



Lakeshore Mobility Options Study

Regular Meeting of Council

October 12, 2021

Project Purpose

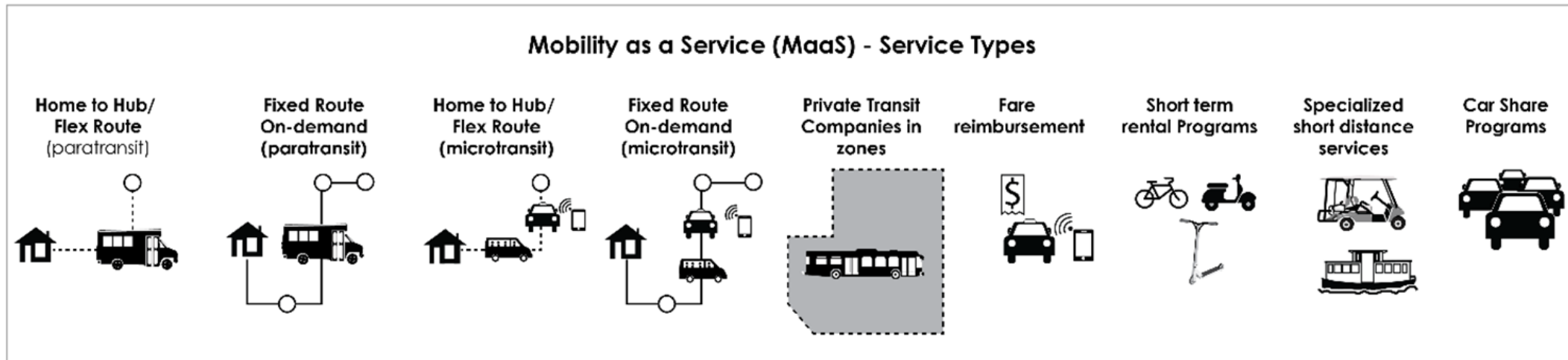
- To gauge the appetite of Lakeshore residents to support establishing alternative mobility options
- To engage with stakeholders to get input into potential plans and service options
- To analyze travel data to identify major travel patterns and key destinations
- To provide an indication of:
 - Where the greatest demand exists?
 - Which mobility services could be considered to deliver service?
 - Extent of service and financial implications?

Why Mobility Services..?

- Alternative transportation options offer choice – especially to those with limited travel options
- Demonstrates the Municipality's response to environmental challenges (GHG's, congestion)
- Addresses travel needs of all age groups (youth, students, commuters, seniors and the elderly, and those with disabilities)
- Encourages the use of active modes (walking and cycling)
- Demonstrates reduced dependence on the automobile (owning and use)
- Embraces the integration of all modes to provide mobility services

Service Delivery Options

- Mobility options can include a variety of modes: e.g. taxis, rideshare services, car share programs, accessible services, on-demand community services, and conventional, scheduled transit services
- Smart phone technology allows for the development of Mobility-as-a-Service (MaaS) strategies that offer the integration of transportation modes
- Modes are presented in a complimentary and integrated way (schedules and fare payment options) to allow customers to plan, book and pay for complete transportation trips



Stantec Project Team



Graeme Masterton, M.A.

Transit Planning Leader

Role: Technical oversight, Transit Visioning

Experience:

Winnipeg Transit Infrastructure and Rapid Transit Plan
Monmouth County Tourism and Travel Demand Management Study
Sarasota Manatee Barrier Islands Transportation Plan



Johann Van Schaik, MBA

Senior Transit Planner

Role: Planning, Costing, Report writing

Experience:

Lake Tahoe Transit Master Plan
Lethbridge Transit Master Plan
Winnipeg Transit Master Plan
Fraser Valley Express Service



Sumeet Kishnani, P Eng

Principal Transportation Planner and Traffic Engineer

Role: Location-based Data Analytics

Experience:

Winnipeg Transit Master Plan
Monmouth County Tourism and Travel Demand Management Study
Sarasota Manatee Barrier Islands Transportation Plan

Project Methodology



Literature & Peer Review

- Comprehensive review of **plans** and **best practices** across small to mid-size Municipalities

Location-Based Data Analysis

- **Smartphone Data:** aggregated, anonymized, location-based data from smartphones providing seasonal and pandemic Travel variations; travel demand and destinations internal and external to Lakeshore
- **Traffic Counts:** Lakeshore and County of Essex counts used to calibrate device movements to represent vehicle trips



Feedback/ Engagement

- **Public Engagement Session 1:** robust survey (May 2021)
- **Business Feedback:** questionnaires completed (May and June 2021)
- **Internal Workshop:** Lakeshore Transit Team & Senior Management Team (June 2021)
- **Public Engagement Session 2:** comments and feedback on draft proposals (July/August 2021)



Vision, Goals and Objectives

Vision & Goal



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VISION

“What we want to be”

Connecting Lakeshore into the Future

GOAL

“What we must achieve to get there”

Create mobility/transit options to support growth and connectivity in Lakeshore between communities that link to key regional destinations

Objectives



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Creating travel choices for all age groups by providing alternative mobility options to the private vehicle

Creating connections between communities to provide access to local, regional and seasonal destinations

Promoting and supporting growth, land use densification and economic diversification in Lakeshore to increase the economic viability and diversity of the municipality

Promoting sustainability and improve the environment through mobility options that lessen the reliance upon private vehicles, especially single occupancy and fossil fuel-based vehicles, for travel in key corridors in the region that will assist in reducing greenhouse gas emissions

Promoting the benefit and use of mobility options through educational opportunities using digital and other media



Feedback

Project Methodology and Engagement Process



Engagement Phase 1

Needs and Preferences

- 80% of respondents use a private vehicle for travel
- 26% seldomly used rideshare services such as Uber and Lyft

Mobility services within Lakeshore

- 60% of respondents would seldom or never use this for work, school, medical or shopping trips during weekdays
- More regular use for shopping, social and recreation is limited to weekends

Mobility services beyond Lakeshore

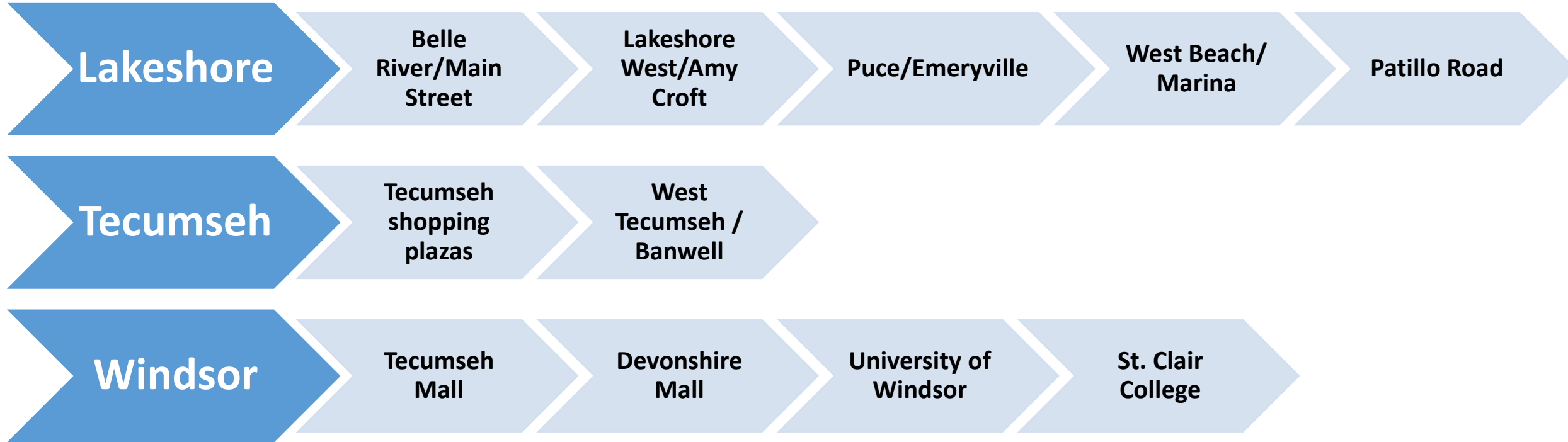
- Dominant destinations were identified as Windsor and Tecumseh with demand for work (daily), school (3 times per week) and shopping (weekends) trips.

Business Responses

- 50% identified that a public transit system would be beneficial to business and employees

Engagement Phase 1

Priority Destinations



Engagement Phase 2

Public Responses

- Purpose: to solicit feedback on concept service options
- Received only 3 public comments + one large employer in the Patillo Road Area

Public Comments

- Concerns relate to service options not providing residential neighbourhood coverage (e.g. Amy Croft Rd. area)
- The importance of the length of the service day to ensure it accommodates industrial and commercial shift times and store hours
- Supporting the use of Country Road 22 as a transit corridor together with managing traffic congestion

Engagement Phase 2

Business Responses

- All employees in the Patillo Road are required to have access to personal transportation resulting in the provision of excess parking to accommodate shift changes/overlaps.
- Responses confirmed:
 - the challenge of attracting entry-level employees
 - a private shuttle service that had been considered in the past
 - many employees living in the catchment area between Belle River and Tecumseh Mall



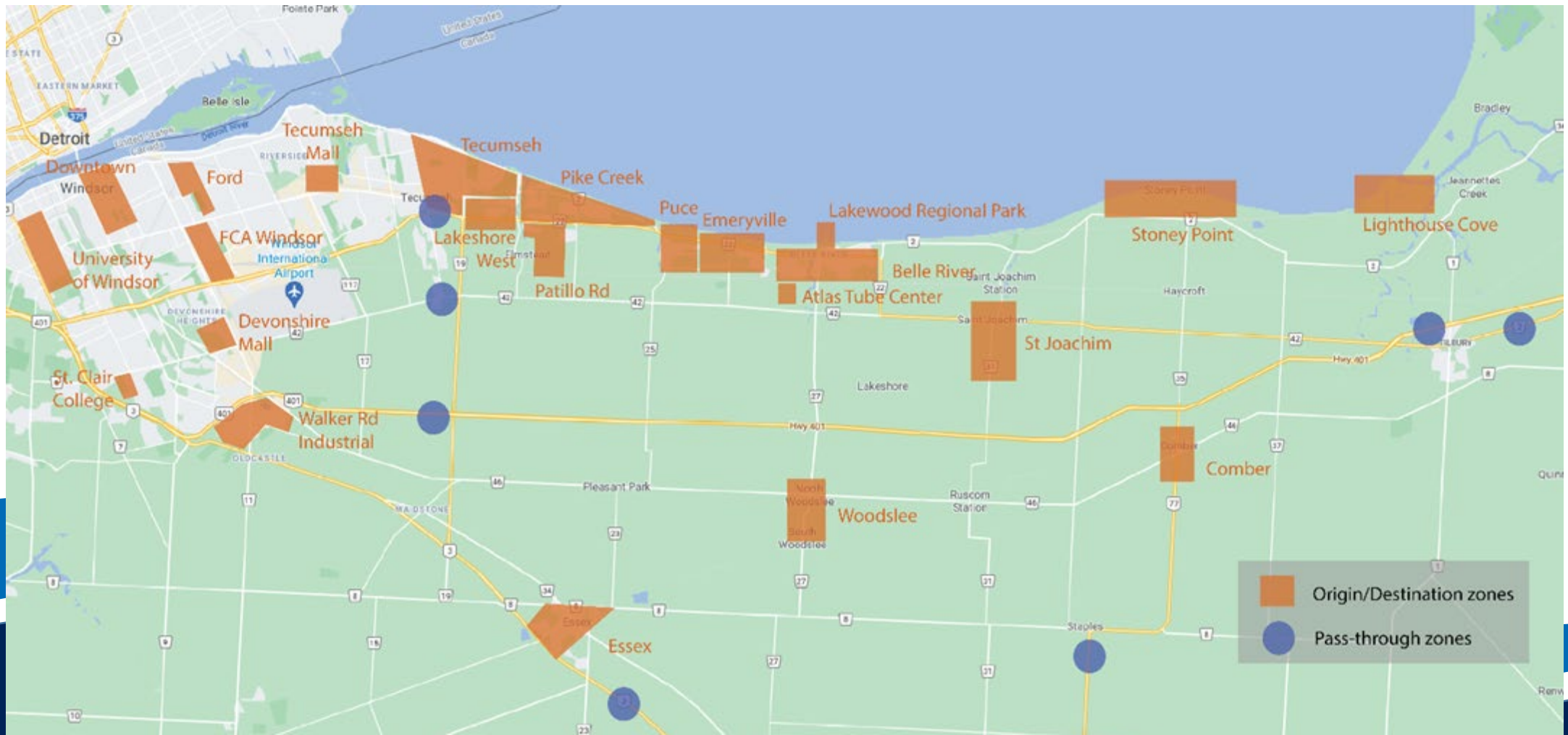
Location-based Data Analysis

Methodology

- Stantec recommended the use of anonymized, aggregated smartphone-based mobility data to obtain information on travel patterns.
- Data was leveraged to understand
 - the major origin-destination movements within Lakeshore
 - regional destinations in the adjacent municipalities of Windsor and Essex County
- Data assisted in quantifying trips between zones to assist in identifying potential service options where demand was the greatest

Data Analysis

- Using StreetLight data, Lakeshore and surrounding communities were divided into zones to observe trip origins and destinations

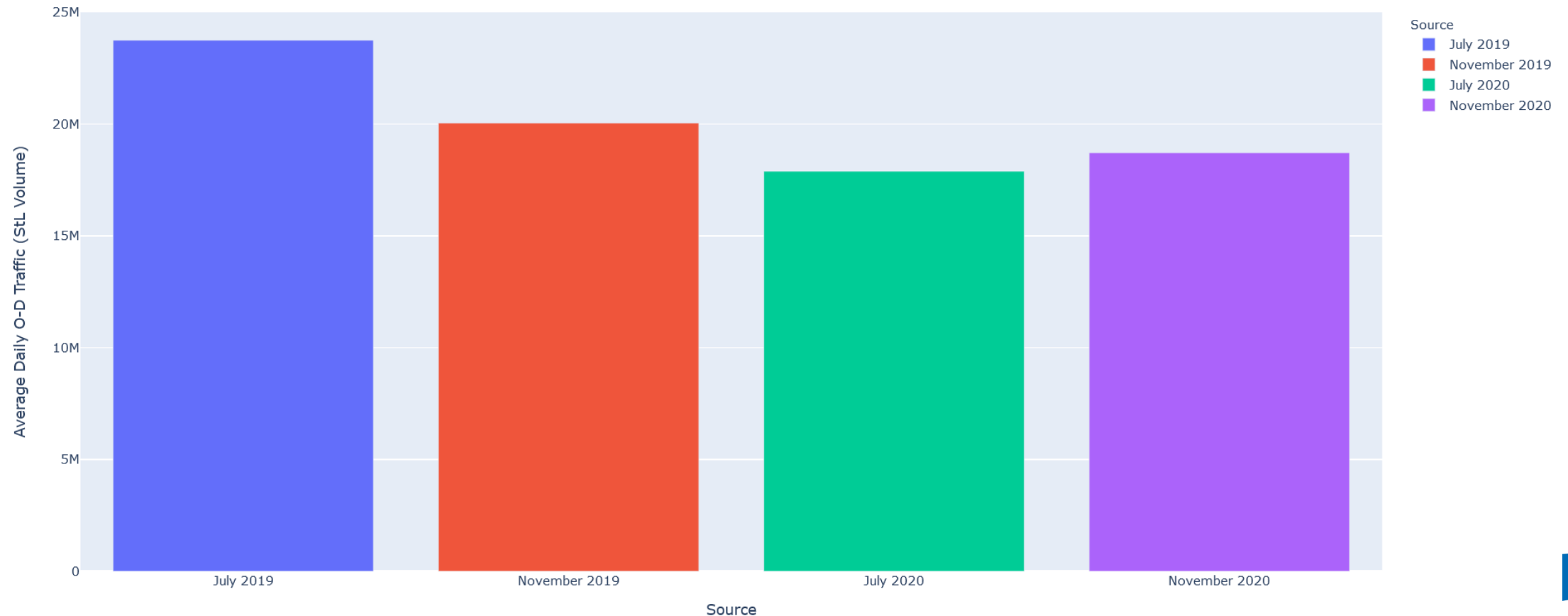


Summary of Findings

- July 2019 had highest travel volumes with November 2019 being significantly lower
- 2020 observed travel demand was lower due to COVID - summer recreational tripmaking being impacted the most due to travel restrictions.
- Majority of trips are internal (start and end within the same zone)
- Within Lakeshore, the major destinations that attract the most trips are Belle River, Emeryville, Lakeshore West, Pike Creek and Patillo Road Industrial Area.
- Same 5 zones generate 87% of external trips. Roughly half of these external trips have regional destinations beyond Lakeshore.
- 90% of the regional trips from Lakeshore have destinations in Windsor that are relatively evenly distributed
- Major destinations in Windsor that stand out include Tecumseh and Devonshire malls, Downtown and University of Windsor
- After Windsor, other destinations include Tecumseh and Essex.

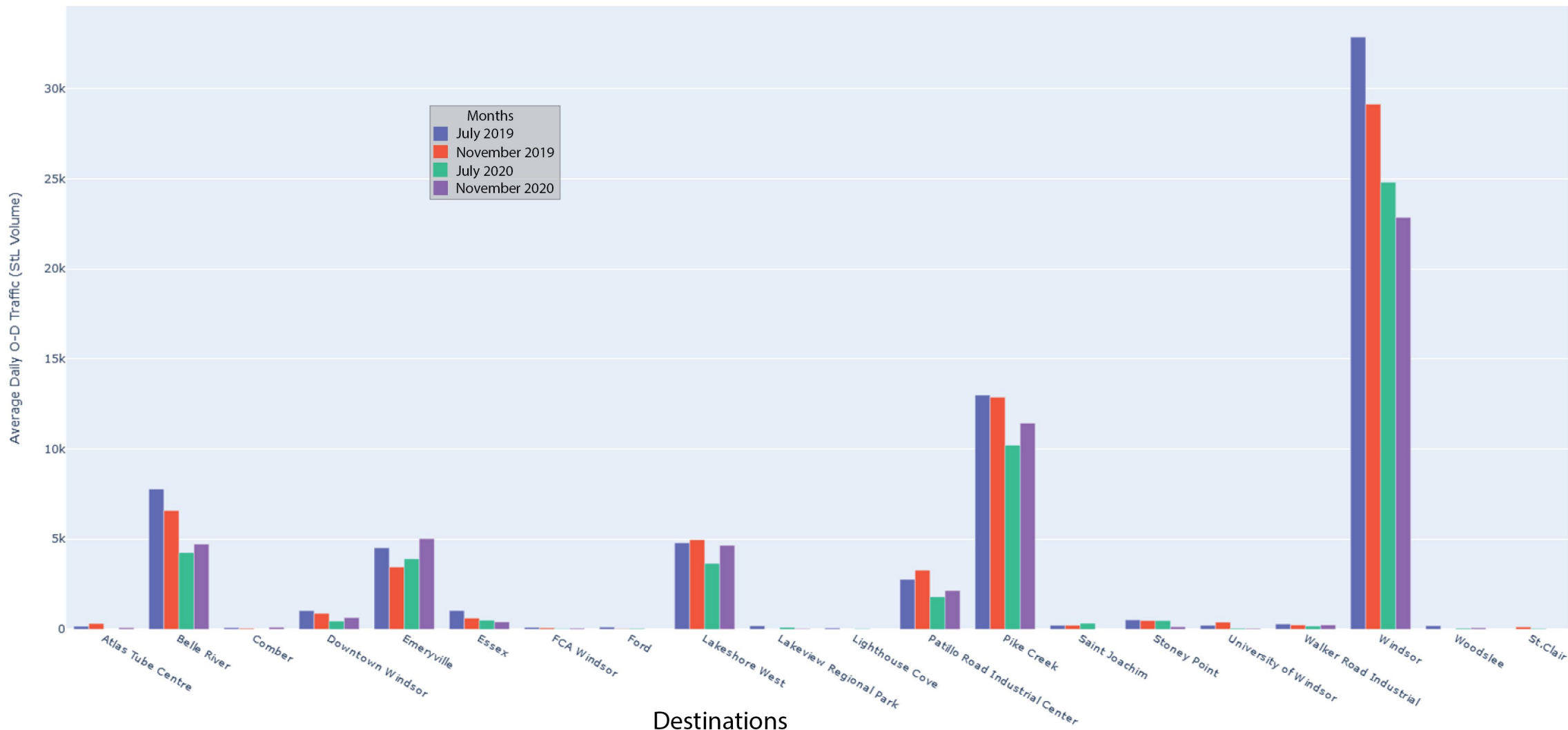
Examples of Data Details...

Variation in total regional monthly travel: Seasonal and Pre/Post COVID conditions



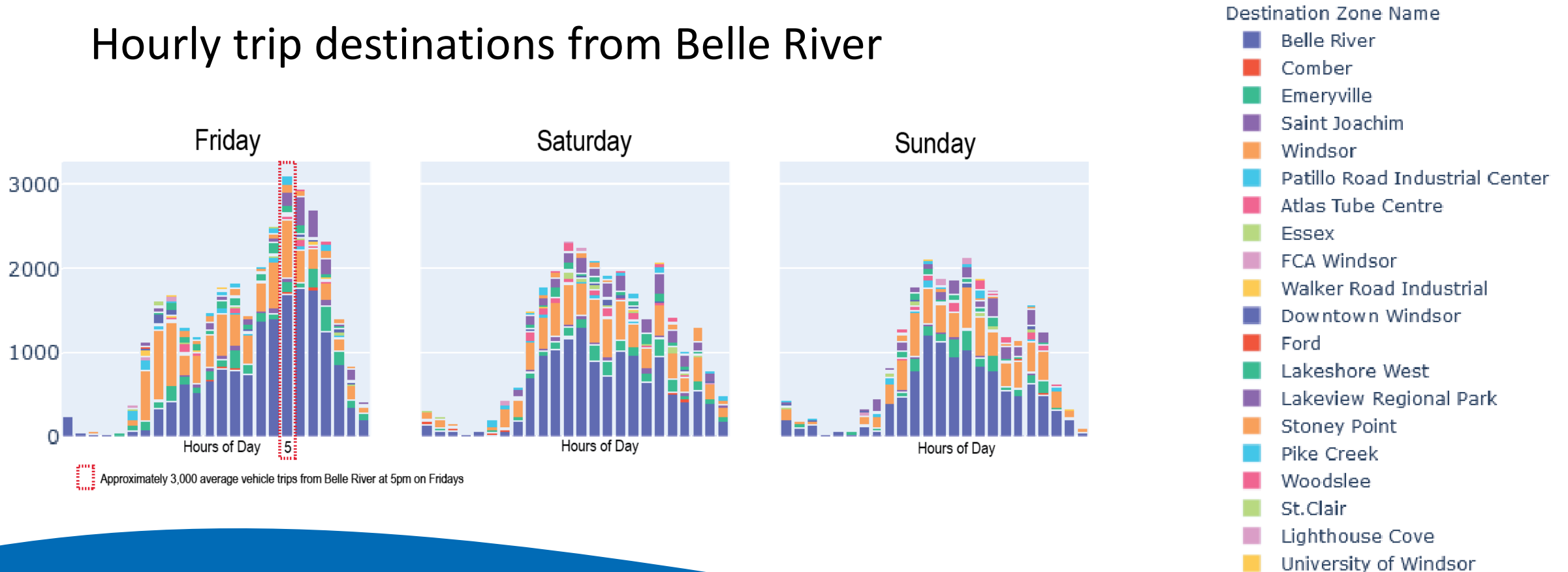
Examples of Data Details...

Average daily trip destinations from Lakeshore West



Examples of Data Details...

Hourly trip destinations from Belle River



Examples of Data Details...

External trips summary from O-D Matrix (ranking of travel activity)

Daily Device Trip Origins to External Zones			
Zone	Total	Rank	% of trip destinations beyond Lakeshore (regional trips)
Belle River	15,627	1	56%
Lakeshore West	10,237	2	57%
Pike Creek	9,548	3	69%
Patillo Road Industrial Center	7,956	4	67%
Emeryville	7,935	5	53%
Lakeview Regional Park	2,694	6	22%
Stoney Point	1,295	7	48%
Atlas Tube Centre	968	8	26%
Comber	938	9	50%
Woodslee	665	10	69%
Saint Joachim	614	11	31%
Lighthouse Cove	224	12	35%
Total	58,701		

Findings

- Based on engagement findings and data analysis:
There is an appetite to consider developing and implementing some form of a mobility service that addresses the greatest travel demand
- Fairly regular regional service is warranted which will contribute to removing private vehicles from the road to ease congestion and reduce GHG emissions



RoutePlan Analysis



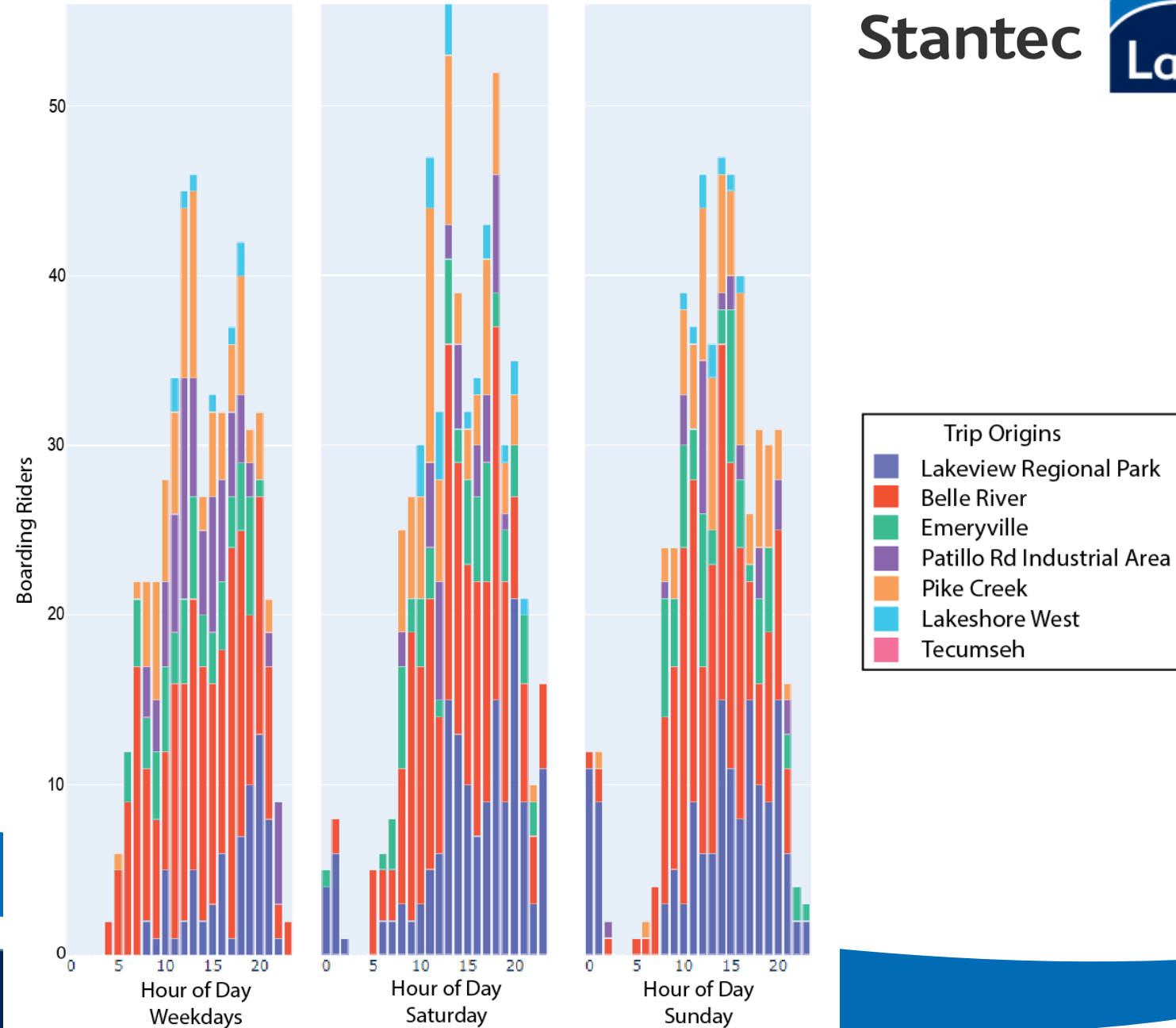
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- Tool to estimate overall origin-destination demand and potential transit ridership between locations/zones along a specified route
- Route identified as extending for Lakeshore Park to Tecumseh Mall
- Estimated demand between Lakeshore and Windsor:
 - Weekday: 10-20 rides per hour during peak periods with a slightly higher demand (35) at midday
 - Saturday: 30 - 60 rides per hour (10am and 10pm)
 - Sunday: 35 - 45 rides per hour (11am and 6pm)

Travel Demand

Ridership demand based on transit absorption rate assumptions





Service Options, Next Steps & Recommendations

Primary Service Recommendation



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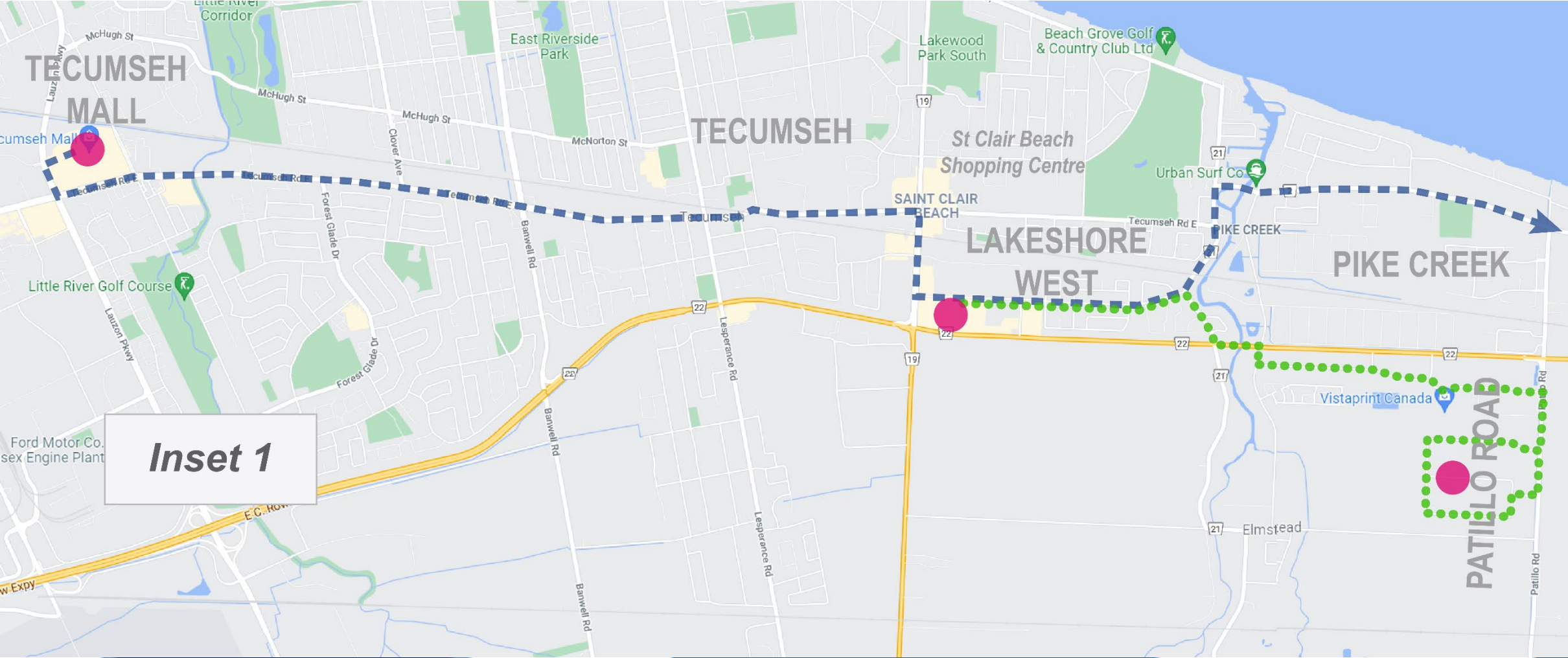


Option 1a

- Scheduled regional service between Belle River and Tecumseh Mall
- Routing via CR22, Old Tecumseh Road, Amy Croft Dr, Tecumseh Rd East
- Potential exchange at St. Clair Shore Shopping Centre to connect to residential and Patillo Rd Industrial Area feeder services



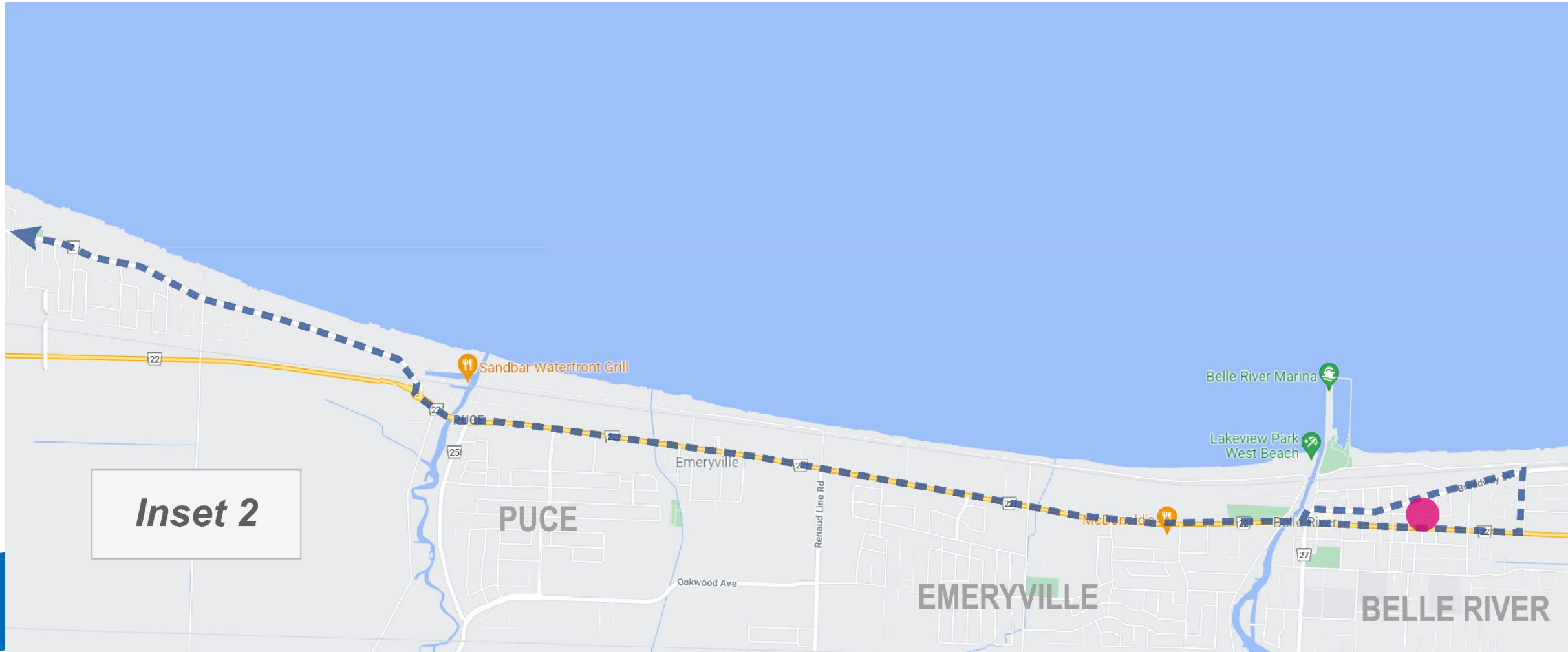
Primary Service Recommendation



Primary Service Recommendation



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Route Extension Options



Route Extension Options



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Option 1b: Extension of the Primary Routing from St Clair Shores Shopping Centre to provide scheduled service into the Patillo Industrial area on weekdays

Option 1c: Providing additional, seasonal service on the Primary Route in the summer months to meet the demands for travel to the Lakeview Regional Park

Option 2a: Extension of Primary Routing (Option 1a) from Tecumseh Mall to the Devonshire Mall. It could potentially provide access to other employment opportunities along Walker Road

Option 2b: Extending Option 2a into the Patillo Road Industrial Area

Proposed Service Frequencies



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Summary of Service Frequencies (minutes)

Weekdays		1a Primary Routing	1b Patillo Rd Extension	1c Sesonal Service Extension	2a Devonshire Mall	2b Devonshire Mall + Patillo Extension
Early Morning	-	-	-	-	-	-
AM Peak	5.30 - 8.30am	30	30	-	30	30
Mid Morning	9am - 12pm	-	-	40	-	-
Midday	12 - 2pm	40	40	-	40	40
Early Afternoon	2 - 4pm	-	-	40	-	-
PM Peak	4 - 7pm	30	30	-	30	30
Early Evening	7.30 - 10.30pm	40	40	-	40	40
Weekends						
Saturday	7am - 10.30pm	40	-	-	40	-
Sunday/Holiday	9am - 7pm	-	-	40	-	-

Service Implications and Cost



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Route Option		Annual Revenue Hours	Peak vehicle requirement	Annual Operating Cost (millions)	Annual Fare Revenue (millions)	Annual Net Operating Cost (millions)	
						\$2 Fare	\$3 Fare
1a	Primary Routing (Belle River - Tecumseh Mall)	13,130	5	\$1.181	\$0.491	\$0.854	\$0.690
1b	Primary Routing to Tecumseh via Patillo Road Industrial Area	15,970	6	\$1.438	\$0.603	\$1.036	\$0.835
1c	Additional Seasonal Routing to serve Lakeview Park	1,320	-	\$0.119	\$0.047	\$0.089	\$0.072
2a	Primary Routing (Belle River - Devonshire Mall)	18,660	7	\$1.682	\$0.700	\$1.216	\$0.982
2b	Primary Routing to Devonshire Mall via Patillo Rd Industrial Area	21,560	8	\$1.938	\$0.811	\$1.398	\$1.127

Recommendations

- Consider establishment of Option 1a as the Primary Route along the Lakeshore-Tecumseh corridor.
- Engage with Transit Windsor and Tecumseh Transit in terms of operating permissions and delivery options.
- Engage with Tecumseh with respect to cost sharing of services.
- Engage with Patillo Road Industrial Area to consider establishing a shuttle service or contributing to cost sharing of transit services as a feeder service to the Primary Route.
- Examine ways of integrating Essex services to provide feeder services.
- Engage with Transport Service Providers to support the provision of feeder services to the Primary Services as has been successfully demonstrated in Oakville Ontario.

Questions and Discussion...?

Thank you!

Johann van Schaik
Graeme Masterton