

MONTGOMERY

the way forward



Our Team

Inner City Consultants is a group of aspirational student planners at the University of Calgary in the area of urban planning and design in Calgary, Alberta. Consisting of three senior student planners at the School of Architecture, Planning and Landscape, we have a common passion in creating better cities for urban dwellers. Through our practice, we bring forward evidence-based analysis and community-focused design to meet our clients' objectives.





Michael Ge

With a background in Civil Engineering, Michael remarkably balances his time on the team as an engineering consultant and a policy planner. He uses his experience in transportation planning as a way to improve our streets and he takes great pride in helping communities achieve their vision with feasible solutions. It takes special skill to simultaneously accommodate both pedestrians and drivers in a dense urban setting - and Michael did it. In addition to being an absolute foodie, Michael enjoys weekend staycations in his favorite neighbourhood in Calgary - the Beltline.



Gerrit Scheffel

Gerrit is a planner who has ample experience in corporate finance, urban design, and community engagement. His past work in a corporate environment has shaped him to be an effective project manager in taking a high-quality and timely approach with the projects we work on where he utilizes his interpersonal and networking skills. You won't find him in Calgary on the weekends - frequent ski trips to mountains with his family (and the family Yorkie) are what he lives for. After all, there is a reason he lives in Parkdale - it's on a straight road to several of the provinces best ski resorts!



Lilit Houlder

Lilit's foundations in architecture have paved the way to pursue urban planning as her main passion. She has previously worked as a municipal planner in northern Alberta and an urban designer for a private consulting firm. Lilit is a firm believer that cooperation and innovation are an integral part of success in urban design, seeking out like-minded people who thrive to think outside the box. Having made a permanent home in Sunnyside, Lilit has strategically placed herself in the vicinity of one of the best bakeries in the city, and fulfilled her dream of living in a 10-minute neighbourhood.

ACKNOWLEDGMENT

THANK YOU!

A sincere thank you to our steering committee members for their time and offering valuable feedback for this project. Additionally, we would like to thanks the University of Calgary, The City of Calgary and the Montgomery Community Association for their support on this project. We also appreciate the public for their participation during the community engagement process.

Steering Committee

Montgomery Community Association

Janice Mackett (Planning Committee Chair) Marilyn Wannamaker Laura Kornfeld Neal Greywall

University of Calgary

Professor Francisco Alaniz Uribe

The City of Calgary

John Hall

CivicWorks

Ben Bailey







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EXECUTIVE SUMMARY

THE BIG PICTURE

The community of Montgomery is an established inner-city neighbourhood in northwest Calgary. Situated along 16 Avenue (Trans-Canada Highway), a major regional transportation corridor, Montgomery is the gateway to Calgary from the west and also the gateway to the Rocky Mountains from the east. Montgomery is located on the Bow River and enjoys amenities like the Regional Bow River Pathway and Shouldice Athletic Park.

As Montgomery continues to age and the City of Calgary seeks to densify established neighbourhoods, the community has been experiencing consistent redevelopment pressure. The Montgomery Community Association has partnered with the Federation of Calgary Community and the Master of Planning Program at the Faculty of Architecture, Planning and Landscape at the University of Calgary to create a land use concept plan for the community between January and April in 2020.

Through the study process, Inner-City Consultants has worked with the community to create a land use concept plan for the future of Montgomery - The Way Forward. The plan is guided by five key planning and design principles:

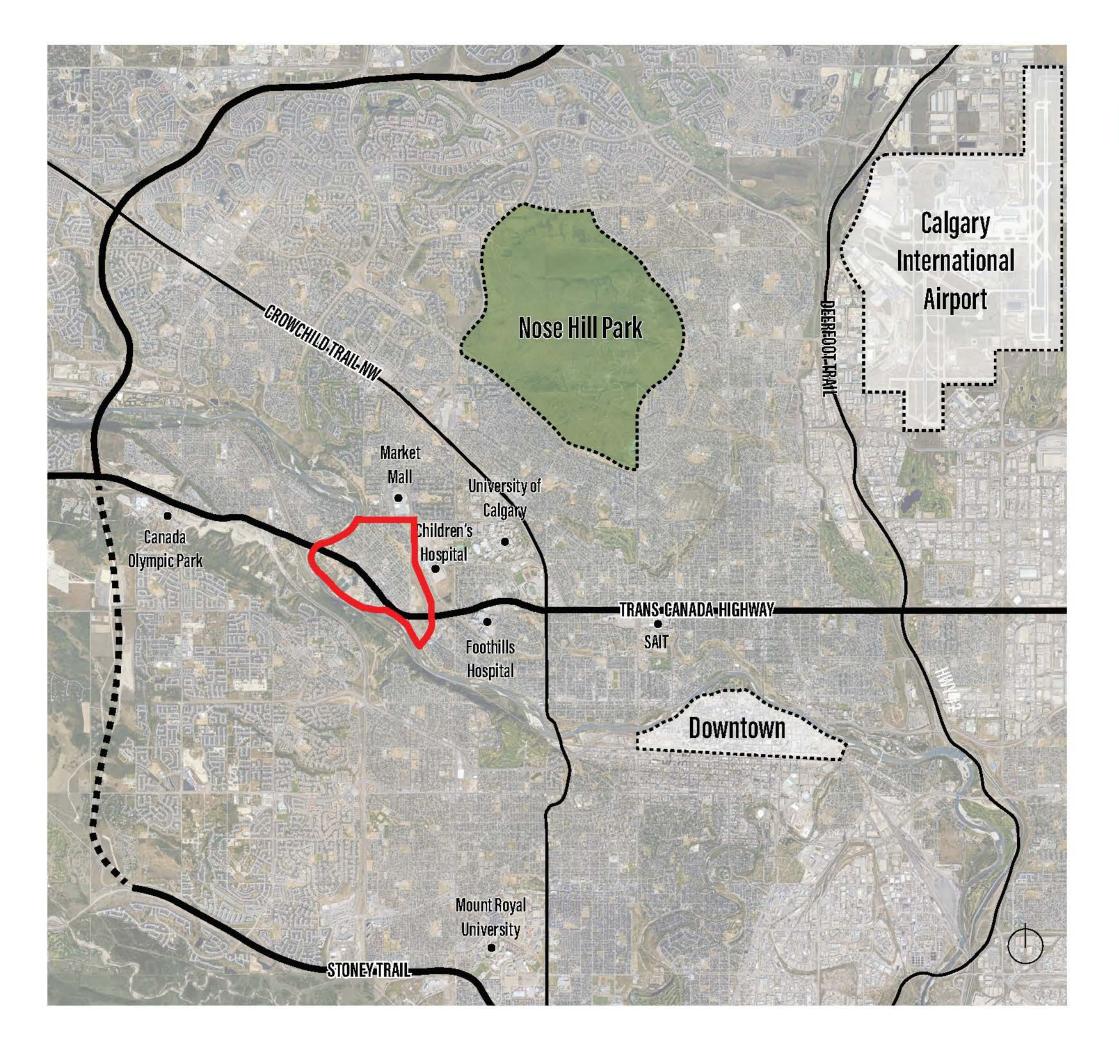
- » Memorable Open Spaces
- » Strategic Community Growth
- » Vibrant Main Streets
- » Reinvented Town Centre
- » Multi-Modal Connections

The evidence-based and community-focused study process includes several key components:

- Community analysis of policy, history, demographics, environment, mobility, and land use;
- » Public and community engagement;
- » Community vision, principles, and strategies;
- » Design concepts for open space, mobility, land use, main streets, and town centre;

This report documents the study process along with our findings, recommendations, and conclusions that can be used by the community of Montgomery. We believe it will help contribute to an even better Montgomery in the future.

context



CONTEXT

This study is an academic project from the Faculty of Architecture, Planning and Landscape at the University of Calgary, but at the same time it is also a real-world project, which can be used by the community of Montgomery to guide their long-term planning and growth endeavors. From January to April 2020, Inner City Consultant worked with the project steering committee, the community association and the community members to the community's vision and design concepts with policies and strategies for implementation.

At Inner City Consultants, we value the lived experience of urban dwellers and strive to improve the quality of life through an integrated approach of land use planning, urban design, effective mobility and meaningful engagement. Our mission is to create a community for everyone.

Montgomery is an established community located along the Tran-Canada Highway. It is about 6 kilometers away from Calgary downtown and 120 kilometers away from Banff National Park. As an inner city community in the northwest quadrant of Calgary, it is close to many regional and local destinations and facilities, including Calgary International Airport, Nose Hill Park, University of Calgary, Canada Olympic Park, Foothills Hospital, and others.

Enclosed by Shaganappi Tr to the east, the Bow River to the west and south, and 32 Ave to the north, Montgomery was established as a hamlet before being annexed to Calgary in 1963. Mostly built out in the 1950's, the community experienced population loss between mid 1960's and early 2000's due to a demographic transition from families to empty nesters. Currently, Montgomery has about 4,000 residents with low-density housing (single detached, semi-detached, and duplex) accounting for over 80% of the housing stock. However, the population is projected to increase by 50% by the year 2040 due to an influx of new residents.

Situated by the Bow River, Montgomery offers excellent views and great recreational amenities. For instance, the Shouldice Park provides residents and visitors opportunities for active outdoor recreation.

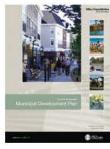
LEGAL FRAMEWORK

Several statutory and non-statutory documents from The City of Calgary were reviewed to understand the legal and policy framework that applies to Montgomery. The documents include the Municipal Development Plan, Calgary Transportation Plan, The Guidebook for Great Communities, South Shaganappi Community Area Plan, and Montgomery Area Redevelopment Plan.

STAKEHOLDERS

Stakeholder engagement was a key component of this project to develop the community design concept for the community of Montgomery. Through stakeholder engagement, we received valuable feedback and diverse ideas from the community, which helped shape our vision and design interventions for the community. For this project, the following were identified as key stakeholders:

Montgomery Community Residents Montgomery Community Association Federation of Calgary Communities The City of Calgary Developers and Local Business Owners



MUNICIPAL DEVELOPMENT PLAN (MDP)

One of the strategic goals for Calgary's developed communities is to shape a more compact urban form (MDP Volume 12.2) by intensifying and diversifying Major Activity Centres (MAC) and Main Streets, as well as encouraging transit oriented development. Categorized as a developed community, Montgomery is one of the inner city neighbourhoods that is facing redevelopment and intensification. Additionally, the community is close to what MDP defines as a Community Activity Centre (Market Mall) to the north and a Major Activity Centre (University of Calgary, Foothills and Alberta Children's hospitals) to the east.

CALGARY TRANSPORTATION PLAN (CTP)

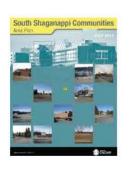
Bowness Road is an integral road for Calgary's future, serving the city's Primary Transit Network as well as being designated a Main Street and a Neighbourhood Boulevard to support retail and mid-density residential developments. Parallel to Bowness Road is the Trans-Canada Highway, an Urban Boulevard providing transportation connectivity to the surrounding communities and activity centres. Stretching along the north bank of the Bow River and on the south edge of the community, the Bow River Pathway serves as a Primary Cycling Network for both commuting and recreational purposes. This community has two main streets running through its core with Bowness Road envisioned for active and pedestrian-friendly streets.

THE GUIDEBOOK FOR GREAT COMMUNITIES (GGC)



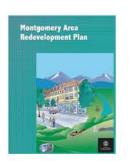
This document, once finalized and approved by Council, will help direct Calgary's future growth and changes for better health, interaction, ecology, economic opportunity and identity. It directs growth to Main Streets and Activity Centres, offers tools to responsibly manage growth along Bowness Road and other key corridors and nodes in Montgomery, and transitions Montgomery from "local" to "minor" housing and commercial levels of activity using urban design principles and policies. Policies on building design and frontage, transition in scale and activity, site design and amenities will help shape Montgomery's future.

SOUTH SHAGANAPPI COMMUNITY AREA PLAN (SSCAP)



As part of the SSCAP vision, eight communities, including Montgomery, are set to become sustainable, low carbon, diverse, and mixeduse by 2040. Presented are interventions to future population growth including increase in the diversity of housing typologies and jobs, and an increase in community amenities and educational facilities achieved by utilising the Major Activity Centre (University of Calgary) east of the site.

MONTGOMERY AREA REDEVELOPMENT PLAN (ARP)



The ARP for the community of Montgomery seeks to preserve its small town character by maintaining low-density housing to the north of Bowness Road, while adding moderate density to the south of Bowness Road. Boasting three commercial zones (Trans-Canada Highway Commercial Area, Montgomery Shopping Centre, and Bowness Road Commercial Area), the ARP seeks to revitalize Bowness Road with its Clean & Green concept using traffic calming and street tree planting. The ARP identified three community gateways (southeast and northwest entrances along Bowness Road and Trans-Canada Highway), which must be redesigned to entice throughtraffic and outside visitors.

PROJECT UNDERSTANDING

Since 2006, Montgomery has seen some redevelopment activities, but the community transformation has been slow. This project will take an evidence-based and community-focused approach to look at the past and present of the community and prepare a comprehensive land use concept to address the needs of the community. Through our analysis and community engagement, the preliminary key objectives are defined as follows:

- » Establish guidelines for the appropriate redevelopment and densification
- » Identify and promote character identity that recognizes the community's heritage
- » Enhance mobility and safe linkages for pedestrians
- » Assess options for enhancing the community's open space system
- » Create strategies for housing redevelopment with focus on diverse housing types

A few key issues were identified in this stage for the community of Montgomery to facilitate the community analysis and strategy developments. They are highlighted in this section.

Community Growth and Redevelopment

In the mid-late 2000s, Montgomery experienced population decline, which led to the closure of the public high school in the community; and not until recently, the population in Montgomery started increasing again. To ensure sustainable residential and commercial growth, it is critical to intensify the community to provide the sufficient resident base for retail success. However, as a primarily low-density community, it is essential to intensify strategically to match the existing small-town feel. Recognizing that there is a higher percentage of low-income population, it is paramount to ensure that the redevelopment strategy increases housing diversity and affordability.

Main Street and Community Identity

Both 16 Avenue and Bowness Road are designated as Main Streets, but both streets are filled with auto-oriented strip mall developments that lack active street frontages. With parking located in the front of businesses, pedestrian safety is threatened by vehicles crossing the sidewalk at regular intervals. With these two streets serving the dual functions of thoroughfare and vibrant main streets, it is critical to balance the needs of movement and placemaking and transform them into high-quality public realm to ensure Montgomery remains a desirable destination.

Community Access and Connectivity

Montgomery is physically segregated from the surrounding communities on most sides. To the west, it was separated by Bow River, with only two roadway accesses of 16 Avenue and Bowness Road. To the south, there is no vehicular access across the Bow River except for a pedestrian bridge. To the east, Shaganappi Trail cuts through Montgomery Hill limiting vehicular and pedestrian access. In Montgomery, wide high-speed roads such as Bowness Road and 16 Avenue create a physical divide between blocks, which becomes problematic in creating pedestrian-oriented main streets.

Safe Mobility for All Ages and Abilities

Within the residential neighbourhood area, the street network generally follows a grid street pattern, providing great connectivity for pedestrians and cyclists. However, 16 Avenue traverses through the heart of the community, which generally acts as a barrier to pedestrians. Walkability has been largely overlooked, especially across 16 Avenue, where only one fully signalized pedestrian crossing was provided at Home Road.

Park and Open Space System

Although the community offers many parks and open spaces, the majority are located on the outer edge of the community, which does not best serve the community residents; for instance, the Shouldice Athletic Park is located on the southern edge, where 16 Avenue acts as a significant barrier for pedestrians, especially people with mobility challenges. A large portion of the open space is also passive open space in nature, such as Montgomery Hill. Other challenges exist in Montalban Park, which is located on a significant slope, limiting accessibility to residents and also open space programming. Therefore, it is essential to create a quality park and open space system in the community that enhances park programming, offers accessibility to all ages and abilities, and creates better pedestrian and cyclist connectivity.







Meeting ★ Open House *****Workshop W Presentation P

METHODOLOGY

Stage 1 Project Initiation

During the Project Initiation stage, we will collect all background data (including GIS data, or tho and air photo data), create base maps (including subdivision, building block, and land parcels), conduct site visits for photo inventory, and review relevant policy framework documents (including Municipal Development plan, Calgary Transportation Plan, Guidebook for Great Communities, and Montgomery Area Redevelopment Plan).

Stage 2 Community Analysis

During the Community Analysis stage, we will take an evidence-based approach to better understand the community of Montgomery. First, we will conduct a guided site visit with members of the community association to identify the issues the community is currently facing. Secondly, we will conduct a thorough scan of the community from different perspectives, which includes the following:

Environmental analysis including topography, flood risk, urban forest, land cover, etc.

Review of the historic evolution through the comparison of historical ortho and air photos

Inventory of land use, housing, building typology, and amenities (park, pathway, school, etc.)

Review of mobility network for all modes of transportation, including walking, cycling, transit, vehicles, as well as goods movement

Evaluation of public realm and walkability including block size, street furniture, street tree, etc.

Socio-demographic analysis of population, its growth, its composition, age distribution, etc.

Lastly, we will synthesize all findings from the site visit and analyses to create a community analysis report, which forms the foundation that will support our design concept in the later stage.

			Wor	kshop	W			3	Presen	ntation	P			j	Report	R
Montgomery: Community Design Concept		January			February			March				April				
	Week Starting	13	20	27	3	10	17	24	2	9	16	23	30	6	13	20
Stage 1 - Project Initiation	ŭ							I.						70		
Base mapping																
Legal framework review																
Photo inventory																
Project schedule		R														
Stage 2 - Community Analysis																
Site visit			*													
Environmental analysis																
Historic evolution scan																
Inventory of land use, housing, building typology, and amenity																
Mobility network review																
Public realm and walkability evaluation																
Socio-demographic analysis																
Community analysis synthesis					Р											
Stage 3 - Community Workshop																
Focus group interview						*										
Build physical model																
Community mapping of issues, opportunities, and constraints																
Host community workshop								W								
Stage 4 - Draft Design Concept																
Land use and density																
Housing													t.			
Public realm and placemaking																
Community main streets and nodes																
Parks and open space																
Mobility network																
Draft design concept presentation to steering committee											P					
Stage 5 - Final Design Concept																
Policy development												*				
Revise and finalize design concept																
Final open house															*	
Design concept documentation																R

PROJECT INITIATION

BASE MAP LEGAL FRAMEWORK REVIEW PHOTO INVENTORY JANUARY 17 BASE MAP

COMMUNITY ANALYSIS

SITE VISIT

ENVIRONMENTAL ANALYSIS HISTORIC EVOLUTION SCAN

INVENTORY OF LAND USE, BUILDING TYPOLOGY, AMENITY

MOBILITY NETWORK REVIEW PUBLIC REALM & WALKABILITY

SOCIO-DEMOGRAPHIC ANALYSIS COMMUNITY ANALYSIS SYNTHESIS

COMMUNITY WORKSHOP

FOCUS GROUP INTERVIEW

BUILD PHYSICAL MODEL MAPPING OF ISSUES, OPPORTUNITIES, CONSTRAINTS

HOST COMMUNITY WORKSHOP

DRAFT DESIGN CONCEPT

LAND USE & DENSITY HOUSING

PUBLIC REALM & PLACEMAKING COMMUNITY MAINSTREETS & NODES PARKS & OPEN SPACES

MOBILITY NETWORK

DRAFT DESIGN CONCEPT PRESENTATION

FINAL DESIGN CONCEPT

POLICY DEVELOPMENT REVISE & FINALIZE DESIGN CONCEPT

FINAL OPEN HOUSE

DESIGN CONCEPT DOCUMENTATION

JANUARY 29 SITE VISIT FEBRUARY 7 COMMUNITY ANALYSIS REPORT

FEBRUARY 12 FOCUS GROUP INTERVIEW
FEBRUARY 25 PHYSICAL MODEL
FEBRUARY 29 COMMUNITY WORKSHOP

MARCH 20 DRAFT DESIGN CONCEPT

APRIL 15 FINAL PRESENTATION APRIL 19 FINAL OPEN HOUSE APRIL 22 FINAL REPORT

INTRODUCTION

METHODOLOGY

Stage 3 Community Workshop

During the Community Workshop stage, we will focus on soliciting community feedback through stakeholder consultation, including a focus group interview with the steering committee and a community workshop with the community residents. To facilitate the stakeholder consultation, we will build a 3D physical model of the community, which will be placed at the community workshop. The identified issues, opportunities, and constraints will be captured during a public mapping exercise, which will guide the objectives of our design interventions in the later stage.

Stage 4 Draft Design Concept

With the identified issues, opportunities and constraints, as well as the design objectives, we will generate the draft design concept which will include several key areas, namely land use, open space and mobility. We will propose a land use and intensification strategy to facilitate sustainable community growth. To attract investment and promote community identity, a public realm and placemaking plan will be created for the community main streets and nodes. We will propose improvements to the mobility network for all modes of transportation. Additionally, we will develop a parks and open space system to enhance the local open space and its connectivity to the regional open space system. These components together will form the draft design concept, which will be presented to the steering committee for review and feedback.

Stage 5 Final Design Concept

With the feedback from the steering committee, we will revise and finalize the design concept and also develop appropriate policies and guidelines to enable the implementation of the design concept. The final design concept will be revealed to the steering committee, other committee members, and the general public in the final open house. All deliverables through this process will be documented including the background data review, community analysis, stakeholder and public engagement, the design process and concept, and the policies for implementation.

ANALYSIS

current state

1914	Land boom collapses and development halts
1943	Named changed to Montgomery
1052	Tarrage David Flomentary Cohool anone
	Terrace Road Elementary School opens
1953	Montgomery Junior High School opens
1958	Montgomery incorporated as town, Safeway opens
1963	Calgary annexes Montgomery
1964	Montgomery Community Association established
1972	Shouldice residence demolished
1975	Bow River Pathway Opening
1976	Pedestrian Bridge to Edworthy Park Opening
1978	Initiation of the Neighbourhood Improvement Program
	0 1
2009	Shouldice artificial turf fields opens
2010	4-storey mixed-use building off Bowness Road built
	·
2011	Montgomery Junior High School closes
2013	Calgary Flood damaged the Shouldice Park

1906 James Shouldice purchases Shouldice Terrace

Hextall Bridge to Bowness opens

James Shouldice residence built, Streetcar opens





RAPID GROWTH

STAGNATION

REVITALIZATION





HISTORY

TIMELINE

Slow Growth (1900s - 1940s)

In 1906, James Shouldice purchased Shouldice Terrace (the name of Montgomery community back then). In 1911, he built his residence at the north end of Home Road, near 52 Street. Although planned for more growth, economic conditions caused development to halt. In 1943, the community changed its name to Montgomery.

Rapid Growth (1950s - 1960s)

In the 1940s and 1950s, the community experienced rapid growth, especially with residential development. In the same era, Terrace Road Elementary School and Montgomery Junior High School opened as a result of the rapid growth and increased population. Incorporated as a town in 1958, the community welcomed a major grocery store Safeway to Montgomery. Near its full buildout, the community had limited capacity to expand, but needed additional sources of revenue to support its municipal services. As a result, through negotiation with the City of Calgary, Montgomery was annexed to Calgary as a neighbourhood.

Stagnation (1960s - 1990s)

In 1972, the Shouldice residence was demolished. During the 1970s, the Bow River pathway and other pathway structures were built as the City experienced an economic boom, which led to continuous expansion of Calgary city limits. As an established inner-city neighbourhood, Montgomery experienced little growth. With the rundown of municipal infrastructure, the Neighbourhood Improvement Program was initiated in Montgomery.

Revitalization (2000s - Now)

During the 2000s, additional recreational and sporting facilities were built in Montgomery. At the same time, the community started to experience infill development pressure as the City's growth strategy shifted to prioritize redevelopment of established neighbourhoods.

HISTORY

EVOLUTION

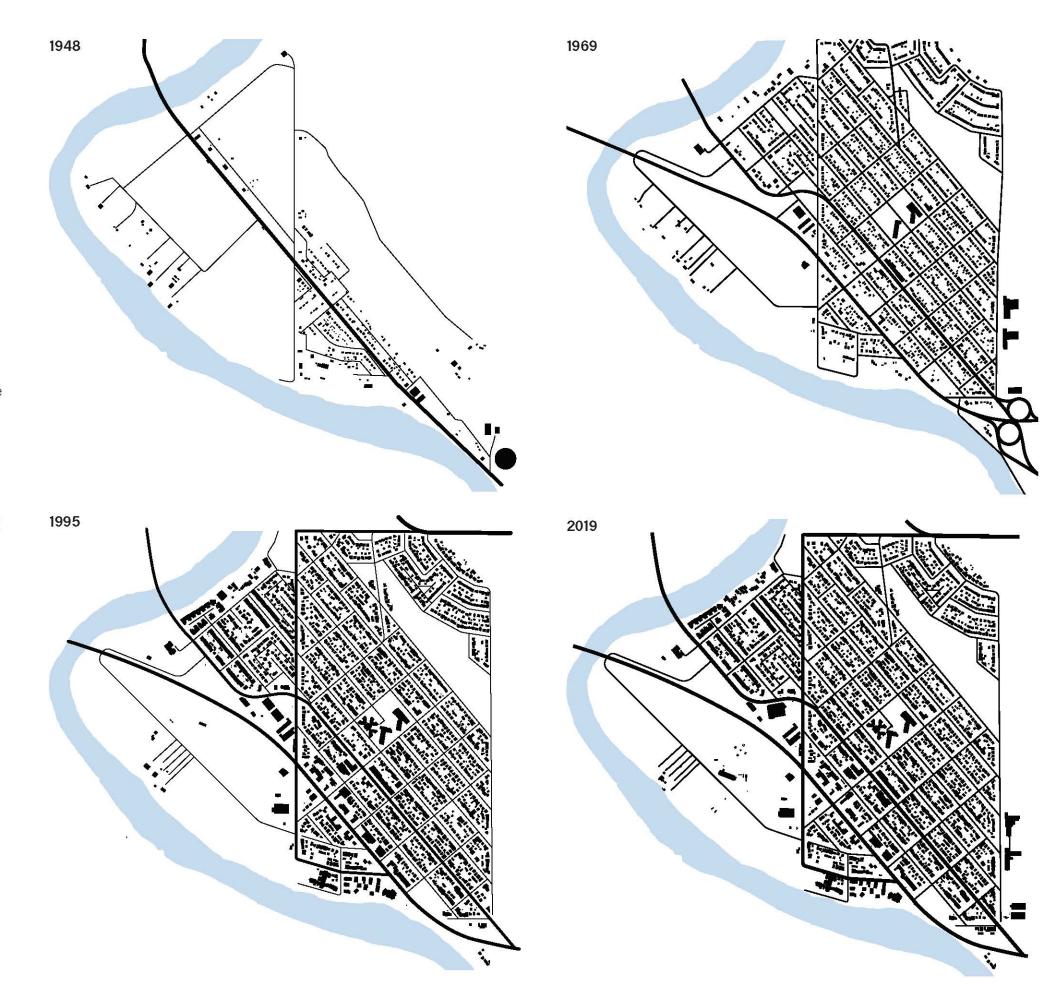
In 1948, the majority of the community was built along the Bowness Road / 16 Avenue corridor. The Shouldice residence was built at the north end of present day Home Road.

In 1969, the community was close to full build-out. At this time, the Trans-Canada Highway / 16 Avenue corridor had been built and Bowness Road was realigned in the community.

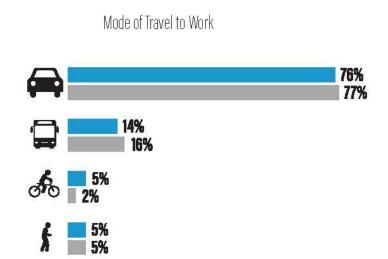
In 1995, further development occurred along and south of the 16 Avenue corridor. Additionally, more development can be seen along the Bow River by the west end of the community.

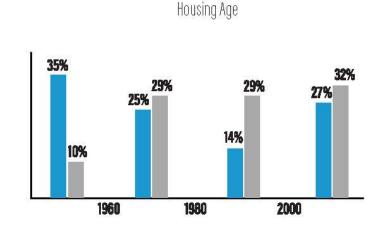
In 2019 we can start to see some signs of community redevelopment near the community centre and also the Shouldice Athletic Park.

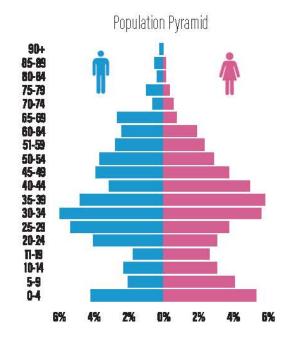
Collectively, it can be concluded that the community experienced rapid growth in the 1950s and 1960s and since then, there has been spots of redevelopment efforts in Montgomery. With many residential dwellings near the end of the building life cycle, the community is standing at a crossroad as to how the community could revitalize.





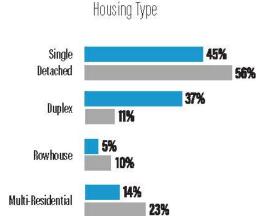


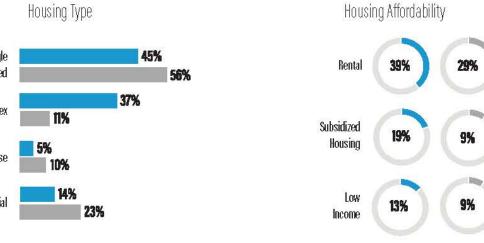












1968

PEOPLE PER HOUSEHOLD



Minority Population

36%

17%

Visible

Minorities

Household Occupancy

1990

2016

Indigenous

31%

17%

Immigrants

PROFILE

DEMOGRAPHICS

This section details the findings of community demographics using the City of Calgary community demographics data from 2016.

Population

Montgomery has a total population of 3,975. The community has a notably high representation of seniors, but the age group of 30-39 still represents the highest proportion of the population. In comparison to the City average, the community has an above average indigenous population, but lower visible minorities and immigrants.

Travel Patterns

Similar to the City average, over 70% of Montgomery residents drive to work. About 14% of residents use public transit as the community has Routes #1 and #305 that travel directly to Calgary downtown. With convenient connections to the Bow River pathway, the community has a higher percentage of people who bike to work when compared to the City average.

Household

The median household income in Montgomery is \$85,000, lower than the City average of \$97,000. From 1968 to 2016, the household size of both Calgary and Montgomery has decreased, with the average household size of Montgomery sitting at 2.2. Digging deeper into its composition, it is found that the almost 70% of households have 2 people or less.

Housing

About 60% of housing in the community was built prior to the 1980s. The higher number of homes built post-2000 suggest redevelopment activities in Montgomery. The community has a higher percentage of duplex and semi-detached housing than the City average. The community also a has higher percentage of rental, subsidized housing and low income, especially in the children and seniors demographics.

ENVIRONMENT

FLOOD & SLOPE

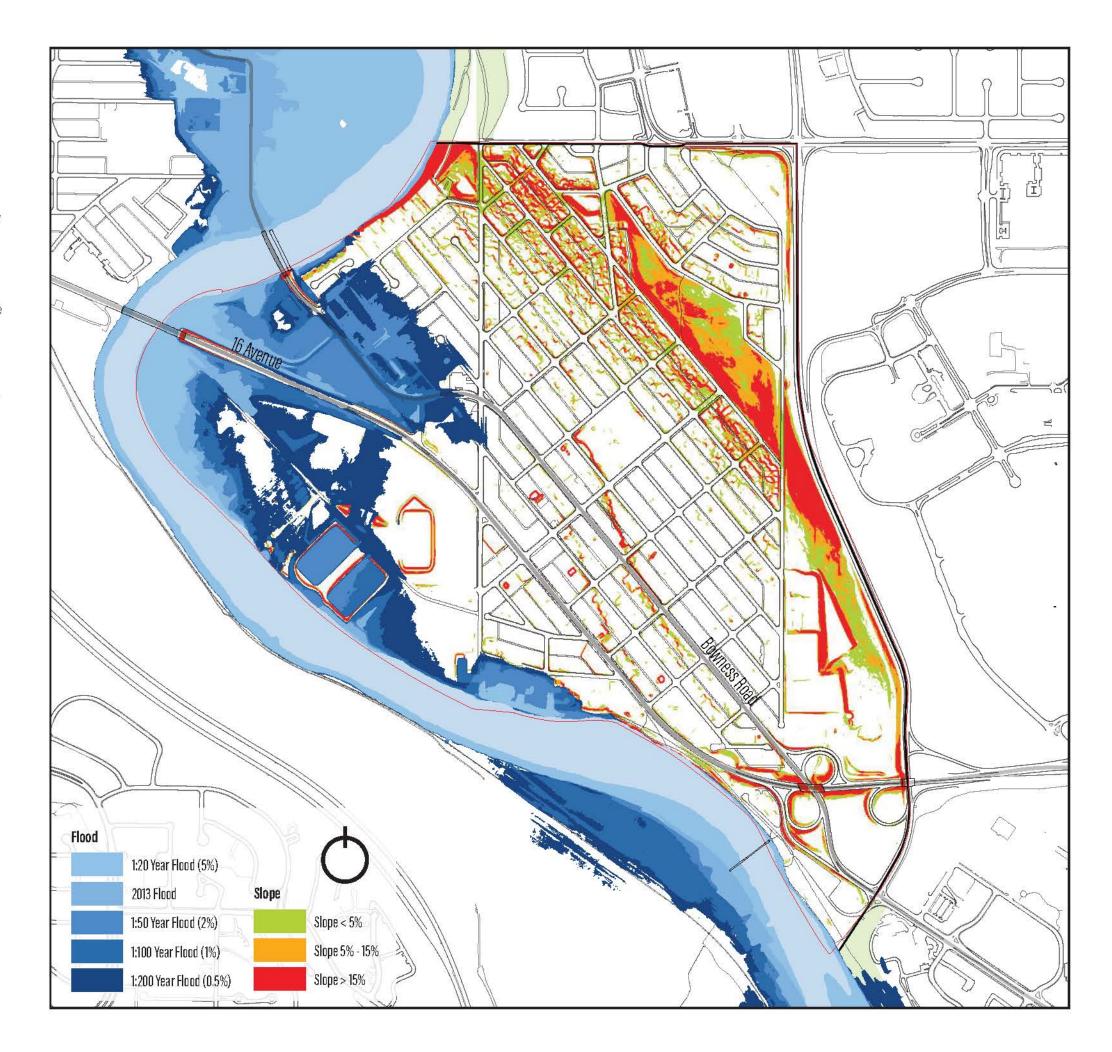
An environmental analysis is an important first step to understanding the key physical constraints and opportunities that face the community of Montgomery. The community is situated along the north bank of the Bow River and runs along the steep northern slope of the Bow River valley. The potential for flooding and presence of undevelopable areas due to slope are fundamental characteristics that inform all future planning decisions in Montgomery.

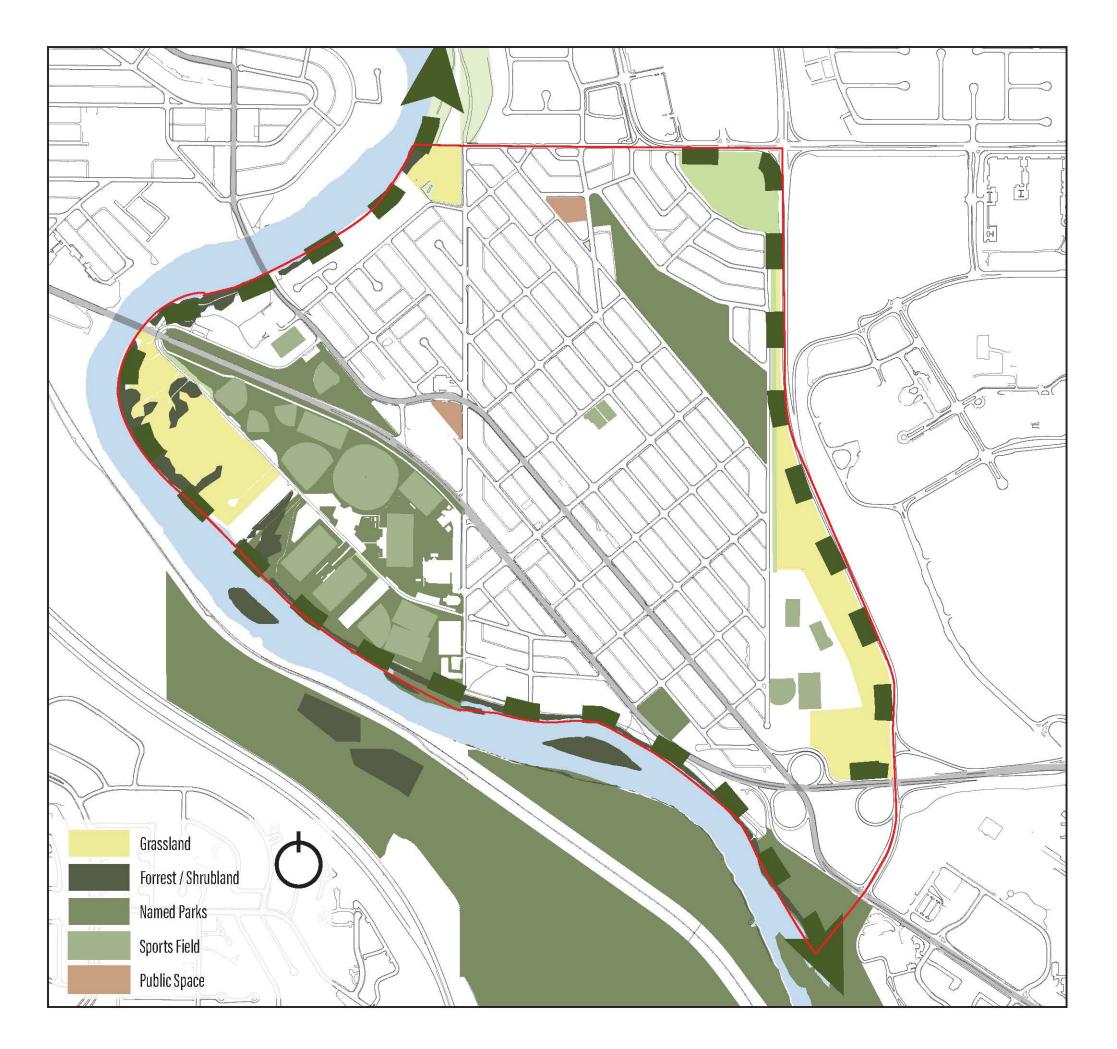
Observations:

- » Most of the flooding will occur within the Shouldice Park boundary which justifies this land use as appropriate and should remain;
- The berm constructed along Montgomery Boulevard is necessary to protect residential development south of 16 Avenue from flooding;
- » Montalban Park and Montgomery Hill are mostly undevelopable due to a slope greater than 15 degrees;

Opportunities:

- » Flood resilient design strategies can be created for future development that may be affected by a significant flood event;
- » Slope adaptive design strategies can be created for future development that is located on a slope;





ENVIRONMENT

OPEN SPACE

Parks and open space are an integral part of the community by providing areas for leisure and recreation, a network of habitat for flora and fauna, and holding important historic and natural resources. We identified and classified the parks and open spaces within Montgomery to gain an understanding of how the community functions and what opportunities it provides residents.

Observations:

- » The river front provides a natural corridor for people to enjoy and for wildlife to traverse;
- » Grasslands and natural forested areas have been maintained along the riverfront and areas of steep terrain to provide a relaxing escape for Montgomery residents;
- » Shouldice park is a regional draw for organized sports, but does not offer Montgomery residents leisurely access to the facilities;
- » There are large tracts of underutilized open space created by arterial roadways at both the north and south ends of Shaganappi Trail;

Opportunities:

- » Create a safe, accessible, and enjoyable pedestrian network linking the major parks and open spaces within the community;
- » Enhance the historical significance of the Shouldice Residence site through programming;
- » Design programmed areas within Montalban Park and George Gell Park to create a unique and enjoyable experience for visitors;
- » Continue with waterfront improvements to enhance the pedestrian realm and create safe access to the river;

ENVIRONMENT

URBAN FOREST

Conducting an inventory of City managed trees provides a strong indicator for the quality of the public realm throughout the community. The map shows the spatial patterns of public trees in Montgomery, with the most common types identified as popular (33%), spruce (18%), ash (11%), and elm (8%).

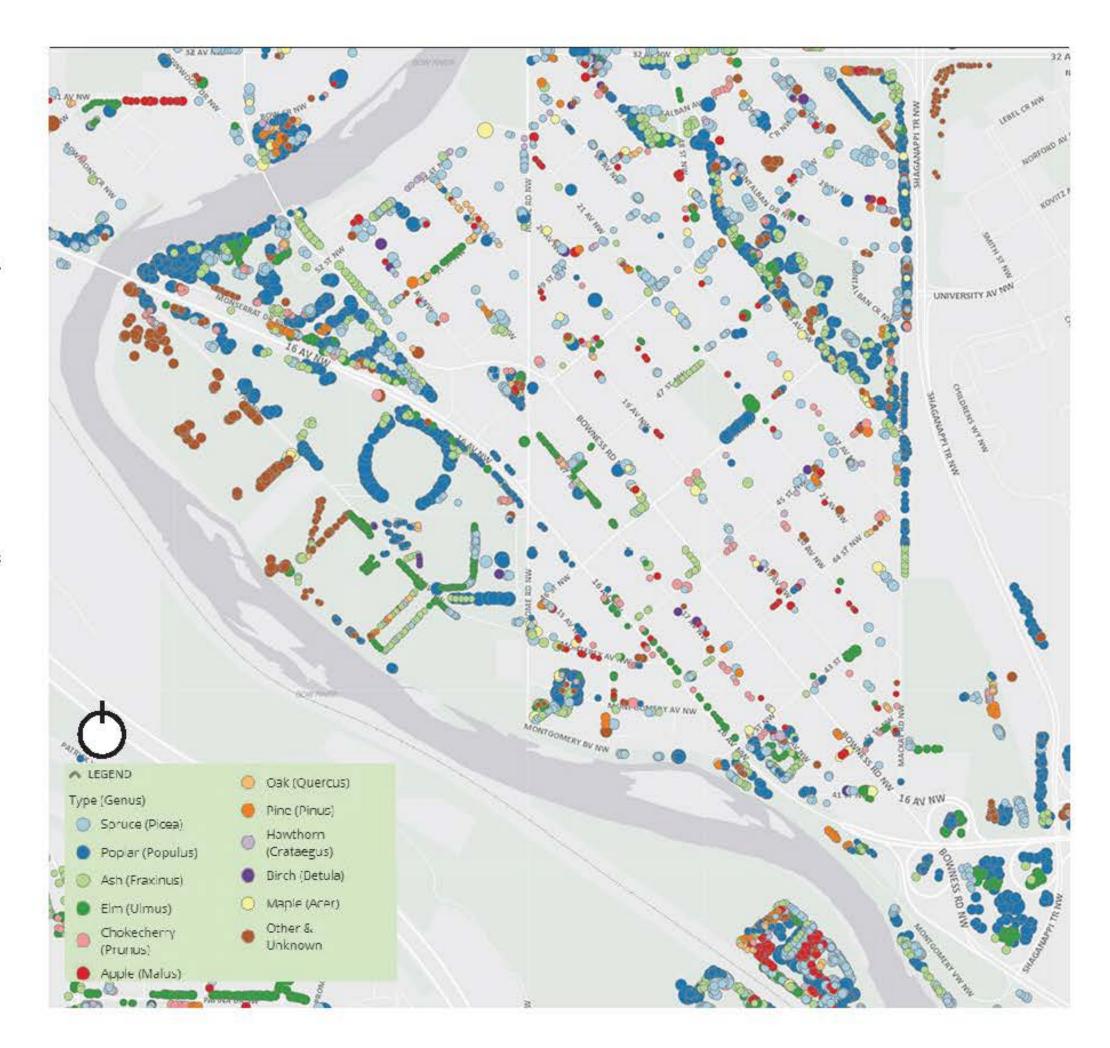
Our research shows that for the community of Montgomery has a total of 3,578 public trees, which translates to 1,212 trees per square kilometer. As a mature inner-city neighbourhood, Montgomery could benefit from planting additional trees, especially as part of the community redevelopment efforts.

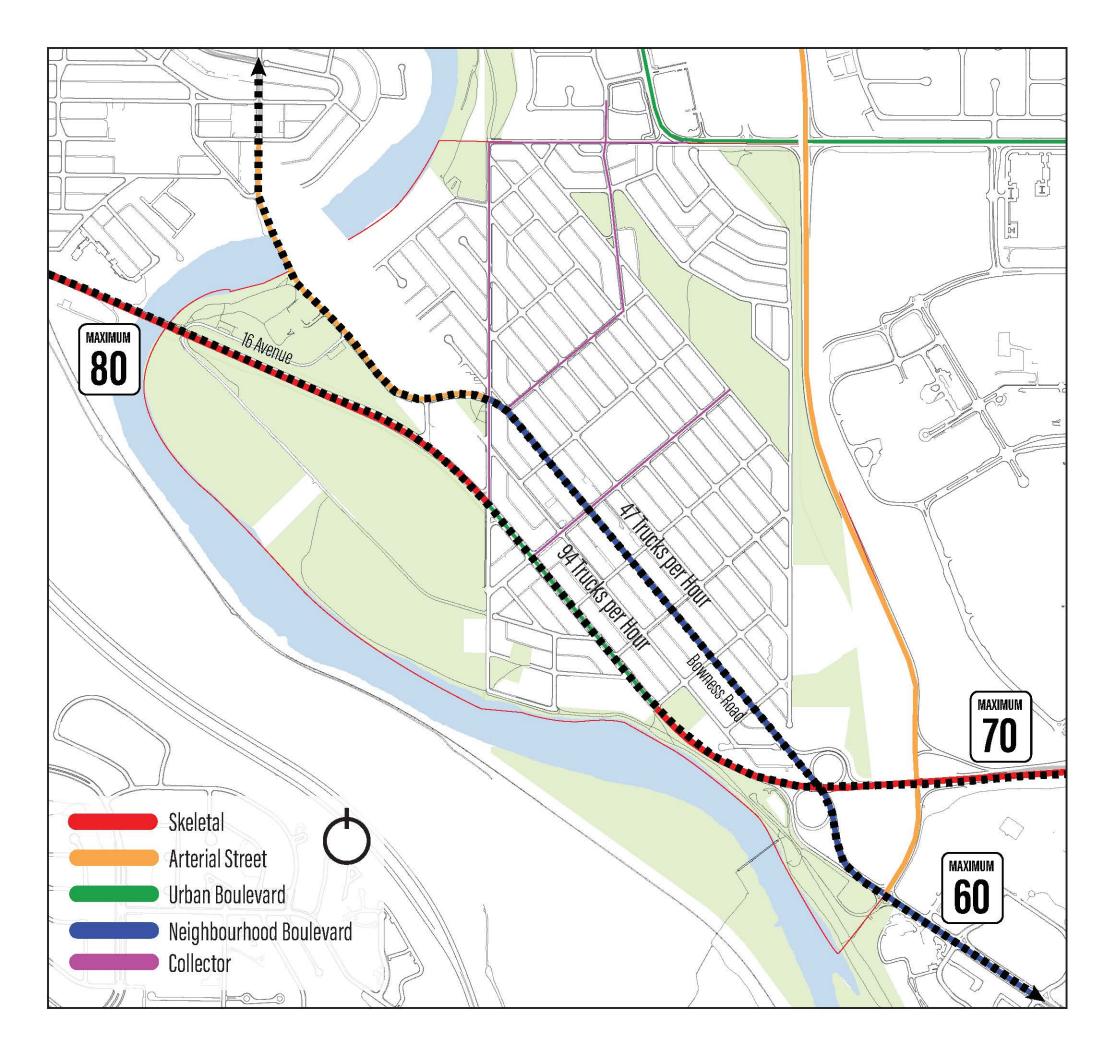
Observations:

- » The public parks are well populated with trees, along with several streets, particularly in the areas to the north of the community;
- » Many streets in the in the heart of the community such as Bowness Road are lacking a consistent pattern of street trees;

Opportunities:

» Through implementing street tree planting in alignment with a universal design strategy, the quality of Montgomery's public realm can be improved;





CLASSIFICATION

Montgomery faces a unique situation where there exists two main streets within the community, 16th Avenue and Bowness Road. 16th Avenue transitions from a Skeletal Road to Urban Boulevard while traversing the community, which is intended to slow traffic and elevate the priority of the pedestrians, cyclists, and transit. Similarly, Bowness Road transitions from an Arterial Street to a Neighbourhood Boulevard classification intended to support mixed-use development and prioritize pedestrians and cyclists. Both of the main streets are classified as goods movement routes which allows for truck traffic.

Observations:

- » 16 Avenue acts as a significant physical barrier that bisects the community in two parts, north and south;
- » The design of both 16 Avenue and Bowness Road fail to create a safe and enjoyable experience for pedestrians and cyclists;
- » Collector roads such as Home Road and 48 St are wide and located on steep slopes, which allow vehicles to travel faster than posted speed limits;

Opportunities:

- » Design the mainstreets to physically elevate the priority and safety of the pedestrian and cyclist appropriately throughout the community;
- » Create stronger pedestrian connections across 16 Avenue;
- Move trucking traffic off of Bowness Road to 16 Avenue;
- » Introduce traffic calming measures on both mainstreets and all collector roads throughout the community;

VOLUME & SAFETY

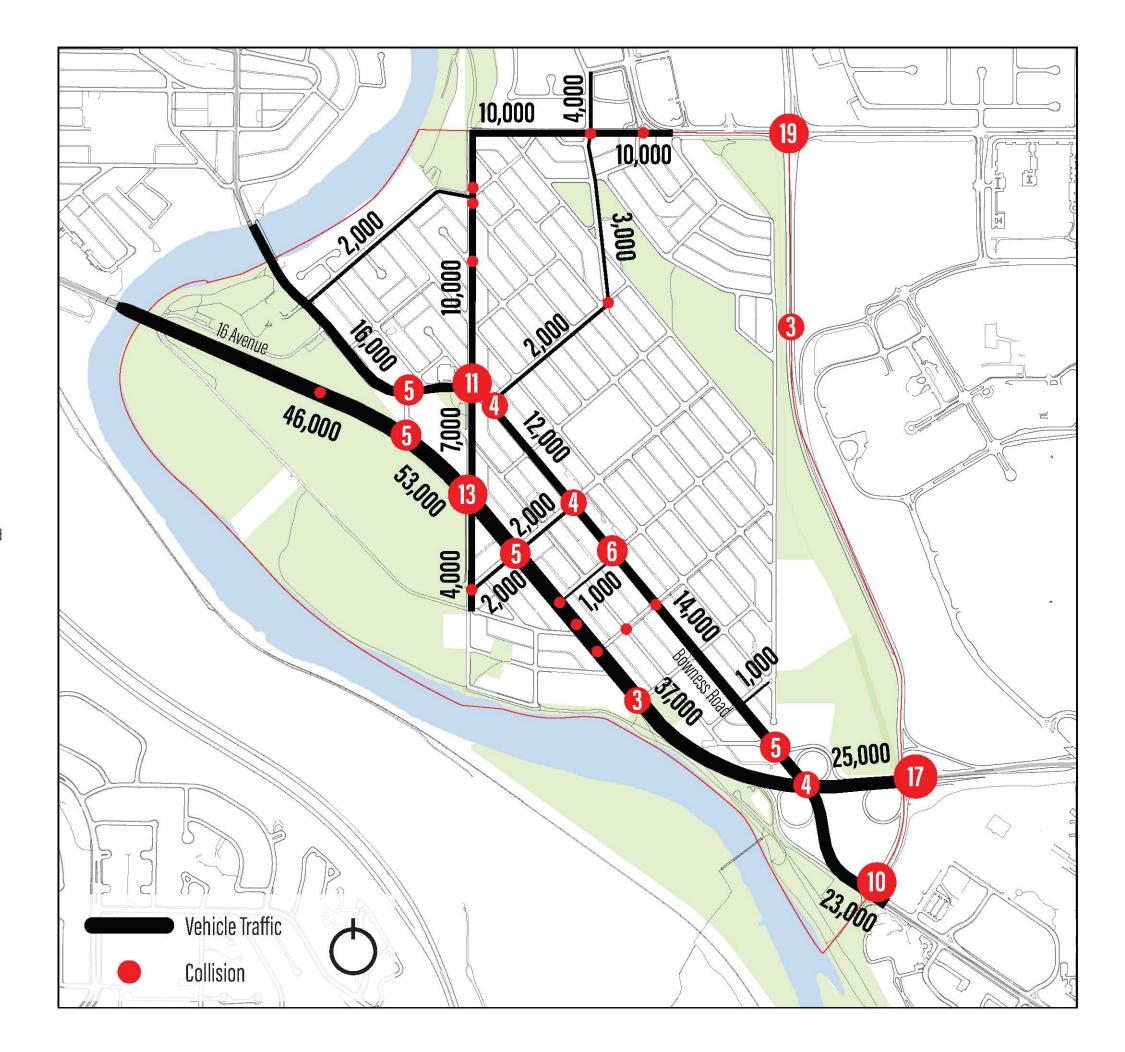
The Trans-Canada Highway (or 16 Avenue) is the primary goods movement route across the country and acts as the main east-west thoroughfare in Montgomery and the City of Calgary. This road services up to 53,000 vehicles per day which is a significant volume of traffic bisecting the community. Bowness Road acts as an Arterial road to the neighouring community of Bowness, and therefore sees a significant volume (up to 15,000 vehicles per day) of traffic as well. Home Road experiences a high volume of shortcutting traffic (up to 10,000 vehicles per day) as people traverse the community to reach regional destinations such as Shouldice Athletic Park.

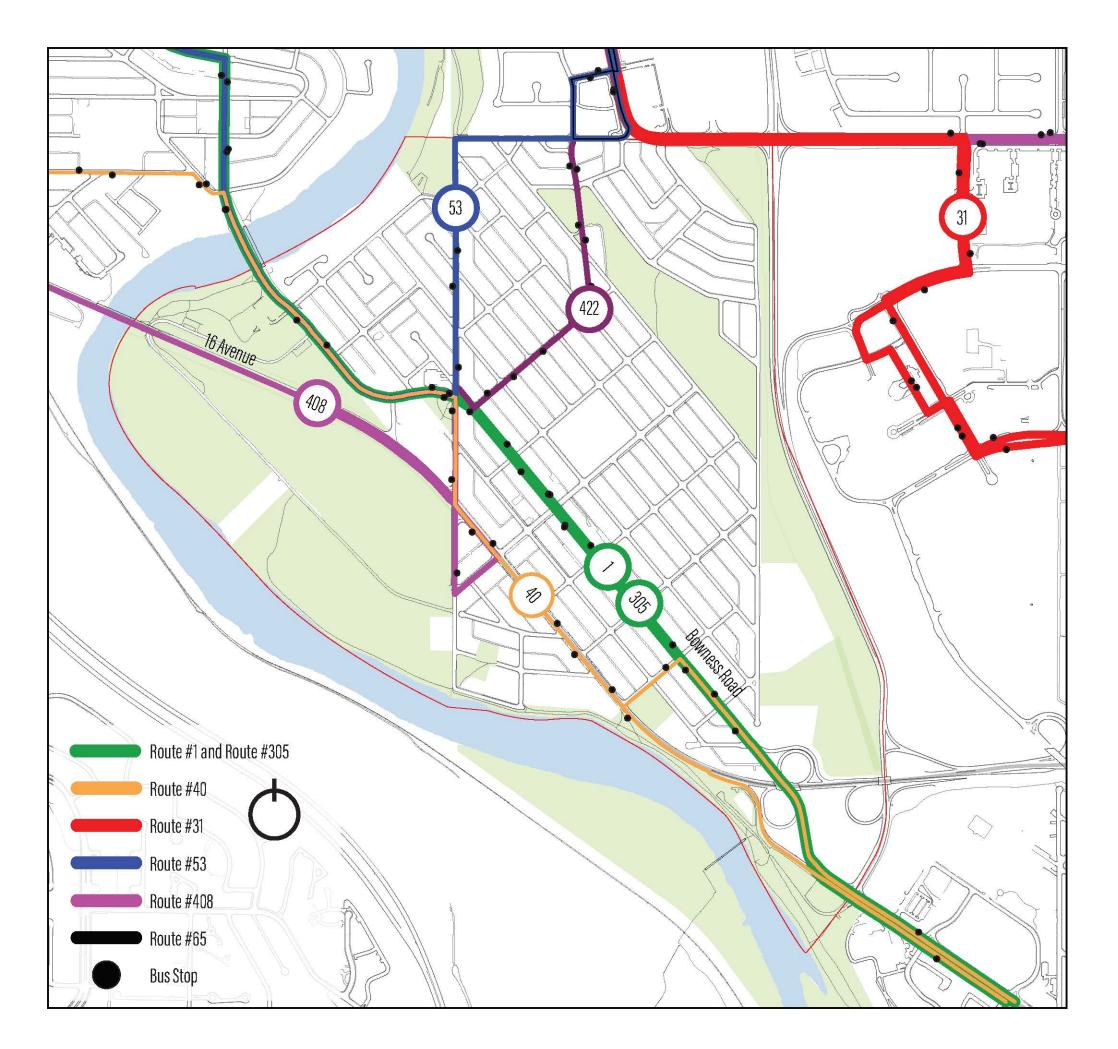
Observations:

- » The intersections at Home Road and Bowness Road, as well as Home Road and 16 Avenue see a high number of vehicle and pedestrian incidents, in part due to the skewed angle;
- » Significant shortcutting traffic exists on Home Road, 52 Street, and 48 Street;

Opportunities:

- » Redesigning problem intersections will increase the legibility and safety for pedestrians, cyclists, and vehicles;
- » Strategic traffic calming measures on streets experiencing high volumes of cut-through traffic can act as a deterrent;





TRANSIT

The community is serviced by eight bus routes that connect residents to the downtown, light-rail-transit (LRT), and other regional employment, health, and commercial centres. The community is not directly serviced by LRT which provides the highest level of transit service across the City of Calgary.

The eight bus routes servicing Montgomery are listed below with the service frequency identified:

>>	Route 305 (Bowness - Downtown)	15 min
>>	Route 1 (Bowness - Forest Lawn)	15 min
»	Route 31 (Dalhousie - Lions Park)	25 min
»	Route 53 (Brentwood - Gree ood)	30 min
»	Route 408 (Valley Ridge - Brentwood)	30 min
>>	Route 422 (Dalhousie - Montgomery)	30 min
>>	Route 40 (Crowfoot - North Hill)	35 min
>>	Route 65 (Market Mall - Downtown)	40 min

Observations:

- » Frequency of bus routes poses a challenge to Montgomery residents as many routes run at intervals greater than twenty minutes;
- » The 305 Express Bus runs during peak hours to and from the city's downtown, but only stops once within Montgomery at the intersection of Bowness Road and Home Road;

Opportunities:

» Creation of a covered Transit Hub at the intersection of Bowness Road and Home Road will allow for expanded transit service and a comfortable user experience;

CYCLING

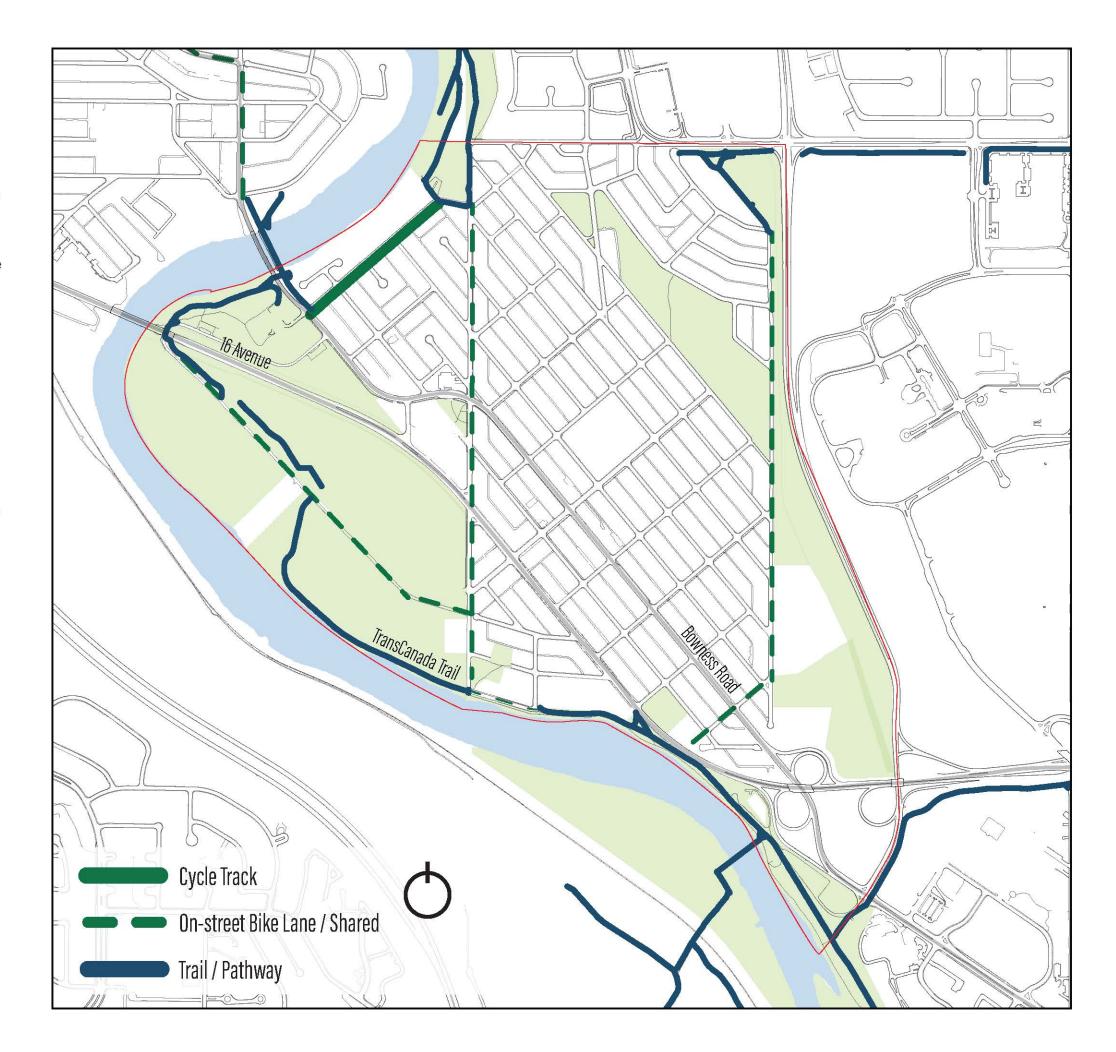
Montgomery enjoys exceptional access to Calgary's Regional Pathway system which runs along the riverfront through much of the city. The Regional Pathway provides some of the best cycling access to downtown in the city, and this advantage should be leveraged with the improvement of cycling facilities throughout the neighbourhood.

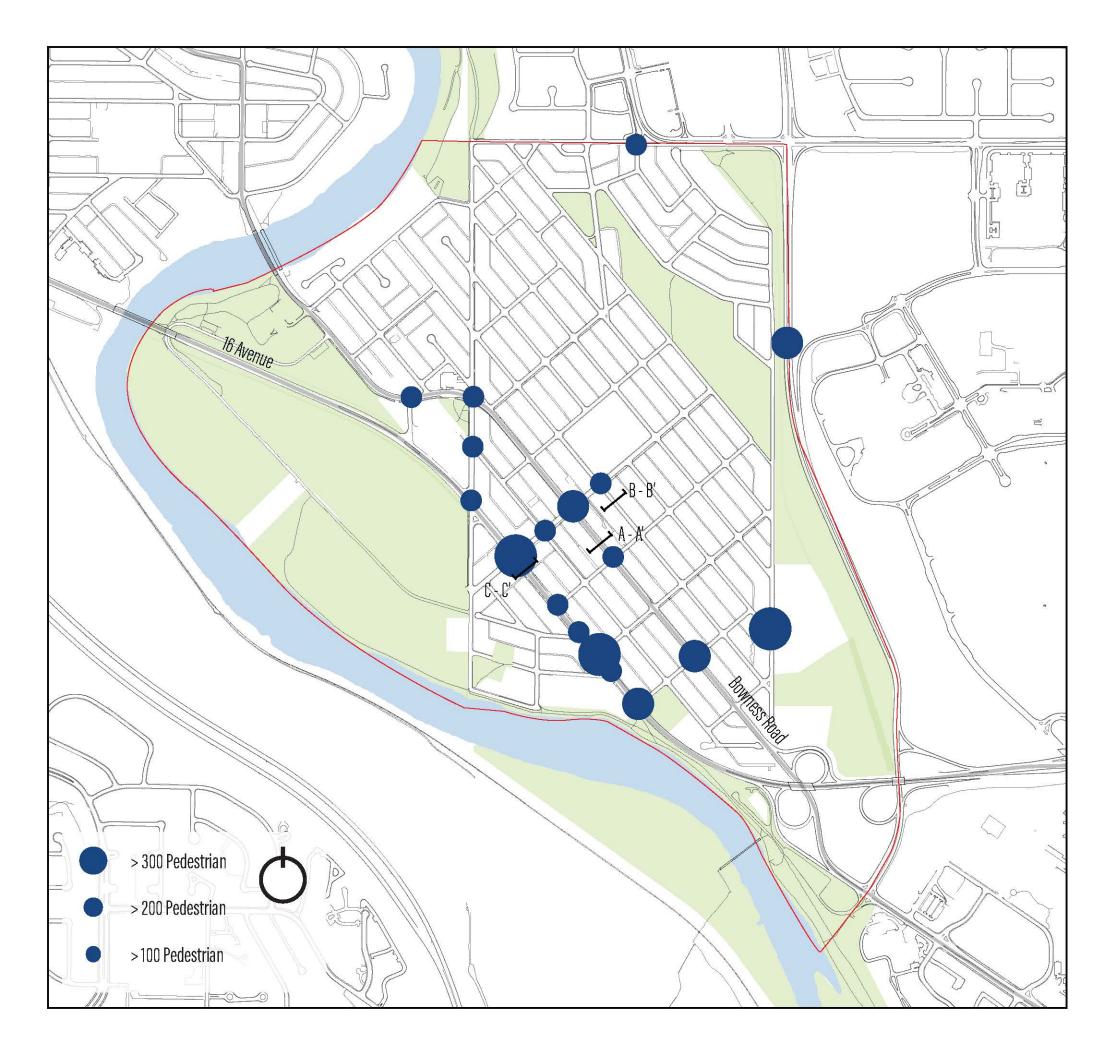
Observations:

- » The only separated bicycle track exists on 52 Street;
- » The Regional Pathway is disjointed through Shouldice Athletic Park;
- » Main streets are not serviced by dedicated bicycle infrastructure;

Opportunities:

- » Provide dedicated cycling infrastructure to Bowness Road which will connect the community east-west along the amenity rich main street;
- » Create a safe and accessible open space network through principles of universal design that include cycling infrastructure upgrades throughout the community;
- » Improve the quality of the Regional Pathway through Shouldice Athletic Park to a fully separated cycling pathway, which is currently a low-quality shared roadway;





PEDESTRIAN

Using available traffic count data from The City of Calgary, the 6-hour pedestrian crossing volumes at intersections were calculated and presented. This diagram highlights the intersections where higher pedestrian crossing volumes were observed.

Observations:

- » Along the 16 Avenue corridor, the highest volumes were observed at 46 Street, 44 Street, and 43 Street, where pedestrian-actuated pedestrian crossing beacons were installed;
- » Along the Bowness Road corridor, the highest volumes were observed at 46 Street and 43 Street;
- » The recently constructed intersection at Shaganappi Trail and University Avenue also experienced high pedestrian volume, indicating a pedestrian desire line between Montgomery and the new University District;
- » High pedestrian volume was also observed near the Foundations for the Future High School;

Opportunities:

- » Enhance crosswalk facility quality and pedestrian permeability across 16 Avenue at various crossing locations;
- » Reduce traffic speed through policy and roadway design interventions along key corridors and at key intersections to improve pedestrian safety;
- » Enhance the 46 Street pedestrian connection from the riverfront and Shouldice Athletic Park through main streets and Terrace Road Elementary School to Montalban Park and University District;

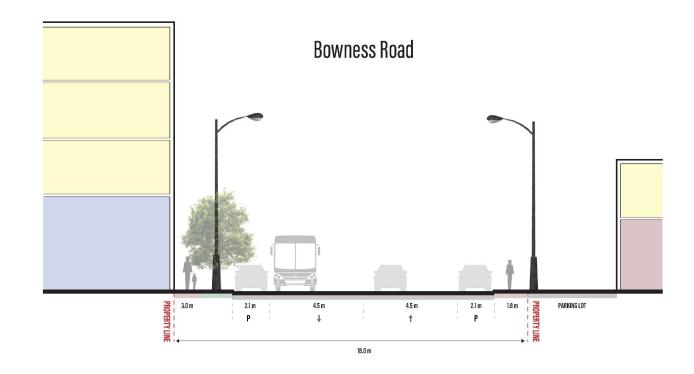
CROSS SECTIONS

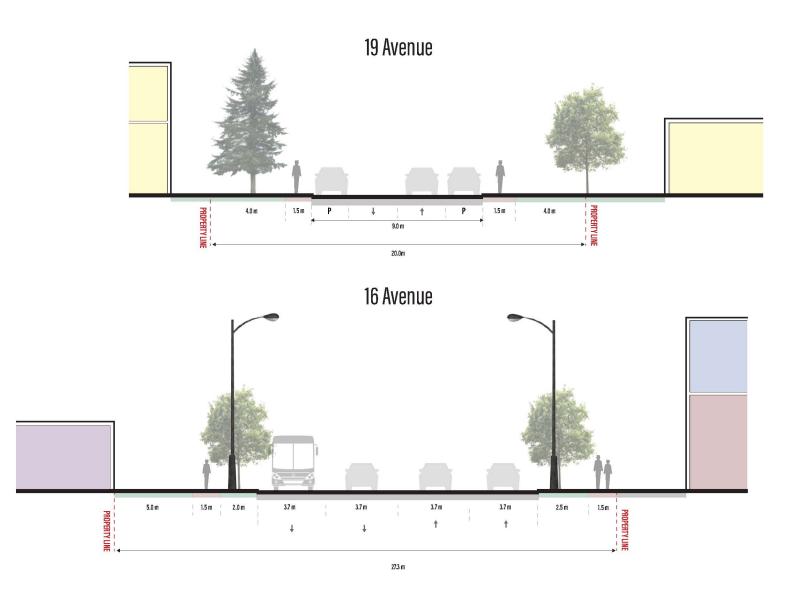
Cross sections are shown for three locations in Montgomery. Bowness Road and 16 Avenue represent the main streets in the community that will likely require the most design interventions and 19 Avenue represents a typical neighbourhood local road.

As the cross section shows, Bowness Road has a very wide travel lane width with on-street parking on the curb lane. This encourages high travel speed and negatively impacts pedestrian safety. In contrast, as a main street, there is a significant lack of space for other users, including pedestrians and cyclists.

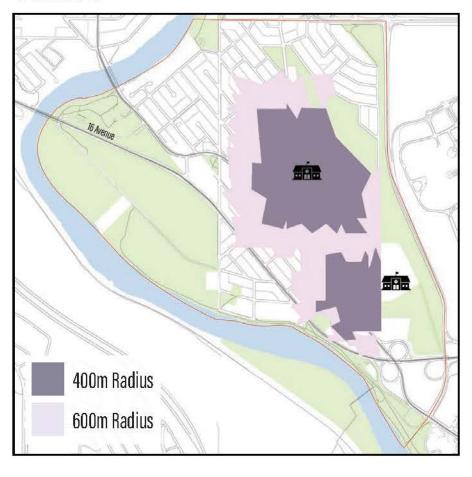
19 Avenue is a typical residential local road with one travel lane each direction and parking on the curb lane. Mono-walks are provided where pedestrian space is allocated right next to vehicular space instead of a separate walk where pedestrians are protected from vehicles by a boulevard.

As a major east-west transportation corridor in Montgomery and the City of Calgary, 16 Avenue has 2 travel lanes each direction and provides high travel capacity for automobiles. Similarly, the space is disproportionally allocated to automobiles, and only limited space is provided for the pedestrians and cyclists. As a designated main street in Calgary, 16 Avenue could be redesigned to provide better public realm for pedestrians.

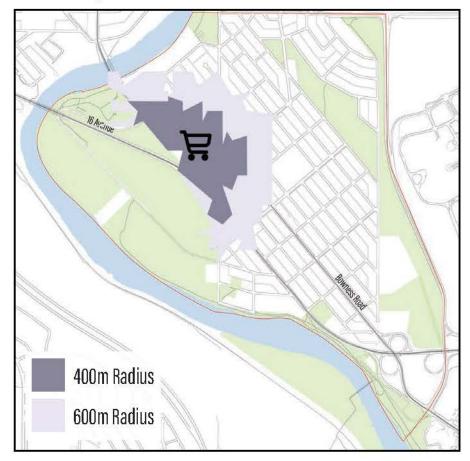




Schools



Grocery Store



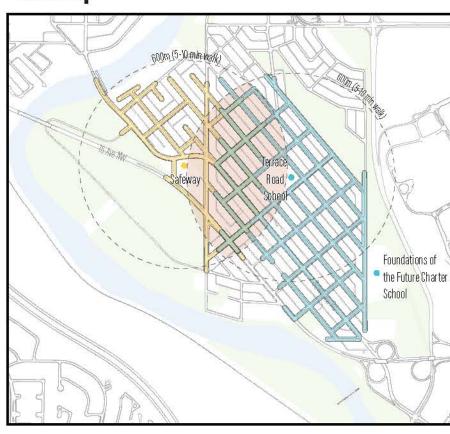
MOBILITY

WALKSHED

Walkshed analyses were conducted for key community amenities to understand the range of accessibility of these key community services to the local residents by walking. The analyses were performed for the two schools, Terrace Road Elementary School and the Foundations for the Future High School, as well as the Safeway grocery store.

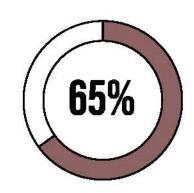
Thanks to the grid street network in Montgomery, the community has good accessibility to these amenities by walking within 400 and 600 meters. The 16 Avenue corridor by the Athletic Shouldice Park acts as a barrier to walking mobility.

Overlap

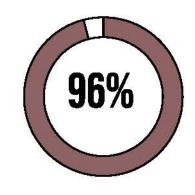


Main Street Crossing

120 people crossing Bowness Road per Hour



90 people crossing16 Avenue per Hour



Use enhanced pedestrian crosswalks with traffic signals and flashing beacons instead of marked and unmarked crosswalks

CROSSING QUALITY

Although walkshed analysis treats street network equally, roadways are different for crossing pedestrians due to the quality of pedestrian crosswalk. In particular, with the available traffic count data from the City, the pedestrian crossing volumes at 16 Avenue and Bowness Road are further explored. It was found that about 120 people cross Bowness Road per hour during the traffic data collection period, and 65% were found to cross at the enhanced crosswalks with traffic signals and flashing beacons instead of marked and unmarked crosswalks. In comparison, 90 people cross 16 Avenue per hour and 96% were found to cross at the enhanced crosswalks.

As both main streets carry high traffic volumes, we can conclude that pedestrians prefer to cross at safer crossings. Furthermore, with a total of four travel lanes on 16 Avenue, a much higher percentage of pedestrians will only use enhanced crosswalks.

ZONING

The current zoning in the community shows a mix of different land use districts, including low-density residential, multi-residential, Direct Control, commercial, mixed-use and special purpose districts.

As the zoning map shows, much of the community is designated as R-C1 with pockets of R-C2 and R-C1s re-designations as applications for secondary suites continue to increase. A review of the residential land use to expand the flexibility of the R-C1 designation would create a streamlined development.

The multi-residential and mixed-use districts are mostly concentrated along Bowness Road. The major commercial land uses are zoned along the commercial corridor (C-COR2) on 16 Avenue and in the Montgomery Square by the Safeway site. These land use designations concentrate higher density and commercial amenities along the two main streets in Montgomery.

The special purpose districts include a variety of uses that differ from the traditional residential, commercial, industrial, mixed-use districts. They could include natural areas, schools, parks, community services, recreation, and future urban development areas. In Montgomery, they are reserved for natural areas, recreational facilities, and community services including schools and senior housings.

The detailed zoning breakdown with maximum density and height is provided on the next page, which also included land use breakdown for each individual parcel.



16 Avenue Residential Commercial - Retail Commercial - Office Commercial - Food Services Medical Commercial - Professional Services Community Uses (School, Church, etc.) Commercial - Accommodation Mixed-Use Commercial - Automotive Service Industrial Light

LAND USE

LAND USE

	ZONING	DESCRIPTION / DISTRICT	DENSITY*	MAX. HEIGHT						
Residential										
	R-C1(S)	Contextual One Dwelling	20 uph	10m						
	R-C1N	Contextual Narrow Parcel One Dwelling	30 uph	10m						
	R-C2	Contextual One / Two Dwelling	40 uph	10m						
	R-CG	Grade-Oriented Infill	40 uph	11m						
	DC	Direct Control								
Commerc	cial									
	C-O f 1.0 h 10	Office	52 jobs	10m						
	C-O f 1.0 h 12	Office	75 jobs	12m						
	C-C1	Community 1	75 jobs	10m						
	C-COR2 f 1.0 h 12	Comidor 2	52 jobs	12m						
	C-COR2 f 3.0 h 16	Corridor 2	100 jobs	16m						
	C-COR2 f 4.5 h 22	Corridor 2	170 jobs	22m						
Multi-Re:	sidential									
	M-CG (d)	Contextual Grade-Oriented	20 uph	12m						
	M-CG	Contextual Grade-Oriented	111 uph	12m						
	M-C1	Contextual Low Profile	148 uph	14m						
	M-X1	Low Profile Support Commercial	148 uph	14m						
Mixed-Us	3e									
THINGS BO	MU-1 f 3,0 h 16	General	60 uph	16m						
	MU-1 f 4.5 h 22	General	220 uph	22m						
	MU-2 f 3.0 h 16	Active Frontage	160 uph	16m						
	MU-2 f 4.5 h 22	Active Frontage	220 uph	22m						
Special F	Puronse									
Spoolal I	S-UN	Urban Nature								
	S-SPR	School, Park and Community Reserve								
	S-CS	Community Service								
	S-R	Recreation								
	S-Cl	Community Institution		12m						
	S-CRI	City and Regional Infrastructure		ILIII						
	S-FUD	Future Urban Development								
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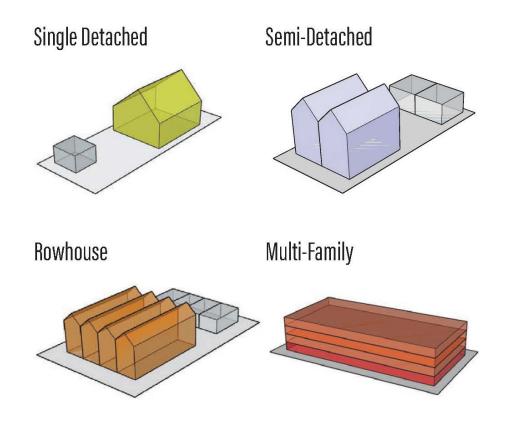
Note:* Low-density residential zone UPH numbers and commercial zone job numbers are approximate based on City of Calgary's Plan It Pattern Book and are not restricted in the Land Use Bylaw.

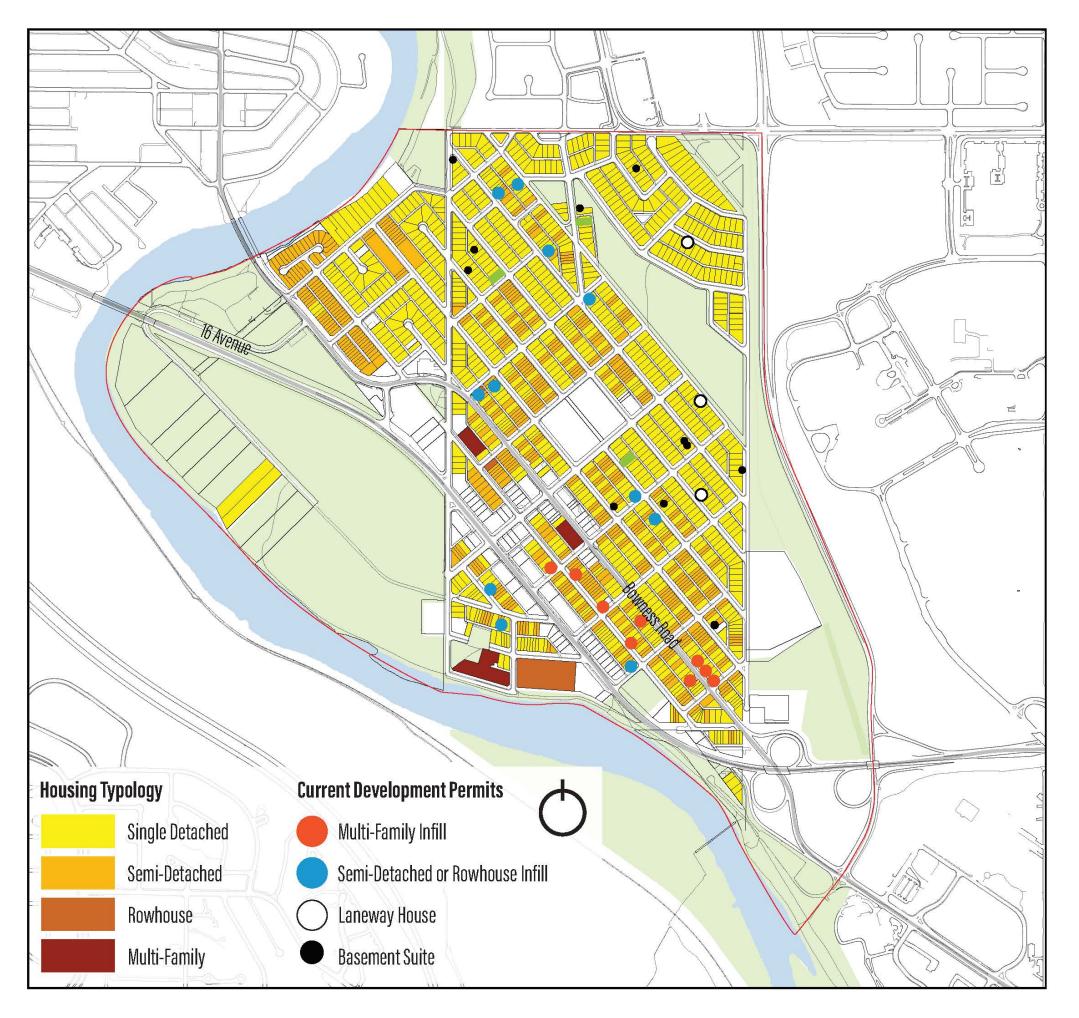
25

TYPOLOGY

On the individual parcel level, we also reviewed the housing typology for residential uses. It is noted that commercial buildings are not reviewed for typology. Four housing typologies were found in Montgomery, including single-detached, semi-detached / duplex, rowhouse, and multi-family. The map highlights that the majority of the community is made of single-detached units, with semi-detached located sparsely across the community, and rowhouse and multi-family concentrated along the main streets and the riverfront.

We also identified current development permit applications to understand the redevelopment trends in the community. It is found that gentle intensification is occurring across the community with semi-detached, rowhouse, basement suite and laneway housing applications, and higher-density multi-family infill is mostly happening along and in between the two main streets.





University Montalban District Park Shouldice Athletic Park Children's Hospital Commercial - Food Services Commercial - Accommodation Edworthy Commercial - Automotive Service Park lacktriangledownMedical Community Uses (School, Church, etc.) **Natural Amenities**

LAND USE

AMENITIES

An inventory of amenities in the community of Montgomery was also conducted to understand what is being offered and what might be lacking from the community that could benefit from our policy and design interventions.

Although commercial food services are being offered, the community lacks high-quality dining venues as several key fast food chain stores can be found, such as Tim Horton's and KFC that benefit pass-through travelers rather than local residents. The community offers accommodation services along 16 Avenue mostly in the form of motels.

Due to its proximity to hospitals and several established senior housing and services, several medical clinics are located in the community. This helps serve the aging population in the community where they can be easily accessible by walking.

The community also has businesses that service automobiles, particularly six gas stations can be found along the two main streets. Many natural amenities also can be found in the community, including dog parks, playgrounds, boat launch, etc.

CURRENT DENSITY

The 3D model shows the current density in the community. It is important to recognize that this map shows the current land use and built form of individual parcels, and it does not reflect the zoning that indicates the maximum allowable density.

The majority of Montgomery currently is occupied by low density residential districts, which includes single-detached dwelling, duplex, semi-detached dwelling, and rowhouse.

The 4-storey mixed-use apartment building at Bowness Road and 45 Street stand out along the Bowness Road, which signals the recent higher-density infill along the main street.

Additionally, some big box commercials, strip malls, and auto-oriented businesses are also observed along the Bowness Road and 16 Avenue corridor.

Lastly, the Shouldice Athletic Park occupies a significant portion of the land area in the southwest of the community, which is isolated from the community by the high-speed high-volume 16 Avenue corridor.





MAXIMUM DENSITY

In contrast, this map highlights the maximum allowable density according to the current zoning approved by the Calgary Land Use Bylaw.

The most significant difference is highlighted in the main street area, bounded by Bowness Road to the north, Monterey Avenue and Bow River to the south, 49 Street to the west, and 42 Street to the east. It is noted that this model represents the allowable maximum building height and each parcel likely will have smaller building footprint as it goes through further land development plans in a later stage.

This graph clearly signals the City's intention to intensify along and in between the main street corridors of Bowness Road and 16 Avenue. As a first step, the City has recently completed a Bowness Road Streetscape Master Plan and is moving into construction soon, and is currently undergoing a 16 Avenue Corridor Study and Streetscape Master Plan.

According to the City's population projection, by 2042, the population in Montgomery is expected to grow by over 50%. The majority of population growth is anticipated to be located in the main street areas.

FUTURE DENSITY

To further illustrate the difference between the current density and maximum allowable density, perspective overlays are presented.

On Bowness Road at the 46 street intersection, currently the parcels are occupied by strip malls and auto-oriented commercial with parking facing the street and directly driveways off Bowness Road. With the maximum allowable density and other land use requirements for the current zoning, the built form and street feel can be changed significantly. The building can be as high as 6-stories with reduced building setback. This creates a better sense of enclosure that helps to transform Bowness Road to a more vibrant street.

On 16 Avenue near the intersection of 45 Street, the parcels are currently occupied by auto-oriented commercials in standalone buildings, which creates a highway-like feeling that discourages pedestrian movements. With the maximum allowable density, the sense of enclosure can be significantly improved.

Bowness Road

Current Density

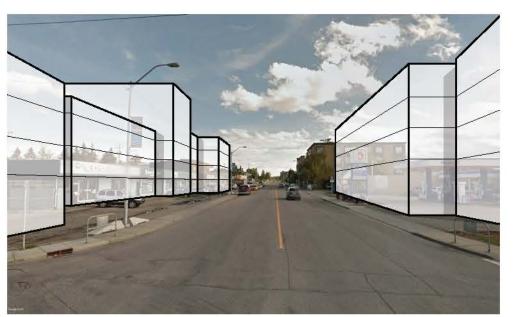


Current Density

16 Avenue

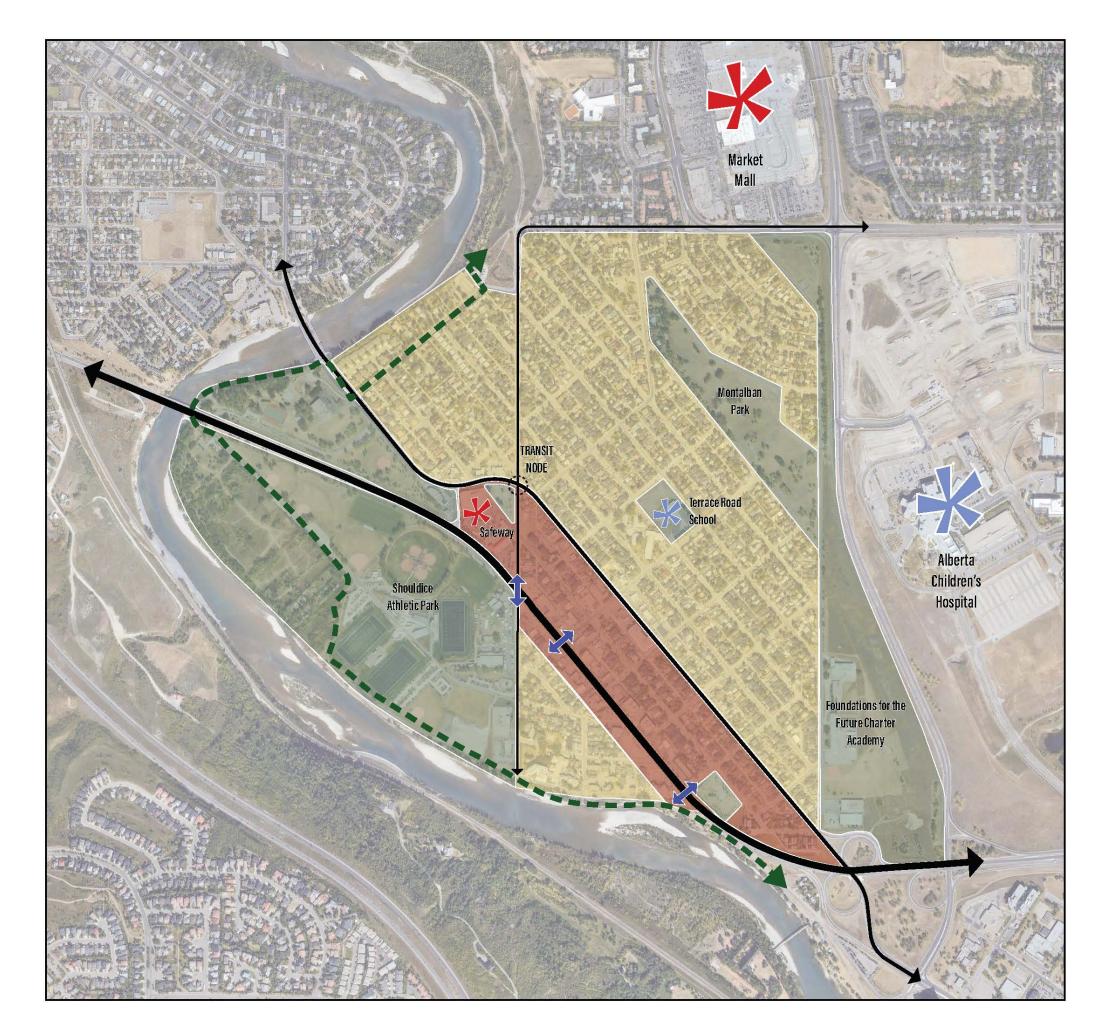


Maximum Allowable Density



Maximum Allowable Density





SUMMARY

FUNCTIONAL MAP

Through the detailed community analysis, we have summarized how the community serves its residents and interacts with the surrounding communities in this functional map.

The community offers good access to amenity spaces, including the Bow River, Shouldice Athletic Park, and community and neighbourhood parks, such as Montalban Park. Along the Bow River also lies the popular Bow River pathway that Calgarians and Montgomery residents enjoy.

The community has good access to various commercial and employment opportunities along the main street area. Bounded by 16 Avenue, Bowness Road and Home Road, the community is home to a Safeway grocery store, that provides products to meet the daily needs of local residents.

16 Avenue and Bowness Road are two key east-west transportation corridors that carry the highest amount of vehicular traffic in the community. Home Road acts as a key north-south transportation route through the community.

Looking beyond the community boundary, the community is close to a major activity centre - Market Mall to the north, that meets the community's shopping needs. To the east, it is close to the University of Calgary, the up and coming University District as well as the Foothills Hospital, which have all influenced the demographics and businesses and services in Montgomery.

SUMMARY

ISSUES

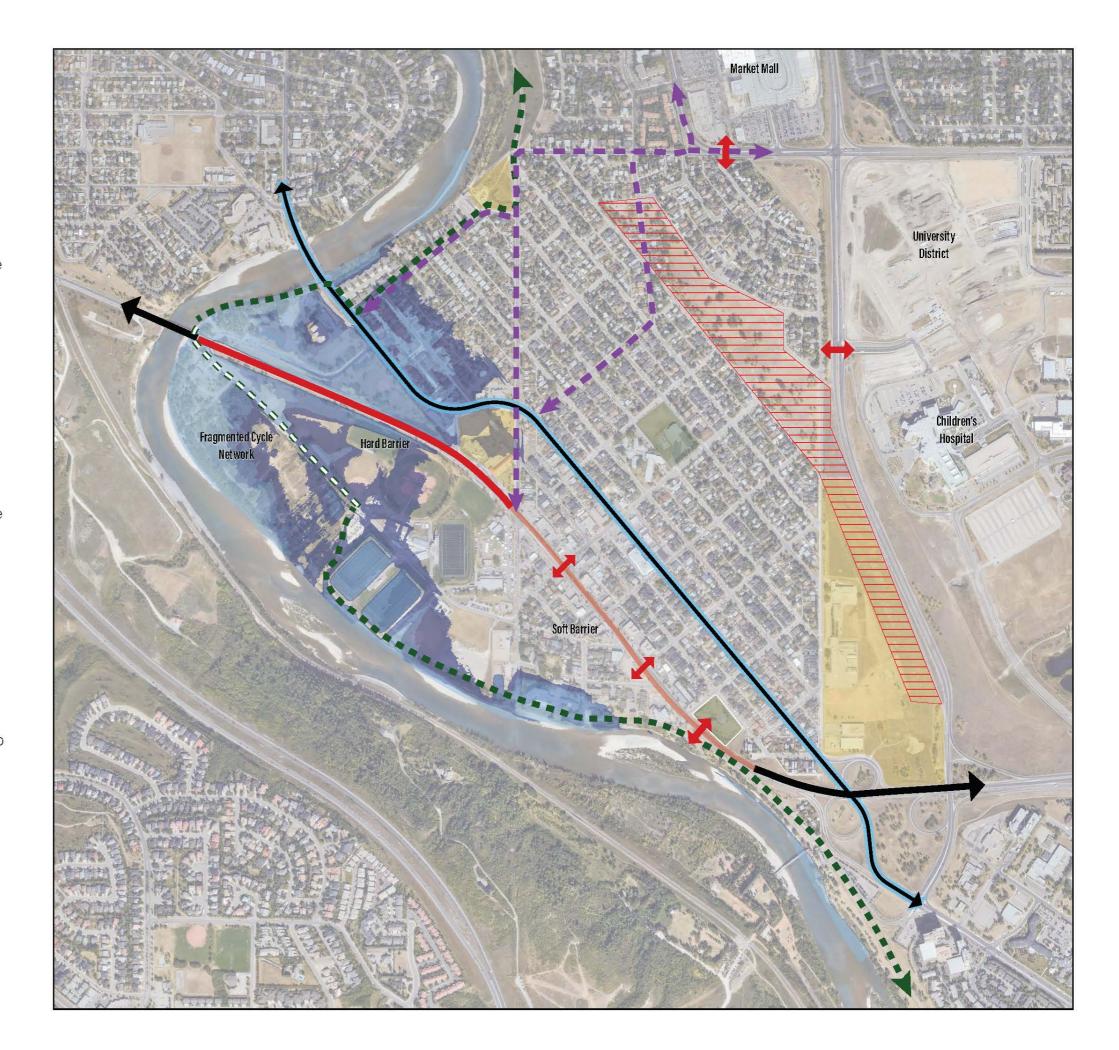
There are several functional issues that our analysis has revealed, which will guide our proposed design and policy interventions.

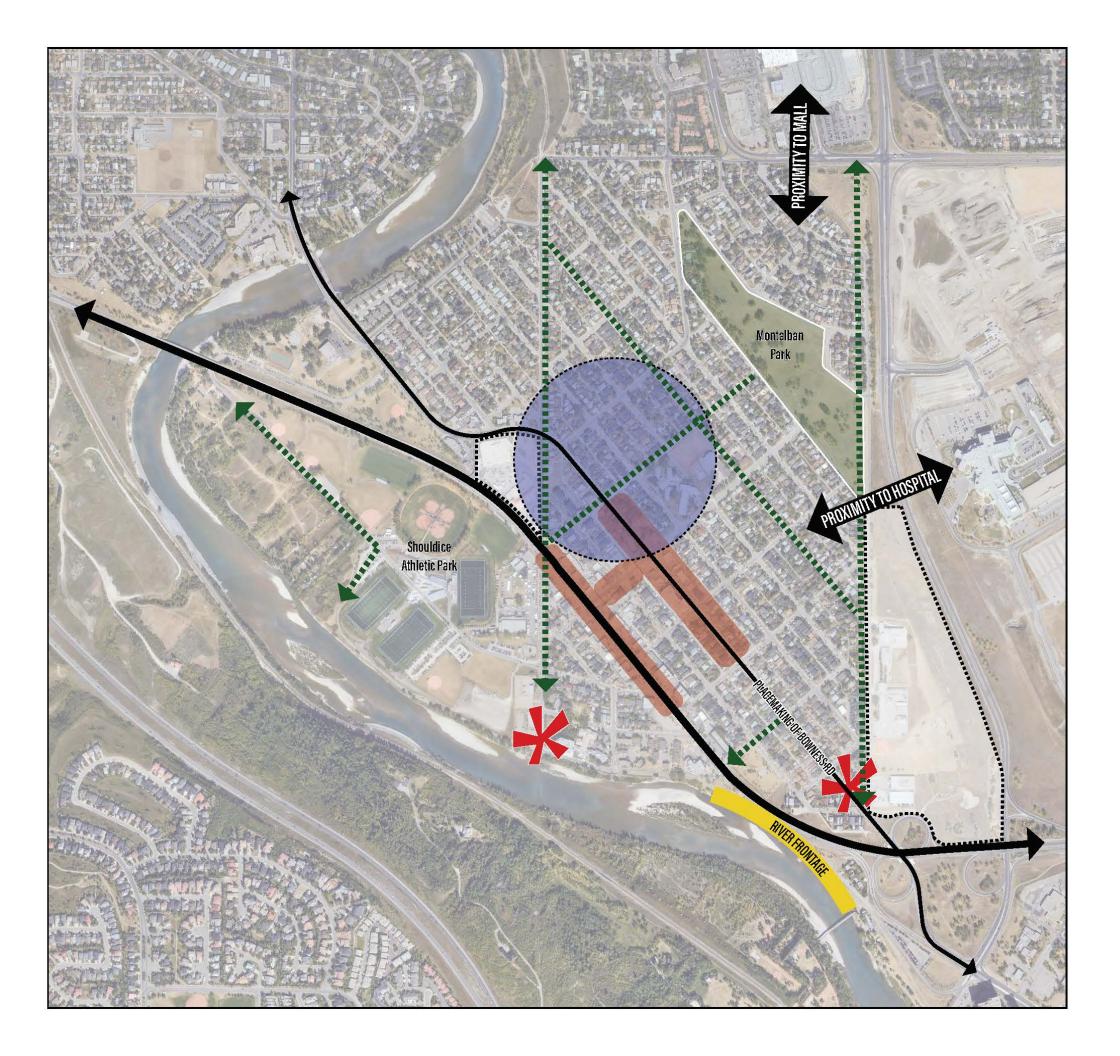
Environmentally speaking, there is a steep slope in the northeast of the community that runs diagonally from the Bow River to Montgomery Hill. This poses challenges for infill developments that are slope adaptive and interventions for Montalban Park improvements. Additionally, there is significant flooding risk near the southwest of the community, which is currently zoned for special purposes, such as natural areas and parks.

16 Avenue acts as a significant community barrier that bisects the north and south ends of the community and only offers limited opportunities for pedestrian crossing and safe vehicular ingress and egress. Bowness Road is classified as a truck route that carries notable truck traffic, which is mismatch for its neighbourhood boulevard classification and neighbourhood character.

Due to natural topography and lack of connectivity, Montgomery is segregated from the University District and Market Mall to the north. It also experiences shortcutting traffic on several neighbourhood streets, including Home Road, 48 Street, and 52 Street. The slopes on these streets contribute to traffic speeding and negatively impacting pedestrian safety. The Bow River pathway in the community is fragmented in the Shouldice Athletic Park area, which forces cyclists to share a road that could experience high vehicular traffic during game days and special events.

Due to the functionality and design of 16 Avenue and Bowness Road, the commercial uses are auto-oriented and do not best serve the needs of the local residents. Lastly, the public spaces and amenities in the community are underutilized to bring the community together for social interactions.





SUMMARY

OPPORTUNITIES

In addition to the identified issues, we also recognize several assets and opportunities for the community that we can capitalize on and even address some of the identified issues.

To create vibrant main streets and enhance the community identity, we suggest upgrading the main streets of 16 Avenue and Bowness Road by improving the public realm and creating a main street connector on 46 Street. Additionally, a town centre can be reinvented at the existing Safeway grocery store to elevate its prominence. This allows for strategic intensification around the town centre and in close proximity to the Terrace Road Elementary School.

With its proximity to the Bow River, we recommend to provide enhanced riverfront design to activate the area as a key community amenity. We also propose to upgrade this key recreational and mobility cycling corridor to an all ages and abilities cycling facility where they are completely separated from vehicular traffic.

Taking advantage of the river, Shouldice Athletic park and Bow River Pathway, we propose to create a landmark waterfront destination at the south end of Home Road to enhance the public spaces south of 16 Avenue.

We also propose to enhance the cycling connections within Montgomery to connect to the regional pathways in the City, for instance, cycling connections can be improved on Home Road, 21 Avenue, and Bowness Road where they also serve key community destinations.

ENGAGEMENT

conversations







ENGAGEMENT

PROCESS

Due to the global pandemic of COVID-19, the only engagement activity that occurred was the community workshop on Saturday, February 2020.

The workshop participants were placed at six tables and they were asked a set of questions by members of our team. At the end of discussions on issues and opportunities, there was a group report back session where each table presented their main findings from the discussions.

The discussion sessions were very productive as the community residents shared their issues and opportunities with the project team. After the community workshop, many residents also stayed longer to view the study findings from each project group and asked questions and provided further feedback on the analyses.

As part of the study process, a physical model was also made for the community and it was placed in the centre of the community workshop venue for residents to view.

ENGAGEMENT

WHAT WE HEARD

The workshop focused on themes of challenges (issues and opportunities) and future possibilities (assets and opportunities). An example of community feedback from one of the discussion tables was presented here.

- » What are the main issues today with current infill and densification practices?
- » What are the main issues with future densification along the main corridors (16 Avenue, Bowness Road)?
- » Where do you catch transit? What are your main concerns with transit?
- » Where do you walk and/or cycle?
- » What are your main concerns for driving and parking?
- » Are there streets that would benefit from traffic calming (for example where there is speeding)?
- » What kinds of housing types are missing in the community?
- » What kind of commercial land uses do you think are missing in the community?
- » What are the special places in the neighbourhood?
- » Where would you like to walk/bike? What are your main concerns for walking/cycling?
- » What are the outside resources/amenities your community should connect to?
- » What areas do you consider appropriate for infill and sensible densification?
- » Do you see an opportunity for more creative housing types (unique multifamily buildings)?
- » Are you supportive of laneway housing and secondary suites? What issues would need to be addressed for these to be a successful addition to your community?
- » What kinds of improvements would you like to see to the parks and open spaces?
- » What kind of streetscape improvements do you think are necessary and where?

Land Use / Housing

- » Supportive of densification, such as duplex and laneway housing, which could see laneway getting paved; Rowhouse might be a bit too much density in a low-density residential area
- » Increase density around school, along 16 Avenue and Bowness Road
- » Better for density to be spread out in the community than focused on just one corridor / area
- » Street parking could be issue for major densification developments
- » 4-story maximum density / building heights are appropriate for the community
- » Social housing area could be redeveloped into complexes when buildings reach end of life

Amenities / Commercial Businesses

- » Special place in the community is the dog park, businesses along Bowness Road, Dale Hodges Park access (previous Shouldice residence on Home Road), and Safeway
- » Montgomery could use more coffee shops, brewery, dog-friendly businesses, restaurants, water park, ice cream shop, boutique stores, and art gallery
- » Important to have local businesses that are destinations where residents can hang out
- » The rafting business by Bow River has a lot of garbage, needs garbage bin
- » Would like to see positive change with the motel, maybe a hotel, affordable housing, etc.
- » Streetscape improvements more trees, patio for commercial businesses, streetlights (52 St and Bowness Road), pedestrian crossings (Home Road and Bowness Road), street furniture
- » More active uses for Shouldice Park & Ride lot than an empty parking lot



Transportation

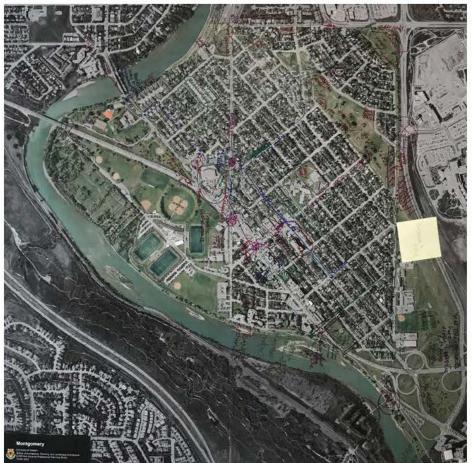
- » Use Bus #1 frequently and it is convenient to go to downtown, but there is a time point at Home Road so need to catch the bus earlier; have used Bus #40 to go to Brentwood only occasionally
- » Bus #305 is not really faster than #1 due to congestion
- » Use Bow River Pathway a lot for walking and cycling, more to the south
- » There is ice on the sidewalk when going for run in winter
- » Traffic signals on 16 Ave could use improvements, particularly at Home Road and 49 Street
- » 4-storey development on Bowness Road doesn't have parking on site causing parking issues
- » 52 Street has shortcutting traffic speeding through, needs traffic calming with speed bumps
- » Pedestrian crossings at Bowness Road, 16 Avenue and Home Road are major issues
- » Paving Bowness Road and Bow River Pathway for driving, cycling and walking
- » Need signal or merge lane on 16 Ave to improve traffic, especially at 49 Street
- » Bowness Road / 48 Street is also a dangerous intersection
- The topography at the north end of the community limit the walking mobility of senior residents

Parks and Open Space

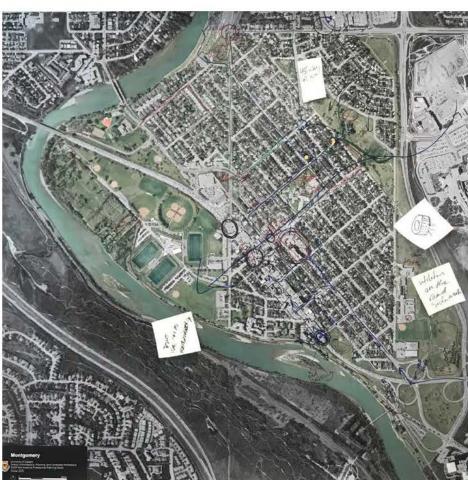
- » Improve parks by upgrading equipment in the playground areas, adding more trees, picnic tables, and more sitting areas
- » More sitting opportunities along the Bow River
- » More active use and programming for park space in general
- » Like the Shouldice Park as it brings vibrancy to the community











ENGAGEMENT

SUMMARY

Using the valuable feedback provided by the community residents, we have summarized the findings and identified the community characteristics, issues and opportunities that the community is facing. Some of the engagement discussion materials are shown here.

Characteristics

- » Community spirit;
- "Little town" characteristics;
- Lower-income;
- » Withstood gentrification;
- » Diverse ethnicity, income, education, occupation;
- » University employees;

Issues

- » Noise from development;
- » Sidewalks in disrepair;
- Shortcutting traffic;
- » Steep slops in the pedestrian realm;
- » Parking;
- Housing affordability;
- Walkability;

Opportunities

- » Addition of the young population;
- » Proximity to Market Mall, hospitals, riverfront and downtown;
- » High visitor traffic and commercial corridor;

The engagement findings together with the evidence-based analyses were used to inform our vision and guiding principles for the community as well as our design interventions which are explained in further details in the following sections.

DESIGN CONCEPTS

our vision for the future

VISION

Montgomery: Your Emergent Community



Memorable Open Spaces



Multi-Modal Connections



Community Growth



Vibrant Main Streets



Reinvented Town Centre

DESIGN CONCEPTS

LAND USE



OVERVIEW

OBJECTIVES & STRATEGIES

As a mature inner-city neighbourhood, the community of Montgomery is experiencing redevelopment pressures in its low-density residential neighbourhood and along Bowness Road.

This section takes a holistic look at the existing land use pattern in the community and proposes different strategies to make the envisioned future Montgomery possible. With our proposed land use concept, we focus on strategic intensification within the community that does not contradict the existing neighbourhood character, enhancing the attractiveness of community-oriented commercial businesses, especially along the identified main streets.

The following land use strategies are proposed to improve the quality of the residential and commercial uses in Montgomery:

- » Modest intensification in the mature residential area to ensure future development or infill is context sensitive and respects the adjacent land parcels;
- » Promotes community-oriented and pedestrian-friendly commercial businesses that activate the commercial streets and improves the public realm;
- » Creates a Town Centre in the heart of the community to enhance the identity and character of Montgomery;
- » Appropriate building heights to allow for street activation of the main streets and the neighbourhood;
- » Encourages housing diversity of various uses and forms to create a community that welcomes everyone;

LAND USE

ZONING INVENTORY

Low Density Residential Districts

They encompass several codes (R-C1, R-C1N, R-C1s, R-C2, R-CG). Built forms primarily include single-detached, semi-detached, duplex, and rowhouse.

Multi-Density Residential Districts

They encompass several codes (M-CG, M-C1, M-X1).

Built forms primarily include duplex, rowhouse, townhouse, and apartment.

Commercial Districts

They encompass several codes (C-C1, C-O, C-COR1, C-COR2). Built forms include single-use commercial or office buildings, but C-COR1 and C-COR2 also allow for mixed-use developments.

Mixed Use Districts

They have two codes (MU-1, MU-2) designated for mixed-use developments. It is important to recognize that the two mixed-use codes have more specific requirements on the mix of uses.

Special Purpose Districts

They include several zoning codes (S-UN, S-SPR, S-CS, S-R, S-CI, S-CRI, S-FUD) designated for schools, parks, open space, community services, institutions, among other special uses.

Direct Control (DC) Districts

It is a customized land use designation with a list of allowable uses and a set of rules specific to a particular development. Most DC designations include a cross-reference to the rules of one of the standard designations of the Land Use Bylaw.



R-C1, R-C1N, R-C1s



R-CG



M-C1, M-X1



C-COR1, C-COR2



R-C2



M-CG



C-C1, C-O



MU-1, MU-2



EXISTING ZONING

Residential

Currently, north of 19 Avenue, the majority of the existing residential area is zoned as R-C1 and R-C2, consistent with the current build form. R-CG is mostly found along 19 Avenue and further south near the 16 Avenue and Bowness Road interchange. For simplicity, a few parcels zoned as R-C1s and R-C1N are noted as R-C1 as they are of similar use and form.

The multi-residential zoning codes of M-CG, M-C1, and M-X1 are found between the two main streets. Limited number of parcels are zoned M-X1 which includes supportive commercial on the ground floor.

Commercial & Mixed-Use

Three commercial zoning codes of C-C1, C-O and C-COR2 are currently used. C-C1 is designated for community commercial, C-O is used for office commercial, and C-COR2 is mainly designed for commercial corridor on 16 Avenue, which allows parking in front of the building with direct street access. Another corridor commercial code, C-COR1 differs from C-COR2 in that it promotes active street frontage with parking in the back.

MU-1 and MU-2, are found along Bowness Road and 46 Street. Although both support mixed-use, MU-2 requires active street frontage, whereas MU-1 allows mix of uses across several buildings.

Special Purpose & Direct Control (DC)

For the purpose of this exercise, all Special Purpose codes have remained as is. Additionally, no new DC is proposed for new parcel and most DC parcels remained as is, except where new uses and built forms are proposed.

ZONING STRATEGY

Based on the analyses, we propose several strategies to modernize the zoning in Montgomery to facilitate strategic community growth.

Residential

- » Majority of the R-C1 and R-C2 zones remain as is and it is expected that infill from R-C1 to R-C2 will occur as individual parcels redevelop, therefore no zoning change was developed;
- » Modest intensification of mature residential area along collector roads and around schools from R-C1 and R-C2 to R-CG;
- » Residential intensification near the Town Centre and Bowness Road to M-CG and M-C1 due to better access to transit and commercial and employment opportunities;
- » Major redevelopment in the Town Centre to allow for higherdensity mixed-use development to create a unique identity for Montgomery;

Commercial & Mixed-Use

- » The MU-1 and MU-2 zones along Bowness Road remain as is;
- » C-O and C-C1 are replaced with MU-1 and MU-2 to allow for better mix of uses within a building or across several buildings. This also reduces the restriction of allowable commercial businesses to let the market to dictate the best uses:
- » C-COR1 is used to replace C-COR2 along 16 Avenue to elevate pedestrian experience and improve public realm with continuous active street frontage;
- » Additional MU-1 zones are proposed on 46 Street between Home Road and 16 Avenue to create a continuous mixed-use corridor from the riverfront to Bowness Road to strengthen the connectivity of active street frontage all the way to the riverfront;





PROPOSED ZONING

The proposed zoning simplified the land use zoning codes used in Montgomery and offers density and height transition where practical. The following policies are recommended for implementation:

- » All developments shall follow the land use designations shown on the Proposed Zoning Map;
- » All developments building heights shall follow the Proposed Building Height Map and requirements listed in the land use bylaw;
- » All commercial and mixed-use development shall follow the land use bylaw on the maximum density;
- Vehicle and bicycle parking provision shall meet the land use bylaw. Where parking bylaw relaxation is requested, a parking study shall be conducted and approved by the General Manager of Transportation prior to approval;
- » Buildings with heights over 14 meters need to perform a shadow study analysis to ensure overshadowing can be minimized where reasonably possible;
- » No new single-detached dwelling shall be built in multi-residential and mixed-use zones (MC-1, MC-2, MC-G, MU-1, MU-2, C-COR1);
- » Direct driveway access from the main streets to the commercial and mixed-use zones are not permitted except approved by the General Manager of Transportation;
- » For MU-1, MU-2 and C-COR1 zones, all residential units shall be located above the first story;
- » All commercial and mixed-use building and frontage designs shall accommodate all ages and abilities;
- Innovative building and public infrastructure designs are encouraged, such as net-zero building, green roofs, rain garden, LED street lighting;

EXISTING HEIGHTS

This section summarizes the maximum allowable heights based on the existing land use zoning codes. It is noted that the Calgary land use bylaw lists more detailed height restrictions for some of the land use codes based on their proximity to certain uses, such as low density residential districts, etc., but for the purpose of this exercise, the general height restriction is being applied.

Based on our analysis, the maximum allowable heights are determined in the following:

» R-C1: 10 meters; » R-C1N: 10 meters; » R-C1s: 10 meters; » R-C2: 10 meters; R-CG: 11 meters; M-CG: 12 meters; » M-C1: 14 meters; » M-X1: 14 meters; C-C1: 10 meters; » C-O: h in C-O f#h#; C-COR1: h in C-COR1 f#h#; C-COR2: h in C-COR2 f#h#; h in MU-1 f#h#d#; » MU-1: MU-2: h in MU-2 f#h#d#; » DC: defined in the DC bylaw; » Special Purpose: not defined;

The map shows that the buildings with higher maximum allowable heights are located primarily in the community core area between 19 Avenue and the riverfront.





HEIGHT STRATEGY

Through our community workshop and the feedback received from the community, we understand that the community is mostly concerned with building heights when it comes to intensification, which suggests that with proper consideration of building heights, intensification could be well received by the community.

Therefore, our maximum allowable building height has been primarily determined through shadow study to evaluate sun exposure on the public realm, among other key design considerations. Upon review of the existing land use zoning, our proposed design interventions, and also community desires and feedback, we have identified the corridors of 16 Avenue and Bowness Road as appropriate for intense densification.

Using the findings of the shadow study for the three main streets and considering the community feedback and our analysis, we have identified the following building height strategies to achieve our goals:

- » Lower the maximum allowable building heights along all three main streets to maximize sun exposure to activate the streets;
- Gentle increase of building heights in the residential intensification area along major collector roads, transit routes, and around major community destinations;
- » Most significant height increase is proposed at the proposed Town Centre as it is envisioned to transition from a big box commercial store with abundance of parking stalls to a mixed-use, vibrant, transit-supported development that establishes itself as the centre of the community;

The map shows how the maximum allowable building heights are in comparison to the maximum allowable building heights of the current zoning codes. This analysis shows that the projected population growth can be achieved without intense building height increase due to concentrated intensification.

PROPOSED HEIGHT

With the proposed strategies to identify building heights, the proposed maximum allowable building heights are shown in the map.

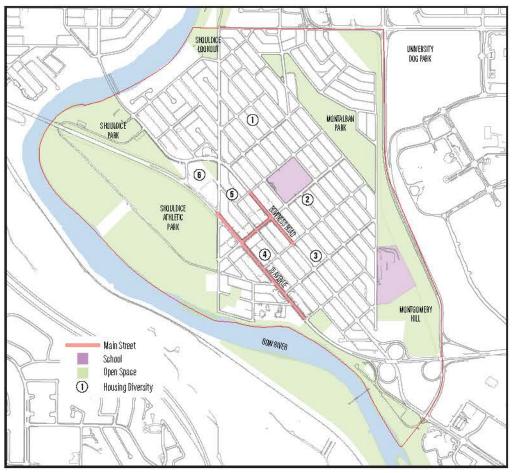
It can be observed clearly from the map that:

- » The maximum building heights of 20 meters are found in the Town Centre and along the riverfront. These are the two key areas identified that can positively contribute to building the community identity and character and activate the community by drawing visitors passing by the community;
- » The next highest building heights of 16 meters and 14 meters are found along Bowness Road, 16 Avenue, 46 Street, and around the Town Centre. They are zoned for both multi-residential and mixeduse developments that will form the population base to support the local commercial businesses;
- » The remaining low-density residential area will consist of residential buildings with heights of 10 to 12 meters that are compatible to the existing neighbourhood character;

It is important to note that the maximum allowable building heights do not mean that all buildings will be built to the maximum height. We expect that individual parcels will evolve and get redeveloped in different times and building heights will likely vary due to different uses and forms of these buildings.

Using the proposed zoning and maximum allowable building height, the expected housing unit increase is calculated for residential, mixeduse and commercial zones. It is expected that not all redevelopments will be built to maximum height and the most intense built form. A total of additional 1,296 is expected, and they are distributed as follows: C-COR1 192 units, MU-2 320 units, MU-1 154 units, M-C1 170 units, M-CG 180 units, R-CG 100 units, and R-C2 180 units.







Live Work Units Eagle Rock, Los Angeles

HOUSING DIVERSITY

Through our analysis, we found that the majority of housing stock in Montgomery is single detached dwelling, but the City and the community are growing more diverse, with smaller household size and changing demographic profile.

Therefore, through our proposed land use zoning and maximum allowable building heights, we aim to increase housing diversity in use, form and height to welcome the anticipated increasingly diverse population. We have proposed several different housing types that are less commonly seen in Montgomery, but could benefit the community greatly and are shown spatially:

- » Laneway Housing: it is a gentle intensification in the same lot of a parcel zoned for R-C1 and R-C2. It makes aging in place possible for multi-generations to live in the same area, and could also serve as a start-up housing for a young family;
- » Co-housing: it can be situated in a R-CG zone at a corner lot to allow for social connections by sharing the same housing amenities, such as kitchen and yard;
- » Live Work Units: it can be located in R-CG and M-CG zones to allow for a community-oriented family-style business to serve the needs of the community, which in turns helps strengthen the community identity and character;
- » Triple Mixed Use: ideally located on the 16 Ave corridor, it can take advantage of the high through traffic volume on 16 Ave as a goods movement corridor, it could accommodate a range of general / light industrial uses that matches the community character;
- » Rental Housing: ideally located in M-CG or M-C1 zones, it supports people with different housing needs, such as students, but also lower-income families through the provision of 1, 2 and 3 bedroom apartments:
- » Mixed-Income Housing: ideally placed in the Town Centre, it supports lower-income individuals and families and supports similar functions of affordable housing but encourages social connections;



Triple Mixed Use Development Vancouver, Canada



Laneway Housing Hillhurst, Calgary



Co-Housing Winston Heights, Calgary



Mixed Income Housing Edmonton, Canada

Rental Housing

Edmonton, Canada



HOUSING DIVERSITY

Units

350

150

190

170

180

100

60

60

Zone

1260 Additional Units

MU-2

MU-1

M-C1

M-CG

R-CG

R-C2

R-C1

C-COR1

Assumptions

MU-2

150 units in town centre
Maximum 4-story along main streets
Average height of buildings = 3.5-storeys
70% of buildings will have residential units

MU-1

Maximum 4-storeys
Average building height = 3-storeys

C-COR1

Maximum 4-storeys
16 buildings with 8 units per floor along 16 Avenue
50% of buildings will include residential units

M-C1

50% apartments with average height = 3-storeys 50% townhouse

M-CG

30% redeveloped in 20 years (36 parcels) Avg 6 units per redeveloped parcel

R-CG

30% redeveloped in 20 years (65 parcels) Add 1.5 units per developed lot

R-C2

30% infill over 20 years Add 1 unit per infill

R-C1

30% infill over 20 years Add 1 unit per infill

Total

DESIGN CONCEPTS

MAIN STREETS

MAIN STREETS

Vision + Strategies

Montgomery is home to two city-designated Main Streets - Bowness Rd and 16 Ave, however, to establish an accessible and enjoyable street network, our team proposes to designate 46 St as a Main Street Connector road that will not only link the two Main Streets, but also create an enjoyable path towards the Riverfront. 46 St will not be officially designated as a Main Street, however, the design will treat it as such.

This corridor is designated as the Main Street Improvement Zone; parcels within this zone are subject to commercial and mixed-used intensification.

The intensification zone is a sustainable way to manage growth in population while leaving the majority of the neighbourhood as low-density residential.

Programming within the Main Street Improvement Zone will establish a sense of community and culture in the neighbourhood, contributing to a growing awareness of neighbourhood identity. This will be accomplished by providing programming with peak uses throughout different parts of the day, and collaborative spaces that will encourage interaction between users. These spaces can be promoted through land use bylaws, addressing co-working and live/

MAIN STREETS AS SOCIAL STREETS

work spaces, co-op art studios, maker spaces, etc. Additionally, wayfinding efforts are encouraged along the Main Street Improvement Zone, linking pedestrians to other key sites across the community, including the Town Centre, Montalban Park, and the Riverfront closest to the zone.

Lastly, the Main Streets are part of the Universal Design Street Network (see Mobility section) and are subject to similar street design elements that encourage a safe, accessible, and comfortable walking and cycling environments.

AM to PM ACTIVITY



WALK TO WORK

LUNCH/COFFEE BREAK

TRIP TO FARMER'S MARKET





4 PM - 10 PM

NOON-4 PM

9 AM - NOON

LATE LUNCH **BREAK STROLL** MEETING AT LOCAL CAFE

AFTER WORK DINNER/DRINKS PICK UP GROCERIES ON THE WAY HOME **EVENING ENTERTAINMENT** WALK TO STORES

HOW CAN WE ACCOMMODATE THIS LIFESTYLE?

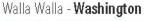
LOCAL ECONOMY	CULTURE + COMMUNITY
CO-WORKING OFFICES	LOCAL RETAIL/SPECIALTY
MAKER SPACES	LOCAL CAFES
LIGHT INDUSTRIAL WORK- SHOPS	FARMER'S MARKETS
	RESTAURANTS/BAR
LIVE/WORK UNITS	LIVE MUSIC VENUES
BOUTIQUE HOTELS	ART GALLERIES
	ART STUDIOS

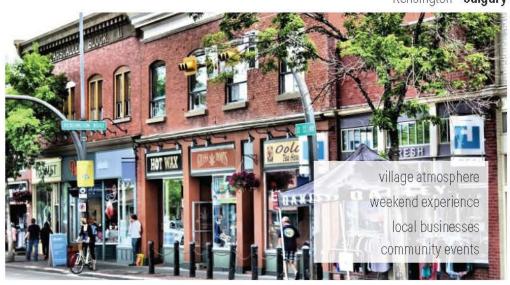
Kensington - Calgary

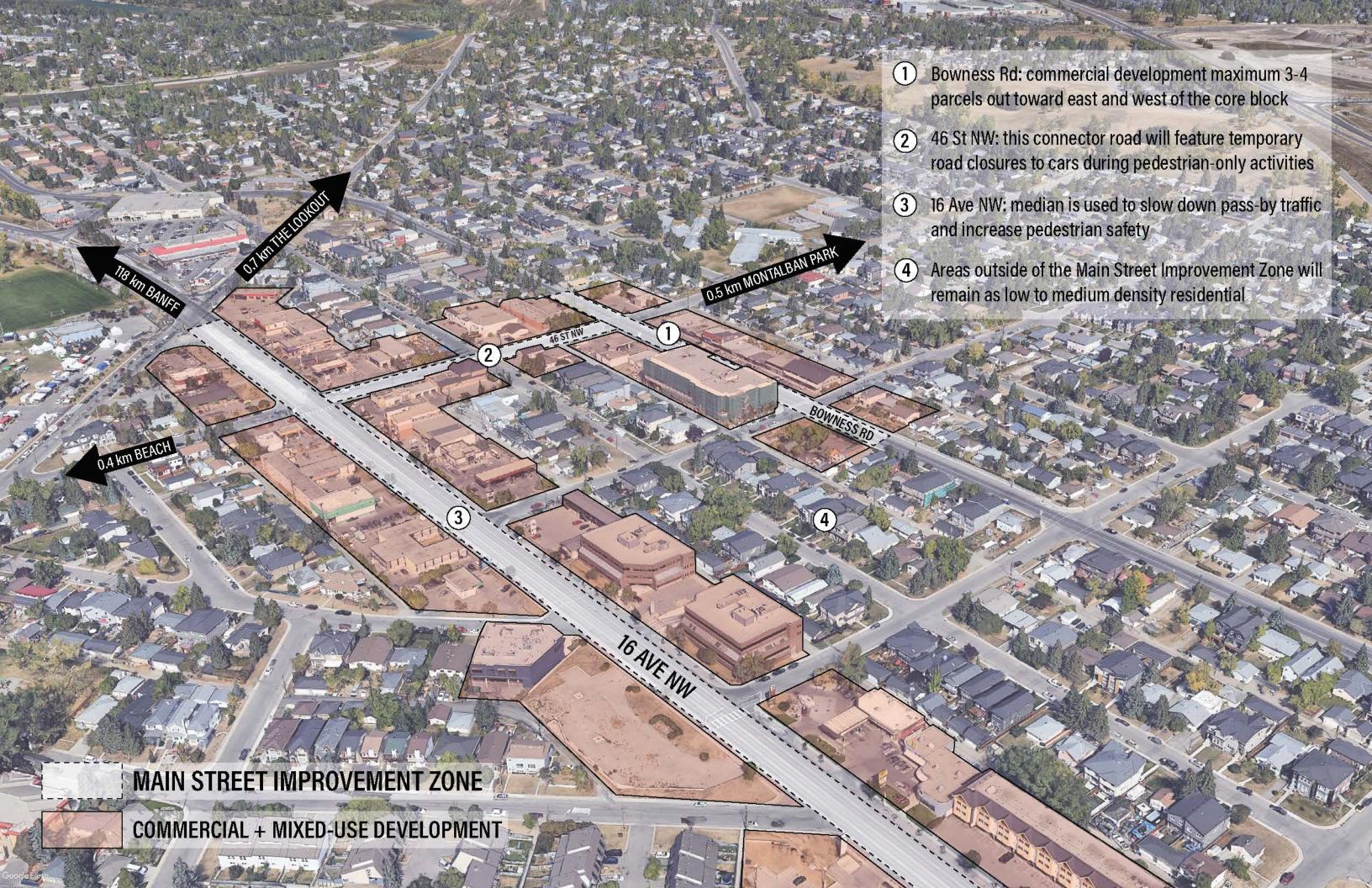








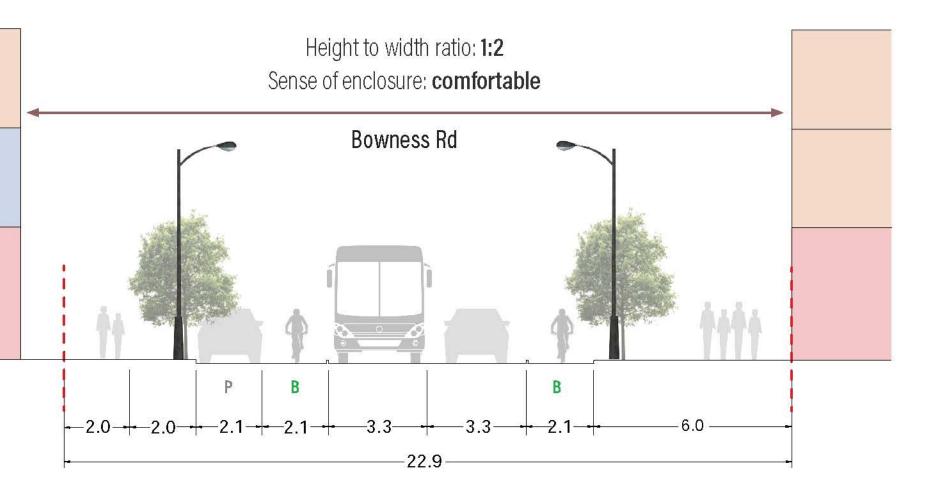




Section A'-A"

MAIN STREETS

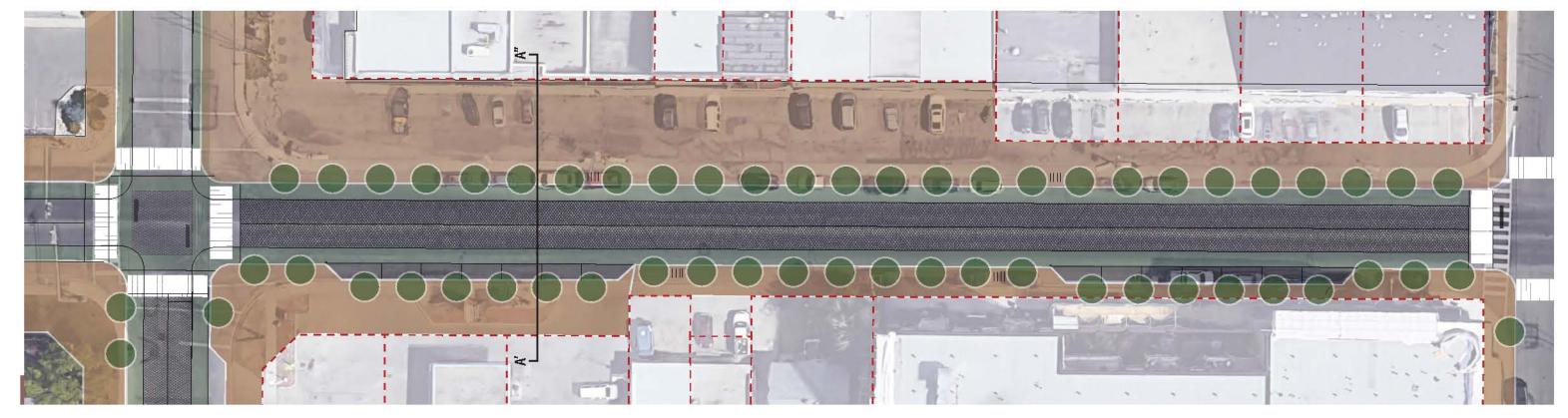
BOWNESS RD



The Bowness Rd Main Street Boundary mainly concentrated in the core block between 46 St and 45 St, however, it includes corner properties of the outer blocks. This is due to the already established commercial uses in these corner sites (46 St & Bowness, and 45 St & Bowness), ensuring no disturbance to the residential character outside of that area.

It is important to note the widened pedestrian realm along the north side of Bowness Rd. This side has the most sun exposure. Front parking (including street parking) has been relocated to the rear side of the properties, widening the pedestrian realm. Front driveways will no longer fragment the sidewalk, as pedestrians will enjoy the continuous pathways. Additional design features include speed bumps as vehicles enter this zone, cycle lanes, bike parking, and vehicular parking on the south. The continuous tree boulevard with an approximate width of 1.5m will create a safety buffer between pedestrians and traffic.

These design interventions will signal to the drivers to reduce their speed, and even discourage shortcutting traffic through the neighbourhood.



Building massings and their effects on the public realm were considered in the design guidelines. Developments on the south side of Bowness Rd will not have any negative shadowing impacts on the north sidewalk if a step back is applied on the fourth storey. Developments on the north side of Bowness Rd will reversely feature fourth storey step backs along the back of the property. With residential parcels abutting the laneway, it is important to ensure no negative shadowing from the commercial development. Additionally, a 10m setback is proposed along the rear, with mandatory parking.

Shadowing was considered for peak-time usage: during morning work breaks, lunch, and late afternoon (after work). The proposed massing ensures a favourable environment for the users during those peak times, and maximum sun exposure. Developments along both sides of the Main Street will require ground floor commercial frontage with future deliberations about the appropriate scale of permeability. While commercial uses will be allocated for the ground floors, office, residential, or flex spaces can be found in from second storey up.

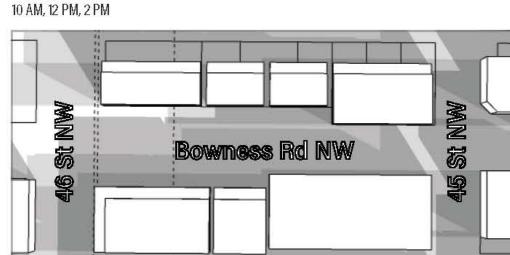
The sense of enclosure (height to width ratio) created by the public realm and building heights are human-scale and comfortable for pedestrian users. This is a significant change from the current sense of enclosure: buildings are moved to the property lines (with no minimum setbacks required along street frontages) and parking is moved to the back, reduce the distance between buildings.

Shadow Analysis

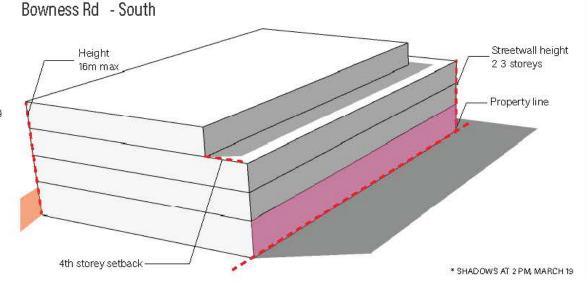
June 21

Bowness Rd NW





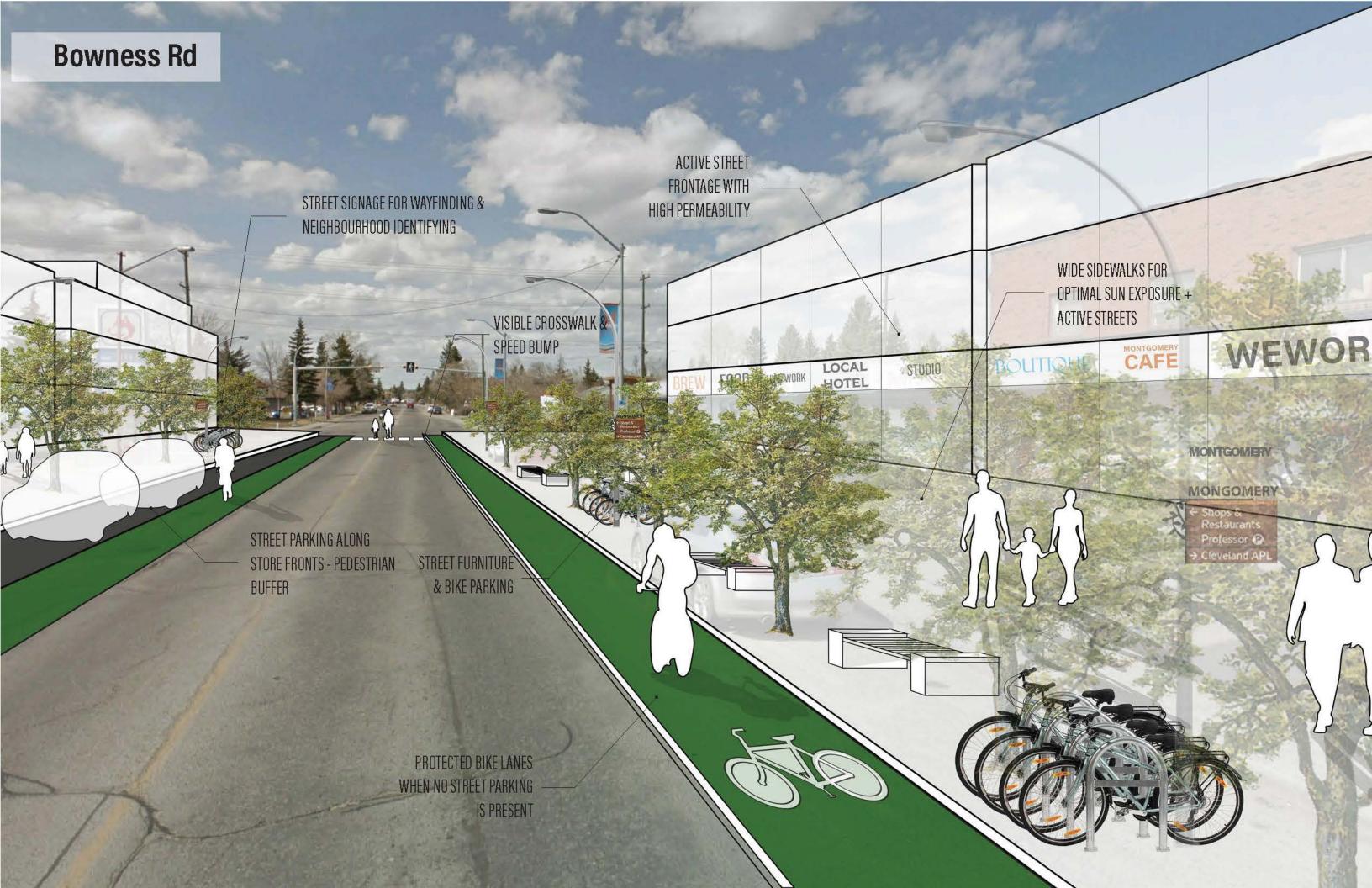
Bowness Rd - North 4th storey stepback 10m setback from lane Minimal to no overshadowing of buildings Parking behind the building



Supporting Policy

January 21

- 2.1 No minimum setbacks required along a street frontage, except on the south side of Bowness Rd where room for public realm must be considered
- 2.2 Minimum 1.2m setback from side property line
- 2.3 10m setback in the read of the property facing lane (on north side of Bowness Rd) to mitigate shadowing
- 2.4 Maximum 12m height on the street frontage, after which a minimum 3m step back going to maximum 16m height
- 2.5 Commercial street frontage on ground



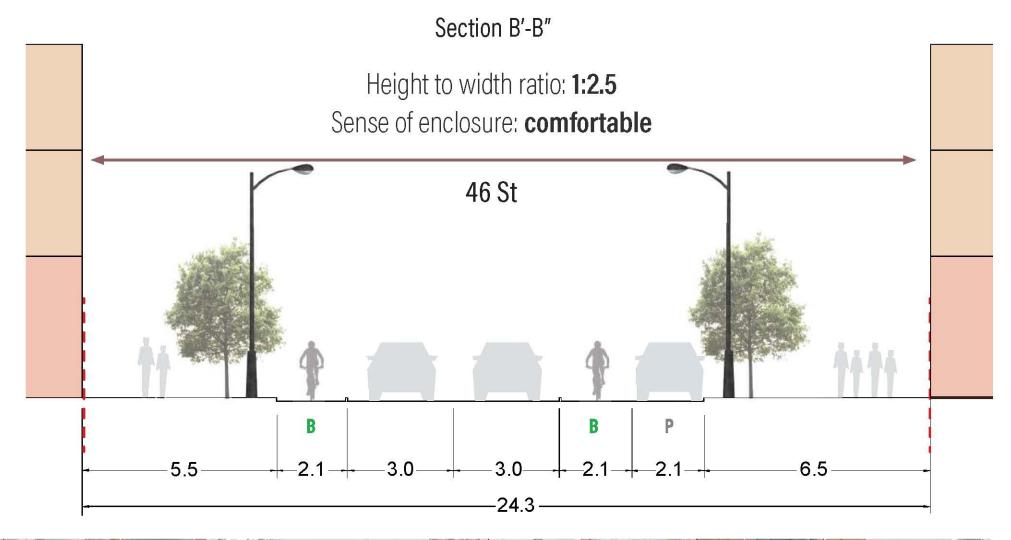
MAIN STREETS

46 ST

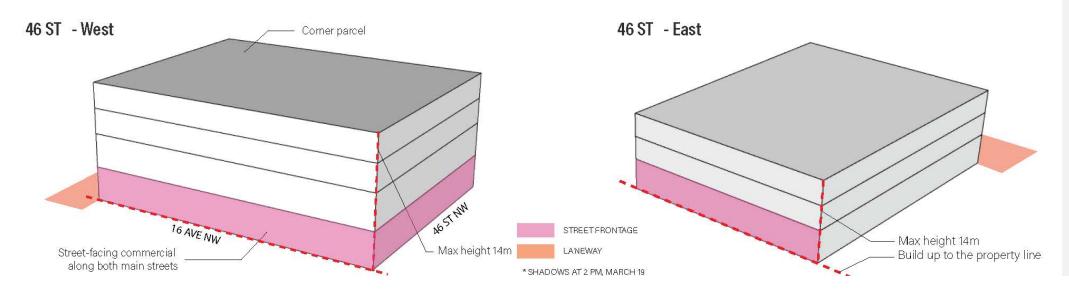
While not an officially-designated Main Street, 46 St will act as a key connector between 16 Ave and Bowness Rd, ensuring a continuous path with similar land use policies and street design features.

Due to traffic flows that are the lowest of the Main Streets, 46 St is a favourable environment for a pedestrian only street during temporary closure to vehicular access. Events such as farmers markets or street festivals can be held on this street.

Similar to Bowness Rd and 16 Ave, streets are characterized by wide sidewalks, speed bumps, and raised crosswalks. However, 46 St features a cobbled roadway (not sidewalks) for a comfortable pedestrian atmosphere when the street is closed to vehicles. A comfortable sense of enclosure continues along as the street reaches 16 Ave.







Supporting Policy

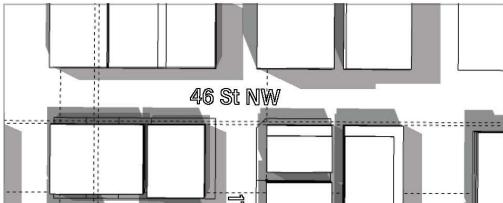
- 2.6 No minimum setbacks required along a street frontage
- **2.7** Minimum 1.2m setback from side property line
- 2.8 Minimum 3m setback from lane if adjoining residential parcel
- 2.9 Maximum 14m height
- **2.10** Commercial street frontage on ground floor facing main streets

Shadow Analysis

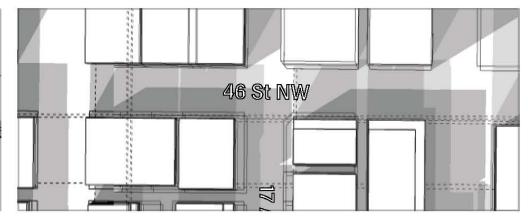
June 21

10 AM, 12 PM, 4 PM 46 St NW

March 19 10 AM, 12 PM, 4 PM



January 21 10 AM, 12 PM, 2 PM



This street is the least affected by shadowing due to its north-south orientation, creating a favorable atmosphere for events during various times of the day. Commercial street frontages will characterize the ground floor land use, and buildings may be developed with no minimum setbacks when fronting on a

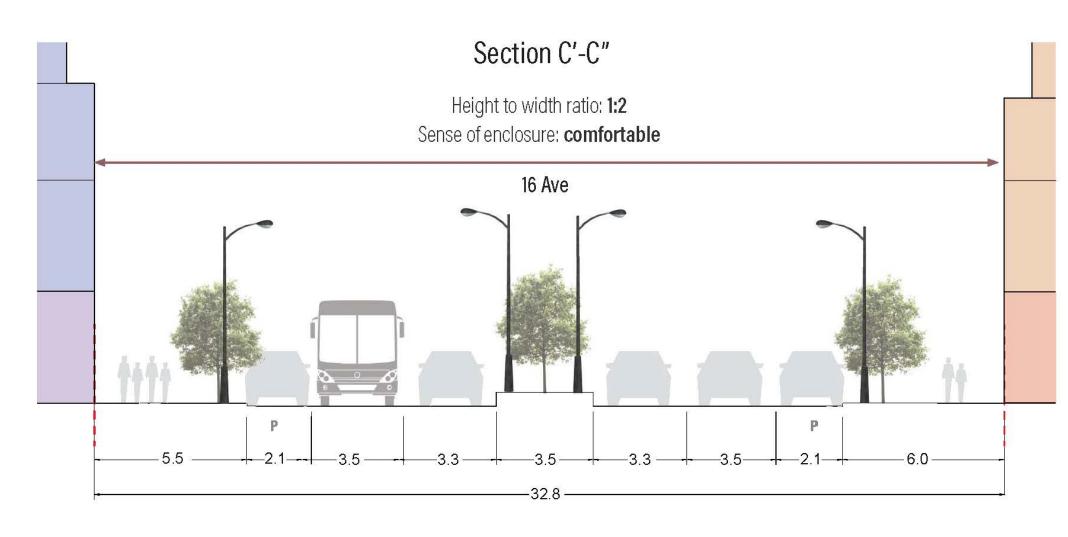
Building massings will mirror developments along Bowness Rd, however no step backs will be necessary along this road due to minimal shadowing on the public realm. West side of 46 St allows for higher developments than the east side, however, the sense of enclosure remains comfortable in this case.

Sunfest on 9 Ave Main Street - Inglewood, Calgary



street.





MAIN STREETS

16 AVE

16 Ave is the most car-oriented of the three Main Streets. It is important to note that while a Main Street characteristic is assigned, it also acts as a major highway that connects pass-by traffic to key regional destinations like Banff.

We recognize that there is a large amount of through-traffic during peak times, but an opportunity exists to attract this through traffic into the community. Through successful street design, and identity building features such as way-finding, public art, etc., Montgomery can be recognized as a gateway community.

A median (such as the one on Memorial Dr) will be incorporated into the street design, as well as a tree boulevard on either side of 16 Ave. Similar to other Main Streets, this will encourage traffic to slow down and recognize that they are driving through Montgomery. Identifiers such as unique plantings can be used to create a visual node along the road: a successful example of that are the street pots along Zoo Drive on the way to the Calgary Zoo.



Road Planting - Zoo Rd, Calgary

Road Median - Memorial Dr, Calgary





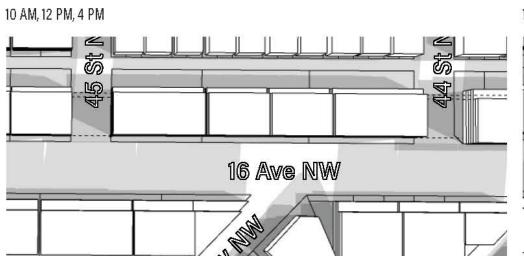
With the larger-scale developments in the area, 16 Ave will have comfortable levels of sun exposure, creating a favorable environment for an enjoyable outdoor experience. Similar analysis times for sun/shadow studies were used the previous two streets, as same peak times are expected as on Bowness Rd and 46 St.

South side of 16 Ave will allow for a 16m maximum development height, however, a front step back at the fourth storey will be required. Due to a favorable pedestrian realm, front setbacks are not required, and properties can be developed to the property lines. On the north, buildings can only reach a maximum of 14m in height, and a rear step back on the top floor is required. A 10m setback in the rear will also ensure the availability of parking, and minimal shadowing on residential properties abutting the laneway.

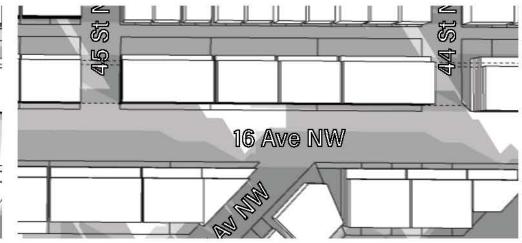
Shadow Analysis

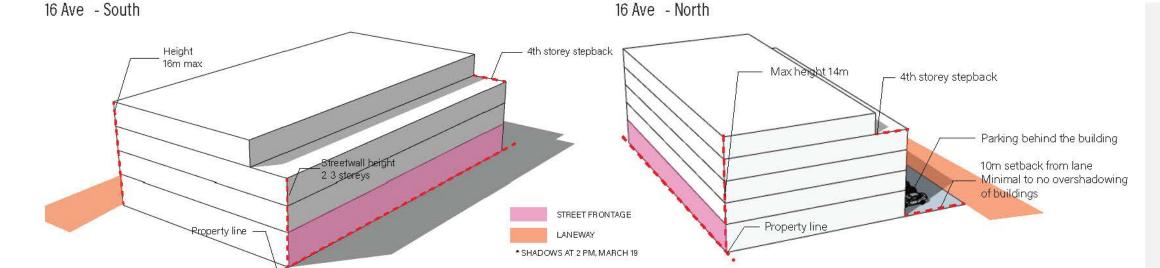
June 21 10 AM, 12 PM, 4 PM





January 21 10 AM, 12 PM, 2 PM



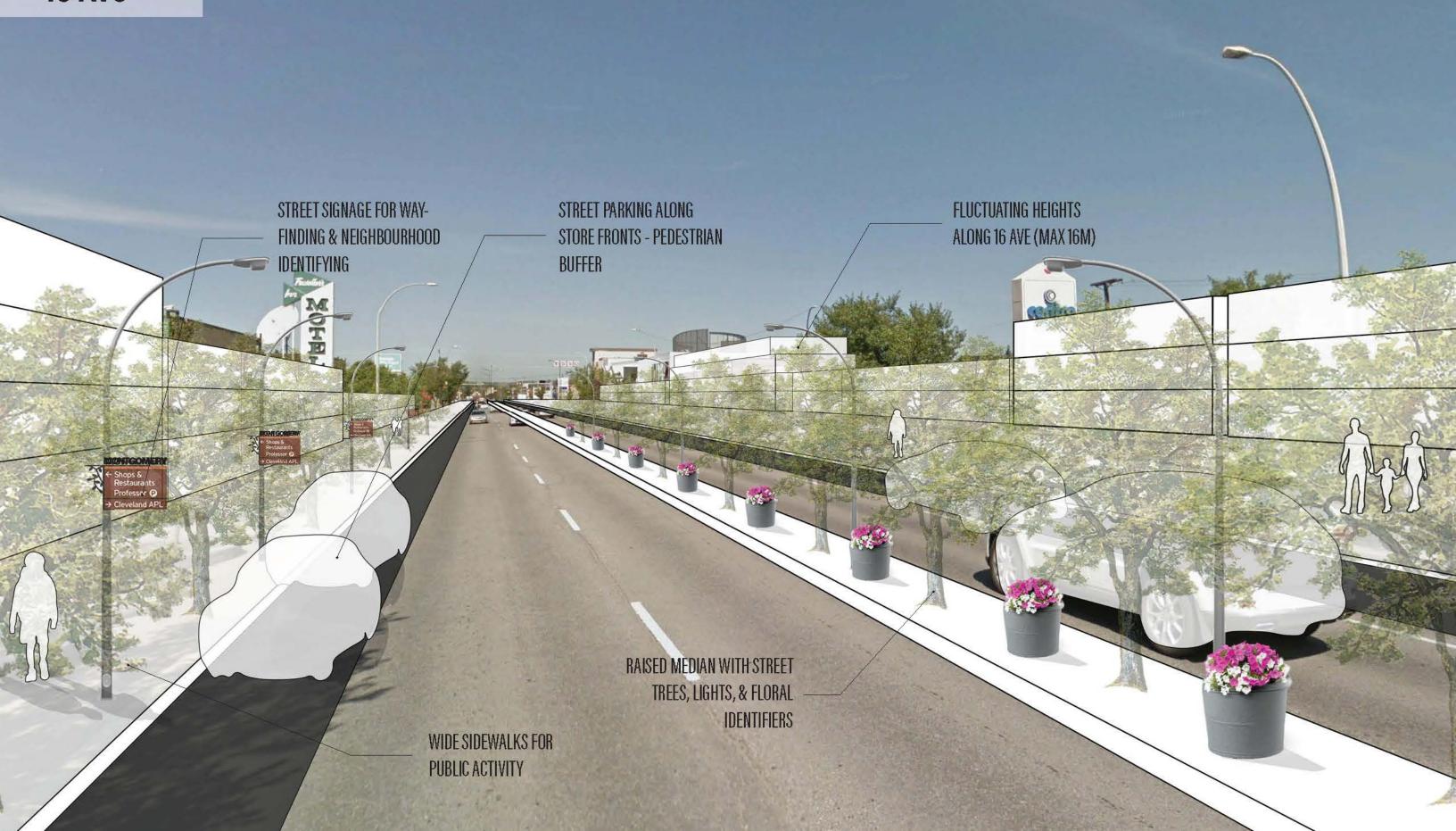


March 19

Supporting Policy

- 2.10 No minimum setbacks required along a street frontage
- 2.11 Minimum 1.2m setback from side property line
- 2.12 10m setback from lane (if adjoined by a residential parcel) to mitigate shadowing
- 2.13 Maximum 14m height
- 2.14 Commercial street frontage on ground floor

16 Ave



DESIGN CONCEPTS

TOWN CENTRE



SITE ANALYSIS

The Town Centre site is currently a commercial node adjacent to Montgomery Square and bounded by Bowness Road to the north, 16th Avenue to the South, Home Road to the east, and 49th Street to the west. Currently the site's anchor tenant is Safeway which creates a regional draw for residents of Montgomery and surrounding communities for groceries and other daily shopping needs.

The space is dominated by car oriented uses, such as parking lots and strip mall shopping. The quality of buildings within the site appear ready for replacement in several cases.

Montgomery Sqaure is a large open space but offers very little in terms of programming or comfort for visitors. When observing the site, it seems that most people traverse the site without stopping to relax and enjoy the space.

The intersection at Bowness Road and Home Road is a very busy one with an awkward design due to the shift of the street grid network. Our analysis revealed that the intersection experiences several traffic related incidents every year, prompting us to investigate design improvements.

Finally, we recognize that the site acts as the community's transit service hub where many transit users have the opportunity to switch bus lines to reach their final destination. Creating a covered transit hub that increases the capacity to provide elevated bus service is a strong opportunity we see for the site.





Large Parking Lot- Safeway

Parking lots create an uncomfortable environment for pedestrians and encourage shoppers to drive from store-to-store rather than walk. This mode of shopping results in destination shopping and can negatively impact foot traffic for businesses.



Strip Mall Development-Bowness Rd

Strip mall developments create undesireable edge conditions that do not support certain businesses like restaurants or coffee shops. Parking in front also reduces the visibility of shops from the public realm reducing the chance that customers will stumble upon locally owned businesses.



Auto Oriented Uses- Bowness Rd

Auto-oriented land uses such as gas stations take up large parcels of developable land and prioritize the movement of vehicles rather than people. These uses are not conducive to creating a vibrant Town Centre.



Open Space- Montgomery Square

Montgomery Square is a large open space at the heart of the community. On two sides it is bordered by roads, and the final third side is bordered by a blank wall. The square suffers from lack of active edges and interesting programming to entice visitors to stay and enjoy the space.



Intersection at Home Rd & Bowness Rd- Montgomery

The intersection at Bowness Road and Home Road is large and has somewhat awkward as the roads do not intersect in a grid pattern. This intersection is the site of several vehicle and pedestrian incidents yearly.



Bus Stop-Bowness Rd

Bus stops along Bowness Road have small bus bays and bus shelters. The area acts as a transit hub as riders often switch bus lines at this location.

PLAN VIEW

This plan is intended to provide a vision for what could be in a space that offers so much potential as a hub of activity in Montgomery.

The plan outlines a mixed-use commercial node with an adjacent transit hub capable of providing frequent bus service to the community.

Providing residential units with the Town Centre is important to leverage an investment in improved transportation infrastructure, however, we believe restricting building heights to no more than 6-storeys is important for maintaining community context.

The introduction of shared streets through the Town Centre elevates the priority of the pedestrian above that of the vehicle, which can create a much more enjoyable human experience.

The plan relocates Montgomery square into the heart of the space where the buildings have been designed to provide a sense of enclosure while maintaining sun exposure to the public square and proposed steps inspired by Downtown Crossing in Boston.

The plan promotes low-rise, courtyard style development and traffic calming measures such as a traffic circle at the intersection of Home Road and Bowness Road.





Mixed Use Development - Santana Row, San Jose, California

Vertical mixed-use with ground floor commercial is proposed to create active street frontage and an interesting pedestrian experience. Providing residential or office units above will help to provide the required intensity to support the vibrant Town Centre.



Transit Station - Bern, Switzerland

A covered transit station can encourage ridership due to a more comfortable year-round experience. This investment in transit infrastructure could be made possible if the Town Centre was to be built-out in full.



Shared Street - Brighton, United Kingdom

Shared streets can elevate the priority of the pedestrian and create provide the opportunity for high quality public realm. Vehicle access to the Town Centre can be limited to off-peak hours, or closed completely during special events.



Downtown Crossing Plaza - **Boston, Massachusetts**

High quality public realm design will encourage people to linger in spaces, while programmable spaces would offer an opportunity to organize events and build community. The steps shown above achieve both objectives simultaneously.



Courtyard - **Bo01**, **Malmo**, **Sweden**

Courtyards can serve a very important function within the Town Centre by providing shelter from traffic noise off of 16th Avenue and a semi-private space for residential tenants.



Traffic Circle - New Hampshire

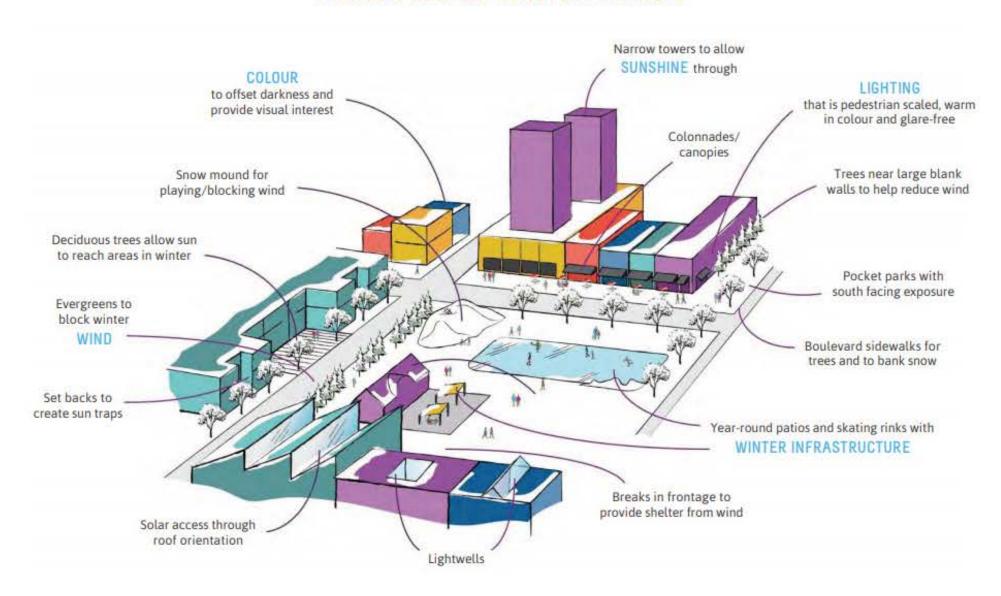
A traffic circle at the intersection of Bowness Road and Home Road can be an effective tool for traffic calming, improved vehicle flow and road alignment over the existing condition.

WINTER CITY DESIGN

It is imperative that winter city design considerations are at the forefront of the Town Centre build-out. This space should be designed as a hub of commercial activity that is safe and enjoyable during all seasons.

The City of Edmonton's Winter City Design Guidelines (2016) were referenced when considering policy and design recommendations. This images below visualize some for the important nuances of high quality winter city design.

PRINCIPLES OF WINTER DESIGN



(City of Edmonton, 2016, p. 7)



Climate Responsive Design at Blatchford Redevelopment in Edmonton, AB

(City of Edmonton, 2016, p. 20)

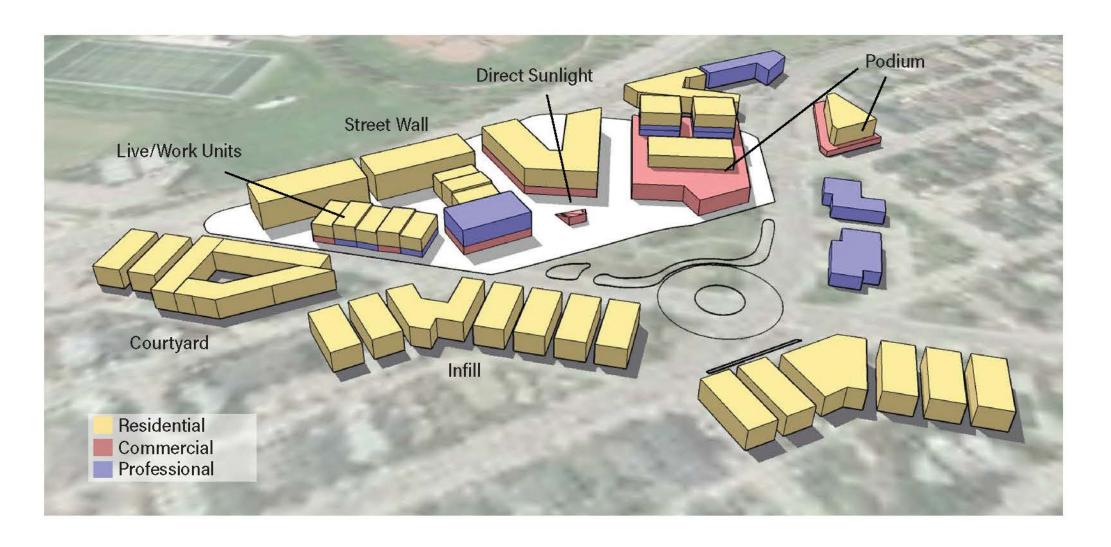
BUILDING HEIGHT, MASSING & ORIENTATION

Building height, massing, and orientation are integral to creating an enjoyable, human scale Town Centre. Winter city considerations, active frontages, shadowing, community context, and shelter from wind and traffic noise are all important factors that are considered within this plan.

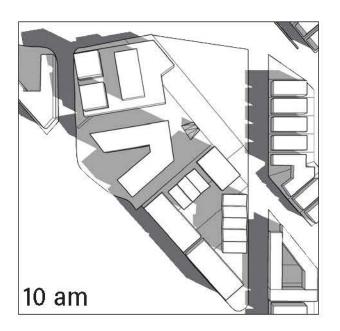
POLICY

There are several policy recommendations that we propose specifically as it relates to building height, massing and orientation within the Town Centre:

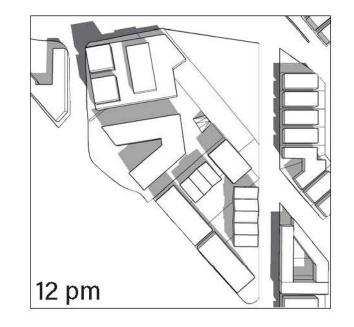
- » A maximum height of 6-storeys is recommended to reduce shadowing and to maintain an appropriate density transition into the community;
- » Buildings over 4-storeys should be required to include a podium or stepback to reduce downdrafts and create an active and enclosed street frontage;
- » Courtyard design should be promoted to create sheltered sun-traps that will be comfortable throughout all seasons;
- » Buildings should be oriented to block north-west wind, and provide sound shelter from the busy 16 Avenue corridor;
- » Ground floor commercial uses should be encouraged within the core Town Centre to compliment the shared street design;
- » A continuous street wall should be encouraged as an important design element in creating a comfortable sense of enclosure;

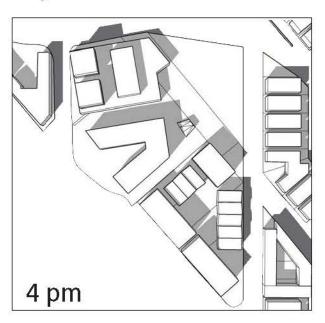


Shadow Study Spring Equinox (March 19, 2020)



The shadow study was conducted on the spring equinox to give an understanding of the average daylight, and to make proposals for building and massing height. The buildings were then oriented and spaced to allow for direct sunlight to reach building faces of adjacent buildings.





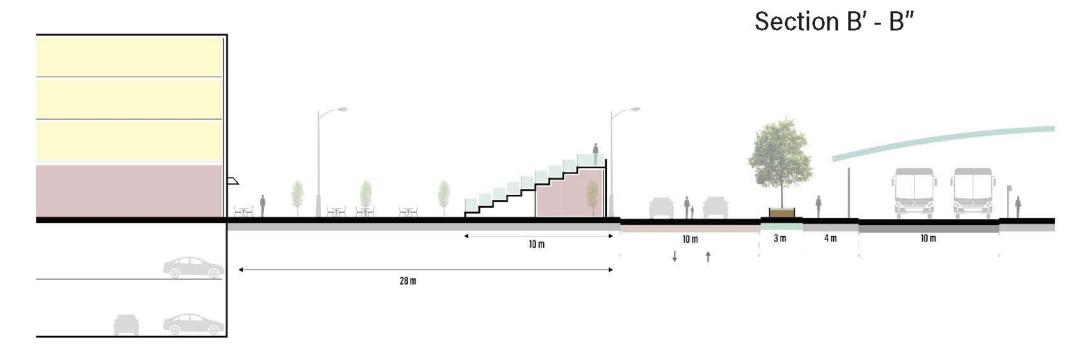
MONTGOMERY SQUARE

Montgomery Square is the central public space within the Town Centre that should provide both a space for unorganized activity and programmed events and gatherings. By moving the Square into the heart of the Town Centrefrom its current location, it can benefit from active edges and a sense of enclosure and comfort that the buildings provide.

Appropriate uses along the edge of the Square would be coffee shops, restaurants, and retail. Land uses such as banks and other professional services should be located off the Square as they often create fast walking and determined customers.

The steps inspired by Downtown Crossing in Boston provide an interesting way to increase the available seating that is exposed to sunlight throughout the darker months. It also provides an ampheatheatre-like area that can hold community events and gatherings.

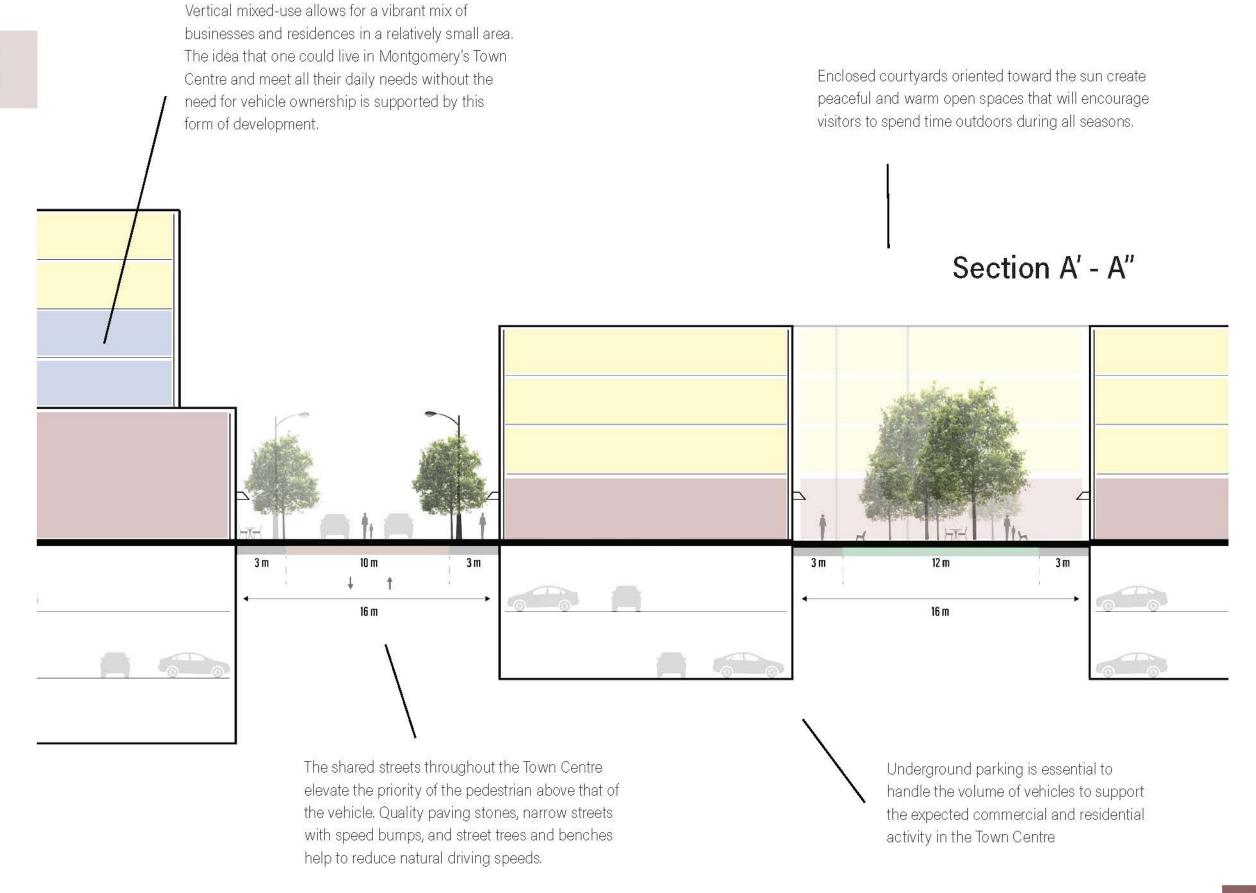
The covered transit hub is adjacent to Montgomery Square as well and is expected to generate a significant amount of foot traffic within the area. The square and surrounding businesses provide a place for transit users to shop, eat, socially intereact while they wait for their bus.





Town Centre

SITE SPECIFIC DESIGN



DESIGN CONCEPTS

OPEN SPACE

OPEN SPACE

OVERVIEW

Montgomery is characterized by a steep slope in the northeast part of the site, and flat areas in the south. The community is bounded by the Bow River to the south and west, featuring a popular riverfront stroll among the local residents.

The community's cycling and pathway network along the riverfront is part of a larger regional and national networks of the Calgary Bow River Pathway system, and the Trans Canada Trail (The Great Trail) that connects Canadian cities from the east to the west.

Additionally, Montgomery has four major open space typologies that include:

- Natural Areas Montgomery Hill
- Regional Parks Shouldice Athletic Park
- Community Parks Shouldice Park
- Neighbourhood Parks Montalban Park

Neighbourhood parks were the most underutilized ones in the community, featuring a lack of programming - in some cases due to steep slopes. Four of these neighbourhood parks were chosen to be redesigned with appropriate programming for local users and visitors. These parks include:

- the former site of the James Shouldice Ranch (The Lookout)
- Montalban Park
- George Gell Park
- Riverfront area.

The proposed Universal Design Street Network (see Mobility section) and the Cycling Network connect these major parks and other key areas in the community. As seen on the map, the Cycling network is situated on the edges of Montgomery and along major routes within it, including 52 St, Home Rd, and 43 St, which are primary points of access to the riverfront and the Bow River Pathway.

Natural Area - Montgomery Hill



Regional - Shouldice Athletic Park

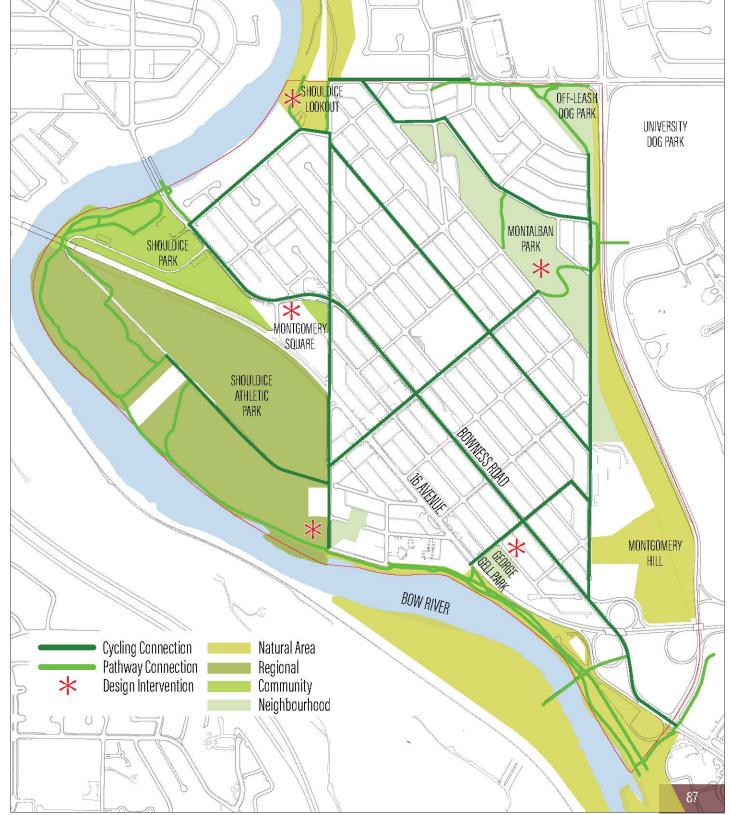


Community - Shouldice Park



Neighbourhood - Montalban Park









OPEN SPACE

THE LOOKOUT

Situated on the former site of the James Shouldice Ranch, this park is located on the northwest edge of Montgomery, and currently acts as a gateway to the Bow River Park for local residents. The objective is to create an accessible and vibrant open space that features its historical significance.

The park's adjacency to the Bow River Pathway is an opportunity to attract visitors to this space and a possible platform to educate about Montgomery's identity and historical significance.

Existing trees have been retained on the site, with the proposed network of trails designed to bypass them. Trees along the pavilion will allow users to spend time in shaded areas.

Viewing Platform - Sea to Sky Trail, BC



2018 China House Vision Exhibit



The first design intervention is the addition of a viewing platform to the north edge of the site that will complement an existing one below, on the southwest edge of the park. The two viewing platforms are separated by a steep slope, and each one can be accessed easily by visitors at either elevations. The proposed viewing platform faces the Bow River and the adjacent community of Bowness.

The second design intervention is an addition of a pavilion adjacent to the existing parking lot.

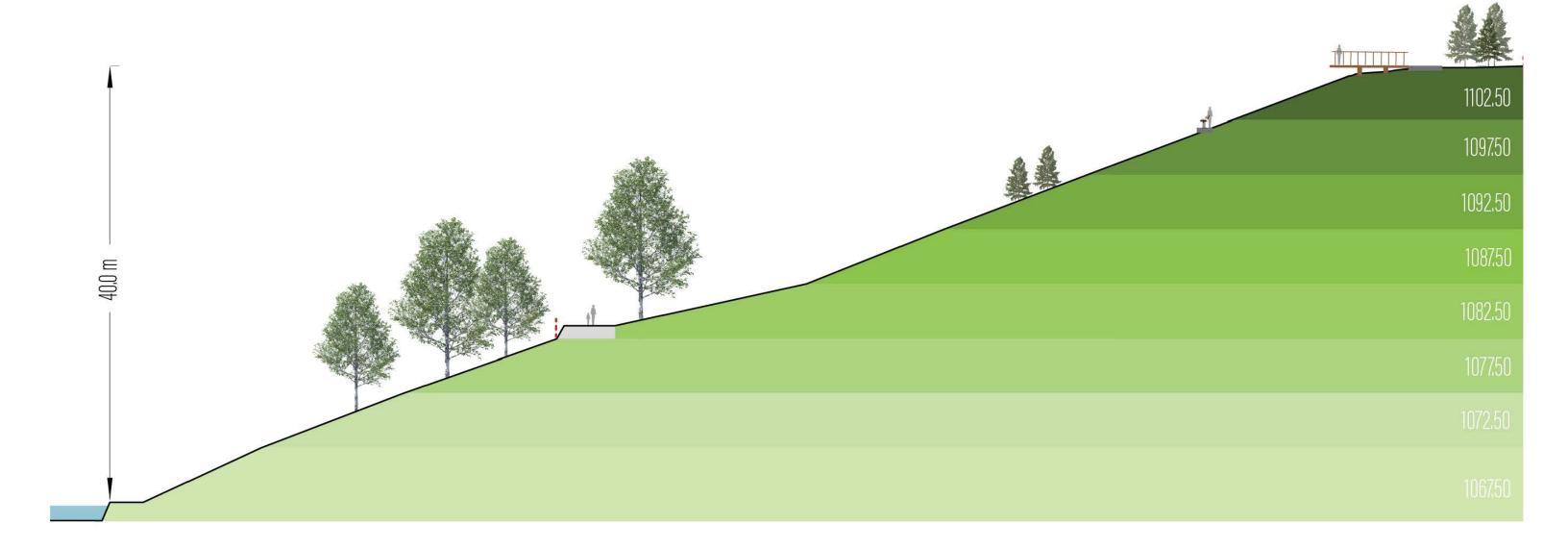
The lot will provide accessibility to vehicles going to the pavilion. Visitors will be given the convenience to stay and rest - a feature that the analysis found lacking in Montgomery.

Other opportunities that the pavilion will include are: seating, public washrooms, community kitchen, fire pits, and an event space. Addition of activities both indoors and outdoors will ensure the usage of space in the winter season. Further learning opportunities about the history of James Shouldice and his ranch will take place in this development.

The three features of this park (two viewing platforms and the pavilion) will be connected by a series of trails following the lines of topography - this will ensure that users encounter the easiest possible inclines during their walks.

As seen in the cross section below, there is an elevation gain of 40m from the Bow River to the top of the hill. While trails on this site may be challenging to some visitors, they can act as a training course to those who love to exercise outdoors and hike in the city. However, the allocation of trails ensures that a wide variety of users (age and ability) can use this space.

Section A' - A"





OPEN SPACE

MONTALBAN PARK

Montalban Park is a popular space for dog walking - majority of the community to the north of the park utilizes this space. It is also a popular short-cutting route towards the south of the community, and while there is only one paved trail, there are several desire lines that show the most popular shortcutting routes. Similar to The Lookout, this park has a steep slope along the walking paths which discourage many users, however, the community school two blocks south of the park may bring an influx of young users who may prefer challenging and active environments.

The objective for this space was to meet the needs of local residents, which include:

- establishing an efficient and accessible north-south route
- treating the steep slope as an opportunity for special programming
- providing quiet spaces for local residents (dog walking, strolls)
- providing active spaces for young users

It is important to note that there are no existing sidewalks along Montalban Park. A pedestrian crosswalk is proposed at the south foot of the stairs to mitigate this challenge. Additionally, majority of the existing trees remain on the site, however, two trees are proposed to be removed from the park for the addition of a stair landing on the southern edge.

Toboggan Hill - **Beloit WI**



The first design intervention features a toboggan hill going down the steep axis of the park. In the summer, sledding can become summer tubing, or a slip and slide hill ensuring an active space throughout the seasons. Tobogganing, sledding, and tubing are popular activities that cater to families in the area. This is an additional opportunity for residents to build their sense of identity and community by socializing and participating in activities with their neighbours. Directly above the hill will be a zip line platform (second intervention) that will be open all year.

Currently, the only paved trail in Montalban Park does not get cleared in the winter. Additionally, it builds a layer of ice, creating dangerous conditions for winter cyclists. The third design intervention proposes stairs along a currently popular shortcutting route, with a rail built in for convenient bike transportation and several resting spots along the way. While ensuring an accessible route, the stairs can also be a popular exercise feature among residents outside of the winter months.

The fourth design intervention also takes advantage of the steep slope. A small amphitheatre is proposed along the south edge of the park. Programming for informal and community-led events will complement the quiet neighbourhood. It has been placed in a location enclosed by trees from the residents to the south, and a steep hill from the residents to the north, ensuring a lack of noise disturbance.

Zip line - Ralph Klein Park, Calgary, AB



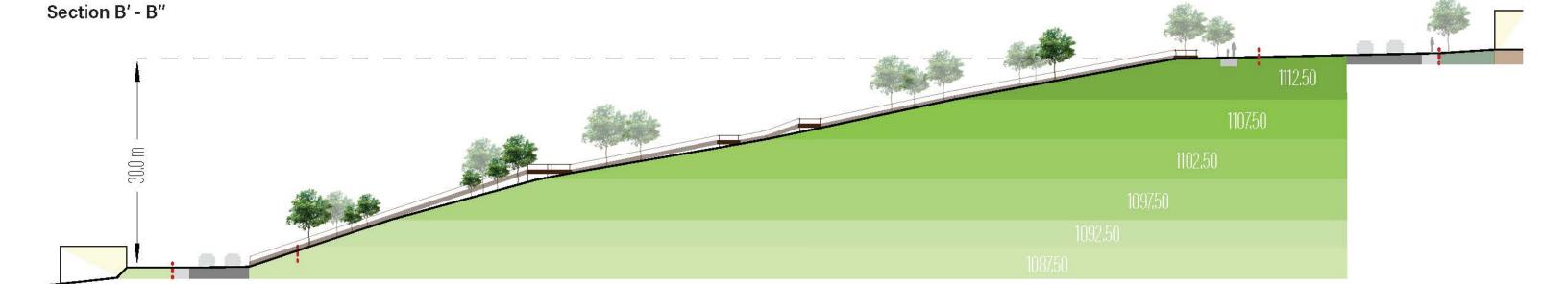
- 17.5 m

Wooden Stairs - Crescent Heights, Calgary



Meinig Amphitheatre - Sandy, Oregon





107,6 m



OPEN SPACE

GEORGE GELL PARK

George Gell Park situated on the southeast end of Montgomery, adjacent to Trans Canada Hwy (16 Ave) to the south, and residential parcels along the rest of the edges. Its existence along a major traffic route does not give opportunity for a quiet open space.

It is proposed that this park should be the most active and multi functional of the entire community. Flat topography allows for a wide variety of possible uses. Enclosed by coniferous species of poplar and spruce trees along 16 Ave, a safe buffer is created for the users.

The objectives for the redevelopment of this park are as follows:

- Catering to all ages: children, adults, elderly
- Catering to a variety of demographics: families, single users, large groups, small groups, etc.
- Providing an active, lively, and social environment

The first design intervention features an outdoor beach volleyball court with space for seating and observing the games. It is located on the current playground site.

The second design feature is a community garden with over 20 planting beds and space to store tools.

The third design feature is a rain garden on the southeast corner of the park. This is the quietest area, where users can stroll and observe shrubs, perennials, and flowers native to the region. A wall of coniferous trees (poplar and spruce) is planted along the east edge of the park to ensure an intimate enclosure and visual separation form the highway.

The fourth design intervention is a naturalized playground situated directly across from a residential area, and further away from the highway. The playground can be seen from many points across the park, and from abutting residential areas. This may allow families to observe their children from nearby locations, without any existing trees blocking the view.

Three gazebos have been placed adjacent to major areas of the park:

- west of naturalized playground
- east of beach volleyball court
- along the rain garden path

Gazebos can accommodate both, large and small groups of people. Additionally, benches have been placed along the paths to ensure resting spots, and opportunities to observe other activities taking place.

Fire pits have been placed across the park and in close proximity to the programmed spaced - this will allow residents to participate in several activities throughout the day without having to leave the park.

While located along the highway on one side, it functions as the backyard of local residents to the north and west. This atmosphere and variety of active uses will contribute to the sense of community and identity.

This park accommodates many users: gardening can be enjoyed by the elderly, hobbyists, and families who want to educate their children about food; beach volleyball can accommodate any users who have an active lifestyle or enjoy sports; the rain garden can attract those who enjoy a peaceful atmosphere or are nature enthusiasts, and the naturalized playground is an active space for children and families to spend their afternoon.



Beach Volleyball - Garden Park, Edmonton



Community Garden - East Village, Calgary



Naturalized Playground - Westmoreland Park, Portland, OR



Naturalized Playground - Columbia Tech Centre, Vancouver WA



Naturalized Playground - Reeds Crossing Discovery Park, Hillsboro, OR





OPEN SPACE

RIVERFRONT

The riverfront site is located at the south end of Home Road. The space is currently underutilized as a gravel park & ride lot. We propose condensing and paving this lot, creating space for an urban beach. To complete this destination, we propose an addition of public washrooms and a seasonal snack bar.

Creating stepped access to the waterfront similar to Calgary's East Village will allow visitors to take advantage of the natural gravel bars that exist at the site.

A separated pedestrian pathway is proposed along the east side of Home Rd, where public art installations and street lighting will create an engaging pathway to the beach destination, while providing a sense of safety and comfort.

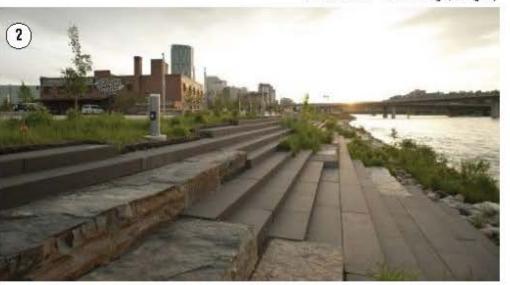
Precedents have been noted from different countries around the world. Natural beach area is an important feature, as over development around the riverfront is discouraged in this case.

Using the power of the river stream, the design team proposed to use this environmental feature to create a surfing area. More calm aquatic experience can be seen in the swimming area.





River Access - East Village, Calgary



Pathway Lighting - Ottawa, Canada



Public Art - Contemporist



River Surfing - Cunovo, Slovakia





DESIGN CONCEPTS

MOBILITY



OVERVIEW

Objectives & Strategies

With easy access to 16 Avenue, a major east-west mobility corridor, frequent transit service, especially routes #1 and 305# directly to downtown, and Bow River Pathway right adjacent to the community, Montgomery has great mobility options. Therefore, our objectives are to further enhance the rich options that the community provides, build a multi-modal community. Considering the higher population of seniors, we also want to prioritize pedestrian movements over the automobile to encourage community mobility. With our proposed land use concept, we focus on enhancing the attractiveness of sustainable mobility, especially along the key corridors and Town Centre. This section will discuss the strategies we will deploy to achieve these objectives.

Different scales of strategies are considered for improving the mobility in the community of Montgomery. They include the following:

- » Applying Universal Design principles to ensure mobility options are provided for everyone, especially for people with reduce mobility:
- » A combination of traffic calming techniques to discourage short-cutting traffic and manage short-cutting traffic speed;
- » Create a multi-modal community by enhancing sustainable transportation modes, including walking, cycling, and transit;
- » Using Urban Design techniques to enrich the experience of sustainable mobility;

ROADWAY

Based on our analysis and community feedback, we understand that the community needs a transportation network that is more friendly to vulnerable road users, including pedestrians, cyclists, and transit users. Therefore, we propose several design interventions from the transportation network level to demote the importance of automobile and promote sustainable transportation.

Road Classification

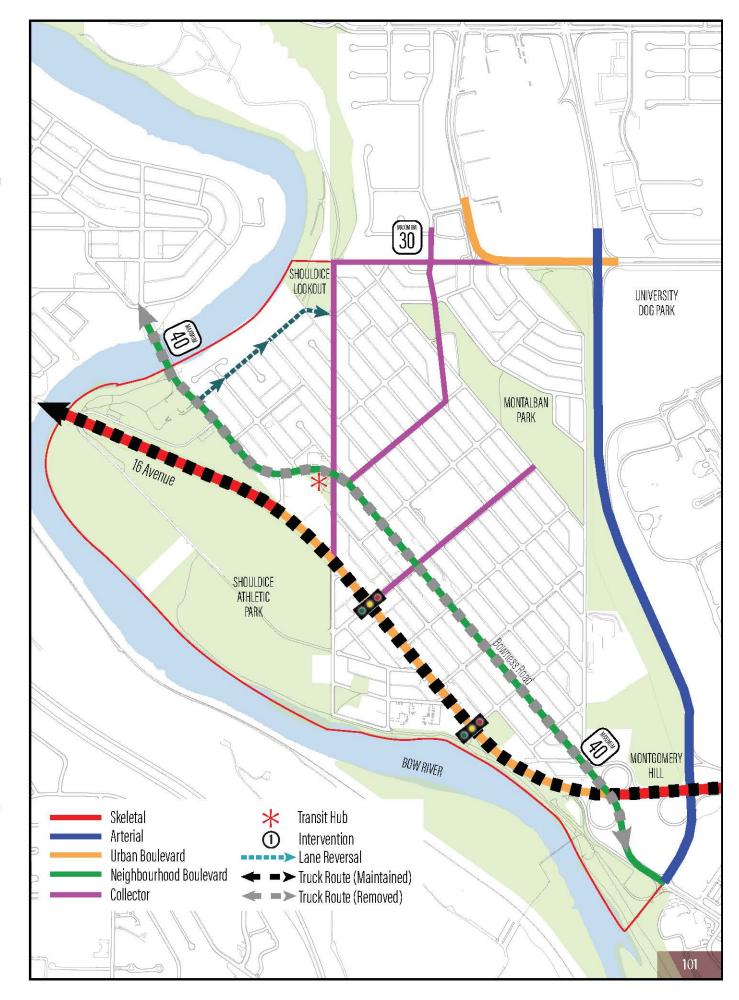
We propose to extend the urban boulevard section of the 16 Avenue corridor west to 49 Street as we are transforming the Safeway site to a Town Centre that will be pedestrian friendly. Additionally, we propose to make the entire Bowness Road corridor neighbourhood boulevard to match their neighbourhood character by removing the arterial road classification. It is important to propose appropriate road classifications as they define the roadway design standards, access management, and more importantly, the hierarchy of vulnerable road users in the mobility spectrum.

Truck Route

To maintain the neighbourhood character of Bowness Road, we propose to remove the truck route designation from Bowness Road. This is a critical change as truck route designation requires several design standards that negatively impacts pedestrian friendliness of a street, such as the design of turn radius at an intersection. With a truck route of 16 Avenue close by, there is no need for Bowness Road.

Pedestrian Permeability

To improve pedestrian permeability across the barrier of 16 Avenue, we propose to add two traffic signals at 46 Street and 43 Street. 46 Street will act as the key connector of two main streets of 16 Avenue and Bowness Road with a direct cycling connection from the riverfront and Shouldice Athletic Park to Montalban Park and extended into University District. 43 Street is an existing key cycling connection from the riverfront to the FFCA school across 16 Avenue, while it also serves as a gateway feature at the east end of the community to visually cue through traffic that they have entered a urban community.





Curb Extention

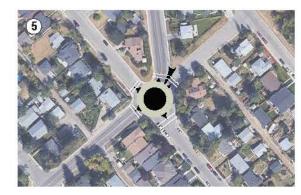
Strathcona County

Curb extensions physically reduce the crossing distance for pedestrians and cyclists and their exposure to vehicular traffic. At the same time, a narrower road causes drivers to intuitively reduce their travel speed. Before investing in a permanent curb extension design, the community could also contact The City to install a temporary traffic calming (TC) curbs.



Raised Crosswalk **/ancouver**

A raised crosswalk signals to drivers the presence of pedestrians. We propose their installation on Home Road and 19 Avenue. However, it is recognized that this might present minor challenges for the City Transportation department in terms of winter maintenance.



Five-Leg Intersection

Traffic Circle

A traffic circle is recommended along 48 Street where there is a complicated five-leg intersection which poses visibility challenges for drivers. The traffic circle can reduce vehicle speed, improve pedestrian crossing, and improve community east-west connectivity.



Rectangular Rapid Flashing Beacon **Princeton, New Jersey**

RRFB is an effective pedestrian crossing safety improvement strategy in Calgary and beyond where the rapidly flashing lights draw drivers' attention immediately. It is well suited for Home Road and 52 Street as this location expects high pedestrian and cycling crossing volumes due to access to parks, transit stops and schools.



3D Crosswalk **Ísafjörður, Iceland**

Traffic Diverter Design

48 St

The 3D crosswalk is strategically chosen for 48 Street and 19 Avenue as it is located close to the senior housing and school. This is a low cost option for effective pedestrian crossing safety improvement that can even be community led.



The traffic diverter concept can be applied to the intersection of 48 Street and 23 Avenue by creating deviation of 48 Street from a straight line roadway to a minor roadway with stop control. With added stop control of three seconds, traffic will come to a stop with significant reduction of travel speed and a

vehicle will have to again travel some distance to regain their speed.

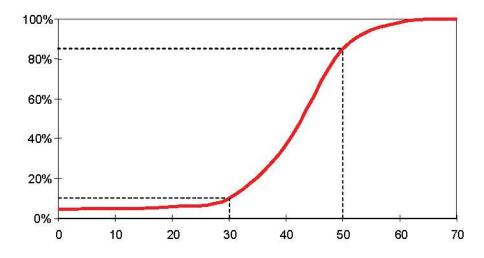
ROADWAY

TRAFFIC CALMING

Through our analysis and community workshop, we understand there are significant traffic shortcutting and safety issues, so we propose several traffic calming measures.

Policy Intervention

We will make Montgomery the first 30km/h community in Calgary and also reduce Bowness Road's speed to 40 km/h to discourage shortcutting traffic. Research shows that probability of fatality for a pedestrian colliding with a vehicle travelling at 50 km/h is ~85%, while the probability is only 10% when colliding with a vehicle at 30 km/h. It is important to recognize that speed limit changes require strong political support. For instance, Edmonton City Council voted to lower speed limit in residential streets to 40 km/h on March 11, 2020.



Physical Design Intervention

It is important to recognize that while policy intervention can be effective to a degree, we also need physical design interventions to encourage behavior change. For 52 Street, we propose to reverse the one-way street travel direction to use the natural uphill slope northbound to reduce speed. For Home Road and 48 Street, there are several design interventions that could be applied to several locations (designs and locations shown on the map and graphics) and these interventions can even be used in combination to further enhance its effectiveness.

TRANSIT

OVERVIEW

The community of Montgomery has several bus routes serving the community. These routes connect the community to Calgary Centre City, nearby LRT stations, including Dalhousie, Lions Park, Brentwood, and Crowfoot, as well as major activity centres, such as Market Mall.

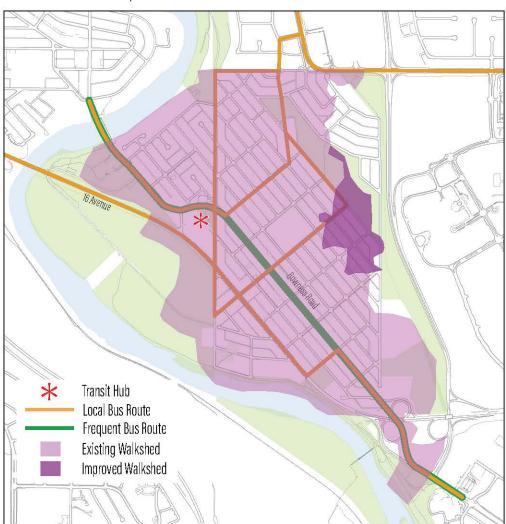
There are mainly two types of transit services, the frequent / primary transit including Routes 1 and 305, and regular transit routes at a lower frequency, including Routes 31, 30, 53, 65, 408 and 422. Particularly, it is noted that Route 305 only runs during the AM and PM peak hours and Routes 31 and 65 only travel by Montgomery but do not directly serve the community well.

To improve the transit network and route services in Montgomery, we propose the following specific strategies:

- » Transit centre: create a transit hub at the Town Centre (existing Safeway site) where all transit routes will service;
- » Route 305: promote it to an all-day transit service with an additional stop at 43 Street on Bowness Road to improve its reach;
- » Route 65: extend its route into the heart of Montgomery via Home Road and 48 Street and stop at the transit hub;
- » Route 422: extend transit service south to river front and increase transit coverage by creating a loop using 46 Street;
- » Route 53: divert transit route from Home Road to 48 Street to reduce duplicated coverage on Home Road and increase coverage further east of the community;

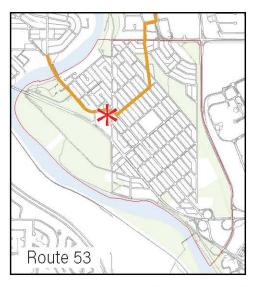


Transit Walkshed Improvement











Calgary Transit MAX Teal - Mount Royal University Stop



High quality transit stop facility for three stops on Route 305 at Home Road, 46 Street, and also 43 Street. The amenities could include: heated bus shelter during winter, outside seating bench and garbage bin, and electronic display board to show real-time bus arrival information.

King County Metro Transit Bike Park & Ride - Washington



Bike Park and Ride provides secure bike parking to residents from Montgomery and surrounding communities who wish to integrate their commute with biking and transit. This is ideally located at the transit hub as it is connected to the cycling facilities on Bowness Road and Home Road.

TRANSIT

SERVICE COVERAGE

We recognize that the existing transit routes do not service the east end of the community very well. Therefore, one of our key transit service improvements is to extend local transit routes on 46 Street to service the east end. 46 Street is chosen for a few reasons:

- » CT generally runs transit service on collector road or higher and 46 Street is a collector road;
- » 46 Street is the key connector of two Main Streets of 16 Avenue and Bowness Road, and the transit route can run directly to south of 16 Avenue to connect the two parts of Montgomery;
- It is close to the elementary school and senior housing as well as can provide direct transfer to the frequent transit services of Routes 1 and 305 at Bowness Road;

The recommended local transit service can improve the walkshed of the transit routes and covers more of the community. It also increases the percentage of people serviced by transit within walking distance due to increased density along Bowness Road and 16 Avenue.

FACILITIES

It is key to provide high-quality transit facilities, especially for frequent transit routes such as Routes 1 and 305. Our recommendation to elevate Route 305 to all-day service warrants facility upgrades similar to the Calgary MAX lines.

Additionally, to promote integrated multi-modal transportation, it is proposed to add a secure bike parking facility at the transit hub. To ensure seamless co-existence of cycle track and bus stop, we also propose to design a floating bus stop on Bowness Road.

CYCLING

OVERVIEW

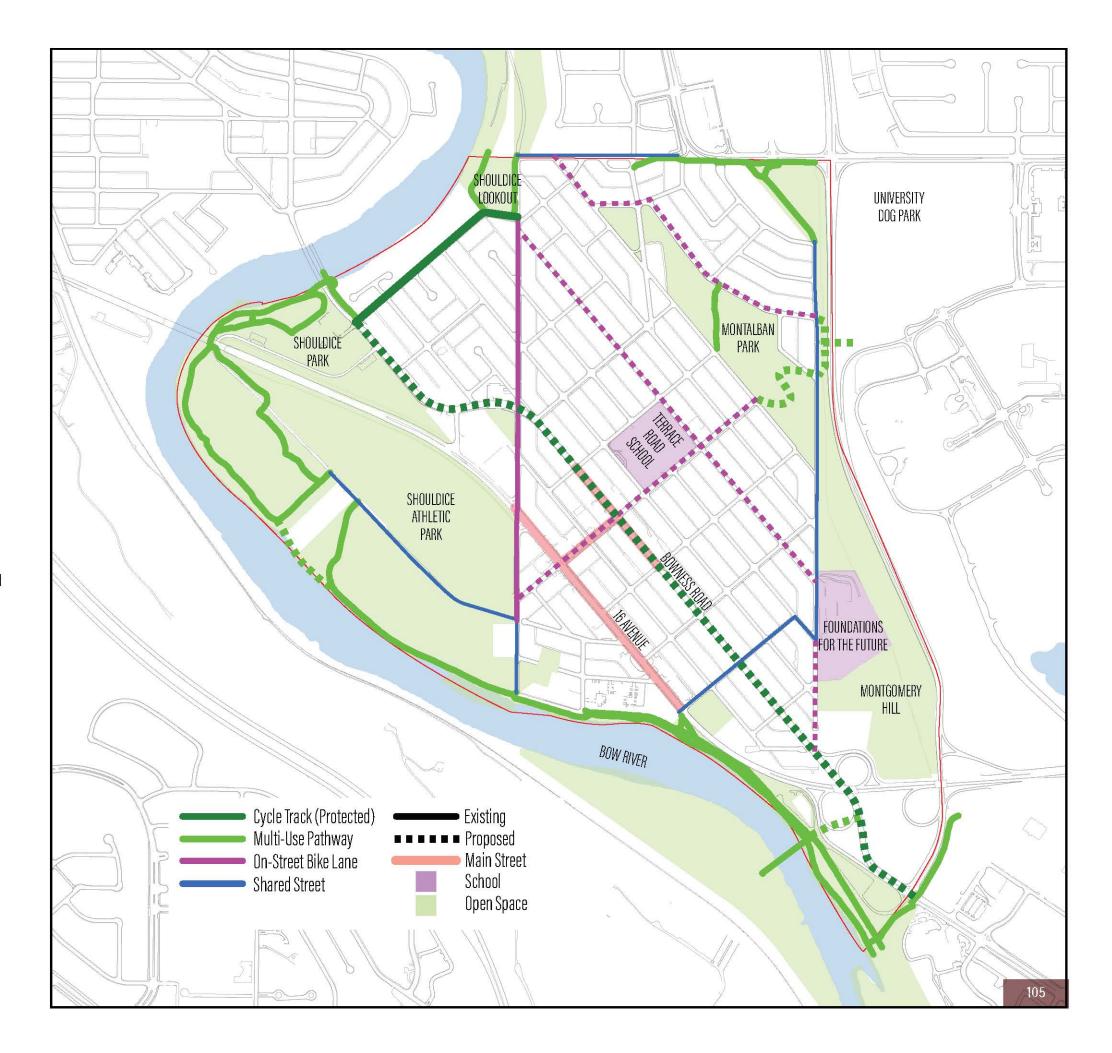
Through our analysis, we found that most cycling routes are on the outer edges of the community of Montgomery, thus they do not offer convenient cycling connections for the residents in Montgomery.

Therefore, we propose additional cycling connections to truly create a cycling network that links the parks and open spaces, key destinations in the community including schools and main streets, and connect to amenities outside the community, including nearby parks and natural areas, and the up-and-coming University District.

Proposed cycling infrastructure includes physically-separated protected cycle track, off-road multi-use pathway, painted or buffered on-street bike lane, and shared street with signage and sharrows.

The proposed routes are intended to increase cycle network connectivity. Key improvements include:

- » Bow River Pathway: pathway is proposed to offer complete off-road multi-use pathway that is designed for all ages and abilities in the long term;
- » Bowness Road: cycle track is proposed to make Bowness Road a Complete Street that offers high-quality sustainable transportation;
- » 21 Avenue: on-street bike lane is proposed to connect Shouldice Lookout and the elementary and high schools;
- » 23 Avenue / Montalban Avenue / Montalban Drive: on-street bike lane is proposed to connect Shouldice Lookout and Montalban Park to the University District;
- » 46 Street: on-street bike lane is proposed to connect the riverfront through the main streets and the elementary school to Montalban Park and eventually to the University District;
- » MacKay Road: on-street bike lane is proposed to act as a cycling connector to Bowness Road and eventually to Edworthy Park, which acts as an alternative connection of 43 Street:



Cycle Track **Downtown Calgary**



Bow River Pathway **Calgary**



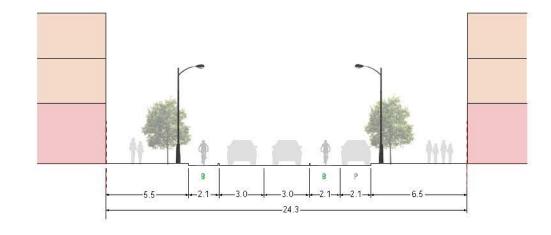
On-Street Bike Lane **Surrey, BC**



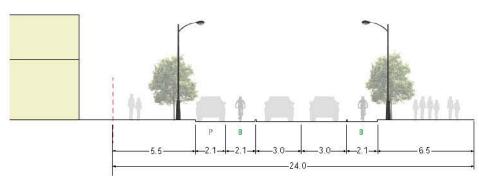
Shared Street **Portland, OR**



46 Street



Montalban Drive



Tactical Urbanism - Seattle, WA





CYCLING

CORRIDOR DESIGNS

The four types of cycling infrastructure are illustrated and further discussed:

- » Cycle Track: provides cyclists their own right-of-way and full protects cyclists from higher-speed motor vehicles. It could be on the road ground level or be elevated to the sidewalk level, depending on the local context;
- » Pathway: provides full protection of cyclists and pedestrians from vehicular traffic and could have mixed right-of-way for both pedestrians and cyclists or separately;
- » On-Street Bike Lane: it could be painted or buffered on-street bike lane, dependent on road traffic volume, available right-of-way, and cyclist user characteristic (age, experience, etc.), and curbside management (parking, boulevard, etc.);
- » Shared Street: cyclists don't have their right-of-way and they share the road with vehicular traffic. This usually only applies to lowvolume roadway, such as a neighbourhood local road or road with significantly constrained right-of-way;

In this section, the on-street bike lanes on 46 Street and Montalban Drive are highlighted. 46 Street is a collector road with active street frontages on both sides connecting two main streets of Bowness Road and 16 Avenue, where Montalban Drive is local road providing cycling connectivity through the community.

TACTICAL URBANISM

Through community conversations, we understand that Montalban Park lacks a sidewalk on the north end (south side of Montalban Drive) potentially due to maintenance concerns. Therefore, we recommend the implementation of a Tactical Urbanism project to install a temporary sidewalk with the simple use of temporary bollards, paint and signage. It is cost effective and allows for immediate implementation, as one of the key benefits of tactical urbanism.

UNIVERSAL DESIGN

OVERVIEW

We also propose to adopt universal design to create a complete community for everyone. This includes people who are physically or visually impaired, the elderly, and families with children.

While it is our ultimate goal to apply universal design on all community routes, the following major pedestrian corridors are prioritized to gain community support:

- » Main Streets: Bowness Road, 16 Avenue, and 46 Street are three main / commercial streets identified through our design that will generate high pedestrian activities;
- » Around Terrace Road Elementary School and Shouldice Seniors Community: they will best serve children and the elderly, which encourages more physical activities and promotes healthy living;
- » Home Road: this is a key north-south corridor connecting from the proposed Town Centre and Transit Hub to the popular Shouldice Athletic Park and the redesigned riverfront with the Landmark Beach. It will be well used by the community residents and people using the recreational, sports facilities and transit services;
- » Bow River Pathway and Connections: pathways are part of active and healthy lifestyles of Calgarians and universal design will encourage more local residents to access these natural amenities;









Bike Lanes



Painted Crosswalks



Cobbled Streets



Raised Crosswalks + Yellow Stripes



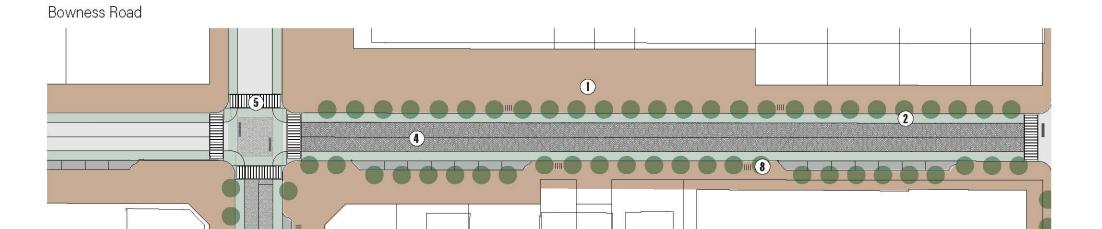
Raised Medians



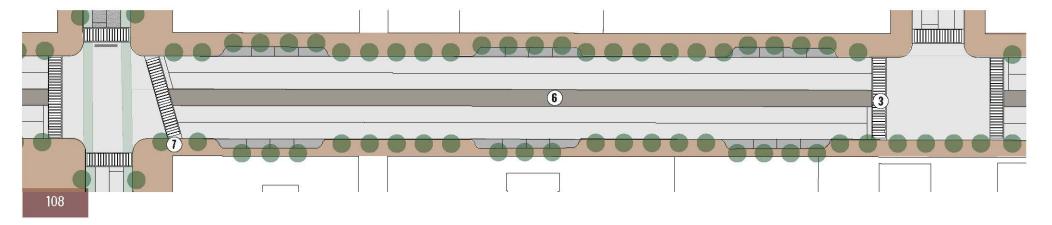
Audible Cues



Lighting



16 Avenue



UNIVERSAL DESIGN

ELEMENTS

Universal design could include a diverse range of design elements and this section highlights a few that are applicable to Montgomery:

- » Wide Sidewalks: It can accommodate higher pedestrian volumes and create a barrier-free pedestrian corridor for people using mobility devices.
- » Bike Lanes: It provides better social equity to people who cannot afford private vehicles, improves health, and reduce greenhouse gas emission.
- » Painted Crosswalks: It is a low-cost option to inject art and fun into the pedestrian experience and could be a celebration of identity, culture and history.
- » Cobbled Streets: Suggested to be used sparsely, it highlights the key streets in the community that improves safety and adds to community identity.
- » Raised Crosswalks + Yellow Stripes: Tailored to people who are visually/physically impaired, this allows for safer and easier mobility and promotes physical and social well-being.
- » Raised Medians: It provides physical protection for crossing pedestrians and also slows vehicular traffic with physical barriers.
- » Audible Cues: This helps people who are visually impaired to safely cross busy signalized intersections.
- » Lighting: Street lighting during nighttime improves pedestrian awareness of the surrounding and increases sense of personal safety, as well as promotes the vitality of the community.

UNIVERSAL DESIGN

BOULEVARD

A boulevard is an important element of roadway design that can serve vital functions if properly designed.

Street Trees

Street trees can bring a wide range of benefits, which could include better air quality, physical and social well-being, enhanced street aesthetics, lowered noise from streets, slowed vehicular traffic, cooler air and shade, stormwater management, among others.

Our analysis indicated a generally lack of street trees for a mature community like Montgomery, in comparison to other mature neighbourhoods, such as Sunnyside. Therefore, our goal is to double the tree counts in the community through street re-design as Montgomery goes through the community life-cycle.

Other Functions

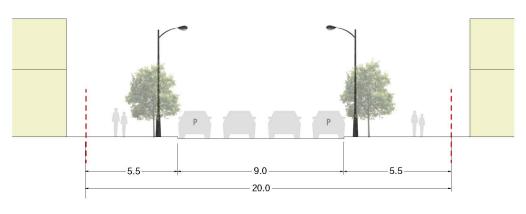
It is important to recognize that, in addition to street trees, the boulevard also serves other important functions, especially on a non-residential street. The boulevard could accommodate a variety of infrastructure, such as bus stops, benches, bike racks, utility boxes, fire hydrants, and even commercial outdoor patio spaces.

From the environmental management perspective, it also serves the stormwater management function, which could be in the form of a bioswale. Additionally, for Calgary particularly, it is also a key component of winter city design principles for snow storage.

Tree Lined Street - Edmonton, AB



47 Street



Boulevard Perspective



Bus Stop



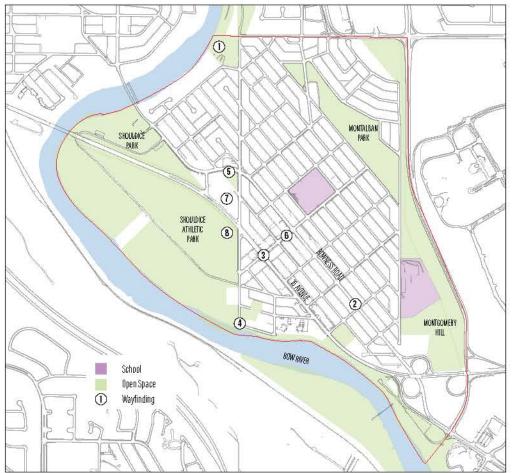
Curbside Bioswale - New York, NY



Snow Storage



Wayfinding Implementations



Wayfinding Palettes













Identity building Examples - Beltline, Calgary







UNIVERSAL DESIGN

WAYFINDING

Wayfinding encompasses all the ways in which people understand their surroundings and navigate from place to place. Therefore, wayfinding is important as it creates community identity and fosters a sense of place. For instance, to celebrate the identity and history of Montgomery, a Jane's Walk could be organized by the community that highlights the unique landmarks in Montgomery.

For Montgomery, we propose implementing wayfinding strategies to several key categories, including pathways, cycling routes, main streets, town centre, transit hub and routes, and recreational and sports amenities. To enhance the community identify, we also propose a range of public art installations that could become landmarks in Montgomery. As examples, a few identity building examples in Beltline are shown here.

The following principles and strategies are recommended for effective wayfinding designs for Montgomery:

- » Wayfinding network is designed to connect people to places in Montgomery, such as two main streets of 16 Avenue and Bowness Road, Shouldice Athletic Parks, the Montgomery Transit Hub;
- » Wayfinding signage is placed at key decision points to guide people to their destinations and also discover new places, such as Harry Boothman Bridge across Bow River, Bow River Pathway at Shouldice Lookout;
- Wayfinding signage design should have high readability with consistent colors and styles and limited amount of information (maximum 3 destinations per sign), use landmarks to provide orientation cues, be designed for people of all ages and abilities (including children and people with mobility challenges) using proper signage height and easy-to-understand messages and graphics;

CONCLUSION

the way forward





CONCLUSION

THE WAY FORWARD

As an inner-city established community, Montgomery is facing redevelopment pressure as The City of Calgary continues to grow. This land use design concept plan is prepared to guide the growth of Montgomery as a reemergent community in Calgary by creating memorable open spaces, multimodal connections and diverse mobility options, strategic community growth, vibrant main streets, and reinvented town centre.

This document will help shape the future of the community, create a blueprint for the way forward by identifying the vision, guiding principles, strategies, and policies for the community.

This study has reference many planning and design principles throughout the process, which includes but is not limited to tactical urbanism, universal design, complete street, complete community, aging in pace, new urbanism, green infrastructure, winter city design, inclusive planning, among others.

We, at Inner City Consultant, would like to thank the community association, the steering committee, the community members for their time, efforts and inputs throughout the study process.

REFERENCES

inspirations

References

Documents

- » Municipal Development Plan. City of Calgary. 2009.
- » Calgary Transportation Plan. City of Calgary. 2009.
- » The Guidebook for Great Communities. City of Calgary. 2020.
- » South Shaganappi Community Area Plan. City of Calgary. 2011.
- » Montgomery Area Redevelopment Plan. City of Calgary. 2017.
- » A Hunt for History Montgomery Memories. Montgomery Community Association and The Calgary Foundation. 2006.
- » Montgomery Community Profile. City of Calgary. 2016. https://www.calgary.ca/CSPS/CNS/Documents/community_social_statistics/community-profiles/montgomery.pdf
- » Montgomery Population Projection. City of Calgary. 2016. https://www.calgary.ca/CSPS/CNS/Documents/community_social_statistics/ Montgomery_pp.pdf
- » Calgary Top Tree Species. https://www.calgary.ca/CSPS/Parks/Pages/ Planning-and-Operations/Tree-Management/Top-Tree-Species-for-Calgary. aspx
- » Open Data Sources. City of Calgary via the University of Calgary SANDS Archives.
- » Calgary Road Classification and Truck Route Maps. City of Calgary. https://www.calgary.ca/Transportation/TP/Pages/Planning/Forecasting/Forecasting-Toolbox.aspx
- » Calgary Traffic Count Data. City of Calgary. https://trafficcounts.calgary.ca/
- » Calgary Traffic Collision Data. City of Calgary. https://data.calgary.ca/ Transportation-Transit/Traffic-Incidents/35ra-9556/data
- » Calgary Transit Schedules and Maps. City of Calgary. https://www.calgarytransit.com/schedules-maps
- » Calgary Land Use Bylaw Maps. https://www.calgary.ca/PDA/pd/Pages/ Calgary-Land-Use-bylaw-1P2007/Land-Use-bylaw-1P2007-maps.aspx
- » Calgary Development Map. City of Calgary. https://developmentmap. calgary.ca/?redirect=/pdmap
- » Shouldice Park. City of Calgary. https://www.calgary.ca/CSPS/Parks/ Pages/Locations/ -parks/Shouldice-Park.aspx
- » Historical Resources Hextall Bridge. City of Calgary. https://www.calgary.ca/PDA/pd/Pages/Heritage-planning/Discover-Historic-Calgary-resources.aspx?dhcResourceld=698
- » Prairie Sky Co-Housing, https://prairieskycohousing.wordpress.com/
- » Wayfinding Design Principles. http://www.ai.mit.edu/projects/infoarch/ publications/mfoltz-thesis/node8.html
- » Edmonton Approved 40km/h Speed Limit. https://globalnews.ca/

- news/6661390/edmonton-council-40-lower-speed-limits/
- » Calgary Land Use Bylaw. http://lub.calgary.ca/
- » Speed Management. Organization for Economic Co-operation and Development. 2016.
- » City of Edmonton. (2016). Winter Design Guidelines: transforming edmonton into a great winter city. Retrieved from https://www.edmonton. ca/city_government/documents/PDF/WinterCityDesignGuidelines_draft. pdf

Images

- » City of Calgary Orthophotos. SANDS Archives.
- » Aerial Images from Google and Google Earth.
- » City of Calgary Historical Images. https://maps.calgary.ca/CalgaryImagery/
- » James Shouldice Residence. http://cdm280501.cdmhost.com/cdm/ref/ collection/p280501coll7/id/993
- » Ralph Klein Park Playground. https://calgaryplaygroundreview.com/ralph-klein-park-playground/
- » TransLink Wayfinding. http://appliedwayfinding.com/projects/translink/
- » Beltline Murals. https://www.avenuecalgary.com/city-life/guide-to-calgarybump-murals/
- » Calgary City Centre Wayfinding. http://www.calgarycitynews.com/2012/06/ » city-of-calgary-launches-new-city.html
- » Rotary / Mattamy Gree ay. https://www.parksfdn.com/the-rotarymattamy-gree ay-1
- » Calgary Public Art. https://curiocity.com/calgary/lifestyle/project-bike-rack-is-calgarys-newest-public-art/
- » Curbside Bioswale. https://archpaper.com/2015/04/new-york-city-use-90-bioswales-help-clean-brooklyns-gowanus-canal/
- » Housing Typology Apartment. https://newhomelistingservice.com/ alberta/calgary/walden-place/3978
- » Raised Crosswalk. https://chi.streetsblog.org/2013/01/31/eyes-on-thestreet-icy-potholed-downtown-alleys-need-raised-crosswalks/
- » Bus Stop. https://www.citylab.com/transportation/2016/03/the-best-place-for-a-bus-stop/472188/
- » Boulevard for Snow Storage. https://twitter.com/CyclistBartek/ status/940642832922107905
- » Housing Typology Single Detached. https://www.calgaryhomeboys.com/ calgary-detached-homes-for-sale.php
- » Safeway. https://canada247.info/explore/alberta/division_no_6/calgary/ northwest_calgary/safeway-montgomery-403-288-3219.html

- » Temporary Sidewalk. https://twitter.com/dongho_chang/ status/748609256455168000
- » Tree Lined Street. https://www.flickr.com/photos/bencito_ traveller/4755235891/
- Secure Bike Parking. https://www.soundtransit.org/blog/platform/parkride-new-secure-bike-parking-lockers-headed-to-station-near-you
- » Raised Crosswalk. https://twitter.com/dstn_m/ status/1000423833751511040
- » Chinook Arc. https://creativemachines.com/sculpture/chinook-arc
- » Housing Typology Rowhouse. https://engagerndsgr.com/faq
- » Live Work Unit. http://ktgy.com/e-r-b-fresh-live-work-concept-bringsshopkeeper-units-los-angeles/
- » Floating Bus Stop. https://twitter.com/dongho_chang/ status/1216195058032136193?lang=en
- » Mixed Income Housing, https://www.gecarchitecture.com/londonderry
- » Riverwalk Wayfinding. https://www.cygnus.group/our-work/riverwalk-pathway/
- » 3D Crosswalk. https://www.boredpanda.com/3d-pedestriancrossing-island/?utm_source=google&utm_medium=organic&utm_ campaign=organic
- » Naturalized Playground. https://gree orkspc.com/ourwork/westmorelandpark-nature-based-play
- » Amphitheater. https://gree orkspc.com/ourwork/2018/8/28/meinigamphitheater
- » Natural Play Area. https://gree orkspc.com/ourwork/2018/8/21/columbiatech-centure-nature-play-area
- » Natural Discovery Park. https://gree orkspc.com/ourwork/2018/10/11/ discovery-park
- » Housing Typology 3 Bedroom Apartment. https://killamreit.com/ apartments/calgary-ab/treo-sherwood
- » Santana Row. Federal Realty. (n.d.). Design for Walkability: an initiative to retrofit suburban communities. Retrieved from http://www. designforwalkability.com/casefive
- » Transit Station. Flickr. (2015). Near the Train Station in Bern, Switzerland. Retrieved from https://www.flickr.com/photos/toshio1/17020521127
- » Steps. Horner, John. Howeler+Yoon. (2016). Downtown Crossing Plaza. Retrieved from http://www.howeleryoon.com/work/101/downtown-crossing-plaza
- » Shared Street. Project for Public Spaces. (2017). What is shared space?
 Retrieved from https://www.pps.org/article/what-is-shared-space

References

- » Bo01 Malmo Sweden. Baltic Urban Lab. (n.d.). Vastra Hamnen area bo01 – waterfront regeneration in Malmo. Retrieved from https://www. balticurbanlab.eu/goodpractices/v%C3%A4stra-hamnen-area-bo01waterfront-regeneration-malm%C3%B6
- » Traffic Circle. New Hampshire Department of Transportation. (n.d.). Roundabouts. Retrieved from https://www.nh.gov/dot/org/projectdevelopment/highwaydesign/roundabouts/
- » Viewing Platform. Sea to Sky Gondola. (n.d.). Spirit viewing platform. Retrieved from https://www.seatoskygondola.com/attractions/viewing-platforms/
- » China House Vision 2018. https://www.dezeen.com/2018/10/02/china-house-vision-exhibition-beijing-design-week-future-homes/
- » Inglewood Sunfest: Inglewood, Calgary. (n.d.). Retrieved from https://www. todocanada.ca/city/calgary/event/inglewood-sunfest/
- » Wien Strandbar herrmann. Flickr. https://www.flickr.com/ photos/7301946@N03/419321312
- » RiverWalk, AvenueCalgary. https://www.pinterest.ca/pin/488288784570331204/
- » Pathway Lighting. https://ncc-ccn.gc.ca/our-plans/showcase-illumination-project-richmond-landing-shoreline-access#&gid=1&pid=3
- » Contemporist Wafinding Public Art. https://www.pinterest.ca/ pin/521362094332173057/
- » River Surfing, Cunovo Wave. http://riverbreak.com/spots/cunovo-riversurfing-bratislava/

