

Appendix A

Detailed Methodology and Data

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A1 Data Sources

This section details the data sources used in the Vehicle-for-Hire Transportation Impact Study.

A1.1 PTC Trip Records

The Municipal Licensing & Standards (ML&S) Division currently receives trip records, shown in Exhibit A1-1, for each trip performed by a PTC since September 7, 2016. This includes the start and end points of trips located to the nearest intersection, request times, pickup times, the type of service, trip status and a shared trip indicator. Starting April 1st, 2017, trip start times were truncated to the nearest hour and waiting times and trip status have been omitted. The data is provided by licensed PTCs to ML&S on a monthly basis.

Exhibit A1-1: Current PTC Trip data provided to ML&S

Trip Records	Description
origin	Tagged to the nearest intersection, or municipality if outside city
destination	Tagged to the nearest intersection, or municipality if outside city
request time	When trip was requested (only prior to April 2017)
pickup time	truncated to hour
end time/duration	combined with start hour (e.g. 7:20 = start between 7 am and 8 am, 20 min duration)
distance in km	truncated/rounded to nearest 100 m
type of service	XL, WAV, X etc.
pooled trip ID	ID changes whenever vehicle is empty for pooled service
trip status	Whether the trip was completed, or driver or passenger cancelled, only until April 2017

A1.2 Pick-up/Drop-off Activity Data through Shared Streets

PTC trip data collected by ML&S is geo-referenced to the nearest intersection in order to protect individuals' privacy. While extremely valuable for understanding travel patterns and trends, the trip data does not provide the precise resolution to understand pick-up and drop-off hotspots, nor the interaction with curbside bylaws and regulation. Curb activity data was provided by Uber and Lyft using SharedStreets as a broker. An indicative sample is shown in Exhibit A1-2.

SharedStreets is a project of the Open Transport Partnership, a non-profit funded by Bloomberg Philanthropies and private companies including Uber, Lyft, and Ford Motor Co. Data was received for a total of nine weeks in 2018 from January to September and aggregated by hour of day to a 10m spatial resolution. The SharedStreets platform filters out any data if there was only

one pick-up or drop-off in the requested time-period for any 10m segment of curb to avoid this data being personally identifiable.

Exhibit A1-2: SharedStreets Pickup/Drop-off Data



This curbside activity data collected through SharedStreets is exclusive to PTCs and represents a fraction of the curbside activity at these locations. This data can be an indicator of high activity locations for other curbside uses including other for-hire vehicle services, such as taxis, or commercial delivery vehicles.

Data limitations include:

- The side of street for pick-up and drop-off is based on the direction of travel of the vehicle prior to stopping.
- For one-way streets where vehicles could be stopping on either side of the street all pick-up and drop-off activity is aggregated to the right-hand side.

A1.3 Additional Data Provided by PTCs

Additional information was requested of both major PTCs. Uber provided the following data while Lyft declined to participate.

- **Aggregate Wait Times:** Average wait times by neighbourhood and time period (e.g. Weekday AM Peak, Friday & Saturday Evenings) for select weeks to provide information on the trends in wait times from April 2017 to September 2018.
- **Aggregate Proportion of Distance Travelled by Period:** For March 2017 and September 2018, the proportion of the total distance travelled by

drivers during each activity period – cruising while waiting for a request, en-route to a request, and in-service with a passenger. This was used to estimate and validate modelling the total amount of deadheading VKT.

- **Hourly Number of Active Vehicles:** The number of vehicles active on the platform by hour for select dates below:
 - Friday Dec 15th 2017
 - Thursday March 29th 2018
 - Thursday May 31st 2018
 - Thursday Sep 13th 2018
 - Friday Sep 14th 2018
 - Saturday Sep 15th 2018
 - Saturday June 23rd 2018

A1.4 Transportation Tomorrow Survey (TTS)

The Transportation Tomorrow Survey (TTS) is a regional household travel survey conducted by the University of Toronto in collaboration with local and provincial government agencies to collect information about urban travel trends and patterns in the Greater Golden Horseshoe area. The survey has been conducted every five years since 1986 and helps local and regional governments, as well as the province and its agencies make transportation planning and investment decisions. The most recent survey was conducted in the fall of 2016 and is used to understand the characteristics of PTC and taxi travelers.

A1.5 UTTRI Resident Survey

The University of Toronto Transportation Research Institute (UTTRI) undertook a survey of City of Toronto residents in May 2019 in order to analyze the factors that influence residents' choices of when or if they choose to travel by exclusive and/or shared PTC services in the City. The survey conducted was a specialized travel survey that uses a Stated Preference (SP) technique built on Revealed Preference (RP) information of daily travel.

The survey collected information from a random sample of residents selected from a market research panel of the City of Toronto. Respondents were asked a series of questions pertaining to personal and household characteristics, information on the extent to which respondents use PTC services, and their familiarity with and perceptions of PTC services. In addition, respondents were asked to complete a series of real (revealed) and hypothetical (stated) preference questions, which were used to understand the trade-offs that people make when choosing a mode of travel in the City. These trade-offs were structured around two types of trips: commute to work or school trips, and discretionary trips made for entertainment or other purposes.

The survey was conducted using a web-based questionnaire and was administered to the members of the Canadian Viewpoint ('CanView') consumer panel. Panel members were deemed to be eligible for the survey if

their home address was within the City of Toronto. In total, 723 completed responses were obtained from a total of 913 participants.

A1.6 TTC Subway Delay Data

The TTC logs each Subway delay including the time, location and duration of the incident. This dataset is available on the [City's Open Data Portal](#).

A1.7 HERE Traffic Speed Data

Transportation Services purchases traffic speed data from HERE, a navigation company, for real-time traffic operations and historical analyses. Data is provided in five-minute bins for all the city streets where data are available. This data was used for simulating the routing of PTC trips from origin to destination.

A1.8 Bluetooth Traffic Speed Data

The Transportation Services Division monitors travel times on a number of downtown arterial streets using Bluetooth readers, originally deployed for monitoring the King Street Transit Pilot and other downtown transportation initiatives. This data provides traffic speeds at a street-link and 5-minute resolution, where data is available, and is used to measure travel time trends.

A2 Methodology

The methodology was based on new approaches and best-practices from the academic literature developed in cooperation with the University of Toronto Transportation Research Institute. The methodology has been designed to build credible and conservative assessments of the volume of PTC vehicles on City streets in the absence of data about the volume of PTC vehicles on city streets and on deadheading activity.

A2.1 Trip Routing

In order to convert trip records into PTC vehicle volumes on the City's streets, it was necessary to model the likely path vehicles took from the recorded origin to the recorded destination. Routing was performed using pgRouting, a PostgreSQL implementation of Dijkstra's Shortest Path algorithm. Trips were routed through a network of historical traffic conditions at the time of pickup data using a snapshot of travel times sourced from travel speed data from HERE (see Appendix A1.7) in order to more accurately model the paths taken by PTC drivers. Gaps in traffic data were filled in by using data models provided by HERE for each street segment by time of week.

A2.1.1 Routing Methodology before April 2017

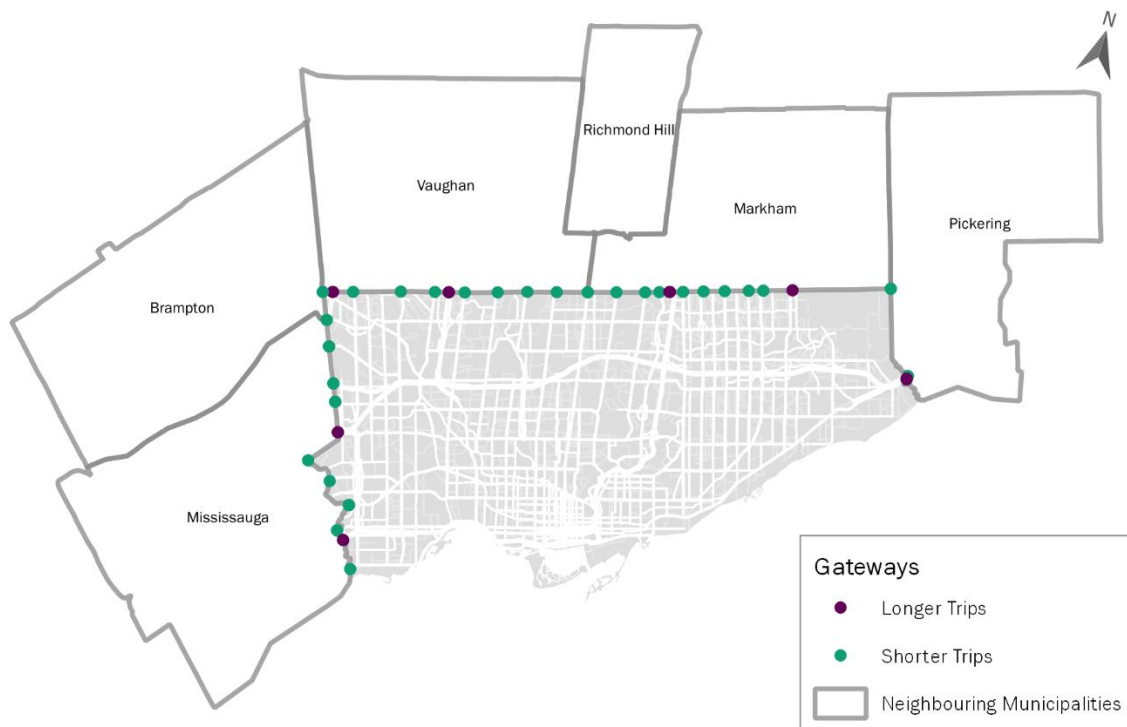
Prior to April 2017, timestamps for trip requests, pick-ups and drop-offs are accurate to the minute or second. HERE traffic data is available in five-minute increments.

The following methodology was implemented to route origins and destinations using this data:

1. **Generate a routing network:** For each five-minute bin, historical traffic data for that time was joined with models for that day of week, 15-minute period and link provided by HERE. Link IDs were duplicated for bidirectional streets and are re-drawn in the direction of travel. Source and target nodes for each link were also corrected to the direction of travel. The network mostly accounts for access restrictions and differences in road elevation but does not account for turn restrictions at intersections.
 - a. **Trips within Toronto:** For each trip record, the nearest node was found in the routable HERE network. These were typically the exact same intersections. Multi-level intersections were not dealt with explicitly.
 - b. **Trips from/to the six nearest municipalities outside of Toronto:** For trip records where the origin or destination was outside the city but within the six nearest municipalities, the node was assigned to be a “gateway”, an intersection on that municipality’s border representative of a major arterial or highway. Exhibit A2-1 shows the map of gateways used. If a trip started or ended more than three kilometers outside of the City of Toronto, it was assumed the PTC driver took a highway; otherwise, major arterials became candidate intersections.
 - c. **Trips from/to beyond the six nearest municipalities outside of Toronto:** These trips were excluded.
 - d. **Pooled trips:** Passenger segments were re-ordered to represent driver segments: trips were not routed from origin to destination, but from stop to stop, in the order the driver would have logically conducted these journeys.
2. **Route the trips:** Five-minute batches were sent to a many-many Dijkstra routing engine with the network for that time period in batches of 250 unique origins and their corresponding destinations in order to avoid memory issues. The routing engine was implemented within the pgRouting extension of the PostgreSQL database, and returned the shortest path for each origin-destination pair given traffic conditions at that time.
3. **Combine route and Origin-Destination (OD) data:** Routing results were joined back to trip (or pooled segment) ODs to link them with their trip record.

To produce neighborhood-level vehicle-kilometres travelled (VKT), the number of distinct trips for each link is multiplied by that link’s length and then aggregated by neighbourhood.

Exhibit A2-1 Map of Gateways to External Municipalities



A2.1.2 Routing Validation

Routed trips were validated by comparing routed VKT with the network distance for trips summed over the individual trip records provided to the City by PTCs.

VKT for routed trips was calculated by summing up the total length of routed street network using HERE's street geometry. Outliers – trips whose routed and recorded distances were significantly different – were then mapped to investigate potential errors. This method was used to resolve bugs in the routing process. Once any major variances were resolved, the average differences between routed and recorded distances were mapped by neighborhood to ensure no significant bias was present.

A2.1.3 Routing Methodology after April 2017

All timestamps for dates after March 30, 2017 were shifted to the start of the hour (for example '2018-09-13 07:47:30' becomes '2018-09-13 07:00:00'). Uber provided additional timestamps accurate to the minute; Lyft, did not.

Since accurate timestamps are critical to routing and to linking trips together (Section A2.2), imputed timestamps for Lyft trips were generated by bootstrapping from Uber trips. This is done for each Lyft pick-up timestamp by randomly sampling it from an Uber pick-up within a one kilometer radius, on the same day and hour. The drop-off timestamp was then self-consistently calculated from the duration of the trip. Pooled Lyft trips are

treated as a single trip from the first pick-up to the final drop-off, with the timestamp of the first pick-up imputed using the methodology outlined above.

A2.2 Routing Deadheading

The previous section described the process used to estimate PTC vehicle volumes when PTC drivers are traveling with a passenger. The travel between the destination of one trip and the origin of the next (i.e. deadheading) is also a critical component of the total VKT generated by PTCs.

Since the trip data available to the City does not contain an explicit driver identifier to link individual trips together, it is necessary to model the behaviour of drivers to estimate their behaviour between passenger trips. Fortunately, the assignment of drivers to passengers is governed by the driving applications of PTC companies, and emulating these applications allows us to make educated guesses of how drivers move from one trip to the next. The process of connecting drivers with passengers is referred to as "trip linking" in this report.

A2.2.1 Linking Methodology

A PTC driver serving multiple trips over the duration of their work period will cycle between three distinct periods:

- Cruising while waiting for a passenger request (Period 1)
- Driving en-route to a request (Period 2), and
- Driving in-service of the request (Period 3).

Cruising and driving en-route to a request collectively constitutes deadheading. At the beginning and end of the work period, the driver may also commute from and to another location. The trip linking in this report only estimates the time taken and distance travelled by drivers en-route to a request. Using the data available, it is virtually impossible to reconstruct the exact service history of individual drivers. It is possible, however, to produce a set of trip linkages that, in the aggregate, resemble the real-life distribution of en-route times and distances.

The methodology used to link individual trips together is as follows:

1. **Generating feasible links:** Which trips can feasibly be linked together was determined over the course of a day in five-minute increments. For each increment, the drop-off locations of all trips ending in the increment were collected. For each drop-off, the closest 30 pick-up points of trips beginning within the next 20 minutes were found (these values were selected to make the problem computationally tractable). The set of drop-off points was then routed to the set of pick-up points using the methodology detailed in Section A2.1.1. All routes that take longer to travel than the time difference between the drop-off and pick-up were discarded. The remaining routes comprise the choice set of feasible links between drop-offs and pick-ups.

2. **Transform the feasible links into a graph:** The set of feasible links was then transformed into a directed graph. The nodes of the graph represent trips, and directed edges represent the feasible links.
3. **Determine the linking solution:** One of several graph algorithms was utilized to determine which of the feasible links were actually taken by drivers. These graph algorithms find a "matching", or set of links such that every trip's pick-up and drop-off are each joined to at most one link. Differences between algorithms are discussed below. For this report, the batched fleet minimizing algorithm is used, as the distribution of trip wait times it produces most closely matches the actual distribution found in the data (Section A2.2.2).
4. **Convert the solution to volumes:** The linking solution can then be treated as a set of trips, and their paths converted to neighbourhood VKTs as detailed in Section A2.1.1. A set of trips linked together can then also be treated as the path taken by a hypothetical driver over the course of their work period. This can be used to produce a variety of interesting measures including, for example, the total amount of time drivers spent between servicing trips. Drivers are assumed to begin their work period at the pick-up of their first trip, and end at the drop-off of their last trip.

The linking algorithms are simplified versions of driver-to-passenger matching algorithms used by PTC companies and autonomous vehicle simulations¹. They include:

- **Greedy:** Connect each drop-off with the feasible pickup with the shortest travel time, handling the drop-offs in order of time. This is similar to Uber's driver-passenger matching algorithm², though when there are multiple drivers and passengers Uber has been reported to make additional corrections to minimize wait times.
- **Fleet-minimizing:** Link as many trips together as possible (without connecting multiple drivers to the same trip), thereby minimizing the number of drivers (more precisely the number of driver work periods) needed to satisfy all trips. This algorithm is outlined by Vazifeh et al. 2018³, who used it to determine the minimum size of a hypothetical automated vehicle fleet to service New York City's taxi demand. In practice, it forces drivers on average to wait and travel for longer between trips than for greedy linking (conversely, greedy linking requires more drivers to operate). It also acts on the entire graph at once (unlike the greedy algorithm, which handles each trip in order of time), and so is realistic only in cases where a PTC company predicts trip demand several hours into the future.
- **Batched fleet-minimizing:** Divide up the feasible links graph into time increments of t_{bin} . Then, use the fleet-minimizing algorithm to link the

¹ Hanna, J. P., Albert, M., Chen, D., & Stone, P. (2016). Minimum cost matching for autonomous carsharing. *IFAC-PapersOnLine*, 49(15), 254-259.

² Stanford University School of Engineering. (2018, April 3). Dawn Woodward: How Uber matches riders and drivers to reduce waiting time [Video file]. Retrieved from <https://youtu.be/GyPq2joHZv4>

³ Vazifeh, M. M., Santi, P., Resta, G., Strogatz, S. H., & Ratti, C. (2018). Addressing the minimum fleet problem in on-demand urban mobility. *Nature*, 557(7706), 534.

trips in each increment (potentially to unlinked trips from past increments) in order of time. This algorithm produces results similar to the greedy one, but with corrections that reduce the number of drivers needed. This is the algorithm used for the main report, with $t_{bin} = 1$ minute.

Linking was performed for October 20, 2016 and September 13, 2018, representative days near the beginning and near the end of the study period, respectively.

As with routed trips outlined in Section A2.1, this methodology uses the shortest-time route connecting trips, without incorporating turn restrictions or accounting for driver behaviour. It additionally does not model drivers as agents with, for example, limits on how much they wish to drive, or preferred geographic regions for servicing trips, as data on these are not available. This results in some work periods that are unrealistically long, but are in the minority (e.g. about 10% of the work periods from the 2016 trip linking solution are longer than 4.6 hours, but the median work period length is 1.4 hours). Trip linking alone is also unable to constrain driver behaviour while cruising – since drivers may pause or continue driving during this time – or commuting to and from other locations.

A2.2.2 Linking Optimization and Validation

For the batched fleet-minimizing algorithm, t_{bin} is a tunable free parameter. The maximum feasible deadheading time, t_{max} , can also be decreased from 20 minutes. To tune these two values, a large set of link solutions are calculated using t_{bin} and t_{max} values selected by a Bayesian hyperparameter optimizer. Once each solution is available, the passenger wait time can be derived from the driver en-route time for the selected link, and the distribution of linked passenger wait times can be compared to the distribution of true passenger wait times by their Jensen-Shannon divergence. This optimization was tried on October 10, 2016 and March 30, 2017, and for both days a t_{bin} of approximately one minute and a t_{max} of 20 minutes produces linking results that best reproduce the distribution of true wait times. For October 10, the first quartile, median and third quartile of the linked wait times are 3.3, 5.2, and 7.7 minutes, respectively, while the true wait times are 3.7, 5.5, and 7.8 minutes. The same t_{bin} and t_{max} were also used for September 13, 2018 (since accurate trip request timestamp data was not available for after March 2017, preventing optimization).

The VKT was compared to aggregate distance (by period) data provided by Uber. It shows that 35 to 40% of total VKT is spent cruising, 5 to 10% en-route, and 55% in-service, meaning the ratio of en-route to in-service VKT is about 10 to 20%. The upper end of this range is consistent with the ratio of 24% for the October 10 linking solution, and 17% for the September 13 one.

Uber also provided the hourly number of unique active (in-service or deadheading) vehicles for dates throughout 2018. A linear fit of the number of active vehicles against the total number of trips led to the following estimated model (adjusted $R^2 = 0.964$):

$$N_{vehicles} = 0.48N_{trips} + 274$$

This is equivalent to about two trips per vehicle (somewhat of an overestimate, since the fit is to Uber vehicles and trips only, and some Uber drivers simultaneously drive for Lyft). The linking solution for October 10 predicts 30% fewer vehicles, and for September 13 predicts 15% fewer trips. This indicates that trip linking is more efficient than real PTC operations, and introducing driver work constraints may lead to a more accurate estimate.

The median amount of cruising time per work period varies considerably depending on the linking algorithm used, ranging from only 13% of the in-service time for the batched fleet-minimizing algorithm to 29% for the day-long fleet-minimizing algorithm. If it is assumed that driving speeds during cruising are not very different than those in-service, the period data from Uber indicates cruising time is closer to 60 to 70% of the in-service time. It is unclear, however, whether this data includes drivers making trips they would have completed otherwise while having the Uber app open, which would inflate the cruising VKT fraction. Since there is very little data available on driver behaviour during cruising, it is difficult to determine why trip linking underestimates it.

A2.3 Example Routing and Linking

Exhibit A2-1: Example of a Sequence of Routed and Linked Trips

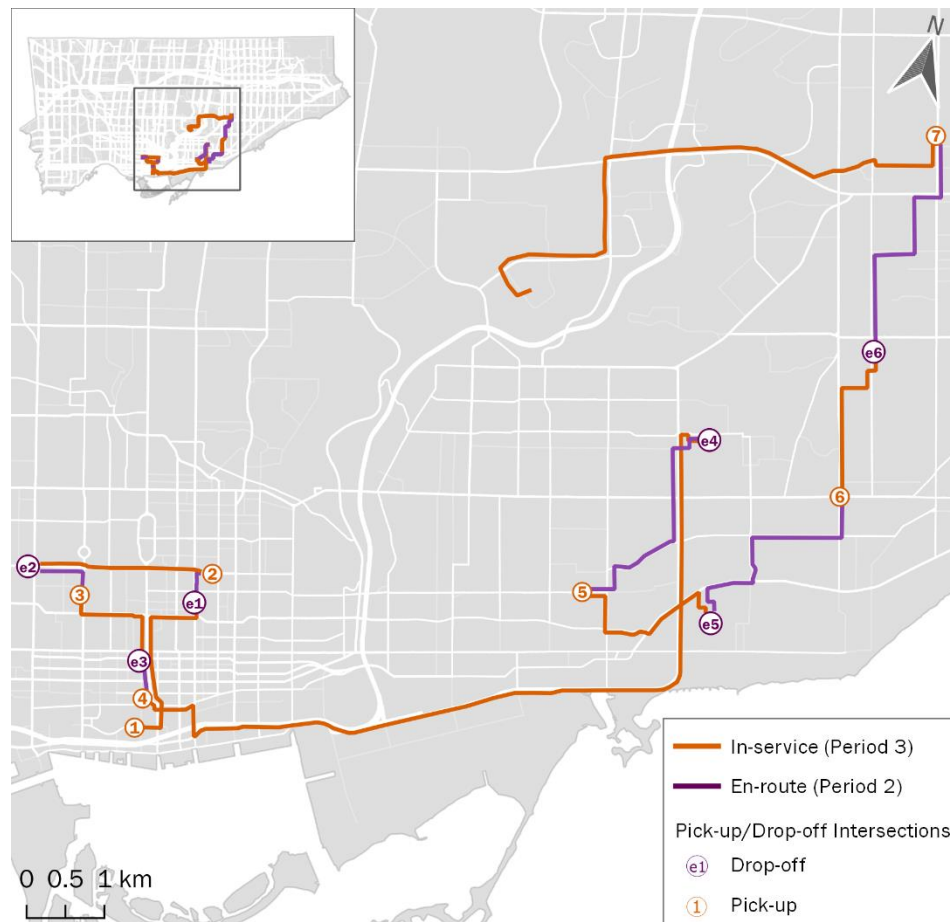


Exhibit A2-3 shows a set of origin/destination points for the evening of October 20, 2016 that have been routed and linked together into the path taken by a hypothetical driver using the methodology described in this Section. Each trip, or trip en-route to the next passenger, represents the shortest travel-time path between the origin and destination given traffic patterns at the time (see Section A2.1.1). Connections from one trip to the next are the result of the batched fleet-minimizing algorithm (see Section A2.2.1), which tries to connect as many trips to available and close-by drivers as possible. The order in which the trips and en-route trips were taken is labelled on the map.

This example also shows that drivers within the downtown core can freely be diverted by trip linking to service other areas of the city. This may or may not be realistic depending on typical driver behaviour and how the PTC driver-passenger matching service functions. Additional data on these could potentially make trip linking considerably more accurate.

A2.4 Estimating Transit Alternatives to PTC Trips

Estimated travel attributes of the fastest transit alternatives to PTC trips were determined using OpenTripPlanner (OTP), an open-source software suite that provides transportation network analysis services given general transit feed specifications (GTFS) and OpenStreetMap (OSM) data.

GTFS data for the TTC were downloaded from the Transitland Feed Registry⁴, and OSM data from OSM Extracts by Interline⁵. OTP was run locally, and transit alternatives for a given PTC trip were estimated by passing its origin location, destination location, and time as inputs. OTP outputs multiple trip itineraries for each set of inputs; the one with the fastest travel time was selected for this analysis.

A3 Transportation Network Impacts Studies in Other Jurisdictions

To date, there have been a number of congestion studies that have been completed by municipalities, academics, and consultancies across North America, varying in scope and overall approach. A selection of these are summarized in Exhibit A3-1. Most of these studies are in agreement that the introduction of PTCs are resulting in additional vehicle-kilometers to the street networks on which they're operating, but the connection to resulting changes in congestion is less certain.

The most comprehensive study to date was published in October 2018 by the San Francisco County Transportation Authority (SFCTA). It attempted to isolate the total congestion that PTCs were adding to its street network, using a combination of its local long-term travel demand forecasting model, the application of traditional volume-delay functions to convert observed speeds to volumes, and estimated PTC trip volumes. This model was also used to estimate traffic volumes in the absence of PTCs, in order to provide an alternative scenario against which to compare current conditions.

⁴ Transitland Feed Registry. Retrieved from <https://transit.land/feed-registry/>.

⁵ OSM Extracts by Interline. Retrieved from: <https://www.interline.io/osm/extracts/>

Exhibit A3-1: Summary of Congestion Studies in Other Jurisdictions

Jurisdiction (Author)	Publication Date	Summary of Findings
Denver (Alejandro Henao, PhD Dissertation) ⁶	May 2017	<p>Approach</p> <ul style="list-style-type: none"> Uses data collected personally as an Uber/Lyft driver to directly measure VMT for each trip, compared to the trip it replaced (based on a passenger survey). <p>Findings</p> <ul style="list-style-type: none"> On average, the VMT for PTC trips was found to be 84.6% greater than the trip it replaced. This increase would correspond to an additional 5.5 billion miles travelled in the USA in 2016 if the findings in Denver were transferrable to the rest of the country.
United States (Schaller Consulting) ⁷	July 2018	<p>Approach</p> <ul style="list-style-type: none"> Uses a variety of simplified scenarios varying the amount of total PTC trips that are shared, and the modes from which these trips are replacing, to estimate the total additional miles added to the transportation network. <p>Findings</p> <ul style="list-style-type: none"> On average, each additional PTC trip is associated with a 41 to 180% increase in kilometers travelled relative to the mode it's replacing, on average. In the USA's nine largest metropolitan areas, PTCs are estimated to have added 5.74 million miles in 2017.
San Francisco (San Francisco County Transportation Authority) ⁸	October 2018	<p>Approach</p> <ul style="list-style-type: none"> Two separate analysis methods: one using historical INRIX probe-based data, and the use of volume-delay functions to isolate the impact of PTC volumes from overall volume changes, and the second using a travel demand model to estimate the congestion impacts estimated over a series of scenarios. <p>Findings</p> <ul style="list-style-type: none"> An overall decrease in arterial speeds between 2009 and 2016 of 26% and 27% in the AM and PM peak periods. An estimated 55-65% of the overall changes in speed due to the contribution of PTCs. An estimated 44-47% of the overall increase in vehicles-miles travelled due to the contribution of PTCs.

⁶ Henao, Alejandro. (2017). Impacts of Ridesourcing – Lyft and Uber – on Transportation Including VMT, Mode Replacement, Parking, and Travel Behavior. Retrieved from <https://pqdtopen.proquest.com/pubnum/10265243.html?FMT=AI>

⁷ Schaller Consulting. (2018). The New Automobility: Lyft, Uber and the Future of American Cities. Retrieved from <http://www.schallerconsult.com/rideservices/automobility.pdf>

⁸ San Francisco County Transportation Authority. (2018). TNCs & Congestion. Retrieved from: https://www.sfcta.org/sites/default/files/2019-02/TNCs_Congestion_Report_181015_Final.pdf

Appendix B

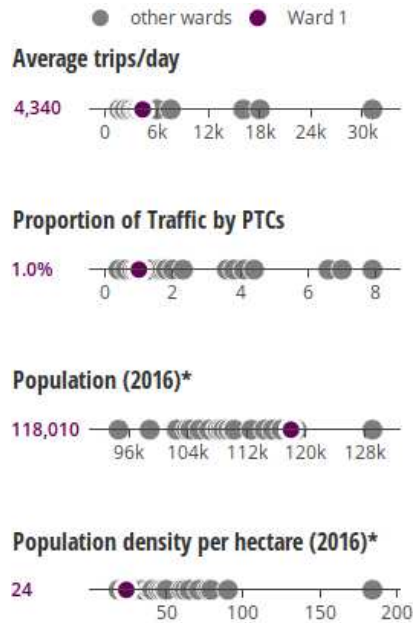
Detailed Methodology and Data

Ward 1: Etobicoke North

SEPTEMBER 2018

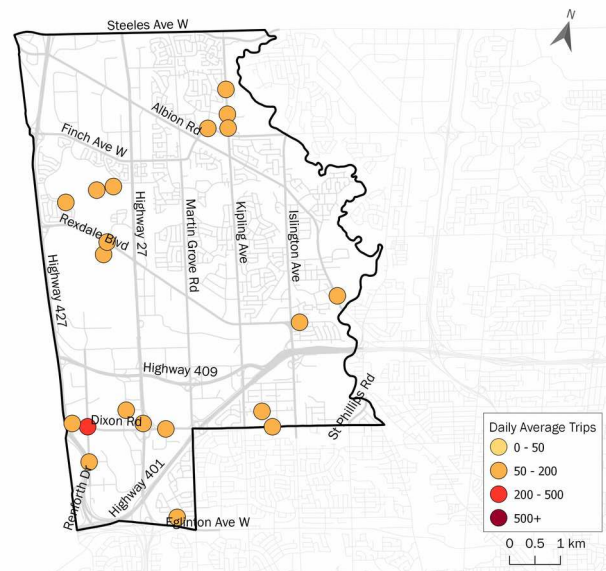


Ward at a Glance



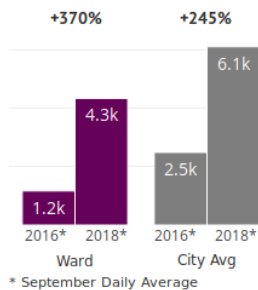
*Source: Statistics Canada, Census 2016, 2011 & 2006.

Top 20 Pick-up and Drop-off Hotspots

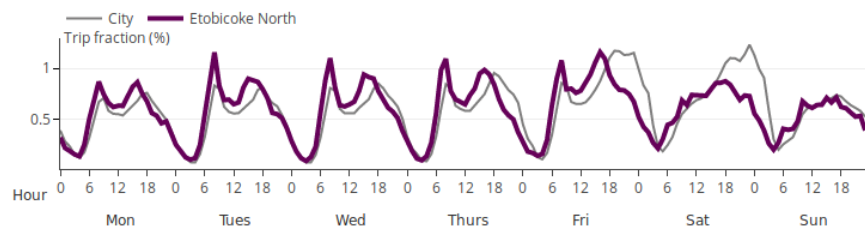


The largest hotspot is at Carlingview Drive & Dixon Rd around many airport hotels. Other hotspots include Woodbine Racetrack and mall, Albion Centre mall, and the Toronto Congress Centre.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

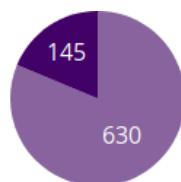
Destination	Trips/day	Fraction (%)
Etobicoke North	1,510	35
Outside Toronto	1,245	29
Humber River-Black Creek	325	7
Etobicoke-Lakeshore	235	5
Etobicoke Centre	185	4

Most trips end within-ward or outside of the city

Busiest Hour (Sept 2016–2018)

7 AM, SAT JUN 23, 2018

775 TOTAL TRIPS



■ Dropoffs
■ Pickups

An event at the Toronto Congress Centre caused drop-offs to be concentrated around this location.

Top 5 Destinations

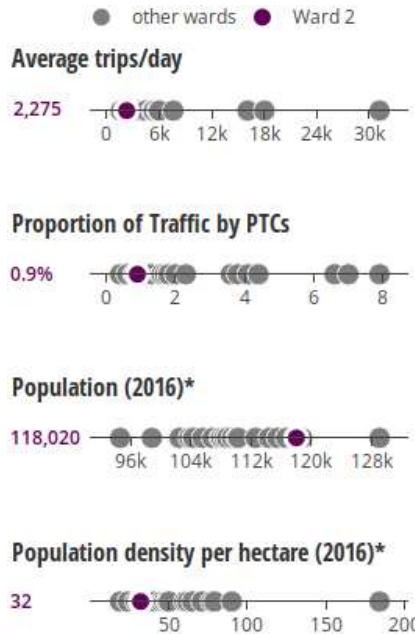
Destinations	Trips	%
Etobicoke North	55	37
Outside Toronto	50	36
Etobicoke-Lakeshore	10	7
Humber River-Black Creek	5	5
Spadina-Fort York	5	5

Ward 2: Etobicoke Centre

SEPTEMBER 2018

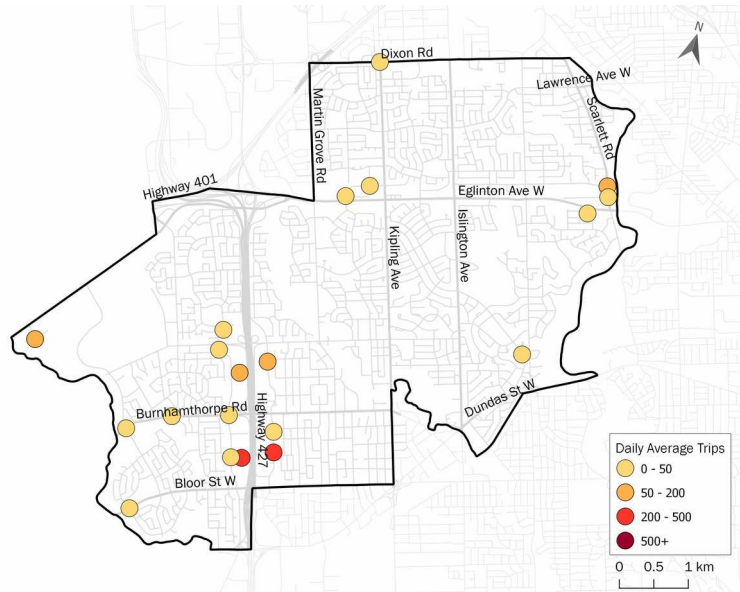


Ward at a Glance



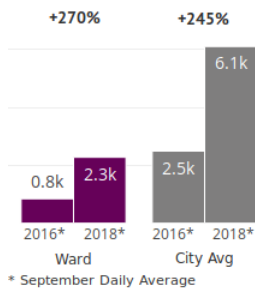
*Source: Statistics Canada, Census 2016, 2011 & 2006.

Top 20 Pick-up and Drop-off Hotspots

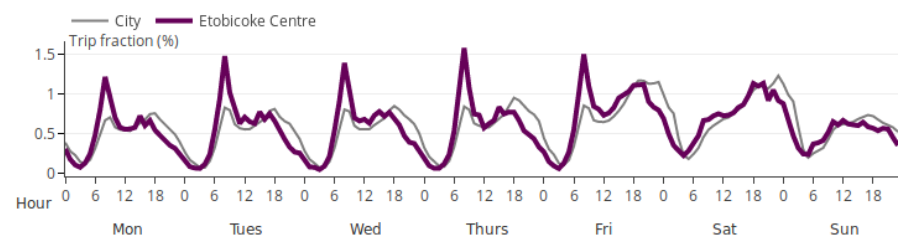


The largest hotspots are at offices along the 427, with other hotspots near apartments (Eglinton & Kipling, Eglinton & Scarlett Rd, Markland & Humbertown).

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

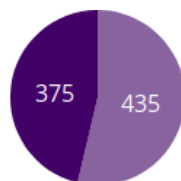
Destination	Trips/day	Fraction (%)
Etobicoke-Lakeshore	505	22
Outside Toronto	465	20
Etobicoke Centre	375	17
Etobicoke North	200	9
Spadina-Fort York	160	7

Most trips end in Etobicoke-Lakeshore, a major transit hub; outside the city; or within-ward.

Busiest Hour (Sept 2016–2018)

2 AM, MON JAN 1, 2018

810 TOTAL TRIPS



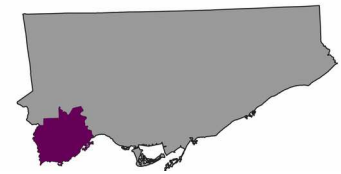
Dropoffs
Pickups

New Year's Eve. Activity mostly occurred at residential towers along the 427 and Eglinton Ave.

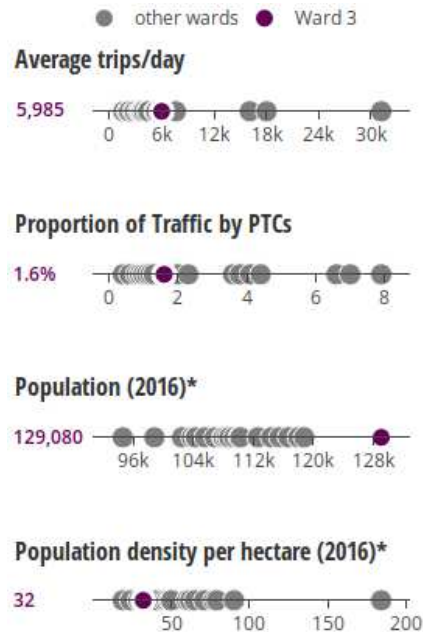
Top 5 Destinations	Trips	%
Etobicoke Centre	120	33
Outside Toronto	70	19
Etobicoke-Lakeshore	65	18
Spadina-Fort York	20	6
Parkdale-High Park	15	5

Ward 3: Etobicoke-Lakeshore

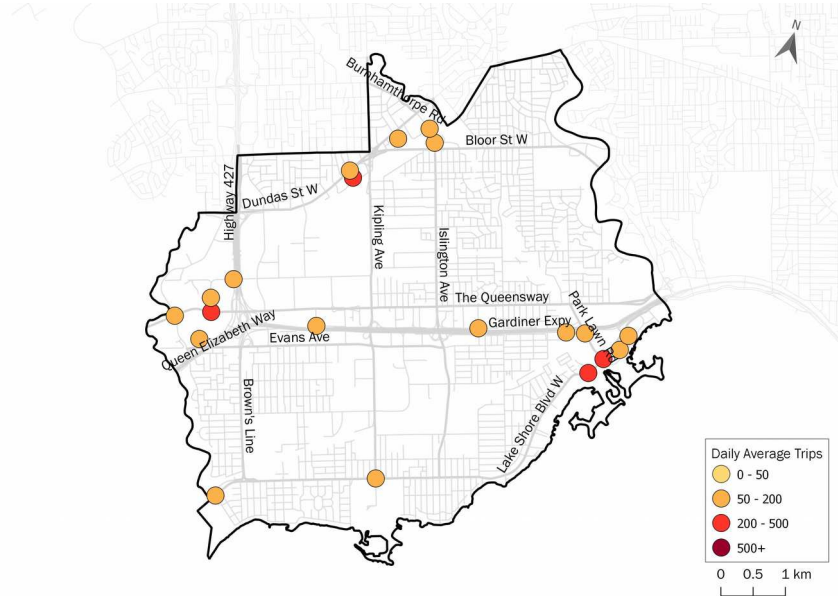
SEPTEMBER 2018



Ward at a Glance

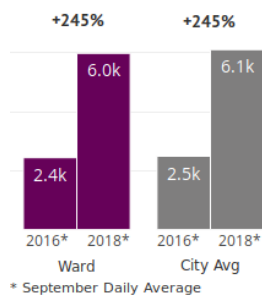


Top 20 Pick-up and Drop-off Hotspots

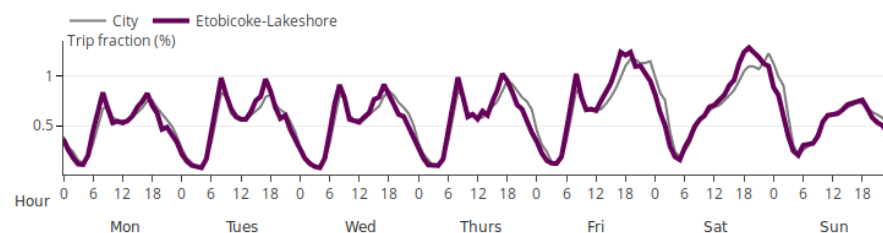


Hotspots at Sherway Gardens, TTC stations, Humber Bay Shores; fewer trips at Long Branch, Humber Bay College, and condos along the QEW.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

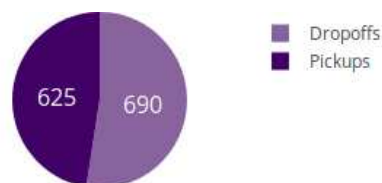
Destination	Trips/day	Fraction (%)
Etobicoke-Lakeshore	2,095	35
Outside Toronto	1,045	17
Spadina-Fort York	775	13
Etobicoke Centre	460	8
Parkdale-High Park	370	6

Most trips end within-ward; outside the city; or in Spadina-Fort York.

Busiest Hour (Sept 2016–2018)

2 AM, MON JAN 1, 2018

1,310 TOTAL TRIPS



Many pick-ups and drop-offs occurred at Humber Bay Shores, TTC stations, and nearby malls.

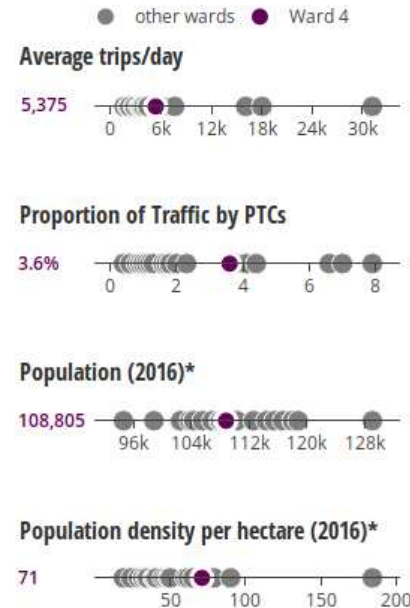
Top 5 Destinations	Trips	%
Etobicoke-Lakeshore	190	30
Outside Toronto	145	23
Etobicoke Centre	90	14
Parkdale-High Park	65	10
Spadina-Fort York	40	6

Ward 4: Parkdale-High Park

SEPTEMBER 2018



Ward at a Glance

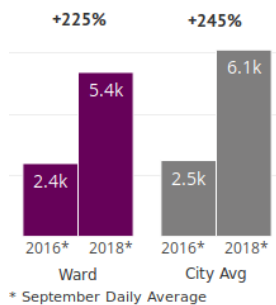


Top 20 Pick-up and Drop-off Hotspots

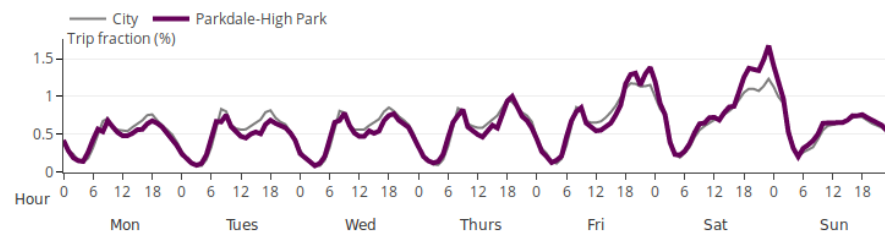


The map shows that activity is concentrated in Parkdale, with other activity occurring near TTC stations along Bloor St, and in the Junction.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

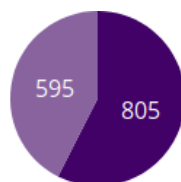
Destination	Trips/day	Fraction (%)
Spadina-Fort York	1,270	24
Parkdale-High Park	830	15
Davenport	625	12
University-Rosedale	570	11
Etobicoke-Lakeshore	430	8

Most trips end in neighbouring wards or within-ward.

Busiest Hour (Sept 2016–2018)

11 PM, SAT SEP 15, 2018

1,400 TOTAL TRIPS



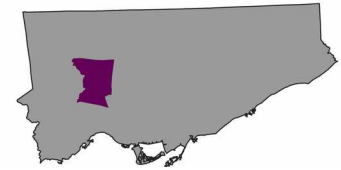
■ Pickups
■ Dropoffs

Activity at TTC stations, the Junction, Roncesvalles, & condos at The Queensway & Windemere.

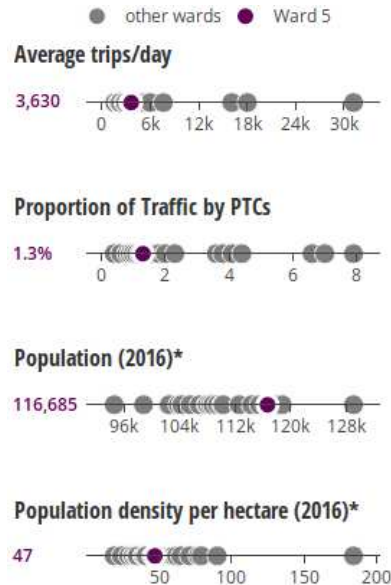
Top 5 Destinations	Trips	%
Spadina-Fort York	175	21
Parkdale-High Park	120	15
Davenport	100	13
Etobicoke-Lakeshore	100	12
University-Rosedale	80	10

Ward 5: York-South Weston

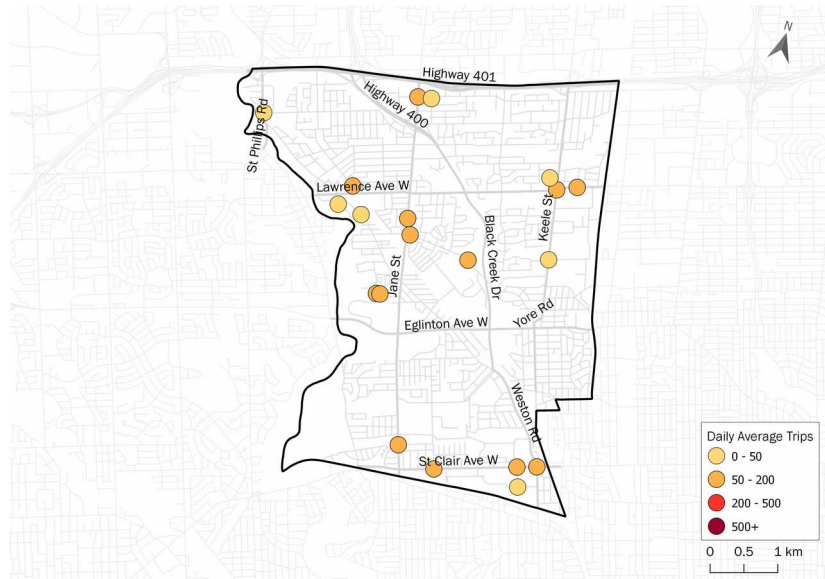
SEPTEMBER 2018



Ward at a Glance

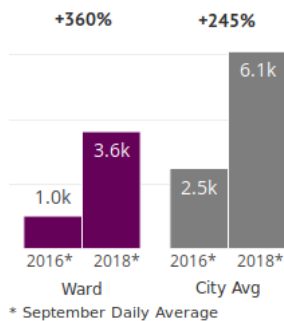


Top 20 Pick-up and Drop-off Hotspots

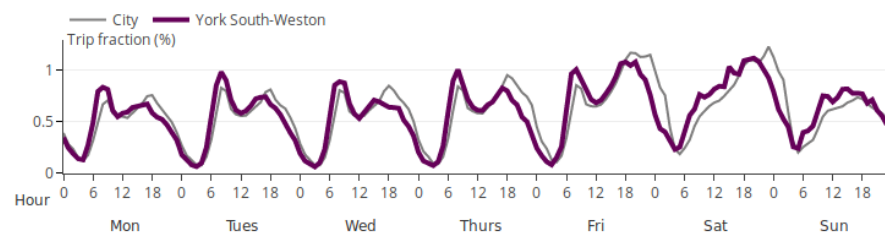


The map shows a cluster at the Stockyards, Gunns Loop, and the commercial centres and residential complexes around Weston Road.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

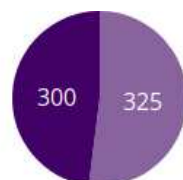
Destination	Trips/day	Fraction (%)
York South-Weston	830	23
Eglinton-Lawrence	340	9
Outside Toronto	295	8
Davenport	295	8
Humber River-Black Creek	270	7

Most trips end within-ward; nearby wards, or outside Toronto.

Busiest Hour (Sept 2016–2018)

9 PM, FRI SEP 28, 2018

630 TOTAL TRIPS



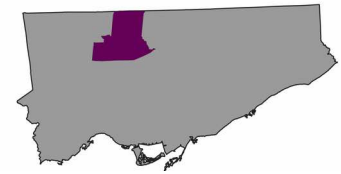
Dropoffs
Pickups

Activity near residential towers, and near the Junction and Gunns Loop in the Stockyards district.

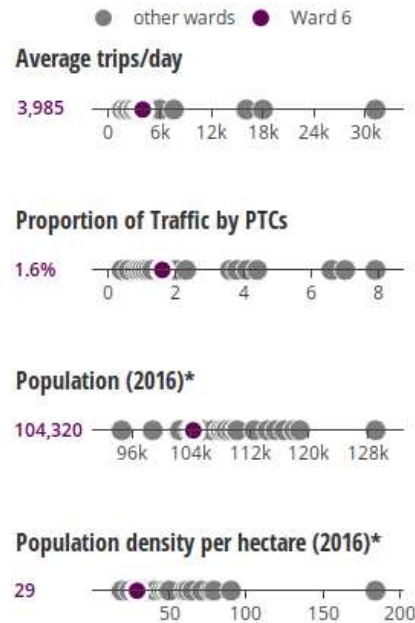
Top 5 Destinations	Trips	%
York South-Weston	75	25
Humber River-Black Creek	30	10
Eglinton-Lawrence	30	9
Spadina-Fort York	25	8
Davenport	25	8

Ward 6: York Centre

SEPTEMBER 2018

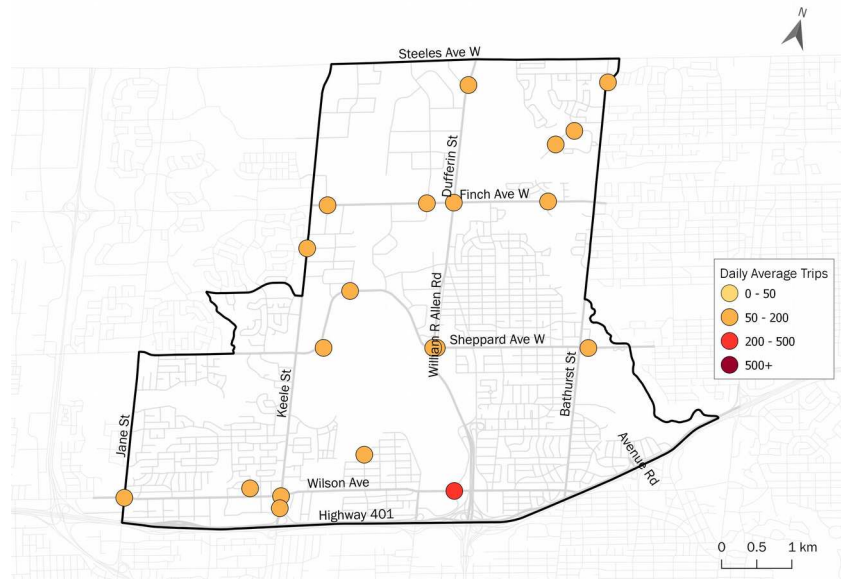


Ward at a Glance



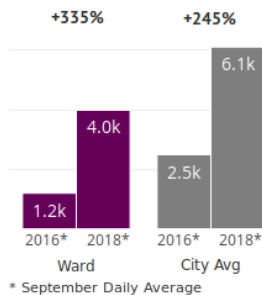
*Source: Statistics Canada, Census 2016, 2011 & 2006.

Top 20 Pick-up and Drop-off Hotspots

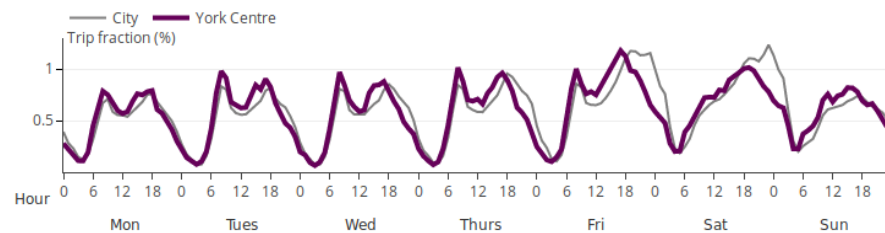


The map shows the largest hotspot near Wilson station, with other clusters at Sheppard West station, and the Keele & Wilson area.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

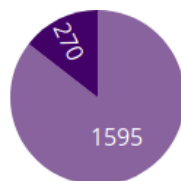
Destination	Trips/day	Fraction (%)
York Centre	900	23
Outside Toronto	600	15
Humber River-Black Creek	575	14
Eglinton-Lawrence	400	10
Willowdale	370	9

Humber River-Black Creek is the location of York University.

Busiest Hour (Sept 2016–2018)

3 PM, SUN AUG 5, 2018

1,865 TOTAL TRIPS



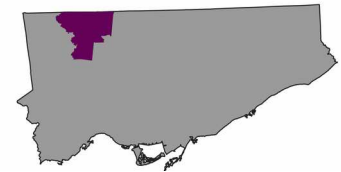
Dropoffs
Pickups

Drop-offs outnumbered pick-ups, with most clustered at Downsview Park for the Veld Music Festival.

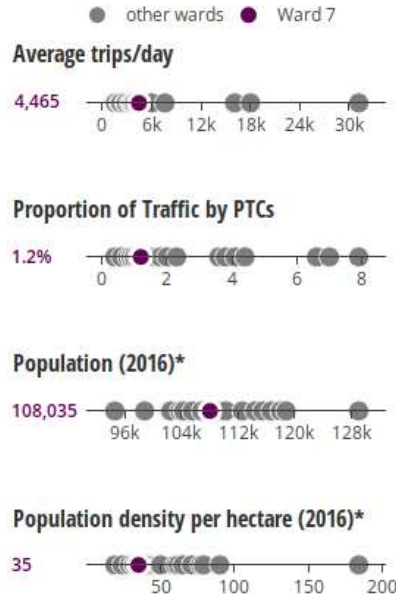
Top 5 Destinations	Trips	%
York Centre	125	46
Humber River-Black Creek	30	12
Outside Toronto	30	11
Willowdale	20	7
Eglinton-Lawrence	15	6

Ward 7: Humber River-Black Creek

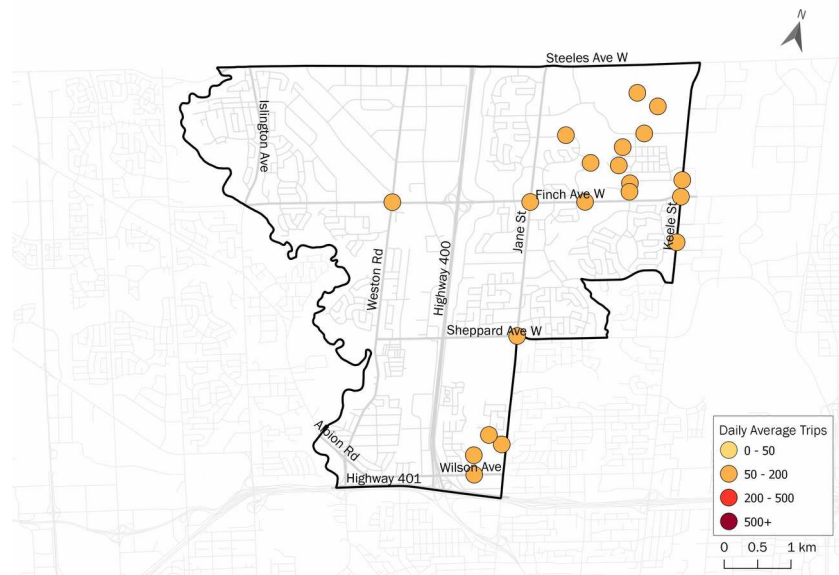
SEPTEMBER 2018



Ward at a Glance

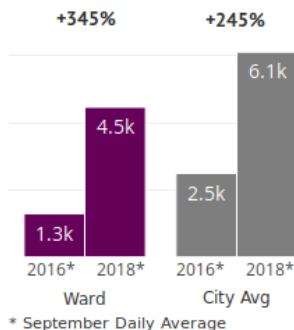


Top 20 Pick-up and Drop-off Hotspots

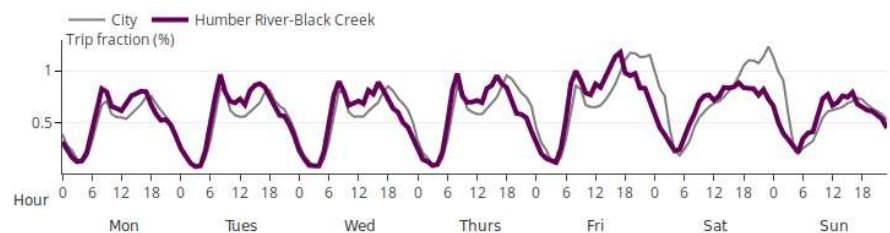


The largest cluster is near York University, with others near Seneca College/Sheridan Mall; Jane & Sheppard; and along Finch.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

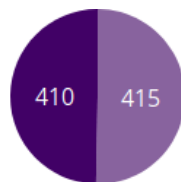
Destination	Trips/day	Fraction (%)
Humber River-Black Creek	1,415	32
Outside Toronto	915	20
York Centre	560	13
Etobicoke North	320	7
York South-Weston	250	6

Most trips end within-ward, outside Toronto, or York Centre.

Busiest Hour (Sept 2016–2018)

5 PM, FRI SEP 21, 2018

825 TOTAL TRIPS



Dropoffs
Pickups

Activity clustered around Jane & Finch, York University, and Finch West station.

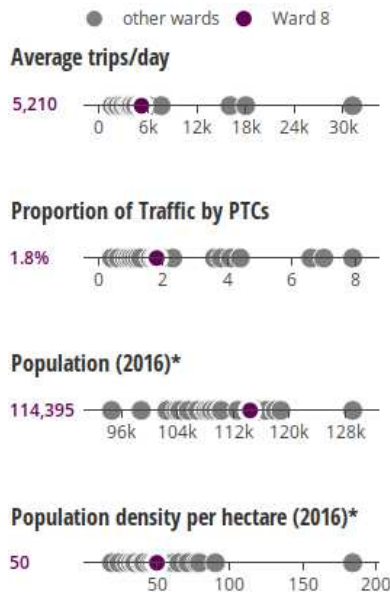
Top 5 Destinations	Trips	%
Humber River-Black Creek	175	43
Outside Toronto	70	18
York Centre	50	12
Etobicoke North	25	6
York South-Weston	20	5

Ward 8: Eglinton-Lawrence

SEPTEMBER 2018



Ward at a Glance

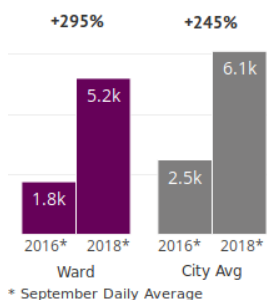


Top 20 Pick-up and Drop-off Hotspots

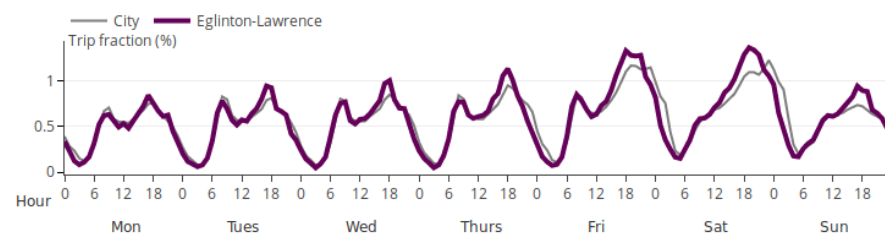


The map shows major hotspots near Yorkdale mall, and Yonge & Eglinton, with smaller clusters along Lawrence, and around Forest Hill.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

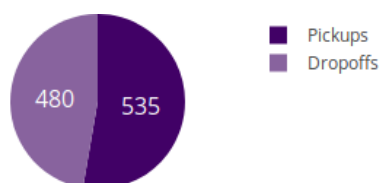
Destination	Trips/day	Fraction (%)
Eglinton-Lawrence	1,060	20
Spadina-Fort York	435	8
Toronto-St. Paul's	435	8
Outside Toronto	425	8
University-Rosedale	400	8

Most trips end within-ward, neighbour wards or outside Toronto.

Busiest Hour (Sept 2016–2018)

6 PM, FRI SEP 28, 2018

1,015 TOTAL TRIPS

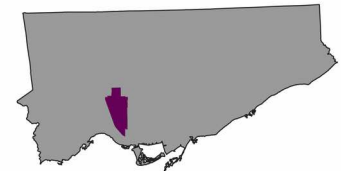


Activity clustered near Yorkdale Mall, and near condo towers along Lawrence Ave & Bathurst St.

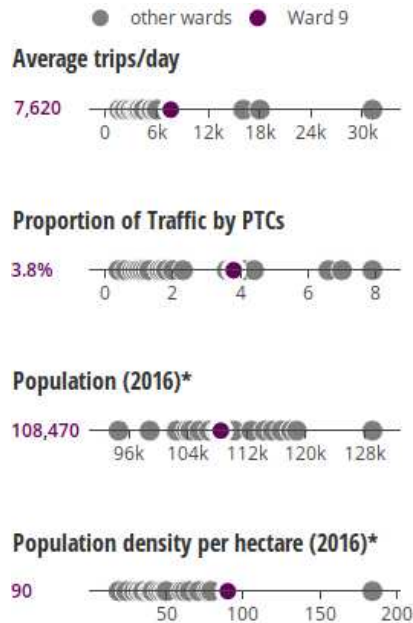
Top 5 Destinations	Trips	%
Eglinton-Lawrence	135	25
University-Rosedale	55	10
Spadina-Fort York	40	7
Don Valley West	35	7
Toronto-St. Paul's	35	6

Ward 9: Davenport

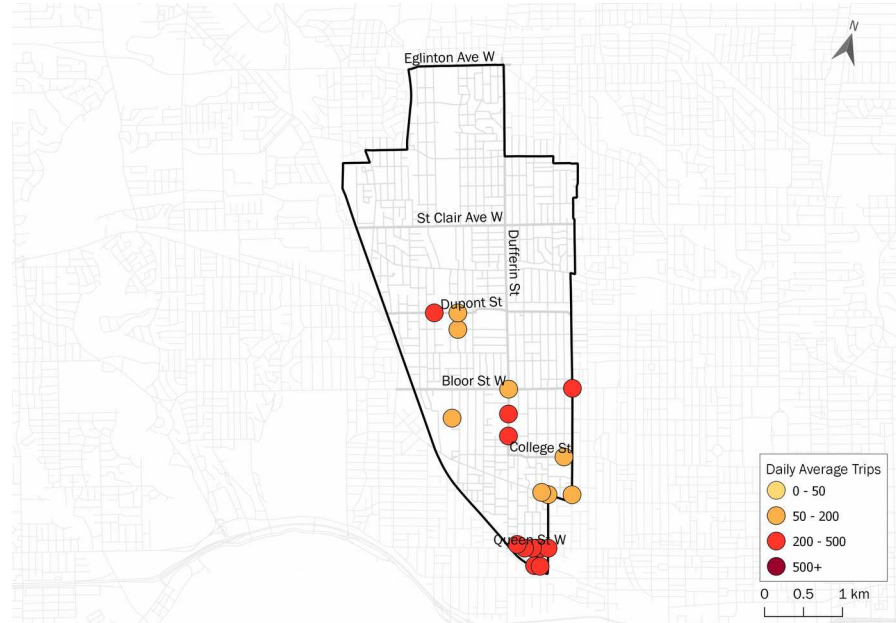
SEPTEMBER 2018



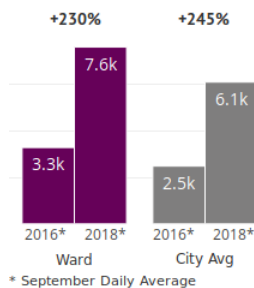
Ward at a Glance



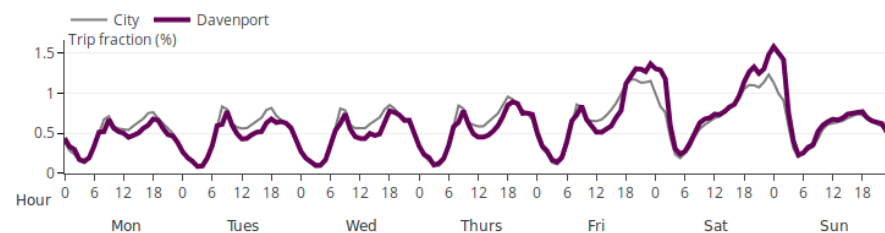
Top 20 Pick-up and Drop-off Hotspots



Daily Trip Growth



Time of Week Profile



Five Busiest Locations

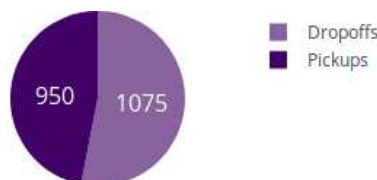
Destination	Trips/day	Fraction (%)
Spadina-Fort York	1,925	25
Davenport	1,185	16
University-Rosedale	1,140	15
Parkdale-High Park	650	9
Toronto Centre	575	8

Most trips end within-ward, nearby wards, or downtown core.

Busiest Hour (Sept 2016–2018)

10 PM, SUN DEC 31, 2017

2,025 TOTAL TRIPS

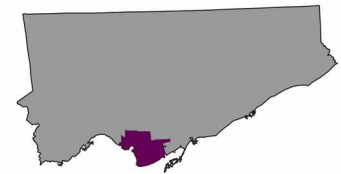


Activity clustered on Queen St W with pick-ups on Dundas St W.

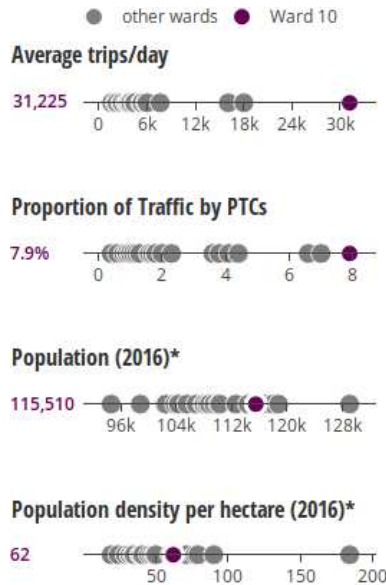
Top 5 Destinations	Trips	%
Spadina-Fort York	325	34
Davenport	185	19
University-Rosedale	160	17
Parkdale-High Park	65	7
Toronto Centre	55	6

Ward 10: Spadina-Fort York

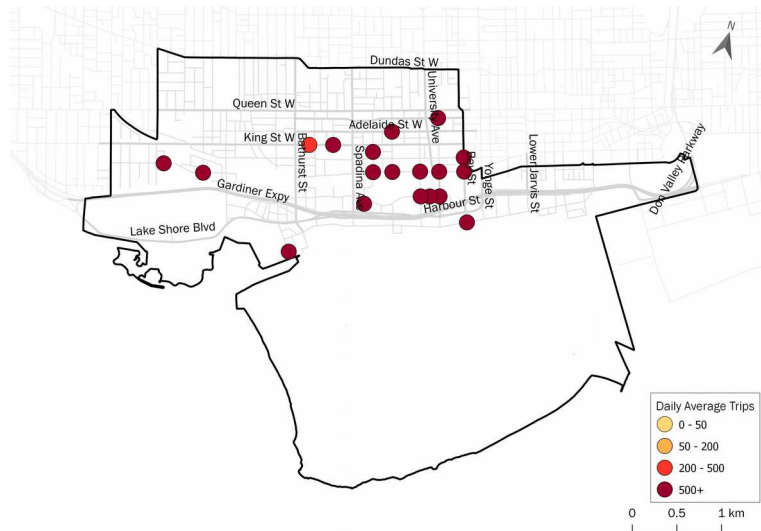
SEPTEMBER 2018



Ward at a Glance

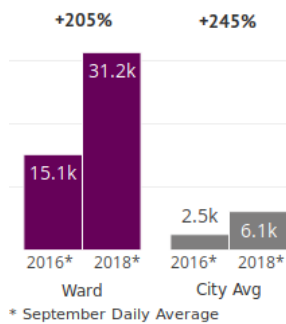


Top 20 Pick-up and Drop-off Hotspots

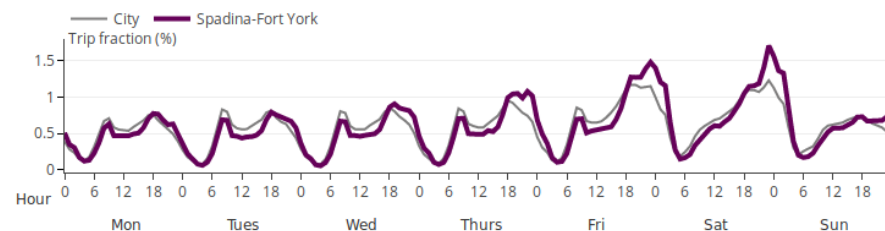


Activity focussed around the Metro Convention Centre/CN Tower, Union station, King St W, ferry terminal, island airport, Liberty Village.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

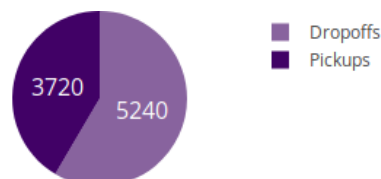
Destination	Trips/day	Fraction (%)
Spadina-Fort York	10,390	33
University-Rosedale	4,865	16
Toronto Centre	4,455	14
Outside Toronto	2,205	7
Davenport	1,820	6

Most trips end within-ward, neighbour wards, or outside Toronto.

Busiest Hour (Sept 2016–2018)

10 PM, SUN DEC 31, 2017

8,960 TOTAL TRIPS



Drop-offs were near Exhibition & King St W, and pick-ups were near condos around CityPlace, Liberty Village and Union station.

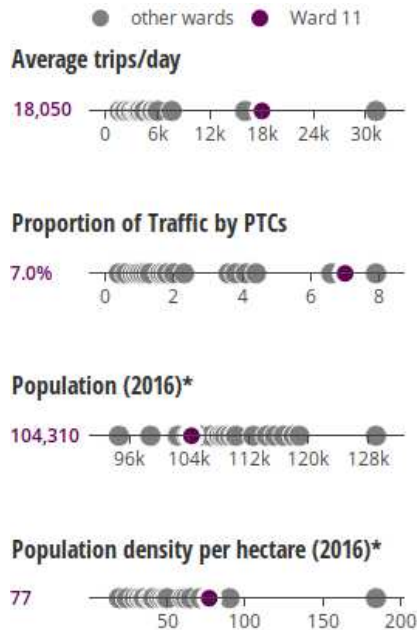
Top 5 Destinations	Trips	%
Spadina-Fort York	2,080	56
University-Rosedale	430	12
Toronto Centre	340	9
Davenport	260	7
Toronto-Danforth	205	5

Ward 11: University-Rosedale

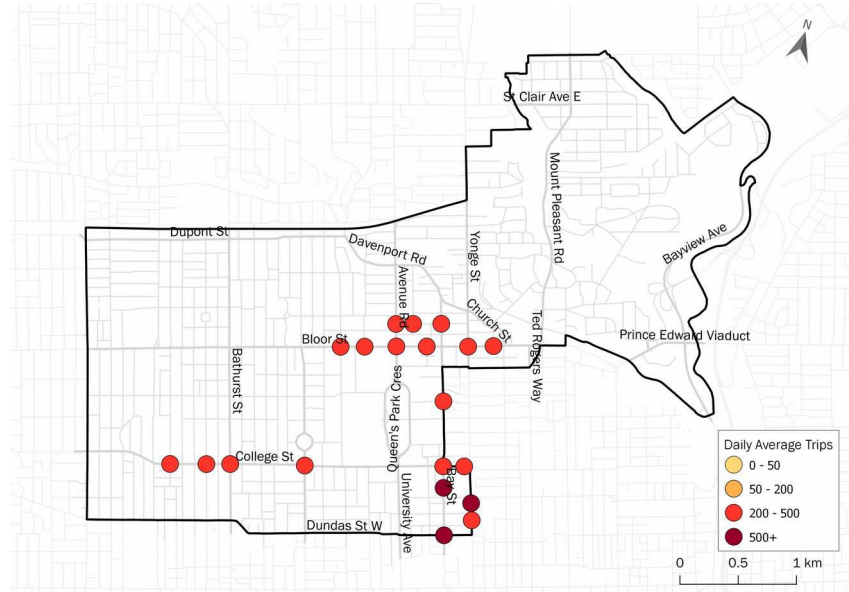
SEPTEMBER 2018



Ward at a Glance

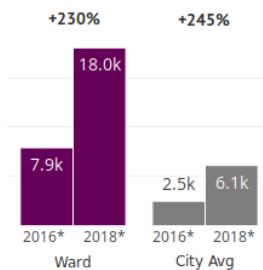


Top 20 Pick-up and Drop-off Hotspots

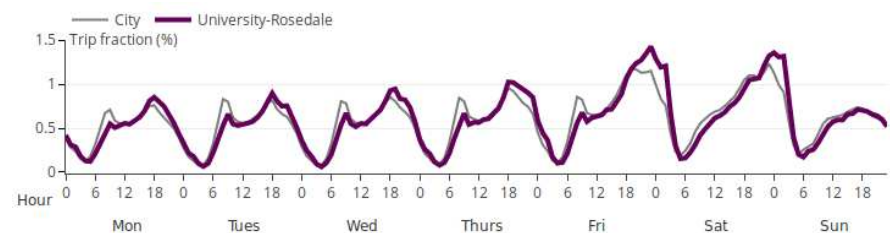


Activity clustered around Little Italy, Bloor St in the Annex and Yorkville, and around the Discovery District.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

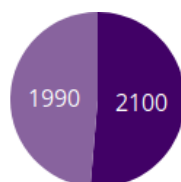
Destination	Trips/day	Fraction (%)
Spadina-Fort York	4,970	28
University-Rosedale	3,710	21
Toronto Centre	2,610	14
Davenport	1,155	6
Toronto-St. Paul's	1,135	6

Most trips end within-ward or in neighbour wards.

Busiest Hour (Sept 2016-2018)

9 PM, FRI SEP 28, 2018

4,090 TOTAL TRIPS



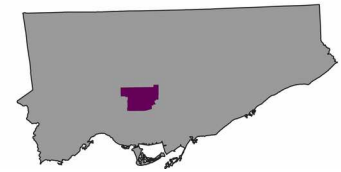
■ Pickups
■ Dropoffs

Activity clustered in Little Italy, Yorkville, Koreatown and the University of Toronto.

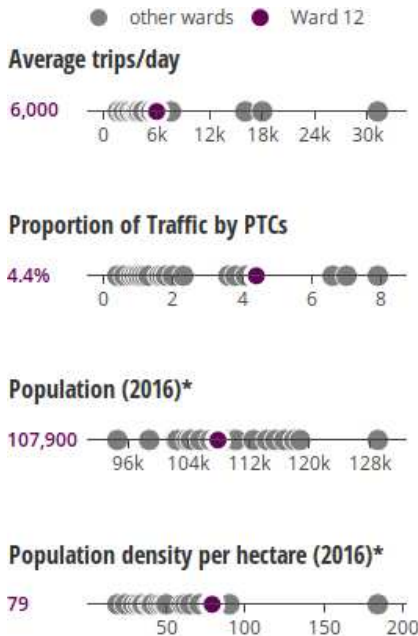
Top 5 Destinations	Trips	%
Spadina-Fort York	570	27
University-Rosedale	565	27
Toronto Centre	400	19
Davenport	130	6
Toronto-St. Paul's	95	4

Ward 12: Toronto-St. Paul's

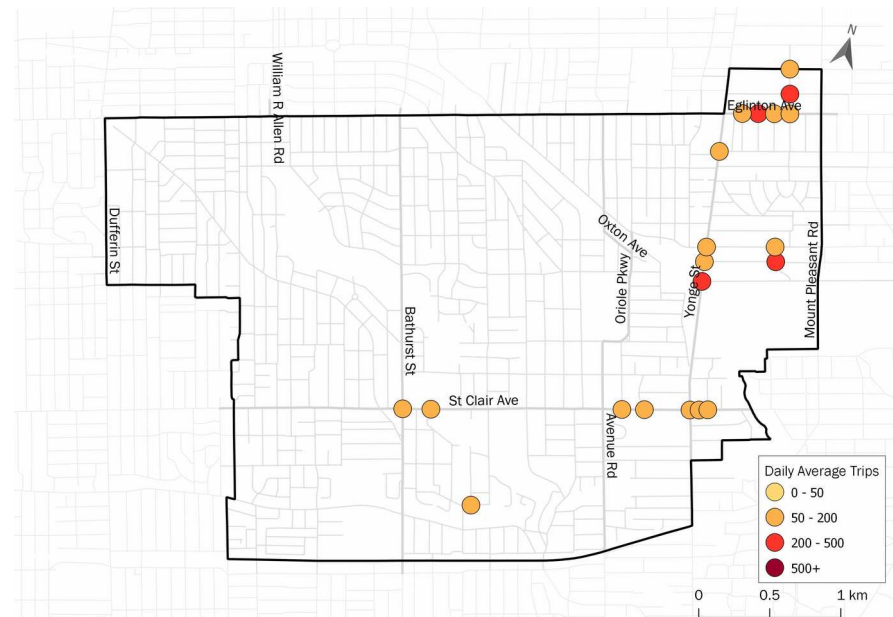
SEPTEMBER 2018



Ward at a Glance

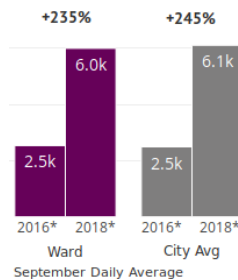


Top 20 Pick-up and Drop-off Hotspots

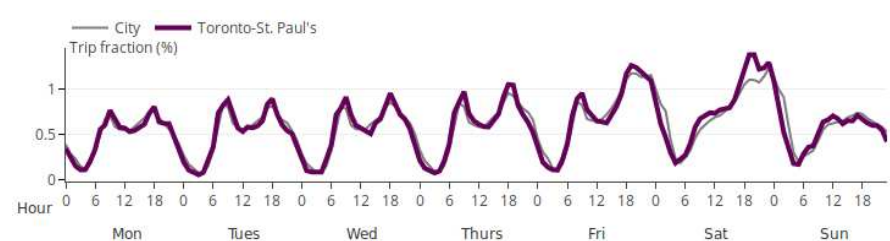


Principal hotspots along Yonge St in Midtown near TTC stations. Other hotspots were at St. Clair West station and George Brown College.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

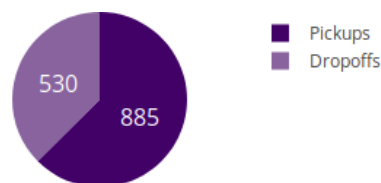
Destination	Trips/day	Fraction (%)
Spadina-Fort York	1,075	18
University-Rosedale	1,050	18
Toronto-St. Paul's	735	12
Toronto Centre	545	9
Eglinton-Lawrence	460	8

Most trips end within-ward or in neighbour wards.

Busiest Hour (Sept 2016–2018)

10 AM, WED AUG 8, 2018

1,415 TOTAL TRIPS

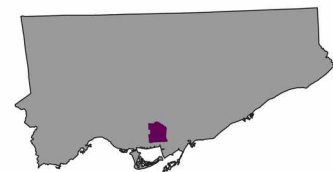


Activity clustered near TTC stations, areas with entertainment, businesses, and condos.

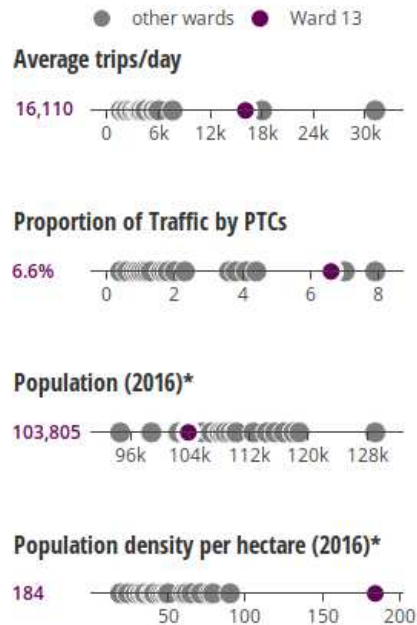
Top 5 Destinations	Trips	%
University-Rosedale	230	26
Spadina-Fort York	220	25
Toronto Centre	170	19
Toronto-St. Paul's	80	9
Eglinton-Lawrence	30	3

Ward 13: Toronto Centre

SEPTEMBER 2018



Ward at a Glance

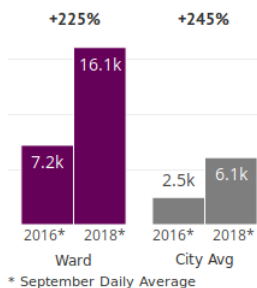


Top 20 Pick-up and Drop-off Hotspots

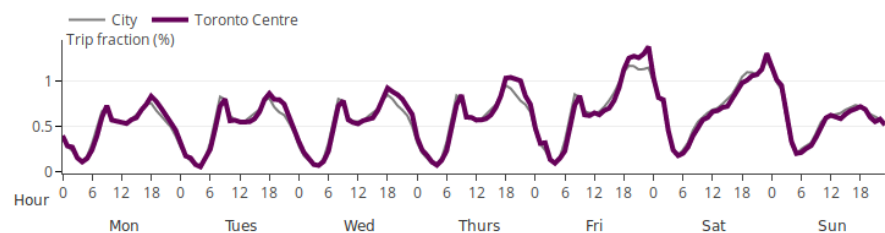


Activity was at all parts of Yonge St, with other clusters along Church St, the Distillery District, and in St. Jamestown.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

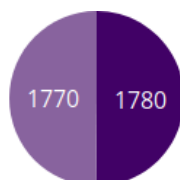
Destination	Trips/day	Fraction (%)
Spadina-Fort York	4,775	30
Toronto Centre	2,925	18
University-Rosedale	2,825	18
Toronto-Danforth	1,045	6
Outside Toronto	825	5

Most trips end within-ward or in neighbour wards.

Busiest Hour (Sept 2016–2018)

9 PM, FRI SEP 28, 2018

3,545 TOTAL TRIPS



Drop-offs were near the Sony Centre, on Yonge St, and Church St near Wellesley.

■ Pickups
■ Dropoffs

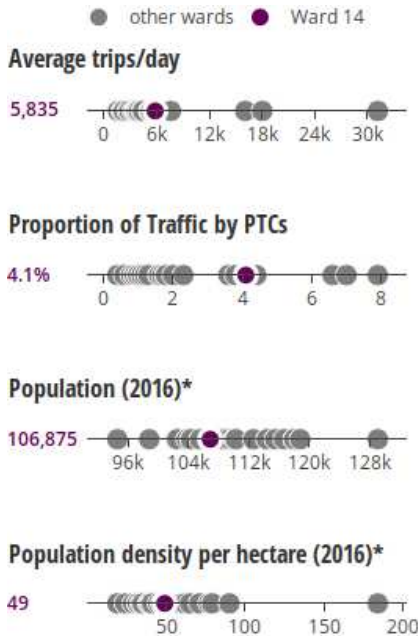
Top 5 Destinations	Trips	%
Spadina-Fort York	555	31
Toronto Centre	430	24
University-Rosedale	300	17
Toronto-Danforth	90	5
Davenport	75	4

Ward 14: Toronto-Danforth

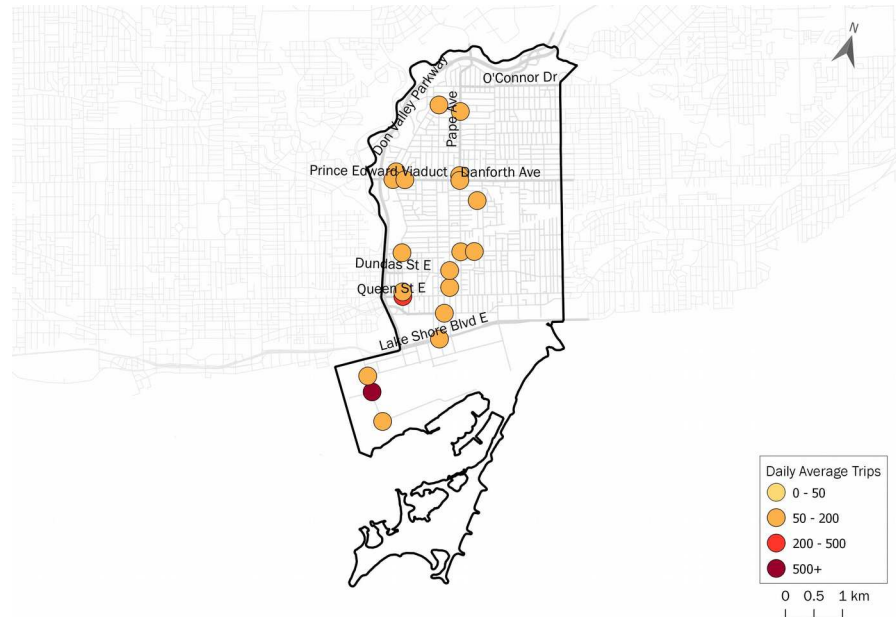
SEPTEMBER 2018



Ward at a Glance

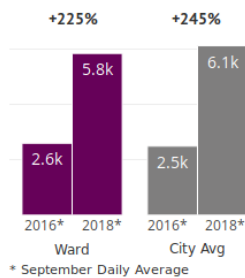


Top 20 Pick-up and Drop-off Hotspots



Activity clustered near Polson Pier, Queen & Broadview, along Carlaw Avenue/Gerrard Square, along Cosburn Avenue, and Broadview station.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

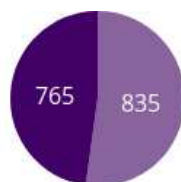
Destination	Trips/day	Fraction (%)
Spadina-Fort York	1,245	21
Toronto-Danforth	1,075	18
Toronto Centre	970	17
University-Rosedale	575	10
Beaches-East York	490	8

Most trips end within-ward or in neighbour wards.

Busiest Hour (Sept 2016–2018)

11 PM, SAT AUG 11, 2018

1,600 TOTAL TRIPS



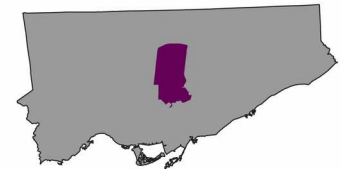
Dropoffs
Pickups

Drop-offs clustered in Polson Pier and pick-ups near Broadview, Pape and Donlands stations.

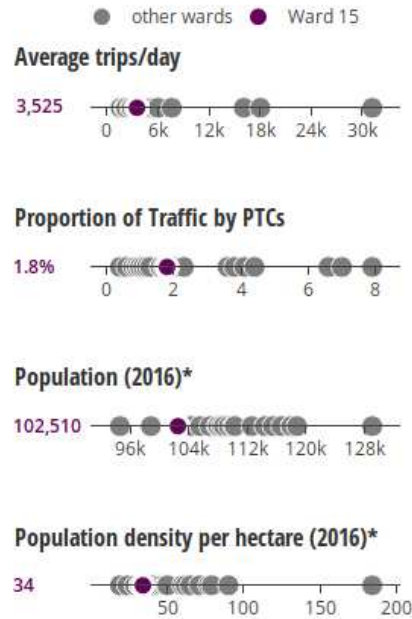
Top 5 Destinations	Trips	%
Spadina-Fort York	150	20
Toronto-Danforth	125	16
Toronto Centre	90	12
University-Rosedale	80	10
Beaches-East York	75	10

Ward 15: Don Valley West

SEPTEMBER 2018



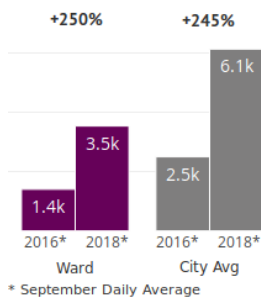
Ward at a Glance



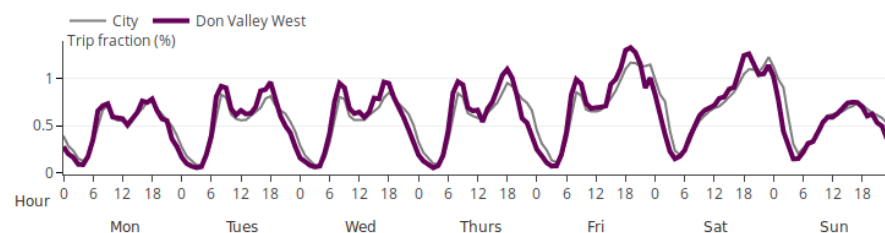
Top 20 Pick-up and Drop-off Hotspots



Daily Trip Growth



Time of Week Profile



Five Busiest Locations

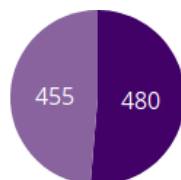
Destination	Trips/day	Fraction (%)
Don Valley West	520	15
Spadina-Fort York	395	11
University-Rosedale	345	10
Toronto-St. Paul's	310	9
Eglinton-Lawrence	290	8

Most trips end within-ward or in neighbour wards.

Busiest Hour (Sept 2016–2018)

1 AM, MON JAN 1, 2018

935 TOTAL TRIPS



Activity mainly near Yonge & Eglinton, and some near Lawrence station and Thorncliffe Park.

■ Pickups
■ Dropoffs

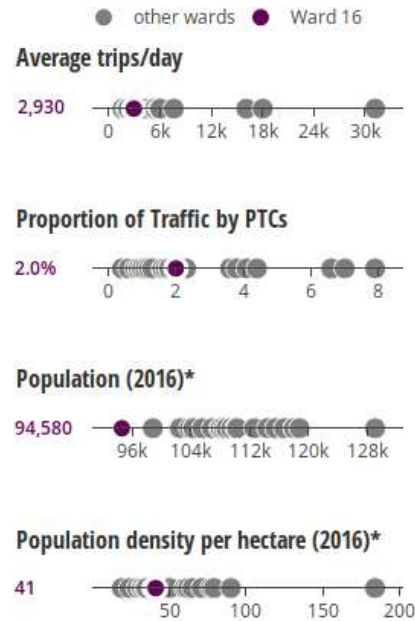
Top 5 Destinations	Trips	%
Don Valley West	85	18
Eglinton-Lawrence	65	13
Toronto-St. Paul's	60	12
University-Rosedale	45	9
Spadina-Fort York	35	8

Ward 16: Don Valley East

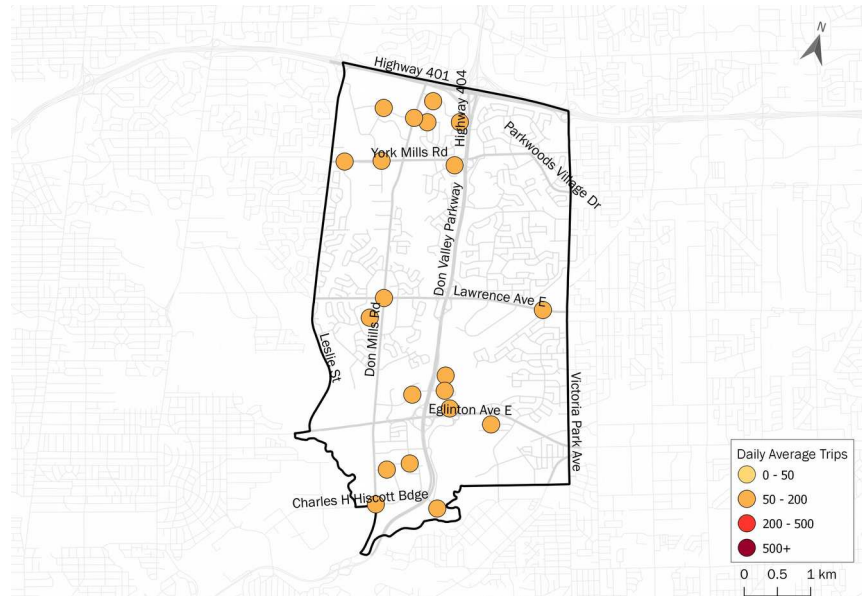
SEPTEMBER 2018



Ward at a Glance

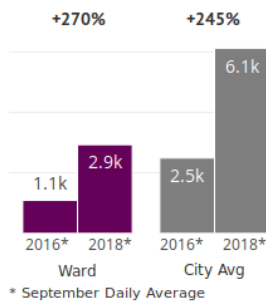


Top 20 Pick-up and Drop-off Hotspots

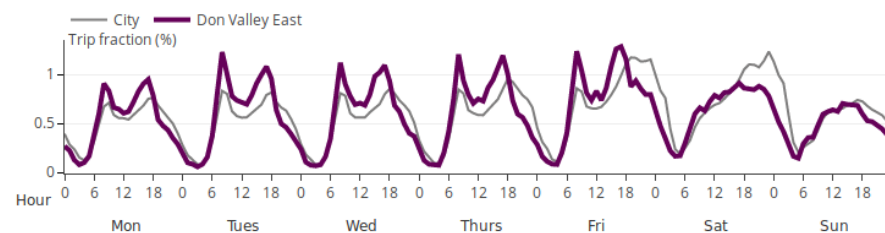


Trips in this ward clustered at offices near Don Mills and Graydon Hall, and around Flemingdon Park.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

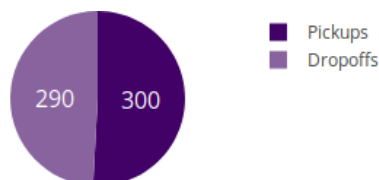
Destination	Trips/day	Fraction (%)
Don Valley East	510	17
Don Valley North	290	10
Spadina-Fort York	240	8
Scarborough Centre	235	8
Don Valley West	215	7

Most trips end within-ward, in nearby wards, or in Old Toronto.

Busiest Hour (Sept 2016–2018)

8 AM, TUES AUG 21, 2018

590 TOTAL TRIPS

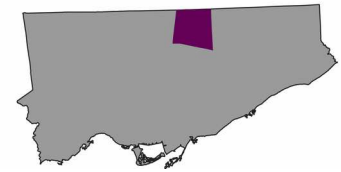


Trips were commuter-related, near businesses at Flemingdon Park and Don Mills near the 401.

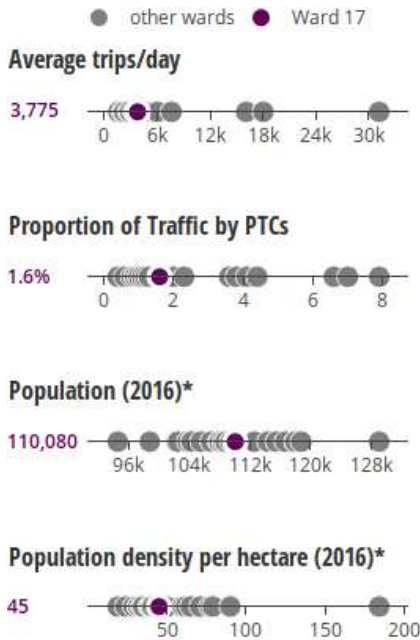
Top 5 Destinations	Trips	%
Don Valley East	65	21
Don Valley North	35	12
Spadina-Fort York	25	8
Don Valley West	20	7
University-Rosedale	20	7

Ward 17: Don Valley North

SEPTEMBER 2018



Ward at a Glance

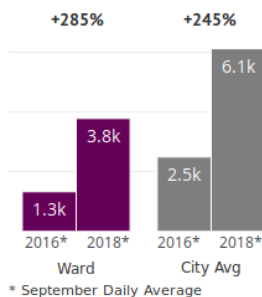


Top 20 Pick-up and Drop-off Hotspots

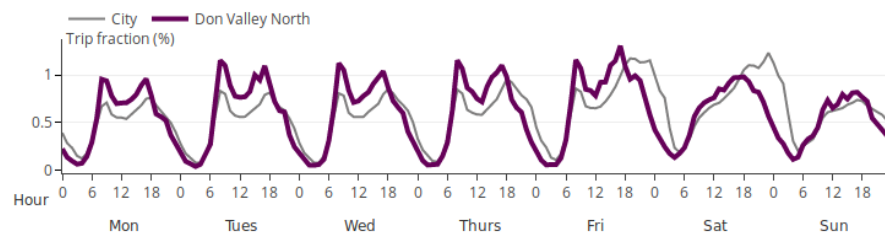


Hotspots were near TTC stations along Sheppard Ave, especially Don Mills station. Victoria Park and Sheppard also saw noticeable activity.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

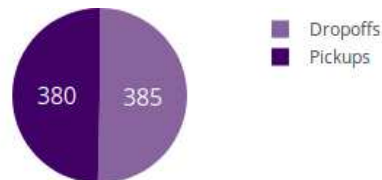
Destination	Trips/day	Fraction (%)
Don Valley North	935	25
Outside Toronto	555	15
Willowdale	440	12
Don Valley East	295	8
Scarborough-Agincourt	240	6

Most trips end within-ward, in nearby wards, or in Old Toronto.

Busiest Hour (Sept 2016–2018)

9 AM, MON SEP 10, 2018

770 TOTAL TRIPS

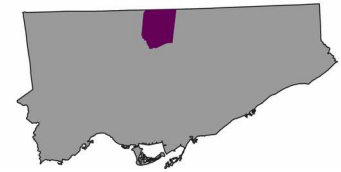


Activity was near Victoria Park & Sheppard, North York General Hospital, and Bayview stations.

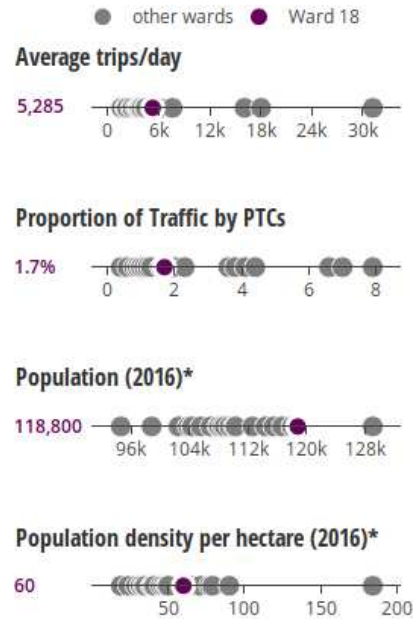
Top 5 Destinations	Trips	%
Don Valley North	140	37
Outside Toronto	55	14
Willowdale	50	13
Don Valley East	40	10
Scarborough-Agincourt	15	4

Ward 18: Willowdale

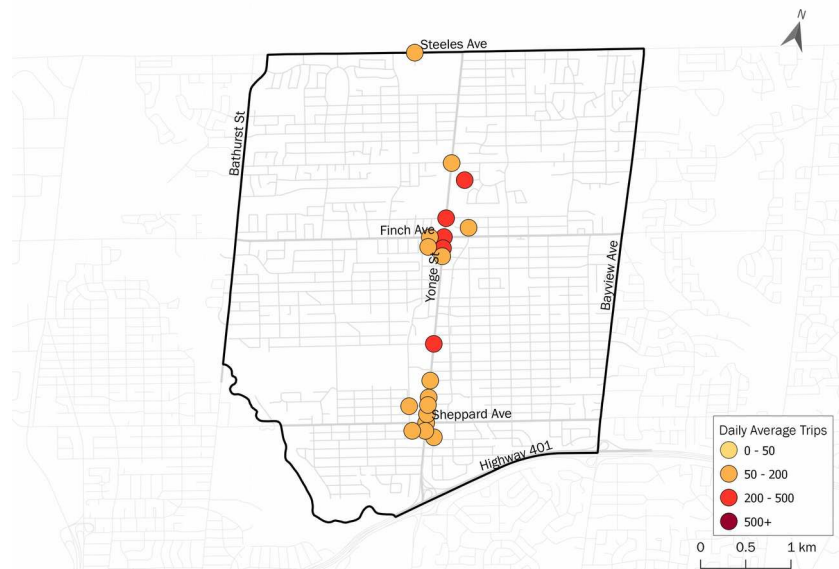
SEPTEMBER 2018



Ward at a Glance

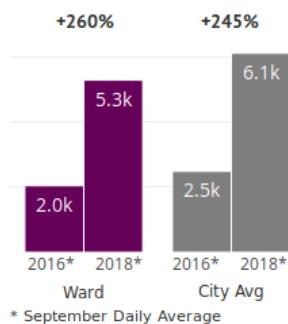


Top 20 Pick-up and Drop-off Hotspots

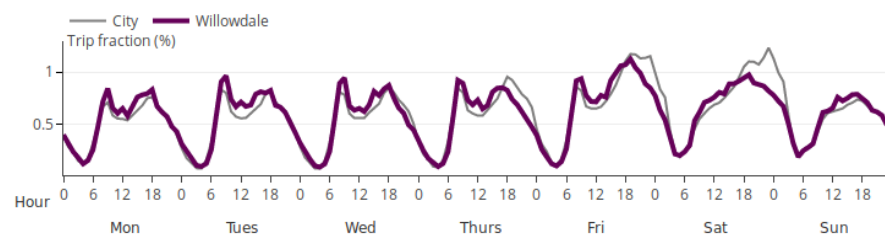


Trips clustered all along Yonge, with a main concentration around Finch station, and another near Sheppard-Yonge station.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

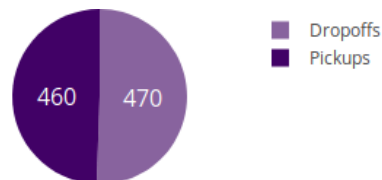
Destination	Trips/day	Fraction (%)
Willowdale	1,490	28
Outside Toronto	1,165	22
Don Valley North	470	9
York Centre	370	7
Humber River-Black Creek	280	5

Most trips end within-ward or outside Toronto.

Busiest Hour (Sept 2016–2018)

5 PM, FRI SEP 21, 2018

930 TOTAL TRIPS

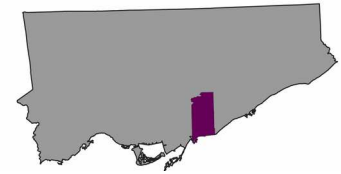


Trips were along Yonge St with clusters at Finch station, North York Centre and Sheppard-Yonge.

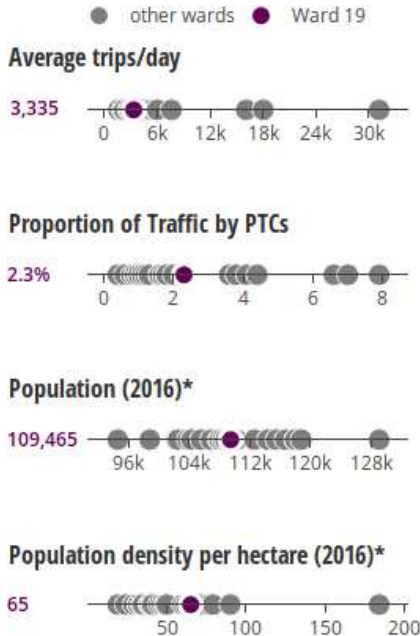
Top 5 Destinations	Trips	%
Willowdale	180	39
Outside Toronto	75	16
York Centre	40	8
Don Valley North	30	6
Eglinton-Lawrence	25	5

Ward 19: Beaches-East York

SEPTEMBER 2018



Ward at a Glance

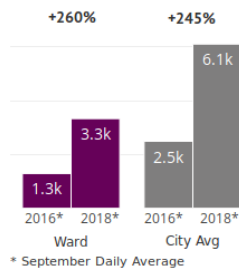


Top 20 Pick-up and Drop-off Hotspots

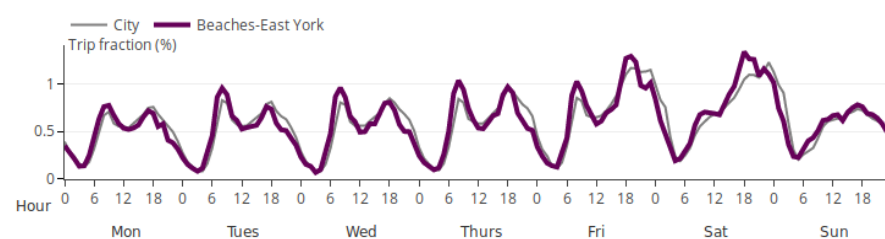


Trips tended to cluster around TTC stations and near the apartment and condo buildings in Crescent Town.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

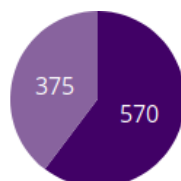
Destination	Trips/day	Fraction (%)
Beaches-East York	710	21
Spadina-Fort York	500	15
Toronto-Danforth	465	14
Toronto Centre	335	10
Scarborough Southwest	305	9

Most trips end within-ward or Old Toronto.

Busiest Hour (Sept 2016–2018)

11 PM, SAT JUL 28, 2018

945 TOTAL TRIPS



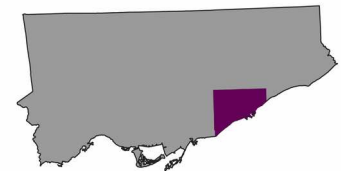
■ Pickups
■ Dropoffs

Trips were along Queen St, with less activity at Woodbine, Main Street, and Victoria Park stations.

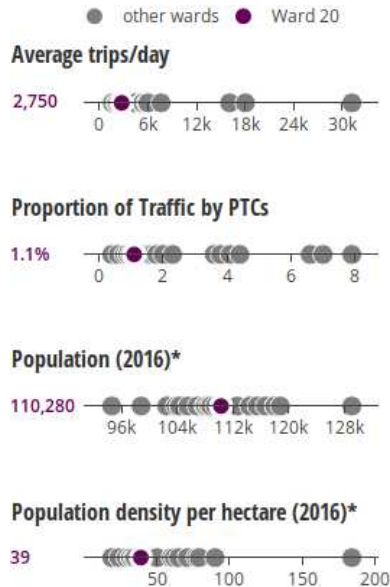
Top 5 Destinations	Trips	%
Beaches-East York	105	18
Spadina-Fort York	90	16
Toronto-Danforth	75	13
Scarborough Southwest	55	10
Toronto Centre	55	10

Ward 20: Scarborough-Southwest

SEPTEMBER 2018



Ward at a Glance

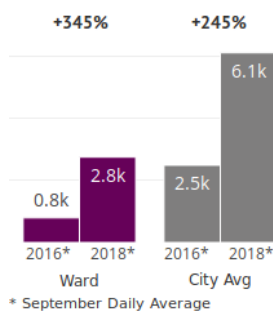


Top 20 Pick-up and Drop-off Hotspots

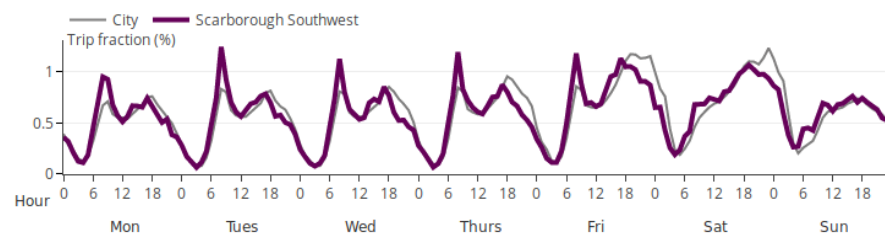


Most trips tended to cluster along Eglinton Ave, with a major hotspot at Kennedy station.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

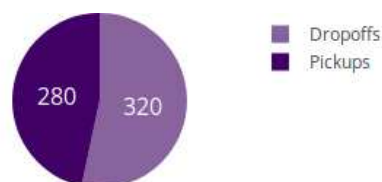
Destination	Trips/day	Fraction (%)
Scarborough Southwest	710	26
Scarborough Centre	430	16
Beaches-East York	295	11
Scarborough-Guildwood	190	7
Spadina-Fort York	160	6

Most trips end within-ward or neighbour wards.

Busiest Hour (Sept 2016–2018)

1 AM, MON JAN 1, 2018

600 TOTAL TRIPS

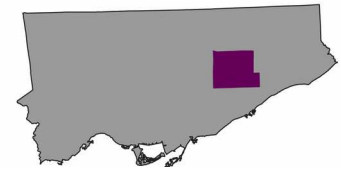


Activity near Golden Mile, Victoria Park, Warden and Kennedy stations, and near Kingston Road.

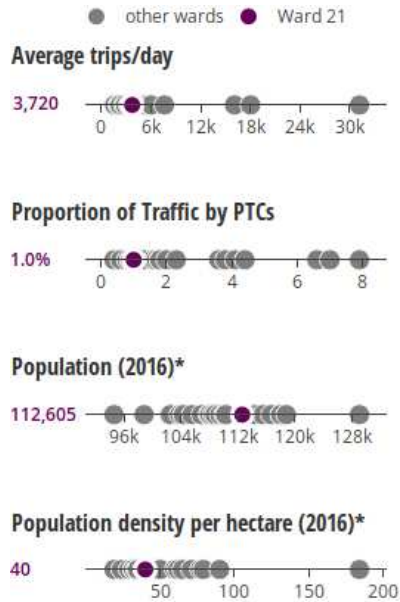
Top 5 Destinations	Trips	%
Scarborough Southwest	80	29
Beaches-East York	50	17
Scarborough-Guildwood	30	10
Scarborough Centre	25	9
Toronto-Danforth	15	6

Ward 21: Scarborough Centre

SEPTEMBER 2018



Ward at a Glance



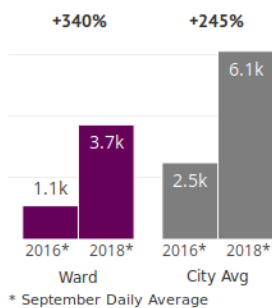
*Source: Statistics Canada, Census 2016, 2011 & 2006.

Top 20 Pick-up and Drop-off Hotspots

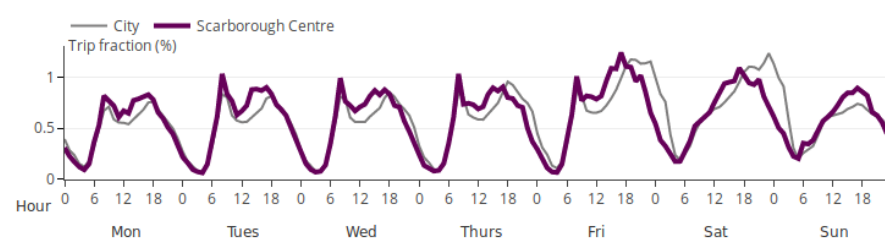


Major hotspots occurred around Scarborough Centre station, with a smaller hotspot along Eglinton Avenue in the Golden Mile.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

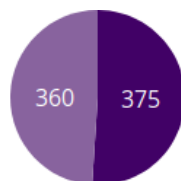
Destination	Trips/day	Fraction (%)
Scarborough Centre	865	23
Scarborough Southwest	480	13
Scarborough-Guildwood	355	10
Don Valley East	245	7
Outside Toronto	240	6

Most trips within Scarborough, a major transit hub.

Busiest Hour (Sept 2016–2018)

5 PM, FRI SEP 21, 2018

735 TOTAL TRIPS



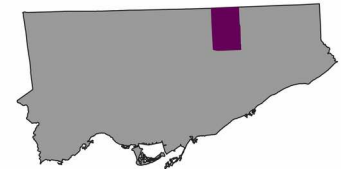
■ Pickups
■ Dropoffs

Trips were commuter-related, maily located near the Golden Mile and the Scarborough Town Centre.

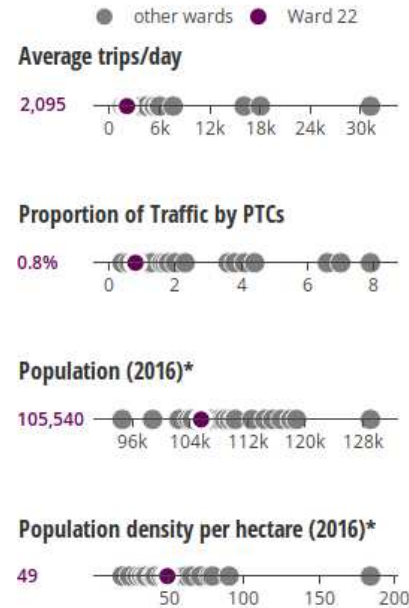
Top 5 Destinations	Trips	%
Scarborough Centre	105	27
Scarborough Southwest	45	11
Scarborough-Guildwood	35	9
Scarborough-Agincourt	30	8
Scarborough North	30	7

Ward 22: Scarborough-Agincourt

SEPTEMBER 2018



Ward at a Glance

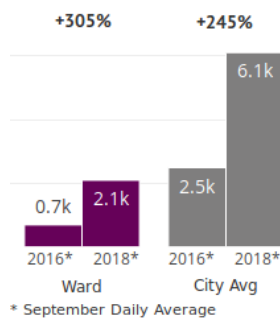


Top 20 Pick-up and Drop-off Hotspots



Hotspots tended to cluster along and around Sheppard Ave E, with another cluster e.g. near the Delta Hotels.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

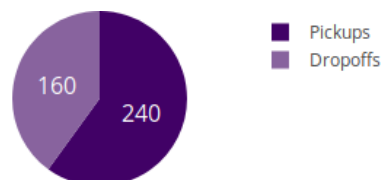
Destination	Trips/day	Fraction (%)
Scarborough-Agincourt	395	19
Outside Toronto	375	18
Don Valley North	270	13
Scarborough Centre	220	11
Scarborough North	155	7

Most trips end within-ward or outside Toronto.

Busiest Hour (Sept 2016–2018)

8 AM, TUES SEP 25, 2018

400 TOTAL TRIPS

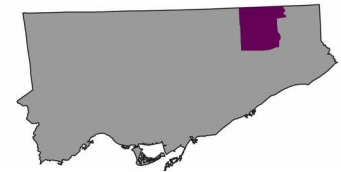


Trips were commuter-related, with hotspots near Victoria Park Avenue and near Finch Avenue.

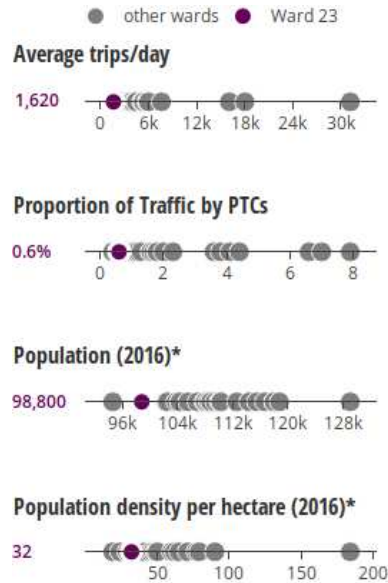
Top 5 Destinations	Trips	%
Scarborough-Agincourt	60	26
Outside Toronto	50	21
Don Valley North	35	16
Scarborough Centre	15	7
Scarborough North	15	6

Ward 23: Scarborough North

SEPTEMBER 2018

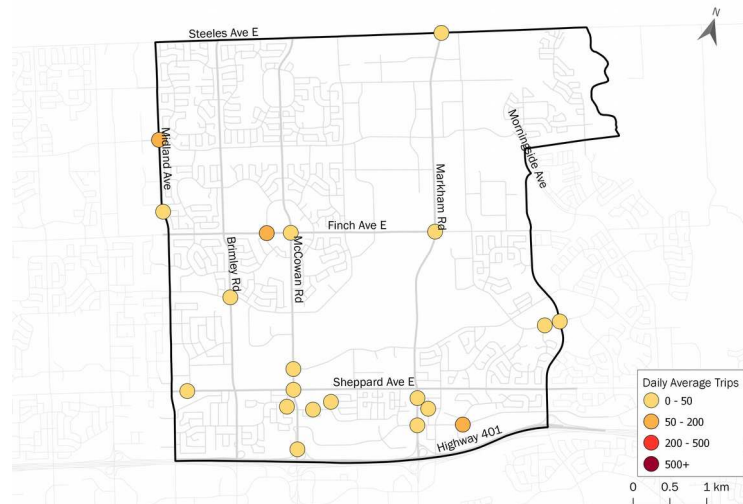


Ward at a Glance



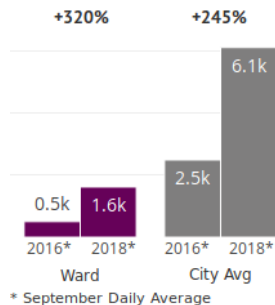
*Source: Statistics Canada, Census 2016, 2011 & 2006.

Top 20 Pick-up and Drop-off Hotspots

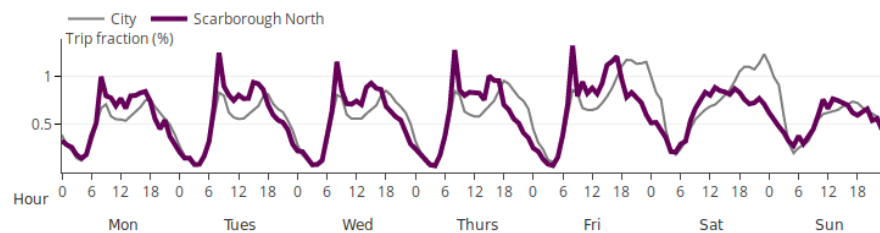


There were several hotspots around e.g. Sheppard & McCowan, and Markham Road south of Sheppard.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

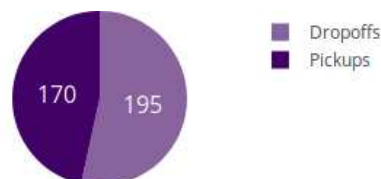
Destination	Trips/day	Fraction (%)
Scarborough North	310	19
Outside Toronto	270	17
Scarborough Centre	215	13
Scarborough-Guildwood	145	9
Scarborough-Agincourt	140	9

Most trips end within Scarborough or outside Toronto.

Busiest Hour (Sept 2016–2018)

8 AM, TUES SEP 25, 2018

400 TOTAL TRIPS

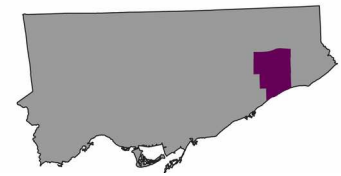


Drop-offs were in Novopharm Court, pick-ups in White Haven. Activity at Finch & McCowan.

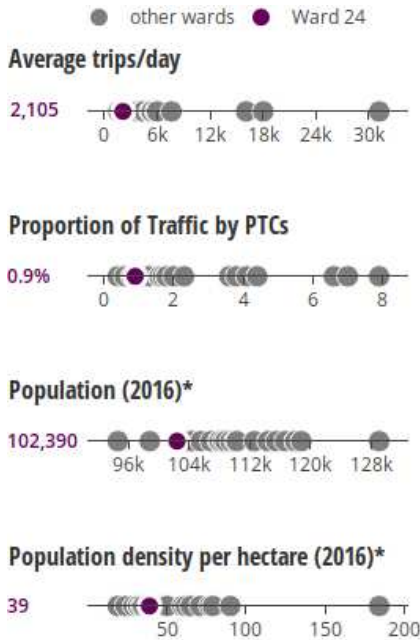
Top 5 Destinations	Trips	%
Scarborough North	40	24
Scarborough-Guildwood	20	13
Outside Toronto	20	11
Scarborough Centre	15	10
Don Valley North	15	9

Ward 24: Scarborough-Guildwood

SEPTEMBER 2018

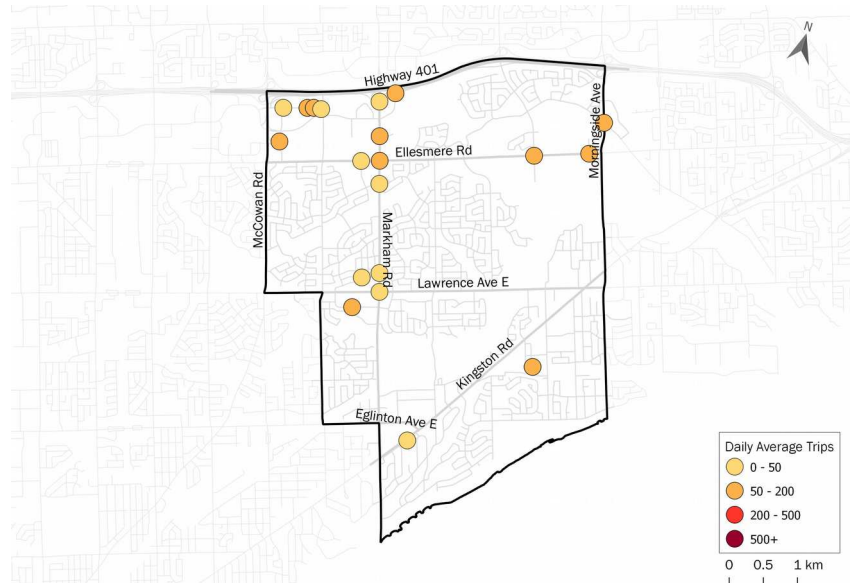


Ward at a Glance



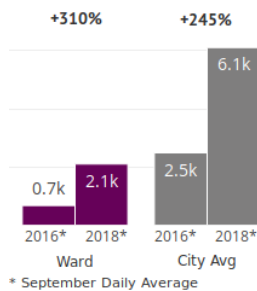
*Source: Statistics Canada, Census 2016, 2011 & 2006.

Top 20 Pick-up and Drop-off Hotspots

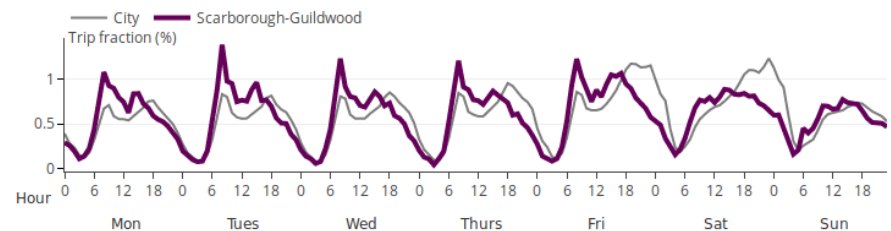


Trips tended to cluster at the eastern part of Scarborough Centre, with another cluster at Lawrence and Markham Road.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

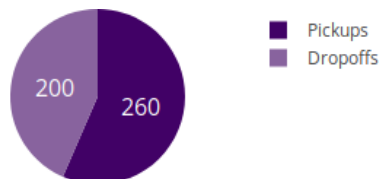
Destination	Trips/day	Fraction (%)
Scarborough-Guildwood	495	23
Scarborough Centre	365	17
Scarborough-Rouge Park	245	12
Scarborough Southwest	235	11
Scarborough North	170	8

Most trips within Scarborough, a major transit hub.

Busiest Hour (Sept 2016–2018)

8 AM, TUES SEP 25, 2018

460 TOTAL TRIPS



Trips clustered near Scarborough Town Centre, UofT Scarborough, Eglinton Ave and Markham Rd.

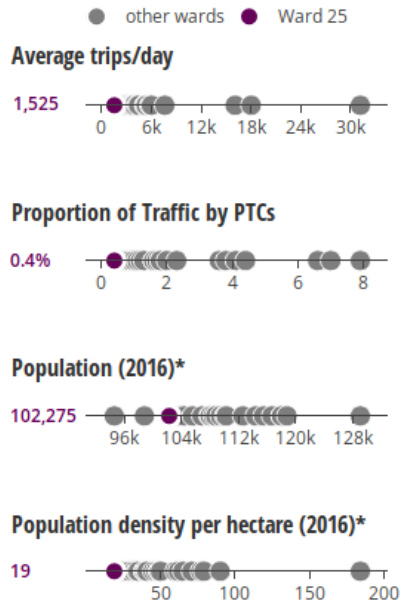
Top 5 Destinations	Trips	%
Scarborough-Guildwood	80	31
Scarborough Centre	40	15
Scarborough North	30	12
Scarborough Southwest	30	12
Scarborough-Rouge Park	25	10

Ward 25: Scarborough-Rouge Park

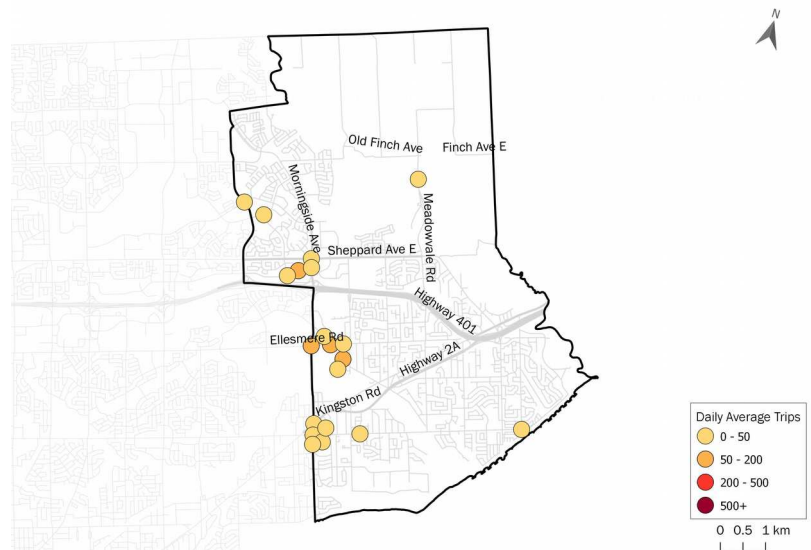
SEPTEMBER 2018



Ward at a Glance

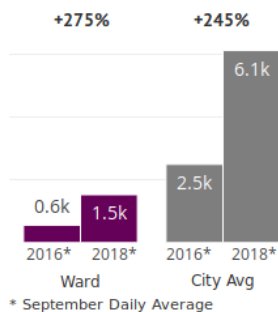


Top 20 Pick-up and Drop-off Hotspots

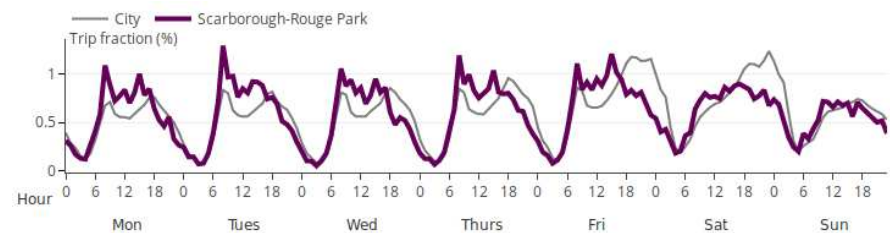


Hotspots clustered around the University of Toronto Scarborough, and on Morningside at both Sheppard and Kingston Rd.

Daily Trip Growth



Time of Week Profile



Five Busiest Locations

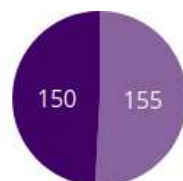
Destination	Trips/day	Fraction (%)
Scarborough-Rouge Park	410	27
Scarborough-Guildwood	225	15
Scarborough Centre	185	12
Outside Toronto	185	12
Scarborough North	150	10

Most trips end within Scarborough or outside Toronto.

Busiest Hour (Sept 2016–2018)

9 AM, MON SEP 10, 2018

305 TOTAL TRIPS



Dropoffs
Pickups

Trips were commuter-related, with most activity occurring at University of Toronto Scarborough.

Top 5 Destinations	Trips	%
Scarborough-Rouge Park	50	34
Scarborough-Guildwood	25	18
Scarborough Centre	15	11
Outside Toronto	15	10
Scarborough North	15	10