

Municipality of Chatham-Kent
Infrastructure and Engineering Services
Engineering and Transportation Division

To: Mayor and Members of Council
From: Ian Clark, Transit Project Manager
Date: July 2, 2020
Subject: Driving Forward: Chatham-Kent's Transit Strategy

Recommendation

It is recommended that:

1. Driving Forward: Chatham Kent's Transit Strategy be approved for the purpose of public transit capital and operational planning.

Background

The CKTransit system includes conventional and specialized service. Council-approved service levels are as follows:

- Conventional Urban
 - Mon. – Sat., 6:15 A.M. – 7:15 P.M., 30-minute frequency
- Conventional Inter-Urban
 - Mon. – Sat., four round trips (6:15 A.M., 8:45 A.M., 4:15 P.M., 6:45 P.M.)
- Specialized
 - Chatham Accessible
 - Mon. – Thu. & Sat., 6:15 A.M. – 7:15 P.M.
 - Fri., 6:15 A.M. – 11:00 P.M. / Sun., 9:00 A.M. – 5:00 P.M.
 - Wallaceburg Accessible
 - Mon. – Sat., 8:00 A.M. – 7:00 P.M. / Sun., 9:00 A.M. – 5:00 P.M.

In June 2019, the Municipality initiated a review of public transit needs and strategies with the objective of prioritizing and recommending policies, projects, and operating service standards to guide CKTransit over the next 5-10 years. During the review period, Council took several actions due to initial project findings, to prepare for future service contracts, or to pilot initiatives explored in the report:

- On June 24, 2019, Council approved two temporary service level increases. Route 5 in Chatham and a 12:15 P.M. inter-urban trip commenced operation in September 2019 and were subsequently extended until June 30, 2021;

- On September 23, 2019, Council approved a temporary demand-responsive service to extend Chatham's public transit service hours into the evening. CKTransit OnRequest was launched in March 2020;
- On November 4, 2019, Council approved administration enter into a cooperative purchasing agreement with Metrolinx, a crown agency owned by the province of Ontario, for the purpose of purchasing transit vehicles and related equipment;
- On December 9, 2019, Council approved administration purchase and retain ownership of its public transit vehicles, with continued third party operation, storage, and maintenance, for future operator contracts expected to commence after June 30, 2021;
- On March 23, 2020, Council approved administration purchase two larger 9-metre public transit buses, as well as two 6-metre specialized transit vehicles, for use in future transit services;
- On May 25, 2020, Council approved administration enter into an agreement with the Province of Ontario to access funding under the Investing in Canada Infrastructure Program (ICIP) Public Transit Stream. Funding will allow CKTransit to proceed with several capital projects discussed in Driving Forward, including:
 - Additional transit vehicles;
 - Security camera systems;
 - Demand-responsive software licensing;
 - Shelters at transit hub locations in primary urban centres outside Chatham;
 - Rehabilitation of the Downtown Chatham Terminal;
 - Electronic messaging boards at transit hubs;
 - Kiosks for SmartCards and fare payments.

Administration has now completed the public transit review and authored a document titled Driving Forward: Chatham-Kent's Transit Strategy (Appendix A). This document is intended to serve as Chatham-Kent's master plan for public transit planning.

Comments

Driving Forward includes 60 actionable recommendations that will impact the planning, design, and service levels of public transit in Chatham-Kent. Recommendations are intended to sustainably meet the transit needs identified by the public and are in alignment with overarching master plans.

New recommendations include:

- Proactively planning transit infrastructure alongside new land developments to improve transit access and first-mile-last-mile connections for riders;
- Utilizing demand-responsive service during times or areas with lower ridership;
- Leveraging partners such as Four Counties Community Transportation, Erie Shores Community Transit, and adVANtage Transportation for rural transit options within the Municipality and access to neighbouring jurisdictions;

- Extending service hours in Chatham to accommodate local employment opportunities and social demand;
- Introducing conventional urban transit within Wallaceburg;
- Matching conventional service hours, days, and fares with specialized service;
- Implementing larger buses on the busiest routes;
- Prioritizing new concession fares towards low-income riders;
- Improving Inter-Urban frequency and coverage within Chatham-Kent's primary urban centres;
- Empowering ridership with the knowledge to effectively navigate the system; and
- Improving accessibility and aesthetics of bus stops and transit hubs.

The report includes guidance on prioritization, timelines, funding sources, operational cost estimates, and metrics for performance monitoring.

Upon Council approval of Driving Forward, administration will conduct the recommended Route Optimization Study. This study will address systemic issues with schedule adherence by reviewing the fixed route design in Chatham, as well as bus stop locations along the inter-urban network. This study will be complete before the end of 2020.

Administration will also proceed with the release of a Request for Proposal (RFP) for a new transit operator contract following the expiry of current agreements on June 30, 2021. To achieve operational efficiencies discussed in the report, administration will be seeking an operator to deliver all CKTransit conventional and specialized services. Operating contracts will only be for existing service levels approved by Council. However the provision of service enhancements, as outlined in Driving Forward, will be a requirement of the successful vendor.

Staff will then return to Council prior to the 2021 Budget Process with incremental cost and staffing impacts associated with the implementation of Driving Forward's project and service level recommendations.

Areas of Strategic Focus and Critical Success Factors

The recommendation in this report supports the following areas of strategic focus:

☐ Economic Prosperity:

Chatham-Kent is an innovative and thriving community with a diversified economy

☐ A Healthy and Safe Community:

Chatham-Kent is a healthy and safe community with sustainable population growth

☐ People and Culture:

Chatham-Kent is recognized as a culturally vibrant, dynamic, and creative community

☐ Environmental Sustainability:

Chatham-Kent is a community that is environmentally sustainable and promotes stewardship of our natural resources

The recommendation in this report supports the following critical success factors:

☐ Financial Sustainability:

The Corporation of the Municipality of Chatham-Kent is financially sustainable

☐ Open, Transparent and Effective Governance:

The Corporation of the Municipality of Chatham-Kent is open, transparent and effectively governed with efficient and bold, visionary leadership

☒ Has the potential to support all areas of strategic focus & critical success factors

☐ Neutral issues (does not support negatively or positively)

Consultation

Over 190 hours of public consultation took place to present the recommendations in Driving Forward. Consultation included meetings with service groups, committees, local businesses, municipal departments, vendors, peer jurisdictions, ridership, as well as through an online portal at www.letstalkchatham-kent.ca. Over 2,000 comments were reviewed by the project team.

The following public information centres were also held:

- August 12, 2019, 11:30 AM – 2:00 PM, Municipal Centre, Tilbury
- August 12, 2019, 4:00 PM – 6:30 PM, Municipal Centre, Wallaceburg
- August 13, 2019, 12:00 PM – 2:30 PM, Adult Activity Centre, Ridgetown
- August 13, 2019, 4:00 PM – 6:30 PM, Community Senior Centre, Blenheim
- August 14, 2019, 10:00 AM – 12:00 PM, Civic Centre, Chatham
- August 14, 2019, 1:30 PM – 3:30 PM, Active Lifestyle Centre, Chatham
- August 14, 2019, 4:30 PM – 6:30 PM, W.I.S.H. Centre, Chatham
- December 5, 2019, 9:30 AM – 11:00 AM, Adult Activity Centre, Ridgetown
- December 5, 2019, 3:30 PM – 5:00 PM, Community Living, Wallaceburg
- December 6, 2019, 12:00 PM – 1:30 PM, Public Library, Tilbury
- December 11, 2019, 2:00 PM – 3:30 PM, Public Library, Dresden
- December 12, 2019, 12:00 PM – 1:30 PM, Public Library, Blenheim
- December 12, 2019, 3:00 PM – 4:30 PM, Royal Canadian Legion, Wheatley
- December 13, 2019, 3:00 PM – 4:30 PM, Royal Canadian Legion, Wheatley
- January 29, 2020, 4:00 PM – 5:30 PM, Bothwell Theatre, Bothwell

- January 29, 2020, 6:30 PM – 8:00 PM, Brunner Community Centre, Thamesville
- May 6, 2020, 6:00 PM – 7:00 PM, Facebook Live

Financial Implications

There are no financial implications associated with the approval of Driving Forward. Administration will return to Council prior to the 2021 Budget Process with incremental cost and staffing impacts associated with the implementation of project and service level recommendations outlined in Driving Forward.

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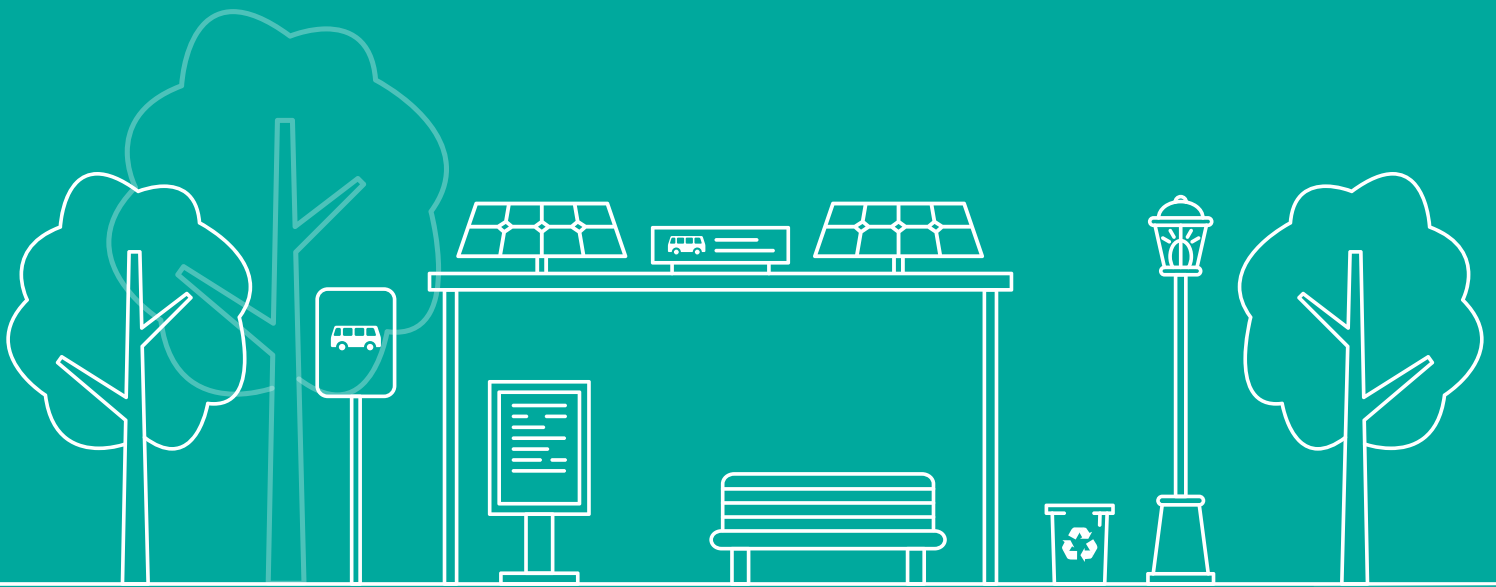
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Attachments: Appendix A: Driving Forward: Chatham-Kent's Transit Strategy

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Driving Forward

Transit Strategy 2020

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1 INTRODUCTION



Figure 1-1: Downtown Chatham Terminal

1.1 EXECUTIVE SUMMARY

Driving Forward is the Municipality of Chatham-Kent's first master plan for public transit. It is the culmination of a year-long public consultation and research process aimed to define the transit needs of residents, and discover how the Municipality can meet those needs. More than 190 hours of consultation through open public sessions and interviews with community stakeholders, local businesses, and ridership produced over 2,000 comments to inform the report's conclusions. Ultimately, Driving Forward seeks to shift the image of public transit in Chatham-Kent from a service for those captive to the system, to an effective tool to help accomplish municipal priorities to the benefit of all residents.

Driving Forward is aligned with the direction of the Municipality's strategic plan, CKPlan 2035, the Official Plan, and Transportation Master Plan. It contributes to broader municipal objectives including urban density and growth, strong economic conditions through improved access to jobs and education, environmental sustainability, and healthier residents through reduced social isolation and access to critical needs such as medical appointments or healthy food.

The 60 actionable recommendations in Driving Forward guide the development and design of transit operations as well as identifies the infrastructure and capital assets required to support implementation over the next 5-10 years. This report is meant to be flexible and open to revision as new best practices emerge, technological enhancements take place, and the needs of ridership change. It is to be a tool for decision-makers within CKTransit – the Municipality's public transit service – as well as municipal leaders in Transportation, Engineering, Planning, Economic Development, and Social Services as they develop and implement their future business plans.

The variety of transit needs identified by residents and ridership is typical of comparable systems but also highlight the gaps that prevent the service from maximizing its value to the community. Needs include larger vehicles for capacity and mobility, reliable scheduling, extended hours beyond 7:15 PM for local employment opportunities, greater frequency of Inter-Urban service beyond four round trips per day to accommodate work or school, rural transit options, improved bus stop infrastructure, easier re-loading of passes, and transit education for vulnerable populations.

Addressing these gaps becomes increasingly important as ridership continues to increase. Since 2016, ridership has risen 23% and is expected to outpace population growth by 1-2% in each of the next five years. As Chatham-Kent positions itself as a retirement community for active seniors, an educational destination for international students, and an attractive investment opportunity for employers in the service industry, a long-term plan for the implementation of a resilient system is necessary to ensure transit serves an asset to achieving these objectives, rather than a barrier.

Some of the strategies discussed in Driving Forward to sustainably address transit needs include:

- Proactive transit infrastructure planning alongside new land developments;
- Dynamic re-routing of underutilized vehicles to meet peak demand periods or reduce delays;
- Allocating the most resources where it could benefit the most ridership;

- Empowering ridership with the knowledge to effectively navigate the system;
- Targeting fare concessions to low income riders; and
- Maximizing cost efficiency by utilizing demand-responsive or subsidized partner-provided services during times or areas with low ridership.

Resiliency is also a key component of Driving Forward, particularly in light of the COVID-19 Pandemic. While the long-term impacts of the pandemic are yet to be seen, operating recommendations are to be flexible and scalable to changing environments. Regular performance monitoring and measurement will ensure service levels are tailored to the current economic and social conditions of Chatham-Kent. Examples in Driving Forward include the alignment of transit operating hours to meet the needs of local employers and service groups, and right-sizing transit supply according to ridership volume through variable bus sizes and adjustable vehicle quantities within a demand-responsive service area.

Driving Forward has split its recommendations across five system elements, each with its own vision statement, describing where stakeholders want public transit in Chatham-Kent to be, and where the system could realistically be at the conclusion of the report's planning horizon:

System Element	Vision Statement
Land Use and Transit Planning	The transit system is planned to support the long-term achievement of urban growth and community development objectives while new land developments are planned with transit-supportive design standards to increase system quality and efficiency.
Transit Service Delivery	All Chatham-Kent residents are able to access sustainable transit services that support urban growth and daily life.
Fares	Fare policy and payment tools make transit usage simple, sustainable, and accessible to riders.
Fleet and Infrastructure	Vehicles, bus stops, and transit hubs are safe and accessible to ridership and promote a positive image of public transit in Chatham-Kent.
Ridership Support	Riders have the tools, knowledge, and support to confidently use public transit.

Table 1-1: System Elements and Vision Statements

The recommendations in this report increase the proportion of resources allocated towards the highest ridership communities by establishing a Tiered Route Structure that would define the intention of the routes – frequent, convenient, or limited service – and establish resource expectations to meet that intended purpose. Recommended service level enhancements equate to a 52% increase in revenue

vehicle hours (RVH) from 39,000 to 59,300 by 2031 (5.2% annual service growth). This would require an annual operating budget of \$1.5 million above 2019 levels. Service enhancement characteristics include:

- 7-day Conventional Urban service in both Chatham and Wallaceburg;
- Extended hours into the evenings to accommodate local employment opportunities;
- 6-day Inter-Urban service at more convenient intervals connecting the seven Primary Urban Centres of Blenheim, Chatham, Dresden, Ridgetown, Tilbury, Wallaceburg, and Wheatley;
- Curb-to-curb Specialized Urban service for those with disabilities matching Conventional service hours and locations;
- Limited service options for residents in rural communities and settlement areas;
- A pilot program for Community Bus service intended to connect residents of Bothwell and Thamesville with shopping opportunities in Chatham on a weekly or bi-weekly basis; and
- Maintained or enhanced partner-provided services for rural residents to connect them with critical services in urban centres or neighbouring municipalities such as Newbury and Leamington.

In order to service certain areas or times in a financially efficient manner, the Driving Forward plan incorporates demand-responsive Conventional service, or subsidized partner-provided options, where ridership is low or has low potential for growth. Daytime weekday service in Chatham is still expected to be efficiently delivered through Conventional fixed routes. Larger vehicles to address capacity issues and mobility concerns from riders have been recommended for the busiest corridors along with improved accessibility and aesthetics at bus stops and transit hub points. This also includes the introduction of sheltered stops or hubs in Primary Urban Centres outside Chatham.

Driving Forward also proposes actions to ensure the design of Chatham-Kent's land developments are favourable to the transit system, rather than reactively designing the transit system around the design of those new developments. Changes to the development review process would identify the need for supporting transit infrastructure, or priority measures, at forecasted points-of-interest for ridership such as high-density residential developments, commercial retail, or large employment centres.

Recommendations on fares include more targeted concessions toward low-income users, eliminating time-based concessions, extending the Conventional Urban concession fare structure to the Inter-Urban and Specialized services, and providing online re-loading services for passes. Greater ridership support services – such as tools for education, real-time vehicle tracking, trip planning, and wayfinding – are also proposed to assist current and new riders with confident navigation of the system.

CKTransit is recommended to cover 25% of its expenses through fare revenue in order to financially sustain routes and services. At current service levels, this represents a 14% increase in ridership, or a 3% increase in ridership combined with the concession fare adjustments discussed in this report. The 52% increase in service levels proposed in Driving Forward would necessitate a ridership increase of 49%, or over 500,000 annual passenger trips, without raising fares. These numbers are comparable and achievable by peer municipal systems researched in this report.

The balance of expenses for new operations are recommended to be covered by the municipal tax base. The current operational allocation of Provincial Gas Tax funding – approximately \$800,000 – is not

recommended to be increased. One-time or capital expenses are recommended to continue to be funded through a combination of the Provincial Gas Tax and other transit or infrastructure grants provided from senior levels of government. Examples include fleet, bus stops, shelters, transit hub development, and new technology implementation. Driving Forward has identified and prioritized capital projects and should be referenced during the grant application process as funding sources become available.

The project team would like to thank the local business, service groups, committees, ridership, vendors, peer transit agencies, municipal departments, and staff who contributed to the development of this report. The tremendous amount of feedback received reflects the importance of public transit service to the community. The clarity of vision and priorities produced from this collaboration will undoubtedly ensure Chatham-Kent's public transit system continues to *Drive Forward...*

1.2 BACKGROUND

Timeline of Relevant Events

1998	First operator contract for Conventional service begins under the newly amalgamated Chatham-Kent. Ownership of eight municipal buses are transferred to the operator.
2002	Chatham-Kent retroactively funds Four Counties Transportation services to Ward 3 residents since 1997 and enters into an agreement to continue service subsidization.
2003	Operator contract awarded for Conventional service that would see the introduction of smaller buses and a new four-route system from 6:15 AM – 6:15 PM, Monday-Saturday.
2003	Wallaceburg and Chatham Specialized service eligibility criteria is harmonized allowing for broader eligibility aligned with the Ontarians with Disabilities Act.
2003	The name Chatham-Kent Transit, or CKTransit, is officially adopted.
2004	Ontario introduces the Dedicated Gas Tax Funds for Public Transportation Program. Funds would be used to increase service hours to 7:15 PM and the eventual introduction of the Inter-Urban system.
2007	Inter-Urban Route A begins operations.
2008	Chatham-Kent formally enters into a cost sharing agreement with Erie Shores Community Transit to continue servicing residents in Wheatley and parts of Romney.
2009	Inter-Urban Route D begins operations.
2010	Inter-Urban Route C and Seasonal Beach Bus begin operations.
2014	SmartCard fare payment technology is introduced on Conventional service.
2016	A new fare strategy is adopted that would see Conventional fares increase for the first time since 2006 with planned increases in 2017 and 2019.
2017	The Affordable Pass for low-income riders is introduced.
2019	Urban Route 5 and mid-day Inter-Urban trips begin operations on a pilot basis.
2019	SmartCard fare payment technology is introduced on Specialized service.
2020	Demand-responsive evening service within Chatham begins operations on a pilot basis.

Table 1-2: Timeline of Recent Transit Events

Chatham-Kent is one of the largest municipalities by geography (2,458 km²) in Ontario. It also has the lowest population density – 41.4 people per km² – among Ontario municipalities with a population of 100,000 or greater. This makes the provision of efficient and convenient public transit across Chatham-Kent a difficult proposition. However public transit has a long history in the area and can be traced to the late nineteenth century with the operation of a horsecar-powered street railway system in the former City of Chatham. Conventional bus service began in Chatham in 1946 while Chatham Transit, the predecessor service to CKTransit, commenced operation in 1977. The communities of Ridgeway, Blenheim, Tilbury, and Wallaceburg also had versions of Urban or Inter-Urban services.

The amalgamation of Kent County, the City of Chatham, and 21 other jurisdictions took place in January 1998. At the time of amalgamation, Chatham was the only population centre with daily Conventional and Specialized transit service while Wallaceburg also operated Specialized service. Provincial funding

cuts in the late 1990s subsequently reduced Conventional service in Chatham by 28%. This decreased Urban routes from six to four and eliminated extra peak hour trips.

Conventional transit routes now connect Chatham with nine other Kent County townships, towns, and villages. CKTransit is currently piloting expanded Urban service within Chatham with a 5th daytime route as well as a demand-responsive evening service. Specialized curb-to-curb transit continues to operate seven days a week in Chatham and Wallaceburg, while subsidized partner-provided transit service operates in rural Chatham-Kent through partnerships with Erie Shores Community Transit, Four Counties Community Transportation – both established prior to amalgamation – and a more recent partnership with AdVANTage Transportation.

Increased ridership over the last few years, driven by changing demographics and economic conditions, is placing pressure on peak capacity, increasing demand for expanded service hours and coverage areas, and intensifying issues with service reliability, quality, and communication. Base service hours dedicated to Conventional and Specialized Urban transit has remained the same for nearly twenty years while the Inter-Urban convention system has not been re-evaluated since it was introduced between 2007 and 2010. A service review conducted in 2011 introduced operational changes such as smart card fare systems, new transfer policy, and fare prices. However several recommendations intended to address future growth such as enhanced service reliability, coverage, and capacity were never implemented.

Public demand has been growing for a public transit master plan that provides a path for sustainable system improvement. This has been vocalized by several recent initiatives such as:

- Smart Cities Challenge: In January 2018, local groups and the Municipality participated in a nationwide competition challenging municipalities to improve the lives of residents through innovation, data, and connected technology. Public transit was selected as Chatham-Kent's project as it was identified as a shared priority by the diverse groups involved in the project. The application was submitted in partnership with the Walpole Island First Nation and Delaware Nation at Moraviantown and was informed by consultations with local groups, municipal departments, and a Transportation Survey which received 304 responses;
- Municipal Election and CKTransit Task Force: In September 2018 a Transit Survey was conducted by a group of local residents during the municipal election campaign which concluded dissatisfaction with the current system. The survey received 380 responses. The improvement of transit services was subsequently identified as a priority for the current term of Municipal Council and from December 2018 to June 2019 a CKTransit Task Force operated with the purpose of reviewing public feedback on the transit system, identifying opportunities to address these gaps, and submit recommendations for improvement;
- Transportation Master Plan Update: In September 2018 a project to update the Municipality's Transportation Master Plan (TMP) was initiated. This project included extensive public consultation such as a focus group workshop held in February 2019, as well as Public Information Centres in the summer and fall of 2019. Transit-related issues received significant interest from the public during this project. The need for a public transit review was identified in the TMP Update.

2 REPORT

DEVELOPMENT

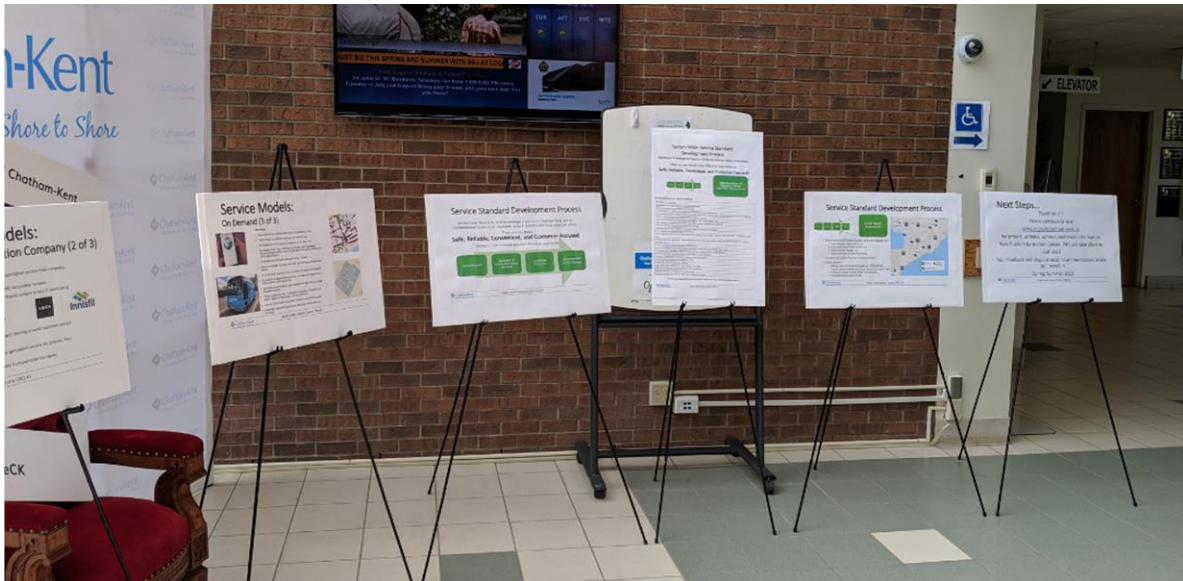


Figure 2-1: Public Information Centre (PIC) in Chatham

2.1 STRATEGIC ALIGNMENT

Driving Forward is part of an interdependent collection of plans for growth and development in Chatham-Kent. Recommendations are aligned with the objectives of overarching master plans and informed by parallel strategies where public transit can play a supporting role. The successful implementation of the direction outlined in this report is best achieved by building on the strong foundation of goals and principles already pursued by the Municipality.



Figure 2-2: Driving Forward in context with overarching Municipal Plans

Important elements of Driving Forward derived from existing master plans and strategies are summarized as follows:

- Transit can be an important component of the overall transportation system for Chatham-Kent by providing access to daily services, retail needs, and recreational resources. It can help reduce vehicular traffic in the larger Primary Urban Centres such as Chatham, and provide transportation to jobs and services for residents who do not have access to a private automobile. (Official Plan, 2008);
- The Municipality will extend public transit to new developed areas as demand warrants. (Official Plan, 2008);

- There is a strong relationship between land use, built form, and transportation. Where arterial roads travel through Primary Urban Centres, streetscapes need to be designed to promote active transportation and transit use. (Official Plan, 2008);
- The continued provision of transit service is based on numerous considerations, including the ability of Chatham-Kent to recover transit service costs through the fare box, the type of service being offered (dial-a-bus or scheduled bus service), the level of service offered, the development density that supports transit, the routing of service, etc. (Official Plan, 2008);
- It shall be the objective/policy of Chatham-Kent to:
 - Support the continued development and expansion of transit service where economically feasible.
 - Provide safe, convenient and accessible transit service that meets the needs of businesses and residents, including children, youth, seniors and persons with special needs, and persons with disabilities.
 - The Municipality shall continue to provide local transit service in Chatham-Kent within its financial capabilities.
 - Undertake a Transit Master Plan to examine the provision of wider transit service in Chatham and the expansion of service to other Primary Urban Centres such as Wallaceburg;
 - Medium- and high-density residential development shall be encouraged to front on arterial roads where transit is either provided or planned. (Official Plan, 2008);
- The projected growth in Chatham-Kent can be expected to result in healthy lifestyles with public transit services becoming increasingly important to maintain the mobility of the aging society. An increasing percentage of communities will be unable to drive. (Transportation Master Plan Update, 2020);
- The transit plan should focus on the urban areas as the first priority where the greatest change in ridership can be achieved. (Transportation Master Plan Update, 2020);
- Complete Streets should improve safety and convenience for all road users. This should include improvements to transit facilities including appropriate shelters/seating, lighting and schedules. (Transportation Master Plan Update, 2020);
- Seek continuous improvement in providing public transit services that increases mobility and is responsive to the needs of the community. (Transportation Master Plan Update, 2020);
- Promote ridesharing as a travel demand management measure and improve accessibility by supplementing transit services. (Transportation Master Plan Update, 2020);
- Economic viability is a cornerstone to any existing or future services. The provision of transit services is reliant upon suitable development densities and the provision of transit supportive land use policies within the Official Plan. (Transportation Master Plan, 2007);
- Goals to make the community Age-Friendly:
 - Foster a more user-friendly and barrier-free transportation system for people of all ages and abilities throughout CK.

- Expand the network of partnerships to increase transportation services/options throughout CK. (Age-Friendly Community Action Plan, 2015);
- The rural nature of the municipality and the lack of transit outside of Chatham means that employees need a car to travel to work. Even within Chatham, the transit hours do not support individuals doing shift work or those working outside of the transit service area. (Recommendation is to) ensure transportation is not a barrier to employment. (Local Labour Market Plan Update, 2018);
- The Municipality of Chatham-Kent can position itself as a leader in municipal policy, setting the example of how to reduce the municipality's own environmental impact through areas such as procurement, life-cycle assessment, community services and urban planning to meet global targets referenced in the Paris Agreement (Climate Emergency Motion, 2019)

2.1.1 CKPlan 2035

CKPlan 2035 is a community strategic plan that was developed based on the collective vision of Chatham-Kent residents, businesses, and government for what Chatham-Kent aspires to be in 20 years. This community plan is focused on four key strategic areas: Economic Prosperity; People and Culture; A Healthy and Safe Community; and Environmental Sustainability. The 2018-2022 Municipal Council identified “improve transportation, public transit and active transportation options” as a priority to support the CKPlan 2035 areas of strategic focus.

This plan is important to Driving Forward as it provides a clarity of vision for Chatham-Kent in which transit can play a role in achieving.

Economic Prosperity	People will fulfill economic opportunities locally according to their skills, abilities and training.	<i>Driving Forward seeks to better connect residents with employment and educational opportunities.</i>
Healthy & Safe Community	Everyone will feel safe, supported and have opportunities to be healthy physically and mentally.	<i>Driving Forward seeks to make transit more accessible by improving supporting infrastructure, implementing transit training, and offering more options for low-income residents.</i>
People & Culture	Our population will be thriving, valued and have a vibrant social and cultural diversity.	<i>Driving Forward seeks to better connect Chatham-Kent populations with one another.</i>
Environmental Sustainability	Everyone can make sustainable and renewable choices in all aspects of their lives.	<i>Driving Forward seeks to make public transit an attractive alternative to those who have access to a private automobile.</i>

2.1.2 Official Plan: Action Toward Sustainability

Chatham-Kent's Official Plan sets out the objectives and policies to guide the short- and long-term physical development of all lands within the Municipality. Policies provide for orderly growth and development, and compatibility between the many different uses of land within the Municipality. While the objectives and policies in the Official Plan primarily relate to the physical development, they also include objectives related to social, economic, and environmental matters.

The Official Plan is important to Driving Forward as it sets standards and guidelines that have an impact on the quality and performance of the transit system, including:

- Streetscape standards and transit-friendly design;
- Identification of sustainable growth areas including Primary Urban Centres;
- Residential density targets favourable to transit efficiency;
- Concentrated areas of employment or industry;
- Mixed-use developments attractive to riders;
- Accessibility standards;
- Active transportation networks facilitating first-mile-last-mile transit connections.

These standards and guidelines play a role in achieving positive public transit outcomes such as:

- Reducing physical barriers to transit access through physical development standards;
- Improving schedule adherence and frequency by creating density, land efficiency, and directness of travel;
- Increasing ridership by reducing walking distances and improving pedestrian networks connecting to the transit system;
- Improved economic productivity through efficient access to employment and industry;
- Reducing reliance on private automobiles.

2.1.3 Transportation Master Plan

The Transportation Master Plan (TMP) defines the long-term improvements required for infrastructure and traffic management in Chatham-Kent. The TMP coordinates land use planning with transportation system planning and infrastructure investment in order to address community and legislative needs.

The TMP is important to Driving Forward as it prioritizes and plans for transportation foundations influencing the transit system, including:

- Roadway designations impacting speed and capital improvements;
- Transportation network design;
- Traffic calming or transit priority measures influencing travel time;
- Pedestrian infrastructure connecting destinations;
- Transportation mode share targets.

2.2 METHODOLOGY

2.2.1 Development

Driving Forward was initiated in June 2019 by municipal staff with the goal to develop a strategic direction of public transit in Chatham-Kent. It was anticipated that this study would take one year to plan, conduct public consultation, research and/or pilot solutions, and present final recommendations to Municipal Council.

The scope of study consisted of the following areas:

- Service model, coverage, frequency, and routes
- Fare model and financial sustainability
- Fleet
- Bus stop / hub / shelter guidelines, and intermodal connections
- Municipal governance structure, policies, and procedures
- Ridership-support and value-added services

The study ultimately aimed to address two fundamental questions:

What are the transit needs of Chatham-Kent residents?

and

How can the Municipality meet the transit needs of residents?

The first question required a review of recent background reports, surveys, and public information centres where public transit was a leading or periphery topic. Public comments and other information collected by the CKTransit Task Force, SmartCities Application team, and the Transportation Master Plan 2020 update team were included in the scope of review for Driving Forward due to their recentness and relevancy to this fundamental question.

This process was supported by three rounds of public consultation sessions between August 2019 – May 2020 where issues were presented for clarity, potential solutions identified, and recommendations were outlined. A challenge recognized early in the process was “feedback fatigue” from transit ridership who had already participated in the surveys and focus groups collected through the projects mentioned above. This resulted in frustration from some transit riders when asked once again for comments or participation in other transit-related surveys. Driving Forward opted to address this fatigue by focusing resources on targeted engagement with specific service groups, businesses, and committees with an interest in transit, while supplementing this engagement with the more traditional public information centres conducted on similar studies.

The second fundamental question required a review of existing overarching master plans to seek direction and alignment, a review of innovative solutions available in the market place and/or implemented by comparable jurisdictions, and an understanding of barriers to service changes including

funding, legislative compliance, operational limitations, and ridership behaviour. The following actions were taken:

- Interviews with peer municipalities;
- Discussions with service groups representing vulnerable transit riders;
- Discussions with transit operators and a review of existing operator agreements;
- Review of available funding sources and current financial commitments;
- Review of existing legislation for compliance.

A significant element of Driving Forward is the introduction of a demand-responsive Conventional transit model, driven by software. This is a relatively new technology implemented by only a few municipalities. However it is in the process of being integrated into municipal transit systems ranging from Calgary and York Region to Brant County and Stratford, Ontario. Given the low population density and large geography of Chatham-Kent, it was identified early in the process that this solution could play a role in enhancing transit services in a more financially efficient manner.

In order to explore the viability of this solution, Driving Forward issued a Request for Information (RFI) to understand the functionality of this software and how it could potentially benefit the CKTransit system. Five demand-responsive software providers responded to the RFI plus three transportation providers with either experience or interest in working in a demand-responsive system. It was ultimately decided that a pilot service, limited in scope, would be tested within Chatham during the evening hours when fixed route transit ended. This pilot service was launched in March 2020, however it was subsequently suspended after five days due to the COVID-19 Pandemic. The service was re-launched in June 2020.

Information collected through the RFI consultation and pilot planning process have helped informed several recommendations in Driving Forward.

2.2.2 Public Engagement

An extensive public engagement process took place throughout the study. Over 190 hours of consultation took place with over 2,000 comments reviewed. Consultation included meetings with service groups, committees, local businesses, municipal departments, vendors, peer jurisdictions, ridership, as well as through an online portal at www.letstalkchatham-kent.ca. Seventeen (17) Public Information Centres (PICs) took place over three rounds from August 2019 to May 2020. Every round of PICs was advertised through the Chatham-Kent media distribution list, website, buses, shelters, and social media. Cooperation was received from staff at several venues who advertised the session for their members and the public. Paid advertisements were placed in the Chatham Daily News (twice) and the Thamesville Herald.

PIC Round 1

- August 12, 2019, 11:30 AM – 2:00 PM, Municipal Centre, Tilbury
- August 12 2019, 4:00 PM – 6:30 PM, Municipal Centre, Wallaceburg
- August 13, 2019, 12:00 PM – 2:30 PM, Adult Activity Centre, Ridgetown

- August 13, 2019, 4:00 PM – 6:30 PM, Community Senior Centre, Blenheim
- August 14, 2019, 10:00 AM – 12:00 PM, Civic Centre, Chatham
- August 14, 2019, 1:30 PM – 3:30 PM, Active Lifestyle Centre, Chatham
- August 14, 2019, 4:30 PM – 6:30 PM, W.I.S.H. Centre, Chatham

Each session was open house-style for residents to drop-in and view information and discuss topics with the project team. The objective of these sessions was to inform residents about the scope of the project, outline known service gaps and weaknesses reported by the public through previous transit-related initiatives, seek direction on operating standards, and receive feedback on alternative transit models including demand-responsive transit.

A total of 43 individuals attended these sessions with attendance ranging from 0 (Tilbury) to 18 (Chatham Civic Centre).

This was the only formal round of consultations that included a survey due to the “feedback fatigue” cited above. Surveys were available at each PIC location as well as at every Chatham-Kent municipal centre, Health & Family Services, Family Service Kent, the Adult Language & Learning Centre, and online. Surveys were also conducted with riders on transit buses and were made available within the AdVANTage Transportation vehicle. 81 responses were received (86% Chatham, 7% Blenheim, 4% Wallaceburg, 3% other Chatham-Kent communities). Survey results are summarized as follows:



Figure 2-3: PIC in Blenheim

- 42% value greater coverage over greater frequency, while 36% value both evenly, and 22% value greater frequency over greater coverage;
- 96% agree that the Municipality has a responsibility to provide some level of transit service to all areas of Chatham-Kent in order to access critical services (medical appointments, grocery shopping, etc.) for those without private transportation and to prevent social isolation;
- 85% agree route transfers should be possible in more locations other than the Downtown Terminal;
- 83% would consider using a demand-responsive service if it was available in their area, however 11% of those respondents would only request a trip by calling.

227 comments were received both online and through the hard copy comment sheets or surveys. Example comments on common topics is provided below. A more comprehensive list is available in Appendix A.

Bus Size	<ul style="list-style-type: none"> • <i>“The buses need to be bigger and a lot cleaner. In order to allow seating as well as room for assistive devices.”</i>
Accessibility	<ul style="list-style-type: none"> • <i>“More seating on the bus for people with a disability.”</i>
Information	<ul style="list-style-type: none"> • <i>“We need the interurban bus route schedule to actually show all of the stops.”</i>

Operations

- *“It’s silly that the bus drops you off on one side of the road where you have no choice but to walk across the busy street since lights are few between and avoid all the side streets.”*
- *“I would like to suggest the urban transit begin earlier and end later. I believe ridership would increase if folks could get to work before 7AM, and could get a ride home around 9PM at night.”*
- *“Eliminate the bus-loop and have routes running in both directions, avoiding unnecessary, longer bus rides.”*

Fares

- *“Seniors could not afford the fares.”*

PIC Round 2

- December 5, 2019, 9:30 AM – 11:00 AM, Adult Activity Centre, Ridgetown
- December 5, 2019, 3:30 PM – 5:00 PM, Community Living, Wallaceburg
- December 6, 2019, 12:00 PM – 1:30 PM, Public Library, Tilbury
- December 11, 2019, 2:00 PM – 3:30 PM, Public Library, Dresden
- December 12, 2019, 12:00 PM – 1:30 PM, Public Library, Blenheim
- December 12, 2019, 3:00 PM – 4:30 PM, Royal Canadian Legion, Wheatley
- December 13, 2019, 3:00 PM – 4:30 PM, Royal Canadian Legion, Wheatley
- January 29, 2020, 4:00 PM – 5:30 PM, Bothwell Theatre, Bothwell
- January 29, 2020, 6:30 PM – 8:00 PM, Brunner Community Centre, Thamesville

Each session was open house-style for residents to drop-in and view information and discuss topics with the project team. The objective of these sessions was to specifically target residents living outside Chatham to better understand their transit needs, present potential service models for each community based on feedback received earlier in the project, and outline current options available in their community.

A total of 78 individuals attended these sessions with attendance ranging from 3 (Tilbury) to 19 (Wallaceburg). The increase in attendance can be partly attributed to a shift in venue selection from municipal centres to those with greater public traffic. Wheatley was visited twice due to a date error in the local media.

Comment sheets were available at each session, municipal centres outside Chatham, and online (all information presented at the PIC was also available online). 77 comments were received. Example comments from different communities are provided below. A more comprehensive list is available in Appendix A.

Blenheim

- *“Pick up locations and times could be made on-demand, thus enabling all users to enjoy the service for a cheap fair, and I’m willing to pay more taxes for it.”*

Bothwell

- *“A Shuttle bus is needed to come to Bothwell once or twice a week to bring people to run errands, go to a doctor’s appointments, etc.”*

Dresden	<ul style="list-style-type: none"> • <i>“(Issues are) frequency, length of time on the bus, lack of signage on when the bus will arrive.”</i>
Ridgetown	<ul style="list-style-type: none"> • <i>“The time buses waste driving around empty could be used to go to Highgate.”</i>
Thamesville	<ul style="list-style-type: none"> • <i>“Would be willing to have a tax increase for a transit service to be provided in Thamesville.”</i>
Tilbury	<ul style="list-style-type: none"> • <i>“Times (need to be) accessible to employees and more direct route to Chatham.”</i>
Wallaceburg	<ul style="list-style-type: none"> • <i>“It would be helpful to have route map information at the stops such as the hub points. The frequency of the Inter-Urban route to Wallaceburg is a frequent complaint of clients. Clients would benefit from a mid-day route.”</i>
Wheatley	<ul style="list-style-type: none"> • <i>“More affordable transportation options.”</i>

PIC Round 3

- May 6, 2020, 6:00 PM – 7:00 PM, Facebook Live

The final round of public consultation was initially scheduled as an in-person session at the John D. Bradley Convention Centre in Chatham. However the physical distancing measures imposed during the COVID-19 Pandemic necessitated changing this to an online format.

A 30-minute presentation was delivered by the project team through Chatham-Kent’s Facebook page. The purpose was to present the draft recommendations in the report. The presentation was followed by a question and answer session.

58 individuals watched the presentation live with 1,655 watching at least some portion of the recorded video in the ten days following the session. Participants were able to leave comments or questions on the Facebook page. 55 comments or questions were submitted with the majority concerning day-to-day operations.

Targeted Engagement

In addition to general engagement with ridership and residents, the Driving Forward project team sought direct meetings or interviews with transit stakeholders in order to better understand their needs, issues, and discuss potential solutions. Approximately 80% of all public engagement hours were allocated to targeted engagement. These groups included:

Accessibility Advisory Committee	Hope Haven
Adult Language & Learning	Leamington Transit
Age Friendly Committee	Metrolinx
Agmedica	New Beginnings
Children’s Treatment Centre	Other municipal departments
CK^Y Committee	Prosperity Roundtable on Poverty
Community Living Chatham	Simcoe County Transit

Community Living Wallaceburg
Current CKTransit operators
Enviroshake
Erie Shores Community Transportation
Family Service Kent
Four Counties Transportation
Goodwill Career Centre

St. Clair College Thames Campus
TekSavvy
URIDE
Various bus providers
Various On-Demand Transit software providers
Walpole Island Employment Services
YA Canada

Several other stakeholder groups were contacted but the project team did not receive a response or a meeting could not be scheduled within the consultation period. Regular communications between concerned groups and CKTransit operations staff was relayed to Driving Forward where relevant.

Example comments from different stakeholders are provided below. A more comprehensive list is available in Appendix A.

- *“Difficult to book a ride (on Accessible service) at a specific date and time because they are always full. This service also ends early with no mode of transportation in the evening.”*
- *“Many clients would be able to use a Conventional transit system if it was available. They currently use the accessible service since it is the only service available to them.”*
- *“Staff members could (help) book rides for (our) clients in an On-Demand system.”*
- *“Tilbury, Ridgetown, Blenheim, Wheatley, Bloomfield Industrial Park – all have major employers that cannot fill certain shifts because they cannot find employees that have transportation to work the shifts.”*
- *“Walpole Island/Moraviantown have interest in transit services to get people to jobs.”*
- *“(We) would be willing to hold education seminars/workshops to educate their clientele about the ON-Demand transit booking system.”*
- *“We recruit in other communities outside Chatham to fill positions, but then transportation is a problem.”*
- *“Many of our clients enjoy the convenience and accessibility of (the Chatham Accessible) system.”*
- *“Our clients would benefit from an educational program that could teach new riders how to use the system and experienced riders new changes to the system.”*
- *“We would like to be able to have (the Client’s) support personnel ride the Conventional system for free which is currently allowed on the accessible system.”*
- *“Transit training would be helpful for seniors and could take place at senior centres.”*
- *“The new route (5) is inconvenient for our employees since it is only every hour.”*
- *“It can be challenging for clients to keep track of the two different types of bus passes required to ride both the Inter-Urban and the urban systems.”*
- *“I would be interested in going into Chatham for dinner or a movie if the Inter-Urban bus ran later at night.”*

Driving Forward's online community engagement portal www.letstalkchatham-kent.ca was available throughout the duration of the project for interested stakeholders to submit comments, share ideas, and view project information. There were 906 visits to this website during the consultation period, including visits by 111 unique registered users. 16 ideas or comments were shared through the platform while project documents were downloaded 281 times. Project staff also fielded phone calls and emails from individual riders or other stakeholders who had specific concerns or recommendations to share. Phone calls and emails are not captured in the overall engagement statistics.

The above word cloud reflects the diversity of comments and ideas shared during the engagement process. The most common themes of public feedback can be summarized as:

- Service reliability (i.e. late buses)
- Education (i.e. accessing these opportunities and increasing knowledge of the transit system)
- Service hours (i.e. do not run late enough or on Sundays)
- Vehicle capacity (i.e. small buses)
- Service frequency (i.e. limited Inter-Urban trips)
- Cost and payment options (i.e. affordable options / no online card re-loading)
- Communication (i.e. where the service goes and how it works)
- Supporting infrastructure (i.e. lack of shelters, accessible bus stops)

It is important to note that another objective of the study was to build awareness of the current CKTransit and partner-provided services throughout the engagement process. Driving Forward found that a recurring issue was a lack of knowledge of available transit services that could already meet some of the needs described by residents. This reinforces the theme of poor service communication identified by stakeholders.

2.2.3 Report Format

Driving Forward is separated into chapters, headings, and subheadings, to provide the reader with the background and purpose of the study, its strategic alignment, the report methodology, existing services, performance in the context of peer comparators, service proposals, and the pathway to implementation.

Service proposals are divided into chapters covering five transit system elements. Each chapter begins with Key Observations relevant to the proceeding discussion gathered through stakeholder feedback or research.

- Section **4.1** details proposals concerning land development guidelines conducive to the transit system and long-term transit planning;
- Section **4.2** details proposals for the delivery of services, routes, and service level characteristics.
- Section **4.3** details proposals concerning fare structure and payment methods;
- Section **4.4** details proposals around physical infrastructure strategy including accessible stops and fleet guidelines;
- Section **4.5** details proposals around increased ridership support such as education, marketing, wayfinding, and staffing capacity.

Specific service and capital recommendations are consolidated in section **5 Implementation**, along with prioritized timelines and funding solutions.

The scope of Driving Forward excluded day-to-day operational challenges such as rider complaints, cleanliness, vendor contract compliance, or mechanical issues. Recommendations are intended to address systemic issues through the establishment of preventative measures or strategic planning. Driving Forward also did not establish specific growth targets to convert non transit users into CKTransit riders. Recommendations for service expansion or increased capacity are based on growth projections and the service needs of a captive transit market. Transportation mode share, including private automobile or active transportation, are addressed in the broader Transportation Master Plan.

Recommendations are also limited by the availability of financial resources and constrained by legislation. Statutes and legislations include, but are not limited to, the Public Transportation and Highway Improvement Act, Ontarian with Disabilities Act, Dedicated Funding for Public Transportation Act, Metrolinx Act, and the Public Vehicles Act.

3 SYSTEM OVERVIEW



Figure 3-1: SmartCard Reader on a CKTransit Bus

3.1 SERVICES

3.1.1 Family of Services

The “Family of Services” transit concept is most widely known in Ontario through the Toronto Transit Commission’s (TTC) project to better integrate its Specialized transit riders (i.e. Wheel-Trans) into its Conventional system. The term more broadly represents any collection of transit services residents can utilize to complete their trip from origin to destination.

While not promoted as such in Chatham-Kent, the term best represents the current collection of services, delivered by or with funding from CKTransit, required to sustainably meet the diverse needs of residents over the Municipality’s large geographic area. As outlined throughout Driving Forward, public transit in Chatham-Kent will continue to require a multifaceted and multi-tiered approach to service delivery in order to provide quality service in a financially sustainable manner.

CKTransit’s Family of Services consists of:

- Conventional Urban service within Chatham
- Specialized Urban services within Chatham and Wallaceburg
- Conventional Inter-Urban service connecting ten Chatham-Kent communities;
- One seasonal Conventional route
- Partner-Provided service connecting rural parts of Chatham-Kent with each other or neighbouring communities.

3.1.1.1 Conventional Urban Network

Conventional Urban service in Chatham has four base routes (Route 5 is temporarily being piloted in addition to a demand-responsive evening service). Base routes offer 30-minute all day fixed schedule service from 6:15 AM to 7:15 PM, Monday through Saturday, excluding statutory holidays. There are no additional trips during peak hours or backup vehicles dispatched when the service encounters significant delays or when a vehicle is above capacity. Service is delivered over a radial route network with all vehicles travelling in a one-way, clockwise direction (i.e. loop service), in order to provide maximum coverage. All routes are scheduled to converge at the Downtown Chatham Terminal at the same time to enable timed transfers.

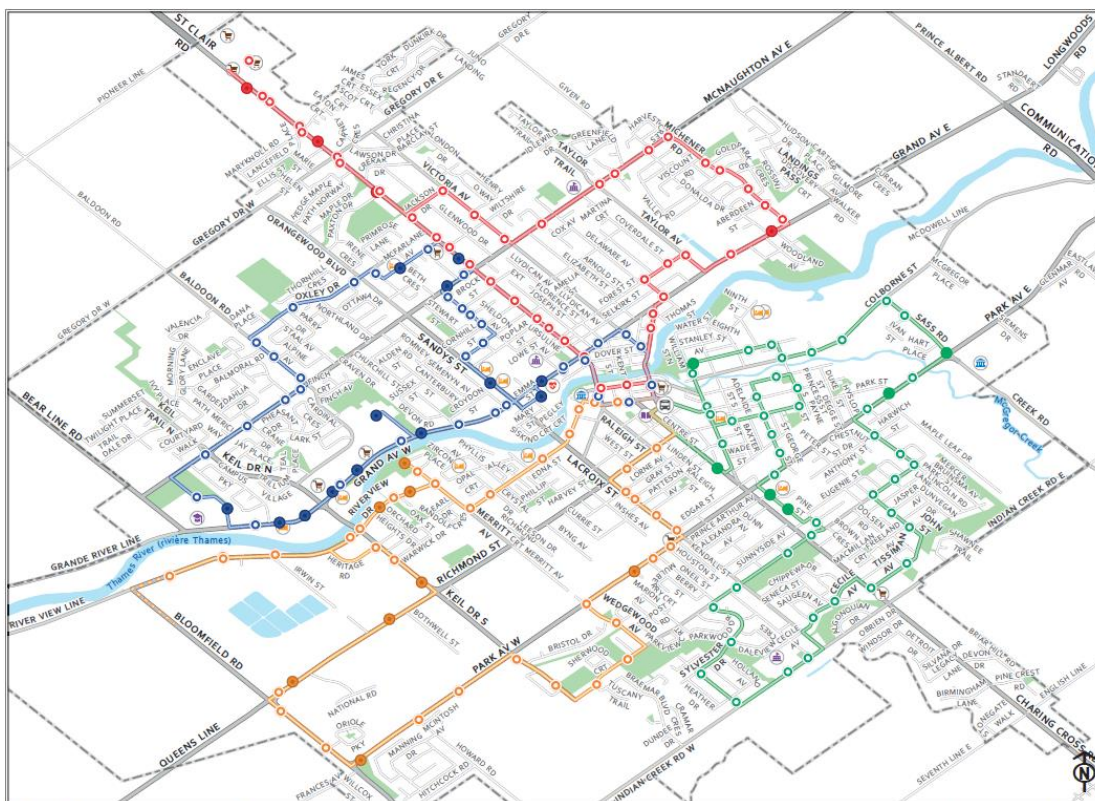


Figure 3-2: Conventional Urban Network, excluding the temporary Route 5

Fleet vehicles are all low-floor diesel-powered 8-metre cutaway buses that hold 21 passengers including one wheelchair spot. All vehicles are equipped with standard fare boxes, smartcard validators, visual and audible stop announcement systems, automatic vehicle locator systems, and modem systems facilitating real-time predictive bus arrival information that riders can access via a mobile application or web portal. All vehicles are owned by the third party service provider, while all technology mentioned is owned by the Municipality.

There are 193 bus stops in the service area with 15% consisting of shelters and 17% with advertising benches. There is currently no Conventional Urban service in any other Chatham-Kent community.

3.1.1.2 Specialized Urban Network

Specialized transit, referred to as Accessible Transit by CKTransit, is a parallel service designed for riders unable to use the Conventional network due to a disability. Specialized transit is a legislative requirement that must be provided at parity with its Conventional counterpart operating in the same service location or service time.

CKTransit provides Specialized Urban service within the community boundaries of Chatham and Wallaceburg. Both services existed prior to amalgamation and have seen minor operational changes since that time. Service is delivered through a demand-responsive model whereas riders are required to request a trip by phone call for a specific date and time. Service is provided curb-to-curb to any destination within the urban boundaries of those communities.

Service hours are as follows:

- Chatham
 - Monday – Saturday, 6:15 AM to 7:15 PM
 - Friday Evening extended to 11:00 PM
 - Sunday, 9:00 AM to 5:00 PM
- Wallaceburg
 - Monday – Saturday, 8:00 AM to 7:00 PM
 - Sunday, 9:00 AM to 5:00 PM

Only riders who meet eligibility criteria and are approved by municipal staff may access the service. Eligibility criteria is determined on a needs-based system. Any person unable to access or use the Conventional system with dignity due to a temporary or permanent disability may be eligible. The criteria is relatively broad and may include both ambulatory and non-ambulatory persons as well as those with a cognitive disability.

Fleet consists of cutaway vehicles or minibuses equipped with lifts, powered by gasoline engines. Unlike Conventional service vehicles, all Specialized vehicles include seatbelts for passenger safety and comfort. All vehicles are equipped with standard fare boxes, smartcard validators, and automatic vehicle locator systems. All vehicles are owned by the third party service providers (Chatham and Wallaceburg have separate providers), while all technology mentioned is owned by the Municipality.

3.1.1.3 Conventional Inter-Urban Network

Conventional Inter-Urban service connects the largest community of Chatham with surrounding communities in the Municipality by fixed routes. The original concept of the Inter-Urban network was limited to Chatham-Kent's seven Primary Urban Centres (PUCs). Each trip takes 2.5 hours to complete and was designed to connect those communities in the most direct manner, including stopping in the middle destination twice to service riders wanting to travel in either direction (i.e. two-way service allows Blenheim residents to travel directly to Ridgetown as well as directly to Chatham). The original network was:

- Route A: Chatham – Wallaceburg – Dresden – Wallaceburg – Chatham
- Route C: Chatham – Blenheim – Ridgetown – Blenheim – Chatham
- Route D: Chatham – Tilbury – Wheatley – Tilbury – Chatham

Route C also includes a stop in the Secondary Urban Centre of Charing Cross, as it is located on the most direct route between Chatham and Blenheim.

Route D was subsequently changed one year after implementation citing low ridership between Wheatley and Tilbury. Wheatley was removed as a stop in favour of the Secondary Urban Centre of Merlin, before adding stops in Charing Cross, Cedar Springs, Dealtown, South Buxton, and North Buxton. This has made Route D the only Inter-Urban Route without direct two-way service between Chatham and a PUC (Tilbury). It takes residents departing Chatham for Tilbury two hours to reach their destination compared to the 25-minute return journey from Tilbury to Chatham.

All three routes provide two trips in the morning – departing Chatham at 6:15 AM and 8:45 AM – and two trips in the afternoon – departing Chatham at 4:15 PM and 6:45 PM – Monday to Saturday. A mid-day trip on all routes departing Chatham at 12:15 PM is currently being piloted on a temporary basis.



Figure 3-3: Inter-Urban Network, clockwise from top left – Routes A, C, D

Fleet vehicles are all low-floor 8-metre cutaway buses powered by a hybrid gasoline-CNG engine. Vehicles hold 20 passengers including one wheelchair spot. All vehicles are equipped with standard fare boxes, smartcard validators, automatic vehicle locator systems, visual and audible stop announcement systems, and modem systems facilitating real-time predictive bus arrival information that riders can access via a mobile application or web portal (implemented in Spring 2020). All vehicles are owned by the third-party service provider while all technology mentioned is owned by the Municipality.

There are 93 bus stops along all routes with no sheltered stops. The Inter-Urban network does not offer a parallel service for those requiring Specialized curb-to-curb pickup.

3.1.1.4 Seasonal Service

A seasonal Conventional route operates four days per week during summer months connecting Chatham with the communities of Mitchell's Bay, Grande Pointe, Pain Court, Charing Cross, Blenheim, and Erieau. Known as the "Beach Bus", the service starts on the Friday of Victoria Day weekend in May and continues until the Labour Day Monday in September. Similar to the Inter-Urban routes, this service provides four trips on service days departing at 9:00 AM, 11:30 AM, 3:00 PM, and 5:30 PM.

3.1.1.5 Partner-Provided Service

CKTransit maintains partnerships with three external transit service providers. These partnerships fill service gaps for rural residents not otherwise addressed through the system delivered directly by CKTransit. All three partnerships operate a demand-responsive service delivery model whereby the rider must schedule a trip one or several days in advance. Service hours, eligibility, vehicles, rates, and other levels of service are typically determined by the partner-provider and not dictated by CKTransit.

Erie Shores Community Transit

Erie Shores Community Transit, operated by the South Essex Community Council, provides curb-to-curb service for residents living in Wheatley and Romney (west of Coatsworth Road) with connections to Leamington, Windsor, and other destinations in Essex County. Eligibility is currently limited to those aged 55 or older or if a rider has a temporary or permanent disability. CKTransit subsidizes operating costs proportionately alongside other participating municipalities according to its share of ridership.



This is currently the only public transit service providing a regular connection between Wheatley and Leamington.

Four Counties Transportation



Four Counties Community Transportation, operated by the Municipality of West Elgin, services residents living in Chatham-Kent's Ward 3 including Bothwell, Highgate, Thamesville, Duart, Morpeth, Orford, and Ridgetown. Curb-to-curb connections can be made to any destination in the service area which also includes West Elgin, South West Middlesex, and Newbury. The hospital in Newbury is the primary destination requested by Chatham-Kent residents and connecting residents with that destination was the original objective of the service.

As with Erie Shores, CKTransit subsidizes operating costs alongside other participating municipalities proportionately to its share of ridership. Eligibility has recently been opened up to all residents in the service area regardless of age or physical ability.

AdVANTage Transportation

AdVANTage Transportation, operated by Family Service Kent, services all Chatham-Kent residents up to age 60 with curb-to-curb transit anywhere in the Municipality. Residents over the age of 60 may qualify for transportation under the Community & Home Assistance Program (CHAP) also operated by Family Service Kent.



AdVANTage fills a significant CKTransit service gap by providing transit to all communities, including the possibility of 24/7 service with advanced booking. The service was launched as a four-year pilot project in April 2019 with funding

from the province's Community Transportation Grant Program. The application was a partnership between the Municipality and Family Service Kent.

AdVANTage is a door-to-door service, with pick up and drop off at specific addresses, rather than bus stops. Fares are determined on a sliding scale according to income. While the service was originally limited to those passengers referred from the Ontario Disability Support Program, Ontario Works, and the Children's Treatment Centre of Chatham-Kent, the service is now open to the general public.

As of November 2019 the service also connect residents with destinations outside of Chatham-Kent.

3.1.2 Other Transportation Options

Chatham-Kent is fortunate to have several other transportation services available for residents depending on location, purpose, and demographic factors. The below services are outside the scope of Driving Forward, however they are relevant to the transit needs of Chatham-Kent residents, particularly in areas or times not serviced by CKTransit or its Partner-Providers.

3.1.2.1 Taxi and Ride-Hailing Companies

As of November 2019 the Municipality had 36 active licenses for drivers of taxi or ride-hailing companies. The number of active licenses were as follows:

- Tam's Taxi (Wallaceburg) – 2
- Courtesy Cabs (Chatham) - 11
- Ace Taxi (Chatham) – 1
- URIDE (a Ride-Hailing Transportation Company) - 22

URIDE began operations exclusively within Chatham in October 2018. One year later service within Blenheim was available on Friday and Saturday nights only, with connections between Chatham and Blenheim available at any time.

Taxi service out of Leamington is also available to residents of Wheatley.

3.1.2.2 CareLink Health Transit

CareLink Health Transit, operated in Chatham-Kent through the Community Home & Assistance Program (CHAP), provides accessible and affordable transportation for municipal residents. Destinations range from local to out-of-town locations and fares vary based on destination.

Eligible passengers are:

- Adults age 60+ travelling for a medical appointment or social engagement;
- Adults with disabilities age 18+, travelling for a medical appointment.



3.1.2.3 Robert Q Airbus

Robert Q Airbus provides ground transportation services to and from Pearson Airport in Toronto, London International Airport, and Detroit Metropolitan Airport. Trips require advanced booking by the passenger.

There are two pickup/drop off locations in Chatham-Kent:

- Esso - On The Run, Hwy. 401 at Bloomfield Rd. (Exit 81), Chatham
- Flying J, Hwy. 401 at Hwy. 42 (Exit 56), Tilbury

There is no CKTransit service to either location.

3.1.2.4 School Transportation

A frequent comment from older residents during public engagement activities was their use of public transit in the former City of Chatham to travel to school. Today, all Ontario school boards provide transportation services to eligible students based on their own eligibility policies. The Ministry of Transportation is responsible for licensing and setting standards for the safe operation of school buses in Ontario through the Highway Traffic Act and its regulations. Between two to five school boards will typically form a consortia in order to attract financially favourable bids from transportation service providers.

Chatham-Kent Lambton Administrative School Services (“CLASS”) is a shared services organization that is equally owned by the Lambton Kent and St. Clair Catholic District School Boards. CLASS is responsible for all elements associated with the planning and provision of student transportation services.

Few municipalities in Canada provide student transportation on behalf of school boards. As CKTransit operations are contracted out to a third party, the Municipality would not see any cost benefit to bidding on, or supplementing, school transportation services.

3.1.2.5 Via Rail

Via Rail operates intercity passenger rail service across Canada. Chatham-Kent has one stop on the network – the Chatham Station in Downtown Chatham. Up to eight daily departures are available from the Chatham Station with four departures towards Windsor, and four departures towards London/Toronto.

The station is serviced by a nearby CKTransit bus stop. However the current operating hours of CKTransit are insufficient for the earliest departure towards London/Toronto (6:18 AM) and the two latest departures towards Windsor (9:00 PM and 10:57 PM).

3.1.2.6 Greyhound Canada

Greyhound is an intercity bus transportation service that connects Chatham-Kent with Windsor, London, and destinations beyond.

There are four Greyhound pickup/departure locations in Chatham-Kent:

- 30 Mill Street West, Tilbury
- 664 Grand Avenue East, Chatham
- 41 London Road, Thamesville
- 15807 Longwoods Road, Bothwell

Locations are serviced once in each direction every day of the week.

Westbound (Windsor) departures take place between 11:45 AM – 12:55 PM while eastbound (London) departures take place between 5:45 PM – 6:45 PM.



The Tilbury stop is the only location currently serviced by the CKTransit system. A bus stop along Inter-Urban Route D is within 350m of the Greyhound location. However the frequency of the current CKTransit schedule would see riders arrive at the Tilbury location at 10:35 AM, approximately 2 hours and 20 minutes prior to the Greyhound departure for Windsor. Transit riders would not be served by Greyhound's eastbound service as the earliest afternoon Route D service would see riders arrive in Tilbury approximately 20 minutes after Greyhound's departure.

The Greyhound location in Chatham is located on the community's northeastern boundary approximately 700m from the closest CKTransit stop. While east and westbound departure times are within the Route 2 service span (except for Sundays), there is currently no sidewalk connecting the bus stop to the Greyhound location. Thamesville and Bothwell are not currently serviced by CKTransit. It should be noted that there is no consultation between the Municipality and Greyhound Canada regarding Greyhound pickup/departure locations.

Additional transit and transportation services are also available within the Municipality, often serving a specific demographic. These include Neighbourlink, the Canadian Cancer Society, and others not specifically identified in this report.

3.2 FORECAST AND TRENDS

3.2.1 Profile and Travel Patterns

Driving Forward sought to get an understanding of a typical user of CKTransit services and their travel patterns in order to better anticipate changing needs and ridership level forecasts as population shifts occur over the planning horizon. A survey conducted in 2015 revealed an age cohort breakdown as follows:

- Adult 55.2%
- Senior 20.6%
- Student (including post-secondary) 20.4%
- Child 3.8%

Riders are typically captive to the system, in that they do not have alternative means of transport. Conversations with ridership on Urban, Inter-Urban, and Specialized services reveal the purpose of their travel include all aspects of life including daily use for work and school, and recurring use for shopping, errands, medical appointments, and leisure activities.

Based on ridership volume and travel patterns it is estimated that 2.2% of Chatham-Kent residents (including 4.6% of residents living in Chatham) use public transit more than once per month.

While income data for CKTransit users was not collected, the Ministry of Transportation reports that populations in households earning less than \$40,000 per year are more likely to take public transit than own/operate a private vehicle. The median household income in Chatham-Kent is just over \$50,000. This would indicate a potential for public transit growth where the system operates in areas or times that meet the needs of those prospective riders.

Monitoring transfer behaviour can help identify future express routes in order to shorten trip time between the most popular points-of-interest.

CKTransit uses boarding data to determine popular points-of-interest and travel patterns. In 2019, the top destinations for Conventional service were the Downtown Terminal, St. Clair College, Great Canadian Superstore, St. Clair Ave/CIBC, and CKHA Chatham Campus. The most popular connections between routes were Route 1

↔ Route 2, and Route 2 ↔ Route 4. The most popular connection from the Inter-Urban service was Route C ↔ Route 1. However several popular points-of-interest within Chatham are already directly serviced by Inter-Urban routes so require no connection to an Urban route.

An analysis of passenger boardings by time of day, or by trip for the Inter-Urban service, was conducted using 2019 data:

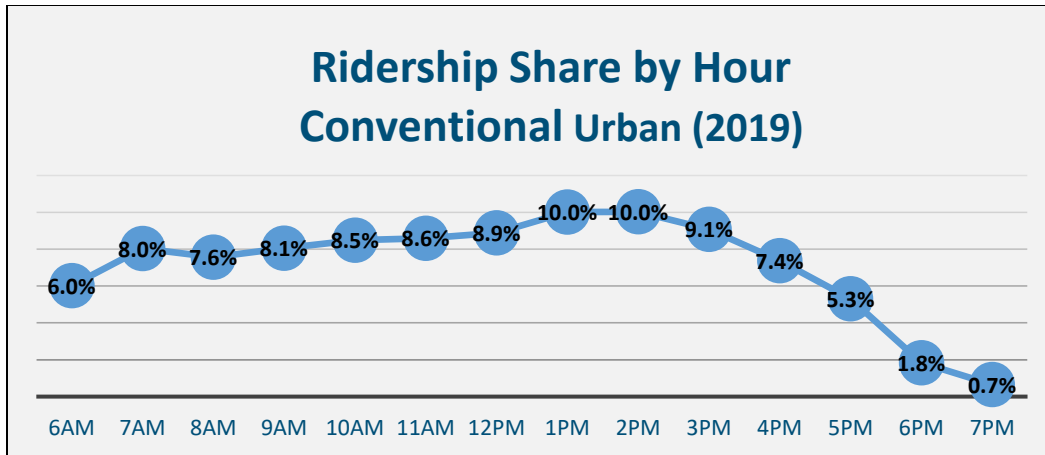


Figure 3-4: Ridership Share by Hour (Conv. Urban - 2019)

Whereas comparable transit systems experience a peak during the morning and afternoon rush hours, with a mid-day trough, CKTransit's Conventional Urban service maintains this peak throughout most of the day. This is attributed to the implementation of on-peak and off-peak bus fares in 2015. Riders who pay using a SmartCard receive a greater discount for riding during off-peak hours. This practice has alleviated some capacity constraints during traditional peak hours spreading passenger loading relatively evenly throughout the day.

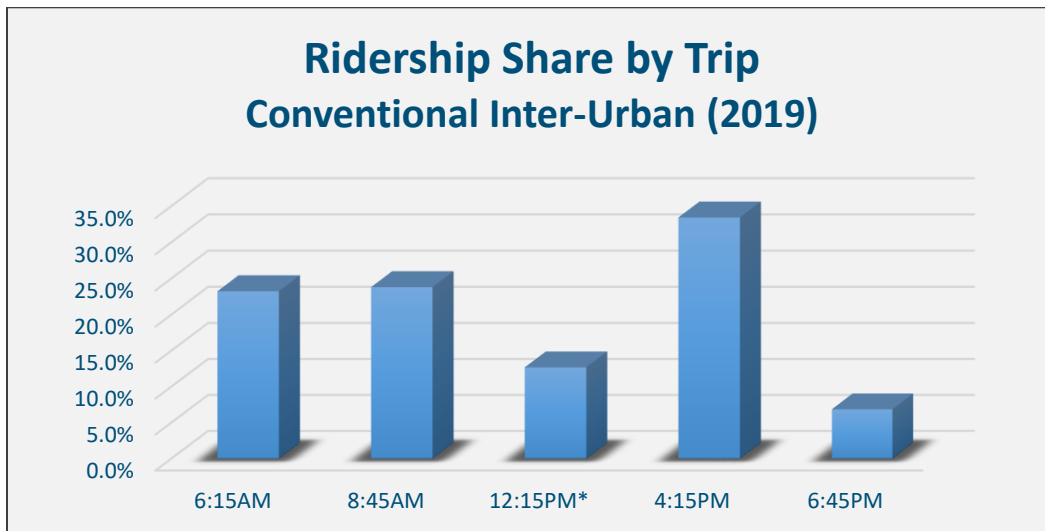


Figure 3-5: Ridership Share by Run (Conv. Inter-Urban - 2019)

**The 12:15PM trip, launched in September 2019, was extrapolated over a 12-month period.*

It should also be noted that Conventional Urban and Inter-Urban Routes experience a 40% and 45% decline respectively on Saturdays.

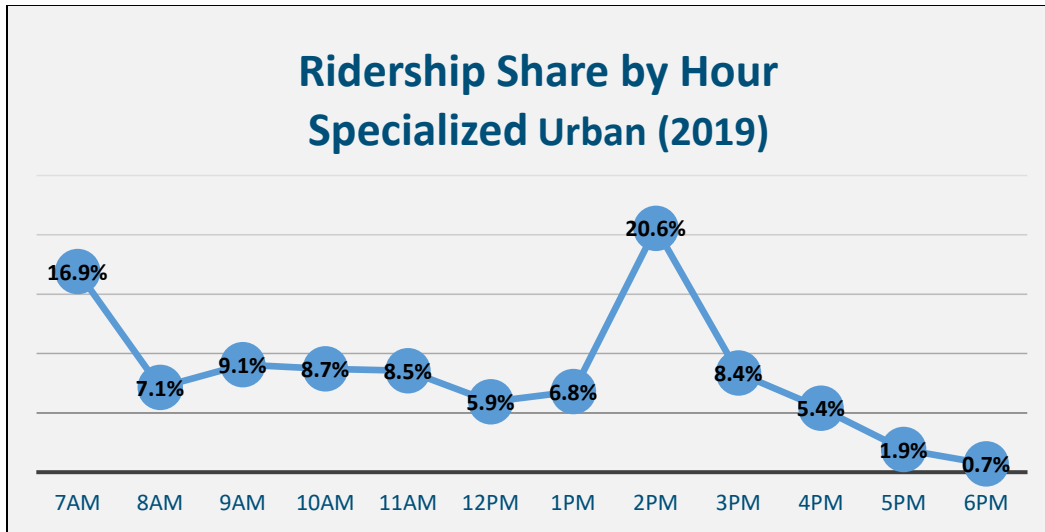


Figure 3-6: Ridership Share by Hour (Special. Urban - 2019)

Specialized Urban service experiences similar peak periods as its Conventional counterpart but with greater variance during off-peak times. Specialized service in Chatham also averages 4-5 trips (<1%) during the extended Friday evening hours (until 11PM). Specialized services further experience an 83% and 90% decrease on Saturdays and Sundays respectively compared to weekday trips.

Across all services, ridership drops roughly 13% during the summer months – May to August – compared to the rest of the year.

3.2.2 Demographic Trends

The Municipal Comprehensive Review for Chatham-Kent, published in 2019, concluded that the Municipality will experience moderate annual population growth at a rate of 0.1% until 2046. The majority of this growth is anticipated to be accommodated within the community of Chatham.

Of significance to public transit is the shifting age demographics of residents. The below table summarizes the population growth forecast for Chatham-Kent by age group share.

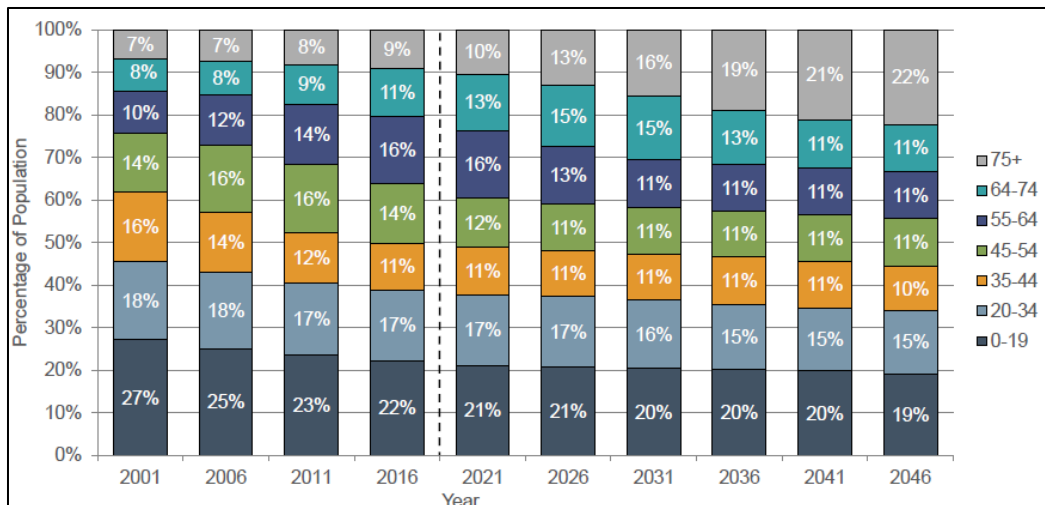


Figure 3-7: Forecasted Population by Age Group, 2016 to 2046
Source: Comprehensive Review 2019, Watson & Associates Economists Ltd.

The oldest demographic (75+) is anticipated to increase from 9% to 22% as a share of the overall population. This equates to an extra 14,700 persons entering that age bracket. Chatham-Kent’s Transportation Master Plan has already concluded that public transit services will become increasingly important to maintain the mobility of an aging society. While older seniors do not make as many trips on the service, they are more likely to be dependent on transit – either Conventional or Specialized – and will continue to make up a large part of the ridership base.

Not captured in the Comprehensive Review is the growth of Temporary Residents – particularly international students attending Thames Campus or Ridgetown College. While this group makes up a small portion of the overall population, like seniors, they are more likely to be dependent on transit. International student enrollment in Chatham has risen between 100-200 students in the last three years. Transit agencies across Ontario have cited an increase in international student enrollment as a contributor to ridership growth. As colleges and universities seek out the additional tuition revenue this market brings, it is anticipated that this trend will continue throughout Driving Forward’s planning horizon.

Economic conditions also play an important role in transit usage. While these conditions are more dynamic and difficult to predict over the long-term, anecdotal conversations with ridership reveal that the abundance of lower wage jobs in lieu of higher waged or salary positions in the past, have resulted in some families reducing car ownership from two to one and utilizing public transit more often. It is important for CKTransit to maintain an open dialogue with Economic Development – particularly amid the uncertainty of the COVID-19 Pandemic – in order to anticipate shifts in ridership demand as a result of new or changing employment opportunities throughout the Municipality.

3.2.3 Ridership Levels

CKTransit has seen exceptional growth over the last few years. From 2016-2019 ridership over all services combined grew by 23% (5.5% annually) to a total of slightly under 340,000 boardings. This can be attributed to the age demographic, international student enrollment, and shifting economic trends already discussed.

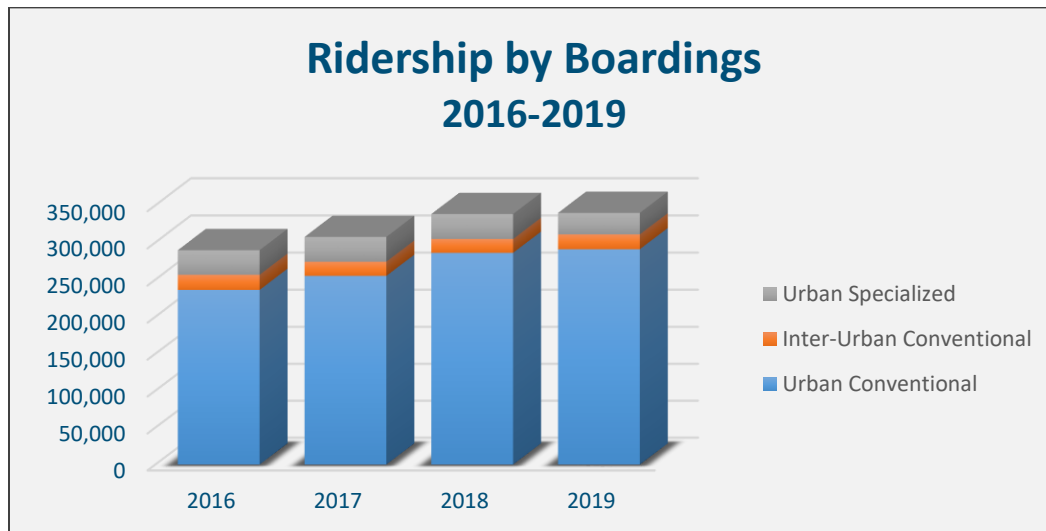


Figure 3-8: Ridership by Boardings 2016-2019

In addition to ridership for CKTransit-delivered services, Erie Shores Community Transportation and Four Counties Transportation sees 360 and 270 annual passenger trips respectively. These ridership numbers have remained relatively flat over recent years. Ridership levels for AdVANTage Transportation, launched in April 2019, were not yet available.

A ridership forecast was conducted using recent historical as well as continuing demographic trends and known variables. It is forecasted that overall ridership will continue to increase between 1-2% each year until 2024. At this time annual passenger boardings will be approximately 372,000. Most of this growth is expected in the Conventional and Specialized Urban routes with low growth in the Conventional Inter-Urban system.

CKTransit ridership is forecasted to grow between 1-2% annually until 2024 at current service levels.

It is important to note that this ridership forecast is based on the existing service levels. It is anticipated that any additional routes or route enhancements as recommended by Driving Forward will further increase ridership levels as outlined in section **5.4.2 Service Sustainability**.

3.3 COMPARATORS AND PERFORMANCE

3.3.1 Peer Comparators

To provide context for this report’s recommendations, Driving Forward has made various comparisons to peer municipalities regarding operating metrics, resource allocation, and financial data. It should be noted that comparisons only provide a high level assessment of the CKTransit system as less tangible factors – such as funding sources, labour or service agreements, service levels, demographics, and local economies – also play a role in service design and delivery.

To provide an accurate comparison to other systems, the CKTransit Conventional Urban service in Chatham and Specialized service in Chatham and Wallaceburg are compared against communities of similar geographic and population size. The CKTransit Conventional Inter-Urban service is compared to regional or more rural based systems involving similar travel distances.

Note that peer comparisons are made using data from the 2018 Ontario Urban Transit Fact Book and 2018 Specialized Transit Services Fact Book published by the Canadian Urban Transit Association and prepared by the Ontario Ministry of Transportation. More recent data on CKTransit performance may be used elsewhere in Driving Forward where relevant.

3.3.1.1 System Descriptions

Belleville has a population, demographic breakdown, and service area similar to the community of Chatham. Loyalist College is located within the community and has a student enrollment roughly twice that of St. Clair College’s Thames Campus. Belleville Transit operates a radial network with both one-way and two-way travel, with routes converging at the transit terminal or other significant hub points. Service operates on a 30-minute frequency with reduced service on weekends. Routes begin as early as 5:00 AM, with a demand-responsive service operating during the evening hours until 12:00 AM.

North Bay has a population and service area similar to the community of Chatham. It is home to Nipissing University and Canadore College, as well as Canadian Forces Base North Bay. North Bay Transit operates a radial network with mostly one-way service converging at the transit terminal. Limited service is available to out-of-town areas of employment at select times. Service operates on a 30-minute frequency with reduced service during evenings and on weekends. Routes begin at 6:15 AM and terminate at midnight.

Sault Ste. Marie has a population comparable to the combined populations of Chatham-Kent’s Primary Urban Centres, over a smaller geographic area. It is home to Sault College and Algoma University. Sault Ste. Marie Transit Services operate mostly two-way routes converging at the transit terminal and other popular points-of-interest. Service operates on a 30-minute frequency, with limited peak-time service on the busiest routes, and reduced service during the evenings and on weekends.

Operations run from 6:00 AM to 12:15 AM on weekdays. A pilot project for demand-responsive service on Sunday evenings has been in place since 2019.

Welland is a city within the Niagara Region with a population, demographic breakdown, and service area similar to the community of Chatham. Post-secondary opportunities are available in the nearby area, serviced by Niagara Regional Transit, but not within the city. Welland Transit operates eight city routes, from 6:30 AM to 11:00 PM on weekdays, with reduced service on weekends.

Woodstock has a population and service area similar to the community of Chatham. The Woodstock campus of Fanshawe College has a student enrollment similar to St. Clair College's Thames Campus. Woodstock Transit operates similarly to CKTransit's Urban service with six one-way routes operating at a 30-minute frequency, six days per week. Service runs from 6:00 AM to 10:00 PM on weekdays.

Niagara Regional transit offers services to communities in the Niagara region comparable to the CKTransit Inter-Urban network. However the service area's population is four times higher than the Chatham-Kent population. The service compliments the area's existing city-operated, or urban transit systems with a focus on connecting post-secondary educational institutions. Nine routes operate at varying intervals according to popularity – ranging from every 20 minutes to only four round trips per day. Routes operate at a higher fare than the city networks they compliment. Routes do not operate on Sundays, with only limited Saturday service.

Norfolk County is a single-tier municipality with a geographic area and population density similar to Chatham-Kent. Ride Norfolk provides transit service within the area as well as connections to larger centres such as Simcoe and Brantford. Depending on the route, service is limited to certain weekdays or a select number of departures per day. Routes operate no earlier than 7:45 AM and terminate by 6:30 PM. There is no weekend service.

3.3.1.2 Conventional Metrics (2018)

System	Population	Ridership	Passenger Revenues	Operating Expenses	Revenue Vehicle Hours	Adult Fare
Chatham-Kent	106,000	304,709	\$518,648	\$1,507,542	25,156	\$2.50 / \$5
Belleville	50,716	1,135,409	\$1,752,982	\$4,379,976	51,440	\$3
North Bay	51,553	1,667,835	\$2,924,378	\$6,151,932	62,400	\$3
Sault Ste. Marie	73,300	1,599,387	\$2,164,237	\$8,568,439	79,957	\$2.90
Welland	52,293	935,373	\$789,914	\$4,951,701	42,908	\$3
Woodstock	41,000	422,833	\$595,999	\$2,574,107	26,892	\$2.50
Niagara Regional	447,888	741,800	\$1,912,765	\$7,346,656	55,625	\$6
Norfolk County	64,044	7,712	\$20,171	\$275,368	3,268	\$2.50 / \$6

Table 3-1: Conventional Transit Performance (CUTA Fact Book, 2018)

3.3.1.3 Specialized Metrics (2018)

System	Active Registrants	Passengers per Capita	Trips	Passenger Revenues	Operating Expenses	Revenue Vehicle Hours
Chatham-Kent	2,184	0.670	37,528	\$101,847	\$775,021	8,255
Belleville	2,736	0.454	23,037	\$10,224	\$423,916	5,760
North Bay	535	0.621	29,216	\$76,274	\$669,342	10,329
Sault Ste. Marie	3,163	0.671	46,913	\$74,212	\$1,229,256	18,010
Welland	297	0.276	14,442	\$23,305	\$415,935	6,600
Woodstock	785	0.887	36,373	\$83,173	\$996,274	18,997

Table 3-2: Specialized Transit Performance (CUTA Fact Book, 2018)

3.3.1.4 Summary of Findings

This section summarizes findings based on the above metrics and other information found during the research process:

- Peer group typically operates later into the evening compared to CKTransit;
- Most of the peer group provides Conventional service on Sundays;
- Price point for fares, and fare concession categories, are similar to CKTransit except the peer group does not offer discounts during off-peak times;
- Most systems allow children under five to ride free, although Sault Ste. Marie and Welland allow children twelve and under to ride free;
- Chatham-Kent spends less on transit operations compared to most of the peer group;
- Most of the peer group offers Specialized service during the same hours and at the same fare as its Conventional system;
- CKTransit delivers the highest number of Specialized trips per capita compared to peers with a similar population;
- CKTransit has the largest service area and second lowest population density;
- CKTransit offers the least number of revenue vehicle hours per capita compared to the other Conventional urban systems;
- CKTransit has the fewest riders per capita compared to the other Urban conventional systems;
- Fare recovery on the CKTransit Conventional system is comparable to other Urban systems;
- Greater Inter-Urban service hours are provided by CKTransit compared to Norfolk County;
- CKTransit typically spends less per Specialized trip compared to most of the peer group.

3.3.1.5 CKTransit On-Time Performance (OTP)

Additional analysis was conducted on CKTransit's on-time performance (OTP) to determine the validity of recurring concerns expressed by riders regarding the inability of buses to remain on schedule. Delays plague every transit system and the level in which a transit agency can control their causes can vary. The causes of CKTransit's poor OTP performance have often been attributed to:

- Route length / design
- Passengers requiring extra time to board (i.e. ramp deployment)
- Train crossings
- Construction, detours, or unexpected traffic conditions
- Weather

It should be noted that the first cause is under direct control of the Municipality while the remaining are largely external forces that warranting mitigation measures.

CKTransit's Conventional Urban system (Routes 1-4) is scheduled to complete 26 runs each service day. A run equates to a single 30-minute loop departing the Downtown Terminal fifteen minutes after and before the hour from 6:15 AM – 7:15 PM. Industry standard dictates that each run should include a 10% recovery time from the scheduled frequency to account for delays or driver breaks.

An analysis using data from September 2018 – August 2019 produced the following:

Route	Distance	Required Avg. Speed to Meet Schedule	Actual Avg. Speed	Median Run Time
1	11.8 km	26.2 kph	23.1 kph	30 min 39 sec
2	12.7 km	28.2 kph	28.0 kph	27 min 13 sec
3	12.4 km	27.6 kph	27.4 kph	27 min 9 sec
4	12.6 km	28.0 kph	29.5 kph	25 min 38 sec

Table 3-3: Routes 1-4 OTP, Sep. 2018 – Aug. 2019

It is important to note that in order to facilitate transfers, buses are instructed not to leave the Downtown Terminal prior to the other routes arriving. This results in all four routes falling behind schedule even if only a single route was delayed. During this time period Routes 1-4 each experienced between 4-5 missed runs (17%) every weekday due to either one or multiple late buses. Whereas the 30-minute routes should be timed to return to the Terminal in 27 minutes (accounting for 10% recovery time), the median for Routes 1, 2, and 3 all exceed this target. Actual recovery time has been recorded as high as 15 minutes since the earliest bus must wait for the latest bus to ensure a coordinated departure from the Terminal.

Route 5 was introduced in September 2019 on a pilot basis to address two primary issues with the Urban network: OTP of Routes 1-4, and overcapacity on Route 1. Route 5 shortened the lengths of Routes 1, 3, and 4 by incorporating some of those bus stops. Over a two month period from October – November 2019 the average number of missed runs on Routes 1-4 was reduced to an average of two each service day.

This analysis validates the schedule adherence issues communicated by ridership. It also supports the conclusion that route length/design (including policy choices leading to excessive vehicle idling time at the Terminal) – which is under direct control of the Municipality – is a significant contributor.

A similar analysis of the Conventional Inter-Urban system (Routes A, C, D) did not reveal any systemic issues with schedule adherence.

4 SERVICE PROPOSALS



Figure 4-1: CKTransit Bus operating Demand-Responsive Service

4.1 LAND USE AND TRANSIT PLANNING

The transit system is planned to support the long-term achievement of urban growth and community development objectives while new land developments are planned with transit-supportive design standards to increase system quality and efficiency.

4.1.1 Key Observations and General Comments

- Transit system design can be used to support municipal land-use and growth objectives however transit operations are typically planned reactively to urban design, negatively impacting this potential, as well as the quality and efficiency of service;
- Long-term plans or metrics, such as coverage goals, triggering future transit route development have not been identified;
- Design standards supporting the transit system have either not been identified or not consistently been applied during the land development review process;
- The Downtown Chatham Terminal is in an ideal location for route convergence, however ridership would like more transfer point options;
- There is disconnect between the route planning process and the land-use planning process;
- Chatham-Kent does not collect Development Charges for transit to assist with growth-related capital improvements;
- Transit routes, stops, or exchange points have not always been built alongside connecting infrastructure (e.g. sidewalks) to ensure accessibility;
- Where resources are limited residents generally prefer a transit system with sufficient coverage in their respective community over sufficient frequency, however infrequency is often cited as a barrier to usage;
- Local routes in Chatham, designed as one-way loop, maximizes community coverage but increases travel times;
- Urban coverage goals have not been established to help inform expanded transit service cost implications of new developments;
- Urban frequency goals have not been established to help inform long-term infrastructure requirements – i.e. physical or regulatory transit priority measures – to reduce delays;

- Employment/housing demand and supply vary across Primary Urban Centres necessitating the need for an interconnected transit system (i.e. Inter-Urban) between these designated growth centres;
- Access to private property holding popular ridership destinations such as shopping malls, schools, etc. can be limited due to permission rights or safety concerns caused by non-supportive design.

4.1.2 Designing Chatham-Kent for Transit

The design of Chatham-Kent's transit system can serve an important role in achieving the Municipality's broader goals of growth, density, and community development. However the quality of transit operations, including its reliability, accessibility, and efficiency, are highly dependent on the Municipality's urban design and planning standards. Urban design that does not support transit use negatively impacts the cost and quality of the transit system. A poorly designed and costly transit system, in turn, reduces system adoption and its ability to support targeted growth and development. Understanding this mutually dependent relationship is critical should Chatham-Kent choose to position itself over the long-term as an attractive destination for residents and employers who increasingly rely on efficient and sustainable transit service to meet their needs.

CKTransit is challenged with providing service to a relatively low population over a large geographic area. Even the largest community of Chatham has its major points-of-interest scattered across its boundaries with new residential developments primarily planned on its periphery. In addition, Chatham-Kent has identified seven Primary Urban Centres (PUC) for planned growth. Residents and employers of each PUC have identified access to

public transit as an important service in order to remain and be successful in their community. However 29% of residents live in Secondary Urban Centres, rural areas, or site-specific developments. Many of these residents have also identified transit service as necessary to access critical services or other opportunities not found in their respective community.

Urban design that does not support transit use negatively impacts the cost and quality of the transit system and its ability to support targeted growth and development.

As urban sprawl occurs and new developments are proposed, the financial and operational impact of delivering transit service must be planned alongside other infrastructure costs required to service those new developments (utilities, sidewalks, roadways, etc.). Conversely, not providing transit service to those new developments negatively impacts the policy objectives of the Municipality. Transit considerations have not consistently been given during the development review process resulting in a transit service that must be designed to support new land developments, rather than designing land developments to support the transit system.

This section outlines issues and recommendations concerning a more integrated land use and transit planning approach.

4.1.2.1 Land Use Development

Chatham-Kent's Official Plan establishes objectives and policies to guide the short-term and long-term physical development of all lands within the Municipality. Policy direction in the document aims to create urban communities with concentrated growth and a mix of land uses, with specific reference to medium- and high-density residential development along roads where transit is either provided or planned. Adherence to these policies can better support the design of a quality and efficient transit system.

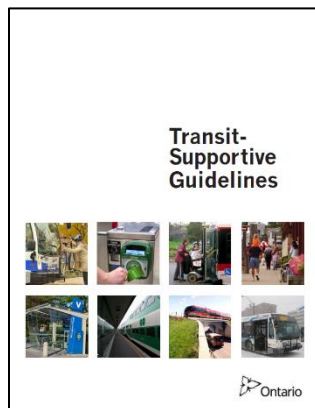


Figure 4-2: Transit-Supportive Guidelines, Ministry of Transportation

Other objectives and policy statements in the Official Plan aim to promote an active and healthy population, increase social interaction, and reduce private automobile dependency. However specific reference to public transit as a contributor to those objectives is often omitted from those policy statements in favour of active transportation. Given that all Conventional transit users are pedestrians (or possibly cyclists) at some point in their trip, the Municipality should ensure public transit is recognized as an asset in achieving the same social, environmental, and economic objectives as active transportation.

Furthermore, additional infrastructure is required for effective public transit delivery beyond the first-mile, last-mile infrastructure (connected sidewalks, trails, etc.) shared with active transportation. Sheltered stops, sidewalk leads, signage, or physical transit priority measures must all be considered in long-term land use planning. Driving Forward suggests the

Municipality recognize this difference through specific policy direction to support infrastructure and design standards that encourage public transit usage.

Some of the most common criticism received from the public concerning the CKTransit system was related to infrastructure and land design. This included:

- Inaccessible bus stops not connected to existing sidewalk network or pedestrian crossing;
- Insufficient right-of-way space to place a shelter or implement transit priority measures required at popular destinations or high-ridership routes;
- Bus stops too far from the front doors of popular points-of-interest due to either access permission or safety concerns.

Chatham-Kent's review process for land developments, mandated under the Planning Act, involves a Technical Advisory Committee (TAC) – with representation from various municipal departments – who, in part, ensure that land development occurs with full awareness of the potential implications on the objectives and policy direction of other service areas. However, a gap exists between defined transit objectives and the design standards required for their implementation. While CKTransit is represented on TAC through a member of the Traffic and Transit division, design standards specifically intended to support the transit system have not been identified or documented. This has resulted in inconsistent identification of potential land development issues, or missed opportunities, that negatively impact the quality and efficiency of transit service.

Missed opportunities to plan transit-supporting infrastructure alongside municipal capital projects such as road or boulevard construction are discussed in sections **4.1.3.2 Transit Corridors** and **4.1.4 Identifying Exchange Point Locations**.

More observable issues impacting ridership occur when significant points-of-interest on private lands are inaccessible to the transit system. This includes both:

- Design barriers that prevent the safe passage of transit vehicles or create long walking distances and unsafe conditions for riders; and
- Permission barriers where private property owners do not permit transit vehicle passage despite requests from ridership.

Many of Chatham-Kent's top destinations, such as shopping malls, schools, and entertainment attractions, are located on private property. Routes with direct access onto private property notably include the Real Canadian Superstore (Chatham), Cascades Casino (Chatham), Beer Store (Wallaceburg), and Sobeys (Blenheim). In all cases, CKTransit had to design its system to fit the layout of these developments. Transit vehicles share the same access points into parking lots with private automobiles contributing to schedule delays and safety hazards. Design issues may also limit where transit vehicles can operate within the development, including:

- Building overhangs preventing the passage of transit vehicles;
- Speed bumps or tight passageways increasing risk of collision;
- Insufficient turning radii;
- Accessibility or other safety concerns for passengers at available bus stop points.

Driving Forward is recommending design and permission barriers to transit be mitigated through the creation of development standards to support transit usage and applied during the development review process. Transit-supporting design standards have been adopted by several Ontario municipalities and may be triggered by:

1. New developments along a designated Transit Corridor;
2. New developments within proximity to a designated Exchange Points;
3. New developments resulting in a failure to maintain defined urban coverage goals – i.e. area not currently serviced by existing transit network;
4. New developments potentially resulting in a failure to maintain defined frequency goals – i.e. the development is within the existing transit network but may generate delays due to increased ridership;
5. New commercial or industrial developments with long setback distances likely to generate ridership requests for direct access to the property.

Specific standards identified through public feedback and best practice may include:

- Setback distances conducive to riders with limited mobility for multi-unit dwellings, senior residences, or mid-size commercial developments;
- Connected and accessible pedestrian access into industrial or larger residential and commercial developments;

- A prescribed percentage of land in large commercial developments be conveyed to Chatham-Kent for transit infrastructure (shelters, bus bays, etc.) along with right-of-way privileges and a dedicated route;
- Proactive identification of future transit stop location(s) in residential developments should transit system expansion be implemented;
- Expanded right-of-way privileges for transit vehicles or infrastructure where pedestrian access from the roadway is problematic;
- Diverse mix of land use around Transit Corridors and Exchange Points, as well as access to car and bicycle parking, and connections with active transportation infrastructure.

4.1.2.2 Primary Urban Centres (PUC)

The Official Plan directs most planned growth to Chatham-Kent's seven designated PUCs: Blenheim, Chatham, Dresden, Ridgetown, Tilbury, Wallaceburg, and Wheatley. Full municipal services are to be available in these communities in order to support growth objectives. This growth requires access to employment opportunities (employers in turn require access to residents whether as consumers or labour), education, leisure, and critical services such as medical appointments and grocery shopping. Quality transit systems serving those designated growth centres attract residents and businesses, leading to higher density, higher ridership, and less financial subsidy.

The small size (< 5,000 population) of most of these PUCs necessitates access to other PUCs since some of those opportunities or services may not be available within their own urban boundaries. 71% of Chatham-Kent residents live in PUCs with nearly all forecasted population growth expected to occur in those centres:

Primary Centres	Population	
	2016	2046
Chatham	44,500	48,500
Wallaceburg	10,200	9,600
Tilbury	4,800	5,100
Blenheim	4,400	4,600
Ridgetown	3,100	3,100
Wheatley	3,100	3,900
Dresden	2,500	2,600
Total Primary	72,600	77,400
Secondary Centres	3,700	3,800
Rural Area	25,700	24,900
Chatham-Kent	102,000	106,000

Table 4-1: Population and Population Forecast by Primary Urban Centre
Source: Comprehensive Review 2019, Watson & Associates Economists Ltd.

While quality and efficient transit service can help achieve growth objectives, common criticism of the Inter-Urban system is that the lack of frequency and excessive travel time make the service insufficient to connect most residents with the employment and educational opportunities found in other PUCs. Additionally, Wheatley has been without any Conventional transit service since 2011.

It is important to note that of the 26,224 annual revenue vehicle hours (RVH) currently allocated to Conventional service in the base budget, approximately 10% of hours are utilized to service Chatham-Kent communities not designated as PUCs. While public transit should not exclusively apply only to the PUCs, the different policy direction necessitates that transit service be planned exclusively from one another in order to achieve their separate development objectives. Servicing a non-designated PUC at the same service level as a PUC, through a shared route, either:

- A. Sacrifices urban development and growth objectives of the PUC whereas coverage or frequency has been sacrificed;
- B. Indirectly encourages growth in the wrong designated growth area, increasing infrastructure costs; or
- C. Both

Strong public feedback was received from Tilbury residents during the Driving Forward public engagement process regarding the excessive two-hour travel time to get from Chatham to Tilbury due to the route deviation to service several non-PUC communities located in southwest Chatham-Kent.

4.1.2.3 Secondary Urban Centres and Rural Areas

Approximately 30,000 Chatham-Kent residents live in designated Secondary Urban Centres or other rural areas. The largest settlement areas consist of fewer than 1,000 people, including Thamesville, Charing Cross, Merlin, Mitchell's Bay, Bothwell and Pain Court. Transit needs in these communities have primarily focused on access to critical services such as medical appointments, social services, or grocery shopping. Other residents require transit service to attend leisure activities and reduce social isolation. Some of these residents currently use the Inter-Urban service to get to work or school.

The Official Plan supports the concept of healthy communities through the provision of a safe, healthy and complete community through affordable housing choices and a range of safe transportation options, quality human services, schools, public spaces and local amenities. Many of these residents have cited barriers to their ability to move to a PUC where access to critical services can be more easily achieved. Furthermore, as an agricultural community it should be expected that many Chatham-Kent residents will be unable to relocate since they service the industry.

Chatham-Kent should plan for transit service options for residents outside PUCs in order to support the achievement of the healthy communities concept along with community development principles. See section **4.2.3.3 Community Routes**.

4.1.3 Planning Transit Services

4.1.3.1 Frequency vs Coverage

Transit planning must consider how resources are to be allocated. As with all transit operators, CKTransit faces competing priorities for limited transit resources. These priorities can be summarized as a dichotomy between Ridership (Frequency) goals and Coverage goals.

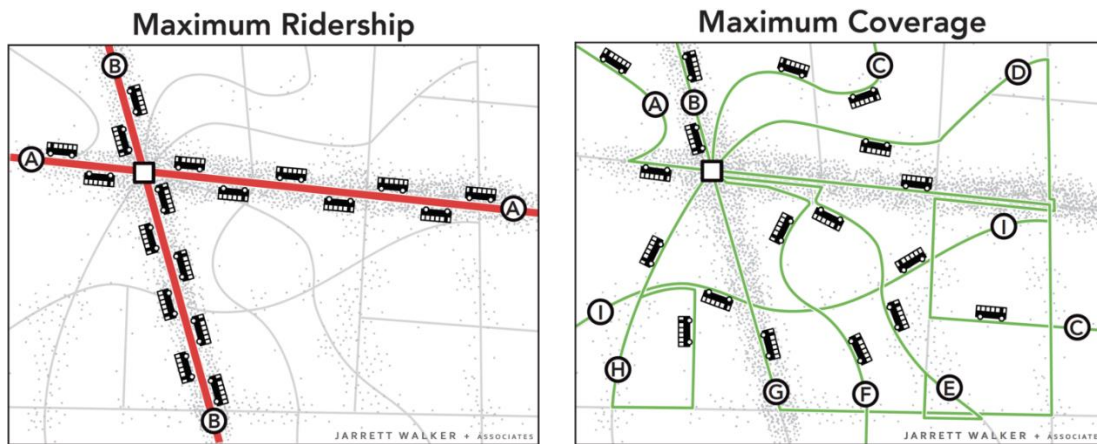


Figure 4-3: Ridership vs Coverage transit designs. Image by Jarrett Walker + Associates

Ridership, or Frequency, goals are established in the interest of economic efficiency whereby the system focuses on the highest density or highest demand areas. Bus frequency is typically greater in order to maximize ridership. The efficiency outcomes of this approach are usually referenced in development strategies such as the Official Plan where density is desired. This system would theoretically focus on the community of Chatham's arterial roads, or to major destinations where the highest density exists and the routes can service those stops in the most direct manner. Since service is concentrated, the frequency of bus service can be increased by adding more vehicles to the route.

Coverage goals are established in the interest of social equity whereby the system focuses on providing some transit service, regardless of location, to ensure those with the highest need have mobility options for recurring activities such as medical appointments, shopping, or leisure. Coverage goals typically result in less frequent transit but over a larger area. The equity outcomes of this approach are usually desired or referenced in strategies concerning social services or improved accessibility for vulnerable populations.

The current CKTransit Conventional network is focused on achieving Coverage goals. All Urban and Inter-Urban routes respectively run on the same frequency regardless of ridership demand. During peak ridership times, this has resulted in riders being left behind because of a full bus on one route, while a bus on another route was at low capacity. However, more bus stops are available to residents within their community to reduce walking distance and increase the service area.

Whereas both goals are admirable, the achievement of each must be prioritized when working within a fixed funding envelope. The prioritization of transit goals are further necessitated by the geographic size and relatively low population density of Chatham-Kent.

Public feedback has demonstrated that achieving Coverage goals remains the transit system's priority for residents within their urban area. While increased frequency is still requested by residents, there is little public desire to reduce coverage (i.e. bus stop locations and routes) in favour of improving frequency to the most popular destinations. Furthermore, achieving Frequency goals is typically the focus of cities looking to encourage the adoption of public transit over private automobile usage in order to alleviate traffic congestion. Specific targets to reduce automobile traffic have not been

identified by the Municipality nor was traffic congestion raised as an issue during Driving Forward’s consultation process.

Service level and route recommendations in this report have prioritized improved Coverage over improved Frequency within a Primary Urban Centre where limited resources are expected.

4.1.3.2 Transit Corridors

Transit Corridors are linear areas within a municipality specifically identified for long-term public transit infrastructure development. Whereas routes may shift with new travel patterns, demand, or operational limitations, Transit Corridors are static designations where infrastructure and new land developments conducive to transit use are identified and prioritized over years and decades. The designation of Transit Corridors within Chatham-Kent urban areas is required to help achieve urban density goals – required to better sustain transit – and trigger transit-supportive development standards when capital upgrade projects on roads and boulevards are performed or new developments are proposed on adjoining lands.

There is a close relationship between Transit Corridors and the classification of municipal roads. Chatham-Kent’s urban roads are classified as Arterial, Collector, or Local:

Urban Arterial	Urban Collector	Local
<ul style="list-style-type: none"> • Serve intra-urban and through travel; • Direct access from abutting properties is limited, particularly near major intersections; • Right-of-way widths of 26.0 m. to 35.0 m; • Posted speeds vary from 50 km/hr to 70 km/hr. 	<ul style="list-style-type: none"> • Serve moderate volumes of inter-neighbourhood traffic; • Connect collector and local roads to arterial roads or provincial highways; • Direct access from abutting properties is normally permitted, except near major intersections; • Right-of-way widths vary from 20.0 m. to 26.0 m.; • May contain on-street parking on one or two sides; • Posted speeds vary from 50 km/hr to 60 km/hr. 	<ul style="list-style-type: none"> • Serve residential and/or employment areas; • Connect individual properties to collector, arterial roads and Provincial highways; • Direct access from abutting properties is permitted except near major intersections; • Right-of-way widths of 20.0 m. minimum; • Provision for on-street parking on one or two sides; • Posted speeds vary from 40 km/hr to 60 km/hr.

Table 4-2: Urban Road Design Requirements in CK Official Plan

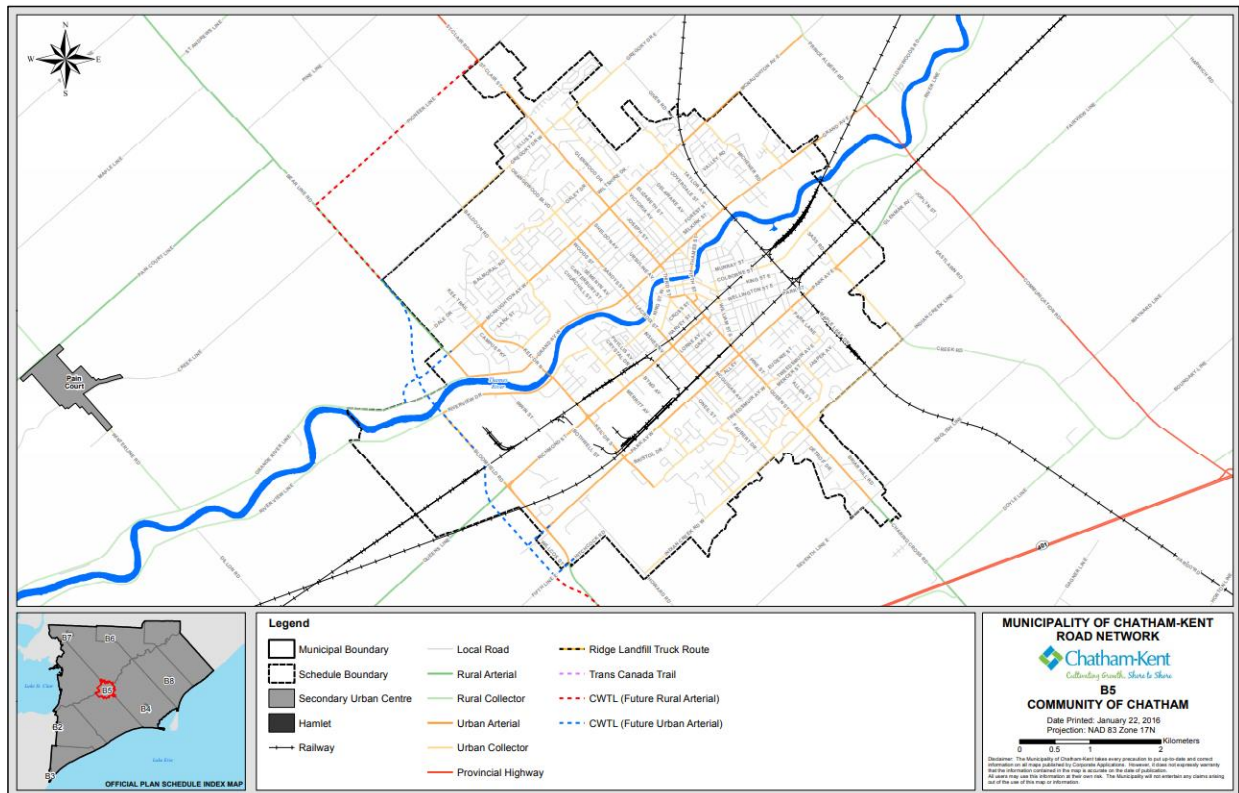


Figure 4-4: Road Network in Chatham

Transit Corridors should be planned along urban arterial roads where travel is more direct, continuous, and maintenance standards are highest. They should identify specific locations for bus stop infrastructure utilizing current right-of-way widths or identifying requirements for expanded right-of-way space if necessary. The actual installation of transit infrastructure may not occur until funding sources are secured or ridership warrants. However, their proactive identification will ensure opportunities are not missed to support their installation should adjoining capital projects take place.

Transit Corridors may be identified and utilized for existing routes, or they may be identified in areas targeted for logical expansion of the transit service. Unlike current route design, Transit Corridors should plan for infrastructure on both sides of the street to prepare for future two-way local route development.

Due to the small ridership and population of most PUCs, it is only recommended at this time to identify Transit Corridors in Chatham and Wallaceburg. The below is a conceptual layout of Transit Corridors based on existing road classification, known capital projects, and ridership patterns:

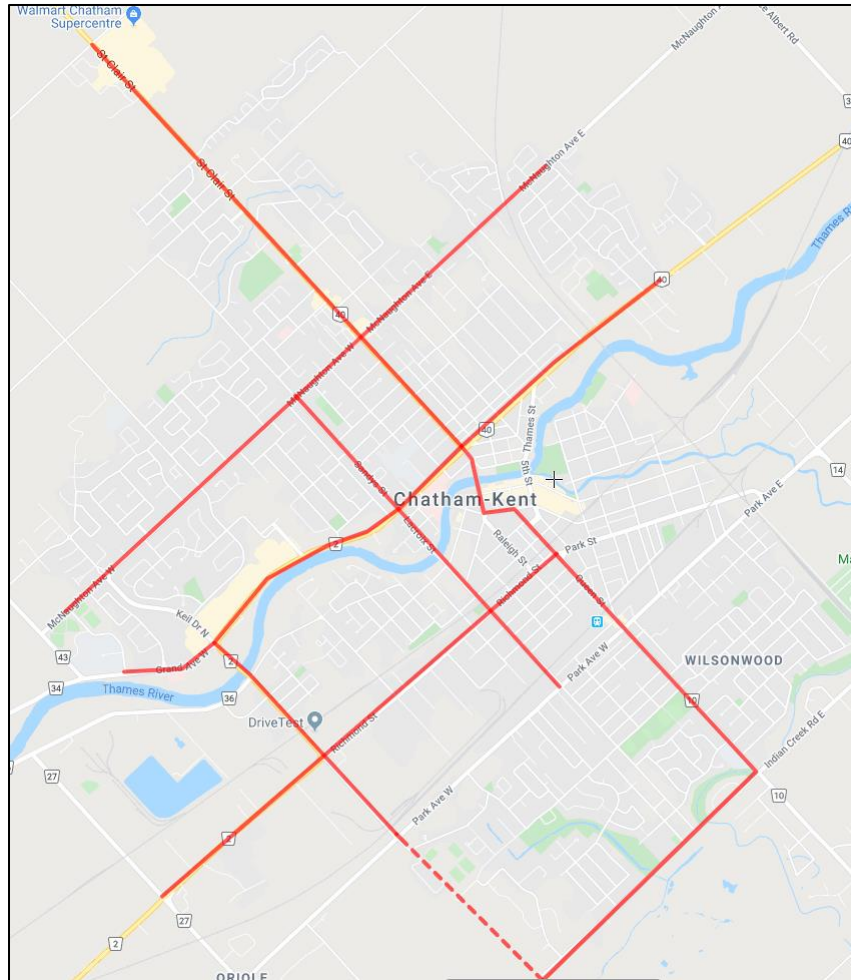


Figure 4-5: Conceptual layout of Transit Corridors in Chatham

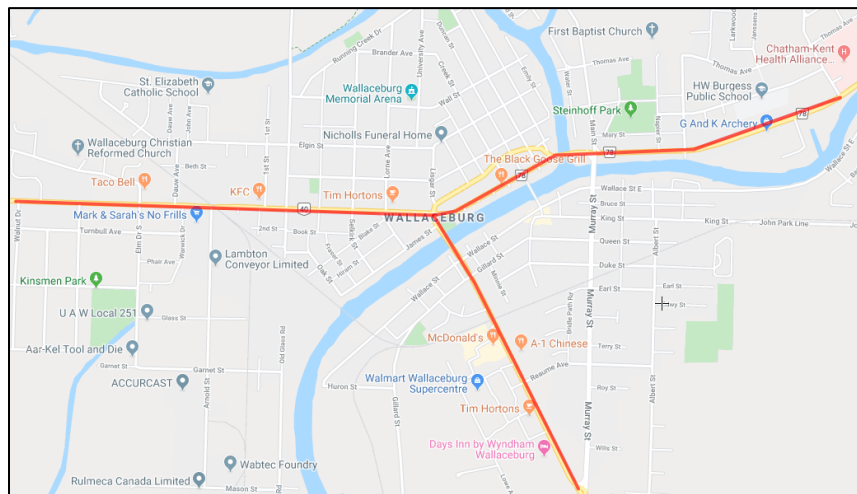


Figure 4-6: Conceptual layout of Transit Corridors in Wallaceburg

4.1.3.3 Planning Future Fixed Routes

Driving Forward is recommending fixed route design within an urban area primarily be planned along Transit Corridors to take advantage of supporting infrastructure, with deviation onto collector or some local roads to meet coverage goals or to service disconnected points-of-interest. Route design should have the ability to be adjusted on a periodic basis due to changing circumstances without the excessive costs of significant infrastructure relocation.

CKTransit's fixed routes in Chatham service all road classifications with a focus on maximizing coverage at the expense of travel efficiency. As routes only travel in one direction, it is quicker to travel from Point A to Point B than it is to travel from Point B to Point A. This is a frequent complaint among transit users.

A Route Optimization Study is recommended in order to address systemic issues with fixed routes in Chatham and facilitate planning for possible route expansion.

These one-way loop routes have the advantage of providing service over a larger area. However, two-way routes provide more direct travel and are often more legible for ridership. They also provide safer and more convenient options along arterial roads where pedestrian crossings are spaced further apart. Richmond Street between Keil and Bloomfield is a notable example where riders may have to walk up to 1.5 kilometres simply to access the businesses on the opposite side of the road.

There are two options to implement two-way fixed routes in Chatham:

1. Continue with loop design but add another vehicle travelling in the opposite direction; or
2. Create a new two-way fixed route network designed for more direct travel.

Option 1 is not recommended as it will double the number of Revenue Vehicle Hours necessary for implementation and still result in less direct travel for riders. There are also many areas along the current routes which would make two-way travel operationally difficult. This includes several left turns without adequate traffic controls, limited right-of-way access on boulevards, lack of sidewalk or other accessible infrastructure, and street parking.

Option 2 is preferred, however, the cost of adjusting or installing additional infrastructure to facilitate the design is expected to be significant, and a complete overhaul of a fixed route transit network would demand further public consultation not conducted in Driving Forward.

It is recommended a Route Optimization Study be conducted, particularly where there is increased funding to facilitate the introduction of new fixed routes in Chatham, with the following goals:

- Design new routes along Transit Corridors with connections to Transit Hubs to take advantage of supporting infrastructure, with deviation onto collector or some local roads to meet coverage goals or to service disconnected points-of-interest.
- Maintain existing coverage of at least 90% of Chatham residents within a 400-600m walking distance of a bus stop. This may include the incorporation of flexible stops to meet coverage goals without jeopardizing schedule adherence;

- Increase two-way travel and directness of travel, to the greatest extent possible, particularly along Transit Corridors where opportunities for pedestrian crossing are limited;
- 30-minute frequency, including adequate recovery time, for all Local Routes;
- Identification of future express or local routes should funding become available.

4.1.3.4 Transit Priority Measures

Transit Priority is a term used to refer to a variety of measures designed to give transit vehicles and their riders priority over general vehicular traffic. Transit priority measures can be:

- Regulatory, such as “Yield to the Bus” regulations and signage (applicable in Ontario), lane or parking restriction depending on time of day;
- Operational, such as re-timing traffic signals to respect the large number of passengers on transit vehicles compared to private vehicles; and
- Physical, such as exclusive transit ways, or intersection queue jumpers.

Driving Forward did not find vehicular traffic to be a significant factor in schedule-adherence issues. While peak traffic can delay buses, a cost-benefit analysis regarding the cost of installing Transit Priority infrastructure and saved transit time would likely not warrant action. An exception is the low-priority traffic signal control opticom emitters installed on Conventional buses. These should continue to be utilized on the CKTransit Conventional fleet as they are a cost-effective tool to reduce idling time.

Regardless, the potential for capital investment in Transit Priority Measures may be identified in the future along Transit Corridors based on data collected during the traffic surveying process or should future schedule adherence issues be attributed to an increase in vehicular traffic or ridership.

4.1.4 Identifying Exchange Point Locations

Exchange Points are locations where transit riders switch between different routes or modes of transport. Driving Forward has identified two types of Exchange Points relevant to CKTransit: Transit Hubs and Secondary Exchange Points.

4.1.4.1 Transit Hubs

Transit Hubs are more significant infrastructure developments and can serve as anchor points for routes, and are typically:

- Located in urban environments adjacent to popular points-of-interest;
- Are a single point that does not require crossing the street to transfer vehicles;
- Are the touch point for multiple route types and may include timed connections;
- A larger physical structure, entirely accessible to multiple passengers with mobility devices;
- Provide customer service amenities such as the display of pertinent information (route disruptions, new services, schedules, real-time arrival times, etc.), shelter from the elements, parking, nearby washrooms, or other amenities.

The CKTransit Conventional network identifies the Downtown Chatham Terminal (47 Centre Street) as the only Transit Hub. However transferring between routes is possible at other locations. As CKTransit explores a network consisting of Urban, Inter-Urban, and Community Routes, serviced by both fixed route and demand-responsive transit services, the planning of multiple Transit Hubs will be necessary to facilitate seamless transfers between routes due to both the geographic size of Chatham-Kent, and high ridership numbers at points-of-interest in Chatham other than the Downtown Terminal.

Public feedback and an analysis of ridership data and future route connections has identified five possible locations for consideration of Transit Hub development within Chatham:

1. Downtown Terminal
2. St. Clair College Thames Campus
3. SmartCentres Chatham
4. Richmond/Keil Drive Business and Commercial Area
5. Chatham Plaza (South)

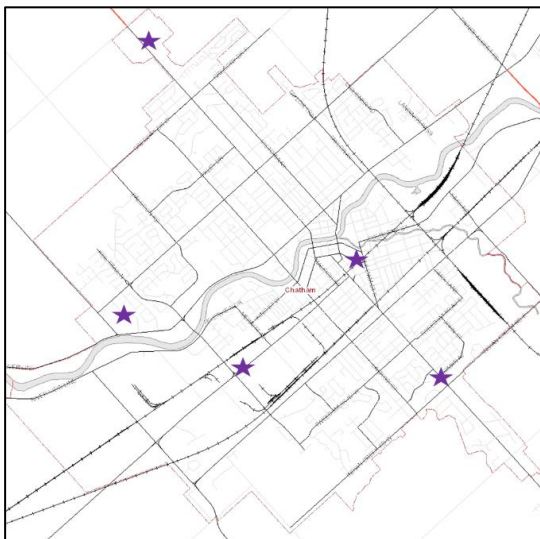


Figure 4-7: Conceptual Layout of Transit Hubs in Chatham

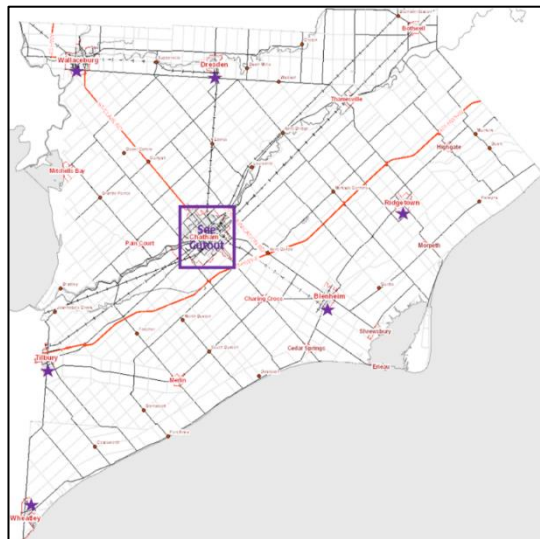


Figure 4-8: Conceptual Layout of Transit Hubs across Primary Urban Centres

Furthermore, a significant concern from riders in PUCs outside Chatham is the absence of any sheltered stops. Given the future possibility of riders making connections between Inter-Urban and Community Routes, and considering the longer wait time riders experience in those communities, it is recommended a Transit Hub be explored in each PUC.

It is suggested that the potential locations of Transit Hubs be re-evaluated as part of a Route Optimization Study recommended in section **4.1.3.3 Planning Future Fixed Routes**. The physical development of these lands will be pending available funding and may only be required whereas future route connections and ridership growth warrants. However the preliminary identification of these points is necessary should project synergies arise through upcoming capital projects or new land developments.

Where funding is limited, Transit Hubs outside Chatham should be planned in areas where the rider can access a public building such as a library or municipal centre to seek shelter, use their facilities, or access information.

4.1.4.2 Secondary Exchange Points

Secondary Exchange Points should be identified and planned along Transit Corridors where two routes are likely to converge, and riders can change from one vehicle to another. These are not a single point but would require the rider to cross the street to catch the bus traveling perpendicular to the originating bus. Secondary Exchange Points do not require significant infrastructure investment other than a shelter at each bus stop point and active transportation measures such as sidewalks or pedestrian crossings to connect the two points. The potential of a bus bay must also be considered in long-term infrastructure planning should this Exchange Point be used as a timed stop. A bus bay would permit vehicular traffic to pass the bus while it waits for its scheduled release time.

These Exchange Points would likely only be necessary in Chatham. Current route design would necessitate this only at the intersections of:

- St. Clair Street / McNaughton Avenue
- St. Clair Street / Grand Avenue
- Lacroix Street / Richmond Street

4.2 TRANSIT SERVICE DELIVERY

All Chatham-Kent residents are able to access sustainable transit services that support urban growth and daily life.

4.2.1 Key Observations and General Comments

- Most areas of Chatham-Kent have too low of a prospective ridership to justify frequent fixed route transit service;
- Defined goals for Coverage and Frequency have not been established to assist decision-making or justify the current service levels to the public;
- The Inter-Urban network provides daily service to several secondary or hamlet communities representing less than 1% of ridership;
- All Urban local routes in Chatham converge at the Downtown Terminal at the same scheduled time to facilitate transfers, however delay to a single route delays all routes;
- Urban routes in Chatham experience systemic schedule-adherence issues and do not have adequate recovery time to “catch up” once a delay is experienced;
- All Conventional routes are allocated with a single vehicle regardless of ridership demand;
- There are no contingencies if a vehicle is over capacity. The rider must wait for the next scheduled bus;
- Service hours do not reflect many employment opportunities available in the community;
- Specialized transit departures may be delayed up to 10 minutes due to a combination of policy and customer behaviour;
- Specialized transit is offered at greater hours in Chatham and is the only transit option in Wallaceburg, incentivizing ridership to use this service versus Conventional;
- Route D only provides one-way travel, taking nearly two hours for ridership to travel from Chatham to Tilbury;
- The AdVANTage Transportation pilot service fills large rural gaps in the CKTransit network;
- 95% of the Beach Bus ridership uses the service only on a weekend or holiday resulting in virtually no ridership on Fridays and Mondays;
- Wheatley residents prefer a transit connection to Leamington versus Tilbury/Chatham;
- Major employers in Chatham must recruit residents from other urban centres to meet labour demand, citing transit as a barrier;
- Conventional ridership decreases 40-45% on Saturdays.

4.2.2 Determining Delivery Models

Driving Forward has identified three primary models for public transit service delivery relevant to Chatham-Kent. The choice of a delivery model in a specific area or during a specific time is based on the most financially efficient model given the volume of ridership.

1. Fixed Route
2. Demand-Responsive
3. Partner-Provided (Subsidized)

Figure 4-9: Transit Delivery Models

4.2.2.1 Fixed Route

Fixed routes operate along a fixed path, with fixed stops, over a fixed schedule. All CKTransit Conventional routes currently operate according to this model. The fixed route has been the primary method of public transit delivery since its beginnings. It has the benefit of being easily understood, predictable, and negotiable by local ridership and visitors. It is also the most financially efficient whereas a large volume of riders are moving between similar origins and destinations at similar times. Conversely, the fixed route model is less financially efficient in lower density areas or during lower ridership times.

Industry standard indicates that fixed routes are the most efficient option where ridership is at or above 15 riders per vehicle hour. Currently all Conventional routes in Chatham are above that rate during daytime hours. All other service areas within Chatham-Kent are well below that threshold.

It is important to note that fixed route services also do not always provide adequate coverage within a service area. Maximizing coverage has been identified as important to CKTransit riders.

Driving Forward is recommending the continued use of fixed route service in Chatham, during the daytime hours, where it is economically efficient or would be the most utilized option according to local ridership capabilities. In order to increase coverage within Chatham, without decreasing existing frequency or adding fixed routes, alternative models below should be considered for supplementation.

Flexible Fixed Route

Flexible fixed routes are designed to allow for pathway deviations without creating excessive delays for other riders on the bus. They can be considered a hybrid between fixed route and demand-responsive delivery models. Flexible fixed routes consist of a set path, with opportunities to either deviate or extend the path to service additional stops on request. Any minor delay caused by the deviation would be made up for on subsequent runs when the deviation is not requested.

Fixed Route daytime Conventional service in Chatham, with flexible stop options, facilitates the efficient movement of a higher ridership over a larger coverage area while better maintaining schedule.

This permits bus stops in the deviation area to theoretically be serviced at the same frequency as other stops along the fixed path when required, but due to limited requests, they will not regularly place time stress on the route in order to meet its schedule.

Requests for the flexible stop drop-offs could be made when the rider boards the vehicle. Requests for pickups could be made through the same booking processes (phone call, mobile app, website) used for demand-responsive service delivery discussed below.



Figure 4-10: Conceptual layout of Route 4 using Flexible Fixed Route delivery. The fixed route portion (orange) would travel from Riverview Drive, turning left on Keil Drive. The route would only deviate to service stops on the western portion of Riverview Drive (yellow) when requested, before returning to Keil Drive.

4.2.2.2 Demand-Responsive

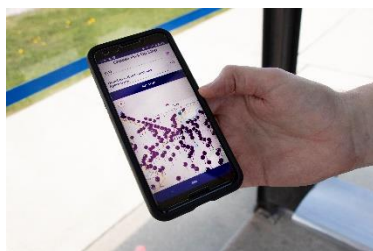


Figure 4-11: CKTransit OnRequest Transit App

Demand-Responsive services refer to any service where vehicles are not confined to a specific path and deploy only when there is a rider request. This type of transportation model has been in existence for decades. The current CKTransit Specialized services, in which riders book by telephone at least 24 hours in advance, traditional taxi companies, and ride sharing companies such as Uber are examples of this delivery model.

On-Demand software technology is a relatively new development which significantly improves the booking and route planning used in demand-responsive services and allows for it to take place in real-time. The software is similar to that which is used by companies such as Uber; however it can be customized to the existing transit operations model and deployed on existing transit vehicles. Riders can book trips via a mobile application, website, or by calling in over the phone. The software provides riders with real time information on the location of the bus, available space (bicycle rack, wheelchair space, seats, etc.), and delays.

Driving Forward is recommending demand-responsive transit service delivery on all routes, or during certain times, where ridership is between 5-15 riders per vehicle hour. This would include all Inter-Urban routes as well as potential Urban routes taking place during evening hours or on weekends.

Demand-Responsive service delivery will also continue for all curb-to-curb Specialized transit in order to most effectively service the accessibility needs of that ridership.

Demand Responsive with Trip Windows

Demand Responsive with Trip Windows designates timeframes in which a pickup or drop-off could occur in order to allow riders to align travel plans together. This is particularly beneficial for routes servicing a large area with minimum ridership (such as the CKTransit Inter-Urban network). Whereas demand-responsive service could facilitate real-time “on demand” pickups for a single rider, it may prove to be costlier to implement than a fixed route if the vehicle must regularly travel long distances for one rider at a time.

Trip Windows promote efficiency by encouraging multi-passenger loading (same as fixed route schedules) but allowing flexibility to not dispatch the vehicle at all should no requests take place. Driving Forward is recommending Trip Windows be implemented for a Demand-Responsive Inter-Urban service in order to promote ride-sharing and reduce the service cost on a per passenger basis.

From the perspective of the rider, a demand-responsive with trip window service would make travel planning similar to the current fixed route model. Examples of current Inter-Urban pickup times for Fixed Route vs the potential new service model are below:

SERVICE	CURRENT SERVICE	DRIVING FORWARD
Wallaceburg Inter-Urban Pickup Time Examples	Fixed Route: <u>Monday – Friday</u> 6:45 AM (To Dresden) 7:55 AM (To Chatham)	Demand-Responsive with Trip Windows: <u>Monday – Friday</u> 6:40 – 7:00 AM (To Dresden) 7:50 – 8:10 AM (To Chatham) *By request only

Table 4-3: Example Pickup Times, Inter-Urban System

4.2.2.3 Partner-Provided (Subsidized)

This delivery model refers to any partnership with a third party’s existing transportation service where CKTransit subsidizes costs either on a per passenger basis or through a lump sum. This model is currently used for transportation services in Wheatley/Romney (Erie Shores) as well as Ward 3 (Four Counties).

The delivery of the service is usually demand-responsive due to low ridership. It has the benefit of low start-up costs and relative turn-key management. Since the model utilizes a pre-established service, it is more cost efficient to partner than to develop an entirely new municipally-owned service as long as ridership remains relatively low. Subsidies payed on a per passenger basis will cost CKTransit more as

ridership grows. This is the opposite of most traditional transit systems where growing ridership means fuller buses and a lower per-passenger cost overall.

There are many examples across Ontario where municipal transit systems have partnered with local taxi companies to service lower ridership areas, including Welland, Sudbury, Peterborough, and Thunder Bay. In 2017 Innisfil became the first municipality in North America to subsidize the ride hailing company Uber as their transit service provider in lieu of a traditional transit system. The popularity of the Innisfil-Uber partnership resulted in an operating subsidy increase from \$640,000 in 2018 to \$900,000 in 2019. When 2019 subsidies were projected to reach \$1.2 million Town officials increased fare prices and put restrictions on eligible locations and monthly rides per passenger.

Although influence over service level is reduced, a Partner-Provided transit model is a cost-effective option to address low ridership routes versus direct-delivery through CKTransit.

In addition to rising cost concerns, CKTransit may also be limited to the current business operations model of the third-party provider – including fare structure, customer service standards, accessibility, driver availability, and data sharing.

Based on this analysis Driving Forward recommends this service model only for areas with low ridership and low growth potential in which a municipal service would be economically prohibitive. This includes:

- Service outside Primary Urban Centres;
- Connections with neighbouring communities for medical or grocery shopping needs;
- Any off-hours service (e.g. late night).

4.2.3 Establishing a Tiered Route Structure

A Tiered Route Structure allows service levels to be defined and resources allocated in a way that sustainably meets the needs of both the local ridership, as well as the broader goals of the Municipality. Larger population centres designated for growth should receive a greater share of transit resources to satisfy for daily needs such as work and school. Smaller areas with less ridership are allocated limited resources to satisfy critical needs such as medical or grocery shopping, to ensure opportunities for a healthy lifestyle are available across Chatham-Kent.

Service levels most relevant to the passenger experience include hours of operation, frequency, coverage, and directness of travel. Inadequate service levels in the largest population centres of Chatham (lack of service hours) and Wallaceburg (lack of stops and frequency) are a recurring concern expressed by riders. Meanwhile, the Inter-Urban system services communities such as Cedar Springs, Dealtown, South Buxton, and Merlin at the same frequency as the Primary Urban Centres of


- 
1. Urban Routes
 2. Inter-Urban Routes
 3. Community Routes
 4. Temporary Routes

Figure 4-12: Tiered Route Structure

Wallaceburg, Tilbury, and Ridgetown. This is despite differing growth goals established by the Municipality and the significant difference in ridership levels.

A Tiered Route Structure, tied to service level, is necessary to support the sustainable growth and community development objectives of the Municipality.

Using a classification system to determine service level is common in Chatham-Kent. As outlined in section **4.1.3.2 Transit Corridors**, a classification system is already used concerning road designations. Those designations impact service levels including maintenance or snow clearing standards. Driving Forward has identified four tiers of routes relevant to transit service delivery in Chatham-Kent. The aim of this structure is to ensure flexibility with changing

transit needs in the future while providing a predictable and sustainable level of service for residents throughout the Municipality.

ROUTE TIER	CURRENT SERVICE	DRIVING FORWARD	SERVICE LEVEL
Urban Routes	Chatham <ul style="list-style-type: none"> - Conventional (Local) <i>Fixed Route Delivery</i> - Specialized <i>Demand-Responsive</i> Wallaceburg <ul style="list-style-type: none"> - Specialized 	Chatham <ul style="list-style-type: none"> - Conventional (Local and Express) <i>Fixed Route with Flexible Stops / Demand-Responsive Integration</i> - Specialized Wallaceburg <ul style="list-style-type: none"> - Conventional (Local) - Specialized <i>Demand-Responsive</i> 	Maximum coverage and frequency along highest ridership corridors to facilitate access to daily needs such as work and school. Service is 7 days per week.
Inter-Urban Routes	Chatham-Wallaceburg-Dresden Chatham-Blenheim-Ridgetown Chatham-Cedar Springs-Dealtown-South/North Buxton-Merlin-Tilbury <i>All Fixed Route delivery</i>	Chatham-Wallaceburg-Dresden Chatham-Blenheim-Ridgetown Chatham-Tilbury-Wheatley <i>Demand-Responsive delivery with Trip Windows</i>	Coverage within Primary Urban Centres with direct connections between neighbouring Centres. Greatest frequency funding will permit to facilitate access to daily needs such as work and school. Service takes place on weekdays with weekend service limited or according to available funding.
Community Routes	n/a	All Chatham-Kent population centres	Limited hours or days with greatest coverage funding will allow to

		Wheatley-Leamington service <i>Demand-Responsive or Partner-Provided delivery</i> Community Bus service	facilitate access to critical services such as medical and shopping and to reduce social isolation.
Temporary Routes	Seasonal S1 (Mitchell's Bay-Grande Pointe-Pain Court-Chatham-Charing Cross-Blenheim-Erieau)	Special events or seasonal destinations as identified and funded on an annual basis	Service levels vary according to intended purpose of the temporary route.

Table 4-4: Summary of route changes based on Tiered Route Structure

4.2.3.1 Urban Routes

Urban routes take place in Chatham-Kent's largest population centres capable of financially sustaining a service with maximum coverage and a frequency of between 20-40 minutes. Service delivery is either Fixed Route or Demand-Responsive depending on ridership volume. Urban routes are intended to facilitate the movement of people for daily activities such as work and school – essential for urban growth – as well as medical, shopping, and leisure. The hours of operation and service days should be sufficient to sustainably meet those needs, setting them at a higher service level than other routes on the Tiered Structure. Specific hours may vary between urban centres as ridership demand warrants.

Urban Routes provide the highest level of service sustainable within Chatham-Kent's largest population centres in order to best connect riders with work, school, and other activities.

Specialized curb-to-curb service should be available within the same urban boundaries serviced by the Conventional route(s).

Driving Forward is recommending Urban routes be implemented in both Chatham and Wallaceburg, seven days per week, where it is anticipated service levels could be financially sustained according to the recommendations in section 4.3.3 **Setting a Fare Recovery Target**.

Local Urban Routes

Local Urban routes provide broad coverage within a specific urban centre. Frequency can be between 30-40 minutes with fixed routes operating as either one-way or two-way service. These routes currently operate mostly in the community of Chatham with Specialized Urban service in Wallaceburg.

Driving Forward is recommending enhancement to the service hours of the local routes in Chatham to better meet the needs of riders, and to align with the service hours of comparable communities. The growth of shift employment (retail, customer service, etc.) as major employers within Chatham has created demand for service past 7:15 PM. Employers require transit service into the evening hours in order to connect prospective employees with these job opportunities. Many members of the public have also requested later hours to conduct shopping, get home from evening classes at Thames Campus, or to attend leisure activities such as visiting the cinema.

Driving Forward is also recommending a local Urban route for Conventional service be introduced in parallel, or integrated with, the Specialized Urban service in Wallaceburg in order to address the needs of residents without access to a private vehicle, but who do not have a disability. This meets the parity criteria between Conventional and Specialized service discussed in section **4.2.5 Accommodating for Accessibility and Specialized Service**.

Express Urban Routes

Where local routes maximize coverage, express routes maximize frequency and/or directness of travel. There are currently no routes in the system that would fall in this subcategory. A conceptual Express Urban route would provide direct two-way travel between two or more Transit Hubs or popular points-of-interest at a frequency of 20 minutes or less. The service span of these fixed routes would likely be limited to peak ridership hours in order to alleviate capacity constraints and decrease travel time.

Chatham is the only community where Express Urban routes would be warranted due to its current ridership levels and projected growth. It is recommended that these routes be considered in concert with the Route Optimization Study to ensure they align with the most common travel patterns of ridership and compliment, but not duplicate, efforts made to adjust the directness of travel concerns of local Urban routes already outlined.

Whereas coverage is preferred over frequency by residents it is recommended local route design and implementation take priority over express routes when funding is limited.

4.2.3.2 Inter-Urban Routes

Inter-Urban routes are primarily focused on moving riders between Primary Urban Centres (PUCs) for daily purposes such as work, school, or other recurring activities. However these routes experience significantly lower ridership than the Conventional Urban system in Chatham. This has an impact on overall fare recovery targets and the annual allotment of Provincial Gas Tax funds CKTransit receives – currently required to fund approximately 40% of operations – due to the ridership-population formula used to distribute funds. For this reason investment and expansion in Urban routes is the more financially sustainable option where funds are limited.

However a combination of other factors warrant the continued implementation of this network:

- The unique geographic makeup of Chatham-Kent;
- The specific designation of PUCs as targeted communities for growth; and
- The inequitable distribution of affordable housing options, job opportunities, and critical services within each PUC.

During Driving Forward’s engagement process the need for businesses to recruit prospective employees from other Chatham-Kent PUCs was a recurring theme in order to fill position vacancies. Several riders also indicated their reliance on the Inter-Urban system as affordable housing options were only available in one community while employment opportunities were only available in another.

Expansion of the Inter-Urban service beyond the seven designated PUCs would put further financial stress on the system and take away resources required for Urban route expansion which would benefit more residents at a lower subsidized cost. Inter-Urban routes should be limited to PUCs so subsidy costs can be contained and growth can be directed as outlined in the Official Plan.

Inter-Urban routes connect residents with prospective employers, education, housing, and other services found across all Primary Urban Centres in order to encourage sustainable and targeted growth in those communities.

At the time of the alteration of Route D, it was cited that ridership between Wheatley and Tilbury was as low as two riders per week. This was after approximately one year of service operation. Ridership during 2019 in the communities proposed for removal was seven passengers per week in total.

Although conditions have changed in Wheatley since 2010 – such as the closure of the only grocery store and potential closure of the only doctor’s office – it is not anticipated that ridership between Wheatley and Tilbury would be significantly higher with a return to service. However, with a demand-responsive model CKTransit would save costs as the bus would only travel there when requested. Furthermore, it is anticipated that ridership between Tilbury and Chatham would grow as ridership would now have direct two-way travel with times comparable to travel by private vehicle.

4.2.3.3 Community Routes

Community routes are focused on moving riders from Secondary Urban Centres, hamlets, and rural areas to Transit Hubs located in Primary Urban Centres (PUCs). Frequency and service span are reduced to contain costs but provide a basic level of service to all Chatham-Kent residents so they can access critical services, such as medical appointments or grocery shopping, and participate in activities that reduce social isolation. Routes could be established to service limited hours each weekday, or service specific destinations on a weekly or bi-weekly basis.

No equivalent to Community Routes are currently operated by CKTransit. However several communities outside PUCs are serviced on Inter-Urban Route D. Partner-Provided services including Four Counties Transportation, Erie Shores Community Transportation, and AdVANtage Transportation also provide a level of service to rural residents that would be roughly equivalent to the goals of a CKTransit Community Route.

The small populations found in rural areas, combined with low growth projections, conclude that an equivalent service delivered by a partner-provider, such as those already mentioned, is the most financially sustainable model for implementation compared to direct delivery.

Driving Forward is recommending the establishment of community routes, or their equivalent in partner-provided service, in order to meet the desired vision of providing transit options to all Chatham-Kent residents. This ensures everyone has access to the critical services they need to support a healthy community.

4.2.3.4 Temporary Routes

Temporary Routes are either seasonal or designed to service a specific event. Service levels would vary according to the route's intended purpose. The Seasonal (S1) "Beach Bus" falls into this route classification. The route connects the popular summer destinations of Mitchell's Bay and Erieau, via Chatham and Blenheim, between May – September, four days per week. Recent examples where Temporary Routes were requested by residents but not implemented include the RM Sotheby's 40th Anniversary Celebration/Retro Fest as well as the International Plowing Match. Routes such as these are typically viewed positively and allow residents to access leisure destinations or events in which they may otherwise not have access.

Whereas funding is limited and the expansion of the other Route Tiers is prioritized, Driving Forward is recommending that Temporary Routes – including the Beach Bus – not be included in base services offered on a permanent basis. CKTransit should ensure the overall system – including the terms of transit operator agreements and routing software capability – allow the required flexibility to establish these routes when warranted and with relatively little notice.

Temporary Routes should be identified on an annual basis through the supplemental budget process or funded from other sources when unexpected opportunities are presented throughout the year.

4.2.4 Presenting a New Route Network

The conceptual route network presented by Driving Forward is intended to achieve the vision statement for Transit Service Delivery with consideration for public demand, community objectives, and forecasted growth. Route descriptions are meant to aid in future planning. Implementation timelines are discussed in section 5 **Implementation** and may be fluid according to available funding and ridership demand.

Resiliency is a core component of the route network. Dynamically re-assigning in-service vehicles in real-time will help overcome service delays and full buses.

The efficiency and quality of routes will be positively influenced by the Land Use and Transit Planning recommendations outlined in the previous section. This network changes the way in which the current Conventional and Specialized transit services interact with one another in order to better allocate available vehicle supply with ridership demand.

The network also addresses some of the schedule adherence issues discussed in section 3.3.1.5 **CKTransit On-Time Performance (OTP)**. While operator agreements can specify the dispatch of additional vehicles when faced with a disruption, this can be a costly solution and not always implemented in a timely fashion. As outlined under several route descriptions, Driving Forward is proposing resilient solutions where in-service vehicles operating demand-responsive routes could be re-routed as necessary should fixed routes face disruptions to their schedules.

4.2.4.1 Route 0 (Urban Local, Chatham)

Route 0 (currently Chatham Accessible)			
		Current Service	Driving Forward
Span	Weekday	6:15 AM - 7:15 PM FRI: 6:15 AM - 11:00 PM	6:15 AM - 12:30 AM
	Saturday	6:15 AM - 7:15 PM	6:15 AM - 10:30 PM
	Sunday	9:00 AM - 5:00 PM	8:30 AM - 6:00 PM
Frequency		--	30-40 minutes
Transit Hub Connections		All Chatham Transit Hubs	
Description		Specialized Service Only	Integrated Conventional & Specialized Service

Table 4-5: Route 0, Conceptual Service Levels

Route 0 operates Conventional and Specialized Urban service within Chatham, with potential service to outlying areas as far as the Bloomfield Business Park if vehicle capacity and funding will allow. The route is entirely demand-responsive with trips requiring a request by the rider. As is currently the case, eligible riders of Specialized curb-to-curb service would utilize this route for service within Chatham. However, the route would also be available for integration with Conventional service at new bus stops identified but not connected to the fixed route system. This would allow for greater Conventional coverage in Chatham at parity with the Specialized service.

Route 0 vehicles operate Specialized transit in Chatham with capability to service Conventional stops, as well as provide backup support to fixed routes during service disruptions.

Where capacity is available, dispatchers should have the ability to take an in-service vehicle on Route 0 and temporarily assign it to a fixed route if that route is experiencing a disruption. This will provide an operationally convenient backup option to reduce the delay to fixed route ridership.

When ridership is lower – such as evenings and weekends – where it is less efficient to be serviced

by fixed routes, all bus stops in Chatham would be serviced by Route 0 and the fixed route service would end. An integrated service during these times would require an approximate 109% increase in vehicle hours, above the current Specialized service level in Chatham, mostly to accommodate a permanent evening service available to both Conventional and Specialized riders.

A 68% increase in weekday vehicle hours, above the current Specialized service level in Chatham, is also estimated to accommodate increased demand for Specialized transit and the integration of Conventional stop-to-stop coverage. Vehicle quantity and capacity should be sufficient to address peak demand.

It should be noted that if ridership after 7:15 PM grows, it may be more financially efficient to extend the fixed route hours in lieu of an entirely demand-responsive model.

4.2.4.2 Routes 1-4 (Urban Local, Chatham)

Routes 1-4			
		Current Service	Driving Forward
Span	Weekday	6:15 AM - 7:15 PM	6:15 AM - 7:15 PM
	Saturday	6:15 AM - 7:15 PM	< See Route 0 >
	Sunday	--	< See Route 0 >
Frequency		30 minutes	30 minutes
Transit Hub Connections		All Chatham Transit Hubs	

Table 4-6: Routes 1-4, Conceptual Service Levels

Routes 1-4 currently operate fixed-service delivery in Chatham. High ridership continues to warrant a fixed route model versus a demand-responsive model between the hours of 6:15 AM to 7:15 PM.

As outlined in section **4.1.3.3 Planning Future Fixed Routes**, a Route Optimization Study should be conducted to ensure the route paths continue to logically service ridership demands, meet schedule targets, while exploring opportunities for increased two-way coverage on the most utilized Transit Corridors.

Routes should continue to converge at the Downtown Chatham Terminal at the same scheduled time to facilitate passenger transfers. However as further Transit Hubs are developed in the community this may be re-visited with the goal of facilitating the quickest origin-to-destination trips for the most common travel patterns.

4.2.4.3 Route 5 (Urban Local, Chatham)

Route 5			
		Current Service	Driving Forward
Span	Weekday	6:30 AM - 7:30 PM	6:15 AM - 7:15 PM
	Saturday	6:30 AM - 7:30 PM	< See Route 0 >
	Sunday	--	< See Route 0 >
Frequency		60 minutes	30 minutes
Transit Hub Connections		Select Chatham Transit Hubs	

Table 4-7: Route 5, Conceptual Service Levels

This local Urban route has been piloted since September 2019. The original intention of the route was to address over-capacity issues on Route 1 as it travelled from the Downtown Chatham Terminal to Thames Campus. It was also utilized to reduce the routes length on other Conventional fixed routes in order to improve their schedule performance and enable two-way travel along a busy section of Richmond Street. To address all these constraint Route 5 operated at half the frequency (60 minutes) as the other fixed routes.

Recommendations outlined in Driving Forward, including larger vehicles and the resilient implementation of Route 0, are anticipated to address future over-capacity issues experienced on Route 1. However, Routes 1-4 are unable to meet their expected 30-minute frequency without sacrificing

route coverage while two-way travel along Richmond Street, a frequent request for riders and business along that section, cannot be addressed without the additional coverage Route 5 can provide.

Driving Forward is recommending Route 5 become a permanent service during daytime hours in Chatham and be redesigned to a 30-minute frequency to align with all Urban fixed routes.

4.2.4.4 Urban Express Routes (Chatham)

Express Routes			
		Current Service	Driving Forward
Span	Weekday	--	Peak AM & PM
	Saturday	--	--
	Sunday	--	--
Frequency		--	20 minutes
Transit Hub Connections		Select Chatham Transit Hubs	

Table 4-8: Express Routes, Conceptual Service Levels

There is currently no CKTransit Urban express service. Peak-period buses that provided direct service along higher ridership corridors were eliminated in the late 1990s to early 2000s after a reduction in provincial funding. The re-introduction of this service during peak ridership times would facilitate faster commutes over longer distances within Chatham for ridership sharing similar origin-to-destination trip times (i.e. Thames Campus students, employment along Richmond Street, etc.). Service would likely operating along Transit Corridors and commence/terminate at a Transit Hub.

Driving Forward is recommending the development of two Urban Express routes as part of the Route Optimization Study. Routes would require approximately 3,000 annual vehicle hours to operate during peak ridership times. The implementation of these routes would be dependent on ridership growth and desired travel patterns. Urban Express routes should complement the coverage goals achieved by the Urban Local routes, not serve as a replacement.

4.2.4.5 Route 10 (Urban Local, Wallaceburg)

Route 10 (currently Wallaceburg Accessible)			
		Current Service	Driving Forward
Span	Weekday	8:00 AM - 7:00 PM	6:15 AM - 9:15 PM
	Saturday	8:00 AM - 7:00 PM	8:00 AM - 7:00 PM
	Sunday	9:00 AM - 5:00 PM	9:00 AM - 5:00 PM
Frequency		--	30-40 minutes
Transit Hub Connections		Wallaceburg w. connection to Walpole Island	
Description		Specialized Service Only	Integrated Conventional & Specialized Service

Table 4-9: Route 10, Conceptual Service Levels

Route 10 operates Conventional and Specialized Urban service within Wallaceburg, with potential service to Walpole Island. The route is entirely demand-responsive with trips requiring a request by the rider. As is currently the case, eligible riders of Specialized curb-to-curb service would utilize this route for service exclusively within the urban boundaries. However, the route would also be open to all residents for Conventional bus stop-to-bus stop service. This would bring parity to Specialized and Conventional service operating in the community. An additional vehicle would be required to deliver Route 10 in order to meet anticipated demand.

The integration of Conventional service into this route would also result in a reduced need for bus stops serviced by the Inter-Urban route as a transfer between routes could be made. This would decrease the route time required for to operate the Inter-Urban route.

4.2.4.6 Route 11 (Inter-Urban, Chatham-Wallaceburg-Dresden)

Route 11 (currently Route A)			
		Current Service	Driving Forward
Span	Weekday	5 Trips (6:15 AM, 8:45 AM, 12:15 PM, 4:15 PM, 6:45 PM)	6:15 AM - 9:15 PM
	Saturday	4 Trips	4 Trips
	Sunday	--	--
Frequency		--	120 minutes
Transit Hub Connections		Select Chatham Transit Hubs, Wallaceburg, Dresden	
Description		Fixed Route, Conventional Service	Demand-Responsive with Specialized Service Integration

Table 4-10: Route 11, Conceptual Service Levels

Route 11, currently operating as Route A, connects Chatham with Wallaceburg and Dresden. Due to current ridership volume, it is recommended that all Inter-Urban routes deliver service through a Demand-Responsive with Trip Windows model. This would accomplish two desires expressed by residents and ridership:

1. Reduce or eliminate instances where the bus travels to/from a community without ridership, thereby reducing wasted cost; and
2. Decrease travel time by going directly to the bus stops with trip requests without following a set path designed for maximum coverage.

The Trip Window concept is necessary to better ensure multi-passenger loading on a single trip. A rider would only be able to request a trip during certain times recurring at set intervals (proposed as every two hours).

When Inter-Urban vehicles do not receive a trip request during a set interval they could be reassigned to either Route 0 or Route 10 in order provide added capacity if demand is warranted. This is preferable to

the vehicle remaining parked in a specified location and takes advantage of the labour costs CKTransit incurs whether or not the vehicle is servicing a requested trip. In order to better enable this resiliency CKTransit may have to require trip requests for Inter-Urban service be made in advanced, likely 90 minutes before a trip window opens.

4.2.4.7 Route 11A (Inter-Urban, Chatham-Wallaceburg)

Route 11A			
		Current Service	Driving Forward
Span	Weekday	--	1 Trip, departing 9:15 PM
	Saturday	--	2 Trips, Mid-Day & Evening
	Sunday	--	--
Frequency		--	120 minutes
Transit Hub Connections		Select Chatham Transit Hubs, Wallaceburg	
Description			Extra service between Chatham and Wallaceburg

Table 4-11: Route 11A, Conceptual Service Levels

While all Inter-Urban routes are proposed to operate at the same service level, Route 11A recognizes the substantial difference in population and employment opportunities located in Wallaceburg compared to other Primary Urban Centres outside Chatham. Route 11A would exclude Dresden from its route to enable a more frequent run between Chatham-Kent's two largest urban areas. Route 11A could allow for either additional runs in the evening hours or frequent service during peak weekday hours.

It is not recommended Route 11A be implemented until ridership adapts to the new proposed Inter-Urban service and a proper evaluation on ridership demand can be made.

4.2.4.8 Route 12 (Inter-Urban, Chatham-Blenheim-Ridgetown)

Route 12 (currently Route C)			
		Current Service	Driving Forward
Span	Weekday	5 Trips (6:15 AM, 8:45 AM, 12:15 PM, 4:15 PM, 6:45 PM)	6:15 AM - 9:15 PM
	Saturday	4 Trips	4 Trips
	Sunday	--	--
Frequency		--	120 minutes
Transit Hub Connections		Select Chatham Transit Hubs, Blenheim, Ridgetown	
Description		Fixed Route, Conventional Service	Demand-Responsive with Specialized Service Integration

Table 4-12: Route 12, Conceptual Service Levels

Route 12, currently operating as Route C, connects Chatham with Blenheim and Ridgetown. Service delivery characteristics are the same as Route 11. The current bus stop in Charing Cross may be maintained as it can be serviced on the most direct path between the Primary Urban Centres without impacting schedule or cost.

4.2.4.9 Route 13 (Inter-Urban, Chatham-Tilbury-Wheatley)

Route 13 (currently Route D)			
		Current Service	Driving Forward
Span	Weekday	5 Trips (6:15 AM, 8:45 AM, 12:15 PM, 4:15 PM, 6:45 PM)	6:15 AM - 9:15 PM
	Saturday	4 Trips	4 Trips
	Sunday	--	--
Frequency		--	120 minutes
Transit Hub Connections		Select Chatham Transit Hubs, Tilbury, Wheatley	
Description		Fixed Route, Conventional Service	Demand-Responsive with Specialized Service Integration

Table 4-13: Route 13, Conceptual Service Levels

Route 13, currently operating as Route D, is recommended to revert to its original incarnation which connected the Primary Urban Centres of Wheatley, Tilbury, and Chatham. This alteration would eliminate Inter-Urban service to Cedar Springs, Dealtown, South Buxton, North Buxton, and Merlin. Rationale for this alteration has been discussed in section **4.2.3.2 Inter-Urban Routes**. Those communities could theoretically be serviced by Route 20 as discussed below.

Service delivery characteristics are the same as Route 11.

4.2.4.10 “Route 20” (Community, Chatham-Kent Rural)

“Route 20” is an earmarked Community Route primarily designed to connect Chatham-Kent residents not serviced by the Urban and Inter-Urban routes with the closest Transit Hub in order to access the rest of the system. This route would provide a more limited level of service hours and vehicle capacity than higher Route Tiers, but it would be available to all Chatham-Kent residents on a demand-responsive basis, regardless of location. The limited service would be sufficient for riders to access grocery stores, medical appointments, or participate in leisure activities.

The service would likely require an advanced trip request of 24 hours or greater in order to ensure the route could operate as efficiently as possible over a large rural area. Due to the high costs of direct-delivery, it is recommended CKTransit partner with another agency who can deliver a similar service that meets the objectives of this route. Existing partnerships with Erie Shores Community Transportation, Four Counties Transportation, and AdvANTage Transportation would fit this model.

4.2.4.11 “Route 21” (Community, Wheatley-Leamington)

“Route 21” is an earmarked Community Route providing connection between Wheatley and Leamington. Driving Forward has identified this connection as important for Wheatley residents. While Route 13 enables access to Tilbury and Chatham at a service level appropriate for Wheatley residents to access employment opportunities, education, or other daily activities, “Route 21” is designed to give those residents transit service options for critical needs – such as grocery shopping or medical appointments – located in their closest neighbour. An improved connection between these communities was identified by residents in order to allow seniors to age in place or encourage new residents to settle in Wheatley who may not have regular access to a private vehicle.

As with other Community Routes, Driving Forward is recommending the objectives of this route be accomplished through a partner-provided delivery model in order to reduce costs. Discussions with Leamington Transit and Erie Shores Community Transportation – regarding the broadening of existing eligibility criteria – has indicated that this is a possibility and should be explored further.

4.2.4.12 Community Bus

Community Bus service, included under the Community Route Tier, is primarily designed to serve the needs of seniors and persons with mobility challenges living in smaller population centres with weekly or bi-weekly scheduled service to access shopping opportunities found in larger urban centres. While the service is designed with those populations in mind, it is open for use by all residents in the service area. This type of service has been implemented in municipalities such as Toronto, London, Guelph, Peterborough, and Ottawa.

Where Route 20, due to low population density in the areas it serves, provides options for one-off transit needs that may be unique to the individual, Community Buses are intended to encourage riders to plan their trips together to the same shopping destinations. The concept was identified by Bothwell and Thamesville residents as an alternative to the more regular and costly Inter-Urban service provided to Primary Urban Centres.

Driving Forward is recommending that this concept first be piloted as a weekly or bi-weekly service connecting residents in Bothwell, Thamesville, and Moraviantown with shopping destinations in Chatham. This service could potentially be delivered by an existing partner-provider to avoid the purchase of an additional transit vehicle by CKTransit.

4.2.5 Accommodating for Accessibility and Specialized Service

Managing the growth and efficient operation of Specialized transit service is a significant challenge for all transit agencies, and may be the most complicated challenge facing CKTransit over the planning horizon of Driving Forward.

Growth trends and demographics would indicate CKTransit should expect more residents to require use of CKTransit’s Specialized services – currently known as Chatham Accessible and Wallaceburg Accessible

– in the near future, although a ridership forecast is difficult to conduct. As outlined, Specialized transit delivery is far more expensive to deliver than its Conventional counterpart, yet a parallel service for those whose disability prevents access or usage of the Conventional service is mandated through legislation.

Managing the growth and sustainability of Specialized transit services may be the most complicated challenge faced by CKTransit.

Interviews with service groups and feedback from ridership have indicated uncertainty or mixed opinions on how the service is both intended to operate, or how it should operate. Clarity in the purpose of the system for prospective ridership is important for CKTransit to sustainably manage growth. For context, ridership in Chatham

Accessible was 5,500 annual trips at the time of amalgamation. Today, approximately 25,000 annual trips take place. This growth cannot be attributed alone to aging demographics. The broadening in legislated eligibility criteria (e.g. including ambulatory persons) as well as the decline in Conventional service coverage in the late 1990s to early 2000s can also be attributed.

A comparison with applicable legislation and the operation of peer systems has revealed guidelines on how CKTransit should be clarifying the intended purpose of Specialized service.

Specialized service is:

- Public transit or shared-ride transportation in the spirit of Conventional service but for those unable to access or use that service due to a disability.

This broad definition contributes to the uncertain eligibility criteria of the service; however it is necessary to ensure that those with varying capabilities who demonstrate need of the service will qualify. For clarity, it is also necessary to define what Specialized service is not intended to be based on the same analysis.

Specialized service is not:

- A taxi cab or charter service;
- Medical transportation or similar service requiring physical passenger assistance from the driver outside the vehicle (i.e. entering premises, carrying bags, etc.);
- Automatically available for persons who:
 - Reach a certain age;
 - Have a certain disability;
 - Join a specific service group;
 - Take up residence in an assisted-living facility;
 - Require trips during times or in areas without Conventional service.

- 
1. Integration
 2. Parity
 3. Education
 4. Evaluation

Figure 4-13: Guiding Principles to sustainably manage Specialized Service

Driving Forward has identified four guiding principles CKTransit can follow in order to address over-subscriptions issues experienced in Specialized service and to more sustainably manage future growth:

1. Integration, where possible, with Conventional service

2. Parity between services
3. Education on services;
4. Closer evaluation in the eligibility determination and the trip planning processes.

4.2.5.1 Integration

As outlined earlier in this chapter, opportunities have been presented in the conceptual route network that better utilize existing capacity to meet fluctuating demand between Conventional and Specialized routes. This concept avoids the costs of maintaining separate fleets between services and may reduce negative stigma cited by some Specialized service users by allowing co-mingling between passengers. The possibility of integration should be considered with any service expansion.

4.2.5.2 Parity

Current CKTransit policies and operations contribute to over-subscription of Specialized services according to some service groups. While specific cases of eligibility abuse are hard to identify, ridership is incentivized to apply for Specialized service, even if they do not have a disability preventing them from using Conventional service, due to Specialized service's expanded operating hours or other policies. Chatham Accessible operates service on Sundays while its Conventional counterpart does not. Wallaceburg Accessible is currently the only public transit service available in that community.

CKTransit Conventional operations have seen great improvement in its accessibility over the years such as low floor buses and audio/visual announcements of stops. However all policies and conveniences should be periodically reviewed to determine if they are a requirement (legislative) and if they can be sustainably offered over both service streams. Driving Forward is recommending the following take place in order to meet the principle of parity:

- Offer Conventional and Specialized services during the same operating hours;
- Offer same fare structures and payment systems across all services including monthly passes and concession fares;
- Allow eligible riders to bring a support person with them on the Conventional service at no charge;
- Re-evaluate or consider eliminating non-legislated customer convenience policies unique to Specialized service, such as the five-minute wait allowance for pickups or allowing permanent recurring bookings if they cannot reasonably be implemented in the Conventional service;
- Ensure all CKTransit drivers receive the same accessibility training;
- Re-brand Chatham and Wallaceburg "Accessible" services in a manner that does not imply a lack of accessibility in Conventional operations. Examples from other municipalities include "Para" or "Parallel" service, "Mobility Plus", etc.

Outside the scope of Driving Forward, but necessary to promote continued use of Conventional service, is the overall accessibility of Chatham-Kent pedestrian networks which connect residents from their door to the closest bus stop. CKTransit should be in active voice in highlighting the impact of inaccessible community design and how it financially impacts transit service.

4.2.5.3 Education

As discussed in greater detail in section **4.5 Ridership Support**, CKTransit should offer education on how the Conventional service operates and the features that could meet the accessibility needs of prospective riders. This includes vehicle features (mobility spaces, size restrictions on mobility aids, ramp or lifts, audio/visual stop announcements, accessible bus stops, etc.), service areas, schedules, trip planning tools, and customer policies that could improve usage of riders with mobility restrictions.

4.2.5.4 Evaluation

Greater involvement by decision-makers in the eligibility and trip planning evaluation process is necessary to ensure those who do not demonstrate need for Specialized transit can be directed to the Conventional service or alternatives. This would free up capacity for those captive to the curb-to-curb service. Applications currently receive little scrutiny from CKTransit due to limitations in staffing capacity and expertise in mobility restrictions. Very few Ontario municipalities offer a comprehensive eligibility determination process, likely due to the same limitations. Those that implement a more rigorous process usually require three elements:

1. Direct contact (phone call or in-person) with the transit agency by the rider or care giver to request an application. This prevents service groups from filling out applications in mass on behalf of their clients regardless of individual ability – a practice witnessed by CKTransit staff;
2. An option for an in-person interview with the applicant, performed by a qualified individual, to discuss the limits to their mobility and how they could be alternatively serviced by the transit system; and
3. A re-certification process. This provides an opportunity for re-evaluation of approved applicants in the context of accessibility improvements in the Conventional system that have occurred over a period of time.

CKTransit currently approves Specialized service users on a temporary or permanent basis. A third eligibility category – conditional – is mandated under legislation and is for riders who only require Specialized service under certain circumstances. This could be due to winter weather or if their disability would only prevent them from using the Conventional service for less accessible destinations.

The implementation of the conditional approval category may result in greater migration of Specialized transit users to the Conventional service if it is assumed some permanently approved riders do not need that service for all their trips. However implementation could be difficult or costly. Evaluation on a trip-by-trip basis by dispatch who book trips would be open to subjectivity and negotiation, even if a detailed decision-making rubric is provided.

The successful implementation of the above also does not guarantee any relief to the capacity issues experienced in the Specialized service and could result in negative feedback from riders accustomed to receiving the service with little resistance. Due to the sensitivity of the subject it is recommended closer evaluation of CKTransit's Specialized service processes – from application intake, to approval, to ongoing management and trip planning – be conducted in close coordination, or led by the Accessible Advisory Committee.

4.2.6 Leveraging Partnerships

Existing partner-provided service agreements with Erie Shores Community Transportation and Four Counties Transportation should be maintained. Agreements come at a relatively minimal cost to the Municipality and provide a valuable service to residents. These partnerships could play a cost-effective role in the implementation of the proposed Route 20, Route 21, and Community Buses, or at a comparable service level, in lieu of direct delivery by CKTransit.

The pilot partnership with Family Service Kent for the AdVANTage Transportation service should continue to be evaluated. However initial feedback from ridership has been positive as it fills a significant gap – particularly for rural residents – left by CKTransit’s Urban and Inter-Urban services. This service could also play a role in the implementation of a comparable service to the proposed Route 20, Route 21, or Community Buses.

Accessible transit in Chatham during nighttime hours, after public transit hours have ended, continues to be a gap since the closure of Radio Cabs at the end of 2017. There is no longer an accessible taxicab service available in Chatham-Kent. While the partnerships above have the ability to provide an accessible vehicle at any hour, trips require multi-day advanced booking in order to ensure costs are not incurred to retain on-call drivers. This leaves residents requiring accessible transit in last minute or emergency situations without an option. While Driving Forward is not recommending a specific action from the perspective of public transit service, this gap remains a concern in the overall context of transportation in the Municipality.

4.3 FARES

Fare policy and payment tools make transit usage simple, sustainable, and accessible to riders.

4.3.1 Key Observations and General Comments

- Operations require nearly an 80% subsidization from non-fare sources, including the tax base;
- Riders must visit a municipal centre in order to re-load transit smartcards, thereby using a ride to/from the centre;
- The Semester Pass for Thames Campus students is the most discounted fare available however, unlike most U-Passes, no minimum ridership volume has been negotiated to secure that concession;
- 30-Day Affordable Passes for low income riders are available for the Urban service, however some riders cannot afford the upfront cost of the discounted pass;
- Some seniors have requested the return of the annual senior's pass due to both the convenience of visiting a municipal centre only once a year, and the deep discount;
- CKTransit was an early adopter of SmartCard technology for transit systems of its size;
- The current CKTransit fare structure is divided into three distinct streams with no consistency in available fare concessions among streams;
- Riders require separate SmartCards for the Inter-Urban and Urban systems;
- CKTransit has not implemented a fare parity policy between Conventional and Specialized services as dictated in AODA legislation.

4.3.2 Collecting Fares

It is important for CKTransit to keep up with changing preferences regarding payment technology. CKTransit was an early adopter of SmartCard technology compared to other small to medium-sized Ontario transit systems when they introduced the technology in 2015. SmartCard technology has increased the reliability of boarding data, permitted the introduction of certain pass types and concessions fares, and reduced the administrative burden associated with the transport, accounting, and depositing of large volumes of coins. In 2019, approximately 72% of all fares were paid without cash.

An anticipated change to fare technology in the near future is contactless payment made through either credit cards or mobile phones – particularly in light of the COVID-19 Pandemic. Riders would be able to pay their bus fare directly without having to pre-pay or obtain an intermediary medium (i.e. SmartCard). This new technology has yet to receive wide adoption in North America. Those that have piloted the

technology have reported bandwidth issues when processing multiple transactions. Smaller systems such as CKTransit may also have difficulty negotiating manageable transaction fees given the level of ridership. Account-based payments, where riders preload an account stored on their phone instead of a card, may be a more viable option however some of the same technological issues as mobile payments have been reported. While it would make fare payment easier for some riders, Driving Forward has concluded that the technology is not yet a viable option for CKTransit. It is suggested adoption of credit card or mobile phone payment methods continue to be monitored and evaluated.

A more pressing need expressed by existing ridership is the ability to procure or re-load SmartCard passes outside municipal centres. Several riders have criticized the need to use a ride, or spend a fare, in order to visit a centre where re-loading can take place. It is

recommended an online system for reloading SmartCard passes be implemented for ridership. Such a system should be usable by individual riders as well as service agencies who manage multiple cards on behalf of their clients.

Online re-loading of the current SmartCard system should be prioritized above mobile payment options.

Physical Card Pickup

While an online platform should suffice for those re-loading a fare pass already physically obtained, the initial acquisition of a card still poses an issue for some riders. In addition to municipal centres, CKTransit currently has agreements with Chatham-based Shoppers Drug Mart outlets to sell 30-Day passes (excluding Affordable Passes or Semester Passes) and Cash Passes pre-loaded with \$20. It is recommended that this practice be expanded to include additional outlets commonly visited by transit ridership, including:

- Shoppers or similar outlets outside Chatham
- Grocery stores
- Libraries
- Thames Campus and Ridgeway College

Sales can either take place through existing points-of-sale at those locations, or through an automated kiosk. It is recommended automated kiosks be placed at the highest usage outlets in order to reduce the administrative burden on vendors and to permit both the initial purchase or re-loading of existing SmartCard passes. A secure system for mailing SmartCard passes to riders unable to reach any of these physical locations should also be explored.

4.3.3 Setting a Fare Recovery Target

Recognizing that most ridership is captive, with no access to an automobile, transit fares must be affordable for those who need the system most. The scope of Driving Forward excludes recommendations on specific price points for fares as those decisions are largely driven by annual budgetary requirements. However the need to increase fares, from time to time, should be based on the

established fare recovery target whereas it is no longer achievable due to incremental increases in transit costs over time.

Urban and Inter-Urban Routes

Based on existing fare data, and a comparison with peer municipalities, it is recommended that CKTransit formally establish a fare recovery target of 25%. This would mean twenty-five cents of every dollar spent on the entirety of the transit system would be recovered from the fare box. The remainder will be funded by government grants, other revenue sources (i.e. advertising), and the municipal tax base. An analysis of 2019 data revealed a total fare recovery of 22.6% across all CKTransit route types.

Route Type	Gross Cost	Fares Collected	Fare Recovery
Conventional Urban	\$1,065,821	\$447,101	41.9%
Specialized Urban	\$804,439	\$94,472	11.7%
Conventional Inter-Urban	\$855,705	\$79,779	9.3%
Temporary (Beach Bus)	\$45,586	\$4,018	8.8%
System Total			22.6%

Table 4-14: CKTransit Fare Recovery by Route Type (2019)

It should be noted that the greatest fare recovery occurs in the most densely populated area (Chatham's Conventional Urban service). This should be factored into decisions regarding where service expansion can be most sustainably implemented. In order to reach a 25% fare recovery rate for the overall system it will be necessary for CKTransit to either increase fares or increase ridership. Increasing a smaller share of both ridership and fare revenue is likely the most realistic approach.

Community Routes / Partner-Provided Services

CKTransit does not have direct control over fares charged by partners currently delivering transit services equivalent to the proposed Community Route Tier (e.g. Erie Shores, Four Counties, AdVANTage). However it is suggested that the fare recovery expectations for these routes be higher than that of Urban or Inter-Urban routes to ensure financial resources are not diverted from higher-ridership tiers and the system as whole remains as affordable as possible to the largest amount of riders. While this may result in higher fares for Community Routes, the service is more likely to remain financially sustainable over the long-term.

4.3.3.1 Exact Cash Fare

The exact cash fare (ECF) is the price point in which the fare recovery target should be based, after taking into account lost revenue due to concession fares. Only 28% of CKTransit ridership pay the exact cash fare. The current ECF for CKTransit Urban and Inter-Urban service is broken down as follows:

- Conventional Urban: \$2.50
- Conventional Inter-Urban (incl. Seasonal): \$5.00 Adult, \$4.50 Senior/Student, \$2.50 Child
- Specialized Urban: \$3.00

The introduction of SmartCard technology in 2015 enabled CKTransit to eliminate cash-based concession fares on the Conventional Urban service. It is recommended CKTransit follow suit for the Inter-Urban service by eliminating cash-based concessions for seniors, students, and children. Concession fares for these groups can continue to be offered through the SmartCard system. Due to the small population base to draw from, it is suggested the ECF for Inter-Urban remain at a higher price point compared to Urban routes (i.e. currently \$2.50 vs \$5.00) in order to better meet the fare recovery target without relying on additional fare increases on Urban routes, used by the majority of ridership.

It is also recommended that CKTransit adhere to legislation and bring all Specialized transit fares to parity with its Conventional counterpart. This means that, for example, users of the Chatham Accessible service should only be charged a \$2.50 cash fare, same as riders of the Conventional service in that community.

4.3.4 Identifying Concession Fares

Concession fares are any reduction in the price of using transit based on varying factors including recurring usage, income level, age, or affiliation. The ECF should be the basis of all concession fares, thereby making the ECF the highest cost category.

Prioritizing concession fares toward low-income residents can increase ridership by enabling usage by those who may not otherwise be able to access the system.

As an alternative to raising the ECF to meet the 25% fare recovery target, CKTransit can consider re-evaluating the concession categories already in place as a means to drive ridership growth. The specific goals for implementing a concession fare can vary between municipalities, however, they can broadly be divided into two categories: (1) to increase ridership; and (2) to achieve a social or

political benefit. The former will usually result in an increase in overall fare revenue while the latter usually results in a decrease, albeit with some other community benefits not directly related to the transit system.

It is suggested CKTransit prioritize any new concession fare offerings as a means to increase ridership and meet its fare recovery target. This means targeted concessions towards low-income residents without other transportation options, who find the ECF of CKTransit to be cost-prohibitive.

The concession fare changes recommended in Driving Forward are expected to result in a net gain of between \$40,000 - \$55,000 without change to ridership levels. This should contribute to the increased fare recovery target.

4.3.4.1 Cash Passes

Cash Passes are pre-paid fare media utilizing SmartCard technology. Riders are encouraged to use Cash Passes over cash fares by way of a 20% discount during on-peak hours and 50% discount during off-peak hours (\$2 and \$1.25 fare respectively vs \$2.50 ECF). Cash Passes were introduced on Specialized Urban service during the Autumn of 2019, however no discount was provided against the ECF.

Current Service		
On-Peak:	7 AM – 10 AM, 1 PM – 4 PM	20% Discount
Off-Peak:	6 AM – 7 AM, 10 AM – 1 PM, 4 PM – 7:30 PM, Saturdays	50% Discount

Table 4-15: Current On-Peak/Off-Peak Times

Off-peak fares are valued by ridership who have limited income and cannot pay the upfront \$40 required for the unlimited Affordable 30-Day Pass. However the implementation of off-peak fares is problematic for demand-responsive services, including Specialized service where fare parity is legislated. Unlike fixed route service, artificially creating demand during traditional off-peak times – when fewer vehicles are in operation – will increase costs to CKTransit as additional vehicles must be added to address this demand. It is counterproductive to implement discounts that will result in an unreliable and over-loaded transit system.

Furthermore, those that are unable to alter their travel plans, but have limited income, may feel penalized by having to pay more when they have no other option. The fare is also universally applied meaning full-fare payers or the municipal tax base are subsidizing riders who may not require further subsidy.

It is recommended that the Cash Pass discount of 20% off the ECF be implemented on all Urban, Inter-Urban, and Specialized services. It is further recommended that the 50% off-peak Cash Pass discount be eliminated and additional revenue gained be reallocated to a new Affordable Cash Pass for eligible users as outlined in section **4.3.4.3 Affordable Passes**.

Cash Passes						
	Current Service			Driving Forward		
Route Type	ECF	On-Peak Discount	Off-Peak Discount	ECF	On-Peak Discount	Off-Peak Discount
Conventional Urban	\$2.50	20%	50%	\$2.50	20%	n/a
Specialized Urban	\$3.00	n/a	n/a	\$2.50	20%	n/a
Conventional Inter-Urban	\$5 / \$4.50	n/a	n/a	\$5.00	20%	n/a

Table 4-16: Driving Forward Cash Pass Discounts

It is estimated these changes will result in a net increase of approximately \$66,000 in CKTransit revenues. The revenue gained through the elimination of off-peak Cash Pass fares will be partially offset by the introduction of Cash Pass concessions on the Inter-Urban and Specialized services, as well as the decrease in the ECF for Specialized services. However, moderate growth in the Inter-Urban service as a result of the new concessions can result in a further net increase to revenues.

4.3.4.2 30-Day Passes

30-Day Passes are unlimited-use transit passes that are currently only offered for the Conventional Urban service. Approximately 15% of ridership utilizes 30-Day Passes. Passes are non-transferable and may be purchased with up to 90 days of use each time the SmartCard is loaded. Fares are calculated at a discount of 32% and 45% off the ECF (based on 44 rides) respectively for Adults and Seniors/Students.



Driving Forward is recommending 30-Day Passes be implemented for all CKTransit services at a 30% discount for Adults and 45% discount for Seniors/Students based on 44 rides at the current ECF. Inter-Urban passes should also include access to Urban routes. The introduction of 30-Day Passes on the Inter-Urban network will eliminate the need for 22-Ride Passes.

30-Day Passes						
	Current Service			Driving Forward		
Route Type	ECF	Adult Discount	Senior & Student Discount	ECF	Adult Discount	Senior & Student Discount
Conventional Urban	\$2.50	32%	45%	\$2.50	30%	45%
Specialized Urban	\$3.00	n/a	n/a	\$2.50	30%	45%
Conventional Inter-Urban	\$5 / \$4.50	n/a	n/a	\$5.00	30%	45%

Table 4-17: Driving Forward 30-Day Pass Discounts

It is estimated these changes will decrease CKTransit fare revenue by approximately \$18,000, mostly attributed to the Specialized service. However, moderate growth in the Inter-Urban service as a result of the new concessions should offset some of this loss.

4.3.4.3 Affordable Passes

The Affordable 30-Day Pass is an unlimited-use non-transferrable pass that is available only to those residents who have an annual combined family income at or below the Statistics Canada low income measures (LIM) table. In order to be eligible for the Affordable 30-Day Pass, a completed application form along with supporting documentation must be submitted to the Municipality. Like 30-Day Passes, riders are able to purchase up to 90 days of use at a time. Fares are calculated at a discount of 64% (\$40) off the ECF (based on 44 rides).

While the Affordable 30-Day Pass is well-received by those with limited income, it can still be out of reach for those who cannot afford the upfront purchase price. Driving Forward is first recommending that the Affordable 30-Day Pass be made available across all CKTransit services at the equivalent discount. Inter-Urban passes should also include access to Urban routes.

It is further recommended that the revenue earned by eliminating the off-peak Cash Pass fare be used to fund an Affordable Cash Pass where eligible low income residents can receive a 50% discount off the

ECF fare at any time of the day. The minimum amount required to load a Cash Pass should be reduced from \$20 to \$10 for all users.

Affordable Passes						
	Current Service			Driving Forward		
Route Type	ECF	30-Day Discount	Cash Pass Discount	ECF	30-Day Discount	Cash Pass Discount
Conventional Urban	\$2.50	64%	n/a	\$2.50	65%	50%
Specialized Urban	\$3.00	n/a	n/a	\$2.50	65%	50%
Conventional Inter-Urban	\$5 / \$4.50	n/a	n/a	\$5.00	65%	50%

Table 4-18: Driving Forward Affordable Passes

It is estimated these changes will result in a net loss of \$16,000 in CKTransit revenues, attributed mostly to a decrease in fares collected on the Inter-Urban and Specialized services. Some volume growth from riders who would not otherwise be able to access the system without the Affordable Cash Pass may offset some of this net loss.

4.3.4.4 Children (Under 5 Years)

A child under the age of five currently rides for free on the Conventional Urban service when accompanied by a fare-paying adult. Driving Forward is recommending this policy be applied to the Specialized and Inter-Urban services for simplicity and to align with peer comparators. It is estimated this change will have minimum impact on overall fare revenues.

4.3.4.5 Annual Seniors Pass

A deeply discounted annual pass for seniors was discontinued in 2017. This pass offered a discount of up to 80% off the ECF, making it the lowest cost concession fare available. In 2011 staff estimated this pass required an additional \$30,000 that must be captured through other fare categories or the municipal tax base. As Chatham-Kent's population continues to age it is reasonable to assume that this amount would continue to rise if the fare was still available.

There has been some demand from residents to see the return of this fare due to both the discount and the convenience of only having to purchase the pass once annually from a municipal centre. Driving Forward is not recommending the Annual Senior Pass be reinstated for the following reasons:

- The inability to sustainably offer the same concession on Specialized services (a legislative requirement);
- The introduction of the Affordable Pass, available to low income seniors and non-seniors alike;
- The recommendation to introduce online pass re-loading, which will eliminate the need to visit a municipal centre every three months to renew a pass.

It is suggested that any new concession fares be focused on riders meeting low-income eligibility requirements to better ensure limited subsidy amounts are directed to those with the highest need.

4.3.4.6 Semester Pass / U-Pass

CKTransit's Semester Pass is available to post-secondary students showing proof of enrollment at St. Clair College Thames Campus. As it is only available on the Conventional Urban system this effectively excludes students at Ridgetown College. A Semester Pass permits unlimited use over a four month period (Fall, Winter, and Summer semesters).

A U-Pass – or Universal Transit Pass – is a program common across Ontario that gives students enrolled in post-secondary schools unlimited access to local transit. Unlike the Semester Pass, programs are usually mandatory fees included within a student's tuition that provide them with a pass whether or not that student chooses to use transit. Since fees are collected from a large participant base, post-secondary schools can typically negotiate a reduced fee from the transit agency which exceeds a typical monthly pass discount. The guaranteed annual revenue this provides is of benefit to the transit agency, however may be controversial in some student unions depending on the amount of pupils who do not require transit service.

The CKTransit Semester Pass is already the most discounted concession fare available at 73% off the ECF. Therefore there is no incentive for Thames Campus, or its student body, to negotiate a new rate in exchange for the guaranteed revenue generated through a U-Pass. Driving Forward is recommending the Semester Pass be immediately or gradually increased until it is offered at no less than the Affordable 30-Day Pass (65% off ECF) with future consideration on raising it until it is equivalent with the Student 30-Day Pass (45% off ECF). As with the Annual Seniors Pass, post-secondary students meeting low income eligibility criteria may apply for the Affordable 30-Day Pass.

It is further recommended that an equivalent Semester Pass be made available across Inter-Urban and Specialized services. This will address the needs of students at Ridgetown College as well as Thames Campus students who live in other Chatham-Kent communities. Inter-Urban passes should include access to Urban routes.

It is estimated these changes will result in a net increase of between \$4,000 - \$13,000 in CKTransit revenues. However this could also better position Chatham-Kent to negotiate a U-Pass with both local colleges, resulting in further guaranteed revenue to fund the service.

4.3.4.7 Transfers

The transfer policy for CKTransit services was last revisited in June 2019 when the transfer time limit for Conventional Urban service was increased from 60 minutes to 70 minutes. Transfer policy for Conventional Inter-Urban service allows for connection to the next Inter-Urban trip when one is scheduled immediately following the last. Inter-Urban riders can transfer to Urban routes at no extra charge while Urban riders can transfer to Inter-Urban routes at a top-up fee equivalent to the difference in the fare.

A transfer time of 70 minutes is recommended for Conventional Urban service with the ability of the rider to return via the same bus route or continue their travel on another bus within 70 minutes of their boarding.

With the increased service frequency and introduction of new concession fares for the Inter-Urban service outlined in Driving Forward, it is recommended that the transfer time limit for Inter-Urban service be changed to double that of the Urban service time (reflecting the doubling of fare value between the services). Inter-Urban transfers should allow for connections to other Inter-Urban and Urban buses, or the same bus, anytime within that transfer period.

4.3.5 Exploring Fare-Free Transit

Fare-Free Transit (FFT) permits all riders, or identified groups, to use transit service without paying a fare either at all times or for specific days/occasions. A complete FFT system is not common in North America. Successful implementation is generally the result of senior government funding or increases in municipal fees in other areas (i.e. parking, tolls, etc.) to offset lost fare revenue.

CKTransit currently collects around \$600,000 in fares, funding between 20-25% of its services. It is estimated that no more than \$25,000 is spent on fare collection systems and software. However, the same fare system also collects important boarding and location data that would need to be retained in an FFT model. In addition to direct costs saved, there would be cost avoidance benefits through the reduction in administrative time required to sell passes, load SmartCards, handle currency, and settle fare disputes.

CKTransit already provides FFT in certain instances:

- Children under 5 with an accompanying adult (Urban service only, recommended to be expanded to Inter-Urban service)
- Clean Air Day (all Conventional service)
- Civic Holiday Weekend (Route S1 – Beach Bus)

Examples of FFT from other transit systems include youth (sometimes just during summer months), seniors (sometimes only on certain days or specific hours), or on occasions such as election days, special holidays, or important events.

Fare-free special occasions offered by CKTransit has resulted in an increase in ridership of between 30-50%, including more instances of service denials due to buses reaching their capacity. This is consistent with literature outlining the ridership impact on other systems that have implemented FFT. It should be anticipated that any implementation of a universal FFT model in CKTransit would require an additional 30% investment in carrying capacity (vehicle size or quantity) in addition to the impact of lost fare revenue.

With the exception of children, youth, or the homeless, FFT was not a significant request expressed by residents during the Driving Forward review. Like other concession fares, FFT for specific groups would typically be funded through the ECF charged to full-fare payers. Price sensitivity, cited by many CKTransit users as a barrier to usage, necessitates that any fare-free policy targeting certain groups (i.e. youth)

implemented on CKTransit should be funded through the general tax base and not through increased fares to other users.

It is suggested that any implementation of FFT for special occasions or towards specific groups be done on a temporary and limited basis with funding identified through the supplemental budget process. This would better allow administration to evaluate the less tangible advantages and disadvantages of FFT and if any expansion or permanent inclusion is warranted.

Canadian National Institute for the Blind (CNIB) Cardholders

CKTransit has informally allowed Canadian National Institute for the Blind (CNIB) cardholders fare-free transit on Conventional service since prior to amalgamation. This informal policy is known only to some riders and is not reflected in the municipal user fee by-law. This concession is not accepted on CKTransit Specialized services. While some Ontario municipalities continue to offer FFT for CNIB cardholders, others have eliminated this practice as AODA legislation on fare parity has come into place. If CKTransit were to formalize this concession and make it available across all services, it may be seen as favouring a specific disability over the needs of other riders – whether their needs are due to another disability or low-income. It is recommended that CKTransit eliminate this practice.

4.3.6 Simplifying SmartCards

The recommended changes to concession fares should not necessitate the introduction of new SmartCards, further complicating the payment process. Wherever possible, riders should be able to use the same physical card – Cash Pass, 30-Day Pass, etc. – across CKTransit Urban, Inter-Urban, or Specialized services. Given the higher price point for Inter-Urban services, any pass purchased for this service would automatically include access to the Urban network.

4.4 FLEET AND INFRASTRUCTURE

Vehicles, bus stops, and transit hubs are safe and accessible to ridership and promote a positive image of public transit in Chatham-Kent.

4.4.1 Key Observations and General Comments

- Route 1 experiences passenger services denials due to a lack of seating capacity – sometimes with demand up to 24% above vehicle capacity, while Route 2 is nearing its maximum capacity;
- Over 50% of CKTransit bus stops are inaccessible due to either a lack of a concrete lead to the curb or no connection to a sidewalk;
- CKTransit is unable to take advantage of most senior government grants for transit vehicle purchase and upgrades due to the third-party ownership model;
- The small size and conditions of transit vehicles are a recurring concern issued by riders and non-riders alike;
- Wayfinding is a frequent issue among riders due to a lack of information at bus stops and on vehicles;
- The Downtown Chatham Terminal is strategically located to facilitate transfers among multiple Urban routes, however the aesthetics and physical infrastructure is poor leading to issues with accessibility and ridership comfort;
- Many bus stop signs are often placed on existing poles and not always visible to ridership or bus drivers;
- Popular points-of-interest, including Thames Campus and the Smart Centres shopping development, have bus stops in multiple or inconvenient places leading to confusing transfers or difficulty for riders to access their final destination.

4.4.2 Determining a Future Fleet

4.4.2.1 Specifications

Current CKTransit vehicles are owned, operated, and maintained by third-party service providers. The Municipality dictates the required vehicle type; however the quantity is left to the service provider depending on service specifications (e.g. routes, frequency) and business requirements (e.g. driver scheduling, backup vehicles to ensure uninterrupted service).

CKTransit's core fleet consists of 16 vehicles including backups:

Service	Vehicle	Provider
Conventional Urban	8-metre (18-21 Pass./1 WC) x 6	InTouch Connections
Specialized Urban (Chatham)	7-metre (4 Pass./4 WC) x 4	Voyago
Conventional Inter-Urban	8-metre (20 Pass./1 WC) x 4	Citilinx
Specialized Urban (Wallaceburg)	6-metre (4 Pass./2 WC) x 2	Citilinx

Table 4-19: CKTransit Fleet Capacity

In late 2019, three more vehicles were introduced to the system in order to provide service for the temporary Route 5 (Conventional Urban) and the mid-day trips on Routes A, C, and D (Conventional Inter-Urban).

Vehicles are equipped with:

- Fare boxes, Driver Consoles, and SmartCard/Barcode validators;
- Opticom emitters for traffic signal priority;
- Visual and audible stop announcement systems (Conventional only)
- Modem/software systems for vehicle location and real-time transit information (Conventional only).

The above equipment is owned and supplied by CKTransit. Ramps or lifts for passengers with mobility restrictions, as well as mobility device securement systems, are also included on each vehicle. Third-party operators further supply their own radio systems for communication with dispatch.

The size of the 8-metre Conventional buses is of concern to a significant number of transit users. In addition to the service denials caused by full buses – primarily along Route 1 – many riders cite mobility restrictions (lack of space for movement) as reason to warrant larger vehicles. Several non-transit users have also cited the small vehicle as discouraging their use of the service, as they are accustomed to larger buses found in other municipalities. Chatham-Kent reduced the size of its transit vehicles beginning in 2002 – from 12-, 10.5-, and 9-metres to 8-metres – citing cost concerns and empty buses.

All transit systems face ridership levels that significantly vary between peak and off-peak times. Vehicle size must be sufficient to address peak ridership to prevent service denials. However this leaves large vehicles empty during off-peak times which can create an impression of wasted resources. Smaller vehicles that do not address peak capacity result in frustration from riders denied boarding or packed into overcrowded buses. It can also increase the cost of service delivery by requiring additional vehicles be dispatched to alleviate capacity issues.

The following vehicle types are commonly available in Ontario transit systems and have been identified for potential inclusion in a future CKTransit fleet:

6-Metre Community Shuttles

- Available with up to seven seats, or four wheelchair spaces plus four seats. Ramp options at both side and rear entrance;

- Approx. \$130,000;
- Lifecycle of 5 years;
- Appropriate for Specialized service or Conventional Community Routes.

8-Metre Low-Floor Buses

- Available with up to 21 seats with two wheelchair spaces or nine seats with four wheelchair spaces. Limited standing room. Ramps at side entrance;
 - Approx. \$200,000;
 - Lifecycle of 5-7 years;
 - Appropriate for Specialized service or Conventional service in lower ridership routes or times (evening, weekend, Inter-Urban).

9-Metre Low-Floor Buses

- Available with 24 seats with two wheelchair spaces and standing room for up to 15 passengers. Dual entrance with front loading ramp;
 - Approx. \$490,000;
 - Lifecycle of 8-12 years;
 - Appropriate for Conventional Urban service.

Driving Forward is recommending the following concerning future vehicle specifications:

- Introduction of 9-metre transit vehicles during daytime weekday service on Routes 1 and 2 to address peak ridership levels. Ridership levels will continue to be monitored on Routes 3, 4, and 5 with the possibility that 9-metre vehicles may need to be introduced on all Conventional Urban routes in Chatham by the end of the planning horizon;
- Continued implementation of 8-metre transit vehicles on all other Conventional Urban and Inter-Urban routes as well as demand-responsive hours of operation;
- Features to ensure all 8-metre vehicles are “Specialized service ready” to allow for co-mingling between services depending on demand. This would require a minimum of two wheelchair spaces (legislated) as well as seatbelts on priority seating benches;
- Bike racks on all vehicles operating Conventional routes to support active transportation and first-mile-last mile connections;
- Front exterior electronic signage on all Conventional vehicles that clearly display route and direction to improve ridership wayfinding;
- Interior lighting, where permitted within vehicle specifications, to improve visibility and safety of ridership;
- Continued implementation of a mixed sized fleet (8-metre and 6-metre) to deliver Specialized service in Chatham and Wallaceburg.

4.4.2.2 Ownership

CKTransit is alone among peer comparators in Ontario with regards to its transit vehicle ownership policy. With some exceptions for vehicles used in Specialized services, Municipalities of similar size or larger retain transit vehicle ownership, whether or not they deliver operations internally or contract operations to a third party provider.

This practice began in 1998 when the ownership of eight municipal-owned buses was transferred to the private operator of the Chatham Conventional Service in response to a reduction in transit funding from senior levels of government. Beginning in 2002, outsourcing the capital purchase and ownership of transit vehicles continued with subsequent operators as new vehicles were required to replace the aging pre-amalgamation fleet.

The Municipality pays for the capital costs of vehicles over the life of the service contract. The Municipality is ineligible to utilize provincial or federal funding for vehicles not under its ownership. As a result, the vast majority of capital costs for transit vehicles are paid for by the municipal taxpayer.

The life expectancy of the vehicle is a significant factor when determining the length of a service contract. Municipal ownership of vehicles would permit for shorter service contracts and flexibility for service standard changes or vehicle upgrades. Due to this current policy, a Request for Proposal (RFP) must be issued 15 months prior to contract expiry and awarded no less than 12 months prior to allow for sufficient time for the provider to procure the vehicles. Municipal ownership would allow vehicles to be transferred to new service providers or to new service agreements without a 12-month lead time.

Driving Forward considers owning the CKTransit fleet as advantageous for the following reasons:

- Allows access to existing senior government grant and funding programs to facilitate transit vehicle replacement or upgrades;
- Provides flexibility to access one-time vehicle grants not anticipated when operator contracts are established;
- Provides flexibility in the length of operator agreements as they will no longer be based around the lifespan of the vehicle;
- Allows for future conversion to alternative fuel vehicles in line with any municipal plans to develop supporting infrastructure;
- Provides additional revenue streams through bus wraps, in-vehicle advertisements, and the sale of vehicles once they are out of service;
- Shortens the lead time required to award an operator contract as the Municipality can purchase the vehicles at any time prior to the service agreement or transfer existing vehicles from one operator to the next;
- The removal of the capital fees paid to the operator, included in the CKTransit operating budget, will allow for the creation of a transit vehicle lifecycle reserve to mitigate the risk of a future loss of senior government grants to replace the vehicles.

The disadvantages of this practice include the Municipality assuming risk for the upfront capital investment and procurement process. This can be mitigated respectively through leveraging senior

government grants and participation in Metrolinx' cooperative purchasing agreement. Driving Forward is recommending the Municipality assume ownership of all future transit vehicles.

4.4.2.3 Procurement and Lifecycle

An analysis of eight Ontario transit agencies with a total vehicle count of between 10 – 25 vehicles revealed an average spare ratio of around 30%. It is estimated CKTransit will require a minimum of seventeen (17) vehicles, including spares, to maintain existing core service. Service expansion recommended over Driving Forward's planning horizon will require a fleet of approximately twenty-two (22) vehicles. Routes or services anticipated to be delivered through a partner-provided delivery model – such as all Community Routes – have not been counted in this total as the chosen partner is expected to provide the vehicle.

Core Service	6-Metre	8-Metre	9-Metre
Urban Routes 1-4		2	2
Inter-Urban Routes 11-13 (A, C, D)		3	
Route 0 (Specialized Chatham)	2	2	
Route 10 (Specialized Wallaceburg)		1	
Service Expansion			
Route 0 (Additional Hours, Chatham Fringe)		1	
Route 5		1	
Express Routes			2
Route 10 (incorporating Conventional service)		1	
Route 11A	<i>No additional vehicle required</i>		
Route 20	<i>Partner-Provided Service</i>		
Route 21	<i>Partner-Provided Service</i>		
Community Bus Service	<i>Partner-Provided Service</i>		
Seasonal / Temporary	<i>Consider using Spares</i>		
Subtotal	2	11	4
Spares (30%)	1	3	1
Total	3	14	5
	22		

Figure 4-14: Vehicle Quantity Requirements

The procurement of all transit vehicles at one time may cause future capital expense issues as vehicles reach the end of their lifecycle at the same time. A procurement plan should be put in place that spreads the capital investment over multiple years to both expand the lifecycle of in-service vehicles and reduce the one-time fleet replacement cost. While it is expected that senior government funding for transit vehicles will be available for the foreseeable future, it is recommended CKTransit create a lifecycle reserve for vehicles to mitigate the risk of senior government funding. This lifecycle account could also be used for other transit infrastructure projects identified in Driving Forward.

As a conservative measure, the lifecycle for each vehicle type has been calculated at the low end of their expected service life. The following lifecycle can be assumed based on the vehicles identified **4.4.2 Determining a Future Fleet**.

Vehicle Procurement based on Core Service	Replacement Year									
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
6-Metre	3				2			1		
8-Metre	12		1	1	1	2	1	2	2	2
9-Metre	2						1		1	
From Lifecycle	\$3.77M	\$0	\$200K	\$200K	\$460K	\$400K	\$690K	\$530K	\$890K	\$400K

Table 4-20: Vehicle Replacement Chart by Year

The above vehicle replacement plan – not accounting for inflation, value-added taxes, or in-service costs – would require an approximate \$425,000 annual contribution to a lifecycle budget. CKTransit spends approximately \$390,000 annually on the capital reimbursement portion of third-party operator agreements. This capital reimbursement portion can be redirected to a lifecycle budget to assist with the capital replacement of future municipal-owned vehicles.

4.4.2.4 Alternative Fuels

Only a handful of transit agencies in Canada have implemented, or are in the stages of implementing, electric buses into their fleet. Transitioning CKTransit’s fleet to electrical requires careful analysis of available charging infrastructure and maintenance facilities. Vehicle range may impact route distances, driver shift changeovers, and the overall quantity of vehicles to maintain uninterrupted service. The current cost of electric buses is also an implementation barrier with purchase prices ranging from 70-100% above the cost of an equivalent diesel-powered vehicle. It would be sensible for CKTransit to take advantage of senior government funding to offset these capital purchases, however the third-party ownership model inhibits this as already discussed in section **4.4.2.2 Ownership**.

Only full size 12-metre (40-foot) electric buses are currently available to the Canadian market. Current ridership levels would not fill those buses in Chatham-Kent. While smaller transit vehicles suitable for Chatham-Kent will eventually be available, the timeframe for this is unknown.

Another option for CKTransit is the use of Compressed Natural Gas (CNG) vehicles. Vehicles operating on the Inter-Urban service currently use a CNG/Gasoline hybrid engine. At a minimum, re-fuelling (or re-charging) infrastructure should be available at the fleet depot so vehicles can be prepared for service the following day. However should CKTransit purchase an entire fleet of alternative fuel vehicles this would likely limit the number of suitable third-party operators in a competitive bidding process – if any were suitable – or require CKTransit to pay the full cost of infrastructure installation, reflected through the operator price, without the ability to leverage senior government financial support.

It is anticipated that transit vehicles using alternative clean fuel sources will not just be desirable by Chatham-Kent in the near future, but may become a mandatory requirement to receive senior government funding for vehicle replacement. It is suggested CKTransit continue to monitor the

progression of the alternative fuel market, the operating impact experienced by peer municipalities, and availability of financial support.

Due to the relatively small size of CKTransit's fleet, any transition would ideally be done alongside an overall strategy by the Municipality to adopt the use of these fuel sources through an electric or CNG infrastructure investment plan, in order to take advantage of economies of scale.

4.4.3 Improving Bus Stops

CKTransit has 289 active bus stops. Only 28 stops – all in Chatham – include a shelter. Other amenities such as benches, garbage containers, sidewalk leads, and landscaping vary. Of significant concern to riders and administration is the inaccessibility of many stops to those riders who use wheelchairs or other mobility devices. Bus stops are often a rider's first point of access to the transit system. Their appearance and functionality can leave a lasting impact on the rider's overall impression of the transit system. Guidelines on the development of CKTransit bus stops were first proposed during the 2011 Service Review on transit operations. Driving Forward has updated some of these guidelines with information collected over the course of this study.

4.4.3.1 Stop Locations and Walk Distance

CKTransit has a service standard of 400m-600m (five minute average walking time) between bus stops in an urban setting. Under this standard approximately 90% of all residents in Chatham are considered serviced by the Conventional Urban network. Several factors can influence the distance between stops including urban density, local destinations, and bus schedule adherence. As expansion of the Conventional Urban service is considered in Chatham and introduced in Wallaceburg, Driving Forward is recommending the same coverage and walking distance standards be applied.

90% of residents in all Primary Urban Centres should have no more than a five minute walk to a bus stop.

Bus stop locations in other Primary Urban Centres served by the Inter-Urban network require a greater walking distance for those residents living within the urban boundary, particularly in Wallaceburg. This is required to ensure the bus, which travels long distances, can consistently meet its scheduled arrival times.

Under the assumption that Inter-Urban service will become demand-responsive and buses will no longer be required to follow fixed paths, Driving Forward is recommending all seven Primary Urban Centres served by that network have a bus stop coverage goal of 90% of urban residents within a 400m-600m walk. This will allow expanded bus stop coverage without disrupting schedule adherence. Exceptions may occur due to vehicle access restrictions, lack of pedestrian infrastructure, or limited urban density.

Furthermore, as discussed in section **4.1 Land Use and Transit Planning**, new land developments that could necessitate expansion of the CKTransit service area should have stops identified during the planning process to ensure future residents can make lot purchase decisions accordingly.

4.4.3.2 Accessibility

Driving Forward estimates less than 50% of CKTransit stops are accessible with criteria defined as uninterrupted connected access between the sidewalk and the curb by way of a concrete landing pad. Many more bus stops facilitate boarding by riders in wheelchairs via connected access from the sidewalk to the road, or a private laneway; however CKTransit should not consider this acceptable practice.

As Chatham-Kent's population ages, improving the accessibility of Conventional bus stops will mitigate the financial impact of continued over-subscription of the Specialized service. A greater share of riders with mobility issues using the Conventional service improves financial sustainability for the entire transit network as a whole.

Driving Forward is recommending CKTransit establish a 70% target for accessible bus stops throughout the CKTransit network in the next 10 years. Where right-of-way space allows, concrete pads should be raised and extended 9 metres long to accommodate front and rear doors of full size transit buses. Without a raised landing pad, the slope of the bus ramp may be too high for mobility device users. This accessible stop target is dependent on continued pedestrian network development across all Primary Urban Centres.

CKTransit should continue to implement shelters at bus stops according to available funding with priority given to stops with an annual boarding count greater than 500, along designated Transit Corridors, and with consideration given to strategic importance or vulnerable ridership. Larger shelters capable of supporting two mobility devices should be prioritized at stops adjacent to senior residences or other destinations popular to those who may have limited mobility.

4.4.3.3 Bus Stop Design

Bus stops should be recognizable to catch the attention of riders and drivers. Uniformity is important to improve recognition. Several bus stop signs, or flags, have been placed in obscure locations alongside other signage, obstructed, or inconsistently located on poles, shelters, or nearby buildings. The height of bus stop signs has been observed to be anywhere from 1.5 metres to slightly over 3 metres. Examples are noted below.

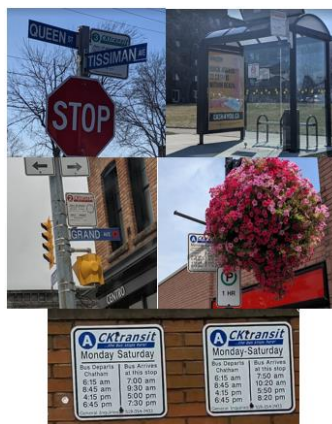


Figure 4-15: Examples of inconsistent bus stop sign placement or obstructions

It is recommended new bus stop flags are installed on its own pole (not existing street signage poles, hydro poles, or shelters), visible from both directions, at a height of between 2 and 3 metres, and a consistent distance from the roadway. Poles at higher ridership stops should be equipped with a local information case at pedestrian height that includes supporting information such as route design, schedule, fares, and other pertinent service notices. This is intended to improve ridership wayfinding and the overall image of the transit system

Driving Forward is also recommending guidelines be developed for the informational content on bus stop signs. Sign content should strike a balance between simplicity and helpfulness. Sign content should include a generally accepted universal transit wayfinding symbol (i.e. a bus), CKTransit logo, CKTransit website and phone number, route number(s), unique bus stop number, and a no parking notice enforcing existing bylaw.

It should also be noted that the current parking bylaw prohibits vehicle standing within 12 metres on the remote side of a transit stop and 28 metres on the approach side of the stop. However the absence of signage, enforcement, and the presence of marked street parking at select stops, leaves this bylaw mostly disregarded by the public.



Figure 4-16: Example of Local Information Case on Bus Stop Pole

4.4.3.4 Winter Maintenance

CKTransit establishes winter snow clearing standards for sheltered stops or stops with benches. The responsibility for winter clearing rests with the respective contractor for shelters and benches. The following minimum standards are in place:

- Snow removal within a 5-metre radius of shelters. This also includes de-icing salts to provide an ice-free surface. Snow removal occurs when 2" or more of snowfall as per Province of Ontario standards.
- Bench area cleared within a five (5) metre radius on a daily or snowfall event basis so as to consistently meet the minimum maintenance standards of the Municipality. Application of de-icing salts upon completion of snow removal effort to ensure ice-free surfaces.

Driving Forward has determined that these standards are in line with comparable municipalities. Winter maintenance has long been an issue within many jurisdictions impacting all types of mobility. CKTransit drivers, at their discretion, have the ability to drop off passengers at the safest clearing along the route whereas a stop is inaccessible due to ice or snow. As CKTransit increases the percentage of bus stops with a shelter or a bench, more stops will be subject to the current winter maintenance standards.

4.4.4 Improving Transit Hubs

Transit Hubs should be designed primarily to facilitate efficient and safe transfer between vehicles for riders to complete their journey. At a minimum, Transit Hubs should be:

- Designed to allow two or more vehicles serving different routes to converge (multiple points of entry may be necessary) at a single point where ridership waits;
- Accessible for all mobility devices;
- Connected to an adjoining pedestrian network;
- Sheltered from weather elements;
- Complimented with wayfinding tools including maps and service information

Depending on available funding, spatial requirements, and ridership demand, the following should also be considered for Transit Hubs:

- Bicycle parking in a well-lit area;
- Washroom facilities;
- Located near a parking lot;
- Access to payphones or WIFI;
- Electronic signage providing real-time arrival information or service disruptions;
- Multi-modal connections (i.e. train) where relevant.

Section **4.1.4.1 Transit Hubs**, identified eleven potential Transit Hub locations for a future CKTransit network. The following is recommended concerning each location:

Downtown Chatham Terminal

The Terminal in downtown Chatham requires immediate renovations to improve accessibility, safety, and wayfinding. The following, at a minimum, is recommended as a priority for Transit Hub development:

- Patching holes in concrete;
- New layout and modernization of garbage bins and benches to improve accessibility;
- Improved protection from weather elements (i.e. wind);
- Improved wayfinding measures including route maps or electronic signage;
- Safety lines indicating the overlap of vehicle mirrors with the boarding platform;
- Emergency call buttons connecting ridership with police;
- Signage identifying the Terminal

Consideration should also be given to the number of landing bays. The Terminal can currently accommodate the simultaneous docking of eight 8-metre vehicles. The return of larger size vehicles and implementation of extra routes necessitates either extra landing capacity at the terminal or alternative measures along Centre Street or Wellington Street. The inability of vehicles to get past one another within the Terminal can also contribute to departure delays as all vehicles must depart in the order they arrived.

It is recommended the Downtown Chatham Terminal be renovated with consideration given to the above as well as other service direction outlined in Driving Forward.

St. Clair College Thames Campus

Thames Campus is one of the most popular destinations on the CKTransit network. There are currently five separate stops that service the campus:

- Fergie Jenkins at St Clair College (#1023) – Routes 1, 5
- Fergie Jenkins at Health Plex (#1024) – Route 1
- Grand River Ln College (#5021) – Routes A, D
- College (#8001) – Route S1
- Health Plex (#8008) Route S1

The location of these stops require riders to traverse a parking lot and/or cross a road. Creating a single point of pickup, in a desired location close to the entrances of the college, arena, or HealthPlex will improve both the efficiency of the network and the experience for riders. However the single location and route must be safely negotiable by transit vehicles, ideally segregated from automobile traffic.

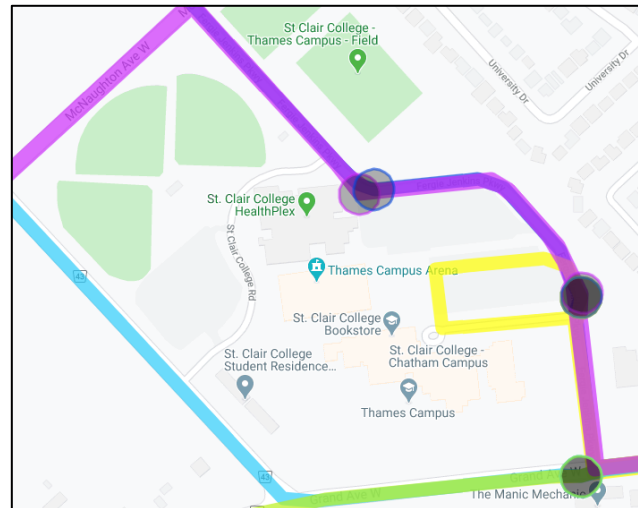


Figure 4-17: Bus Stop locations at Thames Campus

It is recommended CKTransit staff begin discussions with administration at Thames Campus concerning the development of a Transit Hub on campus property. Any agreement would likely require the ceding or leasing of campus property with maintenance responsibilities falling to the Municipality.

SmartCentres Chatham

Improved access to the SmartCentres shopping mall on the north-end of Chatham is one of the more recurring requests received from ridership. The only bus stop is located in front of the Real Canadian Superstore, however, ridership requests closer service to other shopping locations including the adjacent Wal-Mart.

Both legal permissions and safety concerns have prevented route expansion in this area. This northside location is ideal for route connections between the Chatham Urban service, the Inter-Urban network, or the proposed Community Transit routes or Community Bus service pilot outlined in section **4.2.4.12 Community Bus**.

Driving Forward is recommending CKTransit enter into discussions with property owners of the SmartCentres development in Chatham around the development of a Transit Hub in a desired location close to the entrances of major shopping destinations or with safe and connected pedestrian access. The Transit Hub should be safely negotiable by transit vehicles, ideally segregated from automobile traffic. The agreement may require the ceding or leasing of property with clear maintenance and liability responsibilities defined.

Chatham South and Chatham West

Driving Forward has preliminarily identified locations near the intersections of Queen Street & Indian Creek Road (South) and Keil Drive and Richmond Street (West) as ideal locations for Transit Hubs potentially connecting to the proposed route network. Specific locations should be identified alongside a Route Optimization Study and as new land developments are proposed in the area.

These locations have the potential to service adjacent business and points-of-interest, and could ideally connect riders from both the Chatham Urban and Inter-Urban Conventional routes.

Development of these Transit Hubs should be deferred until route connections are identified, complimentary capital projects or developments on adjoining land are proposed, or ridership demand warrants.

Wallaceburg

It is recommended that the development of a Transit Hub in Wallaceburg be prioritized to facilitate the seamless connection between the Conventional Inter-Urban route and the recommended Conventional Urban system in the community.

As funding becomes available the hub could begin as a shelter, with the recommended amenities added over time according to the needs of the local ridership. The specific location should be open to public opinion, however it may strategically be placed in a central location such as the downtown core or a popular point-of-interest such as the County Fair Mall.

Blenheim, Dresden, Ridgetown, Tilbury, and Wheatley

Similar to Wallaceburg, the development of Transit Hubs in the remaining Primary Urban Centres proposed to make up the Inter-Urban network should incorporate public opinion on their exact locations. The location of each Hub would likely be in a central location, or adjacent to a popular point-of-interest for local ridership.

CKTransit should begin financial planning for a shelter in each of these communities, with other recommended amenities added over time according to the needs of ridership.

4.5 RIDERSHIP SUPPORT

Riders have the tools, knowledge, and support to confidently use public transit.

4.5.1 Key Observations and General Comments

- New residents, or those new to the system, have expressed frustration finding information on how the transit system works;
- CKTransit is one of the few Ontario transit systems of its size without trip planning functionality on popular mapping tools such as Google Maps;
- Community service groups have expressed interest in educating their clientele on the local transit system, however they need effective tools to do so;
- The Municipality currently only has 0.6 full-time equivalent staff, split between two positions, dedicated to public transit;
- Riders and service groups have indicated there would be greater usage of the Conventional service, versus the costly Specialized service, if better education or accommodations were in place;
- Partner-provided services filling gaps in the CKTransit system, including Four Counties Transportation and Erie Shores Community Transit, are not promoted alongside other CKTransit services;
- Transportation hubs such as the Via Rail Station or the current Greyhound stop do not have local transit information posted for visitors;
- A mobile application and website is available for real-time bus tracking but the service is not available on all fixed routes.

4.5.2 Communicating Services

Various policies relating to CKTransit have been developed over time to both guide decision makers and inform the public. While most pertinent information – route schedules, maps, fares, etc. – can be found on the municipal website and in other physical collateral, there are several policies or procedures applicable to ridership which are either difficult to locate for new users, or have not been defined.

Policies directly impacting the rider include:

- Strollers, shopping carts, and non-mobility aid devices
- Mobility device size limits
- Process and requirements to secure a mobility device during trips

- Pets and service animals
- Priority and courtesy seating
- Driver discretion at obstructed bus stops (i.e. winter hazards)
- Specialized service ad-hoc pickups around medical appointments
- No-show or cancellation rules for Specialized and demand-responsive services
- Expectations for rider behaviour

Driving Forward is recommending new or existing tools, such as the CKTransit website, be better utilized to effectively communicate policies, procedures, and asset specifications impacting the experience of riders.

As communication is a two-way exercise, it is also suggested the same tools be utilized to inform ridership of the proper channel to voice feedback or complaints on service, accessibility barriers, or to submit service ideas. Ridership are currently directed by either the third-party service provider or the municipality depending on the information to be provided.

Given the diversity of public transit services in Chatham-Kent, including partner-provided services, Driving Forward is further recommending that all services be better advertised, where appropriate to the local ridership, to ensure potential system users are aware of the available options required to complete their journey anywhere in Chatham-Kent. This underscores the “Family of Services” concept outlined in section **3.1.1 Family of Services**.

4.5.3 Improving Tools for Wayfinding

Wayfinding is the process of planning and executing a journey. Improving the conspicuousness of bus stops and Transit Hubs for riders and drivers has been discussed in section **4.4.3 Improving Bus Stops**. However to build confidence ridership should be encouraged to plan their journey prior to leaving their house. This is typically done through available trip planning tools, either through physical collateral or electronic instruments.

CKTransit primarily relies on transit maps and the “NextBus” mobile app or website for riders to plan their journey. However the latter service did not incorporate Inter-Urban routes, and has since stopped serving the entire network as of January 2020. Other Ontario transit



agencies have moved to open data systems that allow third-party application developers to build tools for trip planning and displaying real-time bus arrivals. Popular applications include the Transit App, Moovit, and Google Maps. Data on stops, schedules, routes, and vehicle location is typically provided at no charge and the application developer can create a user-friendly tool which benefits that system’s ridership.

An existing advantage for CKTransit is that all transit vehicles have already been outfitted with Automatic Vehicle Location (AVL). AVL involves the use of computers and Global Positioning Systems (GPS) in dispatching and tracking transit vehicles. It also integrates with on-board technology to pass

essential information to in-vehicle peripherals (headsigs, annunciators, etc.) and passenger information systems (website and mobile applications).

Driving Forward is recommending CKTransit implement an open-source General Transit Feed Specification (GTFS). This will permit popular developers to access the CKTransit GTFS feed for applications that can deliver real-time vehicle arrival information and journey planning tools on all fixed routes – ideally across major apps common to other transit systems. CKTransit should also explore developers that can implement these services along with demand-responsive trip booking and routing capability for an all-in-one transit user experience.

4.5.4 Educating & Training Ridership

CKTransit maintains an inventory of physical marketing collateral, including fixed route maps and Chatham/Wallaceburg Accessible brochures. Hard copy brochures are distributed to new riders enrolled in the Specialized service. Hard copy maps are available at most municipal centres.

There is no active effort to distribute physical materials concerning partner-provided transportation services, such as Four Counties and Erie Shores. However information on these services is available on the website.

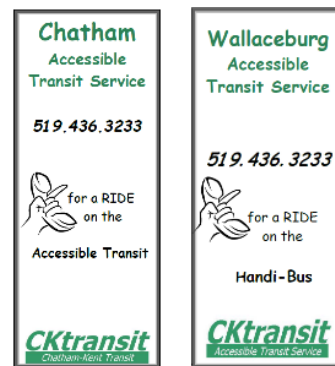


Figure 4-18: Accessible Brochures

A frequent comment from transit users is the inability to obtain a physical route map. CKTransit must balance the costs of physical map printing with the benefits of a more informed ridership. Drivers have reported instances of waste when maps are made available in-vehicle, both through discarded maps at stops or the same rider taking multiple copies. For the same reasons, many transit agencies in Ontario have moved away from making physical maps available on vehicles. Online versions are typically available for free, with some agencies choosing to charge for distributing a hard copy.

CKTransit should consider targeted distribution of physical maps to specific service groups or agencies with significant clientele using transit services. Inventory management would be left to the specific groups as supplies last. Some of these same groups or agencies have either attempted, or expressed interest in, offering education or transit training services to the same clientele. However proper educational tools and information is required to deliver such training.

Transit Training

Transit training is intended to equip persons with the knowledge and confidence to travel independently on the transit system. It often includes supports to help riders navigate accessible Conventional service, in order to reduce over-subscription on the Specialized service. Training is valuable to transit agencies as it ensures riders are well-prepared prior to using the service, and can grow ridership by empowering new persons with the confidence to try the system.

Those who request transit training typically include:

- People with disabilities: some people have experienced difficulties using public transit independently in the past. Many people with limited mobility who have relied on Specialized services are now able to use accessible Conventional transit. People with other types of disabilities may not be using public transit at all because of a perception that these services are difficult to use, or that the service will not meet their individual needs.
- Seniors: many automobile-driving seniors who are not familiar with public transit services shift to transit as their ability to drive declines.
- Newcomers: may not be familiar with local service options, and may have difficulties interpreting written information if their knowledge of English is limited.

While some larger systems utilize both in-class and in-vehicle components of an education program, it is likely that CKTransit would only offer the former. Metrolinx, a crown agency of the province of Ontario, has templates for transit educational tools available for customization by smaller transit systems. Driving Forward is recommending CKTransit use these templates to create and implement transit training tools. Internal educational expertise from the Community Human Services department could be utilized to ensure the tools are designed for the most vulnerable of populations. Due to limited staffing capacity, it is anticipated that the training sessions could be delivered by service groups with the target clientele, who would be provided with the tools at no cost.

The Accessibility Advisory Committee, along the lines of comparable transit systems, may recommend new applicants to the Specialized transit service first go through transit training to determine whether or not their needs can be met by the Conventional system. This will provide an added layer of screening to ensure the limited resources of the Specialized service are targeted towards those who need the system most.

4.5.5 Generating Non-Fare Revenue



Figure 4-19: Shelter and bench advertisements in Chatham

CKTransit has increased non-fare revenue sources significantly over the last few years with the installation of advertisement-supporting shelters and benches. This type of revenue has increased 167% since 2017, to approximately \$40,000 annually.

Shelter and bench advertisements are contracted to third-party companies who provide a share of earnings to CKTransit or use these earnings to offset their cost to maintain the infrastructure holding the advertisement. This is likely the best model for CKTransit as no existing capacity is on hand to seek out and sell advertising opportunities internally.

As a result, non-fare revenue does not provide a significant cash flow to fund operating services. Given the size of the Chatham-Kent market, this would likely remain the case even with a significant expansion of advertising opportunities. However shelters and benches provide value to ridership as discussed in section **4.4.3 Improving Bus Stops**. Advertising revenue offsets the cost to install and maintain this infrastructure, permitting broader implementation. Factoring advertisement revenue into the transit infrastructure strategy should remain the case moving forward.

Other revenue streams explored by comparable jurisdictions include the sale of physical maps at retail outlets, data usage licensing for real-time transit information, and utilizing vehicles for further advertisement opportunities. Driving Forward is recommending in-vehicle advertisements or bus wraps be explored to boost advertising revenues. These additional revenues could be used to offset the need to raise fares in the future, when faced with the rising costs of delivering the system.

4.5.6 Enhancing Leadership Capacity

CKTransit operations are the responsibility of the Engineering and Transportation Division under the Infrastructure and Engineering Services Department. The Manager, Linear Assets has 20% of time allocated to public transit while an Engineering Technologist I has 40% of time allocated to public transit. Other staff members contribute to transit-related activities and projects as required, including administrative assistants, customer service, and finance.

There are no municipal staff members with 100% of time dedicated to public transit.

Specific responsibilities of these two positions include contract management, budget management, product procurement, grant writing, project execution, data reporting, system monitoring, detour planning, map creation, accessible service eligibility verification, website maintenance, public communications, and customer inquiries.

The delivery of transit operations are outsourced to third-party companies. Since 2014 the Municipality has divided Conventional and Specialized transit operations across four service packages which are currently operated by three external providers:

- Conventional Urban – InTouch Connections
- Conventional Inter-Urban & Wallaceburg Accessible – Citilinx Transit
- Chatham Accessible - Voyago

Current contracts are for a 7-year period concluding June 30, 2021. Service provider responsibilities include vehicle provision and ownership, maintenance, storage, operation, bookings for Specialized service, and customer service. Service providers employ all bus operators, mechanics, and dispatchers. They are the first point of contact for customer questions, concerns, or complaints concerning day-to-day operations. Significant issues are elevated to municipal staff for resolution.

Driving Forward has not determined any necessity to move public transit operations in-house. Contracting out service delivery is common with small Ontario systems such as Bradford West Gwillimbury, as well as large systems such as York Region Transit. Disadvantages of outsourcing, such as lack of direct control on service performance, can be offset by cost savings depending on the operating

environment. CKTransit would likely not be financially advantaged by assuming operations. The Municipality is also currently not positioned with the garage space, technical expertise, nor the staffing capacity to operate its own transit system.

However several concerns expressed by ridership on the current state of the transit system would be addressed with extra staffing resources. The lack of dedicated staffing leadership has reduced the prominence of transit in the overall decision-making hierarchy of the Municipality – contributing to some of the land use and development issues outlined in section **4.1.2 Designing Chatham-Kent for Transit** – as well an inability to proactively identify system performance and capacity concerns before they become systemic to the design of the service. Gaps in responsibility not filled under the current staffing structure include:

- Education and marketing resource development;
- Regular system performance monitoring (i.e. schedule adherence, boardings by location, boarding times, coverage statistics) for continuous improvement;
- Public engagement, communications, and customer satisfaction;
- Partnership engagement including community stakeholders, Four Counties, Erie Shores, etc.
- Identification of new grant/funding opportunities;
- Determining Specialized transit eligibility;
- Actively identifying municipal projects that may have an impact on transit services (i.e. new developments, capital roadway or boulevard improvements, active transportation network development) and proactively work with project lead to the benefit of the transit service;
- Project execution including the creation of new wayfinding tools, fare systems, vehicle procurement, and major infrastructure development;
- Exploration of additional outlets or kiosks for SmartCard sales;
- Re-development of bus stop flags and bus stop infrastructure standards;
- Exploration of in-vehicle advertisements or other revenue generating opportunities.

Driving Forward is recommending the introduction of a dedicated staff position to coordinate CKTransit and partner-provided transit services to fill these existing gaps and implement the service-related recommendations in this report. Similar positions in comparable systems would be a Transit Coordinator, or Mobility Coordinator should the job description expand into other modes of transportation, particularly for vulnerable populations. It is concluded that greater leadership through dedicated staffing will be crucial to the long-term success of Chatham-Kent's transit system, as sought by Driving Forward.

5 IMPLEMENTATION



Figure 5-1: Bus Shelter with Solar Panels

5.1 RECOMMENDATION SUMMARY

Land Use and Transit Planning

The transit system is planned to support the long-term achievement of urban growth and community development objectives while new land developments are planned with transit-supportive design standards to increase system quality and efficiency.

1	Incorporate transit-supporting development standards or guidelines into the development review process to ensure new land developments are designed to support sustainable and barrier-free public transit. (See 4.1.2)
2	Identify and designate Transit Corridors in Chatham and Wallaceburg for the purposes of planning long-term transit infrastructure investment, promoting urban density through adjacent land developments, and anchoring transit route design. (See 4.1.3.2)
3	Identify and designate planned Transit Hub locations – one in each Primary Urban Centre and up to five in Chatham – for the purpose of developing long-term plans for transit-supporting infrastructure on adjoining lands. (See 4.1.4)
4	Conduct a Route Optimization Study to improve existing routes and plan for future fixed route implementation within Chatham. (See 4.1.3.3)

Transit Service Delivery

All Chatham-Kent residents are able to access sustainable transit services that support urban growth and daily life.

5	Consider multiple delivery models for service implementation to balance financial sustainability with service goals. (See 4.2.2)
6	<p>Implement a Tiered Route Structure to better align service levels and allocate resources in a way that sustainably meets the needs of both the local ridership, as well as the broader goals of the Municipality. Larger population centres designated for growth should receive a greater share of transit resources while lower density areas are allocated limited resources that support the healthy communities concept through access to critical services.</p> <ol style="list-style-type: none">1. <u>Urban Routes</u>: highest level of service sustainable within Chatham-Kent's largest population centres in order to connect riders with work, school, and other activities;2. <u>Inter-Urban Routes</u>: highest level of service sustainable to connect residents in Primary Urban Centres with prospective employers, education, housing, and other services found across all other Primary Urban Centres in order to encourage sustainable and targeted growth in those communities;3. <u>Community Routes</u>: supports healthy communities across Chatham-Kent through limited service hours that connect riders from Secondary Urban Centres, hamlets, and rural areas

	<p>with access to critical services, such as medical appointments or grocery shopping, found in Chatham-Kent's Primary Urban Centres;</p> <p>4. <u>Temporary Routes</u>: service levels dictated by the specific purpose of the route (i.e. seasonal, event-specific). Routes identified on an annual basis through the supplemental budget process to ensure funding priority remains with other base routes serving more critical needs.</p> <p>(See 4.2.3)</p>
7	Match Specialized transit service hours and areas of service with its Conventional counterpart and integrate services if and where possible. (See 4.2.5)
8	Implement seven-day Conventional Urban service in Chatham. Align service span with local employment and education opportunities, in a financially sustainable manner, including consideration to demand-responsive service delivery during low ridership areas or times. (See 4.2.4)
9	Establish Route 5 as a permanent service in Chatham and redesign to a 30-minute frequency to align with other Urban fixed routes. (See 4.2.4)
10	Introduce Conventional Urban service within Wallaceburg, seven-days per week, on a demand-responsive basis including a possible connection to Walpole Island. Align service span with local employment and education opportunities, in a financially sustainable manner. (See 4.2.4)
11	Expand vehicle capacity servicing the demand-responsive Specialized service in Chatham in order to provide Conventional demand-responsive access to fringe areas of Chatham inaccessible to the daytime fixed route (i.e. Bloomfield Business Park). (See 4.2.4)
12	Implement demand-responsive Conventional Inter-Urban service between Chatham-Kent's seven Primary Urban Centres at a two-hour weekday frequency appropriate to access employment, education, and other critical needs, with limited Saturday service. (See 4.2.4)
13	Implement limited transit service options for all Chatham-Kent communities through the establishment of a Community Route(s) system. Partner-Provided demand-responsive delivery should be considered to reduce operational costs, including a combination of existing relationships with Four Counties Transportation, Erie Shores Community Transportation, and AdvANTage Transportation. (See 4.2.6)
14	Prioritize an improved transit connection between Wheatley and Leamington through a Community Route service ("Route 21"). Consider opening up eligibility criteria of Erie Shores Community Transportation to all residents or work with Leamington Transit as they explore a demand-responsive Conventional service. (See 4.2.4.11)
15	Pilot a scheduled Community Bus service connecting Bothwell, Thamesville, and Moraviantown with Chatham. Concept may be expanded to other Secondary Urban Centres where successful. (See 4.2.4.12)
16	Implement a flexible routing policy whereas vehicles operating a demand-responsive service may be reassigned according to ridership demand or to supplement fixed route service when significant delays arise or vehicles exceed capacity. (See 4.2.4)
17	Conduct a study in coordination with the Accessibility Advisory Committee to address over-subscription issues in current Specialized services by evaluating sustainable best practices regarding application, intake, approval, renewal, and ongoing management processes. (See 4.2.5)

18	Re-brand Chatham and Wallaceburg “Accessible” services in a manner that does not imply a lack of accessibility in Conventional operations. (See 4.2.5)
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Fares

Fare policy and payment tools make transit usage simple, sustainable, and accessible to riders.

19	Implement an online system for reloading SmartCard passes. Such a system should be usable by individual riders as well as service agencies who manage multiple cards on behalf of their clients. (See 4.3.2)
20	Expand availability of physical SmartCard purchase to more outlets commonly visited by transit ridership either at points-of-sale or an automated kiosk. (See 4.3.2)
21	Establish a fare recovery target of 25% of overall operational expenses to help inform future fare increases or ridership growth goals. (See 4.3.3)
22	Encourage SmartCard adoption by eliminating remaining cash-based concessions fares across all services and exclusively offer concessions through use of SmartCards. Passes, where possible, should be accepted across all CKTransit services to eliminate the need for a single rider to carry multiple cards. (See 4.3.4)
23	Continue implementing a higher price point on the Exact Cash Fare (ECF) of Inter-Urban routes compared to Urban routes in order to better meet the fare recovery target. (See 4.3.3.1)
24	Implement fare parity between Specialized transit services and Conventional transit services operating in the same area. (See 4.2.5.2)
25	Implement a 20% concession fare off the ECF for payments by Cash Pass SmartCard on all Urban, Inter-Urban, and Specialized services during all service times. (See 4.3.4.1)
26	Eliminate the 50% off-peak Cash Pass concession fare whereas it cannot be reasonably implemented at parity with Specialized service. Use increase in revenues to help reach fare recovery target and/or fund additional income-based (i.e. “Affordable”) concession fares. (See 4.3.4.1)
27	Implement a 30% concession fare off the ECF for Adult 30-Day Passes (45% for Seniors and Students) on all Urban, Inter-Urban, and Specialized services. (See 4.3.4.2)
28	Eliminate the Inter-Urban 22-Ride pass in favour of the discounted 30-Day Pass and Cash Pass. (See 4.3.4.2)
29	Implement a 65% concession fare off the ECF for 30-Day “Affordable” Passes for riders meeting low-income eligibility criteria on all Urban, Inter-Urban, and Specialized services. (See 4.3.4.3)
30	Implement a 50% concession fare off the ECF for payments by a new “Affordable” Cash Pass SmartCard for riders meeting low-income eligibility criteria. Concession should be implemented on all Urban, Inter-Urban, and Specialized services during all service times. (See 4.3.4.3)
31	Reduce the minimum re-loading requirement on Cash Pass and “Affordable” Cash Pass cards from \$20 to \$10. (See 4.3.4.3)

32	Immediately or gradually increase the Semester Pass concession fare until it is offered at no less than the Affordable 30-Day Pass (65% off ECF) with future consideration on raising it until it is equivalent with the Student 30-Day Pass (45% off ECF). A Semester Pass at an equivalent concession fare should also be made available for use on Inter-Urban and Specialized services. (See 4.3.4.6)
33	Implement fare-free transit for a child under the age of 5, accompanied by a paying adult, on all Urban, Inter-Urban, and Specialized services. (See 4.3.4.4)
34	Maintain existing 70-minute transfer window for Urban routes and existing transfer policy between Urban and Inter-Urban routes. In concert with the recommended increase in frequency for Inter-Urban routes, consider doubling this transfer window time for Inter-Urban routes. (See 4.3.4.7)
35	Eliminate the unofficial practice of fare-free transit for Canadian National Institute for the Blind (CNIB) cardholders. (See 4.3.5)

Fleet and Infrastructure

Vehicles, bus stops, and transit hubs are safe and accessible to ridership and promote a positive image of public transit in Chatham-Kent.

36	Assume ownership of all future CKTransit vehicles. Third-party operators will continue to be responsible for operation, maintenance, and storage of the vehicles. (See 4.4.2.2)
37	Procure at least 17 transit vehicles to deliver base services, with the possibility of up to 22 vehicles for expanded services outlined in Driving Forward. (See 4.4.2.3)
38	Establish a lifecycle reserve to mitigate the risk of losing future government grants to replace vehicles, or for use in future transit capital projects. (See 4.4.2.3)
39	Introduce 9-metre (30-foot) transit vehicles for daytime weekday service on Routes 1 and 2 to address peak ridership levels. Continue to monitor ridership on other Chatham routes and financially plan for the possible introduction of 9-metre vehicles on all Chatham fixed routes in the next 5-10 years. (See 4.4.2)
40	Continue implementation of 8-metre (26-foot) transit vehicles on all other Conventional Urban and Inter-Urban routes as well as demand-responsive hours of operation. Ensure all 8-metre vehicles are “Specialized service ready” to allow for co-mingling between services depending on demand. (See 4.4.2)
41	Continue to include bike racks on all transit vehicles not dedicated for Specialized service and implement front exterior electronic signage on all Conventional vehicles that clearly display route and direction to improve ridership wayfinding. Interior lighting, where permitted within vehicle specifications, should be improved for visibility and safety of ridership. (See 4.4.2)
42	Extend to all seven Primary Urban Centres the current coverage goal of 90% of all residents within a 400m-600m walk to a bus stop under a demand-responsive service delivery model. (See 4.4.3)
43	Develop new bus stop flags for uniformity across Urban and Inter-Urban service areas with the primary goal of improving wayfinding and journey planning. (See 4.4.3)

44	Improve wayfinding by ensuring new bus stop flags are installed on its own pole, visible from both directions, at a height of between 2 and 3 metres, and a consistent distance from the roadway. Poles at higher ridership stops should be equipped with a local information case at pedestrian height that includes supporting information such as route design, schedule, fares, and other pertinent service notices. (See 4.4.3)
45	Continue to implement bus stop shelters according to available funding with priority given to stops with an annual boarding count greater than 500, along designated Transit Corridors, and with consideration given to strategic importance or vulnerable ridership. (See 4.4.3)
46	Establish a 70% target for accessible bus stops throughout the CKTransit network in the next 10 years. (See 4.4.3)
47	Prioritize the rehabilitation of the Downtown Chatham Transit Hub to improve accessibility, pedestrian and bicycle access, safety, and wayfinding. (See 4.4.4)
48	Enter into discussions with property owners of St. Clair College Thames Campus around the development of a Transit Hub in a desired location close to the entrances of the college, arena, or HealthPlex to improve the efficiency of the existing and planned route intersections, and ridership accessibility. (See 4.4.4)
49	Enter into discussions with property owners of the SmartCentres development in Chatham around the development of a Transit Hub in a desired location close to the entrances of major shopping destinations or with safe and connected pedestrian access. (See 4.4.4)
50	Identify locations for the potential development of Transit Hubs in Chatham West (near Keil/Richmond intersection) and Chatham South (near Queen/Indian Creek intersection). Development should be deferred until future route intersections are identified, complimentary capital projects or developments on adjoining land are proposed, or ridership demand warrants. (See 4.4.4)
51	Identify and begin financial planning for the development of a Transit Hub in Wallaceburg, Blenheim, Tilbury, Ridgetown, Dresden, and Wheatley. Wallaceburg should be prioritized where funding is limited. (See 4.4.4)

Ridership Support

Riders have the tools, knowledge, and support to confidently use public transit.

52	Utilize new or existing tools, such as the CKTransit website, to effectively communicate policies, procedures, and asset specifications impacting the experience of riders. (See 4.5.2)
53	Re-evaluate or consider eliminating non-legislated customer convenience policies unique to Specialized service, such as the five-minute wait allowance for pickups or allowing permanent recurring bookings, if they cannot reasonably be implemented in the Conventional service. (See 4.2.5)
54	Mandate the same accessibility training, including sensitivity, etiquette, equipment, and policy training, across all operators of Conventional and Specialized services. (See 4.2.5)

55	Allow eligible riders to bring a support person with them on Conventional services, at no additional fare, as is currently permissible on Specialized services. (See 4.2.5)
56	Create and implement transit training tools designed to educate and encourage the use of transit services to vulnerable populations. (See 4.5.4)
57	Promote the “Family of Services” concept by advertising partner-provided service options – such as Four Counties Transportation, Erie Shores Community Transportation, and AdVANTage Transportation – alongside CKTransit services where appropriate to local ridership. (See 4.5.2)
58	Implement an open-source General Transit Feed Specification (GTFS). Permit developers to access the CKTransit GTFS feed for applications that can deliver real-time vehicle arrival information and journey planning tools – ideally across major apps common to other transit systems. (See 4.5.3)
59	Explore in-vehicle advertisements or bus wraps as an additional revenue source to reduce the need for future fare increases. (See 4.5.5)
60	Establish a dedicated staff position to coordinate CKTransit and partner-provided transit services to fill existing gaps, better identify proactive measures to maintain or improve service quality, and implement the service-related recommendations in this report. (See 4.5.6)

5.2 TIMELINES

The proposed timelines can be used for the purposes of prioritization, as well as acknowledgement of known projects already scheduled in the short-term. Driving Forward recognizes that timelines proposed in any master plan may be abstract. Implementation is subject to numerous obstacles, including the availability of funding, and may also be fluid with the shifting demand of public transit.

5.2.1 Short-Term (1-2 Years)

- Completion of Route Optimization Study to inform medium- or long-term projects including new route design (and bus stop infrastructure relocation/installation), as well as the identification of Transit Corridors and conceptual development of future routes; **(See 4.1.3.3)**
- Acquisition of a municipally-owned CKTransit fleet – 17 vehicles – to cover existing service levels, including an upgrade to larger 9-metre buses on high ridership routes; **(See 4.4.2.2)**
- Preparations for the acquisition of a new third-party transit operator contract in advance of the current contract expiry in June 2021. Contract terms should be flexible to accommodate the potential implementation of service recommendations outlined in Driving Forward, with the preference for a single operator to enable dynamic routing across services; **(See 4.2.4)**
- Extension of service hours into the evening for Chatham’s Conventional and Specialized Urban system; **(See 4.2.4)**
- Shift of the Inter-Urban system to a demand-responsive delivery model and introduction of new bus stop locations in those Primary Urban Centres to more closely match Chatham service levels; **(See 4.2.4)**
- Rehabilitation of the Downtown Terminal in Chatham; **(See 4.4.4)**
- Installation of shelters – or Transit Hub points – in each Primary Urban Centre outside Chatham; **(See 4.4.4)**
- Development and incorporation of Transit-Supportive Design Standards into the land development review process; **(See 4.1.2)**
- Development and launch of the GTFS feed for trip planning and real-time vehicle tracking across all CKTransit fixed routes; **(See 4.5.3)**
- Development and launch of online SmartCard reloading services; **(See 4.3.2)**
- Implementation of fare parity between Conventional and Specialized services; **(See 4.2.5.2)**
- Opening up of Erie Shores Community Transportation eligibility to improve connection between Wheatley and Leamington; **(See 4.2.4.11)**
- Introduction of fare-free policy for support persons assisting eligible riders on Conventional services; **(See 4.2.5)**

5.2.2 Medium-Term (2-5 Years)

- Introduction of a dedicated staff person to CKTransit to lead or assist with Driving Forward recommendations (See 4.5.6), including:
 - Exploration of additional outlets or kiosks for SmartCard sales; (See 4.3.2)
 - Development of transit education or training tools; (See 4.5.4)
 - Re-development of bus stop flags and bus stop infrastructure standards; (See 4.4.3)
 - Development of new eligibility criteria and processes for Specialized services, including potential rebranding, in conjunction with Accessibility Advisory Committee; (See 4.2.5)
 - Promotion of “Family of Services” and communication of policies; (See 4.5.2)
 - Exploration of in-vehicle advertisements or other revenue generating opportunities; (See 4.5.5)
- Launch of Wallaceburg Conventional service; (See 4.2.4)
- Launch Conventional Sunday service in Chatham; (See 4.2.4)
- Expansion of Inter-Urban service up to seven pickups each weekday; (See 4.2.4)
- Exploration and potential development of Transit Hub sites in North Chatham and Thames Campus; (See 4.4.4)
- Implementation of other fare structure changes across Urban, Inter-Urban, and Specialized streams including new concessions. Fare increases may be considered during this period if necessary; (See 4.3.4)
- Launch of Community Bus pilot servicing Thamesville, Bothwell, and Moraviantown; (See 4.2.4.12)
- Development of Route 20, or equivalent service levels, following conclusion of AdVANtage Transportation pilot period; (See 4.2.6)
- Exploration and development of Route 21, or equivalent service level, through coordination with Leamington Transit; (See 4.2.4.11)

5.2.3 Long-Term (5+ Years)

- Development and possible implementation of Conventional Urban Express Routes in Chatham; (See 4.2.4.4)
- Potential launch of Route 11A according to ridership needs; (See 4.2.4.7)
- Potential development of Transit Hubs in South and West Chatham locations; (See 4.4.4)
- Lifecycle replacement of fleet to begin, consideration of 9-metre vehicles on all Conventional Urban routes in Chatham if ridership warrants; (See 4.4.2.3)
- Achievement of 70% target for accessible CKTransit bus stops; (See 4.4.3)

5.3 FUNDING

5.3.1 Current Status

The CKTransit operational base budget is approximately \$2.5 million. This is primarily funded from a combination of the municipal tax base, the Provincial Gas Tax, and fares. Operational expenses include the service provider contracts (including a capital component for third-party owned vehicles), shelter and bench maintenance, shelter lifecycle, technology servicing and licensing, SmartCard inventory, sign replacement, and minor administrative expenses.

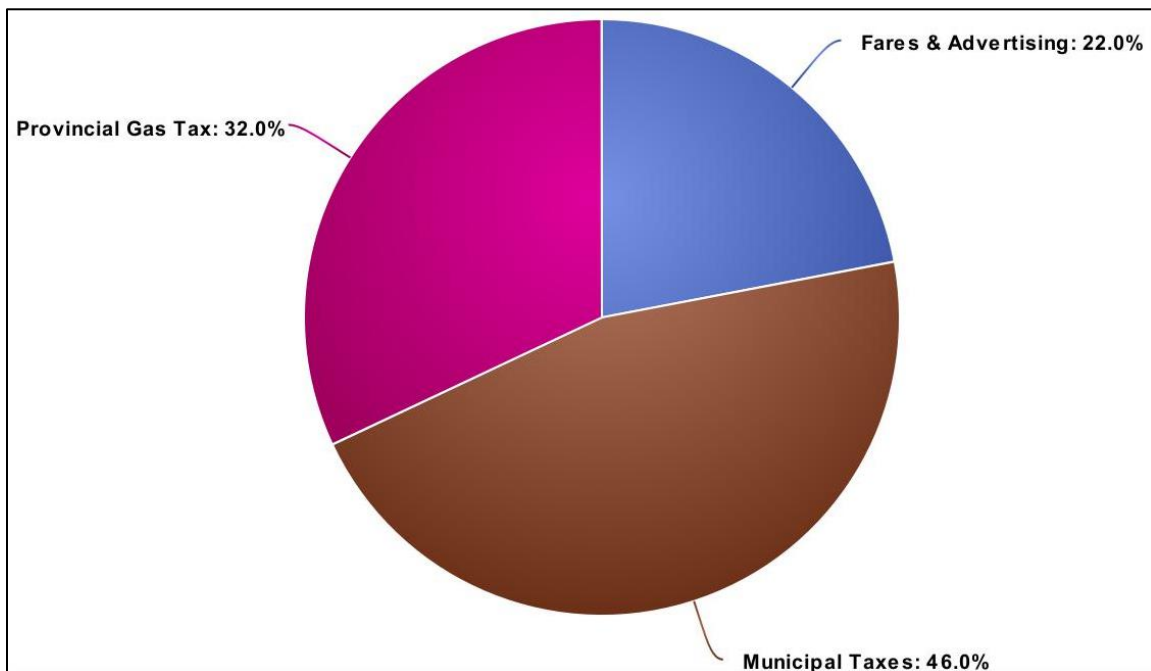


Figure 5-2: Funding Sources for CKTransit Operations

Virtually all capital or one-time expenses are funded through the Provincial Gas Tax or other grants from senior levels of government, when available. These expenses include shelter installation, capital upgrades, technology procurement, and pilot services such as the temporary Route 5 and the demand-responsive evening service in Chatham.

5.3.2 Municipal Tax Base

Public transit is an area-rated service in Chatham-Kent. In 2019, a household property tax bill included an average of \$19 to fund the transit system (all area-rated numbers are based on a property tax assessment of \$100,000). Residents living in areas without transit service do not pay property taxes for public transit. Chatham property owners pay approximately \$25 (Conventional and Specialized Urban / Inter-Urban), Wallaceburg property owners pay approximately \$15 (Specialized Urban / Inter-Urban), and property owners in other communities serviced by the Inter-Urban system pay approximately \$5.

Property owners living in the service areas of Erie Shores Community Transportation and Four Counties Transportation also pay a relatively minimal amount to offset those partner-provided services. Driving Forward anticipates the area-rated charging structure will remain in place.

To avoid the uncertainty of recurring funding programs offered by senior levels of government, Driving Forward is proposing the net cost of all new proposed routes or service levels presented in this report be funded through the municipal tax base. The total estimated cost of these operational recommendations is \$1.5 million above current budgeted levels. Under a continued area-rated structure, this is expected to add an additional \$10 and \$12 to Chatham and Wallaceburg property tax bills respectively (whereas the majority of service enhancements are proposed in those communities) plus an additional \$2 in other communities serviced by the Inter-Urban system. Estimations do not include inflation or any capital expenditures required to launch the services.

5.3.3 Provincial Gas Tax and Other Government Funding

In 2004, the Province of Ontario introduced the Dedicated Gas Tax Funds for Public Transportation Program (“Provincial Gas Tax”). This program provides a sustainable source of funding for Municipalities to support public transit service expansion. The funding cannot be used to replace municipal funding for transit. The annual allotment to Chatham-Kent varies on an annual basis depending on the amount of provincial gas tax collected in Ontario and according to CKTransit’s share of ridership and population compared to the rest of the province.

CKTransit received \$965,599 during 2018-19. Approximately \$800,000 of this amount was allocated towards base operations while the balance is held in reserve for use on special projects, pilots, or capital purchases. Operations include the entirety of the Inter-Urban system, the shelter lifecycle strategy, as well as a small portion of the Chatham Urban service. Capital or one-time expenses have included shelter installation or bus stop development, fare system installation, and pilot services such as the temporary Route 5 and demand-responsive evening service.

Virtually all capital, pilot programs, or one-time transit expenses have been funded through the Provincial Gas Tax or other grant programs offered by the Provincial or Federal government. Driving Forward is proposing that those projects recommended in this report continue to be funded by these sources in order to lessen the burden on the municipal tax base. Due to senior government unpredictability, this funding strategy constrains CKTransit’s ability to accurately provide timelines for many of these projects. However Driving Forward should be used to identify priority projects and support the grant application process as funding sources become available.

Other government funding sources available to transit systems include:

- Investing in Canada Infrastructure Plan (ICIP) – Public Transit Stream
- Public Transit Infrastructure Fund (PTIF)
- Ontario Community Transportation Grant Program
- Federation of Canadian Municipalities (FCM) – Green Municipal Fund
- Green Commercial Vehicle Program (GCVP)

5.4 PERFORMANCE MEASUREMENT

This section is intended to offer guidelines for performance criteria to ensure CKTransit services remain committed to the vision statements described in Driving Forward. These are not strict standards. Service levels should also consider social benefits or less quantifiable metrics that seek to achieve overarching goals established by the Municipality.

5.4.1 Quality of Service

It is important for public transit services to remain relevant to the changing needs of the community. Driving Forward is proposing quality to be measured on a regular basis according to On-Time Performance, Coverage, Service Span, and Customer Satisfaction.

On-Time Performance (OTP)

As discussed in section 3.3.1.5 CKTransit On-Time Performance (OTP), this metric is of significant concern to current ridership. The Route Optimization Study is expected to produce new route alignments and stop locations to improve OTP. Many transit agencies attempt to meet a target of 90% schedule adherence (departing no earlier than the scheduled departure time and arriving no later than 3 minutes after the scheduled arrival time). CKTransit should adopt this standard. Where OTP falls short of 90% consideration should be given to:

- Shortening route length;
- Realigning stops or stop spacing;
- Implementing Transit Priority Measures;
- Implementing flexible or demand-responsive stops for difficult to reach locations that do not see consistent ridership volumes throughout the service span; and/or
- Adding additional vehicles during peak periods on demand-responsive routes.

Coverage

Coverage should be measured by the existing service standard of 90% of all urban residents living within a 400m-600m walk to a bus stop. This should apply to each Primary Urban Centre serviced by an Urban or a demand-responsive Inter-Urban route. CKTransit should avoid one-off requests for the relocation of bus stops. Rather, specific locations should be determined by objective analysis of common travel patterns over a period of time with additional consideration given to locations that would service large volumes of riders such as popular points-of-interest, high density residential developments, schools, and centres of employment.

Service Span

The appropriate service span, or operating hours, of CKTransit services should be measured through a combination of local community needs, and service sustainability criteria discussed below. As all

Chatham-Kent residents should have public transit options available to satisfy critical needs, the minimum service span for any proposed Route Tiers (except Temporary Routes) should be weekdays from 9:00 AM – 5:00 PM since most critical services are available during that time. However those hours would not be sufficient to support the objective of Urban and Inter-Urban Route Tiers. Those tiers must have greater capacity and frequency for riders to reliably use public transit to access employment and education opportunities. This includes later into the evening and weekends when many of those opportunities are still available.

This also means Urban service may be different between Chatham and Wallaceburg due to the differing local opportunities. The Inter-Urban service span may also not match an Urban service span due to lower ridership and its inability to financially sustain expanded hours according to the criteria below.

CKTransit should continue to work with Economic Development and Community Human Services to determine the appropriate service span given local conditions and opportunities. The recommended operating hours outlined in Driving Forward have been analyzed to meet local circumstances in a sustainable manner; however this analysis should be revisited on a regular basis.

Customer Satisfaction

This guideline is intended to address less quantifiable service characteristics important to ridership. This should be evaluated at least on an annual basis, likely through a ridership survey, to determine overall user satisfaction with transit service. Service characteristics may include:

- Cleanliness
- Accessibility
- Access to Information
- Comfort
- Safety
- Drivers

Results can be used to alter policy/procedure, improve communications, make adjustments to service contracts, or other improvements to ridership support services. Benchmarks should be created to assist with year-over-year comparisons.

5.4.2 Service Sustainability

As discussed in section **4.3.3 Setting a Fare Recovery Target**, CKTransit should expect a 25% fare recovery against its combined operational expenses in order to financially sustain routes and services. Higher ridership in Chatham is likely to drive the majority of this fare recovery, offsetting lower ridership services and the higher cost Specialized service. At current service levels, this represents a 14% increase in ridership, or a 3% increase in ridership combined with the concession fare adjustments discussed in this report.

Driving Forward has recommended several additional routes, or expanded span of service for existing routes. Service level enhancements recommended in the short- to medium-term would equate to a 52%

increase in revenue vehicle hours above current levels. Sustaining all services – new and existing – would require a 49% ridership increase. This should be considered achievable given the untapped market potential of evening service hours, Sunday service, and Wallaceburg Conventional service. This ridership volume is also in line with comparable transit systems in Ontario.

The chosen service delivery model (see section **4.2.2 Determining Delivery Models**) will have an impact on the fare recovery target. CKTransit should follow the recommended ridership level guidelines when determining the most cost effective model in which a route can be delivered. Those minimum ridership levels (15+ per vehicle hour for fixed route / 5-15 per vehicle hour for demand-responsive) can also be used as benchmarks for future route implementation, elimination, or adjustment to service levels.

Minimum ridership numbers for Community Routes have not been recommended as service is intended to meet basic social and critical needs. Ridership is expected to be minimal in those service areas – thus necessitating delivery through a partner-provided where it is more financially efficient.

Where the system's overall financial sustainability falls short of the fare recovery target CKTransit should consider:

- Raising fares or altering the concession fare structure;
- Reducing Urban or Inter-Urban service levels;
- Changing service delivery to a more efficient model given the ridership level (i.e. Demand-Responsive or Partner-Provided); and/or
- Implementing a ridership growth strategy.

6 APPENDIX A

Consolidated Comments

Driving Forward reviewed over 2,000 comments from residents and transit stakeholders concerning their transit needs and how they could be addressed, including comments collected from other recent transit-related initiatives dating back to January 2018.

The following is a consolidated list of comments, divided by topic, intended to give the reader a general understanding of what was reported to the project team. Many comments have been edited to remove personal information or inappropriate language, expand context, or for clarity where necessary. Not all comments are included in this list due to duplication and the variety of methods in which feedback was accepted (comment forms, surveys, emails, interviews, phone calls, etc.).

Category	Comments
Bigger Buses	Big buses so that we don't need to be at bus stop because of full bus, buses until midnight, polite drivers. Bigger buses with more seating, more room and better options for safety. Larger buses. Larger buses on the busiest routes. Need bigger buses for Routes 1 and 2. Larger buses so that passengers are not left behind at bus stops.
Number of Buses	5 buses instead of 4 An ideal service should be 1. Extra buses for each route More buses during peak hours. Needs more than one bus for each route.
Accessibility	Not accessible/not meeting community needs. The signs on the buses never work. As a deaf rider this is upsetting. Mobility devices not properly accommodated on the conventional system. Bus drivers should be properly educated on accessibility parameters to help eliminate barriers for those who have accessibility needs. Inter-urban bus stops are not accessible.
Road Safety	Better drivers or driving conditions going over a curb when making a turn and sometimes turning so fast that you have to hold on the seat in front of you to keep from getting thrown out into the aisle. Poor driving.

	Some drivers are quite erratic. Driving fast. Stopping very quickly. Turning corners quickly.
Bus Stops	<p>Covered areas at bus stops</p> <p>Ideally, you should not have to walk more than 10 min to bus stop!</p> <p>Shelters at stops especially near malls and apartment/condo buildings.</p> <p>More bus shelters, benches, times posted like the next bus for those whom do not have the app.</p> <p>More shelters for stops would help in the bad weather.</p> <p>I have to run across Richmond traffic every day because there is a stop across from work, on the wrong side of the street, and no traffic light.</p> <p>Need to put a bus stop on Walpole Island and include it in the transit route, with at least a morning stop (9:00AM) and an evening stop (6:00PM).</p> <p>The bus terminal needs a sheltered area for riders to feel safe and comfortable from the elements.</p> <p>Bus shelters located at bus stops are not accessible for scooters/wheelchairs.</p> <p>Shelters and signage need to be added at the inter-urban bus stops.</p>
Bus Information	<p>I really don't understand the routes on your web page.</p> <p>Able to use Google Maps to have access to updates</p> <p>Show the exact time the bus will be at the stop.</p> <p>1st: the signs show service every 30 min. It should show the actual time the bus will be at the stop.</p> <p>Make it easier to find out about routes, times etc.</p> <p>The route map is very confusing.</p> <p>Bus information is difficult to find for both the urban and inter-urban routes.</p> <p>Inter-urban arrival times are not clear on the bus stop signs. This makes trip planning difficult for transit riders.</p> <p>Inter-urban buses did not have information on connections to urban buses for better trip planning.</p> <p>An educational campaign to teach users how to use the conventional bus system would benefit people such as members of New Beginnings: Brain Injury Association.</p> <p>Inter-urban stops should have signs that include the scheduled pick-up times.</p> <p>Implement education regarding the bus system needs to be better to accommodate an aging population, who may eventually have to use the bus system.</p>
Service Hours	<p>Possibly later night service, I had encountered a time when I came on interurban bus 9:00pm, had to take a taxi-wait was around 1 hr, it was cold and being female, I was not happy being alone waiting for the taxi.</p> <p>Buses that run until after 10 p.m. and on Sundays.</p>

	<p>Current business is needed later at night.</p> <p>Buses being on time.</p> <p>Buses running past 7 pm and on holidays/Sundays.</p> <p>Longer hours for those of us who work late. I work until 9 and then I have to walk an hour and a half home because buses stop running at 7</p> <p>Buses running every 20 to 30 minutes. Multiple routes that stay running past 9 when the stores close. People that don't drive need a reliable and affordable system to get to and from work and appointments.</p> <p>Interurban times changed.</p> <p>Really need more times for Interurban buses.</p> <p>On time and run later. People can't afford cars, cabs and end up walking at night. Shifts don't get done until 11 pm yet buses quit running earlier than that.</p> <p>As a manager of a business that has employees relying on the current system, I find it does not work with the schedules I create for staff. I am unable to hire people that do not have transportation for evening and weekend shifts. The system needs to change.</p> <p>Ridgetown to Chatham updated transit frequency to 2-3 hours.</p> <p>Have a bus service on Sundays for those who want to attend church, go shopping, or visit friends.</p> <p>Without later bus service it is impossible for people who rely on transit to go to a movie at night or to take advantage of Cheap Tuesdays, it is only possible for them to see Matinees.</p> <p>The urban bus service has often stopped running by the time the inter-urban buses arrive in Chatham.</p> <p>Inter-urban service is too infrequent.</p>
Environment	<p>Positive environment for the kids.</p> <p>Clean buses – wipe the greasy hair marks off the windows each night – currently they stay there for a week! AC has not worked on the majority of buses all summer!</p> <p>An ideal service would include a kind and courteous driver.</p> <p>Safer bus routes and more bus stops with coverage from outside elements. Not fun standing in the rain getting soaked or freezing in the winter.</p> <p>Bus shelters would be nice to see more of at some areas, even just a canopy.</p> <p>I would like to see access on buses for young mothers with babies in strollers not having to take baby out and fold up strollers to get on the bus. It is especially difficult if they have gone shopping and carry extra things. For a lot of moms it is their only means of transportation.</p> <p>Having buses with working AC especially in the extreme heat multiple times this summer I had to ride with other in a bus with no AC and no air flow I was so hot as one point I felt very sick.</p>

	<p>Maybe less smoke breaks.</p> <p>Bicycle access onto buses.</p> <p>Nicer staff.</p> <p>Clean, working heating and cooling, friendly drivers.</p> <p>The scrolling signs on the buses hardly ever work. As a deaf rider this frustrates me a lot.</p> <p>Primary concerns are hygiene, the spread of illness and smooth rides.</p> <p>Safety is a concern sitting on the buses with some of the other riders with no interior lights on in the vehicle.</p> <p>There is no lighting or cameras on buses, making users feel unsafe.</p>
Prices/Purchasing	<p>Affordable rates for those on public assistance.</p> <p>More affordable rates needed for the inter-urban service.</p> <p>I think kids should be free until age 12.</p> <p>Making the bus more affordable would really help. I bought a car because I couldn't afford the cost of the bus for myself and my children.</p> <p>It would also be convenient to be able to re-load the cash-card where they were bought – in our case, Shoppers at St. Clair.</p> <p>More places (after hours) to purchase passes in towns outside of Chatham.</p> <p>Support person should be allowed to ride the conventional bus system free from fare.</p> <p>Consistent bus pass options and fare pricing on all public transit services in Chatham-Kent.</p> <p>Bus passes should be available to buy at more locations.</p> <p>Bus service should be free and funded by the Municipality.</p> <p>Allow for bus pass purchases online.</p>
Extended/Changed Routes	<p>From Wallaceburg to Blenheim and Tilbury. Anywhere there are factories or businesses that employ people.</p> <p>It would be a mesh network that is fully integrated with on-demand transit services from drivers and other options.</p> <p>If the bus went from Dresden – Chatham but through Kent Bridge I'd ride every day x2.</p> <p>More times for interurban bus.</p> <p>New transit needs more to run in a small town not just the big city.</p> <p>I would like to see the bus come to Pain Court more than just seasonal.</p> <p>More buses to Blenheim, Wallaceburg and Tilbury.</p> <p>Route D needs to be shorter, it is currently 2 hours and 40 minutes long.</p>

Bi-directional	<p>A BIG improvement would be two-way routes so that one would not have to 'ride all the way around' to get back to downtown, or back home.</p> <p>Bi-directional routing. My home is at Stanley and 7th Ave. In order for me to take a bus from near me (museum stop) to the Canadian Tire Plaza I have to take the bus in my neighbourhood all around its route to get to the downtown terminal to switch buses.</p> <p>There needs to be bi-directional routing. One way loops of town are wasteful for the traveller if needing only a short hop from point B to point A but the bus has to go through the rest of the route first.</p> <p>Last week I was riding bus #2. The bus turned onto St. Clair from King Street, I pushed the stop button; in order, to get off at the corner of St. Clair and Grand Avenue; however, the driver blew through my stop, considering I has already pushed the button.</p>
Shuttle Bus	<p>Weekly/Monthly shuttle bus from Bothwell to Chatham.</p> <p>Weekly/Monthly shuttle bus from Thamesville to Chatham.</p>
ON-Demand	<p>Similar to an Uber, a Jitney that picks you up and drops you off at custom locations.</p> <p>The ideal service is door to door but that is not yet realistic.</p> <p>Transit on demand.</p> <p>We need to use AI and other technological advances to make it both affordable and accessible, to engage more people with convenience and efficiency.</p> <p>Look at Belleville's custom bus service, it is Uber-like and is working so well it might be adopted throughout its service.</p> <p>Some communities have found that to avoid empty buses during off peak hours, dial-a-ride may be a better way to go.</p> <p>Evolve with technology and permit use of Uber in Chatham-Kent.</p> <p>Please bring Uber to Chatham-Kent. It's a great service that will greatly help our community.</p> <p>I'd love to see an on-demand network of transit options, to make mobility for all around Chatham-Kent and neighbouring communities a reality.</p> <p>On demand transit to get from Wheatley to other cities in Chatham-Kent for work and youth activities.</p> <p>On demand bus to travel around Ridgetown.</p> <p>On demand service should be investigated.</p>
Accessible Bus Service – Chatham/Wallaceburg	<p>This service would benefit from greater integration between the conventional and accessible bus services.</p> <p>Difficulty booking the bus due to over capacity in both Chatham and Wallaceburg.</p> <p>Wallaceburg residence would benefit from using a conventional transit system instead of using the Accessible bus service as their form of transportation.</p>

	<p>An app should be used to schedule the Accessible buses instead of a spreadsheet.</p> <p>Need to be able to contact someone on Sundays about the Accessible bus.</p>
No Changes to CKTransit	
Satisfactory Service	<p>Most drivers are friendly and helpful.</p> <p>My experience has been fine.</p> <p>Overall I think our service is adequate for our small community.</p> <p>The service is very admirable, we depend on it for our travel to shopping and job.</p> <p>Reasonable.</p> <p>OK.</p> <p>It's great.</p> <p>Good.</p> <p>Excellent.</p> <p>Above par.</p>
Other	
	<p>Can always improve the current system.</p> <p>Have to modify.</p> <p>I don't think it works well enough for people.</p> <p>I feel it is a bare Minimum.</p> <p>If you don't have a car in Chatham, you're gonna have a bad time.</p> <p>It is an okay service but needs lots of improvements.</p> <p>It is not usable for me.</p> <p>It needs great improvement. Often frustrated with the current system.</p> <p>Needs a lot of improvement.</p> <p>Unreliable.</p> <p>Implement a new Handi-Transit scheduling software package to improve service and accessibility.</p> <p>Promote bilingualism and accessibility throughout the municipality and make transit system resources available in French.</p> <p>Subsidized public transit van or quicker transit between communities.</p> <p>Improved transit vehicle maintenance.</p> <p>Buses for special events such as Canada Day.</p> <p>Walpole Island would benefit from a public transit system connecting the community to Wallaceburg.</p>

	<p>40% of Goodwill Career Centre clients have the skills to work but no transportation to get to the jobs either between cities in Chatham-Kent or within the city in which they reside.</p> <p>Many employers within Chatham-Kent have shifts that they cannot fill due to a lack of transportation for their employees.</p> <p>Transportation is a major barrier for Walpole Island residence.</p> <p>Reliability of the existing service is a problem, people are often late for work because the bus was 15 minutes behind schedule.</p> <p>The Municipality should be promoting ride sharing to supplement transit.</p>
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