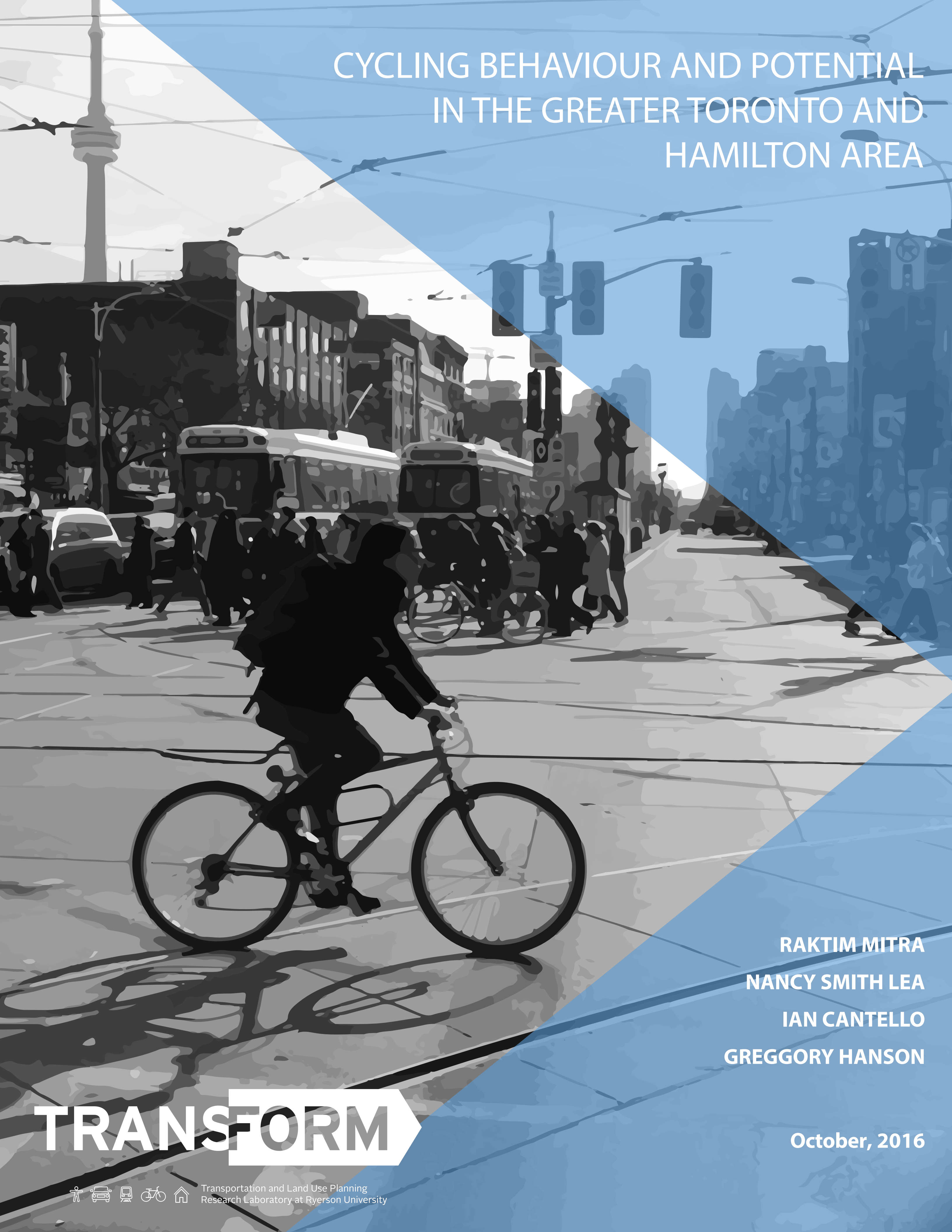

CYCLING BEHAVIOUR AND POTENTIAL IN THE GREATER TORONTO AND HAMILTON AREA

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EXECUTIVE SUMMARY

In the Greater Toronto and Hamilton Area (GTHA), policy and popular interest in active transportation has grown considerably over the past decade. The Regional Transportation Plan for the GTHA, *The Big Move,* has identified higher walking and cycling rates as a major objective to be achieved by 2025. This strategic position is also supported by the *Growth Plan for the Greater Golden Horseshoe,* and as a result, Official Plans and Transportation Plans that emphasize cycling and cycling-friendly communities have become more common. This research was undertaken to inform the current policy and planning practice on this topic. The report documents current ***patterns*** of cycling in the GTHA, quantifies cycling ***potential*** in the region, and identifies areas with high ***propensity*** for cycling.

GTHA residents take 14 million trips everyday to travel to various destinations; only 6% of them are currently either walked or cycled. Between 2001 and 2011, cycling rates have increased by 37%, which is a 61% increase in the total number of cyclists in 10 years. Despite that, the overall cycling mode share for the GTHA was moderate in 2011, only 1% of all trips were taken using a bicycle. It appears that the previously observed 37% growth in cycling mode share can largely be explained by an increased popularity of cycling in Toronto's downtown/ inner urban neighbourhoods. In most parts of the GTHA other than Toronto, cycling rates have increased moderately (i.e., between 0.26% and 1.5%) or have remained unchanged.

In comparison, 4.35 million trips within the GTHA can be considered potentially cyclable trips, which is one-third (i.e., 33%) of all trips that are not currently taken on foot or a using a bicycle. A potentially cyclable trip is a trip where (1) the primary mode of travel was not walking or cycling, (2) the trip distance was between 1 and 5 km, and (3) the purpose of the trip was not to facilitate other passenger(s). Other key findings from this report are:

- More than half (53%) of the estimated potentially cyclable trips are short trips, between 1 and 3 km in length. All regional municipalities produce very high volumes of short trips that could potentially be cycled.
- With regard to socio-demographic groups, the potential for cycling was higher among unemployed travellers and among women. Women currently make more trips that can potentially be cycled (54%) compared to men (46%). However, only 30% of current cyclists on GTHA's roads are female.
- Currently only 1.1% of school or work-related trips by 11-16 year old youth are cycled. However, our estimations suggest that at least 27.5% of all trips to school or work by this age group can potentially be cycled.
- Most transit access and egress trips are short (i.e, 90% trips are below 1 km) and are walked. However, approximately 4% of transit access trips, and 3.6% of egress trips, are potentially cyclable but are currently taken using a car (either as drivers or passengers).
- One in five (22%) of transit access/egress trips relating to the use of GO Transit could potentially be cycled. However, cycling potential varies across GO stations.
- Neighbourhood built environment is a significant enabler (or barrier) to cycling. A statistical modeling of cycling behaviour in the GTHA revealed that population density, land use mix, dedicated cycling facilities (i.e., cycle tracks and bicycle lanes) and safer streets (i.e., roads with lower speed limits) were positively associated with cycling uptake. Longer trip distances (>5 km) was a potential barrier.

Metrolinx, which is the provincial agency responsible for transportation planning for the GTHA, has outlined several strategic directions in a recently released *Discussion Paper for the Next Regional Transportation Plan* (Metrolinx, 2016). Our recommendations within this report are positioned to inform the new Regional Transportation Plan, and more broadly, advance transportation planning policy and practice in this region.

First, Metrolinx's proposed strategy of promoting active transportation for short trips is a critical first step. Many GTHA municipalities are currently in the process of adopting new and improved Active Transportation Plans and/or supporting policies, which may benefit from stronger support from the province. There is also a critical need for the planning and investment of all municipal and regional transit expansion projects to include an active transportation plan that prioritizes walking and cycling connections to transit.

Second, as the GTHA communities continue to grow within the provisions set out in the *Growth Plan,* the GO-transit corridors have evolved as spines that have guided much of this growth in the suburban municipalities. As a result, an opportunity has emerged where Metrolinx can play the role of a key stakeholder in creating dense, mixed use and complete communities by utilizing the land development potential around transit stations. This report identifies such opportunities. By carefully designing the communities and streets near major transportation nodes that demonstrate high cycling potential, significant improvements in the regional cycling rate can be achieved.

Third, Metrolinx has been facilitating walking and cycling among children through the Active and Sustainable School Travel (ASST) initiative. A regional approach can be extremely useful in capitalizing the very high potential for cycling among this younger population by improving coordination, leadership and monitoring/evaluation processes.

Fourth, women are the way forward for cities and regions aiming to increase cycling trips. In the absence of policy and programming that are strategically directed to women, much of the existing cycling potential among female travellers may never be materialized, particularly in suburban municipalities within the GTHA. However, more research focusing on women's cycling behaviour and barriers to cycling is needed to inform the development of future policy and programming that can specifically address the current very large gender-gap.

Lastly, promoting cycling to/from transit stations can play a critical role in addressing and mitigating the first mile/ last mile problem, and improving the quality and quantity of transit ridership as a result. Current Metrolinx policy around GO Rail Parking and Station Access is heavily focused on automobiles, which is perhaps justified based on current travel patterns. However, this report identifies significant potential for cycling to/from many GO transit stations. The results can help Metrolinx and its stakeholders in determining the priorities for capital investment in cycling facilities, or perhaps identify locations/ stations for pilot projects focusing on improving active transportation network and facilities aimed at providing better access to stations.

Chapter 1 Introduction

1.1 Background

The link between active transportation (travel by human powered modes such as walking and cycling), urban health and sustainability is a central theme in current urban planning practice and policy discussion. In particular, academic, professional and public interest in urban cycling has grown significantly over the last decade. This interest is matched by a significant increase in cycling rates in recent years across Canada. However, by comparison to car trips, the mode share of cycling in the Greater Toronto and Hamilton Area (GTHA) still remains very low; only 0.9% of all daily trips in 2011 were cycling trips (Data Management Group, 2013). Interestingly, however, current cycling mode share is comparable to the percentage of trips (1.64%) taken by GO Transit, and the combined mode share of active transportation (walking and cycling) is 6.1% (Data Management Group, 2013), which is nearly quadruple that of GO Transit's mode share. Also encouraging is the fact that despite current low rates, cycling is slowly becoming a more common mode of transportation in some parts of the GTHA. Nevertheless, the low rate of cycling is a potential barrier to realizing the key visions set out in the Regional Transportation Plan, *The Big Move*, namely-1) high quality of life, 2) thriving, sustainable and protected environment, and 3) strong, prosperous and competitive economy (Metrolinx, 2008).

To address this, the Regional Transportation Plan has identified higher walking and cycling rates as a major objective to be achieved by 2031. As the Government of Ontario's transportation agency for the GTHA, Metrolinx has also adopted an approach to make significant investments in improving the cycling network in order to improve cycling rates within the GTHA (Metrolinx, 2008). Recently, Metrolinx released a *Discussion Paper for the Next Regional Transportation Plan,* which proposes several strategic directions to support active transportation, including cycling (Metrolinx, 2016).

In recent years, capital and operational investments in cycling facilities have also been supported through Official Plans, Transportation Master Plans or design guidelines across municipalities and regional municipalities in the GTHA. The *Growth Plan for the Greater Golden Horseshoe* (also known as the Places to Grow Plan) emphasizes compact, vibrant and complete communities**.** Creating streets and places that enable cycling (and active transportation in general) is critically important in achieving this key guiding principle set out in *The Growth Plan* (Ontario Ministry of Municipal Affairs, 2006).

The Big Move identified a goal of 20% of all trips in this region involving either walking or cycling (Metrolinx, 2008). As only 6% of all trips in the GTHA are currently taken either on foot or using a bicycle, a major modal shift has to occur to make the abovementioned objective a reality. However, not all trips can be feasibility cycled, and we recognize that opportunities for cycling may vary geographically due to differences in built environment-related facilitators and barriers. Cycling uptake may also be influenced by socio-demographic and trip characteristics. This means that some neighbourhoods/ communities in the GTHA may have higher potential for cycling growth compared to others. For greater success of short-term policy and programming related to cycling, priority should be strategically directed to areas where higher potential for cycling growth exist. To increase cycling in the GTHA more broadly, systemic social and land form barriers need to be addressed. An improved understanding of the state of cycling across the GTHA, as well as the potential for future growth, is critical to this end.

To address this gap, we undertook this research project to explore current cycling behaviour and opportunities for cycling growth in the GTHA.

1.2 Research Objectives

The main goal of this study was to identify areas with higher and lower cycling potential using a geographical analysis covering the GTHA. More specifically, the research had three objectives:

1) Explore current regional patterns of cycling in the GTHA. Identify who is making these trips, where, when and for what purposes, using Transportation Tomorrow Survey (TTS) data.
2) Identify trips that can reasonably be cycled but are not currently being cycled. Geographically explore the nature and extent of this cycling ***potential*** across the GTHA, compared to current cycling patterns.
3) Explore the ***propensity*** for cycling using a quantitative approach. Identify geographic units (e.g., census tracts) within the GTHA with built environment and socio-demographic characteristics that are favourable for cycling.

1.3 Travel Data

Household travel data from the Transportation Tomorrow Survey (TTS) was analyzed for this research. The TTS is a series of cross-sectional household travel surveys conducted in the Greater Golden Horseshoe (GGH) region once every five years since 1986 (Data Management Group 2013). 2011 is the most recent year that TTS data is available for analysis. In this report, we used the 2011 version of the TTS data to examine trips by individuals who live in the GTHA (i.e., the City of Toronto, City of Hamilton and the regional municipalities of Durham, York, Peel, and Halton). The TTS data is collected from fall until spring. The 2011 TTS included a 5% samples of all households in the region (n = 160,000 households).

The TTS collects retrospective travel behaviour data using a computer assisted telephone interviewing (CATI) method. An adult household member is interviewed over telephone, who proxy-reports for all household members aged 11 years and older. The respondent reports trips by all household members aged 11 or older, for the day prior to the date of the survey. ***Unless otherwise mentioned, the travel mode of a trip in this report represents the primary mode of travel***. For example, if someone cycled to a transit station and then took transit to travel the majority of the distance to a destination, the primary mode of travel for that trip would be transit, resulting in an under-reporting of walking and cycling trips. To address this, transit access/egress trips, and travel modes used for these trips, were explored separately. In addition, the survey also collected some socio-demographic data on households and individual travellers, which has been used in our analysis.

The TTS only focuses on trips that are made for transportation purposes, and does not include information on recreational walking or cycling. More important, because TTS data is collected only among households with a home phone-line, the survey is less representative of the youth and young adults, a subpopulation that is likely to walk and use bicycle more often than other population groups for trip-making, but many of whom do not possess a home-phone. As a result, the TTS surveys typically under-report walking and cycling trips. In addition, travel data is collected only for individuals aged >11, leaving out a large proportion of children from the survey sample. Despite its limitations, the survey offers the largest population-representative travel behaviour dataset of its kind in North America, and has been widely used to inform transportation planning in the GTHA.

In order to discuss current cycling behaviour and cycling potential in the GTHA, data from the 2011 TTS, aggregated at the census tract (CT), regional municipality, and GTHA levels, are summarized into maps, graphs and charts. For the analysis of cycling propensity (i.e., areas within GTHA where people are expected to be more likely to cycle for transportation purposes), we relied on other public and private sources of data, the details of which, along with the analytical methods used to estimate cycling propensity, are described in Chapter 4.

1.4 Organization of this Report

The results are presented in three chapters. Chapter 2 explores the current rates and regional patterns of cycling in the GTHA. Followed by that, Chapter 3 quantifies the potential for cycling in this region, and discusses the socio-demographic, built environment and trip-related characteristics of potentially cyclable trips. The geographical variation in cycling potential is also explored. Chapter 4 presents results from a quantities analysis that examines current cycling behaviour in the region. Based on this analysis, the cycling propensity (or cycle-friendliness) of the GTHA communities were estimated and mapped. Lastly, Chapter 5 discusses some key policy implications based on the findings from this research.

This regional cycling study is a first-of-its-kind in Canada. It provides much needed context-specific insights relating to advancing active transportation planning in the GTHA in light of the visions set out in the *Growth Plan* and *The Regional Transportation Plan*, by quantifying the potential for cycling growth in this region. The results may work as a benchmark that Metrolinx, municipalities in the GTHA and grass-roots organizations can use to identify the socio-demographic groups, trip types and geographic locations with higher potentials for cycling. The study also proposes an approach that can be used as a tool to identify places within the GTHA that are likely to be more amenable to cycling. More specifically, findings from this study will inform the ongoing Regional Transportation Planning Review Process (Metrolinx, 2016), by enabling Metrolinx to undertake targeted and context-specific strategies and programs aimed at improving cycling rates across the region.

Chapter 2 Current Regional Patterns of Cycling in the GTHA

As part of this research project, we submitted a report in August 2015 (Mitra and Smith Lea, 2015), where we summarized the current patterns of cycling trips in the GTHA. The goal of that exploration was to improve our understanding of ***who is making cycling trips, where, when and for what purposes***. The key findings from this report are discussed below. The full analysis can be found in Appendix 1.

Our analysis revealed that cycling trips have been increasing in the GTHA. In 2011, the GTHA residents made 126,000 cycling trips in total, compared to 79,000 trips a decade ago, indicating a 61% increase in the number of cycling trips, and a 37% increase in cycling mode share. Despite this, the overall mode share of cycling, in relation to car trips, remained very low in 2011 at only 0.93% (Figure 1). However, the current cycling mode share is comparable to the percentage of trips by GO Transit. Combined mode share of active transportation (walking and cycling) is 6.1%, which is higher than most large urban regions in North America.

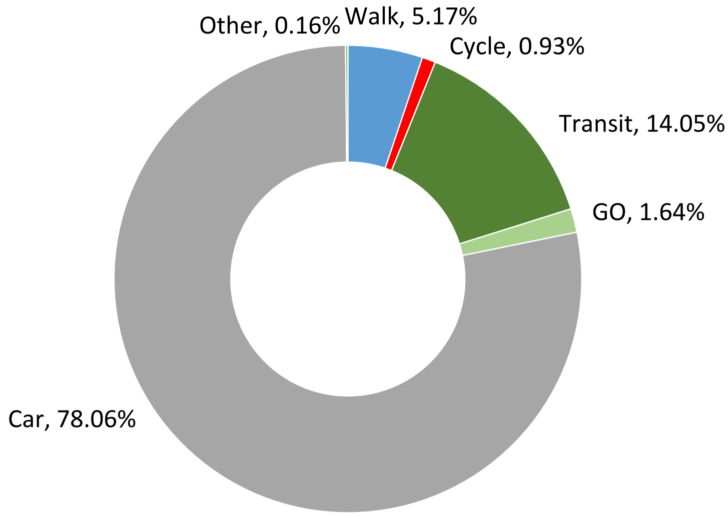

Figure 1: Mode Share of all Trips in the GTHA (2011)

As expected, the rates of cycling were not the same across the GTHA. While in Toronto, 1.9% of all trips are made by bicycle, the rates remain relatively lower in other regional municipalities. Figure 2 explores this topic in further detail, by plotting the rates of cycling across space. The map shows cycling mode share (i.e., % of all trips that were cycled) for each census tract (CT) of trip origin within the GTHA. The results are shown using a "surface-map", where the expected values of cycling for places in between the two TAZ centroids were estimated using an Inverse Distance Weighted (IDW) method. The figure indicates that Toronto's inner urban neighbourhoods (i.e., downtown and surrounding communities) are the only areas in the GTHA that have systematic concentrations of relatively high cycling rates (2% or more). In other parts of the GTHA, cycling rates are relatively lower and the geographical distribution is more sporadic. However, TAZs with relatively high cycling rates (between 1 and 2%) can be found in some municipalities outside of Toronto (for example, in Oshawa, Oakville and Hamilton, among others). With regard to the total number of cyclists in a CT, we see a similar pattern, where the top 10% cycling-trip-producing neighbourhoods were located within the inner urban neighbourhoods of Toronto, and some were also located in Hamilton and Burlington (Figure 3).

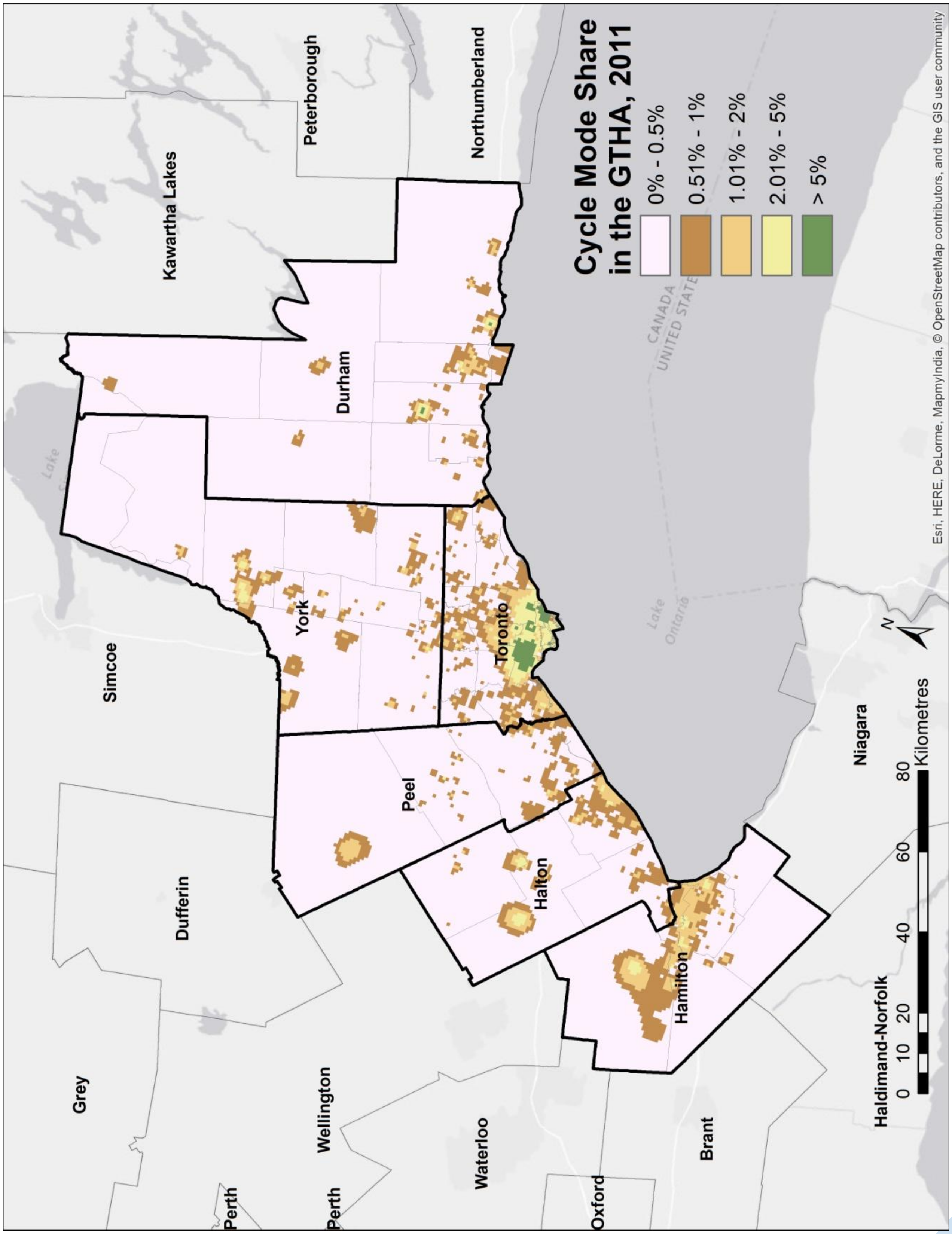

Figure 2: Cycling Rates in the GTHA, 2011

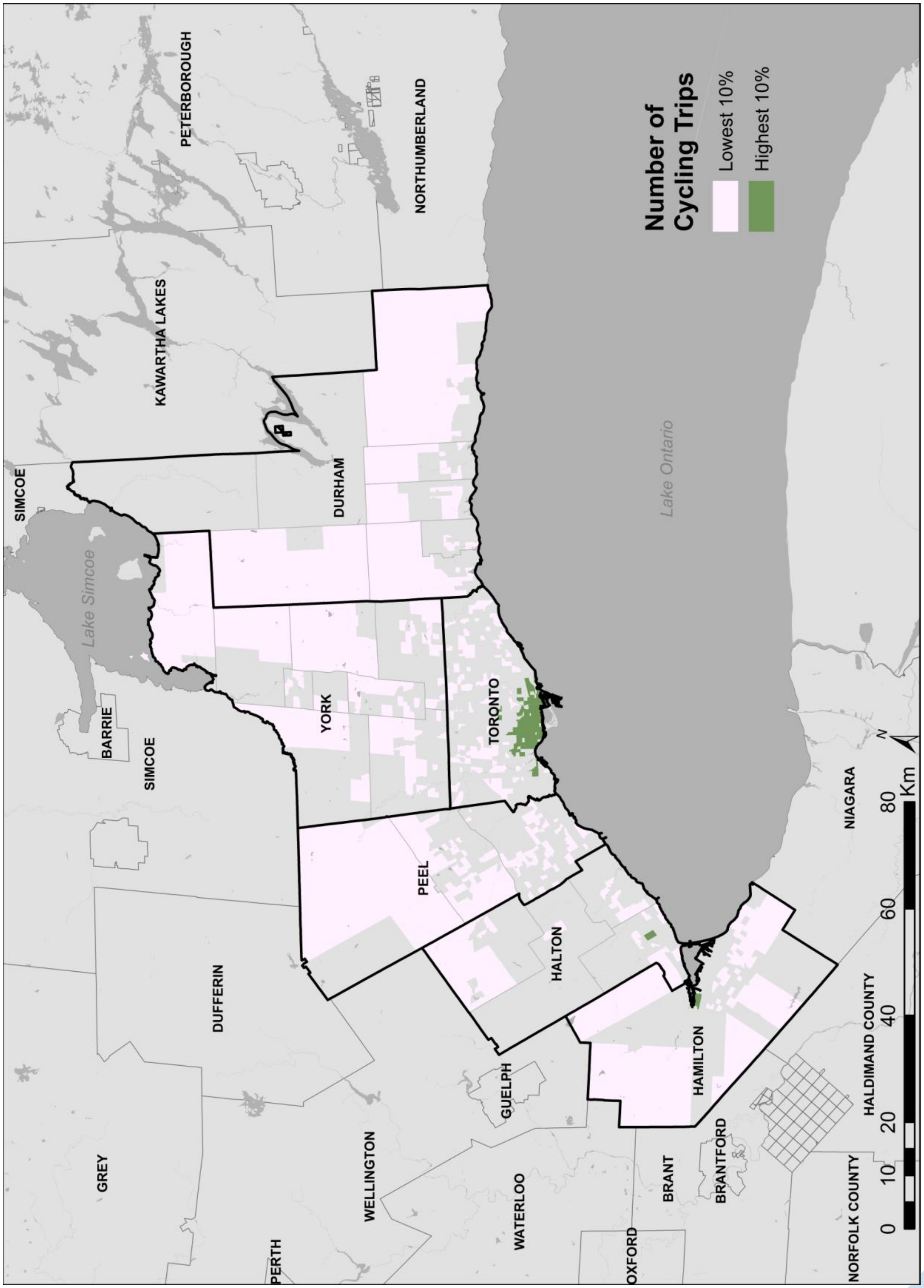

Figure 3: Cycling Volume in the GTHA by Census Tracts, 2011

Other key findings from that report are summarized below:

- It appears that the previously observed 37% growth in cycling mode share can largely be explained by an increased popularity of cycling in Toronto's inner urban neighbourhoods. In most parts of the GTHA other than Toronto, cycling rates have increased moderately (i.e., between 0.26% and 1.5%) or have remained unchanged.
- Cycling is most common for trips that are between 1 and 5 kms in length; 80% of all current cycling trips are <5 km (straight-line of the "crow-fly" distance). In contrast, <10% of cyclists travel more than 7 km.
- Cycling is most commonly used for travelling to work and school. However, significant variations exist across the GTHA. While in Toronto and Hamilton, cycling rates are relatively high among those travelling to work, in other regional municipalities, cycling mode shares for work trips are very low.
- Most transit users live close to, and walk to, transit stops. In fact, for transit access trips that are < 1 km in length, the vast majority (91%) are made on foot. However, when the distance between home/destination and transit stops is >3 km, almost all transit users drive, or are driven, to/from transit stops. It is worth noting that 7.4% of current transit riders live between 1 and 5 kms from a transit stop, a distance that could be cycled, under favourable conditions, to access transit. Similar patterns were also observed for transit egress trips.
- With regard to the socio-demographic characteristics, half of the current cyclists are <40 years old, while 90% are <60 years old. Cycling rates are very low among 20-39 year olds in the regional municipalities of Durham, York, Peel and Halton. In addition, less than one third of the current cyclists in the GTHA are female.
- Cycling rates do not appear to vary across employment/ student status of GTHA residents; however, access to private automobiles (2 or more) may reduce cycling propensity for daily trips.

The findings presented above begin to provide insights into areas of opportunity, and potential areas for future growth. Broadly, the analysis presented here reveals that cycling uptake can be different depending on trip and traveller characteristics. Noticeable geographical variation in cycling rates also exists, indicating that the potential for cycling growth, as well as the social and environmental barriers to this potential growth, may not be the same everywhere. In Chapter 3, this baseline information was used to identify cycling potential for the GTHA.

Chapter 3 Potential for Cycling in the GTHA

A key objective of this research was to quantify and explore potentially cyclable trips within the GTHA. ***Potentially cyclable trips are trips that can reasonably be cycled but are currently being taken using other motorized travel modes (i.e., all other modes except walking and cycling)***. This chapter focuses on the demographic (e.g., age, sex of travellers), geographic (e.g., origins, destinations) and trip-related (e.g., distance, trip purposes, time of travel) characteristics of these potentially cyclable trips. Comparisons between currently cycled and potentially cyclable trips are made where needed.

This analysis will offer insights into key demographic groups, locations and trip types within the GTHA region that offer higher potential in the face of forthcoming policy and programming aimed at improving the current cycling rate in the GTHA.

3.1 Defining Potentially Cyclable Trips

Quantifying the potential for cycling is not an easy task. In a previous study, researchers from the UK identified potentially cyclable trips on the basis of the characteristics of the people who are currently cycling as well as the types of trips currently being made by bicycle (Transport for London, 2010). In other words, a set of criteria was used to identify trips that are currently taken by motor vehicle or public transit that share common characteristics with currently cycled trips.

More recently, Ledsham and Savan (2015) used 2006 TTS data to examine ward-level cycling behaviour in Toronto and developed a methodology to strategically segment target populations with the highest potential to participate in cycling. They identified eight key factors that they found to influence cycling rates in Toronto: 1) age, 2) sex, 3) trip length, 4) trip frequency, 5) population density, 6) destination density, 6) cycling service density, and 8) terrain. They determined the factors associated with higher cycling potential are:

- trips of less than 5 km
- medium to high population density
- high destination density
- medium to high cycling service density
- relatively level terrain

This report adopts a somewhat broader conceptualization of cycling potential. ***All trips with a cyclable trip distance that are not currently walked or cycled were identified as potentially cyclable trips***, as long as these trips were not taken to facilitate another trip (e.g., drop someone at work or school). More specifically, a potentially cyclable trip was identified, from the 2011 version of the TTS data, based on the following criteria:

- A trip where the primary mode of travel was not walking or cycling, and
- A trip where the crow-fly distance between its origin and destination was between 1 and 5 km, and
- A trip where the purpose of the trip was not to facilitate other passenger(s).

Our analysis of current cycling behaviour in the GTHA (Chapter 2) indicated that nearly three-fourth of current cyclists travel between 1 and 5 km (straight line or crow-fly distance). This 75 percentile trip distance was used in this study as the “reasonable” cycling distance, which can be reasonably cycled within 20 mins. Moreover, trips that are currently walked, or can easily be walked (i.e., where trip distances are <1 km), were not identified as potentially cyclable trips. In addition, only trips that involved specific activities for the travellers at the trip-ends were considered; trips taken to facilitate other passenger(s) were excluded to avoid overestimation. For example, let us assume that an 11 year-old child (TTS does not collect data on children aged <11 years) lives 2 kms from her school and is regularly driven to school by a parent. Here, the child has a specific purpose at the trip-end, and the parent is facilitating this trip. In our analysis, this trip would be identified as one (but not two) potentially cyclable trip.

3.2 Findings

3.2.1 Potentially Cyclable Trips in the GTHA

The households within the GTHA undertake nearly 14.04 million trips everyday, the 2011 Transportation Tomorrow Survey data reveals (Data Management Group, 2013). Not surprisingly, the majority (78%) of these trips are currently taken using privately owned automobiles (Figure 1). In comparison, only 5% of travellers walk to various destinations, and another 1% or 128,000 trips are taken on a bicycle.

However, our analysis reveals that ***4.35 million trips within the GTHA can be considered potentially cyclable trips, which is 31% of all trips in this region, and one-third (i.e., 33%) of all trips that are not currently taken on foot or a using a bicycle.***

To illustrate further, Figure 4 shows the mode shares of GTHA trips by grouping travel modes by their cycling potential. The figure demonstrates that 6% of all 14.04 million trips in the GTHA are currently taken using active transportation modes (i.e., walking and cycling). Of the other trips, 63% are either too short (i.e., <1 km, where walking would be the most desirable mode of transportation) or cannot reasonably be expected to be cycled, largely because of longer trip distances, and some because they are taken to facilitate other trips. Trips to facilitate other trips were excluded so as not to double-count trips (see Section 3.1 above) , not due to the nature of the trip itself as we recognize that the bicycle can be, and is, used successfully to carry passengers, i.e. by cargo bike, bike trailer, or trail-a-bike hitch. The remaining 31% trips are potentially cyclable, and should be the focus of future cycling related policy and programming.

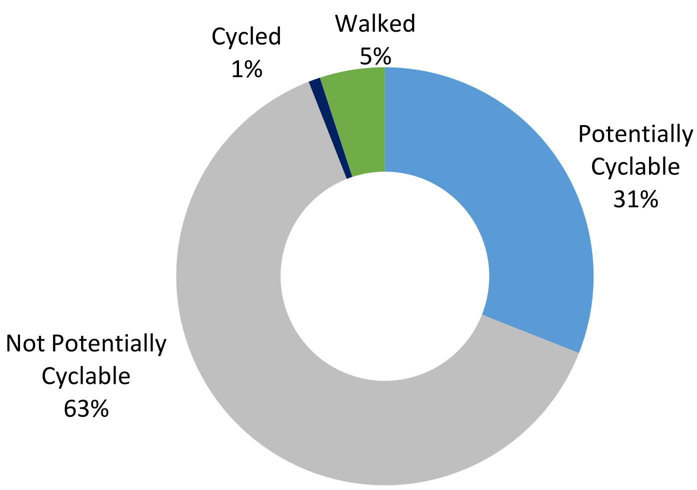

Figure 4: Mode Shares of Household Trips in the GTHA, 2011, by Cycling Potential.

Most of the potentially cyclable trips (3.6 million or >82%) are currently taken using privately owned automobiles (i.e., cars), either as drivers or as passengers, compared to 721,000 potentially cyclable trips that are taken using public transit (including GO Transit). Put differently, it appears that 33% of all current car trips can potentially be cycled, compared to 37% of current transit trips (Figure 5). In other words, a higher proportion of transit trips have the potential to be cycled under favourable conditions, compared to car trips. In the context of our study, this result is likely due to the fact that a higher percentage of car trips (compared to transit) are >5 km in length, which is the upper limit of what we have identified as a comfortable cycling distance.

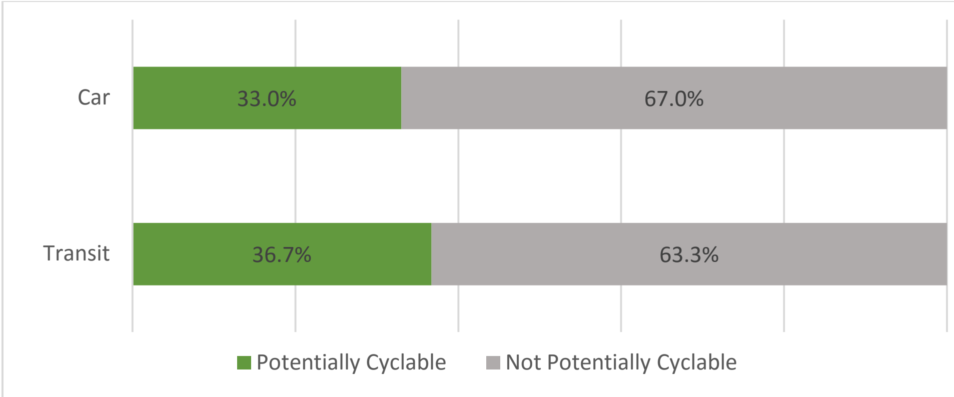

Figure 5: Percentage of GTHA Trips by Car and Transit that are Potentially Cyclable, 2011

3.2.2 Geographical Distribution of Cycling Potential

Not every place within the GTHA has the same potential for cycling growth. Toronto, being the largest municipality by population (and by number of trips) in the GTHA, produces the highest number of potentially cyclable trips, compared to other regional municipalities within the GTHA. This is despite the fact that the current cycling rate in Toronto is the highest among all GTHA municipalities. Figure 6 compares the number of potentially cyclable trips between regional municipalities. In contrast to this potential, the small number of trips that are currently cycled can also be noticed in the figure.

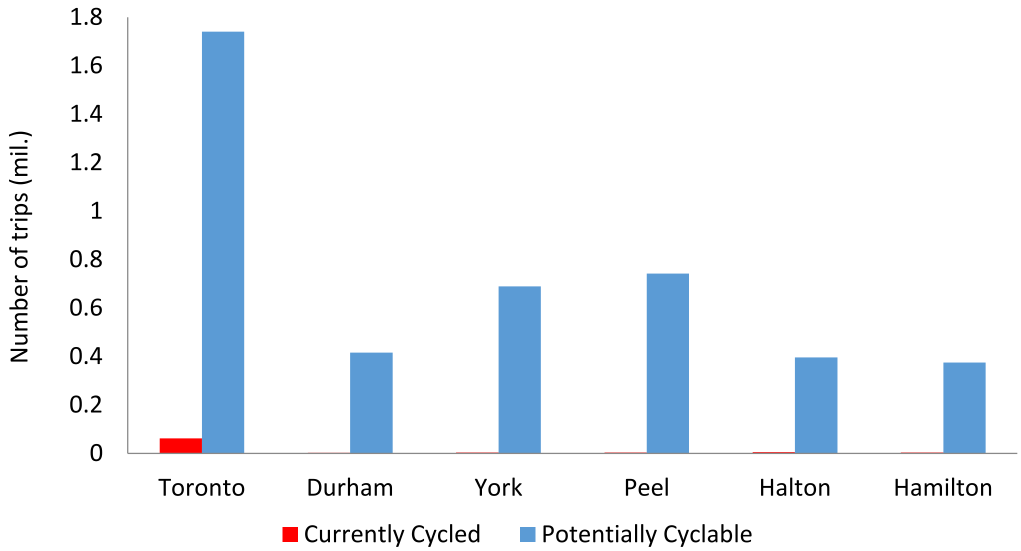

Figure 6: Currently Cycled versus Potentially Cyclable Trips in the GTHA, 2011

The regional difference in cycling potential is directly associated with the number of trips that are produced in each region. For example, Toronto, York and Peel produce the highest amount of household trips on a daily basis (41%, 16% and 18% of all trips in the GTHA, respectively). As a consequence, these three regional municipalities demonstrate higher potential for cycling, compared to other places within the GTHA (Figure 6). However, this pattern is somewhat reversed when standardized cycling potential (i.e., percentage of all trips in a regional municipality that are potentially cyclable) are compared across the six regional municipalities. As Figure 7 demonstrates, the lowest proportion of current trips in Toronto, York and Peel can be considered potentially cyclable, compared to, for example, Hamilton, where more than 35% of current trips can potentially be cycled. Our observations suggest that in Durham and Halton Regions as well as in the City of Hamilton, a higher proportion of currently motorized trips (either by car or by transit) are shorter trips (i.e., <5 km), which is what is likely producing higher rates for future cycling potential.

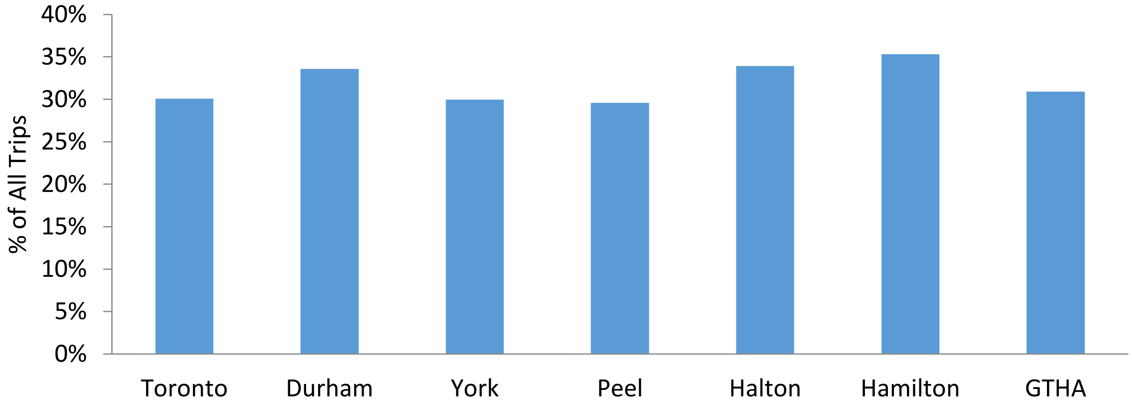

Figure 7: Potentially Cyclable Trips as Percentage of All Trips in the Regional Municipalities in the GTHA, 2011

Further disaggregated exploration somewhat confirms the above observations. Figure 8 plots the number of potentially cyclable trips across the GTHA. For a better visualization of gradation between neighboring census tracts, 0.25 km^2 "fishnet" pixels were used as an overlay[1]. On the map areas in red produce a higher number of potentially cyclable trips, whereas those in grey produce fewer. The map shows concentrations/ clusters of higher (versus lower) cycling potential across the GTHA. However, when observed closely, it appears that the urban centres and inner urban neighbourhoods in Toronto and other regional municipalities where there are concentrations of non-residential use (i.e., jobs, shops and other destinations), as well as some degree of jobs-housing balance, are the areas that show higher potential for cycling. This observation is consistent with findings from current research that reports that mixed land-use and short distances between locations, and the presence of a range of non-residential uses including retail, are positively correlated with cycling rates (Damant-Sirois and El-Geneidy, 2015; Saelens et al., 2003; Krizek and Johnson, 2007). It is possible that households living in the census tracts within these urban neighbourhoods would have shorter travel distances to destinations in general partly due to the land development patterns In contrast, residential communities that are typically characterised by longer commute times and the lack of land use mix have lower potential for cycling.

[1] 500m by 500m grid 'pixels' were overlayed on the census tracts comprising the GTHA. Each census tract was then given a count of the number of pixels which lay partially or wholly within the census tract. This count was then used to divide the total number of potentially cyclable trips in a census tract. The resultant per-pixel value was then joined to the pixel grid with an averaging operator. This assured that a pixel sitting wholly within one census tract was associated with the value of the census tract as a whole, whereas those which spatial overlapped with several polygons would be associated with an average between neighbouring census tracts.

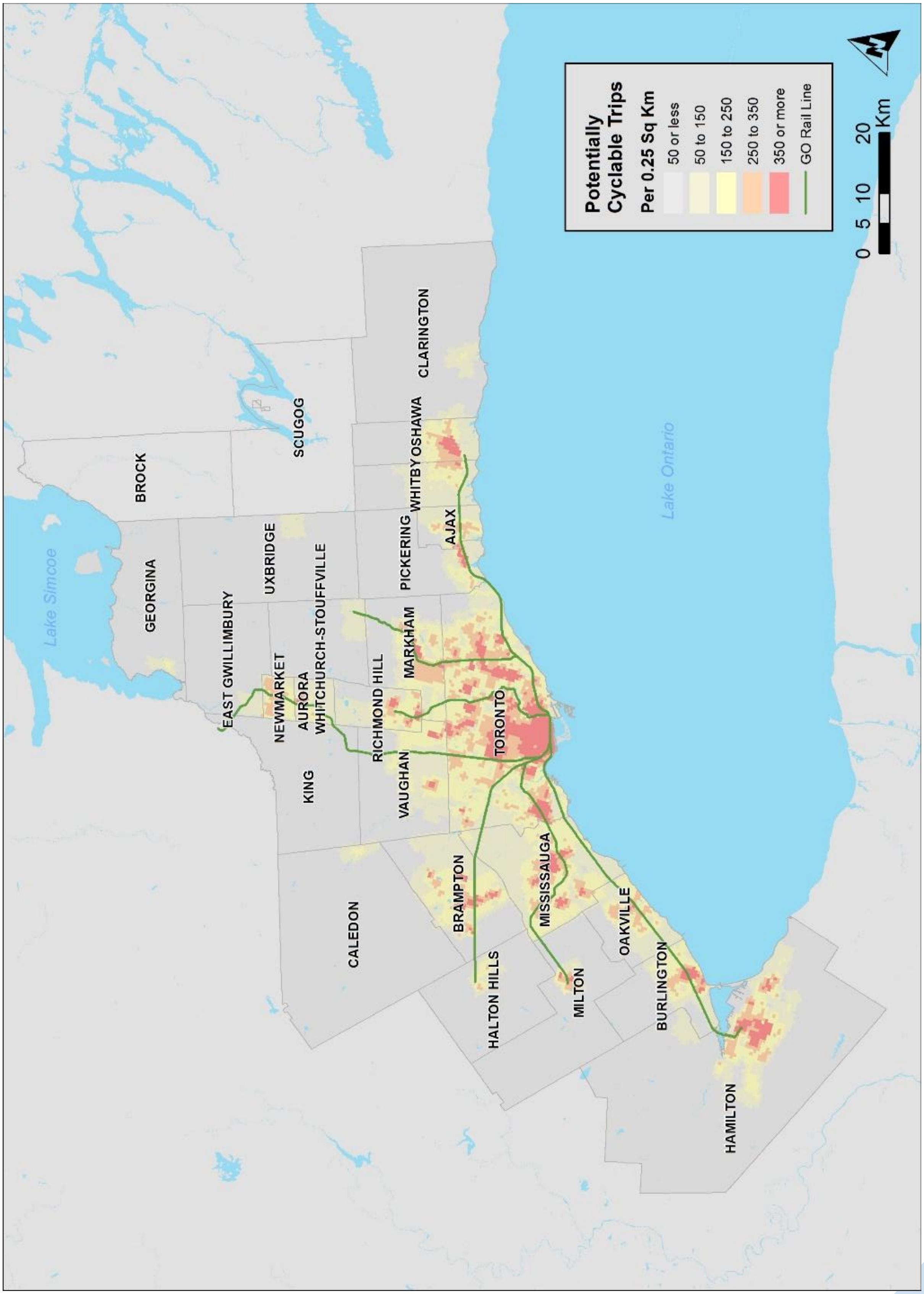

Figure 8: Potentially Cyclable Trips in the GTHA, 2011

Figure 9 shows similar information to Figure 8, but this time, only census tracts with the highest 10% and lowest 10% potential for cycling (measured in terms of the total number of potentially cyclable trips in each census tract) are highlighted. The figure clearly shows that suburban residential communities, surrounding the central urban areas of the GTHA, have very low potential for future cycling growth. In contrast, inner urban neighbourhoods in municipalities just outside of Toronto, including Oshawa, Whitby, Markham, Vaughan Mississauga, Oakville and Burlington, offer some of the highest potential for cycling (Figure 9).

When the rates of potentially cyclable trips (i.e., the proportion of all trips in a census tract that could potentially be cycled) were explored, the finer grain geographical variations became more apparent (Figure 10). For example in Oakville, while some of the downtown/ inner urban neighbourhoods demonstrated very high potential for cycling (i.e., very high proportions of current trips that are potentially cyclable but are not being cycled), some other neighbourhoods within the same municipality had very low potential. Similar comments can be made for some other similar municipalities such as Mississauga, Richmond Hill, Markham and Pickering.

From Figures 9 and 10, the potential for cycling in the neighbourhoods within the City of Toronto is also interesting. The City of Toronto currently has the highest cycling mode share (1.8%) of all GTHA municipalities. As Figure 2 indicates, in some neighbourhoods, more than 5% of all trips are currently taken using a bicycle. Despite the current relatively higher rates of cycling, the potential for cycling growth remains very high within the City's inner urban neighbourhoods. This finding, however, is not surprising at all. Many households in Toronto's inner-urban neighbourhoods live very close to their work and other daily/ usual destinations, and clearly many of their daily trips could potentially be cycled under favourable conditions, by household members who are perhaps more amenable to cycling. Some inner-suburban neighbourhoods in Scarborough, North York and Etobicoke, many of which currently have low cycling rates, also demonstrate very high potential for cycling. Very low cycling potential can also be seen in some census tracts located throughout the City. The social, environmental or trip-related factors that might explain this geographical variation in Toronto and elsewhere in the GTHA are further explored in Chapter 4.

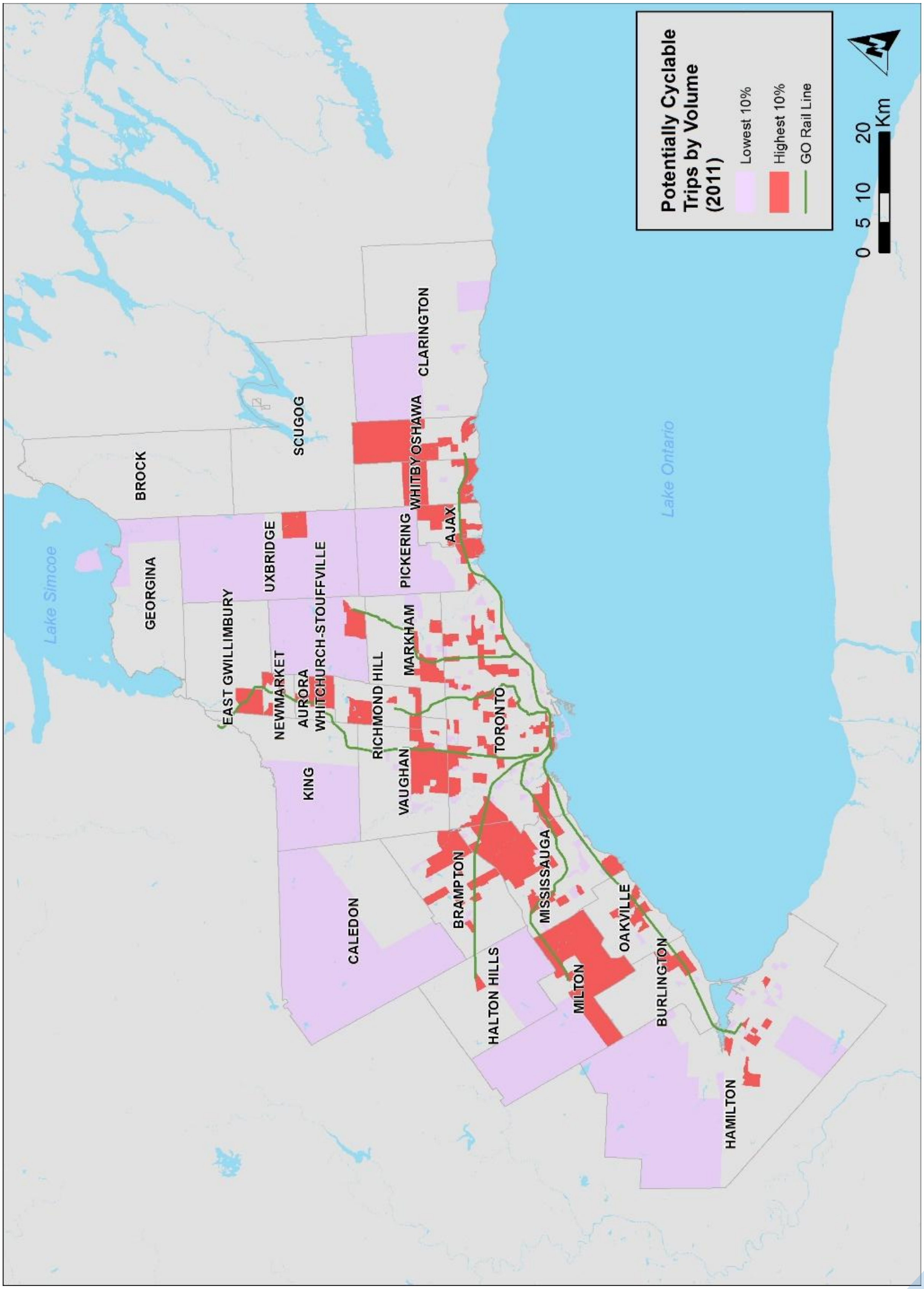

Figure 9: Census Tracts with Highest and Lowest Quantities of Potentially Cyclable Trips in the GTHA, 2011

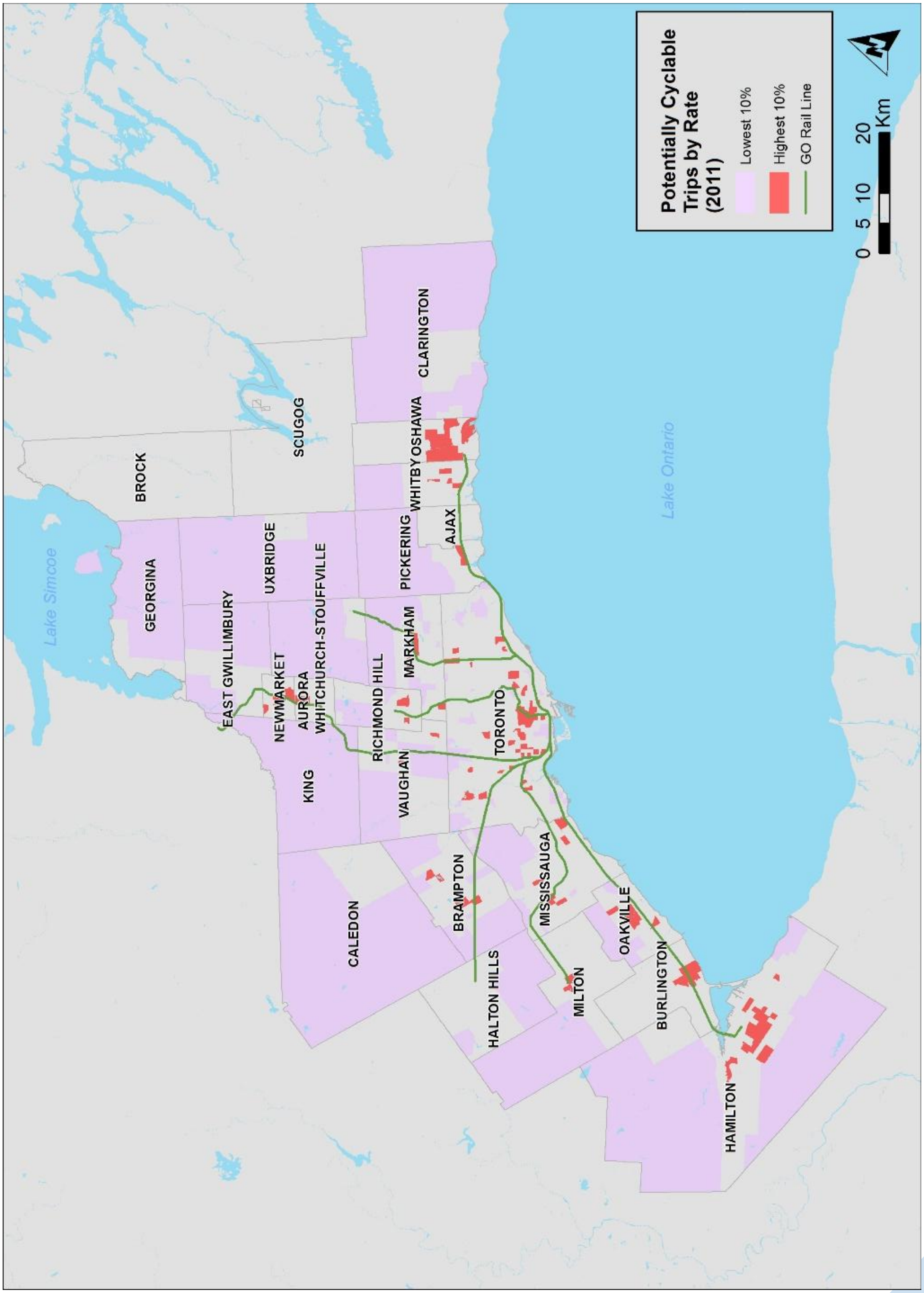

Figure 10: GTHA Census Tracts with Highest and Lowest Proportions of Trips that are Potentially Cyclable, 2011

3.2.3 Trip Characteristics of Potentially Cyclable Trips

The potential for cycling may not be the same for all types of travel needs; high or low potential may exist for trips made for different purposes, at different distances, and at different times of the day.

Figure 11 compares the trip purposes between currently cycled and potentially cyclable trips. The figure indicates that the majority of currently cycled trips (56%) are either commuting trips or are trips to school, i.e., trips to/from regular and fixed destinations; the proportion is high when compared to our previous finding that 43% of all trips in the GTHA that are either work or school trips (Appendix 1). In other words, cycling is more common for these utilitarian trips compared to other travel modes. In this context, promoting cycling for commuting (to/from work and school) trips by means of strategic policy and programming can produce quick wins. While there are opportunities to significantly improve cycling rates for work and school trips, at least numerically, the largest potential for cycling relates to home-based discretionary trips (52%), in other words, for the trips between home and various non-utilitarian destinations. Despite being relative short, these trips are less frequently cycled.

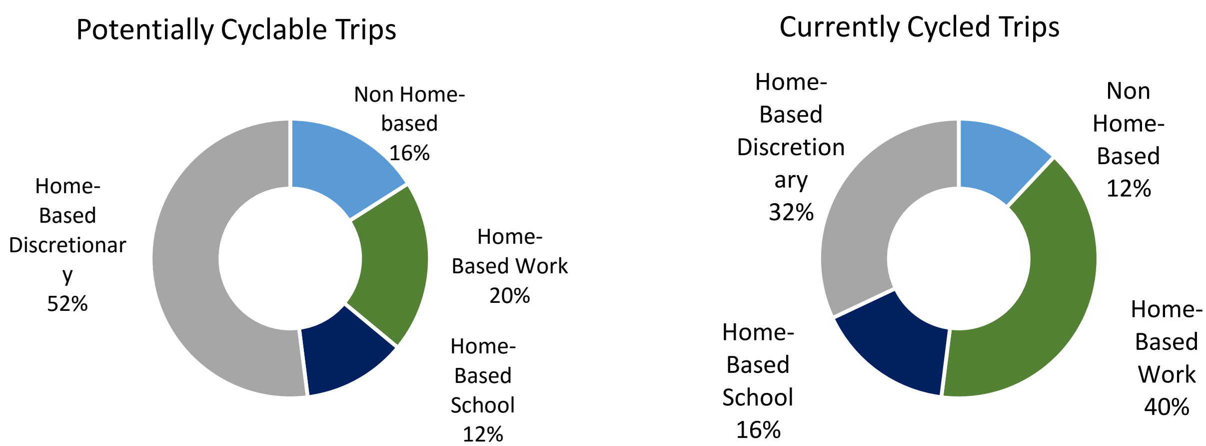

Figure 11: Trip Purpose of Currently Cycled Trips versus Potentially Cyclable Trips in the GTHA, 2011

The topic is further explored in Figure 12, which breaks down potentially cyclable trips (other than trips to home) by destination purpose. The figure indicates that trips to market/shops demonstrate high potential for cycling, in addition to “other” destinations for which the actual trip purposes are unknown.

Some variations across the regional municipalities are also evident from Figure 12. For example, Toronto, Region of Peel and Hamilton demonstrate the highest potential for cycling to work and school. In comparison, the highest potential for cycling to market/shops exists in the regions of Durham and Halton.

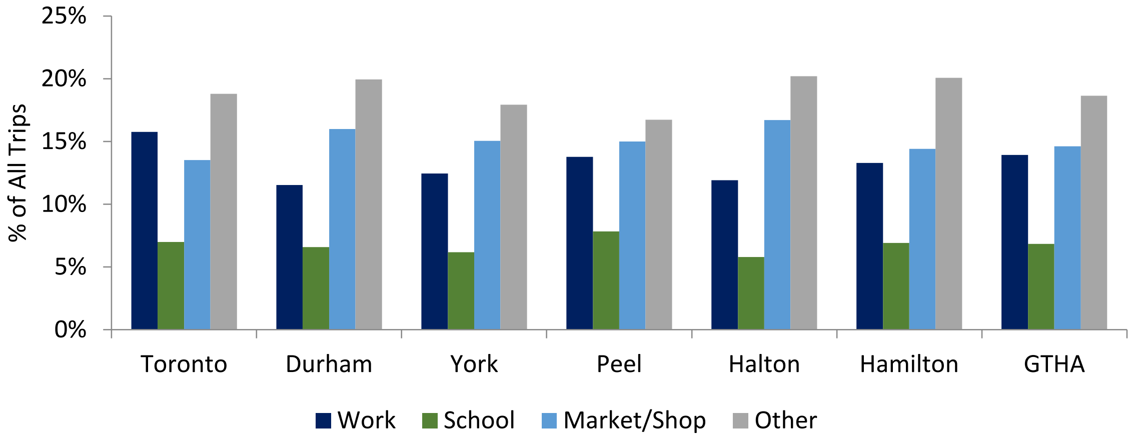

Figure 12: Potentially Cyclable Trips by Destination Purpose, by Regional Municipalities in the GTHA, 2011

Note: The Figure does not show trips to home, which constitutes 44% of all trips in the GTHA.

To explore the times of day when higher or lower potential for cycling might exist, we compared trip start times of currently cycled trips to those which are potentially cyclable (Figure 13). The data points show the percentage of all daily trips that started at each hour. Of note here are the higher values of potentially cyclable trips during the off-peak hours in the middle and end of the day, and lower values during the morning and afternoon pick hours. The finding is consistent with our previous observations, and indicates that while currently cycling is more common for travelling to utilitarian destinations such as work or school that would largely require travelling in morning and afternoon peak hours, a high potential for cycling for non-utilitarian travel, in this context, outside of the peak travel hours.

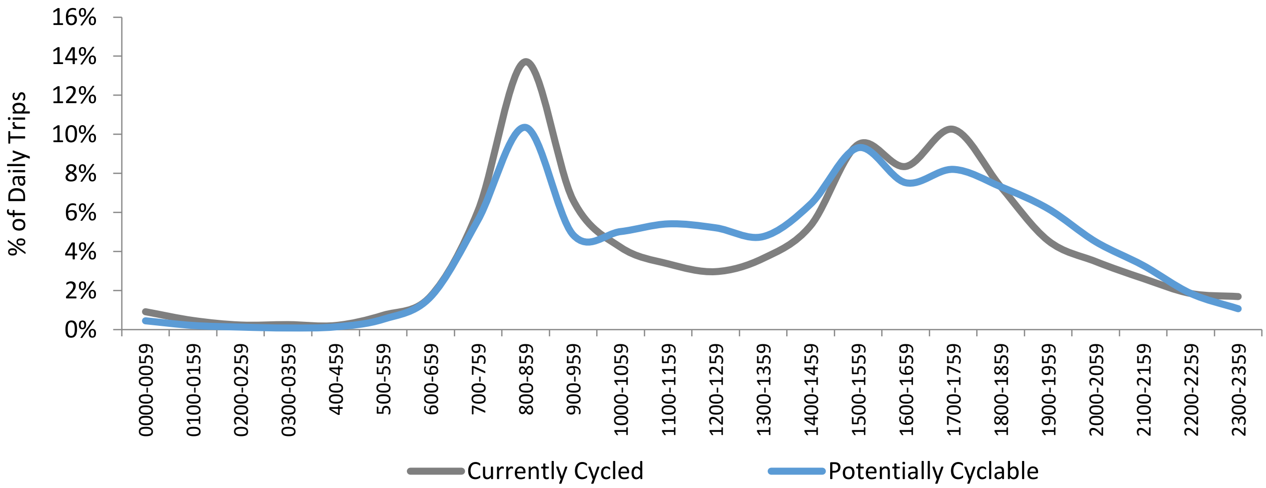

Figure 13: Currently Cycled versus Potentially Cyclable Trips in the GTHA, by Trip Start Time in 2011

Interestingly, the majority of the potentially cyclable trips that are currently driven or taken using transit are relatively short trips. Figure 14 breaks down the potentially cyclable trips by trip distance, and reveals that ***60% of these trips are between 1 and 3 km in length***, a distance that is representative of the majority of currently cycled trips (53% of currently cycled trips are between 1 and 3 km in length; Appendix1). The fact that most of the current motorized trips that can potentially be cycled are short trips suggests that under favourable conditions (i.e., with policy and physical infrastructure that supports cycling), current travellers might be amenable to take up cycling to complete these trips.

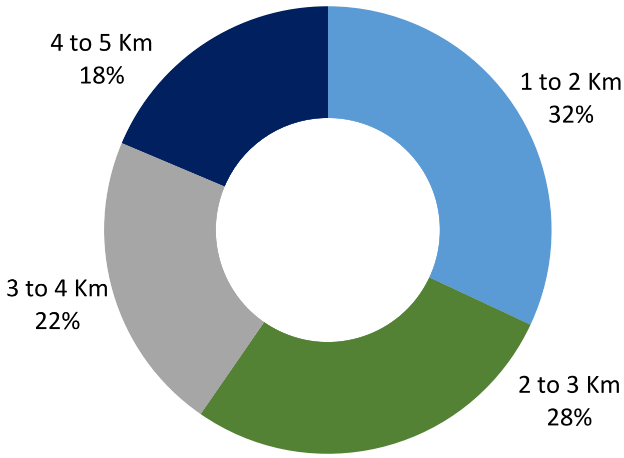

Figure 14: Trip Distance of Potentially Cyclable Trips in the GTHA, 2011

Further exploration reveals that average travel distance for the potentially cyclable trips, when aggregated at the level of regional municipalities, does not vary across urban and suburban regions.Figure 15 compares the proportion of potentially cyclable trips by distance for each regional municipality to the GTHA-wide average. No visible difference was evident across the six geographies.

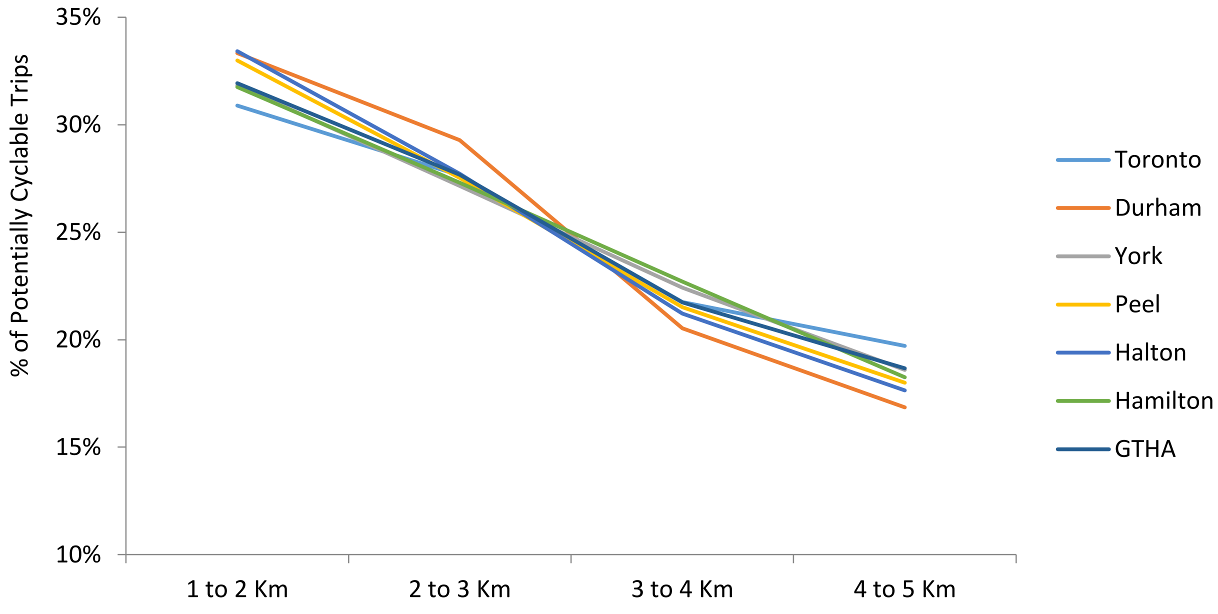

Figure 15: Trips Distance of Potentially Cyclable Trips by Regional Municipalities, 2011

3.2.4 The Demography of Potentially Cyclable Trips

In this study, cycling potential was defined entirely based on trip characteristics. However, different demographic groups may have distinct travel patterns, and as a consequence, may have different potential for policy and programming purposes. This section of the report explores differences in cycling potential by travellers' employment status, gender, and age.

Employment Status and Cycling Potential

The majority of current cyclists (53%) are full time employees (Figure 16). This pattern is consistent with overall trip-making behaviour in the GTHA and elsewhere in North America. For example, existing research has reported a positive correlation between having a professional job and the likelihood of cycling (Goodman et al., 2013; Saelens et al., 2003). Our analysis also revealed that full time employees in the GTHA tend to make more cycling trips in general (Appedix 1). However, when it comes to cycling potential in this region, it appears that a large proportion of potentially cyclable trips (45%, compared to only 31% of currently cycled trips) are currently taken by unemployed individuals. This is an encouraging observation from a policy perspective. Unemployed or underemployed travellers (35% of trip makers in the TTS survey were unemployed, and may include students and older adults) who currently drive or take transit to nearby destinations, may significantly benefit from cycling, which is a cheaper and healthier transportation option for making shorter trips.

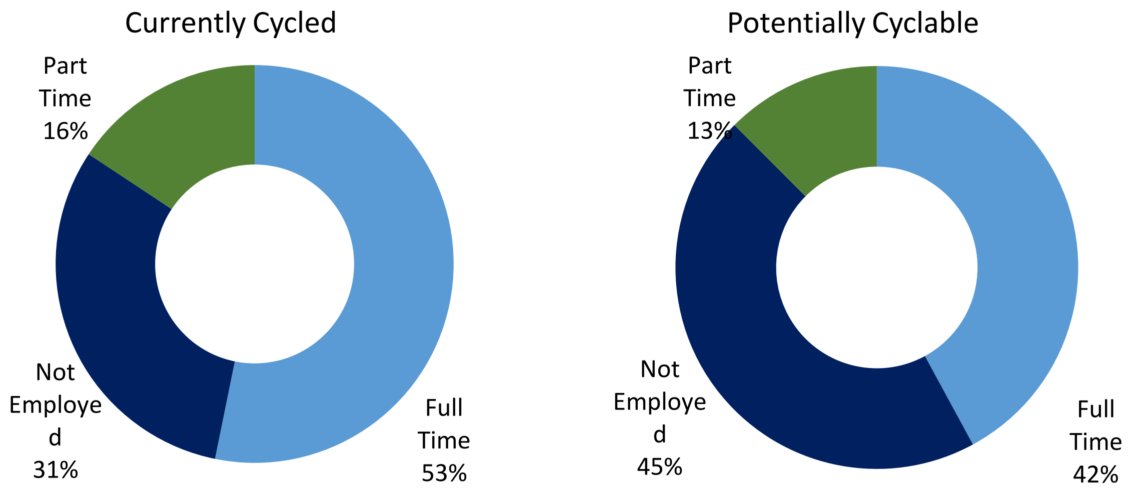

Figure 16: Employment Status of Current Cyclists versus Those Making Potentially Cyclable Trips in the GTHA, 2011

Gender and Cycling Potential

Currently, less than 30% of cyclists in the GTHA are female, a pattern that is similar to other North American locations (Damant-Sirois and El-Geneidy, 2015; Garrard et al., 2012; Moudon et al., 2005; Pucher and Renne, 2003). Considerable geographical variability by gender also exists within the GTHA. For example, in the regional municipalities of Durham, York, Peel and Halton, women constitute less than 20% of all cyclists, when compared to Toronto where women constitute 33% of current cyclists (Appendix 1). The gender-gap (or lack thereof) is perhaps more evident at a finer geograpchial scale. For example, Ledsham et al (2013) found that in the Toronto neighbourhoods with the highest cycling mode share, almost half of the trips are by women.

Recent years has seen increased academic interest in understanding why gender differences in cycling exist. Some studies have found that women are more risk-averse or more safety-conscious than men (Garrard et al, 2012; Bernhoft and Carstensen, 2008). Another recent study, attempting to understand why the number of bicycle trips by American men outnumber trips by women by a ratio of 2 to 1, found a strong interaction of gender with safety perception as well as household responsibilities (Emond et al, 2009). An Australian study found that women face more barriers to cycling than men, related to traffic conditions, motorist aggression and safety (Heesch et al., 2012). As Ledsham et al (2013) found, some neighbourhoods have higher rates of cycling than others, which the authors suggest could partially be explained by the "safety in numbers" phenomenon. This phenomenon is documented in a groundbreaking study (Jacobsen, 2003) that found that, contrary to common wisdom at the time, collision rates decline as the numbers of people walking or bicycling increase. Improved traffic safety in census tracts with high cycling rates may result in a higher cycling uptake among women living in those census tracts.

Our research also shows that there is potential for increasing women's cycling mode share in the GTHA. Women currently make more trips that can potentially be cycled (54%) compared to men (46%). It appears that the pattern is relatively consistent across the regional municipalities within the GTHA. Part of this gender difference in potentially cyclable trips can be explained by current travel behaviour of male and female trip makers. Figure 17 shows current trips by all other modes than walking and cycling, broken down by trip distance. Trips taken to facilitate other passengers were excluded from this analysis. It is clear that a higher proportion of trips by female travellers are shorter trips (< 5 Km), that, according to our conceptualization in this report, can reasonably by cycled.

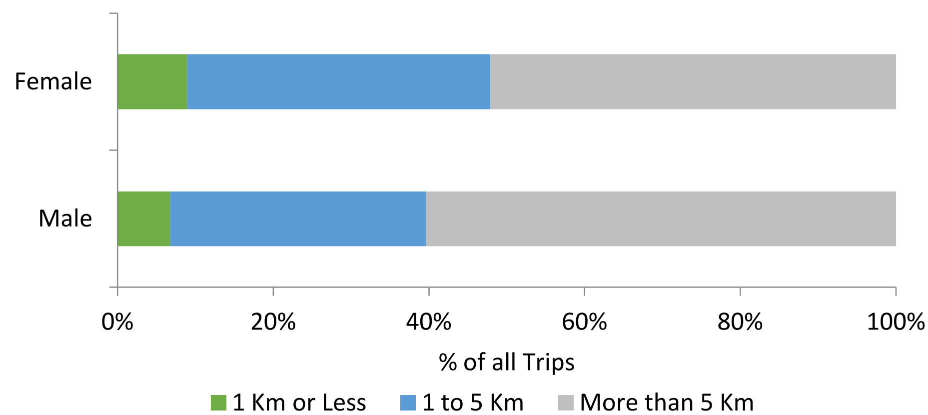

Figure 17: Currently Non-Walked and Non-Cycled Trips by Trip Distance, by Female and Male Travellers in the GTHA, 2011

Note: Trips taken to facilitate other passengers were excluded.

While the gender gap in potentially cyclable trips is large (i.e., an 8% higher potential for women), it clearly does not match the existing gender gap in cycling (i.e., only 30% of current cyclists are women). As a result, in the absence of policy and programming that are strategically directed to women, much of this cycling potential among female travellers may remain unrealized, particularly in suburban municipalities within the GTHA.

Age and Cycling Potential

Lastly, 87% of cycling trips in the GTHA are currently taken by individuals aged between 16 and 65 years. This demographic group also undertakes the highest share of potentially cyclable trips (Figure 18). GTHA residents aged 65 years or more contribute to 16% of the potentially cyclable trips. In comparison, only 5% of the current cycling trips are by this age group. Older age can be a barrier to cycling for some, despite having a theoretically high potential for cycling uptake.

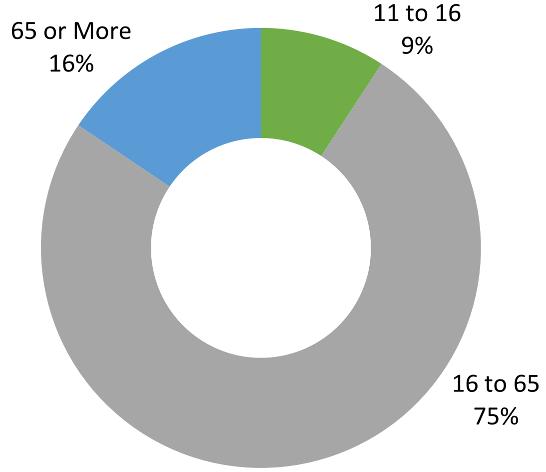

Figure 18: Potentially Cyclable Trips by Age in the GTHA, 2011

Travel by children and youth is a particularly interesting topic to explore in the context of this research. For example, previous studies conducted in Toronto indicated that more children and youth are now being driven to school than ever before, despite the fact that average school travel distance has remained somewhat unchanged over the last three decades (Buliung et al., 2009; Mitra et al., 2016). Typically, most of their utilitarian travel destinations (e.g., school, work) are located close to home. Figure 19 shows trip distances of school and work trips by children and youth aged between 11 and 16 years. It appears that three-fourths (74%) of all trips by this age group are less than 3 km in length; 85% of all trips are less than 5 Km in length. Within this context, children and youth who are younger than the legal driving age (i.e., <16 years of age) can be a very promising demographic group for cycling-focused policy and programming.

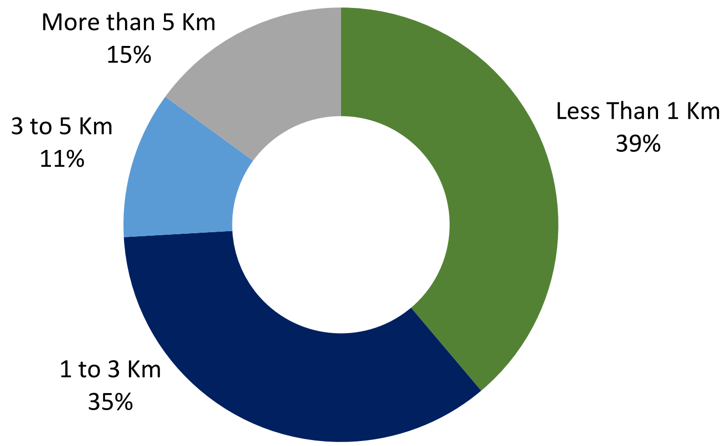

Figure 19: Travel Distance of School and Work Trips in the GTHA, 2011, by 11 to 16 Year-olds

Currently, only 4,500 trips to school or work by children and youth aged 11-16 years (which is only 1.1% of all such trips by this age group) are cycled. However, based on our estimations, ***40% of the current school and work trips can be considered potentially cyclable. A more conservative approach, where we considered only trips between 1 and 3 Km in length as potentially cyclable trips, produced a value of 27.5%.*** In addition, the potential for cycling does not vary considerably across the regional municipalities, as can be seen in Figure 20. Further disaggregated exploration produced a similar result. As Figure 21 indicates, the areas (i.e., census tracts) with higher potential for cycling trips can be found all cross the urbanized GTHA.

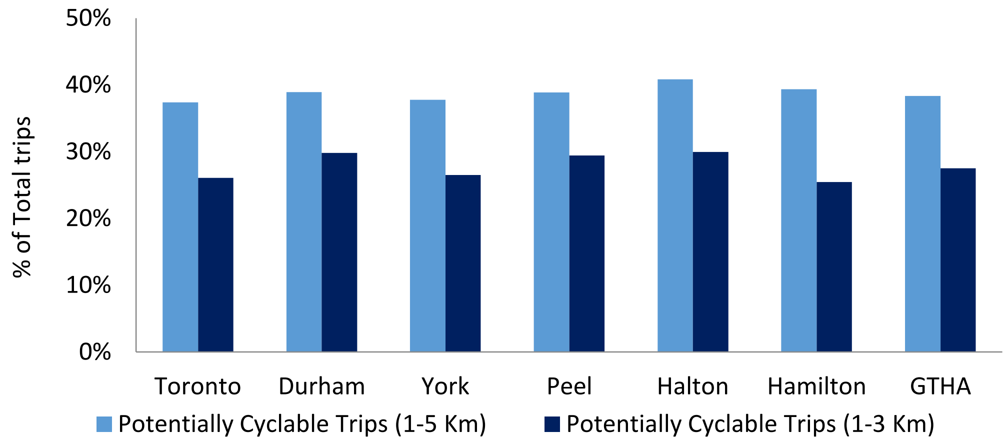

Figure 20: Potentially Cyclable Trips by 11 to 16 Year-Olds in the GTHA, 2011 (Trips to School and Work Only)

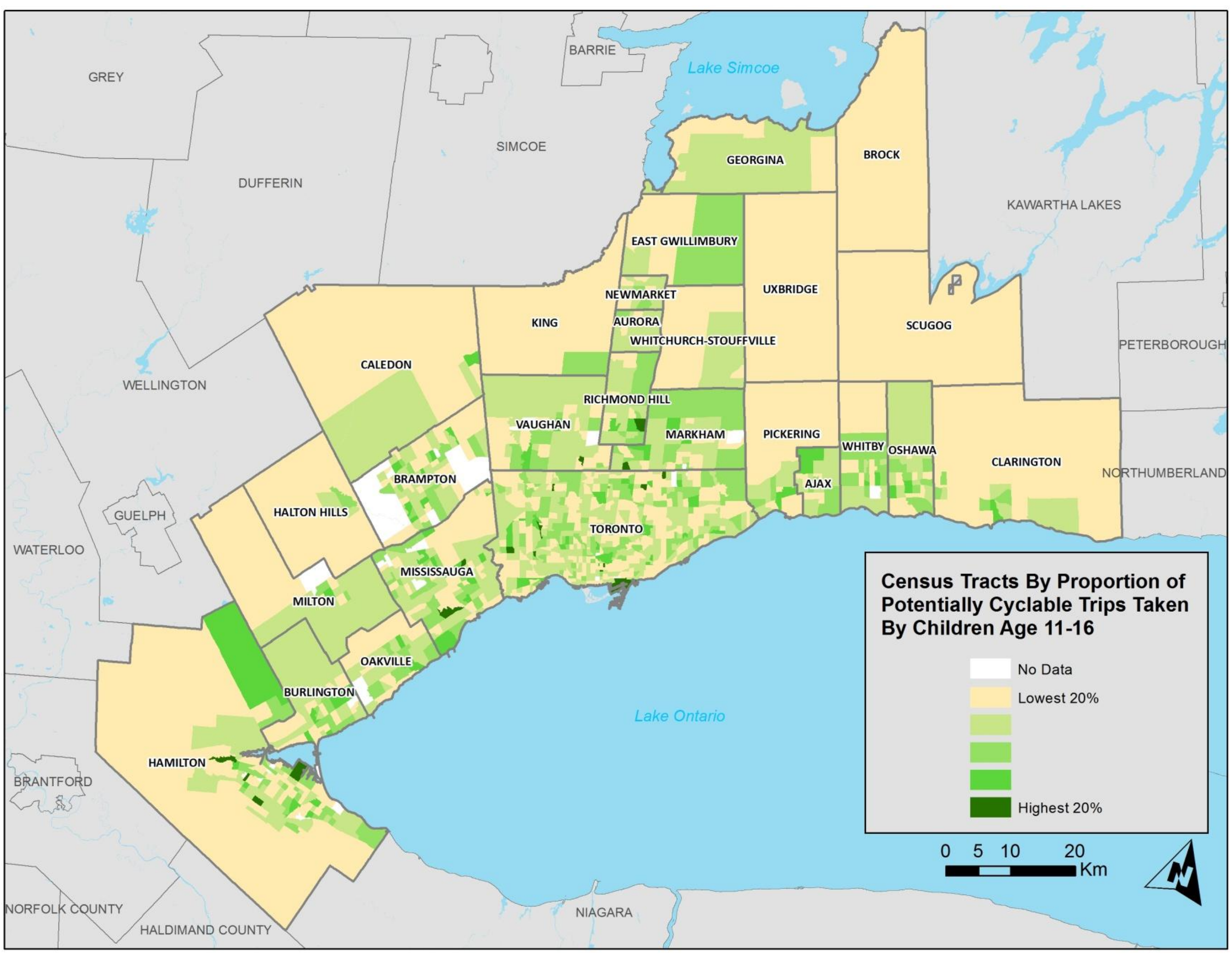

Figure 21: Potentially Cyclable Trips by Children and Youth aged 11-16 years

3.2.5 Cycling Potential for Transit Access and Egress Trips

One in seven trips in the GTHA (14%) are transit trips (Figure 1), and most transit users live, or have their trip origins/ destinations, close to transit stops. For example, Figure 22 breaks down transit access trips (i.e., trips from the trip origin to a transit stop/ station) by distance. The figure indicates that 90% of current transit access trips are less than 1 Km in length. Perhaps as a result, 91% of all transit access trips are taken by foot, as we identified in Chapter 2. However, another 7.4% of these transit access trips are between 1 and 5 km in length. An analysis of transit egress trips (i.e., trips from a transit stop/ station to final destination) showed a similar pattern with regard to distance. These short distances to and from transit stops/ stations offer a great opportunity, as many of these trips could potentially be cycled.

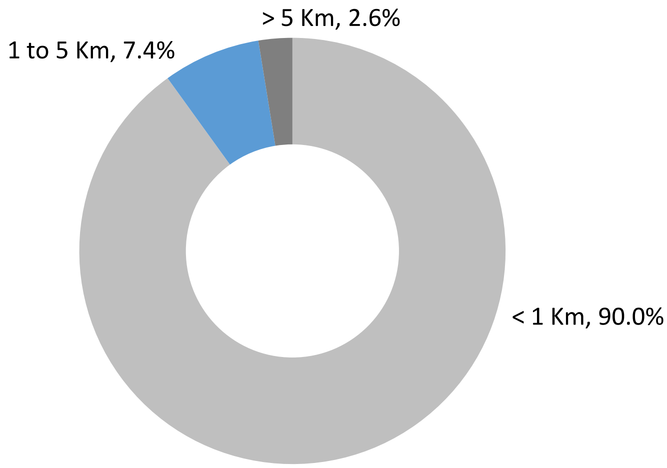

Figure 22: Transit Access Trips by Distance in the GTHA, 2011

Figure 23 shows mode shares for transit access trips; the proportion of trips that are potentially cyclable is also identified in the figure. It is notable that in comparison to only 0.2% transit access trips that are currently cycled, 4% of transit access trips that are currently taken by motor vehicle could potentially be cycled. In total, we have estimated that ***more than 79,000 transit access trips per day (which is 4% of all transit access trips) could potentially be cycled by GTHA residents, compared to only 4,500 trips that are currently cycled***. ***Of these potentially cyclable trips, 98% are driven- 60% as drivers and 38% as auto passengers.*** It is worth noting here that many of the transit access/egress trips that are currently taken on foot, particularly in urban areas to GO and local transit stops, could also be cycled. But for the purpose of this study, these trips were not defined as potentially cyclable trips. In other words, the number of potentially cyclable transit access/ egress trips that we report here is likely an underestimation.

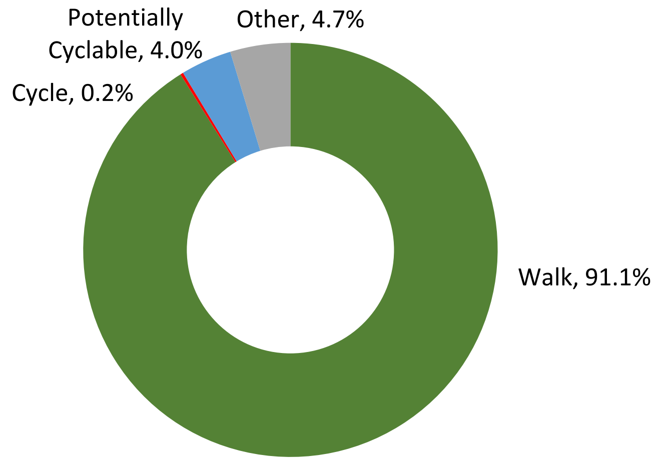

Figure 23: Mode Shares of Transit Access Trips (Including Potentially Cyclable Trips) in the GTHA, 2011

Not surprisingly, residents in the City of Toronto produce the highest number of these potentially cyclable transit access trips, compared to other regional municipalities in the GTHA (Figure 24); this high value is likely associated with the higher transit mode share in the City. However, it is important to note that the regional municipalities of York, Peel and Halton, despite their lower rates of transit use, produce large numbers of transit access trips that could potentially be cycled.

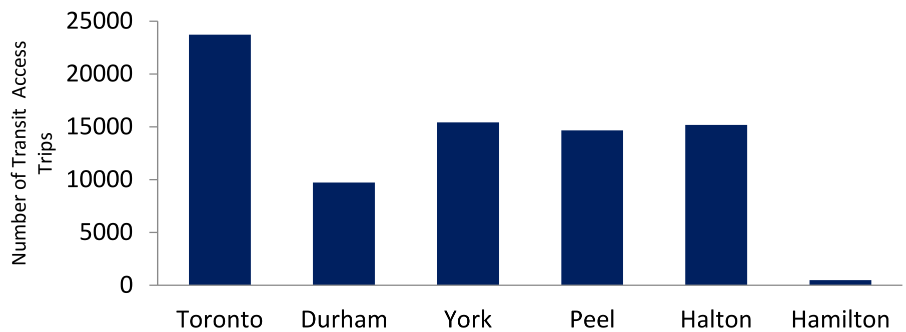

Figure 24: Number of Potentially Cyclable Transit Access Trips by Regional Municpalities in GTHA, 2011

The topic is further explored in Figures 25, which shows the proportion of transit access trips in each regional municipality that could potentially be cycled. Halton Region tops the list, where 34% of current transit access trips could potentially be cycled- a rate that is 8.5 times higher than the GTHA average. Hamilton and Toronto have the lowest proportion of transit access trips that could potentially be cycled.

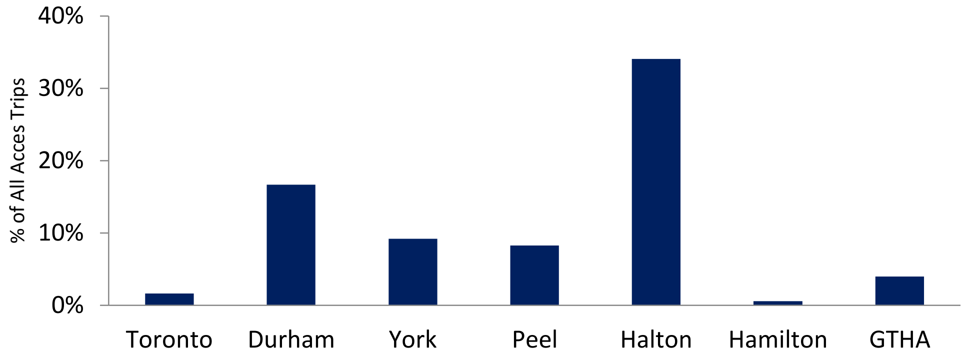

Figure 25: Proportion of Potentially Cyclable Transit Access Trips in the GTHA, 2011

At a more disaggregate level, the census tracts with higher potential for cycling begins to show a distinct pattern. It appears that concentrations of potentially cyclable trips can more commonly be found in census tracts that are nearby the GO transit stops/ stations (Figure 26). It is likely that many residents in these census tracts depend on the regional transit service for their daily commuting needs, and drive to/from the transit stops. Similarly in the City of Toronto, higher cycling potential exists in census tracts that are located close to the subway terminal points (e.g., near Kennedy, Finch, Downsview and Kipling stations).

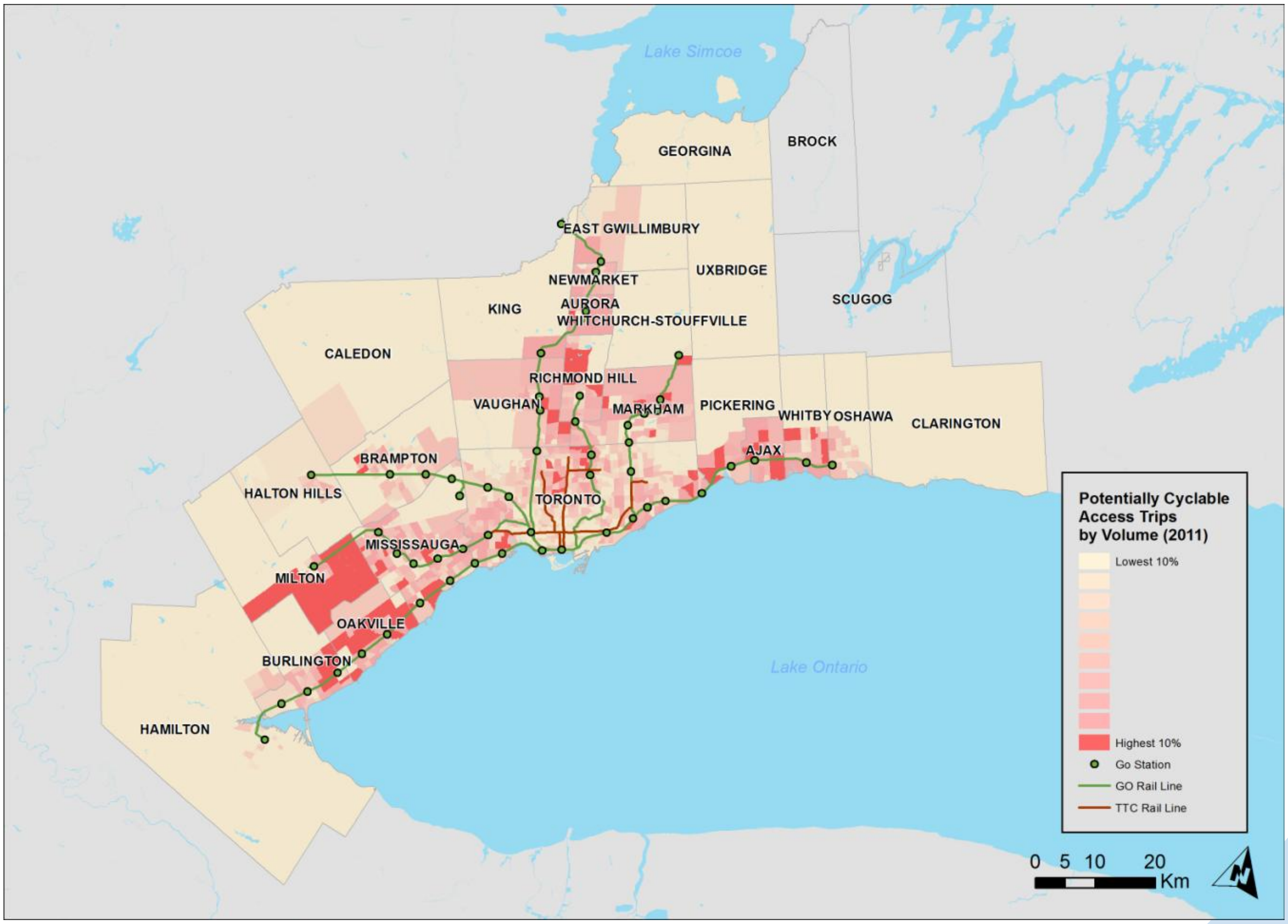

Figure 26: Potentially Cyclable Transit Access Trips by Volume in the GTHA, 2011

Similar to transit access trips, our estimations indicate that ***more than 72,000 transit egress trips (i.e., trips from transit stop/ station to final destination), which is 3.6% of all egress trips across the GTHA, could potentially be cycled, compared to only 4,400 that are currently cycled.***

The geographical distribution of these potentially cyclable transit egress trips is also similar to that of transit access trips. Figure 27 indicates that nearly 34% of all transit egress trips in the Region of Halton could potentially be cycled, the highest among all regional municipalities. In comparison to that, a very low proportion of transit egress trips in Toronto and Hamilton could be considered potentially cyclable. Figure 28 illustrates the variations in egress trips across the GTHA.

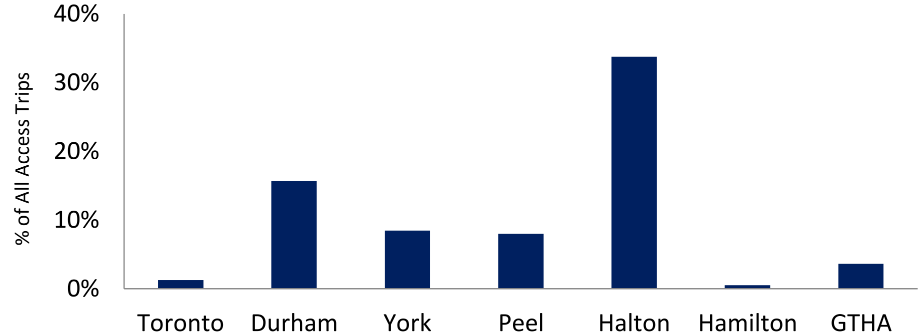

Figure 27: Proportion of Potentially Cyclable Transit Egress Trips in the GTHA, 2011

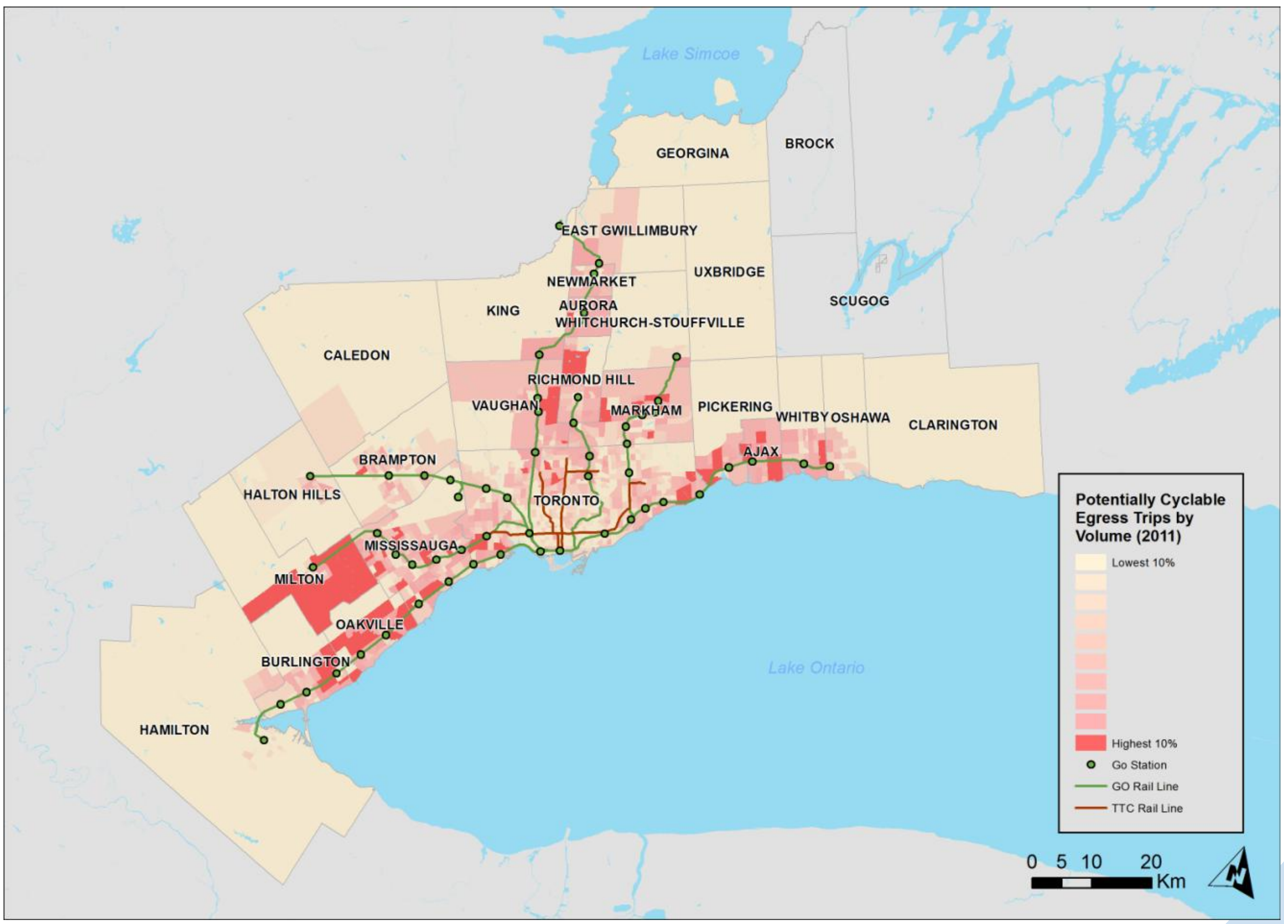

Figure 28: Potentially Cyclable Transit Egress Trips by Volume in the GTHA, 2011

Cycling Potential among GO Transit Users

Using a similar method, the number of potentially cyclable access and egress trips relating to GO Transit was identified (i.e., these are the trips that included the use of GO transit as part of the trip). In 2011, 66% of GO Transit users walked to or from the stations, which can partly be explained by high number of walking trips at large urban stations (such as the Union Station in Toronto). However, another 44.3% transit users drive, or are driven, to/from GO Transit stations, a proportion that is very high compared to overall mode share of driving for transit access/egress trip (approximately 8%).

When combined together, it appears that ***nearly 70,000 of transit access/egress trips relating to various GO stations could potentially be cycled, which is 22.1% of all trips to/from GO stations***. An effort to link these potentially cyclable trips to specific GO Transit stations, however, was unsuccessful because a very high proportion of TTS respondents did not identify their GO Transit boarding/unboarding points. Instead, Figure 29 shows potentially cyclable GO Transit-related access and egress trips within 5 km of each station. While this approach involves some duplication and potential over-estimation, it provides some insights into the relative opportunities for cycling improvement across space. It also appears that the potential for cycling, relating to access/egress trips, may not be the same for all stations. Stations with the highest potential were all located in suburban municipalities. The implications for these findings to advance transportation planning in the GTHA are further discussed in Chapter 5.

3.3 Summary

In the context of very low rates of cycling in GTHA municipalities (Chapter 2), this chapter quantified the potential for cycling in this region, and explored the potential variation in this potential across socio-demographic groups and geographical locations. A potentially cyclable trip was defined as a trip with a cyclable trip distance (1-5 km) that is not currently walked or cycled, excluding trips that are used to facilitate other passenger trips in order to avoid overestimation. Key findings from our analysis of cycling potential are summarized below:

- 4.35 million daily trips within the GTHA can be considered potentially cyclable trips, which is one-third (33%) of all trips that are not currently taken on foot or a bicycle.
- Approximately 33% of all trips that are currently driven, and 37% of all trips by transit, can potentially be cycled.
- More than half (53%) of our estimated potentially cyclable trips are short trips, between 1 and 3 km in length. In addition, there is no regional variability in trip length distribution.
- With regard to socio-demographic groups, the potential for cycling was higher among unemployed travellers and among women.
- Currently only 1.1% of school or work-related trips by 11-16 year old youth are cycled. However, our estimations suggest that 27.5% to 40% of all trips to school or work by this age group can potentially be cycled.
- Most transit access and egress trips are short (i.e, 90% trips are below 1 km) and are walked. However, approximately 4% of transit access trips, and 3.6% of egress trips, are potentially cyclable but are currently taken using a car (either as drivers or passengers). Interestingly, potentially cyclable transit access/egress trips are concentrated around major transit facilities (i.e., GO stations and subway terminals).
- 22% of transit access/egress trips relating to the use of GO Transit could potentially be cycled. However, not all GO stations currently offer a similar potential for cycling.

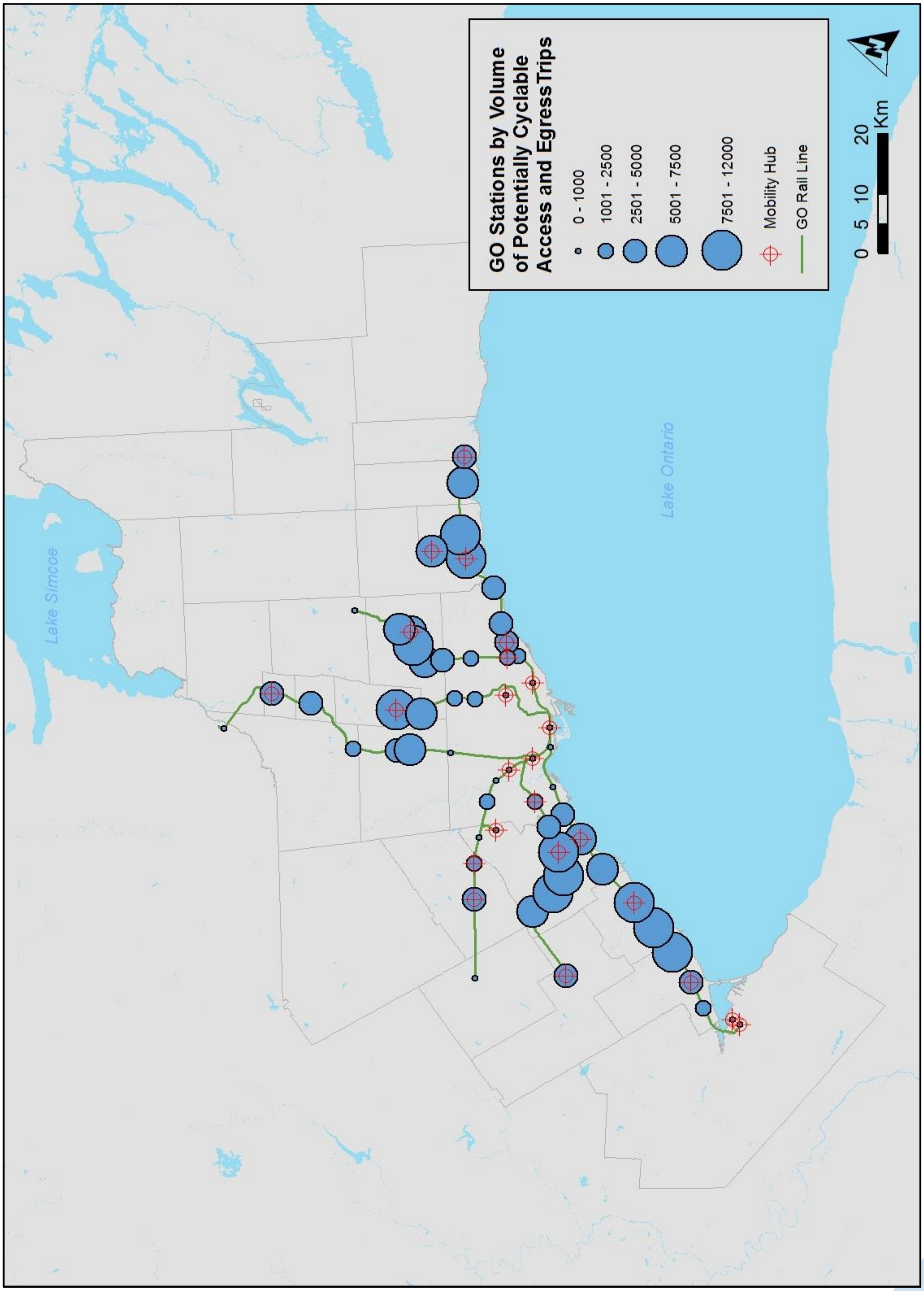

Figure 29: Potentially Cyclable Access/ Egress Trips within 5 Km of GO Transit Stations

Findings from this chapter indicate the existence of huge potential for cycling in the GTHA, both in urban and suburban municipalities. With policy and programming strategically directed toward specific locations and demographic groups, much of this potential might be realized, which may improve the current cycling rate in this region. In Chapter 4, we present results from further systematic investigation and identify key areas for potential interventions that could produce higher rates of cycling.

Chapter 4 Propensity for Cycling in the GTHA

An emerging literature has emphasized socio-demographic (e.g. gender, age, income, employment status, education, ethnicity) and neighbourhood built environment (e.g. cycling facilities, development density, access to non-residential uses) characteristics, as well as the characteristics of a trip, that may deter or enable cycling. This literature indicates that not all trips, people or places are equally amenable to cycling. Gaining a better understanding of these factors that potentially influence cycling uptake can provide further insights into the challenges and opportunities relating to future cycling growth across the GTHA region.

This chapter comprises a detailed census tract (CT) level analysis of potential socio-demographic and environmental influences on cycling behaviour, using travel behaviour data obtained from the 2011 TTS, in order to explore the ***propensity*** for cycling. This analysis quantitatively examines and identifies GTHA-specific socio-demographic and environmental factors that are statistically associated with cycling uptake in a CT, and based on that, identifies areas within the region that are potentially more amenable to cycling. In other words, ***areas across the GTHA where residents are more likely to take up cycling for day-to-day travel purposes were identified***.

The results of this analysis can be used as an analytical tool, which, individually or in combination of the findings from Chapter 3 (i.e., areas with high concentrations of potentially cyclable trips) may provide an even more sophisticated insight into the opportunities for cycling growth in the GTHA region, and may inform targeted planning and policy interventions.

4.1 Factors Considered to Estimate Cycling Propensity

A series of variables were examined to identify and measure their potential influence on cycling uptake, more specifically, the number of cycling trips originated in each CT. The selection of these variables was informed by current literature on cycling behaviour. In general, three types of variables were explored: trip characteristics, socio-demographic characteristics and the built environment.

Trip Characteristics

Similar to other chapters in this report, the travel data for analysis was taken from the 2011 TTS. Cycling counts per CT, more specifically, the number of trips originated in a CT where the primary mode of transportation was cycling, was explored as the travel outcome. Trips undertaken to facilitate other passengers were excluded. Additionally, the analysis was restricted only to people aged between 15 and 64 years.

Trip distance is perhaps the most frequently cited reason for not cycling (Dill and Car, 2003). TTS does not collect data on travel distance, and instead, reports the straight-line distance between origin and destination of a trip as a proxy measure. For the purposes of this study, the proportion of trips originated from a CT that were >5 km in length was used as a proxy measure for trip distance. Nearly three-quarters (74%) of all cycling trips in the GTHA were less than 5 km in length, compared to only 46% of all trips which were of that length in 2011 (Mitra and Smith Lea, 2015). Consequently, within the context of this study, we hypothesized that a CT with a higher proportion of shorter trips ≤5km would also demonstrate more cycling trips, similar to what has been reported previously (Ledsham et al, 2013).

Socio-Demographic Characteristics

Socio-demographic variables came from the 2011 TTS, 2011 Canadian Census, and the 2011 National Household Survey (NHS). Variables include age, marital status, education, family/ household characteristics, labor characteristics, occupied private dwelling characteristics and household income characteristics (Table 1).

Built Environment

The built environment variables came about as a result of GIS processes using data from DMTI Spatial©'s road infrastructure datasets and Enhanced Points Of Interests (EPOI) dataset, current to the year 2013. The variables consisted of several density measures (population, business, employment, and road blocks), station access, road speeds and predominant building age (used here as a proxy measure for neighbourhood maturity) (Table 1).

The latest open data for the regional municipal cycling facilities across the study area was used to measure the proportion of streets within a CT with a dedicated cycling facility. Only on-street cycle tracks and bicycle lanes were considered for the analysis (Table 1 and Figure 30). A more flexible definition of cycling facility, which would include shared road space such as signed bike routes and sharrows, and recreational trails in addition to dedicated facilities mentioned above, was initially considered but was excluded from final analysis because of the lack of consistency in how those facilities function and are designated across the GTHA. It is worth noting that only 2% of all road space within the GTHA has dedicated on-street cycling facilities. The currency of the cycling infrastructure data, however, could not be confirmed.

Table 1: Variables Explored as Potential Influences on Cycling Rates

Variable	**Definition**
TripCharacteristics	
Cycling trips	Total number of cycling trips (excluding facilitate passenger), originating from a census tract (CT)
Trips > 5 km	Proportion of all cycling trips, starting from a CT, that are > 5km (straight line distance)
Socio-demographic Characteristics	
Household >4	Percent of families in CT with 4 or more members
≤1 cars in household	Percent of households in CT with one or less cars
Median income	The median household income of the CT
Single Parent Families*	Percent of households in CT that are single parent families
Education*	Predominant level of education in CT. 0 if post-secondary or higher; 1 if high school; 2 if no high school.
Sex*	Percent of population in CT identified as Female
Age*	Percent of the CTs population that is ≤ 40 years of age
Neighbourhood Characteristics	
Population density	Number of people (,000) per square km in a CT
Neighborhood age	Predominant age of the buildings in a CT. 0 if built after 2000; 1 if built between 1960 and 2000; 2 if built before 1960.
Household Rooms*	Number of rooms in a Household – which also includes bedrooms
Blocks density*	Number of road blocks per sq km of area within CT
Business density	Number of commercial and office addresses per sq km in a CT
Transit access*	A CT with a subway or regional rail station within 2 km. 0 if false; 1 if true.
Major roads	Operating Speed of the majority (>50%) streets in a CT. 0 if ≤40 km.hr; 1 if >40 km/ hr.
Cycling facility	Percent of all roads in a CT with dedicated cycling facilities, including on street bike lanes and cycle tracks
Other people cycling	Number of cyclists aged 15-64 years within 5 km from the centre of a CT

*Variables excluded from the final multivariate analysis due to lack of statistical significance at $\alpha = 0.1$

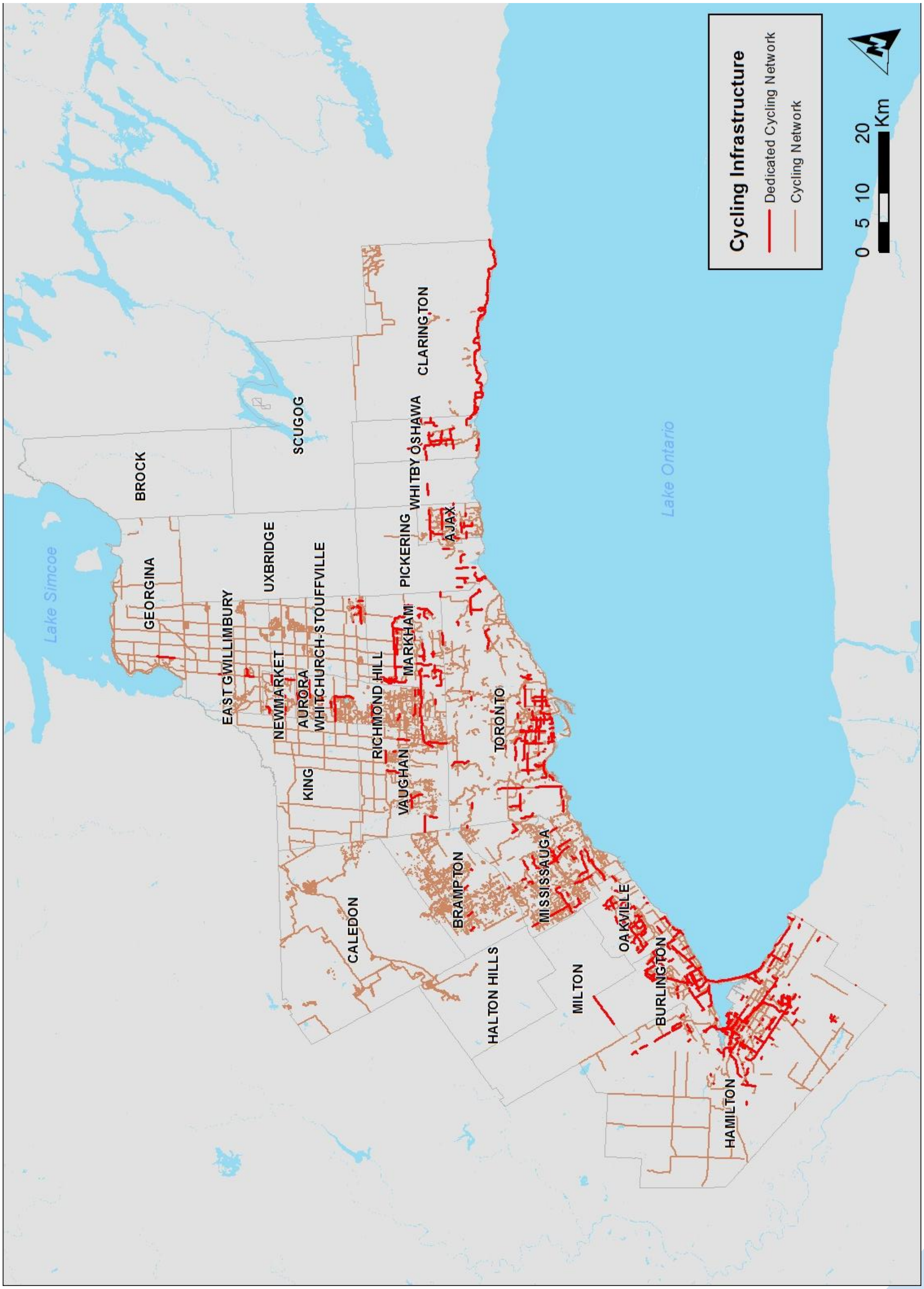

Figure 30: All Cycling Network in the GTHA

Finally, recent research has emphasized that cycling behaviour is “local” and may be influenced by the presence of a strong bicycling culture and advocacy in local communities (Krizek et al., 2009; Ledsham et al., 2013). To account for this potential influence, we included a spatial auto-correlation term, expressed by the number of other people who are cycling nearby a CT, in our analysis. This approach is widely used in the field of environmental ecology (Augustin et al, 1996), and was adopted here as a proxy to represent localized cycling culture (Table 1).

After accounting for missing data and extreme outliers, data relating to 1,321 CTs were included in multi-variate statistical analysis.

4.2 Modelling Cycling Behaviour

A negative binomial regression approach was adopted to examine the correlation between selected socio-demographic, built environment and trips characteristics, and the number of cycling trips in a CT. The total number of trips was not uniform across all CT (i.e., the potential opportunities for a cycling trip or the “exposure” was different across CTs). As a result, an offset variable was introduced in the model. This offset variable represents the log of exposure, with coefficient constrained to be 1. The coefficient (β_{x1}) of a negative binomial model represents the correlation between a variable x_1 and the log of expected rate of cycling. For easier interpretation, the results are also reported in terms of $e^{\beta_{x1}}$ or the ***“Incident rate ratio (IRR), which represents the expected number of cycling trips, relating to a one-unit change in variable x_1, accounting for total number of trips within a CT.*** A more detailed description of the methodical approach is provided in Appendix 2.

4.3 Variables that Influence Cycling Uptake in the GTHA

The results from the regression analysis are shown in Table 2. Variables such as age, sex, single parent families, education, transit access, blocks density, and number of rooms in a household were excluded from the final multivariate analysis due to lack of statistical significance at α= 0.1 during preliminary analysis.

In our analysis, travel distance was analyzed as percent of trips in a CT that were over 5 km. The results confirmed findings from existing literature and suggested a strong negative correlation between travel distance and cycling rate. We found that for every 1% increase in the work trips greater than 5 km, the incidence rate ratio or IRR (i.e., the number of expected cycling trips, per trip within the census tract) would decline by a factor of 0.98 units (Table 3), holding the other variables constant.

Three variables relating to socio-demographics in the GTHA were included in the multivariate analysis, and all produced results that support current literature. Similar to what has been reported in previous research (e.g., Carse et al. 2013), family size was negatively associated with cycling; a one percent increase in households with >4 members in a CT was correlated with 0.12 times lower cycling IRR for commute trips.

Access to private automobiles was correlated with cycling, again supporting previous research that indicated statistical association between high car ownership and low cycling rates (e.g., Caulfield, 2014; Saelens et al., 2003). In the context in the GTHA, the median household income of a CT was positively correlated with cycling, indicating that all else being equal, incidences of cycling would be higher in higher income neighbourhoods (Table 3).

Table 2: Summary of Statistical Influences on Cycling Uptake

Variable Name	Direction of Association	IRR
Trip Characteristics		
Trip length > 5 km	-	0.98
Socio-demographic Characteristics		
Household >4	-	0.12
≤1 cars in household	+	3.26
Median income	+	1.01
Neighbourhood Characteristics		
Population density	+	1.03
Neighbourhood age (< 1960)	+	2.21
Neighbourhood age (1960 – 2000)	+	1.35
Business density	+	1.01
Major roads	-	0.79
Cycling facility	+	1.04
Other people cycling	+	1.01

Note: Detailed results can be found in Appendix 2

With regard to the built environment characteristics, the model results indicated an association between the presence of cycling facilities and expected incidences of cycling trips for commuting purposes (Table 3). A one percent increase in streets with cycling facilities was correlated with 1.04 times increase in the IRR for cycling trips. The presence of other people cycling nearby would also influence a nearby CT cycling incidence rate.

Among the other neighbourhood characteristics, population density was associated with cycling trips. Neighbourhood age was also associated with cycling trips. In the context of the GTHA, older neighbourhoods would have higher incidence of cycling, compared to neighbourhoods that were developed after 2000 (Table 3). Some differences in the correlates of cycling were also evident. For example, a range of built environment characteristics, including population change in the neighbourhood, while CTs where the majority of roads had an operating speed of >40 km would produce lower IRR, when compared to a CT where the predominant vehicle operating spend is ≤40 km (Table 3). Additionally, density of commercial uses within a CT was positively correlated with cycling trips; the variable did not influence IRR for cycling trips to work or school. Findings from this report, then, generally confirms previous research that has reported a relationship between population density and mixed land use on cycling (Damant-Sirois and El-Geneidy, 2015; Saelens et al., 2003), while at the same time, emphasizes that the correlates of cycling can be different across trip purpose.

Figure 31 further explores the relative influences of various dependent variables on cycling trips. The figure shows improvement to the log-likelihood (best described as the impact each variable has on predicting cycling rate) relating to each of the variables included in the model. In general, household car ownership, neighbourhood maturity (measured in terms of predominate building age), and prevalence of nearby cyclists had the largest influences in explaining cycling incidence rates, while the impact of high speed roads, median income, and business density was relatively moderate. Trip distance (i.e., % commute trips >5 km) was also an important indicator of cycling for commute purposes in a CT.

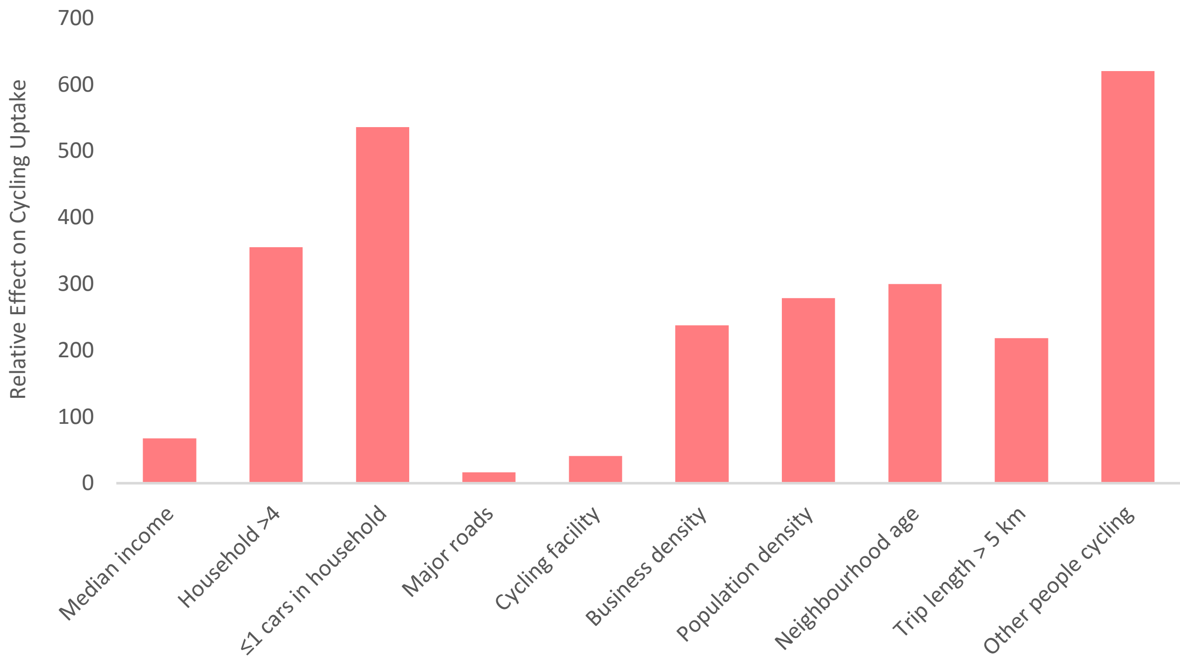

Figure 31: Relative Impact of Variables on Cycling Rate in a Census Tract

When the factors are combined together (Figure 32), it appears that modifiable factors such as the neighbourhood environment, had relatively greater influence on cycling trip rates at the CT level, when compared to socio-demographic characteristics. This finding is encouraging for policy and planning practice around cycling, because it support the current planning principles that emphasize an improved built environment (i.e., land use mix, urban design and street network characteristics) to enable active transportation uptake. Interestingly, the prevalence of nearby cyclists had a comparably large impact on cycling incidence rates for both commute and non-work trips. While this result may be indicative of a safety in numbers effect (Jacobsen, 2003) or the influence of localized cycling culture or advocacy (Krizek et al., 2009; Ledsham et al., 2013), such findings could also suggest that there are more unexplained correlates that impact cycling counts. Further exploration of this topic, however, was beyond the scope of this study.

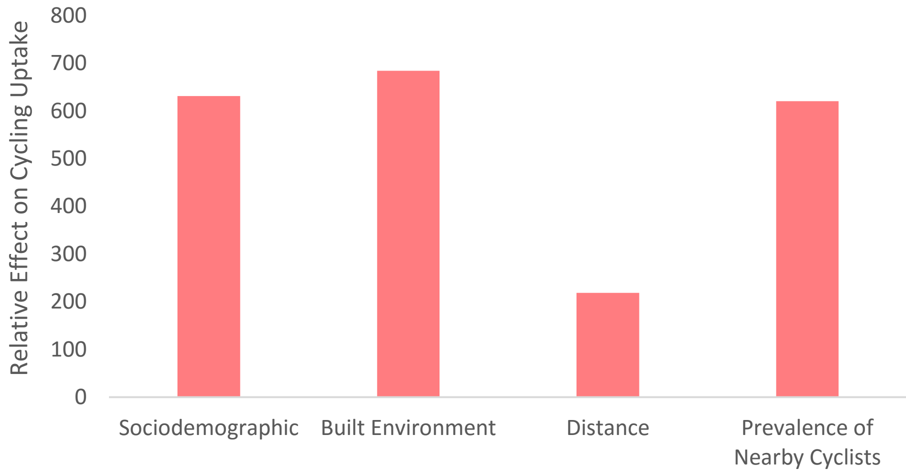

Figure 32: Grouped Relative Impact of Variables on Cycling

4.4 Mapping Cycling Propensity of GTHA Neighbourhoods

Using the results from the negative binomial regression model, ***propensity maps*** were created to explore the geographical distribution of locations that are more amenable to cycling. In order to do this, the values of each statistically significant factor of influence (i.e., each trip, socio-demographic and environmental characteristic) were multiplied by their corresponding coefficient (this is the magnitude of effect on cycling uptake), producing the propensity of high versus low cycling rates, relating to each variable included in the model, by CTs across the GTHA. These individual effects were added up to estimate cycling propensity for each CT, which were then mapped to identify bicycle-friendly communities, based on the results of our statistical model. Further details of the method are described in Appendix 2. Finally, to account for variations in CT areas, a "fishnet" approach was used to distribute the overall cycling propensity in a CT into smaller 0.25 km^2 grids. The details of the fishnet approach are discussed elsewhere in this report (section 3.2.2).

The propensities of cycling, estimated using the model results, are mapped in Figure 33. The propensities relating to the built environment, holding the socio-demographic variations constant, are shown in Figure 34. These figures identify areas within the GTA that can be considered more bicycle-friendly (versus less bicycle-friendly) based on travel behaviour of current GTHA residents. Using these figures, we can begin to identify spatial clusters of CTs with higher cycling propensity. As expected, much of inner urban Toronto showed very high propensity (top 10% of the GTHA). Interestingly, smaller pockets of areas that would be amenable to cycling can be found in various parts of the so-called "suburban" GTHA, for example, in the municipalities of Burlington, Brampton, Markham and Ajax. In contrast, we can see low cycling propensities in many suburban communities around Toronto, including neighbourhoods located in Vaughan, Richmond Hill, Oakville and Newmarket, indicating that the residents and/or the built environment within these municipalities are less amenable to cycling.

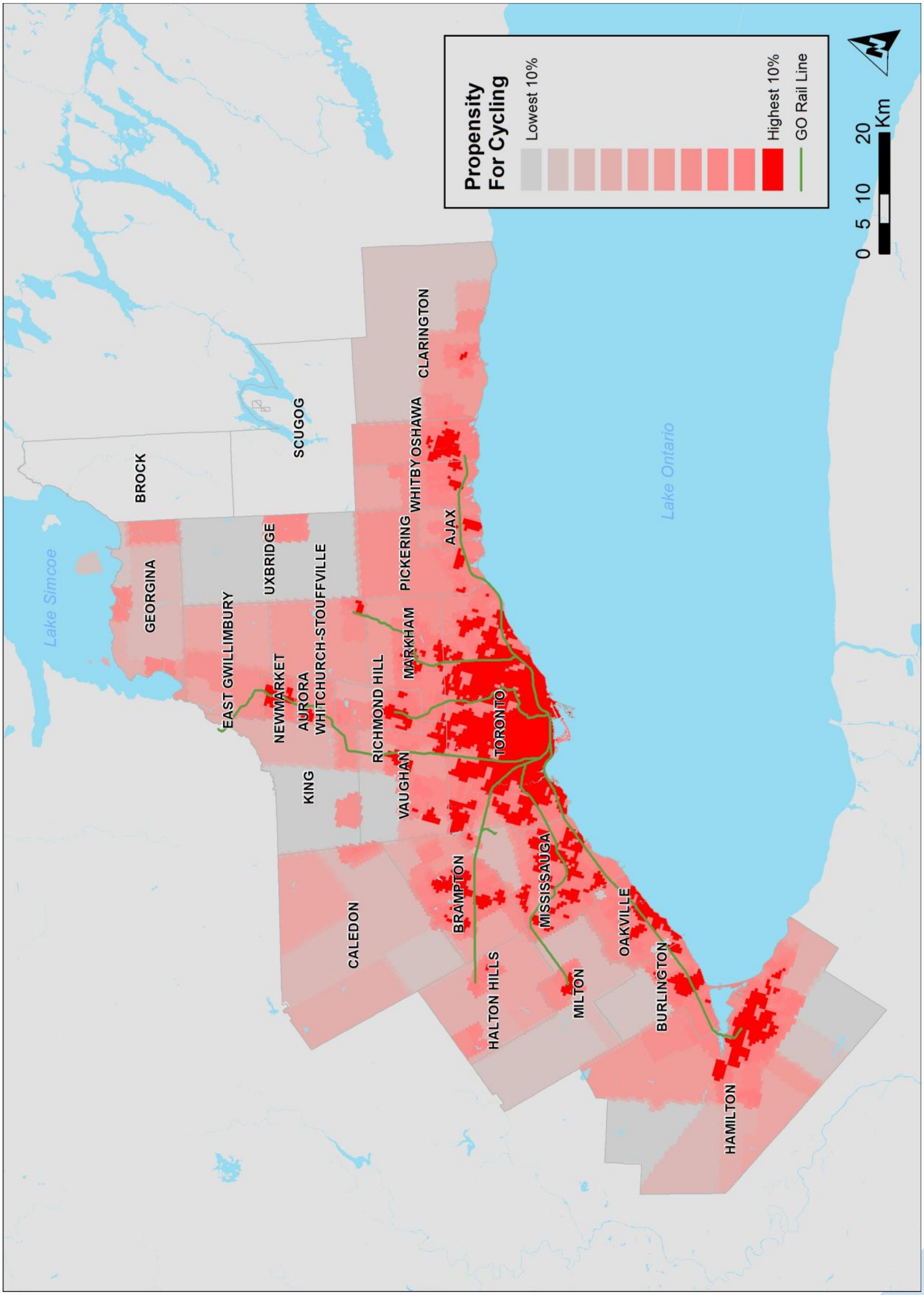

Figure 33: Cycling Propensity in the GTHA

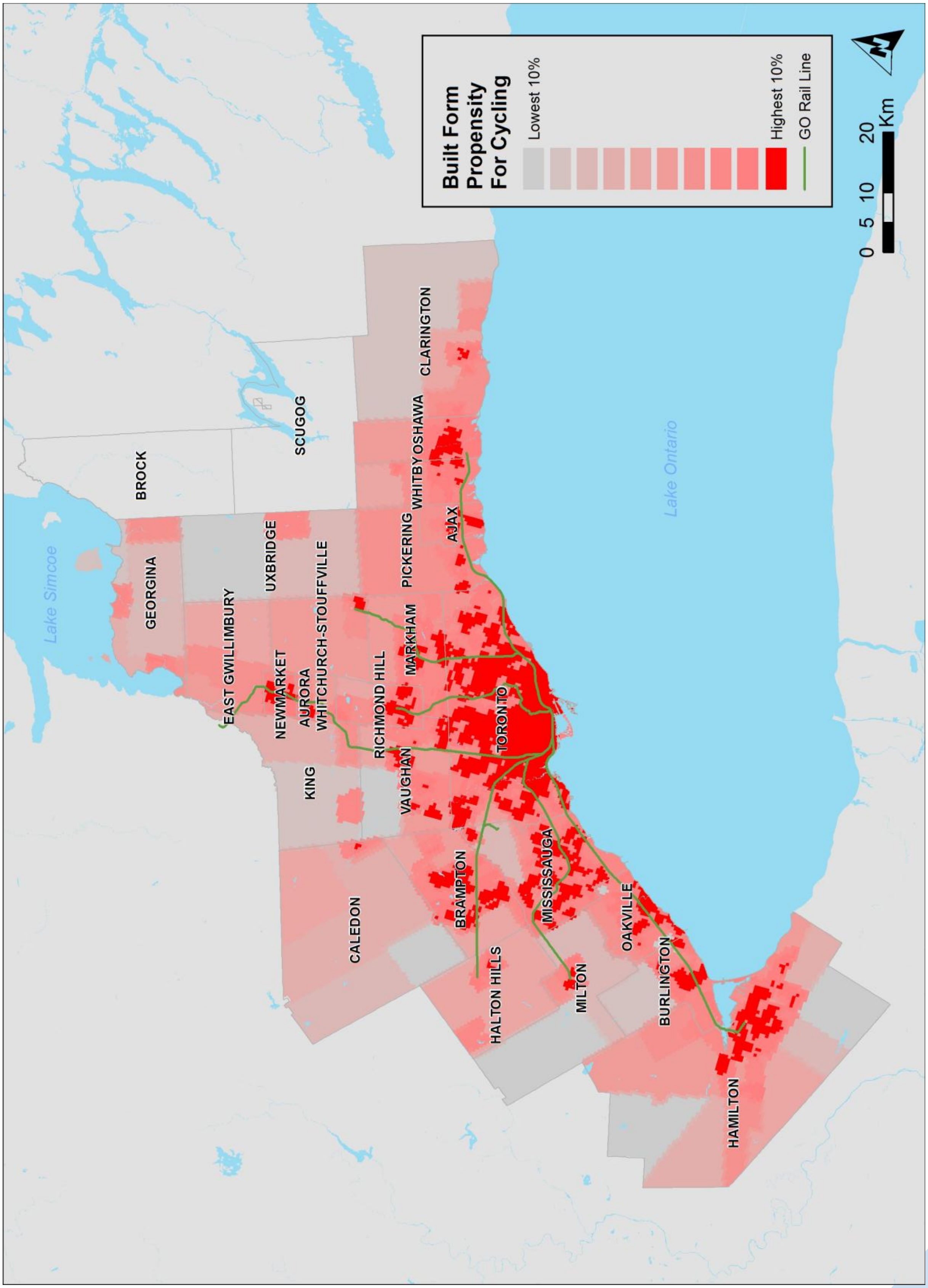

Figure 34: Cycling Propensity for the GTHA, Relating to the Neighbourhood Built Environment

In summary, the analysis presented in this chapter enabled a more policy-relevant exploration of cycling behaviour across the regional landscape. This analytical framework can be used as a tool to reveal localized barriers to cycling and identify priorities for active transportation planning and investment. More important, a comparison between the geographical distribution of cycling potential (Figure 8) and neighbourhood-level cycling propensity (Figures 33 and 34) may begin to identify and bridge the gaps between current cycling condition in GTHA communities and opportunities for improvements, a topic that is discussed further in Chapter 5. Such an exploration can inform policy that may systematically target these areas with programs or capital investments.

Chapter 5 Implications for Advancing Regional Transportation Planning in the GTHA

GTHA residents take 14.04 million trips everyday to travel to various destinations. The majority (63%) of these trips are short trips less than 5 kms, and yet, only 6% of them are currently either walk or cycle. Particularly, the cycling rate in this region is very low at 0.9% of all trips. The current rate is clearly representative of a missed opportunity, because many of these short trips could easily be cycled under favourable conditions.

In response, The Regional Transportation Plan for the GTHA, *The Big Move,* identified increased cycling mode share as one of the key objectives (Metrolinx, 2008). It is worth noting that planning for active transportation (i.e., walking, cycling and other human powered transportation modes) typically occurs at the municipal level, and is guided by Official Plans and (Active) Transportation Plans. However, the environmental, economic and health-related benefits of active transportation are significant on a regional scale. As a result, it is critically important that municipal planning policy and practice is informed by a regional perspective of the challenges and opportunities relating to cycling, and are aligned around shared goals.

To this end, Metrolinx, which is the Provincial agency that implements *The Big Move,* has adopted strategies to improve active transportation uptake across the GTHA, and continues to work with municipalities to realize the goals outlined in *The Big Move.* Recently, Metrolinx released a *Discussion Paper for the Next Regional Transportation Plan* (Metrolinx, 2016) that outlines six key proposed strategies to support active transportation. They are: 1) promote walking and cycling for short trips, 2) improve municipal active transportation plans, 3) overcome barriers to active transportation through capital investment in infrastructure, 4) promote active transportation-friendly land use planning and design, 5) adopt strategies to improve pedestrian and cyclist safety, and 6) promote active transportation by children and youth.

This research was undertaken to inform this regional transportation planning process. In this study, we quantified the cycling potential in the GTHA and explored demographic and geographical variations in this potential (Chapter 3). Following that, we also statistically examined the potential influences on current cycling behaviour, emphasizing particularly on census-tract level neighbourhood built environment characteristics, and identified areas in the GTHA that are relatively more cycling-friendly compared to others (Chapter 4). When studied together, the results provide insights into the challenges and opportunities relating to cycling in the GTHA from a regional perspective.

Based on our analysis we conclude this report with a discussion of some of our insights into the potential implications of the findings for advancing transportation planning in the GTHA, and informing urban growth in this region.

5.1 A Very Large Number of GTHA Trips are Short and Potentially Cyclable

Cycling rates in the GTHA have increased in recent years. However, much of this increase can be explained by growth in Toronto's inner urban/ downtown neighbourhoods (Chapter 2). Cycling rates within the rest of the GTHA have increased more moderately (i.e., between 0.26% and 1.5%) or have remained unchanged. While current rates are low, huge potential for cycling exists in the region. Our analysis suggests that 4.35 million trips within the GTHA can be considered potentially cyclable trips, which is one-third (i.e., 33%) of all trips that are not currently taken on foot or a using a bicycle. More than half (53%) of our estimated potentially cyclable trips are short trips, between 1 and 3 km in length.

While current cycling rates in many suburban municipalities remain low, most of these municipalities demonstrate a high potential for cycling (Figure 35). More important, we could not identify any significant difference in the distance distribution of these potentially cyclable trips across the six regional/upper tier municipalities. In other words, in all regional municipalities within the GTHA, a large proportion of these potentially cyclable trips are very short (i.e., <3 km). If a significant portion of this potential is realized, then the impact on GTHA's transportation network, and more broadly on the region's environment, population health and economy, would be clearly felt. For example, if only one in five (20%) of these potentially cyclable trips are actually cycled, that would take 716,000 cars off GTHA streets and highways everyday, and contribute to a significant reduction in congestion and greenhouse gas emission, and at the same time, major increase in physical activity accumulation at a population level.

Within this context, Metrolinx's proposed strategy of promoting active transportation for short trips is a critical first step. While many GTHA municipalities are currently in the process of adopting new and improved Active Transportation Plans and/or supporting policies, historical underinvestment from the upper levels of government may have slowed down the implementation of these plans/ policies. For example, the current network of dedicated cycling facilities (i.e., bicycle lanes and cycle tracks) is limited and highly fragmented (Figure 30 in Chapter 4). Municipalities and the Province of Ontario should work together in making strategic investments to improve bicycle networks in urban and suburban communities, particularly where higher potential for cycling exist. In addition, there is a critical need for the planning and investment of all municipal and regional transit expansion projects to include an active transportation plan that prioritizes walking and cycling connections to transit.

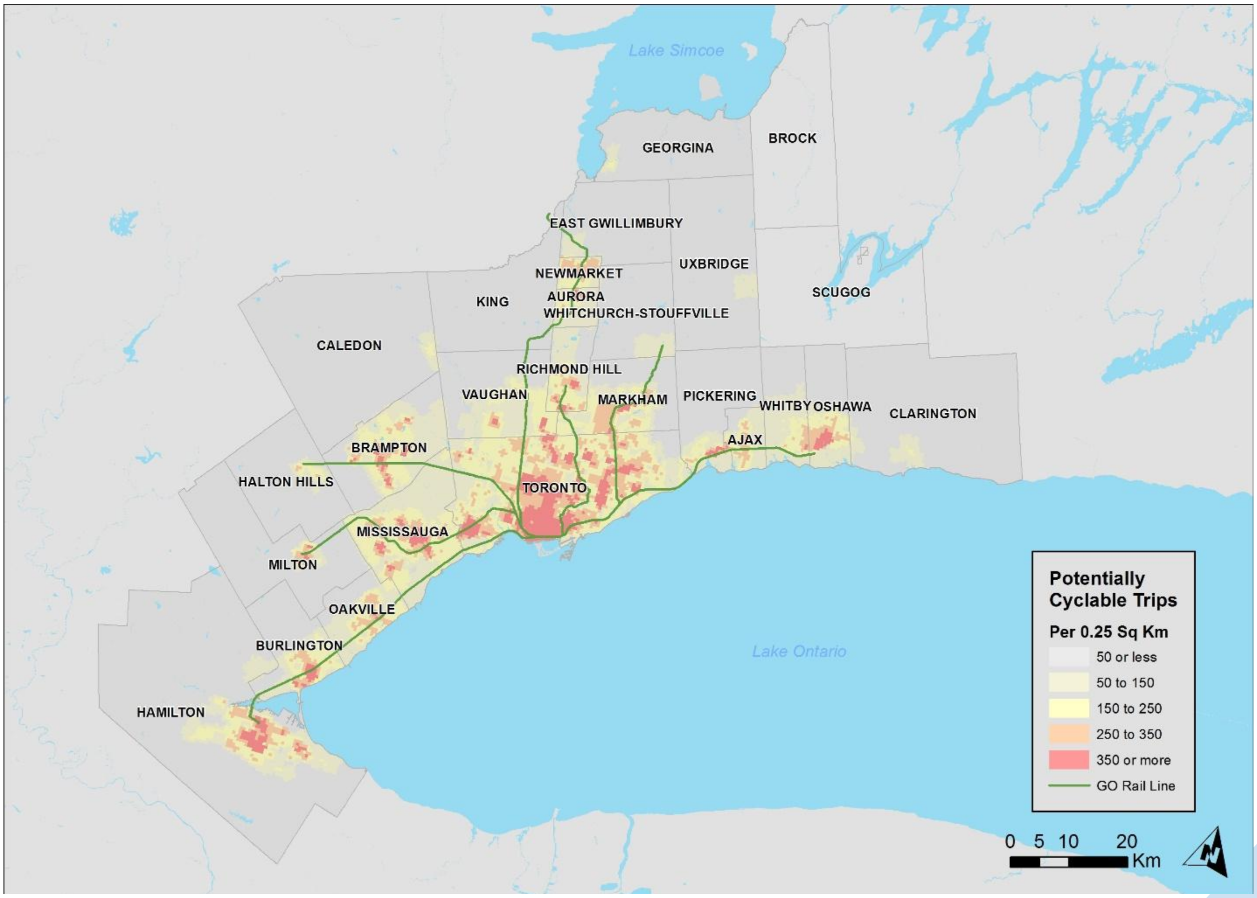

Figure 35: Cycling Potential in the GTHA

5.2 Built Environment is a Key to Promoting Cycling

The Growth Plan for the Greater Golden Horseshoe encourages the development of compact, vibrant communities with an emphasis on the public realm, urban design and continuous active transportation networks, all of which are to enable walking and cycling for transportation and recreation (Ontario Ministry of Municipal Affairs, 2006). Results from our analysis (Chapter 3), similar to findings from international research (Damant-Sirois and El-Geneidy, 2015; Saelens et al., 2003), confirm the importance of the neighbourhood environment in the context of the GTHA, and identified built environment characteristics that may support cycling within the GTHA neighbourhoods. Population density, land use mix, dedicated cycling facilities (i.e., cycle tracks and bicycle lanes) and safer streets (i.e., roads with lower speed limits) were associated with cycling uptake (Table 2 in Chapter 4). Dense and mixed use communities may also provide access to more destinations and thereby reduce travel distance, which is another factor that was strongly correlated with cycling.

As the GTHA communities continue to grow within the provisions set out in the *Growth Plan,* the GO-transit corridors have evolved as spines that have guided much of this growth in the suburban municipalities. As a result, an opportunity has emerged where Metrolinx can play the role of a key stakeholder in creating dense, mixed use and complete communities by utilizing the land development potential around transit stations. This potential was duly acknowledged in *The Big Move* in the recommendation for the Mobility Hubs, which has subsequently resulted in the development of detailed Mobility Hub Guidelines for 51 major transit stations (existing and proposed) within the region (Metrolinx, 2011). In addition to key placemaking objectives that encourage dense, vibrant and mixed-use communities around transit, the *Guidelines* also encourage the creation of cycling-friendly streets for improved mobility.

Implementation of this shared vision requires close collaboration between municipal planning authorities, developers, transit authorities, community stakeholders and provincial government, including Metrolinx. Results from our study can inform this process by providing insights on the topic of cycling. Figure 36 shows cycling potential within 5 km of GO Transit stations. The proposed Mobility Hubs are also identified in the figure. Clearly, the opportunities for cycling uptake are not currently the same everywhere. Some of the *Hubs* showed relatively low potential (expressed here in terms of the number of trips to various destinations that could by cycled), while some other stations offer greater potential. By carefully designing the communities and streets near these major transportation nodes, significant improvements in the regional cycling rate can be achieved.

At a finer geographical scale, the immediate challenge is to create cycling-friendly environments in the areas where high potential for cycling already exists. Figure 37 shows examples of two GO Transit stations, namely- Burlington and Aurora. The images to the left shows cycling potential (darker colour demonstrating higher cycling potential), and the images to the right shows cycling propensity relating to the neighbourhood built environment, holding the socio-demographic variations constant (darker colours highlighting places that can be considered more cycling-friendly according to our statistical modeling of travel behaviour). In both cases, some mismatch between cycling potential and cycling propensity could be identified. In other words, potential for cycling was not always accompanied by a cycling-friendly built environment. A high cycling potential means that residents are already taking many short trips, but instead of walking or cycling, they are using motorized modes of travel such as cars or transit. From a planning perspective, then, enabling cycling by means of capital investment in improved cycling facilities (e.g., bicycle lanes/ tracks, bicycle lock/storage facilities at key destinations, and introduction of bike-share programs) may produce quick wins in these areas. The results from this study may inform this process. However, if the communities become denser and more mixed-use as a result of long term planning within the directions provided by the *Growth Plan*, the cycling propensity (i.e., cycle-friendliness) would improve, potentially leading to even higher potential for cycling.

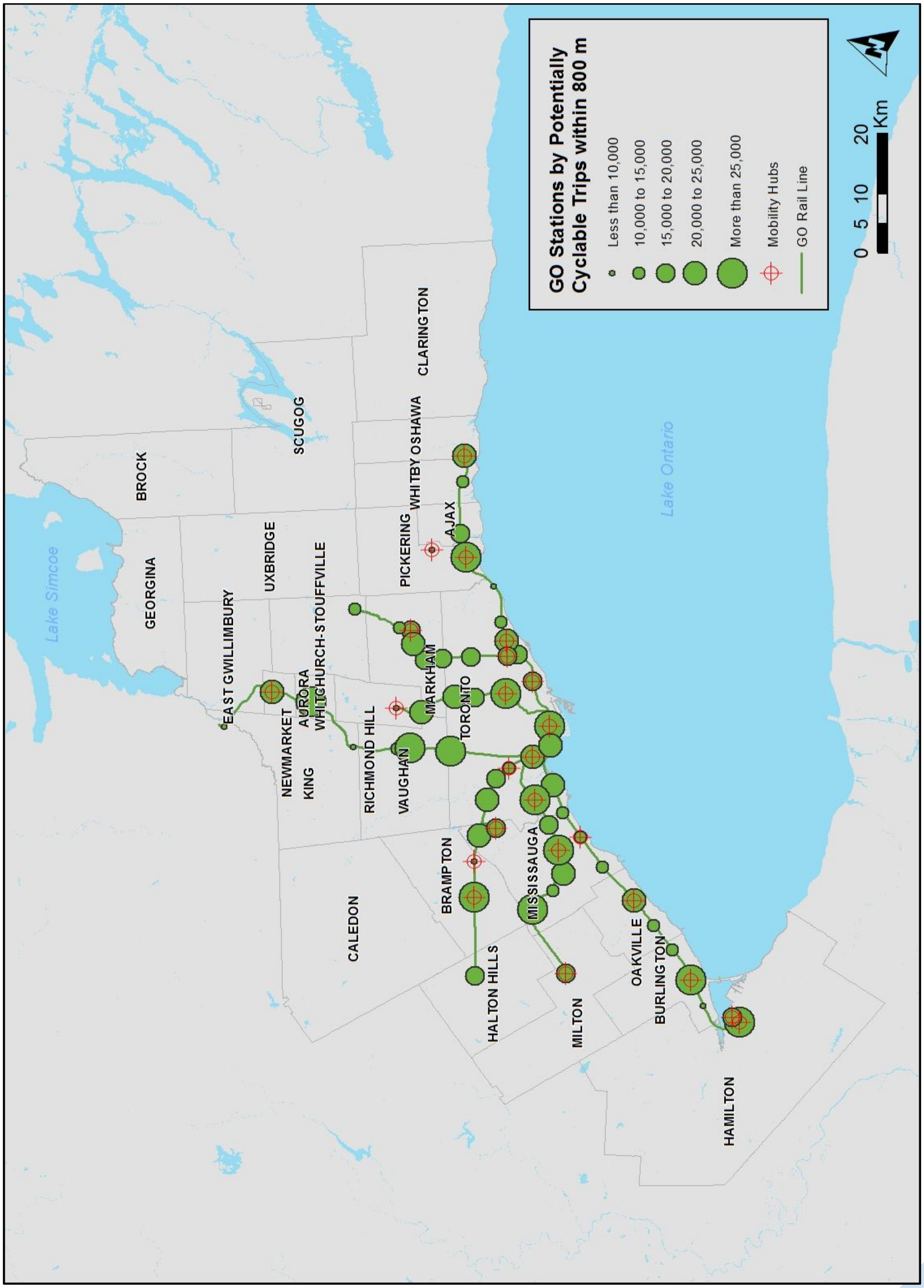

Figure 36: Cycling Potential within 5 km of GO Stations

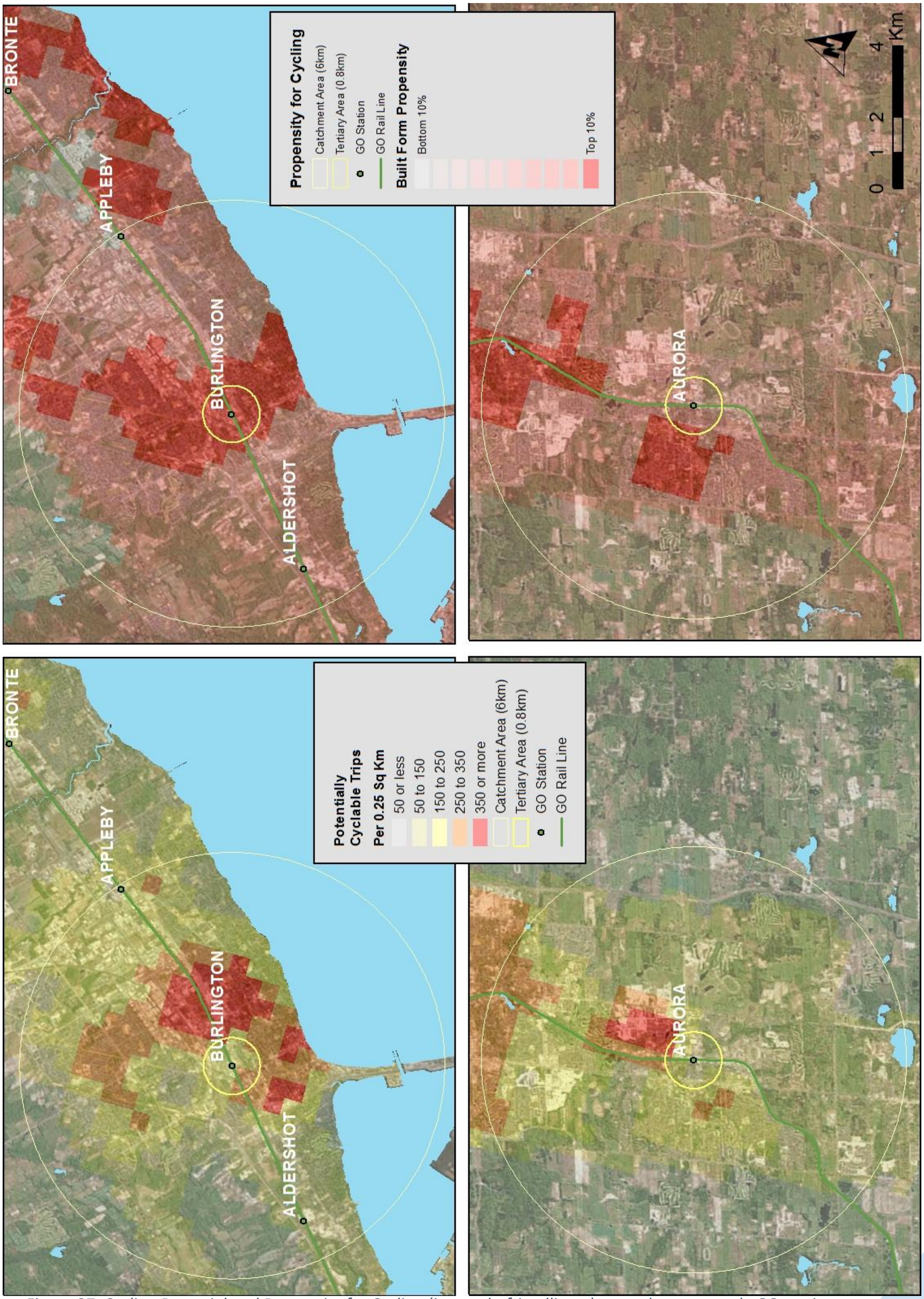

Figure 37: Cycling Potential and Propensity for Cycling (i.e., cycle-friendliness) around two example GO stations.

Similar comparisons between other stations can be made using data and methods from Appendix 2. GTHA-wide cycling potential (Figure 8) and propensity (Figures 34 and 35 in Chapter 4) have been discussed elsewhere in this report. Using this data, Metrolinx and other stakeholders would be able to identify high-priority station areas for strategic investment.

5.3 Promoting Cycling among Children and Youth may Improve Active Transportation and Health

The *Discussion Paper for the Next Regional Transportation Plan* emphasizes the importance of active transportation for children and youth (Metrolinx, 2016). Active transportation can be a regular source of physical activity (ParticipACTION, 2016); impacts of active transportation on a child's social and emotional health are also well documented (Burgi et al., 2011; Fusco et al., 2012). Travelling to/from school is the most common type of trip for a child during the school year. As a result, existing policy and grassroots initiatives have largely focused on active school transportation, while the enablers and barriers to walk or cycle to other destinations are less known.

Typically, most utilitarian travel destinations (e.g., school, work) for children and youth aged between 11 and 16 years are close to their homes. For example, our analysis revealed that three-fourth (74%) of all trips to school or work, by this age group, are less than 3 km in length, and yet, only 1.1% of these trips are currently cycled. In contrast, and based on our estimations, 27.5% of trips to school/work can be considered potentially cyclable.

Unfortunately, cycling behaviour of North American children is understudied in current literature, and as a result, current knowledge on the barriers to cycling is limited. Previous studies conducted in Toronto indicated that more children and youth are now being driven to school than ever before, despite the fact that average school travel distance has remained relatively unchanged over the last three decades (Buliung et al., 2009; Mitra et al., 2016). Mitra et al (2016) also suggested that the perception of what should be considered a "walkable/ bikable" distance may have changed over time, and that children are less willing to travel actively (or are allowed to walk/cycle) even when a destination is located at a short distance.

Current literature has also identified parental as well as children's/youths' perception of safety as a critical barrier to active transportation (Mitra, 2013). Some of these negative perceptions may be overcome by designing improved cycling facilities and safer streets. For example in the US, the Safe Routes to School (SRTS) programs have remained heavily focused on capital investment in pedestrian and cycling-friendly infrastructure, and several systematic studies have reported significant improvements in active transportation rate as a result (McDonald et al., 2014; Stewart et al., 2014). In contrast, soft interventions such as training and education programs are a more common approach in Canada, with only limited success so far (Mammen et al., 2014). Programming initiatives specifically focused on cycling (e.g., Bike to School Week) are also increasing, but their impacts remain to be systematically explored.

In the GTHA, Metrolinx has been facilitating walking/cycling among children through the Active and Sustainable School Travel (ASST) initiative (Metrolinx, 2016b). A regional approach has been highly effective in other parts of the Western World, by improving coordination, leadership and monitoring/evaluation processes. Such programs have been supported by sustainable sources of funding (Flanagan and Mitra, 2016). Similar resources, dedicated to promoting walking and cycling among children, are largely absent in the GTHA.

5.4 Closing the Gender Gap in Cycling is Critical

Women in the GTHA make more short trips compared to men (measured as a proportion of total trips). With regard to estimated potential for cycling, women currently make more trips that can potentially be cycled (54%) compared to men (46%). However in reality, only 30% of current cyclists on GTHA's roads are female. Our analysis strongly suggests that women are the way forward for cities and regions aiming to increase cycling trips. In the absence of policy and programming that are strategically directed to women, much of the existing cycling potential among female travellers may never realized, particularly in suburban municipalities within the GTHA.

The geographical variation in the gender-gap also requires policy and scholarly attention. It is remarkable that some neighbourhoods in downtown/ inner urban Toronto have achieved similar levels of gender parity as is seen in established cycling-friendly European countries (e.g. the Netherlands, Denmark, and Germany), even prior to the recent increase in cycling infrastructure in downtown Toronto, while other municipalities have failed to attract women to cycle. Unfortunately, systematic research focusing on the gender gap in cycling is limited. Previous studies have identified some potential barriers to cycling among women, including 1) household responsibilities (Emond et al, 2009), 2) stronger safety perceptions and concerns for safety (Bernhoft and Carstensen, 2008; Emond et al., 2009; Garrard et al., 2012), and 3) poor travel experiences as cyclists (Heesch et al., 2012).

Despite limited knowledge on women's cycling behaviour, cross-sectional studies have found an association between cycling facilities and higher rates of cycling among women. These findings indicate that that provision of safe cycling infrastructure can be a critical factor in increasing cycling by women (Garrard et al., 2011). Canadian researchers have also found that women, more than men, are less likely to ride on roads without some type of cycling facility (Teschke et al, 2012). Based on current evidence, it appears that policy emphasis on active transportation networks may enable cycling among some women, but clearly, more research focusing on women's cycling behaviour and barriers to cycling is needed to inform the development of future policy and programming that can specifically address the current very large gender-gap.

5.5 Cycling Can Play a Critical Role in Solving the First/Last Mile Problem

The first/last mile problem refers to when the distance to access transit is two or more kilometres, longer than an easy walking distance (Craig, 2013). One in every seven trips in the GTHA (14%) are transit trips. Providing efficient and safe access to/from transit stops is critical to the success of our transit systems and further improvements to ridership. Currently, 91% of transit riders in the GTHA walk to transit stops/stations. However, 98% of those who do not walk drive, or are driven, to transit stations. This is unfortunate within the context where 97.4% of transit riders travel less than 5 km to get to a transit station. When access to GO Transit stations were explored specifically, we found that 43.3% of GO transit riders drove to/from transit stations, although 66% of them lived within 5 km of a station.

In contrast, our estimations indicate that 4% of all transit access trips, and 3.6% of all egress trip, could potentially be cycled. Similarly, approximately 70,000 transit access/egress trips relating to the use of GO transit could potentially be cycled, which is 22.1% of all trips to/from GO stations. It is worth noting that the current potential for GO Transit-related cycling trips is related to a modest mode share of GO Transit (1.6% of all trips in the GTHA are GO Transit trips). With the planned improvements to the GO service frequency, the GO ridership is expected to rise, which may provide even greater opportunities to facilitate cycling among GO Transit riders.

The findings from this research can inform the ongoing planning initiatives to improve the quality and quantity of transit ridership in the GTHA. For example, the current *GO Rail Parking and Station Access Plan* emphasizes the importance of automobile parking facilities in improving ridership and customer experience (Metrolinx, 2013). While the need for multimodal access and related infrastructure is acknowledged, the plan lacks specific recommendations, particularly in terms of improved bicycle facilities. This emphasis on automobile access is perhaps justified based on current travel behaviour, where 43% transit riders drive (or are driven) to/from GO stations, and only 0.5% cycle. Predicting potential change in travel behaviour is also difficult because of a lack of high quality transit access/egress data. In this study, an effort to link transit access/egress trips to GO Transit stations was unsuccessful due to a high volume of unavailable station information data. While systematic research focusing specifically on this "first and last mile problem", using improved and robust data, is critically important, in the absence of such research, findings from this study may begin to provide some insights to address this topic, which can inform the proposed update to the *GO Rail Parking and Station Access Plan* (Metrolinx, 2016c).

For example, Figure 39 shows the number of potentially cyclable access and egress trips specifically relating to GO Transit that occurred within 5 km of each station. The proposed Mobility Hubs are also highlighted. The map clearly demonstrates very high cycling potential in some (but not all) suburban GO Transit stations. Inner urban stations (such as Exhibition station in Toronto) had relatively low potential, perhaps because most users travel short distances to/from stations, and either already walk or cycle as their mode of transportation. In these stations, accommodating current cyclists' need would be an important planning concern, which is not captured in this report. Regardless, using this or any similar analysis, Metrolinx and its stakeholders can determine the priorities for capital investment in cycling facilities, or perhaps identify locations/ stations for pilot projects focusing on improving active transportation network to provide better access to stations, improving bicycle storage and locking facilities, or even an expansion of the bike-share program outside of Toronto and Hamilton. Managing and mitigating demand for driving to/from GO stations is critically important for efficient and sustainable growth of this transit system, as well as the environmental and economic sustainability of the suburban communities in

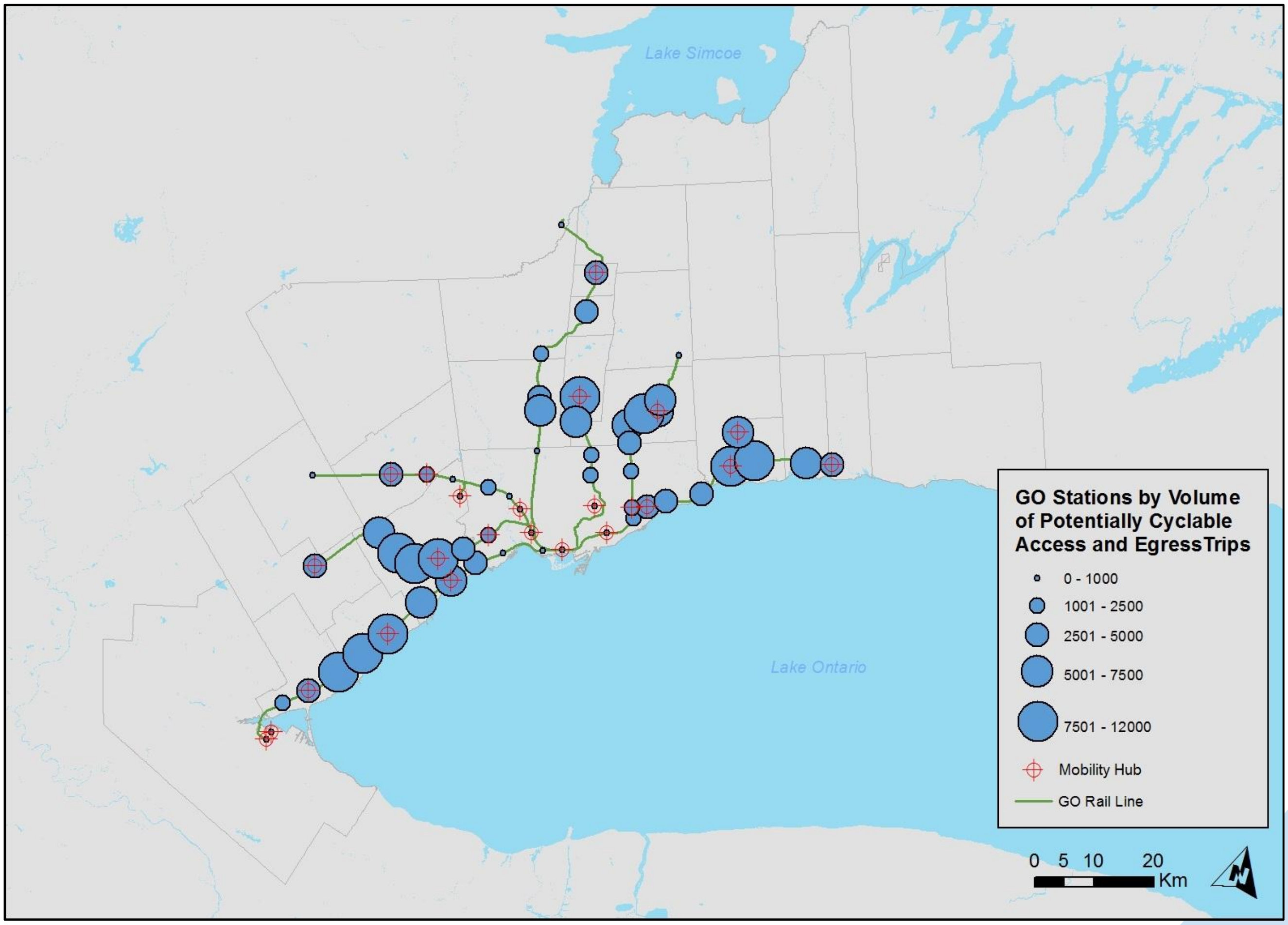

Figure 39: Potentially Cyclable Access/ Egress Trips within 5 km of GO Transit Stations

the GTHA, and the promotion of bicycling can be an effective way of reducing automobile dependency given the high potential that already exists at many of the GO stations. The magnitude of the expected impacts cannot, however, be quantified unless further research or pilot projects are undertaken.

5.6 Conclusion

This report has documented current patterns of cycling in the GTHA, the cycling potential in the region, and the areas with high propensity of cycling. We have found that there is tremendous potential for improving cycling rates in the GTHA. By capitalizing on this potential, the region could reap multiple benefits as a result: from reducing congestion and capital costs, to improving air quality to enhancing the physical health and well being of residents. The GTHA region is growing rapidly and more transportation choices are needed to manage the increased travel demand. Cycling is an under-tapped and affordable solution to the serious transportation challenges that we face in this region.

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Appendix 1 Cycling Behaviour in the GTHA

This appendix summarizes current regional patterns of cycling across the region; the information is taken directly from our previously submitted report titled "Cycling Behaviour in the Greater Toronto and Hamilton Area" (Mitra and Smith Lea, 2015). The report should be used as a compliment to Chapter 2 of this Final Reprot.

Using data from the 2011 TTS, and by means of graphs and charts, this appendix identifies the rates of cycling across the GTHA, and the context within which these trips are taking place. The results of our descriptive analysis are presented under two key themes: (1) Cycling trips in the GTHA, and (2) Cyclists in the GTHA.

Cycling Trips in the GTHA

Cycling trips have been increasing in the GTHA. In 2011, the GTHA residents made 126,000 cycling trips in total, compared to 79,000 trips a decade ago, indicating a 61% increase in overall cycling trips and a 37% increase in cycling mode share. Despite this, the overall mode share of cycling, in relation to other travel modes, remained very low in 2011 at only 0.93% (Figure 1). Combined mode share of active transportation (walking and cycling) is only 6.1%.

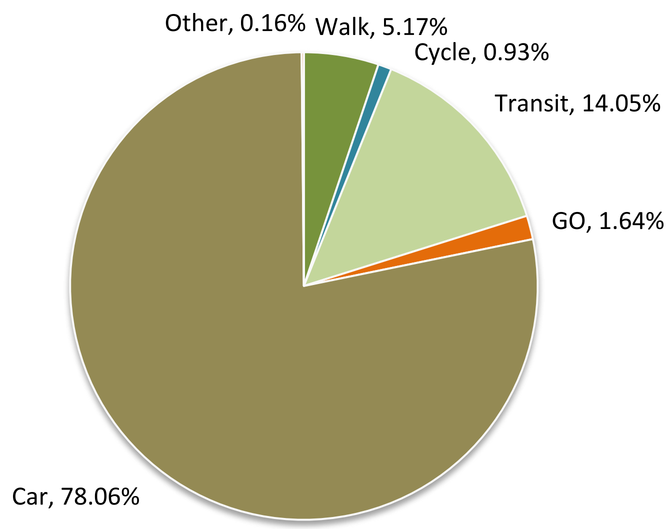

Figure 1: Mode Shares of all Trips in the GTHA (2011)

As expected, the rates of cycling are not the same across the GTHA. Figure 2 compares cycling mode shares by the regional municipalities. While in Toronto, 1.9% of all trips are made by bicycle, the rates remain relatively lower in other regional municipalities. Particularly notable are Durham, York and Peel regions, where only about 3 out of a thousand trips are taken using a bicycle.

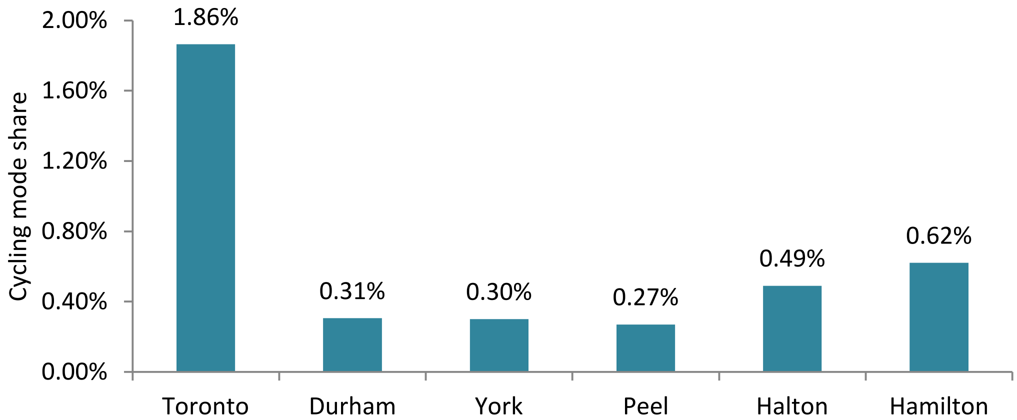

Figure 2: Cycle Mode Share in the GTHA (2011)

Figure 3 explores this topic in further detail, by plotting the rates of cycling across space. The map shows cycling mode share for each traffic analysis zone (TAZ) of trip origin within the GTHA. The values for places in between the two TAZ centroids were estimated using an Inverse Distance Weighted (IDW) method. The figure indicates that the downtown and surrounding neighbourhoods of Toronto are the only areas in the GTHA that have systematic concentrations of high cycling rates (2% or more). In other parts of the GTHA, cycling rates are relatively lower and the geographical distribution is more sporadic. However, TAZs with relatively high cycling rates (between 1 and 2%) can be found in some municipalities outside of Toronto (for example, in Oshawa, Oakville and Hamilton, among others).

With regard to changes in cycling rates over the last decade, most of the areas that have experienced a considerable growth in cycling mode share (i.e., >1.5% over a ten year-period) are located in the older downtown and surrounding neighbourhoods of Toronto (Figure 4). While areas outside of Toronto also showed some increase in the cycling rate between 2001 and 2011, no large and meaningful geographic concentration of TAZs with >1.5% increase in cycling could be identified. It appears that the previously observed 37% growth in cycling mode share can largely be explained by an increased popularity of cycling in Toronto's older neighbourhoods. In most parts of the GTHA other than Toronto, cycling rates have increased moderately (i.e., between 0.26% and 1.5%) or have remained unchanged.

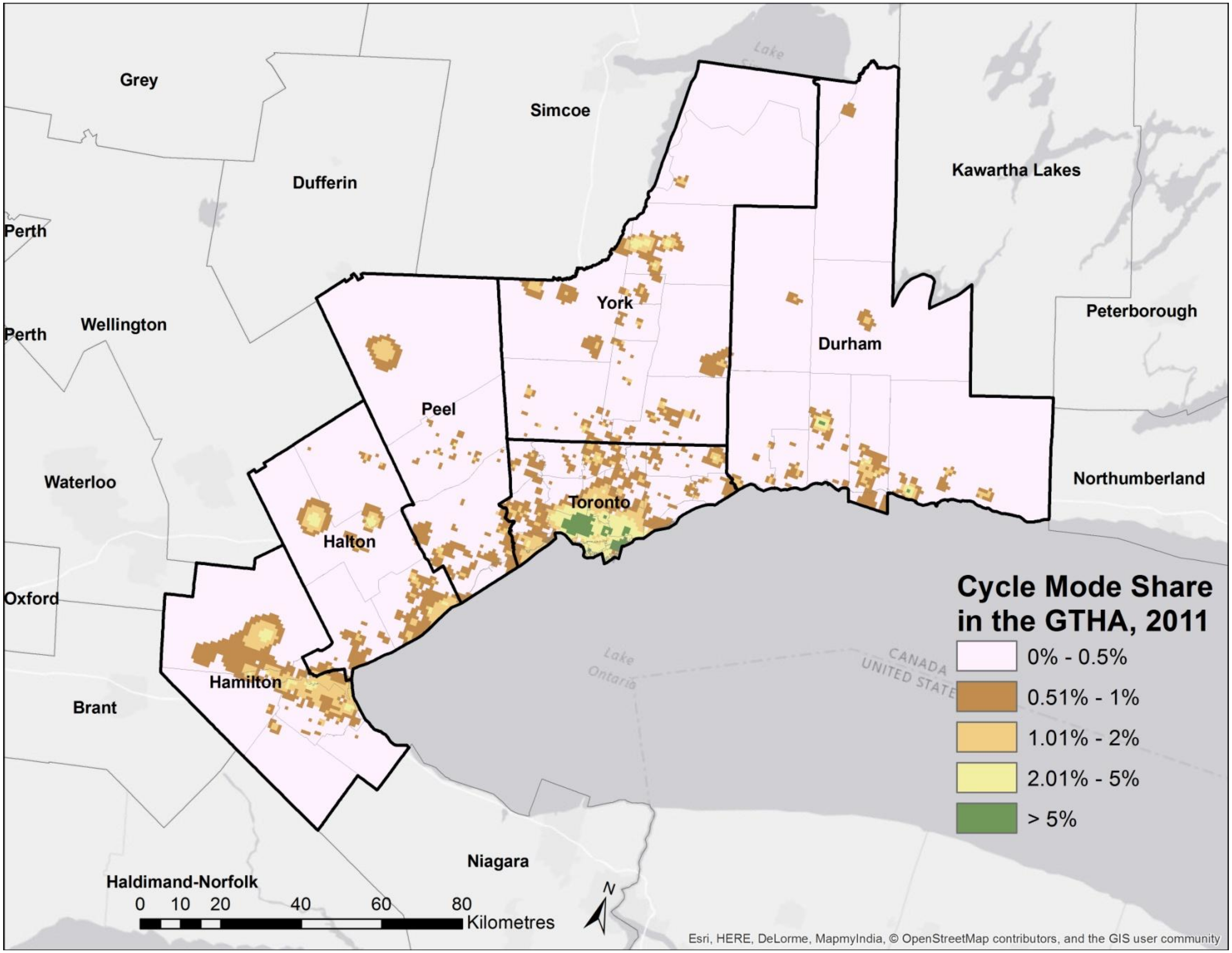

Figure 3: Geographical Distribution of Cycling Rates in the GTHA (2011)

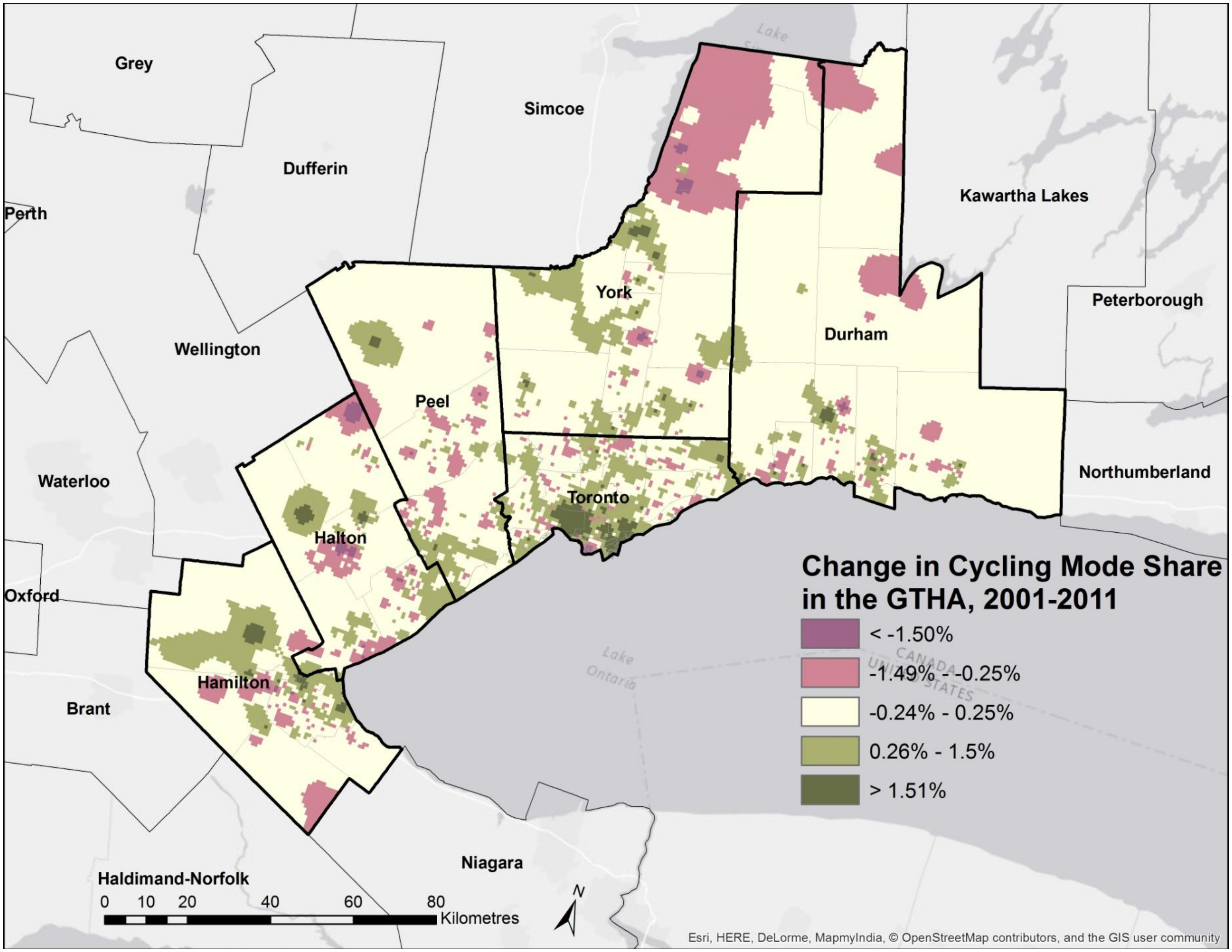

Figure 4: Change in Cycling Mode Share in the GTHA between 2001 and 2011

Not surprisingly, cycling rates are correlated with the distance travelled by the GTHA residents. Figure 5 plots cycling mode share by trip distance. At each distance, the ratio of cycling trips to all trips was calculated. The distances shown here are straight-line distances in km. between trip origins and destinations. The figure shows that the majority (53%) of all cycling trips in the region are between 1 and 3 kms in length. In contrast, only 9% of the cycling trips are >7 km in length. Also notable is the fact that when travel distance is very short (<1 km), cycling rate is relatively low, perhaps because at those distances, walking is a more feasible alternative for travelling. In summary, ***a distance between 1 and 5 kms appears to be the ideal distance for cycling in the context of the GTHA; 74% of the current cyclists travel this distance for their everyday trips***.

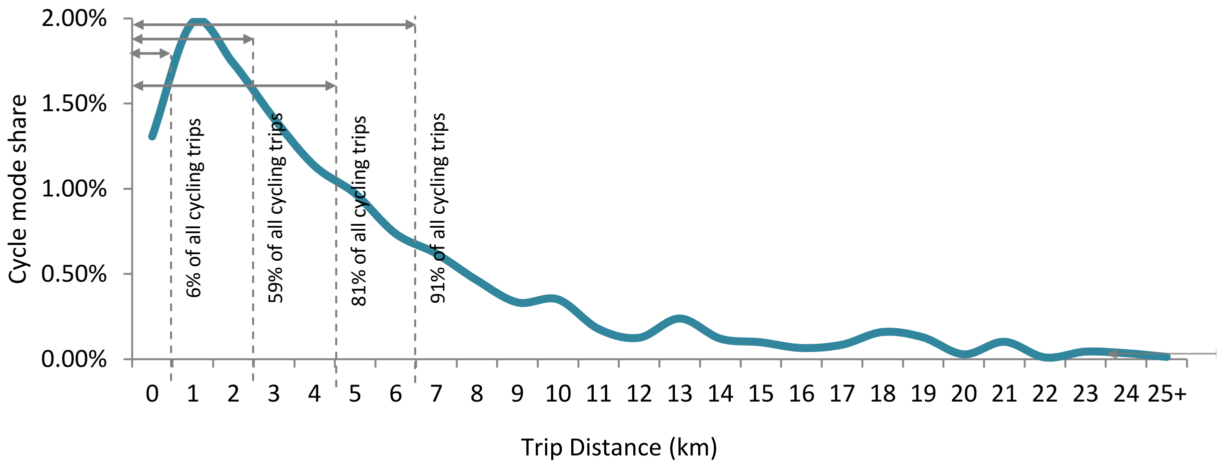

Figure 5: Cycling Mode Share by Distance Travelled (2011)

Figure 6 compares cycling trips to trips made by all modes, in relation to the time of the day when these trips are taken. The trip-making behaviour of the cyclists does not appear to be different than the overall day-long travel pattern by the GTHA residents. Clear morning and afternoon peaks (i.e., commuting peaks) emerged in both cases, indicating that commuting remains a major purpose for cycling trips. The afternoon peak lasts longer than the morning peak, for cyclists as well as for all trips.

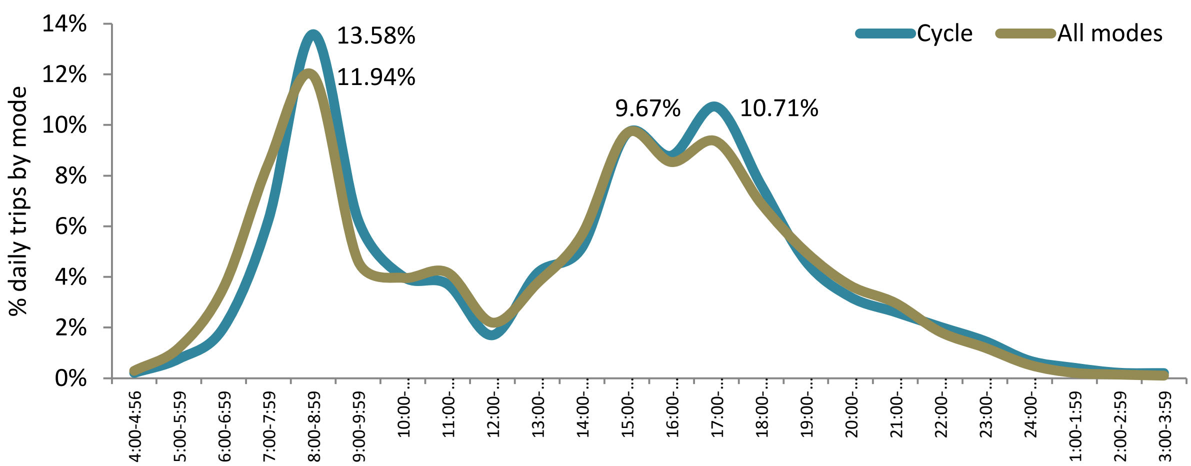

Figure 6: Trip Rates by Time of the Day (2011)

Figure 7, which compares cycling trips with all trips in the GTHA with regard to trip purpose, somewhat confirms the abovementioned observation. The figure shows that on average within the GTHA, bicycles are more often used to travel to work or school (i.e., for commuting trips: 56% of all cycling trips, compared to 43% of all trips), and less often used for other non-utilitarian purposes.

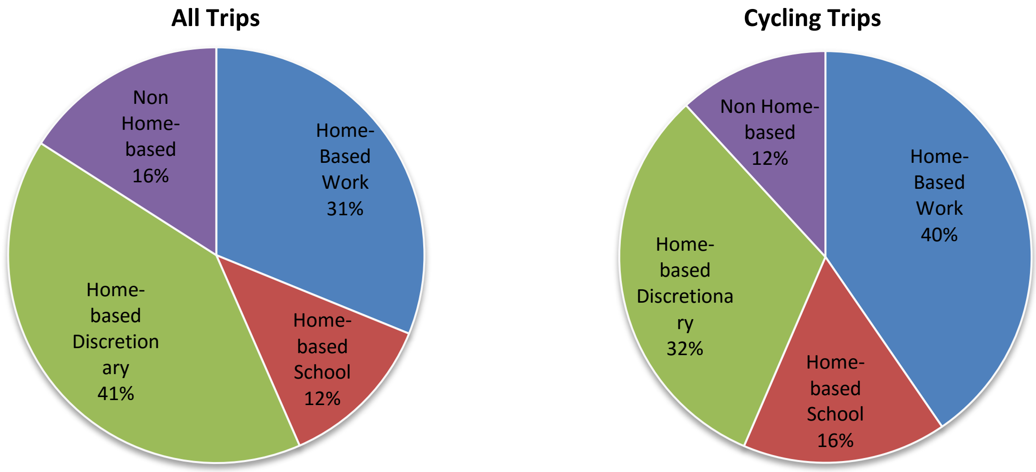

Figure 7: GTHA Trips by Purpose (2011)

Figure 8 explores the same topic through a different lens. In this case, mode shares of cycling for different types of trips taken by the GTHA residents were summarized. As expected based on our previous observations, cycling mode share is relatively high for work and school trips, compared to trips to market/shop and other destinations. For example, the table shows that 1.1% of all work trips and 1.2% of all school trips in the GTHA are taken by bicycle.

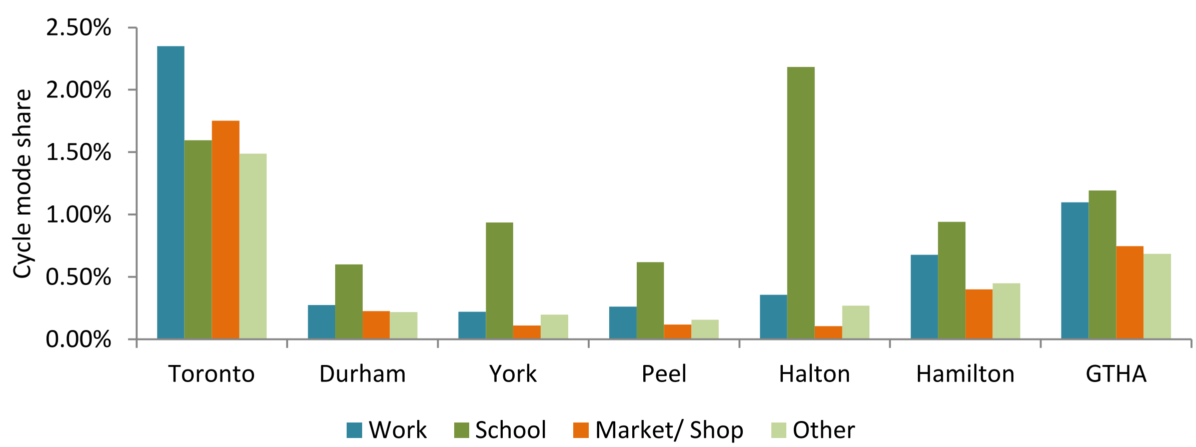

Figure 8: Cycling Mode Share by Trip Destinations (2011)

Major differences across regional municipalities were also observed (Figure 8). While in Toronto, cycling is most common for work-trips (among all trip purposes), in other regional municipalities (Halton in particular), schools are clearly the most common destinations for cycling trips. The use of bicycles for work trips remains very low in these places. Similarly, while in Toronto, a relatively high proportion of the trips to markets/ shops are cycling trips (1.75%), in other regional municipalities, cycling trips to markets/ shops are not so common.

Cycling Trips to Access Transit

We know that one in seven trips in the GTHA (14%) are transit trips (Figure 1), and typically people walk, cycle, drive or take other modes to transit stops. Characteristics of these trips that are taken to access transit stops (or to access final destinations from a transit stop) are relatively less known, but can be an important area where policy can focus. Hypothetically, transit stops that are beyond an easy walking distance, but are relatively short (e.g., < 7 km, which is approximately the 90 percentile cycling distance in the GTHA), can reasonably be reached using a bicycle, if enabling conditions exist.

In the GTHA, most individuals who use transit for daily travel live relatively close to transit stops. Figure 9 shows that 90% of all transit access trips are <1 km in length (straight line distance), while 98% trips are <5 km. Walk (91%) and car (9%) are the most common modes of travelling to transit stops (Figure 10). For example, 95% of all transit access trips that are <3 kms are on foot. However, as distance to transit stops increases, the car becomes the dominant mode to reach them; 99% of all transit access trips >3 km are car driven trips.

An exploration of transit egress trips (i.e., a trip from a transit stop to final destination) also revealed similar results. At <3 km, 96% people walked. In contrast, at >3 km, 98% drove to their destinations.

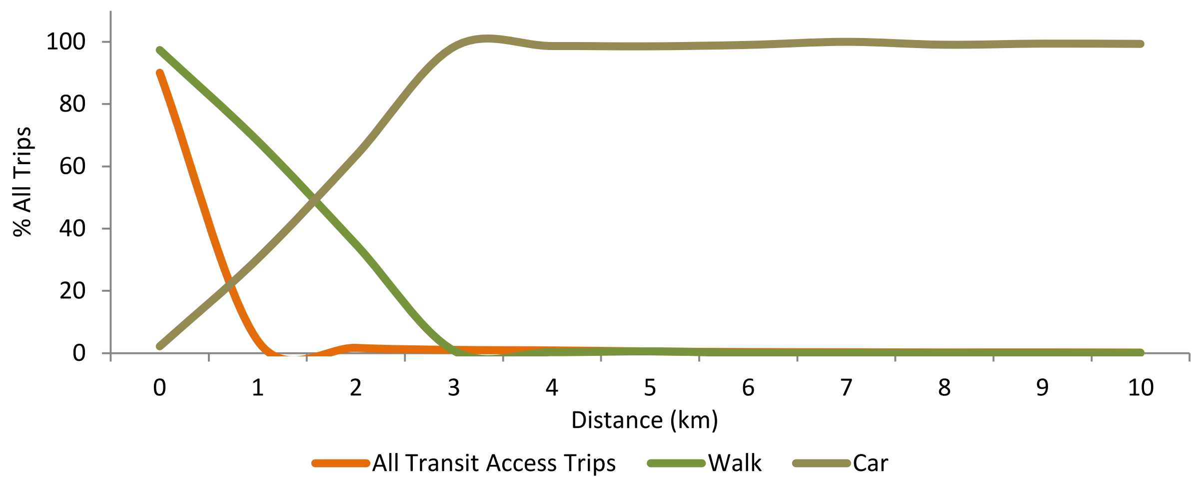

Figure 9: Transit Access Trips and Mode of Transport to Reach Transit Stops, by Distance (2011)

In comparison to walking and driving, the current mode shares of cycling for both transit access trips and egress trips are very low at only 0.23% (Figure 10). This is an important finding in the context that 8% of all transit access trips (158,000 trips per day), and 7.5% of all egress trips (147,000 trips per day), are between >1 km and <7 km, which could be reasonably taken using a bicycle under favourable conditions.

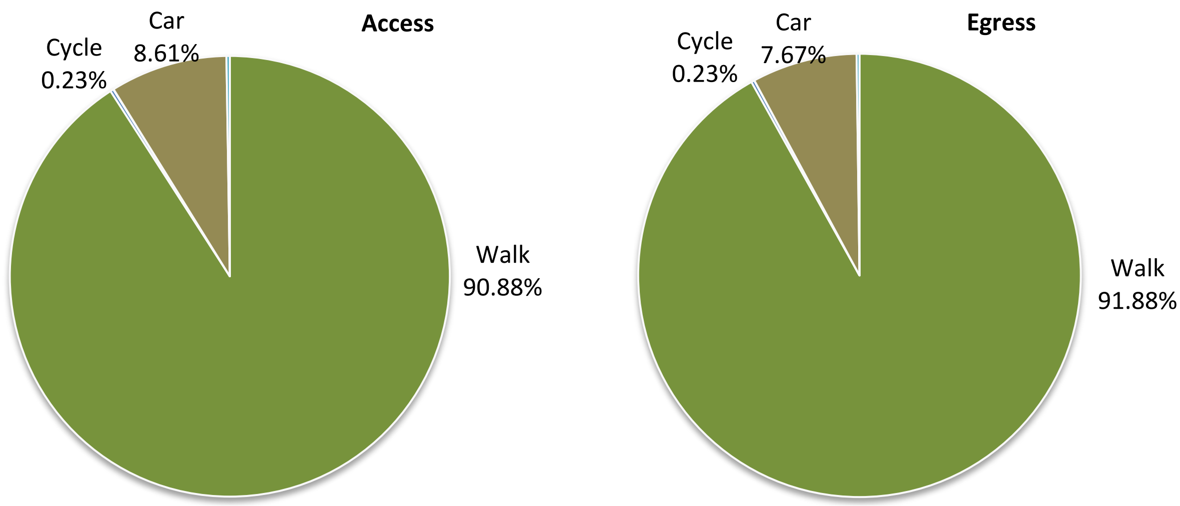

Figure 10: Mode Shares for Transit Access and Egress Trips in the GTHA (2011)

There are differences in cycling mode share, for trips to transit stops, across the regional municipalities (Figure 11). Lowest cycling rates were observed in Toronto, Peel and Hamilton, and Halton had the highest rate. While the causal links cannot be established from this data, more developed transit services (i.e., larger networks reducing travel distance to transit stops) may explain low cycling rates in some municipalities, particularly in Toronto and Hamilton.

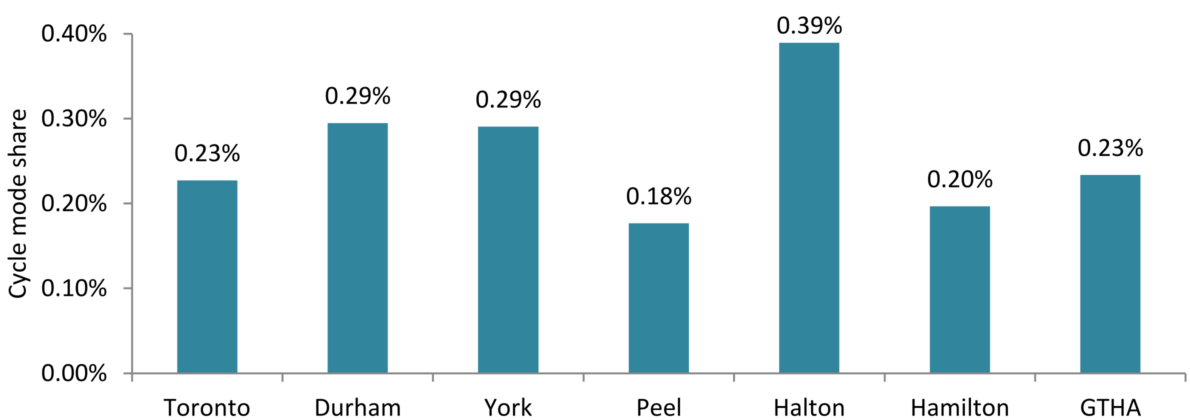

Figure 11: Cycle Mode Share for Transit Access Trips in the GTHA (2011)

Cyclists in the GTHA

Not every individual is equally likely to pick up cycling as their travel mode, even when enabling conditions exist. Previous research conducted in other parts of North America has identified strong correlations between socio-demographic characteristics and cycling. For example, current literature has consistently reported lower cycling rates among women (Garrard et al., 2012; Pucher et al., 2011). Cycling was also more common among younger people compared to older adults (Buehler and Pucher, 2012a; Saelens et al., 2003). A recent study in Toronto found that only 39% of those who were cycling on a downtown street (Sherbourne Street, with a bicycle track) were female; 65% of the cyclists were <40 years old (Mitra et al. 2015). Another Toronto study that examined the 2006 TTS data, found that 34% of trips by bicycle in Toronto are made by women but that there is a high variability in cycling rates across space (Ledsham et al, 2013). Another recent study that explored data from 90 large US cities concluded that cycling rates for commuting trips were statistically higher in cities with a high percentage of student population, and in those with a high percentage of households without cars (Buehler and Pucher, 2012b). Future policy in the GTHA region should strategically focus on subpopulations that are more likely to substitute their current travel modes for cycling under favourable conditions. The analysis presented in this report provides insights into this topic.

Similar to what has been reported elsewhere, cycling is more common among younger people in the GTHA. Figure 12 shows the proportion of cyclists by age groups. The figure reveals that the majority (51%) of the cyclists were <40 years old, and most (90%) were aged between 11 and 60 years. Cycling behaviour for children <11 years old could not be explored due to data unavailability.

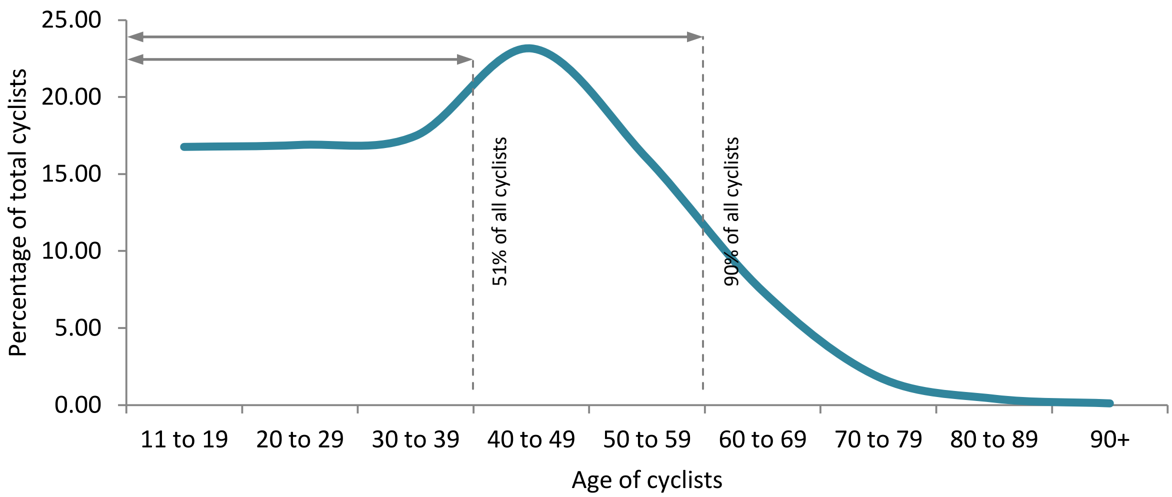

Figure 12: Proportion of Cycling Trips by Age Group in the GTHA (2011)

Further investigation into age-specific cycling rates revealed interesting differences across the regional municipalities within GTHA. The cycling mode share is the highest among the youth (11 to 19 year olds) in the regional municipalities of Durham, York, Peel and Halton (Figure 13), a finding that is consistent with Figure 8, where we found that the cycling rates are higher for school-trips within these regional municipalities. In contrast, adults living in these places rarely cycle. For example, cycling mode shares among 20-39 year olds are 0.32% in Durham, 0.23% in York, 0.20% in Peel and 0.32% in Halton, compared to 2.25% in Toronto. The difference in cycling rates between age groups was relatively moderate in Toronto and Hamilton.

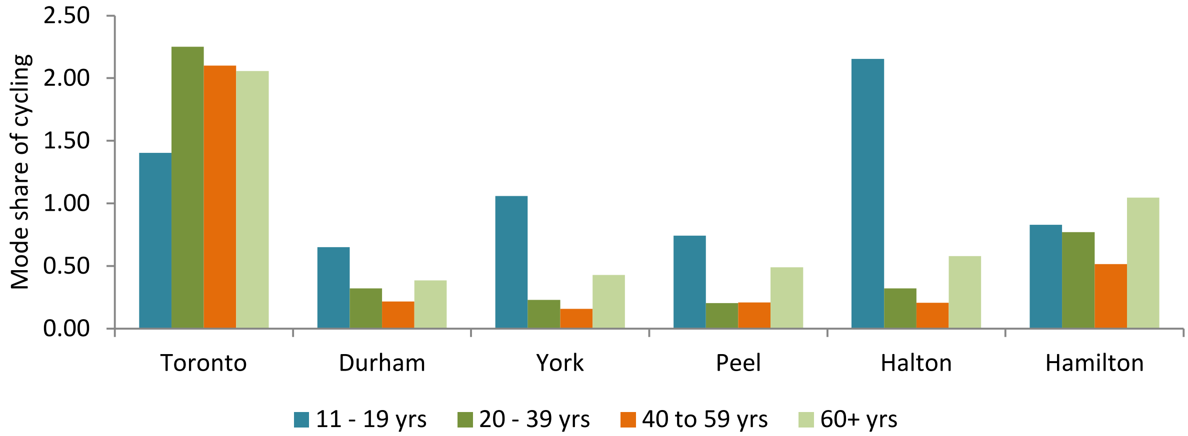

Figure 13: Cycling Mode Share by Age Groups in the GTHA (2011)

A major gender-difference exists in cycling behaviour within the GTHA, confirming the findings from existing research conducted in the US and Canada. Figure 14 shows that overall in the region, only 29% of the cyclists are female. The gender-gap in cycling is relatively larger in the regional municipalities of Durham, York, Peel and Halton where <20% of all cyclists are female. In a recent study conducted in Toronto, Ledsham et al. (2013) identified a considerable amount of variability in gendered cycling behaviour that is only revealed through a finer scale of analysis. For example, in some downtown Toronto wards, on average, close to 50% of cycling trips are made by women.

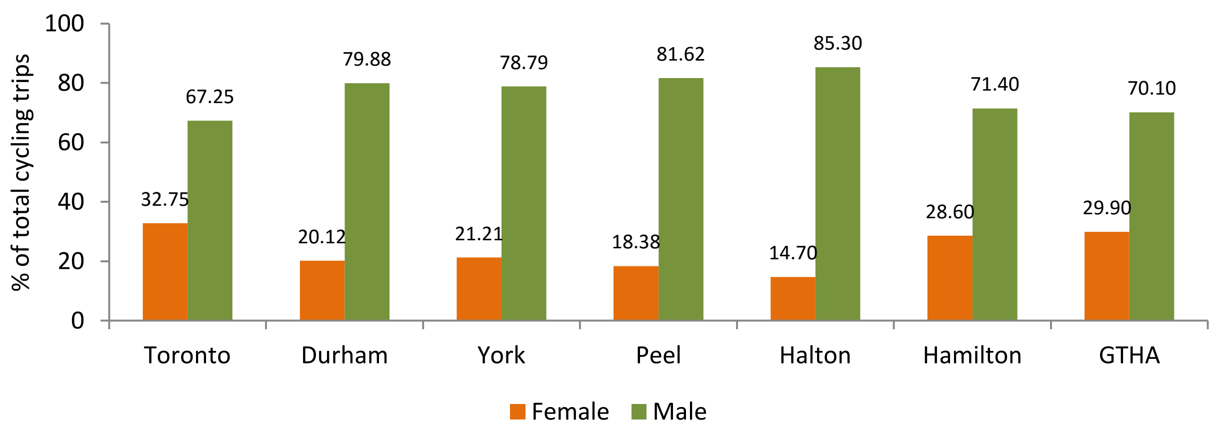

Figure 14: Gender-gap in Cycling in the GTHA (2011)

Figure 15 summarizes the employment-status composition of current cyclists. Contrary to the previous research that indicated a correlation between students and cycling, no clear difference emerged in the context of the GTHA. Only one in five cyclists is a full time student, which is not very high when compared to 16% of all trip-makers in the GTHA who are students. The majority of the cyclists (56%) are either full time or part time workers. Overall, there is no difference in the employment composition between cyclists and all trip-makers.

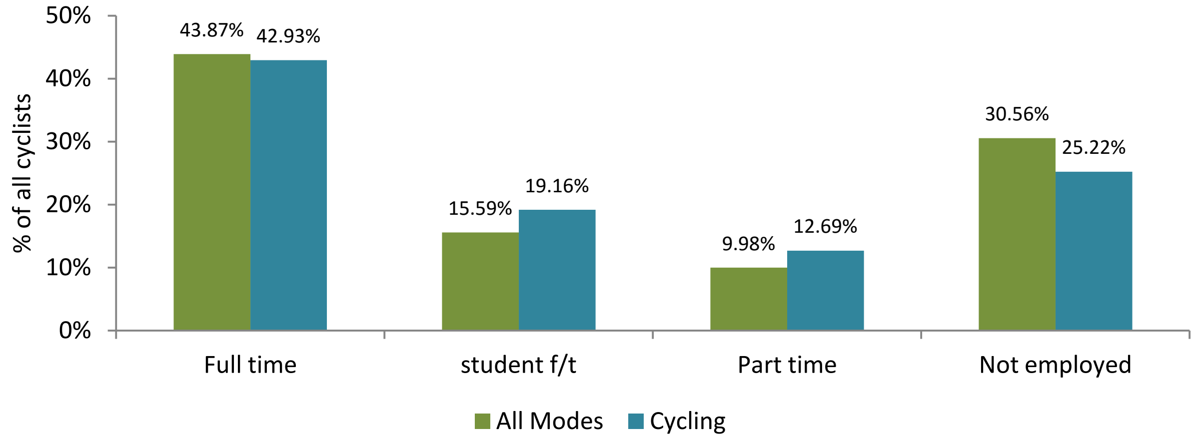

Figure 15: Employment Composition of GTHA Trip-makers (2011)

Finally, household car ownership is correlated with cycle mode share in the GTHA, similar to what has been found in other places. Figure 16 shows that cycling rate declines dramatically as a household's access to cars increases. Among those who did not have access to a privately owned automobile, mode share of cycling is 5%. In contrast, 84% of all daily trips are car-trips when a household have access to three or more cars.

In the GTHA, 75% of cycling trips are taken by individuals who own only one car or less; 31% cycling trips are taken by individuals who do not own any automobile.

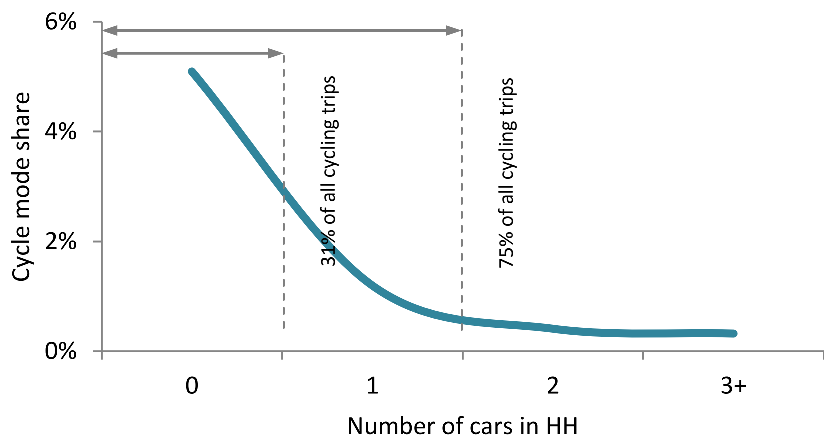

Figure 16: Automobile Ownership and Cycle Mode Share in GTHA (2011)

Appendix 2 Cycling Propensity in the GTHA Neighbourhoods- Detailed Methods

In this study, neighbourhood-level cycling propensity was estimated based on a regional-scale modeling of cycling behaviour. Cycling propensity is the expected cycling rate in a neighbourhood, when estimated based on social and environmental characteristics within that geographical space. In this study, propensity is used as a measure to examine how amenable a neighbourhood is to cycling, in comparison to other places in the GTHA.

The purpose of this appendix is to provide a detailed description of the data and methods used for our estimation, so that the method can be replicated for future use. The estimated propensity value for each census tract (CT) within GTHA is also reported. This document can be used as a tool to map and evaluate the “cycle-friendliness” of communities in comparison to the rest of the GTHA.

Travel Data

The study area for this research is limited to the Greater Toronto and Hamilton Area (GTHA), which consists of: Toronto, Hamilton and Regional Municipalities of Durham, York, Peel and Halton.

Travel data for analysis came from the 2011 version of the Transportation Tomorrow Survey (TTS). The available data is aggregated at the level of 1,328 CTs within the region, and was expanded to be representative of GTHA’s population. Some CTs were removed from analysis to address missing data problem.

Cycling counts per CT, more specifically, the number of trips originated in a CT where the primary mode of transportation was cycling, was explored as the travel outcome for this research. Trips undertaken to facilitate other passengers were excluded. Additionally, the analysis was restricted only to people aged between 15 and 64 years.

TTS does not collect data on travel distance, and instead, reports the straight-line distance between origin and destination of a trip as a proxy measure. For the purpose of this study, we included the proportion of trips originated from a CT that were >5 km in length was used as a proxy measure for trip distance.

Socio-Demographic and Built Environment Data

Socio-demographic variables came from the 2011 TTS, 2011 Canadian Census, and the 2011 National Household Survey (NHS). Variables include age, marital status, education, family/ household characteristics, labor characteristics, occupied private dwelling characteristics and household income characteristics (Table 1).

The built environment variables came as a result of GIS processes using data from DMTI Spatial©’s road infrastructure datasets and Enhanced Points Of Interests (EPOI) dataset, current to the year 2013. The variables consisted of several density measures (population, business, employment, and road blocks), station access, road speeds and predominant building age (used here as a proxy measure for neighbourhood maturity) (Table 1).

The latest open data for the regional municipal cycling facilities across the study area was used to measure the proportion of streets within a CT with a dedicated cycling facility. Only on-street cycle tracks and bicycle lanes were considered for the analysis (Table 1). A more flexible definition of cycling facility (which would include shared road spaces, sharrows and recreational trails in addition to dedicated facilities mentioned above) was initially considered but was excluded from final analysis because of the lack of statistical significant data. The currency of the cycling infrastructure data, however, could not be confirmed.

Finally, we included a spatial auto-correlation term in our multivariate analysis. In its simplest form, an auto-correlation can be expressed by the number of other people who are cycling nearby a CT, and this approach was adopted here as a proxy to represent localized cycling culture (Table 1).

TABLE 1: Variable Descriptions

Variable	**Definition**
TripCharacteristics	
Cycling trips	Total number of cycling trips (excluding facilitate passenger), originating from a census tract (CT)
Trips > 5 km	Proportion of all cycling trips, starting from a CT, that are > 5km (straight line distance)
Socio-demographic Characteristics	
Household >4	Percent of families in CT with 4 or more members
≤1 cars in household	Percent of households in CT with one or less cars
Median income	The median household income of the CT
Single Parent Families*	Percent of households in CT that are single parent families
Education*	Predominant level of education in CT. 0 if post-secondary or higher; 1 if high school; 2 if no high school.
Sex*	Percent of population in CT identified as Female
Age*	Percent of the CTs population that is ≤ 40 years of age
Neighbourhood Characteristics	
Population density	Number of people (,000) per square km in a CT
Neighborhood age	Predominant age of the buildings in a CT. 0 if built after 2000; 1 if built between 1960 and 2000; 2 if built before 1960.
Household Rooms*	Number of rooms in a Household – which also includes bedrooms
Blocks density*	Number of road blocks per sq km of area within CT
Business density	Number of commercial and office addresses per sq km in a CT
Transit access*	A CT with a subway or regional rail station within 2 km. 0 if false; 1 if true.
Major roads	Operating Speed of the majority (>50%) streets in a CT. 0 if ≤40 km.hr; 1 if >40 km/ hr.
Cycling facility	Percent of all roads in a CT with dedicated cycling facilities, including on street bike lanes and cycle tracks
Other people cycling	Number of cyclists aged 15-64 years within 5 km from the centre of a CT

*Variables excluded from the final multivariate analysis due to lack of statistical significance at α= 0.1

Statistical Analysis and Propensity Scores

Preliminary analysis of the TTS data relating to CT-level cycling counts indicated that they were unevenly dispersed and not normal. Additionally, there are an abundance of CTs with zero recorded cycling trips. As a result, a negative binomial regression model was estimated. These models are similar in nature to a Poisson regression, and are generally used to explore count data. A negative binomial regression was appropriate in this context, as these models are better suited to analyze overly dispersed data, which was the case in this study. Furthermore, the total number of trips were not uniform across all CT (i.e., the potential opportunities for a cycling trips or the "exposure" was different across CTs). As a result, an offset variable was introduced in the model. This offset variable represents the log of exposure, with coefficient constrained to be 1.

The coefficient (β_{x1}) of a negative binomial model represents the correlation between a variable x_1 (i.e., a social or environmental variable that is expected to influence cycling uptake) and the log of expected cycling count, controlling for the total number of trips in a CT. In this paper, the results are also reported in terms of $e^{\beta_{x1}}$ or the "Incident rate ratio (IRR)", which represents the expected cycling count, per trip originated within a CT, in response to a one-unit change in variable x_1. The results from the negative binomial regression model is summarized in Table 2.

Table 2: Correlation between Social and Environmental Characteristics and Cycling Uptake

Variable Name	Coef.	S. E.	*IRR*	*P*
Trip Characteristics				
Work trips > 5 km	-0.23	0.01	0.98	0.001
Socio-demographic Characteristics				
Household >4	-1.86	0.43	0.12	<0.001
≤1 cars in household	1.18	0.26	3.26	<0.001
Median income	0.01	<0.01	1.01	<0.001
Neighbourhood Characteristics				
Population density	0.02	0.01	1.03	0.004
Neighbourhood age (< 1960)	0.79	0.11	2.21	<0.001
Neighbourhood age (1960 – 2000)	0.3	0.10	1.35	0.002
Business density	0.01	<0.01	1.01	0.002
Major roads	-0.23	0.10	0.79	0.023
Cycling facility	0.04	0.01	1.04	<0.001
Other people cycling	0.04	<0.01	1.01	<0.001
(Intercept)	-6.01	0.34	<0.01	0.004
Goodness of Fit				
Chi-sq (df)	1615.32 (11)			
P	<0.001			
AIC	11351.87			

Propensity

The value of each statistically significant variable for a CT was multiplied by its corresponding coefficient, producing the expected number of cyclists for that CT, controlling for the total number of trips in that CT. These values were then added to identify cycling propensity for a CT, relating to the socio-demographic, built environment and trip characteristics of that particular CT. This value represents relative estimation of how amenable a CT is towards cycling, in comparison to other CTs within the GTHA.

Cycling *Propensity = -6.01 – 0.23 X (Work trips > 5km) – 1.86 X (Household >4) + 1.18 X (≤1 cars in household) + 0.01 X (Median income) + 0.02 X (Population density) + 0.79 X (NH age <1960) + 0.3 X (NH age 1960-2000) + 0.01 X (Business density) – 0.23 X (Major roads) + 0.04 X (Cycling facility) + 0.04 X (Other people cycling)*

Built environment-related cycling propensity was also estimated separately. The value for each CT represents the relative cycle-friendliness of the built environment within a CT, when variations in the socio-demographic characteristics and travel distance are accounted for. Additive propensities were catalogued and added to this document for future use (Table 4).

Cycling *Propensity related to Built Environment = 0.02 X (Population density) + 0.79 X (NH age <1960) + 0.3 X (NH age 1960-2000) + 0.01 X (Business density) – 0.23 X (Major roads) + 0.04 X (Cycling facility)*

This methodical approach enabled a more policy-relevant exploration of cycling behaviour, across the regional landscape. Comparing neighbourhood-level cycling propensity within municipalities and regions can reveal significant clustering of favourable and un-favourable conditions for cycling, and as a result can inform policy that may systematically target these areas with programs or capital investment.

Census Tract-Level Propensity Data

Table 4 summarizes cycling propensity data by census tract ID. Each CT has corresponding values that represent cycling potential, and cycling propensity.

Currently Cycled Trips	A count of all cycled trips that are cycled within a CT per day (does not include trips where facilitating a passenger is the purpose).
Cycling Potential	Cycling Potential is the total count of trips that could be cycled (but are not currently cycled) within a given CT. A detailed definition is provided in Chapter 3.
Total Trips for All Modes	This is the total trips originated in a CT per day (does not include trips where facilitating a passenger is the purpose).
Propensity Score	Propensity score is the result of the analysis described above. Propensity score represents how amenable the CT is to cycling, estimated in relation to social and environmental characteristics within the CT. Built environment propensity is the propensity for cycling relating to the neighbourhood built environment characteristics, holding the socio-demographic and trip characteristics constant,
Propensity Ranking	Propensity ranking is the propensity scores broken down into 10 equal quantiles. For instance, a propensity rank of 1 means the corresponding CT is in the bottom 10% of all CTs in terms of its propensity score and is

therefore less suitable than a CT with a higher ranking. A CT with a ranking of 10 is in the top 10% of all CTs in terms of propensity.

To map or evaluate cycling propensity for a municipality (or other geographies), simply locate the CTs that are relevant to your query, and note the corresponding data that are of importance. Propensity maps can be created to explore the geographical distribution of the results. These CT level maps can identify cycling-friendly versus un-friendly communities to inform planning decisions.

Additionally, applying a "fishnet" grid over a CT level propensity map can help standardize propensity values to account for the variations in CT areas (i.e., big versus small CTs), which would further improve the visualization of propensity across geographic areas.

Table 3: Propensity Scores for Census Tracts within GTHA

CTUID	Municipality	Currently Cycled Trips	Cycling Potential	Total Trips for All Modes	Propensity Score	Built Env Propensity Score	Propensity Ranking	Built Env Propensity Ranking
5320001.00	Durham	26	6113	12358	161.69	76.35	9	9
5320002.01	Durham	81	2009	5820	36.51	22.28	4	4
5320002.02	Durham	75	1586	3936	43.86	24.93	4	4
5320002.03	Durham	20	5286	15411	85.21	57.17	8	8
5320003.01	Durham	0	5903	10194	65.61	36.66	7	6
5320003.02	Durham	26	5416	10731	63.12	39.75	6	7
5320004.01	Durham	0	1659	3775	29.00	14.71	3	2
5320004.02	Durham	63	12422	24724	379.52	151.42	10	10
5320005.00	Durham	55	1989	4385	47.01	28.79	5	5
5320006.00	Durham	26	1484	3889	36.73	25.12	4	4
5320007.00	Durham	20	3287	6723	85.83	47.49	8	8
5320008.01	Durham	0	1702	5031	31.41	19.87	3	3
5320008.02	Durham	87	1569	3589	24.09	13.10	2	1
5320008.03	Durham	60	2854	6020	40.73	22.34	4	4
5320008.05	Durham	26	5934	10591	77.98	39.79	7	7
5320008.06	Durham	58	2334	5085	19.60	13.11	1	1
5320008.07	Durham	0	3759	9143	35.77	23.44	4	4
5320009.01	Durham	20	3537	5660	71.12	36.21	7	6
5320009.02	Durham	0	1852	4307	27.51	16.21	2	2
5320009.03	Durham	20	3377	6277	39.80	22.87	4	4
5320009.04	Durham	37	2367	4433	29.09	16.53	3	2
5320009.05	Durham	29	4431	8924	72.10	31.55	7	6
5320010.00	Durham	122	9921	19900	267.30	102.65	10	10
5320011.00	Durham	0	6125	13038	187.24	81.91	9	9
5320012.00	Durham	0	4842	9326	135.23	59.30	9	9
5320013.00	Durham	23	7106	12537	129.84	75.02	9	9
5320014.01	Durham	0	1673	3455	25.83	12.43	2	1
5320014.02	Durham	20	2365	5583	46.27	17.30	5	2
5320015.01	Durham	13	5990	19730	113.22	71.57	8	9
5320015.02	Durham	20	2221	5469	29.22	18.66	3	3
5320016.01	Durham	0	4887	14575	49.60	38.23	5	7
5320016.02	Durham	0	8641	22376	57.39	45.28	6	8
5320100.01	Durham	24	6054	17610	80.24	44.39	7	7
5320100.02	Durham	0	1215	4352	34.42	15.44	3	2
5320100.03	Durham	0	4114	11618	65.55	40.57	7	7
5320101.02	Durham	14	5471	11636	66.54	40.61	7	7
5320101.03	Durham	0	2316	4541	26.04	16.26	2	2
5320101.04	Durham	0	3344	7228	42.10	24.53	4	4
5320101.05	Durham	0	5237	12518	70.89	41.65	7	7
5320101.06	Durham	38	7438	20438	107.78	69.78	8	9

5320102.01	Durham	0	1039	2701	16.72	9.29	1	1
5320102.02	Durham	0	1950	3950	34.32	12.95	3	1
5320102.03	Durham	0	3123	7475	45.95	24.68	5	4
5320103.00	Durham	0	2981	6308	81.16	34.23	7	6
5320104.00	Durham	0	2234	5802	54.73	32.54	6	6
5320105.03	Durham	31	2048	7121	23.91	20.02	2	3
5320105.04	Durham	30	2392	5932	32.83	22.51	3	4
5320105.05	Durham	33	1564	5464	20.63	15.88	1	2
5320105.06	Durham	0	1368	2520	15.04	10.09	1	1
5320105.07	Durham	30	3714	10389	53.70	38.19	5	7
5320105.08	Durham	0	1566	3319	14.45	9.40	1	1
5320105.09	Durham	22	2607	6718	41.79	27.85	4	5
5320105.10	Durham	53	3313	8439	38.58	31.27	4	6
5320105.11	Durham	0	2083	11840	31.87	24.83	3	4
5320105.12	Durham	18	1450	9456	32.32	27.79	3	5
5320105.13	Durham	135	10772	27925	76.55	55.47	7	8
5320200.00	Durham	0	1615	9063	56.44	40.30	6	7
5320201.01	Durham	28	1676	7035	39.25	24.05	4	4
5320201.02	Durham	52	1147	5048	18.49	12.60	1	1
5320202.03	Durham	0	4216	10923	55.56	29.29	6	5
5320202.04	Durham	32	1677	5407	26.58	19.33	2	3
5320202.05	Durham	0	1524	5645	23.86	20.04	2	3
5320202.07	Durham	0	1441	6118	24.00	15.95	2	2
5320202.08	Durham	0	1460	4727	23.81	16.62	2	2
5320202.09	Durham	0	726	2863	12.63	9.36	1	1
5320202.10	Durham	30	2815	11663	43.62	30.67	4	5
5320202.11	Durham	0	3005	8928	45.14	31.41	5	6
5320203.01	Durham	24	1262	3720	18.01	13.17	1	1
5320203.02	Durham	0	1151	3410	16.62	12.61	1	1
5320203.03	Durham	65	3045	10625	90.12	62.65	8	9
5320203.04	Durham	0	3238	9556	35.39	25.42	4	4
5320204.00	Durham	65	4774	11661	130.05	67.95	9	9
5320205.00	Durham	38	1885	5101	25.25	18.39	2	3
5320206.00	Durham	0	831	7790	23.54	19.44	2	3
5350800.01	Durham	0	1620	3656	39.65	17.52	4	2
5350800.02	Durham	65	8882	24778	84.72	45.43	8	8
5350801.01	Durham	0	2076	4965	18.00	12.99	1	1
5350801.02	Durham	48	2868	8851	43.97	27.62	4	5
5350803.03	Durham	67	6355	14217	20.63	13.26	1	1
5350803.04	Durham	0	1320	4759	98.43	91.82	8	10
5350803.05	Durham	18	2881	8330	21.85	17.56	2	3
5350803.06	Durham	0	3148	8138	44.30	30.89	5	5
5350804.01	Durham	0	5381	13537	54.95	37.21	6	7
5350804.05	Durham	0	3526	8954	30.89	20.97	3	3
5350804.06	Durham	0	600	1810	94.91	51.93	8	8
5350804.07	Durham	25	2206	5853	29.73	16.70	3	2
5350804.08	Durham	0	2530	6156	35.45	27.67	4	5
5350804.10	Durham	36	10475	22084	69.77	29.63	7	5
5350804.11	Durham	18	7436	14712	80.39	40.34	7	7
5350804.12	Durham	0	2041	5551	31.31	23.76	3	4
5350804.13	Durham	0	2353	6916	8.17	6.24	1	1
5350805.02	Durham	0	2123	5678	31.60	22.06	3	4
5350805.04	Durham	30	2252	6862	23.02	15.98	2	2
5350805.05	Durham	57	3128	7434	112.28	77.58	8	9
5350805.06	Durham	27	5224	12337	67.71	52.53	7	8
5350805.08	Durham	27	9614	24882	18.24	14.64	1	2
5350805.09	Durham	0	2590	6979	34.96	25.21	3	4
5350805.10	Durham	0	1974	6215	25.93	20.82	2	3
5350805.12	Durham	0	2518	7065	18.69	13.38	1	1
5350805.13	Durham	0	6238	16452	23.91	19.40	2	3

5350806.00	Durham	0	398	3276	87.39	53.38	8	8
5350807.00	Durham	0	195	4674	151.60	110.46	9	10
5350810.01	Durham	24	2674	7667	67.24	28.29	7	5
5350810.02	Durham	0	1524	3403	44.51	23.42	5	4
5350810.03	Durham	22	1460	3817	42.30	25.35	4	4
5350810.04	Durham	18	6563	14621	116.17	57.53	9	9
5350810.05	Durham	0	3009	7018	20.79	12.37	1	1
5350811.00	Durham	44	7850	17467	59.25	26.75	6	5
5350812.00	Durham	27	3582	8678	51.47	29.17	5	5
5350820.01	Durham	27	1660	4649	14.11	11.80	1	1
5350820.02	Durham	27	6600	14757	19.75	13.68	1	2
5350820.03	Durham	0	2037	5147	61.67	52.56	6	8
5350830.00	Durham	0	822	6857	19.33	30.43	1	5
5350831.01	Durham	0	2563	7519	76.38	55.92	7	8
5350831.02	Durham	0	6297	18410	77.25	45.60	7	8
5350832.00	Durham	0	300	4423	17.61	11.60	1	1
5350600.01	Halton	88	5022	13355	78.59	41.17	7	7
5350600.02	Halton	16	2505	11370	30.20	21.90	3	3
5350601.00	Halton	149	3960	9943	117.17	53.50	9	8
5350602.00	Halton	120	9329	19741	102.22	47.63	8	8
5350603.00	Halton	64	1729	5296	133.49	55.60	9	8
5350604.00	Halton	50	3131	7519	152.78	71.74	9	9
5350605.00	Halton	0	3488	8014	107.52	41.41	8	7
5350606.00	Halton	71	7636	16505	257.30	128.65	10	10
5350607.00	Halton	70	2939	7515	59.34	32.31	6	6
5350608.00	Halton	0	4050	7115	88.34	47.43	8	8
5350609.00	Halton	84	2012	6638	85.42	47.57	8	8
5350610.02	Halton	42	2276	8299	95.98	60.57	8	9
5350610.03	Halton	101	1878	7387	69.68	26.44	7	5
5350610.04	Halton	21	1268	3718	57.54	28.74	6	5
5350611.00	Halton	0	4362	11662	40.41	25.59	4	4
5350612.01	Halton	0	2600	5893	0.00	0.00	1	1
5350612.03	Halton	71	3202	10035	40.48	28.06	4	5
5350612.05	Halton	73	7276	14139	43.82	28.06	4	5
5350612.07	Halton	23	6231	15150	23.93	15.56	2	2
5350612.08	Halton	40	4731	9469	61.69	45.96	6	8
5350612.10	Halton	57	4610	15871	0.00	0.00	1	1
5350612.11	Halton	0	2903	7786	29.55	22.84	3	4
5350612.12	Halton	122	3459	10125	55.18	37.35	6	7
5350612.13	Halton	0	2698	6519	86.41	55.35	8	8
5350612.14	Halton	49	5942	13474	82.95	57.00	7	8
5350612.15	Halton	0	1578	5640	40.02	25.10	4	4
5350612.18	Halton	24	2109	6352	59.04	40.17	6	7
5350612.19	Halton	24	1754	4730	37.97	28.44	4	5
5350612.20	Halton	0	1460	4984	56.88	39.41	6	7
5350612.21	Halton	0	1343	6710	24.40	17.56	2	2
5350612.22	Halton	24	1251	6055	45.23	34.68	5	6
5350612.23	Halton	0	1152	5819	21.25	15.43	2	2
5350612.24	Halton	22	2898	8765	27.72	18.03	2	3
5350612.25	Halton	85	5358	12045	20.00	17.67	1	3
5350613.01	Halton	0	2880	5718	31.55	21.12	3	3
5350613.03	Halton	84	7127	14562	59.54	28.27	6	5
5350613.04	Halton	97	4124	12886	46.39	22.12	5	4
5350614.01	Halton	18	2548	6255	38.21	24.48	4	4
5350614.02	Halton	18	2676	6851	55.58	34.80	6	6
5350615.00	Halton	0	1938	7952	75.77	53.58	7	8
5350620.01	Halton	0	6580	14919	20.68	16.04	1	2
5350620.02	Halton	24	2180	6820	48.49	38.68	5	7
5350620.04	Halton	0	10998	39104	36.31	27.62	4	5
5350620.05	Halton	0	1479	3360	21.50	16.49	2	2

5350620.06	Halton	0	1397	4489	31.15	18.94	3	3
5350620.07	Halton	0	2396	5695	26.33	20.88	2	3
5350621.00	Halton	48	7753	14544	117.34	60.80	9	9
5350622.00	Halton	234	4633	10568	47.97	27.84	5	5
5350623.00	Halton	121	4631	9830	354.61	161.45	10	10
5350624.00	Halton	24	3083	7085	20.30	13.90	1	2
5350625.00	Halton	53	3631	12280	44.33	20.63	5	3
5350626.00	Halton	0	943	9457	24.61	15.12	2	2
5350630.00	Halton	27	1143	6518	60.25	38.69	6	7
5350631.02	Halton	0	2373	6963	48.55	38.53	5	7
5350631.03	Halton	21	1744	4994	37.45	35.20	4	6
5350631.04	Halton	0	1453	5172	30.79	25.19	3	4
5350632.00	Halton	73	4458	10307	67.76	42.64	7	7
5350633.00	Halton	48	5096	11258	63.82	33.40	6	6
5350634.01	Halton	0	3855	8519	25.25	18.41	2	3
5350634.02	Halton	0	1808	4726	40.14	25.42	4	4
5350635.00	Halton	109	6037	13035	51.49	28.15	5	5
5350636.00	Halton	0	1162	3549	58.02	34.12	6	6
5350637.00	Halton	0	2886	7333	66.87	46.70	7	8
5350638.00	Halton	30	2253	8157	55.78	36.22	6	6
5350639.00	Halton	0	1227	6511	28.28	21.36	3	3
5370200.00	Halton	0	2043	6375	71.64	36.43	7	6
5370201.00	Halton	93	4314	12437	61.95	36.92	6	7
5370202.00	Halton	79	2427	8801	93.99	42.29	8	7
5370203.00	Halton	0	1294	4147	65.26	33.30	7	6
5370204.00	Halton	0	1190	3892	35.37	19.01	4	3
5370205.01	Halton	21	5601	14355	31.14	16.12	3	2
5370205.02	Halton	21	2765	7996	21.34	7.50	2	1
5370206.00	Halton	115	5295	13543	44.52	20.61	5	3
5370207.01	Halton	0	5466	12915	74.68	45.45	7	8
5370207.02	Halton	0	2922	8045	42.25	30.61	4	5
5370207.03	Halton	0	3423	7673	27.01	14.92	2	2
5370207.04	Halton	68	1973	4607	31.90	13.72	3	2
5370208.00	Halton	33	3269	7858	146.68	89.42	9	10
5370209.00	Halton	0	600	1596	88.83	48.17	8	8
5370210.00	Halton	33	2091	4133	107.28	51.99	8	8
5370211.00	Halton	43	3711	7393	160.77	82.63	9	9
5370212.00	Halton	0	832	2385	100.41	56.30	8	8
5370213.00	Halton	21	3451	8986	74.70	30.86	7	5
5370214.00	Halton	70	2904	5558	63.84	27.93	6	5
5370215.00	Halton	15	1781	3453	115.79	52.92	9	8
5370216.00	Halton	0	3294	6559	10.68	6.16	1	1
5370217.01	Halton	91	11957	23010	39.41	17.36	4	2
5370217.02	Halton	76	6878	13740	57.73	31.08	6	6
5370218.00	Halton	0	7652	17110	16.50	9.85	1	1
5370219.00	Halton	0	2240	4997	59.75	32.90	6	6
5370220.00	Halton	0	2935	7923	44.24	20.42	5	3
5370221.00	Halton	24	1972	4242	21.81	12.39	2	1
5370222.01	Halton	0	2125	7187	0.00	0.00	1	1
5370222.02	Halton	67	4102	9917	45.51	22.77	5	4
5370222.03	Halton	22	1416	3396	142.23	91.21	9	10
5370223.01	Halton	35	4432	8509	102.34	56.11	8	8
5370223.02	Halton	262	4720	10703	121.31	69.95	9	9
5370223.05	Halton	0	793	2515	23.96	17.22	2	2
5370223.06	Halton	25	4469	9826	37.21	27.38	4	5
5370223.07	Halton	25	2916	6557	28.72	19.23	3	3
5370223.09	Halton	0	2668	7869	26.55	19.11	2	3
5370223.10	Halton	0	2858	7616	59.28	41.05	6	7
5370223.12	Halton	87	9768	26054	26.31	13.11	2	1
5370223.13	Halton	104	3607	7532	55.26	34.76	6	6

5370223.14	Halton	0	1384	4517	70.37	41.00	7	7
5370223.15	Halton	0	1942	4942	14.81	9.32	1	1
5370223.16	Halton	0	1437	3547	55.46	34.55	6	6
5370224.00	Halton	0	5824	20627	16.09	12.59	1	1
5370001.01	Hamilton	31	3755	9889	56.45	37.56	6	7
5370001.02	Hamilton	0	2582	6560	30.72	18.87	3	3
5370001.04	Hamilton	48	2381	6444	32.32	25.05	3	4
5370001.05	Hamilton	0	2981	6264	37.63	28.01	4	5
5370001.06	Hamilton	31	2619	6881	97.25	67.42	8	9
5370001.07	Hamilton	0	1515	3203	19.61	13.59	1	2
5370001.08	Hamilton	44	4276	9664	44.92	35.61	5	6
5370001.09	Hamilton	0	3315	7635	24.53	17.15	2	2
5370002.01	Hamilton	29	2336	5529	31.07	23.34	3	4
5370002.03	Hamilton	14	2293	4838	31.83	22.68	3	4
5370002.04	Hamilton	0	1721	3875	32.82	25.14	3	4
5370002.05	Hamilton	23	4320	8764	16.19	11.10	1	1
5370002.06	Hamilton	0	5291	11005	67.91	32.81	7	6
5370003.01	Hamilton	0	2360	6145	51.30	29.21	5	5
5370003.02	Hamilton	23	3310	7330	40.54	19.65	4	3
5370003.03	Hamilton	0	1772	3159	25.95	18.20	2	3
5370003.04	Hamilton	22	6867	11742	27.37	14.23	2	2
5370004.01	Hamilton	18	4285	7499	69.07	31.39	7	6
5370004.02	Hamilton	0	3973	7063	75.93	41.43	7	7
5370005.01	Hamilton	46	13714	24763	35.00	20.64	3	3
5370005.02	Hamilton	0	2035	4576	51.72	27.07	5	5
5370005.03	Hamilton	0	2643	5478	19.80	11.57	1	1
5370006.00	Hamilton	28	2581	5658	118.55	65.61	9	9
5370007.00	Hamilton	0	2809	5429	99.36	44.06	8	7
5370008.00	Hamilton	0	1508	2441	88.23	40.36	8	7
5370009.00	Hamilton	0	4018	7516	291.96	147.70	10	10
5370010.00	Hamilton	0	2892	5614	52.98	27.94	5	5
5370011.00	Hamilton	62	6287	9423	62.09	31.57	6	6
5370012.00	Hamilton	17	2093	3657	54.35	33.81	6	6
5370013.00	Hamilton	28	6420	14577	60.71	31.51	6	6
5370014.00	Hamilton	22	1670	3759	25.61	14.91	2	2
5370015.00	Hamilton	36	1910	2735	135.38	45.71	9	8
5370016.00	Hamilton	38	1100	2666	44.11	21.03	5	3
5370017.00	Hamilton	59	2593	5160	109.51	59.83	8	9
5370018.00	Hamilton	0	284	584	0.00	0.00	1	1
5370019.00	Hamilton	0	3568	5937	42.72	22.79	4	4
5370020.00	Hamilton	44	2799	5758	209.27	93.37	10	10
5370021.00	Hamilton	0	4373	9598	54.42	23.39	6	4
5370022.00	Hamilton	0	3544	5838	39.99	17.11	4	2
5370023.00	Hamilton	0	2079	3916	29.51	15.50	3	2
5370024.00	Hamilton	18	2420	4720	37.64	18.28	4	3
5370025.00	Hamilton	0	1039	2507	5.96	3.37	1	1
5370026.01	Hamilton	0	2373	5359	50.52	20.88	5	3
5370026.02	Hamilton	0	2610	5846	46.31	19.76	5	3
5370026.03	Hamilton	0	1094	2314	50.92	32.42	5	6
5370026.04	Hamilton	0	484	1160	32.92	19.12	3	3
5370026.05	Hamilton	0	2346	5816	28.18	13.41	3	1
5370026.06	Hamilton	0	3458	8010	24.78	16.54	2	2
5370027.00	Hamilton	31	771	2055	22.07	11.15	2	1
5370028.00	Hamilton	0	1420	3964	65.55	32.91	7	6
5370029.00	Hamilton	24	2815	6280	81.39	34.63	7	6
5370030.00	Hamilton	23	2587	6010	27.78	13.81	2	2
5370031.00	Hamilton	24	1575	3174	12.53	6.94	1	1
5370032.00	Hamilton	31	2064	4755	60.29	37.10	6	7
5370033.00	Hamilton	118	1659	3677	102.08	52.98	8	8
5370034.00	Hamilton	70	5995	14321	19.35	6.94	1	1

5370035.00	Hamilton	114	1834	4305	85.79	31.92	8	6
5370036.00	Hamilton	119	3271	9247	75.08	23.86	7	4
5370037.00	Hamilton	63	3390	9542	36.94	13.41	4	1
5370038.00	Hamilton	22	1425	3955	50.17	15.66	5	2
5370039.00	Hamilton	68	1682	4563	75.93	24.15	7	4
5370040.00	Hamilton	20	1090	3541	63.12	29.61	6	5
5370041.00	Hamilton	78	2540	5952	274.99	100.85	10	10
5370042.00	Hamilton	149	3620	8122	64.16	30.37	6	5
5370043.00	Hamilton	58	4022	9471	186.15	102.26	9	10
5370044.00	Hamilton	88	2325	4886	114.87	47.90	9	8
5370045.00	Hamilton	471	8605	31038	46.37	26.93	5	5
5370046.00	Hamilton	161	3322	8846	72.77	43.19	7	7
5370047.00	Hamilton	63	2270	5441	54.96	21.74	6	3
5370048.00	Hamilton	24	3293	10075	76.84	24.79	7	4
5370049.00	Hamilton	134	3999	11074	109.70	54.36	8	8
5370050.00	Hamilton	33	2820	6618	140.16	76.51	9	9
5370051.00	Hamilton	23	2969	6757	67.22	35.80	7	6
5370052.00	Hamilton	48	2303	5597	292.62	213.72	10	10
5370053.00	Hamilton	24	1868	4006	95.63	60.51	8	9
5370054.00	Hamilton	18	1482	4011	74.12	35.59	7	6
5370055.00	Hamilton	0	1393	3578	157.93	66.30	9	9
5370056.00	Hamilton	37	2631	6480	128.56	66.02	9	9
5370057.00	Hamilton	0	1099	3029	67.79	44.64	7	7
5370058.00	Hamilton	114	4581	8127	66.34	39.40	7	7
5370059.00	Hamilton	38	2560	5400	53.11	36.58	5	6
5370060.00	Hamilton	19	2141	4436	48.21	25.23	5	4
5370061.00	Hamilton	19	1448	3460	53.35	26.11	5	4
5370062.00	Hamilton	68	2634	8459	36.36	26.58	4	5
5370063.00	Hamilton	61	1798	5167	73.13	49.40	7	8
5370064.00	Hamilton	74	1004	2791	32.00	23.37	3	4
5370065.00	Hamilton	95	928	2756	92.00	49.21	8	8
5370066.00	Hamilton	180	2960	7633	77.18	39.32	7	7
5370067.00	Hamilton	19	1463	3765	48.92	29.32	5	5
5370068.00	Hamilton	48	1127	2933	25.78	15.91	2	2
5370069.00	Hamilton	24	1810	6675	95.45	41.16	8	7
5370070.00	Hamilton	75	1441	3831	64.72	30.93	6	5
5370071.00	Hamilton	23	4289	10452	31.50	17.56	3	3
5370072.01	Hamilton	74	3784	10384	14.65	12.07	1	1
5370072.02	Hamilton	14	6349	14433	52.85	27.86	5	5
5370072.03	Hamilton	24	2213	7647	32.53	16.24	3	2
5370072.04	Hamilton	0	1392	3088	16.90	10.91	1	1
5370073.00	Hamilton	0	398	1460	95.41	32.81	8	6
5370080.01	Hamilton	0	1158	4361	21.44	16.23	2	2
5370080.03	Hamilton	0	1940	5620	55.14	34.79	6	6
5370080.05	Hamilton	26	1704	8254	48.86	35.72	5	6
5370080.06	Hamilton	0	3245	9076	61.88	52.34	6	8
5370080.07	Hamilton	26	1463	4359	28.72	25.64	3	4
5370081.00	Hamilton	0	1475	3339	32.08	16.81	3	2
5370082.00	Hamilton	30	2808	6744	17.31	8.17	1	1
5370083.00	Hamilton	0	4126	8439	52.61	24.62	5	4
5370084.01	Hamilton	0	1036	2361	31.18	19.77	3	3
5370084.02	Hamilton	25	1303	3184	52.52	27.74	5	5
5370084.03	Hamilton	0	996	2639	47.32	30.85	5	5
5370084.04	Hamilton	0	1349	4165	42.66	14.72	4	2
5370084.05	Hamilton	0	1244	3063	20.21	11.58	1	1
5370085.01	Hamilton	0	1261	4274	29.58	22.48	3	4
5370085.02	Hamilton	24	3435	7835	43.13	28.93	4	5
5370085.03	Hamilton	0	2652	12003	13.01	7.62	1	1
5370086.00	Hamilton	0	2788	14755	8.57	7.59	1	1
5370100.00	Hamilton	0	2194	17163	7.08	5.19	1	1

5370101.01	Hamilton	0	1944	8378	26.96	13.43	2	1
5370101.02	Hamilton	0	585	3275	10.45	12.88	1	1
5370120.01	Hamilton	0	4802	12302	20.06	14.35	1	2
5370120.02	Hamilton	0	1442	7593	52.70	32.78	5	6
5370121.00	Hamilton	0	1608	6056	30.69	50.05	3	8
5370122.01	Hamilton	0	3760	10219	76.50	48.49	7	8
5370122.02	Hamilton	0	4384	11544	100.46	55.42	8	8
5370123.00	Hamilton	0	10427	24274	73.94	44.87	7	8
5370124.00	Hamilton	0	2373	5607	21.14	8.96	2	1
5370130.02	Hamilton	0	2917	6352	117.04	63.37	9	9
5370130.03	Hamilton	21	2252	5852	51.19	26.21	5	5
5370131.00	Hamilton	19	1751	4562	70.89	45.74	7	8
5370132.00	Hamilton	29	2642	8490	129.11	59.77	9	9
5370133.01	Hamilton	0	1003	3168	64.79	39.05	6	7
5370133.02	Hamilton	45	4277	11716	295.30	138.15	10	10
5370140.02	Hamilton	0	3544	11579	26.10	18.00	2	3
5370140.03	Hamilton	0	3918	13914	19.76	16.16	1	2
5370140.04	Hamilton	0	2853	10637	27.62	18.90	2	3
5370141.00	Hamilton	0	1413	6587	32.90	19.52	3	3
5370142.01	Hamilton	0	666	6045	43.65	34.94	4	6
5370142.02	Hamilton	0	332	5165	14.52	7.91	1	1
5370143.00	Hamilton	0	660	6479	65.09	48.29	6	8
5370144.01	Hamilton	0	877	5198	64.40	47.78	6	8
5370144.02	Hamilton	0	768	2407	45.79	34.85	5	6
5350500.01	Peel	30	1934	4645	40.05	16.19	4	2
5350500.02	Peel	23	2007	5715	39.87	15.77	4	2
5350501.01	Peel	63	6149	19688	66.10	28.16	7	5
5350501.02	Peel	0	3250	8351	23.22	13.54	2	1
5350502.01	Peel	20	1899	6515	28.52	18.84	3	3
5350502.02	Peel	0	875	3392	50.19	21.76	5	3
5350503.00	Peel	66	3323	9359	131.70	72.84	9	9
5350504.00	Peel	0	1603	3985	54.64	31.15	6	6
5350505.01	Peel	41	3000	8871	34.90	22.78	3	4
5350505.02	Peel	39	2341	6165	23.08	11.86	2	1
5350506.00	Peel	22	832	2796	114.16	55.59	9	8
5350507.00	Peel	21	3661	8595	38.95	23.60	4	4
5350508.00	Peel	22	1394	3762	93.72	57.62	8	9
5350509.01	Peel	105	3943	11916	69.55	38.21	7	7
5350509.02	Peel	22	5031	9563	38.33	18.55	4	3
5350510.00	Peel	89	10203	24656	49.38	30.64	5	5
5350511.01	Peel	0	1370	4488	27.09	12.55	2	1
5350511.02	Peel	0	3784	7713	74.05	46.89	7	8
5350512.00	Peel	0	3425	8960	61.87	35.23	6	6
5350513.01	Peel	40	3914	10917	139.07	84.33	9	9
5350513.02	Peel	0	5494	12247	28.75	16.78	3	2
5350513.03	Peel	59	4224	13088	50.34	26.36	5	5
5350513.04	Peel	0	1655	4263	46.67	32.87	5	6
5350514.01	Peel	0	890	3154	64.31	39.42	6	7
5350514.02	Peel	0	4094	10387	58.72	46.30	6	8
5350515.01	Peel	35	4971	15302	84.49	50.05	8	8
5350515.02	Peel	75	2148	6061	22.99	15.53	2	2
5350516.01	Peel	85	3577	10766	19.49	11.95	1	1
5350516.02	Peel	20	2432	7200	48.91	36.50	5	6
5350516.03	Peel	0	1807	6097	120.17	60.48	9	9
5350516.04	Peel	0	5457	12295	51.35	24.03	5	4
5350516.05	Peel	0	3574	8166	69.84	42.67	7	7
5350516.06	Peel	47	2116	6003	44.59	27.59	5	5
5350516.08	Peel	42	6320	14416	39.56	22.36	4	4
5350516.09	Peel	0	5700	16630	74.34	46.18	7	8
5350516.11	Peel	20	2309	5651	48.08	28.51	5	5

5350516.16	Peel	41	5939	21353	48.83	21.17	5	3
5350516.17	Peel	0	1027	3763	92.16	53.29	8	8
5350516.18	Peel	39	1076	3817	99.11	57.48	8	9
5350516.20	Peel	20	2105	6928	26.29	21.95	2	3
5350516.21	Peel	59	3136	7830	91.59	80.47	8	9
5350516.22	Peel	0	2348	7082	17.24	15.47	1	2
5350516.23	Peel	78	2154	6386	17.50	15.32	1	2
5350516.24	Peel	0	3273	9925	27.98	23.35	2	4
5350516.25	Peel	0	3965	11486	37.81	27.55	4	5
5350516.26	Peel	40	4547	13315	35.25	27.03	3	5
5350516.28	Peel	0	2096	5900	36.44	27.04	4	5
5350516.29	Peel	49	1406	4715	46.33	39.97	5	7
5350516.30	Peel	0	1822	4907	52.89	42.85	5	7
5350516.31	Peel	0	4288	11960	73.48	44.56	7	7
5350516.32	Peel	21	1121	4830	28.28	22.14	3	4
5350516.37	Peel	0	1919	7052	27.86	18.27	2	3
5350516.38	Peel	0	2354	6591	17.22	14.43	1	2
5350516.39	Peel	27	5022	11726	35.18	30.31	3	5
5350516.40	Peel	0	2544	8154	23.24	18.04	2	3
5350516.41	Peel	0	1441	4727	31.64	24.46	3	4
5350516.42	Peel	85	3384	11659	25.45	20.52	2	3
5350516.43	Peel	39	8696	18786	57.72	42.40	6	7
5350516.44	Peel	60	6314	15312	49.06	31.17	5	6
5350516.45	Peel	115	3942	12423	17.21	13.44	1	1
5350516.46	Peel	50	2673	9551	42.98	37.78	4	7
5350516.47	Peel	0	1477	4638	63.94	61.48	6	9
5350517.00	Peel	21	637	1704	74.83	51.79	7	8
5350518.00	Peel	0	2031	5824	88.93	46.62	8	8
5350519.00	Peel	0	2809	7908	50.53	32.25	5	6
5350520.01	Peel	0	5279	15600	23.08	15.57	2	2
5350520.02	Peel	0	4683	11441	9.25	6.10	1	1
5350520.05	Peel	0	1412	3960	34.78	21.68	3	3
5350520.07	Peel	21	4482	10220	51.89	24.78	5	4
5350520.08	Peel	19	4291	10425	102.03	56.40	8	8
5350520.09	Peel	0	3041	10369	104.40	41.02	8	7
5350520.10	Peel	21	2623	9795	32.14	14.49	3	2
5350521.01	Peel	0	1566	4418	133.44	60.97	9	9
5350521.02	Peel	0	1474	4223	55.01	38.98	6	7
5350521.03	Peel	0	1911	4582	73.45	42.09	7	7
5350521.04	Peel	92	2661	5947	67.10	36.86	7	7
5350521.05	Peel	0	2213	5159	31.71	15.94	3	2
5350521.06	Peel	42	3876	9229	41.21	16.81	4	2
5350522.00	Peel	0	4623	11628	28.52	16.85	3	2
5350523.00	Peel	0	3184	7467	43.16	21.84	4	3
5350524.01	Peel	22	2129	5289	35.34	19.67	3	3
5350524.02	Peel	0	2216	5343	84.31	36.83	8	7
5350525.01	Peel	50	931	3096	71.29	43.85	7	7
5350525.02	Peel	0	2204	6032	51.36	27.93	5	5
5350526.01	Peel	29	2590	8477	31.73	20.27	3	3
5350526.02	Peel	17	1584	6174	29.76	20.14	3	3
5350527.01	Peel	22	21057	52825	17.50	7.32	1	1
5350527.02	Peel	0	2810	7660	41.58	21.68	4	3
5350527.03	Peel	0	4418	14334	54.36	29.55	6	5
5350527.04	Peel	23	2728	7688	38.13	22.57	4	4
5350527.05	Peel	0	1854	5387	306.04	182.68	10	10
5350527.06	Peel	0	2949	7379	39.87	26.15	4	5
5350527.07	Peel	0	2049	5041	83.01	49.80	7	8
5350527.08	Peel	0	2002	4793	38.43	26.84	4	5
5350527.09	Peel	0	3292	7234	29.80	18.22	3	3
5350528.01	Peel	0	2091	4923	33.86	25.85	3	4

5350528.02	Peel	22	4244	11056	25.16	18.94	2	3
5350528.10	Peel	0	5150	11211	25.72	18.32	2	3
5350528.11	Peel	0	3070	6507	69.57	29.12	7	5
5350528.12	Peel	0	3196	8159	20.91	17.36	2	2
5350528.13	Peel	0	2012	4994	45.21	37.49	5	7
5350528.15	Peel	0	1789	5204	42.42	42.10	4	7
5350528.16	Peel	86	3973	9331	30.24	23.76	3	4
5350528.18	Peel	49	5633	13169	37.32	29.54	4	5
5350528.19	Peel	64	2567	6203	26.83	19.18	2	3
5350528.20	Peel	0	2951	8196	29.76	19.98	3	3
5350528.21	Peel	45	5268	18425	54.88	32.17	6	6
5350528.22	Peel	22	2181	6787	65.23	51.16	6	8
5350528.24	Peel	0	6125	23859	25.84	22.27	2	4
5350528.25	Peel	0	4146	10627	50.48	30.18	5	5
5350528.26	Peel	21	2819	8385	117.50	69.30	9	9
5350528.31	Peel	0	1955	5536	38.92	26.87	4	5
5350528.32	Peel	0	4228	12937	84.31	86.53	8	9
5350528.33	Peel	0	3985	8561	46.92	36.22	5	6
5350528.34	Peel	28	6572	21380	47.21	29.00	5	5
5350528.35	Peel	0	11998	66045	30.98	18.49	3	3
5350528.36	Peel	23	2126	6174	48.81	49.45	5	8
5350528.37	Peel	0	2775	12399	27.97	21.18	2	3
5350528.39	Peel	0	4291	20577	98.79	73.52	8	9
5350528.40	Peel	0	4145	14882	190.78	172.52	9	10
5350528.41	Peel	91	17803	147527	16.13	12.40	1	1
5350528.42	Peel	0	5617	11202	42.37	35.50	4	6
5350528.43	Peel	0	1970	5762	139.56	83.36	9	9
5350528.44	Peel	0	833	2153	56.13	50.12	6	8
5350528.45	Peel	0	3026	6402	611.98	397.71	10	10
5350528.46	Peel	29	1569	5043	32.49	31.08	3	5
5350528.47	Peel	0	3017	7502	20.31	20.88	1	3
5350528.48	Peel	0	2740	9274	7.29	5.81	1	1
5350528.49	Peel	0	1920	5070	19.22	17.47	1	2
5350529.01	Peel	20	1191	4322	27.52	19.48	2	3
5350529.02	Peel	23	1213	4382	37.81	30.11	4	5
5350530.01	Peel	23	2753	7758	50.56	35.39	5	6
5350530.02	Peel	0	799	2383	42.47	22.66	4	4
5350531.01	Peel	67	1043	5508	25.97	17.70	2	3
5350531.02	Peel	44	2148	8925	21.80	17.92	2	3
5350532.01	Peel	0	1220	4055	42.12	32.08	4	6
5350532.02	Peel	22	1336	5816	14.09	9.85	1	1
5350540.01	Peel	30	3552	9894	46.99	20.07	5	3
5350540.02	Peel	44	2928	11112	79.98	32.31	7	6
5350550.01	Peel	27	13025	35544	22.82	13.84	2	2
5350550.02	Peel	55	7853	16356	38.39	20.92	4	3
5350560.00	Peel	43	3268	10901	55.44	37.55	6	7
5350561.00	Peel	68	4485	14368	80.14	41.03	7	7
5350562.02	Peel	65	4598	9598	213.48	125.25	10	10
5350562.03	Peel	23	2379	6116	88.97	57.76	8	9
5350562.04	Peel	0	1463	3787	66.22	40.79	7	7
5350562.05	Peel	0	3378	8851	113.16	53.18	8	8
5350562.06	Peel	23	2162	4309	58.34	33.89	6	6
5350562.07	Peel	0	2824	7506	37.38	23.22	4	4
5350562.08	Peel	48	2473	5787	21.79	13.54	2	2
5350562.09	Peel	0	2438	6009	57.45	33.94	6	6
5350562.11	Peel	0	1475	3724	28.37	15.83	3	2
5350562.12	Peel	0	1790	5056	56.14	24.43	6	4
5350562.13	Peel	18	3797	16854	26.35	17.43	2	2
5350562.14	Peel	0	1943	5037	29.87	21.64	3	3
5350562.15	Peel	0	2796	6732	17.13	13.50	1	1

5350563.01	Peel	22	11671	27162	35.79	19.13	4	3
5350563.02	Peel	22	2104	6388	113.75	62.62	8	9
5350564.01	Peel	0	2194	5599	33.69	19.30	3	3
5350564.02	Peel	21	1318	3117	41.01	25.64	4	4
5350570.01	Peel	93	11900	31175	157.95	73.07	9	9
5350570.02	Peel	0	2412	6429	42.60	24.66	4	4
5350571.01	Peel	0	1938	4646	37.02	22.13	4	4
5350571.02	Peel	28	3037	7384	35.72	19.67	4	3
5350572.01	Peel	62	4834	10542	212.16	111.51	10	10
5350572.04	Peel	0	1421	5095	31.98	23.97	3	4
5350572.05	Peel	23	5810	13560	35.42	18.20	4	3
5350572.07	Peel	0	1547	4556	34.01	27.21	3	5
5350572.08	Peel	0	1440	4129	48.44	39.93	5	7
5350572.09	Peel	0	3207	7390	18.85	18.14	1	3
5350572.10	Peel	0	1543	3994	57.02	53.94	6	8
5350573.03	Peel	45	4894	11309	26.02	16.53	2	2
5350573.05	Peel	23	3157	7699	22.55	14.98	2	2
5350573.06	Peel	0	1691	5185	38.65	28.43	4	5
5350573.07	Peel	0	2567	5647	29.87	15.17	3	2
5350573.09	Peel	0	1888	5307	54.50	41.17	6	7
5350573.10	Peel	51	883	3296	24.14	20.13	2	3
5350573.11	Peel	0	1198	3986	16.07	14.76	1	2
5350574.00	Peel	45	9004	19017	66.90	30.50	7	5
5350575.01	Peel	0	4098	8852	30.73	19.47	3	3
5350575.02	Peel	0	2697	5849	23.96	12.32	2	1
5350575.03	Peel	0	2242	6201	25.20	14.94	2	2
5350575.04	Peel	0	4193	11925	113.02	70.94	8	9
5350575.05	Peel	0	7088	12914	53.45	33.04	5	6
5350575.07	Peel	0	1110	2980	18.87	16.34	1	2
5350575.08	Peel	0	1456	5095	27.48	23.07	2	4
5350576.04	Peel	23	1608	5326	68.43	41.84	7	7
5350576.05	Peel	39	4354	11363	62.92	47.65	6	8
5350576.06	Peel	23	3877	9405	15.72	10.62	1	1
5350576.07	Peel	28	5456	12621	22.64	17.48	2	2
5350576.09	Peel	40	3436	8255	28.99	18.58	3	3
5350576.10	Peel	0	9136	20169	46.82	30.19	5	5
5350576.16	Peel	0	3447	8316	37.64	34.88	4	6
5350576.17	Peel	0	2008	5619	65.36	46.54	7	8
5350576.18	Peel	0	5061	15506	21.51	20.79	2	3
5350576.20	Peel	0	4758	13847	79.75	76.36	7	9
5350576.22	Peel	0	6312	12520	38.11	29.90	4	5
5350576.24	Peel	0	1190	6457	12.23	10.92	1	1
5350576.29	Peel	0	1067	3631	48.43	41.83	5	7
5350576.30	Peel	23	2235	27574	30.85	26.55	3	5
5350576.31	Peel	0	1978	5852	54.43	42.84	6	7
5350576.32	Peel	18	2537	8622	19.99	17.25	1	2
5350576.33	Peel	0	1245	3406	22.21	13.38	2	1
5350576.34	Peel	0	2900	7403	85.79	71.58	8	9
5350576.35	Peel	0	3082	12692	13.98	14.75	1	2
5350576.36	Peel	0	2728	10866	25.60	21.58	2	3
5350576.37	Peel	46	5077	20326	8.74	8.97	1	1
5350576.38	Peel	0	2010	8395	21.26	20.27	2	3
5350576.39	Peel	0	1567	6519	35.17	33.14	3	6
5350576.40	Peel	50	17647	56029	24.90	22.14	2	4
5350576.41	Peel	0	1460	6292	67.08	56.77	7	8
5350576.42	Peel	0	8522	10140	26.75	22.15	2	4
5350576.43	Peel	0	2136	6949	21.23	17.61	2	3
5350576.44	Peel	0	832	2905	169.49	145.50	9	10
5350576.45	Peel	0	1136	3076	20.23	16.61	1	2
5350576.46	Peel	0	1410	3740	39.47	39.96	4	7

5350576.47	Peel	0	1027	3375	13.67	17.97	1	3
5350576.48	Peel	0	3111	10915	8.05	7.71	1	1
5350576.49	Peel	0	828	3738	10.13	8.65	1	1
5350576.50	Peel	0	2317	8124	9.18	10.15	1	1
5350576.51	Peel	18	4025	13686	9.68	9.14	1	1
5350585.02	Peel	0	2573	7998	22.14	20.38	2	3
5350585.03	Peel	0	4955	15749	16.77	11.90	1	1
5350585.05	Peel	0	2898	9227	30.91	26.57	3	5
5350585.07	Peel	0	999	8833	50.39	34.23	5	6
5350585.08	Peel	0	312	3040	27.63	20.02	2	3
5350585.09	Peel	0	4679	12650	53.70	52.12	6	8
5350585.10	Peel	0	3267	8679	31.47	30.63	3	5
5350586.01	Peel	0	1779	10024	31.16	22.53	3	4
5350586.02	Peel	0	621	5310	11.24	7.76	1	1
5350587.01	Peel	0	551	7557	41.45	31.65	4	6
5350587.02	Peel	0	1043	7366	56.50	35.73	6	6
5350001.00	Toronto	330	4123	11295	580.37	199.23	10	10
5350002.00	Toronto	143	1091	4172	81.17	21.93	7	3
5350003.00	Toronto	22	571	1561	15.32	6.15	1	1
5350004.00	Toronto	232	2236	6014	183.70	74.11	9	9
5350005.00	Toronto	284	3164	8539	498.44	187.15	10	10
5350006.00	Toronto	0	116	234	0.00	0.00	1	1
5350007.01	Toronto	84	1472	4246	9.66	4.00	1	1
5350007.02	Toronto	327	2486	8676	91.59	34.57	8	6
5350008.00	Toronto	485	8135	20819	292.07	65.70	10	9
5350009.00	Toronto	78	808	2275	0.00	0.00	1	1
5350010.01	Toronto	465	2517	5978	1708.75	354.90	10	10
5350010.02	Toronto	648	5604	17142	904.70	220.26	10	10
5350011.00	Toronto	3155	15835	72264	475.23	98.09	10	10
5350012.01	Toronto	160	2179	7555	13640.36	3659.30	10	10
5350012.02	Toronto	376	4309	24775	105305.24	22339.00	10	10
5350013.00	Toronto	729	8175	40165	812.41	200.49	10	10
5350014.00	Toronto	1036	17563	124162	10166.26	3995.87	10	10
5350015.00	Toronto	367	5164	30279	7778.08	1824.09	10	10
5350016.00	Toronto	971	7099	28681	6983.73	1487.17	10	10
5350017.00	Toronto	541	5931	17807	2147.00	600.51	10	10
5350018.00	Toronto	212	1730	4469	2263.11	711.02	10	10
5350019.00	Toronto	99	1151	3214	579.61	239.20	10	10
5350020.00	Toronto	129	2701	6552	50.64	15.24	5	2
5350021.00	Toronto	23	2075	7689	74.61	27.87	7	5
5350022.00	Toronto	19	1494	5701	106.28	44.31	8	7
5350023.00	Toronto	94	1343	5223	114.09	49.71	8	8
5350024.00	Toronto	80	1582	6110	122.06	46.28	9	8
5350025.00	Toronto	74	803	3442	136.47	50.69	9	8
5350026.00	Toronto	258	2742	8962	174.13	67.28	9	9
5350027.00	Toronto	223	2069	5195	130.10	49.08	9	8
5350028.00	Toronto	353	4135	9169	329.17	110.68	10	10
5350029.00	Toronto	454	4304	9949	394.85	137.03	10	10
5350030.00	Toronto	431	2434	5381	534.37	237.96	10	10
5350031.00	Toronto	259	3400	6841	375.04	184.68	10	10
5350032.00	Toronto	243	2159	6168	405.31	155.11	10	10
5350033.00	Toronto	154	1369	3902	702.44	255.10	10	10
5350034.01	Toronto	207	1922	5895	1884.66	515.43	10	10
5350034.02	Toronto	1178	10723	62321	530.52	152.16	10	10
5350035.00	Toronto	1617	20029	97934	241.67	67.25	10	9
5350036.00	Toronto	1160	4746	22976	118262.50	34723.96	10	10
5350037.00	Toronto	648	6011	26429	220904.58	74142.11	10	10
5350038.00	Toronto	1247	5226	14774	14028.42	5281.01	10	10
5350039.00	Toronto	377	3028	9054	15149.18	6596.61	10	10
5350040.00	Toronto	596	2214	5721	17091.25	6143.82	10	10

5350041.00	Toronto	390	2397	6088	2411.60	839.99	10	10
5350042.00	Toronto	610	3548	8282	614.71	262.36	10	10
5350043.00	Toronto	751	2712	6668	377.26	134.50	10	10
5350044.00	Toronto	360	3311	6658	571.38	184.49	10	10
5350045.00	Toronto	180	1928	4550	841.17	312.74	10	10
5350046.00	Toronto	277	3391	7022	358.43	126.67	10	10
5350047.01	Toronto	316	1313	4157	198.29	79.91	9	9
5350047.02	Toronto	225	1398	4462	336.79	155.27	10	10
5350048.00	Toronto	190	2231	4896	157.53	62.70	9	9
5350049.00	Toronto	215	2696	8069	157.56	62.21	9	9
5350050.01	Toronto	90	3099	9217	92.42	34.97	8	6
5350050.02	Toronto	74	3709	10113	217.82	83.94	10	9
5350051.00	Toronto	344	2883	8433	281.48	122.12	10	10
5350052.00	Toronto	461	4473	10397	314.24	123.55	10	10
5350053.00	Toronto	271	2740	6887	418.68	142.57	10	10
5350054.00	Toronto	922	9764	19240	564.09	218.62	10	10
5350055.00	Toronto	500	1725	4097	986.30	363.59	10	10
5350056.00	Toronto	821	2744	6428	2364.82	832.02	10	10
5350057.00	Toronto	715	2788	7106	1665.40	538.23	10	10
5350058.00	Toronto	810	2300	6444	1876.14	707.43	10	10
5350059.00	Toronto	610	2901	8216	9090.55	3349.63	10	10
5350060.00	Toronto	941	3979	9437	7555.19	2207.37	10	10
5350061.00	Toronto	3265	13418	67358	2080.03	777.88	10	10
5350062.01	Toronto	479	5145	15341	890.77	249.78	10	10
5350062.02	Toronto	794	9023	34191	34590.06	9277.64	10	10
5350063.01	Toronto	568	5509	19323	1897.42	466.61	10	10
5350063.02	Toronto	179	3688	9791	2136.06	554.74	10	10
5350064.00	Toronto	235	3488	11283	619.87	149.86	10	10
5350065.00	Toronto	219	5539	13246	640.12	257.00	10	10
5350066.00	Toronto	474	3630	9539	436.67	119.64	10	10
5350067.00	Toronto	70	2222	4469	827.11	178.75	10	10
5350068.00	Toronto	324	1393	3947	638.47	180.08	10	10
5350069.00	Toronto	392	3949	8716	189.62	65.93	9	9
5350070.00	Toronto	300	4380	8614	145.01	49.72	9	8
5350071.00	Toronto	153	3144	6600	343.54	127.61	10	10
5350072.01	Toronto	110	2174	5316	295.26	126.85	10	10
5350072.02	Toronto	177	1625	4293	171.03	63.54	9	9
5350073.00	Toronto	164	3891	8247	220.67	81.82	10	9
5350074.00	Toronto	226	1906	5136	119.13	44.98	9	8
5350075.00	Toronto	81	3307	8292	206.61	81.24	10	9
5350076.00	Toronto	123	1427	5570	118.55	43.23	9	7
5350077.00	Toronto	44	2417	5934	187.96	78.77	9	9
5350078.00	Toronto	56	1641	5209	105.86	43.04	8	7
5350079.00	Toronto	17	4637	13834	111.48	42.41	8	7
5350080.01	Toronto	31	2578	6476	107.87	37.76	8	7
5350080.02	Toronto	69	2009	5573	153.35	61.21	9	9
5350081.00	Toronto	111	1725	5282	149.84	49.59	9	8
5350082.00	Toronto	52	1136	3437	153.52	49.86	9	8
5350083.00	Toronto	161	3309	7202	106.34	48.48	8	8
5350084.00	Toronto	251	3557	7808	93.12	35.08	8	6
5350085.00	Toronto	137	3577	6655	214.05	73.76	10	9
5350086.00	Toronto	195	2169	3443	247.84	71.74	10	9
5350087.00	Toronto	244	5321	11298	187.36	64.30	9	9
5350088.00	Toronto	145	4334	13977	89.95	21.79	8	3
5350089.00	Toronto	386	7599	22367	1351.88	305.01	10	10
5350090.00	Toronto	93	2487	5415	731.52	211.47	10	10
5350091.01	Toronto	621	5709	12847	34806.79	9300.34	10	10
5350091.02	Toronto	247	2069	4565	523.41	194.96	10	10
5350092.00	Toronto	1118	4991	12139	7952.45	2812.66	10	10
5350093.00	Toronto	845	4072	10436	924.54	337.71	10	10

5350094.00	Toronto	641	2602	6387	1436.53	601.18	10	10
5350095.00	Toronto	353	2282	4543	1446.79	553.87	10	10
5350096.00	Toronto	445	2896	6355	399.09	162.14	10	10
5350097.01	Toronto	0	1896	4524	306.68	140.37	10	10
5350097.02	Toronto	223	3000	6103	211.33	80.01	10	9
5350098.00	Toronto	226	3027	7987	148.28	65.33	9	9
5350099.00	Toronto	263	2338	6905	211.09	76.72	10	9
5350100.00	Toronto	62	949	4144	140.22	77.28	9	9
5350101.00	Toronto	162	1979	5149	204.47	74.79	10	9
5350102.01	Toronto	0	656	2721	130.81	47.88	9	8
5350102.02	Toronto	59	1051	3723	199.98	59.21	10	9
5350102.03	Toronto	62	396	1641	70.40	19.29	7	3
5350103.00	Toronto	429	5521	15999	87.18	28.55	8	5
5350104.00	Toronto	41	3132	8827	39.42	14.61	4	2
5350105.00	Toronto	85	1146	5275	409.60	163.51	10	10
5350106.00	Toronto	188	5662	12469	61.31	30.42	6	5
5350107.00	Toronto	41	1541	4751	85.91	43.44	8	7
5350108.00	Toronto	310	2642	7403	257.83	133.14	10	10
5350109.00	Toronto	233	2534	5405	230.39	81.58	10	9
5350110.00	Toronto	121	3015	6147	141.05	58.54	9	9
5350111.00	Toronto	90	1321	3187	83.58	36.61	8	6
5350112.00	Toronto	74	2256	5879	94.49	41.79	8	7
5350113.00	Toronto	144	2429	6618	92.81	38.06	8	7
5350114.00	Toronto	289	3813	7805	165.62	70.66	9	9
5350115.00	Toronto	391	2074	4567	532.36	201.99	10	10
5350116.00	Toronto	244	3507	9267	581.20	219.54	10	10
5350117.00	Toronto	619	3653	10898	311.60	97.76	10	10
5350118.00	Toronto	153	6270	11090	320.05	112.42	10	10
5350119.00	Toronto	40	3830	6930	265.52	112.30	10	10
5350120.00	Toronto	61	1183	2491	405.49	127.49	10	10
5350121.00	Toronto	23	3538	8839	206.65	51.50	10	8
5350122.00	Toronto	124	5047	10335	67.61	19.28	7	3
5350123.00	Toronto	24	347	1057	432.23	110.70	10	10
5350124.00	Toronto	132	5851	13416	185.69	49.49	9	8
5350125.00	Toronto	160	3810	6849	29.73	9.73	3	1
5350126.00	Toronto	60	3152	8502	217.85	74.59	10	9
5350127.00	Toronto	0	2617	8419	141.90	52.74	9	8
5350128.02	Toronto	75	3577	14631	114.11	31.03	9	5
5350128.03	Toronto	15	2236	6418	140.49	44.47	9	7
5350128.04	Toronto	48	2438	6669	279.13	68.71	10	9
5350129.00	Toronto	55	5306	17470	115.31	45.64	9	8
5350130.00	Toronto	101	4501	9387	135.11	49.51	9	8
5350131.00	Toronto	154	2821	5838	210.47	116.62	10	10
5350132.00	Toronto	40	2849	7261	125.80	66.35	9	9
5350133.00	Toronto	44	3438	8693	110.74	48.71	8	8
5350134.00	Toronto	66	1789	4468	136.47	57.51	9	9
5350135.00	Toronto	140	7042	18997	155.32	63.08	9	9
5350136.01	Toronto	39	2010	6878	140.45	37.73	9	7
5350136.02	Toronto	75	3779	12999	302.86	86.73	10	9
5350137.00	Toronto	130	5647	15514	138.58	55.06	9	8
5350138.00	Toronto	65	1771	4791	249.35	96.26	10	10
5350139.00	Toronto	153	4089	11492	243.57	114.92	10	10
5350140.00	Toronto	0	1288	3026	130.64	41.77	9	7
5350141.01	Toronto	27	2602	7021	290.87	86.41	10	9
5350141.02	Toronto	21	1972	6488	50.10	19.31	5	3
5350142.00	Toronto	30	3073	9154	109.33	50.40	8	8
5350150.00	Toronto	17	1999	3827	98.55	40.33	8	7
5350151.00	Toronto	13	2367	4389	103.76	54.98	8	8
5350152.00	Toronto	0	3201	8550	70.10	27.31	7	5
5350153.00	Toronto	22	2780	6985	64.58	29.48	6	5

5350154.00	Toronto	0	2145	6056	68.04	29.69	7	5
5350155.00	Toronto	0	1559	4684	44.46	28.41	5	5
5350156.01	Toronto	23	1517	4305	45.97	23.48	5	4
5350156.02	Toronto	0	887	3056	51.96	27.09	5	5
5350157.00	Toronto	0	1154	3532	45.09	25.53	5	4
5350158.00	Toronto	0	3106	6264	38.03	18.67	4	3
5350159.01	Toronto	0	1472	4320	38.07	22.33	4	4
5350159.02	Toronto	17	1337	3615	84.40	40.56	8	7
5350160.00	Toronto	0	1695	3892	37.90	22.81	4	4
5350161.00	Toronto	49	3632	8333	53.52	25.73	5	4
5350162.00	Toronto	17	1931	5372	74.91	30.94	7	5
5350163.00	Toronto	24	1929	3671	200.46	86.61	10	9
5350164.00	Toronto	212	2712	5912	127.99	49.20	9	8
5350165.00	Toronto	101	1957	4467	102.55	47.45	8	8
5350166.00	Toronto	0	2744	5581	67.70	43.17	7	7
5350167.01	Toronto	33	1271	3136	101.99	28.32	8	5
5350167.02	Toronto	18	1992	4430	140.85	53.62	9	8
5350168.00	Toronto	65	2348	6731	58.16	23.72	6	4
5350169.01	Toronto	35	1745	4720	65.85	30.19	7	5
5350169.02	Toronto	34	2231	6645	82.17	32.44	7	6
5350170.00	Toronto	14	2878	7414	66.75	27.45	7	5
5350171.00	Toronto	29	2625	5568	84.24	39.39	8	7
5350172.00	Toronto	0	2731	5999	89.21	41.57	8	7
5350173.00	Toronto	0	1401	3818	72.14	32.50	7	6
5350174.00	Toronto	23	2769	9229	49.72	22.29	5	4
5350175.01	Toronto	0	1578	5817	31.55	13.94	3	2
5350175.02	Toronto	0	2750	8780	89.54	35.64	8	6
5350176.00	Toronto	0	2750	11113	59.02	34.00	6	6
5350180.00	Toronto	65	3481	9346	98.49	39.45	8	7
5350181.01	Toronto	79	1235	4462	252.06	82.68	10	9
5350181.02	Toronto	17	2318	4865	172.87	66.69	9	9
5350182.00	Toronto	34	3475	9549	94.30	34.03	8	6
5350183.00	Toronto	117	3014	8070	101.41	37.97	8	7
5350184.01	Toronto	43	2189	4950	199.31	95.31	10	10
5350184.02	Toronto	62	1856	4015	159.09	59.48	9	9
5350185.01	Toronto	120	4053	8822	123.69	52.50	9	8
5350185.02	Toronto	74	2813	5790	45.99	18.60	5	3
5350186.00	Toronto	0	3983	6634	139.16	74.37	9	9
5350187.00	Toronto	14	1832	5122	84.05	38.89	8	7
5350188.00	Toronto	101	2980	5237	103.59	42.39	8	7
5350189.00	Toronto	14	2203	6281	74.64	34.26	7	6
5350190.01	Toronto	88	2365	7507	60.32	28.06	6	5
5350190.02	Toronto	0	1433	3930	104.92	46.21	8	8
5350191.00	Toronto	54	1977	5333	105.75	46.52	8	8
5350192.00	Toronto	0	2635	5042	23.96	13.62	2	2
5350193.00	Toronto	17	1183	3261	45.00	31.60	5	6
5350194.01	Toronto	0	287	1490	37.94	29.99	4	5
5350194.02	Toronto	0	1168	4798	27.20	15.83	2	2
5350194.03	Toronto	40	1510	5428	12.61	5.98	1	1
5350194.04	Toronto	66	9422	20670	36.64	17.24	4	2
5350195.00	Toronto	49	3314	9524	62.29	35.89	6	6
5350196.00	Toronto	131	5259	14554	288.27	143.78	10	10
5350200.00	Toronto	0	1820	5469	179.27	64.39	9	9
5350201.00	Toronto	40	1968	6467	237.86	88.97	10	10
5350202.00	Toronto	0	1110	3414	66.09	32.94	7	6
5350203.00	Toronto	0	1205	4267	100.70	40.85	8	7
5350204.00	Toronto	0	1460	5353	51.28	23.41	5	4
5350205.00	Toronto	0	1697	10327	0.00	0.00	1	1
5350206.01	Toronto	0	2248	6193	60.29	28.17	6	5
5350206.02	Toronto	33	1989	6593	74.61	37.29	7	7

5350207.00	Toronto	119	1684	4854	121.75	64.05	9	9
5350208.00	Toronto	73	1479	5927	54.15	22.90	6	4
5350209.00	Toronto	0	739	2670	96.90	43.03	8	7
5350210.00	Toronto	53	3787	17071	43.51	11.67	4	1
5350211.00	Toronto	92	3447	10868	70.75	37.74	7	7
5350212.00	Toronto	53	1908	6177	31.26	17.97	3	3
5350213.00	Toronto	86	27372	68359	101.26	36.75	8	6
5350214.00	Toronto	43	6656	18582	187.59	69.95	9	9
5350215.00	Toronto	177	10973	25638	89.64	39.24	8	7
5350216.00	Toronto	24	3715	9087	1019.76	467.78	10	10
5350217.00	Toronto	81	1938	6780	365.15	154.85	10	10
5350218.00	Toronto	14	1922	5579	567.24	171.52	10	10
5350219.00	Toronto	21	2736	6715	137.37	61.49	9	9
5350220.00	Toronto	22	2053	6281	48.98	27.22	5	5
5350221.01	Toronto	23	4254	11372	44.24	21.57	5	3
5350221.02	Toronto	87	1785	6417	49.60	26.84	5	5
5350222.01	Toronto	0	4456	10669	53.22	27.26	5	5
5350222.02	Toronto	104	2445	5995	75.47	43.97	7	7
5350223.00	Toronto	56	2250	5682	74.01	39.53	7	7
5350224.00	Toronto	0	947	2079	116.52	68.21	9	9
5350225.01	Toronto	0	4615	13984	109.45	37.89	8	7
5350225.02	Toronto	0	1625	5010	76.76	27.27	7	5
5350226.00	Toronto	82	3025	8337	28.12	11.95	3	1
5350227.00	Toronto	18	2381	4718	199.14	83.71	10	9
5350228.00	Toronto	0	859	4259	79.02	29.35	7	5
5350229.00	Toronto	0	1042	2009	146.00	50.94	9	8
5350230.01	Toronto	0	1547	3704	59.29	26.98	6	5
5350230.02	Toronto	0	1420	4158	32.29	15.80	3	2
5350231.00	Toronto	48	3486	8411	20.80	11.39	1	1
5350232.00	Toronto	17	3573	8899	50.64	21.98	5	4
5350233.00	Toronto	63	5134	12897	41.98	24.89	4	4
5350234.00	Toronto	0	1955	4532	85.02	51.20	8	8
5350235.01	Toronto	0	1253	2941	109.68	52.06	8	8
5350235.02	Toronto	0	3145	9469	107.74	51.38	8	8
5350236.01	Toronto	17	2293	6671	35.75	18.87	4	3
5350236.02	Toronto	46	4293	14058	23.31	10.51	2	1
5350237.01	Toronto	0	1573	4555	54.13	35.68	6	6
5350237.02	Toronto	0	1207	3641	69.33	36.79	7	6
5350237.03	Toronto	0	2688	7287	124.81	51.40	9	8
5350238.01	Toronto	0	2264	6665	26.80	16.24	2	2
5350238.02	Toronto	0	1916	7009	26.21	12.69	2	1
5350239.00	Toronto	0	2283	8113	46.08	25.38	5	4
5350240.01	Toronto	0	3051	7461	42.05	22.76	4	4
5350240.02	Toronto	0	2905	8179	60.11	25.56	6	4
5350241.00	Toronto	0	1135	4062	85.07	44.57	8	7
5350242.00	Toronto	0	335	1224	58.97	41.65	6	7
5350243.01	Toronto	0	1599	5857	63.16	39.37	6	7
5350243.02	Toronto	0	738	3579	27.71	14.16	2	2
5350244.01	Toronto	20	3122	6589	13.92	7.69	1	1
5350244.02	Toronto	38	1233	3346	39.94	22.12	4	4
5350245.00	Toronto	48	2493	7348	40.21	22.95	4	4
5350246.00	Toronto	25	1832	4425	74.06	42.01	7	7
5350247.01	Toronto	54	13091	54411	17.63	11.50	1	1
5350247.02	Toronto	25	5845	14957	50.93	27.06	5	5
5350248.02	Toronto	25	2999	7495	22.82	16.48	2	2
5350248.03	Toronto	0	2514	10468	335.36	189.30	10	10
5350248.04	Toronto	28	5867	27535	86.11	55.08	8	8
5350248.05	Toronto	0	1922	6739	54.44	28.09	6	5
5350249.01	Toronto	0	1637	4588	63.08	38.80	6	7
5350249.03	Toronto	17	2488	9705	165.56	94.50	9	10

5350249.04	Toronto	0	1352	4359	29.77	24.29	3	4
5350249.05	Toronto	17	3695	9941	29.80	17.72	3	3
5350250.01	Toronto	42	1874	6470	58.65	36.02	6	6
5350250.02	Toronto	37	4841	10044	40.99	26.02	4	4
5350250.04	Toronto	0	1446	3731	60.53	33.14	6	6
5350250.05	Toronto	0	1396	6012	44.55	27.56	5	5
5350260.01	Toronto	20	3281	13642	84.31	41.80	8	7
5350260.03	Toronto	15	5491	14701	28.05	11.46	2	1
5350260.04	Toronto	0	919	3160	58.80	31.82	6	6
5350260.05	Toronto	49	369	1788	125.45	61.47	9	9
5350261.00	Toronto	23	4130	11495	115.09	55.17	9	8
5350262.01	Toronto	15	1477	4507	65.03	23.30	6	4
5350262.02	Toronto	0	3102	10155	19.02	11.11	1	1
5350263.02	Toronto	0	5486	15703	170.21	68.21	9	9
5350263.03	Toronto	24	4251	14560	38.66	16.25	4	2
5350263.04	Toronto	24	2789	8308	108.39	31.76	8	6
5350264.00	Toronto	0	1706	3898	158.27	57.78	9	9
5350265.00	Toronto	72	6258	23412	165.14	44.75	9	7
5350266.00	Toronto	36	5963	13013	148.47	50.84	9	8
5350267.00	Toronto	22	3118	7682	27.59	15.08	2	2
5350268.00	Toronto	59	7858	24760	322.81	136.82	10	10
5350269.01	Toronto	0	2059	5412	89.07	42.15	8	7
5350269.02	Toronto	0	1371	4503	99.00	47.69	8	8
5350270.01	Toronto	23	2767	7926	171.64	90.50	9	10
5350270.02	Toronto	0	2135	5987	36.54	20.42	4	3
5350271.01	Toronto	18	3137	8394	54.02	27.24	6	5
5350271.02	Toronto	0	2352	6762	55.06	31.02	6	5
5350272.01	Toronto	34	1224	4755	62.58	27.13	6	5
5350272.02	Toronto	67	1602	5462	54.67	30.98	6	5
5350273.01	Toronto	82	8499	23004	41.45	23.23	4	4
5350273.02	Toronto	58	2899	8162	29.44	18.56	3	3
5350274.01	Toronto	22	2894	7193	32.58	20.94	3	3
5350274.02	Toronto	22	2663	9204	182.73	83.66	9	9
5350275.00	Toronto	36	5279	14505	102.26	50.71	8	8
5350276.01	Toronto	41	4349	9167	80.54	46.46	7	8
5350276.02	Toronto	0	4869	13109	109.39	63.86	8	9
5350277.00	Toronto	154	3947	10074	116.52	93.67	9	10
5350278.00	Toronto	48	3841	9861	103.85	64.26	8	9
5350279.01	Toronto	14	4073	10278	168.37	81.06	9	9
5350279.02	Toronto	0	5092	12301	64.13	37.17	6	7
5350280.00	Toronto	0	6013	13744	72.89	34.53	7	6
5350281.01	Toronto	30	3275	9110	67.70	37.31	7	7
5350281.02	Toronto	0	1236	2521	93.77	48.98	8	8
5350282.00	Toronto	44	4064	9508	121.97	75.61	9	9
5350283.01	Toronto	0	3096	6874	71.85	32.75	7	6
5350283.02	Toronto	0	1358	3562	16.97	9.01	1	1
5350284.00	Toronto	0	2253	7043	65.40	33.14	7	6
5350285.00	Toronto	0	1520	3709	77.73	40.32	7	7
5350286.00	Toronto	92	15614	47702	37.18	18.94	4	3
5350287.01	Toronto	0	5504	14013	92.75	51.58	8	8
5350287.02	Toronto	20	3281	8892	36.18	15.91	4	2
5350288.00	Toronto	44	6051	14328	571.49	304.36	10	10
5350289.00	Toronto	0	2259	6536	126.02	87.04	9	10
5350290.00	Toronto	0	3215	10030	56.30	25.63	6	4
5350291.01	Toronto	69	4175	9345	159.91	80.49	9	9
5350291.02	Toronto	0	2181	6073	65.62	39.57	7	7
5350292.00	Toronto	15	7175	18467	59.80	34.04	6	6
5350293.00	Toronto	14	2963	8613	87.18	56.02	8	8
5350294.01	Toronto	0	1416	3864	40.50	22.70	4	4
5350294.02	Toronto	0	2255	5257	122.22	67.31	9	9

5350295.00	Toronto	0	1877	4508	60.84	34.68	6	6
5350296.00	Toronto	14	4469	15746	30.10	24.86	3	4
5350297.01	Toronto	99	5500	12303	56.19	23.09	6	4
5350297.02	Toronto	18	2876	7965	54.86	32.07	6	6
5350298.00	Toronto	94	3762	8079	138.67	99.30	9	10
5350299.01	Toronto	24	3055	8869	145.64	83.45	9	9
5350299.02	Toronto	17	2807	16315	99.83	27.06	8	5
5350300.00	Toronto	0	3941	16620	83.02	25.55	7	4
5350301.01	Toronto	0	1376	4222	60.45	31.92	6	6
5350301.03	Toronto	49	590	3345	148.31	71.61	9	9
5350301.04	Toronto	0	4969	19235	89.07	43.03	8	7
5350302.01	Toronto	0	3193	9424	31.87	14.92	3	2
5350302.02	Toronto	0	2703	7789	24.61	12.40	2	1
5350302.03	Toronto	33	1170	3693	118.51	71.52	9	9
5350303.00	Toronto	0	8882	24990	65.96	32.22	7	6
5350304.01	Toronto	0	788	2938	72.83	36.09	7	6
5350304.02	Toronto	0	1364	4700	31.77	12.95	3	1
5350304.03	Toronto	18	2101	5967	130.70	84.38	9	9
5350304.04	Toronto	0	1116	4220	27.97	13.04	2	1
5350304.05	Toronto	0	928	2914	43.96	16.70	4	2
5350304.06	Toronto	0	1740	5976	46.58	22.82	5	4
5350305.01	Toronto	17	3795	9827	49.35	24.23	5	4
5350305.03	Toronto	0	5585	13031	27.62	11.14	2	1
5350305.04	Toronto	38	4826	16218	56.67	16.40	6	2
5350306.01	Toronto	66	2707	6941	55.37	37.07	6	7
5350306.02	Toronto	34	2365	7363	149.98	79.91	9	9
5350307.03	Toronto	28	1405	6678	411.83	129.44	10	10
5350307.04	Toronto	99	2793	13740	143.68	48.41	9	8
5350307.05	Toronto	24	480	2053	114.13	35.33	9	6
5350307.06	Toronto	0	1118	4921	138.04	51.76	9	8
5350307.07	Toronto	53	3714	15042	172.95	86.40	9	9
5350308.01	Toronto	100	5906	22156	16.70	6.08	1	1
5350308.02	Toronto	122	2413	6502	54.51	31.59	6	6
5350309.00	Toronto	0	2519	6501	171.15	74.41	9	9
5350310.01	Toronto	131	1816	4638	251.39	142.75	10	10
5350310.02	Toronto	55	4580	10877	87.64	46.57	8	8
5350311.02	Toronto	0	2661	8297	62.26	29.57	6	5
5350311.03	Toronto	23	1514	4653	28.97	16.35	3	2
5350311.04	Toronto	54	2218	6530	82.77	43.83	7	7
5350311.05	Toronto	0	2471	6563	99.71	44.57	8	7
5350311.06	Toronto	159	15974	92869	26.60	11.49	2	1
5350312.02	Toronto	0	1153	4104	51.11	24.99	5	4
5350312.03	Toronto	0	2459	7898	46.41	23.35	5	4
5350312.04	Toronto	17	2661	9681	665.29	340.80	10	10
5350312.05	Toronto	0	1818	5018	34.15	16.36	3	2
5350312.06	Toronto	17	1368	3677	51.03	29.70	5	5
5350312.07	Toronto	0	1415	2807	62.91	36.34	6	6
5350313.00	Toronto	42	3934	11628	31.47	17.31	3	2
5350314.01	Toronto	0	1457	4229	33.52	16.13	3	2
5350314.02	Toronto	21	1160	4266	17.89	10.74	1	1
5350315.01	Toronto	17	996	3297	75.12	41.32	7	7
5350315.02	Toronto	21	1650	3545	24.96	17.35	2	2
5350315.03	Toronto	28	6467	23371	25.72	14.02	2	2
5350316.01	Toronto	0	1955	6408	22.79	11.75	2	1
5350316.03	Toronto	28	2762	6793	24.34	12.50	2	1
5350316.04	Toronto	0	889	2640	228.61	114.57	10	10
5350316.05	Toronto	0	1394	3776	50.43	26.11	5	4
5350316.06	Toronto	0	882	3056	55.99	29.34	6	5
5350317.02	Toronto	48	2941	6780	33.86	13.84	3	2
5350317.03	Toronto	51	1025	3835	32.55	15.54	3	2

5350317.04	Toronto	99	1617	4388	23.02	10.57	2	1
5350317.05	Toronto	40	1150	4078	83.57	31.20	8	6
5350318.00	Toronto	40	6541	19324	58.83	24.77	6	4
5350319.00	Toronto	0	1706	5687	45.63	27.58	5	5
5350320.01	Toronto	0	1980	5763	36.50	17.53	4	2
5350320.02	Toronto	69	6980	15327	158.94	78.36	9	9
5350321.01	Toronto	111	2753	7768	33.43	20.20	3	3
5350321.02	Toronto	0	1363	3906	42.73	20.99	4	3
5350322.01	Toronto	0	717	6855	243.09	78.40	10	9
5350322.02	Toronto	21	4088	5660	68.21	45.68	7	8
5350323.01	Toronto	0	2378	5618	26.94	14.14	2	2
5350323.02	Toronto	0	3066	8997	47.15	24.42	5	4
5350324.01	Toronto	0	2343	6275	34.76	19.54	3	3
5350324.02	Toronto	0	4634	11263	37.28	19.43	4	3
5350324.03	Toronto	33	6136	21440	69.76	29.87	7	5
5350324.05	Toronto	0	1296	3624	43.25	22.57	4	4
5350324.06	Toronto	0	1070	3846	75.06	33.57	7	6
5350330.00	Toronto	0	2696	8224	175.56	76.03	9	9
5350331.01	Toronto	0	2277	7458	27.85	12.77	2	1
5350331.03	Toronto	0	1701	5041	25.17	15.76	2	2
5350331.04	Toronto	0	1929	6234	100.78	45.12	8	8
5350332.00	Toronto	0	3028	8295	44.83	26.31	5	5
5350333.00	Toronto	0	2372	7095	47.70	28.45	5	5
5350334.00	Toronto	44	2628	8296	61.47	34.49	6	6
5350335.00	Toronto	0	3095	10471	87.27	48.67	8	8
5350336.00	Toronto	31	2167	7319	81.67	45.22	7	8
5350337.00	Toronto	26	2132	6589	110.26	51.02	8	8
5350338.00	Toronto	55	3358	10102	143.71	66.95	9	9
5350339.00	Toronto	37	3006	9006	107.18	47.25	8	8
5350340.00	Toronto	0	2158	5807	88.96	45.97	8	8
5350341.02	Toronto	58	2234	6994	143.51	64.40	9	9
5350341.03	Toronto	0	879	3426	59.01	35.00	6	6
5350341.04	Toronto	0	1214	5349	74.47	39.68	7	7
5350342.00	Toronto	51	3083	10738	41.14	20.61	4	3
5350343.00	Toronto	26	1535	4650	43.39	20.61	4	3
5350344.01	Toronto	18	3271	8175	63.51	31.61	6	6
5350344.02	Toronto	0	834	3216	91.02	37.84	8	7
5350345.00	Toronto	0	919	2866	50.23	28.55	5	5
5350346.01	Toronto	50	4134	10562	67.50	38.24	7	7
5350346.02	Toronto	0	1469	4736	33.59	14.16	3	2
5350347.00	Toronto	0	2714	10203	18.28	7.76	1	1
5350348.00	Toronto	102	13678	25172	136.81	62.35	9	9
5350349.00	Toronto	84	4227	10520	70.04	32.06	7	6
5350350.00	Toronto	34	9997	25660	124.45	64.17	9	9
5350351.01	Toronto	41	1860	5453	364.81	158.77	10	10
5350351.02	Toronto	0	1158	2960	168.21	66.77	9	9
5350352.00	Toronto	64	3721	9880	193.45	97.11	9	10
5350353.02	Toronto	0	2754	6521	57.71	33.59	6	6
5350353.03	Toronto	15	960	3307	27.08	11.92	2	1
5350353.04	Toronto	50	3245	7485	62.21	36.24	6	6
5350354.00	Toronto	33	3109	8185	67.06	37.23	7	7
5350355.02	Toronto	0	2117	5440	24.45	11.82	2	1
5350355.03	Toronto	0	2033	4088	55.19	30.40	6	5
5350355.04	Toronto	0	1840	4255	68.93	31.48	7	6
5350356.00	Toronto	31	7983	15363	55.47	31.31	6	6
5350357.01	Toronto	15	2798	7661	27.44	15.65	2	2
5350357.02	Toronto	14	1624	4278	24.96	16.02	2	2
5350358.01	Toronto	0	1615	4532	93.94	54.97	8	8
5350358.02	Toronto	0	1559	4710	57.21	31.17	6	6
5350358.03	Toronto	42	1833	5444	29.93	15.38	3	2

5350359.00	Toronto	21	6030	13242	37.45	17.70	4	3
5350360.00	Toronto	41	3112	8265	27.95	16.72	2	2
5350361.01	Toronto	40	2088	7775	30.45	20.28	3	3
5350361.02	Toronto	0	4100	13657	88.02	50.41	8	8
5350362.01	Toronto	29	2596	8361	46.87	29.44	5	5
5350362.02	Toronto	0	1047	4919	47.89	29.79	5	5
5350362.03	Toronto	109	5658	24491	80.20	49.49	7	8
5350362.04	Toronto	0	1539	6039	63.11	33.57	6	6
5350363.02	Toronto	83	1197	3494	32.36	18.59	3	3
5350363.04	Toronto	14	1742	4446	147.92	101.19	9	10
5350363.05	Toronto	0	2613	6399	51.37	28.73	5	5
5350363.06	Toronto	13	4450	12823	38.35	12.96	4	1
5350363.07	Toronto	23	7856	22408	27.14	16.26	2	2
5350364.01	Toronto	49	3645	9644	42.95	24.10	4	4
5350364.02	Toronto	0	676	1937	160.34	81.90	9	9
5350365.00	Toronto	50	3644	11054	226.58	134.93	10	10
5350366.00	Toronto	0	2976	8400	109.84	58.18	8	9
5350367.01	Toronto	0	1851	4795	10.91	7.59	1	1
5350367.02	Toronto	0	1640	4203	70.63	39.06	7	7
5350368.01	Toronto	15	12629	34091	72.93	21.20	7	3
5350368.02	Toronto	0	2828	9232	54.73	27.15	6	5
5350369.00	Toronto	14	6301	17034	45.44	24.35	5	4
5350370.01	Toronto	24	7045	16628	272.36	124.91	10	10
5350370.02	Toronto	15	4383	12565	114.30	53.99	9	8
5350370.03	Toronto	0	2146	6557	208.13	114.65	10	10
5350371.00	Toronto	72	10438	26106	183.38	97.42	9	10
5350372.00	Toronto	26	2147	5627	127.24	78.45	9	9
5350373.00	Toronto	37	3345	7513	87.82	40.89	8	7
5350374.01	Toronto	17	2583	6737	159.90	96.28	9	10
5350374.02	Toronto	0	1401	4094	40.83	20.81	4	3
5350374.03	Toronto	0	1299	4192	62.17	28.92	6	5
5350375.01	Toronto	0	3104	8343	48.18	25.22	5	4
5350375.02	Toronto	0	971	2132	29.25	14.12	3	2
5350375.03	Toronto	14	3015	8615	28.95	15.41	3	2
5350375.04	Toronto	0	2552	7434	47.26	30.54	5	5
5350375.05	Toronto	17	1491	5234	14.17	7.86	1	1
5350376.01	Toronto	0	2941	6887	57.43	31.18	6	6
5350376.02	Toronto	32	1554	5012	51.27	27.11	5	5
5350376.04	Toronto	27	2302	6656	33.93	18.55	3	3
5350376.05	Toronto	32	3609	8071	37.91	25.41	4	4
5350376.06	Toronto	16	6926	14510	33.82	9.05	3	1
5350376.08	Toronto	0	2611	8909	53.61	25.37	5	4
5350376.09	Toronto	0	1299	5911	55.05	32.06	6	6
5350376.11	Toronto	27	916	2777	88.00	55.77	8	8
5350376.12	Toronto	0	3639	9871	59.55	32.41	6	6
5350376.13	Toronto	0	2001	5479	45.31	23.14	5	4
5350376.14	Toronto	16	1503	4521	14.79	10.27	1	1
5350376.15	Toronto	0	1583	3574	73.85	35.41	7	6
5350376.16	Toronto	32	4534	9611	47.18	22.17	5	4
5350377.01	Toronto	0	4149	12769	31.30	15.43	3	2
5350377.02	Toronto	0	4997	10929	20.12	12.21	1	1
5350377.03	Toronto	28	1508	3681	51.47	34.81	5	6
5350377.04	Toronto	0	2235	6730	82.13	49.11	7	8
5350377.06	Toronto	0	1092	3478	53.75	41.29	6	7
5350377.07	Toronto	0	2075	5992	20.88	13.92	1	2
5350378.02	Toronto	0	2990	9128	40.40	22.57	4	4
5350378.03	Toronto	43	6904	16525	22.03	13.17	2	1
5350378.04	Toronto	0	3138	9990	33.79	22.83	3	4
5350378.05	Toronto	0	1100	3626	54.46	35.19	6	6
5350378.06	Toronto	29	2666	7164	99.71	63.69	8	9

5350378.07	Toronto	30	6855	18374	62.35	34.10	6	6
5350378.08	Toronto	21	1397	4531	27.74	14.62	2	2
5350378.11	Toronto	30	3403	7620	44.31	27.52	5	5
5350378.12	Toronto	0	1642	5447	133.28	71.03	9	9
5350378.14	Toronto	49	4961	9944	27.40	16.37	2	2
5350378.16	Toronto	29	1880	7279	47.28	33.13	5	6
5350378.17	Toronto	0	976	3488	28.34	22.94	3	4
5350378.18	Toronto	0	769	1962	168.72	66.62	9	9
5350378.19	Toronto	68	8202	19587	31.37	24.23	3	4
5350378.20	Toronto	21	1173	3075	37.63	14.54	4	2
5350378.21	Toronto	0	1289	3193	10.98	7.40	1	1
5350378.22	Toronto	0	1138	3089	132.90	74.85	9	9
5350378.23	Toronto	0	2796	6126	19.22	10.86	1	1
5350378.24	Toronto	0	2747	7736	20.77	11.62	1	1
5350378.25	Toronto	21	5098	15406	9.30	8.53	1	1
5350378.26	Toronto	0	1209	4171	18.95	17.88	1	3
5350378.27	Toronto	33	3644	11356	27.96	20.45	2	3
5350378.28	Toronto	110	2745	11653	74.43	55.96	7	8
5350802.01	Toronto	58	4489	10995	55.67	31.22	6	6
5350802.02	Toronto	69	1227	5885	51.43	26.90	5	5
5350400.02	York	0	2509	7396	18.92	15.51	1	2
5350400.03	York	0	461	2062	67.08	46.47	7	8
5350400.04	York	0	1667	3721	79.34	40.84	7	7
5350400.06	York	20	1150	3610	38.80	27.03	4	5
5350400.07	York	60	3812	8898	12.58	7.05	1	1
5350400.08	York	21	6739	12652	27.17	14.35	2	2
5350400.11	York	21	3937	12391	12.84	12.78	1	1
5350400.12	York	182	2264	6536	47.52	34.48	5	6
5350400.13	York	0	3715	10111	45.50	46.54	5	8
5350400.14	York	59	1927	7129	55.70	47.14	6	8
5350400.15	York	20	3311	7765	33.14	22.82	3	4
5350400.16	York	0	2207	8035	39.79	34.17	4	6
5350400.17	York	0	1470	6072	27.91	28.16	2	5
5350400.18	York	0	753	1961	41.84	32.69	4	6
5350400.19	York	21	3753	13194	40.01	28.41	4	5
5350400.20	York	0	505	2655	16.96	11.90	1	1
5350400.21	York	0	148	1814	6.19	4.80	1	1
5350400.22	York	0	3909	10248	37.48	32.59	4	6
5350400.23	York	0	6427	15734	7.80	7.04	1	1
5350401.04	York	22	1883	4701	11.75	7.05	1	1
5350401.05	York	50	13975	48408	81.97	28.04	7	5
5350401.06	York	22	4191	9215	109.01	71.81	8	9
5350401.07	York	42	3042	6706	32.57	19.47	3	3
5350401.08	York	64	2358	4742	318.17	195.58	10	10
5350401.09	York	141	6265	16600	46.48	38.27	5	7
5350401.10	York	107	5345	22667	35.55	24.78	4	4
5350401.11	York	0	1934	5049	18.19	17.63	1	3
5350401.13	York	32	1687	4798	77.90	60.71	7	9
5350401.14	York	107	3912	9378	105.59	93.40	8	10
5350401.15	York	55	9379	17771	44.81	21.81	5	3
5350401.17	York	0	1573	4221	23.03	17.73	2	3
5350401.18	York	103	10451	26862	38.82	25.74	4	4
5350401.19	York	0	5373	16004	96.92	66.51	8	9
5350401.20	York	0	887	2414	16.73	16.12	1	2
5350401.21	York	0	917	2105	105.18	101.92	8	10
5350401.22	York	62	4201	9514	64.91	46.51	6	8
5350401.23	York	0	773	1586	9.36	6.56	1	1
5350402.01	York	0	3164	10595	14.71	7.19	1	1
5350402.02	York	45	2656	6639	61.86	33.79	6	6
5350402.03	York	0	1299	4419	12.26	5.71	1	1

5350402.04	York	0	1846	6043	65.27	35.99	7	6
5350402.05	York	0	2331	4095	48.31	24.14	5	4
5350402.06	York	20	3113	8771	28.10	14.37	3	2
5350402.07	York	0	1162	2579	34.30	20.91	3	3
5350402.08	York	62	2736	7524	26.04	14.59	2	2
5350402.09	York	0	3087	7183	59.23	30.39	6	5
5350402.10	York	21	3333	8090	19.20	9.73	1	1
5350402.12	York	45	4183	22435	45.38	16.59	5	2
5350402.13	York	42	2806	6418	42.72	25.99	4	4
5350403.01	York	0	4205	11237	42.93	34.12	4	6
5350403.03	York	27	4227	16146	61.30	44.82	6	8
5350403.04	York	0	3095	9954	19.99	17.22	1	2
5350403.05	York	45	2086	4864	61.61	34.55	6	6
5350403.07	York	0	1648	5634	57.13	49.07	6	8
5350403.09	York	0	2028	6438	34.18	28.58	3	5
5350403.10	York	0	1520	5577	14.88	12.84	1	1
5350403.11	York	0	2817	8956	18.36	14.95	1	2
5350403.12	York	0	2477	9442	21.14	17.07	2	2
5350403.13	York	40	5829	13670	27.74	14.60	2	2
5350403.14	York	0	3732	11441	30.36	25.83	3	4
5350410.02	York	61	2113	5795	82.13	36.95	7	7
5350410.03	York	0	3071	7951	80.16	48.09	7	8
5350410.04	York	0	1462	4135	68.48	43.97	7	7
5350410.05	York	19	4903	11355	26.84	19.92	2	3
5350410.07	York	57	1781	6278	36.89	29.22	4	5
5350410.09	York	20	4289	10888	38.77	15.85	4	2
5350410.10	York	0	1338	3952	86.54	46.22	8	8
5350410.11	York	20	2753	6123	29.96	23.35	3	4
5350410.12	York	12	7162	15545	89.52	29.97	8	5
5350410.13	York	0	5323	13443	16.73	14.44	1	2
5350410.14	York	0	1906	6481	30.03	23.14	3	4
5350410.15	York	20	535	1639	98.70	55.49	8	8
5350411.01	York	0	2799	7885	98.62	56.22	8	8
5350411.04	York	0	2447	8041	29.00	23.14	3	4
5350411.07	York	22	1999	6019	6.45	5.60	1	1
5350411.08	York	22	18560	83712	32.18	19.74	3	3
5350411.09	York	0	1945	8589	43.82	30.40	4	5
5350411.12	York	0	2963	7612	26.22	21.84	2	3
5350411.15	York	27	2528	7890	378.99	283.35	10	10
5350411.16	York	0	2681	8493	19.76	16.69	1	2
5350411.17	York	0	1427	6596	25.98	18.71	2	3
5350411.18	York	0	2956	11639	32.58	21.02	3	3
5350411.19	York	0	4890	12376	30.21	21.58	3	3
5350411.20	York	92	6748	21939	20.93	17.20	2	2
5350411.21	York	0	2731	7208	24.08	22.47	2	4
5350411.22	York	0	4695	9753	49.71	43.66	5	7
5350411.23	York	0	1253	3967	150.85	77.69	9	9
5350411.24	York	27	1899	5981	28.13	26.06	3	4
5350411.25	York	0	1085	3955	29.11	25.25	3	4
5350411.26	York	22	1059	4723	14.97	14.78	1	2
5350411.27	York	22	2071	6923	22.80	21.75	2	3
5350412.01	York	0	3683	9933	21.00	13.63	2	2
5350412.02	York	20	4669	13268	25.00	15.66	2	2
5350412.04	York	17	8485	28108	33.41	22.76	3	4
5350412.06	York	24	3212	7546	44.09	35.02	4	6
5350412.08	York	0	1009	2864	71.51	47.02	7	8
5350412.10	York	0	1791	6759	143.60	100.18	9	10
5350412.11	York	20	5233	20124	22.76	19.80	2	3
5350412.12	York	0	3621	8962	14.73	10.67	1	1
5350412.13	York	24	6281	17225	34.30	22.62	3	4

5350412.14	York	0	830	3210	83.32	70.78	8	9
5350412.15	York	20	4535	9900	40.92	29.69	4	5
5350412.18	York	0	6364	14595	78.00	57.81	7	9
5350412.19	York	0	1981	9175	8.01	8.44	1	1
5350412.20	York	20	1185	4422	38.90	35.58	4	6
5350412.21	York	0	458	1243	0.00	0.00	1	1
5350412.22	York	0	3547	13011	40.91	37.17	4	7
5350412.23	York	0	3479	10814	26.78	23.96	2	4
5350412.24	York	0	3709	11894	12.37	11.50	1	1
5350413.00	York	0	4749	20541	2.89	2.38	1	1
5350420.03	York	0	3186	7447	73.14	45.87	7	8
5350420.05	York	0	8357	29209	51.83	36.51	5	6
5350420.06	York	0	3469	7553	48.98	40.01	5	7
5350420.08	York	0	2519	6540	162.85	74.41	9	9
5350420.09	York	55	2285	6543	58.76	26.49	6	5
5350420.10	York	0	2227	6072	116.72	105.06	9	10
5350420.11	York	0	4032	8340	41.48	25.70	4	4
5350420.13	York	0	8397	18498	46.80	22.66	5	4
5350420.14	York	0	1653	5902	38.63	18.49	4	3
5350420.15	York	0	1425	2581	20.71	20.36	1	3
5350421.01	York	0	6130	14786	43.76	29.10	4	5
5350421.04	York	0	5149	10642	149.67	65.53	9	9
5350421.05	York	0	2115	5364	33.88	21.23	3	3
5350421.06	York	0	2211	5446	20.41	8.45	1	1
5350421.07	York	0	1689	4836	65.87	50.01	7	8
5350422.02	York	21	4224	10360	102.57	60.57	8	9
5350422.03	York	0	2488	9679	20.35	13.95	1	2
5350422.04	York	23	1960	4727	27.28	20.32	2	3
5350422.05	York	51	6878	15554	21.33	17.21	2	2
5350422.06	York	0	4237	10953	101.86	58.81	8	9
5350423.01	York	17	4004	11678	42.49	31.91	4	6
5350423.02	York	17	4178	10792	26.18	16.16	2	2
5350424.04	York	0	1372	3893	67.00	53.12	7	8
5350424.05	York	21	5600	13609	49.82	38.88	5	7
5350424.07	York	0	2489	8622	53.23	41.43	5	7
5350424.08	York	0	4593	12400	49.69	37.71	5	7
5350424.09	York	0	1188	5075	13.28	10.57	1	1
5350424.10	York	62	2162	8344	38.76	35.47	4	6
5350424.11	York	0	2353	9937	28.57	22.40	3	4
5350424.12	York	25	6885	28152	38.92	31.18	4	6
5350424.13	York	0	3815	10425	16.45	9.92	1	1
5350430.02	York	193	8958	24732	34.27	22.35	3	4
5350430.03	York	124	1960	6702	61.62	38.83	6	7
5350430.04	York	0	3042	11616	135.27	90.48	9	10
5350431.01	York	0	993	9095	48.90	26.28	5	5
5350431.02	York	0	835	7351	102.69	72.03	8	9
5350440.00	York	24	8521	21778	29.54	17.70	3	3
5350441.02	York	0	3709	8402	71.93	41.16	7	7
5350441.03	York	0	3748	10832	44.65	31.19	5	6
5350441.04	York	0	3929	11906	30.89	26.06	3	4
5350442.02	York	24	3184	8053	143.40	73.78	9	9
5350442.03	York	0	3089	7440	38.11	28.77	4	5
5350442.04	York	0	2363	5548	64.28	38.86	6	7
5350442.05	York	22	9775	20836	57.95	41.75	6	7
5350442.06	York	22	3675	12107	18.87	16.74	1	2
5350450.02	York	30	4561	10715	72.48	29.24	7	5
5350450.03	York	0	9805	22489	35.30	21.43	3	3
5350450.05	York	27	4498	9042	112.81	73.60	8	9
5350450.06	York	34	3203	6551	59.66	41.54	6	7
5350451.01	York	19	2016	3622	65.25	39.96	7	7

5350451.02	York	74	5855	12247	282.41	132.35	10	10
5350451.03	York	19	5224	11688	49.77	33.42	5	6
5350451.05	York	0	4672	10585	36.47	25.37	4	4
5350451.06	York	105	2463	7273	16.63	13.61	1	2
5350451.07	York	35	3779	8716	45.95	32.74	5	6
5350452.01	York	0	3763	8500	90.74	45.32	8	8
5350452.02	York	22	4133	10028	72.70	38.81	7	7
5350452.03	York	159	6589	17843	44.65	24.88	5	4
5350452.05	York	40	6366	16300	31.44	22.83	3	4
5350452.06	York	22	4288	8713	32.41	22.75	3	4
5350452.07	York	0	3095	6952	57.29	40.01	6	7
5350455.00	York	0	1299	8979	63.42	46.86	6	8
5350456.01	York	66	2152	8378	107.70	77.62	8	9
5350456.02	York	0	6305	15910	47.30	32.73	5	6
5350456.03	York	132	1340	5701	29.28	23.44	3	4
5350460.01	York	44	2465	12794	34.52	29.65	3	5
5350460.02	York	0	1218	8435	58.20	39.01	6	7
5350461.01	York	0	885	5171	43.76	82.97	4	9
5350461.02	York	0	970	10666	16.01	23.87	1	4
5350470.00	York	0	501	5246	42.01	31.98	4	6
5350471.00	York	0	1401	5940	46.99	37.09	5	7
5350472.00	York	0	3088	11644	20.96	14.80	2	2
5350473.01	York	62	2759	7287	42.70	36.17	4	6
5350473.02	York	41	4975	11464	25.56	18.37	2	3
5350473.03	York	0	1286	4050	46.26	35.28	5	6
5350474.00	York	0	1227	4214	82.84	50.51	7	8
5350475.00	York	0	1707	7963	66.23	38.24	7	7
5350476.00	York	0	710	3633	21.93	21.33	2	3