Condos in the Suburb: What are the Drivers Behind the Decision to Move into Suburban Condominiums?

by

Cyrus Yan

A thesis

presented to the University of Waterloo

in fulfillment of the

thesis requirement for the degree of

Master of Arts

in

Planning

Waterloo, Ontario, Canada, 2015

Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

High-rise residential condominiums are increasingly utilized by suburban municipalities in Canada as an alternative to suburban sprawl for accommodating population growth. Despite its increasing adoption, little research exists to support the effectiveness of this growth management tool, and a key indicator of its success is on whether its suburban condo dwellers exhibits a consumption pattern and lifestyle that are more urban in character. This study offers a comparative analysis on the lifestyles and motivations of suburban condominium dwellers, their respective municipalities, and condominiums clusters located in the downtowns of Toronto and Vancouver. It finds that the suburban 'condo boom' is fueled by a transient population characterized by tenuous socio-demographic status, childless and small households, and is currently not in a position to replace lower density forms of housing. In addition, the characteristics indicative of an urban form of living, namely that of reduced land consumption and auto-dependency, and increased levels of active transportation and public transit use, are either absent or only realized to a limited degree. The problems of how to ensure larger, relatively affordable condominium units, and how to enhance the transit-supportiveness of the suburban downtown are distilled from the findings as key issues to overcome, and five recommendations are made to address them.

Acknowledgments

I would like to thank my supervisors Dr. Markus Moos and Dr. Joe Qian for their support and guidance during the writing of this thesis, and Dr. Pierre Filion for acting as the reader of my thesis. Their knowledge of the suburban environment and related planning discourse contributed to my success in maintaining a clear focus for my thesis research. I would also like to thank my parents Tina and Tommy Yan for their patience and continued support throughout my education, without them this would not be possible.

Table of Contents

List of Figures

List of Tables

Introduction

The Problem of Growth Management

Sustainable ways of accommodating growth in the suburban environment have been a major challenge for Canadian municipalities in the past two decades. As Canada continues to experience significant urban growth, the problem of providing sufficient land to accommodate the expansion of residential, commercial, and office building stands looming as the environmental and financial costs of suburban sprawl become clear. Planning policy in Canada has adopted growth management principles that strive to achieve the goals of environmental, social, and economic sustainability. Many of these principles promote efficient land use and development patterns to limit the expansion of urban settlement areas, thereby minimizing land consumption and servicing costs. In the province of Ontario for example, the Provincial Policy Statement, 2014 (PPS) outlines the province's planning direction over the next 20 years and encourage "efficient land use and development patterns that support sustainability by promoting strong, liveable, healthy and resilient communities" (Provincial Policy Statement, 2014, p. 6). To use land efficiently, growth and development are to be focused within 'settlement areas', which are "urban areas and rural settlement areas, and include cities, towns, villages and hamlets" (ibid.).

In other words, future growth is to be accommodated and channeled into existing built-up areas in the form of intensification and redevelopment. A popular

approach to implementing this mandate of efficient land use and development pattern to achieve sustainable growth is the concentration of development in urban growth centres designated by policies such as the Growth Plan for the Greater Golden Horseshoe, 2006 (GPGGH). Developments in these locations are often characterized by mixed-use zoning, transit oriented development, and high-density residential buildings (Filion, 2001; Grant, 2009; Skaburskis, 2006). The rationale behind this approach lies in the assumption that the concentration of urban functions, amenities, and population yield the most efficient growth pattern while fostering an appealing, vibrant, social environment (Filion, 2001; Grant, 2009; Ministry of Infrastructure, 2006; Provincial Policy Statement, 2014; Quastel et. al., 2012; Skaburskis, 2006). Integral to this approach is the concentration of the residential population into a small spatial proximity, and an increasingly prevalent way to achieve this is through the construction of vertical multi-unit residential housing in the form of condominiums.

The prevalence of condominiums over other forms of high-density housing tenure is in part due to changes in the public sector's housing policy, and in part due to market conditions that favour this type of tenure. The aversion of governments to manage the upkeep and repair of high density public housing resulted from a shift in the understanding of housing provision (at least at the most basic level) as a function of the state to that of the market and the individual, which began in earnest in the 1970-80s (Lehrer et. al., 2010). At the same time, as land value in the central districts of metropolitan areas such as Toronto and Vancouver continued to increase in step with the rising prominence of the creative and service

economy, a compelling financial case was building up for both buyers and sellers for high-rise condos. From the buyer's perspective, the opportunity to own prime real estate at a relatively affordable price is appealing, especially taking into consideration the added benefit of low maintenance and enhanced convenience. For the seller, the condominium housing arrangement eliminates the developer's responsibility to maintain and repair major 'common elements' of the building (e.g. elevator, heating and air conditioning, and boilers), as these would become the responsibility of the condominium corporation, a legal entity established, funded, and governed by the condominium's unit owners (The Condominium Act, 1998).

The Role of Condominiums

The current growth management strategy adopted by Canadian municipalities is strongly reliant on the development of high-density residential or mixed-use condominiums to accommodate for future population growth. The success of this strategy is contingent on the condominium's ability to draw suburban dwellers away from a consumption pattern characterized by high land use, high energy consumption, and automobile dependency, and towards a more urban lifestyle characterized by walkable neighbourhoods, transit oriented development, reduced auto-dependency, and a vibrant street life (Moos & Mendez, 2015; Filion, 2001; Quastel et. al., 2012; Skaburskis, 2006).

Instigating the shift from a suburban lifestyle to an urban one has been a planning objective since as early as the 1970s, when policy makers began to critically analyze the post-war model of urban development, which is characterized by geographically dispersed and mono-functional superblocks. The ameliorative plans put in place in the aftermath of the post-war planning model sought to reverse the unsustainable practices of the previous decades but were largely hindered by the path dependency of the built form already in place. Most significantly, the transportation infrastructure established to accommodate for an automobile enabled population in the post-war years now stranded them on rectilinear virtual islands as the urban and suburban population try to wean itself off from an auto-dependent lifestyle (Filion, 2012). Despite plans in place that called for reduced energy consumption and preservation of green space, it was not until recently that societal factors in Canada became conducive for bringing about a shift in suburban consumption patterns.

Three major societal conditions drive the current development outlook of Canadian cities towards a more efficient model. The first factor is raising energy rates. Ontario's Long Term Energy Plan, 2013 forecasts an increase of 52% in electricity bill for a typical residential unit between 2013 and 2032. This will likely undermine the financial feasibility of living in large suburban dwellings that are more expensive to heat and cool and require an automobile to be accessible. Consequently, less people will be able to afford larger format dwellings such as single and semi-detached homes and will opt for more compact alternatives. Second, the stability of Canada's real estate market in the aftermath of the 2008

U.S. subprime mortgage crisis continues to advertise the country as an attractive option for both domestic and international investors (Urban Land Institute, 2014). The sustained demand for Canadian property (especially in metropolitan areas) incentivizes developers to build in ways that capitalizes on the high valuation of real estate. Third, demographic and lifestyle changes in the contemporary metropolitan population is driving a trend of downsizing households that is expected to perpetuate into the foreseeable future. Persistently low fertility rate in developed nations is reducing demand for large suburban homes as family size continues to shrink. Take the province of Ontario for example, from a record high of 3.8 children per woman in 1960, its fertility rate had dropped to 1.52 in 2011 and is only expected to rebound to 1.60 by 2028 (Ministry of Finance, 2013).

There are thus very strong incentives for the many of today's homebuyers to select the high-rise condominium over lower density housing options. If the high-rise condo is made accessible to people of all income levels and household structures, it will be a powerful tool for achieving sustainable growth. Furthermore, whereas the construction of high-rise condominiums in urban downtowns has been prevalent for quite some time (Lehrer et. al., 2010; Rosen & Walks, 2013, Kern, 2007), it is only in the recent decade that suburban municipalities began to integrate high-density residential dwellings into their growth management strategy. The implementation of high-rise condominiums in suburban municipalities to accommodate for a growing population has the potential to facilitate the transition of communities living a resource-intensive, auto-dependent lifestyle to one that is more environmentally and economically

sustainable, with the added benefit of a healthier lifestyle. To realize these benefits, the current role of high-rise condominiums in suburban municipalities must first be understood, and the gap between what it is and what it can be must be identified.

Towards A Complete Growth Management Strategy – An Examination Of Suburban Condominiums

To find out whether the suburban high-rise condominium is a successful growth management tool from a resource efficiency and social standpoint, this study aims to answer the question of *whether this form of housing is enticing suburbanites to move into higher-density housing arrangements and adopt a more urban lifestyle*. The impetus for asking this question is twofold. First, the novelty of the suburban condo boom phenomenon and the potential benefits of improving the health, sustainability, and configuration of the suburban landscape make a critical examination of its success as a growth management tool an important exercise. Second, whereas a large body of research exists with respect to the development of high-rise condominiums in urban downtowns (Rosen & Walks, 2013; Lehrer et. al., 2010; Lehrer & Wieditz, 2009; Kern, 2007; Fincher, 2007; Fincher, 2004; Bickford, 2000; Perin, 1977), with studies into its drivers, inhabitants, issues, and opportunities, little to no research exists that specifically pertains to high-rise condominiums in the suburban landscape.

The research question will be answered by answering two sub-questions: 1. Who is living in suburban high-rise condominiums, and how they are characterized in terms of demographic, behaviour, and motivations, and 2. Are suburban condominium dwellers living an 'urban' lifestyle? My research will examine the lifestyle, motivation, and socio-economic characteristics of condominiums dwellers in the Canadian suburban municipalities of Markham and Richmond Hill between the years 1991-2011. It will examine the income levels, gender, age, ethnicity, occupation, education, commute pattern, household size, and future plans of the residents of the sampled condominiums. A comparative analysis will also be conducted to determine whether any changes in the demographic and socio-economic characteristics of neighbourhoods that had played host to new high-rise condominiums in the study period are attributed to a shift in the consumption pattern of suburban dwellers.

In providing a detailed profile of those currently living in suburban high-rise condominiums, my research will also highlight the mismatch (should any exist) between the target clientele of new condominium developments base on the existing configuration of this type of housing, and the actual occupants of these developments. The significance of this study lies in its potential to inform city builders—planners, developers, and city/town councils, of the needs not being met in the current housing development model, and why that is so. With this information, it will be possible to propose new forms of high-rise condominium arrangements that are more effective in bridging the transformation of the suburban to the urban. This study will also shed light on the key determinants that

must be considered to capitalize on the current condo boom and accelerate the pace of compacting the Canadian suburbs. My proposed research thus begs the question: what is a suburb, and why is the transformation of the suburb to a more urban environment desirable?

Defining The Suburb

Existing literatures on the topic of the suburban environment yielded a multitude of definitions for what is commonly referred to as 'the suburb'. Different definitions put varying levels of emphasis on a number of properties that range from physical characteristics to lifestyle and other intangible traits. In terms of physical characteristics, density; distance; location; built form; period of development; transportation; and urban design (Moos & Mendez, 2015; Walks, 2013; Forsyth, 2012) had all been used by scholars to demarcate between that which is urban and that which is suburban. For lifestyle and other less intangible traits, ownership; occupancy; automobile use; centrality; difference; functionality; types of activities embarked; political demarcation; socio-cultural norms; and newness were considered on various occasions (Moos & Mendez, 2015; Walks, 2013; Forsyth, 2012). Of particular interest to this study, Moos & Mendez's (2015) investigation of 26 Canadian metropolitan areas using a definition of urban/suburbanism measured in terms of homeownership, single-family dwelling occupancy, and automobile usage informs and reinforces an understanding what constitutes an urban/suburban lifestyle that will be used to interpret its findings.

For the purpose of conducting my research and site selection, a suburban municipality will be identified based on its administrative boundary as per the definition used by the Census of Canada. Hence, a suburban municipality will be defined as a municipality that is adjacent to a central municipality, which lends its name to a Census Metropolitan Area (Turcotte, 2008). This definition has the advantage of being consistent with existing literature (e.g., Young, Wood, & Keil, 2011; Grant, 2009) and with that used in the collection of the Census of Canada data. It is therefore familiar to planners, policy makers, developers, and residents and easily operationalized in the primary data collection portion of my research.

Regarding the question of why an urban lifestyle is preferable to a suburban one, in addition to fostering an appealing, vibrant, and social environment (Filion, 2001; Grant, 2009; Growth Plan for the Greater Golden Horseshoe, 2006; Provincial Policy Statement, 2014; Quastel et. al., 2012; Skaburskis, 2006), an urban configuration is also superior to the suburban from a resource efficiency standpoint. As the defining characteristic of the suburb is often its sprawling low-density neighbourhoods and automobile dependency (Moos & Mendez, 2015; Forsyth, 2012; Trucotte, 2008), a suburban municipality will tend to consume (sometimes vastly) more land, infrastructure, and fuel to carry out its function than a city built under urban principles while serving the same number of people. In light of climate change, a growing population, and rising land prices, the resource management argument for urbanizing the suburbs is now gaining a tremendous amount of traction.

Defining The High-Rise Condominium

A second key concept, the high-rise condominium itself, must also be defined before one proceeds with investigating the suburban condo boom. The term 'condominium' refers to a form of real estate ownership wherein the residential units within the condominium complex are privately owned (by individuals or corporations) and the unit owners elect a board of directors to oversee the management of the common elements within the condominium. The common elements typically include (but is not limited to) the complex's elevators, hallways, mechanical equipment, and parking and recreational amenities, and the exterior premise. The unit owners of a condominium then pay a monthly Common Element Assessment (CEA) to fund the upkeep of the complex. Additionally, the Board of Directors may create by-laws and rules that the condominium residents must abide by. The by-laws usually outline the repair and maintenance responsibilities of the owners and the corporation, and set the terms for the accessibility of the condominium's assets to non-unit owners. As for the rules, they are typically established as a formal code of conduct that residents should abide by to protect the welfare and security of residents and their enjoyment of the condominium's facilities (The Condominium Act, 1998).

Of particular relevance to this study is the notion of a 'high-rise condominium', which is defined here as a condominium complex consisting of residential structures of five storeys or higher. The adoption of the five storeys cutoff point for a high-rise designation stems from the desire to keep a height classification system consistent with that of Statistics Canada's 2011 Census

definition to streamline the data collection and analysis process. Thus, a high-rise condominium is any five storeys or higher residential apartment whose units are privately owned, while the management of the entire building complex is carried out by a corporate entity with an elected board of directors.

Thesis Structure

This study will adopt a mixed-method analytic dissertation format to answer its research question. Following the introductory section, where the Canadian suburban context is reviewed in brief, and the research question and a definition of the suburb and the high-rise condominium are presented, a review of the existing literature on the suburb and high-rise condominiums will be offered. This provides an empirical context for which the problems of condominium development within a growth management strategy arise. The review will be followed by a section on the geographic and local policy context of my case studies and elaborate on the rationale behind selecting the municipalities of Markham and Richmond Hill as study areas.

Then, the methodology that this research employs in answering the stated questions will be discussed, which includes information on the data source, collection procedure, quantitative variables examined, and method of analysis. A report of the research findings will subsequently be presented, along with an analysis of the results. The analysis will support recommendations made in this study to improve the effectiveness and inclusiveness of the current growth

management policies, specifically in regards to suburban condominium development. Finally, the concluding section will summarize the research findings and recommendations, relate them to the broader context of planning, and propose potential questions for further research.

Literature Review of Existing Research

The Condo and the Suburb

A review of existing literature on the history of residential high-rise condominiums in North America, problems with regards to how it is currently conceived, and a brief discussion of the high-rise condo built form in the suburban context will first be presented in the following section. This is followed by a review of the development of the suburban built environment in the past two decades, focusing on changes in demographics, built configuration, and density.

Since the subject of this research is the suburban high-rise condominium, it is vital for the researcher to gain an understanding of its history in the North American context in order to determine what relevant socio-demographic indicators should be investigated in this study. An awareness of existing problems identified by scholars studying the high-rise condominium will also help guide the refinement of research variables, the interpretation of research findings, and in shaping any recommendations that might be proposed at the end of this study to improve the effectiveness of the high-rise condominium as a growth management tool.

The section has also supplemented a review of research on high-rise condominium with a review of the changes in the suburban landscape over the

past two decades. Particular focus is placed on discussions that point to the phenomenon of suburban densification in the past two decades. The period of 1990s and onward is especially interesting because it is a time when both the urban and suburban condo boom throughout major cities in Canada is generally understood to have occurred (Lehrer et. al., 2010; Rosen & Walks, 2013, Kern, 2007). It thus follows that any ostensible change in the socio-demographic make-up or in the planning policy of the suburban landscaping during this time may also be good candidates for having some significant impact in driving the suburban condo-boom.

Understanding the factors behind the increasing prevalence of the high-rise condominium and the uneven development of the suburban landscape will also assist the researcher in creating a conceptual framework for interpreting the research findings. This understanding is achieved by juxtaposing our knowledge of the supply and demand-side pressures that compel people to move into high-rise condominiums with the observed changes in the suburban landscape. It allows the reader to get a sense of how the suburban condo boom has come about, whether it is transient, and how the propagation of this built form can be more successfully implemented from the standpoint of social and environmental sustainability.

The North American Condo Boom:

The introduction of high-rise condominium to North American cities as a form of housing tenure is generally understood to have occurred in the 1960s, two distinct waves of condo boom have been identified (Lehrer et al., 2010; Rosen & Walks, 2013). The first wave took place between 1970–80, and the second from the 1990s onward. In both instances, the end result was a surge in the construction of high-density residential housing. Urban scholars examining the condo-boom phenomena identified a number of demand-side forces that made high-rise condominiums attractive to both developers and homeowners, the most significant of these forces is that of the changing North American demographics.

In a chronicle of the development of high-rise condominiums in American metropolitan areas, Lasner (2012) observed that the average American household size fell from 4.8 in 1880 to 2.6 in 2010. The continued fall in average household size in the United States and much of the developed world, coupled with the growth of the young professional, single-child or childless young family, and the retiree populations created a surge in demand for smaller, more affordable residential housing, which coincides with the two waves of condo-boom (Rosen & Walks, 2013; Lasner, 2012; Lehrer et al., 2010; Lehrer & Wieditz, 2009). It is noteworthy that the word 'affordable' mentioned above does not imply that these groups were financially marginalized. Rather, affordability is used in a relative sense in the context of selecting housing options in prime real estate such as central metropolitan areas and popular urban edge locations. In addition to changes in the composition of the domestic population, research also found that as of 2001,

immigrants were twice as likely to be owner-occupied condo dwellers compared to the population as a whole (Rosen & Walks, 2013). This indicates that the continued demand for high-rise condominiums, which began in the 1990s, is at least driven in part by new immigrants' preference for this type of housing. While affordability is a major factor for the popularity of condos for immigrants, the tendency for both new immigrants and new condos to be located in major metropolitan cities such as Toronto and Vancouver likely contributed to the skewed proportion of immigrant-owned condominium units.

Following changing demographics, public policy also played an important role in enabling the high-rise condo boom. Growth management and housing policies adopted by the Canadian government since the 1980s encouraged forms of concentrated high-density developments that are market-oriented, aimed at stimulating private real estate investments, and attracting knowledge-economic workers (Kern, 2007; Lehrer et al. 2010; Lehrer & Wieditz, 2009; Rosen & Walks, 2013). The high-rise condo built form was also utilized as a tool to regulate suburban sprawl (Filion, 2012; Rosen & Walks, 2013). However, this high-density housing strategy was criticized for promoting a 'culture of property' and a problematic neoliberal commodification of space. In relegating the provision of affordable high-density housing to private developers under the rationales of maximizing global competitiveness, stimulating local economy, and attracting "highly skilled, innovative and entrepreneurial knowledge workers" (Lehrer & Wieditz, 2009), the Canadian government was accused of downloading its social responsibilities to a market operating under a neoliberal philosophy, which leaves

no room to consider housing as an essential good that should be accessible to all (Kern 2007; Lehrer & Wieditz 2009; Rosen & Walks, 2013).

The Social Impact of Condominiums

Among the greatest concerns raised in the privatization of high-density housing through the condominium model is the depletion of affordable housing for sale or for rent, and the weakening of public life due to the 'fencing off' of formerly public spaces and the homogenization of its social make-up. In regards to the depletion of affordable housing, the concern is that new condominium developments often take the form of re-development projects, which demolish older, more affordable housing in place with luxury buildings that are priced beyond the range of its former residents (Bickford, 2000; Lehrer & Wieditz, 2009). However, Lesnar's (2012) examination of the condominium phenomenon in American metropolitan areas found indications not only that rental housing stock had not decreased due to the condo boom, but affordable housing options may even be preserved in the long run by the condominium ownership structure, as property owners are more likely to resist re-development than rental tenants. Therefore, as far as housing affordability is concerned, the development of high-rise condominiums may not necessarily be detrimental, particularly in the long run. Nonetheless, it is noted that as landlords set the price of rent, an increase in supply does not necessarily translate to a proportionate decrease in rent, and as the

average size of new high-rise condominiums continue to decrease (Carras, 2013) this increase in housing stock may only benefit smaller households.

The conversation on high-rise condominium's impact on public life is less ambiguous. This built form is widely considered to be a privatization of public space, where public access to the condo premise is strictly regulated under the pretext of safety and protecting the privacy of condo residents (Bickford, 2000; Kern, 2007). However, it is noted that condo developments often also facilitate the development of nearby public amenities through mechanisms such as Section 42 of the Province of Ontario's Planning Act (1990), which requires a proportion of the lands proposed for development to be allocated for park or other public recreation purposes. Some scholars had also suggested that the high-rise condo landscape either alters the preference of its owners and residents in favour of privatization, or that this built form attracts those already predisposed to support such policy. A study conducted by Rosen & Walks in 2013 through computer assisted telephone interviews found respondents who are condo residents to be "approximately six times more likely to say they support the privatization of public services" than their non-condo counterparts (p. 168). Thus, notions of a privatized, exclusive space are often associated with the condominium by urban scholars.

To combat these negative social consequences, planners and policy makers frequently propose that developers implement social mixing strategies to integrate different socioeconomic classes into new high-rise condo project. The rationalization of this is based on two underlying assumptions, the first is that income segregation, whether voluntary or not, are fundamentally unjust, and the

second is that segregated neighbourhoods are dangerous "incubation sites for ethnic radicalism and terrorist acts" (Bridge et. al., 2012, p. 55) in the post 9/11 world. Critics of social mixing reject both assumptions, arguing that rather than being an incubator of crime and radicalism, voluntarily segregated neighbourhoods contain valuable networks of mutual social support that community planners so often desires, and the voluntary concentration of the socioeconomically marginalized increases the efficiency and feasibility of the delivery of social services to those that need it most (Bridge et. al., 2012). Furthermore, even when social mixing policy is implemented and people with different socioeconomic backgrounds live in close proximity to one another, existing research indicate that interactions between the different groups are rare and the only discernible effect of social mixing is in rendering the issue of poverty in the mixed neighbourhoods indiscernible (Bridge et. al., 2012; Lehrer, 2010; Lehrer & Wieditz, 2009).

The Empty Nester Rhetoric

The xenophobic and alienating high-rise condominium setup thus continues to be a problematic component of the contemporary city landscape. Not only is the current high-rise condominium a sterile private enclave that undermines the possibility of a vibrant public realm (Bickford, 2000; Kern, 2007; Rosen & Walks, 2013), the target audience of new condominium projects tend to be

chosen based on their capacity to purchase these properties at a profitable price rather than on housing need (Fincher, 2007; Lehrer & Wieditz, 2009).

Of these, the group 'empty nesters' is frequently referenced to justify the lack of family amenities and small unit size of new condominium developments (Fincher, 2007). Complementing the 'empty nesters' rhetoric is a life cycle assumption based on a heteronormative understanding of the archetypal nuclear family structure (Fincher, 2004; Fincher, 2007; Perin, 1977). This particular interpretation of who lives in condominiums has been challenged by various authors, who argued that not only is the assumption false, but it is also detrimental to the accessibility of demographic groups that do not conform to the aforementioned stereotype (Bickford, 2000; Fincher, 2004; Fincher, 2007; Kern, 2007). Furthermore, the life cycle interpretation adopted by private developers is seen as an excuse to target demographics that are perceived as the most lucrative clients (Fincher, 2004; Fincher, 2007).

Gentrifying Tendencies

The tendency for new high-density condominium developments to be located in areas well serviced and connected to public infrastructure and amenities, often in designated urban growth centres means that many of these developments may experience severe gentrifying pressures (Filion, 2001; Quastel et. al., 2012; Skaburskis, 2012). This can result in the displacement of the low-income population away from newly gentrified neighbourhoods (Quastel et. al.,

2012) and is not conducive to meeting the goals of the growth management strategy adopted by Canadian planning policies as a significant portion of the population may not be able to access this housing option. Interestingly, the effects of gentrification can also be beneficial to the economically marginalized in some situations. A study of the changing household characteristics of Toronto neighbourhoods that are located in gentrified tracts found that working class inhabitants of these places can in some cases take advantage of the rising value of their property and improve their economic standing (Skaburskis, 2012). That is not to say that gentrification should be encouraged so as to serve as a springboard for low-income neighbourhoods. The phenomenon comes with a multitude of negative consequences such as social polarization, the domination of a homogenized, market-oriented ideology over local idiosyncrasies, and the depletion of rental housing stock (Walks & Maaranen, 2008). Rather, a balanced understanding of gentrification broadens the boundary of the solutions that are conceivable that can achieve the goal of development without displacement.

The phenomenon of gentrification in the suburban context may be understood through the combination of two economics models. The first is the neoclassical economic model introduced by Alonso (1964) and Muth (1969), and later applied in an examination of changes in property values in Canada's three largest metropolitan areas by Skaburskis and Moos (2008). This model postulates a centrifugal force propelled by the desire to own larger houses at lower land prices and a centripetal force driven by the appeal of inner cities due to reduced commute time and costs. The gentrification pattern of cities is thus in part shaped by these

two forces. The second economic model, which aimed to account for the gentrification of suburban high-density residential developments, is the Ricardian model. This model postulates that "land rent profile reflects the value of differences in fertility that can be interpreted in the urban setting as differences in neighbourhood quality" (Ricardo, 1969; Skaburskis, 2006). Skaburskis' (2006) reference to what constitutes a 'neighbourhood quality' is largely inexplicit, but can be traced to attributes such as proximity to friends and family, people of similar interest, workplace, and family amenities (p. 239). This set of qualities is uniquely appealing to a family-oriented demographic that resides in the New Urbanist development of Cornell in Markham, Ontario, however, it is conceivable that a similar set of qualities can be identified which generates a Ricardian rent premium for suburban condominiums.

Understanding Suburban Gentrification

Based on an understanding of the neoclassical economic model and the Ricardian model in a suburban context, the gentrification of suburban downtown cores is thought to be caused by the net increase in the perceived value of these centres. This net increase would be derived from the summation of a centrifugal force emanating from the city core in the form of decreasing land prices, and an augmented centripetal force drawing homebuyers to suburban condominiums located in urban growth centres because of a Ricardian rent premium attributed to

proximity to various amenities, retail and office buildings, and transit oriented developments.

Condominium In The Suburbs

There is evidence that the high-rise condominium structure as it is conceived currently neglects the growing number of lower class households and fails to be an effective tool in accommodating for the continued growth of North American cities. Efforts to introduce a more diverse constituent into the condo environment have been half-hearted at times and downright contradictory at others. This problem is further exacerbated in suburban municipalities, where high-rise condominiums are frequently proposed as a growth management tool to address future increases in population and curb suburban sprawl. In addition to the challenge of providing affordable housing options in a socially equitable fashion, the existence of "a transportation-land use dynamic which results in continuing adaptation of the built environment to the space requirements of the automobile" (Filion, 2012, p. 116) further undermines the likelihood of the occurrence of a 'suburban condo boom'. Despite these challenges, suburban condominium high-rises are increasingly common, and whereas the motivations behind buying high-rise condominiums located in the downtown core is well understood, the motivations for living in a high-rise located in the heart of suburbia is not.

The Trend in Suburban Development

Studies of the suburban realm have recognized the heterogeneity of what was once considered to be uniform and mono-functional. Research into the suburbs have thus organized this environment into the typologies of inner suburb, outer suburb, and exurb/urban fringe to better examine the idiosyncrasies associated with each of these zones (Charney, 2005; Filion, 2012; Filion et. al., 2010; Hulchanski, 2007; Lehrer & Wiedtz, 2009; Murdie et. al., 2013; Pavlic & Qian, 2013; Skaburskis & Moos, 2008). While there is no exact delineating criteria for different types of suburbs, metrics in population density, period of construction, and Census Metropolitan Area (CMA) boundary have often been used as indicators of whether an area under investigation falls within a particular typology (Hulchanski, 2007; Lehrer & Wiedtz, 2009; Pavlic & Qian, 2013). Using this conceptual framework, numerous investigations have found that within the past four decades, each of the three suburban strata had experienced a developmental pattern that differs significantly from one another.

In a report on income polarization among Toronto's neighbourhoods between 1970-2005, Hulchanski (2007) presented a map of the change in average individual income within the City of Toronto relative to the Toronto CMA, which depicted a "spatial trifurcation of the city" (Lehrer & Wiedtz, 2009, p. 141). Hulchanski's report highlighted not only a pattern of increasing income polarization throughout the Toronto CMA, but also the continuation of rapid suburban growth of municipalities outside of the Toronto City boundary, strong inner-city reinvestment, and a volatile decline and disinvestment in the inner

suburbs (Lehrer & Wiedtz, 2009). This pattern of uneven development was also identified in Pavlic & Qian's (2013) examination of whether there is empirical evidence of declining inner suburban prosperity in Canadian urban regions relative to other urban zones. The study found that between 1986-2006, all of Canada's 15 largest CMAs' inner suburbs experienced decreasing household median income, whereas this trend was reversed for most urban fringe/exurbs. Additionally, urban fringe/exurbs also scored highest on other measurements of prosperity, such as high household ownership, and low unemployment. Similarly, a study of the three CMAs of Vancouver, Montreal, and Toronto between 1971-2001 conducted by Skaburskis & Moos (2008) found that "after accounting for the effect of new additions, the main transfer of wealth is from the older suburban ring to both the inner city and the new suburbs" (p. 905). Although this research found no notable trends to the changes in investment patterns that had led to differential increases in the level of wealth of suburban neighbourhoods, it did find that inner suburbs tended to be hit the hardest by these changes. It was also noted that neighbourhoods, which received above-average level of investment in one decade tended to receive less in the next (Skaburskis & Moos, 2008).

The re-investment into the city core and the rapid development of the suburban fringe is sometimes seen as an "emerging form of neoliberal spatial fix" (Lehrer & Wiedtz, 2009), a process wherein a region's economic activity and process of capital accumulation is sustained through the development and re-development of land and properties that are believed to be profitable. As such, the rationale for inner-city reinvestment has its roots in the neoclassical economic

model, which postulates that as cities expand, housing closer to the city core appreciates in value due to its proximity to the core (and by implication, jobs), resulting in an increased demand for a finite supply of inner-city housing (Skaburskis & Moos, 2008; Muth, 1969). The logic behind the continued rapid expansion of the outer suburbs and the urban fringe is less obvious. Pavlic & Qian (2013) postulated a decentralizing trend (similar to the neoclassical-Ricardian dynamic mentioned earlier) in the form of market preference for newer and larger suburban housing at a lower price as the driver for the rapid growth of the fringe/exurb, which begs the question of why there is a sudden interest with 'living on the edge'.

Murdie, Logan, and Maaranen's (2013) examination of the socioeconomic profile of those living in Canada's eight biggest CMAs found that outer suburban areas, particularly for CMAs experiencing significant growth (predominately Vancouver and Toronto, followed by Calgary and Ottawa) are to a large extent classifiable as 'family ethnoburbs'. These neighbourhoods are popular settlement locations for new immigrants, and consist of newer housing stocks compared to the inner suburbs. The emergence of family ethnoburbs in the outer suburbs coincided with a change in the socioeconomic status of new immigrants found in other studies. For instance, Moos & Skaburskis (2010) observed a shift in the composition of new immigrants into Vancouver from cohorts of refugees and working class families in the 1960s to an influx of 'economic immigrants' since the 1980s that tend to be wealthier and highly skilled. There are indications that this change in immigrant composition may be linked to the growth of the outer

suburban and urban fringe areas (Hiebert et. al, 2008; Ley, 2003; Moos & Skaburskis, 2010; Murdie et. al., 2013), as these places benefit from a decentralizing trend due to relatively low housing cost and the recent immigrants' preference for new housing at a reasonably affordable price. Thus, our current understanding of the outer suburban realm points to strong growth momentum perpetuated by demand side pressures exerted at the local as well as the global level. It is also observed that this demand side pressure is driven predominantly by an influx of economic immigrants into the suburbs of metropolitan areas.

The rapid pace of growth observed in the suburban fringe of major cities like Toronto and Vancouver has significant ramifications for the development of higher density housing in the suburban realm. As the population of wealthier new immigrants grow within the suburban fringe and exurbs, there will be more demand side pressure for housing located in the core of these emerging (sub)urban centres. In addition, as these centres build up a critical mass to sustain the creation of locally based jobs and retail/commercial hubs, these places will become ideal locations for high-density housing from a development and planning perspective. The recent acceleration of building activities at the suburban fringe is thus fueling a change in the morphology of suburban housing and is opening up a window of opportunity to reimagine this sprawling expanse.

Changing Suburban Form

Research on the morphological changes of Canadian suburbs over time are few. The present body of knowledge points to market forces, and past and present land use policy as the primary forces shaping the Canadian suburban landscape. An investigation conducted by Filion (2012) examined a north-south suburban transact in the Toronto CMA and found suburban development since the Second World War had followed a traditional growth trajectory of predominantly mono-functional land use. This growth pattern is attributed to " the existence of a transportation-land use dynamic, which results in continuing adaptation of the built environment to the space requirements of the automobile and to the car-induced reduction of accessibility gradients" (p. 116). The existence of this dynamic is supported by the finding that between the oldest to the newest suburban developments, a consistent increase in the ratio of parking area to building footprint was observed (Filion, 2012).

Despite the homogeneity of land functions within the suburban realm, there are however indications that the Canadian outer suburbs had nonetheless experienced an increase in density in the past four decades (Filion et. al., 2010). Moreover, unlike its American counterparts, where a dispersive growth pattern can be clearly discerned, the growth pattern of Canadian suburbs showed a mixture of dispersion and concentration (Charney, 2005). Interestingly, both tendencies seem to be propelled by decisions made at the market and policy level.

From a structural perspective, the post-war North American model of selecting the automobile as the fundamental unit for which land use plans are

conceived created an urban fabric of mono-functional super-grid/blocks upon which all subsequent land use decisions must be made (Filion, 2012). This resulted in an inherent tendency for all (sub)urban developments to lean towards a pattern of sprawl and dispersion as automobile-enabled accessibility improved the overall feasibility of living in the outer suburbs. Translated to market terms, so long as a parcel of land is connected by an arterial road or a highway, it is a more appealing investment option than already developed locations at the inner city, where re-development results in diminishing returns (Charney, 2005). On the other hand, contemporary planning policies advocating for concentrated development along urban nodes and major corridors are steering development toward designated urban and suburban cores (Charney, 2005; Filion, 2012; Filion et. al., 2010), thereby limiting the extent of suburban dispersion observed in CMAs across Canada. It has also been observed that the relatively cheap land prices in suburban locations attract major developers to invest into large swaths of land to focus their development, further mitigation dispersive pressures in favour of clustering (Charney, 2005). Thus, no matter how one interprets the current morphology of the suburban environment, it is undeniable that every successive land use policy significantly impacts how suburbs develop, and its effects do not cease the moment a new policy is adopted but rather, they ripple through time in an interplay of reinforcement and negation.

Existing research have traced the developmental trajectory of Canadian suburbs through time and found that socioeconomic changes in the demographic composition of Canadian metropolitan areas is likely linked to the continued

growth of outer suburbs and the development of the urban fringe (Hiebert et. al, 2008; Ley, 2003; Moos & Skaburskis, 2010; Murdie et. al., 2013). Furthermore, the defining feature of new Canadian suburbs is found not to be one of growing dispersal but a mix of dispersion and clustering in "suburban downtowns, office parks, or edge cities" (Charney, 2005, p. 467). This pattern is predominately driven by land use policies implemented to curb suburban sprawl, often characterized by the definition of suburban nodes and major corridors where concentrated developments are promoted, along with a mix of land uses and a multi-modal transit network (Filion, 2012; Charney, 2005). At the heart of this suburban intensification policy lie the high-rise condominium.

Literature Review in Summary

Through the above review of existing research on the topics of condominiums and suburbs, a number of common features between the developments of these two types of landscape become apparent. Firstly, the rapid growth of condos in the downtown core and the exurb/urban fringe since the 1990s are both manifestations of a changing demographic profile of Canadian metropolitan areas. Specifically, shrinking household size and the emergent of a substantial economic immigrant population have given rise to strong demands in metropolitan downtown cores on one hand, and the desire for newer, low density housing on the other. There is also indication that the popularity of metropolitan downtown real estate is linked to similar interest in the exurb/urban fringe. As land in the urban downtown become increasingly scarce and expensive,

investment into the outer suburbs becomes an increasingly attractive option. The consequence of this is the second common feature between condo and suburban development: that they are both facets of a polarizing trend.

Existing research have identified the tendency for new investments in the recent decades to be concentrated in either the urban downtown or the exurb/urban fringe, this polarization of urban development creates an uneven development pattern, which separates the financially privileged and marginalized. What's more, the appreciation in real estate value of these polarized spaces generates the pre-requisite market condition for higher density developments. Thus, the underlying conditions driving the downtown condo boom is found to be closely linked with the rapid growth of suburban areas and set the stage for an intersection between these two urban typologies.

Drivers for Change: Driven to Change?

In examining the current body of knowledge on growth management and condominium development in the Canadian context, there is virtually no research specifically relating to suburban condominium development. My research examines condominium development in the suburban context and in doing so aims to answer the question of whether the current form of development represents a successful implementation of a sustainable growth management strategy as per Canada's planning policies. In examining the demographic and socio-economic characteristics of condominium dwellers in the suburban

municipalities of Markham and Richmond Hill, and what guides their decision in housing selection, as stated earlier, my research seeks to answer the question of whether this form of housing is successful in bringing about a change in the consumption pattern of suburban dwellers.

This research will evaluate the success of suburban high-rises as a growth management tool to achieve social and environmental sustainability by examining the motivations behind suburban condo dweller's decision to move into high-density housing in a low-density environment. The focus of this research is guided by the understanding that the emergence of a suburban 'condo boom' is the result of an intersection of changes in the demographics of the suburban population of major Canadian metropolitan areas and regional planning policy. Specifically, in regards to population composition, there is a shift in the demographic characteristics of suburban dwellers towards smaller households and a greater proportion of wealthy immigrants. In combination with a regional planning policy that aims to direct development towards designated nodes and corridors, there is thus a substantial net developmental pressure at this point in time for the rapid build up of high-density housing along premium lands in close proximity to (sub)urban mixed-use centres.

Measuring the Suburban Phenomenon: A Review of Qualitative and Quantitative Methods

Qualitative Approaches

Both quantitative and qualitative methods are applied in evaluating the success of growth management strategies to achieve its intended effect. In terms of qualitative analysis, Grant's (2009) research into the theory and practice in planning the suburbs is demonstrative of an approach to refine a theory for an observed phenomenon through analyzing and interpreting the explanations given by key stakeholders immersed in the situation. Grant (2009) conducted a series of interviews with planners, developers and municipal councilors of three Canadian suburban municipalities and asked for their interpretations of the various levels of success seen in the implementation and results of New Urbanist strategies. In doing so, she found that developers 'picking and choosing' the most revenue-generating New Urbanist practices and the level of political support expressed by municipal councilors to empower the local planning department to enforce New Urbanist practices are the most significant factors for the success of a municipality's growth management strategy (Grant, 2009).

A second qualitative approach that is complementary to the structured interview of key stakeholders as demonstrated by Grant's (2009) research is the narrative analysis approach used by Fincher (2007) to investigate the claim that

new private condominium developments are innovative at a planning standpoint. Fincher conducted 70 interviews with professionals in the development industry from the late 1990s to the early 2000s. Open-ended questions about high-rise housing were presented to the interviewees, and the transcripts from these interviews were then categorized thematically and subsequently reviewed to study how the interviewees narrated their understanding of the identity of high-rise dwellers as attempts to normalize certain preferred interpretations. Fincher found that the type of discourse employed by condominium developers in justifying the construction of condominiums with little or no family amenities was an attempt to normalize the assumed demands of a wealthy 'empty nester' demographic with little or no empirical basis as well as a an outdated moral judgment of the expected life courses of the residential population (2007). The narrative analysis approach is valuable in highlighting the assumptions and biases of the interviewee and offers an additional dimension of qualitative analysis that can be conducted from key stakeholder interviews, which may identify the underlying motives that compelled an individual to adopt a particular rhetoric.

In addition to the interviews and narrative analysis, the administering of surveys is also found to be an effective way to collect qualitative data, particularly at the micro-level. In examining whether New Urbanist developments are effective in reducing the extent of suburban sprawl, Skaburskis (2006) administered 300 survey contracts via a drop-off and pick up method to randomly selected sample dwellings in the New Urbanist community of Cornell, Markham to investigate its inhabitant's demographic and socio-economic status, previous dwelling habits,

and the designs of New Urbanism as an attraction for settling in Cornell. His analysis of the 203 returned surveys found that New Urbanism is indeed successful in attracting suburban dwellers to higher density housing types, interestingly, it was also found that New Urbanist developments such as Cornell is not attracting high-rise dwellers. It is worth noting that Skaburskis' success in qualitative data collection through surveying is in no small part due to his employment of survey distribution personnel that went door-to-door to explain the purpose of the survey, and a carefully designed survey questionnaire that contained closed-ended questions embedded in open-ended ones.

Lastly, Fillion's (2012) morphological study of a north-south transact of the suburban municipalities of Scarborough and Markham is an approach that is effective in qualitatively testing for the correlation between planning policy and actual urban form. This approach is roughly analogous to studying rock strata in geology to trace out the Earth's history. The examination of a north-south transact of the a suburban municipality offers a cross-sectional view of its succession in urban form since the Second World War. Provided that the reader accepts the assumption that initially, urban development tend to radiate out from the city core, this method presents a clear narrative on the developmental trajectory of the suburbs of Canadian metropolitan areas.

Quantitative Approaches

In regards to quantitative analysis, Skaburskis' (2012) method of measuring changes in income levels and distribution in gentrified tracts as compared to the rest of the Toronto Census Metropolitan Area (CMA) by calculating for its Gini co-efficients, and Quastel et. al.'s (2012) application of Principal Component Analysis (PCA) to measure urban change by occupational categories, household characteristics, and immigration status, were both able to succinctly correlate the extent of gentrification with demographic changes encompassing a wide range of socioeconomic status indicators. The advantage of using the Gini co-efficient is its familiarity in the planning profession for measuring inequality, it is also relatively simple to calculate and yields similar results compared to other quantitative measures (Skaburskis, 2012). The advantage of PCA lies in its ability to transform a set of variables into uncorrelated 'components' and thereby identifying relationships among variables within the base set for which further investigation may be warranted. In addition, PCA can also be used to match tracts data between census years and to some degree address the differences in variable definitions over time (Quastel et. al., 2012).

Lastly, the quantitative variables being examined in the vast majority of the literatures reviewed originated in data collected in the Census of Canada (and National Household Survey). Of these, the variables found to be most relevant as indicators of suburban residential change and gentrification are housing characteristics (type, age of housing stock), occupation categories, household characteristics, immigration status, income levels, commute pattern, and attained

education (e.g., Moos & Mendez, 2015; Murdie et. al., 2013; Pavlic & Qian, 2013; Filion, 2012; Grant& Scott, 2012; Moos & Skaburskis, 2010; Walks & Maaranen, 2008; Hulchanski, 2006; Bunting et. al., 2004).

Methods

The Mixed-Methods Approach

This study employs a mixed-method approach to answer its research question, which involves the collection of both quantitative and qualitative data for analysis and interpretation. Specifically, a concurrent transformative strategy is chosen to guide the research process. This strategy is characterized by the researcher's decision to fine-tune the sensitivity of his or her research questions based on a conceptual framework and to conduct the qualitative and quantitative data collection at the same time (Creswell, 2009). The conceptual perspective, which guides this study is outlined in the introductory chapter and can be summed up here as a critical examination on the success of suburban high-rise condominiums as a growth management tool to entice suburban dwellers to switch to a more urban lifestyle. The qualitative and quantitative data collected in this study are hence selected towards this end.

The data used in this study consist of both primary and secondary data. The finer-grained primary data will be collected through the administration of an online survey, and the data collected from this strategy of inquiry will contain both quantitative data (in the form of fact-based multiple choice questions) and qualitative data (in the form of open-ended, opinion-based questions). The secondary data will be obtained from the Census of Canada and 2011 National

Household Survey. The survey data collected will orient the examination of secondary data pertaining to this study. In other words, the online survey functions as exploratory research where relevant points of interest are identified, to be further investigated through secondary research. Any potential trends or patterns identified through the online survey will thus be verified through Census/NHS data prior to being reported as a finding of this study. This research approach will cumulate in the generation of comparative statements on the socio-demographic and lifestyle characteristics of suburban dwellers with their background municipalities, as well as the urban municipalities (and downtown high-rise clusters) of Toronto and Vancouver. These statements will be categorized thematically and where appropriate, will be expressed in counts. They will serve as the factual basis from which a qualitative interpretation of the lifestyles and motivations of suburban condo dwellers will then be made. They will also be used to inform any recommendations for policy makers to improve the effectiveness of the suburban high-rise condominium as a growth management tool.

The primary data collected through an online survey study of condo residents in Markham and Richmond Hill whose building was constructed between 1991 and 2011. Its findings are then further examined using secondary data obtained from the Census of Canada database for same geographic boundary (Markham and Richmond Hill), and similar data for the City of Toronto and Vancouver.

The above approach to compare the survey findings with the high-rise condo environments of Markham and Richmond Hill, Toronto, and Vancouver is

preferable to alternative means (such as interviews and narrative analysis) in three major ways. First, the survey is vastly more time efficient as a means of collecting larger number of samples than interviews or narrative analyses, which both require substantial front-end time investments for the researcher for each sample taken. Additionally, when structured properly, survey data can easily be codified and analyzed using a wide range of statistical and graphical techniques. Second, the survey is also vastly more convenient as a mean of information sharing from the respondent's standpoint, as a survey of 10 to 15 minutes in length is sufficient for the purpose of inquiring for finer grained economic and demographic data, as well as additional open-ended questions. Lastly, data collected from the survey can easily be aligned with Census of Canada data for comparative analysis, making this method of data collection much more expedient than alternative options.

Survey Administration

This study's primary data is collected through the administration of an online survey that asked respondents to answer questions organized in five categories, which relates to the various aspects of the respondent's condominium residency. These categories are location, demographic, condominium characteristic, motivation, and lifestyle. The survey included a total of 55 questions and contained multiple choice, ranked, and open-ended questions. Content wise, the survey questions inquired about more detailed information pertaining to the respondent and his or her household.

A pilot study of the survey was first distributed to a group of ten volunteers to ensure that the questions being asked are formulated clearly and the anticipated time commitment of the survey as outline in the information letter is accurate. As a result, elaborations were made on some of the survey questions and the questions were also reorganized into the five categories referenced above. The anticipated time commitment of the survey had also been adjusted from the initial estimation of 20-25 minutes to 10-15 minutes.

Regarding the distribution of survey invitations, a list of condominium corporations that are built between 1991 and 2011 was first compiled by the researcher, after which a Canada Post mailing campaign was implemented targeting the mailing routes that contained the condominiums eligible for this study. An invitation and information letter for potential participants of the research study to fill out the online survey was then sent out in the mailing campaign. 4,000 invitation letters in total were sent out to high-rise condominiums in the target municipalities, and the recipients of the information letter was asked to fill out the survey within approximately 30 days from the day the invitation letter is received. In addition to the mail out of information letters, the property managers of a number of high-rise residential condominium corporations in Markham and Richmond Hill were also contacted and asked to invite the board of directors and residents of their buildings to participate in the survey. The recruitment process of property managers were largely informal in nature and was primarily based on the professional network of the researcher and word of mouth. Lastly, a digital version of the information letter was posted on the researcher and

academic advisor's social media platforms, including Facebook and Twitter, to disseminate the survey invitation digitally and capture the those who do not rely on physical mail as their primary mode of communication.

Secondary Data Collection

In addition to survey data, socio-demographic data for Census Tracts with high concentrations of high-rise condominiums in the subject municipalities, and data for the City of Toronto and Vancouver were obtained as a secondary data source to contextualize the findings from the survey study and to identify characteristics that may differentiate urban condo dwellers from their suburban counterpart. The selection of Toronto and Vancouver as the reference cities to compare the 'urban-ness' of the survey study is made based on the generally accepted notion that the two cities represent among the most urbanized areas of Canada. Furthermore, both cities have experienced condo booms in the recent decade. In addition, there is clear connection between Toronto's condo boom and that of Markham and Richmond in that they are located geographically adjacent to each other and therefore are subjected to similar socio-demographic pressures. In the case of Vancouver, existing research such as that conducted by Moos and Skaburskis (2010) indicated that the origin of Canada's condo boom phenomena can be traced to the sale of the EXPO lands by the British Columbia provincial government to the Hong Kong based Li family following the 1986's World Fair. This event characterized the decoupling of the Canadian labour and housing

market and highlighted the emerging role of economic immigrants as the new drivers of housing development (ibid.). The urbanity of Vancouver and its history with the development of high-rise condos in Canada thus makes the city an ideal reference point to understand and distinguish the development of suburban high-rise condos from that which occurred in the urban environment.

Census Tracts with a high proportion of high-rise condominiums within Markham and Richmond Hill are identified via site-visits to the subject municipalities throughout 2014, aerial imagery obtained from Google Maps (2014), and the researcher's own local knowledge of the development history of these municipalities. Similar high-rise 'hotspots' in Toronto and Vancouver are visually identified through GIS mapping, which displays the proportion of high-rise condominiums (defined by the 2011 Census of Canada as "apartments in buildings with five or more storeys" – as a % of total occupied private dwellings) presented in each Census Tract. The maps also depict Census Tracts with more than 60% of its private dwellings being high-rise condominiums constructed after 1990 to highlight the more recent wave of condo boom that is associated with a marked increase in this type of dwellings in suburban areas.

The Question of Enticement

In the introductory chapter, the question of whether suburban condominiums can entice suburban dwellers to switch to an urban lifestyle was identified as being contingent to the success of high-rise condominiums in

accommodating for future population growth. This question can be answered by determining whether condo dwellers exhibit a more 'urban' lifestyle as compared to residents living in lower density dwellings. However, in order to determine whether the consumption pattern of suburban condo dwellers are more urban than those living in adjacent neighbourhoods, one must first clarify what constitutes an 'urban' environment.

A review of existing literatures on this subject, including an investigation by Forsyth (2012) on defining the notion of 'the suburb' found that planners and researchers alike are either having fruitful discussions on matters of urbanity and growth without explicitly defining what they meant by 'urban' or 'suburban', or, like this study, the urban/suburban distinction is made pragmatically and variably based on the objectives of the investigation. What this observation implies is that the urban/suburban designation is most effectively utilized in a relative sense to highlight certain aspects associated with the term. For the purpose of this study, residents of a given geographic area exhibits an 'urban lifestyle' if it is more conducive to fostering walkable neighbourhoods, transit oriented development, reduced auto-dependency, and a vibrant street life (Moos & Mendez, 2015; Filion, 2001; Grant, 2009; Growth Plan for the Greater Golden Horseshoe, 2006; Provincial Policy Statement, 2014; Quastel et. al., 2012; Skaburskis, 2006), and also superior in terms of efficiently using various finite resources. Therefore, the question of whether the consumption pattern of condo dwellers exhibit an urban quality can be answered by comparing the 'urban-ness' of the former with the rest of the target municipalities whose housing stock are predominantly low-density in nature. This

comparison will also be made between the survey respondents, residents of the cities of Toronto, and Vancouver to highlight the demographic and lifestyle characteristics of the respondents. As noted earlier, these two cities are selected as reference scenarios for urban living as they are established within the field of planning and urban studies as geographies that are decidedly 'urban' in character (e.g., Moos & Mendez, 2015; Murdie et. al., 2013; Rosen & Walks, 2013; Filion, 2012, 2010; Quastel et. al., 2012; Harris, 2011; Moos & Skaburskis, 2010, 2008; Walks & Marranen, 2008; Fincher, 2007, 2004; Kern, 2007; and Skaburskis, 2006). The measurement criteria for this comparison will include work arrangement, commute pattern, primary mode of transportation, previous housing arrangement, future housing plan, lifestyle, and the extent to which they value the convenience and amenities offered by higher-density living over a larger, low-density dwelling.

Data collected from the survey study will also be analyzed and indicators of urbanity and lifestyle will be cross-tabulated to shed light on the reason why suburban condo dwellers decide to move into a high-rise condominium and why some of them are planning to move out on one hand, and demographic data about the respondents on the other. The purpose of the analysis is to determine the motivating factors of suburban condo dwellers in different stages of their life to live in a condominium and how this built form is fulfilling or neglecting these needs.

Limitations of Methodology

The major limitation of this study is mainly one of scope. With respect to the fine-grained survey data that had been collected, time and financial constraints led to a relatively small number of participants reached for this study. The three-month duration of the study precluded a more generous window of time for potential participants to respond to the survey, and a limited budget meant that a randomly selected sample of 4,000 suburban condo dwellers were sent an information letter, out of a total potential population of more than 17,000 suburban condo dwellers identified. Therefore, the findings that are derived from this study can only reliably speak about the motivations and lifestyles of the respondents and not the target municipalities or suburban condo dwellers as a population. That being said, if the findings of the survey correspond with well-substantiated conjectures made in other peer-reviewed literatures on the topic, it would be suggestive of the fact that the data collected in this survey study can speak to some reasonable extent about the condo dweller population in general.

Furthermore, as only two suburban municipalities were examined in this study, one might also question the generalizability of its findings at the regional level and beyond. Two considerations must be discussed on this point, the first is whether the urban growth policy context of Markham and Richmond Hill differs significantly from adjacent municipalities, and the second is whether the socio-economic drivers for a suburban condo dweller's decision to live in high-density dwellings differs significantly from place to place. In regards to the policy context, the planning policy direction of local municipalities in Ontario are largely shaped

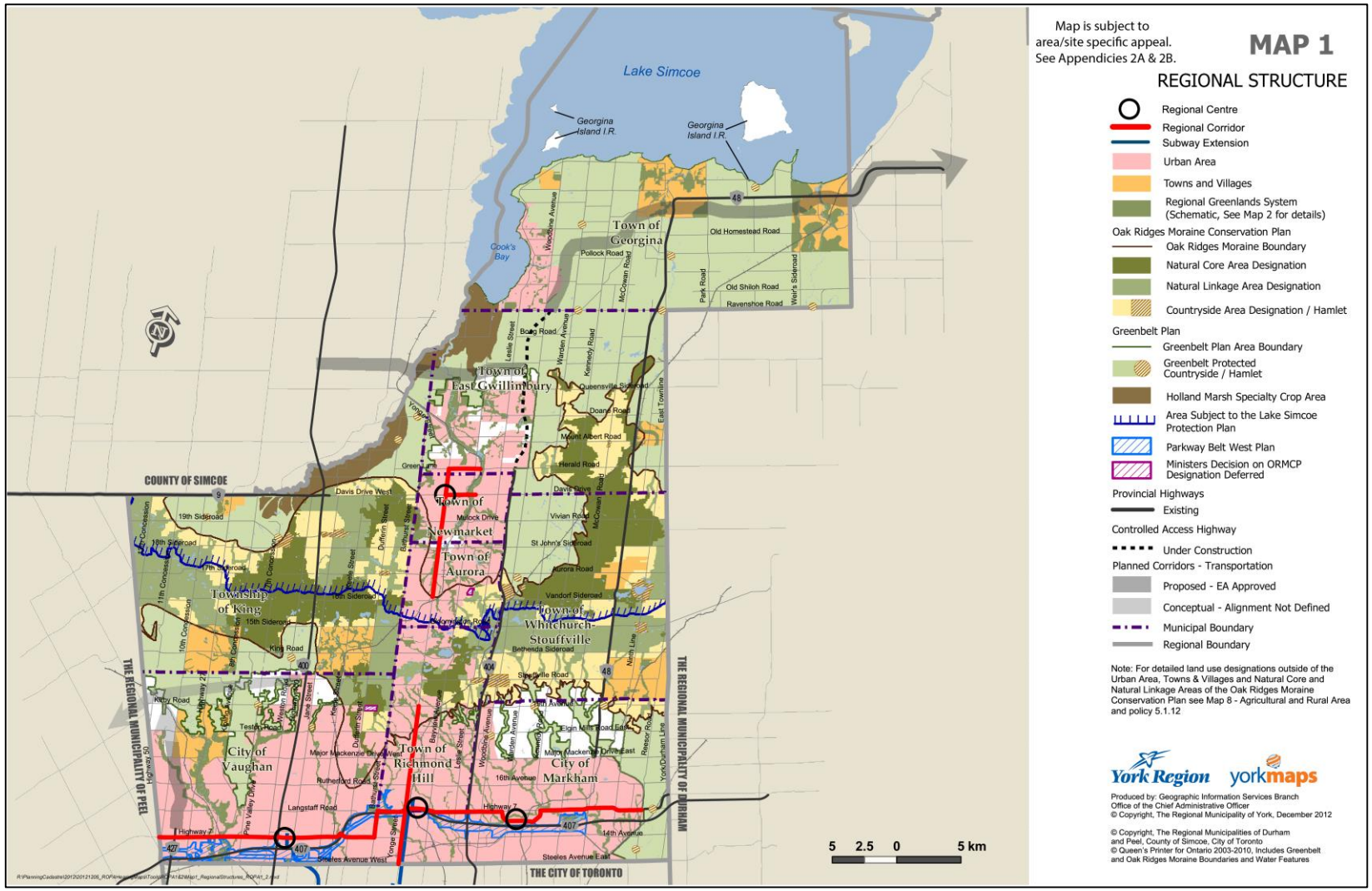
by regional plans such as the Growth Plan for the Greater Golden Horseshoe (2006) and the Provincial Policy Statement (2014), which are policies made at the provincial level and are effective as such. The presence of these regional and provincial documents implies a uniform growth policy context under which local municipalities within the GTHA operate under. However, local municipalities can implement planning policies through their Official Plans that may be more stringent than that set out in regional policies, therefore it is possible for the growth policies of Markham and Richmond Hill to differ from other municipalities in the GTHA. To apply the findings of this study to another community, one will thus need to be cognizant of the local policy context of the subject municipality.

In regards to whether the socio-economic drivers for a suburban condo-boom differs from place to place, the findings of this study will make the distinction between driving forces that are unique to the target municipalities and driving forces that are more relevant at the regional level and beyond, if applicable. There is also the question of whether one can generalize the motivation of suburban dwellers of Markham and Richmond Hill's decision to move into a suburban high-rise condominium. An assumption (and limitation) of this study is that suburban condo dwellers' motivations are not fundamentally different in the North American context.

Lastly, it should be noted that although the condominiums selected for the invitation letter mail out were randomly selected, as noted in the Survey Administration section, the recruitment of survey participants also involved soliciting the help of property managers to invite condominium board directors

and residents to participate in the survey study. Section 56 of the Condominium Act of 1998 authorizes a condominium corporation's board of directors the right to by by-law pass a resolution for the governance and management of the corporation, including on whether to authorize the retention of a property management company. Therefore, soliciting the assistance of property managers for participant recruitment is expected to skew the survey responses into representing a bigger portion of suburban condo dwellers who live in larger, more financially established condominium buildings. This is not considered to be of any concern for this study for the reason that the subject of this study is *high-rise* condominiums, which in almost all cases contain more than 100 units and therefore poses formidable (if not impossible) challenges for any small group of owner-elected volunteers to manage without retaining the help of full-time management staff. However, this study also notes a secondary bias introduced from soliciting the help of property managers. As a condominium corporation's board of directors tend to be in most frequent contact with the property manager, it is probable that many survey respondents recruited by the latter will tend to be the former. This is expected to skew the survey's respondents to having a larger portion of households with higher income and education levels due to the fact that board members are typically elected based on their individual merit (i.e. professional expertise in managing the affairs and finances of a corporate entity). The potential implication of this bias is the responses may be skewed to represent the motivation of a group that is more educated and financially established.

Figure 1: York Regional Structure



Source: The Regional Municipality of York, December 2012

Regional and Local Context

The selection Markham and Richmond Hill as the target municipalities for this study was made partly due to their similarity from a policy standpoint, and partly due to the fact that these suburban municipalities have an ample population of suburban high-rise dwellers for a study on suburban condos to draw on. They are located north of the amalgamated City of Toronto, within the Region of York. The City of Markham has an area of 212.58 km^2 while the Town of Richmond Hill has an area of 100.95 km^2 (Statistics Canada, 2011). Together, the two municipalities has a geographical expanse that covers roughly half of the City of Toronto (630.21km^2), but merely a sixth of the total area of the York Region (1,762.17 km^2).

Table 1: Population Comparison of Toronto, York Region, Markham, and Richmond Hill

Area	Population (2006)	Population (2011)
Toronto	2,503,281	2,615,060
York Region	892,712	1,032,524
Markham	261,573	301,709
Richmond Hill	162,704	185,541

Data Source: Statistics Canada, Census of Canada 2011

Table 2: Population Density Comparison

Area	Population density per square kilometer
Toronto	4149.5
York Region	585.9
Markham	1419.3
Richmond Hill	1838

Data Source: Statistics Canada: Census Profile 2011

Although the densities of Markham and Richmond Hill seem starkly suburban compared to the city of Toronto, the two municipalities have disproportionately high levels of population density within the upper-tier municipality of York Region of which they belong. What's more, much of Markham and Richmond Hill's population growth appears to be accommodated by a consistent and significant supply of medium to high-density housing.

A review of housing data from the CMHC indicates that between 2007 and 2013, more apartment units were built than single detached houses in Markham and Richmond Hill, with 11,015 units compared to 10,524 (Housing Now, 2007-2014). The significant presence of high-rise housing units in these municipalities make them interesting subjects of study for those investigating the drivers behind the 'condofication' of the suburban landscape. Why is the condominium form of housing thriving in suburban municipalities? What are its drivers, and how can suburban municipalities do to promote and improve the effectiveness of high-rise

condominiums as a growth management tool? These are the questions that may be answered by looking to Markham and Richmond Hill, where high-rises condominiums increasingly dominate the landscape of their urban centres. To proceed with this investigation, we first examine the regulatory environment that accompanies this curious landscape. The following section offers a review of the growth policies governing the development pattern of the two suburban municipalities.

Policy of Suburban Growth and Transition

Provincial and regional growth policy play a significant role in the emergence and continued growth of these urban centres. The Growth Plan of the Greater Golden Horseshoe, 2006's designation of two Urban Growth Centres in Markham and Richmond Hill (Figure 2) mandated a policy direction of the intensification of the urban environment and the building up of regional nodes and corridors, which was adapted in the Official Plans of York Region and the local municipalities. This led to growth clustering policies at the regional level such as the requirement to accommodate a minimum of 40% of all residential developments within the built-up areas (York Region, 2010, Section 1.2) and directives to promote the siting of "major office, institutional, education, cultural and entertainment facilities to Regional Centres and Corridors" (York Region, 2010, Section 4.2) in conjunction with "mixed-use commercial and high-density residential development(s)" (ibid.). In addition, local municipalities are required to

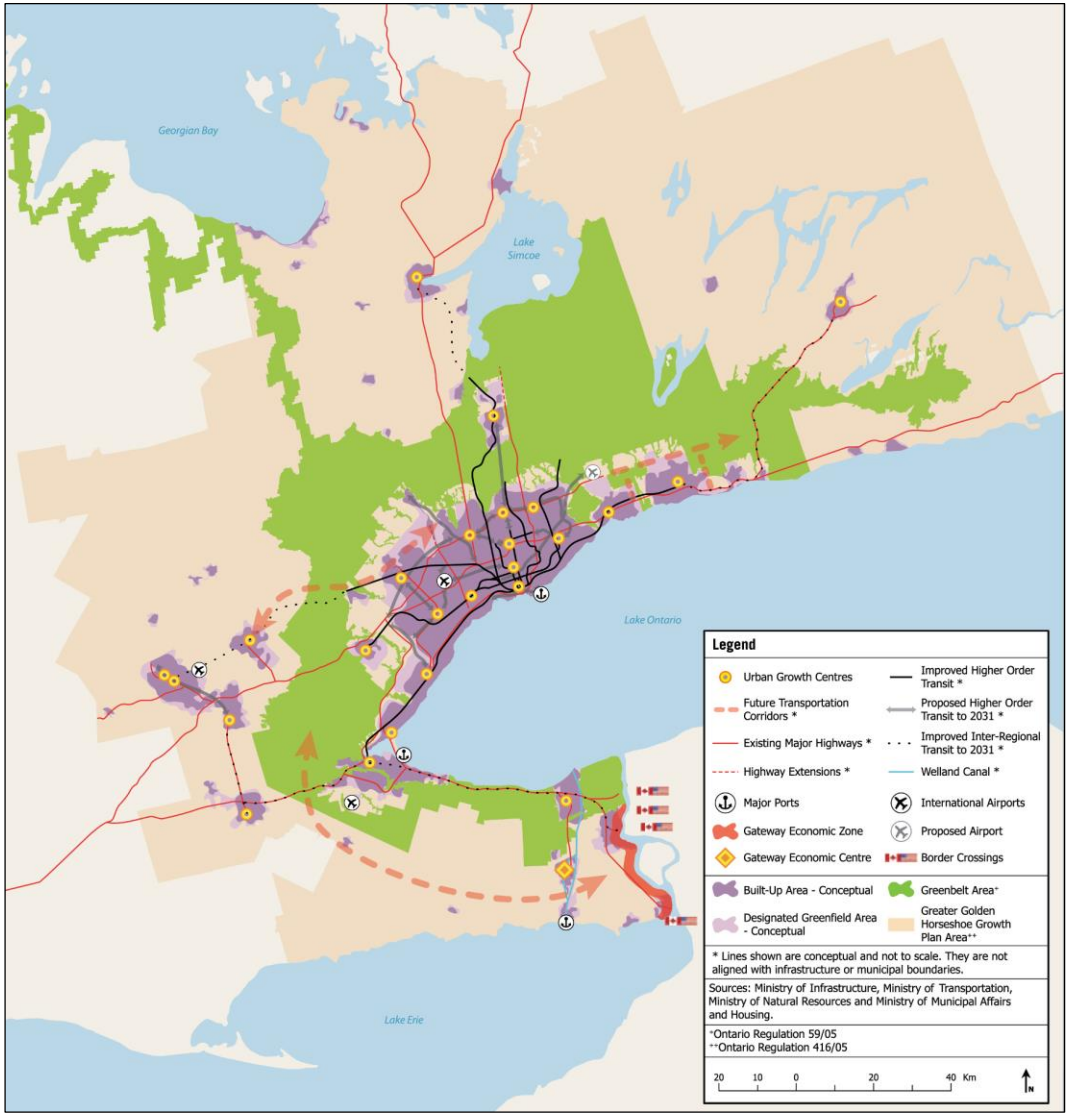
implement the development of Urban Growth Centres by creating policies and plans that steer development towards areas of designated for intensification. The City of Markham for example has created a comprehensive strategy for the build out of its regional growth centre, the Markham Centre.

The vision for Markham Centre originated in a public consultation process that began in 1992. The process resulted in the creation of the Markham Centre Community Improvement Plan two years later. The plan aims to "integrate a balance and diversity of residential, retail, office and public uses, at transit supportive densities within a Regional Rapid Transit Corridor (City of Markham, 2013, Section 9.12.2) and translates into a target of 20,000 high-rise condominium and townhouse units with a residential capacity of 41,000, and an employment centre with up to 39,000 jobs. Since the creation of this plan, an advisory group had been formed along with guiding principles and a performance measurement rubric established to meet the growth objective for Markham Centre. Similarly, the Town of Richmond Hill's policy on its Urban Growth Centre (Richmond Hill Centre) outlined a vision that combines major office and commercial buildings, with medium to high-density residential housing, all located adjacent to a major public transit terminal (Town of Richmond Hill Official Plan, 2010).

The policy landscape of Markham and Richmond Hill are very similar to each other on the provincial, regional, and local level. Both municipalities are governed by the 2006 Growth Plan, the Provincial Policy Statement of 2014, and the York Region official plan. On a local level, both municipalities chose to orient

their downtown development towards a mixed-use, medium to high-density commercial centre anchored by one or more modes of transportation. The strategy of mixing office, commercial, and residential buildings at a major transportation hub makes intuitive sense. The arrangement is resource efficient from an environmental and financial standpoint, and as indicated by the CMHC housing data mentioned earlier, development at this density level is occurring at a steady pace for the better part of the last decade.

Figure 2: Places to Grow Concept Map



Source: Ontario Ministry of Infrastructure, 2006

Survey Findings

Survey Findings Summary

A total of 63 online survey responses were received, one of which was incomplete and excluded from the final tally. The findings reported here thus represent the preferences and opinions of 62 individuals living in the high-rise condominiums in the City of Markham (49 responses) and the Town of Richmond Hill (13 responses). Respondents were also asked to state the year of completion of the high-rise condominium in which they lived, and over 90% of respondents reported living in high-rise condominiums that were built after 1991.

The portrait of survey respondents painted above indicated that the sample population consisted mostly of single individuals or those living with a partner, comprising of men and women in equal proportions. They were relatively wealthy. And 20% of all respondents reported that they lived with at least 1 child. The survey found no tendency for a particular ethnic group to prefer suburban high-rise condominiums over other housing options among survey respondents. Respondents were generally well-educated, and were substantially more affluent than the average suburban condominium dweller in Markham and Richmond Hill. The vast majority of respondents owned their condo dwellings, which typically had 1 or 2 bedrooms. Roughly half of the respondents expected to live in their

condos for the next five years or more, and their choice of dwelling was mostly based on practical considerations such as affordability; maintenance obligations; and convenience, followed by the desire to live in an urban environment that is more conducive to active, multi-modal transportation. Despite this, an overwhelming proportion of respondents exhibited a lifestyle consistent with that of a typical suburbanite. Furthermore, for those wishing to move out in the future, only 30% intended to move to an urban environment. The following section reports in greater detail the findings gathered in the online survey.

Respondent Profile

Of the 62 respondents, there was an equal number of males and females. The survey found that the majority of the respondents were Canadian citizens (82%; 68% also reported having lived in Canada for over 20 years), 32% were single and 44% reported to be married, 45% reported to be living alone. Broken down by age category, the largest cohort represented was the 30 to 34 age group (17.7%), followed by the 25 to 29, and 35 to 39 cohorts (both 14.5%). Residents 65 years of age and over comprised 9.7% of the total sample population.

Only 20% of all respondents stated that they lived with at least one child under 18 years of age, which corresponds to the high number of individuals (70%) who stated that proximity to school is not an important factor for their choosing to live in a suburban high-rise condominium. That the vast majority of survey respondents were either childless or did not live with their children supports the

view that the suburban 'condo boom' is at least in part fueled by the increasing population empty nesters and young (childless) professionals as alluded to by various urban scholars (Rosen & Walks, 2013; Lasner, 2012; Lehrer et al., 2010; Lehrer & Wieditz, 2009; Fincher, 2007). Furthermore, there is also indication that the participants of the survey likely did not consider suburban high-rise condominiums as a suitable dwelling for raising children. When ask how important having children is as a factor for moving into the suburban high-rise condominium in which they resided, only 17% of the respondents stated that it is an important factor. On the other hand, 36% of all respondents stated having children as an important motivating factor for their decision to move out of their current high-rise dwellings if they decide to do so. The fact that many respondents still consider high-rise condominiums as being unsuitable for raising children is indicative of this being a major challenge for the suburban high-rise to become an affective growth management tool.

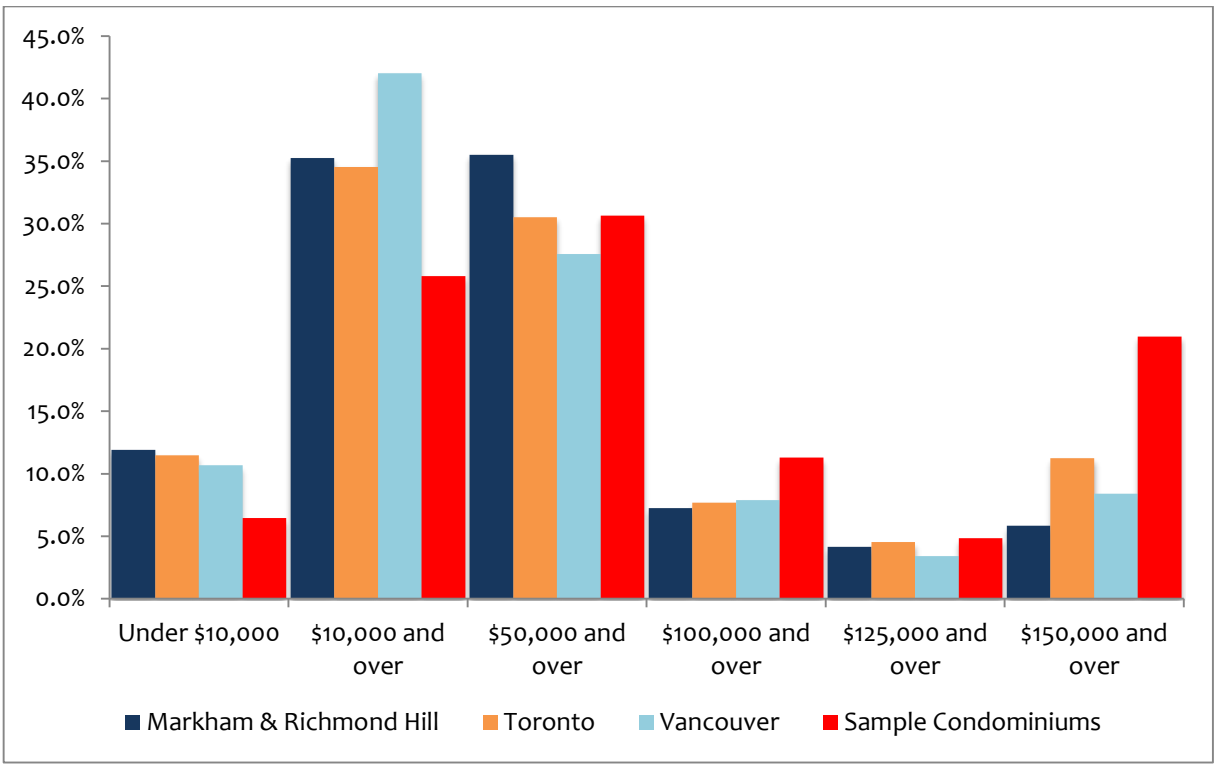
In terms of ethnic composition, the survey found that individuals of Asian origins (West, South, or East and Southeast) constituted 57% of the respondents, with those of East and Southeast Asian origins alone representing 43%. These figures are similar to that of Markham and Richmond Hill, where 62% of the municipalities total population were of Asian origins, 39% of them being of East and Southeast Asian origins according to the National Household Survey of 2011. The survey respondents are thus ethnically similar to the population of the municipalities in which they belonged.

73% of all respondents possessed a bachelor or graduate's degree, compared to the Markham and Richmond Hill's combined average of 61%, making the survey respondents a highly educated group. It also consisted mostly of households that earned between $50,000 to $100,000 (30.6% of the total sample population), followed by those that earned between $10,000 and $49,999 (25.8%). Furthermore, a significant portion of respondents belonged to affluent households (with income $150,000 and over), which accounted for over one-fifth (21%) of those surveyed. When asked to identify what their occupation was from a list of 10 choices plus with an option to select 'Other' as an identifier, 35% of the respondents identified themselves in the 'Other' category, making it the most common response. It is likely that many who had selected 'Other' were either students or retirees. Second to the 'Other' option, 17% of the respondents stated that their occupation was in Management; followed by those who were in Business, Finance and Administration (12%); and Health (12%). None of the respondents surveyed stated Art, Culture, Recreation and Sport; Trades, Transport and Equipment Operators and Related; or Primary Industry (i.e. mining, oil, forestry, natural gas) as their occupation.

Compared to the high-rise population of Markham and Richmond Hill (where only 6% of its high-rise dwelling households made over $150,000), there is a disproportionate amount of affluent households captured in this survey—this can be attributed to two possible explanations: a small sample size, and the recruitment methodology. Due to the survey's small respondent size (62), it is not entirely

unexpected to observe significant differences between the sample and actual population. With regards to the study's recruitment methodology, as it partially relied on word of mouth propagated by property managers who belonged to the researcher's personal network, some bias appear to be present in terms of who was contacted to participate. The high proportion of respondents belonging in more affluent households may thus be due to the fact that property managers most often liaise with members of the condominium's board of directors, who in turn tend to be more educated and wealthy members of the condominium community.

Figure 3: Household Income Distribution Comparison



***Data for Census Tracts with high concentration of high-rise condominiums in Markham, Richmond Hill, Toronto, and Vancouver were retrieved from the 2011 National Household Survey.**

To contextualize the observed income distribution among survey respondents, 2011 National Household Survey data is used to further examine the household income distribution of high-rise condo dwellers. When the income distributions of areas with high concentrations of high-rise condominiums in Markham, Richmond Hill, Toronto, and Vancouver are viewed together, there is clear indication that a higher proportion of affluent households resided in urban high-rises than suburban ones. Of note, the proportion of households with annual

income of $150,000 and over residing in downtown condominiums in Toronto is nearly doubled that of Markham and Richmond Hill. For reference, the household income distributions for the surveyed sample, areas with a high concentration of high-rise condominiums in Markham and Richmond Hill, and the entirety of Markham and Richmond Hill are provided below.

Table 3: Household Income Distribution Comparison, Survey & 2011 National Household Survey

Income Range	Surveyed Sample	Census Tract with High Concentration of High-rise Condominiums in Markham & Richmond Hill (Census 2011)	Markham & Richmond Hill (Census 2011)
Under $10,000	6.5%	11.9%	3.62%
$10,000 and over	25.8%	35.3%	23.60%
$50,000 and over	30.6%	35.5%	30.38%
$100,000 and over	11.3%	7.3%	11.65%
$125,000 and over	4.8%	4.2%	9.14%
$150,000 and over	21.0%	5.8%	21.60%

Data Source: 2011 National Household Survey

Ownership & Reasons for Moving into a Condo

In terms of ownership, living conditions and lifestyle choices, most respondents were homeowners (77%), and almost all lived in dwellings with 1 or 2 bedrooms (92%). The vast majority of them also expected that they will reside in their condo in the medium (1 to 5 years, 45%) to long-term (more than 5 years,

47%). When asked how important different factors are (on a scale of 1 to 5, with 5 being very important) in their decision to move into a high-rise condominium, 58% of all respondents ranked affordability highly (4 or 5) as a determinant factor for choosing this type of housing, followed by the benefit of having less maintenance (52%), and better security (52%). When this finding is broken down by age, a clear trend can be observed that affordability is a greater concerns for the younger respondents, while proximity to recreational facilities are more pertinent on the minds of the more senior individuals. The importance of the convenience of having less maintenance to worry about and the perceived security benefits of living in a condominium is found to be age independent among the survey respondents.

A major benefit of high-rise condominiums as touted by its developers is that they are conducive to a more urban lifestyle, characterized by reduced land use, energy consumption, and car dependency, and more active, vibrant pedestrian realm and transit-oriented developments that encourage public and active forms of transportation. These benefits are found to be of some significance for the survey respondents. 45% of the respondents considered walkability as an important factor influencing their decision to move into a high-rise condominium, and 43% considered better access to public transit as an important driving force for their decision to so do. As far as motivation for moving into a condo is concerned, respondents were first and foremost concerned with affordability, followed by convenience, but they also appear to be drawn to the prospect of living in a multi-modal environment that offers more active modes of transportation.

When asked to describe what the most important benefits and drawbacks to living in a suburban high-rise condominium is, almost a quarter of all respondents identified the freedom from property maintenance obligations as the most important benefit of living in this dwelling type. Other frequently identified factors include proximity to amenities (17%) (which encompass condo-specific amenities such as on-site gyms, locker room, and swimming pools as well as off-premise amenities such as grocery stores and nearby parks); convenience (7%); and affordability (7%). For drawbacks, the most frequently stated factor is poor public transit (11%), followed by distance from downtown Toronto; lack of green space; and lack of privacy; high maintenance fee; and bad traffic (9%). This finding highlights a disconnect between the respondents' expectations of life in a suburban condo high-rise, and the reality that they are presented with once they have moved in. Specifically, although many respondents considered access to active and multi-modal transportation compelling factors for moving into a high-rise condo, they did not feel that these benefits were sufficiently realized.

Commute Pattern

82% of all respondents reported owning a car, and 98% reported that they were not participants of any car sharing programs. This suggests that the vast majority of survey respondents were highly dependent on their personal automobile, and indeed, 85% of them reported personal automobile as their primary mode of transportation to conduct errands, and 72% reported it as their

primary mode of transportation for getting to work. This level of car dependency for travelling to work is similar to the municipal average of Markham (81%) and Richmond Hill (83%).

The use of public transit as a primary mode of transportation for work and errands is found to be somewhat age dependent among the survey respondents. 27% of all younger adults ages 20 to 39 reported public transit as their primary mode of transportation for running errands, and 23% of them reported taking public transit as their primary mode of transportation for going to work. The use of a personal automobile as one's primary mode of transportation was prevalent throughout all age groups, and no respondents aged 40 or over reported any other modes of transportation as their primary means of getting to work. One respondent reported walking to work and to run errands, and 3 respondents reported walking to conduct various errands. Lastly, only one respondent in the age group of 25 to 29 reported cycling to work, making this the least utilized mode of transportation among all respondents.

Figure 4: Respondent's Primary Mode of Transportation to Conduct Errands by Age

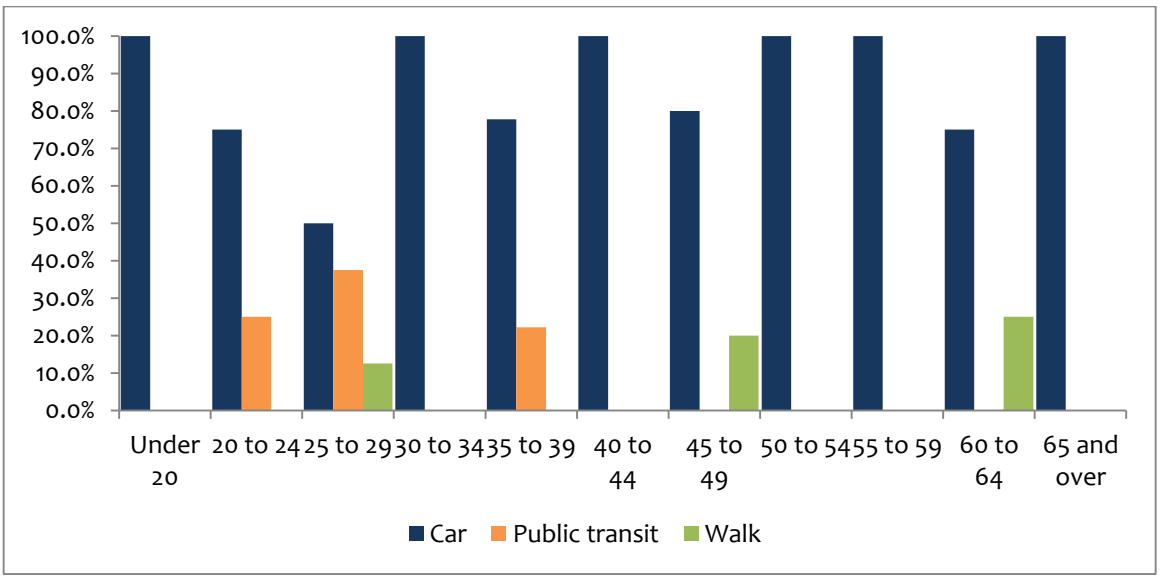
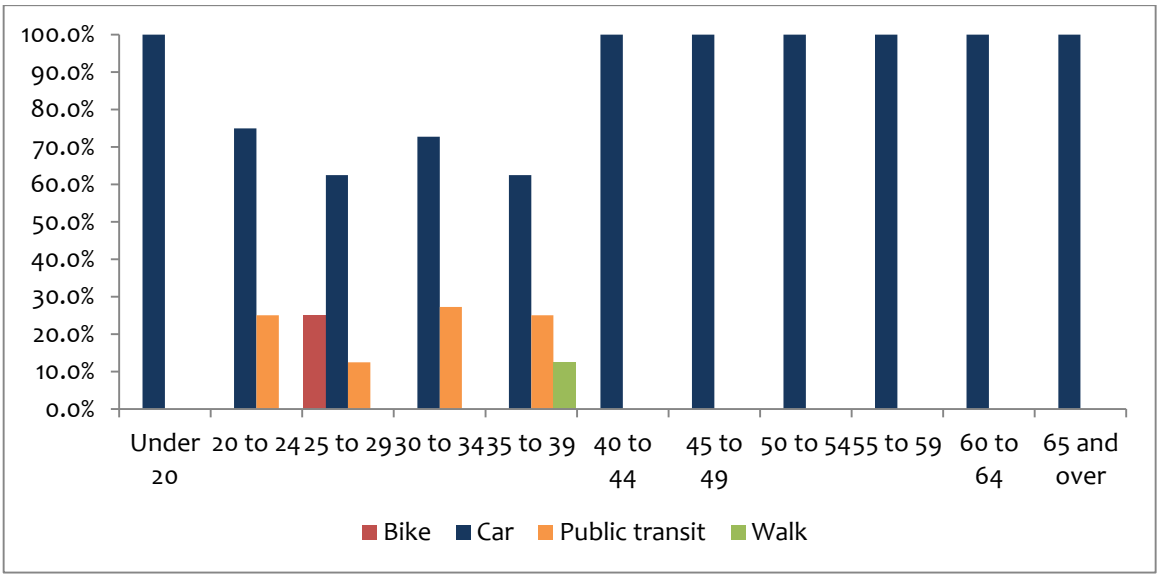


Figure 5: Respondent's Primary Mode of Transportation for Work by Age



Future Plans

More than half of all respondents indicated that they planned on moving to a different type of dwelling within the next five years. For those who considered moving, 56% expressed that they were interested in remaining in the suburbs of the Greater Toronto Area, and 18% wished to move into the City of Toronto. There is also indication that the intention to move to a new type of dwelling in the next 5 years corroborates somewhat with the respondent's age. A respondent's likelihood of moving to a new type of dwelling increases by age until the 30 to 34 years of age range (where 90% of respondents of that age expressed that they plan to move to a new type of dwelling), then decreases thereafter. The correlation between age and one's decision to move suggests that for the survey respondents, the appeal of high-rise condominiums is to an extent dependent on where one is in the life cycle. It also suggests that many respondents considered their suburban high-rise condo as temporary dwellings at this particular point of their life.

Reasons for Moving out of a Condo and into Another Dwelling Type

Similar to the question on the importance of various factors in one's decision to move into a high-rise condominium, respondents were asked how important the same set of factors were in their decision to move out of their existing dwelling. The biggest reported factor influencing respondents' decision to move to a new type of dwelling was improvements in one's financial position, with 50% of all respondents assigning a value of 4 or 5 (on a scale of 1 to 5) in their

answers. This was followed by proximity to workplace (44%), and walkability (43%). The survey also found that improvement in financial position was only a factor for respondents below retirement age, and proximity to workplace was a greater concern for younger residents (ages 34 or below). Not surprisingly, having children was not at all important for respondents 45 years of age and older. On average, those ages 45 to 49 assigned a value of 1.6, and those 50 to 54 assigned a value of 1.25, all older age groups assigned the lowest possible value for this as a factor for moving into another dwelling. In contrast, having children was the second most important factor influencing the decision of the 25 to 29 and 30 to 34 years age groups (assigning an average value of 3.88 ad 3.82 respectively) to want to move into another dwelling type.

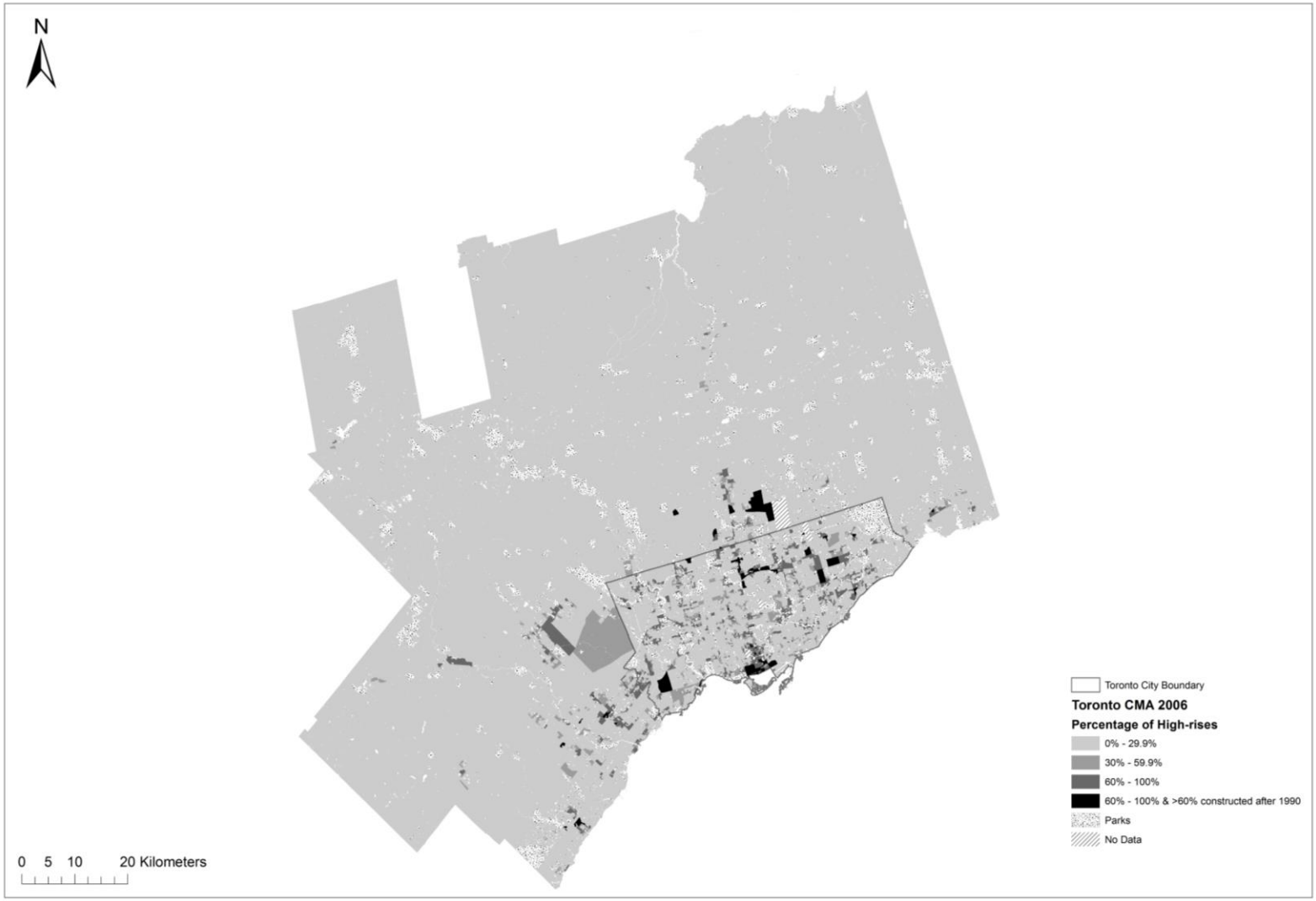
Findings from Secondary Research

In addition to the survey findings presented above, this study also collected secondary data from the Census of Canada and National Household Survey of 2011 on Census Tracts with a high concentration of high-rise condominiums in the municipalities of Toronto, Vancouver, Markham, and Richmond Hill. Areas with high concentration of high-rise condominiums in downtown Toronto and Vancouver were identified using two maps generated in ArcGIS (Figure 6 and Figure 7), which display the proportion of high-rise condominiums (defined by the 2011 Census of Canada as "apartments in buildings with five or more storeys" – as a % of total occupied private dwellings) present in each Census Tract. The maps also depict Census Tracts with more than 60% of its private dwellings being high-rise condominiums constructed after 1990 to highlight the more recent wave of 'condo boom' that is associated with a marked increase in this type of dwellings in suburban areas.

Census Tracts with similarly high concentration of high-rise condominiums within Markham and Richmond Hill were identified via site-visits to the subject municipalities throughout 2014, supplemented by 2014 aerial imagery obtained from Google Maps, reviewing the growth policies of the City of Markham and the Town of Richmond Hill, and the researcher's own local knowledge of these municipalities.

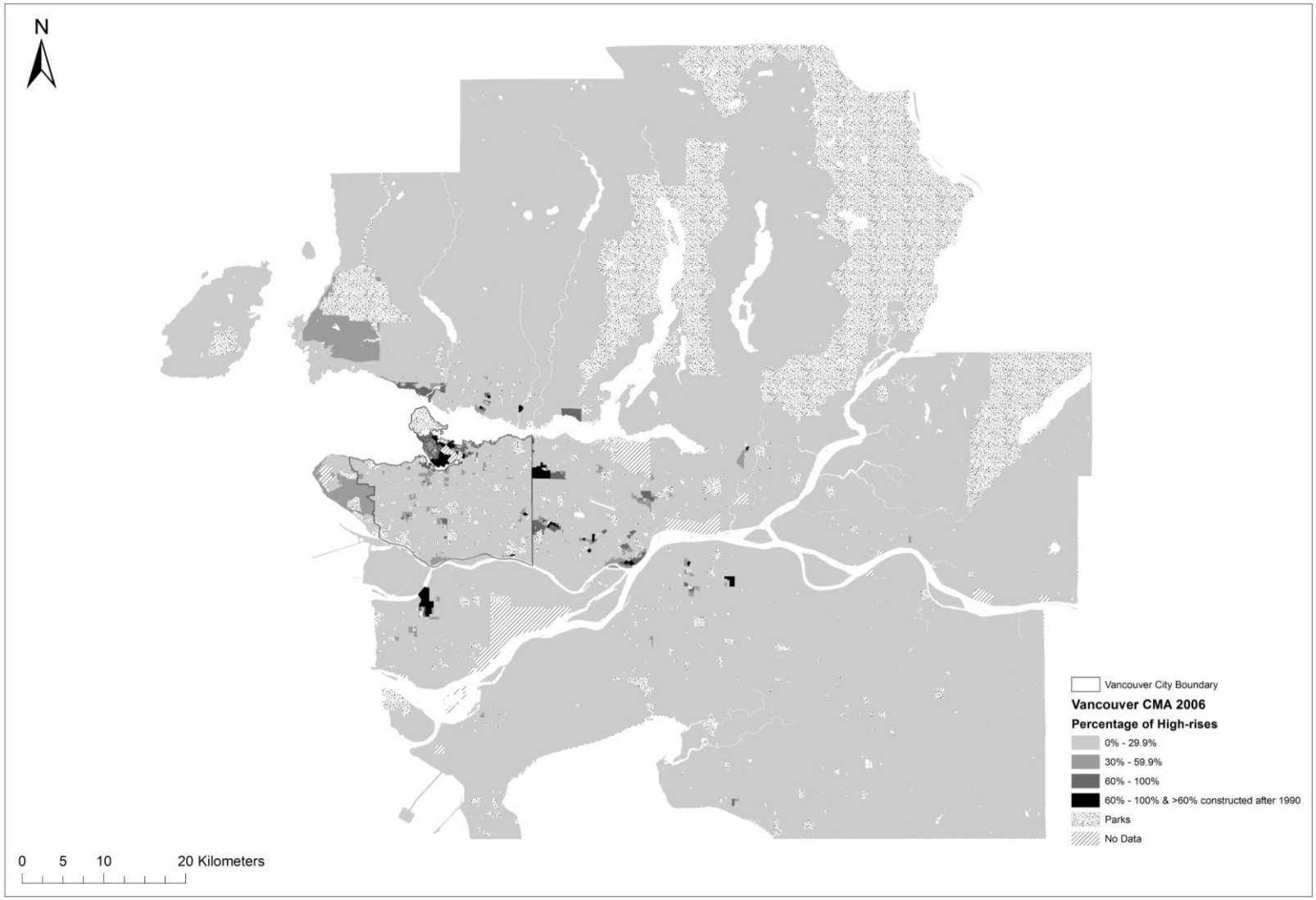
The Census Tracts and associated Dissemination Areas that were selected within the City of Markham were sub-categorized under the districts of: Commerce Valley/Leitchcrot; Markham Centre; and Woodbind/404 under the City of Markham's 2013 Official Plan (henceforth referred to as 'Markham OP'). The growth, land use, and development of these districts were guided by site-specific policies outlined in Section 9 of the Markham OP. Lands within the three districts were designated as mixed-use key development area (Commerce Valley/Leitchcrot; Section 9.6.2); urban growth centres (Markham Centre; Section 9.12.2); or part of a Regional Corridor (Woodbine/404; Section 9.20.2) respectively. The policies for these lands were generally geared towards higher density housing types that are mixed-use and planned at an intensity that is supportive of public transit. Similarly, the Dissemination Areas selected within the Town of Richmond Hill were part of the Richmond Hill District, which was "intended to develop into a compact, mixed-use urban centre supported by high quality public realm, walkable streets, and transit-oriented development" (p. 4-4, 2010 Richmond Hill Official Plan).

Figure 6: Distribution of High-rise Condo Clusters in Toronto by Census Tracts



Data Source: Census of Canada 2006

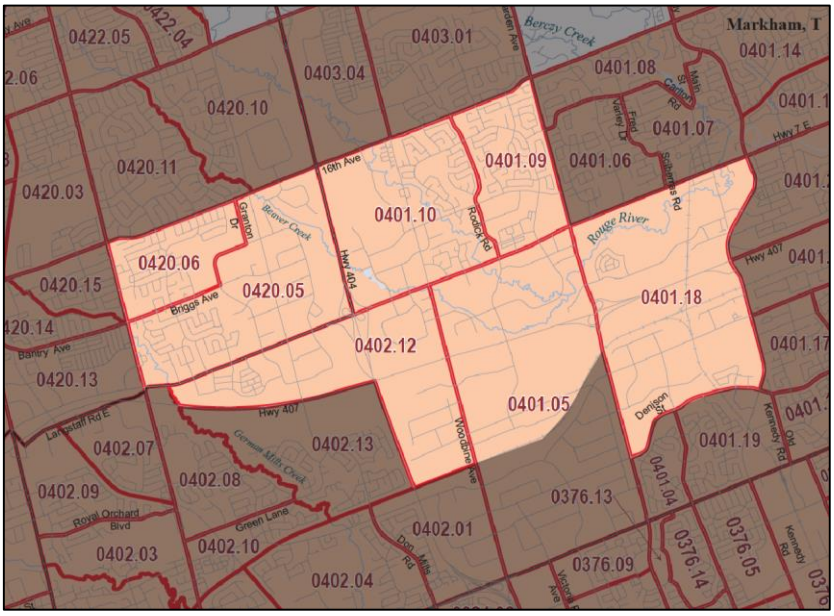
Figure 7: Distribution of High-rise Condo Clusters in Vancouver by Census Tracts



Data Source: Census of Canada 2006

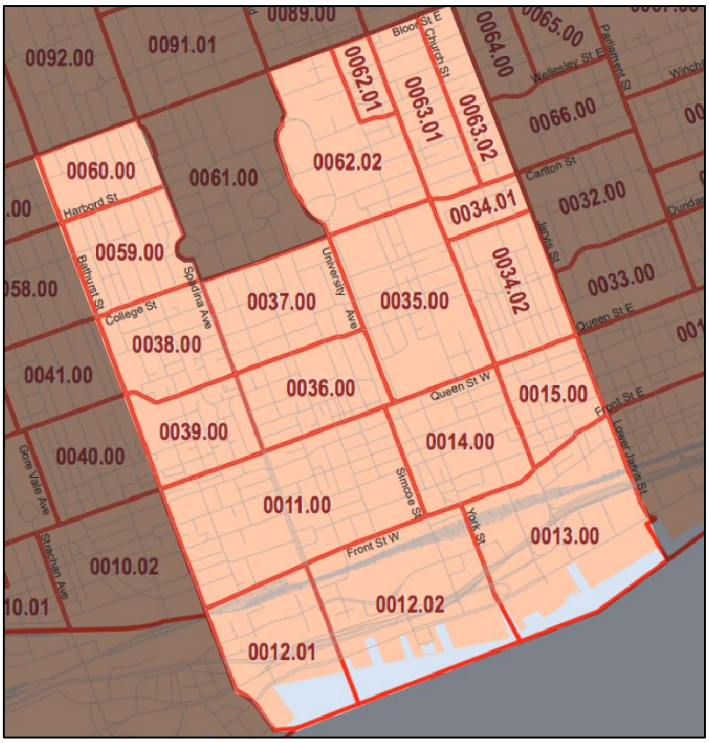
The Census Tracts that were eventually selected are outlined in the reference maps below, and Dissemination Area level data on the socio-economic characteristics of its residents were collected to identify any differentiating factors between urban condo dwellers and their suburban counterpart. Of the 63,735 dwellings that are located within the Toronto Dissemination Areas, approximately 85% were in the form of apartments that are five storeys or higher, for Vancouver, the percentage was approximately 83% out of a total of 38,180 dwellings. For the suburban municipalities of Markham and Richmond Hill, approximately 71% (out of a total of 6,040) of dwellings captured in the selected Dissemination Areas fall within the high-rise category. It is therefore considered that the Dissemination Areas presented below indeed represent locations in their respective municipalities where a high concentration of high-rise condominiums were present. The findings of this secondary research are summarized in the following section.

Figure 8: Condo Cluster in Markham and Richmond Hill by Census Tracts



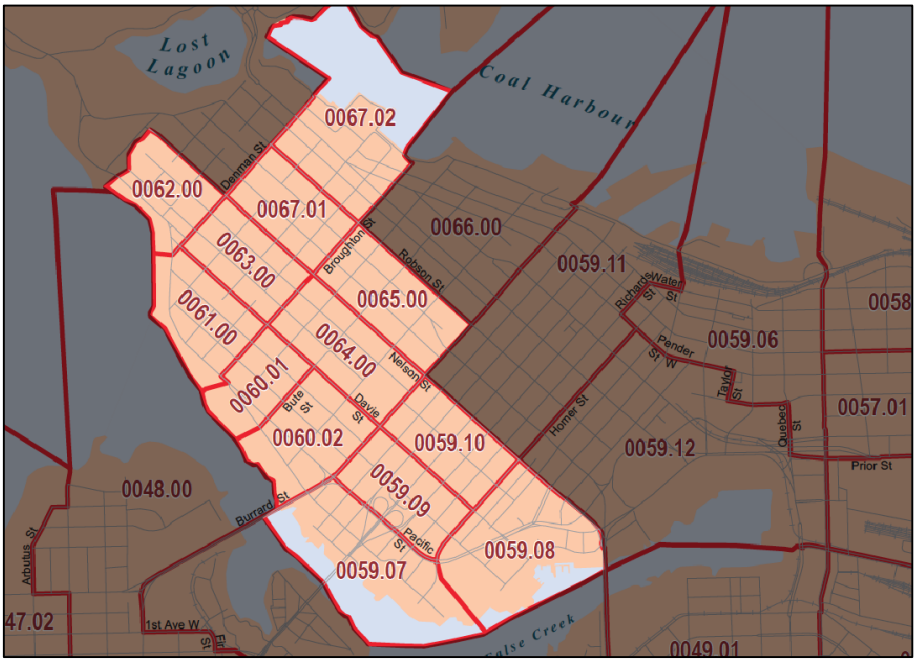
Source of Base Map: Statistics Canada, 2011

Figure 9: Condo Cluster in Downtown Toronto by Census Tracts



Source of Base Map: Statistics Canada, 2011

Figure 10: Condo Cluster in Downtown Vancouver by Census Tracts



Source of Base Map: Statistics Canada, 2011

Ownership

Perhaps the most striking difference between condo dwellers of downtown Toronto and Vancouver, and those in Markham and Richmond Hill is that the proportion of renters occupying high-rise condo dwellings in urban downtowns was vastly higher than that in the suburban environment. In condo clusters located downtown Toronto and Vancouver, the proportion of residents who were renters exceed 60%, whereas in Markham and Richmond Hill, the reverse was true and over 70% of all residents were also unit owners.

Table 4: Condo Units Ownership Comparison

	Markham/Richmond Hill	Toronto	Vancouver
Owner	72.6%	38.6%	29.5%
Renter	27.3%	61.4%	70.5%

Data Source: 2011 National Household Survey

Citizenship & Immigration Status

The proportion of residents who are not Canadian citizens were higher than municipality-wide levels across all condo clusters examined. There were however, higher proportions of immigrants reported in suburban condo clusters. This observation is consistent with the understanding that the 'condo boom' is at least in part driven by new immigrants' preference for this type of housing (Rosen & Walks, 2013), however, the group that is found to be most overrepresented in condo clusters in terms of immigration status are non-permanent residents.

The proportion of non-permanent residents who lived in condo clusters of the municipalities examined was almost *thrice* as high as municipality-wide levels. This observation make intuitive sense as those who has work visas or are foreign students are expected to be more likely to rent their place of residence, at convenient locations at the heart of the city. For downtown Toronto and Vancouver, this logic is obvious. It is less so for the Markham and Richmond Hill until one realizes that the condo clusters in these municipalities are located along the Highway 7 corridor, which is a Regional Corridor with a high concentration of

commercial and retail establishments, in relatively close proximity to the only post-secondary education institution in these municipalities (Seneca college, located in Markham's Woodbine/404 district and adjacent to the boundaries between Markham and Richmond Hill), and being a 5-10 minutes drive away from the Highway 404 ramp, which is the region's major highway leading directly to downtown Toronto. From a functional standpoint, a foreign student or worker can have the 'best of both worlds' renting a condo unit in the suburban downtown of Markham and Richmond Hill.

Demographic Profile

Consistent among all condo clusters examined in Toronto, Vancouver, Markham, and Richmond Hill, the age groups of 25 to 29, and 30 to 34 are found to be the largest cohorts. Interestingly, the 65 and over age group tend to be underrepresented, contrary to the 'empty nester' rhetoric often used to describe the target market of condominium constructions (see Table 5). Furthermore, the age composition of residents in the condo clusters and the survey respondents indicate a prominence of young adults in the demographic make-up of high-rise condominiums.

The findings of the secondary research also found that of the population of condo dwellers in downtown Toronto and Vancouver, the proportion of single individuals (not separated, divorced, or widowed) was much higher than the municipal average. Although the proportion of married/common-law couples

living in high-rise condominiums was less than the municipal averages in Markham and Richmond Hill, this phenomenon was markedly less drastic. The average number of children per census family[1] for the condo clusters examined were comparatively low for Markham and Richmond Hill (1.02 compared to 1.3), and lower still for Toronto and Vancouver (0.59 compared to 1.1, and 0.39 compared to 1 respectively).

In terms of education, a much higher proportion of individuals who possessed a postsecondary certificate, degree, or diploma were presented in the condo clusters examined for Toronto and Vancouver compared to the rest of these municipalities. For Markham and Richmond Hill, the education levels of the portion of population living in condo clusters were found to be the same as the municipalities in which they belonged.

Commute Pattern

For the employed population aged 15 years and over, the vast majority of residents living in downtown condo clusters in Toronto and Vancouver utilized public transit and active modes of transportation for travelling to work. And whereas approximately 53% of residents in all of Toronto and 52.5% of residents in all of Vancouver travelled to work using a personal vehicle, the number was found

1 Defined as "a married couple and the children, if any, of either or both spouses; a couple living common law and the children, if any, of either or both partners; or, a lone parent of any marital status with at least one child living in the same dwelling and that child or those children" by Statistics Canada's 2011 Census. Retrieved from: http://www.statcan.gc.ca/eng/concepts/definitions/c-fam

to be as low as 21.5% in the downtown condo cluster in Toronto and 32% for the one in Vancouver (

Table 9). However, in the condo clusters examined in Markham and Richmond Hill, the proportion of residents who relied on a personal vehicle to travel to work was very similar to municipality-wide levels. Therefore, it is clear that the benefits of spatially and functionally compacting the suburban downtown to reduce car dependency have not yet materialized.

Table 5: Age Composition Comparison of Study Areas

	Condo-clusters			Municipality-wide			Survey Sample
Age	Toronto	Vancouver	Markham & Richmond Hill	Toronto	Vancouver	Markham & Richmond Hill	Markham & Richmond Hill
Under 20	8.58%	7.05%	2.7%	21.07%	16.64%	24.85%	1.6%
20 to 24	12.81%	8.37%	8.2%	7.02%	7.34%	6.76%	6.5%
25 to 29	19.34%	15.29%	13.6%	8.10%	9.85%	6.04%	14.5%
30 to 34	14.78%	13.30%	12.9%	7.69%	8.84%	5.73%	17.7%
35 to 39	9.04%	9.84%	9.4%	7.28%	7.83%	7.08%	14.5%
40 to 44	6.49%	8.32%	8.5%	7.55%	8.06%	8.15%	8.1%
45 to 49	6.02%	7.67%	9.2%	7.94%	8.15%	8.72%	8.1%
50 to 54	5.31%	6.59%	8.1%	7.31%	7.31%	8.01%	8.1%
55 to 59	4.38%	6.13%	7.7%	6.22%	6.55%	6.88%	4.8%
60 to 64	3.79%	5.73%	7.2%	5.39%	5.87%	5.90%	6.5%
65 and over	9.49%	11.64%	12.5%	14.43%	13.58%	11.90%	9.7%

Data Source: Census of Canada 2011

Table 6: Proportion of Population by Sex, Comparison of Study Areas

	Condo-clusters			Municipality-wide			Survey Sample
Sex	Toronto	Vancouver	Markham & Richmond Hill	Toronto	Vancouver	Markham & Richmond Hill	Markham & Richmond Hill
Male	51.21%	52.39%	47.56%	48.01%	48.90%	48.77%	50%
Female	48.79%	47.61%	52.44%	51.99%	51.10%	51.23%	50%

Data Source: Census of Canada, 2011

Table 7: Proportion of Population by Citizenship Status, Comparison of Study Areas

	Condo-clusters			Municipality-wide			Survey Sample
Citizenship	Toronto	Vancouver	Markham & Richmond Hill	Toronto	Vancouver	Markham & Richmond Hill	Markham & Richmond Hill
Citizen	81.80%	79.70%	78.96%	85.97&	86.02%	89.71	82.26%
Non-citizen	18.20%	20.30%	20.96%	14.03%	13.98%	10.29%	17.74%

Data Source: 2011 National Household Survey

Table 8: Proportion of Population by Immigration Status, Comparison of Study Areas

	Condo-clusters			Municipality-wide		
Immigration Status	Toronto	Vancouver	Markham & Richmond Hill	Toronto	Vancouver	Markham & Richmond Hill
Immigrants	39.07%	33.00%	73.02%	48.61%	43.84%	56.77%
Recent Immigrants (2001-2011)	14.53%	11.85%	22.38%	15.97%	12.70%	14.99%
Non-immigrants	53.25%	56.44%	22.56%	48.87%	52.27%	42.08%
Non-permanent Residents	7.67%	10.52%	4.28%	2.52%	3.89%	1.15%

Data Source: 2011 National Household Survey

Table 9: Proportion of Population by Primary Mode of Commute for Work, Study Areas Comparison

	Condo-clusters			Municipality-wide			Survey Sample
Mode of Transportation	Toronto	Vancouver	Markham & Richmond Hill	Toronto	Vancouver	Markham & Richmond Hill	Markham & Richmond Hill
Personal Vehicle	21.7%	31.7%	78.6%	52.86%	51.6%	81.53%	72%
Public Transit	32.2%	26.4%	16.6%	35.55%	29.95%	15.27%	13%
Walked	40.6%	37.0%	3.2%	7.28%	12.54%	1.89%	2%
Bicycle	4.0%	3.1%	0.0%	2.16%	4.37%	0.29%	3%
Other Methods	1.5%	1.8%	0.0%	1.16%	1.55%	1.02%	10%

Data Source: 2011 National Household Survey

Discussion

Returning to the original question introduced at the beginning of this study, which sought to address the problems that impede the high-rise condominium from becoming a more effective suburban growth management apparatus by answering the questions of whether it is enticing suburbanites to move into higher-density housing arrangements and to adopt a more urban lifestyle. This question is further broken down into two sub-questions:

1. Who is living in suburban high-rise condominiums? And how are they characterized in terms of demographic, behaviour, and motivations?
2. Are suburban condo dwellers living an 'urban' lifestyle?

In examining the socio-economic characteristics of suburban condo dwellers and comparing them with their respective municipalities and urban condo dwellers, this study has found that the suburban 'condo boom' is in large part fueled by the rise of a residential population whose state of housing is more fragile than previous generations. Specifically, this population is found to comprise largely of educated, childless young adults and temporary foreign residents. Furthermore, at its current state, there is little indication that the provision of high-

rise condominiums in suburban municipalities is effecting any significant change in the resource consumption pattern of its inhabitants.

In every instance of areas with a high proportion of high-rise condominium examined in this study through Census data, the young (mostly childless) adult population was present in disproportionately large numbers, along with non-permanent residents. What's more, the online survey conduct found respondents' rationales for living in suburban condos to often be very pragmatic—they seek housing that is affordable, maintenance-free, and exclusive. There is also an implicit understanding among the survey respondents that the condo is only an in-between home for different stages of one's life and in particular, that it is not appropriate for raising children. As the household type composition of the survey respondents is very similar to that of the municipalities to which it belonged, the factors identified as drivers for one's decision to move into suburban condos among the surveyed population may also be at play on a greater scale.

The demographic profile for suburban dwellers observed through both the survey and Census/NHS data also supports our understanding that the condo boom is to a large extent fueled by a fall in average household size, coupled with the growth of the young professional single-child or childless family demanding for smaller, more-affordable housing options (Rosen & Walks, 2013; Lasner, 2012; Lehrer et al., 2010; Lehrer & Wieditz, 2009). However, Census data on age cohort collected for all high-rise condo clusters examined in this study contradicts our expectation of the retiree population (or 'empty nesters') as a significant catalyst of

the condo boom phenomena. Coupled with the observation made using 2011 National Household Survey data that non-permanent residents are almost three times as likely to settle in suburban condos than elsewhere in the municipality, it becomes apparent that the suburban condo boom—and the socio-economic function that condo housing plays, is closely linked with the supply and demand of an affordable, temporary type of housing for a mobile population.

Behaviours and Motivations

With regards to behaviours and motivations, the importance of affordability in the decision-making of suburban condo dwellers is supported by two observations. First, suburban condo dwellers who participated in the online survey ranked affordability as their primary reason for moving into a suburban condominium, followed by the freedom from maintenance obligations, and the security of a gated, exclusive community. Second, unique to suburban condominiums, the 2011 National Household Survey data collected indicate that a vast majority of residents were owners rather than renters. The reverse was true in urban condominiums, which suggests that suburban condo owners considered their purchase as a home as well as an investment, whereas for downtown condo owners, the purchase was mainly for investment purposes and the location of the condominium in urban downtown was preferred from a 'rentability' standpoint.

The finding that living in a suburban high-rise condo is often perceived as a temporary arrangement is inferred from three observations. First and foremost,

the 2011 National Household Survey data has shown a higher proportion of renters in high-rise condos compared to other forms of housing. For example, 54% of those living in Toronto owned their dwelling, while only 39% of those living in Toronto's downtown condo cluster owned theirs, and 88% of Markham and Richmond Hill's residents owned their unit, compared to only 73% ownership for suburban condo cluster dwellers. The tendency for high-rise condos to have higher rates of rental occupancy suggests that this type of dwelling is considered by its owners and renters to be temporary in nature.

Second, half of the suburban condo dwellers who responded to the online survey noted that they planned on moving to a different type of dwelling in the next 5 years, despite the high ownership ratio for suburban condos. A possible explanation for this observation is that suburban condo owners recognize the rent premium associated with residential dwellings centrally located in the downtown area and decided to purchase a suburban condo unit as a low-risk investment that one could also live in. Based on this, the purchase of a suburban condo unit is primarily an investment that one expects to mature over time and liquidate afterwards when one is financially capable of making a housing purchase of a more 'permanent' nature. Furthermore, a majority of younger respondents in the survey indicated moving out of a condo when they plan to have children. Although this survey finding is not statistically significant to be representative of the behavior of all suburban condo dwellers, it is consistent with Lasner's (2012) observation that the condo boom is associated with the rise of the single-child or childless family and Finch's (2007) assertion that this form of housing is designed

to exclude families with children. There is thus some indication that the high-rise condo in its current form is designed only for a narrow segment of the lifecycle.

The third observation that supports the view that suburban high-rise condo is largely considered a temporary form of housing is the prominence of non-permanent residents among condo dwellers. That the proportion of non-permanent residents in high-rise condos is found to surpass the municipal average consistently by a factor of two to three[2] is clear indication that this form of housing is particularly appealing to those whose life conditions are more tenuous.

Other features found to be appealing among survey respondents that are also likely drivers for living in high-rise condos include their relative affordability; freedom from property maintenance obligations; and, to a lesser extent—proximity to various amenities. The observations noted above thus describe the suburban high-rise condo as a housing option mostly for a temporary and transitional population. They also suggest that the rationale behind one's decision to move into a high-rise condo is rooted in practicality, with focuses in financial feasibility, freedom from obligation, and mobility.

Do Suburban Condo Dwellers Live an Urban Lifestyle?

Despite the provision of mixed-use high-density housing in suburban municipalities through local and regional planning policies, it seems that the goal of facilitating an urban lifestyle characterized by walkable neighbourhoods, transit

[2] 2011 National Household Survey

oriented development, reduced auto-dependency, and a vibrant street life (Moos & Mendez, 2015; Filion, 2001; Quastel et. al., 2012; Skaburskis, 2006) has yet to materialize in suburban downtowns. Take the surveyed population as an example, true, respondents expressed the desire for enhanced public transit and the ability to walk to nearby amenities, but their experience living in this type of housing and the behaviour that they continued to exhibit indicate a lifestyle that is firmly suburban in character. Furthermore, the online survey and 2011 NHS findings of the transient nature of living in a condo is not conducive in fostering social interaction, and the stubbornly auto-centric lifestyle of its residents suggest that most suburban condo dwellers have not shifted to active and multi-modal forms of transportation and the benefits of transit oriented development is so far absent. That being said, the other facets of an urban lifestyle – that of reduced land and energy consumption – is partially realized by virtue of the high-rise condo's form and location. However, as the findings of the online survey suggest that younger households currently living in suburban high-rise condos will likely move to lower density forms of housing, even the reduced land consumption may only be temporary. Therefore, the suburban condo only partially fulfills its function/benefit of shifting its residents to a more urban lifestyle and it is, thus far, unsuccessful in changing the behaviours of suburban condo dwellers.

In theory, suburban high-rise condos are facilitative to a lifestyle centred on active modes of transportation as they are often constructed in centrally located areas with multi-modal transit. However, the actual commute pattern as indicated by both the survey findings and 2011 National Household Survey data is that the

commute habits of suburban condo dwellers are almost identical to the municipal average. The infrastructure to facilitate alternative modes of transportation is there, but residents are not taking advantage of it, how then does one reconcile the empirical observation of a suburban condo boom and the reality that suburban condo dwellers lead a very much suburban lifestyle despite buying into the perks of living in a condo? It seems that the appeal of transit infrastructure, central location, and mixed-use environment and their values are being manifested in a way that is unintended by planners and policy makers.

The Unintended Benefits of Suburban Condos

Rather than enticing those who wants to live in an urban environment, suburban condos seem to be attracting savvy investors who recognize the land premium associated with the urban, transit-oriented qualities of suburban condos. The suburban condo boom seems to be attributed to planning policies that not only facilitate an urban lifestyle, but also concentrate the qualities beneficial to real estate value into specific locations in a municipality, within a specific built form. These ideally located high-rise residential units become the preferred choice for those who cannot afford lower-density housing options. It thus follows that rather than depleting the existing affordable housing stock resulting from the demolishing of older, more affordable housing as feared by some (Bickford, 2000; Lehrer & Wieditz, 2009), the suburban condo boom creates a point of entry for lower-income individuals into the housing market and even offer the benefits and

convenience of downtown living to those who cannot afford a mortgage in the form of increased rental housing stock. For example, according to aggregate data obtained from Trovit.ca (an online search engine for real estate property), the average condo price for Markham as of December 2015 was $482/square feet, compared to $554/square feet for Toronto (accessed December 29, 2015)[3]. This suggests an average price difference of roughly 15% for condominiums located in Toronto compared to Markham, and perhaps even greater for dwellings located in the downtown core. As Lesnar (2012) found in his examination of the condominium phenomenon in American metropolitan areas, affordable housing options may actually be preserved in the long run by the condominium ownership structure, particularly within suburban municipalities where land value tend to be lower than the urban centre.

Despite the tendency for new high-density condominium developments to be located in areas well serviced and connected to public infrastructures and amenities, the finding that condo dwellers living in suburban downtowns tend to be less affluent than the neighbouring demographic[4] suggests only modest gentrification pressure being exerted on this type of housing. Specifically, the net effect on the value of high-rise condos located in suburban downtowns as a result of the rent premium attributed to proximity to various amenities; retail and office buildings; and transit oriented developments, and the discounted land prices due

[3] Toronto data retrieved from: http://property.trovit.ca/2049/markham-price-property and Markham date retrieved from: http://property.trovit.ca/257/toronto-price-property

[4] Based on 2011 National Household Survey data.

to the distance of these condos from urban downtowns appear to be such that the affordability of suburban high-rise condos is maintained. This observation cast doubt to the concern that new condo developments would displace the existing low-income population or eliminate affordable housing. Perhaps there is such a risk in urban downtowns, where there may be instances in which the existing affordable housing is demolished to make way for new condo development, but this phenomenon would be rare in suburban municipalities, where as previously noted, land prices are generally lower. Furthermore, even if it is the case that the existing, more affordable form of housing is demolished, it is not necessarily (perhaps even unlikely) the case that the result would be coercive displacement and a reduction in affordable housing stock. As a study of the changing household characteristics of Toronto neighbourhoods conducted by Skaburskis (2012) has pointed out, working class (lower income) inhabitants living on lands to be redeveloped can often benefit from the associated appreciation in the value of their property. In addition, as this study has highlighted, high-rise condo dwellers tend to be less affluent members of community and therefore, the redevelopment of existing lands into high-rise residential dwellings may in fact lead to an increase in the total number of housing that are relatively more affordable.

The suburban condominium's function as affordable housing has the potential to address the housing challenges created by the continued appreciation of land prices in metropolitan areas that are desirable to live in and should be investigated further. This is particularly relevant in the Canadian context as the country's relative political and economic stability continues to position Canadian

cities as not only great places to live but also great investment choices. A steady supply of affordable housing will allow cities to continue to benefit from the economic activities generated by increased foreign and domestic investments, attract outside talent by offer a high quality and flexible housing option, and provide opportunities for lower income individuals and families to achieve financial stability by facilitating their entry into the housing market.

Conclusion & Recommendations

This study has examined the population of suburban high-rise condominium dwellers in the municipalities of Markham and Richmond Hill, as well as the demographic characteristics of high-rise condo dwellers in Toronto and Vancouver. In so doing, it has found that the suburban 'condo boom' currently experienced by a number of Canadian municipalities is fueled largely by the advent of a transient demographic whose living condition is more fragile than previous generations. This group is comprised largely of educated, childless young adults and foreign residents whose immigration status is tenuous at best. The suburban high-rise condominium provide these individuals with a relatively affordable housing option while at the same time giving them access to a living arrangement that is convenient, functional, and energy efficient.

However, the benefits of this form of housing as stated by its proponents are far from realized. It is not considered conducive to families, and therefore not

in the position to replace lower-density housing in the suburban landscape, and it is thus far unable to change the consumption pattern of its residents to reduce automobile use and increase public transit use and active transportation. To improve the effectiveness of suburban high-rise condominiums as a growth management tool for achieving the aforementioned benefits, two central problems must first be addressed—a. how to ensure larger condominium units are built while maintaining their relative affordability; and b. how to enhance the transit-supportiveness of the suburban downtown. The following section proposes five recommendations in response to the shortfalls of the high-rise condominium housing type identified through this study. They include:

3. The cost of short-distance commutes via public transit to be significantly reduced, if not free altogether.
4. The number and frequency of buses be increased to achieve average commute times that are comparable to personal automobile travel.
5. Paid parking is implemented in all major nodes and corridors of suburban municipalities.
6. Increase the maximum height of residential high-rises in exchange for the provision of larger units on the lower floors of the condominium.
7. The height restrictions be relaxed for commercial and office zoned buildings in downtown areas to permit mixed-use residential, and increase maximum permitted height of land designated for residential use along major transit corridors.

Recommendations

The findings that suburban condo dwellers are comprised disproportionately of less affluent, young, and temporary residents raises the question of what can be done to retain these transient dwellers and position this type of housing as a more permanent lifestyle choice. To achieve this, measures to enhance the advantages of suburban high-rises and mitigate or eliminate its undesirable properties should be pursued. Based on a review of existing literature, and the findings of this study, the potential benefits and detriments of a suburban residential high-rise can be summarized as thus:

Table 10: Summary of Benefits and Detriments of High-rise Condominiums

	Social	Environmental	Economic
Benefits	• Safety • Convenience • Preserves affordable housing stock	• Reduced land consumption • Transit supportive • Reduced auto-dependency	• Affordability • Supports commercial and office development • Low cost of maintenance • Reduced infrastructure and servicing costs
Detriments	• Exclusive/isolating • Displacement of existing low-income population from condo development • Not universally accepted as an appropriate place for raising children • Temporary housing		• Cost of rental may be high

Table 10 summarizes the benefits and detriments of the suburban high-rise condominium. Based on the above understanding of the challenges and

opportunities of this form of housing, the following section proposes five recommendations that planners and policy makers can consider to improve its effectiveness in realizing its social, economic, and environmental benefits.

Tackling Auto-dependency

A major intended benefit of suburban high-rise condos is that of increased usage of public and active modes of transportation, and a corresponding reduction in the residents' dependency on the automobile. This has yet to materialize in the suburban municipalities examined, but the failure of suburban high-rise condos at the present time to entice suburbanites, and its inability to curb the wasteful resource consumption pattern of a car-dependent, spatially dispersed lifestyle does not necessarily imply the failure of planning policies that aim to limit sprawl. Rather, policies for concentrated development along urban nodes and major corridors to build up suburban cores as described by Charney (2005) and Fillion (2012; 2010) require time to implement, it may simply be that it is still too early to reap the benefits of the seeds sown as an urban landscape can take years to develop into a spatially compact, multi-functional space.

As indicated by the survey findings in this study, almost half of all respondents saw better assess to public transit as an important driving force for their decision to move into this type of dwelling, there is thus evidence to suggest that suburban high-rise condo is being perceived by its providers and users to be transit-supportive. Based on this understanding on the mismatch between intent

and behavior, one conclusion of this study is that the convenience of living in close proximities to various amenities must be paired with measures to de-incentivize *unnecessary* automobile use in order to reduce auto-dependency. The emphasis here is in the word 'unnecessary' as it is unrealistic and unreasonable to restrict an individual's freedom to travel if their work or life demands it. As an example, a general contractor may be required to travel from job site to job site, often on a tight schedule, it is unlikely that they can be persuaded by levies and taxes to start taking public transit (carrying around various tools and materials) or to outright give up their field of work. Furthermore, it would be difficult to implement and regulate some sort of fixed cost for whenever one starts up an automobile. Such a measure would be costly, cumbersome, and a very large scale endeavour. For these reasons, this study recommends the following three recommendations to de-incentivize unnecessary automobile use:

1. The cost of short-distance commutes via public transit should be significantly reduced, if not free altogether.

With electronic billing methods being increasingly adopted in the GTHA region (such as the implementation of the Presto card system), it is now possible to track the distance that each commuter has travelled, and to bill them accordingly. Base on this, the transit system now has the capacity to differentiate between long and short-distance commuters and offer financial incentives to encourage public transit use and shorter distance travel. To implement this, the first step would be to

determine exactly how short a trip should be in order to be qualified for the discounted or free transit use. The answer to this question will require examinations into the cost of maintaining transportation infrastructure, operating the public transit system, and the commute habits of the inhabitants of suburban municipalities.

A related problem that needs to be addressed in order to encourage additional transit use is the gap in commute time between public transit and automobile. Therefore, it is further recommended that:

2. The number and frequency of buses be increased to achieve average commute times that are comparable to personal automobile travel.

We have seen throughout this study that the primary considerations in one's decision to embrace a certain lifestyle or habit are practicality and convenience. Providing high-rise condos that are located in suburban downtowns, in close proximity to various amenities is certainly part of what makes an urban lifestyle practical and convenient, but it is equally crucial to offer alternative modes of transportation that also satisfies these two criteria. As such, it will be necessary for the public transit system to transport its users in a manner that is at least comparatively efficient to that which it is competing against, and one way to achieve this is through investments to increase the frequency of buses servicing each route and reducing the average commute time of public transit. For instance, two bus routes currently service the Highway 7 regional corridor in Markham and

Richmond Hill on a regular basis, with the equivalent of one additional bus route being active during rush hours. This translates into a total maximum of 3 bus routes actively using the Highway 7 'rapidway' dedicated bus lane. The wait time for each bus route ranges from 15 minutes (for Viva buses) to 40 minutes[5] (See Appendix C for transit map). Considering the rapidway is built solely for buses to traverse, an opportunity exist to further increase the service frequency of the buses and create a regional corridor that is truly transit-oriented.

As with the case of Recommendation No. 1, emerging technologies can be leveraged to greatly enhance the feasibility of adding more buses on the road. One such example is to leverage driverless technology. Driverless technology is close to reaching maturity for widespread application, and some policy makers are starting to consider the legislative and regulatory hurdles associated with its implementation. Using the suburban municipalities of Markham and Richmond Hill as an example, embracing driverless public transit should be considered as a potentially low-cost solution to making public transit more efficient and competitive. The major transportation corridor of Highway 7 contains a dedicated centre lane for public transit, called the 'rapidway', it is a lane reserved exclusively for public transit and would also be an ideal environment for the implementation of autonomous vehicles due to it being largely insulated from the hard-to-predict behaviours of countless drivers on the road. Putting driveless public transit on the rapidway could drastically reduce the operating cost through eliminating costs associated with hiring a human driver, and will also significantly increase the

[5] For details on the bus route schedules, visit: tripplanner.yrt.ca/

punctuality, safety[6], and ultimately the efficiency of the public transit system. It may seem unrealistic at first glance to implement driveless vehicles on the road, but driveless public transit is already being tested, if not already implemented in various capacities[7].

Regardless of whether driverless technology will be embraced by suburban municipalities, the point remains that a transit-supportive environment alone will not compel people to take public transit if the latter is going to make one late for work everyday or expose one to involuntary sleep deprivation. Auxiliary to enhancing the appeal and efficiency of public transit, this study also recommends that:

3. Paid parking is implemented in all major nodes and corridors of suburban municipalities.

The purpose of this measure is to maximize the cost margin between taking public transit and travel using a personal automobile and in conjunction to Recommendations No. 1 and 2, policy makers will have established a set of realistic, compelling financial incentives to reducing auto-dependency.

6 More information on the safety record of driverless vehicles can be found on Google Self-Driving Car Project Monthly Report May 2015, retrieved from: http://static.googleusercontent.com/media/www.google.com/en/us/selfdrivingcar/files/reports/report-0515.pdf

7 For examples of driverless public transit already in use, and more discussion on the topic, see the links below:

https://en.wikipedia.org/wiki/List_of_automated_urban_metro_subway_systems

http://www.humantransit.org/2015/06/guest-post-driverless-taxis-driverless-buses-and-the-future-urban-mobility-mix.html

A Matter of Relative Affordability

In addition to the shortfall in curbing auto-dependency and encouraging transit use, a lynchpin to the success of using suburban high-rises as a growth management tool is its ability to attract family-oriented, long-term residents from the suburbs. This is primarily a problem of affordability and the developer's willingness to build larger condo units. The objective of the following recommendations is thus to *minimize* the exclusivity of high-rise condos in prime living locations in the centre of suburban downtowns. To achieve this, a suburban municipality may:

4. Increase the maximum height of residential high-rises in exchange for the provision of larger units on the lower floors of the condominium.

The rationale behind incentivizing the construction of larger units on the lower floors of a residential high-rise development is threefold. First, as this is a policy to relax the planning regulations around a development to permit more units, it is in the developer's interest to take up the offer and capitalize on the value of their land, it also eliminates the possibility of having this policy challenged, 'watered downed', or otherwise distorted by well-funded real estate coalitions looking to protect their interest. Instead of looking for creative ways to circumvent an unfavourable policy, developers can instead use their money and creativity on something positive (or to simply pass on the offer if it doesn't suite their interest).

Second, the specification to request larger units on the lower floors of a high-rise development is based on the understanding that large units located on the summit of a high-rise tend to be marketed and perceived as penthouse/luxurious units, and a premium is placed on the view that comes with a high vantage point. By requiring that larger units be provided on the lower floors, the premium associated with a prestigious unit with a nice view would be eliminated. It will provide more affordable family sized units without stigmatizing the entire development as 'affordable housing' (a term that many developers like to avoid for fear of lower the development's valuation and in turn their profit margin).

Third, provided the appropriate technical studies are conducted to ensure there will be no significant negative impact to the surrounding environment as a result of increased height, relaxing height limitations will also be economically and environmentally beneficial for the municipality. Higher concentration of the residential population within the suburban downtown will limits sprawl, contributes to meeting the population threshold necessary to support additional transit infrastructure, and also creates the market base for local commercial and office developments. The intended result of this policy is to provide a type of affordable housing that young families will perceive as a suitable, permanent type of dwellings for raising children.

Complimentary to the above recommendation to increase height limitations in exchange for larger units on lower floors of a high-rise, it is also recommended that:

5. The height restrictions be relaxed for commercial and office zoned buildings in suburban downtown areas to permit mixed-use residential, and increase maximum permitted height of land designated for residential use along major transit corridors.

This recommendation aims to increase the supply of condo units at prime locations in suburban downtowns to mitigate the rent premium that these units come with, and consequently, lower the cost of living in suburban condos. Recommendations No. 4 and 5 will also create the population density necessary to bolster commercial, office, and transit development and spur the growth of higher density, more socially and economically vibrant downtowns.

With the exception of implementing driverless vehicles (where the regulatory ramifications of automated vehicles will need to be addressed by higher levels of government) discussed under Recommendation No. 2, all recommendations made in this study can be implemented at the local or regional municipality level and hold great promise in improving the effectiveness of high-rise condos as a growth management tool to enhance the urbanity of a suburban environment.

Vertical Re-alignment of the Suburban Geography

The recommendations outlined above aim to provide residents of suburban municipalities with an affordable housing option that meets the spatial needs of a young family with children, complimented by a transportation system designed to enhance the transit-supportive configuration of this type of housing. By addressing the shortfalls identified in this study, the high-rise condominium will be a potent growth management tool for facilitating a shift in the consumption pattern of the suburban population from consumption pattern characterized by high land use, high energy consumption, and automobile dependency, to a more urban lifestyle characterized by walkable neighbourhoods, transit oriented development, and drastically reduced resource consumption. What's more, the applications of suburban high-rise dwellings as an integral component of a strategy to transition a suburban landscaping into an urban one will not be limited to the local and regional context of the study area. As the findings and recommendations made in this study are based on fundamental economic forces and demographic trends present in many developed countries, its relevance extends to all suburban communities faced with the challenge of managing growth in a sustainable manner.

Limitations of Survey Findings

As mentioned earlier in the methodology section, the main constraint of this study is one of scope. Although with the exception of income levels, the demographic characteristic of the survey respondents generally matches that of the municipal average, the number of survey respondents (n=62) is below the threshold required to generate statistically significant findings representative of the entire population of suburban condominium dwellers in Markham and Richmond Hill. As such, the detailed demographic characteristics, motivations, and preferences of the survey respondents were used as primary indicators of trends and phenomenon to which inferences are made only after further investigating whether such indicators are present in secondary research data. In other words, any interesting observations found through the survey are checked against the 2011 Census and NHS data for corroboration, and inference on a particular trend or phenomena is made only if there is indeed corroboration between the two sets of data. Consequently, a further constraint imposed by a small survey sample size and the need to rely on Census and NHS data is that these data are factual and do not offer any glimpse of why respondents with a particular demographic characteristic exhibit a particular behavior 'in their own words'.

Aside from the limitations on the size and depth of the primary and secondary data collected respectively, the ethnic composition of the study area and the possibility that it may limit the applicability of this study warrants some

discussion. The municipalities of Markham and Richmond Hill are somewhat atypical in that the Asian population comprises a visible *majority* of their total population, which raises the possibility that cultural disposition may play a role in the prevalence, motivations, and preferences suburban condo dwellers. However, this is unlikely for two reasons, the first being the reported reasons for survey respondents' decision to move in or out of a high-rise condo are largely financial and practical considerations that are culturally independent. The second reason is that studies conducted by other urban scholars on condominium housing of other developed countries found similar demographic characteristics as those identified in this study (Lesnar, 2012; Rosen & Walks, 2013; Fincher 2007). Therefore, it is not expected that the trends and phenomenon observed (and by implication, the recommendations) made in this study are confined to the local or regional context.

Lastly, it is noted that the recommendations made in this study with respect to the provision of larger, relatively affordable condo units are based on the assumption that the reason current suburban high-rise condos are not considered suitable for starting a family and raising children is largely due to their small size. From a practicality standpoint, many new condo units in today's market ranges from 500 to 1,000 square feet in size, mostly due to the tendency for smaller units to be sold faster and are also cheaper to rent out. However, the cheapest, smallest units are also by definition designed to house the minimal household size possible—one person, offering the minimal functional space acceptable/marketable (the "reshaping of form and interest of housing construction firms towards international students" as noted by Finch in her study

of high-rise housing in Melbourne, Australia. (2007, p. 638)). To accommodate households three or more times the size of the minimal household, the square footage of a unit would need to increase accordingly (though not necessarily proportionately), and therefore the provision of larger condo units will be necessary for this type of housing to be considered 'family-friendly'. Furthermore, this study takes the position that it is unlikely for the prescription of family amenities (e.g. daycares, on-site playgrounds, and other children oriented facilities) to improve the perception that suburban high-rise condos are not suitable for families in any significant way. The rationale behind this position is that other forms of housing currently considered suitable for raising children, namely, single-detached, semi-detached, and townhomes often are not located in close proximity to any of the above family amenities. Rather, the biggest distinguishing factor appears to be larger dwelling size, and proximity to open space and natural environment. The former has been addressed in the recommendations made in this study, and it also recognized that the latter can only be provided at a limited scale within the urban/suburban downtown environment.

Further Research

The findings of this study, and the recommendations that it proposes raise many questions for further investigation. In designing policies to incentivize the

construction of larger condo units conducive to raising children, it will be necessary to find out the size distribution of the existing condo housing stock and determine how large a unit should be to be considered appropriate for a family with children to live in. It will also be necessary to review the rationale behind the current maximum height permitted for suburban municipalities, and possibly amend the height limitation for residential high-rises to enhance the resource efficiency of this type of housing.

Furthermore, an exploration on whether the provision of larger, relatively affordable condo units is sufficient to turn high-rise condos into 'family-friendly' building, or whether additional criteria need to be met (e.g. family amenities, and the presence of open space and natural environment) is yet another important topic of research to validate the findings and recommendations made in this study.

Regarding transit-supportive development and encouraging multi-modal transportation, which are both key objectives of the compact development policy pursued by many suburban municipalities, additional research to determine what a 'comparable' level of average commute time is in order for public transit to be seen as a competitive alternative for existing drivers will greatly contribute to the success of the such policy. In addition, from an efficiency standpoint, serious investigations into the feasibility and timeline of leveraging emerging technology to reduce the operating cost of the transit system, and to implement distance-based pricing should be considered to further undermine the appeal of driving, especially for short-distances.

Bibliography

Alonso, W. (1964). *Location and Land Use: Toward a General Theory of Land Rent.* Cambridge, MA: Harvard University Press.

Bickford, S. (2000). Constructing inequality: City spaces and the architecture of citizenship. *Political Theory,* 28, 355-376.

Bridge, G., Butler, T., & Lees, L. (2012). *Mixed Communities: Gentrification by Stealth?* Policy Press.

Bunce, S. (2004). The emergence of 'smart growth' intensification in Toronto: environment and economy in the new official plan. *Local Environment*, 9(2), 177-191.

Bunting, T., Walks, A., & Filion, P. (2004). The uneven geography of housing affordability stress in Canadian metropolitan areas. *Housing Studies*, 19(3), 361–393.

Canada Mortgage and Housing Corporation. (2007-2014). *Housing Now - Greater Toronto Area.* Canada Mortgage and Housing Corporation.

Carras, G. (2013, November 29). *The walls really are closing in.* Retrieved November 7, 2015, from The Toronto Star: http://www.thestar.com/life/homes/2013/11/29/the_walls_really_are_closing_in.html

City of Markham. (2013). *Markham Official Plan.* Markham: City of Markham.

Charney, I. (2005). Re-examining suburban dispersal: Evidence from suburban Toronto. *Journal of Urban Affairs*, 27(5), 467-484.

Costello, L. (2005). From Prisons to Penthouses: The changing images of high-rise living in Melbourne. *Housing Studies*, 20(1), 49-62.

Creswell, J. (2009). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (Third Edition ed.). London: Sage.

Easthope, H., & Tice, A. (2011). Children in apartments: Implications for the compact city. *Urban Policy and Research*, 29(4), 415-434.

Filion, P. (2012). Evolving suburban form: Dispersion or recentralization? *Urban Morphology,* 16, 101-119.

Filion, P., Bunting, T., Pavlic, D., & Langlois, P. (2010). Intensification and Sprawl: Residential Density Trajectories in Canada's Largest Metropolitan Regions. *Urban Geography*, 31(4), 541-569.

Filion, P. (2001). Suburban mixed-use centres and urban dispersion: What difference do they make? *Environment and Planning A*, 33, 141-160.

Fincher, R. (2007). Is high-rise innovative? Developers' contradictory narratives of high-rise housing in Melbourne. *Urban Studies,* 44, 631-649.

Fincher, R. (2004). Gender and life course in the narratives of Melbourne's High-rise housing developers. *Australian Geographical Studies*, 42, 325-338.

Forsyth, A. (2012). Defining suburbs. *Journal of Planning Literature,* 27, 270-281.

Google. (2015). *Monthly Reports.* Retrieved August 2015, from Google Self-Driving Car Project: http://www.google.com/selfdrivingcar/reports/

Government of Ontario. (1998). *Condominium Act, 1998.* Retrieved from http://www.ontario.ca/laws/statute/98c19

Government of Ontario. (2012, January 1). *Planning Act, R.S.O. 1990, c. P.13.* Retrieved October 25, 2015, from: http://www.ontario.ca/laws/statute/90p13

Grant, J., & Scott, D. (2012). Complete Communities Versus the Canadian Dream: Representations of Suburban Aspirations. *Canadian Journal of Urban Research*, 2(1), 132-157.

Grant, J. (2013). The future of the suburbs: Suburbs in transition. *Planning Theory & Practice*, 14(3), 391-415.

Grant, J. (2009). Theory and practice in planning the suburbs: Challenges to implementing new urbanism, smart growth, and sustainability principles. *Planning Theory & Practice*, 10, 11-33.

Harris, D. (2011). Condominium and the city: The rise of property in Vancouver. *Law & Social Inquiry*, 36(3), 694-726.

Henderson, S. (2011). *Making The Scene: Yorkville and Hip Toronto in the 1960s.* Toronto: University of Toronto Press.

Hiebert, D., Mendez, P., & Wyly, E. (2008). The Housing Situation and Needs of Recent Immigrants in the Vancouver Metropolitan Area. Vancouver: Metropolis British Columbia.

Hulchanski, D. (2007). The three cities within Toronto: Income polarization among Toronto's neighbourhoods, 1970-2005. Toronto: Cities Centre Press, University of Toronto.

Jarrett Walker. (2015). *Driverless taxis, driverless buses, and the future urban mobility mix.* Retrieved August 2015, from Human Transit: http://www.humantransit.org/2015/06/guest-post-driverless-taxis-driverless-buses-and-the-future-urban-mobility-mix.html

Kern, L. (2007). Reshaping the boundaries of public and private life: Gender, condominium development, and the neoliberalization of urban living. *Urban Geography*, 28, 657-681.

Lasner, M. G. (2012). *High Life: Condo Living in the Suburban Century.* New Haven: Yale University Press.

Lehrer, U., Keil, R., & Kipfer, S. (2010). Reurbanization in Toronto: Condominium boom and social housing revitalization. *disP – The Planning Review, 46 (180),* 81-90.

Lehrer, U., & Wieditz, T. (2009). Condominium development and gentrification: The relationship between policies, building activities and socio-economic development in Toronto. *Canadian Journal of Urban Research*, 18, 140-161.

Lehrer, U., & Milgrom, R. (1996). New (Sub)Urbanism: Countersprawl or repackaging the product. *Capitalism Natura Socialism*, 7(2), 46-64.

Ley, D. (2003). Artists, aestheticisation and the field of gentrification. *Urban Studies*, 40(12), 2527-2544.

Mathews, V. (2008). Artcetera: Narrativising gentrification in Yorkville, Toronto. *Urban Studies*, 45(13), 2849-2876.

Moos, M., & Mendez, P. (2015). Suburban ways of living and the geography of income: How homeownership, single-family dwellings and automobile use define the metropolitan social space. *Urban Studies,* 5, 1864-1882.

Moos, M., & Skaburskis, A. (2010). The globalization of urban housing markets: Immigration and changing housing demand in Vancouver. *Urban Geography*, 31(6), 724-749.

Murdie, R., Logan, J., & Maaranen, R. (2013). *Eight Canadian metropolitan areas: Who lived where in 2006?* Toronto: Cities Centre Press, University of Toronto.

Muth, R. (1969). *Cities and housing*. Chicago: University of Chicago Press.

Ontario Ministry of Energy. (2013). *Ontario Long Term Energy Plan 2013*. Retrieved from: http://www.energy.gov.on.ca/en/files/2014/10/LTEP_2013_English_WEB.pdf

Ontario Ministry of Finance. (2013). *Ontario Population Projections Update.* Retrieved from: http://www.fin.gov.on.ca/en/economy/demographics/projections/projections 2012-2036.pdf

Ontario Ministry of Infrastructure. (2006). *Growth Plan for the Greater Golden Horseshoe, 2006*. Retrieved from https://www.placestogrow.ca/content/ggh/plan-cons-english-all-web.pdf

Ontario Ministry of Municipal Affairs and Housing. (2014). *Pronvincial Policy Statement.* Retrieved from http://www.mah.gov.on.ca/AssetFactory.aspx?did=10463

Pavlic, D., & Qian, Z. (2013). Declining inner suburbs? A longitudinal- spatial analysis of large metropolitan regions in Canada. *Urban Geography*, 35(3), 378-401.

Perin, C. 1977. Everything in its place: Social order and land use in America. Princeton NJ: Princeton University Press.

Quastel, N., Moos, M., & Lynch, N. (2012). Sustainability-as-density and the return of the social: The case of Vancouver, British Columbia. *Urban Geography*, 33, 1055-1084.

Ricardo, D. (1969). The principles of political economy and taxation. London: Everyman's Library.

Rosen, G., & Walks, A. (2013). Rising cities: Condominium development and the private transformation of the metropolis. *Geoforum,* 49, 160-172.

Skaburskis, A. (2012). Gentrification and Toronto's changing household characteristics and income distribution. *Journal of Planning Education and Research,* 32, 191-203.

Skaburskis, A., & Moos, M. (2008). The redistribution of residential property values in Montreal, Toronto, and Vancouver: examining neoclassical and Marxist views on changing investment patterns. *Environment and Planning A* , 40, 905-927.

Skaburskis, A. (2006). New urbanism and sprawl: A Toronto case study. *Journal of Planning Education and Research,* 25, 233-248.

Statistics Canada. (2011). *2011 Census*. Canada.

Statistics Canada. (2011). *2011 National Household Survey.* Canada.

Town of Richmond Hill. (2010). *Richmond Hill Official Plan.* Richmond Hill: Town of Richmond Hill.

Toronto Real Estate Board. (2015). *Condo Market Report - First Quarter 2015.* Toronto: Toronto Real Estate Board.

Turcotte, M. (2008). *The city/suburb contrast: How can we measure it?* Retrieved from Statistics Canada: http://www.statcan.gc.ca/pub/11-008-x/2008001/article/10459-eng.htm

Urban Land Institute. (2014). *Emerging Trends in Real Estate 2014, Canada Edition.* Retrieved from: https://www.pwc.com/ca/en/real-estate/publications/pwc-emerging-trends-in-real-estate-2014-en.pdf

Walks, A. (2013). Suburbanism as a way of life, slight return. Urban Studies, 50, 1471-1488.

Walks, A., & Maaranen, R. (2008). Gentrification, social mix, and social polarization: Testing the linkages in large Canadian cities. *Urban Geography*, 29 (4), 293-326.

York Region. (2010). York Region Official Plan - 2010. York Region.

Young, D., Wood, P., & Keil, R. (Eds.). (2011). *In-between Infrastructure: Urban Connectivity in an Age of Vulnerability.* Canada: Praxis (e)Press.

Appendix A – Survey Data

Q2. Which municipality is your condominium located in?	#	%
Markham	49	79%
Richmond Hill	13	21%
Total	62	100%

Q3. When was your condominium constructed?	#	%
1991-2011	37	60%
After 2011	19	31%
Before 1991	5	8%
Don't know.	1	2%
Total	62	100%

Q4. Are you member of a visible minority?	#	%
No	34	55%
Yes	28	45%
Total	62	100%

Q5. What is your citizenship status?	#	%
Citizen	51	82%
Permanent Resident	7	11%
Temporary Resident	4	6%
Total	62	100%

Q6. How many years have you lived in Canada?	#	%
10 to 15	1	2%
16 to 20	6	10%
6 to 10	3	5%
Less than 5	9	15%
Over 20	41	68%
Total	60	100%

Q7. What is your ethnicity?	#	%
British Isles origins	7	10%
French origins	2	3%
Aboriginal origins	1	1%
Other North American Origins	4	6%
Caribbean origins	2	3%
Latin, Central and South American origins	1	1%
European origins	5	7%
African origins	2	3%
Arab origins	1	1%
West Asian origins	1	1%
South Asian origins	9	13%
East and Southeast Asian origins	29	43%
Oceania origins	0	0%
Other	3	4%
Total	67	100%

Q8. What is your relationship status?	#	%
Common Law	4	6%
Divorced	8	13%
Married	27	44%
Single	20	32%
Widowed	3	5%
Total	62	100%

Q9. What is your gender?	#	%
Female	31	50%
Male	31	50%
Total	62	100%

Q10. If married or common law, what is the gender of your spouse?	#	%
Female	15	45%
Male	18	55%
Total	33	100%

Q11. How old are you?	#	%
Under 20	1	2%
20 to 24	4	6%
25 to 29	9	15%
30 to 34	11	18%
35 to 39	9	15%
40 to 44	5	8%
45 to 49	5	8%
50 to 54	5	8%
55 to 59	3	5%
60 to 64	4	6%
65 and over	6	10%
Total	62	100%

Q12. What is your HIGHEST attained level of education?	#	%
Did not graduate high school	4	6%
Graduated high school	4	6%
Attained a college/trades school diploma	9	15%
Attained a Bachelor's degree	27	44%
Attained a Graduate's degree	18	29%
Total	62	100%

Q13. What is your household type?	#	%
Living alone	28	45%
Living with roommate	1	2%
Living with parents	2	3%
Single parent with children	5	8%
Living with spouse, with children	9	15%
Living with spouse, no children	17	27%
Total	62	100%

Q14. How many children are there in your household?	#	%
I do not live with any children	44	73%
1	5	8%
2	10	17%
3	0	0%
More than 3	1	2%
Total	60	100%

Q15. How many of them are under the age of 18?	#	%
0	38	81%
1	4	9%
2	4	9%
3	0	0%
More than 3	1	2%
Total	47	100%

Q16. What is your total household income (this includes your income, that of your spouse and/or any children earning an income, it does NOT include the income of any other renters living in your unit)?	#	%
Under $10,000	4	6%
$10,000 and over	7	11%
$35,000 and over	9	15%
$50,000 and over	10	16%
$75,000 and over	9	15%
$100,000 and over	7	11%
$125,000 and over	3	5%
$150,000 and over	5	8%
$175,000 and over	5	8%
$200,000 and over	3	5%
Total	62	100%

Q17. Are there any renters living in your unit (not counting yourself, your spouse or children if you rent)?	#	%
Yes	3	5%
No	59	95%
Total	62	100%

Q18. If you answered yes to question 17, how many renters are living in your unit?	#	%
1	1	33%
2	1	33%
3	0	0%
More than 3	1	33%
Total	3	100%

Q19. If you answered yes to question 17, what is the estimated total income of the other renters (not counting yourself, your spouse or children if you rent)?	#	%
Under $10,000	1	25%
$10,000 and over	2	50%
$50,000 and over	1	25%
Total	4	100%

Q20. What is your occupation?	#	%
Management	10	17%
Business, Finance and Administration	7	12%
Natural and Applied Sciences and Related	3	5%
Health	7	12%
Social Science, Education, Government Service, and Religion	4	7%
Art, Culture, Recreation and Sport	0	0%
Sales and Service	6	10%
Trades, Transport and Equipment Operators and Related	0	0%
Primary Industry (i.e. mining, oil, forestry, natural gas)	0	0%
Processing, Manufacturing and Utilities	2	3%
Other	21	35%
Total	60	100%

Q21. How is your work arrangement?	#	%
Full-time	44	81%
Part-time	10	19%
Total	54	100%

Q22. How often do you work from home? Please describe your work arrangement.	#	%
Never	24	53%
Sporadic	2	4%
Once a week or less	8	18%
More than twice a week	11	24%
Total	45	100%

Q23. Do you own or rent the unit you currently live in?	#	%
I own the unit	48	77%
I am renting the unit	14	23%
Total	62	100%

Q24. If you are renting, how much rent do you pay each month (not including utilities)?	#	%
$500 or less	2	13%
$1,000 or less	1	7%
$1,500 or less	5	33%
More than $1,500	7	47%
Total	15	100%

Q25. Are there any other people in the unit paying rent? If so, how much?	#	%
No	23	88%
$400	1	4%
$500	1	4%
Don't know	1	4%
Total	26	100%

Q26. If you own your unit, what are your approximately monthly mortgage payments?	#	%
No mortgage	17	38%
$500 or less	2	4%
$1,000 or less	15	33%
$1,500 or less	9	20%
More than $1,500	2	4%
Total	45	100%

Q27. Are you renting your unit to somebody else?	#	%
Yes	0	0%
No	54	100%
Total	54	100%

Q28. If you answered yes to question 27, how much rent are they paying you in total every month?	#	%
$500 and over	1	100%
Total	1	100%

Q29. Are you a first time homeowner?	#	%
Yes	24	40%
No	36	60%
Total	60	100%

Q30. How many people (including children) are living in your unit?	#	%
1	26	47%
2	17	31%
3	6	11%
4	5	9%
5	0	0%
More than 5	1	2%
Total	55	100%

Q31. How many of the people living in your unit are not a spouse, child or other family member?	#	%
0	48	96%
1	1	2%
2	0	0%
3	0	0%
More than 3	1	2%
Total	50	100%

Q32. What is the square footage of the unit you are living in?	#	%
Under 500 sq. ft.	6	10%
500 sq. ft. and over	35	56%
1000 sq. ft. and over	21	34%
2000 sq. ft. and over	0	0%
Total	62	100%

Q33. How many bedrooms are in your unit?	#	%
1	28	47%
2	27	45%
3	4	7%
More than 3	1	2%
Total	60	100%

Q34. How many total rooms are in your unit?	#	%
1	11	18%
2	21	34%
3	13	21%
4	8	13%
More than 4	9	15%
Total	62	100%

Q35. How long do you INTEND to live in this condominium?	#	%
Less than 1 year	5	8%
1 to 5 years	27	45%
More than 5 years	28	47%
Total	60	100%

Q36. What recreational facilities and amenities does your condominium include? (Check all that apply)	#	%
Gym	59	95%
Laundry room	5	8%
Storage lockers	60	97%
Bicycle lockers	47	76%
Car share parking	10	16%
Parking spot	59	95%
Swimming pool	40	65%
Party room	59	95%
Guest suite	48	77%
Retail space	18	29%
Office space	12	19%
Sports facility	29	47%
Private green space (i.e. Parks and gardens)	25	40%
Other (please specify)	11	18%
Total	62	

Q37. What type of dwelling (detached, semi-detached, townhouse, condominium, etc.) did you previously live in?	#	%
Single-detached house	28	50%
Semi-detached house	7	13%
Row house (Townhouse)	6	11%
Apartment in a building with 5 or more storeys	10	18%
Apartment in a building that has fewer than 5 storeys	5	9%
Other (please specify)	0	0%
Total	56	100%

Q38. Please rate from 1 (not at all important) to 5 (extremely important) how important were the following factors in your decision to move into this condominium?	%	1	%	2	%	3	%	4	%	5	n =
Affordability	22%	13	2%	1	19%	11	19%	11	39%	23	59
Better security	22%	13	12%	7	14%	8	17%	10	35%	20	58
Proximity to workplace	29%	16	4%	2	22%	12	11%	6	35%	19	55
Less maintenance	22%	13	7%	4	19%	11	19%	11	33%	19	58
Walkability	31%	18	5%	3	19%	11	17%	10	28%	16	58
Better access to public transit	29%	16	9%	5	18%	10	16%	9	27%	15	55
Proximity to grocery store	23%	13	11%	6	27%	15	14%	8	25%	14	56
Moving in with a partner	55%	30	9%	5	9%	5	4%	2	24%	13	55
Proximity to recreational facilities	25%	14	11%	6	14%	8	30%	17	21%	12	57
To live close to people with similar lifestyles	36%	20	16%	9	18%	10	15%	8	15%	8	55
Proximity to schools	62%	33	8%	4	2%	1	13%	7	15%	8	53
Having children	65%	35	4%	2	15%	8	4%	2	13%	7	54
Proximity to nature	49%	27	16%	9	20%	11	6%	3	9%	5	55
To move to a larger dwelling	59%	32	6%	3	17%	9	15%	8	4%	2	54

Q39. Do you plan on moving to a different type of dwelling in the next 5 years?	#	%
Yes	31	51%
No	30	49%
Total	61	100%

Q40. If you answered yes to question 39, what type of dwelling do you plan on moving into?	#	%
Single-detached house	8	23%
Semi-detached house	9	26%
Row house (Townhouse)	11	31%
Apartment in a building with 5 or more storeys	5	14%
Apartment in a building that has fewer than 5 storeys	2	6%
Total	35	100%

Q41. If you answered yes to question 39, where do you plan on moving?	#	%
Suburbs of Toronto (905 area)	19	56%
City of Toronto	6	18%
City outside of the GTA	4	12%
Small town or rural area outside the GTA	3	9%
Outside of Canada	2	6%
Total	34	100%

Q42. Please rate from 1 (not at all important) to 5 (extremely important) how important are the following factors in compelling you to want to move into a different dwelling type in the future.	%	1	%	2	%	3	%	4	%	5	n =
Moving in with a partner	43%	23	0%	0	17%	9	17%	9	23%	12	53
Having children	42%	22	11%	6	11%	6	17%	9	19%	10	53
Improvements in financial position	26%	14	6%	3	19%	10	24%	13	26%	14	54
To move to a larger dwelling	30%	16	4%	2	23%	12	23%	12	21%	11	53
To live close to people with similar lifestyles	37%	19	12%	6	25%	13	12%	6	15%	8	52
Proximity to schools	46%	23	10%	5	10%	5	18%	9	16%	8	50
Proximity to grocery store	22%	11	10%	5	28%	14	18%	9	24%	12	51
Proximity to recreational facilities	26%	13	12%	6	29%	15	12%	6	22%	11	51
Proximity to workplace	23%	12	8%	4	25%	13	17%	9	27%	14	52
Proximity to nature	28%	15	15%	8	17%	9	22%	12	19%	10	54
Less maintenance	35%	18	19%	10	15%	8	15%	8	15%	8	52
Better security	38%	19	16%	8	12%	6	4%	2	30%	15	50
Better access to public transit	30%	15	16%	8	18%	9	8%	4	28%	14	50
Walkability	29%	15	6%	3	22%	11	8%	4	35%	18	51

Q43. Do you own a car?	#	%
Yes	50	82%
No	11	18%
Total	61	100%

Q44. Are you currently a participant of any car sharing programs (i.e. Zipcar)?	#	%
Yes	1	2%
No	61	98%
Total	62	100%

Q45. What is your primary mode of transportation to run errands (shopping, groceries, etc.)?	#	%
Car	50	85%
Public transit	6	10%
Bike	0	0%
Walk	3	5%
Total	59	100%

Q46. On average, how often do you use the following modes of transportation? (1 = less than once a month, 2 = less than once a week, 3 = once a week, 4 = three times a week, 5 = almost every day)	%	1	%	2	%	3	%	4	%	5	n =
Car	9%	5	2%	2	%	3	%	4	74%	43	58
Public transit	59%	31	11%	1	10%	6	5%	3	15%	8	53
Bike	84%	38	2%	6	13%	7	2%	1	2%	1	45
Walk	28%	15	19%	1	9%	4	2%	1	19%	10	53
Other (please specify)	0%	0	0%	10	19%	10	15%	8	0%	0	0

Q47. What is your primary mode of transportation for getting to work?	#	%
Car	43	72%
Public transit	8	13%
Bike	2	3%
Walk	1	2%
Other/Not applicable	6	10%
Total	60	100%

Q48. If you are taking public transit to get to work, which one of the following do you use?	#	%
GO	10	22%
Greyhound	1	2%
Viva	17	37%
TTC	13	28%
Other (please specify)	5	11%
Total	46	100%

Q49. What is your average commuting DISTANCE for getting to your workplace (one way)?	#	%
5km or less	14	29%
15km or less	15	31%
50km or less	16	33%
50km or more	3	6%
Total	48	100%

Q50. What is your average commute TIME for getting to your workplace (one way)?	#	%
5 minutes or less	6	12%
15 minutes or less	12	23%
30 minutes or less	14	27%
1 hour or less	16	31%
More than 1 hour	4	8%
Total	52	100%

Q52. In your own words, please describe what factors you consider to be most important when choosing a place to live, and why. (multiple responses allowed)	#	%
Affordability	10	19%
Comfort	3	6%
Convenience	20	37%
Dwelling size	2	4%
Good community	7	13%
Green space	3	6%
Investment potential	4	7%
Lifestyle	2	4%
Luxury	3	6%
Parking	1	2%
Peaceful environment	8	15%
Proximity to grocery	9	17%
Proximity to malls	3	6%
Proximity to school	1	2%
Proximity to work	7	13%
Proximity to library	1	2%
Reputation of nearby school	2	4%
Security	15	28%
Similar people	3	6%
Walkability	3	6%
n =	54	-

Q53. Are there any particular amenities you look for when choosing where to live? Please explain why. (multiple responses allowed)	#	%
Coffee shop	1	2%
Green space	6	13%
Grocery	5	11%
Gym	10	22%
In-suite laundry	2	4%
Indoor parking	1	2%
Mall	4	9%
Parking	1	2%
Public transit	7	16%
Restaurant	6	13%
Swimming pool	2	4%
Trail	2	4%
n =	45	-

Q54. What do you consider to be the most important benefits and drawbacks of living in a condominium in Markham? (multiple responses allowed)	#	%
Affordability	3	7%
Appreciation potential	1	2%
Beautiful environment	1	2%
Cleanliness	1	2%
Convenience	3	7%
Great community	1	2%
Larger apartments	1	2%
Less crowded than downtown Toronto	1	2%
Less maintenance	10	24%
Privacy	2	5%
Proximity to amenities	7	17%
Proximity to downtown Toronto	2	5%
Proximity to similar people	2	5%
Proximity to work	1	2%
Security	2	5%
Sense of community	1	2%
Vibrant downtown	1	2%
View	1	2%
n =	41	-

Q55. What do you consider to be the most important benefits and drawbacks of living in a condominium in Markham? (multiple responses allowed)	#	%
Distance from downtown Toronto	3	9%
Distance from highway	1	3%
Distance from work	2	6%
High housing cost	1	3%
Lack of ethnic diversity	1	3%
Lack of green space	3	9%
Lack of privacy	3	9%
Lack of space	2	6%
Maintenance fee	3	9%
Nearby construction	1	3%
Not walkable	1	3%
Other ethnicities	1	3%
Parking & site service	1	3%
Poor appreciation potential	1	3%
Poor public transit	4	11%
Reliance on the automobile	2	6%
Sense of isolation	1	3%
Small dwelling size	1	3%
Traffic	3	9%
n =	35	-

Appendix B – Secondary Research Data

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Home Ownership	#	%	#	%	#	%	#	%	#	%	#	%
Owner	131,020	87.83%	4,395	72.60%	571,790	54.57%	24,460	38.60%	128,440	48.55%	11,275	29.50%
Renter	18,160	12.17%	1,650	27.30%	476,085	45.43%	38,855	61.40%	136,135	51.45%	26,920	70.50%
Total	149,180	100.00%	6,050	100.00%	1,047,875	100.00%	63,315	100.00%	264,575	100.00%	38,195	100.00%

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Population	#	%	#	%	#	%	#	%	#	%	#	%
0 to 4	26,230	5.38%	655	4.67%	140,510	5.37%	3,110	2.87%	24,770	4.10%	1,675	2.73%
5 to 9	28,965	5.94%	465	3.32%	128,060	4.90%	1,530	1.41%	22,400	3.71%	855	1.39%
10 to 14	30,965	6.36%	515	3.67%	132,290	5.06%	1,410	1.30%	24,175	4.01%	625	1.02%
15 to 19	34,840	7.15%	830	5.92%	150,045	5.74%	3,245	2.99%	29,095	4.82%	1,170	1.91%
20 to 24	32,945	6.76%	980	6.99%	183,470	7.02%	13,885	12.81%	44,285	7.34%	5,130	8.37%
25 to 29	29,420	6.04%	1,615	11.52%	211,850	8.10%	20,965	19.34%	59,465	9.85%	9,375	15.29%
30 to 34	27,915	5.73%	1,535	10.94%	201,165	7.69%	16,015	14.78%	53,335	8.84%	8,155	13.30%
35 to 39	34,510	7.08%	1,115	7.95%	190,405	7.28%	9,795	9.04%	47,230	7.83%	6,035	9.84%
40 to 44	39,695	8.15%	1,010	7.20%	197,400	7.55%	7,035	6.49%	48,640	8.06%	5,100	8.32%
45 to 49	42,500	8.72%	1,095	7.81%	207,625	7.94%	6,520	6.02%	49,195	8.15%	4,705	7.67%
50 to 54	39,025	8.01%	960	6.84%	191,290	7.31%	5,760	5.31%	44,105	7.31%	4,040	6.59%
55 to 59	33,530	6.88%	910	6.49%	162,535	6.22%	4,750	4.38%	39,500	6.55%	3,760	6.13%
60 to 64	28,740	5.90%	855	6.10%	140,960	5.39%	4,110	3.79%	35,365	5.86%	3,515	5.73%
65 to 69	18,905	3.88%	465	3.32%	102,445	3.92%	3,020	2.79%	22,845	3.79%	2,555	4.17%
70 to 74	14,505	2.98%	385	2.75%	86,185	3.30%	2,435	2.25%	18,800	3.12%	1,665	2.72%
75 to 79	10,850	2.23%	355	2.53%	74,215	2.84%	1,995	1.84%	15,870	2.63%	1,160	1.89%
80 to 84	7,540	1.55%	185	1.32%	59,630	2.28%	1,515	1.40%	12,305	2.04%	920	1.50%
85 and over	6,165	1.27%	95	0.68%	54,965	2.10%	1,320	1.22%	12,110	2.01%	835	1.36%
Total	487,250	100.00%	14,025	100.00%	2,615,060	100.00%	108,380	100.00%	603,500	100.00%	61,305	100.00%

Data source: Census of Canada (bottom); 2011 National Household Survey (top)

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Household Income (2010)	#	%	#	%	#	%	#	%	#	%	#	%
Under $5,000	3,260	2.19%	460	7.67%	40,120	3.83%	5,400	8.53%	14,115	5.34%	3,095	8.09%
$5,000 to $9,999	2,145	1.44%	255	4.25%	24,230	2.31%	1,855	2.93%	6,855	2.59%	990	2.59%
$10,000 to $14,999	2,905	1.95%	195	3.25%	36,950	3.53%	3,100	4.90%	12,250	4.63%	2,185	5.71%
$15,000 to $19,999	4,125	2.77%	275	4.58%	58,390	5.57%	3,215	5.08%	16,550	6.26%	2,550	6.67%
$20,000 to $29,999	8,625	5.78%	490	8.17%	99,650	9.51%	5,605	8.86%	23,885	9.03%	3,580	9.36%
$30,000 to $39,999	9,985	6.69%	660	11.00%	97,935	9.35%	4,670	7.38%	23,065	8.72%	3,715	9.71%
$40,000 to $49,999	9,560	6.41%	495	8.25%	95,330	9.10%	5,270	8.33%	23,490	8.88%	4,050	10.59%
$50,000 to $59,999	9,525	6.38%	575	9.58%	84,030	8.02%	4,990	7.88%	19,445	7.35%	2,700	7.06%
$60,000 to $79,999	18,530	12.42%	900	15.00%	135,840	12.96%	8,360	13.21%	33,690	12.73%	4,805	12.56%
$80,000 to $99,999	17,270	11.58%	655	10.92%	101,985	9.73%	5,965	9.42%	25,370	9.59%	3,040	7.95%
$100,000 to $124,999	17,380	11.65%	435	7.25%	84,855	8.10%	4,870	7.69%	21,650	8.18%	3,020	7.90%
$125,000 to $149,999	13,640	9.14%	250	4.17%	56,140	5.36%	2,870	4.53%	13,935	5.27%	1,305	3.41%
$150,000 and over	32,230	21.60%	350	5.83%	132,425	12.64%	7,120	11.25%	30,270	11.44%	3,215	8.41%
Total	149,180	100.00%	6,000	100.00%	1,047,880	100.00%	63,290	100.00%	264,570	100.00%	38,250	100.00%

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Gender Distribution	#	%	#	%	#	%	#	%	#	%	#	%
Male	237,650	48.77%	6,670	47.56%	1,255,585	48.01%	55,505	51.21%	295,095	48.90%	32,115	52.39%
Female	249,605	51.23%	7,355	52.44%	1,359,475	51.99%	52,875	48.79%	308,400	51.10%	29,190	47.61%
Total	487,255	100.00%	14,025	100.00%	2,615,060	100.00%	108,380	100.00%	603,495	100.00%	61,305	100.00%

Data source: Census of Canada (bottom); 2011 National Household Survey (top)

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Marital Status	#	%	#	%	#	%	#	%	#	%	#	%
Married/Common-law	249,380	62.18%	6,795	54.82%	1,131,780	51.11%	39,065	38.18%	264,105	49.63%	24,280	41.77%
Single	110,475	27.54%	3,845	31.02%	746,190	33.70%	51,585	50.42%	194,270	36.51%	25,405	43.70%
Separated	7,515	1.87%	445	3.59%	69,600	3.14%	2,480	2.42%	12,850	2.41%	1,510	2.60%
Divorced	15,895	3.96%	855	6.90%	140,240	6.33%	6,045	5.91%	35,825	6.73%	5,180	8.91%
Widowed	17,830	4.45%	455	3.67%	126,385	5.71%	3,140	3.07%	25,110	4.72%	1,755	3.02%
Total	401,095	100.00%	12,395	100.00%	2,214,195	100.00%	102,315	100.00%	532,160	100.00%	58,130	100.00%

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
	#	%	#	%	#	%	#	%	#	%	#	%
Average # of children per census family	1.30	-	1.02	-	1.10	-	0.59	-	1.00	-	0.39	-

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Citizenship Status	#	%	#	%	#	%	#	%	#	%	#	%
Citizen	434,670	89.71%	11,055	78.96%	2,214,540	85.97%	86,405	81.80%	507,695	86.02%	48,175	79.75%
Non-Citizen	49,835	10.29%	2,935	20.96%	361,485	14.03%	19,220	18.20%	82,515	13.98%	12,235	20.25%
Total	484,505	100.00%	14,000	100.00%	2,576,025	100.00%	105,625	100.00%	590,205	100.00%	60,410	100.00%

Data source: Census of Canada (top & middle); 2011 National Household Survey (bottom)

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Education	#	%	#	%	#	%	#	%	#	%	#	%
No certificate, diploma or degree	60,790	15.26%	1,855	15.16%	380,965	17.51%	7,260	7.30%	72,105	13.89%	3,050	5.30%
High school diploma or equivalent	94,420	23.70%	2,800	22.88%	523,320	24.05%	17,765	17.80%	118,345	22.80%	11,575	20.20%
Postsecondary certificate, diploma or degree	243,155	61.04%	7,585	61.97%	1,271,545	58.44%	74,800	74.90%	328,525	63.30%	42,545	74.40%
Total	398,360	100.00%	12,240	100.00%	2,175,830	100.00%	99,825	100.00%	518,975	100.00%	57,170	100.00%

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Immigration Status	#	%	#	%	#	%	#	%	#	%	#	%
Immigrants	275,065	56.77%	10,230	73.02%	1,252,215	48.61%	41,265	39.07%	258,750	43.84%	19,940	33.00%
Recent immigrants	72,640	14.99%	3,135	22.38%	411,480	15.97%	15,345	14.53%	74,980	12.70%	7,160	11.85%
Non-immigrants	203,865	42.08%	3,160	22.56%	1,258,870	48.87%	56,245	53.25%	308,495	52.27%	34,105	56.44%
Non-permanent residents	5,575	1.15%	600	4.28%	64,945	2.52%	8,100	7.67%	22,965	3.89%	6,355	10.52%
Total	484,510	100.00%	14,010	100.00%	2,576,025	100.00%	105,620	100.00%	590,205	100.00%	60,425	100.00%

Data source: 2011 National Household Survey

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Dwellings	#	%	#	%	#	%	#	%	#	%	#	%
Total # of dwellings	149,180	100.00%	6,040	100.00%	1,047,880	100.00%	63,735	100.00%	264,575	100.00%	38,180	100.00%
# of apartments with five storeys or higher	17,325	11.61%	4,275	70.78%	429,225	40.96%	54,070	84.84%	70,270	26.56%	31,605	82.78%

	Markham & Richmond Hill		Condo Cluster - Markham & Richmond Hill		Toronto		Condo Cluster - Downtown Toronto		Vancouver		Condo Cluster - Downtown Vancouver	
Primary Mode of Transportation for Work	#	%	#	%	#	%	#	%	#	%	#	%
Car Truck Van - Driver	165,665	74.97%	4,645	72.63%	567,555	48.32%	12,270	19.93%	141,435	47.97%	10,585	29.84%
Car Truck Van - Passenger	14,500	6.56%	460	7.19%	53,380	4.54%	1,110	1.80%	10,685	3.62%	660	1.86%
Public Transit	33,750	15.27%	1,080	16.89%	429,275	36.55%	19,815	32.18%	88,290	29.95%	9,355	26.37%
Walked	4,180	1.89%	210	3.28%	85,475	7.28%	24,980	40.57%	36,960	12.54%	13,135	37.03%
Bicycle	630	0.29%	0	0.00%	25,350	2.16%	2,460	4.00%	12,885	4.37%	1,105	3.11%
Other Methods	2,250	1.02%	0	0.00%	13,585	1.16%	925	1.50%	4,570	1.55%	630	1.78%
Total	220,975	100.00%	6,395	100.00%	1,174,620	100.00%	61,570	99.98%	294,825	100.00%	35,475	99.99%

Data source: Census of Canada (top); 2011 National Household Survey (bottom)

Appendix C – Highway 7 Transit Maps

route navigator 1 **Highway 7**

YORK REGION TRANSIT

eastbound
to Box Grove Walmart

Weekends/Holidays

Richmond Hill Centre Terminal	Bayview Ave. & Highway 7	Leslie St. & Highway 7	Cochrane Dr. & Highway 7	Woodbine Ave. & Highway 7	Warden Ave. & Highway 7	Kennedy Rd. & Highway 7	McCowan Rd. & Highway 7	Main St. & Highway 7	Markham Stouffville Hos.	Box Grove Walmart
4453	9724	6634	3217	6790	4165	4176	9751	9753	5095	6552
A	B	C		D	E	F	G	H	I	J
Saturday										
			6:10	6:11	6:14	6:19	6:22	6:26	6:32	6:38
6:44	6:52	6:57		7:01	7:04	7:09	7:12	7:16	7:22	7:28
7:34	7:42	7:47		7:51	7:54	7:59	8:02	8:06	8:12	8:18
8:24	8:32	8:37		8:41	8:44	8:49	8:52	8:56	9:02	9:08
9:14	9:22	9:27		9:31	9:34	9:39	9:42	9:46	9:52	9:58
			10:00	10:01	10:06	10:12	10:17	10:22	10:32	10:38
10:04	10:12	10:17		10:23	10:28	10:34	10:38	10:43	10:51	10:57
10:58	11:06	11:11		11:17	11:22	11:28	11:33	11:38	11:48	11:54
11:43	11:51	11:56		12:02	12:07	12:13	12:18	12:23	12:32	12:38
12:23	12:31	12:36		12:42	12:47	12:53	12:58	1:03	1:12	1:18
1:03	1:11	1:16		1:22	1:27	1:33	1:38	1:43	1:52	1:58
1:43	1:51	1:56		2:02	2:07	2:13	2:18	2:23	2:32	2:38
2:23	2:31	2:36		2:42	2:47	2:53	2:58	3:03	3:12	3:18
3:03	3:11	3:16		3:22	3:27	3:33	3:38	3:43	3:52	3:58
3:43	3:51	3:56		4:02	4:07	4:13	4:18	4:23	4:32	4:38
4:23	4:31	4:36		4:42	4:47	4:53	4:58	5:03	5:12	5:18
5:03	5:11	5:16		5:22	5:27	5:33	5:38	5:43	5:52	5:58
5:43	5:51	5:56		6:02	6:07	6:13	6:18	6:23	6:32	6:38
6:23	6:31	6:36		6:42	6:47	6:53	6:58	7:03	7:12	7:18
7:03	7:11	7:16		7:21	7:25	7:30	7:33	7:37	7:44	7:50
7:43	7:51	7:56		8:00	8:03	8:08	8:11	8:15	8:21	8:27
8:24	8:32	8:37		8:41	8:44	8:49	8:52	8:56	9:02	9:08
9:04	9:12	9:17		9:21	9:24	9:29	9:32	9:36	9:42	9:48
9:54	10:02	10:07		10:11	10:14	10:19	10:22	10:26	10:32	10:38
10:44	10:52	10:57		11:01	11:04	11:09	11:12	11:16	11:21	11:27
11:34	11:42	11:47		11:51	11:54	11:59	12:02	12:06	12:11	12:17
12:24	12:32	12:37		12:41	12:44	12:49	12:52	12:56	1:01	1:07
1:14	1:22	1:27		1:31	1:34	1:39	1:42	1:46	1:51	1:57
Sunday/Holiday										
			7:30	7:35	7:39	7:43	7:47	7:51	7:57	8:03
8:08	8:16	8:19		8:24	8:28	8:32	8:36	8:40	8:46	8:52
9:00	9:08	9:11		9:16	9:20	9:24	9:28	9:32	9:38	9:44
9:52	10:00	10:03		10:08	10:12	10:16	10:20	10:24	10:30	10:36
10:44	10:52	10:55		11:00	11:04	11:08	11:12	11:16	11:22	11:28
11:36	11:44	11:48		11:54	11:59	12:03	12:07	12:11	12:18	12:24
12:30	12:38	12:43		12:50	12:55	12:59	1:03	1:07	1:15	1:21
1:24	1:32	1:37		1:44	1:49	1:53	1:57	2:01	2:09	2:15
2:21	2:29	2:34		2:41	2:46	2:50	2:54	2:58	3:06	3:12
3:18	3:26	3:31		3:38	3:43	3:47	3:51	3:55	4:03	4:09
4:15	4:23	4:27		4:33	4:38	4:42	4:46	4:50	4:57	5:03
5:12	5:20	5:24		5:30	5:35	5:39	5:43	5:47	5:54	6:00
6:09	6:17	6:21		6:27	6:32	6:36	6:40	6:44	6:51	6:57
7:05	7:13	7:16		7:21	7:25	7:29	7:33	7:37	7:43	7:49
7:55	8:03	8:06		8:11	8:15	8:19	8:23	8:27	8:33	8:39
8:47	8:55	8:58		9:03	9:07	9:11	9:15	9:19	9:25	9:31
9:39	9:47	9:50		9:55	9:59	10:03	10:07	10:11	10:17	10:23
10:31	10:39	10:42		10:46	10:50	10:54	10:58	11:02	11:08	11:14
11:23	11:31	11:34		11:38	11:42	11:46	11:50	11:54	12:00	12:06

Bus Stop Number

westbound
to Richmond Hill Centre

Weekends/Holidays

Box Grove Walmart	Markham Stouffville Hosp.	Main St. & Highway 7	McCowan Rd. & Highway 7	Kennedy Rd. & Highway 7	Town Centre & Highway 7	Woodbine Ave. & Highway 7	Leslie St. & Highway 7	Richmond Hill Centre Terminal
6552	1555	9754	9752	4716	1549	6791	6635	4453
J	I	H	G	F		D	C	A
Saturday								
						6:22	6:27	6:39
6:43	6:50	6:58	7:01	7:04	7:09	7:12	7:17	7:29
7:33	7:40	7:48	7:51	7:54	7:59	8:02	8:07	8:19
8:23	8:30	8:38	8:41	8:44	8:49	8:52	8:57	9:09
9:13	9:20	9:28	9:31	9:34	9:39	9:42	9:47	9:59
10:03	10:10	10:18	10:22	10:25	10:32	10:35	10:42	10:54
10:43	10:50	10:58	11:03	11:07	11:14	11:17	11:24	11:38
11:23	11:30	11:38	11:43	11:47	11:54	11:57	12:04	12:18
12:03	12:10	12:18	12:23	12:27	12:34	12:37	12:44	12:57
12:43	12:50	12:58	1:03	1:07	1:14	1:17	1:24	1:37
1:23	1:30	1:38	1:43	1:47	1:54	1:57	2:04	2:17
2:03	2:10	2:18	2:23	2:27	2:34	2:37	2:44	2:57
2:43	2:50	2:58	3:03	3:07	3:14	3:17	3:24	3:37
3:23	3:30	3:38	3:43	3:47	3:54	3:57	4:04	4:17
4:03	4:10	4:18	4:23	4:27	4:34	4:37	4:44	4:57
4:43	4:50	4:58	5:03	5:07	5:14	5:17	5:24	5:37
5:23	5:30	5:38	5:43	5:47	5:54	5:57	6:04	6:17
6:03	6:10	6:18	6:23	6:27	6:34	6:37	6:44	6:57
6:43	6:50	6:58	7:03	7:07	7:14	7:17	7:24	7:37
7:23	7:30	7:37	7:40	7:43	7:48	7:51	7:56	8:08
8:13	8:20	8:27	8:30	8:33	8:38	8:41	8:46	8:58
9:03	9:10	9:17	9:20	9:23	9:28	9:31	9:36	9:48
9:53	10:00	10:07	10:10	10:13	10:18	10:21	10:26	10:38
10:43	10:50	10:56	10:59	11:02	11:07	11:10	11:15	11:27
11:33	11:40	11:46	11:49	11:52	11:57	12:00	12:05	12:17
12:23	12:30	12:36	12:39	12:42	12:47	12:50	12:55	1:07
1:13	1:20	1:26	1:29	1:32	1:37	1:40	1:45	1:57
Sunday/Holiday								
						7:46	7:51	8:03
8:08	8:14	8:21	8:24	8:28	8:33	8:37	8:42	8:54
9:00	9:06	9:13	9:16	9:20	9:25	9:29	9:34	9:46
9:52	9:58	10:05	10:08	10:12	10:17	10:21	10:26	10:38
10:44	10:50	10:57	11:00	11:04	11:09	11:13	11:18	11:30
11:36	11:42	11:50	11:53	11:57	12:02	12:07	12:13	12:25
12:28	12:34	12:42	12:45	12:49	12:54	12:59	1:05	1:17
1:25	1:31	1:40	1:43	1:47	1:52	1:57	2:03	2:15
2:22	2:28	2:37	2:40	2:44	2:49	2:54	3:00	3:12
3:19	3:25	3:34	3:37	3:41	3:46	3:51	3:57	4:09
4:16	4:22	4:31	4:34	4:38	4:43	4:48	4:54	5:06
5:13	5:19	5:28	5:31	5:35	5:40	5:45	5:51	6:03
6:10	6:16	6:25	6:28	6:32	6:37	6:42	6:48	7:00
7:02	7:08	7:14	7:17	7:21	7:26	7:30	7:35	7:47
7:54	8:00	8:06	8:09	8:13	8:18	8:22	8:27	8:39
8:46	8:52	8:58	9:01	9:05	9:10	9:14	9:19	9:31
9:38	9:44	9:50	9:53	9:57	10:02	10:06	10:11	10:23
10:30	10:36	10:41	10:44	10:48	10:53	10:56	11:01	11:13
11:22	11:28	11:33	11:36	11:40	11:45	11:48	11:53	12:05

route navigator 1 **Highway 7**

YORK REGION TRANSIT

revised schedule

Monday-Sunday/Holiday

Effective April 19, 2015

The schedule will be adjusted to better reflect actual travel time and to improve on-time performance.
Weekdays:
All eastbound short trips departing Woodbine Avenue/Highway 7 will change to depart from Cochrane Drive/Highway 7.
Departure time changes:
- First eastbound trip to depart Cochrane Dr./Highway 7 at 4:04 a.m.
- First eastbound trip to depart Richmond Hill Centre Terminal at 5:22 a.m.
- Last eastbound trip to depart Richmond Hill Centre Terminal at 1:16 a.m.
- Last westbound trip to depart from Box Grove WalMart at 12:29 a.m.

Frequency changes:
- Early morning every 31 minutes
- Morning rush hour every 26 minutes
- Midday every 40 minutes
- Afternoon rush hour every 28 minutes
- Evening every 36 minutes

Changes continued on inside...

Map Legend

Direction of Travel · Time Point · Bus Terminal · GO Station · College/University · Community Centre · Hospital · Library · Municipal Office · Park & Ride · Secondary School · Shopping Centre

route navigator **77***

*includes branches 77/77A

Highway 7

YORK REGION TRANSIT

eastbound

Weekends/Holidays

Hwy. 7 & Hwy. 50	Hwy. 7 & Vaughan Valley	Hwy. 7 & Martin Grove Rd.	Hwy. 7 & Islington Ave.	Hwy. 7 & Weston Rd.	Hwy. 7 & Jane St.	Hwy. 7 & Keele St.	Promenade Terminal	Yonge St. & Centre St.	Yonge St. & Steeles Ave.	Finch GO Bus Terminal
6194	5691	9700	9703	9709	4153	4155	4024	4039	9817	2330
A	B		C			D	E		F	G
Saturday										
							5:05	5:10	5:16	5:19
4:47	4:58	5:00	5:03	5:12	5:15	5:20	5:29	5:34	5:40	5:43
5:18	5:29	5:31	5:34	5:43	5:46	5:51	6:00	6:05	6:11	6:14
5:49	6:00	6:02	6:05	6:14	6:17	6:22	6:31	6:36	6:42	6:45
6:18	6:31	6:33	6:36	6:45	6:48	6:53	7:02	7:07	7:13	7:16
6:49	7:02	7:04	7:07	7:16	7:19	7:24	7:33	7:38	7:44	7:47
7:20	7:33	7:35	7:38	7:47	7:50	7:55	8:04	8:09	8:15	8:18
7:51	8:04	8:06	8:09	8:18	8:21	8:26	8:35	8:40	8:46	8:49
8:22	8:35	8:37	8:40	8:49	8:52	8:57	9:06	9:11	9:17	9:20
8:53	9:06	9:08	9:11	9:20	9:23	9:28	9:37	9:42	9:48	9:51
9:24	9:37	9:39	9:42	9:51	9:54	9:59	10:08	10:13	10:19	10:22
9:55	10:08	10:13	10:17	10:24	10:29	10:33	10:41	10:47	10:54	10:57
10:26	10:39	10:44	10:48	10:55	11:00	11:04	11:12	11:18	11:25	11:28
11:02	11:10	11:15	11:19	11:26	11:31	11:35	11:43	11:49	11:56	11:59
11:33	11:41	11:46	11:50	11:57	12:02	12:06	12:14	12:20	12:27	12:30
12:04	12:12	12:17	12:21	12:28	12:33	12:37	12:45	12:51	12:58	1:01
12:35	12:43	12:48	12:52	12:59	1:04	1:08	1:16	1:22	1:29	1:32
1:06	1:14	1:19	1:23	1:30	1:35	1:39	1:47	1:53	2:00	2:03
1:37	1:45	1:50	1:54	2:01	2:06	2:10	2:18	2:24	2:31	2:34
2:08	2:16	2:21	2:25	2:32	2:37	2:41	2:49	2:55	3:02	3:05
2:39	2:47	2:52	2:56	3:03	3:08	3:12	3:20	3:26	3:33	3:36
3:10	3:18	3:23	3:27	3:34	3:39	3:43	3:51	3:57	4:04	4:07
3:41	3:49	3:54	3:58	4:05	4:10	4:14	4:22	4:28	4:35	4:38
4:12	4:20	4:25	4:29	4:36	4:41	4:45	4:53	4:59	5:06	5:09
4:43	4:51	4:56	5:00	5:07	5:12	5:16	5:24	5:30	5:37	5:40
5:14	5:22	5:27	5:31	5:38	5:43	5:47	5:55	6:01	6:08	6:11
5:45	5:53	5:58	6:02	6:09	6:14	6:18	6:26	6:32	6:39	6:42
6:16	6:24	6:29	6:33	6:40	6:45	6:49	6:57	7:03	7:10	7:13
6:47	6:55	7:00	7:04	7:11	7:16	7:20	7:28	7:34	7:41	7:44
7:18	7:26	7:28	7:32	7:41	7:44	7:49	7:58	8:04	8:10	8:13
7:43	7:57	7:59	8:03	8:12	8:15	8:20	8:29	8:35	8:41	8:44
8:14	8:28	8:30	8:34	8:43	8:46	8:51	9:00	9:06	9:12	9:15
8:45	8:59	9:01	9:05	9:14	9:17	9:22	9:31	9:37	9:43	9:46
9:16	9:30	9:32	9:36	9:45	9:48	9:53	10:02	10:08	10:14	10:17
9:47	10:01	10:03	10:07	10:16	10:19	10:24	10:33	10:39	10:45	10:48
10:18	10:32	10:34	10:38	10:47	10:50	10:55	11:04	11:10	11:16	11:19
10:49	11:03	11:05	11:09	11:18	11:21	11:26	11:35	11:41	11:47	11:50
11:20	11:34	11:36	11:40	11:49	11:52	11:57	12:06	12:12	12:18	12:21
Sunday/Holiday										
7:57	8:08	8:10	8:12	8:21	8:24	8:28	8:37		8:52	8:55
8:39	8:50	8:52	8:54	9:03	9:06	9:10	9:19		9:34	9:37
9:21	9:32	9:34	9:36	9:45	9:48	9:52	10:01		10:16	10:19
10:03	10:14	10:16	10:18	10:27	10:30	10:34	10:43		10:58	11:01
10:45	10:56	10:58	11:00	11:09	11:12	11:16	11:25		11:40	11:43
11:27	11:38	11:40	11:42	11:51	11:54	11:58	12:07		12:22	12:25
12:09	12:18	12:21	12:25	12:33	12:37	12:41	12:50		1:06	1:09
12:51	1:00	1:03	1:07	1:15	1:19	1:23	1:32		1:48	1:51
1:34	1:42	1:45	1:49	1:57	2:01	2:05	2:14		2:30	2:33
				and every 42 minutes until						
6:28	6:36	6:39	6:43	6:51	6:55	6:59	7:08		7:24	7:27
7:10	7:22	7:24	7:26	7:34	7:37	7:41	7:50		8:04	8:07
7:52	8:04	8:06	8:08	8:16	8:19	8:23	8:32		8:46	8:49
8:32	8:46	8:48	8:50	8:58	9:01	9:05	9:14		9:28	9:31
9:14	9:28	9:30	9:32	9:40	9:43	9:47	9:56		10:10	10:13
9:56	10:10	10:12	10:14	10:22	10:25	10:29	10:38		10:52	10:55

Bus Stop Number

westbound

Weekends/Holidays

Finch GO Bus Terminal	Yonge St. & Steeles Ave.	Yonge St. & Centre St.	Clark Ave. & New Westminster Dr.	Promenade Terminal	Hwy. 7 & Keele St.	Hwy. 7 & Jane St.	Hwy. 7 & Weston Rd.	Hwy. 7 & Islington Ave.	Hwy. 7 & Martin Grove Rd.	Hwy. 7 & Hwy. 50
2330	9770	4038	1388	4031	4130	4132	9710	9704	4302	6194
G	F			E	D			C		A
Saturday										
						4:25	4:29	4:36	4:41	4:47
						4:56	5:00	5:07	5:12	5:18
						5:27	5:31	5:38	5:43	5:49
5:26	5:31	5:35		5:42	5:53	5:58	6:02	6:08	6:12	6:18
5:57	6:02	6:06		6:13	6:24	6:29	6:33	6:39	6:43	6:49
6:28	6:33	6:37		6:44	6:55	7:00	7:04	7:10	7:14	7:20
6:59	7:04	7:08		7:15	7:26	7:31	7:35	7:41	7:45	7:51
7:30	7:35	7:39		7:46	7:57	8:02	8:06	8:12	8:16	8:22
8:01	8:06	8:10		8:17	8:28	8:33	8:37	8:43	8:47	8:53
8:32	8:37	8:41		8:48	8:59	9:04	9:08	9:14	9:18	9:24
9:03	9:08	9:12		9:19	9:30	9:35	9:39	9:45	9:49	9:55
9:34	9:39	9:43		9:50	10:01	10:06	10:10	10:16	10:20	10:26
10:05	10:10	10:16		10:24	10:36	10:40	10:44	10:51	10:55	11:02
10:36	10:41	10:47		10:55	11:07	11:11	11:15	11:22	11:26	11:33
11:07	11:12	11:18		11:26	11:38	11:42	11:46	11:53	11:57	12:04
11:38	11:43	11:49		11:57	12:09	12:13	12:17	12:24	12:28	12:35
12:09	12:14	12:20		12:28	12:40	12:44	12:48	12:55	12:59	1:06
12:40	12:45	12:51		12:59	1:11	1:15	1:19	1:26	1:30	1:37
1:11	1:16	1:22		1:30	1:42	1:46	1:50	1:57	2:01	2:08
1:42	1:47	1:53		2:01	2:13	2:17	2:21	2:28	2:32	2:39
2:13	2:18	2:24		2:32	2:44	2:48	2:52	2:59	3:03	3:10
2:44	2:49	2:55		3:03	3:15	3:19	3:23	3:30	3:34	3:41
3:15	3:20	3:26		3:34	3:46	3:50	3:54	4:01	4:05	4:12
3:46	3:51	3:57		4:05	4:17	4:21	4:25	4:32	4:36	4:43
4:17	4:22	4:28		4:36	4:48	4:52	4:56	5:03	5:07	5:14
4:48	4:53	4:59		5:07	5:19	5:23	5:27	5:34	5:38	5:45
5:19	5:24	5:30		5:38	5:50	5:54	5:58	6:05	6:09	6:16
5:50	5:55	6:01		6:09	6:21	6:25	6:29	6:36	6:40	6:47
6:21	6:26	6:32		6:40	6:52	6:56	7:00	7:07	7:11	7:18
6:52	6:57	7:02		7:09	7:20	7:24	7:28	7:35	7:38	7:43
7:23	7:28	7:33		7:40	7:51	7:55	7:59	8:06	8:09	8:14
7:54	7:59	8:04		8:11	8:22	8:26	8:30	8:37	8:40	8:45
8:25	8:30	8:35		8:42	8:53	8:57	9:01	9:08	9:11	9:16
8:56	9:01	9:06		9:13	9:24	9:28	9:32	9:39	9:42	9:47
9:27	9:32	9:37		9:44	9:55	9:59	10:03	10:10	10:13	10:18
9:58	10:03	10:08		10:15	10:26	10:30	10:34	10:41	10:44	10:49
10:29	10:34	10:39		10:46	10:57	11:01	11:05	11:12	11:15	11:20
11:00	11:05	11:10		11:17	11:28	11:32	11:36	11:43	11:46	11:51
11:31	11:36	11:41		11:48	11:59	12:03	12:07	12:14	12:17	12:22
12:02	12:07	12:12		12:19	12:30	12:34	12:38	12:45	12:48	12:53
Sunday/Holiday										
						7:36	7:40	7:47	7:51	7:57
						8:18	8:22	8:29	8:33	8:39
						9:00	9:04	9:11	9:15	9:21
9:08	9:13		9:21	9:27	9:38	9:42	9:46	9:53	9:57	10:03
9:50	9:55		10:03	10:09	10:20	10:24	10:28	10:35	10:39	10:45
10:32	10:37		10:45	10:51	11:02	11:06	11:10	11:17	11:21	11:27
11:14	11:19		11:27	11:33	11:44	11:48	11:52	11:59	12:03	12:09
11:56	12:01		12:09	12:15	12:26	12:30	12:34	12:41	12:45	12:51
12:38	12:43		12:53	1:00	1:12	1:16	1:20	1:27	1:29	1:34
				and every 42 minutes until						
7:38	7:42		7:50	7:57	8:08	8:12	8:17	8:24	8:27	8:32
8:20	8:24		8:32	8:39	8:50	8:54	8:59	9:06	9:09	9:14
9:02	9:06		9:14	9:21	9:32	9:36	9:41	9:48	9:51	9:56
9:44	9:48		9:56	10:03	10:14	10:18	10:23	10:30	10:33	10:38
10:26	10:30		10:38	10:45	10:56	11:00	11:05	11:12	11:15	11:20
11:08	11:12		11:20	11:27	11:38	11:42	11:47	11:54	11:57	12:02

notes

When necessary, layovers in the eastbound direction will take place at Highway 7/Vaughan Valley Blvd.

route navigator **77***

*includes branches 77/77A

Highway 7

YORK REGION TRANSIT

revised schedule

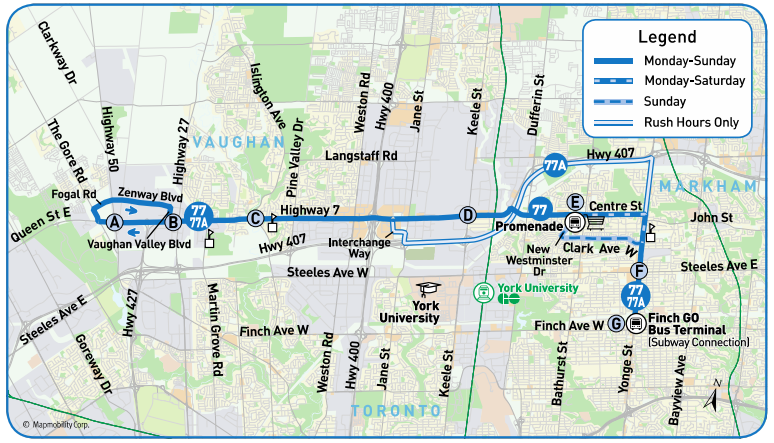
Monday-Sunday

Effective November 2, 2014

Weekdays:
The schedule for Route 77A will be adjusted to reflect actual travel time.

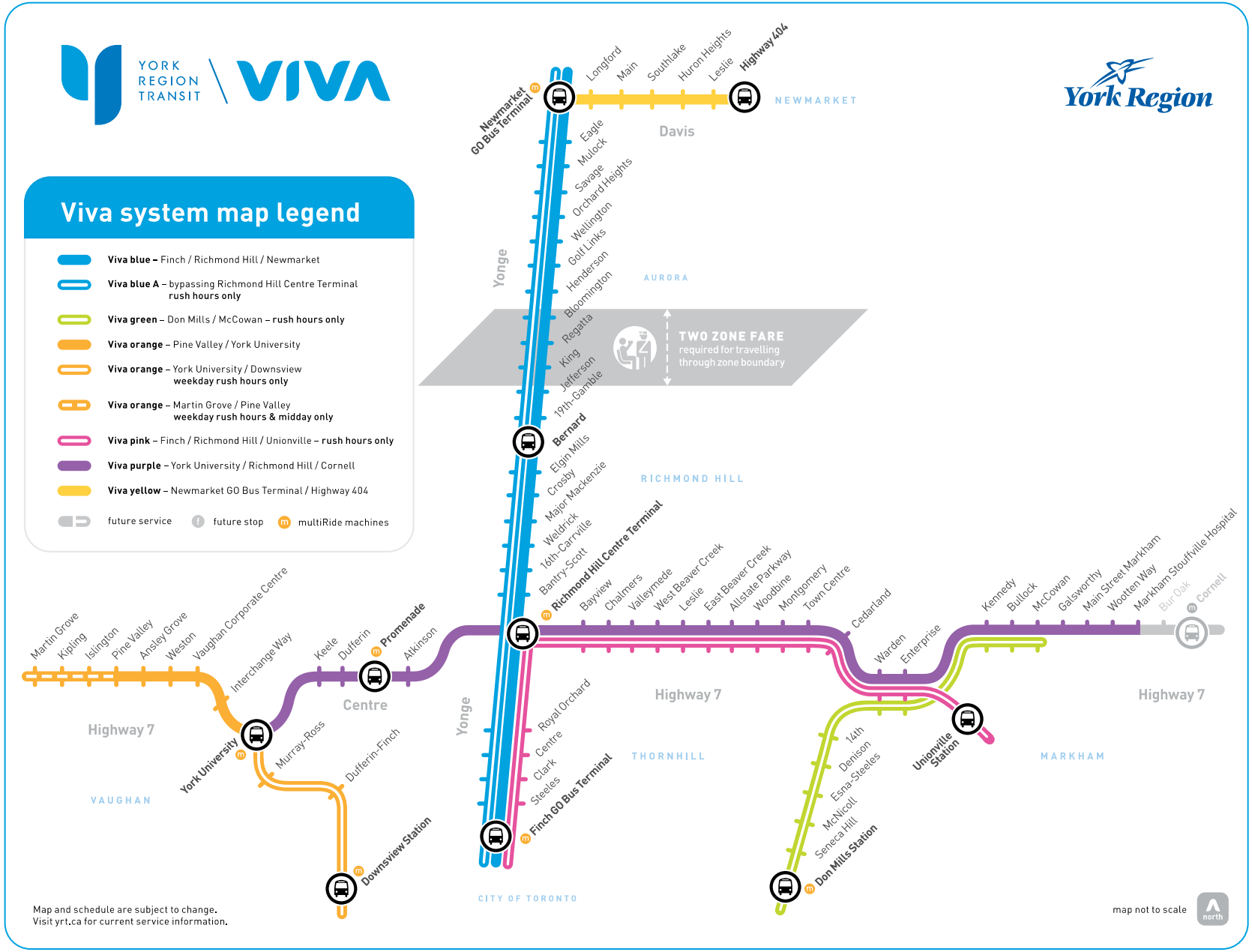
Route 77A frequency adjustment:
Afternoon rush hours every 35 minutes

Note: Route 77A does not service stops on Yonge Street between Yonge St./Centre St. and Yonge St./Hwy 407.



Map Legend

Direction of Travel · Time Point · Bus Terminal · GO Station · College/University · Community Centre · Hospital · Library · Municipal Office · Park & Ride · Secondary School · Shopping Centre


YORK REGION TRANSIT
VIVA
York Region
Viva system map legend
Viva blue – Finch / Richmond Hill / Newmarket
Viva blue A – bypassing Richmond Hill Centre Terminal rush hours only
Viva green – Don Mills / McCowan – rush hours only
Viva orange – Pine Valley / York University
Viva orange – York University / Downsview weekday rush hours only
Viva orange – Martin Grove / Pine Valley weekday rush hours & midday only
Viva pink – Finch / Richmond Hill / Unionville – rush hours only
Viva purple – York University / Richmond Hill / Cornell
Viva yellow – Newmarket GO Bus Terminal / Highway 404
future service
future stop
multiRide machines
Newmarket GO Bus Terminal
Longford
Main
Southlake
Huron Heights
Leslie
Highway 404
NEWMARKET
Davis
Eagle
Mulock
Savage
Orchard Heights
Wellington
Golf Links
Henderson
Bloomington
Yonge
AURORA
Regatta
King
Jefferson
19th-Gamble
TWO ZONE FARE
required for travelling through zone boundary
Bernard
Elgin Mills
Crosby
Major Mackenzie
RICHMOND HILL
Weldrick
16th-Carrville
Bantry-Scott
Richmond Hill Centre Terminal
Bayview
Chalmers
Valleymede
West Beaver Creek
Leslie
East Beaver Creek
Allstate Parkway
Woodbine
Montgomery
Town Centre
Cedarland
Warden
Enterprise
Kennedy
Bullock
McCowan
Galsworthy
Main Street Markham
Wootten Way
Markham Stouffville Hospital
Bur Oak
Cornell
Martin Grove
Kipling
Islington
Pine Valley
Ansley Grove
Weston
Vaughan Corporate Centre
Interchange Way
Keele
Dufferin
Promenade
Atkinson
Centre
Highway 7
Highway 7
Highway 7
York University
Murray-Ross
Dufferin-Finch
Downsview Station
VAUGHAN
Yonge
Royal Orchard
Centre
Clark
Steeles
Finch GO Bus Terminal
THORNHILL
CITY OF TORONTO
14th
Denison
Esna-Steeles
McNicoll
Seneca Hill
Don Mills Station
Unionville Station
MARKHAM
Map and schedule are subject to change.
Visit yrt.ca for current service information.
map not to scale
north