Transit-Oriented Density Cannot Mitigate Climate Change if it does not Prevent Displacement: A review of Toronto's and Montreal's Approach to Climate Change in Planning Documents

Supervised Research Project Report
Submitted in partial fulfillment of the Master of Urban Planning degree

Submitted by: Michelle Brais

Supervised by: Dr Anna Kramer

School of Urban Planning
McGill University
August 2021

TABLE OF CONTENTS

ABSTRACT **3**

RÉSUMÉ **4**

ACKNOWLEDGEMENTS **5**

INTRODUCTION **6**

1. LITERATURE REVIEW: THE SOCIAL AND ENVIRONMENTAL IMPACTS OF TRANSIT-ORIENTED DENSITY **10**

2. RESEARCH QUESTION AND METHODS: IS AFFORDABLE HOUSING PROTECTED AND EXPANDED WHERE THERE IS TRANSIT-ORIENTED DENSIFICATION? **18**

3. PLAN ANALYSIS: A LOOK AT PLANNING APPROACHES, INTENSIFICATION POLICIES, & AFFORDABLE HOUSING POLICIES **19**

3.1 TORONTO *20*

3.1.1 BACKGROUND 21

Population, Housing, and Transportation 21

Planning Documents 22

3.1.2 ANALYSIS 23

Planning Approach to Sustainability-as-Density 23

Intensification Policies and Their Impacts on Housing Affordability and Displacement 25

Affordable Housing Policies: their Presence, Absence, and Effectiveness 34

3.2 MONTREAL *37*

3.2.1 BACKGROUND 38

Population, Housing, and Transportation 38

Planning Documents 40

3.2.2 ANALYSIS 41

Planning Approach to Sustainability-as-Density 41

Intensification Policies and Their Impacts on Housing Affordability and Displacement 43

Affordable Housing Policies: their Presence, Absence, and Effectiveness 51

3.3 SUMMARY OF THE FINDINGS *58*

4. RECOMMENDATIONS: URBAN CLIMATE JUSTICE THROUGH TRANSIT-ORIENTED AFFORDABILITY **60**

CONCLUSION **64**

REFERENCES **66**

APPENDIX 1: CITY STATISTICS **76**

APPENDIX 2: SPATIAL ANALYSIS MAPS **78**

APPENDIX 3: COMPARISON OF STATISTICS INSIDE AND OUTSIDE TARGETED GROWTH AREAS **84**

ABSTRACT

Transit-oriented development is encouraged through sustainability-as-density policies that operate on the notion that urban design which promotes higher building density, mixed use, and good transit access will decrease cities' carbon footprint by encouraging residents to shift transportation modes from cars to public and active transportation. However, through eco-gentrification, these policies can contribute to the displacement of low-income households who are most likely to use and depend on transit, have contributed the least to GHG emissions, and are the most vulnerable to climate issues, to be replaced with households who own and use cars more. In order for sustainability-as-density policies to both assure social justice and climate action, they must protect and provide affordable housing in transit-oriented developments. This paper analyzes the climate planning policies of Canada's two largest cities, Toronto and Montreal, in order to determine if their sustainability-as-density measures to reduce GHG emissions from transportation are coupled with affordable housing policies. The provincial, regional, and municipal land-use plans are examined through a content analysis interrogating how and if housing affordability is considered in these policies, and to what degree are they likely to offset development-driven displacement of low-income, transit rider households. The findings show that affordable housing policies are not strong, inclusive, widespread, or effective in these cities, and they rely on market forces to provide housing for all households. Intensification policies target high-density areas home to lower-income renters, rather than more privileged areas that are still accessible to transit. Affordable housing is an afterthought in these cities' climate planning and are likely to stall them from reaching their modal shift and GHG emission goals. There needs to be better protections for affordable housing, and a greater supply of new affordable housing assured through plans and policies that not only set intentions but also requirements for affordable housing in transit-oriented development. Most importantly, governments need to support these targets and requirements through funding and programs.

RÉSUMÉ

Le développement lié au transport en commun (TOD) est encouragé par des politiques de densité durable qui reposent sur l'idée qu'un aménagement urbain favorisant une densité de construction plus élevée, des usages mixtes et un bon accès au transport en commun réduira l'empreinte carbone des villes en encourageant les résidents à passer de la voiture au transport collectif et actif. Cependant, par le biais de l'éco-gentrification, ces politiques peuvent contribuer au déplacement des ménages à faible revenu qui sont les plus susceptibles d'utiliser et de dépendre des transports en commun, qui ont le moins contribué aux émissions de GES et qui sont les plus vulnérables aux problèmes climatiques, pour être remplacés par des ménages qui possèdent et utilisent davantage la voiture. Pour que les politiques de densité durable assurent à la fois la justice sociale et l'action climatique, elles doivent protéger et fournir des logements abordables dans les TODs. Ce document analyse les politiques de planification climatique des deux plus grandes villes du Canada, Toronto et Montréal, afin de déterminer si leurs mesures de densité durable visant à réduire les émissions de GES provenant du transport sont couplées à des politiques de logement abordable. Les plans d'aménagement du territoire provinciaux, régionaux et municipaux sont examinés par le biais d'une analyse de contenu visant à déterminer si et comment l'abordabilité du logement est prise en compte dans ces politiques, et dans quelle mesure elles sont susceptibles de compenser le déplacement des ménages à faible revenu. Les résultats montrent que les politiques de logement abordable ne sont pas fortes, inclusives, répandues ou efficaces dans ces villes, et qu'elles s'en remettent aux forces du marché pour fournir un logement à tous les ménages. Les politiques d'intensification et de densification ciblent les zones à forte densité où vivent les locataires à faible revenu, plutôt que les zones plus privilégiées qui restent accessibles aux transports en commun. Le logement abordable est une réflexion après coup dans la planification climatique de ces villes et risque de les empêcher d'atteindre leurs objectifs de transfert modal et d'émissions de GES. Il est nécessaire de mieux protéger les logements abordables et d'augmenter l'offre de nouveaux logements abordables grâce à des plans et des politiques qui ne se contentent pas de fixer des intentions, mais qui imposent également des exigences en matière de logements abordables dans les TODs. Plus important encore, les gouvernements doivent soutenir ces objectifs et ces exigences par du financement et des programmes.

ACKNOWLEDGEMENTS

The work was funded by the Insight Development Grant titled “Zoning, residential density and housing affordability” led by Anna Kramer. I would like to thank Dr Kramer who was the supervisor of this project for her guidance, reviews, edits, and general support. I also wish to thank Prof. Lisa M. Bornstein for her guidance and support in the beginning stages of the project. I would finally like to acknowledge the people in the study group that supported me and helped me complete this project, Patricia Deer, Valentina Samoylenko, and Zane Davey.

INTRODUCTION

Climate Planning in Cities

Human-induced climate change is one the greatest global challenges of the 21st century. Since the 1992 Rio Earth Summit, cities have been pushing low-carbon agendas. They have taken on the roles of leaders in climate change mitigation and have been the ones to build political support for greenhouse gas emission (GHG) abatement at higher levels of government (Bulkeley & Betsill, 2003; Bulkeley & Betsill, 2013). Since the 2000s, the world's megacities founded policy networks such as the C40 Cities Climate Leadership Group and ICLEI–Local Governments for Sustainability initiatives for support and collaboration on climate action with the goal to prioritize GHG emissions reduction. The role of cities in climate change was further anchored in a report published by the World Bank (2010) arguing that it was imperative that both climate change mitigation and adaptation be addressed at the urban scale as an "urgent agenda." Approaches to climate action have also involved sustainability, in which policies must balance economic, social, and environmental well-being for current and future generations (Brundtland & Khalid, 1987). Today, the notion of the sustainable city to manage urban growth and change has become widespread. The ubiquitous discourse of sustainability and climate action has led to the adoption of formal sustainability plans and climate action plans by local governments. Also, it has led to the integration of sustainability and climate change into land-use planning.

These plans have integrated similar types of urban interventions and policies in the Western world that fit under "green" or "gray" urban nature (Wachsmuth & Angelo, 2018). "Green" interventions and policies evoke a return to nature in the city, such as greening, parks, and gardens, whereas "gray" interventions and policies are high-tech solutions to sustainability issues, such as dense urban cores, high-speed public transit, and energy-efficient buildings. It has been found that the most effective way to create a "climate-smart" city is to pair both "green" interventions and policies with "gray" ones which are now both ubiquitously part of land-use plans in the largest cities of the Global North (Ibid).

The Emergence of Sustainability-as-density: Planning to Reduce Urban GHG Emissions through Transportation Modal Shifts

The language of sustainability as a spatial planning framework is built around principles of walkability, mixed-use, complete communities, the preservation of greenspace, and locating employment near housing to create "climate-friendly" or "low-carbon" neighbourhoods whose design is meant to encourage the residents to lower their carbon footprint (Design Centre for Sustainability at UBC, 2006; Newman & Kenworthy, 1999). These principles were largely based on the observation that Australian and North American cities consumed more fossil fuels for transportation as compared to their European counterparts, due to being largely built around the car (Hall, 2014). In 2016, Canada's transportation sector is the second largest source of GHG

emissions, accounting for 25% of total national emissions, half of which is driven by passenger motor vehicle use, particularly light truck use with the increased popularity of SUVs (ECCC, 2021) and, 78% of Canadians in the largest cities commuted to work in private motor vehicles according to Canadian 2016 census data (Savage, 2019). Several academics and institutes (Cole, 2015; Glaeser, 2011; Gore & Robinson, 2009; Hillman, 1996; Kousky & Schneider, 2003), international organizations (Corfee-Morlot et al., 2009; Kamal-Chaoui & Robert, 2009), and corporations (Shell International BV, 2014) are convinced that the compact city is the most important policy goal for sustainability and for climate change mitigation and adaptation. Researchers have found that density, diversity, and design influence modal choices, encouraging the use carbon-free modes of transportation (Cervero & Kockelman, 1997). The urbanist Peter Calthorpe who is a leader in the New Urbanism movement and who codified the concept of Transit-Oriented Development, calculates that urban densification alone could achieve half of the GHG emissions reductions needed in the United States, by 2050, in order to do its share in holding the global temperature under two degrees Celsius (Calthorpe, 2015). Similarly, a London School of Economics study of large global cities found that even a modest blend of pro-density housing and transit policies could cut those cities' emissions by a third by 2030 (Floater et al., 2014). And so, planning policy goals have focused on creating denser, more compact cities which feature a modal shift away from motor vehicles to walking, cycling, and public transit (Ewing et al., 2008), ensuing an era in which planning policy centers sustainability-as-density (Quastel et al., 2012). However, the climate benefits of this type of planning are not as assured as these stakeholders claim; especially if they do not consider the socio-economic dimensions of the city.

Climate Change and Inequality

Climate change has profound effects on human rights and social justice. In terms of socio-economic class, the negative consequences of climate change are known to affect low-income countries and poor people in high-income countries more strongly than higher-income countries and groups. They are more vulnerable to environmental and health consequences as well as economic strain (Blau & Moncada, 2015; Humphreys & Robinson, 2010; Levy & Patz, 2015; Raworth, 2008). These vulnerable groups are also those who have contributed the least to carbon emissions responsible for the onset of climate change. The current international climate agreement, the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement, acknowledges climate change as a human rights issue:

> "climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity" (UNFCCC, 2015, p. 2).

The agreement also emphasizes split responsibilities between developed and developing nations, particularly those who are vulnerable to the adverse effects of climate change, to reach some international equity between nations for climate action. However, the mitigation and adaptation interventions themselves have become a source of inequity. Commentators in the academic community have noted that "communities vulnerable in the face of climate change can also be vulnerable when confronted with adaptation and mitigation intervention and discourses" (Marino & Ribot, 2012, p. 391).

This is the case on the urban level where the notion of sustainability-as-density is affecting housing security, access, and well-being of the low-income groups in the city. The development of dense, transit-friendly cities is causing eco-gentrification which is attracting urban elites to the inner-city and displacing low-income households from the central historically working-class neighbourhoods to less well-served neighbourhoods and the suburbs (Agyeman, 2013; Cohen, 2017, 2018; Jones & Ley, 2016; Quastel et al., 2012; Rice et al., 2020; Wachsmuth et al., 2016). Low-income and racialized populations are most likely to live in economically and socially diverse renter neighbourhoods near transit (Kramer, 2018) and, the current North American plans for transit-oriented development often focus densification and mixed-use development on major corridors and urban "nodes" where these neighbourhoods are situated (Filion & Kramer, 2012). These communities have already suffered from unhealthy environments from hierarchical zoning (Whittemore, 2021). They have historically been concentrated in dense tenement housing in the inner-city because they were excluded from the single-detached housing suburbs of the mostly white middle and wealthy classes, where there was no affordable housing (Belshaw, 2016; Whittemore, 2021). Low-income and racialized neighbourhoods are also already at an environmental disadvantage, they are more exposed to pollution from being located closer to highways and heavy industry, for example, or waste facilities (Bullard, 1990; U.S. GAO, 1995) and, they have access to fewer green amenities such as parks and greenspace due to discriminatory practices in siting toxic facilities (Byrne & Wolch, 2009; McConnachie & Shackleton, 2010). Environmental justice advocates have fought for more equitable access to healthy environments but paradoxically their efforts have helped attract an influx of affluent residents (Checker, 2011; Gould & Lewis, 2012, 2016).

Sustainability planning for climate change follows these patterns of environmental disinvestment and then reinvestment contributing to environmental inequalities. The eco-gentrification which displaces low-income and racialized residents from their neighbourhoods, which are now considered to have green amenities due to their walkability and transit-friendliness, follows in the legacy of inequitable urban development of urban reform, renewal, and revitalization. The urban poor suffer the most from environmental inequities and planning for climate change follows in this pattern. They are more vulnerable to environmental risks, health risks, and greater poverty from the effects of climate change, but also, they are more vulnerable to inequalities caused by mitigation efforts against climate change.

Furthermore, the in-migration of high-income households, who have more carbon-intensive lifestyles and are more likely to drive, to "climate-friendly" neighbourhoods, and subsequent displacement of low-income groups, who are more dependent on transit, from urban centres, undermines the densification efforts to reduce carbon emissions (Cohen, 2016a, 2017, 2018; Heinonen et al., 2013; Heinonen et al., 2011; Minx et al., 2013; Rice et al., 2020; Wiedenhofer et al., 2017). Dense urban neighbourhoods with low carbon footprints need to provide both affordable housing and good access to transit in order to be just and also effective at addressing climate change (Cohen, 2016b, 2018; Heinonen et al., 2013; Ummel, 2014; Wachsmuth et al., 2016).

This paper examines the main planning documents of the two largest cities of Canada, Toronto and Montreal, to determine if their sustainability-as-density policies are protecting and expanding affordable housing to prevent displacement and aid in the goal of mode shift. The first section summarizes academic literature and reports written on the social and environmental impacts of sustainability-as-density planning. The second section states the research question and methods. The third section is a policy analysis of the planning principles, intensification policies, the affordable housing policies in Toronto and Montreal's land-use planning documents. And the fourth section proposes different policy recommendations for the creation of just and effective climate-friendly cities.

1. LITERATURE REVIEW: THE SOCIAL AND ENVIRONMENTAL IMPACTS OF TRANSIT-ORIENTED DENSITY

The Social Impact of Sustainability-As-Density

The technological and design solutions of sustainability planning and policies are problematic if they push an economic agenda that avoids social responsibility. Sustainability planning is a concept used to advance economic growth and is most often market-oriented (Greenberg, 2015). The way in which sustainability planning takes form at the moment promotes the idealistic technocratic view that sustainability problems can be solved with "smart" technology by out-thinking and out-planning negative outcomes all the while continuing to support economic growth (Checker, 2011). These policies adopt a "green" capitalism founded on the idea that the city is a business. Sustainable policy in this mode becomes an entrepreneurial, neoliberal "sustainable fix" used to facilitate growth dynamics rather than addressing root contradictions in which this economic model is the cause of climate issues (While et al., 2004). A number of case studies have exposed that sustainable policies are being used to attract in-movers and non-polluting "new economy" industries, such as the tech sector, to entrepreneurial cities (Jonas & While, 2007). The walkable, bikeable, healthy, and safe neighbourhoods, with quality green and public spaces and social amenities, which are at the heart of the notion of sustainability-as-density, are marketed towards urban elites (Rice et al., 2020). On the demand side, young professionals increasingly seek to live and work in environmentally friendly neighbourhoods (Cortright, 2014; Florida, 2013, 2014). Many technology and start-up firms are (re)locating their traditional suburban campus to dense, mixed-use urban areas providing easy access to the city's prized amenities in order to attract these type of workers (Fisher, 2015; Florida, 2016; Slavin, 2015). And so, the policies actively contribute to the growing inequality in the city from the rising house prices and social exclusion in the new economy, to the displacement of low-income residents (Evans & Jones, 2008; Gibbs & Krueger, 2007; Jonas & While, 2007). For example, a study led by Hagerman (2007) found that the production of new green spaces appealed to very specific and elitist visions of "liveability" in Portland, Oregon, a city known for its progressivity, which attracted the elite and put the stressor of displacement on low-income housing and on service agencies that support low-income populations.

Sustainability planning and policies without economic justice cause a specific type of gentrification instigated by the provision of green amenities and infrastructure: ecological gentrification, or eco-gentrification for short. In the last decade, the term has been used to describe the vicious cycle of disinvestment and environmental degradation which devalues urban space and the subsequent reinvestment and environmental remediation which increases the values of properties surrounding it, creates financial stress for existing residents, and often displaces them. The residents that are displaced are often low-income and racialized residents and the new residents are higher-income, often non-racialized residents. This effect is also compounded with a decrease in state involvement in housing provision and an increase in the financialization of

housing which have made housing less and less affordable (Aalbers, 2017). Many of the urban growth management and intensification plans demonstrate features of "third-wave gentrification" which is characterized by policy-led gentrification in which the public sector increasingly relies on the private sector to invest in urban land development by providing financial and educational incentives (Hackworth & Smith, 2001). The private interests that increase the cost of housing leave low-income residents in a situation where they are either in serious financial stress while living in the city or facing displacement to the suburbs or elsewhere.

The observation of eco-gentrification started through several studies examining "green" sustainability policies and interventions such as parks, gardens, greenspaces, natural grocery stores and urban forests (Anguelovski, 2015; Bryson, 2013; Checker, 2011; Curran & Hamilton, 2012; Dooling, 2009; Goodling et al., 2015; Gould & Lewis, 2012, 2016; Pearsall, 2010; Quastel, 2009). Lately, the attention has shifted to effects of "gray" sustainability policies such as bike lanes, energy-efficient buildings, transit-oriented development, and density (Agyeman, 2013; Cohen, 2017, 2018; Jones & Ley, 2016; Machline et al., 2020; Quastel et al., 2012; Rice et al., 2020; Wachsmuth et al., 2016). A few studies and reports have examined the phenomenon in Toronto and Montreal. A study led by Dale and Newman (2009) on brownfield development with sustainability goals in Victoria, BC and Toronto found that these developments do not encourage nor maintain social diversity and equity inside the new development and in adjacent neighbourhoods. Another study led by Bunce (2009) examined how the publicly funded planning and redevelopment of Toronto's waterfront is guided by sustainability principles, but the development strategies are based on policy-led gentrification through public sector financial and educational incentives for private real estate development. In Montreal, there has been great controversy around the Montreal sustainability flagship project, the Université de Montréal LEED certified MIL Campus, built on a former railyard next to a metro station. Local community groups have found that the campus' construction has led to the gentrification of the poorest nearby neighbourhood, Park Extension (Guay et al., 2020). And, a study led by Grube-Cavers and Patterson (2015) found a significant and positive relationship between the proximity of census tracts to urban rail transit and the likelihood of undergoing gentrification in both Toronto and Montreal.

The displacement of low-income residents due to sustainability-as-density policy is particularly destabilizing as the high-density, walkable, and transit-friendly neighbourhoods in the inner-city were traditionally those of working-class residents. These are areas previously rejected and neglected by urban elites in the postwar era when suburbs boomed in Canada. This original urban exodus created the car-dependent city as we know it. The inner-city houses became neighbourhoods which the white middle and upper classes and government associated with crime, violence, new immigrants, and visible minorities (Belshaw, 2016). And so, the middle class and wealthy settled into the brand-new suburbs. The industry followed them to the edges of the city and commuting with personal motor vehicles became the norm. Highways to connect the

downtown and the industrial nodes were built over torn down neighbourhoods in the inner-city by state-led urban renewal projects. The state built over neighbourhoods that it considered irredeemable slums where there was dense housing and immigrant communities. As highway and road expansion continued, public transportation such as streetcars were pulled out of service so as to make more room for more cars. The planning era between the 1930s and 1970s is the antithesis of the sustainability-as-density planning era in which we are today.

In the 1970s, the trends of suburbanization, car dependency, and state-neglected inner-city neighbourhoods started to reverse themselves. Issues of land, resources and infrastructure inefficiency caused by urban sprawl weighed on municipal finances, businesses began to resettle in city-centres, and environmental concerns gained mainstream attention. This decade brought in an era of inner-city revitalization. And, the following years, as the guiding principle of sustainability-as-density have taken hold, gentrification increased the social status of central areas as well as areas within transit corridors that extend to the inner suburbs thus making the pre-existing denser neighbourhoods near transit less affordable for the current residents (Meligrana & Skaburskis, 2005).

Today, the neighbourhoods who are most vulnerable gentrification are the most social and economically diverse areas where people rely on transit to get around. An empirical analysis of seventeen large American and Canadian metropolitan regions finds that transitscapes, neighbourhoods where it is easy to get around using transit, are consistently more economically and socially diverse than autoscapes, neighbourhoods where residents rely on motor vehicles to get around (Kramer, 2018). They have on average lower median household incomes and a greater proportion of lower-income households. There are more single person households. There is a greater diversity of racial backgrounds. The housing stock is older, more mixed with higher average densities, and there is more balance between rental and owner units. There is less car ownership and a lower modal share of driving to work. However, housing is consistently more expensive near frequent transit; though rent is slightly lower in transitscapes, median incomes are significantly lower than in autoscapes (Kramer, 2018). Households who rely on transit the most to travel and who are most likely to use it are less likely to be able to afford housing near it. In Vancouver, for example, the higher land values near transit incite development of high-rise condominium towers that make walkable, dense, and transit-friendly neighbourhoods more suitable for dual-earner households with careers in higher-order occupations. Increases in university-educated young professionals in these neighbourhoods points to gentrification of these working-class districts (Quastel et al., 2012).

In the face of increasing housing prices, some low-income households have no choice but to relocated to the lower-density neighbourhoods, notably, the suburbs. In the United States, a study finds that though the concentration of poverty is higher in the inner city, there are now a larger number of poor households living in suburban areas than in the inner city (Berube & Kneebone, 2006). It is an issue when the most affordable places to live are the least walkable, least bikeable, and least well served by transit because it means that the households must depend on

cars to have access to the city and the opportunities it offers. And so, transportation costs for these households become greater and the household's carbon footprint increases, as will be explored in the next section. If they cannot afford commuting by car, they are barred off from the city's amenities and opportunities as well as their social networks and the services that these communities have developed. Otherwise, they are subject to long and difficult commutes into the city where limited transit service exists. Furthermore, not only does green planning put low-income households at a disadvantage in terms of access and affordability, when green planning causes these households to relocate to the suburbs, it also makes them more vulnerable to the effects of climate change. Cities and towns in the suburbs are under-resourced and unable to conduct rigorous climate resiliency planning unlike large metropolises (Got Green & Puget Sound Sage, 2016).

Sustainability planning policies that push densification and more active and public transit use as they are commonly written and implemented today are meant to cater to "new economy" sectors and their high-earning employees, relying on publicly endorsed urban development from the private sector. The influx of redevelopment in historically working-class neighbourhoods is displacing low-income households away from the transit, amenities, opportunities, social networks, and social services on which they rely into areas that are less well served and often auto dependent. This planning is meant to reduce GHG emissions and make "climate-friendly" cities, but it is causing great social inequalities, and these inequalities are also undermining their ability to fight climate change, as is explored in the next section.

The Undermining of Environmental Goals set by Sustainability-As-Density Policies

Though one of the most important environmental goals of density is the reduction of car ownership and dependency, a Canadian Mortgage and Housing Corporation (CMHC) (2009) study of ten transit-oriented developments (TODs) with high density and mixed-use near rapid transit station in Canada's largest Census Metropolitan Areas (CMA) found that there hasn't been a decrease in car ownership and increase in transit commuting across the board. The study was able to calculate that four of the ten neighbourhoods had higher car ownership rates than the CMA, one had lower rates, and another had the same rates. In four developments, transit ridership was significantly higher than the CMA average. It doubled the average in two neighbourhoods and tripled in one. However, few people have changed their travel habits since moving into TODs. The transit to work rates are nevertheless much greater than in the CMA, but the data suggests that the respondents may have chosen the area to make their usual travel patterns more convenient and the increase in transit commutes does not come from behaviour changes (CMHC, 2009). Also, in a study of gentrifying neighbourhoods with new condos and higher incomes in Toronto, Montreal, and Vancouver, it was found that there is more cycling and walking than in neighbouring areas, but there is less transit ridership and slightly more car use (Danyluk & Ley, 2007). There was also an

examination of American case studies of 52 transit-rich neighbourhoods (TRN) where there was often the construction of a new transit station, which found that in 40% of the developments, public transit use for commuting actually declined compared to the changes in transit use in the metropolitan area, and in 71% of the neighbourhoods, car ownership increased faster (Pollack et al., 2010).

As explored above, these types of dense, mixed-use developments attract more high-income residents. Though density, diversity, and design of cities has been found to influence public transit ridership (Cervero & Kockelman, 1997), income also has a significant influence. A synthesis of 50 studies found that mode choice is first influenced by socio-economics and only secondly influenced by built environment (Ewing & Cervero, 2001). In the Unites States and Canada, low-income groups exhibit higher public transit use than high-income groups (Cui et al., 2020; Giuliano, 2005). High-income riders of transit are often classed as choice riders, riders who decide to take transit instead of the other transportation options such as a personal motor vehicle but do not depend on transit. High-income households are also more likely to own a car and there is a consensus among researchers in Canada, the United States and Australia that personal motor vehicle ownership is a major deterrent to public transit use (Boisjoly et al., 2018; Currie & Delbosc, 2011; Manville et al., 2018). Meanwhile, low-income riders are generally in the category of captive riders (Beimborn et al., 2003) who will ride public transit because they have limited options, notably they cannot afford personal motor vehicles (Dodson et al., 2007).

A study of eleven metropolitan regions in Canada comparing the impacts of accessibility on mode share between low- and higher-income groups found that public transit use is more sensitive to changes in accessibility for lower-income groups than for higher-income groups. This relationship is strongest in the largest metropolitan regions of Canada. Therefore, public transit interventions that improve accessibility for low-income groups would bring about a greater use of public transit and doing so would likely bring service improvements on low-income riders that are dependent on service, which could greatly improve their quality of life (Cui et al., 2020). However, researchers on investment in rail transport in the United States (Taylor & Morris, 2015) and the U.K. (Banister, 2018) argue that there is a trend of increasing investments geared towards high-income choice riders, where there is less ridership potential and which in turn leaves low-income riders with reduced public transport services (Cui et al., 2020; Giuliano, 2005). According to these studies, both sustainability-as-density policies and transit service extensions are catered to the well-off who are less likely to use transit. Catering the policies to low-income households would have a greater impact on ridership and car ownership, not to mention quality of life (Barri et al., 2021). These trends are not only increasing social inequalities but are also undermining their potential environmental impact for which they are said to be put in place.

The consumption habits of the higher-income households settling in inner-cities also undermine the potential environmental benefits of density and transit access. When examining the GHG

emissions of a neighbourhood, studies are often limited to the energy-efficiency of the buildings and of the modes of transportation. However, a third factor is often overlooked, the resident's consumption and waste patterns. Affluence is synonymous with higher consumption. Consumption contains significant embedded emissions, and there is no evidence that affluent people decrease their consumption when moving to denser, transit-friendly, and walkable neighbourhoods (Rice et al., 2020). A study estimated the direct emissions of Canadian households based on their spending on fossil fuels used for homes and personal vehicles and indirect emissions from the production, transportation, and use of goods and services that these households consume. The study found that the greater people's affluence, the more they pollute. Much of the inequality in emissions is driven by the very top of the income distribution (Lee & Card, 2011). In 2011, emissions of the top 1% of households were almost double those of the next 4%. People in the top quintile produce almost 20% more emissions than the average Canadian. Meanwhile, a person in the bottom quintile produces less than one third of average emissions. When comparing the two groups, the top quintile emits 1.8 times more GHGs than the bottom quintile. And so, any change in commuting patterns by transit or by active transportation by higher-income households moving to city centres does not offset, for example, the emission generated from their more frequent travel by plane as compared to the lower-income counterparts that were displaced (Cohen, 2016a, 2017; Rice et al., 2020). It was found in studies led in the US (Ummel, 2014), Finland (Heinonen et al., 2013; Heinonen et al., 2011), the UK (Minx et al., 2013) and China (Wiedenhofer et al., 2017) that in prosperous, post-industrial cities, the changes in inner-city travel are largely and sometimes entirely offset by the consumption of goods, services and leisure plane travel by the individuals of the relatively wealthy classes who are increasingly settling in cities' "low-carbon" neighbourhoods.

In conclusion, the way in which we build sustainable cities through increased density and transit access for a wealthier class does not wield the environmental benefits that the city aspires to if they contribute to displacing low-income households to autoscapes and bar them from access to new "climate-friendly" developments. It does not always change travel habits due to self-selection of residents who were already using low-carbon transportation modes who are settling into the new development. People of greater means have more transportation options and tend to own a car and drive it more than a low-income household living in the same neighbourhood who would rely on active and public transportation. When calculating overall emissions caused by housing, travel, and consumption habits, higher-income households' consumption and air travel patterns offset their low-carbon lifestyles in the city. The environmental impact of sustainability planning in a city is then largely determined by the displacement of low-income residents who have less carbon-intensive lifestyles out of necessity and who would be forced into more auto-dependent lifestyles if they cannot reasonably access other modes of transportation. On top of burdening low-income households with displacement, higher living costs, lower access to transit and other green amenities, and with severance from social networks and service, it is increasing their carbon

footprints. These burdens are doubly unfair as lower income groups are the ones who have historically contributed to GHG emissions the least and are the most vulnerable to the effects of climate change. It is important, then, that sustainability planning be framed to reverse housing inequalities and avoid displacement as a way to improve social justice and the environmental impact of cities.

Centering Social Justice in Sustainability Planning

It is difficult to counter dense, transit-oriented development which are implemented in the name of sustainability because sustainability policies are presented as being politically neutral and ecologically and socially sensitive. The policies put forward are seen as immune to meaningful resistance based on social concerns, and so, those who oppose the policies are seen to be against sustainability and relegated to the political margins (Checker, 2011). The debates are then limited to which kinds of technological and managerial fixes should be implemented and not how to deal with the environmental problems through the reimagining of the neoliberal hegemony into a "new socio-ecological order" that could better centre social justice (Swyngedouw, 2010). It is not the first time that a politically neutral discourse has been at the root of and covering up unequal urban development and the displacement of low-income residents. Checker (2011) argues that is the most recent iteration of old discourses of urban reform, renewal, and revitalization. In this new era of urban development, eco-gentrification linked to "gray" sustainability planning poses a particular challenge as carbon politics is integrated in all aspects of urban planning, design, and behaviours.

There are several scholars, practitioners, and community activists that are attempting to change how we do sustainability planning in a way that centers social justice. In response to gentrification caused by "green" interventions, Curran and Hamilton (2012) suggest improvements that are "just green enough" to increase the local green amenities but without attracting large-scale new investment in area. It involves the development of a partnership between the "gentrifiers" and the residents to find ways to plan for remediation and redevelopment of contaminated sites while avoiding displacement. Wolch et al. (2014) builds on this concept suggesting that "just green enough" strategies require "projects that are explicitly shaped by community concerns, needs, and desires, rather than either conventional urban design formulae or ecological restoration approaches" (p. 241). In a similar vein, Agyeman (2013) has written at length on how sustainability planning must include social sustainability issues of equity, participatory process, and provisions of basic needs. Furthermore, eco-gentrification community activists have been involved in green projects through similar techniques as environmental justice community activists such as participation in official planning processes, community organizing, and direct tactics to put pressure on government agencies and corporations (Pearsall & Anguelovski, 2016). For example, in Austin, Texas the environmental justice activist group People Organized in Defense of Earth successfully opposed the city's SMART growth plan by reframing how the plan created environmental inequalities (Tretter, 2013). In Boston, Massachusetts

community organizing around secure food systems, economic development, and environmental protection protected vulnerable families from gentrification. The Dudley Real Food Hub, which is a partnership between non-profits, small businesses, residents, was created to address complex development issues in relation to food and land and to ensure economic development opportunities for families living in neighbourhoods under gentrification pressures (Anguelovski et al., 2018). And, in Vancouver, a coalition of 23 neighbourhood groups opposed the city's EcoDensity Charter by holding protests and writing letters to the editor in local media to demand more community consultation because of concerns about affordable housing and livability. However, the bill was ultimately passed despite weak community support (Rosol, 2013).

Cohen (2018) articulates the need for environmental justice in climate planning not only for social justice but to attain climate change goals. He argues that

> For both infrastructural and political reasons, the best strategy to slash carbon emissions and adapt to the inevitable climate-linked disasters we cannot prevent is for public authorities working with community-based groups and movements to take immediate action to reduce urban inequalities, housing inequality in particular. In short, the best way to prevent ecological breakdown is to democratically pursue climate policies that reduce social inequality (Cohen, 2018, p. 2).

He suggests that we extend the "right to the city" concept to climate planning by assuring affordable housing and good transit access in densifying areas. The concept that dense urban neighbourhoods with low carbon footprints are those anchored by both affordable housing and good access to transit is also supported by other research (Cohen, 2016b; Heinonen et al., 2013; Ummel, 2014; Wachsmuth et al., 2016). In practice, it has found to be effective. For example, a study in Malmö, Sweden, found that Eco-districts, which are walkable, bikeable, and transit accessible districts with a slew of green amenities and GHG emission reduction measures, were not associated with gentrification thanks to explicit goal set out by city planners to provide low-to-moderate income housing in all districts (Fitzgerald & Lenhart, 2016).

Given the risk of displacement of transit riders posed by sustainability-as-density policies demonstrated above, there is a need to consider housing affordability in transit-oriented development plans. The following section will examine planning documents in Toronto and Montreal in order to determine if it abides by the tenets that dense climate-friendly sustainable cities are ones that give equal access to housing and transit.

2. RESEARCH QUESTION AND METHODS: IS AFFORDABLE HOUSING PROTECTED AND EXPANDED WHERE THERE IS TRANSIT-ORIENTED DENSIFICATION?

The research question is the following: in land-use planning for climate change, specifically through transit-oriented densification policies, are the City of Toronto and the City of Montreal protecting and expanding affordable housing to prevent displacement and aid in the goal of mode shift? In order to explore this question, I chose the relevant plans on the provincial, regional, and municipal scale that had an incidence on the City of Toronto and the City of Montreal land-use planning. I use a combination of content and discourse analysis to analyze the policies in these plans. I identify sustainability-as-density policies and interrogate how and if housing affordability is considered in these policies, and to what degree are they likely to offset development-driven displacement of low-income, transit rider households.

3. PLAN ANALYSIS: A LOOK AT PLANNING APPROACHES, INTENSIFICATION POLICIES, & AFFORDABLE HOUSING POLICIES

For this analysis, I examined the Toronto and Montreal's provincial planning policy directions, the regional land-use and development plan, and the municipal official plans. The analysis is separated by city. It starts with background information on the current situation of population, housing, and transportation in each city in order to contextualize the policies and a description of the policy documents being analysed. The analysis is then split into three sub-sections: the first examines the policy documents' planning approach to sustainability-as-density policies and to what extent it includes housing justice; the second examines the spatial extent of the densification areas set by the policies and their consequences on the affordability of housing in these areas; and the third examines the presence, absence, and effectiveness of affordable housing policies that apply to the densification areas.

3.1 TORONTO

3.1.1 BACKGROUND

Population, Housing, and Transportation

Toronto is the largest city in Canada with a population of 2.7 million and a metropolitan region population of 5.9 million in 2016. The city and the CMA were the fastest growing city and region in all of Canada and the United States in 2019 and the third fastest in 2020. The population grew by 4.5% in the city and by 6.1% in the metropolitan region from 2011 to 2016. The City of Toronto is at the centre of the largest population and economic region of Canada, the Greater Golden Horseshoe, which contributes over 25% of the Canadian GDP (MMAH, 2020a). In 2020, the Toronto metropolitan region has the highest rents of any metropolitan region in Canada (CMHC, 2021). Toronto's housing is characterized by high rise buildings along major roadways and in commercial and business districts, and semi-detached and detached housing in the inner blocks. There are few gentle- and medium-density housing types like mid-rises and townhouses.

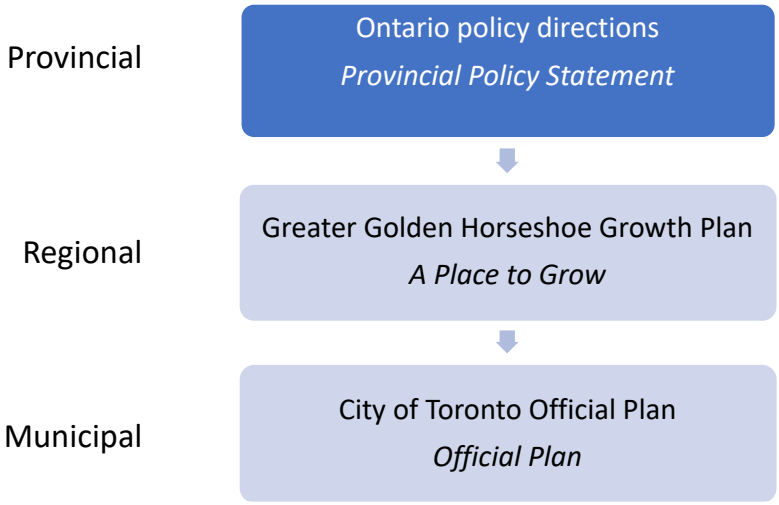
The Greater Toronto Area (GTA) has an underground subway system, buses, streetcars, and commuter trains. The GTA has three distinct areas: the old city, which is very transit oriented and higher density; the amalgamated inner suburbs, which are lower density but also have high density along major roads and a grid network of frequent buses; and the neighbouring suburban regional municipalities, that have their own transit systems and smaller urban centres but are largely suburban and auto dependent.

Metrolinx is the agency that manages and integrates road and public transit in the Greater Toronto and Hamilton Area (GTHA), which comprises a majority of the GGH region. The subway system, buses and streetcars in the City of Toronto are managed by the Toronto Transit Commission (TTC). The subway system has four lines and 75 subway stations. There are a number of new transit projects being planned and built, including light rail in the inner suburbs and a subway line to add more transit capacity to the downtown. The grid of TTC bus and streetcar routes covers the entire city and feeds into the subways, with frequent and express service on high-demand routes. GO commuter rail and bus link adjacent suburban cities with downtown Toronto. The transit network is continuously expanding. There are many additional expansions being proposed that are currently under review. The TTC subway network, the LRTs and the GO rail transit are identified in *Figure 3.1.2* for the City of Toronto. The City of Toronto also has an expanding bike lane network. There are currently over 256 km of bike lanes which are highly concentrated in and around the downtown area.

According to the Canadian Census data from 2016, transportation in the City of Toronto is still car dominant (see *Appendix 1*). Just over half of commutes in the City of Toronto use personal motor vehicles. This proportion increased to nearly seventy percent in the metropolitan region. The second most popular mode of transportation is public transit which represents over a third of residents' main commute mode in the city and a quarter in the metropolitan region. Finally, active transportation modes are the least popular; they make up a tenth of commuting in the city and seven percent in the metropolitan region.

Planning Documents

Figure 3.1.1. Planning structures from provincial to municipal for Toronto



For the policy analysis, I chose to primarily examine the provincial, regional, and municipal planning documents of Toronto. On the provincial level, there is the *Provincial Policy Statement, 2020* (PPS) issued under Section 3 of the *Planning Act*. It is a consolidated statement of the Ontarian government's policy directions on land-use planning and development. It was most recently updated in 2020 document. This is the enabling legislation for all planning policy, and it sets out the framework for policy in general terms. On the regional level, the province has the Growth Plan, called *A Place to Grow: Growth Plan for the Greater Golden Horseshoe* (GGH), which includes Toronto and its regional commuter catchment. It is a provincial plan that provides more detailed and geographically specific policies for the GGH region that aim to meet certain land-use planning, development, and growth objectives. The first version of this regional plan took effect in 2006 and was updated in 2020. On the municipal level, the *City of Toronto Official Plan* contains the city-wide planning policies. It is updated regularly, with the current version in effect since February 2019. While the planning policies of the official plan are required to be "consistent with" the PPS, municipal official plans and decisions are required to "conform" or "not conflict" with the Growth Plan.

3.1.2 ANALYSIS

Planning Approach to Sustainability-as-Density

Objectives to mitigate climate change through GHG emission reduction are present throughout all levels of government and, an important part of the land-use plan to achieve those objectives is promoting growth in compact form and complete communities which have access to transit. In the PPS, one of the eight policy directions for building strong healthy communities is on *Energy Conservation, Air Quality and Climate Change*. In this policy direction, the government notably sets out to promote compact form and a structure of nodes and corridors, promote active transportation and transit, and encourage transit-supportive development and intensification for mixed-use development that shorten commute journeys and decrease congestion (MMAH, 2020b, p. 23).

In the Growth Plan, one of the main guiding principles is to integrate climate change considerations into planning and managing growth by incorporating approaches to reduce GHG emissions. The main guiding principles also include supporting the achievement of complete communities and prioritizing intensification and higher densities in strategic growth areas to make efficient use of land and infrastructure and support transit viability (MMAH, 2020a, pp. 5-6). Furthermore, the plan states that building compact and complete communities are the main way that this plan contributes to contribute to the Ontarian target to reduce GHG emissions set in the *Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan, 2018* (MMAH, 2020a, p. 10).

As for the Official Plan, it states that building through the plan will take on actions on climate change by "reducing harmful emissions and building a clean, resilient City" in the vision (City of Toronto, 2019, pp. 1-2). In the vision's aspirations, there is no explicit mention of GHG emission reduction, but there is the promotion of complete communities, of greater mixed use and walkability, and of a comprehensive and high-quality, affordable transit system (City of Toronto, 2019, pp. 1-2).

In these planning documents, the definition of compact built form is the same as in the academic literature. It emphasizes density and resource efficiency and encourages transit and active transportation through built form. However, there is no emphasis on access to these environments and their amenities for low-income households who are most likely to use transit and active transportation. Complete communities are defined as mixed-use neighbourhoods with convenient access to most of the necessities for daily living. In the list of included necessities there are hints at income diversity with the inclusion of "a full range of housing" and an "appropriate mix of jobs, local stores, and services" (MMAH, 2020a, p. 68), but it is not explicitly stated in the definition that the housing must range in price and that the mix of employment and amenities includes those that cater to lower-income residents. The emphasis is rather that the complete communities cater to people of different of ages and abilities. Furthermore, at all levels of

government analyzed, there is no explicit acknowledgement of the effects of densification policies on gentrification and displacement.

It is also important to note that apart from environmental motivations, the promotion of compact form, and complete communities are also present in policies whose motivations are being efficient with land, resources, infrastructure, and public service facilities and supporting economic growth and activity. And so, though compact form and complete communities are seen as central to mitigating climate change in the city, other goals may supersede environmental ones in the way they are implemented. Notably, the economic growth goals get in the way of assuring access to environmental, dense developments to low-income groups who are most likely to use public and active transportation instead of personal motor vehicles.

As a way to implement compact form and complete communities, the plans emphasize strategic growth in their policies. These policies concentrate intensification in nodes and corridors that have a mix of residential and employment growth and are well-served by transit. Growth in the City of Toronto is to be concentrated in three different areas which are described in *Table 3.1.1*.

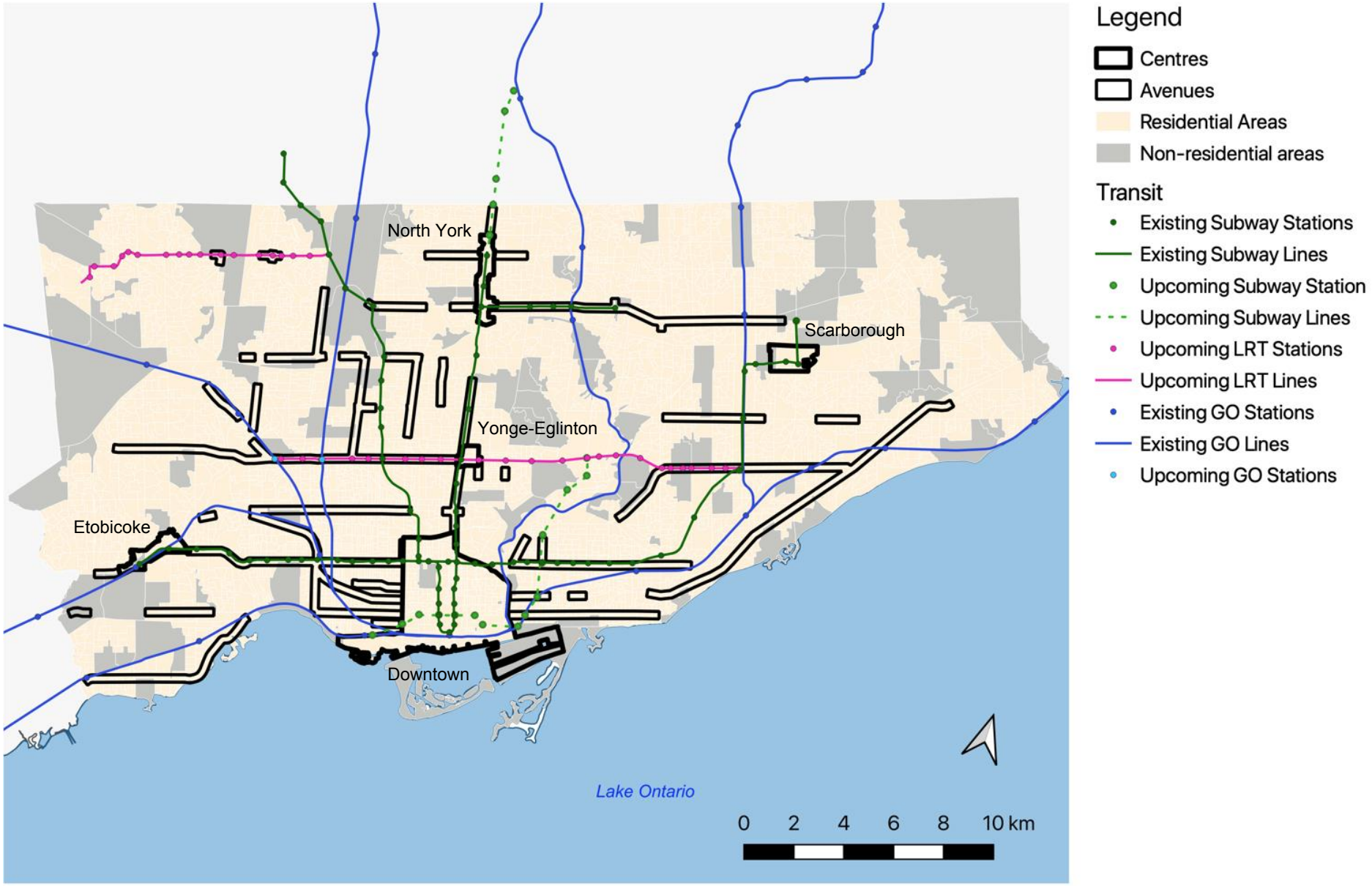
Table 3.1.1 Characteristics of intensification areas in the City of Toronto

Type	**Area (hectare)**	**Percentage of total area**	**Minimum density targets**
Urban Growth Centres/Centres	2,711	5.2%	• 400 residents and jobs combined per hectare by 2031 or earlier
Avenues	4,764	8.9%	Residential and employment growth encouraged No minimum density targets
Major Transit Station Areas	To be determined	To be determined	• 200 residents and jobs combined per hectare near subway stations • 160 residents and jobs combined per hectare near light rail transit or bus rapid transit stations • 150 residents and jobs combined per hectare near GO Transit rail network stations
Protected residential areas	44,874	85.9%	No minimum density targets

Urban Growth Centres (UGCs) are identified for the GGH region. They are existing or emerging downtown areas. The City of Toronto has 5 UGCs, referred to as Centres in the Official Plan: Downtown Toronto, Scarborough, North York, Etobicoke, and Yonge-Eglinton. All Centres have a Secondary Plan to guide their growth more specifically.

Avenues are corridors along major streets slated for re-urbanization where residential and employment growth is encouraged as well as the improvement of street design in areas where there is shopping opportunities and good access to transit. Unlike Centres, there are no minimum density requirements, each Avenue is planned and designed on a case-by-case basis.

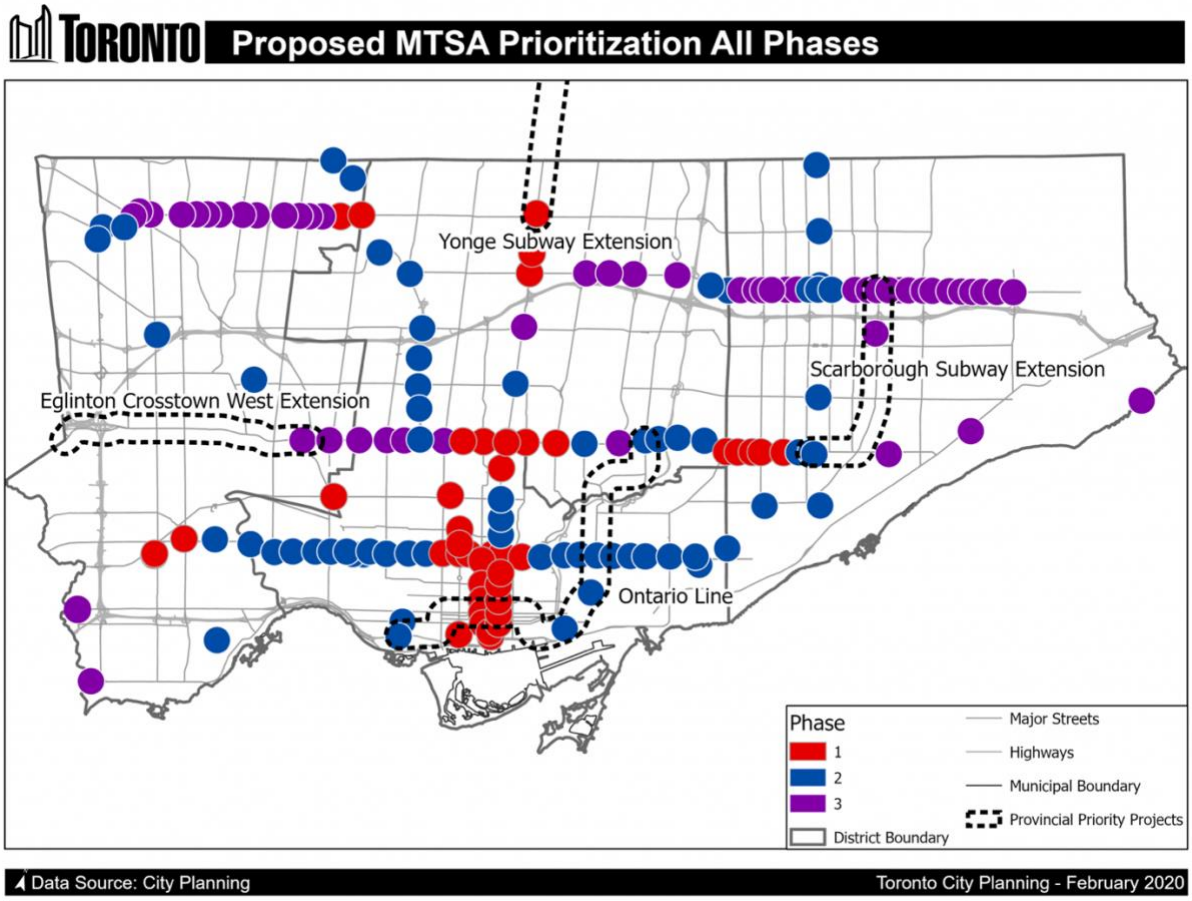
Figure 3.1.2. City of Toronto Centres and Avenues in relation to the transit network



Data Sources: Toronto Open Data Portal, 2021; City of Toronto Official Plan, 2019; Statistics Canada 2016.

The Major Transit Station Areas (MTSAs) are planned around the priority transit corridors identified in the Growth Plan. The MTSAs often overlap with the Avenues. The City must delineate the boundaries and set densities for at least 180 MTSAs. *Figure 3.1.3* identifies all the potential MTSAs. The phases represent the order in which areas are prioritized for review, delineation, and its densities to be set. There will also be a subset of MTSAs called Protected Major Transit Station Areas (PMTSAs) whose delineations and densities can be adopted before the next Official Plan. These areas are also allowed to apply inclusionary zoning, which the city is using to plan for affordable housing where market conditions could support it. In the Official Plan, which was updated in 2019, the MTSAs are not yet integrated as they were conceptualized for the 2020 PPS and Growth Plan. They are currently under review for the next update of the Official Plan.

Figure 3.1.3. Proposed MTSAs and Phasing of Review (City of Toronto, 2021b)



The City of Toronto expects large population growth, but the spatial extent of densification is very limited to small areas of the city. Currently, when accounting for Centres and Avenues, only 14% of the City of Toronto area is targeted for growth (see *Table 3.1.1*). This causes there to be a large contrast in density of these areas with the rest of the city. It also creates competition for developable

land, which increases the development costs, thus making it difficult to integrate affordable housing.

Moreover, not all areas contained in Centres, Avenues and in forthcoming MTSAs are subject to the same targeted growth. There are certain areas that are not subject to substantive growth called Neighbourhoods. They are neighbourhoods deemed to be stable that are protected from redevelopment and are only subject to sensitive infill that fits within the neighbourhoods' character. There are two types of Neighbourhoods: Neighbourhoods are low-rise and low-density residential areas, and Apartment Neighbourhoods are residential areas with taller buildings and higher density than Neighbourhoods. To densify these areas, Apartment Neighbourhoods are subject to infill development and, in Neighbourhoods, the policy encourages secondary units to be built. However, the Neighbourhoods and Apartment Neighbourhoods in the densification areas have more existing social infrastructures and are often in walking distance to commercial and transit corridors. Also, the low-rise, low-density Neighbourhoods tend to have owned single-detached homes, have small family sizes including many elderly couples whose children have moved out, and have been losing population density (Dingman, 2018). Nonetheless, they are not expected to significantly receive any growth apart from the Official Plan encouraging homeowners to create of second units such as secondary suites, basement apartments, accessory apartments, coach houses, or laneway suites. The protection of these Neighbourhoods and Apartment Neighbourhoods creates a greater competition for the land in the already small growth areas and further makes development costs higher, thus making it more difficult to feasibly build affordable housing in the densification areas.

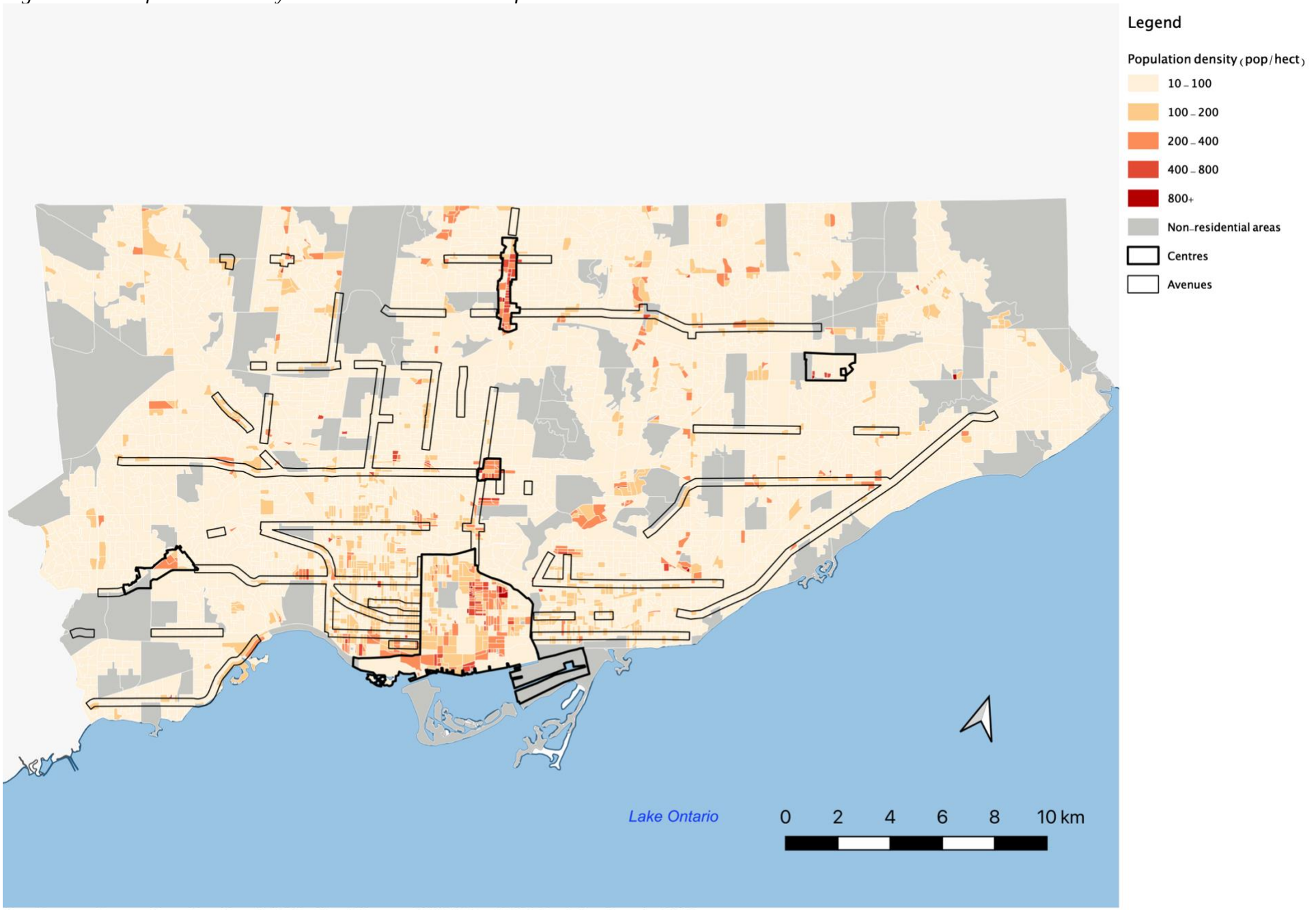
I compared the demographics, housing, and transportation inside and outside the current growth areas set by the *City of Toronto Official Plan* and found that the Centres and Avenues are already denser and are more vulnerable to the displacement of low-income residents. Areas slated for more densification and redevelopment near transit have already been subject to a wave of densification, particularly in the Centres. In *Figure 3.1.4*, I mapped population density to compare the existing densities with the policies' targets, but I excluded job densities. Nevertheless, many dissemination areas near subway stations in the Centres have already reached the targeted minimum density of 400 residents per hectare without including job densities (also see *Appendix 2)*. This residential density is due to the greater proportion of attached housing in the targeted growth areas. In fact, the intensification areas are already made up of nearly three quarters apartment buildings of five storeys or more (see *Appendix 3*). The dissemination areas with lower densities notably in the Downtown Centre are either commercial areas or they are situated in the low-rise, low-density Neighbourhoods protected from redevelopment.

The targeted growth areas are also already less affordable; the average monthly rent is $200 greater which is nearly a fifth higher than in the zones outside them (see *Figure 3.1.6*). And, there are more residents that are vulnerable to displacement. There are proportionally far more renters

in these zones, there are more renter households under financial stress to pay for shelter costs, there are a greater proportion of low-income residents (see *Figure 3.1.5*). The rent increase and eviction laws are not strong enough to protect the existing affordable rentals. According to Residential Tenancies Act (RTA) of Ontario, landlords are allowed to raise rent once a year based on the guideline set by the Ontario government. However, there are no guidelines on the amount they can increase rent when there is a new tenant, and a new lease is created. The lack of control on renting prices can create an incentive to evict tenants through false pretenses where there is redevelopment and gentrification, such as in intensification areas. There has been an increase in applications for evictions for the "Landlord's or Purchaser's own use" and "Demolition or conversion" which are being used in "bad faith" to evict long-term tenants in order to move new tenants in at a higher rent as Toronto has been growing (City of Toronto, 2021e).

As for other demographic characteristics (see *Appendix 3*), at this scale there is no notable disparity of the ethnic mix inside and outside the targeted growth areas. However, in Toronto, visible minorities were more likely to have low-income status according to Canada Census data in 2016: the prevalence of low-income status was 20.4% for visible minorities compared to 10.5% for residents who are not visible minorities. Furthermore, a study led by Hulchanski and Maarenen (2018) for the Neighbourhood Change Research Partnership mapped out low-income neighbourhoods based on 2016 Statistics Canada Census Tract data and found that visible minorities are more likely to live in low-income neighbourhoods compared to white people. Their findings in *Figure 3.1.7* show that there are several low-income areas where Centres and Avenues are planned, notably in the North York and Scarborough Centres. Therefore, in these areas, racialized communities are more at risk of displacement.

Figure 3.1.4. Population density inside and outside intensification areas in Toronto



Data Sources: Toronto Open Data Portal, 2020; City of Toronto Official Plan, 2019; Statistics Canada, 2016.

Figure 3.1.5. Comparison of housing and demographics linked to housing affordability inside and outside intensification areas in Toronto

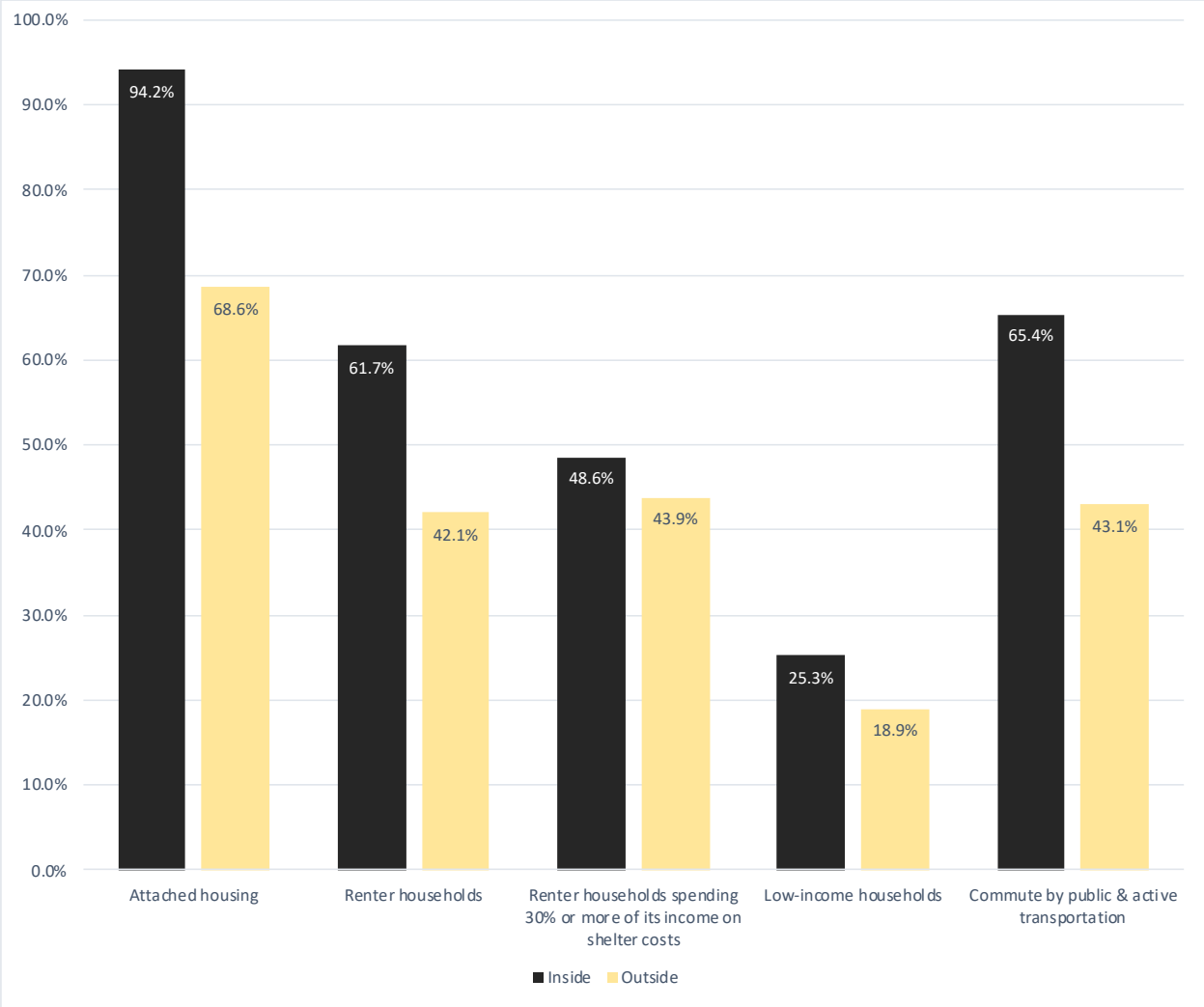


Figure 3.1.6. Average monthly rent inside and outside intensification areas in Toronto

Figure 3.1.7. City of Toronto average individual income by census tract, 2015(Hulchanski & Maaranen, 2018, p. 23)

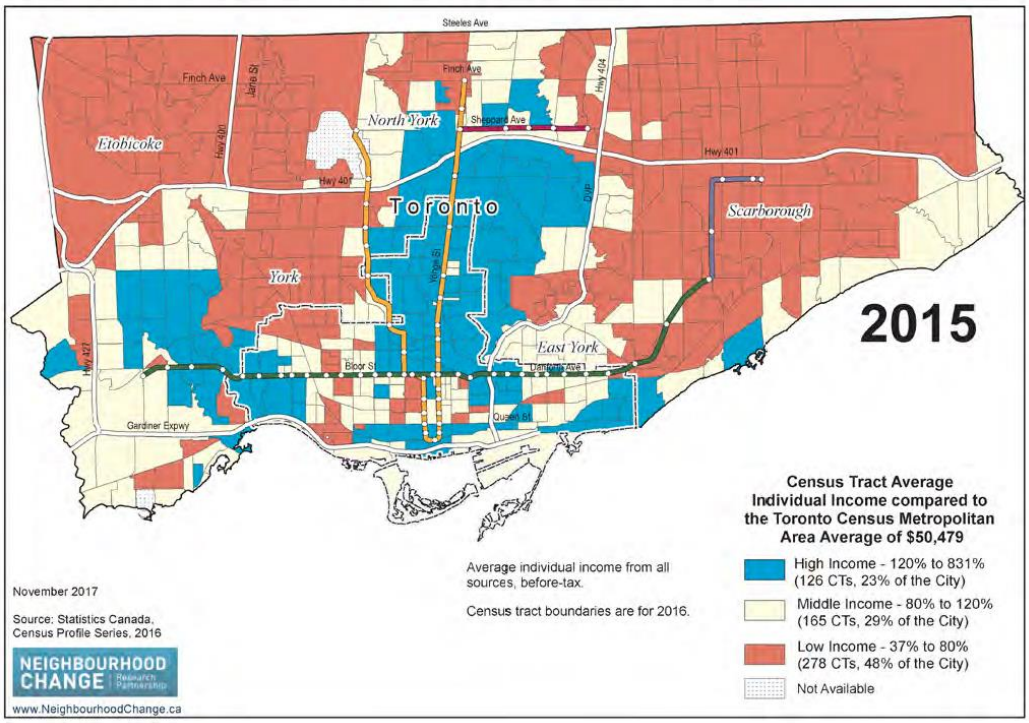
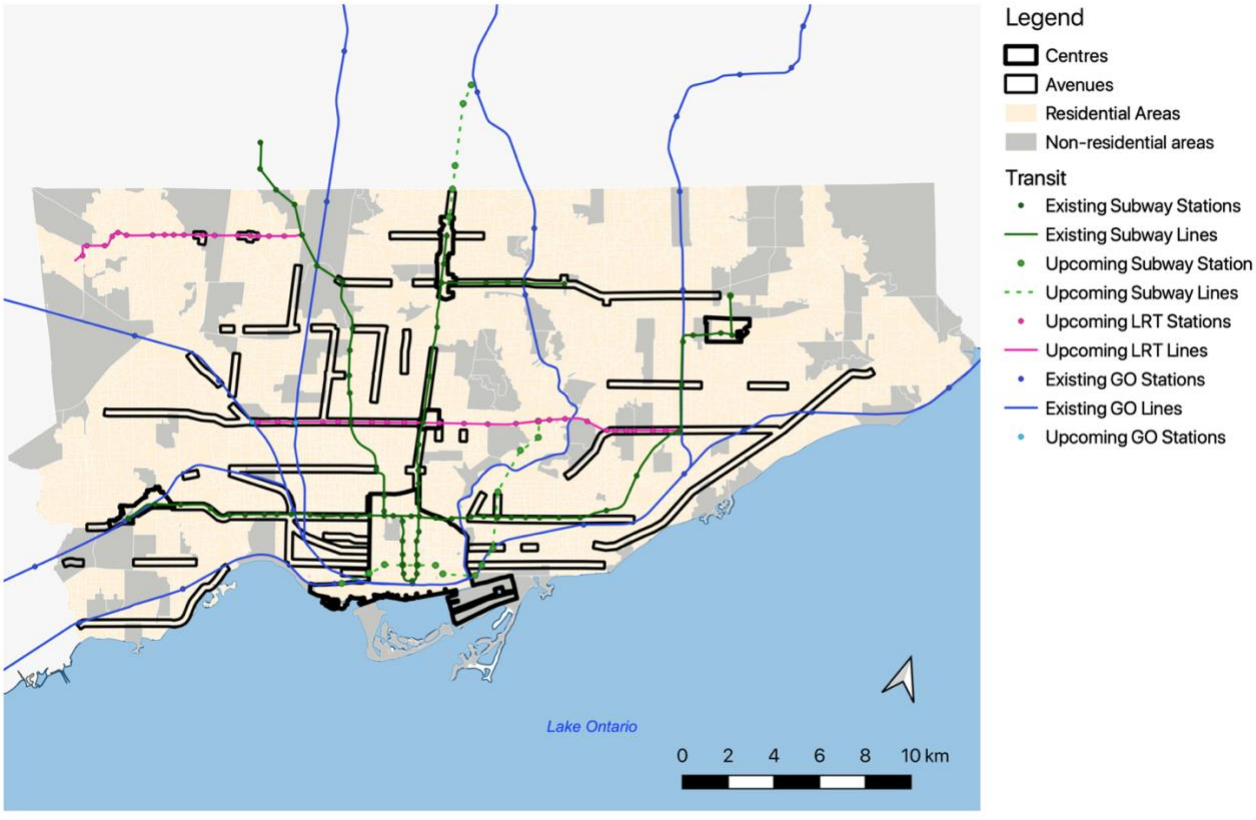


Figure 3.1.8. City of Toronto Centres and Avenues



Data Sources: Toronto Open Data Portal, 2021; City of Toronto Official Plan, 2019; Statistics Canada 2016.

In conclusion, the concentration of redevelopment efforts to densify, create mixed use and have easy access to transit in a narrow spatial extent creates construction competition and high land values, thereby making it difficult to build affordable housing in these areas. The constraints of the narrow corridors and nodes is unreasonable given that good access to transit is within a walking distance of 500m and 1km, but the Avenue intensification areas extend less than 300m from transit arteries. The implementation of MTSAs may remedy this issue. Furthermore, the redevelopment areas are further constrained by the protection of Neighbourhoods which are prime areas with access to amenities and transit.

Affordable Housing Policies: their Presence, Absence, and Effectiveness

Though the plans do not mention the link between densification and housing unaffordability, there is an overall acknowledgement that housing is increasingly unaffordable in the Toronto region which is caused by many factors such as the financialization of housing, speculation, international investment, and the lack of housing construction in the last couple of decades. The PPS has a *Housing* section which sets out policies with the goal "to provide for an appropriate range and mix of housing options and densities required to meet projected requirements of current and future residents of the regional market area" (MMAH, 2020b, p. 16). The Growth Plan and the Official Plan also echo these intentions with more of a focus on affordable housing. One of the Growth Plan's main guiding principles is to "support a range and mix of housing options, including additional residential units and affordable housing, to serve all sizes, incomes, and ages of households" (MMAH, 2020a, pp. 5-6). And, "affordable housing choices that meet the needs of everyone throughout their life" is in the Official Plan's vision's aspirations (City of Toronto, 2019, pp. 1-2). To address the issue of housing unaffordability, the PPS and Growth Plan both demand policies at lower levels of government to set targets for affordable housing (MMAH, 2020a, p. 22; MMAH, 2020b, p. 16). However, as of now, no targets have been set in the Official Plan. The PPS and Growth Plan have been updated in 2020 and the Official Plan in 2019, and so, the targets may appear in the upcoming iteration of the Official Plan, but they have not been announced as part of the review thus far.

There are other existing policies for affordable housing in the PPS, the Growth Plan, and the Official Plan. However, many lack applicability and inclusivity. Particularly in the PPS and the Growth Plan, there is no mention of how housing affordability would be achieved, for example through any specific programs or planning mechanisms, other than by increasing the diversity of housing typologies and increasing housing supply. In the PPS, there is a policy for the provision of mix housing including affordable housing through "establishing development standards for residential intensification, redevelopment and new residential development which minimize the cost of housing and facilitate compact form" (MMAH, 2020b, p. 17). In the Growth Plan there is a policy to support housing choice by "identifying a diverse range and mix of housing options and densities, including additional residential units and affordable housing to meet projected needs of current and future residents" (MMAH, 2020a, p. 22). Meanwhile, in the Official Plan, there is a similar emphasis on providing a diversity of housing types, but it also includes de-commodified housing. It uses the expression "full range of housing" specified as "ownership and rental housing, affordable and mid-range rental and ownership housing, social housing, shared and/or congregate-living housing arrangements, supportive housing, emergency and transitional housing for homeless people and at-risk groups, housing that meets the needs of people with physical disabilities and housing that makes more efficient use of the existing housing stock" (City of Toronto, 2019, pp. 3-21, 3-22). Furthermore, the strategy of creating a diversity of housing to achieve more affordability is also present in the large site policy for which large residential developments must assure a "minimum of 30 percent of the new housing units will be in forms other than single-detached and semi-detached houses, such as row housing, triplexes and multi-

unit residential buildings" (City of Toronto, 2019, p. 3-24). These policies signal that for this region an important part of the affordable housing issue seems to be solvable through increasing the supply of market housing as long as there are more multi-unit residential buildings. Though it is true that multi-unit housing is more affordable than single-family homes, increasing the diversity of housing will not be enough to assure housing for low-income households. Especially in limited growth areas where the market pressures are strong, the land values will continue to increase, thus making it difficult for the units to come on the market at an affordable price and to maintain long-term affordability.

Furthermore, the way that affordable housing is defined is problematic in these planning documents. The definition of affordable housing is not inclusive. In the PPS, affordable housing is defined as housing for which low- and moderate-income households' shelter cost do not exceed 30% of their gross annual household income or housing for which the purchase price is at least 10% below the average purchase price of a resale unit in the regional market area (MMAH, 2020b, p. 39). For the first option, low- and moderate-income households are identified as those with incomes in the lowest 60% of the income distribution of the regional market area (MMAH, 2020b, pp. 45-46). This category includes a majority of households, which means that potential targets for affordable housing can then be fulfilled without assuring housing for households in the lowest income percentiles. For the second option, the definition of affordability is tied to the market instead of income. In a heated market, 10% under the average market price can easily exclude many households struggling to find housing. And so, even if there were affordable housing targets in the Official Plan and planning mechanisms in place to guarantee this housing, it will not cater to a sizable number of households who struggle to afford housing. However, the definition of affordable housing is subject to change in the Official Plan and will likely be based on household income percentiles and unit size and not on market price (City of Toronto, 2021a).

Where the Official Plan has binding policies that protect affordable housing and incite the construction of more affordable housing, they are not ambitious enough and do not focus on the growth areas near transit. For affordable housing protection, there are strong rental replacement policies that protect existing rental properties of six units and above and their prices. These policies assure that development that affects 6+ unit rental housing guarantees the same number of units at similar prices in the new development (City of Toronto, 2019, pp. 3-22, 3-23). The policies also protect affordable rentals from conversion to condominium, from severance, and from subdivision (City of Toronto, 2019, pp. 3-23, 3-24). The policies act as a strong deterrent to making changes to or demolishing large rental buildings. However, the provincial rent increase policies and eviction policies do not protect the prices of the units when new tenants move in. And so, the units' rents can still become unaffordable if the landlords are successful in replacing tenants with higher paying tenants, especially in areas where there is high demand such as the growth areas.

As for policies that promote the construction of affordable housing, there is the large site policy which promise 20% additional affordable housing when there is a demand for a height or density increase on a site of at least 5 hectares (City of Toronto, 2019, p. 3-24). This means, there is no guarantee of affordable housing in these developments unless there is an application for zoning changes. Furthermore, the affordable housing does not need to be built on the site, it can be constructed by the developer anywhere in the City; the developer may provide land to the City near the site for affordable housing, or they may give cash to the City instead. In the case where these sites are in an intensification area, the affordable housing will not need to be constructed in these well-connected and convenient areas. Also, given the minimum area of these sites of 5 hectares there is only the Portlands in the Downtown Centre to which these policies would apply in the targeted growth areas.

Finally, there are upcoming inclusionary zoning policies in the MTSAs in the next Official Plan that may assure more construction of affordable housing. The inclusionary zoning will be the only binding policy that specifically targets densification areas and so, will assure affordable housing near transit. The policies will specify the following characteristics: the percentage of affordable housing required, including different requirements for condominium ownership and purpose-built rental projects; the minimum size of development projects that inclusionary zoning would be applied to; how long the units must remain affordable for; and a proposed new definition for affordable ownership housing.

At the moment, the City of Toronto has strong rental protection policies for keeping existing affordable rental stock, but the stock is still threatened by the province's rent increase and evictions policies. It has weak policies for new affordable housing supply. The policies do not have any specific provisions for housing in the targeted growth areas where there is the greatest risk of displacement and where there is the most need for affordable housing, except for upcoming inclusionary zoning in future MTSAs. Future changes to definition of affordable housing and inclusionary zoning in the MTSAs signify of greater concern and increased action towards protecting and creating affordable housing in the city, but these changes are unlikely to reverse housing inequalities and avoid displacement near transit which are necessary to housing justice and GHG emission reduction. Overall, the city is likely to continue to see a net loss of affordable housing in intensification areas.

3.2 MONTREAL

3.2.1 BACKGROUND

Population, Housing, and Transportation

Montreal is the second largest city in Canada with a population of 1.7 million and a metropolitan region population of 4.1 million in 2016. The Greater Montreal region is considered the demographic, economic, and cultural core of Quebec; it is composed of nearly half of the province's population, jobs and contribute nearly 50% of its GDP (CMM, 2012). However, it is one of the least expensive metropolitan regions to rent in; it ranks fourteenth out of seventeen Canadian metropolitan regions in 2020. Montreal is known for its dense urban form. In 2006, nearly 60% of the population and jobs are concentrated within a 15-kilometre radius around the downtown core, and more than 90% of the population is concentrated inside a 30-kilometre radius (CMM, 2012). The housing stock in the dense downtown core is characterized by numerous rows of duplexes and triplexes and a small proportion of single-family dwellings. Also, there is a recent emergence of high-rises in the central business district.

Greater Montreal has public transit network consisting of underground metro, buses and commuter trains. L'Autorité régionale de transport métropolitain (ARTM) is the agency responsible for the planning, the funding, and the rates of all public transit in the metropolitan region. The metro and the on-island bus network are managed by the Société de Transport de Montréal (STM). It consists of four metro lines with 68 stations. Five new stations are under revision to extend the Blue Line from St-Michel to Anjou. There are over 200 bus routes that cover the whole Island of Montreal, including 29 frequent bus routes, most of which cover the east and centre of the island, and 35 express bus routes which feed passengers into the metro network. Meanwhile, the commuter train network is managed by Exo. It has five lines and 51 stations which feed residents of remote boroughs and suburbs into the metro network or directly downtown. It also has the Réseau Express Métropolitain (REM) project currently under construction to be delivered in 2022, which have 26 stations some of which will be added and others replaced in the Exo commuter train network of Greater Montreal. The metro and commuter train network are identified in *Figure 3.2.4.*

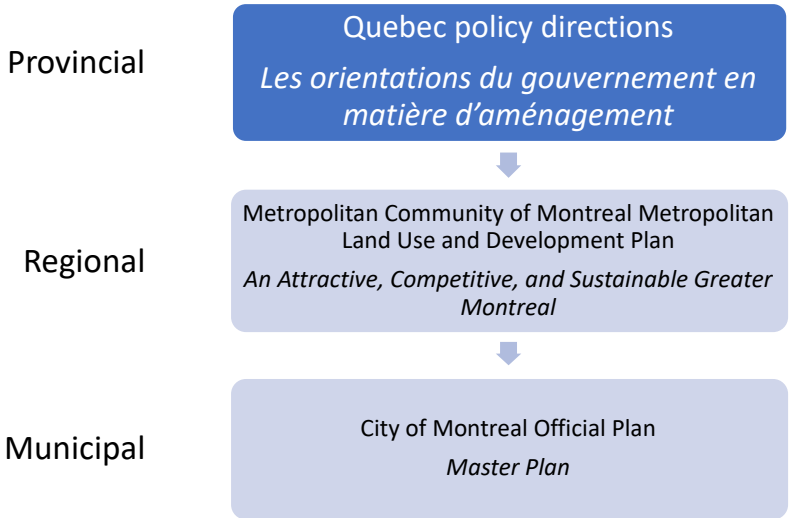
There currently more than 846 kilometres of bike paths that span the whole Island of Montreal, but most paths are concentrated in the central most dense neighbourhoods. Montreal is ranked as the 18th most bikeable city in the world, tied with Vancouver, according to the Copenhagenize 2019 Index (Copenhagenize.eu Design Co., 2019). The bike network is continuously expanding. A notable bike path project at the moment is construction is the Express Bike Network (EBN) which calls for the creation of 184 kilometres of bike paths with five main corridors.

In 2016, Montreal remains a car-commuting city according to the Canadian Census data. Despite all the transit and active transportation options, half of commuters use private motor vehicles as their main transportation mode in the City of Montreal, and nearly seventy percent of them in the metropolitan region. Public transit is the second most popular mode of transportation,

representing over a third and a fifth of commute modes in Montreal and the metropolitan region, respectively. Finally, active transportation modes are the least prevalent commuting options. Walking rates are the same as in Toronto. However, cycling rates are slightly higher, representing four percent in the city and two percent in the metropolitan region.

Planning Documents

Figure 3.2.1. Planning structures from provincial to municipal for Montreal



For the policy analysis, I chose to primarily examine the provincial, regional, and municipal planning documents of Montreal. On the provincial level, Quebec has provincial urban planning guidelines, *Les orientations du gouvernement en matière d'aménagement*. It is issued under the *Act Respecting Land Use Planning and Development*. The current legislation was enacted in 1994. On the regional level, there is the *Metropolitan Land Use and Development Plan* (PMAD), which is adopted by the Metropolitan Community of Montreal (CMM), an organisation that coordinates planning with the 82 municipalities in the Greater Montreal Area. The PMAD must conform to the provincial urban planning guidelines. The current version, *An Attractive, Competitive, and Sustainable Greater Montreal*, was published in 2011. It is revised every 5 years but up until now, the objectives are judged to be still relevant and so, no changes to the plan itself have been made since 2011. Concurrently, the CMM publishes 5-year action plans to identify the main actions that it will concentrate on the implement the objectives of the PMAD. The most recent action plan was published in April 2019 for the 2019 to 2023 period. On the municipal level, there is the City of Montreal official plan, the Master Plan. The current version was written in 2004 and updated in 2011. It covers the plans of the Agglomeration of Montreal which include all the merged and unmerged municipalities on the Island of Montreal. The Master Plan must conform to both the Quebec urban planning guidelines and the PMAD.

3.2.2 ANALYSIS

Planning Approach to Sustainability-as-Density

The provincial planning guidelines, which were published in 1994, promote efficient use of land and resources and a greater, more efficient service of public transportation. However, it does not explicitly mention climate change mitigation. Rather, compact development and consolidation of existing urban development is motivated by efficiency of public finances. This demonstrates that before climate action became mainstream, the Quebec government already preferred compact form and intensification in order to avoid the public costs of urban sprawl. It is then possible that the discourse in other planning documents has shifted to include climate change and sustainability in order to make intensification an altruistic endeavour and making the policies difficult to oppose as Checker (2011) points out. This puts into question the intensions of intensification policy to truly be sustainable or to simply focus on the efficiency of public finances and economic growth. The true test of whether planning principles are meant to champion sustainability then lies in the commitment to equal access to housing and public transportation which are primordial to reducing GHG emissions in the province, which is discussed later in this analysis.

Though they are not mentioned in provincial planning guidelines of the 90s, objectives to mitigate climate change through GHG emission reduction are at the centre of planning at the regional and municipal level. In the PMAD and Master Plan, there is a strong focus on intensification in transit-oriented development (TOD) zones and growth in the downtown around rapid mass transit stations in order to achieve climate objectives. In the PMAD, a great emphasis on how the CMM will "fight against climate change" is through implementing "relatively dense urban environments" (CMM, 2012, p. 39). The PMAD is structured to address three challenges: land use, transportation, and environment. The land-use challenge pertains to urban and population growth and urban sprawl. The first objective in the first policy direction on land-use is to "Direct 40% of household growth towards structural metropolitan mass-transit network access points." The PMAD recommends that 40% of new households being housed in new units from 2011 to 2031 be directed towards TOD neighbourhoods located around metropolitan mass-transit network access points.

In terms of the transportation, the main goals are to increase modal share of public transit from 25% to 30% during morning rush hour by 2021, and to 35% in 2031. These transportation goals are seen as essential to reducing GHG emissions. There are also goals to implement active transportation networks. These approaches are said to be motivated by Quebec's new-found ecological values and concern about climate change, and their wish to see automobile use decline, particularly during rush hours (CMM, 2012, p. 80).

Meanwhile, there is a strong awareness that intensification in TODs can have negative effect on access to transit and mode shift in the PMAD. The CMM explicitly recognizes the negative impacts that urban growth and development and the reliance of the city on increasing property values has on gentrification and the attraction of affluent residents who are less likely to

use transit (CMM, 2012, p. 82). To that effect, the PMAD and the CMM's *Metropolitan Action Plan for Affordable Housing* (PAMLSA) make recommendations to include social and affordable housing in TODs in municipal policies. This is seen as part of the strategy to reaching the transportation modal share shift goals.

As for the municipal Master Plan, the planning approach endorses sustainable development expressed as urban development that "intends to take a balanced approach based on economic vitality, social equity, environmental preservation and respect for the needs of future generations" (Ville de Montréal, 2011, p. 6). In this optic, the Master Plan is focused on the development of established areas and vacant areas within the City limits to reduce GHG emissions, notably the "intensification and diversification of activities in the vicinity of metro and commuter train stations, as well as major public transportation corridors" (Ville de Montréal, 2011, p. 44). However, there is no emphasis on the need for a mix of housing in these developments as essential parts of reaching sustainability goals.

In the PMAD, the CMM maps out where municipalities should have TODs and their recommended residential densities in order to reach the goal of to "Direct 40% of household growth towards structural metropolitan mass-transit network access points" (see *Figure 3.2.2*). In the 2019-2023 PMAD Action Plan, the target is increased to 60% of new households. This was revised due to the new REM. However, there has not yet been updates to the PMAD to identify TOD zones around the new REM stations. The CMM has invested $3.5 million in 35 TOD projects in Greater Montreal from 2013 to 2020.

The areas deemed for intensification in the Master Plan largely overlap with the PMAD recommendations (see *Figure 3.2.3*). The intensification areas and minimum density targets are updated from time to time. See *Figure 3.2.4* for the updated areas from May 2021. The plans have also not yet included densification areas around the upcoming REM stations. Nevertheless, the current targeted areas make up a majority of the residential areas already (see *Table 3.2.1*).

Table 3.2.1 Residential areas inside and outside targeted intensification areas

	Area (hectare)	**Percentage of total area**
Residential areas targeted for intensification	16,370	53.6%
Protected residential areas	14,173	46.4%

Figure 3.2.2. Minimum residential density thresholds in TOD zones (CMM, 2012, p. 87)

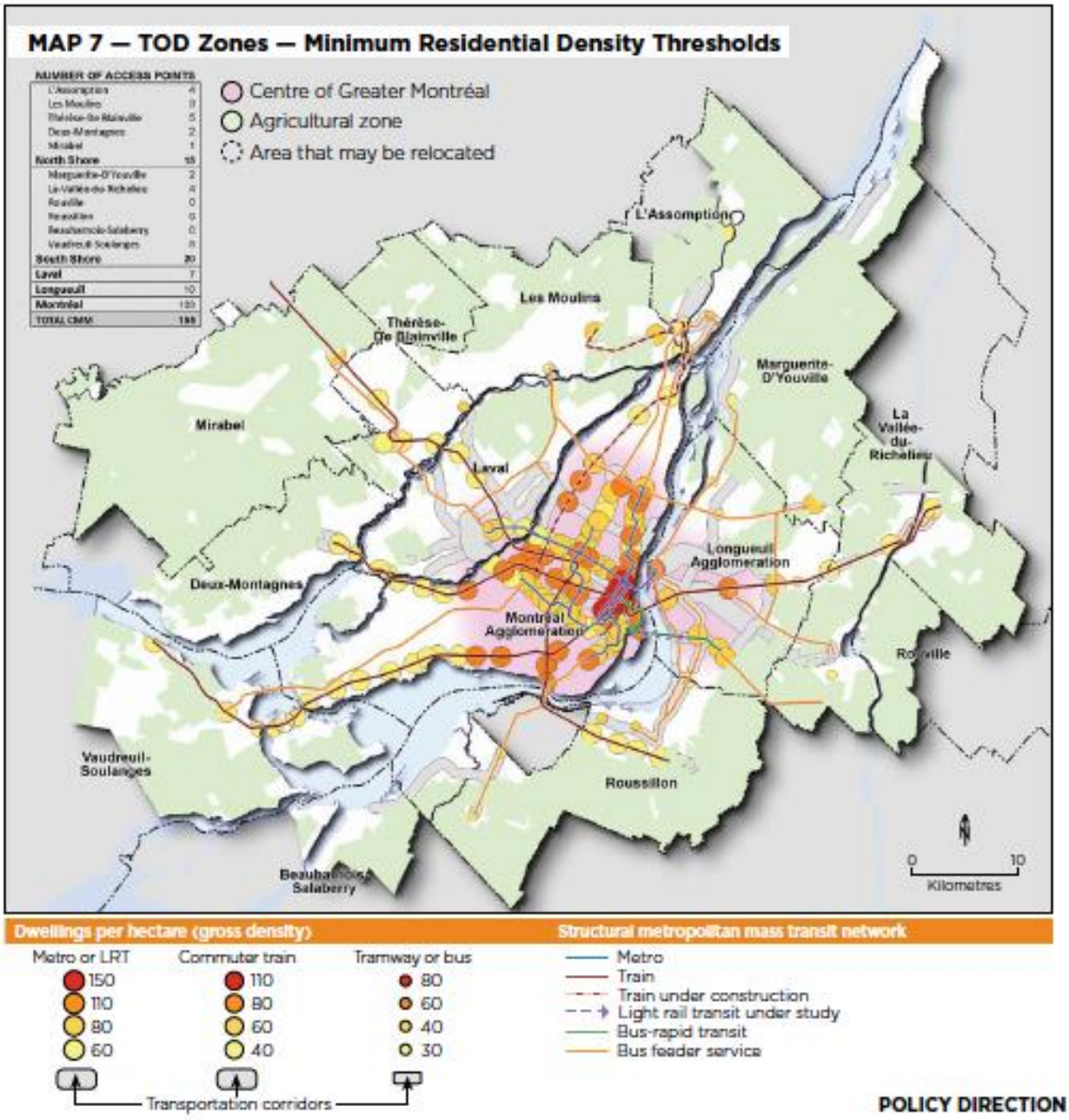


Figure 3.2.3. Master Plan map of areas deemed for intensification (Ville de Montréal, 2011, pp. 45-46)

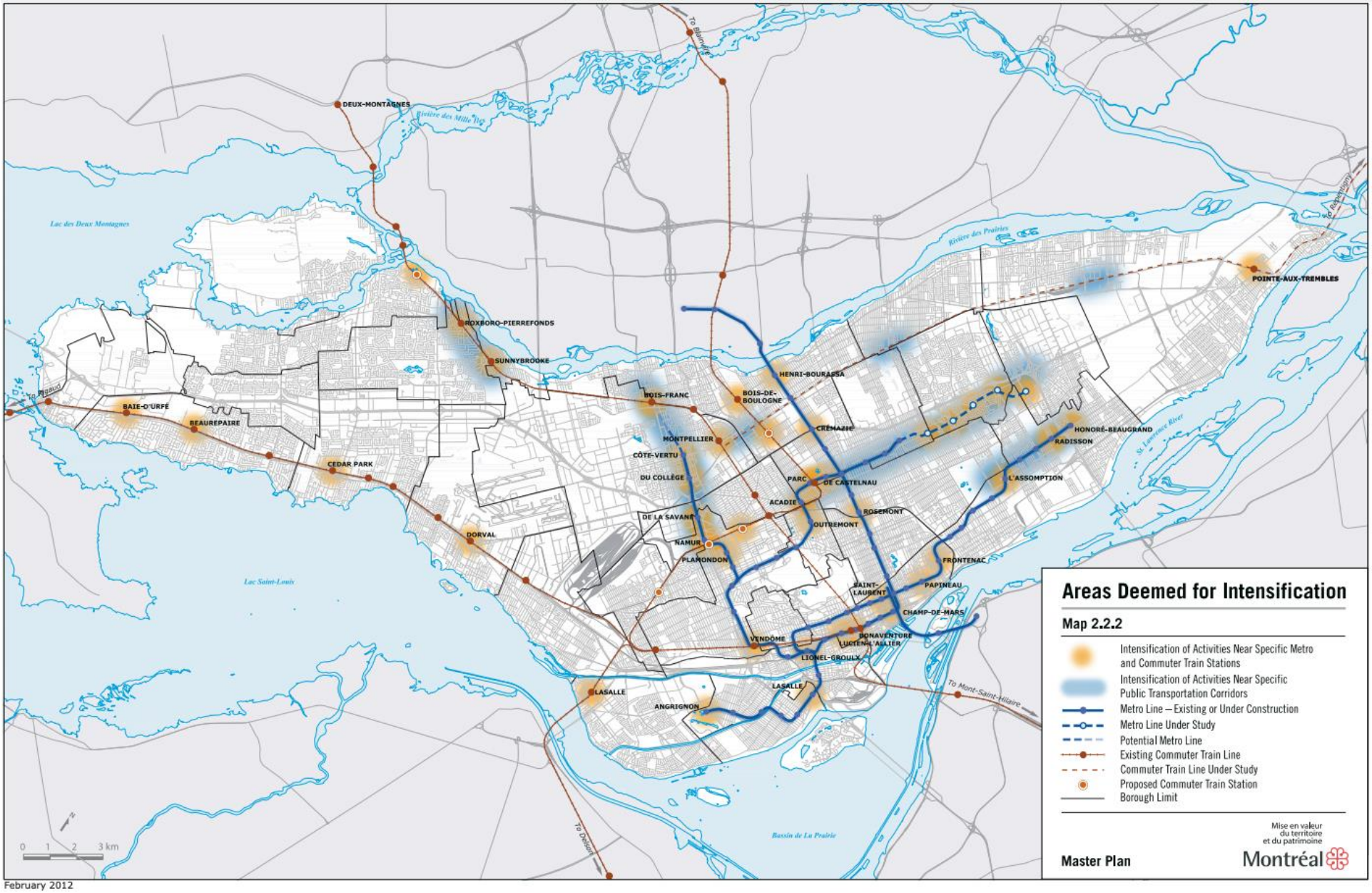
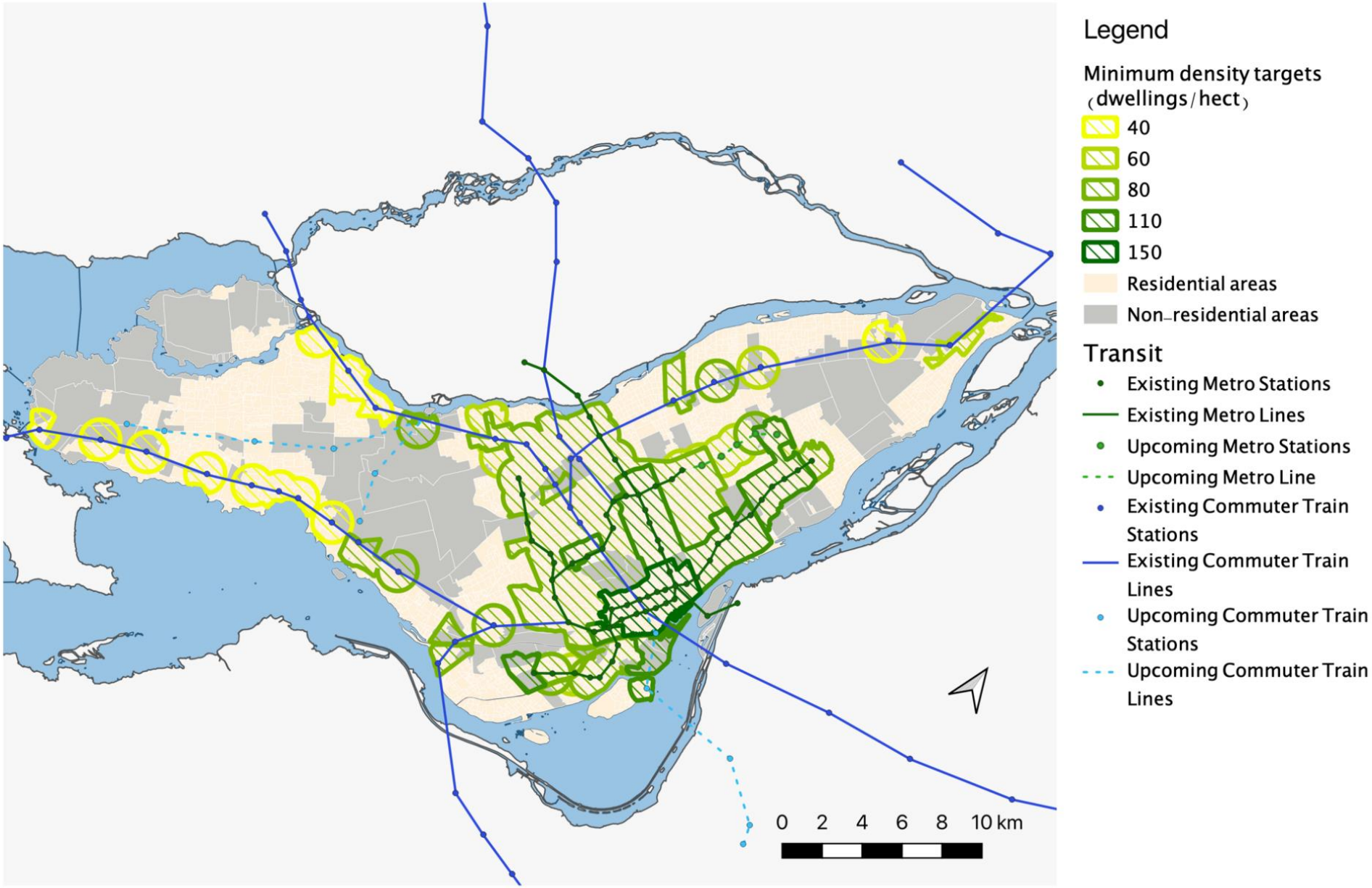


Figure 3.2.4. Minimum density targets in Montreal, 2021



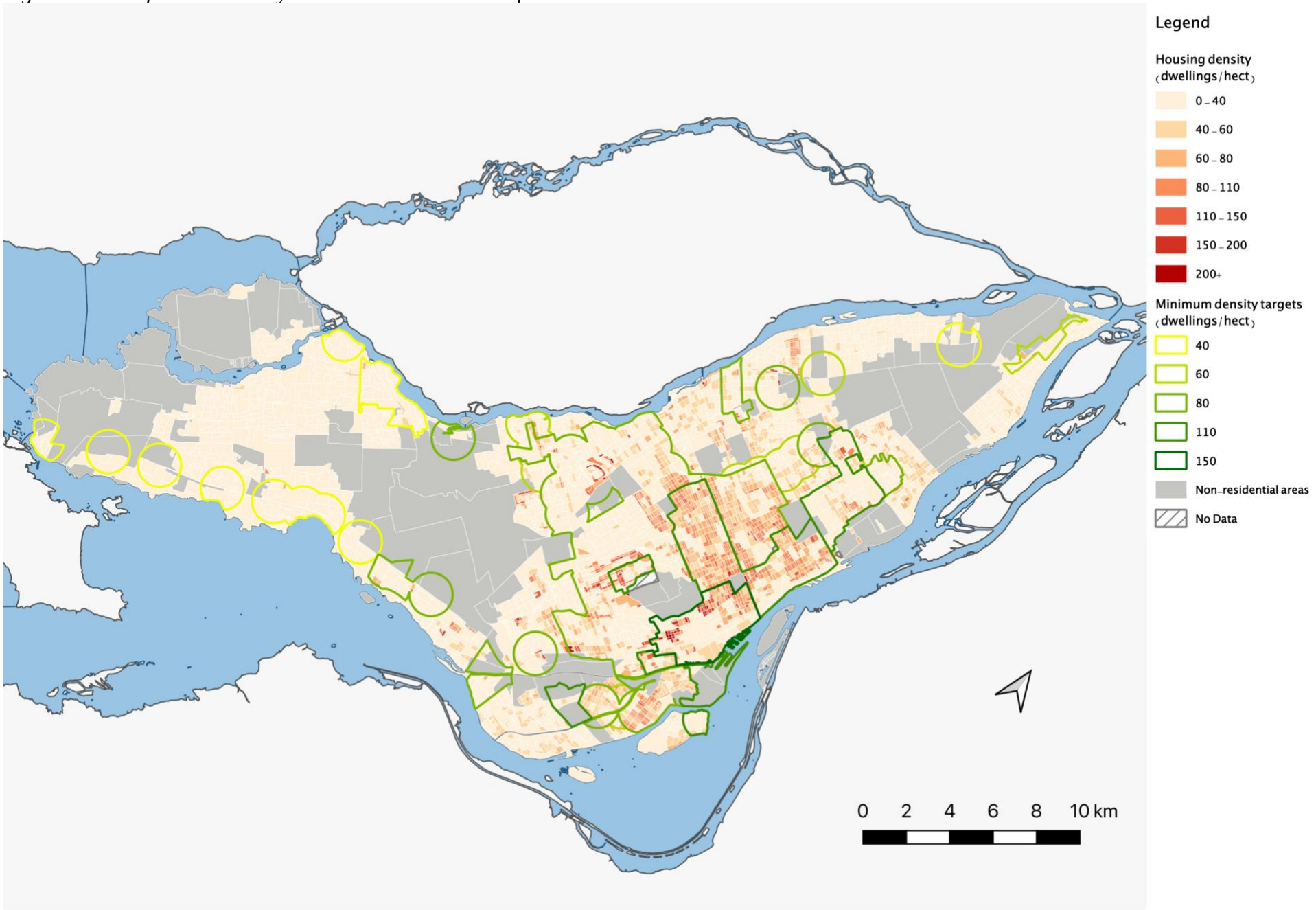
Data Sources: Montreal Open Data Portal, 2021; Statistics Canada, 2016.

The comparison of the demographics, housing, and transportation inside and outside the 2021 intensification areas from the Master Plan found that the targeted neighbourhoods are already denser and have more residents vulnerable to displacement. The areas targeted for higher minimum dwelling density are areas with higher densities to start. The densification strategy is to increase dwelling density based on current density, thus creating more construction competition is areas where there is already less land to develop, particularly in midtown residential areas east of Mount-Royal where several areas have already reached the minimum density targets (see *Figure 3.2.5 and Appendix 2*). Though the densification areas make up a majority of the island's area, there are still significant differences in demographic and housing characteristics between the areas inside and outside. The densification areas encompass the areas with medium density housing, such as the plexes, that Montreal is known for. Single family homes are rare in the densification areas, making up under six percent of the housing whereas they are much more common in the protected areas (see *Figure 3.2.6* and *Appendix 3*).

Despite Montreal being a renting city, with sixty percent of the population that rented in 2016, residents in intensification areas are more at risk of displacement. The proportion of renters is fifteen percent higher inside than outside the targeted areas (see *Figure 3.2.6*). Renters are particularly vulnerable to displacement when there are building pressures and higher land values in the densification areas because the rent increase and eviction policies are not being upheld in Montreal. According to the laws and regulations on rental housing set out by the rental board of Quebec, the Tribunal administrative du logement (TAL), landlords can ask to increase rent at the time of renewal of a lease which the renter can either accept or reject. In the case when there is a new tenant and new lease, the landlord can change the rent but, Article 1896 of the Civil Code stipulates that he or she is obligated to indicate the lowest rent paid in the last year in Section G of the lease. However, it has been difficult to enforce, and it has been known to be omitted or filled out incorrectly by landlords in order to instate higher rents. There are currently several groups who are advocating for a formal register of rents to assure this right.

Also, it has been uncovered that rents in Montreal have been increasing because landlords are evicting tenants or repossessing units under false pretenses, similarly to in Toronto. Evictions are permitted when landlords want to do renovations such as divide up rental units, demolish them, enlarge, or change their use. The rental unit can also be repossessed if the landlord wishes to use the residence for themselves, their children, their parents or any relative for whom they are the main source of support. A study led the non-profit housing committee in Rosemont—La-Petite-Patrie, the Comité Logement de La Petite-Patrie, found that in 85% of the cases reported to the committee, the projects that were cited as reasons for repossessions and evictions were never realized (Blanchard et al., 2020).

Figure 3.2.5. Population density inside and outside intensification areas in Montreal



Data Sources: Montreal Open Data Portal, 2020; Statistics Canada, 2016.

Figure 3.2.6. Comparison of housing and demographics linked to housing affordability inside and outside intensification areas in Montreal

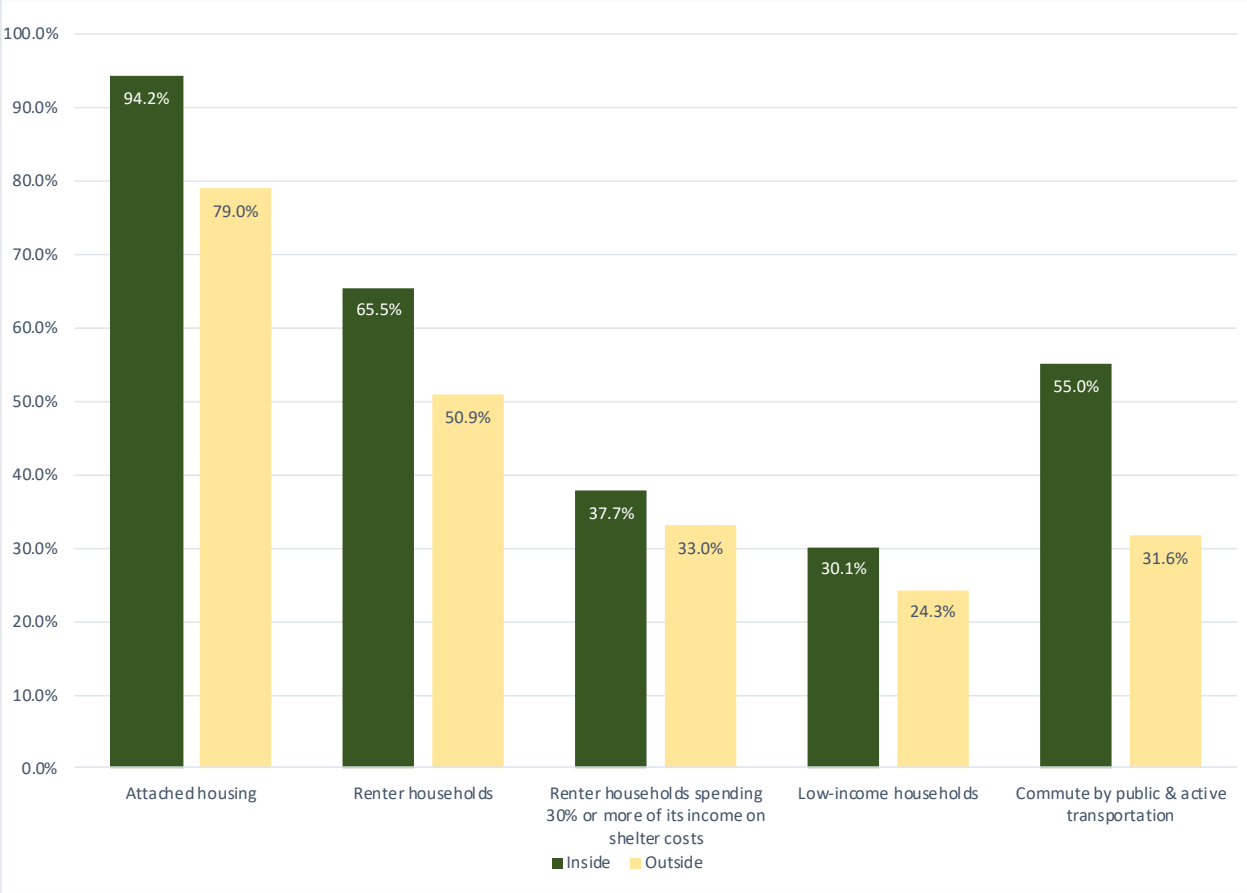


Figure 3.2.7. Average monthly rent inside and outside intensification areas in Montreal

Furthermore, the densification areas, there is a higher proportion of households who are spending over 30% of their income on shelter costs and low-income households (see *Figure 3.2.6*). Meanwhile, the average monthly rent in 2016 was higher in the densification areas, but the difference is only $40 (see *Figure 3.2.7*). As for other demographic characteristics, as in Toronto, at this scale there is no notable disparity of the ethnic mix inside and outside the densification areas (see *Appendix 3*). However, in Montreal, visible minorities were more likely to have low-income status according to Canada Census data in 2016: the prevalence of low-income status was 25.3% for visible minorities compared to 12.4% for residents who are not visible minorities. And so, due to the growth pressures, the disrespect of renting laws, and the greater vulnerability of the populations living in the intensification areas, the implementation of the densification policies is likely to result in diminishing affordable housing stock and displacing low-income and visible minority households from these areas. These areas need strong affordable housing policies to reverse these effects.

Moreover, it is interesting to note that beyond having negative impacts on affordable housing, the densification policies have so far been found to be ineffective at shifting modal shares to public and active transportation. An evaluation of the PMAD in 2018 has found that the plan was reaching its goal to have 40% of new units being constructed in TOD zones (before the goal was increased to 60% in 2019). However, the evaluation also determined that the modal share of public transit had stagnated at 25% despite the densification goals being reached. The press release writing about the evaluation stayed optimistic citing that when the projects and residential that were in progress are completed, then there would be a noticeable change (CMM, 2018). For the moment, it seems that the intensification near transit in Greater Montreal is not influencing transportation mode choice.

Affordable Housing Policies: their Presence, Absence, and Effectiveness

There is a strong consciousness that housing is becoming more and more unaffordable in the city by all levels of government. The provincial planning guidelines bring up the issue that the maintenance of good quality housing is becoming difficult as housing costs are increasing faster than household revenues. The planning guideline to address these challenges is to improve housing conditions and to adapt them to the socioeconomic context in order to develop quality neighbourhoods and encourage social mixing (DGUAT, 1994, p. 20). The PMAD does not have any guiding principles on housing affordability, but it also invokes the need for social and economic diversity (CMM, 2012, p. 90). And, as mentioned above, the PAMLSA states that assuring affordable housing in TOD zones is integral to the PMAD's primary climate goals. Finally, the Master Plan has a planning approach tenet to maintain and enhance housing quality and diversity in Montreal (Ville de Montréal, 2011, p. 6).

In the PMAD action plan, the CMM states that it is in the phases of research and drafting of guidelines to recommend certain affordable housing targets in TOD zones for municipalities, as only the municipal governments can set affordable housing targets. For the moment, the City has set a target that 30% of all new residential construction be affordable for low- or moderate-income households in the Master Plan. This target has prompted the creation of two planning mechanisms to encourage housing affordability in new residential developments: the *Strategy for the inclusion of affordable housing in new residential projects* and the *By-law for a Diverse Metropolis*.

The inclusionary strategy imposes negotiations with developers for 30% affordable housing on large municipally owned land, 15% of social or community housing and 15% affordable housing (SMVT, 2005, p. 15). Large sites encompass those that can welcome the development of more than 200 residential units. It also has a clause that incites the City to evaluate the potential of large sites to be held as a land trust with affordable, social, and community housing, but only in boroughs where the potential for new construction is low and market conditions, particularly the vacancy rate, are favourable (SMVT, 2005, p. 20), where municipal or public sites for development are rare or nonexistent. Not all sites to which this policy applies are in the intensification areas and so, this does not guarantee affordable units with access to frequent and convenient transit. The strategy also has action plans for residential development outside of large municipally owned land. However, the City has much less control on those lands through this strategy. Rather, the strategy sets out action plans to evaluate and eventually adopt other planning policies, programs, and tools for those areas. And so, the scope of the impact of the strategy itself is very limited to large municipally owned sites which are becoming scarcer and scarcer as they are being sold and developed by private developers. To this day, none of the sites have become a land trust.

Figure 3.2.8. Affordable housing zones for the By-law for a Diverse Metropolis *(Ville de Montréal, 2021, Annex B, p.1)*

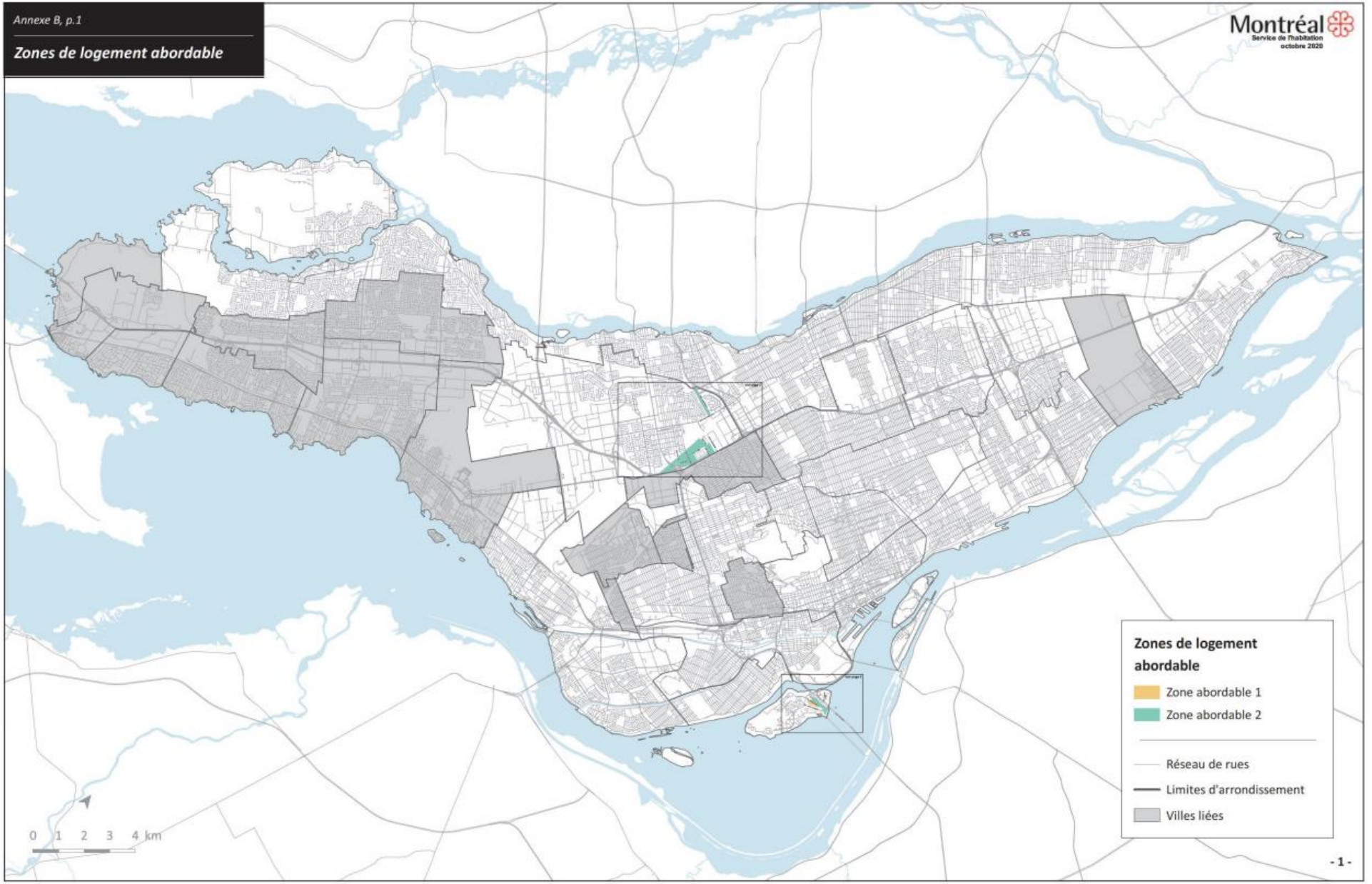


Figure 3.2.9. Affordable housing zones in Ville Saint-Laurent for the By-law for a Diverse Metropolis
(Ville de Montréal, 2021, Annex B, p.2)

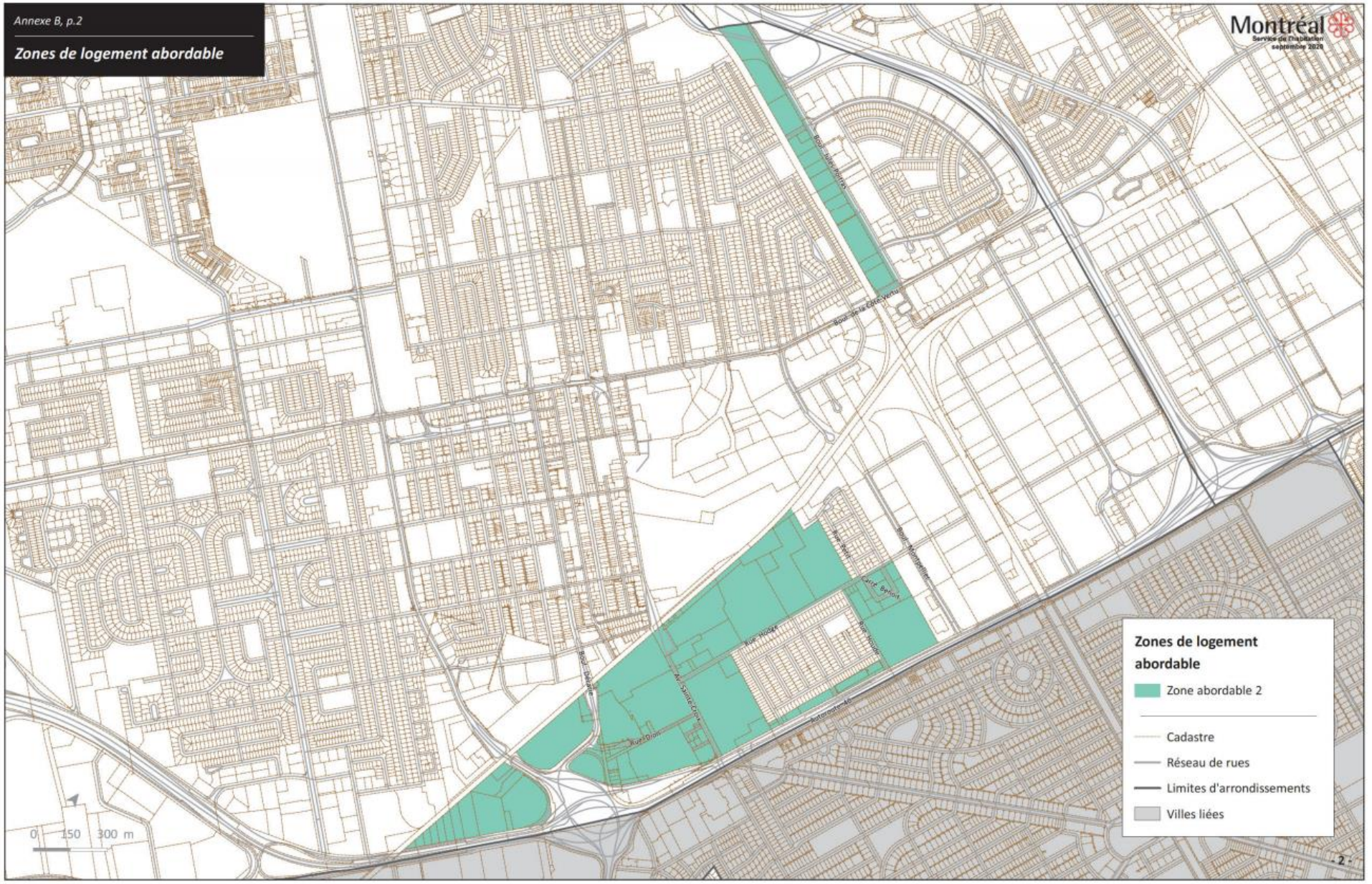
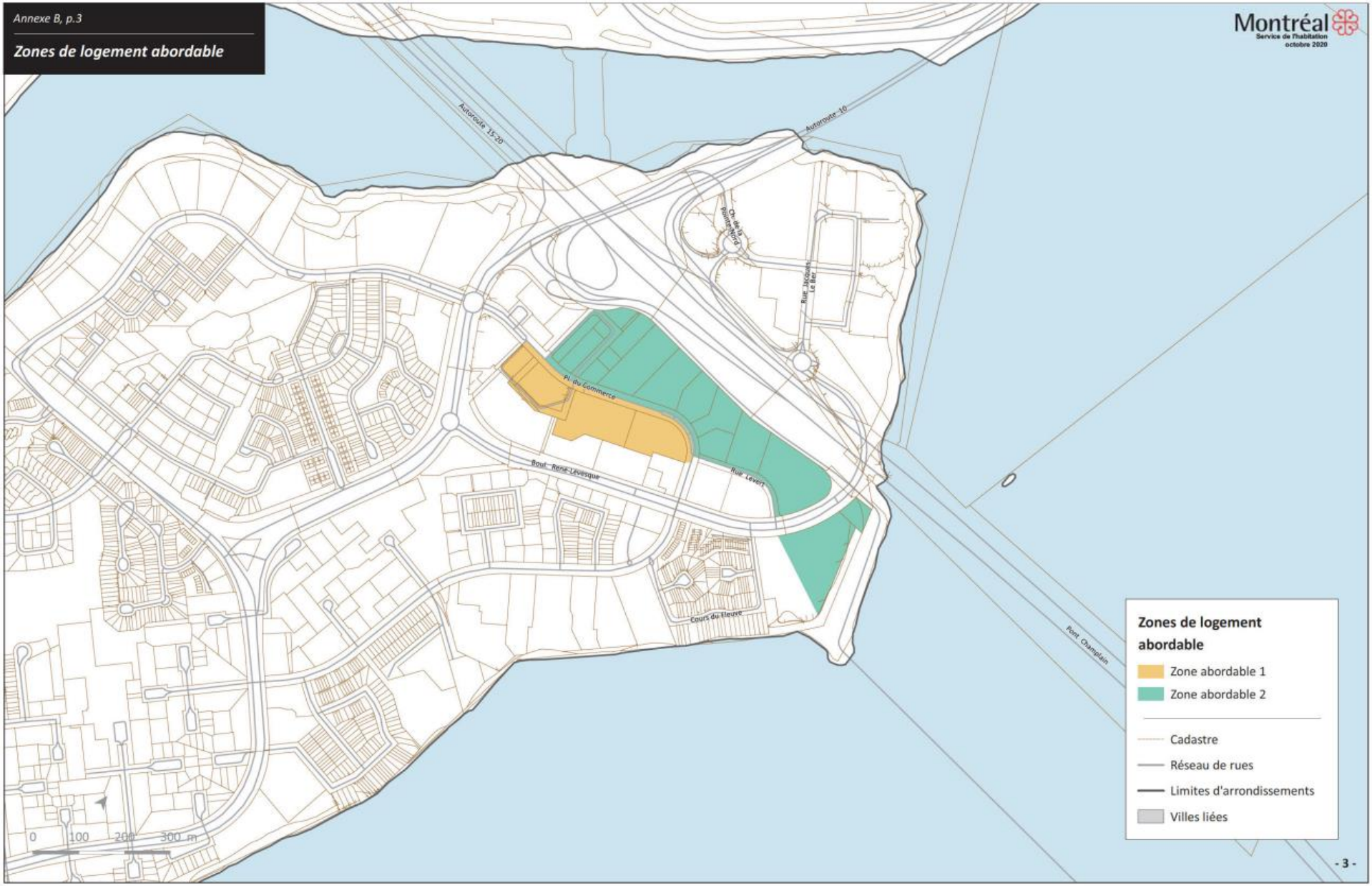


Figure 3.2.10. Affordable housing zones in Nun's Island for the By-law for a Diverse Metropolis *(Ville de Montréal, 2021, Annex B, p.3)*



The *By-law for a Diverse Metropolis* is also very limited in scope. In 2019, *By-law for a Diverse Metropolis* was adopted. The by-law imposed 15% to 20% affordable housing, 5% to 10% family housing, and 20% social housing to new residential projects of 450m^2 (approximately 5 units) or more and spanned the whole city, but now, it only targets new development in two specific developing areas in Ville-Saint-Laurent and Nun's Island (see *Figures 3.2.8 to 3.2.10*). Fortunately, both areas are in the intensification areas around transit. The inclusionary zoning imposes negotiations with the developer who must assure 20% social housing and up to 20% affordable housing and family housing. However, these social and affordable units can be built outside of the site as part of the developer's agreement with the City, and so possibly be situated away from transit. Otherwise, there is also the option of paying a fee to the City instead that would be dedicated to the construction of social housing. And so, the inclusionary zoning by-law does not guarantee the provision of new affordable housing in the limited areas where it is being applied.

Beyond the strategy and by-law being limited in scope, their definition of affordable housing results in them having a limited impact. In the inclusionary strategy, affordable housing is defined as housing for which low- and moderate-income households must not spend over 30% of their monthly gross income on shelter. However, the strategy defines low- and moderate-income households vaguely, based on their ability to find shelter that fits into this category. It does not identify the quintile of the income distribution in which these households are categorized. It is then difficult to evaluate if the provision of affordable housing has attained its goals. Nonetheless, the guarantee of 15% social and community housing assures that the lowest income households will have some housing provided for them. In the inclusionary by-law, unlike the inclusionary housing strategy's definition which is based on income, the definition of affordable housing is based on real estate market values. This is problematic as market values are not an indication of ability to pay for struggling households, especially in a market where housing prices are increasing at a disturbing rate.

Apart from setting affordable housing targets, the PMAD, the Master Plan and the inclusionary strategy include guidelines and policies that operate on the notion that diversified housing typology and tenure will meet some affordable housing needs. The PMAD aims to "Encourage the construction of a wide variety of dwellings (typologies and tenures) to better meet the needs of different household types and better integrate different socio-economic groups into community life (upholding social diversity)" (CMM, 2012, p. 90). Housing diversity is integral to one of the main objectives of the Master Plan: *Section 2.1 High-quality, diversified and complete living environments*. In this objective, the City intends to support the new construction of housing units of different sizes and types in order to meet the needs of various household compositions; rental housing, as well as condominium or single property ownership; and with price diversity. Finally, in the inclusionary strategy, the diversified housing notion translates into an action plan for the "Adaptation of some planning by-laws, especially to facilitate the construction of a wide range of dwellings and to minimize the requirements that have a strong impact on their affordability, such as those related to parking" (SMVT, 2005, p. 14). Increasing diversity of

housing in the new supply is seen as an integral solution to increasing the social and income diversity in TODs and in the rest of the Island.

In the Montreal planning documents of this analysis, there is a concentration on affordable housing supply in new residential developments, but few policies regarding the protection of existing rentals. The conversion of rentals into condominiums is not mentioned in the plans but there are strong municipal laws that mostly prohibit the conversion of rental buildings divided co-ownership since 2000 in the agglomeration of Montreal. There are protection policies that are focused on keeping up the quality of the housing thus indirectly avoiding demolitions of housing due to poor maintenance in *Section 2.1* of the Master Plan. These policies are supported by *Rénovation Québec* which is a provincial program funded by the *Société d'habitation du Québec* and the CMHC for the improvement and maintenance of residential buildings. The program applies to all residential buildings including rental buildings. However, as mentioned when discussion the vulnerability to displacement in the intensification areas, rental increase and eviction policies are loosely upheld. The owners of rental units may evict tenants for renovation and benefit from these programs, but there is no control on how much the rents will increase rents for the following tenant. And so, the condominium conversion laws and renovation programs may protect rentals from being taken off the market and from going into disrepair, but they do not protect their affordability.

It is important to couple both affordable housing protection policies with new supply. There is a telling example of how new development projects may provide new affordable units but eliminate surrounding affordable units which are not protected. Université de Montréal acquired 38 hectares of land of the former Outremont rail yards from Canadian Pacific Rail with $120 million in aid from the municipal, provincial, and federal government. The site is being developed into the university's new sciences complex, the MIL campus. It is both an institutional and residential development project which connected Outremont, a wealthy Montreal neighbourhood to Park Extension, one of the poorest neighbourhoods, through a bridge that connects the project to the Acadie Metro Station. In accordance with the inclusionary housing strategy, the project has planned 30% affordable units in the new residential development: of the 1 300 housing units planned thus far, the project has set out to have 15% affordable housing and 15% be social housing. However, its construction has resulted in rent hikes and reno-victions in Park Extension due to the lack of rental protections (Guay et al., 2020). The provision of social and affordable housing does not offset the number of households being displaced during the project's construction particularly since none of the social and affordable housing stock have been reserved to Park Extension households. This intensification project near transit has thus far done more harm than good for housing affordability in Montreal.

Montreal, as opposed to Toronto, has several policies to promote the construction of new affordable housing. The Master Plan set an affordable housing target in new residential

development. However, there have been few effective policies to implement this goal. The inclusionary housing strategy only assures affordable housing on large municipally owned sites and the inclusionary zoning by-law only applies to two small areas. And, neither assure that the affordable housing will be situated in the intensification areas near transit. Finally, the affordable housing provision policies in new developments are not paired with strong affordable housing protection policies which are primordial for the prevention of displacement. The concern for affordable housing in TOD is present and there is intent to implement more programs and planning mechanisms to address it with the support of governments at all levels, but for now, the planning is not sufficient to reverse housing inequalities and avoid displacement with the construction of TOD projects as they are presently.

3.3 SUMMARY OF THE FINDINGS

I found that in both the City of Toronto and City of Montreal, sustainability-as-density policies are central to climate change plans, they are important to the cities' contributions to mitigating climate change. Both cities promote compact form and the development of complete communities where there is dense, diverse housing, mixed uses, and good access to public transit. However, the PMAD is the only document that states that the inclusion of affordable is integral to successful climate-friendly development. Meanwhile, compact form and complete communities are also central to other public goals such as land and resource efficiency and economic growth, which sometimes eclipse the environmental goals in the way that policies are implemented. This reinforces the notion that sustainability-as-density policies are being used as a "sustainable fix" to facilitate growth dynamics rather than addressing root contradictions in which this economic model is the cause of climate issues (While et al., 2004).

As part of the policies to increase residential densities and mixed use near transit, both cities have identified targeted growth areas. In Toronto, the spatial extent of the areas is very limited, which exacerbates building competition, whereas in Montreal, it covers a majority of the city, and building competition is less intense. However, a spatial analysis that compares demographics, housing, and transportation inside and outside of the growth areas in both cities found that the targeted areas have more renting, higher average rents, and lower incomes, and they have already higher densities and greater transit use. And so, in the face of growth pressures in these areas, there is a greater risk of displacement of low-income residents if there are no policies protecting and constructing affordable housing. Especially given the rental increase and eviction policies that do not properly protect current tenants from gentrification and displacement.

Affordable housing is an important concern for all levels of government for both Toronto and Montreal. However, affordable housing is an afterthought of densification. Generally, the planning documents for both cities have set targets for densities in growth areas before any were set for affordable housing. Furthermore, the existing affordable housing policies rely highly on private development, are limited in scope, are not inclusive, and do not assure the construction of affordable housing near transit. One of the main strategies that appear in the planning documents is to increase overall housing supply and promote having a diversity of housing types, sizes, and densities. It is assumed that increasing housing supply and diversity will meet some of the affordable housing needs through market forces. This type of construction relies on a growth model led by real estate development and investment for profit which fundamentally contradict the goal of an affordable city. Meanwhile, the policies that explicitly promote or require the construction of affordable housing are only applied to a very limited area such as large sites, municipally owned land, or small targeted areas. The definition of affordability in these policies is vague and sometimes not actually affordable. Finally, wherever there are binding policies for the provision of new affordable housing, the housing is not guaranteed to be built within an area accessible to good transit service.

Both cities have some notable affordable housing protection and provision policies and intentions to expand housing affordability planning mechanisms, programs, and funding, but at the moment, they are not strong enough to increase affordable housing stock in transit-oriented development. The policies from the examined planning documents that promote intensification of housing near transit with the goal of mode shift are likely to increase land values in these growth areas and attract wealthy residents meanwhile displacing low-income residents due to the lack of complementary affordable housing protection and supply. And so, the net loss of affordable housing in the growth areas caused by these planning policies, puts both the cities' sustainability goals and equity at risk in these cities.

4. RECOMMENDATIONS: URBAN CLIMATE JUSTICE THROUGH TRANSIT-ORIENTED AFFORDABILITY

In order for the sustainability-as-density policies to reverse housing injustices and reach the cities' climate goals, this paper's recommendations are:

1. Stronger rental protection policies.

The provincial governments should have stronger rental protection policies in order to reduce unreasonable price hikes and illegal evictions that displace low-income residents. To start, there needs to be rent control between tenants. Landlords should be limited in their ability to increase rents unreasonably between leases. Also, requirements to divulge past rents as are present in Quebec leases should be applied in Ontario and there should be the instatement of a formal register of rents to assure transparency. For bad faith evictions and repossessions, there needs to be better follow-up and investigation from the TAL in Quebec and the Landlord and Tenant Board in Ontario. Instead of relying on tenants to denounce cases where they feel landlords are evicting them under false pretenses, the TAL and Landlord and Tenant Board should demand documentation and proof and follow up on changes in each repossession and eviction case.

Rentals should be further protected with policies such as Toronto's rental protection for buildings of six units or more in the Official Plan. Toronto should maintain this protection and Montreal should add similar policies on top of the renovation policies and programs that maintain affordable rentals on the island.

2. Densification areas should encompass greater areas.

Densification policies should be extended to low-density neighbourhoods which are walkable to transit. This is particularly an issue in Toronto where Neighbourhoods are higher income, have higher homeownership, and have greater access to social amenities and active and public transportation options than other areas. Protecting these neighbourhoods is unjust and creating greater construction pressures to areas with more vulnerable populations. Also, in Toronto, densification areas should be further expanded to include more areas within walking distance to transit (500m to 1km).

3. Governments should protect public land from private development and dedicate it to long-term de-commodified housing near transit

The federal, provincial, and municipal governments should make public land policies that forbid private for-profit development on public lands. The city could reserve the remaining city-owned

brownfields to be developed by non-profit developers or by the city on land trusts to assure long-term de-commodified housing particularly on lots near transit.

For example, in Hong Kong, the Hong Kong Administrative Region government gave Mass Transit Railway the land near mass transit stations before their construction and held it in a land trust. The government in Toronto and Montreal could also buy land around future transit stations and hold it in a public land trust and lease it long-term for affordable and social housing. This would remove the impacts of land speculation on housing costs and assure that low-income households, who use transit the most, have access to it.

The Vancouver Community Land Trust Foundation is another successful example of a land trust. The City of Vancouver formed the Vancouver Land Trust Foundation from a consortium of non-profit and private sector partners. The Land Trust assembled a proposal for four sites of available city-owned land to provide 358 non-market housing units. Because the Land Trust is managing a portfolio with four sites, it allows the project to be more cost-efficient and financially stable; the construction and operation costs are more efficient and rent-geared to income for a variety of incomes can create a cross-subsidy that ensures affordability. Other sources of revenue come from housing providers and from the sale of commercial retail units at the sites. The project is estimated to reach financial stability within the first year and any surpluses generated by the project will be split evenly between the City of Vancouver and the Land Trust (Patten, 2015). In Montreal, this could have been applied to the Université de Montréal MIL Campus residential development, the former Children's Hospital site, which were sold at a low price to private developers, and it could still be applied the former Royal Victoria. In Toronto, it could be applied to the Portlands, a large central area on the waterfront that is mostly public land.

4. Local plans of TODs should require more community involvement.

Plans should include community consultations throughout the planning and implementation process. Projects should also require community benefit agreements or comprehensive transit-oriented development strategies. For example, in 2007, San Leandro, California created a strategy to revitalize the downtown. The municipality was able to secure grants from regional metropolitan planning organizations. The City Council appointed a Citizen Advisory Committee and the City participated in several public consultation meetings. Because the majority of rental housing was situated within 800m of the Bay Area Rapid Transit station, the City and the citizens created a strategy to preserve the rental units and identify sites for 3,000 new market-rate and affordable units in the TOD zone. To fund the new affordable housing, it collected fees from developers with projects in the TOD zone. It also lowered the parking ratios to a maximum of one space per unit to increase density and make affordable housing more feasible. Finally, when the City and the community members approved new affordable and family rental housing in the TOD zone and the City partnered with a non-profit developer to take on the projects (Pollack, Bluestone et al. 2010).

5. Planning documents must include real targets and requirement for affordable housing with an inclusive definition of affordable housing.

Planning documents should have real targets and requirements for affordable housing. In Toronto, these targets and requirements are said to be included in the next Official Plan. At the moment, Montreal has a 30% goal of affordable housing in new residential developments. The targets and requirements should be more ambitious and stricter in the densification areas which are transit accessible. In the requirements, the definition of affordable housing must be truly affordable for low- and moderate-income households. The definition of affordable housing should be based on incomes and not on market prices.

6. Affordable housing needs to be funded and supported with programs instead of vague intentions.

There needs to be funding and programs that support affordable housing targets and requirements. The strategies and policies cannot only be inclusionary zoning and height and density negotiations. The governments cannot rely on the private developers to include truly affordable housing on the long term without incentives and subsidies.

It is important to note that there are several fiscal limits to increasing affordable housing generally in these cities. Municipalities have few funds to leverage to contribute to de-commodified housing. Firstly, social and affordable housing largely depends on federal and provincial funding and programs. However, after 50 years of federal involvement in the administration of social housing programs, in 1996, it transferred this administration to the provinces and territories. Through this policy, it withdrew its responsibility for the stream of subsidies which were once the initial funding packages for the approximately 500 000 social housing units across Canada. Secondly, the incremental withdrawal of funds has made it up to provinces to upkeep of the current social housing and to fund new affordable housing stock. These funds would have to come from increasing revenue from taxes in the province. However, increasing taxes is politically difficult. Thirdly, Canadian municipalities cannot borrow many funds from banks or other government which could be allocated to social and affordable housing programs and so, they must rely on increasing revenues from property taxes. However, municipalities are reluctant to do so because of the political pushback it will garner. Lastly, as the PMAD points out, there is an increasing reliance on development and increasing property values for tax revenue. And so, the cities' promotion of development to increase the tax base which could increase funds for social and affordable housing programs comes in direct conflict with housing affordability goals. It is no surprise that the planning documents are unambitious and relying on market forces to provide proper housing because they are limited in what they can regulate without financial support. It then becomes primordial that federal funding is increased to support provinces and municipalities in their endeavours to create just climate-friendly neighbourhoods.

Due to the exacerbation of housing crisis in the wake of the COVID-19 pandemic, CMHC announced an additional $2.5 billion in funding for affordable housing in the federal government's Budget 2021. Further studies should follow the impacts of this funding on local policies.

The proposed solutions focus on adapting the densification areas around existing and projected transit corridors. Other studies should examine future expansions of the transit systems under review and who they will serve. They should also explore how transit networks can be extended to car-dependent low-income neighbourhoods and be coupled with intensification measures to provide transit access, density, and affordable housing.

CONCLUSION

Climate planning is rising as a priority and has become ubiquitous in land-use plans of cities in the Global North. A major component of plans to reduce GHG emissions to reach climate goals are sustainability-as-density policies focused on reducing car use in favour of public and active transportation through increasing building densities and mixed-use along major transit corridors. However, these types of policies have caused social and environmental injustices between high-income, often white, and low-income, often racialized, urban residents. The green amenities of transit-oriented development are causing eco-gentrification. The developments attract the wealthy class and increase land values in neighbourhoods that are historically working-class, where low-income households have been concentrated in dense tenement housing due to exclusionary zoning. Not only are low-income households being displaced, but this displacement leads to the undermining of climate goals. Because income is a greater determiner of public transportation use than urban design, low-income households are more likely to use and depend on public transportation, and high-income households are more likely to drive despite easy access to transit. The densification of areas near transit does not guarantee a modal shift away from car use if they displace low-income residents to auto-oriented peripheries.

Sustainability-as-density policies that do not prevent the displacement of low-income households are perpetuating social injustices that sever low-income residents from their communities, decrease their access to transit, amenities, services, facilities, and economic opportunities of the inner-city. These policies fall in a pattern of urban renewal. They are also perpetuating environmental disadvantages as these residents once again have low access to environmental amenities even though they contribute the least to the carbon emissions and are most vulnerable to climate issues. Sustainability-as-density policies must center affordable housing and good access to transit for social justice in order for cities to reach their climate goals.

This paper analyzes the content of the transit-oriented densification policies in the provincial, regional, and municipal land-use plans of Canada's two largest cities, Toronto and Montreal, to determine if the cities are protecting and expanding affordable housing to prevent displacement and aid in the goal of mode shift. It was found that sustainability-as-density policies are central to both cities' planning. Both emphasize the need for complete communities with higher densities, mixed uses, and good access to public transit. However, the role of social and economic justice in sustainable development is rarely acknowledged in the planning documents, and affordable housing is not often seen an essential part of reaching climate goals. Furthermore, sustainability-as-density strategies are motivated by several other goals, such as economic growth and public cost efficiency, that seem to supersede the climate goals. This reinforces the notion that sustainability-as-density policies are being used as a "sustainable fix" to facilitate growth dynamics rather than addressing root contradictions in which this economic model is the cause of climate issues (While et al., 2004). The densification and affordable housing policies also reinforce this idea.

Both cities have set out areas for intensification. In both cases, the areas targeted have a population that is more vulnerable to displacement, including low-income households and people of colour, and the policies protect low-density and car-dependent areas. And, in Toronto, these policies even protect low-density areas within the intensification areas that have good access to transit. Meanwhile, affordable housing in these areas is an afterthought in these plans. Both cities are in a phase of research and not implementation of affordable housing policies and programs though construction has already started to intensify and gentrify inner-city neighbourhoods. Density targets are present before many of the affordable housing targets have been set. Furthermore, the existing affordable housing protections and supply policies and programs are not strong enough to prevent the displacement of vulnerable populations and assure social and economic diversity in the "climate-friendly" neighbourhoods. If there are no further stronger interventions, the policies will result in a net loss of affordable housing in these neighbourhoods. Overall, both cities are aware of affordable housing issues and show intentions to address them in upcoming plans and programs. Future research should analyze the affordable housing targets and inclusionary zoning upcoming in the next update of the *City of Toronto Official Plan* as well as the affordable housing measures that will result from the PMAD action plan.

Finally, in order to reverse the housing injustices caused by densification policies and reach the cities' climate goals, this paper recommends stronger rental protection policies; densification areas that encompass greater areas; the protection of public land from private development and the dedication of this land to de-commodified housing; mandatory community involvement in TOD plans; real targets and requirements for affordable housing with an inclusive definition of affordable housing; and funding and programs for affordable housing, especially in transit accessible areas.

REFERENCES

Aalbers, M. B. (2017). The variegated financialization of housing. *International Journal of Urban and Regional Research, 41*(4), 542-554.

Agyeman, J. (2013). *Introducing just sustainabilities: Policy, planning, and practice*. Zed Books Ltd.

Anguelovski, I. (2015). Healthy food stores, greenlining and food gentrification: Contesting new forms of privilege, displacement and locally unwanted land uses in racially mixed neighborhoods. *International Journal of Urban and Regional Research, 39*(6), 1209-1230.

Anguelovski, I., Brand, A. L., Chu, E., & Goh, K. (2018). Urban Planning, community (re)development and environmental gentrification. In R. B. Holifield, J. Chakraborty, & G. P. Walker (Eds.), *The Routledge handbook of environmental justice*. Routledge, Taylor & Francis Group.

Banister, D. (2018). *Inequality in transport*. Alexandrine Press.

Barri, E. Y., Farber, S., Kramer, A., Jahanshahi, H., Allen, J., & Beyazit, E. (2021). Can transit investments in low-income neighbourhoods increase transit use? Exploring the nexus of income, car-ownership, and transit accessibility in Toronto. *Transportation research part D: transport and environment, 95*, 102849.

Beimborn, E. A., Greenwald, M. J., & Jin, X. (2003, 2003/01/01). Accessibility, Connectivity, and Captivity: Impacts on Transit Choice. *Transportation research record, 1835*(1), 1-9. https://doi.org/10.3141/1835-01

Belshaw, J. D. (2016). Cold War Society: Cities and Suburbs. In *Canadian History: Post-Confederation*. BCcampus. https://opentextbc.ca/postconfederation/

Berube, A., & Kneebone, E. (2006). *Two steps back: City and suburban poverty trends, 1999-2005*. Brookings Institution.

Blanchard, M., Baril, M., Lavigne, S., & Thibault, A. (2020). *Entre fraude et spéculation: Enquêtes sur les reprises et évictions de logements*. https://comitelogementpetitepatrie.org/wp-content/uploads/2020/12/Entre-fraude-et-spe%CC%81culation-2020.pdf

Blau, J., & Moncada, A. (2015). *Human rights: A primer*. Routledge.

Boisjoly, G., Grisé, E., Maguire, M., Veillette, M.-P., Deboosere, R., Berrebi, E., & El-Geneidy, A. (2018). Invest in the ride: A 14 year longitudinal analysis of the determinants of public transport ridership in 25 North American cities. *Transportation Research Part A: Policy and Practice, 116*, 434-445.

Brundtland, G. H., & Khalid, M. (1987). *Our common future* (019282080X). O. U. Press.

Bryson, J. (2013). The nature of gentrification. *Geography Compass, 7*(8), 578-587.

Bulkeley, H., & Betsill, M. M. (2003). *Cities and climate change : urban sustainability and global environmental governance*. Routledge.

Bulkeley, H., & Betsill, M. M. (2013). Revisiting the urban politics of climate change. *Environmental politics, 22*(1), 136-154.

Bullard, R. (1990). Dumping in Dixie: Race, class, and environmental quality. *Urban Air Pollution, 13*.

Bunce, S. (2009). Developing sustainability: sustainability policy and gentrification on Toronto's waterfront. *Local Environment, 14*(7), 651-667.

Byrne, J., & Wolch, J. (2009). Nature, race, and parks: past research and future directions for geographic research. *Progress in human geography, 33*(6), 743-765.

Calthorpe, P. (2015). *Urbanism in the age of climate change*. Routledge.

Canadian Mortgage and Housing Corporation. (2009). *Transit-oriented development (TOD) : Canadian case studies*.

Canadian Mortgage and Housing Corporation. (2021). *Rental Market Report: Canada and Selected Markets*. https://assets.cmhc-schl.gc.ca/sites/cmhc/data-research/publications-reports/rental-market-reports/2020/rental-market-report-69720-2020-en.pdf?rev=936ca622-a6c5-4cbc-b937-d29b1d63cc14

Cervero, R., & Kockelman, K. (1997). Travel demand and the 3Ds: Density, diversity, and design. *Transportation research part D: transport and environment, 2*(3), 199-219.

Checker, M. (2011). Wiped out by the "greenwave": Environmental gentrification and the paradoxical politics of urban sustainability. *City & Society, 23*(2), 210-229.

City of Toronto. (2019). *City of Toronto Official Plan*. https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/official-plan/

City of Toronto. (2021a). *Inclusionary Zoning Policy: Overview*. https://www.toronto.ca/city-government/planning-development/planning-studies-initiatives/inclusionary-zoning-policy/inclusionary-zoning-overview/

City of Toronto. (2021b). *Official Plan Review*. Retrieved 25 June 2021 from https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/official-plan/official-plan-review/

City of Toronto. (2021c). *Social Housing Waiting List Reports*. Retrieved 20 July 2021 from https://www.toronto.ca/city-government/data-research-maps/research-reports/housing-and-homelessness-research-and-reports/social-housing-waiting-list-reports/

City of Toronto. (2021d). *Toronto at a Glance*. Retrieved 15 July 2021 from https://www.toronto.ca/city-government/data-research-maps/toronto-at-a-glance/

City of Toronto. (2021e). *Understand and Fight Evictions*. https://www.toronto.ca/community-people/housing-shelter/rental-housing-tenant-information/understand-fight-evictions/

Cohen, D. A. (2016a). Petro Gotham, People's Gotham. In S. Solnit & J. Jelly-Shapiro (Eds.), *Nonstop Metropolis: a New York City atlas*. University of California Press.

Cohen, D. A. (2016b). The rationed city: The politics of water, housing, and land use in drought-parched São Paulo. *Public Culture, 28*(2 (79)), 261-289.

Cohen, D. A. (2017). The other low-carbon protagonists: Poor people's movements and climate politics in Sao Paulo.

Cohen, D. A. (2018). Climate Justice and the Right to the City. *Penn: Current Research on Sustainble Urban Development. Philadelphia: University of Pennsylvania*.

Cole, D. H. (2015). Advantages of a polycentric approach to climate change policy. *Nature Climate Change, 5*(2), 114-118.

Communauté métropolitaine de Montréal. (2012). *An Attractive, Competitive, and Sustainable Greater Montreal*.

Communauté métropolitaine de Montréal. (2018, 11 September 2018). *La densification se poursuit dans le Grand Montréal - Nouveau numéro des chiers métropolitains sur le suivi du PMAD 2012-2018* [Press release]. https://cmm.qc.ca/communiques/la-densification-se-poursuit-dans-le-grand-montreal-nouveau-numero-des-cahiers-metropolitains/

Copenhagenize.eu Design Co. (2019). *The 2019 Index*. Retrieved July 1, 2021 from https://copenhagenizeindex.eu/the-index

Corfee-Morlot, J., Kamal-Chaoui, L., Donovan, M. G., Cochran, I., Robert, A., & Teasdale, P.-J. (2009). Cities, Climate Change and Multilevel Governance. *OECD Environment Working Papers*. https://doi.org/doi:https://doi.org/10.1787/220062444715

Cortright, J. (2014). The young and restless and the nation's cities. *City Observatory, 8*.

Cui, B., Boisjoly, G., Miranda-Moreno, L., & El-Geneidy, A. (2020). Accessibility matters: Exploring the determinants of public transport mode share across income groups in Canadian cities. *Transportation research part D: transport and environment, 80*, 102276.

Curran, W., & Hamilton, T. (2012). Just green enough: Contesting environmental gentrification in Greenpoint, Brooklyn. *Local Environment, 17*(9), 1027-1042.

Currie, G., & Delbosc, A. (2011, 2011/09/01/). Understanding bus rapid transit route ridership drivers: An empirical study of Australian BRT systems. *Transport Policy, 18*(5), 755-764. https://doi.org/https://doi.org/10.1016/j.tranpol.2011.03.003

Dale, A., & Newman, L. L. (2009). Sustainable development for some: green urban development and affordability. *Local Environment, 14*(7), 669-681.

Danyluk, M., & Ley, D. (2007). Modalities of the new middle class: Ideology and behaviour in the journey to work from gentrified neighbourhoods in Canada. *Urban Studies, 44*(11), 2195-2210.

Design Centre for Sustainability at UBC. (2006). *Sustainability by Design: A Vision for a Region of 4 Million* (P. M. Condon & J. Teed, Eds.). Design Centre for Sustainability at UBC.

Dingman, S. (2018). Toronto's low-rise neighbourhoods losing density as 'overhousing'spreads. *The Globe and Mail*.

Direction générale de l'urbanisme et de l'aménagement du territoire. (1994). *Les orientations du gouvernement en matière d'aménagement*.

Dodson, J., Gleeson, B., Evans, R., & Sipe, N. (2007, 2007/03/01). Investigating the Social Dimensions of Transport Disadvantage II: From Concepts to Methods through an Empirical Case Study. *Urban Policy and Research, 25*(1), 63-89. https://doi.org/10.1080/08111140701225511

Dooling, S. (2009). Ecological gentrification: A research agenda exploring justice in the city. *International Journal of Urban and Regional Research, 33*(3), 621-639.

Environment and Climate Change Canada. (2021). *Canadian Environmental Sustainability Indicators: Greenhouse gas emissions*. www.canada.ca/en/environment-climate-change/services/environmental-indicators/greenhouse-gasemissions.html

Evans, J., & Jones, P. (2008). Rethinking sustainable urban regeneration: ambiguity, creativity, and the shared territory. *Environment and Planning A, 40*(6), 1416-1434.

Ewing, R., Bartholomew, K., Winkelman, S., Walters, J., Chen, D., Mccann, B., & Goldberg, D. (2008). Growing Cooler: The Evidence on Urban Development and Climate Change. Urban Land Institute.

Ewing, R., & Cervero, R. (2001). Travel and the built environment: a synthesis. *Transportation research record, 1780*(1), 87-114.

Filion, P., & Kramer, A. (2012). Transformative metropolitan development models in large Canadian urban areas: The predominance of nodes. *Urban Studies, 49*(10), 2237-2264.

Fisher, A. (2015, 24 June 2015). Why companies are saying farewell to the 'burbs, and hello to the big city. *Fortune*. https://fortune.com/2015/06/24/companies-moving-to-cities/

Fitzgerald, J., & Lenhart, J. (2016). Eco-districts: can they accelerate urban climate planning? *Environment and Planning C: Government and Policy, 34*(2), 364-380.

Floater, G., Rode, P., Robert, A., Kennedy, C., Hoornweg, D., Slavcheva, R., & Godfrey, N. (2014). *Cities and the New Climate Economy: the transformative role of global urban growth*.

Florida, R. (2013, 7 October 2013). The Urban Tech Revolution. *Urbanland*. https://urbanland.uli.org/economy-markets-trends/the-urban-tech-revolution/

Florida, R. (2014). *The rise of the creative class--revisited: Revised and expanded*. Basic Books (AZ).

Florida, R. (2016, 7 June 2016). Startups and Venture Capital Are Going Urban. *Bloomberg CityLab*. https://www.bloomberg.com/news/articles/2016-06-07/martin-prosperity-institute-report-venture-capital-goes-urban

Gibbs, D., & Krueger, R. (2007). Containing the contradictions of rapid development? New economic spaces and sustainable urban development. In R. Krueger & D. Gibbs (Eds.), *The sustainable development paradox: Urban political economy in the United States and Europe* (pp. 95-122). Guilford Press.

Giuliano, G. (2005). Low income, public transit, and mobility. *Transportation research record, 1927*(1), 63-70.

Glaeser, E. L. (2011). *Triumph of the city : how our greatest invention makes us richer, smarter, greener, healthier, and happier*. Penguin Press.

Goodling, E., Green, J., & McClintock, N. (2015). Uneven development of the sustainable city: Shifting capital in Portland, Oregon. *Urban Geography, 36*(4), 504-527.

Gore, C., & Robinson, P. (2009). Local government response to climate change: Our last, best hope. In H. Selin & S. D. VanDeveer (Eds.), *Changing climates in North American politics: Institutions, policymaking, and multilevel governance* (pp. 137-158). MIT Press.

Got Green, & Puget Sound Sage. (2016). *Our People, Our Planet, Our Power*. https://gotgreenseattle.org/wp-content/uploads/2016/03/OurPeopleOurPlanetOurPower_GotGreen_Sage_Final1.pdf

Gould, K., & Lewis, T. (2012). The environmental injustice of green gentrification: the case of Brooklyn's Prospect Park. *The World in Brooklyn: Gentrification, immigration, and ethnic politics in a global city*, 113-146.

Gould, K., & Lewis, T. (2016). *Green gentrification: Urban sustainability and the struggle for environmental justice*. Routledge.

Greenberg, M. (2015). 'The sustainability edge': Competition, crisis, and the rise of green urban branding. *Sustainability as myth and practice in the global city*, 105-130.

Grube-Cavers, A., & Patterson, Z. (2015). Urban rapid rail transit and gentrification in Canadian urban centres: A survival analysis approach. *Urban Studies*, *52*(1), 178-194.

Guay, E., Vansintjan, A., Reiser, C., Renzi, A., Jolivet, V., Vukov, T., Megelas, A., Rose-Antoinette, R., & Darwish, A. (2020). *MIL façons de se faire évincer*. http://comitedactionparcex.org/wp-content/uploads/2020/06/MIL-fa%C3%A7ons-de-se-faire-%C3%A9vincer-LUniversit%C3%A9-de-Montr%C3%A9al-et-la-gentrification-%C3%A0-Parc-Extension.pdf

Hackworth, J., & Smith, N. (2001). The changing state of gentrification. *Tijdschrift voor economische en sociale geografie, 92*(4), 464-477.

Hagerman, C. (2007). Shaping neighborhoods and nature: Urban political ecologies of urban waterfront transformations in Portland, Oregon. *Cities*, *24*(4), 285-297.

Hall, P. (2014). *Cities of tomorrow : an intellectual history of urban planning and design since 1880* (Fourth edition. ed.). Wiley-Blackwell.

Heinonen, J., Jalas, M., Juntunen, J. K., Ala-Mantila, S., & Junnila, S. (2013). Situated lifestyles: II. The impacts of urban density, housing type and motorization on the greenhouse gas emissions of the middle-income consumers in Finland. *Environmental Research Letters*, *8*(3), 035050.

Heinonen, J., Kyrö, R., & Junnila, S. (2011). Dense downtown living more carbon intense due to higher consumption: a case study of Helsinki. *Environmental Research Letters, 6*(3), 034034.

Hillman, M. (1996). In favour of the compact city. *The compact city: A sustainable urban form*, 36-44.

Hulchanski, D. J., & Maaranen, R. (2018). *Neighbourhood Socio-Economic Polarization & Segregation in Toronto: Trends and Processes since 1970*. http://neighbourhoodchange.ca/documents/2018/09/hulchanski-2018-toronto-segregation-presentation.pdf

Humphreys, S., & Robinson, M. (2010). *Human rights and climate change*. Cambridge University Press.

Jonas, A. E., & While, A. (2007). Greening the entrepreneurial city. *The sustainable development paradox: Urban political economy in the United States and Europe*, 123-159.

Jones, C. E., & Ley, D. (2016). Transit-oriented development and gentrification along Metro Vancouver's low-income SkyTrain corridor. *The Canadian Geographer/Le Géographe Canadien, 60*(1), 9-22.

Kamal-Chaoui, L., & Robert, A. (2009). Competitive Cities and Climate Change. *OECD Environment Working Papers*. https://doi.org/doi:https://doi.org/10.1787/218830433146

Kousky, C., & Schneider, S. H. (2003). Global climate policy: will cities lead the way? *Climate policy, 3*(4), 359-372.

Kramer, A. (2018). The unaffordable city: Housing and transit in North American cities. *Cities, 83*, 1-10.

Lee, M., & Card, A. (2011). Who Occupies the Sky? The Distribution of GHGs in Canada. *Behind the Numbers*.

Levy, B. S., & Patz, J. A. (2015). Climate change, human rights, and social justice. *Annals of global health, 81*(3), 310-322.

Machline, E., Pearlmutter, D., Schwartz, M., & Pech, P. (2020). *Green Neighbourhoods and Eco-gentrification: A Tale of Two Countries*. Springer Nature.

Manville, M., Taylor, B. D., & Blumenberg, E. (2018). *Falling Transit Ridership: California and Southern California*. https://trid.trb.org/view/1500403

Marino, E., & Ribot, J. (2012). Adding insult to injury: climate change, social stratification, and the inequities of intervention. *Global Environmental Change, 22*(2), 323-398.

McConnachie, M. M., & Shackleton, C. M. (2010). Public green space inequality in small towns in South Africa. *Habitat international, 34*(2), 244-248.

Meligrana, J., & Skaburskis, A. (2005). Extent, location and profiles of continuing gentrification in Canadian metropolitan areas, 1981-2001. *Urban Studies, 42*(9), 1569-1592.

Ministry of Municipal Affairs and Housing. (2020a). *A Place to Grow: Growth Plan for the Greater Golden Horseshoe*. https://www.publications.gov.on.ca/CL29325

Ministry of Municipal Affairs and Housing. (2020b). *Provincial Policy Statement, 2020*. https://www.ontario.ca/page/provincial-policy-statement-2020

Minx, J., Baiocchi, G., Wiedmann, T., Barrett, J., Creutzig, F., Feng, K., Förster, M., Pichler, P.-P., Weisz, H., & Hubacek, K. (2013). Carbon footprints of cities and other human settlements in the UK. *Environmental Research Letters, 8*(3), 035039.

Newman, P., & Kenworthy, J. R. (1999). *Sustainability and cities : overcoming automobile dependence*. Island Press. http://lcweb.loc.gov/catdir/toc/98-42239.html http://catdir.loc.gov/catdir/enhancements/fy0666/98042239-d.html

Office municipal d'habitation de Montréal. (2020). *Assessing applications and waiting lists*. Retrieved 20 July 2021 from https://www.omhm.qc.ca/en/submit-application/assessing-applications-and-waiting-lists

Patten, K. (2015). Vancouver Community Land Trust Foundation: Examining a model for long-term housing afordability.

Pearsall, H. (2010). From brown to green? Assessing social vulnerability to environmental gentrification in New York City. *Environment and Planning C: Government and Policy, 28*(5), 872-886.

Pearsall, H., & Anguelovski, I. (2016). Contesting and resisting environmental gentrification: Responses to new paradoxes and challenges for urban environmental justice. *Sociological Research Online, 21*(3), 121-127.

Pollack, S., Bluestone, B., & Billingham, C. (2010). *Maintaining diversity in America's transit-rich neighborhoods: Tools for equitable neighborhood change*.

Quastel, N. (2009). Political ecologies of gentrification. *Urban Geography, 30*(7), 694-725.

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*(7), 1055-1084.

Raworth, K. (2008). *Climate Wrongs and Human Rights: Putting people at the heart of climate change policy* (Vol. 117). Oxfam.

Rice, J. L., Cohen, D. A., Long, J., & Jurjevich, J. R. (2020). Contradictions of the climate-friendly city: new perspectives on eco-gentrification and housing justice. *International Journal of Urban and Regional Research, 44*(1), 145-165.

Rosol, M. (2013). Vancouver's "EcoDensity" planning initiative: A struggle over hegemony? *Urban Studies, 50*(11), 2238-2255.

Savage, K. (2019, 2 December 2019). *Results from the 2016 Census: Commuting within Canada's largest cities*. Statistics Canada. Retrieved 27 May 2021 from https://www150.statcan.gc.ca/n1/pub/75-006-x/2019001/article/00008-eng.htm

Service de l'habitation de la Ville de Montréal. (2020). *Profil des ménages et des logements Agglomération de Montréal Édition 2020*.

Service de la mise en valeur du territoire. (2005). *Strategy for the inclusion of affordable housing in new residential projects*.

Shell International BV. (2014). *New Lenses on Future Cities*.

Slavin, P. (2015, 1 July 2015). Walkable Downtowns Drawing Companies and Talent. *Urban Land Magazine*. https://urbanland.uli.org/news/walkable-downtowns-drawing-companies-talent/

Swyngedouw, E. (2010). Impossible sustainability and the post-political condition. In *Making strategies in spatial planning* (pp. 185-205). Springer.

Taylor, B. D., & Morris, E. A. (2015, 2015/03/01). Public transportation objectives and rider demographics: are transit's priorities poor public policy? *Transportation, 42*(2), 347-367. https://doi.org/10.1007/s11116-014-9547-0

Tretter, E. M. (2013). Contesting Sustainability:'SMART Growth'and the Redevelopment of A ustin's E astside. *International Journal of Urban and Regional Research, 37*(1), 297-310.

Ummel, K. (2014). Who pollutes? A household-level database of America's greenhouse gas footprint. *Center for Global Development Working Paper*(381).

United Nations Framework Convention on Climate Change. (2015). Paris agreement. Report of the Conference of the Parties to the United Nations Framework Convention on Climate Change (21st Session, 2015: Paris).

United States General Accounting Office. (1995). *Hazardous and Nonhazardous Waste: Demographics of People Living Near Waste Facilities: Report to Congressional Requesters*. The Office.

Ville de Montréal. (2011). *Master Plan*. http://ville.montreal.qc.ca/portal/page?_pageid=2762,3101662&_dad=portal&_schema=PORTAL

Ville de Montréal. (2020). *Règlement pour une métropole mixte, document explicatif - version révisée, novembre 2020*. https://portail-m4s.s3.montreal.ca/pdf/rmm_document_explicatif.pdf

Règlement visant à améliorer l'offre en matière de logement social, abordable et familial, (2021). https://portail-m4s.s3.montreal.ca/pdf/reglement_pour_une_metropole_mixte.pdf

Wachsmuth, D., & Angelo, H. (2018). Green and gray: New ideologies of nature in urban sustainability policy. *Annals of the American Association of Geographers*, *108*(4), 1038-1056.

Wachsmuth, D., Cohen, D. A., & Angelo, H. (2016). Expand the frontiers of urban sustainability. *Nature News*, *536*(7617), 391.

While, A., Jonas, A. E., & Gibbs, D. (2004). The environment and the entrepreneurial city: searching for the urban 'sustainability fix'in Manchester and Leeds. *International Journal of Urban and Regional Research*, *28*(3), 549-569.

Whittemore, A. H. (2021). Exclusionary zoning: Origins, open suburbs, and contemporary debates. *Journal of the American Planning Association*, *87*(2), 167-180.

Wiedenhofer, D., Guan, D., Liu, Z., Meng, J., Zhang, N., & Wei, Y.-M. (2017). Unequal household carbon footprints in China. *Nature Climate Change*, *7*(1), 75-80.

Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough'. *Landscape and urban planning*, *125*, 234-244.

World Bank. (2010). *Cities and climate change: An urgent agenda*.

APPENDIX 1: CITY STATISTICS

Toronto and Montreal housing statistics

	Toronto	Montreal
Total private dwellings	1 179 057	843 872
Social housing	93 404[1], ~7.9% (2015)	62 157[2], ~7.4% (2019)
Number of households active on social housing waiting list	79 332[3], ~2.9% (2021)	>23 000[4], ~1.3% (2020)
Mean monthly shelter cost for rented dwellings metropolitan region[3] (2020)	$1 523	$891
Rate of average rent increase between 2019 and 2020 metropolitan region[3] (2020)	4.6-4.9%	4.2%
Vacancy rate of private rentals metropolitan region[3]	1.5 % (2019) 3.4% (2020)*	1.5 (2019) 2.7% (2020)*

*Vacancy rates increased in 2020 due to the COVID-19 pandemic, however average monthly rents continued to rise.

[1] (City of Toronto, 2021d)

[2] (SHDM, 2020)

[3] (City of Toronto, 2021c)

[4] (OMHM, 2020)

[5] (CMHC, 2021)

Toronto and Montreal demographics

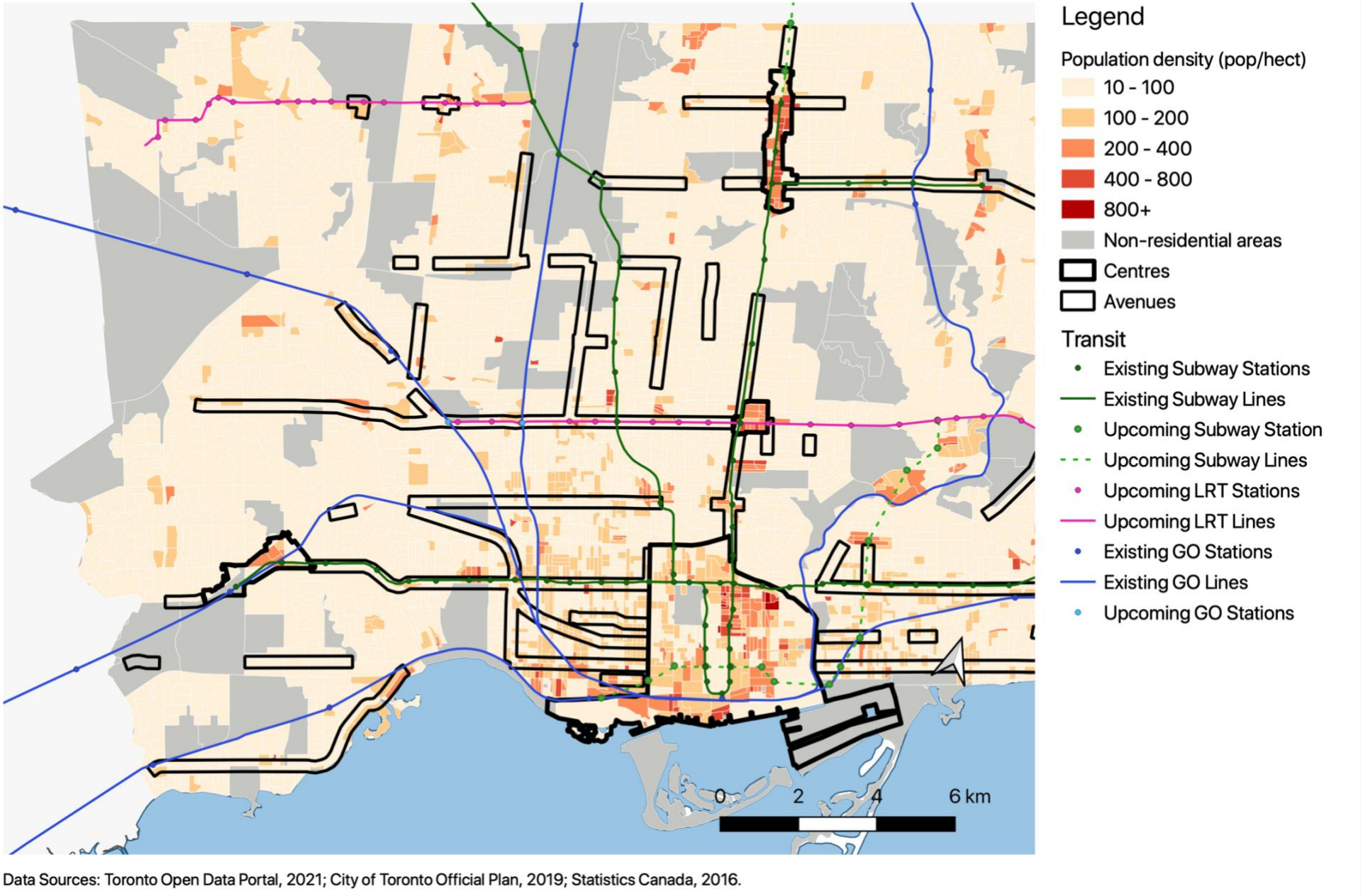
	Toronto	Montreal
Population	2 731 570	1 704 694
Population metropolitan region	5 928 040	4 098 927
Population growth 2011-2016	4.5%	3.3%
Population growth 2011-2016 metropolitan region	6.1%	7.2%
Population density per km^2	4 334	4 662
Number of households	1 112 930	779 805
Percentage owners	57.8%	36.7%
Percentage renters	47.2%	63.3%
Proportion tenant households in subsidized housing	15.1%	8.9%
Proportion renters paying more than 30% of income on housing	46.8%	36.5%
Proportion of low-income households (2015)	20.2%	22.7%
Median total household income before tax (2015)	$65 829	$50 227
Average total household incomes before tax (2015)	$102 721	$69 047

Toronto and Montreal mode of transportation for commuting

	Toronto	Montreal
City		
Motor vehicle (driver or passenger)	50.5%	50.1%
Public transit	37%	36.5%
Walking	8.6%	8.6%
Cycling	2.7%	3.9%
Other	1.1%	0.9%
Metropolitan Region		
Motor vehicle (driver or passenger)	68%	69.4%
Public transit	24.3%	22.3%
Walking	5.2%	5.2%
Cycling	1.4%	2.0%
Other	1.0%	0.8%

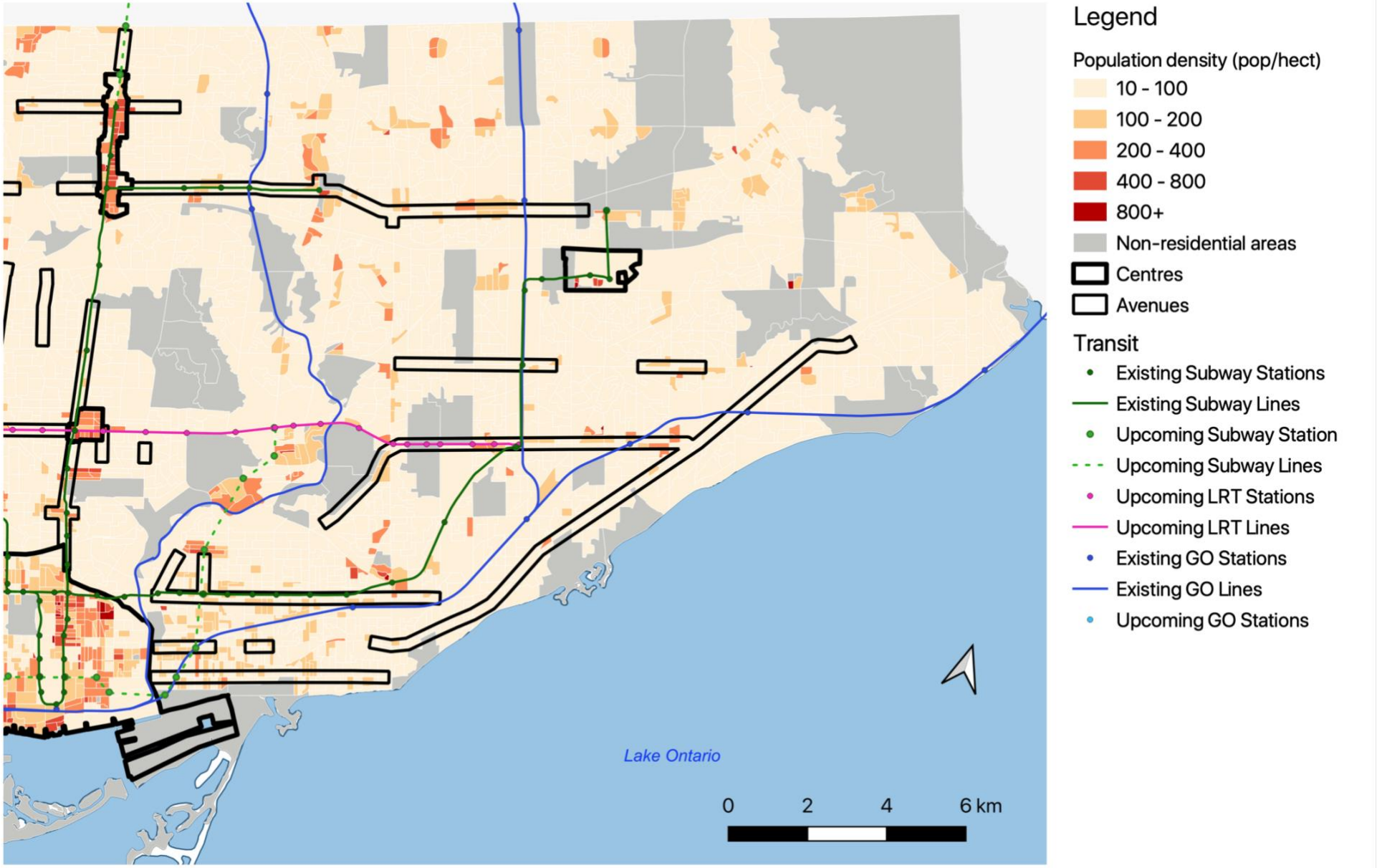
APPENDIX 2: SPATIAL ANALYSIS MAPS

Population density inside and outside intensification areas in Toronto (West)



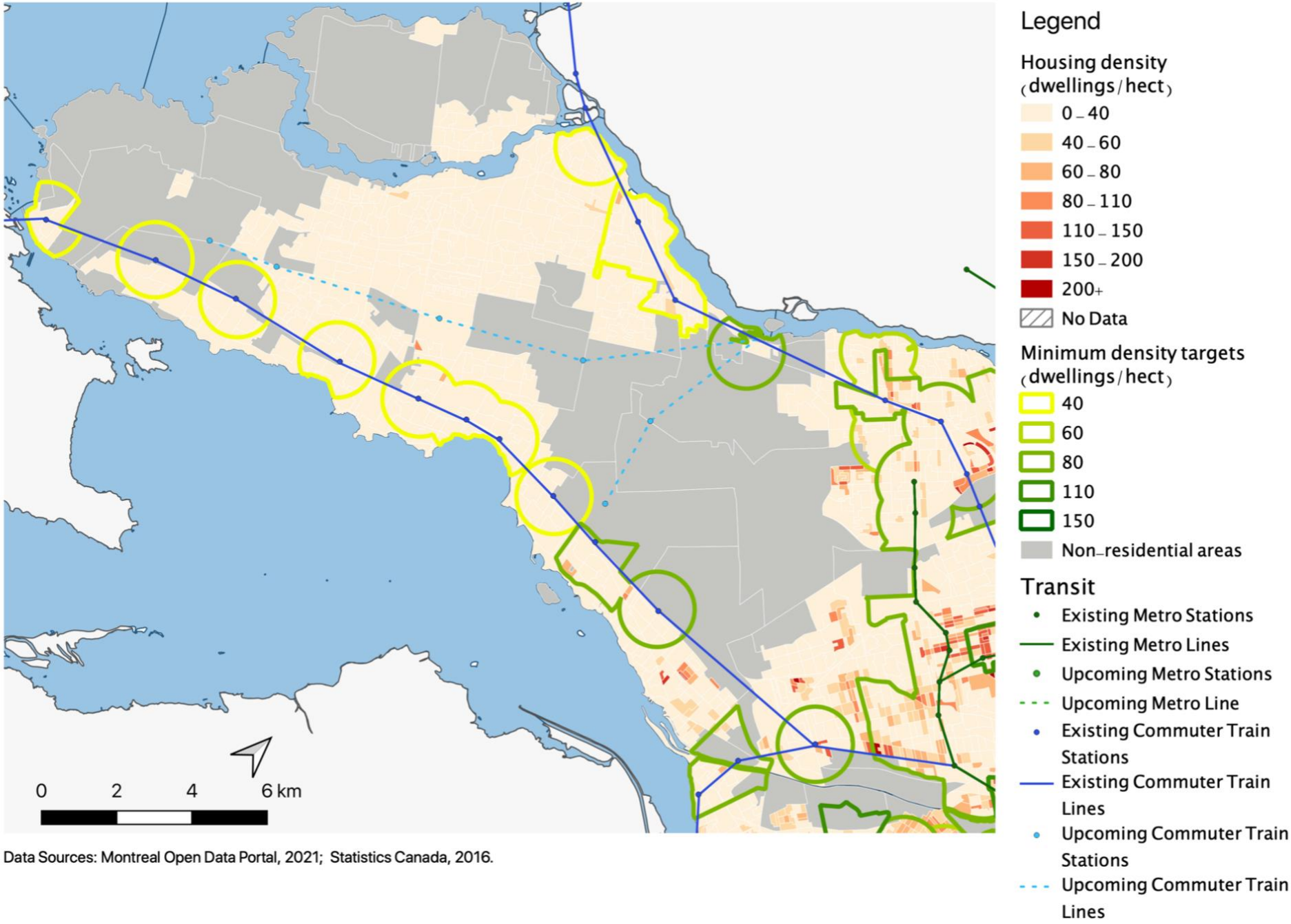
Data Sources: Toronto Open Data Portal, 2021; City of Toronto Official Plan, 2019; Statistics Canada, 2016.

Population density inside and outside intensification areas in Toronto (East)



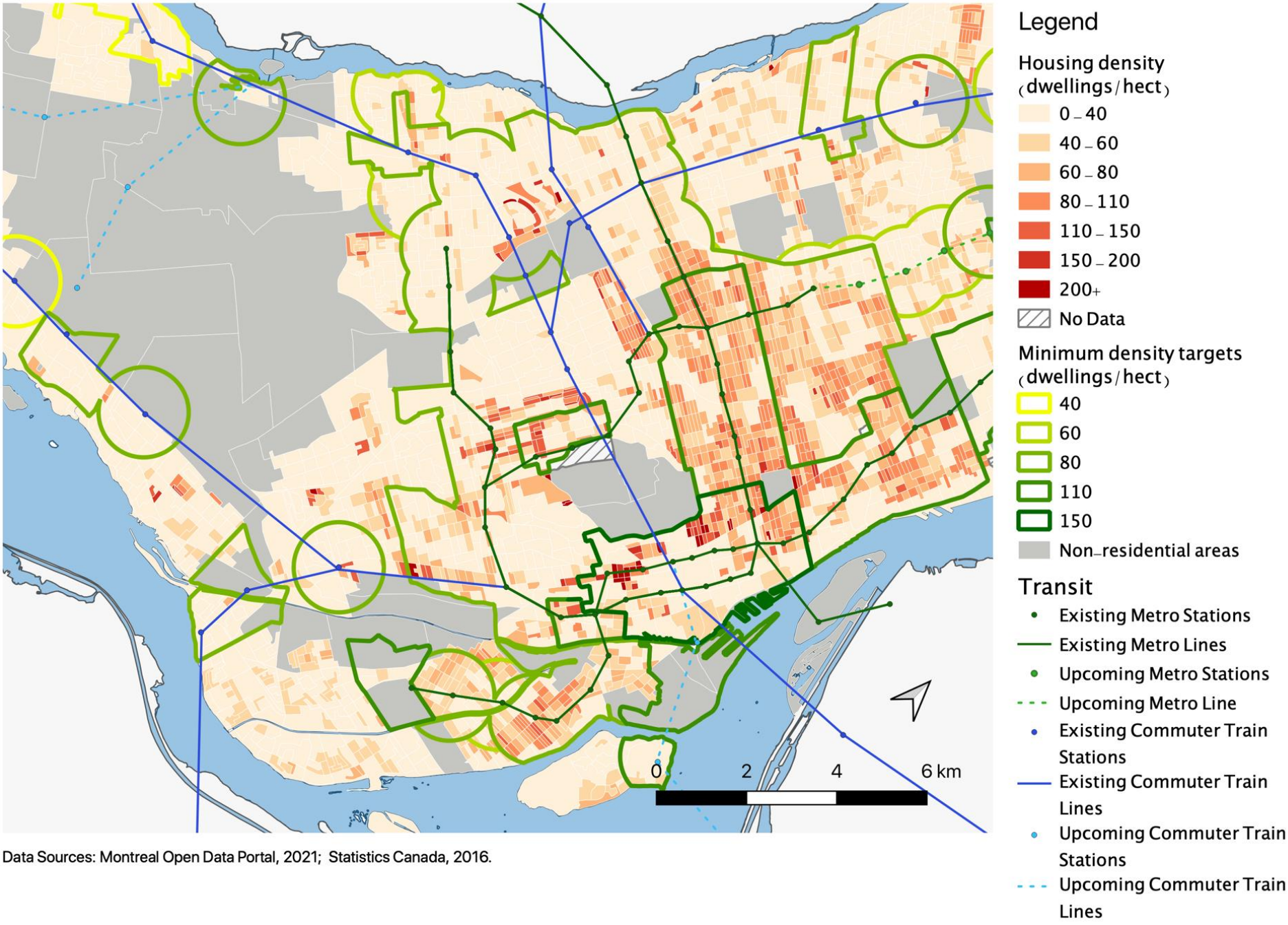
Data Sources: Toronto Open Data Portal, 2021; City of Toronto Official Plan, 2019; Statistics Canada, 2016.

Population density inside and outside intensification areas in Montreal (West)



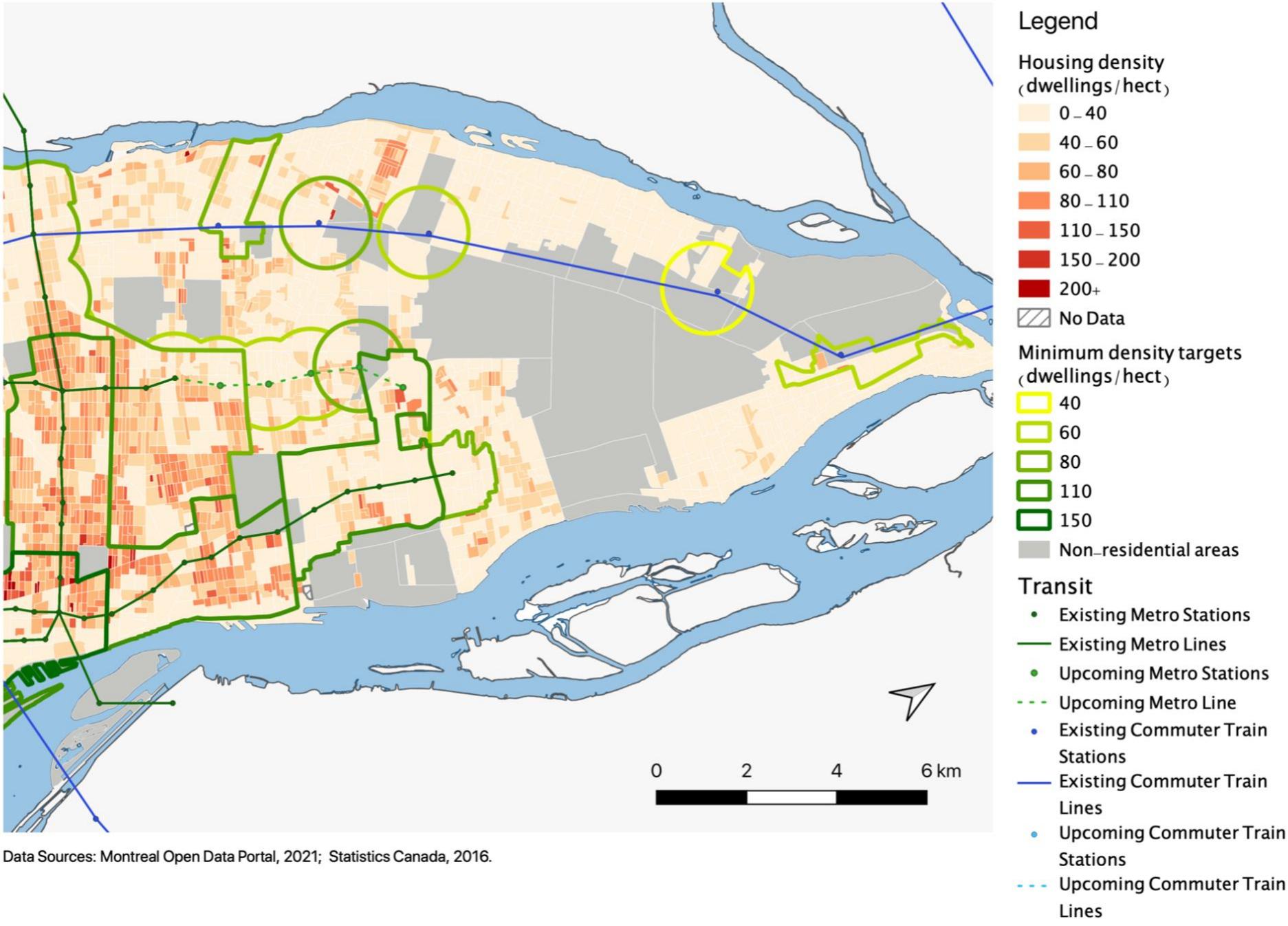
Data Sources: Montreal Open Data Portal, 2021; Statistics Canada, 2016.

Population density inside and outside intensification areas in Montreal (Mid)



Data Sources: Montreal Open Data Portal, 2021; Statistics Canada, 2016.

Population density inside and outside intensification areas in Montreal (East)



Data Sources: Montreal Open Data Portal, 2021; Statistics Canada, 2016.

APPENDIX 3: COMPARISON OF STATISTICS INSIDE AND OUTSIDE TARGETED GROWTH AREAS

A comparison of housing and demographics inside to outside Centres and Avenues in Toronto

		Inside	Outside	City-wide[1]
Housing Type	Single-detached house	5.5%	31.2%	23.8%
	Semi-detached house	2.7%	7.9%	6.4%
	Apartment or flat in a duplex	1.7%	5.4%	4.3%
	Row house	3.1%	6.4%	5.5%
	Apartment in a building that has fewer than 5 storeys	14.8%	15.1%	15.0%
	Apartment in a building that has 5 or more storeys	71.9%	33.8%	44.8%
	Other single-attached house	0.3%	0.2%	0.3%
	Movable dwelling	0.0%	0.0%	0.0%
Housing Tenure	Owner	38.3%	57.9%	52.3%
	Renter	61.7%	42.1%	47.7%
Housing Affordability	Owner households spending 30% or more of its income on shelter costs	33.9%	24.4%	26.4%
	Renter households spending 30% or more of its income on shelter costs	48.6%	43.9%	45.7%
	Renter households in subsidized housing	14.4%	14.2%	14.3%
	Average rent for renter households	$1,343.98	$1,135.73	$1,213.80
Housing Suitability	Suitable	88.5%	87.5%	87.8%
	Not suitable	11.5%	12.5%	12.2%
Housing Condition	Only regular maintenance or minor repairs needed	93.8%	92.6%	92.9%
	Major repairs needed	6.2%	7.5%	7.1%
Low income	In low income based on the Low-income measure, after tax	25.3%	18.9%	20.4%
Visible Minority	Visible Minority	49.8%	52.0%	51.5%
	South Asian	9.5%	13.4%	12.5%
	Chinese	13.1%	10.6%	11.1%
	Black	7.6%	9.3%	8.9%
	Filipino	4.9%	5.9%	5.7%
	Latin American	2.6%	2.9%	2.9%
	Arab	1.7%	1.3%	1.4%
	Southeast Asian	1.4%	1.6%	1.5%
	West Asian	2.7%	2.1%	2.3%
	Korean	2.8%	1.2%	1.5%
	Japanese	0.7%	0.4%	0.5%
	Other	1.0%	1.5%	1.4%
	Multiple	1.7%	1.8%	1.8%

[1] Statistics slightly differ from city profiles due to the elimination of dissemination areas with a population density below 10 people per hectare.

	Not Visible Minority	50.2%	48.0%	48.5%
Aboriginal Ancestry	Aboriginal ancestry (only)	0.2%	0.1%	0.2%
	Aboriginal ancestry and non-Aboriginal ancestry	1.4%	1.1%	1.2%
	Non-Aboriginal ancestry (only)	98.4%	98.7%	98.7%
Main mode of commuting to work	Car, truck, van -- as a driver	30.5%	50.8%	45.6%
	Car, truck, van -- as a passenger	2.8%	5.1%	4.5%
	Public transit	40.2%	36.2%	37.2%
	Walked	21.0%	4.6%	8.7%
	Bicycle	4.2%	2.3%	2.8%
	Other method	1.3%	1.0%	1.1%

A comparison of housing and demographics inside to outside TOD zones in Montreal

		Inside	Outside	City-wide[2]
Housing Type	Single-detached house	5.8%	21.0%	10.9%
	Semi-detached house	2.6%	5.5%	3.6%
	Apartment or flat in a duplex	11.4%	15.1%	12.6%
	Row house	3.0%	5.2%	3.7%
	Apartment in a building that has fewer than 5 storeys	59.5%	43.2%	54.1%
	Apartment in a building that has 5 or more storeys	17.2%	9.7%	14.7%
	Other single-attached house	0.5%	0.3%	0.4%
	Movable dwelling	0.0%	0.1%	0.0%
Housing Tenure	Owner	34.6%	49.2%	39.4%
	Renter	65.5%	50.9%	60.6%
Housing Affordability	Owner households spending 30% or more of its income on shelter costs	18.3%	16.3%	17.5%
	Renter households spending 30% or more of its income on shelter costs	37.7%	33.0%	36.4%
	Renter households in subsidized housing	7.8%	6.2%	7.3%
	Average monthly rent	$857.49	$816.88	$846.17
Housing Suitability	Suitable	91.5%	92.2%	91.7%
	Not suitable	8.5%	7.8%	8.3%
Housing Condition	Only regular maintenance or minor repairs needed	91.5%	93.2%	92.0%
	Major repairs needed	8.5%	6.8%	7.9%
Low income	In low income based on the Low-income measure, after tax	30.1%	24.3%	28.4%
Visible Minority	Visible minority	32.6%	33.9%	33.0%
	South Asian	3.7%	3.1%	3.5%
	Chinese	3.7%	2.6%	3.3%
	Black	7.9%	12.5%	9.6%
	Filipino	1.7%	1.2%	1.5%
	Latin American	3.7%	3.9%	3.8%
	Arab	7.1%	6.5%	6.9%
	Southeast Asian	2.1%	1.8%	2.0%
	West Asian	1.0%	1.0%	1.0%
	Korean	0.3%	0.3%	0.3%
	Japanese	0.2%	0.1%	0.2%
	Other	0.3%	0.3%	0.3%
	Multiple	0.7%	0.7%	0.7%
	Not a visible minority	67.5%	66.1%	67.0%
Aboriginal Ancestry	Aboriginal ancestry (only)	0.4%	0.3%	0.3%
	Aboriginal ancestry and non-Aboriginal ancestry	2.4%	1.6%	2.1%
	Non-Aboriginal ancestry (only)	97.3%	98.1%	97.6%
	Car, truck, van -- as a driver	41.3%	63.8%	49.3%

[2] Statistics slightly differ from city profiles due to the elimination of dissemination areas with a population density below 10 people per hectare.

Main mode of commuting to work	Car, truck, van -- as a passenger	2.7%	3.7%	3.1%
	Public transit	39.2%	26.8%	34.9%
	Walked	10.7%	3.8%	8.2%
	Bicycle	5.1%	1.0%	3.7%
	Other method	0.9%	0.8%	0.9%