DAVIS
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TRAN

Planning + Design

Neighbourhood Development Plan

Westgate–
–Rosscarrock–
–Glendale

Version 1.0

Issued 2019.04.18

Neighbourhood Development Plan

Prepared for
Communities of Westgate, Rosscarrock, and Glendale

Prepared by
Davis Maselli Tran Planning + Design

Project team
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Version **1.0**

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Executive Summary

Dear Sirs/Madams,

Davis Maselli Tran Planning + Design is pleased to submit a Neighbourhood Development Plan for the communities of Westgate, Glendale, and Rosscarrock, located west of Downtown Calgary. Davis Maselli Tran Planning + Design is an established consulting firm and has developed a large portfolio of planning projects and clients across Canada.

The following document outlines current and historic conditions of the neighbourhood, as well as site analysis, preliminary studies, local policy context, and future policies to be implemented. The Neighbourhood Development Plan will assist with the development of placement strategies, sustainable land use patterns, effective transportation networks, and the preservation of open spaces. The Westgate/Glendale/Rosscarrock Neighbourhood Development Plan will not only be an invaluable asset to guide the planning and development occurring in these communities, but will also set a new standard for contextually-appropriate community planning within Calgary.

Yours faithfully,

Rhea Davis

Jon Maselli

Jeremy Tran

Contents

We Are
Planners.
Urban Designers.
Drivers of Change.

RHEA DAVIS

Having graduated first class from Maharaja Sayajirao University, India in Architecture, Rhea is experienced with creating detailed site plans and community-scale master plans. Rhea excels in creating sustainable communities by rethinking waste management, urban food production and active transportation.

JON MASELLI

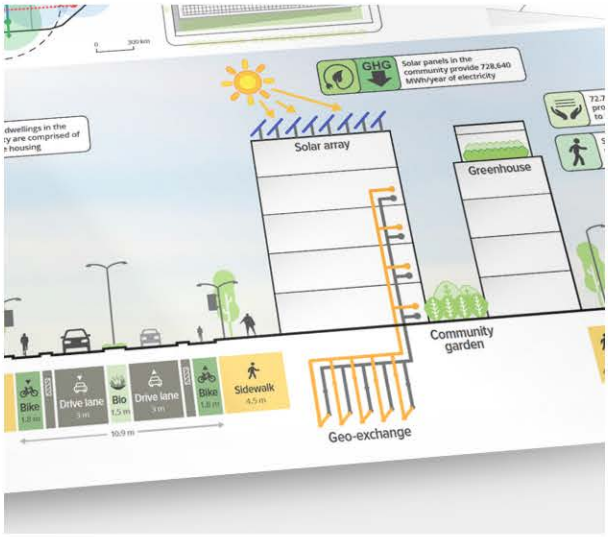
With over five years experience in planning, Jon is passionate about creating more liveable cities through meaningful and innovative urban design. Jon is pursuing a graduate degree in Planning at the University of Calgary, and holds an honours bachelor's degree in Urban Planning from Concordia University.

JEREMY TRAN

Graduating from the National University of Singapore with a degree in Real Estate and having more than 4 years of experience in the industry, Jeremy is well versed in residential development, commercial development and revitalization. Jeremy's areas of planning interest include housing affordability and age-integrated communities.

Our Projects

BLOOMHAVEN DEVELOPMENT PLAN
Proposing a vision for the future of northwest Calgary's Spy Hill site, along with development and urban design plans and policies.



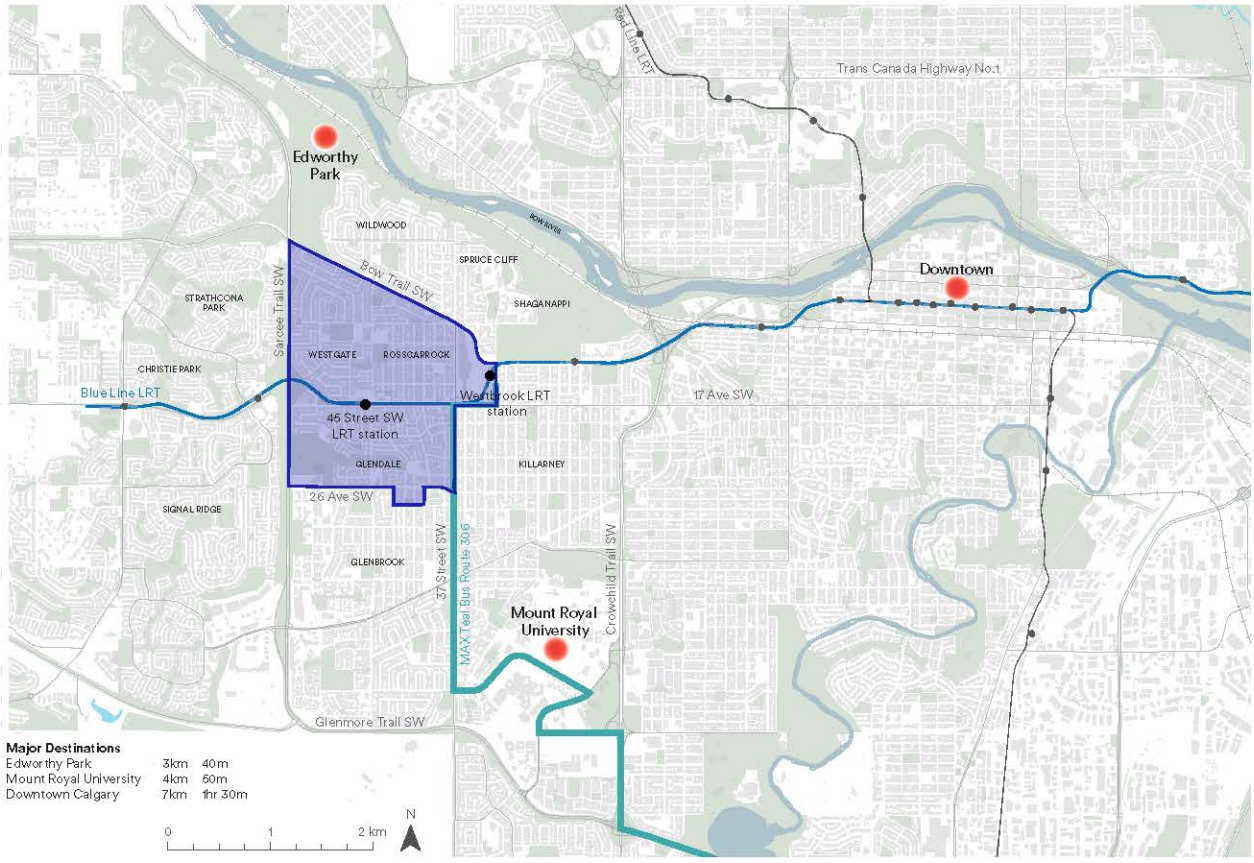
MANCHESTER ECO-DISTRICT
Redeveloping Manchester into Calgary's first mixed-use low-carbon district through renewable energy and an integrated local economy.

MISSION/BELTLINE/STAMPEDE PARK NEIGHBOURHOOD CHANGE REPORT
Report presenting diversity, demographic, socio-economic, and housing market changes.

Project Introduction

01 Context

The subject study area (the "neighbourhood") comprises three communities: Westgate, Glendale, and Rosscarrock in the west of Calgary and is bound by Bow Trail SW to the north, 37 Street SW and 33 Street SW to the east, Sarcee Trail SW to the west, and 26th Avenue SW to the south. The communities are strategically located close to employment and educational hubs such as Calgary's downtown, Westbrook Mall and Mount Royal University as well as recreational destinations such as Edworthy Park and Shaganappi Point Golf Course, with excellent transit connections via the Blue Line LRT and MAX Teal BRT service. The neighbourhood was built out as an auto-centric suburban area and has faced increased development pressure to accommodate more mixed-uses in recent years.



The neighbourhood and its surrounding context.

02 Policy Framework

The proposed Neighbourhood Development Plan (NDP) will take into consideration the existing legal and planning framework that influences the local development directly or indirectly. This framework is made up of multiple planning policies, guidelines, studies and initiatives of which the main ones are summarized hereafter:

City-wide policies

Municipal Development Plan (MDP)

The new community planning guidelines translate the city-wide objectives and core policies into relevant guiding principles for future developments.

Calgary Transportation Plan (MDP)

The NDP's proposed transport network will incorporate major polices under this plan such as providing a wide range of mobility choices and encouraging walking and cycling.

TOD Development Policy Guidelines

This policy document guides the land use pattern, development density, urban design and placemaking of areas around transit stations, namely Westbrook and 45th Street LRT stations in our project context.

Other City of Calgary policies & guidelines

The final development plan will also consider all other relevant policies and guidelines under the city of Calgary such as the landuse bylaw, parking bylaw, open space plan & policy, environmnetal policy, and others.

Locally specific policies

Westbrook Village Area Redevelopment Plan

This plan guides the redevelopment in the vicinity of Westbrook LRT station that is envisioned as a mixed-use, high-density activity node with wide range of housing choices and diverse employment opportunity.

37 Street SW Streetscape Master Plan

The proposed plan will take into consideration the intial analysis from this ongoing initiative to transform 37 Street SW into a unique and vibrant place for the community and businesses that is also safe and easily accessible.

West LRT Land Use Study

The study summarized the key values from the communities around the West LRT stations and acts as reference for design of future development proposals.

03 Goals and Objectives

We envision the building of a **well-connected**, **age-conscious** and **complete neighbourhood** by integrating existing resident needs and the city's future development plans.

The following four goals have been identified based on stakeholder feedback and discussions with local residents. These goals align with our previously outlined vision of creating a complete community.

1. Strategic growth

Recommend a range of affordable housing types that accommodate different age, income and community appropriate use. Provide sensible densification around strategic locations that promote a neighbourhood focused living.

2. Attractive open spaces

Encourage healthy living for all age groups through an integrated system of parks, pathways and playgrounds while preserving natural community features.

3. Vibrant public realm

Design safe and lively public spaces that preserve and enhance community character, foster a sense of place and encourage comfortable user experiences.

4. Effective mobility

Offer alternate transportation options and a connected pedestrian environment that decreases the dependence on automobiles, reduce congestion and greenhouse emissions.

Past to Present
Westgate/Glendale/Rosscarrock

The communities of Westgate, Glendale and Rosscarrock were established towards the end of the 1940s. Prior to this time, the lands were fell outside the City of Calgary limits and were used for ranching and agricultural purposes. Many existing homes were demolished at this time to make way for the development of Rosscarrock, and the community plan expanded on an existing grid structure of streets. Glendale was built consecutively as one of Calgary's first post-war suburban communities.

Ranches were built in Rosscarrock until the late 1940s.

Glendale Pond prior to draining in 1956.

Over the next decade as development boomed in Calgary, the community of Westgate was built adjacent to Rosscarrock. In 1959, Calgary's city limits were extended to include these three communities, and homes west of 45 Street SW were built in Glendale.

In 1966, Westbrook Mall opened its doors. It acted as an important destination for the local community with its many storefronts and services for all that one could need. Schools were built in all three communities to handle the increase in children, and old destinations like the drive-in movie theatre and gun range were closed, to be replaced with additional commercial stores.

By 1975, Calgary's communities west of downtown were seeing a dramatic increase in population. The road formerly known as 53 Street SW was expanded into a divided four lane expressway and renamed as Sarcee Trail SW. Plans originally existed to connect Sarcee Trail to its northern counterpart, however these never originated into construction.

Westbrook Mall was opened in 1964.

Sarcee Trail SW was expanded in 1973.

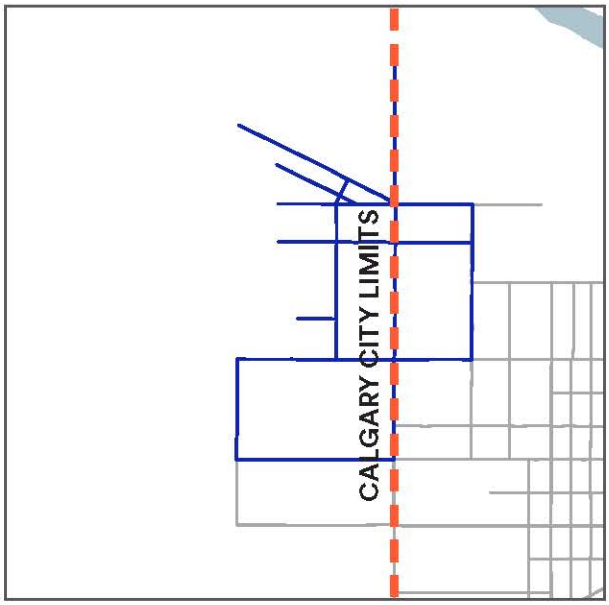
In 1983, the City of Calgary began examining the potential for the the creation of a west LRT network, connecting communities located west of Downtown to the core of the city. A document was published titled the West LRT Functional Study, however no development occurred until the late 2000s. Between these time periods, not much changed within the neighbourhood. Little construction took place, and developers turned their attention to other communities in the city.

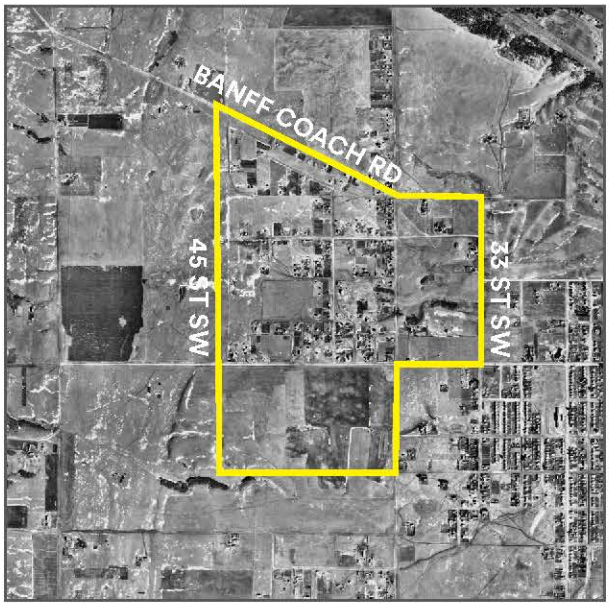
Capitalizing on the existing West LRT Functional Study, a new West LRT Land Use Study was published by the City in 2006. This document further researched the feasibility of connecting west Calgary to the rest of the existing LRT network. Plans were decided upon in short order, and by 2007 construction had begun on the Blue Line's west expansion. During this timeframe, a redevelopment plan study was published for the area surrounding Westbrook Mall. Citing a transit-oriented village, the plan would bring in up to an additional one thousand residents to the area. In 2011, Ernest Manning High School was demolished to make room for the Blue Line. The school was rebuilt in the community of Springbank Hill.

West LRT studies from 1983 and 2006.

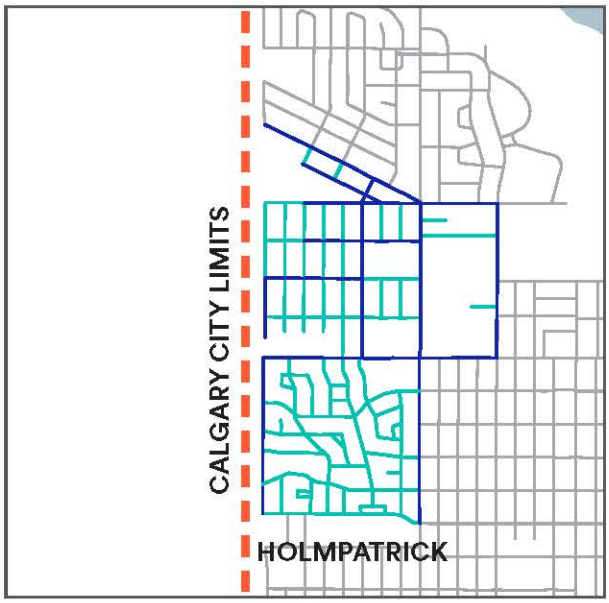
By 2012, the Blue Line's west extension opened to the public. Since this time, the Nicholls Family Library has been built at the Westbrook LRT station, and a 37 Street SW Streetscape Master Plan has been published. Little development has occurred around the Westbrook LRT station despite the existence of a transit-oriented village plan. Developers have proposed ideas for the construction of an arena on the site, which have since fallen through. There is no existing Area Redevelopment Plan for any of the three studied communities, however there are plans to create one in upcoming years.

Urban Form over Time

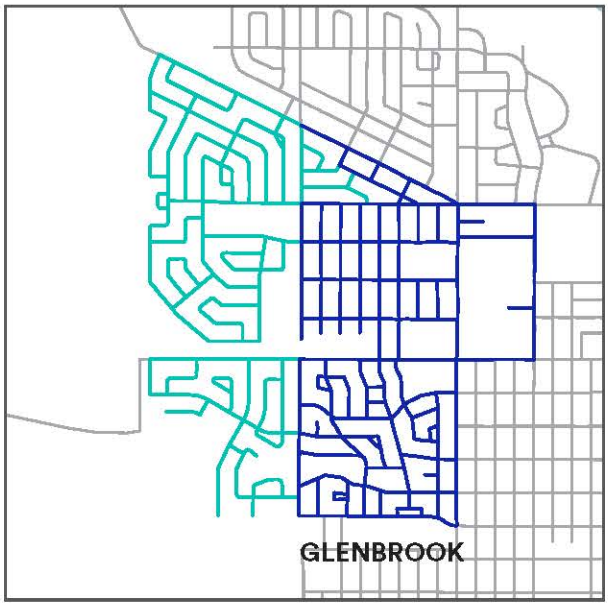




1949 – Ranches outside city limits to be demolished for development of Rosscarrock community.

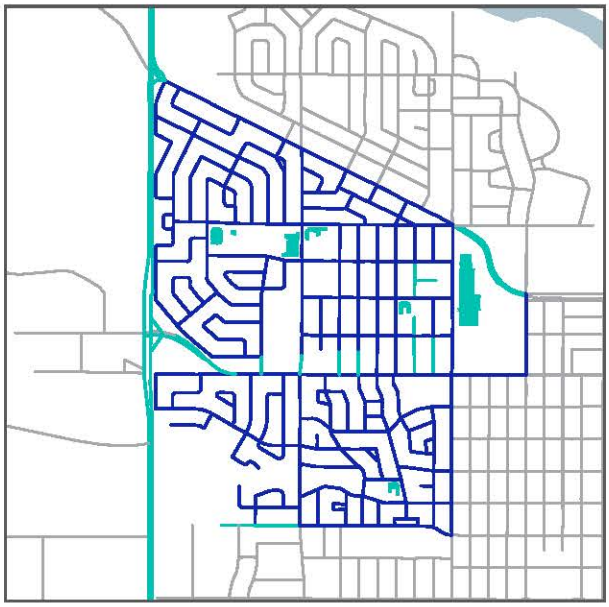


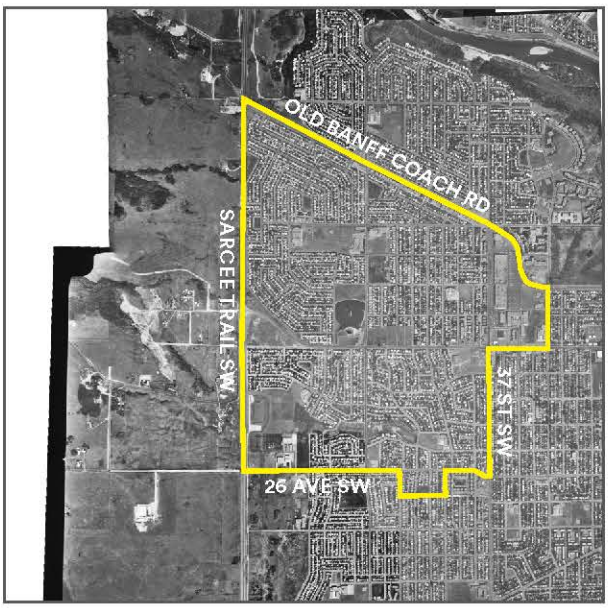
1955 – Rosscarrock and Glendale under development, note missing school parcels in Rosscarrock.



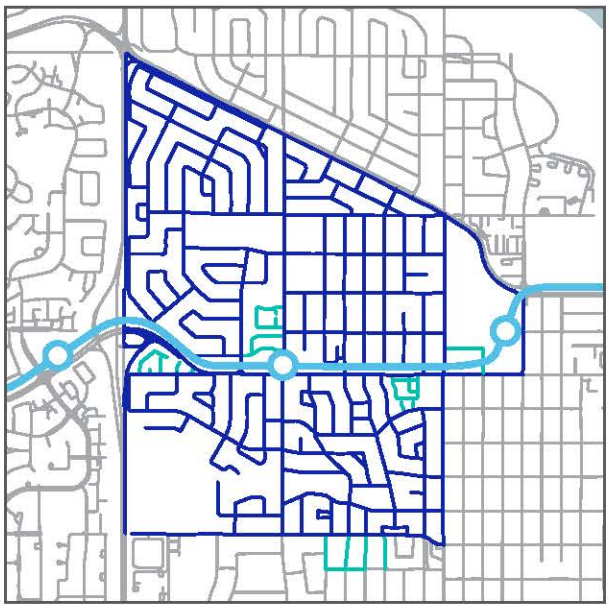
1959 – City limits expanded, Westgate and western half of Glendale developed.

1966 – Westbrook Mall opened.



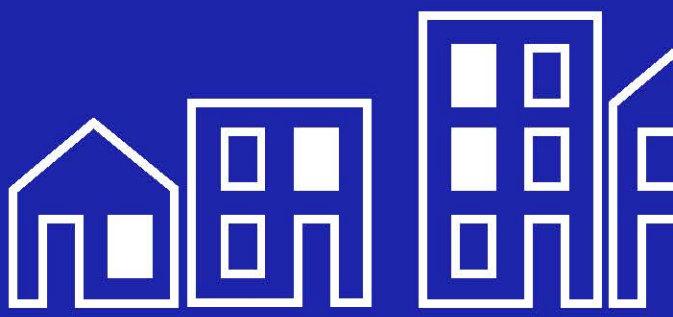


1975 – Sarcee Trail SW expanded, improved connectivity between communities, new schools built.



1955 – Rosscarrock and Glendale under development, note missing school parcels in Rosscarrock.

1.
Strategic growth

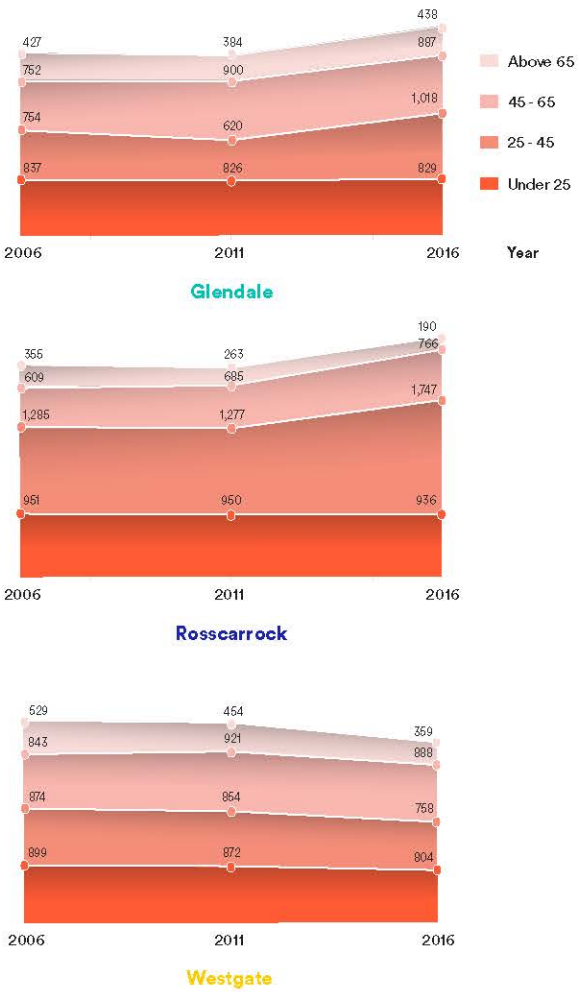


Strategic growth

This section proposes sensible densification around strategic locations in the neighbourhood to accommodate the population projection by 2042, to realize higher use of land around critical infrastructures and to promote neighbourhood focused living.

01 Analysis

Aging in place



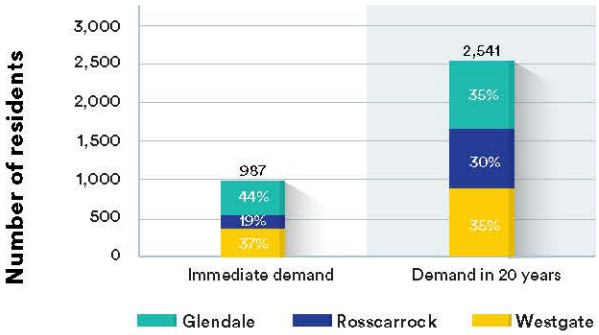
Age breakdown of WGR in 2006, 2011 and 2016 (Statistics Canada).

All communities have sizable shares of seniors aged 65 and above who have specific needs in the built environment in order to age in place.

There are about 1,000 residents in WGR that have the immediate demand for age-friendly features in the neighbourhood built environment. It is estimated that only 4.7% of the existing dwelling units in WGR that have barrier-free access from the sidewalks.

In 20 years, there will be approximately 2,500 residents, equally split among the three communities that have demand for aging-in-place.

Our proposed land use and development types will take this into account by encouraging developments that are age-integrated and co-locating residential uses with others to remove social isolation out of the aging experience.



The number of residents with demand for ageing in place immediately and in 20 years (Statistics Canada).

Current houses in WGR with no barrier-free access from sidewalks.

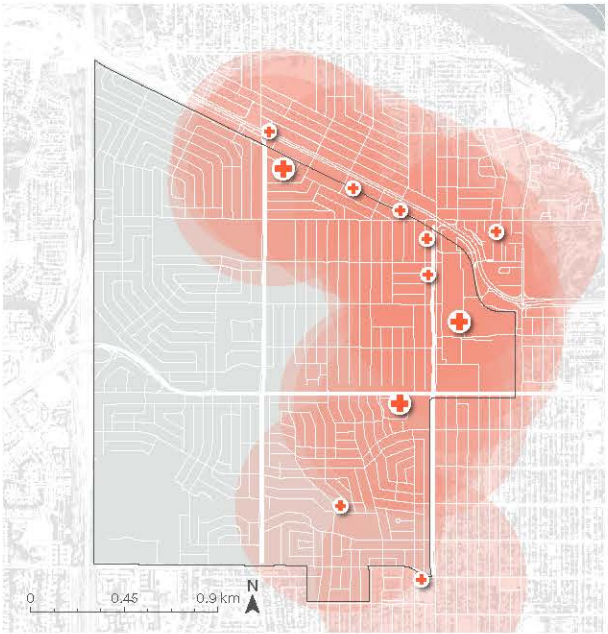
Amenities

Parts of WGR adjacent to major streets (Bow Trail, 37 Street and 17 Ave) are relatively well-serviced with a wide range of amenities including dining establishments, clinics, childcare services and grocery.

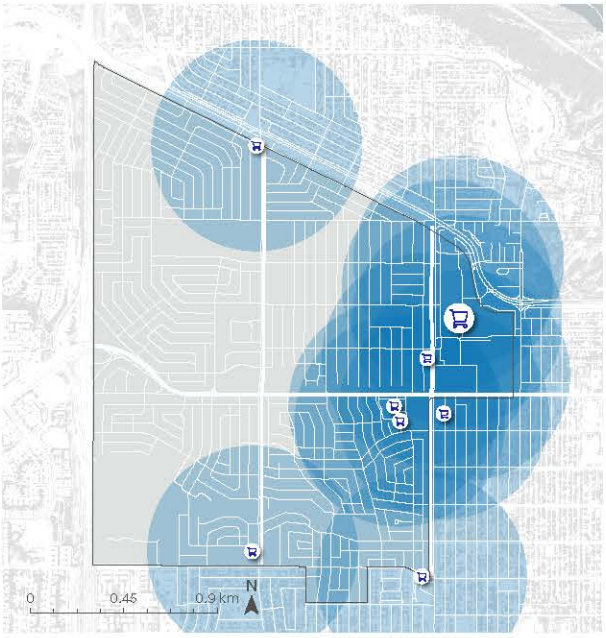
However, the neighbourhood's interior is less so, particularly the northwest corner of Westgate being out of walking distance to many essential amenities.

This information will inform our strategic growth policies to bring commercial uses to the underserviced areas.

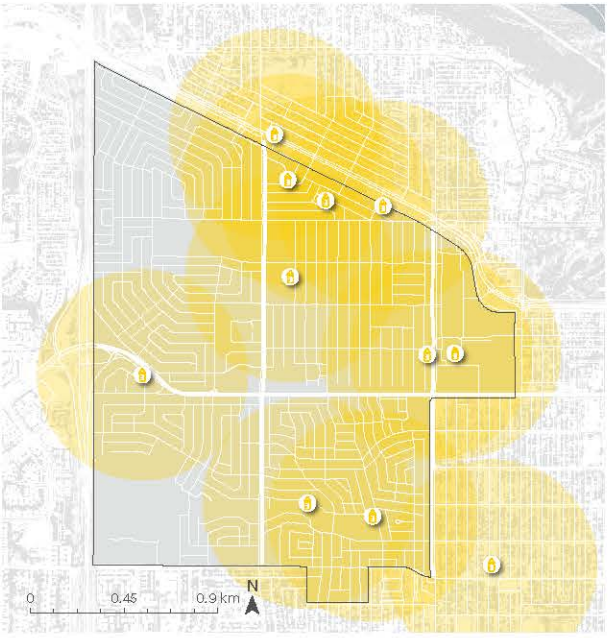
5 min walkshed from dining establishments



5 min walkshed from clinics

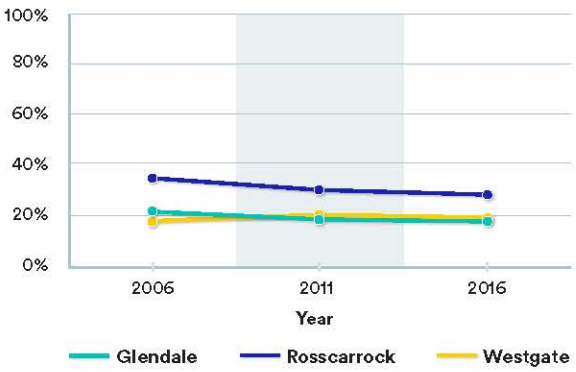


5 min walkshed from grocery



5 min walkshed from childcare services

Housing affordability



Percentage of households spending more than 30% of income on housing, 2011 - 2016 (Statistics Canada)

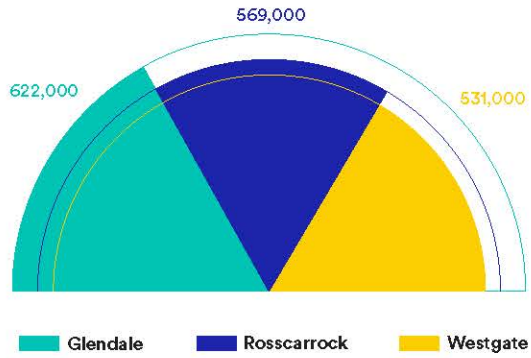
Glendale and Westgate have approximately 20% of households spending more than 30% of income on shelter which is on par with the city's average of 22%. However, Rosscarrock has significantly higher proportion of households spending more on shelter than the recommended threshold.

Additionally, Rosscarrock's average dwelling value is also higher than that of Westgate and WGR's average dwelling value as a whole has steadily increased over the years.

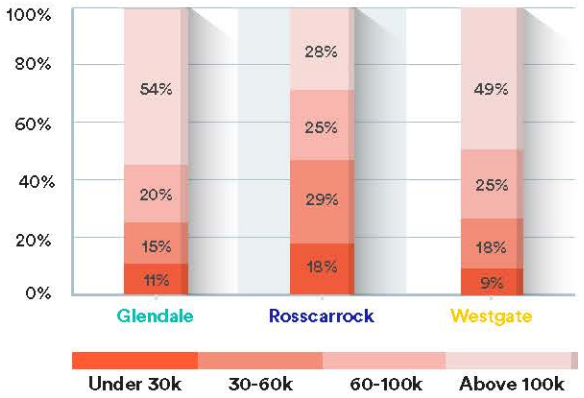
On the contrary, WGR's average household income has been trailing the city's average between 2006 and 2016 with Rosscarrock having larger shares of households earning less than $60,000 annually.

The difference in household income and dwelling values present an affordability

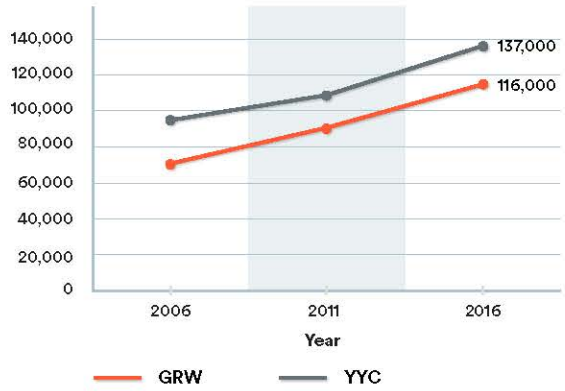
Average dwelling values of the neighbourhood compared with YYC, 2011 - 2016 (Statistics Canada)



Average dwelling values of respective communities in 2016 (Statistics Canada)



Household income structure of respective communities in 2016 (Statistics Canada)



Average household income of the neighbourhood compared with YYC, 2006 - 2016 (Statistics Canada)

challenge for WGR and particularly in Rosscarrock. The proposed land use and development types will call for mixed-income developments with a wide range of unit sizes that cater to all spectrum of income.

Housing diversity

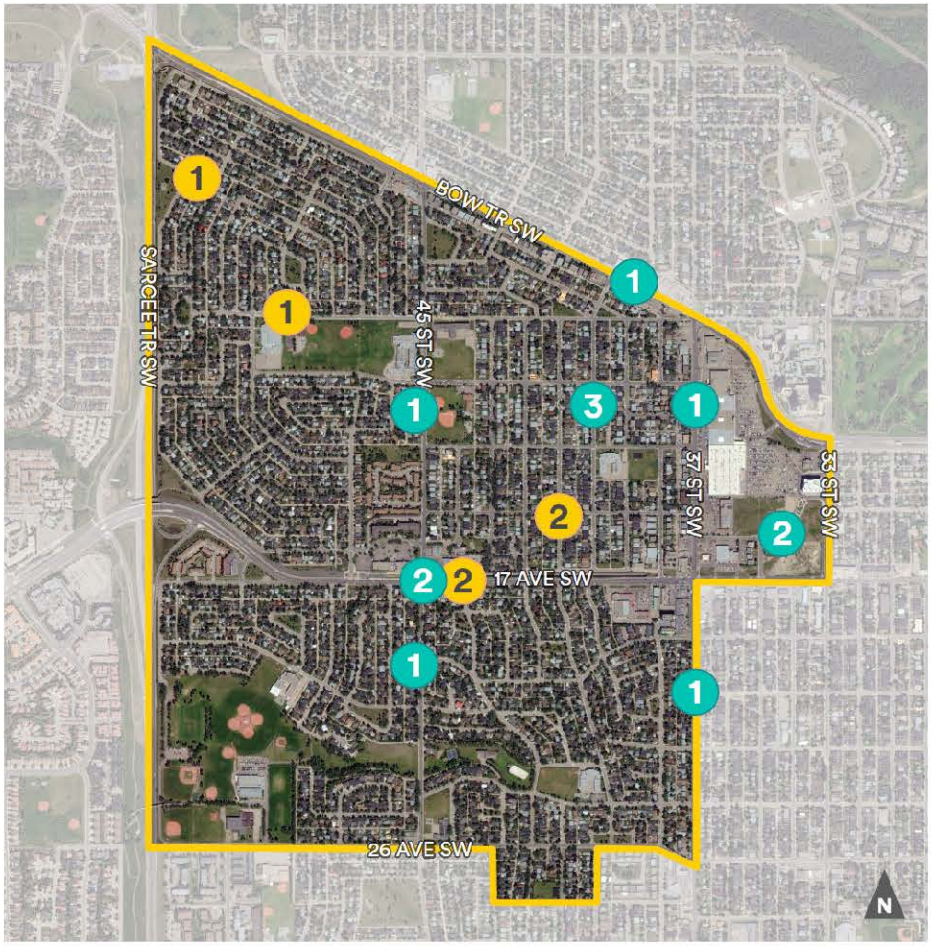
Housing types and their land area used and number of residents

Dwellings in WGR are mostly made up of single family houses. 82% of the total residential land is used for single family houses which only accommodate 62% of the total number of residents.

On the other end of the spectrum, only 2% of residential land is used as apartments but 13% of the total number of residents live in this housing type.

The land use efficiency coupled with a desire to promote a more balanced and diverse housing typology inform our decision to introduce more residential apartments in WGR.

02 What we heard



OPPORTUNITIES

1. Achieve density while maintaining the community's character
2. Potential for mixed use density around transit station
3. Preservation of historic dwellings
4. Creation of destination places
5. Potential for infill development through creative housing choices

ISSUES

1. The northwestern portion of Westgate is underserviced by amenities and transit
2. Existing housing affordability issue in Rosscarrock
3. Presence of illegal secondary suites
4. Lack of wheelchair accessibility in the communities
5. Communities show need for future aging in place developments

03 Guiding principles and policies

Future land use and development in WGR shall promote the following:

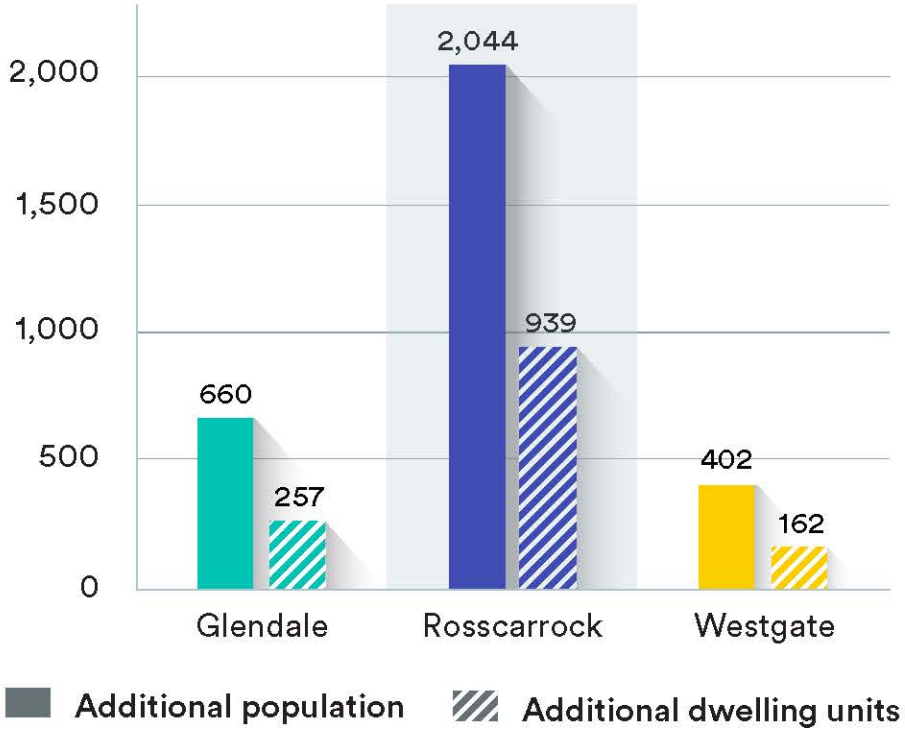
Respect and enhance community character	New developments shall respect and enhance the character of the immediate neighbourhood they are in through mindful use of architectural elements and building scale and setback decision. Land use pattern shall retain existing community character yet promote new focal community points.
Encourage development of local businesses for focused living	New commercial uses are strategically introduced throughout WGR to encourage local businesses, to bring more amenities to residents and to create destinations within the neighbourhood.
Designed for longevity and inclusivity	New developments are encouraged to be flexible in design so reconfiguration of their layout is easy when owners require to. At the same time, new developments shall be age friendly and consist of many housing typologies of various sizes and price points to cater to a wide spectrum of household incomes and demographics.
Contribute to a pedestrian-oriented, safe and attractive public realm	Through requirements of setback and landscaping, new developments shall provide privacy for their residents and contribute to a safe, attractive and pedestrian-oriented environment.

04 Proposed land use map

The proposed land use pattern takes into account the population growth of WGR from now till 2042 as projected by the City of Calgary, ensuring that the proposed density accommodates the growth yet still maintaining WGR's characters of today.

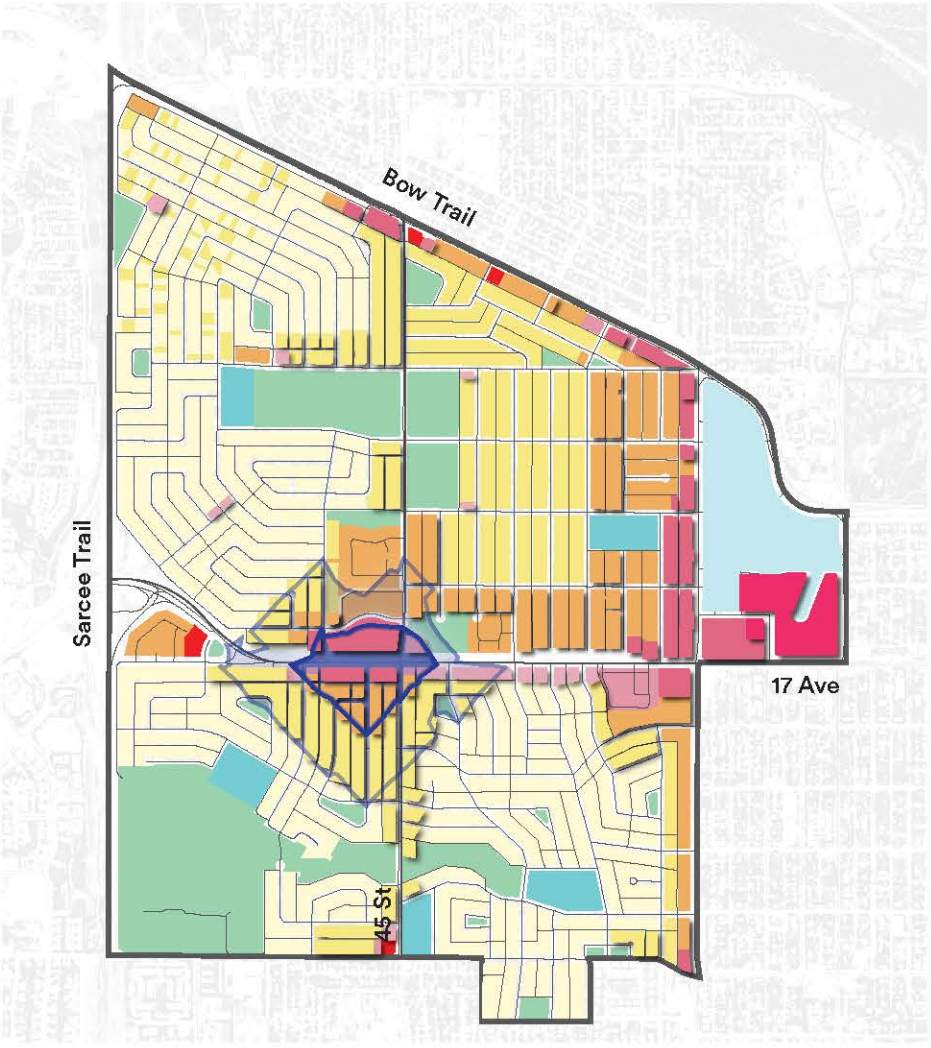
Most of the growth has been strategically incorporated into the immediate areas surrounding 45 Street and Westbrook LRT stations to take advantage of the underutilized mass transit. Higher density is packed into the 200m walkshed around 45 Street LRT station before transitioning down to the existing density level of the interior of WGR.

Mixed use developments are injected throughout the neighbourhood as well as along the east side of 17 Ave, 37 Street and Bow Trail. Gentle residential intensification is buffered around new mixed use developments and along 45 Street.



Projected number of additional residents and dwellings from 2018-2042 (City of Calgary)

The proposed zonings are grouped by the development types' impact on the surrounding environment in terms of form, scale, density and activities generated.



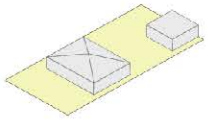
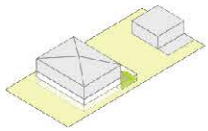
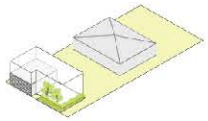
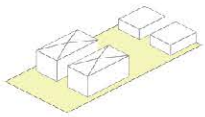
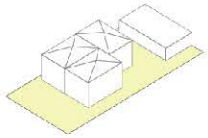
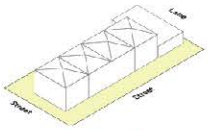
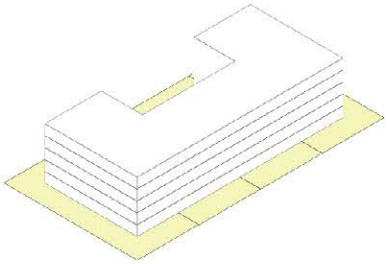
From 45 Street LRT Station

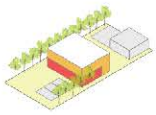
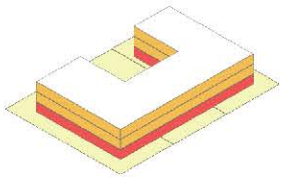
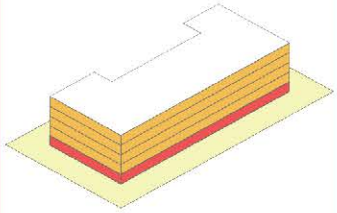
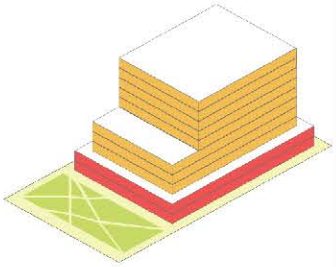
- 200m walkshed
- 400m walkshed

Zoning

- Residential Low
- Residential Medium Low
- Residential Medium
- Mixed Use Low
- Mixed Use Medium
- Mixed Use High

Proposed land use map

New zoning	Residential Low	Residential Medium Low*	Residential Medium
Height	1-2 storeys (3-6m)	2-3 storeys (6-10m)	2-5 storeys (6-15m)
Allowable typology	 Single family house (RC1)  Secondary suite (RC1s)  Laneway unit (RC1s)	 Duplex (RC2)  Triplex / Townhouse (MCG)  Cottage cluster (RCG)	 Fourplex / Rowhouse (MCG / RCG)  Multifamily 3-5 storeys (MC1, MC2)
Density	12 - 29 uph	29- 50 uph	57 - 180 uph

New zoning	Mixed Use Low	Mixed Use Medium	Mixed Use High
Height	2-3 storeys (6-10m)	3-5 storeys (10-15m)	Avove 5 storeys (above 15m)
Allowable typology	 Mixed use (live-work) Commercial: first storey Residential: second storey  Mixed use building Commercial: first storey Residential: upper storeys	 Mixed use building Commercial: first storey Residential: upper storeys	 Mixed use building Commercial: first 2 storeys Residential: upper storeys
Density	FAR 0.4 - 1.5	FAR 1.5 - 2.5	FAR > 2.5

* Developments zoned Residential Medium Low are also allowed to apply for secondary suites and laneway houses, subject to the city's current approval process

Zoning interpretation and development types allowed in respective zonings

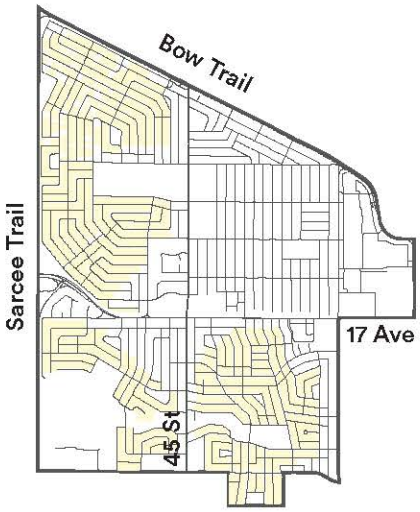
05 Housing typology

This section will explains in details the various housing types that are grouped under the following zonings: Residential Low (RL), Residential Medium Low (RML) and Residential Medium (RM) as well their main design guidelines.

Residential Low - Zoning Map

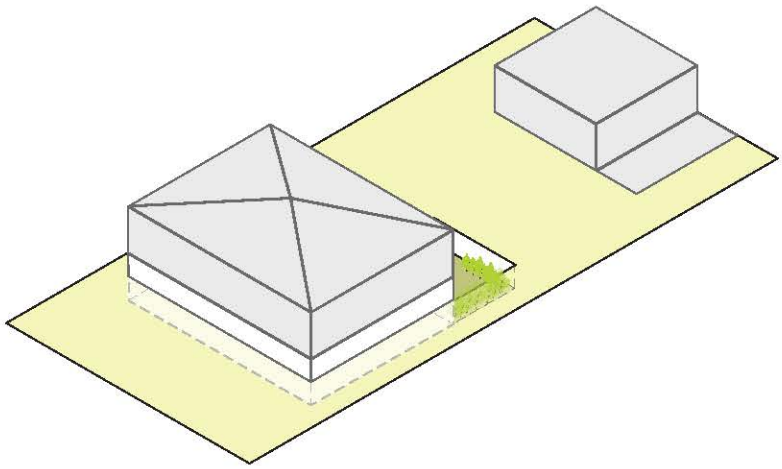
Residential Low zoning includes the following housing types:

- Single Family Houses,
- Single Family Houses with Secondary Suite,
- Single Family Houses with Laneway House



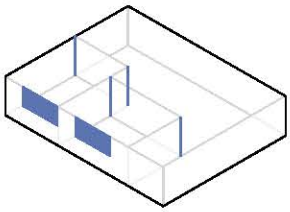
Residential Low - Single Family House with Secondary Suite

Prototype

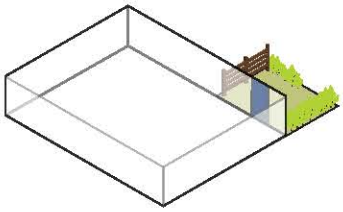


Parcel size 7,500 sqft
Suite size 1,500 sqft
Density 29 units/ha

Design guidelines

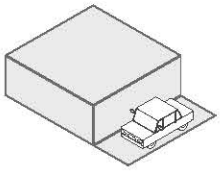


Each bedroom shall have at least 1 window and ceiling height shall be at least 6'4.



Secondary suite shall have separate entrance and outdoor space from the principal unit.

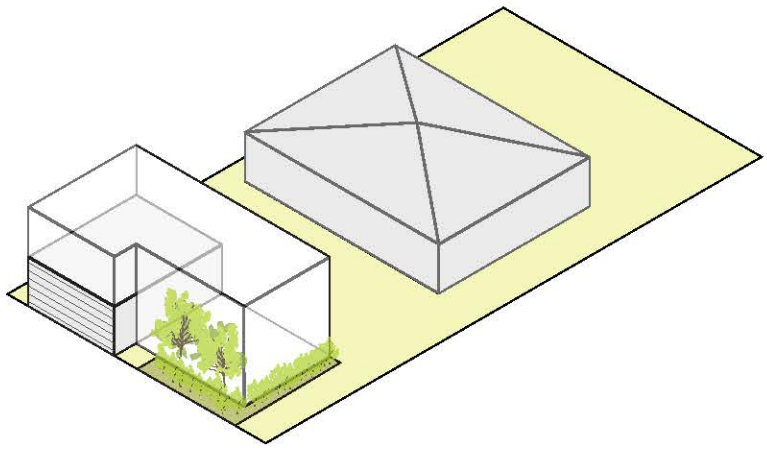
Private outdoor space for secondary suite (Toronto, ON)



At least 1 additional parking space shall be provided for the suite.

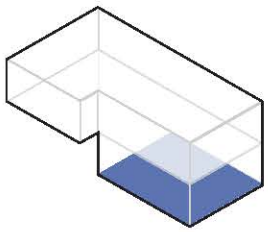
Residential Low - Single Family House with Laneway House

Prototype



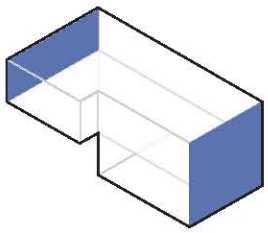
Parcel size 7,500 sqft
Suite size 1,400 sqft
Density 29 units/ha

Design guidelines

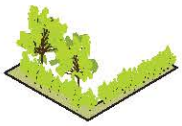


The laneway house must include at-grade living space.

Laneway unit with at-grade living space (Vancouver (BC)

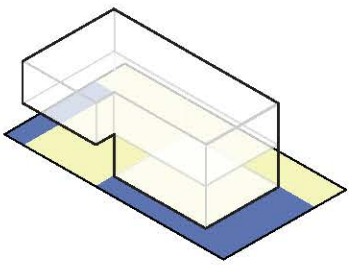


Side windows shall not be intrusive to neighbours' privacy.

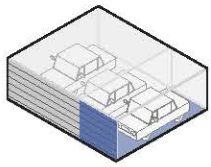


Planting strip shall have at least 1 tree that is native to the region.

Landscaping behind laneway unit (Vancouver, BC)



The laneway house shall have maximum 2 storeys with minimum side and rear setbacks of 1.2m.



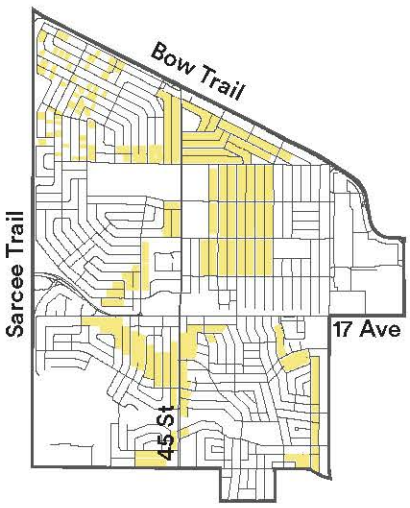
At least 1 additional parking space shall be provided in garage.

Residential Medium Low - Zoning Map

Residential Medium Low zoning includes the following housing types:

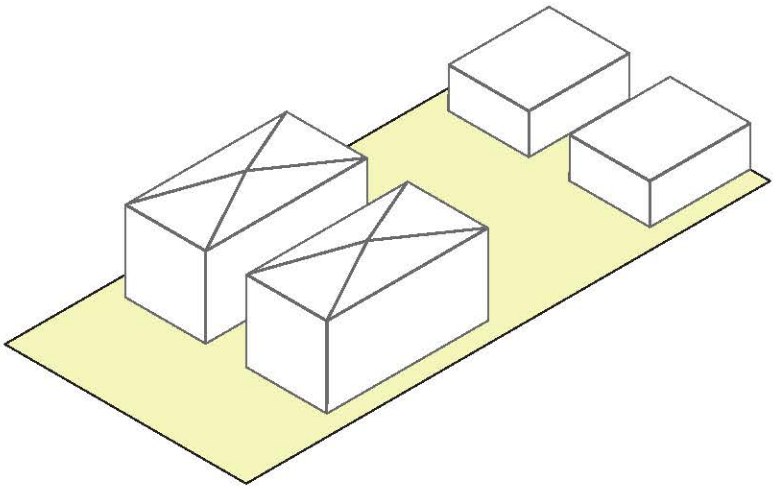
- Duplex,
- Triplex,
- Cottage cluster

Each unit of the above housing type is also allowed to have at most either one secondary suite or one laneway unit.



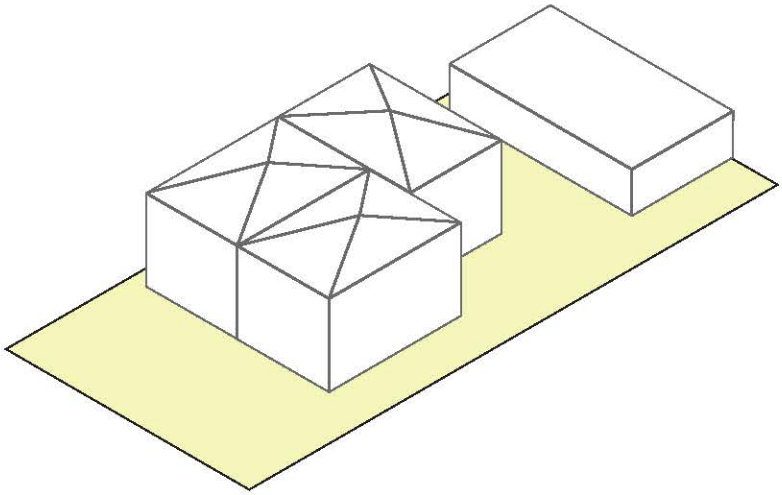
Residential Medium Low - Duplex & Triplex

Prototype 1 - Duplex



Parcel size 7,500 sqft
Suite size 1,540 sqft
Density 29 units/ha

Prototype 2 - Triplex



Parcel size 7,500 sqft
Suite size 1,400 sqft
Density 43 units/ha

Design Guidelines

Variation in design elements avoids twin look in duplex project (North Vancouver, BC)

Colour variation avoids twin look in duplex project (White Rock, BC)

Facades of side-by-side units should be varied through design elements and colours.

Duplex & triplex units shall be at maximum 2 storeys.

Front-facing garages at lower elevation (BC)

Lane-facing garage with shared parking pad i(North Vancouver, BC)

Garages shall be **rear-facing** or be minimized visually through use of elevation change and landscaping.

Each unit shall have at least **1.5 off-street parking spaces.**

Landscaping used to separate 2 units in a duplex (Burnaby, BC)

Landscaping used as screening from neighbouring units (Delta, BC)

Landscaping shall be designed to provide **privacy** among units and between units and neighbours.

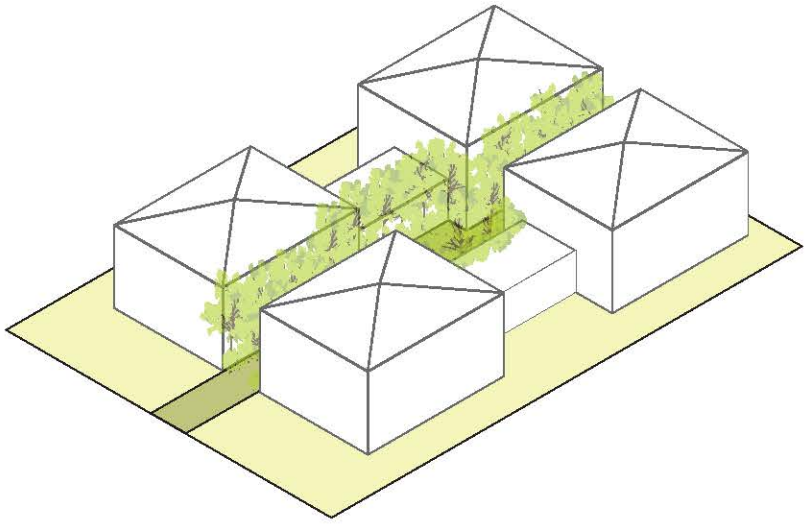
Entrances from street provided for front-to-back duplex (Vancouver, BC)

Private entrances to a triplex in North Vancouver (BC)

All units shall have **at-grade entrances** from main street.

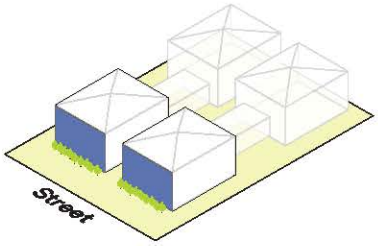
Residential Medium Low - Cottage Cluster

Prototype



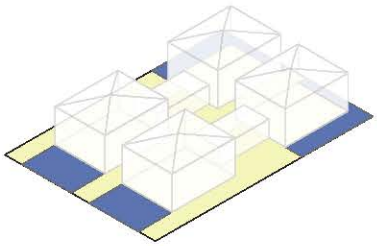
- Parcel size 11,200 sqft
- Each unit size 1,550 sqft
- Shared green space 1,600 sqft
- Density 38 units/ha

Design Guidelines



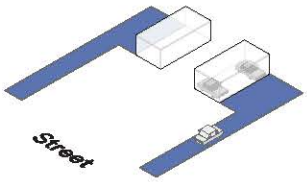
Units facing main street shall be street-oriented, reflect pattern of houses in neighbourhood and provide landscaping along frontage

Third Street Cottage (Langley, WA)



Each unit shall have a private outdoor space of minimum 200 sqft

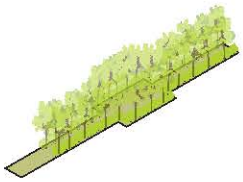
Private outdoor space abutting shared space (Seattle, WA)



Driveways from main street to garages shall be shared among units

Each unit shall have 1.5 parking spaces on average

Shared driveway and garage (Langley, WA)



The shared green space shall be at least 300 sqft per unit

Shared space for community activities (Redmond, WA)

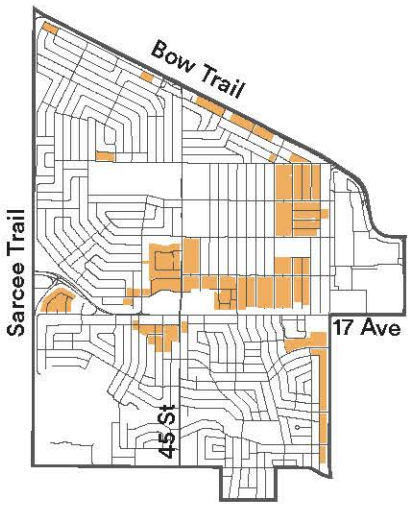
Cully Grove's common green (Portland, OR)

Residential Medium - Zoning Map

Residential Medium zoning includes the following housing types:

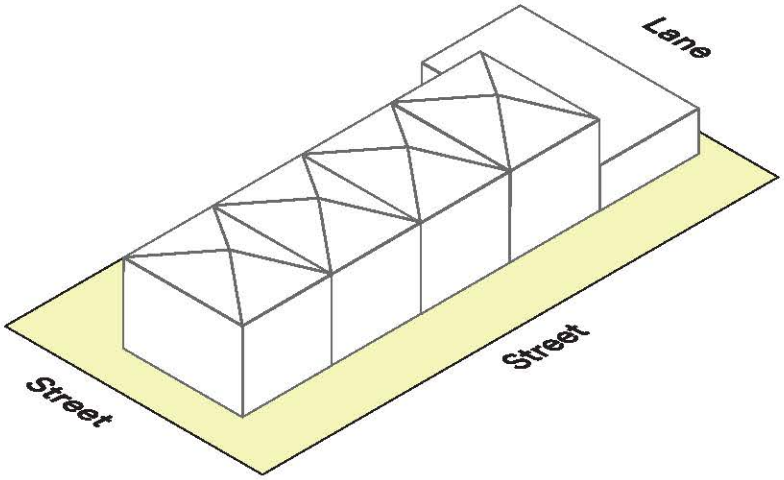
- Fourplex
- Rowhouse (with at least 57 units/ha)
- 3-to-5-storey multi-family apartment

Secondary suites and one laneway units are not allowed in this zoning.



Residential Medium - Rowhouse

Prototype



Parcel size 11,200 sqft
Each unit size 1,300 sqft
Density 57 units/ha

Rowhouse on corner lot allows all units to have backyards (Burnaby, BC)

All units to have **direct access to main street**. Rowhouse should be located on **corner lots.**

Garage and visitor parking face laneway (Burnaby, BC)

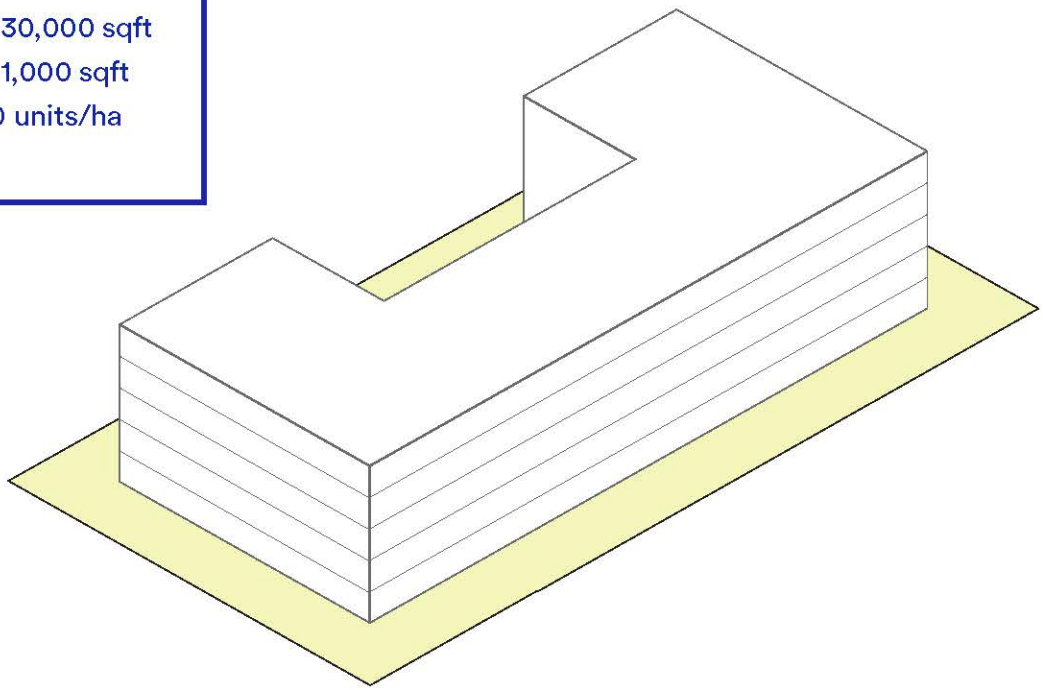
No **garages** shall face main street

Each unit shall have at least **1 off-street parking spaces and 0.5 visitor parking spaces**

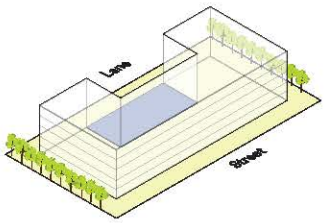
Residential Medium - Multi-family Apartment

Prototype

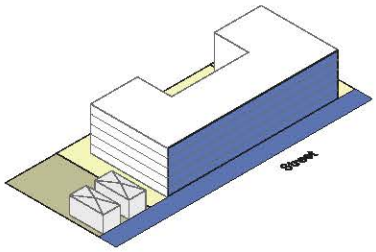
Parcel size 30,000 sqft
50 units at 1,000 sqft
Density 180 units/ha
FAR 2.2



Design Guidelines

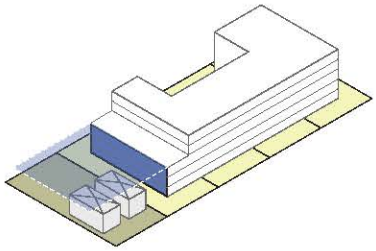


Parking shall be placed away from main street. Landscaping shall be used to screen parking lots from neighbouring properties.



Buildings shall be **street-oriented** with entrances from streets and **similar front setbacks** to other buildings on the street.

Multi-family development with similar setbacks to other buildings (Wexford, PA)



Scale of building portion adjacent to established neighbourhood shall conform to the established scale.

06 Mobile commercial use

Recognizing parts of WGR are heavily underserviced with low accessibility to crucial daily amenities such as grocery, food and childcare and the proposed land use and mobility plan will take a considerable amount of time to materialize, mobile commercial uses are proposed as an interim response to meet the demands of residents.

A food truck in a K-Mart parking lot (Minneapolis, MN)

Owners of land zoned for **mixed uses, commercial and special purpose (school, community hall)** may apply to convert one of their parking lots for mobile commercial uses ("MCU").

Mobile commercial vendors must obtain the city and landowner's consent before occupying approved MCU space.

MCU include **food trucks, grocery stores, pet grooming services** and other mobile commercial uses deemed appropriate by the city with hours of operation from **7am to 7pm.**

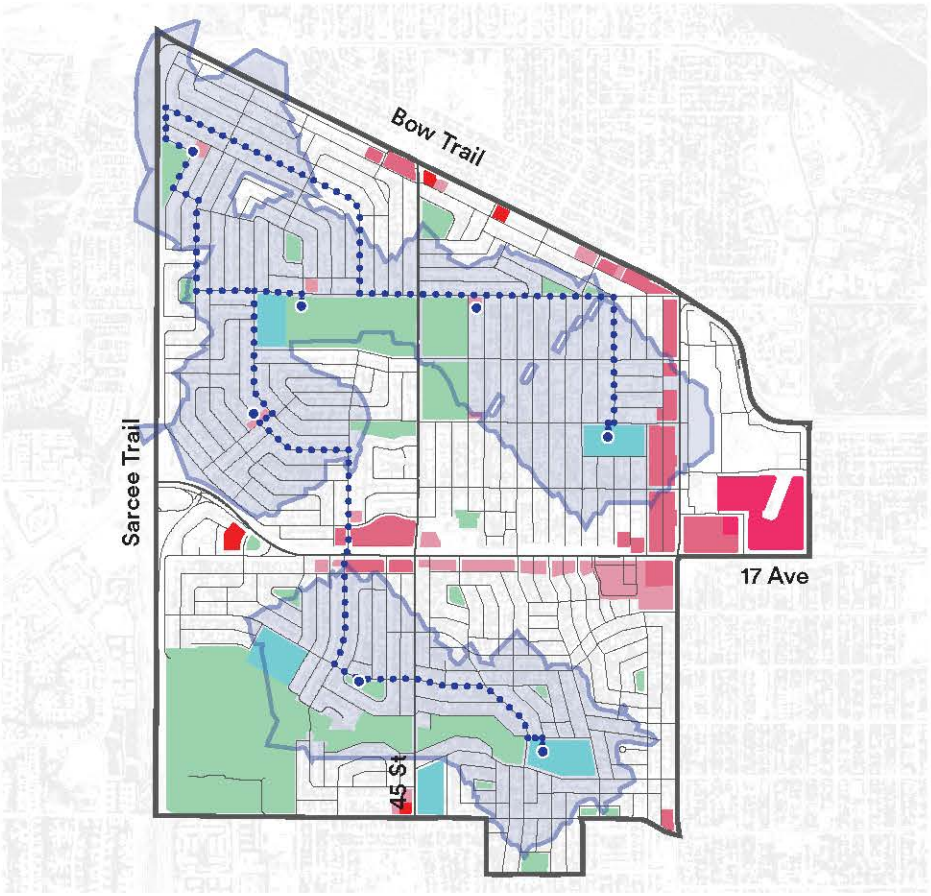
Site must contain **at least 2 other parking spaces** for patrons in addition to parking required for primary use.

Mobile commercial vendors shall ensure **waste and grease disposal** is not done on site.

A grocery truck parked in a school on its way across multiple food deserts (Boston, MA)

A grocery truck in a local park (Atlanta, GA)

Summer grocery truck operates in Calgary's food deserts such as Pinebridge, Bridgeland and Spruce Cliff



Suggested route and stops for a mobile commercial vendor within a day

5-min walkshed around a MCU

Map of land uses allowed to apply for MCU

07 Mixed use development typology

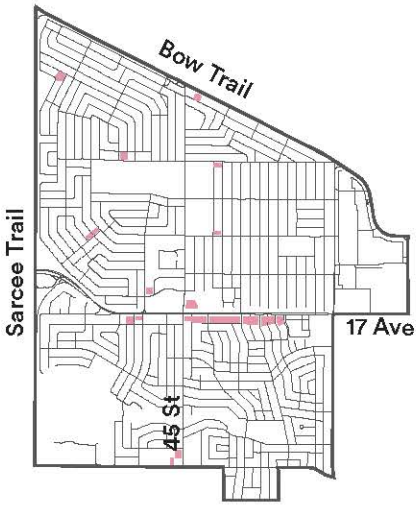
This section will explains in details all mixed use development types that are grouped under the following zonings: Mixed Use Low (MUL), Mixed Use Medium (MUM) and Mixed Use High (MUH) as well their main design guidelines.

Mixed Use Low - Zoning Map

Mixed Use Low zoning includes the following development types:

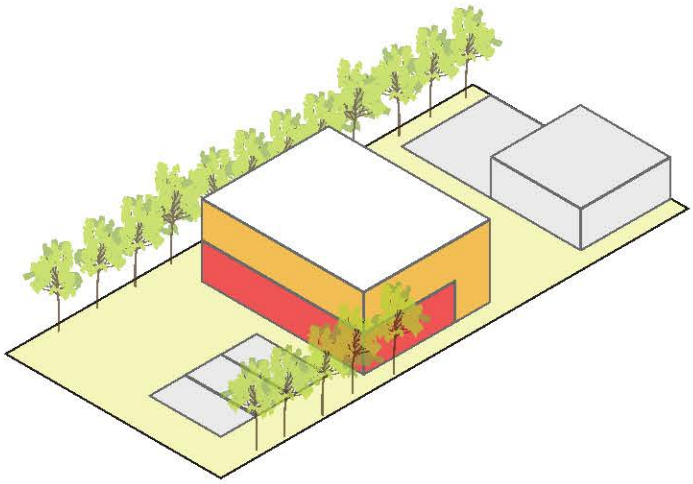
- Mixed Use Low - Neighbourhood (interior of communities and 26 Ave)
- Mixed Use Low - Main Street (along 17 Ave and Bow Trail)

These developments are allowed to have Mobile Commercial Uses.

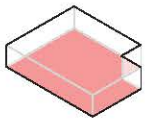


Mixed Use Low - Neighbourhood

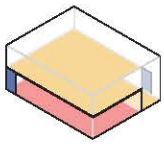
Prototype



Parcel size 7,500 sqft
Commercial 1,400 sqft
Residential 1,600 sqft
FAR 0.5



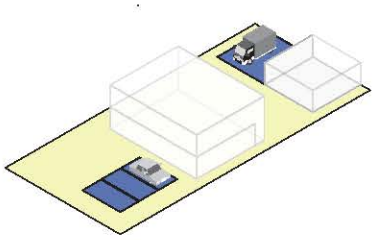
Commercial uses including personal & professional services, retail, food and artist studios shall **not cause nuisances** to neighbours



Commercial and residential units shall be on the 1st & 2nd storeys respectively with **separate entrances**

A residential unit with ground floor as a bakery in Mission (Calgary, AB)

Trees shall be planted to lessen noise impact from commercial activities



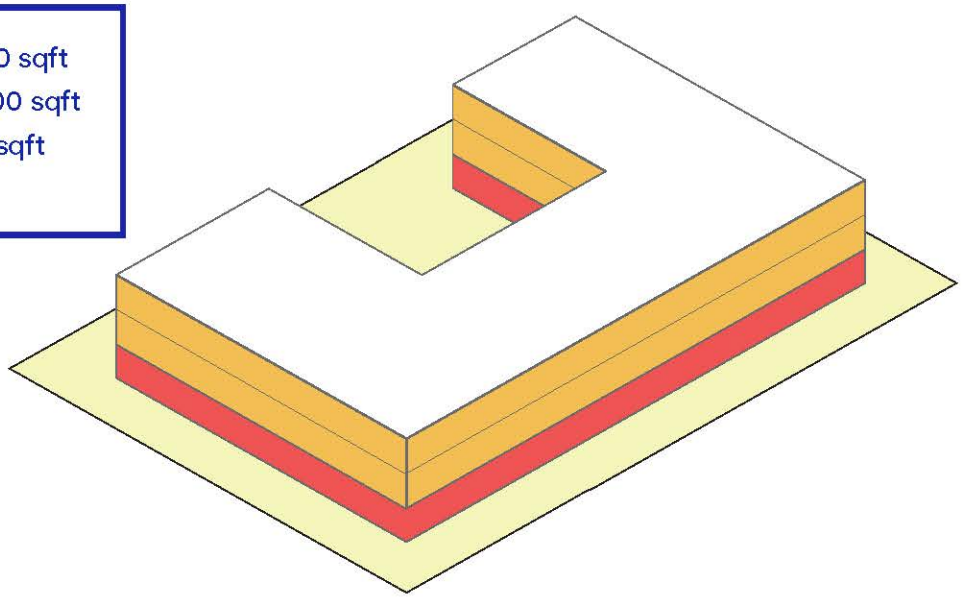
Depending on the nature of proposed business, up to 3 **patron parking spaces** are required

Loading bay and 1 additional parking space are required

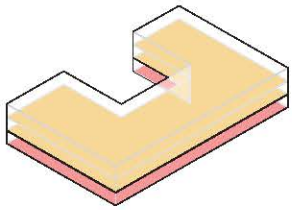
Mixed Use Low - Main Street

Prototype

Parcel size 22,500 sqft
Commercial 11,000 sqft
18 apt unit 1,000 sqft
FAR 1.5



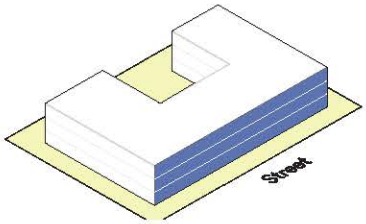
Design Guidelines



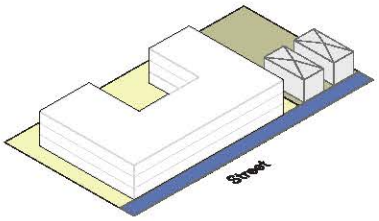
Ground floors are for commercial uses that **generate traffic**

Residential units are **not permitted on ground floors** fronting main streets

Acqua Vento (Calgary, AB)



Building frontage shall be **street-oriented** and **pedestrian-oriented**



There is no minimum building setback

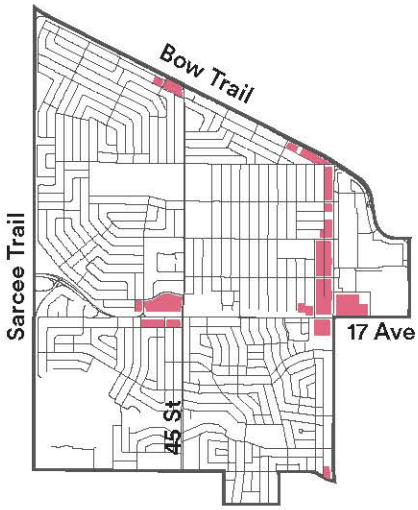
Commercial entities can apply to the city to use part of public realm for **patio space**

Restaurant patios in a mixed use development (Kelowna, BC)

Mixed Use Medium

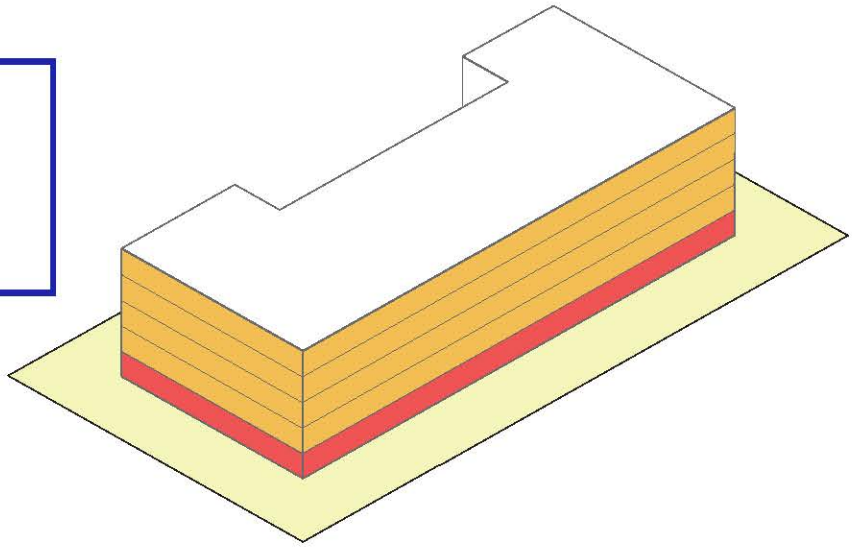
Mixed Use Medium zoning includes mixed use developments from 3 to 5 storeys.

These developments are allowed to have Mobile Commercial Uses.

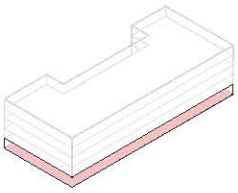


Prototype

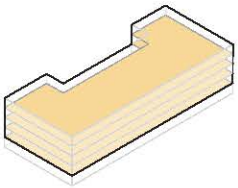
Parcel size 30,000 sqft
Commercial 13,000 sqft
40 apt units at 1,000 sqft
FAR 2.2



Design Guidelines

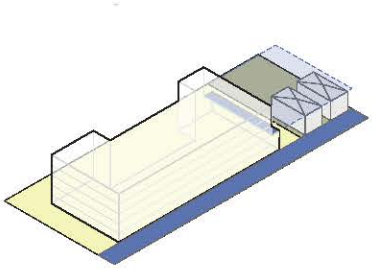


Ground floors are for **commercial uses** while **parking** shall be **underground or at rear**



Residential component shall be at upper floors and is encouraged to be **mixed income with diverse range of unit sizes**

Mixed income residential development with ground floor retail (Seattle, WA)



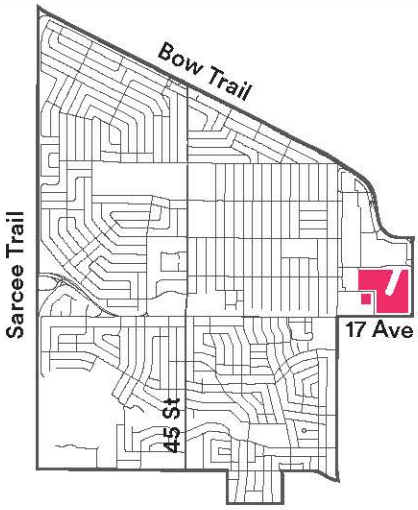
Building shall **match height and setback** of other buildings on the same block otherwise **stepback** shall be provided

Mixed use development that follows the setback and height of existing buildings (Toronto, ON)

Mixed Use High

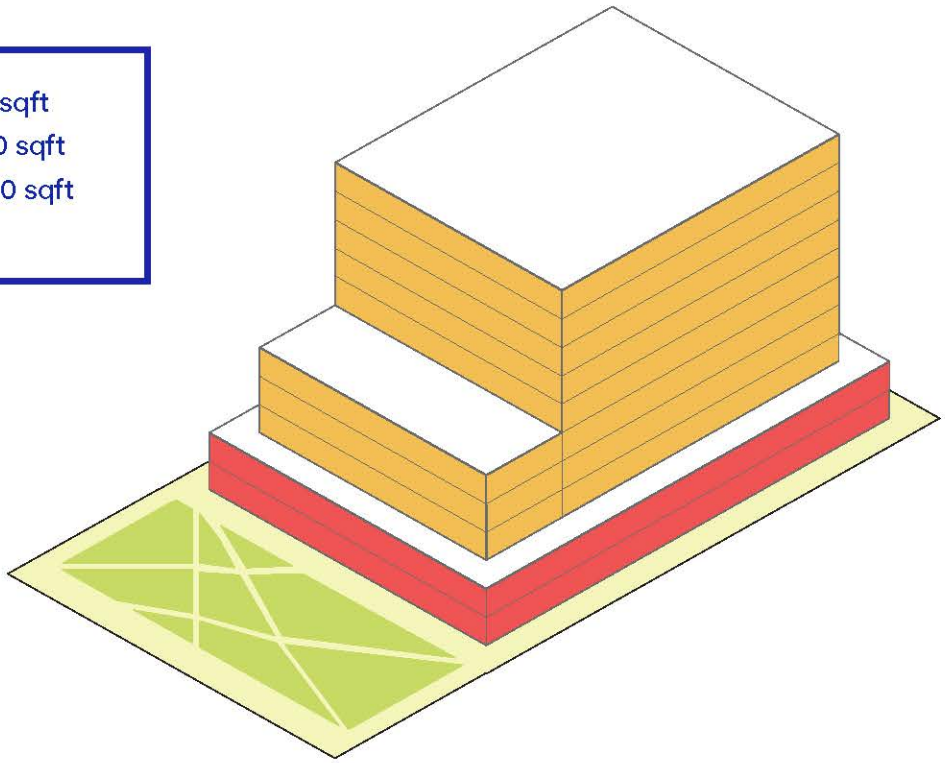
Mixed Use High zoning includes mixed use developments higher than 5 storeys.

These developments are allowed to have Mobile Commercial Uses.

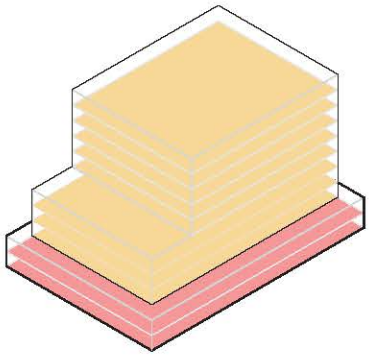


Prototype

Parcel size 30,000 sqft
Commercial 32,700 sqft
70 apt units at 1,000 sqft
FAR 3.5

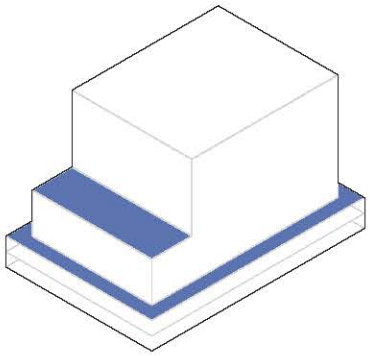


Design Guidelines



First 2 floors shall be **commercial uses** while **residential** uses are on **upper floors** and **parking** shall be **underground**

Mixed use development located next to transit to reduce the need for parking (Seattle, WA)



Residential component shall have building **stepback of at least 1.5m** from commercial podium and at every 5 storeys

A **public plaza** shall be well integrated with public realm

Mixed use development with a public plaza (Los Angeles, CA)

08 Schools and community facilities

This section discuss guidelines on how to make more efficient use of school facilities and playgrounds. The concept of co-location of schools and community halls with residential use is also discussed.

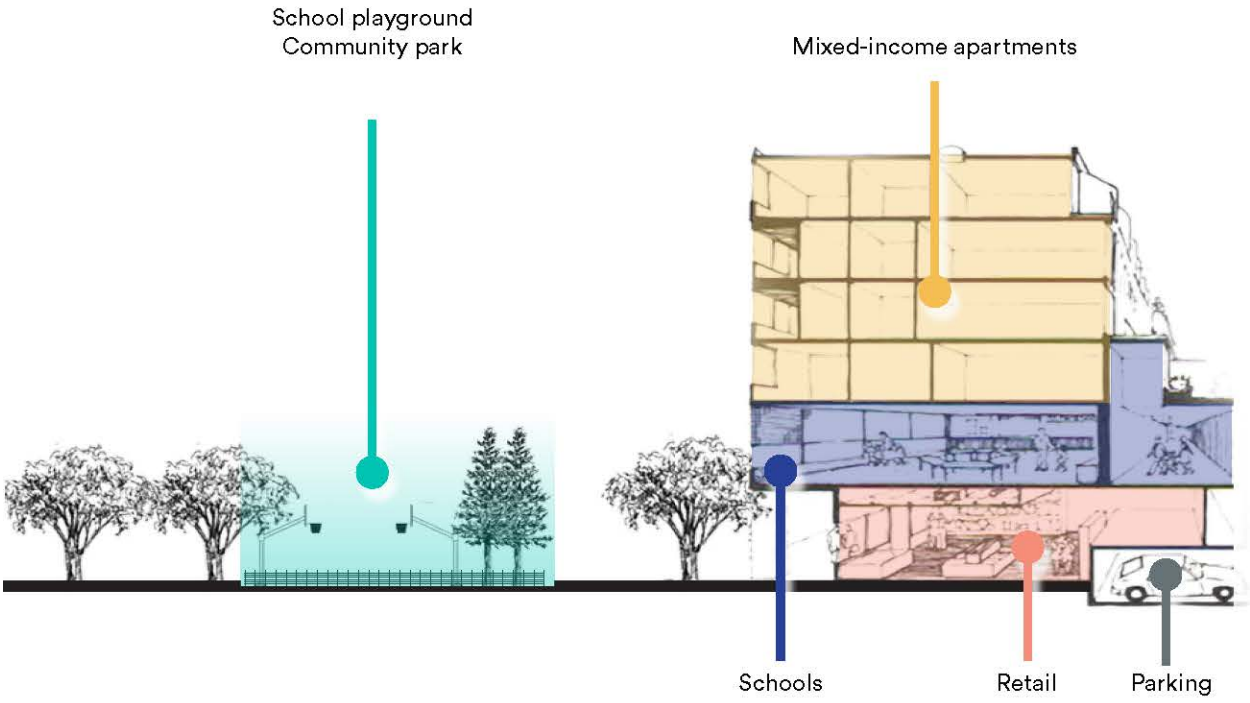
Use of Schools

Community Associations and/or community members may seek principals' permission to **use school indoor facilities** after school hours and during vacation times for community services and social function.

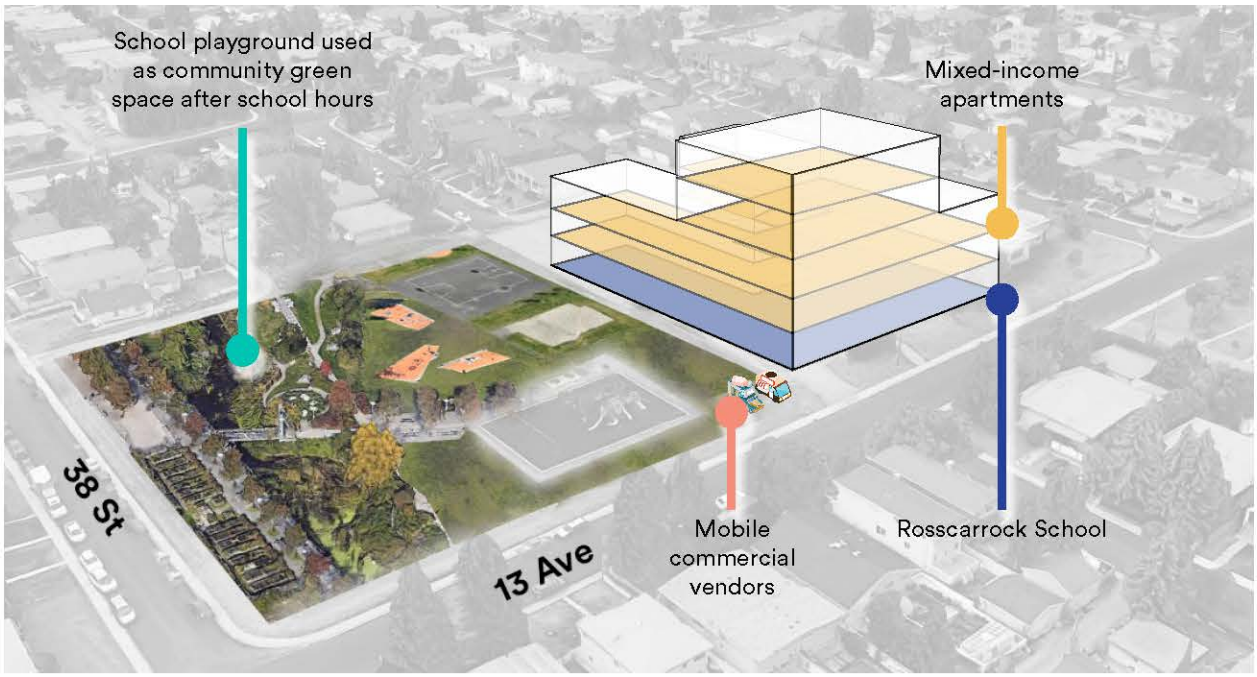
School playgrounds should be opened to community members after school hours and during vacation

Co-location of Facilities

Schools and other community facilities such as community halls, when possible shall be co-located with residential use to encourage community building and promote accessibility to community amenities.

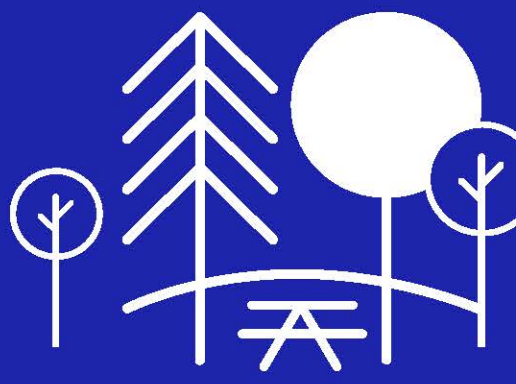


Co-location of two schools with ground floor retail and residential apartments in St. Lawrence development (Toronto, ON)



Proposed co-location of Rosscarrock school with residential use with mobile commercial uses and school playground doubling up as community park after school hours.

02
Attractive open spaces



Attractive open spaces

01 Introduction

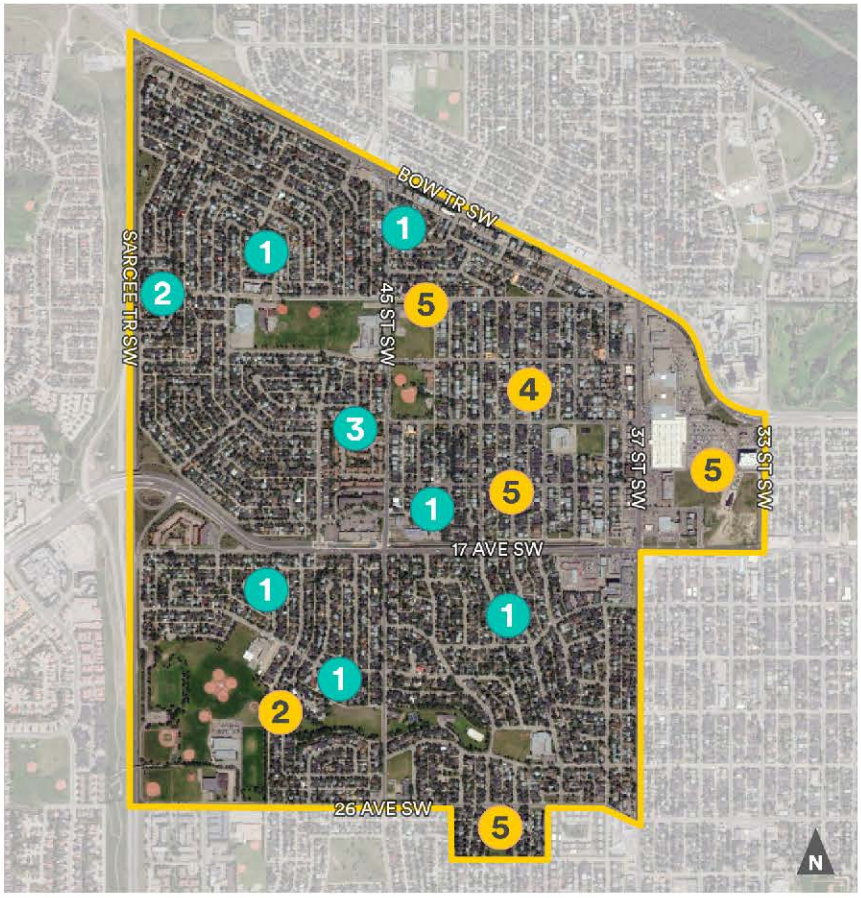
The neighbourhood's open space system has been a part of the three communities' historical, social and cultural centres since their conception. These spaces have contributed to the overall attractiveness and quality of life of the residents. The parks and open spaces category has been developed to provide the neighbourhood with a comprehensive and integrated source of guidelines and policy on open spaces.

The Open Space Plan conforms to Council-approved, city-wide policy documents such as Urban Forestry Management Plan, Natural Area Management Plan, Open Space Plan and Stormwater Source Control Guidelines.

This category also aims to protect, enhance and preserve the existing urban biodiversity of the communities. Green space features that have been found to impact resident's health positively were analyzed and reported in subsequent sections. Some of the green space features analyzed are listed below (Morrison, 2017):

- Neighbourhood green space density
- Proximity to residents and accessibility
- Diversity of plants (types of grass and large trees)
- Perceived cleanliness
- Perceived safety
- Play structures
- Community gardens
- Water features

02 What we heard



OPPORTUNITIES

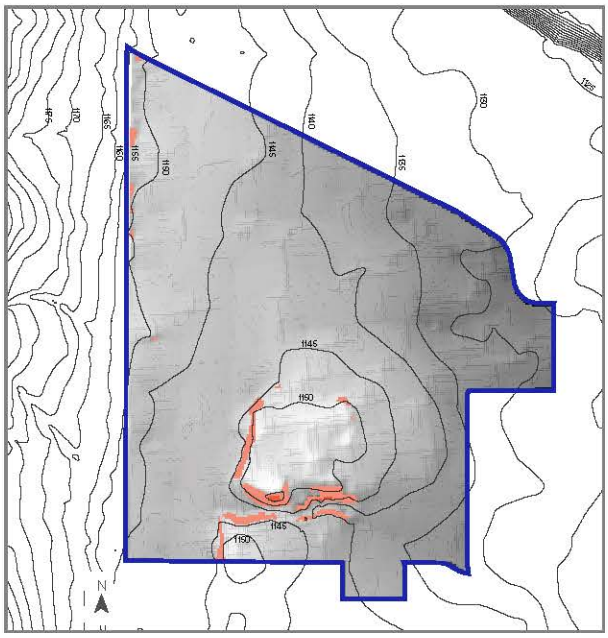
1. Improvement of bike path network and addition of bike storage near LRT stations
2. Add safe pedestrian crossings across Sarcee Tr SW
3. Improve bus routes in Westgate
4. Addition of bus stop at women's shelter
5. Create safer walking pathways along arterial roads

ISSUES

1. Many intersections need improvement to reduce potential accidents
2. Drivers don't follow speed limit along 45 St SW
3. School zones and pick-up/drop-off areas are exceedingly busy
4. Noise along Sarcee Tr SW
5. Drivers cut into the community when 17 Ave SW is busy
6. Cost of transit to downtown is more than the cost of parking downtown
7. Transit is inefficient for residents to get to places within the communities
8. Lack of pedestrian connections to Signal Hill/Christie Park/Strathcona Park

03 Key findings

TOPOGRAPHY



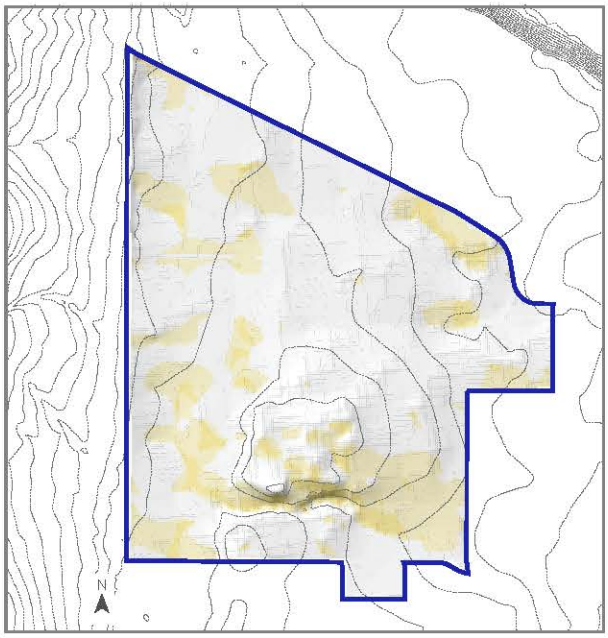
Contours at 5m

Difficult to build slopes (15 - 33%)

Unbuildable slopes (< 33%)

The topography map displays an even contour gradient across the neighbourhoods, cut at 5-metre contour intervals. The exception is in Glendale at the Optimist Park, where the highlighted slopes are from 15 to over 33 percent tilt. It makes the highlighted areas prone to stormwater accumulation, steep enough to be trying to walk over and overall unsuitable for building construction.

SUN EXPOSURE



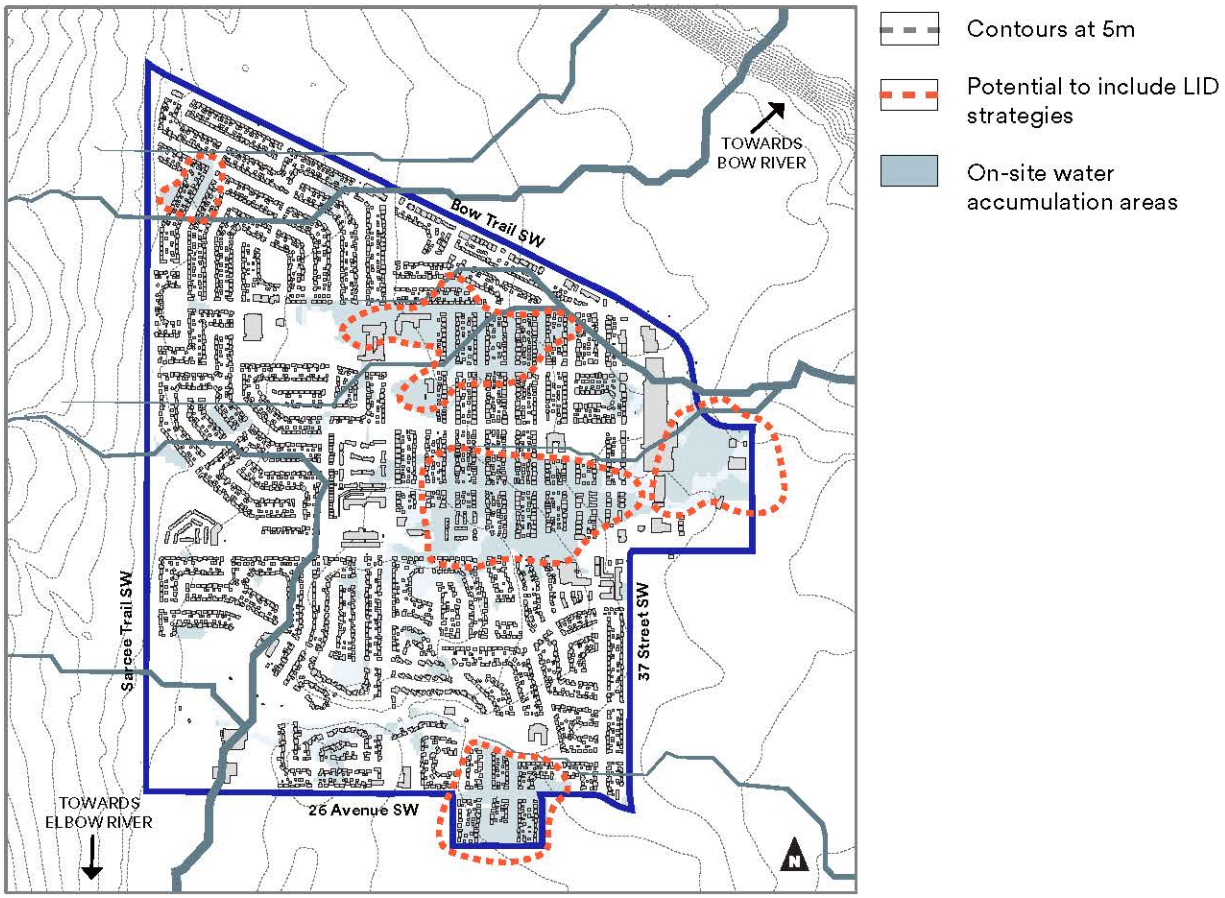
Contours at 5m

South-east and south-west facing slopes

South facing slopes

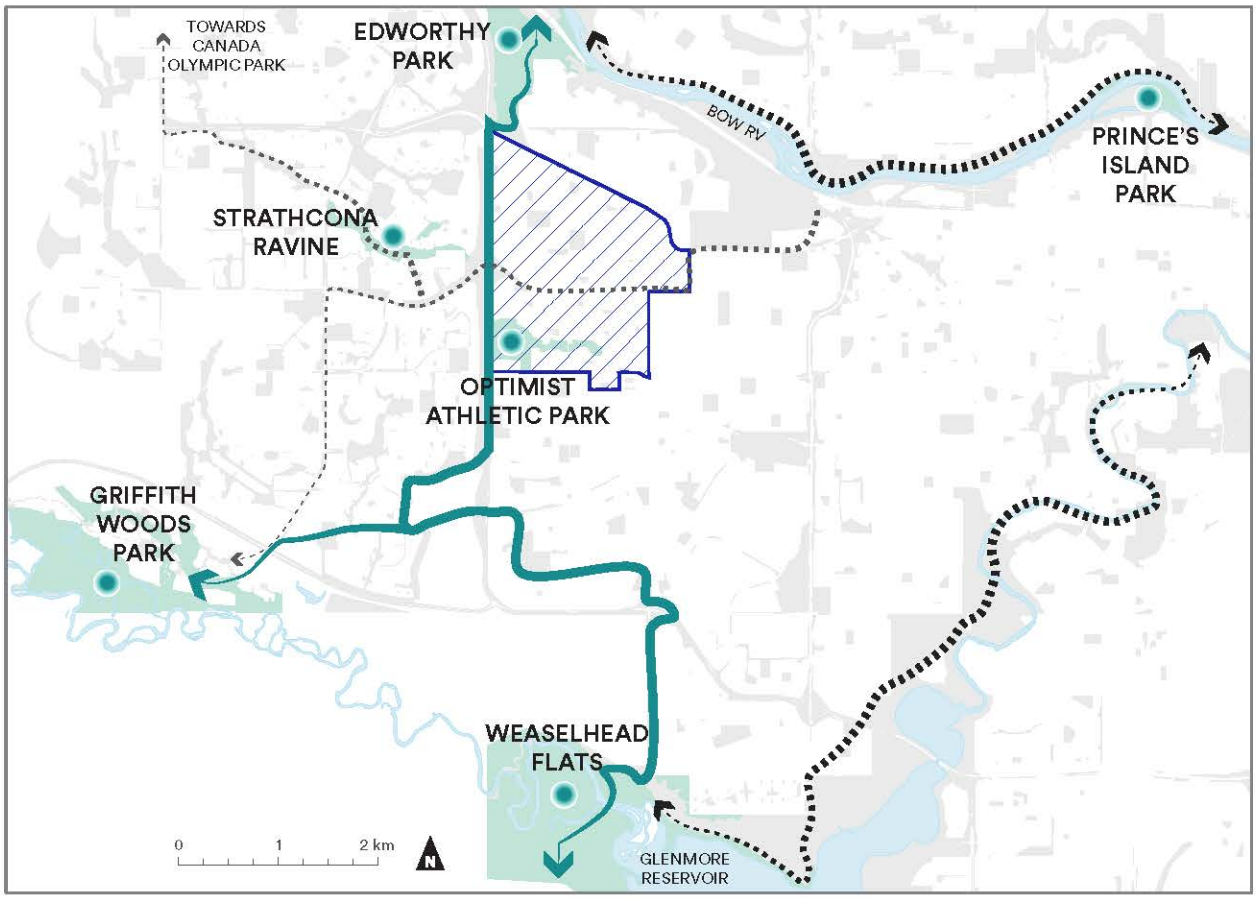
The sun exposure map highlights the south-facing slopes that are more open to sunlight and warmer winds. These areas are potential locations of where faster snow melts will occur in spring. The site has multiple south facing slopes that capture maximum sunlight on usable areas. These areas can also suggest locations that can accommodate climate responsive building designs, building placements for new developments and potential locations for redeveloping green spaces.

STORMWATER ACCUMULATION



Based on the topographic data, the map highlights pockets of on-site areas affected by stormwater pooling. The drainage pattern indicates the site is sloped such that water drains into the Bow River to the north-east and Elbow River to the south. This map may not accurately represent the current issue of stormwater pooling as it does not take into consideration the street layout and existing stormwater drain capacity. However, it gives a good indication of the potential problem areas that could benefit from low-impact development strategies to avoid flooding and property damage in the future.

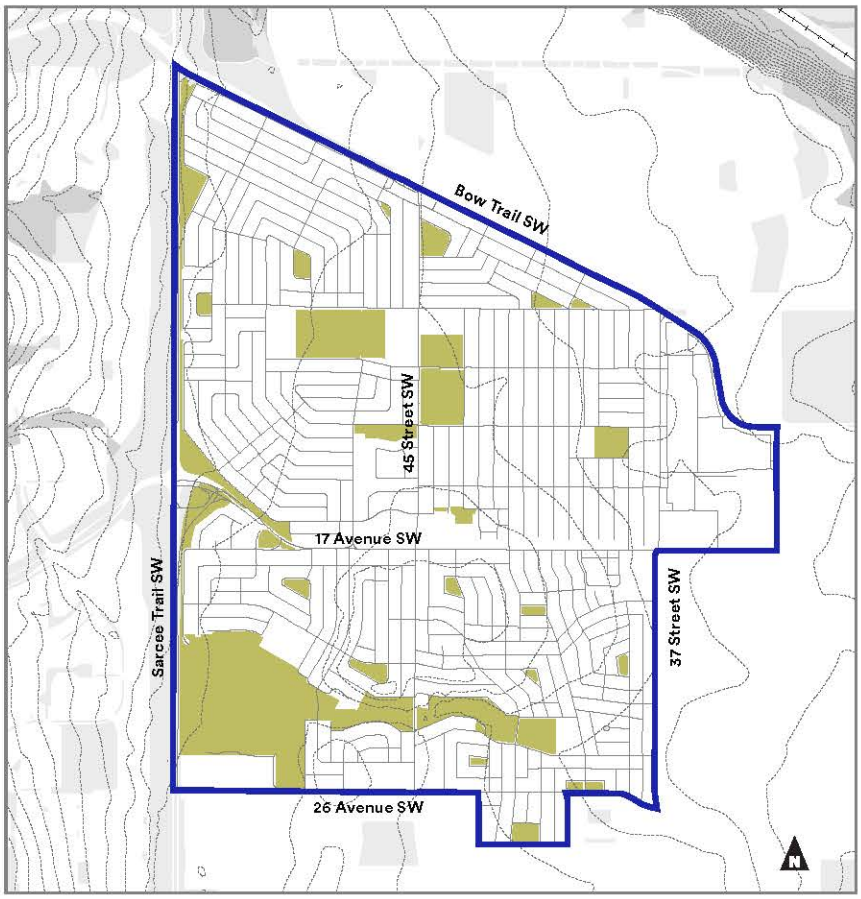
REGIONAL GREEN SPACES AND LINKAGES



The communities are strategically located along Rotary Mattamy Greenway that connects to recreational destinations such as Edworthy Park to the north and Griffith Woods park and Weaselhead flats to the south. The city-wide cycling route passes through the community providing an east-west connection to the city's downtown and other green space amenities.

There is potential to strengthen these connections to increase pedestrian and bicyclists movement within and outside the community. Safer and convenient east-west connections along Sarcee Trail can increase the usage of Mattamy greenway and provide better connections to other city amenities. A look inside these communities suggests that the locations of these green spaces are scattered and will benefit from a well-connected pedestrian network and cycling infrastructure.

COMMUNITY GREEN SPACES



Contours at 5m

Community green spaces

Natural areas outside the site area

The communities open spaces map shows the spatial location of the open spaces and totals to 45 hectares of open space area in the neighbourhood. The ideal green space density recommended by the World Health Organization is 5 hectares per 1000 persons[1]. The average green space density within the neighbourhood is 4.7 hectares per 1000 persons, which is on par in comparison to the recommended values. However, the use, quality and accessibility of these green spaces will ultimately determine its contribution to the health and wellbeing of the residents.

1 Russo, A., & Cirella, G. T. (2018). Modern Compact Cities: How Much Greenery Do We Need? International Journal of Environmental Research and Public Health. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6209905/

04 Guiding principles and policies

Accessible open spaces	Make the use and enjoyment of the open spaces accessible to a range of age groups and mobility levels.
Quality and user experience	Present a welcoming and natural setting for all community parks and open spaces brings the community together and promotes a healthy lifestyle.
Stormwater management strategies	Promote local retention of stormwater and limit the dependence on municipal drains keeping in mind Calgary's unique environmental setting.
Cleanliness and safety standards	Establish open space standards that are sensitive to the local community's needs.
Inclusive programs	Create a sense of place with each intervention that will offer a variety of uses and facilities year-round to all residents regardless of age, income, ethnicity or disability.

05 Open space typology

Neighbourhood parks

- Support casual picnicking spaces
- Improve park seating and landscaping
- Provide playsets for neighbourhood children to gather
- Provide pathways that guide access from park entries to playing and seating areas

School playgrounds

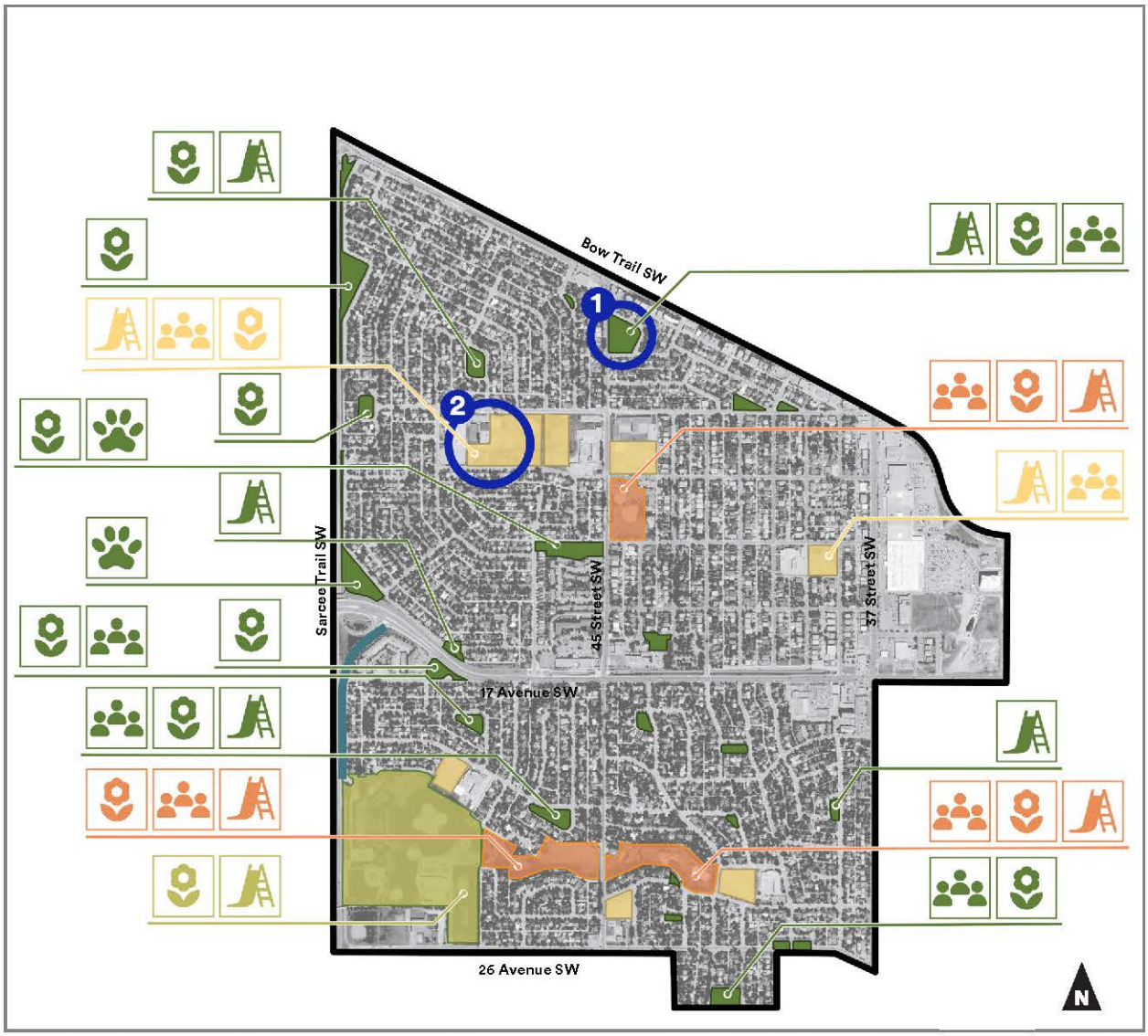
- Support time-restrictions to allow use of playgrounds after school time
- Plant additional trees to buffer this area from roads and provide shade to users
- Provide flexible sports activities on a single playing field
- Provide shaded seating options
- Provided public access points after school time

Community event spaces

- Enhance public access to these parks
- Support the use of this area as an outdoor event
- Provide additional picnic spaces and seating options to accommodate large gatherings
- Support leisure activities of park users and viewers
- Plant additional trees to safely buffer this area from roads and provide shade to users
- Provide bike storage facility

Sports related spaces

- Provide shaded seating options for cheering and viewing activities
- Provide internal pedestrian connections to better support the many activities
- Provide flexible sports activities on a single playing field



Map showing designated open space typologies and programming (Visualizations of proposed improvements for Parks 1 and 2 are provided at the end of the section)

- Neighbourhood parks
- Community event spaces
- School playgrounds
- Sports related spaces
- Active play elements
- Community activities
- Dog parks
- Design improvements

06 Open space programming

ACTIVE PLAY ELEMENTS

Active playset (Terra Nova Park - Richmond, BC)

Spraypark (Kidstown - Scarborough, ON)

Active play elements challenges and promotes children's growth by providing opportunities for children to engage in multiple different types of play - 'play value'. A playground with high play value will need to have a variety of play elements which work together to provide settings for social exchange, problem-solving scenarios and physiological growth[1].

Elements such as:

- Open grassy areas
- Rock climbing wall
- Swing sets, slides, climbers, jumpers, etc.
- Sandbox
- Splash pads and spray parks
- Small skateboard parks
- Multi-use ice rinks

Design guidelines

1. Playground design should include children with physical and mental disabilities.
2. Invest in playsets with high "play value" in high usage areas such as school and community parks.
3. Incorporate nature into the design as much as possible by adding gardens, trees, flowers, boulders, stumps and logs for enhancing their creative and sensory play.
4. Position playsets underneath trees to provide natural shade while optimizing on sun exposure.
5. Ensure the playground meets appropriate safety requirements.
6. Establish an active Playground Maintenance Program that inspects equipment every year and helps with the installation of new elements.

1 Moreno, E. (2018, February 23). 10 Principles of Playground Design. Retrieved from https://playgroundideas.org/10-principles-of-playground-design/

COMMUNITY ACTIVITIES

Open picnic spaces (Victoria Park - Kitchener, ON)

Movie screening (Philadelphia, PA)

Community activities focus on programs that are important for community building. Identify talents and interests within the community through an engagement process. This opportunity can be utilized to develop effective relationships with local pubs and coffee shops to attract more activity and enables local businesses to market their brand.

Include activities such as:

- Outdoor exercising
- Art/Music festival
- Picnic spaces
- Community gardening
- Meditation and fitness parks
- Special events
- Food truck events
- Local food showcasing events
- Mural making and community art
- Farmer's market
- Intergenerational programs
- Outdoor movie nights

Design guidelines

1. Designated parks should include amenities such as covered and non-covered seating options, picnic benches, waste receptacles, washrooms, lighting and open areas suitable for holding outdoor events and serving large gatherings.
2. Semi-Permeable fencing in the form of a row of trees, tall shrubs or low hedge shall be planted to buffer edges from main roads while preserving visual permeability. Avoid impermeable and opaque fences that obstruct sight lines.
3. Designated spaces should provide easy public access, in the form of multiple pedestrian entries, a storage facility for bikes and wheelchair accessible pathways that lead to the different activities on the ground.
4. Visible signage with a list of activities should be displayed at the entrance of the building.

Shaded spaces (Cornwall Park - Auckland, NZ)

Enclosed spaces (Glass House - New Canaan, CT)

Outdoor exercising (Victoria Park - Kitchener, ON)

Yoga in the park

Community gardening (Parkdale - Calgary, AB)

Farmer's market (Sunnyside - Calgary, AB)

DOG PARKS


(Sault-au-Récollet Dog park - Montreal, QC)


(Laurelhurst Park Dog park - Portland, OR)

Currently, the community lacks off-leash dog parks and pet owners use two spaces in Westgate as un-official off-leash areas. However, due to the lack of programming, there have been several complaints of uncontrolled dogs harming residents.
Spaces that were centrally located for residents to access from their homes easily were considered to allocate spaces for an off-leash dog park area. It is recommended to allocate those areas as single-use off-leash areas to prevent conflicts between dog owners and other park users. The map indicates the allocated open spaces for off-leash activities. However, the final designations of the areas will depend on municipal budget considerations, site-specific conditions and user-driven demand. No additional parking should be assigned since the areas are within the community.

Design guidelines

1. Fencing should be fully enclosed and must be at least 1.5m high with double-gated entries and exits to increase the comfort and safety levels of passing pedestrians.
2. Provide adequate signage and design interventions to minimize potential conflicts between dogs, their owners and other park users.
3. A standard level of site amenities should be included in all identified off-leash areas, such as signage, open areas for running and playing, waste receptacles, clearly marked boundaries and seating for owners.
4. Designated parks should include a 5m setback distance and dense tree plantings to mitigate noise concerns from neighbouring residential uses.
5. Communication and enforcement of on-leash areas must be improved upon for the overall safety of the residents, through awareness campaigns and additional enforcement strategies.

For additional information refer: City of Winnipeg (2018). Off-leash Dog Areas Master Plan.

DESIGN IMPROVEMENTS

The following features are recommended for design improvements and should be implemented on a case by case basis.

Park bench design

Shaded seating

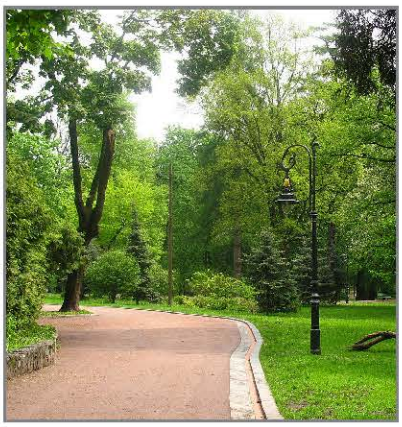
Picnic benches

Park signage

Waste bins

Lighting

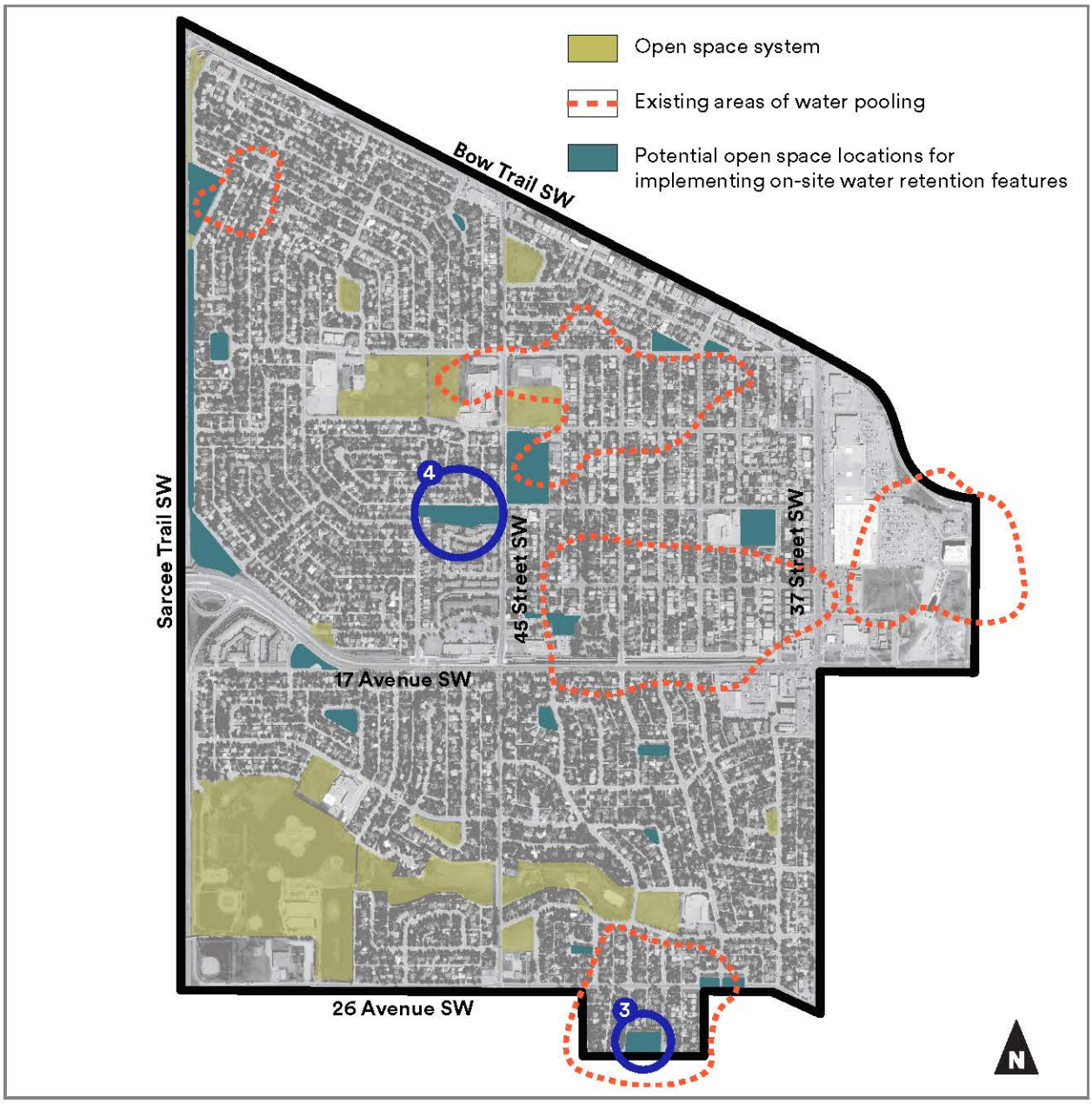
Landscaping



Accessible Pathways

Permeable fencing

STORMWATER MANAGEMENT



Map showing potential areas for implementing water retention features (Visualizations of proposed improvements for Parks 3and 4 are provided at the end of the section)

The map highlights areas which could benefit from source control implementation. However, due to the inaccuracy of the data, the recommendation is for the City to conduct adequate GIS-based quantitative analysis to accrately narrow down areas within the community that can most benefit from such implementations.

The communities are conventionally designed residential development that are dependent on the City's stormwater drains to capture runoffs. The aim of this section is to minimize the runoffs and pollutants and manage volumes and rate of runoffs at or near its source before it reaches the municipal drainage systems.

The City recommends *Stormwater Source Control Practices Handbook Calgary (2007)* for site-specific designs such as:

- Absorbent Landscaping such as bioswales, grass swales, rain garden, porous pavements
- Bioretention Areas such as ponds and trenches
- Stormwater Reuse such as rainwater harvesting techniques
- Better Planning Practices such as green streets and reduced frontage
- Green Roofs

The following stormwater management features are recommended for the sites and shall be implemented as per the City's analysis.

(Pinehurst - Seattle, WA)

1. Bioswales

Bioswales are linearly shaped open channel drainage systems used alternatively to the conventional curb, gutter and underground storm sewer system along roadways and rows of parking. They are designed to guide water to a collection facility with slope and depth of flow measurements. Bioswales can be a landscape feature integrated to provide green space in developed environments.

Bioretention pond design

2. Bioretention ponds

Bioretention ponds are depressed landscaped areas designed to treat stormwater through settling, fine filtration and extended detention. For Calgary's unique climate, these areas can be used for temporary snow storage. Infiltration is significantly reduced during cold seasons due to the dormancy of the vegetation. However, treatment may still occur if a flow path is available and the underlain filtering media is not frozen solid.

For additional information refer: City of Calgary (2012). Stormwater Source Control Design Guidelines.

Water collection tanks

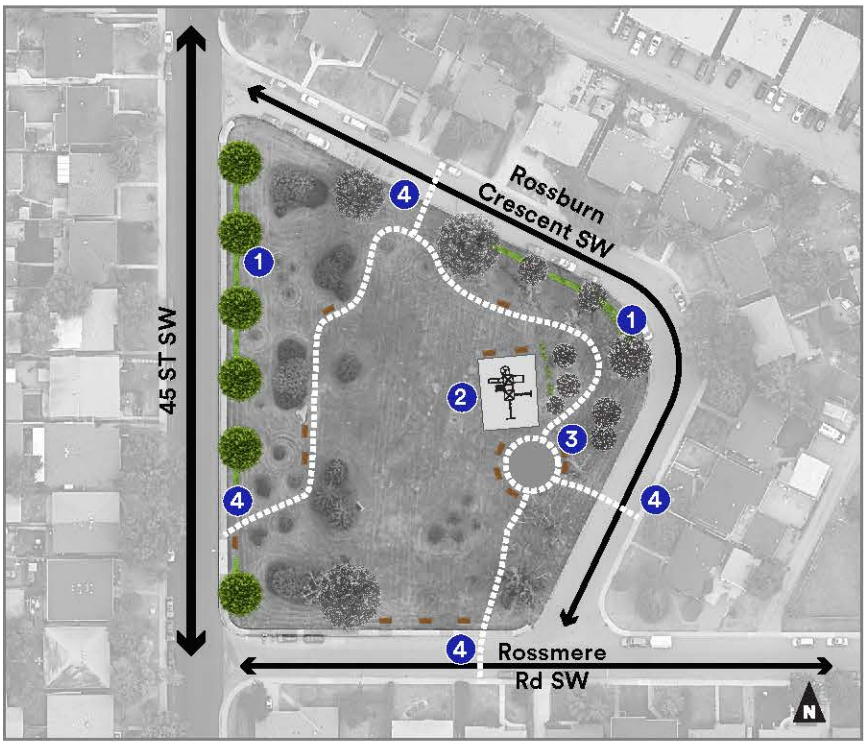
3. Rainwater harvesting tanks

Water collecting tanks can capture runoffs and significantly reduce the community's dependence on the City's water supply mains. Captured water can be re-used for toilet flushing, watering lawns and community gardens and doing laundry. Encourage new residential and commercial buildings to integrate adequate collection, storage, treatment and distribution facilities.

Design guidelines

1. Establish conscious use of water resources that are sensitive to Calgary's environmental setting through awareness programs and education for children and adults.
2. Sensitize the residents to issues of stormwater management by direct visual means.
3. Street and building designs that have impervious surfaces should disconnect from the municipal drains and allow stormwater to filter, evapotranspire or be re-used naturally.
4. As part of the community's water management planning, the CA (Community Association) should partner with a local water storage tank dealer to help install and maintain tanks at subsidized rates for the residents.
5. All bioswales features should be with an inverted slope profile with a maximum slope of 2%.
6. A shallow ponding area shall be incorporated in the designated areas after further study.
7. Plant species that are non-woody and salt tolerant must be selected for bioretention areas.

VISUALIZATIONS FOR THE PROPOSED IMPROVEMENTS



IMPROVEMENTS

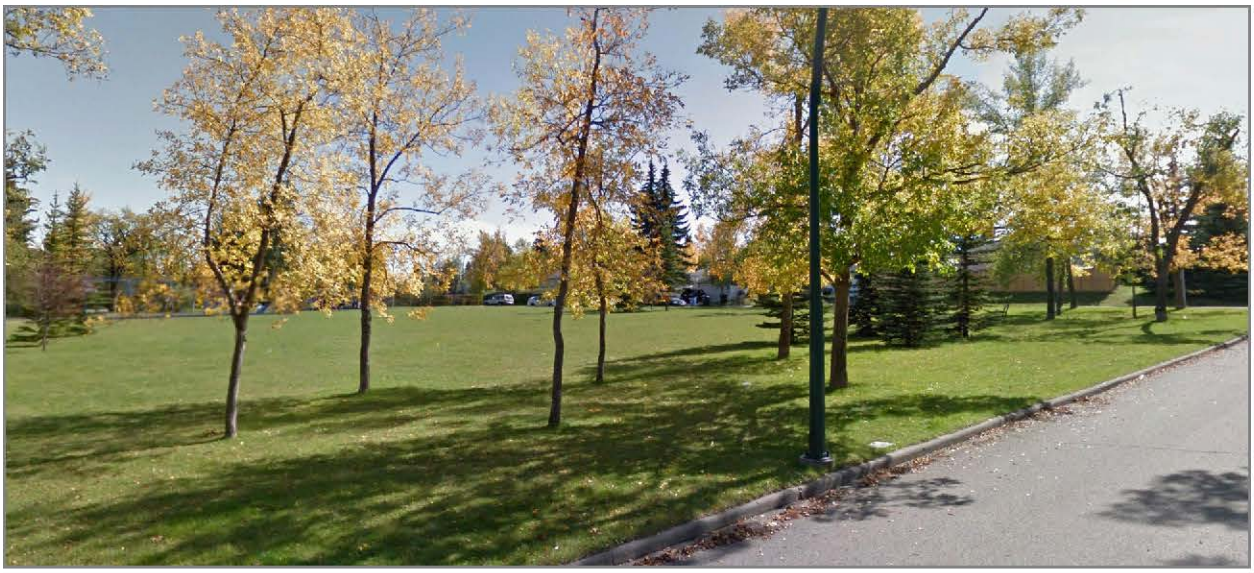
1. Permeable fencing along park edges facing main roads obstructed visibility areas
2. Improved playset and benches
3. Pathways that lead to activities
4. Multiple accessible pathways to the park

Park 1 - Neighbourhood park programming (Park at Rossburn Crescent - Rosscarrock)

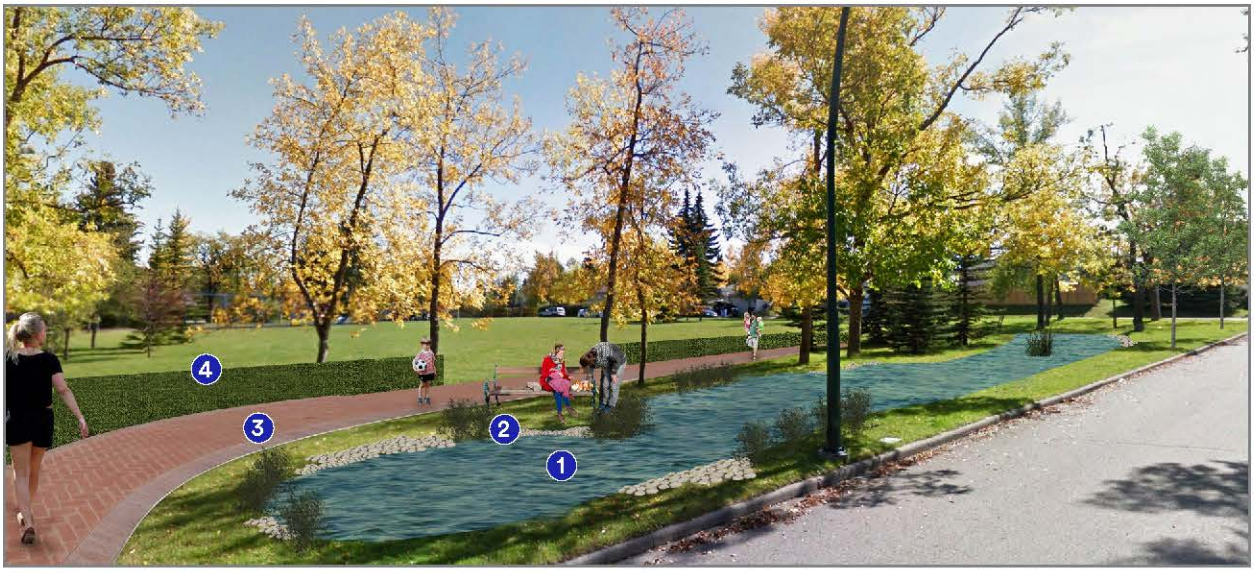
IMPROVEMENTS

1. Staging areas for community gathering activities
2. Flexible open spaces that provide multiple playing options
3. Accessible pathways that lead to activities
4. Street trees and shrubs form barrier between main roads and the open space
5. Proposed community garden for Westgate community association

Park 2 - School playground programming (Westgate school - Westgate)



Park 3 - Existing view (28 Ave SW park - Glendale)



Park 3 - View of the park after implementing the retention pond (28 Ave SW park - Glendale)

IMPROVEMENTS

1. Depressed landscape for stormwater collection
2. Soft landscaping and seating allows users to interact with the feature
3. Pathway designed to connect and disconnect the area from the rest of the park
4. Permeable fencing to disconnect the area from the rest of the park

Park 4 - Bioswale implementation (Proposed dog park - Kitchener, ON)

IMPROVEMENTS

1. Fully enclosed dog park area for pedestrian safety
2. Double-gated entries for added safety
3. Improved pathways for better connections
4. Dense trees and shrubs to mitigate noise concerns for surrounding residents to act as a bioswale on sub ground level
5. Bioretention pond for stormwater collection

03
Vibrant public realm

Vibrant public realm

01 Introduction

The public realm of a community consists of all exterior social spaces that are generally accessible to all people regardless of ownership. A high-quality public realm helps in establishing a sense of place and a unique identity for the community and its residents. It can be achieved through promoting human-scaled architectural design, built forms oriented to the public realm and convenient connections to spaces.

This document will guide the design of public and semi-public spaces in the communities to enhance the unique character of each locality. The guidebook provides recommendations that focus on providing pedestrian-friendly, vibrant and a convenient place for the residents of Westgate, Rosscarrock and Glendale. The recommended guidelines are intended to be used by City staff and decision makers in the review of new development proposals.

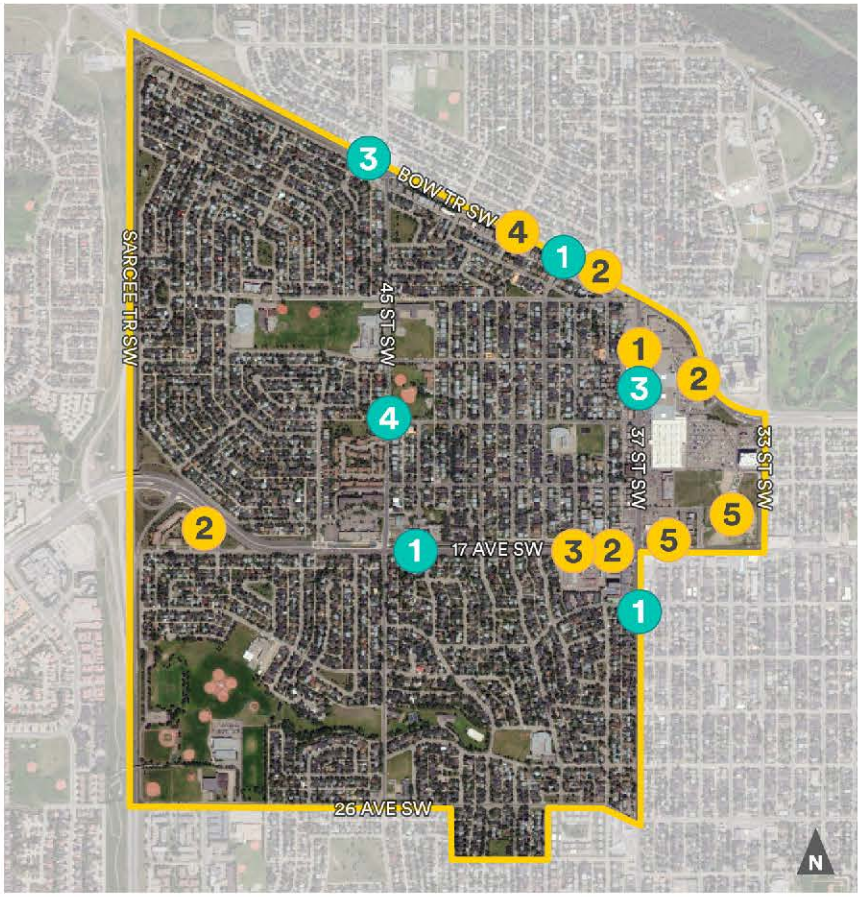
Public Spaces include:

- Streetscape elements
- Residential and commercial frontages
- Enhanced open spaces
- Rear lanes

Urban Elements include:

- Lighting
- Seating and benches
- Waste Bins
- Bike racks
- Street trees

02 What we heard



OPPORTUNITIES

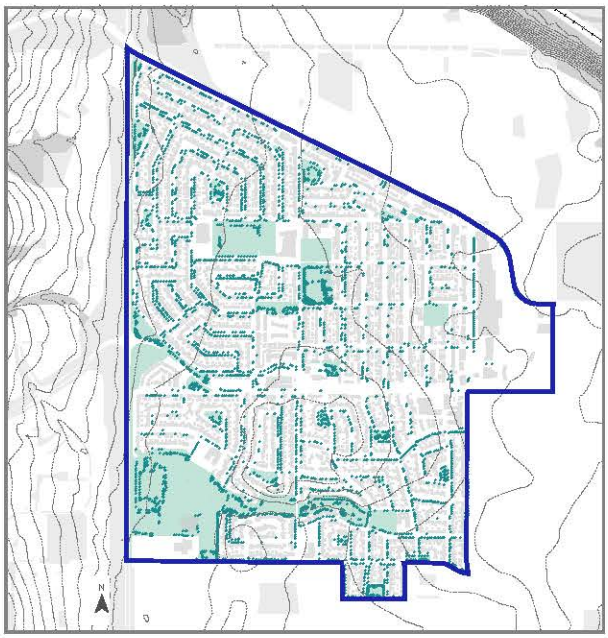
1. Sidewalks can be widened and repaired, especially along arterial roads
2. Addition of new street furniture, signage, and tree plantings
3. Improve pedestrian crossings across 37 St SW and Bow Tr SW
4. Narrow roadways to slow down traffic in residential areas
5. Improve lighting on streets and walkways
6. Develop architectural guidelines to help citizens and developers in undertaking construction work

ISSUES

1. High crime rates along 37 St SW
2. Parking lots and strip malls leave little room for green space and other design elements
3. Commercial building façades along 17 Ave SW do not match in design, materiality, and colour
4. Mid-block curb cut on Bow Tr SW for vehicular access causes traffic and safety problems
5. Vacant and underutilized lots on 17 Ave SW and south of Westbrook station

03 Key findings

STREET TREE DENSITY



Contours at 5m

Existing trees

Community green spaces

Natural areas outside the site area

The map shows the existing placement of trees in the communities. The table below tabulates the total number of trees and the average tree density in each community. The analysis indicated that Rosscarrock has reduced tree cover due to less open spaces. The community will benefit from more tree plantation, specifically along main corridors, residential streets and open areas.

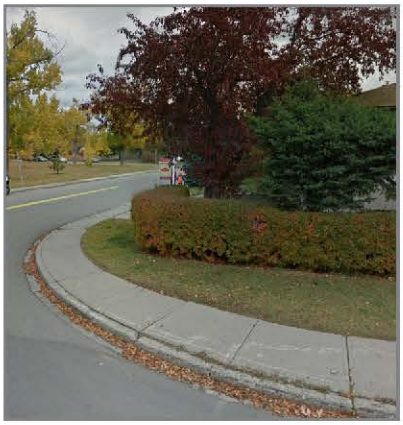
	Westgate	Rosscarrock	Glendale
Number of trees	1404	805	1906
Tree density (trees/ha)	**12**	**8**	**14**

For additional information refer: City of Calgary. Urban Forest Management - Tree Schedule

QUALITATIVE ANALYSIS OF THE EXISTING CONDITION

Inadequate sidewalk width

Sparse street tree plantation



Inaccessible sidewalk

Lack of street furniture

Auto-centric commercial frontages

Sloped landscape that drains water on to sidewalks

Inadequate landscape zone

Under-utilized laneways

Visually unappealing fencing

04 Guiding principles and policies

Enhance community character	Promote and enhance each community's character by providing convenient, desirable and memorable places for residents.
Provide a pedestrian focused netowork	Provide a strong pedestrian-focused network using existing and new facilities to create more safe and accessible connections that allow residents to walk, cycle and use transit to reach destinations.
Improve socializing experience	Enhance the public experience within the sidewalk realm that supports local businesses and retail spaces by providing functional spaces for socializing and recreation.

05 Urban elements

STREET FURNITURE

Pedestrian-oriented seating options (Bethesda, MD)

Co-located amenities

Street furniture includes:

1. Seating options
2. Lighting
3. Street trees
4. Waste bins
5. Signage and banner
6. Bike and transit facilities
7. Public art

Design guidelines

1. Co-locate amenities and transit services such as seating, bus stops, bike racks to provide variety in modes and convenience in movement.
2. Integrate lighting elements such as ground lights, lamp-posts and seasonal lights where possible.
3. Preserve and protect existing trees deemed valuable by City's Urban Forest Management guidelines and improve planting conditions through the redevelopment process. Use trees and plantation to frame the area.
4. Establish Gateways at 17 Ave and 37 St SW by integrating public art and quality planting to express the uniqueness of the area.
5. Integrate signs into architectural expression. Prefer three-dimensional lettering that is durable, high quality and attracts attention from a distance.
6. Integrate Stormwater Management at surface-levels using bioswales to guide street runoffs to a retention pond. These changes to be primarily focussed in residential areas.

PEDESTRIAN SIDEWALK

Wide and unobstructed sidewalk

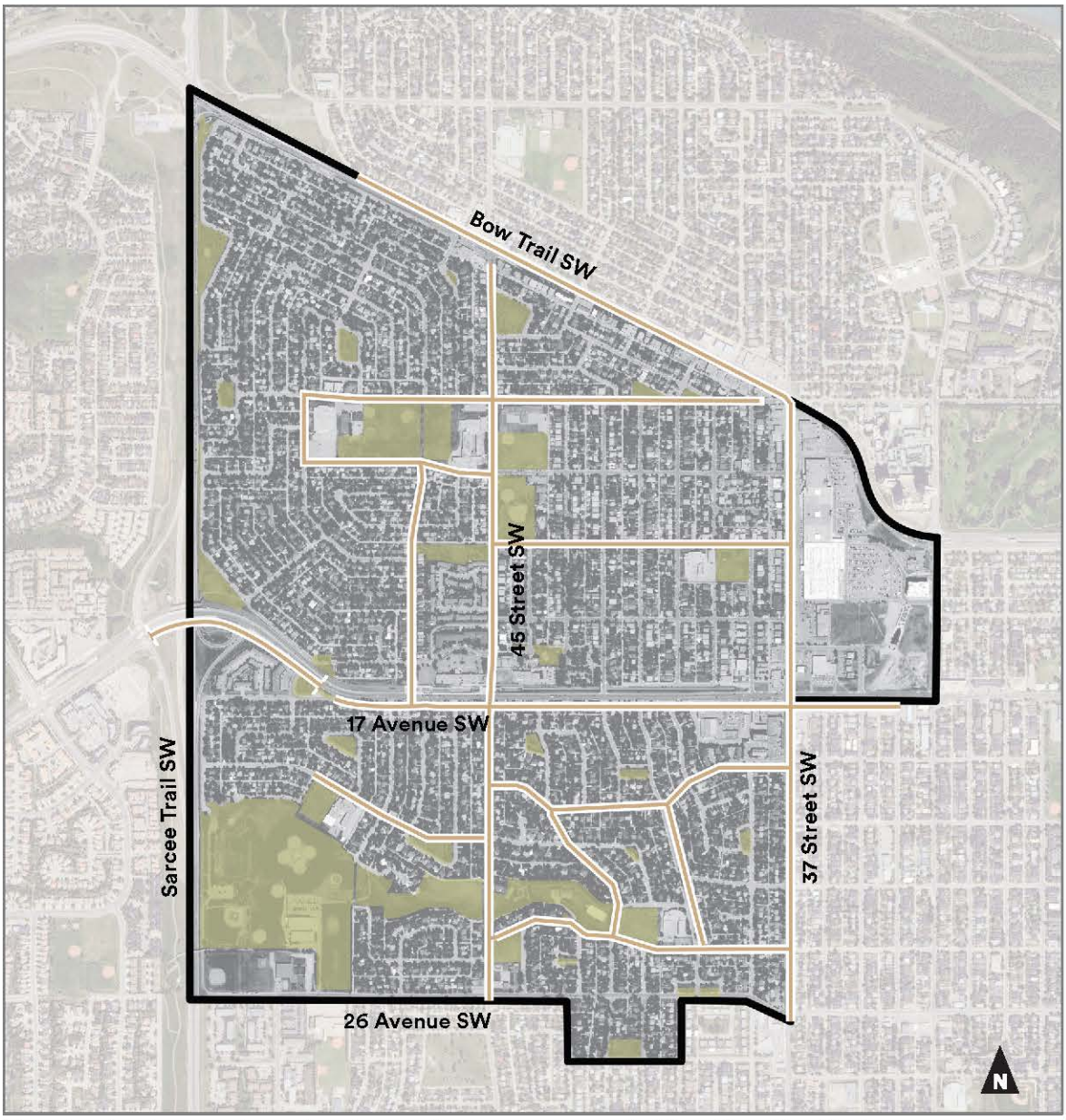
Porous paving material

Sidewalks allow pedestrian movement and access to promote walkability in a community. Enhancing pedestrian connectivity activates existing streets socially and economically. The quality of the sidewalks plays a vital role in its attractiveness to users. Sidewalks need to be safe, accessible and well-maintained to be friendly to all age groups and persons with disability.

There is a well-connected pedestrian network existing in the neighbourhood. However, it lacks space and is not maintained well. Sidewalk width standards should provide ample space for people to walk side by side and have enough space for street furniture. For a high-quality urban experience at the street level, all community sidewalks should be widened to the recommended dimensions, as tabulated below:

	Residential (47 ST SW)	**Residential collector** (17 Av, 45 St SW)	**Commercial** (37 ST, Bow Tr SW)
Existing width	1.25 m	1.30 m	1.60 m
Recommended width	**1.8 m**	**2.5 m**	**3.0 m**
Recommended width	**6 ft**	**8 ft**	**10 ft**

Sidewalk width recommendations from: Hopper J, Leonard. Landscape Architectural Graphics Standard.



Map showing frequently used pathways that are recommended for sidewalk widening

LANDSCAPE ZONE

Segregated planter box

Row of trees to frame the area (Philadelphia, PA)

Landscape improvements along sidewalks can enhance the pedestrian experience at the street level. Ideal plantation can promote the modelling of micro-climate, create permeable barriers or define corridors. It also has the potential to integrate as a stormwater management strategy. Moreover, trees help to soften the streetscape, provide buffer from traffic and create a safe pedestrian experience within the public realm.

Parks

Tree species

- Ivory Silk tree lilac
- Rosthern crabapple
- Japanese Tree Lilac
- Hawthorn
- Schubert Chokecherry

Shrub species

- Mugo Pine
- Globe Blue Spruce
- Nest spruce

Residential streets

Tree species

- Amur Maple
- Bur Oak
- Wayfaring Tree

Shrub species

- Ninebark
- Red Barberry
- Meyer's Dwarf Lilac
- Potentilla or Shrubby Cinquefoil

Main streets

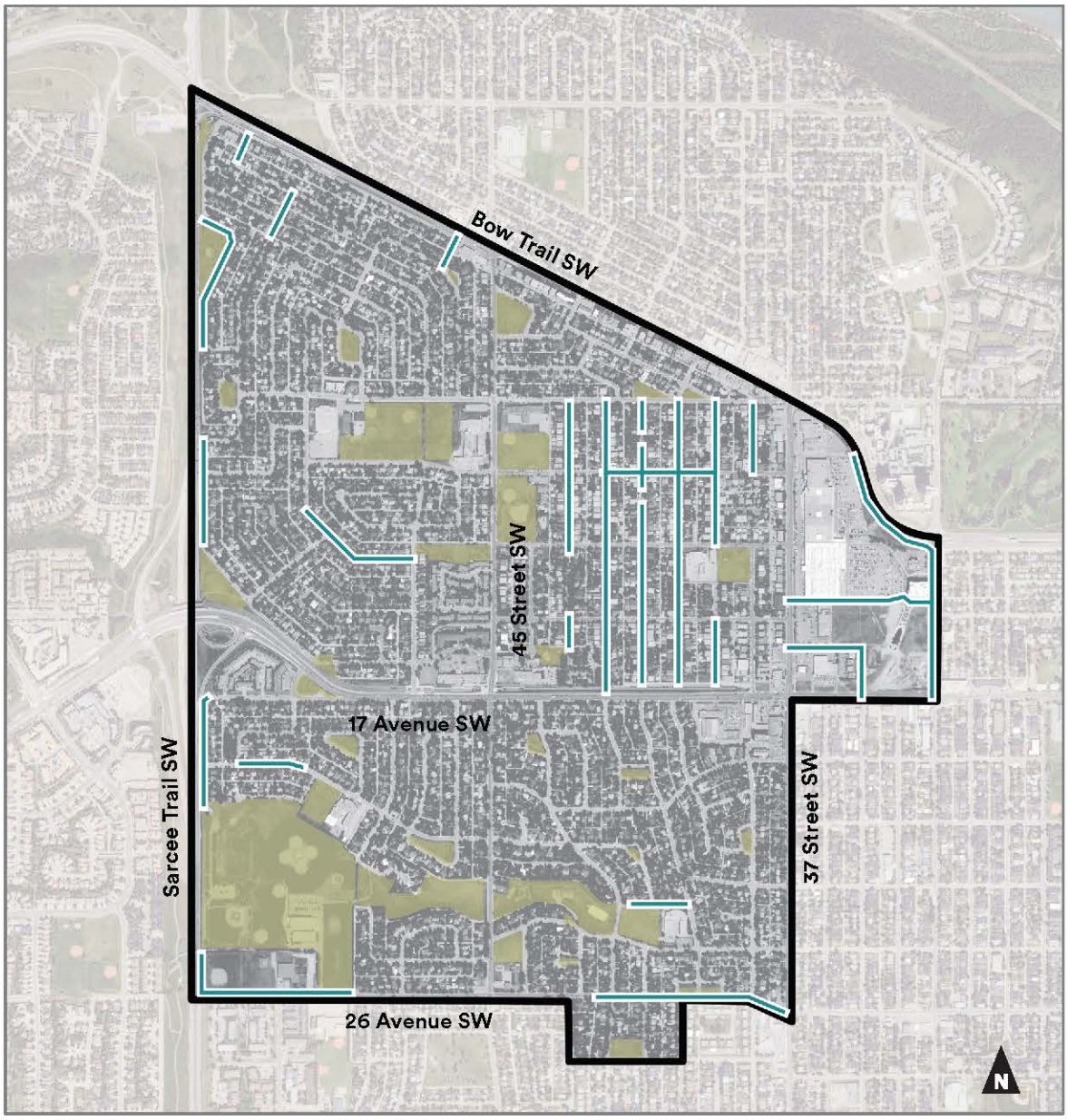
Tree species

- American Mountain Ash
- Asian Bird Cherry
- Siberian Larch
- Brandon Elm
- Ohio Buckeye
- Green Ash

Shrub species

- Snowberry
- Sister Justina Lilac
- Potentilla or Shrubby Cinquefoil
- Nannyberry

For additional information refer: City of Calgary (2017). YardSmart Trees and Shrubs



Map highlighting areas that will benefit from street tree plantation

The recommendation is to plant easy to maintain species that require minimal water and are drought and salt tolerant. The specified list of plantations adapts well to Calgary's unique climate and water availability. The recommended trees shall be planted in the proposed areas shown on the map. Street trees shall be planted from the specified planting list to reinforce the character of each area by prioritizing the right tree for the right space.

RESIDENTIAL STREET FRONTAGE

Medium density dwelling frontage

Low density dwelling frontage

Residential sidewalks should have a softer landscape treatment that provides a buffer from traffic noise and integrates opportunities for stormwater management where possible. Residential fencing should integrate with the overall composition of the street. Encourage planter fences or short fences made of high-quality materials that provide security and brings delight to the passerby.

Design guidelines

1. Trees and shrubs should be selected from the community-specific planting list (refer landscape zone).
2. Provide a minimum 1.8m sidewalk on all residential streets and 2.5 along 17 Ave with mixed-use land uses for comfortable pedestrian passage.
3. Front lawn landscaping should be such that stormwater does not trickle to the sidewalk. Design slopes and permeable fences that allow snowmelts and rainwater to seep into the ground.
4. The buffer between the sidewalk and residential property should be fully planted with species specified in the planting list or short permeable fencing that integrates with the public realm charater.

COMMERCIAL STREET FRONTAGE

Retail spill-outs (San Francisco, CA)

Interactive retail frontage

Commercial street frontages such as the sidewalks along 37 St SW and 17 Ave SW must be wide enough to support space for cafe seating, patio and increased foot traffic. Encourage seamless continuation of the public realm through spill-outs and retail display. Retail buildings should not have blank walls. Encourage use of large windows, planters and lighting to add a lively character.

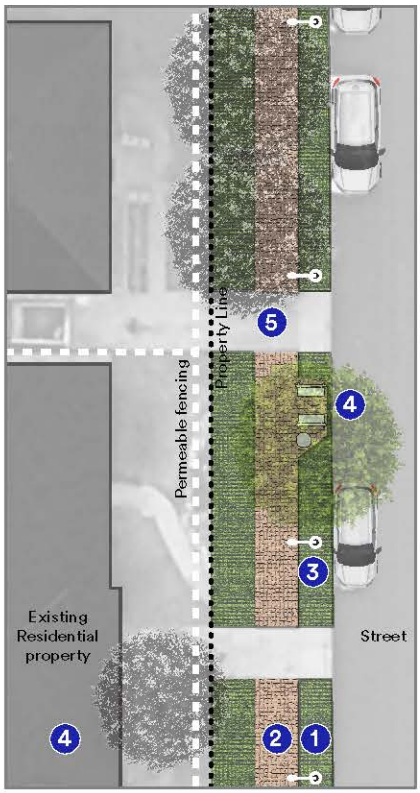
Design guidelines

1. Mixed-use and Commercial sidewalks must be widened (recommended 2.5 – 3.0 m) to allow pedestrians to shop locally, walk to destinations, gather and socialize.
2. Application for on-street parking should be evaluated on an individual development basis.
3. Adjacent buildings should have consistent setbacks from the abutting property line to form a continuous street wall and substantial pedestrian space. Include green pocket spaces with seating if there is space between two buildings.
4. Discourage driving aisles between buildings and pedestrian walkways along main streets. Locate drive aisles and parking areas behind the building screened from view.
5. Buildings over two-storeys to enforce height setbacks to preserve the street character at ground floor (refer section under strategic growth).

VISUALIZATIONS FOR THE PROPOSED IMPROVEMENTS

Example of a pedestrian-oriented building layout

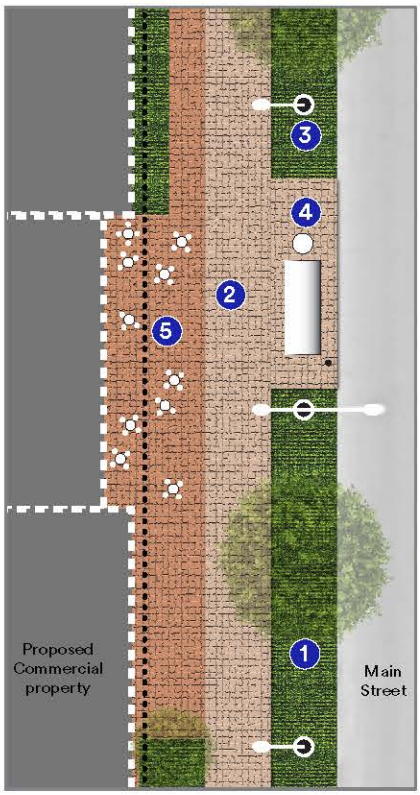
- Vehicular access
- Parking areas
- Landscape zones
- Pedestrian access
- Public realm



TYPICAL RESIDENTIAL STREET FRONTAGE

IMPROVEMENTS

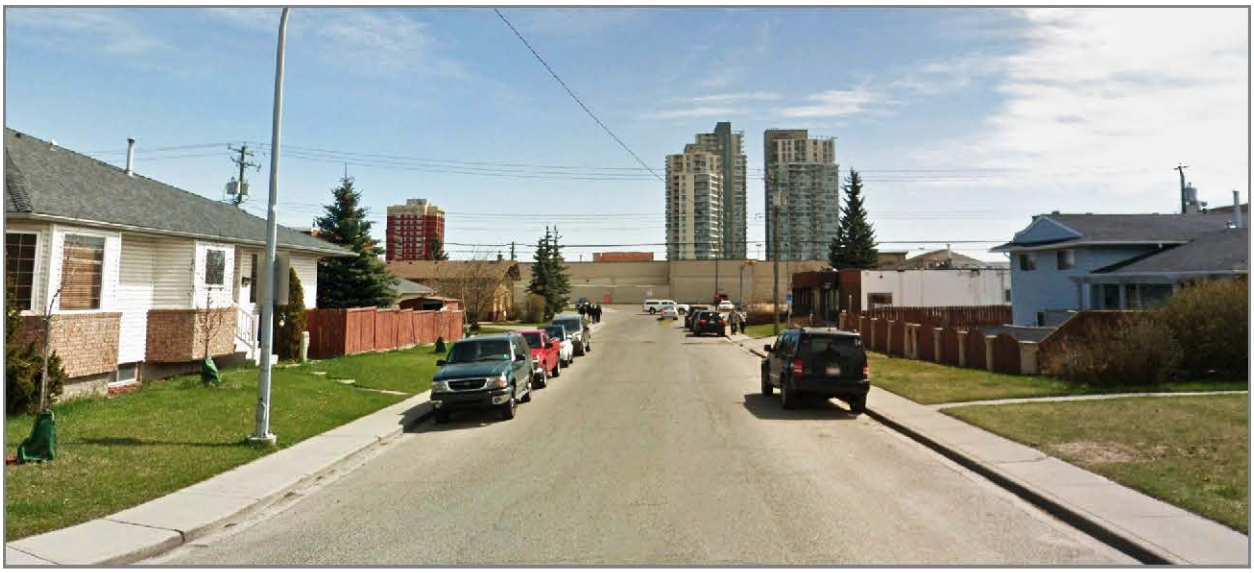
1. 1.5 m landscaped zone includes trees and shrubs from the recommended list
2. Improved sidewalk to 1.8 m width
3. Sidewalk-oriented lighting
4. Street furniture such as benches and waste bins located under shade
5. Sidewalk at a constant level. Sloped driveways can be permitted after the property line



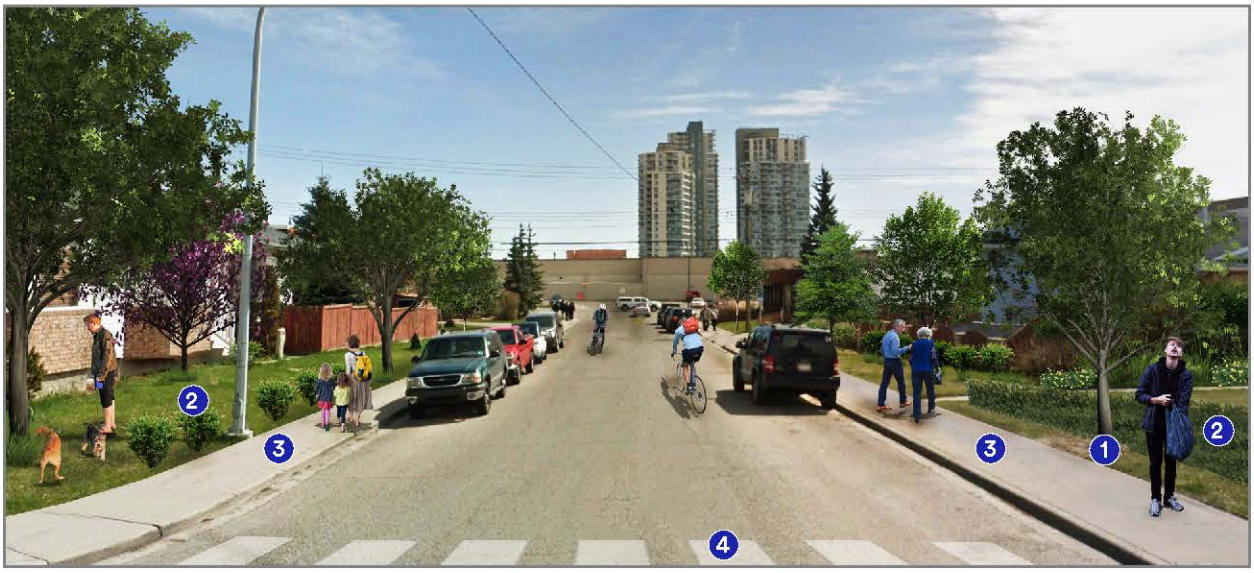
TYPICAL COMMERCIAL STREET FRONTAGE

IMPROVEMENTS

1. 3 m landscaped zone includes trees and shrubs from the recommended list
2. Improved sidewalk to 3 m width
3. Sidewalk-oriented lighting
4. Street furniture such as bus stops and waste bins located for convenient pedestrian access
5. Retail spill-out areas for seamless continuation to the public realm



Existing view (28 Ave SW park - Glendale)



View of the park after implementing the retention pond (28 Ave SW park - Glendale)

IMPROVEMENTS

1. Street tree plantation as per the specified list. Use narrow and less dense trees to frame the streets
2. Buffer between sidewalk and property fence line are fully planted with shrubs from the specified list to improve water permeability
3. Sidewalk widened to 1.8 m
4. Frequent pedestrian crossing zones to improve walkability

Existing view (28 Ave SW park - Glendale)

View of the park after implementing the retention pond (28 Ave SW park - Glendale)

IMPROVEMENTS

1. Street tree plantation as per the specified list. Use narrow and less dense trees that frame the streets and does not obstruct driver's visibility
2. Landscaped zone are fully planted with trees and shrubs from the specified list to form a barrier between the sidewalk and the main street
3. Sidewalk widened to 3.0 m in front of commercial buildings
4. Frequent pedestrian crossing zones to improve walkability. Signalled and raised crosswalk to improve driver visibility and pedestrian safety
5. Street furniture such as bus stop, seating, waste bins and lighting included to improve the pedestrian experience

LANEWAY PEDESTRIAN NETWORK

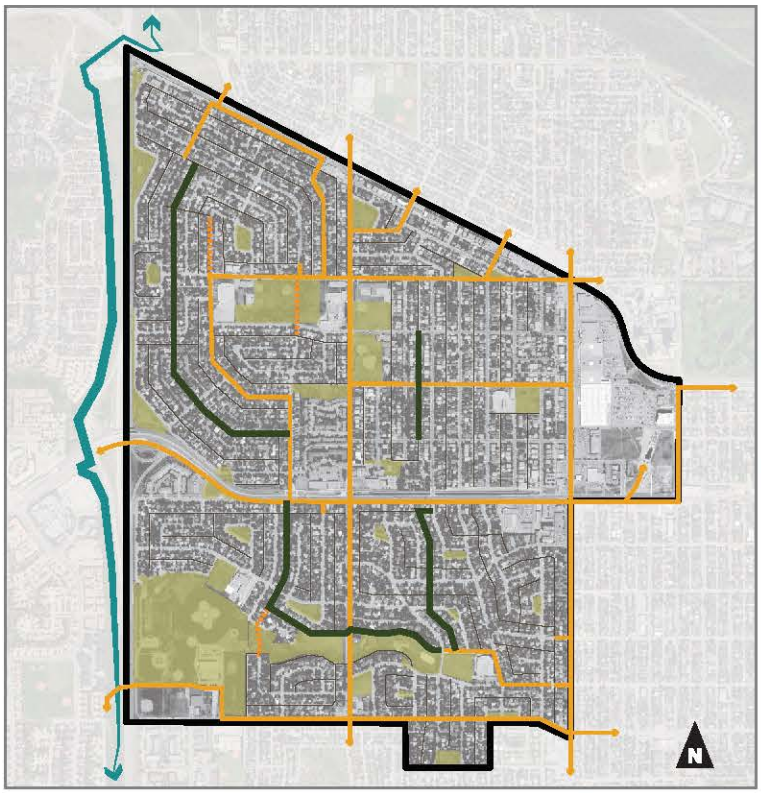
Shared laneway (Portland, OR)

Pedestrian-only pathways

The communities currently suffer from traffic congestion and vehicles travelling at high speeds during peak hours, making an unsafe pedestrian environment. Alleyways are a system of narrow passageways, running in between neighbourhood blocks, currently used as a service road for garbage trucks and as rear access to garages. At present they are neglected, shabby looking lanes that discourage people from using it. This section aims to offer a healthy walkable environment that is offset from the high-congestion traffic environment on the main street and converts currently undesirable and under-utilized spaces to form a well-connected network.

The envisioned laneway pedestrian network is a connected rear laneway system that can be shared by pedestrians, children, cyclists and cars using the concept of woonerf. The lanes can include a green strip, quality paving and lighting to make them a more welcoming, livelier and usable space. The idea is to integrate such a space into the existing urban environment to provide faster and convenient pedestrian connections while utilizing it as an extension of the residential backyards. The repurposed laneways can provide a safer place for kids to play, residents to interact with their neighbours and increase the aesthetic appeal of the area.

This guidebook inspires reclaiming this extensive existing network for the public realm. A pilot project should be implemented in the recommended laneways highlighted in the Phase 1 map to assess the success in terms of community acceptance, pedestrian usage and learn from the negative implications of the project to guide the next phase of laneway improvement projects. Phase 1 map highlights three laneways, one in each community, which are currently used by pedestrians to get to major destinations. Phase 2 map recommends the next set of laneways that connect to high-frequency transit routes and provide north-south and east-west connections within each community.



High frequency transit routes

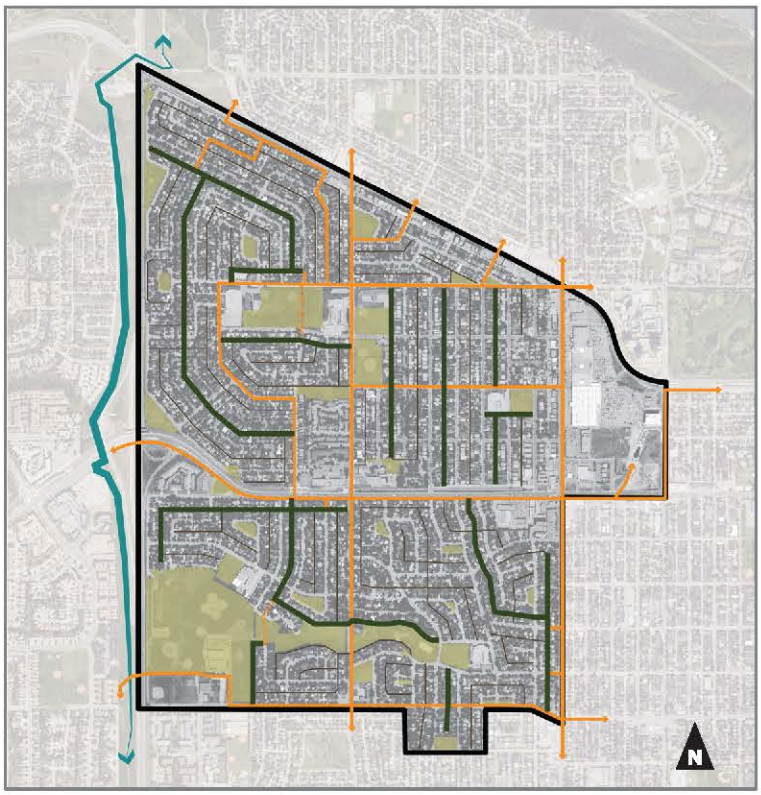
Existing laneways

Proposed laneways for improvements

Community Open spaces

Mattamy greenway

Phase 1 map showing laneways that should be included in the pilot project



High frequency transit routes

Existing laneways

Proposed laneways for improvements

Community Open spaces

Mattamy greenway

Phase 2 map showing laneways that should be included for better internal community connections

Existing view of a laneway in Westgate

View of the laneway after improvements

IMPROVEMENTS

1. Improved pathway with porous paving material. Pathway to be shared by pedestrians, children, cyclists and cars.
2. Buffer between laneway and property fence line are fully planted with shrubs to improve water permeability. Plant species as per owners choice.
3. Seating options and adequate lighting for user comfort and safety
4. Permeable green fencing that adds to the pedestrian experience while securing the property

04
Effective mobility

Effective mobility

This section proposes measures to reduce vehicular dependecy within the communities, while also promoting the use of public transportation and alternative modes of travel. In turn, the policies will aid to reduce vehicular congestion and greenhouse emissions.

01 Analysis

Street hierarchy found in WGR.

The City of Calgary classifies two roads as espressways within WGR: Bow Trail and Sarcee Trail. Major arterials are 17 Avenue SW and 37 Street SW, and collectors include 45 Street SW, 8 Avenue SW, and 26 Avenue SW.

- Expressway
- Major
- Collector
- Street
- Laneway
- Walkway
- Pathway
- Neighbourhood boundary

Walk score and transit score data was gathered from the Walkscore.com website in order to determine levels of permeability into the community. The data shows that the community of Rosscarrock has the highest levels of walkability and transit accessibility out of all three studied communities. Glendale follows second, with Westgate third. Overall, WGR performs better than the City of Calgary average walkability of 48, and transit accessibility of 43.

Rosscarrock

68 WALK SCORE

50 TRANSIT SCORE

Glendale

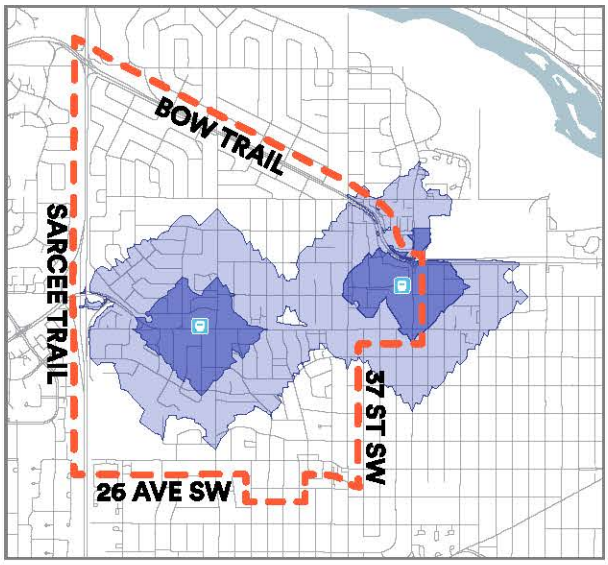
63 WALK SCORE

49 TRANSIT SCORE

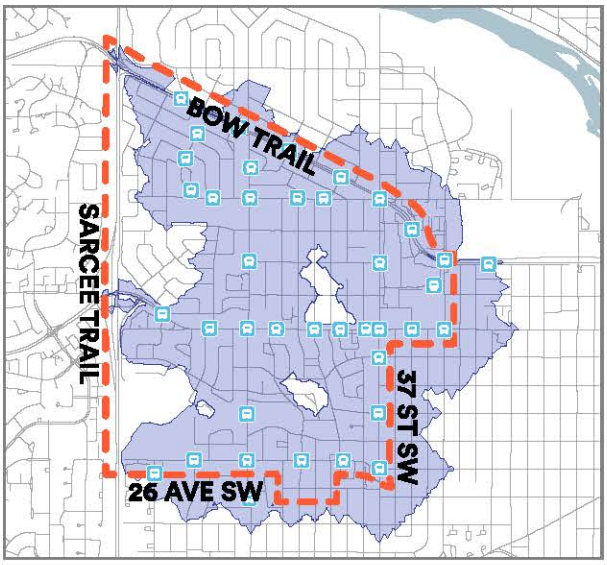
Westgate

52 WALK SCORE

46 TRANSIT SCORE



Pedestrian walksheds towards LRT stations.



Pedestrian walksheds towards bus stops.

5 min walk

10 min walk

5 min walk

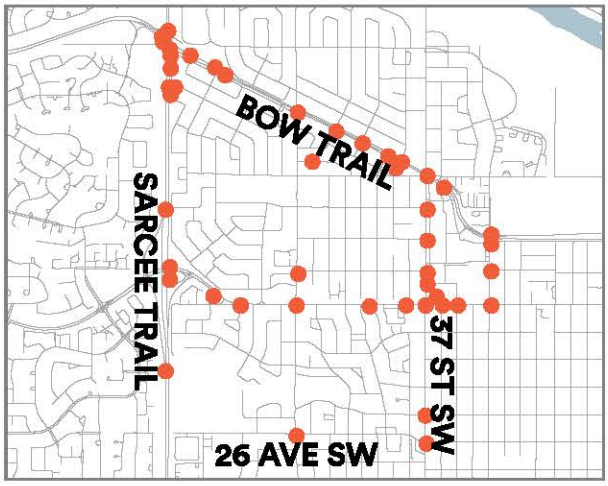
LRT stations were found to be accessible by 49% of the neighbourhood within a 10 minute walkshed. The community of Rosscarrock exhibited the highest levels of access to LRT stations at 61% coverage, Glendale second at 49% coverage, and Westgate third at 37% coverage.

81% of dwellings within the neighbourhood were found to be within a 5 minute walk of a bus stop. The community of Rosscarrock was the most accessible, with 91% dwellings falling within the walkshed. Glendale exhibited similar high numbers at 84% coverage. Westgate falls behind at only 69% coverage.

Regarding intersection density, the community of Glendale surpasses Rosscarrock to hold 1.75 intersections per hectare. Rosscarrock comes in second at 1.68 intersections per hectare, and Westgate comes third at 1.47 intersections per hectare. A higher amount of intersections per hectare equates to areas with more integrated and connected street networks. These networks provide more permeability and access to pedestrians. The City of Calgary's average intersections per hectare is 1.53.

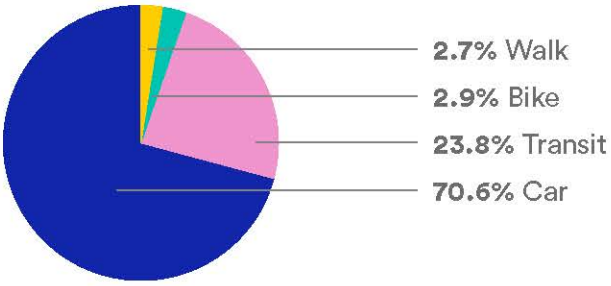
Average number of vehicles per 6 hours.

The City of Calgary reports highest concentrations of vehicular traffic per 6 hour period along Bow Trail, Sarcee Trail, and 17 Avenue SW east of 45 Street SW. Traffic reduces along 17 Avenue SW once west of 45 Street SW. 37 Street SW also sees a considerable amount of vehicles per 6 hours, at around 6,000 along the corridor.

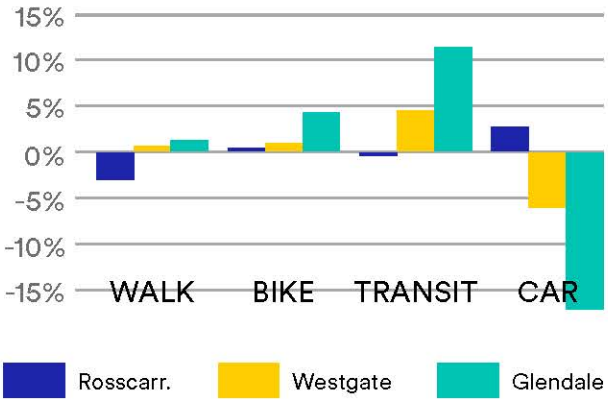


Reported traffic incidents from 2016-2018.

Emergency services report the location of all traffic incidents after their occurance. In WGR, the majority of incidents involve two vehicles, at 63%. Single vehicle incidents are less common, at 17%. 12% of all reports involve multiple vehicles. 4% of reports correspond to signal lights flashing red. 3% of reports correspond to stalled vehicles.



Total mode share distribution in 2016.



Mode share trends from 2011 to 2016.

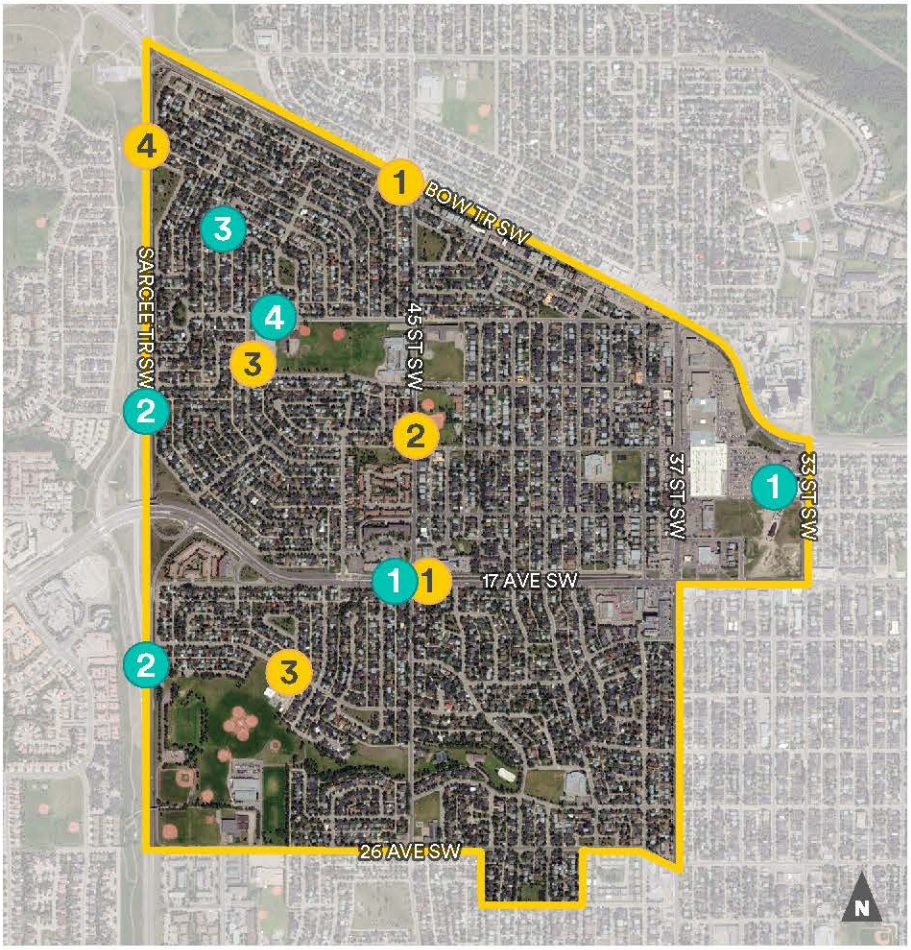
As of 2016, around 71% of neighbourhood residents used a private vehicle to commute to work, while 24% reported using public transit. Only 3% reported commuting by walking, and another 3% reported commuting by bike.

From 2011 to 2016, the community of Glendale has seen a large shift towards to the use of public transit. Vehicular dependency dropped in this community by over 15% within a span of five years. Reported transit use rose by over 10%, as well as a reported 4% increase in cycling.

The community of Westgate reported approximately a 5% increase in transit ridership during this same time period. 6% of Westgate residents reduced their dependency on their private vehicle.

The community of Rosscarrock shows a different picture, with a reduction in walking from 3% of local residents, and an increase in car dependency by 3% of local residents. Transit use remained mostly stagnant.

02 What we heard



OPPORTUNITIES

1. Improvement of bike path network and addition of bike storage near LRT stations
2. Add safe pedestrian crossings across Sarcee Tr SW
3. Improve bus routes in Westgate
4. Addition of bus stop at women's shelter
5. Create safer walking pathways along arterial roads

ISSUES

1. Many intersections need improvement to reduce potential accidents
2. Drivers don't follow speed limit along 45 St SW
3. School zones and pick-up/drop-off areas are exceedingly busy
4. Noise along Sarcee Tr SW
5. Drivers cut into the community when 17 Ave SW is busy
6. Cost of transit to downtown is more than the cost of parking downtown
7. Transit is inefficient for residents to get to places within the communities

03 Guiding principles and policies

Future transportation and mobility improvements in WGR shall incorporate the following objectives:

- Prioritize modes of active transportation while discouraging use of private vehicles.
- Improve the standard of mobility for local residents.
- Provide for increased access to local amenities and services.
- Create a safe, secure and walkable neighbourhood.

Policies to be respected:

1. Existing bus route frequency shall be increased to better meet the needs of the local population.

2. A free local bus loop route shall be implemented for community members to better access local amenities and services.

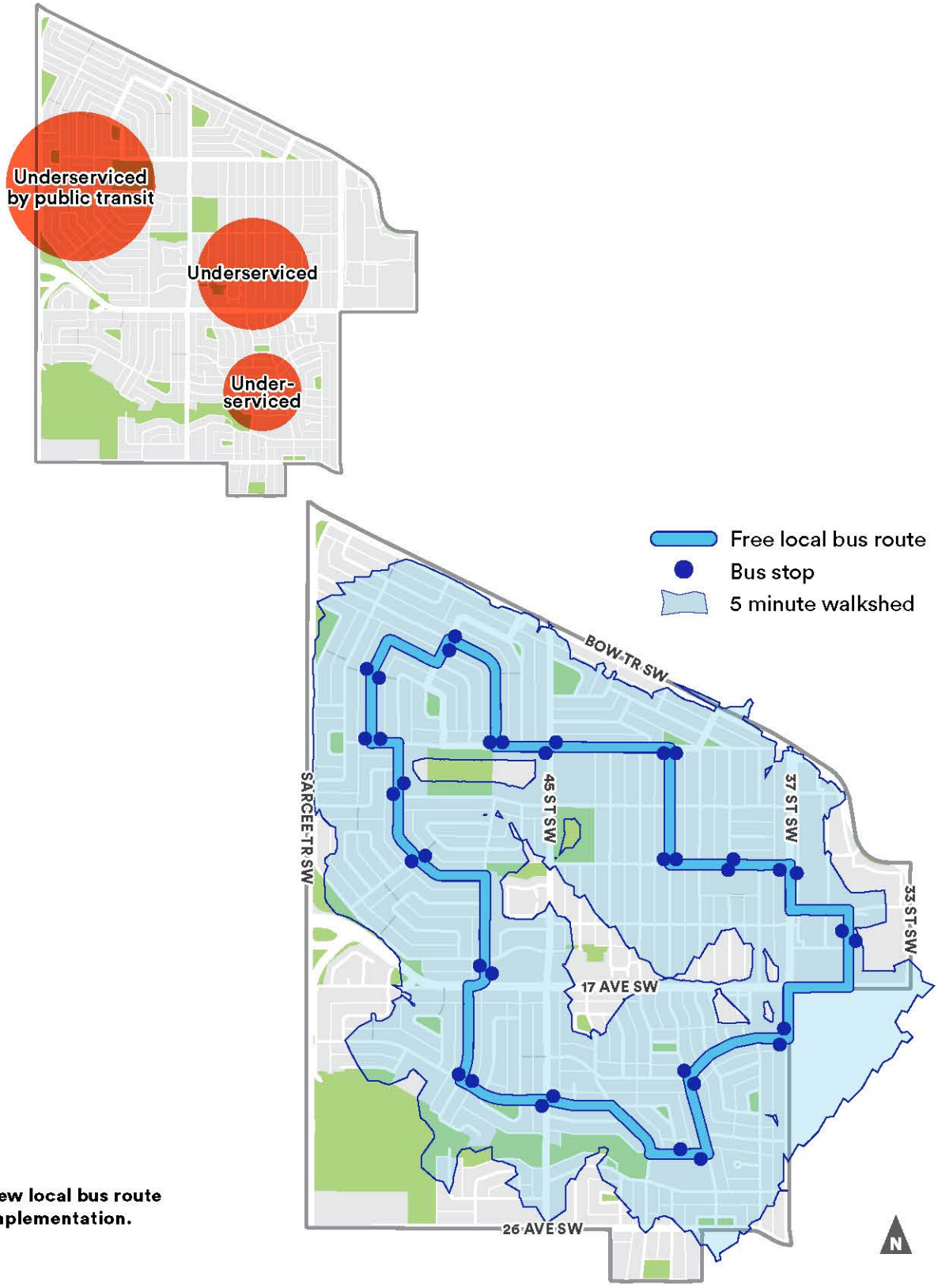
3. The bike pathway network shall be improved as a means of prioritizing alternative modes of travel.

4. Bike storage units shall be introduced at 45 Street SW and Westbrook LRT stations to encourage cycling to the stations.

5. Road intersections shall be improved through various design interventions.

6. Pedestrian crossings shall be renovated or introduced in additional locations along arterial and collector roads.

04 Bus service improvements



New local bus route implementation.

A free local bus loop route is proposed for the neighbourhood in order to resolve reported issues of public transportation accessibility and lack of mobility options within WGR. Community members mentioned multiple times during feedback sessions that despite the proximity of two LRT stations, many residents still use their private vehicles to commute.

The free local bus service responds to these issues and was designed based on similar precedents found in Concord, California and Sydney, Australia. Both of these precedent systems are funded through their respective cities and transportation agencies. Grants have also been provided to leverage remaning funding that the cities cannot provide. A similar funding scheme may be implemented in Calgary, with Calgary Transit leveraging a portion of the funding, and the remaining coming from the Government of Alberta's Community Transit Fund. Additional funding may be provided through the local community associations by residents paying their association a small fee in order to utilize the service.

Additionally, bus service frequency may be increased from 30 minutes per bus to 20 minutes per bus, especially on bus route 93. Route 93 passes north-south through the neighbourhood and acts as an important connector route to the communities of Wildwood to the north, and Glenbrook to the south. This increase in frequency would not only encourage more people to ride transit, but also service more residents through the additional dwelling increases as proposed in the strategic growth section of this document. The new local bus loop will begin its route at a frequency of every 20 minutes, serving around 818 passengers per day, and a total of 4,088 dwelling within its 5 minute bus stop walkshed service areas. These numbers were determined based on a GIS analysis of the existing amount of dwellings within the communities, and the proposed new amount of dwellings to be developed in oncoming years.

Bus route 93	
Before	**After**
Frequency of 30 minutes	Frequency of 20 minutes
140 passengers per day	280 passengers per day
732 dwellings within 5 minute service areas	824 dwellings within 5 minute service areas

Free local bus loop
Frequency of 20 minutes
818 passengers per day
4,088 dwellings within 5 minute service areas

Service details for existing and new bus routes.

05 Improving public perceptions

As it currently stands, many residents expressed that they do not use public transit due to their negative perceptions of the system. This is especially true for the bus network. Cities like Montreal and Toronto have attempted to remedy this issue by running advertisement campaigns to improve public perceptions of local bus and train services.

A similar project may be implemented within the WGR neighbourhood to encoure local transit ridership as a means of improving economic, social, and environmental sustainability. Riders would feel encouraged to ride transit as a means of reaching local businesses and supporting the local economy. These riders would also feel closer ties to their community by meeting friends and acquaintances on public transit. Lastly, public transit riders would feel a higher committment to promoting an environmentally sustainable lifestyle by using their private vehicles less frequently.

Conceptual advertisements to encourage public transit ridership.

06 Bus infrastructure improvements

Bike storage facilities

Safe and secure location to store your bike before riding the train. Provides effective weather protection.

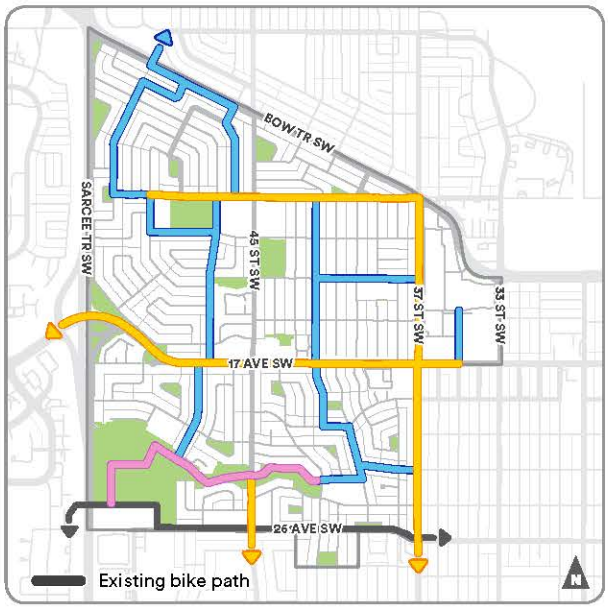
Island bus stops

Improves cyclist safety by providing a barrier between bikeways and traffic. Provides safe pedestrian access when boarding and disembarking buses.

Heated bus shelters

Keeps transit users warm while waiting for buses. Easy to retrofit into existing bus shelters.

07 Cycling improvements



Shared bike lane

Buffered bike lane

Shared-use pathway

Locations of new proposed cycling lanes.

Many residents made note of the lack of accessible cycling pathways within the neighbourhood. The plan responds to this by proposing cycling improvements through the integration of three new typologies of bike routes: 1. shared bike lanes, 2. buffered bike lanes, and 3. shared-use pathways.

Shared bike lanes allow for cyclists to bike on the road along with vehicle traffic, buffered bike lanes will be implemented on collector and arterial roads to provide more safety for pedestrians, and a shared-use pathway will be included in Glendale's large park space.

Shared bike lanes

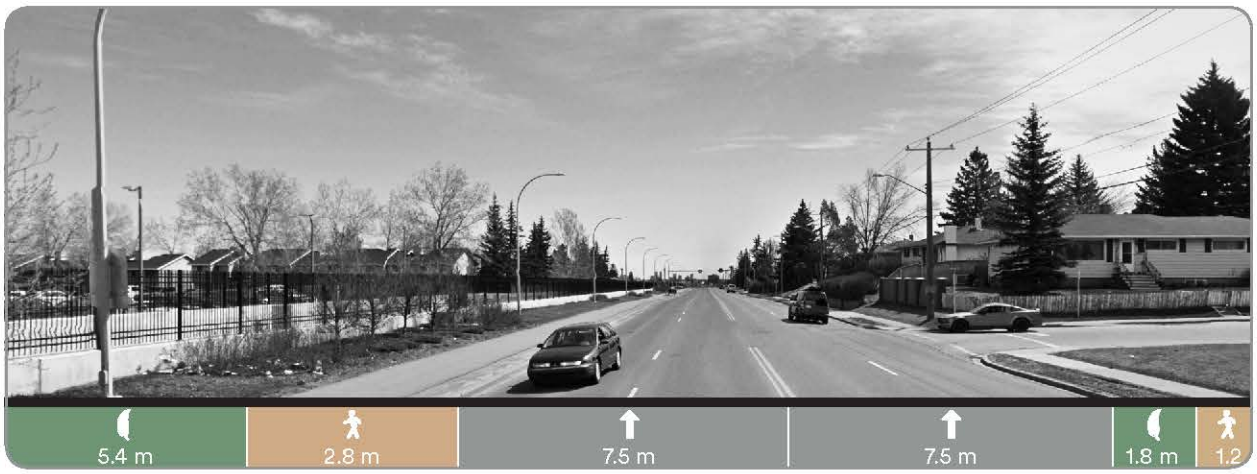
Motorists and cyclists share the road. Shall be enforced on neighbourhood streets with proper signage and road markings.

Buffered bike lanes

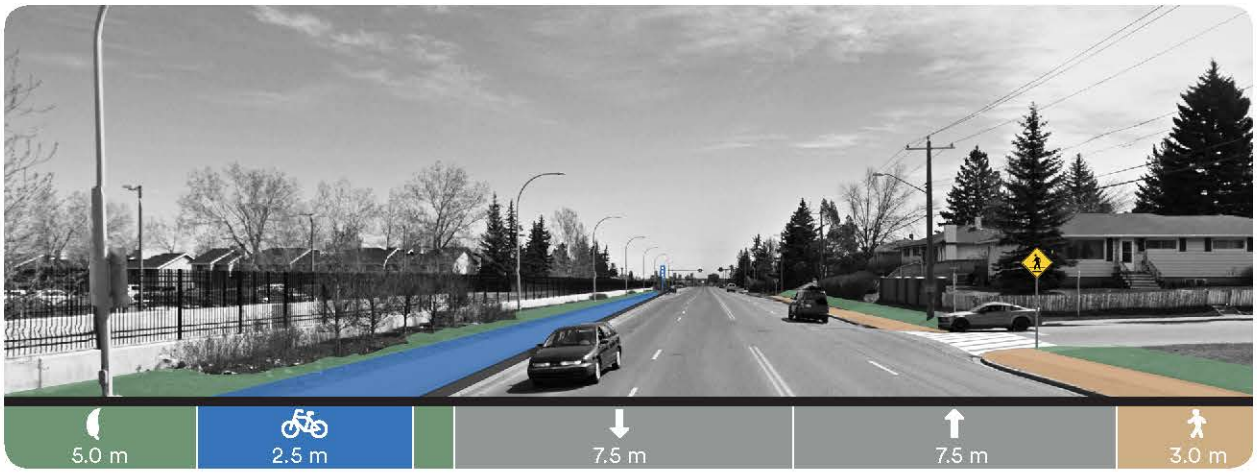
Designated bike lane separated from vehicular traffic by a physical barrier. Contributes to the perception of safety along streets with heavy traffic.

Shared-use pathways

Paved pathways located along open spaces. Shared by both pedestrians and cyclists.



Existing roadway conditions at 17 Avenue SW



Proposed roadway improvements at 17 Avenue SW

08 Intersection improvements

1 Curb extensions
2 Island crosswalk
3 Signalled crosswalk
4 Painted crosswalk
5 Raised crosswalk
6 Lighted crosswalk

Proposed locations and types of intersection improvements

Curb extensions

Reduces speeds of moving vehicles. Reduces crossing distance for pedestrians. Has the same width as on-street parking.

Island crosswalk

Limits pedestrian exposure to vehicular traffic. Minimum protected width shall be 6 feet. Includes curb and signal to protect waiting pedestrians.

Signalled crosswalk

Increases pedestrian visibility to drivers from a greater distance. Includes signal priority for pedestrians.

Painted crosswalk

Alerts drivers to expect crossing pedestrians compared to crossings without signals. Builds a unique streetscape and adds community character.

Raised crosswalk

Bevelled slopes reduce traffic speeds. Increases pedestrian safety. Especially effective near schools.

Lighted crosswalk

Increases visibility of pedestrians. Automated activation and solar-powered. Low maintenance required.

Project Feedback + Sections

Project Feedback

LIGHTS at NB Sarcee and Bow Trail MUST give more time to NB traffic. This will remedy the CRAWLING TRAFFIC in later afternoon on NB Sarcee, which causes people to take NB 45th St from 17 Ave to avoid the slowdown on Sarcee

MUST have the "WALK" light come on for pedestrians on crosswalks EACH CYCLE, NOT JUST IF WALK BUTTON IS PRESSED.
Pedestrians RISK crossing when NO WALK SIGNAL in order to catch TRAIN

rediculous ideas; no need for more commercial; max 3 stories or townhouses on S. side of 17 Ave

5 stories is too much. No more than 4 stories (if no winter shadow) or 3 stories if there is a shadow

FIVE STOREY BUILDINGS are TOO HIGH for assimilating in this area.
3 storey MAX. NO EXCEPTIONS ESPECIALLY WHERE single family homes are

MUST INSTALL a LEFT TURN ARROW ON NB 45 STREET @ 17 AVE to relieve traffic build up at morning and afternoon "school drop off" & pick up times.

Mobile amenities better than fixed development

Pedestrian/bike light at 47 St & 17 Ave. Takes a long time to change after pressing button to cross before red light (crosswalk light goes on)

SELLERS should get a good price for their home because they are contributing to the common good. Property values should NOT go down for neighbouring properties becuse the change is part of a PLAN.

Increased sidewalk width to 2.5 m – who maintains? Very challenging clearing snow from 1.3 m width especially on bus/train route due to increased foot traffic

IF the land in question was NEW development at a NEW LRT station & surrounding area... THIS [density gradient] IDEA is fabulous. The gradual change from high density multiuse 5 storey buildings to single family could be structured from the start. To achieve this in Glendale Westgate Rosscarrock is hard because too many existing homes.

DEVELOPMENT needs to meet needs of SENIORS. 1 storey 2 bedroom & 1 bed/plus den units (also some 1 bedroom).
And FAMILIES, some 3 bedroom units.

Need traffic calming (bumps) on Westwood Dr west of 47 St (raceway for some people)

Buffered bike lanes on 17 (anywhere in Calgary?) present snow clearing challenges, bad idea.

If develop 4+ stories on 17 Ave w/ buffered bike lanes, going to have horrible traffic congestions

waste of money:
- curb extensions
- island crosswalks

Dog Parks:
Install "Green Bins" for dog poop disposal. It will get properly composted by City Recycle. Keeps poop out of Land Fill.

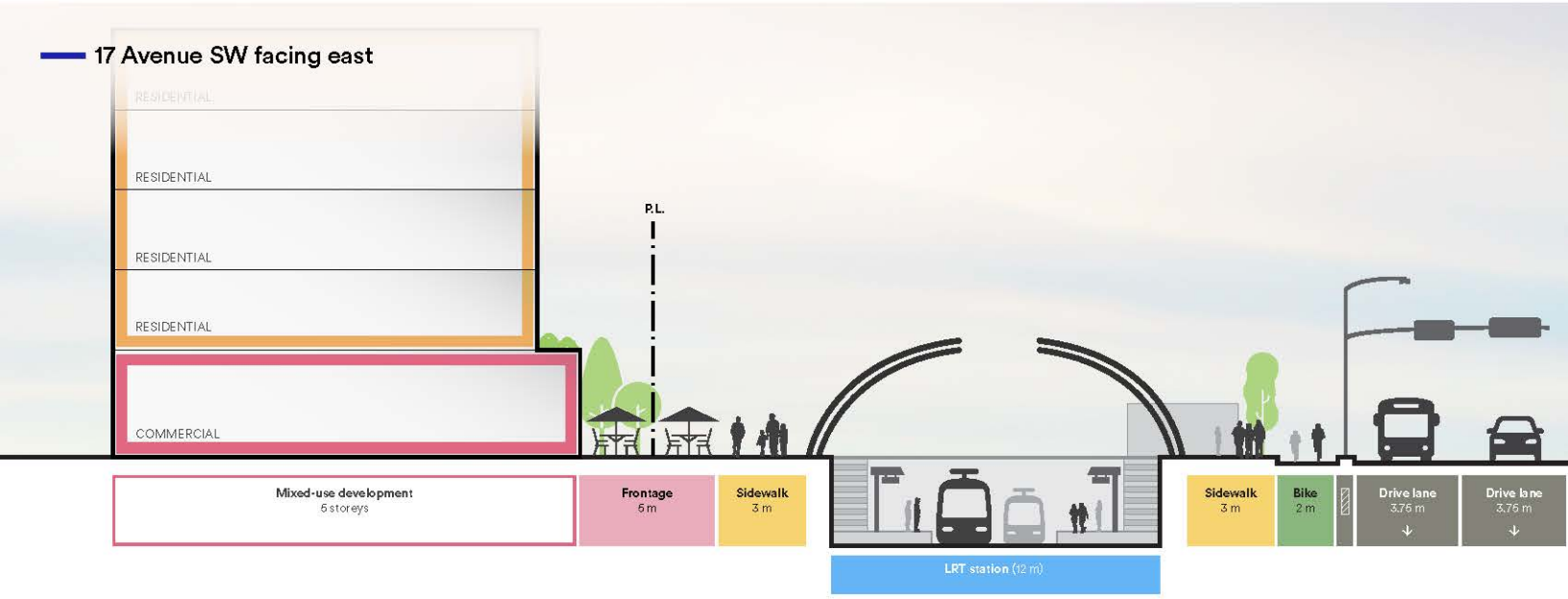
Problems w/ off leash dogs on residential streets and in parks, playgrounds, school yeards & soccer fields that are designated either NO Dogs Allowed OR ON-Leash only.

Need more signage for both on & off leash parks.

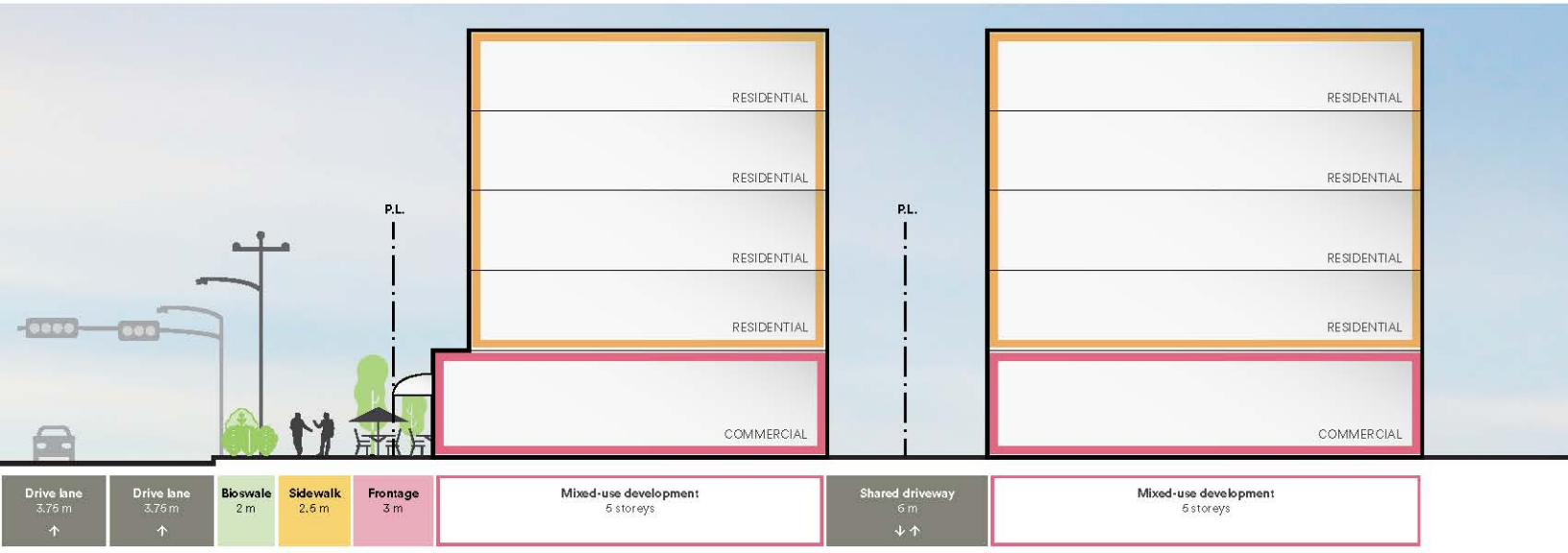
Need turn lights on 45 St on both northbound & southbound. Have no parking on east side of 45 St for about 400 ft & have 2 lanes (one for turning west onto 17 Ave & thru traffic)

Long wait times up to 6 light wait going north on 45 St @ 17 Ave

Sections


17 Avenue SW facing east
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
COMMERCIAL
P.L.
Mixed-use development
5 storeys
Frontage
6 m
Sidewalk
3 m
LRT station (12 m)
Sidewalk
3 m
Bike
2 m
Drive lane
3.75 m
Drive lane
3.75 m


13 Avenue SW facing west
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
INSTITUTIONAL
P.L.
School playground and gathering spaces
Community garden
Landscaping
Ped
1.8 m
Land-scaping
1.8 m
Shared drive/bike
4.3 m

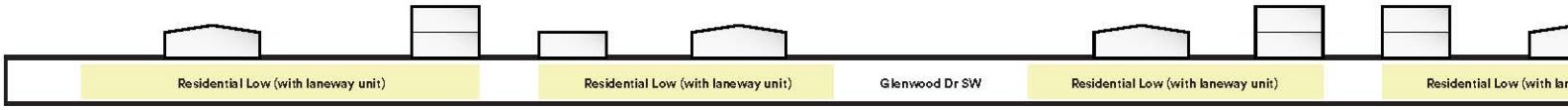

RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
COMMERCIAL
P.L.
P.L.
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
COMMERCIAL
Drive lane
3.75 m
Drive lane
3.75 m
Bioswale
2 m
Sidewalk
2.5 m
Frontage
3 m
Mixed-use development
5 storeys
Shared driveway
6 m
Mixed-use development
5 storeys

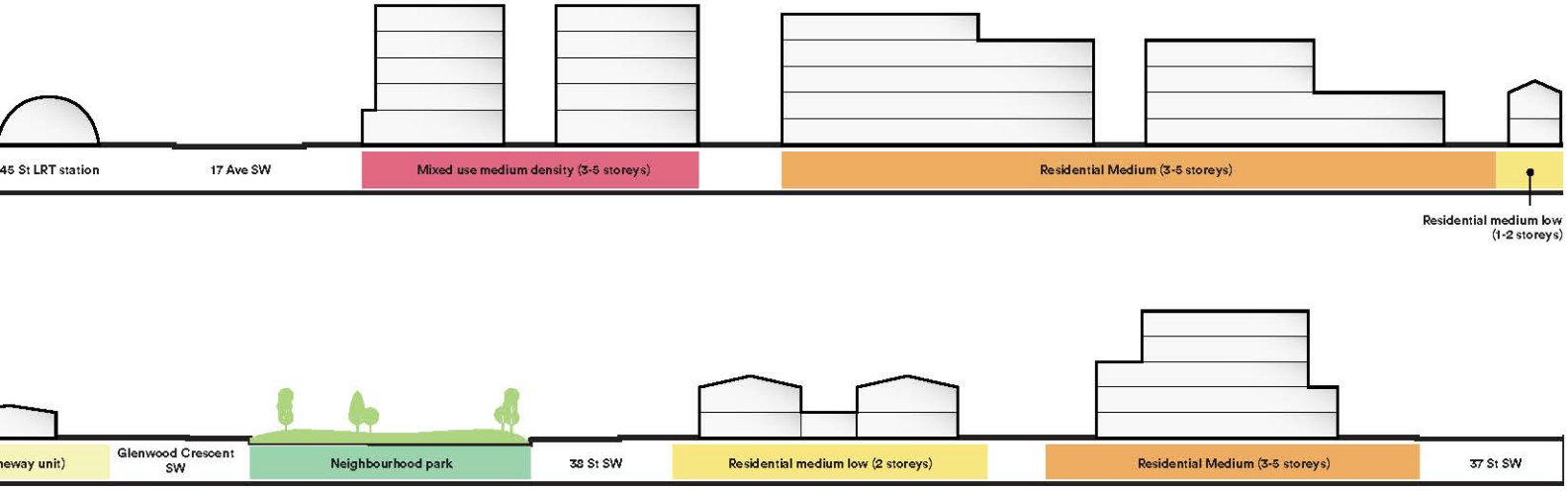

P.L.
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
RESIDENTIAL
P.L.
P.L.
Shared drive/bike
4.3 m
Land-
scaping
1.8 m
Ped
1.8 m
Land-
scaping
1.8 m
Residential development
5 storeys

SECTIONS

Building height transition around 45 Street station

Building height transition from Glendale towards 37 Street SW




45 St LRT station
17 Ave SW
Mixed use medium density (3-5 storeys)
Residential Medium (3-5 storeys)
Residential medium low
(1-2 storeys)
neway unit)
Glenwood Crescent
SW
Neighbourhood park
38 St SW
Residential medium low (2 storeys)
Residential Medium (3-5 storeys)
37 St SW

DAVIS
MASELLI
TRAN

Planning + Design