

**An Alternative to Sprawl: Downtown  
Densification in Orillia, Ontario**

by

Eric James MacPherson Holmes

Submitted in partial fulfilment of the requirements  
for the degree of Master of Architecture

at

Dalhousie University  
Halifax, Nova Scotia  
June 2023

Dalhousie University is located in Mi'kmaq'i,  
the ancestral and unceded territory of the Mi'kmaq.  
We are all Treaty people.

© Copyright by Eric James MacPherson Holmes, 2023

# Contents

Abstract .....	iv
Acknowledgements .....	v
Chapter 1: Introduction .....	1
Thesis Question.....	1
Description of Situation.....	1
Urban Sprawl .....	2
Orillia.....	6
Response to Situation.....	7
Chapter 2: Long History of Orillia .....	8
3300 BCE .....	8
1600s .....	8
1800s .....	9
1900s .....	10
2000s .....	11
Chapter 3: Urban Design of Downtown .....	14
Urban Structure .....	14
Water .....	15
Main Street .....	15
The End? .....	16
The Grid.....	17
The Residential.....	18
The Void.....	18
Public Squares.....	19
Arcades.....	20
Densified Residential .....	20
Transit Loop .....	21
Strategy Application .....	22
Chapter 4: Design of Blocks .....	24
Moving Forward .....	24
Block Proposals .....	27

Gold Block .....	27
Green Block .....	29
Blue Block.....	31
Pink Block .....	33
Orange Block .....	35
Red Block .....	37
Chapter 5: Design of Red Block .....	39
Programmatic Relationships.....	39
Connections and Layout.....	43
Structure and Materiality.....	48
Chapter 6: Future Recommendations .....	52
Design Approaches .....	52
Block Scale .....	52
Building Scale .....	53
Densification .....	53
Why Not Today? .....	57
Chapter 7: Conclusion .....	59
References .....	60

# Abstract

Towns in southern Ontario, Canada, have experienced many changes since the mid-20th century due to urban sprawl around them. Residential suburbs with cul-de-sacs and big box stores have prioritized cars and drivers, while distancing residents from the history and greater diversity of the downtown. Consequently, much of the downtown core has been relegated to underused parking lots.

Using the town of Orillia as a case study, this architectural design thesis explores a different urban strategy that densifies the downtown, turning parking lots into mixed-use developments with housing. It stitches new buildings into Orillia's urban fabric by working with the town's history, inserting public and private spaces into downtown blocks, and recognizing different uses in the surrounding areas to guide programs for new mid-rise developments at the scale of the block. This project could serve as a prototype for other towns in southern Ontario with similar urban problems and potential.



# Acknowledgements

I would firstly like to thank all the faculty members that have helped me make this thesis possible. First to my supervisor Steve Parcell and advisor Niall Savage for their wisdom, guidance and overall support of my thesis over the past few months. This would not have been possible without you.

To all my fellow classmates it was a pleasure working alongside you over these past few years.

To Bryan, Jordan and Norm, thank you for sticking by my side through thick and thin. It was a pleasure being able to work alongside you and I'm grateful to call you my friends.

To all of my family and friends back in Ontario, and for all of you in (the much warmer) Australia, none of this would have been possible without your love and support for the past 25 years. I hope this thesis makes you proud and I can't wait to show you where I go from here.

Finally, to Mum, Dad and Catherine, none of this would be a reality without your love. Through all the ups and downs, there was never any doubt that this would be a possibility for me, and for that I'm forever thankful and proud to call you my family.

# Chapter 1: Introduction

## Thesis Question

Can the revitalization and densification of the downtown core in small Ontario towns reduce the negative phenomenon of urban sprawl and strengthen the town's positive characteristics?

## Description of Situation

The 1950s and 1960s brought a swift change to living circumstances in small cities in southern Ontario. Prior to this shift, residents lived in neighbourhoods near the downtown core, and by default, local businesses. This new era of growth resulted in outer suburban developments for new residents and automobile traffic. This sprawl has had many negative effects, including profound disconnections between residents and their downtown core. To begin to visualize an appropriate response to this situation, a clear understanding of both the “vacant downtown” and urban sprawl is needed.



Downtown Orillia (Orillia 2016)

The city of Orillia, Ontario, serves as a case study where problems and solutions will be examined. Throughout this thesis, the terms “town” and “city” will be used interchangeably due to the influence of population numbers dictating these terms. However, when used, these terms will refer to towns/cities with a population under 100,000, and when referring to larger cities, such as Toronto, the term “major city” will be used.



West Ridge, typical suburban development (Orillia 2021)

Cities such as Orillia allowed developers to build suburban neighbourhoods and commercial areas, which in turn increased automobile traffic and turned much of the

downtown into parking lots. Suburban development also led to the departure of both commercial and residential uses from the downtown core.

Cars allowed developers to build cheaply and easily on former farmland with support from local, provincial, and federal governments. Big box stores also proliferated throughout these suburban areas. Residents are choosing not to support the locally owned “mom and pop” businesses that they would have in the past. With declining business and support from residents and government, downtown businesses have been forced to close, contributing to the present reality of the “vacated downtown”. Fewer residents use the downtown core on a day-to-day basis. The downtown is most alive during weekends, holidays, and special events throughout the warm months of the year. This suburban shift has caused problems for downtown residents who must travel farther for necessities.

## Urban Sprawl

Urban sprawl in southern Ontario is a complex phenomenon.



Street view of parking lot behind main street buildings, Orillia, ON. (Google 2020)

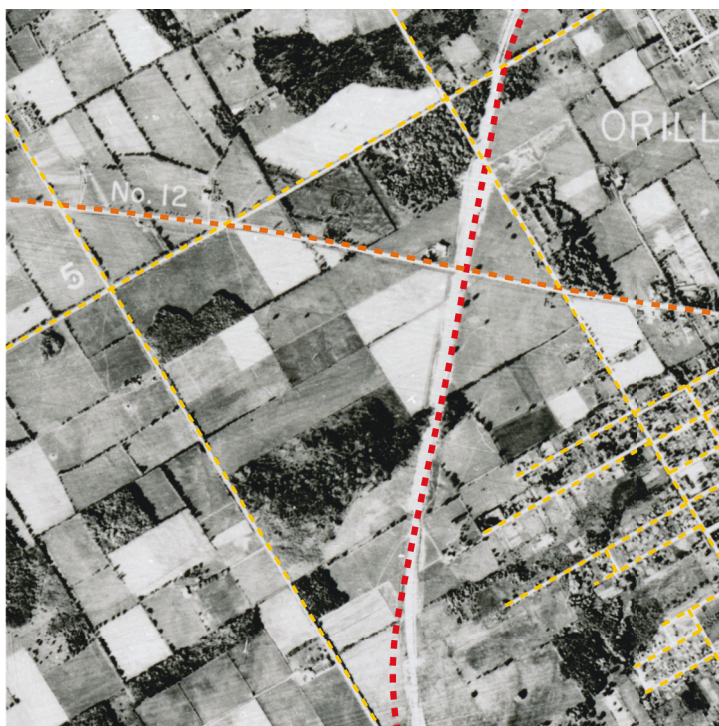
It includes big box stores and office parks, congested highways, and post-war suburbs with cul-de-sac streets and cookie cutter housing (Tachieva 2010, 1). For towns in Ontario, sprawl has been a quick solution to an influx of people moving from more populated areas such as Toronto. The socioeconomic reasons for this influx include financial burdens due to the high costs of houses in cities, the choice to raise a family in a less urban area, and new job opportunities.

In typical North American suburbs with single-family, low-density homes along curvilinear streets, most amenities are only reachable by car (Herzog 2014). People without a car are disadvantaged and residents rarely walk, run or cycle (Tacheva 2010, 16). Public spaces such as parks and plazas are generally underused (Whyte, 1980, 75).

Driving to work, for groceries and other day-to-day necessities adds greatly to a city's carbon footprint, as most cars still use fossil fuels, either directly or indirectly. A reliance on cars also has negative health factors, such as social isolation and lack of exercise leading to weight gain (Sturm and Cohen 2004, 488).

Suburban developments also have harmful impacts on natural environments, including valuable farmland, marshes and larger ecological landscapes. A green belt across southern Ontario has been a protected environment since 2005, with over 2 million acres of prime farmland. This protection is now being threatened, as the provincial government is proposing to use this land for sprawl housing. According to the 2021 Canadian Census, the province is losing 319 acres of usable farmland every day, an increase





Outskirts of Orillia in 1954



Suburban Orillia in 2018

- Highway
- Arterial
- Local
- Cul-de-sac

Analysis of urban sprawl patterns in Orillia

of 82% since 2016 (Griffin 2022). More food then needs to be imported.

Although sprawl is an expedient way to provide more housing, it is ignoring large-scale and long-term environmental and socioeconomic impacts. Mike Schreiner, a Green Party provincial politician for the City of Guelph, called for “real solutions” to Ontario’s current housing crisis: “What is lacking isn’t space for more housing — it’s ambition and real solutions from the Ford government that will actually address the crisis, not just benefit wealthy land speculators and pro-sprawl developers... Instead of building the wrong homes in the wrong places (million-dollar mansions on the Greenbelt), let’s build where people, especially young people, want to live: in affordable 15-minute communities where people can be close to jobs, family, shops, and transit” (Star 2022).



Aerial view of suburban development within green belt, Milton, ON. (Narwhal 2022)

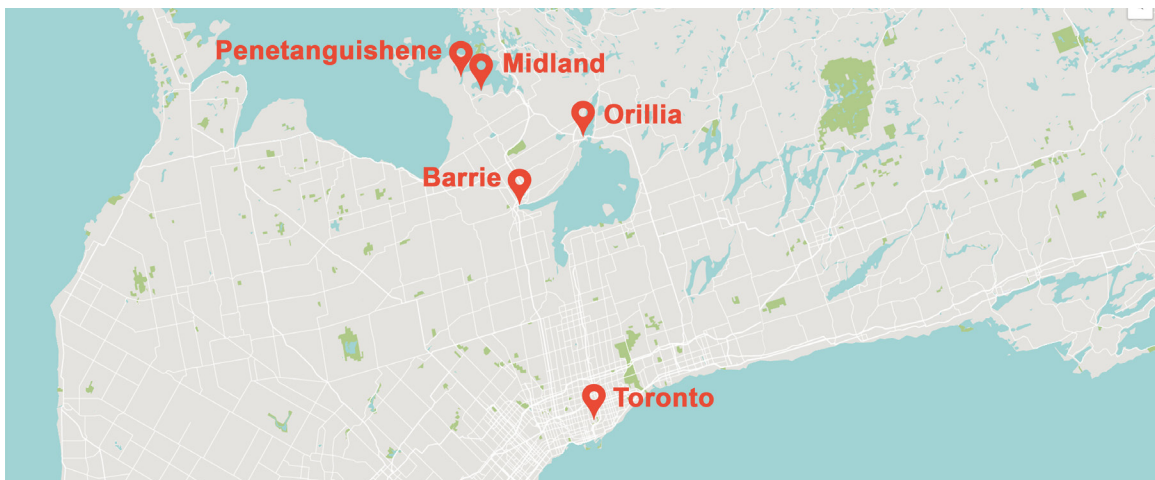


## Orillia

The City of Orillia is the focus of this thesis for a few reasons. Its early development was based on natural resources such as fish and lumber and its prime location along water routes and near other towns. This potential was coined “The Orillia Spirit” to describe the city’s potential for social, moral, and economic success (Richmond 2017). Taking advantage of these opportunities created the urban fabric of the downtown core, strong institutions and surrounding residential areas up until the 1950s.

Orillia is located approximately 150 kilometres north of Ontario’s largest city, Toronto. Orillia is located on both Lake Couchiching and Lake Simcoe, which are joined by The Narrows. Census data has shown steady growth for the city, with a 2021 population of 33,411 residents, an 8.4% increase of 3000 residents since 2011 (Census 2011).

However, during the 1950s the historical patterns began to be replaced by sprawl. Cul-de-sacs, highways, parking lots, and big box stores were added to the outskirts of the city,



Map of Southern Ontario

disconnected from the downtown core, the heart of the city since its initial development.

## **Response to Situation**

It is important to recognize that a permanent solution to these problems would require contributions from experts in many different disciplines, including economics, politics, urban planning, sociology and environment. This thesis focuses on an urban design and architectural approach to the downtown core. Its ideas for the City of Orillia are intended as prototypes for other towns in Ontario that are facing similar problems.

This approach uses several strategies. The first recognizes the long-term history of this place, from roughly 3300 BCE to the present. It highlights events and developments that made Orillia a thriving town, but later led to urban sprawl. Secondly, present strengths and weaknesses in the urban design of the city are identified to understand what does and does not need to be retained. Thirdly, it proposes an urban design for the downtown core and an architectural design for one urban block. This will involve comparisons between the downtown core and the suburbs, ideas for urban districts, and new/modified urban programs. A fourth strategy is to establish a public transit connection between the downtown and the suburbs. An overall ambition is for the downtown to become again the heart of the city for the good of its present and future residents.



## Chapter 2: Long History of Orillia

### 3300 BCE



The Narrows (Miles 2017)

To understand which factors drove Orillia's development, its early history as a temporary settlement, then village, town, and city will be analyzed by considering the city's socioeconomic interactions, movement and situation. Orillia officially became a recognized village by the Ontario government in 1867 but the history of the settlement can be dated back to 3300 BCE. The Indigenous Huron people recognized the meeting of two major bodies of water: Lake Couchiching to the north, and the larger Lake Simcoe to the south. The shallow connection between the two lakes is now commonly known as The Narrows and is where the Huron fished, traded, and gathered for thousands of years.

### 1600s



"Huron and de Champlain on Georgian Bay" (Kelly 1895)

With both Lake Simcoe and Lake Couchiching being connected to the St. Lawrence River (at the time via portage), it was only a matter of time before the Europeans, in this case Samuel de Champlain, used The Narrows as an exploration route and permanent place of gathering and trade (Richmond 2017). The arrival of Samuel de Champlain in the year 1604 to what is today known as Canada marked the beginning of colonialism and a major shift in what would become the country's future urban landscape. For both the French settlers and the Huron people, this gathering place was an ideal place for trade and settlement, including a place where food could easily be sold and purchased. Along with food, The Narrows, geographically and socially, was a place of rest and settlement. Visitors and residents could eat and socialize, as this area became a hub of strong

socioeconomic success for many years. Later, in 1609, the Huron and French settlers withdrew from the area due to conflict with the Iroquois.

### 1700s



“Orillia Logging Cabin”  
(Ware 1844)

After the retreat of Champlain, other French settlers, and the Iroquois in 1609, the area of Orillia remained largely uninhabited for decades. Other than The Narrows continuing to be used as a hub for trade and rest (fur trade by this time) there were no permanent settlements in the area. Although uninhabited at the time, this area boasted a huge potential for future settlement through the natural resource of timber, a commodity that would eventually launch a permanent settlement of what is now known as the City of Orillia.

### 1800s



“Gentleman Warming Their  
Toes” (Martin 1832)

By the 1800s Orillia had a single economic focus: timber. Two settlements were developed along the shores of Lake Simcoe and Lake Couchiching, just kilometres from The Narrows. From each settlement, a street was extended away from the waterfront. Later they intersected to become Orillia’s most well-known and oldest streets, Mississaga Street and West Street. Mississaga Street eventually became the axis for Orillia’s downtown core, and a grid of development followed rapidly. Dense forests that once limited travel were now seen as an opportunity for financial gain. The “Orillia Spirit” anticipated a better life for thousands of new inhabitants (Richmond 2017). Mississaga Street became a place of trade, social interaction and industrial connection, with businesses lining both sides of the main street. Mississaga Street also became the home of the town’s weekly farmer’s market, which continues to provide

residents with locally made goods and services to this day. This socioeconomic surge was accompanied by a grid of streets and single family residences that expanded around the downtown core, limited on the east by the waterfront and Lake Couchiching.

By 1871, the socioeconomic success of Orillia allowed for the first railway line and train station. This marked the first modern connection to major city centres such as Toronto and Barrie, just south of Orillia. The city's success also led to the development of public infrastructure with amenities such as a firehall, school and hospital, making Orillia a true town within the area. The industrial surge from timber created patterns of movement which not only situated the downtown core of Orillia, but also dictated where streets were built, where people lived, and where industry and commerce flourished for over 100 years.



Orillia Firehall (Murdoch 2000)

### **1900s**

The early 1900s saw the “Orillia Spirit” continue, as the introduction of electricity enabled new industries to develop. A prominent business of the time was the Tudhope Motor Company. Originally a carriage maker, it grew to become one of the largest automobile manufacturing factories in the country. This period also saw a surge in culture and art with the construction of the Orillia Opera House. (The original was built in 1898 and burned down in 1915) (Richmond 2017).

As with all towns and cities in the country, both World Wars and the Great Depression had a significant impact on the local people and their economy. Although Orillia's development slowed down, its culture and socioeconomic prowess recovered. Orillia's second “golden age” surged

in the 1950s and 1960s, as industry boomed, a community centre was built, and an international folk festival was founded – a festival that occurs annually to this day.



1908 Tudhope-McIntyre  
(Richmond 2017)

The 1950s and 1960s brought rapid change to Orillia, as residents started formulating competing goals for the city's future. One side wanted the city to continue growing at a rapid pace, promoting industry and commerce as it did in the past. By contrast, many in the community wanted the city to remain a quaint town. This is where the city's problem with urban sprawl began and was not recognized before it was too late. After officially becoming a city in 1968, Orillia was still divided in how it should grow. The mayor at the time famously declared, "Our day is tomorrow, Look, We Are a City! But We're Still Orillia" (Richmond 2017).



"Home or Highrise" ad in  
*Packet & Times*, comparing  
crane and building height  
to Opera House, 1978  
(Richmond 2017)

With the city running out of space, proposals were made to densify parts of the city near the downtown core, but these were met with great opposition from some residents. A group called "Home or Highrise" succeeded in banning highrises within the borders of the city for years. With no clear direction forward, Orillia remained stagnant, as people were divided on its future. Orillia's municipal government tried to remain as neutral as possible, but this ultimately resulted in urban sprawl and the gradual loss of the town's historic socioeconomic identity.

## 2000s

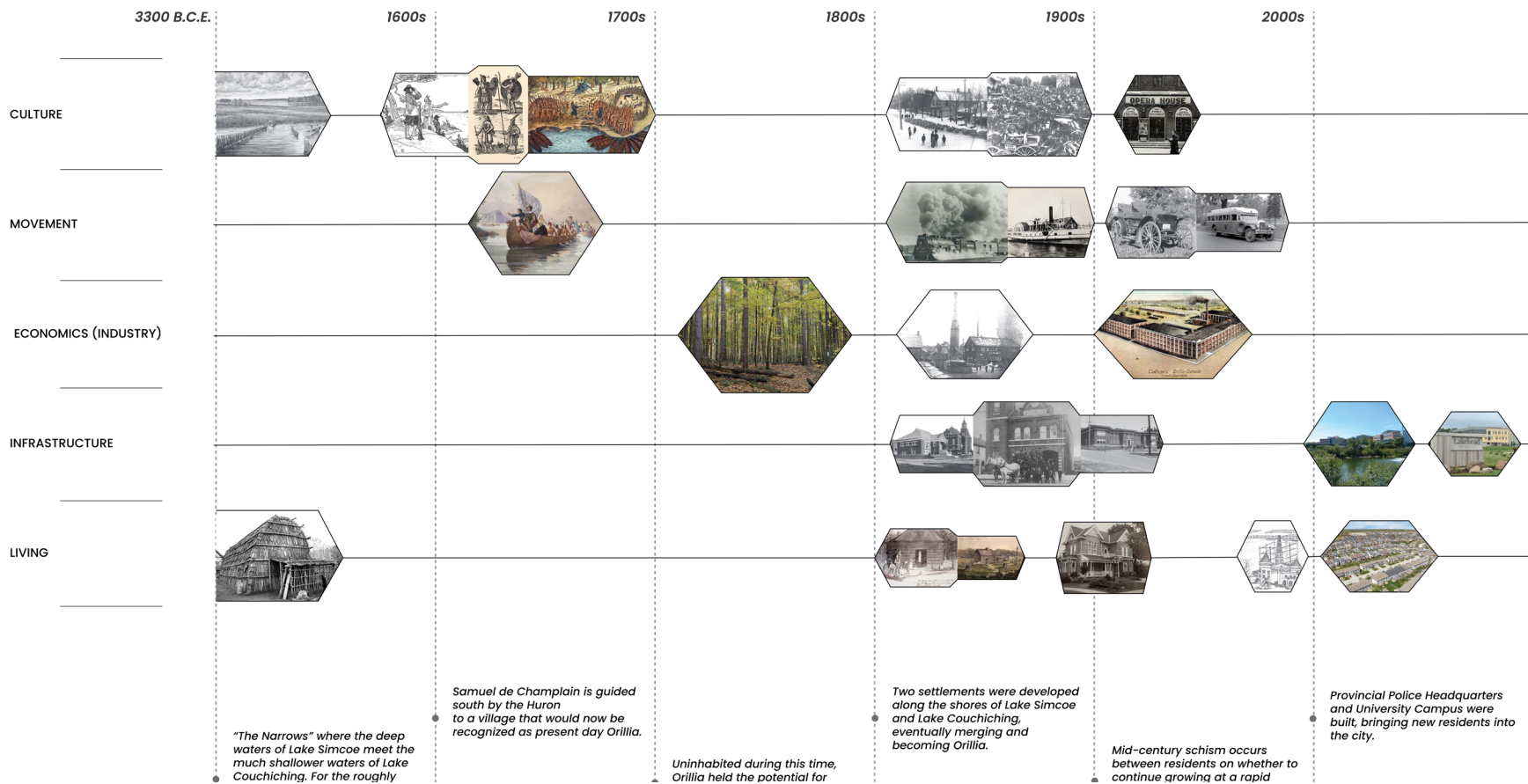
The late 1990s and 2000s brought many positive and welcome additions to the city. First, the Ontario Provincial Police built their new headquarters in Orillia in 1995. The project immediately brought new residents and hundreds of new job opportunities into the city - the first major economic influx in decades. 2006 marked the opening of Lakehead



Lakehead University  
entrance (OrilliaMatters  
2023)

University's Orillia campus, which currently has over 1400 students.

By the 2000s it also became clear how much of the city had succumbed to urban sprawl, as illustrated in Chapter 1 by the photo of Orillia's newest suburb, West Ridge.



Historical diagram of Orillia



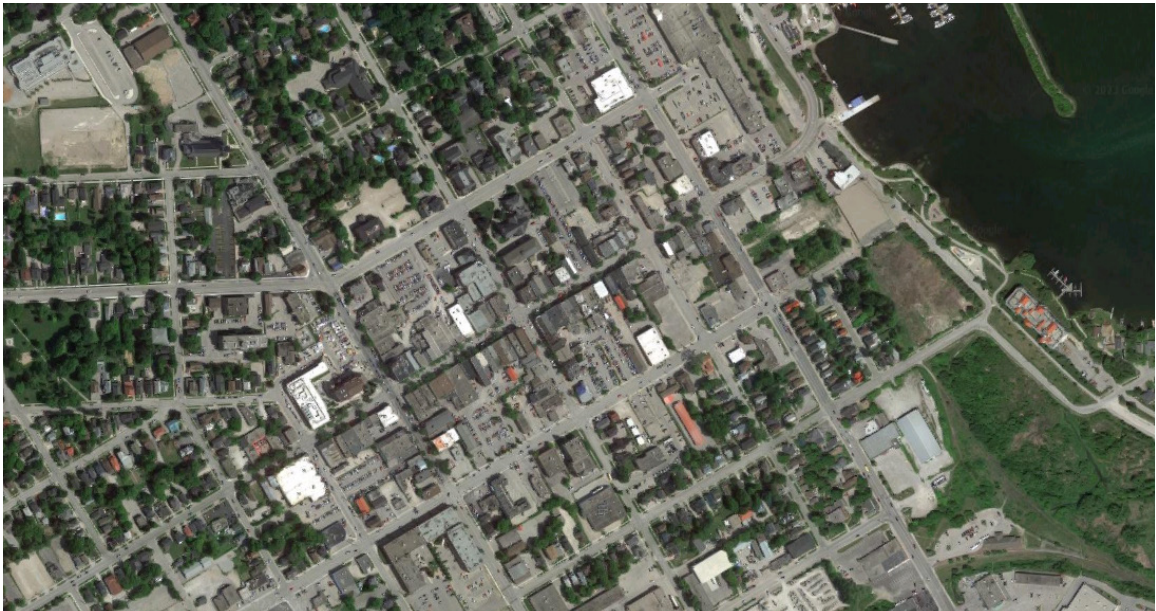
## Chapter 3: Urban Design of Downtown

### town

#### Urban Structure

Before attempting to revitalize the downtown core of Ontario towns suffering from sprawl, we need to understand how and why the downtown cores became the “heart” of their community. The urban form of a typical downtown core of an Ontario town will become evident and will be used as a template for future design moves.

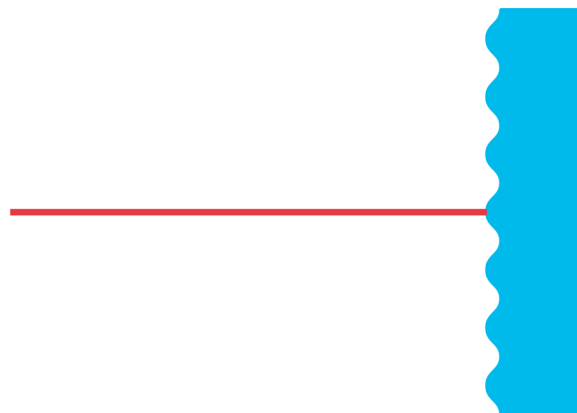
Seen below is an aerial photo of present-day downtown Orillia. Although an urban structure may not be apparent from this image, there is a hierarchy of urban form in many Ontario towns.



Aerial view of downtown Orillia (Google 2023)

## Water

Most downtown cores are situated next to a major body of water such as a lake or river, as travel was feasible only via water, due to dense forest or marsh. Travel by boat was possible in the warmer months of the year. In the winter months, frozen rivers and lakes could be traversed via foot or sled. Ontario waterways represented commerce and industry, and in Orillia, the waterfront was used for log booms and timber processing. The waterfront of downtown Orillia and other similar Ontario cities was the starting point for future urban development.



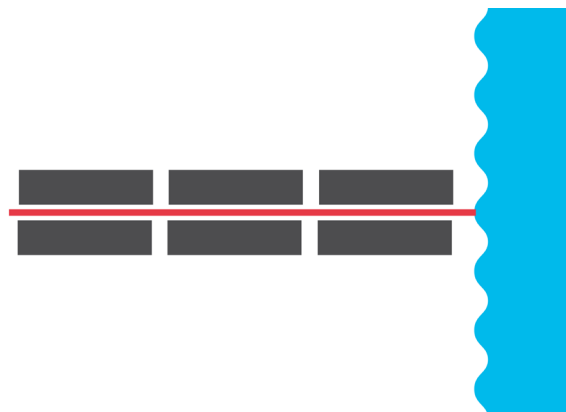
Urban structure diagram: water

## Main Street

From the waterfront, a perpendicular was the next step for these towns. With most of the waterfront being used for industry, the main street became home for trade and commerce, and amenities such as banks, bakeries and butcher shops. These permanent buildings (shown in orange below) would typically be two story, timber framed, brick buildings with a storefront on the first floor and living space on the second floor. Until the development of the



automobile, the main street was a bustling corridor of people, horses, carriages, and other forms of traffic moving in and out of the town.



Urban structure diagram: main street

### **The End?**

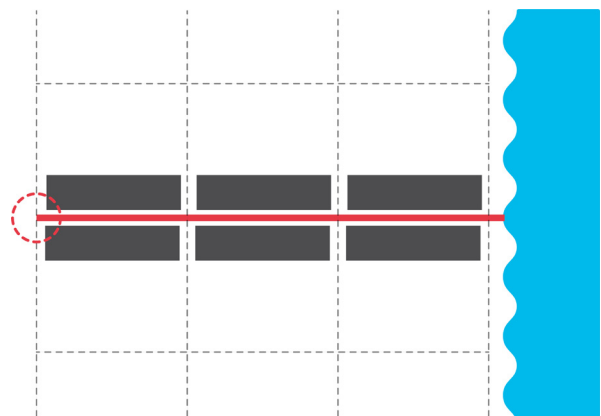
The main street typically has an endpoint that marks the edge of the downtown core. In the early days it could be an intersection with a major street. Later it could end in a prominent building or institution. In Orillia's case, West Street and the accompanying farmer's market defined the edge of the downtown and later were reinforced by the Orillia Opera House (1898) and Orillia Public Library (1911).



Urban structure diagram: The End?

### The Grid

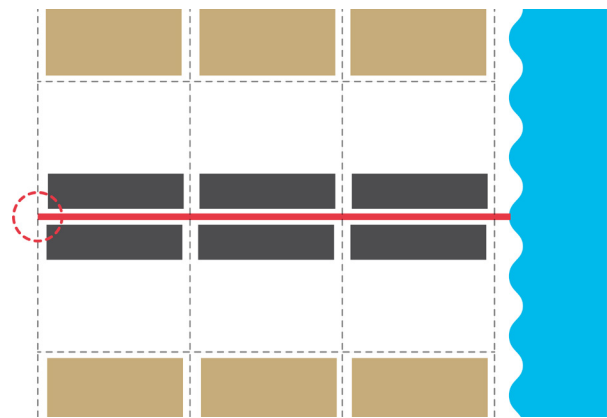
The form of almost every Ontario town during the 19th century was organized from a surveyor's grid, extending laterally from the main street. The grid fostered a clear separation between residential areas and the hustle and bustle of the waterfront and main street. This separation assisted residents of the downtown core to simultaneously access downtown while avoiding the busier parts of the waterfront and core.



Urban structure diagram: the grid

## The Residential

Residential areas (shown in yellow below) accommodated the influx of residents with new jobs in commerce and industry. Homes in these areas were usually built for families and had a fair amount of yard and garden space. In the 19th century, distances were not a concern, as the population was small enough to travel downtown on foot or by carriage.

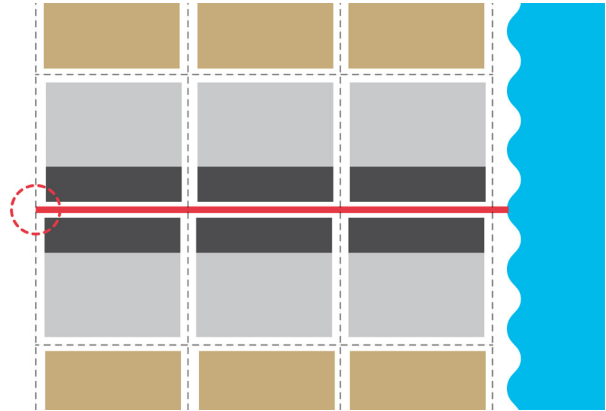


Urban structure diagram: the residential

## The Void

These residential areas kept their distance from the downtown core, maintaining a clear separation between private and public life. With no clear purpose for this zone, even with the growth of the town throughout the 19th and 20th century, it remained a void (shown in gray below) until the arrival of automobiles. For a growing number of residents the automobile was the only way to travel downtown. The voids between the main street and the residential areas then were used for parking lots. Although some buildings may have been added along side streets, these concrete tundras continue to separate the downtown core from the rest of the city. This phenomenon is typical for many Ontario

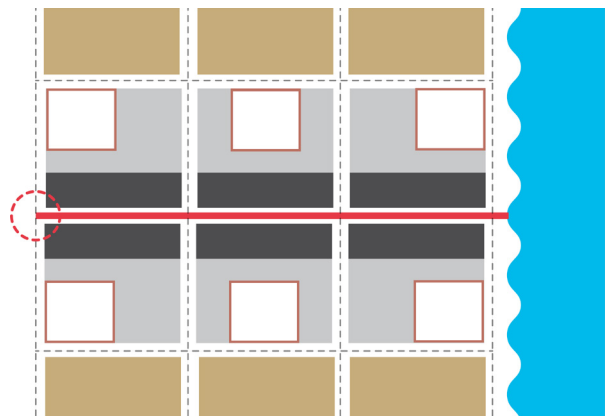
towns that opted to provide convenient parking rather than risking the demise of the downtown.



Urban structure diagram: the void

## Public Squares

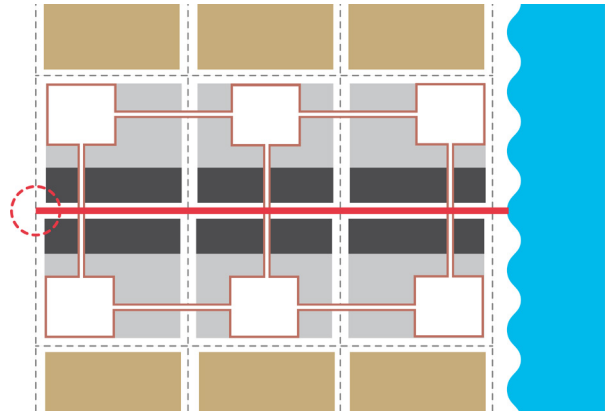
With this understanding of the existing urban structure of the downtown, design strategies can now be introduced. To start, dedicated public squares can be placed where the parking lots once stood. These squares can be located along a street edge or corner, depending on the block. This will establish public spaces as the primary urban feature of each block.



Urban structure diagram: public squares

## Arcades

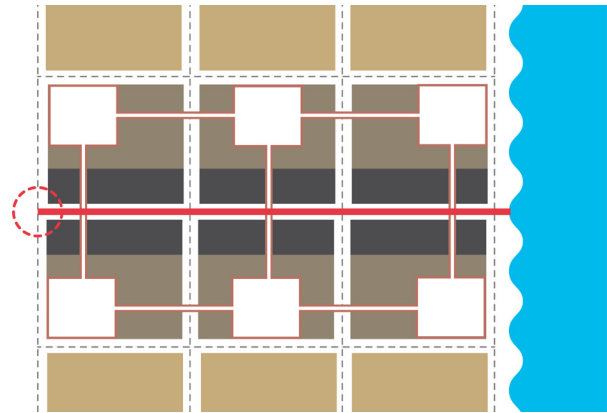
These public squares can be linked to the main street and other squares. To do this, they can cut through the proposed residential blocks and through openings between existing buildings along the main street.



Urban structure diagram: arcades

## Densified Residential

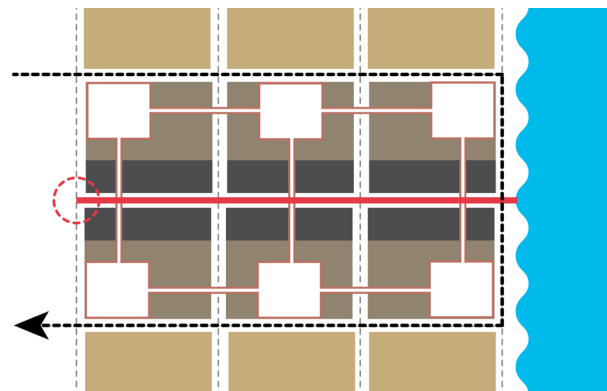
The penultimate stage in the urban design strategy is the addition of residential buildings to infill the rest of the block. The height and size of these new buildings will be influenced by existing buildings on the block. The form of these blocks can vary greatly, depending on the retained buildings and the block's overall development.



Urban structure diagram: densified residential

### Transit Loop

The final stage of the urban strategy is to incorporate a transit loop to link the proposed blocks to the rest of the city, including the suburbs. For Orillia, a bus system would be a realistic and adequate form of transit for its current population. Each block could have a dedicated bus stop. After using the former parking lots for new development, there would still be plenty of off-site parking in the surrounding area for future residents and visitors.



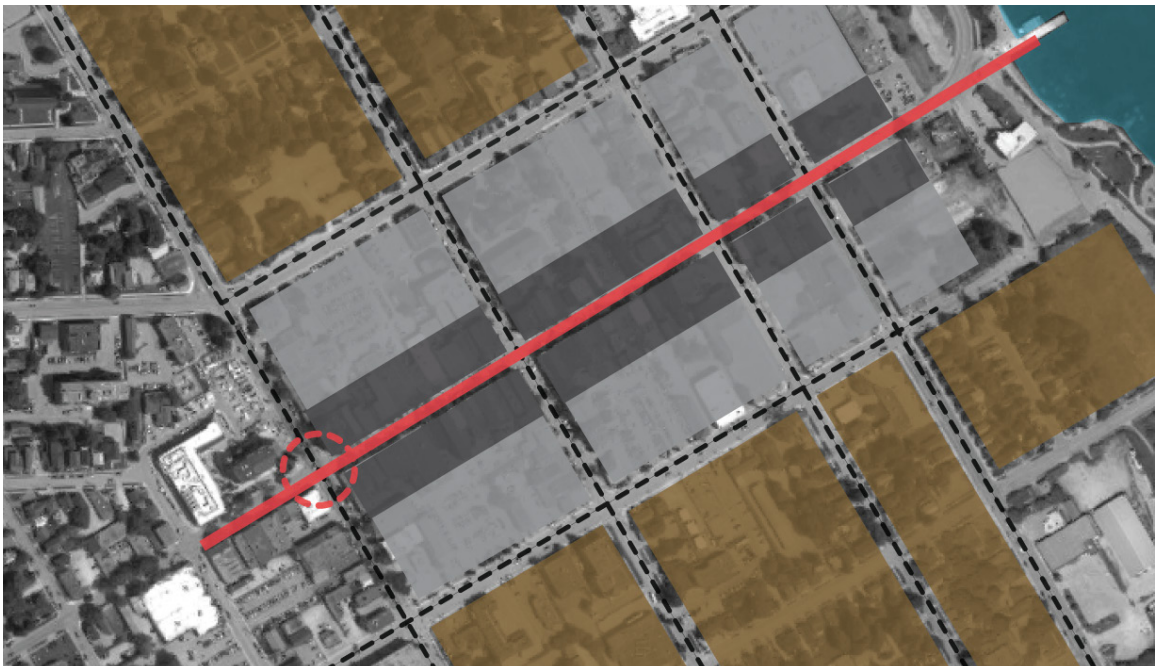
Urban structure diagram: transit loop

## Strategy Application

The same pattern of urban growth and form is evident in other Ontario cities. Midland and Penetanguishene, for example, have different populations (17,000 and 9,000 respectively, compared to Orillia's 33,000) but similar geographic locations, histories, and current problems with urban sprawl. (For their locations, see the map in Chapter 1.)

Midland is located in the Georgian Bay area of central Ontario and is approximately 50km northwest of Orillia. Historically, its industrial roots are in grain and lumber.

Penetanguishene, also known as Penetang, is located on the southern tip of Georgian Bay and is approximately 55km northwest of Orillia and 5km west of Midland. Historically, its roots are in naval activity and lumber.



Orillia urban structure analysis (Google 2023)



Midland urban structure analysis (Google 2023)



Penetanguishene urban structure analysis (Google 2023)



## Chapter 4: Design of Blocks

### Moving Forward

A revitalization of the downtown core involves a redevelopment of its parking lots into public and private projects that will densify the area and enhance public life. It is important that these developments establish a network of pedestrian connections to make the downtown feel unified, a feeling that has been missing since the onset of urban sprawl.

Secondly, a dedicated transit line connects all major parts of the downtown with the rest of the city, especially the suburban areas. This will reduce the need for automobile traffic and parking downtown. The transit line follows secondary streets around the perimeter of the downtown area to provide plenty of access without adding traffic to the main street. Each block also has a dedicated bus stop that is integrated into the development and its pedestrian network. Future downtown residents who have a car can park it off-site and use the transit system when needed.

Revitalizing Orillia's downtown will require a careful analysis of its strengths, weaknesses, and needs. Unlike in the suburbs, downtown residents should have amenities near where they live, so that walking is typical and driving is unnecessary. This approach has become known as the "fifteen-minute city." Adding housing downtown will increase the permanent population and support additional services.

Each of the six downtown blocks will include a mixture of residential and commercial/institutional uses. Each block will be organized around an indoor and/or outdoor public space, similar to a neighbourhood campo in Italian towns.

This establishes a central social space at the scale of the neighbourhood, unlike typical developments in Canada that consist solely of private residences.

Rather than developing the six downtown blocks in the same way, with the same program(s), the character of each block can be developed individually. Certain parts of the downtown area currently have particular institutions and uses: market, churches, waterfront recreation, offices, etc., as shown in the map below. These different qualities can be augmented in the new developments. This will stitch the new buildings into the existing area. It will also form qualitatively different “districts” that can appeal to different types of residents.

Each block has also been assigned a specific colour based on its historical or architectural context and its proposed social or cultural program. These colours could appear not only in drawings, but also in buildings with tinted glass, shades of stone and brick, lighting, etc. This would differentiate the blocks for wayfinding and expressing their characters.

Referring to the downtown plan and the colours for the six blocks, the following collages and block plans show how Orillia’s history, architecture, and institutions can provide a foundation for future development. They also show the types of programs and social activities that could be implemented in each block and its public space. Different housing types on each block recognize different types of residents (Sherwood 1978). This qualitative, character-based approach is suited to downtowns that already have some diversity and character, unlike uniform suburbs. This approach could be used in other growing Ontario towns.

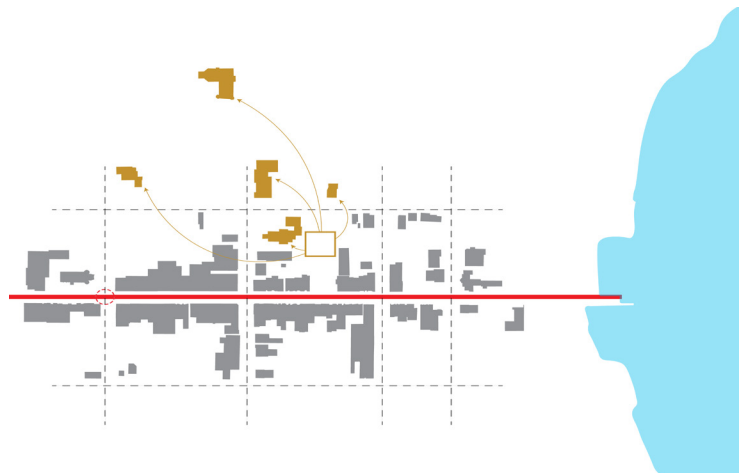


Block program diagram, showing how the program of each new block draws from existing programs nearby

## **Block Proposals**

### **Gold Block**

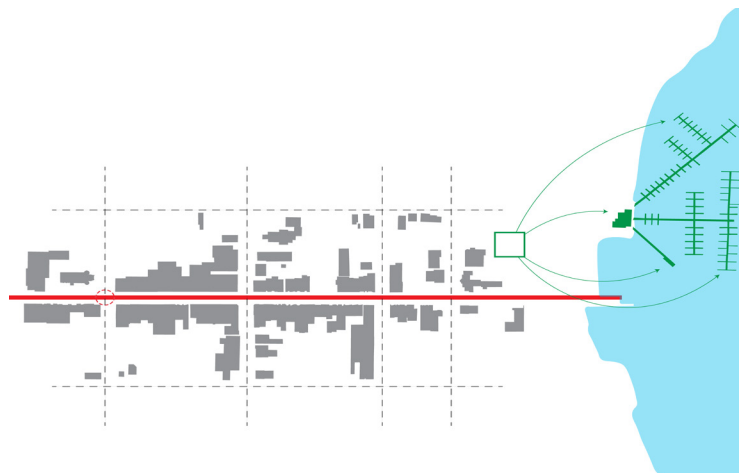
The Gold Block creates public and private spaces for people who value faith-based social gathering. With four of Orillia's most popular churches within walking distance, this block provides a related public space for social outreach programs. Orillia has a deep religious history, with many older people still attending the churches they did as children. Residences on this block would provide comfortable and spacious living within walking distance of the downtown. For retirees, this would be an optimal transition from isolated suburban home ownership to a new, more social experience. For this block, it would be important to separate public and private areas, and include spaces for small social gathering and observation, unlike a typical apartment block. A design with private entrances would be appropriate. The Winscombe Street houses (in the plan within the collage) would be an excellent precedent for this block. The block's public space could supplement existing church spaces for ceremonies such as weddings, concerts, and funerals. Architecturally, it could draw characteristics from church halls, with large openings for natural light to make the indoors feel open and warm. This block could also provide different places for worship for the increasingly multicultural population of Orillia.



Gold Block

## **Green Block**

The Green Block is adjacent to the waterfront. It would suit young professionals and/or retired people who are looking for a weekend getaway or a permanent residence with direct access to boats, walking trails, and restaurants and boutique stores along the main street of Orillia. Its private living spaces have views of the waterfront and/or the historic downtown. The reference plan in the collage shows the Neue Vahr Apartments designed by Alvar Aalto, with a fan-shaped layout and a single-loaded corridor to maximize views and thermal orientation. The public spaces in the block take up most of the ground floor, as a transition between the waterfront and the downtown. These public spaces could alternate between indoor and outdoor, depending on how much protection from the elements is needed throughout the year. Public change rooms and washrooms could be provided for waterfront visitors and participants in summer watersport events. A building that feels light in structure and casual in social activity would complement the beauty and openness of the waterfront.

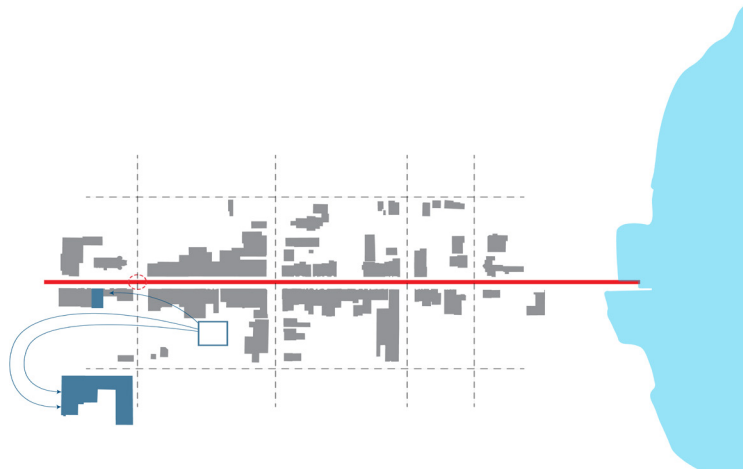


Green Block

## **Blue Block**

The Blue Block is located directly across from the historic Tudhope Carriage Company factory site (now known as the Tudhope Building). The factory itself is still standing but has gone through major architectural and programmatic changes. It is now occupied by major local and provincial government bodies such as Orillia City Hall and public services such as Service Canada. The building is also a dormitory for Lakehead University students, providing a historic downtown experience for students who attend the new university in suburban West Ridge. The Tudhope Building recently added condominium apartments that have been popular with older couples and retirees. The design approach for this block should serve both the professional sector and the living sector. Two separate living modules - one for university students, one for young professionals and condo residents - could support university expansion and government department expansion. The public section for university students could include spaces for studying and common rooms for social interaction. The professionals and condo residents could benefit from a café and general spaces for work, meeting, and social events. Structurally, a slab building would allow for many different room sizes, such as smaller dorm rooms and larger apartments and common spaces. Projects such as the Harumi Apartment House by Kunio Maekawa and the Durand Apartments by Le Corbusier show the range of special layouts that slab construction could achieve. The materials for this block should be drawn from existing buildings in the area such as the Tudhope Building, with its combination of historical design, modern finishes and structural expression.



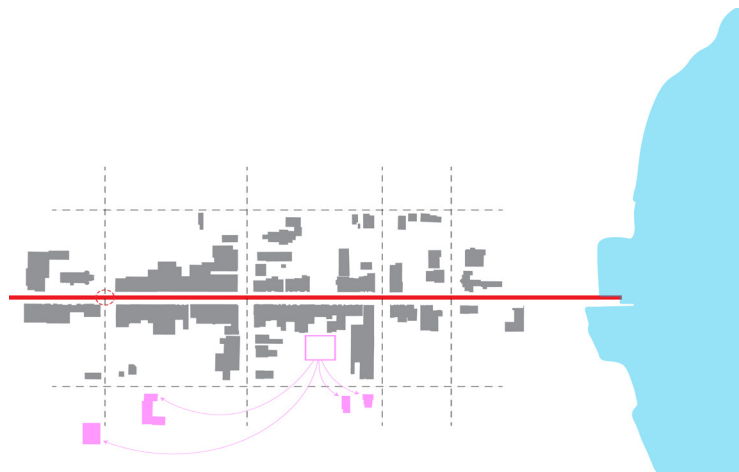
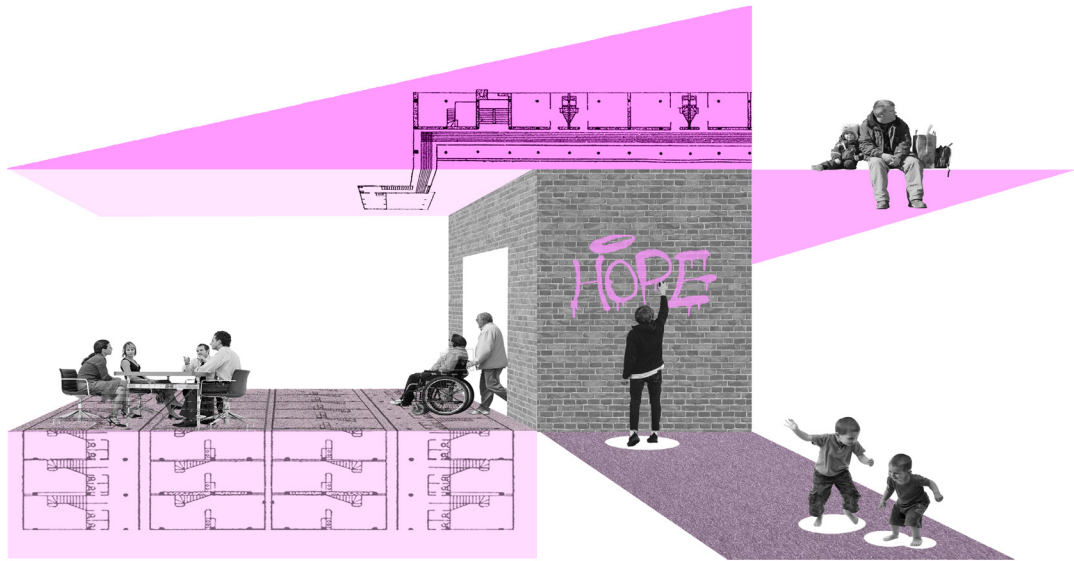


Blue Block

## **Pink Block**

Like the rest of Ontario, Orillia needs more affordable housing and social services. The highlighted buildings in the block diagram show existing charities and social services within the downtown core. In 2021 over 50% of renters in this census area were considered “rent poor”, meaning that over 30% of their income is spent on shelter cost (Census 2021).

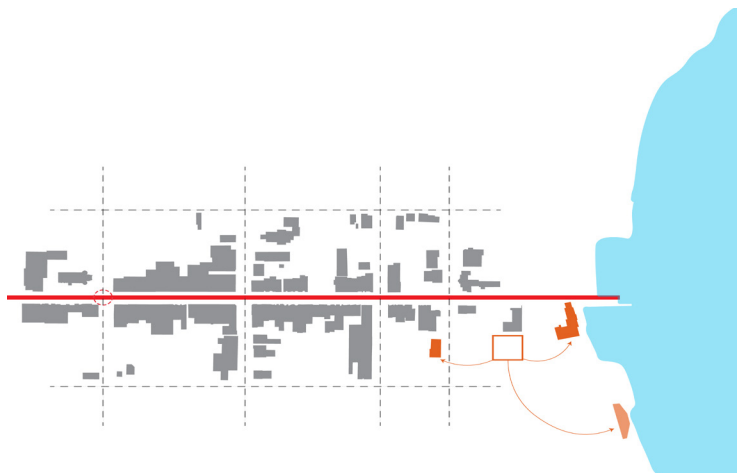
The Pink Block addresses the physical and mental health needs of residents in this area. Expanding its physical spaces for social services and charities would reach more of those in need. The private modules within this block should be designed for people who cannot afford market housing. They can include both halfway-housing and permanent affordable housing. As with the Blue Block, slab construction would offer flexibility for various room sizes. One example is the Narkomfin Apartments, built in 1928, where private rooms are balanced by collective kitchens, gyms, libraries, etc. and its larger, public spaces. This maximized the number of inhabitants and the amenities they shared. In the Pink Block the design of the public spaces should epitomize accessibility, inclusivity, and comfort. The private spaces also should be accessible, inclusive and comfortable. Although this block aims to be dense and affordable, each private space should be designed to feel like a home.



Pink Block

## **Orange Block**

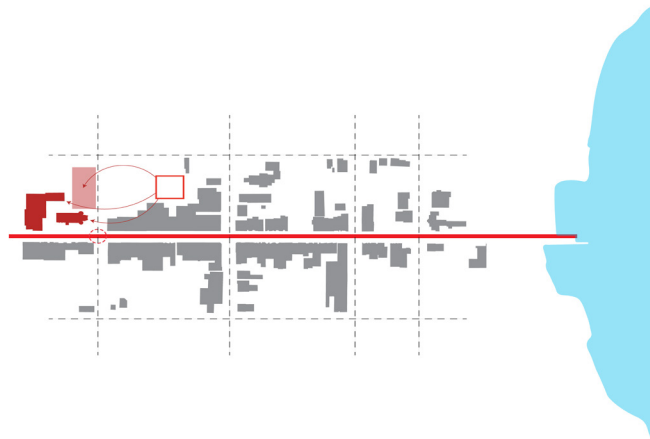
The intentions of the Orange Block are similar to those of the Pink Block. The Orange Block is home to the Royal Canadian Legion and the Orillia Youth Centre. The Legion provides services to the military, including veterans of all past conflicts, as well as RCMP members and their families. The Orillia Youth Centre provides social services to the youth of Orillia. Both organizations are deeply embedded in the social fabric of Orillia. Extending their services into event halls and outdoor event spaces could strengthen their connection to the community and expand future fundraisers. This block is also near Orillia's skatepark, which has hosted weekly youth programs that introduce youths to skating. The private modules of this block could focus on the living situation for veterans, those looking to retire, and those who need extra care. There should also be an arrangement for raising families with social support from other residents, as well as members of the Youth Centre and Legion. The living spaces should be private in their design, more like an individual home than a group home. An architectural approach to this block could draw from the Spangen Quarter project (1919-1921) by Michiel Brinkman. This project consists of private blocks around courtyards and gardens. The public spaces for the Orange Block should be designed to invite those who are using the social services. Natural light through glass curtain walls and dedicated outdoor spaces for grass and gardens would create a home-like environment for both the public and private modules.



Orange Block

## **Red Block**

The Red Block is the primary design focus of this thesis for a few reasons. First, it is located where most vehicles enter and exit the downtown core via Coldwater Road, then park in one of the many surface parking lots. This route also is a direct link to the suburbs in the project. The proposed transit line arrives here, circles the downtown, then returns to the suburbs. Secondly, the Red Block is located across from the Orillia Farmers' Market, which historically defined the end of the main street. Next to the market are two cultural landmarks, the Orillia Opera House and the Orillia Public Library. The programmatic and urban complexity of this block makes it a suitable focus to test the ideas in this thesis.



Red Block



## Chapter 5: Design of Red Block

### Programmatic Relationships

#### *Farmers' Market*

Across the street from the Red Block, the existing Orillia Farmers' Market originated in the 19th century near its current location (Richmond 2017). It now operates year-round on Saturdays, and on Friday evenings during the summer. Its site is used as a parking lot for the Opera House and Public Library on weekdays. Although this time-sharing arrangement is efficient, an influx of people to the downtown area would create a demand for a larger market, both indoors and outdoors. In addition, having a dedicated market space indoors would enable the farmers' market to operate at full capacity during the region's harsh winter months.

The proposal for the Red Block includes the addition of new indoor and outdoor market spaces and some changes to the existing market/parking lot across the street. These changes ensure that the existing market can still accommodate vehicles but would not be turned into a parking lot full time. Two permanent, mass timber pergolas are placed on this site, with two more on the outdoor market space in the Red Block. The form of these pergolas follows the form of the roof of the Red Block market building and the curtain wall of its new indoor market space.

The indoor market space is connected to the outdoor market spaces by a series of glass accordion walls that can be open during the farmers' market and during the warmer months of the year. These doors ensure that all the market spaces are connected into one entity, rather than separate entities.



Existing market with new pergolas



Indoor market

### ***Opera House***

The Orillia Opera House is situated directly across West Street from the Red Block. The Opera House currently has a capacity of just over 900 people. This means that smaller shows and lower budget performances of music, plays and musicals are not currently possible. To expand the programming of the Opera House a dedicated space for these smaller performances has been included in the Red Block. This performance space is designed as a traverse style stage format, with two facing sets of steps that provide both access and seating for up to 100 people. The performance space is also meant to be accessible throughout the day and encourages members of the public to enter and exit the space freely, an experience similar to seeing a busker perform for patrons of an Italian campo.

The Orillia Opera House has a direct material influence on the Red Block. Its iconic red brick is used for the exterior cladding of the two apartment blocks. This choice pays homage to the Opera House and the surrounding brick buildings and creates a contrast between the residential buildings and the timber frame structure of the market building.

### ***Orillia Public Library***

The Red Block also includes two public spaces that extend the programming of the Orillia Public Library for displaying its public art and hosting educational programs for both youth and adults. The first space is a dedicated art gallery for three-dimensional art such as sculptures and specifically street art, a common sight for those who walk along Mississaga Street and around Orillia's downtown core. This program, called "Streets Alive", has been sponsored by the Orillia





Red Block with Coldwater Road and West Street in the foreground



Arcade entrance from Mississauga Street

Central Business Improvement Area Office for over the past decade. These street art installations have a yearly theme in which blank, uniform sculptures are provided for local and foreign artists to complete in their own way. Recently, these installations have included giant wooden guitars, cut-steel automobiles and banners. This results in an annual art show for all who visit the downtown core of Orillia. The gallery space in the Red Block is designed to be a home for these projects on a 24/7 basis and a home for more artistically explorative additions to the program's yearly contribution to the city.

The second dedicated space in the Red Block is a gallery for the city's historical art collection. The Orillia Public Library has a vast collection that has been acquired and donated by artists and residents over the years. These artists include Arthur Shilling, Elizabeth Wyn Wood, and Franklin Carmichael. The library currently holds an intermittent "Culture Day" where these works are put on public display. This new space is intended to make this existing program a full-time activity for everyone living in or visiting the downtown core.

## **Connections and Layout**

### ***Campos***

The public space of the Red Block follows the principles of neighbourhood campos that are commonly found in historic centres of Italian cities such as Rome and Turin. These campos are a prime location for small businesses and shops, with at least two streets that meet at the square. They are surrounded by multi-storey mixed use buildings with businesses on the ground floor and private dwellings

above. These private dwellings have windows and balconies that overlook the campo.

Many aspects of the Italian campo were incorporated into the design of the Red Block. All the apartments facing into the market have a direct view of either the indoor or outdoor market space. Those facing the outdoor market space also have a Juliet balcony, allowing them to be a part of the space during the warmer months of the year. Indoors, there is also a glass balcony with direct views into the market. For the residents who do not have a view from their apartment into either market space, the stairs and elevators are situated to provide views of the market while leaving or entering their apartment. The Red Block encourages both public and private life through the ideals of the Italian campo. The ground level of the market also includes spaces for a cafe and small businesses for the public and residents of the Red Block.

### ***Arcades***

As a common historical type, the arcade is a public passageway through an urban block. It is a straight route defined by arches, with shops and businesses on both sides. Pedestrian connections to the main street and the other blocks are an intrinsic part of this urban design strategy for the densification of downtown Orillia, so arcades are an obvious solution. In the Red Block, there are three arcades: two cutting through the apartment buildings, and one through an opening between existing buildings on Mississauga Street. All three arcades are designed to clearly indicate the urban structure of the Red Block and to establish connections to the rest of the blocks in the future. The arcade form is emphasized by a continuous glass roof,





Indoor market



Outdoor market



and by continuous flooring material. From outside the Red Block, the glass roofs and associated curtain walls can be seen from above and at street level. For those inside, the unobstructed light acts as a visual guide for movement within the project. The floors for the arcades are limestone, found in southern Ontario, which has a wavy pattern. This may recall the various waterways in Orillia's history. This flooring pattern also contrasts the rest of the indoor flooring material, a darker stone finish with a pattern that emulates the site's existing contour lines.

### ***Apartments***

Above the ground floor the Red Block includes four storeys of apartments along West Street, and three storeys along Coldwater Road. There are one, two and three-bedroom apartments for the people who would be attracted to this block: those who just moved into the downtown core, those who work within the downtown core, and students of the city's suburban college and university who want to live closer to the heart of the city. These apartments could also appeal to young couples and families who want to live closer to Orillia's largest elementary and secondary schools and take advantage of the Red Block's public programs.

Each apartment has views of the downtown core and plenty of natural light in its living, kitchen and master bedroom spaces. Some also have a Juliet balcony that opens up to the outdoor market space.

Every apartment floor has a semi-private "neighbourly space" to bridge the gap between the public spaces and private spaces of the project. These spaces are accessible only to those with a key or key card. These spaces have a shared kitchen area and bar, as well as large dining tables



Indoor arcade



Outdoor arcade

for hosting neighbours or an entire floor. These spaces also have couches for relaxing and tables for working in a less noisy location than the public gathering spaces. These neighbourly spaces also have interior views of the arcades and the indoor and outdoor market spaces.

### **Structure and Materiality**

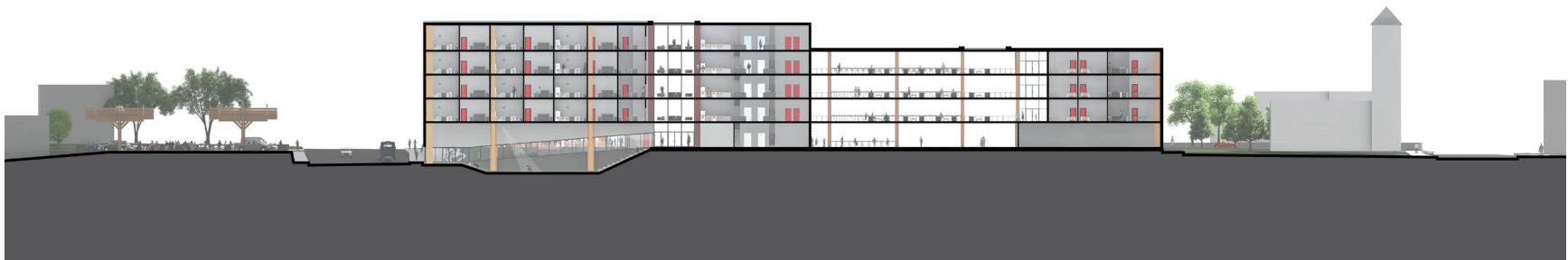
The Red Block project's main structural element is mass timber, which runs through the indoor market space and into the apartment spaces when necessary. This honours Orillia's historic roots to the timber industry. The roof of the indoor market space has a wooden-slat construction with openings to control the amount of light entering the space and to reinforce the routes of the arcades.

The two apartment buildings within the Red Block project are finished with the same red brick as many buildings in the downtown core, including the Orillia Opera House and the building at the corner of Mississauga Street and West Street. These neighbouring brick structures also influenced how tall the new apartment blocks and market space would be, so that this infill densification would seem like part of the block, not a foreign imposition.

The glass curtain wall between the indoor and outdoor market includes accordion doors that can remain open throughout the warm months of the year. The glass itself has a red tint that becomes more opaque as the glass panels ascend. This signifies the Red Block for new visitors. Future developments on other blocks could also use glass tinting for identification. The apartment buildings in the Red Block have large, black metal framed windows and balcony doors, like the historical industrial buildings in the downtown core, such as the Tudhope Building.



Section through the Red Block from Coldwater Road (left) to Mississauga Street (right), showing the bus stop, indoor market, public galleries, and arcade.

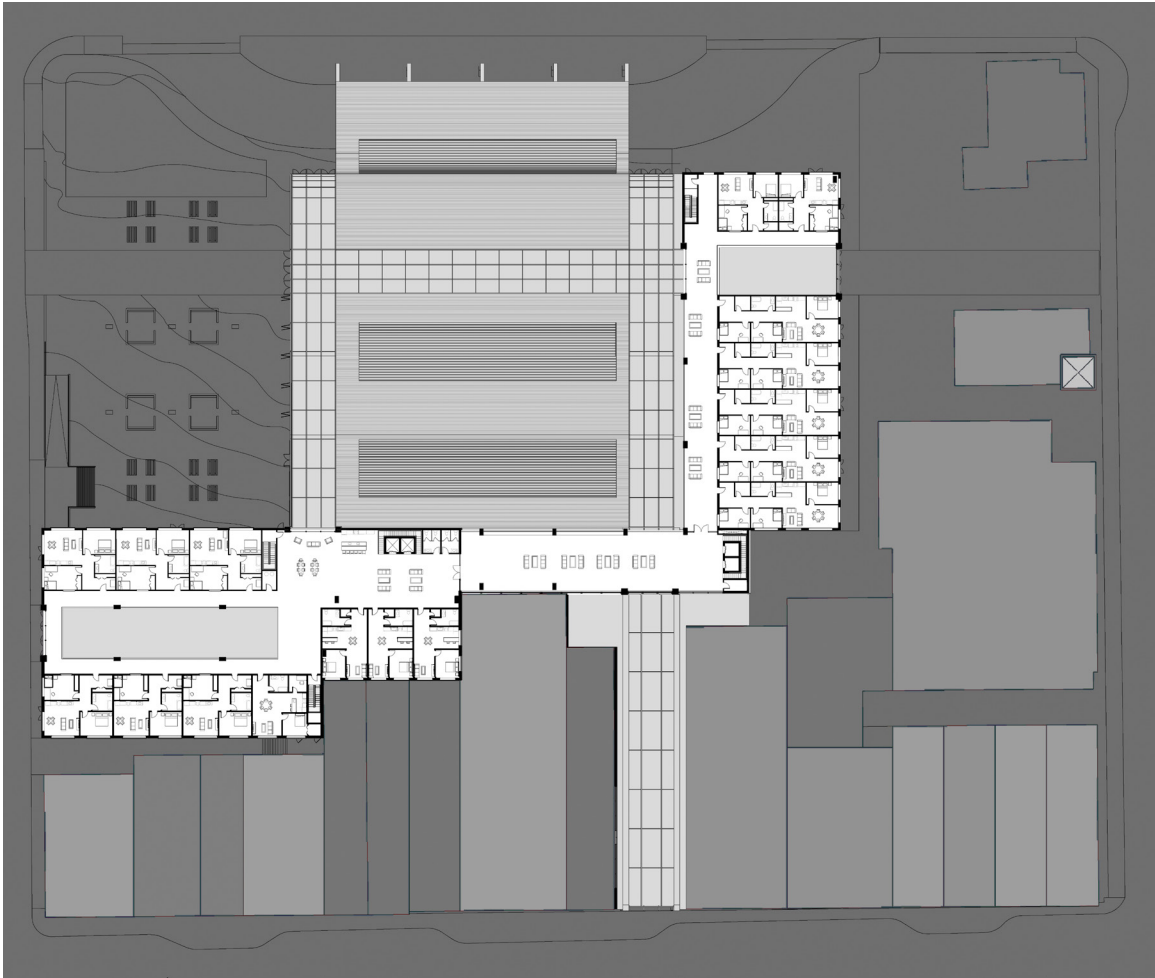


Section through the Red Block from West Street (left) to Peter Street (right), showing the outdoor market, ground floor theatre, apartments, neighbourly space, and public galleries.



Ground floor plan





Typical upper floor plan

## **Chapter 6: Future Recommendations**

### **Design Approaches**

As Orillia is typical of many southern Ontario towns and small cities, this study and proposal for downtown Orillia could contribute to a set of design principles for application elsewhere. Three main strategies can be identified.

The first strategy for downtown densification is to recognize the history, urban structure, and social institutions of the town. Its current strengths, weaknesses, and needs also need to be identified. From there, one can focus on individual urban blocks and how infill can be achieved at that scale.

The second strategy is to recognize the social need for three different types of spaces in each block: public, neighbourly, and private. This is a significant departure from conventional practice, which emphasizes private space.

The third strategy for densification is to do a quantitative analysis that considers the profiles of potential residents, population density (compared to suburban locations), and economics of land acquisition, development, ownership, and maintenance. With sustainability in mind, this would require a long-term plan over many decades.

### **Block Scale**

In a typical southern Ontario town, empty spaces for densifying downtown blocks may be located at corners or along street edges. In downtown Orillia, there are four corner sites and two mid-block sites. When considering the development potential for each block, an assessment of the value of existing buildings (historical, economical, social,



etc.) is needed, so that priorities for retention and demolition can be made.

The first step for design is to situate the public square at the busiest part of the block. A pair of arcades then can connect the public square to the main street and to (future) public squares on adjacent blocks. The third step is to insert residential buildings into the block, adjusting them to fit among the existing buildings. Any infill project requires a careful consideration of its surroundings, so that design decisions on building heights, materials, etc. are made with the larger town in mind.

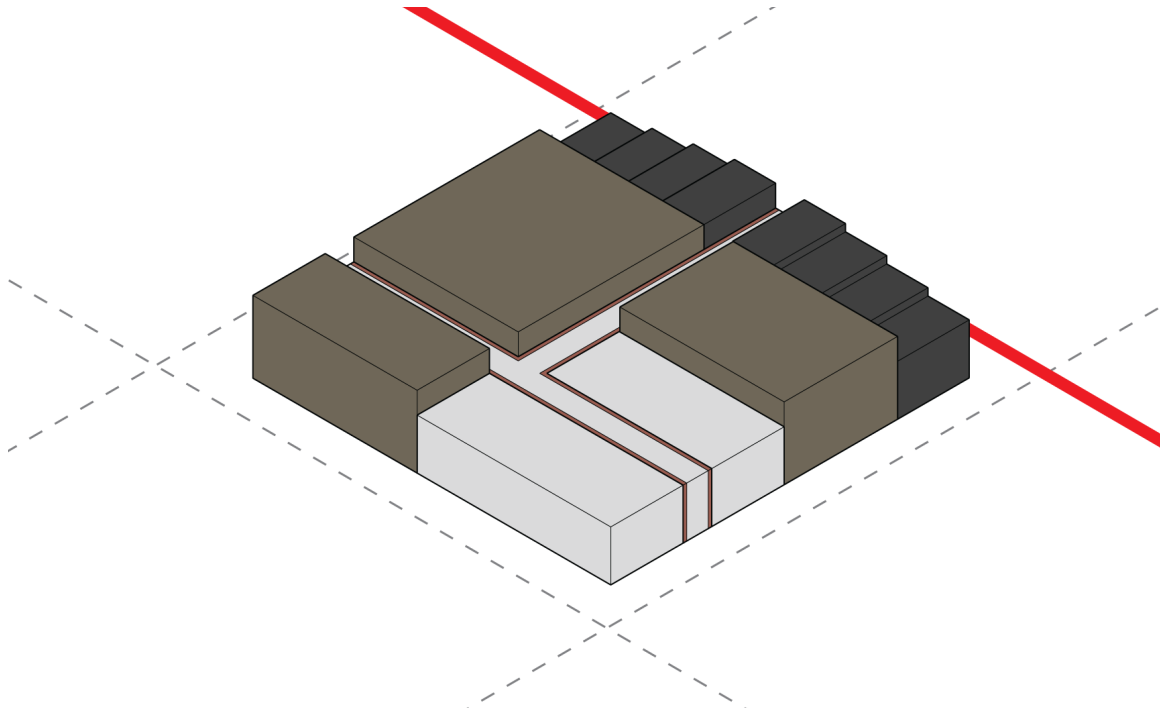
### **Building Scale**

Within the block, public spaces should be located primarily at ground level to extend the public space of the street. Acknowledging seasonal variations in Canada, both indoor and outdoor spaces are desirable. Ideally, indoor public spaces should be open to the public at all hours. To encourage public use, these spaces should include a range of conditions, from loud to quiet and from open to enclosed.

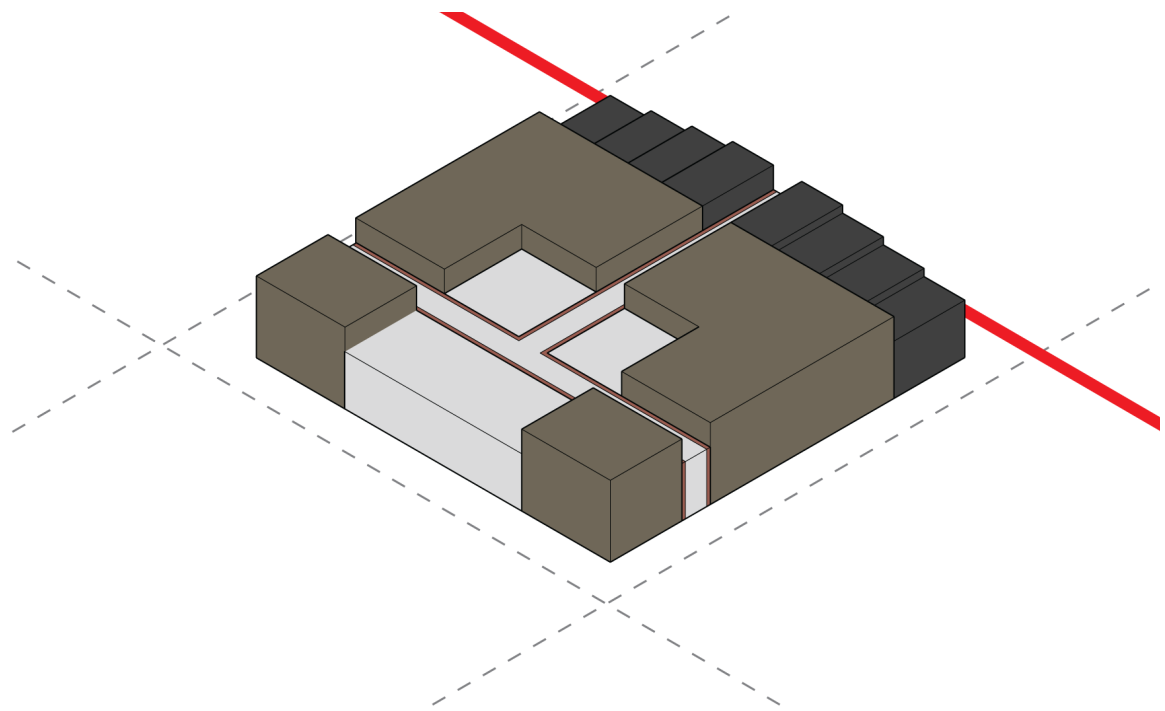
Between the public square and the private apartments, a middle zone for neighbours completes the three-part social gradient. This recognizes recent variations in residential living (including co-housing and co-ops) that promote neighbourly association for health and social benefits. Traveling from the street to one's apartment would include a route through the public square, then a neighbourly space or gallery for residents only.

### **Densification**

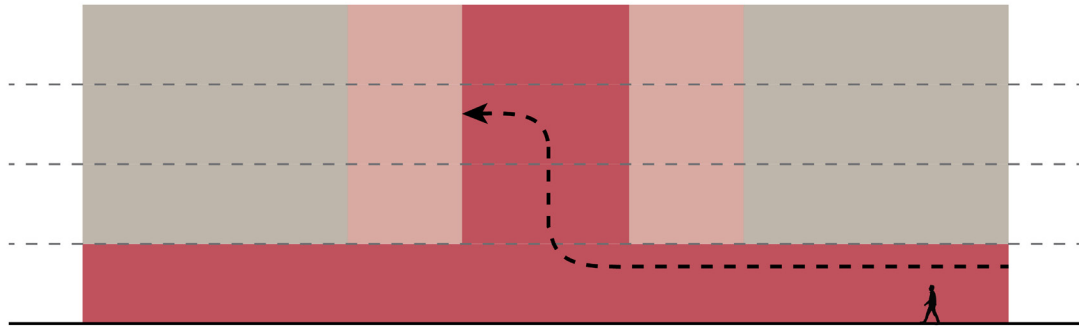
Various criteria can be used to compare suburban sprawl to downtown densification. One is lifestyle. Suburbs privilege



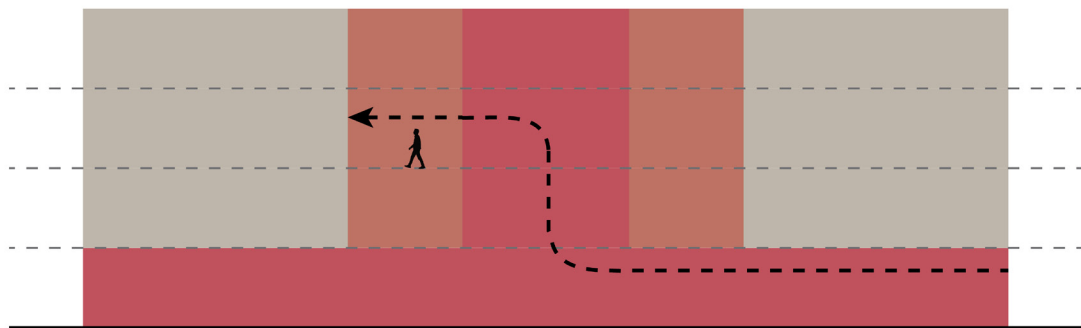
Ideal corner block



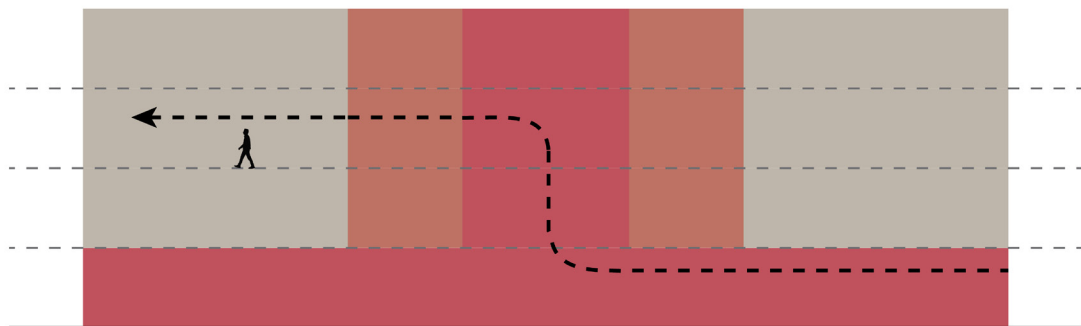
Ideal side block



Ideal section, showing access to public spaces only



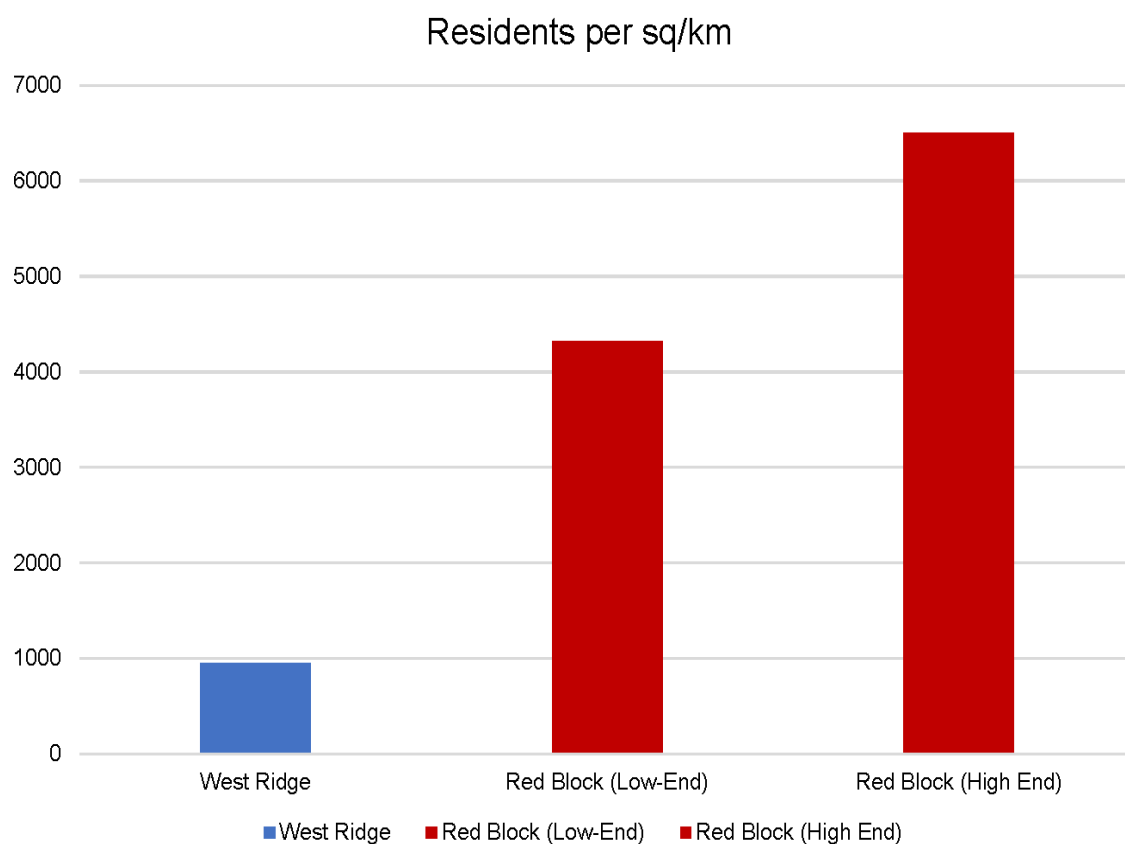
Ideal section, showing a path from public to neighbourly spaces for residents



Ideal section, showing a path from public to neighbourly to private spaces for individuals

people with cars but provide few benefits for others, while downtowns offer more diverse benefits for everyone. Another is economics. Suburbs take over farmland and use it inefficiently to house relatively few people, while downtowns provide a range of amenities from private to public.

Using data from the 2021 Government of Canada census, the population densities of Orillia's West Ridge suburb and the proposed Red Block were compared. West Ridge has an average of 947 people per square kilometre (Census 2021). The Red Block would range from 4,300 to 6,500 people per square kilometre, depending on its apartment mix (one, two or three bedrooms).



Densification chart

## Why Not Today?

Infill projects and new developments typically face resistance from established residents who fear change, usually focusing on negative conditions such as noise and traffic. Acknowledging these fears and presenting benefits of change would require extended conversation and public involvement.

According to urbanist Brent Toderian, the biggest hurdle for densification projects not occurring more in our society is due to the politicians and urban decision makers.

NIMBYs are not necessarily the problem. They are behaving normally for humans. The problem is politicians and other decision-makers who know better, who don't do the right thing because of NIMBY fear. If you've had a long process, heard from thousands of people, investigated and understood the technical issues, know your aspirations as a city, and you let 10 or 15 individuals at the last minute show up at council and turn it down? I don't blame those 15 individuals, I blame the leaders. (Roberts 2017)

At the same time, other groups (such as Stop Sprawl Orillia) oppose typical suburban development and urge their politicians to seek alternatives.

When asked about these conversations and arguments Brent Toderian stated:

There are angry people who will yell at you. You need the will to stand up to that. When I work with cities, a lot of my time is spent preparing them for the storm. I've sat in the municipal chair; I've felt the storm directly. I've had development agencies try to get me fired for taking firm positions. My job in Calgary was almost literally to turn things around, and you never do that without making many people upset. This is going to sound overly simplistic, but the truth is, it often starts with a better city-wide conversation. (Roberts 2017)

Moving forward with downtown densification - and the Red Block in particular - would involve much more than just design. It would involve many players, different experts, and

a broader consideration of the town's future that builds on the strengths of its past.

## Chapter 7: Conclusion

Urban sprawl is an extremely complicated problem facing not just Orillia but many growing towns and cities in southern Ontario and elsewhere. The strategy presented in this thesis is meant to contribute to the conversation and help kick-start a plan for the future. It is by no means a take-it-or-leave-it design proposition, but an exploration of how to interpret the history of a town and how to employ urban and building strategies to consider the town's future.

As Orillia is my home town, the thesis relied on personal memory and experience, along with historical accounts, theoretical sources, and examples of urban design elsewhere in the world. As an architectural thesis done in an academic setting, it was developed within certain parameters. A different thesis on Orillia could involve community members directly and include other disciplines.



## References

- Bacon, Edmund N. 1967. *Design of Cities*. New York, NY: Penguin Books.
- Cook, H. 1910. Mississaga Street, Orillia. Photograph. Orillia. Toronto Public Library
- County of Simcoe. n.d. Geographical Information Systems - Maps. Accessed June 9, 2023. <https://www.simcoe.ca/InformationTechnology/Pages/gis.aspx>.
- Cullen, Gordon. 1961. *The Concise Townscape*. New York, NY: Van Nostrand Reinhold.
- Flanagan, Ryan. 2017. "Ion Construction Costs Run \$50 Million over Budget." CTV News Kitchener, December 11. <https://kitchener.ctvnews.ca/ion-construction-costs-run-50-million-over-budget-1.3716861>.
- Gehl, Jan. 2010. *Cities for People*. Washington, DC: Island Press.
- Gehl, Jan, and Birgitte Svarre. 2013. *How to Study Public Life*. Washington, DC: Island Press.
- Geist, Johann Friedrich. 1983. *Arcades: The History of a Building Type*. Cambridge, MA: The MIT Press.
- Griffin, Tyler. 2022. "Ontario Rapidly Losing Farmland amid Urban Sprawl, Provincial Agriculture Group Says." CBC News, June 18. <https://www.cbc.ca/news/canada/toronto/ont-farmland-loss-1.6493833>.
- Herzog, Lawrence A. 2015. *Global Suburbs: Urban Sprawl from the Rio Grande to Rio de Janeiro*. New York, NY: Routledge.
- Hibbert, Titus Ware. 1844. Log Shanty in Orillia Township, Ontario. Photograph. Orillia. Toronto Public Library.
- Jacobs, Jane. 1961. *The Death and Life of Great American Cities*. New York, NY: Random House.
- Knapp, Gerrit-Jan, and Emily Talen. 2005. "New Urbanism and Smart Growth: A Few Words from the Academy." *International Regional Science Review* 2,. no. 28: 107–18.
- Lynch, Kevin. 1990. *The Image of the City*. Cambridge, MA: The M.I.T Press.
- Maclennan, Robin. 2018. Fall Into Shopping – Downtown Orillia. Look Local. <https://look-local.ca/barrie/blog/2018/09/23/fall-into-shopping-downtown-orillia/>.
- Map of the North Simcoe Railway, and Its Connections. 2014. Wikimedia Commons. [https://commons.wikimedia.org/wiki/File:Map\\_of\\_the\\_North\\_Simcoe\\_Railway,\\_and\\_its\\_connections.jpg](https://commons.wikimedia.org/wiki/File:Map_of_the_North_Simcoe_Railway,_and_its_connections.jpg).

- Mississauga St. n.d. Orillia Public Library. Accessed June 9, 2023. <https://images.ourontario.ca/orillia/24959/data?n=54>.
- Mississauga Street, looking east, Orillia, Ontario, Canada. 1910. Photograph. Orillia. Toronto Public Library.
- Opera House, Orillia, Ontario. 1910. Photograph. Orillia. Toronto Public Library.
- Orillia Welcome Sign. 1982. Photograph. Orillia. Toronto Public Library.
- "Photo 445792." 1954. Map. Southern Ontario. Department of Lands and Forests. <https://digitalarchive.mcmaster.ca/islandora/object/macrepo%3A73373>.
- Region of Waterloo. 2013. "Community Building Strategy." *The Corridor Today*. [https://www.regionofwaterloo.ca/opendatadownloads/The\\_Corridor\\_Today-chapter\\_1.pdf](https://www.regionofwaterloo.ca/opendatadownloads/The_Corridor_Today-chapter_1.pdf).
- Richmond, Randy. 2017. *The Orillia Spirit: An Illustrated History of Orillia*. 2nd ed. Toronto: Dundurn Press.
- Roberts, David. 2017. "Making Cities More Dense Always Sparks Resistance. Here's How to Overcome It." *Vox*. June 20. <https://www.vox.com/2017/6/20/15815490/toderian-nimbys>.
- Satellite image of Midland. 2023. Google Maps. <https://www.google.com/maps/place/Midland,+ON/@44.754876,-79.8995039,13135m/data=!3m2!1e3!4b1!4m6!3m5!1s0x4d2adb0fc029287b:0xdeaefe26f8e0aba85!8m2!3d44.749516!4d-79.8921923!16zL20vMDF3amZj?entry=ttu>
- Satellite image of Orillia. 2023. Google Maps. <https://www.google.com/maps/place/Orillia,+ON/@44.6083235,-79.4175988,4652m/data=!3m1!1e3!4m6!3m5!1s0x4d2aa93c483b6195:0xfc76a43d237f733c!8m2!3d44.6082465!4d-79.4196783!16zL20vMDE4bjBz?entry=ttu>.
- Satellite image of Penetanguishene. 2023. Google Maps. <https://www.google.com/maps/place/Penetanguishene,+ON/@44.7924445,-79.9441194,13126m/data=!3m2!1e3!4b1!4m6!3m5!1s0x4d2adbe306ae0d93:0x83e91452868b07d9!8m2!3d44.7687678!4d-79.933681!16zL20vMDF3amNm?entry=ttu>
- Sherwood, Roger. 1978. *Modern Housing Prototypes*. Cambridge, MA: Harvard University Press.
- Sturm, Roland. 2004. "Suburban Sprawl and Physical and Mental Health." In *Public Health*, edited by Deborah Cohen, 488–96. Santa Monica, CA: Rand.
- Surette, Jacqueline. n.d. Picture Orillia. City of Orillia. Accessed June 9. <https://www.orillia.ca/en/visiting/picture-orillia.aspx>.
- Tachieva, Galina. 2010. *Sprawl Repair Manual*. Washington, DC: Island Press.

Whyte, William H. 1980. *The Social Life of Small Urban Spaces*. New York, NY: Project for Public Spaces.