

building value through sustainable investments





AKNOWLEDGEMENTS

CAST and the Exchange District BIZ extend their gratitude to members of the development community, businesses, organizations, and property owners within the Exchange District for sharing invaluable insights and ideas that have helped shaped this plan.

CAST and the Exchange District BIZ would also like to acknowledge the critical input and collaboration of the City of Winnipeg, CentreVenture Development Corporation, and Economic Development Winnipeg.

The preparation of this plan was carried out with assistance from the Green Municipal Fund, a Fund financed by the Government of Canada and administered by the Federation of Canadian Municipalities. Notwithstanding this support, the views expressed are the personal views of the authors, and the Federation of Canadian Municipalities and the Government of Canada accept no responsibility for them.

© 2023, Exchange District Business Improvement Zone. All Rights
Reserved. This project was carried out with assistance from the
Green Municipal Fund, a Fund financed by the Government of Canada
and administered by the Federation of Canadian Municipalities.
Notwithstanding this support, the views expressed are the personal
views of the authors, and the Federation of Canadian Municipalities
and the Government of Canada accept no responsibility for them.

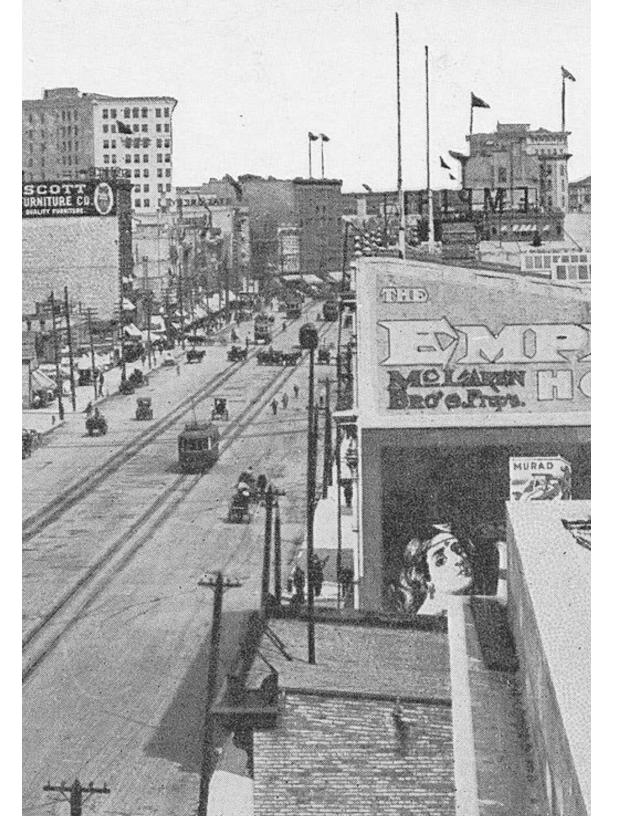


TABLE OF CONTENTS

1.0 PROJECT OVERVIEW	0
1.1 Introduction	O
1.2 Exchange District Plan 2022 Overview	0
1.3 Value Planning Methodology	O
1.4 How to Use This Document	0
1.5 Value Planning	O
1.6 Value Planning Process	O
1.7 Value Uplift Methodology	10
2.0 STUDY AREA INTRODUCTION	1
2.1 Neighbourhoods as the Focus of Urban Change	16
2.2 Study Area Overview	16
2.3 Creating Sustainable Neighbourhoods	2
2.4 Community Based Asset Mapping	2
2.5 Sustainability Metrics	2
2.6 Neighbourhood Sustainability Index (NSI)	2
3.0 PRINCIPLES & ESSENTIAL MOVES	3
3.1 Principles	3
3.2 The Seven Essential Moves	3

4.0 FOUNDATIONAL PROJECTS & VALUE UPLIFT	.50
4.1 Rows Precinct	59
4.2 Education & Innovation Precinct	68
4.3 Chinatown	78
4.4 Neeginan	86
4.5 Alex	99
4.6 Waterfront Living	108
4.7 Connection and Intensification	121
5.0 COMMUNITY BASED ACTION PLAN	134
5.1 From Investment Strategy to Action Plan	137
5.2 Governance: What is in Place, What Is Still Needed	139

1.0
PROJECT
OVERVIEW



1.1 Introduction

Twenty-five years ago, the Exchange District BIZ led a planning exercise with funding from the Winnipeg Development Agreement. The resulting document, "The Exchange District Strategic Action Plan" established a vision for the Exchange District and together with its strategic actions proved to be, overall, a valuable tool for guiding the evolution and development of the area. The vision of participating stakeholders over two decades ago:

"The Exchange District should be a neighbourhood in which there is a diverse mix of heritage, commercial, cultural, residential and recreational uses and activities. It should be known as a community of people and activities as well as the district of old and historical buildings.

It should have a character which is unique in the city and distinct from the main commercial area of the downtown.

When someone thinks about cultural activities, about unique architecture and interesting streets, of trendy bars and brewpubs, of public outdoor art, of loft apartments or of an urban waterfront, they should instinctively think of the Exchange."

In recent years, the Exchange District has been faced with a variety of challenges. The consensus among today's stakeholders is that the most significant barrier to addressing these challenges has been the lack of a renewed vision for the Exchange District and a plan to guide its development for the next 25 years and beyond.

The Exchange District BIZ, in collaboration with the City of Winnipeg, initiated a planning process in 2020 to bring forward a renewal of earlier momentum by setting out a vision for the next generation of development in the area. This process resulted in two interrelated documents.

The first, Exchange District Plan 2022, was adopted by Winnipeg's City Council in February 2022 to serve as the guiding document for the City of Winnipeg in the Exchange District and as the primary input for the area as the Planning Department develops a new Secondary Plan for Downtown Winnipeg.

The second, this document, is an evidence-based sustainable neighbourhood action plan that serves as the basis for a community based investment strategy. It is a framework for achieving the objectives of Exchange District Plan 2022 while addressing the urgent need for environmental sustainability and resilience, social inclusion, and reconciliation within the urban context.

1.2 Exchange District Plan 2022 Overview

Working with the City of Winnipeg, the Exchange District BIZ lead the creation of the Exchange District Plan 2022, the first long-term plan for the area in nearly 20 years. Based on significant background research, the consolidation of a number of relevant plans and strategies, the Plan has been informed by a broad range of community stakeholders as well as local and international expert knowledge in heritage conservation, urban planning, transportation and mobility, and economic, environmental and social development. The Plan incorporates the findings of an extensive heritage conservation report completed as part of its creation. The Plan was officially endorsed by Winnipeg City Council in February 2022, and serves as the foundational document for the Exchange District Community Investment Strategy.

From the District Plan engagement process, five priorities were distilled, each supported by a set of objectives.

In order to support these objectives and priorities, Exchange District Plan 2022 lays out a number of recommended programs, strategies and interventions. These include a comprehensive list of specific directions for new and enhanced policies, regulations, and procedures to be administered by the City of Winnipeg and its partner organizations. Please refer to that document as the background for The Exchange District Community Investment Strategy. Actions are summarized in Annex 1.

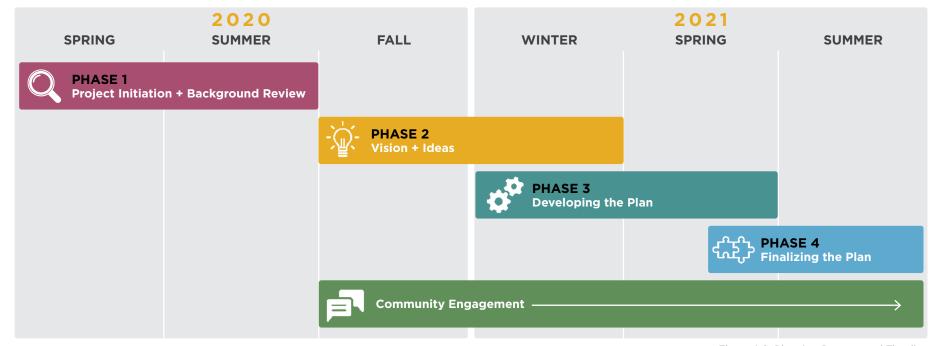


Figure 1-2: Planning Process and Timeline

1.3 Value Planning: A methodology and set of tools for community based investment

Where the Exchange District Plan 2022* established a longterm planning document for the Exchange District, addressing the regulatory, planning, and development landscape and setting a framework for the area's urban development. The Exchange District Investment Strategy provides and evaluates a specific set of actions, proposing specific investments, interventions, and developments to achieve the aims of that plan.

Using the Value Planning methodology (further discussed in Section 2), this document presents a set of tools for community-based action, including a robust investment strategy for environmentally sustainable and socially equitable outcomes.

An integrated set of investment propositions was identified aligned to the five principles of Exchange District Plan 2022. These propositions were drawn from two sources. The first included project ideas already in discussion with the community or being incorporated into public and private sector investment plans. The second included documented analogues; projects that have been successfully implemented elsewhere. The suite of integrated investment propositions (both public and private sector investments) was modeled to calculate value uplift; the increase in property assessments and taxes that might be generated to fund the public sector investments.

1.4 How to Use This Document

This document lays out a series of principles, actions, and projects aligned with the Exchange District Plan 2022 that together form an Investment Strategy. Using the Value Planning methodology, this integrated strategy models the uplift potential for property value increases. While a specific ROI will need to be calculated factoring in detailed costing, partnership agreements, and governance models, the value uplift calculations presented here demonstrate that the City of Winnipeg can move forward on strategic investments in partnership with the private sector and the community with the confidence that projects are truly investments and not merely costs. The projected revenue potential presents a true path for transformative growth and the transformation of the Exchange District into a vibrant, prosperous, and sustainable complete community for all. Following an overview of the Value Uplift Methodology and an explanation of how specific data for the study area were used to calculate property value projections, the core of the document is organized into three progressive sections.

The first core section [2.0 STUDY AREA INTRODUCTION]

introduces the study area and its precincts, the metrics collected, and the underlying approach that informed the propositions of the document.

The second core section [3.0 PRINCIPLES & ESSENTIAL MOVES] lays out the overriding principles for the study area as a whole and the 7 essential moves that set the backdrop for the remainder of

the strategy.

The third core section [4.0 FOUNDATIONAL PROJECTS] lays out specific principles, actions and foundational projects for each of the seven defined precincts. While these can (and should) be looked at as precinct strategies in their own right, they are intended to work together as part of the whole— each integrated and contributing the success of the others.

Value Planning

Value Planning is an approach that quantifies the increase in municipal property assessment and taxes generated by an investment strategy that integrates both public and private investments in the service of achieving planned community outcomes. This methodology was systematized by the Canadian Urban Institute.

The Exchange District Community Investment Strategy expanded on this methodology to measure progress against a broader range of outcomes that support the development of an environmentally sustainable and socially equitable neighbourhood. The tool developed to measure sustainability, the Neighbourhood Sustainability Index, is discussed in sections 3.4 through 3.6.

Value Planning Process

Value Planning follows a process with the following 6 stages:

- **1. Community Engagement:** engagement with the community is the "through line" which connects all stages of the process.
- 2. **Discovery:** a discovery process is used to develop a comprehensive asset map. The process involves integrating a variety of data sources to summarize community assets and policies.

- **3. Visioning:** the asset map is used to develop a cohesive vision for the future and to identify potential projects and policy suggestions. The vision statement is workshopped with the community to confirm the direction of the vision and to identify a short list of candidate foundational propositions. Foundational propositions are those having traction in the community, identified champions, strong linkages to other projects and potential to contribute to the achievement of economic, social and environmental goals (triple bottom line).
- **4. Strategies and Action Plan:** the next step is to drive community value into the planning process by leveraging the authenticity of place, building on projects and initiatives that are foundational to enhancing the wealth generating capacity of the community while promoting sustainability. The output is a set of integrated Precinct Action Plans which taken together are used to create a comprehensive communitybased investment strategy (CBIS) that integrates private and public sector contributions.
- **5. Governance:** the precinct action plans and integrated investment strategy are converted to a community-based investment plan through a sequenced development program, often catalyzed by initiating public sector projects to leverage private sector response. The development and stewardship of the investment plan is typically assigned to a communitybased governance agency to administer public sector involvement, engage private partners, monitor progress and report. Community commitment to the investment plan derisks private sector investments.
- **6. Feedback:** monitoring progress on the investment plan allows reporting of momentum towards action plan targets and signals when the plan needs to be updated as conditions on the ground evolve. The objective is to keep the community investment strategy perpetual.

1.7 Value Uplift Methodology

1.7.1 Introduction

Value Uplift refers to the net increase in municipal assessment and taxes created through new development. Of interest to the municipality is the degree to which any public sector investments that are made (for example, improvements to public streets or spaces, implementation of rapid transit, installation of public art, etc.) result in an uplift that returns more in municipal tax revenue than it costs to undertake the investments (i.e., the return on investment). Positive ROI is a component of ensuring sustainable community development.

The value uplift calculation procedures comprise seven steps, summarized below.*

1. Prepare Base Case

The base case was prepared from property assessment records for the study area provided by the City of Winnipeg. These records were then joined to property shape files using GIS software. The fields of interest include street address, assessment roll number, land area, building area, zoning, parcel use code, current assessment, property tax and business tax.

2. Prepare Development Trend Projection

A development trends projection was prepared by growing the assessment of all properties in the study area at a rate consistent with past trends. The trend was developed from assessment summaries provided by the City of Winnipeg (previous twenty years).

Please see Annex 2 for a more detailed account of how these steps were applied to The Exchange District Community Investment Strategy

The purpose of preparing the trends projection was not to infer development prospects of specific properties but to produce an aggregate growth in assessment, property tax and business tax (i.e., uplift) to produce the "business as usual" case. The uplift of the trends projection / base case is later deducted from the uplift of the strategy projection to produce the "net" that can be attributed to the proposed investments.

3. Identify Current Projects / Proposals

A list of current projects (either under construction, with development permits, or under active consideration) was assembled from a field survey of the study area (to record construction activity and permitting signs) confirmed by developers active in the study area and augmented by information provided by Centre Venture.

These projects were inserted into the first five-year period of the strategy projection (replacing the trend projection for those properties).

4. Prepare Development Vision Projection

A development vision was prepared for the overall study area and then for each of the seven precincts identified within it, indicating both the municipal investments contemplated (new roads, implementation of rapid transit service, improvements to public spaces) and new development supported by these public sector investments.

The translation of the vision to a property development projection was rooted on the examination of analogues where similar public investments have been made.

Analogues are case studies that examine the amount and character of private sector investment induced through expenditures on public spaces and infrastructure.

Sections 3 through 5 (the bulk of this document) lay out these development visions.

The development vision was then mapped in GIS software with each development proposition coded onto the property record by type of proposed development and development intensity (height and floor area ratio).

5. Prepare Value Uplift Calculations

For each property in the study area assessment, property tax and business tax values were prepared for:

- Base Case (drawn directly from the assessment records)
- Trends Projection /Business as Usual (based on historic trends as described above)
- Strategy Projection (development of selected properties based on precinct visions)

Modelling of the strategy uplift was based on uplift factors that are used to calculate assessment, property tax, business tax, development quanta and residential units based on the proposed type and intensity of development.

6. Prepare Municipal Investment Estimates

The municipal investments contemplated in the precinct strategy visions were projects devised by the study team – not projects on the municipal drawing board. Accordingly, no municipal cost estimates were available for these projects. Implementation costs will be an integral component of moving the investment "strategy" to an "investment "plan" once the strategy has been adopted and detailed designs are available to base the costing on (see section 6).

7. Calculate Return on Investment

The purpose of developing the uplift calculation is not to "get the number right". Rather, the uplift calculation provides insight into whether the "direction is right". Will the proposed municipal investments likely provoke a private sector development response sufficient to meet the precinct strategy development visions and generate returns in excess of costs? Return on investment can be calculated during the formulation of the investment plan once project designs are available and costing is estimated based on the net present value of investment and revenue as they are realized through the plan's projection period.

1.7.2 Beyond Property Taxes

The Exchange District Community Investment Strategy expands on the notion of Value Uplift by including metrics for the uplift of environmental and social factors. With cities becoming by far the dominant human habitat globally, urban development must address the current climate crisis head-on. This study presents a new approach to understanding, measuring, and addressing this challenge through urban development. Social inclusion and equity, likewise, have been often neglected in discussions of prosperity in an urban context. Together with environmental considerations, this study establishes metrics for social and inclusionary factors. The Neighbourhood Sustainability Index (discussed in sections 3.5 and 3.6) was produced with the understanding that social inclusion and equity are fundamental to the achievement of "sustainability."



2.0 STUDY AREA INTRODUCTION



2.1 Neighbourhoods as the Focus of Urban Change

Neighborhoods are the right scale to enable a wide variety of sustainable development initiatives As the focus for transformation. They are big enough to achieve consequential action, yet small enough to effectively sustain working partnerships. The dynamism and creativity which can coalesce at this level makes them ideal for pursuing sustainable and regenerative development.

Active participation in solving neighbourhood issues is more accessible, personal and motivating than tackling issues which are geographically more removed from daily life. Citywide change can be implemented most effectively when it is powered by citizens intimate with the development of a locally shared vision relevant to their lives.

Given the ongoing integration of the online with the on-ground world, neighbourhoods are poised to redefine both their economies and political processes around the principles of participatory decision-making and community planning.

2.2 Study Area Overview and Introduction to Precincts

Winnipeg's Exchange District is located on Treaty 1 territory the original lands of the Anishinaabeg, Cree, Oji-Cree, Dakota, and Dene people— and the homeland of the Red River Métis.

The study area is slightly expanded from that defined in Exchange District Plan 2022. This was done as a vision emerged during the process of compiling block-level data into its 7 proposed precincts. It includes the Exchange District National Historic Site, The Exchange District Business Zone boundaries, plus neighbouring areas with potential for creating greater connectivity and integration.

The district's unique architecture, shops, entertainment venues and public infrastructure all reflect Winnipeg's diverse history and culture. In this area one can clearly identify some of Winnipeg's outstanding characteristics which include the preservation of both industrial and formal historic buildings, the creativity and commitment of local businesses, and the ability to realize ambitious projects such as Waterfront Drive and the Manitoba Centennial Centre.

The study area was compiled into seven Precincts beginning with Exchange District Plan 2022's identified "Areas of Special Identity" as a starting point and then further refined based on built form, historical vocation and future opportunities for transformation. The Precincts were further subdivided into Blocks which were the base units for assembling the sustainability data. Fuller profiles are included for each precinct in section 4.



Vision as the Driver of Urban Change

Urban change begins with the assumption that community leaders accept the challenge of promoting an inspiring vision that can move people towards participatory community transformation. Daniel Burnham suggests that great change does not come from a reactive attitude towards solving individual urban problems, but rather from a bold resolution.

Make no little plans. They have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever-growing consistency.

The global response to the current environmental crisis will depend on the capacity of cities to promote sustainable development, regenerate local ecosystems and create broadly shared community wealth.

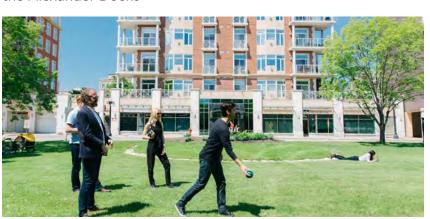
Rows (R)

Reinvestment in infrastructure, buildings & places to strengthen retail, restaurants & the creative & tech sectors.



Waterfront Living (WL)

Completion of the residential & recreational corridor & the Alexander Docks



Chinatown (CT)

Realization of the Chinatown plan & the neighbourhood main street.



Neeginan (N)

Restoration of indigenous places & spaces. Realization of the indigenous urban village plan.



Alex (A)

Arts & leisure asset development. Brewery & distillery row. Integration of Centennial Corporation.



Connection and Intensification (CI)

Mixed use infill & infrastructure plan. Portage & Main redesign.



Education and Innovation (EI)

The development of a private & public sector innovation campus focusing on clean tech, creative industries & urban innovation systems.



2.3 Creating Sustainable Neighbourhoods

Sustainable neighbourhoods demonstrate characteristics and capacities that align with the five priorities set out in Exchange District Plan 2022:

2.3.1 Community Building

Sustainable neighbourhoods fully engage everyone who lives, works and visits. This requires a full range of housing, employment and services, accessible to the full social spectrum. The provision of services to those currently underserved is key to this outcome, and includes the development of affordable (as well as student) housing, employment development at all skill levels, and support for local leadership in decision making. Public investments in sustainable neighbourhoods are strategically selected, and are implemented to create a virtuous cycle in which private sector investments boost economic activity and build the municipal tax base while supporting equitable outcomes.

2.3.2 Character and Placemaking

Sustainable neighbourhoods are authentic – offering unique opportunities for prosperity. The built environment celebrates, complements, or confronts its history and traditions. Authenticity can be recognized through three characteristics: values, what people hold dear; vibe, the lived culture of a place including streets as platforms for culture and commerce; virtuosity, the ability to develop and sustain excellence – the "expressed culture" of place ranging from public art, public places, performances, the application of local knowledge.

2.3.4 Innovation and Creativity

Sustainable neighbourhoods are those that create wealth that is retained in the community. Authentic walkable neighbourhoods attract creative talent which generates economic activity. Supporting a local focus ensures that most of the benefits of this economic activity are broadly shared within the neighbourhood through employment development, entrepreneurship development and neighbourhood loyalty programs (shop local / eat local).

2.3.3 Resilience and Adaptation

Sustainable neighbourhoods maximize locational efficiency through mixed use and compact urban development. They emphasize resource efficiency and circularity, reducing waste, and reusing materials through the adaptive reuse of heritage buildings, re-purposing building stock as much as possible, integrating new construction into existing buildings, and developing robust waste reduction and recycling programs. They sharply reduce their carbon footprint and greenhouse gas emissions by promoting active transportation, transit, and care sharing over private automobile ownership and through fuel-switching (electric vehicles when motorized transport is needed. buildings that are heated through non-carbon emitting energy sources), and the incorporation of green building technologies. Promoting local food and the reduction of food waste are also features of sustainability. As is increasing the tree canopy through street plantings to encourage walking by making streets more comfortable. The incorporation of green roofs also contributes to heat amelioration and the incorporation of permeable surfaces reduces stormwater surges.

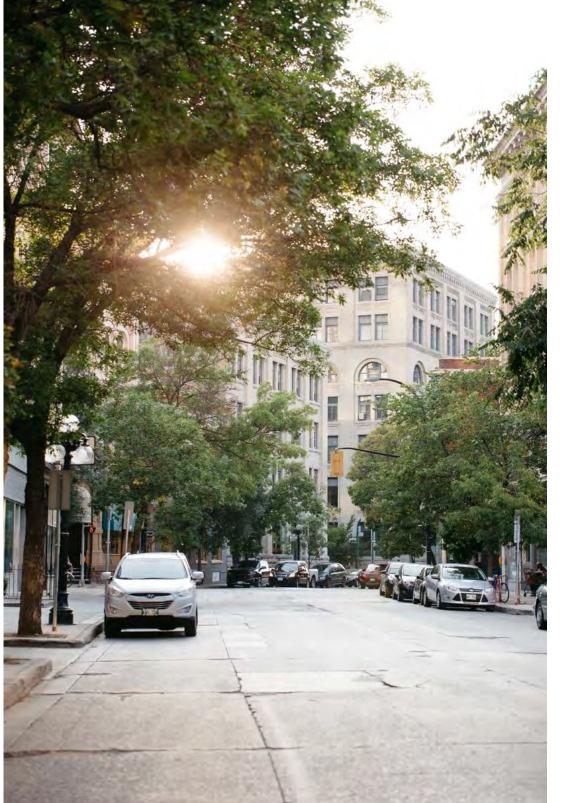
2.3.5 Mobility and Connectivity

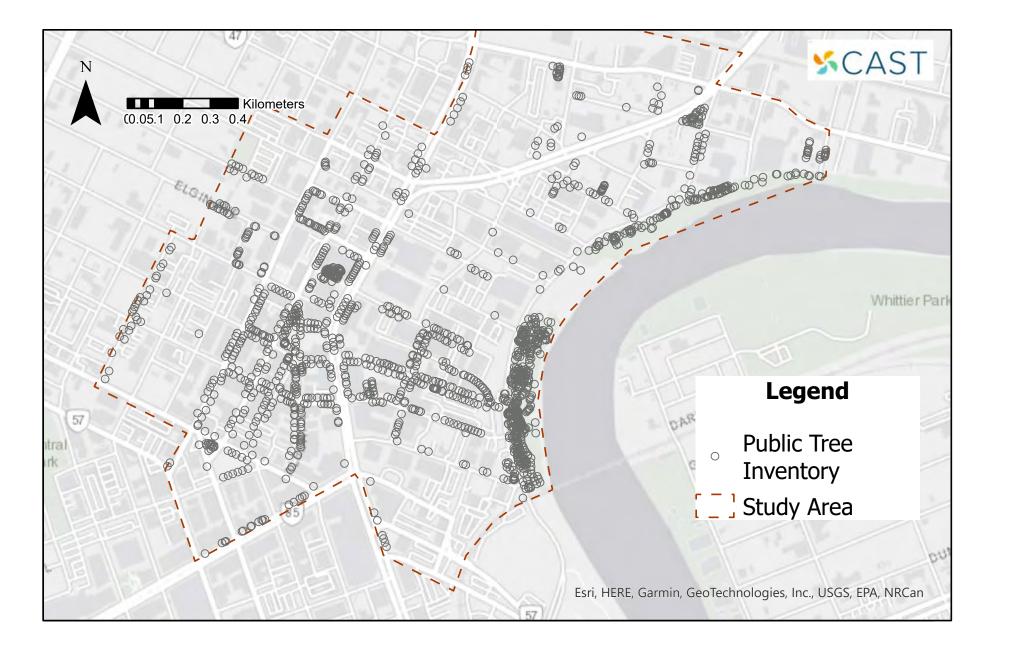
Mobility is a combination of proximity, connectivity and modality. Proximity measures the distance needed to travel to fulfill daily needs (to travel to work, school, shops, service providers etc.). Sustainability is enhanced when neighbourhoods feature a broad mix of uses as travel distances are reduced. Connectivity measures the degree of efficiency in movement between locations, achieved through the removal of barriers. And modality refers to the range of travel options available including on foot, bicycle, public transportation, ride hailing, vehicle share or private automobile. The cornerstone to neighbourhood sustainability is "walkability", the suite of characteristics that make walking an attractive option - safe streets that are enticing to walk on connecting to a full range of destinations. In support, high order public transit provides connectivity to destinations beyond the neighbourhood. Multi-functional and complete streets provide the foundation for active transportation and serve as the platform for commerce.

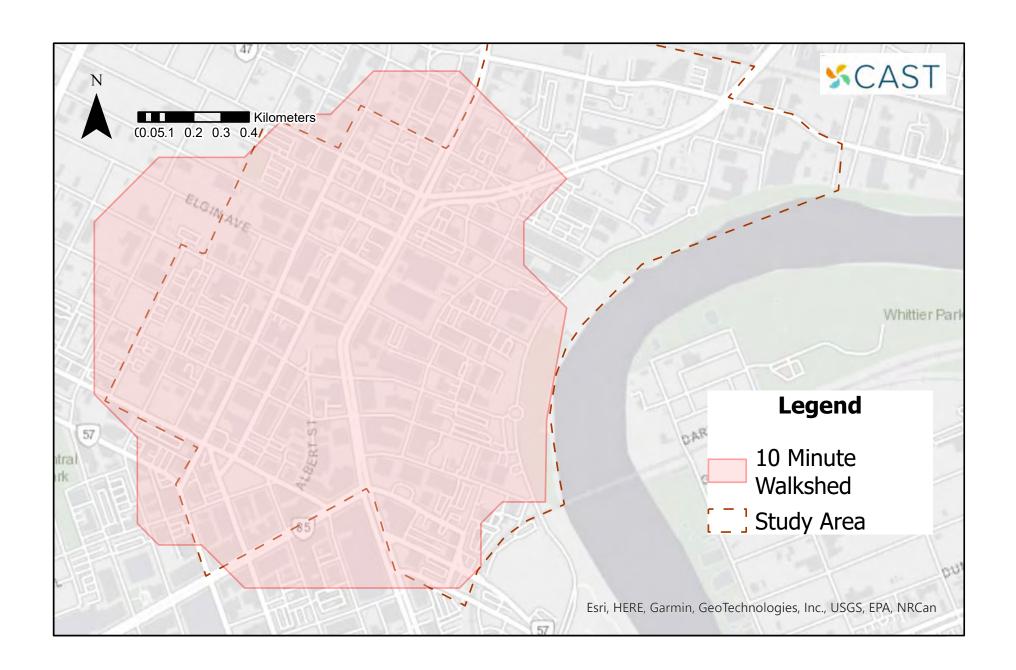
2.4 Community Based Asset Mapping

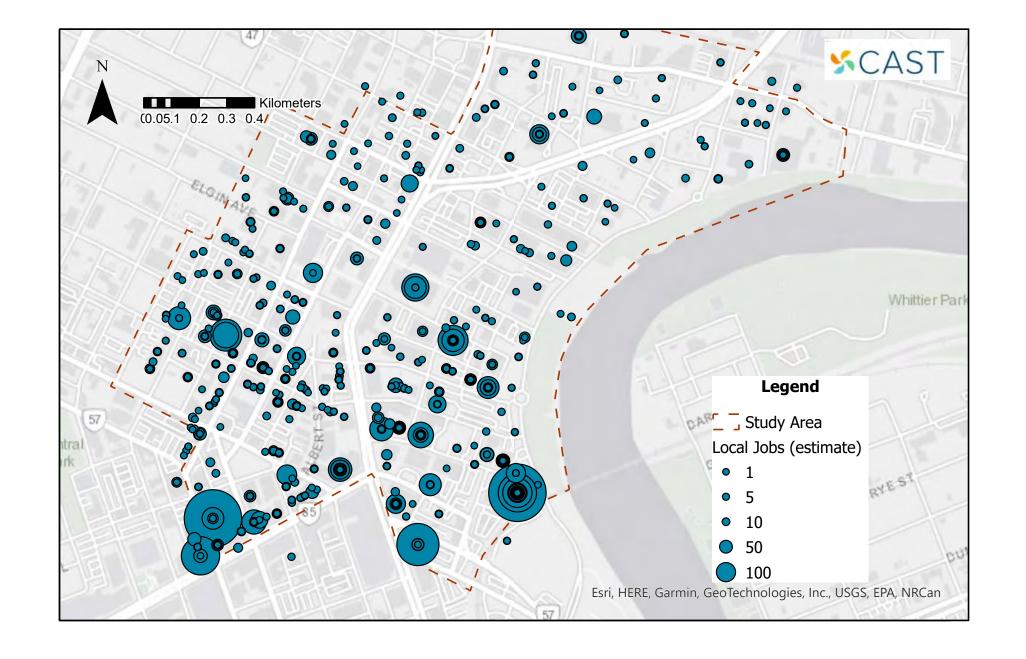
The preparation of Exchange District Plan 2022 included the integration of information on current conditions and planning directions within the study area extracted from a wealth of planning documentation.

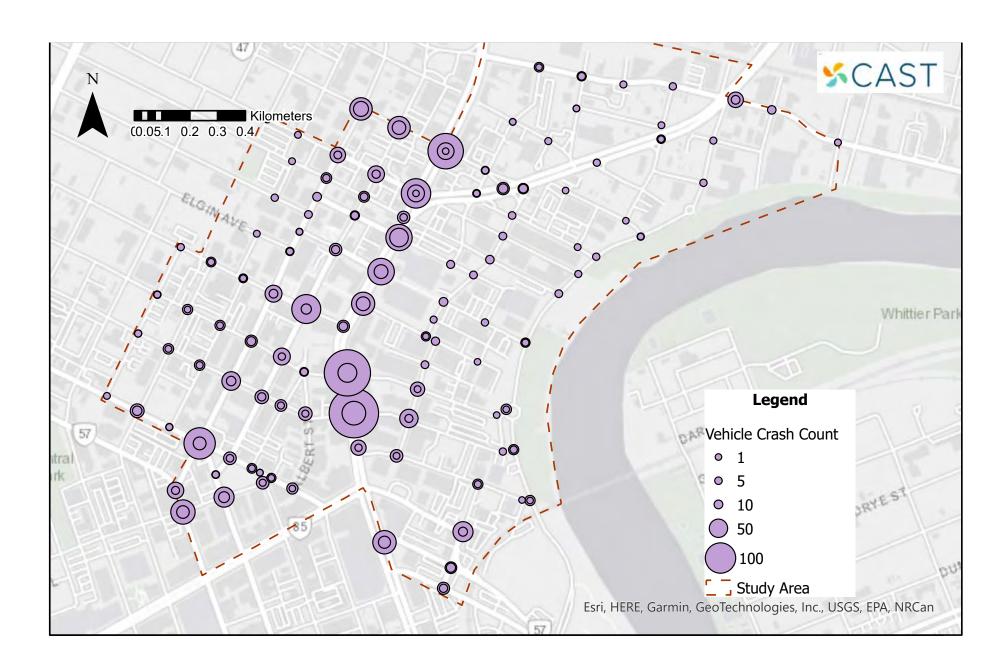
As part of the study process leading to the development of precinct strategies and action plans, these data were assembled as layers within a consolidated GIS geodatabase. A selection of a few mapped data layers is illustrated below, showing municipal street trees, vehicle collisions, business locations by business type, active street network, building footprints. Information collected as part of this study related to sixteen sustainability metrics (discussed as part of the *Neighbourhood Sustainability Index*, Section 3.6, below) was added to this geodatabase to provide ongoing tracking and visualization.











2.5 Sustainability Metrics

A substantial list of candidate sustainability metrics was investigated to determine the availability of data to support the measurement of sustainability at a neighbourhood scale.

In total, nearly three dozen metrics were investigated.
Unfortunately, neighbourhood level data could not be sourced for most. The short list (those for which data could be assembled) is summarized below.

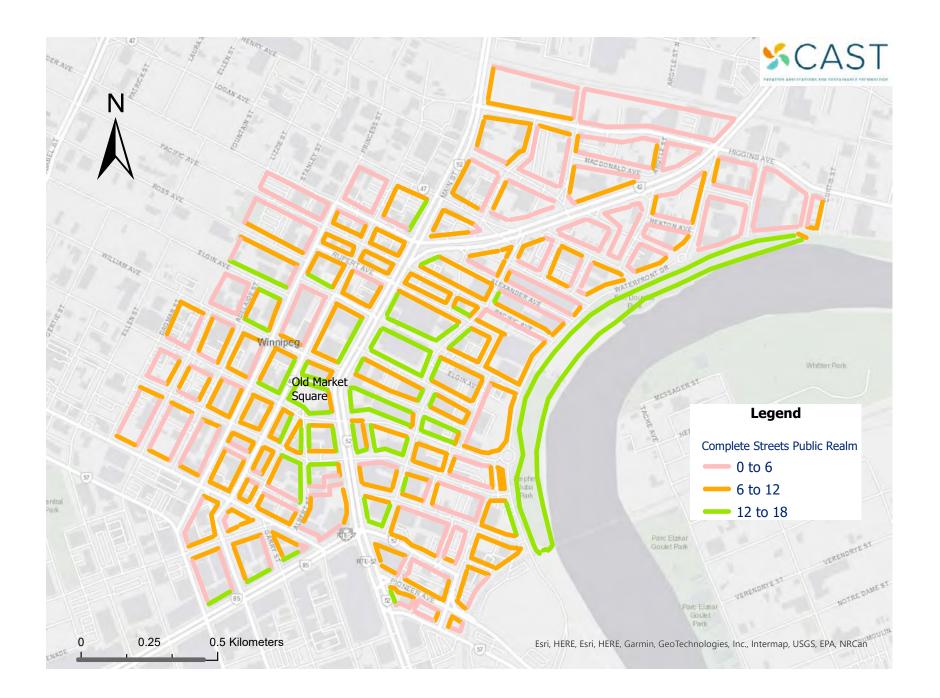
Figure 3-5 provides the final list of metrics and illustrates their relative contribution to the three dimensions of economic, social and environmental sustainability, with darker shading indicating a higher level of contribution. Although the metrics were organized along three dimensions for purposes of presentation, the chart emphasizes the highly integrated nature of metrics.

Metric	Di	mensio	n
	Econ	Soc	Env
Population / Dwelling Unit Density			
Assessment / Tax Density			
Job Density			
Local Business Share			
Mobility Score (Modes Combined)			
Complete Streets (Public / Private Realm)			
Safe Streets (Crime and Accidents)			
Condition Assessment Public Realm			
Complete Neighbourhood			
Social Access / Inclusion / Equity			
Authenticity (Vibe and Virtuosity)			
Reuse of Building Core / Shell			
Implementation of Green Technologies			
Fuel Switching (Buildings and Vehicles)			
Vehicle Modal Shift			
Tree Canopy			

For example, transit, bike paths and pedestrian walkways all increase mobility options (social dimension) while reducing auto dependency and their greenhouse gas emissions (environmental dimension).

Several of the metrics required custom surveys to be developed to collect data in the field. An example is the rating of conditions along the street in terms of both the quality of public realm elements (such as the width of sidewalks, presence of street trees etc.) and private realm elements (such as the presence or absence of active facades vs. blank walls or parking lots). For illustration, a mapping of the public realm rating of each block face is presented in Figure 3-5b. The higher the rating, the more amenable the experience is for pedestrians and cyclists which in turns encourages non-auto trips and enhances the quality of the street as a platform for commerce. On the map, the block faces coloured green have the highest rating while those coloured pink have the lowest.

The relationship between the selected metrics and their consequential contribution to sustainability is provided in Annex 2. The methodology used to develop their measurement is provided in Annex 3. The data collected for all metrics was integrated into an assessment tool, the Neighbourhood Sustainability Index.



2.6 Neighbourhood Sustainability Index (NSI)

In order to assess the current state of sustainability and to measure progress towards future targets, the project team developed an indexing tool designed to directly address a feature of the City's policy direction on sustainability:

[From Sustainable Winnipeg] The City intends to apply the Bellagio STAMP (Sustainability Assessment and Measurement Principles) which captures globally recognized best practices, to guide the process of developing a measurement system.

The selection of indicators is a critical step in the process of developing a measurement system.

Indicators need to be meaningful, valid (they measure what they are intended to measure), easy to understand and able to be measured in a practical way.

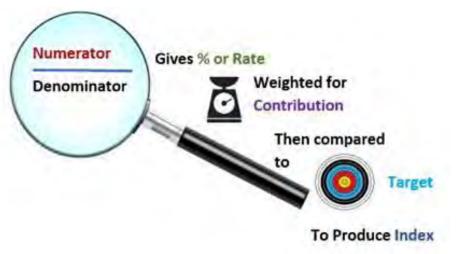
The typical approach is to identify three dimensions of sustainability: **social, environmental and economic** and this has been adopted by Sustainable Winnipeg as well.

Additionally, it was critical for this study to operationalize sustainability measurement at the **neighbourhood** rather than the regional level.

Although the Bellagio STAMP has been widely accepted as a guide for constructing a sustainability assessment process, its operationalization is an area yet to be explored in theory or in practice for planning at the neighbourhood level.

This challenge was addressed by first identifying metrics for which data could currently be collected at the neighbourhood scale, and then developing the tool to both index current conditions and monitor progress over time. That progress is defined in relation to Exchange District Investment Strategy targets.

The tool developed for this purpose is the *Neighbourhood Sustainability Index* (NSI).



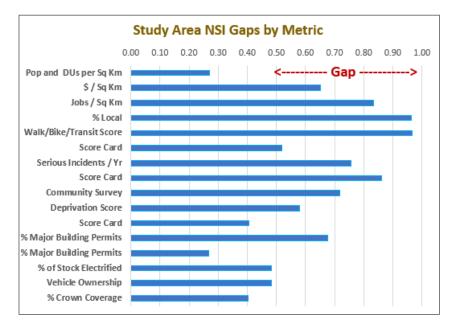
The NSI tool was used to assemble measurements for each of the sixteen selected metrics, record the aspect measured (numerator) in comparison to a base (denominator) – for example, the number of dwelling units per square kilometre. The tool then allowed for the weighting of each metric. The weights were developed by the project team based on an extensive review of academic research and in alignment with signals picked up through community consultation.

The weighted current measurements were then compared to targets to arrive at "index" values. The targets were developed by the project team in alignment with the Objectives and Priorities of the Exchange District Plan 2022, additional engagement with the community, and with reference to the aspiration of the precinct action plans (presented in Section 5.)

The index for each metric, aggregated to the study area, is illustrated below.

Study Area NSI: Indices by Metric			
Metric	Indices		
Population / Dwelling Unit Density	0.27		
Assessment / Tax Density	0.65		
Job Density	0.83		
Local Business Share	0.96		
Mobility Score (Modes Combined)	0.97		
Complete Streets (Public / Private Realm)	0.52		
Safe Streets (Crime and Accidents)	0.76		
Condition Assessment Public Realm	0.86		
Complete Neighbourhood	0.72		
Social Access / Inclusion / Equity	0.58		
Authenticity (Vibe and Virtuosity)	0.41		
Reuse of Building Core / Shell	0.68		
Implementation of Green Technologies	0.27		
Fuel Switching (Buildings and Vehicles)	0.48		
Vehicle Modal Shift	0.48		
Tree Canopy	0.40		

The bar chart illustrates the "gaps" between the current value for each metric and the action plan targets.



The NSI tool was prepared as an Excel workbook.

Measurements were recorded for each of the 102 blocks in the study area, including for each, a numerator and denominator from which a rate was calculated. The rate was then compared to a target selected for each metric to generate the indices. Annex 2 provides a discussion of the metrics most consequential to driving neighbourhood sustainability and Annex 3 provides detail on how each of the sixteen metrics were measured.

The NSI tool can be used to monitor progress over time and measure success in closing the gaps. Individual projects and initiatives to close the gaps are presented in each of the Precinct Action Plans (Section 5).

Several action plan items are common across all precincts in the study area, including:

- increasing residential population (through an ambitious program of residential construction across all levels of affordability),
- improving public realm elements to promote walkability,
- increasing social access and equity for segments of the community that require additional support,
- encouraging the implementation of green technologies in all new construction and during the re-purposing of the existing building stock,
- improving mobility through the development of rapid transit and vehicle share,
- accelerating the transition away from petroleum fueled vehicles by providing vehicle charging infrastructure, and
- increasing the amount of tree canopy throughout the study area.

Although not a deliverable of this project, during the progress of the study program CAST engaged with the Ace Project Space of Red River College to examine the availability of neighbourhood level sustainability data in three dozen communities in Canada and the United States. This student project, which delivered a software tool to store and organize data links, will be used by CAST to assess the viability of creating the NSI as a commercial software application.



3.0 PRINCIPLES & ESSENTIAL MOVES



3.1 Principles

Our research and analysis revealed a number of recurring challenges to be overcome in order to achieve the vision articulated within Exchange District Plan 2022 As is often the case, challenges also represent opportunities which we have articulated as 3 guiding principles. These principles underlie the value propositions presented within The Exchange District Community Investment Strategy and form the basis of an investment strategy for the area.



3.1.1 Mobility and Walkability

Challenges:

Walkability throughout the study area is highly variable. One street may feature shops, patios and restaurants driving a vibrant street life. A block away you might find parking lots, blank walls, wind and dust and no sense of heading towards a desirable destination. The intersection of the two high streets (Portage and Main) is bereft of life and activity at street level. Impossibly challenging and ugly intersections and highways undermine pedestrian connections. A freeway severs portions of the community from others. One-way excessively wide high-speed streets with turning restrictions hinder mobility in the area for vehicles, pedestrians, and cyclists alike. Weak connections and barriers between key activity hubs encourages single destination visits to the downtown and the use of a car for trips even within the downtown, driving the need for parking.

Key Opportunity:

- The incredible improvement and quality of space, and major enhancements in conditions for street level business success can be achieved for minimal cost given the high level of proximity between key activity hubs and the low cost of improving connectivity.
- Discouraging future actions and infrastructure projects that induce traffic demand and shifting to investments that create attractive routes for pedestrians will strengthen the streets as platforms for culture and commerce

3.1.2 Residential Development and Livability

Challenges:

The residential population of the study area is insufficient to create a market for a full range of services, holding back the achievement of the "complete communities" objectives in the City of Winnipeg's official plan. The study area is blessed with a concentration and variety of employment opportunities and a large student population but suffers from a lack of housing options. The daytime population far exceeds the nighttime population. While the area offers a spectacular array of cultural, sports and recreation facilities and venues, basic community services are lacking – such as a full grocery store. All the things that are expensive and hard to realize in a downtown like A-list concert halls, arenas and museums are here while the more basic building blocks of apartments, condos, grocery stores, bakers, and butchers are missing.

Key Opportunity:

- The urban real estate in the study area has tremendous potential to be quickly and efficiently developed into a major mixed-use, residential development.
- Absolutely every amenity from parks to outstanding cultural and sports facilities punctuate every corner of the district.
 Winnipeg boasts outstanding architectural and cultural streetscapes that are authentic and need only to be leveraged.
- Every residential infill project proposed has been paired with additional greenspace, the development of adjacent bars and restaurants and improvements to the area's natural features: placemaking and natural spaces are key to successful residential development.

3.1.3 Heritage Conservation, Placemaking, and Sustainable Infill

Challenges:

In spite of dozens of economically successful re-purposing restoration and redevelopment of significant heritage properties and adjacent land, there persists an unfounded perception that these properties are expensive and hard to restore. Changes to provincial law regarding condominium reserves have discouraged condominium re-purposing of existing buildings. While the perception may be greater than the reality, it is true nevertheless that in the current climate, rental redevelopment of existing properties comes with much lower financial risk and higher return than condos. Given the direct relationship between residential conversion and restoration of significant heritage buildings. this presents a serious challenge. A current lack of policy and financial incentives has meant that the world-leading green building technologies in recent public sector buildings (most notably, Red River College Polytechnic) aren't currently being leveraged to create wide-spread deployment across the district.

Key Opportunity:

Informally, redevelopment has taken on a pattern of co-development of heritage building sites with new building and new green technology being integrated into an existing building. 15 such projects completed in the last 10 years. This sends a strong signal that faster approvals and a supportive policy framework could multiply such projects over a shorter period.

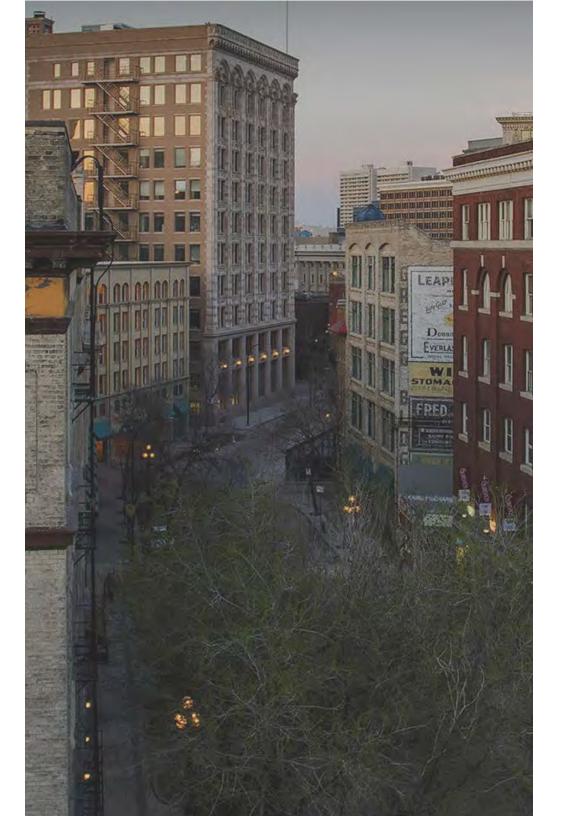
3.2 The Seven Essential Moves

The seven essential moves are highly impactful district wide projects that accelerate the renewal of the Exchange District and are foundational to the five priorities and the three principles that underpin this strategy. They ensure rapid residential infill development greater connectivity within the district and with the rest of the City, filling gaps in services and amenities and transforming the area into Canada's most walkable and successful urban neighbourhood. They are foundational and synergistic with the foundational projects that are specific to each of the seven precincts and work together to create a new ecology of place and create new outcomes. The best example of a new outcome was the change in perception of the East Exchange when Waterfront Drive shifted the perception of the area from uninhabitable to one of the most desirable neighbourhoods in the city. This perception shift created a huge demand for residential projects in the Waterfront Precinct. This strategy and seven "essential moves" across seven precincts extends that pattern of success across the entire Exchange District. Each of them work to help build the tax base and strengthen the local economy and livability of the neighbourhood.



Precinct Based Planning

Even within the smaller footprint of the study area as compared to the full downtown, the data assembled, amenities, industries, ranges of housing and urban geography suggest smaller planning precincts. These smaller precincts allow for finer-grained intervention, focal points for development and infrastructure, and specific opportunities, allowing future growth to be specific, directed, and cohesive parts of the whole. From a heritage conservation and urban design perspective, this allows clearer and more effective heritage integration and urban design guidelines.





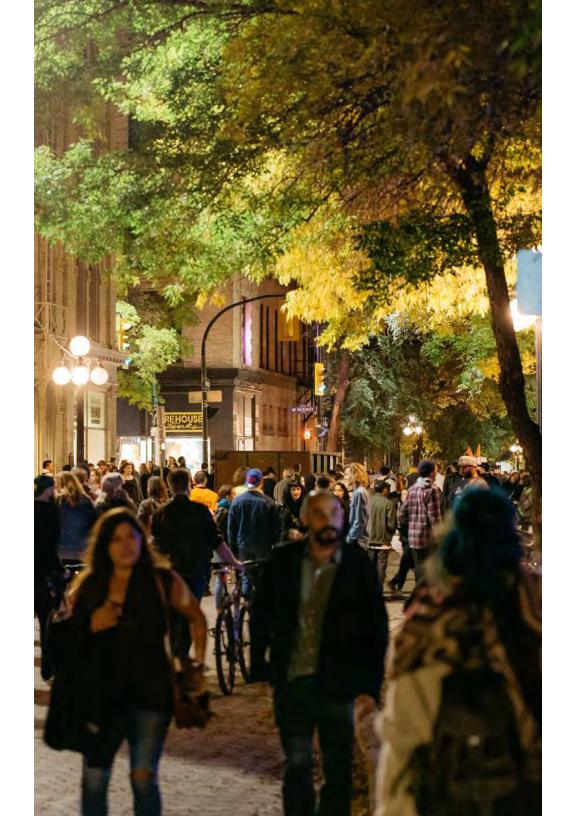
2

Residential Development and Intensification Zones

Residential Development and Intensification Zones (RDIZs) allow the City to work in partnership with the community, developers and business owners on efficient, effective, and measurable development targets. Based on overall value uplift, specifically calculated return on investment, and predictable outcomes to the NSI, RDIZs allow the City to make bankable investments on infrastructure, specific infill and development incentives, policies and partnerships.

Supported by clear, pre-established development permissions and guidelines for residential projects, the intent of the RDIZs is to expedite development approvals while maintaining the integrity of the City's planning goals. Each RDIZ will have the equivalent of its own master development plan, including municipal commitments to the infrastructure and public amenities necessary to support residential development, including upgraded water service, waste water and land drainage sewer, utilities, public open space, and public art.

The Plan calls for seven (7) such zones resulting in a total target population of 25,000 residents over a 20-year period. Overall, they should include a true mix of market and affordable housing, a strong focus on Indigenousled development, and harness market-scaled affordability incentives. Each has a specific focus, designed to leverage existing assets, complement built form, and align with the current plans and projects with its surrounding precinct.









Corridors and Connections

The restoration of downtowns and historic neighbourhoods throughout North America has become increasingly tied to the vibrancy of streets, which are usually marked by the perception of their walkability and safety. Attractive corridors and connections that invite the eye to experience beautiful and evocative streetscapes increase street-level pedestrian activity dramatically. These vibrant and livable streets take many forms. Formal Cultural Corridors with structured art installations, lined with culturally-focused businesses can quickly become a neighbourhood high-street. Lining laneways and drayways with art installations, projecting videos on blank walls, and filling them with music can make the pathway itself a destination.

Cultural Corridor Network

Formally defining a series of pedestrian-oriented travel paths from the Alexander Docks site through the spine of cultural and artistic assets in the Exchange District, this Cultural Corridor Network will enhance currently informal, frequently used pedestrian routes while creating a destination. Leveraging the popularity of programming such as Nuit Blanche, Alleyways in the Exchange and Winnipeg Fringe as well as existing street-level art and design elements, this will be enhanced overtime to become a preferred pedestrian route linking the East and West Exchange, Chinatown and the SHED.

- Define a series of routes and work with the arts and cultural community, Winnipeg Arts Council, the MCCC, MMF, the Winnipeg Arts Consortium, and heritage experts to designate the route and create an masterplan.
- Engage with traffic engineers, city planners and the community to integrate specific interventions along the corridor network highlighted separately in this strategy) and define appropriate infrastructure interventions along each stretch creating a pedestrian-friendly path of travel.

Construction Target:

5 Years: Primary Streets
10 Years: Complete Network

Objectives and Principles:

MC, CB, CP

Completion State:

The Cultural Corridor Network becomes a destination in and of itself for local and external tourism as well as a connector across the study area, strengthening the Exchange District's identity as Winnipeg's arts and cultural hub.

Patio Promenades

Development of "Patio Promenades" by creating rows of outdoor dining streets as destinations, enhancing the safety, livability and commercial success of the streets in the process. Stretches of King, Albert, Bannatyne, McDermot and William already have significant patio clusters to build upon while many other restaurants and bars are located on streets with wide sidewalks or temporary curb bump outs.

 Work with city planning and permitting departments, local city councilors, the Mayor's office, Centre Venture, The Exchange District BIZ, restaurateurs, bar owners, building owners and resident associations to advance the plan and agreements around operations and branding.

Construction Target:	5 years	
Objectives and Principles:	IC, CP	
Completion State:		

Exchange District is home to the most diverse and (cont.)

Completion State (cont.):

well-rated culinary cluster in western Canada. The patios have become a magnet for Winnipeggers and tourists alike as single destination and single purpose visits decline while there is a measurable uptick in multiple location visits. More people are visiting more often and going to more locations in the larger Exchange District. Visitors, residents and businesspeople are taking advantage of the frequent rapid transit options so they can enjoy a bottle of wine, craft beers or whiskey and not have to drive home.

Shared streets quickly become a place for everyone and everything, adapting to match the traffic-mode needs of a given season, day or time. Strategically deployed these have helped reduce crime, increase business attraction and retention, and changed the perception of downtowns and commercial districts.

Maybe most of all, streets and lanes crowded with tables and patios become the greatest refuge for urban residents and visitors (no one has ever been to a city that has too many restaurants and cafes with patios that spill onto the streets.

Bringing nature into the city in the form of greenways and tree-lined boulevards not only creates an oasis amongst the bricks and concrete, it provides a pleasant break from man-made environments and on hot days, offers a cooling refuge in an urban centre. The interface of water and land is maybe one of the biggest magnets for human activity, and neighbourhoods with rivers and lakes capitalize on this magnetism by building beautiful bridges and rambling boardwalks that connect us to water and life.





Arts Festival Campus

The Exchange District is well known as the sight of the City's premier arts festivals, drawing hundreds of thousands of visitors each year. It has the potential to build on this reputation and draw additional arts and cultural celebrations by formalizing and expanding what is currently an informal geography for these events and more. By connecting the core of the Exchange including Old Market Square, the Market Lands and the proposed Walker Square (Ellice/Notre Dame) and the connecting streets as an entertainment campus of linked spaces that can be managed with simplified booking and permitting, the area can include branding as well as infrastructure such as bollards to create an appropriately scaled and supported festival campus that will draw additional festivals of various scales.

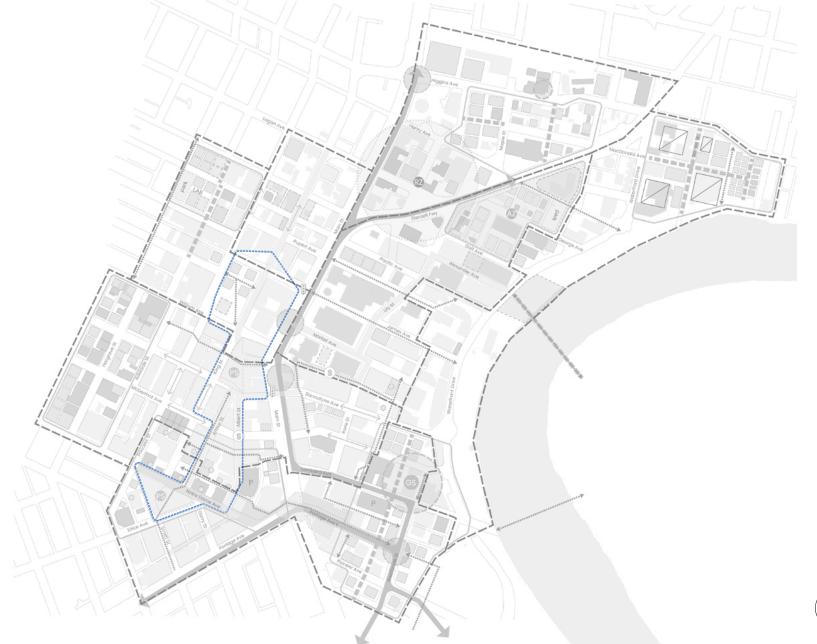
Arts Festival Campus

The Exchange District is well known as the sight of the City's premier arts festivals, drawing hundreds of thousands of visitors each year. It has the potential to build on this reputation and draw additional arts and cultural celebrations by formalizing and expanding what is currently an informal geography for these events and more. By connecting the core of the Exchange including Old Market Square, the Market Lands and the proposed Walker Square (Ellice/Notre Dame) and the connecting streets as an entertainment campus of linked spaces that can be managed with simplified booking and permitting, the area can include branding as well as infrastructure such as bollards to create an appropriately scaled and supported festival campus that will draw additional festivals of various scales.

- Develop the core of the Exchange including Old Market Square as an Arts Festival
 Campus spanning from the China Gardens to the proposed Walker Square as a
 shared amenity for easy scaling and management of events and festivals. Managed
 by a stakeholder partnership, including the City of Winnipeg, the Exchange District
 BIZ and major venues within the campus, events could choose from smaller and
 larger options for events.
- Create shared infrastructure, including permanent adjustable bollards for street closures, furniture for on-street activation, and technical infrastructure for simplified production. Develop branding for marketing the asset.
- Create a partnership structure for promoting, managing use, rental options and permitting for the Arts Festival Campus's shared assets and to coordinate individual public and private space usage.

Construction Target:	5 years	
Objectives and Principles:	CP, CB, MC	
Completion State:		

The area attracts more festivals and events. Event planners are able to easily configure their footprint to scale and leverage a range of public and private assets to execute easily.





5

High Impact Rapid Transit

High impact rapid transit adopts a series of measures and approaches to accelerate and augment the impact of rapid transit investments on the prosperity and population growth of the study area. The proposed organization is meant to maximize the interdependence and synergies of residential infill projects with rapid transit lines and stations. Building off of the City of Winnipeg's Master Transit Plan, it considers side by side bi-directional transit-ways located curbside on busier regional streets and "surface subway models" in the centre lanes of transit malls with larger hub stations. This approach pulls transit onto roadways that are integrated with major residential redevelopment zones, giving transit priority or exclusive lanes where appropriate. This approach is centered on highly walkable transit oriented neighbourhoods surrounded by green space, parks and attractive, safe pedestrian pathways, while reducing impacts on traffic congestion in the short and medium-term.

Rapid Transit Corridor Alignment

A north-south leg of the City's planned rapid transit system which extends from the transit hub in the Portage and Main Area (Westbrook) and runs north-south on Main Street, with stations at the William/Market Avenue intersection and Higgins Avenue.

 Work with Winnipeg Transit, resident associations, indigenous organizations, property owners, businesses, trails organizations, active transportation, and resident groups, and Functional Transit to develop two-way rapid transit routes, detailed corridor design and stations.

Construction Target:	10 years
Objectives and Principles:	MC, RA

Completion State:

Main Street functions as an efficient, beautiful, and well connected rapid transit corridor which improved ridership along these routes to sufficiently reduce traffic congestion. Downtown commerce and livability are improved as the area becomes more accessible and more services, venues, and landmarks can be accessed via public transit. The rapid transit corridors reduce travel times, costs for commuters and the need for large swaths of high value developable land to be used for parking.





Infrastructure Maintenance, Replacement & Beautification

Reverse years of poor maintenance of both the private and public realm with sufficient funding to ensure proper maintenance of the infrastructure, spaces, and places essential to the economic and cultural health of the study area. Restore and reinvest in successful "legacy" programs that catalyzed private sector investments in the built environment. Restore the programs, funding, capacity, agency, financial incentives, and development tools to fulfill the ambition of government, community, and business to realize the potential of this precinct depends.

Remove competitive disadvantages and barriers that impede reinvestment in the built environment. Treat streets as wealth generating assets and community amenities rather than as simply traffic movers and automobile storage. Improve pedestrian, transit, cycling and vehicle circulation and connectivity throughout the study area, across the downtown and into Winnipeg's historic central residential neighbourhoods.

Improve the precinct's walkability, lighting, wayfinding and safety through investments in natural green spaces, signage, building lighting, street furniture, and sidewalk infrastructure.

Set state of good repair standards for the Exchange District and annually audit and report on progress and publish an annual maintenance schedule to maintain those standards.



Specifically address:

- This should ensure comprehensive renewal, repair and restoration of public infrastructure and spaces throughout the precinct.
- Fix deteriorating and broken street furniture, lighting, and sidewalks, remove "graffiti" markings from frequent utility street and curb cuts and sidewalk demolition.
- Maintain and continue to develop a high visibility pedestrian and street level high design environment.
- Restore and protect essential heritage and historic elements of the streetscapes.
- Enforce property standards bylaws and engage Centre Venture in resolving problematic properties.
- Enforce property bylaws, resolve the barriers to redevelopment of the St Charles Hotel at the corner of Alberta and Notre Dame as it is a significant to improving the street and a healthy retail business environment in the area.
- Offer an assistance program to shop owners and restaurants in upgrading their store fronts and manage vandalism.
- Create a greater identity for the history of the "Rows" and improve place branding, wayfinding, and arrival locations within the precinct
- Create heritage and existing building guidelines for street/pedestrian level building guidelines for the Exchange given its unique legacy office, banking, and warehouse building mix.
- Augment tree planting, green buffers, sidewalk extensions, and parallel curbside parking on identified restaurant and retail rows.
- Restoration of programs that assist in the renewal, re-purposing, and repair of the existing building stock.



Transformation of Main Street and Disraeli

Many cities are reversing the negative development impacts of freeways with designs focused on green boulevards and block configurations that promote walkability, livability, and quality development. This strategy is known as a freeway to boulevard strategy.

The western (at-grade) section of the Disraeli Freeway should be reconfigured to support complete community development and restore walkability. This will reconnect and restore the health of the neighbourhoods adjacent to the west Disraeli and the Disraeli/Main intersections, creating the conditions to support infill development, restore a healthy environment for businesses and cultural and recreational venues. While revitalizing the area as an inclusive, livable and successful mixed residential and commercial neighbourhood will require far more than simply addressing the design of the streetscape, it will be impossible without a significant redesign of elements of the freeway from the Argyle Street to the Main Street intersections.

We recommend that the redesign of the western section of the freeway happen in a series of incremental changes over a 10-year horizon. That the first interventions generate early restoration of residential and commercial infill projects and help restore the commercial viability and residential livability of Main Street, the Neeginan, Chinatown and Alex precincts

Disraeli Revitalization

Mobility and Connection: Reconfigure the western stretch of the Disraeli Freeway to redistribute and de-concentrate traffic, improve mobility, and build a vibrant northeast Exchange District. Restore the commercial viability of blocks, reconnect neighbourhoods and reintroduce the fully connected intersections which enable commercial and residential development.

- Create an expert team which includes Municipal Planning
 Department staff and local experts which focuses on redesigning
 freeway projects and rebuilding impacted urban neighbourhoods.
- Develop a steering committee which includes both Centre Venture and the City to study and develop the redesign of the precinct, repeating the successful process used for Waterfront Drive.
- Study analogous projects such as Milwaukee's Park East Freeway Redevelopment (54k vehicles per day), which triggered massive reinvestment and redevelopment after it was successfully transformed into McKinley Boulevard. Though the Disraeli has lower average vehicle traffic (43K per day) and is a shorter length, the "investment area" and potential uplift are similar.

Construction Target:	15 - 20 Years
Objectives and Principles:	MC, CB, RA

Completion State:

An end to the practice of concentrating and funneling traffic onto a few congested streets, undermining walkability and commerce. A revitalized Main Street which supports thousands of local residents, enables the revival of the cultural and commercial life and improves connectivity with the Manitoba Centennial Corporation cultural campus in both Chinatown and Neeginan.





4.0
PRECINCT
PRINCIPLES &
FOUNDATIONAL
PROJECTS



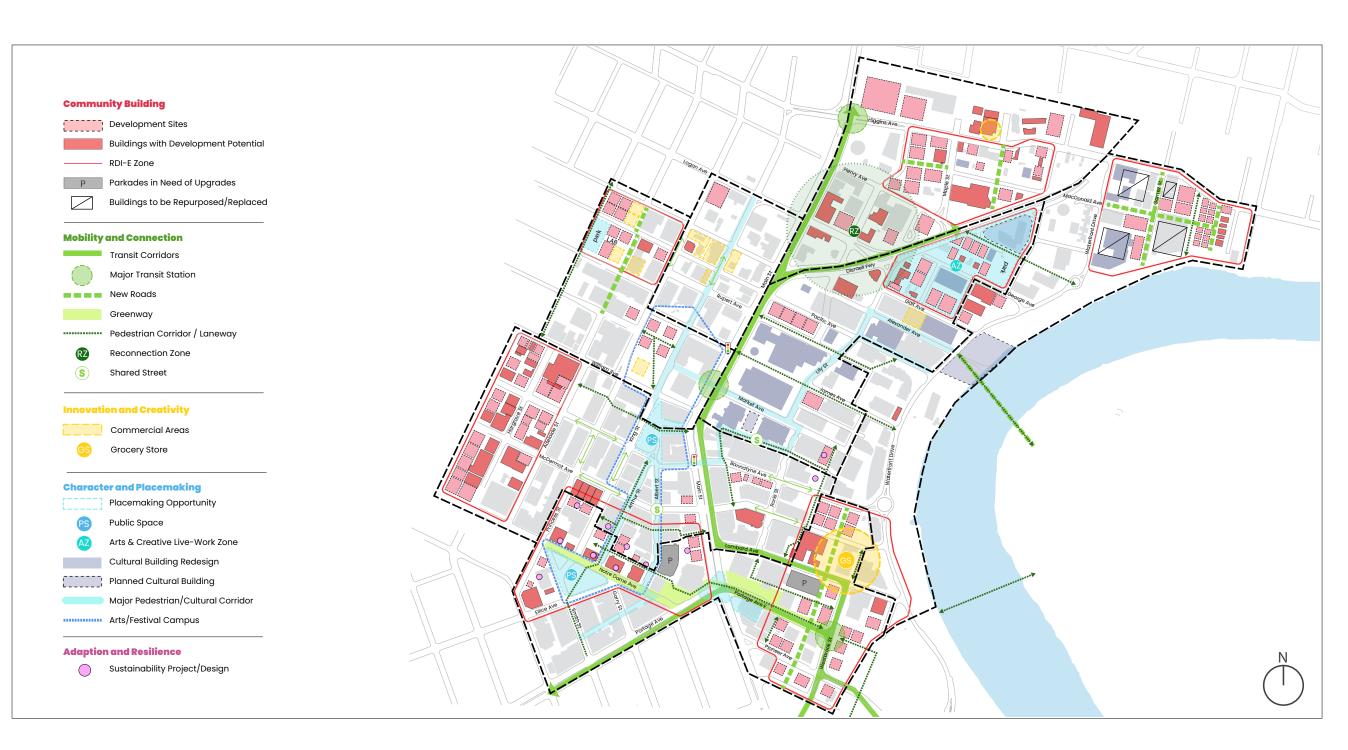
Taken together, the Principles, Essential Moves, and Foundational Projects for the overall study area (and their articulation within the following Precinct-Based Investment Strategies) provide a comprehensive vision for transitioning the study area to a more sustainable future through a precinct-based development approach, one that the City of Winnipeg has found success with in the past.

This collection of precinct-specific strategies, which complement and expand on the directions outlined in the Council-approved Exchange District Plan 2022 (see Annex 1), will require strategic municipal investments in foundational infrastructure projects driving private sector and community-based investments to realize the overall vision for the Exchange District.

An integrated public / private sector investment strategy can help inform the proper sequencing of investments to maximize the development response, allows the municipality to benefit from development opportunities created by the City's investments, generates uplift in property taxes to amortize City investments and for the private sector de-risks their investments by providing certainty – both in the form of the municipal commitment to its investment commitments and in the form of community buy-in that mitigates delays in project approvals.

The investment strategy for each Precinct is organized as follows:

- **Vision** articulating the overall development vision for the precinct
- **Community Investment Focus -** defining the core focal points of the investment strategy
- **Precinct Actions** outlining the priority actions and their alignment with the principles established in the Exchange District Plan 2022, that constitute the precinct-specific investment strategy
- Foundational Projects and Analogues outlining the foundational projects, and their alignment with the principles established in the Exchange District Plan 2022, that constitute the precinct-specific investment strategy
- Value Uplift projection of the potential value uplift generated as a result of the investments



Value Uplift by Precinct

For each of the 570 properties in the study area municipal assessment, property tax and business tax values were calculated for:

- Base Case (drawn directly from the 2022 assessment records)
- Trends Projection /Business as Usual (based on historic trends)
- Strategy Projection (a sub-set of properties based on precinct visions)

The projections were cast in four five-year increments beginning 2022 (Time 0). The difference (delta) between the Trends Projection and the Strategy Projection generates the uplift that is attributed to the strategy investment elements (such as new roads, greenways, high order transit and public squares).

The purpose of uplift modelling is not to get the "number" right but to confirm if the "direction" of the strategy is right.

This modelling completed as part of this study confirms the direction of the "community investment strategy" but does not lock down the "community investment plan". Getting from strategy to plan will require firming up commitments by both the public and private sector to their investment programs and getting agreements in place to orchestrate the development program (a role historically provided by CentreVenture).

Provided on the adjacent page are the results of the strategy uplift modelling work, itemized by Precinct and Time period.

Modelling of the investment strategy produces a Property Tax Uplift (over Trends) of \$ 103.5 Million summed over the 20-year projection horizon. By year 20, the annual property tax uplift would grow to \$9.3 million.

The uplift is largely driven by the Residential Development Intensification Zones (RDIZ), featured in the strategy. The annual property tax uplift continues to increase throughout the twenty-year projection horizon as public sector investments are completed and private sector developments are brought on stream in response.

The Business Tax Uplift is more modest. This is a result of the conversion of business properties (notably parking lots) to residential use, particularly the large surface parking lots in the Connection and Intensification Precinct. The property tax generated by the new residential units goes up but the business tax is removed. Other property conversions to residential, such as multi-storey warehouse buildings in the Rows Precinct, also increase residential property tax with a concomitant loss of business tax. As the strategy is converted to an investment plan, it will be important to ensure that business incubator and start-up space is not lost to residential gentrification.

	Annual Tay	Annual Tay	Annual Tay	Annual Tay	Cummatian of
Precinct	Annual Tax Uplift by Year 5	Annual Tax Uplift by Year 10	Annual Tax Uplift by Year 15	Annual Tax Uplift by Year 20	Summation of 20 Year Uplift
AP	587,047	661,610	939,684	932,488	\$13,272,924
CIP	14,862	28,087	1,807,022	3,597,062	\$18,242,508
CP	84,424	82,853	277,679	267,919	\$2,894,579
EIP	1,006,483	1,221,900	1,212,389	1,207,202	\$20,221,864
NP		1,225,853	1,195,490	1,165,127	\$20,921,074
RP	294,738	1,470,156	1,591,135	1,488,776	\$19,765,241
WLP	68,181	561,502	671,189	662,719	\$8,161,160
Null	-	+			
TOTAL	\$2,055,736	\$5,251,960	\$7,694,588	\$9,321,294	\$103,479,351

Precinct	Annual Tax Uplift by Year 5	Annual Tax Uplift by Year 10	Annual Tax Uplift by Year 15	Annual Tax Uplift by Year 20	Summation of 20 Year Uplift
AP	14,880	24,516	22,289	20,602	\$359,931
CIP	2,272	23,407	-513,219	-1,281,730	-\$5,642,025
CP	-20,444	-26,492	80,005	73,684	\$349,558
EIP	446,410	444,315	443,870	430,231	\$7,748,554
NP		385,205	380,351	375,496	\$6,656,137
RP	31,029	-88,773	-413,169	-525,118	-\$3,744,931
WLP	5,488	8,364	-9,222	-21,275	-\$30,036
Null	~		9	*	
TOTAL	\$479,635.88	\$770,543.74	-\$9,095.18	-\$928,111.18	\$5,697,189.32

As the study area is blessed with a full range of employment, the strategy is largely focused on increasing the residential population to provide support to a broad range of housing options and ancillary support services such as grocery and health services. In total, the uplift modelling yields an increase of nearly 11,000 residential units which would increase the population of the study area by about 15,000 over the Trend projection – to a level sufficient to provide support to a large range of commercial services, including a complete grocery store. The increase in residential units is focused in the seven Residential Development Intensification Zones featured in the strategy and assumes heights and densities which respect adjacent heritage properties.

Precinct	Additional Units by Year 5	Additional Units by Year 10	Additional Units by Year 15	Additional Units by Year 20	Total at Year 20
AP	204	237	479	460	460
CIP	108	273	2,312	3,760	3,760
CP	173	163	288	272	272
EIP	592	1,015	1,295	1,575	1,575
NP		627	603	580	580
RP	371	1,790	2,228	2,175	2,175
WLP	483	809	1,678	2,010	2,010
Null	- 3				
TOTAL	1,931	4,915	8,884	10,831	10,831

A snapshot summary providing 20-year box scores for each of the seven precincts is provided at the end of each of the following sections. The box scores show the accumulation of the property tax uplift (over Trends), the business tax uplift (over Trends) and the additional residential units (over Trends) for the twenty-year projection period.





4.1 Rows Precinct

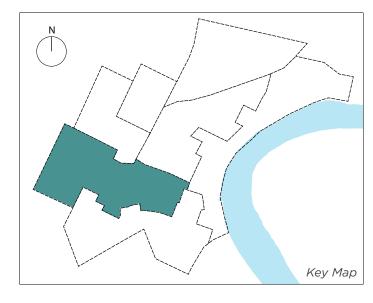
Fueling Local Industry

4.1.1 Profile and Vision

Arguably the "heart" of the Exchange District, the Rows precinct comprises the areas surrounding the former "Banker's Row" along Main Street and "Newspaper Row" on McDermot Avenue. These iconic collections of buildings influenced many of the built characteristics which still dominate the precinct today. These heritage assets have been the impetus behind successive renewal efforts dating back to the Old Market Square Association in the 1970s and the creation of the Exchange District National Historic Site.

The site of Winnipeg's foremost financial institutions during the city's rapid growth period, "Banker's Row" is home to many of Winnipeg's most iconic and recognizable buildings. Though some of these buildings were demolished after the mass banking exodus in the mid 20th century, many have been successfully re-purposed from offices and banks into housing, government offices, research facilities, and night clubs. Though offering little in the way of direct street-level activation, these historic structures continue to be re-purposed to fit the changing needs of the Exchange District's economy, culture, and community.

The precinct was also home to a large concentration of print media companies throughout the early 20th century, leading to many unique architectural features and street designs. The relatively smaller blocks which make up newspaper row are the result of newspaper publishers' need to have significant street-level contact and public interaction. Now, these blocks contain a multitude of locally owned boutiques, restaurants, and art galleries which underpin much of the district's street-level activity. Other tenants include digital communications, design, and technology firms, continuing the Exchange District's central role in Winnipeg's cultural and creative tech sectors. Much of the precinct's infrastructure is suffering from neglect and poor maintenance, while changes in parking rates, street design, directions, and functionality have led to demands from residents and businesses for a coordinated plan to support the area's commercial, cultural, and residential character. As well, a strong desire to strengthen the precinct's "destination" character has prompted initiatives to create streets that are designed to "go to" and not "go through."



The vision for the Rows precinct is to:

- Maintain the authenticity of the precinct's unique culinary, architectural, cultural, economic, and historic character, and narrative; and
- Realize greater beauty still, through the manifestation of its values and authenticity in the bold design of all new buildings, places, infrastructure, public art, and in the restoration of natural space.

4.1.2 Community Investment Focus

Focal Point 1: Prosperity

- Continue to develop the Rows as the core of the Exchange
 District by prioritizing infrastructure investments based on
 their ability to create "go to" streets, places, and spaces.
 Improve walkability to create a stronger customer base for
 street level retail businesses and restaurants.
- Create strong jurisdictional advantages for the precinct's commercial clusters through a planned and integrated investment strategy developed in partnership with businesses and community leaders.
- Introduce incentives while removing barriers for investments in buildings, infrastructure, technology, and underdeveloped sites to accelerate the expansion of the high growth, high value industries of the 21st century.

Focal Point 2: Restoration

- Dedicate funding to ensure proper maintenance of the infrastructure, spaces, and places essential to the economic and cultural health of the precinct. Restore and reinvest in the successful "legacy" programs that catalyzed many private sector infrastructure investments throughout the Rows precinct.
- Remove the competitive disadvantages and barriers that frustrate reinvestment in the Rows built environment.
- Treat streets as wealth generating assets, not just places to move traffic and store automobiles, by improving pedestrian, transit, cycling and vehicle connectivity both within the precinct and to the rest of the Exchange District.

4.1.3 Precint Actions

Character and Place Making

- Develop clear and measurable maintenance standards and provide an annual infrastructure audit, together with a commitment from the City on an annual maintenance plan and schedule of repairs. This should include:
- Comprehensive renewal, repair and restoration of public infrastructure and spaces throughout the precinct.
- Repair of deteriorating and broken street furniture, lighting, and sidewalks.
- Removal of utility markings, construction debris, and remnants of previous infrastructure
- 2. Develop a high visibility street level design environment on Arthur Street as part of the Old Market Square to SHED pedestrian connector.
- 3. Review, enhance and enforce property standards by-laws, engaging CentreVenture to resolve chronically problematic properties.
- 4. Resolve barriers to the restoration and redevelopment of the St. Charles Hotel at the corner of Albert and Notre Dame, recognizing its significance to hinder or improve the street and local retail business environment.
- 5. Provide support for ongoing interpretation tours for buildings on the Exchange District BIZ's walking tour program.
- 6. Offer assistance to shop owners and restaurants who are upgrading their store fronts and managing vandalism.

- 7. Create a greater identity for the history of the "Rows" by improving place branding, wayfinding, and arrival locations within the precinct
- 8. Create street-level design guidelines for existing heritage and infill buildings within the Rows precinct, emphasizing its unique office, banking and small warehouse building mix.
- Augment tree planting, green buffers, sidewalk extensions, and parallel curb-side parking on identified restaurant and retail rows.
- 10. Restoration of programs that assist in the renewal, repurposing, and repair of the existing building stock.

Innovation and Creativity

- Support culinary businesses and the food and beverage sector by designating restaurant populated streets as "Patio Promenades" as illustrated in [Figure Glen's index 64BD-3]. Brewery walks and designated restaurant rows all help create a business destination, while artful destination signage and public art help define the areas.
- Pilot a three-year pilot program to eliminate fees and remove barriers to sidewalk patios and create bump-outs on narrower sidewalks to generate high levels of street safety and commerce. Evaluate the net revenue benefits and crime reductions which result from concentration of patios.
- 2. Support expansion of the IT, clean tech, and creative industries into the underdeveloped properties and underutilized warehouse buildings in the precinct's west side. Define this as a Commercial Investment and Development Zone (CID-Z) which promotes creative and innovative infill

- development to Dagmar Street.
- 3. Comprehensive renewal, repair and restoration of public infrastructure and spaces throughout the precinct.
- 4. Provide incentives and guidelines for redesigning building elements that are poorly configured for street level retail and restaurant development due unconventional building features.
- Undertake a precinct-wide annual business survey to better understand the needs of the cultural and creative tech industries and inform a development strategy for these sectors.
- 6. Pilot a buy local and live local program.

Resilience and Adaptation

- Enable the rehabilitation of the larger warehouses that are in disrepair, have high vacancy rates and aging fossil fueled HVAC systems by incentivizing the use of modern green tech systems.
- 2. Apply an infill renewal program which takes advantage of the many empty lots adjacent to existing buildings to create zero emission and zero waste buildings. Focus this initiative in the RDI R zone in this precinct.
- 3. Develop district energy and heating systems and micro grids to introduce clean energy solutions.
- 4. Start measuring and managing waste and recycling systems to support a zero-waste objective.

Mobility and Connectivity

As part of the broader Mobility Innovation Strategy:

- Upgrade laneways for pedestrians, creating smaller, pedestrian scale blocks.
- Restore and expand the number of wider sidewalks and outdoor amenity spaces.
- Undertake complete street re-designs when streets are repaired or modified.
- Introduce a "Building Lighting" initiative to create a safe environment at night and in the winter.
- Re-introduce awnings and porticos, which were once commonplace, on commercial frontages.
- Reinforce the highly walkable "go to" character and functionality of the street grid and streetscapes that creates a strong and safe environment for pedestrians and street level activities.
- Consistent with the Exchange District Plan 2022, develop opportunities for shared streets and advance efforts to strengthen pedestrian traffic: consider redeveloping Albert Street as a Shared Street, reducing speeds to 30km/hr
- Enhance pedestrian connections linking True North Square and Old Market Square.

4.1.4 Foundational Projects and Analogues



1A. Albert Street Shared Street Redevelopment

Develop Albert Street into a shared street by improving the area's "walk to" rather than "walk through" qualities and developing a living laneway perpendicular to the street. The street allows access for commercial and cultural activities that support local businesses and tourism. Living laneways take advantage of existing lanes and outdoor carriage ways to enhance pedestrian routes with art, music, sounds or interactive lighting, making urban areas exciting, prosperous, and fun.

The carriage lane and laneway that runs from just east of Main Street, through the 250 McDermot carriageway to Arthur Street is the first living laneway opportunity. The second wraps around the Electric Railway Chambers Building to 201 Portage and connects the open spaces running all the way to Arthur St, parallel to Notre Dame Ave.

- Identify themes, concepts and designs for the both the living laneways and shared streets.
- Work with local building owners, businesses, cultural, arts, trails, heritage, and active transportation groups to create a larger pedestrian network.

Construction Target:	5 years
Objectives and Principles:	MC CP RA

Completion State:

Albert Street is a popular destination which increases attendance for arts events, retail shopping and other activities. Albert Street sees significant increases in retail revenue, perceptions of safety and pedestrians counts, while conflict with vehicle traffic diminishes.



1B. Rows RDIZ

A complete live-work infill development community bounded by Dagmar, William, Adelaide, and Notre Dame. A residential/mixed-used development populated with mid to high-rise heights along with robust street level retail. Focus on businesses which expand the Rows' creative, tech and culinary sectors along with an independent local retail business cluster.

- Work with local creative and tech associations, building/property owners, businesses, RRCP, residential and commercial developers, and affordable housing groups to develop a plan that identifies and prioritizes sites for co-development.
- Prioritize Green Building Infill that integrates into adjacent heritage buildings to the advantage of both.

Construction Target:	10 years
Objectives and Principles:	CB CP RA

Completion State:

A new six-block development with a population of 4,000 people, 20 infill buildings and 6 conversions of existing buildings. Strong street level retail and restaurants along Bannatyne and McDermot which strengthen and extend the restaurant and beverage cluster already located on William Ave. Stronger connectivity and integration between RRCP and the creative tech business sector south of William.

4.1.5 Value Uplift

The Rows Precinct features a large Residential Development and Intensification Zone on the blocks west of Adelaide Street – both vacant lots used primarily for parking plus an inventory of structures amenable to re-purposing. This RDIZ is only a few minutes walk from the proposed transit station on Main Street and the large concentration of existing employment opportunities in the ROWS. Modelling indicates this RDIZ could generate over 2,000 residential units (over Trends) and nearly \$20 Million in property value uplift. Property conversions will result in the loss (or displacement) of business tax revenue signaling the importance mitigating the loss of space currently providing employment.

ROWS PRECINCT Uplift Summary 20 Year Cumulative	
Property Tax	\$19,765,241
Business Tax	-\$3,744,931
Residential Units	2,175





4.2 Education & Innovation Precinct

Fueling Local Industry

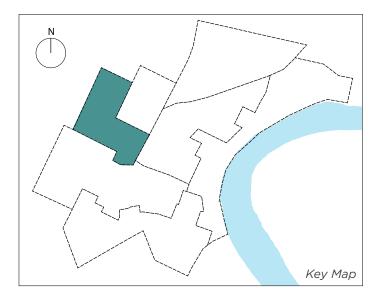
4.2.1 Profile and Vision

Located adjacent to Chinatown, the Education and Innovation precinct is home to several of Winnipeg's newest and most dynamic education facilities, innovative tech start-ups and research labs. The area was originally designated as the "Red River College Precinct" in the 2001 "Centre Plan" implemented by Centre Venture municipal development corporation. Through this initiative, the City provided free buildings and land, along with several million dollars in tax incentives, to develop a Red River College (RRC) campus on the site of the original Grain Exchange. Subsequent development built upon the precinct's unique attributes, which include a legacy of 19th century aggrotech firms and a collection of historic buildings. The introduction of thousands of creative, tech and entrepreneurship students and graduates to the area has created opportunities for adjoining precincts to meet the demand for services and living spaces required by this population.

Now called the Education and Innovation Precinct, this updated precinct plan covers a larger area than its predecessor and includes a new collection of projects and proposed developments. The emerging synergies between the adjacent study area precincts has led to a steady increase in student registration at Red River College, creating a cycle which has fostered the development of more ambitious initiatives.

Among these new achievements are the Patterson Global Food Centre (located in the restored Union Bank Tower), the North Forge aerospace start-up incubator, and the recently completed Manitou a bi Bii Daziigae innovation centre. One significant opportunity is the recently announced Creative Hub which will be built on the Market Lands site. This project will house Urban Shaman Contemporary Aboriginal Art Gallery, Mentoring Artists for Women's Art, Video Pool Media Arts Centre, and Creative Manitoba as well as a large infill residential development.

The cumulative effect of all these investments is to create a powerful cluster of resources to drive the local innovation economy These projects are central to Winnipeg's integration into the high tech, high value industries of the current world economy and provide the Exchange District with the necessary infrastructure to have a global impact.



The vision for the Education and Innovation precinct is to:

- Build on the dynamism and synergy of growth between Red River College Polytech, the creative and tech sectors, and a commitment to innovation from the City of Winnipeg to focus efforts on an education and innovation cluster. Position this cluster to generate the talent, leadership and technology needed to drive a world-leading local innovation economy.
- Invest in its growth as a centre of shared knowledge, research and development, tech transfer and entrepreneurship that
 can help confront the global challenges of climate change and adaptation with locally.
- \cdot Solidify Winnipeg's emergence as Canada's leading centre for urban innovation, facing the future boldly

4.2.2 Community Investment Focus

Focal Point 1: Concentration and Clustering

- Drive innovation by developing a strong concentration of resources for research and development, knowledge transfer, shared spaces, technical expertise and access to a wide range of advanced technologies.
- Create an innovation supercluster through coordination with innovation and educational organizations such RRC-Polytech, North Forge Fabrication Lab, the Market Lands creative cluster and encouraging a broad collocation of advanced technology, clean tech and creative entrepreneurs.
- Through collaboration, these organizations can enhance technology capacity, talent development and a skilled work force, both sharing and accelerating research and development.
- Continuing to develop, concentrate and strengthen these assets and talent pools is a key priority of this precinct.

Focal Point 2: Walkability

- A highly walkable and well-connected community with ample meeting places and low-friction pedestrian travel is necessary for building collaboration through a concentration of people and ideas. This relies on two factors: proximity and connectivity. Building proximity and connections within the precinct are priorities in the current stages of this mature precinct's development.
- Much of the precinct features oversized blocks, large tracts
 of parking lots, speed-oriented one-way streets, limited
 pedestrian options and street level activity with few shops and
 services. A limited residential population and lots of "missing
 teeth" on many blocks has left most of this precinct as
 unpleasant for walking and with too few places to gather.

4.2.3 Precinct Actions

Community Building

 Development of an innovative housing project bordered by Ross, Princess, Pacific, and the alignment of Lizzie Street through the west side parking lot (see Foundational Project, Below). The project, called a "Living Lab" is advanced in the Chinatown and Northwest Exchange Precinct Strategy and described as "a mixeduse and mixed-income residential development at three to six floors, to transition in size and scale from the warehouses of the Exchange District to the lower rise housing stock of the Centennial neighbourhood. Development should focus on affordability to encourage the widest range of new downtown residents."

The project includes:

- Incorporating two existing heritage buildings with the new modern buildings being built to the west.
- The Main floors of heritage buildings are designed to be convertible flex space in order to contribute eyes on the street and active building frontages.
- 2. Plan Residential live-work spaces for the burgeoning cluster of RRCP students, tech workers, and entrepreneurs on the Alexander Avenue and Princess facing parking lots, vacant lots and underutilized buildings. Reserve half of the parking lot open space for innovation-based commercial and institutional developments.

Resilience and Adaptation

- Develop a reuse and re-purpose strategy for the 1930's to 50's low-rise (single story) cinder block industrial buildings which takes advantage of their affordability and flexibility.
- Start a pilot project on Adelaide Street to transform the mid-century low-rise, low-cost buildings into a retail and restaurant centered shared street.

Mobility and Connectivity

- Redesign streets to support a highly walkable neighbourhood with strong residential appeal.
- Improve vehicle circulation and pedestrian movement as well as the infill potential of the area by breaking up the large blocks into smaller, more developable and more walkable blocks.
- Layout a pedestrian lane and corridor starting at Lizzie Street and Alexander Avenue and then following the Lizzie alignment south through Gord Dong Park to William Avenue.
- Construct a two-way shared street from Stanley and Alexander to Rupert Avenue, with a pedestrian pathway further south on Elgin Avenue.
- Develop an integrated pedestrian corridor running along Elgin, diagonally crossing the Market Lands, to Old Market Square and Arthur Street.
- Support a wayfinding system and signage for the precinct.

Character and Placemaking

 Developing an innovation-themed street design with destination branding to designate Princess Street as the Exchange District's "Education and Innovation High Street."

Innovation and Creativity

- City Hall to take on a major leadership role as a critical partner in the innovation cluster. City Council to be the leading urban public policy innovator in Canada by piloting new initiatives within the El precinct. The City strives to be recognized as the most innovative urban government in Canada and declares the Exchange District a premier urban innovation space. The goal is to position Winnipeg as Canada's leader in urban innovation, technology, and livability.
- 2. Designate the area directly north of the RRCP campus, from Elgin to Alexander Avenue, as the extended development zone for the Education and Innovation Precinct.
- Mandate CentreVenture to prioritize the underutilized buildings and surface parking lots as opportunities to integrate new residential and mixed-use development. Connect these new projects with the Ross Avenue Living Lab developments and the adjacent Chinatown Precinct (CP) to extend the innovation-centered cluster north.
- Designate the parking lots bounded by Alexander Avenue, Pacific Avenue, the north-south alignments of Lizzie Street and Stanley Street as an integrated, mixed-use development site.

- Look to develop half of these lands for innovation and education-centered buildings to accommodate the future growth and expansion of RRCP, North Forge and other innovation and research organizations. Reserve the other half of the development site for new residential infill.
- Engage owners of existing buildings and undeveloped lots to explore plans for a further concentration of innovation and education institutions and/or businesses with an infill development.
- 4. Work with the leadership of RRCP to support future development plans as a catalyst for innovation-based business.
- Assign responsibility in the City of Winnipeg and CentreVenture to explore ways to maximize the positive social, economic, environmental and cultural impacts of Manitou a bi Bii daziigae (innovation centre) on the innovation, creative, tech and Indigenous initiatives in the precinct and across the Exchange District.
- Work with RRCP to explore partnerships and options for the parking lots and undeveloped lands on the northeast corner of Elgin and Princess and the southeast corner of Pacific and Princess.
- 5. Support CentreVenture in their development of the Market lands Creative Hub and Market building.

4.2.4 Foundational Projects and Analogues



2A. E+I RDIZ & Ross Avenue Living Lab Pedestrian

An innovative housing project advanced in the Chinatown and Northwest Exchange Precinct strategy and is called a" Living Lab. "A mixed-use and mixed-income residential development at three to six floors. The development focusses on affordability, to encourage the widest range of new downtown residents." The project incorporates two existing heritage buildings with main floors of convertible flex space for uses that contribute eyes on the street and active building frontage.

• Work with citizens groups, the Chinatown development group, the project proponents and CentreVenture to realize the design and the project.

1	
Construction Target:	5 years: 200 Units
	10 Years: 750 Units
Objectives and Principles:	CB CP RA

Completion State:

The urban lab launches experimental and innovative housing solutions and creates a dynamic creative leadership group that leads collaborative projects in community building across the Exchange District and throughout the downtown. The RDIZ is home to 1,000 new residents



2B. Lizzie Street N-S Connector

Create a walkable-scale grid by creating a new north-south lane/shared street by extending the Lizzie Street alignment across Alexander Ave and through to William Ave, transforming oversized blocks to a walkable-scale. This will create much-needed pedestrian connections, provide greater circulation and reduce pressure on parallel streets, creating a more livable environment.

 Work with residents, City Council, Public Works and Planning Departments and CentreVenture to realize these two new corridors. Right-sizing the blocks improves their development potential and walkability.

Construction Target:	5 years: 200 Units
	10 Years: 750 Units
Objectives and Principles:	CB CP RA
Completion State:	

A new highly walkable, bikeable and drivable street to break up the super blocks which create circulation problem and challenges to infill development

2C. Market Lands Development

Centre Venture describes this multidimensional project as centred on a creative hub:

"The heart of the Market Lands project is a new seamless "Creative Hub"... [it] will provide creators with access to shared space, equipment and other resources. These spaces will provide venues to collaborate, innovate, exhibit, and sell creative products. The Creative Hub includes three integrated and complementary components: Public market incubator, Centre for Art and Design, and the Public Art Realm. The development includes a significant housing development. "

 Support CentreVenture and allied groups in realizing these projects

Construction Target:	5 years
Objectives and Principles:	CI CP CB
Completion State:	

Complete construction of the facilities, the establishment of a successful centre for creative industries, artists, indigenous culture, a diverse residential community and foundation for future expansion of a local innovation driven economy and healthier community.

2D. City Hall Innovation Centre

The City of Winnipeg strives to be the most innovative urban government in Canada. The Exchange District receives regulatory status as an urban innovation space in order to create the flexibility for pilot projects that position Winnipeg as Canada's leader in urban innovation, spanning technology, mobility, and livability, including policies that drive equity, cultural resilience, and environmental sustainability.

City Hall adopts a leadership role, mandating that Winnipeg become the leading urban public policy innovator in Canada, piloting new initiatives within the Exchange. It creates an innovation agenda including procurement, social enterprise and urban design strategies, becoming a leader and early adopter in regenerative community development, and it becomes a central partner in the innovation cluster.

 The city establish an inside/outside joint team responsible for championing the innovation strategies like this one at city hall and that the city set measurable targets for progress towards its stated innovation goals.

Construction Target:	5 years
Objectives and Principles:	RA CI MC CB
Completion State:	

Winnipeg is an internationally recognized leader in urban energy, transportation, resource recovery, attracting Canada's public and private sector innovators and entrepreneurs. It continually ranks in the top 10 of the global "Smart City" rankings.

4.2.5 Value Uplift

A feature of the strategy for the Education and Innovation Precinct is the creation of a pedestrian corridor to subdivide the long bocks to promote walkability. A second feature is the lab work -live spaces to build out from the innovation energy of the college. This precinct also includes the redevelopment of Market Square including a significant residential component.

EDUCATION + INNOVATION PRECINCT Uplift Summary 20 Year Cumulative		
Property Tax	\$20,221,864	
Business Tax	\$7,748,554	
Residential Units	1,575	



4.3 Chinatown (CT))

Celebrating Chinese-Canadian Heritage

4.3.1 Profile and Vision

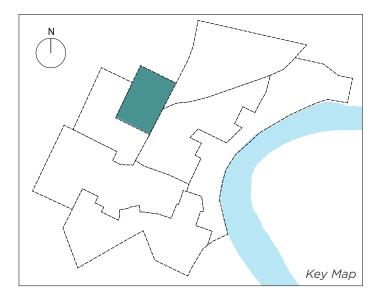
Bounded by James Avenue, Main Street, Alexander Avenue, and Princess Street, Winnipeg's historic Chinatown has been a distinct component of the study area since the early 19th century. There is already a well-developed plan in place for this precinct, the Chinatown and the Northeast Exchange District Plan, which was the result of a community-led and CentreVenture-supported engagement process. The essential recommendation of this action plan is to advance and implement this existing strategy, with a few minor additions.

Historically, the precinct provided Winnipeg's growing Chinese population with a space to live, work, eat, and organize in a time of immense public and political hostility. The precinct's infrastructure, enterprises, and cultural programming expanded exponentially following the abolition of the Chinese Immigration Act. However, the development of alternative Chinese cultural hubs throughout the city saw the Winnipeg Chinatown Development Corporation emerge in 1971 to ensure that the area would be preserved and promoted. This institution has successfully championed this goal by developing a collection of important infill projects including the Harmony Mansion, Dynasty Building, and the redeveloped Cultural Centre.

Chinatown is facing many common challenges associated with older commercial and cultural areas. Consistent with the overall Exchange District, the precinct's lack of appropriately sized, affordable retail spaces (1,500 sq feet or less) and housing options continues to be a pressing concern. Additionally, the loss of some significant building such the historic Coronation Block, once home to City Hall, has created a series of empty frontages while many existing buildings continue to be

threatened by demolition. The lack of street lighting has also created perceptions of unsafety which, in combination with poor traffic circulation have created many "go through" rather than "go to" streets. This summation of damaged infrastructure has created some unpleasant streetscapes and uncomfortable distances between retail businesses, depressing building values throughout the community.

The biggest driver of change and development in Chinatown is the presence of Red River College along Princess Street, creating potential to build a neighbourhood high street for the surrounding West Exchange area. There is a growing demand for affordable restaurants, housing, and consumer products from the student population, which could be met by a revitalized Chinatown. Recently, the precinct has completed three new large-scale residential redevelopments, published an updated master development plan, and begun discussions with Red River College Campus to develop synergies. The precinct has the capacity, organization, and direction needed to pursue a new round of projects and initiatives.



The vision for Chinatown is to:

Γhe precinct action plan has been designed to explore investment scenarios based on early conversations and projects that nave been put forward in recent years. In exploring these scenarios, we drew on the following community-led statements:

- Restore the neighbourhood as home, and a place of pride, for Chinese Canadians, with longstanding restaurants and businesses flourishing;
- Re-establish King Street as a character main street, with a dense blend of authentic local Chinese restaurants and shops
 offering a unique retail experience and offering much needed services to a burgeoning RRC-Polytech student body

4.3.2 Community Investment Focus

Focal Point 1: Connection

- Create a high level of walkability in the neighbourhood with strong connections to other people magnet Exchange District locations.
- Rebuild street level commercial activity, particularly restaurants and retail necessary to serve a growing college student and residential population.
- Improve pedestrian access across Main Street to the many amenities within the surrounding precincts.

Focal Point 2: Restoration

- Sufficient funding to ensure proper maintenance of the infrastructure, spaces, and places essential to the economic and cultural health of the precinct.
- Treat King Street as a great cultural, commercial, and wealth generating asset, not just a place to move traffic through and store automobiles.
- Remove the competitive disadvantages and barriers that frustrate reinvestment in the built environment.

4.3.3 Precinct Actions

Mobility and Connection

- Create strong north-south connections for Chinatown with the Market Lands, Old Market square and Arthur Street pedestrian corridor.
- Develop the system of north-south pedestrian laneways proposed in the Chinatown and Northwest Exchange Strategy to create strong connections between Red River College Polytechnic and Chinatown's King Street.
- Phase in the implementation of two-way streets within the Chinatown precinct as recommended in the original Centre Plan Development Framework, with a specific priority being given to King and Princess Streets.
- 2. Improve key pedestrian crossing points on Main Street such as Disraeli, Rupert, Alexander, Logan, and James. Work with organizations in the Alex and Neeginan Precincts to reconfigure streets to be more walkable and amenable to pedestrian crossing (undertake a walkability assessment that looks at reconfiguring developable blocks, remove slip ways, and reduce crossing distances).
- 3. Select appropriate mobility pilot projects for Chinatown as part of the Mobility Innovation Zone, focusing on connection to rapid transit routes, car share sites, bike share locations and electric scooter pilots. Include pilot projects which utilize drop off sites and /or app-based trackers for local trips and connectivity.

Community Building

- 1. Continue with the staged implementation of the Chinatown and Northeast Exchange District Plan.
- Maintain a focus on retaining and attracting locally owned businesses and services that are needed by the local student population throughout the King Street redevelopment, with necessary amenities including:
- A convenience store and/or pharmacy
- Bookstore/ stationery supply shop
- Affordable restaurants, bakeries and coffee shops
- Hairstylists and beauty technicians
- Clothing stores
- Bars, neighbourhood pubs and cafés
- Outdoor patios and gathering places
- Promote and optimize the location of local grocers to raise their profile and accessibility for community members. Invite small business owners to become a part of the revitalization and infill projects on King Street.
- Continue to build out the approved infill housing projects, including the Henry Commons (just north of the precinct), as well as public parks and spaces.

Resilience and Adaptation

- 1. Review the plan's housing and mixed-use developments to ensure that they include green technology and designs in the building plans.
- 2. Prioritize the "missing teeth" locations on and adjacent to King Street for green infill co-development projects.

Character and Place Making

- The City should take on a leadership role in the advocacy for government funding for the Chinese Cultural Centre and commit to a funding partnership within the context of the current precinct plan.
- 2. Designate and develop King Street between St. James Ave and Logan Ave as Winnipeg's signature Chinatown high street. Restore and/or replace damaged infrastructure, street furniture and the design elements that celebrate the Chinese character of the precinct.
- 3. Undertake a thorough inventory assessment of the remaining buildings, places, businesses, and structures of importance to the Chinese community and prioritize them for restoration and interpretation.
- Create an installation to remember the Coronation Building, a demolished landmark building that once housed City Hall and the iconic Shanghai Restaurant in a creative and artistic way.
- Review Vancouver's new zoning and character preservation bylaws for the City's Chinatown that were developed to preserve its existing places and spaces and ensure appropriate scale and design compatibility of new construction. Evaluate the feasibility of applying similar bylaws here.

Innovation and Creativity

Develop opportunities for talent attraction in the software and innovation sector by enticing Chinese, Asian and other international students with a background and interest in software to assist with the development of the creative and technology cluster in the Exchange.

- Build a Student Business Development Centre with a "Student Visa and Startup" support program in the commercial and mixed-use infill development complexes along King Street between Rupert and Logan.
- Model the project on the highly successful City of Toronto Business Development Center (TBDC https://tbdc.com/) whose start-up Visa program supports international students and helps "entrepreneurs compete at a global scale by helping them solve problems that are unique to their start-up."

4.3.4 Foundational Projects and Analogues



3A. Chinatown Highstreet

Develop a vibrant, concentrated, and authentic three-block commercial "high street" experience that celebrates the history and culture of Chinese Winnipeggers. This development will also encourage business growth by creating opportunities for micro-business startups, pop-ups, and incubator spaces to meet a growing demand for the 'shop local' movement

 Support Centre Venture in their work with the Chinese Cultural Centre, Winnipeg Chinatown Development Corporation and the Chinatown West Exchange Precinct project team.

Construction Target:	5 years: 200 Units
	0 Years: 750 Units
Objectives and Principles:	CP, MC

Completion State:

A dynamic and highly walkable street, recognized as a popular "go to" cultural and dining destination. Visits are up and people are staying longer durations, visiting multiple locations as a result. There are no vacant lots and infill housing projects are fully occupied

4.3.5 Value Uplift

The largest uplift opportunity for Chinatown Precinct is the redevelopment of properties along King Street and Alexander Avenue to mixed use with residential units over grade level commercial space.

CHINATOWN PRECINCT Uplift Summary 20 Year Cumulative		
Property Tax	\$2,849,579	
Business Tax	\$349,558	
Residential Units	272	





4.4 Neeginan (N)

Realizing Community Vision

4.4.1 Profile and Vision

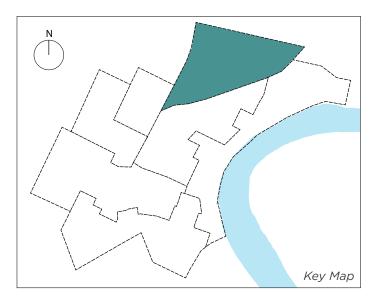
Located between the Disraeli Freeway, Main Street, and the Canadian Pacific Railway (CPR) tracks just north of Higgins Avenue, The Neeginan Precinct is the result of the visionary leadership of Winnipeg's urban Indigenous community. The name "Neeginan" translates to "Our Place" and the precinct is home to a range of Indigenous political, social, and cultural organizations including a health centre, art gallery and many Indigenous businesses. Thunderbird House, the Urban Aboriginal Council Winnipeg, the Indigenous Executive Circle, Main Street Project, and the Manitoba Metis Federation's government offices are all located within its boundaries.

Once the site of the Canadian Pacific Railway station, the area's economy declined in 20th century when Eaton's opened on Portage Avenue, a move which shifted the retail center away from Main Street. This decline was accelerated by dismantling of Winnipeg's streetcar system, leading Main Street to gradually be redesigned from an urban high street to an urban highway, along with construction of the Disraeli Expressway, which divided and isolated the area. The freeway created a barrier which blunted the positive impacts intended by downtown cultural investments in the 1960s and 70s and accelerated the abandonment of the area. The leadership of the urban Indigenous community responded by creating a dynamic vision for the area in the early 1980s. This vision which forms the foundation of this precinct's plan for development and offers hope for continued rehabilitation of the area.

The development of the precinct's Indigenous campus began with the restoration of the CPR station and the construction of the Thunderbird House, designed by Douglas Cardinal. These investments included a wide range of cultural and community services including a sweat lodge, the Kookum childcare centre, support services and shelters for street involved people.

As well, the site is currently in the process of constructing low-barrier housing units for community members in need of accessible housing options. Lagging commitment from key stakeholder, however, is a continued barrier facing Thunderbird House.

Finally, the Main Street Project and several local organizations have formed a large community coalition that is identifying community needs and offering both practical solutions and inspiring ideas to sustain and grow this community. This includes the "Main Street Action Plan," a strategy to build the investments, supports and services needed to re-empower the precinct and the wider Main Street community. The contents of this action plan are not intended to impose a vision or a set of projects but rather to explore possible investment scenarios and provide support to the community in developing a financial model to pursue development.



The vision for the Neeginan Precinct will be defined by the community:

The precinct action plan has been designed to explore investment scenarios based on early conversations and projects that have been put forward in recent years. In exploring these scenarios, we drew on the following community-led statements:

- The Vision of the Urban Indigenous Council: "A self-sufficient, healthy, vibrant urban Indigenous community, where families and children are ensured a good quality of life, through equal opportunity and choice so that Winnipeg's Indigenous people are a part of all things a distinct presence throughout Winnipeg"
- Goal of the Main Street Action Plan: "a community where all people feel safe, connected to places and one another and
 where there is a sense of beauty, love, and hope. A place where all things that are needed to realize the dream are in place.
 Housing, access to health services, recreation, cultural connections and natural and built beauty"

4.4.2 Community Investment Focus

As the community works together to define and realize the long-range vision for the Neeginan precinct, the initial investment strategy is premised on two focal points:

Focal Point 1: Listen and Care

- There has been a lot of progress made in realizing the decades-old vision for what was titled the Neeginan area in the original Centre Plan. What has been missing is the funding needed from all levels of government to support ongoing planning, community engagement, and maintenance.
- There is also a need to improve health, education, cultural and housing resources which for the urban Indigenous community are concentrated in this area.
- It is time to listen more actively, care and invest in this emerging Indigenous hub so it can deliver the transformative change the community has been trying to achieve.

Focal Point 2: Follow and Support

- There have been no shortage of plans or ideas, many of which are being delivered by often overburdened community groups who struggle to find the commitment and funding to match either the scale of the challenge or the power of their vision.
- Moving towards a twenty-year planning process, with defined and financed five-year plans, provides an opportunity for both the public and private sector to support the urban Indigenous leadership by making timely and well-funded commitment.

4.4.3 Precinct Actions

Mobility and Connection

- Develop a signature rapid transit hub/station at Higgins
 Avenue and Main Street and north-south BRT/LRT lanes/rail
 in the east-side curb lane of Main Street.
- Coordinate the development of land use, and location of infill development, with the specific location of the station to ensure that the pedestrian connections to the station from across the precinct are well lit and designed.
- Run the rapid transit vehicles in the curbside corridor, with access to and from the Disraeli or northeast bound lines.
- 2. Model and explore costs of LRT/BRT options for the Main Street rapid transit line to demonstrate impacts and benefits of technology choices, including:
- Study a hybrid BRT/LRT system like Ottawa's or
 Mississauga's which use an LRT line on major through
 downtown routes like Portage Avenue, Main Street and St.
 Mary's Road to avoid congestion. Measure tax base growth,
 economic uplift and environmental benefits for all systems
 and compare them with solely using BRT on regional peak
 times.
- Design a downtown rapid transit spine as recommended here that can work with LRT, BRT or both.
- 3. Rethink the Disraeli Freeway into a grand Boulevard. (This recommendation also applies to the Alex and Chinatown precincts). Reconfigure the at-grade section of the Disraeli Freeway to support complete community development and restore walkability. Reconnect and restore the health of the neighbourhoods adjacent to the Disraeli and the Disraeli/Main intersection with the goal of creating

conditions to support infill development, businesses, cultural assets and recreational venues. While the freeway and its design are not the only factor contributing to the precinct's degradation and depression, revitalizing the area as a livable and successful residential and commercial neighbourhood would be near impossible without a significant redesign of the freeway elements from Argyle Street to the Main Street intersections. We recommend that redesign happen in a series of incremental changes over the 20-year horizon of this plan. That the first interventions suggested are ones that will generate early restoration of residential and commercial infill projects, commercial viability and residential livability of Main Street, Neeginan, Chinatown and ALEX.

The following initiatives are recommended.

- Define the entrance to the City of Winnipeg's Downtown, East Exchange District and Neeginan neighbourhoods.
- Establish a physical entrance and gateway that clearly defines one's arrival in the downtown, the Waterfront Drive branding and signage is a good model.
- Transition the freeway into a grand boulevard style street, similar to Winnipeg's Broadway Avenue, which has three lanes of traffic in each direction but is a green, high quality pedestrian environment which facilitates efficient connections.
- From the Downtown arrival point, undertake reconfigurations to restore a grid street system capable of sustaining high-value downtown commercial uses, street level retail and residential development.

- Transition quickly from highway road conditions of 60km/h (which are actually in practice much higher) to urban high street speeds.
- Examine the optimal locations for pedestrian and vehicular intersections which can be redesigned to remove barriers and reduce crossing distances. The goal here is to restore north-south pedestrian traffic while accommodating vehicle access on a restored grid pattern street system that can create a seductive pedestrian experience.
- Review the freeway's exits and entrances from the western terminus of the river crossing to reduce the concentration of traffic and reconnect it to regional and collector streets (before reaching Main Street). This will redistribute traffic and avoid concentrating traffic down the Disraeli and onto south Main Street.
- Reduce the land currently consumed by the freeway's extended footprint to build, on a block-by-block basis, the following features:
 - Restored walkable blocks.
 - Restored access to more north-south and east-west streets adjacent to the freeway.
 - A proper controlled intersection with right angle turns while removing slipways and other traffic speed accelerators.
- Examine the potential of using Logan Avenue as the principal direct intersection into Main Street as it is two lanes in either direction, the same as the majority of the Disraeli Freeway.

- Restore and reintroduce a grid street system where possible. In the Neeginan precinct that would be a grid where MacDonald Avenue would push through to Austin Street while Lily could be reconnected as a north-south through street.
- Select certain appropriate north-south connection streets to be pedestrian corridors.
- Look for opportunities to replicate the success of the design of Waterfront Drive, which has roundabouts, few stops signs and no traffic lights. This creates a slow and steady traffic flow instead of a high-speed street with many traffic lights (commonly referred to as a "hurry and stop" street), which tend to be more congested.
- Look to restore connections across Main Street to normalize and complete the grid. Improve vehicular and pedestrian circulation within Chinatown and treating the precinct and its streets as a destination, not a throughway.
- Examine the relationship between the Manitoba Centennial Corporation's cultural campus and the surrounding streetscapes to better encourage, longer multi-destination visits to the area. Remove the freeway characteristics which frustrate the north-south Main Street connections and the challenge of crossing Main Street.
- 4. Prioritize the very wide streets within the Neeginan Precinct in complete street initiatives. Extend Macdonald Avenue (east-west) and Meade Street (north-south) to create walkable sized blocks and frontages consistent with appropriately scaled infill development.

- 5. Hold a design competition to redesign the intersections affected by the Disraeli Freeway and Main Street highway (Disraeli, Alexander, Logan, Rupert, and Pacific) to support walkability, mobility, safety improvements and viable commercial streets.
- Strengthen the precinct's connections to both Point
 Douglas and the Exchange District by rebuilding residential
 neighbourhoods and turning Annabella into a seductive
 pedestrian and cycling corridor.
- 7. Develop a major pedestrian access point on the Red River on the opposite site of the Disraeli to the Alexander Docks.

Community Building

1. Support and fund the Main Street Action Plan, Have the City, and the other orders of government, formally adopt the Main Street Action Plan and commit to providing the resources necessary to fully implement the key actions in suggests. Build upon the existing progress on issues mentioned in the action plan, such as the city adding an additional \$300,000 for a public washroom and \$250,000 for staff for the new rapid housing initiative. The Federal and Provincial governments have also funded Main Street Project with \$1.5 million for shelter expansion, while the Federal government has announced a further \$12.8 million in affordable housing funds (though it is not clear how much of this would be dedicated to MSP's priorities or program proposals). Though these funding programs are positive steps forward, they are limited by the fact that they are city-wide and may be one-time funds. It is important to note that the development of a fully funded, long term strategic plan is an essential focus of the Main Street Action Plan.

- Work with the City of Winnipeg to initiate a Main Street area secondary plan.
 - Undertake a secondary plan based on a needs assessment and infrastructure review of the area which includes strong community engagement and guidance from elders.
- Rebuild Thunderbird House and expand its programming.
 - Partnership with YouthUP/MaMawi/comm.UNITY204/ Aniishative for elder-led cultural events and community outreach.
 - A program for regular lunches/meal provision to the community.
 - Establish and fund restorative justice circles.
- Build and maintain a community Sweat Lodge and sacred community green spaces.
 - Build a permanent and/or winter portable sweat lodge in partnership with MaMawi.
 - Create a sacred community greenspace in a City or a Provincial Park, possibly as part of the Gateway/Louise Bridge Redevelopment.
- Support the 24/7 Saabe Walkers Initiative which includes:
 - · An outreach community safety program.
 - Creation of a community directory of services and alternatives to police.
 - Integrated partnership with the Winnipeg Police Service and the restoration of the community-based policing and local "beat cops.".

- Downtown hotel strategy and affordable housing development.
- Better oversight over downtown hotels in the Main Street area along with plans to ensure they remain safe and secure places to live.
- Funding for more affordable housing units to meet community needs.
- The construction of community public washrooms.
- Dedicated neighbourhood beautification staff.
- Fund summer positions through the green team and city programs.
- Support for a volunteer coordinator and volunteer supports.
- Partner with Siloam Mission's Off the Streets (MOST)
 program to engage the community in beautification and
 clean-up programs.
- Housing is a foundation of the Neeginan Precinct Action plan. Work with all levels of government to secure full funding for future phases of the Indigenous Urban Village CAHRD plan, including the low barrier and affordable housing being built near the Thunderbird House on Main Street.
- 3. Establish the Neeginan Residential Development Investment Zone (RDIZ-N) to create a significant infill housing project, beginning with a robust community-led visioning process.
- A new Neeginan Residential Development Investment Zone (RDIZ-N) could include:
 - Rezoning and introducing new public infrastructure

investments to establish a residential mid to high-rise (10 to 20 floors) residential neighbourhood bordered by Higgins and Henry Avenues, and Austin and Maple Streets.

- This would include the construction an east-west extension of MacDonald Avenue, up to Austin Street, to create walkable size blocks and sufficient frontages.
- The concept is to create a cluster of mid to high rise residential and mixed-use buildings. Depending on the desired population, the community would be built out to between six to ten buildings. This would provide a base to build a larger community and attract needed amenities and retail.
- A second phase of low-rise single-family homes and townhouses on a block bordered by Argyle, MacDonald, Higgins and the extension of Meade Street to MacDonald. This would preserve the existing homes while creating Meade Street as a frontage for townhouses.
- Alternate configurations should be examined by CAHRD, Main Street Project, the MMF, residents, businesses, tenants, and property owners to review and model various residential and mixed-use infill development proposals.
- The RDIZ-N would be developed in alignment with "Our Winnipeg: Complete Community" with the primary goal of providing affordable housing and resources for houseless and under-housed people.
- Explore interest from indigenous-led groups in building a health centre on this site.
- Work with the city to examine current plans for phasing out the industrial land designations in this zone.

Resilience and Adaptation

 Seek Federal and foundation funding for Indigenous leaders and community groups while the City plans out a regenerative community built with a "circular" local economy model.

Character and Placemaking

- The restoration and full funding of the repair of Thunderbird House with a sustainable funding model similar to mainstream provincial and federal cultural venues and museums.
- Create spaces for indigenous public art in key high visibility locations throughout the study area, and especially in the Alex, Waterfront Living, Neeginan, and Connection and Intensification precincts, in order to visibly integrate these precincts and to foster indigeneity as a principle of future placemaking.
- 3. Develop a wayfinding program for Neeginan that supports the work of Momenta and other community-led organizations that are restoring traditional trails and pathway.
- 4. Create strong branding and arrival signage for the Neeginan precinct at each entry portal.
- 5. Request that the City of Winnipeg fund a CentreVenture and Winnipeg Arts Council led artist/design competition to beautify and light up the Main Street CPR rail underpass as a major art installation.

Innovation and Creativity

- 1. Restore street level retail and restaurants on key streets, with priority given to a redesigned Main Street commercial and cultural frontage which runs from Alexander Ave to Higgins Avenue. Utilize the "Main Streets" approach to using public art while focusing on a cluster of social enterprises and locally owned Indigenous businesses. Introduce Indigenous and local food pop-up stores in partnership with the RRCP culinary program
- 2. Study the potential for collaborative workspaces and popup businesses, cultural spaces, and community services in the currently under-utilized Main Street commercial frontages.
- 3. Build linkages with creative and tech companies in the Exchange District, social service and youth organizations, RRCP and Exchange District tech companies who have labour shortages for the long-term development of sector workers.

4.4.4 Foundational Projects and Analogues

4A. Neeginan RDIZ

Residential mid to high-rise (10 to 20 floor) residential development focused on affordability and complete community framework (housing, employment, shops, personal services, healthcare and highly walkable). The project will occupy the space bordered by Higgins and Henry Avenues, and Austin and Maple Streets.

- Bring together CAHRD, the MMF, Treaty One
 Development Corporation, municipal and urban
 indigenous community leaders to lead the creation
 and review of recommendations and determine a
 development plan.
- Advance a housing proposal which will be incorporated into the Downtown plan with the aim of securing government support, approvals and funding.

Construction Target:	5 years
Objectives and Principles:	CB, CP, RA
Committee Chates	

Completion State:

A comprehensive mixed-income and affordable housing project which is home to four or five thousand people and creates a walkable, complete community. The project reflects Indigenous values and community-generated priorities throughout its design and configuration. The project includes the establishment of Winnipeg's first Indigenous hospital and healing centre as well as residential rental apartments and condos.

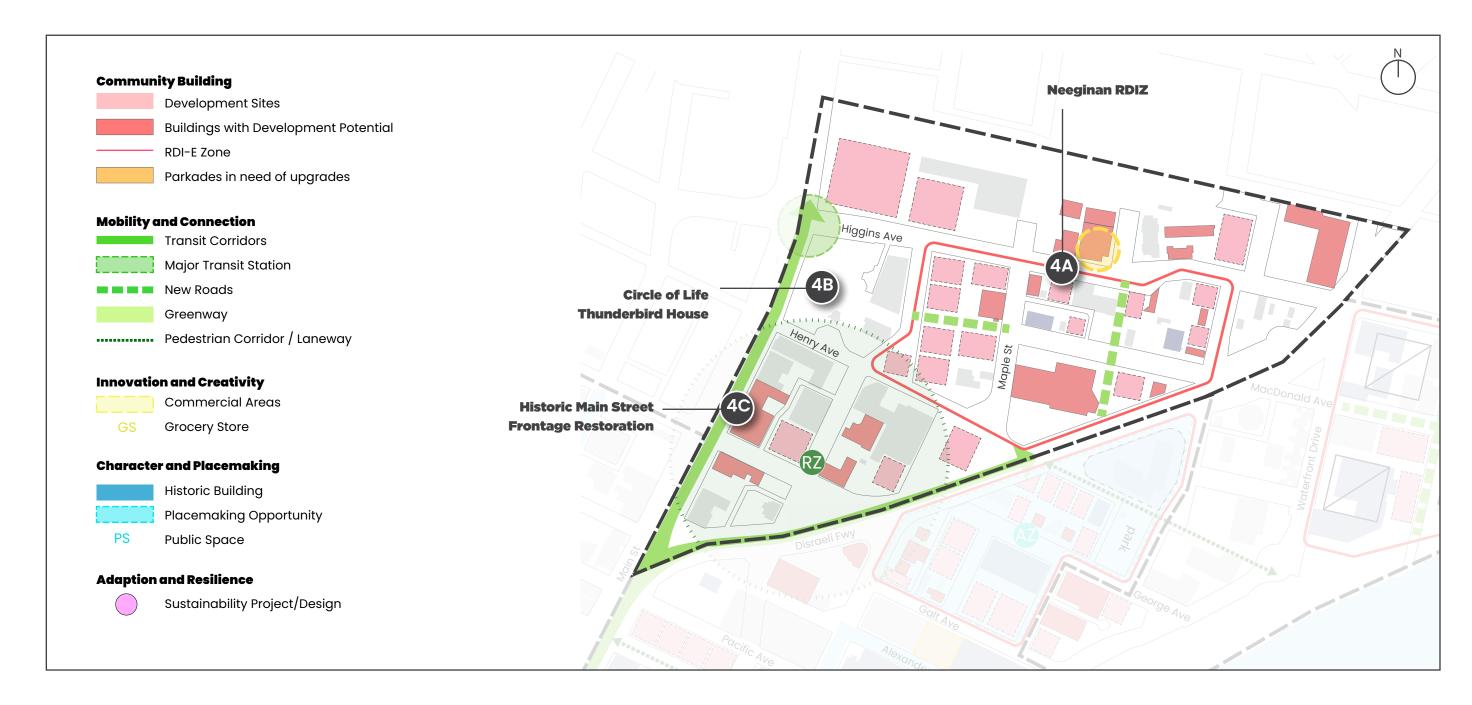
4B. Circle of Life Thunderbird House

Redevelop the Circle of Life Thunderbird House (Anishinaabemowin: Whaka Pimadiziiwii Pinaysiiwigamic) to fulfill its role as an Indigenous community centre and ceremony grounds located in the heart of Winnipeg's inner city. The centre never enjoyed the funding models or supports provided to conventional settler cultural institutions and was abandoned by governments while it struggled to support an underserved community with scarce resources.

 Support the board and volunteers at the Neeginan Centre and organize a broad coalition of community leaders to petition and challenge all levels of government.

Construction Target:	5 years
Objectives and Principles:	CB, CP
Completion State:	

The physical restoration and repair of the building along with a long-term budget commitment from governments to sustain the centre. A celebratory reopening of the fully restored Thunderbird House (and all its programming) which honours this unique, deeply spiritual and beautiful place.



4C. Historic Main Street Frontage Restoration

Restore the historic frontages along Main Street and create opportunities for local Indigenous entrepreneurs, artists and social enterprises. Work with Red River College Polytechnic's Indigenous Entrepreneurship program and the local community to identify and create opportunities. Leverage the rapid transit line and a showcase design transit station as a kick-start for renewed street life.

 Use the America Main Streets approach to using public art while developing a cluster of locally owned Indigenous businesses and social enterprise. Promote local food pop-up stores in partnership with RRCP culinary program, CAHRD and the MMF.

Construction Target:	10 years
Objectives and Principles:	CB, CP, RA
Completion State:	

Main Street retail frontages are home to unique and exciting pop-up restaurants and cultural shops. Winnipeg's social enterprises engage people in a range of environmental and community-oriented services and products.

4.4.5 Value Uplift

A main feature of the strategy for the Neeginan Precinct is the reconnection of the precinct to the waterfront by increasing the porosity of the Disraeli Freeway. Currently cut off and isolated, there is a large amount of land suitable to development for a full range of housing options and new indigenous enterprise. There is a significant inventory of commercial and industrial buildings that can be re-purposed to recreate the economic vitality of this precinct.

NEEGINAN PRECINCT Uplift Summary 20 Year Cumulative		
Property Tax	\$20,921,074	
Business Tax	\$6,656,137	
Residential Units	580	



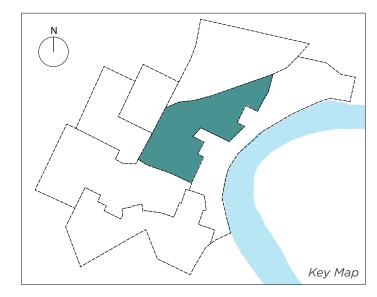


4.5 Alex

Living in the arts

4.5.1 Profile and Vision

Named after Alexander Avenue and the Alexander Docks, which together form a cultural corridor and active mobility spine, this precinct is located between John Hirsch Place, Main Street, Waterfront Drive, and the Disraeli Freeway. The precinct contains a significant concentration of "expressed cultural" assets, including the Centennial Concert Hall, Royal Manitoba Theatre Centre, Manitoba Museum, Steinkopf Gardens and Tom Hendry Warehouse Theatre. However, the "lived cultural" assets are relatively underdeveloped, presenting opportunities for loft residences, public art installations, patio restaurants, shops and cultural businesses that create consistently vibrant activity. Here, the many open spaces, abandoned transit vehicle holding sites, and surface parking lots between cultural assets offer ample opportunity for new infill development, and to realize the precinct's potential. The area is largely administered by the Manitoba Centennial Centre Corporation, a publicly funded entity tasked with promoting urban renewal and artistic endeavours within the community. The recently published Manitoba Centennial Corporation Conceptual Development Plan covers most of the Alex precinct, setting the stage for driving the precinct's future development.



The recent emergence of several breweries, distilleries, and restaurants within the precinct has created a new set of destinations.

Examples include Nonsuch Brewing Company and Patent 5 Distillery, both of which are building strong foundations in an industry with historic roots in the Exchange District. These public facing facilities with beer halls and tasting rooms have brought new life to former industrial streets and have provided a launch pad for urban renewal and new commercial hospitality ventures in the precinct.

The vision for the Alex Precinct is to capitalize on it's many assets:

- Elevate Alex's reputation as a national centre of artistic and cultural excellence, so it becomes widely recognized as a destination-making brand for tourism.
- Strengthen connections to adjacent precincts so that long-standing barriers, both physical and cultural, are torn down and replaced by bridges and pathways.
- Drive residential growth to create a vibrant 24-hour precinct, with mixed housing attracting artists alongside arts patrons, producers, and creators.

4.5.2 Community Investment Focus

Focal Point 1: Walkability and Connectivity

- The streets of the Alex precinct should be consistently full of people and activity with intersections designed to be inviting and easy to cross.
- The streets should be beautifully designed, with wide sidewalks, patios, and pedestrian amenities. There should be a coherent grid of through streets, pedestrian laneways and corridors.
- New rapid transit lines should be integrated alongside the pedestrian environment and transit stations and stops should be unique, beautiful, and accessible.

Focal Point 2: Active Frontages

- New developments in transit lines, building design and parking all contribute to active street frontages, people centered places and the safety that comes with eyes on the street.
- Arts and cultural buildings should extend their influence well into the street with interactive frontages, light displays and the use of outdoor spaces in order to bring life to the district.
- Creating active frontages on buildings and properties is perhaps the single most important change needed to make this area a great destination and a more livable, fun place to be.

4.5.3 Precinct Actions

Mobility and Connections

- The Main Street rapid transit spine is a critical link for bringing people back to the streets of the Alex Precinct as it offers a chance to improve both mobility and place making. As the recommendations for the rapid transit spine are also common to the Connection and Intensification Precinct and Rows precincts, they are not all repeated here. A two-lane rapid transit line in the east curb lane of Main Street opens the following new opportunities:
- Create a pedestrian route system in the form of the way finding system present on transit maps and travel times to make walking a more enjoyable, safe, and practical choice than driving.
- Rethink the "front yards" and "faces" of street fronting buildings to be welcoming and beautiful to walkers and transit riders in order to encourage these forms of travel.
 Turn the building front yards into people magnets by creating beautiful gathering spaces with accessible public furniture.
- Use the Market Street Transit station as a gateway and wayfinding centre (See Character and Place Making as well as the Market & Main Transit Station Foundational Project, below).
- Design Market and William as a single functional intersection to improve vehicle turning, transit access and pedestrian crossing while simplifying and improving access to the Exchange District in the process. This would mean that traffic lights at both Market and William are coordinated in order to stop traffic before an extended intersection.

- 3. Develop the pedestrian connection which crosses both Main Street and Disraeli (see "Bold Move #3, Revitalize the Disraeli, above).
- 4. Improve parking lot productivity and design by reducing concentrations of empty lots and dead zones while undertaking a parking lot utilization study.
- 5. Prepare complete street designs with single level cycling and pedestrian lanes. These will create safer environments, less disruptions, greater accessibly and easier snow removal, all of which are important to both walkers and cyclists.
- Develop the shared streets and laneways that connect ALEX, Neeginan and the Rows right to the Forks. Use dray ways and other suggested connections to make the pedestrian blocks smaller and more walkable.

Community Building

- Rethink the Disraeli Freeway to support infill development –
 a freeway to boulevard strategy as described in Bold Move
 #3: Reconfigure the at-grade western section of the Disraeli
 Freeway to support complete community development
 and walkability in the neighbourhoods adjacent to the
 west Disraeli and the Disraeli/Main intersections. The goal
 is to create conditions to support infill development and
 restore a healthy environment for businesses, cultural and
 recreational venues.
- Create a residential and mixed-use infill development that leverages its proximity to the cultural cluster and Alex Residential Development and Investment Zone. It would include an affordable housing zone for artists and offer amenities and resources for the creative and arts sectors.

- The RDIZ would be bounded by Argyle, Disraeli, Lily, Galt and Duncan.
- Preserve the existing homes on Henry, George, Lily and Galt.
- Focus on detached and semidetached houses, town houses and low-rise buildings for the infill development between Henry and George while supporting significant studio development near existing artist studios on Henry.
- Organize mid to high-rise development on vacant lots and parking lots on the area bounded by George, Lily, Galt, and Duncan, placing taller buildings further north towards the freeway.
- Examine the potential for converting the industrial building fronting on George (between Duncan and Edwin) into shared studio and creative space with kilns, metalworking equipment, wood shops and other shared artist resources.
- 3. On the block bounded by Marsha, Rupert, Pacific and Main, undertake the development of mid to high-rise residential buildings with street level retail and parking facilities as required. This is a significant opportunity to build high quality housing and a residential population base.
- 4. Advance momentum by building smaller scale infill projects, like the residential building proposal for the SE corner of James and Lily, on the vacant lots on Market and Bannatyne that lie east of Rorie.

Character and Placemaking

 Integrate the Manitoba Centennial Corporation's buildings and cultural campus into the larger precinct, reducing blank walls and making improvements in interactivity between building and streets in the process. Work to establish restaurants, public amenities, and street level

business adjacent to the prominent cultural and institutional buildings. Work with place making organizations to create highly interactive frontages within the Centennial Corporation campus.

- 2. Design the rapid transit station at Market Avenue to be situated near the 1919 Streetcar art installation and the Pantages Theatre in order to make it not only a station but a destination in itself. Build upon the presence of one of the City's most historic theatres, the Pantages, which has been a fixture of the City's arts and performing communities for decades. Given the history of this corner, the transit stop should be an area for interpretation and remembrance and as such should be accompanied by an artistic map and quide for the area.
- 3. Design Alex's streets as true arts and culture corridors with themes and concentrated activities such as patios, cafés or art galleries. Launch a seductive street campaign where visual, auditory, and aromatic experiences designed to reflect both local talent and the areas unique history. Another essential part of this place making project is helping public art be mobile and accessible throughout the community, giving it a dynamic and refreshing character.
- 4. Develop opportunities for wider sidewalks and bump-outs for restaurant patios.
- 5. Explore restoration and revitalization of both Galt and Alexander, with the Eaton's Printing and Warehouse building having the opportunity to have a massive presence and be a defining place in the Exchange District.

Innovation and Creativity

- 1. Further develop the nascent food, brewing and distilling cluster which includes enhancing, expanding and branding the current cluster. Convene local brewers, distillers, and pubs to develop a place-based strategy to promote in the wider community. Explore "Brewers walks and hikes" designations and different sector branding initiatives to connect this cluster with those in the west Exchange.
- 2. Build on the success of Alleyways in the Exchange by piloting a "living laneways" program.

4.5.4 Foundational Projects and Analogues

5A. Alex RDIZ

A Residential and mixed-use development that leverages its proximity to one of the largest clusters of arts and cultural institutions in Canada. The ALEX Residential Development and Investment Zone helps create an affordable housing complex for artists while offering amenities and resources for both the creative and arts sectors, including shared studios, kilns and fabrication shops. Centered on Alexander Avenue in the Northeast of the Exchange District

 Organize an arts and culture development round table which includes property owners and artist groups who have advanced these ideas in order to develop a plan and investment strategy.

Construction Target:	5 years
Objectives and Principles:	CB CP RA
Completion State:	

A dynamic and fully resourced artist community living in affordable, safe, and accessible housing community with ample resources to support their work. This project would be a template for cities looking to advance human creativity by enriching the local arts scene and community quality of life.

5B. Alexander Shared Street

Develop Alexander Street between Lily and Waterfront Drive as a shared street. With the popularity of adjacent local destination businesses, the new mixed residential development at 90 Alexander, the proposed renewal of the Alexander Docks site, and development of an active transportation bridge connecting North St Boniface, this low-vehicular traffic street is well positioned to become an attraction and a key part of the Cultural Streets and Pedestrian Network.

- Work with adjacent property owners, developers, businesses and arts groups to develop a shared street that is beautifully designed, functional for local uses, and responsive to the heritage of the immediate area.
- Include plantings, trees, and public art, and infrastructure that allows for easy closure and programming for festivals and local events.

Construction Target:	5 years
Objectives and Principles:	MC CP RA

Completion State:

Alexander Street is a vibrant destination for local residents and visitors alike, becoming an inviting people corridor for those attending arts performances and museums within the Alex Precinct and beyond.

5C. Integrate MCC buildings

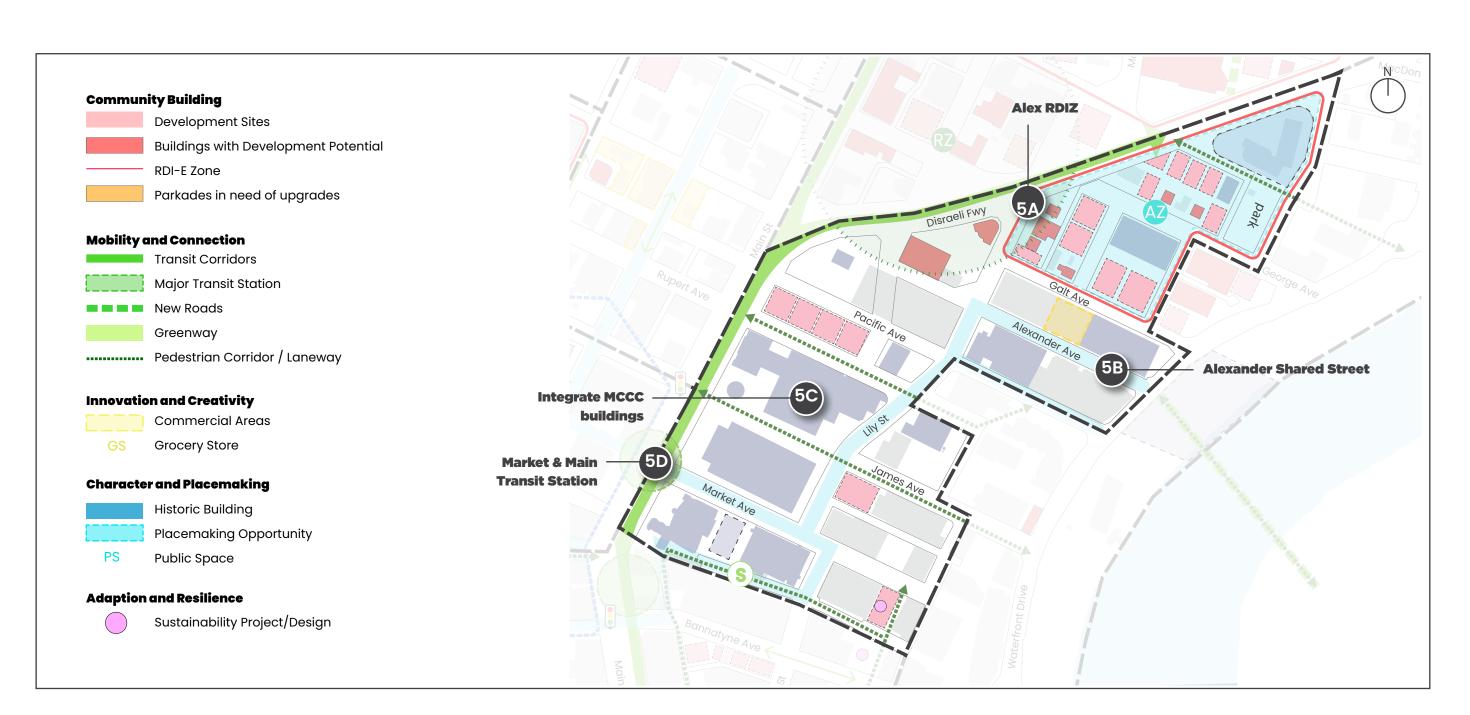
Integration of the Manitoba Centennial Corporation's buildings and cultural campus into the larger precinct by reducing the blank walls and improving the interactivity between building and streets. Work to establish public-facing restaurants, amenities, and street level business adjacent to cultural and institutional buildings.

 Work with Manitoba Centennial Corporation and professional place making organizations to create highly interactive frontages within the campus. The MCC has identified Place Des Arts in Montreal as an alignment model.

Construction Target:	5 years
Objectives and Principles:	СВ

Completion State:

The MCC cultural campus is consistently full of people, with no vacant storefronts or vacant lots separating buildings. The precinct boasts a concentration of restaurants, art galleries, pop-up shops, and local businesses to rival its concentration of arts and theatre venues. The streets are regularly active with night markets, living laneways, and street festivals, providing visitors with multiple activities and destinations. All of the precinct's many destinations are easily connected by beautiful, clean, safe, and bright pedestrian corridors.



5D. Market & Main Transit Station

Design the rapid transit station at Market Avenue to be situated near the 1919 Streetcar public art installation and the Pantages Theatre so as not to be only a station but a destination itself. The transit stop in the Pantages public square should be interpretive and offer an artistic maps and guides to the area, including a centre for discovery and self-guided walking trips.

 Work with Winnipeg Transit, the Pantages Theatre owners, City Planning, The Exchange District BIZ, Centre Venture, local arts groups and the MCC to develop a gateway transit stop and interpretive centre concept..

Construction Target:	10 years
Objectives and Principles:	MC. CP, RA

Completion State:

The Market station introduces you to the neighbourhood, the Pantages Theatre, the streetcar memorial and easily accessible local history. The landing pad, a design icon and a full transit station, contains an interpretive centre and interactive kiosk all about the area. The station is busy, the transit line is a huge success, and the local streets are brimming with people.

4.5.5 Value Uplift

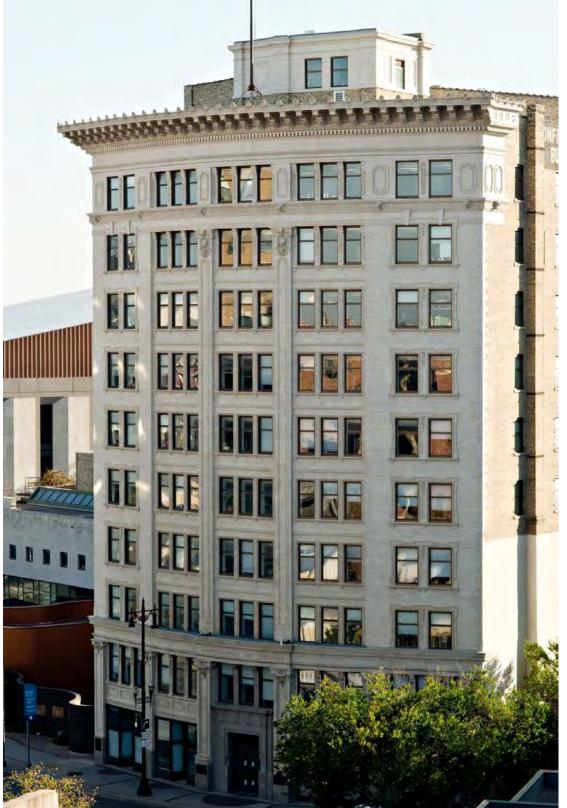
Residential Units

One main feature of the development strategy for the ALEX Precinct is the creation of the Arts and Creative Live-Work Zone through the development of open lots and the re-purposing of existing structures. Another significant development opportunity is the parking lot along Rupert Avenue (north of the Manitoba Museum).

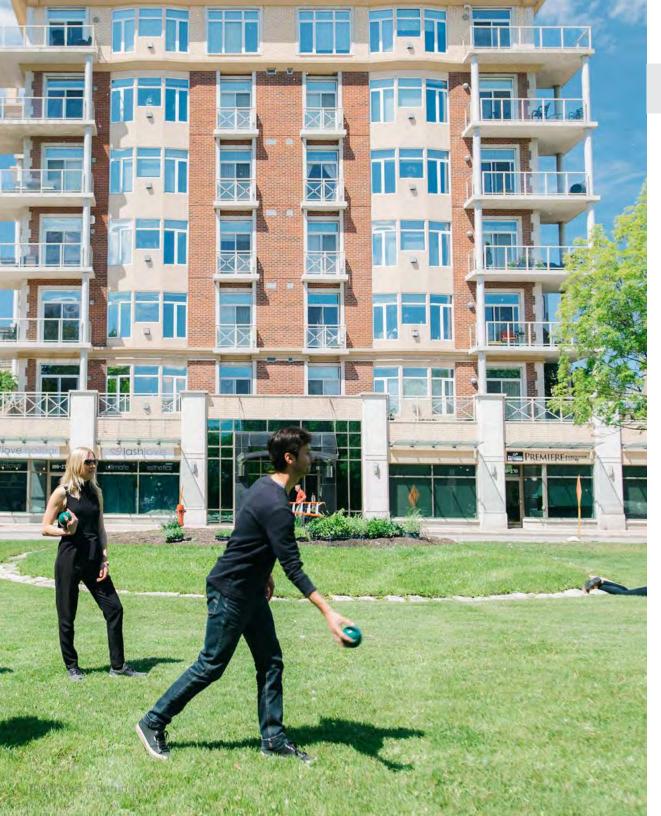
ARTS + LEISURE + ENTERTAINMENT PRECINCTUplift Summary | 20 Year Cumulative

Property Tax	\$13,272,924
Business Tax	\$359,931

460







4.6 Waterfront Living (WL)

Bridging people, places, and rivers

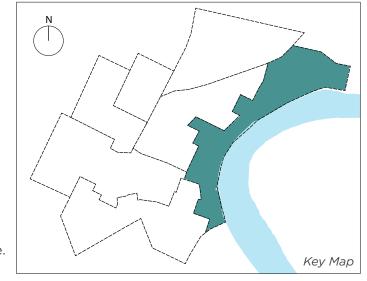
4.6.1 Profile and Vision

The Waterfront Living Precinct is composed of the blocks which follow the shore of the Red River along the Exchange District's eastern edge. There is a long history of Indigenous settlement and stewardship of the Red River and the land surrounding it. Engagement with the urban Indigenous community, particularly the Metis Nation and Treaty One First Nations, is the starting point for a decision making and planning process for the precinct. The ideas which come from these community engagement sessions and conversations with elders will offer a new vision and direction.

The precinct is a testament Winnipeg's ability to vision, plan, and execute ambitious community redevelopment. During the latter half of the 20th century, the area contained polluted lands, abandoned railway infrastructure, and dead-end streets. However, these brownfield sites underwent a significant redevelopment starting in 2000, propelled by the efforts of the municipal development corporation, Centre Venture. By introducing new grants, development incentives, and direct public investments (including the roadway and improvements to the parkland), the City was able to redevelop the site into a complete residential community featuring local green space, businesses, and public art installations.

The Waterfront Drive redevelopment remains the benchmark for Exchange District planning initiatives and can serve as a model development for improving connectivity, residential growth, and street-level activity. However, this revitalization effort did not include the area immediately south of the Disraeli Expressway or the land between Waterfront Drive and the Red River. Currently declining industrial sites, these lands also present new redevelopment opportunities.

The most significant of these opportunities is the Alexander Docks, a downtown riverfront access site awaiting attention and reinvestment. These docks have been a significant community landmark for centuries and is currently a site of remembrance for missing and murdered Indigenous Women and Girls (MMIWG). The redevelopment of the historically significant Alexander Docks provides an opportunity to focus on meaningful reconciliation, river ecology, and cultural celebration while transforming it into a landmark public destination and event space.



Likewise, while the bridge connections and winter river trails south of the Exchange District are well used, the lack of similar connections within and between the Exchange District, North St. Boniface, and South Point Douglas continue to leave these communities isolated. Possible redevelopment of the Alexander Docks lands provides a chance to solve this challenge by improving connectivity.

The vision for the Waterfront precinct is to complete the residential development cluster along Waterfront Drive and to:

- Realize the potential of one of the most beautiful and accessible urban river frontages in Canada bordered by highly livable, walkable, and an urban neighbourhood that reflects and celebrates its unique history and sense of place.
- Create a community that celebrates and restores the respect for nature that was built over thousands of years of indigenous human history.
- Ensure an affordable and complete neighbourhood that works to build healthy connections between all people and the river.
- Build on Winnipeg's emerging reputation as a place of beautiful architecture and public spaces.

4.6.2 Community Investment Focus

Aligned with the vision for the Waterfront precinct, the investment strategy is premised on two focal points:

Focal Point 1: Go to the Waterfront

- Realize the "Go to the Waterfront" strategy. Enjoy and discover the life on and of the river. Create year-round opportunities for Winnipeggers to rediscover and enjoy being a river community.
- Restore and reactivate historic assets. Build bridges figuratively and literally to connect us to the river.
- Create ecological awareness of the Red River and its broader system, including the Seine and the Assiniboine.
 Restore natural ecosystems where they are damaged or missing and need restoring.
- Recognize the Red River as a working urban river and aspire to restore its health and many good uses as per Canada's Water Keepers "swimmable, drinkable and fishable" rivers.

Focal Point 2: Healthy River Neighbourhoods

- Create a string of healthy river neighbourhoods built in celebration of nature and the unique river ecosystems and lands we live on.
- Remember and learn from the thousands of years of human history and the indigenous traditions, caring for all our relations, including those described as the natural world.
- Complete the vision of complete downtown and riverside neighbourhoods by removing barriers to affordability and investment, ensuring a place that welcomes all people.

4.6.3 Priority & Objective Focal Points

Mobility and Connection

- Reconnect communities on both sides of the Red River by building bridges. Improve connectivity in order to enhance the local economy, improve accessibility and stimulate greater value and use of critical public recreational and cultural assets. Fulfill the city-wide desire to connect walking trails and complete "walking loops" with river crossings to facilitate access to natural and cultural places.
- 2. Bridges, by being one of the most place-defining structures a city can build, have the power to attract both residential and commercial investment by increasing livability, desirability and tourism. Two signature projects, which are inspired by the success of Esplanade Riel, emerged during community engagement:
- A cantilevered pedestrian and cycling sidewalk platform connected to the CN Mainline Railway Bridge, crossing the Red River from St Boniface to the Exchange District (Darveau Street and Tache Avenue to Waterfront Drive and Lombard Avenue). Cantilevering an enclosed pedestrian and cycling corridor onto an existing durable structure is a great way to improve the value of existing transportation assets without imposing a large environmental impact. The development of very light and strong composite building materials has made cantilevered sidewalks and platforms affordable and easier to construct.

• A pedestrian bridge from the Alexander Docks to Whittier Park, connecting the green spaces, festivals, cultural venues and people in both communities. Facilitating greater access and active transportation use both within and between these walkable urban neighbourhoods will encourage local residential population growth. Completing a Tache-Waterfront walking loop would connect Whittier Park, Fort Gibraltar, the Festival grounds, the Centennial/MTC arts cultural cluster, local breweries and many other recreation, arts, tourism, and cultural assets. The structure would be conceptually similar to Toronto's Humber River Bridge or Don River Bridges, which are prefabricated as a single span or two section spans on a pier.

Community Building

- Stimulate residential infill by planning, rezoning and servicing the redevelopment of aging, underutilized waterfront lands. Focus this initiative north of the Waterfront Trail and east of Waterfront Drive (Gomez/ Macdonald) to restore and expand these historic residential neighbourhoods.
- Restoring and rebuilding infrastructure to support the existing single family and semidetached houses on Annabella and Curtis.
- Extending the Annabella and Curtis low-rise neighbourhood west of the Cutis back lane by adding two 20-unit townhouse blocks. These are to be developed as affordable housing to meet the needs of families with children.

- Extending Macdonald one block east to create a four-square block mid to high-rise residential waterfront neighbourhood, with buildings rising from 10 floors adjacent to the trail to 20 floors backing on Higgins Avenue, which has frontages on Macdonald and Gomez. There are approximately 15 opportunities to co-develop new residential buildings with existing buildings (including heritage buildings). Designate this Gomez-MacDonald Residential Development Investment Zone (RDIZ-GM).
- Several emerging projects in municipalities around the world have demonstrated that a net-zero GHGs wood building cluster strategy offers a model for "green" infill in these waterfront brownfield sites.
- Providing a green buffer and trail between the low rise and denser residential areas will ensure better natural lighting and mobility within the neighbourhood as well as easy public access to the river trail system.
- Building on authentic local housing design by capturing the traditional vocabulary of inner-city residential architecture with new expressions, modern materials and green technologies (Lunenberg's recent infill housing developments reflect these concepts).
- 2. Support smaller scale infill housing opportunities within the precinct, especially where affordable housing can be co-located within a block or building. Utilize opportunities to re-purpose, restore and green existing buildings.

 One such opportunity is the buildings and vacant lands across from Fort Douglas Park on Waterfront Drive, between George and Galt Avenues. A small-scale residential building with street level retail would create space for a coffee shop, convenience store or other personal service retail that is absent on the northern stretch of Waterfront Drive. The Ship Street development on McDermot Avenue is a good model compatible with a recreational waterfront.

Resilience and Adaptation

- 1. Take a "circular community" approach to development which includes developing a strategy for green buildings that use renewable energy and storage systems. Build infrastructure and buildings that are zero waste and zero GHGs (geothermal, passive building design, wood construction, renewable materials and energy, micro grids, and re-distributive systems). One challenge will be the amount of waste materials that could be generated by transforming an industrial area into a residential neighbourhood. The Mountain Equipment Co-op Store at 303 Portage Avenue provides a good model for circular economy construction as it was built using 96% recovered materials by weight.
- 2. Identify and prioritize co-development opportunities for integrating infill green building into existing buildings.

- 3. Work with local river restoration organizations such as the Point Douglas Residents Committee, Operation Red River Clean Up, Take Pride Winnipeg and others to develop a maintenance and restoration plan for the Exchange District stretch of the Red River. Further develop a "Drink, Fish and Swim" water keeping approach to the urban Red River (details can be found at https://www.swimdrinkfish.ca/waterkeepers)
- 4. Work with the City of Winnipeg and the Province of Manitoba's Ministry of the Environment to undertake a climate risk assessment of the river and to develop a climate resilience development strategy for the urban Red River.

Character and Placemaking

- Redevelop the Alexander Docks as a focal point for connections to and across the Red River. Create a spectacular array of coordinated and collaborative activities to transform the riverfront north of the Forks into a centre of vibrant cultural and recreational activity. Develop the site to fully reflect the centuries of Indigenous history, culture and traditions present on these lands as well as its function as a landmark for gathering and fishing.
- 2. Restore the historic docks and expand them into a wharf fit for a leading 21st century city. Re-imagine and enhance the docklands to meet the needs of an active, working, urban river that functions as a travel route, sporting venue, place for canoe and kayaking activity rentals, river cruise destination, heritage boat tour location, water taxi route and major inter-module transfer hub to and from

- the river for both Winnipeggers and visitors alike. The Red River is highly navigable and can easily support recreational and tourism travel and access to the lakes. Build a jetty onto the old docks to accommodate smaller boats and canoes and examine the possibility of expanding docking facilities into the calm waters just north of the historic docks.
- 3. Adopt or acquire a signature river craft, such as the American Institute of Architects has for their architecture tours in New York City, Grace Anne II in Kenora or the Bluenose in Lunenberg. In Winnipeg it could be as simple as a York Boat or a smaller, yet still elegant, period river craft from the golden days of lake tours. This boat could be a tour vessel and attraction in its own right.
- 4. Build a fully equipped outdoor stage at this site as the banks of the Red River curve to form a natural performance amphitheater. It is perfect for cultural events, entertainment and both celebratory and memorial gatherings, much like "The Wharf" in Washington, DC. Constructing a covered stage on the riverbank will take advantage of the natural seating of the raked riverbank, creating a signature event venue and community focal point as well as seating for organized river events.
- 5. Create the infrastructure for a modern "fishing hub" on the Red River. Urban fishing has a long history in Winnipeg, with popular fisher's eddies, bridges and dock locations being places where people and fish have gathered for many centuries. A fishing hub should:

- Recognize and respect the treaty rights of Indigenous people and all the agreements which been made regarding the lands and rivers. Ensure decisions are made with the consent of local Indigenous stakeholders. Recognize and celebrate the Metis homeland as a rich part of the precinct's history and culture.
- Adopt a formal urban fishing program which includes teaching, outreach, support, and education. Phoenix, Arizona is a good model.
- Install urban fishing location signage, way finding and markings explaining the locations for fishing and the types of fish in the river during different seasons. Provide information on when fish can be caught, size limits, age restrictions, catch and release rules, licensing and other necessary information.
- Organize Exchange District shore fishing derbies and similar events to promote fishing and participation in the life of the neighbourhood and river, recognizing that river fish are part of the food needs of Winnipeg families.
- Build a public fishing and water recreation office staffed with experts who can offer everything from the sale of fishing licenses, the rent and use of fishing equipment, fishing classes and assistance in learning how to use fish cleaning tables and other amenities in the docklands area.
- Create a fishing amenity area by installing water services, fishing equipment storage, fish cleaning tables and equipment to assist people in preparing their fish to eat. Provide on-site recycling and waste disposal to help keep the area clean and healthy.

- 6. Improve public access and water features by creating places to safely get close to the water around the docks and integrate presentations of the flora, fauna and water. Two initiatives would create a good starting point. Develop access points where people can touch and explore the water at particular interpreted points of interest. Cleveland's waterfront boardwalk is a good example of areas which are well designed and child safe. Chicago's canal "Wild Mile" and Detroit's waterfront Lowland Park both nurture and present wild places showing beautiful water plants on the river's edge, in eddies, and in accessible marsh lands. This creates a beautiful and inviting river experience which could be replicated in Winnipeg given the biodiversity in and around the docks area.
- 7. Develop waterfront sunbathing, entertainment and play areas. Winnipeg's waterfront north of the Forks lacks the amenities found at the Forks or that are traditional to many urban waterfront parks. Activities that could be easily accommodated as part of the offerings around the Alexander Docks include:
- Sunbathing and outdoor relaxation spaces, similar to those on the Bow River in Calgary, where there is a comfortable grade for sunbathing and gathering is common. Given the docks is the one open area that could be maintained and surfaced to accommodate sunbathing and relaxing outdoor activities it makes sense to designate the space for this activity.

- Both Hamburg and Berlin have riverfront areas where decks, loungers and towels can be rented, and food and beverages purchased, for the urban equivalent of a day at the beach. Setting up such recreational amenities would expand the attractiveness of the area and create opportunities for small businesses.
- Children and adult play areas similar to the Toronto
 Waterfront and both The Wharf and The Yards riverfronts
 in Washington DC, all of which have interactive, athletic,
 play equipment including swings and rockers for kids. This
 includes wavy decks and pick up sports spaces with fun
 design elements that people of all ages can climb or sit.
 The Forks in Winnipeg offers a particularly local example
 and success story of a large-scale development of diverse
 riverside recreational activities.
- 8. Install public art at the Docks and around the entire north waterfront. Projects like Niizhoziibeanon at the South Point demonstrate the Indigenous cultural renaissance currently underway in the City and can inspire creative and beautiful installations around this part of the waterfront. The adjacent concentration of artists, museums and cultural venues lacks only one major missing piece, a location for large sculpture and public art installations. Designing a sculpture garden in this area would make sense given the wide-open site.

9. Educational installations regarding struggles for labour and Indigenous rights which took place within the precinct. This includes remembrance and activism to confront misogyny, systemic racism and the tragedy of murdered and missing indigenous women and girls (MMIWG), all of which have a strong presence here. The need for this to be expressed in a way that offers authentic representations is fundamental and must be part of the restoration and narrative of this plan. Interpretive programs and representations of this history are necessary to promote the authenticity and history of this site.

Innovation and Creativity

- 1. Develop an ecotourism and leisure brand for the waterfront, including an online portal for access to businesses, services, and natural assets.
- 2. Create opportunities for street level business units for ecotourism, fishing, canoeing, birding, cycling, and other riverside recreational activities.
- 3. Ensure high speed internet infrastructure throughout this precinct and open data on river conditions and flows to support innovation in tourism and related sectors.
- Develop a nature and river discovery wayfinding component to be part of the recommended wayfinding strategy and system for the Exchange District. Find creative ways to tell the stories of these places and peoples.

4.6.4 Foundational Projects and Analogues

6A. Waterfront RDIZ

Residential Development Investment bordered by Higgins Avenue Waterfront Drive, the Waterfront Trail, and the laneway west of Curtis Street. The restoration and repair of Annabella and Curtis maintaining and preserving single family homes. The construction of a new north-south street accommodating twenty low rise 2 floor loft and town houses

 Manage the transition and redevelopment of remaining industrial lands. Work with residents, businesses, tenants and property owners to review various residential infill and mixed-use developments. Review the idea of an infill development with the community and examine a range of alternatives, including opportunities for affordable housing..

Construction Target:	5 years: 1000 Units,
	10 Years: 2000 Units
Objectives and Principles:	CB CP RA

Completion State:

A healthy, green, beautiful, walkable, and complete neighbourhood offering a range of housing options. Housing is provided to ensure a diverse and mixed income community with excellent neighbourhood services.

6B. Pedestrian Suspension Bridge

A traditional wooden suspension bridge designed for the natural settings of the Alexander Docks site and Whittier park to complete the St Boniface and Winnipeg downtown loops and fill in a major cross town active transportation connection.

Convene organizations and community leaders
 and who have been working to better connect
 Winnipeggers to the river and improve riverside
 communities. Trails, residents, local business, recreation,
 and cultural groups, The Forks, CentreVenture,
 Francophone, Metis and indigenous leaders, artists,
 architects, planners, and developers to develop a
 partnership to pursue funding to realize this important
 connection.

Construction Target:	5 years
Objectives and Principles:	CB CP RA

Completion State:

The completion of interconnected riverside loops and neighbourhood connections, removing real and perceived barriers to environmental and healthier transportation choices. More Winnipeggers discovering the river, Whittier Park to Waterfront and our major hometown and tourism destinations.



6C. Alexander Docks Renewal and Site Development

Restore and renew the Alexander Docks and surrounding docklands as a focal point to connect to the river and surrounding communities. Create coordinated and collaborative fun activities to transform the docklands into a centre of vibrant cultural and recreational activity. Woven through all projects is a priority to celebrate and respect the millennia of indigenous people's history, lives, leadership, and how our treaties define our shared journey forward together.

- Building on the work done to date by The Forks North Portage Partnership, CentreVenture, The Exchange District BIZ and others, this renewal process starts in partnerships formed with Treaty One First Nations, the Manitoba Metis Federation, and local, urban indigenous people. It should recognize the importance of Treaty One, of the Red River Metis, of Tommy Prince and of Tina Fontaine as well as our relationships with the Red River, to the earth, and to one another.
- This is a project with a long history of community and volunteer support and visioning and should continue to proceed with engagement with residents, Red River Basin ecology groups, and the broader communities of Point Douglas, West Alexander and North St Boniface.

Construction Target:	5 years
Objectives and Principles:	CP RA CB CI

Completion State:

The Docks is a recreational hub of fishing, kayaking, canoeing, concerts, sports, walking hiking, sunbathing, relaxing, drinking, eating and celebrating. The site includes docking facilities, tour boats, fishing wharfs and equipment rentals, river and shore flowers and marshes, access points, play structures, public art and recreation spaces. Above all, it respects an honours those before us and the generations to come.

6D. Cantilevered Bridge Connector

A cantilevered pedestrian and cycling sidewalk/ platform on the northside of CN Mainline Railway Bridge (connecting North St Boniface to the Exchange District, Darveau to Lombard Avenues). The interface with bridge structure would have to be safely away from the trains with an enclosed crossing platform and elevation that would ensure complete separation of people and trains.

Undertake a community engagement with residents and trail users and active transportation networks in the city to explore this as cost effective and useful connection and crossing. Invite Canadian National Railways into a conversation about the development of a pedestrian and cycling trail or sidewalk cantilevered off the CN Mainline Bridge.

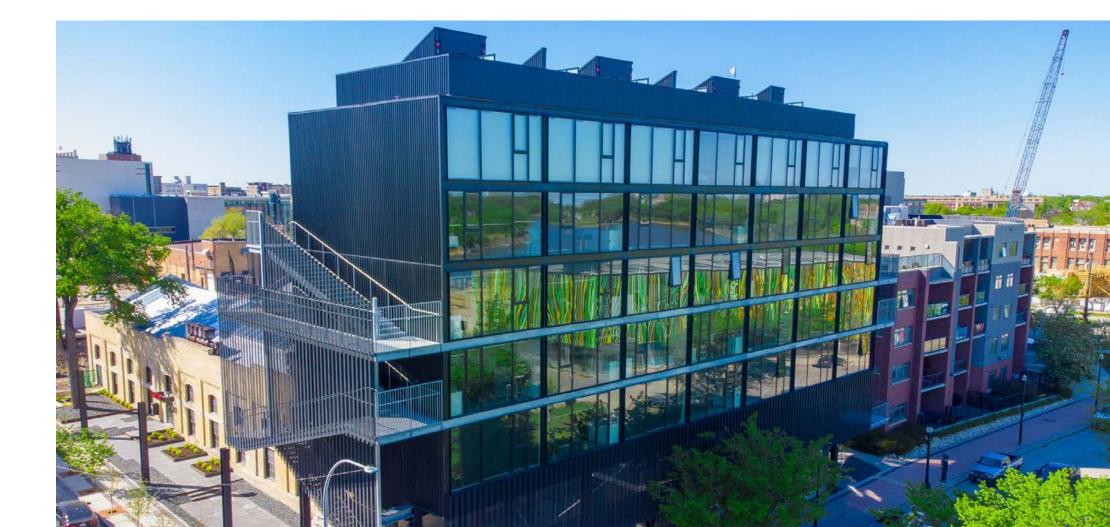
Construction Target:	10 years
Objectives and Principles:	MC CP RA
Completion State:	

A safe popular, unique, affordable, and dynamic cantilevered pedestrian/cycling corridor on the CN rail bridge. Strong active transportation connections between residential neighbourhoods, hotels, and tourism destinations. Exceed the popularity and success achieved by bridges in San Lorenzo, Sacramento, and Ottawa.

4.6.5 Value Uplift

The Residential Development Intensification Zone that is a feature of the strategy for the Waterfront Living Precinct is an expansion of the hugely successful Waterfront Drive development to the south. Several pedestrian corridors are proposed to create developable and walkable blocks. A mix of housing unit types is proposed with potential of 2,000 units.

WATERFRONT LIVING PRECINCT Uplift Summary 20 Year Cumulative		
Property Tax \$8,161,160		
Business Tax	-\$30,036	
Residential Units	2,010	





4.7 Connection and Intensification (CI)

Launchpad for a complete downtown

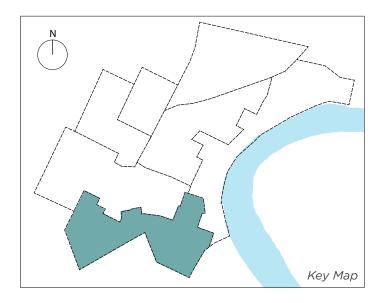
4.7.1 Profile and Vision

The immediate areas surrounding Portage Avenue, both east and west of Main Street, make up the Connection and Intensification Precinct. These historic routes became the centre of Winnipeg's early industrial development and endowed the Portage and Main intersection with its landmark status. The introduction of multiple rail spur lines however, caused endemic connectivity challenges throughout the precinct, with irregular blocks, inconsistent road configurations, and limited pedestrian throughways.

The precinct's skyscrapers and historic buildings, most of which are clustered around Portage and Main, are surrounded by surface parking lots, single purpose parking structures, and under-utilized lands. Though the precinct is the center of almost every major urban activity area, attraction, and destination, much of the area presents is hostile to pedestrians. The precinct's lack of trees, public transit, bike lanes and pedestrian amenities has limited development potential and suppressed residential growth. Under development has negatively impacted tax base growth, tourism, commerce, and livability within both the precinct itself as well as adjacent destinations.

East of Main: The major land use is mostly surface parking lots, along with some low rise parkades. The blocks containing these lots are all located within a five-minute walk of Portage and Main, as well many important cultural venues.

West of Main: Along Notre Dame Street is a strip of buildings in poor condition and in need of reinvestment, most of which are also adjacent to empty sites and parking lots. There are two different zoning categories in this area, compared to three in the East Exchange.



The vision for the Connection + Intensification precinct is:

To create the most prosperous high street intersection in Canada in the centre of Canada's most livable, walkable, and authentic core urban neighbourhood.

That Portage and Main becomes one of Canada's most visited, imitated, sustainable, beautiful, and photographed destinations.

4.7.2 Community Investment Focus

Building on the vision for the C+I precinct, the investment strategy is premised on two focal points:

Focal Point 1: Intensification

- Develop a sufficient residential population to create a complete and regenerative community.
- Inclusively offer a complete range of housing options for all, building a strong work force within walking distance of the district's very large employment base and a customer base for its retailers.
- Harmonize a transition zone in scale and height of development from the warehouse concentrations in the National Historic Site to the office cluster at Portage and Main.

Focal Point 2: Connection

- Become one of Canada's most walkable neighbourhoods by restoring strong pedestrian, active transportation, transit, and vehicle connections to and from the area.
- Enhance mobility within in the precinct significantly to attract and retain strong street-level commercial activity, and a growing residential population.
- Remove barriers to access to the many amenities within the surrounding precincts, the Forks, the SHED, the Central Business District, and the larger Downtown.

4.7.3 Precinct Actions

Mobility and Connection

- Provide opportunities for buildings to be connected to, or co-developed with, rapid transit stations as a component of a master development plan.
- 2. Restore and create a coherent grid pattern street system which emphasizes two-way and two-lane streets throughout the precinct. Extend the characteristic design elements of the more commercially successful and higher value areas of the Exchange District.
- 3. Replace the "rail spur" street alignments with a proper street grid.
- 4. Create pedestrian throughways and new streets to create "right-size" blocks to promote a walkable and commercially friendly scale (60-to-100-meter frontages).
- Create a new north-south street through the parking lots between Main St and Westbrook Ave as a municipal investment project to stimulate both intensification and connections to activity hubs.
- 6. Move forward on the original Centre Plan Development Framework for two-way streets by converting King, Princess, Bannatyne and McDermot to two-way.
- 7. Undertake a major infrastructure maintenance and completion project which includes street furniture and public art restoration initiatives.

- 8. Develop a transit grid with intersecting rapid transit routes to support transit-centered and walkable downtown neighborhoods and to ensure transit riders arrive in a city centre where cars are not necessary.
- 9. Locate and develop individual transit routes that make up the downtown "rapid transit spines" with a view to optimizing transfer points and enhancing overall transit rider mobility within the recommended grid pattern street system. Reduce vehicle volumes and concentrations at Portage and Main by turning the following streets into transit and mixed travel corridors):
- North South: Westbrook (Pioneer to Lombard) to be designed as the integrated north-south rapid transit spine and connector for lines running both east-west and north-south. North bound transit vehicles can exit Main Street into a new transit corridor aligned with Westbrook just north of York and Main and re-enter Main Street using a mixed transit corridor on Lombard. Westbrook's mostly undeveloped frontages provide opportunities for integrating stations with buildings. Westbrook is a wide street which allows for direct connections and wide turning radii while also intersecting with all planned rapid transit spine corridors: Izzy Asper Way, Main Street, Pioneer Avenue, the Union Station lines and Portage West.
- East West: Lombard Avenue to provide rapid access to Main and define its current role as the major access street for Portage and Main business parking lots. It has few active frontages and can function well as a mixed transit vehicle and motorist corridor from Westbrook to Main.
- North- South: Main Street (Lombard to William) to develop

- a separated north and south bound transit route in its far east lane with a second hub station at William Avenue and Main Street. (Create separated transit priority lanes from William to Lombard).
- East West: Portage Avenue East to function as a "transit priority greenway" with expanded public open space and a transit corridor. Transit vehicles running east-west on Portage Avenue would access the main transit hub through Portage East. Private vehicle access would be limited as it is on the Graham Transit Mall (almost all primary vehicle access to Portage Ave East buildings is from other streets).
- Develop a Transit Hub (transfer) Station on Westbrook and a secondary station on Portage East for Portage Avenue and Provencher Boulevard destination routes.
- The investments in rapid transit routes should be modelled for TIF financing, as they can be a significant driver of property value uplift. If properly modelled and designed these projects will maximize both ridership and tax base growth and create a source of project funding. LRT and BRT should be modelled to calculate the differential financial and ridership outcomes.
- 10. Reconnect streets which are incomplete and remove major pedestrian barriers within the precinct. Develop an urban "complete street" grid east and west of Portage and Main similar to the Waterfront Drive Precinct. Focus on rebuilding and reconnecting street level commercial blocks:

- Adapt a complete streets model. Prioritize the economic value and functionality of the downtown high streets and restore the necessary elements and conditions for successful commercial frontages and activity.
- Restore active transportation/pedestrian connections at key intersections in the two RDI (residential development intensification) zones and the CDI (commercial development intensification) zone- Main Street and Westbrook Street presenting significant design challenges.
- Reduce the concentration and impact of vehicles at Portage and Main and take steps to relieve pressure points by restoring north-south through streets, turning choices, localized vehicle circulations, and two-way streets while optimizing traffic flow signalization and regulation.
- Main Street and Portage are both Provincial highways,
 meaning that previous redesigns have seen the
 enhancement of the "go through" qualities of both streets.
 To counter this, a redesign of the high streets is required
 which supports development of the "go to" characteristics
 of these streets. Focus on redesigning and developing
 these blocks as complete streets by restoring the necessary
 private frontage and public realm elements while removing
 barriers to east-west pedestrian flow across Main Street.
- 11. Develop a major pedestrian priority corridor and green way from True North Square to Old Market Square which is centered on a new public square between Ellice and Notre Dame. Invest in a desirable environment, wayfinding, and pedestrian infrastructure.

Community Building

- 1. Affordable units should compose a significant component of the buildings. Each residential development should include a diversity of affordable and market options
- Eliminate requirements for minimum number of parking spaces across and provide incentives for parking lot conversions, including shorter approval processes. Set requirements and incentives for car share locations and bicycles racks.
- 3. Ensure active frontages on all new builds and pedestrian level design that supports a strong interaction with the street.
- 4. The Portage Avenue East Residential Development Investment Zone (RDIZ-E) will require a working group established to develop a master development and investment plan for the area. Characteristics of the development should include:
- Population/development goal: 4000 residents, 2,800 residential dwellings units.
- RDI Boundaries: North Bannatyne Ave; south William Stephenson Way; east - Ship Street, north-south lane and CNR highline to the east; west - lane east of Rorie Street and then along Main Street.
- RDI area height restriction guidelines: Bannatyne to McDermot Avenues 25 meters (35 meters if restoring an adjacent existing building with a setback on upper floors); McDermot to Lombard Avenues, 40 meters (50 meters

if restoring an existing adjacent building with a setback on upper floors); Lombard to William Stephenson Way, 60 meters (70 meters if restoring an adjacent existing building).

- Develop a grocery store as an anchor for the development.
 Locate the store to efficiently serve both the daytime
 Portage and Main office workforce and residents.
- 5. Develop the Portage West area by designating a Residential Development Intensification Zone (RDIZ-W) and establish a working group to develop a master development and investment plan for this area. Characteristics of the development:

Population/development goal: 1000 residents, 700 residential dwellings units

RDI Boundaries: North - Parallel lanes south of McDermot; south Ellice to Notre Dame to Portage Avenue. East - Main Street. West - Princess and Donald Streets.

Resilience and Adaptation

- Develop a circular community which includes green buildings that use renewable energy and storage systems. Build infrastructure and buildings that are zero waste and zero GHGs. (Geothermal, passive building design, renewable materials & energy, micro grids, and redistributive systems).
- 2. Create a pilot co-development zone for integrating infill green building into existing buildings.
- 3. Undertake a design competition with the owners of

properties on the old Walker Theatre block to revisit and reintroduce the concept of a complete surround structure on the site and partnership with a new square across the street, looking to Miller Plaza and Park in Chattanooga for inspiration. Focus on green building co-development models like RRCP.

4. Prioritize the "missing teeth" locations on and adjacent to Notre Dame for the next generation of green infill codevelopment projects.

Character and Place Making

- Restore Portage and Main to its iconic status as a beautiful, historic, commercially and culturally successful, fully connected, and functional intersection.
- Concentrate transit stations within blocks of P&M at key destinations and use Westbrook Street as the major transfer and connection hub to reduce vehicle concentrations at P&M.
- Create a major east-west greenway from the baseball stadium/Westbrook transit mall through to a new public square/Burton Cummings theatre, crossing P&M at grade on the north side of the intersection.
- Redesign and re-purpose Portage Avenue East from Main Street to Westbrook Street as a "transit and pedestrian greenway." Eliminate vehicular through traffic of non-transit vehicles, except for the construction of a private drive to access the Fairmont Hotel. Other buildings on this these blocks of Portage Avenue are to be accessed by adjacent streets.

- Create partnerships with the Portage and Main property owners to incorporate privately owned open spaces and redesigned adjacent public spaces (including the Greenway) into a beautiful and celebratory corridor and intersection.
- Redesign and recreate "pedestrian attraction" laneways that run to and from the Portage Avenue greenway to Lombard, Westbrook, and Pioneer to connect the Forks, Shaw Park, CMHR, the Waterfront and East Exchange. Reinforce a strong and safe pedestrian crossing on Main Street.
- Redesign and recreate "pedestrian attraction" laneways that run to and from the Notre Dame Greenway/roadway to Old Market Square, Burton Cummings Theatre, True North Square, RRCP, City Hall and the West Exchange District.
- Create a strong, beautiful, and safer pedestrian crossing of Portage Avenue at the intersection of Fort/Notre Dame and Portage.
- Incentivize and facilitate the restoration of building frontages for street level retail, restaurants and pedestrian amenities.
- 2. Re-purpose existing laneways to be walkable "living laneways" that are designed to accommodate art spaces, musical programming, light shows, and interactive walls. Adopt existing, and build new, pedestrian laneways which use a pedestrian "seductive approach to design to enhance connectivity (similar to initiatives in Montreal and Melbourne).

- 3. Develop the old Methodist Church site as a public square, outdoor concert, events venue, pedestrian meeting place, and connection hub. Provide bollards on Ellice and Notre Dame to close streets to widen the pedestrian and events space available for major gatherings.
- 4. Undertake an Urban Acupuncture (Jaime Lerner) approach to locate serendipitous installations in key pedestrian corridors and public facing spaces.

Creativity and Innovation

1. Develop the Portage and Main Commercial Development Intensification Zone (CDIZ-PM) with high-rise and mid-rise infill in and around the empty and underutilized lots around Portage and Main. Priority developments include the two lots immediately north of 201 Portage Avenue on Main Street which have been the subject of high-rise commercial and mixed-use development proposals involving the restoration of an adjacent heritage building.

The parkades and parking lots adjacent to the office towers fronting on the west side corners of Main Street (from Lombard to William Stephenson Way) offer opportunities for commercial infill and mixed-use development with the adjacent RDIZ-E zone. This area has the potential for an additional 40 stories of commercial space (2,500 m2 per floor) either as standalone buildings or as components of mixed-use developments.

- 2. Develop a grocery store/food and wellness commercial centre as an anchor for the development. This development must be located to efficiently serve both the daytime Portage and Main office workforce and residents. Develop linkages to the Patterson Global Food Centre, Richardson's International and AKI foods.
- 3. Develop a financial plan to capture the value and new revenues collected from restored street level retail and infill residential development and use it to offset the cost of repairing the Portage and Main Circus and the elimination of "spur line" street configurations.

4.7.4 Foundational Projects and Analogues

7A. Westbrook Transit Station/Corridor

Develop a rapid transit station and mixed transportation corridor on Westbrook to be situated near the intersection of Portage Ave East. Route some of the Transit Master Plan's north-south Transit /Rapid Transit routes to Westbrook. Develop an efficient two-way centre lane transit hub.

 Work with Winnipeg Transit, property owners, businesses, active transportation, and resident groups to develop a multi-route rapid transit corridor and N-S/E-W transit hub near Portage and Main.

Construction Target:	Station: 5 Years
	Corridors: 10 years
Objectives and Principles:	MC CP RA
Completion State:	

Westbrook Street is a major rapid transit corridor with a central transit hub and transfer station, reducing vehicle concentration and volume pressures on Portage & Main.

12\$ Value Planning Value Planning

7B. Grocery Store & Health Retail Co-development

Co-development of a food and wellness innovation cluster within a residential development. Centered on a grocery store and the retail services required for a complete community east of Main. Built in proximity to the office towers at Portage and Main, it will leverage a large worker customer base in addition to the growing residential population. A grocery co-development in this transit & residential hub will significantly begin to resolve the food desert in the downtown core.

 Develop the partnerships needed to realize grocery, wellness & other essential services, including CentreVenture, Economic Development Winnipeg, developers, property owners, residents and community organizations.

Construction Target:	5 Years
Objectives and Principles:	CB CI CP

Completion State:

A thriving grocery store, affordable food, and accessible health and wellness services at the centre of a new transit oriented development. This project should be leveraged as a foundational component of the Portage East RDIZ



7C. New N-S Connector

Create a pedestrian-scale connector with a new north-south roadway running from William Stevenson Way to Bannantyne Ave. This reduces oversized blocks to become walkable, provide greater circulation and reduce pressure on parallel streets, including reducing vehicle traffic on Westbrook transit corridor.

 Work with Winnipeg Public Works, Transit, property owners, businesses, active transportation, and resident groups to create optimized walkable sized blocks, better vehicular and pedestrian circulation that prioritizes street level commerce.

Construction Target:	5 Years
Objectives and Principles:	MC CP RA
Completion State:	

A north – south through street for the new Portage East residential and commercial neighbourhood. This is a shared street with pedestrian & cycling spaces and 30km speed limit. Ample space for patios & retail.

7D. Portage East RDIZ

Create a residential neighbourhood east of Portage and Main that is priced for a broad mix of incomes and providing housing for the district's workforce. Includes affordable and market housing and retail services. The development leverages its proximity to the Exchange District's neighbouring precincts' cultural amenities, the Forks, baseball stadium, SHED, new rapid transit lines and the city's largest employment cluster.

 Work with local leaders, property owners, residential developers, businesses, CentreVenture, Economic Development Winnipeg, the Downtown & Exchange District BIZs and affordable housing organizations.

Construction Target:	5 years: 750 Units 10 Years: 2800 Units
Objectives and Principles:	CB CP RA
Completion State:	

A residential mixed income community of 4000 residents and 2,800 residential dwellings units (400,000 square meters). At least 8 of 20 potential building sites & nine possible building conversions have been completed.



7E. Portage Avenue E / Notre Dame Greenway

Develop Portage Ave East as an East-West Transit & Active Transportation Greenway with a driveway for hotel/commercial access. Route East-West Transit /Rapid Transit routes to and from the Westbrook Transit Hub to Portage Ave West. Create a green tree-lined corridor that connects across the north side of Portage Avenue to the west side of Main Street. Portage Avenue East is a priority street for people, transit and active transportation.

 Work with Winnipeg Transit, local landowners, businesses, active transportation, and resident groups.

Construction Target:	5 Years
Objectives and Principles:	MC CP RA
Commission Chates	

Completion State:

Portage Avenue East is a transit link and green corridor with a central transit station. Vehicle concentration and volume pressures on Portage & Main are reduced. Strong links to the Red River, East Exchange, St Boniface and The Forks are established.

7F. Green Co-development RDIZ

The focus of this RDIZ is to further advance green buildings as co-developments with existing buildings—especially those with architectural and historic value. The mix of durable buildings and empty lots and parking lots creates an excellent opportunity for green infill using the new tech of infill to re-purpose and restore existing buildings.

 Work with green building innovators, green tech companies, local landowners, businesses, active transportation, and resident groups.

Construction Target:	5 years: 750 Units, 10 Years: 1500 Units
Objectives and Principles:	CB RA CI CP
Completion State:	

A residential mixed income community of 2000 residents and 1,500 residential dwellings units. These units would utilize green tech, passive buildings design and available zero GHG and zero waste technologies, fuels and materials

7G. Walker Square

Acquire the old Methodist church site for a major high design downtown public square and outdoor entertainment venue. Create square with an outdoor stage, public art, & amenities essential to an event hub, and pedestrian destination which provides a corridor between the SHED & Old Market Square. This park will be a net zero waste and GHGs facility.

 Engage key partners and property owners to develop a major public place & pedestrian/cultural corridor and create a management partnership in connection with the Arts Festival Campus.

Construction Target:	10 Years
Objectives and Principles:	CP CB

Completion State:

Complete Construction of an outdoor, cultural & sports events venue linked with the Arts Festival Campus. Introduce sustainable energy, water technologies. Create a programming partnership to manage indoor & outdoor coordinated events, community celebrations.

4.7.5 Value Uplift

The Connection and Intensification Precinct includes two Residential Development and Intensification Zones – one centered on a pedestrian corridor along Arthur Street connecting to the proposed development of Walker Square adjacent to the Burton Cummings Theatre, the other centered on a high order rapid transit spine along Westbrook, featuring new roads and pedestrian corridors to break up the large surface parking lots to create attractive development sites withing a walkable block grid. The precinct could see the addition of nearly 4,000 additional residential units and a significant generation of additional property tax. Business tax would be reduced as a result of the conversion of the parking lots.

CONNECTION + INTENSIFICATION PRECINCT Uplift Summary 20 Year Cumulative		
Property Tax	\$18,242,508	
Business Tax	-\$5,642,025	
Residential Units	3,760	

5.0 COMMUNITY BASED ACTION PLAN



While the Exchange District Community Investment Strategy provides the high-level contours for investment and the broad-scale calculations that demonstrate the value-uplift potential, it must still be translated into an action plan with finer-grained development plans, specific calculations based on proposed investments from all sectors at the precinct level, and a strategic understanding of how to specifically sequence each.

This will require bringing together the various partners described throughout this report to agree upon a governance model and undertaking the following next steps in developing a Community Based Action Plan:

- Establish a priority sequence for foundational projects, factoring in how each multiplies the success of the others, the readiness of specific partners involved, and the degree of impact to be achieved.
- Create specific development plans and infrastructure projects according to the priority sequencing that includes final costing and refined value-uplift calculations to establish net ROI.
- Establish a refined series of "Success Metrics" for each foundational project and precinct plan, aggregating them into an overall reporting tool for evaluation over time. These should include both value uplift and sustainability indices as well as broader metrics of interest to community, investors and partners at varying levels of government.



5.1 Community Investment Strategy to Action Plan

A Community Based Investment Strategy requires the necessary conditions in place to foster successful, seamless implementation. The essentials conditions include:

- 1. An organization with the sufficient capacity, agency and authority to:
- Authorize the necessary projects.
- Achieve public trust by demonstrating the competency, relationship-building and imagination required to manage the strategy's implementation.
- Access the funding and resources sufficient to deliver its mandate.
- Administer incentives and tax credits, borrow and lend money, own property, buy and sell property, evaluate and review TIF proposals, and model the public and private returns on investments of plan projects.
- Work with the City Government as a shareholder, preferably through the Office of the Mayor.
- Help navigate the relationships between both public and private sector organizations.
- Facilitate negotiations between agencies and private developers to expedite approvals.
- Advocate for the community's interest by making recommendations for strong representation among its board members.
- 2. A clear community-based investment strategy with these characteristics:

- It is complete, includes all functions and assets, and is responsive to the variables which are consequential to city building.
- It is built from an understanding of people and place and leverages unique characteristics, resources, and culture to generate specific advantages and unique opportunities.
- It is legislated and budgeted so that the investments and their expected returns are made transparent with an implementation strategy locked-in to provide certainty that de-risks private sector participation.
- It is built around clearly defined precincts, and action plans for each one. The precinct approach, by defining a community of interest, fosters sustaining engagement through implementation and ensures accountability for the measurement of results.
- 3. A coherent investment plan, built from the strategy, which is evidence based and meets these criteria:
- Every consequential project and initiative in the plan is modelled to determine expected outcomes and delivery time.
- Context and project sequencing are built into the plan. Foundational components and their investments are implemented early in the development sequence to catalyze subsequent investments by providing the foundations for success.
- The progress on every consequential plan component is subject to measurement using specific, predetermined metrics built into the plan. Monitoring of these metrics is used to measure progress, identify issues and trigger course correction to maintain focus on the plan's objectives.

- Progress is reported annually with a review and plan update produced every five years. This update will include a reengagement with community members of the precinct.
- 4. A clearly defined and recognized role for the community including:
- Representation on the board and leadership team of the implementing body.
- Fostering broad engagement with all sectors of the community who share responsibilities for the strategy's successful implementation.
- The community, including its developer stakeholders, is charged with ensuring the investment strategy is refreshed at five-year intervals to respond to changing circumstances to ensure the focus remains on community regeneration, sustainability and broadly shared wealth generation.
- Review new planned investments and initiatives as they are proposed, to ensure they serve to strengthen the strategy and protect the investments that have already been completed.
- 5. Champions and Constituencies are expressions of leadership and the roles taken on by proponents, including:
- Champions can be any person or organization who takes ownership of leading and a project to completion. They either offer the resources and funding needed to realize the project themselves or provide the leadership to secure funding from other sources.
- Champions can also be the delivery or change agents

Examples of this include:

- A community coalition delivering homelessness programs, affordable residential housing and outreach projects in a comprehensive plan.
- A co-op developing an expanded car share presence and working on policy to facilitate the expansion of car locations.
- A City Councilor championing a shared street project.
- A business leader championing a new park.
- A developer proposing a major residential infill project including provision for completing a street grid or providing a pedestrian thoroughfare.
- An entrepreneur championing innovative software to promote local business and buy local incentives.
- Constituencies for a project or plan are also important.
 These are the people who live or work in the community, are supportive of community regeneration, study and endorse initiatives that move the strategy forward, or are associated with a group that would benefit from the plan or project. An engaged, informed and activated constituency is critical to the long-term success of the strategy and the investment plans that support it.

5.2 Governance: What is in Place & What Is Still Needed

The City of Winnipeg has recently approved Exchange District Plan 2022 and has launched the development of a new downtown plan that includes the study area. There is an opportunity to incorporate and expand upon the seven precinct actions plans presented in this report in alignment with OurWinnipeg and its supporting direction statements.

Precinct-based development planning is not new to Winnipeg. The Waterfront Drive project illustrated the municipal investment-led approach to community development. Waterfront Drive/ the East Exchange District, Red River College Campus and the Sports, Hospitality and Entertainment District (SHED) were all successful strategic precinct-based initiatives and the Chinatown and Northwest Exchange is now into its construction phase.

Though Winnipeg already has many of the conditions necessary for community-based investment planning, there are a few updates and revisions needed to further facilitate the process.

To achieve the momentum that is needed to sustain a successful community-based investment strategy, the City needs both a critical mass for project support and the timely delivery of projects. These conditions require the restoration of the capacity, agency, financial tools and incentives which properly accommodate market realities and unlock private investor participation. For consideration are the following measures:

- That CentreVenture is assigned as the implementing agency for the development projects contained in the Exchange District Community Investment Strategy, while the Exchange District and Downtown BIZs be assigned the implementing agency for the initiatives within their mandates. Economic Development Winnipeg should play a significant partnership role in supporting this implementation.
- The by-laws which govern Centreventure's ability to create incentives and financial tools should be reviewed and updated to better reflect today's market conditions. The administration, evaluation and decision-making powers of Centreventure's original mandate should be restored and updated according to the review's findings. It should be mandated to make funding decisions on the same basis that allowed the Waterfront Drive and Red River College projects to be successful— that of keeping development decisions separate from policy decisions within the study area.
- Centreventure's current lack of sustained funding is hindering its ability to operate and fulfill its mandate, which includes:
 - maximizing the growth in City revenues,
 - ensuring projects are successfully completed,
 - · building the tax base, and
 - pursuing projects which are aligned with and assist in implementing City policy.

- To meet the development ambitions of this precinctbased investment strategy and realize the new property and business tax revenues which it will generate, it is recommended that:
 - Centreventure's annual operating grants be fully restored, recognizing the revenue-generating function it serves through increasing City of Winnipeg property values and direct assets.
 - The revenues generated from the investments made on CentreVenture-enabled projects be reported annually and reviewed on a 5-year planning and review cycle for adjustments.
 - New net revenue from development projects and infrastructure investments be separately accounted for and reported on. That the practice of banking these proceeds, paying for the development of necessary infrastructure projects and funding incentives that are necessary to secure investments be restored. These funds should not be used for administration.
 - Tax increment financing, grants and incentives be modelled for value-uplift to determine the return on investment for both public and private sector investors.
 That TIFs be considered only when a direct public good or benefit can be measured and attributed to a particular investment. TIFs should only be utilized for developments that need an infrastructure investment in order to be realized and where the new net tax revenues can be used to pay back the City for the cost of the new infrastructure.

- Centreventure's mandate and authority be clarified and updated to include sufficient capacity to meet more ambitious development goals outlined in this plan as well as other Downtown related plans now being developed. These include the ability to fully administer incentives and tax credits, borrow and lend money, own property, buy and sell property, review TIF proposals and model the public and private returns on investments of in plan projects.
- There be a publicly accessible annual general meeting of Centre Venture which is hosted by the City shareholder to report on current progress and future plans.
- Capacity be restored in the Planning, Property and Development Department approximating parity with analogous departments in peer cities.
- The Business Improvement Zones operating within the Downtown be recognized as service-delivery partners, and that relevant City Departments work with them to establish and fund service-delivery models that help to advance the goals of this strategy.





Annex 1: Precinct Profiles

Table of Contents

Waterfror	nt Living Precinct (W) Profile	2
Histo	pry	2
Recei	nt Developments	2
Oppo	ortunities and Challenges	3
Outco	ome of Community Engagement	4
Look	ing Ahead	4
The Rows	Precinct (R) Profile	5
Histo	ry	5
Recei	nt Developments	5
Oppo	ortunities and Challenges	6
Outco	ome of Community Engagement	6
Looki	ing Ahead	7
Education	and Innovation Precinct (EI) Profile	7
Histo	ry	7
Recei	nt Developments	8
Oppo	ortunities and Challenges	8
Outco	ome of Community Engagement	9
Looki	ing Ahead	9
Chinatow	n (CT) Precinct Profile	10
Histo	ry	10
Recei	nt Developments	10
Oppo	ortunities and Challenges	11
Outco	ome of Community Engagement	11
Looki	ing Ahead	12
Connectio	on and Intensification (CI) Precinct Profile	12
Histo	ry	12
Recei	nt Developments	13

	Opportunities and Challenges	15
	Outcome of Community Engagement	14
	Looking Ahead	15
The	Arts Leisure Entertainment (ALEX) Precinct Profile	15
	History	15
	Recent Developments	15
	Opportunities and Challenges	16
	Outcome of Community Engagement	16
	Looking Ahead	17
Ne	eginan (N) Precinct Profile	17
	History	17
	Recent Developments	18
	Opportunities and Challenges	18
	Outcome of Community Engagement	19
	Looking Ahead	10

Waterfront Living Precinct (W) Profile

.

History

The Waterfront Living precinct (W) was the first site of the economic boom which made Winnipeg the fastest growing city of its size in North America at the dawn of the 20th century. The precinct was built in the early 1870s around a railway junction which connected the original Grand Trunk (later Canadian National) and Canadian Pacific transcontinental tracks, as well as many other rail lines leading to St. Paul, Minnesota. These spur lines encroached on the adjacent neighbourhood and directly led to the discontinuous street system which remained until early 2000s. These enduring connectivity challenges, combined with the extensive contamination associated with early industrial development, meant that the Waterfront precinct slowly descended into a Brownfield site throughout the latter half of the 20th century.

Recent Developments

In 2000, Winnipeg initiated a new approach to city building by producing a multi-precinct investment plan which would strategically plan infrastructure and underpin desired developments. This East Exchange Management Plan fostered the creation of Waterfront

Drive, a new riverside community which would reverse the decline of the Exchange District's historic centre by introducing parks, public art, a parkway, mid-rise residential, and mixed-use development with street level retail. This comprehensive precinct secondary plan was the first initiative to be built out of the larger downtown "Centre Plan". Implementing the East Exchange Management Plan became the responsibility of the City's downtown development corporation (CentreVenture) in collaboration with the Mayor's Office. This partnership ambitiously worked to overcome the neighbourhood's intractable challenges, which included insufficient road, water and sewer infrastructure, the loss of the district heating system, a building vacancy rate of over 60%, abandoned buildings and rail lines, serious ground contamination and pollution, a high crime rate and capital flight. These challenges were compounded by the fact that the municipal government had a credit rating on the edge of junk bond status, the highest per capita municipal debt in the country and the highest residential property taxes in Canada.

What happened next was a remarkable transformation of the then-blighted precinct based on two significant changes in the City's approach to planning. First was a decision by local officials to stop trying to put reactive, "band-aid" solutions on individual problems and instead build towards a vision of an ideal waterfront. Second, the city decided to stop looking at the cost of every one-off solution to specific problems and instead shift the focus to planning based on the return on investment from strategic investments. This new approach, which actively grew the tax base in excess of costs, catalysed the infrastructure and residential infill development which was necessary to realize the transformation. The precinct now enjoys a host of self-financed infrastructure, a 180-degree shift in perception of the area (from a "no go" place to the "go to" street in the city), and ongoing development of mid-rise, mixed-use buildings.

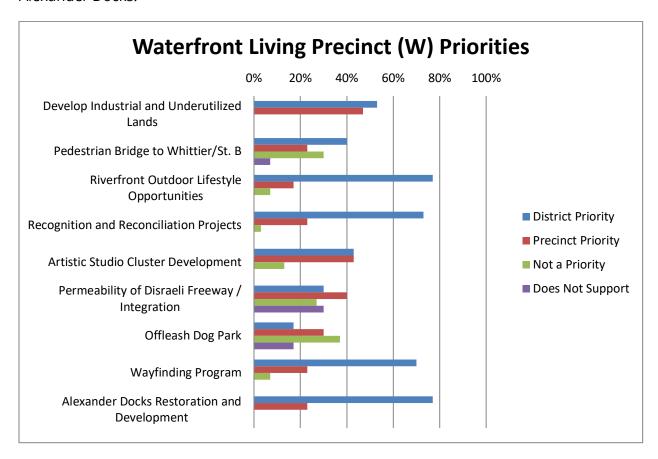
Opportunities and Challenges

Today, Waterfront Drive extends well beyond the blocks in the central warehouse area, and it has opened a stretch of land as far north as Higgins Avenue. This part of the drive includes many underutilized buildings and undeveloped sites, including century old industrial buildings along the parkway and deeper into the precinct. These historic buildings and brownfield sites have historically needed commitment to city plans to attract investment from the edges in towards the centre of the Exchange District. The waterfront also offers many opportunities to integrate the East Exchange District with both Point Douglas and Neeginan by rebuilding historic connections and reknitting the city centre neighbourhoods together. These pathways have been seriously damaged by the construction of the Disraeli Express Way, which has created a significant barrier and put downward pressure on the land values and livability of a once vital commercial and

residential district. By better integrating the Indigenous cultural centres into the larger downtown community, a Waterfront Living redevelopment could make the rich mix of museums and performance venues in the area significantly more accessible.

Outcome of Community Engagement

Engagement with the community confirms that community stakeholders are supportive of improving connectivity and wayfinding, expanding public greenspace and access to the river, and modernizing many of the precinct's currently neglected historic sites including Alexander Docks.



Looking Ahead

While the structured plans, incentives and design reviews that sponsored the success of the initial Waterfront Drive success story are no longer available, the precinct has created a north-south spine that can inspire other connections between the East Exchange District, Red River College, the City Hall campus and the emerging redevelopment of China Town on the west side of Main Street. Integrating these areas by promoting cycling infrastructure, functional transit, and 2-way streets can begin this necessary reconnection initiative in Winnipeg's historic centre.

The Rows Precinct (R) Profile

History

"Banker's Row" on Main Street and "Newspaper Row" on McDermot Avenue and their legacy buildings gave rise to much of the built environment that today still dominate this precinct. From 1880 to 1920 all of the City's major newspapers were located on McDermot Avenue between Arthur Street to Rorie Street, earning the area the name "Newspaper Row." The publications housed on this strip provided the City with crucial information regarding developments in farm technology, science, world events, and politics. This significant concentration of media meant that the corner Albert Street and McDermot Avenue often saw arguments break out between editors of the liberal leaning Manitoba Free Press and the more conservative Winnipeg Tribune.

Intersecting "Newspaper Row," "Banker's Row" runs north-south along Main Street between William and Portage Avenue. The Row's three blocks rapidly developed due to the construction of eleven major regional bank headquarters during the late 19th and early 20th centuries. The sizeable city blocks which supported these historic buildings still maintain several of these impressive and historically important street frontages. With nine of the original bank buildings still standing alongside more contemporary financial institutions like the beautiful terra cotta Confederation Life building, the important role of banking in Winnipeg's development is clearly displayed. In combination, these Rows provided the precinct with an enduring identity and character which continues to this day.

Recent Developments

The vocations of the early Rows have given way to a high-density cluster of unique, locally owned businesses and restaurants which provide the community with a wide array of goods and services. The diversity and authenticity of the firms which are concentrated in this precinct make it one of the largest clusters of restaurants, local retailers, and outdoor patios in the city. The communications and media companies of the print and paper age have been replaced by digital communications, technology, and design industries, continuing the Exchange's role as a centre of Winnipeg's cultural and creative tech sectors. Several government offices now occupy the Hamilton Bank and the Confederation Life buildings, the Union Bank Tower is now the Patterson Global Food Centre of Red River College, the Union Trust Tower is home to a Birks store and a mixture of companies and non-profit, and the Bank of Montreal is soon to be the headquarters of the Manitoba Metis Federation. In the shadow of these successful redevelopments, buildings such as Bank of British North America building lie empty and underutilized. Notwithstanding these enduring vacancies, the shift from banking and financial services to post-secondary

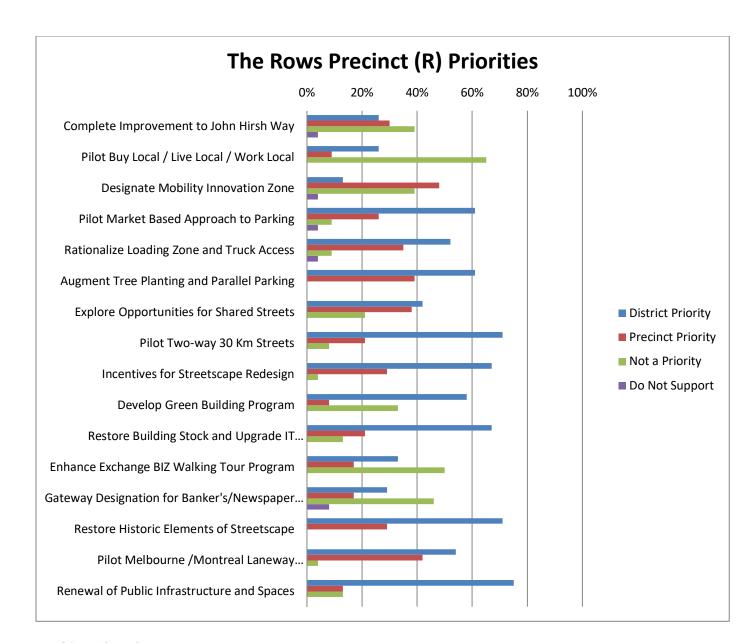
education, government, non-profit and mixed-use redevelopment has been largely successful.

Opportunities and Challenges

The challenge of preserving and interpreting the precinct's historic streetscape has been long-standing challenge and still lacks a cohesive plan, due in large part to the lack of resolution on the Portage and Main reconfiguration. This challenge has also greatly affected many Portage and Main building owners and investors, many of whom are on the public record saying that they need to know the future of this pivotal intersection's pedestrian reconnection before finalizing any further investment decisions. Alongside these challenges are numerous opportunities to modernize much of the precinct's historic infrastructure. The occasional empty lots immediately adjacent to existing buildings provide opportunities for new green buildings to integrate into existing buildings. This process of modernizing historic buildings with new green infill buildings has proved to be hugely successful in places like Toronto, where a city-wide "Tower Renewal" program encouraged significant investment and renewal.

Outcome of Community Engagement

Engagement with the community confirms that community stakeholders strongly value both preserving the Rows' unique physical dimensions and modernizing the infrastructure therein to meet contemporary needs. Specifically, streetscaping initiatives, sustainable infrastructure upgrades, and expanding public space are all precinct priorities.



Looking Ahead

Modernizing these buildings to meet the needs of the digital revolution and to transition towards net zero GHG emissions has created pressures for reinvestment in the precinct's building stock. Given that Winnipeg has run some of Canada's most successful building renewal and infill programs, and the growing demand for precinct renewal, augmenting the influence and visibility of the Rows is a central priority for the Exchange District.

Education and Innovation Precinct (EI) Profile

History

Since 2000, the Education and Innovation Precinct has been prioritized as the City's innovation hub because authentic urban settings are the natural habitat for the creative

tech sector workforce, which generally skews younger. The precinct's flourishing internet firms and technical colleges have relied as much on the incredibly durable and malleable historic buildings of the 1880's as they have on modern photovoltaic cells. The bold leadership and success of late 19th century innovators such as Nicholas Bawlf led the area to quickly become the centre of Winnipeg's business community, grain trade, and farm technology. While this dominance ended in 1908 with the relocation of the Winnipeg Grain and Commodity Exchanges, it has emerged a century later as the launch pad for the new digital economy.

Recent Developments

The precinct is one of three Downtown sites where the City has already completed a successful precinct-based transformation. In 2001, the City provided free buildings and land, along with several million dollars in tax incentives, to develop a Red River College (RRC) campus on the site of the original Grain Exchange. The implementing agency (CentreVenture) ensured that the development built upon the precinct's unique attributes, which include a legacy of agro-tech firms and collection of historic buildings. The desirability of the Princess Street Campus' location and built form contributed to a 30% jump in student participation in programs which were offered downtown, clearly demonstrating the precinct's embedded value.

The RRC has continued to promote innovation and creativity within the precinct, with further projects such as the new innovation centre and the "ACE Project Space" demonstrating this. These expansions helped the Downtown campus swell to nearly 4,000 students, leading to a series of subsequent investments in the surrounding area. These complementary investments in the EI precinct include the restoration of the Union Bank Tower into the Patterson Global Food Centre, the establishment of start-up incubator North Forge, and creative hub Innovation Alley, all of which serve to brand and build out this innovation cluster. Clearly, the RRC provided a significant catalyst for much of the precinct's recent development and provides a solid foundation upon which future value planning initiatives can build. Ultimately, expanding and accelerating these innovation initiatives will help power the Exchange District's continuing success.

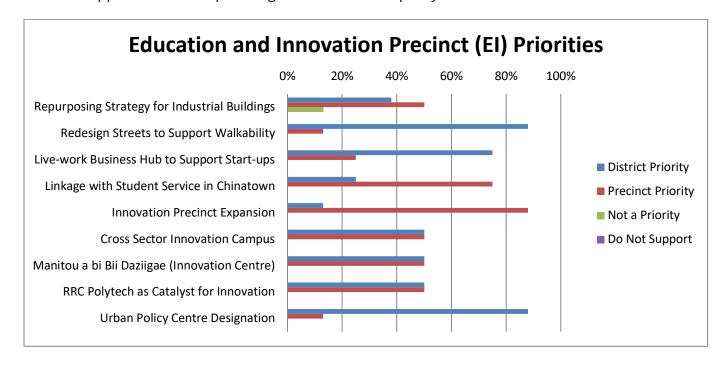
Opportunities and Challenges

The area directly north of the RRC campus contains a surplus of underutilized buildings and surface parking lots, meaning that opportunities for developing community amenities are plentiful. In addition to several beautiful parks and greenspaces, the opportunity to integrate with the adjacent Chinatown Precinct (CP) to extend the innovation-centered infrastructure north towards Alexander Avenue offers exciting potential. The recently announced Creative Hub at Market Lands, which will include the Urban Shaman

Contemporary Aboriginal Art Gallery, Mentoring Artists for Women's Art, Video Pool Media Arts Centre, and Creative Manitoba, promises another opportunity to connect to aligned cultural assets. As well, the bourgeoning cluster of students, tech workers, and entrepreneurs within the precinct suggests that community demand for creating space for starts ups, expanding the creative technology sector and building exciting work-live spaces and residences will increase significantly in the coming years, underlining the importance of strong linkages to the Chinatown Precinct.

Outcome of Community Engagement

Engagement with the community confirms that community stakeholders support both precinct focussed initiative and the development of foundational initiatives which uplift the entire Exchange District, including street redesign to support walkability, development of work live opportunities and pursuing innovative urban policy.



Looking Ahead

Making the right investment decisions is as important today as it was a century ago and will require the same commitment to innovation, risk tolerance and boldness that drove the precinct's original success. The completion of the RRC Innovation Centre and the Market Lands project create a foundation for the next generation of development in the precinct. The investment strategy for this precinct can build on existing grassroots community support to ensure that all future development fulfills the hopes and needs of the growing base of stakeholders.

Chinatown (CT) Precinct Profile

History

Though Winnipeg's Chinatown precinct (CT) is relatively small when compared to other urban Chinatowns in Canada it retains a tremendously rich history and culture. The precinct was born from a settlement of Chinese immigrants in the late 1800s, all of whom hailed from the tight-knit community of Chenshan, Guangdong. Despite the fact that Winnipeg residents were openly hostile to the settlement of Chinese immigrants, this community braved much abuse in order to call Winnipeg home. This hostility was compounded by a suffocating degree of systemic racism, most notably in the form of the head tax, which began a legacy of discrimination towards Chinese Canadians. In spite of these hostile and challenging obstacles, a remarkable and dynamic Chinese business and cultural community emerged on King Street (north of City Hall) which has anchored the West Exchange for decades. Given the barriers to greater immigration faced by the Chinese community over the past century, Winnipeg's downtown Chinatown is a remarkable testament to the strength and resilience of the city's Chinese community.

Recent Developments

Following the abolition of the Chinese Immigration Act in 1947 Winnipeg's Chinese community grew in both volume and area, with the rise of alternative Chinatowns along McPhilips Street and Pembina Highway offering new hubs for Chinese business, housing, and cultural infrastructure. The development of these suburban precincts reduced the relative influence of the historic downtown Chinatown and therefore catalysed the 1971 incorporation of the Winnipeg Chinatown Development Corporation (WCDC). This new organization sought to facilitate the maintenance, renovation, and development of precinct infrastructure to ensure that the community remained vibrant. The completion of several major precinct projects soon followed, with landmarks like the Harmony Mansion and Dynasty Building being completed during the 1970s and 1980s. Despite the efforts of the WCDC, the last 30 years have seen investment in Chinatown decline and the community experience depreciating housing stock, retail occupancy rate, and cultural infrastructure. This escalating situation prompted the WCDC, in conjunction with Winnipeg's municipal development corporation CentreVenture, to undertake a planning exercise to determine the needs and goals of the community moving forward. Published in 2019, the "Development Strategy for the NW Exchange-Chinatown" report is the most relevant document for determining the future of downtown Chinatown.

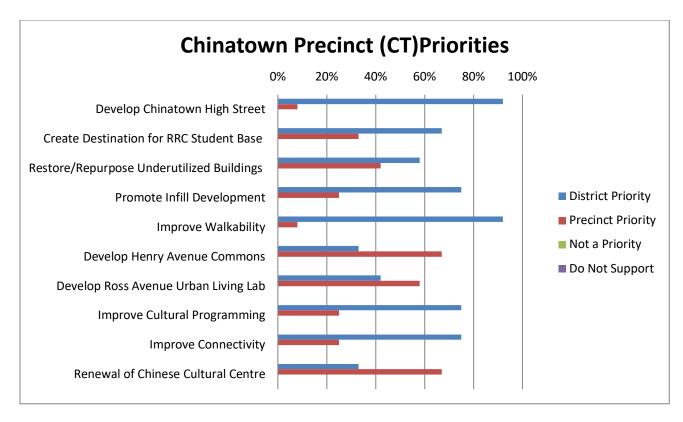
Opportunities and Challenges

Many of the issues raised in consultation sessions with Chinatown residents are endemic to many older neighbourhoods and commercial districts in Winnipeg. For example, a serious lack of appropriately sized, affordable retail spaces (1,500 sq feet or less) and housing options in the community despite empty lots and surface parking occupying key commercial locations. Additionally, the loss of some significant building such the Coronation Block has created a series of empty frontages while many existing buildings continue to be threatened by demolition. The lack of street lighting has also created perceptions of unsafety which, in combination with poor traffic circulation and access have created many "go through" rather than "go to" streets. This summation of damaged infrastructure has created some unpleasant streetscapes and uncomfortable distances between retail businesses, depressing building values throughout the community.

However, Chinatown's prospects for development begin from an advanced stage of planning underpinned by a thorough community engagement process. The report found that Chinatown already possesses a significant number of businesses which are essential for the emergence of a complete community and offer the potential to become a neighbourhood high street for the surrounding West Exchange area. It also suggested that the biggest driver of change and development in Chinatown is the rapidly growing presence of Red River College along Princess Street. This creates numerous opportunities given the growing demand for affordable restaurants, housing, and a variety of services and consumer products from the student population, demand that could be that could be well-served by a revitalized Chinatown.

Outcome of Community Engagement

Engagement with the community confirms that community stakeholders support many of the themes already outlined in the precinct's current development plan, with neighbourhood rejuvenation being supported through affordable housing infill, streetscaping initiatives, and an expansion of community goods and services.



Looking Ahead

While Chinatown continues to face pressure from suburban Chinese cultural hubs, depreciated infrastructure, and poor accessibility, the precinct has already invested enormous time, energy, and creativity into producing a comprehensive plan to guide development in both the short and medium term. This resilience and creativity of this historic community is on display once again and it won't be long until King Street reclaims its rightful place as central hub of the West Exchange.

Connection and Intensification (CI) Precinct Profile

History

Portage and Main originated as a key intersection because of its proximity to Winnipeg's two most important rivers, the Red and the Assiniboine, which have been utilized by Cree and Ojibway communities for centuries. The vast trading and transportation networks developed along this route were central to the area's early development, and eventually came to be the birthplace of the Metis Nation. In 1862, Henry McKenny raised eyebrows when he closed a deal to build his store, and eventually a pub and hotel, at what was then a wet and marshy intersection. His building's alignment with the old river lot boundaries put it at a not quite perpendicular alignment with Main Street, resulting in an odd alignment of streets has endured to this day. The reason this matters is that the inefficient,

problematic, and incomplete street system, is recognized as a significant impediment to investment and remains a central reason why vast expanses of surface lots occupy what should be some of the most valuable urban land in Canada. McKenny's unusual choices seeded a pattern of development that would define these unique corners and engender well over a century of debate on how to best manage them. The connection and intensification (CI) precinct, centered on P&M, is arguably both the oddest and most famous intersection in Canada due to this legacy of unique and controversial thinking in urban design and planning.

Recent Developments

Developing a cluster of high-rise office towers around this intersection was a struggle given the declining retail and commercial environment of the downtown since the 1970s. These pressures led the city to initiate several projects, including the 1976 agreement for the underground concourse and the 1978 closure of the intersection at street level to pedestrians. The original design was an elevated above-ground solution by urban planner Vincent Ponte, however, this plan was rejected, and the final connection went underground. In cities like Montreal or Toronto, concourses are connected at street level in addition to elevated or subterranean connections, greatly improving the range of pathways a pedestrian can take. These developments triggered a multi-decade long search for better connectivity and integration opportunities throughout the precinct. To date, the most serious of these opportunities manifested itself in the form of the Downtown "Centre Plan" of the early 2000s. This plan identified the strengthening of pedestrian connections between various downtown commercial, cultural, residential and activity hubs as essential to the revival of commercial retail and cultural life in the city's high streets. While many of the connections were realized (Waterfront Drive, Esplanade Riel, through cycling routes), the most central and important connecting intersection at Portage and Main is still under consideration.

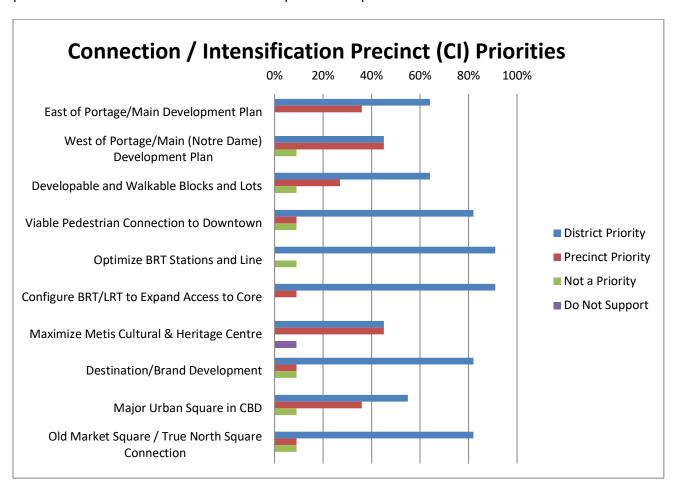
Opportunities and Challenges

The precinct faces many challenges in its pursuit of a precinct redesign which is simultaneously functional, efficient, and aesthetically pleasing. A significant challenge currently facing the precinct is the extraordinarily high concentration of surface parking lots which surround the precinct's few culturally and economically prosperous landmarks. As well, the area faces significant retail pressure from both alternative commercial hubs exacerbated by the recent Covid-19 pandemic, a challenge which is best exemplified by the failure of the downtown Portage Place Mall. Finally, halting the deterioration of the underground circus and replace the exhausted membrane between the ceiling of the concourse and the roadway requires immediate attention and significant investment.

Notwithstanding these issues, the recent creation of a central transit hub adjacent to P&M will immediately enhance access to the area and its desirability as place to live, work, and play. Furthermore, the area between Bannatyne Avenue and Pioneer Avenue now boasts a major new food research centre, while the baseball stadium provides a beachhead for transitioning towards an innovation, technology and entertainment cluster. By combining necessary infill development with basic transportation infrastructure, the precinct can quickly reach its full development potential as a 21st century cluster of businesses, cultural amenities, and housing.

Outcome of Community Engagement

Engagement with the community confirms that community stakeholders support rebuilding the precinct's historically important connectivity and transport systems through BRT/LRT construction and optimization. As well, the community highlighted the importance of the P&M intersection for the entire city and as such emphasized the need to include the precinct in all current and future municipal master plans.



Looking Ahead

This most culturally iconic of Canadian intersections continues to be a defining characteristic of the city's image and its reputation. As many experts have observed, a city's image is most defined by how people experience the ten or so city blocks surrounding the central high streets, making this precinct an essential part of Winnipeg's identity and branding. The development of the investment plan for the Connection and Intensification precinct will have to consider the cultural and historical significance of the intersection's "brand" while improving its functionality and accessibility.

The Arts Leisure Entertainment (ALEX) Precinct Profile

History

The ALEX precinct, home to an unmatched concentration of arts and culture facilities, is centered on Alexander Avenue in the Northeast section of the Exchange District. This area is largely administered by the Manitoba Centennial Corporation (MCC), a Manitoba crown agency tasked with ensuring that impactful development plans are produced, promoted, and implemented. While the Vision and Mission of the corporation do not mention the immediate community, the "History" section of the corporation's website opens with this a highlighted statement:

"(The founders) Roblin & Steinkopf formed the concept of a Manitoba Centennial Centre in 1960 to commemorate Canada's centenary and initiate a broad scheme of urban renewal in Winnipeg's Point Douglas Area."

Though nothing surfaced in our research which examined the MCC's extraordinary "cultural campus" as foundational to the health and economy of the surrounding district, the precinct has developed into one of Winnipeg's most virtuous and authentic neighbourhoods. Ultimately, both the current and future success of this cultural hub is directly tied to the MCC's efforts to pursue progressive urban renewal and economic development throughout both the ALEX precinct and the district as a whole.

Recent Developments

This is one of two precincts with an updated precinct plan which has been initiated but not yet fully implemented, with the other being the Chinatown Strategic Action Plan. This work focused on connections and synergies between the various cultural, commercial, sports and natural assets within the area. It highlighted opportunities for infill residential projects and strong pedestrian connectivity through "living lanes" initiatives. Central to the strategy was the redevelopment of the Alexander Docks site and its connection and contribution to the precinct. More recently, the Centennial Corporation released a redevelopment plan

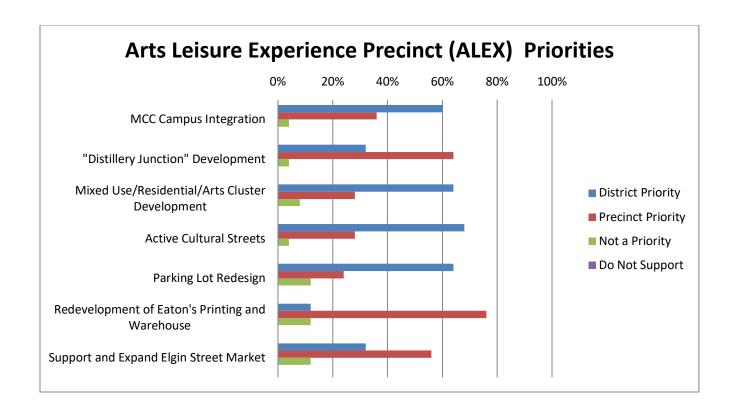
authored by Public City which reimagines the campus by focusing more on building renewal and function than on connectivity to the surrounding community. Both initiatives maintain a strong focus on parking as a priority issue, with the need for a broader range of transportation options in the community a necessary step to ensure that cultural institutions remain accessible. These plans offer many improvements to the campus and present a great opportunity for dialogue with other actors in the area to reignite the original concept of a broad scheme of urban renewal. Finally, food and beverage facilities such as the Nonsuch Brewing Company (2016) and Patent 5 Distillery (2019) are building a strong foundation for an emerging new commercial sector with deep historic roots in the Exchange District. These public facing facilities with beer halls and tasting rooms have brought new life to formerly industrial streets and have provided a launch pad for urban renewal and new commercial hospitality ventures in the precinct.

Opportunities and Challenges

Though the ALEX precinct features all the big cultural venues and assets that are usually difficult to get built, there are many projects still needed in order to realize the full potential of the campus. The formal "expressed cultural" assets such as theatres, concert & performance venues, A-list museums, galleries, film production, internationally renowned artists, actors, and performers are all already abundant. However, the "lived cultural" assets are relatively underdeveloped, presenting opportunities for loft residences, public art installations, patio restaurants, shops and cultural businesses that create consistently vibrant activity. Here, the many open spaces, intersections, abandoned transit vehicle holding sites, waiting areas, and surface parking lots between cultural assets offer ample opportunity for new infill development. Additionally, the nearby waterfront Alexander Docks area is an outdoor public space which would lend themselves to repurposing and are awaiting new designs and investment.

Outcome of Community Engagement

Engagement with the community confirms that community stakeholders support increasing the local residential population and improving the ease of movement within the precinct, suggesting that accessibility remains a central limitation for the precinct's foundational cultural infrastructure.



Looking Ahead

Several buildings and sites offer opportunities to expand midrise residential development to match what has occurred along the riverfront, providing an enhanced customer base for the precinct's many extraordinary assets and institutions. By improving the overall pedestrian experience and connectivity within the rest of the district, it will be significantly easier to attract private investments which can leverage recent public investments in Manitoba's arts and cultural sector.

Neeginan (N) Precinct Profile

History

The Neeginan (N) Precinct we know today is the result of the visionary leadership of the urban Indigenous community who transformed the Canadian Pacific Railway Station into Winnipeg's urban Indigenous core. The name "Neeginan" translates to "Our Place" in English and is now home to a range of Indigenous political, social, and cultural organizations including a health centre, art gallery and many indigenous businesses. Though the precinct maintained a vibrant and dynamic community for centuries, the area's economy started to decline after 1910 when Eaton's opened on Portage Avenue and proceeded to shift the retail centre away from Main Street. At the same time, the mass

immigration that drove the CPRs revenues for decades precipitously dropped off, further contracting the community's opportunities for investment. This trend was temporarily reversed due to a wave of industrial development caused by the explosion of manufacturing and industry during WWII and by the late 1950s most industrial activity was again centered on Main Street and the CPR main line. This post-war economic boom fueled significant growth in the area, leading to a series of infrastructure investments on Main Street which intended to support a north-south "through highway" connecting the suburbs to the city centre. These dynamics led the city to dismantle the street railway system which was centered on Main Street in order to support the area's increasing demand for rail, truck, and commuter access. Though great wealth was generated in the precinct through railway expansion and mass immigration to Winnipeg, the precinct's Indigenous citizens were continuously exploited and excluded from this prosperity and faced a cultural genocide which has persisted through generations.

Recent Developments

The construction of the Disraeli Expressway, which started in 1960, quickly divided the area and isolated it at the same time that the industrial base of the city started a long period of decline. Despite the changing needs of the precinct's economy following the decline of industry in the 1970s, the heavy highway infrastructure which was isolating this part of the city centre remained firmly intact. In 2008, work started on a \$195 million repair and expansion of the freeway with little consideration given to its impact on the future development or livability of the area. Though the Province invested tens of millions of dollars in new cultural, education and recreation facilities on Main Street throughout the 1960s and 1970s, none of these developments provided much benefit for the businesses and residents to the north of the expressway. It is impossible to look towards the future without understanding the area's legacy as Winnipeg's high street of the late 19th and early 20th century, and as the industrial centre of the city in middle decades of the 1900s. What followed was decades of decline and isolation. However, starting in the 1980's, the leadership of the urban Indigenous community created a dynamic vision for the area and has since worked persistently to realize it. That vision forms the foundation of this precinct's development and hope for an effective reconciliation process.

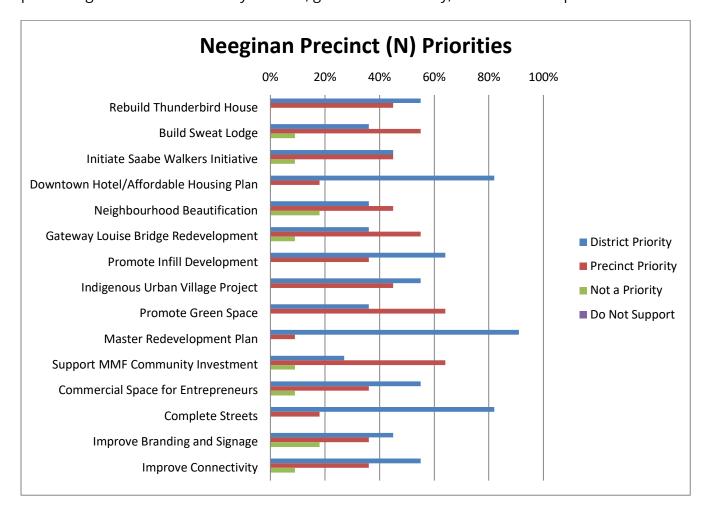
Opportunities and Challenges

Though the decline of the precinct's industrial economy and freeway-driven neglect have substantially depressed the neighbourhood, the dynamism of local leadership such as the Urban Aboriginal Council and the Manitoba Metis Federation (MMF) continues to be displayed. The development of the precinct's remarkable Indigenous campus began with the Douglas Cardinal designed Thunderbird House which includes a wide range of cultural

and community services including a sweat lodge, the Kookum childcare centre, support services and shelters for street involved people. As well, the site is currently in the process of constructing a number of low-barrier housing units to satisfy the needs of community members in need of accessible housing options. Furthermore, the MMF recently purchased the Bank of Montreal Building at Portage and Main and, providing another opportunity for the community to develop essential infrastructure such as housing, a museum or an expansion of their vocational school. Finally, the Main Street Project's current work in identifying community needs and offering practical solutions continues to be a vital community asset which can inspire the developments needed to re-empower the precinct.

Outcome of Community Engagement

Engagement with the community confirms that community stakeholders support promoting accessible community services, greater connectivity, and infill development.



Looking Ahead

While the Neeginan precinct has been overlooked and undervalued by planners for decades, leading to a dramatic decline in community health and vitality, the precinct

possesses an unrivalled creativity and resilience on which an effective community transformation can be built. The stakeholders and community organizations present in this precinct have proven that they are capable of completing remarkable and ground-breaking projects, all that is needed is to utilize this capacity is more coordinated city planning and resources.

Annex 2: Value Uplift Calculation Procedure

Table of Contents

ntroduction to Value Uplift	1
Prepare Base Case	
repare Development Trend Projection	
dentify Current Projects / Proposals	
Prepare Development Vision Projection	
Prepare Value Uplift Calculations	
Prepare Municipal Investment Estimates	
Calculate Return on Investment	4

Introduction to Value Uplift

Value uplift refers to the net increase in municipal assessment and taxes created through new development. Of interest to the municipality is the degree to which any public sector investments that are made (for example, improvements to public streets or spaces, implementation of rapid transit, installation of public art etc.) result in an uplift that returns more in municipal tax revenue than the cost of undertaking the investments (i.e., the return on investment). Positive ROI is a component of ensuring sustainable community development.

The value uplift calculation procedures comprise seven steps:

- Prepare Base Case
- Prepare Development Trend Projection
- o Identify Current Projects / Proposals
- o Prepare Development Vision Projection
- o Prepare Value Uplift Calculations
- Prepare Municipal Investment Estimates
- Calculate Return on Investment

Each of these steps is elaborated below.

Prepare Base Case

The base case was prepared from property assessment records for the study area provided by the City of Winnipeg. These records were then joined to property shapefiles using GIG software. The fields of interest include street address, assessment roll number, land area, building area, zoning, parcel use code, current assessment, property tax and business tax.

Prepare Development Trend Projection

A development trends projection was prepared by growing the assessment of all properties in the study area at a rate consistent with past trends. The trend was developed from assessment summaries provided by the City of Winnipeg (previous twenty years).

A triage assessment was prepared to separate properties into two categories: 1) No Change and 2) Incremental Change (based on development and assessment density).

For properties assigned to No Change, the assumption is that no development / redevelopment of these properties will occur and assessment growth for these properties would be based on market factors alone (i.e., increase in market value assessment / annual rental values). For projects assigned to Incremental Change, it was assumed that assessment growth would occur both from market factors and for some properties, new development. The purpose of preparing the trends projection was not to infer development prospects of specific properties but to produce an aggregate growth in assessment, property tax and business tax (i.e., uplift) to produce the "business as usual" case. In other words, even in the absence of the municipal investments contemplated in the strategy projection, it can be expected that market values will grow and some properties will be developed within the study area – in the aggregate assumed to occur at the same rate as in the past.

The uplift of the trend projection / base case is later deducted from the uplift of the strategy projection to produce the "net" that can be attributed to the strategy investments.

Identify Current Projects / Proposals

A list of current projects (either under construction, with development permits or under active consideration) was assembled from a field survey of the study area (to record construction activity and permitting signs) confirmed by developers active in the study area and augmented by information provided by Centre Venture.

These projects were inserted into the first five-year period of the strategy projection (replacing the trend projection for those properties).

Prepare Development Vision Projection

A development vision was prepared for each of the seven precincts of the study area indicating both the municipal investments contemplated (new roads, implementation of rapid transit service, improvements to public spaces) and new development arising therefrom. The strategy visions articulate around "foundational projects" which have the potential to induce private sector development – muck like the development of Waterfront Drive in the Exchange District induced private sector development of residential and commercial development. The translation of the vision to a property development projection was rooted on the examination of analogues where similar public investments have been made (examples drawn from precinct development orchestrated by Centre Venture Development Corporation in Winnipeg and examples drawn from elsewhere). A summary of the analogues and their uplift is provided at Annex 4.

The precinct development visions (both description and mapped representation) are provided in the Exchange District Community Investment Strategy.

The development vision was then mapped in GIS software with each development site coded onto the property record by type of proposed development and development intensity (height and floor area ratio).

Once coded, the property records were exported to Excel for the preparation of the uplift calculations.

Prepare Value Uplift Calculations

For each property in the study area assessment, property tax and business tax values were prepared for:

- Base Case (drawn directly from the assessment records)
- Trends Projection /Business as Usual (based on historic trends as described above)
- Strategy Projection (development of a sub-set of properties based on precinct visions)

The projections were cast in four five-year increments beginning 2022.

The difference (delta) between the Base Case and the Trends Projection provided the Business- as-Usual value uplift.

The difference (delta) between the Trends Projection and the Strategy Projection provided the uplift attributed to the strategy investments.

Modelling of the strategy uplift was based on an examination of assessment records and the development of uplift factors to generate assessment, property tax, business tax,

development quants (Sq. built space) and residential units based on proposed development type and intensity of development.

Prepare Municipal Investment Estimates

The municipal investments contemplated in the precinct strategy visions were projects imagined by the study team – not projects on the municipal drawing board. Accordingly, no municipal cost estimates were available for these projects. The estimates provided by the study team are indicative only based on a review of analogues. The timing of these investments is also hypothetical.

Calculate Return on Investment

The purpose of developing the uplift calculation is not to "get the number right". Rather, the uplift calculation provides insight into whether the "direction is right". Will the proposed municipal investments provoke a private sector development response sufficient to meet the precinct strategy development visions and generate returns in excess of costs?

The return on investment from a hypothetic suite of municipal investments promoting a hypothetical private sector development response was prepared as a net present value calculation based on four simplifying assumptions:

- The municipality announces early in the first five-year period a firm commitment to the public sector investments to produce sufficient certainty to stimulate private sector project investment planning,
- The municipality arranges sufficient long-term project financing to complete all public sector investments, staged within the first ten years of the projection period, with a 30-year repayment horizon,
- The private sector projected development response for each five-year period is spread evenly through that five-year period.
- o The private sector development all occurs all within a 20-year horizon.

Annex 3: Sustainability Metrics - Measurement

Table of Contents

Introduction	2
Definitions	3
Developing Neighbourhood Scale Sustainability Metrics	3
Metrics and Measurement	4
Economic	4
Population and Dwelling Unit Density	4
Property Assessment and Tax Density	5
Job Density	5
Local Business Share	5
Social	6
Mobility Score	6
Complete Streets	6
Safe Streets	7
Street Condition Assessment	7
Complete Neighbourhood	8
Social Access / Inclusion / Equity	8
Authenticity	9
Environmental	9
Reuse of Building Core/ Shell	9
Implementation of Green Technologies	10
Fuel Switching (Buildings and Vehicles)	10
Vehicle Modal Shift	11
Tree Canopy	11

Introduction

This Annex describes the development and measurement of neighbourhood sustainability metrics, organized into three dimensions: Economic, Social and Environmental. Although organized this way for presentation, many of the metrics pertain to more than one dimension and an improvement in these metrics will induce an improvement along more than one dimension of sustainability.

Annex 2 provides the rationale for the selection of these metrics, providing substantiation why each is considered consequential to creating neighbourhood sustainability.

The City of Winnipeg¹ is planned and designed based on a logical urban structure that focuses growth and change to enhance existing assets, to create complete communities and complete existing communities, and to ensure a <u>socially</u>, <u>environmentally</u> and <u>economically</u> sustainable future through the integration of transportation planning, land uses, built forms and urban design.

In developing the neighbourhood sustainability metrics, we sought to identify a set of characteristics, resources, capacities and potentials that can are both consequential and measurable to form the baseline for tracking indicators of the long-term <u>economic vitality</u>, <u>environmental resilience</u> and <u>social health</u> of the Winnipeg Exchange District neighbourhood.

Sustainable neighbourhoods²:

- are socially cohesive and diverse, with a mix of housing types and employment opportunities
- o give priority to walking, cycling and transit
- o encourage energy efficiency
- o promote efficient use of resources
- have residential areas located close to recreational and commercial services with pedestrian and cycling connections

¹ City of Winnipeg, A Sustainable Winnipeg, https://winnipeg.ca/interhom/CityHall/OurWinnipeg/pdf/ASustainableWinnipeg.pdf

² City of Pickering Ontario Website, https://www.pickering.ca/en/living/sustainableneighbourhoods.aspx#

Definitions

The following definitions were adopted to ensure consistent application.

Dimensions: The metrics were organized for presentation into three groupings recognized as dimensions in many presentations of sustainability indicators, including foundational planning documents of the City of Winnipeg. The three dimensions are: Economic, Social and Environmental.

Metric (in some measurements schemes called a parameter): the name given to the individual property / characteristic that is to be measured (e.g., fuel switching away from fossil fuels).

Indicator: the specific aspect selected for measurement (e.g., non-residential buildings that do not use fossil fuels as their primary heating source).

Unit of Measurement: how the aspect is measured (e.g., number of buildings – or alternately, the number of square meters of space).

Rating: calculated as a fraction with a numerator representing the indicator measurement (e.g., number of buildings not heated by fossil fuel) divided by the denominator (the total number of buildings).

Weighting: the weight assigned to each individual metric (total weight 100).

Target: the desired rating value to be reached.

Index: the degree to which the current measurement has reached the target value (expressed as a decimal with 1.0 indicating the target is fully met). By creating Indices, all metrics can all be compared on the same scale (0 to 1.0).

Developing Neighbourhood Scale Sustainability Metrics

Much of the data that would be useful for developing metric ratings (numerators and denominators) is only collected at the national, sub-national or city scale. The denominators for the Metrix Indices are measures of area or length or numbers of features of either the Study Area, Precincts or Blocks.

Significant effort was made to source data at the neighbourhood scale. Over three dozen metrics were investigated with data being developed for sixteen.

The sixteen metrics for which data is available provided a sufficient basis for tracking progress – but different and potentially stronger metrics can be developed once the requisite data are developed.

In several instances, custom field surveys were developed to collect data that was considered fundamental to tracking progress in moving the Exchange District neighbourhood towards a more sustainable future.

To develop measurements on a consistent basis, the Study Area was divided into blocks (either defined by the street system or formalized pedestrian passageways). Measurements for all metrics was recorded at the block level and mapped using GIS software.

In certain instance the data was available at a scale larger that blocks (such as postal forward sortation areas) and the measurements had to be generalized to all blocks within the larger geography. In other instances, measurements were made at the individual block edges and then rolled up to create a block rating.

What follows is the methodology for collecting measurement data for the sixteen sustainability metrics included in the Neighbourhood Sustainability Index developed as part of this study.

Metrics and Measurement

Economic

Population and Dwelling Unit Density

Indicator: Population and Dwelling Unit Density

<u>Unit of Measurement</u>: Number of people and number of occupied dwelling units

<u>Rating</u>: Total number of people and total number of occupied dwelling units divided by total land area – most recent Census (2021)

Weighting: determined by study team

Target: determined by study team

Index: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The most recent Census counts were available at the level of dissemination area (not dissemination block). These 2021 census counts were prorated to study

area block based on the distribution of the 2016 census. This metric can be updated once the 2021 census counts are available by census block.

Property Assessment and Tax Density

Indicator: Municipal Assessment and Property Tax Revenue Density

Unit of Measurement: Dollars of assessment and property tax

<u>Rating</u>: Total assessment plus total property tax divided by total area of assessed properties.

Weighting: determined by study team

Target: determined by study team

Index: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The most recent assessment and property tax records were provided by the City of Winnipeg and then aggregated to the block level using GIS software.

Job Density

Indicator: Job **Density**

<u>Unit of Measurement</u>: Number of jobs (estimate)

Rating: Total number of jobs (estimate) divided by total land area

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The data for jobs was provided by a private data vendor specializing in business records. The number of jobs is the data vendor's estimate. These data were provided by business address then rolled up to the study area blocks using GIS.

Local Business Share

<u>Indicator</u>: Local Businesses and Jobs

<u>Unit of Measurement</u>: Number of local businesses and jobs (estimate – private data vendor)

<u>Rating</u>: Total number of local businesses and jobs (estimate) divided by total businesses and jobs

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

Notes: The data for jobs was provided by a private data vendor specializing in business records. The number of jobs is the data vendor's estimate. These business data (by address) were then examined by the study team to identify local businesses (businesses owned and operated within the study by Winnipeg residents). This identification was assisted by a listing on the Exchange District Business Zone membership. The local / non-local share was then rolled up to study area blocks using GIS software.

Social

Mobility Score

<u>Indicator</u>: Walkscore / Bikescore / Transitscore

<u>Unit of Measurement</u>: Walkscore / Bikescore / Transitscore scores added together

Rating: Total of three scores added then divided by the maximum of 300

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: Walkscore, Bikescore and Transitscore were obtained from the Walkscore website (https://www.walkscore.com/) for a representative address for each block in the study area.

Complete Streets

<u>Indicator</u>: each block face was scored for thirteen public realm elements (including: width of sidewalk, presence of bike lane, presence of transit stop, two or one way traffic, presence of parallel curb parking, street trees, accessible pedestrian crossing, street furniture, street lighting, bike rack, patios, public art, block length) and the degree of activation of the private realm (blank walls or parking lots vs doors, windows, street front commercial activity etc.).

Unit of Measurement: Scorecard points

Rating: Total of scores for all block faces rolled up to the block divided by the maximum total points

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: A custom field survey instrument was developed to systematize scoring with defined scoring rubric for each element.

Safe Streets

Indicator: Serious vehicle accidents and crime reports

<u>Unit of Measurement</u>: Number of serious vehicle accidents (fatalities, injuries, property damage) plus number of crime reports (incidents of violent crime, property crime and criminal code traffic violations)

Rating: Score points based on reported incidents broken into quintiles

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

Notes: The vehicle accident data was provided by the Manitoba Public Insurance and summarized by block using GIS software. The counts were divided into quintiles to create scores from 1 to 5 with 5 points awarded for the lowest number of incidents. The crime data was extracted from crime maps located on Winnipeg Open Portal and summarized by Precinct based on neighbourhood and incident type. Each block within a precinct was assigned the same score.

Street Condition Assessment

Indicator: Condition of street public elements

<u>Unit of Measurement</u>: Scorecard points

<u>Rating</u>: Each block face was scored based on the condition of the street and sidewalk elements (subjective assessment)

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

Notes: A custom field survey instrument was developed to systematize scoring.

Complete Neighbourhood

Indicator: Availability of Important Services

<u>Unit of Measurement</u>: Resident survey frequency counts

Rating: Of the 70 services residents were asked to indicate availability for (food services, health services, retail services, transportation services, personal services, housing services), 39 were rated as important features of a walkable neighbourhhood by more than 30% of the survey respondents. The rating was based on the availability of these 39 services within a ten-minute walk (i.e., availability according to survey respondents' awareness).

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: A custom web survey was developed with invitations sent out to members of the Residents of the Exchange District association and posted on both the Exchange Biz website and the resident associations website

(https://residentsoftheexchangedistrict.wildapricot.org/). As the survey pertained to the study area as-a-whole, the same score was assigned to all blocks in the study area.

Social Access / Inclusion / Equity

Indicator: Stats Canada Index of Multiple Deprivation

Unit of Measurement: Quintile Scores

Rating: The multiple deprivation index provides quintile scores for seventeen factors organized along four dimensions (residential instability, economic dependency, ethno-cultural composition and situational vulnerability). The best score (lowest degree of deprivation) is a score of 1 for each of the four dimensions (total 4) and the highest (highest degree of deprivation) is a score of 5 for each of four dimensions (total 20). The rating developed for this metric was based on the difference between the score indicated and the minimum of 4.

Weighting: determined by study team

<u>Target</u>: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The quintile scores were available at the level of dissemination areas which were then assigned to the study area blocks using GIS software. Data source: https://www150.statcan.gc.ca/n1/pub/45-20-0001/452000012019002-eng.htm

Authenticity

<u>Indicator</u>: each block face was scored for four elements of "vibe" (including: intact design / cultural landscape, human scale, eyes on street, and retail / restaurant row) and two elements of "virtuosity" (virtuosos places and landmark / reputation).

<u>Unit of Measurement</u>: Scorecard points

<u>Rating</u>: Total of scores for all block faces rolled up to the block divided by the maximum total points

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: A custom field survey instrument was developed to systematize scoring with defined scoring rubric for each element.

Environmental

Reuse of Building Core/ Shell

<u>Indicator</u>: Building construction in the past ten years that re-used existing building elements (core / shell)

<u>Unit of Measurement</u>: Square meters of construction

<u>Rating</u>: Square meters of new construction reusing existing building core / shell divided by the total square meters of new construction.

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The City of Winnipeg provided a list of all building permit records which were examined to determine which permits involved the reuse of building core and shell. The focus was on permits with construction value over \$2 million.

Implementation of Green Technologies

<u>Indicator</u>: Building construction in the past ten years that incorporated the use of green technologies

Unit of Measurement: Square meters of construction

<u>Rating</u>: Square meters of new construction incorporating green technologies divided by the total square meters of new construction.

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

Notes: The City of Winnipeg provided a list of all building permit records which were examined to determine which permits involved the implementation of green technologies. The focus was on permits with construction value over \$2 million.

Fuel Switching (Buildings and Vehicles)

<u>Indicator</u>: Fuel source for vehicles and buildings in the study area.

Unit of Measurement: Primary fuel source.

Rating: Number of vehicles in the study area that are either electric (EV) or hybrid divided by the total number of vehicles <u>plus</u> the number of buildings (residential and commercial) in the study area not being heated primarily by natural gas divided by the total number of buildings in the study area. Total of scores for all block faces rolled up to the block divided by the maximum total points

Weighting: determined by study team

Target: determined by study team

Index: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The Energy source for buildings was provided by Manitoba Hydro and the data on vehicle type was provided by Manitoba Public Insurance. Both data sources were provided based on postal forward sortation areas that were then assigned to the blocks within each FSA.

Vehicle Modal Shift

<u>Indicator</u>: vehicle (non) ownership and car share membership.

<u>Unit of Measurement</u>: the number of licensed vehicles in the study area and the number of members of PegCity Coop (car sharing service).

<u>Rating</u>: An inverse ratio of vehicle licenses to population in the study area plus the ratio of PegCity Coop members to the population holding vehicle licenses in the study area.

Weighting: determined by study team

Target: determined by study team

<u>Index</u>: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The membership data was provided by the PegCity Coop and the vehicle and license data was provided by Manitoba Public Insurance. The vehicle license data was provided by postal forward sortation area and then assigned to the blocks within each FSA.

Tree Canopy

Indicator: summer tree cover

<u>Unit of Measurement</u>: Land surface in study area shaded in summer by tree cover

Rating: Area of tree canopy divided by total land surface of study area

Weighting: determined by study team

Target: determined by study team

Index: Current weighted rating divided by target (expressed as a decimal)

<u>Notes</u>: The tree canopy area was estimated from interpretation of aerial photography.

Annex 4: Analogues

Table of Contents

Pub	olic Realm Improvement	3
Sun	ndance Square Plaza	3
	Project Description:	3
	Project Specifications	3
	Public Investment:	3
	Uplift:	4
	Sources:	4
Mill	er Park	5
	Project Description:	5
	Project Specifications:	5
	Public Investment:	5
	Uplift:	5
	Sources:	5
SHE	ED District	6
	Project Description:	6
	Project Specifications:	6
	Public Investment:	6
	Uplift:	7
	Sources:	7
Wat	terfront Drive	7
	Project Description:	7
	Project Specifications:	7
	Public Investment:	8
	Uplift:	8
	Sources:	8
Bag	by Street Reconstruction	8
	Project Description:	8

	Project Specifications:9
	Public Investment: 9
	Uplift:9
	Sources:9
Par	k East Freeway10
	Project Description:10
	Project Specifications:
	Public Investment:
	Uplift:10
	Sources:
Infil	l Development12
Riverfront Park	
	Project Description:12
	Project Specifications:
	Public Investment:
	Sources:
Sma	aller Lot Development14
Wo	cester Center Galleria – City Square14
	Project Description:14
	Project Specifications:
	Public Investment:14
	Sources:
Bus	Rapid Transit / Light Rail Transit15
	Summary of Observations / Conclusions:
	Sources / Representative Studies17

Public Realm Improvement Sundance Square Plaza, Fort Worth, Texas



https://www.beckgroup.com/projects/sundance-square-plaza/

Project Description: Previously a narrow pedestrian corridor flanked by parking lots, Sundance Square Plaza is a public "55,000-square-foot living room" in the heart of Fort Worth's downtown. The \$13 million Plaza, which is only one part of the broader downtown development project Sundance Square, was a necessary piece of publicly available (though privately owned) cultural and recreational infrastructure which greatly facilitated the connectivity of the City's downtown. Importantly, the Plaza site sits directly aside Fort Worth's Main St, revealing the enormous potential which can be unlocked by ensuring that major city streets are permeable, pedestrian friendly, and open to the public.

Project Specifications: The Plaza itself is 1.37 acres, with 498 public seats typically available (279 movable chairs, 79 cafe-style tables, and 24 seven-foot benches). As well, the Plaza maintains 392 linear feet of seatwalls, which face a permanent performance stage, and 214 outdoor chairs/82 tables from restaurants which have opened storefronts/patios within. Additional amenities include a 3,120 sf programmable fountain, four sculptural umbrellas (which combined create 5,791 square feet of shaded space and light up at night), and 43 native Escarpment Live Oaks and 18 native Cedar Elm trees, all of which provide reprieve from the scorching Texas sun. Importantly, the project eventually included closing.

Public Investment: \$13 Million

Uplift:

- Reduced the peak stormwater flow rate 18.8% by reducing impervious surfaces by 7.3%
- The 61 planted trees combined sequester 6 567 lbs of CO2 annually through, equivalent to the CO2 emitted from driving 7 923 miles in a passenger vehicle.
- Reduces mid-day pavement surface temperatures by 22°F under the structural umbrellas, which have expanded shaded area to 22% of the Plaza, compared to only 7% pre-development.
- The number of people attending events increased, on average, more than 10 times compared to before the Plaza. Average non-event foot traffic now reaches 133 people at a time on Saturdays and 39 on weekdays.
- People generally stay longer at the new Plaza, with a survey of 629 groups (1,991 people total) who stayed in the park longer than one minute finding that 43% stayed for more than 15 minutes, with a 21-minute average length of stay. As well, the average stay for families with children playing in the fountain was 49 minutes.
- The 10 free monthly public events held in the square draw, on average, over 1600 people.
- Improved the quality of life and perception of the City for 88% of 120 survey respondents.
- Retail sales in the vicinity jumped over 20% after the plaza opened.
- In its first six months, the plaza activated over 90% occupancy in two new buildings adjacent to the site and over 275 000 f² of mixed-use development surrounding the Plaza has occurred since its completion.
- Contributed to a 5% increase in per f² sales prices of residential units in Downtown Fort Worth during the first six months of existence.

- Ozdil, Taner R., James Richards, Ryan Brown, Justin Earl, and Dylan Stewart. "Sundance Square Plaza." Landscape Performance Series. Landscape Architecture Foundation, 2014. https://doi.org/10.31353/cs0800.
- https://developingresilience.uli.org/case/sundance-square-plaza/
- https://sundancesquare.com/.

Miller Park, Chattanooga, Tennessee



https://www.architectmagazine.com/project-gallery/miller-park 1

Project Description: Located in Downtown Chattanooga, the 2018 Miller Park redevelopment provided the local community with new and expanded green public event space. The project involved removing an existing park fountain, raising the park to street level, building a new roadway, and constructing an outdoor community stage/venue. The redeveloped park has complimented nearby public infrastructure investments such as Miller Plaza and become a hub for community gatherings and events.

Project Specifications: The 2-acre area includes a public park, roadway, and open public stage.

Public Investment: \$6.1 Million in private investment and \$4.2 Million in public investment.

Uplift: No analysis of value uplift provided due to recent construction.

Sources:

- https://www.architectmagazine.com/project-gallery/miller-park 1.

SHED District, Winnipeg, Manitoba



https://www.stantec.com/en/projects/canada-projects/s/sports-hospitality-entertainment-district-shed

Project Description: The 11-block district was established as the focal point of a city-endorsed Downtown plan which built from the success of the MTS Centre and mirrored downtown revitalization efforts of other major North American cities. The aim was to create a lively mixed-use district that is defined as much by its entertainment venues and mix of complementary uses as it is by the quality of its public realm.

Project Specifications: The public investments included in the project included:

- Upgraded street lighting
- Widening and upgrading of sidewalks for pedestrians
- Enhanced skywalk connections
- Street furnishings, enhanced signage, and public art
- Facade and storefront improvements
- Retail recruitment activities
- A wayfinding system
- Downtown BIZ provides safety, cleanliness, and events programming funded through BIZ levies and corporate support.

Public Investment: Approximately \$30 Million in public investments have been invested in the project.

Uplift: Over \$900 million in private real estate investment has occurred/or is under construction in the SHED over the last 5 years.

Sources:

- https://www.centreventure.com/the-shed.

Waterfront Drive, Winnipeg, Manitoba



https://www.winnipegregionalrealestatenews.com/publications/real-estatenews/4522/waterfront-drive-a-perfect-balance-of-urban-living-and-nature

Project Description: Waterfront Drive was developed as a solution to the high rates of building abandonment, crime, vacancy, pollution and contamination which the East Exchange District's underutilized riverside area suffered from throughout the 1990's. The project's intent was to promote development which would enhance the character of the Exchange District National Historic Site, promote beautification and connectivity throughout the urban environment, and grow City's tax base to cover the initial public investments. By organizing community stakeholders, introducing a collection of new investment incentives, and investing the necessary public funds to decontaminate the brownfield site, the mayor's office was able to catalyze many private investments which are now prominent destinations.

Project Specifications: The project included:

- New 400m roadway (Waterfront Drive).
- >170 new residential units.
- 12 building redevelopments.
- >36 000f² of commercial space.

- Stephen Juba Park.

Public Investment: \$9 Million.

Uplift: Over \$250 Million in private investment has followed the initial public investments and strategy plan.

Sources:

- https://www.canadianurbanstrategies.com/waterfront-drive-mb.
- https://www.scatliff.ca/waterfront-drive.
- https://www.umanitoba.ca/faculties/architecture/media/CiP_2009_Marli.pdf.

Bagby Street Reconstruction, Houston, Texas



https://www.landscapeperformance.org/case-study-briefs/bagby-street-reconstruction

Project Description: Description: A 12 block reconstruction of a depreciated major street in Houston's downtown. Historically, the 4-lane one way throughway suffered consistent degradation due to exposure to extreme heat and 4 large car lanes. The redevelopment, which was the first Houston project to meet *Greenroads'* sustainability criteria, shrunk the street to two lanes (still one-way), significantly expanded tree canopy and public pedestrian space, reduced the rate of erosion/depreciation, and contributed uplifted the value of adjacent properties. Ultimately, this streetscaping redevelopment greatly improved walkability and neighbourhood beautification.

Project Specifications: The project covered 0.62 miles (1.24 lane-miles)/13 city blocks and 175 trees.

Public Investment: \$13 Million.

Uplift:

- Uplift: Captures and treats 100% up to 437 600 gallons in rain gardens.
- Removes 85% of suspended solids, 75% of bacteria, 73% of phosphorous, and 93% of oil and grease from stormwater
- 14% reduction in average sidewalk temperatures due to expanded shade coverage.
- 42% increase in shade coverage in the corridor, with total coverage now reaching 90%
- Development used 25% recycled materials instead of new concrete, avoiding 300 tons of carbon emissions in the process.
- Sequesters 7 872 lbs of carbon and 38 564 gallons of stormwater annually due to the 175 newly planted native trees (42% increase in tree growth area).
- Better accommodates pedestrian needs according to 83% of 345 surveyed visitors.
- 80% of 480 surveyed visitors said the redesign increased safety compared to the street before reconstruction.
- 38% increase in seating and social gathering space and a 276% increase in pedestrian area.
- 13% increase in on-street parking and 42% reduction in pedestrian crossing distance due to transition from 4 lanes to 2.
- Property values of the surrounding buildings increased by 26% (\$53 million).
- Nearly \$30 million in new private investment occurred in the surrounding area a year after the redevelopment.
- In aligning Bagby's irrigation infrastructure with a nearby park the Midtown neighbourhood saw a steady 10% water bill reduction every year since.

- Shearer, Allan W., and Neive Tierney. "Bagby Street Reconstruction." Landscape Performance Series. Landscape Architecture Foundation, 2015. https://doi.org/10.31353/cs1000.
- https://developingresilience.uli.org/case/bagby-street/.

Park East Freeway Milwaukee, Wisconsin



https://www.cnu.org/publicsquare/2020/01/22/park-east-transformative

Project Description: This formerly unfinished freeway development was reconstituted into McKinley Boulevard, a six-lane urban transportation grid which facilitated significantly better connectivity within Milwaukee's Downtown. The freeway had previously meant that commuters could bypass large sections of the Downtown, causing significant neglect and underinvestment in many core area neighbourhoods. Following the redevelopment there has been a significant increase in commercial, mixed-use, and residential infrastructure which has significantly increased the City's tax base and urban density.

Project Specifications: The redevelopment opened up 28 city blocks (26 acres) for new development and investment.

Public Investment: \$45 Million.

Uplift:

- Between 2001 and 2006, the average assessed land values per acre in the area covered by the former Park East Freeway grew by over 180%.
- The average assessed land values in the Park East Tax Increment District grew by 45% during the same period.
- The areas growth is much higher than the citywide average increase (25%) during the same time period.

Sources:

- https://www.cnu.org/what-we-do/build-great-places/park-east-freeway.

Pedestrian Bridge at The Yards Waterfront Park Washington, D.C.



https://www.aisc.org/nsba/prize-bridge-

awards/prize-bridge-winners/pedestrian-bridge-at-the-yards-waterfront-park/.

Project Description: As one of the central public infrastructure investments of The Yards project, this pedestrian bridge has allowed this fast-growing urban infill community to access both sides of the Anacostia River. This development has not only improved community accessibility to necessary amenities such as greenspace, grocers, and entertainment venues, but also maximized the value of foundational district projects such as the district winery and Nationals' Park. By improving the walkability of the neighbourhood, the community's appeal for both residents and new private investment has increased steadily throughout the years.

Project Specifications: The bridge is 200 feet long with an average deck width of 20 feet.

Public Investment: \$3 Million.

Uplift:

- The Yards District has seen the fastest growth in both retail space and residential population in the entire city since the project was initiated.

- https://www.aisc.org/nsba/prize-bridge-awards/prize-bridge-winners/pedestrian-bridge-at-the-yards-waterfront-park/
- https://www.brookfieldproperties.com/en/our-approach/case-studies/the-yards.html

Infill Development Riverfront Park, Denver, Colorado



ttp://www.rfpcommunityfoundation.org/

Project Description: An urban infill community developed on former railroad land in downtown Denver, Riverfront Park is the culmination of a series of public-private partnerships aimed at rejuvenating the City's downtown. While the project has clearly fulfilled a vision of mixed-use development it's clear that residential infill, which totalled an area of 1,126,431 ft2, was prioritized over the construction of new retail/office space, which amounted to still impressive 48,553 ft2. This former brownfield site now boasts considerable community infrastructure, greenspace, and population and has been central to Denver's 21st century rejuvenation.

Project Specifications:

- 1 126 431f² of residential space (1859 units).
- 48 553 f² of retail space
- 513 465 f² of parking (4011 stalls).
- 2.2 acres of parks/greenspace.

Total project size: 22.65 acres.

Public Investment: Private construction costs amounted to \$339.5 million, public infrastructure construction costs amounted to upwards of \$15 Million.

Uplift: The ULI report states that as of 2014 "more than \$413 million in home sales have been completed at Riverfront Park, with development costs for these buildings totaling \$339.5 million, providing net income of \$73.6 million thus far to the development partnership." (9) As well, per ft2 home prices are "substantially higher than those in many

adjacent neighborhoods" (9) while commercial rental rates and occupancy now stand in the top 5 percent in the metropolitan area." (9)

Additionally, the 2020 publication of The Outdoor Downtown, Denver's 20-year urban master plan, found that between 2000 and 2017 the downtown population swelled to 20 000 (a 279% increase) while Downtown employment growth outpaced both State and National averages (13.2% between 2010-15). The developments underlying this trend led the U.S. News and World Report to rank Denver as the best place to live in America in 2016, while the same year saw the city reach #1 on Forbes' ranking of places to have a career or business. (15) Importantly, the trends and accolades referenced in the report specifically referenced the Riverfront Park Neighbourhood (Platte Valley) as one of three Downtown neighbourhoods which has promoted "particularly high amounts of development." (15)

- http://casestudies.uli.org/wp-content/uploads/2016/01/Riverfront-Park-PDF.pdf
- https://www.denvergov.org/files/assets/public/parks-andrecreation/documents/planning/the-outdoor-downtown_master-plan-final.pdf

Smaller Lot Development Worcester Center Galleria – City Square, Worcester, Massachusetts



https://www.lmp.com/city-square/

Project Description: An enormous downtown mall built in 1971, the WCG struggled to retain retail tenancy throughout the early 90s due to the expansion of suburban outlet shopping. Upon its closure in 2006, the City of Worcester (in combination with various private investors) demolished the WCG and redeveloped the land into a mixed-use community with plenty of public space to increase density, connectivity, and investment throughout the Downtown.

Project Specifications: The original mall covered an area of 34 acres with 1 000 000f² of retail space and 4 300 parking spaces. In comparison, the redevelopment covered an area of only 20 acres and contained 350 000f² worth of retail space, 500 000f² worth of office and medical research space, 1 000 residential units, 3 900 parking spaces, and 168 hotel rooms.

Public Investment: \$90 Million.

Uplift: The City of Worcester website cites that to date "a roughly \$90 million public investment has generated \$298 million in private development at the CitySquare project site." The same report found that 2 of the on-site buildings, namely the UMass Memorial Health Care Centre and the Unum building, have created at least 1150 jobs combined.

A separate 2020 case study done by the National Association of REALTORS® Research Group found that the CitySquare development "The CitySquare spurred other investments in the area, with a combined total of approximately \$2 billion of private and public

investments into the downtown area." (24). The report also states that since the CitySquare project was initiated "the Greater Worcester Area has experienced an increase in population, job growth, wages, and a reduction in jobless claims en route to becoming the second most populated city in New England." (24).

Sources:

- https://www.nar.realtor/sites/default/files/documents/2020-case-studies-on-repurposing-vacant-retail-malls-05-08-2020.pdf.
- http://www.worcesterma.gov/city-square.

Bus Rapid Transit / Light Rail Transit



https://globaldesigningcities.org/publication/global-street-design-guide/designing-streets-people/designing-transit-riders/transit-networks/

Project Description: The impact of light rail rapid transit and bus rapid transit (both on separated guideways and in mixed traffic configurations) has been extensively studied. Most studies have focussed on measuring land value uplift, principally the uplift in residential property values around stations originating commuter passengers with much less study of the uplift around destination stations in the commercial cores. Only a few studies have looked at changes in land use around stations or attempted to measure business impact. Academic treatments of the subject typically extensively review literature and then summarize results for multiple transit systems.

Summarized below are a few key observations followed by a representative list of references.

Summary of Observations / Conclusions:

- Land value uplift from rapid transit is a product of a bundle of goods: regional accessibility to people and jobs and local accessibility to transit-oriented development,
- 2. Even within modal choice (BRT vs LRT), although generally positive, uplift values vary from one system to the next and from one station to the next,
- 3. By itself, transit infrastructure is not sufficient uplift depends on transit supportive land use policy / TOD (favourable development density and reduced parking), conversion of one-way high-speed roads that provide competitive travel time by automobile, transit signal pre-emption, plus integration of development into station location and design,
- 4. Implementation of rapid transit assists in the creation of a virtuous cycle of mutually supportive pubic and private sector investments leading to higher land use intensity and sustainable mobility patterns,
- 5. Benefits from LRT investments are capitalized over two time periods: first, immediate developer response to sites clearly benefiting from increased accessibility and second, a longer-term response as the area served by transit is slowly transformed,
- 6. Maximum benefit is achieved if the development response is planned integral to transit planning (ahead of the curve), not simply occurring ad hoc in repose to implementation of rapid transit (the case for "value planning")
- 7. Commercial land use intensification is typically focussed on properties closest to the BRT station (100 to 200 meters distant), while residential intensification may occur on properties located further away (up to 500 meters),
- 8. BRT can be used as an initial stage to develop ridership to levels sufficient to warrant the more costly LRT implementation or in combination with LRT in sections of a corridor where significant intensification and ridership opportunities already exist.
- 9. BRT performance can be enhanced with provision of suburban park-and-ride facilities,
- 10. Improved local accessibility to transit stations is enhanced through convenient, pedestrian friendly street connections,
- 11. Without planning control or direct municipal intervention in the form of affordable housing provision, rapid transit can lead to gentrification around stations.

It is not the transit hardware (such as rubber tire buses or transit lanes) that unleash the transformation of land use, but rather sustainable transit-oriented zoning, a sense of place

making, and the effective organization of collective spaces and streetscape that provokes sustainable development patterns.

Taken from: Insights into the Impacts of Mega Transport Infrastructures on the Transformation of Urban Fabric: Case of BRT Lahore.2016. p29.

Sources / Representative Studies

- Higgins, C. D. 2015. A Value Planning Framework for Predicting and Recapturing the Value of Rapid Transit Infrastructure, PhD Thesis, McMaster University. This thesis includes a review of sixty transit systems in North America.
- London Transit Commission. 2016. The Way Ahead: London's Bus Rapid Transit Strategy Business Case (London Ontario).
- Saskatoon. 2018. Plan for Growth. Economic Benefits of Bus Rapid Transit. Transit Plan: Bus Rapid Transit (BRT) Planning & Design September 2018. Attachment 5. This profiles a dozen case studies. Retrieved from https://pubsaskatoon.escribemeetings.com/filestream.ashx?DocumentId=66124
- Khan A., Butt I, and Gull S. 2021. An Appraisal of Socio-Economic and Environmental Impacts of Metro BRT on Surrounding Commercial Activities in Lahore, Pakistan. JRSP, Vol. 58, No 3(July-Sept 2021). Retrieved from http://pu.edu.pk/images/journal/history/PDF-FILES/4_58_3_21.pdf
- Adeel A., Notteboom B., Yasar A., Scheerlinck K., and Stevens J. 2021. Insights into the Impacts of Mega Transport Infrastructures on the Transformation of Urban Fabric: Case of BRT Lahore. Retrieved from https://www.mdpi.com/2071-1050/13/13/7451/htm