TORONTO'S APARTMENT TOWER RENEWAL INITIATIVE: INFUSING VALUE INTO SURPLUS LANDS FOR COMMUNITY DEVELOPMENT

by

Frederick Thibeault

Bachelor of Environmental Science, Honours in Planning
University of Waterloo, 2010

A Major Research Paper
presented to Ryerson University
in partial fulfillment of the requirements for the degree of
Master of Planning
in
Urban Development

Toronto, Ontario, Canada, 2014

AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this major research paper. This is a true copy of the major research paper, including any required final revisions, as accepted by my examiners. I authorize Ryerson University to lend this major research paper to other institutions or individuals for the purpose of scholarly research

I further authorize Ryerson University to reproduce this major research paper by photocopying or by other means, in total or in part, at the request of other institutions or individuals for the purpose of scholarly research.

I understand that my major research paper may be made electronically available to the public.

TORONTO'S APARTMENT TOWER RENEWAL INITIATIVE:

INFUSING VALUE INTO SURPLUS LANDS FOR COMMUNITY DEVELOPMENT

Frederick Thibeault, 2014

Master of Planning

in

Urban Development

Ryerson University

ABSTRACT

Toronto is home to over 1,189 apartment towers built between 1945 and 1984, following LeCorbusier's "tower in the park" model. Today, many apartment towers communities are fraught with issues that demand immediate and focused attention. Several towers are now approaching 50 years of age, and are beginning to show signs of decay, neglect, and decline, presenting concerns surrounding their physical condition, environmental impacts, and access to essential amenities within close proximity. The former Mayor of Toronto David Miller responded by initiating a study to identify solutions to growing concerns, and financing strategies to achieve it. Notwithstanding these issues, tower neighbourhoods have access to an exorbitant amounts of surplus lands that could accommodate infill activities, and spur investments in these neighbourhoods. The goal of this paper is to assess if surplus lands can be leveraged as the primary funding source to finance the goals and objectives of Toronto's tower renewal initiative.

Key words: *tower renewal, inner-suburbs, neighbourhood revitalization, financing strategies*

ACKNOWLEDGEMENTS:

This major research paper came together through the support, guidance, and advice of many. Accordingly, I would like to give thanks the following people for their help in shaping this report.

To Chris Phibbs of PQR Solutions (and former mayor of Toronto planning advisor under David Miller's administration), which was crucial in spurring the idea to pursue this topic. Her support in providing a number of resources and insights on the initiatives were of great assistance.

To Professor Ronald Keeble, which provided significant insight on development industry standards, development limitation, and political implications surrounding new development proposals. This insight helped shape the final development scenarios that were the centrepiece to this report.

To my second reader, Professor David Amborski, which assisted greatly in formulating and understanding the current financing strategies proposed by Toronto, as well as understanding the several tools the City has at its disposal to secure investments. His expertise in municipal finances was of great assistance in understanding opportunities and limitations to capital support programs.

Finally, I am very grateful to my advisor Professor Steven Webber, for his advice, motivation and encouragement during the many phases of this research endeavour. His enthusiasm for the project, and expertise in the field of urban investment, land valuations, and development *proformas* gave me the drive to approach the project in a number of ways. His wealth of knowledge allows me to learn a great deal in the process, making the experience that much more gratifying.

TABLE OF CONTENTS

List of Figures:

1.0 INTRODUCTION

Toronto is home to over 1,189 apartment towers built between 1945 and 1984 to the modernist era standards of the "tower in the park" envisioned by LeCorbusier in the early 20th century. These towers house over one million of Toronto's current population, encompassing over 30 per cent of the city's total housing stock and the vast majority of the city's purpose-built rental stock. Altogether, they are an indispensable housing resource for the city.

Notwithstanding their prominence in Toronto's housing stock, apartment tower neighbourhoods of this form have been fraught with significant issues that demand immediate and focused attention, especially considering they are some of the most impoverished areas of Toronto. A number of these communities are now approaching 50 years of age, and have begun to show signs of decay, neglect, and decline. Given their auto-dependent design, these communities are victim to poor levels of servicing, a lack of programmed community services, and lack nearby commercial amenities that serve its residents within a walkable distance – which is especially problematic since most of their residents cannot afford an automobile. These neighbourhoods are perceived as less desirable to live in as they do not meet the diverse array of needs of Toronto's residents, consequently receiving little investment from both the public and private sectors. This housing stock is considered the most ecologically unsustainable form of housing, emitting enormous quantities of CO_2 gases in the atmosphere yearly, contributing to the city's smog issues and taxing the overall power infrastructure supply.

In response to growing concerns surrounding the physical condition, environmental impacts, and lack of amenities within these apartment neighbourhoods, the former Mayor of Toronto, David Miller, initiated a 2008 study with E.R.A. Architects to underline key issues and explore potential solutions to address concerns (E.R.A. Architects, 2010). The result encompassed a comprehensive apartment tower renewal strategy that sought to enhance the pre-existing apartment tower housing stock by 1) creating a cleaner and greener city; 2) creating stronger and more complete communities; 3) increasing social and cultural benefits to residents; and 4) enhancing local economic activity within these neighbourhoods.

The goals and objectives of the plan are, without question, very well grounded in the current needs of apartment tower communities, and are therefore not up for debate in this report. However, the major limitation to achieving the goals and objective of the plan is financing the major capital investments needed for these tower neighbourhoods. Current investments are conducted on an "as needed basis", where most investments are made to meet basic liveability standards (City of Toronto, 2011). Simply put, these towers are privately owned by corporations that may not have the sufficient capital resources to invest large sums of money into their towers and/or lack the incentive to make the necessary investments. Accordingly, achieving the objectives of the plan are reliant on the implementation of a feasible financing model.

Acknowledging this issue, Toronto staff worked in partnership with Morrison Park Advisors to develop a financing model with a low-interest and secured source of funding that is financially viable for building owners and the City, the latter being the main contributor to lending the capital required for improvements (City of Toronto, 2011). Strictly speaking, the current model is predicated on improving the overall sustainability of apartment towers. Unfortunately the current focus does not address the other objectives set out in the plan.

An inventory of the existing apartment tower stock in Toronto revealed that on average individual apartment tower lots had an average area of 1 hectare. Approximately 90% of this land is considered underdeveloped – clustered nodes providing even larger lot sizes by combining contiguous parcels of land (E.R.A. Architects; University of Toronto, 2008). Not only can this surplus space be repurposed for infill opportunities that introduce additional housing and community amenities, they are also a significant capital holding that apartment tower owners can sell for capital gains. These funds can be reinvested into their towers, and improve liveability for residents.

Developable land in Toronto is arguably the best form of currency to individuals seeking to invest in the City, and add to their development pipeline for immediate and future capital growth. In the context of Toronto, the areas that are most rich with "shovel ready lands" are located in the inner-suburb tower neighbourhoods. This constitutes a significant opportunity for attracting investments to areas of

marginal investment and meeting the objectives of the tower renewal initiative by addressing, in part, current financing barriers. This will reduce the reliance on city assisted funding for apartment tower renewal projects aimed at increased sustainability.

The goal of this research paper is to assess if surplus land resources available to apartment tower owners can be leveraged as the primary development funding source to introduce the array of uses that the City of Toronto recommends for tower neighbourhoods, and create a development model (i.e. *proforma*) that relies on this source of funding to pay for the envisioned goals and objectives of the tower renewal initiative.

To accomplish this, a literature and policy review was undertaken to assess where the apartment renewal movement currently stands; the importance of introducing commercial uses within residential neighbourhoods; and the current provincial and city legislative planning framework that enables this form of development (as-of-right) as well as the key changes that would be required. Following this contextual analysis, site visits were conducted across the inner-suburbs of Toronto to gain on the ground information of 10 apartment tower clusters. The information gathered was used to develop potential development scenarios. The final phase of the research entailed the creation of a development model with a low and high build-out scenario that is transferrable to other apartment clusters within the city. This will assist the city in assessing development potential for tower clusters, and kick-start the discussion for future investments. Over time, more accurate figures can be added to identify potential underlying issues that this research paper was not able to identify.

Ultimately, this tool can be used to create a more informed discussion on how the City of Toronto and its many tower owners can begin to implement the goals and objectives of the Tower Renewal initiative.

2.0 METHODOLOGY

The project's methodology consisted of three phases: a literature and policy review component (Phase I); a site reconnaissance component (Phase II); and a development scenario component (Phase III). The below sections explain the process that was followed to complete each phase.

2.1 CONCEPTS:

The following concepts will be used throughout the report, and represent baseline definitions:

Anchor business: defined as an operation that: 1) has a recognizable brand to individuals inside and outside of the community; 2) has the greatest footprint in a node; 3) contributes the most to the commercial rents within the node; 4) has a wider offering of products for consumers; and, 5) can support other smaller commercial units through spillover effects, whereby attracting consumers to the area and housing employees (this is dependent on the type of establishments, where in some instances larger businesses can push out small ones due to their competitive pricing).

Assessment value: Defined as the dollar value assigned to a property, reviewed on a yearly basis, to measure the applicable property taxes. The value is determined by the Municipal Property Assessment Corporation (MPAC) using comparable sales and on-site inspections to determine the value of the property asset. Generally, the value of the assessment is lower than the appraised fair market value. This information was be drawn from the City of Toronto registry.

Complete communities: the Growth Plan for the Greater Golden Horseshoe defines complete communities as: *"meet[ing] people's needs for daily living throughout an entire lifetime by providing convenient access to an appropriate mix of jobs, local services, a full range of housing, and community infrastructure including affordable housing, schools, recreation and open space for their residents. Convenient access to public transportation and options for safe, non-motorized travel is also provided."* (Ministry of Infrastructure, 2012, p. 47)

Developable area: Defined as the ground surface within an identified apartment site or cluster that has no major built structure(s) of significance (e.g. apartment towers), and that can be repurposed infill activities. This area can include both landscaped (e.g. grass) and hardscaped surfaces (e.g. parking).

Development model: Speaks to the strategy utilized for capitalizing on existing land holdings and built features, the development *proforma*, scenarios for build-out, and funding strategies (capital sources).

Development *proforma*: Defined as a method to calculate future financial results of a proposed change to a development property, and to emphasize whether a development is economically feasible or sound, and whether it meets the financial expectations from investors and other interested parties.

Infill Initiatives: Any form of development which occurs within the underutilized space within a site. In this context, it is defined by the development of open space between apartment buildings within an apartment cluster; the spaces between individual buildings; or redeveloping the podium of a tower.

Large conglomerate businesses: Defined as an establishment which employs between 50-500+ employees, which is owned and operated by corporations which are not local to the community, and have a lesser impacts on local economies.

Small independent businesses: Defined as an establishment which employs between 1-50 employees, which are owned and operated independently by individuals with ties to the local neighbourhood, municipality, or region. Typically does not include retail chains.

Areas of Marginal Investment: Defined in the context of this study as a geographic area within the city which is less desirable to residents and commercial operators to locate due to a lack of existing amenities and services, reducing overall residential and commercial real-estate values. As a causal effect, little investment is made within these areas due to their low returns.

Tower Podium: Defined as the ground floors of an apartment tower that extends beyond the foot print (i.e. floor plate) of the tower itself. Typically house ancillary non-residential uses that serve the immediate and surrounding community.

2.2 Literature and Policy Review - Phase I

The first phase of the research comprised of a literature review of the "tower in the park" built form; the apartment tower renewal initiative in Toronto; and the importance of small businesses; a policy review of the existing regional and city of Toronto planning framework of apartment tower uses; and a review of the recommended funding strategy for funding apartment tower renewal. Sources used to inform these sections included journal articles from planning and economic development journals; planning legislation and policies; planning reports; and key informant interviews.

2.3 Site Reconnaissance Research Design - Phase II:

The second phase of the research involved the collection of primary site data. Information gathered consisted of existing land holdings, amenities, and development potential. The findings of these assessments served as the starting point for creating a development *proforma* for individual tower projects, and identify different development and funding scenarios for full build-out.

Site Selection and Property Mapping

A sample population of 10 apartment tower clusters were selected to assess their development potential for ground floor podium projects and general infill opportunities. The following criteria were used to select tower properties within Toronto's boundary:

I. The site must be within the inner suburbs of Toronto, which include the former city of Etobicoke, North York, York, and Scarborough.
II. The site is designated "Apartment Neighbourhood" under the current city of Toronto Official Plan, and area zoned "Residential Apartment" in the consolidated zoning bylaw 0569-2013.
III. The site is adjacent to a road classified as a collector road, minor arterial, or major arterial.
IV. The cluster is at least 1 hectare in size.
V. A minimum of 5 sites must consist of apartment towers that do not currently have commercial and/or community services and amenities.

VI. All Toronto Tower Renewal pilot projects (Kipling; Parkview; Markham; Shaughnessy) located within the inner-suburbs were selected.

VII. A maximum of four sites selected can have an existing ground floor commercial and/or community amenity podium.

Selected properties were mapped within the context of the City using GIS software. AutoCAD data was also extracted to draft detailed contextual plans of the immediate neighbourhood and used to render detailed site plans to assess infill potential on site (City of Toronto, 2012).

Site Visits and Amenity Inventory

For each site visit, property and tower structure attributes were inventoried and listed in a tabular format, to facilitate comparison between different tower properties or clusters. The following elements were sought and listed during each site visit:

Inventory of built structures on site

I. Apartment tower(s) – Number of towers on a site; residential floors; approximation of number of units per floor (counting balconies)
II. Podium(s)
III. Community amenities
IV. Commercial uses
V. Presence of a grocery store
VI. Parking pads/structures

Inventory of uses within a 250m of site

I. Commercial uses
II. Community amenities, services, and infrastructure
III. Transit availability (bus or subway access)

Site Specific Valuations:

To improve the accuracy of the development *proforma*, data pertaining to all observed tower's revenue generation and operation expenses were estimated (using the below methodology). Estimations were then used to evaluate the residual land values of the conveyed property created by severances, the

remaining tower properties, and leases for commercial units within the podium of existing towers. The subsections that follow explain the different variable sets used to inform the development scenarios.

VARIABLE SET A – PARCEL SIZE AND SITE COVERAGE ESTIMATIONS:

Using digital sources, land coverage information was accumulated to assess the existing built form of the selected tower case studies, and infill potential. Total lot sizes allow for the estimation of the asset's value as a whole, and residual land value (without the apartment structure).

Variables:

1. Municipal Address
2. Site size (ha)
3. Building Footprint
4. Parking Coverage
5. Residual Land (ha + %)
6. Buildable lot size (ha)

Methodology:

I. City of Toronto (2012) parcel boundary data was extracted from Ryerson's MADAR library resources – relevant layers from boundary data files included the following:
   a. PROPERTY_LINE_PDM: Denotes parcel boundaries based on ownership and municipal addresses
   b. BUILDING_LINE_PDM: Denotes existing building footprint as of 2012
   c. MUNICIPAL_NUMBER_PDM: Denotes the municipal address of individual parcels

II. Parking podiums were not included in the existing parcel boundary data extracted, requiring that they be derived from City of Toronto 2012 Orthoimagery (aerial photography)
   a. Using a combination of extracted City of Toronto (2012) parcel boundary CAD drawings and City of Toronto (2012) Orthoimagery, datasets were imported into ArcGIS. Parking podiums were drawn using orthoimages as a base. Newly drawn parking podiums were imported into AutoCAD for further analysis.

III. Site coverage was estimated using the "area" tool in AutoCAD software. The following variables were extracted using hectares as a primary unit:
   a. Site area (ha) – PROPERTY_LINE_PDM as source data

b. Building footprint (ha) – BUILDING_LINE_PDM as source data

c. Parking podiums (ha) – Orthoimagery as source data

IV. The surplus land was measured in hectares and ratios of the total area that was not developed were calculated.

V. Total buildable area was calculated on a per-parcel basis. Potential site conveyances were proposed and estimated for two scenarios. These conveyances were used to estimate the total capital that can be gained through the sale of conveyed lands – further discussed in "Assessment of Infill Potential & Development *Proforma*".

VARIABLE SET B – TOWER REVENUE GENERATION POTENTIAL:

To estimate the total asset value and residual land value of individual tower lots, total yearly revenue per tower was calculated. Variables used to estimate total revenues were compiled using a number of sources and data collection methods, including: tower owner websites; rental broker websites; and photographs taken during on-site visits.

Variables:

1. Tower owner(s)
2. Number of residential floors
3. Total number of units per floor
4. Number of 1, 2, and 3 bedroom units per floor
5. Unit sizes (per square foot)
6. Monthly rate per unit type
7. Monthly revenues per tower
8. Annual revenues per tower

Methodology:

I. Tower owners were found using web-sources, searching the tower's municipal address – they were subsequently cross-referenced using MPAC data.

II. During site visits, the number of residential floors per tower were counted and recorded.

III. Number of units per floor were estimated by counting the number of balconies, and applying the ratios shown in Figure 1 (% of Totals). Ratios were calculated by Kesik & Saleff (2009, pp. A-4) in the Tower Renewal Guidelines.

Figure 1: 20 Storey Tower Archetype Unit Breakdown

TYPE	Bachelor	1-Bedroom	2-Bedroom	3-Bedroom
Ground Floor	-	2	4	-
Typical Floors (x19)	-	4	6	2
Penthouse	-	-	2	-
Totals	-	78	120	38
% of Totals	**0.00%**	**33.10%**	**50.80%**	**16.10%**

IV. Unit rental values were found and noted using rental rates provided by tower owner and/or rental broker websites. In the instance were values were not available, comparable unit rental rates within the neighbourhood were applied.

V. Total yearly revenues were calculated using the following formulae:

$$\sum[(x_{1bdrm} \times r_{1bdrm} \times f) + (x_{2bdrm} \times r_{2bdrm} \times f) + (x_{3bdrm} \times r_{3bdrm} \times f)] \times 12$$

$\sum[\dots] = Total\ monthly\ revenues\ of\ a\ tower$
$x_{nbdrm} = number\ of\ bedrooms\ on\ a\ floor\ plate$ using 20 storey building archetype ratios
$r_{nbdrm} = monthly\ rate\ for\ a\ bedroom$
$f = number\ of\ residential\ floors$

VI. Note that values not readily available or estimated are highlighted in red font within the data tables for each tower cluster

VARIABLE SET C – TOWER SPECIFIC OPERATIONAL COSTS:

To estimate the total asset value and residual land value of the individual tower lots, total operation costs were needed. Given the high number of apartment sites surveyed, individual operational costs, building maintenance costs, and mortgage repayment fees were not collected.

Variables:

1. Building utility costs (hydro & water) using comparable tower GFAs
2. Building maintenance costs as percentage of total revenues (%)
3. MPAC assessed property value (City of Toronto Registry Office)
4. Mortgage assumed to be $0.00 per annum

Methodology:

I. Building utility costs were estimated using the Ministry of Natural Resources Canada, Office of Energy Efficiency's Screening Tool for New Building Design (http://www.screeningtool.ca). The same tool was used by Kesik, T., & Saleff, I. (2009, p. 137) in the "Tower Renewal Guidelines" to set a baseline estimation of utility costs for different tower archetypes. Estimations were made for towers ranging from 15,000 m^2 to 65,000 m^2 at 5,000 m^2 intervals.

II. Mortgage repayment fees were assumed to be $0.00 per annum.

III. Building maintenance costs were calculated at 40.00% of yearly revenues. This represents an estimation that was regarded as acceptable from the Toronto Community Housing Corporation's (2014) viewpoint. This ratio includes works related to building upkeep (e.g. cleaning) and structural and mechanical maintenance (e.g. window replacement, boiler repairs).

IV. Property tax rates for multi-residential was taken from the City of Toronto website. 2013 rates are 1.91% of the assessed value of the property. To value yearly property taxation, the tax rate was applied to 2014 MPAC assessed property values for each tower (drawn from the City of Toronto Registry Services desk). The calculation is as follows:

$$Property\ Taxes = Multi\ Residential\ Tax\ Rates\ (1.91\%) \times MPAC\ Assessed\ Value$$

V. These values combined comprise the total operational costs for an apartment tower.

VARIABLE SET D – RESIDUAL LAND VALUE CALCULATION:

Residual land values were calculated to estimate the value of the surplus lands of an apartment tower site (i.e. lands not covered by the footprint of the tower). The base value was also used to calculate potential uplift in land value once the site is rezoned to a more developable zoning category.

Variables:

1. Total yearly revenues
2. Total yearly operational costs
3. Multi-residential cap rates 2014 (low and high value)
4. MPAC property assessment value (2014)

Methodology:

I. Net Operating Income was calculated using the Variable Set B and C.

II. Capitalization Rates for multi-residential units were taken from Colliers International Cap Rate Report (Q4 2013). Both high (4.75%) and low (3.75%) cap rates were used.

III. Residual Land Value calculation:

$$Residual\ Land\ Value = \left(\frac{NOI}{Cap.Rate}\right) - MPAC\ Assessed\ Value$$

$NOI = Net\ Operating\ Income\ (Revenue - Operating\ Costs)$
$Cap.Rate = Capitalization\ Rates\ (low\ and\ high)$

IV. Residual land value per hectare was calculated.

VARIABLE SET E – HARD & SOFT COST ESTIMATES:

Using the Altus Construction Cost Guide (2014) industry standard construction costs were used to estimate the cost of constructing multiple uses within the tower lot or conveyed lot.

Using Metropia's development standards (2014), soft costs were assumed to total 55% of the total hard cost investments made for the proposed development.

Variables:

1. Shopping Centres/Retail
2. Residential Condominiums & Apartments
3. Townhouses
4. Timber frame townhouses
5. Schools (for community centres)

VARIABLE SET F – SALEABLE, LEASABLE, AND CAP-RATES:

Commercial lease values for residential and retail uses per square foot, and associated capitalization rates, were all taken from Colliers International yearly reports for Toronto to ensure consistency. These values will be used to assess the value of the rezoned lands slated for infill activities.

Variables:

1. Colliers International Cap Rates, Q4 2013, retail cap rates
2. Colliers International Retail Report, Spring 2013, average retail rents
3. Colliers International Cap Rates, Q4 2013, multi-residential cap rates

Assessment of Infill Potential & Development Proforma:

Once site characteristics and valuations were collected and documented, using CAD software, buildable areas were approximated for future infill development and tower podium construction. Values for the buildable lot areas were calculated in phase III of the study. Using Metropia's (2014) residual land valuation methodology, land valuations were calculated for the newly created infill lots. These results were also used to estimate uplift values for potential section 37 contributions.

Figure 2: Example of Infill Potential – Jane & Finch

2.4 DEVELOPMENT SCENARIO CREATION - PHASE III:

The final phase of the research consisted of incorporating data gathered during phase II into two development *proformas*. A high and low build-out scenario was created. Two clusters were selected based on their identified infill potential determined in phase II of the methodology.

The purpose of this phase sought to assess how buildable areas of tower clusters could be used to finance tower renewal objectives. This could be achieved through the land sales or through joint partnerships with the public sector (e.g. introduction of community amenities) or the private sector (e.g. introduction of additional housing stock or commercial amenities) to develop the surplus developable lands or to introduce ground floor podium uses in the existing tower structures.

These *proforma*s can be used as a financing template for other apartment tower clusters across the city, and potentially other municipalities within the Greater Golden Horseshoe that have high concentrations of apartment tower neighbourhoods as identified in the Ontario Ministry of Infrastructure Tower Renewal Initiative (2010).

The following are the build out scenarios with associated uses that were reviewed:

LOW BUILD-OUT

1. New tower podium with:
    a. Residential (market/rental)
    b. Commercial Retail Units
    c. Commercial Grocery Store
    d. Community Centre

HIGH BUILD OUT

1. New market and or rental housing (mid-rise development)
2. New commercial retail units
3. Mixed-use (mid-rise development)
4. Community Centre amenities

Figure 3 and Figure 4 represent a simplified *proforma* template that was used to assess the land value and/or viability of the low and high build-out scenarios reviewed.

Figure 3: Revenue Generation Potential for New Parcels (Metropia, 2014)

	Storeys	Sft per floor	Total sft
Residential (Market)	X_1	Y_1	Z_1
Residential (Rental)	X_2	Y_2	Z_2
Commercial (Podium)	X_3	Y_3	Z_3
Est. GFA			$=Sum(Z_T)$
Saleable Space (GSA)	X_1	Y_1	Z_1
Leasable Space (LSA)	X_2+X_3	Y_2+Y_3	Z_2+Z_3

	$ Units	$/sft	Revenue ($)
Est. Saleable Revenue		B_1	$R_1=B_1 * Z_1$
Est. Leasable Revenue (residential)	A_2		$R_2=(A_2*12)/$ Cap Rate
Est. Leasable Revenue (commercial)		B_2	$R_3=(B_2*Y_3*12)/$ Cap Rate
Est. Revenue			$=Sum(R_T)$

Figure 4: Land Residual Calculation for Severed Lot (Metropia, 2014)

	Revenue ($)	$/sft	
Total Revenue	$=Sum(R_T)$	$=Sum(R_T)/Sum(Z_T)$	
Cost	**Costs ($)**	**Net**	**Gross**
Land	0	0	0
Hard		=Gross*Efficiency	Variable Set E
Soft		=Gross*Efficiency	55% of Hard
		=Sum(Net)	=Sum(Gross)

Profit (no land cost)	Costs-Revenue
Acceptable Profit (15% of revenues)	Profit * 15%
Land Value	Profit - Costs

3.0 Literature Review

3.1 Towers in the Park

During the early 20th century when the pioneers of planning were discussing the Garden City movement and its numerous variations, Le Corbusier, a Swiss architect, went against the prevalent model of creating low-density suburbs at the peripheries of cities on open green lots. Instead he proposed an alternate vision. In his Ville Radieuse, Le Corbusier preferred a development form that remained in the existing city, and proposed substituting "the congested, interlayered city" built form with soaring towers separated by wide roadways and large expanses of green space. These residential towers were to be spaced 400 meters atop of subway stations to be accompanied by a major highway radiating from a central location at the core of the neighbourhood unit.

Ultimately, the result would be an orderly planned neighbourhood unit, which had a less dense built form (albeit higher concentrations of residential units) with increased breathing room, ridding itself from the city of old' chaos. (Sewell, 1993).

3.1.1 Why Towers in the Park?

Le Corbusier's model garnered significant support for the achievable results his scheme would provide. His "tower in the park" idea would be able to achieve densities well above 400 units per hectare by constructing 45 meter towers that would only cover approximately 12% of the total lot area, leaving the remainder of the space for accessible park uses. Underground parking was also strongly pursued to reduce the amount of surficial parking space. The country was brought to the city. (Sewell, 1993)

It was well accepted at the time for its focus on abundant open green space, its reliance on pedestrian walkways to move residents from place to place, a rejection of traditional forms of housing, maintaining the idea of separation of uses (which at the time was perceived as best-practice), and a shunning of grid street patterns in favour of looping discontinuous roads (again, consistent with the views at the time, and resembled the Garden City scheme).

As the model gained prominence in urban built forms, the perceived advantages to the model began to display negative repercussions. To name a few: single use neighbourhoods where not as successful as once perceived; discontinuous roads provided limited accessibility to community amenities (if they existed) as well as access to other areas in the city; large expanses of green space were overwhelming, and in fact reduced the relation these towers had to the street; walking was possible but not enjoyable; the subway transit that was meant to serve the neighbourhood never materialized.

Once a preferred form of housing of both planners and private developers, the tower in the park scheme began to lose popularity by the 1970's, as citizen groups began to mobilize against this modernist view of planning and development, leading to its eventual abandonment.

3.1.2 Current Challenges

Although Le Corbusier's initial vision had promise in creating a functional and complete community for its future residents, the end product that the city is left with today is not reflective of what was once envisioned, and has led to significant challenges for the residents of these neighbourhoods.

Under-Serviced Communities

Apartment tower neighbourhoods today have a built form geared toward automobile usage and single use zoning standards. Accordingly, these neighbourhoods are disconnected from many community and commercial amenities that their residents typically rely upon on a daily basis. Having population densities comparable to the downtown core of the city, these neighbourhoods lack active main streets, services, shops, employment, and public spaces for communal gathering. In many instances, they are located in service and food deserts. Residents are faced with either the option to drive (if available), wait for bus services, or walk in some of the least walkable and disconnected areas of the city.

Even the once revered open spaces envisioned in the "tower in the park" scheme are deteriorating, fragmented from the neighbourhood, and in most instances inaccessible and unsafe for pedestrians. As such, the provision of communal space is now lost, short of these areas being revitalized. (E.R.A. Architects; University of Toronto, 2008)

The demographic makeup of these communities has also evolved over time, as they have become areas of ethnic and cultural diversity, and typified as reception hubs for newcomers because these are some of the most affordable areas in the city. The single use organization of these communities, and the lack of infrastructure make it significantly difficult for residents to access services, and to encourage entrepreneurship and investment directly within the neighbourhood. (E.R.A. Architects; University of Toronto, 2008)

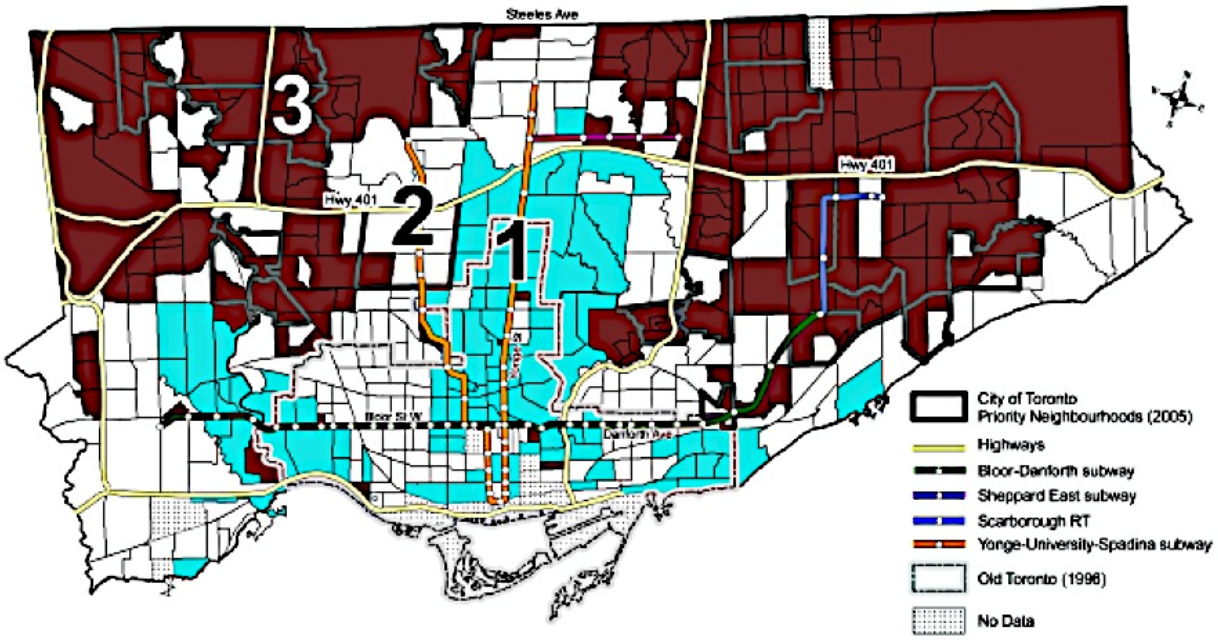
Aging and Inefficient Buildings

These structures were designed during a time of cheap energy when environmental sustainability was not a primary concern. Today's building science principles that seek to increase overall efficiencies were not part of their design, making them the highest consumers of energy and emitters of greenhouse gases in the city. To further aggravate the issue, tower building envelopes are aging, many of which surpassing their anticipated life cycle (windows especially). A lack of renewal funds from owners has led to a long list of deferred maintenance (E.R.A. Architects; University of Toronto, 2008). This not only impacts the environment, but also operational expenses as sudden increases would challenge building owners due to their limited ability to increase rents to compensate for the additional costs.

A Polarized City

As David Hulchanski (2007) pointed out in his Three Cities study (represented in Figure 5), the spatial income polarization of Toronto's neighbourhoods, since the 1960s a significant shift in pockets of wealth and poverty has occurred in the formerly middle income city. Although Toronto's apartment towers are spatially distributed across the city, the majority of the stock is located in a third city represented by areas that are significantly challenged by increased levels of poverty and inadequate services such as transit, social and community services (E.R.A. Architects; University of Toronto, 2008).

Figure 5: Three Cities – Average individual income from all sources



Change in the Census Tract Average Individual Income as a Percentage of the Toronto CMA Average, 1970-2005

City #1
Increase of 20% or More
100 Census Tracts, 20% of City

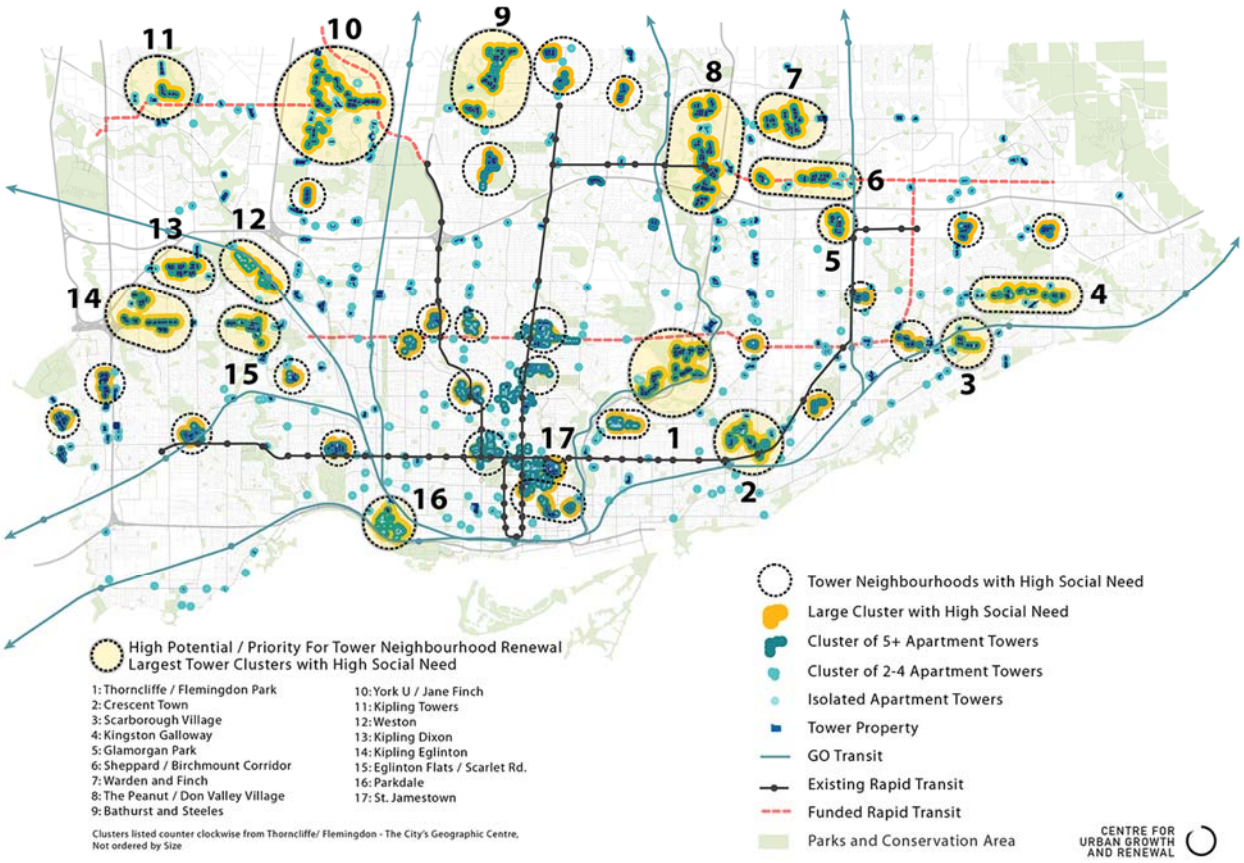
City #2
Increase or Decrease
is Less than 20%
208 Census Tracts, 40% of City

City #3
Decrease of 20% or More
206 Census Tracts, 40% of City

Note: Census Tract 2001 boundaries shown. Census Tracts with no income data for 1970 or 2005 are excluded from the analysis. There were 527 total census tracts in 2001

Poverty in Toronto is predominantly located in the modernist tower developments of the past that are areas of little investment and regeneration. Figure 6 is a representation of the distribution of apartment tower neighbourhoods throughout Toronto that are clusters requiring a high level of social needs.

Figure 6: Distribution of Apartment Tower Neighbourhoods throughout Toronto (Stewart, 2014)



A Neglected Resource

Candidly spoken, apartment neighbourhoods are not providing the quality of life that was once intended, and have instead fallen in disrepair and face numerous challenges.

Notwithstanding this grim reality, they are collectively one of Toronto's greatest asset, moreover, one of Toronto's largest land asset. The "parks" that surround these towers have been repurposed for surface parking spaces, have abandoned their pools, are home to numerous dumpsters, and are segregated by countless meters of chain link fences (E.R.A. Architects; University of Toronto, 2008). They are not meeting their intended purpose.

Nevertheless, there is the opportunity to breathe new life in these grassy/muddy surfaces with amenities that can positively bolster these neighbourhoods to better serve the residents they house.

3.2 The Apartment Tower Renewal Initiative

In response to growing concerns surrounding the aging tower building stock within the city the former Mayor of Toronto, David Miller, initiated in 2008 a Toronto based assessment to underline key problems and identify potential solutions to improving Toronto's apartment tower resources. With the assistance of E.R.A. Architects, an assessment of tower stock was conducted, which reviewed the tower building stock's lifecycles, environmental impacts, social contributions, prevalence in the rental market, and their underbuilt morphology that can be leveraged as potential opportunities to create complete communities and intensify through infill activities (E.R.A. Architects, 2010). Following implementation of the Tower Renewal initiative, the City initiated in 2008 five pilot projects across the City to estimate the benefits of the initiative and garner more City Council support (shown in Figure 7 below).

Figure 7: City of Toronto Tower Renewal Pilot Sites

215 Markham Road, Scarborough

2667-2677 Kipling Avenue, Etobicoke

110 Parkway Forest Drive, North York

175 Shaughnessy Boulevard, North York

These projects are ongoing, and have survived the new administration elected in 2010. The primary challenge in moving the Tower Renewal initiative forward, which was identified in the Tower Renewal Implementation Handbook (2011), and persists to this day, is the implementation of a viable financing strategy that is acceptable to the city's administration and tower owners. This issue is especially problematic considering the loss of the initiative's champion, former mayor David Miller, and a current administration with different objectives. Today, the Tower Renewal staff continues to work on the initiated pilot sites, awaiting further direction in finalizing its funding model to begin rolling out the initiative (City of Toronto, 2011).

Between 2008 and 2010, Toronto staff has worked closely with Morrison Park Advisors to develop a model with a low-interest and secured source of funding that is viable for the City, building owners, and investors (City of Toronto, 2011). The recommended approach consisted of establishing a Tower Renewal Corporation, which would comprise of an arm's length city agency, that would manage financing arrangements with building owners through long-term contracts, and would be responsible for ensuring improvements are implemented in a fashion that meets the expectations of the building guidelines developed by the City (Mayor's Tower Renewal: Opportunities Book) over the life of the project. Funds allocated by the Corporation would be secured through a property-lien arrangement – further information on this topic is found in Section 4.2 Financing Options Reviewed for Apartment Renewal (Morrison Park Advisors, 2010; Ministry of Municipal Affairs and Housing, 2006).

The comprehensive set of goals apartment tower renewal strategy to enhance the pre-existing apartment tower housing stock encompass 1) the creation of a cleaner and greener tower stock; 2) creation of stronger communities; 3) increasing the social and cultural benefits to residents; and 4) enhancing local economic activity within apartment neighbourhood communities.

3.2.1 Major Benefits and Opportunities of the Tower Renewal Initiative

The apartment tower renewal initiative focuses strongly on preserving and enhancing a building typology of the modernist era that collectively houses approximately one million of the Greater Toronto region's population, as an alternative to costly and disruptive removal and redevelopment initiatives

(McClelland, Stewart, & Ord, 2011). Both the City of Toronto (2011) and E.R.A. Architects (2010) identified major opportunities for tower renewal, three of which have been selected for this discussion.

The first consists of leveraging the existing tower's structural fabric – having a long and renewable life-cycle – and increasing the efficiency of buildings through targeted green technology enhancements, thus lowering total carbon footprints and associated operational costs. On a per square metre average, slab apartment towers consume 20% more energy than any other type of housing (E.R.A. Architects; University of Toronto, 2008). Estimates have shown that retrofitting towers City-wide could reduce the greenhouse gas output by over 700,000 tonnes CO^2 per year, and reduce the per building consumption of electricity by 50%, natural gas by more than 50%, water by 20%, and improve waste diversion by over 30% (E.R.A. Architects; University of Toronto, 2008). The current funding model is predicated on these cost savings as a means to payback the invested capital improvements to a tower's efficiency.

Secondly, individual lots measure on average 1 hectare in size, and on average 90 percent of apartment tower sites are underdeveloped – clustered nodes provide even larger lot sizes. This surplus space can be repurposed for infill opportunities (Kesik & Saleff, 2009). Surplus lands provide a form of equity that can be sold or transferred for infill developments purposes, while the sale proceeds could be used to fund tower specific initiatives and improvements. Infill potential provides the opportunity to introduce new commercial and/or social amenities on site and new housing options (tenure and form). This would generate direct benefit to existing and future residents of apartment tower neighbourhoods. The municipality would also benefit from infill, in that they will be meeting the intent of the Growth Plan of creating complete communities; introducing new market and purpose-built rental units (potentially at affordable rates by leveraging section 37 contributions); adding revenue generators to the city's tax base; and increasing employment opportunities for residents.

Lastly, existing residential densities within apartment neighbourhoods can range between 150 to 350 people per hectare and in some instances reach up to 500 persons per hectare, already exceeding the 50 persons and jobs per hectare called for by the Growth Plan. This population density increases the feasibility of introducing new higher order transit lines and creating transit oriented mixed-use nodes.

Across the Greater Toronto Area and Hamilton over 14% of apartment towers are located in existing growth nodes, and 55% are located along major arterial roads, both locations where the plan calls for increased intensification and the creation of mixed-use environments and complete communities (Kesik & Saleff, 2009; Ministry of Infrastructure, 2012; McClelland, Stewart, & Ord, 2011).

Altogether, re-envisioning tower neighbourhoods within the city as areas of potential growth and investment allows a municipality to meet a number of provincial and local planning initiatives that are difficult to implement, often due to a lack of available lands.

3.2.2 Current Focus of the Tower Renewal Financing Model

Morrison Park Advisors' primary mandate was to develop a financing strategy predicated on funding building improvements aimed at operational efficiencies and resource consumption, by re-allocating funds accrued through operational cost-savings in repaying retrofit investments secured by a Tower Renewal Corporation. This model is comparable to a number of European tower renewal projects that relied on operational savings to payback initial investments and fund additional projects aimed at increasing total amenity spaces and introducing commercial uses within apartment clusters.

The primary limitation of Morrison Park Advisor's recommended funding model is the fine balancing act required to repay the initial investments made towards increased building efficiencies, and funding the other goals and objectives of the initiative. This limitation stems from the comparative cost of energy in North America and Europe, the latter being significantly higher. Due to the low utility costs charged to Toronto residents, the savings acquired through increased efficiencies are marginally sufficient to fund tower efficiency capital investments, leaving little to no residual revenues that can be invested in improving the social and economic fabric of tower neighbourhoods.

One could argue that once capital investment financing has been amortized, the savings from efficiencies can then be re-invested to fund other tower renewal objectives. However, there are significant limitations to this approach.

Amortization periods for tower specific efficiency improvements can range between 3 years for marginal system improvements to over 20 years for more comprehensive improvements to the structure. Figure 8 lists a number of potential enhancements that can be made to a typical 20 storey apartment tower archetype, as calculated by Kesik & Saleff (2009) in their Tower Renewal Guideline document. Repayment of these investments are highly reliant on fluctuating energy prices and efficiencies, and cannot risk adding additional strain on existing financing plans. Altogether, it may take a number of years before new investments can be funded through building efficiencies.

Figure 8: 20 Storey archetype tower conceptual case study (Kesik & Saleff, 2009)

IMPROVEMENTS	VALUE	PAYBACK PERIOD YEARS
Replace existing roof with RSI 3.5 (R-20) roof	$294,600	11.42 @ Current energy escalation rate 10.65 @ High energy escalation rate
Overclad non-balcony/shear walls with RSI 2.1 (R-12) cladding system	$860.844	17.07 @ Current energy escalation rate 15.55 @ High energy escalation rate
Replace existing windows with RSI 0.44 (R-2.5) units	$1,710,889	13.50 @ Current energy escalation rate 12.48 @ High energy escalation rate
Enclose balconies RSI 0.44 (R-2.5) glazing + RSI 2.64 (R-15) ground	$2,816,016	21.03 @ Current energy escalation rate 18.87 @ High energy escalation rate
Overclad walls RSI 2.8 (R-16) + overclad balconies RSI 1.76 (R-10) + new guards + replacement windows	$6,253,040	23.28 @ Current energy escalation rate 20.72 @ High energy escalation rate
Replace boilers with multi-stage condensing 93% AFUE	$540,000	5.46 @ Current energy escalation rate 5.25 @ High energy escalation rate
Heat recovery system 70% efficiency + ducted air supply to each suite	$395,000	4.79 @ Current energy escalation rate 4.62 @ High energy escalation rate
Water conservation measures for 30% reduction	$120,000	3.37 @ Current energy escalation rate 3.28 @ High energy escalation rate
Complete tower renewal (baseline)	**$6,000,888**	**16.85 @ Current energy escalation rate** **15.36 @ High energy escalation rate**
Complete tower renewal (high)	**$7,609,485**	**20.25 @ Current energy escalation rate** **18.22 @ High energy escalation rate**

Although the current financing strategy does not directly identify means of financing other tower initiatives, the City of Toronto Tower Renewal Implementation Handbook (2011) presents a long-term phased enrolment system, the Sustainable Towers Engaging People (STEP) program, which seeks to meet the intent of enhancing the social realm. The STEP program is: "designed to incrementally build the capacity of property owner to undertake substantial Tower Renewal projects, and outline the various types of support available to owners by the City and by other Tower Renewal partners" (City of Toronto, 2011, p. 17). Nevertheless, the program does not sufficiently address how these projects are to be funded beyond improved efficiencies, and this presents another key limitation to the current program framework.

Relying on savings from increased efficiencies to fund the introduction of new community and commercial amenities assumes that building owners will opt to invest in improvements that may not provide a direct benefit to their assets. Ultimately, this may not materialize, as owners may instead prefer to apply these accumulated funds to ongoing and future tower or site specific improvements.

Strictly speaking, in the Toronto context, the current focus of the model is most suitable in achieving the goal of creating a cleaner and greener city by improving the overall sustainability of existing apartment stocks within the City, and less so in community buildings. Additional attention must be allocated to a financing model that permits the development of community based services and amenities concurrently with building retrofits, and expedite the process of refurbishing Toronto's apartment tower stock.

Leveraging land holding as a capital asset should be given more attention, as it could open the door for infill opportunities that create complete communities.

3.3 Importance of Commercial Amenities In Apartment Tower Clusters

Urban commercial amenities play a large role in defining the identity of communities within the City of Toronto. They contribute to creating dynamic destinations consisting of mixed uses, distinct built forms, active street life, and diverse demographic composition. Commercial use within an urban environment contributes to the economic health of the local community by catering to residents as well as drawing visitors within the area to walk, shop, and explore the many merchants that provide a variety of services and goods.

A common factor seen in many established commercial activity nodes serving the immediate community are the independent owners and operators as opposed to large commercial conglomerates. The availability of underutilized lands in apartment tower clusters within the inner suburbs of Toronto provides a new area that can accommodate the creation of new commercial nodes that cater specifically to the residents.

The Growth Plan for the Greater Golden Horseshoe and the enacted apartment tower renewal initiative seek the creation of complete communities (see section 2.1). The city of Toronto in its planning framework enables and encourages the development of these nodes across its jurisdiction through:

I. the provision of permissive zoning for mixed use operations, including residential, commercial, and employment uses;
II. enacting Avenues and Mid-Rise Buildings Studies Plans across a number of urban avenues that aim to enhance the ground-floor experience of major throughways as well as integrate seamless multi-modal transportation connections that promote alternative modes of transportation;
III. establishing distinct and strict urban design policies aimed to enhancing the built environment as well as the pedestrian realm; and,
IV. encouraging active transportation as a means of moving around the City

(City of Toronto, 2010)

Although the policy framework is in place to encourage the development of commercial activity nodes within the core urban areas within the City, a significant challenge remains in attracting, establishing, and maintaining viable and diverse commercial and retail uses within the inner-ring suburbs of Toronto, more specifically apartment tower clusters (Grant & Perrot, 2009). Private investment incentives in revitalizing these areas are lacking, and planning legislation has yet to be fully implemented to accommodate the introduction of commercial uses in apartment tower clusters.

The focus of the following subsections will explore how infill opportunities within apartment tower neighbourhoods constitute an opportunity to establish new commercial nodes within the City of Toronto and fill the gap in providing amenities within a proximate distance to local residents. The social and economic benefits of small-retail establishment in contrast to their conglomerate and chain counterparts and how the two can co-exist in a synergetic relationship will also be discussed.

3.3.1 The Small Businesses Advantage

Small businesses contribute both to the social fabric of communities and the overall definition of community character, in turn creating the perception of place or “insideness”, to which Relph defined as a “degree of attachment or involvement that one has in a particular place” (Alexander & Shaw, 2012, p. 31). Some of the earliest contributions to the discussion of this intrinsic value comes from Jane Jacobs (1961), who championed the importance of local businesses as being integral to street life, creating community, enhancing the perception of safety (eyes on the street), and enhancing neighbourhood character. In her thesis dissertation, Menzies (2008) observed that small B.C. businesses had far greater levels of involvement within their communities; contributions included donation of goods and services; financial contributions; sponsorships for sport teams; promotion of non-profit organizations; and employee services. Simply put, the presence of commercial activities help meet the Tower Renewal Initiative of bolstering the economic health of tower neighbourhoods

Small businesses are significant contributors to the local and regional economy and comprise of a total of 94% of the total market share of businesses within Ontario, making them a significant force (Alexander & Shaw, 2012; Canadian Federation of Independent Businesses, 2010). Mom and pop stores

and independent businesses have the ability to strengthen local economies and strengthen neighbourhood fabric (LiveWorkLearnPlay, 2010).

Small businesses are also more diverse in their offerings comparatively to larger conglomerates, providing goods and services that are more specialized and that cater to specific segments of the population, whether socially, economically, or ethnically (Alexander & Shaw, 2012). Florida (2002), Goodno (2005), Sutton (2010), and Qadeer (1997) all speak to the importance of establishing heterogeneous business types and targeted consumers to attract a greater mix of social and ethnic backgrounds within the population inhabiting or visiting the area.

Local economic impacts can be measured by three components: their direct, indirect, and induced impacts on a wider economy (Alexander & Shaw, 2012). Direct impacts constitute spending which is required for a business to operate, whereas indirect impacts address external economic effects. Induced impact is defined as a multiplier effect where business owners and employees spend money in other local businesses, thus re-investing in their own communities (Alexander & Shaw, 2012; Wang & Rainer vom, 2007). The Maine Economic Centre for Economic Policy (2011) and the Institute for Local Self Reliance (2003) collected data from local small retail businesses and larger conglomerate and found local businesses can generate approximately 76% larger returns to the local economy as opposed to large retail conglomerates.

Small businesses are uses that can be easily accommodated within the space available on the ground floor of apartment buildings, newly built podium spaces, and infill commercial developments, providing an array of amenities and services that cater directly to the residents.

3.3.2 The Role of Larger Commercial Conglomerates (National Chains)

Contrary to the popular perception of larger commercial conglomerates being a detriment to smaller retail operations, the former can in fact provide direct benefits to the community and to their smaller business counterparts if they are integrated intelligently.

As discussed, smaller retailers are recognized as having the role of contributing to the creation of a unique character within a community, and catering specifically to the commercial needs and culture of the local neighbourhood, whereas larger conglomerates provide lower prices, larger selections, recognized brands, and consistent quality across multiple locations (LiveWorkLearnPlay, 2010). Accordingly, it is possible that both large and small retailer can co-exist in the same environment, and benefit from one another's specific offerings.

Artz (2012) and Hicks (2012) undertook a set of American based studies that reviewed the impact of big-box retailers on small local businesses – more specifically WalMart – in the immediate and long term (15 years). Both studies concluded that big-box retailers have both positive and negative impacts on local businesses in the short and long term. The availability of lower cost general merchandise made it difficult for small general store retailers to compete, whereas smaller retailers that specialized in a certain type of good or in food services either felt no impact from the presence of a big-box retailer, or benefitted from its presence as trip frequencies to Walmart increased. Lastly, Hicks (2012) observed that American consumers frequenting WalMart and competing big-box store, especially in the low-income strata, save up to $18 billion a year, where money can be spent or re-invested in other activities, potentially other local commercial stores.

The key takeaway to note is that larger commercial operation can act as the commercial anchor (destination) of a commercial node within a community, attracting a wider array and number of consumers to an area (anchor use defined on page 4).

Another consideration is the capital pool national chains have at their disposal for investing in new outlets. This provides a greater level of reassurance to investors building in apartment tower neighbourhoods, as opposed to relying solely on smaller commercial operators, which have little available capital at their disposal and where success is less reassured. Development regulations, such as Section 37, can also be leveraged to provide additional benefits to the community in the upzoning of apartment tower lands (further discussed in section 4.1 Planning Framework).

4.0 City of Toronto Context: Moving the Initiative Forward

4.1 Planning Framework

Unlike European apartment neighbourhoods that were originally planned with retail, cafés, markets, kiosks, and public services, their Toronto counterparts suffer from a lack of services and amenities that contribute to the creation of complete communities (E.R.A. Architects; University of Toronto, 2008). Due to the prohibitive nature of zoning programs that originated from the 1960s, when a significant portion of the stock was developed, many serve as bedroom communities that are auto-dependent and disconnected from the commercial and public amenities that should be serving them. Notwithstanding past trends, current legislation at both the provincial and local (Toronto) level is moving towards the successful European model of apartment development (E.R.A. Architects, 2010).

4.1.1 Provincial Policy Framework

The Tower Renewal initiative is linked to a number of provincial policies, including the Big Move – Metrolinx's Transportation Plan, Ontario's Poverty Reduction Strategy, the Go Green Action Plan, and the Growth Plan for the Greater Golden Horseshoe (hereafter referred to as the "Growth Plan"). These plans seek to: connect residents to higher-order transit corridors; introduce services and amenities to impoverished areas; reduce overall carbon emissions; and creating a more compact, complete, and efficient form of development respectively (McClelland, Stewart, & Ord, 2011).

Tower neighbourhoods present an opportunity to meet the goals of the Growth Plan (2005), whereby presenting intensification opportunities through infill introduces a wider array of market and purpose built rental properties, community based social and commercial amenities. The existing built tower structures, regarded as a highly resilient with renewable life-cycles, and availability of undeveloped lands within tower neighbourhood can be leveraged as highly developable citywide activity hubs for the establishment of complete and sustainable communities.

A wider array of housing types and tenures for current and future residents that seek to adapt their living environment with their current lifestyle needs can be achieved through infill initiatives. Types of new housing can include market housing, co-ops, rent to own, family sized housing units, multi-generational housing, and senior housing (E.R.A. Architects; University of Toronto, 2008).

Metrolinx's transit plan and the Transit City Plan for Toronto are two initiatives that enable tower neighbourhoods to be catalysts for future growth and investment within the inner suburbs of Toronto. The existing residential densities of tower neighbourhood provide the necessary ridership levels to support the development and operation of higher-order forms of transit; in addition, the benefits of existing built form of larger rights-of-way also facilitate the introduction of dedicated lane transit systems.

These value added benefits would increase the desirability of tower neighbourhoods, increase land values, and in turn attract greater attention from private investors. (E.R.A. Architects; University of Toronto, 2008; Hulchanski, 2007)

4.1.2 City of Toronto Policy Framework

Official Plan Policies:

Toronto's 2010 consolidated Official Plan provides direction in *Section 4.2 - Apartment Neighbourhoods* on future development growth standards for the City's established neighbourhood apartment tower stock, which aligns with the directives of the Growth Plan's proposal for increased densities, and the Tower Renewal initiative's proposal for introducing additional amenities and services. The plan stresses that approximately half of available dwelling units in Toronto are accounted for in this designation, and these areas require a significant infusion of investment and improved amenities and services.

The plan states in Section 4.2, that "built up apartment neighbourhoods are stable areas of the City where significant growth is generally not anticipated", but there are "opportunities for additional townhouses or apartments on underutilized sites and this Plan sets out criteria to evaluate these

situations" (City of Toronto, 2010, pp. 4-5). These evaluating principles are set out in *Section 4.2.2 & Section 4.2.3 – Development Criteria in Apartment Neighbourhoods,* which read:

4.2.2 *Development in Apartment Neighbourhoods will contribute to the quality of life by:*

- *a) locating and massing new buildings to provide a transition between areas of different development intensity and scale*
- *b) locating and massing new buildings so as to adequately limit shadow impacts*
- *f) providing indoor and outdoor amenity spaces*
- *g) providing ground floor uses that enhance the safety, amenity and animation of adjacent streets and open spaces*

4.2.3 *Significant growth is generally not intended within developed Apartment Neighbourhoods. However, compatible infill development may be permitted on a site containing an existing apartment that has sufficient underutilized space to accommodate on or more new buildings while providing good quality of life for both new and existing residents. Infill development that may be permitted on a site containing an existing apartment building will:*

- *b) provide existing residents with access to the community benefits where additional height and/or density is permitted and community benefits are provided pursuant to Section 5.1.1 (height and/or density incentives) of this Plan*

(City of Toronto, 2010, pp. 4-6)

Reviewing the Official Plan policies, it is apparent that future infill development within apartment neighbourhoods is contingent on ensuring that all building activities benefit existing residents by providing new amenities and services. Infill should be sympathetic to the on-site and surrounding built form where the intensity and scale of the development transitions between high and low density forms of development – namely single family dwelling to high density towers.

In addition to development standards, the Plan also allows, through the passing of zoning by-law amendments, granting height and/or density increases for in-kind or cash-in-lieu contributions for community benefits, which are outlined in *Section 5.1.1 – Height and/or density incentives*, which reads:

5.1.1 ***Height and/or density incentives:*** *City can pass a zoning by-law to grant a height and/or density increase for a particular project that is greater that is greater than the zoning by-law would permit in return for community benefits such as: additional parkland, non-profit arts, cultural, community or child care facilities, public art, conservation of heritage buildings, transit improvements and purpose built rental housing.*

(City of Toronto, 2010, pp. 5-1)

Hypothetically, if private investment for infill activities is attracted to apartment tower renewal sites located in inner-ring suburbs an opportunity presents itself to capture a portion of uplift values gained through Section 37 contributions, and re-direct those funds to fund the introduction of public services and amenities to tower neighbourhoods. Allowing infill development could create direct and tangible benefits for a community.

Section 37 contributions could be secured on an ad-hoc basis as infill development occurs. Alternatively, the creation of area specific policies for specific apartment tower neighbourhood designations or Secondary Plans could be implemented to better manage the contributions, ensure that the community needs are mapped and assessed at an early stage prior to development, and provide greater transparency to the community of the benefits they are to (or should) receive. This would equally grant a greater degree of power to the City to acquire contributions, as is explained in Section 5.1.1.5, which reads:

> ***1.1.1.5*** *Despite Policies 3 and 4, Section 37 may be used, irrespective of the size of the project or the increase in height and/or density: c) where Secondary Plan or area specific policies in this Plan contain Section 37 provisions that prevail.*
>
> (City of Toronto, 2010, pp. 5-3)

Section 5.1.1.6 of the Official Plan outlines capital facility that are acceptable Section 37 contributions – most prevalent to tower projects are listed below – which reads as follows:

> ***1.1.1.6*** *Section 37 community benefits are capital facilities and/or cash contributions toward specific capital facilities, above and beyond those that would otherwise be provided under the provisions of the Planning Act or the Development Charges Act or other statute, including:*
>
> *b) fully furnished and equipped non-profit child care facilities, including start-up funding;*
>
> *c) public art;*
>
> *c) other non-profit arts, cultural, community or institutional facilities;*
>
> *e) parkland, and/or park improvements*
>
> *g) streetscape improvements on the public boulevard not abutting the site*
>
> *i) purpose built housing with mid-range or affordable rents, land for affordable housing, or, at the discretion of the owner, cash-in-lieu of affordable rental units or land*

j) local improvements to transit facilities including rapid and surface transit and pedestrian connections to transit facilities

m) other local improvements identified through Community Improvement Plans, Secondary Plan, Avenue Studies… community service and facility strategies, or other implementation plans or studies.

(City of Toronto, 2010, pp. 5-3)

A key takeaway from Toronto current Section 37 implementation guidelines is the ability to rely on infill development to strengthening apartment neighbourhoods, through cash or in-kind contributions and the introduction of services. It implies that there is added value in implementing secondary plans or special policy areas to better manage contributions to ensure a positive and direct impact on the subject tower neighbourhoods while also meeting the overall goals of the initiative, provincial, and local plans. Caution needs to be given to the degree and intensity of Section 37 contributions being made by private investors to ensure it does not become a dissuading factor. A balance must be achieved.

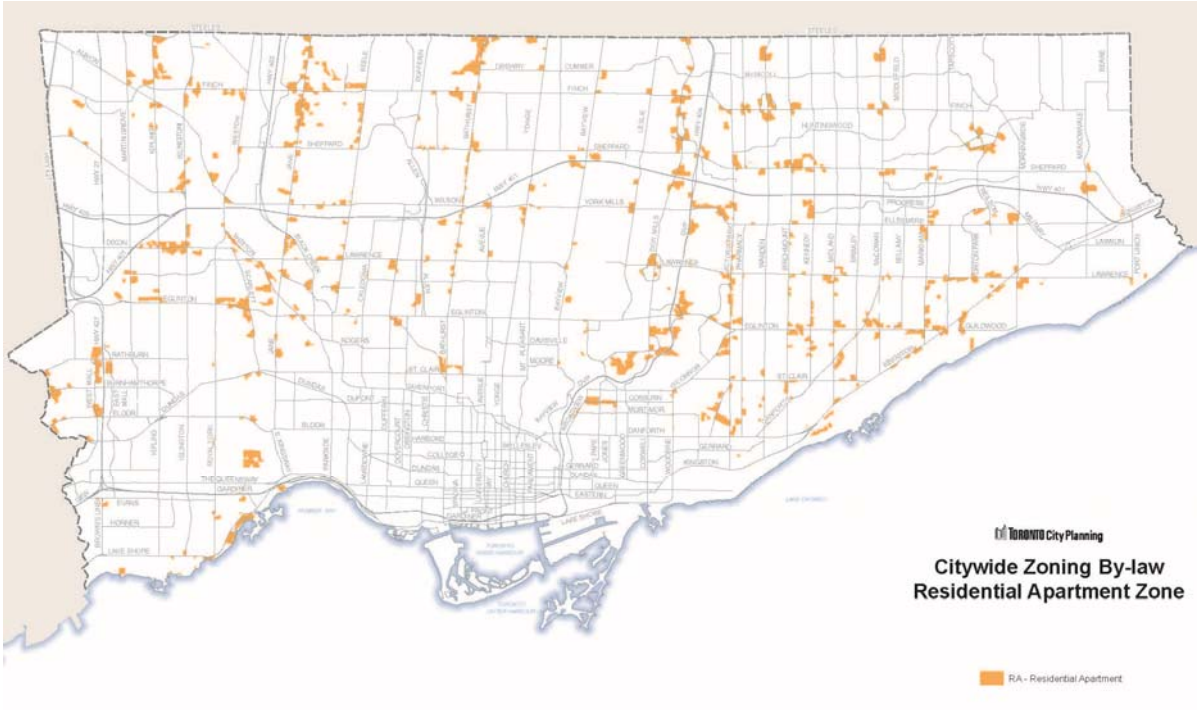
City of Toronto Zoning By-law 569-2013: Residential Apartment Commercial

During the development of Toronto's consolidated zoning by-law 569-2013, city staff worked closely with the Centre for Urban Growth and Renewal (CUG+R) and United Way Toronto to develop a more permissive zoning category for existing apartment tower neighbourhoods – currently zoned Residential Apartment (RA) – that would permit as-of-right commercial and service based uses. The newly created Residential Apartment Commercial (RAC) zone seeks to: "support as-of-right low-impact mixed uses within Apartment Neighbourhoods, such uses as small shops, farmers markets, small-scale institutions, and community services, which are common in many traditional Toronto neighbourhoods yet have been prohibited in most Apartment Neighbourhoods to date…" (E.R.A. Architects, 2012; City of Toronto, 2010). Refer to Appendix A: 'RA' & 'RAC' As-of-Right Uses (ZB 569-2013), for a complete list of all as-of-right uses.

A review of existing zoning maps for RA zone classifications indicates there are currently no sites within the city that are zoned RAC, as seen in Figure 9. As a result implementation will require zoning by-law amendments. Implementation of the RAC zone is slated to begin in spring of 2014, where a series of

public meetings are to be held to hear what the vertical neighbourhoods of Toronto foresee and desire for their communities (Stewart, 2014).

Figure 9: City of Toronto Residential Apartment Zone (City of Toronto, 2010)



Stewart (2014) points out that the implementation of the RAC zone in Toronto is an initial and key step in meeting the Tower Renewal initiatives. It is the impetus to kickstart the program by allowing a greater mix of uses that will close the existing service provision and commercial amenity gap that are currently prohibited in the current RA zone. To display the potential benefits infill may bring, E.R.A. Architect will assist the City of Toronto in its implementation of the RAC zone by displaying conceptual demonstration projects during the community stakeholder meetings.

Notwithstanding the progress being made, there is a limitation to the RAC zone in the City of Toronto zoning by-law 569-2013. Under Section 15.20.20.100 Conditions, heavy restrictions are placed on the allowable floor space for an ancillary building committed to community services and commercial uses on a site zoned RAC. This could deter investors and developers due to the lack of development flexibility

Greater coverage and densities could be reached – and in turn greater profit margins – if the lot were to be severed, and rezoned to a more permissive zone classification. Considering the great infill potential within these sites, lands severed for redevelopment under Section 51(24) of the Planning Act, could be rezoned to medium density residential zones (RT & RM), or single or mixed use commercial zones (CL, CR), maximizing the level of services provided.

Redevelopment of these sites can become increasingly complex as uses are introduced and new lots are created. As such, these development proposals should be revised as a whole (Consent, OPA, ZBA, Site Plan) to ensure the project fits into the surrounding context and that the new activities on site function in synergy.

Additional Planning Tools to Secure Needs

In meeting the Tower Renewal initiatives, private investors need to be present and actively involved. Ultimately, they will seek a specific project return that is viable and meets their investment objectives. In tandem to this, the City of Toronto recognizes that many apartment neighbourhood clusters require significant investments to introduce community based amenities and services, and tower owners recognize that their structures require significant investments in increasing utility efficiencies. All three stakeholders have a specific 'want and need' if they are to move forward with development activities. Therefore it is crucial that all interests be placed on the table during discussions to ensure that the process can be negotiated with ease, that desires are transparent, and that agreements are secured to ensure implementation. Figure 10 summarizes tools available in the Planning Act in securing City identified needs for the community in question.

Figure 10: Planning Act tools to secure investments and needs (MMAH, 1990)

TOOL	SECTION		SECURITY
Density Bonusing	37 (1)	The council of a local municipality may, in a by-law passed under section 34, authorize increases in the height and density of development otherwise permitted by the by-law that will be permitted in return for the provision of such facilities, services or matters as are set out in the by-law.	Toronto can secure cash-in-lieu or in-king contributions from the total uplift in value accrued through the zoning of a severed parcel.
Holding provision by-law	36 (1)	The council of a local municipality may, in a by-law passed under section 34, by the use of the holding symbol "H" (or "h") in conjunction with any use designation, specify the use to which lands, buildings or structures may be put at such time in the future as the holding symbol is removed by amendment to the by-law.	A holding provision could be placed on a property slated for future infill, requiring as a condition of lifting the 'H' symbol that a specific use be introduced on site (e.g. a community centre, formal park, arts and cultural gallery space)
Powers of the Committee	45 (9)	Any authority or permission granted by the committee under subsections (1), (2) and (3) may be for such time and subject to such terms and conditions as the committee considers advisable and as are set out in the decision	The Committee of Adjustments has the power to place conditions on the approval of a minor variance, which could entail a cash-contribution for increased density.
Consents – Powers	53 (12)	A council or the Minister in determining whether a provisional consent is to be given shall have regard to the matters under subsection 51 (24) and has the same powers as the approval authority has under subsection 51 (25) with respect to the approval of a plan of subdivision and subsections 51 (26) and (27) and section 51.1 apply with necessary modifications to the granting of a provisional consent	Is permitted to place the same types of conditions as a plan of subdivision on the approval of a conveyance, providing an avenue to secure a specific need for the community.

4.2 FINANCING OPTIONS REVIEWED FOR APARTMENT RENEWAL

Renewing apartment structures for increased efficiencies alone is a capital heavy endeavour that requires between $25,000-$45,000 per unit that is likely to cost several million dollars per building (E.R.A. Architects, 2010; Morrison Park Advisors, 2010). Considering approximately 67% of the apartment tower stock in Toronto is privately owned (85% in the GTHA) an attractive financing strategy with an acceptable rate of return must be integrated to encourage private investments. Given the current Provincial financial climate, financing projects through provincial grants and subsidies is unrealistic. As a result, the City has directed its financing strategy to rely predominantly on the City's ability to assist owners in financing projects through its borrowing powers, and its ability to place liens on properties. (Morrison Park Advisors, 2010).

4.2.1 Owner Financing Options

The capital tower apartment owners have at their disposal is typically tied up as equity. Freeing up this resource would require a new or additional mortgage or an unsecured form of financing. If owners want to invest their own capital or equity, an acceptable rate of return is applied as a benchmark, where anything below is rejected.

The limited ability for building owners to raise rents – as imposed by the Residential Tenancies Act and rates contingent on the market conditions of apartment tower neighbourhoods in Toronto – also restricts their ability to raise substantial capital funds to re-invest into their apartment tower (Morrison Park Advisors, 2010). Relying on tower owners to undertake unassisted capital heavy expenditures may result in no action being taken.

Accordingly, owners may be more open to investing in such improvements if they acquired a significant infusion of capital to reduce the overall payback period of the investment to a range more palatable to their investment needs.

4.2.2 Government Based Financing

Municipalities wishing to participate in the tower renewal program already understand the long-term benefits it will bring; however, pre-existing operational and capital budget obligations limit borrowing capacities. As such, the city of Toronto does not have the capacity to finance apartment tower renewal projects within its jurisdiction, where a commitment of well over $2 billion dollars would be required for improved building efficiencies alone, without taking the costs of improved community services and amenities into account (Morrison Park Advisors, 2010).

Direct government financing, however, has the capacity to fund projects without placing too much burden on owners and the city. The funding required for building improvements could be reached over the life of the apartment renewal project by borrowing money from capital markets – namely those in the United States which see Canadian municipal holdings as very desirable given their high yields and excellent credit ratings, especially those with maturities of 30 and 40 years (Hanniman, 2013). However, concerns that the city undertaking borrowing options would be fully liable for the additional debt burden, without any forms of security to assure repayment from owners could inflate the interest rates of the loan due to the risk of defaulted payments by tower owners.

Given that borrowing is the most viable means of securing funds for the apartment tower renewal initiative, additional securities must be implemented to make financing more resilient and robust, while ensuring the city does not undertake expenditures with unnecessary risk on their financial health.

4.2.3 Municipal Forms of Security

Lenders typically prefer secured forms of loans, such as mortgages, as they provide greater reassurance and powers to recoup some or all of their invested capital by seizing and selling the owner's asset(s) if a default occurs.

If the City is to assist tower owners in providing direct financing at a lower interest rate, greater investment security will be required if lenders are to provide the necessary funds at the appropriate

interest rate, and more reassurance and flexibility to the owners will need to be provided if owners are to participate (Morrison Park Advisors, 2010).

Property based obligations

Property taxes are the most significant and secure source of revenue for municipalities. Revenues are secured through a "property lien" status, permitted under Ontario Regulation 594/06 (Ministry of Municipal Affairs and Housing, 2006). This ensures that when tax payments are defaulted, the amount is linked to the property itself (Kitchen, 2002).

With a minor amendment to the permissions set out in O. Reg. 594/06, an opportunity is created to utilize property liens to secure tower renewal investments made by the City. By providing property liens to any capital investment made by the city for Tower Renewal purposes provides a method for the city to enforce repayment. In the event of a defaulted payment, the investment could be recuperated with far greater ease, bolstering security. This approach is more acceptable to tower owners comparatively to unsecured financing and taking on a second mortgage, as the risk of losing their asset due to defaulted payments is greatly reduced and payment flexibility is improved.

4.2.4 Morrison Park Advisors' Recommended Approach: Credit-Enhanced Capital Pool

Morrison Park Advisors (2010) recommended that the city create a credit-enhanced capital pool that would be funded primarily through the issuance of bonds from the capital markets and secured through an extension of the existing O.Reg. 594/06.

In order to enhance the credit ratings of the bonds issued from the capital market that are to be infused into the capital pool, the City would need to "over-collateralize" the funds by providing a temporary contribution of 3%-10% of the total expected cost of the projects, which would have a far lesser impact on the City's budget in comparison to full financing. Contributions to the fund can also be incrementally added over the timeline of the project or program, reducing the overall impact to the City's budget (Morrison Park Advisors, 2010).

4.2.5 City of Toronto Hi-RIS Program:

In waiting for the creation of the City of Toronto Renewal Corporation and the associated amendment to O. Reg. 594/06, Toronto established the High-Rise Retrofit Improvement Support Program (Hi-RIS), a three year pilot program established in July of 2013, to assist multi-residential property owners fund tower specific improvements for energy and water efficiency, and conservation improvements. Altogether, city Council has approved a $10 million funding envelop (capital bank) to help finance improvement, aimed to capturing a target of 10 buildings (City of Toronto, 2014).

The program was made possible through an amendment to provincial regulation regarding local improvement charges to allow for municipalities to advance funding to participating property owners to cover the initial improvement costs, and be repaid over a pre-determined amortization period of the load through a property lien agreement, plus the cost of borrowing and administration services from the City. The term can range between 5 to 10 years terms, which reflect the useful life of the improvement (City of Toronto, 2014). The financing arrangement are summarized in Figure 11 below.

Ultimately the program is a mirror image of the program Morrison Park Advisors is proposing, where the sole difference is that it is managed by Tower Renewal staff.

Figure 11: Hi-RIS Program Charge Calculation (City of Toronto, 2014)

Funding Amount	Must be below 5% of total building value	
Cost of Borrowing	5 years	2.5 %
	10 years	3.75 %
	15 years	4.25 %
	20 years	4.50 %
Administrative Charge	Multi-residential administrative charge of 0.8%	

4.3 MEETING THE APARTMENT TOWER GOALS:

The availability of underdeveloped lands within inner suburb tower neighbourhoods presents a distinct redevelopment opportunity for developers and investors. An influx in private-sector investments could enhance these neighbourhoods greatly as envisioned in the initiative.

The current financing model recommended by Morrison Park Advisors, and the application of the current Hi-RIS program have been specifically designed to meet the objective of increasing building sustainability, and less so the other initiatives proposed by the tower renewal initiative. Presently, the implementation of the financing model is at a standstill, presenting an opportunity to undertake a second review of additional financing strategies to fund the other plan objectives.

A strategy that deserves attention by Morrison Park and Advisors and the Tower Renewal department of the City, consists of leveraging the available underutilized land assets through conveyances to the public and private market, as an additional source of revenue to fund tower specific renovations, and reducing the overall payback period of loans. Recall that on average, these modernist towers sit on lots averaging one hectare in size (2.47 acres) with an average site coverage of 11%, providing a significant amount of land for infill (E.R.A. Architects, 2010). The benefits of this are two-fold, as the amount to finance from the building owner's perspective is reduced, in turn reducing strains on the, albeit proposed, Tower Renewal Corporation capital pool that relies on market bonds.

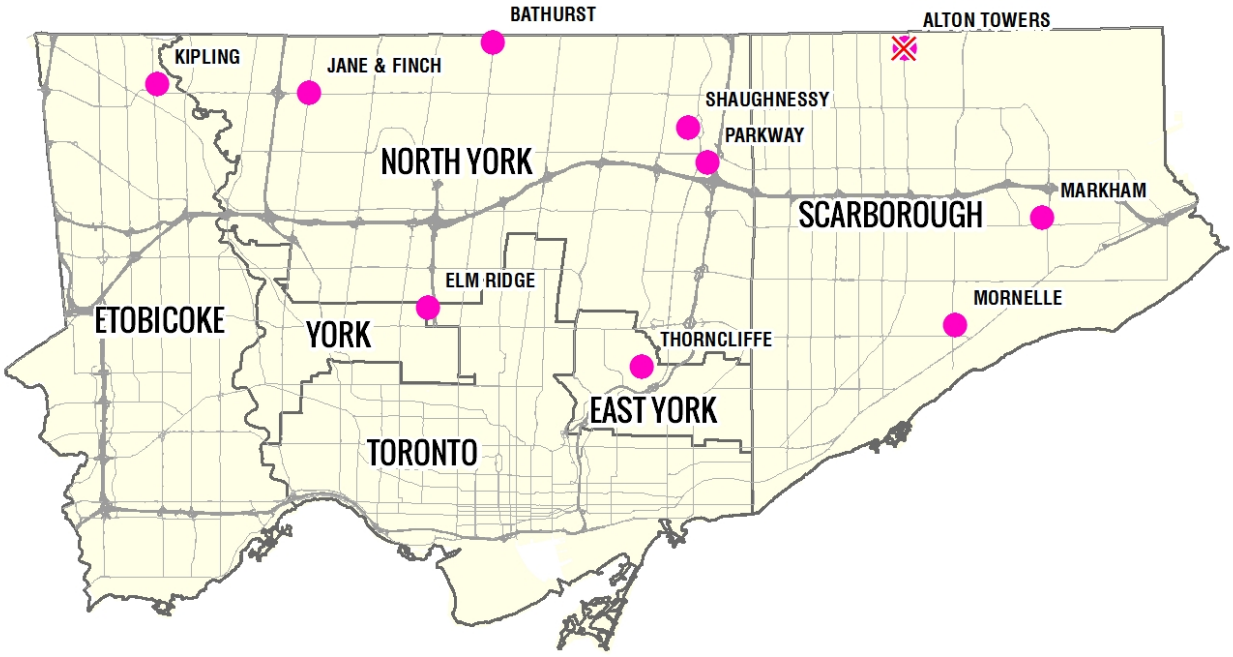
With the newly introduced Residential Apartment Zone (RAC) – ZBL 0569-2013 – that allows for commercial uses and public services within apartment tower sites, the stage is set for the inclusion of mixed-use activities within Toronto's inner-suburbs.

Conveyance of lands for infill activities provides the opportunity to introduce a mix of market housing, subsidised housing, and additional rental units for different life-stages on the tower site. With the potential for new infill projects, land value capture tools such as Section 37 contributions could be used to secure added revenues derived from the amendment to the new RAC zone, and direct funds to introducing major social/amenity projects in or near the apartment neighbourhood.

5.0 Site Reconnaissance Findings and Observations

A total of 10 clusters were pre-selected prior to site visits and are shown below in Figure 12. As mentioned in the methodology section, the clusters were spatially distributed across the inner suburbs of Toronto, whereby one cluster in each former municipality was identified, save for Toronto proper. Of the 10 clusters, Alton Tower was omitted as it consisted of a condominium cluster, and was no longer an apartment site eligible for the Tower Renewal initiative. Appendix B presents all collected information for each cluster.

Figure 12: Cluster Locations within the City of Toronto




Parkway


Markham


Kipling


Shaughnessy


Elm Ridge


Jane & Finch


Bathurst


Mornelle


Thorncliffe

5.1 RECONNAISSANCE FINDINGS

5.1.1 Community and Commercial Amenities

From the clusters that were observed, several had community and commercial amenities on site, and an even greater instance where these same services were provided within a 250 metre walking distance from the site. Figure 13 below provides a summary of amenities that were identified during site visits and further site-by-site research. A more detailed view is provided in Appendix B of the present report.

Figure 13: Cluster Findings – Amenities

	Use	Type	1. PARKWAY	2. MARKHAM	3. KIPLING	4. SHAUGHNESSY	5. ELM RIDGE	6. JANE & FINCH	7. BATHURST	8. MORNELLE	9. THORNCLIFFE
Non Residential Uses on-site	Community Centre	INSTITUTIONAL	●		●		●	●			●
	Daycare	COMMERCIAL/ INSTITUTIONAL		●	●		●	●	●	●	
	Convenience Commercial	COMMERCIAL		●		●	●			●	●
	Convenience Retail	COMMERCIAL									●
	Personal Service Shop	COMMERCIAL					●				
	Grocery Store	COMMERCIAL					●				
	Open space	INSTITUTIONAL	●	●	●	●	●	●	●	●	●
	Park Structure	INSTITUTIONAL	●	●	●		●	●	●	●	
	Underground Parking	PARKING		●		●	●	●	●	●	●
	Structured Parking	PARKING									
	Surface Parking	PARKING	●	●	●	●	●	●	●	●	●
Non Residential Uses off-site	Commercial Mall	COMMERCIAL	●	●	●	●		●	●		●
	Community Centre	INSTITUTIONAL	●		●			●			●
	Daycare	INSTITUTIONAL	●	●	●	●		●			
	Medical	COMMERCIAL	●	●	●			●	●	●	
	Convenience Commercial	COMMERCIAL	●	●	●		●	●	●	●	●
	Convenience Retail	COMMERCIAL		●		●	●	●	●		●
	Personal Service Shop	COMMERCIAL	●	●	●	●	●	●	●		●
	Grocery Store	COMMERCIAL	●	●	●	●	●	●	●	●	●
	Park	INSTITUTIONAL	●		●	●	●	●	●	●	●
	Park Structure	INSTITUTIONAL	●		●	●	●	●	●		●
	School	INSTITUTIONAL	●	●	●	●		●	●	●	●

The presence of these uses does not preclude the fact that additional community and/or commercial amenities, or an expansion, could not be supported and welcomed in the community. In fact, given the findings of current urban tower challenges, there is a great need of additional social assistance. Secondly, there is also opportunity to introduce commercial uses that better cater to the residents in

closer and more accessible distances. Both of these assertions are supported by the initial community consultations that the Miller administration undertook in assessing community needs (Phibbes, 2014).

The following observations were made of the current availability of amenities:

Social/Community Amenities:

I. The quality of on-site community centres and daycares structures appeared to be in disrepair, warranting significant investment in retrofits, renovations, or replacement
    a. uses in community centres were predominantly for child services, such as day and summer camps

II. Community centres found within close proximity to the site offered a greater variety of community based services (e.g. daycares, community space, ESL programs) and recreational amenities, and appeared in better physical conditions.

III. In almost all instances, an elementary or secondary school site was located within a 250 metre distance of the cluster and provided programmed and maintained open space

IV. Exterior open spaces were present in vast quantities on all sites, however, further observations showed that they were:
    a. inaccessible to other towers and from the street and were fenced
    b. significant pooling of water rendered the open space un-usable for play
    c. open spaces were rarely programed, and if they were, a central play structure was the only programmed amenity, and pools appeared condemned and unmaintained
    d. a lack of pathways connecting the open spaces to the tower and surrounding destinations (such as commercial clusters or bus stops)
    e. There were many instances where spaces were perceived as unsafe, as there was little visibility from the street
    f. Overall, the open spaces were underutilized and served more as a grassed landscaped area. The reduction in this form of space would, arguably, be of little loss to the community. Observations affirmed the findings of the research surround apartment tower challenges.

V. There was an abundant amount of parking located on site – almost all sites provided underground parking, and all sites had access to surface parking pads. The surface parking pads were underutilized, and were not full.

Commercial Amenities:

I. A total of 4 apartment tower sites included an ancillary convenience commercial use located within the ground floor of the tower, housed within the shell of a former residential unit.

II. The Elm Ridge cluster provided an array of commercial uses within a ground floor podium of 145 Marlee Avenue. The commercial space was purpose built, and resembles a single story strip commercial plaza – refer to section 5.2.1

III. In all instances, selected tower clusters were located near a major commercial mall, commercial strip plazas, or a combination of both. They offered a range of area specific amenities, such as ethnic food restaurants or grocery stores.

IV. All apartment clusters had a national chain grocery store (e.g. No Frills, Sobeys, Metro, Food Mart, Target, and Food Basics) located within a 250 meter walking distance to the site .

Although a number of community and commercial amenities were available within a very reasonable walking distance from the clusters, the pedestrian experience travelling to these spaces were less than favourable as access was a considerable issue. These clusters are in auto-dominant areas where little investments have been made to enhance pedestrian safety, experience, and connectivity.

Introducing new community and commercial amenities on-site provides the opportunity for non-drivers to access their daily needs in a safe, proximate, and accessible area. Moreover, given the above average densities, community and commercial activities will have a user base on site that can more than sustain their operations.

5.1.2 Land Value Assessment

To enhance the accuracy of the development *proforma*, data pertaining to all observed tower's revenue generation and operation expenses were estimated (as per the methodology outlined in Section 2.3, in the Site Specific Valuations: subsection). A total of 35 tower structures were reviewed to evaluate their respective ***residual land values***, and whether that value was substantial enough to fund tower specific improvements.

The results are summarized in Figure 14 to Figure 17 found between pages 52 to 53, and supported by the key findings below. For an expansive view of all the collected and analysed statistics, refer to Appendix C: Net Operating Income & Land Residual Cost Analysis.

Findings:

I. Average lot sizes of all 35 towers were approximately 1.489 hectares in size (3.679 acres), of which the built structures on site covered a mere 10.08% of the lands. An average 1.339 hectares (3.308 acres) of underutilized land per lot was available for infill.
    a. Note: the above total includes existing parking pads and internal laneways. If tower owners do not wish to reconfigure their lots to maximize surplus lands, using E.R.A. Architects' (2008) estimate of 30% total lot coverage would be a more conservative estimation. The applied ratio is dependent on the level of revitalization desired.

II. Based on Colliers International Cap Rate Report (2013), multi-residential unit buildings in City of Toronto have a capitalization rate of 3.75% (low) to 4.75% (high). Lower capitalization rates equate to higher sale values for the asset being sold. Altogether, the stronger and safer the market is, the lower capitalization rates. Comparatively to the Greater Toronto Area, which Colliers International apartment market trends report (2014) provided a cap rate of 5.05%, a 30 bps to 130 bps (bps = base points) differential.
    a. Between 2004 and 2013, the cap rates for apartment structures within the GTA have dropped from 7.25% to 5.05%, whereas in city of Toronto, they have remained relatively stable. This indicated that the value of multi-residential high-rise apartments are

increasing in value within the GTA (Toronto specific values were not available for review).

III. Net operating income calculations of all 35 observed towers have shown that:

a. Average yearly gross revenues are estimated at $3.34 M, or $144.54 a square metre;

i. Note if commercial uses were present, their contributions to the tower's overall revenue stream were not calculated, and were assumed to be at the same rate as residential units. 145 Marlee Avenue was removed from the averages as is was identified as an outlier, given it had a sizable purpose built ground floor commercial podium.

b. Utility costs are estimated to be on average $459,000 a year, or $16.07 a square metre;

c. Yearly maintenance costs were estimated at 40% of total yearly revenues, and constituted the highest operating costs, averaging $1.34 M per building, or $57.82 per square metre.

d. Average yearly tax rates are valued at 1.91%, which equated to an average expenditure of $429,724, or $16.26 per square metre; and,

e. The average Net Operational Income of a building was estimated at $1.11 M, or $54.33 per square foot.

IV. In comparing the capitalized value of the observed site to MPAC's property assessment, it was discovered that:

a. When using a lower capitalization rate of 3.75%, save for the Elm Ridge cluster, every tower cluster had a negative average land residual value. Furthermore, only 6 tower sites had a residual value above $0.00. A stronger market equates to lower land value, as the structure is a more desirable investment.

b. When using a higher capitalization rate of 4.75%, five of the nine observed clusters had a negative average land residual value. Furthermore, a total of 16 sites had a residual land value greater than $0.00. A weaker market equates to higher land value, as the structure is slightly less desirable as an investment.

Notwithstanding what capitalization rate is applied to assess the residual value of surplus tower lands, there is a great deal of value that can be extracted from surplus underutilized lands. When applying a low capitalization rate to apartment structures, the value of residual land become negative, asserting that the value on site is in fact the apartment tower. Rezoning would be required to extract a viable capital value to surplus lands by increasing permitted densities and offering a wider range of uses. The inverse is true when applying a higher cap rate to apartment structures, giving land greater value, opening the possibility to sell conveyed lots as-is for a profit, which can be later rezoned for infill activities. Whatever uplift value is applied to assessing the residual land values, the uplift from amending the as-of-right zoning to a more intensive and permissive zone are identical.

Lessons Learned

From the findings, two key takeaways were identified from the study, and transferred to the development *proforma* phase of this study.

First and foremost, the residual land values of tower sites are either non-existent or marginal – depending on the cap rate applied in assessing their values – and will continue to decline as cap rates continue to drop for multi-residential apartments in the GTA, while acknowledging the fact that lower capitalization rates suggest higher market value for tower apartments. In either scenario, rezoning for higher density will be required if a portion of the property is to be severed and be sold on the public or private market.

Secondly, building maintenance costs is unquestionably the highest operational expenditure to an apartment building owner. If a building owner were to properly upkeep their tower through appropriate maintenance schedules, this will be capitalized in their building's overall value when MPAC assesses the structure. Following maintenance schedules also ensure that building utility efficiencies will be held to a higher standard, further reducing their total operational costs. If an owner opted to expend additional revenues to further increase efficiencies in their building above the norm savings in utility costs would be capitalized in the building's overall value, as the total NOI of the building would increase. There is an

undeniable advantage for an owner to invest in the efficiency of their tower, and it is accepted that there is an appetite from tower owners to invest in efficiency improvements aimed at reducing overall utility costs if a proper return is present. This was asserted in the context of Toronto when Pine's (2014) tower renewal team conducted interviews with tower owners, and by the Institute for Building Efficiencies in their 2010 and 2013 surveys aimed towards residential building owners.

In instances where owners continually defer scheduled maintenance on their buildings, this shortfall in management will be capitalized in the buildings overall value as MPAC reassesses the property, and utility rates continue to rise due to reduced efficiencies. Differing maintenance on apartment structure is to the detriment of the owner, as it ultimately affects their bottom-line.

If rezoned, surplus lands have the potential to fund tower specific improvements aimed at reducing utility costs, and funding ongoing or deferred building maintenance.

Figure 14: Cluster Findings – Net Operating Income

						REVENUES		UTILITY + MAINTENANCE		TAX ASSESSMENT		NOI
Clusters		Towers	Hectares	Surplus Lands	GFA (m2 total)	Monthly Revenue	Yearly Revenue	Utility Costs	Maintenance Costs	MPAC Assessment	Annual Tax Charge	NOI
1	PARKWAY	3	1.307	1.160	25,000	$ 286,653	$ 3,439,840	$ 403,273	$ 1,375,936	$ 20,332,397	$ 388,369	$ 1,272,262
2	MARKHAM	4	1.310	1.149	27,500	$ 219,957	$ 2,639,478	$ 442,952	$ 1,055,791	$ 17,643,125	$ 337,002	$ 803,734
3	KIPLING	3	1.149	1.022	28,333	$ 246,754	$ 2,961,049	$ 456,178	$ 1,184,420	$ 17,857,167	$ 341,090	$ 979,361
4	SHAUGHNESSY	2	1.187	1.069	20,000	$ 177,281	$ 2,127,368	$ 323,926	$ 850,947	$ 15,271,250	$ 291,696	$ 660,799
5	ELMRIDGE	5	1.643	1.228	75,000	$ 195,901	$ 2,350,811	$ 347,476	$ 940,324	$ 19,447,375	$ 371,465	$ 691,546
6	JANE & FINCH	2	2.475	2.315	42,500	$ 325,931	$ 3,911,174	$ 681,012	$ 1,564,470	$ 28,437,250	$ 543,180	$ 1,122,513
7	BATHURST	7	1.181	1.358	23,333	$ 281,896	$ 3,382,749	$ 380,540	$ 1,353,100	$ 23,458,833	$ 448,087	$ 1,201,022
8	MORNELLE	3	1.455	1.289	26,667	$ 229,356	$ 2,752,271	$ 429,729	$ 1,100,908	$ 15,564,167	$ 297,291	$ 924,342
9	THORNCLIFFE	6	1.698	1.465	52,500	$ 539,966	$ 6,479,594	$ 667,771	$ 2,591,838	$ 44,465,250	$ 849,331	$ 2,370,654
	AVERAGES	**35**	**1.489**	**1.339**	**35,648**	**$ 278,188**	**$ 3,338,259**	**$ 459,206**	**$ 1,335,304**	**$ 22,497,424**	**$ 429,724**	**$ 1,114,026**

Figure 15: Cluster Findings – Land Residual Calculations

						NOI	CAP VALUE		RESIDUAL LAND VALUE (cap rate)			
Clusters		Towers	Hectares	Surplus Lands	GFA (m2 total)	NOI	3.75% Cap. Value (low)	4.75% Cap. Value (high)	Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
1	PARKWAY	3	1.307	1.160	25,000	$ 1,272,262	$ 33,926,982	$ 28,272,485	-$ 13,594,585	-$ 11,894,325	-$ 7,940,088	-$ 6,962,263
2	MARKHAM	4	1.310	1.149	27,500	$ 803,734	$ 21,432,894	$ 17,860,745	-$ 3,789,769	-$ 3,354,562	-$ 217,620	-$ 235,623
3	KIPLING	3	1.149	1.022	28,333	$ 979,361	$ 26,116,299	$ 21,763,582	-$ 8,259,132	-$ 8,176,651	-$ 3,906,416	-$ 3,904,262
4	SHAUGHNESSY	2	1.187	1.069	20,000	$ 660,799	$ 17,621,296	$ 14,684,413	-$ 2,350,046	-$ 2,653,716	$ 586,837	$ 174,995
5	ELMRIDGE	5	1.643	1.228	75,000	$ 691,546	$ 18,441,221	$ 15,367,684	$ 1,006,154	n.a.	$ 4,079,691	n.a.
6	JANE & FINCH	2	2.475	2.315	42,500	$ 1,122,513	$ 29,933,673	$ 24,944,727	-$ 1,496,423	-$ 636,869	$ 3,492,523	$ 1,647,931
7	BATHURST	7	1.181	1.358	23,333	$ 1,201,022	$ 32,027,263	$ 26,689,386	-$ 8,568,430	-$ 5,402,036	-$ 3,230,553	-$ 1,489,851
8	MORNELLE	3	1.455	1.289	26,667	$ 924,342	$ 24,649,122	$ 20,540,935	-$ 9,084,956	-$ 5,425,021	-$ 4,976,769	-$ 2,466,949
9	THORNCLIFFE	6	1.698	1.465	52,500	$ 2,370,654	$ 63,217,450	$ 52,681,208	-$ 18,752,200	-$ 8,815,297	-$ 8,215,958	-$ 2,712,978
	AVERAGES	**35**	**1.489**	**1.339**	**35,648**	**$ 1,114,026**	**$ 29,707,355**	**$ 24,756,130**	**-$ 7,209,932**	**-$ 5,794,810**	**-$ 2,258,706**	**-$ 1,993,625**

Figure 16: Cluster Findings – Net Operating Income per Square Metre

TOTAL AVERAGES PER SQUARE METRE — REVENUES — UTILITY + MAINTENANCE — TAX ASSESSMENT — NOI

	Clusters	Towers	Hectares	Surplus Lands	GFA (m2 total)	Monthly Revenue	Yearly Revenue	Utility Costs	Maintenance Costs	MPAC Assessment	Annual Tax Charge	NOI
1	PARKWAY	3	1.307	1.160	25,000	$ 12.05	$ 144.54	$ 16.13	$ 57.82	$ 851.33	$ 16.26	$ 54.33
2	MARKHAM	4	1.310	1.149	27,500	$ 8.00	$ 96.00	$ 16.11	$ 38.40	$ 640.69	$ 12.24	$ 29.26
3	KIPLING	3	1.149	1.022	28,333	$ 8.73	$ 104.71	$ 16.10	$ 41.88	$ 639.19	$ 12.21	$ 34.51
4	SHAUGHNESSY	2	1.187	1.069	20,000	$ 8.86	$ 106.37	$ 16.20	$ 42.55	$ 763.56	$ 14.58	$ 33.04
5	ELMRIDGE	5	1.643	1.228	75,000	$ 9.48	$ 113.78	$ 16.45	$ 45.51	$ 912.55	$ 17.43	$ 34.38
6	JANE & FINCH	2	2.475	2.315	42,500	$ 7.89	$ 94.64	$ 16.04	$ 37.86	$ 697.18	$ 13.32	$ 27.43
7	BATHURST	7	1.181	1.358	23,333	$ 12.10	$ 145.24	$ 16.43	$ 58.09	$ 1,013.12	$ 19.35	$ 51.36
8	MORNELLE	3	1.455	1.289	26,667	$ 8.31	$ 99.69	$ 16.12	$ 39.88	$ 588.60	$ 11.24	$ 32.45
9	THORNCLIFFE	6	1.698	1.465	52,500	$ 10.24	$ 122.83	$ 15.02	$ 49.13	$ 844.51	$ 16.13	$ 42.55
	AVERAGES	**35**	**1.489**	**1.339**	**35,648**	**$ 9.52**	**$ 114.20**	**$ 16.07**	**$ 45.68**	**$ 772.30**	**$ 14.75**	**$ 37.70**

Figure 17: Cluster Findings – Capitalized Value per Square Metre

TOTAL AVERAGES PER SQUARE METRE — TAX ASSESSMENT — NOI — CAP VALUE

	Clusters	Towers	Hectares	Surplus Lands	GFA (m2 total)	MPAC Assessment	Annual Tax Charge	NOI	3.75% Cap. Value (low)	4.75% Cap. Value (high)	Over/Under-valued (low)	Over/Under-valued (high)
1	PARKWAY	3	1.307	1.160	25,000	$ 851.33	$ 16.26	$ 54.33	$ 1,448.87	$ 1,207.39	-$ 598	-$ 356
2	MARKHAM	4	1.310	1.149	27,500	$ 640.69	$ 12.24	$ 29.26	$ 780.14	$ 650.12	-$ 139	-$ 9
3	KIPLING	3	1.149	1.022	28,333	$ 639.19	$ 12.21	$ 34.51	$ 920.37	$ 766.98	-$ 281	-$ 128
4	SHAUGHNESSY	2	1.187	1.069	20,000	$ 763.56	$ 14.58	$ 33.04	$ 881.06	$ 734.22	-$ 118	$ 29
5	ELMRIDGE	5	1.643	1.228	75,000	$ 912.55	$ 17.43	$ 34.38	$ 916.89	$ 764.08	-$ 4	$ 148
6	JANE & FINCH	2	2.475	2.315	42,500	$ 697.18	$ 13.32	$ 27.43	$ 731.49	$ 609.57	-$ 34	$ 88
7	BATHURST	7	1.181	1.358	23,333	$ 1,013.12	$ 19.35	$ 51.36	$ 1,369.61	$ 1,141.34	-$ 356	-$ 128
8	MORNELLE	3	1.455	1.289	26,667	$ 588.60	$ 11.24	$ 32.45	$ 865.26	$ 721.05	-$ 277	-$ 132
9	THORNCLIFFE	6	1.698	1.465	52,500	$ 844.51	$ 16.13	$ 42.55	$ 1,134.61	$ 945.51	-$ 290	-$ 101
	AVERAGES	**35**	**1.489**	**1.339**	**35,648**	**$ 772.30**	**$ 14.75**	**$ 37.70**	**$ 1,005.37**	**$ 837.81**	**-$ 233.06**	**-$ 65.50**

5.2 Development Precedent Case Studies

Two development precedent case studies were selected based on their consistency with the goals and objective of the Tower Renewal Initiative and their level of intensity in site alterations. These precedents will be used to inform low and high build-out concepts and associated development *proforma* scenarios assessing their feasibility. They include:

I. The Elm Ridge cluster, which was selected for its existing commercial podium that houses a number of uses. As such, the low build-out scenario consists of an at-grade podium with commercial and community services that are available to the immediate community.

II. The Parkview cluster, which was selected on the premise that it represents a full-build out concept that was prescribed in the Tower Renewal Initiative. It achieves this by introducing new market and rental housing, ground floor commercial uses, and the construction of a new community centre. Accordingly, the high build-out scenario consists of a full community revitalization, with significant levels of infill activities taking place.

Two apartment clusters identified in the study that could benefit and accommodate infill activities were selected, and are explored in detail in section 6.0 Proposed Development Scenarios of the present report, which include the Kipling (Etobicoke) cluster and the Jane & Finch (North York) cluster.

Figure 18: Selected Development Precedent Case Studies

140 Elm Ridge – Low Build-out (Google, 2014)

Emerald City – High Build-out (Allen, 2013)

5.2.1 Low Build-Out: Nubury Properties Ltd @ 145 Marlee Avenue

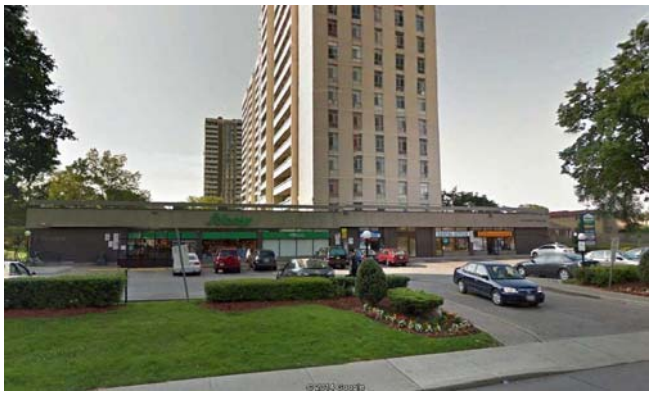
Located at 145 Marlee Avenue in the former municipality of York, this apartment structure has the added advantage of a commercial podium at grade that provides an array of commercial amenities and services to nearby residents (see Figure 19).

The tower has an approximate total of 324 residential apartment rental units, and sits atop a 1,447m^2 commercial plaza with a total of seven commercial retail units – uses include a convenience store, hair salon, dental office, medical clinic, dry-cleaners, and a Sobeys grocery store. A secondary podium to the building houses 715 m^2 community centre/child care centre that houses a recreational space, fitness room, and indoor pool.

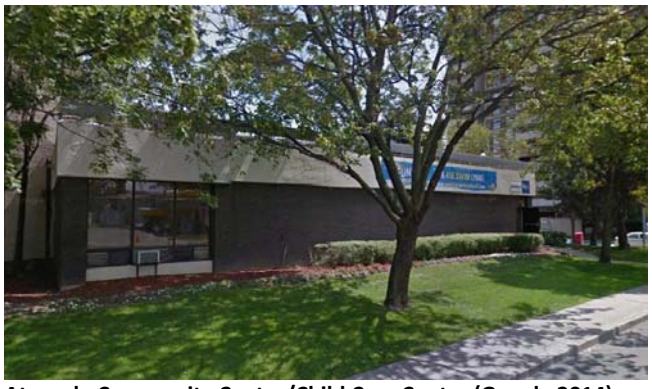
Notable Takeaways

Given the podium's architecture, it is assumed that it was constructed after the tower. A missed opportunity for this would have been to include additional market or rental units on the second floor of the podium. Adding commercial uses within the property also provides the opportunity for an additional revenue stream to owners. Lastly, podiums take very little additional lands, leaving space for future infill activities.

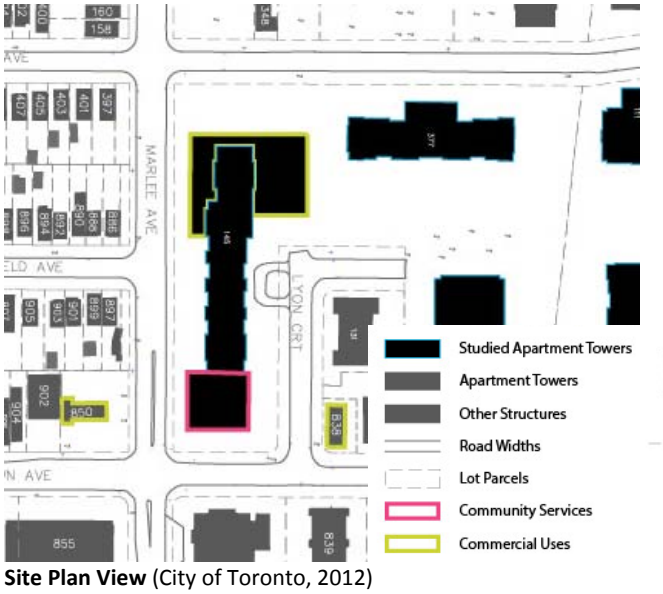
Figure 19: 145 Marlee Street – Nubury Properties Ltd.



At-grade Commercial Plaza Podium (Google 2014)



At-grade Community Centre/Child Care Centre (Google 2014)



Site Plan View (City of Toronto, 2012)

5.2.2 High Build-Out: Emerald City Condominiums @ Parkway Forest Drive

On September 15, 2008, the Ontario Municipal Board approved an Official Plan Amendment (no. 579) and Zoning By-law Amendment (865-2008) to permit the revitalization of lands in the Parkway Forest Community, located south of Sheppard Avenue East and east of Don Mills Road. This included 110 Parkway Forest drive, a tower renewal pilot site of the Tower Renewal Office.

Figure 20: Parkway Forest Drive Community

Predevelopment Site (Allen, 2013)

Proposed Development (Allen, 2013)

The subject development blocks are designated as "mixed-use area" under the current Toronto Official Plan, and zoned "residential multiple (6)" under the consolidated zoning by-law. The current approved zoning allows for a total of 3,753 residential units (within structure ranging 7 to 36 storeys in height) with commercial component (solely in Block A), consisting of 2,200 new dwelling units, 1,221 existing rental apartment units, and the demolition and replacement of 332 rental units – a new amendment to the zoning is seeking an additional 600 units to be distributed among the proposed new development blocks. Commercial uses are permitted in block 'A' of the development, along Don Mills road, which permits retail stores, personal service shops, business and professional offices, professional medical offices, restaurants, financial institutions, dry-cleaning and laundry collecting establishments.

In rendering the approval, the OMB appended within the implementing zoning by-law five holding symbols ('H') to the lands with provisions for their removal as well as a number of Section 37 contributions for the added density within the sites (see Figure 21 for detailed breakdown). Most notable of these contributions included the construction of a new community centre/child care facility,

outdoor swimming pools, the replacement of demolished rental units with a portion to remain affordable, and $1,000,000 provision to the city to support subsidies aimed at affordable rental rates. (City of Toronto, 2008)

Notable Takeaways from Development Proposal

This project clearly demonstrates the development potential of apartment neighbourhoods within the inner-suburbs of Toronto. If development potential exists on site, the private sector will see the opportunity to invest, and the city can in turn draw significant contributions from development activities. In this particular instance, the developer was able to secure between 2,200 – 2,800 new market units and introduce up to 2,143 m^2 of saleable/leasable commercial floor space. From the city's perspective, they were able to secure the revitalization of 332 purpose built rental units, a new community centre/child care centre, community pools, and subsidies using by tools provided in the Planning Act (City of Toronto, 2014). Lastly, from the existing owner's perspective, they were able to secure significant proceeds from the sale of their surplus lands (formerly used as parking pads), and have a sizable contribution towards their overall mortgage payments, towards re-investing in their tower to improve utility efficiencies, or addressing items on their deferred maintenance list.

Through a partnership between the City, apartment owners, and private developers, this development achieved the Tower Renewal Initiative's objective and goals of increasing efficiencies, providing community uses, provision of commercial activities, increased employment opportunities, and increased investment in the neighbourhood.

Although not all inner-suburban apartment neighbourhoods have the locational advantage of Parkway Forest Community – adjacent to two major arterial, the Sheppard subway line, and Fairview Mall – a key lesson is that development is feasible on these sites, and that securing city and community interests with the tools made available through the Planning Act is paramount. This also makes a compelling case to introducing higher-order transit spines across these neighbourhoods (as were proposed by Miller's Transit Plan (2008) to bolster the neighbourhood's desirability, spurring private-sector investments.

Figure 21: Parkway Master Plan Development Securities and Contributions

Holding (S.36)		Conditions
H-1	I.	Design and Tendering of the Community Centre/Child Care Centre must be at the building permit stage
	II.	Design and tendering of outdoor swimming pools must be at the building permit stage
	III.	Design of parkland improvements must be completed
	IV.	Submitted a Traffic Management Plan satisfactory to the Director of Transportation services
H-2	I.	Implemented and constructed Traffic Management Plan recommendations
H-3	I.	Community Centre/Child Care Centre must be completed
	II.	Submit Traffic Impact Assessment for a double left turning lane and other improvements to Sheppard Avenue
H-4	I.	Construction of Sheppard Avenue left turning lane plus improvements
H-5	I.	Submit Traffic Impact Study to demonstrate there is adequate transportation capacity to accommodate addition site generated traffic.

Density Bonus (S.37)	Conditions
(i)	Construction of 332 rental replacement units in Phase 1 (229 units) and Phase 3A (103 units)
(v)	Provisions for the delivery of public facilities, whereby the owner agrees to design, construct and provide, at its own costs, a: a) 4,500 square metre recreational centre i. 3,662 m^2 for community recreational purposes ii. 838 m^2 for child care services b) Outdoor pool facility + 525 m^2 ancillary building c) Two (2) fully furnished community agency spaces for community use having a lease of 99 years, renewable upon 25 year periods
(vii)	Provisions for monetary contributions by the owner to the child care centre as follows: a) $170,000.00 for equipment b) $150,000 for capital reserve equipment fund c) $10,000 for moving costs
(viii)	Provisions from owner to provide public art contributions (1%)
(ix) – (xiii)	Provisions for traffic management studies and construction
(xiv)	Provisions for transit improvement: a) Provide direct pedestrian linkage to TTC entrance b) $250,000 contribution for TTC road transit improvements c) Road widening for Bus d) One annual (12 month) subscription to all first purchasers and relocated tenants
(xvii)	$1.7 million development charge credit from the Parks and Recreation component
(xxi)	No less than 332 replacement rental units are to be constructed, whereby a minimum of 119 are to be new affordable rental units.
(xxiv)	Provisions whereby the owner agrees to restrictions on the application to the Ontario Rental Housing Tribunal for any above-Guideline rent increases for the rental replacement units.
(xxvii)	Provision for a special rent supplement contribution whereby the owner agrees to contribute $1,000,000.00 to the City to enable the City to provide rental assistance to facilitate the provision of affordable housing for eligible households residing at the remaining apartment buildings.

Taken from by-law 865-2008 (OMB) (City of Toronto, 2008)

6.0 PROPOSED DEVELOPMENT SCENARIOS

Low and high build-out scenarios were developed using two different types of structure construction, namely concrete slab apartment/condominiums and timber frame mid-rise buildings for their varying construction costs per square metre – values were draw from the Altus Group (2014) Construction Cost Guide.

LOW BUILD-OUT

1. New tower podium with:
   a. Residential (market/rental)
   b. Commercial Retail Units
   c. Commercial Grocery Store
   d. Community Centre

HIGH BUILD OUT

1. New market and or rental housing (mid-rise development)
2. New commercial retail units
3. Mixed-use (mid-rise development)
4. Community Centre amenities

Development Scenario Assessment Guidelines/Rules:

The ability to increase surplus land values within apartment tower sites is highly contingent on the potential sale of market residential units that generate the most revenues. Residential rental units and commercial leasable space do add value, but are difficult to predict. Accordingly, the feasibility of the proposed infill projects will be predominantly focused on market housing sales. As there were no comparable land sales within the study area for residential condominiums, a range of values were assessed to determine the sensitivity of the land values versus the per square foot sale of market residential space, ranging between $300 per square feet (net-zero value) to $600 per square feet (downtown prime rates).

Based on the saleable range of market housing, a development proposal is acceptable if the final residual land value of the severed parcel is equal or greater to one million dollars (this is a sizeable amount that can fund a number of tower specific improvements – see Figure 8). Scenarios with lower values will be deemed unfeasible, as proceeds are not sufficient to funding tower improvements.

Lastly, timber frame construction cannot exceed 6 storeys in height – in the high build-out scenario with timber frame construction presented in section 6.2, heights were reduced to 6 storeys in height – this assumes that timber frame will be approved in the next Ontario Building Code amendment.

6.1 Low Build-Out Development Model - 2667-2677 Kipling Avenue, Etobicoke

Using the Kipling Cluster case study, a low build-out concept was developed to estimate the total uplift in land values, and the degree to which a moderate levels of infill could be introduced on site. As a design rule for this model, it was determined that the infill that is to take place must be connected to an existing tower structure – namely 2667-2677 Kipling Avenue in this scenario. Refer to Appendix B-3: Kipling for additional details on the cluster's existing form and revenue generating capabilities.

6.1.1 Development Process:

The following development process was developed to recognize the tower owner and purchaser's interests while ensuring that the three objectives of the Tower Renewal initiative for a single cluster are implemented (community, commercial, environmental efficiency):

1. Sever land holdings that are aimed at accommodating proposed infill activities – in this scenario, a 0.3971 hectare lot as shown in Figure 23. Provide the following conditions of approval to the application – permitted under Section 53(12) of the Planning Act:
    1.1. Severed site must be rezoned to either RAC, CR, or RM

    CAVEAT: If the site has as-of-right permissions to accommodate proposed infill, ensure that conditions be placed on the application for consent and (if applicable) application for minor variance to the in-effect zoning by-law to secure community benefits.
2. Rezone to Residential Apartment Commercial (RAC), and:
    2.1. Seek relief from:
        2.1.1. Section 15.20.20.100(1) to permit a greater GFA for commercial uses
        2.1.2. Section 15.20.20.100(4) to permit a greater GFA for a community centre
        2.1.3. If relief to the RAC zone are not possible, rezone entire site to Commercial Residential (CR) or Residential Multiple (RM), with necessary exceptions, to permit desired uses
    2.2. Secure community benefits through Section 37 of the Planning Act:

2.2.1. Cash-in-lieu contribution to the enhancement and/or construction of a new purpose-built community space. An in-kind contribution is preferable if uplift values are significant enough to fund the construction and outfitting of a new space.

2.2.2. Secure between 10%-20% of all new residential units introduced on site as purpose built rental units, which can be retained by the developer or conveyed to another property management company or not-for-profit at the cost of construction.

3. Sell severed lands to a private developer
4. Use proceeds to fund tower specific enhancements. To ensure funds accrued through the sale of the lands are spent in portion on tower revitalization, two options should be explored – their legality would need to be assessed:

   4.1. A holding symbol be placed on the severed lot ('H'), under section 36(1) of the Planning Act requiring that tower works must be initiated prior to the construction of any new structures on site – the purchaser can in turn put a condition of sale that protects their interests from the selling party if they were to default on their commitment.

   4.2. The Committee of Adjustment place a condition of approval on the proposed severance, requiring that a minimum capital contribution be allocated towards the revitalization of the tower – this value should not exceed the total net sale value of the property.
   CAVEAT: If the Tower Renewal Corporation exists at this time, they should be the primary point of contact in negotiating the final revitalization sum, and be the recipient of the allocated funds aimed at revitalizing the tower.

The above process will need to be supported by a negotiation process between all parties involved to ensure benefits to the community are maximized. Given that the profit margin for the developer is strongly dependant on the number of new units proposed on site, a balancing act must be achieved between what is profitable to the investor, beneficial to the community and tower owner, and what constitutes 'good planning'. In addition to a negotiation process, a formal secondary plan for the area should also be developed by planning staff to manage the rate and type of growth occurring in the community and identify gaps in service provisions that need fulfilling.

6.1.2 Proposed Concept Plan:

This model has been adapted from the low build-out case study of 145 Marlee Avenue, summarized in section 5.2.1, found at page 55 of the present report, as an archetype to follow.

A 0.3971 ha parcel of land, which will house new residential and commercial uses, will be severed from both 2667-2677 Kipling Avenue, and consolidated into a single parcel.

The low build out proposal for this site introduces new market and rental residential units, at grade commercial units, and a new community centre. As shown in Figure 23 and Figure 24, the new residential and commercial uses will be integrated into a newly proposed 4 storey podium, to be constructed at the base of 2667 Kipling Avenue, a 23 storey slab apartment tower; whereas, the community centre (proposed to be built at a later time once the necessary funds are accrued through Section 37 contributions), will be built within a second podium addition to 2667 Kipling Avenue.

The intensity of this proposed infill project is considered minimal, as the increase in density and height, and total lot coverage within the severed parcel will be minimal, and consistent when comparing to the surrounding area. Moreover, this proposal leaves room for future infill activities if demand rises.

Figure 22: Land-Use Summary & Site Coverage

Land Statistics	Severed	Retained (2667-2677 Kipling)
1. Original Parcel Size	n.a.	2.252 ha
1. Parcel Size	0.3971 ha	1.855 ha
2. Lot Coverage (building-surface)	1,225 m^2	3,042 m^2
3. Floor Space Index (FSI)	0.85x	0.16x

Proposed Uses (GFA)	Severed	Retained (2667-2677 Kipling)
1. Apartment Tower	n.a.	30,124 m^2
2. Rental Condo	323 m^2	n.a.
3. Market Condo	610 m^2	n.a.
4. Convenience Commercial	350 m^2	n.a.
5. Grocery Store	875 m^2	n.a.
6. Community Centre	n.a.	650 m^2

Figure 23: Low Build-Out Scenario – Podium Infill

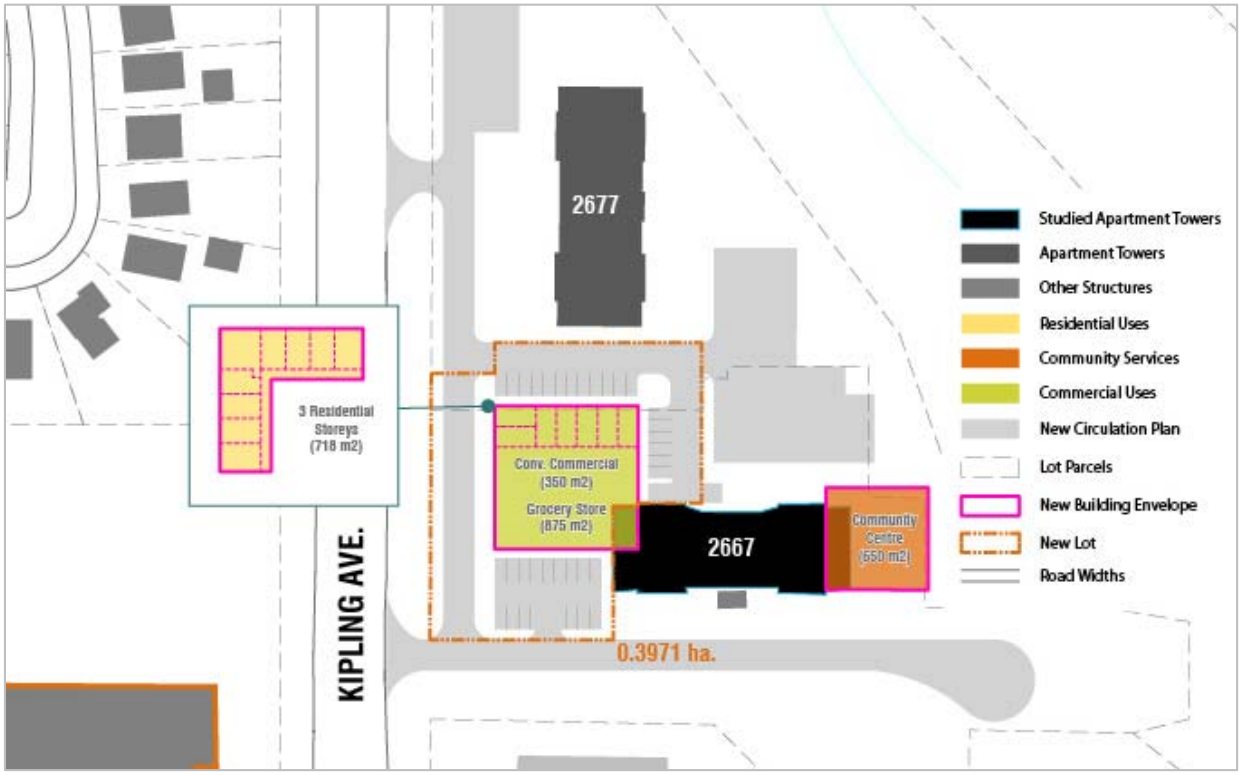
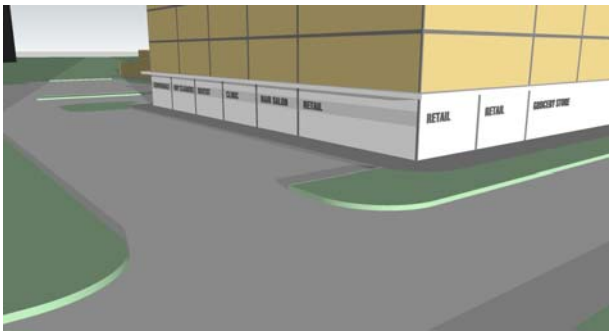
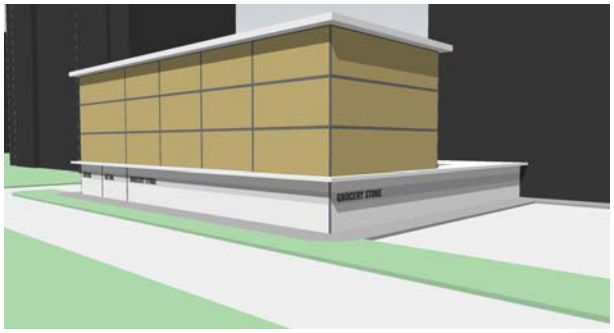


Figure 24: Low Build-Out Scenario Conceptual Massing Renderings

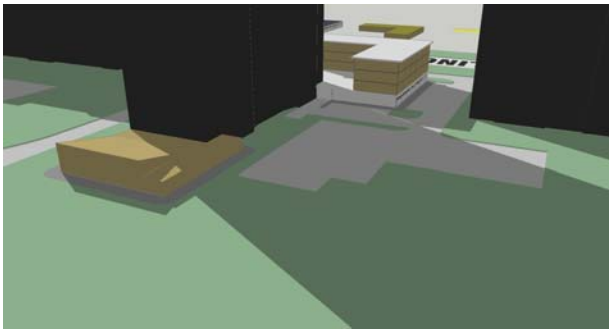
Podium with Commercial and Residential Infill



Convenience Retail at Grade



Local Grocery Store + Residential Condos.



Future Community Centre

6.1.3 Land Value and Development Costs

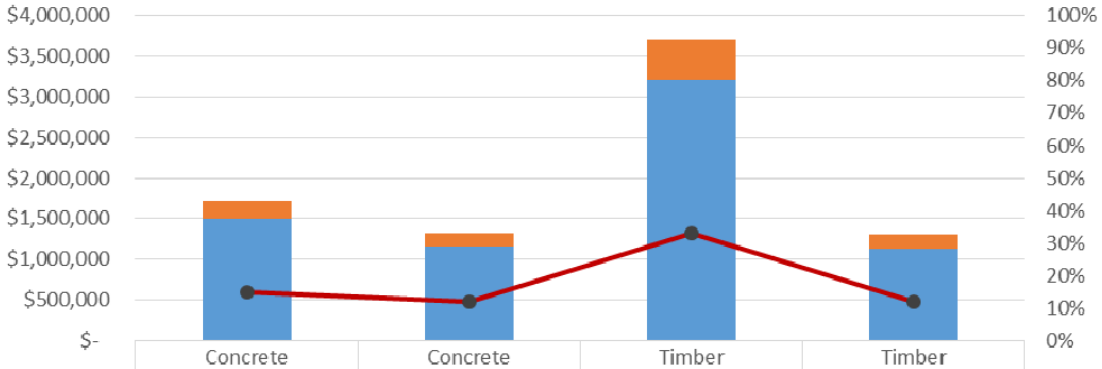
Between the two construction standards observed, concrete slab and timber frame, the following observations were made:

I. Referring to Figure 26 and Figure 27, ***concrete slab construction*** for the proposed residential component is profitable if market sales per square foot is $575 to $600. Any value below $500 per square feet, the proposed severed parcel is valued below $0. Given that the Kipling cluster is in an area of marginal investment, a saleable rate of $575-$600 may be too high a rate to charge new potential residents, making the development unfeasible.

II. Referring to Figure 28 and Figure 29, ***timber frame construction*** for the proposed residential component is profitable if market sales per square foot is$450 to $600. Any value below $350 per square feet, the proposed severed parcel is valued below $0. A saleable rate of $450 is more acceptable for the area in which the parcel is located, making timber construction far more viable for this development scenario.

The figure below summarizes the potential residual land values and uplift values that can be extracted from the both the Concrete and Timber frame construction options. A ratio has also been provided as to how much the Section 37 contribution would fund the new proposed community centre for this project.

Figure 25: Low Build-Out – Concrete vs. Timber Frame Construction Residual Land and Uplift Values



	Concrete ($600 sft)	Concrete ($575 sft)	Timber ($600 sft)	Timber ($450 sft)
Uplift Value ($)	$224,838	$172,699	$482,322	$169,488
Net Profit ($)	$1,498,920	$1,151,326	$3,215,482	$1,129,921
In-Kind Cont. (%)	15%	12%	33%	12%

Figure 26: Concept Plan Pricing & Revenue for Concrete Slab Construction

New Use	Floors	Square Metres
1. Market Condominiums (85%)	3	1,831
2. Rental housing (15%)	3	323
3. Community Centre	1	650
4. Commercial Ground Floor	1	350
5. Grocery Store (Commercial)	1	875

Developer Revenues	Profit (no land)	Acceptable Profit (15%)
1. High ($6,458/m² OR $600/sf)	$ 3,579,448	$ 2,080,528
2. Low ($4,843/m² OR $450/sf)	$ 1,125,846	$ 1,712,487

Land Value (Owner Revenues)	Severed Parcel	Value per Hectare
1. High ($6,458/m² OR $600/sf)	$ 1,498,920	$ 3,774,667
2. Low ($4,843/m² OR $450/sf)	$ 0	$ 0

Section 37 Cash-in-lieu Contribution (High)	Value	Portion of Community Centre ($1,437,471.00 - 650 m²)
1. Low (10%)	$ 149,892	10%
2. Medium (12.5%)	$ 187,365	13%
3. High (15%)	$ 224,838	15%

Section 37 Cash-in-lieu Contribution (Low)	Value	Portion of Community Centre ($1,437,471.00 - 650 m²)
1. Low (10%)	$ 0	0%
2. Medium (12.5%)	$ 0	0%
3. High (15%)	$ 0	0%

Figure 27: Land Value Sensitivity vs. Market Housing Value ($/sf) – Concrete Build

Sft.	Total Value	Value (ha.)
600	$ 1,498,920	$ 3,774,666
575	$ 1,151,326	$ 2,899,335
550	$ 803,733	$ 2,024,007
525	$ 456,139	$ 1,148,675
500	$ 108,546	$ 273,347
475	-$ 239,047	-$ 601,982
450	-$ 586,641	-$ 1,477,313
425	-$ 934,234	-$ 2,352,642
400	-$ 1,281,828	-$ 3,227,973
375	-$ 1,629,421	-$ 4,103,301
350	-$ 1,977,015	-$ 4,978,633
325	-$ 2,324,608	-$ 5,853,961
300	-$ 2,672,202	-$ 6,729,292

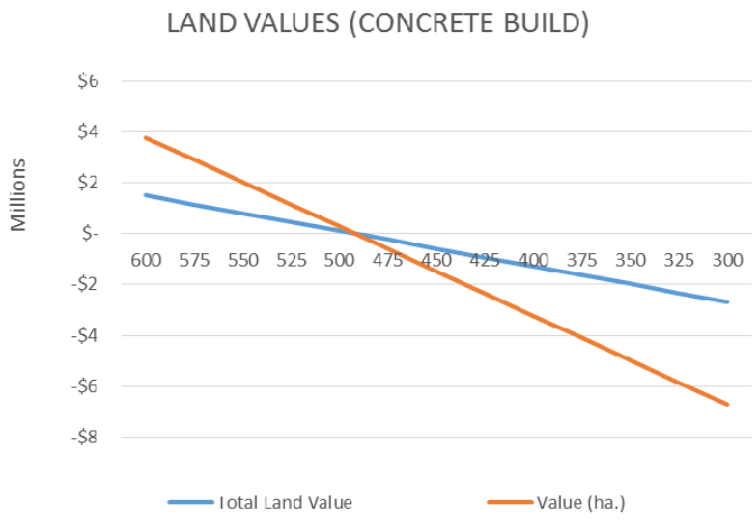
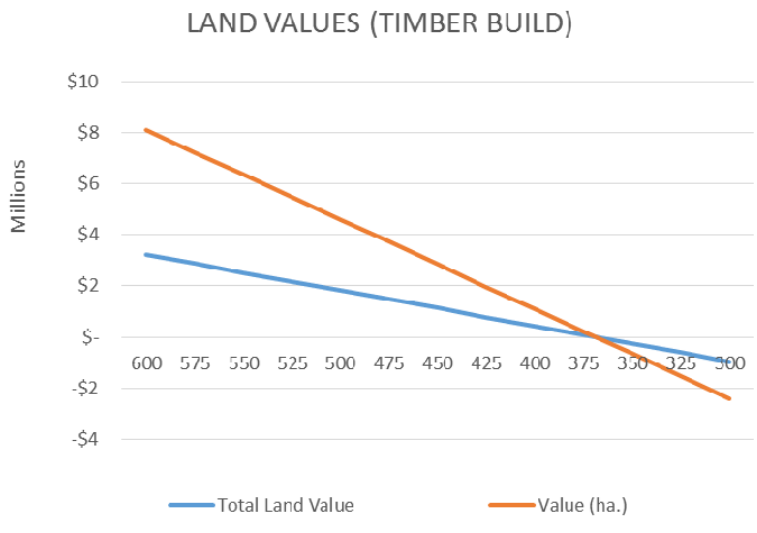


Figure 28: Concept Plan Pricing & Revenue for Timber Frame Construction

New Use	Floors	Square Metres
1. Market Condominiums (85%)	3	1,831
2. Rental housing (15%)	3	323
3. Community Centre	1	650
4. Commercial Ground Floor	1	350
5. Grocery Store (Commercial)	1	875
Developer Revenues	**Profit (no land)**	**Acceptable Profit (15%)**
1. High ($6,458/m² OR $600/sf)	$ 5,135,181	$ 1,919,698
2. Low ($4,843/m² OR $450/sf)	$ 2,681,579	$ 1,551,658
Land Value (Owner Revenues)	**Severed Parcel**	**Value per Hectare**
1. High ($6,458/m² OR $600/sf)	$ 3,215,482	$ 8,097,412
2. Low ($4,843/m² OR $450/sf)	$ 1,129,921	$ 2,845,432
Section 37 Cash-in-lieu Contribution (High)	**Value**	**Portion of Community Centre ($1,437,471.00 - 650 m²)**
1. Low (10%)	$ 321,548	22%
2. Medium (12.5%)	$ 401,935	27%
3. High (15%)	$ 482,322	33%
Section 37 Cash-in-lieu Contribution (Low)	**Value**	**Portion of Community Centre ($1,437,471.00 - 650 m²)**
1. Low (10%)	$ 112,992	8%
2. Medium (12.5%)	$ 141,240	10%
3. High (15%)	$ 169,488	12%

Figure 29: Land Value Sensitivity vs. Market Housing Value ($/sf) – Timber Build

Sft.	Total Value	Value (ha.)
600	$ 3,215,482	$ 8,097,411
575	$ 2,867,888	$ 7,222,080
550	$ 2,520,295	$ 6,346,751
525	$ 2,172,701	$ 5,471,420
500	$ 1,825,108	$ 4,596,092
475	$ 1,477,514	$ 3,720,761
450	$ 1,129,921	$ 2,845,432
425	$ 782,327	$ 1,970,101
400	$ 434,734	$ 1,094,772
375	$ 87,140	$ 219,441
350	-$ 260,453	-$ 655,888
325	-$ 608,046	-$ 1,531,216
300	-$ 955,640	-$ 2,406,547



6.1.4 Meeting the Apartment Tower Initiatives Checklist

If concrete slab construction for the residential units is pursued, developers need to reduce their acceptable profit margin of 15% of total profits, or the city should convey special provisions that would reduce its fees associated with the development to increase land values.

Alternatively, if timber frame construction is pursued, the developer could retain their full 15% of profit, and require no conveyances from the city. Additional conveyances could be given to accelerate the introduction of a community centre.

Additions to the Community

I. New market residential units within the community;
II. New rental units have been introduced on site, totaling 323m^2 which equates to approximately 5 new residential units of 70 m^2;
III. Leasable commercial space has been made available, equating to approximately 7 new commercial retail units of 50 m^2;
IV. Introduction of a new grocery store for the immediate and surrounding community;
V. Through uplifted land values, cash-in-lieu contributions can be pooled for the construction of a new community centre within a new podium of the structure – if community space is immediately required, a more cost effective solution can be implemented in the interim;
VI. At a saleable rate of $450 per square foot with a timber frame construction, the land sale proceeds are approximated at $1,129,921 for 0.3971 ha – the rate per hectare is estimated at $2,845,432 and additional land sales can be further re-invested into tower revitalization.

6.2 High Build-Out Development Model - 10 San Romanoway, North York

Using the Jane and Finch cluster case study, a high build-out concept was developed that introduced a number of new uses on the tower site 10 San Romanoway, which currently houses a 33 storey apartment structure and ancillary community centre. Refer to Appendix B-6: Jane & Finch for additional details on the cluster.

6.2.1 Development Process:

The following development process was developed using the same principles as the low-build out scenario outlined in Section 6.1:

1. Sever land holdings that are aimed at accommodating proposed infill activities – in this scenario, a 1.388 hectare lot as shown in Figure 30. Provide the following conditions of approval to the application – permitted under Section 53(12) of the Planning Act:

   CAVEAT: If the site has as-of-right permissions to accommodate proposed infill, ensure that conditions be placed on the application for consent and (if applicable) application for minor variance to the in-effect zoning by-law to secure community benefits.
2. Rezone severed site to Commercial Residential (CR) and/or Residential Multiple (RM), and secure community benefits through Section 37 of the Planning Act:
   2.1. Construction of community space in the ground-floor podium of a newly constructed residential building, with approximately 600 m^2 of community amenity space;
   2.2. Cash-in-lieu contribution for the enhancement of the public realm, prioritizing the residential cluster where the development is taking place, or in the immediate community.
   2.3. Secure between 10%-20% of all new residential units introduced on site as purpose built rental units which can be retained by the developer or conveyed to another property management company at the cost of construction.
3. Sell severed lands to a private developer

4. Use proceeds to fund tower specific enhancements. To ensure funds accrued through the sale of the lands are spent in portion on tower revitalization, two options should be explored – their legality would need to be reviewed:
    4.1. A holding symbol be placed on the severed lot ('H'), under section 36(1) of the Planning Act requiring that tower works must be initiated prior to the construction of any new structures on site – the buying party can in turn put a condition of sale that protects their interests from the selling party if they were to default on their commitment.
    4.2. The Committee of Adjustment place a condition of approval on the proposed severance, requiring that a minimum capital contribution be allocated towards the revitalization of the tower – this value should not exceed the total net sale value of the property.
    CAVEAT: If the Tower Renewal Corporation exists at this time, they should be the primary point of contact in negotiating the final revitalization sum, and should be the recipient of the allocated funds aimed at revitalizing the tower.

The above process will need to be supported by a negotiation process between all parties involved to ensure benefits to the community are maximized. The profit margin for the developer in this scenario is far greater than the low build-out scenario, however it remains strongly dependant on the number of new units proposed on site and the per square foot market rate at which they are sold.

When developing larger parcels of this size, the creation of a secondary plan for the area is strongly recommended to ensure that the contributions are properly and effectively expended within the community. Community based consultation derived from the secondary planning process will inform what investments they find are most desired in their neighbourhood.

6.2.2 Proposed Concept Plan

This model has been adapted from the high build-out case study of Emerald City, summarized in section 5.2.2, found at page 56 of the present report.

A 1.388 parcel of land, which will house new residential and commercial uses, will be severed from 10 Romanoway Drive. The high build-out proposal for this site introduces new market and rental residential units, at grade commercial units, and a new community amenity space. As shown in Figure 31 and Figure 32, the new residential and commercial uses will be integrated into a three 7-9 structure, and 3 townhouse blocks, divided among 6 development block (A-F). Commercial uses will be housed within the ground floors of the structures located in Blocks D, E, and F. The community amenity space is located within the ground floor of Block D.

As a mid-rise built form, which is recommended in the Toronto Official Plan (2010), the intensity of this proposed infill project is at its highest. This proposal will be the first of its kind in the neighbourhood, and should activate the street frontage to make it more conducive to walking. This provides a building archetype that can be replicated along Jane Street and Finch Avenue, both having a significant inventory of underutilized land at the streets edge that is viable for infill activities and street activation.

Figure 30: Land-Use Summary & Site Coverage (Concrete Slab/Timber Frame)

Land Statistics	Severed	Retained (2667-2677 Kipling)
1. Original Parcel Size	n.a.	3.253 ha
2. Parcel Size	1.388 ha	1.865 ha
3. Lot Coverage (building-surface)	4,938 m^2/4,938 m^2	2,509 m^2
3. Floor Space Index (FSI)	2.26x / 1.82x	2.92x
Proposed Uses (GFA)	**Severed**	**Retained (2667-2677 Kipling)**
1. Apartment Tower	n.a.	53,724 m^2
2. Rental Condo	3,600 m^2/2,700 m^2	n.a.
3. Market Condo	20,400 m^2/15,300 m^2	n.a.
4. Convenience Commercial	3,131 m^2	n.a.
5. Grocery Store	0 m^2	n.a.
6. Community Centre/Space	600 m^2	881 m^2

Figure 31: High Build-Out Scenario – Major Infill Activities

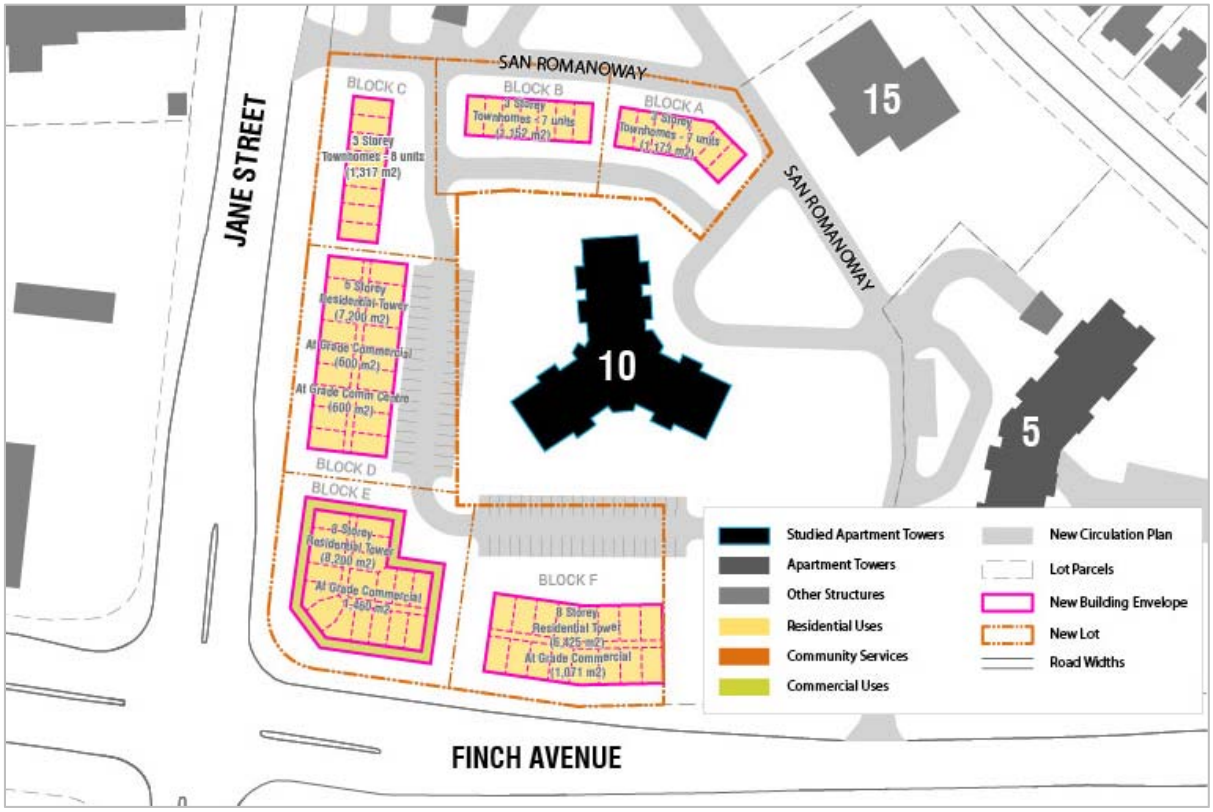
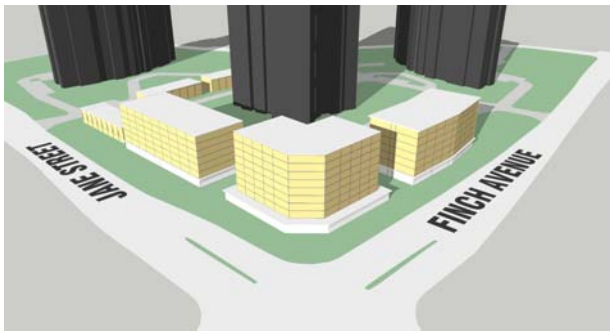
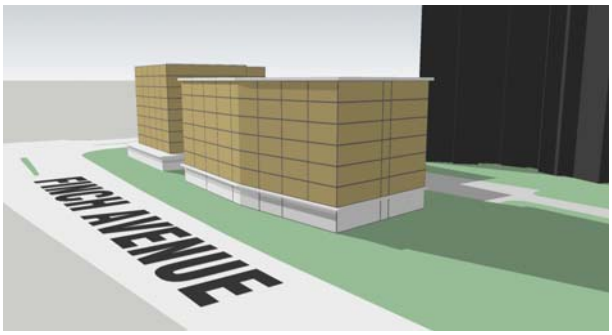


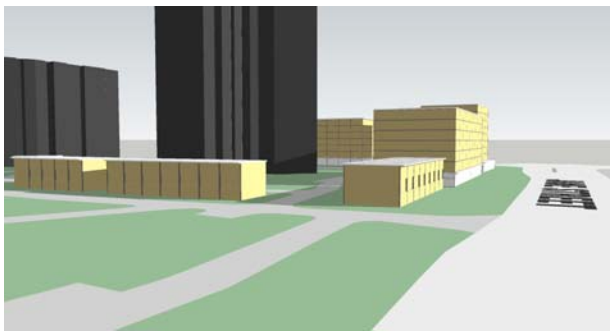
Figure 32: High Build-Out Scenario Conceptual Massing Renderings



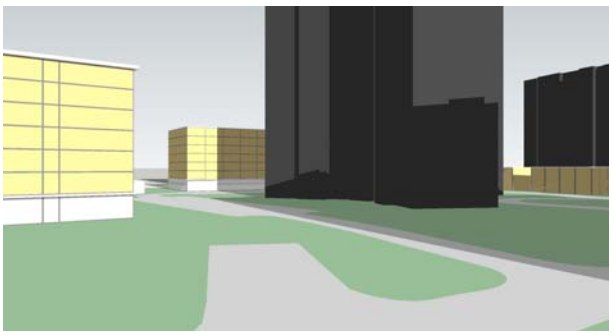
Major mixed-use infill at Jane & Finch



Residential Condo/Apart. with commercial at grade



Addition of three storey townhouse clusters



Ample residual green space within retained lot

6.2.3 Land Value and Development Costs

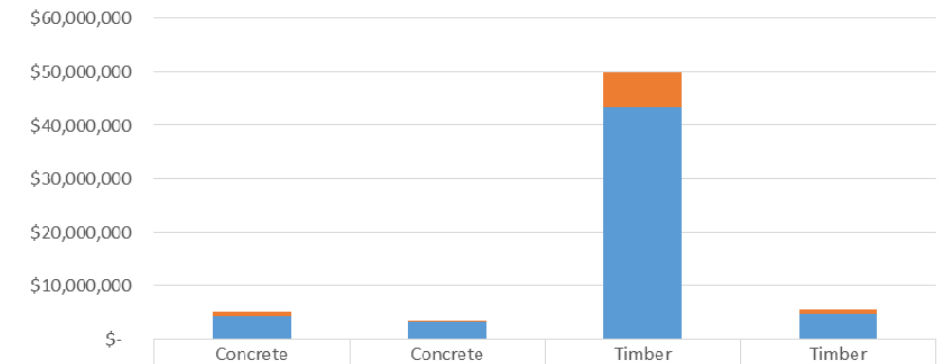
Between the two construction-standards observed the following observations were made:

I. Referring to Figure 34 and Figure 35, ***concrete slab construction*** for the proposed residential component is profitable if market rates per square foot is $450 to $600. Any sale value below $450 per square foot produces a parcel valued below $0. Given that the Jane and Finch is in an area of marginal investment, a saleable rate of $600 is too high. A $450 rate may be feasible within the area, especially if transitional housing for seniors is needed or marketable in the area. A detailed market analysis of the area is needed to assert the former.

II. Referring to Figure 36 and Figure 37, ***timber frame construction*** for the proposed residential component is profitable if market rates per square foot are is $300 to $600. Any value below $300 per square feet, the proposed severed parcel is valued below $0. A saleable rate of $325 is more than acceptable for the area in which the parcel is located, making timber construction far more viable in this development scenario.

The figure below summarizes the potential residual land values and uplift values that can be extracted from the both the concrete and timber frame construction options. In all four options, Section 37 contributions are large enough to fund the proposed community centre.

Figure 33: High Build-Out – Concrete vs. Timber Frame Construction Residual Land and Uplift Values



	Concrete ($600 sft)	Concrete ($450 sft)	Timber ($600 sft)	Timber ($325 sft)
Uplift Value ($)	$675,257	$485,700	$6,495,983	$730,867
Net Profit ($)	$4,501,713	$3,238,003	$43,306,551	$4,872,449

Figure 34: Concept Plan Pricing & Revenue for Concrete Slab Construction

New Use	Floors	Square Metres
1. Market Condominiums (85%)	20	20,400
2. Market Townhomes	22 Units – 3 floors	3,652
3. Rental housing (15%)	20	3,600
4. Community Centre	1	600
5. Commercial Ground Floor	1	3,131
Developer Revenues	**Profit (no land)**	**Acceptable Profit (15%)**
1. High ($6,458/m² OR $600/sf)	$ 51,846,144	$ 21,834,722
2. Low ($4,843/m² OR $450/sf)	$ 20,348,005	$ 17,110,001
Land Value (Owner Revenues)	**Severed Parcel**	**Value per Hectare**
1. High ($6,458/m² OR $600/sf)	$ 30,011,422	$ 21,625,178
2. Low ($4,843/m² OR $450/sf)	$ 3,238,003	$ 2,333,191
Section 37 Cash-in-lieu Contribution (High)	**Value**	**Community Centre Funded ($1,360,127 - 600 m²)**
1. Low (10%)	$ 3,001,142	Yes + Cash-in-lieu
2. Medium (12.5%)	$ 3,751,427	Yes + Cash-in-lieu
3. High (15%)	$ 4,501,713	Yes + Cash-in-lieu
Section 37 Cash-in-lieu Contribution (Low)	**Value**	**Community Centre Funded ($1,360,127 - 600 m²)**
1. Low (10%)	$ 323,800	Yes + Cash-in-lieu
2. Medium (12.5%)	$ 404,750	Yes + Cash-in-lieu
3. High (15%)	$ 485,700	Yes + Cash-in-lieu

Figure 35: Land Value Sensitivity vs. Market Housing Value ($/sf) – Concrete Build

Sft.	Total Value	Value (ha.)
600	$ 30,011,422	$ 21,625,178
575	$ 25,549,185	$ 18,409,847
550	$ 21,086,949	$ 15,194,516
525	$ 16,624,712	$ 11,979,184
500	$ 12,162,476	$ 8,763,854
475	$ 7,700,240	$ 5,548,523
450	$ 3,238,003	$ 2,333,191
425	-$ 1,224,232	-$ 882,139
400	-$ 5,686,469	-$ 4,097,470
375	-$ 10,148,705	-$ 7,312,801
350	-$ 14,610,942	-$ 10,528,132
325	-$ 19,073,178	-$ 13,743,463
300	-$ 23,535,414	-$ 16,958,794

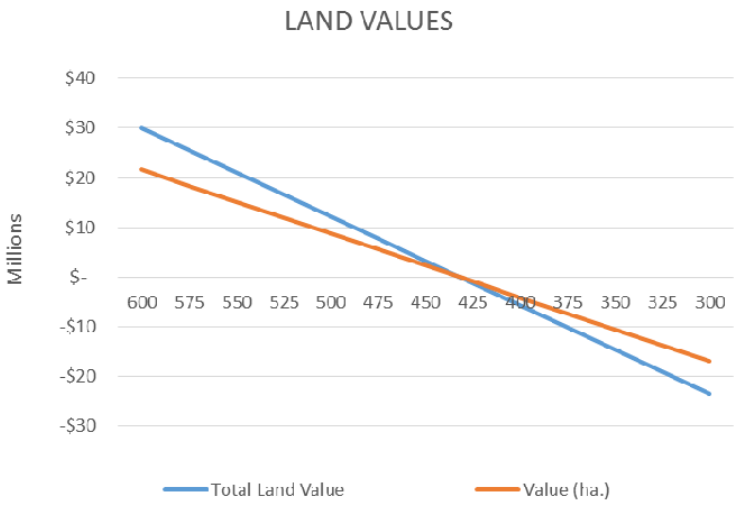


Figure 36: Concept Plan Pricing & Revenue for Timber Frame Construction

New Use	Floors	Square Metres
1. Market Condominiums (85%)	15	15,300
2. Market Townhomes	22 Units – 3 floors	3,652
3. Rental housing (15%)	15	2,700
4. Community Centre	1	600
5. Commercial Ground Floor	1	3,131

Developer Revenues	Profit (no land)	Acceptable Profit (15%)
1. High ($6,458/m² OR $600/sf)	$ 60,098,445	$ 16,791,894
2. Low ($4,843/m² OR $325/sf)	$ 14,881,855	$ 10,009,406

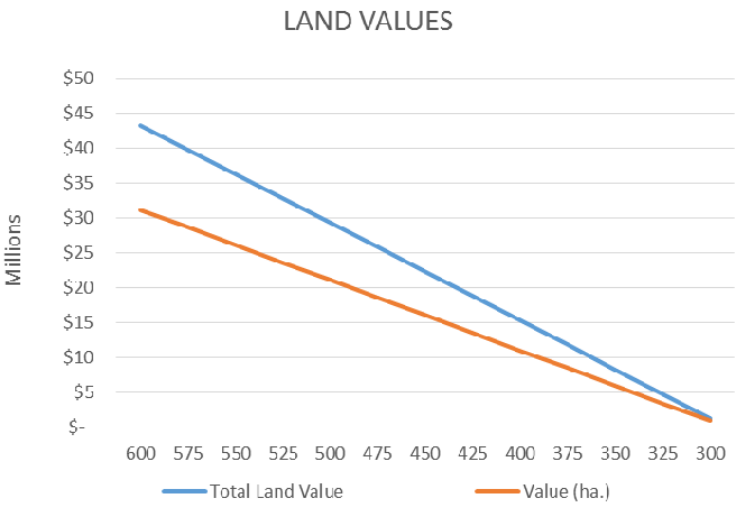
Land Value (Owner Revenues)	Severed Parcel	Value per Hectare
1. High ($6,458/m² OR $600/sf)	$ 42,306,551	$ 31,205,181
2. Low ($4,843/m² OR $325/sf)	$ 4,872,449	$ 3,550,544

Section 37 Cash-in-lieu Contribution (High)	Value	Community Centre Funded ($1,360,127 - 600 m²)
1. Low (10%)	$ 4,330,655	Yes + Cash-in-lieu
2. Medium (12.5%)	$ 5,413,318	Yes + Cash-in-lieu
3. High (15%)	$ 6,495,982	Yes + Cash-in-lieu

Section 37 Cash-in-lieu Contribution (Low)	Value	Community Centre Funded ($1,360,127 - 600 m²)
1. Low (10%)	$ 487,244	Yes + Cash-in-lieu
2. Medium (12.5%)	$ 609,056	Yes + Cash-in-lieu
3. High (15%)	$ 730,867	Yes + Cash-in-lieu

Figure 37: Land Value Sensitivity vs. Market Housing Value ($/sf) – Timber Build

Sft.	Total Value	Value (ha.)
600	$ 43,306,551	$ 31,205,182
575	$ 39,812,542	$ 28,687,521
550	$ 36,318,532	$ 26,169,860
525	$ 32,824,523	$ 23,652,200
500	$ 29,330,514	$ 21,134,540
475	$ 25,836,505	$ 18,616,879
450	$ 22,342,495	$ 16,099,218
425	$ 18,848,486	$ 13,581,558
400	$ 15,354,477	$ 11,063,898
375	$ 11,860,468	$ 8,546,237
350	$ 8,366,459	$ 6,028,577
325	$ 4,872,449	$ 3,510,916
300	$ 1,378,440	$ 993,256



6.2.4 Meeting the Apartment Tower Initiatives Checklist

Both concrete slab and timber framing construction can be pursued with high profitability for both the developer and the existing tower owners. Notwithstanding the former, the timber frame construction standard would be more conducive to the existing market rates in this neighbourhood. Section 37 contributions for timber frame construction are higher than concrete slab construction as the profit margin for the developer is greater and this saving would be passed through to new residents. As marketability in the subject area increases, and as acceptable square foot sale values increase, the viability for concrete slab construction would also increase.

Additions to the Community

I. New market residential units within the community at affordable rates, opening the opportunity to provide start-up housing (young families) or transitional housing for seniors looking to downsize;
II. New rental units have been introduced on site, totaling 4,148 m^2 which equates to approximately 60 new residential units of 70 m^2;
III. Leasable commercial space has been made available, equating to approximately 22 new commercial retail units of 100+ m^2;
IV. Through uplifted land values, a 600 m^2 community amenity space can be constructed;
V. Additional cash-in-lieu contributions can be either pooled for other major investments within the community, or for on-site investments for additional community amenities, which may include, but are not limited to, community gardens, a market square, programming open spaces, introduction of recreational spaces, or transit improvements;
VI. At a saleable rate of $325 per square foot with a timber frame construction, the land sale proceeds are approximated at $4,872,449 for 1.388 ha.

6.3 Development Scenario Limitations

The reader should be made aware that the development scenarios presented in the preceding sections are not without their limitations. Given that there are gaps in information – specified below – the accuracy of the findings are not without some margin of error. Moreover, assumptions are made about the approvability of the proposal, the current appetite from both the City of Toronto Staff and Ward Councillors and the residential communities as a whole for this type of development. Accordingly, in reviewing these development scenario *proformas*, please acknowledge the following:

I. Site specific land valuations are speculative, and are based entirely on development potential. As there was a lack of resources in comparable land sales and development precedents within inner-suburban neighbourhoods available for review, the results of the *proformas* cannot be assertively guaranteed without direct market assessments.

II. Continuing under the same limitations as discussed above, without actual data speaking to past land sales and development precedents, a residential saleable floor area that takes into account actual market rates could not be applied with full certainty; thus the application of a range of values. Market values should therefore be assessed on a cluster by cluster basis.

III. The same conclusion needs be given to commercial market rates as well, where location specific information should be accrued as opposed to the aggregated date collected from Colliers International's (2013) Retail Report for the GTA.

IV. Specific to the timber frame build out scenario, the an amendment has yet to be approved to the Ontario Building Code to allow for the construction of timber frame housing above three storeys in height, to a maximum of six storeys. The scenarios that use this construction model should be used as references as to the potential cost savings of timber structure once (if) approved in the future.

V. Based on initial conversations with Chris Phibbs (2014), councillors of wards that are rich with apartment tower sites are still reluctant to accommodate increased density. Therefore the

approvability of these projects will be highly contingent on achieving buy-in from the community to pressure their councillors to support these projects.

The advantages and disadvantages of concrete built structure versus timber frame structures are not up for debate in the scope of this study. Nevertheless, the following distinctions should be made and understood.

Concrete buildings have a longer lifespan – as seen by the resilient tower stock – and are far 'easier' to maintain compared to timber frame construction (Ditmars, 2013). However this resiliency comes at a cost of higher construction costs, which must be offset by higher per square foot sale values and smaller unit sizes. In areas of marginal investment in the inner-suburbs, the demand and marketability of new condominiums and their associated costs may not be supported by current market trends, making them unfeasible.

Alternatively, timber frame construction is far more economical than concrete, albeit having a shorter life cycle. This alternative is more conducive for areas of marginal investment that do not have the demand nor market to support concrete build values. This is not to say that they are any less liveable than concrete buildings, just that they are valued at a lesser rate, which is natural.

Overall, the decision whether to select concrete or timber frame construction is dependent on the acceptable market residential rates per square foot that can be charged to future consumers.

7.0 Conclusion & Recommendations

The private development market is in constant search of developable lands to add to their portfolio and future development pipeline, often forcing them to find innovative yet complicated solutions to assembling lands within Toronto. This inflates land values that are ultimately passed through to the future purchasers and creates affordability issues.

That being said, tower neighbourhoods in Toronto have at their disposal a significant supply of surplus lands in a city that has a significant shortage of land resources. This land surplus can and should be leveraged for future infill activities that provides additional affordable housing and achieves the goals of the tower renewal initiatives.

Notwithstanding the availability of this prime resource, the as-of-right development potential of the lands is limited by current planning regulations that remove any monetary values that could be drawn from the sale of lands to the benefit of the existing tower owner. As a result this reduces its development potential from the private industry's perspective.

To infuse values into surplus lands, planning regulations must be amended to allow for a wider array of uses and high development densities. In using one of the two development models created in this report, land sale values can be infused into surplus tower lands to: finance tower revitalization; allow private developers to generate profits through market sales; and allow the municipality to draw in-kind or cash-in-lieu contributions from up-zoning activities that can be used to finance community amenities. The following are contributions that should be drawn from infill activities:

I. ***Tower improvements*** – financed through the sale of lands, and residual investment needs backed by the future Tower Renewal Corporation's capital pool and financing plan
II. ***New Residential Market Units*** – built by private developers, and sold on the private market (primary profit generator)

III. ***New Residential Rental Units*** – 10-15% of total new residential unit GFA can be sold at cost to another residential property management company as a condition of approval. Affordability should be built into the units where feasible.

IV. ***Commercial amenities*** – Developed concurrently with residential uses along the ground floor podium

V. ***Community amenities*** – Developed concurrently with residential uses, or developed once sufficient section 37 cash-in-lieu contributions are collected through other development activities

In addition to utilizing the development models created in the present report, the following recommendations should also be considered by the City of Toronto in the implementation and full roll-out of the tower renewal initiative.

Growth Management Recommendations:

I. Staff should develop a city wide plan to identify areas of primary interest for apartment tower infill activities. This should guide the long term implementation of the initiative across the city, targeting and prioritizing clusters requiring immediate attention and investment
    a. Within this plan, detailed information pertaining to residential and commercial market conditions should be evaluated on a ward based format at a minimum, or by Toronto's 140 neighbourhood boundary classifications

II. The city should develop a secondary plan for the neighbourhood prior to undertaking any high build-out scenario for a cluster to ensure:
    a. a community consultation process be undertaken, allowing the opportunity to identify neighbourhood needs and wants, as well as garner increased buy-in and support by clearly outlining how the community will benefit from development
    b. orderly and phased development within a cluster, and provide more formulaic guidelines as to the desired density for the proposed development

c. community amenities desired by the residents of the neighbourhood are itemized and prioritized, and secured in the final build-out of an identified tower cluster
d. that commercial amenity types conducive to resident needs are identified and suggested within the overall development
e. pricing of desired community amenities to be funded through section 37 contributions is estimated and planned beforehand, ensuring cash-in-lieu contributions are earmarked and potential in-kind contributions are valuated before negotiations commence
f. creation of neighbourhood specific programs that assist existing and new residents in taking advantage of newly constructed commercial retail units to start and manage their own business, and/or provide new employment opportunities

III. The City should consult with the Toronto Community Housing Corporation prior to and during the development of future plans for tower renewal to assess:
    a. if they require new affordable rental units, which can be provided at the cost of construction during infill activities and secured through Section 37 contributions.
    b. if specific tower renewal projects should be prioritized in the city wide phasing as they may align with TCHC projects, providing opportunities for cost savings or joint-venture partnerships

Arm's Length Tower Renewal Agency Mandate Recommendations:

I. The City of Toronto should move forward with its plan to introduce the Tower Renewal Corporation, whereby in addition to their responsibilities defined in the City of Toronto Implementation Plan (2011), they should :
    a. be the first point of contact to tower owners seeking to undertake infill activities within a podium space, or undergo the process of severing and selling a parcel of land
    b. assist in developing secondary plans for apartment neighbourhoods
    c. be a commenting agency in the review of future development applications within apartment tower neighbourhoods, and assist Planning staff in maintaining orderly and phased infill activities

d. be the institution responsible for negotiating and securing a portion of sale proceeds that will be directed towards tower specific improvements
e. assist in reviewing tower efficiencies with building owners, and recommending options to increase overall sustainability

II. The Tower Renewal Corporation should be, in some capacity, associated or partnered with the Toronto Community Housing Corporation (TCHC), as both should align their goals and objectives as the tower renewal initiative moves forward

Infill Construction and Revitalization Recommendations:

I. The final determination of which construction standard to pursue for an infill project should be based on what market rates are most appropriate for the area in question. If concrete construction is deemed to be financially feasible for an infill project, where a sizeable and acceptable return can be extracted from the sale of land, that option should be given priority over timber frame construction.

II. Timber frame construction should be exclusively used in areas where acceptable market rates are not sufficient to accommodate concrete construction at the time of the proposal, as developer profit margins are too low.

The tower owners and dwellers of Toronto hold a lucrative trump card that can assist them in strengthening their neighbourhoods by spurring new investment. It is time that the city provide the tower owners and their residents the playing field to play the hand that they were dealt, and reap the rewards.

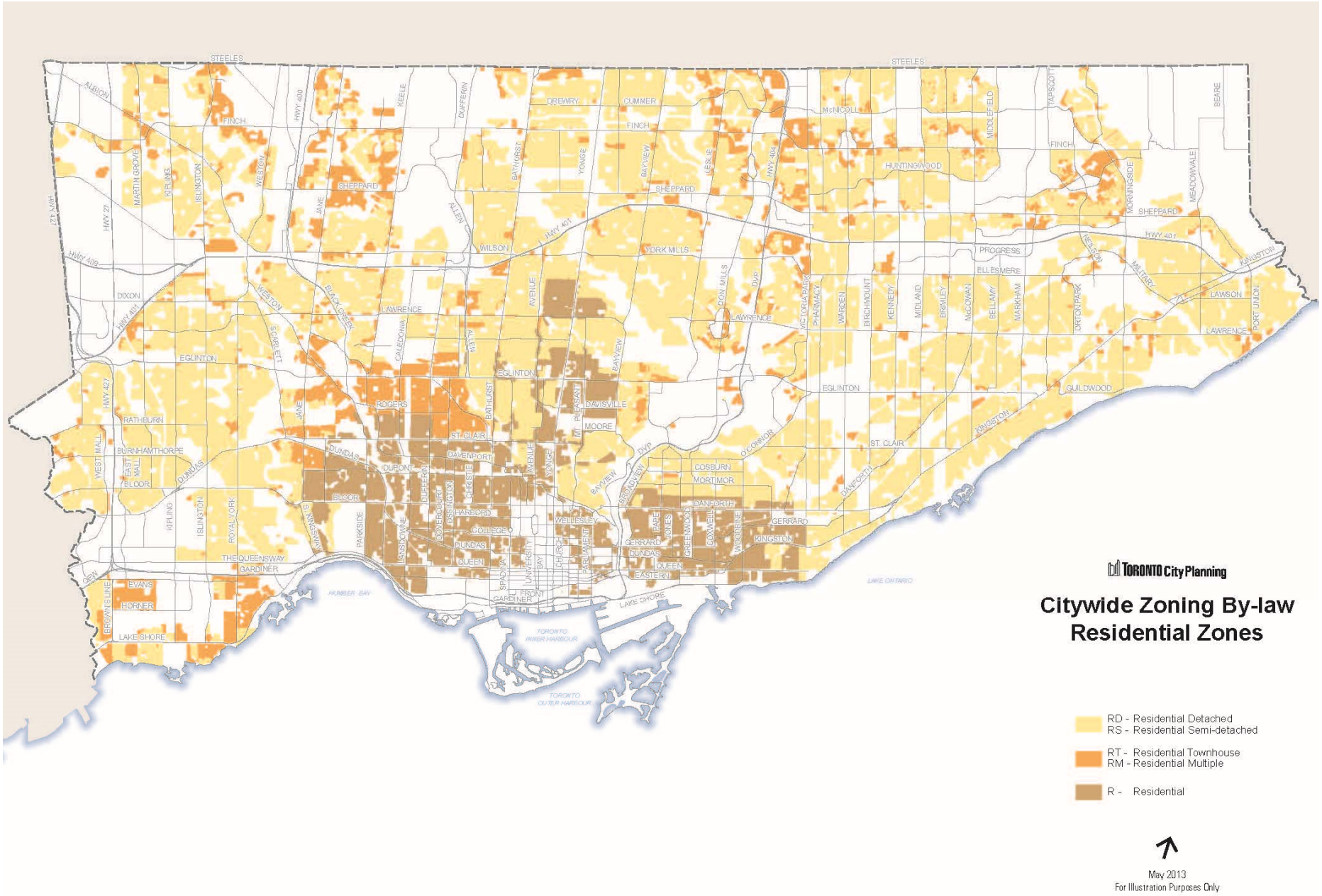
APPENDIX A: 'RA' & 'RAC' AS-OF-RIGHT USES (ZB 569-2013)

	RM Residential Multiple	RA Residential Apartment	RAC Residential Apartmet Commercial	CR Commercial Residential
AGRICULTURAL USE				
Market Garden			PC	P
PARK AND RECREATION RELATED USES				
Park	P	P	P	
Recreational Use			PC	PC
RESIDENTIAL USES				
Dwelling Unit (if a permitted residential building Type	P	P	P	P
Secondary Suite	PC	PC	PC	PC
Home Occupation	PC	PC	PC	PC
Private Home Daycare	PC	PC	PC	PC
RESIDENTIAL BUILDING TYPES				
Detached House	P			
Semi-Detached House	P			
Townhouse				PC
Duplex	PC			
Triplex	PC			
Fourplex	PC			
Apartment Building	PC	P	P	PC
Mixed Use Building				PC
OFFICES				
Software Development and Processing Office			PC	P
Office			PC	P
Medical Office (medical clinic)			PC	P
RETAIL AND SERVICE USES				
Amusement Arcade				PC
Eating Establishment			PC	PC
Take-out Eating Establishment			PC	PC
Drive-in Eating Establishment				
Adult Entertainment				
Cabaraet				PC
Nightclub				PC
Financial Institution			PC	P
Automoated Banking Machine			PC	P
Funeral Home				PC
Gaming Establishment				
Hoten				PC
Lennel				
Personal Service Shop			PC	P

	RM Residential Multiple	RA Residential Apartment	RAC Residential Apartmet Commercial	CR Commercial Residential
RETAIL AND SERVICE USES CONT'				
Personal Service Shop				PC
Wellness Centre			PC	PC
Massage Therapy			PC	PC
Pet Services				
Entertainment Place of Assembly				
Sports Place of Assembly				PC
Retail Service				PC
Retail Store			PC	P
Tourist Home			PC	P
Service Shop				PC
Wholesaling Use				
Body Rub Service				PC
COMMUNITY SERVICES, CULTURAL FACILITIES			PC	P
Art Gallery				P
Club				P
Day Nursery			PC	P
Museum				PC
Place of Worship				PC
Crisis Care Shelter			PC	PC
Private School		PC	PC	P
Public School				PC
Adult Education School			PC	PC
Place of Assembly				
Zoo				
Performing Arts Studio				
GENERAL INSTITUTIONS				
Community Centre	PC	PC	PC	P
Library	PC	PC	PC	P
Education Use			PC	P
Religious Education Use			PC	P
Post Secondary School				P
Veterinary Hospital			PC	P
Laboratory				PC
Court of Law				P
WORKSHOPS AND STUDIOS				
Artist Studio			PC	P
Production Studio			PC	P

P = Permitted
PC = Permitted with Conditions

City of Toronto Residential Zone Map



Appendix B: Site Reconnaissance Work Sheets

Appendix B-1: Parkway

Appendix B-2: Markham

Appendix B-3: Kipling

Appendix B-4: Shaughnessy

Appendix B-5: Elm Ridge

Appendix B-6: Jane & Finch

Appendix B-7: Bathurst

Appendix B-8: Mornelle

Appendix B-9: Thorncliffe

Parkway Forest

Approximate Address Parkway Drive & Forest Manor Road
Former Municipality North York
Pilot Site Yes
Pilot Site Address 110 Parkway Drive

PARCEL INFORMATION

UNIT BREAKDOWN

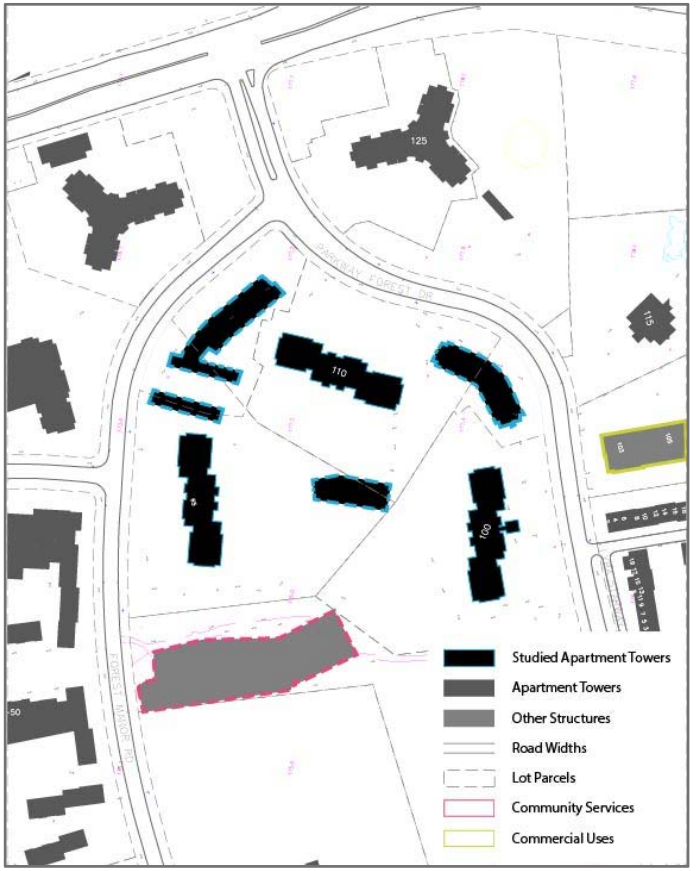
NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual land	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	110 Parkway Forest Drive	Timbercreek	1.176	0.148	0.115	1.028	87.41%		1	-	17	25,160	13	221	4		$ 1,179	7		$ 1,399	2		$ 1,625	$ 301,127	$ 3,613,525
B	110 Parkway Forest Drive	Timbercreek	0.185	0.000	0.104	0.185	100.00%		1 (new)	-	TBD	TBD	TBD	#VALUE!										#VALUE!	#VALUE!
C	100 Parkway Forest Drive	Timbercreek	1.364	0.149	0.084	1.215	89.08%		1	-	17	25,330	13	221	4		$ 1,179	7		$ 1,399	2		$ 1,625	$ 301,127	$ 3,613,525
D	65 Forest Manor Drive	Q Residential	1.380	0.143	0.097	1.237	89.64%		1	-	17	24,310	13	221	4	681	$ 1,010	7	880-950	$ 1,200	2	1160-1161	$ 1,380	$ 257,706	$ 3,092,471
E	85 Parkway Forest Drive	Homestead	0.173	0.000	0.093	0.173	100.00%		1 (new)	-	1	TBD	7	7	0	0	$ -	0	0	$ -	7	1800	$ 2,540	$ 17,780	$ 213,360
F-1	130 Parkway Forest Drive	Homestead	0.376	0.000	0.091	0.376	100.00%		1 (new)	-	7	TBD	13	91	4	605	$ 1,515	5	872-989	$ 1,791	3	1149-1267	$ 2,164	$ 150,549	$ 1,806,588
F-2	95 Parkway Forest Drive	Homestead	0.376	0.000	0.091	0.376	100.00%		1 (new)	-	1	TBD	7	7	0	0	$ -	0	0	$ -	7	1800	$ 2,540	$ 17,780	$ 213,360

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	Yes	
	Daycare		COMM/ INST	Yes	Located within the community centre
	Convenience Commercial		COMM	No	
	Convenience Retail		COMM	No	
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	
	Park Structure		INST	Yes	Located within the community centre
	Other				
	Underground Parking		P	No	
	Structured Parking		P	No	
	Surface Parking		P	Yes	
Non Residential Uses off-site	Commercial Mall		COMM	Yes	Fairview Mall
	Community Centre		INST	Yes	Parkway Forest Community Centre (includes Childcare Centre & Pool)
	Daycare		INST	Yes	Parkway Forest Community Centre
	Medical		COMM	Yes	Dental Office
	Convenience Commercial		COMM	Yes	Forest Convenience; Health Drug Mart; Iqbal Grill; Tekka Sushi; Dry Cleaning;
	Convenience Retail		COMM		
	Personal Service Shop		COMM	Yes	Trade Secrets; Joseph Salon & Sap; Hairline
	Grocery Store		COMM	Yes	Foodland
	Park		INST	Yes	Forest Manor Public School + Parkway Forest Park
	Park Structure		INST	Yes	Forest Manor Public School
	School		INST	Yes	Forest Manor Public School

NOTES

1	Part of the Emerald City Condominiums Master Plan
2	Parking surfaces being infilled with new development
3	Ideal Example of infill potential for apartment tower clusters
4	Significant concentrations of commercial uses within close proximity of the cluster
5	Additional commercial activities on site may not be necessary
6	New community centre proposed on site, using Parkway Forest Park lands - potentially
7	
8	
9	
10	



Markham

Approximate Address Markham Road & Cougar Court
Former Municipality Scarborough
Pilot Site Yes
Pilot Site Address 215 Markham Road

PARCEL INFORMATION

UNIT BREAKDOWN

NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual land	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	215 Markham Road	Capreit	1.168	0.146	0.242	1.022	87.50%		1	-	17	24820	12	204	4	790	$ 955	6	1090	$ 1,065	2	1265	$ 1,260	$ 216,237	$ 2,594,843
B	225 Markham Road	Capreit	1.528	0.202	0.181	1.326	86.78%		1	-	15	30300	16	240	5	840	$ 930	8	1030	$ 1,010	3	1360	$ 1,260	$ 245,705	$ 2,948,458
C	25 Cougar Court	Metcap	1.375	0.150	0.212	1.225	89.09%		1	-	20	30000	12	240	4	0	$ 849	6	0	$ 959	2	0	$ 1,260	$ 233,052	$ 2,796,627
D	15 Cougar Court	Amaz Property	1.17	0.146	0.304	1.024	87.52%		1	-	17	24820	12	204	4	0	$ 799	6	0	$ 959	2	0	$ 959	$ 184,832	$ 2,217,986

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	No	
	Daycare		COMM/ INST	Yes	215 Markham Street - ground floor; 225 Markham Street - ground floor; 15 Cougar Court
	Convenience Commercial		COMM	Yes	225 Markham Street - ground floor
	Retail		COMM	No	
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	Underutilized and discontinuous in most areas; pool is present at 225 Markham street, but appears abandoned
	Park Structure		INST	Yes	Part of the daycare at 215 Markham Street
	Other				
	Underground Parking		P	Yes	All sites have access
	Structured Parking		P	No	
	Surface Parking		P	Yes	All sites have access
Non Residential Uses off-site	Commercial Mall		COMM	Yes	Commercial Strip Plaza to the south and west; Markington Square (Rio Can); Walmart 1km away; etc...
	Community Centre		INST	No	
	Daycare		INST	Yes	Located within Markington Square
	Medical		COMM	Yes	Hope Medical Centre
	Convenience Commercial		COMM	Yes	Commercial Strip Plaza
	Convenience Retail		COMM	Yes	
	Personal Service Shop		COMM	Yes	
	Grocery Store		COMM	Yes	Metro; Batala Supermarket
	Park		INST	No	
	Park Structure		INST	No	
	School		INST	Yes	Cedar Drive Public School (more than 250m)

NOTES

1	Existing daycare and commercial uses
2	Good access to Markham Street
3	Oppourtunity for commercial and residential infill
4	Leveled Topography
5	Surrounded by low density development
6	
7	
8	
9	
10	

KIPLING

Approximate Address Kipling Avenue & Panorama Court
Former Municipality Etobicoke
Pilot Site Yes
Pilot Site Address 2667-2677 Kipling Avenue

PARCEL INFORMATION

UNIT BREAKDOWN

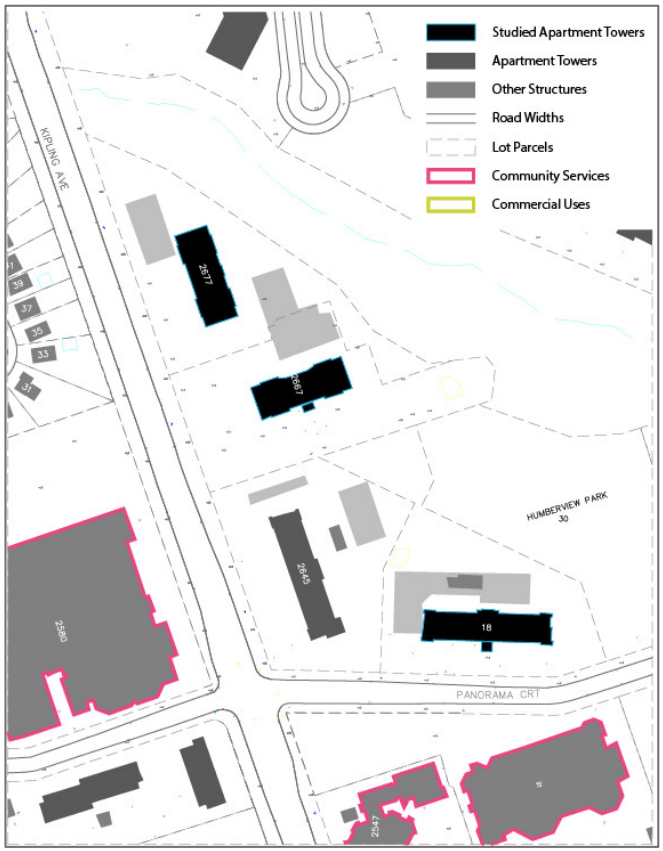
NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual land	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	2677 Kipling Avenue		1.123	0.123	0.136	1.000	89.05%		1	-	23	28290	10	230	3	0	$ 985	5	??	$ 1,150	2	??	$ 1,300	$ 257,493	$ 3,089,917
B	2667 Kipling Avenue		1.129	0.119	0.086	1.01	89.46%		1	-	23	27370	10	230	3	0	$ 985	5	??	$ 1,150	2	??	$ 1,300	$ 257,493	$ 3,089,917
C	2645 Kipling Avenue	CONDO	1.104	0.144	0.088	0.96	86.96%		1	-	18	25920													
D	18 Panorama Court		1.195	0.140	0.168	1.055	88.28%		1	-	17	23800	12	204	4	760	$ 985	6	1020	$ 1,120	2	1285	$ 1,300	$ 225,276	$ 2,703,314

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	No	
	Daycare		COMM/ INST	No	
	Convenience Commercial		COMM	No	
	Retail		COMM	No	
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	Fenced
	Park Structure		INST	No	
	Other				
	Underground Parking		P	Yes	All properties have access
	Structured Parking		P	No	
	Surface Parking		P	Yes	All properties have access
Non Residential Uses off-site	Commercial Mall		COMM	Yes	Albion Centre
	Community Centre		INST	Yes	Rexdale Community Hub
	Daycare		INST	Yes	Found within the Rexdale Community Hub
	Medical		COMM	Yes	Found within the Albion Centre
	Convenience Commercial		COMM	Yes	
	Convenience Retail		COMM	Yes	
	Personal Service Shop		COMM	Yes	
	Grocery Store		COMM	Yes	Albion Centre - No Frills
	Park		INST	Yes	Humberview Park
	Park Structure		INST	Yes	Humberview Park
	School		INST	Yes	Elementary, Middle, and Secondary School

NOTES

1	Parcel C is a condominium tower - sale of land may be difficult
2	Significant number of community amenities located nearby
3	Lots A & B have infill potential
4	Surrounded by low density housing and community infrastructure
5	Adjacent to high-traffic arterial
6	Albion Centre Mall to the south
7	Commercial Strip plaza to the north
8	
9	
10	



SHAUNESSY

Approximate Address Don Mills Road West & Shaughnessy Boulevard
Former Municipality North York
Pilot Site No
Pilot Site Address n.a.

PARCEL INFORMATION

UNIT BREAKDOWN

NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual land	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	185 Shaughnessy Boulevard	Westdale	1.369	0.140	0.056	1.229	89.77%		1	0	15	21,000	10	150	3	740-755	$ 1,000	5	980-1000	$ 1,250	2	1200	$ 1,400	$ 178,710	$ 2,144,520
B	175 Shaughnessy Boulevard	Homestead	1.005	0.096	0.101	0.909	90.45%		1	0	18	17,280	8	144	3	707-719	$ 1,090	4	917-934	$ 1,250	1	1200	$ 1,400	$ 175,851	$ 2,110,216

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	No	
	Daycare		COMM/ INST	No	
	Convenience Commercial		COMM	Yes	Ground floor podium of 185 Shaughnessy Boulevard
	Convenience Retail		COMM	No	
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	Fenced
	Park Structure		INST	No	
	Other				
	Underground Parking		P	Yes	Both towers have access to underground parking structures
	Structured Parking		P	No	
	Surface Parking		P	Yes	
Non Residential Uses off-site	Commercial Mall		COMM	Yes	Fairview Mall & Peanut Mall
	Community Centre		INST	No	
	Daycare		INST	Yes	Located within elementary schools nearby
	Medical		COMM		
	Convenience Commercial		COMM	Yes	Peanut Mall located on Don Mills road - marginal pedestrian access
	Convenience Retail		COMM	Yes	Peanut Mall located on Don Mills road - marginal pedestrian access
	Personal Service Shop		COMM	Yes	Peanut Mall located on Don Mills road - marginal pedestrian access
	Grocery Store		COMM	Yes	Tone Tai Supermarket - ethnic specialty
	Park		INST	Yes	Oriol Park
	School		INST	Yes	3 elementary; 2 secondary schools

NOTES

1	Very little opourtunity for infill development
2	
3	
4	
5	
6	
7	
8	
9	
10	

ELMRIDGE

Approximate Address Marlee & Elm Ridge
Former Municipality North York
Pilot Site n.a.
Pilot Site Address n.a.

PARCEL INFORMATION

UNIT BREAKDOWN

NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual land	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A		**Nubury Ltd.**	**2.179**	**0.586**	**0.115**	**1.593**	**73.11%**		**3**	**2**				**664**										**$ 751,897**	**$ 9,022,764**
A-1	145 Marlee Avenue	Nubury Ltd.		0.184						2	18	33066	18	324	6		$ 1,050	9		$ 1,125	3		$ 1,325	$ 366,890	$ 4,402,674
A-2	377 Ridelle Avenue	Nubury Ltd.		0.154							17	26214	12	204	4		$ 1,050	6		$ 1,125	2		$ 1,325	$ 231,005	$ 2,772,054
A-3	377 Ridelle Avenue	Nubury Ltd.		0.078							17	13294	8	136	3		$ 1,050	4		$ 1,125	1		$ 1,325	$ 154,003	$ 1,848,036
B		**Nubury Ltd.**	**1.107**	**0.244**	**0.113**	**0.863**	**77.96%**		**2**					**352**										**$ 398,596**	**$ 4,783,152**
B-1	111 Ridelle Avenue	Nubury Ltd.		0.090							17	15300	8	136	3		$ 1,050	4		$ 1,125	1		$ 1,325	$ 154,003	$ 1,848,036
B-2	140 Elm Ridge Drive	Nubury Ltd.		0.154							18	27756	12	216	4		$ 1,050	6		$ 1,125	2		$ 1,325	$ 244,593	$ 2,935,116

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	Yes	Pool, Daycare, and Summer Camp
	Daycare		COMM/ INST	Yes	145 Marlee Avenue - within the podium
	Convenience Commercial		COMM	Yes	145 Marlee Avenue - within the podium
	Retail		COMM	No	
	Personal Service Shop		COMM	Yes	145 Marlee Avenue - within the podium
	Grocery Store		COMM	Yes	Sobeys
	Open space		INST	Yes	
	Park Structure		INST	Yes	
	Other		COMM	Yes	Medical Clinic; Drycleaners
	Underground Parking		P	Yes	All properties have access
	Structured Parking		P	No	
	Surface Parking		P	Yes	All properties have access
Non Residential Uses off-site	Commercial Mall		COMM	No	
	Community Centre		INST	No	
	Daycare		INST	No	West Prep Daycare Centre
	Medical		COMM	No	
	Convenience Commercial		COMM	Yes	Strip plaza to the north
	Convenience Retail		COMM	Yes	Strip plaza to the north
	Personal Service Shop		COMM	Yes	Strip plaza to the north
	Grocery Store		COMM	Yes	Zito's Marketplace
	Park		INST	Yes	Benner Park; Viewmount Park; Beltline Park
	Park Structure		INST	Yes	Yes
	School		INST	No	

NOTES

1	One owner across all parcel
2	Established commercial hub at 145 Marlee Street
3	Example of full buildout with commercial uses
4	
5	
6	
7	
8	
9	
10	

JANE & FINCH

Approximate Address Jane Street and Finch Avenue (Sam Romanoway - Sam Roccoway Street
Former Municipality North York
Pilot Site n.a.
Pilot Site Address n.a.

PARCEL INFORMATION

UNIT BREAKDOWN

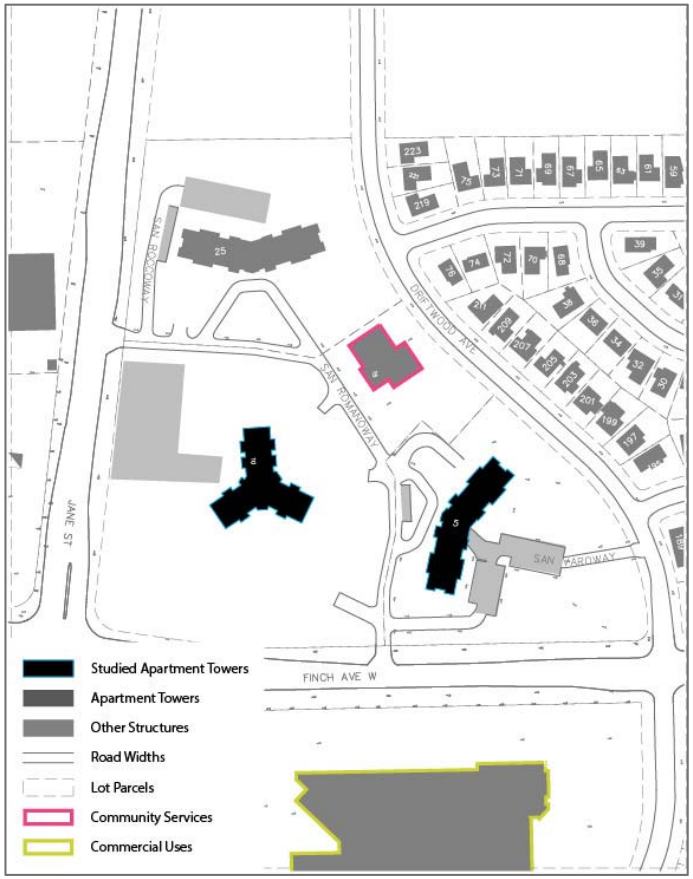
NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual Lands	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	25 San Roccoway	Greenwin	1.698	0.157	0.110	1.541	90.75%		1		18	28,260	13	234	4	0	$ 880	7	780	$ 1,200	2	1022	$ 1,275	$ 258,840	$ 3,106,083
B	10 San Romanoway	Cap Reit	3.252	0.163	0.311	3.089	94.99%		1		33	53,724	12	396	4	620-690	$ 880	6	870-950	$ 1,000	2	1120	$ 1,200	$ 393,022	$ 4,716,265
B-1	15 San Romanoway	Cap Reit		0.088					n.a.	1	1	881			0			0			0				
C	5 San Romanoway	CONDO	1.697	0.158	0.147	1.539	90.69%		1		18	28,440	13	234	4	760	$ 985	7	780	$ 1,000	2	0	$ 1,200	$ 240,373	$ 2,884,476

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	Yes	Community recreational centre located within Parcel B, municipal address 15 San Romanoway
	Daycare		COMM/ INST	Yes	Located within the community centre
	Convenience Commercial		COMM	No	
	Retail		COMM	No	
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	Movie Screening centre within the community centre
	Park Structure		INST	Yes	Available within the available open space provided on site
	Other				
	Underground Parking		P	Yes	Access is available for all three towers within the cluster
	Structured Parking		P	No	
	Surface Parking		P	Yes	Access is available for all three towers within the cluster
Non Residential Uses off-site	Commercial Mall		COMM	Yes	Jane and Finch Mall; Yorkgate Centre
	Community Centre		INST	Yes	York University TD community engagement centre; York woods library;
	Daycare		INST	Yes	Potentially located within elementary schools located within the proximate community
	Medical		COMM	Yes	Yorkview Lifecare Centre; Footcare Place
	Convenience Commercial		COMM	Yes	Strip plaza located at SW corner of Jane & Finch
	Convenience Retail		COMM	Yes	Strip plaza located at SW corner of Jane & Finch
	Personal Service Shop		COMM	Yes	Strip plaza located at SW corner of Jane & Finch
	Grocery Store		COMM	Yes	No Frills; Price Choppers
	Park		INST	Yes	Finch Hydro Corridor; Driftwood Park
	Park Structure		INST	Yes	Driftwood Park
	School		INST	Yes	Driftwood PS; St. Charles Garnier SS

NOTES

1	Huge expance of lands available on lands fronting on Jane and Finch
2	Oportunity to provide at street commercial uses, creating a node
3	Surrounded by major commercial uses
4	
5	
6	
7	
8	
9	
10	



BATHURST

Approximate Address Bathurst, Fisherville, and Rockford
Former Municipality North York
Pilot Site n.a.
Pilot Site Address n.a.

PARCEL INFORMATION

UNIT BREAKDOWN

NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual Lands	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	25 Fisherville Road	Marika Corp.	1.516	0.138	0.210	1.378	90.90%		1	0	18	24,840	12	216	4	n.a.	$ 1,182	6	n.a.	$ 1,362	2	0	$ 1,450	$ 284,383	$ 3,412,596
B	5 Fisherville Road	Pinedale Propei	2.343	0.234	0.288	2.109	90.01%		2	0				0										$ 495,973	$ 5,951,680
B-1	Building 1 - 5 Fisherville	Pinedale Propei	1.172	0.117	0.144	1.055	90.01%		1	0	17	19,890	12	204	4	n.a.	$ 989	6	n.a.	$ 1,289	2	n.a.	$ 1,450	$ 247,987	$ 2,975,840
B-2	Building 2 - 6040 Barthurst	Pinedale Propei	1.172	0.117	0.144	1.055	90.01%		1	0	17	19,890	12	204	4	n.a.	$ 989	6	n.a.	$ 1,289	2	n.a.	$ 1,450	$ 247,987	$ 2,975,840
C	*6030 Bathurst Street (VACANT)*		*0.655*		*0.176*	*0.655*	*100.00%*		*0*	*0*				*0*										$ -	$ -
D	6030 Bathurst Street	Timbercreek	1.616	0.151		2.120	131.19%		1	0	18	27,180	14	252	5		$ 1,225	7		$ 1,475	2		$ 1,839	$ 365,615	$ 4,387,382
E	*6020 Bathurst Street (VACANT)*		*0.321*		*0.040*	*0.321*	*100.00%*		*0*	*0*				*0*										$ -	$ -
F	6020 Bathurst Street	Timbercreek	0.923	0.142	0.152	1.102	119.39%		1	0	11	15,620	14	154	5		$ 1,225	7		$ 1,475	2		$ 1,839	$ 223,432	$ 2,681,178
G	6010 Bathurst Street	???	0.853	0.120	0.121	0.733	85.93%		1	0	12	14,400	10	120	3		$ 989	5		$ 1,399	2		$ 1,400	$ 167,880	$ 2,014,560
H	12 Rockford Road	RTM Property M	0.810	0.107	0.119	0.703	86.79%		1	0	13	13,910	10	130	3		$ 1,020	5		$ 1,225	2		$ 1,400	$ 154,092	$ 1,849,099

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	No	
	Daycare		COMM/ INST	Yes	Enriched Child Care - 6030 Bathurst Street
	Convenience Commercial		COMM	No	
	Retail		COMM	No	
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	
	Park Structure		INST	Yes	
	Other				
	Underground Parking		P	Yes	25 Rockford Drive did not have access to underground parking
	Structured Parking		P	No	
	Surface Parking		P	Yes	Some parking was located on shared access vacant lands
Non Residential Uses off-site	Commercial Mall		COMM	Yes	The Market Exchange Mall (NW corner of Bathurst & Steeles); Stip Plaza (SE corner of Bathurst and Steeles)
	Community Centre		INST	No	
	Daycare		INST	No	Potentially in School
	Medical		COMM	Yes	Bathurst Drug Store; Shoppers Drug Mart
	Convenience Commercial		COMM	Yes	Strip plaza
	Convenience Retail		COMM	Yes	Strip plaza
	Personal Service Shop		COMM	Yes	Strip plaza
	Grocery Store		COMM	Yes	Price Choppers; Fresh Co.; Shoppers Drug Mart
	Park		INST	Yes	Lissom Park
	Park Structure		INST	Yes	
	School		INST	Yes	Fisherville Jr PS

NOTES

1	Towers along major arterials
2	All properties are separated by fences
3	Abundant room for new podium developments
4	Commercial retail available nearby
5	Grocery stores north of the cluster
6	
7	
8	
9	
10	

MORNELLE

Approximate Address Mornelle Court & Ellesmere Road
Former Municipality Scarborough
Pilot Site n.a.
Pilot Site Address n.a.

PARCEL INFORMATION

UNIT BREAKDOWN

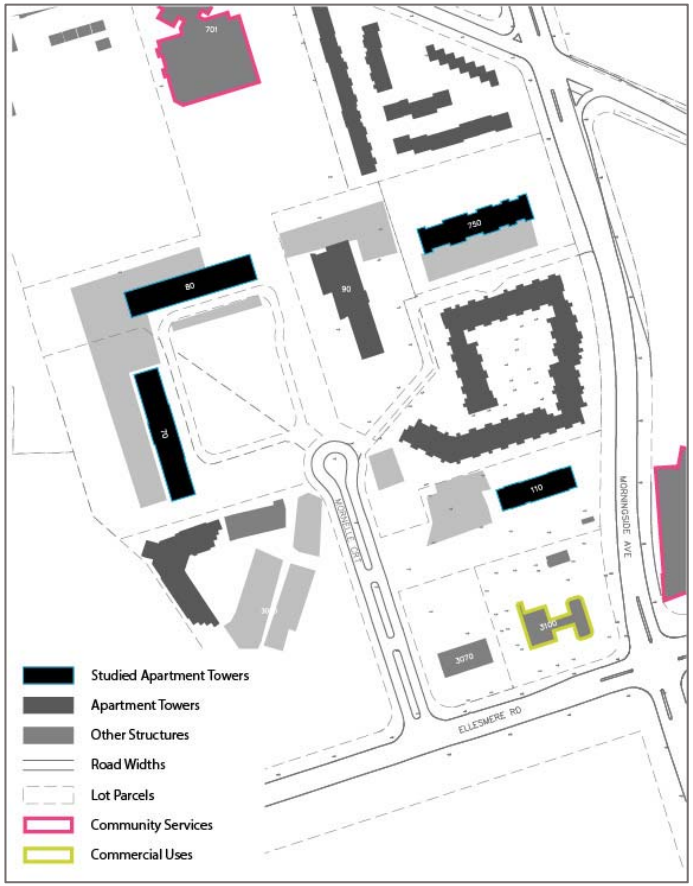
NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual Lands	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	70 Mornelle Court	Unknown	1.677	0.173	0.327	1.504	89.68%		1		16	27,680	18	288	6	n.a.	$ 875	9	n.a.	$ 995	3	0	$ 1,295	$ 289,031	$ 3,468,372
B	80 Mornelle Court	MetCap	1.648	0.180	0.304	1.468	89.08%		1		16	28,800	18	288	6	n.a.	$ 849	9	n.a.	$ 949	3	0	$ 1,295	$ 279,823	$ 3,357,870
C	90 Mornelle Court	CONDO	1.205	0.193	0.201	1.012	83.98%		1		12	23,160	14	168										$ -	$ -
D	750 Morningside Avenue	Cogir	1.041	0.145	0.180	0.896	86.07%				12	17,400	10	120	3	n.a.	$ 915	5	0	$ 949	2	n.a.	$ 1,295	$ 119,214	$ 1,430,571
E	110 Mornelle Court Ave	TCHC	0.992	0.092	0.168	0.900	90.73%		1		15	13,800	8	120										$ -	$ -

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	No	
	Daycare		COMM/ INST	Yes	110 Mornelle Court
	Convenience Commercial		COMM	Yes	80 Mornelle Court @ the ground floor
	Retail		COMM	No	
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	
	Park Structure		INST	Yes	
	Other				
	Underground Parking		P	Yes	Available on all sites
	Structured Parking		P		
	Surface Parking		P	Yes	Available on all sites
Non Residential Uses off-site	Commercial Mall		COMM	No	
	Community Centre		INST	No	
	Daycare		INST		
	Medical		COMM	Yes	Centenary Optical; Shoppers Drug Mart; Rouge Valley Centenary
	Convenience Commercial		COMM	Yes	Strip Plaza located along Ellesmere Road - westbound
	Convenience Retail		COMM		
	Personal Service Shop		COMM		
	Grocery Store		COMM	Yes	Food Basics
	Park		INST	Yes	Ellesmere Reservoir Park
	Park Structure		INST		
	School		INST	Yes	Military Trail PS; Pope John Paul II CS;

NOTES

1	Site is enclosed to the West with a wooded area
2	Ellesmere has very little traffic exposure for intensification
3	Open area on site has a rolling topography
4	110 Mornelle is subject to a building renewal project
5	Different owners for all towers, with two condominiums and one TCHC
6	Existing commercial use could be expanded
7	The nearby commercial strip is located uphill, and very inaccessible
8	
9	
10	



THORNCLIFFE DRIVE

Approximate Address 53-93 Thorncliffe Drive Park
Former Municipality East York
Pilot Site n.a.
Pilot Site Address n.a.

PARCEL INFORMATION

UNIT BREAKDOWN

NO	Address	Owner	Hectares	Building Footprint	Parking Coverage	Residual Lands	Ratio	Buildable Area	Tower	Podium	Floors	GFA (m2 total)	Unit/Floor	Total Units	1 bdrm/ Floor	SQ/ft	Monthly Rate	2 bdrm/ Floor	SQ/ft	Monthly Rate	3+ bdrm/ Floor	SQ/ft	Monthly Rate	Monthly Revenue	Yearly Revenue
A	85-95 Thorncliffe Drive Park	Morguard	3.536	0.426	0.348	3.110	87.95%		3			0		0										$ 1,542,123	$ 18,505,473
A-1	*85 Thorncliffe Drive Park*	*Morguard*	*1.768*	*0.148*	*0.174*	*1.620*	*91.62%*		*1*		*43*	*63,683*	*12*	*516*	*4*	*554-875*	*$ 1,245*	*6*	*1147*	*$ 1,525*	*2*	*1616*	*$ 1,910*	*$ 771,061*	*$ 9,252,737*
A-2	*95 Thorncliffe Drive Park*	*Morguard*	*1.768*	*0.148*	*0.174*	*1.620*	*91.62%*		*1*		*43*	*63,683*	*12*	*516*	*4*	*554-875*	*$ 1,245*	*6*	*1147*	*$ 1,525*	*2*	*1616*	*$ 1,910*	*$ 771,061*	*$ 9,252,737*
B	79 Thorncliffe Drive Park	Q Residential	1.473	0.224	0.436	1.249	84.79%		1		17	38,080	18	306	6	n.a.	$ 910	9	n.a.	$ 1,110	3	n.a.	$ 1,390	$ 333,197	$ 3,998,367
C	75 Thorncliffe Drive Park	Q Residential	1.218	0.226	0.294	0.992	81.44%		1		17	38,420	18	306	6	n.a.	$ 910	9	n.a.	$ 1,110	3	n.a.	$ 1,390	$ 333,197	$ 3,998,367
D	71 Thorncliffe Drive Park	Q Residential	1.344	0.171	0.218	1.173	87.28%		1		20	34,200	16	320	5	n.a.	$ 910	8	n.a.	$ 1,110	3	n.a.	$ 1,390	$ 348,442	$ 4,181,299
E	65 Thorncliffe Drive Park	???	1.376	0.197	0.178	1.179	85.68%		1		20	39,400	17	340	6	n.a.	$ 915	9	n.a.	$ 1,100	3	n.a.	$ 1,390	$ 369,055	$ 4,428,656
F	53 Thorncliffe Drive Park	Park Property M	1.239	0.155	0.191	1.084	87.49%		1		20	31,000	14	280	5	963	$ 980	7	1188	$ 1,100	2	1422	$ 1,475	$ 313,783	$ 3,765,401

BUILT CHARACTERISTICS

	Use		Type	Available	Details
Non Residential Uses on-site	Community Centre		INST	Yes	Reserved for 85-95 Thorncliffe Drive Park
	Daycare		COMM/ INST	No	
	Convenience Commercial		COMM	Yes	75 Thorncliffe Drive Park - Convenience Store + Grocery
	Retail		COMM	Yes	75 Thorncliffe Drive Park - Clothing
	Personal Service Shop		COMM	No	
	Grocery Store		COMM	No	
	Open space		INST	Yes	Mediocre access and lack of maintenance
	Park Structure		INST	No	
	Other				
	Underground Parking		P	Yes	
	Structured Parking		P	No	
	Surface Parking		P	Yes	
Non Residential Uses off-site	Commercial Mall		COMM	Yes	East York Town Centre Mall; Target; Strip Plaza with specialty foods;
	Community Centre		INST	Yes	Church and community centre
	Daycare		INST		Potentially located within Thorncliffe Park Public School
	Medical		COMM		Dental office; medical clinic; Shoppers Drug Mart; i2i opticians
	Convenience Commercial		COMM	Yes	Located within strip plazas
	Convenience Retail		COMM	Yes	Located in mall and strip plazas
	Personal Service Shop		COMM	Yes	Located in mall and strip plazas
	Grocery Store		COMM	Yes	Food Basics
	Park		INST	YEs	R.V. Burgess Park; Leaside Park
	Park Structure		INST	Yes	
	School		INST	Yes	Thorncliffe Park Public School
	Other		COMM	Yes	Bowling; yoga; Fitness Centre

NOTES

1	79 Thorncliffe Park Drive: Top apartment building in Toronto for property standards complaints: http://www.thestar.com/news/city_hall/2013/08/27/torontos_top_apartment_building_for_complaints_79_thorncliffe_park.html
2	Numerous owners of apartment stock
3	Very little connectivity between towers
4	Abundance of open space and surface parking
5	Good transit access
6	Schoold is central to the neighbourhood
7	
8	
9	
10	

Appendix C: Net Operating Income & Land Residual Cost Analysis

Appendix C-1: Utility Cost Breakdown & Assumptions

Appendix C-2: Toronto Tax Assessment Breakdown per Tower Lot

Appendix C-3: Land Residual Calculation Worksheets (Total & Per Square Metre)

Appendix C-1: Utility Cost Breakdown & Assumptions

Building Profile Summary

Proposed Building:	Multi-Unit Residential - XX,000 m²	
Location: Toronto (A), Ontario	Toronto (A), Ontario	
Heating System: Fossil	Fossil	
Utility Rates		
	$ 0.093 per kWh	$ 12.394 per GJ
		$ 12.394 per litre
	$ 0.000 per kW	oil/propane

Building Shell	**Reference Building**	**Subject Building**
Average window-to-wall-area ratio:	26.47%	26.47%
Overall window USI-value:	3.2 W/m²°C	5 W/m²°C
Window shading coefficient:	0.736	1.000
Overall wall RSI-value:	1.818 m²°C/W	0.6 m²°C/W
Gross exterior wall area:	6224 m²	6224 m²
Roof type:	All other	All other
Overall roof RSI-value:	2.128	1.4
Gross exterior roof area:	1400 m²	1400 m²

Mechanical System	**Reference Building**	**Subject Building**
Heating efficiency:	80%	60%
Minimum outside air:	0.4 l/s/m²	0.4 l/s/m²
Demand control ventilation (DCV) type:	None	None
Percent of outside air controlled by DCV:	0%	0%
Percent of floor area cooled:	0%	0%
Cooling efficiency:	2.5 COP	2.5 COP
Outdoor air economizer?	No	No
Efficiency of exhaust air heat recovery:	0%	0%
Service water heating fuel type:	Fossil	Fossil
Service water heating efficiency:	80%	60%
Service water savings:	0%	0%
Mechanical Efficiency Options (only applies to Your Design):		
Heating plant option: On/Off	Off	Off
Variable speed fans: No	No	No

Lighting	**Reference Building**	**Subject Building**
Average lighting density:	10 W/m²	10 W/m²
Lighting controls		
None	0%	0%
None	0%	0%

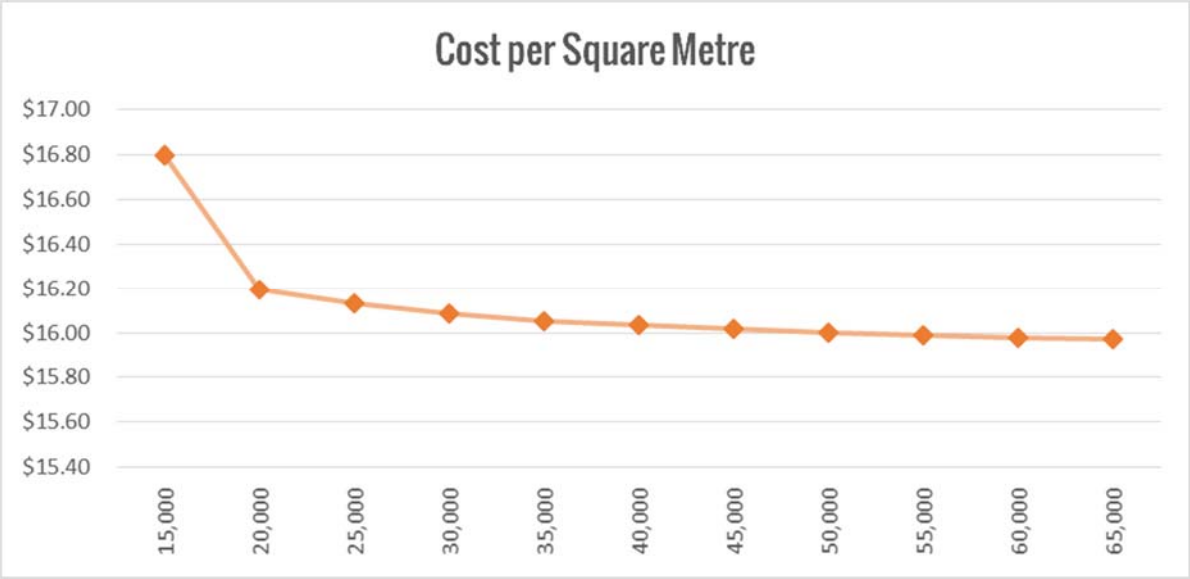
Parkade lighting	**Reference Building**	**Subject Building**
Parkade floor area:	2500 m²	2500 m²
Average lighting density:	3.2 W/m²	3.2 W/m²
Percent of lighting load with occupancy sensor c	0%	0%

Process Loads	**Reference Building**	**Subject Building**
Average process load density: 0 0	0%	0%
Percent served by electricity: 0 0 %	0%	0%

Notes:

Canada, Office of Energy Efficiency Screening Tool For New Building Design (http://www.screeningtool.ca/). The mentionned tool is what was used to set a baseline estimation of utility costs for tower structures within the "Tower Renewal Guidelines", Kesik, for the comprehensive retrofit of multi-unit residential buildings in cold climates", Kesik, T., & Saleff, I. (2009)

the: proposed building size; Gross exterior roof area (used a constant of 1,400 m^2 as it was the typical floorplate size of the majority of apartment structures); and Parkade floor area (used a constant of 2,000 m^2).



OFFICE OF ENERGY EFFICIENCY

TYPE	GFA (M^2)	ESTIMATED COST PER ANNUM	
A	15,000	$	252,000.00
B	20,000	$	323,926.00
D	25,000	$	403,273.00
E	30,000	$	482,631.00
F	35,000	$	561,893.00
G	40,000	$	641,335.00
H	45,000	$	720,687.00
I	50,000	$	800,040.00
J	55,000	$	879,392.00
	60,000	$	958,744.00
K	65,000	$	1,038,096.00

NOTES:

1. Used 1400 m2 as a base roof area
2. Used 2500 m2 as a base parkade floor area

Appendix C-2: Toronto Tax Assessment Breakdown per Tower Lot

The following values (depicted in blue below) were calculated using 2014 property assessment data taken from the City of Toronto's automated registry office clerk's desk.

Multi-Unit Tax Rate 1.91%

PARKWAY

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value
A	110 Parkway Forest Drive	Timbercreek	1.176	25,160	$ 301,127	$ 3,613,525	$ 21,283,125	$ 406,529
C	100 Parkway Forest Drive	Timbercreek	1.364	25,330	$ 301,127	$ 3,613,525	$ 19,509,432	$ 372,650
D	65 Forest Manor Drive	Q Residential	1.380	24,310	$ 257,706	$ 3,092,471	$ 20,204,633	$ 385,929

MARKHAM

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value
A	215 Markham Road	Capreit	1.168	24,820	$ 216,237	$ 2,594,843	$ 16,238,000	$ 310,162
B	225 Markham Road	Capreit	1.528	30,300	$ 245,705	$ 2,948,458	$ 20,274,500	$ 387,263
C	25 Cougar Court	Metcap	1.375	30,000	$ 233,052	$ 2,796,627	$ 18,746,500	$ 358,077
D	15 Cougar Court	Premji Amir	1.17	24,820	$ 184,832	$ 2,217,986	$ 15,313,500	$ 292,503

KIPLING

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value
A	2677 Kipling Avenue	1241676 Ontario	1.123	28,290	$ 257,493	$ 3,089,917	$ 16,896,000	$ 322,731
B	2667 Kipling Avenue	1241676 Ontario	1.129	27,370	$ 257,493	$ 3,089,917	$ 16,896,000	$ 322,731
D	18 Panorama Court		1.195	23,800	$ 225,276	$ 2,703,314	$ 19,779,500	$ 377,808

SHAUGHNESSY

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value
A	185 Shaughnessy Boulevard	Westdale	1.369	21,000	$ 178,710	$ 2,144,520	$ 17,326,500	$ 330,954
B	175 Shaughnessy Boulevard	Homestead	1.005	17,280	$ 175,851	$ 2,110,216	$ 13,216,000	$ 252,439

ELM RIDGE

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value
A		**Nubury Ltd.**	**2.179**	-	**$ 751,897**	**$ 9,022,764**	**$ 70,696,000**	$ 1,350,365
A-1	145 Marlee Avenue	Nubury Ltd.		33,066	$ 366,890	$ 4,402,674	$ 34,913,500	$ 666,883
A-2	377 Ridelle Avenue	Nubury Ltd.		26,214	$ 231,005	$ 2,772,054	$ 23,742,089	$ 453,498
A-3	377 Ridelle Avenue	Nubury Ltd.		13,294	$ 154,003	$ 1,848,036	$ 12,040,411	$ 229,984
B		**Nubury Ltd.**	**1.107**	-	**$ 398,596**	**$ 4,783,152**	**$ 42,007,000**	**$ 802,376**
B-1	111 Ridelle Avenue	Nubury Ltd.		15,300	$ 154,003	$ 1,848,036	$ 14,927,237	$ 285,125
B-2	140 Elm Ridge Drive	Nubury Ltd.		27,756	$ 244,593	$ 2,935,116	$ 27,079,763	$ 517,251

JANE & FINCH

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value
A	25 San Romanoway	Greenwin	1.698	28,260	$ 258,840	$ 3,106,083	$ 23,778,000	$ 454,184
B	10 San Romanoway	Cap Reit	3.252	53,724	$ 393,022	$ 4,716,265	$ 33,096,500	$ 632,177

BATHURST

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	Yearly Revenue	TAX ASSESSMENT MPAC Assessment	Taxation Value
A	25 Fisherville Road	Marika Corp.	1.516	24,840	$ 284,383	$ 3,412,596	$ 25,683,500	$ 490,581
B	5 Fisherville Road	Pinedale Proper	2.343	-	$ 495,973	$ 5,951,680	$ 38,493,000	$ 735,255
B-1	*Building 1 - 5 Fisherville*	*Pinedale Proper*	*1.172*	*19,890*	*$ 247,987*	*$ 2,975,840*	*$ 19,246,500*	*$ 367,628*
B-2	*Building 2 - 6040 Barthurst*	*Pinedale Proper*	*1.172*	*19,890*	*$ 247,987*	*$ 2,975,840*	*$ 19,246,500*	*$ 367,628*
D	6030 Bathurst Street	Timbercreek	1.616	27,180	$ 365,615	$ 4,387,382	$ 28,958,250	$ 553,132
F	6020 Bathurst Street	Timbercreek	0.923	15,620	$ 223,432	$ 2,681,178	$ 17,530,250	$ 334,845
G	6010 Bathurst Street	799965 Ontario I	0.853	14,400	$ 167,880	$ 2,014,560	$ 14,260,500	$ 272,390
H	12 Rockford Road	RTM Property M	0.810	13,910	$ 154,092	$ 1,849,099	$ 15,827,500	$ 302,321

MORNELLE

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	Yearly Revenue	TAX ASSESSMENT MPAC Assessment	Taxation Value
A	70 Mornelle Court	Mornelle Apts L	1.677	27,680	$ 289,031	$ 3,468,372	$ 18,396,500	$ 351,392
B	80 Mornelle Court	MetCap	1.648	28,800	$ 279,823	$ 3,357,870	$ 15,733,000	$ 300,516
C	90 Mornelle Court	TCHC	1.205	23,160	$ -	$ -	$ 15,646,500	$ 298,864
D	750 Morningside Avenue	Cogir	1.041	17,400	$ 119,214	$ 1,430,571	$ 12,563,000	$ 239,966
E	110 Mornelle Court Ave	TCHC	0.992	13,800	$ -	$ -	$ 11,598,000	$ 221,534

PARCEL INFORMATION

NO	Address	Owner	ha.	GFA (m2)	REVENUES Monthly Revenue	Yearly Revenue	TAX ASSESSMENT MPAC Assessment	Taxation Value
A	85-95 Thorncliffe Drive Park	Morguard	3.536	127,366	$ 1,542,123	$ 18,505,473	$ 123,141,500	$ 2,352,127
A-1	85 Thorncliffe Drive Park	Morguard	1.768	63,683	$ 771,061	$ 9,252,737	$ 61,570,750	$ 1,176,064
A-2	95 Thorncliffe Drive Park	Morguard	1.768	63,683	$ 771,061	$ 9,252,737	$ 61,570,750	$ 1,176,064
B	79 Thorncliffe Drive Park	Q Residential	1.473	38,080	$ 333,197	$ 3,998,367	$ 29,027,000	$ 554,445
C	75 Thorncliffe Drive Park	Q Residential	1.218	38,420	$ 333,197	$ 3,998,367	$ 29,102,500	$ 555,887
D	71 Thorncliffe Drive Park	Q Residential	1.344	34,200	$ 348,442	$ 4,181,299	$ 29,043,000	$ 554,751
E	65 Thorncliffe Drive Park	???	1.376	39,400	$ 369,055	$ 4,428,656	$ 30,156,500	$ 576,020
F	53 Thorncliffe Drive Park	Park Property M	1.239	31,000	$ 313,783	$ 3,765,401	$ 26,321,000	$ 502,758

Estimated property tax = Assessed Value x Residential Tax Rate

Appendix C-3: Land Residual Calculation Worksheets (Total & Per Square Metre)

Multi-Unit Tax Rate	1.91%
Maintenance Rate	40.00%
Cap Rate (High)	4.75%
Cap Rate (Low)	3.75%

PARKWAY FOREST

NO	Address	Owner	Hectares	Surplus Lands	GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	110 Parkway Forest Drive	Timbercreek	1.176	1.028	25,000	$ 301,127	$ 3,613,525	$ 403,273	$ 1,445,410	$ 21,283,125	$ 406,529	$ 1,358,313	$ 36,221,675	$ 28,596,059	-$ 14,938,550	-$ 14,531,663	-$ 7,312,934	-$ 7,113,749
C	100 Parkway Forest Drive	Timbercreek	1.364	1.215	25,000	$ 301,127	$ 3,613,525	$ 403,273	$ 1,445,410	$ 19,509,432	$ 372,650	$ 1,392,192	$ 37,125,124	$ 29,309,308	-$ 17,615,692	-$ 14,498,512	-$ 9,799,876	-$ 8,065,742
D	65 Forest Manor Drive	Q Residential	1.380	1.237	25,000	$ 257,706	$ 3,092,471	$ 403,273	$ 1,236,988	$ 20,204,633	$ 385,929	$ 1,066,280	$ 28,434,146	$ 22,448,010	-$ 8,229,513	-$ 6,652,800	-$ 2,243,377	-$ 1,813,563
			1.698															

MARKHAM

NO	Address	Owner	Hectares	Surplus Lands	GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	215 Markham Road	Capreit	1.168	1.022	25,000	$ 216,237	$ 2,594,843	$ 403,273	$ 1,037,937	$ 16,238,000	$ 310,162	$ 843,471	$ 22,492,553	$ 17,757,279	-$ 6,254,553	-$ 6,119,915	-$ 1,519,279	-$ 1,486,574
B	225 Markham Road	Capreit	1.528	1.326	30,000	$ 245,705	$ 2,948,458	$ 482,631	$ 1,179,383	$ 20,274,500	$ 387,263	$ 899,180	$ 23,978,136	$ 18,930,108	-$ 3,703,636	-$ 2,793,089	$ 1,344,392	$ 1,013,871
C	25 Cougar Court	Metcap	1.375	1.225	30,000	$ 233,052	$ 2,796,627	$ 482,631	$ 1,118,651	$ 18,746,500	$ 358,077	$ 837,268	$ 22,327,147	$ 17,626,695	-$ 3,580,647	-$ 2,922,977	$ 1,119,805	$ 914,126
D	15 Cougar Court	Amaz Property	1.17	1.024	25,000	$ 184,832	$ 2,217,986	$ 403,273	$ 887,194	$ 15,313,500	$ 292,503	$ 635,015	$ 16,933,739	$ 13,368,741	-$ 1,620,239	-$ 1,582,265	$ 1,944,759	$ 1,899,178

KIPLING

NO	Address	Owner	Hectares	Surplus Lands	Rounded GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	2677 Kipling Avenue		1.123	1	30,000	$ 257,493	$ 3,089,917	$ 482,631	$ 1,235,967	$ 16,896,000	$ 322,731	$ 1,048,588	$ 27,962,354	$ 22,075,543	-$ 11,066,354	-$ 11,066,354	-$ 5,179,543	-$ 5,179,543
B	2667 Kipling Avenue		1.129	1.01	30,000	$ 257,493	$ 3,089,917	$ 482,631	$ 1,235,967	$ 16,896,000	$ 322,731	$ 1,048,588	$ 27,962,354	$ 22,075,543	-$ 11,066,354	-$ 10,956,786	-$ 5,179,543	-$ 5,128,260
D	18 Panorama Court		1.195	1.055	25,000	$ 225,276	$ 2,703,314	$ 403,273	$ 1,081,326	$ 19,779,500	$ 377,808	$ 840,907	$ 22,424,188	$ 17,703,306	-$ 2,644,688	-$ 2,506,813	$ 2,076,194	$ 1,967,956

SHAUGHNESSY

NO	Address	Owner	Hectares	Surplus Lands	Rounded GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	185 Shaughnessy Boulevard	Westdale	1.369	1.229	20,000	$ 178,710	$ 2,144,520	$ 323,926	$ 857,808	$ 17,326,500	$ 330,954	$ 631,832	$ 16,848,862	$ 13,301,733	$ 477,638	$ 388,639	$ 4,024,767	$ 3,274,830
B	175 Shaughnessy Boulevard	Homestead	1.005	0.909	20,000	$ 175,851	$ 2,110,216	$ 323,926	$ 844,087	$ 13,216,000	$ 252,439	$ 689,765	$ 18,393,729	$ 14,521,365	-$ 5,177,729	-$ 5,696,071	-$ 1,305,365	-$ 1,436,045

ELM RIDGE

NO	Address	Owner	Hectares	Surplus Lands	Rounded GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A		**Nubury Ltd.**	**2.179**	**1.593**	**105,000**	**$ 751,897**	**$ 9,022,764**	**$ 1,693,369**	**$ 3,609,106**	**$ 70,696,000**	**$ 1,350,365**	**$ 2,369,924**	**$ 63,197,982**	**$ 49,893,144**	$ 7,498,018	**$ 4,706,854**	$ 20,802,856	**$ 13,058,918**
A-1	145 Marlee Avenue	Nubury Ltd.		0	65,000	$ 366,890	$ 4,402,674	$ 1,038,096	$ 1,761,070	$ 34,913,500	$ 666,883	$ 936,625	$ 24,976,673	$ 19,718,426	$ 9,936,827	#DIV/0!	$ 15,195,074	#DIV/0!
A-2	377 Ridelle Avenue	Nubury Ltd.		0	25,000	$ 231,005	$ 2,772,054	$ 403,273	$ 1,108,822	$ 23,742,089	$ 453,498	$ 806,461	$ 21,505,640	$ 16,978,137	$ 2,236,449	#DIV/0!	$ 6,763,952	#DIV/0!
A-3	377 Ridelle Avenue	Nubury Ltd.		0	15,000	$ 154,003	$ 1,848,036	$ 252,000	$ 739,214	$ 12,040,411	$ 229,984	$ 626,838	$ 16,715,669	$ 13,196,581	-$ 4,675,258	#DIV/0!	-$ 1,156,170	#DIV/0!
B		**Nubury Ltd.**	**1.107**	**0.863**	**45,000**	**$ 398,596**	**$ 4,783,152**	**$ 720,687**	**$ 1,913,261**	**$ 42,007,000**	**$ 802,376**	**$ 1,346,828**	**$ 35,915,414**	**$ 28,354,274**	**$ 6,091,586**	**$ 7,058,616**	**$ 13,652,726**	**$ 15,820,076**
B-1	111 Ridelle Avenue	Nubury Ltd.		0	15,000	$ 154,003	$ 1,848,036	$ 252,000	$ 739,214	$ 14,927,237	$ 285,125	$ 571,696	$ 15,245,234	$ 12,035,711	-$ 317,998	#DIV/0!	$ 2,891,525	#DIV/0!
B-2	140 Elm Ridge Drive	Nubury Ltd.		0	30,000	$ 244,593	$ 2,935,116	$ 482,631	$ 1,174,046	$ 27,079,763	$ 517,251	$ 761,188	$ 20,298,340	$ 16,025,005	$ 6,781,424	#DIV/0!	$ 11,054,758	#DIV/0!

Multi-Unit Tax Rate	1.91%
Maintenance Rate	40.00%
Cap Rate (High)	4.75%
Cap Rate (Low)	3.75%

JANE & FINCH

NO	Address	Owner	Hectares	Surplus Lands	Rounded GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	25 San Roccoway	Greenwin	1.698	1.541	30,000	$ 258,840	$ 3,106,083	$ 482,631	$ 1,242,433	$ 23,778,000	$ 454,184	$ 926,835	$ 24,715,603	$ 19,512,318	-$ 937,603	-$ 608,438	$ 4,265,682	$ 2,768,126
B	10 San Romanoway	Cap Reit	3.252	3.089	55,000	$ 393,022	$ 4,716,265	$ 879,392	$ 1,886,506	$ 33,096,500	$ 632,177	$ 1,318,190	$ 35,151,743	$ 27,751,376	-$ 2,055,243	-$ 665,299	$ 5,345,124	$ 1,730,262

BATHURST

NO	Address	Owner	Hectares	Surplus Lands	Rounded GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	25 Fisherville Road	Marika Corp.	1.516	1.378	25,000	$ 284,383	$ 3,412,596	$ 403,273	$ 1,365,038	$ 25,683,500	$ 490,581	$ 1,153,704	$ 30,765,436	$ 24,288,502	-$ 5,081,936	-$ 3,687,907	$ 1,394,998	$ 1,012,335
B	5 Fisherville Road	Pinedale Properties	2.343	2.109	40,000	$ 495,973	$ 5,951,680	$ 641,335	$ 2,380,672	$ 38,493,000	$ 735,255	$ 2,194,418	$ 58,517,814	$ 46,198,274	-$ 20,024,814	-$ 9,494,933	-$ 7,705,274	-$ 3,653,520
B-1	*Building 1 - 5 Fisherville*	*Pinedale Properties*	*1.172*	*1.055*	*20,000*	*$ 247,987*	*$ 2,975,840*	*$ 323,926*	*$ 1,190,336*	*$ 19,246,500*	*$ 367,628*	*$ 1,093,951*	*$ 29,172,014*	*$ 23,030,537*	*-$ 9,925,514*	*-$ 9,412,531*	*-$ 3,784,037*	*-$ 3,588,466*
B-2	*Building 2 - 6040 Barthurst*	*Pinedale Properties*	*1.172*	*1.055*	*20,000*	*$ 247,987*	*$ 2,975,840*	*$ 323,926*	*$ 1,190,336*	*$ 19,246,500*	*$ 367,628*	*$ 1,093,951*	*$ 29,172,014*	*$ 23,030,537*	*-$ 9,925,514*	*-$ 9,412,531*	*-$ 3,784,037*	*-$ 3,588,466*
D	6030 Bathurst Street	Timbercreek	0.961	2.120	30,000	$ 365,615	$ 4,387,382	$ 482,631	$ 1,754,953	$ 28,958,250	$ 553,132	$ 1,596,667	$ 42,577,777	$ 33,614,035	-$ 13,619,527	-$ 6,424,305	-$ 4,655,785	-$ 2,196,125
F	6020 Bathurst Street	Timbercreek	0.602	1.102	15,000	$ 223,432	$ 2,681,178	$ 252,000	$ 1,072,471	$ 17,530,250	$ 334,845	$ 1,021,861	$ 27,249,638	$ 21,512,872	-$ 9,719,388	-$ 8,819,771	-$ 3,982,622	-$ 3,613,995
G	6010 Bathurst Street	???	0.853	0.733	15,000	$ 167,880	$ 2,014,560	$ 252,000	$ 805,824	$ 14,260,500	$ 272,390	$ 684,346	$ 18,249,228	$ 14,407,285	-$ 3,988,728	-$ 5,441,647	-$ 146,785	-$ 200,252
H	12 Rockford Road	RTM Property Manager	0.810	0.703	15,000	$ 154,092	$ 1,849,099	$ 252,000	$ 739,640	$ 15,827,500	$ 302,321	$ 555,138	$ 14,803,687	$ 11,687,121	$ 1,023,813	$ 1,456,348	$ 4,140,379	$ 5,889,585

MORNELLE

NO	Address	Owner	Hectares	Surplus Lands	Rounded GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	70 Mornelle Court	Unknown	1.677	1.504	30,000	$ 289,031	$ 3,468,372	$ 482,631	$ 1,387,349	$ 18,396,500	$ 351,392	$ 1,247,001	$ 33,253,353	$ 26,252,647	-$ 14,856,853	-$ 9,878,227	-$ 7,856,147	-$ 5,223,502
B	80 Mornelle Court	MetCap	1.648	1.468	30,000	$ 279,823	$ 3,357,870	$ 482,631	$ 1,343,148	$ 15,733,000	$ 300,516	$ 1,231,575	$ 32,842,000	$ 25,927,895	-$ 17,109,000	-$ 11,654,632	-$ 10,194,895	-$ 6,944,751
D	750 Morningside Avenue	Cogir	1.041	0.896	20,000	$ 119,214	$ 1,430,571	$ 323,926	$ 572,228	$ 12,563,000	$ 239,966	$ 294,451	$ 7,852,014	$ 6,198,958	$ 4,710,986	$ 5,257,797	$ 6,364,042	$ 7,102,725

THORNCLIFFE

NO	Address	Owner	Hectares	Surplus Lands	Rounded GFA (m2 total)	REVENUES Monthly Revenue	REVENUES Yearly Revenue	UTILITY + MAINTENANCE Utility Costs	UTILITY + MAINTENANCE Maintenance Costs	TAX ASSESSMENT MPAC Assessment	TAX ASSESSMENT Taxation Value	NOI	CAP VALUE 3.75% Cap. Value (low)	CAP VALUE 4.75% Cap. Value (high)	RESIDUAL LAND VALUE (cap rate) Residual land Total (low)	Residual land Per hectare (low)	Residual land Total (high)	Residual land Per hectare (high)
A	**85-95 Thorncliffe Drive Park**	**Morguard**	**3.536**	**3.110**	**130,000**	**$ 1,542,123**	**$ 18,505,473**	**$ 1,038,096**	**$ 7,402,189**	**$ 123,141,500**	**$ 2,352,127**	**$ 7,713,061**	**$ 205,681,619**	**$ 162,380,226**	-$ 82,540,119	**-$ 26,540,231**	-$ 39,238,726	**-$ 12,616,954**
A-1	*85 Thorncliffe Drive Park*	*Morguard*	*1.768*	*1.555*	*65,000*	*$ 771,061*	*$ 9,252,737*	*$ 1,038,096*	*$ 3,701,095*	*$ 61,570,750*	*$ 1,176,064*	*$ 3,337,482*	*$ 88,999,530*	*$ 70,262,787*	*-$ 27,428,780*	*-$ 17,639,087*	*-$ 8,692,037*	*-$ 5,589,734*
A-2	*95 Thorncliffe Drive Park*	*Morguard*	*1.768*	*1.555*	*65,000*	*$ 771,061*	*$ 9,252,737*	*$ 1,038,096*	*$ 3,701,095*	*$ 61,570,750*	*$ 1,176,064*	*$ 3,337,482*	*$ 88,999,530*	*$ 70,262,787*	*-$ 27,428,780*	*-$ 17,639,087*	*-$ 8,692,037*	*-$ 5,589,734*
B	79 Thorncliffe Drive Park	Q Residential	1.473	1.249	40,000	$ 333,197	$ 3,998,367	$ 641,335	$ 1,599,347	$ 29,027,000	$ 554,445	$ 1,203,240	$ 32,086,410	$ 25,331,376	-$ 3,059,410	-$ 2,449,487	$ 3,695,624	$ 2,958,866
C	75 Thorncliffe Drive Park	Q Residential	1.218	0.992	40,000	$ 333,197	$ 3,998,367	$ 641,335	$ 1,599,347	$ 29,102,500	$ 555,887	$ 1,201,798	$ 32,047,953	$ 25,301,016	-$ 2,945,453	-$ 2,969,207	$ 3,801,484	$ 3,832,141
D	71 Thorncliffe Drive Park	Q Residential	1.344	1.173	35,000	$ 348,442	$ 4,181,299	$ 561,893	$ 1,672,520	$ 29,043,000	$ 554,751	$ 1,392,136	$ 37,123,623	$ 29,308,123	-$ 8,080,623	-$ 6,888,852	-$ 265,123	-$ 226,022
E	65 Thorncliffe Drive Park	???	1.376	1.179	40,000	$ 369,055	$ 4,428,656	$ 641,335	$ 1,771,463	$ 30,156,500	$ 576,020	$ 1,439,839	$ 38,395,712	$ 30,312,404	-$ 8,239,212	-$ 6,988,305	-$ 155,904	-$ 132,234
F	53 Thorncliffe Drive Park	Park Property Manager	1.239	1.084	30,000	$ 313,783	$ 3,765,401	$ 482,631	$ 1,506,160	$ 26,321,000	$ 502,758	$ 1,273,852	$ 33,969,381	$ 26,817,932	-$ 7,648,381	-$ 7,055,702	-$ 496,932	-$ 458,424

Appendix D: Development Scenarios

Appendix D-1: Low Build-Out Concrete Slab Construction Scenario

Appendix D-2: Low Build-Out Timber Frame Construction Scenario

Appendix D-3: High Build-Out Concrete Slab Construction Scenario

Appendix D-4: High Build-Out Timber Frame Construction Scenario

Appendix D-1: Low Build-Out Concrete Slab Construction Scenario ($600 sf)

ASSUMPTIONS

		Rates	Comments	
Efficiency		**83.00%**	Metropia (2014) average	
CAP RATES				
Multi-Residential (low)		**3.75%**	Colliers International (2014) Cap Rate Report	
Multi-Residential (high)		**4.75%**	Colliers International (2014) Cap Rate Report	
Retail Strip Mall (low)		**5.75%**	Colliers International (2014) Cap Rate Report	
Retail Strip Mall (high)		**6.75%**	Colliers International (2014) Cap Rate Report	
SALE + LEASE RATES (m^2)				Sft Value
Multi-Residential sale	**$**	**6,458.35**	Metropia (2014) average ($600 sft)	$ 600.00
Multi-Residential lease	**$**	**9.52**	Average per gross square meter monthly rate	.
Neigh. Retail Net Rent (low)	**$**	**22.00**	Colliers International (2013) Retail Spring Report	
Neigh. Retail Net Rent (high)	**$**	**30.00**	Colliers International (2013) Retail Spring Report	
Neigh. Retail Vacancy (low)		**5.00%**	Colliers International (2013) Retail Spring Report	
Neigh. Retail Vacancy (high)		**8.00%**	Colliers International (2013) Retail Spring Report	
OPERATIONAL COSTS				
Tax		**15.00%**	15% of total revenues	
Utility	**$**	**1.34**	Average utility cost per square meter monthly rate	
Maintenance		**10.00%**	10% of total revenues	
BUILDING COSTS (m^2)				Sft Costs
Strip Plaza	**$**	**914.93**	Altus Group 2014 Cost Guide	$ 85.00
Super Market	**$**	**1,614.59**	Altus Group 2014 Cost Guide	$ 150.00
Residential Condo/Apt. (Basic Quality)	**$**	**1,829.86**	Altus Group 2014 Cost Guide	$ 170.00
Residential Condo/Apt. (Medium Quality)	**$**	**2,045.14**	Altus Group 2014 Cost Guide	$ 190.00
Townhouse (row)	**$**	**1,022.57**	Altus Group 2014 Cost Guide	$ 95.00
Townhouse (stack)	**$**	**1,237.85**	Altus Group 2014 Cost Guide	$ 115.00
School (community centre	**$**	**1,937.50**	Altus Group 2014 Cost Guide	$ 180.00

	Storeys	m^2 per floor	Total m^2
Residential (Market)	3	610	1,831
Residential (Rental)	3	108	323
Commercial (Podium)	1	1,225	1,225
Est. GFA			**3,379**

Saleable Space Res. (GSA)	3	507	1,520
Leasable Space Res. (LSA)	3	89	268
Leasable Space Comm. (LSA)	1	1,017	1,017
Est. GFA			**2,805**

	$/$m^2$	Gross Revenue ($)
Est. Saleable Revenue	$ 6,458.35	$ 9,814,407
Est. Leasable Revenue (residential)	$ 3,318.46	$ 1,072,194
Est. Leasable Revenue (commercial)	$ 22.00	$ 2,983,587
Est. Sale Revenue		**$ 13,870,187**

	Commercial Op
Tax	$ 40,263
Utility	$ 16,339
Maint	$ 26,842
	$ 83,445

	Revenue ($)	$/$m^2$
Total Revenue	$ 13,870,187	$ 4,945.57

Cost	Costs ($)	Net	Gross
Land	0	0	0
Hard	$ 6,639,186.40	$ 2,367.27	$ 1,964.84
Strip Plaza	*$ 374,664.81*	*$ 1,070.47*	*$ 914.93*
Super Market	*$ 1,652,932.99*	*$ 1,889.07*	*$ 1,614.59*
Residential Condo/Apt. (Basic Quality)	*$ 4,611,588.60*	*$ 2,140.94*	*$ 1,829.86*
Residential Condo/Apt. (Medium Quality)	*$ -*	*$ 2,392.82*	*$ 2,045.14*
Townhouse (row)	*$ -*	*$ 1,196.41*	*$ 1,022.57*
Townhouse (stack)	*$ -*	*$ 1,448.28*	*$ 1,237.85*
Community Centre	*$ 1,473,471.70*	*$ 2,266.88*	*$ 1,937.50*
Soft	$ 3,651,552.52	$ 1,302.00	$ 1,080.66
Totals	$ 10,290,738.93	$ 3,669.28	$ 3,045.50

Alotted m^2
350
875
2,154
-
-
-
650

Profit (no land cost)	$ 3,579,448.49
Acceptable Profit (15% of revenues)	$ 2,080,528.11

Cost	Sale Value ($)	Net	Gross
Land Value	$ 1,498,920.38	$ 534.46	$ 443.60

Sale Value	Area (hc)	$ Hectare
Severed Parcel	0.39710	$ 3,774,667.29

Uplift (Section 37)	Contribution %	Gross
Low Contribution	10.00%	$ 149,892.04
Medium Contribution	12.50%	$ 187,365.05
High Contribution	15.00%	$ 224,838.06
Community Centre Contribution	98.30%	$ 1,473,471.70

Appendix D-2: Low Build-Out Timber Frame Construction Scenario ($450 sf)

ASSUMPTIONS

		Rates	Comments		
Efficiency		**83.00%**	Metropia (2014) average		
CAP RATES					
Multi-Residential (low)		**3.75%**	Colliers International (2014) Cap Rate Report		
Multi-Residential (high)		**4.75%**	Colliers International (2014) Cap Rate Report		
Retail Strip Mall (low)		**5.75%**	Colliers International (2014) Cap Rate Report		
Retail Strip Mall (high)		**6.75%**	Colliers International (2014) Cap Rate Report		
SALE + LEASE RATES (m^2)				Sft Value	
Multi-Residential sale	**$**	**4,843.76**	Metropia (2014) average ($600 sft)	$	450.00
Multi-Residential lease	**$**	**9.52**	Average per gross square meter monthly rate	.	
Neigh. Retail Net Rent (low)	**$**	**22.00**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Net Rent (high)	**$**	**30.00**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Vacancy (low)		**5.00%**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Vacancy (high)		**8.00%**	Colliers International (2013) Retail Spring Report		
OPERATIONAL COSTS					
Tax		**15.00%**	15% of total revenues		
Utility	**$**	**1.34**	Average utility cost per square meter monthly rate		
Maintenance		**10.00%**	10% of total revenues		
BUILDING COSTS (m^2)				Sft Costs	
Strip Plaza	**$**	**914.93**	Altus Group 2014 Cost Guide	$	85.00
Super Market	**$**	**1,614.59**	Altus Group 2014 Cost Guide	$	150.00
Residential Condo/Apt. (Basic Quality)	**$**	**1,829.86**	Altus Group 2014 Cost Guide	$	170.00
Residential Condo/Apt. (Medium Quality)	**$**	**2,045.14**	Altus Group 2014 Cost Guide	$	190.00
Timber Frame Townhouse (Basic Quality)	**$**	**1,157.12**	Altus Group 2014 Cost Guide	$	107.50
Timber Frame Townhouse (Medium Quality)	**$**	**1,399.31**	Altus Group 2014 Cost Guide	$	130.00
Townhouse (row)	**$**	**1,022.57**	Altus Group 2014 Cost Guide	$	95.00
Townhouse (stack)	**$**	**1,237.85**	Altus Group 2014 Cost Guide	$	115.00
School (community centre	**$**	**1,937.50**	Altus Group 2014 Cost Guide	$	180.00

	Storeys	m^2 per floor	Total m^2
Residential (Market)	3	610	1,831
Residential (Rental)	3	108	323
Commercial (Podium)	1	1,225	1,225
Est. GFA			**3,379**
Saleable Space Res. (GSA)	3	507	1,520
Leasable Space Res. (LSA)	3	89	268
Leasable Space Comm. (LSA)	1	1,017	1,017
Est. GFA			**2,805**

	$/$m^2$	Gross Revenue ($)
Est. Saleable Revenue	$ 4,843.76	$ 7,360,805
Est. Leasable Revenue (residential)	$ -	$ -
Est. Leasable Revenue (commercial)	$ 22.00	$ 2,983,587
Est. Sale Revenue		**$ 10,344,391**

	Commercial Op
Tax	$ 40,263
Utility	$ 16,339
Maint	$ 26,842
	$ 83,445

	Revenue ($)	$/$m^2$
Total Revenue	$ 10,344,391	$ 3,688.41

Cost	Costs ($)	Net	Gross	Alotted m^2
Land	0	0	0	
Hard	$ 4,943,749.42	$ 1,762.75	$ 1,463.08	
Strip Plaza	*$ 374,664.81*	*$ 1,070.47*	*$ 914.93*	350
Super Market	*$ 1,652,932.99*	*$ 1,889.07*	*$ 1,614.59*	875
Residential Condo/Apt. (Basic Quality)	*$ -*	*$ 2,140.94*	*$ 1,829.86*	-
Residential Condo/Apt. (Medium Quality)	*$ -*	*$ 2,392.82*	*$ 2,045.14*	-
Timber Frame Townhouse (Basic Quality)	*$ 2,916,151.61*	*$ 1,353.83*	*$ 1,157.12*	2,154
Timber Frame Townhouse (Medium Quality)	*$ -*	*$ 1,637.19*	*$ 1,399.31*	-
Townhouse (row)	*$ -*	*$ 1,196.41*	*$ 1,022.57*	-
Townhouse (stack)	*$ -*	*$ 1,448.28*	*$ 1,237.85*	-
Community Centre	*$ 1,473,471.70*	*$ 2,266.88*	*$ 1,937.50*	650
Soft	$ 2,719,062.18	$ 969.51	$ 804.69	
Totals	$ 7,662,811.60	$ 2,732.26	$ 2,267.77	

Profit (no land cost)	$ 2,681,579.84
Acceptable Profit (15% of revenues)	$ 1,551,658.72

Cost	Sale Value ($)	Net	Gross
Land Value	$ 1,129,921.13	$ 402.89	$ 334.40

Sale Value	Area (hc)	$ Hectare
Severed Parcel	0.39710	$ 2,845,432.20

Uplift (Section 37)	Contribution %	Gross
Low Contribution	10.00%	$ 112,992.11
Medium Contribution	12.50%	$ 141,240.14
High Contribution	15.00%	$ 169,488.17
Community Centre Contribution	130.40%	$ 1,473,471.70

Appendix D-3: High Build-Out Concrete Slab Construction Scenario ($450 sf)

ASSUMPTIONS

		Rates	Comments		
Efficiency		**83.00%**	Metropia (2014) average		
CAP RATES					
Multi-Residential (low)		**3.75%**	Colliers International (2014) Cap Rate Report		
Multi-Residential (high)		**4.75%**	Colliers International (2014) Cap Rate Report		
Retail Strip Mall (low)		**5.75%**	Colliers International (2014) Cap Rate Report		
Retail Strip Mall (high)		**6.75%**	Colliers International (2014) Cap Rate Report		
SALE + LEASE RATES (m^2)				Sft Value	
Multi-Residential sale	**$**	**4,843.76**	Metropia (2014) average ($600 sft)	$	450.00
Multi-Residential lease	**$**	**9.52**	Average per gross square meter monthly rate		
Neigh. Retail Net Rent (low)	**$**	**22.00**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Net Rent (high)	**$**	**30.00**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Vacancy (low)		**5.00%**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Vacancy (high)		**8.00%**	Colliers International (2013) Retail Spring Report		
OPERATIONAL COSTS					
Tax		**15.00%**	15% of total revenues		
Utility	**$**	**1.34**	Average utility cost per square meter monthly rate		
Maintenance		**10.00%**	10% of total revenues		
BUILDING COSTS (m^2)				Sft Costs	
Strip Plaza	**$**	**914.93**	Altus Group 2014 Cost Guide	$	85.00
Super Market	**$**	**1,614.59**	Altus Group 2014 Cost Guide	$	150.00
Residential Condo/Apt. (Basic Quality)	**$**	**1,829.86**	Altus Group 2014 Cost Guide	$	170.00
Residential Condo/Apt. (Medium Quality)	**$**	**2,045.14**	Altus Group 2014 Cost Guide	$	190.00
Timber Frame Townhouse (Basic Quality)	**$**	**1,157.12**	Altus Group 2014 Cost Guide	$	107.50
Timber Frame Townhouse (Medium Quality)	**$**	**1,399.31**	Altus Group 2014 Cost Guide	$	130.00
Townhouse (row)	**$**	**1,022.57**	Altus Group 2014 Cost Guide	$	95.00
Townhouse (stack)	**$**	**1,237.85**	Altus Group 2014 Cost Guide	$	115.00
School (community centre	**$**	**1,937.50**	Altus Group 2014 Cost Guide	$	180.00

	Storeys	m^2 per floor	Total m^2
Residential (Market)	1	23,504	23,504
Residential (Rental)	1	4,148	4,148
Commercial (Podium)	1	3,131	3,131
Est. GFA			**30,783**

Saleable Space Res. (GSA)	1	19,508	19,508
Leasable Space Res. (LSA)	1	3,443	3,443
Leasable Space Comm. (LSA)	1	2,599	2,599
Est. GFA			**25,550**

	$/$m^2$	Gross Revenue ($)
Est. Saleable Revenue	$ 4,843.76	$ 94,494,418
Est. Leasable Revenue (residential)	$ 2,880.19	$ 11,946,455
Est. Leasable Revenue (commercial)	$ 22.00	$ 7,625,804
Est. Sale Revenue		**$ 114,066,677**

	Commercial Op
Tax	$ 102,910
Utility	$ 41,762
Maint	$ 68,606
	$ 213,278

	Revenue ($)	$/$m^2$
Total Revenue	$ 114,066,677	$ 4,464.47

Cost	Costs ($)	Net	Gross	Alotted m^2
Land	0	0	0	
Hard	$ 60,463,659.21	$ 2,366.49	$ 1,964.19	
Strip Plaza	*$ 3,351,644.36*	*$ 1,070.47*	*$ 914.93*	3,131
Super Market	*$ -*	*$ 1,889.07*	*$ 1,614.59*	
Residential Condo/Apt. (Basic Quality)	*$ 51,382,602.77*	*$ 2,140.94*	*$ 1,829.86*	24,000
Residential Condo/Apt. (Medium Quality)	*$ -*	*$ 2,392.82*	*$ 2,045.14*	-
Timber Frame Townhouse (Basic Quality)	*$ -*	*$ 1,353.83*	*$ 1,157.12*	-
Timber Frame Townhouse (Medium Quality)	*$ -*	*$ 1,637.19*	*$ 1,399.31*	-
Townhouse (row)	*$ 4,369,284.36*	*$ 1,196.41*	*$ 1,022.57*	3,652
Townhouse (stack)	*$ -*	*$ 1,448.28*	*$ 1,237.85*	
Community Centre	*$ 1,360,127.72*	*$ 2,266.88*	*$ 1,937.50*	600
Soft	$ 33,255,012.57	$ 1,301.57	$ 1,080.30	
Totals	$ 93,718,671.78	$ 3,668.07	$ 3,044.49	

Profit (no land cost)	$ 20,348,005.12
Acceptable Profit (15% of revenues)	$ 17,110,001.53

Cost	Sale Value ($)	Net	Gross
Land Value	$ 3,238,003.59	$ 126.73	$ 105.19

Sale Value	Area (hc)	$ Hectare
Severed Parcel	1.38780	$ 2,333,191.81

Uplift (Section 37)	Contribution %	Gross
Low Contribution	10.00%	$ 323,800.36
Medium Contribution	12.50%	$ 404,750.45
High Contribution	15.00%	$ 485,700.54
Community Centre Contribution	42.01%	$ 1,360,127.72

BLOCK	Use	Storey	Units	m^2
BLOCK A	Townhouse (row)	3	7	1,173
BLOCK B	Townhouse (row)	3	7	1,162
BLOCK C	Townhouse (row)	3	8	1,317
BLOCK D	Residential Condo	6	102	7,200
	Commercial	1		600
	Comm. Centre	1		600
BLOCK E	Residential Condo	6	102	7,200
	Commercial	1		1,460
BLOCK D	Residential Condo	8	120	9,600
	Commercial	1		1,071
Totals			346	31,383

BLOCK	Area (ha.)	Value ($)
BLOCK A	0.1502	$ 350,445.41
BLOCK B	0.1688	$ 393,842.78
BLOCK C	0.1900	$ 443,306.44
BLOCK D	0.2895	$ 675,459.03
BLOCK E	0.2814	$ 656,560.17
BLOCK F	0.3079	$ 718,389.76
Totals	1.3878	$ 3,238,003.59

Appendix D-4: High Build-Out Timber Frame Construction Scenario ($325 sf)

ASSUMPTIONS

		Rates	Comments		
Efficiency		**83.00%**	Metropia (2014) average		
CAP RATES					
Multi-Residential (low)		**3.75%**	Colliers International (2014) Cap Rate Report		
Multi-Residential (high)		**4.75%**	Colliers International (2014) Cap Rate Report		
Retail Strip Mall (low)		**5.75%**	Colliers International (2014) Cap Rate Report		
Retail Strip Mall (high)		**6.75%**	Colliers International (2014) Cap Rate Report		
SALE + LEASE RATES (m^2)				Sft Value	
Multi-Residential sale	**$**	**3,498.27**	Metropia (2014) average ($600 sft)	$	325.00
Multi-Residential lease	**$**	**9.52**	Average per gross square meter monthly rate		
Neigh. Retail Net Rent (low)	**$**	**22.00**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Net Rent (high)	**$**	**30.00**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Vacancy (low)		**5.00%**	Colliers International (2013) Retail Spring Report		
Neigh. Retail Vacancy (high)		**8.00%**	Colliers International (2013) Retail Spring Report		
OPERATIONAL COSTS					
Tax		**15.00%**	15% of total revenues		
Utility	**$**	**1.34**	Average utility cost per square meter monthly rate		
Maintenance		**10.00%**	10% of total revenues		
BUILDING COSTS (m^2)				Sft Costs	
Strip Plaza	**$**	**914.93**	Altus Group 2014 Cost Guide	$	85.00
Super Market	**$**	**1,614.59**	Altus Group 2014 Cost Guide	$	150.00
Residential Condo/Apt. (Basic Quality)	**$**	**1,829.86**	Altus Group 2014 Cost Guide	$	170.00
Residential Condo/Apt. (Medium Quality)	**$**	**2,045.14**	Altus Group 2014 Cost Guide	$	190.00
Timber Frame Townhouse (Basic Quality)	**$**	**1,157.12**	Altus Group 2014 Cost Guide	$	107.50
Timber Frame Townhouse (Medium Quality)	**$**	**1,399.31**	Altus Group 2014 Cost Guide	$	130.00
Townhouse (row)	**$**	**1,022.57**	Altus Group 2014 Cost Guide	$	95.00
Townhouse (stack)	**$**	**1,237.85**	Altus Group 2014 Cost Guide	$	115.00
School (community centre	**$**	**1,937.50**	Altus Group 2014 Cost Guide	$	180.00

	Storeys	m^2 per floor	Total m^2
Residential (Market)	1	18,404	18,404
Residential (Rental)	1	3,248	3,248
Commercial (Podium)	1	3,131	3,131
Est. GFA			**24,783**
Saleable Space Res. (GSA)	1	15,275	15,275
Leasable Space Res. (LSA)	1	2,696	2,696
Leasable Space Comm. (LSA)	1	2,599	2,599
Est. GFA			**20,570**

	$/$m^2$	Gross Revenue ($)
Est. Saleable Revenue	$ 3,498.27	$ 53,437,788
Est. Leasable Revenue (residential)	$ 1,744.50	$ 5,665,782
Est. Leasable Revenue (commercial)	$ 22.00	$ 7,625,804
Est. Sale Revenue		**$ 66,729,374**

	Commercial Op
Tax	$ 102,910
Utility	$ 41,762
Maint	$ 68,606
	$ 213,278

	Revenue ($)	$/$m^2$
Total Revenue	$ 66,729,374	$ 3,244.03

Cost	Costs ($)	Net	Gross	Alotted m^2
Land	0	0	0	
Hard	$ 33,450,011.43	$ 1,626.16	$ 1,349.72	
Strip Plaza	*$ 3,351,644.36*	*$ 1,070.47*	*$ 914.93*	3,131
Super Market	*$ -*	*$ 1,889.07*	*$ 1,614.59*	
Residential Condo/Apt. (Basic Quality)	*$ -*	*$ 2,140.94*	*$ 1,829.86*	-
Residential Condo/Apt. (Medium Quality)	*$ -*	*$ 2,392.82*	*$ 2,045.14*	-
Timber Frame Townhouse (Basic Quality)	*$ 24,368,954.99*	*$ 1,353.83*	*$ 1,157.12*	18,000
Timber Frame Townhouse (Medium Quality)	*$ -*	*$ 1,637.19*	*$ 1,399.31*	-
Townhouse (row)	*$ 4,369,284.36*	*$ 1,196.41*	*$ 1,022.57*	3,652
Townhouse (stack)	*$ -*	*$ 1,448.28*	*$ 1,237.85*	
Community Centre	*$ 1,360,127.72*	*$ 2,266.88*	*$ 1,937.50*	600
Soft	$ 18,397,506.29	$ 894.39	$ 742.34	
Totals	$ 51,847,517.72	$ 2,520.55	$ 2,092.06	

Profit (no land cost)	$ 14,881,855.95
Acceptable Profit (15% of revenues)	$ 10,009,406.05

Cost	Sale Value ($)	Net	Gross
Land Value	$ 4,872,449.90	$ 236.87	$ 196.60

Sale Value	Area (hc)	$ Hectare
Severed Parcel	1.38780	$ 3,510,916.49

Uplift (Section 37)	Contribution %	Gross
Low Contribution	10.00%	$ 487,244.99
Medium Contribution	12.50%	$ 609,056.24
High Contribution	15.00%	$ 730,867.49
Community Centre Contribution	27.91%	$ 1,360,127.72

BLOCK	Use	Storey	Units	m^2
BLOCK A	Townhouse (row)	3	7	1,173
BLOCK B	Townhouse (row)	3	7	1,162
BLOCK C	Townhouse (row)	3	8	1,317
BLOCK D	Residential Condo	5	85	6,000
	Commercial	1		600
	Comm. Centre	1		600
BLOCK E	Residential Condo	5	85	6,000
	Commercial	1		1,460
BLOCK D	Residential Condo	5	75	6,000
	Commercial	1		1,071
Totals			267	25,383

BLOCK	Area (ha.)	Value ($)
BLOCK A	0.1502	$ 527,339.66
BLOCK B	0.1688	$ 592,642.70
BLOCK C	0.1900	$ 667,074.13
BLOCK D	0.2895	$ 1,016,410.32
BLOCK E	0.2814	$ 987,971.90
BLOCK F	0.3079	$ 1,081,011.19
Totals	1.3878	$ 4,872,449.90

Works Cited

Alexander, D., & Shaw, P. (2012). Say Goodbye to Small Retail: Should we Care? *Plan Canada 52(2)*, 26-33.

Allen, J. (2013, September 20). *Parkway Forest: Urban Thinking in the Suburbs*. Retrieved from Urban Toronto: http://urbantoronto.ca/news/2013/09/parkway-forest-urban-thinking-suburbs

Altus Group. (2014). *Construction Cost Guide 2014.* Toronto: Altus Group. Retrieved from http://www.altusgroup.com/media/111555/CostGuide_2014_web.pdf

Artz, G. M. (2012). Revisiting WalMart's Impact on Iowa Small-Town Retail: 25 years later. *Economic Development Quarterly*, 26(4), pp. 298-310.

Canadian Federation of Independent Businesses. (2010). *Ontario's Small Business Profile.* Toronto: CFIB.

City of Toronto. (2008). *BY-LAW No. 865-2008 (OMB).* Toronto: City of Toronto. Retrieved March 23, 2014, from http://www.toronto.ca/legdocs/bylaws/2008/law0865.pdf

City of Toronto. (2010, December). Toronto Official Plan. Toronto, Ontario, Canada.

City of Toronto. (2011). *Tower Renewal Implementation Book.* Toronto: City of Toronto.

City of Toronto. (2012). City of Toronto Property Data Map 2012 (DWG Version). Toronto, Ontario, Canada.

City of Toronto. (2014). *High-rise Retrofit Improvement Support Program (Hi-RIS)*. Retrieved from Tower Renewal: http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=ab3147e94c5b3410VgnVCM10000071d60f89RCRD

City of Toronto. (2014, March 5). *Parkway Forest*. Retrieved from City of Toronto: https://www1.toronto.ca/wps/portal/contentonly?vgnextoid=3fc0b3659f054410VgnVCM10000

071d60f89RCRD&vgnextchannel=490452cc66061410VgnVCM10000071d60f89RCRD#64a977e0c2654410VgnVCM10000071d60f89____vtabs3

Colliers International. (2013). *Q4 2013 Cap Rate Report.* Toronto: Colliers International. Retrieved March 10, 2014, from http://www.collierscanada.com/~/media/Files/Research/2014/Q4%202013%20Cap%20Rate%20Report.ashx.

Colliers International. (2013). *The Retail Report Canada - Spring 2013.* Toronto: Colliers International. Retrieved March 10, 2014, from http://www.collierscanada.com/en/News/2013/Retail%20Report%20Spring%202013#.Uyo1zPldVlc

Colliers International. (2014). *Apartment Market Trends 2014.* Toronto: Colliers International. Retrieved March 10, 2014, from http://www.collierscanada.com/~/media/Files/Research/2014/2014%20Multifamily%20Newsletter.ashx.

Colliers International. (Q4 2013). *Colliers International Cap Rate Report.* Toronto: Colliers International. Retrieved 3 1, 2014, from https://www.collierscanada.com/~/media/Files/Research/2013/Q1%202013%20Cap%20Rate%20Report.ashx

Ditmars, H. (2013, May 17). Condo builders push merit of concrete. *Globe and Mail*. Toronto. Retrieved from http://www.theglobeandmail.com/life/home-and-garden/real-estate/condo-builders-push-merits-of-concrete/article12001560/

E.R.A. Architects. (2010). *Tower Neighbourhood Renewal in the Greater Golden Horseshoe.* Toronto: Ministry of Infrastructure.

E.R.A. Architects. (2012, May). *Toronto zoning reform to empower apartment neighbourhoods*. Retrieved 10 30, 2013, from E.R.A. Architects: http://era.on.ca/2012/10/15/toronto-zoning-reform-to-empower-apartment-neighbourhoods/

E.R.A. Architects; University of Toronto. (2008). *Mayor's Tower Renewal: Opportunities Book.* Toronto: City of Toronto.

Florida, R. (2002). *Rise of the Creative Class.* New York: Basic Books.

Goodno, J. B. (2005). On Immigration Street. *Planning*, 71 (10) pp. 4-9.

Grant, J., & Perrot, K. (2009). Where Is the Café? The Challenge of Making Retail Uses Viable in Mixed-use Suburban Development. *Urban Studies, 48 (1)*, 177-195.

Hanniman, K. (2013). *Borrowing Today for the City of Tomorrow? Municipal Dept and Alternative Financing.* Toronto: Institute for Municipal Finance and Governance.

Hicks, M. J. (2012). Mom-and-Pops or Big Box Stores: Some Evidence of Walmart Impact on Retail Trade. *Economic Development Quarterly*, 26(4) 311-320.

Hulchanski, J. D. (2007). *The Three Cities Within Toronto.* Toronto: University of Toronto.

Institute for Building Efficiency. (2010). Global Energy Efficiency Indicator - Global Results 2010. Retrieved 10 31, 2013, from http://www.institutebe.com/InstituteBE/media/Library/Resources/What%27s%20New/EEI-2010-Global-Executive-Summary-ENG.pdf

Institute for Building Efficiency. (2013). 2013 Energy Efficiency Indicator Survey. Retrieved 11 6, 2013, from http://www.institutebe.com/InstituteBE/media/Library/Resources/Energy%20Efficiency%20Indicator/061213-IBE-Global-Forum-Booklet_I-FINAL.pdf

Institute for Local Self-Reliance. (2003, September). *The economic impact of locally owned businesses vs. chains: a case study in midcoast Maine.* Retrieved April 5, 2013, from http://www.ilsr.org/economic-impact-locally-owned-businesses-vs-chains-case-study-midcoast-maine/

Jacobs, J. (1961). *Life and Death of Great American Cities.* New York: Vintage.

Kesik, T., & Saleff, I. (2009). *Tower Renewal Guidelines: For the Comprehensive retrofit of Multi-Unit Residential Buildings in Cold Climates.* Toronto: University of Toronto.

Kitchen, H. M. (2002). *Municipal Revenue and Expenditure Issues in Canada, Canadian Tax Paper No. 107.* Toronto: Canadian Tax Foundation.

LiveWorkLearnPlay. (2010). *The Power of the Mom-and-Pop.* Toronto: LiveWorkLearnPlay.

Main Centre for Economic Policy. (2011). *Going Local: Quantifying the Economic Impact of Buying from Locally Owned Businesses in Portland, Maine.* Maine. Retrieved from http://www.mecep.org/view.asp?news=2003

McClelland, M., Stewart, G., & Ord, A. (2011). Reassessing the Recent Past: Tower Renewal in Toronto. *APT Bulletin 42 (3)*, pp. 9-14.

Menzies, S. (2008, May 12-18). *From the local pub to the corner store: A pilot study on the importance of small, independent businesses as sites of passibe community-building.* California: Humboldt State University.

Metropia. (2014, March 14). Residential Condiminium Site Aquisition. (S. Fleming, Ed.)

Ministry of Infrastructure. (2012). *Growth Plan for the Greater Golden Horseshoe.* Retrieved December 1, 2012, from Places to Grow: https://www.placestogrow.ca/content/ggh/plan-cons-english-all-web.pdf

Ministry of Municipal Affairs and Housing. (2006). *ONTARIO REGULATION 594/06.*

MMAH. (1990). *Planning Act.* Retrieved October 24, 2012, from Service Ontario e-laws: http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90p13_e.htm

Morrison Park Advisors. (2010). *Tower Renewal Financing Options.* Toronto: City of Toronto.

Phibbes, C. (2014, March 20). Former Planning Advisor to Mayor David Miller. (F. Thibeault, Interviewer)

Qadeer, M. A. (1997). Pluralistic Planning for Multicultural Cities: The Canadian Practice. *Journal of the American Planning Association*, 63 (4), pp. 481-494.

Qadeer, M., & Agrawal, S. K. (2010). Evolution of Ethnic Enclaces in Toronto Metropolitan Area, 2001-2006. *Internation Migration & Integration*, 11, p. 315-339.

Relph, E. (1976). *Place and placelessness.* London: Pion Limited.

Sewell, J. (1993). *The Shape of the City.* Toronto: University of Toronto Press Incorporated.

Stewart, G. (2014, January 31). *Toronto Tower Renewal - Mapping Tower Renewal: Areas of Opportunity/Priority*. Retrieved from E.R.A. Architects: http://era.on.ca/blogs/towerrenewal/?p=2032#more-2032

Sutton, S. A. (2010). Rethinking Commercial Revitalization: A Neighbourhood Small Business Perspective. *Economic Development Quarterly*, 352-371.

Toronto Community Housing Corporation. (2014, March 28). Financial Analyst. (F. Thibeault, Interviewer)

Wang, X., & Rainer vom, H. (2007). Chapter 4: Economic Base Theory. In X. Wang, *Research Methods in Urban and Regional Planning* (pp. 134-216). Springer.