PRESERVATION THROUGH PROLIFERATION:
ADDRESSING GROWTH OF A MID-CENTURY MODERN INNER-URB

by

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CONTENTS

ABSTRACT

This thesis looks to develop a language for future growth in the 1950s suburban development of Don Mills, Ontario. As an excellent example of post-war, modern town planning, Don Mills exemplifies the principles of modernism in its planning techniques and most importantly its encompassing architectural fabric. As gentrification and growth occurred and the 'McMansion' trend of lot-hungry, faux-historic homes continues, this once architecturally focused neighbourhood is becoming increasingly blurred with the extensive demolition and renovation occurring in the last decade.

As Don Mills continues to mature, a growth strategy is necessary in order to preserve the key design features which distinguish Don Mills, as well as address the failing features which, in part, have caused this trend to occur. This project seeks to prescribe growth through design principles which reflect those implemented in the original design of the community.

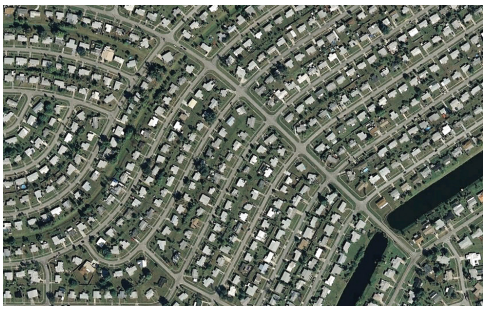
ACKNOWLEDGEMENTS

To Niall, Steve and Ted for all of your words of encouragement, guidance, enthusiasm and criticism throughout the development of this thesis.

To my entire family and friends for their unconditional support and for always pushing me to pursue my dreams.

To my wonderful lady, for remaining supportive and providing me with steady ground - without you I would not have made it.

Thank you all.



Suburban developments in Southwest Florida. (Human Landscapes in SW Florida 2010)

Fig. 1 Fort Myers, Florida, 1970s
Fig. 2 Fort Myers, Florida, 1970s
Fig. 3 Bonita Springs, Florida, 1980s
Fig. 4 Port Charlotte, Florida, 1950s

CHAPTER 1: INTRODUCTION

Can the character of Don Mills be preserved through a reinterpretation of modern design principles to provide a guided language for growth?

Suburban Sprawl

Immediately after World War II, North America developed into a prosperous population of vast consumerism and mobility, which led to a sprawling population with plentiful amounts of land and the construction of vast quantities of housing developments. Today, Canada's top ten largest cities are growing at varying paces, all of which have multiple urban cores, where the majority of North Americans live. However they do not resemble our old downtowns with high-rise buildings touching shoulder to shoulder. Instead, their broad, low outlines leapfrog over existing developments and dot the landscape like radar blips, separated by vast green space and parking lots (fig. 1-4) (Bruegmann 2006, 42-45).

The word suburb evokes an image of post-World War II single-family tract homes, developed as a result of automobile industrialization. In reality however, suburbia has existed for the past two centuries as a prime example of a population's pursuit of lifestyle choices that were incompatible with the policies and development patterns of the urban cores (fig. 5) (Soule 2006, 14). Postwar

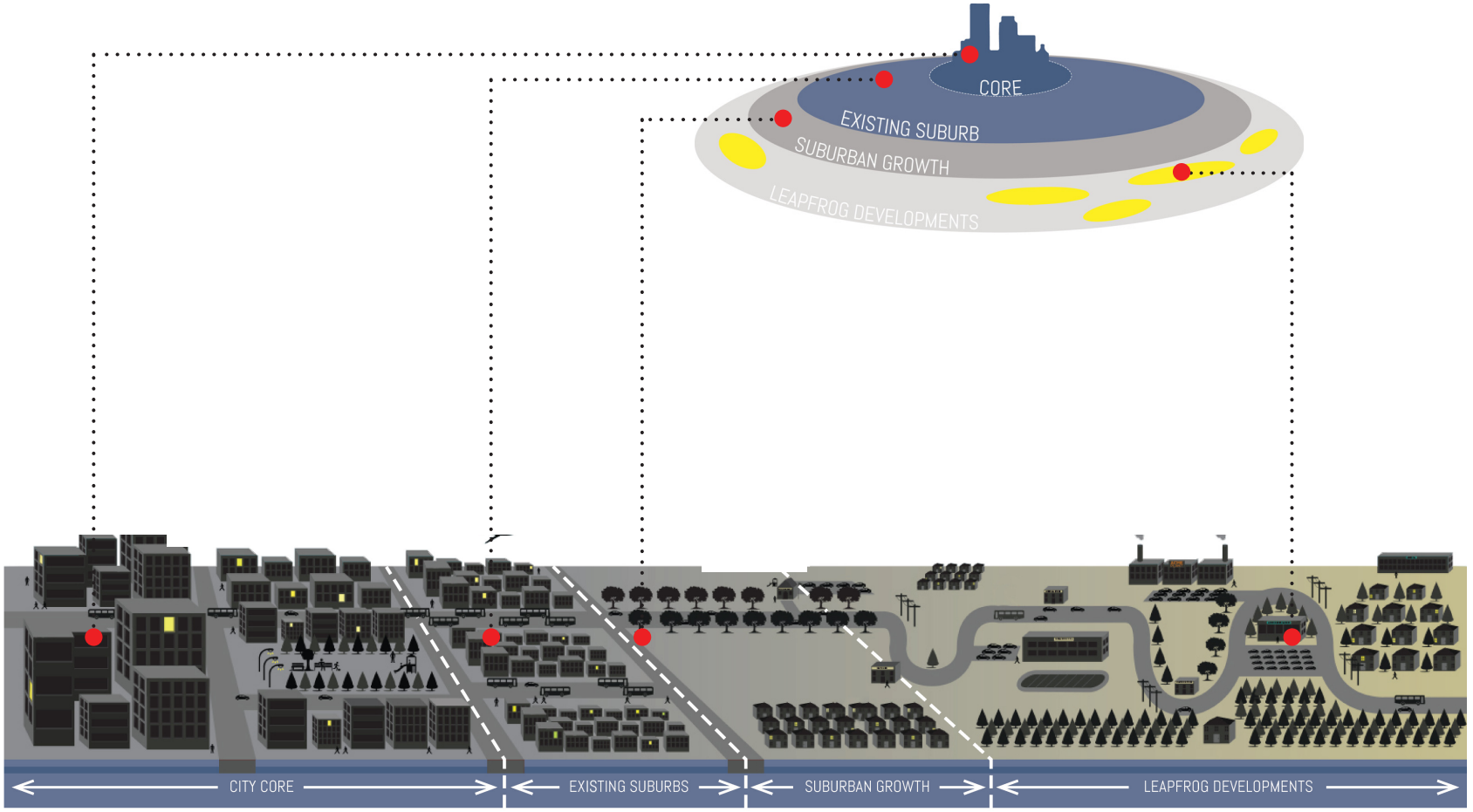


Fig. 5 Suburban sprawl diagram portraying the geographical procession of growth from the city core, which after WWII quickly grew, leapfrogging over existing developments onto greenfields.

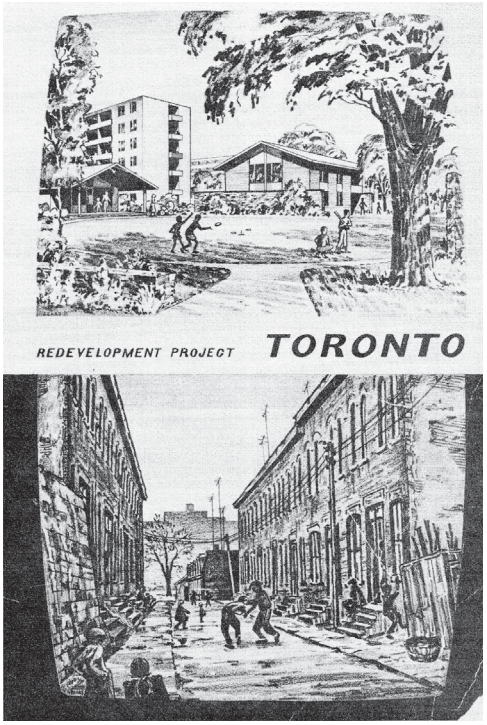


Fig. 6 Image representing the contrast between the state of the urban cores in the nineteenth century compared to the benefits of modernism. (Sewell 1993, 107)

suburbanization and sprawl was different in scale but not really different in kind from what had occurred previously. The idea and reasoning for moving out of the downtown core is recorded from as early as 1799, when a Philadelphia newspaper reported that

> persons who are disposed to visit the environs of this city, and more particularly on a warm day after a rain, are saluted with a great variety of fetid and disgusting smallers, which are exhaled from the dead carcasses of animals, from stagnant waters, and from every species of filth that can be collected from the city... (Blake 1956, 8)

The state of the urban cores at that time resulted in the decreasing desirability of maintaining residence, and following the tradition of 'villeggiatura,' the withdrawal to a country estate for wealthy families which was a central feature of Italian life in the fifteenth and sixteenth centuries after a leisure class had developed in the urban cores, a sprawling mentality had begun (fig. 6) (Coffin 1979, 9).

One of the first known suburbs in North America is Brooklyn, which in 1814 was an independent community. That year, the first steam ferry began carrying passengers to and from Manhattan and the following year a Brooklyn newspaper was already claiming that the "nascent Long Island suburb must necessarily become a favourite residence for gentlemen of taste and fortune, for merchants, laborers, and persons of every trade in

Fig. 7 Levittown drawing, one of the first suburban developments which was designed to offer the family settling in them everything that was required to live a full community life. (Venturi 2007, 53)

society" (Teaford 2008, 2). The most iconic symbol of mass produced suburban housing and what we recognize now as the beginning of the North American suburb is Levittown, New York, built immediately after the war (fig. 7). This marked the beginning of the proliferation of suburban development with the marketing of the 'suburban lifestyle.' However, this form of tract housing developments faced a lot of criticisms at the time, namely defining them as dull, homogeneous and unnatural (Teaford 2008, 34).

> To some observers, sprawl applies to any extension of the suburban margin; to others it is synonymous with the spread of development onto sensitive green lands and agricultural soils, increasing in highway congestion, or the proliferation of new subdivisions of homogeneous and low density, single-family housing. The traditional definition of sprawl, however, is much more specific: it refers to suburban development that is 'haphazard, disorganized, poorly serviced, and largely unplanned. (Bourne 2001, 26)

In Toronto, the amount of development that occurred immediately after the war meant that any statistical presentation of housing units or land consumed was obsolete the day it was published (fig. 8).

> This was particularly true of housing as Canada, no less than other countries after the war, had suffered from the diversion of its constructive energies. The skills of men and women from everywhere had been enlisted for the purposes of destruction, however the human race had continued to multiply and by the end of the war there was a desire for an interval of peace and stability and they needed

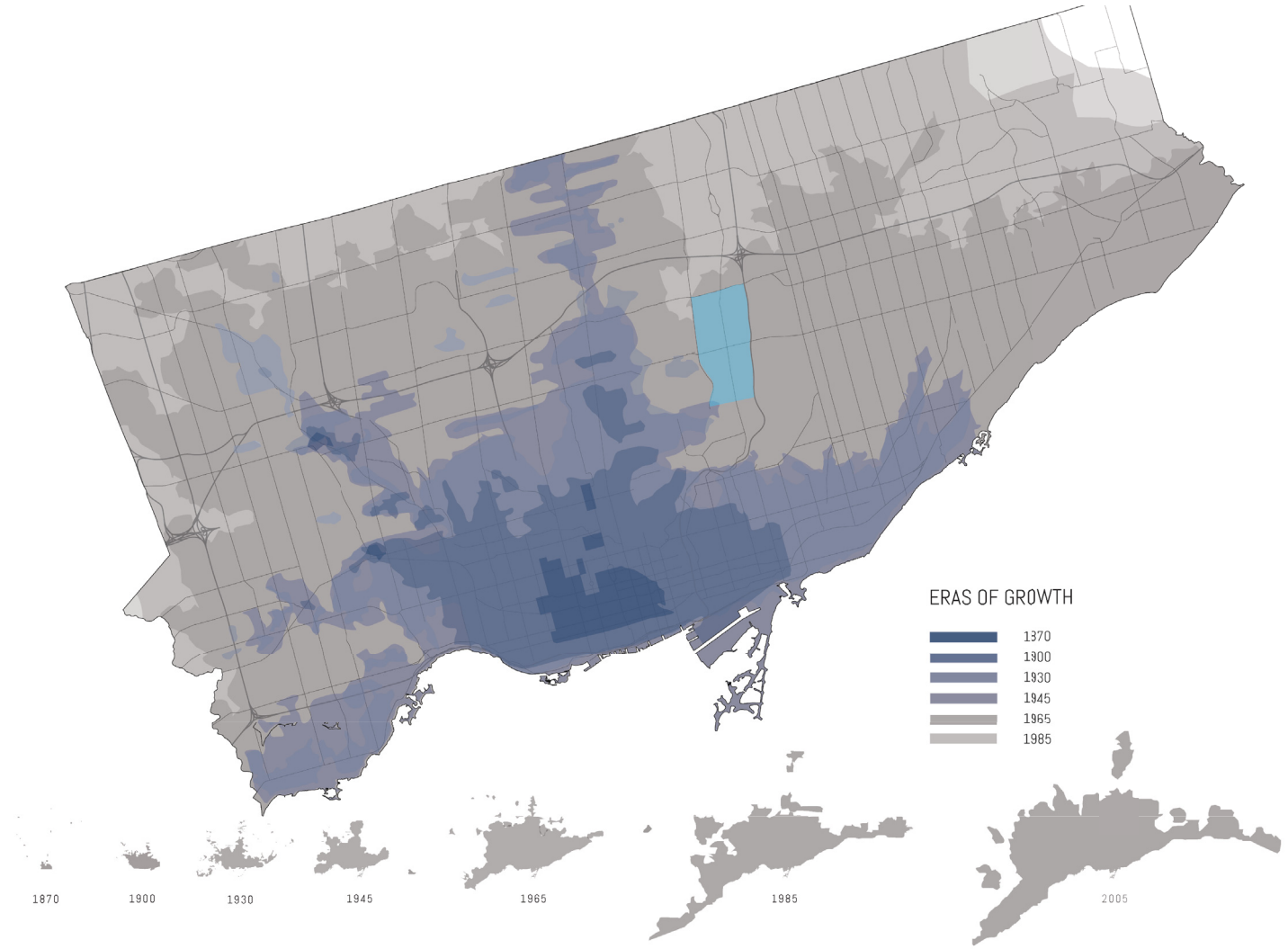


Fig. 8 The rate at which Toronto grew immediately after the war (grey) was expeditious compared to before the war (blue) representing the suburban sprawl that occurred as a result of the influx of population, resources, and technology. (City of Toronto Community Council Profiles)

> to build the houses that were required to raise the new generation. The 1944 'Curtis Report' suggested that if 1946 was to be the first full construction year it would be necessary for Canada to build at least 96,000 housing units a year, a gigantic task for a country which had never before built more than 50,000 housing units a year, and during the 10 years before the war started had constructed an average of only 26,000 dwellings a year. This era of vast expansion is apparent in the growth maps of any major Canadian city, and in Toronto particularly, people were challenging the idea of what a good city could be. While these ideas were generally rejected in the built-up areas of Toronto, they continued to flourish at the edges of the city before city planners really started to accept a change in the built form of a community. (Carver 1948, 4)

Since Toronto was first settled over 200 years ago, it had always been built at a human scale. Walkable distances to the urban core were standard and over time, with increasing populations, Toronto expanded and progressively got larger. Immediately after the war however, in a relatively short amount of time, Toronto was completely transformed from being built for people to being built for automobiles. From 1950 to 1959, 11,550 acres of land were subdivided for housing purposes, and between 1960 and 1969 another 5,500 acres of land was subdivided (Bourne 1973, 223). Obviously, the need for housing after the war played an important role in a lot of the building that occurred, however other factors have been ignored. Among them, the impact of demographic change, revisions in living arrangements, and density ratios played important roles in Toronto's expansion. For

Fig. 9 "Welcome. Did you have difficulty finding us?" In the *Washington Post* column ("Shaping the City") by Roger K. Lewis, FAIA, University of Maryland (Soule 2006, 308)

example, the average household size has declined by over 35 per cent since 1961, resulting in the need for an additional 35 per cent more dwelling units to house the same population (Bourne 2001, 26). Thus without anything except people to space ratios changing, sprawl would have occurred to some degree because of modern space allowances.

While much of the literature on suburban sprawl highlights the impact of municipal plans and zoning rules, it is necessary to understand that there has never been a requirement for sprawl, rather it is the demand that exists for it which drives people out from the urban cores. A key factor is the price, it is cheaper to buy a house in the suburbs. Another factor is the several decades of government spending on major free-to-use highway systems which have enabled daily long distance commutes to occur. Finally, and most significantly, undercharging developers for necessary infrastructure by municipal governments has made it an economically wise decision to develop land on the extremities of urban cores (fig. 9) (Thompson 2013, ii-iii).

First Tier Suburbs

In the 21st century, scholars regard North Americans as living in a post suburban world, where the word suburb is perhaps obsolete. There exists a vast difference between urban neighbourhoods and the sprawling suburbanized

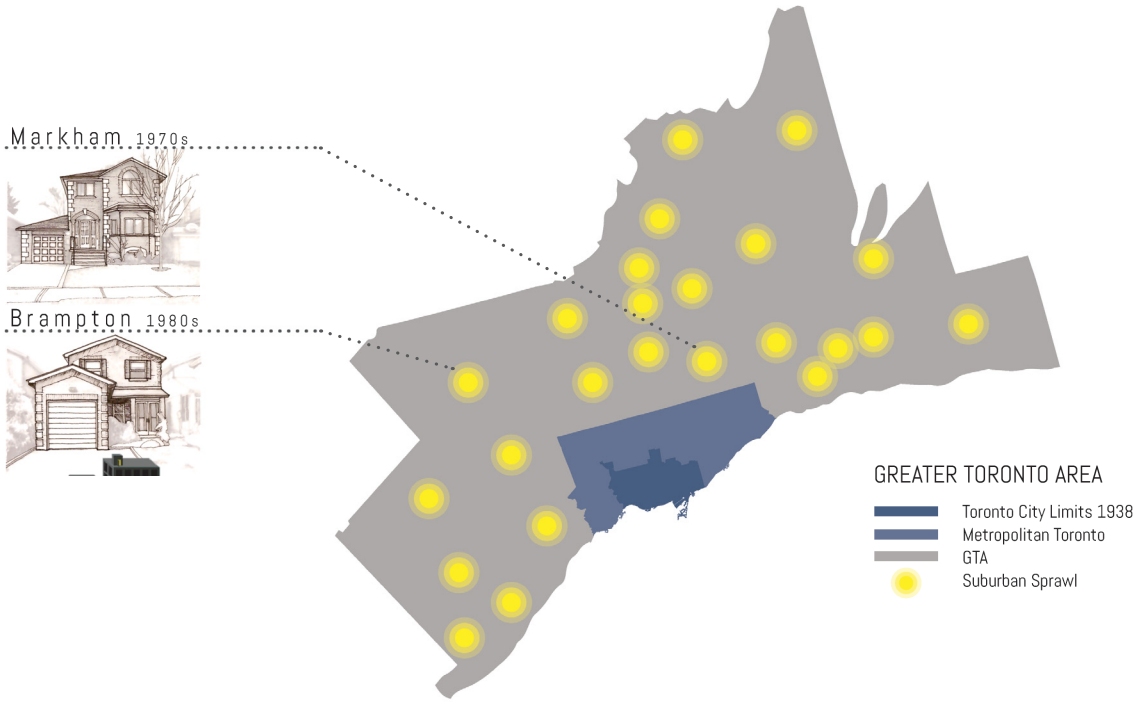


Fig. 10 Toronto's sprawling suburbanized developments that have leapfroged over the existing city limits and out of the geographical progression of developed land.

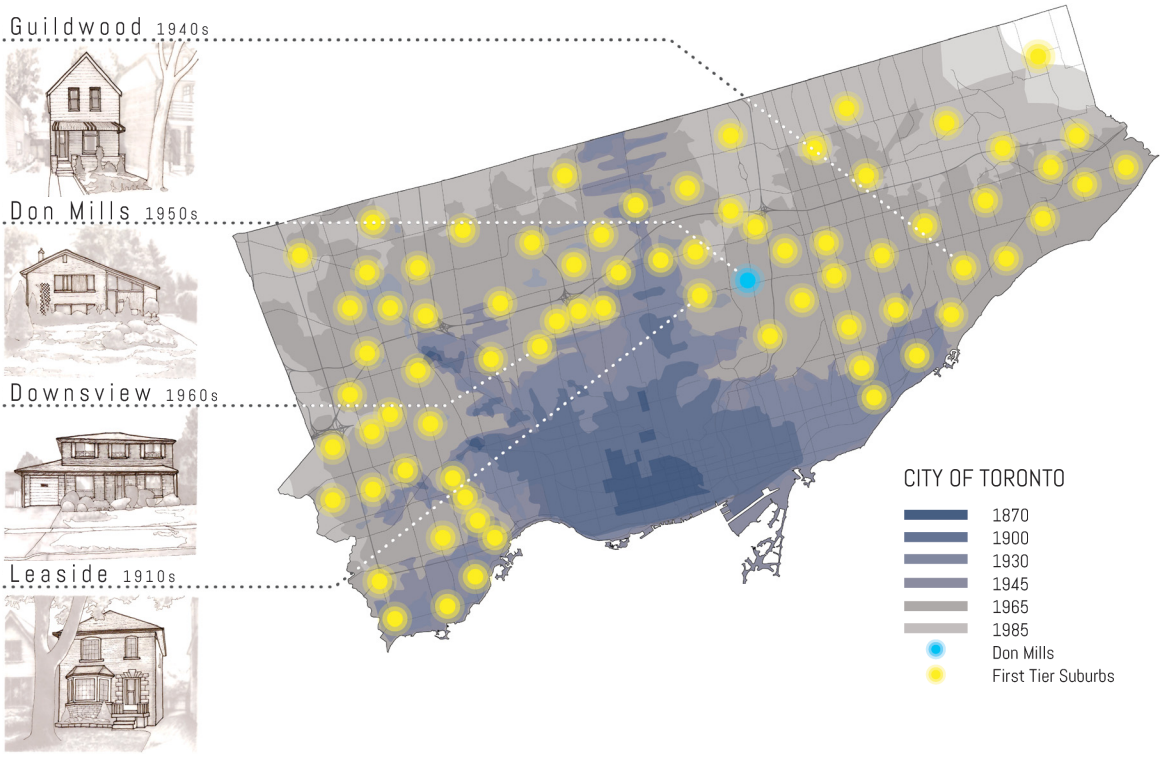


Fig. 11 Toronto's 'first tier suburbs' that were developed right after the war and fall within the geographical progression of developed land beyond the urban core.

developments (fig. 10) that we see today, and squeezed in between these two polarities exist what has been referred to as 'first tier suburbs.' Those which were developed right after the war and lie within the first tier of development, both chronologically and geographically, beyond the city centre (fig. 11). During the late 1990s and first decade of the 21st century, this inner ring of suburbia attracted a good deal of attention from commentators who anticipated their decline and decay (Teaford 2008, 46). Many of these neighbourhoods were poorly planned, built quickly and efficiently in order to satisfy the demand for housing at the time. Little attention was paid to connectivity beyond the neighbourhood limits and often urban planning was automobile-centric, dictating much of how the neighbourhoods looked.

This wave of concern about troubled inner suburbs veils the fact that the first-tier communities are not all alike. Instead, the inner ring is a diverse zone encompassing social and economic extremes. Inner suburbs are not necessarily fragile; many are extraordinarily durable and their age and proximity to the central city does not equate to a decline. Some inner suburbs exhibit many of the symptoms of social disasters, running the risk of being demolished and completely redeveloped. This occurs when a developed plan for a neighbourhood is no longer in line with modern living standards and as a result property values

decline until they become run-down and less desirable. Others, however, remain affluent and highly desirable as a result of innovative planning and a proper preconception of the evolution of the neighbourhood and surrounding area. Possibly the most important generalization that can be made about the inner suburbs is that no generalization can be made about them (Hudnut 2003, 65-66). At the same time, scholars agree that deterioration of the first-tier suburbs is inevitable unless positive targeted interventions do not occur.

Don Mills

In response to the all too common post-war suburb, alternative models began to develop in North America. One such development, Denver's Arapahoe Acres in Colorado, was built between 1949 and 1957. It is the first post-war neighbourhood to achieve historic-district status on the National Register of Historic Places in the United States (fig. 12). Instead of regrading and levelling the lots, which was common development practice at the time, natural slopes were retained. The neighbourhood of post-and-beam homes with an earth-tone palette and horizontal forms represents a break from the common theories of community planning and design in the modern period which encouraged varied architectural styles and a high degree of respect paid to the landscape (Wray 1997).

Fig. 12 Aerial view of Arapahoe Acres representing a new pattern of residential development. All houses were oriented on an angle to the street to allow direct views of the Rocky Mountains and to ensure neighbouring houses do not look directly into each other. (Denver Public Library Digital Collections)

Aerial views of the bare farmland that E.P. Taylor developed in Don Mills c1953. (Panda Architectural Photography Collection)

Fig. 13 Don Mills Rd. & Lawrence Ave.
Fig. 14 Lawrence Ave. looking east

Similarly in Toronto, in 1953, a group of inspired developers saw the potential in the bare farmlands north of the city and decided to develop it into the vibrant and unique community of Don Mills (fig. 13-14). E.P. Taylor was the businessman who initiated the development of Don Mills, along with Karl Fraser and Angus McClaskey whom were put in charge of the Don Mills Development company, to make the vision a reality. The plan for Don Mills was developed by Macklin Hancock, who was then a 28-year-old urban planning graduate student at Harvard University (fig. 15) (Sewell 1993, 82-86).

The plan for Don Mills was guided by five main concepts, all of which were considered new and generally untried in Canada.

Fig. 15 Macklin Hancock c.1970s (Project Planning Associates Ltd.)

The first, and most important principle to define Don Mills was the creation of neighbourhoods. Each neighbourhood was comprised of all the elements which contributed to the elementary school being the cultural focus. It was considered that people tended to congregate around the elementary schools. This was because of the role of the school in the lives of families and the community related activities that they attracted. Even though each neighbourhood functioned independently with its own elementary school and local store, they were considered as part of a larger community. That community consisted of four quadrants, with the common tie being the town centre where the high

Fig. 16 THE NEIGHBOURHOOD

Fig. 17 PEDESTRIAN VS CAR

Fig. 18 GREENBELT

Fig. 19 INDUSTRY

Fig. 20 MODERN DESIGN

Descriptive pictures of the 5 principles that guided the development of Don Mills. (Panda Architectural Photography Collection)

school, library, shopping centre, supermarket, and post office were located (fig. 16).

The second principle was an attempt to separate the vehicle from the pedestrian. Hancock understood that the car was necessary to get to Don Mills, but once you arrived, pedestrian walkways were the main focus to connect each neighbourhood with their elementary school. A hierarchy of streets that included arterial, collector, and local roads was incorporated into the design. This concept was new to Canada at the time and did not fall within the established grid of streets in Toronto. The two arterial roads, Lawrence Avenue and Don Mills Road, were the only bisecting streets in the plan. The rest were T-intersections which reduced the through traffic in the residential neighbourhoods, limiting the interaction between pedestrian and vehicle. To emphasize this point Hancock also eliminated sidewalks from the development and instead opted for a network of green pathways which connected directly into the park network to allow pedestrians access to all parts of the community without having to walk on vehicular routes (fig. 17).

The third principle was to provide generous green spaces throughout the community. This major design element was reflected in the provision of an extensive walkway system, the preservation of many mature trees, and the layout of the streets

to preserve the ravines. The whole plan was designed in such a way to preserve as much of the ravines and existing landscape as possible (fig. 18).

The fourth principle sought to provide local work opportunities for residents in Don Mills. Hancock had the vision that 30 per cent of the residents of Don Mills would be able to work where they lived. This meant that a mix of housing types at a range of prices were necessary to ensure that people could afford to live there. Large areas were set aside at the north and south of the plan for industry. Throughout the plan, detached, semi-detached, and row houses were built at all price levels, including rental and government subsidized housing to ensure that Don Mills was an option for all (fig. 19 & 21).

The fifth and final principle was the consideration to advance high standards of architectural design in Don Mills. In order to ensure a uniform yet diverse image, all houses had to be designed by an approved group of architects, and only in the modern style with approved materials. This meant that the new community would have its own character and be different from anything else built in Canada at the time (fig. 20).

Don Mills was conceived as a garden city, not a suburb. Influenced by Ebenezer Howard's garden city concept, Don Mills was developed to sever

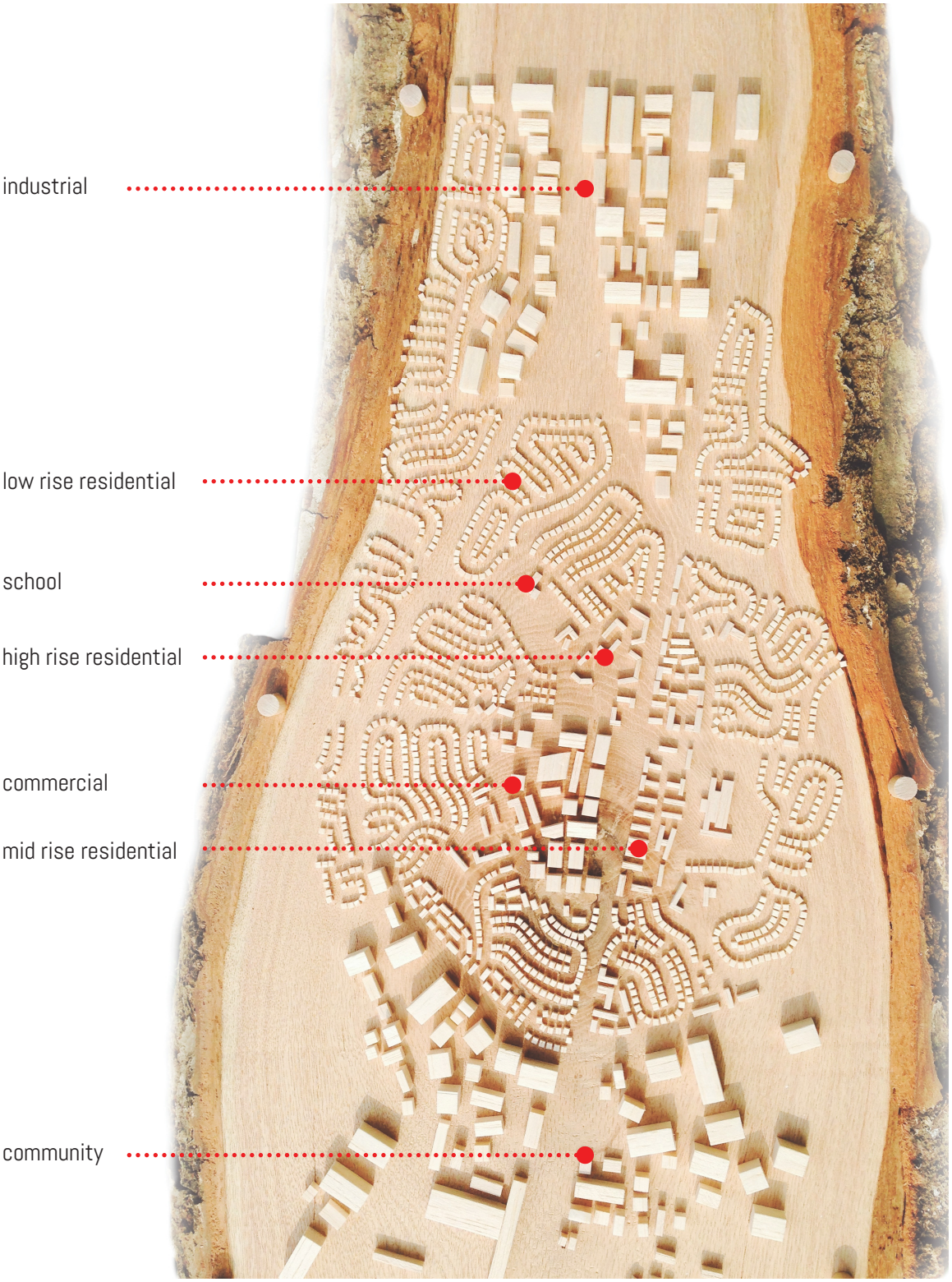


Fig. 21 Model of Don Mills showing land use, specifically the industrial section located on the outer edge of the neighbourhood and the residential quadrants located in the centre.

the association of monotony with the word suburb (Shim 2002, 32-36).

Geography and Surrounding Area

In 1947, E.P. Taylor began purchasing farmland in the township of North York, to the north east of Toronto. He decided on this area because of its remoteness to other developed land, but also because of its proximity to the downtown core. The area had natural boundaries formed by ravines to the west, south, and east, all of which contained railways leading downtown. Roadways had not been built to bridge the ravines and thus access to the site was limited. Don Mills Road, which travels north south through the site, meandered south through the ravine and joined on the other side with the new subdivisions of East York which were under construction at the time. Prior to development, the Don Mills site consisted of approximately 15 to 20 farms (fig. 22).

By 1952, Taylor had purchased almost all of the land that was bounded by the ravines. The total area was approximately 2,063 acres. Much of it was relatively flat and there were few existing trees or buildings. Hancock wanted to disrupt the site as little as possible, and so features such as the rolling hills in the southwest quadrant were retained rather than levelled. The topography, to some extent, also dictated the new road system. Strands of mature trees were protected and

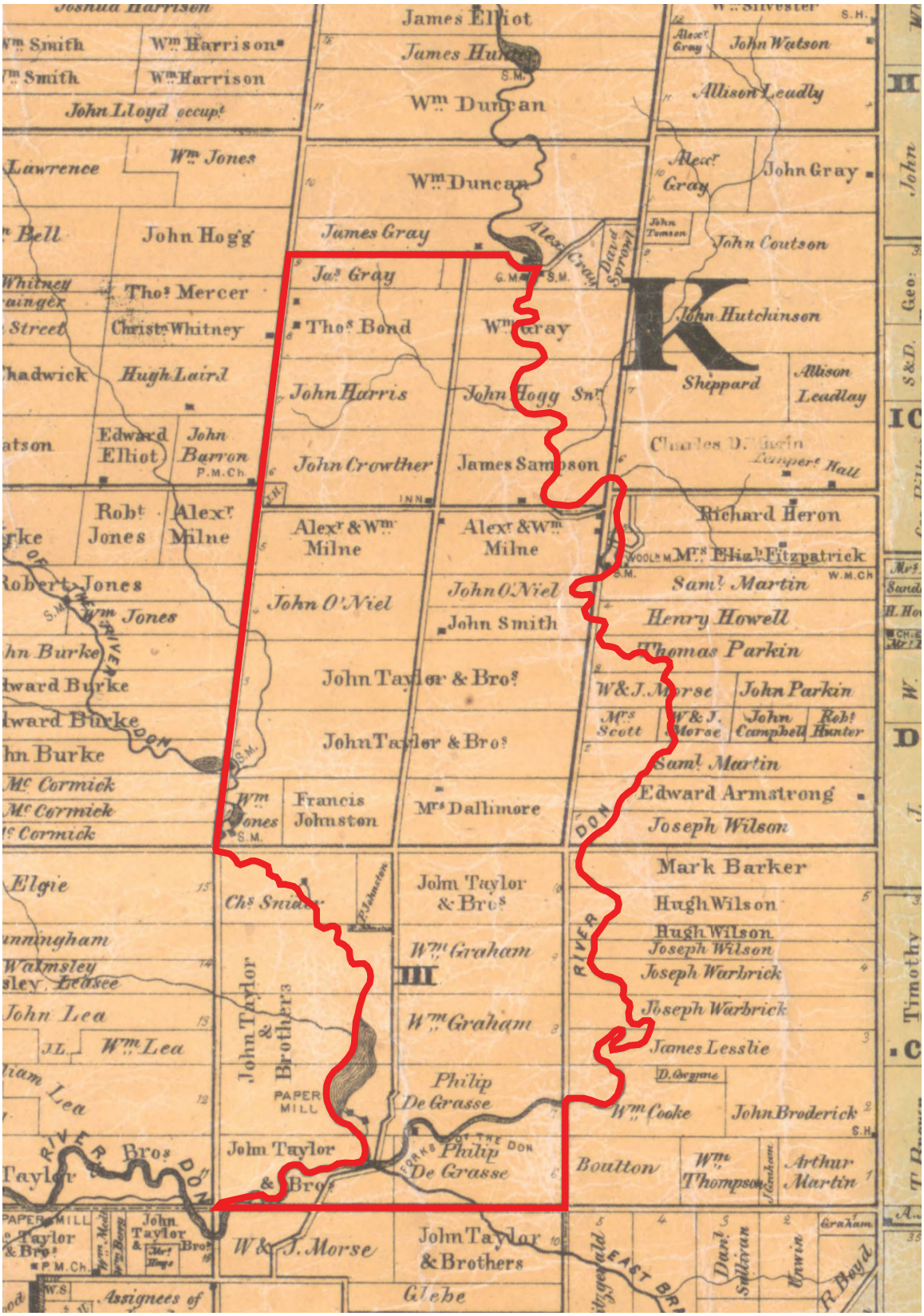


Fig. 22 Farm land divisions prior to E.P. Taylor's development of Don Mills c1860. (City of Toronto Archives)

the road system and housing plots skirted the ravine so as to maintain public green space in the community (fig. 23) (Jones 1957, 40).

The location of the site within the larger context of Toronto was instrumental in Don Mills' success as a community (fig. 24). Taylor recognized that Don Mills was not being conceived in a vacuum, and that the need for a connection to the soon-to-be created Metropolitan Toronto was important. Directly to the north of Don Mills was the future location of the major cross-city planned highway, Highway 401, being built by the Province of Ontario. Hancock however also wanted connections to the south. An additional planned artery to connect the sprawling city was proposed to be built in the Don Valley, directly to the east of Taylor's land. By 1955, Taylor and his team were able to mitigate discussions between the Province of Ontario and the York Road Commission regarding the funding of the project. With the creation of the Metropolitan Toronto government, under Frederick Gardiner's guidance, the city was able to approve the building of the Don Valley Parkway, effectively giving Don Mills' industries access to the provincial highway system. Construction continued quickly over the next decade in Don Mills, and as the community grew in size, the planning implementations that Hancock and his team took became increasingly invaluable to the area's overall success and eventual imitation (fig. 25-30) (LeMay 1949, 12).

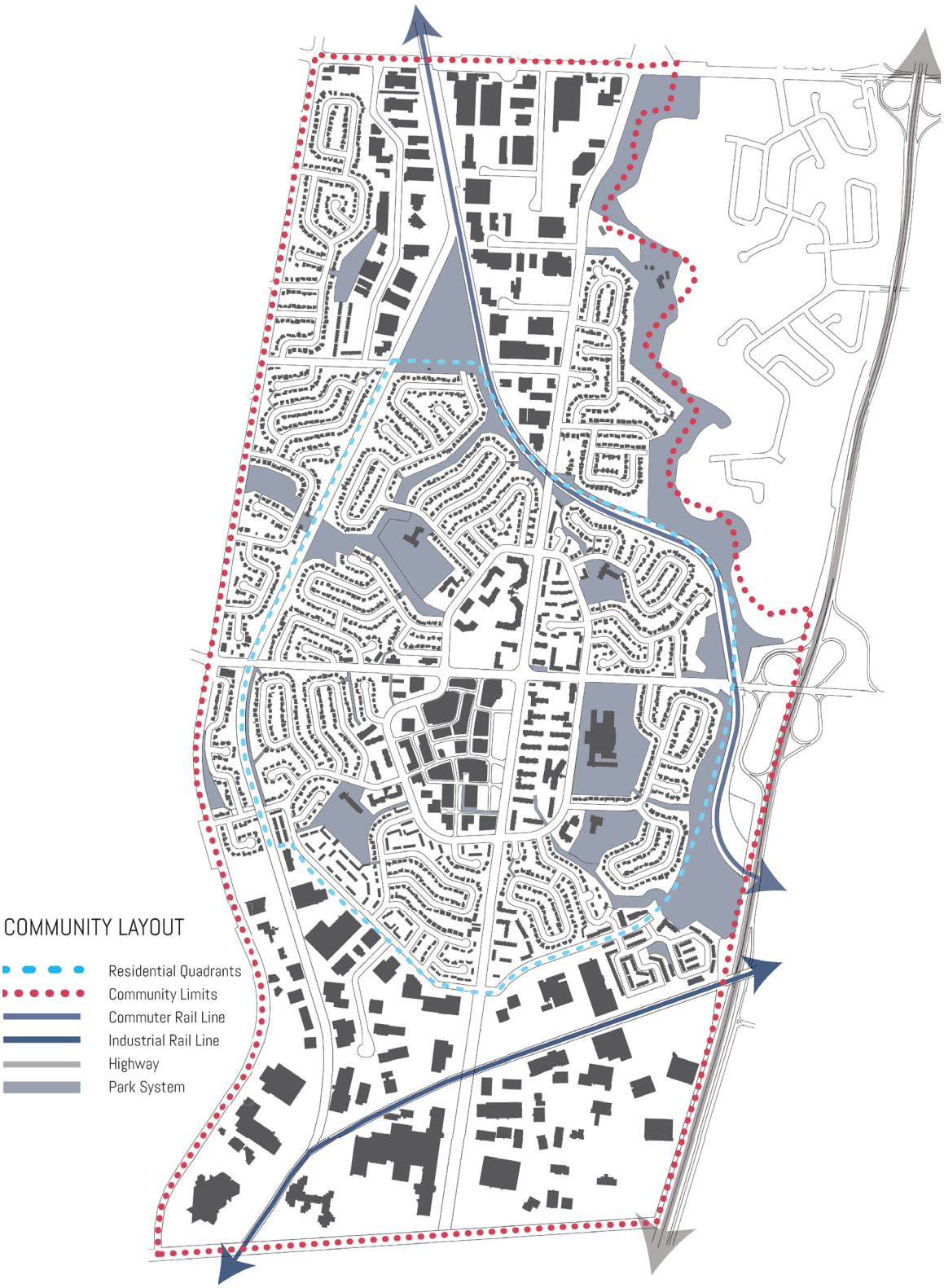


Fig. 23 Don Mills community layout showing how the residential layout and road system was influence by the existing conditions of the site.

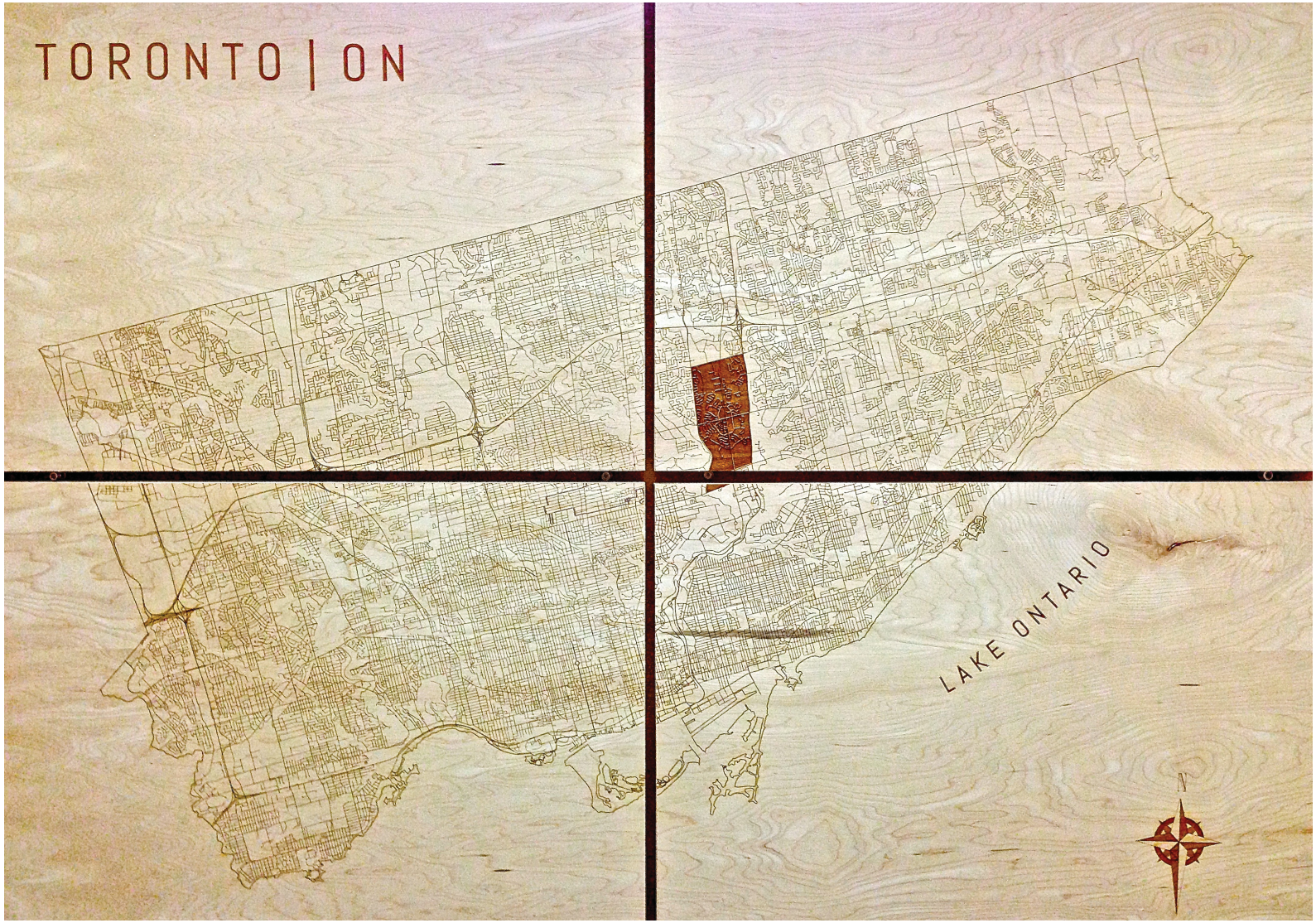


Fig. 24 Map of Toronto indicating Don Mills and its relation to the rest of the city.

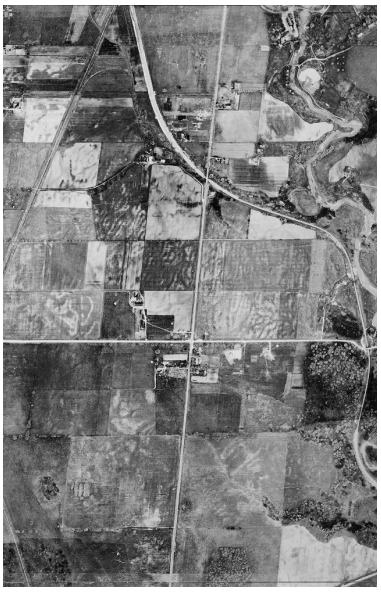


Fig. 25 1947

Fig. 26 1950

Fig. 27 1953

Fig. 28 1957

Fig. 29 1961

Fig. 30 1965

Aerial photography of Don Mills showing the speed by which the community was constructed, starting with the residential quadrants and followed by the central community amenities and the outer industrial ring. (City of Toronto Archives)

Original unmodified houses in Don Mills

Fig. 31 26 Deepwood Crescent
Fig. 32 90 Southill Drive
Fig. 33 39 Jocelyn Crescent
Fig. 34 34 Greenland Road

CHAPTER 2: CONSERVATION

Architectural Elements

The architectural elements present in the modern design of buildings in Don Mills are a key distinguishing factor which separate it from other mid century subdivisions in Toronto (fig. 31-34). By skillful use of design controls, Don Mills Developments was able to ensure a high standard of design by diverse builders, while allowing them the flexibility to develop their own concepts as part of the larger design.

The architectural guidelines for building in Don Mills were restrictive and limiting, yet honest and liberating. Large windows which related to the garden and brought the outside in were desirable. Floor plans were laid out so family members had to walk through common living areas to get anywhere. Kitchens were located at the front of the house with large windows looking out onto the front yard so parents could watch their children outside. Roofing materials were specified so that only certain colours were approved. Backyard fences and second storeys were generally not allowed. Controls were also placed on issues of lot coverage (generally restricted to 25%), building setbacks (generally restricted to 4 meters), and building material (glass, steel and four masonry types) (fig. 35-38) (Sewell 1976, 16-17). The overall idea was to achieve a comprehensive and

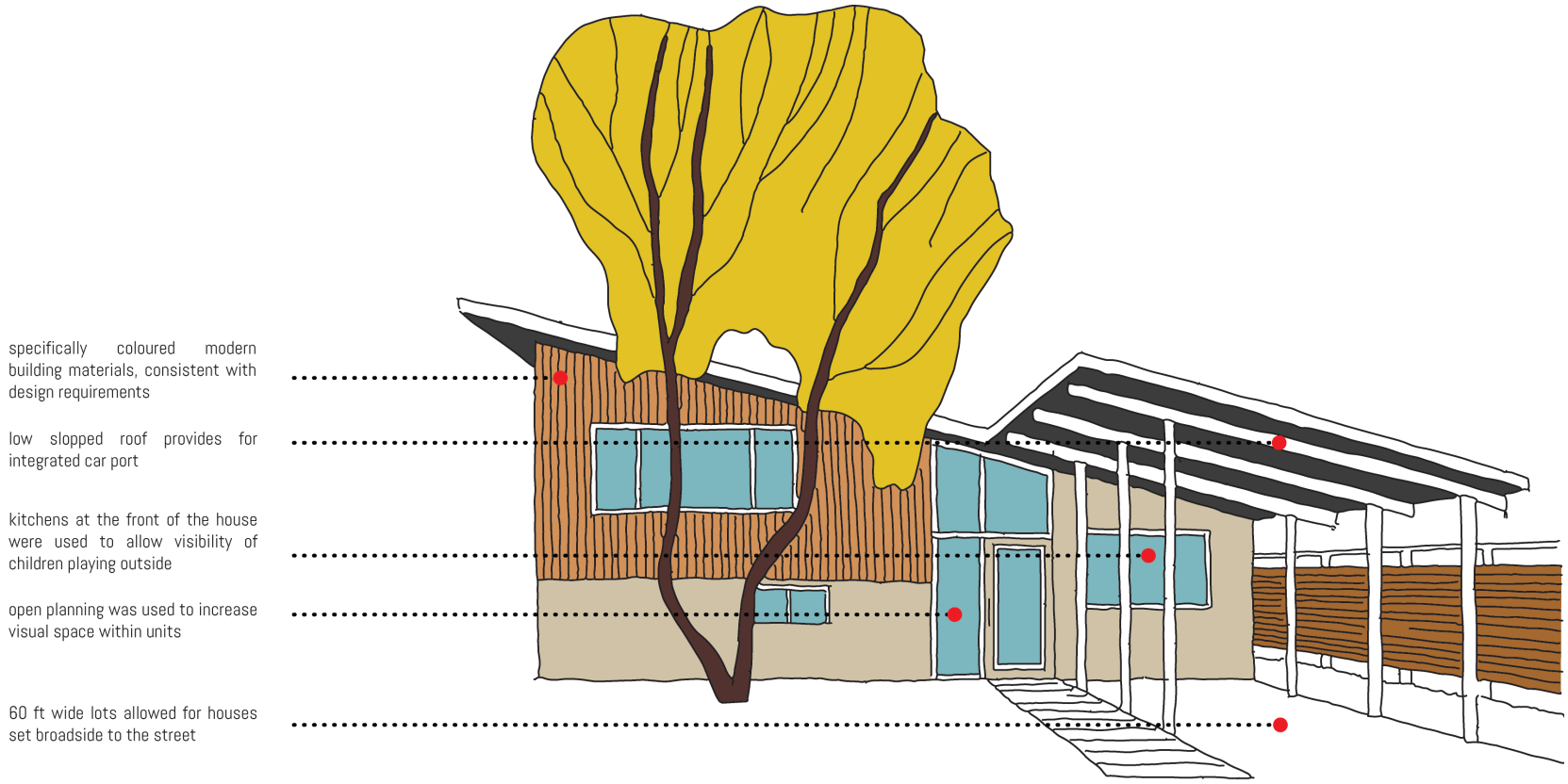


Fig. 35 The original modern design guidelines governing the construction of houses in Don Mills.

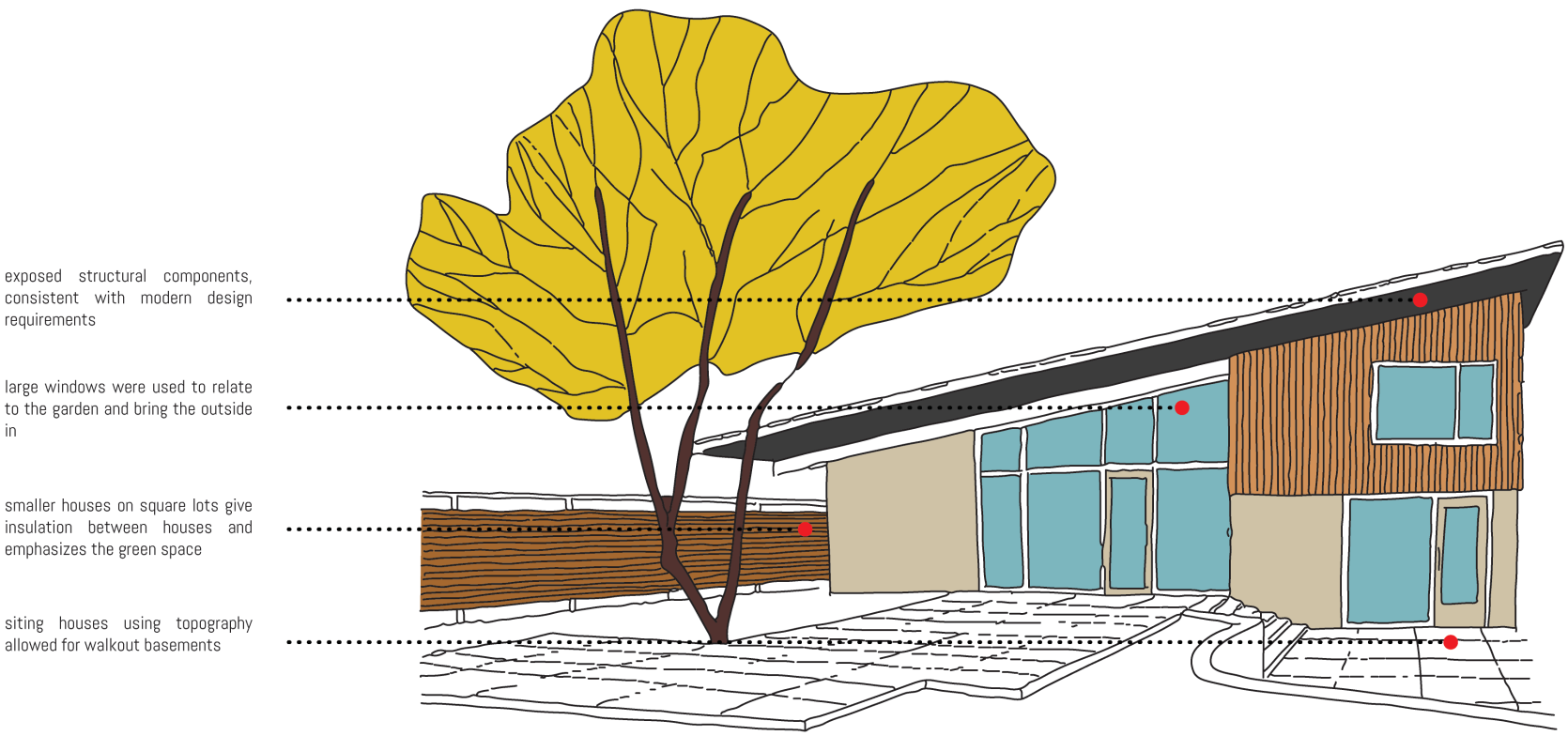


Fig. 36 The original modern design guidelines governing the construction of houses in Don Mills.

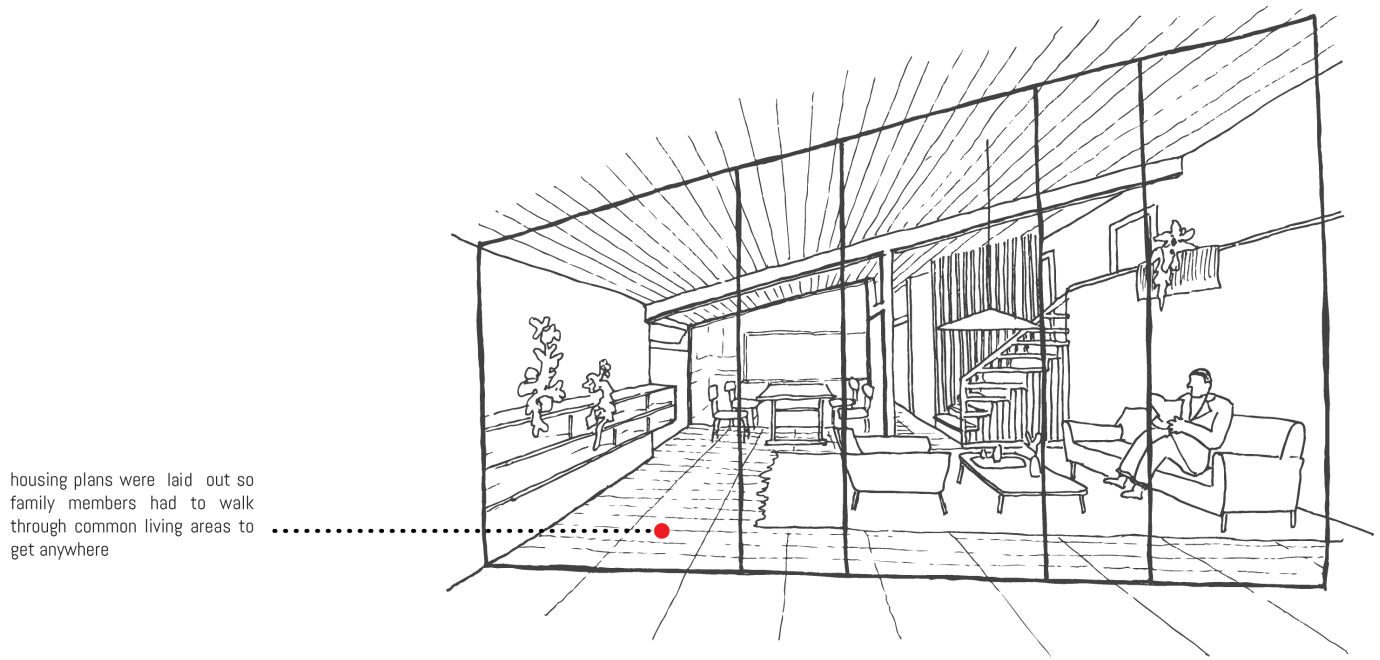


Fig. 37 The original modern design guidelines governing the construction of houses in Don Mills.

Fig. 38 The neighbourhood scale as a result of the original building restrictions in place during the construction of Don Mills.

encompassing architectural fabric, according to modern design principles, never before seen in the city.

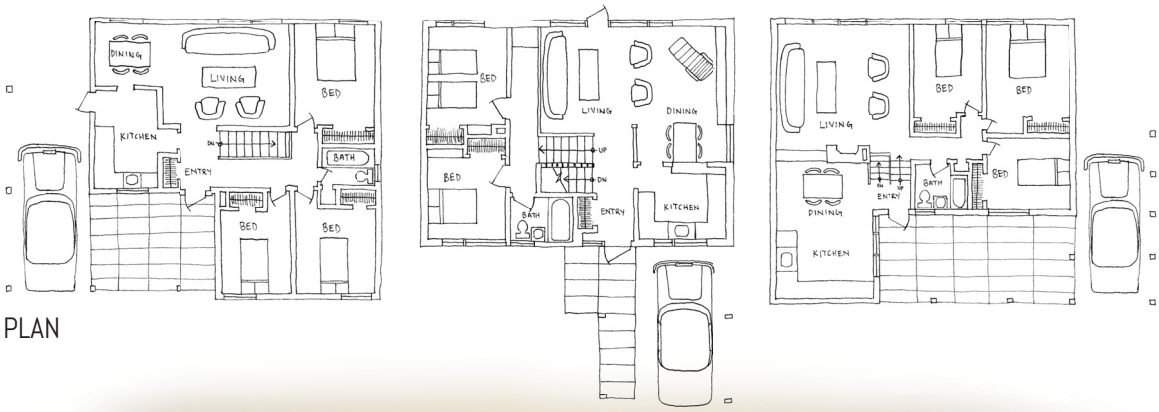
> Don Mills Development controlled the architectural design, colours and materials of all buildings in Don Mills. Furthermore, the corporation insisted that builders use company-approved architects - younger architects like Henry Fleiss, James Murray, Irving Grossman, Michael Bach and John B. Parkin Associates, who had been educated according to Bauhaus principles - to avert any chance of the project's deteriorating into one of the post-war subdivisions of builder's houses that was typical in Toronto in the early 1950's. (Shim 2002, 33)

The resulting architectural character of the community gave a sense of scale to each quadrant that was consistent with Hancock's pursuit of mediating the relationship between the car and the pedestrian. His design allowed for homes to be built on wide 60′ by 100′ lots, breaking the trend in Toronto of having long narrow lots. This layout allowed for spatial insulation to occur between houses and because open floor plans were encouraged, more windows could be provided on the front and rear of the house for more natural light (Sewell 1976, 17). The result was the creation of houses of approximately 1000 to 1500 square feet being built on plots of 6000 square feet. The automobile scale was addressed with the inclusion of car ports and the dominant pedestrian scale that Hancock desired was apparent in the open nature of the neighbourhood. This also translated into the layout of each housing

Architect: Irving Grossman
Layout: 3 Bed, 1 Bath
Size: 1225 sqft

Architect: Henry Fleiss
Layout: 2 Bed, 1 Bath
Size: 1000 sqft

Architect: James Murray
Layout: 3 Bed, 1 Bath
Size: 1290 sqft



PLAN

FRONT ELEVATION

REAR ELEVATION

Fig. 39 The resulting relationship between the interior and exterior of the housing units along with their relationship to adjacent properties.

unit, as the relationship between the interior and exterior was blurred by the inclusion of amenity spaces in both the front and back yards. Although an approved architect was required to design each unit, a uniform yet diverse image was created. Adjacent houses differed in appearance yet were similar in the ways in which each addressed the site and each other (fig. 39).

Current Challenges

Sixty years later, Don Mills continues to be a model for suburban development across Canada and the world, making it one of the most highly sought after places to live in Toronto. However, at the same time that Don Mills was hugely successful as a planned community, it inevitably developed shortcomings as the neighbourhood matured. In some ways Don Mills wasted a lot of land and was unsustainable. Hancock's design allowed for a generous amount of outdoor space compared to the rest of Toronto, which results in a below average population density in the area. This, in part, has resulted in the current trend of tearing down existing Don Mills houses and building 'monster homes' on the generous lots. As Jonathan Mousley, the vice-president of the ratepayers association of Don Mills residents said, "They [developers] just see their own home; they don't see it as part of a neighbourhood, as part of the community, and that's unfortunate" (LeBlanc 2008, 1) (fig. 40-43). The current bylaws governing Don

New developer homes built in Don Mills

Fig. 40 42 Yewfield Crescent
Fig. 41 5 Swiftdale Place
Fig. 42 36 Crossburn Drive
Fig. 43 29 Bradgate Road

Mills allows the construction of 2 storey, 10 meter tall homes with a lot coverage of 25 percent. This encourages the building of lot-hungry, faux-historic McMansions and is completely within developer's rights (fig. 44). However, convincing reasons exist for retaining the original architecture, aesthetics, and sense of community in Don Mills, therefore a guide to expansion and new building must be developed. Similar to Araphaoe Acres where guidelines strictly govern what and how construction occurs in the community, a similar framework needs to be created in Don Mills. As Toronto heritage architect Catherine Nasmith says;

> [Don Mills] is as important to Canadian planning and architecture as any Georgian development is to British planning. No one would think of defacing a Georgian row, yet we have little to prevent the destruction of Canada's modern heritage. This was the period of Canada's coming of age, just before the Centennial. (LeBlanc 2008, 3)

Regretfully, developers view Don Mills as a community of small homes situated on large lots in close proximity to downtown. This reflects the potential for promising investment gains. Evidence suggests that developers will demolish a building if when constructing and selling a new dwelling they are able to triple their initial investment (Fine 2002, 2). The result is the distillation of the architectural fabric of the neighbourhood as the original housing stock is beginning to disappear. As Jon Teaford explains;

Fig. 44 The monster home trend which builds to the maximum allowances detracts from the sense of scale within the neighbourhood.

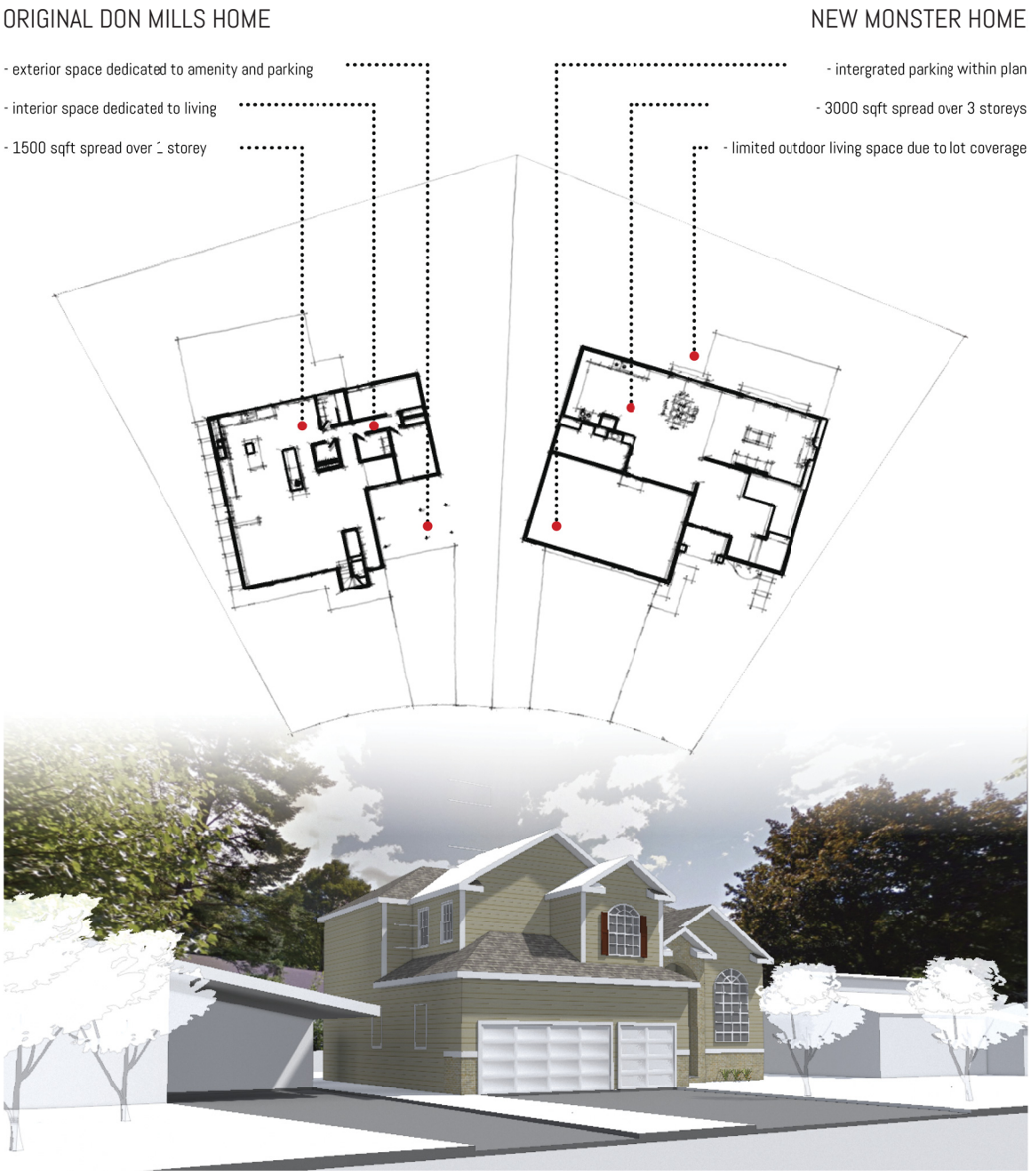


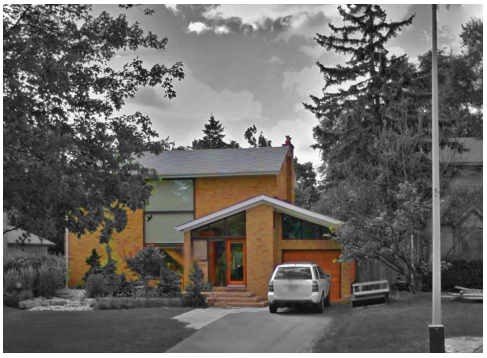
Fig. 45 The resulting visual and spatial effects of lot-hungry developer homes being built between original Don Mills homes.

> The serenity of some older first-tier suburbs has been disturbed, however, by too much economic success. Rather than being undesirable cast-offs, these communities have become too desirable, attracting wealthy purchasers who clear older homes and replace them with larger, more up-to-date and ostentatious dwellings...A certain amount of change is inevitable, but you get too many teardowns and you start losing the character of your community. (Teaford 2008, 56)

The resulting distillation is not only present in the decline of the original housing stock, but also in the feel of the community. When larger developer homes are shoe-horned in between original homes, the open feeling of the neighbourhood is diminished. The larger homes crowd the street and present a set of design principles which reflect a different set of living standards when compared to the original homes. The dominance of the automobile is immediately experienced in the inclusion of integrated two car garages within the plan of the house, directly relating to the addition of second storeys. High roof pitches also add to building heights, creating an out of scale addition which effectively contradicts Hancock's original vision (fig. 45).

Smart Growth

Consequently, the challenge is to develop a vision for the future, that addresses the changing housing tastes and needs without sacrificing the character and long-term stability of Don Mills. Two areas of concern exist in the residential



New developer homes built in Don Mills

Fig. 46 12 Swiftdale Place
Fig. 47 1 Swiftdale Place
Fig. 48 60 Langbourne Place
Fig. 49 28 Farmcote Road

development of Don Mills. The first is the trend to demolish. The second is the need to identifying parcels where compatibly designed, appropriately scaled new homes can be added that direct higher density and new investment to appropriate areas. In order to address these needs, a language for designing needs to be adopted to guide the growth of Don Mills. It then needs to be governed to ensure that speculative teardown developers who have little long-term interest in the welfare of the neighbourhood do not compromise the vision.

The design language must reflect an adaptation of Hancock's original design guidelines, with an understanding of contemporary desires within the housing market. Few examples exist within the neighbourhood of appropriately scaled additions, however their designs have proven to be the most respectful and relevant within the context of Don Mills (fig. 46-49).

More specifically, their designs bridge the gap between the original homes and the recently added monster homes. Lot restrictions, building heights, and building setbacks are not built to their maximum allowances, maintaining the open feel of the neighbourhood quadrants. Second storeys are allocated at the rear of the houses in order to maintain scale among adjacent properties. The street facade thus remains largely intact and helps maintain the original vision for the community (fig. 50).

Fig. 50 A smart growth strategy which addresses scale within the neighbourhood while also providing additional amenity space within each unit.

This thesis seeks to develop this design language, and in turn create strategies to ensure the retention and protection of key design elements of buildings that create the cultural heritage value of Don Mills. This includes encouraging the restoration and renovation of existing buildings and guide change so that new developments are sympathetic to the architectural fabric of the neighbourhood.

Early examples of the emergence of the modern style in residential housing trends as a result of the emergence of 'suburbia.' (Curtis 1996, 95, 124)

Fig. 51 Robie House
Fig. 52 Gamble House

CHAPTER 3: DESIGN

Design Principles

In order to distill the architectural guidelines that governed Don Mills down to a set of principles to guide growth, it is important to consider the design language just as the architects of the early 20th century addressed design. Modern design was an attempt to reconcile architecture to the rapid technological advancements and the modernization of society. This led to the emergence of two related residential housing styles, the Prairie Style (1900-1920) led by Frank Lloyd Wright (fig. 51) and the Craftsman Style (1905-1930) led by Greene and Greene in California (fig. 52) (Curtis 1996, 94). In 1925, when the Nazi government outlawed modern architecture and closed the Bauhaus, many European modern architects, including Walter Gropius and Ludwig Mies van der Rohe, immigrated to the United States stimulating the emergence of the International style. It was coined to characterize a set of principles utilizing two concepts: functionalism and reductionism.

Functionalism is defined as the principle of generating a design based on the purpose of the proposed building. Reductionism is the principle of reducing the elements in a design to their most basic expression, resulting in functional architecture (Wray 1997).

Just as the International style was a prime example of designing based on a set of principles rather then on a style, the design language, which will guide the growth of Don Mills, must be approached in the same way. When Macklin Hancock decided to forgo all the rules of planning when he approached the design of the Don Mills community, he formulated a specific unique DNA for Don Mills. It was not meant to be an adaptation or re-creation of any existing suburb. It was meant to be in a new category all on its own, with DNA that did not resemble that of any other existing place. The same approach must be taken in order to develop the new design language for Don Mills. It must stem from a set of principles, rather then being based on a specific style. In this way, the proposed designs for this thesis are less about what they look like and more about how they were developed. The method by which they were approached and the principles that guided them portray a method to designing that is in line with Hancock's original vision for Don Mills, and thus will be sensitive responses to the architectural fabric not only in their looks but also in how they fit within the context of Don Mills.

Structural honesty plays an important role in modern design, and that transparency in structure will influence the growth in Don Mills. In this way, existing and new construction will be able to seamlessly be joined. Coupled with an emphasis

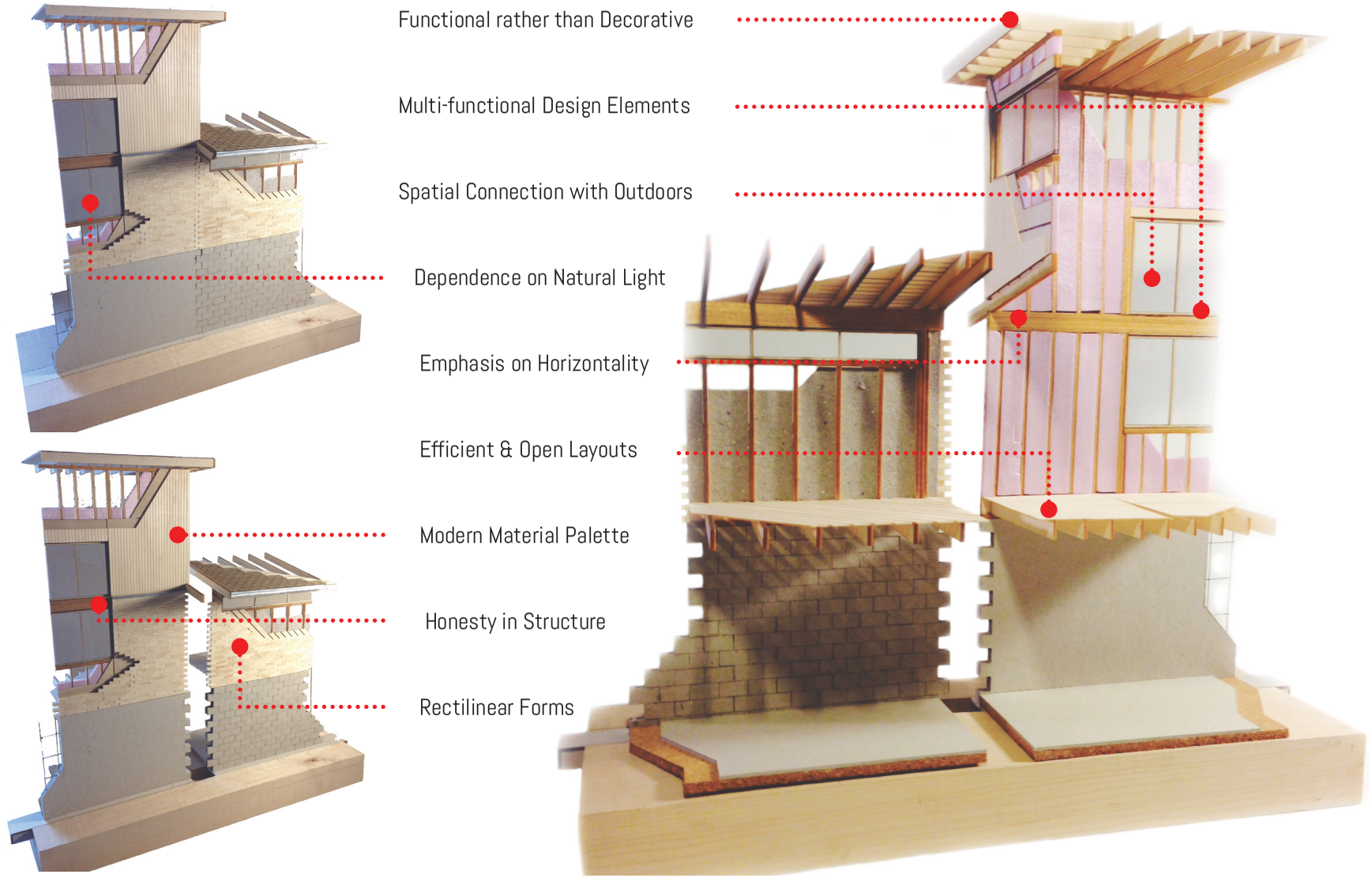
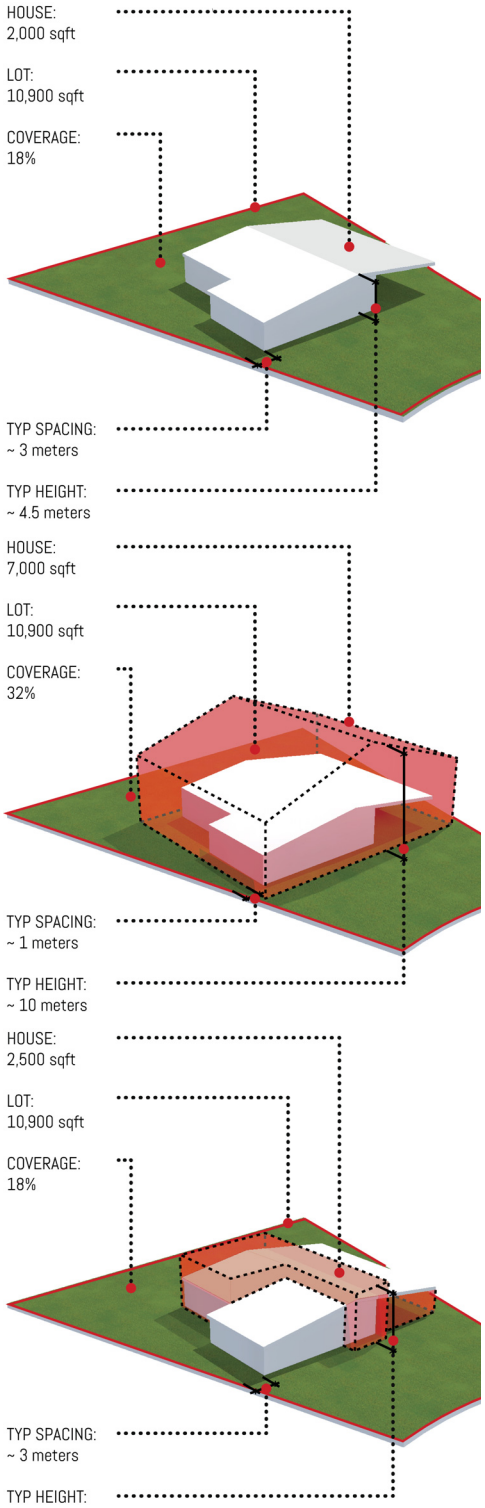


Fig. 53 An illustrative image depicting the developed design principles for guiding growth in Don Mills.

on horizontality and a focus on rectilinear forms, the building techniques used in new construction will allow a seamless integration into existing structures while also being able to distinguish themselves through the use of a modern material palette. This will not only complement the existing materials used, but also provide a contemporary feel that will stand out among the existing architectural fabric of the neighbourhood. Any architectural ornamentation will be functional rather than decorative, allowing elements to perform multiple purposes and thus not complicate the structure with unnecessary components. Finally, spatial connections, especially with the outdoors, and open layouts will ensure non-essential living elements are removed and only efficiently planned spaces will be provided (fig. 53).

These principles will ensure the DNA of the original Don Mills is preserved and represented through new growth in the neighbourhood. The principles are meant to be protective, rather than restrictive and provide a clear outline for how to approach a design before construction commences. They were developed with an understanding of the modern movement, but also build upon some of the best learned lessons from mid-century modern design. The principles allow for honesty in the structure and formal layout, as well as in the design process, which in turn will make for appropriate additions to the architectural fabric of the community.



Lot conditions as a result of structures in three scenarios

Fig. 54 Original structures
Fig. 55 Maximum build out
Fig. 56 Sensitive additions

Renovation Strategy

The renovation strategy is designed to contest the teardown trend in Don Mills, and represents a means to construct sensitive additions to existing buildings while satisfying current trends in the housing market. An existing original Don Mills home, 26 Deepwood Crescent, was chosen based on its location, size, lot size, and proximity to other alterations and new build projects (fig. 54). Current demolition in Don Mills occurs in pockets, where one house is altered followed by other houses within close proximity. This trend occurs because of increased property values which are a direct result of new more expensive construction. When property values increase, it makes for a wise economical investment to renovate a property as the potential net gain is increased. In Don Mills, a lot of the new construction has been granted variances on the building restrictions by the city. This creates a domino effect where it is made easier for adjacent properties to be granted the same allowances, therefore increasing the profit margins from constructing the largest house possible.

The existing bylaws allow for lot coverages in most residential areas of Don Mills to be 25% and the height restrictions to be 10 meters, or 2 storeys (fig. 57). However, these bylaws are a blanket condition that apply to the entire North York region, and do not specifically address Don

Fig. 57 Don Mills by-law restrictions for lot coverage and building heights (City of Toronto Community Council Profiles).

Fig. 58 The pocket condition created by starting the renovation trend of sensitive additions in an ideal location backing onto a pedestrian trail within the community.

Mills. As a result, building allowances within the neighbourhood stand in direct contrast to Hancock's original vision for the community. Lot coverage allowances of 25% create less green space, and diminish both the public and private outdoor amenity space. Also, building height allowances create the opportunity for large, imposing housing facades which dominate the neighbourhood full of ground hugging bungalows. Newly built developer homes within Don Mills have been granted variances which have allowed for lot coverages of up to 35% and building height allowances up to their maximum of 10 meters. The result has been a distillation of the architectural character of the neighbourhood and the blatant disregard of adjacent properties (fig. 55).

This particular house was selected because of the lack of alterations to surrounding properties, and the aspiration of starting a new trend of sensitive alterations in the housing pocket (fig. 58-59). The existing conditions of the property were a lot size of approximately 10,000 square feet and a house size of 2,000 square feet, resulting in a lot coverage of 20%.

The designed renovation of 26 Deepwood Crescent is a guided addition to an existing building that follows the outlined principles while remaining true to the architectural feel of the neighbourhood (fig. 56). A protruding centred facade highlights

Fig. 59 Site plan showing the relation of the renovation with adjacent properties and the landscape.

Fig. 60 Street elevation rendering showing the integration of new construction with existing structure.

the addition to the house, while maintaining the low-sloped roof of the existing structure on either side. The renovation involves the conversion of the garage into interior amenity space, as well as a second storey on the rear portion of the house, barely visible from the road. The square footage of the house increases to double its original size while at the same time maintaining the lot coverage percentage and only increasing the overall height to 6 meters (fig. 60). The result is a 4 bedroom, 2 bathroom home with an open concept living area and recessed second floor overlooking the spaces below. The main floor is separated into communal living and dining spaces on one side and private living spaces on the other. This layout enables the open concept of the neighbourhood to translate into the interior with both a spatial and visual relationship (fig. 61). The house also has a finished basement, providing additional square footage for living, amenity, and utility spaces.

The new additions produce an inviting and livable space on the interior, with a strong connection to the surrounding landscape. A clerestory level of windows allows ample natural light to flood the living spaces from the second storey, enhancing the visual and spatial connections with the outdoors. This also allows for controlled light to penetrate the private living spaces in order to maintain the separation between the two sides of the plan. All of the architectural elements in the

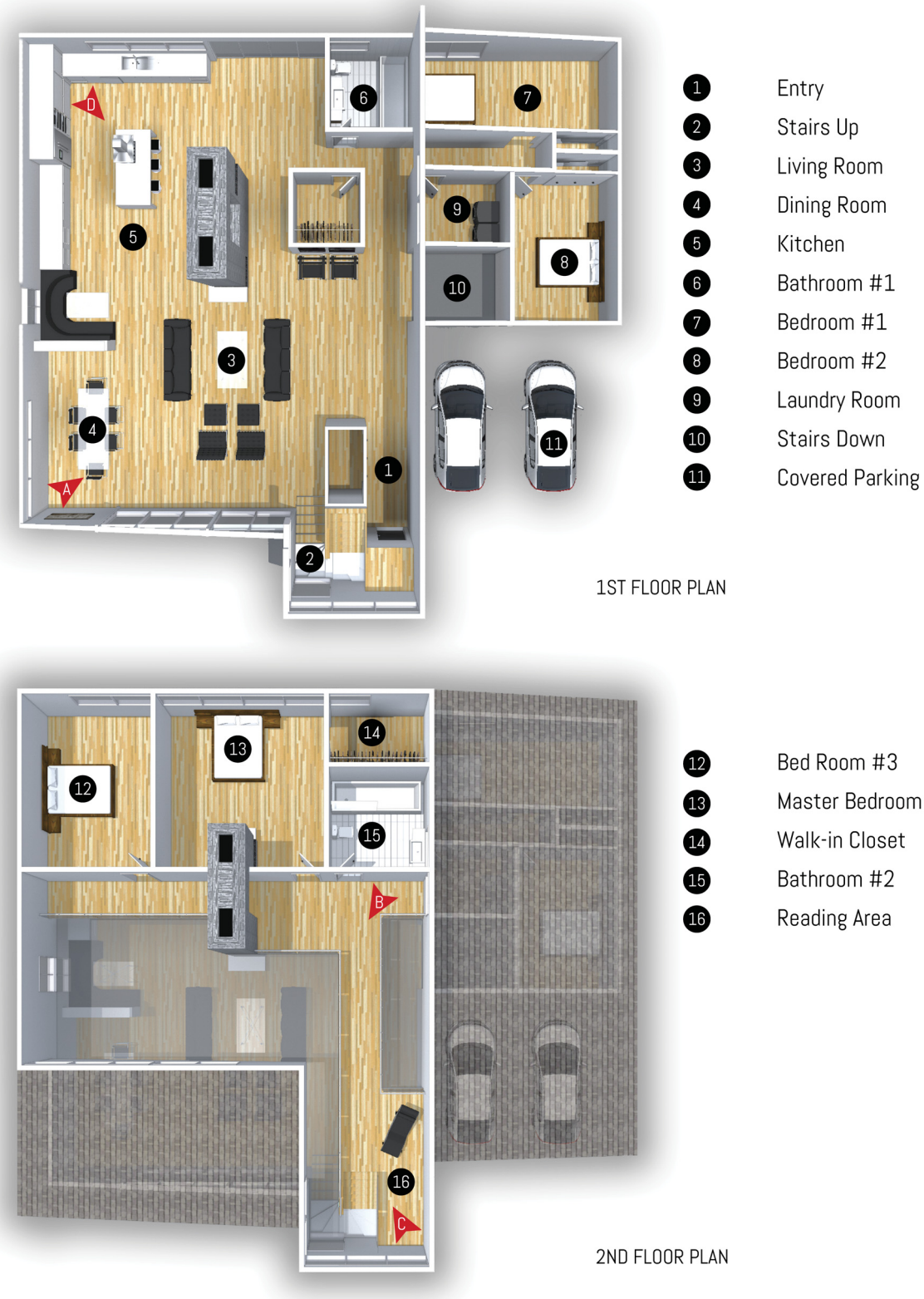


Fig. 61 First and second floor plans of the renovated addition to 26 Deepwood Crescent

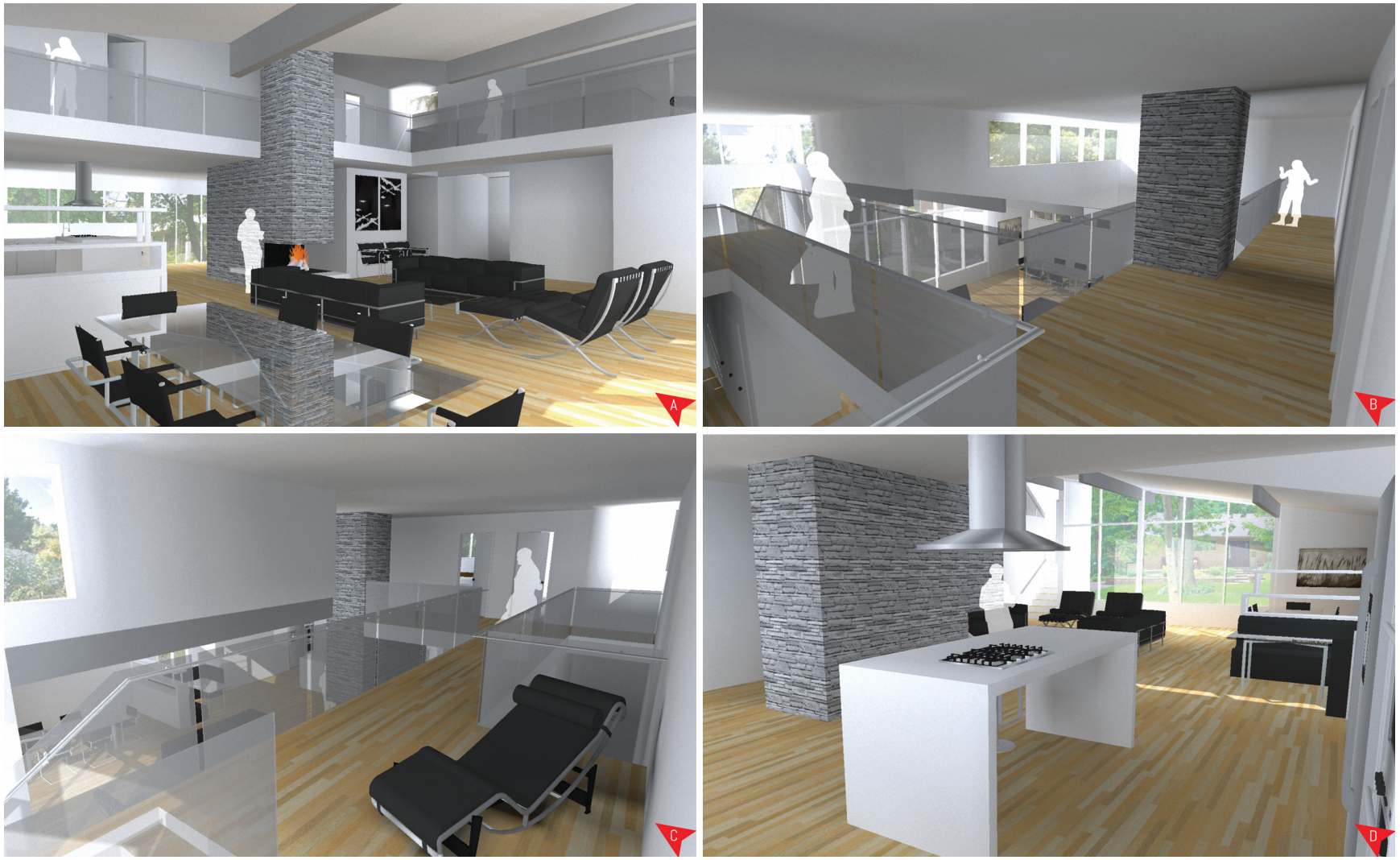


Fig. 62 Interior renderings showing the interconnectivity of spaces as well as the multifunctional aspects of the architectural design elements.

design serve multi-functions and are purpose built rather than decorative. For example, while the rear second storey addition ensures the double height open living and dining spaces at the front of the house, it also creates a more enclosed space at the rear of the house where the kitchen is located, a useful feature for ventilation and artificial lighting. Also, the structural stone chimney serves as both a double feature fireplace in the living and master bedroom, as well as a structural support for the second storey mezzanine overlooking the living spaces below (fig. 62).

The emphasis on horizontality is maintained in the design by only increasing the overall height of the structure by 2 meters. Aside from the protruding facade, the majority of this increase is allocated at the rear of the structure, maintaining the street presence of the home. The horizontal arrangement of the clerestory windows also helps to ground the structure by providing a break in the facade before reaching the soffit. The vertical wood siding on the exterior of the addition provides a juxtaposed look from the street, identifying the new renovation, while at the same time fitting within the colour palette of the existing building materials and the neighbourhood as a whole. The orientation provides a moment of verticality, again emphasizing the addition, as it is not meant to seamlessly blend within the existing structure. Integrated carports provide sheltered parking while not occupying

Fig. 63 Exterior renderings showing materiality and the spatial and visual connections with the landscape.

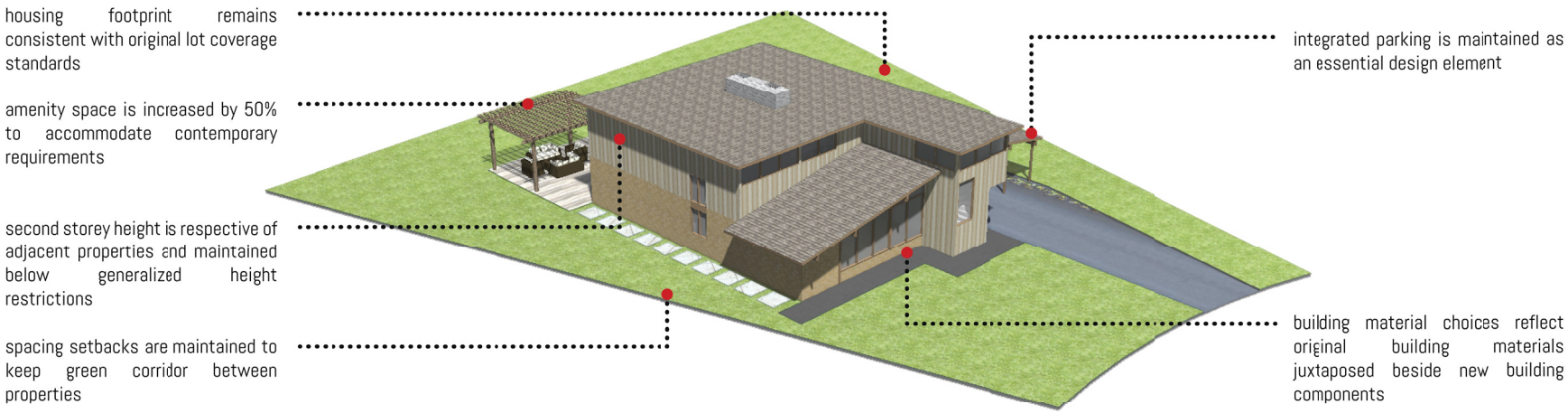


Fig. 64 Site analysis showing how the new renovation satisfies both the trends of the housing market along with the architectural appeal of the community.

important interior space typical of internal garages. The spatial relation with the outdoors is reinforced through the connection of the backyard space with the interior. The amenity space seamlessly flows to the exterior where additional living space is provided (fig. 63).

The resulting design is a sensitive addition to the architectural fabric of the community that not only satisfies current housing trends but also adheres to the building restrictions from past and present. By maintaining the same lot coverage yet doubling the interior space, the renovation effectively satisfies the existing conditions within the community while also providing the updated and upgraded spaces the housing market demands (fig. 64).

Densification Strategy

The densification strategy is designed to direct higher density and new investment to appropriate areas within the community. As a suburb, targeted intervention for increasing density is a necessity in order to keep Don Mills an economically wise investment opportunity and thus a thriving community. Increasing densities in existing suburban communities will reduce per capita servicing costs. It also provides each community with more residents, creating more potential customers for nearby businesses that otherwise do not have a large enough client base

Descriptive pictures of Don Mills' South Hills Village row houses

Fig. 65 Adjacent row houses
Fig. 66 Car port structure
Fig. 67 Front entrance garbage storage

to be financially viable. Increasing the number of residents also results in a more profitable and productive transit service that benefits existing routes and riders.

In its planning stages, Hancock saw the need to build housing for a variety of household incomes. For this reason, South Hills Village was developed in 1956 in the southwest quadrant of Don Mills, comprising 190 rental units, mostly two storey with split level entrances. They were straightforwardly built from the same modern material palette that restricted the rest of Don Mills. They provided private individual green spaces and extensive communal areas which faced visually pleasing internal streets. For their ingenuity and distinction in architectural design, South Hills Village was the recipient of the Massey Medal for architecture in Canada in the late 1950s (fig. 65-67) (Heritage Toronto Don Mills iTour).

For the densification strategy, the residential areas within Don Mills were studied to determine areas of specific low density for targeted intervention (fig. 68). The intervention takes its form at two different scales. One draws from lessons learned in South Hills Village, building medium density housing with influence from the developed design principles. The other takes the form of higher density apartment buildings which bridge the housing price gap that has been created

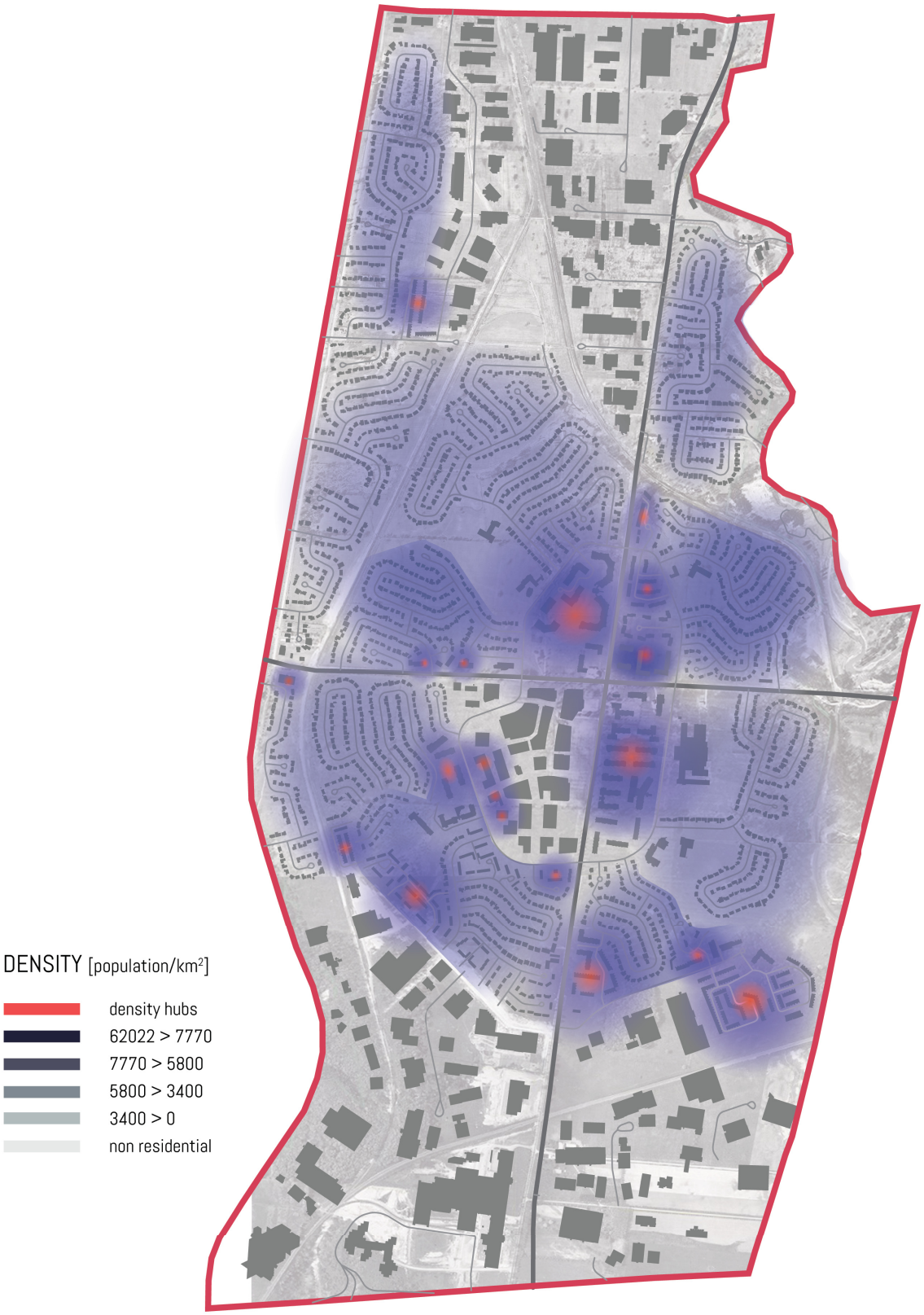


Fig. 68 Density map of Don Mills depicting areas of specific high density (City of Toronto Community Council Profiles)

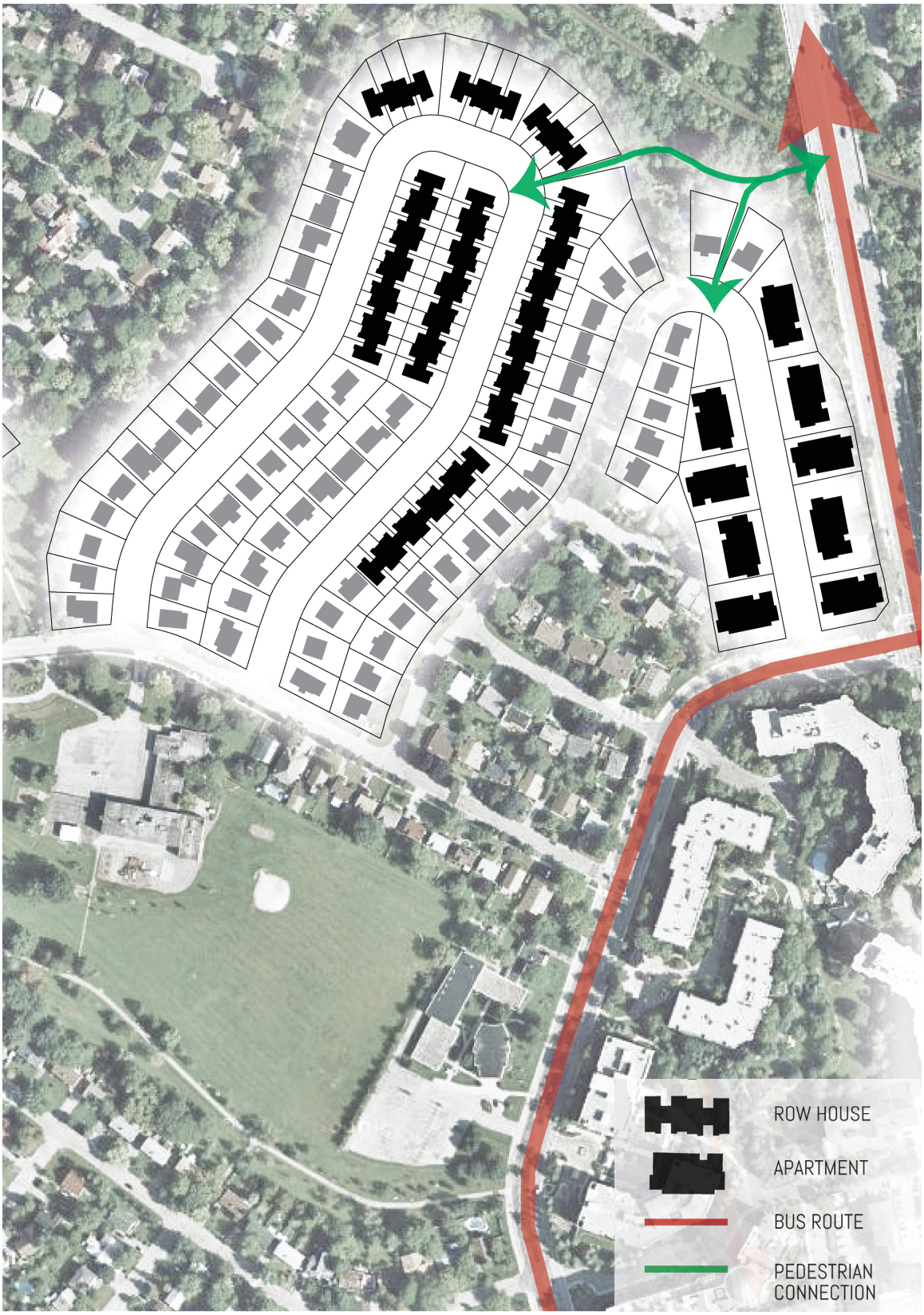


Fig. 69 Implementation strategy for densification, depicting its location close to arterial roads.

in Don Mills from the steady gentrification that has occurred over the last decade. The implementation strategy for each is based on the overall density in the area, the accessibility to main arterial roads, and property values. The resulting location is close to local bus routes, as higher density interventions will support existing infrastructure and businesses. Property values closer to the main roads are also generally lower than those located closer to the ravines, making them prime locations for densification (fig. 69).

The resulting medium density design comprises semi-detached row houses, each with laneway access to private backyard spaces with shared green spaces in the front. Each unit includes an integrated carport which doubles as a canopy covering the front entrance (fig. 70). The entire structure stands six meters tall, suitably fitting within the surrounding architectural fabric. The elevation is broken up into components with the use of a modern material palette including low profile bricks and vertical wood siding. Opposing material colours highlight features such as the panorama windows located on the second floor, as well as the protruding circulation core in the laneway. This juxtaposition creates multiple focal points which detract from the two storey facade on the street front. The large overhanging flat roof defines the upper limit of the structure and provides a horizontal element to break up the

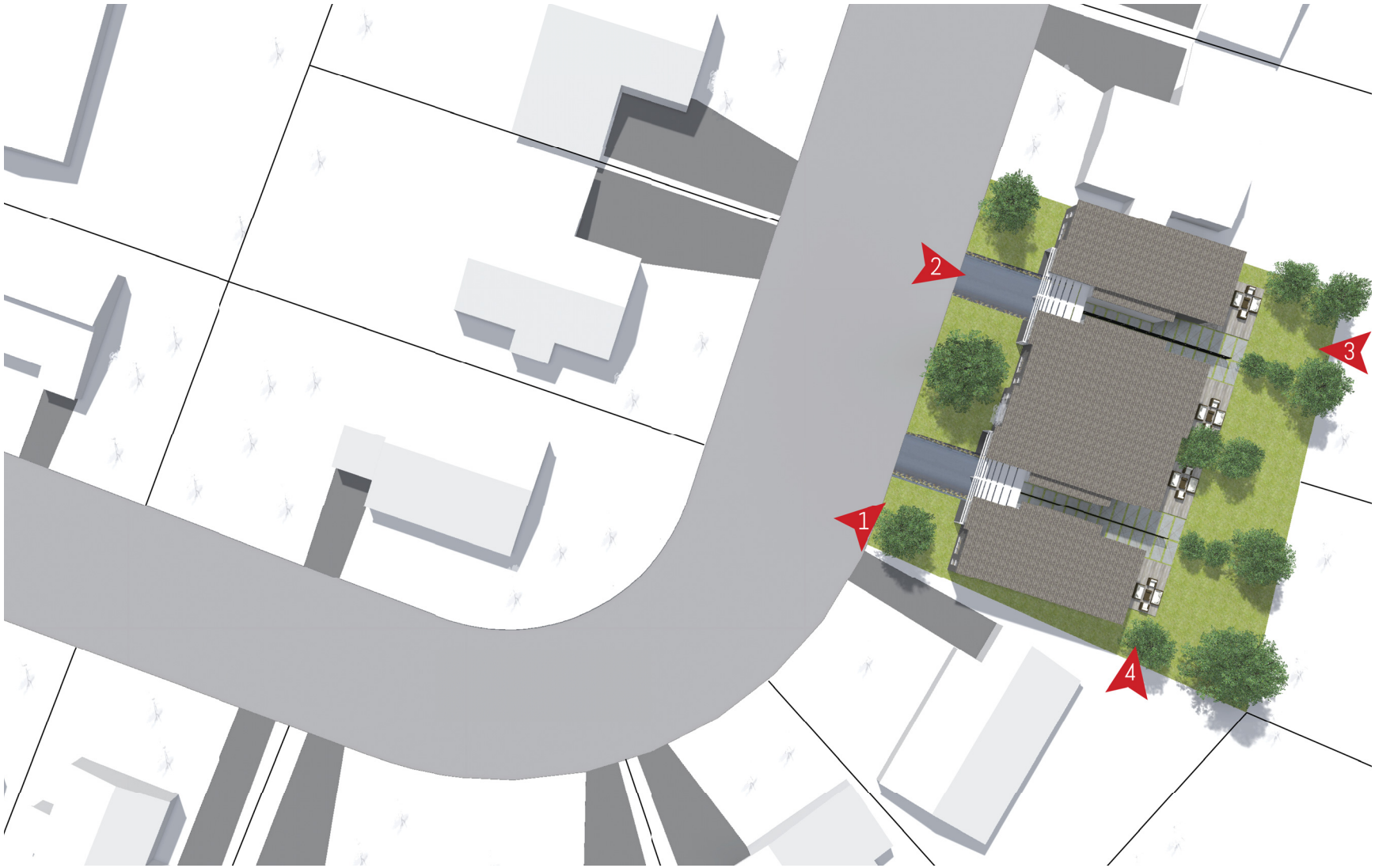


Fig. 70 Site plan showing the relation of the medium density row houses with adjacent properties and the landscape.

Fig. 71 Street elevation rendering of the medium density row house and its scale compared to the landscape in the neighbourhood.

vertical orientation of the windows. Once again, an emphasis is placed on rectilinear forms through the use of multi-functional design elements rather than decorative features. This is depicted not only in the slatted carport but also in the panorama reading room on the second floor which doubles as the main natural light source for each unit. These elements help resolve the reliance most row houses have on artificial lighting as a result of only having windows on the front and rear facades. Similarly, the laneway access to the backyard creates a separation in the structure, which is also used to bring light into the structure with specifically placed windows oriented in the circulation core (fig. 71).

The resulting design consists of 3 bedrooms and 1.5 bathrooms spaced over two storeys. By separating public spaces on the main floor and private living spaces on the second floor, and incorporating a double height mezzanine space above the living room, a functional and efficient layout is achieved in each unit (fig. 72). Natural light is drawn into the depths of the floor plan by the incorporation of specific design elements which separate spaces but also allow the passage of light. For example, the circulation core located in the protruding form in the laneway is designed with structural glass panels instead of conventional railings, along with an open riser stair design to allow natural light to penetrate the floor plan.

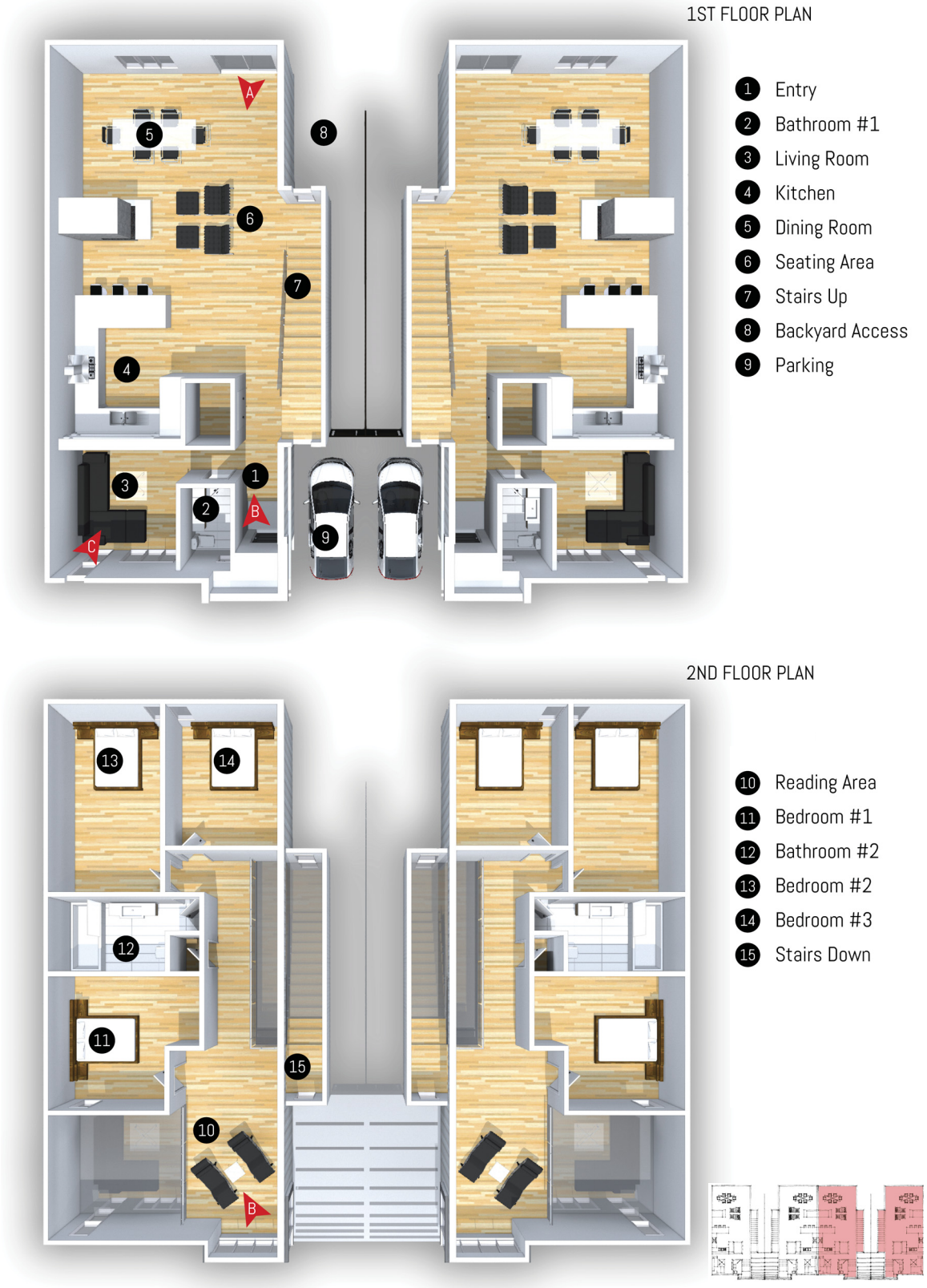


Fig. 72 First and second floor plans of the medium density row house.

Fig. 73 Interior renderings showing the interconnectivity of spaces as well as the multifunctional aspects of the architectural design elements.

Fig. 74 Exterior renderings showing materiality and the spatial and visual connections with the landscape.

Fig. 75 Cross section through a series of row houses showing their integration with one another.

Fig. 76 Longitudinal section cut through a single row house unit showing its integration with the surrounding landscape.

This design element not only satisfies the safety component of the stairs, but also ensures that natural light is available deep into the plan where a conventionally designed row house would not. Also, the mezzanine hallway and overlooking reading space on the second floor allow for the access of natural light to the third bedroom, which typically would have to be placed at the front of the house. Space defining elements such as the open concept shelving unit used to divide the living room from the kitchen are useful in separating spaces but also allowing the passage of light (fig. 73).

Each section of row houses provide individual units with a private backyard space that is easily sheltered from one another through the use of trees and open concept fences. These features make the spaces feel more open and communal, while also setting boundaries which help define individual spaces (fig. 74-75). Each section of row houses is fully integrated within the landscape as pairs are shifted back and forth to break up the solid street elevation that would otherwise occur. Each unit also integrates the slope of the land by raising the main floor to allow for a direct line of sight into the surrounding landscape (fig. 76).

Fig. 77 The pocket of higher density apartment structures is ideally location close to arterial roads, along with pedestrian pathways to access them.

While this design targets increasing density, a higher density structure can be achieved that provides a lower cost solution to living in Don Mills. Through the use of the same design

principles, a higher density apartment structure is also developed by testing the developed design principles against Hancock's original desire to provide housing for a variety of household incomes. The result is a schematic design that emerges as a 4 unit structure, allowing for replication onto multiple floors. This strategy provides an alternative to detached and semi-detached housing units, while allowing lower income households to benefit from same living experience that Don Mills offers.

The massing of the low rise structures spread onto the site reflects a response to the suburban layout of Don Mills. Restricting lot coverages as well as staggering their locations on each lot moderates the street facade that would otherwise be presented to allow the structures to blend in with the surrounding landscape (fig. 77). This allows for each structure to function as its own unit, giving a sense of place and ownership to its residents. Their site layout also creates private green spaces for the residents of each unit. The orientation of these green spaces would address each other and create a screen that would separate the public space from the road. This orientation supports Hancock's original vision of separating the pedestrian from the automobile and thus allows these larger structures to integrate into the residential scale of the community.

Within each structure, 4 units are located on each floor, growing to a maximum of 4 storeys. The size of each unit reflects the reduced cost of living that this option offers. The resulting schematic design allows for 2 to 3 bedroom units, each with an outdoor patio that extends the amenity space. This additional space supports the connection with the outdoors that Hancock originally conceived, but at a lesser premium than the backyard ravine lots. The units are all accessed through a central circulation core, providing easy access from the street which helps define each combination of units within the street elevation. Larger units are located at the centre of each floor, providing more windows which face onto the private green space. Larger patios are also offered here, which overlook the green space and help mediate the interior dominant living experience that apartments typically provide. Smaller patios are provided on the outside units, ensuring all residents are able to maintain a visual and spatial connection with their green space (fig. 78).

The resulting designs produce sensitive additions to the architectural fabric of the community that not only bring targeted investment and density into the neighbourhood but also adhere to the building restrictions from past and present. By effectively doubling the population density within the row house, and creating an even higher density, less expensive housing option in the apartment

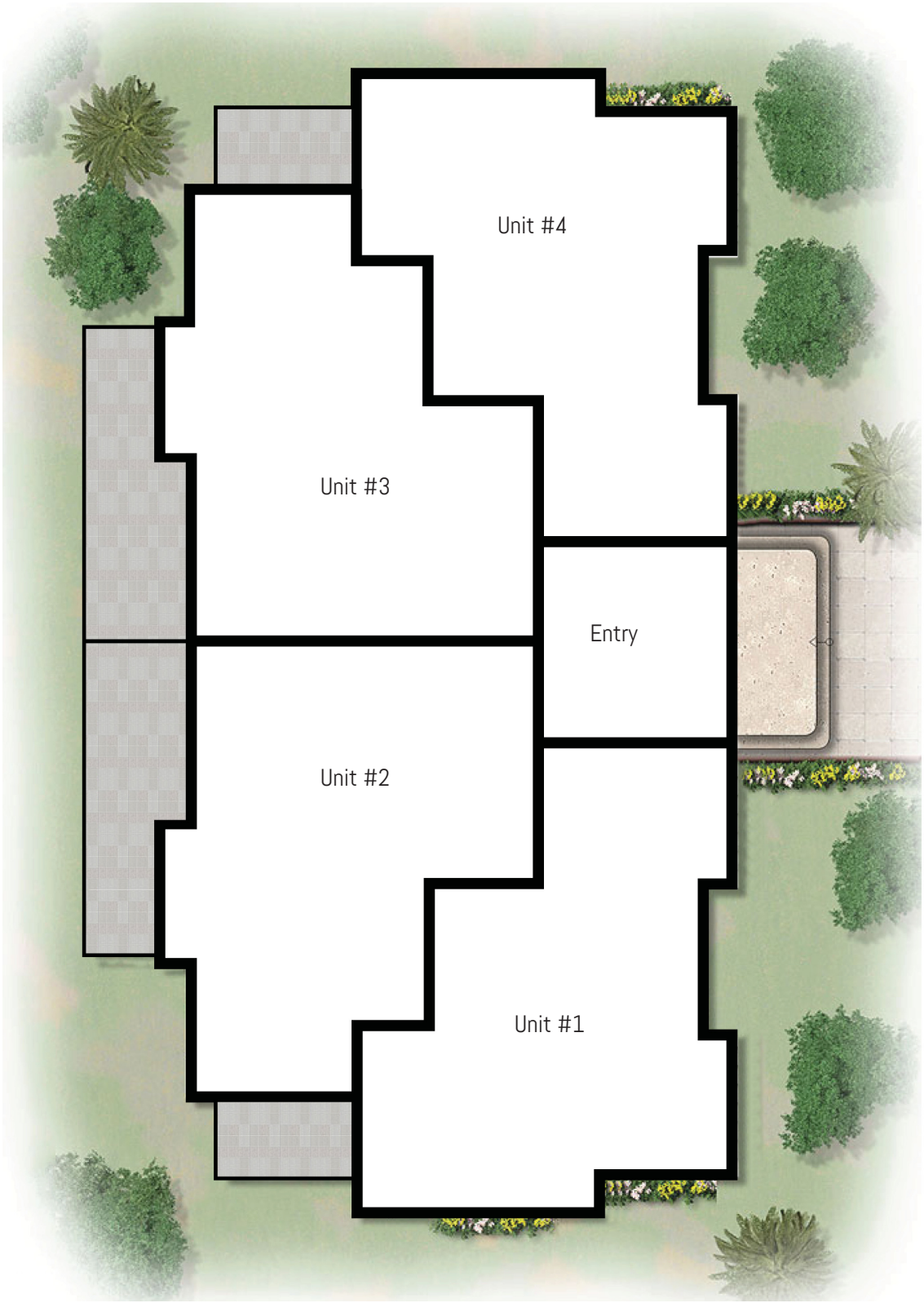


Fig. 78 The plan organization of the units within the higher density apartment structures.

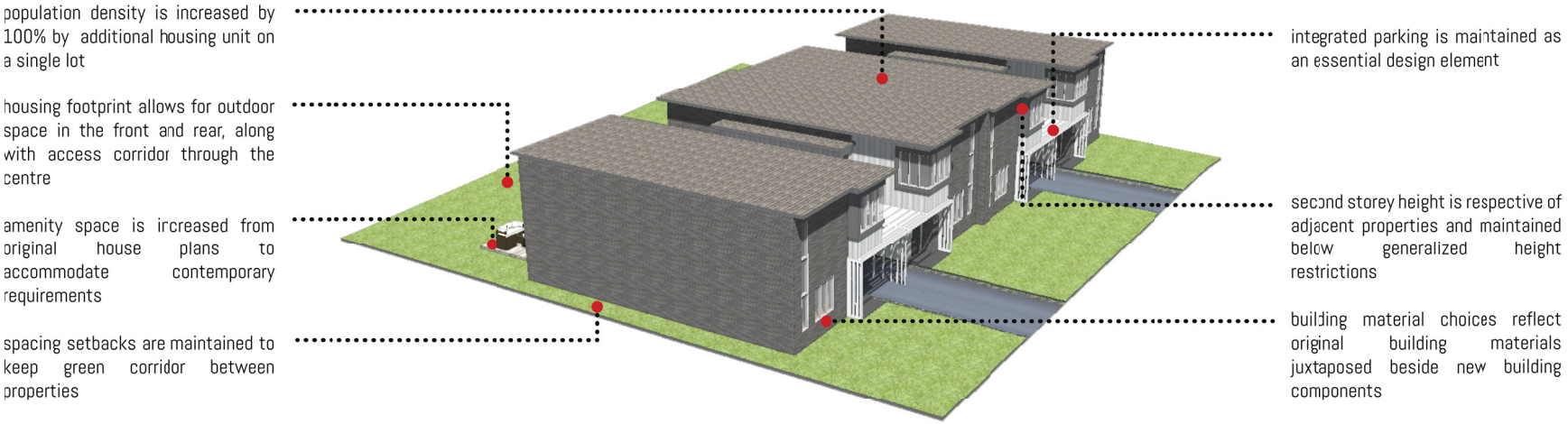


Fig. 79 Site analysis showing how the row house densification satisfies both the density need in the neighbourhood along with the visual appeal of the community.

complex, this strategy provides all people with the opportunity to live in Don Mills, while benefiting from the living standards that Hancock had envisioned when the concept was initially conceived (fig. 79). The additional density supports local businesses and stimulates economic activities, which in turn creates a sustainable live-work scenario within the community. Not only does this benefit people looking to live in Don Mills, but it also supports the viability of Don Mills as a vibrant inner-urb within metropolitan Toronto.

CHAPTER 4: CONCLUSION

Don Mills' natural setting, encompassed by ravines along the Don Valley, and its experimental modern architecture and neighbourhood design create a compelling and unique sense of place. The cultural heritage value of the neighbourhood lies in its history as Canada's first corporate suburb, its association with Toronto's postwar expansion, and its design value as an excellent example of a modern suburb built in harmony with the natural environment. Its innovative concepts of site development and neighbourhood planning and its minimalist aesthetic of the modern movement in architecture are key elements which distinguish Don Mills from its suburban counterparts. The houses in Don Mills have cultural heritage value as a collection of works from some of the leading architects of the day. These architects shared a common modernist vision which has been reflected in targeted interventions within this thesis. What was created has forever changed the way suburbs are built and the strategies proposed here reflect a design language that is appropriate, respective, and responsive to the architectural fabric of Don Mills. By guiding growth through the proliferation of modern design principles, Don Mills will continue to be a prosperous inner-urb, while preserving the essence of modern design that is a significant part of Canada's modern heritage.

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