

BRIDGING DIVIDES | CREATING CONNECTIONS

REIMAGINING EXISTING CITY OF TOWERS NEIGHBOURHOODS

by

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Bridging Divides | Creating Connections:

Reimagining existing City of Towers neighbourhoods

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Master of Architecture 2013

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ABSTRACT

Modern city planning theories were widely accepted in the early twentieth century producing many 'City of Towers' neighbourhoods throughout Toronto and the world. Although cities in the twenty-first century are being planned with the inclusion of human needs, remnants of the twentieth century city planning are still present within our built environment. The current methods of revitalizing existing City of Towers neighbourhoods are band-aid solutions that are not sustainable in the long run.

This thesis investigates how alternative strategies can provide a more integrated solution without taking the tabula rasa approach. Architecture and other built forms are used to propose strategies that will produce a new relationship between existing buildings and their surroundings to meet the needs of residents today and in the future. St. James Town located in Toronto, Ontario is selected to investigate the hypotheses of this thesis to give expression to the topic of *Bridging Divides/Creating Connections*.

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DEDICATION

To my family.

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PART ONE

01

INTRODUCTION

“A balance between the public and private realm...Buildings and their surrounding spaces should interrelate and define one another, with exterior spaces functioning as rooms without roof.”

- Rogers Stirk Harbour and Partners.

‘City of Towers’ neighbourhoods built based on modern city planning principles still exist within Toronto and many other cities around the world. Many of these neighbourhoods which are in the planning process or have been revitalized through various means, such as additions, modifications, or subtractions to existing buildings or neighbourhood structure – infill development. Although existing neighbourhoods are going through revitalization, the existing efforts of improvements are not necessarily reflecting the needs of the community and its residents today or in the future. Much of the infill projects cited in the City of Toronto report, *Infill on Apartment Sites in Toronto – A Ten Year Review: Technical Analysis*, indicated that the majority of the applications were for residential uses only resulting in a low level of community benefit improvements (City of Toronto, 2012, p. 26). Many existing neighbourhoods in Toronto; such as Mount-Dennis – Weston Community and St. James Town still exhibit the ideals of modern city planning. Although there has been an abundant amount of research identifying the challenges and opportunities with these neighbourhoods

today (referred to as 'City of Towers' neighbourhoods), numerous existing neighbourhoods, both in Toronto and elsewhere, have still not undergone significant changes since they were originally built.

Traditional cities, before the industrial revolution, were laid out with a huge emphasis on buildings as being part of a larger urban fabric or network of spaces from which public spaces were carved out of positive voids (Trancik, 1986, p. 100). In Western architecture, ideas that came from the modern movement were a contrast to the traditional design strategies. Buildings were often treated as stand-alone objects not part of a larger fabric of spaces and places. Many critics of modernism, such as Jane Jacobs and Rem Koolhaas, have argued against the drastic shift in the way cities were planned and built in the 20th century as modernist theory was applied. Jacobs argued that "for the first time in history of man as a settler, cities were no longer being built as conglomerations of city space and buildings, but as individual buildings" (Gehl, *Cities for People*, 2010, p. 3). Roger Trancik argued that the ideals of modernism were more focused on "free-flowing space and pure architecture" in hopes of creating better cities (Trancik, 1986). In Colin Rowe's critique in the *Cornell Journal of Architecture*, he referred to modern architecture as an appealing idea on paper, but an idea that was unable to deliver on what it promised in reality (Rowe, 1981, p. 16). This form of thinking resulted in buildings that were isolated from their immediate urban fabric because the design process was more about "optimizing production... [rather than] interest in the city" (Frampton, 2003, p. 10).

Modern city planning theories not only changed the relationship between buildings and the formation of communities, the design and function of public spaces were also altered. Rowe stated in his article, *The Present Urban Predicament*, that "[if] the principal victim of modern architecture was the city, its first victim was surely the garden" (1981). The open spaces at the base of high-rise towers had lost their prominence as a vital organ for the city due to their increase in scale and boundlessness. Modernism was also the point when activities and interactions at the ground level were moved to the corridors of high-rise towers which removed a vital part of

the city – the public realm. The streets that remained were often located at the perimeters of the ‘tower in the garden’ schemes and were stripped of all social implications of the city. They were merely tasked to move people around the city which “connected point A to point B with little regard of the quality of the trip” (Trancik, 1986, p. 21). Public spaces were traditionally places that “promote the values and the missions shared by the local community fostering a sense of identity and belonging” (Meroni & Trapani, 2010, p. 17). They created connections between people and reflected the ideals of the community making cities more liveable places. However, with the emphasis on high-rise towers there was a loss of connection between indoor and outdoor activities as people were removed from street level (Trancik, 1986, p. 10). The introduction of high-rise towers also changed the traditional components that formed cities. Instead of an urban fabric of low and mid-rise buildings that bordered streets and plazas in a horizontal spread, the outcome of modern city planning was a vertical sprawl with buildings that were disconnected from their surrounding context. The discussion below examines how these changes in relationships between elements affect the structure of the city, and asks what happens when public spaces cease to function the way they traditionally did. How can the renewal of the existing towers help form a better relationship between towers and their surrounding areas? How can the lost connections be recaptured?

Although cities in the twenty-first century are now being planned and developed with the inclusion of human needs and responses to the desire for connectivity, remnants of 20th century city planning are still clearly visible in our built fabric – buildings as objects disconnected from its surrounding context. The current revitalization methods for City of Towers neighbourhoods are just ‘band aid’ solutions that will not be able to sustain its residents and the city in the future if the source of the issues is not addressed. Alternative strategies need to be studied in order to provide an integrated approach that can help improve the neighbourhoods as a part of a larger built fabric; the physical building, the surrounding context and the programmatic function of the buildings and spaces, not just increasing the

number of residential units - density.

This thesis aims to identify and take advantage of the opportunities with the existing layouts of the 'City of Towers' neighbourhoods, building upon them rather than taking the tabula rasa approach – removal of the existing and starting from a clean slate. This thesis will focus on looking at the challenges of the existing conditions of City of Towers neighbourhoods, identifying opportunities and proposing design solutions informed by the existing research on Tower Renewal within the City of Toronto and The Greater Golden Horseshoe as well as additional relevant case studies. Through the analysis of existing City of Towers neighbourhoods, this thesis intends to propose design strategies that would produce a new relationship between existing buildings and their surrounding context. This will help create a sense of community and help improve the tower neighbourhoods and the well-being of the city as a whole. This will be achieved by using architecture and other built forms to activate existing underutilized interstitial spaces to improve their quality to meet the needs of the residents today and in the future.

The following sections are divided into 8 chapters. Chapter 2 will discuss relevant background information which formed the basis for this thesis. Chapters 3 to 5 will discuss the importance of connection, place and human scale within the context of revitalizing existing City of Towers neighbourhoods. The three main ideas were identified as crucial elements to a neighbourhood in many of the city reports, but they are also the areas that are often neglected within a design solution. The discussion will include important theories and ideas from various architects, urban designers, and theorists to identify ways to mitigate the effects of the modernist design. Chapter 6 discusses relevant precedents which provide examples of the research discussed in the previous chapters and a summary of the precedents which will help set up the guiding principles to be used in the design project. Chapter 7 presents the design project which uses St. James Town located in Toronto, Ontario as a test case to investigate the hypotheses of the thesis that give expression to *Bridging Divides/Creating Connections*. Chapter 8 provides a conclusion to this thesis.

02

BACKGROUND INFORMATION

The following section discusses the necessary background information which formed the basis of this thesis. This chapter is subdivided into two parts. The first part looks at the current state of City of Towers neighbourhoods and the second part discusses the current zoning bylaws relating to apartment neighbourhoods within the City of Toronto.

2.1 CURRENT STATE OF TOWER RENEWAL IN THE CITY OF TORONTO

Over the past decade, there have been numerous publications investigating residential tower renewal within the City of Toronto. The common theme from most of the publications touch upon the social, economic, environmental, and cultural changes required to help improve that category of Toronto's housing stock. Many of the publications have outlined challenges and opportunities that currently exist within the tower schemes. Some of the literature include: *Mayor's Tower Renewal - Opportunities Book* (2008), *Tower Renewal Guidelines* (2009), *Tower Renewal Implementation Book* (2011), *Toward Healthier Apartment Neighbourhoods* (2012), *Poverty by Postal Code: Vertical Poverty* (2011), *Infill on Apartment Sites in Toronto – A Ten Year Review: Technical Analysis* (2012) and many others that are available from the City of Toronto website¹. The following text will summarize key points relevant to this thesis from three reports.

¹ Documents can be found at- http://www.toronto.ca/tower_renewal/

MAYOR'S TOWER RENEWAL - OPPORTUNITIES BOOK

The *Mayor's Tower Renewal - Opportunities Book* published in 2008, is an important document because it was one of the first book of research which brought to light to the challenges and opportunities available within Toronto's aging high-rise housing stock. The book provided key research on the historical framework of existing towers built during the post-war housing boom and outlined potential opportunities for improvements in social, economic, and environmental aspects as a means for community revitalization. For this thesis, there were two section of great importance: 'Urban Asset' and 'International Case Studies'. The section on 'Urban Asset' looked at the existing high-rise tower neighbourhoods and identified that opportunities for responding to the future needs of the city through the utilization of open spaces at base of towers; most of the land is currently occupied by surface parking lots and fences. Modern city planning principles resulted in towers that occupied only a small portion of the site in order to maximize the amount of open space leftover for recreational purposes. According to the *Mayor's Tower Renewal - Opportunities Book*, most buildings' footprints only occupy 10% of the site and the remaining open spaces is typically underutilized (E.R.A. Architects ; University of Toronto, 2008, p. 48). The large amount of undeveloped and underutilized open space provides an opportunity for Toronto to grow and meet the demands of the future. The section also provided a case for the retrofit of buildings over demolition because the structures of the towers are still in good condition and it can also help minimize the displacement of existing residents. The idea of retrofitting existing towers was reinforced in the section, 'International Case Studies'. This section looked at several tower renewal projects that were carried out in cities across Europe to determine strategies on the revitalization of towers and their neighbourhoods. Some of the main strategies identified include:

- Over-cladding to improve the energy efficiency of the towers
- Services and mixed-uses were added to the neighbourhoods; such as kiosks, markets, stores, community facilities, public spaces, etc.

- Maintaining park spaces around towers to up-keep the quality of the environment, or even the introduction of urban farming opportunities (E.R.A. Architects ; University of Toronto, 2008, pp. 60-65)

A HEALTHIER TORONTO BY DESIGN REPORT: TOWARDS HEALTHIER APARTMENT NEIGHBOURHOODS

A Healthier Toronto by Design Report: Towards Healthier Apartment Neighbourhoods was published in 2012 by Toronto Public Health in partnership with the Centre for Urban Growth and Renewal. The document examined several areas that showcased the impact apartment living had on the health of its residents and others in the surrounding areas. There were eight themes applied to the apartment neighbourhoods which were adopted from a previous report by the Toronto Public Health, *Healthy Toronto by Design*. The themes are:

- Natural Environment
- Built Environment
- Transportation
- Housing
- Income and Employment
- Education and Learning
- Food Security
- Community Health (Toronto Public Health; the Centre for Urban Growth and Renewal, 2012, p. viii).

Each theme identified above was subdivided into smaller sections of relevance. Background information for each section was provided along with a 'solution' deemed appropriate to be applied to existing City of Towers neighbourhoods as part of the revitalization scheme. Another key aspect

that was discussed was the possibility of implementation. Each section analyzed the current zoning regulations to determine if the 'solution' identified was allowed and if the existing zoning regulations did not permit the 'solution' to be applied, a suggestion for revising the zoning by-law was provided. The set-up of each section clearly outlined the possibilities for revitalization of the City of Towers neighbourhoods, but most importantly it also provided the necessary information for the reader to understand what, if any, barriers were in place.

INFILL APARTMENT SITES – A TEN YEAR REVIEW

Infill developments are projects that aim to utilize underdeveloped or under-utilized buildings and sites to help bridge the connection between existing apartment neighbourhoods and their surroundings. This is an alternative method to the tabula rasa approach undertaken by some City of Towers neighbourhoods; most famously Regent Park in Toronto at the time of this thesis. The report looked at the characteristics of 33 projects that have applied for rezoning within a ten year period. It analyzed various aspects; such as location, percentage of the existing buildings retained, uses of new buildings, etc., to help better inform more appropriate methods for future infill development proposals for apartment neighbourhoods.

Within the report, there were two sections that were of particular interest to this thesis. The first sub-sections was on the proposal of non-residential uses - private recreation centres, day care facilities and space for community services at below-market rent (City of Toronto, 2012, p. 26). The report indicated that only 15% of the applications for infill development included non-residential uses (5 of 33 applications). The figures indicated that the many of the existing apartment neighbourhoods focused only on increasing the number of residential units (whether privately owned or rental), but not necessarily on improving the overall benefits of the community.

The second section was on the percentage of demolition versus retention of existing buildings. The report indicated that only 24% (8 of 33 applications) involved the demolition of all existing low-rise and mid-rise buildings. No

buildings 7 storeys or higher were proposed for demolition; all were secured as rental properties for 20 years or more (City of Toronto, 2012, p. 29). This is an indication that the apartment towers were not at the end of their life cycle requiring immediate demolition.

Although the report looked at various aspects of the 33 projects, the post-occupancy of the few realized projects were not included in the study. The post-construction occupancy study of the residents of the towers and the surrounding neighbourhood would have been extremely beneficial to this thesis because it would have provided a good basis for understanding which aspects of the projects were successful and why others were not.

2.2 RESIDENTIAL APARTMENT-COMMERICAL (RAC) ZONE

The Residential Apartment-Commercial (RAC) Zone is a new section in the zoning by-law of Toronto that was approved and implemented in May 2013. The RAC zone provides an opportunity for in-fill development within declining apartment neighbourhoods, but only in accordance with the Official Planning for the City of Toronto. With the update to the existing by-law, it permits the proposed interventions within this thesis to actually be implemented. Something that was once a 'hurdle' to the overall improvement of the neighbourhood is now more accessible allowing more opportunities on a larger scale to existing City of Towers neighbourhoods.

03

THE IMPORTANCE OF CONNECTION

Common Ground, the theme for the 13th Venice Architecture Biennale, referred to importance of the spaces located either between buildings or at their bases. The theme is very relevant to this thesis because it brings to light an aspect of a project that is often overlooked. Connectivity was not ignored in modern city planning; it was just re-imagined at a different scale. Modern city planning principles centered on the car as the main mode of transportation with freeways as the main connectors between various activities and functions that were once close-knit. With the dominance of the car, the distances between activities have increased resulting in the loss of many connections within the city. In Trancik's book, *Lost Space*, he criticizes modern city planning for producing buildings that he sees as "isolated objects not part of a larger fabric of streets, squares, and viable open space" (Trancik, 1986, p. 1). The city can be seen as being composed of high-rises as a city of competing towers rather than a city of integrated spaces. The following sections discuss the importance of connections within the city at varying scales.

3.1 A CITY AS A NETWORK OF CONNECTIONS

Alberti stated in his book, *On the art of building in ten books*, that "the city is like some large house, and the house is in turn like some small city, cannot the various parts of the home... be considered miniature buildings?"

(Alberti, 1988, p. 25). From Alberti's statement, we can begin to look at the design of spaces between buildings within an urban fabric much like the way architects look at the design of buildings – as a system of relationships. One can refer to the buildings as programmed spaces and the surrounding urban spaces as connectors; such as walkways, corridors, bridges, or even as outdoor rooms, which form the necessary link between programmed spaces. In a sense, developing the relationships between buildings should include a type of spatial relationship diagrams that depict the level of connectivity required. Part of the design process for a building includes providing a connection or access to each space. Therefore, if buildings can be metaphorically referred to as programmed, connected spaces, then why are neighbourhoods and whole cities not being designed with proper connections to each space, with respect to their programming as well. By understanding the different elements that form a city through Alberti's lens, architects can begin to understand the importance of connections between buildings and their surroundings. How can we stitch together the 'fragmented' city? Currently in Toronto much of the city centre has already been developed, therefore, the luxury of starting a city from scratch does not exist; planning is at the mercy of the built environment. While this thesis is asking how can the 'objects' of modernism be unified to help improve the overall well-being of City of Towers neighbourhoods, the solutions may be relevant for many other conditions in other cities as well.

ESTABLISHING CONNECTIONS

Many architects have been trying to address the issues of disconnections leftover from Modern design projects. Edward White's book, *Path, Portal, Place: Appreciating Public Space in Urban Environments*, provides an insight on this prospective shift because he gave the path; which connects to a place, the same level of importance as the place; final destination itself. White summarized the three types of spaces: "[the] path invites us to move, portal to move through, and place invites us to stay" (White, 2007, p. 192). Although the exterior spaces defined by White relate more to urban planning than to the design of architecture itself, the three distinct spaces can help provide guidance to the relationships between the buildings

and their surroundings. If we refer to the structure of a City of Towers neighbourhood in White's terms, how successful are those spaces in terms of connectivity? If we imagine the towers as the destination how clear is the path which leads to it? White defined the path as "flowing of the place to the path" (White, 2007, p. 184). The path can be considered as the facilitator of movement or a destination of its own - a linear plaza or urban rooms, which are typically defined by the building facades that form the boundaries of the space. The open spaces found in modern cities are often not successful pathways due to their lack of definition and clarity due to the absence of a definitive boundary. The portal (a type of boundary) is the "transition and transformation...where outside becomes inside...where moving forward changes to arriving" (White, 2007, p. 188). The portal is the transitional zone that marks and defines both the beginning and the end of path and place. Within City of Towers there is no clear transition from path to place except for the building envelope which physically separates the inside from the outside. Therefore, in order for existing City of Towers neighbourhoods to form better connections on the ground plane a sense of boundary, a defined structure, is needed, using portals or other defining strategies.

In Nan Ellin's book, *Integral Urbanism*, she also outlined the importance of connection, but not as an isolated component. Instead, she coined the term 'Integral Urbanism as an approach to reverse the fragmented landscape left behind from Modernism. Integral Urbanism is the amalgamation of various elements typically seen or treated as unrelated. She identified five qualities which will help to achieve Integral Urbanism; hybridity, connectivity, porosity, authenticity, and vulnerability. Hybridity "connects people and activities at points of intensity and along thresholds" (Ellin, 2006, p. 19). It is the idea that at points of high intensity further levels of connections will develop eventually creating a network of connections. Connection on the other hand is the quality which facilitates movement within and in-between urban nodes (Ellin, 2006, p. 42). Through the combination of 'Hybridity' and 'Connectivity' Ellin argued that in large-scale design interventions they create "cores with adjoining corridors" (Ellin, 2006, p.

35). Ellin's reference to Peter Calthorpe's 'Urban Network' is a notable example because the project dealt with building upon existing conditions. Calthorpe's proposal for the growth of the Chicago Metropolis 2020 retained the existing freeways and major arteries while introducing four types of streets: Transit Boulevards, Throughways, Avenues and Connectors (Calthorpe, 2002). Transit boulevards became the main connectors of the city and where they intersect with other road types a 'node' is created to support local activities. Calthorpe's proposal created streets that served as both a connector and a place which could accommodate various activities – the hybridity of function through connectors.

PERMEABLE GRID

Modern city planning emphasized on the idea of 'form follows function' which often resulted in the production of 'objects in space' that had little regards to their immediate surroundings. Henri Lefebvre described the relationship between buildings and their surrounding spaces as "merely a by-product of the internal planning" (Lefebvre, 1991, p. 67). The main focus was on maximizing the function of the building and less on the areas beyond the building's envelope. In Denise Scott Brown's essay, "Common Concerns", in *Common Ground- a critical reader* written for the 13th Venice Architecture Biennale (2012), she referenced the Nolli Map and its representation of relationships between public spaces both within and beyond the boundaries of a building. Brown stated that, "[the] map helps to demonstrate the relations among public spaces, exterior and interior, and to show a building in its context as part of a pulsating network of interior and exterior movement ways and activities" (p. 164). Although, Brown is not the first to reference the Nolli Map in this manner, it is a reminder to us of the importance of those relationships found in traditional cities.

Figure-ground studies have been completed by numerous authors to contrast the relationship between the built environment and its surroundings. In the book, *Public Spaces, Urban Spaces - The Dimensions of Urban Design* by Carmona et al., buildings within traditional cities were described as a "highly connected mass (urban blocks), which defines streets

and squares and a small-scale, finely meshed street grid” while modern cities were described to consist of buildings as “free-standing pavilions/ objects in a more generalized type of ‘space’ and a coarsely meshed ‘road’ grid” (2010, p. 78). Buildings found within City of Towers neighbourhoods are often turned away from the streets in order to face garden-like settings. However, in reality the buildings often face parking lots and other landscaped surfaces and not the utopian gardens many architects and planners have imagined.

Carmona et al. also stated in their book that one of the important qualities established by the urban block pattern was permeability – “the extent to which an environment allows people a choice of routes through and within it” (2010, p. 81). The grid is only successful if there is continuity and any disruption to the pattern immediately reduces the permeability. The pattern of the urban block can also be seen as what Carmona et al. categorize as ‘movement space’ and ‘social space’ which make up the network of public spaces. When the movement space exists on its own, spaces are divided up because their existence is purely for movement and circulation. When the two spaces overlap, it creates a vibrant pedestrian realm that can be used for both circulation and social interaction – “streets as social space” (Carmona, Heath, Oc, & Tiesdell, 2010, p. 83).

The idea of the ‘street as a social space’ is also echoed in the works of Jane Jacobs and Allan Jacobs. In Jane Jacobs’ book, *The Death and Life of Great American Cities*, she described streets as the “main public places of a city, are the most vital organs” (Jacobs J. , 1993, p. 37) because they reflect the image of the city itself and helps to foster a more organized public life. Jacobs furthers her argument by indicating that streets help to achieve a balance between the privacy people desire while allowing for a varying degree of contact between people (Jacobs J. , 1993, p. 73). Streets allow for casual encounters to occur in the public realm to fulfill people’s desire to be in contact others without having to invite people into the privacy of their own homes as well as the freedom to come and go because everyone has a right to be there without any obligations. Allan Jacobs also echoed the importance of streets in his book, *Great Streets*, by acknowledging the

street as a place of social and commercial encounter (Jacobs A. B., 1993, p. 4). He also noted that great streets can help promote the interaction of people without regards to social or economic status. Beyond traditional streets, there are 'woonerfs' (living streets) where pedestrians have priority over other modes of transportation. Although a 'woonerf' is not a new concept, their usage in the City of Toronto is still fairly new. One of the notable places to be used is within Toronto's West Don Lands revitalization. The woonerf will allow the spaces to function as traditional streets, but they can also become multipurpose spaces to accommodate large events or activities easily within the area. Figure 1 shows two examples of 'woonerfs' possibilities within Toronto.

By creating connections between places and buildings it can help to create a more 'structured' set of networks which can accommodate both pedestrians and motorized vehicles harmoniously throughout the city. As previously mentioned, it is not a matter of designing and creating every single connection or node possibly. The creation of key moments of connections can help generate many other unplanned nodes within a community so that the city can continue to grow and meet the needs of its residents.



Figure 1 Renderings of possible woonerfs in Toronto, ON
(T) West Don Lands
(B) Bathurst St. near Spadina Ave



THE EDGE

The connections between buildings within a city are important, but the relationship between a building and its context is essential too. In traditional cities, outdoor spaces were seen as the extension of the home or the 'outdoor rooms', but in modern cities Roger Trancik argued that the 'spaces' are in fact 'anti-space' (Trancik, 1986, p. 2). The spaces create gaps within the city's fabric breaking the previously continuous pedestrian flow. The following text referencing three urban planners and architects will outline the opportunities available within this 'space'.

Jan Gehl refers to the transitional area "where city and building meet" as the 'edge zone' (Cities for People, 2010, p. 75). Within the edge zone Gehl emphasized the importance of the ground floor because it is where the outside activities meet the interior ones – the exchange zone. It also provides an opportunity for activities to collide – to blend with one another. When the ground floor of a building is opened up to the street, a lively interaction becomes possible between the pedestrians and the interior of the buildings (a soft edge). Therefore, to maintain a lively edge, buildings need to engage with the street which in turn attracts people to slow down or stop and experience the activity. Gehl's observation on the impact of ground floor designs does not apply only to commercial properties. He noted that "the edge zone is the most active outdoor area in a residential area...where activities from the residential areas move out to the terrace of front garden" (2010, p. 82). When soft edges are present in a residential area, the outcome of Gehl's survey on Copenhagen streets indicated that activities were two to three times more likely to occur than on a street with hard edges (buildings that do not open to the street) (Cities for People, 2010, p. 85).

The edge was also discussed by Kevin Lynch in his book, *The image of the city*, as one of the five elements that help to form the image of the city. Lynch defined edges as "the boundaries between two phases, linear breaks in continuity: shores, railroad cuts, edges of development wall" (Lynch, 1960, p. 47). Edges can exist either as barriers which separate the two phases or

as seams that join the two together. When the edge functions as a seam an exchange or dialogue between the two phases can occur. Lynch also noted in his book that edges need to be visible within the built environment in order to give it a sense of prominence. When the edge is visible it could also function as a point of reference to align other elements within the city.

In Ellin's book, *Integral Urbanism*, she also discussed the idea of the edge, agreeing with Lynch's concepts. Ellin described the edge through the attitude of 'translucent urbanism' - 'revealing through concealing' creating a sense of porosity. Ellin defined porosity as "an urban condition that allows some seepage but not free flow" (Ellin, 2006, p. 62). It is where edges can blur without losing the integrity of the individual element. Different edge conditions can be accomplished through different levels of porosity; controlling how much seepage is allowed. In Ellin's book, she identified various different types of porosity that can exist, but visual and functional relate most to this thesis. Visual porosity is the ability "to see through but not move through the space" (Ellin, 2006, p. 63). Different levels of visual porosity, achieved through material variations, can affect the quality of life at the edge. For example, when a transparent material, like glass, is used the activities from both the interior and the exterior can fully engage with one another. When an opaque material is used, the interaction at the edge is minimal or non-existent. Functional porosity allows access and movement, but provides privacy due to visual opacity (Ellin, 2006, p. 70). It can be achieved through the use of permeable building edges which create semi-private or semi-public spaces.

Through the understanding of the edge as porous element different levels of interaction can be achieved depending on the different spaces that border one another. This is a crucial understanding for existing City of Towers neighbourhoods because the edge conditions being dealt with are typically where private and public spaces meet - an area that is often overlooked due to ambiguous ownerships.

3.2 THE BUILDING AS A CITY

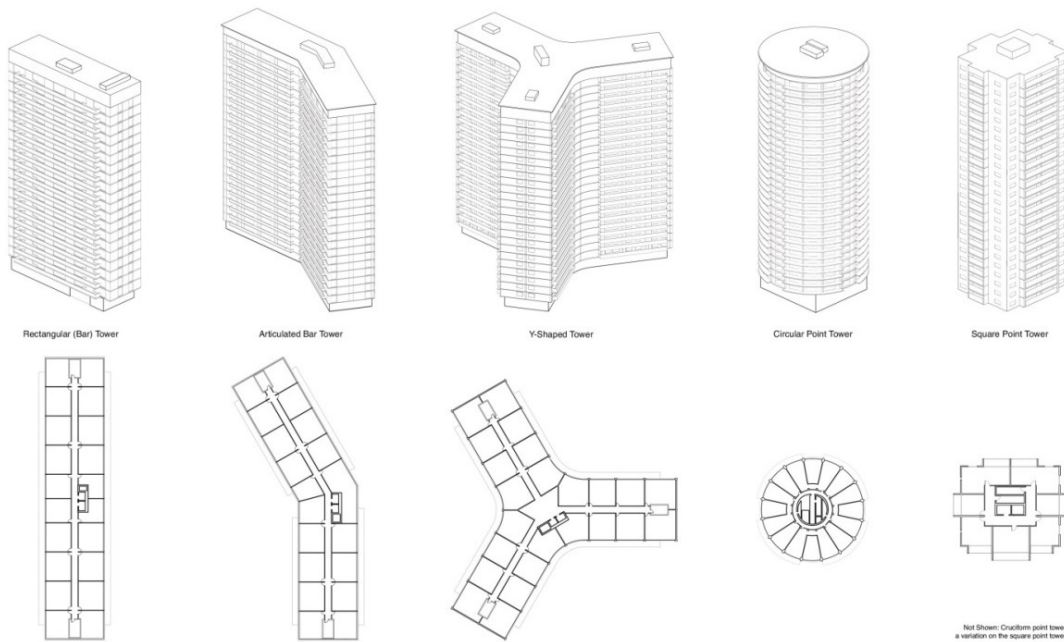
Alberti once stated that “just as the human body is a microcosm of the building, the building is in turn a microcosm of the city” (Alberti, 1988, p. 25). Alberti’s quote plays an important role within this thesis because with the implementations of high-rise towers, the layout of the building and the number of residents literally creates a miniature city within each of the apartment towers. In modern city planning, low to mid-rise buildings lining streets were replaced by high-rise towers surrounded by open space. The hallways and corridors within the towers also became the new ‘streets’ of modernism creating a shift in encounters between neighbours from the front or backyards to the corridors within the towers. Although there has been a forced shift in the place of social encounter, the layouts of the existing apartment towers suggest no such consideration for the new streets. Therefore, in order to improve City of Towers’ neighbourhoods as a whole the interior communal spaces need to be addressed as well. Presently many of the rules and regulations in the City of Toronto that govern the implementation of revitalization projects focus on the overall built form and the landscaping around it. The improvements to the interior of the buildings for the benefit of its residents are rarely considered (or at least documented).

Rem Koolhaas and Bruce Mau’s essay, *Typical Plan* found in *Small, Medium, Large, Extra-Large*, provided an excellent critique on the issues of repetitive floor plans – which are applicable to all apartment towers found in City of Towers neighbourhoods. Typical plans are seen as “an American invention... zero-degree architecture, architecture stripped of all traces of uniqueness and specificity” (Koolhaas, *Typical Plan*, 1998, p. 334). Typical plans suggest repetition in which the choices made by the architect are repeated on every floor level – it is not about catering to individual needs. In the works by Koolhaas and his firm Office of Metropolitan Architecture (OMA), they can be seen breaking away from creating ‘typical’ plans through the use of permeable spaces. In Dovey and Dickson’s essay, *Architecture and Freedom? Programmatic Innovation in the Work of Koolhaas/OMA*, they described the works of Koolhaas and his firm OMA as creating buildings as spatial

'fields' where "space is programmed for indefinite function and chance encounter" (Dovey & Dickson, 2002, p. 5). It was the idea of breaking away from the traditional sense of a 'fixed' program to allow new social encounters to manifest. Dovey and Dickson furthered their argument by quoting architectural critic Jeffery Kipnis's interview with Koolhaas. Kipnis described Koolhaas' works which "liquefy rigid programming into non-specific flows and events...to weave together exterior, interior, vestigial and primary spaces into a frank differential matrix that rids the building of the hackneyed bourgeois niceties of cosmetic hierarchies" (Kipnis, 1998, p. 30). By removing the constraints of a fixed sequence of flow, Koolhaas was able to borrow the concepts of urban spatial relationships to influence the design of the interior to create buildings that flowed seamlessly from the interior to the exterior. Although Koolhaas and OMA's design were seen as moving away from the rigid spatial layout of the interior, Dovey and Dickson argued in their essay that it was just an 'illusion of permeability'. It was a way for architects to provide definition and maintain the flow of the interior spaces to meet the intent of the building, but without the occupants or users of the space feeling trapped or forced to traverse in a predetermined sequence – the illusion of choice.

Although the ideas discussed above were not directly taken from renewal projects, the core concepts can be applied to the revitalization of the existing apartment towers to give more emphasis to the interior spatial relationships. Figure 2 depicts common floor plans and building configurations that can be found in the majority of existing City of Towers neighbourhoods within the City of Toronto. The banality of the existing floor plans suggests that the needs of each building and neighbourhood were not considered because the same repetitive layouts were used cross the city. This is again an emphasis on the idea that the City of Towers neighbourhoods cannot be overhauled without changes to the interior functions of the building as well. Ultimately, the improvement of the neighbourhoods have to extend to improving the lives of the residents as well because buildings are meant to be experienced from both inside and outside and by occupants and people passing by.

Figure 2
Typical Floor Plans and Tower Configurations



3.3 PEOPLE AS A VITAL LINK

People are one of the most important factors in creating a lively space because it is natural that people attract people. Therefore, the presence of people is crucial in the scope of revitalizing City of Towers neighbourhoods, but how can we attract the initial person?

William Whyte identifies Triangulation as the last factor which contributed to creating a successful public space in his book, *The social life of small plazas*. Whyte defines triangulation as the “process by which some external stimulus provides a linkage between people and prompts strangers to talk to each other as though they were not” (Whyte, 2001, p. 94). Although triangulation is not a physical attribute that can be designed, through the use of design or structure of relationships between objects can help to foster interactions between people. Gehl also echoes Whyte in his observation of people attracting people. He noted that when people are

faced with a choice between walking down a deserted or a lively street, the lively street always prevails because the walk is more interesting and would feel safer (Cities for People, 2010, p. 25).

The ability to connect people is a critical aspect to the revitalization of City of Towers neighbourhoods because there are typically a large number of people, but with limited opportunities or spaces to interact. As architects, we have to understand that the relationship between the building and its surrounding context is always interrelated - along with the people that engage with them. As Gehl et al. stated in their article, *Close encounters with buildings*, "it's not about what the new urban context can do for your building, but what your building can do for the context" (Gehl, Kaefer, & Reigstad, 2006, p. 44). For this thesis, the goal is to develop strategies that will help improve the existing conditions of both the buildings and their surroundings to maximize the benefits for the residents and the adjacent neighbourhood. Strategies will also look at reconnecting the relationships between the buildings, the context and the people (both residents and people from the surrounding neighbourhoods).

04

THE IMPORTANCE OF PLACE

“Public spaces allow for shared experiences that can give rise to the mutual respect – however grudging- that is the basis of a thriving metropolitan culture.”

- Raymond Gastil and Zoe Ryan (2004, p. 9).

The isolation of buildings resulting from modern city planning also saw the deterioration of public spaces because the spaces were no longer informed by their context. The courtyards that were once carved from the layout of the buildings and helped to promote interaction between people were gradually removed. Public spaces today are commonly known as “the streets, boulevards, squares and public parks together with the building facades that define them” (Moughtin, 2003, p. 2). Sometimes public spaces also refer to as the leftover spaces between buildings because when many of the traditional public places were eliminated, they were replaced with open spaces that were ‘leftover’ from the building’s design (Shaftoe, 2008, p. 11). The reference to public space as leftover space is an indication that further definition to those spaces are needed in order to allow them to operate at their fullest potential.

The importance of public spaces can be traced as far back as in ancient Greece where the agora was the main place for gathering and discussing political issues. Over time, the agora also functioned as the central market place within a city or town, but it always remained the focal point of the community. The forum was a similar space found in the Roman Empire. Public spaces have a rich underlying importance that helps to shape the city and communities we live in. In the past, people used the public spaces out of necessity; it was part of their daily lives as a means to earn a living or as a social meeting ground. Even though there are many other choices for people to engage in 'social interaction', many still choose to use traditionally identifiable public spaces. As Jan Gehl states in his essay, *Lively, Attractive, and Safe Cities – But How?*, found in *New Urbanism and Beyond*, "most people are present not because they have to be, but because they want to be" (Gehl, 2008, p. 55). In Toronto, with the increase in density in urban centres the need for public spaces to provide visual and recreational relief to serve and promote standards in public behaviour is higher than ever (Corbott, 2004). Without proper public spaces for interaction, public life is at risk. People are more prone to staying within their own private spheres and existing public spaces risk the notion of becoming the opposite of what they should be. Public spaces are the catalyst to creating the connections that are not possible in our private lives alone.

Even though there are many arguments for the end of public space due to change in the social structure of our cities, there are still many indications that public spaces are still valued. Toronto has implemented a public space requirement for new developments within the City. All new developments must allocate a percentage of the ground space for open public space for the neighbourhood. Although the policy is not a strict enforcement on the quality of the space, it is still an indication or acknowledgement from the governing body for the need of public spaces in Toronto; a good starting point. Another indication is in the actions of developers. A recent Toronto Star article, *Sunday in the Park*, noted that more developers were recognizing the value in quality public spaces (Doolittle, 2012). Developers were paying out of their own pockets to build public green spaces beyond

the minimum requirements set forth by the city because they realized the huge appeal to potential buyers. Although once again, providing public space was secondary on the agenda, it is still a sign that these spaces are recognized as important, at least within the urban core. One example of the creation of public space is Celebration Yonge which occurred over a four week period in the summer of 2012. The temporary project was created through the collaboration of Downtown Yonge BIA, its business members and supported by City Councillor Kristyn Wong-Tam (Downtown Yonge Business Improvement Area, 2012). Celebrate Yonge expanded the public realm from the sidewalks onto Yonge St. for 4 blocks between Queen St. and Gerrard St. There were various zones that encouraged different levels of interaction between friends and strangers alike; from outdoor seating to restaurants to games (refer to Figure 3). The success of the pilot project indicates that there is value in quality public realm. The following two sections will discuss the important qualities that can create both successful and unsuccessful spaces.

4.1 SUCCESSFUL PLACE PLANNING

The definition of ‘successful space planning’ for this thesis will be based on the book *How to Turn a Place Around*, published by Projects for Public Spaces. Projects for Public Spaces is a not-for profit organization which advocates and promotes for the need of public spaces to build communities. The book builds upon the research completed by William Whyte in the 1970s and conclusions were drawn based on the analysis of over a thousand public spaces around the world. The four key components that contribute to a successful place are: access and linkage, uses and activities, comfort and image, and sociability (Project for Public Spaces Inc., 2000, p. 17).

ACCESS AND LINKAGE

Access and linkage is defined as the ease in which people can move around the space, the location of the space and the physical elements; such as shops or restaurants, present. This can be translated into the connection with the adjacent buildings and how circulation is defined. Worpole and

Knox mentioned in their paper *The Social Value of Public Spaces* (2007), that good design but wrong location can affect the success of a space. By locating a space adjacent to or in close proximity to existing activities can help create the backdrop necessary to attract a constant pedestrian flow. The way a building is oriented or situated on the site affects the usability of the space as well. The building or buildings must have a relationship with the public space in order for them to take advantage of one another. The relationships can be formed through the placement of building entry ways adjacent to pedestrian pathways or simply providing a visual connection between the interior and exterior activities.

USES AND ACTIVITIES

Uses and activities are the reasons in which people visit a space. If the infrastructure is present to support various activities, it can allow the space to accommodate multiple activities to attract a diverse group of users. The infrastructure of the space can be as little as providing a washroom pavilion or it can be as large as a pavilion for events to occur. The architecture does not always have to be the supporting element; it can also be incorporated within the activities. For example, there could be benches that invite people to stay and relax or it can be a restaurant or café that creates a node for people to gather.

COMFORT AND IMAGE

The comfort and image of a space is directly linked to a person's perception of safety, cleanliness and the ability to sit. Jane Jacobs outlined in her book, *Death of the American Cities*, that safety is one of the main factors which people consider when they are deciding whether to use or go through one space over another. She mentioned three points in which make people feel safe. Firstly, there must be a clear distinction between private and public spaces (Jacobs J. , 1993, p. 44). The ambiguity of ownership with a space can hinder its use by the public because no one is sure whether or the space can be occupied. Secondly, there must be eyes on the street. Buildings should be oriented towards the street so that there are people constantly

‘watching’ the sidewalks (Jacobs J. , 1993, p. 45). The informal form of surveillance can help create a sense of security. Lastly, the space must be used fairly continuously so that strangers passing by can act as a source of surveillance as well. When the three principles are missing the space is often underused or neglected resulting in the perception of being ‘unsafe’ (Jacobs J. , 1993, p. 45). Seating is also an important element which can contribute to the perception of safety within a space. Whyte argued in his book, *The Social Life of Small Urban Spaces*, that ‘people attract people’, but “[even] the most attractive fountains, the most striking designs cannot induce people to come and sit if there is no place to sit (Whyte, 2001, p. 28). When the choice is available, people will sit where there are places to sit.

Comfort can also tie in with the environmental elements. This is extremely important in the Toronto context, because the weather plays a huge part in the comfort of the outdoor environment all year round. Whyte quoted James Marston Fitch, an Architect and advocator for environmental effects on spaces, in his book stating “there needs to be a relationship between architectural and urbanistic spaces so that the urban life can flow between the two” (Whyte, 2001, p. 45). Fitch argued that many of the ‘public spaces’ available are either strictly indoors or outdoors. There are very few spaces that are a mixture of the two; for example a canopy that helps to protect from the elements while extending the outdoor life of the space.

SOCIABILITY

Sociability is the ability for interaction to occur either between friends or strangers. Spaces need to provide elements which can support interaction; for example a bench or fountain for gathering, in order to promote it. Another way to encourage social interaction can be achieved through visual connections. If there is a clear view into the public space, people have the opportunity to see what is happening. Often a visual connection is enough to draw others in. This can be done through wider, more opened entrances or non-opaque ‘barriers’ so that the visual connection is not obstructed.

The four key components previous discussed help to formulate the

beginnings for creating places in which welcome and invite people to stay and occupy. The components are key ideas which can be incorporated (along with other strategies) which can help improve the ground plane of existing City of Towers neighbourhoods to make them more pedestrian friendly and, most of all, to transform them into places people want to gather in.

4.2 UNSUCCESSFUL PLACES

Unsuccessful spaces can be described as spaces that are underutilized or perceived to be unsafe and do not contribute to the well-being of society. They can come in many different forms. The first are streets that have no connection with the adjacent building. Jan Gehl described this condition in his book, *Life Between Buildings: Using Public Space*, as streets that are facing unattractive ground floor facades where nothing interesting is visually appealing (2001). They are the buildings with blank facades which seem to have turned their backs to the street life. Secondly, there are the abandoned lots or inaccessible areas due to physical barriers; such as a fence. These spaces can be fenced off parks or spaces isolated from the majority of the urban fabric. Thirdly, there are the empty street corners. These can be places that have limited pedestrian traffic or corners that have no activities to anchor it. The last forms of unsuccessful place are ill-defined open green spaces. These spaces can occur as leftover space between apartment buildings or open space with no defined activities or zones to promote any form of social interaction.

The need for public spaces is undoubtedly a necessity for growing urban cities in order to provide relief for its residents in multiple levels. However, it's not the quantity of the spaces that matter, it's the quality. As previously discussed, the quality of the space is a major deciding factor on the frequency of their use. Therefore, in order to revitalize existing City of Towers neighbourhoods, improving the quality of their public spaces is crucial aspect to a project's success.

05

THE IMPORTANCE OF THE HUMAN SCALE

Modern city planning principles not only altered the way cities are connected and our perception of place, it has also changed the scale of the city in many ways. Modern city planning emphasized the separation of buildings in order to maximize exposure to light and air, with the aim of improving the health and well-being of the city and its residents. However, many architects, designers and theorists have argued that modernism has in fact removed the human aspect from the design of cities. Douglas Kelbaugh stated in his book, *Common Place – Toward Neighbourhood and Regional Design*, that modern city planning principles resulted in “banalization, scalelessness, commodification and typological impoverishment” (Kelbaugh, 1997, p. 40). Kelbaugh furthers his argument on the absence of the human scale by stating:

“In the parking lot, the human body is no longer the basic measure of architecture, just as the pedestrian is no longer the design determinant of the street...in its most concrete expression , human scale is the stoop of a rowhouse or the front porch of a home rather than the stairwell of a high-rise” (Kelbaugh, 1997, p. 40).

Henry Shaftoe also argued in his book, *Convivial Urban Spaces*, that Le Corbusier “had the best intentions to provide people with hygienic, purified environments for work, rest and play but in their more extreme forms their plans led to sterile, alienating, mechanistic environment” (2008, p. 84).

There was no room in modern city plans to allow for the organic growth of the city to evolve naturally with human participation. Le Corbusier's totalitarian approach to the new city plan created a huge contrast to the scale of the city in terms of humans. He had imaged how people would live and use the city, but in reality human patterns are highly unpredictable. How can the human scale be incorporated into existing high-rise neighbourhoods without returning to the traditional city?

This section focuses on two main scales of a typical City of Towers development: the underutilized public spaces surrounding the buildings, the programming at the base of the towers and the high-rise towers which have a significant impact on the human scale.

5.1 SIZE OF OUTDOOR SPACES

In modern city planning, high-rise towers were separated by large distances to take advantage of the light, air and space around them. However, due to the enormous expanses between buildings, the buildings were no longer able to define the spaces between them. In a sense, the buildings went from being the positive space in traditional cities to being the negative space in modern cities. Kelbaugh stated in his book that "the notion of public space is finite, contained outdoor rooms, defined by background buildings and punctuated by foreground buildings" (Kelbaugh, 1997, p. 81). With the reverse role of figure and ground in modern city planning, public spaces were seen as boundless, unable to define and create the outdoor rooms that were once the extension of the home into the public realm. Kelbaugh follows his critic by arguing that humans need limits within the built environment in order to differentiate a place from a raw space because "boundless architectural and urban space has less nearness, less presence" (Kelbaugh, 1997, p. 82). If the need for limits or boundaries is so important how do we determine the size of those precincts so that they are acceptable social gathering spaces?

In Henry Shaftoe's book, *Convivial Urban Spaces*, he indicated that the overall dimension of a place has a huge impact on the feeling it gives off to

people using or experiencing it. He noted that large spaces can give off the feeling of 'awe', but they won't feel cozy, whereas small spaces can cause the feeling of being 'claustrophobic' (Shaftoe, 2008, p. 73). Larger squares can typically function as gathering spaces for assemblies or demonstrations. Small spaces on the other hand may not be suitable for any activities to occur; unless they connected to other spaces, if the space is too little in size. Therefore, there is a need to determine the optimum dimension of a place so that it neither overwhelms nor underwhelms potential users. Shaftoe compiled a list from various urban designers that have also dealt with the issue of the size of places (Shaftoe, 2008, p. 74):

- Kevin Lynch – between 12 and 24m for each sides for a small square and up to 100m for a large space
- Jan Gehl - up to 100m for a large space and maximum distance for distinguishing facial features as 25m
- Christopher Alexander – maximum 22m across for a small square and maximum for seeing any human movement at 135m

The size of spaces also has an impact on the level of contact between people. With reference to Hall, Gehl described the impact on the contact between people based on 'distance'. With the spacing of the towers set at a grid of 400m, according to the Gehl, the only level of contact between people is the ability to distinguish general forms; for example humans can be distinguished from animals or vegetation. Although the appropriate distance may vary depending on the use of the space, Gehl noted that any form of communication through voice can occur only at 35m and genuine conversations begin within 7m (Cities for People, 2010, p. 35).

With the understanding of the impact of distance on the level of interaction one has with the space and other people, existing open spaces within City of Towers neighbourhoods can be closely examined in order to design size appropriate spaces that can accommodate various functions. The large, boundless open spaces can be turned into an asset for the community rather than a nuisance with appropriate planning and design.

5.2 SCALE OF HIGH-RISE TOWERS

High-rise towers were implemented as a solution to housing a large population within a small building footprint so that more open space is left over for recreation use - the lungs of the city as seen by Le Corbusier. Le Corbusier described the relationship between the importance of higher density to increase open space in his book, *The City of Tomorrow*, "we must increase the open spaces and diminish the distances to be covered. Therefore the centre of the city must be constructed vertically" (Corbusier, *The City of To-morrow*, 1971, p. 163). Although the shift to a vertical city has helped to improve certain aspects compared to the traditional city, modern cities are not without its own set of problems.

With the shift from low or mid-rise units to high-rise towers, one of the most noticeable change was the increased in scale or size of the building itself. Rem Koolhaas' essay titled *Bigness, or the problem of large*, found in the book *Small, Medium, Large, Extra-Large*, was a response to the implications of large-scale buildings within the city. Koolhaas outlined his Theory of Bigness with 5 main criteria: critical mass, the elevator, stripped relationship between the interior and the exterior, building becomes amoral, and building removed from its context (Koolhaas, 1998, pp. 499-502). The last criteria was expanded upon and simply described as "Bigness = urbanism versus architecture" (Koolhaas, 1998, p. 515). As a building becomes 'big' context is no longer relevant because the building can exist without it – the building can be placed anywhere without affecting the context or having the context affect it. According to Koolhaas, the birth of large-scale buildings has eliminated the relationship between context and building because without a theoretical background architects "don't know where to put it...what to do with it...where to put it, when to use it, how to plan it. Big mistakes are our only connection to bigness." (Koolhaas, 1998, pp. 509-510). Buildings are being built with little knowledge of the issues they can create. Although, Koolhaas criticized the negative impact that large-scale buildings can bring, he does not advocate for the elimination of

the building typology. Koolhaas stated in his essay that “Bigness returns to a model of programmatic alchemy” (Koolhaas, 1998, p. 512) which can help create new relationships between individual elements within a single building. Therefore, by embracing the idea of large-scale buildings, but with proper consideration of the building within its context, ‘bigness as urbanism plus architecture’ can be achieved. “Bigness’ is an important issue for City of Towers neighbourhoods because the existing buildings are examples of the ideas discussed in Koolhaas’ essay. Proper mitigation of the neighbourhoods can only come about through understanding the potentials of large-scale buildings.

Jan Gehl also discussed the issues of large-scale buildings in his book, *Cities for People*, but from the point of a person’s experience with the building. Gehl argued that human scale is affected by the speed in which a building is designed to be experienced. Modernism produced buildings that were more geared towards the scale of the automobile rather than humans because they were designed to be viewed from further distances and at a speed of a car - 5km/h architecture (walking) versus 60km/h architecture (driving). Gehl noted that 5km/h architecture has a rich sensory experience with “small spaces, small signals, and many details” whereas 60km/h architecture has “large spaces, large signals and no details” (Cities for People, 2010, p. 44). As the scale of the building increases, the level of detail decreases. This creates an uninviting and inactive edge for pedestrians up-close. Figure 3 referenced from Gehl et al.’s essay, *Close Encounters with Buildings*, depicts the effective viewing distances for experiencing a building. The image indicates that when a pedestrian is up-close to a building, only the ground floor is within the field of vision; where the details of the building can actually be experienced. With many high-rise towers being designed to be viewed from a large distance, many times, the facades of the buildings are ‘faceless’ at close encounters. People are free to traverse around on all sides, yet not all sides are designed with the pedestrian in mind; the buildings just turn their backs to the streets. Therefore, by understanding the experience of the building from a variety of vantage points, a certain

level of detailing can be incorporated at different moments of the building to accommodate a person's experience with it.

The scale of a building can bring forth a preconceived notion of its failure or success, but as an architect, the stigmas of a particular building type can be remediated through good design strategies and implementation. Therefore, although the structure and planning of City of Towers neighbourhoods have been plagued with negative connotations, appropriate design strategies can help improve both the physical and perceived notions of the buildings and their surroundings to accommodate human needs.

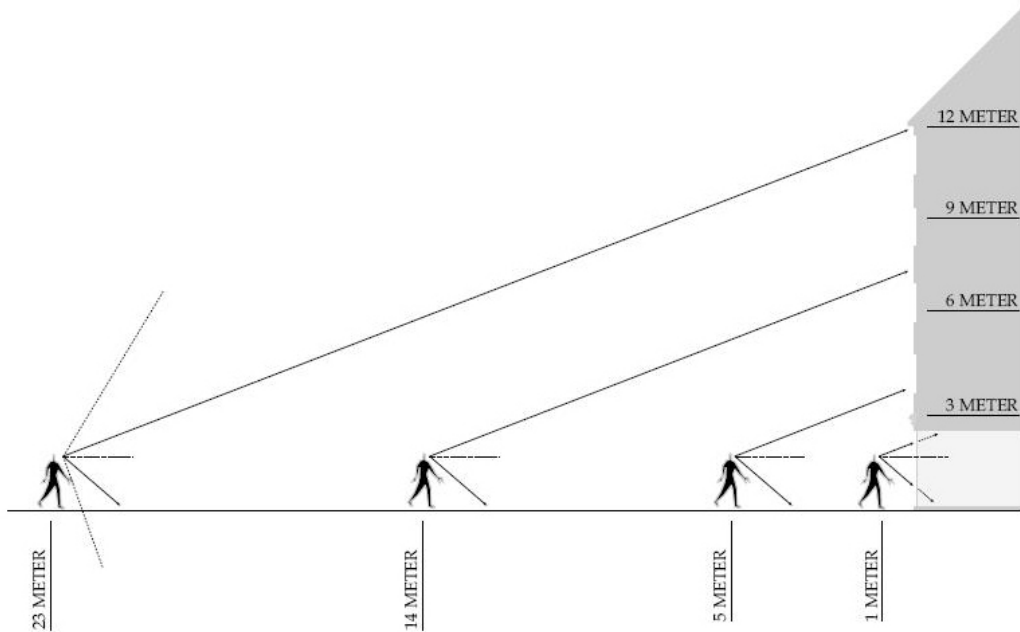


Figure 3
Effective viewing distances at ground level

06

PRECEDENTS

This chapter looks at several precedents to help identify qualities and strategies that can be implemented into the design component of this thesis. The following discussions are divided into two sections: Renewal and New Construction schemes. Two renewal precedents were chosen based on their goal for improving public life. The second section contains the analysis on three new construction precedents. The projects were chosen because they emphasized creating a sense of community within the precincts of the project and with the surrounding city. They are important precedents to be reviewed because many of the existing City of Towers Neighbourhoods lack a sense of community both within the individual towers and between the larger context as well.

6.1 RENEWAL

THE BRUNSWICK, LONDON, ENGLAND

The Brunswick was conceived as a new private development in the heart of a new suburb north of London by Patrick Hodgkinson; project architect. The main plan for the development was to have two apartment towers overlooking a central commercial space (concourse) which also acted as the communal hub for the neighbouring areas. The roofs of the ground floor

commercial units were to be used as a terrace for the residents above which overlooked onto the main concourse. Additional commercial uses were also incorporated below ground; retail units, a movie theatre, and parking for both the residents and the public. The underground component of development was made visible from the main concourse through skylight-like protrusions. However, mid-way through the design of the development, the properties were leased to the Camden Borough Council as council homes (Murray, 1971). Due to the change in potential tenants and financial setbacks the original plans were diluted and much of the social aspect of the project was never built. Since the original vision for the development was never fully realized, The Brunswick never became the social hub for the new suburb. Hodgkinson was quoted in blueprintmagazine.co.uk stating “it was going to be the nucleus for a housing area but all they got round to building was the nucleus” (Richardson, 2006). The Brunswick eventually became an undesirable place, infrequently used after much neglected.

There were many issues which caused the downfall of The Brunswick. Firstly, the connections were poorly executed. The main concourse and the entrance to the residential towers are raised above street level and defined by guardrails which created separate zones; a barrier was formed. The continuous gesture of the guard does not give a distinction between the private and public areas of the site. There was also a lack of relationship between the base of the towers and the main concourse. Although there were a few retail stores adjacent to the main concourse, they did not spill out or take advantage of the adjacent open space. The retail stores were merely tucked away behind the covered pedestrian walkway rendering them almost invisible from the surrounding streets. The third issue was the segregated terraces overlooking the main concourse. The terraces were originally designed to be accessible from the main concourse and as a raised connector between the two towers. However, after various budget cuts and design revisions the connections were never built. This resulted in the separation of the residents from the main concourse. The residents could visually connect with the concourse, but without direct access to it. There

was also a lack of human scale in terms of addressing the needs of the users. Along the entire length of the concourse there was nowhere to sit or gather aside from a few oversized planters. The space was not inviting, it was lifeless; an area no one wanted to spend time in.

The Brunswick was revitalized in 2006 by Levitt Bernstein Architects in collaboration with Patrick Hodgkinson. The main goal of the architects was to bring new life back into the heart of the development while also improving the surrounding areas through the addition of commercial uses and public amenities. Various strategies were implemented to achieve their goal. The first strategy dealt with improving accessibility to the surroundings by opening up the main pedestrian corridor to Bernard Street. The new stair-ramp system extended directly from the public sidewalk to the raised concourse level forming a stronger connection with the street. The second strategy was the addition of more commercial uses. A new supermarket was added to the north of the site along Handel Street. The supermarket helped to anchor the once opened northern entry point to create a destination point from the south. The closure of the north entrance also helped to better define the main concourse. The existing retail units were extended beyond the old covered pedestrian walkway to give them more prominence within the central concourse. Also, new canopies were added above the retail spaces to help define a precinct for the activities to overflow into the main concourse. With the blurring of the two edges, the zones now mutually support one another. The third strategy involved the division of the main concourse into three main 'zones'. The first area is the commercial zone at the entrance from the south of the site; Bernard Street. From the street, one can see the shops and restaurants that give life to the area. The second and third areas are the gathering zones. The second zone consists of a new water fountain feature designed by Susanna Heron, centred behind the entrance of the existing cinema. The foundation provides constant movement within the area, but the height of the fountain walls also provide an abundant amount of seating that was previously missing. The third zone is lined with two rows of benches with a smaller water feature which ties in

with the second zone. Through the combination of the strategies discussed above, the Brunswick was transformed from a derelict area into a new social hub for the residents and the neighbourhoods beyond.

Although the relationship between the concourse area and the adjacent street was resolved through the revitalization, there were still issues that were not addressed. The connection between the residential towers and the concourse level was not improved. There is still no direct connection between the towers and the main concourse below as shown in the original architect's sketch (Figures 5 and 6). The residential terraces do not fall along the path which connects the towers with the activities below resulting in a place where activities can be observed, but not directly experienced. Figures 7 and 8 show the concourse level and the access from along Bernard Street before and after the 2006 revitalization.

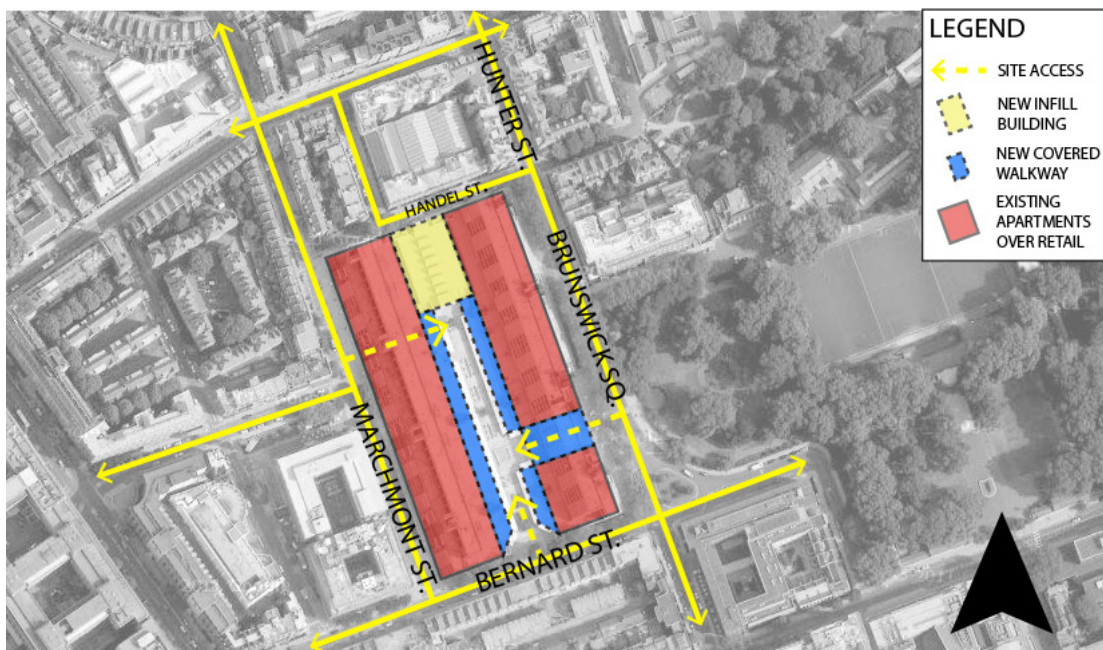


Figure 4
Site Access and circulation

Figure 5
Architect's sketch
depicting the use
of the original
main concourse

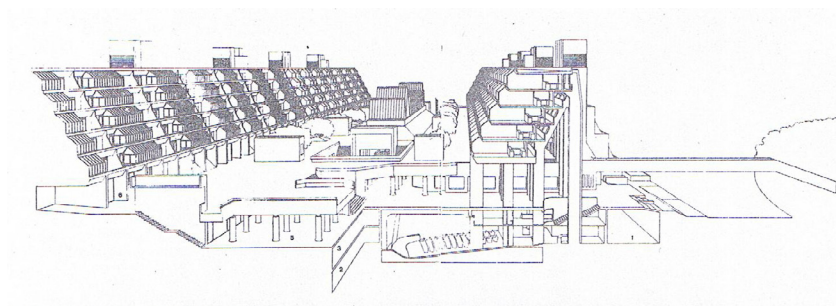
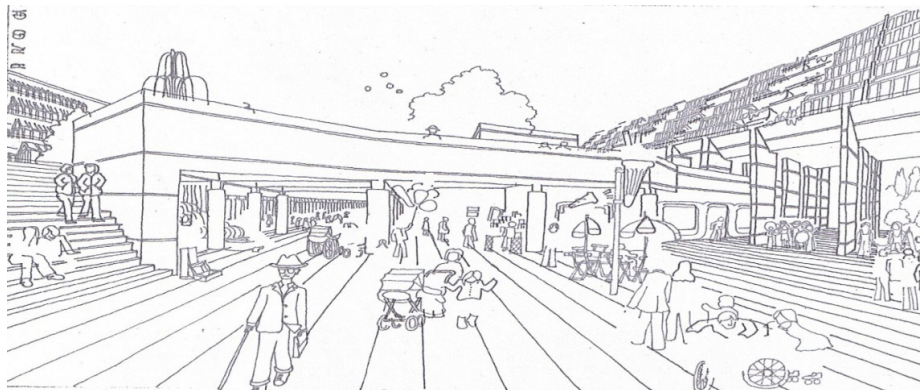


Figure 6
Sectional
Perspective of the
original scheme of
The Brunswick

Figure 7
Concourse Level (L) before
and (R) after the revitalization

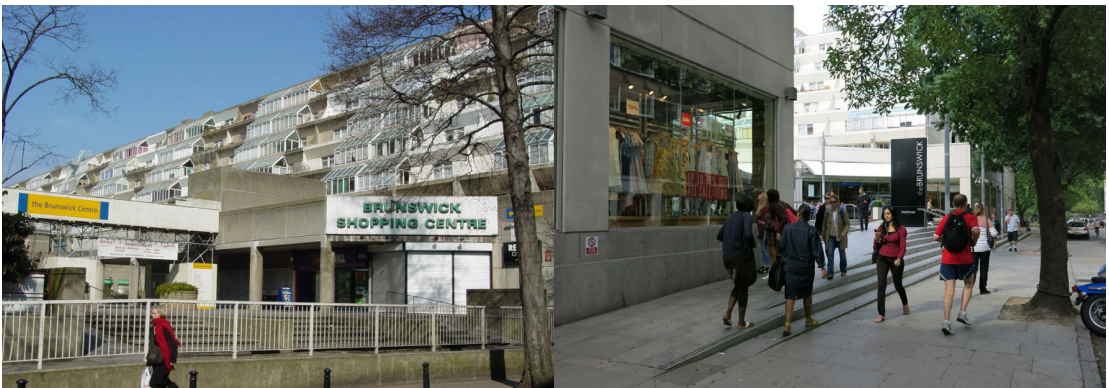


Figure 8
Along Bernard Street
(L) before and (R) after the
revitalizationBrunswick

BIJLMERMEER HIGH-RISE ESTATE, AMSTERDAM, THE NETHERLANDS

The Bijlmermeer high-rise estate was conceived as a satellite city southwest of the core of Amsterdam (refer to Figure 9). Bijlmermeer was the largest housing development built in The Netherlands in the 1960's in response to a huge housing shortage (Helleman & Wassenberg, 2004, p. 4). It was designed as the new modern place and way to live and was the prime example of the CIAM movement in The Netherlands. The plan of Bijlmermeer was based on 'Collectivity' where the "new social spaces would compensate for the limitations of high-rise living" (Helleman & Wassenberg, 2004, p. 5). The idea was that the home was the private realm and all spaces beyond were communal to allow for mutual contact between residents. The communal spaces were to be lined with shops and recreational facilities that would help strengthen the sense of community. The development consisted of 31 tower blocks arranged in honey-comb like formations organized around open space. The first two storeys of each tower contained storage units with an additional 10 residential storeys above housing 300-500 dwellings units each. Also, vehicular and non-vehicular traffic were separated; vehicles occupied the overpasses and pedestrians were restricted to the ground level. Pedestrian bridges were used as links between the aboveground parking garages and the residential towers because the main entrances to the apartment towers were accessed through the garages. With the entrances removed from the ground level where the pedestrian traffic was designed to occupy, it created many unsafe conditions because visual connectivity was not possible.

Although the plans for Bijlmermeer were designed to encourage an alternate way of living, the project in the end was seen as unsuccessful and underwent a 30 year renovation period beginning in the mid-1980's. Within Helleman and Wassenberg's article, *The renewal of what was tomorrow's idealistic city. Amsterdam's Bijlmermeer high-rise*, they identified three main problems that caused the deterioration of the Bijlmermeer high-rise estates: unrealized plans, liveability-problems, and the housing market.

Unrealized plans. Due to financial constraints, many of the retail stores, recreational spaces and transit link were not built. The transit system; the main connection between Bijlmermeer and Amsterdam, was not built until several years after the completion of the development. The absence of the transit link caused Bijlmermeer to exist as an isolated satellite city of Amsterdam with limited access to shared facilities and services. The lack of transit forced residents who could afford cars to be automobile dependent while others were confined to area and its limited resources or people were forced to endure long commutes to the city.

Liveability-problems. The towers were owned and operated by multiple housing corporations which made managing the properties very difficult. Also, the numerous semi-public and public spaces that were designated as social gathering spaces quickly became blind spots where the rate of crimes and drug uses increased. Helleman and Wassenberg's article notes the results of a survey conducted amongst residents cited that crimes and physical deterioration of the buildings as their main concerns (2004, p. 6). There was very little to be done unless the root of the problems was addressed accordingly.

Housing market. Bijlmermeer proposed a new way of living which "did not comply to the living preferences of most people" (Hommels, 2005, p. 128). The project was initially designed for middle-class families, but very few people were willing to transform their traditional lifestyle. With a high vacancy rate from the beginning, it resulted in the allocation of units to people with fewer options; mainly new immigrants and starter families.

The renewal of Bijlmermeer will occur over a 30 year span. The final plan was the result of the collaboration of the city, architects, planners, and most importantly with the residents to determine the future of the area. The majority of the site was slated for demolition, but it was not the initial thought, it was just the resultant of the community discussions on what

people wanted. Figure 10 illustrates the original plans, areas that are to be demolished and the final proposal for Bijlmermeer. Figure 11 shows the existing condition of Bijlmermeer before the revitalization.

The first strategy implemented was the improvement of the ground conditions. That was achieved mostly through the division of the existing open spaces to form new outdoor recreational spaces or to house new in-fill buildings. Many of the overpasses that separated motorized traffic from non-motorized traffic were demolished and surface streets were added. The streets allowed for a better integration of vehicular and pedestrian traffic while also providing a connection to the existing main arteries of the area. With the addition of streets as connectors, they not only linked various places together, but also served as destinations in themselves. Portions of the streets were widened to accommodate various activities within the public realm – hybridity in function. The relationship between the towers and the adjacent streets were improved by providing direct access from the street level. The street level entry helps to improve the safety of the residents because it allows for the idea of “eyes on the street” as Jacobs argues (Jacobs J. , 1993, p. 45).

The existing towers that were not demolished as part of the new scheme for Bijlmermeer were renovated to improve the living conditions of their residents. Firstly, the storage units that occupied the first two storeys at the base of towers were converted into multi-level single family homes. The new units were designed with private gardens and direct access to the street level from each unit to improve the visual and physical connections with its immediate surroundings. Infill buildings were also incorporated into various parts of the site to help break-up the monolithic scale of the existing towers. New building typologies were also incorporated to meet the demands of the existing and future residents. The new buildings include a mixture of new single-family homes, low and mid-rise buildings and community facilities added throughout the site. Many of the new buildings also line the streets to help create an active edge condition which provides a new foundation for people to interact with one another. Figure 12 shows the revitalization

of various aspects of Bijlmermeer. With the reconfiguration of the entire Bijlmermeer district, the once large-scale development with isolate towers in the park is slowly converted into functional zones to meet the needs of the residents today and in the future.

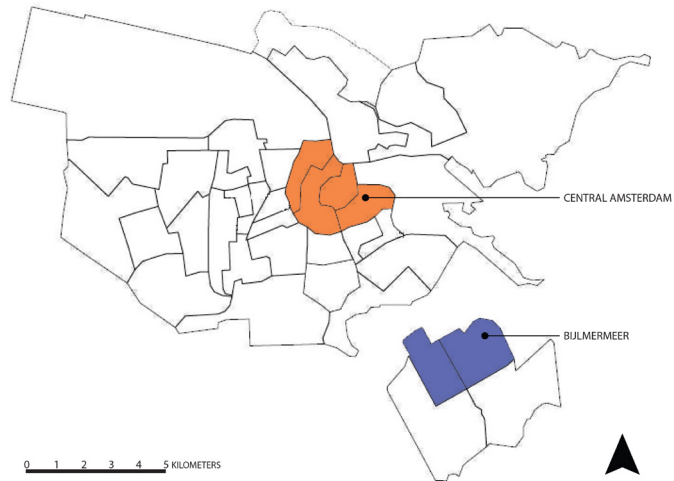


Figure 9
Location map of
Bijlmermeer, NL



Figure 10
Master plan of the
Bijlmermeer High-rise Estate
Top: (L) Original
(R) Demolition
Bottom: (M) Revitalization

Figure 11

Images of Bijlmermeer before the revitalization. Clockwise from Top Left: (1) Aerial view of apartment blocks, (2) typical ground level at base of apartments, (3) View along one of the streets in Bijlmermeer



Figure 12

Images of Bijlmermeer after the revitalization from the ground level. Clockwise from Top Left: (1) & (2) Renovated existing apartment towers with new ground floor single-family units, (3) & (4) New access to units at ground level



RENEWAL SUMMARY

From the analysis of the two precedents, there were many commonalities between the projects even though the scales were different. Some of the ideas include:

- a. Improving accessibility to the site through the addition of streets and removing physical obstacles which form barriers between adjacent spaces.
- b. Improving the relationship between buildings and their adjacent spaces by allowing activities to overflow into adjacent zones. Also, by providing direct access to streets from the ground level units it helps to reinforce Jacobs' notion of 'eyes on the street'.
- c. Addition of 'attractors'; commercial and retail units, community centres, etc., which help draw people to the area - a reason for them to visit.
- d. Definition of open spaces with appropriate implementation of scales and uses. Many of the large, boundless spaces were divided into zones for different activities or they were simply redefined through the introduction of different paving materials or physical elements; such as benches or lighting fixtures.

The main point to be identified from the precedents is the idea that the revitalization of the neighbourhoods cannot be achieved through single, point source improvements. The success to the improvement of existing City of Towers neighbourhoods is the application of a holistic approach – addressing both the buildings and their context. The main ideas derived from the precedents will contribute to the development of strategies which can be applied to revitalize existing City of Towers neighbourhoods.

6.2 NEW CONSTRUCTION

60 RICHMOND EAST HOUSING DEVELOPMENT, TORONTO, CANADA

60 Richmond East Housing Development was developed for the Toronto Community Housing Corporation as part of the redevelopment of Regent Park. The development was designed to house hospitality-industry workers and their families. The main concept for the project was create a self-sustaining building which incorporates a resident-run a restaurant at the base of the building with a garden which supplies some of the food above. Organic waste from the restaurant would also feed back into the garden to complete the cycle.

The form of the building promotes interaction among the residents and, because of the ground-floor restaurant, to form a relationship between the building and its surrounding context as well. The interlocking, contrasting volumes and voids of the building helps to promote a different form of social interaction in contrast to the typical high-rise apartment layout of units along a linear corridor. The atrium at the centre of the building; from the second floor to the ninth floor, provides light for the corridors, while also allowing both a visual and physical connection between the residential units and the common spaces to occur. The arrangement of the open air common spaces also allow the activities to spill outwards to connect the residents with the city beyond the precinct of the building's envelope. Although the configuration of the building lends to more social interactions that can occur within the building, residents still have the ability to choose the level of interaction they desire. With communal spaces on various upper floors, it allowed for social interaction to take place beyond just the ground level. It allows for the residents to interact amongst themselves to form a stronger sense of community within the larger public realm of the city.

Even though this project was specifically geared towards a particular group of people, the layout of building's public and private spaces offered insight on the possibilities of how a building's form can help to promote more interaction between residents. The idea of connection was also evident in

the choice of materials. Glazing was strategically used so that there was just the right amount of visual connection between the housing units and the communal spaces while maintaining a high degree of insulation. At the ground level, the restaurant provided the edge condition that married the building with the pedestrians. Although the communal spaces were located above street level, the upper level connections work due to the building's location. The population of the street level and the communal spaces are not dependent on a single group of people due to the considerable amount of foot traffic in the area. Also, the main entrances to both the restaurant and the residential tower occur at the street level. This ensures that there is a constant connection between the building and the city.

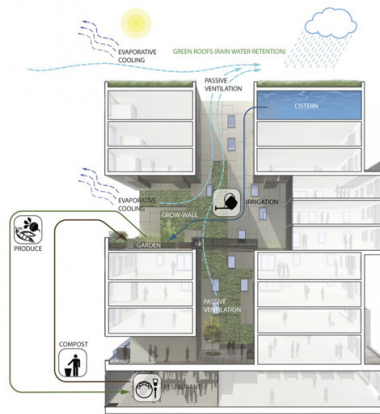
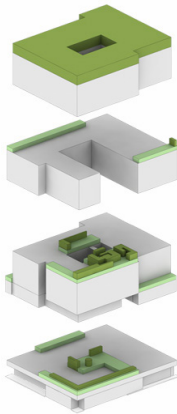


Figure 13
(L) Massing of communal spaces and plants (shown in green) (R) Building Section through central atrium

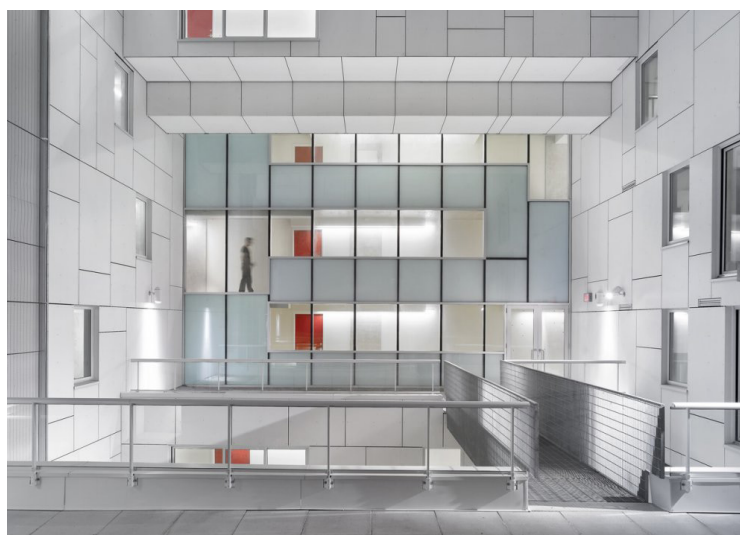


Figure 14
View of interior atrium showing the multi-level connections

VIA VERDE, BRONX, NEW YORK, UNITED STATES OF AMERICA

Although Via Verde is not an example of a tower renewal project, there are many communal aspects and qualities to the project which makes it a worthwhile project to study. Via Verde was the winning scheme for an affordable housing development competition in the South Bronx, New York by Dattner Architects and Grimshaw Architects in collaboration with developers Phipps Houses and Jonathan Rose Companies. The *New Housing New York* competition was held to help imagine a new set of standards for the future of affordable housing development schemes with emphasis on promoting healthy living for residents (New Housing New York, 2006).

Via Verde was completed in 2010 as a mixed-use, mixed-income housing project development. It was composed of a series of different building typologies connected together; a 20 storey apartment tower, a mid-rise building, duplex apartments and towers houses, which steps down in height from north to south in a spiralling formation. The form of the building was enhanced by the series of connected roof terraces and gardens to create a “promenade for residents” (Dattner Architects). The connected green spaces extend the public spaces beyond just the ground level courtyard to provide residents with additional garden spaces and rain water harvesting opportunities. The ground level is composed mainly of a courtyard along with play areas and green spaces. The upper levels are accessed through a series of outdoor staircases beginning at the open-air amphitheatre. The progression from the courtyard to the upper communal spaces moves residents through several community gardens and eventually ending at the fitness centre. Figure 16 illustrates the cascading landscapes and the distribution of residential unit type throughout the development.

The building's footprint hugs the perimeter of the site anchoring the building to the adjacent streets. On the ground level, retail units are located at the base of the high-rise and mid-rise towers to the northern end. The retail units are only accessible from the street, but glass facades visually connect each unit with the private interior courtyard. The remaining streetscape is occupied by live/work and town house units that have dual access to and from both the street and the interior courtyard. The physical and visual connection with the courtyard and the streets allow for a more vibrant façade throughout the building. Even though the development is fairly large in scale, the sense of security was addressed by the implementation of a centralized entry point. All the residents enter off Brook Avenue before separating into their respective entry points within the courtyard at ground level. With the designated building entry points, they help to divide-up the development while promoting interaction at ground level increasing the chance of meeting people within your 'building block' to encourage social interaction. Figure 17 shows the entry points from the ground level units and the retail units along the street.

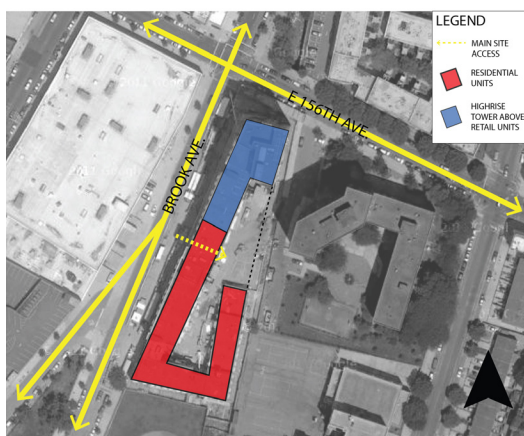


Figure 15
(L) Site access and circulation
(R) West façade along Brook Avenue



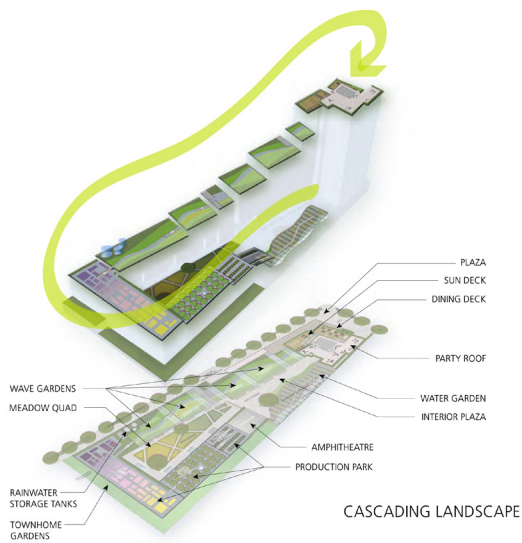


Figure 16
(L) Cascading Landscape (R) Unit Type Distribution

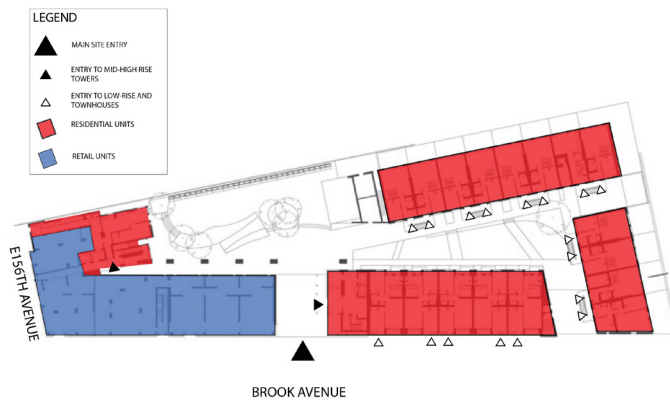
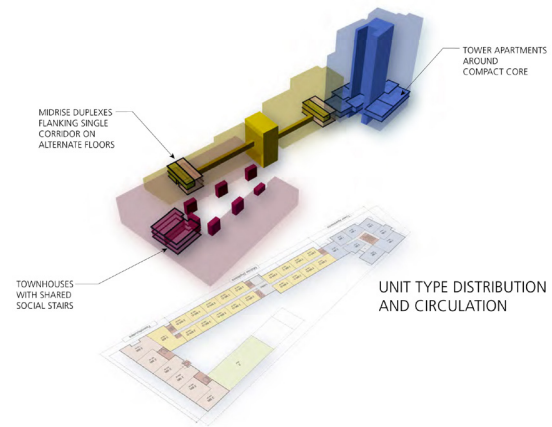


Figure 17
(L) First Floor Plan – Main entry points (R) View of main entry point and ground floor retail units



REGENT PARK REDEVELOPMENT, TORONTO, CANADA

Regent Park was originally built during the mid-twentieth century geared towards creating a low-income community composed entirely of social housing. The design of the development was based on the idea of buildings in a park-like setting; a garden-city. The buildings were turned away from the traditional streets and site was connected through series of pathways. With the buildings turning their backs to the city, the scheme had resulted

in the isolation of Regent Park from its surroundings. Figure 18 shows the original plan of Regent Park in 1951. Another issue was the lack of clearly defined public and private zones. Without proper definitions of space Regent Park was quickly deemed as an undesirable place to live due to the increased crime rates (Hall, 2009). With the downfall of Regent Park, the city voted and agreed that revitalization was needed. The redevelopment of Regent Park was aimed at creating a new mixed-income community. According to the Toronto Community Housing website, the revitalization of Regent Park will include new high-rise towers to accommodate over 18,000 residents (over a 200% increase from the original layout) in a series of mixed building typologies (town homes, mid-rise and high-rise buildings) (Toronto Community Housing, 2013). In addition to the new residential units, new amenities will include: new parks, an aquatic centre, a community centre, an arts and cultural centre, and new retail and commercial spaces. The new amenities will act as the new anchors on the perimeters of the site to draw people in and serve the community. One of the biggest changes to the neighbourhood will be the connection of the once fragmented site. A traditional street grid will be introduced throughout to reconnect the neighbourhood on the interior with its surrounding context. The new streets added (or reinstated) will create a better integrated network of pedestrian and vehicular traffic within the site. They will also help to link the redeveloped neighbourhood to existing main arteries within the city. Figure 19 illustrates the new streets and amenities proposed for the revitalization of Regent Park.

One Cole Street Condo Development was one of the first buildings to be constructed in Regent Park as part of the revitalization. The notable design feature of the building is its dual level of connections. On the street level, the building is occupied by a mixture of retail units and townhouses to engage with pedestrians. Above, there are two high-rise towers which are connected by a 'skypark' (refer to Figure 20). The skypark is a raised recreational space for the residents of the two towers while the podium of the building provides the relationship with the street and pedestrians.

The dual level of connection is similar to that which was found within the *60 Richmond Street* project. Due to the location of the building, in a high-density area, the second level of activities does not deplete the livelihood at the ground level.



Figure 18
Plan of original
Regent Park
development –
1951

Figure 19
Existing and new
traffic circulation for
the redevelopment of
Regent Park

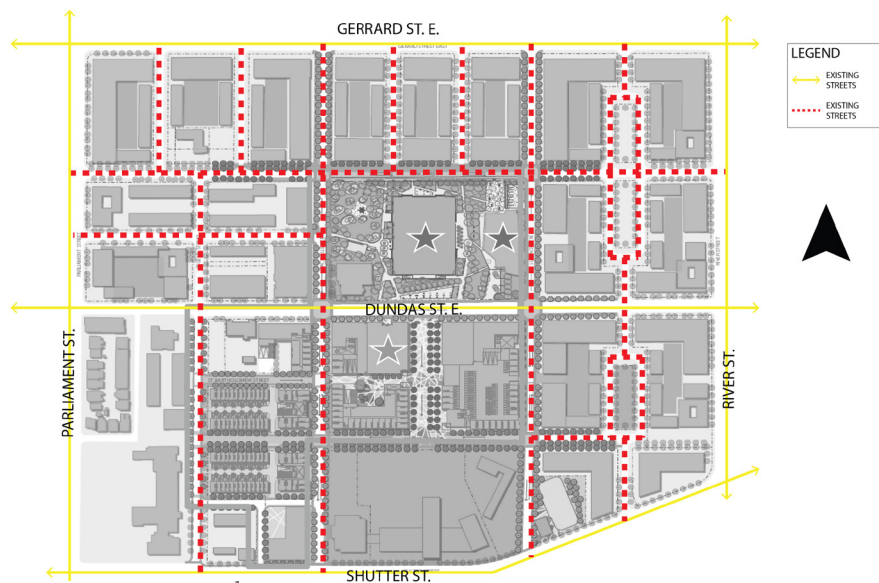


Figure 20
One Cole Street Development - View
onto skypark from apartment tower

NEW CONSTRUCTION SUMMARY

The following key points were commonalities found within the three precedents discussed in this section.

- a. The form of the building defines the adjacent open space.
- b. Visual connections are provided to all common spaces.
- c. Variations in building height and form to break down the monolithic feeling of the apartment towers.
- d. Gathering hubs throughout the site allow for a range of pedestrian movement, such as community centre, parks, etc.
- e. Physical connections between separate zones or communal spaces ensure that there are no isolated points within the neighbourhood. The connections also help to improve the overall pedestrian access throughout the neighbourhoods.
- f. Relationship between building and adjacent spaces; commercial/ retail units on the ground floors, or direct access from the building units at street level.

The main points identified help to address the needs of the present day city. By including the findings from both the tower renewal and new construction schemes, this can ensure that the strategies developed within this thesis meet those needs as well.

6.3 ANALYSIS – DESIGN STRATEGIES

From the analysis of the precedents, four key strategies were developed to improve the livelihoods of the development and the surrounding neighbourhoods:

- **ENGAGING THE EDGE - HORIZONTAL CONNECTIONS**
- **DEFINING SPACES – PHYSICAL OR IMPLIED**
- **DESIGNING MIXED-USE | MIXED BUILDING TYPOLOGIES**
- **CREATING MULTI-LAYER CONNECTION – VERTICAL CONNECTIONS**

A matrix chart summarizing the precedents can be found in Appendix B.

ENGAGING THE EDGE

The edge condition; either where building met city or city met city, analyzed in the precedents was crucial in determining how two components or areas related or interacted with one another. The ‘porous edge’ (a term adopted from Ellin’s book, *Integral Urbanism*, meaning that edges can blur without losing the integrity of the individual (Ellin, 2006, p. 62)) allows the activities of two individual components of the city to interact. This helps strengthen the horizontal connections between the built environments and their surrounding spaces – softening the definition of inside and outside. Also, with different levels of transparency a variety of spaces and relationships can be created to suit different edge conditions.

The Brunswick and Bijlmermeer High-rise Estates, were self-contained developments, both isolated from their surrounding context. The atmosphere of The Brunswick was changed when the fence - that was both a visual and physical barrier between the street and the main pedestrian concourse - was removed. The fence was replaced by a stair and a ramp which allowed the flow of pedestrians directly from the sidewalk to the concourse level. By opening up the concourse level it reinforced its

connection with the surrounding context. A similar gesture was used in the revitalization of the existing apartment towers in the Bijlmermeer High-rise Estates. The two-level storage units at the base of towers were converted into multi-level single-family units with direct access to both the front and back of the building. The occupation of the ground level with inhabitants helps to reinforce the connection between the building and its surroundings – creating Jacobs’ notion of ‘eyes on the streets’. By opening up the edge condition both projects allowed for a more engaging edge in which spaces interrelated with one another. Figure 21 illustrates the edge condition along Bernard Street after the removal of the existing fence on the periphery of The Brunswick.

DEFINING SPACES

All of the precedents analyzed had public spaces that were either defined physically by its surrounding buildings or in some way, an implied boundary for the space was achieved by an arrangement of buildings or objects. Within the renewal precedents, it indicated that most people were more comfortable in open spaces with some sort of boundary. Physical boundaries refer to the buildings or built elements that help shape the space. Implied boundaries refer to the use of materials or the arrangement of built elements that help create a sense of defined space (a precinct). Defined boundaries can also be achieved by changing elevation heights, street furniture, lighting and landscaping. The redefinition or re-organization of the existing spaces through such definitions can transform underutilized spaces into useable communal spaces beneficial to the entire community.

From the precedents analyzed, Via Verde was seen as great example for defining spaces. One of the main strategies used was the change in elevations. The stepping rooftops helped to give definition to each individual space without the physical limitations of a fence. On the ground level, several zones were created within the courtyard through the use of a variety of different materials, but all on the same elevation. Figure 22 indicates the sloped roof level of Via Verde.

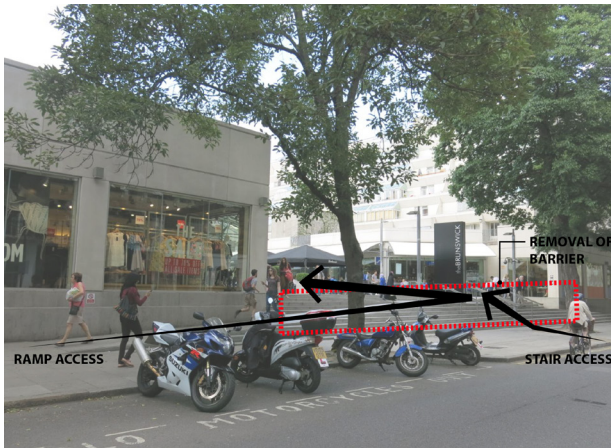
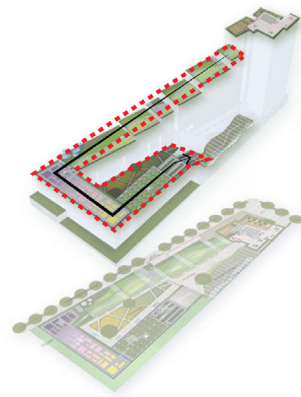
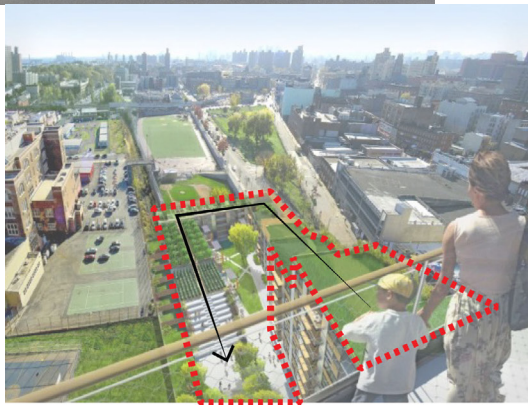


Figure 21
The Brunswick – New edge
condition along Bernard Street

Figure 22
Via Verde- The
stepped roof
levels forming
multiple outdoor
spaces



DESIGNING MIXED-USE | MIXED BUILDING TYPOLOGIES

Mixed-building typology refers to the combination of a variety of building types within the same area that can cater or attract different housing, commercial and/or social needs. Mixed-use refers a combination of different uses either within the same development project – retail or commercial units at the base of residential towers - or a combination of single-use buildings within the same site or neighbourhood. With commercial or recreational uses on the ground plane (or in close walking proximity), they provide an area for social interaction without disrupting the private lives of the residents. They are places for people to meet and gather without obligations or regards to social status. Mixed-use developments also help to improve the accessibility of residents to activities that help to improve the daily lives of residents not possible within confines of the home

alone. By not separating uses, this can also help to populate the interstitial spaces within the site to increase the liveliness of the ground plane.

Another key aspect to creating places is the idea of 'multi-purpose' spaces; the ability to allow users to choose the possible type of activity that can occur. Multi-purpose spaces can occur either as a stand-alone entity or within a mixed-use building. This is crucial because they are the spaces that allow networks or connections to be formed between people without enforcing them. The places have to be easily identifiable and be well-connected with its surrounding context. Multi-purpose spaces can also be achieved in the form of paths as a destination. When paths are incorporated with other functions beyond just circulation, they can help to contribute to the network of places within a community.

The layout of the Brunswick development includes retail and commercial uses on the lower levels and residential above, lending itself to become a community hub for the development and the neighbourhood beyond. With the inclusion of amenities that benefits a larger area it can help to draw people in and create a sense of community. Figure 23 shows the distribution of uses within the Brunswick development.

CREATING MULTI-LAYER CONNECTION

Vertical connections can enliven communal spaces beyond the ground plane and help create micro-communities within the towers. In order for connections beyond the ground plane to be successful, two criteria need to be met. The first criterion is that the population at street level and the upper level communal spaces are not dependent solely on one group of people. This is to ensure that the upper level activities are not permanently removing people from the public realm. The second criterion is that the connection between the building and the city is found at the street level. Therefore, above or underground pathways should be avoided to ensure that the ground plane is never forgotten.

60 Richmond East Housing Development is a prime example which illustrates a design that created opportunities for public activities to be carried out

beyond the ground plane. The residential units within 60 Richmond Street are laid out around an interior courtyard from which common spaces branch off. The central atrium also acts as a visual connection between the activities on the various levels with residents within their apartment units. One of the key things to note in this project is that even though there are common spaces on numerous levels within the development, the main entry and exit points are all kept on the ground level. This allows for smaller communities to be formed within the tower which in turn feeds the larger community beyond. Figure 24 below indicates the courtyards and communal spaces throughout the building.

Figure 23

The Brunswick – Distribution of uses:
Residential and Retail

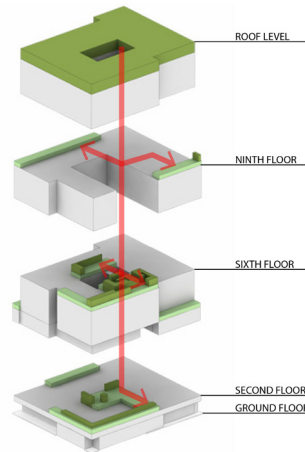


Figure 24

60 Richmond Street – Exploded massing of communal space connected through the central atrium

SUMMARY

Buildings are never standalone objects as they are forever part of a larger built environment. Through the combination of the four strategies discussed above, existing City of Towers neighbourhoods can be revitalized and once again be reconnected with its surrounding context as part of the larger urban fabric. Figure 25 shows the diagrams which summarize the four strategies to be applied to the design project within this thesis.

Figure 25

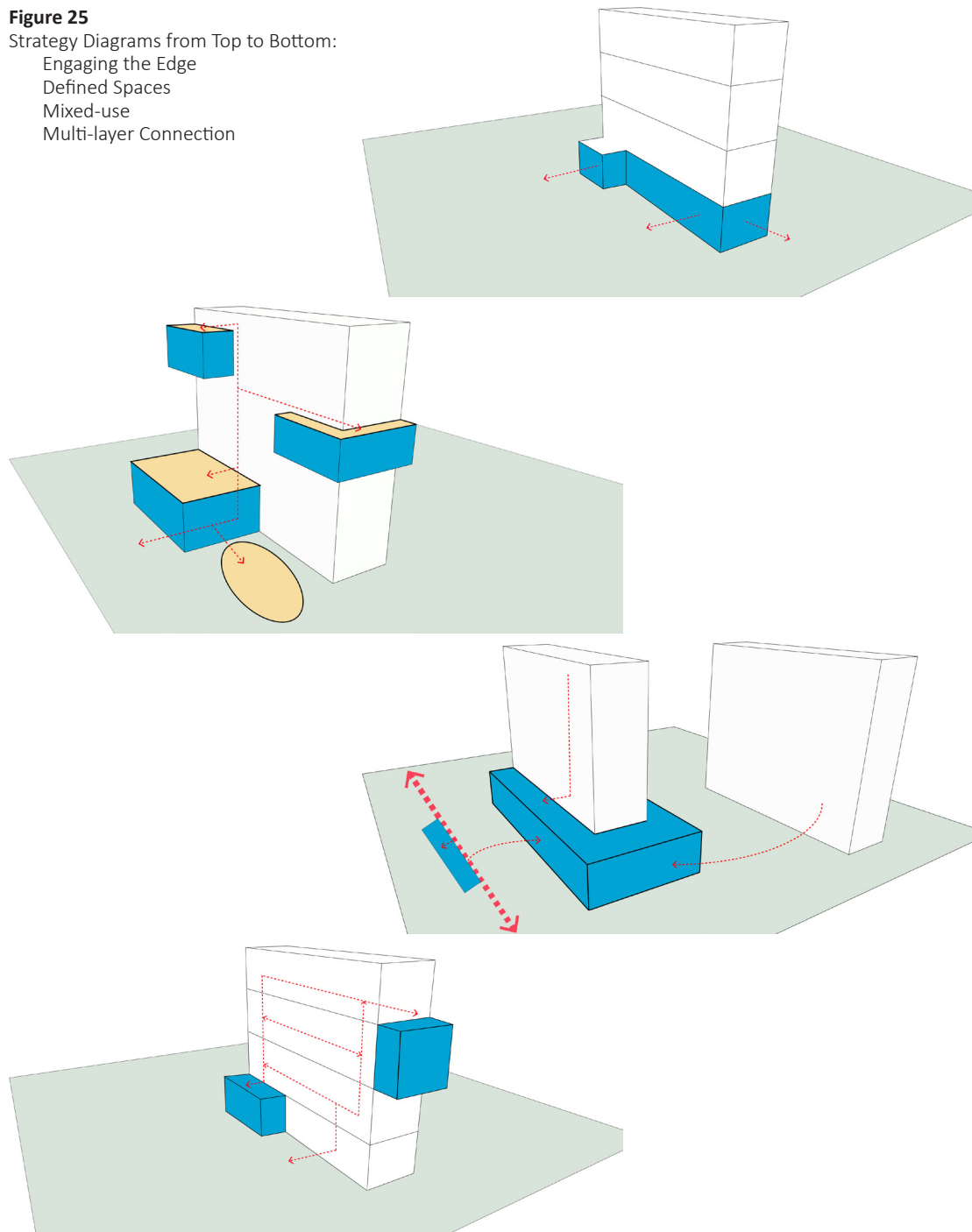
Strategy Diagrams from Top to Bottom:

Engaging the Edge

Defined Spaces

Mixed-use

Multi-layer Connection



PART TWO

07

The Design Project

This chapter links the research previously discussed to a proposed design project. The first section outlines the existing statistics on City of Towers neighbourhoods within the City of Toronto. The second section identifies the existing conditions of St. James Town within the City of Toronto to highlight opportunities and challenges the neighbourhood is experiencing. The last section includes a series of design interventions which help to address the concerns identified within this thesis.

7.1 STATISTICS ON EXISTING CITY OF TOWERS NEIGHBOURHOODS

The section looks at the statistics completed on existing City of Towers neighbourhoods which will give an indication on the extent of revitalization required within the City of Toronto.

According to the *Tower Neighbourhood Renewal in the Golden Horseshoe* report completed in 2010, there were a total of 1925 high-rise towers; 8 storeys or more within the Greater Golden Horseshoe; 1189 towers (or 62%) are located within the City of Toronto. The statistics indicated that there is a significant portion of the Toronto housing stock that was completed

under the planning principles of modernism, therefore, sharing many of the same challenges. The tower renewal report also looked at the clustering of high-rise towers. Within the Golden Horseshoe, 82% were found in clusters of two or more; 62% were found in clusters of 5 towers or more, and only 11% of the towers existed in isolation. The third area analyzed was the size of the property each tower occupied. This was a critical area to examine because one of the main characteristics of modern city planning was to achieve 'towers in the park'-like settings – buildings surrounded by open space. The tower renewal report indicated that 47% of the high-rise towers were located on properties greater than 1 hectare and 57% were directly adjacent to another property. The sheer number of towers located on properties greater than one hectare indicated the vast amount of vacant space available within each property boundary because most buildings only occupy 10-20% of the entire site. The high percentage of buildings directly adjacent to another property also adds to the amount of vacant land available on the ground plane. (E.R.A. Architects; planningAlliance, Cities Centre at the University of Toronto, 2010, pp. 18, 28, 36).

Figure 26 below maps out all the existing towers built between 1945 and 1984 within the City of Toronto and their proximity to existing public transit. The map indicates that many of the towers are separated from public transit which indicates that without a car, residents in those areas are isolated from the city's urban fabric. Furthermore, if amenities such as neighbourhood stores, libraries and recreation centres are not within walking distances or easily accessible by transit residents are even more isolated. Figure 27 below depicts the apartment clusters by property size for downtown Toronto. The map indicates that St. James Town is the largest cluster of post-war apartments in the downtown core with several apartment towers situated within properties boundaries of 1 hectare or more. The large properties provide an opportunity to increase density on the site while also improving the existing conditions within the neighbourhood.

Although rapid transit connections are not the main focus of this thesis connections in the sense of between towers and their surrounding neighbourhoods are. Connection is one of the main concerns within this thesis because despite St. James Town's proximity to public transit, it is still very much disconnected to its surrounding areas (and the buildings within the site have little relationship to each other). There are no relationships between St. James Town and its surrounding neighbourhoods even though they are within walking distance from one another. Therefore, in order to improve the existing conditions within St. James Town, connectivity must be one of the key areas to be improved upon.

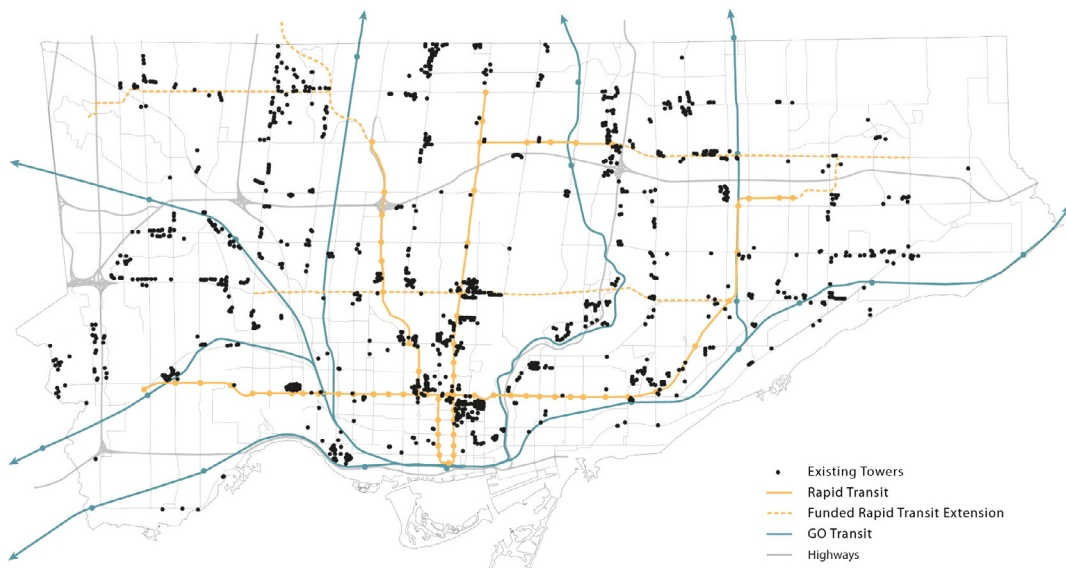
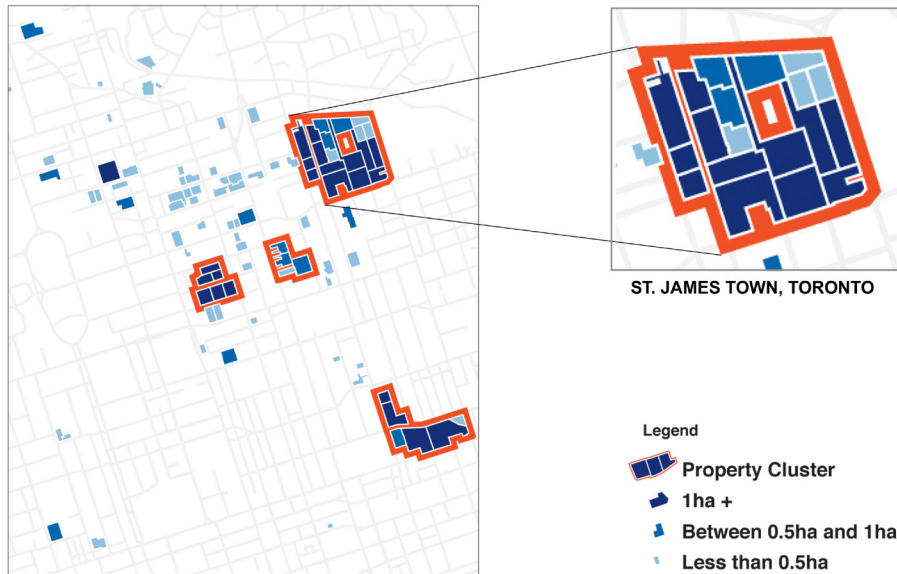


Figure 26
Map of high-rise apartment towers and the urban transportation systems across the City of Toronto

Figure 27

Apartment Clusters by Property
Size for Downtown Toronto and
Enlarged area of St. James Town



7.2 SITE ANALYSIS – PAST, PRESENT, FUTURE OF ST. JAMES TOWN

For this thesis, St. James Town, Toronto was chosen for the site for intervention. St. James Town was chosen because it is a good example of an existing City of Towers scheme that is close to amenities and within walking distance of downtown Toronto, yet it is still a highly undesirable area to live. St. James Town is bordered by Bloor Street to the north, Parliament Street to the east, Wellesley Street to the south and Sherbourne Street to the west (refer to Figure 28). St. James Town was once populated by single family homes that were laid out on a traditional city grid. Figure 29 shows an aerial view of St. James Town and its immediate surroundings with single family homes occupying the area (dated 1910) contrasted with an overlay of the present day configuration. The image shows the vast amount of space which separates the towers compared to the close knit fabric of single family and low-rise buildings. The distance between the towers is also an indication of the lack of relationships or interaction between them.



Figure 28
Location plan and Aerial view of
Present day St. James Town



Figure 29
(L) Map of St. James Town (1910) and
(R) Overlay of present day St. James Town layout

EXISTING CONDITIONS OF ST. JAMES TOWN

Currently, St. James Town is Canada's densest neighbourhood with 17810 residents (City of Toronto, 2012) housed in 19 high-rise towers; 4 of which are owned and operated by the Toronto Community Housing Corporation.

St. James Town was determined to be a suitable site to test the interventions of this thesis because it is a prime example of a City of Towers neighbourhood – apartment towers set within a garden-like setting with pathways, instead of streets, which connect the internal spaces within the site. Figure 30 depicts the existing division of land-uses which include: various building typologies, open space (both soft and hard-scaped), sidewalks, pedestrian circulation routes and vehicular circulation routes. The diagram indicates that buildings occupy only a small portion of the site while open spaces and vehicular route are the most prevalent. From the fragmented layout of the sidewalks we can see that St. James Town was planned around the automobile as the main form of transportation. Also, most of the site is dominated by apartment towers 8 storeys or more with only four mixed-use apartment towers – retail at the ground level. There are only a few low-rise residential buildings that were remnants of the original neighbourhood before the redevelopment. There are 4 public buildings within St. James Town two churches, a public school and a community centre- library combination.

The second reason St. James Town was selected as the test site was due to its close proximity to transit routes. Figure 31 shows the existing transit route options available within and surrounding St. James Town. The dominant modes of transportation around the site are buses and the presence of Sherbourne subway station to the north. With the abundance of connections to public transit and other forms of vehicular circulation, it is an indication that connections to the city are less of a problem than the actual design of the neighbourhood itself. Therefore, by selecting St. James Town this thesis project can focus on the revitalization of the neighbourhood through design rather than on more of an urban planning scale.

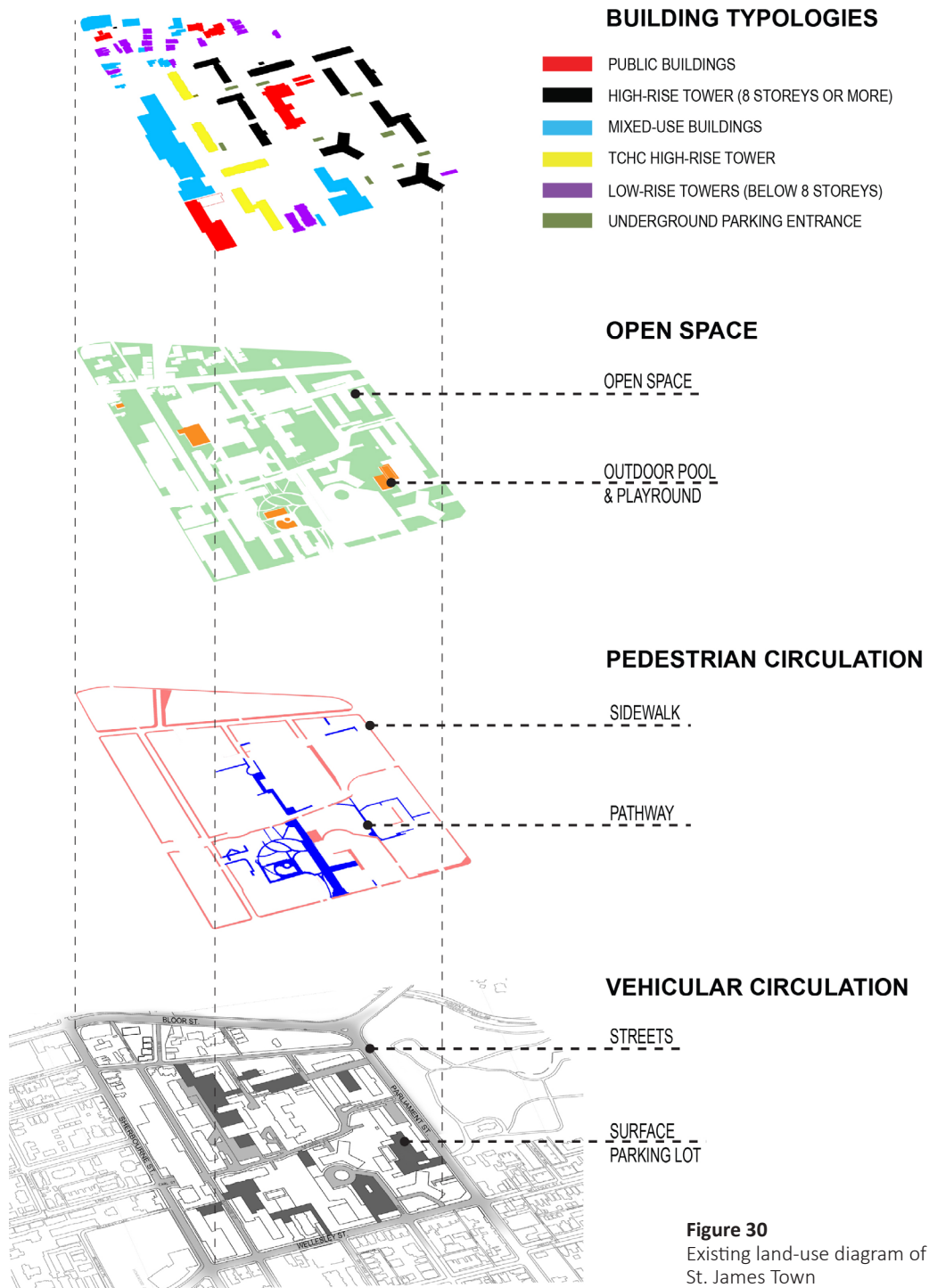


Figure 31
Existing transit routes within and surrounding St. James Town



THE FUTURE OF ST. JAMES TOWN (TODAY)

Currently, there are four major proposals within the boundaries of St. James Town. Although the proposals are still in their early stages, they are important for this thesis because they provide an insight on the possibilities for improvement in the near future. Also, this thesis will take into consideration what is being proposed in order to build off of them. Figure 32 below identifies the proposed locations of each project.

North St. James Town. The proposal to redevelop the northern strip of St. James Town bordering Howard Street, Parliament Street and Bloor Street East will include 4 condo towers ranging from 46 to 56 storeys, the restoration of several existing single-family homes and low-rise apartment buildings. The condo towers proposed will create a new connection between Bloor Street and St. James Town with new retail opportunities on the ground level.

Although, the development is providing new commercial spaces, the green space being built upon is only being replaced by a small parkette along Howard Street. Also, within the *Planning Rationale Report (2010)*, it indicated that there were sufficient amenities within a walkable zone so that no new public amenities were needed to accommodate the new residents. However, with the addition of more than 1700 units and no new proposed community amenities, there will be a huge strain on the existing facilities within in the area.

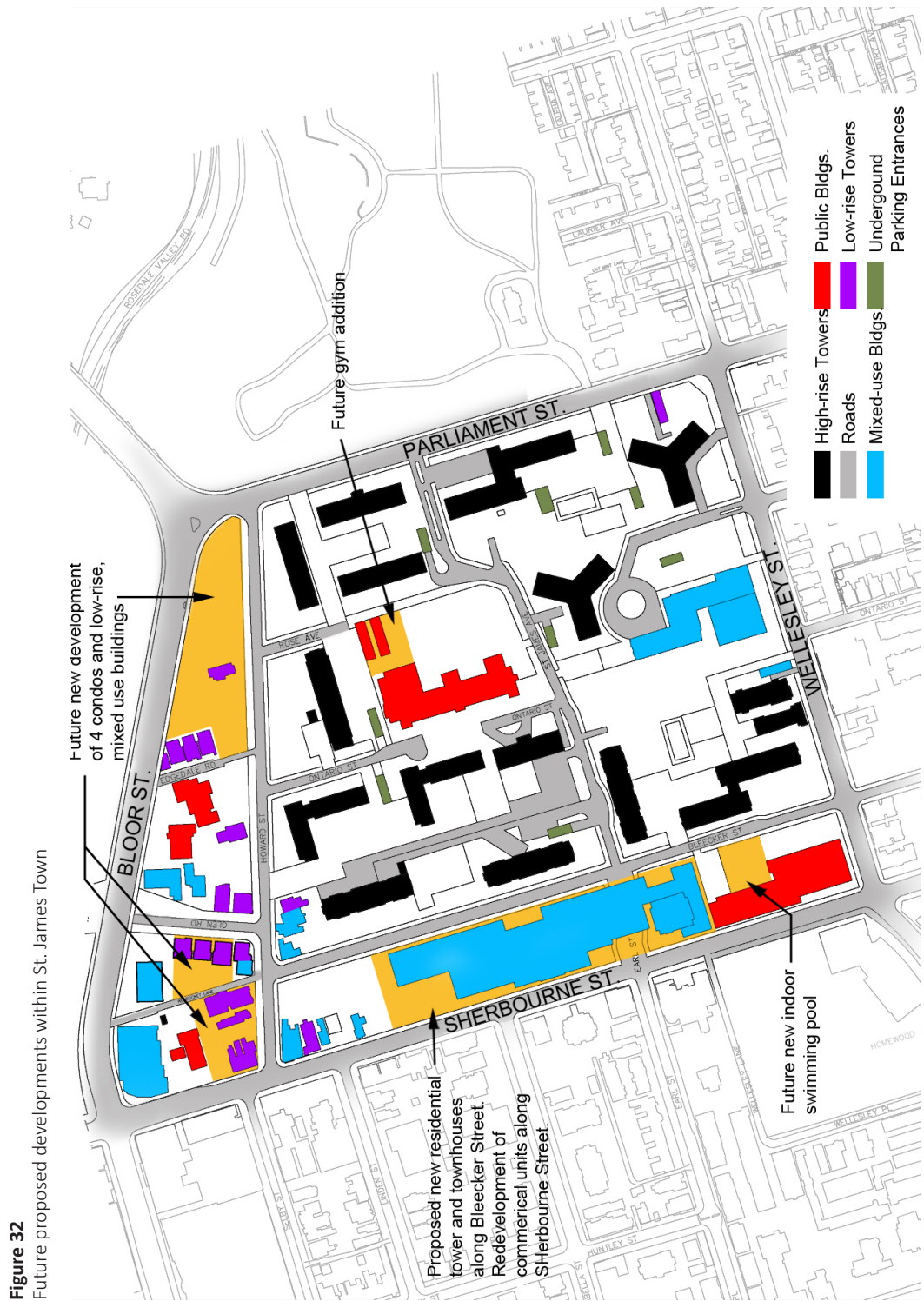
545-565 Sherbourne Redevelopment. The proposal for the redevelopment of 545-565 Sherbourne Street will include the redevelopment of the commercial podium along Sherbourne Street, a new 43 storey rental tower, new town houses on Bleecker Street and the demolition of the existing overpass; which spans across Earl Street. The demolition of the overpass will open up the entry to St. James Town Sherbourne Street. The addition of the townhouses along Bleecker Street will help improve the existing streetscape which is currently occupied by the 'back' of the apartment complex; the loading and garbage zones.

As part of the proposal, according to the *Zoning Amendment and Rental housing Demolition Conversion Application – Final Report* (City of Toronto, 2011, p. 2), the owner has agreed to contribute \$1,000,000 towards the construction of the new Wellesley Community Centre pool and improve the streetscape along Bleecker Street. The contribution agreement will have a direct positive impact on improving the community benefits within St. James Town because in this case the development charges being imposed are designated specifically for the immediate environment.

New Wellesley Community Centre indoor pool. The pool was part of the original plan for the community centre, but due to the lack of funding the portion was put on hold. The funding has recently been approved and the plans for the new facility will be constructed in the near future. Although there are two outdoor pools within the precinct of St. James Town, their access are limited because they are privately owned. The new pool facility will be a great asset to the area because it will be publicly accessible to all and operational all-year round.

Renovation/ addition to Rose Avenue Public School. There is a planned expansion to the existing gym facility and a small addition to connect to the port-a-paks at the north end of the site. The improvements to Rose Avenue Public School will not have a direct impact on the revitalization of the neighbourhood, but it will have a direct impact on the needs of the students and the possible expansion of after-school activities.

At present time, the two new residential proposals have indicated some level of retail at street level, but neither projects have indicated any additional community facilities. The proposals are simply relying on existing facilities within and in the surrounding neighbourhoods to accommodate the increase in residents causing a huge impact on the already strained facilities. Another key issue to note is that all the projects (with the exception of the school proposal) are being proposed on the periphery of the site to engage with its surroundings, but the interior of St. James Town remains unchanged. Therefore, the fragmented interior of the neighbourhood provides a good framework to test the hypotheses of my thesis.



7.3 REIMAGINING ST. JAMES TOWN

This thesis focused on developing a portion of St. James Town in detail, rather than exploring the entire neighbourhood superficially. The area chosen is shown in a dashed box in Figure 33. This area was chosen because it contains the main pedestrian route through the site, existing retail units and a large open green space. Figure 34 identifies the existing components within the area of focus. By beginning the revitalization at this point of St. James Town, it will help create a new hub for the community. This area can become a catalyst for change by reinforcing existing links while also creating new ones that will eventually reconnect the entire neighbourhood and its surroundings. Figure 35 provides photographs of the existing site conditions within the area of focus. The photographs help to illustrate the lack of connections, loss sense of place and the lack of human scale which are currently present in St. James Town.

The proposed design project for this thesis consists mainly of 4 components: improvement of the ground floor retail units at the base of 240 Wellesley Avenue, new community spaces within the existing apartment towers at varying building levels, a new indoor aquatic facility, and a new multipurpose field. Additional schematic design sketches, images and models from the substantial completion review can be found in Appendix D.

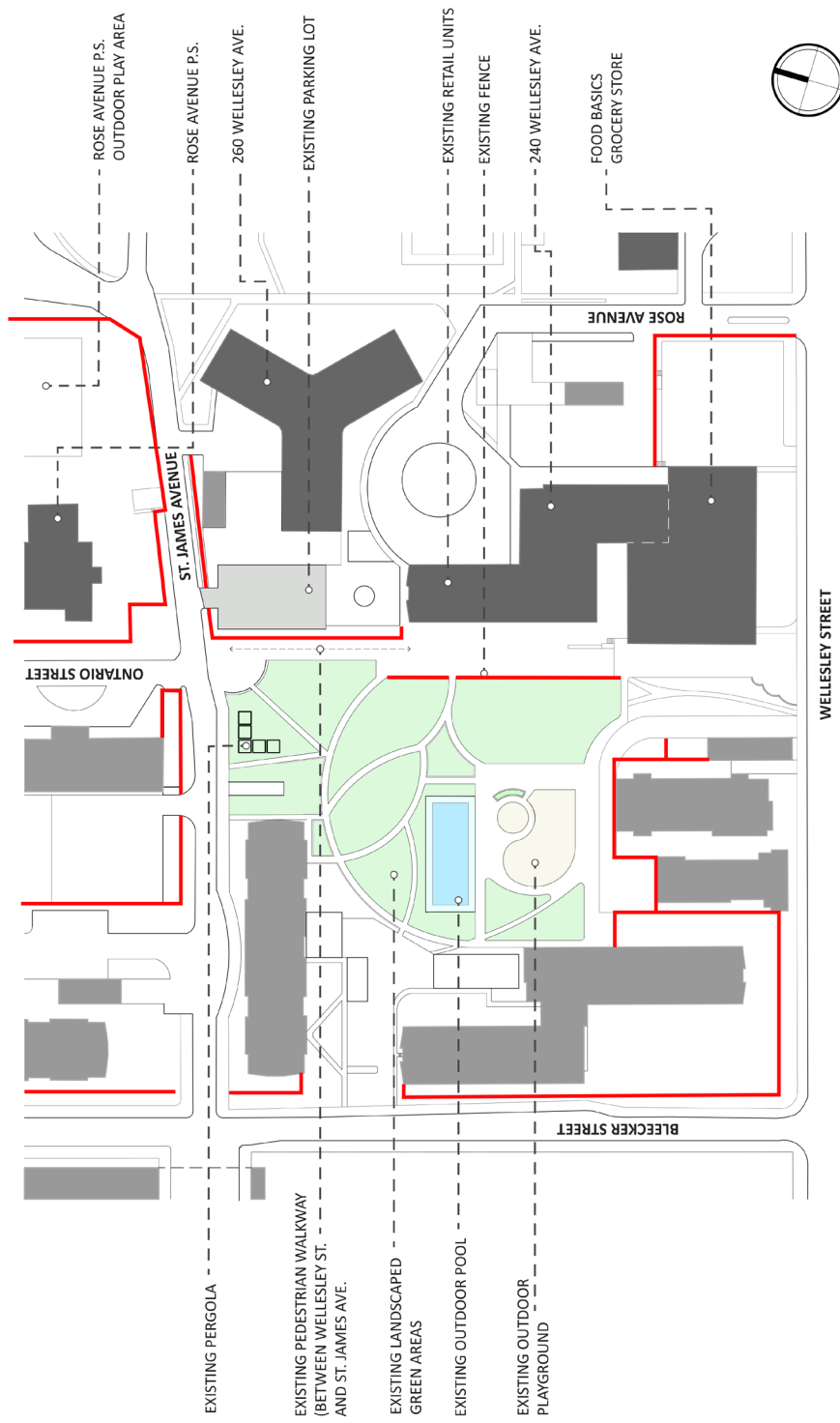
The programmatic implementations were based on the needs of the residents and overall neighbourhood improvements outlined in the Toronto Staff Report, dated March 10, 2003, for the purpose of determining recommendations for community improvement projects in St. James Town. A website operated by volunteers within St. James Town; <http://www.communitymatterstoronto.org>, was also referenced. The website provides information on volunteer run activities, which include community-run initiatives to help improve the existing conditions within neighbourhood. The City of Toronto document referenced the lack of well-defined sidewalks and public spaces suitable for active recreational purposes (City of Toronto, 2003, p. 3) which led to the design project implementing a new multipurpose field. The renovations to existing apartment towers and their

surroundings were undertaken in order to meet the needs of the residents and the immediate neighbourhoods. The improvement to the existing retail units at the base of 240 Wellesley Street provides work opportunities within the site and helps to foster social interaction. The proposed new community spaces within the towers help to encourage social activities that extend beyond the confines of the apartment corridors. Two new components are proposed within St. James Town to help address the needs of residents as previously noted. The first is the creation of a new central community hub - a new multipurpose field that can accommodate various recreational activities from planned, large gatherings to spontaneous, small groupings. The second is the addition of a new pool facility. As previously mentioned, funding was recently approved by the City of Toronto to reinstate the indoor pool that was part of the original plans for the Wellesley Community Centre. This thesis proposes to relocate the pool facility directly to the south of the existing elementary school; Rose Avenue Public School. The location will allow students of the elementary school easy access to the facility while also becoming a new destination within St. James Town to draw people from the surrounding areas. Lastly, the relocation of the pool will add to the identity of the new community hub proposed within St. James Town. Figure 36 identifies the proposed locations for the new multipurpose field and indoor aquatic facility within St. James Town.



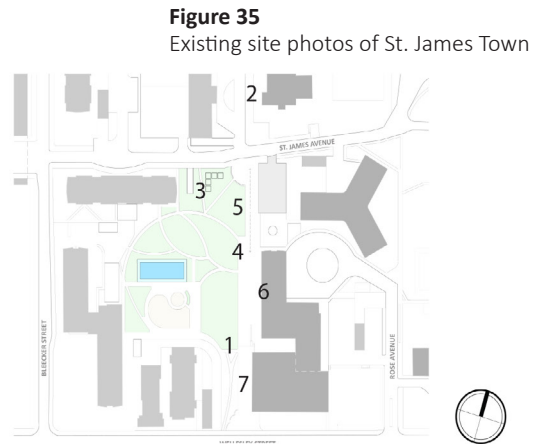
Figure 33
Figure- Ground image of
St. James Town and Area of
focus

Figure 34
Existing site plan of the area of focus





1. VIEW OF PEDESTRIAN WALKWAY - LOOKING SOUTH



2. VIEW OF EXISTING PARKING LOT FROM ROSE AVE. P.S.



3. VIEW OF GREEN SPACE - LOOKING SOUTH



4. VIEW OF RETAIL UNITS AT THE BASE OF 240 WELLESLEY STREET APARTMENT



5. VIEW OF PEDESTRIAN WALKWAY ALONG EXISTING FENCE



6. VIEW FROM CORNER OF RETAIL UNIT



7. VIEW ALONG PEDESTRIAN WALKWAY - LOOKING NORTH

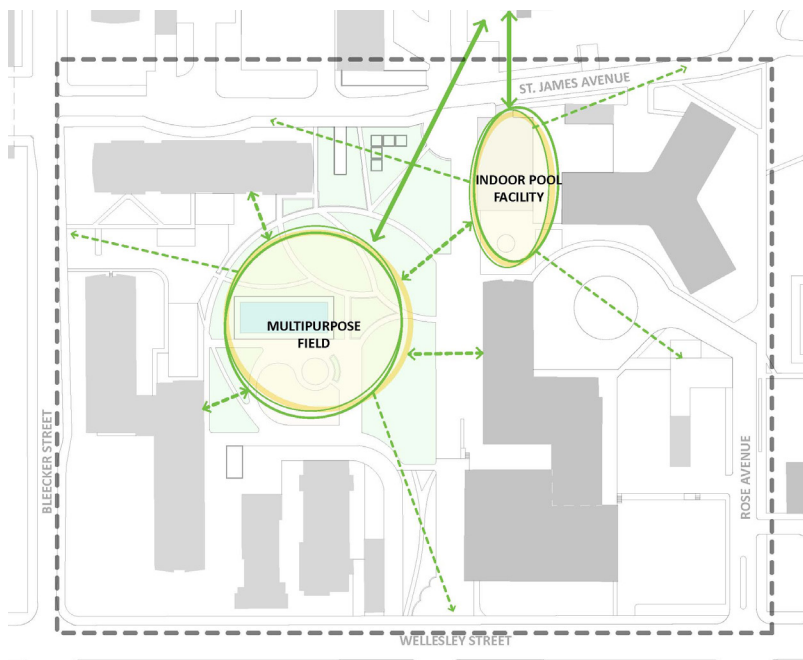


Figure 36
Proposed locations of new
multipurpose field and
indoor aquatic facility

7.3.1 CREATING CONNECTIONS – GROUND PLANE

The ground plane within the area of focus is re-organized before the application of the design principles so that a foundation is in place to receive the bulk of the design project. The indication that St. James Town was laid out to be car-oriented can be seen by the dominance of parking lots and roads that cut through pedestrian walkways. It is a priority, therefore, to improve accessibility for pedestrians and bicycles by creating better connections within the site and to provide connections to the surrounding neighbourhoods. By re-working the ground plane, new pedestrian priority links can be formed between existing buildings while also contributing to a more vibrant public realm overall.

Figures 37 and 38 illustrate the existing pedestrian circulation pathways (traditional sidewalk and internal pedestrian pathways) within the area of focus. Figure 37 also indicates the presence of fences which contributes to the fragmentation of the pedestrian realm. Figures 39 and 40 show the existing vehicular circulation (both traditional streets and internal

roadways). In order to create a continuous pedestrian realm throughout the site, the pedestrian and vehicular circulation patterns were overlaid to identify possibly areas to implement pedestrian priority streets. Pedestrian priority paths are areas in which pedestrians and cars share, but pedestrians have priority – also known as Dutch Woonerfs. Woonerfs were previously introduced within the section entitled ‘Permeable Grids’ in the Chapter ‘Connections’. Figure 41 illustrates the location where existing pedestrian and vehicular circulation patterns overlap. The overlapping areas are best suited to implement pedestrian priority streets because they are areas in which existing pedestrian pathways cut through vehicular zones. By implementing pedestrian priority zones in those areas it can help create a safer environment for pedestrians without eliminating necessary parking spots in close proximity to building entrances.

The next major move within the area of focus is to extend the existing main pedestrian walkway north towards Bloor Street to fully connection the site in the north-south direction. The pathway will become the new north-south thoroughfare – ‘the spine’, in which other links can branch off of. Within the area of focus there is also the presence of fences which act as barriers to reconnecting the site. In fact, the fences create separate zones of landscaped islands throughout St. James Town making it difficult to give purpose or to use the existing open spaces. This thesis proposes to remove some of the existing fences which inhibit a continuous pedestrian realm and re-working the secondary pathways so that links in the east-west direction can be formed as well. The fences around existing playgrounds and the school will be maintained for security purposes. The new pedestrian circulation pathways connect to existing streets within and surrounding the neighbourhood. The re-organization of the ground plane provides additional dedicated pedestrian routes in which people can use to navigate through St. James Town. Figure 42 illustrates the proposed new circulation patterns throughout the area of focus.

Figure 37
Existing pedestrian circulation pattern and existing fence locations

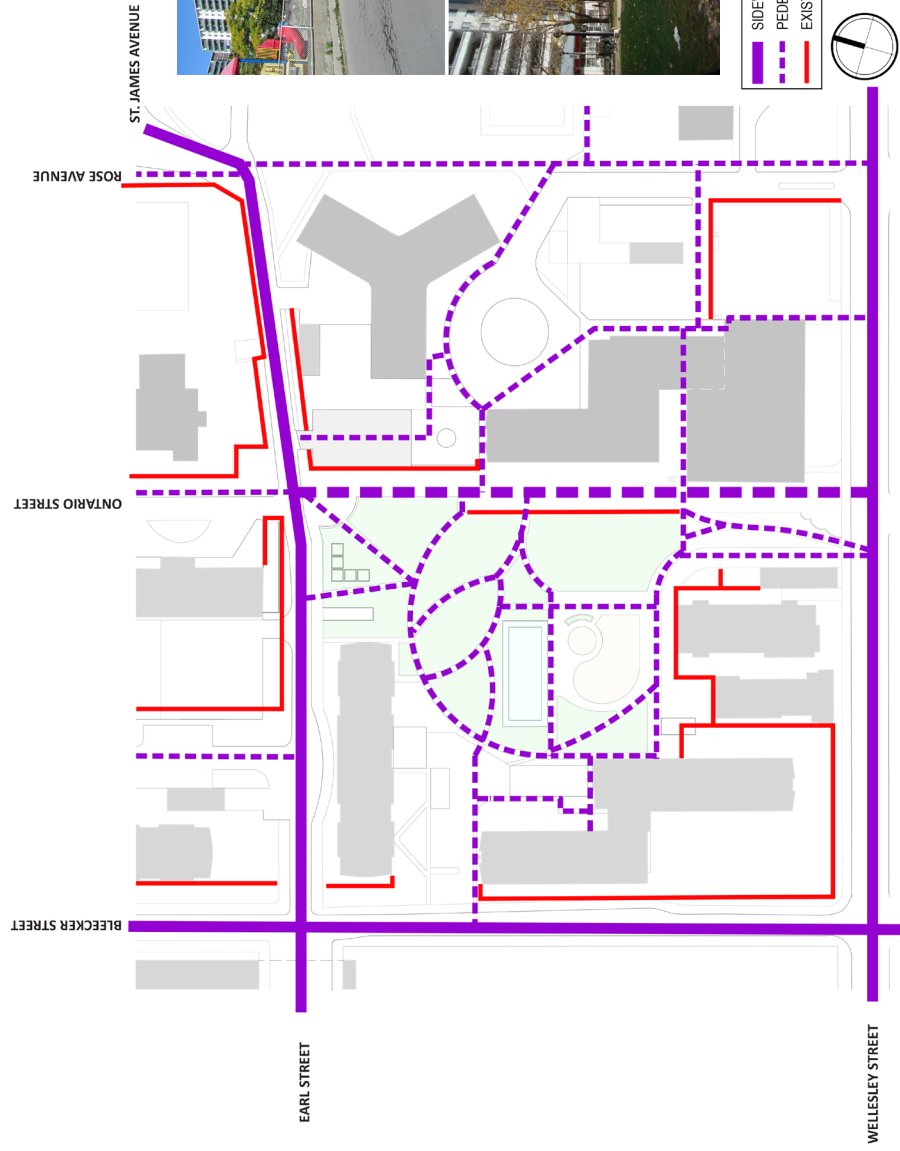


Figure 38
Site photographs of
existing pedestrian
circulation paths (T)
Traditional Sidewalks
(B) Internal Pathways



Figure 39
Existing vehicular circulation pattern

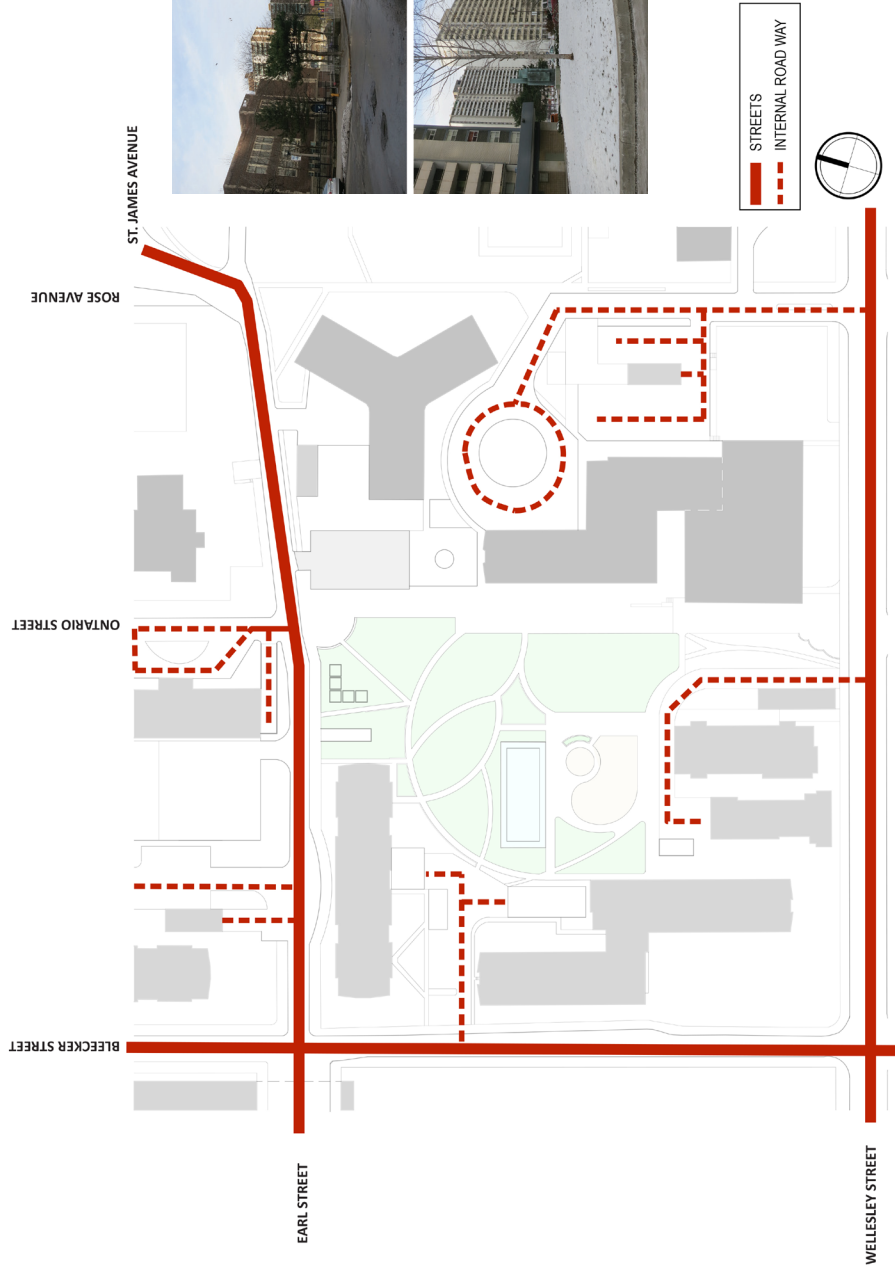
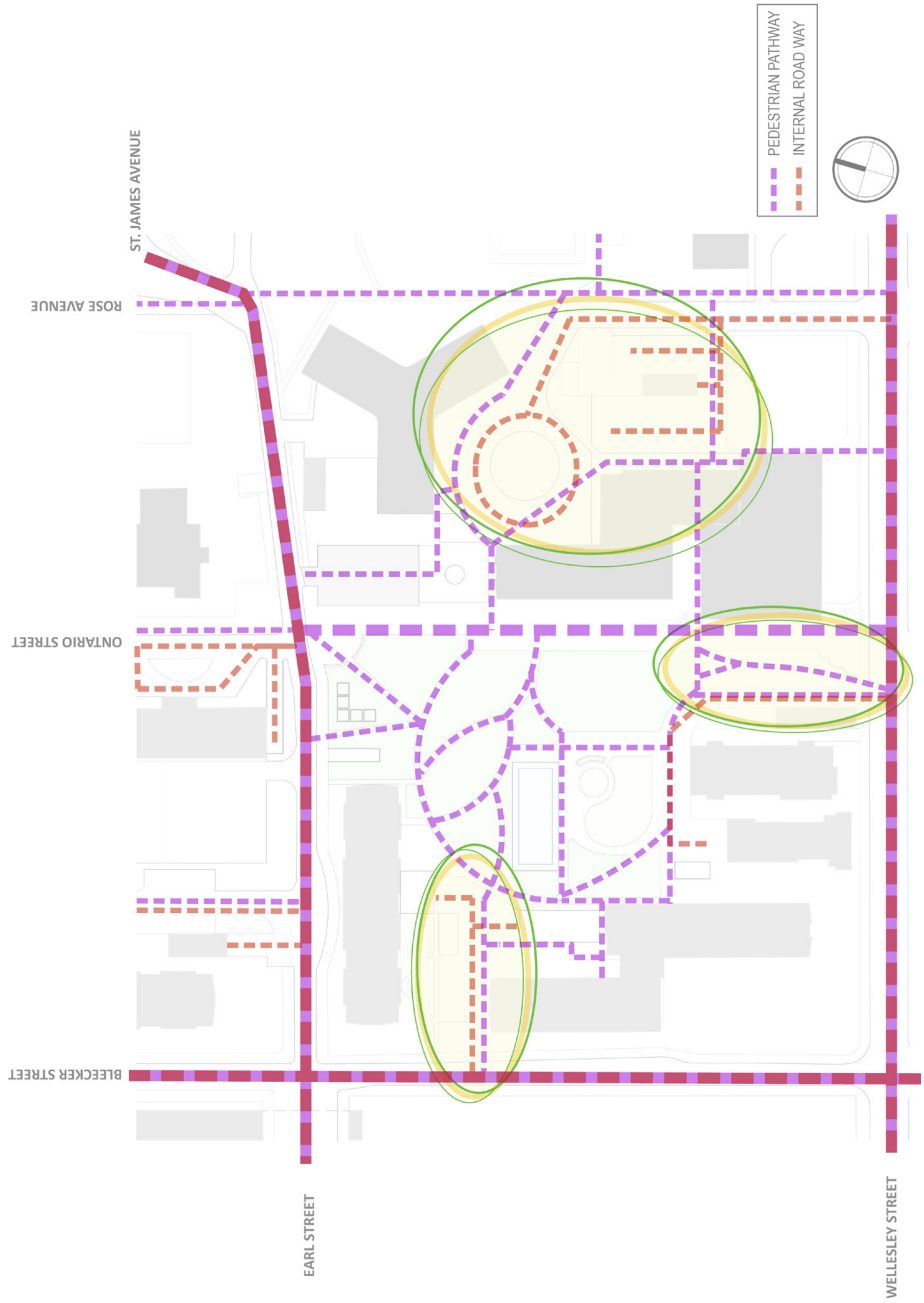


Figure 40
Existing vehicular
circulation
(T) Traditional Streets
(B) Internal Roadways



Figure 41
Diagram of proposed new pedestrian
priority streets within the area of focus



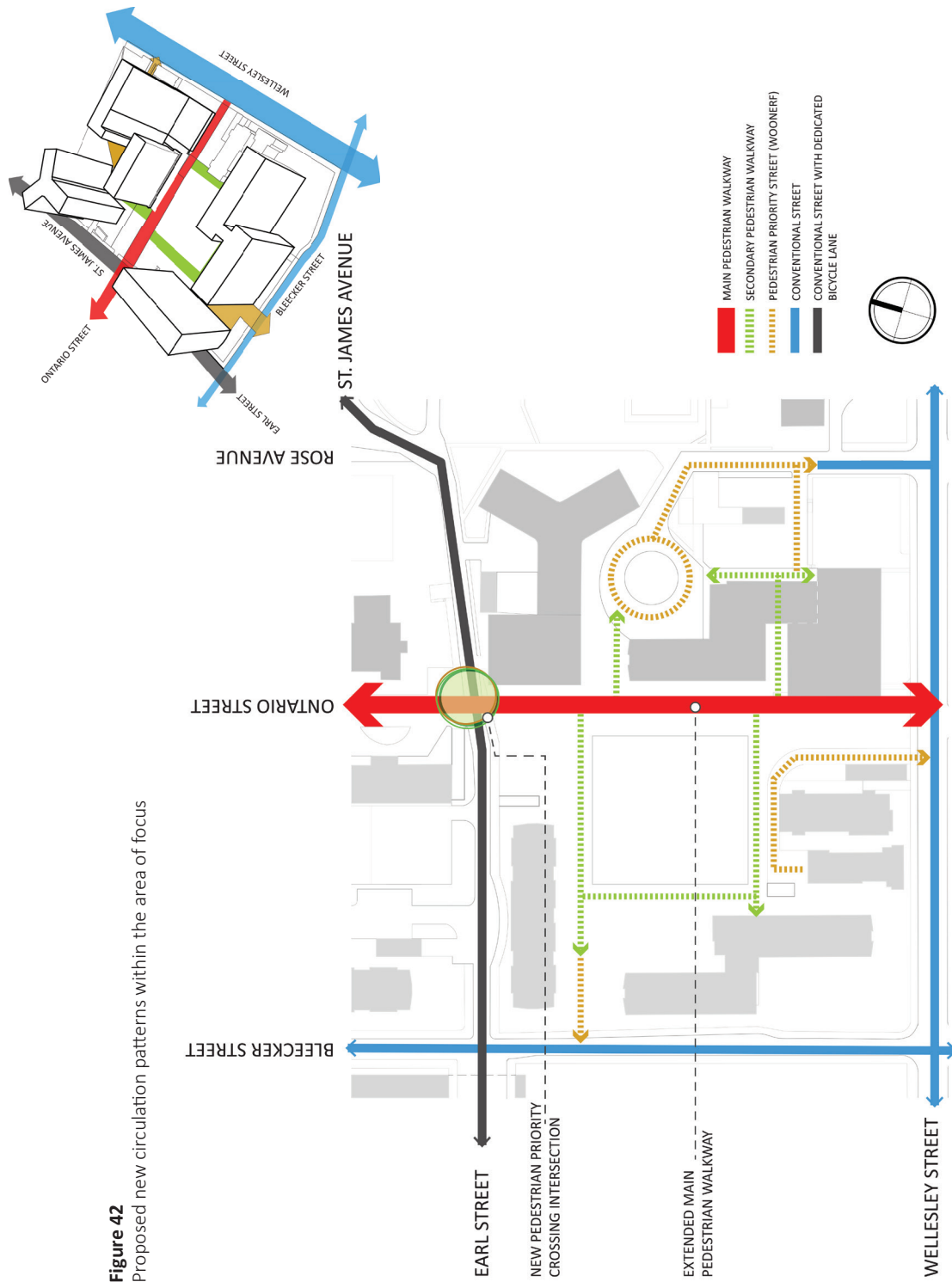


Figure 42
Proposed new circulation patterns within the area of focus

MULTIPURPOSE FIELD AND MAIN PEDESTRIAN WALKWAY

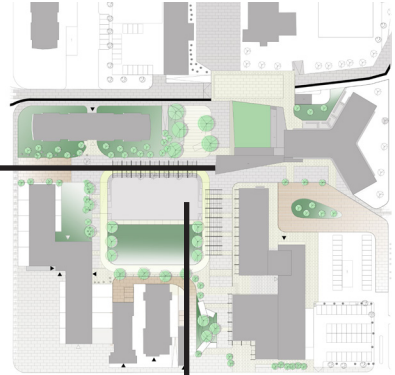
The proposed multipurpose field aims to provide a space where large community events can be held throughout the year while also providing a space where residents can utilize on a daily basis - as an extension of their home. The site for the proposed multi-purpose field is currently occupied by planters and pathways that create numerous small fragmented spaces which hinders its potential to become a gathering hub for the entire neighbourhood. The proposed area is also partially separated from the main pedestrian walkway with the presence of a fence. The fence may provide some separation and definition of the two adjacent spaces, but most importantly it also limits the flow of activities from one space to the next. Figure 43 shows photographs of the existing condition at the proposed location for the new multipurpose field.

The multi-purpose space was created by taking advantage of the natural slope of the site (low point is to the south); defined by the change in elevation. Lowering the field amongst its surroundings opens up the site creating a new central hub. The lowering of the field also gives definition to the space without the presence of a physical fence. The existing fence along the main pedestrian walkway is removed to allow the main pedestrian walkway and the multipurpose field to interact – to engage their shared edges. With the multi-purpose space highly visible from all sides, it can help draw people to the area to improve the liveliness of the public realm of St. James Town. Also, by not enclosing the multi-purpose space, it allows for activities to overflow onto the adjacent spaces. Figure 44 shows the diagram of the creation of the multipurpose field in relationship to its surroundings and a conceptual collage of what the area could look like with the new multipurpose field.

The size of the multipurpose space is based on the previous discussion on the level of interaction between people and activities depending on the size of the space found in the chapter *Human Scale*. The multipurpose field was kept at approximately 60m in length so that activities can be seen from all sides of the space. The perimeter of the multi-purpose field has been designed so that it can accommodate numerous activities when a large community event is not taking place. A running track is also being added around the multipurpose field which also doubles as an accessible route in and around the site due to the change in elevations. Large step-seating incorporated into the northern portion of the field provides access from the higher elevation while also providing informal seating for gatherings, leisure activities, performances, etc. Two glass canopy structures are incorporated along the perimeters of the field. The canopies are to be light and airy structures which provide protect from the elements and doubles as a structure to organize weekend markets or other outdoor events. The canopies are created out of glass and painted steel members which help to liven-up the space and to act as a contrast to the existing colour palette present within St. James Town. Figure 45 depicts the components of the multipurpose field and its immediate surroundings. Figures 46 and 47 indicate examples of activity configurations which can occur within and around the proposed multipurpose field. Figures 48 and 49 illustrate a view from the multipurpose field during a large community event and the incorporation of a skating rink to prolong the use of the field throughout the year respectively. The openness and the transparency of the canopies allow for direct visual connections from the residential units above.

Figure 43

Existing site photos of the
proposed new multipurpose
field location



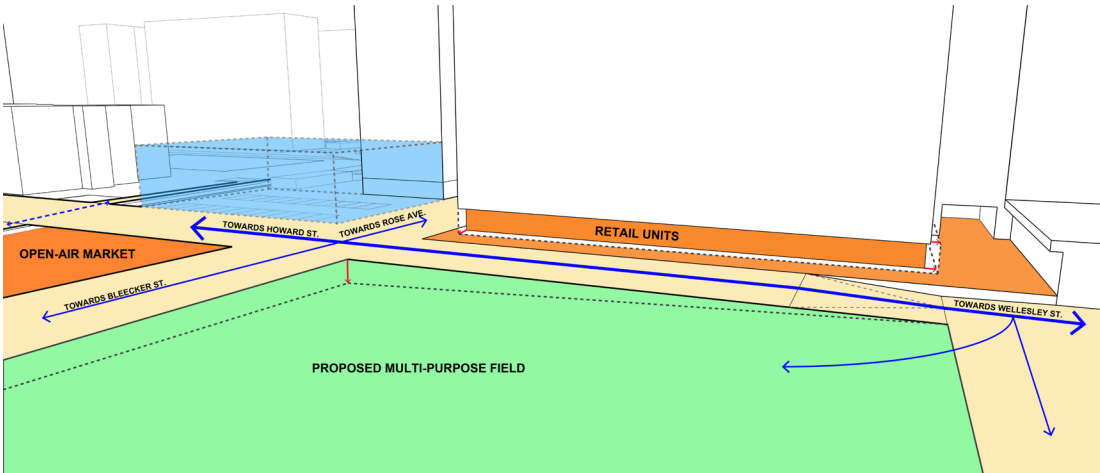


Figure 44
 (T) Diagram of the proposed community hub and
 (B) Conceptual image looking east from the Multipurpose field

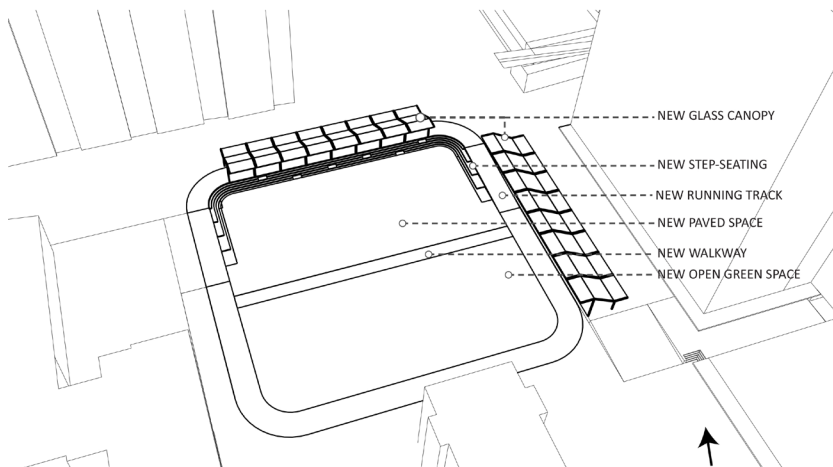
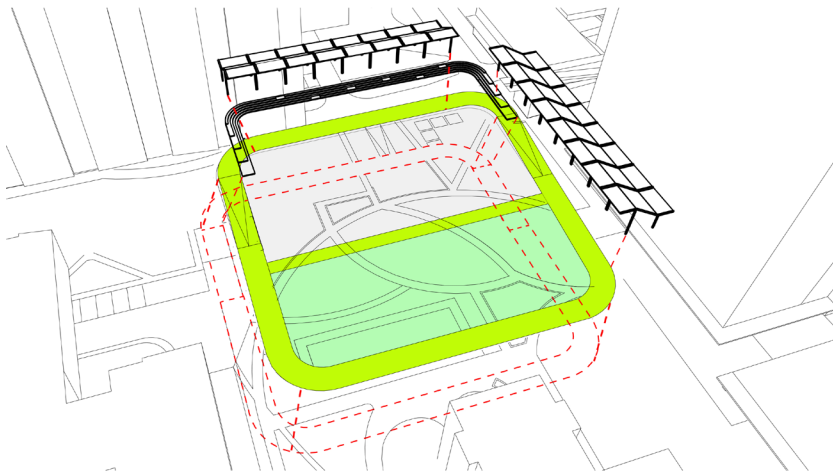
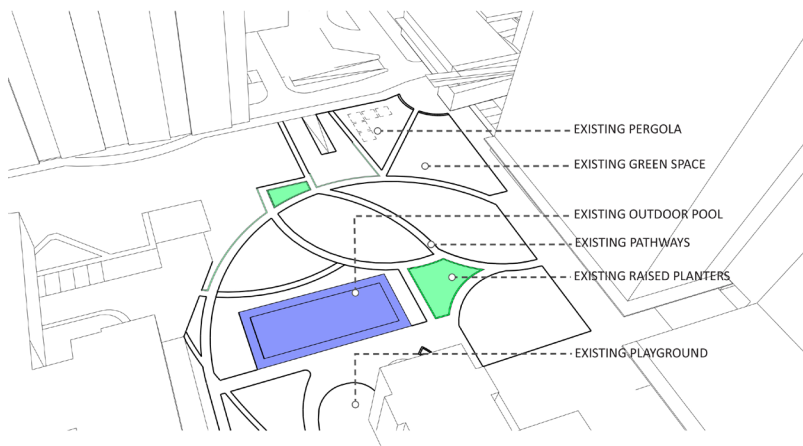


Figure 45
Design development of
the multipurpose field and
pedestrian walkway

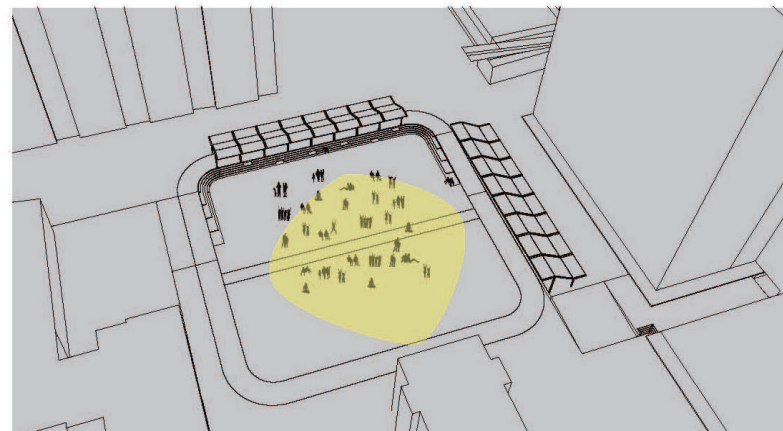
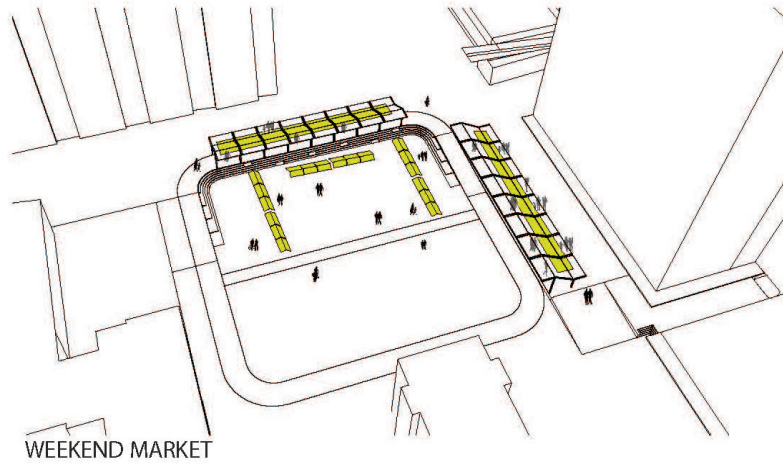
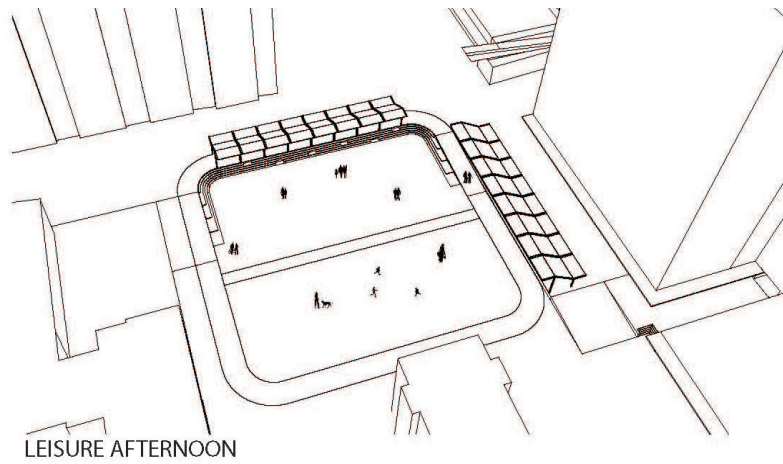


Figure 46
Diagram of possible
activity configurations

MOVIE NIGHT

Figure 47

Weekend market along the perimeter of the multipurpose field – under the north glass canopy looking east



Figure 48

View from multipurpose field towards the new aquatic facility- Large event gathering



Figure 49
View from multipurpose field towards the new aquatic facility-
Winter scene with ice skating

INDOOR AQUATIC FACILITY

The proposed new aquatic centre is near the centre of St. James Town on the site of an existing at grade parking lot nestled between two apartment towers the main pedestrian walkway and St. James Ave. Refer to Figure 50 for existing site photographs. Locating the pool near the centre of the neighbourhood provides an opportunity to re-activate the interior of the neighbourhood by drawing people from the surrounding neighbourhoods to help populate the ground plane. Also, with the close proximity to the existing elementary school, the school can take advantage of the facility and possibly incorporate swimming as a part of its curriculum.

The form of the building was derived from its surrounding context, taking into consideration the desirable view and connections. The program for the building is organized so that all public spaces would be located along the perimeter of the building so that visual connections can be made. Glazing was used along the perimeter of the building to allow for a visual connection between the activities occurring both inside and out to actively engage with its surroundings. The visual connection between the interior and exterior spaces also helps to maintain a high level of safety within and around the building in accordance to the ideas of Jacobs. The program for the aquatic centre includes: ground floor level contains a 25m length pool, a children's pool, change room facilities (male, female and family), pool view/waiting area, breakout spaces (formal and informal), and publicly accessible washrooms. The second floor level contains an upper level viewing gallery and a breakout space which can accommodate programmed activities. The third floor level contains an upper level viewing gallery which leads out to a roof top playing area. The roof top playing area provides a supervised space that can be used as a daycare or a play area for after school programs without having to carve away at valuable outdoor space at the ground level. Figure 51 shows the development of the indoor facility and Figure 52 illustrates the various floor plans for the proposed building.

The program for the facility was organized to ensure that there was a level of connection vertically as well. As mentioned in the descriptions of the four

main strategies, multi-layer connections are important for spaces that are located beyond the ground level. The two levels of spaces above the ground level are designed so that there are visual connections with the surrounding spaces. The roof top playing area allows for a visual connection between the activities of the aquatic facility and the residents in the surrounding towers. The idea of transparency is carried up to the rooftop playing area. The space is 'enclosed' with a vertical louvre system which provides a barrier to below, but without obstructing the view to the activities occurring below. The stair well from the existing apartment tower which extends into the new pool facility is glazed so that visual connections between the components can be maintained. Figure 53 is a section through the indoor aquatic facility which indicates various visual and physical connections between interior spaces and their surrounding context. Figures 54 to 57 are renderings of the interior reception/ lobby space, the swimming pool area and the roof top playing field. The images give a sense of how the spaces are used and how they interact with their surrounding context.

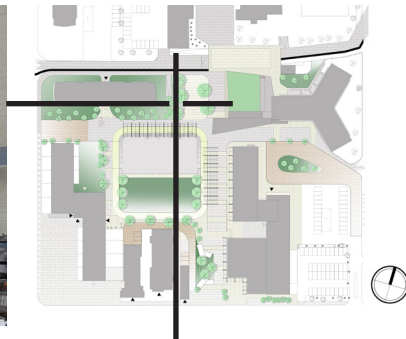


Figure 50
Existing site photos
of the proposed
new indoor aquatic
facility location

Figure 51
Design Development of the Indoor Aquatic Facility

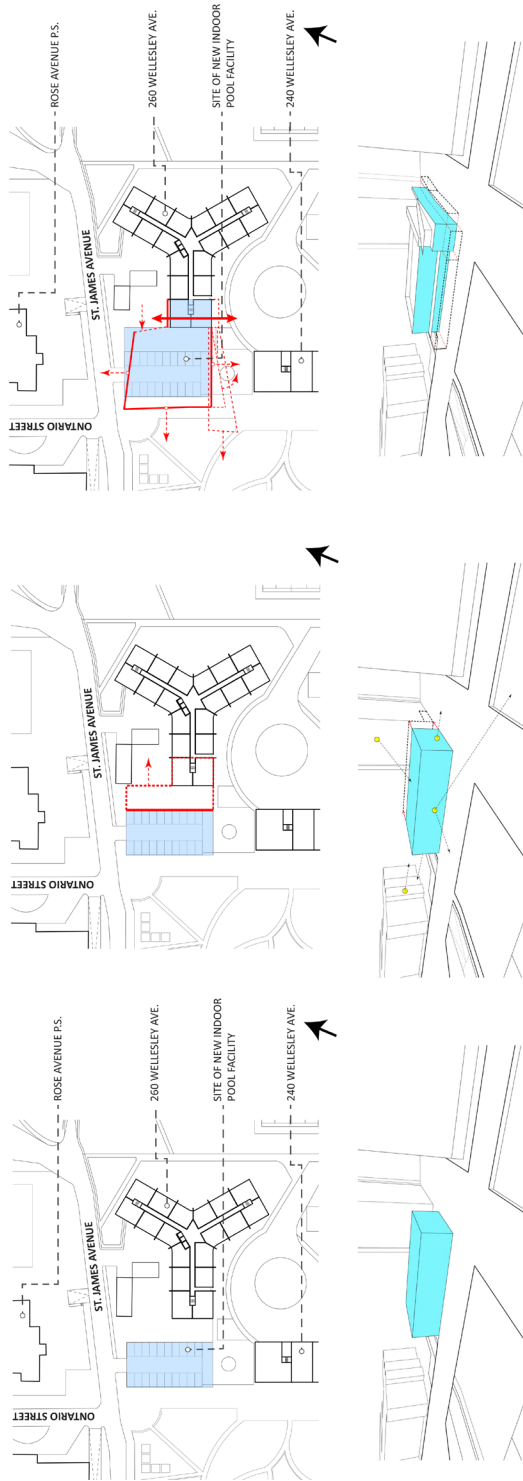


Figure 52
Proposed plans for the Indoor Aquatic Facility - Ground Floor Plan

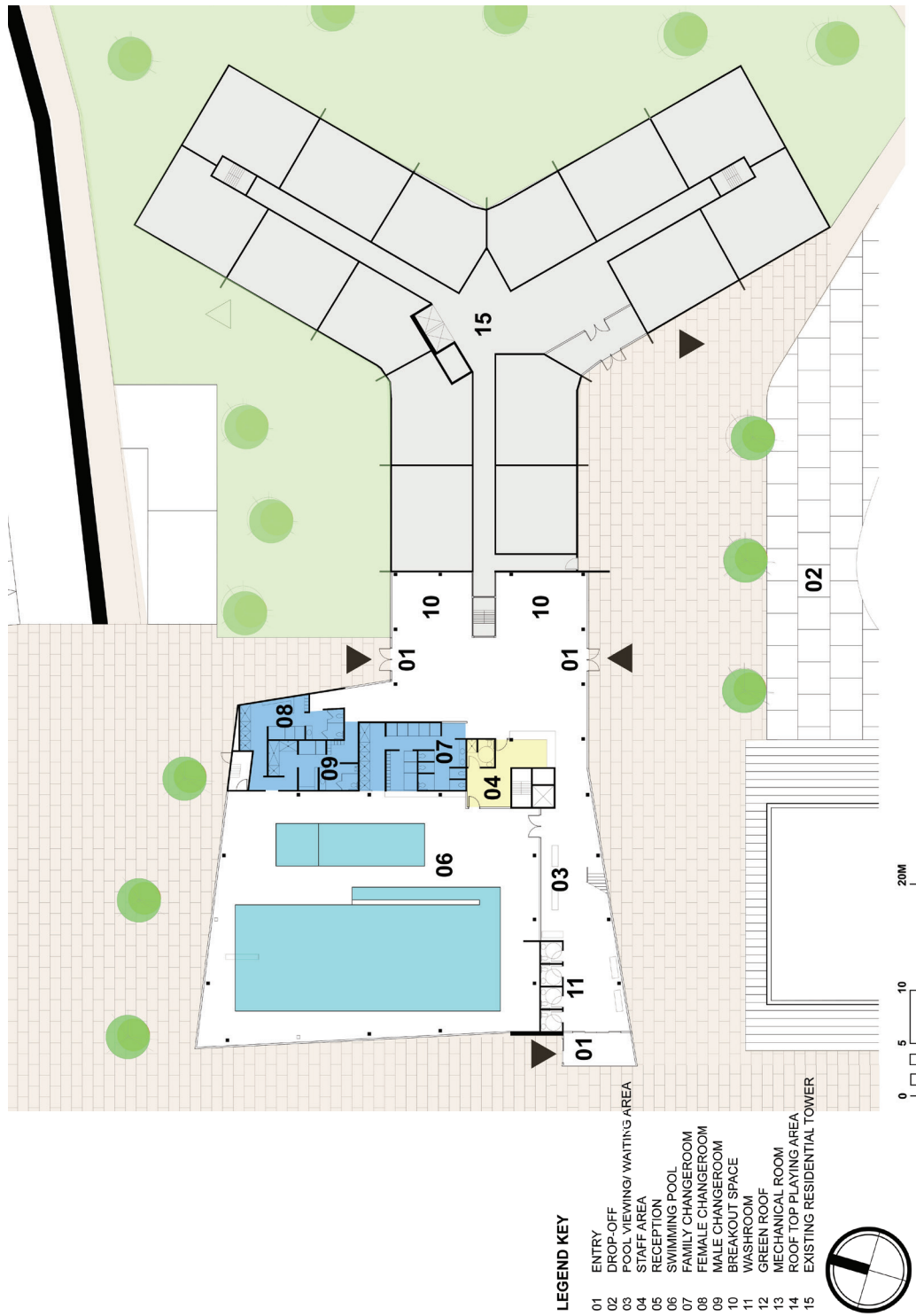
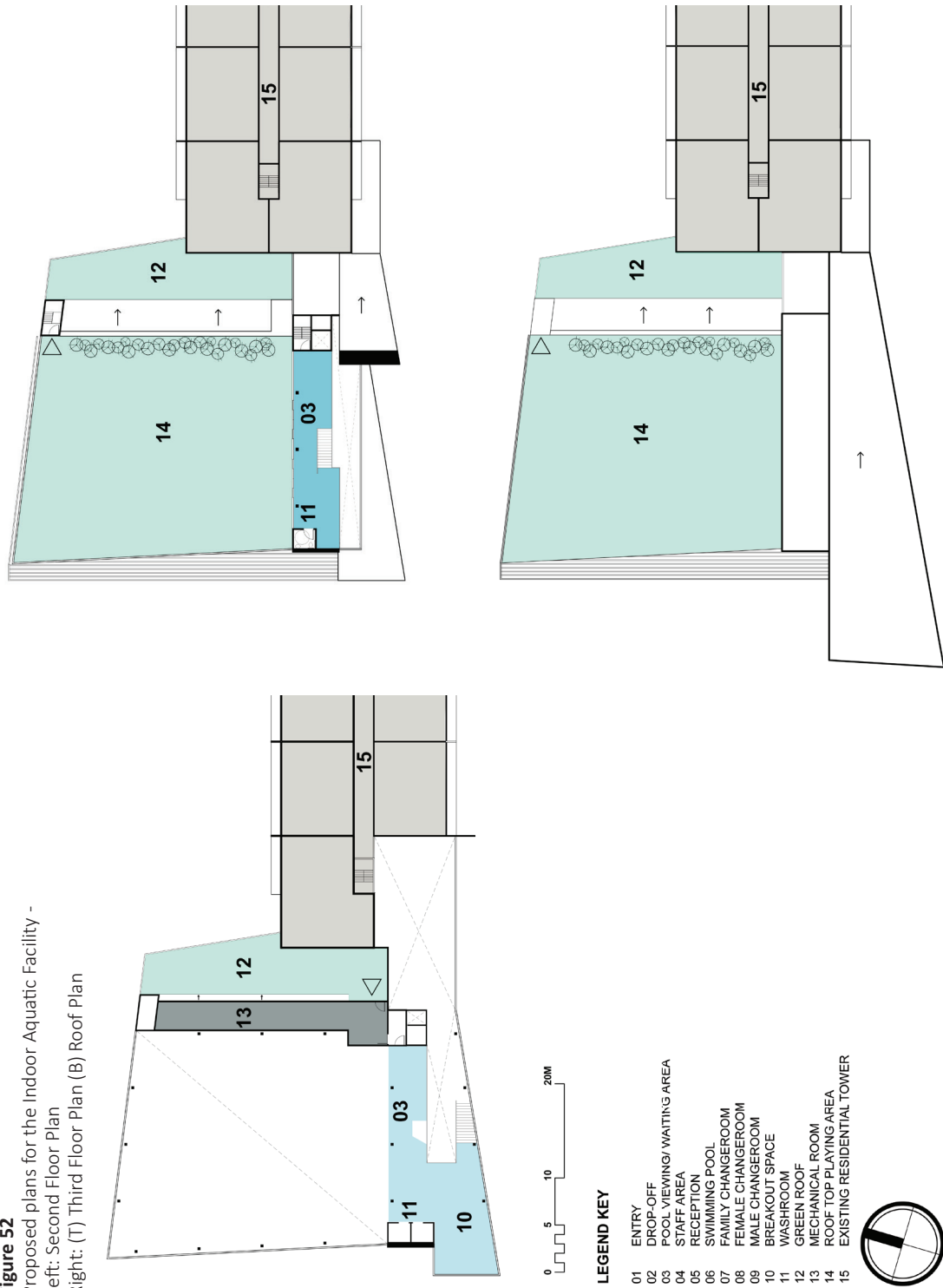


Figure 52
Proposed plans for the Indoor Aquatic Facility -
Left: Second Floor Plan
Right: (T) Third Floor Plan (B) Roof Plan



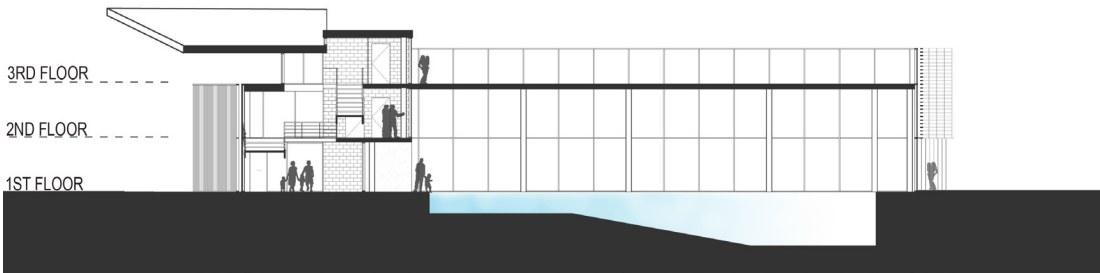


Figure 53
North-south section through the
indoor aquatic facility

Figure 54
View from ground floor breakout space
adjacent to south building entrance



Figure 55
View from ground floor reception desk
looking towards the breakout spaces

Figure 56

View from the swimming pool area looking out towards the multipurpose field



Figure 57

View of the roof top playing area atop the indoor aquatic facility

RETAIL MAIN STREET

The existing retail units at the base of 240 Wellesley Street are the only commercial elements located within the core of St. James Town. Other commercial units are located on the periphery of the neighbourhood typically lining the major streets surrounding the neighbourhood. Retaining the retail units and improving upon them can help draw pedestrians from the surrounding areas into St. James Town as part of their daily commute to and from the subway station. Also, the retail units can help improve the chances of social interaction within the neighbourhood because they are destinations in themselves for people to gather.

Currently, retail units located at the base of 240 Wellesley Street with a Food Basics grocery store located at the south end of the main pedestrian walkway fronting onto Wellesley Street. The retail units at the base of 240 Wellesley Street are currently tucked underneath the balconies above completely hidden from pedestrians along Wellesley Street. Although the existing Food Basics grocery store fronts onto Wellesley Street, the store has a large setback from the sidewalk causing it to be removed from the pedestrian circulation along Wellesley. Also, the west side of the grocery store which faces the main pedestrian walkway is a blank façade which does not add any value to the walkway. Figure 58 illustrates the location of the existing retail units and the photographs show their existing conditions.

In order to give the retail units at the base of 240 Wellesley Street more prominence, the shops have been pulled out from protruding balconies above. A portion of the walkway directly adjacent to the retail units has also been reclaimed to allow the stores to spill out beyond its physical boundaries to accommodate cafes, restaurants and other retail units. Another change to the existing retail layout is the modification of the existing Food Basics grocery store. A portion of the grocery store is extended south towards Wellesley Street to help reinforce a stronger connection with the pedestrian circulation. With the extension of the grocery store, the existing portion along the pedestrian walkway can be reclaimed for new retail units. The new retail units will create a new 'main

street' within St. James Town which extends the existing retail strip towards the periphery of the site. New glass canopies referencing the new canopies surrounding the new multipurpose field will help tie various elements of the neighbourhood together forming a cohesive language throughout. Through the improvement of the existing retail component within St. James Town, it provides more opportunities to attract people from the surrounding neighbourhoods to help populate the ground plane. The retail units also help to foster new social interactions within the neighbourhood and its surroundings to bring to life Whyte's concept of Triangulation described in the chapter *Connections*. Figure 59 illustrates the development of the existing retail units in the final proposal. Figures 60 is a rendering along Wellesley Street looking northeast at the new proposed retail units and figure 61 is a view along the main pedestrian walkway. The images give a sense of how the proposed design strategies help to connect the retail units with their surroundings.

Figure 58
Site photos of the existing retail units

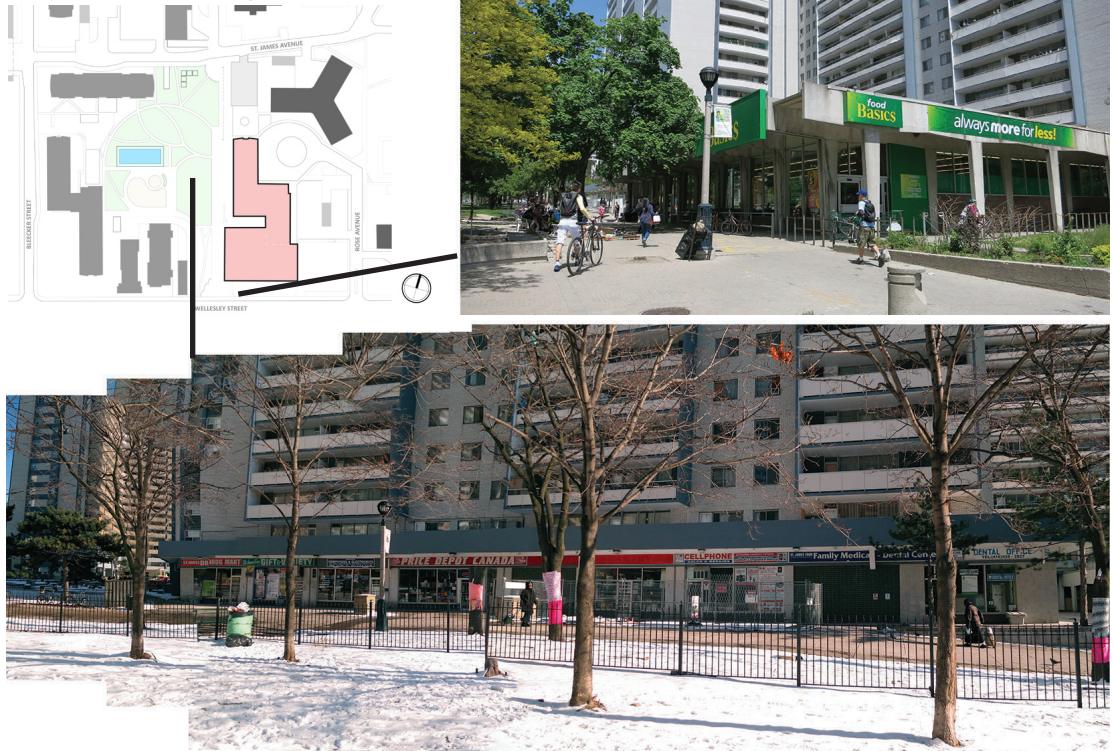
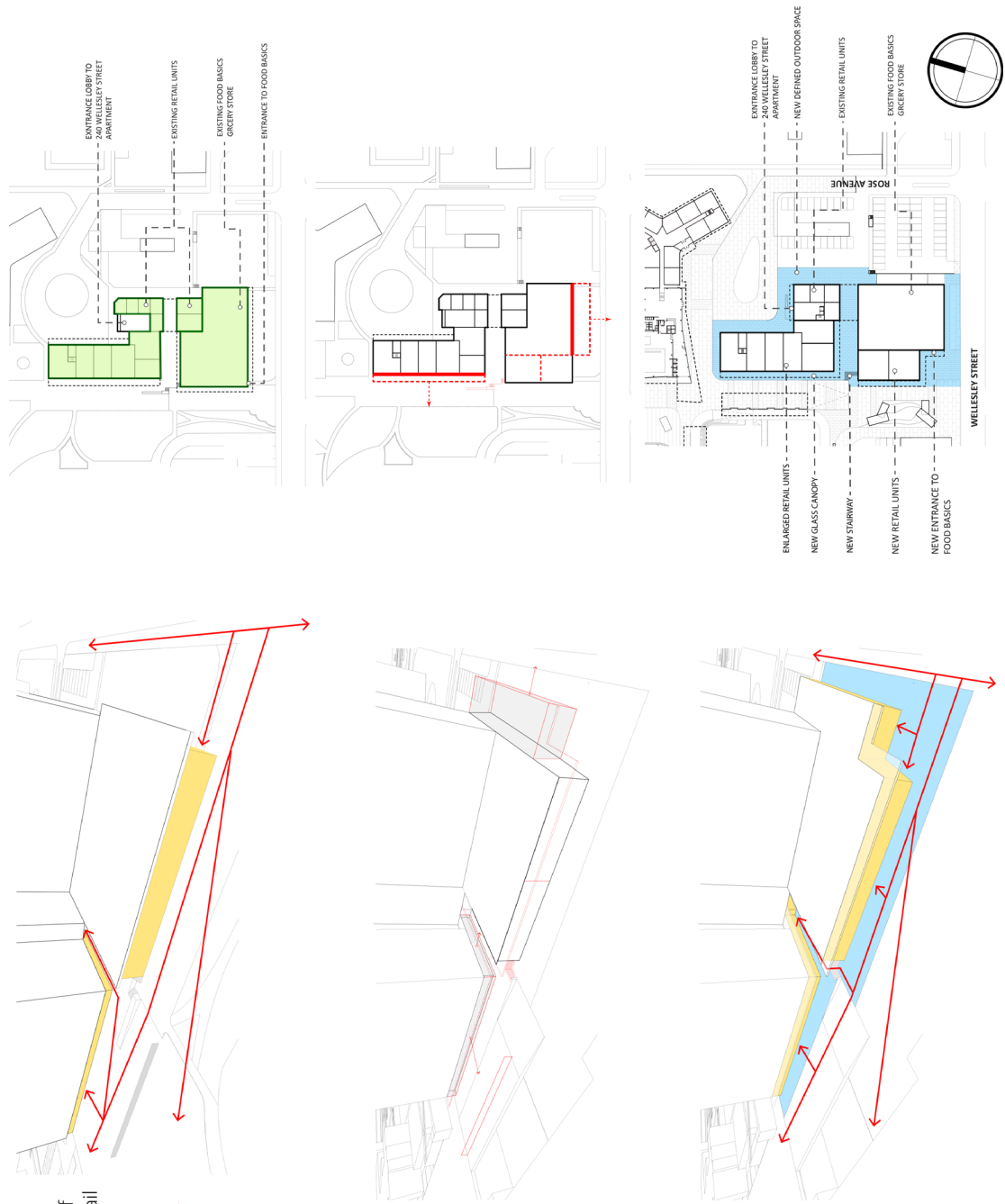


Figure 59
Design
development of
the existing retail
units



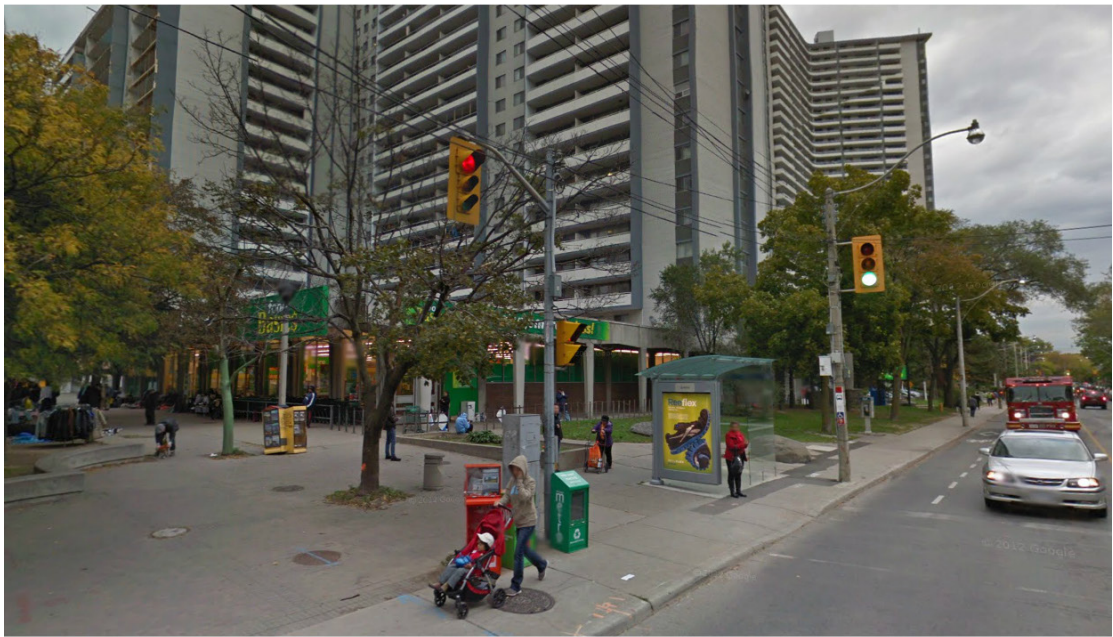


Figure 60
Proposed new view of the entrance to St. James Town along
Wellesley Street (T) existing (B) proposed

Figure 61

Proposed new view along the Main
pedestrian walkway looking north



COMMUNITY SKYHUBS

The community skyhubs are spaces proposed to help encourage interactions between residents within an apartment tower. 60 Richmond East Housing Development was used as a reference to the development of the community spaces. Within the 11 storey building at 60 Richmond Street, communal spaces in the form of courtyards and gardens were located on 2 levels above the ground plane connected by a central atrium space. The size of the spaces also varied in order to accommodate different activities.

The corridors of the existing high-rise apartments replaced the traditional streets in low to mid-rise communities where social interactions use to occur. However, the corridors do not provide adequate room for social interactions due to their narrowness in size. This has resulted in hallways being used merely for circulation purposes. By reclaiming several units within each apartment tower, new community spaces above the ground plane can be formed. The placement of the spaces throughout the height of the towers helps to form micro-communities which contribute to the larger community as a whole.

The proposed community skyhubs consists of four unit types: 1 apartment unit, 2 apartment units (single and double height space) and 2 apartment units near the elevator core. A mixture of the unit types are implemented at 5 level intervals throughout the apartment towers so that the spaces are easily accessible by all the residents. The new proposed community skyhubs are connected in the vertical direction through the use of the existing stairwells. The walls of the stairwells bordering the communal spaces (either the corridor or the community skyhubs) are to be fully glazed to provide a visual connection between the community skyhubs and the existing corridors. The glazing also helps to extend the interaction between levels while allowing daylighting from the skyhubs to penetrate into the corridors. The locations of the units along the vertical axis help to create multi-layered connections within the towers.

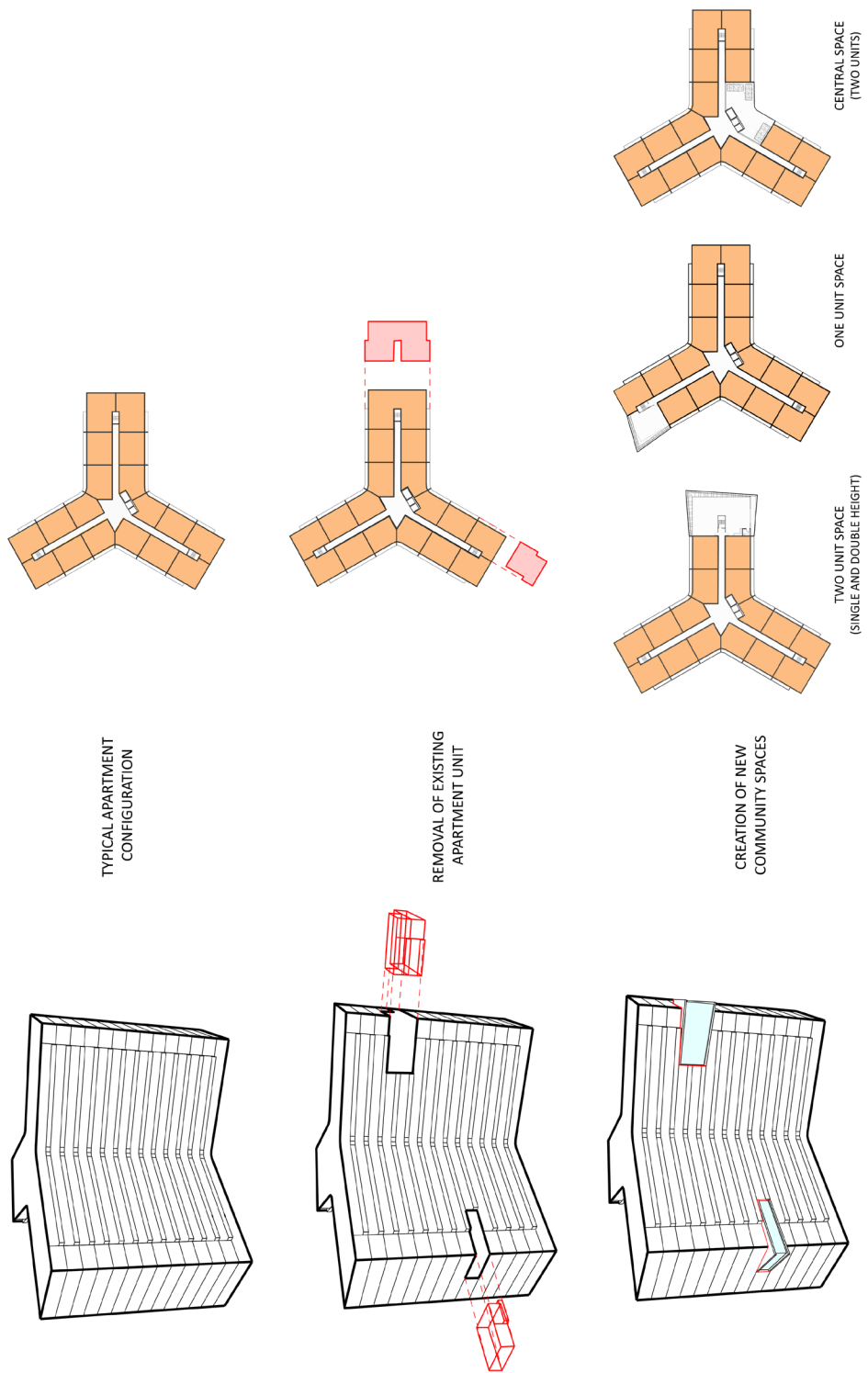
With the implementation of community skyhubs throughout existing

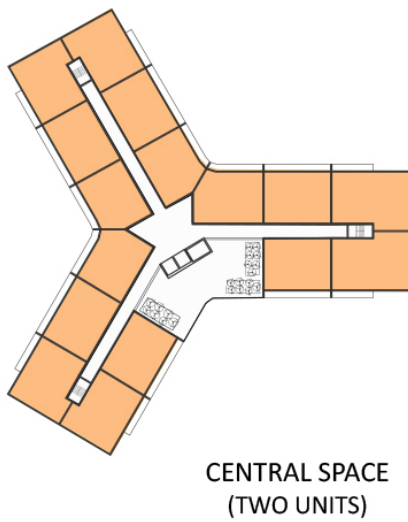
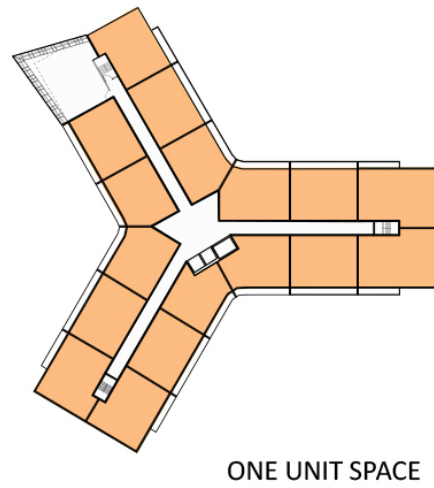
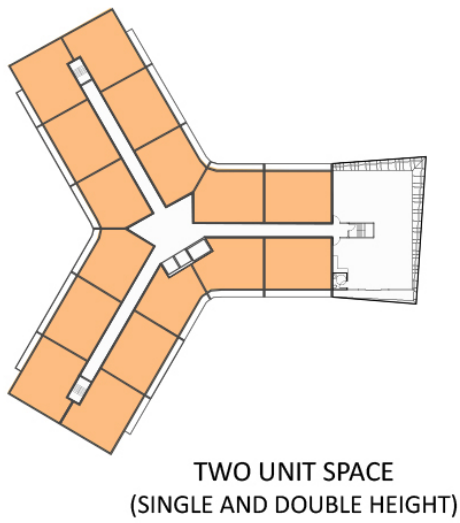
apartment towers, families can participate in activities in designated spaces closer to home. Also, with the close proximity of the community spaces to residential units, they can help increase the visibility and awareness of the events happening while also strengthening Jacobs' idea of "eyes on the streets"; or in this instance 'eyes in the corridor'. The community skyhubs can provide space for exercise groups, daycare during the day and become after school study or play spaces that are supervised. With the conversion of existing residential units, kitchenettes can be added; reusing the existing plumbing connections available, so that community kitchens or cooking groups can be accommodated. The spaces can also be rented out for meetings or events as required within each of the towers. With the addition of the community skyhubs, the existing corridors no longer solely serve as a means of circulation, the corridors now connect people to new found social gathering spaces while also becoming destinations in themselves.

The community skyhubs extend beyond the boundaries of the existing building façade which increases the visibility of the spaces from the ground level. The skyhubs are clad in metal panels with vertical patterns to contrast with the horizontality of the existing apartment towers. Colour can also be added to highlight the community skyhubs when viewed from the exterior. Although the physical size of the buildings cannot be altered, the protrusions of the community spaces and the patterns of the cladding help to break up the monolithic appearance of the existing towers.

Figure 62 illustrates the design development of the new community skyhubs and Figure 63 provides enlarged plans of possible skyhub configurations. The configuration of the spaces will vary depending on the needs of the residents and the neighbourhoods in each individual tower. Figure 64 is a rendering looking from within one of the community skyhub; with a double height ceiling, and Figure 65 is a view from the corridor looking into the community skyhub and the newly glazed exit stairwell. The renderings indicate the visual connections between the corridor, the exit stairwell and the proposed community skyhub to help improve the sense of security within the existing apartment towers.

Figure 62
Design developments of the community skyhubs





0 5 10 20M

Figure 63
Enlarged plans for the new
proposed community skyhubs



Figure 64
View of community skyhub (unit
with half-single and half-double
height ceiling)

Figure 65

View into a community skyhub
space from the existing corridor



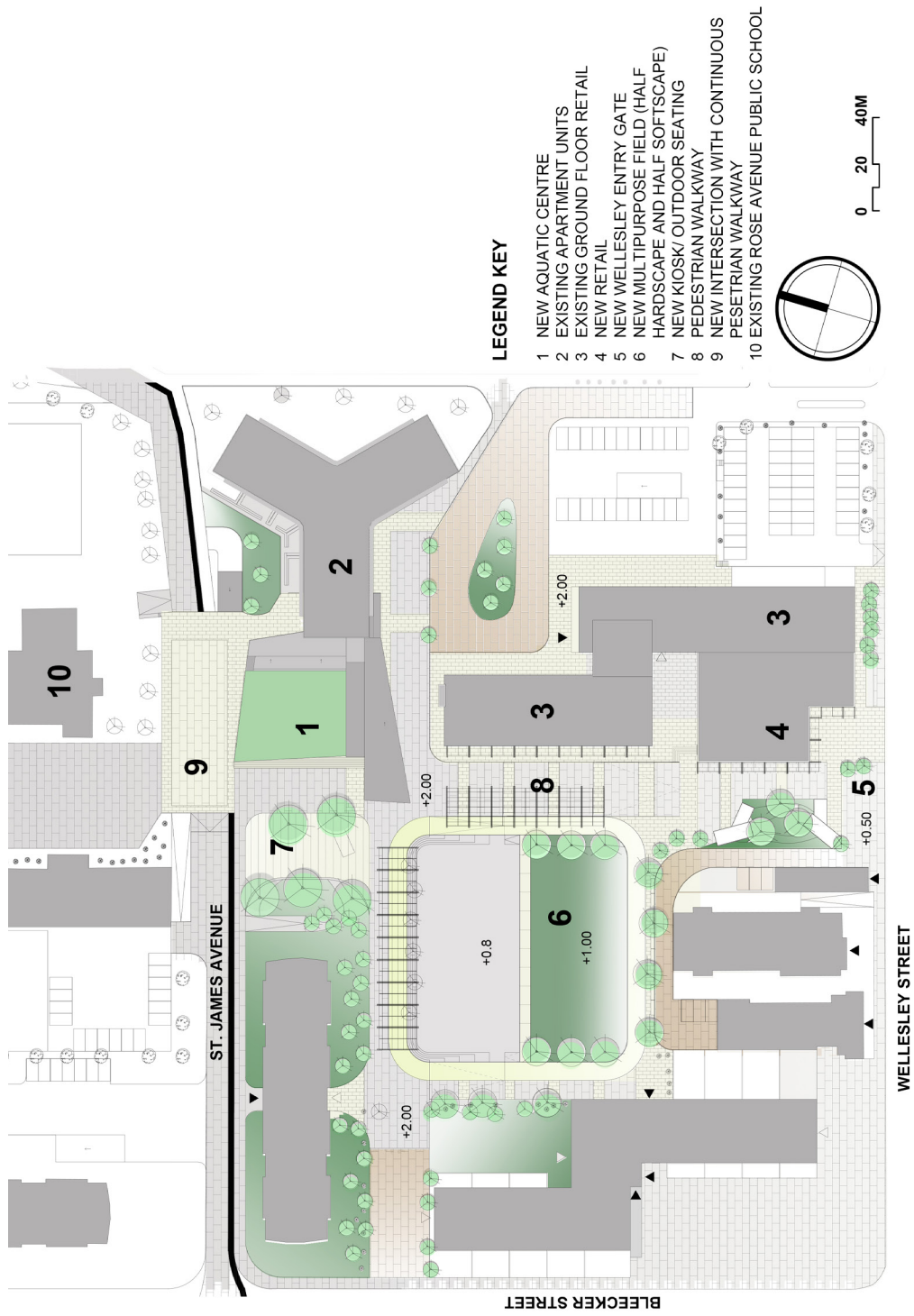
7.4 ST. JAMES TOWN – FINAL DESIGN PROPOSAL

The following images reveal the final design proposal for the revitalization of St. James Town which gives expression to *Bridging Divides / Creating Connections*. Figure 66 and 67 give an overall view of all the design strategies that were implemented.



Figure 66
Aerial view showing all proposed interventions

Figure 67
Proposed Site Plan



EXTERIOR VIEWS

The following images demonstrate the proposed interventions within the existing context of St. James Town and the new relationships created between various built elements. Figures 68 and 69 illustrate views from the various approaches to the centre of St. James Town – the new community hub. Figure 68 is a view from the new junction between the indoor aquatic facility, the existing school and the main pedestrian walkway. The continuous material of the main walkway helps to connect the school with areas south of St. James Avenue. Figure 69 illustrates the approach from the existing roundabout. The roundabout will be kept and used as the main drop-off and pick-up area for the new indoor aquatic facility. The walkway will be enlarged to accommodate anticipated increase in pedestrian foot traffic in the area. The new entry way from Wellesley is shown in Figure 60 in the previous section. Figure 70 is an alternative view at the junction between the indoor aquatic facility, the existing school and the main pedestrian walkway along St. James Avenue looking east. The continuity of the ground paving material once again helps to illustrate the connection between the areas north and south of St. James Avenue.

NIGHT VIEWS

Figures 71 and 72 indicate the level of illumination at night-time which helps to improve the safety within the neighbourhood. The new street lights and pedestrian walkway lights help to create well-lit pathways for pedestrians to traverse. The arrangement of the lighting fixtures assists in identifying the new pathways connecting the entire site. Figure 71 is a view along St. James Avenue looking east and Figure 72 is a view along the pedestrian pathway looking south adjacent to the indoor pool facility.

SITE SECTION

Figures 73 and 74 illustrate the connections created throughout the site in both the horizontal and vertical directions.

Figure 68

View along the main pedestrian walkway looking south towards Wellesley street. (T) existing (B) proposed





Figure 69

View from existing drop-off area looking at the south elevation of the new pool facility. (T) existing (B) proposed

Figure 70

View along St. James Ave at junction between the pool and existing school





Figure 71
Looking east along St. James Ave – night render

Figure 72

Looking south along the main pedestrian walkway – night render



Figure 73
East-west section through the site

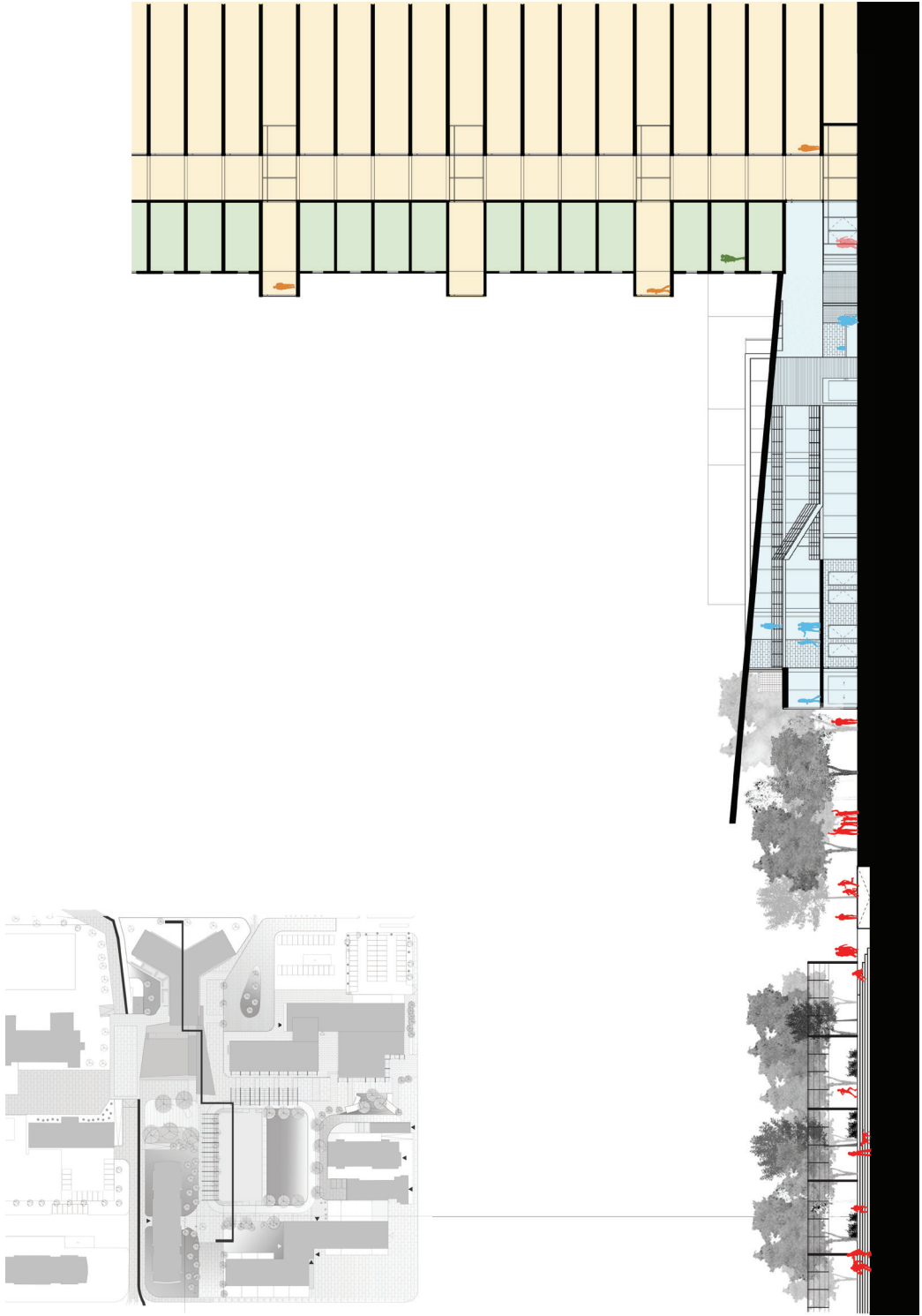
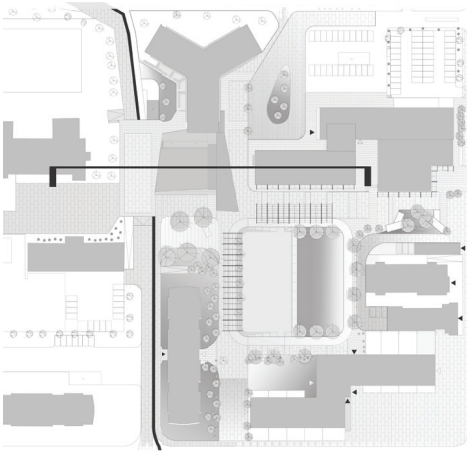


Figure 74
North-south section through the pool and surrounding context



SUMMARY

Figure 75 indicates the implementation of the four strategies developed: engaging the edge, defined spaces, mixed-use | mixed building typologies, and multi-layered connection. The application of the four strategies helped to create new relationships between buildings and between buildings and their surrounding context which was missing in the modern city planning of City of Towers neighbourhoods.

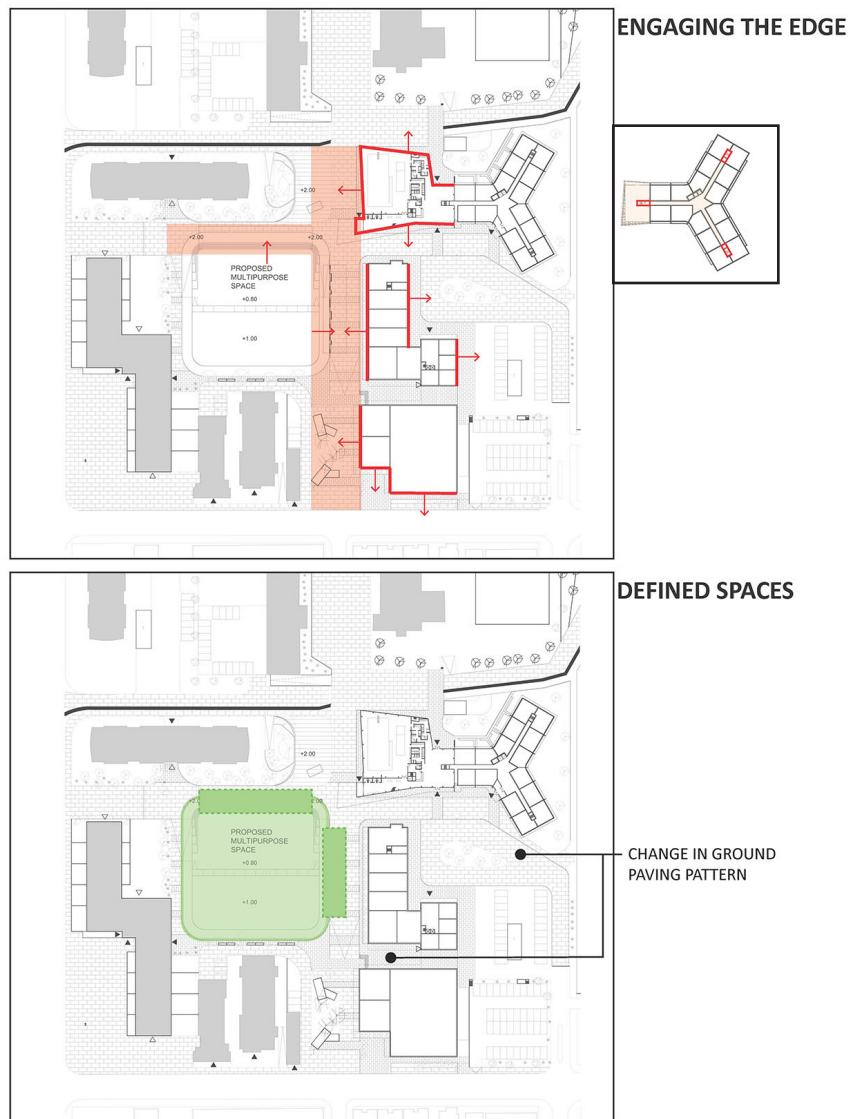
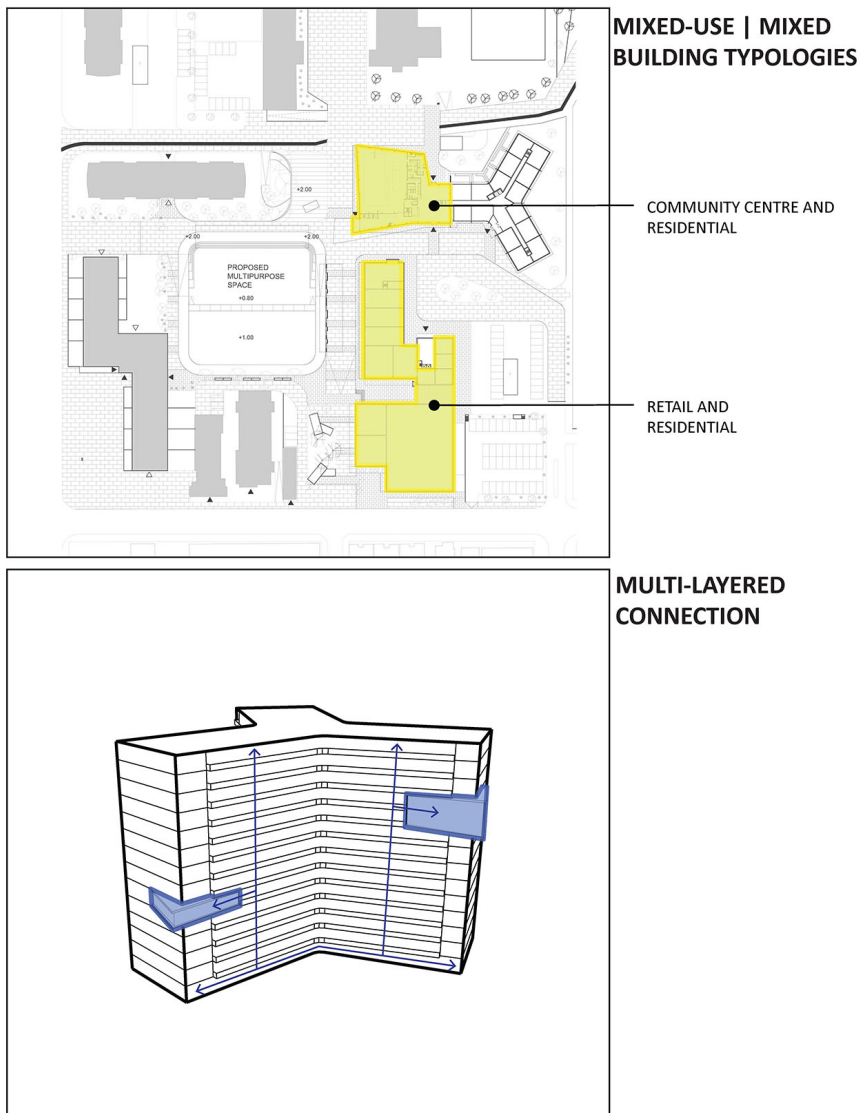


Figure 75
Diagram of design interventions



08

CONCLUSION

In the end, the question of how an existing City of Towers neighbourhood can be revitalized to meet the needs of its residents today and in the future is not a simple one. The revitalization of the neighbourhood needs to take on a holistic approach so that the buildings are not treated as standalone objects, but components within a large built fabric. This idea can be once again be referenced from Alberti's quote "the city is like some large house, and the house is in turn like some small city, cannot the various parts of the home... be considered miniature buildings?" (Alberti, 1988, p. 25). By treating the city and each building within it as equally important entities and resolving all design aspects regardless of how big or small the issues are, we can begin to design buildings and cities as one integrated whole, forming part of a larger urban fabric.

The design project within this thesis demonstrates the possibility of revitalizing existing City of Towers' neighbourhoods without taking the tabula rasa approach, but rather to work with the neighbourhoods' existing layout and structure. The design applications to the ground plane of St. James Town helped to create new relationships between existing buildings, new infill buildings or components and their surrounding context. Just as the towers were isolated from one another and their surroundings, beyond

the ground plane the existing apartment units are disconnected from any form of community space. By applying the same principles to the towers that were applied to the ground plane, new relationships can be formed within the towers to address the needs of the residents.

Even though a portion of St. James Town was used as a testing site for the hypotheses of this thesis, the design principles and strategies used can be adapted and applied to other City of Towers sites because many of the areas share similar challenges and areas of opportunities. The revitalization of these existing neighbourhoods is about reconnecting the buildings and their surroundings rather than simply improving the condition of the buildings. The two elements cannot help revitalize a neighbourhood without working hand-in-hand. Therefore, this thesis advocates for a more holistic approach to the revitalization of existing 'City of Towers' neighbourhoods to truly give meaning to ***Bridging Divides/ Creating Connections***.

09

APPENDIX

APPENDIX A BACKGROUND INFORMATION

CRITICAL TERMS

Defining terms is important because there are often multiple meanings for a particular term, dependent on context. The definitions below will help to establish a baseline of knowledge and understanding of what the author is trying to convey.

‘City of Towers’. The term City of Towers used in this paper refers to a single or a collection of high-rise towers built according to modern city planning principles located within a predefined boundary. The collection of high-rise towers may consist of two or more towers located within close proximity to one another. The boundary refers to either a property line or the precinct of a neighbourhood set out by the City of Toronto. This thesis will only focus on high-rise towers built between 1945 and 1984; the range in years was adopted from the *Tower Neighbourhood Renewal in the Greater Golden Horseshoe* prepared by E.R.A. Architects, planningAlliance, and the Cities Centre at the University of Toronto completed in 2010. Although this thesis will focus on towers within a specified range of dates, the research presented in this paper may be applicable to towers built outside of the range investigated in that study.

Well-being. In the report, *Healthy Toronto By Design* prepared by Linda Wood et al. for the Toronto Public Health (2011), healthy cities are defined as “cities that are prosperous, liveable and sustainable. They are cities with high quality culture, education, food, housing, health care, public transit, recreation, and built and natural” (Wood, Tam, Macfarlane, Fordham, & Campbell, 2011, p. ii). Healthy cities are the result of understanding and meeting the needs of their residents. The measure of a city’s health is a measure of the well-being of a city.

Public Space. Public space is commonly known as “the streets, boulevards, squares and public parks together with the building facades that define them” (Moughtin, 2003, p. 2). They are places to “provide visual relief, a meeting place for socializing, and most importantly it allows for people to understand the behaviours of those around” (Trancik, 1986, p. 11). In this paper, public space refers to the open space; both soft and hard landscaped areas, at the base of high-rise towers – the focus of this study. Public spaces play an important part in society because they “help us sense and connect to others beyond or local or ‘home’ communities, and connect, too, to the biosphere” (Gastil & Ryan, 2004, p. 24). When public spaces are poor in quality, there is a sense of restriction on the amount of activities that actually occurs there. Jan Gehl stated in his book, *Life Between Buildings*, that in “streets and city spaces of poor quality, only the bare minimum of activity takes place. People hurry home. In a good environment, a completely different, broad spectrum of human activities is possible” (Gehl, *Life Between Buildings: Using Public Space*, 2001, p. 13). Therefore, when there is access to thriving public spaces it can help create a sense of community.

THE CITY OF TOMORROW

"Modern life demands, and is waiting for, a new kind of plan, both for the house and the city."

– Le Corbusier (1986)

Modernism was an architectural response to housing needs after the war while also attempting to cleanse cities of illnesses in the mist of the rise of the automobile. One of the most notable architects of the modernist era is Le Corbusier. He had described his image of the 'towns of to-morrow' in various publications such as *The City of Tomorrow* (1929), *Looking at City Planning* (1946), *Towards a new architecture* (1923) and many others during the early twenty-first century. His vision was to create a harmonious city that reconnected the relationship between man and nature in response to traditional city planning in which he thought were chaotic (The City of Tomorrow, 1971, p. 81). The problems of the traditional cities are outlined in his Le Corbusier's essay, *Three Reminders to Architects*, that "...the existing lay-out of our towns in which the congestion of buildings grow greater, interlaced by narrow streets full of noise, petrol fumes and dust; and where on each storey the windows open wide on to this foul confusion" (1986, p. 57). Le Corbusier's outlined the basic principles for the plan of the contemporary city in his book, *The City of To-morrow*, to ensure a sense of order to the city of tomorrow. The principles are:

1. *We must de-congest the centres of our cities.*
2. *We must augment their density.*
3. *We must increase the means for getting about.*
4. *We must increase parks and open spaces.* (1971, p. 166)

In addition to the principles, Le Corbusier clearly laid out the elements of the contemporary city he had envisioned. Skyscrapers would dominate the centre of the city and be surrounded by green spaces at the base of every

tower. The green spaces would be filled with spaces for recreation and leisure such as restaurants, cafes, shops etc. The centre of the city would then be surrounded by a ring of greenery with garden cities; the residential zone, located beyond.

Le Corbusier was not the only one who thought the traditional principles for city planning needed to change in order to improve the lives of people in the late nineteenth century. Sir Ebenezer Howard, an English reporter, started the Garden City Movement by suggesting an alternative city that married the benefits of both rural and city living, but without any of the disadvantages; The Garden City. The Garden City was envisioned as a compact, self-sufficient satellite city which would help relieve the congestion of existing central cities while also repopulating the countryside. Howard defined The Garden City as “not a suburb but the antithesis of a suburb: not a more rural retreat, but a more integrated foundation for an effective urban life” (Howard, 1965, p. 35). The marriage of the town and country was seen as “new hope, a new life, [and] a new civilization (Howard, 1965, p. 48). Figure 1 below depicts the three different cities that people had the choice of living within - ‘The Three Magnets’.

The layout of The Garden City was outlined in Howard’s book, *Garden Cities of To-morrow* (Howard, 1965, pp. 51-55). The Garden City was planned based on a concentric pattern which radiated out from a central core within an area totalling 6000 acres that was divided by six main boulevards. The central core would be surrounded by larger public buildings; such as the town hall, theatre, library, museum, that were shared amongst all the radiating cities. Beyond the public buildings was the central park which was encompassed by the ‘Crystal Palace’. The ‘Crystal Palace’ was a glass arcade filled with shops that opened up into the park on one side and a major road on the other. Beyond the main artery, were the rings of homes that fronted onto the roads and boulevards. The series of homes are separated from the industrial outskirts of the city by a ‘Grand Avenue’; another large park area. On the peripheral of the Garden City lay the railway lines which connect to the other cities beyond and the abundance of agricultural lands.

Although the principles of the Garden City were not widely implemented until after the Second World War, its ideas were seen as influential to the development of Le Corbusier's City of Towers. Le Corbusier manipulated the principles from The Garden City to better suit a city which accommodated a higher-density of living. In the 1920's, Le Corbusier produced a design scheme which furthered the development of a modern city within his Radiant City scheme. Le Corbusier addressed the problems of the traditional city layout by separating functions into designated zones. In the residential zone, high-rise towers were built to allow for high-density living on a small footprint in order to leave an abundant amount of green space for communal recreation at the base. Le Corbusier described the open spaces as 'the lungs of the city' that acted as a buffer between the residents and the motorized vehicles (The City of To-morrow, 1971, p. 163). Each tower in the landscape was made of up of 'cells-for-living-in' that were replicated both horizontally in plan and vertically in section.

The layout of the buildings on the site was achieved naturally according to the relationship of the building's plan to the "sun, space, [and] greenery" (Corbusier, Looking at City Planning, 1971, p. 49). Each tower was set back from the street to allow for maximum air and sunlight to enter the dwellings. The new arrangement of towers within the city eliminated traditional streets and courtyards, which changed the traditional relationship between people and public spaces. People no longer inhabited dwelling units that opened up to the street allowing for formal or spontaneous interactions between neighbours at front or in backyards. Instead, the open space around the towers became the parks, gardens and space for recreational activities that replaced the lost front and backyards of the traditional single family dwelling.

Although the Radiant City scheme was never realized, the principles were later incorporated into the Athens Charter and adopted by architects and urban planners worldwide. Many of the communities built based on the Radiant City principles are still present within the City of Toronto. The issues and challenges of these communities will be further discussed in the Design Project chapter.

APPENDIX B

PRECEDENT ANALYSIS – MATRIX

ISSUES	PRECEDENTS
<p>Loss of Connection between the built environment and its surroundings, and between people and the built environment</p> <ul style="list-style-type: none"> • Increased crime and other negative activities due to the lack of ‘informal surveillance’ • Fragmentation = isolation of buildings, residents and their surroundings; public spaces are no longer an ‘extension of the home’ • Loss of social interaction between people (both formal and informal); no foundation for a community 	<p>The Brunswick, UK</p> <ul style="list-style-type: none"> • Hybridity – Multipurpose space was achieved by extending the commercial uses into the main corridor; the concourse area is both circulation and a destination • Improved accessibility from the street to the main concourse through the use of a stair-ramp; physical barrier removed • Commercial uses (attractors) help to form the basis for social interaction between friends and strangers <p>Bilmermeer, NL</p> <ul style="list-style-type: none"> • Street level access to buildings to reinforce the connections at the ‘edges’ • New streets for connections between places of destination and to existing major arteries • Conversion of ground floor storage units into single-family units to improve both visual and physical connections with the surrounding built environment • Elimination of overpasses allowing pedestrians, cyclists and motorists to occupy the same plane; no segregation traffic • Improved transit connection between the development and surrounding neighbourhoods with public transit and bicycle lanes • Connectors which link different spaces together and at widen points the path becomes a destination itself – multipurpose path • Additional vertical connections to help divide up the long continuous corridors within the towers; helps to create smaller more maintainable zones and improve the journey along the path <p>60 Richmond East, CA</p> <ul style="list-style-type: none"> • The restaurant at the ground plane help to connect with its surrounding • Communal spaces that open up to the city help to reinforce the visual connection between the building and its surrounding • Central atrium physically and visually connects communal spaces at various heights within the building to help promote interaction • Visual connection between the residential units and the central atrium

PRECEDENTS cont...	SYNTHESIS
<p>Via Verde, US</p> <ul style="list-style-type: none"> • Retail units at the ground level help to bridge the transition from public (street), semi-public/private (retail units) to private (residential units) • Visual connections between surrounding areas; playing field to the south and between residents and central communal spaces • Variation in communal spaces to allow for choice in activities • Centralized entry point for the high and mid-rise towers <p>Regent Park, CA</p> <ul style="list-style-type: none"> • New and reinstated through streets to improve accessibility in and around the neighbourhood • New Retail units at the ground level help to engage pedestrians • Improved connections between built forms and communal facilities which helps to redirect pedestrian flow in and out of the site • Placement of active nodes throughout the site to help form connections within the larger context <p>One Cole Street</p> <ul style="list-style-type: none"> • Two levels of connections – upper level = privacy for residents, lower level = public to semi-public/private connections 	<p>PROs</p> <ul style="list-style-type: none"> • Softening boundaries between public and private spaces • Improved accessibility (visual and physical connections); easier access between the built environment and its surroundings (direct connections) • Combination of various traffic flows/patterns; not prioritizing one mode of transportation • Connection between nodes • Providing connections horizontally and vertically; between the building and its surroundings and within individual buildings <p>CONS</p> <p>The Brunswick, UK</p> <ul style="list-style-type: none"> • No direct connection was formed between the residential units above and the commercial units below; still a sense of separation • Need for direct access between the two spaces <p>Bilmermeer, NL</p> <ul style="list-style-type: none"> • The new single-family dwellings at street level do not have a transitional zone between the public and the private; the building just stops at the 'front door'

ISSUES	PRECEDENTS
<p>Loss of the sense of place</p> <ul style="list-style-type: none"> • No connection between places and people; no sense of ownership • Decline in quality public space 	<p>The Brunswick, UK</p> <ul style="list-style-type: none"> • Addition of commercial uses improved the relationship between the development and its surrounding; new social hub, which increased sense of security in the area • The introduction of ‘zones’ helped to give purpose to the concourse area, while at the same time not restricting other the possibility of other activities • Community intervention on the terraces to reclaim existing underutilized open space <p>Bilmermeer, NL</p> <ul style="list-style-type: none"> • Existing towers were recladded to give each building a sense of identity • Addition of recreational and communal spaces that are inviting to all and providing opportunities to gather and socialize • Elimination of hidden corridors help to improve sense of security and usability of the space <p>60 Richmond East, CA</p> <ul style="list-style-type: none"> • Live/ work model; residents are employees of the restaurant and their families which creates a sense of ownership with the building

PRECEDENTS cont...	SYNTHESIS
<p>Via Verde, US</p> <ul style="list-style-type: none"> • The variation in communal space activities allowed for choice and not exclusion for all residents <p>Regent Park, CA</p> <ul style="list-style-type: none"> • New gathering nodes (community amenities, open spaces, commercial uses, etc.) • Each tower/ development were given their own identity within the overall neighbourhood <p>One Cole Street</p> <ul style="list-style-type: none"> • New skypark which connects the residents from the two residential towers • New commercial and institutional uses that serve the entire neighbourhood; eg. Coffee shop, grocery store, bank, daycare, etc. 	<p>PROs</p> <ul style="list-style-type: none"> • Attractors to help draw users to the area • Sense of identity; visually and physical space that people want to visit • Activation of interstitial spaces by providing quality and inviting public space for everyone; increased sense of security, ownership, and social interaction opportunities • Multi-purpose spaces to allow for choices in activities/ uses <p>CONs</p> <p>The Brunswick, UK</p> <ul style="list-style-type: none"> • The relationship at the 'ground level' was improved, but the common spaces within the residential towers were not

ISSUES	PRECEDENTS
<p>Human Scale – Size of spaces, experience of the building and Scale of Towers</p> <ul style="list-style-type: none"> • Large boundless spaces surrounding the towers which resulted in neglect and underutilization; purposeless • Separation of functions; not providing necessities for residents = people have to go elsewhere • Blank facades along streets/ pedestrian walkways; human aspect forgotten • High-rise towers removed activities and interactions from the street level • Large-scale of building overpowering its surroundings 	<p>The Brunswick, UK</p> <ul style="list-style-type: none"> • Breaking up the main concourse into 3 zones for better definition of the space • New infill building (grocery store) to help define the main corridor <p>Bilmermeer, NL</p> <ul style="list-style-type: none"> • New infill buildings (various typologies) and outdoor amenities to break up the large expanses of open space • Defined spaces of activity (playgrounds, pools etc.) achieved through material changes (multipurpose open space to accommodate a variety of events/ activities) • Additional community facilities to improve the needs of the residents • Elimination of hidden corridors • New infill buildings (various building typologies) with a variety of storeys helped to breakdown the overpowering feeling of the existing monolithic towers <p>60 Richmond East, CA</p> <ul style="list-style-type: none"> • The scale of the building was broken up by the form of the building; contrast between solids and voids

PRECEDENTS cont...	SYNTHESIS
<p>Via Verde, US</p> <ul style="list-style-type: none"> • The form of the building helps to shape and define spaces; central courtyard (void) and roof top terraces atop the stepped building • The form of the building (the spiralling) helps to reduce the overall large-scale feeling of the development • The large scale of the building was broken up by the variation in building heights within the overall form of the building <p>Regent Park, CA</p> <ul style="list-style-type: none"> • Reorganization of the ground plane helped to define and carve out new open spaces suitable for a variety of users • Introduction of mixed building typologies and uses • Providing semi-public/private spaces along streets and pedestrian walkways with visual interest • Variation in building height and typologies 	<p>PROs</p> <ul style="list-style-type: none"> • Form of the building and main connecting pathways defined adjacent open spaces; contrast between solids and voids • Large open spaces given definition through physical (carved out of the built form or change in elevation) or implied boundaries (material, overhead precincts) • Purposeful open spaces; appropriate size and connections • Providing a variation in building typologies to attract a variety of residents • Providing facilities for residents within the development (or in close walking proximity) • Providing visually appealing facades along pedestrian walkways • Variation in building height to break up the large-scale of the buildings • The variation in elevation of the building helps to break up the mass of the building visually • Providing smaller communal spaces within buildings; shortening distances required to gain access to activities <p>CONs</p> <ul style="list-style-type: none"> • No variation in mixed-use building structure; always residential atop a commercial 'podium' lining streets <p><i>The Brunswick, UK</i></p> <ul style="list-style-type: none"> • Large-open spaces made unusable due to pathways cutting through them

APPENDIX C

DESIGN PRECEDENT STUDY

INDOOR AQUATIC FACILITY

Regent Park Aquatic Centre was used as a precedent for standalone pool facility. The program for the pool was simply consisting of only: the pool area, two family change rooms, staff offices, meeting room and auxiliary spaces. The unique feature with this facility is the visual openness throughout the building. The public circulation spaces are all highly visible from the inside and out heightening the sense of security.

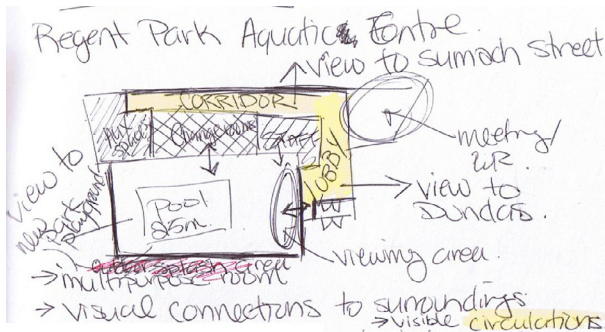


Figure 79
Sketch identifying the circulation pattern through the Regent Park Aquatic Facility

Figure 80
View from the main corridor between the exterior and the pool change rooms



MULTIPURPOSE SPACES

For this thesis, various multipurpose spaces were analyzed in order to determine the qualities for the new multipurpose field. Several precedents were analyzed and the commonality between all the spaces was the fixed elements within the space. The fixed elements, such as seating, planters, etc., help to create a more flexible space which can accommodate a variety of uses. On a day without a pre-set event, it is the fixed elements which give accommodate the users and bring the space to life.

Figure 81

(L) Nathan Phillips Square, Toronto and
(R) Dundas Square, Toronto

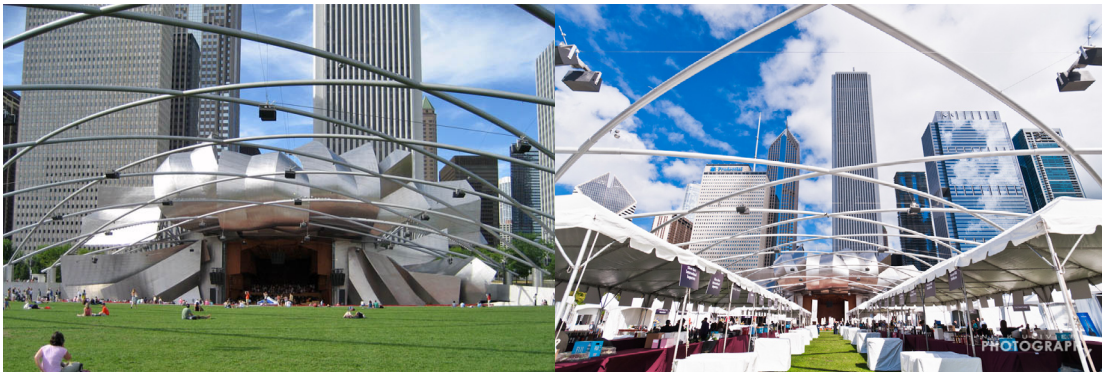


Figure 82

Millennium Park, Chicago (L) no
scheduled event and (R) scheduled event

APPENDIX D

INITIAL DESIGN EXPLORATIONS

CONNECTIONS - BRIDGING

The thesis project started as an exploration trying to create connections between various individual components (both existing and proposed). Through the research on the circulation and program requires for both the new indoor pool facility and the new multipurpose field, the idea to create connecting 'bridges' which serve to physically link all aspects of the site was explored. The overhead walkways would connect above ground spaces to one another for easy access. Although the 'bridges' helped to form new connections, they also created a separation between the new components and their surrounding ground plane. Therefore, the 'bridges' were eliminated from the design and the metaphorical connections were explored in the final design project. The following images depict the initial concept sketches within the site.

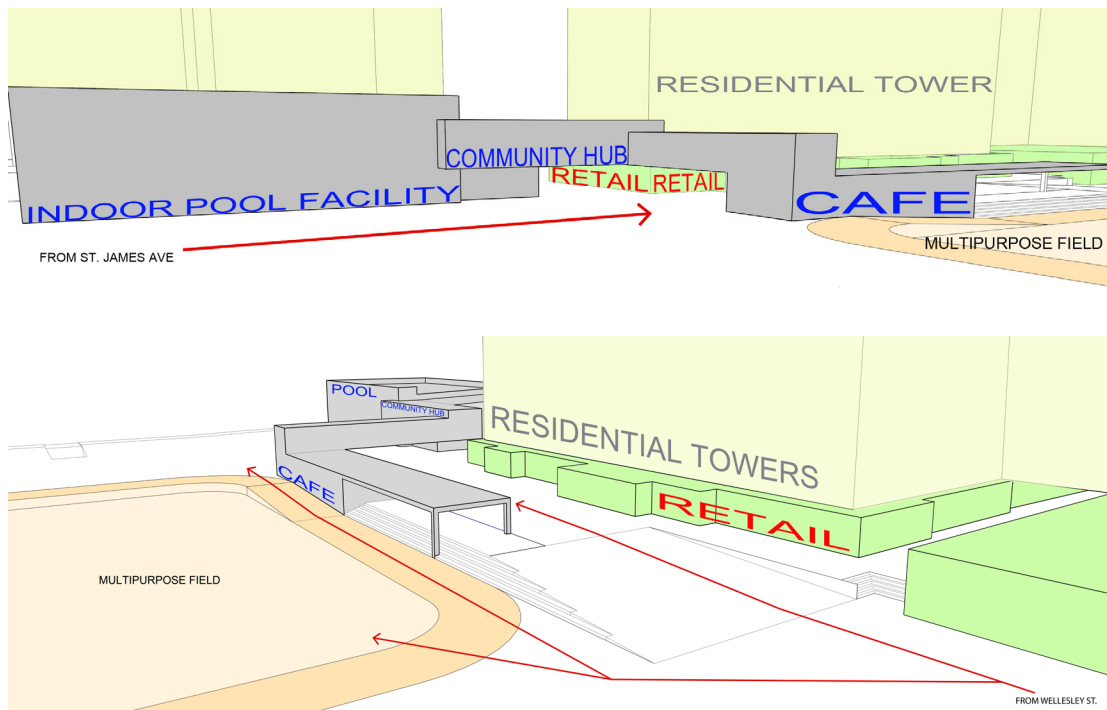
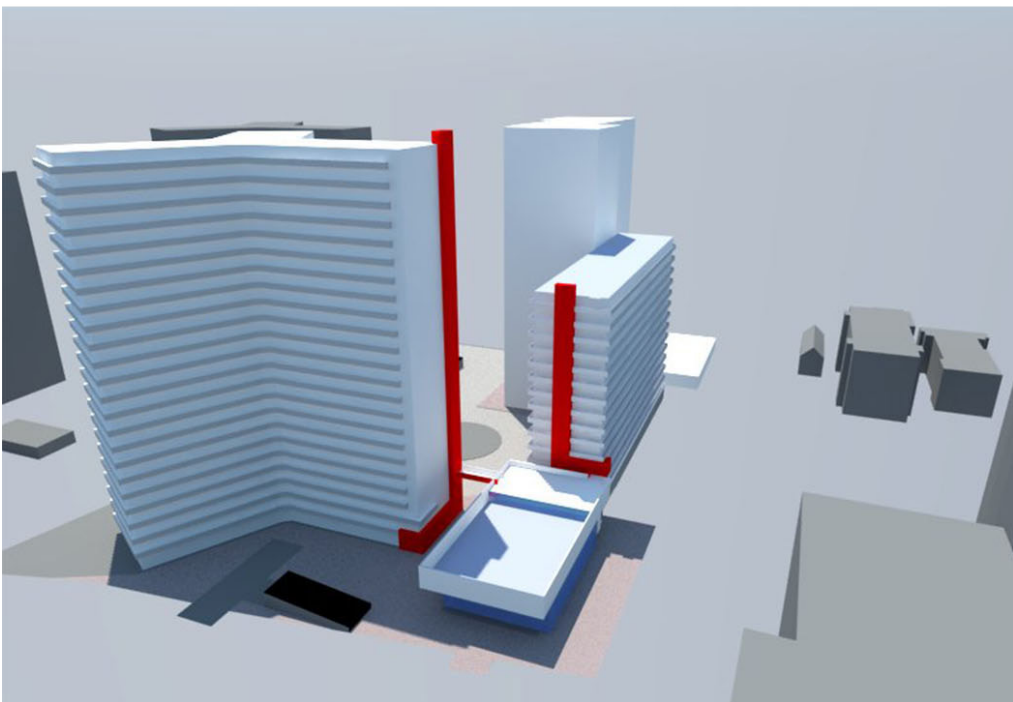
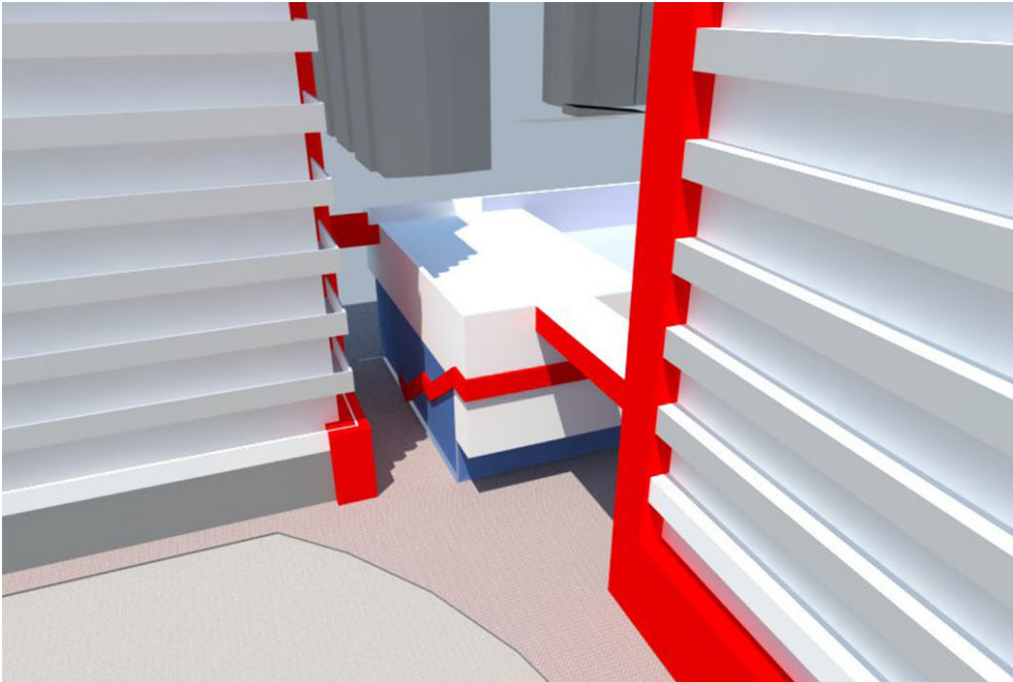


Figure 83

Massing study of relationships between existing and proposed elements

Figure 84

Connection explorations between the pool and the existing apartment units



PEDESTRIAN WALKWAY AND OVERALL SITE EXPLORATION

The existing main pedestrian walkway between St. James Avenue and Wellesley Street was explored. The initial idea was to create a covered walkway in order to give it prominence within its context. Various design options were explored, but the idea of the enclosed walkway resulted in a separation between itself and the surroundings making it a counter-argument to this thesis. Therefore, the idea of an enclosed walkway was replaced with a covered walkway (open on all sides) for a portion of the path and new lighting fixtures along the remainder of the pedestrian walkway. By eliminating an enclosed structure, surrounding activities can flow continuously along the entire length of the path. The following images illustrate the initial design explorations for the pedestrian walkway.

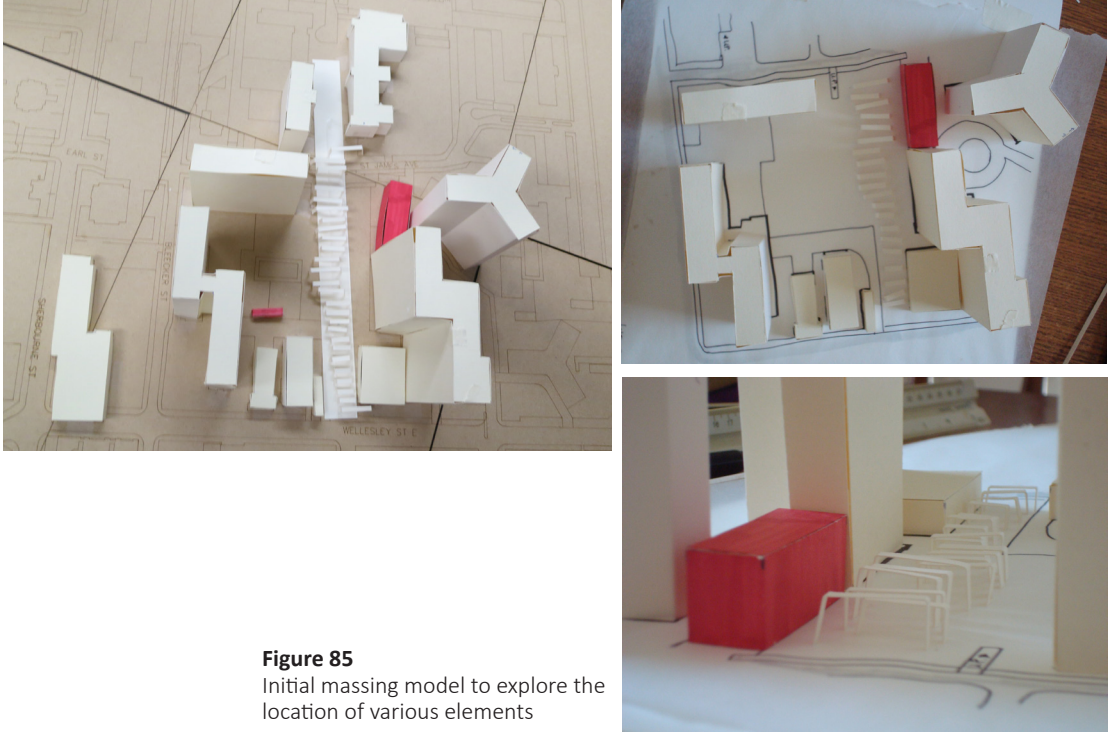


Figure 85
Initial massing model to explore the location of various elements

Figure 86

Initial design explorations of the pedestrian walkway (sketches and study model)

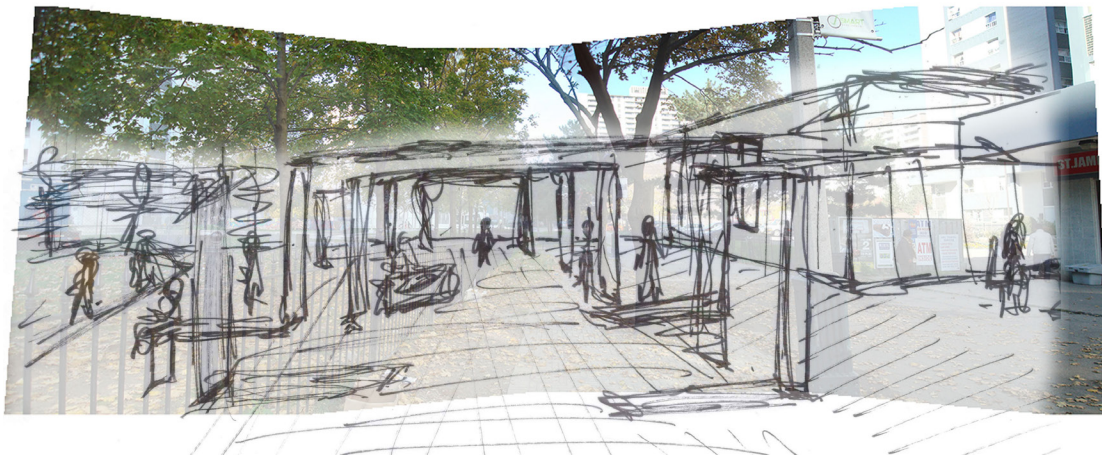
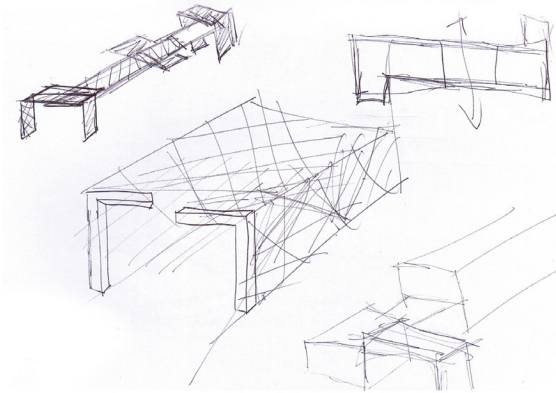
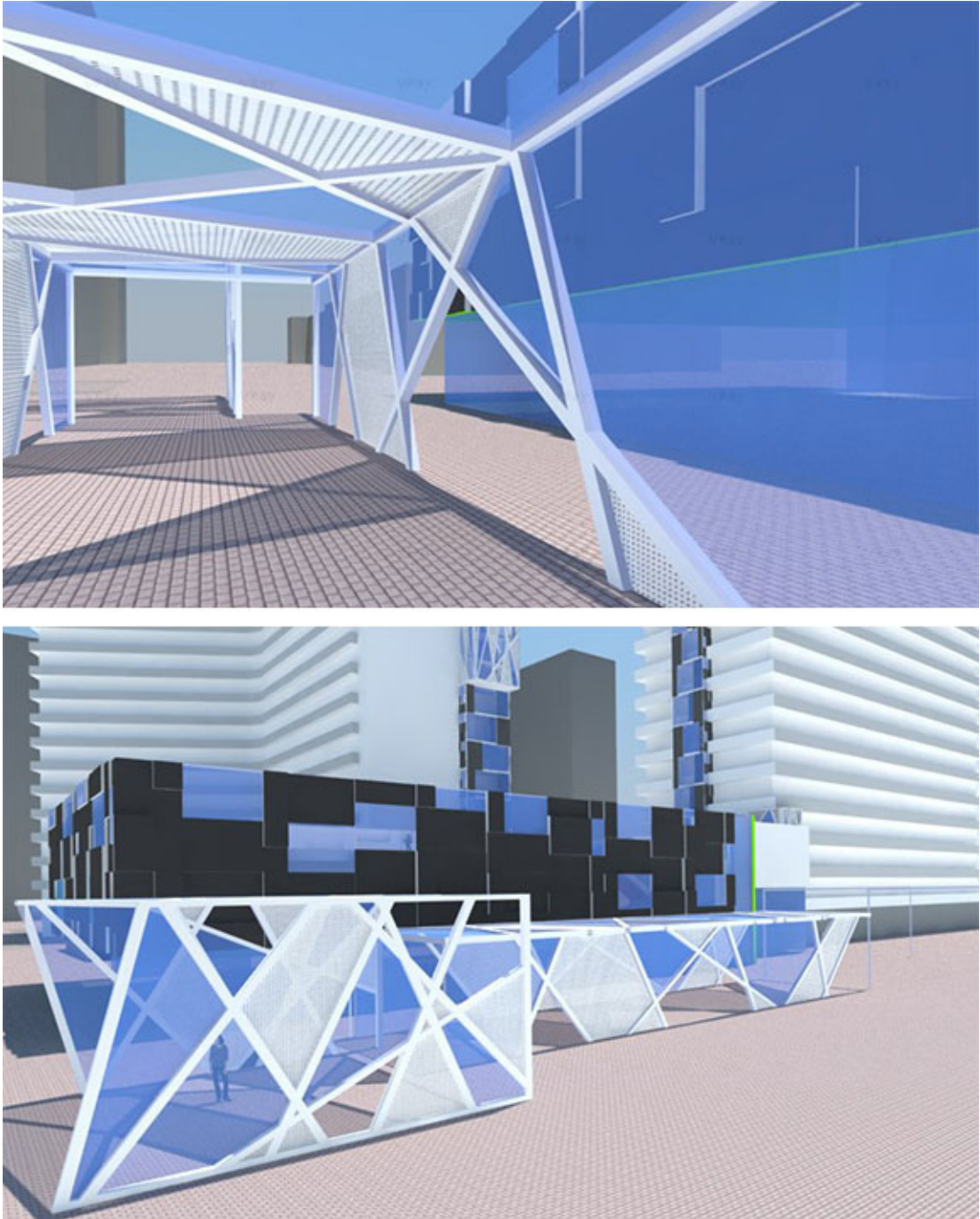


Figure 87
Initial design explorations of the pedestrian walkway



INDOOR AQUATIC FACILITY

The new pool facility is attached to 260 Wellesley Street tower because the exploration of other locations and combinations resulted in numerous pathways which did not contribute to the overall connection of the site. The form of the building takes advantage of its surrounding context to ensure that there is a level of connectivity present. Also, during the early stages of design the pool facility was conceived of as a rectilinear structure, but the rigidity of the form was too close – almost a replica, of the surrounding apartment towers. Therefore, the form of the building moved more towards an angular form which was pushed and pulled to interact with its surroundings.

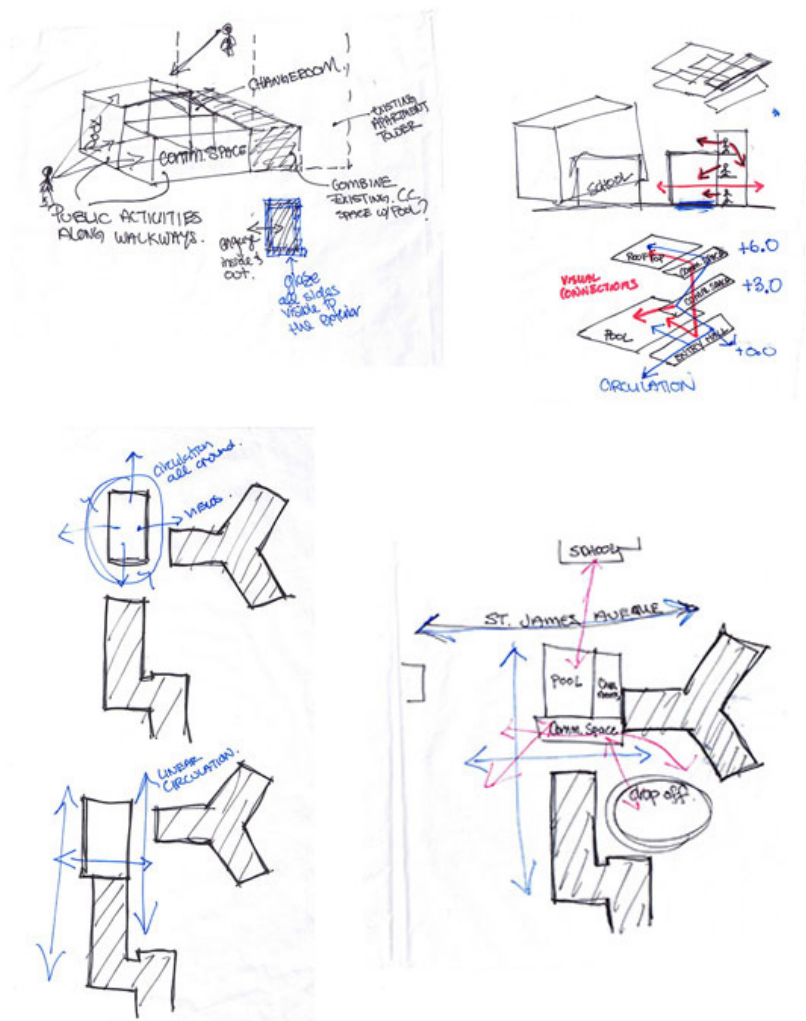


Figure 88
Initial sketches for the
new pool facility (T)
Program and Circulation
(B) Location, views and
connections

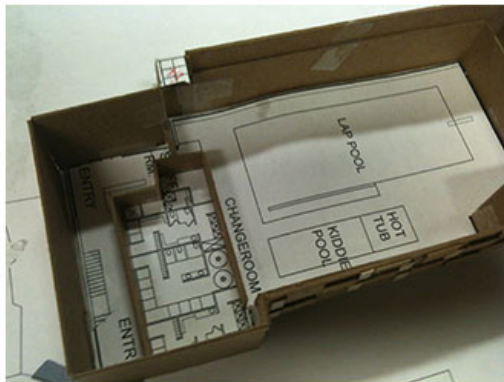
Figure 89
Initial design of the pool facility



UPPER ROOF LEVEL



ROOF TOP PLAY AREA/ LEVEL 3



LEVEL 1



LEVEL 2

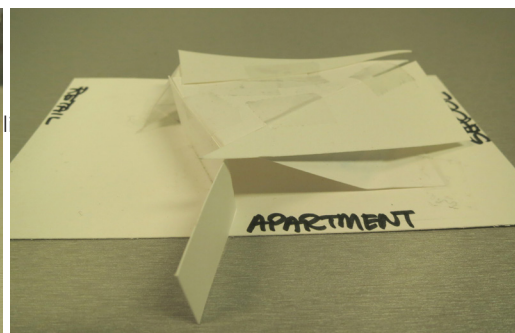
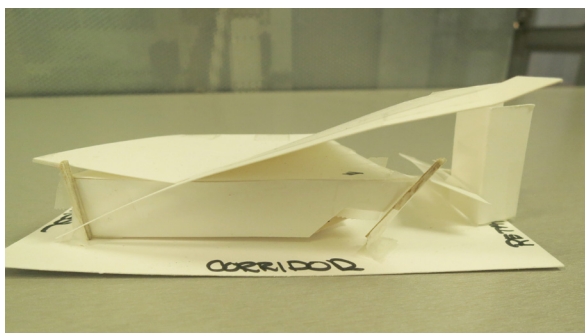


Figure 90
Alternative study models for the pool facility

FINAL THESIS DESIGN MODEL

The final thesis model was constructed out of millboard, clear acrylic and MDF. Millboard and MDF were used to create all of the existing components within St. James Town. Clear acrylic was used to represent the design strategies implemented to create a contrast between the existing solid masses. The lightness of the acrylic was an ideal choice to illustrate the intent of this thesis – Bridging Divides | Creating Connections.

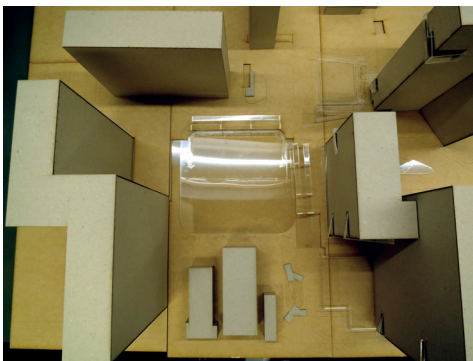


Figure 91
Final Thesis Design Model

10

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