



Transit Windsor

More Than Transit

2019 Transit Master Plan



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1. Introduction

1.1. Purpose

More Than Transit is a Transit Master Plan (the “Plan”) containing short-to-long-term actions and recommendations for Transit Windsor in Windsor, Ontario. The actions and recommendations contained in this report outline the strategy for Transit Windsor over the course of the following decade. The Plan contains both the service’s directions going forward and an implementation plan and schedule for the actions and recommendations.

1.2. 2019 Transit Windsor Comprehensive Service Review

A Transit Master Plan is a powerful tool for the direction of a transit system and is the strategy for achieving the end result. This document is a culmination of a year-long comprehensive service review of Transit Windsor’s entire system - its network, ridership, policies, objectives, service standards, performance targets, system performance, route performance, operating and capital budgets, organization and staffing levels, fleet and facilities, and transit infrastructure.

The *More Than Transit* Plan is directly informed by the findings from the comprehensive service review and addresses the issues heard from the community through two rounds of engagement as well as those observed through analysis.

1.3. Background

Transit Windsor serves the City of Windsor, Ontario, a city that is home to approximately 217,188 people (2016 Census). In one form or another, the agency that is now Transit Windsor has served the area since 1850, beginning with horse omnibuses (city versions of stagecoaches) and progressing to horse-drawn streetcars running on rails in 1873. Windsor had Canada’s first electric street railway, which began operating on May 28, 1886.

In 1891, it became the first Canadian city with an all-electric transit system. And then in 1922, Canada’s first trolley bus began operating in what is today the Walkerville suburb of Windsor. Eventually, Transit Windsor began providing service in what we now know as conventional buses.

Today, Transit Windsor operates 14 routes, three of which provide interregional service connecting Windsor to parts of neighbouring communities. As of 2018, the annual ridership for Transit Windsor was 8,182,290 passengers.

2. Why a New Transit Master Plan?

2.1. The Previous Plan is Out of Date

Transit Windsor's last Transit Master Plan, *The Way Forward*, was published more than 10 years ago in 2006. Since then:

- ▶ The *way we communicate, learn, live, and travel has transformed quickly and dramatically*. Smartphones and other technologies have led to the rise of new mobility options such as car sharing, ride sharing, ride sourcing, bike sharing, and micro-transit. New forms of mobility have made demand-based transit (or desire for it) commonplace in both small and large communities. They have also led to people having higher expectations from transit and other public services to meet their individual lifestyle needs rather than being forced to conform to what is being offered.
- ▶ Societal *values have shifted towards living in communities that are both environmentally sustainable* (i.e. with minimal negative impact on the environment) *and healthy* (i.e. encourage physical activity and which minimize pollution). As there is also now definitive evidence that communities are healthier and “greener” when they have great transit service, this has led to a new wave of wide-ranging support for public transit. More than before, the provincial and federal governments are incentivizing transit in Windsor with large funding.
- ▶ *Windsor has changed*. The dynamics of the global economy have had significant effects on the dominating automotive industry in Windsor. Once the centre of car manufacturing in Canada, Windsor saw dramatic jumps in its unemployment rate in the aftermath of the 2008 economic crisis. This played a part in the city's stagnant population over the last decade. Only in recent years has the city started to recover, with a potential new hospital and several new residential and commercial developments either planned or already underway. Transformation is also evident in the economic sector, with Windsor being in the process of diversifying beyond just manufacturing and into research and development. The city has also been attracting people from around the world, with its postsecondary institutions now attracting hundreds of international students each year. Meanwhile, the neighbouring Towns of LaSalle and Tecumseh have also experienced great bursts of growth. All of these changes mean that *strategic plans that made sense for the future when written in 2006 may no longer reflect how the community has evolved in the last decade*.

The Way Forward emphasized the need to grow the transit mode share in Windsor and a need for interregional transit. *More Than Transit* builds on the goals outlined in *The Way Forward* but goes further by setting more ambitious targets which can be reached with today's technology and evidence-backed best practices. With these tools in the back pocket, the time for Transit Windsor to update, refresh, rethink, and be better is now.

2.2. Existing Transit Situation

Transit Windsor's existing transit network is downtown focused, with 10 of its 14 fully-accessible routes passing through or starting/terminating in Downtown Windsor. Four of Transit Windsor's routes are interregional – Transit Windsor runs a popular Tunnel Bus service connecting Windsor to downtown Detroit via the Windsor-Detroit Tunnel; a route that serves the bordering Town of LaSalle and connects to the rest of the Transit Windsor network at the St. Clair College terminal; a route that dips into the industrial part of the neighbouring Town of Tecumseh for a very short portion of the route; and, as of July 2019, a pilot route connecting Windsor to the Municipality of Leamington, with stops in the Towns of Kingsville and Essex.

Of the 14 routes, many have low frequencies even during the weekday peak period when the most frequent operation is expected. For context, a bus coming every 20 minutes (or more frequently) during peak periods gives riders more opportunities to make their transfers and ensures that users are not forced to wait a long time for the next bus if they miss one or if a bus is full (especially in inclement weather). A bus coming less frequently than every 20 minutes can add a lot of time to an individual's trip if they miss their connection or are a couple minutes late. This makes taking transit very inconvenient and undesirable for someone who has access to other transportation alternatives.

The operating characteristics of the existing routes (as of October 2019) are shown in Table 1.

Table 1: Operating Characteristics by Route

Route	Weekday Span of Service	Weekday Headway (minutes)		Saturday Span of Service	Saturday Headway (minutes)		Sunday/Holiday Span of Service	Sunday/Holiday Headway (minutes)	
		Peak	Off-Peak		Peak	Off-Peak		Peak	Off-Peak
TRANSWAY 1A	6:00 – 24:00	20	30	7:00 - 23:00	20	30	10:00 - 20:00	30	
TRANSWAY 1C	5:30 - 25:30	10	30	5:30 - 25:30	20	30	6:00 - 20:30	40	60
CROSSTOWN 2	5:30 - 25:30	10	30	5:20 - 25:30	20	30	7:00 - 20:00	60	35
CENTRAL 3	6:00 - 19:00	22	33	8:00 - 18:00	30		n/a	n/a	
CENTRAL 3 WEST	19:00 – 24:30	n/a	60	18:30 - 24:30	60		9:00 - 19:30	60	
OTTAWA 4	5:30 - 25:30	20	45	6:00 - 25:00	30	45	9:00 – 21:00	50	
DOMINION 5	6:00 - 24:00	20	20	7:00 - 20:00	30		9:30 - 19:30	60	
DOUGALL 6	6:00 - 22:30	40	70	6:00 - 23:00	40		9:00 - 19:30	70	
SOUTH WINDSOR 7	7:00 - 19:30	30	30	7:00 – 20:00	50		n/a	n/a	
WALKERVILLE 8	6:00 – 24:00	30	45	7:30 – 24:00	70		8:30 – 20:00	70	
LAUZON 10	6:30 – 20:00	35	35	7:30 - 19:30	70		n/a	n/a	
PARENT 14	7:00 - 18:30	40	60	8:00 - 18:00	60		n/a	n/a	
LASALLE 25	7:00 – 19:00	45	90	7:00 – 19:00	90		n/a	n/a	
TUNNEL	5:30 – 25:30	30		5:30 – 25:30	30		8:00 – 25:00	30	
LEAMINGTON 42	5:15 – 19:10	n/a 3 trips/day		7:45 – 19:10	n/a 2 trips/day		n/a	n/a	

The productivity of existing routes varies. The performance of the Transit Windsor system can be measured by route productivity, which is equivalent to the number of passenger boardings the route generates per provided revenue-generating service hour of operation for that route. A typical rule of thumb is that routes with 25 to 40 boarding per revenue service hour have optimal utilization. Below 25 is a sign that a route may be under-utilized, which means that it may not be generating an acceptable level of revenue through fares when compared to the cost of the route’s operation. Often, under-utilized routes receive complaints about “empty buses.” On the other hand, routes that are over-utilized, typically those with 40 boarding per revenue service hour or more, may signal a need to increase service along the route. An over-utilized route will manifest itself as constantly having overcrowded buses. The productivity of the same route can vary by day of the week and/or time of day.

The detailed 2017 productivity by route is shown in Table 2. Note that the utilization codes in the last column represent over-utilized (O), under-utilized (U), and well-utilized (W). Certain routes like the Transway 1C and Dominion 5 are clearly being highly utilized (and likely overcrowded based on the numbers alone). Meanwhile, other routes like the Lauzon 10 generate less ridership per amount of service hours provided.

Table 2: Productivity by Route (2017)

Route	Passenger Boardings per Revenue Service Hour								AVERAGE UTILIZATION
	Weekday Average	Peak AM (6:00 - 9:00)	Midday (9:00- 15:00)	Peak PM (15:00- 18:00)	Early Evening (18:00- 22:00)	Late Evening (22:00- 30:00)	Average Saturday	Average Sunday	
TRANSWAY 1A	37.7	19.8	31.5	42.7	28.8	10.6	29.0	41.4	W
TRANSWAY 1C	40.1	31.8	43.8	36.0	36.2	17.5	29.4	26.0	W
CROSTOWN 2	34.0	23.5	34.6	26.8	35.4	13.1	34.9	28.1	W
CENTRAL 3	15.6	12.9	13.4	15.0	10.4	n/a	14.4	n/a	U
CENTRAL 3 WEST	4.3	n/a	n/a	n/a	4.3	3.9	10.2	13.4	U
OTTAWA 4	18.0	16.6	17.4	22.4	15.0	6.1	10.1	14.3	U
DOMINION 5	51.8	49.7	46.5	68.7	54.8	28.7	29.8	15.1	O
DOUGALL 6	20.4	15.4	20.6	30.0	15.7	20.5	22.1	27.0	U
SOUTH WINDSOR 7	13.3	23.3	11.3	14.1	8.8	n/a	8.9	n/a	U
WALKERVILLE 8	24.2	25.9	20.5	27.8	20.3	44.0	13.5	33.6	W
LAUZON 10	8.3	12.6	6.5	11.2	4.5	n/a	4.4	n/a	U
PARENT 14	15.5	19.3	13.4	12.8	9.6	n/a	13.2	n/a	U
LASALLE 25	7.6	5.4	8.5	7.7	8.8	n/a	4.5	n/a	U
TUNNEL	9.2	12.9	5.3	15.1	8.4	13.6	9.8	16.5	U

One of the unique things about Transit Windsor's service area is that, as shown in Table 3, Windsor's population has stayed relatively stagnant and at times even declined slightly over the last 10 years. Transit Windsor's ridership has displayed the same patterns as Windsor's population in the same time period - ridership is on the rise once more after years of remaining stable or experiencing some minor decline. However, behind the scenes, Transit Windsor is facing several challenges that may threaten its momentum.

Table 3: Transit Windsor Statistics 2007 – 2018 (Source: Canadian Urban Transit Association)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Service Area Population	217,187	217,187	216,473	219,345	210,891	210,891	210,891	210,891	210,875	217,188	217,188	224,134
Ridership (1,000,000s)	6.29	6.86	6.16	6.10	6.39	6.41	6.44	6.37	6.35	6.51	6.72	8.18
Total Operating Revenues (1,000,000s)	\$11.7	\$12.4	\$11.8	\$11.8	\$11.8	\$11.8	\$12.1	\$126	\$12.2	\$13.2	\$13.9	\$15.6
Total Direct Operating Expenses (1,000,000s)	\$23.3	\$25.0	\$24.4	\$24.9	\$26.4	\$27.5	\$27.8	\$29.0	\$28.1	\$28.4	\$28.6	\$31.2
Revenue Vehicle Kilometres (1,000,000s)	5.12	4.98	4.83	4.99	4.99	5.00	5.08	5.08	5.21	5.14	5.14	5.06
Revenue Vehicle Hours	254,014	260,058	255,056	254,391	247,864	247,864	216,708	231,921	235,133	236,123	236,123	257,896

Table 3 also shows that both operating revenues and expenses for Transit Windsor have been increasing in the past decade. However, expenses have increased by over two times as much as the operating revenues have. During the same amount of time, the revenue vehicle hours and kilometres have both remained relatively level, despite rising costs. While some of the rising costs can be attributed to inflation (the average annual rate of inflation in Ontario was 1.68% between 2007 and 2017), operating expenses increased by a rate higher than inflation (2.16% on average annually between 2007 and 2017). Meanwhile, revenues increased by a rate of 1.84%.

However, Windsor is changing. Today, the city is growing and transforming. New developments and facilities are either in construction or in the works. *This means that Transit Windsor must also change to meet the evolving demands of its community.*

2.3. Existing Transit Market

The *More Than Transit* plan gives Transit Windsor the opportunity to ensure that it is serving all of its customers – regardless of socioeconomic barriers, backgrounds, or abilities - in a way that best meets their needs.

As mentioned in the previous section, 10 of Transit Windsor’s 14 routes pass through or start/terminate in Downtown Windsor. However, analysis of travel patterns shows that the commuting period travel demand for trips completed by all modes of travel is distributed across the city rather than centred in the core. The analysis also shows that in the morning peak period, less than 10% of trips are destined to Downtown Windsor. This is in contrast to many other major municipalities where the share of downtown, or Central Business District (CBD), trip destinations is significantly higher. Figure 2, Figure 3, and Figure 4 show some of the AM peak period insights gathered using Streetlight Data, a mobility analytics platform that uses anonymous data from location-enabled devices to provide insights into travel behaviour within a study area. Refer to Figure 1 for a map of the sub-zones that the Transit Windsor Service Area was divided into for the Streetlight Data analysis. This data was used to understand existing travel patterns and demands within Windsor, as well as between Windsor, LaSalle, and Tecumseh. For more details of the Streetlight Data analysis findings, refer to Appendix A.

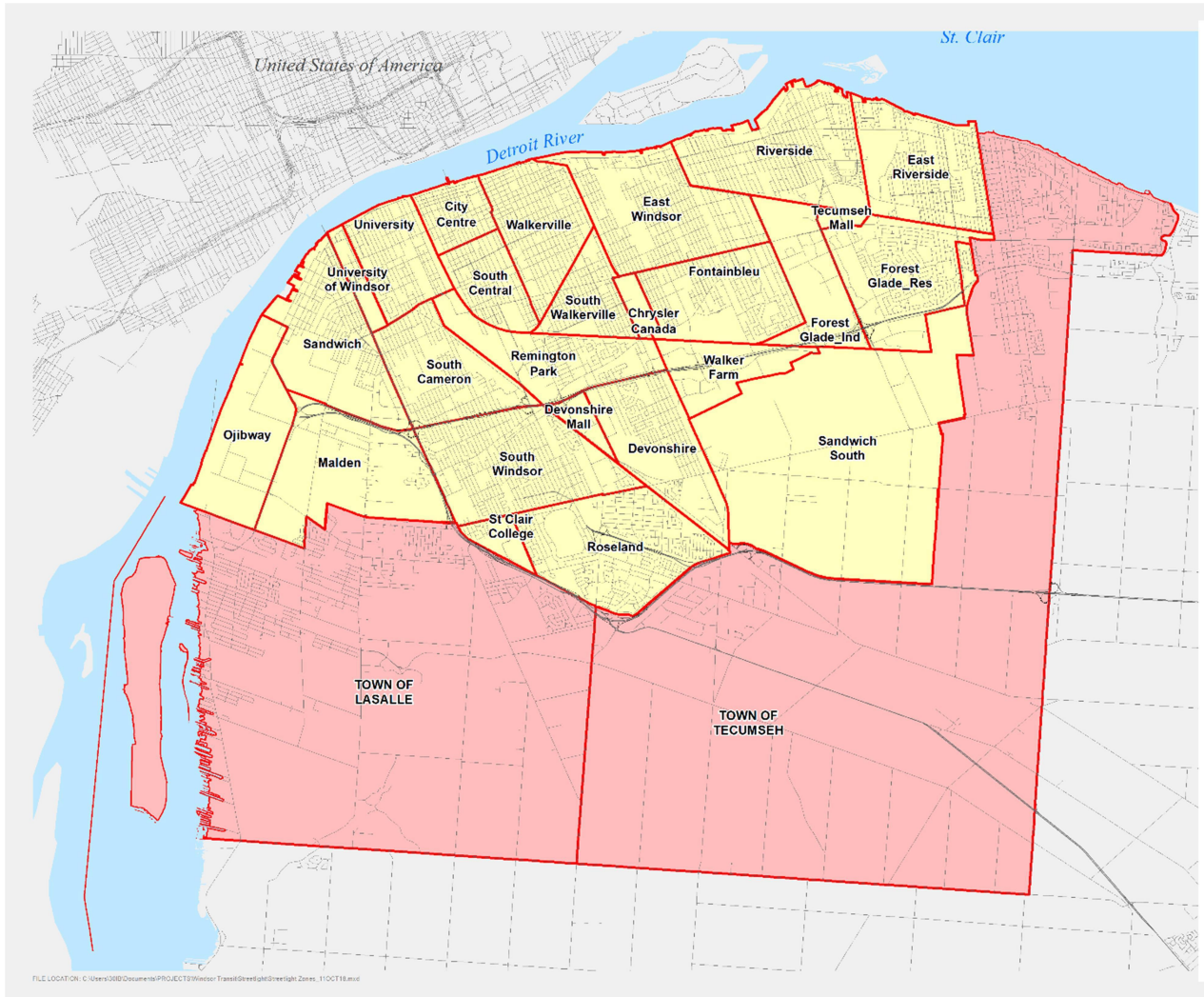


Figure 1: Zones within the Transit Windsor Service Area Used for Streetlight Data Analysis

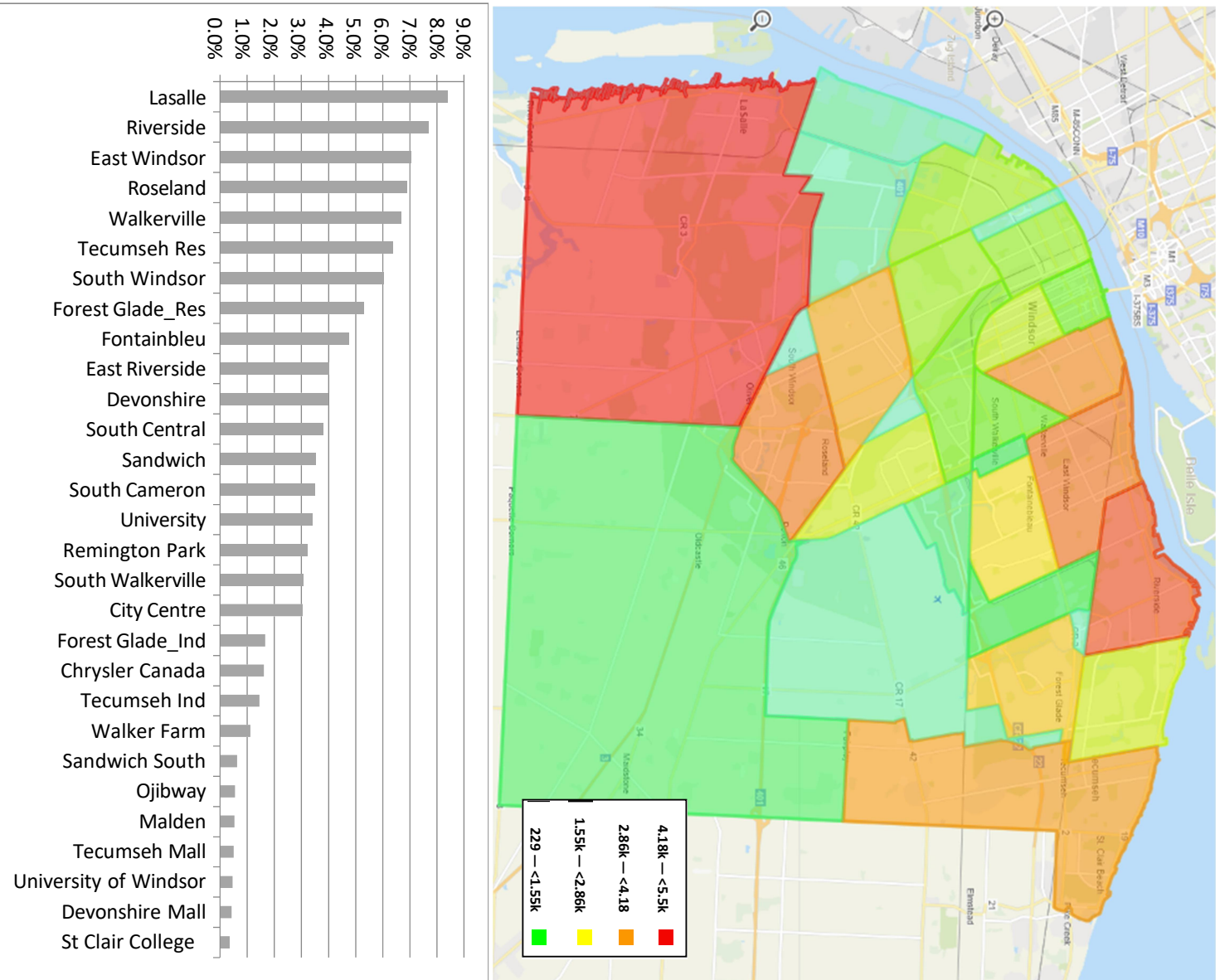


Figure 2: AM Peak Period Trip Origins (including External Trips) in Windsor in 2018

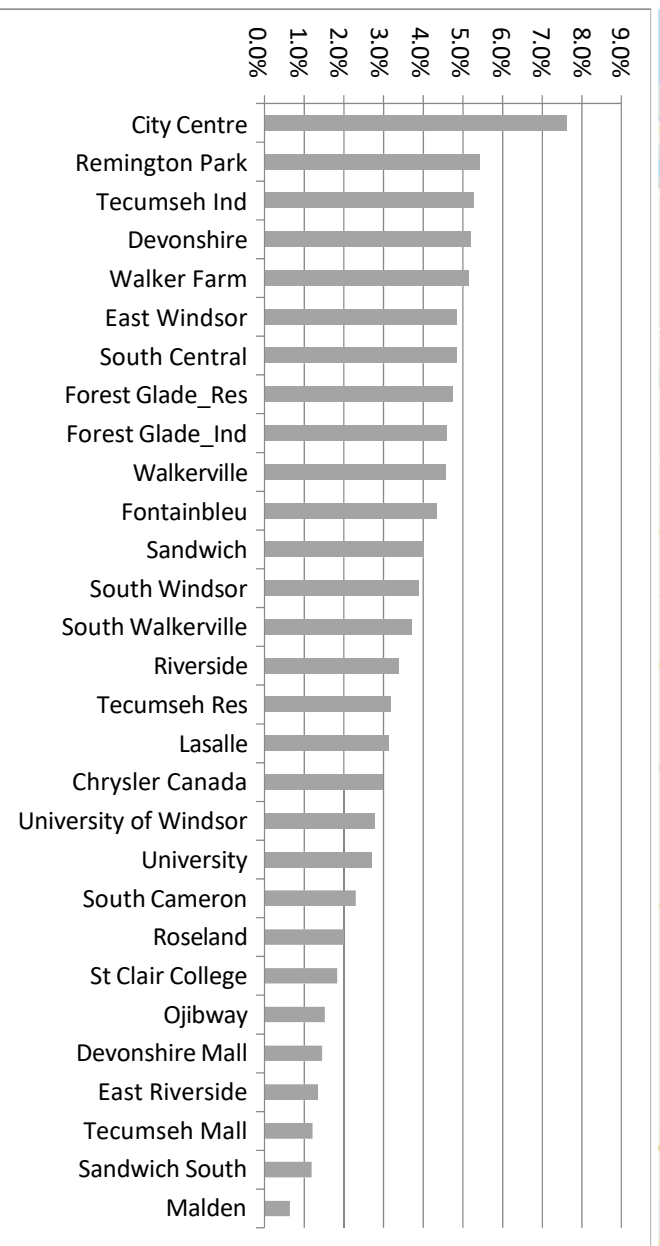
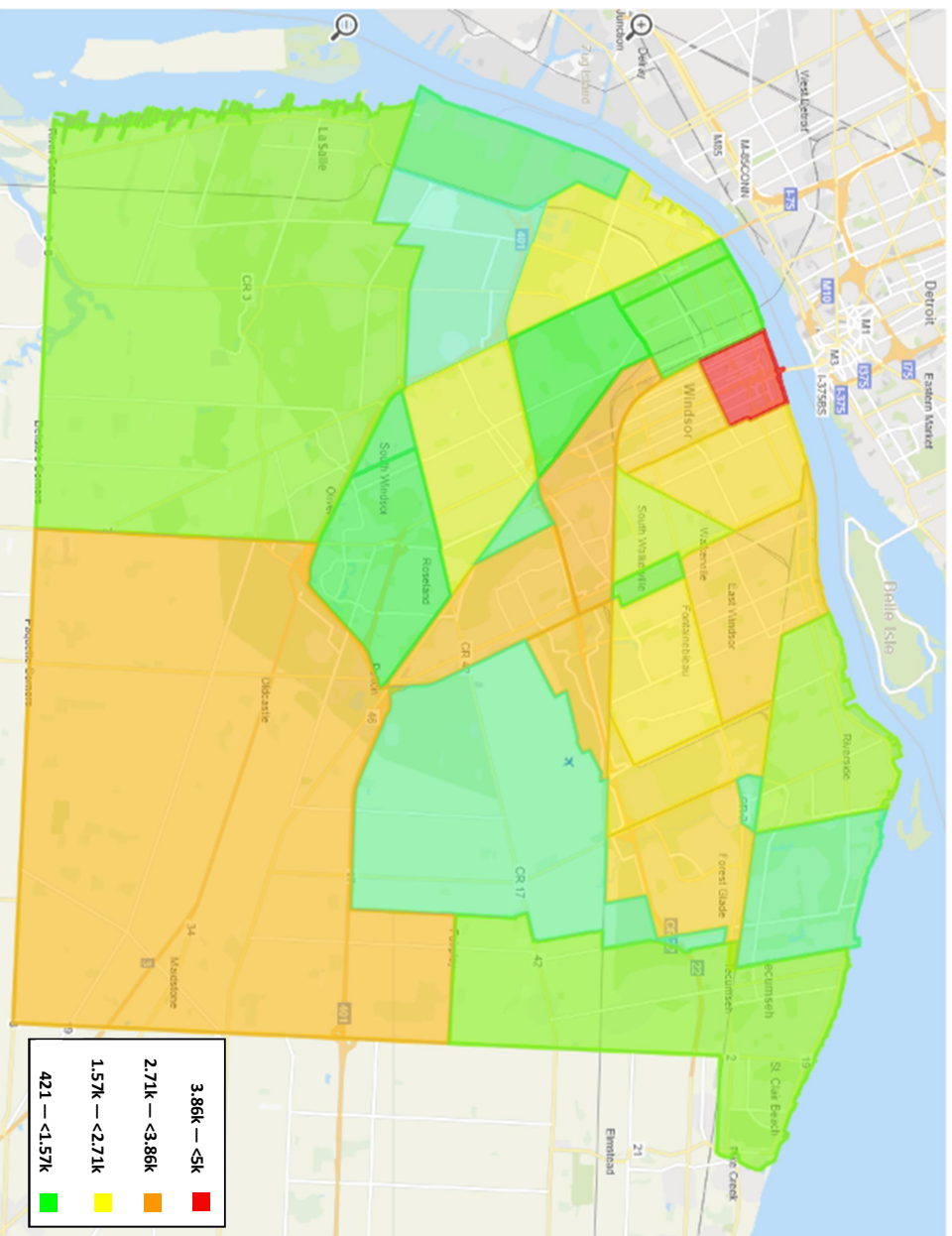


Figure 3: AM Peak Period Trip Destinations (including External Trips) in Windsor in 2018

	Chrysler Canada	City Centre	Devonshire	Devonshire Mall	East Riverside	East Windsor	Fontainbleu	Forest Glade_Ind	Forest Glade_Res	Malden	Ojibway	Remington Park	Riverside	Roseland	Sandwich	Sandwich South	South Cameron	South Central	South Walkerville	South Windsor	St Clair College	Tecumseh Mall	University	University of Windsor	Walker Farm	Walkerville	Lasalle	Tecumseh Ind	Tecumseh Res	Grand Total
Chrysler Canada	0.0%	0.0%	0.2%	0.0%	0.1%	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	1.6%
City Centre	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.2%	0.0%	0.1%	0.4%	0.1%	0.1%	0.0%	0.1%	0.2%	0.2%	0.1%	0.4%	0.1%	0.1%	0.1%	3.0%
Devonshire	0.2%	0.1%	0.0%	0.1%	0.0%	0.1%	0.2%	0.2%	0.1%	0.0%	0.1%	0.4%	0.1%	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%	0.3%	0.1%	0.0%	0.1%	0.0%	0.3%	0.1%	0.2%	0.3%	0.1%	4.0%
Devonshire Mall	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
East Riverside	0.1%	0.4%	0.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.7%	0.0%	0.0%	0.2%	0.4%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.2%	0.1%	0.0%	0.1%	0.6%	4.0%
East Windsor	0.3%	0.4%	0.3%	0.1%	0.0%	0.0%	0.8%	0.4%	0.4%	0.0%	0.0%	0.3%	0.4%	0.1%	0.3%	0.1%	0.1%	0.2%	0.3%	0.1%	0.1%	0.1%	0.1%	0.1%	0.4%	0.5%	0.2%	0.5%	0.2%	7.0%
Fontainbleu	0.2%	0.2%	0.3%	0.1%	0.0%	0.5%	0.0%	0.5%	0.2%	0.0%	0.0%	0.2%	0.3%	0.1%	0.1%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.1%	0.0%	0.1%	0.4%	0.2%	0.1%	0.2%	0.2%	4.7%
Forest Glade_Ind	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	0.2%	0.0%	0.2%	0.0%	0.0%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.1%	1.7%
Forest Glade_Res	0.2%	0.3%	0.2%	0.1%	0.1%	0.2%	0.3%	0.6%	0.0%	0.0%	0.1%	0.2%	0.5%	0.0%	0.1%	0.1%	0.0%	0.2%	0.3%	0.1%	0.1%	0.3%	0.0%	0.0%	0.4%	0.2%	0.1%	0.2%	0.5%	5.3%
Malden	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.5%
Ojibway	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.5%
Remington Park	0.2%	0.2%	0.2%	0.1%	0.0%	0.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.3%	0.2%	0.2%	0.1%	0.0%	0.1%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	3.2%
Riverside	0.3%	0.5%	0.2%	0.1%	0.2%	0.7%	0.5%	0.8%	0.8%	0.0%	0.1%	0.3%	0.0%	0.1%	0.2%	0.1%	0.1%	0.2%	0.2%	0.1%	0.1%	0.2%	0.0%	0.1%	0.5%	0.6%	0.2%	0.2%	0.3%	7.7%
Roseland	0.2%	0.3%	0.8%	0.1%	0.0%	0.2%	0.2%	0.1%	0.1%	0.0%	0.1%	0.3%	0.0%	0.0%	0.1%	0.0%	0.2%	0.2%	0.1%	1.0%	0.3%	0.0%	0.2%	0.2%	0.5%	0.2%	0.5%	0.7%	0.2%	6.9%
Sandwich	0.0%	0.3%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.2%	0.2%	0.2%	0.1%	0.1%	0.0%	0.4%	0.3%	0.2%	0.1%	0.2%	0.2%	0.1%	3.5%
Sandwich South	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.1%	0.6%
South Cameron	0.0%	0.4%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	0.1%	0.1%	0.3%	0.0%	0.0%	0.2%	0.1%	0.5%	0.1%	0.0%	0.3%	0.3%	0.1%	0.1%	0.1%	0.2%	0.0%	3.5%
South Central	0.1%	0.7%	0.1%	0.0%	0.0%	0.2%	0.1%	0.0%	0.2%	0.0%	0.0%	0.4%	0.1%	0.1%	0.1%	0.0%	0.1%	0.0%	0.3%	0.1%	0.1%	0.0%	0.2%	0.1%	0.1%	0.4%	0.2%	0.2%	0.0%	3.8%
South Walkerville	0.2%	0.2%	0.3%	0.0%	0.0%	0.2%	0.3%	0.1%	0.1%	0.0%	0.0%	0.3%	0.1%	0.0%	0.1%	0.0%	0.0%	0.4%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%	0.1%	0.1%	0.1%	3.1%
South Windsor	0.2%	0.5%	0.5%	0.1%	0.0%	0.1%	0.3%	0.1%	0.1%	0.0%	0.1%	0.5%	0.1%	0.3%	0.4%	0.1%	0.3%	0.3%	0.2%	0.0%	0.2%	0.0%	0.3%	0.1%	0.3%	0.2%	0.2%	0.4%	0.1%	6.1%
St Clair College	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
Tecumseh Mall	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%
University	0.0%	0.5%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	0.1%	0.1%	0.4%	0.0%	0.2%	0.3%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	0.1%	0.2%	0.1%	0.1%	0.0%	3.4%
University of Windsor	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%
Walker Farm	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	1.1%
Walkerville	0.1%	1.1%	0.3%	0.1%	0.0%	0.5%	0.3%	0.3%	0.2%	0.0%	0.1%	0.4%	0.2%	0.1%	0.2%	0.1%	0.1%	0.8%	0.5%	0.2%	0.1%	0.1%	0.2%	0.1%	0.2%	0.0%	0.2%	0.2%	0.1%	6.7%
Lasalle	0.3%	0.6%	0.4%	0.1%	0.0%	0.3%	0.2%	0.2%	0.3%	0.4%	0.4%	0.5%	0.1%	0.4%	0.7%	0.1%	0.2%	0.3%	0.3%	0.4%	0.3%	0.1%	0.1%	0.3%	0.4%	0.2%	0.0%	0.6%	0.1%	8.4%
Tecumseh Ind	0.0%	0.1%	0.2%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	1.5%
Tecumseh Res	0.3%	0.6%	0.3%	0.1%	0.5%	0.3%	0.2%	0.5%	0.8%	0.0%	0.1%	0.3%	0.3%	0.0%	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%	0.0%	0.1%	0.0%	0.1%	0.4%	0.2%	0.1%	0.4%	0.0%	6.4%
Grand Total	3.0%	7.6%	5.2%	1.5%	1.4%	4.9%	4.4%	4.6%	4.8%	0.6%	1.5%	5.4%	3.4%	2.0%	4.0%	1.2%	2.3%	4.8%	3.7%	3.9%	1.8%	1.2%	2.7%	2.8%	5.2%	4.6%	3.1%	5.3%	3.2%	100.0%

Figure 4: Origin-Destination Matrix for the 2018 Weekday AM Peak Period Generated using Streetlight Data

All of this shows that *commuting trips are destined cross-town, taking commuters from one edge of Transit Windsor's service area to another*. This is in contrast to a common assumption that the biggest number of commuters is coming from various corners of the City of Windsor and nearby towns to converge in downtown Windsor.

In addition, due to the nature of the major industries in the Windsor-Essex area, shift work at local factories is the form of employment for a significant portion of the population. Shift work can result in “workdays” starting late in the evening and ending early in the morning. This means that *commuting occurs throughout the day*.

Round 1 of community outreach and engagement for this project, which ran from October 2018 to January 2019 focused on identifying how Transit Windsor could better serve its users. The engagement methodology, included:

- Six telephone interviews with internal and external key informants including:
 - The Seniors Advisory Committee (SAC)
 - The University of Windsor Student's Alliance (UWSA)
 - The Windsor Accessibility Advisory Committee (WAAC)
 - The Multicultural Council of Windsor-Essex (MCC)
 - The Workforce Windsor Essex
 - The Downtown Windsor Community Collaborative (DWCC);
- A community telephone survey to understand the local travel habits of Windsor residents that collected 700 responses (500 from Transit Windsor's primary service area residents and 200 from residents of the outer edges of the service area and nearby suburbs);
- Four key stakeholder workshops;
- One Transit Windsor Employee Open House;
- 12 Pop-up Information/Engagement Sessions at various activity centres and transit hubs around the city;
- One day “ridealong” with consultant staff spending part of one day riding various routes throughout the Transit Windsor network; and
- An online community survey to identify issues, needs, and transportation expectations that collected 2,040 responses.

The full results of Round 1 of engagement can be found in Appendix B.

Round 1 resulted in several key findings about the characteristics of Transit Windsor users and their feedback about existing services offered. These are summarized below.

User Characteristics

- More of Transit Windsor’s annual trips are Student fare category trips than Adult fare category trips.
- A recent influx of international postsecondary students to Windsor who do not have access to personal vehicles in Canada is a contributor to the increased student demand for transit services.
- Overall, 20% of the city’s population uses public transit regularly or occasionally.
- Younger generations (34 and below) tend to use transit more often than older generations
- Transit Windsor users are not just low-income residents. About 20 % of people in multiple varying annual income brackets are regular transit users, as shown in Figure 5.

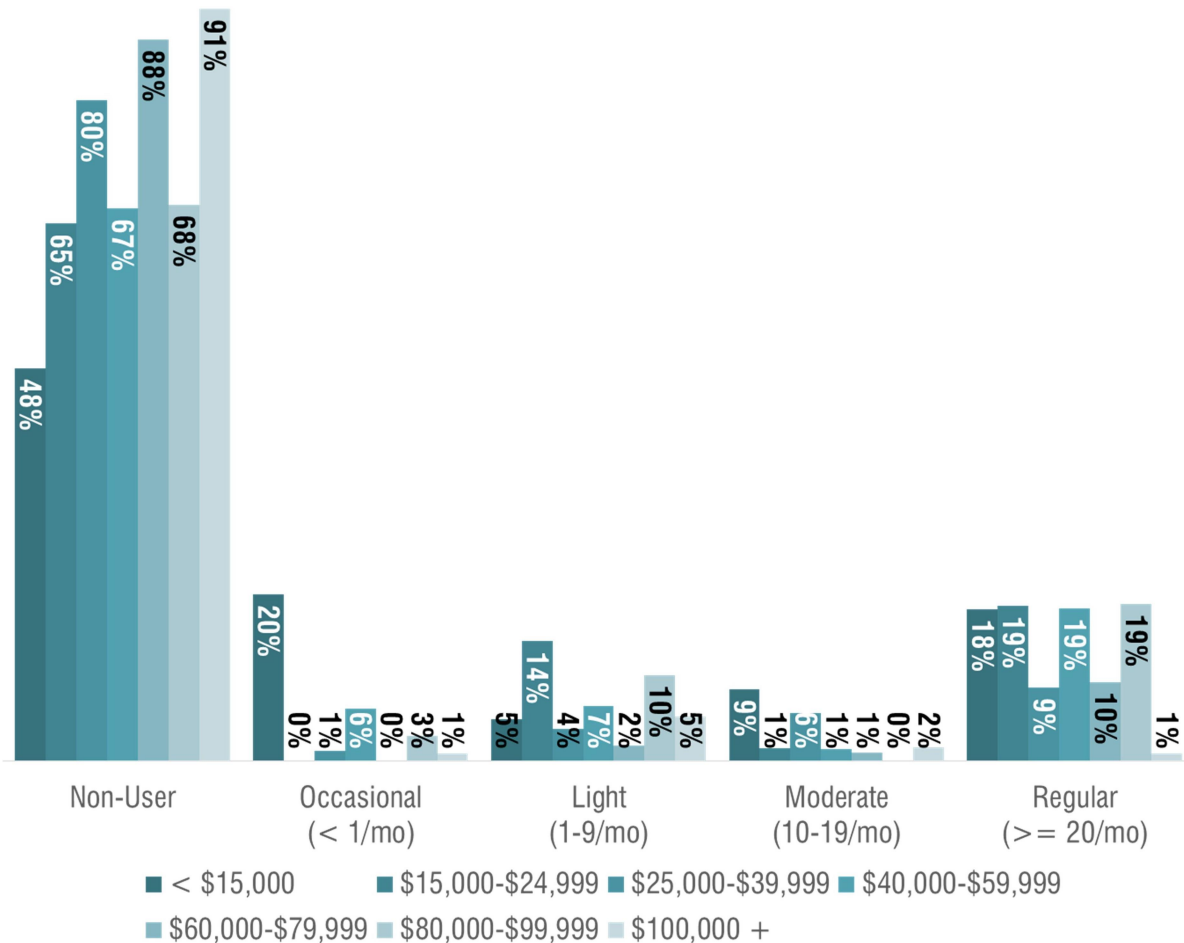


Figure 5: Transit User Type by Household Income

Community Feedback

- Existing bus riders expressed a strong desire for increased evening, weekend, and holiday service. This is particularly an issue for shift and weekend workers.
- Some users experience an inability to efficiently connect between buses, particularly if one or more of the routes are infrequent.
- Many buses are reported as being overcrowded. Though this frustrates all bus users, it is of particular note to users with accessibility needs.
- The top three reasons for occasional bus riders not taking transit more and for non-bus riders not switching to transit were:
 - *Inconvenience of transit for this trip (by bus it would take too long and/or there would be a need for transfer, which is undesirable);*
 - *Service does not extend to their origin and/or destination;*
 - *Their lifestyle requires a personal vehicle before, during, or after work.*
- The top three improvements that could entice non-transit users to use the public transit service more were:
 - *“Better service” - defined as better routes, more stops, faster service, longer times of service, meeting the needs of shift workers, and/or better adherence to schedules;*
 - *“Modernization” - defined as modern payment systems and/or reduced environmental impact; and*
 - *“Cheaper fares.”*
- Users expressed a desire to see more enforcement by bus operators and more robust passenger education as it relates to “bus etiquette.”
- Some users expressed concerns about poor driver attitudes towards teenagers, those with disabilities, newcomers, and homeless individuals or just overall general bad experiences with customer service.

Summary

Public transit is a public mobility option that cannot succeed if it fails to meet the needs of its users. The study of travel demands and results of community engagement show that *Transit Windsor’s network requires strategic changes to better serve the needs of its users.*

2.4. What Do Others Do?

Transit systems are functions of the unique geographic, cultural, and population characteristics of the service area they seek to serve. This means that each system faces unique challenges when providing service for its users. However, using certain standardized performance metrics,

different transit systems can be compared through various lenses of efficiency, utilization, and attractiveness.

This project included a peer review that compared Transit Windsor to five other Canadian transit systems of similar size based on data reported in the annual Canadian Urban Transit Association (CUTA) factbooks.

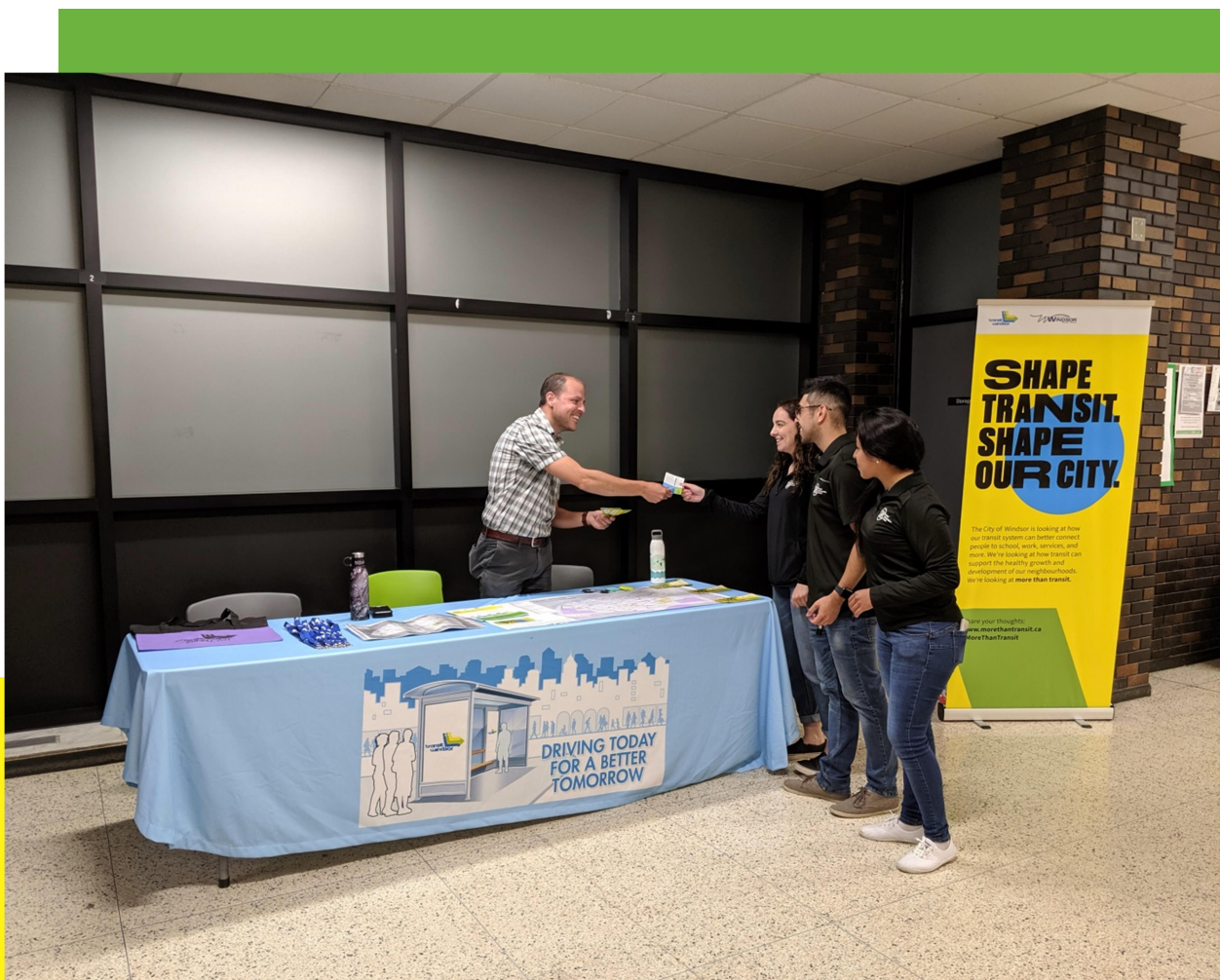
Table 4 shows a summary of some key characteristics of the systems in the peer group when compared to Transit Windsor. The full peer review report can be found in Appendix C.

Table 4: 2017 Peer Group Statistics and Performance Measures (Source: CUTA)

	Windsor	Regina	Saskatoon	London	Kingston	Guelph
System Characteristics						
Service Area Population	217,188	230,430	273,010	389,000	121,133	131,794
Ridership (revenue passengers)	6,719,622	5,326,680	12,392,360	22,918,096	6,145,809	6,476,108
Peak Period Buses	85	89	105	171	55	65
Revenue Vehicle Kilometres	5,141,942	5,191,095	7,450,058	11,710,203	4,473,753	3,853,130
Revenue Vehicle Hours	236,123	272,793	409,658	614,210	238,688	205,821
Amount of Service						
Regular Vehicle Hours/Capita	1.09	1.18	1.50	1.58	1.97	1.56
Service Utilization						
Regular Service Passengers/Capita	30.94	23.12	45.39	58.92	50.74	49.14
Regular Service Passengers/Revenue Vehicle Hour	28.46	19.53	30.25	37.31	25.75	31.46
Financial Performance and Cost Effectiveness						
Municipal Operating Contribution/Capita	\$58.61	\$73.04	\$100.15	\$63.59	\$117.45	\$112.94
Net Direct Operating Cost/Regular Service Passenger	\$2.20	\$3.84	\$2.10	\$1.42	\$2.31	\$2.30
Total Direct Operating Expenses/Regular Service Passengers	\$4.26	\$6.00	\$3.17	\$2.83	\$3.50	\$4.18

The peer review found that Transit Windsor was average in terms of service utilization. However, Transit Windsor had the lowest municipal operating contribution per capita and offered the second least cost effective service (in terms of total direct operating expenses to regular service passengers). It was also on the higher range in terms of operating expenses per provided revenue vehicle hour. Additionally, Transit Windsor currently provides the least amount of service out of peer group despite having a relatively average level of service utilization.

With new transit funding commitments of \$145 millions of dollars by the federal, provincial, and local governments over the next decade (as part of the Investing in Canada Plan (ICIP) , announced in April 2019) , *it is time for Transit Windsor to not only catch up to but to be the leader among its peers.*

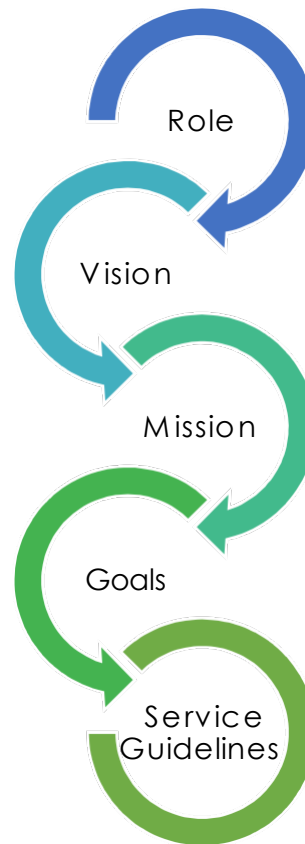


3. Focusing the Organization

The commencement of any strategy update requires a review and re-alignment of the organization's overarching policy framework.

The policy framework is a set of high level principles and directions - or *policies* – that guide the direction and decisions of the organization. The new updated policy framework for Transit Windsor is made up of 5 components, visualized in the graphic below.

- The role is the primary purpose of the organization.
- The vision is a clear and concise statement describing the desired future for the organization in serving its community.
- The mission builds on the broad vision statement by succinctly describing how the organization achieves the vision.
- Goals are specific paths taken to achieve the vision and mission. They are supported by objectives, which are more detailed measurable targets whose achievement will progress the goals.
- The service guidelines are a robust set of planning, design, and operational tools and metrics that link to the goals and objectives.



In response to the existing transit situation discussed in Section 2, Transit Windsor's updated policy framework must push the system towards:

- Modernity;
- Becoming a leading transit provider amongst its peers;
- Providing better service to its customers ;
- Better reflecting the travel demands of the community; and
- A tool to enable the creation of long-term liveable and sustainable communities.

The updated *role, vision, mission, goals, and service guidelines* are presented in the following sections. The detailed methodology and rationale used for the development of each element of the policy framework is presented in Appendix D.

3.1. Role

The primary purpose of Transit Windsor is to provide mobility services to the residents and businesses in the community and to connect Windsor to surrounding communities.

To achieve this role, Transit Windsor will do the following:

- Provide local transit service to 90% of residents within the existing City of Windsor service area;
- Provide interregional transit service from Windsor to neighbouring communities through continued partnerships;
- Provide services that are accessible to all people, regardless of their background, economic situation, or ability level;
- Implement partnerships with other mobility providers and identify any approaches that enhance mobility for residents; and
- Implement programs that influence greater use of sustainable mobility approaches.

3.2. Vision

More than transit – Moving you forward

Within the vision statement, the phrase “more than transit” speaks to themes of modern integrated mobility. It also implies that Transit Windsor is more than just another transit service, a taken-for-granted public service that exists in some form almost everywhere – instead it is an integral component of Windsor’s community.

The second half of the vision focuses on Transit Windsor as a mobility service. The phrase “moving forward” invokes themes of mobility and progress. It also suggests that Transit Windsor will be with “you,” the community every step of the way as the community continues to grow and evolve.

3.3. Mission

Transit Windsor supports the growth of a liveable and sustainable community by providing a reliable, safe and convenient mobility service option that is accessible to all.

The underlined words in the suggested mission statement imply six specific values of Transit Windsor, which are described in more detail below.

- Liveable and Sustainable Community – The desired “liveable community” refers to a community that is healthy (i.e. with a more frequent choice of active transportation or public transit over driving), environmentally sustainable (i.e. has a lesser impact on the environment through reduced emissions due to transit use) and provides its residents with great access to a variety of opportunities.
- Reliable – A reliable service is consistently on time, dependable in transporting customers between their origin and destination locations, and available as an option whenever its customers need to travel somewhere.
- Safe – This speaks to a service that emphasizes the safety of its customers, employees, and any other roadway user or traveler driving, cycling, or walking near or in potential conflict with the transit vehicles.
- Convenient – A service that is *convenient* for the customer is modern (e.g. offers users the ability to get real time information about their trip, incorporates digital fare systems), comfortable to travel on (i.e. comfortable both inside the transit vehicles and while waiting for service), and easy to use.
- Service – The word *service* highlights the fact that Transit Windsor focuses on its users and works to ensure that the service it provides is valued by the community.
- Accessible to All – *Accessible to all* means both accessible to people of all physical and mental ability levels and accessible to people of all age, gender, ethnic, cultural, and economic backgrounds.

3.4. Goals

Goals are specific paths taken to achieve the vision and mission. However they are still relatively broad.

Each of Transit Windsor’s goals for the future has several clear and measurable corresponding objectives. Objectives are more detailed measurable targets whose achievement will progress the goals.

Goals and objectives are more manageable and better aligned when they belong to a clearly defined set of strategic priorities – or themes – that the organization will focus on and prioritize. These strategic priorities flow from the values described in the mission, and are summarized below:

- Modern Mobility – this refers to the modernization of transit systems through new technologies such as implementation of on-demand mobility, phone apps, continued implementation of electronic transit card system and mobile ticketing, etc.
- Customer Focus – this priority looks at emphasizing the role of transit as a service to residents, putting the transit rider first, and optimizing the overall experience (from transit facilities to vehicle comfort to trip length and more) for transit passengers
- Liveable Communities – liveable communities speak to both health of community residents (which can be improved by more people taking transit and using active transportation for first mile/last mile trips) and to optimizing the synergy between transit and land use to create sustainable, vibrant, active, connected, and accessible communities

Table 5 summarizes the goals for Transit Windsor, broken down by strategic priority. The corresponding objectives for each goal are also presented in the table.

Table 5: Goals and Objectives Aligning with the Three Strategic Priorities for Transit Windsor

Strategic Priority	Goal	Objectives
Modern Mobility	1. Increase offering of on-demand transit services	<ul style="list-style-type: none"> a) Explore opportunities for partnership with on-demand mobility providers (e.g. ridesourcing companies, micro-transit providers, carsharing firms, etc.) as a service alternative for <ul style="list-style-type: none"> a. surrounding communities in the County of Essex b. first-mile/last-mile transit user connections b) Explore opportunity to provide in-house on-demand transit service for communities within Windsor and surrounding communities in the County of Essex
	2. Improve passenger access to transit information	<ul style="list-style-type: none"> a) Incorporate GTFS Realtime feed into Google Maps by 2020 b) Provide real-time bus scheduling information at digital kiosks and information screens at Transit Windsor terminals by 2022 c) Develop a user-friendly website and a social media presence for Transit Windsor
	3. Modernize transit infrastructure	<ul style="list-style-type: none"> a) Complete a study to investigate potential for Park and Ride facilities by 2024 b) Explore opportunities for incorporating latest technological advance into Transit Windsor buses and electrification of the Transit Windsor fleet

Strategic Priority	Goal	Objectives
Customer Focus	4. Improve rider experience	<ul style="list-style-type: none"> a) Ensure that Transit Windsor is fully implementing a 12-year lifecycle of its fleet. b) Update all major Transit Windsor stations and terminals by 2025 c) Re-introduce the CUTA Ambassador program in order to provide enhanced customer service training for front line employees by 2021 d) Introduce an employee intranet for sharing key system information, announcements, and examples of great customer service by 2021 e) Engage more directly and regularly with the community through social media and other innovative approaches
	5. Improve transit frequency and level of service	<ul style="list-style-type: none"> a) Increase annual revenue vehicle hours b) Ensure buses operate on-time 95% of the time by 2022 c) Ensure that 95% of all trips made can be made within the transfer window on all days and at all times of transit operation by 2024
	6. Improve transit convenience	<ul style="list-style-type: none"> a) Work with industrial area employers to ensure alignment of service hours on routes serving industrial areas with major work shifts b) Offer evening and weekend service that is within 400m of walking distance for 90% of Windsor's population by 2024
Liveable Communities	7. Encourage development that creates strong relationship between land use and transit	<ul style="list-style-type: none"> a) Develop transit-oriented development guidelines for developments near major Transit Windsor corridors, stations, and terminals) by 2024 b) Collaborate with City of Windsor's Planning and Building Services Department to develop policy that requires consultation with Transit Windsor for all new development and redevelopment applications by 2021
	8. Increase the transit mode share for all trips	<ul style="list-style-type: none"> a) Increase the transit mode share among for all trips to 10% by 2031 b) Increase the transit mode share for all trips to 12% by 2041

Strategic Priority	Goal	Objectives
	9. Incorporate transit supportive measures throughout Transit Windsor's service area	a) Provide and support demand management strategies and programs that can influence and encourage greater use of sustainable mobility approaches
	10. Maximize transit's environmental performance	a) Reduce Transit Windsor's environmental footprint including reduced pollution from transit operations b) Reduce Transit Windsor waste while increasing proper waste diversion rates in line with Action D4 of the City of Windsor's Environmental Master Plan c) Increase energy conservation of all transit offices and facilities in line with Action D2 of the City of Windsor's Environmental Master Plan d) Ensure continued compliance with the City of Windsor's Sustainable Purchasing Guide for Transit Windsor's business operations

3.5. Service Guidelines

Transit Windsor's service guidelines have also been updated as part of the comprehensive service review. The latest version of the guidelines (which is an update to guidelines last updated in 2013) is presented in Table 6.

Table 6: Transit Windsor Service Guidelines

Guideline Type	Guideline	Guideline
Planning	Service Area	<p>Transit Windsor will provide service connecting destinations within the <i>primary service area</i> and limited service within the <i>secondary service area</i>. Transit Windsor will connect the <i>secondary service area</i> to the <i>primary service area</i>.</p> <ul style="list-style-type: none"> • The <i>primary service area</i> shall be defined as the area within City of Windsor’s urban boundary. • The <i>secondary service area</i> shall be defined as the County of Essex and the Region of Detroit.
	Route Structure	<ul style="list-style-type: none"> • Primary and Secondary Routes will travel in a grid-like pattern along major arterial north-south and east-west corridors. Primary routes will be the key “major gridlines,” connecting key destinations across the city. Secondary routes will support the Primary Routes by acting as “minor gridlines” and connecting key destinations to the Windsor core downtown area. • Local Routes will travel primarily along local roads or collectors and be less frequent than the other two route types. Local routes shall feed into either Primary or Secondary Routes. • Alternative Service Delivery (ASD) approaches will be provided in low-density areas and emerging development areas where the ridership to support a primary, secondary or local route may not exist. ASD will connect its service area to the nearest terminal.

Guideline Type	Guideline	Guideline
	Service Coverage	<p>Routes will be located so that 95% of all urban residences, places of work, secondary and post-secondary schools, shopping centres, and public facilities in the primary service area are within a 400m walking distance (accounting for actual pedestrian path taken (not “as the crow flies” distance) of a bus stop.</p>
	New Service Warrant	<ul style="list-style-type: none"> • The new service area should be greater than 600m from existing Primary and Secondary routes and/or greater than 400m from existing Local routes and must be adjacent to areas served by transit. • If the area is located in a low-density and/or emerging development area, ASD service is recommended to develop a ridership base. • <i>Passenger Revenues and Costs</i> – when forecasting passenger ridership, revenues and operating costs, the demand and location of the development, socio-economic characteristics of the population, physical (geographic and road) constraints, accessibility, the pace and timing of development and transit dependency shall be taken into account. • Forecast ridership and revenues must be sufficient such that the service will achieve a Revenue/Cost ratio of 25% within 12 months and 35% within 18 months

Guideline Type	Guideline	Guideline
	Discontinuation of Service	<ul style="list-style-type: none"> Local routes, which fall below 10 passengers per hour should be discontinued. Local routes between 10 and 15 passengers per hour should be modified or restructured. If Primary or Secondary routes have less than 25 passengers per hour on weekdays, Transit Windsor shall commence studies to find ways to encourage more people to use the routes by providing better feeder services, marketing, etc. Primary or Secondary routes should not be discontinued ASD service should be replaced with a fixed route service if it exceeds 15 passengers per hour.
	Target R/C Ratio	System Overall 50% (annual average)
Design	Location of Bus Stops	<ul style="list-style-type: none"> Minimum bus stop spacing along any route should be 150m. There is no preference on bus stop location (i.e. near-side, far-side, and midblock) as it depends on the unique characteristics of the location. Refer to Bus Stop Planning and Design Guidelines for further details.
	Passenger Shelter Coverage	25% - 30% of stops should have shelters
	Bus Bays	The use of bus bays should be discouraged except in certain circumstances where lengthy bus dwell times would significantly interfere with overall traffic movement or on high speed (>60 km/hr) roads.

Guideline Type	Guideline	Guideline
	<p>Frequency of Service</p>	<p>The transit routes should have the following minimum service frequencies, subject to modification based on the context and popularity of each individual route:</p> <p>Peak Periods Weekdays Primary – 20 minutes Secondary - 20 minutes Local - 30 minutes (60 minutes for each direction for bi-directional loop routes)</p> <p>Off-Peak Period Weekdays Primary – 30 minutes - Secondary - 30 minutes Local - 30 minutes</p> <p>Early Mornings/Late Evening Weekday Periods Primary – 30 minutes Secondary - 60 minutes Local - 60 minutes</p> <p>Saturday and Sunday Midday Periods Primary – 20 minutes Secondary - 30 minutes Local - 45 minutes</p> <p>Saturday and Sunday Off-Peak Periods Primary – 30 minutes Secondary - 60 minutes Local - 60 minutes</p>



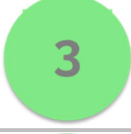
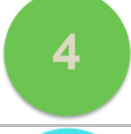
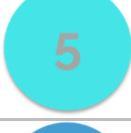

Guideline Type	Guideline	Guideline
	Ridership Levels	<p>Primary and Secondary Routes:</p> <ul style="list-style-type: none"> • <u>Minimum</u>: 25 passenger boardings per revenue hour • <u>Target</u>: 35 passenger boardings per revenue hour <p>Local Routes:</p> <ul style="list-style-type: none"> • <u>Minimum</u>: 10 passenger boardings per revenue hour • <u>Target</u>: 15 passenger boardings per revenue hour <p>ASD:</p> <ul style="list-style-type: none"> • <u>Minimum</u>: 4 passenger boardings per revenue hour • <u>Target</u>: 10 passenger boardings per revenue hour <p>The transit routes should have the following minimum hours of service:</p> <p>Monday – Friday 5:00am – 1:30am</p> <p>Saturdays 6:00am – 1:00am</p> <p>Sundays/Holidays 6:00am – 12:00am</p>
	Transfers	<p>Buses at designated transfer points should wait no longer than 5 minutes for arriving buses.</p>
	Vehicle Occupancy	<p>The maximum number of passengers per bus should not exceed 150% of the seating capacity of large buses and 125% of small buses.</p> <p>Assumed values:</p> <ul style="list-style-type: none"> • 30 ft. – 45 pas. (Rated seating = 30) • 35 ft. – 50 pas. (Rated seating = 35) • 40 ft. – 60 pas. (Rated seating = 40) • 60 ft. – 75 pas. (Rated seating = 50)

Guideline Type	Guideline	Guideline
	Schedule Adherence	No bus should leave early from any time point. Buses should not leave more than 5 minutes late from the time point, 95% of the time.
System Performance	Ridership/Capita	The system goal is ≥ 40 revenue passengers/capita.
	Cost Effectiveness	The system goal is $\leq \$4.00$ total direct operating expenses per regular service passenger

4. The Plan

In Round 1 of the community engagement for the 2019 Transit Master Plan (the “Plan”), the community provided significant feedback on what worked, what didn’t work, and what they would like to see from Transit Windsor in the future. As detailed in the Round 1 Engagement Report (refer to Appendix B), the received comments and concerns were organized into 6 main themes. These themes and their corresponding descriptions are presented in Table 7.

Table 7: Round 1 Engagement Feedback Themes

Theme		Description
	Routes and Reliability	Issues related to frequency of service, overcrowding, the desire for new or expanded routes, and improvements around connections and transfers
	Service	Issues related to service levels, service standards, customer service and the opportunities for improved service through the adoption of new technologies and innovation
	Equity	Priority on providing safe, accessible and reliable transit services
	Better Buses, Improved Infrastructure	Opportunities to improve the current Transit Windsor fleet and transit infrastructure
	Transit for the Common Good	Importance of transit as a tool for positive impacts to the environment, community health, and social justice
	Other	Themes relating to branding, interregional travel, etc.

The new 8-year Transit Master Plan for Transit Windsor addresses each of these issues through a number of planned actions and initiatives. These actions and initiatives are organized under the following five headings:

1. Policy Updates
2. Route Network and Operations
3. Assets and Infrastructure
4. Sustainability and Integrated Mobility
5. The Brand

Actions falling under each of these headings are linked back to the Round 1 engagement themes. Using the graphics that represent each theme in Table 7, each action is tied back to the issue theme that it addresses.

The Plan described in the following sections is supported by additional service plan material in Appendix E.

Community Response to the New Plan

This section discusses some key highlights of the community’s response to the draft Plan.

The initial draft of the plan was presented to the public as part of Round 2 of public engagement. Round 2 (detailed in the report in Appendix F) included:

- A public Open House;
- A Stakeholder Workshop;
- A Transit Windsor Employee Open House;
- Eight Pop-Up Information/Engagement Sessions;
- An interactive online map of the proposed route network which collected 276 comments; and
- An online survey about the new plan, which received 168 responses.

In general, the community responded positively to the new plan. In the online survey, an overwhelming majority of respondents agreed that doubling the amount of service was a step in the right direction for transit Windsor while nearly half of respondents liked the coverage of the new network (meanwhile, about 30% disliked it). These responses are shown in Figure 6.

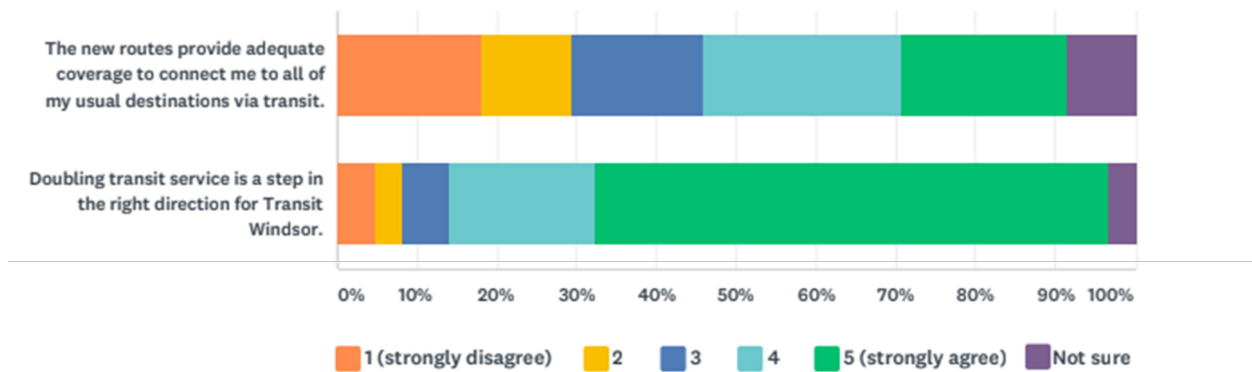


Figure 6: Online Survey Responses Regarding the Draft Route Network

One of the comments received through the interactive online map stated:

“As a transit user for the past 11 years, I think this is a huge improvement. The city is connected like never before. Routes have been broken up which will help with staying on time. I love the use of the Expressway too. I feel it addressed all of my frustrations over the years. It will be so much better for accessibility too because there are more bus options.”

Community feedback also showed great support for the plan’s recommendations to expand inter-regional service in the future. Another comment received through in interactive online map said:

“The use of a tiered transit system with clear designations between the different routes (primary, secondary, local) is a great step in the right direction. There is a net increase in the number of high-frequency routes (<15min frequency) and they cover the key corridors. This brings us closer to other cities which utilize a tiered transit system such as OC Transpo in Ottawa and the TTC in Toronto. With the addition of the new 42 route to Leamington, this a good start to a regional transit system.”

However, the draft plan also received several valid concerns. Participants in the community engagement process had several suggestions for and concerns about details of the proposed new routes. Some also expressed concerns about the safety of having buses on or near the E. C.

Row Expressway. There are no regulations in Ontario or in other Canadian provinces that prohibit buses from operating on Highways, Expressways, Freeways, or other urban or rural high speed roadways. Several modern transit systems in Ontario with strong safety records operate buses on highways, including York Region Transit, GO Transit, and OC Transpo. Transit Windsor will study these and other systems to ensure that highway routes in Windsor will operate safely and effectively.

Many engagement program participants and survey respondents had apprehensions about the proposed new network concept of more transfers for more efficient service. Several of the comments received were from worried Transit Windsor users who anticipated that the network changes would add a lot of time to their trips. As discussed further in Section 4.2, the fundamental philosophy of the new network will be to *streamline transit trips through the implementation of a grid network*. Though this may mean more transfers, overall transit trip lengths (including transfer time) are anticipated to shorten.

There were also many concerns about removing fixed route service between Devonshire and the Oldcastle industrial park (currently provided by the Walkerville 8 route), and replacing it with Alternative Service Delivery (ASD). Many comments were received from Windsor residents who rely on the route to commute to work in the industrial park and who either did not fully understand how the area would be served by ASD or did not think that ASD would have the capacity to meet current travel demands. Note that while ASD service areas were present on the printed maps that were shown at the open house and pop-up sessions, they were not shown on the Social PinPoint map due to limitations of the software. It is believed that this may have confused some customers about service to the Oldcastle industrial area service and resulted in many of the concerns received through Social PinPoint about this change.



Additionally, multiple requests to extend the Oldcastle ASD area to include the South West Detention Centre were also received. More details about the planned ASD service can be found in Section 4.2.

One of the online survey questions asked respondents to prioritize parts of the plan for implementation urgency. Figure 7 shows a visualization of the responses. The top answer came out to be “extending hours of service for transit,” followed by “growing the fleet and expanding the garage,” and then “implementing the new route structure and network.”

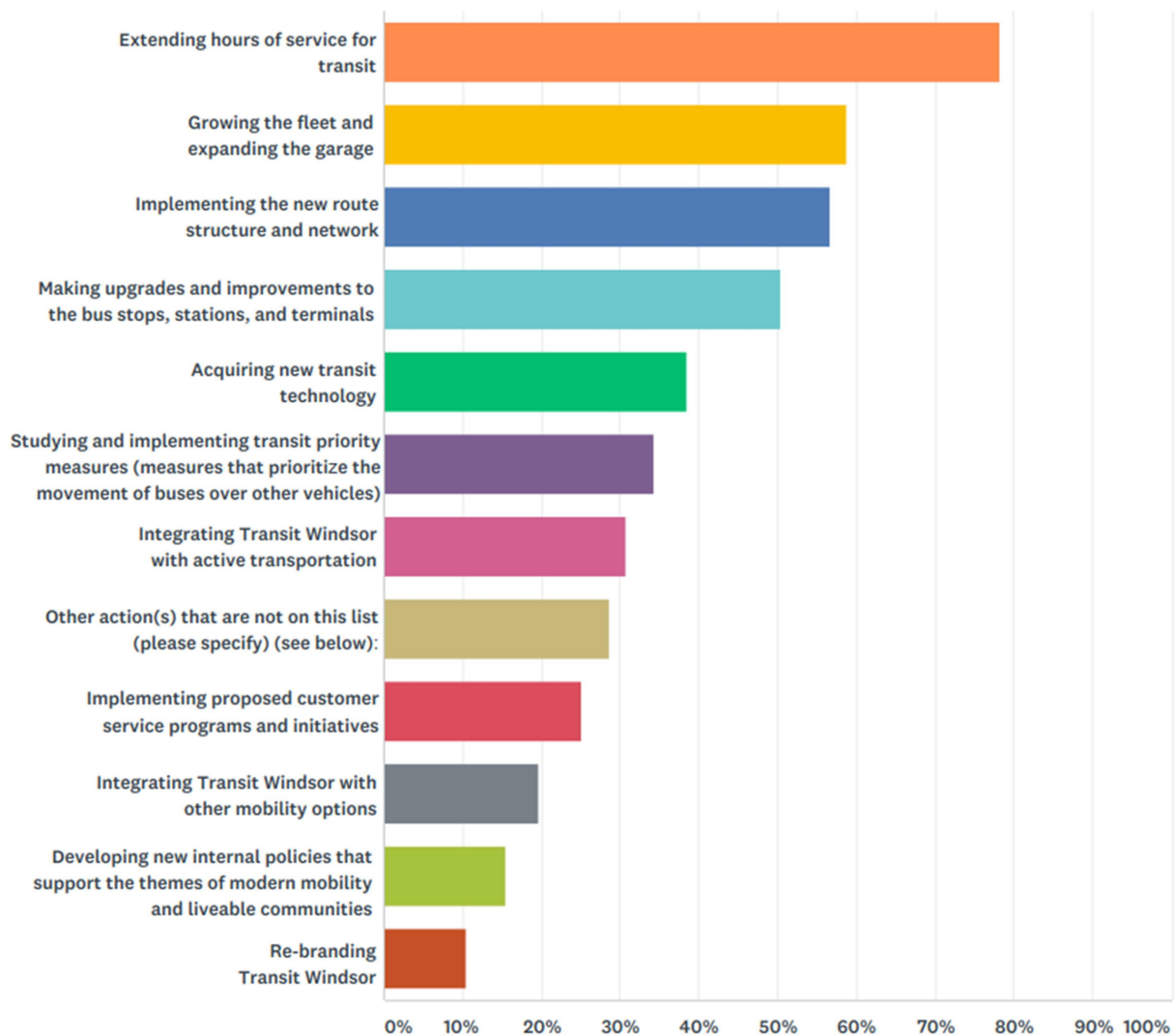
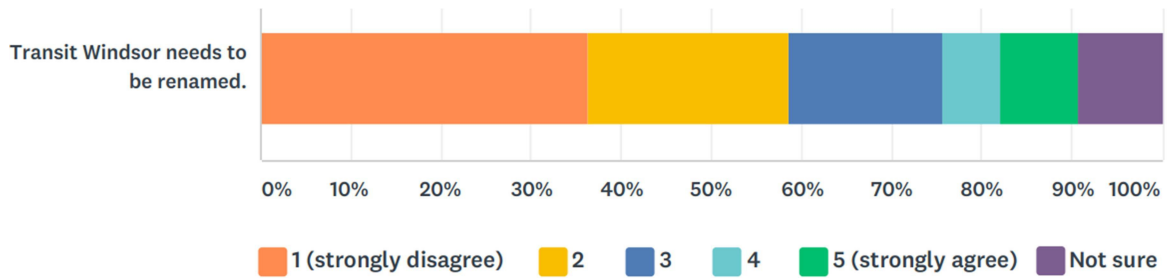


Figure 7: Implementation Priority Results from the SurveyMonkey Survey

Finally, one of the recommendations of the new Plan was a future rebranding (and possible renaming) of Transit Windsor. More information about this can be found in the brand analysis

report in Appendix G. Note that of the online survey respondents, nearly 60% disagreed that Transit Windsor should be renamed.



Feedback from stakeholders and the general public was incorporated into the final version of the Plan that appears in this document. Some of the routes presented at Stage 2 of community engagement have since been amended in response to the feedback gathered. However, a lot of the additional feedback, concerns, and suggestions on the detailed routing and operation of each route Transit Windsor collected in Round 2 of engagement is of a level of detail more than intended for the high-level overarching *More Than Transit* plan. Therefore, these highly valuable detailed comments have been recorded and will be revisited to inform the final details of each new route as their time of implementation draws closer. Furthermore, each new route in the proposed network will be brought to the community for feedback to iron out final route details, scheduling, stop locations, etc. in advance of Transit Windsor's implementation of these changes.

For more details about Round 2 of community engagement and what has been modified since that round of engagement was undertaken, please refer to Appendix F.

4.1. Policy Updates



The first part of the Transit Master Plan includes a commitment to updating Transit Windsor's policies to align with the three strategic priorities first discussed in Section 3.4:

- Customer Focus
- Modern Mobility
- Liveable Communities

Actions related to implementing these policies are presented below.














Customer Service

Transit Windsor's fundamental purpose is to serve its customers. Therefore, the organization will focus on taking a *user-focused* approach to providing its services. This approach will be supported by Actions 1.1 and 1.2.

#	Action	Engagement Theme(s)
1.1	Re-introduce the Canadian Urban Transit Association (CUTA) Ambassador program to provide enhanced customer service training for front line employees	
1.2	Develop a more robust program to engage more directly and regularly with the community through social media	 

Modern Mobility and Liveable Communities

To align with the strategic direction, the new Plan will also contain several policies that will support *modern mobility* and *liveable communities* as they relate to Transit Windsor. These include Actions 1.3 to 1.10.

#	Action	Engagement Theme(s)
1.3	Study opportunities for partnership with mobility providers for on-demand first mile/last mile options	   
1.4	Develop Transit Oriented Development (TOD) guidelines	
1.5	Collaborate with City of Windsor departments to require consultation with Transit Windsor for all new development and redevelopment applications	
1.6	Study potential for Park and Ride facilities	   
1.7	Reduce Transit Windsor's environmental footprint including reduced pollution from transit operations	
1.8	Reduce Transit Windsor waste while increasing proper waste diversion rates in line with Action D4 of the City of Windsor's Environmental Master Plan	
1.9	Increase energy conservation of all transit offices and facilities in line with Action D2 of the City of Windsor's Environmental Master Plan	

#	Action	Engagement Theme(s)
1.10	Ensure continued compliance with the City of Windsor's Sustainable Purchasing Guide for Transit Windsor's business operations	



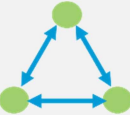
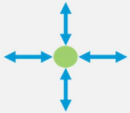
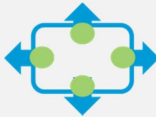

4.2. Route Network and Operations

Transit Master Plan for Transit Windsor includes a new route network. The following six key planning principles form the foundational pillars of the new network design:

1. Grid Route Primary Network Structure – Transit Windsor will have a grid route network (made up of *Primary Routes*) along highway and arterial roads that allows for the “straightening” of routes, provides a more direct service, and enables improvements in crosstown transit services
2. Connect Key Destinations – the *Primary Routes* need to directly connect key activity hubs/nodes to each other - these include Downtown, University of Windsor, St. Clair College, an East End terminal near Tecumseh Mall, Devonshire Mall, the Hotel Dieu Grace Healthcare Terminal, the Windsor International Transit Terminal, and local hospitals.
3. Focus Local routes on Local Community Connections - Fixed *Local Routes* will connect neighbourhood residents to a key destination, from where they can transfer to one of the grid routes to avoid leaving areas without adequate access to transit within a reasonable walking distance.
4. Supplement Grid Routes – *Secondary Routes* are additional grid routes to fill in the gaps between *Primary Routes*
5. Alternative Service Delivery (ASD) – on-demand transit options to provide coverage for low demand areas
6. Provision for Interregional Service – continuation and expansion of service provision to neighbouring communities in the area (including LaSalle, Tecumseh, Leamington, and a connection to downtown Detroit)

Combined together, these principles have resulted in the creation of five new route types, presented in Table 8.

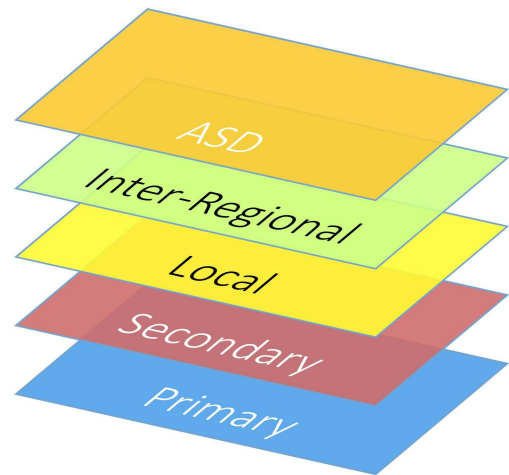
Table 8: New Route Types

Route Type	Description
 <p>Primary - <i>Grid</i></p>	<ul style="list-style-type: none"> • Grid routes on North/South and East/West Arterial Roads
 <p>Primary - <i>Highway</i></p>	<ul style="list-style-type: none"> • Highway Routes on E.C. Row
 <p>Secondary</p>	<ul style="list-style-type: none"> • Fills in the gaps between Primary Routes • Routes connect terminals
 <p>Local</p>	<ul style="list-style-type: none"> • Feeder routes connecting residential and employment areas with local transit terminals
 <p>Inter-regional</p>	<ul style="list-style-type: none"> • Connecting adjacent communities to Transit Windsor Terminals (existing Tunnel Bus, LaSalle, and Leamington)
 <p>ASD</p>	<ul style="list-style-type: none"> • Alternative Service Delivery (ASD) • On-Demand Service for low-density and emerging development areas

In line with the six network design principles, the five route types are essentially “layered” on top of each other to create the final route network.

The following sections describe the route types and new routes (including maps of the routes) in more detail.

Note that there are multiple routes that are proposed to run to the new hospital site in southeast Windsor. These routes are contingent on the construction of the new hospital and would not be implemented to extend to this area if the hospital does not get built. As mentioned in Section 4, each route will be brought back to the community for finalization prior to being implemented and are subject to be modified depending on the detailed community feedback and whether assumptions made about the future are still accurate. Further information on the development of the new route network can be found in Appendix E.



Primary Routes

The *Primary Routes* will be the main grid routes traveling along the arteries and highways of Windsor. Primary routes can be sub-classified into two types – *grid* and *highway*.

The *Primary Grid Routes* are east/west and north/south routes along arterial roads that are spaced 2.0 – 2.5km apart. The *Primary Highway Routes* are those that primarily run along the E.C. Row Expressway.

A summary of the new routes is presented in Table 9.

Table 9: Primary Routes

East-West Routes	
10	Wyandotte
12	Tecumseh Road – University of Windsor (<i>Skip Stop</i>)
14	Tecumseh Road – Windsor International Transit Terminal
North-South Routes	
11	Windsor International Transit Terminal – St. Clair College via University Dr and Huron Church Rd
13	Dominion
15	Howard
17	Walker
Highway Routes	
16	Hotel Dieu Grace Healthcare Terminal – Airport/Proposed Hospital via E. C. Row
18	East Windsor – St. Clair College via E. C. Row

The *Primary Grid* and *Primary Highway* routes can be seen in Figure 8 and Figure 9, respectively.

The minimum service frequencies planned for the primary routes are presented in Table 10.

Table 10: Primary Routes: Tentative Minimum Frequency (minutes)

Route	10	11	12	13	14	15	16	17	18
Weekday									
Early AM	30	30	30	30	30	30	30	30	30
AM Peak	10	15	15	15	10	15	15	20	30
Midday	15	15	30	20	15	15	15	20	30
PM Peak	10	15	15	15	10	15	15	20	30
Early Evening	30	30	30	30	30	30	30	30	30
Late Evening	30	30	30	30	30	30	30	30	30
Saturday									
Early Morning	30	30	30	30	30	30	30	30	30
Midday	15	15	20	30	15	15	15	20	30
Evening	30	30	30	30	30	30	30	30	30
Sunday / Holiday									
Early Morning	30	30	30	30	30	30	30	30	30
Midday	20	20	30	30	20	20	20	30	30
Evening	30	30	30	30	30	30	30	30	30

Figure 8: Primary Grid Routes

Point of Interest

- Major Destination (Green line)
- Transit Terminal (Red circle)

Primary Routes

- 10 (Light blue line)
- 11 (Medium blue line)
- 12 (Dark blue line)
- 13 (Light blue line)
- 14 (Medium blue line)
- 15 (Dark blue line)
- 17 (Darkest blue line)
- Route Extension to Future Hospital (Dashed blue line)

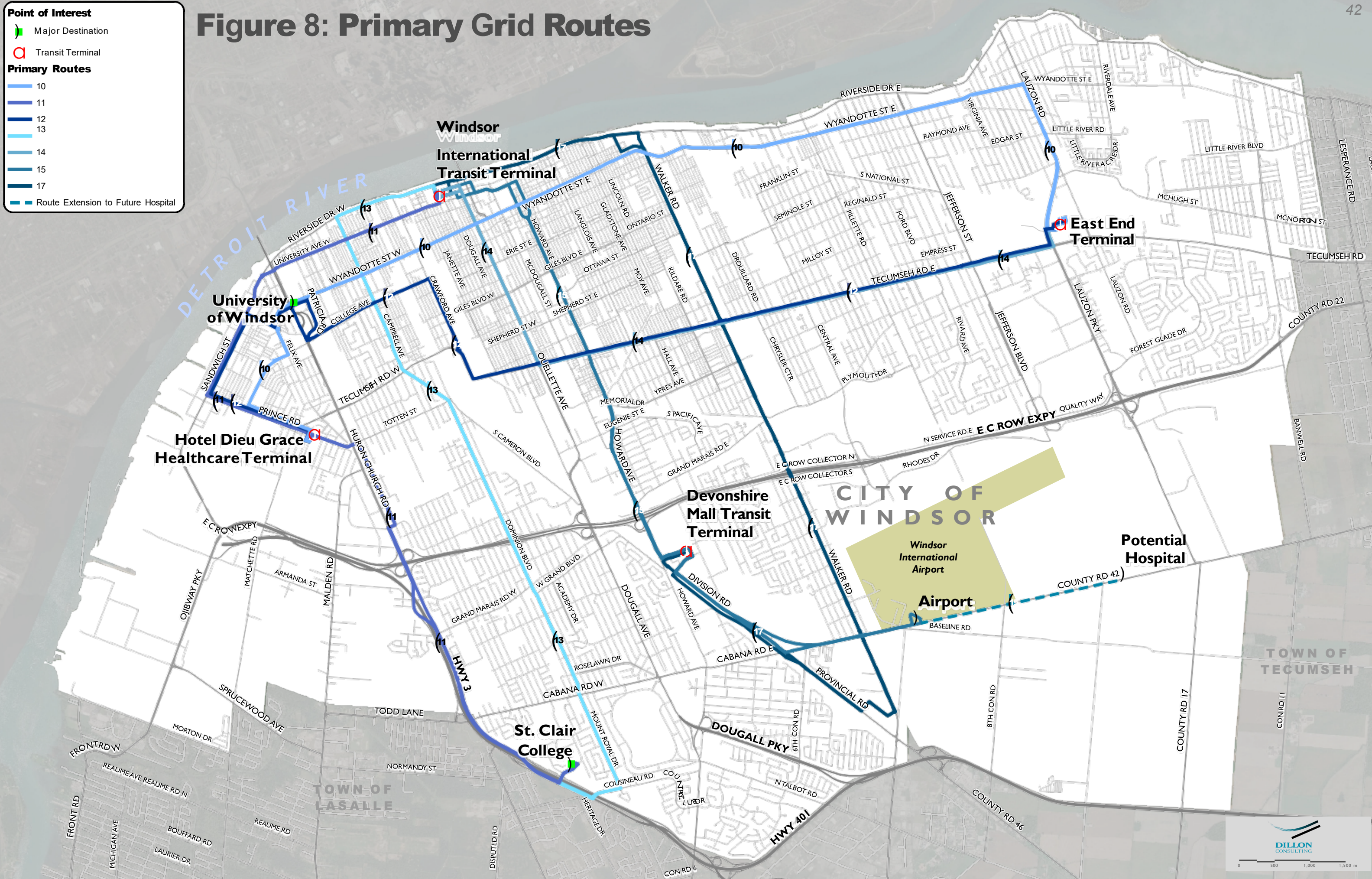


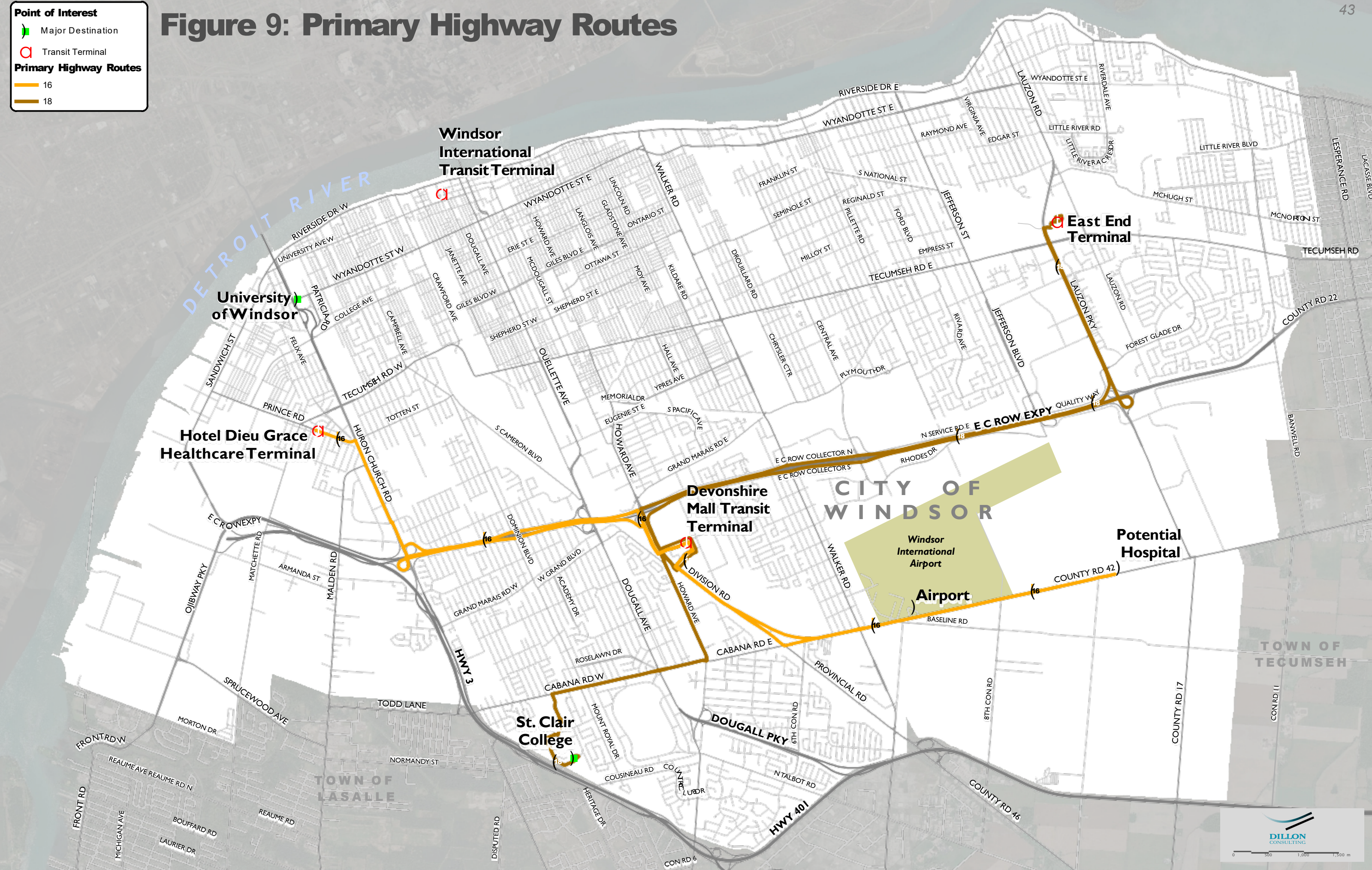
Figure 9: Primary Highway Routes

Point of Interest

- Major Destination (Green arrow icon)
- Transit Terminal (Red circle icon)

Primary Highway Routes

- 16 (Orange line)
- 18 (Brown line)



Secondary Routes and Inter-Regional Routes

Secondary Routes will follow a general grid-like structure and are intended to “fill in gaps” between primary routes as well as connect the major transit terminals. As a supplement to the “major gridlines” created by the *Primary Routes*, *Secondary Routes* will run along arterial and collectors roads. They will be less direct than *Primary Routes* but not circuitous in the way of *Local Routes*.

Meanwhile, *Inter-Regional* routes are intended to connect Windsor to adjacent communities. This means that the existing Tunnel Bus route to Downtown Detroit, the existing LaSalle 25 route, and the 3 trips/day service to Leamington from the St. Clair College Terminal will be maintained. In the slightly longer-term future, the *Inter-Regional Routes* may also include potential route extensions to the south and east of Windsor.

A summary of these new routes is presented in Table 11.

Table 11: Secondary and Inter-Regional Routes

Secondary Routes	
51	Hotel Dieu Grace Healthcare Terminal – Windsor International Transit Terminal via Crawford Ave
52	Windsor International Transit Terminal – East End Terminal via Ottawa St and Seminole St
53	Windsor International Transit Terminal – St. Clair College via Dougall Ave
54	East End Terminal – Windsor International Transit Terminal via Erie St
55	Windsor International Transit Terminal – N Service Rd Industrial (<i>off-peak</i>)
56	East End Terminal – Hotel Dieu Grace Healthcare Terminal
550	Windsor International Transit Terminal – Rhodes Dr. Industrial (<i>peak</i>)
Inter-Regional Routes	
Existing	LaSalle 25
Existing	Leamington 42
Existing	Tunnel Bus
200	Hotel Dieu Grace Healthcare Terminal – New Hospital via University Ave, Ojibway Pkwy and Cabana Rd

The *Secondary* and *Inter-Regional* routes can be seen in Figure 10 and Figure 11, respectively.

Figure 10: Secondary Routes

Point of Interest

- Major Destination
- Transit Terminal

Secondary Routes

- 51
- 52
- 53
- 54
- 55
- 550 (Peak Period Service)
- 56

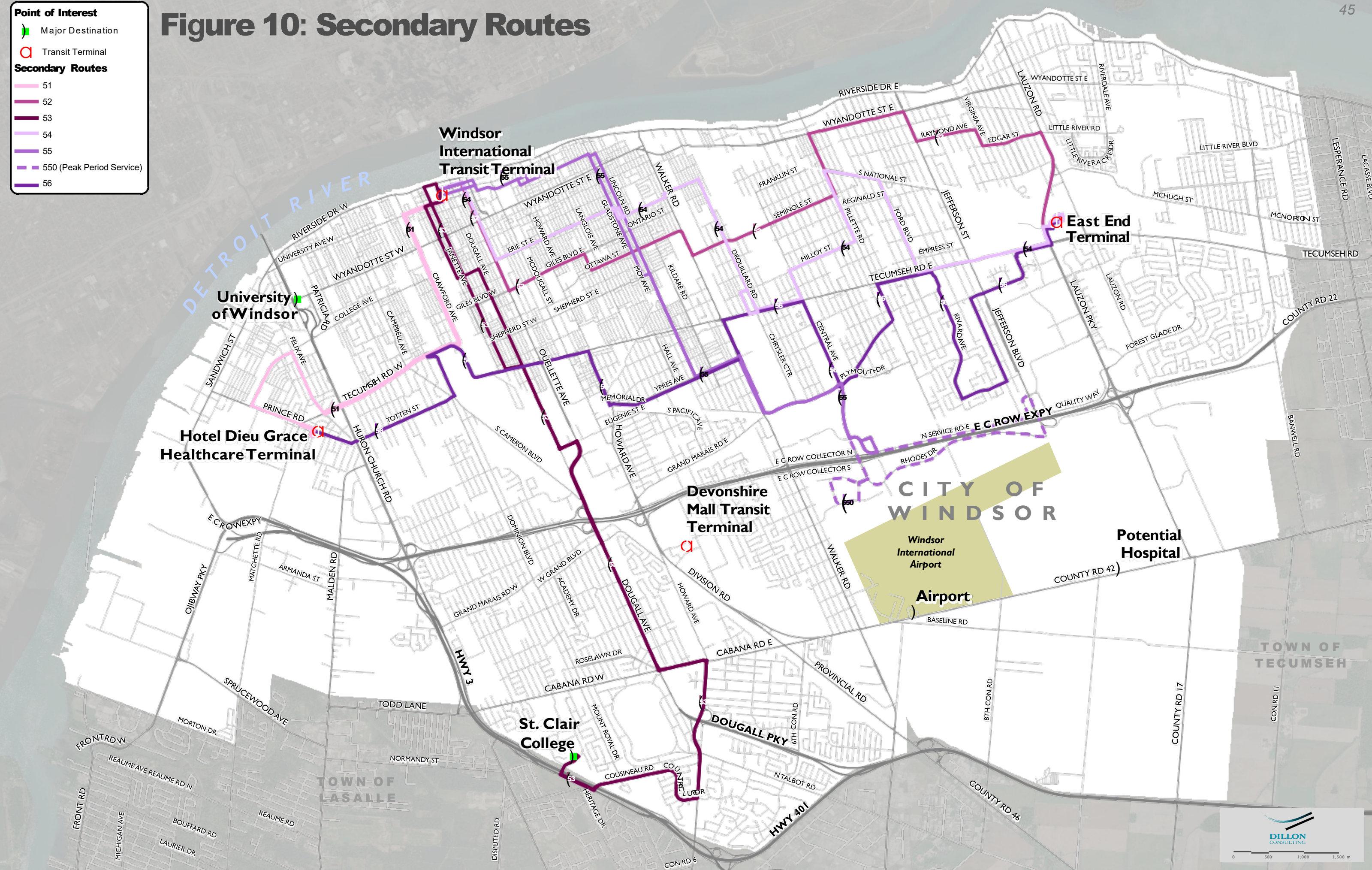


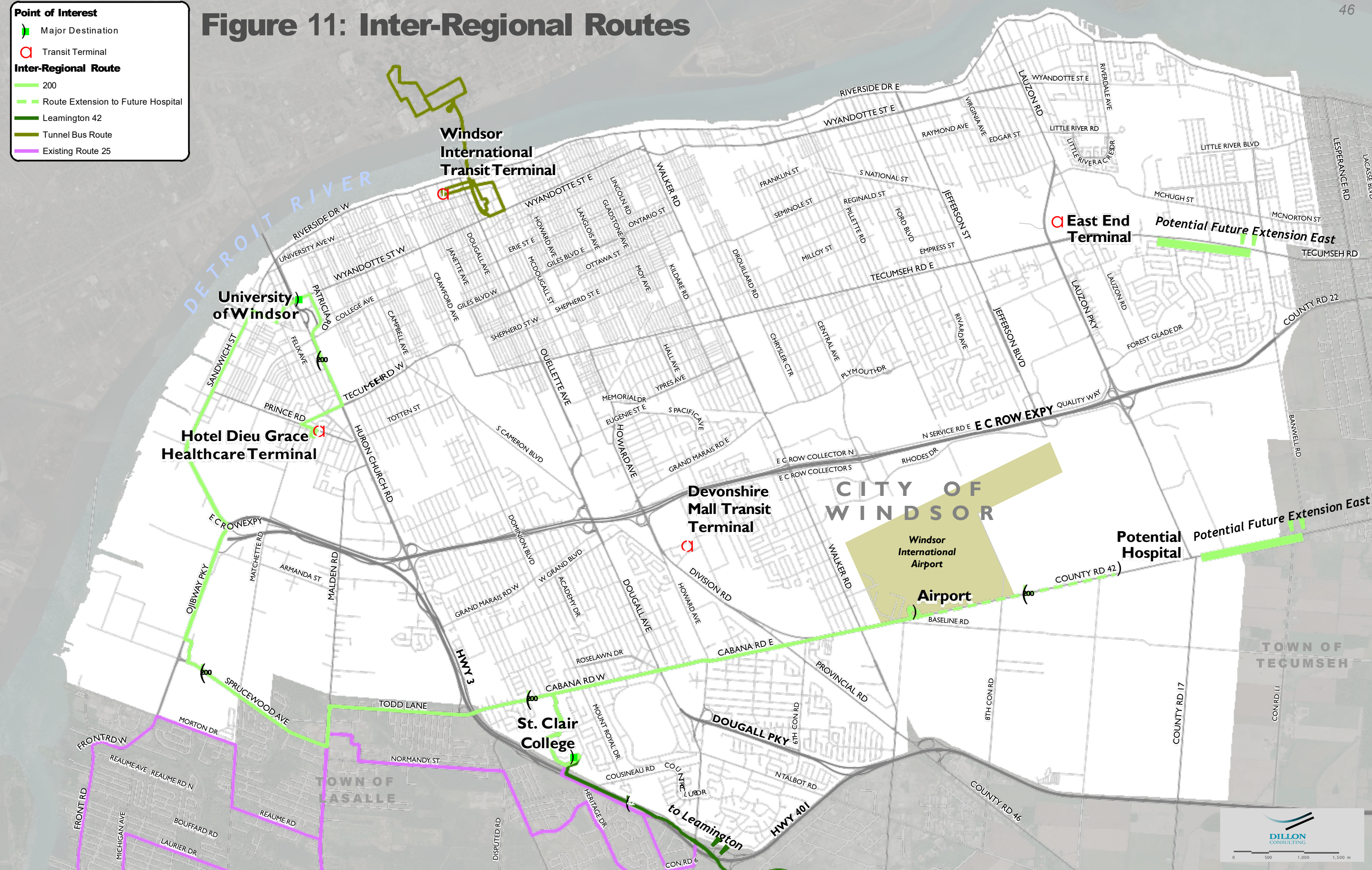
Figure 11: Inter-Regional Routes

Point of Interest

- Major Destination
- Transit Terminal

Inter-Regional Route

- 200
- Route Extension to Future Hospital
- Leamington 42
- Tunnel Bus Route
- Existing Route 25



The minimum service frequencies planned for the *Secondary* and *Inter-Regional* routes are presented in Table 12.

Table 12: Secondary and Inter-Regional Routes: Tentative Minimum Frequency (minutes)

Route	51	52	53	54	55/550	56	200
Weekday							
Early AM	60	30	60	30	60	30	60
AM Peak	20	20	20	20	30	20	30
Midday	30	30	30	30	30	30	30
PM Peak	20	20	20	20	30	20	30
Early Evening	30	30	30	30	30	30	30
Late Evening	60	60	60	60	60	60	60
Saturday							
Early Morning	60	60	60	60	60	60	60
Midday	30	30	30	30	30	30	30
Evening	60	60	60	60	60	60	60
Sunday / Holiday							
Early Morning	60	60	60	60	60	60	60
Midday	30	30	30	30	30	30	30
Evening	60	60	60	60	60	60	60

Local Routes

Local Routes will be the more traditional circuitous routes that travel through a neighbourhood. The purpose of these routes is to collect passengers in local communities and connect them to the nearest transit terminal or *Primary* or *Secondary* route for the rest of their journey.

To avoid undesirable one-way loops, there will be two-way service on all local routes with the exception of Route 103. Note that for Routes 101, 102, 103, and 104, where several of the routes travel along the same corridors, this means that the policy minimum headways represent the headways that each route will pass along a street in either direction (e.g. 30 min peak service = 60 min headway/direction)

A summary of the new *Local Routes* is presented in Table 13 while their hours of service and minimum frequencies are shown in Table 14. A map of the routes can be found in Figure 12.

Table 13: Local Routes

Local Routes	
101	East Riverside
102	North Riverside
103	West Forest Glade – Meadowbrook
104	East Forest Glade – Firgrove
121	Devonshire Heights/Remington Park
122	Devonshire Mall – Walker Road through Roseland
123	St. Clair – Devonshire Mall through South Windsor
160	East End Terminal – Walker Road via Lauzon Pkwy

Table 14: Local Routes: Tentative Minimum Frequency (minutes)

Route	101	102	103	104	121	122	123	160	Min
Weekday									
Early AM	60	30	30	30	60	60	60	60	60
AM Peak	30	20	20	20	30	30	30	30	30
Midday	45	30	30	30	45	45	30	30	45
PM Peak	30	20	20	20	30	30	30	30	30
Early Evening	45	30	30	30	45	45	45	30	45
Late Evening	60	60	45	30	60	60	60	60	60
Saturday									
Early Morning	60	60	60	45	60	60	60	60	60
Midday	45	30	45	30	45	45	45	45	45
Evening	60	60	60	45	60	60	60	60	60
Sunday / Holiday									
Early Morning	60	60	60	60	60	60	60	60	60
Midday	60	45	45	30	45	60	60	45	60
Evening	60	60	60	60	60	60	60	60	60

Alternative Service Delivery

Alternative Service Delivery (ASD) models offer municipalities and transportation operators with a different way to provide public transportation service. ASDs are typically characterized by one or more of the following:

1. The use of technology, such as a mobile application to book, pay and track trips;
2. The use of smaller vehicles that provide demand-responsive service in lower demand neighbourhoods, employment areas or off-peak periods of the day; and
3. The use of third-party providers on an emergent or dedicated basis.

ASD service can be provided through a variety of methods. Sedans, minivans, and shuttle buses are usually vehicles that come to mind but even full-sized buses can be used to provide ASD service. The vehicles size should reflect the anticipated demand for the service. ASD vehicles can provide door-to-door service or have predetermined stops where users have to walk to be picked up and/or a limited number of pre-determined destinations – or do a combination of both. Municipal transit agencies can offer the service fully-in house. Alternatively, they can also choose to contract out the management, software and app development, dispatching and scheduling, and/or operation of the service.

However, despite the obvious convenience of an ASD model, it should not be assumed ASD is the right solution for public transit in every context. In order for ASD to be a reasonable alternative to a traditional fixed route service, the following conditions must be met:

- The relative cost of the service should not exceed the cost of operating a conventional fixed-route in the same area;
- The planned development area will be low-density, which is anticipated to result in low-ridership demand; and/or
- The planned development area will be located on the fringe of the urban area.

ASD will be rolled out to three low-density and low-demand areas within the Transit Windsor service area – the *Oldcastle Business Park* area of the Town of Tecumseh (just south of Highway 401), *West Windsor* (made up of portions of the Ojibway, Sandwich, and Malden planning districts, and the *Sandwich South* planning district while it’s being developed and does not have enough demand to support a fixed route. If the ASD service achieves high ridership, showing the area can support a fixed route service, it can be replaced with a fixed route (in accordance to the Discontinuation of Service Guideline in Table 6 of Section 3.5).

Table 15 summarizes the three planned ASD areas.

Table 15: Summary of Planned ASD Areas

	Area Served
ASD 1	Oldcastle Business Park
ASD 2	West Windsor
ASD 3	Sandwich South

Users of the ASD service will be able to request pick-ups and drop-offs anywhere within the service area. However, outside of the service area, the ASD service will only have one fixed stop at the nearest terminal – Devonshire Mall for the *Oldcastle Business Park*, the West End Terminal

for *West Windsor*, and the potential future Hospital terminal for *Sandwich South*. This will allow the people who live or work in ASD zones to conveniently connect to the rest of the transit system. In implementing ASD, Transit Windsor will ensure that customers with disabilities can access the primary ASD service or some form of equivalent service within the designated three areas.

The three ASD areas are shown in Figure 12.

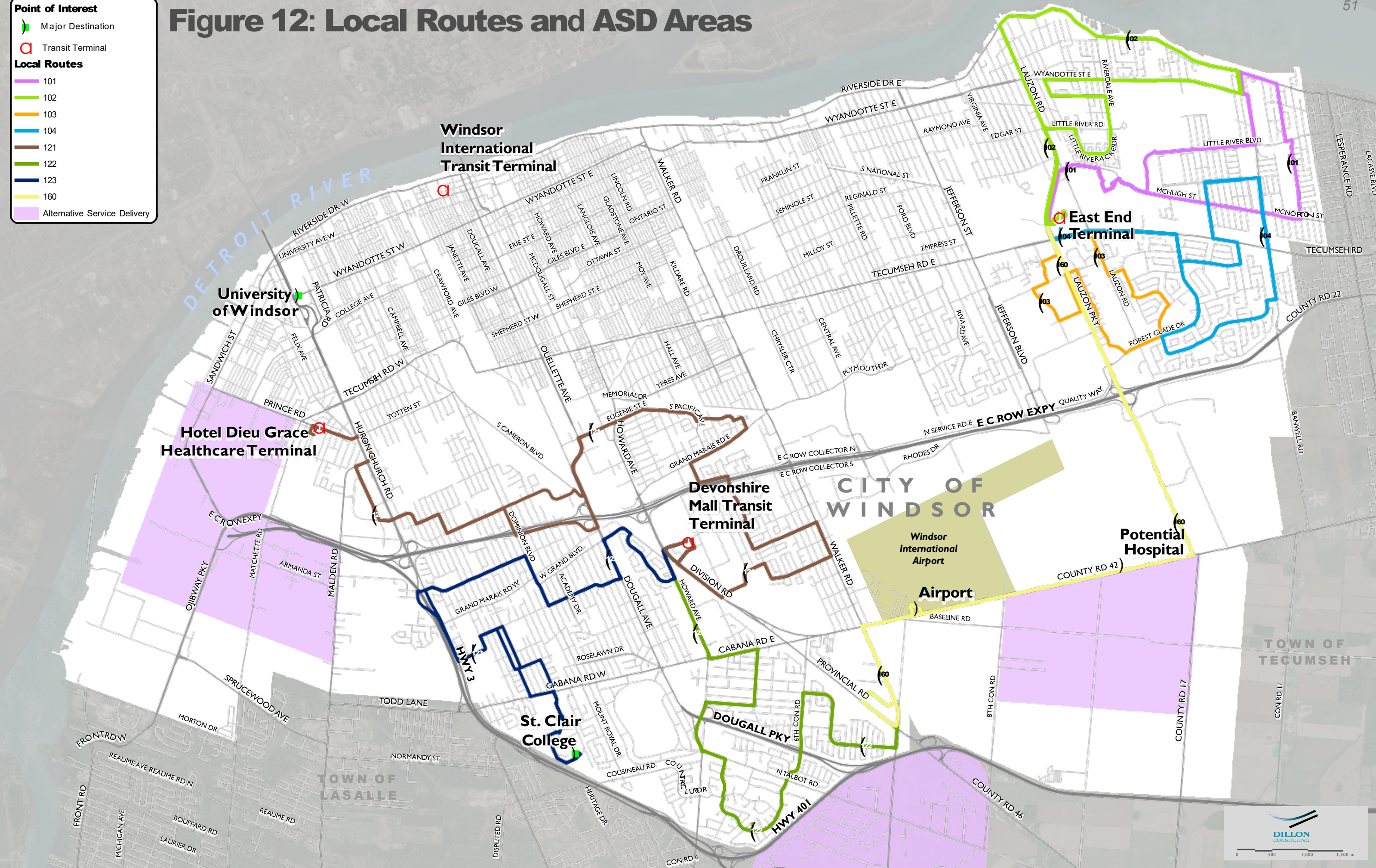
Figure 12: Local Routes and ASD Areas

Point of Interest

- Major Destination (Green arrow)
- Transit Terminal (Red circle)

Local Routes

- 101 (Purple line)
- 102 (Light Green line)
- 103 (Orange line)
- 104 (Blue line)
- 121 (Brown line)
- 122 (Dark Green line)
- 123 (Dark Blue line)
- 160 (Yellow line)
- Alternative Service Delivery (Light Purple shaded area)



Summary

The new route network will be composed of the following five route types that will provide service to the Transit Windsor service area:

- *Primary Routes*
- *Secondary Routes*
- *Local Routes*
- *Inter-regional Routes*
- *ASD Service*

These routes will ensure a big improvement in the amount of service offered by Transit Windsor. It is anticipated that with the full implementation of the new network, service provided by Transit Windsor will nearly double, pushing Transit Windsor to the front of the peer group pack:

- Annual revenue vehicle hours are expected to increase *from 267,100 hours in 2019 to 554,150 hours in 2028*
- Annual revenue vehicle hours per capita (defined as *amount of service* in Table 4 of Section 2.4) will increase *from 1.11 hours/capita in 2019 to 2.29 hours/capita in 2028*.

Details for the calculation of the increased service can be found in Appendix E.

Furthermore, additional staff (in various departments within Transit Windsor, including transit planning staff, technological system staff, operators, supervision, maintenance staff, etc.) will be required to support this system expansion.

The changes to the network are summarized as Actions 2.1 through 2.4.

#	Action	Engagement Theme(s)
2.1	Implement the new route network that will provide: <ul style="list-style-type: none"> • Enhanced service coverage • Expanded hours of operation • Added Sunday service for Local routes • An overall doubling of service • Service in-line with service provided by peer systems 	
2.2	Study and optimize the ASD service model to be used in each of the three identified ASD areas low-density and low-demand areas.	

#	Action	Engagement Theme(s)
2.3	Implement an ASD service model in three low-density and low-demand areas that will be provided either in-house or through a partnership with a third party.	
2.4	Increase the number of Transit Windsor staff to implement and maintain the new system.	

The overall new route network is shown in Figure 13.

Figure 13: Overall Route Network

Point of Interest

- Major Destination
- Transit Terminal

Primary Routes

- 10
- 11
- 12
- 13
- 14
- 15
- 17
- Route Extension to Future Hospital

Primary Highway Routes

- 16
- 18

Secondary Routes

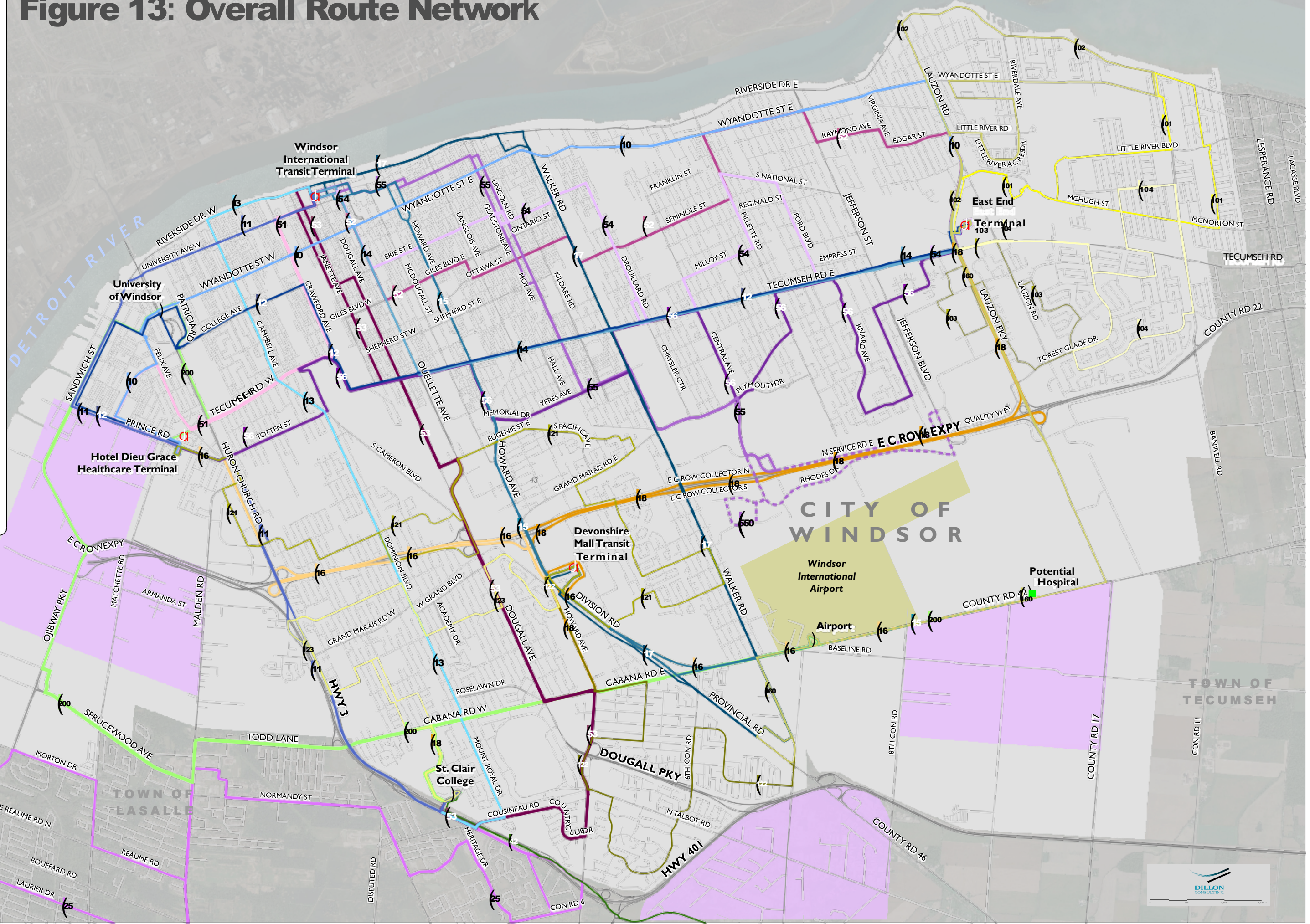
- 51
- 52
- 53
- 54
- 55
- 550 (Peak Period Service)
- 56

Local Routes

- 101
- 102
- 103
- 104
- 121
- 122
- 123
- 160
- Alternative Service Delivery

Inter-Regional Route

- 200
- Leamington 42
- LaSalle 25



4.3. Assets and Infrastructure

Improvements to Transit Windsor's assets and infrastructure are a major component of the Transit Master Plan. These include both general improvements to enhance the transit user experience and the improvements required to support the new route network, as discussed in Section 4.2.

The asset and infrastructure improvements can be categorized into four sub-categories:

- Improvements to the Maintenance and Storage Facility (MASF);
- Improvements to the bus stops, stations, and terminals;
- Implementation of transit priority measures within the Transit Windsor service area; and
- Improvements to transit technologies used by Transit Windsor

The following sections contain details of each of these subcategories of improvements.

Note that the first improvement, regarding the MASF facility, is urgent and will be of the highest priority for future implementations. As discussed under the following heading, without addressing the limitations of the existing MASF facility, the success of Windsor's new plan will be at risk.



Maintenance and Storage Facility

The new network will require:

- Up to 45% more buses on the road during peak periods (equivalent to the peak period bus requirement increasing from 82 buses to up to 120 buses)
- A total fleet expansion of up to 60 buses (bringing the total fleet from 114 buses to up to 165 buses, which will leave Transit Windsor with an approximately 38% spare ratio)
- A mix of standard 40-foot buses, articulated 60-foot buses, and 30-foot buses
- Potentially smaller vehicles (e.g. minibuses, vans, etc.) to serve ASD Areas

The existing Maintenance and Storage Facility (MASF) on North Service Road East is not able to accommodate the growing fleet. Today, the facility is at 110% capacity, causing buses to be stored outside and offsite. The future will see more buses being added to the Transit Windsor fleet and the need to accommodate longer 60-foot vehicles (which both storage bays and maintenance stations in the current facility are not designed for). Furthermore, additional buses to Transit Windsor's fleet will require expanded maintenance service hours over and above the current levels. All of these factors identify an urgent need to expand the existing MASF or construct a new second facility as the planned expansion of Transit Windsor's system is impossible without a MASF expansion or construction of a new facility.

A study regarding the MASF facility must be completed as soon as possible to prepare for the future expansion; many service changes cannot be implemented until the lack of storage and maintenance capacity is addressed.

For more details of the network requirements, refer to Appendix E.

Action 3.1 refers to the planned action for Transit Windsor's MASF.

#	Action	Engagement Theme(s)
3.1	Commence a <i>Fleet and Infrastructure Study</i> to fully understand the requirements for a facility expansion/new facility and determine the desired solution as quickly as possible	

Stops, Stations, and Terminals

A major component of a transit system's assets and infrastructure are the:

- Transit stops - most common types of areas for transit boarding and alighting, these are designated with a transit flag post and may include concrete pads and/or shelters);
- Transit stations – more significant “stops” where two Primary routes meet, these will require facilities to accommodate a larger number of waiting passengers at a given time; and
- Transit Terminals – typically the end of the line “stops” with significant passenger facilities where passengers are able to transfer to a number of different routes.

These three areas are the “gateways” into a transit trip and can make or break a person’s perception of transit as a whole. Therefore, the new Plan will have several actions related to the improvement of these spaces.

To support the new route network (see Section 4.2), several of the existing transit terminals will require upgrading and expansion. Prior to the upgrades, however, studies need to be completed for each terminal to select sites, sizing, layup requirements, driver facilities, and passenger amenities as well as determine a coordination plan with property owners (if the site is owned by a private entity). Feasibility for a new future terminal at the Airport or Future Hospital also requires studying. These studies, in the form of Terminal Improvement Plans, will include:

- St Clair College Transit Terminal
- Devonshire Mall Transit Terminal
- East Windsor Transit Terminal
- Windsor International Transit Terminal
- Airport / Future Hospital
- Phase 2 Expansion of the Hotel Dieu Grace Healthcare Terminal

The plan also requires an update to the 2016 Bus Stop Planning and Design Guidelines. Updates will include adding a new station classification for select *Primary Route* stops (see summary of transit boarding and alighting station areas above), updating the facility and amenities requirements for each stop type, and a review and updates of the *Terminal Facility Guidelines* to align with the work being done for the Terminal Improvement Plans.

And finally, as part of an Ongoing Bus Stop Investment Program, Transit Windsor will also constantly and continuously upgrade existing shelters, pads, benches, and signage; improve accessibility at bus stops; and explore the potential for provision of bicycle facilities at stops. For instance, this program will seek to remedy the fact that the current passenger shelter coverage of 19% fails to meet the recommended guideline of 25-30% in Table 6 of Section 3.5.

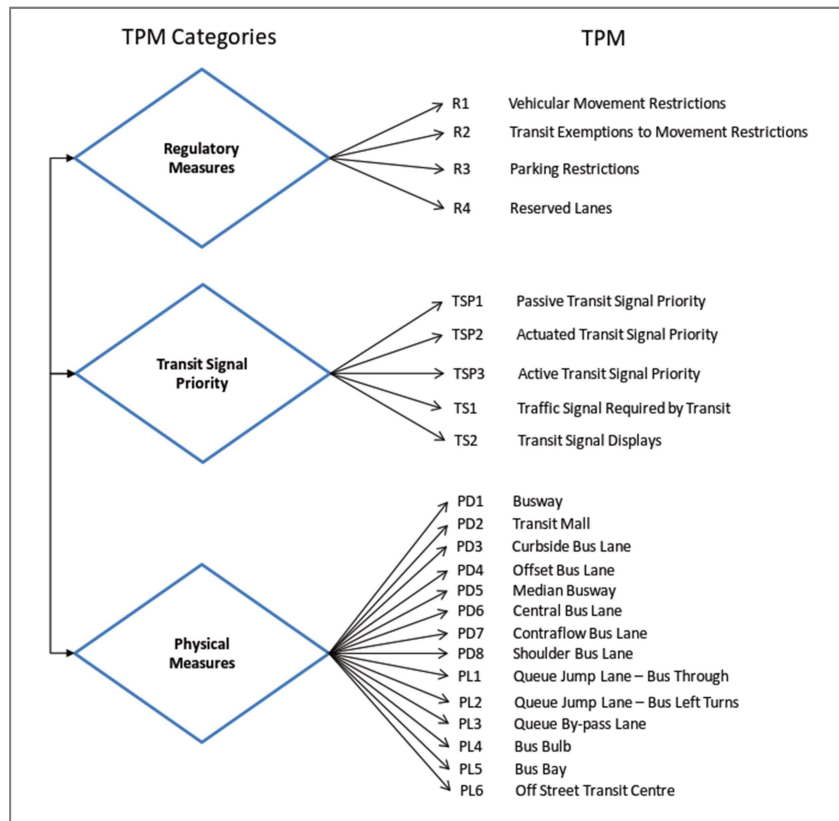
Actions 3.2 to 3.4 speak to the plans for Transit Windsor’s stops, stations, and terminals.

#	Action	Engagement Theme(s)
3.2	Update the <i>2016 Bus Stop Planning and Design Guidelines</i>	1 4
3.3	Complete <i>Terminal Improvement Plans</i> for St Clair College, Devonshire Mall, East Windsor Terminal, Windsor International Transit Terminal, and Airport/Future Hospital terminal HDGH terminal	1 4
3.4	Operate an ongoing <i>Bus Stop Investment Program</i>	4

Transit Priority

Transit users desire a modern mobility experience that’s smooth, convenient, time efficient, and ensures predictable travel times. Transit priority measures (TPM) are a tool for transit systems to help ensure that type of experience. There are three main types of transit priority measures - *regulatory* (i.e. restrictions, exceptions, and space reservations), *transit signal priority*, and *physical* (e.g. physical separation, queue jumps, by-passes, etc.).

Currently, Transit Windsor’s system does not include any transit priority measures. However, as part of the new Plan, Transit Windsor will study the potential and best locations for transit priority measures.



(Source: Guidelines for Planning and Implementation of Transit Priority Measures in Urban Areas, 2013, TAC, pg. 8)

First, a Network Review Study will examine the overall network-level performance of the transit system to identify areas in the network with high passenger volumes, slow travel speeds, and/or large variability in on-time performance and may require TPM. This study will use a data driven approach using “Big Data” sources from the bus’s on-board systems including *Automated Passenger Count* (which counts the “on’s” and “off’s” at bus stops), *Automated Vehicle Location*, (the bus’s GPS), and *Scheduling Data* (which assesses on-time performance).

Next, Corridor Studies will be completed for those areas identified in the Network Review Study. These studies will include operational assessments, modelling, and a review of road configuration to identify and recommend a series of coordinated transit priority measures that are best suited for the corridor.

Once transit priority measures are implemented, Transit Windsor will be continuously completing Site Specific Transit Priority Studies for day to day management and mitigation of issues. These studies will require coordination with various City of Windsor departments to form solutions for the site that accommodate the needs of all of the stakeholders.

These are summarized as Actions 3.5 to 3.7 in this Plan.

#	Action	Engagement Theme(s)
3.5	Complete a transit priority <i>Network Review Study</i> to identify corridors and sites that would benefit from transit priority measures	1 2 4
3.6	Complete several transit priority <i>Corridor Studies</i> at locations identified in the network review stage to determine the measures that will be best suited for the location.	1 2 4
3.7	Continuously complete <i>Site Specific Transit Priority Studies</i> for day to day management and mitigation of issues at sites with transit priority measures	1 2 4

Technologies

Modern transit systems use various technologies to provide the best experience for their users. New technology can support a transit system in a wide variety of ways – for instance, it can expedite the movement on buses on municipal roads, make fare collection more convenient and efficient, and/or collect data that can be used to optimize future transit system planning.

Actions for transportation include renewing, upgrading, or replacing technology that Transit Windsor already has because it will require maintenance or become outdated within the span of this Plan. It also requires Transit Windsor to obtain brand new technology.

The actions related to transportation technologies for Transit Windsor are summarized as Actions 3.8 through 3.20 in this Plan.

#	Action	Engagement Theme(s)
On-Board Systems		
3.8	Upgrade Automated Vehicle Location (AVL) technology	2 4
3.9	Update the Next Stop Announcements/Displays to reflect the new route network	2 4
3.10	Improve the Automatic Passenger Counters (APCs) technology and increase the proportion of buses equipped with APCs	4
3.11	Upgrade the Automated Fare Collection (AFC) system	2 4
Passenger Information Systems		
3.12	Expand Variable Message Sign (VMS) technology to all Transit Windsor terminals and explore potential for VMS at all Major Stops	2 4
3.13	Regularly update Traveller Information Systems to take advantage of the latest technology	2 4
Transit Signal Priority Technologies		
3.14	Investigate potential for and implement Actuated Transit Signal Priority measures at appropriate locations based on results of Action 3.5, 3.6, and 3.7	1 4
3.15	Investigate opportunities for and effort associated with upgrading traffic signal hardware and systems to include Active Transit Signal Priority measures at appropriate locations based on results of Action 3.5, 3.6, and 3.7	1 4
Fleet		
3.16	Upgrade and expand the Maintenance and Storage Facility (MASF) storage systems to accommodate increased fleet and new vehicle models	4
3.17	Invest in a Vehicle Health Module for the existing fleet	4
3.18	Study potential for more sustainable propulsion systems with attention paid to industry trends & uptakes	4 5
Other		
3.19	Investigate data-driven statistical approaches for transit data management and increase the number of staff dedicated for data management	4
3.20	Increase the amount of IT staffing dedicated to implementing and maintaining Transit Windsor's IT systems	4

4.4. Sustainability and Integrated Mobility

Sustainability

Transit can be a great tool for positive change in the communities we live in. Along with walking and cycling, transit is a more environmentally sustainable mode of travel than single vehicle trips. Therefore, the Transit Master Plan seeks to capitalize on opportunities to use transit to make the Windsor community healthier and more environmentally sustainable.

Actions 1.3 to 1.10 of Section 4.1 (which refer to implementing policies with regards to building Liveable Communities) already speak to Transit Windsor's commitments to being more environmentally conscientious and accountable. They also help fulfill the goals and objectives of the City's Environmental Master Plan (specifically Goals A and D). As such, these actions are not repeated in this section.

The 2019 Windsor Active Transportation Master Plan (ATMP), *Walk Wheel Windsor*, identified 8 actions to improve integration between walking and cycling and transit. Transit Windsor will incorporate and commit to the relevant actions from *Walk Wheel Windsor*, which include:

- **Action 1D.1:** Improve walking and cycling connections to transit service consistent with the concurrent Transit Windsor service review.
- **Action 1D.2:** Prioritize amenities at bus stops such as benches, shelters, and customer information.
- **Action 1D.3:** Install secure bicycle parking at high activity bus stops and transit exchanges.
- **Action 1D.4:** Continue to provide bike racks on all buses throughout the year.
- **Action 1D.5:** Continue to work towards a fully accessible transit system, making improvements to bus stops to ensure that they are accessible year-round, and have sidewalk access.
- **Action 1D.6:** Prioritize the installation of sidewalks and crossings along designated bus routes.
- **Action 1D.7:** Ensure the design of bicycle facilities considers the location of, and access to bus stops.
- **Action 1D.8:** Undertake a campaign to encourage all residents to consider transit as a viable and comfortable means of transportation.

Integrated Mobility

In addition to being an inherently “greener” mode of travel than the personal vehicle, modern transit has to respond to today's travel demands and expectations – with the rise of an “on-demand” culture in all aspects of life, people want transit to meet individual lifestyle needs rather than being forced to conform to what is being offered. In this context, transit has the

opportunity to be a fundamental component of the concept of *integrated mobility*, defined by the Canadian Urban Transit Association (CUTA) as “the ability for people to move easily from place to place according to their own needs.” Studies and best practices show that when used in a context-sensitive way, *transportation systems that embrace the integrated mobility philosophy have the potential to greatly enhance the overall sustainability of a community.*

As part of the Transit Master Plan, Transit Windsor will identify potential mutually beneficial integrated mobility partnerships with mobility service providers, including (but not limited to):

- Transportation network companies (TNCs) such as Uber and Lyft;
- “Sharing economy” mobility providers (such as carsharing and bikesharing companies); and
- Handi-Transit

Summary

Actions 4.1 and 4.2 summarize the actions for Sustainability and Integrated Mobility that are part of the Plan.

#	Action	Engagement Theme(s)
4.1	Incorporate Recommendations from Walk-Wheel-Windsor	5
4.2	Explore partnership opportunities with other mobility service providers	2

4.5. The Brand

Part of the Comprehensive Review included a review of the Transit Windsor brand (refer to Appendix G for the full brand analysis report).

Public opinion gathered during community and stakeholder engagement as part of this project suggests that the general public finds the Transit Windsor brand to be outdated. There is some lack of consistency in visual cues and messaging, which makes the service look less cohesive and more fragmented.

There are five key reasons for Transit Windsor to rebrand. They include:

1. *Timing with the transit service review* – Since the Transit Windsor service will undergo a major transformation, rebranding at the same time can help signal this change and can be especially helpful in attracting new riders.

2. *New route network* – With a new route network being implemented, it makes sense to integrate the rebranded wayfinding now to save money.
3. *Regional expansion* – There is currently a potential of expanding the Transit Windsor service area to include neighbouring communities (i.e. Tecumseh, LaSalle, and Leamington). A rebrand can better integrate and appeal to surrounding communities and riders outside of the City of Windsor.
4. *Outdated brand* – With focus on a better transit service and goals to present Transit Windsor as contemporary and relevant, updating the outdated brand will help to reflect the modern kind of experience that Transit Windsor wants to provide.
5. *Consistency and clear communication* – The current brand is fragmented and communications are inconsistent. A rebrand presents a good opportunity to develop a more consistent voice along with brand standards for future application.

A future rebranding of Transit Windsor is part of the 2019 Transit Master Plan and will be prioritized in the first stages of implementation to ensure fiscal responsibility (i.e. to avoid spending money twice by changing brands halfway through the process of implementing this Plan). Transit Windsor will develop a new brand that signals the major positive transformations to the transit service. The rebrand, which will include a new logo and consistent visual brand for Transit Windsor, will use the findings of and the momentum generated by the *More Than Transit* Plan.



Final details of the rebrand will be determined at a future date. However, if a new name for Transit Windsor will be considered, naming exercises will be included in the branding process.

Action 5.1 is the Plan action for the Transit Brand.

#	Action	Engagement Theme(s)
5.1	Undertake the process of rebranding Transit Windsor, starting with completing a full <i>Rebranding Study</i>	6

5. Implementing the Plan

An implementation schedule, system transformation forecasts, and a financial plan are all aspects of the Plan that are crucial to grounding it in reality and making it feasible.

This section presents the schedule for each of the actions discussed in Section 4, a list of forecasted changes to the systems characteristics, the fleet plan, and a financial plan. These pieces must be read in conjunction with each other for the overall implementation plan.

It should be noted that because of a significantly increased level of unknowns beyond the first five years of this 8-year Plan there will be increasing unknowns such as rate of development, changes in funding, and technological advances. As a result, all of the schedules are presented year-by-year for the first five years but combined together for longer-term actions (i.e. five years or more into the future). It is expected that an annual review of this Plan's progress will be undertaken regularly.

5.1. Action Implementation Schedule

Each of the actions from Section 4 is scheduled for implementation as shown in Table 16. In this table, blue shading indicates the timeframe when the action will be taken.

Costs have been shown where considerable construction or external consultant fees is required as part of the action item. These costs are approximate. Squares without costs are actions that will be undertaken in-house (i.e. by Transit Windsor and/or City of Windsor employees).

Additionally, note that for the Route Network, the implementation prioritizes the Primary route network and the replacement of any service that will be removed once each Primary route goes into service.

Though Table 16 provides an overview of the schedule and the anticipated external cost, variations in timing and costs may occur due to unforeseen circumstances. Therefore, the details in the table may change subject to funding, available budgets, and additional unknowns at the time of writing.

Table 16: Plan Implementation Schedule

	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Long-Term (2026 to 2028)
Policy Updates						
Reduce Pollution from Transit Windsor Operations						
Reduce Waste while Increasing Diversion Rates						
Improve Energy Conservation						
Implement CUTA Ambassador Program						
Create Social Media Program						
Overhaul Transit Windsor Website						
Develop Development Application Policy						
Introduce Employee Intranet						
Study New Mobility Partnerships						
Introduce Green Procurement Program						
Develop TOD Guidelines						
Study Potential for Park and Ride						
Route Network						
18 - East Windsor – St. Clair College via E. C. Row						
12 – Tecumseh Road – University of Windsor						
10 – Wyandotte						
11 – Windsor International Transit Terminal – St. Clair College via University Dr and Huron Church Rd						
14 - Tecumseh Road – Windsor International Transit Terminal						
101 - East Riverside						
102 - North Riverside						
103 - West Forest Glade – Meadowbrook						
104 - East Forest Glade – Firgrove						
13 – Dominion						

	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Long-Term (2026 to 2028)
53 - Windsor International Transit Terminal – St. Clair College via Dougall Ave						
123 - St. Clair College – Devonshire Mall through South Windsor						
15 - Howard						
51 – Hotel Dieu Grace Healthcare Terminal – Windsor International Transit Terminal via Crawford Ave						
52 - Windsor International Transit Terminal – East End Terminal via Ottawa St and Seminole St						
54 – East End Terminal – Windsor International Transit Terminal via Erie St						
55 - Windsor International Transit Terminal – N Service Rd Industrial						
550 - Windsor International Transit Terminal – Rhodes Dr. Industrial						
56 – East End Terminal – Hotel Dieu Grace Healthcare Terminal						
121 - Devonshire Heights/Remington Park						
16 - West End Terminal to Airport/Proposed Hospital via E. C. Row						
17 - Walker						
200 – Hotel Dieu Grace Healthcare Terminal – New Hospital via University Ave, Ojibway Pkwy and Cabana Rd						
122 - Devonshire Mall – Walker Road through Roseland						
160 – East End Terminal – Walker Road via Lauzon Pkwy						
Study and Plan ASD Implementation						

	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Long-Term (2026 to 2028)
ASD 1 – Oldcastle Business Park						
ASD 2 – West Windsor						
ASD 3 – Sandwich South						
Increase Staffing Levels to Support Plan						
Fleet						
Investment in New Vehicles (including spares)						
Garage Expansion / New Facility (including preliminary study and expansion of inventory system)	\$250k	\$400k	\$4M	\$17.75M	\$17.75M	
Bus Stops						
Update to Bus Stop P+D Guidelines	\$25k					
Bus Stop Investment Program (including expansion of VMS to stations and terminals)	\$1.75M	\$1.7M	\$1.7M	\$1.75M	\$1.75M	\$4.75M
Terminals						
St. Clair College Terminal Improvement Plan		\$2.5M	\$2.5M			
Hotel Dieu Grace Healthcare Terminal Expansion			TBD			
Devonshire Mall Terminal Improvement Plan			\$5M	\$5M		
East Windsor Terminal Improvement Plan				\$7.5M	\$7.5M	
Proposed Hospital Terminal Plan	<i>Dependent on Construction of New Hospital</i>					
Windsor International Transit Terminal			TBD	TBD		
Transit Priority Measures						
Network Study	\$50k					
Corridor Studies		\$50k	\$50k	\$50k	\$50k	\$250k
Site Plans	\$500k	\$500k	\$500k	\$500k	\$500k	\$2.5M

	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Long-Term (2026 to 2028)
Technology						
Upgrade AVL						\$2M
Upgrade AFC						\$1M
Investigate Data Management Approaches		\$50k				
Study VMS for Major Stops						
Improve and Expand APC						\$425k
Allocated IT Staff for Transit Windsor operations						
Acquire Vehicle Health Systems			\$200k			
Study Sustainable Propulsion Systems			\$200k			
Study Possible Active TSP + Hardware Upgrades for Active TSP						
Replace Traveller Information Systems						\$100k
Integrated Mobility						
Implement Recommendations of Walk Wheel Windsor						
Study Mobility Service Partnership Opportunities						
Branding						
Rebrand Study	\$250k					

5.2. System Transformation, Fleet Plan, and Staffing Requirements

The purpose of the Plan is to transform the Transit Windsor system. It is anticipated that the general system performance (as well as performance indicators) and the financial system performance will change over time as various parts of the Plan are implemented.

Table 17 presents the future forecasted system characteristics and performance based on the new Transit Plan. The values in the table show the maximum ridership growth as a result of the implementation of all the actions. However, in reality, it may take a few years immediately following an action or change to service to see the full ridership growth realized.

Table 17: Forecasted System Performance and Financial Performance

	Base 2019	Year 0 2020	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 8 2028
Population								
Service Area Population	220,260	221,110	221,960	222,500	223,040	223,590	224,130	224,990
Revenue Service Hours								
Total Revenue Service Hours	244,619	244,619	256,159	278,594	329,957	355,908	420,534	514,802
Total Service Hours	273,400	273,400	286,298	311,373	368,779	397,783	470,013	575,373
Total Actual Service Hours (Jan-Dec)	267,070	273,400	277,700	294,657	330,508	378,447	421,860	554,125
TOTAL ANNUAL SERVICE HOURS	267,100	273,450	277,700	294,700	330,550	378,450	421,900	554,150
Ridership								
Ridership (1,000,000s)	8.43	8.51	8.78	9.22	10.11	10.57	11.58	13.00
Performance Indicators								
Rides/ Capita	38.27	38.46	39.55	41.43	45.34	47.29	51.65	57.79
Rides/ Rev. Veh. Hr.	34.46	34.77	34.27	33.09	30.65	29.71	27.53	25.26
Rev. Veh. Hrs./ Capita	1.11	1.11	1.15	1.25	1.48	1.59	1.88	2.29

Additionally, to support the new Transit Windsor network, the Transit Windsor fully-accessible fleet needs to grow. However, the fleet must grow in a way that's steady (since all of the new buses won't be needed until the entire new route network is implemented) and financially feasible (since buying a lot of buses at once is an expensive endeavour).

The fleet expansion plan includes vehicles to accommodate the planned growth in service and the annual replacement of buses to maintain an acceptable (and an overall reduced) average fleet age. Transit Windsor's *2015-2035 Fleet Acquisition Plan* directed that for the purchasing and disposal of buses, the previously used 18-year life cycle for a bus be reduced to 12 years, thereby reducing maintenance requirements and the need for additional spare vehicles.

The planned fleet growth required to support this Plan is shown in Table 18. Note that the last column represents a jump from Year 5 requirements to Year 8 requirements. The table costs contain a level of uncertainty and are subject to change subject to actual prices during purchase and funding availability. Note that the costs per bus used are representative of a standard 40-

foot bus. However, Transit Windsor's future fleet mix may include a mix of standard 40-foot buses, articulated 60-foot buses, 30-foot buses, and potentially smaller vehicles (e.g. minibuses, vans, etc.) to serve ASD Areas.

Table 18: Forecasted Fleet Plan

	Base 2019	Year 0 2020	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Year 8 2028
Peak Buses	82	82	83	86	89	94	103	120
Spare Buses	32	32	33	34	38	40	38	45
Spare Ratio (%)	39%	39%	40%	40%	43%	43%	37%	38%
Total Buses	114	114	117	120	127	134	141	165
Total Expansion Buses	-	0	3	3	7	7	7	24*
Total Replacement Buses	-	8	8	8	8	8	8	24*
Fleet Cost ** (\$1,000,000s)	-	\$6.03	\$8.44	\$8.44	\$11.66	\$11.66	\$11.66	\$37.41*

* Represents total fleet changes from 2026 through 2028.

** Reflective of a 2018 quotation for standard 40' Diesel buses ordered after March 31, 2020 (including farebox and other on board systems) - \$753,000 per replacement bus and \$805,600 per expansion bus

And as the fleet and system grow, more staff across the various Transit Windsor departments (including transit planning staff, technological system staff, operators, supervision, maintenance staff, etc.) will be required to support the growth. Without increases to Transit Windsor's existing staff, this Plan will be impossible to implement. Staffing needs for Year 8 of the Plan are presented in Table 19. Like with the fleet plan, the forecasted values contain a level of uncertainty and may be subject to change due to available funding, changes to scheduling, and other unforeseen circumstances. Refer to Appendix H for a more detailed explanation of how staffing requirements were forecasted.

Table 19: Forecasted Staff Demands

	Base 2019*	Year 8 2028
Forecasted Service and Fleet		
Revenue Service Hours	267,100	554,150
Peak Buses	82	120
Staff Requirements		
Operators	166	250
Other Transportation Operations <i>(includes scheduling, dispatch, radio control, supervision)</i>	13	22
Vehicle Mechanics	19	29
Other Vehicle Maintenance and Servicing <i>(includes storage and supervision)</i>	15	27
Plant and Other Maintenance <i>(includes storage and supervision)</i>	10	15
General and Administration <i>(includes Executive Director's office, planning, marketing, etc.)</i>	21	27
TOTAL	244	370

*Assumed to be the same as the values reported in the 2018 CUTA Factbook, which were the most recent accurate numbers available.

5.3. Paying for It

The Plan is not possible without funding and investment for transit. The new transit funding commitments of several millions of dollars over the next decade by the federal, provincial, and local governments are necessary to make the Plan happen.

Table 20 presents the financial forecasts and financial performance indicators for the new Transit Master Plan. The numbers in the table are based on the *approximated* costs of each of the actions discussed in Section 4 and the fleet plan from Table 18.

Table 20: Financial Plan

	Base 2019	Year 0 2020	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Long- Term 2028
Operating Costs								
Operating Cost/ Platform Hour *	\$123.82	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00	\$125.00
Total Operating Cost (\$1,000,000s)	\$33.07	\$34.18	\$34.71	\$36.83	\$41.31	\$47.31	\$52.73	\$69.27
Contribution to Reserves (\$1,000,000s)	\$1.26	\$1.27	\$1.29	\$1.30	\$1.31	\$1.32	\$1.34	\$1.38
TOTAL OPERATING EXPENSES (\$1,000,000s)	\$34.33	\$35.45	\$36.00	\$38.13	\$42.62	\$48.63	\$54.07	\$70.64
Revenue								
Average Fare*	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85	\$1.85
Total Farebox Revenue (\$1,000,000s)	\$ 15.47	\$15.73	\$16.24	\$17.06	\$18.71	\$19.56	\$21.41	\$24.06
Total Other Revenue (\$100,000s)	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00	\$6.00
Total Non-Farebox Revenue	-	-	-	-	-	-	-	-
Total Revenue (\$1,000,000s)	\$16.07	\$16.33	\$16.84	\$17.65	\$19.31	\$20.16	\$22.01	\$24.66
Net Operating Cost** (\$1,000,000s)	\$17.00	\$17.84	\$17.87	\$19.18	\$22.00	\$27.15	\$30.72	\$44.61
Provincial Gas Tax (\$1,000,000s)	\$3.39	\$3.40	\$3.41	\$3.42	\$3.42	\$3.43	\$3.44	\$3.46
Municipal Investment*** (\$1,000,000s)	\$14.87	\$15.72	\$15.75	\$17.06	\$19.89	\$25.04	\$28.62	\$42.52
Performance Indicators								
Revenue/ Cost Ratio	48.58%	47.79%	48.51%	47.93%	46.74%	42.62%	41.75%	35.60%
Net Direct Operating Cost / Passenger	\$2.02	\$2.10	\$2.04	\$2.08	\$2.18	\$2.57	\$2.65	\$3.43

	Base 2019	Year 0 2020	Year 1 2021	Year 2 2022	Year 3 2023	Year 4 2024	Year 5 2025	Long-Term 2028
Operating Expenses/ Rev. Veh. Hr.	\$140.34	\$144.91	\$140.53	\$136.87	\$129.18	\$136.64	\$128.58	\$137.23
Municipal Operating Contribution/ Service Hour	\$55.69	\$57.48	\$56.72	\$57.90	\$60.19	\$66.16	\$67.83	\$76.74
Municipal Operating Contribution/ Capita	\$67.52	\$71.08	\$70.97	\$76.68	\$ 89.18	\$ 111.98	\$ 127.67	\$189.00

* These values have been kept constant over the life of the plan for simplification purposes and due to the fact that future values cannot be accurately forecasted at the time of writing. In reality, these costs will increase due to inflation and wage increases alone. For planned fare increases, refer to Transit Windsor’s 2018 Fare Structure and Strategy Review report

** Excludes contributions to reserves

*** Includes contributions to reserves



6. Conclusion

Transit Windsor (through its precursors) has a rich history of providing innovative transit service to the Windsor area. In the late 19th and early 20th centuries, Windsor was home to several transit firsts, including Canada’s first electric street railway, Canada’s first city with an all-electric transit system, and Canada’s first trolley bus. Though things have changed in the many decades since, *the time is now to put Windsor at the forefront of its transit system peers once again.*

More Than Transit is an ambitious long term vision for a modern and efficient transit system for Windsor. Put together, the recommendations of this report will result in a comprehensive overhaul of Transit Windsor’s system and a substantial growth in the services it offers. The intention of this plan is to lead Transit Windsor in a direction that is *user-focused*, that offers transit service on par with the expectations of *modern mobility*, and that supports *liveable communities*.

6.1. Early Wins

As of October 2019, several “early wins” have already occurred or are planned for the near future, putting Transit Windsor on track to fulfil its implementation goals and targets. These early wins include:

- Transway 1C is planned to be rerouted off Rivard Avenue in early 2020. This will “straighten out” the route in preparation for Routes 12 and 14, as recommended in this Plan.
- Transit Windsor has plans in place to improve Sunday service throughout its network in the first year of the Plan (2020).
- Transit Windsor also has plans to implement a new Primary Highway Route 18 (Tecumseh Road – St. Clair College via E. C. Row) in the first year of the Plan (2021).
- In 2018, Transit Windsor completed a *Fare Structure and Strategy Review* report, which contains recommendations for a new fare structure and updated fare policies. Stemming from this report, Transit Windsor is adopting a fare policy that will see an annual 2% fare increase each July 1st, effective July 1, 2020. These smaller incremental increases will be less impactful than a larger sudden fare hike. The recommendations for the fare policies and structure have been approved by the City of Windsor Environment, Transportation & Public Safety Standing Committee in October 2019.

- As of May 2019, Transit Windsor implemented a personalized electronic Smart Pass system for fare payments, which can be loaded and re-loaded with 15 or 30 days' worth of fare.
- In 2019, Windsor City Council raised the cost of monthly parking passes at City-owned facilities by \$10, despite the administration's recommendation of only a \$5 increase. As an increase in parking costs/loss of parking spaces disincentives driving (especially to areas such as downtown), this is a win for growing Transit Windsor's ridership and further actions with regards to parking are desired.

6.2. Next Steps

Following the approval of this report by the Windsor City Council, Transit Windsor will embark upon the implementation of this Plan's recommendations, in accordance with the schedule shown in Table 16 of Section 5.1.

As Transit Windsor prepares to implement the various elements of the Plan, it will consult the valuable feedback already collected regarding the individual new route details. Transit Windsor will also bring each new route or route change in the proposed network back to the community for feedback to finalize route details, scheduling, stop locations, etc. in advance of Transit Windsor's implementation of these changes.

