Ontario Association of Architects

Summary Report
Housing Affordability Task Group



February 2019

Housing Affordability in Growing Urban Areas



Contents

1
2
3
5
6
7
8
9
10
11
13
14
15
16

Goal A: Increase Supply	17
A1. Planning for Growth – Closing the Gap	18
A2. The Mismatch of Provincial and City Densities	20
A3. Built-Form Opportunities	21
A3.1. Density in Neighbourhoods	22
A3.2. Density in Corridors	25
A3.3. Density in Centres	27
A4. Increasing Density – Meeting 2040 / 2060 Targets	29
A4.1. 2018 Existing Density	31
A4.2. 2040 Density Targets	32
A4.3. 2060 Density Targets	33
Goal B: Make Housing Financially Attainable	34
B1. Flexibility	35
B2. Full Range of Unit Sizes	36
B3. Reduce Construction Costs	37
B4. New Financial Models	39

Goal C: Address the Urgency	41
C1. Planning and Building for Intensifica	ation 42
C2. Make Regulations More Visible + A	ccessible 46
C3. Introduce Temporary Transitional F	Housing 47
C4. Prepare Evolutionary Master Plans	48
Next Steps	49
Epilogue	50
Appendices	
Appendix A: Built-Form Case Studies	
Appendix B: Policy Case Studies	
Appendix C: Financing Case Studies	



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Task Group.

Introduction

The OAA's **Housing Affordability Task Group** (HATG) is exploring design and regulatory opportunities that address housing affordability in growing communities across Ontario and beyond.

Why? This is a significant issue impacting millions of current and future citizens in Ontario.

Affordable Housing

is typically used to define lowerincome housing needs that are eligible for Federal or Provincial Subsidies VS.

Housing Affordability

refers to the lack of affordability across not only lower- but also middle- and even higher- income households—be they rented or owned—subsidized or not.



This is the real issue



Goals, Actions, and Results

Goal A: Increase Supply

Actions

Increase Density + Free-Up Land

- Promote low-rise infill and intensification within Neighbourhoods through renovations, additions, redevelopments;
- Expand permissions for semis, duplexes, triplexes, four-plexes, townhouses, walk-up apartments and secondary suites (i.e. basement suites, garden suites and laneway suites);
- Promote low to mid-rise intensification along Corridors, particularly those with frequent and reliable public transit; and
- Promote mid to high-rise intensification within Centres.

Optimize Existing Zoning Potential

- In some urban areas, a significant proportion of development potential, based on existing Zoning permissions, remains unrealized; and
- Landowners should be encouraged and incentivized to develop their properties to full capacity in order to maximize the provision of additional residential units.

Actions

Increase Zoning Potential

- In other urban areas, opportunities exist to increase Zoning permissions in order to allow for increased densities and a greater range of building types; and
- Municipalities should be encouraged to update existing Zoning permissions to promote the diversification of the housing stock.

Update Municipal Density Targets to Match Those Set Out in the Growth Plan (2017)

- Municipalities throughout the Greater Golden Horseshoe (GGH)
 do not set densities for existing Neighbourhoods which match
 those required for new Neighbourhoods under the Provincial
 Growth Plan (2017); and
- Municipalities need to ensure that their specified densities conform with those outlined in The Growth Plan (2017).

Results

Taking these actions has the potential to increase supply to meet housing demand of one-and-a-half million persons in Ontario's cities over the next 25 years.

Goal B: Make Housing Financially Attainable

Actions

Reduce Construction Costs

- Increase Zoning permissions in Neighbourhoods and Corridors;
- Reduce development charges and application fees; and
- Promote modular and pre-fabricated housing.

Changes to the Ontario Building Code (OBC)

In addition to revising current municipal land use regulations and Zoning permissions, the Ontario Building Code should be revised to remove regulatory hurdles in order to reduce construction Costs. Example: Create an alternative means of achieving Ontario Building Code compliance to permit a 4-storey building with a single exit. This would require oversight by a Licensed Architect

Financial Model Opportunities

The OAA should support the exploration and development of new Financial Models that are supportive of housing affordability.

Results

Taking these actions has the potential to make housing available to citizens with incomes ranging from \$25,000 to \$120,000.

Goal C: Address the Urgency

Actions

Speed Up Delivery

- Streamline and simplify the development approvals process;
 http://rescon.com/news/files/RESCON_Streamlining_Approvals_Process.pdf
- Expedite development review, evaluation and approval timelines;
- Incentivize construction methods (i.e. modular, pre-fabricated and wood-frame construction) with quick turnaround; and
- Make public land available through Development RFPs.

Results

Taking these actions has the potential to meet municipal and federal targets to deliver affordable housing.

Outcomes

Increased Housing Supply and Social Opportunities

Across All Income Groups, with Emphasis on Lower- and Middle- Income Groups Promoting vibrant and complete communities, where residents can age in place

Increased Housing Supply and Diversity

Within All Neighbourhoods, Corridors and Centres With emphasis on Neighbourhoods which occupy 70–80% of land area

Increased Local Economic Opportunities

Resulting from increased Renovations, Additions, and Redevelopments Being carried out by homeowners, local trades and builders, and developers

Optimized Use and Cost of Infrastructure and Services

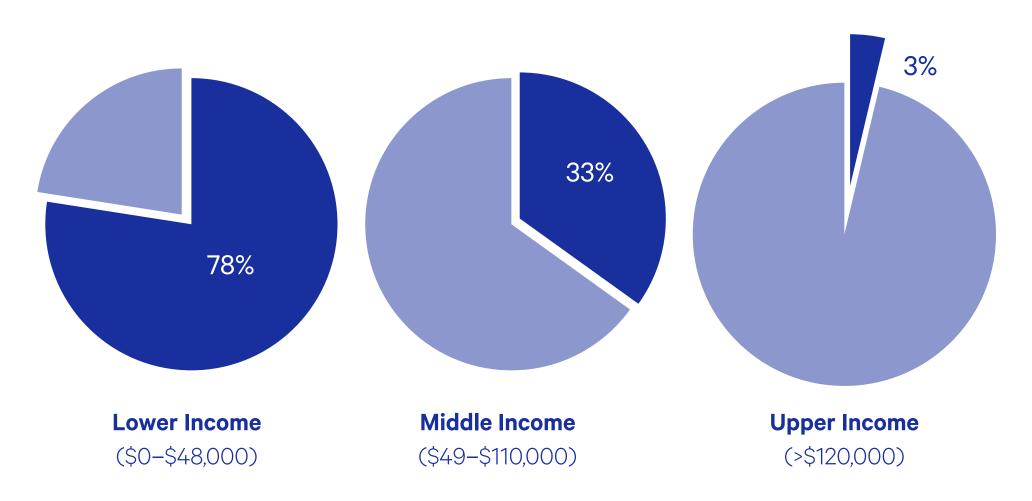
Including Schools, Parks, Roads, Sewers, Water Mains, and Waste Removal



Context

1 What Housing Affordability Looks Like

Lack of affordability currently affects the full range of income.



Households spending more than 30% of their income on housing

Source: Finding the Missing Middle in the GTHA (2018).

2 Shortage of Appropriate Housing Supply

Housing suitability measures whether housing is suitable or not, by assessing if a dwelling has sufficient bedrooms for the size of the household.



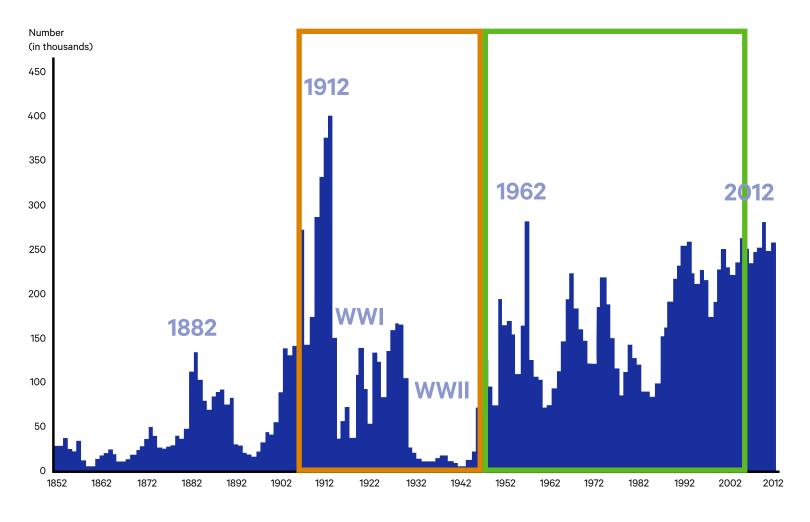
8% of Ontario urban households are 'under-housed' = about 500,000 additional bedrooms are needed across Ontario, including 350,000 in Toronto.

But nearly **two-thirds** of Ontario urban households are **'over-housed' = 5.0 million empty bedrooms across Ontario, including 2.2 million in Toronto Neighbourhoods**.



3 Two Different Communities

Immigration is a key factor driving population growth in Canada, and the need to accommodate it at increasing rates created two distinct communities.



Prior to 1945, immigrants settled in **Unplanned Communities.**

From 1945
onward,
immigrants
settled in
Fully Planned
Communities.

"Un-Planned" Communities

(1905-1945)



By 1945, between 40-60% of all households in Ontario Cities had built their own home; and 80% of these homes included room(s) for a boarder(s) or lodger(s).

Housing Affordability was **high** in the unplanned neighbourhoods.

"Fully-Planned" Communities (1945–2005)



From 1950 on, all new communities (starting with Don Mills) were planned not to change, which meant they were only affordable to 35% of the population.

Housing Affordability was **low** in the fully-planned neighbourhoods.

4 Two Different Cities



The **1943 Plan for Metropolitan Toronto** (which was copied in other Ontario cities) abandoned + demolished the **"unplanned"** City (e.g. Regent Park) and Proposed 7 new "fully-planned" garden suburbs (e.g. Don Mills) around the old City. These were planned and designed **not to change**.

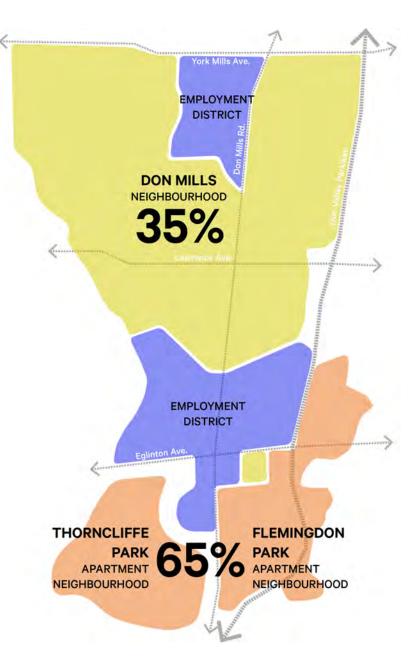
5 Built-Form in the "Fully-Planned" Communities



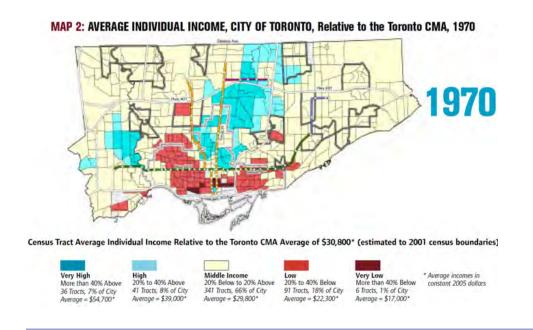
Only 35% of the new population could **afford to own** the Bungalows and Townhouses (e.g. Don Mills).



The remaining 65% lower-income households **rented** in High-Density Towers that were not included in the initial plans (e.g. Flemingdon Park).

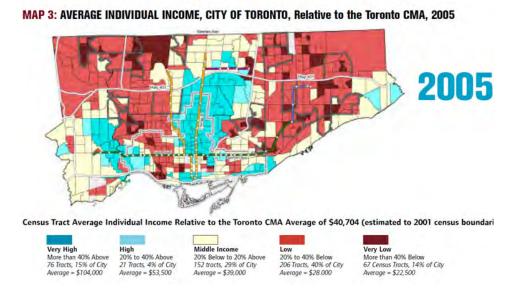


6 The Gap Between Rich and Poor Emerges

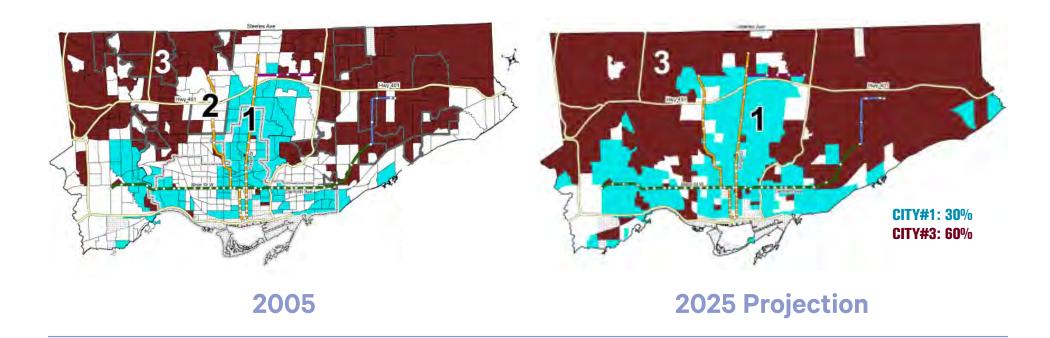


Up to 1970, Toronto comprised many **affordable Middle-income** neighbourhoods (surrounding a mix of older, largely unplanned **High-** and **Low-**Income, neighbourhoods).

By 2005, the older middle-income communities had been replaced by 35% living in affordable new neighbourhoods and 65% who were living in **low-income rental Towers**.



7 The Gap Between Rich and Poor Increases



2005 - Average Individual Income



City #1 - Consistent Increase in Incomes Since 1980 (46 Census Tracts / 9% of City)



City #2 - Minimal Change in Incomes Since 1980 (340 Census Tracts / 66% of City)



City #3 - Consistent Decrease in Incomes Since 1980 (128 Census Tracts / 25% of City)

2025 - Average Individual Income



City #1 - Projected Increase in Income 20% or More (100 Census Tracts / 19% of City) by 2025



City #2 - Projected Minimal Change (50 Census Tracts / 9% of City) by 2025



City #3 - Projected Decrease of 20% or More (308 Census Tracts / 60% of City) by 2025



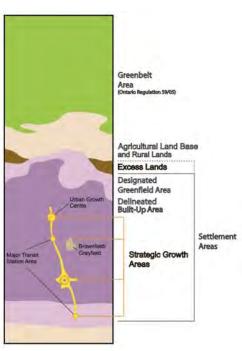
Goal A: Increase Supply

A.1 Planning for Growth - Closing the Gap

In the Region

60% of all new growth will take place in the existing Built-Up Area (dark purple) and 40% in Designated Greenfield Areas (light purple).





Neighbourhood

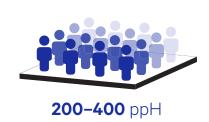




Growth Plan (Min. Targets)



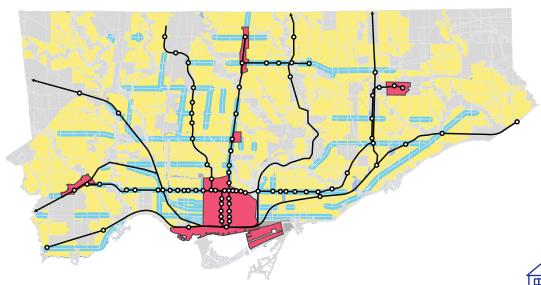




People per Hectare (ppH) - Province

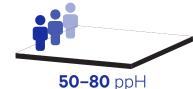
Human Density (Growth Plan - 2017) The number of people residing in one Hectare area (100m x 100m)

Throughout the City



Neighbourhoods
Corridors
Centres
Transit Hub

Growth Plan (Min. Targets)



Toronto's Official Plan sets densities for Neighbourhoods, Corridors and Centres. Different units of measure, which **do not correspond** with the Growth Plan (2017). Neighbourhoods cover the majority of Toronto's lands. Referred to as

Source: City of Toronto Official Plan (2015 Consolidation), by the Corporation of the City of Toronto

"The Yellow Belt".

Floor Space Index (FSI) – Municipalities
Physical Density (Zoning By-Laws) Ratio
of Total Floor Area / Lot Area



Neighbourhood

0000 00





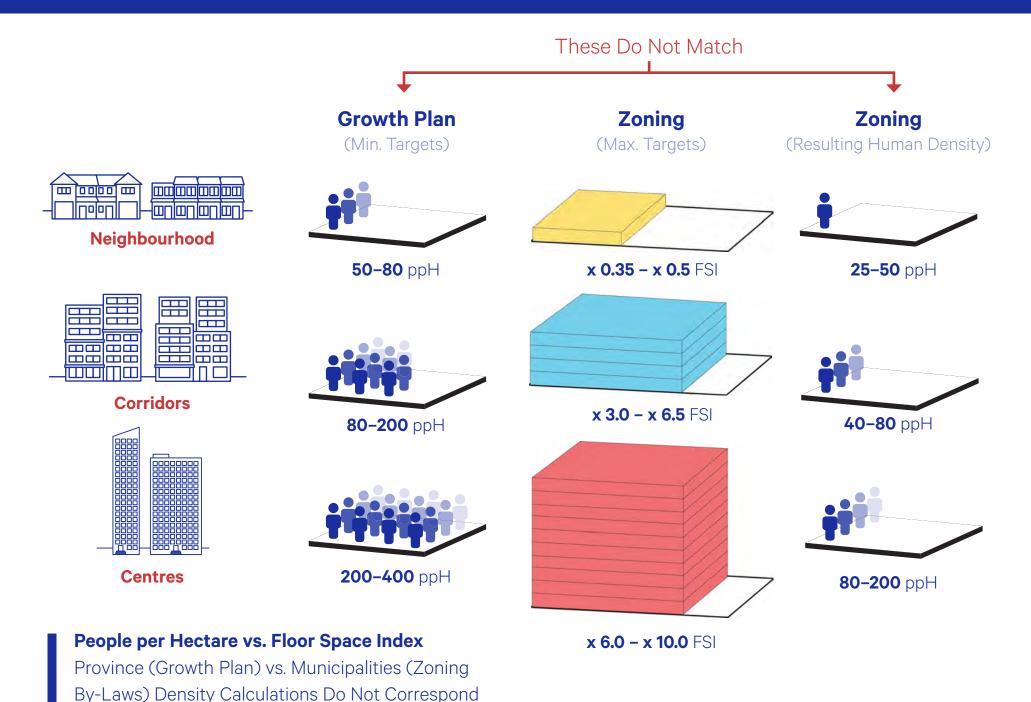
Centres





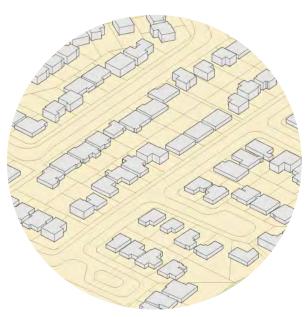
200-400 ppH

A.2 The Mismatch of Provincial + City Densities



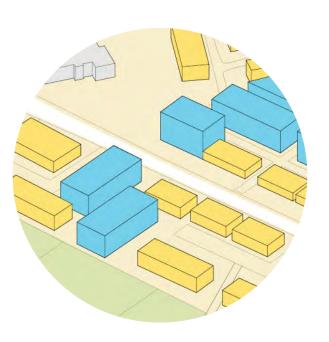
A.3 Built-Form Opportunities

Building Types Found in Each Planning Zone



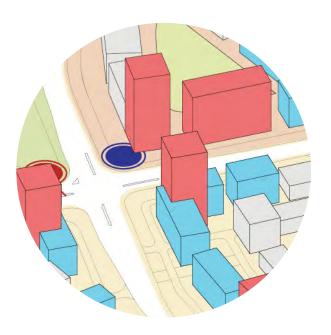
Neighbourhoods
(75% of total land area)





Corridors (5%)





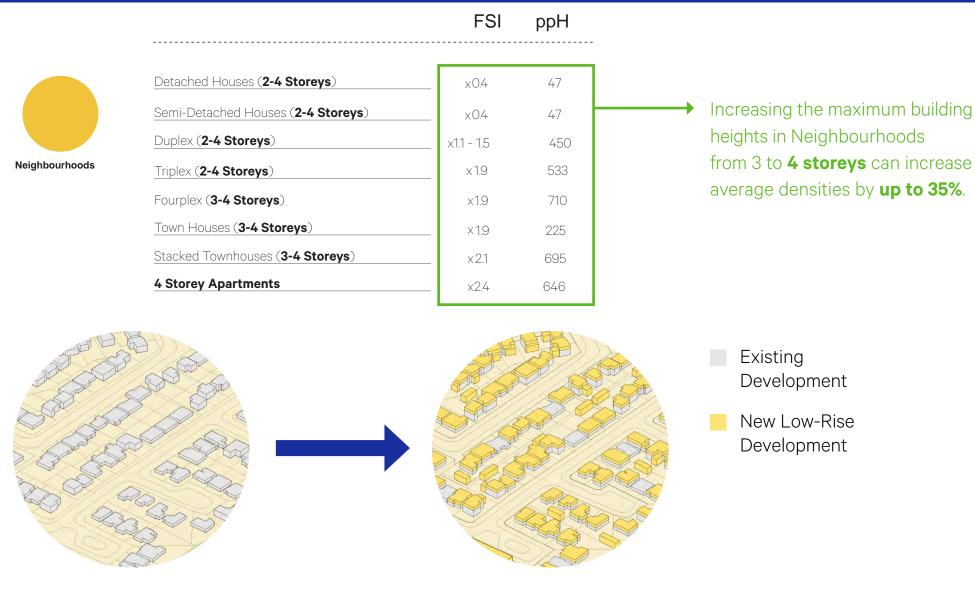
Centres (20%)



A.3.1 Density in Neighbourhoods



Add a Floor



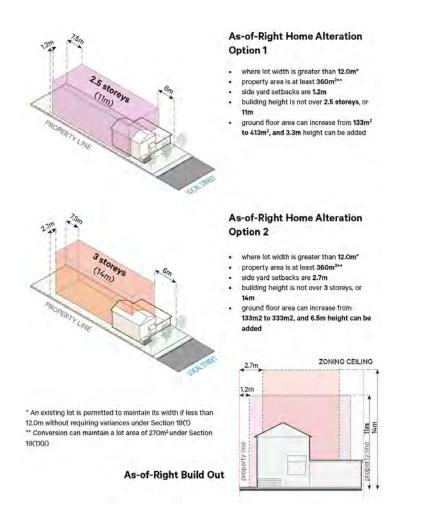
Neighbourhood (Today)Existing Density (2-3 Floors)

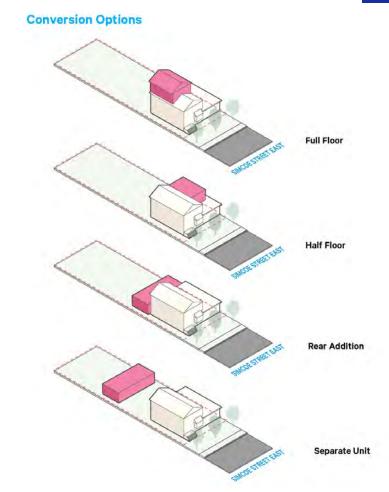
Neighbourhood (2040)

Increased Density with Added Floors / New Buildings (3-4 Floors / Laneway Suites)

Built-Form Opportunities in Neighbourhoods







Owner, developer and builder-initiated infill and intensification within **Neighbourhoods**. Realize unused density permissions to create thousands of new units and help owners with increasing carrying costs.

Existing Neighbourhoods + Built Form in "The Yellow Belt"





(Source: Permitted Residential Built Forms Toronto Zoning By-law 569-2013 (2016), by Galbraith & Associates)

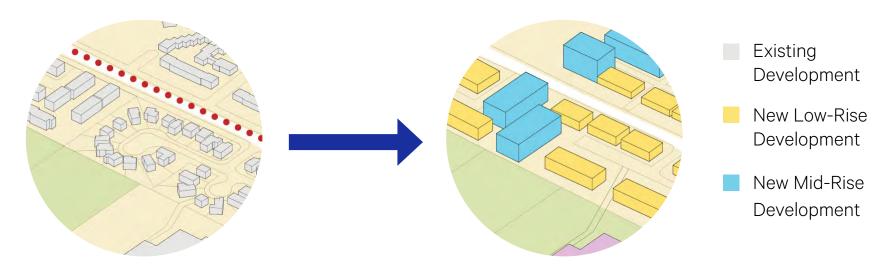
"The Yellow Belt" is built out at relatively low densities. These need to be increased

Existing = Approx. 25-50 ppH (Varies) Former Growth Plan (2006) = Min. 50 ppH Current Growth Plan (2017) = Min. 80 ppH

A.3.2 Density in Corridors

Add 2–8 Floors (to create Mid-Rise)

		FSI	ррН
	Mid-Rise (5 Storeys)	×3.0	808
	Mid-Rise (6 Storeys)	×3.6	963
Corridors			
	Mid-Rise (8 Storeys)	×5.0	683
	Mid-Rise (9 Storeys)	×6.0	1293
	Mid-Rise (12 Storeys)	6.4	2273



Corridor (Today)

Existing Density (2-3 Floors)

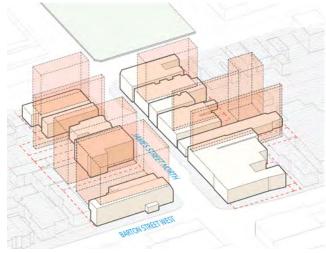
Corridor (2040)

Increased Density with Added Floors and New Buildings (5-12 Floors)

Built-Form Opportunities in Corridors







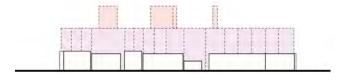


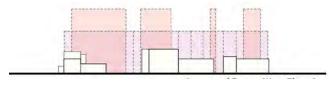
Typical two storey corridor built to 4 Storeys

Typical two storey corridor built to 8 Storeys



Existing Mid-Rise Development





Source: Hamilton West Harbour Investments Guide for Landowners, Builders, and Land Developers (SvN 29 November 2016)

Avenues and Mid-Rise Buildings Study (2010)

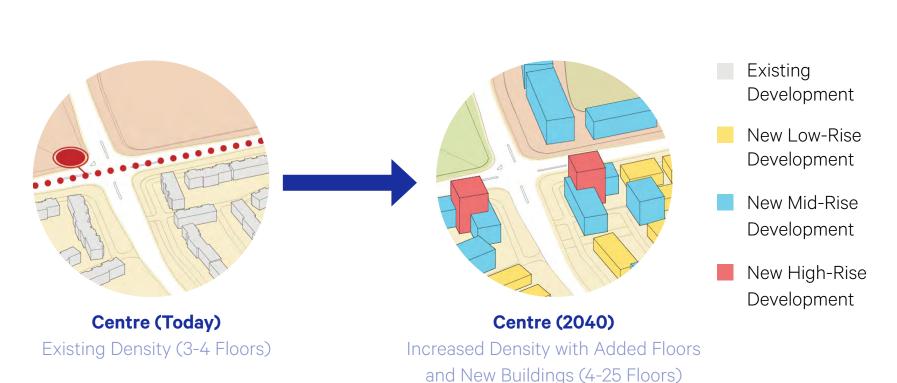
Owner, Developer and Builder–Initiated Intensification along **Corridors**. Realize unused density permissions to create thousands of new low and mid-rise units with direct access to transit.

A.3.3 Density in Centres

Centres - Mixed Use Areas + Apartment Neighbourhods

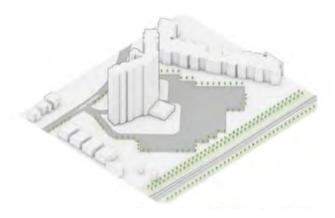
Add Floors and New Mid- to High-Rise Buildings

	FS	SI ppH	
High-Rise (16 Storeys)	×5.9 - 7.3	1668 - 2500	
High-Rise (20 Storeys)	×3.7 - 10.1	2118 - 3205	
High-Rise (25 Storeys)	x3.9 - 11.5	2605 - 3908	
High-Rise (40 Storeys) (Suburban Lot / Larger lot Area)	×6.2	4385	
High-Rise (40 Storeys) (Urban Lot / Smaller Lot Area)	×17.3	6250	

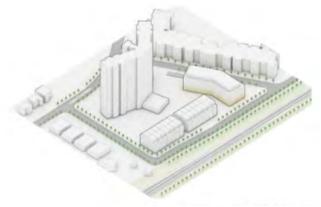


Built-Form Opportunities in Centres





Typical Apartment Tower Before



Typical Apartment Tower After



Low-Rise Commercial



Mid-Rise Mixed-Use



School



High-Rise Residential / School

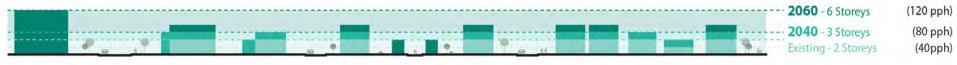
Developer and builder-initiated intensification in **Centres**. Increase density permissions to create thousands of new mid- and high-rise units with direct access to transit.

A.4 Increasing Density - Meeting 2040 / 2060 Targets

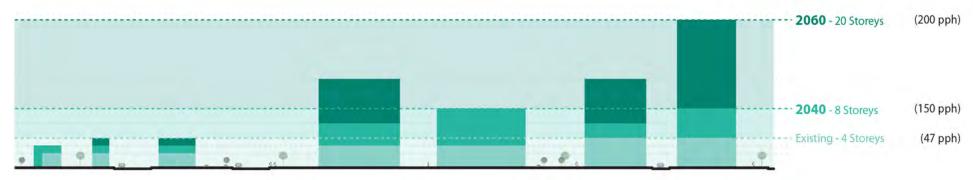


Increasing Densities = Increasing Housing Affordability

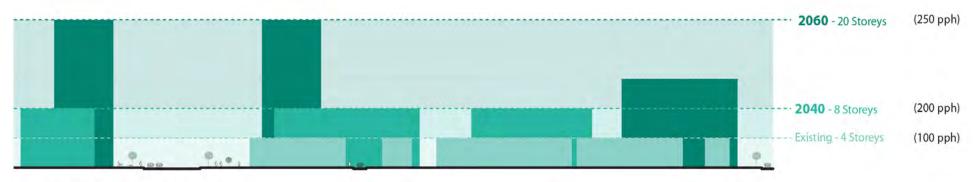
2018-2060



In Neighbourhoods



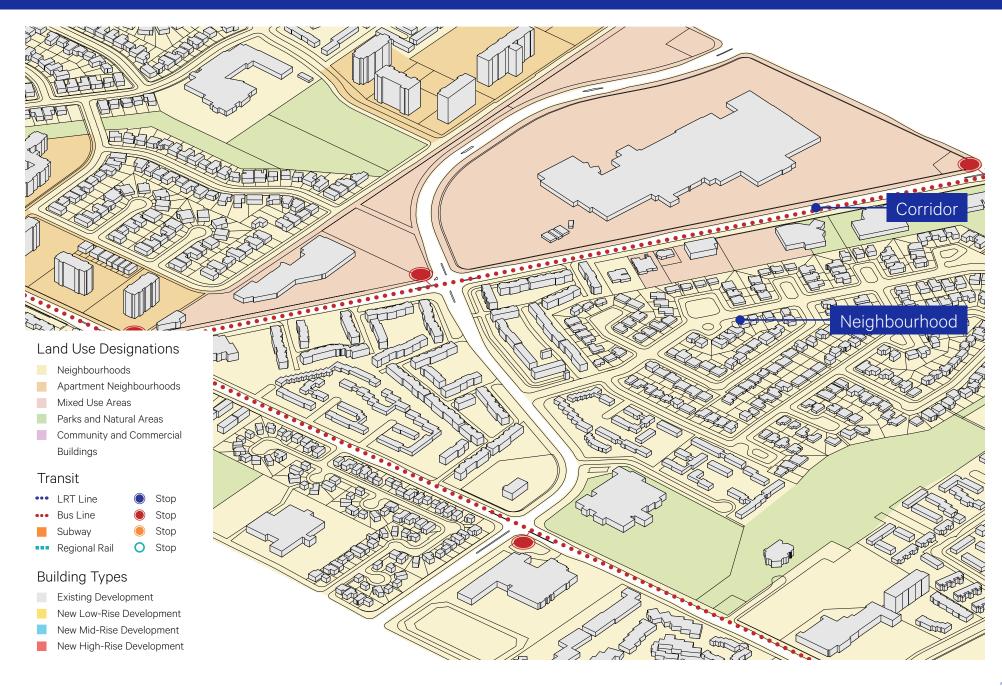
In Corridors



In Centres

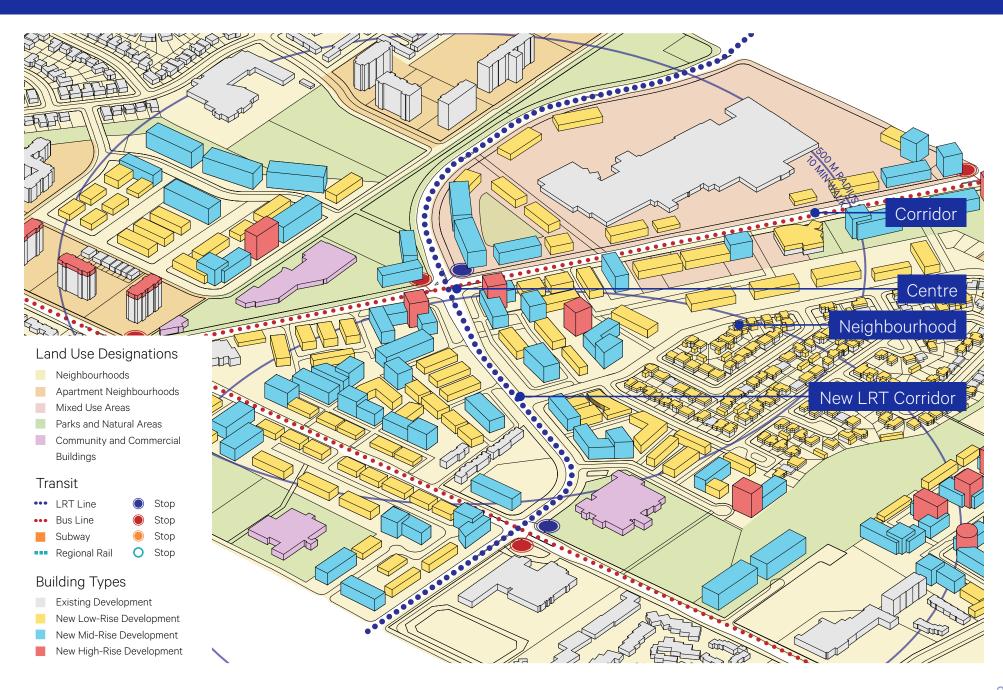
A.4.1 Typical Neighbourhood Growth Plan

2018 (Existing)



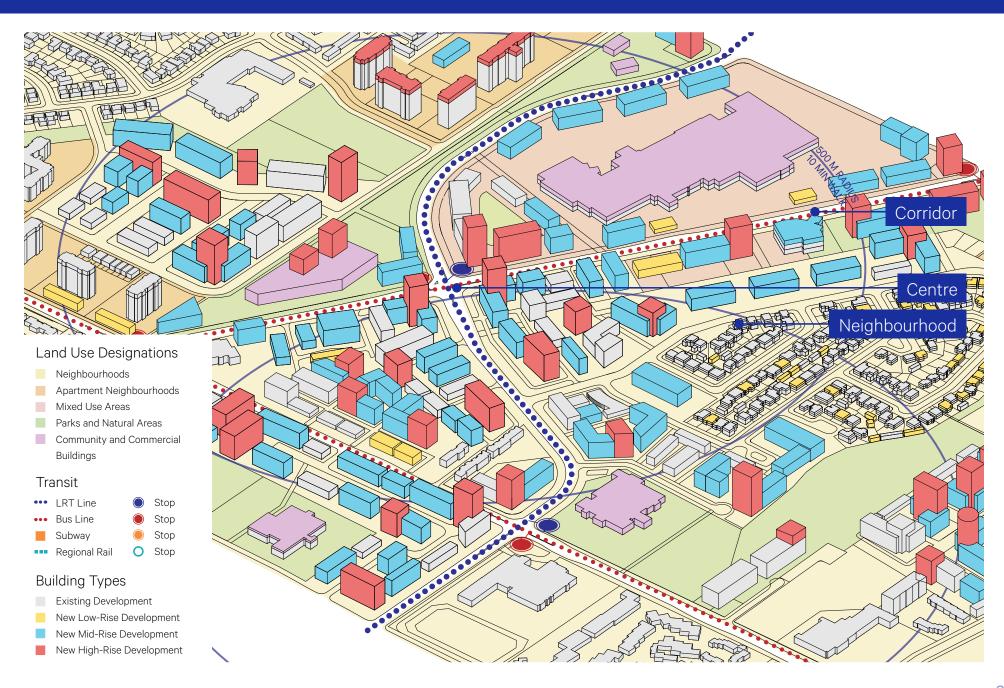
A.4.2 Typical Neighbourhood Growth Plan

2040 - Meeting Current Provincial Density Targets



A.4.3 Typical Neighbourhood Growth Plan

2060 - Projected Provincial Density Targets





Goal B: Make Housing Financially Attainable

B.1 Flexibility

Fluctuating Housing Needs

Housing needs are always in flux, whether it be changing needs of individuals and families or the changing nature of neighbourhoods, cities, or the economy. Architects need to design for future flexibility and find solutions that provide flexibility in existing structures. Flexibility means allowing households to modify, subdivide, add or combine housing areas in order to respond to their changing needs.

Over-Housing vs. Under-Housing

Flexibility can help address the problem of over-housing and under-housing by providing:

- Smaller 'entry-level' units that are more affordable
- Housing alternatives for aging-in-place—to avoid over-housing of empty-nesters; and
- Larger family-sized units in all building types, when and where they are required

An Entry Point into Ownership

Flexibility can provide an entry point into ownership. Owners can occupy a small portion of a larger unit and rent out other portions. This will increase both rental supply and options for ownership and building equity.

B.2 Full Range of Unit Sizes

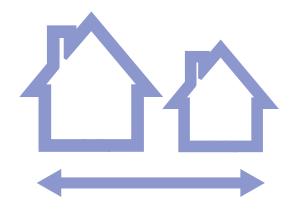
Housing Affordability and Quality

Building an appropriate mix of unit sizes improves affordability and quality of housing by providing lower-cost smaller units and larger family-sized units where they are required.



Smaller Units

Providing these smaller units and larger family-sized units in **Corridors** and **Centres** will allow lower-income households to live in areas that are served by transit and other required services. It will also provide options for families to live near services and transit. In **Neighbourhoods**, where larger units are more common, introducing smaller units could increase affordability for smaller households.



B.3 Reduce Construction Costs

While reducing construction costs can lead to increased operating and maintenance costs, these should be achieved with the building life-cycle costs in mind.

Increase Zoning Permissions

Within **Neighbourhoods**, expand zoning permissions for semis, duplexes, triplexes, four-plexes, and secondary suites (i.e. basement suites, garden suites and laneway suites). Within **Corridors**, increase zoning permissions to allow for mid-rise development. This will simplify and streamline the development application process, while minimizing costs, time-frames and risk.



DIY Finishing

Customization has been introduced in recent years as a premium and luxury product. Customization of units by owners themselves can reduce costs and allow owners to gradually finish and modify their units, based on their own needs and resources.

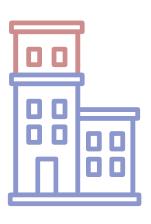


Modular Construction

Construction costs can be reduced through mass production, as well as opportunities for re-use or relocation of temporary structures.

Rooftop Expansion

Construction costs can be reduced by pre-designing for intensification through the introduction of vertical additions, which optimize the use of existing buildings and structures.



B.4 New Financial Models

Home Ownership Models

The OAA should support the exploration and development of new Financial Models which assist with or promote home ownership. Specifically, consideration should be given to:

- Co-ownership and rent-to-own models;
- Down-payment or second-mortgage financing;
- Promoting flexible and modular design; and
- Facilitating sub-letting and/or live/work households.

Home Rental Models

The OAA should support the exploration and development of new Financial Models which assist with or promote home renter-ship. Specifically, consideration should be given to:

- Co-living and/or shared living;
- Flexible rental units; and
- Inter-generational rental units.

Case Studies: Second Mortgage Assistance

Trillium Housing: Trillium Housing provides a 'payment free mortgage' representing 20% of the value of a Trillium home that a given purchaser wishes to buy. The prospective home owner must pay an initial down payment of at least 5%. Trillium shares in the appreciation of the house value over time and, when the home owner decides to sell, Trillium is repaid 20% of the value of the house.

Options for Homes: Prospective home owners provide a 5% down payment for a unit they intend to live in and Options for Homes will provide a down payment loan between 10–15%. As the value of the home appreciates, Options for Homes shares in the growth and are repaid their initial down payment loan percentage when the house is sold.

Case Studies: Co-Investment in Down Payments

Parcel: Parcel Finance purchases equity in homes that prospective home-buyers wish to purchase, reducing the level of savings home buyers are required to have for their down payment. Parcel's investment also reduces the amount of mortgage debt required, allowing home buyers to make mortgage payments that they are better able to afford. As co-owner of the home, Parcel shares in the growth of the home's value. Parcel invests for up to 10 years and home-buyers can buy Parcel out at any time within that 10-year period.



Goal C: Address the Urgency

C.1 Planning and Building for Intensification

Within Neighbourhoods

Update Official Plans to encourage Neighbourhood infill and intensification on a municipality-wide basis.

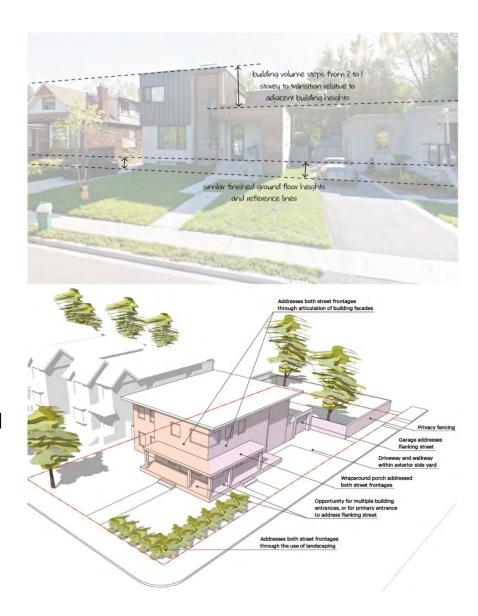
Promote transitions in height, massing, density and unit type between the edges of Corridors and the centres of Neighbouroods.

Prepare Neighbourhood Growth Plans to set intensification targets on a Neighbourhood-by-Neighbourhood basis. *Example: Town of Newmarket Old Main Street Tertiary Plan*

Prepare Urban Design Guidelines to inform the look and feel of Neighbourhood infill and intensification. *Example:*Town of Halton Hills Infill Guidelines / City of Toronto Long

Branch Neighbourhood Character Guidelines

Update Zoning permissions to implement Official Plans and Growth Plans on a municipality-wide and Neighbourhood-by-Neighbourhood basis.



Within Neighbourhoods

Incentivize faster construction, (i.e. modular, pre-fabricated and wood-frame building) which allow for a greater number of units to enter the market within a shorter period of time. This may include waiving or reducing development charges, reducing development application fees and/or introducing tax exemptions.

Expedite Development Review, evaluation and approval timelines. This can be accomplished by:

- Implementing electronic application and permitting systems;
- Reducing maximum timeframes for circulation, review and commentary between regulatory departments and agencies; and
- Improving efficiency and transparency between regulatory departments and agencies.

Along Corridors and Within Centres

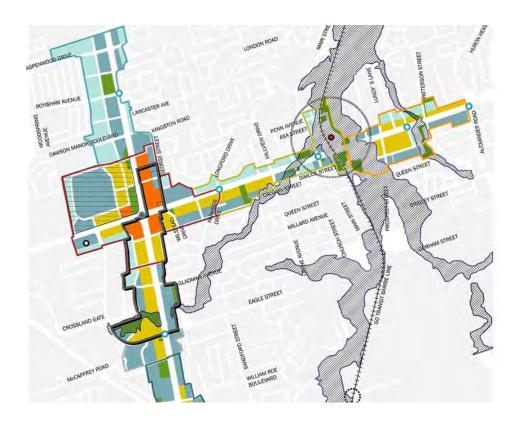
Update Official Plans to encourage intensification along Corridors and Centres.

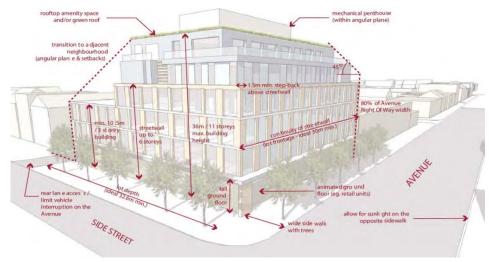
Promote the regeneration of unproductive former industrial areas by permitting a wide array of uses to help attract investment, stimulate the adaptive re-use of existing buildings and encourage new construction.

Example: City of Toronto Regeneration Area land use designation

Prepare Growth Plans to set intensification targets on a Corridor and Centre-specific basis. Example: Town of Newmarket Urban Centres Secondary Plan / King-Spadina and King-Parliament Secondary Plans

Prepare Urban Design Guidelines to inform the look and feel of Corridor and Centre intensification. *Example: City of Toronto Avenues* and Mid-Rise Buildings Study





Along Corridors and Within Centres

Update Zoning permissions to implement Official Plans and Growth Plans on a municipality-wide and Corridor and Centre-specific basis.

Incentivize faster construction, (i.e. modular, pre-fabricated and wood-frame building), which allow a greater number of units to enter the market within a shorter period of time. This may include reducing development charges, reducing development application fees and introducing tax exemptions.

Expedite development review, evaluation and approval timelines. This can be accomplished by:

- Implementing electronic application and permitting systems
- Reducing maximum timeframes for circulation, review and commentary between regulatory departments and agencies
- Improving efficiency and transparency between regulatory departments and agencies

C.2 Make Regulations More Visible + Accessible

How-To Manual

Prepare a 'how-to' manual for land-owners and builders, which uses clear language and simple diagrams to explain:

- Building Code regulations;
- Official Plan policies and Zoning permissions;
- Design guidelines (where applicable);
- Development application processes, fees and timelines (i.e. Site Plan, Consent, Minor Variance and Zoning By-law Amendment);
- Consultant and contractor requirements (where applicable);
- Public consultation requirements (where applicable);
- Building Permit application process, fees and timelines; and
- Funding assistance sources.

C.3 Introduce Temporary Transitional Housing

Introduce Temporary Transitional Housing

Encourage phasing the development of larger sites to accommodate short-term housing needs. This can include temporary buildings, removable modular or pre-fabricated buildings, or those which are designed and engineered to accommodate future additions.

Example: VAHA Temporary Modular Housing (in Vancouver)

Introduce additional density over the mid to long-term, as demand warrants Example: Riocan REIT, Choice REIT and Smart Centre REIT properties / redevelopment sites throughout the GTA.





C.4 Prepare Evolutionary Master Plans

In order to achieve temporary transitional housing, municipalities should work with land owners, developers and other stakeholders to develop master plans and implementation strategies for the evolution of larger sites over time. These master plans should address:

- Block configuration and Parking Lots (drive aisles and surface parking lots could transition into development blocks and public streets)
- Vehicle and pedestrian access and circulation (evolve in situ)
- Parks, open spaces and landscaping (certain sites will be reserved and protected for long-term parkland and open space)
- Building siting, orientation, and setbacks
- Building heights, massing, transitions (for short-term low-density housing as well as midto long-term mid to high-density housing)
- Building articulation and detailing; and
- Phasing strategy outlining the short, mid and long term build-out (how long term development is coordinated)

Next Steps for the OAA

- Adding "Housing Affordability" to OAA Website
- Ensuring Housing Affordability has an ongoing "slot" in Annual OAA Conferences
- Commission a Housing Affordability Design Manual (for OAA-On-Line reference)
- Promote Housing Affordability Ideas, Competitions, and Awards
- Create Model Neighbourhood Growth Plans (in collaboration with Planners and Engineers?)
- Providing Architectural Input and/or Support to other Housing Affordability Initiatives by the Province? The Municipalities? Homebuilders? Developers? Lobby groups—like the "Yellow Belt" and "Laneway Housing" Initiatives we saw? University and College-driven Housing Initiatives / Lectures? etc.
- Commission / Supporting Additional Research on:
 - Bringing municipal zoning into conformity with the Growth Plan
 - Visualizing Residential Densities in both ppH and FSI
 - Identifying New Residential Forms for Greenfield Densities; and
 - Identifying Housing Affordability Financing Mechanisms

Epilogue

Housing is a necessity of life. Housing affordability impacts millions of Ontarians in growing urban centres. Whether you are pursuing an education, starting a career or family, attempting to work and raise your family or simply aging in place—housing affordability is a critical issue that cuts through race, religion and economic status. Adequate quality housing is necessary for our cities to flourish, socially and economically.

Recognizing the emerging crisis in 2015, the OAA together with Residential Construction Council of Ontario and Residential and Civil Construction Alliance of Ontario commissioned the Canadian Centre of Economic Analysis to carry out a broad-based study of housing affordability in Ontario. Following the release of the study in 2017, the OAA furthered its effort by creating the **Housing Affordability Task Group (HATG)** with the objectives to identify key design and planning elements to address housing affordability. In particular, the group explores building types, changes to built form, construction methods, location, site typology and universal regulatory fixes.

HATG has set three goals with recommended actions to meet housing supply needs at an attainable level, in a timeframe that is responsive to Provincial population growth projections through to 2060.

Goal A: Increase Housing Supply by Matching the Provincial Growth Plan (2017)

Increase densities in **Neighbourhoods**, **Corridors**, and **Centres** by optimizing as-of-right existing zoning provisions, updating municipal density targets and expanding zoning provisions. This will promote the diversification of the housing stock to meet projected demand over the next 40 years. The answer lies in zoning potential tied to and realized through the 2017 Provincial Growth Plan.

Goal B: Make Housing Financially Attainable

Develop financing models for alternative ownership/occupancy structures such as sharing, life-cycle adaptation, fractional ownership and land-lease. Develop new financial models for both ownership and rental. If realized in the form presented by HATG, these have the potential to make housing more attainable for all income levels.

Goal C: Speed Up Delivery

Current development approval processes—to secure zoning and building permissions—are complex and normally consume three times the time required to deliver a project. Shortening the timeframe would greatly reduce the costs. Realizing as-of-right density and unlocking the potential on existing and surplus public lands brings housing affordability within reach for many. New, faster delivery methods for housing also need to be realized with tax and development incentives.

The HATG has scratched the surface on housing affordability in advancing these three goals with a set of actions that, if realized, will help solve current issues at hand. All three levels of government must be involved with the solution in concert. New policies and directions must be drafted, put forward for consultation and ultimately adopted. New financial models need to be developed and explored for both ownership and rental. Streamlined project delivery processes need to be implemented and promoted. New housing delivery methods need to be developed and made available.

The skill set already exists within the OAA to pick up this challenge and develop clear, actionable plans to lead the realization of all three goals. The tools are in place. What is required is the will of policy makers and the courage of politicians.

Case Studies

APPENDIX A

Built-Form Case Studies

APPENDIX B

Supportive Strategies

APPENDIX C

Financial Case Studies

APPENDIX D

Policy Case Studies



Appendices

Appendix A: Case Studies

20K INITIATIVE

LOCATION: Auburn, USA **ARCHITECT:** Auburn University **AREA:** Varies **SOURCE:** http://www.ruralstudio.org/programs/20k-house-product-line

The goal of the 20K Initiative, launched by Auburn University's Rural Studio and led by faculty members and architecture students, was to tackle the systemic issues underlying the affordable housing crisis in the United States. The program began in 2005 with the development of \$20,000 homes for low-income residents in an impoverished area of rural West Alabama. It has since shifted its focus into a broader initiative looking at the secondary costs associated with purchase to post-occupancy home maintenance.

By analyzing secondary costs alongside the initial purchasing cost of a home, the 20K Initiative can develop a 'total cost' model, and create a more holistic understanding of homeownership that serves as a force to address and develop strategies for rural health and prosperity.

The 20K Initiative has been working in partnerships with industry leaders and government agencies. Public and private partnerships include Fannie Mae, USDA, the Department of Energy, Habitat for Humanity, and others. The homes are currently one- and two- bedroom models designed to meet residential codes and optimized for passive comfort.

The continuing program aims to develop a wider network of partners to develop a scalable, sustainable and resilient process for delivering homes in underserved rural communities.









Appendix A: Case Studies

55

BREMER PUNKT

LOCATION: Bremen, Germany **ARCHITECT:** Lin Architects Urbanists **AREA:** 800m² **SOURCE:** https://www.archdaily.com/870720/bremer-punkt-lin-architects-urbanists

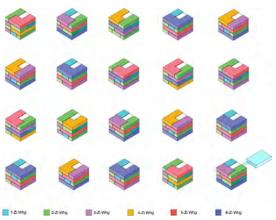
Affordable housing in Bremen, Germany, as well as a number of other German cities, is diminishing in supply as demand for housing grows. GEWOBA, Bremen's largest housing association, sought to extend its existing housing stock by launching an "ungewöhnlich Wohnen" (unusual living) competition in 2011. The competition called for design proposals to adapt five existing postwar housing lots in the Gartendstadt Sud of Neustadt area into affordable and flexible housing.

The result: 'Cube House,' a four-storey timber cube constructed by stacking prefabricated structures on top of one another, fits the surrounding building context, offers open green spaces to residents, and can be reconfigured to allow for flexible layouts that match the specific needs of its residents. Due

to the modular structure and ability to uniquely assemble the units, the Cube House structures can be re-configured to fit onto irregularly shaped sites.

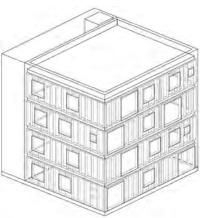
A Cube House is highly versatile despite its surface area of only 13.35m x 13.35m, offering both adaptability and flexibility by way of different apartment combinations, surface area, circulation, façade, and building form requirements.











56

Appendix A: Case Studies

CARMEL PLACE

LOCATION: New York, USA ARCHITECT: nArchitects AREA: 3,250m²

SOURCE: http://narchitects.com/work/carmel-place/

Carmel Place was the winning proposal of the adAPT NYC initiative which focused on providing housing stock to address New York City's growing small household population. As part of former Mayor Bloomberg's 'New Housing Marketplace Plan,' the Carmel Place prototype project (formerly My Micro NY) is the City's first 'micro building' launched to provide loft-like rental apartments that range in area from 24–33 square meters.

The development necessitated a number of zoning relaxations in terms of minimum unit size, maximum density and number of units per building. It has since become a 'closely watched' project in terms of its "groundbreaking use of modular construction" to address housing needs while offering efficiency of interior and exterior spaces. The project also benefited from local production, in that the modules were prefabricated in the Brooklyn Navy Yard.

As New York City's first micro-unit apartment building and the tallest modular development in Manhattan, Carmel Place was one of the first buildings in the City to be constructed by stacking 65 individual, self-supporting, steel-framed modules – 55 of these provide the individual residential units and 10 serve as the building's core. Out of the total rental units, 22 are dedicated as affordable housing, eight of which are reserved Section 8 units for formerly homeless US veterans. The remaining 33 units are rented at market rate.

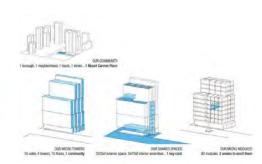


Appendix A: Case Studies













57

UNION STREET ECOHERITAGE

LOCATION: Vancouver, BC **ARCHITECT:** Shape Architects **AREA:** 600m² **SOURCE:** https://shapearchitecture.ca/projects/union-street-ecoheritage/

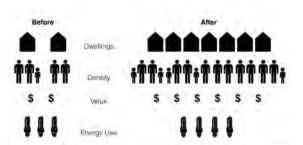
The Union Street EcoHeritage project focuses on offering an alternative approach to densification that is sensitive to the unique patterns of Vancouver's neighbourhoods while proposing heritage revitalization within a low-energy design.

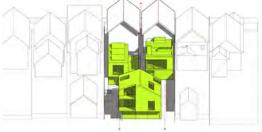
Consisting of seven units distributed over three buildings, the EcoHeritage development is effectively a revitalization of two circa-1890's era heritage homes and a new three-storey, 1,600 square foot laneway infill project.

By developing 6,100 square feet of dwelling space, the project creates a unique housing arrangement that knits together seven units on two formerly

separated lots. The adjacencies between houses create "charged social spaces" for residents that are both tight-knit and permeable, allowing access to Union Street – fronted by the two heritage homes – and the laneway behind.

The EcoHeritage development was funded through the LiveSmart program and launched through the British Columbia Ministry of Energy, Mines and Petroleum Resources, which aims at building 100 of the most energy efficient residential units and schools in the Province.













Appendix A: Case Studies

SALUS CLEMENTINE

LOCATION: Ottawa, Canada ARCHITECT: CVS Architects GFA: 3,034m²

SOURCE: http://www.csv.ca/salus-clementine/

Salus Clementine, is a 42-unit residence built by the Ottawa Salus Corporation, a community-based service which focuses on providing housing to people who struggle with mental illness.

Built to the highest standard for energy efficiency and environmental sustainability, Salus Clementine is the first multi-unit affordable housing development in a cold climate to be both LEED Platinum certified and achieve the International Passive House certification from iPHA. Efficiencies were realized though increasing insulation, reducing air leakage, and eliminating cold bridging while providing exceptional interior air quality. The building reduces

energy consumption by 66% compared to the 2012 Ontario Building Code and cost only 10% over standard construction rates. The reduction is so significant that a furnace is not required to provide heating throughout the winter and cooling loads are minimized.

The project, located in an inner suburb of Ottawa, sets a new precedent for environmental stewardship.









59



Appendix A: Case Studies

DEFLAT KLEIBURG (KLUSHUIS AMSTERDAM)

LOCATION: Amsterdam, Netherlands **ARCHITECT:** NL Architects + XVW architectuur **SOURCE:** https://www.archdaily.com/806243/deflat-nl-architects-plus-xvw-architectuur

DeFlat Kleiburg or Klushuis Amsterdam is one of the Netherlands' biggest apartment buildings. It's comprised of a 400 meter long, 10+1 storey, 500 unit concrete slab that weaves across its site in the residential neighbourhood of Bijlmermeer, in South-East Amsterdam.

The original building, designed in the 1960s, once formed part of a larger, single project in which a number of similarly shaped buildings formed a hexagonal grid. A series of renewal projects occurred in the 80s and 90s but ultimately the Housing Corporation Rochdale launched a competition to rescue the building from demolition.

Consortium deFlat was chosen to redevelop the property with its proposal to turn Kleiburg into a 'klussen' which translates into 'do it yourself.' The idea was

to renovate the building's main structure and leave the apartments unfinished. Elevators, galleries, and other installations were refurbished, while individual unit showers, kitchens, heating systems and even separate interior rooms were not. This would minimize the initial investment cost, and give future residents the opportunity to buy 'the shell' of an apartment at a low price with the freedom to renovate as desired.

Its refurbishment, taken on by NL Architects and XVW architetuur, restores the gridded concrete façades of the 1960s in a reimagining of the building's former purpose - providing "better accommodation for those living in the city's deteriorating neighbourhoods."







Appendix A: Case Studies

60

NIGHTINGDALE 1

LOCATION: Melbourne, Australia ARCHITECT: Breathe Architecture AREA: 80m² per unit

SOURCE: https://www.breathe.com.au/nightingale1/

The Nightingale 1 building was the first development of Breathe Architecture's 'Nightingale' Model – an idea conceived in 2014 focused on building a well-designed, community-led building for residents and not investors.

The model is "purpose-driven," aiming to deliver sustainable housing at cost, as opposed to increasing housing delivery trends that seek maximum financial yields. The financial framework caps profits at 15%, and focuses on stripping unnecessary costs in the typical sale process – real estate agents, marketers, consultants, as well as those that drive up individual unit costs – second bathrooms, individual laundry units, and car parking spaces. The development

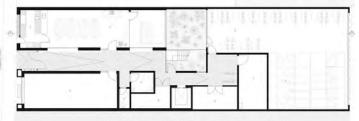
was constructed using both passive design principles and sources of renewable energy, reducing overall running costs and ensuring long-term sustainability.

The Nightingale model focuses on people. Providing housing to first-time home buyers, with or without families; and considering the building's impact on the local community.









61

Appendix A: Case Studies

POCKET SUITES

LOCATION: Winnipeg, Canada **ARCHITECT:** ND LEA + Cohlemyer Architects **AREA:** 21m² per unit **SOURCE:** https://umanitoba.ca/faculties/architecture/media/CiP_2009_Richard.pdf

Pocket Suites are a series of innovative infill projects in Winnipeg, that provide an alternative model to rooming houses and shelters for low-income single persons in Manitoba.

Launched in 2003, the Pocket House concept was introduced by ND LEA architects, and born from the idea that planners and architects alike can create innovative solutions to address urban problems, such as the shortage of quality low-income and barrier-free housing.

Four Pocket Houses were built in two neighbourhoods. Each two-storey building contains eight units with a separate entrance, a private washroom, a cooking area, and a bed, among other furnishings. Each house features three barrier-free suites and one fully accessible suite on the main floor, with the

remaining suites on the second lever accessible by two exterior staircases. The homes are built to be energy efficient, meeting Manitoba Hyrdo's requirements for "excellence in design and sustainability."

The majority of Pocket Suites today are rented out, indicating the project's level of success, but also the level of need for affordable housing, particularly in the Spence and Centennial neighbourhoods. According to SAM management, the original property managers for the Pocket homes, the model can serve as a template for affordable infill housing aimed at single resident occupancies in inner-city neighbourhoods.





62

Appendix A: Case Studies

SUPERLOFTS

LOCATION: Amsterdam, Netherlands **ARCHITECT:** Marc Koehler Architects (MKA) **AREA:** Varies **SOURCE:** http://superlofts.co/wp-content/uploads/2017/05/Superlofts-brochure.pdf

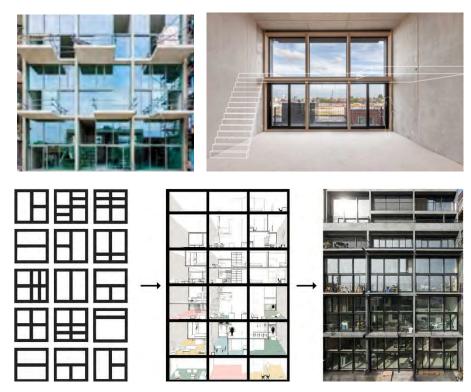
Superlofts' concept is, at its core, focused on providing "participatory, sustainable, and adaptable" loft spaces that offer more diverse and customizable typologies to its residents.

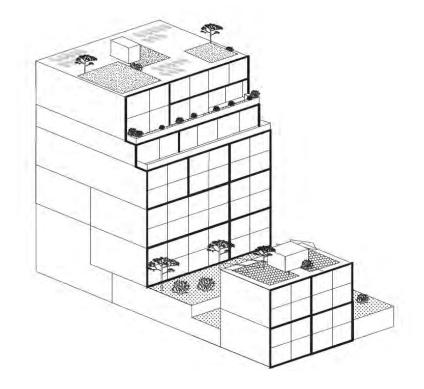
Developed by Marc Koehler Architects (MKA), a Superloft is a prefabricated concrete structure comprising of three to six meter high modules that can be combined into housing blocks, slabs, high-rises or townhouses. Given that a unit is bought as 'raw space,' residents can custom-build their own home to suit their particular (and changing) needs.

The model generates flexibility and resilience by providing people with the

opportunity for homeownership with complete control over a space and without the significant costs associated with household renovations and construction. A cooperative development model that engages the homeowner as a co-developer ensures that residents are central to any decision making that occurs with regards to their respective units.

As well as offering cost-effective and energy-efficient buildings, Superlofts are underpinned by sharing and connection between inhabitants, providing a platform for exchanging ideas and inspiration. The open framework allows for opportunities to create common spaces or shared facilities at minimal cost, the result being a sense of communal urban living among residents.





Appendix A: Case Studies

63

VAHA MODULAR HOUSING PROGRAM

LOCATION: Vancouver, Canada **ARCHITECT:** Horizon North **AREA:** 600 single-occupancy units **SOURCE:** https://vaha.ca/this-is-a-vaha-post-with-an-image-and-a-long-title-its-also-an-external-post/

The Vancouver Affordable Housing Association (VAHA) Modular Housing Program provides temporary housing to low-income and homeless residents, as well as the supportive services they need to transition into longer-term housing.

Anticipating the need for temporary shelter solutions, the BC government preemptively revised zoning by-laws to include "temporary, modular" structures in residential and industrial zones around the City, allowing them to be built for 5- to 10- year tenures. In partnership with the Government of British Colombia, VAHA secured a funding commitment of \$66 million to support the assembly of 600 temporary modular housing units in undeveloped, City-owned

land. The modules can be stacked until they are needed for other planned developments, providing temporary relief to the pressing needs of the City's growing low-income and homeless population.

Horizon North was selected to build the first of these housing projects at 220 Terminal Avenue. The project consists of 40 self-contained, accessible suites with bathrooms, kitchens and shared amenities. Four of the suites were designed to meet accessibility requirements.









Appendix A: Case Studies

Y:CUBE

LOCATION: London, UK **ARCHITECT:** Roger Stirk Habour + Partners **AREA:** 1,640m²; 26m² per unit

SOURCE: https://www.rsh-p.com/projects/ycube/

Y:Cube is a London, UK innovation by Roger Strik Harbour + Partners, focused on providing housing solutions for young people entering the housing market who are otherwise unable to buy into London's surging real estate ladder. A Y:Cube unit is a prefabricated, 26 meter squared, self-contained, one-bedroom studio for single occupancy. All services are pre-built into the module, allowing the Y:Cube to be connected into the water, heating and electricity mains on any given site. Being modular, units are easily demountable or assembled, and therefore provide versatility that is ideal for brownfield sites in already-dense urban areas like London.

Units are constructed to a high quality, eco-efficient standard, utilizing materials such as renewable timber. The prefabrication of a Y:Cube home

ensures energy-efficiency, particularly by way of household insulation to the point that units require little to no heating in cold months.

As rental units, Y:Cube's are set at 65% of market rate. Coupled with low energy bills due to the energy efficient measures in the construction process, the units offer genuinely affordable living options to its residents, as well as "real opportunities for social investment" that provide financial returns to investors, and social returns in local communities by meeting a huge need for affordable housing.













Appendix A: Case Studies

65

Appendix B: Supportive Strategies

FINANCIAL MODELS

Homeownership & Down-payment Assistance Financial Models

TRILLIUM

Location: Ontario

Trillium Housing provides a 'payment free mortgage' representing 20% of the value of a Trillium home that a given purchaser wishes to buy. The prospective homeowner must pay an initial down payment of at least 5%. Trillium shares in the appreciation of the house value over time, and once the household wishes to sell, Trillium are repaid 20% of the value of the home.

OPTIONS FOR HOMES

Location: Ontario

Prospective homeowners provide a 5% down payment for a unit they intend to live in, and Options will provide a Down Payment Loan between 10-15%. As the value of the home appreciates, Options shares in the growth. Options are then paid back their initial Down Payment Loan percentage if the house is sold.

DANIELS FIRST HOME BOOST

Location: Ontario

Daniels' First Home Boost program enables qualified purchasers to increase their down payment from 5% to 15% through an interest-free, payment-free loan.

DANIELS GRADUAL DEPOSIT PAYMENT PLAN

Location: Ontario

Daniels' Gradual Deposit Payment Plan offers the opportunity to buy with 5% down by paying \$3,500 with the Agreement of Purchase and Sale, then \$1,000 each month until you reach 5% or occupancy.

ACCESS CONDOS

Location: Quebec

A standard (10%, eligible to anyone) and exclusive (15%, for homebuyers in the H3C development) financial model are offered as purchasing credits to assist in the downpayment for an Acces Condos unit. In the case of resale, homeowners pay back the initial purchase credit, as well as 10 or 15% of the increased property value respectively.

NOVA SCOTIA DOWN PAYMENT ASSISTANCE PROGRAMME

Location: Nova Scotia

The Down Payment Assistance Program (DPAP) assists Nova Scotians with modest incomes (max \$75,000) who pre-qualify for an insured mortgage to purchase their first home. Eligible participants can apply to receive an interest-free repayable loan of up to 5% of the purchase price of a home. Loans can range between \$7,500 - \$14,000, are interest-free, and repayable over 10 years.

CO-INVESTMENTS

PARCEL FINANCE INC.

Location: Ontario

Parcel Finance purchases equity in homes that prospective homebuyers wish to buy, reducing the level of savings homebuyers are required to have for their down payment. Parcel's investment also reduces the amount of mortgage debt required, allowing homebuyers to make mortgage payments that they are better able to afford. As co-owner of the home, Parcel shares in the growth of the house's value. Parcel invests for up to 10 years - Homebuyers can buy Parcel out at any time within that 10-year period.

BAUGRUPPEN

Location: Berlin, Europe, World-wide

Translates to 'building groups' - Baugruppen is a housing construction model that is focused on the idea of collectively funded, community-based living. Architects, residents, community members work in concert with one another, pooling funds for construction and the purchase of a given plot. Berlin's R50 building is a well known example. It was selected by a Baugruppen collective in an effort to move away from a developer-driven, maximal short-term profit model that is associated with affordable housing crises around the world. Units per-square metre cost €2,150 (around \$2,450), marking a significant discount relative to the cost of buying in the same area of Berlin (€2,950).

NIGHTINGALE BAUGRUPPEN

Location: Australia

The model creates savings by giving the group of prospective homeowners the ability to invest funds in the development of their own home, requiring less capital from investors. Less interest is paid to investors as a result, and these project savings are then recycled to the 'baugruppen' to reduce the cost of the apartments.

The members go on title of the land and Nightingale simply manages the development for them, instead of selling the apartment. As such, Nightingale does not have to pay GST on sales revenue, nor is there Stamp Duty to be paid.

Each household commits 10% of the apartment cost upfront, which is invested into the project to offset development costs. Once completed, the household pays off the remaining 90% in the same way as a traditional purchase. A Nightingale Baugruppen project aims to deliver between 25 and 30% less than market value.

67

Appendix C: Financial Case Studies

The Accès Condos program is central to the SHDM's (Société d'Habitation et de Développement de Montréal) urban revitalization and residential development mission. SHDM has partnered with a number of developers in 'destructured' areas of Montreal, such as it's up and coming project in the Griffintown neighbourhood, sharing risks to obtain competitive fixed prices on condominiums and apartment units.

An 'exclusive' mortgage financing model is offered specifically to families and first-time buyers purchasing units in the H3C Condominium in Griffintown, geared to offer financial incentives to households that plan on keeping the unit for at least five years (intended to reduce speculation / properties as investments). With the 'exclusive' financing option, families are given a 15%

purchase credit for the down payment, with a required minimum deposit of \$1000, thereby reducing the buyer's mortgage loan.

After at least five years of ownership (from the 6th year on), households would be required to pay 15% of the increased value of the unit if they wanted to sell. If they wanted to sell before that time, they would pay higher percentages: 2nd year = 40%, 3rd = 30%, 4th = 25%, 5th = 20%.

Owners pay back the initial purchase credit + 15% of the increased value of the property, and their remaining equity in the unit is theirs to keep. Accès Condos also offers a 'standard' model where anyone is eligible for a 10% purchase credit when buying an accredited unit.

You buy an accredited Accès Condos unit under the exclusive option valued at \$250,000		5 years later*, you resell your condo at the price of \$300,000		Remaining equity after resale 5 years later	
Purchase price:	\$250,000	Increased value of your unit (Sales price minus purchase price):	\$50,000	Sale price:	\$300,000
Purchase credit under the exclusive option - 15%:	- \$37,500	15% of the increased value to reimburse:	\$7,500	Total reimbursement to the SHDM:	- \$45,000
Minimum contribution from the buyer:	- \$1,000	Exclusive option purchase credit to reimburse:	+ \$37,500	Mortgage balance at time of resale**:	-\$178,000
	= \$211,500	Total reimbursement to the SHDM:	± \$45,000	Remaining equity after results:	= \$77,000
		*Starting in the 6th year of ownership A year of ownership corresponds to a period *Mortgage balance based on a mortgage with a of 365 days calculated from the date of signature of the notarial act (deed of sale). years amortization period.		interest rate and a 25	

NIGHTINGALE MODEL

LOCATION: Melbourne, Australia ARCHITECT: Breathe Architecture

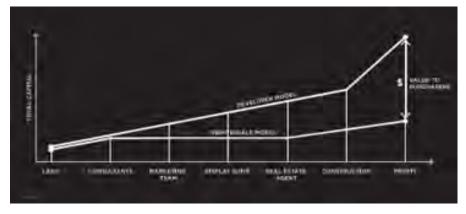
The Nightingale Model "is a set of systems and processes for housing provision," founded on the notion that sustainability, affordability and livability should be architectural priorities in housing. The model has since been expanded into a larger housing movement – the Nightingale Housing Movement – which is a not-for-profit social enterprise that licences the Nightingale Model to architects. Through knowledge sharing amongst the architectural community, the model aims to promote high quality housing that is ecologically, socially and financially sustainable throughout Australia and beyond.

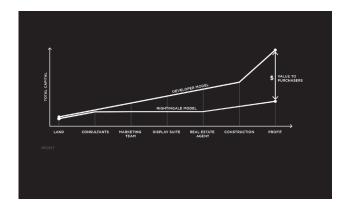
In accessing funding through ethical equity investors, the model is focused on providing housing to first-time home buyers and families, with proximity to schools, employment areas, and local communities—counteracting development trends that push housing farther away from central cores.

Nightingale is a 'purpose-driven model' that aims to deliver sustainable housing at cost, as opposed to increasing housing delivery trends that seek maximum financial yields. The model adopts a financial framework that caps profits at 15% and focuses on stripping unnecessary costs in the typical sale process – real estate agents, marketers, consultants, as well as those that drive up individual unit costs – second bathrooms, individual laundry units, and car parking spaces. Operational costs are further reduced through establishing embedded energy networks. In the Nightingale 1 project, these measures saved the project over \$400,000 and reduced the price of each unit by an average of \$20,000.

Affordability is ensured on a long-term basis through a 20-year restrictive contract. The maximum resale price of a Nightingale unit cannot exceed the initial price paid plus the percentage increase in median house prices of the area from the time one bought, to the time one sold.





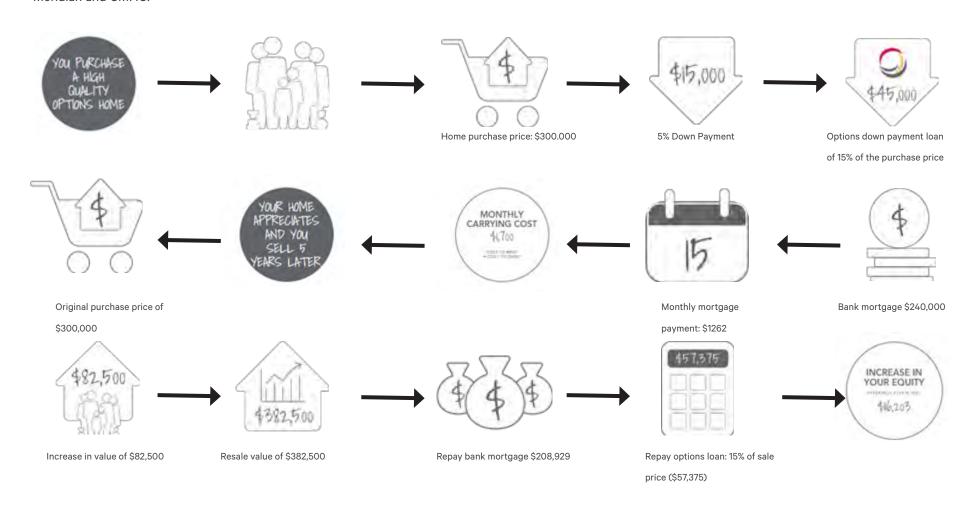


OPTIONS FOR HOMES DOWN PAYMENT LOAN

LOCATION: GTA, Canada

Options for Homes are a non-profit social enterprise that create opportunities for homeownership by offering down payment support to prospective home owners. Having been operational in Toronto since 1994, Options have created homes for over 6,500 households, most of whom could not have afforded home ownership otherwise. Options condominiums are quality built in partnership with Deltra, and Down Payment Loans are recognized as equity by BMO, Meridian and CMHC.

Purchasers must provide a 5% down payment for a unit they intend to live in, and Options will provide a Down Payment Loan of 10 - 15%. As the value of the home appreciates over time, Options share in that appreciation. If a household wishes to sell their home, Options are paid back the Down Payment Loan percentage of the final sale.



PARCEL FINANCE INC.

LOCATION: GTHA, Canada ARCHITECT: JvN/D

The Parcel Finance model purchases equity in homes that prospective homebuyers wish to buy, reducing the level of savings homebuyers are required to have for their down payment. Parcel's investment also reduces the amount of mortgage debt required, allowing homebuyers to make mortgage payments that they are better able to afford. As co-owner of the home, Parcel shares in the growth of the house's value. Parcel invests for up to 10 years - Homebuyers can buy Parcel out at any time within that 10-year period.



Own a home, that you can afford with your current income, in a neighbourhood you love, today.



We cover the down payment, you cover mortgage payments. You don't make any monthly payments to us.



We are a silent partner. You can renovate or alter your home and live the way you like.



We make things easy and support you every step along the way. We take the mystery out of the process.



Save your savings, for home improvements, investments, and life's unanticipated events, rather locking all of your savings into a house.



Far cheaper than any other option. Anyone with less than a 20% down payment is required to pay for mortgage insurance through the government's Canada Mortgage and Housing Corporation. We'll help you reach this 20% threshold so you can avoid these payments. We're half the cost of CMHC Insurance, and we make your mortgage cheaper, not more expensive.

71

TRILLIUM MORTGAGE

LOCATION: GTHA, Canada

Trillium Housing have homes for sale in Toronto and Hamilton, with more to be offered elsewhere in Ontario. With the assistance of development partners, Trillium ensures that housing can be delivered at the lowest possible price in the local market, while offering co-financing to assist in the initial stage of home ownership.

The Trillium Mortgage is an innovative non-profit mortgage assistance program that helps prospective homeowners to purchase a Trillium Home by providing a 'Payment Free Mortgage' that represents 20% of the value of the home. Provided the household puts down an initial minimum down payment of 5%, the Trillium Mortgage simply shares in the appreciation of the value of the

house over time, instead of earning monthly interest on the investment.

As the value of the house increases over time, come the time that a household wants to sell their home, the Trillium Mortgage is repaid (20% of the increased home value / sale price) and the sellers retain what's left.

A shared-appreciation mortgage does not have a conventional interest rate, but instead repayment is made up of the mortgage principal and a share of any appreciation in the value of the home. If the value of a home has increased 15% when the mortgage is repaid, then the homeowner pays the principal plus 15% appreciation.

72



Appendix D: Policy Case Studies

BUFFER ZONING

LOCATION: Vancouver, Canada **ARCHITECT:** Haeccity Studios **SOURCE:** http://www.haeccity.com/missingmiddle/

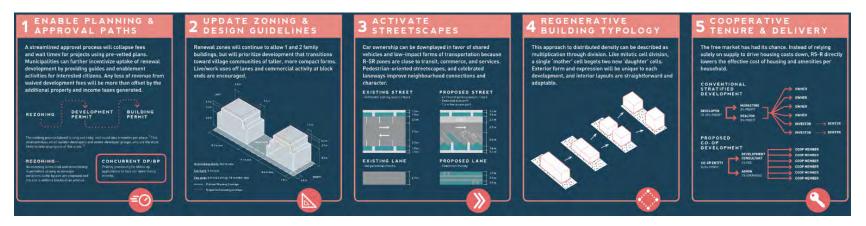
Haeccity Studios' 'MicroOp' strategy introduces a zoning amendment called 'Buffer Zoning' – a method through which to increase density and affordable housing stock in Metro Vancouver in the implementation of 'the economics of tenure and sharing models' for housing.

The method proposes a reorganization of the first three blocks situated on either side of arterial roads – the Buffer Zones, or, what Haeccity are calling 'R5-R' zones – to allow for residential renewal through the provision of infill housing stock.

The R5-R zones would be rezoned to assist in affordable residential renewal, by allowing for densification in the form of 'micro ops' (micro co-ops) - converted single-family lots into three-storey buildings that contain multiple homes of various sizes and bedrooms inside. Each micro-op would be co-owned by its occupants who pool collective funds to buy and develop the site, and subsequently de-commodify the lot as a speculative investment opportunity.

Collections of Micro-Ops on a given block would comprise the Co-Block organization, granting collective access to each micro-ops' knowledge and resources, lending to a socially-collaborative and sharing-based housing model.

While the model would require significant allowances under current residential zoning regulations (R5-R zone owner-occupiers would be granted height, setback and Floor Area Ratio relaxations, for example), it aims at increasing density in an inclusive way, driven by a purpose-built and socially cognizant approach to future development. Full implementation of the model would result in an increase of 100 households per hectare, introducing a new household typology that is nonetheless consistent with the built character of a given residential neighbourhood.



MATURE NEIGHBOURHOOD OVERLAY

LOCATION: Edmonton, Canada **ARCHITECT:** The City of Edmonton **SOURCE:** https://www.cityofedmontoninfill.ca/public/download/documents/16599

The City of Edmonton's Mature Neighbourhood Overlay are a set of 24 regulations on top of the existing zoning intended to ensure that new development in the City's mature neighborhoods are sensitive to its existing character. The model was a response to a trend of suburban-style new builds in the area (built to maximum as-of-right parameters and/or including front garages, for example) that were inconsistent with the existing mature households in the community.

While the MNO, initially conceived in 1997, began as a model to ensure development was consistent with the mature character of residential neighbourhoods, the model has since been reviewed to serve as a more effective piece in providing sensitive infill in mature neighbourhoods, reducing the need for variances and Class B Development Permits, and improving the approvals process.

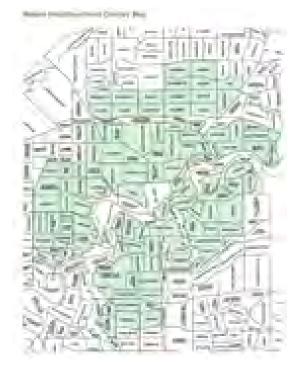
The general purpose of the MNO is to 'regulate residential development' to respond with surrounding contexts, to 'maintain the pedestrian-oriented design of the streetscape', and to provide public consultation opportunities in cases where parties are affected by proposed variances to the Overlay regulations.

Supporting infill is important for adding housing stock in established neighbourhoods in Edmonton and beyond. Infill should nonetheless respond to the context of neighbouring properties, which in turn, will increase the cost and predictability of the approvals process, and 'providing more design flexibility for new housing'.









Appendix D: Policy Case Studies

74

ZONING FOR QUALITY & AFFORDABILITY

LOCATION: New York City, USA ARCHITECT: Housing New York

SOURCE: https://www1.nyc.gov/site/planning/plans/zga/zoning-for-guality-and-affordability.page

Zoning for Quality and Affordability (ZQA) is one product of Mayor de Blasio's ten-year housing plan – Housing New York – intended to 'modernize obscure and outdated zoning rules' that restrict or prevent the development of quality affordable housing.

That zoning has not 'kept pace' with the rate at which urban areas, especially those in New York City, have developed is a reality in many cities around the world. Despite zoning generally serving to keep the built form of given urban areas consistent in terms of height, coverage and character, not updating it to reflect the way that neighbourhoods, demographics, and incomes might change can have exclusionary effects.

In the effort to increase the supply of new affordable housing and address the growing wait-list of (over 200,000) seniors in New York City, ZQA addresses the ways that outdated zoning have prevented 'the affordability and quality' of recently constructed buildings.

The ZQA is focused on the following main points:



AFFORDABILITY

- Improving the provision of affordable senior housing and care facilities to meet the need of seniors, allowing them to 'age in place'.
- Enabling Inclusionary Housing buildings that provide mixed-income housing and construct the full amount of units as allowed by current zoning.
- Reallocating taxpayer funds to more thoroughly meet affordable housing objectives, with less focus on transit-accessible housing.

QUALITY

- Providing 'visual variety' in new affordable housing developments, including façade articulation, courtyards, and improved pedestrian experiences.
- Ensuring adequate ceiling heights in new developments and improved ground-floor retail spaces.
- Maintaining functional rules, including 'contextual zoning' and 'lower-density zoning' districts.

Appendix D. Policy Case studies

MAKING ROOM FOR HOUSING

LOCATION: Vancouver, Canada; ARCHITECT: Making Room

SOURCES: https://vancouver.ca/people-programs/making-room.aspx; https://council.vancouver.ca/20180724/documents/p3.pdf

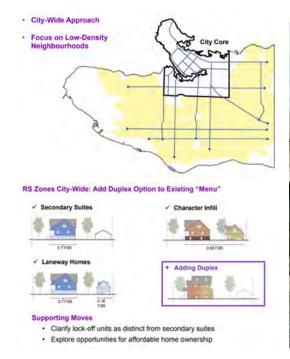
The Making Room for Housing program was devised in concert with the Housing Vancouver Strategy which aims at providing the 'right supply' of housing to meet the needs of people that live and work in Vancouver.

The program will focus on areas that are 'ripe for densification' including areas with proximity to transit, shopping, schools and parks, serving to 'increase housing diversity with the least impacts'.

In particular, the program focuses on 'adding a greater variety of housing types in single-family neighbourhoods', including infill such as 'laneway houses, multiplexes, townhouses, row houses and low-rise apartment buildings'. The program will also seek to provide incentives for rental, co-ops, land trusts and co-housing opportunities in lower-density neighbourhoods, as a means of

providing gentle density. The objective of the program is to offer a provision of housing within neighbourhoods for 'families, downsizing seniors' and other persons that comprise the so-called 'missing middle'.

To enact some of these changes, the Making Room has recommended the rezoning of (select) RT-7 and RT-8 Districts to RT-5, which would allow for laneway houses, secondary suites, lock-off units within duplexes, and options for allowing more than one principal building on a standard site, among others. The program also proposes to rezone (select) RT-10 and RT-10N Districts (small house/duplex zones with Floor Space Ratios ranging from 0.60 – 0.80) to RT-11 and RT-11N (small house/duplex zones with FSR ranging from 0.75 – 0.90) to increase housing choice in respective rezoned areas.







Appendix D: Policy Case Studies

76



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