

L'Université de Montréal

Densification & Affordability: Comparative Real Estate Projects across Montreal

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RÉSUMÉ

Mots Clés : densification, abordabilité, Smart Growth, tendances démographiques, condos

Montréal, Québec se construit vers une forme urbaine compacte, mais il en relève des questionnements quant aux effets sur l'abordabilité et l'accession à la propriété. En tenant compte du processus de la densification urbaine, une enquête sur une série de projets de condominiums immobiliers à travers la ville est menée afin de divulguer les prix des projets nouveaux ou en construction. Au préalable, ceci survole la littérature et les études actuelles portant sur la planification urbaine, notamment celles qui sont reliées au Smart Growth, études dans lesquelles le contexte de densification et de tendances consuméristes à préférer les formes urbaines étalées est mis en évidence. Essentiellement, Moroni (2010) souligne l'approche dichotomique en planification urbaine entre les perspectives «teleocratic» et «nomocratic». La densification montréalaise actuelle contemporaine s'exprime par une multitude de modèles de condos conformes aux nouvelles tendances démographiques et des modes de vie. En s'appuyant sur les critères du programme Accès Condos, sur les critères du SCHL (32% du revenu) et sur le revenu médian des ménages, le niveau d'accessibilité à la propriété d'un condominium peut être mesuré. Les résultats indiquent que selon ces critères, les logements de style condominium, neufs et en construction, sont abordables.

L'analyse contribue empiriquement à la littérature en exposant les liens entre les stratégies actuelles de densification urbaine avec l'abordabilité des logements condos. La recherche porte un regard nouveau sur le phénomène condo à Montréal et ses tendances démographiques. La ville est divisée selon le modèle Burgess et la recherche mène un sondage comparatif des prix pour déterminer l'abordabilité. Les résultats suggèrent que les projets condos actuels sont *relativement* abordables pour les ménages avec un revenu médian et plus, selon Accès Condos.

ABSTRACT

Key Words: densification, affordability, Smart Growth, demographic trends, condos

Montreal, Quebec is building towards a more compact urban form and there is a fundamental questioning of its effect on home-ownership affordability. Using the process of densification, a survey on a range of real estate condominium projects across the city is conducted to divulge the prices of new or in-construction projects. Beginning with a literature review of the most up to date planning stratagems, notably Smart Growth initiatives, the context for densification and consumerist tendencies to prefer sprawled urban forms is highlighted. Fundamentally, there is a teleocratic versus nomocratic planning approach that must be decided upon. Contemporary densification in Montreal is expressed in a myriad of condominium designs conforming to new demographic trends and lifestyles. Using existing criteria by Accès Condos, the projects are compared and validated as to whether or not condominium unit prices are affordable. As a result, new or in-construction condominium units are found to be affordable with respect to the Accès Condos programme and to median income households.

The analysis contributes empirically to the literature by relating the impetus of densification strategies with levels of affordability. The research takes a fresh look into Montreal's own condominium phenomenon alongside trending demographic studies. Using Burgess' spatial segregation of the city, a cross comparison survey tests for affordability across Montreal. The findings suggest that current projects are *relatively* affordable for median income earning households as per AccèsCondos.

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LIST OF ACRONYMS AND ABBREVIATIONS

BIDs Business Improvement Districts

BMO Bank of Montreal

CDN-NDG Côte-des-Neiges-Nôtre-Dame-de-Grâce

CMA Census Metropolitan Area

CMHC Canadian Mortgage Housing Corporation

CMM Communauté Métropolitain de Montréal

CTV Canadian Television

GST Goods and Services Tax

HUD Department of Housing and Urban Development

IMF International Monetary Fund

LICO Low Income Cutoff

LIHTC Low Income Tax Credit

LIM Low Income Measures

LMI Low to Moderate Income

MBM Market Basket Measure

NHA National Housing Act

PPU Programme Particulier Urbain

PST Provincial Sales Tax

RBC Royal Bank of Canada

SAHT South Australian Housing Trust

SHDM Société d'Habitation et de Développement de Montréal

TOD Transit Oriented Development

TD Toronto Dominion

UGB Urban Growth Boundary

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“Health is wealth, money is poker chips. Everything else is bullshit and gun smoke except God, Family and friends” - Harry Platis

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PREFACE

CROSSROADS

“The only source of knowledge is experience” – Albert Einstein

Shelter is a fundamental human need. From the beginning of time, the concept of a physical dwelling and home as a space tending to our most primitive physiological and emotional needs – including resting, eating, and reproducing – has always been highly vested as a basic component to life and communal gathering. From the Indus Valley civilization to the Aegean civilization, shelter has proven itself significant. Because land has always been a limited benefaction, society has always sought to house people in the most efficient and effective ways. In other words, people have been innovating dense living configurations from early periods to the contemporary skyscraper behemoth. At the juncture, there is a questioning of society’s functionality and values, in which productivity and compassion are embroiled into a debate on the level of housing accessibility and the rights to housing.

Simply put, this research attempts to understand society's provision of denser shelter-types and its process for housing people. Using the unique cityscape of Montreal, Quebec, it seeks to understand its current state of housing affordability and how its density factors into the costs of housing in the broader context. With an interesting Anglo-French influence dating back to the 17th Century, Montreal's housing stock is comprised of a myriad of architectural typologies. In the following research, Montreal's new condominium development, as part of the city's Master plan expansion of the downtown and other sectors, is uncovered as a story of densification and its effect on housing affordability.

Because there are many aspects to city planning, there is a focus on the city's densification effect on housing affordability. Planners often address transportation, open spaces, public services and amenities, land-uses, and new development patterns, but focusing purely on the densification process will also allow some of these issues to be addressed tangentially. That said, the narrow lens of studying housing affordability through the densification process proves insufficient as a holistic explanation in understanding the urban condition. The city of Montreal is currently modifying its Master Plan to densify and revitalize specific areas. The general orientation remains to optimize housing density and typologies in the right areas, and prescribe modifications where needed such that levels of affordability can remain acceptable.

Residential density is an extremely valuable concept to understand from a design perspective as it embodies the physical image of a city and because there are practical implications and relations to issues like housing affordability. Density can be a visual representation of a city's economic capacity, diversity, and power. As a result of both scarcity and desirability of select lands, the laws of supply and demand optimize residential development by building both vertically and more densely. This concept is explicative in the strategy to densify residential development, but there are questions as to its effect on access to housing.

The control of building densities plays an important role in the provision of affordable housing, but it is also the point of contact between economic, political, social, and environmental forces. These larger issues play an indirect, but fundamental role in the formation of urban densities and housing affordability. While the density of a city may seem like a rather unimportant indicator, there are some fundamental questions as to its effect on elements like housing affordability. For example, why is it that super dense cities like Hong Kong and Vancouver also have the highest levels of unaffordable housing?

This research focuses on a Canadian context and how the compact city is increasingly becoming favored over sprawled development. In an effort to curb the inefficiencies and unsustainability of sprawl, contemporary planners look to new urban paradigms like Smart Growth, which at the core, seek to densify using a myriad of design strategies. Having been popularized in the late twentieth century by the State of Maryland, the discourse on Smart Growth also looks to provide affordable housing through the provision of mixed-uses, various housing typologies, and higher density. Because of its lack of maturity as a planning mechanism, the effect of its policies are still under investigation and up for debate. Even so, it has not stopped the Smart Growth movement from gaining in popularity as a response to creating more sustainable and efficient neighborhoods.

In order to gain deeper insight into Montreal's urban condition and to address its future strategy, this research entails an examination into its densification strategy, and as a result, its housing affordability. Chapter one introduces the issue of sprawl, the re-emergence of the city centre, densification and Smart Growth, and current implications of Smart Growth strategies. In other words, it contextualizes the need for densification and the most contemporary outlook on curbing sprawl. Chapter two touches on the topic of affordability, the role of diversity, barriers to affordable housing, and the importance of providing affordable housing. Chapter three proceeds to the methodology of the research including the use of academic sources, the gathering of empirical data, and the rationale behind it. Chapter four investigates the city of Montreal in terms of the condominium market, the inclusionary program, the Accès Condos program, and current research on housing trends and affordability. It continues to depict the city centre densification (Griffintown) as a part of the downtown expansion, its demographic market, comparative case studies across Montreal (Le Triangle and Laval), and the results of empirical data gathering. Chapter five discusses the results and concludes the findings of condominium development on housing affordability. The entirety of the research provides a case study analysis to the planning literature linking residential densification to housing affordability in its current state of affairs.

CHAPTER 1

DIRECTING INSATIABLE BUILDING

“How often have I lain beneath rain on a strange roof, thinking of home?” - William Faulkner

INTRODUCTION TO CITY PLANNING

The intricacies of city development demand planning strategies for optimal efficiency of resources in an ever economically dependent society. Planners are required to mediate the intersection of economic, social, political, and environmental spheres through the manifestation of the built environment. For the most part, contemporary cities employ some form of centralized planning and regulation, but such control is tenable given current economic theory – case and point, Adam Smith's notion of the invisible hand and the self-regulating behavior of the market. Historically, cities have in fact not always been planned – a form planners call organic development, but that was before the aggregation of millions in a concentrated area. Beginning in the nineteenth and the twentieth centuries, the coordination of land use controls and regulations were widely accepted and influential in the development of cities. These regulatory frameworks for city planning were the result of eighteenth and nineteenth century thinking that humans could understand and manage their circumstances with reason and science. In a broad sense, urban plans designed from top-down authority to control and to direct an array of private and public activities under the guise of a master plan. In this sense, the results

of unified visions gave permanence to cities. Ultimately, planners could regulate directly or indirectly the costs of living, including housing, rent, and comfort (Moroni 2010). According to Beckley (1992), land use regulations have since proliferated as a liberal reformation and as a quiet revolution from the 1960s. Land use controls are supposed to be correctional policies to alleviate market failures, altering, but not changing fundamental private property rights. Central planning advocates argue the importance of planning regulations as means to serving the interests of the public, but critics have been quick to dissolve the existence of such an interest, instead vindicating regulation as means to protecting private interests based on fundamental class divisions – of social, political, and economic differences – a representation of politics and the existence of the relative powers of specific interest groups. Beckley (1992) refers to Heiman's (1988) neoweberian and neomarxist assertion that central land use regulations employ a 'conservation-and-development' approach represented on a map as areas to protect and as areas to develop for economic purposes. According to Moroni (2010), there are two theories of regulation: 1) a teleocratic approach embodying planning as a series of deliberate, rational interventions on the part of the state to direct and to coordinate private urban activities, such that there is order in the arrangement of a given sociospatial system; and 2) a nomocratic approach in which planning ought to be counter-intuitively based on spontaneity and actions emerging non-intentionally in a self-organizing manner. Furthermore, he believes in the rediscovery of the ideal rules of law where individual freedom can be subject to impersonal and impartial law. Moroni (2010) argues that there are three main arguments to dispense of the teleocratic approach and of Beckley's (1992) quiet revolution. First of all, there is an epistemological issue in planning for a complex system for which we cannot concentrate a dispersion of social knowledge – it is impossible as Moroni (2010) quotes Friedrich von Hayek saying this:

There is . . . a body of very important but unorganized knowledge which cannot possibly be called scientific . . . : the knowledge of the particular circumstances of time and place. It is with respect to this that practically every individual has some advantage over all others because he possesses unique information of which beneficial use might be made, but of which use can be made only if the decisions depending on it are left to him or are made with his active cooperation . . . Central planning based on statistical information by its nature cannot take direct account of these circumstances of time and place . . . Decisions depending on them can be left to the man on the spot.

Ensuing the point that:

...the market is the only known method of providing information [through the price system] enabling individuals to judge comparative advantages of different uses of resources of which they have immediate knowledge and through whose use, whether they so intend or not, they serve the needs of distant unknown individuals. This dispersed knowledge is essentially dispersed, and cannot possibly be gathered together and conveyed to an authority charged with the task of deliberately creating order.

And making it ultimately impossible to create an integrated plan because planners do not possess sufficient relevant information. Secondly, there is a praxeological issue in that centralized planning leads to a drop in productivity, efficiency, and creativity by reducing opportunities of experimentation and forcing upon a community regulations based on limited knowledge. Finally, there is an axiological issue because centralized planning infringes on individual liberty in its disregard for the ideal rule of law or simple and stable rules that apply equally and predictably. Moroni (2010) criticizes centralized planning as arbitrarily connecting supplies of land and buildings, as being highly inefficient, and as involving a strong difference and unequal treatment of lands and individuals through a priori zoning, quoting Richard Epstein (2005, pp.11-12):

The modern administrative state has enormously expanded the scope of government activity. Imagine someone with a plot of land in a prime neighborhood. . . An administrative committee has the power to alter the wealth of the property owner substantially by its decision, up or down. That committee does not ask whether the owner has committed some wrongful act . . . What it is doing is making a judgment about the contribution, loosely defined, that this development will make toward the well-being of the community at large. The background standards – shared benefit, public interest, convenience, necessity and so on – are so nebulous that even where there is a system of judicial review it is difficult to work out the grounds on which decisions have been made and whether they are right or wrong. The amount of discretion built into the system is simply inconsistent with the rule of law.

The issue is therefore not with private action, but with the state's ability to use discretionary decisions. As such, Moroni (2010) contends that cities ought to utilize a system of urban codes versus urban plans because they are impersonal and impartial, and do not represent the coordination of content, but rather the pattern of coordination – the goal of which is not to have a flexible system of land use

regulations, but a set of rules for society to be highly flexible. Taking from Moroni (2010), he recognizes the importance of regulations and discretionary decision-making based on limited knowledge for centralized planning. However, there is an equally disconcerting effect of nomocratic planning that has resulted in inefficient and unjust urban forms as we will see.

RESEARCH TOPIC: DENSIFICATION AND AFFORDABILITY IN MONTREAL

On the topic of this research, cities today recognize the value of compact city centres in conjunction with the provision of affordable housing. Having employed nomocratic planning, the free market, bolstered by private interests, has led to an insatiable demand for suburban type markets, adhered to by unsustainable characteristics. This type of development is devoid of efficient planning and relies heavily on automobile usage. Almost intuitively, planners have been suggesting more compact urban forms particularly located in more central areas. The addition of residential developments, either through conversion or new construction, reinforces the economic pulse of the city by contributing both supply and demand to the downtown market. Society being ever dependent on feasibility, it must collaborate in multidisciplinary fashion to negotiate the manifestation of its spaces. The generation of revenues for both private and public sectors is mutually synergistic and beneficial for the greater good of society.

Across Montreal, there has been a condominium boom that has also sparked a myriad of popular news broadcasts in a number of articles. On January 14, 2014, CTV Montreal reported “Buyer's market: Why condos are on the cheap in Montreal.” In this article, it points out that real estate agents and sellers conceive of ‘...a glut of condos on the market in Montreal; 'Montreal's housing market is the weakest among Canada's four largest cities with a condominium vacancy rate of 2.7 percent as per Remax (Toronto and Vancouver respectively have vacancy rates of 1.2 percent and 1 percent); CMHC predicts that condo prices will drop by five percent at the end of the year; and, George Gaucher, a real estate manager for Royal LePage, claims it is a buyer's market everywhere with the exception of downtown. On February 3rd, 2014, the Financial Post reported “IMF, TD both conclude Canada's housing market overvalued by 10%.” In essence, it wrote that both TD and the IMF contend that Canadian home prices are overvalued by 10%. On February 4th, 2014, the Montreal Gazette reported “In Montreal's crowded condo market, size matters.” It basically described that in order to attract a

wider range of buyers, developers are looking at micro-condos to draw investors and young professionals, although risk-averse banks will not finance them (more wear and tear with living in one small room). In Montreal, Samcon and Devimco, large development companies, have been reported to feature micro-condos. However, banks will only finance the construction of micro-units, but not the actual sale of the units. Historically, banks are noted to not finance 600 square foot units or less. On March 13th, 2014, The Montreal Gazette reported the following facts “Sales of new downtown Montreal condos slowed in 2013 but report points out positive trend.” Despite market fears, buyers have purchased more than sixty percent of the 8,083 new condo units marketed, under construction, or completed in the past year in downtown. The article also quotes the Altus report tracking new condominium projects built with at least five stories from the business district to Papineau, Old Montreal, and Griffintown. In “Consequences of a construction boom,” The Gazette reported details of such on October 16th, 2013. Referring to the Institute de la Statistique du Québec, roughly 22,000 people moved to suburban areas in 2013 for more affordable housing since the median price of a Montreal Island home has more than doubled in the past decade. From 2006 to 2011, the city of Montreal added a mere 900 families while the suburbs added 38,000 families. According to Paul Cardinal, manager of market analysis for the Quebec Federation of Real Estate Boards, the Montreal market can only absorb a limited number of three-bedroom condos and single family houses. In addition, Dominic St-Pierre, Royal LePage's director for Quebec, states that there is a high inventory of housing in Montreal: “Where we are right now, with the condo market now favoring buyers and the single-family home market now balanced, I don't see why we would need to build more units. What we need are more buyers.” In August, the city presented a three-year, \$136 million plan offering families financial aid for the purchase of new homes worth up to \$350,000 in certain neighborhoods. Critics say \$350,000 is too low in reality – the median selling price of a single family home was at \$362,500. Denis Coderre, elected mayor, proposes to increase the maximum purchase price for homes eligible for the financial assistance program to reflect market realities and to render existing single-family homes eligible for home-ownership financial assistance, since plexes and condos are already eligible by expanding the welcome-tax refund. Coderre is targeting the resale market as high land prices are preventing developers from building new single family homes. CMHC announced that condos made up 82% of new residential construction in 2012 in Montreal (The Gazette 2013). Despite the lack of credibility by academics given to popular news, relevant issues are being discussed.

Given the widely covered condominium phenomenon, this research takes on the narrow lens of studying the relationship between city centre densification and affordable housing through comparative real estate condominium projects across Montreal. The field of planning has already developed multiple strategies like Transit Oriented Developments (TODs), New Urbanism, and Smart Growth (SG) to correct sprawl. Beginning in 1997, the State of Maryland implemented the Smart Growth program which instantly gained attention and recognition. At the forefront, Smart Growth leads the way with policies directing more efficient coordination relegating flexible regulations and instead creating smarter development. For practical purposes, the focus is taken from the perspective of Smart Growth policies pertaining to the promotion of urban compactness and housing affordability. By the same token, comparative real estate projects across Montreal, all of which have been identified as the condominium typology are evidence of levels of affordability and compared with the city of Montreal's Accès Condos program's criteria for what is defined as affordable housing. Ultimately, the goal is to find the levels of affordability resulting of densification strategies.

A KEY ISSUE: SPRAWL

In the modern context of city growth, North America has experienced vast consumptions of space for residential purposes in a relatively short period of time. The popularity of suburbia has sprawled its way into the world of planning and has led to the creation of new urban paradigms like Smart Growth, New Urbanism, and other innovative solutions. Holistically speaking, the issue of suburbia is not just rooted in its physical appearance, but in a myriad of North American cultures, ways of thinking, philosophies, and etc... It relates back to an entire spectrum of beliefs and values rooted in the histories of America. That said, the issue on the surface is nonetheless sprawl. So what is sprawl? Sprawl is a categorical terminology to which researchers associate the vices of suburbia, generally relating to the vast land consumption and inefficiencies of suburbanization – from a financial perspective, the fiscal inequalities of public funds required to build and maintain public infrastructures like roads. Because sprawl is a contemporary issue, it is becoming increasingly prominent in political discourse and media marketing (Anthony 2004). With rising support for sustainability and the high costs associated with automobile dependency, the goal of densifying city centres has progressively become a fundamental strategy to combat sprawl. I therefore take on the assumption that sprawl is a generally

accepted major planning issue. In order to properly assess and solve sprawl, it would be in our best interest to break down how suburbia came about. Fundamental root causes are often founded in historical popular behaviors and movements. In this case, we can assess why people decided to embrace suburban development. With numerous perspectives on America's suburbanization, I present the story based on Macionis and Parrillo's *Cities and Urban Life* (2010). In this text book, the authors reveal an insightful historical development of the North American city. The following section gives a brief evolutionary account of sprawl and is followed by a descriptive analysis of its associated ills by urban researchers.

The root causes of sprawl can be founded back to the evolutionary stages of industrialization in America. Beginning in 1792, Macionis and Parillo (2010) recount how Alexander Hamilton founded the first industrial city in Paterson, New Jersey – a pattern that would soon be replicated over again and which saw the rise of the industrial era. In the beginning, the American people were weary of migrating to city centres where industrial factories were located. Urban-rural tensions stemmed from the perceptions of prominent Americans like Thomas Jefferson, born of rural aristocracy, who saw the city as “...ulcers on the body politic” and as “...an evil” (p.60). Industrial society witnessed a shift from Ferdinand Tonnis' *Gemeinschaft* to *Gesellschaft*, two contrasting communities, respectively from “community” to “association” (p.121) or from rural to urban. In *Gemeinschaft* society, the rural village was communally worked by the villagers who shared common goods, evils, beliefs, and values. On the other hand, *Gesellschaft* society presented a more individualistic society based on rationality, calculation, and self-interest. Historians share the belief that the *Civil War* happened as a fundamental confrontation of urban versus rural values. Thus, urban-rural relations clashed and endured important transformations throughout this era. In the end, *Gesellschaft* society won the war and individualism prevailed in America.

All the while, technological advances were made and millions of rural migrants and immigrants saw the rise of metropolises. Buildings were being built taller – facilitated by steel structures and the invention of the elevator; mass public transit was becoming a more frequent reality with the electric trolley and train; and, a mass exodus of rural villages and immigration to cities brought about cultural diversity.

During the industrial era, quality of life was astoundingly horrendous for those with lesser means – many of whom were immigrants, ethnics, and minority groups. For the common dweller, it was

an era marked by overcrowding of people and families into filthy, unhygienic, and unsanitary places. Landowners essentially responded to increasing populations with tenement living. Renowned author Charles Dickens describes these places as being airless, congested slum dwellings in his books like *The Adventures of Oliver Twist*. The smell and unsanitary situation was reinforced by the inadequacy of sewerage systems to deal with high density buildings at the time. It was an unpleasant time for the average urban dweller without additional means (Macionis & Parrillo 2010).

In 1931, James Truslow Adams popularized the term “American Dream” in his *Epic of America*. In the book, he states the American Dream as such:

“...that dream of a land in which life should be better and richer and fuller for everyone, with opportunity for each according to ability or achievement. It is a difficult dream for the European upper classes to interpret adequately, and too many of us ourselves have grown weary and mistrustful of it. It is not a dream of motor cars and high wages merely, but a dream of social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are, regardless of the fortuitous circumstances of birth or position” (p.214-215).

Based on the United States' *Declaration of Independence* in 1776, it is stated that “all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are life, liberty and the pursuit of happiness.” This dream would be propagated with the media and literature such as Arthur Miller's *Death of a Salesman* (1949), offering compelling tales of success and failure. This dream gave people something better, something to hope for.

At about the same time, Ford introduced the moving assembly line, standardization, and the ability to mass produce vehicles in 1913. It was the beginning of Fordism and America's eventual embrace of the automobile. This mass production of vehicles permitted unprecedented production efficiency and saved on costs, which also meant the ability to sell at a lower price to meet a larger demand (Jessop 2007).

After World War II, many soldiers returned home to begin what is currently known as the baby boom, a period marked by a great increase of birth rates from the end of the war to about the 1960s. At the time, housing shortages plagued city centers and people continued to dream a suburban fantasy without congestion like in the tenements, no crime because of poverty, and none of the urban vices associated with the industrial era (Macionis & Parrillo 2010).

By 1956, President Eisenhower signed a bill authorizing the Interstate Highway System, justifying the Federal Aid Highway Act of 1956 as an essential means of security and protection to the American people during the Cold War. Freeways acted as transportation mediums for military maneuvering and evacuation routes – the decision of which was highly influenced by the German autobahns. These freeways would also facilitate automobile travel and development across the nation (U.S. Department of Transportation 2013).

By the 1960s, minority groups visibly began revolting to their impoverished state and to white domination. Many whites and affluent people flocked city centers to settle in peripheral areas – or suburbia. This was the beginning of the post-industrial city where old factories also began relocating outside city centers because of high rents in city centers. There was an expanding growth of white-collar businesses and a shift in the way industries did business – high tech businesses began taking over old urban neighborhoods, while large corporations began outsourcing production in other nations with considerably cheaper labor. While cities continued to grow, city centre growth would decline with the growth of suburban development until the 1980s when there was a central-city retreat (Macionis & Parrillo 2010).

Suburban developments and sprawl were therefore facilitated as the result of several key factors: 1) rising incomes, 2) growth of populations, 3) advances in transportation, and 4) decentralization of employment areas (Behan et al 2008; Hoel and Miller 2002). According to Goetz (2013), a whole spectrum of different terminologies have been employed to depict the process of suburbanization – while they may not be synonymous, they are descriptive of its developmental paradigm:

- Fordist suburbs (Knox and McCarthy 2005);
- Urban realms (Vance 1977);
- The outer city (Muller 1981);
- The galactic metropolis (Lewis 1983);
- Suburban downtowns (Hartshorn and Muller 1989);
- Edge cities (Garreau 1991);
- The peripheral city (Harris 1997);
- Multiple nuclei cities (Harris and Ullman 1945);
- Edgeless cities (Lang 2003)

While suburban development was widely accepted and embraced, there remained skeptics of the development. Knaap and Talen (2005) refer to an article in 1958 by William Whyte - “Urban Sprawl” which *Fortune* published to warn America about its “bad economics... [and] bad esthetics.” Referring back to Macionis and Parrillo (2010), there must be a distinction between growth and sprawl – the difference lying in that sprawl is the result of inefficient land-use management from a lack of regional planning, thereby leading to negative impacts on the environment and other unnecessary increases in costs for everyone. Again, what is sprawl then? Sprawl can be defined as low-density development that is spatially expansive, yet inefficient, and highly dependent on the automobile for travel. Generally speaking, people live in single detached houses segregated from work, retail, leisure, education and everything else. Macionis and Parrillo (2010) explain that laissez-faire government policies, massive road building, political fragmentation, and lack of regional growth controls facilitated this American Dream of owning a house for everyone. According to research experts, here is a cross-referenced list of generally acclaimed ills of sprawl:

Sprawl Attribute(s)	Academic Souce(s)
Spatially Expansive	Carruthers 2002; Carruthers & Ulfarsson 2008; Cruz 2009; Downs 1999; Galster et al 2001; Goetz 2013; Macionis & Parrillo 2010
Spatially Discontinuous	Bier 2001; Carruthers 2002; Galster et al 2001; Garde 2004
Low Density Development	Bier 2001; Carruthers 2002; Carruthers & Ulfarsson 2008; Cruz 2009; Downs 1999; Galster et al 2001; Macionis & Parrillo 2010
Single-use and Exclusionary Zoning	Carruthers 2002; Downs 1999; Macionis & Parrillo 2010
Strip and Leapfrog development	Bier 2001; Carruthers 2002; Downs 1999; Galster et al 2001; Macionis & Parrillo 2010
Automobile Dependence & Excessive Commuting	Anthony 2004; Bier 2001; Carruthers 2002; Carruthers & Ulfarsson 2008; Downs 1999; Gainsborough 2002; Goetz 2013; Macionis & Parrillo 2010
Increased Transportation Costs	Carruthers 2002; Carruthers & Ulfarsson 2008
Increased costs for the provision of Public Infrastructure	Carruthers 2002; Garde 2004; Goetz 2013
Increased costs for the provision of Public Services	Carruthers 2002; Macionis & Parrillo 2010
Greater socioeconomic segregation by means of inequitable land and housing markets and greater fiscal disparities	Carruthers 2002; Downs 1999; Galster et al 2001; Garde 2004
Consumption of natural open spaces	Addison et al 2013; Carruthers 2002; Cruz 2009; Gainsborough 2002; Garde 2004; Macionis & Parrillo 2010
Consumption of resource landscapes and prime agricultural lands	Addison et al 2013; Anthony 2004; Carruthers 2002; Cruz 2009; Garde 2004; Macionis & Parrillo 2010
Destruction of wildlife habitats	Addison et al 2013; Carruthers 2002; Cruz 2009; Garde 2004; Macionis & Parrillo 2010

Relatively worse personal health	Addison et al 2013
Deterioration of central cities	Anthony 2004; Garde 2004; Macionis & Parrillo 2010
Higher levels of social inequality	Anthony 2004; Galster et al 2001; Garde 2004
Fragmentation of powers of land use among many localities	Downs 1999
Lack of centralized planning and control	Downs 1999
Reliance of trickle-down or filtering process for the provision of housing to low-income households	Downs 1999
Fewer resources to deal with city center decay and concentrated urban problems	Gainsborough 2002
Increased pollution and poor air quality	Gainsborough 2002; Macionis & Parrillo 2010
Lacks a sense of place	Garde 2004
Deteriorating housing stock	Garde 2004

Table 1-1. Attributes of Sprawl and corresponding academic reference (Compiled by Ho 2014).

THE RE-EMERGENCE OF THE CITY CENTRE

Given suburban development, the new city centre is not what it once represented – the single dominant hub of economic activity. With mixed reviews from researchers, the city centre has been weakened by the fragmentation of economic activity into multiple nodes, alongside scattering residents and political power. However, there remains questions as to the relevance and significance of the city centre. Under the monocentric form prior to the advent of the car, Kloosterman and Musterd (2001) depict the existence of a single dominant central business district. Birch (2009) describes the downtown as offering and representing a place of visual identity, high land values, and a node of high employment. With a bit of an ironic history, city leaders attempted to revitalize a faltering city centre with funding from the Federal-Aid Highway Act (1956) to encircle downtowns with freeways, demolish old buildings for surface parking, and re-engineer two-way streets into one way networks. Instead of attracting people, they drained the downtowns of their compact, contiguous, densely built community by facilitating and accelerating suburbanization (Birch 2009). As such, the monocentric city evolved towards a polycentric city as witnessed in North America, Europe, and Japan – polycentrism's theoretical pluralism offering more scope to the economic geography of the city, the decentralization of economic activities has changed notions of commuting and the traditional rent gradient that were characteristic of the monocentric city (Kloosterman & Musterd 2001). In other words, Bromley and Thomas (2000) recount the past thirty years with a dominant city centre as being challenged by

decentralization, exacerbated by spatial fragmentation of functions and loss of substantial residential populations that are accentuated by safety issues for evening and night-time activities, marked by a '5pm flight' from the centre. While there is a tendency for economic activities to cluster in multiple nodes, the central city location is still a place of importance and value (Kloosterman & Musterd 2001).

In recent history, there has been a decentralization of economic activities into multiple nodes. Bingham and Kimble (1995) study the new urban reality of edge cities and city centres. Using Joel Garreau's Edge city defined as cores with all the functions of a city, but located away from the old city centre, edge cities are becoming more economically diverse and more highly specialized than ever before, replacing segments of the city centre. The researchers find that edge city growth is increasing which suggests the support of suburban employment while city centres are losing employment or stabilizing at best. In today's metropolis, edge cities have redefined themselves with their proper specializations, while city centres concentrate on governance, financial services, and utilities. The newly specialized city centres are the result of losses to edge cities, not gains (Bingham & Kimble 1995). Similarly in Canada, Bunting et al (2002) find that most metropolitan areas gradually decentralized from 1971 to 1996. Relatively high densities observed in central areas are reflective of residual buildings rather than growth, with the exception of Vancouver, Toronto, and Victoria. Nevertheless, there is evidence of new recentralization and CMA-wide demographic growth suggesting a causal relationship between economic performance and the status of its central area. The fastest growing metropolitan areas – Vancouver, Toronto, and Calgary – are actually evolving towards a hybrid pattern where there is growth in both central and peripheral areas (Bunting et al 2002).

In the past ten to fifteen years, Beauregard (2005) finds that American cities are reliving the experience of middle-income housing in city centres, not seen since the Second Great War. In the 1990s, many city centres turned to middle-income earners for the revival of its livelihood. Birch (2009) notes that from 2000 to 2007, the city centre population rose twelve percent in forty four American cities with a new paradigm for dense, walkable, mixed-use zoning and lots of housing in the city centre. Similarly, Heath (2001) finds that new patterns of housing demand and an influx of new residents have seen a rise in housing return to central locations, citing examples in Boston, Chicago, New York, Toronto, Vancouver, London, Manchester, Sydney, Melbourne, and many more. While Birch (2009) defines central areas as the downtown plus neighboring areas, Marquardt and Füller (2012) examine the role of Business Improvement Districts (BIDs) in the restructuring of inner-cities and downtown areas in Los

Angeles. Beginning in 1999, Los Angeles has revitalized itself into a living and entertainment district for more affluent classes. BIDs have facilitated the revitalization of the downtown by emphasizing the provision of a safe, clean, and friendly place. According to Porter (1997), inner-city economic development is also advantageous and based on recognizing its strategic location, its integration with regional clusters, its unmet local demand, and its human capital. In order for the city centre housing initiatives to succeed, Beauregard (2005) believes that residents need access to jobs, essential amenities, public services, public safety, and etc... All to say that the success of revitalizing the city centre is dependent on public-private collaboration. Beauregard (2005) bases this collaboration on its 'functional interdependence' where the synergistic potential for mixed-uses encourages governments to propose revitalization schemes, while the private sector supplies investors. As a result of these housing initiatives, gentrification, and a prosperous mid-1990s, the downtown regenerated its livelihood across the United States with New York, Chicago, and San Francisco respectively leading the way with the highest number of new housing units from 1970 to 2000. City centre housing supports the downtown economy providing both workers and customers (Beauregard 2005). Birch (2009) expands on the fact that central locations offer more diverse employment opportunities and employment in anchor institutions (universities, hospitals, entertainment, arts, cultures, and sports), and that the city centre is a unitary location connected by mass transit like light rails, bus rapid transit, and trolleys to other areas. According to Chatman and Noland (2014), public transit improvements facilitate clusters of high density employment, high urban growth, agglomeration of economies through increasing labor market accessibility, information exchange, and industrial specialization. The researchers trace links of transit service to central city employment densities, urbanized area employment densities, and population, and find a significant, indirect productivity effect of transit service on wage increases. In essence, businesses and residents alike receive agglomeration benefit from the intensification of transit-use (Chatman & Noland 2014). Because the government recognizes its importance, public and private investments are being made to improve open space amenities to render the downtown more attractive and appealing (Birch 2009). In a case study on Porto, Portugal, Balsas (2004) depicts the city centre's regeneration through urban propaganda projects designed for public investment to market the city internationally. While the government hoped for a trickle-down effect that would see an improvement in liveability, Balsas (2004) warns of an exaggeration on its marketability by investing in public spaces, replacing infrastructure, and modernizing cultural facilities at the expense of institutional

capacity building and civic creativity. Nevertheless, Beckman et al (2013) also claim that place branding is an integral new marketing strategy emphasizing the unique characteristics of a place relating to its culture, heritage, and values to stimulate growth.

In the twenty-first century, Heath (2001) recounts the issue of how to accommodate a growing number of households, how to revitalize cities, and how to create more sustainable urban areas. Policy makers suggest increasing the number of homes within city centres. The Urban Economic Development Group (1998) argues that policies

to attract people back to cities have the potential to kill three birds with one stone. They could reduce the loss of countryside and promote more sustainable patterns of development, while at the same time addressing the root cause of urban decline by making the inner city into somewhere which people no longer wish to escape

Thus, the increase of residential units in the city centre can achieve a number of social, economic, and environmental goals. One way of doing this involves modifying traditional zoning and implementing mixed-use neighborhoods. With a trend towards fewer children, postponed marriages, a rising divorce rate, younger home-buyers and renters, the suburban dream is fast becoming an urban dream. The renaissance of city centre housing is being supported by single persons, students, young professionals, childless couples, empty nesters, active retirees, and those who choose an alternative lifestyle. As such, the revitalization of city centres necessitates the housing component, despite its marginal existence in public debate. These new residential communities can improve streetscapes, boost civic pride, and increase the tax base. City centre development also alleviates development on green fields and peripheral areas. As more people benefit from existing infrastructure with minimal impact on existing environments, there are four key elements to cover:

- address the physical capacity of urban areas to accommodate household growth;
- ensure the economic viability of providing such accommodation;
- create an appropriate quality of environment for residents; and
- encourage, create, and then satisfy the demand for city-center living (Heath 2001)

In Vancouver, Rosol (2013) refers to its EcoDensity initiative as a way of increasing the city's sustainability through the densification of existing neighborhoods. EcoDensity was meant to reduce housing costs, increase housing choice, reduce urban sprawl, alleviate traffic congestion, reduce fossil fuel emissions, preserve industrial and agricultural land, render transit and community amenities more viable, keep taxes low with a vibrant and healthy local economy, and ultimately set Vancouver to exemplary status as being healthy, clean and green. Similarly in Britain, Bromley et al (2005) explore the city centre of Britain and the contribution of residential development to sustainability. They find that sustainability goals are accomplished through residential development in central areas where a larger proportion of residents can walk to city centre attractions and to their place of employment, thereby reducing automobile use. City centre sustainability benefits mostly young adults, and increasingly older adults, although there is an absence of households with children. Finally, Tretter (2013) refers to Austin's smart growth initiative, or 'sustainable urbanism,' coinciding with the growth machine theory and intensification of land use in city centres with taller buildings, justified by more rent and tax revenue. Austin also demonstrates the ability of Smart Growth to deviate development pressures away from suburban areas. On the other hand, Rosol (2013) cites critics associating EcoDensity and the likes of it to the 'greenwashing' agenda of developers, where protestors claim that EcoDensity masks profit seeking motives behind densification as livelihood, sustainable, and affordable. Critiques note that density does not necessarily improve affordability, and that it has not rendered Vancouver more affordable. Hence, there is an inherent issue of affordability that should be unsurprising given that city centres are densifying on prime real estate, which leads to the next big question: for whom are we densifying and why should affordability be taken into account?

CASE STUDY OF REAL IMPEDIMENTS TO CITY CENTRE DEVELOPMENT IN REGINA

With various impediments to affordability, city center development is expensive for several reasons. In "The Future of Housing in Regina – Laying the Groundwork," the Mayor's Advisory Committee on Housing in Regina discusses issues and barriers to affordable housing in the downtown of Regina. As such, the main issues circumventing central residential development can broadly be summarized as the costs of conversion, obstacles to new construction, parking issues, financial barriers, and a lack of incentives programming by the city.

In the city center, there are many vacant buildings available for the conversion to residential usage. Some are heritage buildings that hold unique architectural features that enhance the appearance of the downtown, while others are vacant office buildings. There are many opportunities to convert the upper floors of mixed-use buildings into residential units. However, major upgrades can sometimes surpass the costs of new construction, and there are heavy costs associated with the conversion of commercial buildings into residential use with new building regulations under the National Building Code pertaining especially to fire safety. That said, CMHC offers the Conversion Residential Rehabilitation Assistance Program (Conversion RRAP) to alleviate landlords of the financial stresses on conversions, with a forgivable loan of up to \$18,000 per unit and up to 100% of eligible costs of conversion up to the maximum loan are eligible for assistance.

In terms of new construction, there are several major obstacles to developers. To begin, it is costly to purchase downtown property and to start new construction. In Regina, the costs of building a multi-unit building with less than five stories ranges from \$65 per square feet to \$100 per square feet, and the costs of building a high-rise multi-unit building hovers above \$100 per square feet. The costs of construction demand home-buyers or very high rental rates. In addition, developers are required to locate the right lots for development as many vacant lots are used for parking – the income generated and the demand for parking continually act as impediments to new construction.

Because the personal vehicle is the preferred method of transportation, parking is a key factor for people choosing their homes. Prospective consumers will often require at least one parking stall for both home-buyers and renters. Furthermore, the distance between the housing unit and the parking stall must be minimal as one or two blocks away poses a major inconvenience for consumers. As a result, new construction will often build underground or above grade parking, costing between \$16,000 to \$20,000 per stall, while surface parking costs a mere \$3,000 per stall in comparison. The provision of below or above grade parking therefore significantly increases the total costs for construction and increases the assessment value of the project which increases the annual tax rate per unit. Ultimately, the cost per unit rises with each added amenity. After a certain threshold, consumers will look elsewhere for more affordable homes. Shared parking has been proposed in areas with government parking, with employees parking in the daytime and residents parking at night. The issue lies in the overlap at the beginning and end of work days when both residents and employees require a stall, and in the fact that consumers prefer to private parking stalls.

Conservative lenders mean difficulty in obtaining financing for projects. Many of them require a minimum percentage of units sold prior to committing themselves to financing, and they believe a strong demand will offer assurance that the project can generate the necessary cash flow to service the debt. Developers find it difficult to sell a home that has yet to be built. As for mixed-use buildings, mortgage insurance does not cover buildings with a certain percentage of commercial uses.

In Regina, the City Council in 1997 established the Downtown Residential Incentives program which exempts taxation on new residential buildings or buildings converted to residential uses for up to five years, that are either home-ownership or rental projects. Commercial or other uses are not exempt from taxation. Nonetheless, developers suggest that the support of the DRIP is currently inadequate and that further aid be established for the construction of new projects or the conversion of a building into residential uses.

Residential development of the city center is clearly full of obstacles to achieving affordable housing goals. In addition to the above stated impediments, poor housing conditions and housing stock reaching the end of its life-cycle are also issues that need to be addressed. The city of Regina proposes a committee to find a list of buildings that can be converted to residential use and to establish a target amount of residential units to be built. New housing or converted units will compensate for lost housing. Residential housing is considered to be essential for the livelihood and economic vitality of the downtown, as residents both create and expand the downtown market. Existing infrastructures are optimized and reused which is more efficient, and the economic activity and property taxes generated help to propel the entire city.

ESSENTIAL SOLUTIONS: DENSIFICATION & SMART GROWTH

Given the re-emergence of city centre living, cities are planning against inefficient growth through densification strategies. Amongst these strategies, Smart Growth quickly gained attention since its formation and has acted as a national rallying term to counter sprawling developments. Maryland and Portland make for the leading examples in the United States. Maryland's position remains that the private sector can build wherever it wishes to, but that the state has no obligations to use its own resources (i.e. roads), therefore promoting development near existing developments and redevelopment of existing sites (Bier 2001; Daniels & Lapping 2005). For most public officials, smart

growth is a hot potato when it comes to public debate. With about one third of the nation's suburban housing built twenty five years immediate to World War II, housing analysts estimate about one percent of the nation's housing stock is loss every year, and needs replacing with many situated in the central city (Bier 2001). According to Carruthers and Ulfarsson (2008), local governments spent a combined national average of \$3,959 per capita on public financing – this is to say more compact modes of development are believed to reduce potential costs by concentrating residents together and creating locational efficiencies for access and delivery. Historically, there were three evolutionary waves in public policy. Between the 1960s and the 1970s, the first wave concentrated on creating proper mechanisms to oversee local decision-making processes with respect to the conversion of farmland and development of regional impacts like major capital facilities and shopping centers. In the 1980s, the second wave concentrated on popularizing growth management. In the 1990s, the third wave concentrated on smart growth as a holistic plan for improving quality of life with two key beneficiary effects on public financing: 1) the cost per capita being higher for low-density developments because it fails to capitalize on economies of scale and 2) spatially expansive developments make it difficult to optimize on facility location especially if it is non-contiguous. Services like police protection and roadway maintenance are expensive and equally subject to economies and diseconomies of scale like other services. In other words, low-density spatially expansive development patterns are expensive to support for public financing on a per capita basis (Carruthers & Ulfarsson 2008). As such, densification, compact developments, and Smart Growth are widely recognized as the simplest and best solution to sprawl.

Cruz (2010) contends compact developments have the potential to generate additional benefits like economies of scale for service provision, improved accessibility to essential and other services, and developing a sense of community. With two primary perspectives on the adoption of smart growth policies, the first model is based on property rights and the second model is based on interest groups. Smart growth policies can aim to redistribute the benefits and costs of land development which will have different impacts on different interest groups. In terms of the property rights model, Cruz (2010) contends that the notion of growth and its effects trigger land-use regulations because they are intended to protect property values from urban sprawl and fast growth, as the most popular explanation for the adoption of land-use regulations. The argument is rooted in that land-use regulations protect the over-consumption of public goods, mitigating the consequences of growth as a

'need-based' theory, since it assumes a response to an ongoing issue. It is also linked to Tiebout's model (1956) which contends local communities should have an optimal size for the delivery of public goods, and explains that land-use regulations are a natural response to the deterioration of quality of public goods resulting of sprawl. In terms of the interest groups model, Cruz (2010) contends that groups participating in political decision making will attempt to secure their own interests. Theoretically underpinned from a pluralist perspective, it assumes policy change is the result of competitive interests battling between different groups. The groups that can overcome collective action are also more likely to receive preferred policies and reach their objectives. In the United States, pro-growth interests currently dominate local agendas for land-use regulations and are capable of building coalitions to overcome opposition to profitable developments. The growth machine assumes domination by political alliances between local governments and development interests (Cruz 2010). Smart Growth's central purpose of densification is used as both a developmental tenet and a descriptive illustration of contemporary planning strategies in this research. Because Smart Growth encompasses a large array of policies, it will be interesting to take theoretical assumptions and expectations of its different policies.

DEFINING SMART GROWTH

According to Ye et al (2005), many organizations and groups have adopted smart growth as part of their planning agenda, but the term itself seems to lack a universally standardized definition. Led by vaguely defined goals that promote socially and environmentally sensitive growth, there is a large array of policies and goals that can be implemented, some of which can even be non-compatible to the overall goal. As a relatively new term, many of its policies still lack maturity and therefore require systematic examining after implementation. In order to attain a clear cut comprehensive understanding of smart growth, actions and programs that fall under must be clearly defined. Different organizations, interest groups, government agencies, and environmental groups have all commonly used smart growth as a way of reaching their divergent goals despite inconsistencies and contradictions resulting of their initiatives. From a wide range of definitions taken from renowned organizations, Ye et al (2005) list six major components of smart growth: 1) Planning, 2) Transportation, 3) Economic Development, 4) Housing, 5) Community Development, and 6) Natural Resource Preservation.

Beginning with 'planning,' it is deemed smart when it uses existing infrastructures, reduces automobile use and energy consumption, promotes inclusiveness and regionalism, and integrates housing, economic development, and transportation. Mixed land use is promoted for residents to provide themselves with both a market for work and businesses as a complementary relationship – businesses provide jobs and amenities for residents, and residents provide businesses and a market for businesses. In terms of density, it promotes more open spaces and the conservation of natural spaces, economies of scale in public transit, schools, emergency services, and decreases automobile density. Social and economic interaction are augmented with higher densities. In terms of street connectivity, it avoids dead ends, integrates new roads with existing street networks, and minimizes curb cuts that altogether contribute to disconnections in the urban fabric. Street connectivity can also reduce distances traveled, increase non-motorized trips, and support transit-use. In terms of alternative/innovative water infrastructure and systems, it assures proper sources for water quality while protecting wetlands and natural functioning of streams. Finally, public facilities planning should incorporate proper installations to enhance the viability of existing communities and to reduce outward migration – its costs of which are increasingly being shared with the private sector (Ye et al 2005).

Relating to 'transportation,' it is deemed smart when it provides multimodal forms of transportation that are deemed safe, connected, and accessible. The overall goal of which is to reduce automobile dependence because every mile not traveled means less road budgeting and less pollution. It necessarily includes land use and transportation coordination.

For 'economic development,' smart growth encourages neighborhood businesses, infill development, and downtown redevelopment. Encouraging neighborhood businesses basically means building communities for people to live, work, shop, recreate, and revitalize areas that are 'depressed' through new economic activities that reuse available infrastructures. Infill development entails the use of vacant or abandoned spaces for housing and nonlocal businesses. Downtown redevelopment includes changing the status of city centers as destinations and development targets through housing, employment, public amenities, and recreational activities (Ye et al 2005). 'Housing' is smart when communities can provide more options readily accessible to a wider range of income levels versus the single family home. It creates more opportunities for communities to slowly increase density without radically changing the landscape.

In terms of 'community development,' specific community sociocultural values must be protected and enhanced in the face of change. It is important to keep in mind that different communities have different cultural, historical, and economic values. Policies should emphasize specific community characteristics and historical values that maintain status quo values. There should be an emphasis on community participation for local planning and approaches should stress the use of diverse resources available on a platform that organizations can use for participatory policy making and implementation (Ye et al 2005). Finally, 'natural resource preservation' is deemed smart when natural resources are protected. They include animal habitats, farms, ranch land, wetlands, and other places of natural beauty and critical environmental value. Tools can include strict land use and preservation regulations, market-based mechanisms like conservation easements, transfer of development rights, and purchase of development rights. In summary, Ye et al (2005) illustrate the following:

Planning	Transportation	Economic Development
Comprehensive planning Mixed land uses Increased density Street connectivity Alternative/innovative water infrastructure and systems Public facilities planning	Pedestrianization Facilities for bicycling Public transit promotion Systems integration and nodal networks	Neighborhood business Downtown revitalization Infill development Using existing infrastructure
Housing	Community Development	Natural Resource Preservation
Multifamily housing-related Smaller lots Manufactured homes Housing for special needs and diverse households	Popular participation Recognizing unique communities	Farmland preservation Subdivision conservation Easement conservation Transferable development rights Purchase of development rights Historical preservation Ecological preservation

Table 1-2. The Main Elements of Smart Growth Policies including planning, transportation, economic development, housing, community development, and natural resource preservation. (Source: Ye et al 2005)

DEEPER ANALYSIS OF SMART GROWTH POLICIES

Smart Growth utilizes various policies and tools to combat sprawl. Amongst these tools, it primarily employs statewide growth management, urban growth boundaries, impact fees, new urbanism, transit oriented development (TODs), infill/revitalization projects, and open space preservation, density bonus, and Smart Growth zoning. The following paragraphs are descriptive of the

aforementioned policies with an emphasis on their effects or non-effects on the affordability of housing.

Statewide growth management covers large geographic territories as a state-sponsored attempt to control, with varying degrees, development over a specified region. The goal is to achieve balanced socioeconomic, political and environmental considerations. This tool likely hinders alternative growth locations that can have state-wide impacts on housing markets and is also generally criticized for lacking explicit emphasis on housing, regulatory consistency, local and regional collaboration, and effective policy tools to meet housing needs. There is virtually unanimous agreement for better integration of explicit housing affordability goals in growth management plans. Being government-led, there are often additional administrative costs. On the demand side, limiting developable land can also lead to a decrease in population and indirectly lower housing demand. While this tool can promote compactness, it also has the potential to achieve a more efficient allocation of activities across the city or region, implying higher accessibility to services and amenities and thereby potentially increasing housing prices (Addison et al 2013). Anthony (2004) further discusses four different aspects of state growth management. The first aspect touches on specific elements that need to be planned for infrastructure, environmental protection, and economic development. The second aspect touches on the availability of adequate infrastructure for economic development. The third aspect touches on the need for consistency with state and regional plans. The final aspect is in regards to measures that protect natural and agricultural resources. Anthony (2004) also argues the importance of effective implementation and the need for reinforcement of the above-stated goals. He suggests that there be a mandatory requirement for local planning to follow with state growth plans; he encourages the actual implementation of local plans to be consistent with state plans; he suggests the provision of financial incentives to local governments for growth management practices; he wants to limit the number of amendments to local plans; and lastly, he seeks to integrate strong agricultural land preservation elements into growth management programs (Anthony 2004).

Urban growth boundaries (UGBs) are officially designated areas of development where development outside of the zone is prohibited. Extensively studied, it can be used at both state and local levels. For example, Oregon has a state-enforced UGB that reduces competition between cities and provides stricter regulations than a locally-enforced UGB (i.e. Lexington, Kentucky). While there are no direct restraints on the housing market, its restriction on developable land indirectly impacts

housing markets. Being government-led, there are also additional administrative costs. This tool often promotes more compact forms and convenient access to public transit – while housing demand may increase, thereby decreasing housing affordability, one can argue that lower transportation costs can compensate for additional costs of housing (Addison et al 2013). When using urban containment policies, Cruz (2010) also points out that the complementary instruments to make up for developable land are infill development and redevelopment.

Impact fees are upfront cash payments by developers to cover environmental and infrastructural costs at any location. These costs can become passed on to housing consumers and decrease housing affordability. If these are properly designed, impact fees can potentially enhance housing opportunity by including fee waivers and incentives for affordable and multifamily housing. However, the costs of housing production will inevitably increase. Empirical studies have shown that developers may build more expensive homes because it is easier to transfer costs. The effect of impact fees on housing prices are also dependent on the elasticity of the market. They can introduce additional administrative requirements and effectively slow growth. For instance, the requirement for expanded water and sewer capacity for multifamily housing can hinder such a development because of lengthy application processes. Requiring upfront payment for potential pressures on existing infrastructure, impact fees can mitigate the high cost of infrastructure expansion, which are otherwise paid for by governments. Non-water/sewer related impact fees are suggested to increase the development of multifamily housing and promote the affordability. Impact fees can also have opposite effects on land value depending on how developed the land is and whether there exists an alternative site (Addison et al 2013).

New Urbanism incorporates innovative principles promoting compact development and mixed land uses, planners hope to mix housing types and minimize transit costs. It has better potential to integrate affordable housing. It has been used to guide the implementation of public housing programs like HOPE VI. However, private developers seem unable or unwilling to include affordable housing within market rate developments because it lacks marketability and profitability. Because this tool is often regulated by traditional large-lot zoning practices, administrative costs may occur trying to rezone a parcel from single family use to mixed-use development – while the costs are transferable to buyers, it decreases the affordability aspect of smart growth. This tool often promotes more compact forms and convenient access to public transit – while housing demand may increase, thereby decreasing

housing affordability, one can argue that lower transportation costs can compensate for additional costs of housing. In the US, new urbanism projects have been developed, especially after having received government subsidies or being involved in public-private projects (i.e. Kentlands, Maryland). These projects often command higher prices than traditional neighborhoods. A survey by Johnson and Talen (2008) indicates that the private sector is not motivated to build affordable housing for profitability reasons (Addison et al 2013)

Transit Oriented Developments (TODs) promote compact development of homes and workplaces near public transit systems. Because this tool is often regulated by traditional large-lot zoning practices, administrative costs may occur trying to rezone a parcel from single family use to mixed-use development – while the costs are transferable to buyers, it decreases the affordability aspect of smart growth. This tool often promotes more compact forms and convenient access to public transit – while housing demand may increase, thereby decreasing housing affordability, one can argue that lower transportation costs can compensate for additional costs of housing (Addison et al 2013).

Urban revitalization and infill development encourage development and redevelopment of existing neighborhood spaces. It has the potential to increase density of existing neighborhoods. Because of environmental contamination, existing regulations, high costs, and consumer preferences, infill practices may be inappropriate for large-scale developments. Infill can therefore be costly and lead to an increase in the costs of housing production. Because this tool is often regulated by traditional large-lot zoning practices, administrative costs may occur trying to rezone a parcel from single family use to mixed-use development – while the costs are transferable to buyers, it decreases affordability. This tool promotes more compact forms and convenient access to public transit – while housing demand may increase, thereby decreasing housing affordability, one can argue that lower transportation costs compensate for additional costs of housing. Infill strategies are noted to decrease housing value disparities and restore vitality of urban communities, while also spurring gentrification and rent inflation. Infill costs are a major barrier to housing affordability. Quoting a seventeen-year experienced developer in St.Louis, Farris says the price of redevelopment of a square foot of land is estimated at \$15 versus a mere \$0.25 to \$5 for undeveloped land. Redevelopment activities are also costlier. Infill developments tend to have higher rents and lower affordability (Addison et al 2013).

Open space preservation serves to preserve agricultural land, protect ecosystems, and provide recreational amenities. This preservation has a wide range of challenges that include administrative

tools, planning activities, and cooperation among governments. Being government-led, there are often additional administrative costs. The preservation of natural spaces in urban areas can add be considered an environmental and recreational amenity which adds to housing prices in neighboring areas. Price appreciation is generally contingent on the permanency of an open space. Redevelopment of open spaces has been suggested for declining urban neighborhoods – however, affordability issues may arise (Addison et al 2013).

Density bonus is a regulatory instrument allowing developers to increase the number of units to be built on a given property provided they agree to develop some sort of public good or amenity. These public goods or amenities range from parks/recreational facilities, design amenities, transfer of development rights, retail activities at street level, historic preservation, open spaces or common areas, daycare centers, mass transit centers, affordable housing units, to public land dedication. Density bonuses help to promote affordable housing, child care facilities, open spaces, or the preservation of environmental and historic goods, all while promoting compact development. The incentives are beneficial to poor and moderate-income residents and often minorities, and makes them potential instruments for redistributing resources in the community (Cruz 2010).

Smart Growth zoning is based on the most common form of land use regulation, differentiating land for agriculture, residential, commercial, and industrial use. Based on Smart Growth zoning, cities remove traditional focus from specific land uses to the intensity to which the land is being used. There is an increased flexibility in the types of land permitted for increased density. It encourages particular types of development in certain locations, creates clusters of buildings for several uses, and makes for more walkable neighborhoods with open spaces. Zoning types range from mixed use development zoning, incentive zoning, historic district zoning, open space zoning, performance zoning, form-based zoning, to cluster developments (Cruz 2010).

PARADOXES & CONTRADICTIONS RELATING TO AFFORDABLE HOUSING

According to Addison et al (2013), Smart Growth goals provide a mere framework for densifying cities, but lack detail for both practical and theoretical purposes which makes for easy manipulation and interpretation of its policies. Basically, Smart Growth's strategy revolves around increasing density, providing diversified housing options, and promoting better design with balanced distribution of work and residence, while simultaneously attempting to protect the environment by limiting growth and

reducing the supply of developable land which can increase housing prices and ultimately reduce housing affordability. While not all areas employ all the different tools, it is indeed possible to estimate the effects of Smart Growth tools. As such, Addison et al (2013) present the following theoretical impacts of growth management on the supply and demand of housing:

	State Growth Management	Urban Growth Boundaries	Impact Fees
Supply			
Reduce land supply?	Maybe	Yes	
Increase construction costs?	Maybe	Maybe	Yes
Increase administrative costs?	Maybe	Maybe	Yes
Reduce housing supply?	Maybe	Maybe	Maybe
Demand			
Control population level?	Maybe	Maybe	
Reduce transportation costs?	Maybe	Maybe	
Improve local public services?	Maybe	Maybe	
Improve environmental amenities?			
Inter-jurisdictional effects?		Yes	Maybe Yes

Table 1-3. Theoretical Impacts of Growth management on Housing Supply and Demand.
(Source: Addison et al 2013)

	New Urbanism	Transit Oriented Developments	Infill Development
Supply			
Reduce land supply?			
Increase construction costs?	Maybe		Yes
Increase administrative costs?	Yes	Yes	Yes
Reduce housing supply?	Maybe		
Demand			
Control population level?			
Reduce transportation costs?	Yes	Yes	Maybe
Improve local public services?	Maybe	Maybe	
Improve environmental amenities?		Maybe	
Inter-jurisdictional effects?			

Table 1-4. Theoretical Impacts of Growth management on Housing Supply and Demand.
(Source: Addison et al 2013).

SMART GROWTH & AFFORDABLE HOUSING: IMPLICATIONS

These results hold significant weight for policy implementation as there are apparent contradictions and paradoxes existing under current Smart Growth initiatives. While the amalgamation of studies lack standardization with respect to data and methodology, policy-makers must recognize there are inherent issues that need to be revised. It would appear that densification initiatives sometimes outweigh or inhibit affordability. According to the summation of various academic researches, state growth management, UGBs, impact fees, TODs, and urban infill/revitalization policies

are sometimes found in contention with affordability, both theoretically and/or empirically. While the majority of these studies lack maturity, more studies must be conducted for more conclusive findings. Current studies are not standardized and vary from researcher to researcher. It is difficult to compare the effects of each policy with one another if the methodologies differ from one another.

As for the purposes of this study, there are many lessons to be taken from Smart Growth for Montreal. The following tables illustrate to a certain extent, the dissociations of Smart Growth.

		Land Value		Housing Price		Mixed
		Positive	Negative	Positive	Negative	
State Growth Management	Anthony (2003)					
	Anthony (2006)			X		
	Carruthers (2002)			X		
Urban Growth Boundary	Aurand (2010)					
	Downs (2002)			X		
	Jun (2006)				X	
	Nelson (2000)			X		
	O'Toole (2004)					
	Philips & Goodstein (2000)					
Impact Fee	Woo & Guldman (2011)			X		
	Burge & Ihlanfeldt (2004)					
	Evans-Cowley et al (2005)	X	X			
	Ihlanfeldt & Shaughnessy (2004)			X		
	Mathur (2007)			X		
	Mathur et al (2004)			X		
New Urbanism	Mathews & Turnbull (2007)			X		
	Song & Knaap (2003)			X		
	Tu & Eppli (1999)			X		
	Bowes & Ihlanfeldt (2001)					
TOD	Cervero & Duncan (2002)	X				X
	Debrezion et al (2007)			X		
	Hess & Almeida (2007)			X		
	Kahn (2007)			X		
	Knaap & Hopkins (2001)	X				
	McMillen & McDonald (2004)			X		
	Schill et al (2002)					
	Steinacker (2003)					
Urban Infill/Revitalization	Acharya & Bennett (2001)			X		
	Bolitzer & Netusil (2000)			X		
	Geoghegan (2001)			X		
	Irwin (2002)			X		
	Kaufman & Cloutier (2006)			X		
	Riddel (2001)			X		
	Wu et al (2004)			X		
	Open Space					

Table 1-5. Empirical Results of Growth Management Practices on Land Value, Housing Price, and Affordability
(Source: Addison et al 2013)

		Affordability		
		Positive	Negative	Mixed
State Growth Management	Anthony (2003) Anthony (2006) Carruthers (2002)		X	
Urban Growth Boundary	Aurand (2010) Downs (2002) Jun (2006) Nelson (2000) O'Toole (2004) Philips & Goodstein (2000) Woo & Guldman (2011)	X		
Impact Fee	Burge & Ihlanfeldt (2004) Evans-Cowley et al (2005) Ihlanfeldt & Shaughnessy (2004) Mathur (2007) Mathur et al (2004)	X		
New Urbanism	Mathews & Turnbull (2007) Song & Knaap (2003) Tu & Eppli (1999)			X
TOD	Bowes & Ihlanfeldt (2001) Cervero & Duncan (2002) Debrezion et al (2007) Hess & Almeida (2007) Kahn (2007) Knaap & Hopkins (2001) McMillen & McDonald (2004)			
Urban Infill/Revitalization	Schill et al (2002) Steinacker (2003)		X	
Open Space	Acharya & Bennett (2001) Bolitzer & Netusil (2000) Geoghegan (2001) Irwin (2002) Kaufman & Cloutier (2006) Riddel (2001) Wu et al (2004)		X	

Table 1-6. Empirical Results of Growth Management Practices on Land Value, Housing Price, and Affordability
(Source: Addison et al 2013)

CHAPTER 2

HOUSE OF CARDS: AFFORDABILITY

“Money is kind of a base subject. Like water, food, air and housing, it affects everything yet for some reason the world of academics thinks it's a subject below their social standing” - Robert Kiyosaki

AFFORDABLE HOUSING

The provision of affordable housing is a contentious topic in the capitalist world. Today's world being highly practical has become highly dependent on money currency for the exchange of goods and services – the amount of money one earns is positively correlated with one's potential quality of life. The establishment of meritocratic, individualistic, and neoliberalist values in North America are heavily embedded in the economic process. As a result, society is bound by these major beliefs dominating society. However, the affordability of housing can be quite the debacle in a world where people seek to maximize profits. In a recent polling, Mueller & Tighe (2007) find that Americans respectively ranked health care, education and housing to be of utmost importance. The interrelation of housing conditions and health problems as evidenced by problems pertaining to lead paint, cockroach infestations, and

other factors that lead to sickness and injury, ultimately accentuate the importance of housing – poor housing conditions being especially dangerous to vulnerable children (Mueller & Tighe 2007). Baker et al (2013) contend that housing is therefore a key determinant to the health and well-being of individuals and households. Luckily for Canadians, its semi socialist state offers more support (i.e. universal healthcare) to alleviate such concerns, otherwise unavailable to its American counterpart. The issue at hand is nonetheless to uncover housing affordability in cities today.

Contrary to the glitz and glamour of the American Dream, there are those who have not been so fortunate in their scheme to get rich. According to Stein and Vance (2008), poor urban families often lack access to secure land tenure and home ownership, lack access to basic services and infrastructure (safe water systems, electricity, sanitary systems), endure low quality and low durability housing, and live in higher densities of inhabitants per room. Other than housing expenses, families also need to pay for other necessities including food, medical care, and higher education (Saegert & Benitez 2005). Perhaps most apparent is the fact that people with little money suffer the inadvertent effects of a capitalist system glorifying individual success. From 1978 to 1991, Vliet (1996) refers to a fifty percent increase in household expenditures exceeding more than half of the income on housing for many ethnic minorities, as per the U.S. Department of Housing and Urban Development (HUD). Additionally, Harvard's Joint Center for Housing Studies also reveals a continuing decline in the rate of home ownership for groups under the age of fifty-five (Vliet 1996), and rising housing prices are making it increasingly difficult to access the housing market, especially affordable housing (Ottensmann 1992). Thus, there is an increasing issue of accessibility to the affordable housing market with the constant rise of costs – in particular, the poor urban family whose financial woes continue to be a burden.

While the state offers support programs for housing, there are various issues that persist because support is insufficient. For example, Scally (2009) finds that only twenty-five percent of eligible renters actually benefit from subsidies, which leaves three quarters of vulnerable people out of the loop. In the United States, the government has tried implementing the Low Income Tax Credit (LIHTC) program, wherein investors in affordable housing projects receive a dollar for dollar tax credit, as a way of facilitating the supply of affordable housing units – a result of a lack of incentive for the private market, thereby justifying public intervention. Despite all this public manufacturing, Williamson (2011) writes that there is little research on whether or not rent is actually affordable for residents. Defining thirty percent and more of housing costs as being burdened and fifty percent and more as being heavily

burdened, she concludes that residences based on LIHTC do not guarantee housing affordability with households still being burdened or heavily burdened (Williamson 2011).

On the other hand, there have also been successes in government support programs including some public housing projects. According to Morris (2008), older public housing tenants feel public housing gave them the capacity to live a life they valued versus renting in the private market. Based on interviews with public housing tenants, he finds that several main advantages. Tenants obtain financial security based on a maximum of twenty-five percent of one's income which allows for the payment of everyday expenses and maintenance of health, receive security of tenure without the stresses of planning ahead as a source of happiness, and social cohesion and inclusion with the ability to participate in social activities due to the low costs of housing and become communally active. As a reflection of affordable housing, public housing was intended to relieve low-income people and those with complicated needs. In general, public housing provided tenants with the ability to engage and form lasting social ties within their own communities, adding to the maintenance of health and independence of elders (Morris 2008).

Societal values, reflected by the representatives that get voted, tend to dominate legislative and political outcomes. The concept of addressing affordable housing seems more like a political scheme to attract voters, despite the reality that access and conditions are based upon self-merit and that aid is really limited. Such is the politicized nature on the topic of housing affordability. While one can measure indexes and retain databases on housing prices, the cards have already been stacked and the hands have already been dealt.

CANADIAN CONTEXT

Historically, Canada's CMHC and National Housing Act were formed around World War II as a result of dire housing needs. Brushett (2007) recounts the federal and provincial government debating over who should fund housing after the National Housing Act in 1944, with returning war veterans and many families alike being forced into awful housing conditions because of a housing shortage. Cities at the time were experiencing large waves of immigration and supply of housing was unable to meet demand. By 1954, emergency shelters had to be set up with former army barracks being used to serve unmet housing needs to more than 5,000 people – war veterans being faced with the irony of being

installed back into war barracks after expecting to return home. Torontonians life was characterized as “...doubling up, overcrowding, substandard accommodation, and rents beyond the means to pay... or all four combined” (Brushett 2007, p.376). Some thirty thousand plus families shared dwellings, and some seven hundred other families lived in abandoned stores or condemned buildings. Brushett (2007) contends that Toronto's inability to close emergency shelters rested in the reluctance, if not absolute enmity, by upper levels of government to fund and develop a real social housing program. While the Canadian Housing Mortgage Company (CMHC) was set up in 1944 to extend financing to home owners and private builders, the president David Mansur admitted that the housing shortage in 1956 was no better than immediately after war with an additional 141,000 dwellings. As for the National Housing Act, the minimum annual income to apply for an NHA mortgage was \$3,600 even though the average annual wage was only \$3,120. Since then, the Canadian government has made significant improvements and additional programs to alleviate housing issues.

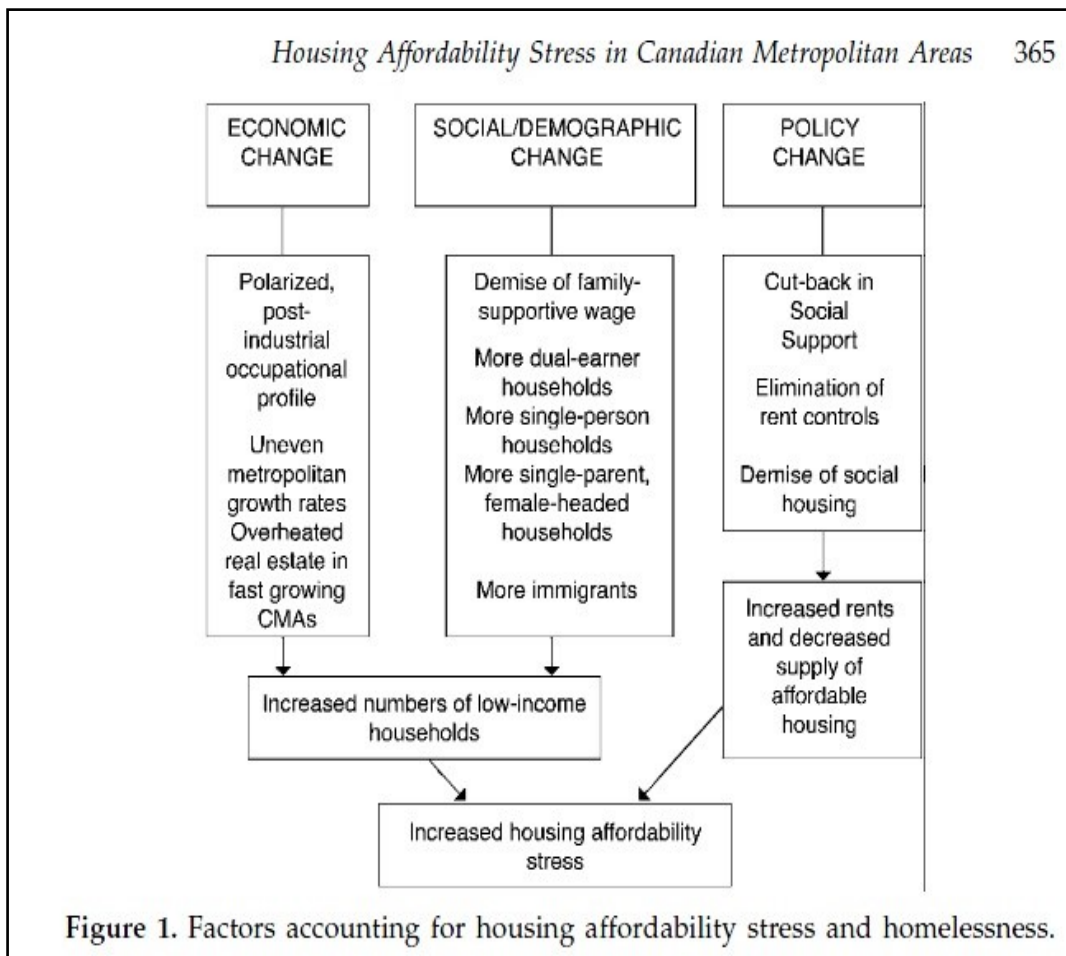


Table 2-1. Housing Affordability Stress in Canadian Metropolitan Areas using economic change, social/demographic change, and policy change as factors accounting for housing affordability stress and homelessness. (Source: Bunting et al 2004)

The previous table is an amalgamation of factors that add to the stress of housing affordability according to Bunting et al (2004). Using a multidisciplinary approach, it touches on economic, social/demographic, and policy changes in a Canadian context. In contrast to Canada's historic need to supply affordable housing, it is a thematic map of societal trends that render housing increasingly unaffordable in a more modern context. Despite time differences, there are still challenges arising from changes, whether it be increased rents or increased single parents.

HOLISTICALLY SUSTAINABLE CITIES

With increasing discourse on the topic of sustainability, Maliene et al (2008) discuss the necessity for housing affordability for the development of sustainable communities. Housing should be available (sufficient supply), decent quality (technically and provisionally), economic (opportunistic and feasible), ecological (energy-saving), and comfortable (as per the user). In terms of affordability, its importance should equal that of its quality and an ever increasing demand for new homes should not continue to result in a rise of housing prices. Land development ought to be more efficient with higher density building that incorporates community transportation. Finally, environmental, social, and economic costs should be taken into consideration in the development process towards a sustainable community (Maliene et al 2008). These important points by Maliene (2008) must become ingrained in the development process for holistically sustainable cities.

THE ROLE OF DIVERSITY

In the modern city, diversity embodies a new guiding principle to urban planning (Fainstein 2005). Talen (2006) summarizes, with strong multidisciplinary support, the justifications for diversity as means to facilitating urban vitality, social equity, economic health, and sustainability, evidenced in current political agendas agglomerating mixed incomes, land uses, ethnicity, races, genders, ages, occupations, and household types. Arthurson (2008) contends that social mixes lead to more stable and vigorous neighborhoods in comparison to pockets of disadvantaged residents; social mixing is viewed as a method of disbanding the spatial segregation of classes that occurred during and post industrialization due to the poor sanitary conditions of the central cities, and social mixing allows for a more equitable distribution of public funds across different neighborhoods. Correspondingly, Patulny and Morris (2012) hold that there is a common assumption that social mixing through a balancing of

homeowners, renters, and social housing tenants within a neighborhood can diminish social homogeneity. In other words, lower income groups can benefit from social mixing through proximity at the neighborhood level. On another note, Fainstein (2005) argues that the competitive edge of the city today and its economic success are reliant upon its diverseness. Talen (2006) specifies that the size, density and congestion of a city and its diversity are reflective of its very own economic assets. In the field of planning, this diversity refers mainly towards a variation of buildings types and its social components, thereby making them inevitably intertwined (Fainstein 2005). In essence, it appears that social mixing is a method of diminishing social inequality and improving economic success through the supply of mixed housing tenures at the neighborhood level with the hopes of generating heterogeneous social interactions.

Applied in North America, Australia, the United Kingdom and internationally abroad, Arthurson (2008) makes reference to the origins of social mixing dating back to the mid-nineteenth century in Britain. At the time, George Cadbury, founder of Bournville Village, designs – with the intention of it – one of the first socially mixed cities. Stemming from a declining urban environment, there was a rise in spatial segregation between social classes. George Cadbury aimed to:

provide high quality housing developments, distinctive in architecture, landscape and environment, in socially mixed communities, using best management practices to promote ways to improve the quality of life for those living in such communities (p.489)

Housing was designed in such a way that middle class residents lived adjacent to working class residents. According to Arthurson (2008), Bournville demystified the working class as amoral and dangerous by the upper and middle classes, and the middle class can provide higher aspirations and standards relating to education and behavior for the poor. Social mix was also a solution to the spatial segregation of classes developing as a result of industrialization and the poor sanitary conditions of concentrations of industrial workers in the slums and inner-city locations. As for social mixing, Hugh Stratton, deputy chairman of SAHT in the 1970s claimed the following:

Besides taking each other's children to the speed-car track races and the theatre, there are more important rich-and-poor exchanges of ambition, compassion, and the learning and initiative required to use whatever services are in theory offering. From poorer neighbors, affluent children may pick up better politics, mechanical skills and social capacities than their snobbish schools offer them (pp.493-494, Arthurson 2008).

Fainstein (2005) confirms that traditional urban design propagated towards the homogeneous segregation of social classes based on order, efficiency, and protection of property values – although, this model is criticized as dull and discriminatory. Talen (2006) writes that the rejection of suburbia is partly based on its lack of diversity and thereby its hindrance towards intellectual and cultural advancements. In the aftermath, Sarkissian (1976) reiterates historic precedent on the goals of social mixing as being:

- To 'raise the standards of the lower classes' by nurturing a 'spirit of emulation;'
- To encourage aesthetic diversity and raise aesthetic standards;
- To encourage cultural cross-fertilization;
- To increase equality of opportunity;
- To promote social harmony by reducing social and racial tensions;
- To promote social conflict in order to foster individual and social maturity;
- To improve the physical functioning of the city and its inhabitants;
- To help maintain stable residential areas;
- To reflect the diversity of the urbanized modern world.

In recent history, many researchers have analyzed the theoretical discourse of planning for diversity (Fainstein 2005; Talen 2006). To contextualize the need for diversity, Talen (2006) refers to Park, Burgess and McKenzie who believe 'competition forces associational groupings' as explicative of homogeneous enclaves. As such, Fainstein (2005) makes reference to Jane Jacobs who argues the need for cities to diversify in a way that creates mutual support, both economically and socially. Talen (2006) continues to refer to a list of renowned researchers for further support of diversification: Harvey and Lefebvre who believe that the city is a place of difference, diversity, and ultimately equality; Smith who finds that social mix and diversity involve moral commitment, positive social contact, and solidarity – all of which are difficult to measure; and Jane Jacobs who terms diversity as 'organized complexity' and that it is the most important condition for a healthy urban place. In terms of social equalization, Leonie Sandercock and Iris Marion Young regard urban diversity as the fundamental path towards social equity (Fainstein 2005). Diversity is therefore argued as a medium to social and economic advancement that positively affects the aggregate.

Various academic researchers have come to link access to a variety of housing tenure and social mixing as intertwining elements of a diverse neighborhood (Arthurson 2008; Graham et al 2007; Musterd & Andersson 2005). Graham et al (2007) find evidence of social exclusion being tackled by policy-makers through a mixing of housing tenures. Musterd & Andersson (2005) find an increasing amount of area-based interventions at the neighborhood level through mixed housing strategies to accommodate social mixing – that since a variety of housing enhances household choices and reduces social segregation, there is facilitation of social mixing and positive socialization for positive outcomes on people's lives with housing as an inherent part of the issue. Similarly, Arthurson (2008) specifies that a balanced social mix requires access to a variety of housing tenures, whether it be social housing, private rental, or owner-occupied housing.

In a study on social housing tenants, Patulny and Morris (2012) find that regardless of age, ethnicity, and education, social housing tenants hold more heterogeneous friendships. If we refer to Nast and Blokland (2013), social capital is defined as the potential of actors to secure benefits of being in a social network, it offers the potential to alleviate levels of inequality through physical proximity in a neighborhood – and while it may not dissolve inequality, the neglect of creating social networks is equally problematic (Nast & Blokland 2013). Hence, social mixing can be seen as an advantageous precondition towards higher levels of equality.

In multicultural East London, Koutrolidou (2012) finds the intricacies and realities of social heterogeneity and the implications for their relations with each other in Hackney and Town Hamlets. While social diversity may facilitate mixed interactions, it can also promote inter-group competition for resources or create further homogeneity in micro enclaves. While ethnocultural relations are significant, they are equally limited (Koutrolidou 2012).

Using three comparative case studies of American 'new towns' (Columbia, Maryland; The Irvine Ranch, California; and The Woodlands, Texas), Kato (2006) finds that they consist of considerably lower levels of social segregation comparative to their metropolitan areas and surrounding neighborhoods. These new towns differentiate themselves from traditional towns because they are larger in size, employ mixed-uses, and employ phased planning through a master developer. New town developments also condemn traditional homogeneity found in suburban demographics and architectural design, and therefore plan for diversity. These three case studies illustrate the contributions of progressive planning for social diversity (Kato 2006).

Based on an ecological analysis of mixed tenure over two decennial censuses in Great Britain, Graham et al (2007) find that mixed-tenure and social well-being of an area's population are assessed with results providing little support of positive outcomes, which leads to questioning about the potential effectiveness of mixing tenures as means to improving social well-being.

Using the Scottish health Survey and records from survey respondents, Lawder et al (2013) find indications that tenure-mixing leads to improved health, improved mental health, and reduced smoking.

In 1989, Sin (2002) covers how Singapore implemented an ethnic quota policy for a balanced ethnic mix. Consequently, the policy is found to ironically have the least impact for the Malays minority who refuse to move from their initial choice of housing. The authors argue that integration policies need to be holistic in approach and sympathetic in operation.

While residential social mixing is believed to enhance social capital, Nast and Blokland (2013) assert that it is disputed both empirically and theoretically by scholars alike. Furthermore, a planned social mixing also does not necessarily create an inclusive community. Patulney and Morris (2012) cite other issues concerning the informal support of social housing and less so of private housing, thereby raising resistance from homeowners towards social tenants in the proximity. Perhaps more importantly, Richard Florida warns to not conflate social inclusion with economic competitiveness (Fainstein 2005). Nevertheless, the literature on the benefits of social mixing remain incomplete (Arthurson 2008). Likewise, Graham et al (2007) also claim that there are few studies on the aftermath of mixed-tenuring.

DEFINING AFFORDABLE HOUSING

To begin, affordable housing needs to be defined into the components that constitute the term in both tangible and non-tangible forms. The most conventional and popular definition widely used in affordable housing literature by the Department of Housing and Urban Development (2013) – wherein affordable housing is defined as affordable when a household pays no more than 30% of its annual income to housing – the technical definition does not attribute any particular level of payment in relation to an individual or group of persons paying for their housing. All the while, the city of Montreal uses a 32% threshold to define properties as affordable for a particular household according to its strategic affordable housing plan. Thus, the level of affordability is relatively arbitrary in its association

with one's cost of housing. In fact, Williamson (2011) contends that thirty percent ought to include tenant paid utilities such as electricity, gas and water; and for homeowners, it ought to include the mortgage payment (principle and interest), property taxes, insurance, utilities, maintenance costs, and homeowners' association fees. We can see that there are different interpretations of affordable housing. Another point is that the level of affordability will differ from person to person. Making reference to a real life situation, a city centre would still be affordable even if the average cost of housing were in the millions given that its inhabitants were all billionaires. Notably, it is apparent that affordable housing is arbitrarily dependent on how we define affordability. Affordable housing is a terminology that relates not only to low-income demographics, but also middle-class and even upper-class demographics. Case and point, affordability is dependent on the person(s) in question. Affordable housing is also capable of being measured as an index, thereby being comparable to other places, the relevance of which is becoming increasingly important in a globalizing economy. People are able to say it is relatively 'more affordable' to live in place x as opposed to place y. In fact, affordability in that sense seems to carry an all-inclusive meaning that holistically includes other expenses (i.e. food, gas, parking, medicare, education, and etc...). Other substitutable terms include below-market and low-income housing – although, these definitions are limited and unclear in that they are not necessarily below-market rental values and low-income being as arbitrary as 30% of one's income (Nguyen 2005). Vliet (1996) describes third sector housing as being privately owned by an individual, a household or a corporation; as being socially oriented versus private interests in accumulating wealth; and, as being price restricted in that there are limits on rental or resale prices. Conversely, third sector housing is also characterized as non-speculative, de-commodified, or affordable housing (Vliet 1996).

Nguyen (2005) finds that academic literature often depicts affordable housing as an extension beyond the physical structure and its aesthetic quality. While intuitive thinking may lead one to believe or imagine affordable housing as a mere physical entity dedicated to servicing low-income households, affordable housing also comes in a variety of direct and indirect, tangible and intangible aid forms (McClure 1993). As such, there are many types of affordable housing programs other than public housing, extending to: subsidies to property owners providing affordable housing, subsidies to affordable housing tenants, and home-ownership assistance programs (Nguyen 2005). Similarly, Baker (2013) finds affordable housing can be broken down into three categories: 1) home-ownership assistance with the aid of an institutional mortgage provider), 2) public housing with public rental

housing tenants, and 3) private rent assistance where private tenants are in receipt of government rental assistance payments. Thus, it is not always apparent that a housing unit is an affordable housing unit. If a tenant receives rent-supplements, one cannot tell that the individual's housing expenses have been rendered more affordable by merely looking at the cost of his rent.

UNDERSTANDING INCOME SEGREGATION & POVERTY

In terms of the target market, affordable housing programs are realistically aimed at low-to-moderate income households and median income households. To start off, segmenting income earnings into groups is as arbitrary and relative as affordable housing itself. The numbers merely facilitate one's understanding of the status quo with regards to a particular location. While the majority of studies focus on low-to-moderate income households, affordability can also be an issue for many median income earning households. As for no income households, it is important to distinguish them from low-to-moderate income households. Statistics Canada uses a practical and relevant methodology for identifying the so-called affordable market. At the heart of the issue, there are fundamentally different needs between low-income groups and person(s) in poverty.

According to Statistics Canada (2012), the focus axiom is a fundamental axiom of poverty that states that a poverty index ought to be independent of the non-poor population. That said, Statistics Canada's own low-income lines violate the focus axiom. For example, LICO utilizes average spending for food, clothing, and shelter; LIM utilizes the median income distribution in relation to low-incomes; and, MBM utilize a standard of consumption using median expenditures on food, clothing, footwear, and shelter. All in all, these three low-income lines are dependent of incomes or expenditures of the non low income population. While low-incomes are often associated with poverty, poverty is in fact "...a multifaceted, multidimensional phenomenon" (Statistics Canada 2012, pp.88). Both scientific and international practices differentiate low-income and poverty. A relatively low level of income does not suffice as a condition for poverty which is the state of being deprived of basic needs. In Canada, the low-income demographic accounts for approximately sixteen percent of the population – low-income estimates consists of Low Income Cut-Off (LICO), Low Income Measure (LIM) and Market Basket Measure (MBM), which respectively found 3.8 million persons with low incomes, 3.7 million, and 3.6 million for the year 2000 (Statistics Canada 2012). All that being said, Statistics Canada (2012) refuses to

estimate the number of poor households because of the imprecision and arbitrary standardization of poverty, coupled with the politicized nature of the data, feeling inappropriate in making such judgments. Instead, it chooses to provide indications of low-income households who might be at risk of impoverishment.

Low income groups are likely associated with welfare dependence, unemployment, homelessness, single parenthood, recent immigration, old-age, handicap or disability, children, or off-reserve aboriginals. Different households with varying incomes are sure to be found with some composite of the aforementioned characteristics that are often linked with a heightened vulnerability to poverty. Statistics Canada (2012) presents more information about a variety of vulnerable people (not holistically inclusive) in the following paragraphs.

Single parents improved their incidence of low-income between 1996 and 2009, dropping from fifty percent to twenty percent. This decrease is associated with the growth of the service sector which has a tendency to employ more women than men.

Due largely to an increased pension income and government transfers from 1976 to the mid-1990s, the low income rate for seniors dropped from over thirty percent to under ten percent. Since 1996, seniors continued to improve until 2007 when there was a small increase in the rate of low-income for seniors.

Children are considered low-income if they live in a household whose income is below the threshold. There is significant interest in the well-being of children in Canada.

Unattached non-elderly (age 45-64 living alone) sustained high incidences of low-income with over thirty percent from 1976 to 2009. In the 1990s, there was an especially high rate reaching nearly forty percent, which fell below thirty five percent thereafter for all three measures.

Recent immigrants currently sustain about a twenty percent rate of low income incidence. In terms of earnings, new immigrants earn less than their old counterparts two decades ago and have a harder time finding employment.

Off-reserve Aboriginal persons improved their low income rate, dropping almost ten percent from a high of thirty percent between 1996 and 2009.

Persons with activity limitations are seeing their median income lose ground relative to other Canadians. These people have a physical or mental condition limiting their daily activities at home, school or work. Statistics Canada (2012) believes that Canada underestimates their hardships.

As for the remaining groups (welfare dependent, unemployed, and homeless persons), they theoretically do not work for money or are impoverished. While welfare dependent people are clearly dependent on public tax money, there are stringent conditions for the receipt of public aid money. Unemployment can be transient or long term – either way, unemployed people are dependent on a third-party sources of income like welfare dependent people. Finally, homeless persons can be considered impoverished because they lack shelter which is a basic need.

KEY INSTITUTIONS

There are several key institutions that deal with affordable housing including the government, the private sector, non-profit organizations, and housing finance agencies. The government's role is to intervene when the housing market fails to supply sufficient housing, which is both controversial and at the discretion of public authorities. It can research and implement policies to facilitate the provision of affordable housing or collaborate with financial institutions and the private sector as a negotiator and facilitator of housing development projects. Finally, the government can educate and guide any interested parties on how to produce affordable housing. From a planning perspective, planners can work with elected officials on rezoning spaces for facilitated residential development. The issue with government aid is creating political incentive and interest that can generate political support. The private sector involves all the practical and technical stakeholders ranging from contractors, developers, financial institutions, to the consumers. The private sector on the production side is often motivated by profits and affordable housing is difficult to promote amongst them. From a planning perspective, the most utilized incentives include density bonuses and rezoning areas to facilitate affordable housing. In Quebec, certain developments are required to dedicate thirty percent to affordable housing and social housing unless proven unfeasible. Non-profit organizations can help at all levels of the supply and demand of affordable housing and vary in emphasis. They can be chameleon-like and help at all stages. Housing finance agencies are a necessity to provide below market rates for both the production and consumption of affordable housing; they are often quasi-public-private institutions.

BARRIERS TO AFFORDABLE HOUSING

In today's society, there are a number of factors that deter the supply of affordable housing. At the heart of these factors, neoliberalist values conflict quite heavily with socialist values. Other more

practical factors include political fragmentation, government limitations, costs of construction, public sentiment, revenue trends, costs of infill development, fiscal incentives, growth controls, and negative effects on private property. The following paragraphs are well researched academia on the aforementioned factors.

Neoliberalism can become in direct contention with social values because the advantages and disadvantages of social values are not always reflected in dollar amounts. Neoliberals contend that subsidized rental housing is lending a hand to the subprime lending crisis (Sherman 2010); Sherman (2010) finds "...the same push to dismantle, relocate, and privatize affordable housing, while replacing low-income tenants with mixed-income populations that are more attractive to municipalities" (p.304). As a result, we find trends of gentrification, privatization, and destruction (Sherman 2010). Put differently, Sherman (2010) contends that the neoliberalist perspective favors mixed-income populations over low-income tenants where new development projects ought to be built instead of state funded housing. In reality, low income families are at risk of being pushed out of their homes.

In terms of political fragmentation, central cities often have fragmented taxing jurisdictions with incentives for fiscal exclusion of lower income households (Ottensmann 1992). On the other hand, there are also other jurisdictions in favor of affordable housing as political incentive for election. As for suburban developments, it is expected that there be political support for continued restrictions on land use regulations for the construction of single family homes.

The government relies too much on 'piggy-back' deals with private developers for the construction of new affordable housing for poor and moderate income households. As a result, there are four major government limitations. The amount of affordable housing built is dependent on the rate and scale of private house building; the amount of affordable housing required is unmet when the private housing market is strong; the most vulnerable and difficult to house people are often neglected with 'piggy-back' deals; and, the lack of affordable housing restrains labor mobility (Shostak & Houghton 2008). Other barriers to home-ownership for low-income families include expiration of government housing subsidies, limited governmental assistance for tenants to buy their apartments, and unaffordable rents (Saegert & Benitez 2005).

According to Scanlon and Hope (2009), New York has seen a rise in the costs of construction including materials, land, logistics, and regulation fees. While land is the major cost factor, regulation and requirement for permits can be expensive unnecessary costs which often require highly specialized

legal and architectural professionals with overlapping jurisdictions causing extensive delays in the issuance of permits. Economic booms also drive up the costs of construction since there is an insatiable demand and large profit margin in the construction industry. Most affordable housing lying outside Manhattan is built with non-unionized labor, estimated at a cost of roughly twenty to twenty-five percent less than unionized workers. In terms of high-rise buildings requiring structural steel reinforcement, additional fire-safety measures, elevators, etc., these features make a project infeasible even with additional units or density bonuses (Scanlon & Hope 2009). While unverified, such a high-rise project will most probably not be located in areas around affordable housing.

According to Morris (2008), there is a common sentiment that public housing is associated with social exclusion in the form of unemployment, welfare dependence, drug and alcohol abuse, crime, and other social dysfunctions. While this is only partly true, long term residents can find themselves with unpredictable neighbors and sometimes complain about their homes being "...a dumping ground for sick people [people with serious mental health problems]... and for druggies" (Morris 2008, p.103). This public sentiment is supported by Vliet (1996) who finds that lack of affordable housing is interrelated with a multitude of other issues including high unemployment, poverty, crime, inadequate social services, defective physical and institutional infrastructures, racial segregation, and access to medical care and quality education.

While growth in high end wages remain strong, most household incomes have remained relatively unchanged since 2000 (nine year period), and as a result, lower-to-middle income earners have not kept up with inflation costs (Scanlon & Hope 2009). This renders housing less affordable for low to moderate income groups, and even median income earners.

Infill development is essentially the construction or the development of areas within a city center, often from being under-utilized or being abandoned as old industrial sites. Infill development is often a solution to sprawling suburban developments, although more costly because they are often old industrial sites that have contaminated the ground. As a result, infill development and affordable housing goals can create tension and opposition for the following reasons: 1) economic costs and delays of redeveloping within a city with small irregular parcels and rezoning complications that lead to project delays; 2) environmental costs associated with decontaminating old industrial lands; 3) financing issues because the complexity of these projects make it harder for traditional lenders to evaluate risks; and 4) political issues including gentrification and neighborhood input slowing the

process and increasing costs (Steinacker 2003). In other words, the high costs of infill development lead to more expensive neighborhoods being erected and ultimately higher costs for housing either directly or indirectly associated with the project.

Depending on localities, fiscal incentives can become quite effective in filtering out low-income demographics and affordable housing altogether. Suburban families prefer restrictive land uses to exclude lower-income households who would otherwise generate additional costs for public services while giving relatively less tax revenue; as a result, there is little political incentive for affordable housing (Ottensmann 1992). On the other hand, this can become a fiscal incentive for central cities to build affordable housing where there is normally a more heterogeneous mix of income earners. Although, one should note city centers also have pockets of high-end and middle-class residences that may think otherwise with regards to affordable housing

Growth Control policies are likely to increase housing prices (Ottensmann 1992). Using basic supply and demand, the restriction of demand will naturally drive up prices for demand. Growth controls are often used to curb sprawl by placing borders on development, orienting towards infill development.

Private property owners have long stated that affordable housing negatively affects property values, while affordable housing advocates claim little academic evidence of this claim. In fact, the California Planning Roundtable (1993) claims thirteen out of fourteen studies examining private properties' proximity to affordable housing has no effect. Opposition nonetheless cite many concerns ranging from quality and design, change in neighborhood character, negative externalities (i.e. traffic, environmental degradation), 'undesirables,' antigrowth sentiments, to fear of decreasing property values. The likelihood of private property values declining rest primarily on poor management and design of the affordable housing unit, poor location of affordable housing with other disadvantageous populations, and clustering of affordable housing residents. On the other hand, affordable housing has no effect when it is in a good location with a healthy and vibrant neighborhood, when it is well built, when management responds well to problems and concerns, and when it is well dispersed. In other words, *when negative effects exist, they are small* and the magnitude of the effect of affordable housing on property values is quite small when compared with other factors that influence property values; *characteristics about the affordable housing unit/site can lead to greater chances of property value decline* if the design and management are poor and the design is not compatible or comparable with

the host neighborhood, this can lead to a reduction in nearby property values; *neighborhood composition is important* since negative effects on property values are more likely to occur when affordable housing is clustered and located in disadvantaged and declining neighborhoods; and, *more studies are needed* since the limited number of methodologically sound studies only enable tentative conclusions to be made. More studies of this nature, in a broader range of regions in the country, may provide more conclusive evidence (Nguyen 2005, p.25).

AFFORDABLE HOUSING: CONCLUDING REMARKS

With neoliberalist policies grinding with social values, affordable housing exists in a gray area. Steinacker (2003) finds that the increases in commute time and the accelerated increases of housing prices to be out of reach of many working-class households. Because of market failures to provide affordable housing, the government justifies itself in stepping in to provide affordable housing. Since fiscal zoning incentive is amongst the most causative factors in leading towards land use controls (Ottensmann 1992), suburbia is a reflection of such a territory is cause for concern. In 1975 and 1983, the Supreme Court of the United States found fiscalized local zoning policies to be economically discriminatory (Provo 2009). Using the logic that suburbia favors fiscal zoning as means to protecting the interests of localities, central cities can take advantage of this in several manners. First of all, city center demographics are often more heterogeneous than suburban populations – for the purposes of this research, there is more variety in socioeconomic standings. As such, there are political interests which can be achieved in catering to different groups of people. In this instance, politicians can gain favor of lower-income families through the provision of affordable housing and take advantage of suburban fiscal policies. According to Ottensmann (1992), central cities would like to provide affordable housing because of high proportions of low-and-moderate income households; therefore, there is political incentive to provide for these people. When a metropolitan government withholds a dominant jurisdiction, the entity can achieve more favorable regulatory policies; therefore, a shift of land use regulatory powers toward a metropolitan or state level is expected to increase the potential for affordable housing. With tax base sharing and state educational assistance with strong equalization, cities can also reduce suburban support for restrictive land uses as a result of fiscal purposes. In other words, a single metropolitan government with dominant jurisdiction can help to achieve more favorable regulatory conditions. Furthermore, land uses are generally less restrictive in the city center

than in the suburbs, and dominant central cities have more power to supply affordable housing, while minimizing the effects on affluent areas. Nonetheless, public policy for affordable housing needs to address the context in which restrictive land use regulations were formulated (Ottensmann 1992).

A city needs to direct a growing portion of resources to housing forms and involve necessary nonprofit organizations to maintain and develop affordable housing (Vliet 1996). In order for lending institutions to increase financial inclusion, Stein and Vance (2008) contend they need to understand the individual, the household, the collective assets of the poor, and re-adapt the lending process to help the poor build enough wealth to purchase a home. It also requires a system that is ready to deal with public corruption through a thorough system of checks and balances such that subsidies are being allocated to the right people. Difficulties lie in financing housing improvements because banks do not see it as profitable, involving costly administrative fees without guarantees given low-income situations. Thus, banks are not equipped to tend to the poor. Effective Housing policy is dependent on a multitude of factors other than just the housing finance sector, including honest and efficient civil services, a functioning tax system, stable political state with a level of continuity between administrations, and methods to identify, screen, and select entitlement to subsidies for low-income families (Stein and Vance 2008).

CHAPTER 3

JOURNEY TO THE CENTRE OF HOUSING

“If we knew what it was we were doing, it would not be called research, would it?” - Albert Einstein

CHOICE OF TOPIC

Before beginning the research, there was a strong episode of thinking, rationalizing, and planning prior to choosing the topic. Major factors taken into consideration included personal interests, current trends, and academia on urban planning. With personal interests in real estate, a very significant and current trend of condominium construction, and urban planning as the field of study, there was a culminating rationalization for choosing a relevant topic and for making sense of how these elements could become a research topic. Nevertheless, how could one tie all of the above into a relevant and significant research topic? Thinking on past academic studies, Smart Growth as a school of thought seemed highly relevant with its intent on creating a sustainable community with various planning tools. In brief, Smart Growth promotes both infill/revitalization projects and affordable housing, which seemed to be the key. Montreal’s condominium boom as an infill/revitalization real estate project coincided with Smart Growth and the affordability of these mega projects could be measured. According to Addison et al (2013), there exists a mixed review on the effects of Smart Growth tools and housing affordability, especially with regards to infill/revitalization efforts as per Steinacker (2003) who prove the negative effects of such on housing affordability. As critics point out

the incongruity of promoting both infill/revitalization projects and affordable housing, this research can serve to provide empirical evidence. Given Montreal's current state of densification with condominium projects being erected throughout the city center, it seems a natural fit to question whether or not such projects could be built at an affordable price for the consumer. Even though Montreal does not outright employ Smart Growth, it is definitely utilizing tools like infill/revitalization projects. The most significant and ambitious project being none other than Montreal's old industrial neighborhood in Griffintown, the research topic exists in the appropriate context both academically and in reality.

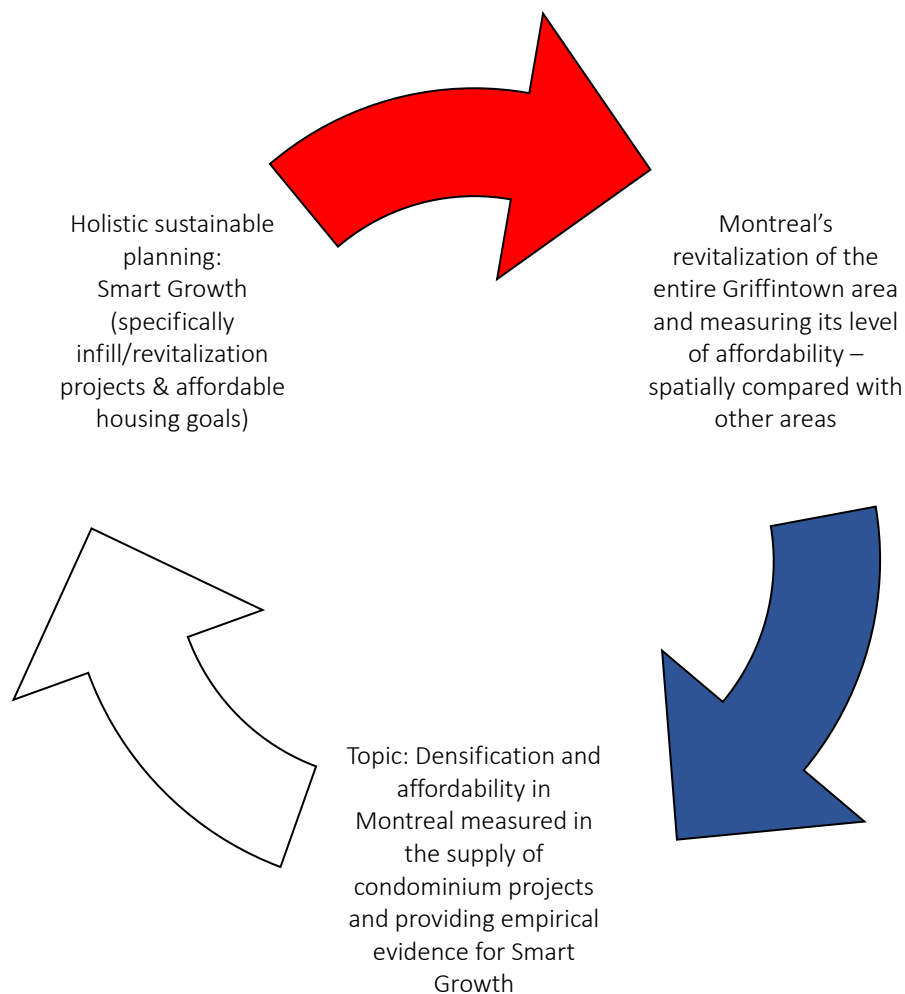


Figure 3-1. The thought process for choosing a topic.
(Source: Enoch Ho 2014)

RESEARCH TOPIC AND HYPOTHESIS

This research paper surveys case study condominium projects to test whether or not the densification process of Montreal's city center can provide affordable housing, and ultimately, the level of access to home-ownership. Before the beginning the research, it was believed that higher density configurations lead to higher home-ownership costs and therefore correspond to a higher revenue market. Case studies include newly built or in construction residential projects of ten units or more and are taken from strategically selected geographic areas: 1) Griffintown, 2) Le Triangle, and 3) Laval. It should be noted that the focus is nonetheless on Griffintown as the case subject of central infill development. The other areas are merely for spatial analysis to reinforce traditional arguments about central lands as being more expensive. Politically speaking, they are not all equivalent in status. Griffintown lies in the South West borough under the jurisdiction of the city of Montreal, which falls under the jurisdiction of the CMM. Le Triangle lies in the CDN-NDG borough and similarly falls under the jurisdiction of the city of Montreal and so on. Laval is on the same level as the city of Montreal and falls under the jurisdiction of the CMM. As per Ernest Burgess' concentric zones, these three areas were chosen as a result of their locations respectively representing the city center, the inner-city, and the suburban neighborhood. That aside, each of these areas also display heavy development of condominium projects. While Griffintown and Le Triangle are rather concentrated areas of redevelopment, project selection in Laval was based on proximity to the city center of Laval (not to be confused with Montreal's downtown). While most of the projects in Griffintown and Le Triangle were taken into account, just a few were selected near Laval's Centropolis commercial center for the spatial comparison. The research hypothesizes that the densification process to reduce urban sprawl can be done while maintaining affordable levels in Montreal.

ACADEMIC RESEARCH

Academic subjects investigated include Smart Growth, the re-emergence of the city center, affordable housing, and social diversity. Technically speaking, the main search engine used to find academic articles was SAGE publications. With a plethora of academic journals, SAGE's online publications make for easy access to a wide variety of articles that are reliable and peer-reviewed. In order to contextualize the research in Montreal on an academic urban planning basis, the study revolves primarily around Smart Growth. While the city of Montreal does not employ Smart Growth,

there are similar and measurable efforts in its current planning. The entire province of Quebec has historically commissioned studies to be done on sprawl, and while it has voiced concerns about sprawl, it has continued to fund public infrastructure like roads and freeways to facilitate sprawl. Montreal is currently employing inner urban management policies to try and densify the city with affordable prices. In line specifically with the Smart Growth initiative, infill development, Montreal seeks to increase urban residential density to maximize efficiency of land uses and of existing transportation infrastructures and to offset suburbanization and unsustainable developmental patterns. However, the practical reality of city living is that housing costs must be affordable enough for the consumerist market to ride the wave. By extension, this permits for higher social diversity across the board. Without reiterating previous chapters, the study is therefore supported by subjects of academia in Smart Growth, housing affordability, and social diversity. As a context for such, the study concentrates on measuring empirically the costs of high density infill/revitalization projects and levels of affordability in Montreal, providing an empirical case study for Smart Growth advocates.

With regards to referencing, there is a range of different sources utilized for the research. As previously mentioned, the academic sources come from a range of renowned peer-reviewed academic journals like the *Journal of Planning Literature* or the *Urban Affairs Review*. Sources are referenced throughout the research under APA format. The credibility of sources used here brings a much stronger base to the research in question and validates the topic as being relevant, interesting, and academic. Amongst these sources, studies by Gerrit-Jan Knaap, Professor of Urban Studies and Planning and Executive Director of the National center for Smart Growth Research and Education at the University of Maryland, are included as forefront material on Smart Growth. Technically speaking, the majority of the sources are based on American research, although there are a few studies based in Canada as well. That said, there can be a level of disjointedness with American sources and Montreal as a case study for Smart Growth. Overall, the sources are solid academic references which can be found in the references of this research and are used to provide an academic context for the study. Other sources include government documentation and news journals. Government sources like Statistics Canada and government websites like the city of Montreal and the city of Laval provided demographic data, although government websites sourced Statistics Canada (it was just easier to find needed data). However, there were a few issues with government sources. First of all, they are not all up to date, in that they are not the most recent statistics, since Statistics Canada only does a consensus study every

five years or so. As such, there is a lag between demographic data and current housing prices that were retrieved from projects. Furthermore, demographic data for the city of Laval and for the city of Montreal were not always presented in similar fashion, and as such, there is missing data (mainly from Laval). The two jurisdictions are equal in terms of state level and therefore demographic data is not necessarily presented in the same manner, as they are autonomous. In addition, terminology is sometimes loosely utilized in demographic tables found by government websites and can be a bit tricky. The city of Montreal, the island of Montreal, the urban agglomeration of Montreal, Montreal, and the region of Montreal are similar but different.

The format of the research is relatively straightforward. It begins with a preface as an introduction of what the reader is about to discover. Chapter 1 covers the rational justification for city planning, the topic at-hand, the key-issue as being sprawl, the re-emergence of the city center, the need for densification and Smart Growth, and Smart Growth. Chapter 2 follows with affordable housing, housing in Canada, holistically sustainable cities, the role of diversity, defining affordable housing, target market, key institutions, barriers and concluding remarks about affordable housing. Chapter 3 covers the methodology behind the research including the rationalization, the topic, the academic and non-academic referencing, the data retrieval, the treating of data, and the fundamental construction of the research. Chapter 4 covers condominium home-ownership in Montreal, Montreal's inclusionary programme, Accès Condos, RBC economic research on housing trends and affordability, the densification of Griffintown, socioeconomic tables based on the South West borough, tables and charts on Griffintown projects, Griffintown housing analysis, and a spatial analysis across Montreal of different projects. Chapter 5 is a discussion of the results tied in with the academic research, and finishes with the conclusion.

FIELD DATA COLLECTION

To begin finding empirical data, a large proportion of condominium projects were investigated throughout Montreal. At the base of the research, the idea was to find whether or not centrally located infill development projects could be built at an affordable price for consumers, which could then be spatially compared with other projects in inner-city and suburban areas. This idea was based on traditional notions that a housing unit's centrality (defined as its proximity to the downtown or the central business district) is positively correlated with its price per square feet. However, this research

will merely take on the aspect of the housing unit price, thereby omitting the size of the unit as tradition would have it. In other words, this research utilizes only housing prices as an indication of affordability. That being said, the actual retrieval of housing prices consisted primarily of an online research for projects and possible price lists and an actual on-ground in-person investigation. As previously mentioned, the criteria for project selection focused on geographic location and newly built or in-construction high density residential condominium projects. The first was rather straightforward as many projects now have online websites as advertisement, but the latter was slightly more complicated. Online projects occasionally listed prices of condos for sale and came in a variety: 1) a full price list, 2) a price list of available units (not including sold units), 3) a range of prices that could be found throughout the project (sometimes advertised as one to three bedrooms between \$250,000 to \$740,000), or 4) no prices. On-site investigation was slightly required some planning. Using a covert style investigation, the pretense of an actual buyer/investor was employed for either personal or investment purposes so as to coax sales agents into presenting the highest possible amount of prices per unit. Why the coaxing? In terms of marketing, sales agents disclose the price list depending on management. As such, there were quite a number of agents who refused to show the price list. For this very simple reason, a great deal of time was spent sweet-talking sales agents into disclosing prices for a variety of units. Why the dual character? Buyers (personal use) and investors do not necessarily look for the same thing. Sales agents will offer units with maximum return on investment for the investor, whereas the buyer for personal use will seek other qualitative characteristics such as a view or floor area for comfort. Most sales agents actually presented smaller units for investment purposes, and it required a personal buyer character to acquire information for larger units. Various characteristics were thought to play an important part on the price of the unit and included the following:

- 1) Number of floors in the project
- 2) Number of units in the project
- 3) Floor Area (Square footage)
- 4) Number of rooms
- 5) Level of elevation (which floor)
- 6) Price (before taxes)
- 7) Monthly Condo Fees
- 8) Municipal & School Taxes
- 9) Name of the project

The collection of data therefore required a lot of planning and traveling prior to the act of retrieving information. The online research was done first to avoid projects with which prices were already retrieved. It was important to take into account the opening hours of many model homes and each area was done at a separate time because of practical time limitations. Because Griffintown consisted of many projects, it required multiple visits to retrieve all the information. It should also be noted that this was done over the course of a one month period in February 2014. Given the volatility of condominium prices (as per all sales agents), the values of this research may change if it is redone.

USING EXCEL

With regards to quantitative data, all information retrieved from Griffintown, Le Triangle, and Laval was primarily inserted into a spreadsheet on Microsoft Excel for the purposes of facilitating calculations of large amounts of data that could be translated into organized and presentable information. In a Microsoft Excel spreadsheet, the data could be sorted according to a number of predefined headings. Because there are many headings, each one containing a numerical or nominal value, it was much simpler creating a new spreadsheet for each location. Thus, there should be at least three tabs at the bottom for each designated location for practical purposes. Moreover, at the bottom of each heading, there should room for the input of mean, median, and range values. This was the most practical way of inputting and of retrieving data for whatever purpose. For example, the creation of a chart was made simple because the data was organized with column headings as seen in the following:

Project Name	Floors	#units	Floor Area (Square Footage)	# Rooms
Which Floor?	Price (\$) before taxes	Dollars per Square Feet	Taxes (GST 5% + PST 9.975%)	
Monthly Condo Fees	Municipal Taxes	School Taxes	Price (taxes included)	
Monthly Payment (90% Mortgaged + Insurance Premium)		Monthly Payment (80% Mortgaged)		
Using a 90% Mortgaged Payment, discounting the down payment				

Payment per Annum (Mortgage, Condo Fees, Mun. & School Taxes)	Income Required for 32% Affordable Level
Using an 80% Mortgaged Payment, discounting the down payment	
Payment per Annum (Mortgage, Condo Fees, Mun. & School Taxes)	Income Required for 32% Affordable Level

Table-3-1. Excel headers for organizing and calculating data
(Source: Enoch Ho 2014)

It should be noted that the headings should be extended across the spreadsheet and not one on top of the other (the above is merely a simplified illustration of all the headings). Spreading out the headings horizontally across the spreadsheet will facilitate calculations as data can be treated column per column.

CALCULATIONS

At the heart of the project, there was one main calculation involving various components – the real cost of purchasing a housing unit. This calculation took into consideration the price (before taxes) as per the sales agent or the price list, taxes (GST 5% + PST 9.975%), monthly condo fees, and municipal and school taxes. Mortgage payments were divided into either a ten percent down payment plus the insurance premium as required by CMHC or a twenty percent down payment. The formula used to calculate the monthly mortgage cost for the ten percent down payment was as follows:

$$=PMT((1+0.0299/2)^(1/6)-1;300;-(\text{"housing price with taxes included"}*0.9*0.02+\text{"housing price with taxes included"}*0.9))$$

Similarly, the formula used to calculate the monthly mortgage cost for a twenty percent down payment was as follows:

$$=PMT((1+0.0299/2)^(1/6)-1;300;-\text{"housing price with taxes included"}*0.8)$$

The monthly mortgage cost took into account the interest rate in the month of February 2014 as per the Bank of Montreal at a rate of 2.99%. As for the insurance premium, it was approximated at a cost of 2% of the mortgaged amount (ninety percent) given that its nature of fluctuating depending on various

other factors. Finally, the payment per annum could be calculated as follows:

$$= \text{"monthly mortgage payment"} * 12 + \text{"monthly condominium fees"} * 12 + \text{"school taxes"} + \text{"municipal taxes"}$$

Using the payment per annum, the income required for a thirty two percent affordability level could be calculated as such:

$$= \text{"payment per annum"} / 0.32$$

There were therefore two "payment per annum" and "income required for thirty two percent affordability" calculated (one using a ninety percent mortgage and the latter using an eighty percent mortgage). The mean, the median, and the range were calculated for condo prices (before taxes), income required for 32% affordability using a 90% mortgage, income required for 32% affordability using an 80% mortgage, floor area, total annual expenditure using a 90% mortgage, total annual expenditure using an 80% mortgage, and number of rooms. Amongst all factors taken into consideration, the majority of real costs are included apart for the costs of varying utilities costs such as gas, electricity, and heating.

TABLES & CHARTS

In terms of tables, they were mostly made up of demographic data. In the South West Borough, several tables were created including annual revenue per household, median revenue per household composition and type of tenure, and a Griffintown demographic profile. The case study projects in Griffintown were also tabled into the number of floors, the number of units, and the sample size taken from each associated project. Based on calculations from the excel table, the mean, median, and range for condo prices (before taxes), income required for 32% affordability using a 90% mortgage, income required for 32% affordability using an 80% mortgage, floor area, total annual expenditure using a 90% mortgage, total annual expenditure using an 80% mortgage, and number of rooms, were put into a table as such:

	Condo Prices (before taxes)	90% mortgaged: Income required for 32% affordability	80% mortgaged: Income required for 32% affordability
Median			
Mean			
Range			
	Floor Area (Square Footage)	90% Mortgaged: Total Annual Expenditure	80% Mortgaged: Total Annual Expenditure
Median			
Mean			
Range			
	# Rooms		
Median			
Mean			
Range			

Table-3-2. Example of median, Mean, and range of various condominium factors
(Source: Enoch Ho 2014)

After compiling all the data and passing the above-stated formulae, resulting calculations could then be organized into tables for graphs and other values such as the average and median could be calculated thereof. Amongst the charts, the main prognostic tools were the column and clustered column charts. Several charts were created from the data. The first amongst these charts was the revenue market chart which consisted of creating a table like the following and which was geographically dependent:

"Place:" Revenue Market	
Income	Frequency
\$0-\$19,999	#

\$20,000-\$39,999	#
\$40,000-\$74,999	#
\$75,000-\$99,999	#
\$100,000-\$140,000	#

Table-3-3. Example of demographic revenue brackets used and frequency
(Source: Enoch Ho 2014)

Incomes in this chart is income required for 32% affordability using a 90% mortgage and an 80% mortgage. Frequency is based on the hypothetical frequency of the aforementioned income. On the Excel Spreadsheet, it can be calculated in several ways – sorted in ascending order of incomes and counted manually or creating a pivot table to calculate the frequency. Thus, this table is created for both 90% and 80% mortgages for Griffintown, Le Triangle, and Laval.

The second chart created is slightly more complicated as it is comprised of incomes required for 32% affordability using a 90% mortgage and an 80% mortgage, the number of rooms available, and the frequency of such. In order to create this chart, it requires a working pivot table which automatically allows u to sort data and create charts with ease. The number of rooms is the independent variable and the incomes required for 32% affordability for both mortgages will automatically associate with the frequency as the dependent variables.

# Rooms	Frequency
\$40,000-\$74,999	
0	#
1	#
2	#
3	#
\$75,000-\$99,999	
0	#
1	#
2	#

3	#
\$100,000 or more	
0	#
1	#
2	#
3	#

Table-3-4. Example of table used for separating # of rooms, revenue brackets, and frequency
(Source: Enoch Ho 2014)

The last chart created is a summary of actual revenue segments versus project segments as proportions across Montreal. As such, there is a proportional illustration of project revenue segments versus actual revenue segments in each geographic location. In brief, there are three main income segments: 1) \$40,000-\$74,999, 2) \$75,000-\$99,999, 3) \$100,000 or more. This is the division on the x-axis and the clustered bars represent actual revenue segments in each location (these locations include the CMM, the South West borough, the CDN-NDG borough, and Laval) as proportions of the population versus revenue segments offered by projects. The idea is to illustrate whether or not projects supply a proportionate amount of units, in terms of price and what is affordable as a result in terms of revenue, with the urban agglomeration of Montreal and all other boroughs.

	\$40,000-\$75,000		\$75,000-\$99,999		\$100,000 or more	
	Actual Revenue Segments	Project Segments	Actual Revenue Segments	Project Segments	Actual Revenue Segments	Project Segments
CMM						
South West Borough						
CDN-NDG Borough						

Laval						
-------	--	--	--	--	--	--

Table 3-5. Example of table used for summary table

(Source: Enoch Ho 2014)

Actual Revenue Segments can be retrieved directly from demographic data which already give the proportion of revenue segment per area of interest (found using StatsCan). Project Revenue Segments can be calculated using the frequencies as such:

Given a table for “Place,”

“Place:” Revenue Market	
Income	Frequency
\$0-\$19,999	F1
\$20,000-\$39,999	F2
\$40,000-\$74,999	F3
\$75,000-\$99,999	F4
\$100,000-\$140,000	F5

Table-3-6. Example of table used for revenue market brackets and frequency

(Source: Enoch Ho 2014)

The proportion for the project revenue segment \$40,000-\$74,999 can be calculated as:

$$F3 / \sum(F1 \rightarrow F5)$$

Similarly and respectively for the project revenue segments \$75,000-\$99,999 and \$100,000 or more:

$$F4 / \sum(F1 \rightarrow F5)$$

$$F5 / \sum(F1 \rightarrow F5)$$

Repeated for Le Triangle and Laval projects.

Thus, the chart titled Summary of Actual Revenue Segments versus Project Segments is comprised of 1) the actual revenue segments found in the relevant geographic location including the CMM, the South West Borough, the CDN-NDG Borough, and Laval, 2) the project revenue segments calculated as shown in the above, and 3) three main revenue segments including \$40,000-\$74,999, \$75,000-\$99,999, and

\$100,000 or more as the x-axis.

The Bid-Rent Curve was derived using the median housing price (before taxes) and the median square footage in a housing unit. As such, the bid-rent curve can be calculated based on geographic locations (x-axis):

$$\text{Median Housing Price (before taxes) / Median Floor Area (square foot)} = A \text{ (square feet per dollar)}$$

The chart can be labelled with the y-axis in dollars per square feet and the x-axis as the distance from city center.

MEASURING RESULTS

Instead of doing two calculations, this research utilizes Accès Condos' measure for affordable housing as a comparable price. According to the chart, a single buyer qualifies for \$200,000 as a maximum eligible purchase price, a household without children (more than one buyer) qualifies for \$250,000 as a maximum eligible price, and a household with at least one child qualifies for up to \$360,000. A \$200,000 unit translates into roughly \$47,000 per annum using a 90% mortgage or \$42,000 per annum using an 80% mortgage. A \$250,000 unit translates into roughly \$57,000 per annum using a 90% mortgage and about \$51,000 per annum using an 80% mortgage. Finally, a \$360,000 unit requires an annual income of roughly \$92,000 per annum using a 90% mortgage or \$84,000 per annum for an 80% mortgage. Because household size is undeterminable, all units below the price of \$360,000 are deemed affordable for households. As such, the easiest way to measure the proportion of units below the cost of \$360,000 is to use the sort by ascending option in Excel for each column under price of condominium (before taxes). After sorting the prices (before taxes), the proportion of values equal to or less than \$360,000 can be calculated as such:

$$=COUNT(\text{"range of values equal to or less than } \$360,000) = A$$

$$=COUNT(\text{"range of values greater than } \$360,000) = B$$

$$\text{Proportion of values deemed affordable} = A / (A+B)$$

This needs to be done for Griffintown, Le Triangle, and Laval.

The median multiplier, as it is called, is an indicator of overall housing affordability within an area. In the final table, the median multiple table uses the ratio of the median revenue of a specific place with the median housing price and is calculated as such:

$$\text{Median Housing Price} / \text{Median Revenue}$$

Because there are various ways of illustrating the median revenue, it is important to explain the perspective used in this research. The median housing price for the South West, CDN-NDG, and Laval are the median housing prices amassed during the collection of data, and the median revenues for each are taken from demographic data. In this project, a few median multiples are calculated to illustrate different points. The first is a median multiple uses the CMM's median revenue in comparison with the CMM, Griffintown, Le Triangle, and Laval's respective median housing price. The second is the same except it uses the median revenue of all homeowners in the CMM. The third median multiple gives an idealized median multiple at which the income is derived as being the required amount for 32% affordability – and uses ideal incomes for each sector. Finally, the difference between median home-owner households in the CMM is calculated with the idealized income for 32% affordability:

$$[MM_1 (\text{median multiple using home-owners in the CMM}) - MM_2 (\text{median multiple using ideal income})] / MM_1 (\text{median multiple using home-owners in the CMM})$$

There were also alternative calculations that could have been used. Primarily, the calculation of whether or not projects are affordable could be based on the CMM's median revenue instead. This would require a reversed calculation of previous work. The condominium price is a rough estimate based on the excel sheet of calculations already made (reversed order of what had been done). Using the calculated list of incomes required for 32% affordability, it is easy to backtrack using similar values. In order to give fuller comparison, the CMM's median revenue and the median revenue of all homeowners in the CMM were used to backtrack how much a condominium unit should cost for 32% affordability.

SAMPLING ERRORS AND MISREPRESENTATIONS

Because of a lack of access to complete price listings, including sold units, there is an inherent mathematical error in being completely representative of each neighborhood. The lack of data proves to add to sampling errors and consequently to all indicators. Furthermore, there is the possibility for

sampling biases throughout all projects, since there were missing values. Sampling biases can also happen when projects of different grades offer or do not offer their price lists. For example, there lies the possibility that less expensive projects, because they offered their price list, could distort the data by including many more values, or vice versa. Spatially speaking, the sample size in Le Triangle and Laval were much smaller than Griffintown's for various reasons. This section acknowledges that there is definitely some distortion of reality. However, the purpose of the study takes on the perspective of a potential buyer or seller, who also lack access to all data.

CHAPTER 4

BRIGHT LIGHTS BIG CITY: MONTREAL CONDOS

“A Montreal house takes a lot of care. So you've got to worry about pipes freezing and roofs leaking so sometimes I think I'm not here long enough to justify the care it takes, but that feeling evaporates very quickly, as soon as I come into the place” -Leonard Cohen

CONDOMINIUM HOME-OWNERSHIP IN MONTREAL

In today's market, the densification process is identified by the masses of condominium development, alongside, public concern on levels of home-ownership affordability. Given the framework of this study, the affordability of the densification process is measured as the cost of home-ownership for in-construction or newly built condominium units across Montreal, in particular to central areas. At the federal level, Canada's Economic Action Plan introduced a first-time home buyer's tax credit or a \$5,000 non-refundable income tax credit amount on a qualifying home in 2009 (applicable to single-family homes, semi-detached, townhouses, mobile homes, condominium units, and apartments in duplexes, triplexes, four-plexes, or apartment buildings as long as it is intended as the place of residence no later than one year after acquisition). The Société d'Habitation et de Développement de Montréal (SHDM), a para-municipal agent corporation of the city of Montreal, also develops real estate projects for affordable housing. It manages the Accès Condos program with over

4,700 housing units and seven commercial buildings. As part of the National Housing Act, the SHDM has built and renovated over 3,000 housing units between 1980 and 1989.

In "Canadian Real Estate," Richard Steacy discusses condominium home-ownership in his sixtieth chapter. Recounting CMHC's first funds dedicated to the construction of a 296 unit condominium project in 1967, both private and public sectors have always supported the condominium typology. Steacy defines condominium home-ownership as "...an apartment or townhouse complex in which residential units are owned by the individual owners and the rest (common elements), including land, is owned in common with other owners" (pp.200). As a condominium home-owner, Steacy finds many benefits such as security in owning a home, owning versus renting for average to modest income households, potential profit during resale, participation in the management of the condominium, enjoyment of services and facilities found in condominium projects, and home-ownership grants provided by the government. In Quebec, condominium home-ownership is referred to as co-ownership of immoveables. While every other province uses by-laws to govern operations, Quebec uses the Declaration of Co-ownership instead to oversee condominium projects.

MONTREAL'S INCLUSIONARY PROGRAM

In 2005, the city of Montreal adopted a strategy for the provision of affordable housing in new residential projects through the municipal levels of government who control local planning and project approval. In response to rising housing prices, increasing demand for affordable housing, reduction of state owned lands, and uncertainty in the provision of social housing, the city of Montreal has looked to facilitate the inclusion of social mixity in large residential developments. In 2004, the Master Plan formally committed itself to the inclusionary plan with the goal of making thirty percent of all new housing units affordable: 15% social housing & 15% affordable rental or ownership. Several key conditions include the fact that enforcement is dependent on the municipality (guideline versus requirement); the fact that it would be applicable to projects over two hundred units only; the fact that obligation is imposed only when major regulation modifications (i.e. density, building height, land-use) are made or public investments are made; the fact that it would be applicable to public and private lands; and the fact that affordable housing goals can be met with new construction, renovation of existing non-residential structures, or cash payments. The program targets households earning up to

120% of the median income. Through the SHDM, funding for social housing development, policy implementation, and intermediary works between the public and private are taken care of. Challenges for the program include securing borough support, stimulating affordable housing for families – notably, 3-bedroom type units, stimulating social housing in high-rise condo towers, and controlling resale of affordable housing units to sustain long-term affordability. The summary of the inclusionary strategy is depicted in more details in the following paragraphs.

The first element is the optimization of current housing subsidy programs. In order to accomplish this, it seeks guarantees from the government of Quebec for continuity of current affordable housing programs for subsidy planning and budgeting (establishing and seeking real costs of affordable housing); it continues to lobby the Canadian government for funding of affordable housing; it sets funds for subsidizing inclusionary projects for annual budgeting exercise; it seeks flexible government programs; it studies potential financial aid to developers for affordable housing; and it evaluates mechanisms to control resale of affordable ownership.

The second element is the use of municipally owned lands. As such, it would develop an inclusionary plan for affordable housing with a minimum of 30% to ensure variety, focused on site characteristics, market characteristics, local needs, project parameters, and opportunities to create affordable units off-site. This means studying opportunities to purchase and renovate existing buildings for social and community housing where new construction is low and market conditions are favorable. Finally, the municipality could sell sites at below-market value for social housing.

The third element is securing the partnership of major public property owners. This requires systematized exchanges between the city of Montreal and major public land owners for the identification of potential lands to be developed. It requires negotiating the commitment to affordable housing from public land owners and a review of property owners/developers' commitment to affordable housing before modifying changes and negotiating special arrangements.

The fourth element is to realize the full potential of regulatory and planning tools. Using these tools, it could promote the development of a variety of housing types for large projects. It could also review parking regulations for new residential projects. Documenting and informing the borough of impacts for predicted housing costs & target measures for the development of affordable housing amongst these tools. With the help of the city of Montreal, it can support, transmit data, and offer pertinent analysis. Finally, it requires a regular supply of updated market data for the status of

affordable housing.

The last element is the adaptation of the city’s service delivery model. This is the mandate to manage subsidy programs to support the construction of affordable housing projects and favor first time home owners. Using the SHDM, the construction of affordable housing and limitations of the budget for subsidies could be enhanced, and the SHDM could always intervene for the creation of affordable housing for large residential projects

Based on an old census tract in 1996, it was not long ago that the city of Montreal was ranked nationally as the most stressed with regards to affordable housing.

Metropolitan area	No. (and %) high-stress census tracts	No. (and %) of all high-stress census tracts in low-rent category (with rents below the median rent)
Montreal	212 (28.0%)	165 (77.8%)
Toronto	172 (21.4%)	131 (76.2%)
Ottawa	54 (25.2%)	36 (66.7%)
Quebec	44 (28.9%)	29 (65.9%)
Vancouver	43 (14.4%)	38 (88.4%)
Hamilton	40 (24.7%)	29 (72.5%)
Edmonton	37 (19.8%)	25 (67.6%)
Winnipeg	35 (22.3%)	27 (77.1%)
Calgary	34 (22.2%)	25 (73.5%)
Halifax	18 (24.0%)	12 (66.7%)
Saskatoon	11 (22.0%)	10 (90.9%)

Source: Calculated by the authors from the Census of Canada, 1996.
Note: High-stress census tracts are those with more than 1.5 times the average proportion of households paying 50% or more of income on rent.

Figure 4-1. Housing Affordability Stress and low-rent neighborhoods across different Canadian metropolitan areas.

(Source: Bunting et al 2004)

The above table is a comparative illustration of housing affordability stresses across Canadian metropolitan areas. According to Bunting et al (2004), Montreal ranked the highest as a high stress census tract where more 1.5 times the average proportion of households pay 50% or more of income on rent in 1996. It is no wonder that Montreal has since looked to implement an inclusionary program.

ACCÈS CONDOS: AFFORDABLE CONDOMINIUMS IN MONTREAL

The SHDM facilitates condominium home-ownership through the Accès Condos program, developed originally by Option for Homes, proven successful in Toronto. Ranging from first-timers to seasoned home buyers, the program is open to everyone with four basic conditions: 1) the intent to live in the unit, 2) the limit of one Accès Condos unit per household, 3) the agreement to Accès Condos contract agreements on the mortgage guarantee on the purchase credit, and 4) the eligibility for a mortgage loan. Exercised through the SHDM, the Accès Condos program facilitates home-ownership by offering a ten percent purchase credit to the buyers. In addition to Accès Condos, the city of Montreal condo ownership program offers grants to first-time home buyers ranging from \$4,500 to \$12,500 and refunds on property taxes depending on the type of household and unit. Taken from the Accès Condos website, the following table outlines affordable prices for different household sizes, from single person buyers to families with at least one child:

Type of Household	Maximum eligible purchase price	Financial assistance	
		Lump sum	Real estate transfer tax refund
Household without children (single buyer)	\$200,000.00	\$4,500.00	None
Household without children (more than one buyer)	\$250,000.00		
Household with at least one child	\$280,000.00	\$10,000.00	100.00%
	\$360,000.00 "family housing unit" that has a habitable floor area less than 1,033 ft ²	\$10,000.00	
	\$360,000.00 "family housing unit" that has a minimum habitable floor area of 1,033 ft ²	\$12,500.00	

Table 4-1. Accès Condos table indicating maximum eligible purchase prices for various household types. (Source Accès Condos 2014).

According to Accès Condos, a family housing unit is a new residential unit with at least five rooms, three of which are closed bedrooms with a window. For a \$200,000 unit, it translates to an income of roughly \$47,000 per annum using a 90% mortgage and similarly \$42,000 per annum using an 80% mortgage.

For a \$250,000 unit, it requires approximately \$57,000 per annum using a 90% mortgage and \$51,000 per annum using an 80% mortgage. Finally, a \$360,000 unit requires an annual income of roughly \$92,000 per annum using a 90% mortgage or \$84,000 per annum for an 80% mortgage. We can later compare affordability, as per Accès Condos, with projects in Griffintown, Le Triangle, and Laval. Since there is no way of asserting the household size of buyers, it will be simplest to merely use the \$360,000 as the limit on which Accès Condos deems a condominium affordable for a household. Since the demographic values (seen later) use household income (without differentiating size), it makes sense that the \$360,000 be used as a benchmark against the median household income.

RBC ECONOMICS RESEARCH ON HOUSING TRENDS AND AFFORDABILITY

For the month of February 2014, RBC found that housing affordability improved slightly in the fourth quarter of 2013. Relative to income gains, home-buyers are allocating a smaller portion of their income to purchasing a market value home – household incomes outpaced the rise in mortgage carrying costs. Across the country, affordability is more of an issue in Toronto and Vancouver. RBC states that “while we expect the Bank of Canada to leave its overnight rate unchanged in 2014, we forecast an upward drift in bond yields – the main driver of fixed mortgage rates – ahead of what is likely to be a gradual pace of policy tightening by both the US and Canadian central banks” - rising interest rates can erode affordability for 2014. As for Quebec, its housing market is on the soft side with re-sales almost seven percent below the ten year average – an indication of an eroding home-buyer's confidence following setbacks in the provincial job market in early 2013. The Montreal area experienced substantial increases in the amount of condominium sales in 2013. Despite the supply of condominiums, supply and demand are balanced. Affordability does not appear to be a significant obstacle to home buyers with the exception of two-storey homes. That said, there are still worries about over-flooding the market with supply. CMHC and Desjardins Economic Studies (2013) conducts a historical overview in a chart that illustrates over the course of twenty-six year, condominium starts (1985-2011). Because the 1990s experienced ‘a period of lethargy that followed excessive construction’ as per the graph, analysts fear a similar experience. Looking at the chart on the following page:

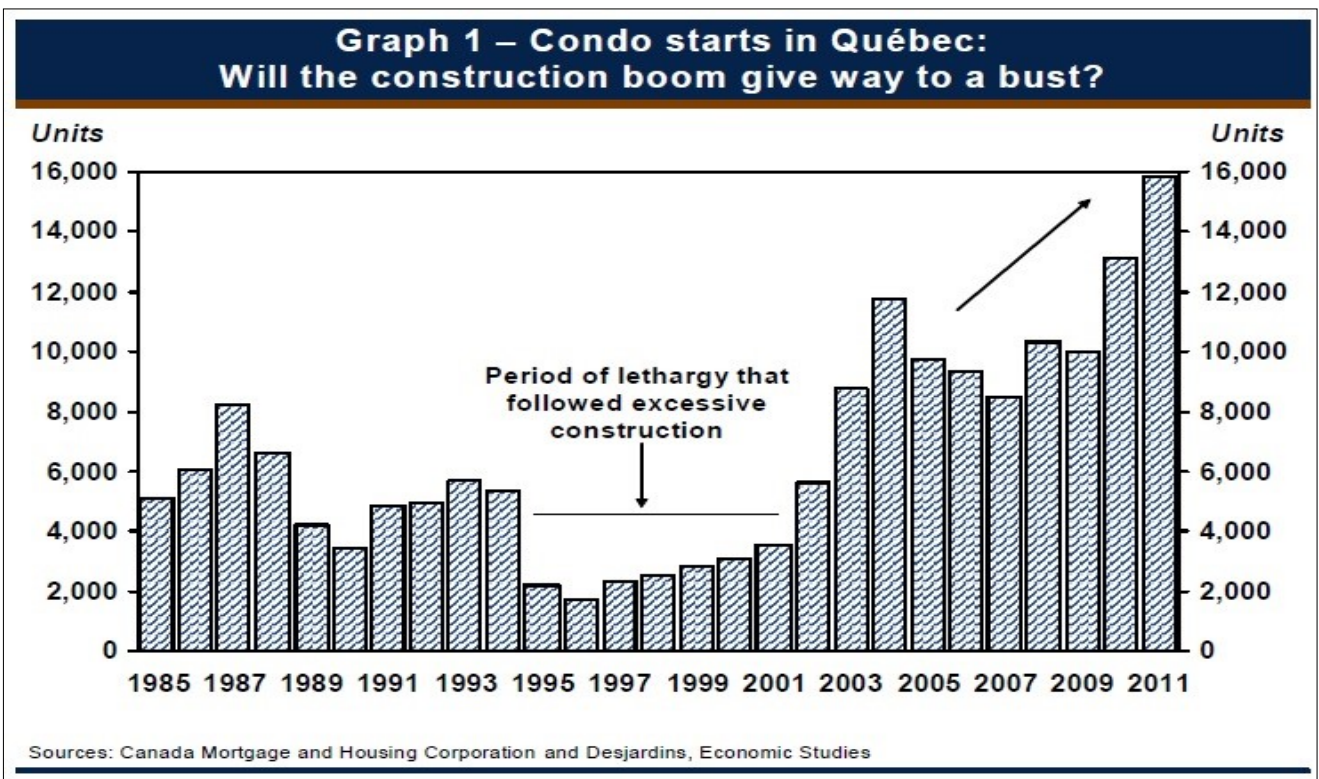


Figure 4-2. Condo starts in Quebec from 1985 to 2011.
(Source: CMHC & Desjardins Economic Studies 2013)

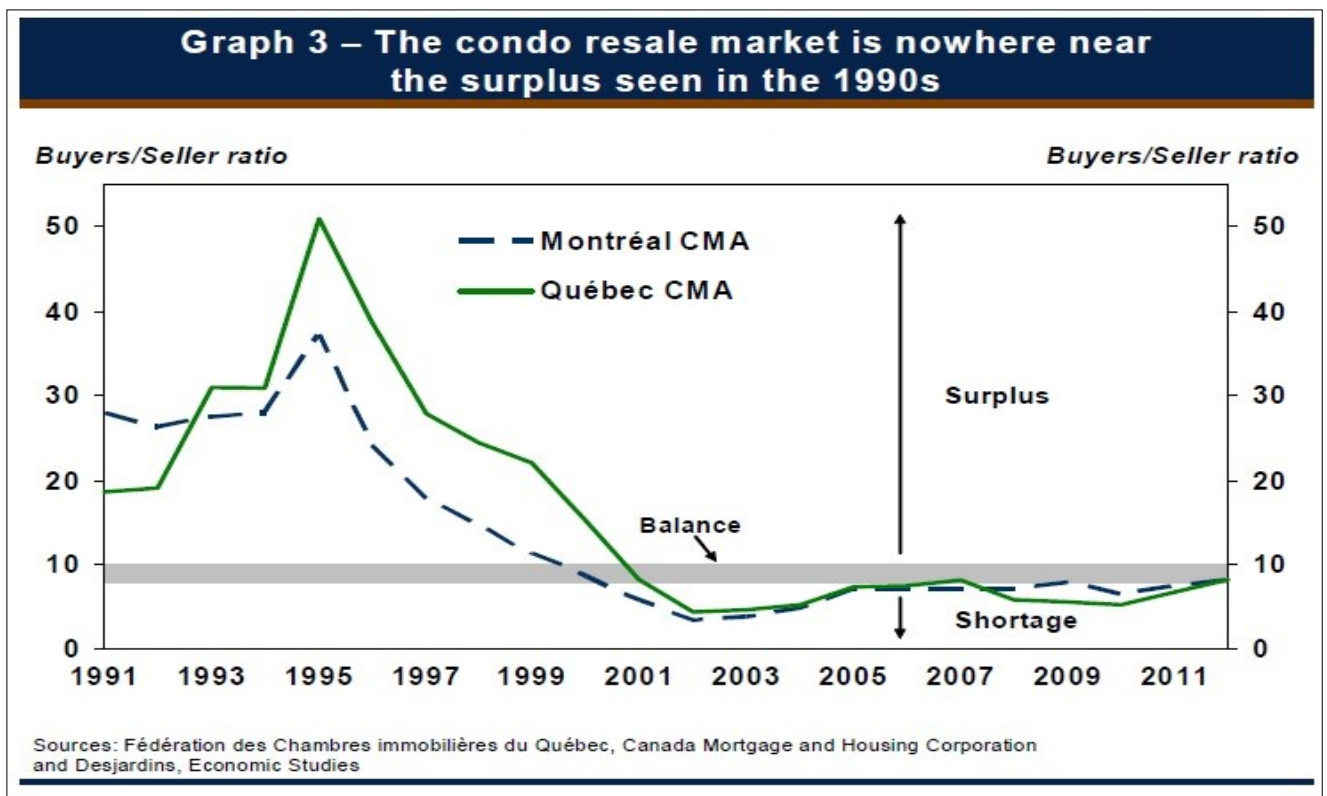


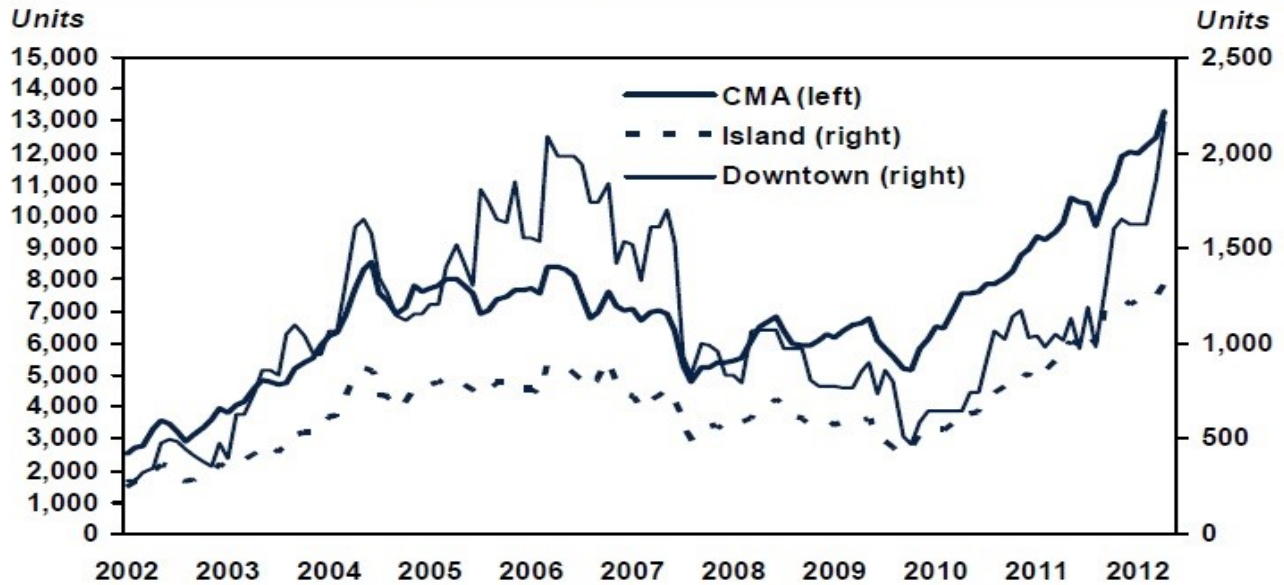
Figure 4-3. Condo resale market from 1991 to 2011 comparing the Montreal CMA to the Quebec CMA.
(Source: CMHC & Desjardins Economic Studies 2013)

Figure 4-3 is illustrious of the surplus experienced from 1991 to 2011 using the buyer/seller ratio in Montreal CMA and in Quebec. The gray line is where the green and blue line should meet for a balanced market, in other words, it marks the point of equilibrium. In the early 2000s, it becomes apparent that there is already new demand, that despite lying close or on the equilibrium, there is a market for the condominium projects.

CITY CENTRE DENSIFICATION: GRIFFINTOWN CASE STUDY

An emblem of Montreal's industrial past, Griffintown is being transformed into a trendy residential neighborhood. With its strategic location between the St-Lawrence River and the downtown, a remodeling of the city to improve access to the waterfront is underway with plans to demolish segments of the Bonaventure Expressway. Griffintown extols the revitalization of a city centre area, the emblem of Smart Growth policies, of which centrally underused territories are given new life as denser, more efficient urban forms. According to the Master Plan, there is a 98 page report sectioned as the *Programme Particulier Urbain Griffintown*, a special urban plan unique to Griffintown. The city is looking to gradually demolish relics of the industrial past, mainly defunct manufacturing structures, to be replaced by mixed-use high rise projects. In conjunction with a new bridge to replace a failing Champlain bridge, a new light rail transit project is being proposed to pass through the old industrial area, connecting the South Shore with the new bridge to Griffintown to downtown. Restaurants, cafes, supermarkets, and other essential retail and commerce are being marketed alongside one another. Griffintown is to become an extension of the downtown and therefore represents the city center for the purposes of this study. Looking at the effects of Griffintown, it becomes apparent that it makes up for a large majority of new construction projects in Montreal over the past decade or so, although it is unclear whether Griffintown represents the Island or Downtown at this point:

Graph 14 – The number of condos under construction in Montréal is up



Sources: Canada Mortgage and Housing Corporation and Desjardins, Economic Studies

Figure 4-4. The Number of condos under construction from 2002 to 2012 comparing the CMA, the Island, and the downtown.

(Source: CMHC & Desjardins Economic Studies 2013)

In comparison to the traditional downtown, Griffintown is more relevant for several key reasons. To begin, traditional downtown housing is more expensive as it is even more centrally located with more amenities and services. Secondly, there is a much heavier contrast in the before and after of Griffintown than the downtown. With its industrial heritage, Griffintown's current turnaround development has been planned to completely alter existing land-uses which conveniently relates back to much of the academic discourse on brownfield revitalization. Griffintown is the poster boy example of many contemporary planning phenomena consolidated into one large project. Finally, given the sheer number of new projects, it also presents a reliable case study for empirical research. Posing as a potential buyer and investor (depending on offers), I set out to find the prices of as many new condominium housing units as possible. While some projects were close to finalizing all transactions (i.e. Le William), others were only just beginning. The area is still heavily under construction and some developers have multiple phases planned (i.e. District Griffin and Bassins du Havre). All projects were condominiums and key differences lied in services provided and both exterior and interior designs. In the following section, a few maps from the Griffintown PPU are presented as such:

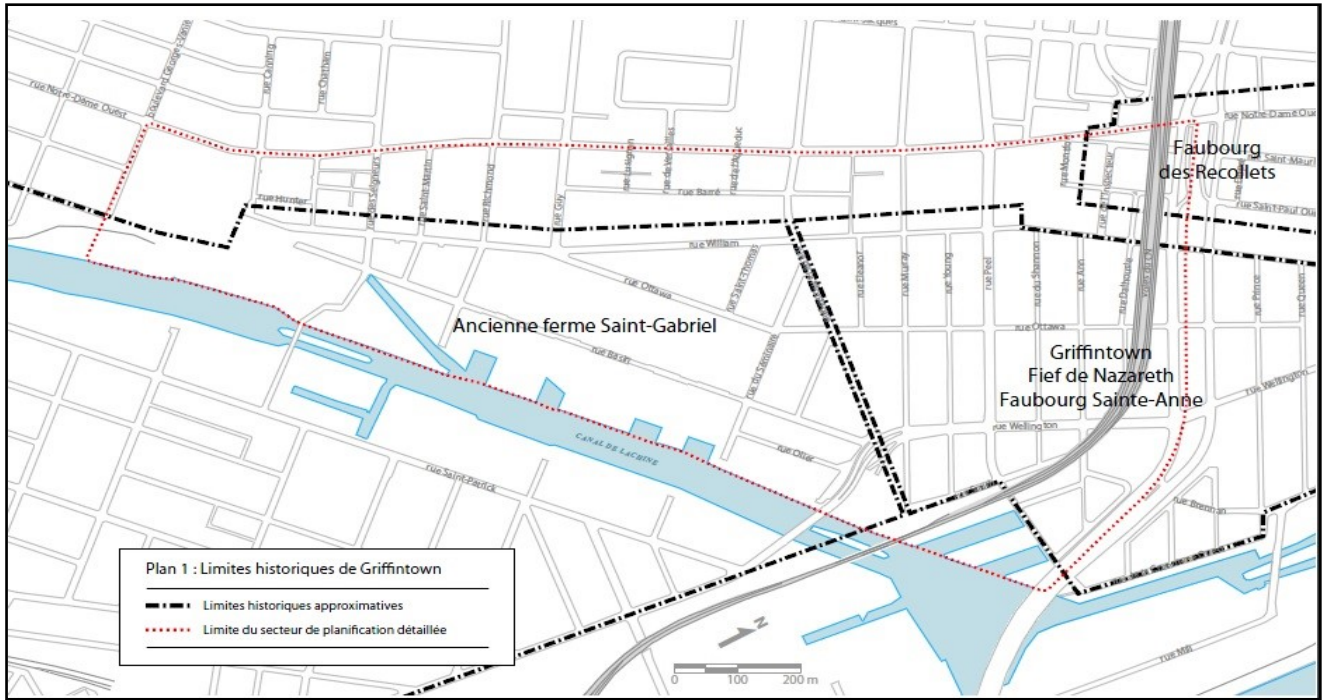


Figure 4-5. Historic (black) versus planned (red) borders of Griffintown. (Source PPU Griffintown 2013)

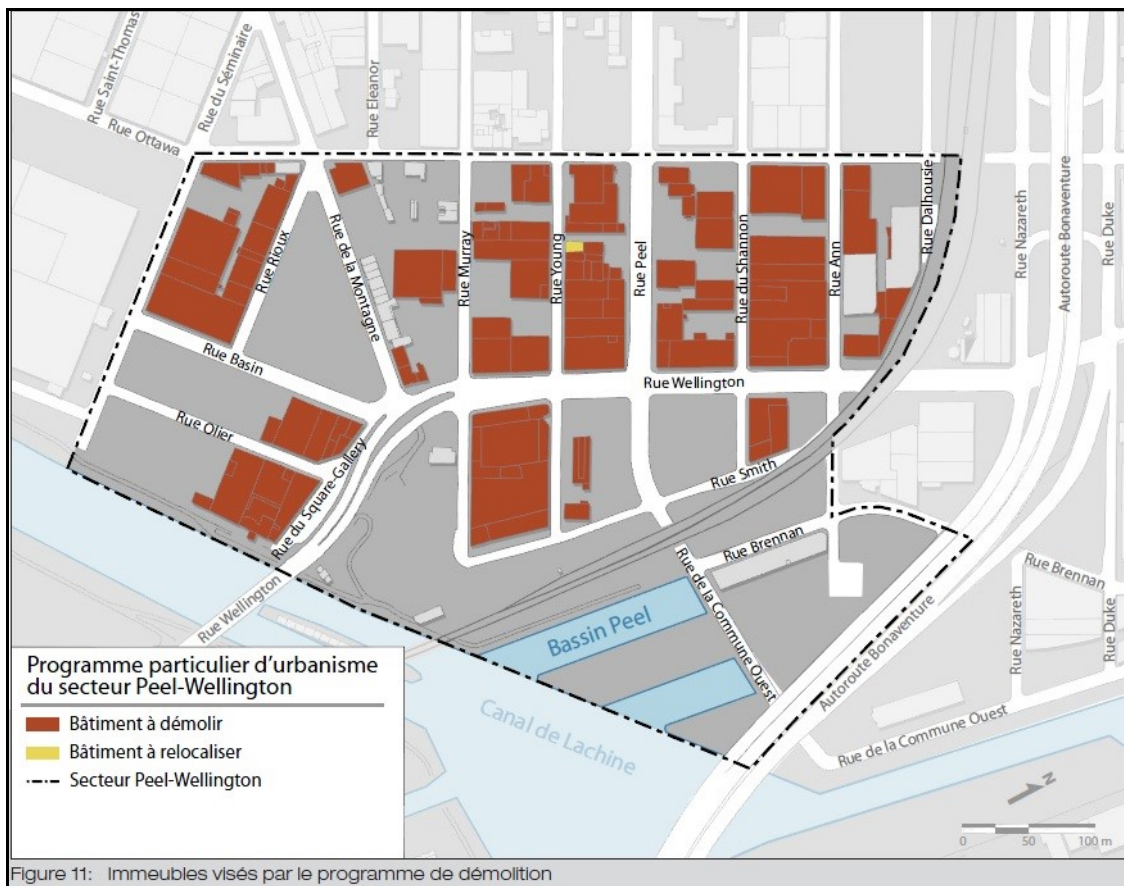


Figure 4-6. PPU's planned demolition (reflected in the brownish-orange color) (Source PPU Griffintown 2013)

INVENTAIRE DES ACTIONS SUR LE DOMAINE PUBLIC DE GRIFFINTOWN

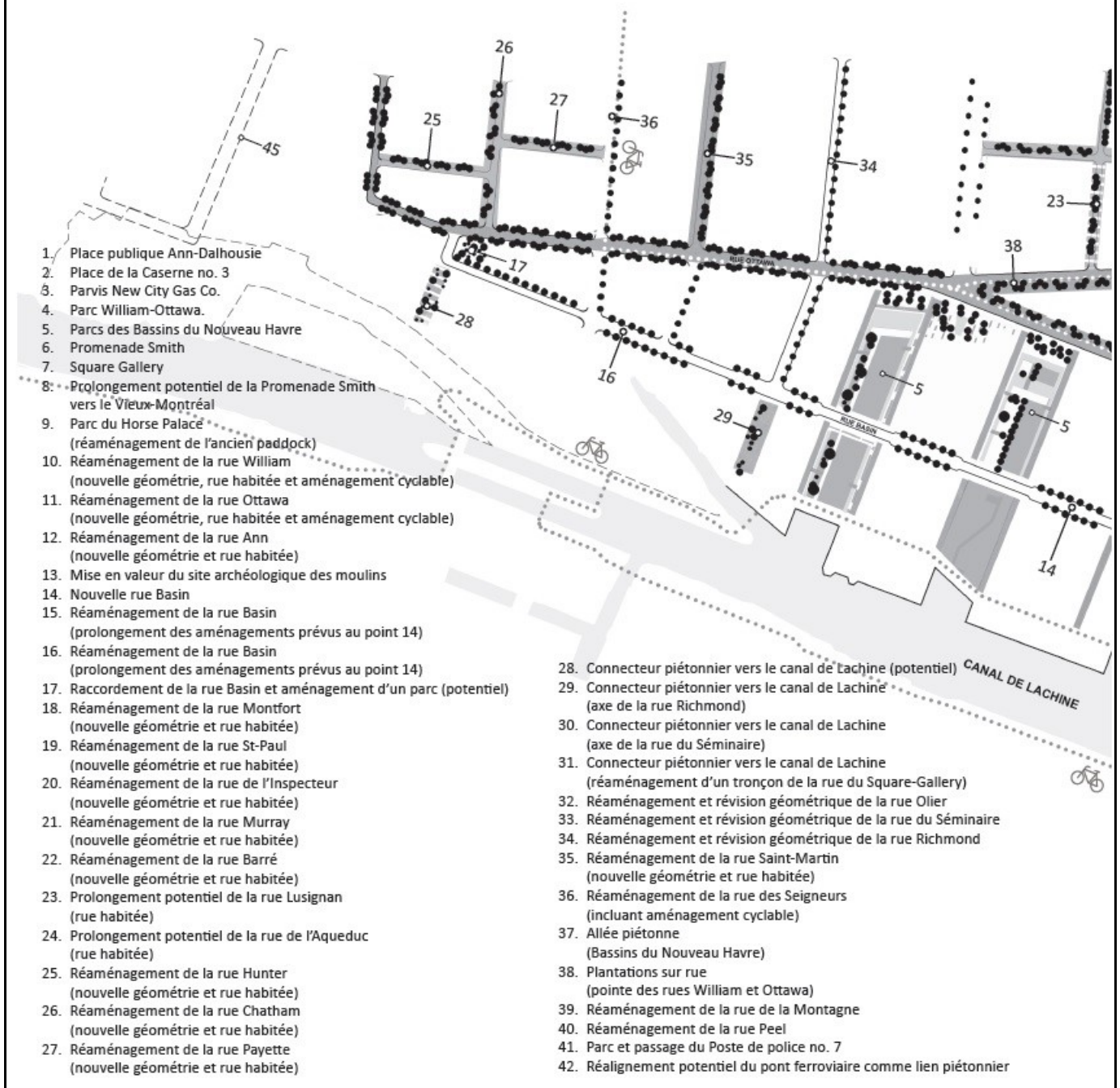


Figure 4-7. An Inventory of interventions in the public domain of Griffintown.

(Source: PPU Griffintown 2013)

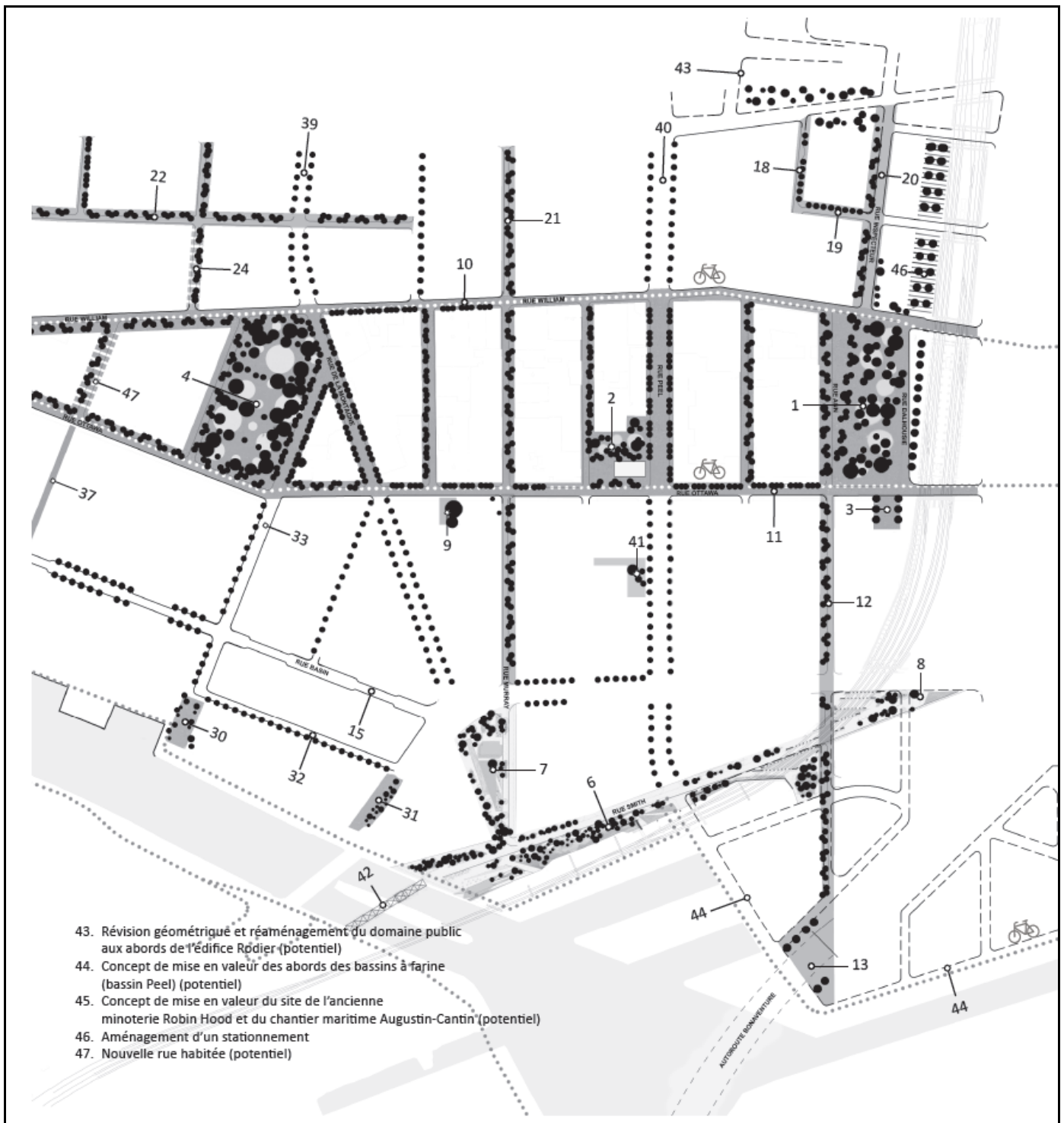


Figure 4-8. An inventory of interventions in the public domain of Griffintown continued.

(Source: PPU Griffintown 2013)

Figure 4-5 outlines the actual borders of Griffintown, although there are projects in this research that are just on the outside of the borders of Griffintown. Figure 4-6 is a specific plan in the Peel-Wellington sector of Griffintown and the buildings to be demolished – the amount of buildings to be demolished is noteworthy. Figure 4-7 and Figure 4-8 illustrate an inventory of forty-seven interventions.

SOUTH WEST BOROUGH & GRIFFINTOWN: SOCIOECONOMIC TABLES

	South West Borough	
	N	%
All Households	33265	100.00
Less than \$20,000	9980	30.00
\$20,000-\$39,000	9750	29.30
\$40,000-\$74,999	8765	26.30
\$75,000-\$99,999	2540	7.60
\$100,000 or more	2230	6.70
Median Revenue	\$33,295,00	

Table 4-2. Annual Revenue per household.

(Source: Statistics Canada customized table from the Census in 2001 and 2006)

	Couples without children	Couples with children	Single Parents	Single persons	All Households
South West Borough					
All Households	\$49,834	\$55,860	\$28,290	\$20,283	\$33,295
Home-owners	\$60,093	\$78,732	\$34,569	\$34,569	\$53,477
Tenants	\$43,763	\$43,207	\$17,667	\$17,667	\$27,605

Table 4-3. Median Revenue per household composition and type of tenure.

(Source: Statistics Canada customized table from the Census in 2001 and 2006)

	2001		2006		2001-2006
	n	%	n	%	% change
All households	910	100.00%	1640	100.00%	180.20%
Couples with children	45	4.90%	115	7.00%	255.60%
Couples without children	260	28.60%	310	18.90%	119.20%
Single parent families	35	3.80%	60	3.70%	171.40%
Single persons	325	35.70%	560	34.10%	172.30%

Table 4-4. Griffintown: Demographic Profile broken down into proportion of various household compositions. (Source: Statistics Canada customized table from the Census in 2001 and 2006)

Both the city of Montreal and Statistics Canada unfortunately hold back statistical data for 2014. In the previous tables, the majority of South West borough households lie slightly below the median revenue level in comparison to the city of Montreal in 2005. The median revenue was \$33,295 for all households – the majority of which made less than \$20,000 per annum (30%). This having been almost ten years ago reflected a time when Griffintown's development was on the rise. Given a history of housing low-income industrial workers, it is not surprising to find a lower median income than the city of Montreal, as its condominium development has only recently taken off. With regards to the home-buyer market, the median income of all home-owners lies at \$53,477 which is also lower than the median income of Montreal home-owners. New projects aimed at median income earning households and higher are expected to raise the median income of Griffintown home-owners as we will see in the next section. Referring to Griffintown's demographic profile, it is clearly visible that there has been high growth from 2001 to 2006, experiencing an increase of 180%. Griffintown has made an effort to accommodate couples with children as the percentage change is at 256% - proportionally higher than all other categories. With the construction of new projects, these statistics are expected to change even more so for 2014.

GRIFFINTOWN: CASE STUDY PROJECTS 2014

	# Floors	# Units (variable)	# Sample (n)
URB Condos	7	110	18
MYST	6	145	13
District Griffin Phase IV	18	139	7
Bassins du Havre Quai 1	8	151	10
Bassins du Havre Quai 2	8	122	47
Le William A	4	15	4
Le William B	8	59	5
Le William C	7	98	7
Gallery des Lofts Phase 1	13	128	65
Total	79	967	176

Table 4-5. Griffintown Projects 2014: Under construction or newly finished.
(Source: Enoch Ho 2014)

In order to retrieve a more accurate picture of the prices, a maximum but limited amount of projects were visited within a one month time-frame (including other comparable projects from different areas in later sections) – the month of February 2014. Condominium prices are volatile and subject to change every few months according to sales agents. Posing as an investor and a potential buyer, sales agents were more open to showing an array of units available. Some projects offered their price list, while others only offered prices for units of interest. The collection of data was therefore varied and the capacity to collect data sometimes depended on my own ability to extract information from the sales agents who refused to give out their price list. In terms of the projects, they were either brand new or in-construction. Looking at the project data, there is total of 967 units available in these new projects – from which there is a sample size of 176 or roughly 18% of the entire population of new or in-construction projects in Griffintown. From the data collected, the following information is a summary with regards to sample units:

	Condo Prices (before taxes)	90% mortgaged: Income required for 32% affordability	80% mortgaged: Income required for 32% affordability
Median	\$344,450.00	\$86,224.00	\$77,939.00
Mean	\$373,296.00	\$93,403.00	\$84,425.00
Range	\$149,000-\$1,306,900	\$37,065-\$316,425	\$33,219-\$284,993
	Floor Area (Square Footage)	90% Mortgaged: Total Annual Expenditure	80% Mortgaged: Total Annual Expenditure
Median	880	\$27,591.00	\$24,941.00
Mean	916	\$29,889.00	\$27,016.00
Range	349-1872	\$11,861-\$101,256	\$10,630-\$91,198
	# Rooms		
Median	2		
Mean	1.57		
Range	0-3		

Table 4-6. Griffintown Projects 2014: Under construction or newly finished.
(Source: Enoch Ho 2014)

****It should be noted that total annual expenditure includes the monthly mortgage payment, monthly condo fees, school and property taxes, GST and PST, and the insurance premium for projects mortgaged at ninety percent. For the full list of samples and calculations, please refer to the Appendix.*

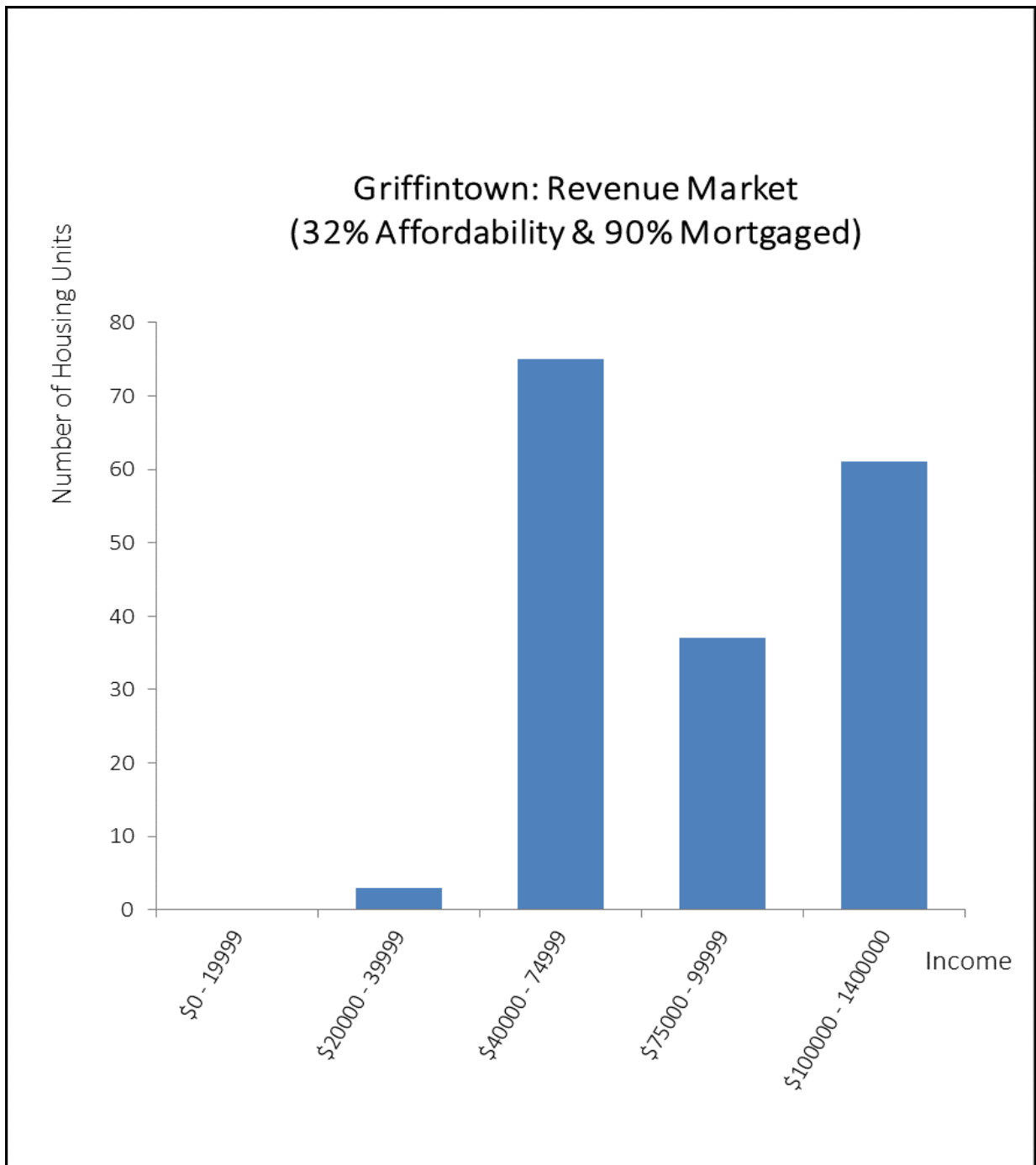


Figure 4-9. Sample of units divided into revenue market of buyers at 32% affordability and 90% mortgaged.

(Source: Enoch Ho 2014)

According to the chart above, the majority of units (~43%) target income groups between \$40,000-\$74,999 and \$100,000-\$140,000 using a 90% mortgage for what is deemed 32% of one's income. These projects are clearly not for LMI groups, but rather median income groups and above. The \$20,000-\$39,000 target market exists for persons interested in micro-condo units – thus, for couples or

single persons only and they are quite limited (~2%). The following chart presents a similar situation using an 80% mortgage which requires a smaller annual income and is therefore expected to reflect more affordable income groups.

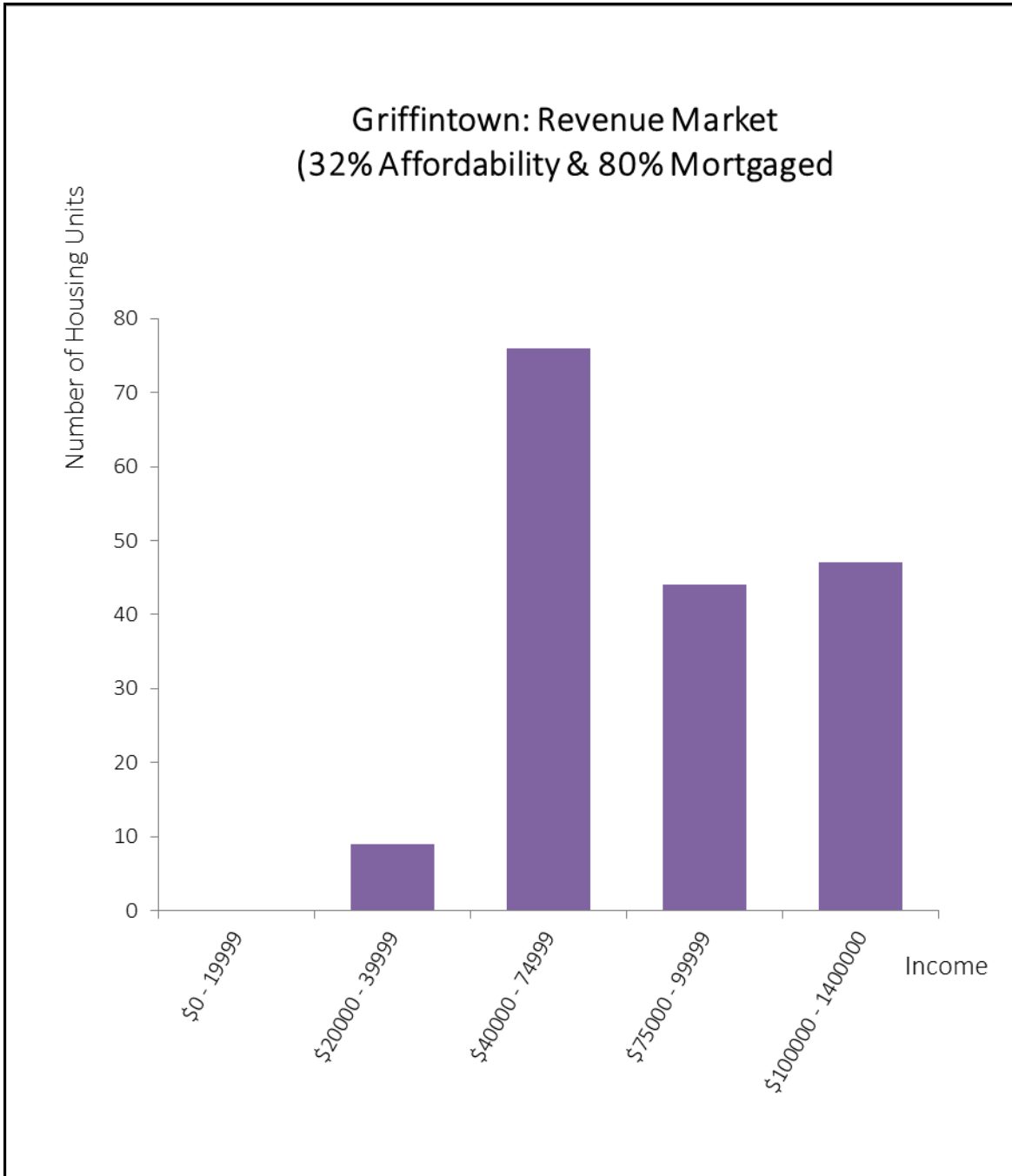


Figure 4-10. Sample of units divided into revenue market of buyers at 32% affordability and 80% mortgaged.
(Source: Enoch Ho 2014)

Comparing the 80% mortgage table to the 90% mortgage table, the frequency of income groups targeted shifts downward as expected. There are more units available in \$20,000-\$39,000 group (~5%), but the majority of units still remain in the \$40,000-\$74,999 market segment (~43%). Developers are clearly targeting people within and above the median income group, even in the case of smaller mortgage payments. The following section presents tables that segment the frequency of the number of rooms available per revenue group.

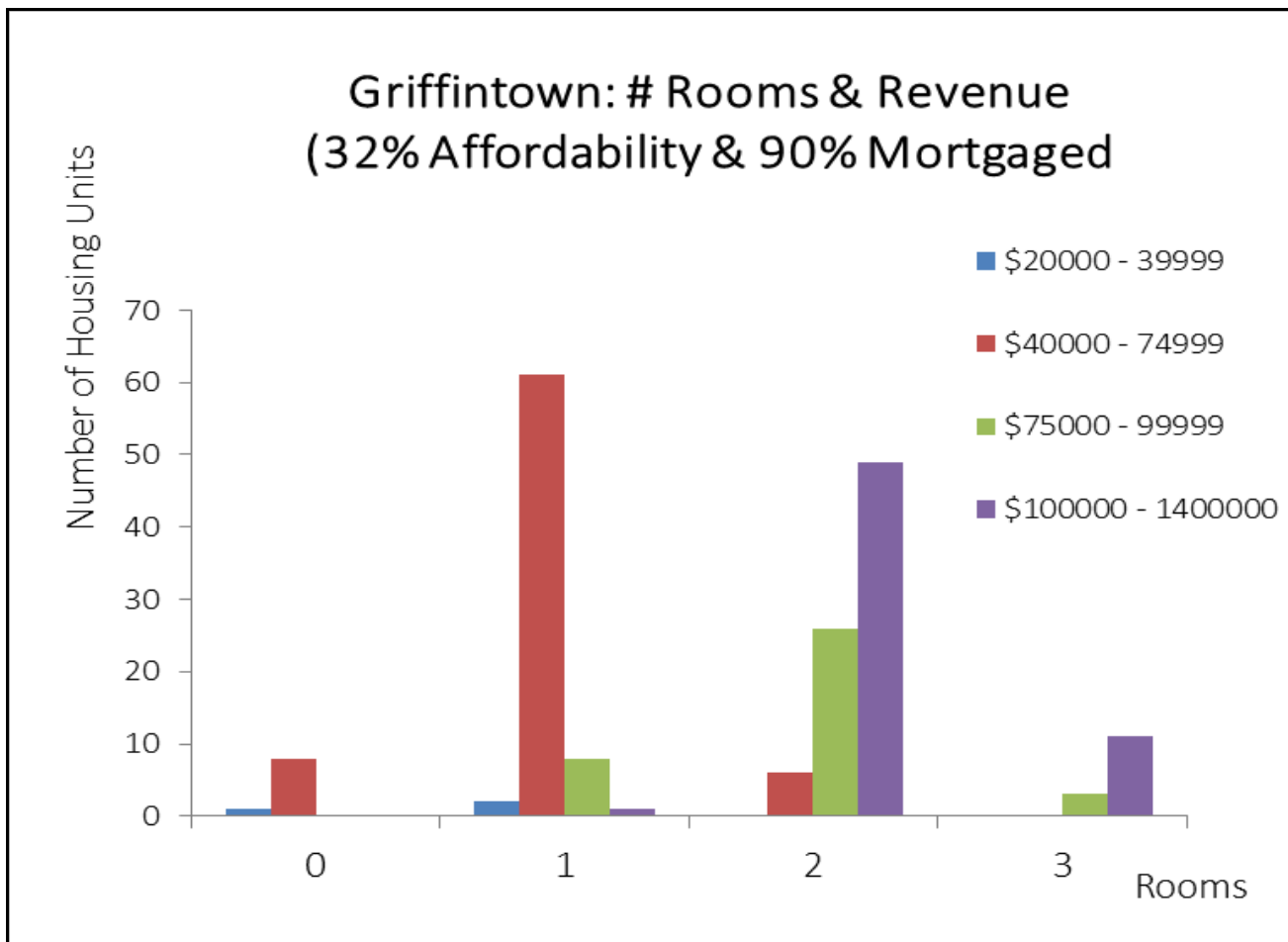


Figure 4-11. The number of rooms & corresponding revenue required at 32% affordability using a 90% mortgage.

(Source: Enoch Ho 2014)

The above table is an illustration of the frequency of units available and the revenue required to buy either zero, one, two, or three rooms at thirty-two percent affordability and a ninety percent mortgage. It is apparent that the majority of the market lies in the segment for one room and incomes of \$40,000 per annum to \$75,000 per annum. After this market, one can see that the market is aimed at a market of two rooms with incomes above \$100,000 dollars per annum.

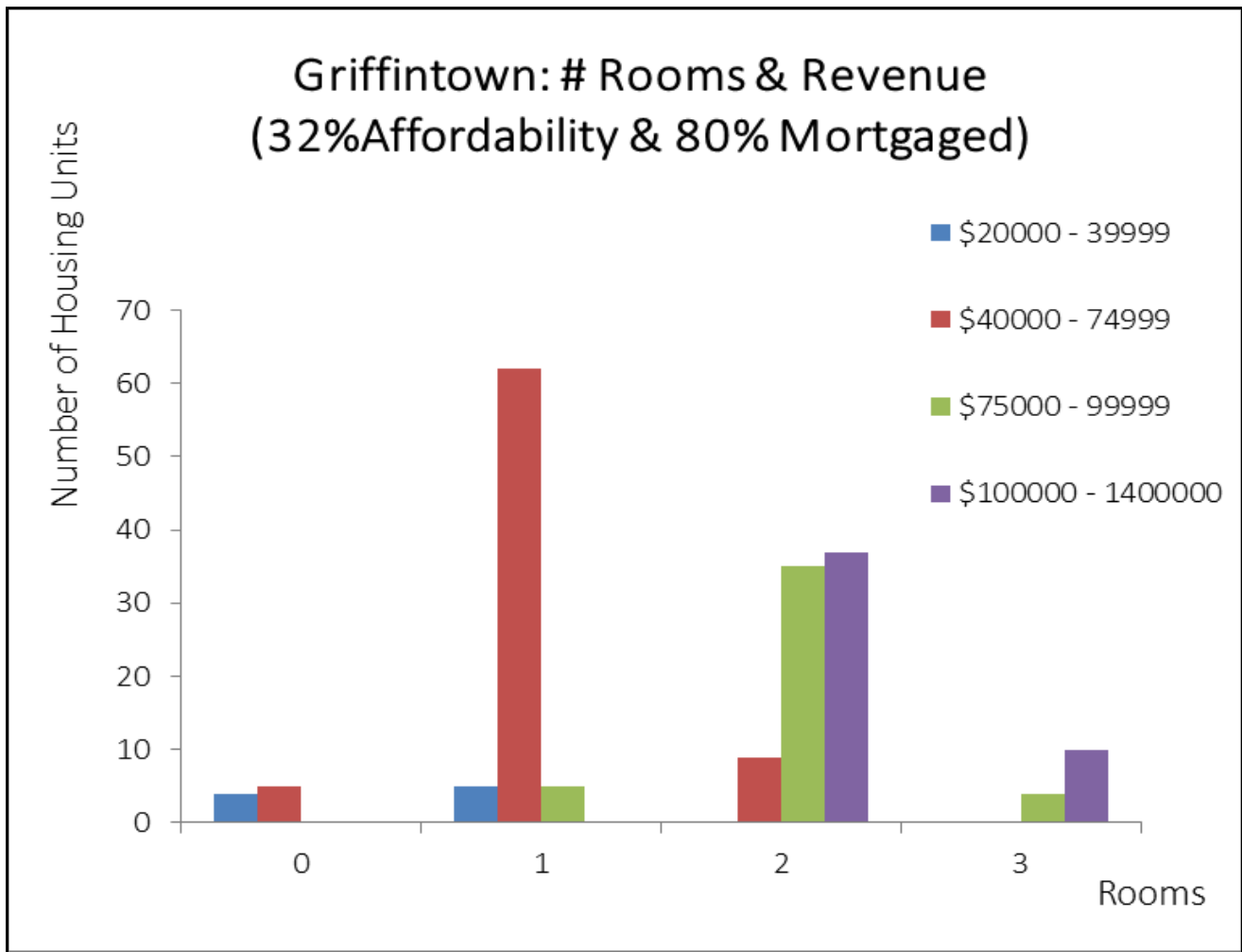


Figure 4-12. The number of rooms & corresponding revenue required at 32% affordability using an 80% mortgage.

(Source: Enoch Ho 2014)

The above table is an illustration of the frequency of units available and the revenue required to buy either zero, one, two, or three rooms at thirty-two percent affordability and an eighty percent mortgage. Similarly, the majority of the market lies in the segment for one room and incomes of \$40,000 per annum to \$75,000 per annum using the 80% mortgage versus the 90% mortgage. After this market, one can see that the market is aimed at a market of two rooms with incomes above \$100,000 dollars per annum – although, there are also more units available for people with incomes between \$75,000 and \$99,999.

GRIFFINTOWN HOUSING ANALYSIS

Comparing Griffintown projects to the median revenue of households in the South West borough, it is apparent that the median income required for home-owners will elevate altogether using both the 80% and the 90% mortgage for all households. Comparing the charts in the previous page to the Accès Condos chart, there are indeed units for single buyers with no room or 1 room within the price range of \$200,000 or roughly a \$47,000 per annum income using a 90% mortgage and \$42,000 per annum using an 80% mortgage. For households with more than one buyer, the income range of \$40,000-\$74,999 for a \$250,000 unit still exists for units with one or two bedrooms. As for three-bedroom units, the \$360,000 is also within range of the prices deemed affordable by Accès Condos, although considerably less proportionally than the one or two bedroom units. While these projects are expected to gentrify Griffintown and increase the median income of home-owners in the South-West borough, the projects offer affordable prices within the island of Montreal. Adding a potential of 967 households, it will more than double the demographic profile of Griffintown in 2006. Similarly, the revenue market reflects and further accommodates this median revenue group with 43% of units being catered to \$40,000-\$74,999 income group. As such, there is still a range of units available for single persons, couples, and small families at both affordable and more luxurious prices. From the smallest micro-condos at 349 feet, District Griffin Phase IV offers the “Certified Genius” units at \$202,021 taxes included. On the other end, there are one million plus dollar penthouses available for high income households. All things considered, the median size of units is decent enough to fit a small family with a median of 2 rooms. A couple making \$20,000-\$40,000 a year each, with enough savings for an 80% mortgage, can buy a median price unit in Griffintown which is quite reasonable. Given the wide range of prices available, Griffintown will surely have a more socioeconomically diversified population. Levels of affordability are nonetheless decent given its central location as an expansion of the downtown area. While the area currently lacks public transit, it will be improved with the proposed new light rail project accompanying the new bridge. The centralized location suggests a lesser dependence on the automobile in comparison to peripheral areas. In 2005, the CMM calculated a median revenue of \$48,016 and similarly, the city of Montreal calculated \$38,201. Considering that this takes into account all households (tenants and home-owners), the median income for home-owners should be even higher. As such, the projects in Griffintown definitely fall within the range of affordable units.

COMPARATIVE/SPATIAL ANALYSIS OF NEW CONDO PRICES ACROSS MONTREAL

Across the city of Montreal, there is a rise in the development of condominium projects which is leading to denser neighborhoods. Back in 2012, Desjardins Bank conducted an economic study on the Quebec condo market described as a “spectacular expansion in condo apartment construction.” Condominium construction reached new peaks in Quebec, Montreal, and Trois-Rivières. While the 1990s suffered a surplus in condominium construction, Desjardins (2012) found economic conditions were considerably more favorable with a condo market in the equilibrium zone. As long as prices remain in the equilibrium zone, they usually follow inflation between 2%-3%. Because resale and construction markets are closely intertwined, the supply of condos will head towards over-supply if the resale market slows down. Nevertheless, they conclude that “Quebec's condo market is showing few signs of a steep imbalance” (Desjardins 2012). In more recent news, CMHC (2014) reports in “Canadian Housing Market: Housing starts lower in 2013, increasing modestly in 2014” that Quebec's moderate economic growth, favorable borrowing conditions, and demographic trends continue to support housing demand in 2013 and 2014. With the popularity of condominium apartments, supply continues to be strong even after three years of sustained construction from 2010 to 2012. In terms of multiple-unit housing starts, CMHC reports 27,300 for 2013 and 27,600 for 2014 in Quebec (CMHC 2014).

THE BURGESS MODEL & MONTREAL

Using Ernest Burgess' traditional model of the monocentric, Montreal is concentrically subdivided into a city center, an inner-city, and a commuter zone. Despite being an antiquated theory, the labels are relevant in a thematic sense like with the reemergence of city centre living. Using the narrow lens of new condominium projects that embody densification, the costs of home-ownership throughout specific areas of Montreal. In the city centre, Griffintown is the most ambitious revitalization project in the entire province; Le Triangle is being revitalized with 57 million dollars in public expenditure and continual phases of condominium projects in the inner-city; and, Laval is a suburban neighborhood with large amounts of condominium projects that reinforce polycentrism, as an autonomous city with its own downtown, simultaneously transforming traditional notions of suburbia characterized as low-density, auto-dependent, and homogeneous housing type.

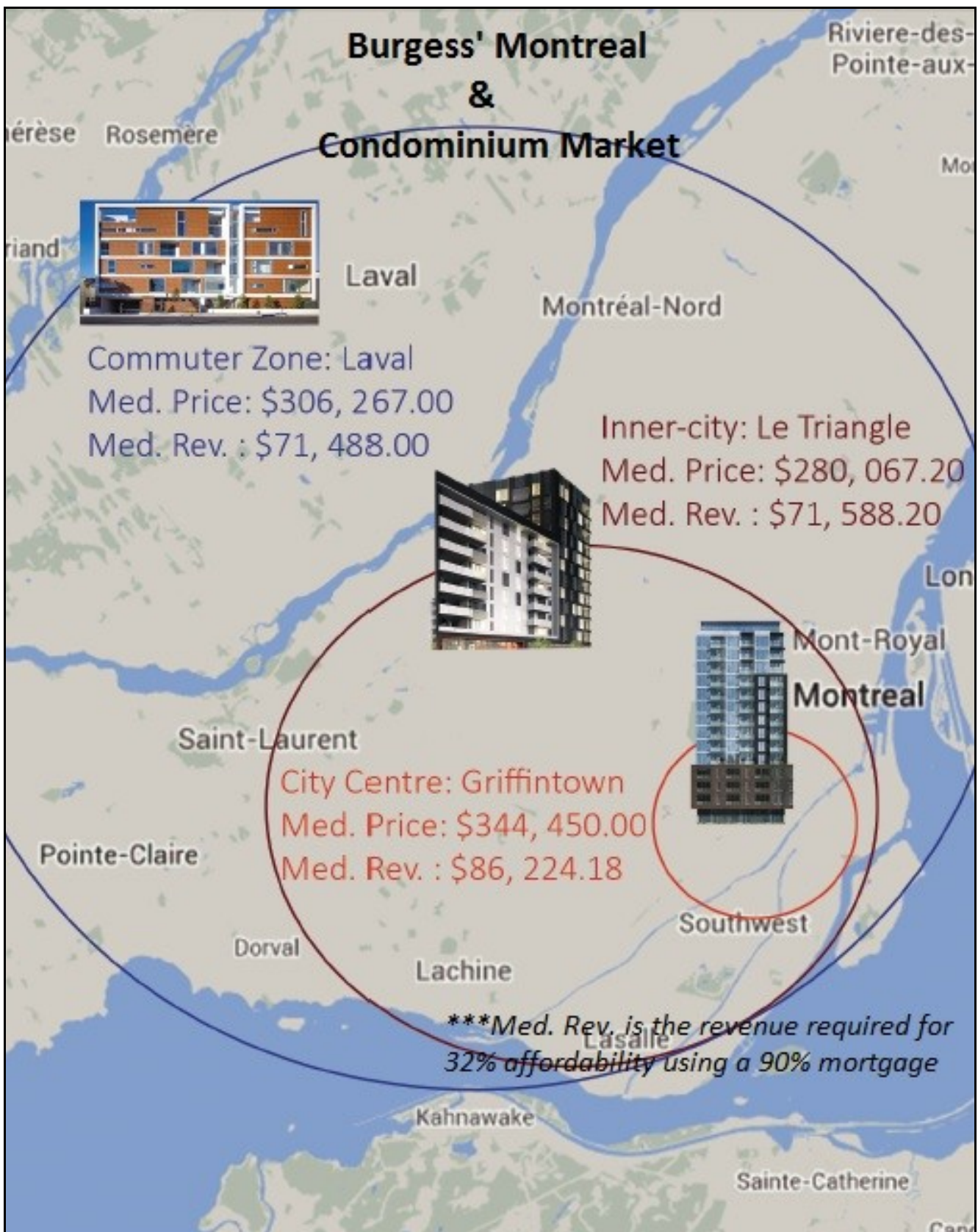


Figure 4-13. The division of Montreal according to the Burgess Model: 1) Griffintown as the city center, 2) Le Triangle as the inner-city, and 3) Laval as the commuter zone. (Source: Enoch Ho 2014)

ACROSS MONTREAL: SOCIOECONOMIC TABLES & DEMOGRAPHICS

	City of Montreal		South West Borough		CDN-NDG Borough	
	N	%	N	%	N	%
All Households	743235	100%	33265	100%	73630	100%
Less than \$20,000	182895	24.6%	9980	30%	20995	28.5%
\$20,000-\$39,000	205190	27.6%	9750	29.3%	20725	28.1%
\$40,000-\$74,999	210070	28.3%	8765	26.3%	18480	25.1%
\$75,000-\$99,999	65965	8.9%	2540	7.6%	5360	7.3%
\$100,000 or more	79115	10.6%	2230	6.7%	8070	11%
Median Revenue	\$38,201.00		\$33,295.00		\$34,693.00	
Home-owners	255635	100%	9335	100%	18100	100%
Less than \$20,000	21995	8.6%	1170	12.5%	1665	9.2%
\$20,000-\$39,000	47915	18.7%	2065	22.1%	2875	15.9%
\$40,000-\$74,999	83200	32.5%	3160	33.9%	5160	28.5%
\$75,000-\$99,999	39745	15.5%	1345	14.4%	2450	13.5%
\$100,000 or more	62780	24.6%	1580	16.9%	5940	32.8%

Table 4-7. Annual revenue (2005) by household and tenure type for the city of Montreal, the South-West borough and the CDN-NDG borough.

(Source: Statistics Canada customized table from the Census in 2001 and 2006)

	City of Laval	
	N	%
All Households	144200	100%
Less than \$20,000	18000	12.5%
\$20,000-\$39,000	31185	21.6%
\$40,000-\$74,999	35007	24.2%
\$75,000-\$99,999	21757	15.1%
\$100,000 or more	25825	17.9%
Median Revenue	\$52,946.00	

Table 4-8. Annual revenue (2005) by household for the city of Laval.

(Source: Statistics Canada customized table from the Census in 2001 and 2006)

Because the city of Montreal and the city of Laval are both census subdivisions, the statistics reported differ slightly which is why there are missing values for the city of Laval. The city of Laval did not report aggregate household composition and type of tenure statistics as the city of Montreal has reported. Nevertheless, these tables offer comparative socioeconomic data for each area of study.

	Couples without children	Couples with children	Single parents	Single persons	All households
CMM					
All households	\$58,338	\$79,876	\$41,578	\$25,548	\$48,016
Home-owners	\$67,602	\$91,260	\$55,762	\$37,179	\$69,985
Tenants	\$43,600	\$45,966	\$32,303	\$20,994	\$30,806
City of Montreal					
All households	\$51,870	\$64,357	\$36,314	\$23,123	\$38,201
Homeowners	\$65,141	\$86,787	\$54,905	\$36,262	\$63,196
Tenants	\$42,536	\$43,812	\$30,591	\$20,328	\$29,766
South West					
All households	\$49,834	\$55,860	\$28,490	\$20,283	\$33,295
Homeowners	\$60,093	\$78,732	\$42,736	\$34,569	\$53,477
Tenants	\$43,763	\$43,207	\$25,482	\$17,667	\$27,605
CDN-NDG					
All households	\$47,982	\$52,194	\$35,844	\$22,184	\$34,693
Homeowners	\$82,196	\$98,986	\$61,430	\$38,779	\$70,081
Tenants	\$37,619	\$39,326	\$29,629	\$20,090	\$28,589

Table 4-9. Median Revenue (2005) according to household composition and type of tenure for the CMM, the city of Montreal, the South West borough, and the CDN-NDG borough.
(Source: Statistics Canada customized table from the Census in 2001 and 2006)

Laval	Couples without children	Couples with children	Single parents	Single persons	All households
All households	\$72,318.00	\$66,988.00	\$55,481.00	\$27,809.00	\$54,946.00

Table 4-10. Median Revenue (2005) according to household composition
(Source: Statistics Canada customized table from the Census in 2001 and 2006)

Using census data of 2011, the South West borough counted a total population of 71,546 persons, a 2.4% increase from 2006, over a territory of 15.7 square kilometers in 2011 or 4,570 persons per square kilometer. In terms of its age pyramid, the highest proportion lies between 25-29 years of age and 30-34 years of age – a potential indication of many young professionals settling in the South West. The South West borough counted 18,010 families in 2011 which included married couples with or without children, couples with or without children, and single parent families – the majority (75%) of which were headed by a couple. In terms of children, the South West borough counted an average of 1.7, the majority (57.1%) of which are under 14 years of age. The average household size is made up of 2.0 persons; however, one person households and two person households make up 44% and 32% respectively of all private housing counted at 36,785 units. In terms of resident status, 91% of the

population have their Canadian citizenship. The highest proportion of visible minorities are black people and Chinese people at 5,495 and 3,125 persons respectively (Ville de Montreal 2014).

Likewise, the CDN-NDG borough counted a total population of 165,031 persons, a 0.5% increase from 2006, over a territory of 21.4 square kilometers in 2011 or 7,697 persons per square kilometer. In terms of its age pyramid, the highest proportion are between 25-29 years of age and 20-24 years of age – a potential indication of many young professionals settling in the CDN-NDG. CDN-NDG counted 39,325 families in 2011 which included married couples with or without children, couples with or without children, and single parent families – the majority (78%) of which were headed by a couple. In terms of children, the CDN-NDG counted an average of 1.7, the majority (58.3%) of which are under 14 years of age. The average household size is made up of 2.2 persons; however, one person households and two person households make up 39% and 29% respectively of all private housing counted at 74,255 units. In terms of resident status, 76.5% of the population have their Canadian citizenship. The highest proportion of visible minorities are black people and Chinese people at 17,690 and 14,480 persons respectively (Ville de Montreal 2014).

In the city of Laval, it counted a total population of 401,553 persons, about a 9 percent increase from 2006, over a territory of 247.72 square kilometers in 2011 or 1,621 persons per square kilometer. In terms of its age pyramid, the highest proportion are between 45-49 years of age and 50-54 years of age – a potential indication of a more mature working crowd in Laval. Other than French or English, the highest reported language as mother tongue is Italian at 16,025 persons or 4.4% of the Laval population. That said, the highest proportion of immigrants come from Lebanon at 8,180 persons or 2.24% of the Laval population. Two person households make up the majority of household compositions at 47,645 persons or 33% of households, followed by Single person households at 36,520 persons or 25.3% of households. That said, the city of Laval differentiates families from households and does not report the statistics on families.

It should be noted that census data is supposedly published every five years. The next census publication is expected for the year 2016. Even to date, the government websites continue to use data from 2005 which renders the tables outdated by almost a ten-year span. Unfortunately, this was the most up to date information accessible to the public. For the purposes of this project, the demographic data is nonetheless used only to compare with current project units and to infer potential changes in each demographic structure.

CASE STUDIES ACROSS MONTREAL: CONDO PROJECT DESCRIPTIONS

Griffintown Projects 2014: Under construction or newly finished			
	# Floors	# Units (variable)	# Sample (n)
URB Condos	7	110	18
MYST	6	145	13
District Griffin Phase IV	18	139	7
Bassins du Havre Quai 1	8	151	10
Bassins du Havre Quai 2	8	122	47
Le William A	4	15	4
Le William B	8	59	5
Le William C	7	98	7
Gallery des Lofts Phase 1	13	128	65
Total	79	967	176
Le Triangle Projects 2014: Under construction or newly finished			
	# Floors	# Units (variable)	# Sample (n)
Rouge Phase IV	12	400	4
Rouge Phase V	12	260	4
Vue Phase IV	10	102	3
Vue Phase V	10	102	4
MA	8	152	7
Total	52	1016	22
Laval Projects 2014: Under construction or newly finished			
	# Floors	# Units (variable)	# Sample (n)
LUMIÈRE Phase I	9	99	2
Quartier Phase III	7	282	4
Le Saint-Elzéar	9	46	4
VIVA Tour Phase III	12	74	55
Total	37	501	65

Table 4-11. Sample Size, # floors, and # units across Griffintown, Le Triangle, and Laval projects.
(Source: Enoch Ho 2014)

The previous table is a brief overview of the projects visited with the total number of floors, total number of units, and sample size taken from each respectively across Griffintown, Le Triangle, and Laval. Like the aforementioned projects in Griffintown, sales agents often did not disclose the price list. Thus, information was retrieved using the same strategy of posing as both a potential buyer and investor to open the array of units available. All projects are either newly finished or in-construction. To avoid reiterating, please refer to the Griffintown section for a more in depth description. Le Triangle projects are presumed as transit oriented projects situated near Namur and de la Savane metro stations in Côte-des-Neiges—Notre-Dame-de-Grâce; it is also located near major transport arteries: the autoroute Decarie and the TransCanadian Highway. As for Laval projects, they are reinforcing the polycentric model by intensifying residential density; its condo market will help to illustrate the effects of polycentrism and densification on housing prices.

SUMMARY OF COMPARATIVE PROJECT TABLES

	Condo Prices (before taxes)	90% mortgaged: Income required for 32% affordability	80% mortgaged: Income required for 32% affordability
Median	\$344,450.00	\$86,224.00	\$77,939.00
Mean	\$373,296.00	\$93,403.00	\$84,425.00
Range	\$149,000-\$1,306,900	\$37,065-\$316,425	\$33,219-\$284,993
	Floor Area (Square Footage)	90% Mortgaged: Total Annual Expenditure	80% Mortgaged: Total Annual Expenditure
Median	880	\$27,591.00	\$24,941.00
Mean	916	\$29,889.00	\$27,016.00
Range	349-1872	\$11,861-\$101,256	\$10,630-\$91,198
	# Rooms		
Median	2		
Mean	1.57		
Range	0-3		

Table 4-12. Griffintown projects 2014: under construction or newly finished. Statistical summary of condo prices, income required for 80% & 90% mortgage for 32% affordability, floor area, total annual expenditure for 80% & 90% mortgage, and #rooms. (Source: Enoch Ho 2014)

	Condo Prices (before taxes)	90% mortgaged: Income required for 32% affordability	80% mortgaged: Income required for 32% affordability
Median	\$280,067.00	\$71,588.00	\$64,847.00
Mean	\$290,868.00	\$73,104.00	\$66,108.00
Range	\$182,561-\$530,463	\$46,660-\$130,971	\$42,269-\$118,213
	Floor Area (Square Footage)	90% Mortgaged: Total Annual Expenditure	80% Mortgaged: Total Annual Expenditure
Median	958	\$22,906.00	\$20,751.00
Mean	992	\$23,393.00	\$21,151.00
Range	594-1615	\$14,931-\$41,910	\$13,526-\$37,828
	# Rooms		
Median	2		
Mean	1.91		
Range	1-3		

Table 4-13. Le Triangle projects 2014: under construction or newly finished. Statistical summary of condo prices, income required for 80% & 90% mortgage for 32% affordability, floor area, total annual expenditure for 80% & 90% mortgage, and #rooms. (Source: Enoch Ho 2014)

	Condo Prices (before taxes)	90% mortgaged: Income required for 32% affordability	80% mortgaged: Income required for 32% affordability
Median	\$306,267.00	\$71,488.00	\$64,932.00
Mean	\$327,415.00	\$75,411.00	\$68,503.00
Range	\$163,416-\$789,525	\$37,925-\$176,878	\$34,462-\$160,147
	Floor Area (Square Footage)	90% Mortgaged: Total Annual Expenditure	80% Mortgaged: Total Annual Expenditure
Median	1178	\$22,876.00	\$20,778.00
Mean	1219	\$24,141.00	\$21,921.00
Range	622-2170	\$12,136-\$56,601	\$11,028-\$51,247
	# Rooms		
Median	2		
Mean	1.85		
Range	0-3		

Table 4-14. Laval projects 2014: under construction or newly finished. Statistical summary of condo prices, income required for 80% & 90% mortgage for 32% affordability, floor area, total annual expenditure for 80% & 90% mortgage, and #rooms. (Source: Enoch Ho 2014)

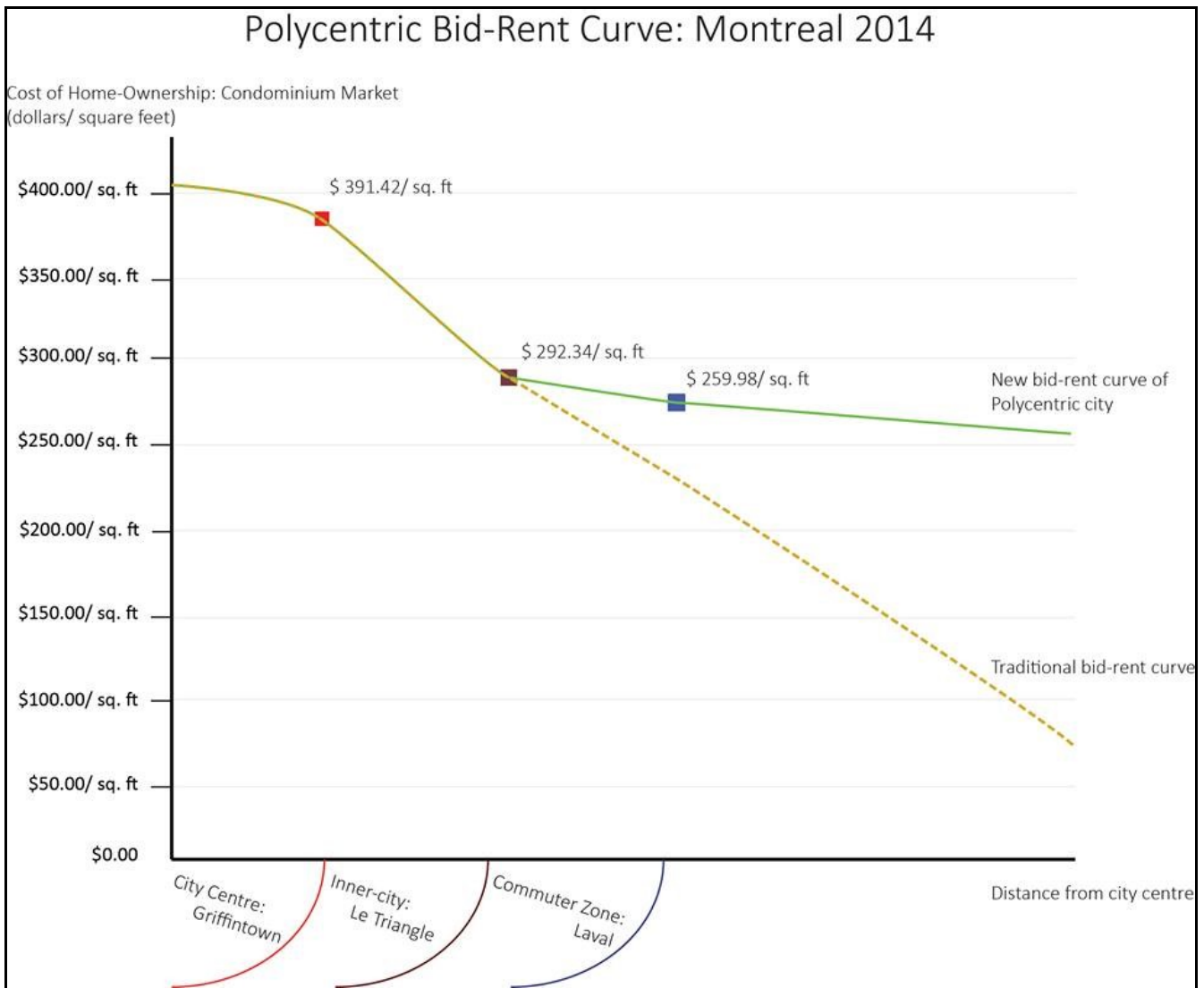


Figure 4-14. Polycentric Bid-Rent Curve reflecting a new reality of traditional land prices due to changes in the urban configuration of housing and transportation.
(Source: Enoch Ho 2014)

Using the median price of a condominium (before taxes) and the median floor area (square footage), a median dollar per square foot could be calculated for all three locations. In line with traditional beliefs that central areas are more expensive per square foot, Griffintown projects are exemplary of traditional notions about costs of centrality. Similarly, Le Triangle is more expensive, as a per square foot measurement, than Laval. That said, the difference is not much which hints at a new bid-rent curve in a polycentric city. By extension, this entails a decreasing difference between inner-city land values and suburban land values in dollars per square foot. In the traditional bid-rent curve, the line appears to be steeper, whereas current polycentrism is potential cause for new levelling of commuter zone areas that are developing their proper nuclei.

CROSS-COMPARISON: REVENUE MARKET & NUMBER OF ROOMS

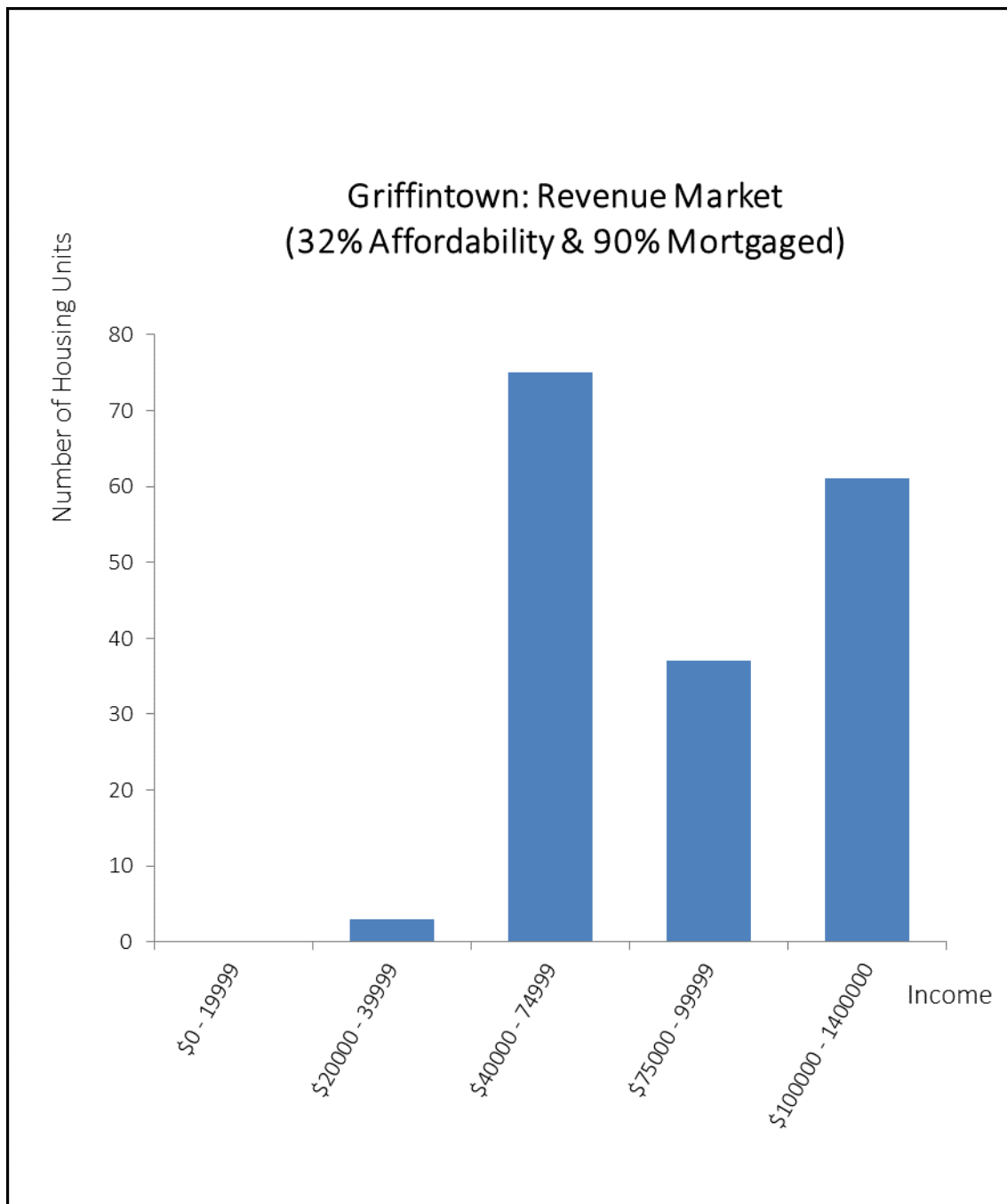


Figure 4-15. Sample of units divided into revenue market of buyers at 32% affordability and 90% mortgaged in Griffintown (Source: Enoch Ho 2014)

As previously mentioned, Griffintown's revenue market targets median income earners to above-median earning households. On the following page, there is a similar trend in Le Triangle – the difference being that there are less above median income earning households.

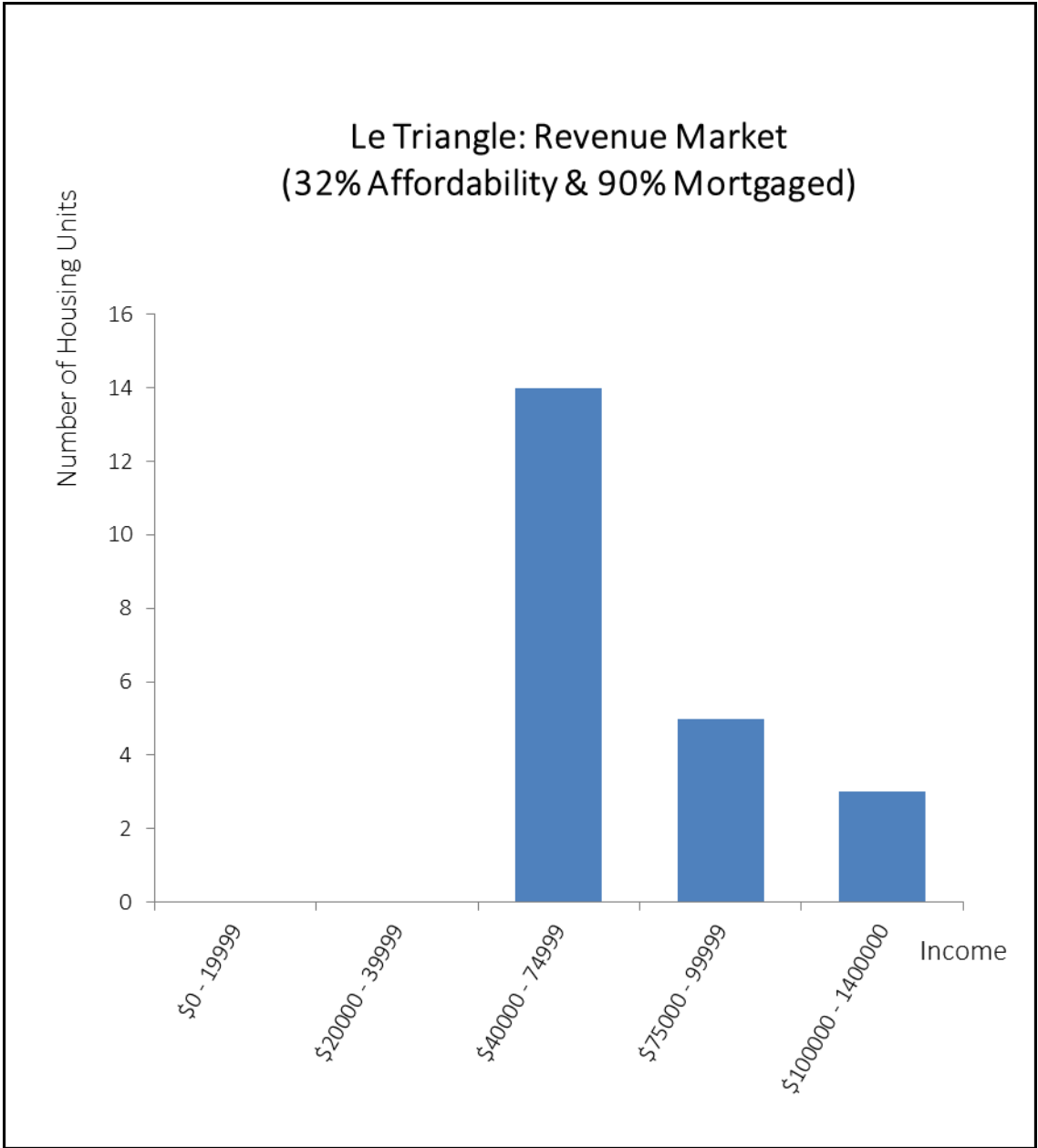


Figure 4-16. Sample of units divided into revenue market of buyers at 32% affordability and 90% mortgaged in Le Triangle.
 (Source: Enoch Ho 2014)

In comparison to Laval on the following page, Le Triangle provides slightly more above median earning household units. Referring back to the new bid-rent curve, it is somewhat expected given the slight edge of Le Triangle's median income required over Laval's median income required. In contrast, the median price for a condominium unit in Laval actually costs more than the median price for a condominium in Le Triangle.

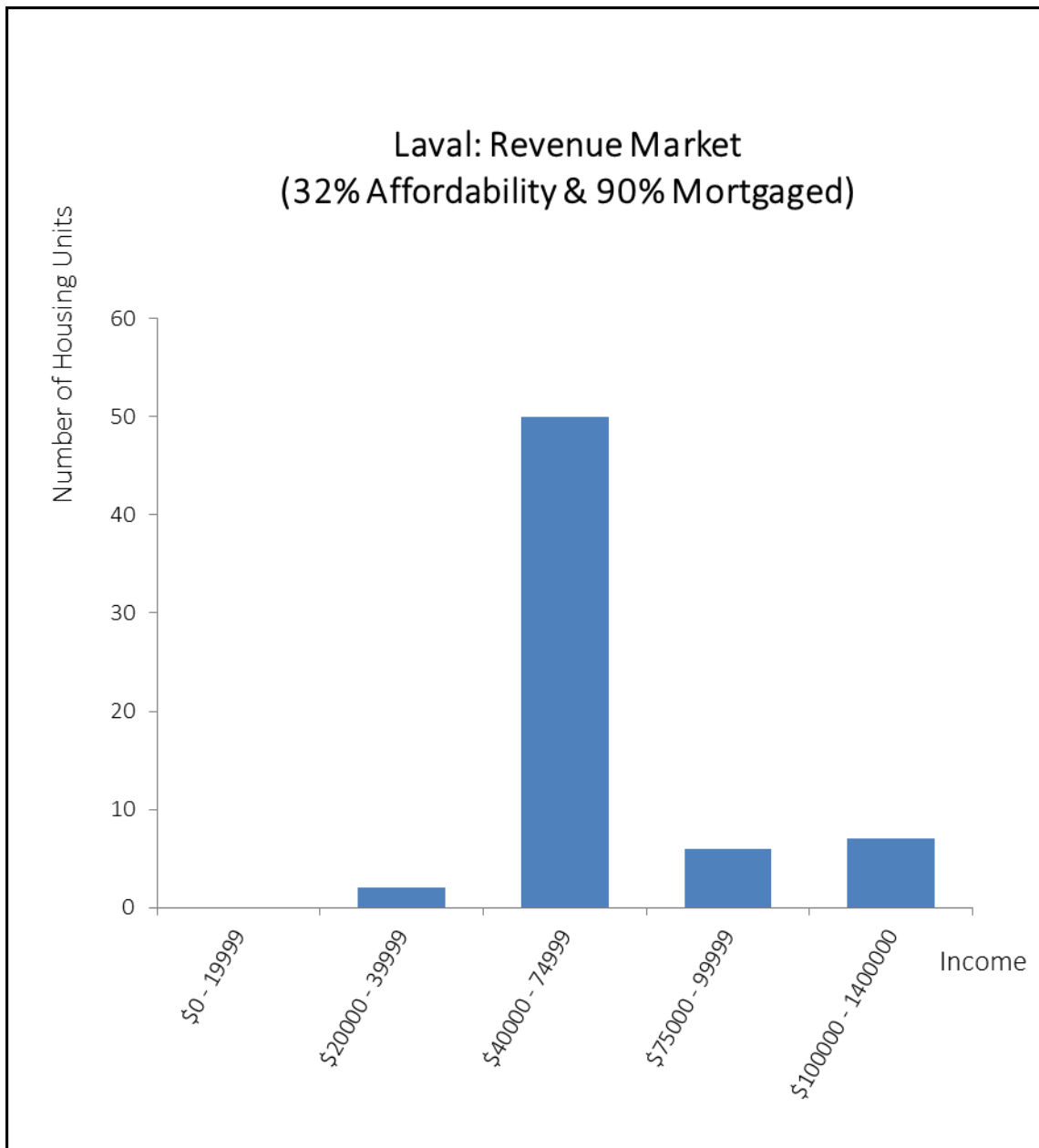


Figure 4-17. Sample of units divided into revenue market of buyers at 32% affordability and 90% mortgaged in Laval.

(Source: Enoch Ho 2014)

In the following section, there are three tables of the “# Rooms & Revenue” for each respective location. While Griffintown on average targets the highest earning demographic segment, it does not offer the most in terms of number of rooms. In Griffintown, the highest proportion of units available is the one room unit for the income group of \$40,000-\$74,999 (median income group), while Le Triangle and Laval both have the highest proportion of two bedroom units for the income group of \$40,000-\$74,999. In other words, consumers are purchasing one room in Griffintown versus two rooms in either Le Triangle or Laval. The opportunity cost or tradeoff is marked by centrality for one less bedroom.

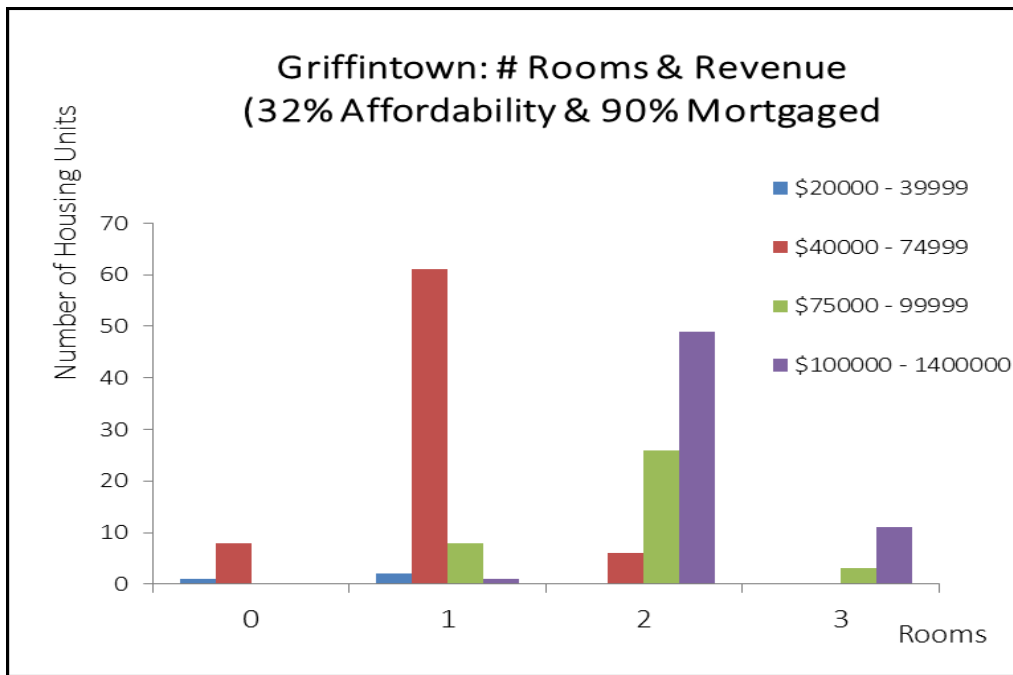


Figure 4-18. The number of rooms & corresponding revenue required at 32% affordability using a 90% mortgage in Griffintown.
(Source: Enoch Ho 2014)

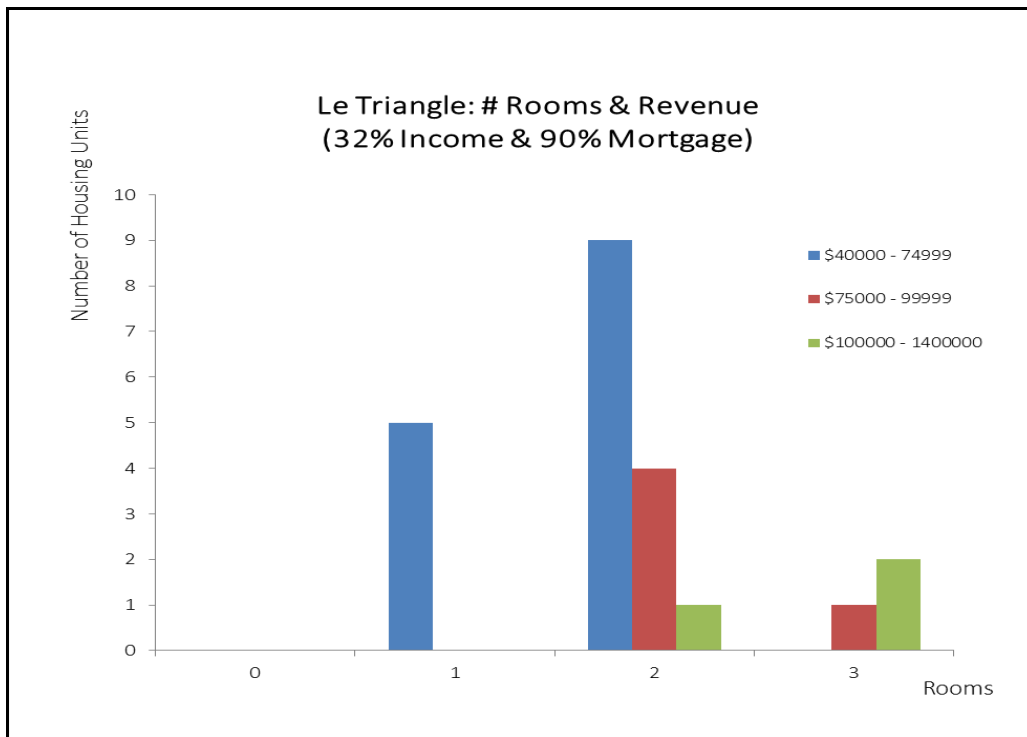


Figure 4-19. The number of rooms & corresponding revenue required at 32% affordability using a 90% mortgage in Le Triangle.
(Source: Enoch Ho 2014)

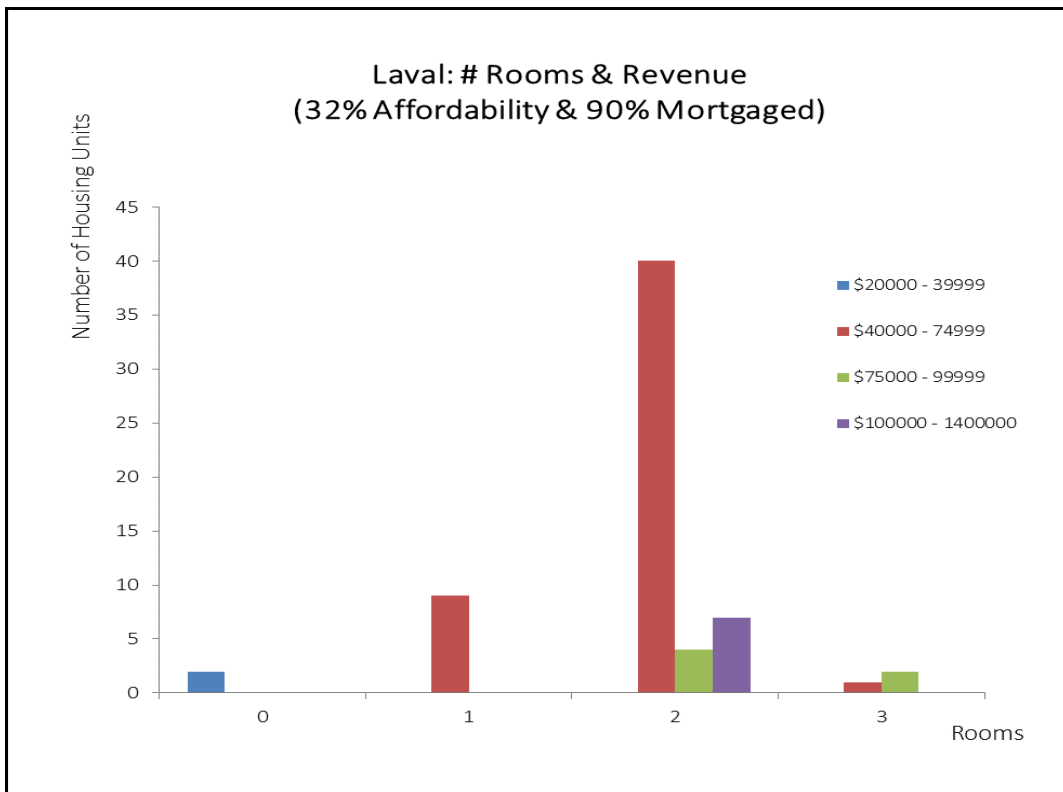


Figure 4-20. The number of rooms & corresponding revenue required at 32% affordability using a 90% mortgage in Laval.

(Source: Enoch Ho 2014)

From the previous the data, it appears that all three locations target mainly median income earning households. The main difference lies in the leftover market (units not targeted to median income households), where more centrally located projects appear to positively correlate with higher supply of above-median income units. In other words, there is a progression of higher end units available from the peripheral towards the centre. In terms of the number of rooms per unit, it is interesting to note that while all three locales have a median of 2 rooms per unit, the number of rooms and revenue tables suggest that it becomes increasingly more affordable and available from the centre outward. In Griffintown, the majority median revenue group of \$40,000-\$74,999 per annum pertains to the one bedroom unit, while le Triangle and Laval's median revenue group pertains to the two bedroom unit. Basically, the market can find one more bedroom for the same price in both le Triangle and Laval versus the city centre in Griffintown. Given that Griffintown is the least affordable area of the three areas, it also follows that le Triangle and Laval fall under affordable levels as per the Accès Condos program since Griffintown, as previously mentioned, supplies affordable units.

SUMMARY

In order to generalize the findings of the research, the proportion of revenue required for 32% affordability is compared with the entire urban agglomeration of Montreal. The urban agglomeration of Montreal counts a total of 1,557,040 persons for the year of 2011. The following figure presents the current revenue demographic versus what is being built on a ratio basis:

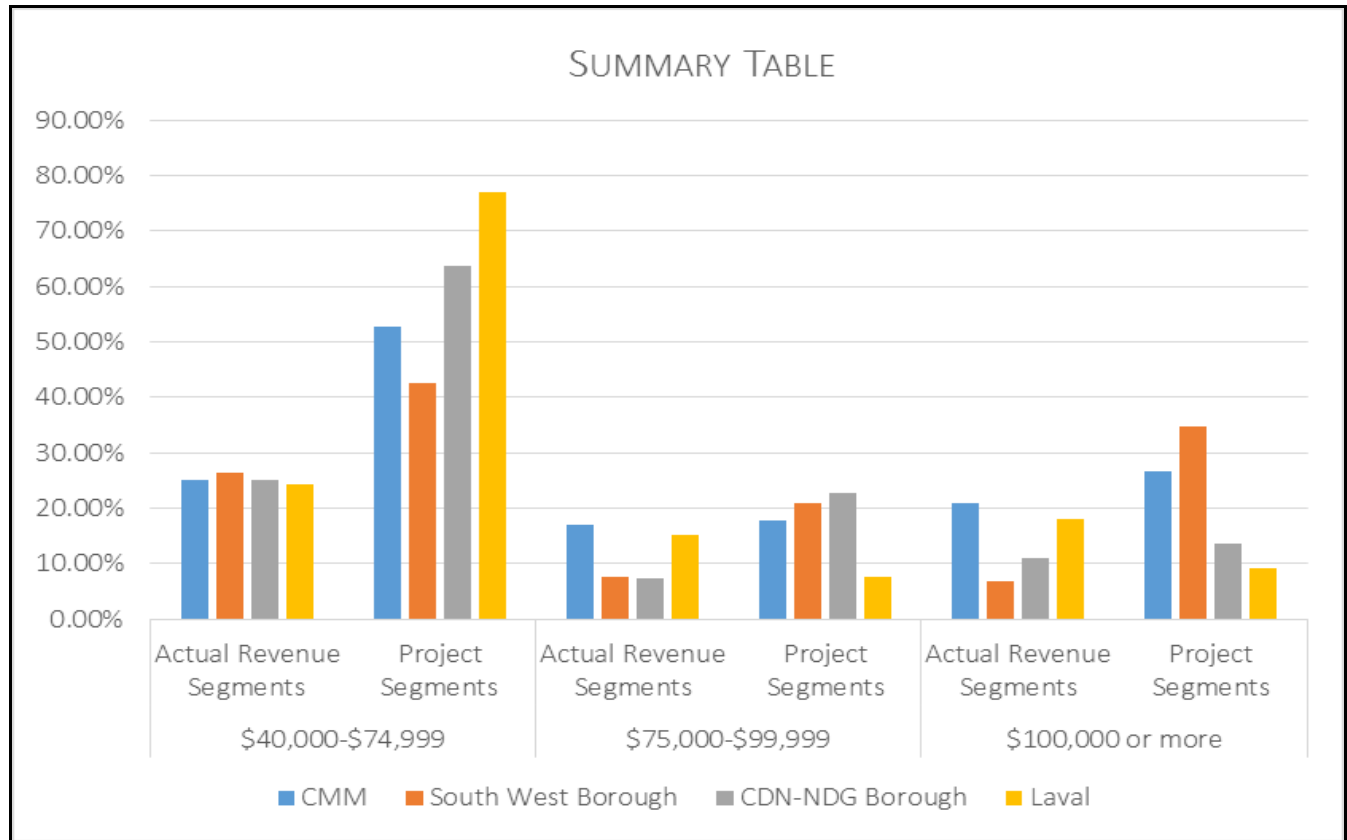


Figure 4-21. Summary of Actual revenue segments versus project segments to compare the current demographic market with the market being created.
(Source: Enoch Ho 2014).

¹Actual Revenue Segments refer to the proportion of revenue segments per area of interest (based on demographic data)

²Project Segments refer to the proportion of units that are affordable at 32% of the income bracket per area of interest (Value for the CMM is the combined proportion of all projects)

³In project segments, the urban agglomeration of Montreal is a summation of all three project samples; South West borough is representative of only Griffintown sample units; CDN-NDG borough is representative of only Le Triangle sample units; and Laval is representative of only Laval sample units.

⁴In project segments, the revenue required (\$40,000-\$74,999/\$75,000-\$99,999/\$100,000 or more) is dependent on a 90% mortgage with a 2.99% fixed/closed term over five years.

FINAL CHAPTER

THE BEGINNING & END

"I think and think for months and years. Ninety-nine times, the conclusion is false. The hundredth time I am right" - Albert Einstein

DISCUSSION

In the midst of a ubiquitous condominium rising in Montreal, it appears that the possibility for affordability remains tenable depending on one's choice of measurement. In order to prove that city center densification can be done at affordable prices, the research takes into account new housing prices, specifically condominium units in Griffintown, and cross-examines the findings with other non-central areas (Le Triangle and Laval) across the city. Furthermore, it utilizes each sector's demographic profile to infer the potential effects of new projects on neighborhood income levels and the new diversity of household incomes. In order to verify the findings, the results are compared with the city of Montreal's Accès Condos program, a program specific to condominium home-ownership, and its criteria for affordable housing. It also takes into account the median multiple for a comparison between median revenues and median housing prices. Finally, it reverses the calculation for an affordable housing price using current median revenues in the CMM and current median revenues of all homeowners in the CMM. Using such a narrow lens, there is still a broad array of issues to discuss with

regards to the densification and levels of affordability in the city centre.

In essence, the research revolves around condominium projects because they manifestly embody the densification process in Montreal. In relation to Smart Growth, the city of Montreal reflects similar ideologies in a Canadian context where densification and housing affordability are desirable. While new projects are expected to raise the median price of housing in the neighborhood, the costs for home-ownership of a condominium unit remain *relatively affordable for a household* depending on the measurement used. Because the research takes on the perspective of home-ownership, there should be a sensible line drawn to distinguish between housing accessibility and owning a home. Referring to CMHC's Housing Continuum, there is a housing spectrum relating to household income:

Housing Continuum						
Emergency Shelters	Transitional Housing	Supportive Housing	Subsidized Housing	Market Housing	Rental Housing	Market Home-ownership Housing

Table 5-1. Housing continuum from emergency shelters to market home-ownership housing. (Source: CMHC 2014)

According to the housing continuum, it is naturally understood that progression across the housing continuum imply rising income levels from left to right. In the calculations, the use of CMHC's measure of home-ownership affordability as being 32% of one's income is taken as a standardized index. From the two previous tenets, affordability is measured in relation to the median income earning households. While income is not holistically reflective of one's capacity to pay, it is a widely used indicator and it is statistically available. While using Montreal as a case study, there are both similarities and differences in its planning process with relation to Smart Growth and to affordability issues.

MEASURING UP WITH ACCÈS CONDOS

The Accès Condos program is offered to various household sizes ranging from single persons, couples, to families with one or more children. Since the median income is used as a comparable indicator, it only makes sense to use the full \$360,000 as per Accès Condos. Furthermore, median household income does not distinguish household size, thereby making the comparison impossible. In

any case, the proportion of units is therefore a measure of units available at a cost equal to or below \$360,000. The following table illustrates the proportion of condominium units deemed affordable and are separated into their respective geographic locations:

	Griffintown	Le Triangle	Laval
Below \$360,000	92	18	54
Above \$360,000	84	4	11
Affordable Proportion	52.27%	81.82%	83.08%

Table 5-2. Proportion of Condominium Units deemed affordable as per Accès Condos (Source: Enoch Ho 2014)

Looking at the table, the city center offers a considerably lower proportion of units below the affordable threshold, while Le Triangle and Laval offer similar proportions of affordable units. This is not surprising given that traditional notions about centrality and the cost per square footage are still true according to the polycentric bid-rent curve in chapter 4. While the city center offers a wider range of unit floor area and price, the cost per square feet will cost much more than Le Triangle or Laval, and this is also reflected in the median floor area per unit (increasing with distance from the city center). However, the majority of units throughout all areas are affordable according to Accès Condos – even though 52.27% is only 2.27% over the majority in Griffintown. This analysis does not take into consideration demographic income and is based purely on the price perspective. In the following section, the median multiple is used to take into account median housing prices and median incomes.

MEDIAN MULTIPLE

The median multiple is calculated as the median price divided by the median revenue of a certain location. In the following table, the median multiple of the CMM, South West, CDN-NDG, and Laval are taken using data from the CMM and the sample of new supply:

Locations:	CMM	South West	CDN-NDG	Laval
Med. Housing Price	\$362,500.00	\$344,450.00	\$280,067.20	\$306,267.00
Med. Revenue	\$48,061	\$48,061	\$48,061	\$48,061
Median Multiple	7.54	7.17	5.83	6.37

Table 5-3. Median multiple of the CMM is illustrated and compared with project median multiples or the ratio of new median housing price (per area of interest) to the median revenue of the CMM (per area of interest).

(Sources: Enoch Ho 2014; Statistics Canada customized table from the Census in 2001 and 2006; the Gazette 2013)

Table 5-3 offers a global perspective of the impact new housing projects have on the CMM as the median household income is used throughout all projects. This includes all households, including those who are not part of the home-ownership market. As a result, the median multiple will give a rather inflated quantity from an affordability perspective because people who cannot realistically afford a housing unit are included. It gives a global perspective of the relationship between the median income and the projects being developed. However, the following table gives the median multiple in terms of the median revenue of home-owners:

Locations:	CMM	South West	CDN-NDG	Laval
Med. Housing Price	\$362,500.00	\$344,450.00	\$280,067.20	\$306,267.00
Med. Revenue	\$69,985	\$69,985	\$69,985	\$69,985
Median Multiple	5.18	4.92	4.00	4.37

Table 5-4. Median multiple of the CMM is illustrated and compared with project median multiples or the ratio of new median housing price (per area of interest) to the median revenue of all home-owners in the CMM (per area of interest).

(Sources: Enoch Ho 2014; Statistics Canada customized table from the Census in 2001 and 2006; the Gazette 2013)

Table 5-4 offers a more relevant median multiple that extends to all current home-owners. As a result, it becomes apparent that the financial stress is significantly less than the previous table and housing seems much more affordable. The ratio compares actual home-owners to their financial burdens. It essentially demonstrates the shelter-cost-to-income ratio comparatively of current home-owners with new home-owners across Montreal using the median value. While current median project prices are still below the CMM’s median housing price, it does not mean that households are using 32% of their incomes on housing.

USING THE 32%

Contrary to the conditions imposed by Accès Condos, if 32% of one’s income (before taxes) allocated to housing costs is the standard for affordability, then housing is in reality not affordable based on this definition of affordable housing. According to the results in Chapter 4, the following incomes were the requirements for a 32% calculation of real housing costs including monthly condominium fees, mortgage payments, school and municipal taxes, and even the insurance premium (using a 90% mortgage with a fixed interest rate of 2.99% over a five year term):

Locations:	Griffintown	Le Triangle	Laval
Median Housing Price	\$344,450.00	\$280,067.20	\$306,267.00
Revenue required	\$86,244.18	\$71,588.20	\$71,488

Table 5-5. Revenue required for 32% of housing costs to be allocated to median housing price across Griffintown, Le Triangle, and Laval

(Source: Enoch Ho 2014)

This table illustrates a more realistic perspective of what is required in terms of revenue for one to allocate 32% of his revenue to a median housing price. It is almost twice the median income of the entire CMM for a median priced unit in Griffintown. In fact, there is a major point with Accès Condos being that it helps households to pay the down payment, whereas non Accès Condos projects are not entitled to such benefits. Thus, the comparison with Accès Condos' table is not necessarily ideal and far from the 32% stress limit. As a median multiple, the shelter-cost-to-income ratio using median values of housing prices and a revenue capable of supporting the costs of shelter using 32% are as follows:

Locations:	South West	CDN-NDG	Laval
Med. Housing Price	\$344,450.00	\$280,067.20	\$306,267.00
Affordable Revenue	\$86,244.18	\$71,588.20	\$71,488
Median Multiple	3.99	3.91	4.28

Table 5-6. Median multiple of area using median housing price per project area and required revenue for 32% affordability

(Sources: Enoch Ho 2014)

These results are expected since the affordable revenue is a larger denominator than current median revenues. In fact, the percentage change in the ratio is as follows:

Locations:	South West	CDN-NDG	Laval
MM ₁	4.92	4.00	4.37
MM ₂	3.99	3.91	4.28
Percentage change	-18.90%	-2.25%	-2.06%

Table 5-7. Difference in housing stresses measured with median multiple – ideal versus current
(Sources: Enoch Ho 2014)

¹MM₁ is the median multiple using the median project price and the median revenue of the CMM

²MM₂ is the median multiple using the median project price and the required revenue for 32% affordability

In a general sense, the percentage change embodies the difference between in housing stress between current CMM home-owners and potential home-owners using the CMM’s median revenue as an index of a potential market. In other words, it is a symbol of the difference between current stress and ideal stress for 32% affordability. As such, the city center is not an affordable place for median income households in the CMM. The median price of a unit in Griffintown requires a purchasing power of approximately 20% more than the median revenue of the CMM. While it is not impossible to find a unit for the median income household in the city center, the cost will be measured as a reduction in floor area. Effectively, a general unit in Griffintown is a bit overwhelming for the median income household.

If one were to reverse the concept of utilizing the CMM’s median income and the CMM’s home-owners’ median income, it would paint a picture of what people realistically need at the moment:

	Median Income	32% of Med. Inc.	Affordable Condo Price
CMM	\$48,061	\$15,379	\$189,000
Home-Owners	\$69,985	\$22,395	\$277,000

Table 5-8. The real cost of an affordable condominium unit for CMM’s median income earners and for home-owners’ median income earners.

(Source: Enoch Ho 2014)

The condominium price is a rough estimate based on the excel sheet with a range of calculations already made (reversed order of what had been done). Using the calculated list of incomes required for 32% affordability, it is easy to backtrack and scan approximate values required. As a result, table 5-8 illustrates the fact that current median incomes and current median housing prices are not reflective of the 32% benchmark. The most relevant information is the fact that an affordable condominium price for median income home-owner households should be at about \$277,000. Amongst the three areas listed, the closest median priced location is in Le Triangle. In other words, affordable condominium prices can be found in inner-city locations like Le Triangle for the median income earning household in the CMM. This calculation equally illustrates the unaffordability of the city center in Griffintown based on a 32% benchmark. However, it is also well within the range of a household condominium based on Accès Condos’ criteria of maximum allowable condominium price for a household.

DEMOGRAPHIC TRENDS & THE CONDOMINIUM TYPOLOGY

To begin, there are new demographic trends that are explanatory of the ostensibly excessive construction of condominium units. From a demographic perspective, the condominium market

conforms to new household trends. According to Gill and Charbonneau (2006), there has been a fundamental change in the household composition over the past forty years in Canada. Where families once constituted the majority lifestyle, there is an increasing variety of household formations including single parent households, couples without children, cohabitation, and single person households – the most frequent domestic arrangement of which is persons living alone. In Canada, thirty percent of people live alone. Traditionally associated with widows, the trend is now principally seen in people aged twenty-five to thirty-four who account for half of all persons living alone. In Montreal, the population of persons living alone has increased almost tenfold from 1961 to 2001. These single persons are very mobile with over half intending to eventually purchase a home, the majority of which would buy off the island (fifty-five percent) and forty-five percent of which would like to buy a single family home. Only five percent would move into a building with more than nine units. While many of them are concentrated in central districts, single persons aspire to live in suburban areas which raises concerns of an urban exodus (Gill & Charbonneau 2006). This confirmation of lifestyle changes and household composition plays an essential role in the supply of housing types and in political discourse. In terms of supply, current Montreal lifestyles are evolving to support densification more than ever. Smaller households basically necessitate smaller spaces. The advent of single person households will facilitate and support more micro-condo developments in city centre areas that are more fitting to one's spatial domestic needs and more affordable overall. The point remains that Griffintown projects are built with the understanding of changing demographic trends and it offers an alternative to suburbia, regardless of their intentions as per the survey.

According to Statistics Canada, baby boomers (1946-1965) represent twenty-eight percent of the Canadian population at 8.2 million persons with an average of 3.7 children. Children of the baby boomers, Generation Y, or echo of the baby boomers (1972-1992) represent twenty-seven percent of the Canadian population at 9.1 million persons with an average of 3.1 children. If we make a chart, the first Generation Y children reached the age of twenty-five in 1997, and the last baby boomer children should reach twenty-five by 2017. Historically, we all know that the baby boomer generation, as its name suggests, as being marked by a large number of births following the Second Great War. The relevance with the condominium boom in Montreal lies in the fact that baby boomer children are becoming of age to purchase their own homes, and baby boomers no longer require their large suburban home. Baby boomers and their children combine for more than fifty percent of the

population. In terms of the size and age structure of the adult population, there are some long term consequences on the market. Currently, baby boomers are theoretically beginning to retire and downsize in housing size, as are their children, who are becoming of age to purchase their first homes. People are beginning to purchase homes at an earlier age, leaving marriage for later, and women are choosing careers over the traditional family lifestyle. This has significant implications for the size of the future population in that growth will increasingly become dependent on immigration.

The province of Quebec is increasingly seeing less marriages, less children, and more single persons/couples. According to the 2011 Census of Montreal, the highest percentage of private dwellings are occupied by persons living alone at thirty-nine percent; two persons at thirty percent; three persons at fourteen percent; four persons at eleven percent; five persons at four percent; and six persons at two percent. As such, we can see that most housing in Montreal require either a bachelor or one bedroom given persons living alone and two persons combine for sixty-nine percent together. On the other hand, we can also understand why there seems to be an insufficient quantity of family housing – developers are not neglecting them, but they are conforming to demographic trends. In fact, most families prefer settling in single family homes in the suburbs.

In summary, generational evolution and demographic trends are statistically proven to be in full support of the housing typology that developers are offering. The lack of single family housing is not a result of dismissal, but the acknowledgment of societal changes that are taking place in the twenty first century. Conveniently so, it is occurring simultaneously with new planning initiatives like Smart Growth.

GRIFFINTOWN CASE STUDY: CROSS-COMPARISON WITH PFAS

The densification of Griffintown is a particularly interesting case study. To begin, Griffintown was originally an industrial inner-city whose prime time dates back a century or so – it was the manufacturing hub of Canada, and it was also purposely segregated from the city centre. In terms of separation, the physical territory being on a hill itself, reinforced by road and building designs, sufficed to segregate the manufacturing hubs and working class families from the glorious city centre. Now, given the change in circumstances, the government is trying to redesign the old industrial area into an extended portion of the downtown as a mixed-use high density residential neighborhood. As the numbers indicate, it is not surprising that the entire area is being gentrified from one year to the next. For current LMI residents, it may force them to relocate to more affordable areas, but for optimal land-

use, there is a price to pay for living in central areas.

If we relate the situation to Smart Growth, Griffintown can be seen as a priority funding area (PFA). As per the State of Maryland, 'PFA' is a tool wherein state infrastructure funding is focused on a specific area in an attempt to offset development elsewhere – in other words, the State of Maryland does not fund suburban sprawl and developers are expected to front the cash needed in non PFAs. PFAs are essentially a form of infill development with government funded infrastructures to facilitate development. While Griffintown is not directly a PFA, it has similar characteristics as the government is currently investing in rebuilding infrastructure in the area. In *Barriers to Development Inside Maryland's Priority Funding Areas*, the Housing Strategies Group at the National Center for Smart Growth Research and Education summarizes issues from the perspectives of planners, developers, and advocates relating to PFAs which Griffintown can learn a great deal from. PFAs were created with the intention to preserve existing communities, to maintain an efficient and effective use of tax money through the reuse of existing infrastructures, and to reduce sprawling developments. According to the document, various elements prove problematic to PFAs. To begin, consumer preference is a major deterrence to PFAs – especially relating to families with children as the market for big lots is very high; rural areas with big lots, lower prices, better schools, and lower crime rates are in direct competition with PFAs. In another sense, PFAs are intrinsically weak – current incentives are insufficient to direct growth to PFAs. In terms of community opposition, it is a huge problem because PFAs are normally accompanied by denser populations meaning more people to speak out against. Opposition is often met by a vocal minority who oppose change of any sort at public consultation meetings. With regards to regulations, they make for timely and costly work otherwise averted in other areas. Other difficulties include the assembling of multiple parcels with multiple property owners and the expanding of public infrastructures like water works. In terms of parking, it is often built as below-grade which is more expensive. Additional expenses stem from environmental decontamination and environmental reviews. Finally, there are often delays due to moratorium resulting of adequate public facilities ordinances (APFC).

Given these issues, Griffintown is surprisingly affordable given similar issues. Montreal is particularly susceptible to public opposition given L'Office de Consultation Publique de Montréal (OCPM) – its public consultation office for all real estate projects. In terms of consumer preference, many families are moving to the suburbs for larger tracts of land and less fiscal burden. As for parking, every project visited also had below-grade parking. In terms of construction, the difficulties associated

with assembling multiple parcels were not researched, nor were issues with expanding public infrastructure, environmental decontamination, or any delays or added costs associated with administrative works by the public office. However, the historic use of Griffintown as an industrial site definitely hints at major environmental remediation costs for the redevelopment of parcels into mixed-use residential towers. The issue at hand being that developers may choose to build more expensive homes to facilitate the transfer of costs and ultimately lower affordability.

Despite aforementioned weaknesses, Montreal offers excellent amenities and services that make city centre living worthwhile. To begin, the downtown is host to major universities, major hospitals, major financial institutions, and landmark government buildings. Griffintown is adjacent to the city's most important buildings and has high accessibility to the major transit arteries across the city. In terms of consumer preferences, the development of condominium living is fast becoming a lifestyle choice and is in direct contention with traditional notions of household formations. Similar to Canada's other two major cities, Toronto and Vancouver, condominium living has become popularized amongst consumers.

On another note, there are a myriad of factors that have been omitted for practical purposes. In relation to dealing with financial institutions, a number of factors were neglected including the buyer's credit (lack of access and inability to quantify in a general sense); the bank's disposition to lending criteria (i.e. one's profession, education, credit, collateral, etc...); buyer's savings and access to cash (i.e. love money); down payments cannot be calculated since it will be different from person to person; and, varying interest rates are undeterminable. Other factors that are taken for granted include market fluctuations that can alter costs of housing. On a larger scale, political, economic, and social conditions also affect levels of affordability. In terms of the projects themselves, incomplete price lists mean deviation exists in the values found. In the short term, price volatility also plays a role – according to sales agents, prices change every three months or so. Because Statistics Canada only publishes a census every five years, demographic data lags a couple of years.

All things considered, the level of affordability should not be measured by the mere price of a housing unit, but rather one's capacity to pay the monthly costs. To sum up, home-ownership affordability therefore depends directly on one's annual revenue and the market's financial stipulations (i.e. term, interest rate, length of amortization, etc...). For these reasons, my tables include revenue required as per current mortgage terms.

CONTRIBUTION TO SMART GROWTH'S INFILL DEVELOPMENT

With regards to Smart Growth, the main tool being used is infill development throughout Griffintown. The entire project of Griffintown can be viewed as a revitalization infill project. By definition, it is the redevelopment of an existing urban neighborhood. Going back to Addison et al (2013), infill development is theoretically supposed to increase construction costs, increase administrative costs, and maybe increase transportation costs. As for the compilation of empirical evidence, Addison et al (2013) point to Evans-Cowley et al (2005) who found that infill development has both a positive and negative effect on land value, and Schill et al (2002) who find that infill development has a negative effect on affordability. Conforming to the goals of infill development, Griffintown has increased its density within an existing neighborhood at a large scale, and while the several costs are omitted including environmental remediation, administrative costs, and land costs, the truth is that the overall outcome suggests the possibility for affordable housing for median income earning households. Against all odds, the projects in Griffintown have proven surprisingly affordable given issues with environmental contamination, existing regulations, and consumer preferences being cited as major deterrents in these types of projects. Although, infill strategies are noted to spur gentrification and rent inflation, meaning that future housing prices may rise to unaffordable levels.

The annual price difference in real costs for a Griffintown unit and a unit in Le Triangle or Laval adds up to about the annual costs of a vehicle as per CAA (2012). According to CAA (2012), the average costs for driving a Honda Civic LX per annum is \$6,439.72 and a Camry LE costs \$7,450.00 per annum. These are your average cars with insurance, license and registration, depreciation, and finance expense (car loan) taken into account for the year 2012. That said, Griffintown is more centrally located and more accessible to city centre hubs – it has proven to be done at affordable levels.

THE BIG PICTURE

In light of the financial aspects of affordability, densification plays a more tangible role in relation to home-ownership costs, the extent of which is not entirely inconclusive, but varying depending on the context. This research suffices to illustrate that housing in the city centre can indeed be provided at affordable levels pertaining to median income levels. However, Griffintown is one case study in a unique context. The reality is that affordability is dependent on a myriad of other factors, in no particular order, such as location, design, market conditions, political conditions, social trends,

economic conditions, and etc... In terms of densification itself, popular writer and speaker on sustainability and planetary futurism, Alex Steffen discusses density as a tool to make cities more affordable. Although his ideas are not academically supported, they remain relevant. In terms of density and property values, Steffen contends that density does not drive up property values, rather property values rise when there are more people who want to live in a given location, or in economics jargon, prices rise with surplus demand. While anti-urbanists often state that cities are made worse by adding density, this is a misunderstanding of reality – the only two ways to reduce price is to reduce demand or increase supply. While reducing demand is possible, cities defer from it as it is both regressive and anti-capitalist, especially if we are referring to an international city like Montreal. The provision of excess supply is an essential and fundamental economic manner of decreasing costs given that all other things remain equal. Despite the fact that very dense cities like Hong Kong and Vancouver also have extremely high costs housing, the fact remains that higher density is one of the best physical ways to alleviate prices. Higher density is like a vent on steaming prices and helps to cool down a hot market. Steffen concludes by saying that we merely need to continue building housing and that density is like a vent to prevent housing costs from rising too quickly.

Reiterating Talen (2006), diversity brings about urban vitality, social equity, economic health, and sustainability. In the terms of Jane Jacobs, ‘organized complexity’ being diversity is the most important condition for a healthy urban place. While projects can be seen as affordable, the traditional urban design still propagates towards a homogeneous segregation of social classes based on order, efficiency, and protection of property values. As a rule of thumb, levels of affordability can be seen with a practical correlation to the level of diversity.

CONCLUSION

In the last two decades, there has been a simultaneous attempt to densify city centres and to render housing more affordable in the planning discourse. With Smart Growth progressives at the forefront, the arguments for change are compelling to optimize the efficiency of city spaces and resources. The most sensible plan has been Smart Growth, led by Gerrit Knaap, and there are similar goals in Montreal. When in Montreal, it is apparent that city officials wish to densify central locations while implementing affordable housing policies. Across Griffintown, fragments of new urbanist designs and Smart Growth infill development type projects are displayed as mixed use residential towers

adjoining hotels, Starbucks, or a bank. This project focuses solely on the home-ownership segment of the housing continuum, and that housing affordability relates to only to home-ownership. According to the findings, the densification of Griffintown, Le Triangle, and Laval remain affordable relative to the measurement used. Using the Acces Condos measure, the densification of Griffintown and other areas are deemed affordable. However, the 32% revenue required for the median price of a project is way over the median revenue of the CMM or the median revenue of all home-owners in the CMM. In other words, current projects are unaffordable using a 32% benchmark. On the other hand, units for sale fall under the requirements for financial aid from the government's affordable housing program, both municipal and federal aids. While there is a wider range of pricing in Griffintown (central area), the median price reflects affordable prices given current market conditions. Commercial banks and analysts nonetheless warn of attenuated affordability with hikes in the interest rate which may affect both sale and resale markets. In terms of its overall effect, densification plays a partial role in determining affordability – a technical aspect that can improve with new technologies like tall wood structures and downsizing, but affordability is holistically dependent on a myriad of other factors like the economic market, political stability, financial regulations, and etc... Micro-condos and tall wood structures will alleviate housing prices and adapt to new technologies and social trends in the future. Multiple factors have undermined housing prices, including the high inventory of condominium units, demographic trends favoring condominium units, and therefore development trends featuring micro-condos. With a record high inventory of new condominium homes, the market's demand is lagging slightly behind. In light of this, banks are providing record low mortgage rates to allow for higher levels of demand. A higher proportion of supply will help continue to undermine housing prices, all other things being equal, many projects have planned more phases to the condominium development. Factors omitted also include employment indicators, delinquency rates, and the income inequality gap. Popular media thus deludes from reality as analysts indicate a balanced market of buyers and sellers that continue to support the condominium development. As for Montreal, the politics of city planning defer from developing a truly strong city centre given the Provincial government's compromise to continually fund suburban infrastructure.

According to Fischler and Wolfe (2000), challenges resulting of globalization, economic specialization, and social diversification require new forms of governance at the local and regional levels. Municipalities are prone to competing versus collaborating with one another and the city of

Montreal is burdened by the added costs of old infrastructures, great social needs, regional facilities, suburban competition, expensive labor force, and problematic management practices. The entire Montreal region suffers from jurisdictional fragmentation and the lack of a common vision. The goal of amalgamation was to reduce the number of stakeholders from 111 to approximately 20, with the hopes of reaching collective agreements more easily. Instead, the reduction of the number of cities from 28 to one, three or five received the most media attention at the expense of efficient planning. In order to help Quebec gain strength in a globalizing world, it must strengthen its central cities, in particular, Montreal. Montreal is becoming poorer as its middle-class flees to the suburbs. Critics claim that the central business district has its fiscal advantages to other municipalities and that suburbanites actually support the central city with the work and money they spend downtown. When in Quebec, linguistic differences also play a role in determining regional coordination and the reduction of suburbanization – Francophone families are the majority households leaving to the suburbs. The *Livre Blanc sur la réorganisation municipale* cites three main weaknesses in Quebec as being suburban sprawl, jurisdictional fragmentation, and fiscal inequality. Fischler and Wolfe (2000) contend that while Montreal is the economic key to Quebec, it remains politically weak as suburbs grow in political power and private investments. While the provincial government promotes compact development, it continues to support suburban sprawl with the provision of suburban infrastructure and public facilities – Quebec needs to stop fueling suburbanization (Fischler & Wolfe 2000). While the findings suggest that central place theory continues to hold despite the trend towards polycentrism, they remain inconclusive from a holistic perspective. Like in Maryland, suburbanization should be funded by private money, including all public infrastructure, to reflect the real costs of development. Quebec currently suffers from the highest proportion of road length per capita in the world which means it is disproportionately indebted to paying off public infrastructure.

As for the affordability of housing, there is an inherent fallacy in the concept itself as a relative issue pertaining to a certain socioeconomic class. If new housing is perceived as unaffordable in Montreal, it is because Montrealers have unrealistic demands for housing space. The reality is that the costs of developing central spaces is expensive – and even more so to purchase. If people can accept smaller living spaces, as in other places in the world, the island of Montreal still has room for families to settle down. If we compared Montreal to say Hong Kong, residents of the latter live in smaller housing units with more people at more expensive prices than Montreal. If we only talk about affordability in

general, we would be talking about the median price which has been reflected as affordable. Otherwise, people complaining about unaffordable prices in Montreal are either low-income or LMI groups that do not reflect general means. However, if we can accept that there is a housing continuum, then the argument that home-ownership is unaffordable is simply not true. While housing affordability would extend throughout the entire spectrum of the housing continuum, the issue at hand is the level of affordability for home-ownership. In this case, housing definitely affordable even if it raises median income levels of a certain borough. Many questions remain such as the following:

How far apart is the reality of the situation from the desired effects of affordable housing?

Should there be affordable housing in the downtown?

Is there an ideal density for affordable housing?

Can we scientifically justify a “given level” of intervention in the housing market?

How do we minimize market inefficiencies with the supply of affordable housing? (i.e. filter free riders who could otherwise afford housing independent of public aid)

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