



BRIDGING THE GAP

BRIDGELAND LAND USE + DEVELOPMENT STUDY

A PROJECT BY MERGING MINDS

EVDP 644 | ADVANCED PROFESSIONAL PLANNING STUDIO

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EXECUTIVE SUMMARY



Calgary is a large and vibrant Canadian city situated at the confluence of the Bow and Elbow Rivers. In order to accommodate its future growth in a sustainable manner, the City has identified inner city neighbourhoods as places with infrastructure and amenities existing that can support population densification. In so doing, growth will align with Municipal Development Plan goals of reducing greenfield development in favour of densifying existing neighbourhoods.

Bridgeland is one of Calgary's oldest communities. It is situated directly adjacent to downtown and is well serviced by major roads and transit, most notably a C-Train station that connects it to the remainder of Calgary. It has an extensive parks and open space system that feeds into the Bow River pathway. It also possesses two main streets and a mix of residential massing, both of which have major potential to grow in the near future. This makes Bridgeland a prime neighbourhood candidate for City of Calgary densification efforts.

Aligning with relevant City of Calgary policies and borrowing best practices from other Canadian municipal statutory documents, our land use and development plan has been written with a strong focus on policy. It also draws on global precedents of urban design in establishing goals to be achieved to enhance the public realm of Bridgeland in the future.

Most importantly, the decisions made in this project have been informed primarily via a combination of site analysis and public engagement feedback. Site analysis has been thorough and has helped shed light on the constraints and opportunities inherent in the neighbourhood. From the site analysis, areas of focus of 1) parks and open space, 2) connectivity, 3) commercial corridors, and 4) residential have been derived. These categories will form the backbone of the land use and development concept going forward in the document. For public engagement, internal and external stakeholders of varied backgrounds have been liaised with throughout the project timeline, as has the public in multiple mapping and open house events. Their feedback has been compiled and there has been an effort to respond to it in every decision made on land use and development in this project.

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SECTION 1.0

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INTRODUCTION

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THE PLAN



The Bridgeland-Riverside Community Association (BRCA) identified the need for a comprehensive plan that can address existing and forthcoming issues in neighbourhood land use and development. The plan being presented has been completed via a combination of background policy and precedent research, thorough site analysis, and comprehensive engagement with relevant stakeholders and the public. The project was carried out in an academic setting, however, has a dual purpose. The recommendations being made in it are concrete, in accordance with municipal and provincial policy, and for the BRCA to use in the future when approaching land use and development issues.

Before commencing the project, a number of statutory policies were referenced to ensure alignment with municipal planning law and best practices. They are:

- **Bridgeland Area Redevelopment Plan (ARP):** Created in 1980, this plan is outdated. This new document takes into account strong elements of the plan while dropping those that are out of date, such as setback requirements that are no longer reflected in the housing stock.
- **City of Calgary Land Use Bylaw 1P2007 (LUB):** The Land Use Bylaw was utilized to gain an understanding of the nature of zoning in Bridgeland and the permitted and discretionary uses currently allowed on parcels. It was also referenced to inform how zoning alterations will be required as the neighbourhood densifies.
- **City of Calgary Municipal Development Plan (MDP):** The final design concept aligns with MDP goals of creating a prosperous economy, shaping a more compact urban form, creating great communities, and connecting and greening the city.
- **City of Calgary Transportation Plan (CTP):** The concept also aligns with the CTP, in that vehicular mobility is of importance, while other modes of travel will be given precedence in the design.
- **City of Calgary Good Streets Guide:** This document was referenced for guidelines to achieve streets that allow for more sustainable methods of travel as well as an excellent public realm.

INTRODUCTION TO BRIDGELAND

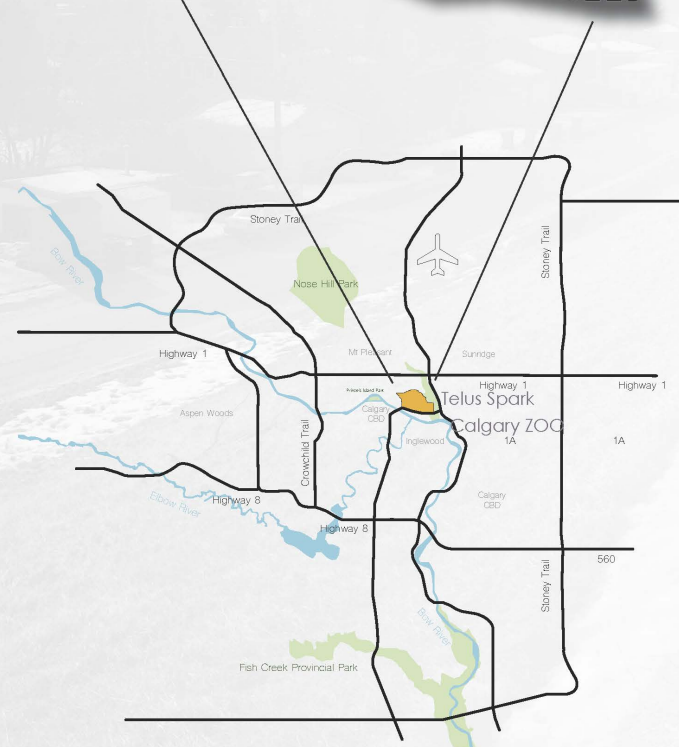
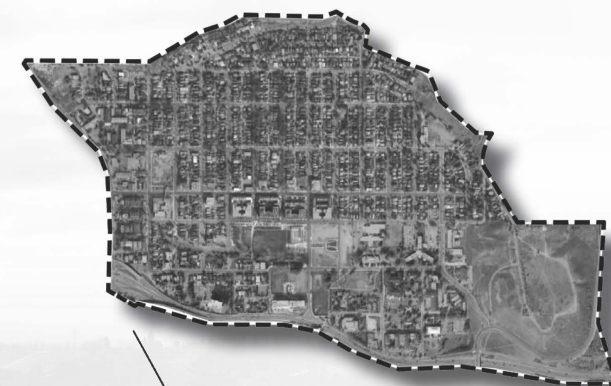


Bridgeland is a community with a population of approximately 6,000 people directly adjacent to downtown Calgary. It is bounded by Renfrew to the north, Crescent Heights to the west, Bottomlands Park and Deerfoot Trail to the east, and the Bow River to the south. Traffic on roads surrounding the neighbourhood is substantial, as Memorial Drive, Edmonton Trail, and Deerfoot Trail are all high volume arteries that lead into and out of the downtown. As a result, neighbourhood roads are often more congested during rush hour due to cut through traffic.

There are two main streets in the neighbourhood: 1st Avenue NE and Edmonton Trail. These main streets possess a wide array of businesses that vary in size and function and are often mixed with residential above the ground floor. Branching off of these main streets are a number of neighbourhood areas possessing their own unique character. To the north of 1st Avenue is a zone composed primarily of single family housing. The housing stock here is currently mixed in age and experiencing infill pressure. Fanning east of Edmonton Trail and running its length are a number of blocks that are higher density residential, such as townhouses and mid rise apartment complexes. In the southwest portion of the neighbourhood is a mix of low density housing that approaches high density when proximate to the LRT station. Finally, south of 1st Avenue and east of 9 Street is East Riverside, a primarily institutional zone dominated by senior housing and long term care facilities.

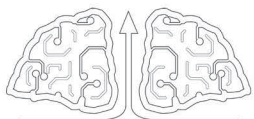
The neighbourhood has ample parkland, natural areas, and beautiful downtown views that its populace enjoys taking advantage of. However, the Bow River Trail system is largely inaccessible due to Memorial Drive acting as a barrier to river access. Furthermore, the bowl shape formed by the bluff surrounding the northern and eastern edges of the neighbourhood acts as a natural connectivity barrier, rendering Bridgeland somewhat isolated from adjacent communities and amenities, such as the Calgary Zoo and Telus Spark.

REGIONAL CONTEXT



YOUR TEAM: MERGING MINDS

Merging Minds was established in 2016 by three urban planners with varying skillsets. Design guru Scott Bell, wordsmith Zach Hoefs, and techspert Taylor Varro decided to merge minds to plan better communities. The hemispheres of the brain mirror our work philosophy, to balance creative solutions with analytical reasoning. We look forward to working with you in achieving your planning and design goals in novel, sustainable, and economically friendly ways.



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WHO WE ARE...

Scott Bell is a native Calgarian who ventured to the University of Victoria to complete a degree in Business and Economics. He worked in the financial sector for a year before he decided to complete his Master's degree in Planning, which allowed him to enter his preferred field of urban design. He excels at using design software to make his planning visions come to life, and has gained experience completing a large walkability study for a professor at the university.



Zach Hoefs comes to Calgary from Whitby, Ontario. His educational background is varied, having completed degrees in History and Education at Queen's University to become a certified high school teacher. Having educated, entertained, and managed teenagers in a classroom setting makes him an experienced public engagement expert, capable of hearing out and collecting the thoughts of diverse groups with the goal of empowering communities and gaining plan consensus. His planning background includes positions in both the private and public sectors.



Taylor Varro, another Alberta native, is from Lethbridge. Before coming to the University of Calgary to complete a Master's of Planning degree, he completed a CAD tech course at Lethbridge Community College, after which he attended the University of Lethbridge to pursue a degree in Urban Studies. At the University of Calgary, he was selected to work for the Urban Lab, a firm run by planning professors. In his term there, he completed a major project for the community of Crescent Heights where he was able to apply his broad technical and creative skillset to provide growth recommendations.



OUR APPROACH AND UNDERSTANDING OF THE ISSUES

Merging Minds has come to the conclusion from public engagement and site analysis carried out between January and April of 2016 that there are a number of overarching issues affecting Bridgeland. These issues centre on themes of parks and open space, connectivity, commercial corridors, and residential. These four areas of focus will be used to structure the remainder of the document in relation to the following site analysis and concept.

Our approach will be to respond to these categorical issues by proposing detailed and concrete solutions that are backed by both precedents and policy. Some of these solutions are immediate fixes that can be implemented by the BRCA. Others will require changes to municipal legislation or funding before their results begin to materialize. For these, we will provide phasing objectives. All concepts will be aim to incorporate urban design guidelines that give the BRCA a clear path to follow in achieving their land use and development goals.

The major issues are as follows:

Parks and Open Space

- Parks lack connectivity through the neighbourhood.
- Bridgeland residents want to revitalize their relationship with the Bow River and feel safer walking along it. The community should be better connected to the pathway system along the river.
- Parks are not being effectively used at all times of the year. Furthermore, they should be designed universally to cater to all demographics present in Bridgeland.

Connectivity

- Bridgeland is isolated from adjacent neighbourhoods due to busy roads and topography, therefore better connections to communities such as Renfrew, Crescent Heights, Inglewood, and the East Village must be explored.
- The interior of the neighbourhood should be better connected for cyclists and pedestrians via a park network. Safer road design for these two groups should also be pursued through initiatives like traffic calming and dedicated cycle lanes.

Commercial Corridors

- There is a lack of public realm elements that draw community members and visitors alike to the community centre.
- 1st Avenue and Edmonton Trail need to be better developed and densified into complete streets.
- Amenities should be improved community wide, especially in East Riverside where the senior population is less mobile and require more activities and services near them.

Residential

- The community is lacking in specific amenities because there is not currently a population threshold being met: densification will have to occur if Bridgeland desires more amenities.
- Densification must happen in a sensitive manner in low density areas of Bridgeland. Some current infill efforts are not fitting with the context of the street.
- The existing character of the neighbourhood, specifically heritage homes and tree canopy are being lost due to infill practices.

OUR VISION FOR BRIDGELAND

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Taking these issues into consideration leads Merging Minds to its vision for Bridgeland. What we propose is a Bridgeland with a well-connected and densely canopied park system that incorporates multimodal pathways, universal design, and public art to draw visitors and Bridgelandians alike into the heart of the neighbourhood, a newly renovated General Avenue Square. Once here, citizens can enjoy the densified core, complete with new amenities that include restaurants and makers spaces. They also have the option to sit, relax and enjoy the sun in an extended public realm. After enjoying their main streets, an economically and demographically diverse Bridgelandian population can retire to their condo, townhouse, infill, or laneway home, proud to live in one of Calgary's best communities.

SECTION 2.0
O.....
PUBLIC ENGAGEMENT
.....¹⁵

INTERNAL AND EXTERNAL STAKEHOLDERS

Over the course of this project, Merging Minds has had the opportunity to meet with a varied group of internal and external stakeholders. We sat down with some in January for extended interviews, while others we have liaised with throughout the project timeline. These include community leaders in business, real estate development, health care services, a steering committee composed of neighbourhood and municipal officials, and community members (to be addressed later). They helped to inform the plan in the following ways:

- **Bridgeland Business Leaders:** A sample group from neighbourhood restaurants and grocery stores were interviewed to elicit feedback on the commercial outlook of the business community. The participants were owners of Blue Star, Canibale, Black Pig Bistro, and Bridgeland Market. We learned about their clientele, growth outlook, and perceived holes in amenity provision on 1st Avenue and Edmonton Trail. Their tacit knowledge of Bridgeland as both business owners and residents helped us to make decisions on commercial corridor growth.
- **Real Estate Developers:** Developers from Brookfield, Gable Craft, Bucci, Minto, and Inertia gave Merging Minds a better understanding of the market demographic being targeted for housing in Bridgeland. They also explained the types of infill and new construction projects occurring in the neighbourhood, providing us with a better picture of the level of densification taking place. This information was used to inform our residential and land use recommendations for the future.
- **Health Care Professionals:** Representatives from Carewest, Alberta Health Services, CNIB, Bishop O'Byrne, and Silvera shared their expertise on their facilities in East Riverside. We took away from them that the seniors residing in this part of Bridgeland felt isolated from the remainder of the community, both economically and socially. Their remarks helped us to make community land use and amenity decisions in this part of the neighbourhood, which will make this area more enjoyable for both the seniors residing here and draw in the rest of the community.
- **EVDP 644 Steering Committee:** This steering committee is composed of high ranking BRCA members who have the pulse on what their community needs, City of Calgary planners who possess expertise in policy alignment and municipal growth goals, private sector officials with architectural expertise who advise on urban design guidelines, and University of Calgary professors. They have helped to focus our work in areas most pertinent to Bridgeland and provided us with feedback to improve our planning and design ideas.

bucci



BRIDGELAND

1910
MARKET

Silvera

FOR SENIORS

**BLUE STAR
ZINER**

**GABLEcraft
HOMES™**



 **Carewest**
INNOVATIVE HEALTH CARE

Brookfield
Residential

cnibi 
seeing beyond vision loss

COMMUNITY ENGAGEMENT EVENTS



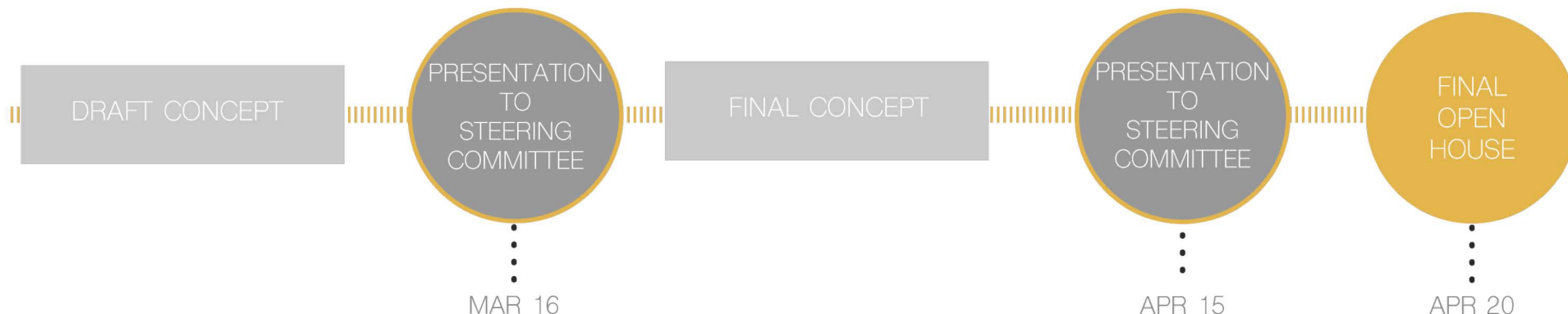
Community members have also had their voices heard throughout the project. Engagement events that incorporated Bridgelandians have been hosted at a variety of times on weekdays and weekends with the goal of providing all residents with at least one opportunity to participate.

Merging Minds first learned about community sentiment in primer documents distributed to us by the BRCA when the project commenced. This primer aided us in understanding the overarching issues facing the neighbourhood and allowed us to start focusing our efforts on the most pressing issues.

Bridgelandians were able to further express their ideas on the future of their community at a well-attended interactive mapping engagement session at the BRCA on February 27, 2016. Conversation here was divided for participants into the topics of parks and open space, connectivity, community amenities, infill, and densification. This event was particularly useful to Merging Minds as we were able to hone the categories that compose the backbone of our concept and further delve into the concept ideas being pursued in these areas. Following this event was an online survey distributed by the BRCA to elicit any more responses that may not have been brought up during the talks.

Finally, we will have the opportunity to gain more feedback from the community in an open house at the BRCA on April 20, 2016. They will be able to comment on our concept and have any questions clarified by Merging Minds at that time.

The concept tenets in the coming pages have been informed by our continued consultations with internal and external stakeholders. Their feedback relevant to each concept point will be communicated. We believe that it is stakeholder feedback, in harmony with our thorough site analysis and application of best planning and urban design practices that will result in the optimal plan for Bridgeland going forward.



friendly for all ages
too much cookie cutter infill
ugly areas
downtown
parking
rush hour cut through
Bridgeland Market
connectivity
redo BRCA
uniform public realm
fix north side of 1st Avenue
cycling
schools
Tom Campbell Park
gateway arches
housing
bike trails
infill
East Riverside
Starbucks
Community Centre
vehicular access
safer paths
Cannibale
heritage
C Train station
Bow River
patios
Calgary Zoo
Edmonton Trail
Luke's Drug Store
Bridgeland
amenities
Memorial Drive too busy
Silvera
fitness facility
walking
better canopy
mixed use developments
no big box stores
pub
warming spaces
yoga studio
grocery store
1st Avenue
public art
public washrooms
pathways
local businesses
doctor's office
traffic calming
better programming
affordability
unsafe trails
traffic on 1st Avenue
empty lots are scary
pedestrian safety
skating rink
open space
seniors
gardens
accessibility
more trees
makers spaces
The Bridges
family friendly
more benches
more bluff staircases
bottleneck path at LRT bridge
art galleries
better community entrances
protect views
more dog friendly areas
better lighting
neighbourhood feel
keep the character
parks
laneway housing
art galleries
cycling
senior isolation
clothing stores
basement suites
schools
microbrewery
pool

SECTION 3.0
O.....
SUMMARY
OF ANALYSIS
.....²¹

INTRODUCTION



As noted in the previous chapter, it is a combination of engagement feedback, best practice application, and thorough site analysis that will guide this land use and development plan for Bridgeland. The site analysis completed and honed in January and February of 2016 has provided us with a greater understanding of Bridgeland from many different perspectives, be they historic, environmental, or commercial. The maps, images and infographics over the following pages are a summing of the neighbourhood site analysis, divided into our four concept areas of focus. These categories are parks and open space, connectivity, commercial corridors, and residential. The results of this analysis have informed our understanding of the constraints that are facing the neighbourhood and how we intend to respond to them with our concept, turning them into opportunities.





NEIGHBOURHOOD PROFILE: HISTORIC & DEMOGRAPHIC

HISTORY



This figure ground evolution shows the buildings that were constructed in the neighbourhood over a century at 20 year intervals. It becomes quickly apparent when looking at the residential zone in the north that most of the parcels have been built upon and now are in the process of being infilled. Additionally, it is interesting to note the growth and change of the figure grounds of the commercial corridors, specifically along Edmonton Trail and the Bridges and former hospital site.

Bridgeland-Riverside was initially called Germantown due to its predominantly German immigrant population at the end of the 19th century. Throughout its history, German and Russians initially composed the largest immigrant groups, however, the 20th century saw an influx of Italian and Ukrainian expats settle in the neighbourhood. 1st Ave NE was in fact so inundated with successful Italian businesses at one point that the neighbourhood became known as Little Italy.

The community gained its current moniker when the Dominion Bridge Company began operating nearby in the early 20th century. The neighbourhood was annexed by the City of Calgary in 1910. Industry at this point centred on the Bow River and included an iron works and lumberyard. Post annexation, a red light district in the neighbourhood was leveled and replaced by Calgary General Hospital. This facility would grow into a major emergency and trauma centre over successive decades until its closure in 1997 and demolition in 1998. This site is now home to the Bridges, one of the largest mixed-use construction projects in western Canadian history.

Today, ethnic, commercial, and institutional legacies are reflected in the character of the neighbourhood, its restaurants, and physical makeup. Some contribute to, while others detract from the public realm and will have to be addressed and worked into the future plan for the neighbourhood.



Glenbow Archives NA-5093-47
Calgary General Hospital, 1956. Glenbow Archives

DEMOGRAPHICS

BRIDGELAND neighbourhood profile

DEMOGRAPHICS at a glance

5,962
population

16% | 12%
Bridgeland | Calgary
population growth, 2009-2014

42
average age

53 | 47
female | male
gender division

21% | 10%
Bridgeland | Calgary
proportion of population age 65+

DWELLINGS AND FAMILIES

POPULATION BREAKDOWN BY HOUSING TYPOLOGY



OWNERSHIP RATE

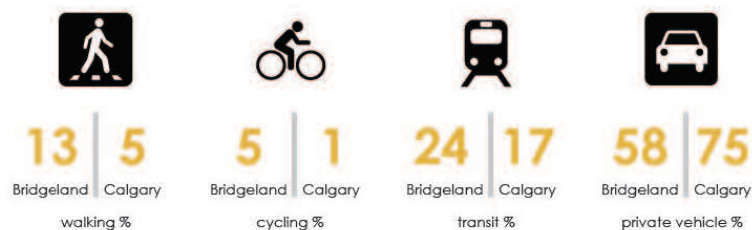


FAMILY UNITS



CIRCULATION

TRANSPORTATION MODE TO WORK



WALKSCORE.COM SCORES



CULTURAL DIVERSITY

IMMIGRANTS, RACE, LANGUAGE, RELIGION



ECONOMICS

ANNUAL MEDIAN INCOMES

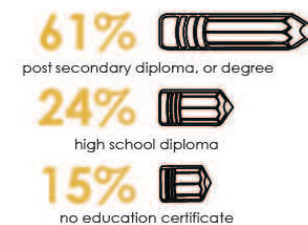


LABOUR FORCE AND UNEMPLOYMENT



EDUCATION

POPULATION AGE 15+ LEVEL REACHED



Bridgeland Community Snapshot



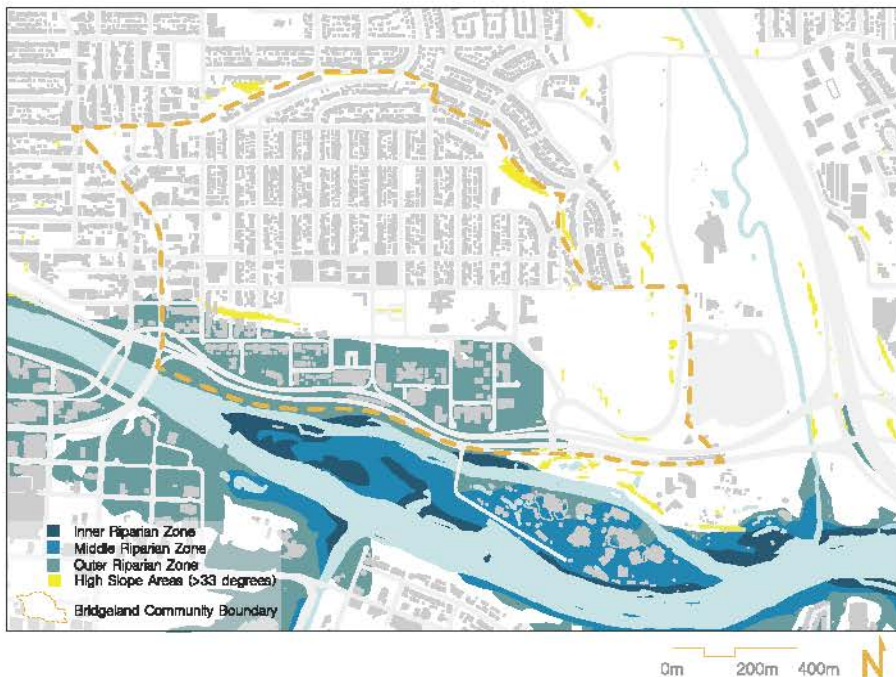


PARKS & OPEN SPACE

ENVIRONMENTAL ANALYSIS

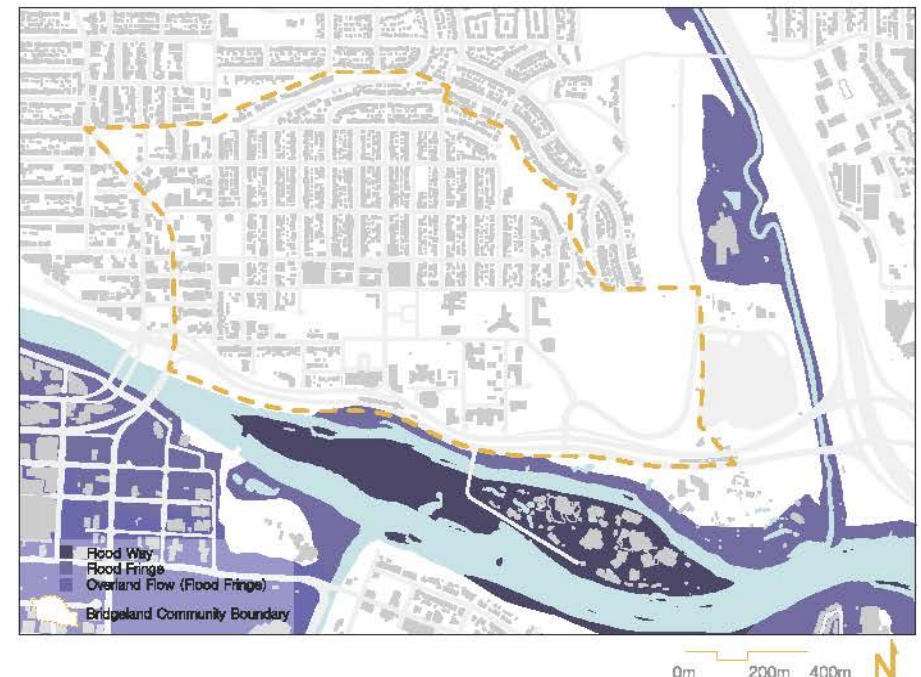
Bridgeland possesses an ample mix of parks and escarpment. The neighbourhood is located adjacent to the Bow River pathway system. Despite this great offering, community parks lack connectivity, an issue that will need to be addressed moving forward. The urban forest in the neighbourhood is dense in parks and along some residential streets, however, it is of poor quality along commercial corridors where they could enhance the public realm. The following maps go into more detail on our parks and open space analysis.

ENVIRONMENTALLY SENSITIVE AREAS



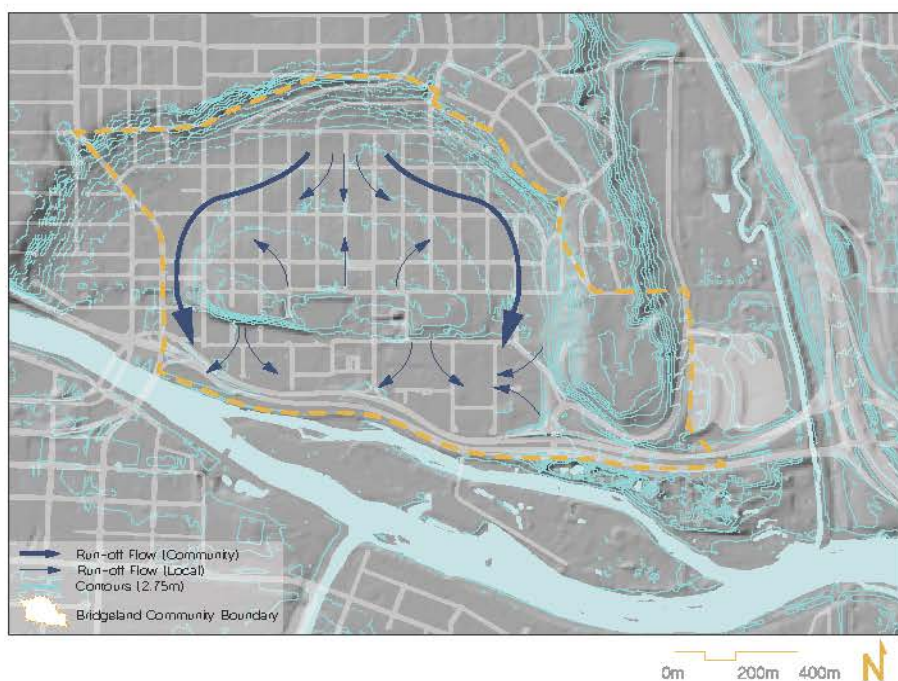
Riparian zones are lands that interface with the Bow River. The City of Calgary wants to protect riparian zones in the future. High slope lands are undevelopable and can be found in areas along the escarpment.

FLOOD STUDY



The floodway and flood fringe on the map are for 100 year event levels. Although most of Bridgeland does not lie in these zones, it did experience flooding in low lying areas in 2013 when pipes burst due to backpressure from other neighbourhoods. This should be kept in mind when developing in the future.

DRAINAGE



This map shows the direction water flows in relation to elevation. Water most often drains southward to the Bow River, however, there is a slight depression in elevation in the single family zone north of 1 Avenue where water can also drain.

OPEN SPACE INVENTORY



Bridgeland has along its neighbourhood borders an abundance of natural areas. However, the interior of the neighbourhood lacks green space in the north, and connectivity throughout.

ENVIRONMENTAL ANALYSIS

URBAN FOREST



Natural areas have extensive tree coverage, however, coverage is sparse in the commercial corridors of 1 Avenue and Edmonton Trail and will need to be addressed as they continue to develop in the future.



CONSTRAINTS AS OPPORTUNITIES: SUMMARY OF ANALYSIS

Trying to get to the “so what?” of what the parks and open space analysis means going forward, we have decided to focus on three main constraints and what they mean for Bridgeland. These constraints will be responded to in our concept by transforming them into opportunities for the neighbourhood to take advantage of in the near future. They are as follows:

- 1. The parks system lacks connections:** Parks and open space in Bridgeland currently lacks connectivity, despite there being ample parkland in the neighbourhood. Additionally, the neighbourhood suffers from poor connectivity to the Bow River Pathway system. Our goal in the concept moving forward will be to establish multimodal links between parks, bluffs, and the Bow that are nicely canopied into a community greenway. In so doing, residents will be able to safely connect through the neighbourhood and beyond.
- 2. Poor use of open space:** Parks and open spaces currently lack programming for all neighbourhood demographics. Bridgeland has a high percentage of seniors composing its population in comparison to the remainder of Calgary. As a result, we will respond to this constraint by designing parks universally. The goal here is to add programming to open spaces of both a banal, daily nature in addition to active elements and events to provide a range of recreational and fun activities for those of all ages.
- 3. Parks are lacking in all-season design:** Parks become dead spaces in the winter months in Bridgeland, most notably the centre of Murdoch Park, which is fenced off. We plan to respond to this constraint by embracing the fact that Calgary is a winter city and redesigning the parks in Bridgeland accordingly. Working with natural topography and selecting central community sites for winter friendly park design will be a part of this plan.





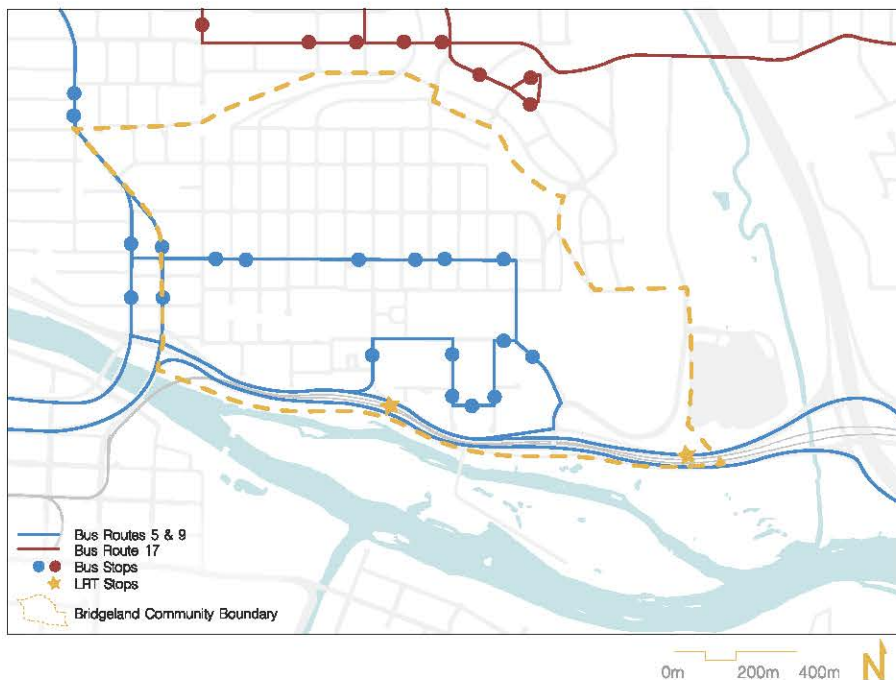


CONNECTIVITY

CONNECTIVITY ANALYSIS

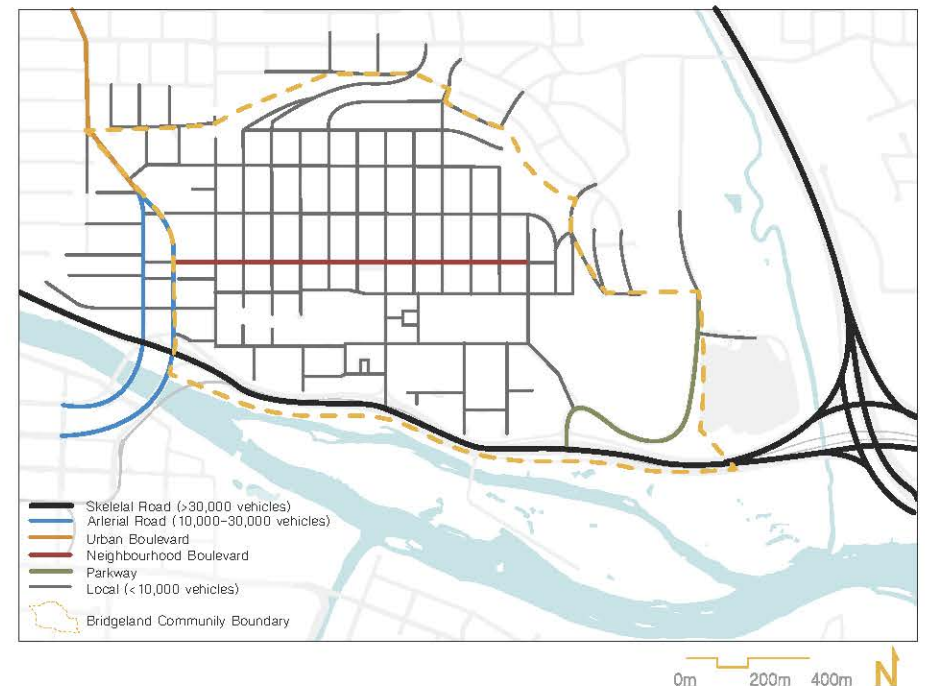
Bridgeland currently possesses strong vehicular connectivity due to its proximity to major roads and highways. It is also well provisioned by public transit with LRT and bus routes. However, the community is less connected by public transport north of 1st Avenue. Additionally, cycling and pedestrian routes are missing that would serve to better connect the neighbourhood multimodally.

PUBLIC TRANSPORTATION



Bridgeland is serviced by two LRT stations in the south in addition to two bus routes that run along major corridors. These routes are most accessible to senior populations who need to use them most, however, far less so in the northern half of the neighbourhood.

ROAD HIERARCHY



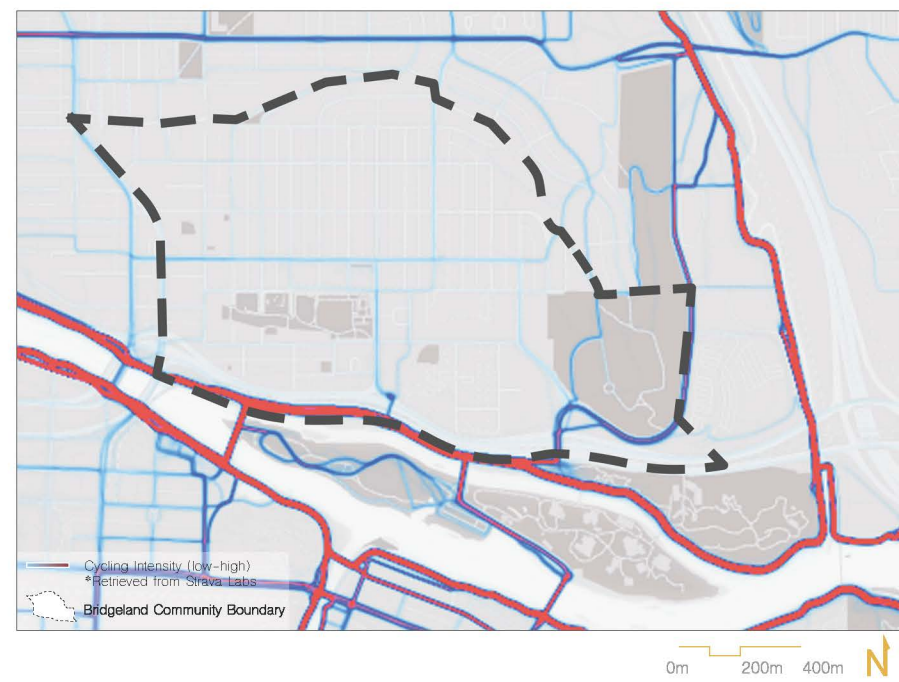
Roads surrounding Bridgeland experience high traffic and pose an opportunity should the streets, specifically Edmonton Trail be developed into inviting places to live, shop, and dine.

TRAFFIC COUNTS



It is important to note that the traffic counts for each intersection were taken on different days in different years, however, the data shows us that the intersection of Edmonton Tr and Memorial Dr sees the most volume.

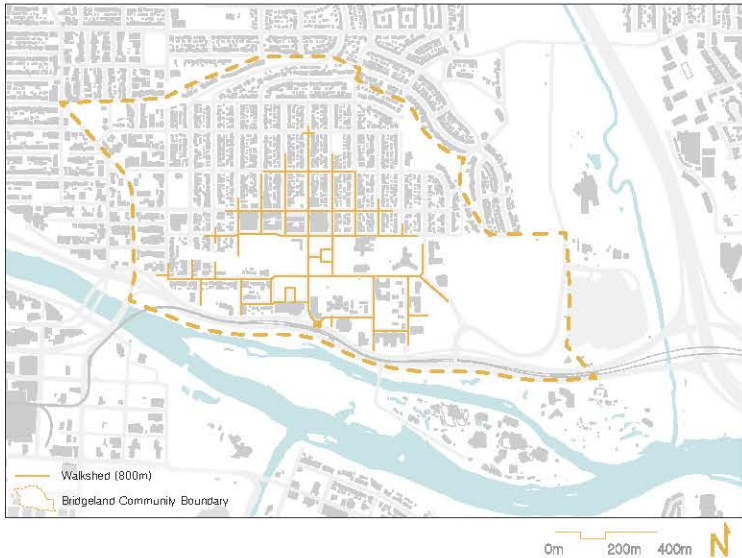
CYCLING HEAT MAP



The strava heat map shows the level to which cyclists use certain routes in the city. Bridgeland is currently underutilized when compared to the Bow River pathway system and would benefit from the building of dedicated bike lanes.

CONNECTIVITY ANALYSIS

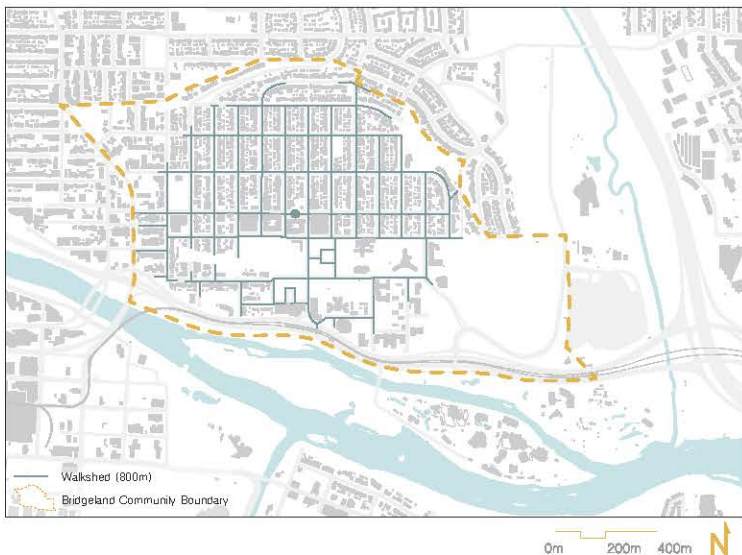
LRT STATION WALKSHED



LIMITED MOBILITY WALKSHED

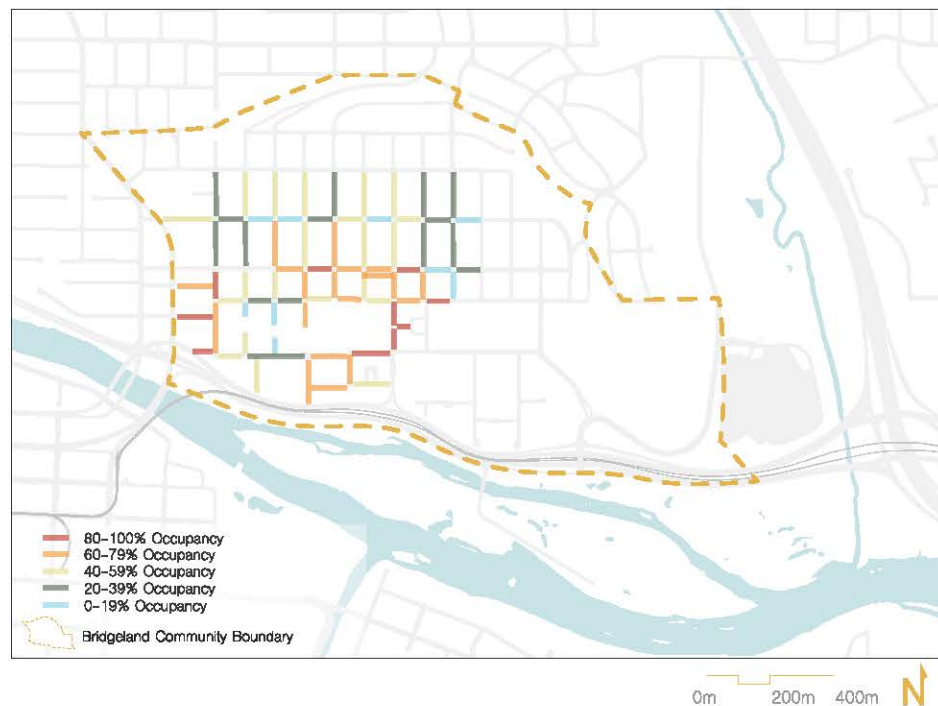


COMMERCIAL WALKSHED



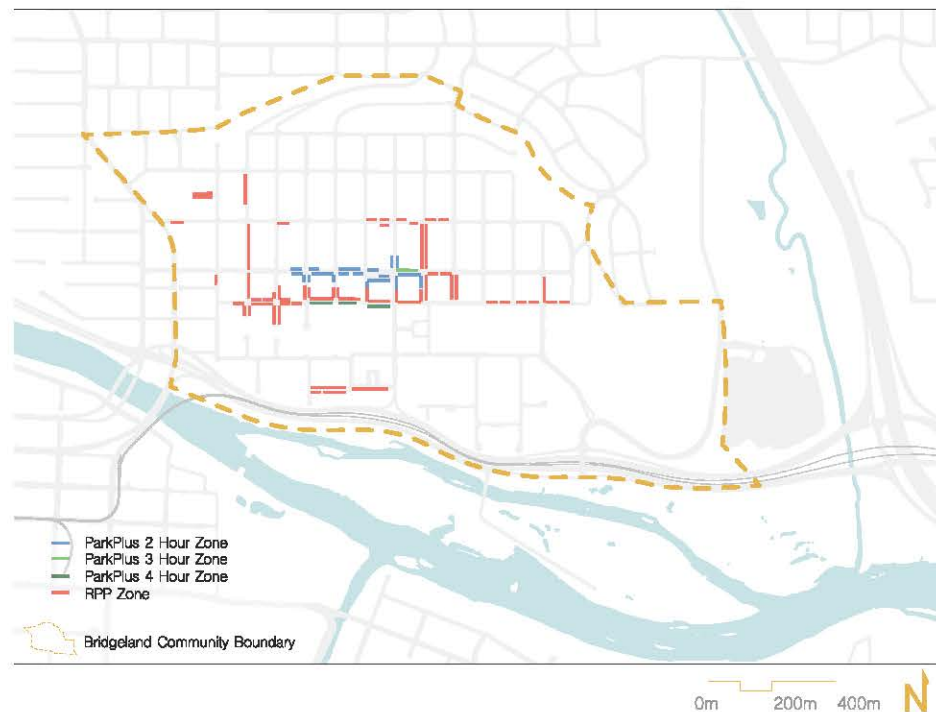
The first two walksheds show the distance a Bridgeland resident can cover in 10 minutes from the LRT station or the Starbucks on 1 Avenue. Due to the neighbourhood grid, Bridgeland is very walkable. The third walkshed shows the distance a senior citizen can cover in the same time in the neighbourhood, proving how isolated this neighbourhood quadrant is.

PARKING OCCUPANCY STUDY



This map shows block face parking occupancy between 11 am and 1 pm on a weekday, predetermined to be the busiest parking period in the neighbourhood using data from the Parking Authority. Block faces along the 1 Avenue corridor, 9 Street, and Edmonton Trail are most heavily parked.

PARKING PERMITS



This map shows the different ParkPlus zones and residential permit zones in Bridgeland.

CONSTRAINTS AS OPPORTUNITIES: SUMMARY OF ANALYSIS

Trying to get to the “so what?” of what the connectivity analysis means going forward, we have decided to focus on three main constraints and what they mean in the context of Bridgeland. These constraints will be responded to in our concept by transforming them into opportunities for the neighbourhood to take advantage of in future land use and development projects. They are as follows:

1. **Bridgeland is isolated from adjacent communities:** Natural barriers like escarpments and the Bow River, in addition to man made ones such as Deerfoot Trail, Edmonton Trail, and Memorial Drive all act as connectivity inhibitors to adjacent neighbourhoods and amenities, specifically for cyclists and pedestrians. Our plan is going to take into account these inhibitors and propose solutions that make topography more manageable and passage across busy roads safer.
2. **Bridgeland has connectivity issues in its interior:** As previously stated in the parks and open space analysis, green connectivity is lacking through Bridgeland. A parkway system would bring a better flow to the neighbourhood for residents who want to enjoy its streets.
3. **Multimodal options for Bridgelandians could use serious improvement:** Sidewalks are lacking on some streets and there are no dedicated bike lanes in Bridgeland. We will propose complete street interventions that put these modalities first and make them attractive options for residents who want to move around without the use of a vehicle.







COMMERCIAL CORRIDOR DEVELOPMENT

LAND USE & ZONING ANALYSIS

Edmonton Trail and 1st Avenue NE are the two main commercial corridors in Bridgeland. Their current zoning and massing allow for future growth in the form of mixed-use developments, which would be good for commercial corridors as they are currently underdeveloped. The amenity offerings along these main streets allow for a mix of tenant sizes and rents, which should be continued in the future to house more local businesses. The streets themselves are lacking in public realm amenities and sense of space, especially where Edmonton Trail and 1st Avenue intersect.

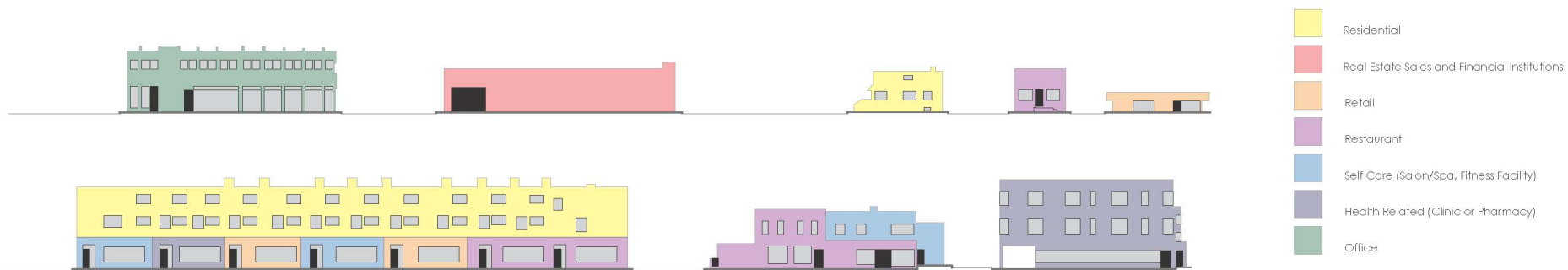
1ST AVE VERTICAL LAND USE



These elevations denote the north and south sides of 1 Avenue, the main commercial corridor in Bridgeland. The south side possesses an excellent mix of residential and commercial uses, while the north is comparatively underdeveloped. This north side has major growth potential in the future, especially due to its sun exposure, making it perfect for patios.

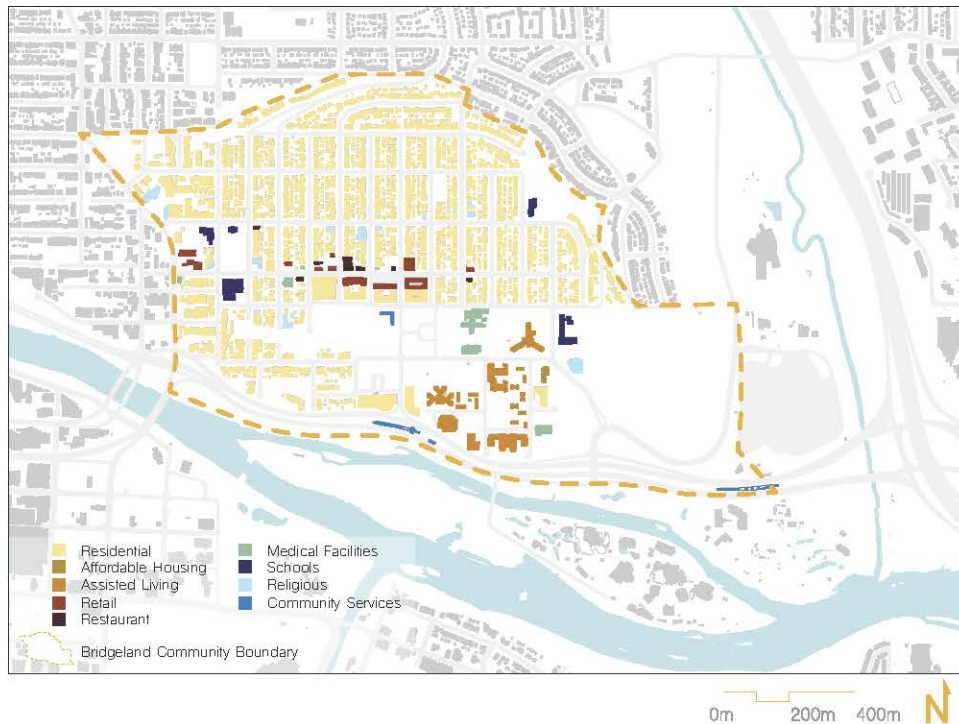
1ST AVE STRUCTURES





LAND USE & ZONING ANALYSIS

EXISTING LAND USE

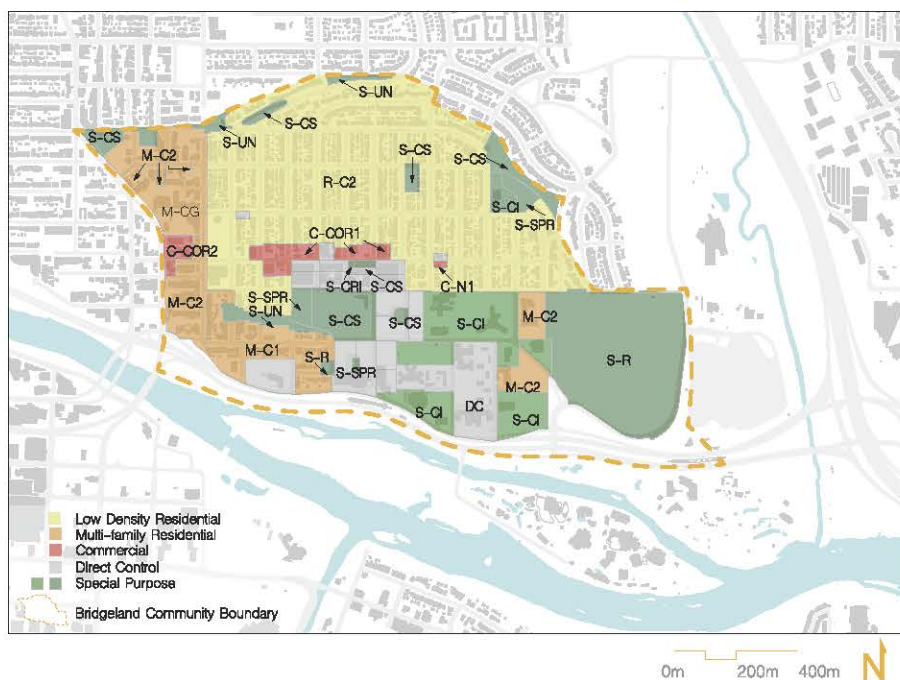


This map shows ground floor land use, and drives home the point that 1 Avenue is mixed use, while the southeast quadrant is institutional and the north is mostly residential.

1 AVENUE - MIXED USE STRUCTURES

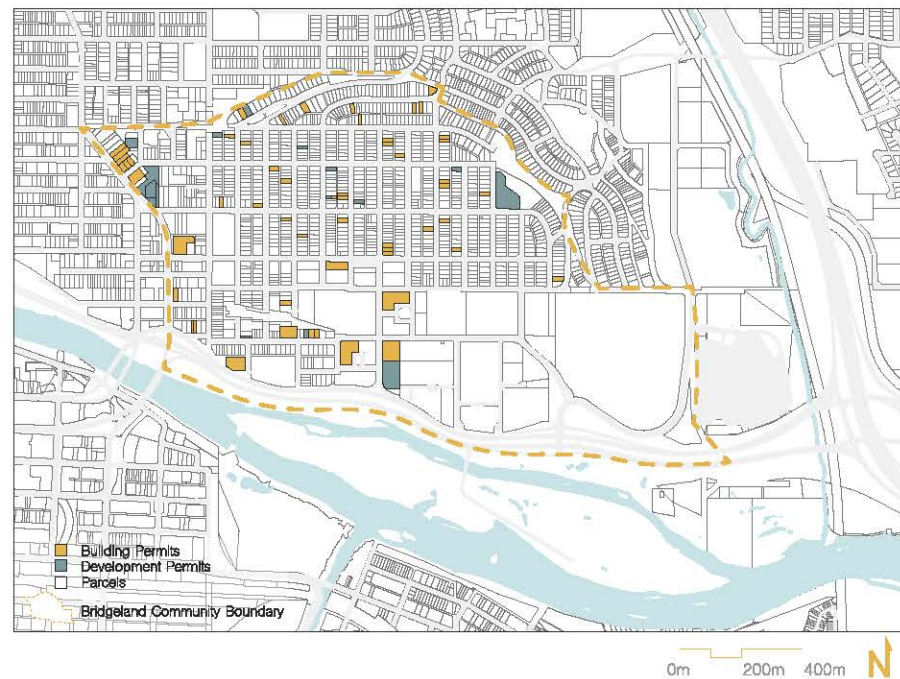


EXISTING ZONING



The zoning map is similar to ground floor land use: mostly low density residential in the north, institutional to the southeast, and along Edmonton Trail higher density residential where the community has the most opportunity to densify. Should densification occur in the single family zone, it will have to be carried out in novel ways.

PERMITS ISSUED BY THE CITY OF CALGARY



Building and development permits are outlined in this map by parcel, showing where construction projects are in the process of being approved. Edmonton Trail and the area near the LRT station see the most heavily concentrated permits.

CONSTRAINTS AS OPPORTUNITIES: SUMMARY OF ANALYSIS

Trying to get to the “so what?” of what the commercial corridor analysis means going forward, we have decided to focus on three main constraints and what they mean in the context of Bridgeland. These constraints will be responded to in our concept by transforming them into opportunities for the neighbourhood to take advantage of in future land use and development projects. They are as follows:

- 1. Commercial Corridors are unwelcoming:** The entrances to commercial corridors in Bridgeland are unsafe and possess poor public realm elements. In response, we will set out urban design guidelines that combine with parks and connectivity goals to draw visitors and residents alike into bustling and active neighbourhood corridors. These will aim to be complete streets.
- 2. Commercial Corridors have experienced uneven development:** Specifically occurring along the north side of 1 Avenue, there is a lack of commercial development in some areas of existing corridors. This will be addressed via the provision of densification and redevelopment guidelines, which will see larger, mixed use buildings to mirror the ones already existing.
- 3. Certain amenities are lacking in Bridgeland and East Riverside:** There are some holes in amenity provision that the community has stated they desire. These will be addressed in tandem with redevelopment aims to provide a better array of services along Edmonton Trail and 1 Avenue. Additionally, unique, community based amenities will be injected into East Riverside to make this area more of a hub for all of Bridgeland and easier to access for the senior citizens living there.







RESIDENTIAL

RESIDENTIAL ANALYSIS

Residential housing types tend to be segregated to multi-family along Edmonton Trail, near the LRT, in the Bridges, and in East Riverside. Everywhere else in the neighbourhood is primarily composed of single family housing. In order to meet the needs of a growing city, Bridgeland as an inner city community will have to continue to densify in the coming years. This means taking another look at the existing zoning and potentially changing it to provide for a better transition between the residential along the commercial corridors and the single family zones. It will also mean working to densify single family areas in novel ways that allow for the preservation of locally significant housing stock and streetscapes.

HOUSING BREAKDOWN

SINGLE
FAMILY



SUB-
DIVISIONAL



TOWNHOUSE

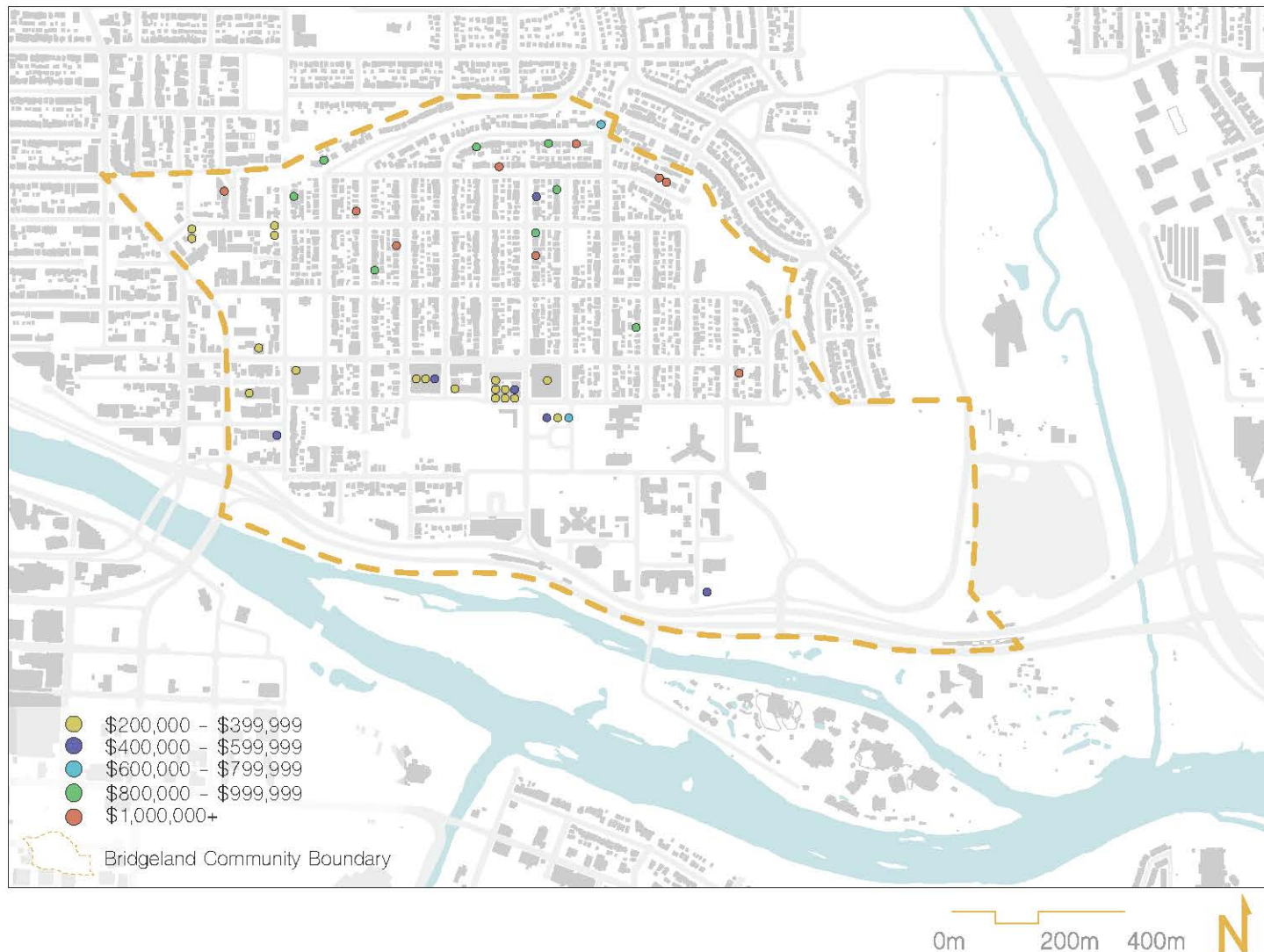




These maps and images denote the spread of certain housing typologies throughout the neighbourhood. It is interesting to note that townhouses, low, mid, and high rise condos are concentrated near the LRT station, Edmonton Trail, and 1 Avenue corridors.

RESIDENTIAL ANALYSIS

MLS LISTINGS - JAN 28, 2016



This information was taken on January 28, 2016. It maps all properties listed for sale. At this point in time, dwellings in the neighbourhood had an average listing price of just over \$650,000 but there were also a wide range of affordable homes listed between \$200,000-\$399,000. Furthermore, the map shows that dwellings are listed neighbourhood wide.

CONSTRAINTS AS OPPORTUNITIES: SUMMARY OF ANALYSIS

Trying to get to the “so what?” of what the residential analysis means going forward, we have decided to focus on three main constraints and what they mean in the context of Bridgeland. These constraints will be responded to in our concept by transforming them into opportunities for the neighbourhood to take advantage of in future land use and development projects. They are as follows:

- 1. Bridgeland lacks density transitions:** The transition from commercial corridor to single family housing in some cases is quite abrupt in Bridgeland. Specifically, the transition from the Bridges development to north of 1st Avenue stands out. Transitions will be created by rezoning areas in the vicinity of commercial corridors to allow for both increased density in these areas in addition to stepdown zones into single family areas of the neighbourhood.
- 2. Infill in single family zones is not context sensitive:** Current infill forms are very boxy and look to maximize floor area ratio for a single family living under its roof, thus not actually achieving densification. These homes are also very expensive. In response, we will provide general infill guidelines and propose housing strategies that allow for more context sensitive infill and a mixed demographic to access the neighbourhood.
- 3. Neighbourhood character is being lost through redevelopment:** Much of the existing housing stock and canopy is destroyed in the name of infill. In response, we will propose defense mechanisms that protect heritage housing and encourage the future planting and protection of the canopy.



SECTION 4.0
O.....
DESIGN CONCEPT
.....⁵⁵

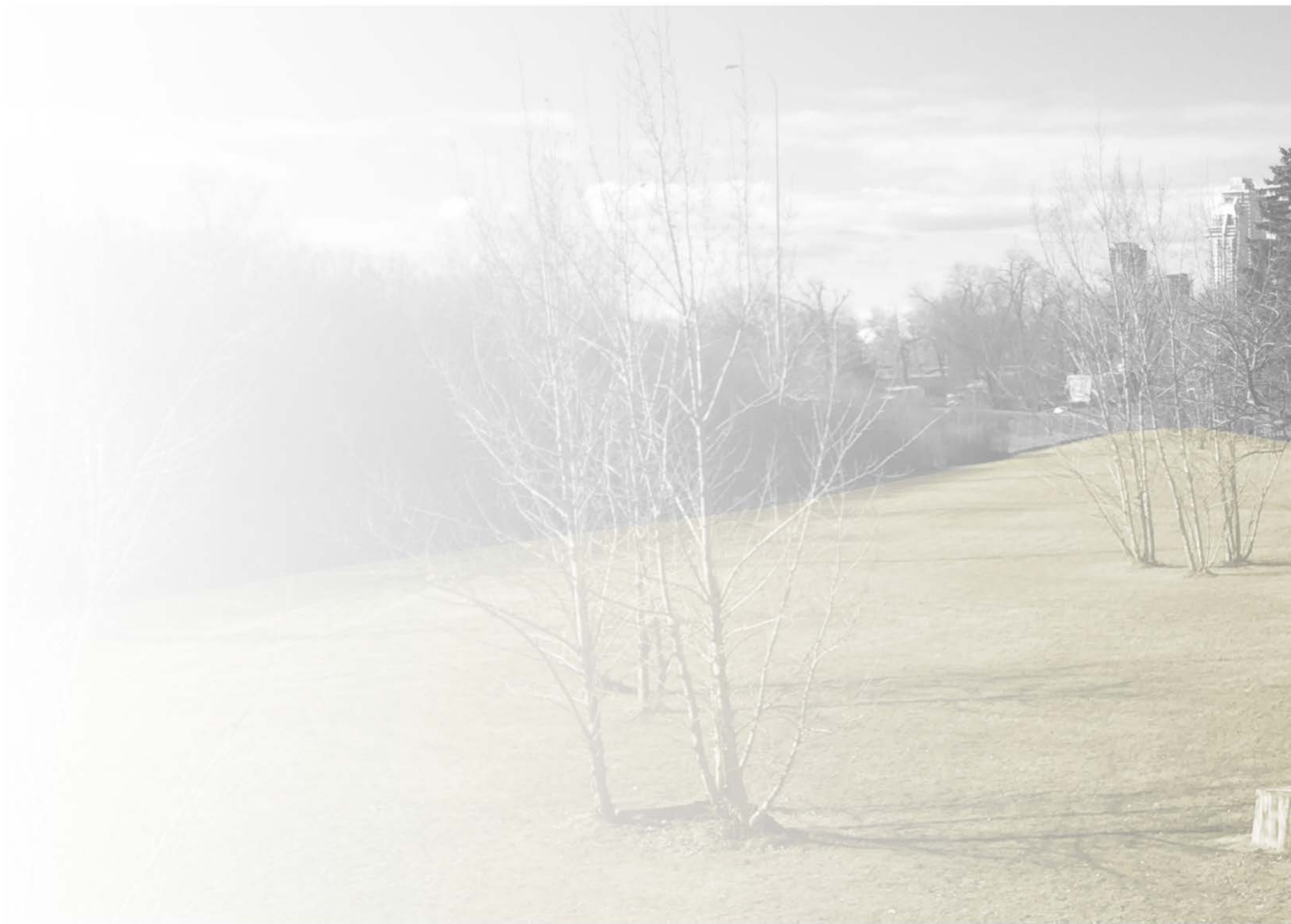




INTRODUCTION

○.....

Our concept vision is to take the opportunities derived from public engagement and site analysis in the four maps to develop a future Bridgeland that is greener, better connected, appropriately developed, and accessible to those of all socioeconomic backgrounds. The following pages outline in detail how we plan to achieve these aims with a combined focus on parks and open space, connectivity, commercial corridors, and residential.



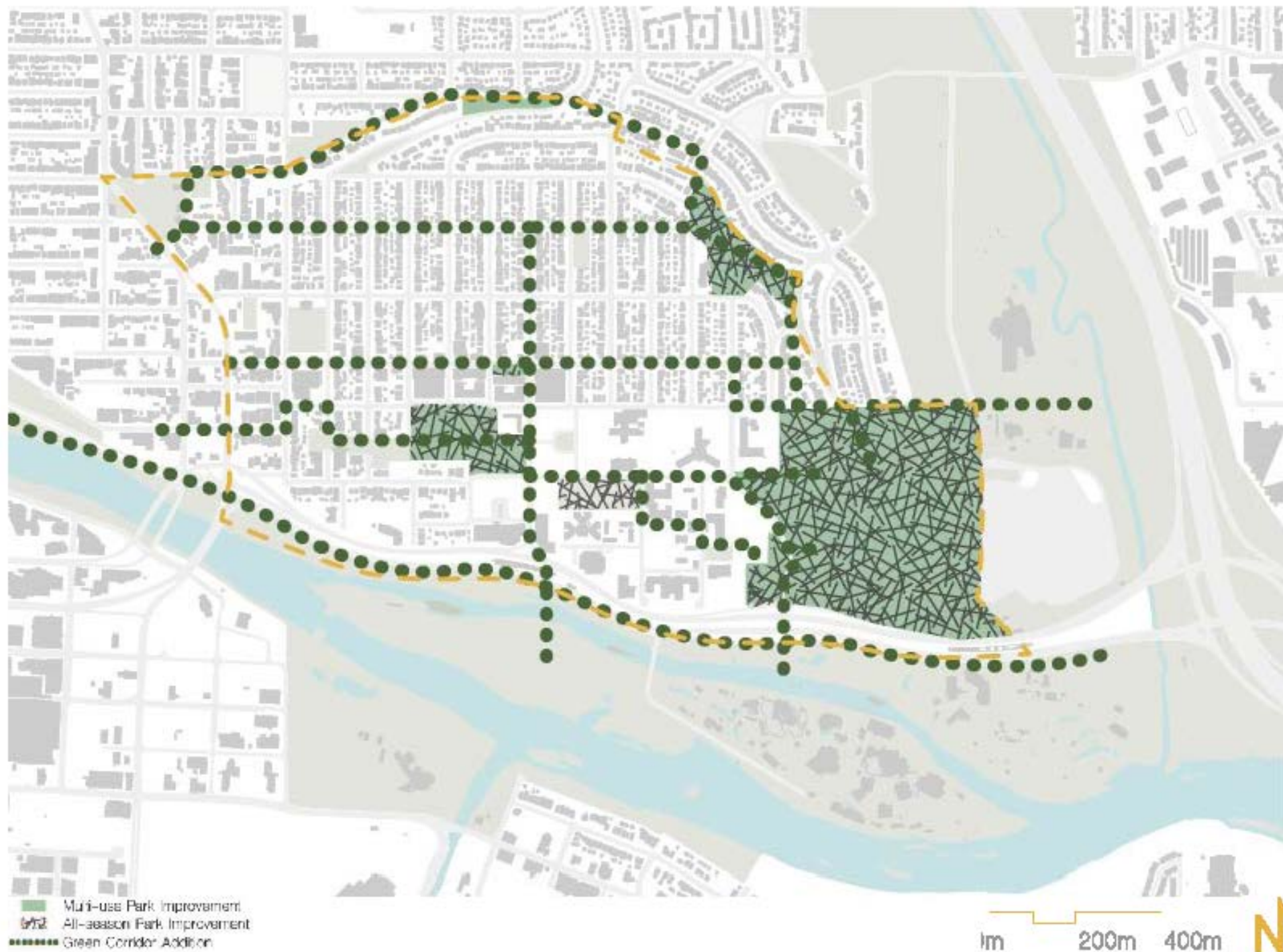


PARKS & OPEN SPACE

INTRODUCTION



Our plan for improving parks and open spaces in Bridgeland is to capitalize on the existing stock by better programming it for all residents through all seasons. We want to accomplish these goals in an economical manner that the BRCA can begin working towards immediately. Furthermore, we want to connect these improved spaces both through the neighbourhood and beyond with an iconic greenway system.



Layering of Major Parks and Open Space Interventions

THE GREENWAY: PARKS AND OPEN SPACE CONNECTIVITY

INTRODUCTION

The bluffs, parks, and Bow River Pathway in Bridgeland are all poorly connected to one another. Our goal moving forward is to establish multimodal links between these three natural zones that are nicely canopied into a community greenway, thus ensuring safe passage for the pedestrians and cyclists who want to enjoy them. Furthermore, as discovered in the site analysis, the Bow River Pathway is heavily trafficked by cyclists. Therefore, by establishing a better link into Bridgeland, the community will be better linked to the rest of the city.

ENGAGEMENT FEEDBACK

- "There are limited areas for dog walking"
- "The riverfront would feel safer with better lighting"
- "There is an opportunity for greater pedestrian and cyclist connections over Memorial Drive"
- "Park space isn't connected"
- "East Riverside requires more open park space"
- "The bluff paths are good but could be better connected"
- "The LRT bridge should be connected to the Riverwalk and St. Patrick Island"
- "The LRT bridge is too narrow and causes a bottleneck for pedestrians and cyclists"

THE GREENWAY



Poorly connected LRT bridge

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to connecting parks and open space to each other and the Bow River:

1. **Creating the Greenway:** The greenway is a series of streets that have been targeted for beautification with the ultimate goal of establishing parks connectivity. Greenway measures include increasing the canopy and making busy roads friendlier for cyclists and pedestrians through multimodal pathway development. As can be seen in the map, the streets and paths we have targeted for the greenway form a grid that connects all major parks and natural spaces in Bridgeland. 1st Avenue will have a dedicated bike lane to make this street feel safer and draw pedestrians and cyclists into this commercial corridor, while other streets we recommend narrowing so both pedestrians and cyclists can share wider sidewalks. In order to gain better access to the bluff and Tom Campbell Hill, we recommend installing a staircase at the eastern terminus of Centre Avenue. Our canopy procurement strategy will be discussed in more detail in the residential chapter in the subsection on protecting the character of neighbourhood streets.

PRECEDENT

Buffalo Bayou Park, Houston: In this project, a downtown park was revitalized through increasing multimodal path connectivity, a denser canopy, gardens, and seating options to animate the space. This is our goal for the Bridgeland greenway: to create a beautiful series of spaces that are linked together and pleasant to explore.



Buffalo Bayou Park: Activated Space

http://landscapeperformance.org/sites/default/files/styles-lightbox-public/Bufalo_20Bayou-After_0.jpg?itok=NuHEJkK-jpgPhases-of-the-High-Line-NYC-Part-3.htm#.VwwmDRlLdQ



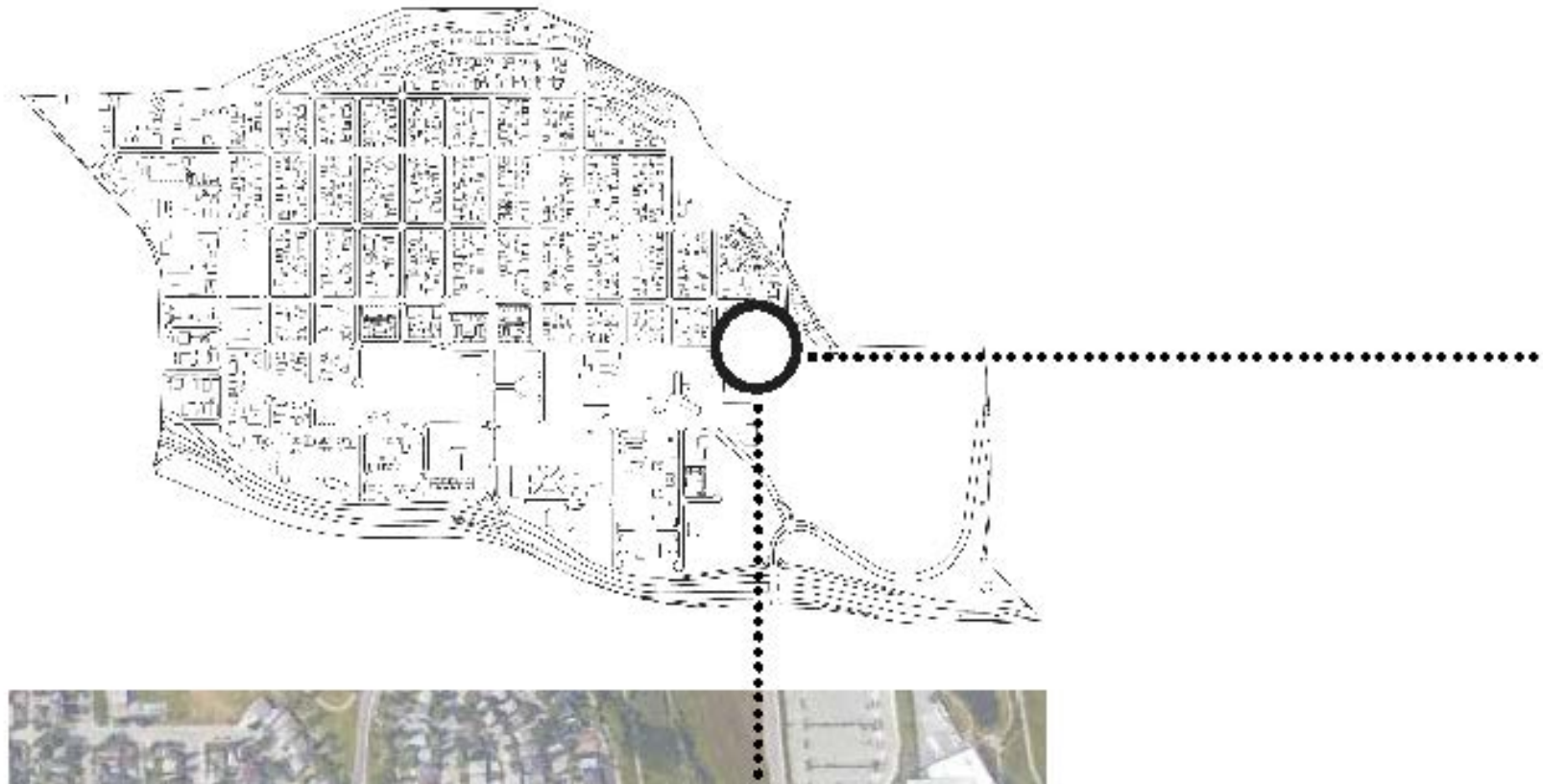
Buffalo Bayou Park: Lit Up

http://farm4.static.flickr.com-3274-2557909723_a86bdb6802.jpg



Buffalo Bayou Park: More Paths

<http://scenariojournal.com/wp-content/uploads/2012/01/Bufalo-Bayou-Walk-0594.jpg>

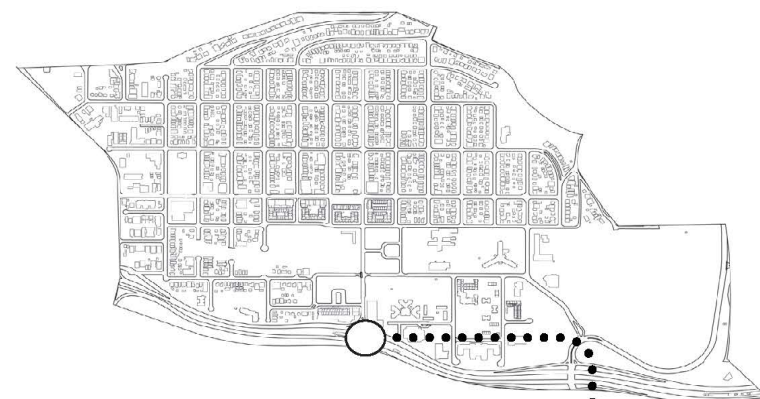


Plan view of Centre Avenue right of way extension

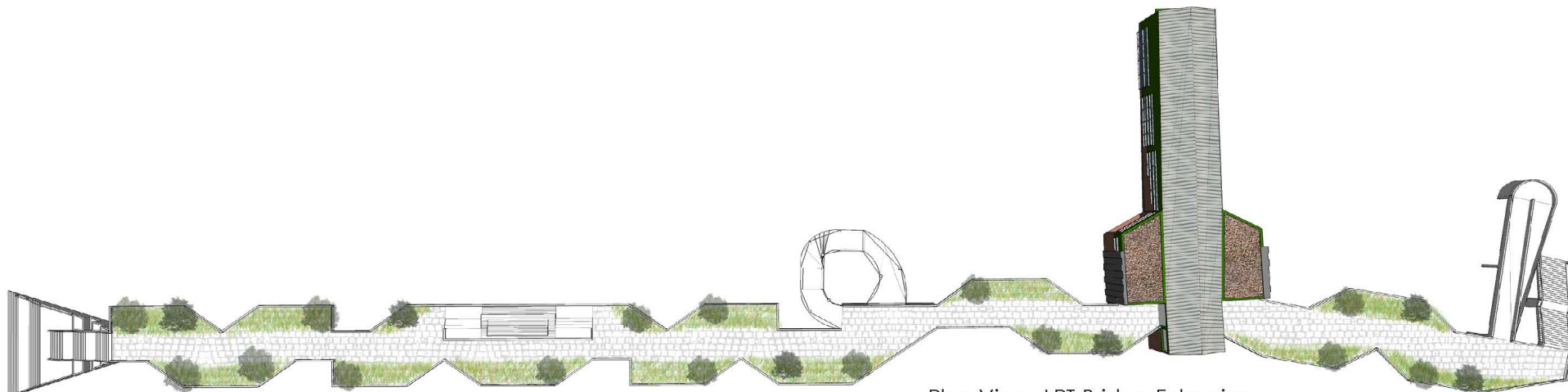


Centre Avenue Staircase: Experiential View

2. Greening and retrofitting the LRT bridge for better river connection: In order to expand the connectivity of the greenway into the Bow River Pathway, the LRT bridge will be retrofitted. The existing bridge spans Memorial Drive, connecting to the LRT station and Bow River Pathway on the north bank. Currently, the bridge is 3.5 metres wide. We propose to extend its length by 80 metres to connect Bridgeland with St. Patrick's island, a relatively inexpensive alternative to the proposed brand new green bridge. The existing bridge will be retrofitted with 3.5 metre x 8 metre inserts that accommodate trees, native plant species and grasses. Retrofitting the LRT bridge will not only improve multimodal connectivity to and from Bridgeland, but will also be effective in connecting the community via a pleasant and continuous urban forest to the Bow River and St. Patrick's Island.



Plan View: Existing LRT Bridge

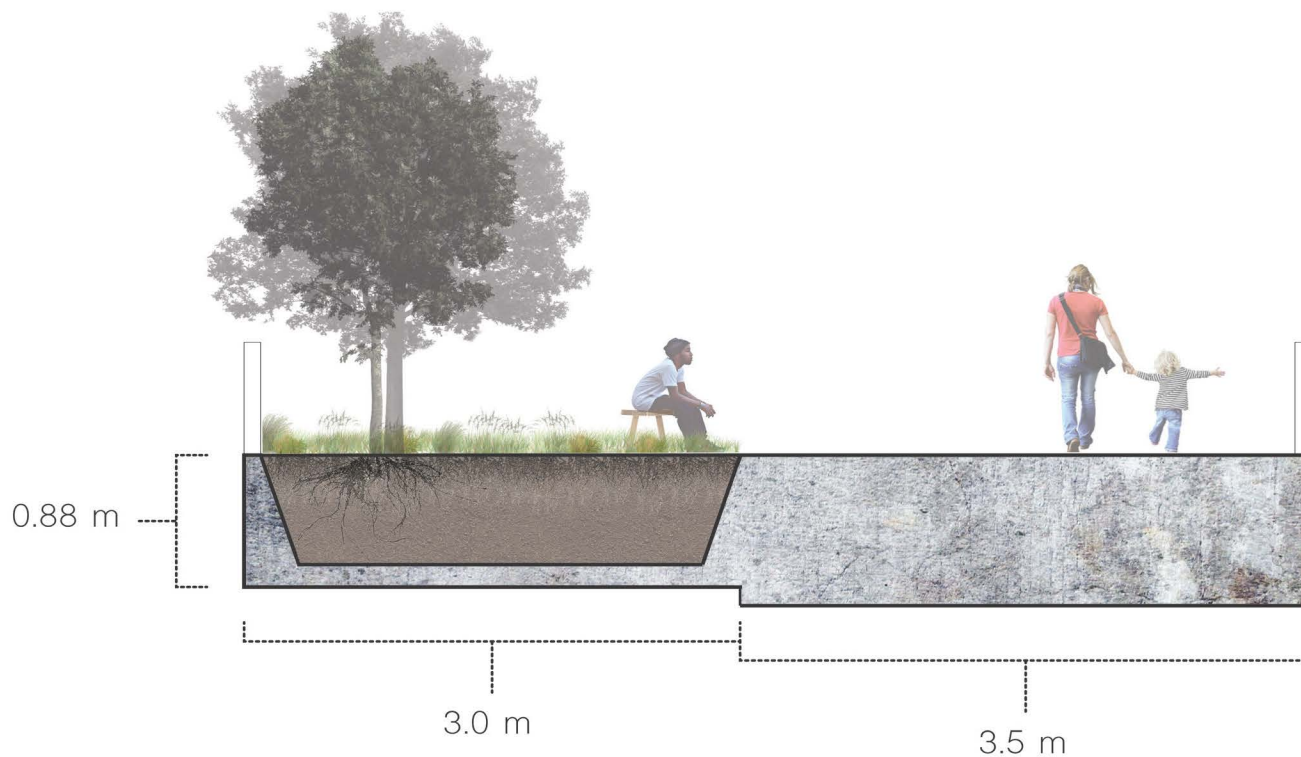


Plan View: LRT Bridge Extension



High Line, New York: An Elevated Linear Park

<http://www.greenroofs.com/content/articles/116-A-Comparison-of-the-3-Phases-of-the-High-Line-NYC-Part-3.htm#.VvwMDRlrLdQ>



LRT Bridge Retrofit: Planter Bed Dimensions

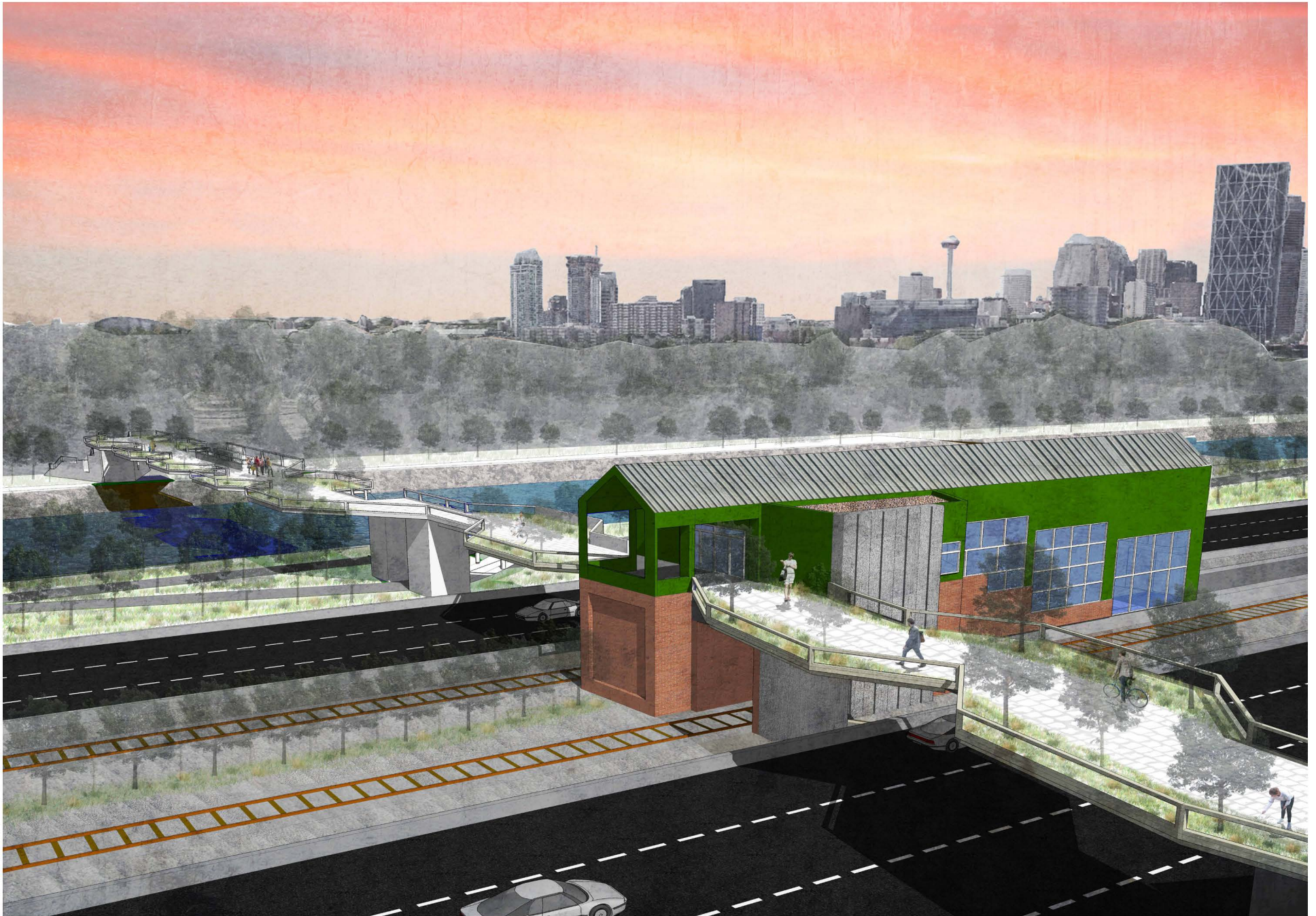
PRECEDENT

The High Line, New York: Referencing structural measurements from the High Line, the depth of the inserts for our bridge will range from 18 to 24 inches (45 to 60 centimetres) depending on what will be planted. Furthermore, similar to the Friends to the Highline & New York City, the BRCA could enter into a license agreement deal with the City of Calgary where the existing beautification committee would be responsible for a portion of the management and maintenance of the bridge vegetation on behalf of the City.



High Line, New York: Gardens

<http://cargocollective.com/Uofanycstudioarch/HIGH-LINE-ARCHITECTURE>



Bridgeland LRT Station, including bridge retrofit



Experiential View: overlooking the Bow River and downtown from the observation deck

BETTER USE OF OPEN SPACE

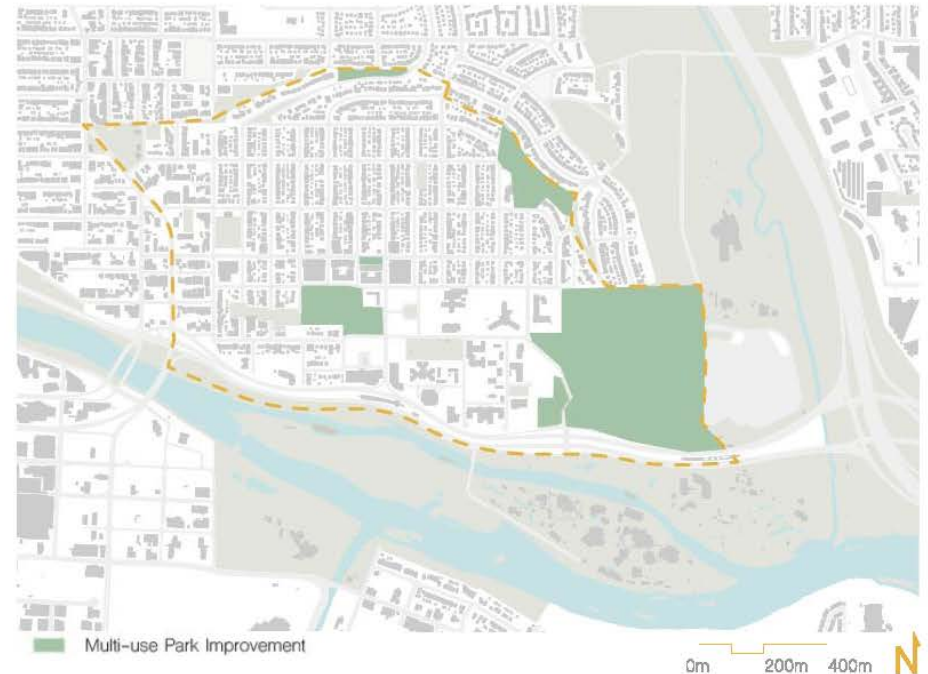
INTRODUCTION

The existing parks and open space system in Bridgeland is quite extensive between traditional park spaces and the bluff that surrounds the north and east boundaries of the community. However, the programming of these spaces is often limited to a few seating options, a sports field, or a jungle gym. What we propose is a remodel of these spaces to provide a greater range of recreational, relaxing, and fun activities for those of all ages. In so doing, parks and open spaces can be enjoyed on a daily basis, yet will also have the flexibility to be reprogrammed into activated event spaces that act as nodes along the greenway.

ENGAGEMENT FEEDBACK

- "Open spaces need more programming"
- "Ravines, bridges, and areas near highways are being squatted on by the homeless"
- "Parks are under-programmed and lack trees and benches"
- "As the neighbourhood densifies, it will need better planned open space to maximize these areas"
- "Parks should be programmed for all ages"
- "Parks should have more trees and seating areas, not just playgrounds"
- "Public art and an adult fitness facility should be incorporated"
- "I would be comfortable walking with my cane if there was a bench every two blocks where I could take a rest"

BETTER USE OF PARKS



Derelict, unused open space on CNIB grounds

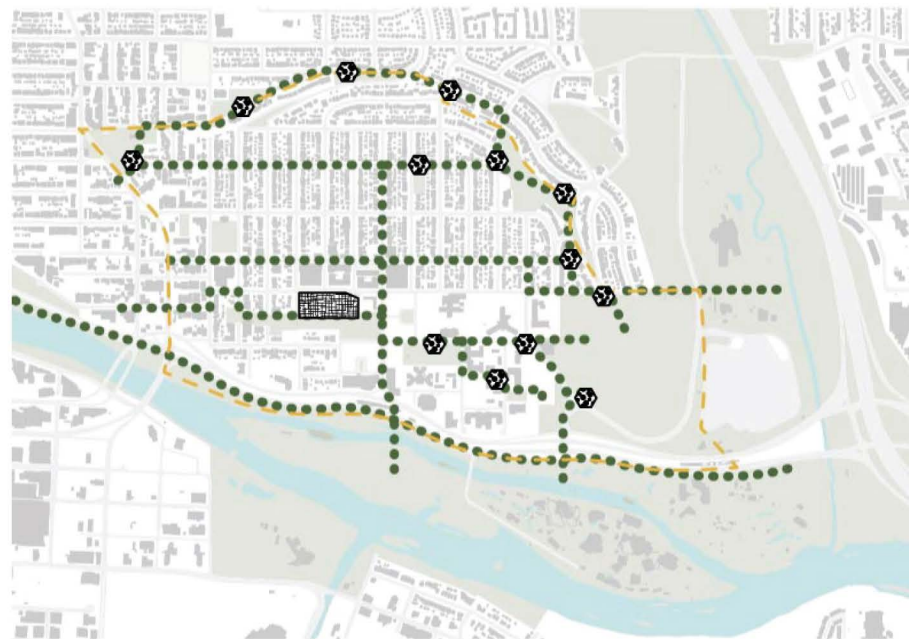
THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to better use of open space:

1. **Outdoor fitness facilities in Murdoch Park:** These facilities will be placed throughout the greenway to give it a better sense of connection and provide a fun participation activity for visitors exploring the neighbourhood. However, the majority will be placed around Murdoch Park, providing a circuit for those wanting to extend their outdoor exercise regimen.

PRECEDENT

Saigon, Vietnam: In Saigon, where space is at a premium, its 10 million residents go to public parks to exercise. Most of the exercise is informal and does not require equipment. However, we noticed that when provided, the equipment was very well used, and could be easily injected into the Bridgeland context.



 SINGLE EXERCISE MACHINE

 MACHINE CLUSTER

Fitness Loop, with majority of machines clustered in Murdoch Park



Saigon, Vietnam: Public Parks with outdoor exercise equipment

http://cdn.c.photoshelter.com/img-get2-10000Gq1kyeQOb_Q-fft=1000x750-SaigonVietnam3016.jpg

<http://waterbuckpump.com/wp-content/uploads/2013-09-exercise.jpg>

2. More street furniture and vegetation in General Avenue Square

Square: This area will be expanded to become a large meeting space for Bridgelandians. Extra benches, tables, and chairs will be injected into the site, in addition to more street trees so visitors and residents alike have a place to relax after shopping 1st Avenue, where they can enjoy a coffee or see friends and family. The site can be activated to host events, such as musical performances or fairs that also allow for community businesses to set up vendor stalls to give out or sell product samples.

PRECEDENT

Thornbury, Melbourne: A disused parking lot in inner city Melbourne was transformed into a fenced in area with portable furniture. It began hosting food trucks in the evenings and has since become a very popular place to gather.



Thornbury, Melbourne: Adaptive Reuse of a Dead Space

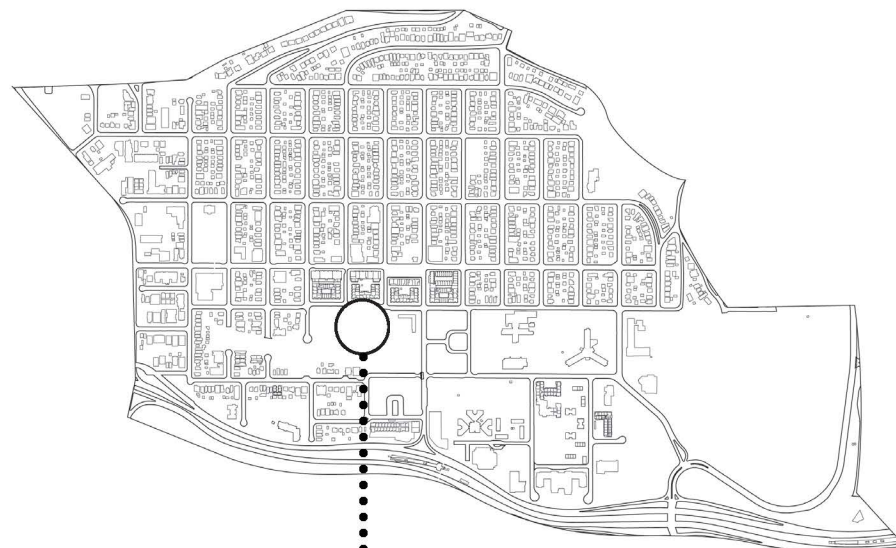
<http://images.essentialkids.com.au/2015-12-28-7108047-0AS-goodfood-gallery-20151228132540379950-600x400.jpg.png>



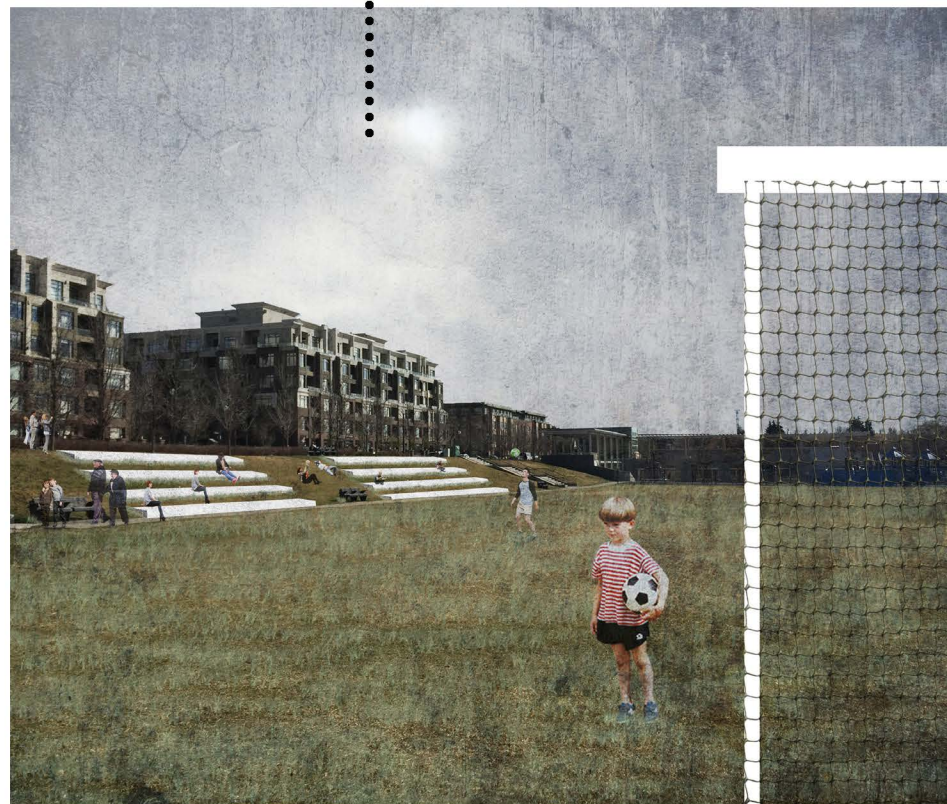
Thornbury, Melbourne: Full Day programming

<http://static1.squarespace.com/static/54692d0ce4b0e3880c8e6fd8-155ff8289e4b0b1eb9260144c-1442808684981-Screen+Shot+2015-09-21+at+2.07.03+pm.png?format=1500w.png>

3. **More paths and benches in all parks:** We recommend increasing the seating in parks for seniors who desire to use these spaces, yet require frequent resting places on their walks. We also recommend paving new paths in parks where residents are currently cutting through.
4. **Viewing deck along bluff:** Constructing a viewing deck at the top of a staircase is a simple addition to the greenway that renders the bluffs a destination. We propose installing one along Centre Avenue, where we already recommend constructing stairs to the top of Tom Campbell Hill as part of the greenway initiative.

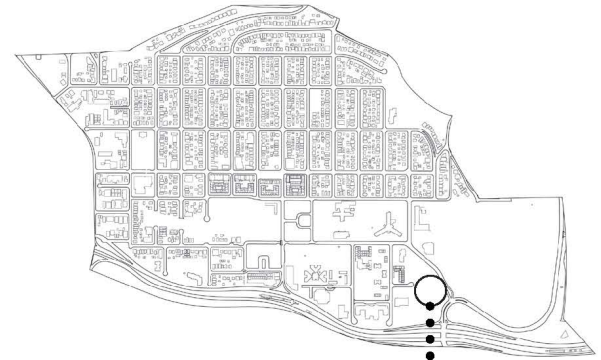


Potential Site: Bluff Viewing Deck



Experiential View: Increased Seating in Murdoch Park

5. Vegetable patch in CNIB lot: We believe the disused area in the southeast of the neighbourhood by the CNIB parking lot should become a temporary project ground primarily for the senior citizens inhabiting the surrounding buildings. A community gardening project could be successful here, should the BRCA fence off an area and charge interested Bridgelandians an annual fee to tend a plot. This charge would cover start up costs for setting up the field for planting and investing in a shared tool shed for lending.



Experiential View of Vegetable Patch on CNIB Grounds

PARKS AS ALL SEASON DESTINATIONS

INTRODUCTION

Parks in Bridgeland are difficult to traverse and become dead spaces in the winter. The neighbourhood parks and open space system is not currently being used to its fullest potential once there is snow on the ground, and we intend to change this trend. Like what we have proposed for better use of open space, our plan is to take advantage of existing features, notably topography and central sites in order to transform Bridgeland into one of Calgary's premier winter city neighbourhood destinations.

ENGAGEMENT FEEDBACK

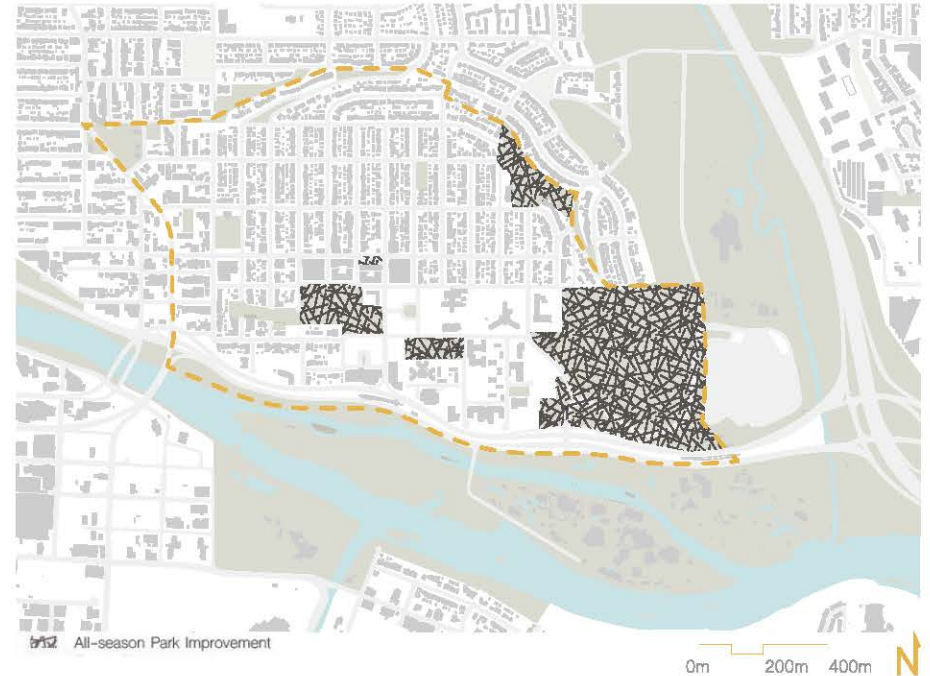
"There are limited spaces and not enough activities for young people"

"The field next to the community centre is well used for soccer in the summer but is snowed in during the winter"

"The stone outcrop in Tom Campbell's park is a destination."

"There should be a skating rink in the neighbourhood."

WINTERIZING PARKS

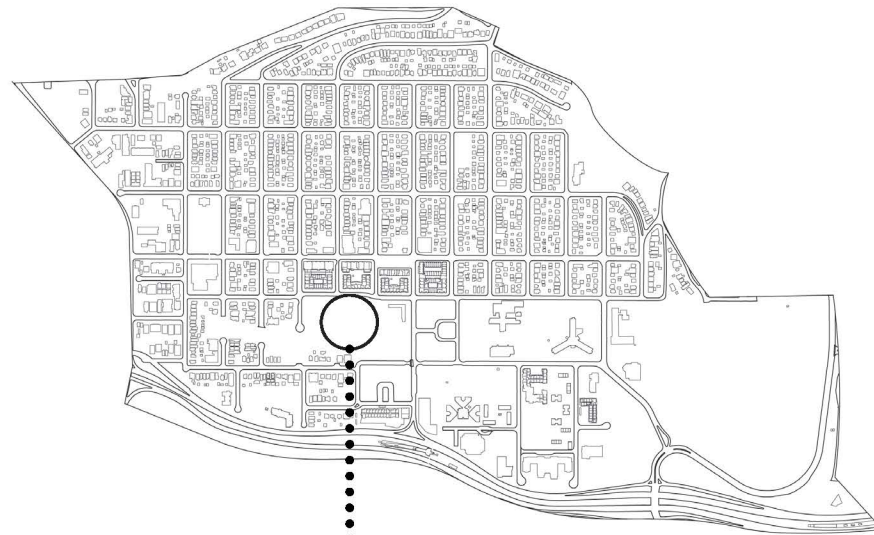


Murdoch Park: Fenced off during winter months

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to designing parks and open spaces for all seasons:

1. **Murdoch Park hockey rink:** This park is very underutilized during the winter months. There is real potential atop the soccer field for a rink, and additionally ample space for a skating track to surround the rink for recreational skaters. Should the BRCA want to get further involved apart from maintaining the ice, it could rent out skates from the tool shed.



Experiential View: Murdoch Park Seasonal Hockey Rink

2. T-Bar and Bunny Run at Tom Campbell's Hill: Tom Campbell's Hill is another underutilized park in the winter. In order to take advantage of this slope immediately adjacent to the downtown, we are proposing a small T-Bar is installed, in addition to a viewing and ski rental chalet at the bottom of the hill. This site is excellently positioned to be an inexpensive in-town learning option for Calgarian children and a great winter gateway to Bridgeland's commercial corridors, where families can head après-ski for lunch.

PRECEDENT

Edmonton Ski Club: The T-bar here spans a similar elevation as Tom Campbell's Hill and is essentially equidistant from downtown Edmonton as Tom Campbell's Hill is from downtown Calgary. The facility charges approximately \$25 for a day pass. This is inexpensive enough to ensure Calgarians come to the hill, while also expensive enough to eventually recoup the costs of constructing the T-bar and paying employees to run the facility.

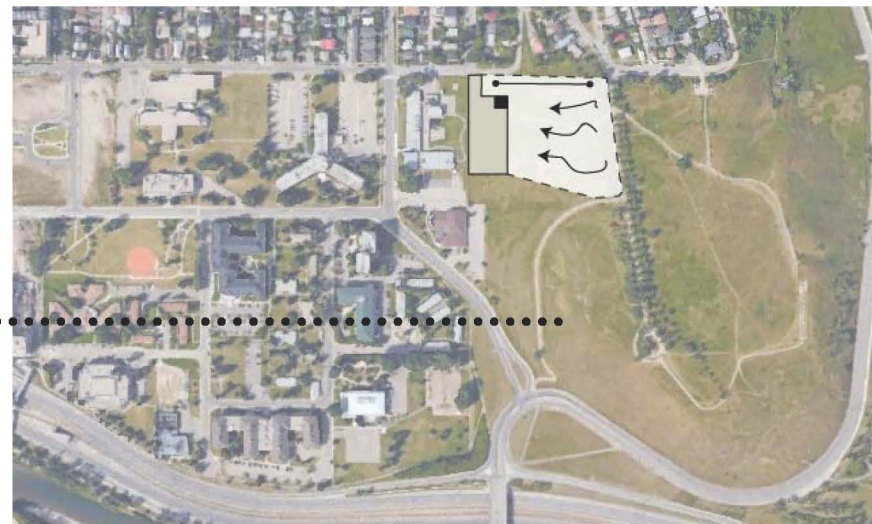
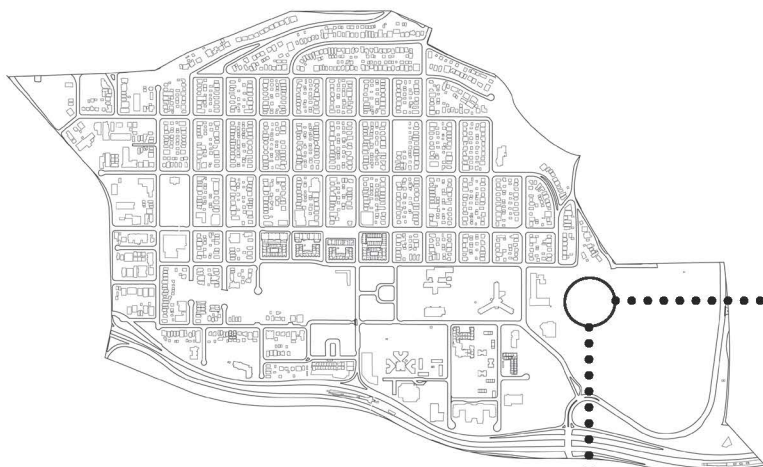


Existing right of way slope, Tom Campbell's Hill

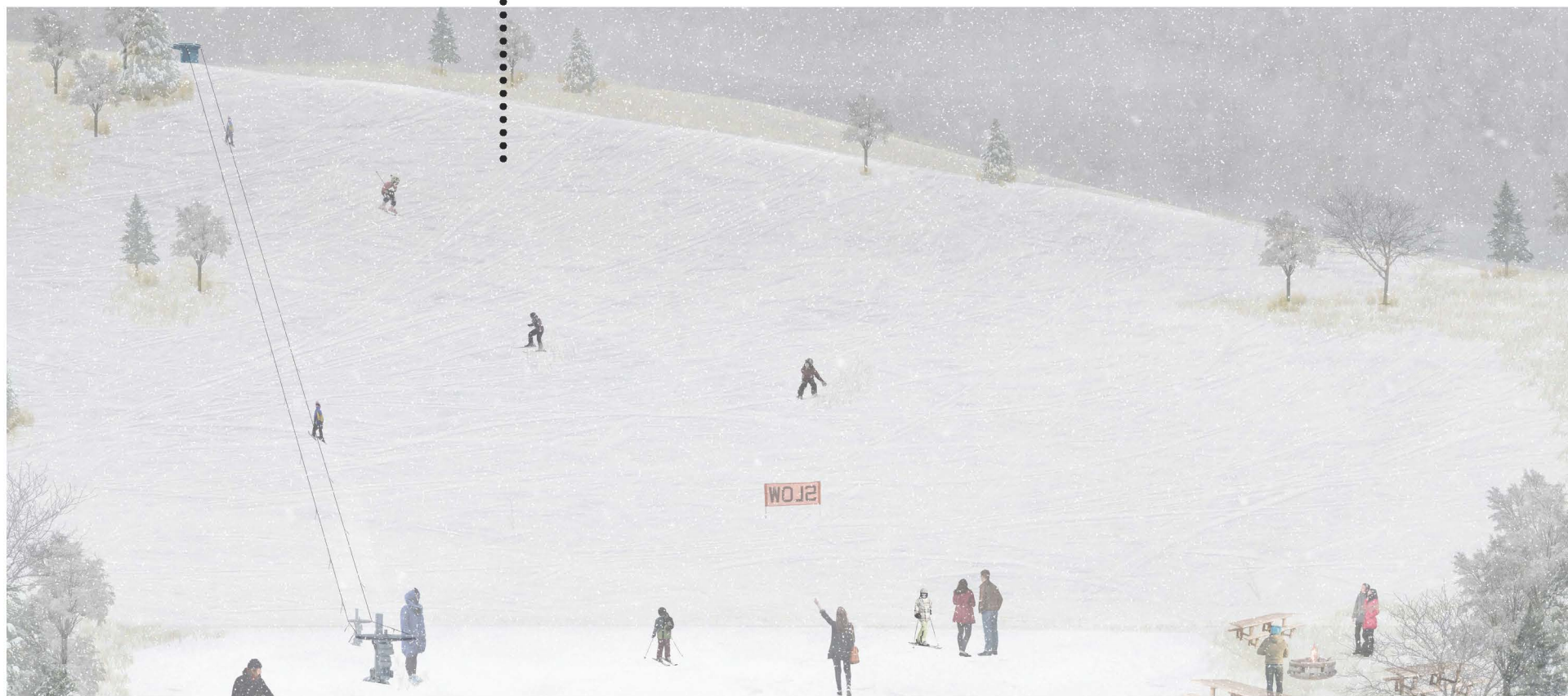


Edmonton Ski Club: Learner's hill

https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcSEsxyRVcHoKjFHM1avy_1cS9FH4vzADMc2czy9LSTXN_mu74R



Plan View: Tom Campbell's Hill Bunny Run



Experiential View: T-Bar and slope from the bottom of the hill

3. General Avenue Square Holiday Zone: The square, whose renovations were explained in the previous section will act as a holiday centre hub. There will be a tree, ice sculptures, and lights to draw people into this part of the neighbourhood. Patios abutting the square will be enclosed, with heaters and blankets to keep patrons warm and enjoying the outdoors.

PRECEDENT

Malmö, Sweden: Patio season never ends in Sweden. Instead, many heaters pump warm air into canopied areas. If you're cold, you can use the colourful blanket hanging from the back of your seat. Their winter weather is similar to Calgary, thus, winter patio culture is possible here!

4. Warming Measures: To make walking the neighbourhood pleasant during winter, certain existing spaces such as bus shelters could be retrofitted with heat lamps, like at C-Train stations downtown. We recommended the sites selected be along the greenway, in high traffic areas between the ski hill, Murdoch Park, and General Avenue Square.

POLICY GUIDANCE

City of Edmonton Winter Design Guidelines: This document guides all of the tenets of our winter city design. We are utilizing its strategies to block wind, maximize sun exposure, bright colour to liven up winter scape, and lighting to create visual interest.



Malmo, Sweden: Four season patios with shelter, blankets, and heaters
<http://can.ch/malmo/4-season-patios-with-shelter-blankets-and-heaters/>



City Hall, Edmonton: Warming Spots
http://www.edmonton.ca/city_government/city_services/city_hall_warming_spots.cfm



High Bridge, Edmonton: Colourful lighting employed to enliven a space

http://www.edmontonjournal.com/news-cms-binary-7419175.jpg_size=aw@20x66.jpg



City Hall, Edmonton: Embracing winter weather with activity

<http://www.makesomethingedmonton.ca/media-cache/4/4e/44e30fece994662c82019901c085.jpg>



Malmö, Sweden: Winter Market Square activation

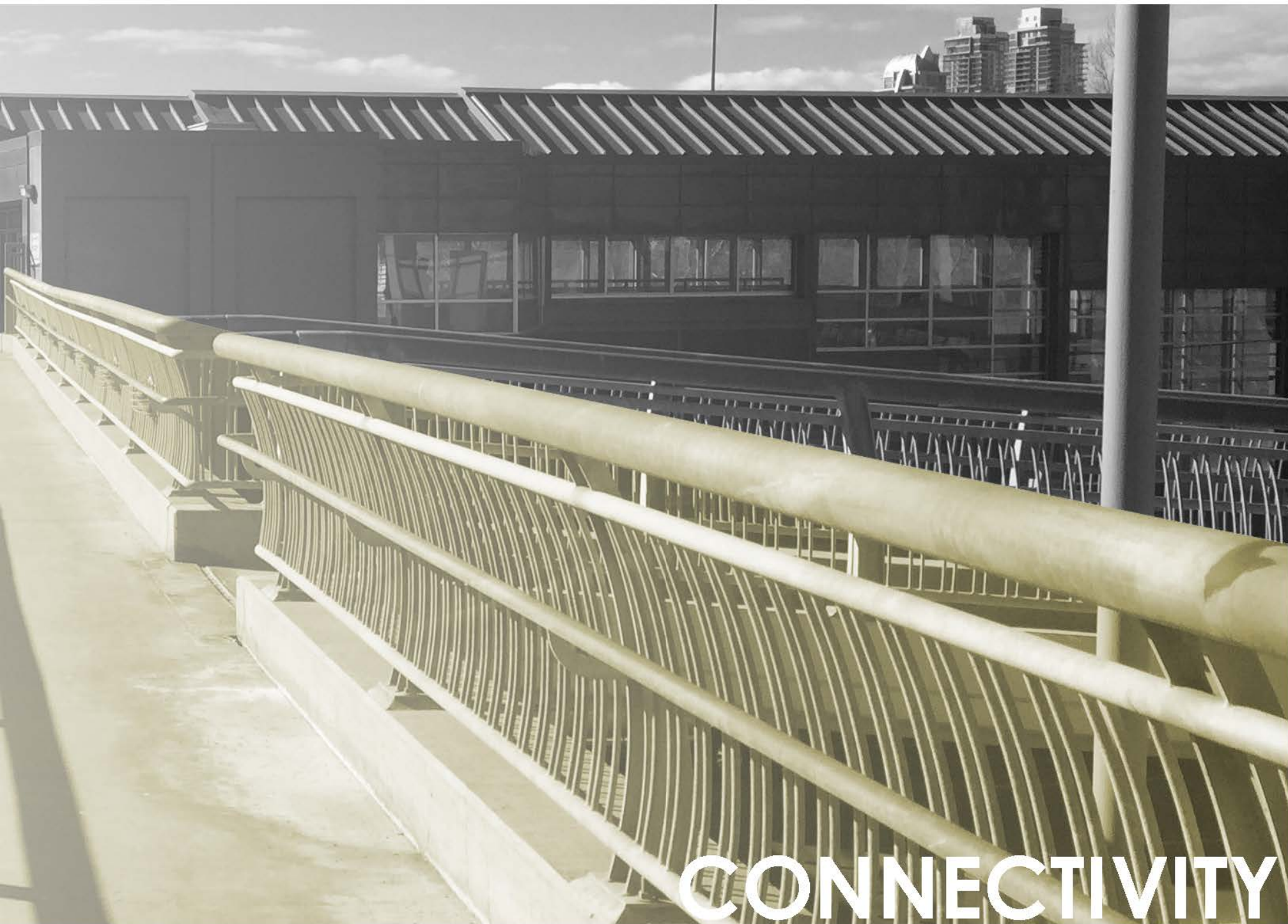
http://blondeagency.com/wp-content/uploads/2012/12_IMG_0528-1024x768.jpg



Urban Precedent: fountain base becomes holiday tree holder

<http://media-cdn.tripadvisor.com/media/photo-s/03/2d/ab/a8/boina-braza.jpg>



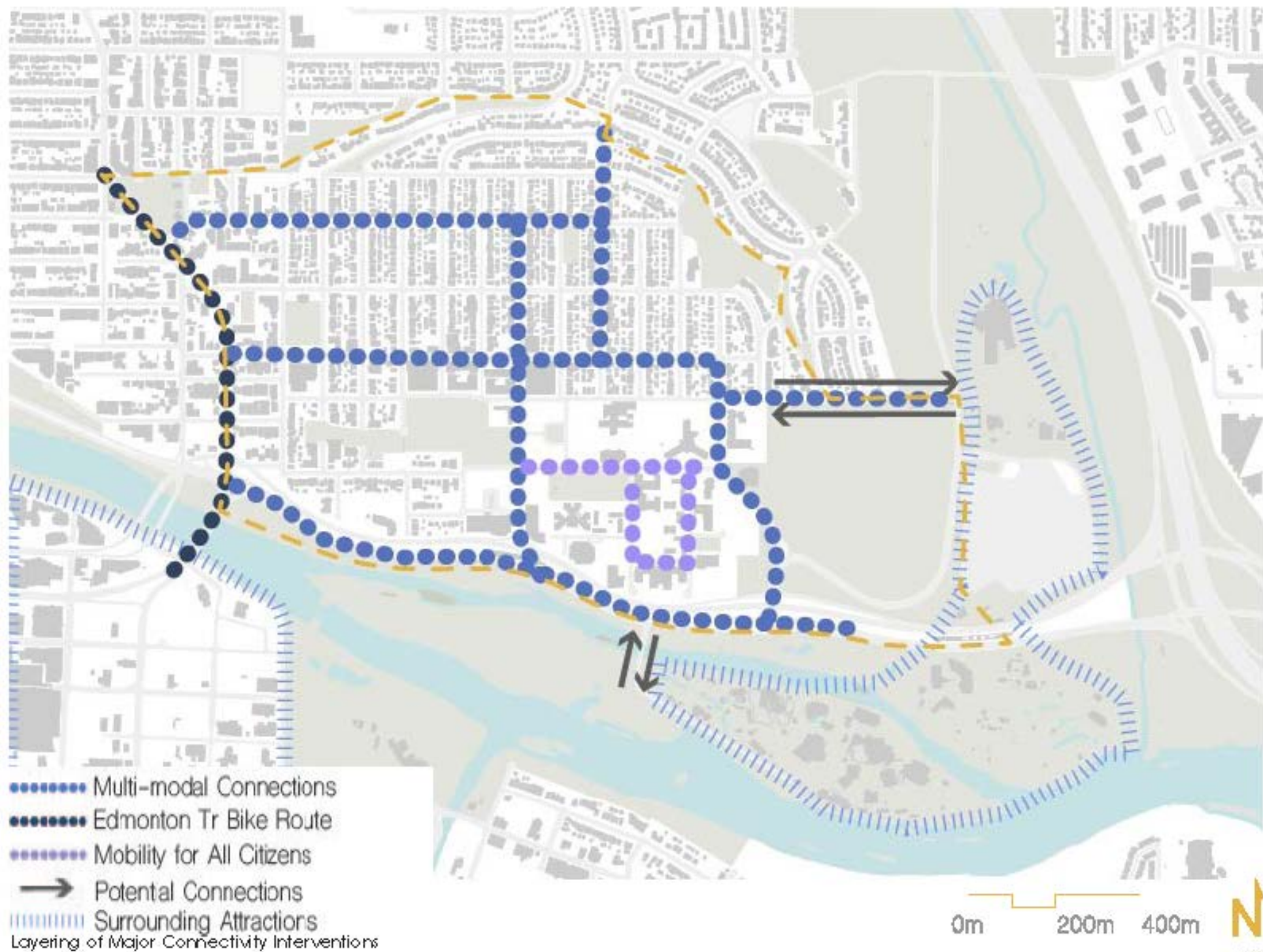


CONNECTIVITY

INTRODUCTION

.....○

In order to improve connectivity, we will address inhibitors to adjacent communities for cyclists and pedestrians, as we believe the site analysis proves that public transit and vehicular mobility are less pressing issues. Both natural and physical barriers will be addressed in order to make Bridgeland safer and better connected within the neighbourhood and to greater Calgary.



..... Multi-modal Connections
 Edmonton Tr Bike Route
 Mobility for All Citizens
 → Potential Connections
 Surrounding Attractions
 Layering of Major Connectivity Interventions

CREATE A MULTIMODAL NEIGHBOURHOOD

INTRODUCTION

Our plan for improving connectivity in Bridgeland is to place more of a focus on the cyclist and pedestrian experience. We want people to slow down and enjoy Bridgeland, be they residents or visitors and take advantage of the neighbourhood greenway or the shopping and restaurants on Edmonton Trail and 1st Avenue. This will be accomplished through the extension of the new cycle lane to be built on Edmonton Trail into the neighbourhood and through complete street design measures that result in the widening of sidewalks and traffic calming measures.

ENGAGEMENT FEEDBACK

"People go through Bridgeland, not to Bridgeland"

"I wish I could walk to the zoo easily. The same goes for St Patrick's Island"

"There are too many cars that use 1 Ave as a cut through during rush hour"

"The pathway loop doesn't connect around the neighbourhood"

"Tom Campbell Hill is very important to the community as a recreation place, but is missing sidewalks and difficult to access from the majority of the neighbourhood"

"There should be better transit provision for seniors and those wanting access of the health facilities in East Riverside"

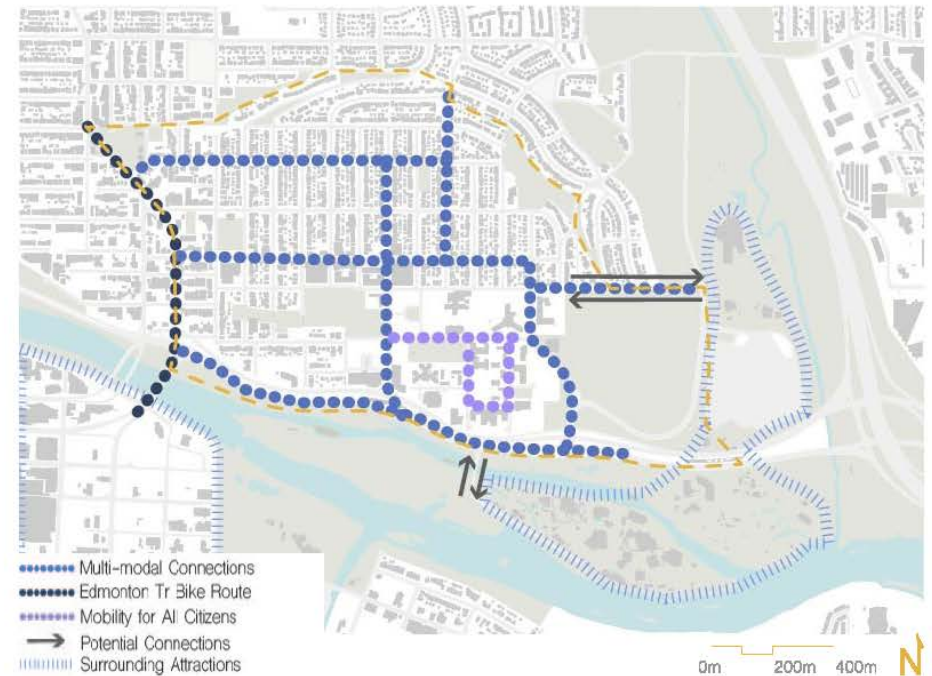
"People aren't comfortable biking on 1 Ave in traffic and would like a separated lane"

"The bluff doesn't have enough staircases"

"Bike lanes are currently inadequate and need to be expanded"

"There should be more pedestrian crossings on 1 Ave"

MULTIMODAL NEIGHBOURHOOD



Streetscapes are not friendly to pedestrians and cyclists

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to connectivity:

1. Make efforts to transform 1 Avenue into a Complete Street:

Due to the arterial nature of Edmonton Trail as a major commuter route, it is difficult to transform this street into an environment that is completely safe and geared toward the pedestrian experience, so instead we will focus on turning the Activity Centre Street of 1 Avenue into one. We will do so by removing the northern parallel parking lane, which allows for the sidewalks to be extended on either side of the road and provide more space for street trees, targeted to be planted here as part of the greenway. There will also be more space to accommodate better seating, lighting, and patios, specifically on the north side of the street where sun exposure and development potential are greatest. There will be more room for a dedicated bike lane along the north side of the street, providing extra buffering for pedestrians from traffic. The widths of all these elements can be accommodated as demonstrated by the cross sections of 1 Avenue provided.

FOCUS AREA

General Avenue Square: To be discussed in greater detail in the commercial corridor concept chapter, this square in the centre of the neighbourhood will have additional complete street elements. It will be paved in cobblestone and change the direction of 1 Avenue into a bowshape as a traffic calming measure for the block, making it a far less attractive cut through option during rush hour. This square has the potential to be fully closed off to vehicles during events and act as a community celebration square.



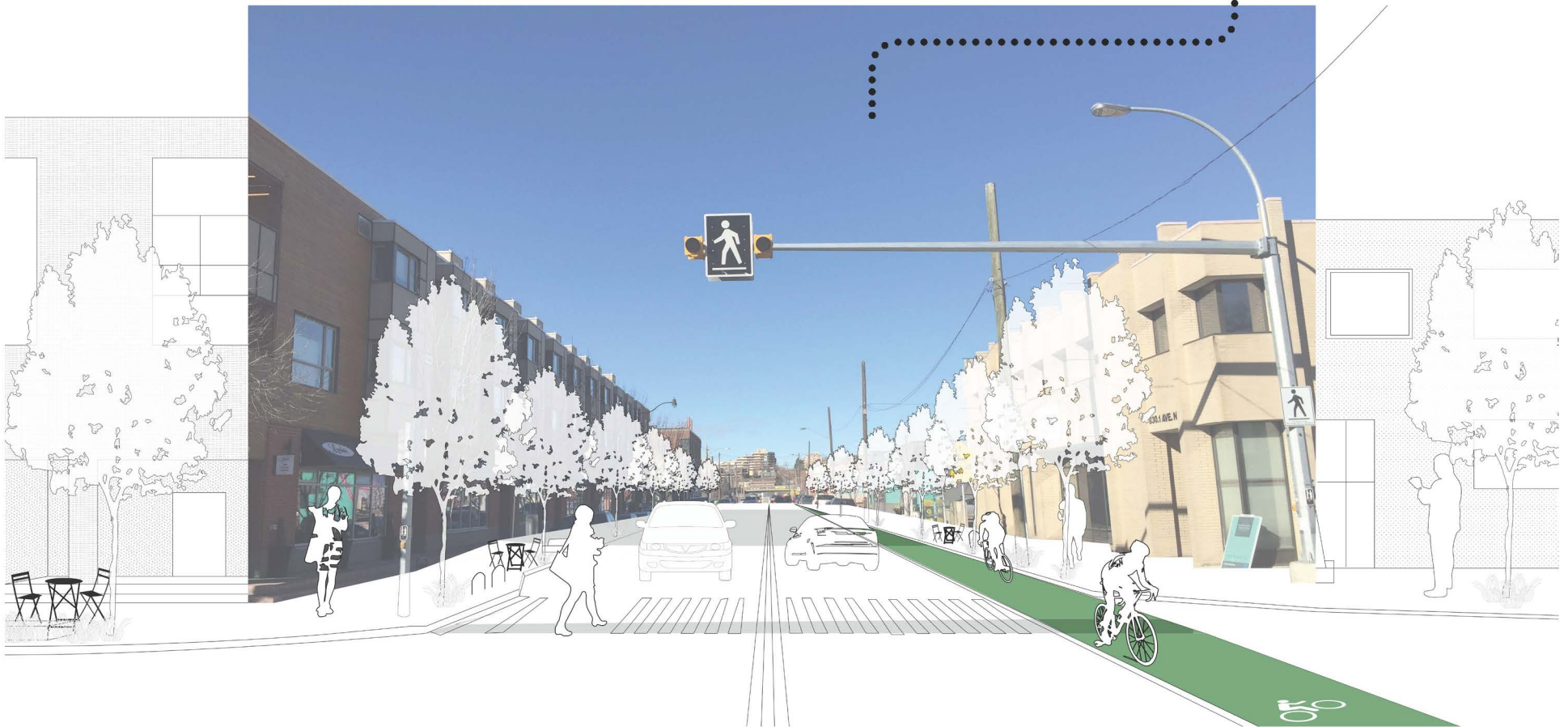
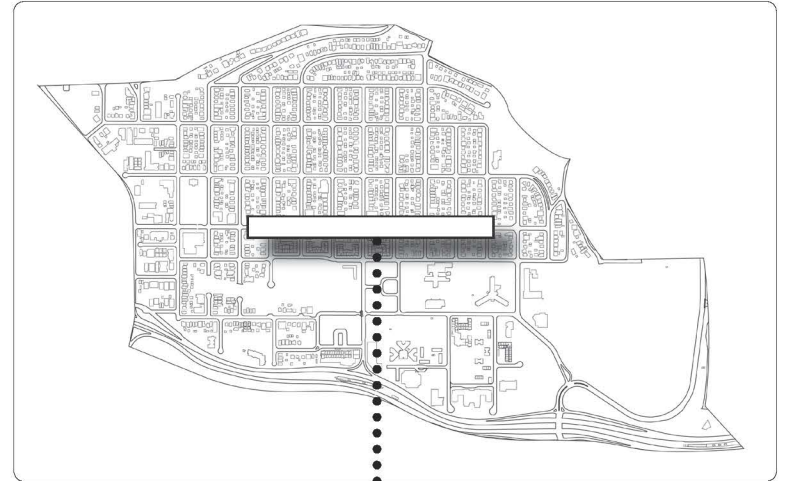
Downtown, Calgary: 7 Street SW separated cycle route
To avoid making it a one-way street



Experiential View: 1 Avenue Complete Street, looking west to square

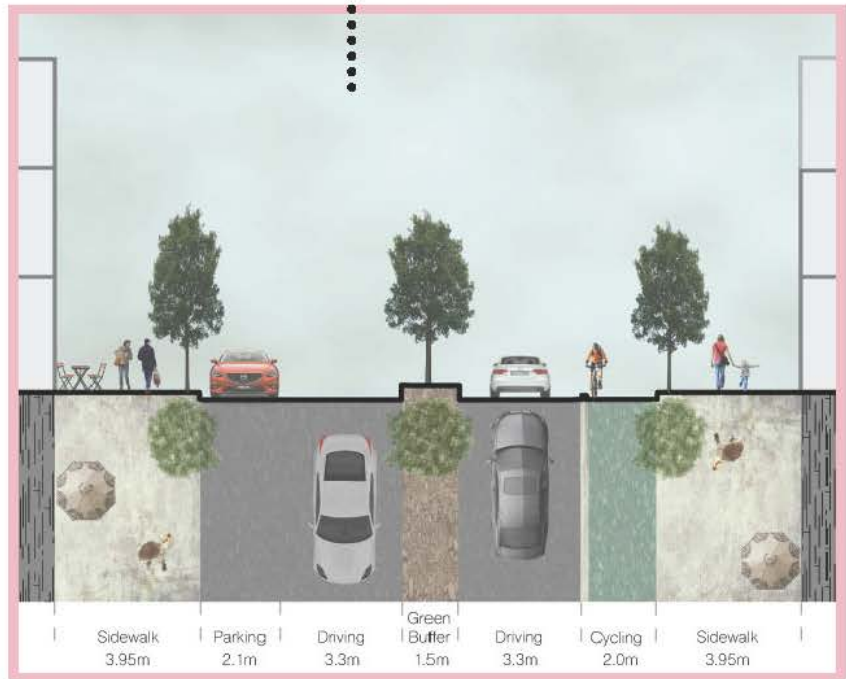
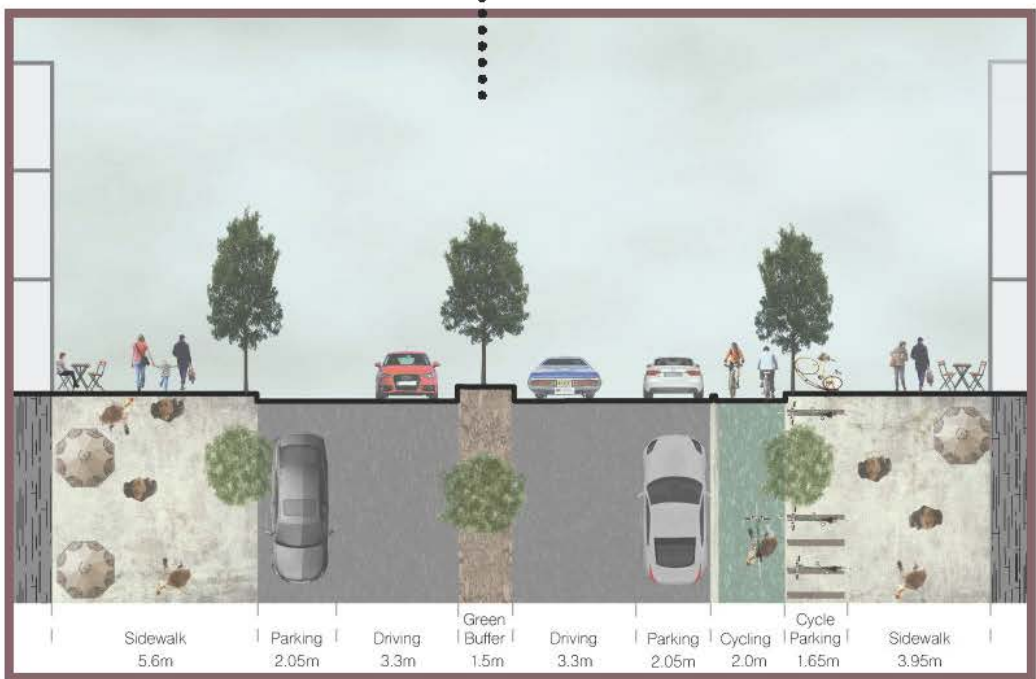
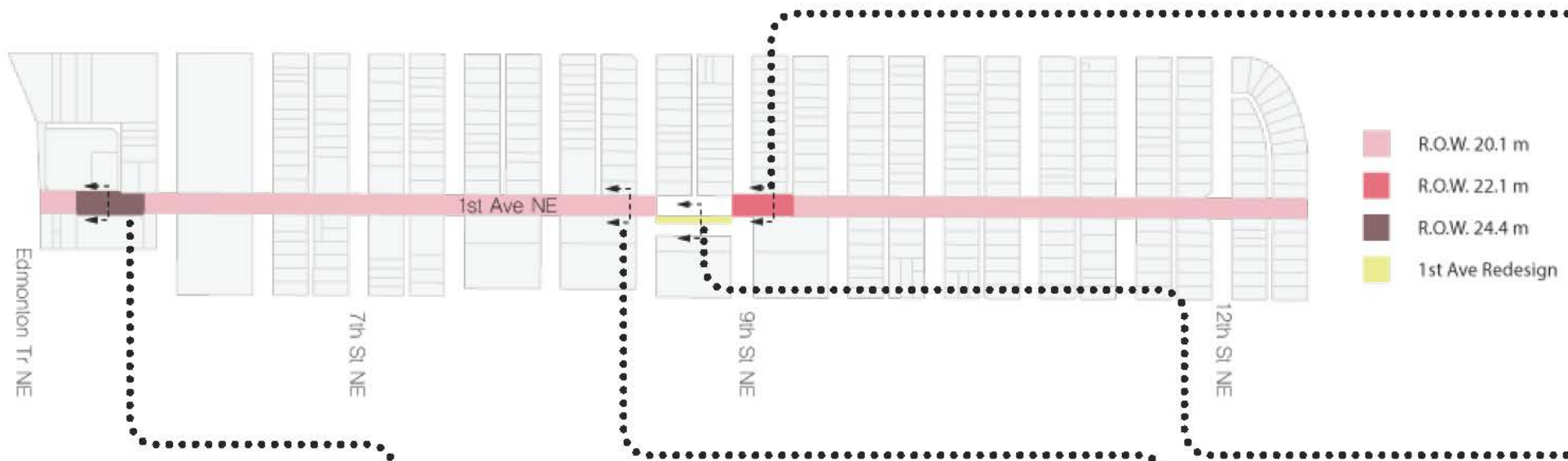
POLICY GUIDANCE

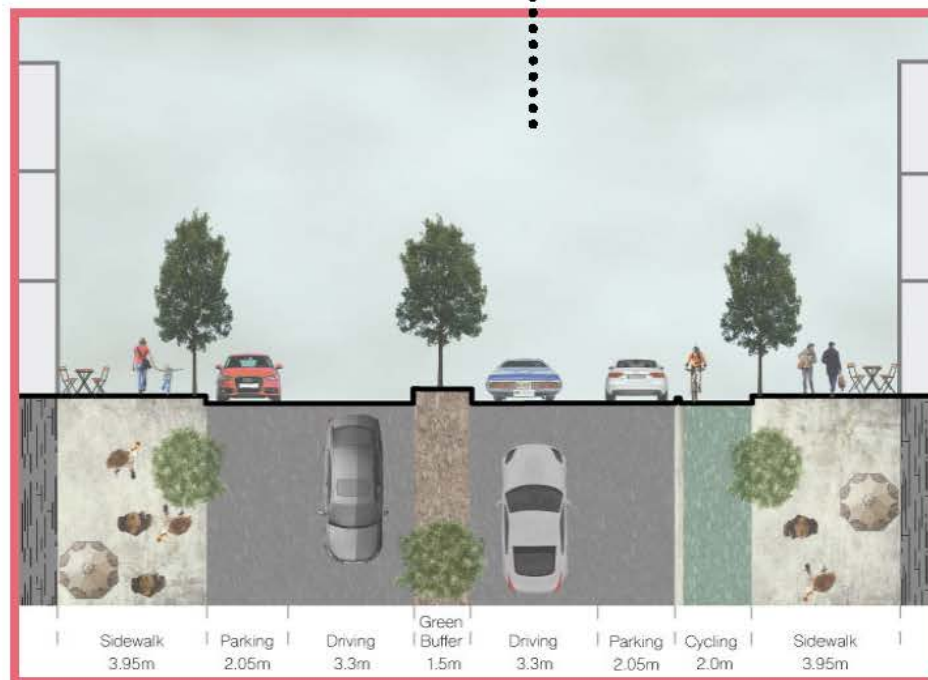
City of Calgary Complete Streets Guide: This document gave us the mechanics to determine appropriate widths of vehicle and bike lanes to be fully accommodated on 1 Avenue. It also helped us categorize the main streets in our neighbourhood and help us determine where to best focus our attention.



1 Avenue as a Complete Street

1 AVENUE RIGHT OF WAY RECOMMENDATIONS





2. **Greenway Overlay:** The greenway system described in the parks and open space chapter will be overlaid with complete street aims. 1 Avenue has already been addressed, however, our recommendation for the remainder of the streets in the greenway is to determine whether road width can be cut down in favour of a sidewalk extension that acts as its own bike lane.

PRECEDENT

Copenhagen, Denmark: The bike lanes in Copenhagen are set in the street, yet slightly raised and divided from the main road by a cobblestone soldier row. This simple solution disseminates the two separate lanes, making a safe space on otherwise busy roads for cyclists.



New York City Cycle Path buffered with trees
<http://www.nycbikemaps.com/wp-content/uploads/2007/06/Ocean-Parkway-Bike-Path-1.jpg>



Bike Path, Copenhagen: Cobbles used to distinguish spaces
<https://pricetags.files.wordpress.com/2014/04/nyc-2.jpg>





COMMERCIAL CORRIDOR DEVELOPMENT

INTRODUCTION

.....○

Edmonton Trail and 1 Avenue have a range of amenities, but this offering can be improved through densification that will support more ground level businesses. They also require better public realm elements to draw visitors into these areas, which will be explored in this chapter. Finally, we will outline our vision for future development massing on main streets in Bridgeland, including the proposed neighbourhood hub, General Avenue Square. Our ultimate commercial corridor goal is to create beautiful entrances that draw Calgarians into main streets possessing excellent and varied amenities.



Layering of Major Commercial Corridor Interventions

DRAW VISITORS AND RESIDENTS TO THE COMMUNITY CENTRE

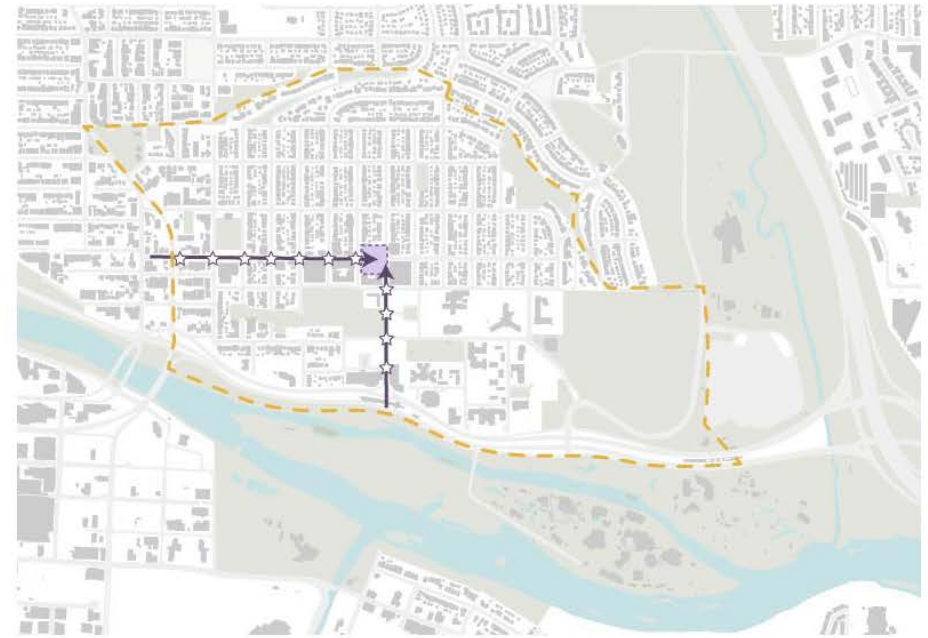
INTRODUCTION

Entrances to commercial corridors in Bridgeland are unsafe due to heavy traffic and are poorly upkept in comparison to the high street area on 1 Avenue where the Bridges are found. Our goal is to beautify commercial corridors through provision of public realm pieces that are contextually relevant to Bridgeland while simultaneously making entrances safer through pedestrian friendly design. We will also use public art in tandem with greenway and connectivity goals to draw visitors into the heart of the neighbourhood.

ENGAGEMENT FEEDBACK

- "Lighting needs to be improved throughout the neighbourhood"
- "Public art should be more prevalent, like on the 1 Ave bridge"
- "Community entrances are ugly and should be beautified with stores and placemaking pieces"
- "Lighting, seating, and public realm elements are lacking on our main streets"
- "Edmonton Trail is busy and unpleasant during rush hour and dangerous to cross"
- "Edmonton Trail should be improved with gardens and lighting"

ART AND ENTRANCES DRAWING PEOPLE IN



Beautifying existing entrances to draw people in

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to improving commercial corridor appeal:

1. **Safe Art:** The first step in drawing visitors into the community is making entrances and streets safer for pedestrians and cyclists. Dual-purpose crosswalks can be used for safe passage of pedestrians and also to welcome visitors to Bridgeland, telling the story of the community. We have proposed using Calgarian bridges as a theme, ordering them chronologically by construction date from Edmonton Trail moving in towards General Avenue Square to draw pedestrians into the neighbourhood centre. However, any theme relevant to Bridgeland's history and culture would be appropriate and different themes can be explored on different streets. The selection of themes for this art would also be a fun and meaningful way to involve the community in a planning decision.

PRECEDENTS

Caracas and Easttown: These cities arted their crosswalks. Caracas made theirs colourful to liven up the street, while Easttown is an American neighbourhood with a musical history that they celebrate through their crosswalks.



Caracas, Venezuela: Art used on crosswalk to draw people in
<http://gonzalocama.com/wp-content/uploads/2014/08/Painted-crosswalks-by-Carlos-Gonzalez.jpg>

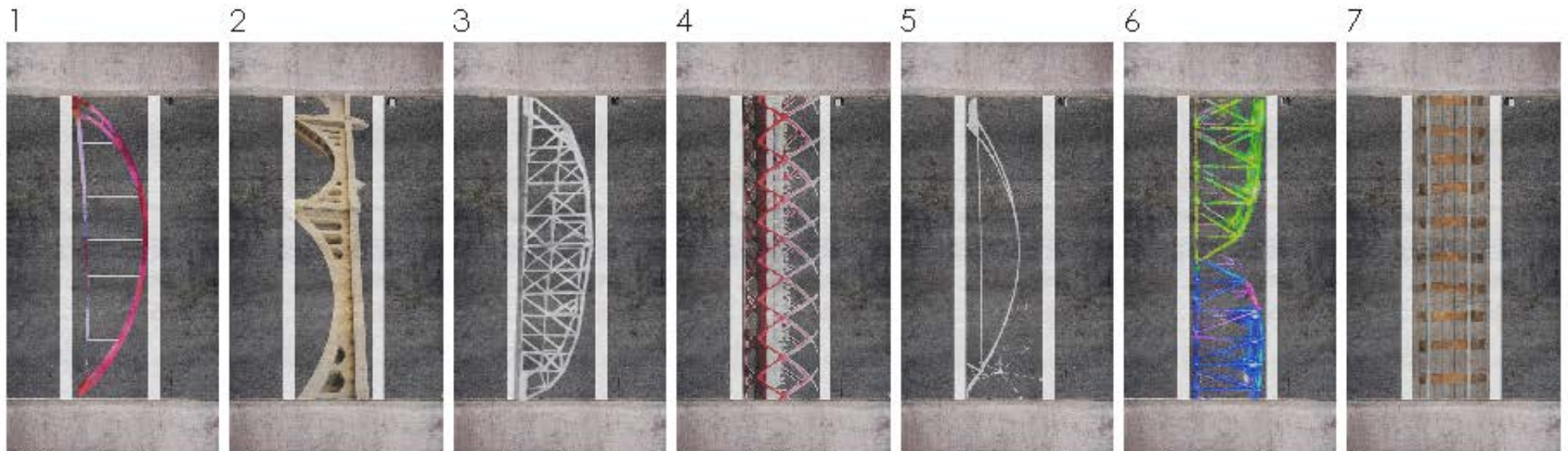


Easttown, USA: Themed crosswalk art to tell neighbourhood story
http://onmilwaukee.com/images/articles/piano-crosswalks-piano-crosswalks_fullsize_story0.jpg_1372431200.jpg

BRIDGES TO THE CENTRE: CROSSWALK ART THEME



Plan View of crosswalk art along 1 Avenue



Bridges of Calgary are being used as a crosswalk pattern to draw people into the centre of the neighbourhood, General Avenue Square

2. Beautify Entrances: After entrances have been made safer, neighbourhood identity will be further strengthened through the use of certain materials or vegetation that tells visitors and residents that they have arrived in Bridgeland. The following entrances should be targeted by the beautification committee for placemaking elements such as planter boxes, seating, or art (the colours and materials are to be determined by the committee):

Edmonton Trail and Memorial Drive

Edmonton Trail and 1 Avenue

9 Street and 12 Street exits from Memorial Drive



Urban Precedents: Beautification elements at entrances

<https://s-media-cache-ak0.pinimg.com/736x/7d/8c/f1/7d8cf12d8730b33bcaeeaa458d93fed3.jpg>



http://cms.esi.info/_Media/productImages/157248_1360681809873_Pf.jpg



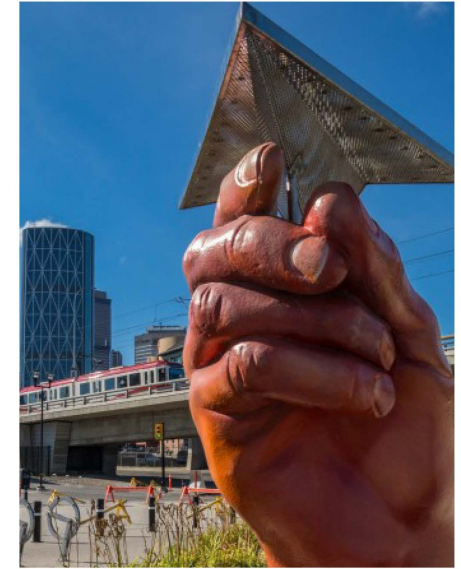
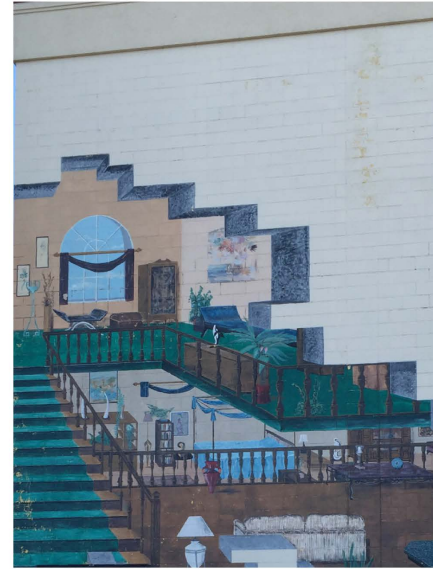
Experiential View: Safety and beautification features invite people into Bridgeland

3. **Art on the Greenway:** We propose installing art walls, places for Calgary artists to have their work displayed on a rotating basis. These walls, in conjunction with other art pieces like sculptures will be placed strategically throughout the neighbourhood to create an art walk that eventually connects viewers to the centre of the community, General Avenue Square.

- **Punctuation:** A cause for pause, whereby the streetscape is interrupted and makes people slow down. This is being implemented in General Avenue Square by the bowed traffic calming measure, paved in cobbles.
- **Focal Point:** This is the obvious centre of the neighbourhood that the other views lead to. We have only placed street trees and planters in General Ave Square to not be prescriptive, but believe that an iconic piece such as a fountain in the summer that can transform into a holiday tree holder in the winter months could act as the neighbourhood focal point. We also propose secondary focal points along the greenway, either the art walls already discussed or sculptures. From these secondary focal points, the goal is to have a view of the main focal point to draw people to the centre.
- **Linking and Joining:** Emerging patterns that are used again to draw visitors to the centre. The art sidewalks are how we plan to link and join 1 Avenue at either end to the centre cobbles.

PRECEDENT

The Concise Townscape, Gordon Cullen: This book provides images and descriptions of good public spaces and informed us of the base elements we should employ to draw residents and visitors alike to the neighbourhood hub, General Avenue Square.



Calgary: Art walls and sculptures used along the Greenway

http://www.bigdoer.com/wp-content/uploads/2014/11/IMG_0669-640x479.jpg



Cullen, Concise Townscape: Example of Punctuation

The Concise Townscape, Gordon Cullen



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DEVELOP THE MAIN STREETS

INTRODUCTION

The commercial corridors of Bridgeland are growing. They currently possess some gaps in their lengths that could be filled with both residential and commercial development. This is most obvious on the north side of 1 Avenue, where massing of the buildings here pale in comparison to their southern neighbours. This issue will be addressed via the provision of densification and redevelopment guidelines, which will see larger, mixed use buildings that mirror the ones already existing. We will also address improving the public realm along these main streets. Once visitors have been drawn in from community entrances, there must be public realm infrastructure in place that entices them to stay and enjoy the neighbourhood.

ENGAGEMENT FEEDBACK

- "Seating and plaza options can be improved on 1 Ave"
- "1 Ave and Edmonton Trail are the best places for densification"
- "The north side of 1 Ave is underdeveloped and should incorporate public art when redeveloped"
- "Patios would be good on the north side of 1 Ave"
- "There isn't enough redevelopment, especially along Edmonton Trail, the entire area looks shabby"
- "Connection from the LRT to 1 Ave is good but can continue to be improved"

CORRIDOR DEVELOPMENT

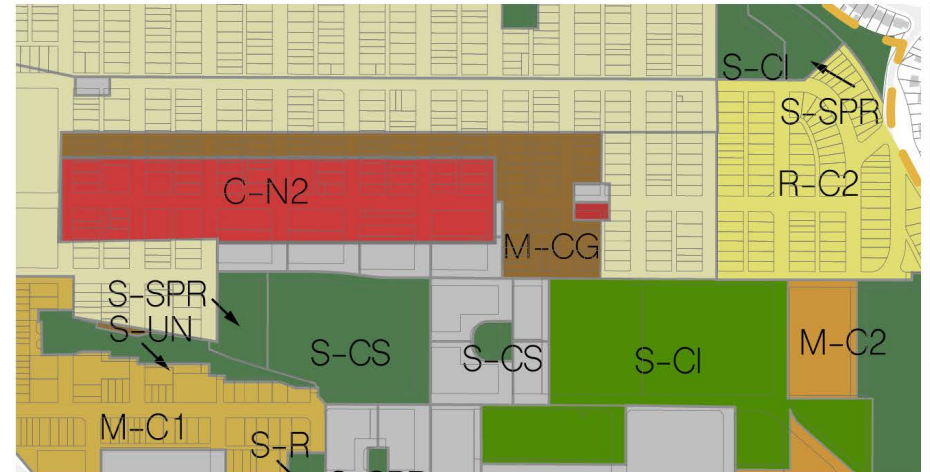


Mainstreets can be densified

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to the growth and development of Bridgeland's Main Streets:

1. **Rezone Commercial Corridors:** With the exception of the Bridges and where the school and schoolyard take up the north and south side of the block face, we are recommending that the remainder of 1 Avenue between Edmonton Trail and 9 Street be rezoned to a Commercial-Neighbourhood 2 (C-N2) district. In so doing, the block can eventually be redeveloped to provide a better sense of commercial connection from Edmonton Trail into the heart of the neighbourhood, General Avenue Square.
- **Height Easement:** We foresee that the buildings being developed along this corridor will be similar in height to the Bridges developments already constructed. C-N2 zoning allows for commercial on the ground floor, with residential or more commercial on upper levels up to a maximum building height of 10 metres. We propose that an easement be granted to mixed-use buildings to allow them a greater height, up to 14 metres (or four storeys), this higher section being set back from the road to appropriately mirror the Bridges development. However, this easement must only be granted when the building footprint, its setbacks, and public realm provisions at ground level (be they plaza space, patios, seating, street trees) are sufficient to the standards set out in this document.



Proposed Commercial Corridor zoning changes



Height easements granted in exchange for public realm elements

http://www.pearltrees.com/s_pic_or_pleached-street-trees-99644635.jpg

2. Mix the use on Edmonton Trail: Extending the C-N2 designation on 1 Avenue to where it meets Edmonton Trail will provide more commercial corridor continuity between the two streets and become a logical built form draw into the centre of Bridgeland. For Edmonton Trail itself, we are not proposing any commercial zoning changes, but are recommending that new developments should have a mix of ground floor amenities, especially if the residential tower is very tall. These amenities can pair with community entrance safety and beautification aims to make the future street level a pleasant and safer place to be.

3. Improve the Public Realm of Commercial Corridors: As already explained, developers that want to build an extra storey and sell more units will only be awarded the C-N2 height easement if they contribute to an enhanced public realm on their property and throughout the community. The BRCA should pair with the City of Calgary and real estate experts on an economic strategy to determine the monetary amount to charge developers in exchange for this extra storey. This money can then be funnelled into BRCA- controlled funds for commissioning public art, expanding and renewing the canopy, better seating and lighting along the Greenway, or supporting business owners on 1st Avenue in attaining patio permits and helping to invest in excellent patio spaces.



Urban Design Guideline: More planters and street trees
http://www.penick.net/digging_images/2016_01_01_Planter_plaza_seating.JPG



Urban Design Guideline: Public art
<https://s-media-cache-ak0.pinimg.com/736x/dd/19/c0/dd19c0a68ab719411e35b139ed3ce682.jpg>



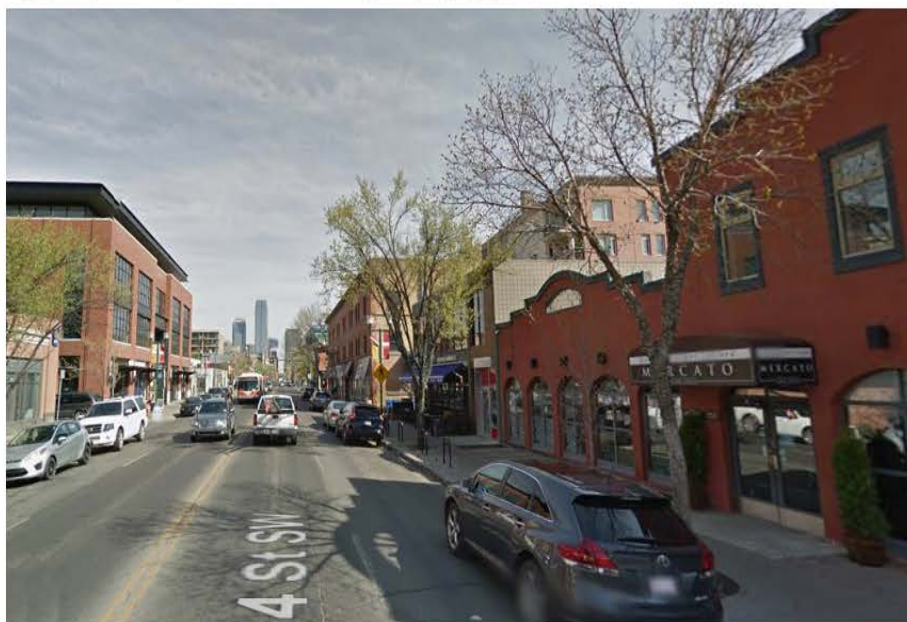
Urban Design Guideline: Mobile canopy and furniture for flexible spaces
<https://s-media-cache-ak0.pinimg.com/736x/dd/19/c0/dd19c0a68ab719411e35b139ed3ce682.jpg>



Urban Design Guideline: Unique ground conditions disseminate space
https://cometravelwithkim.files.wordpress.com/2012/06/dsc_3270_full-size.jpg



Urban Design Guideline: More seating, non-static options
http://p-fst2.pixstatic.com_506a015f74c5b64b0f000a70_w.1500_s.fl1.jpg.jpg



Mission, Calgary: Best practice for 1 Avenue to aspire to
[4thstsw.jpg](#)

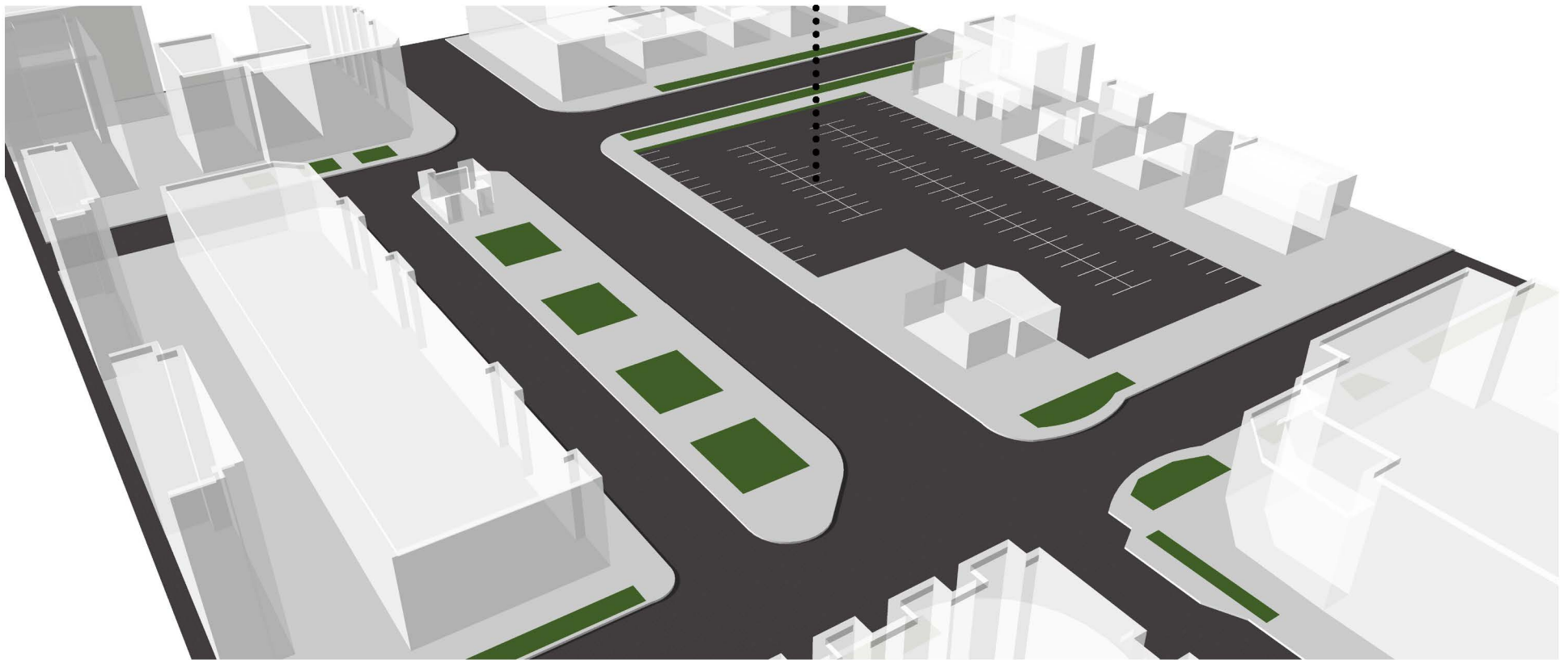
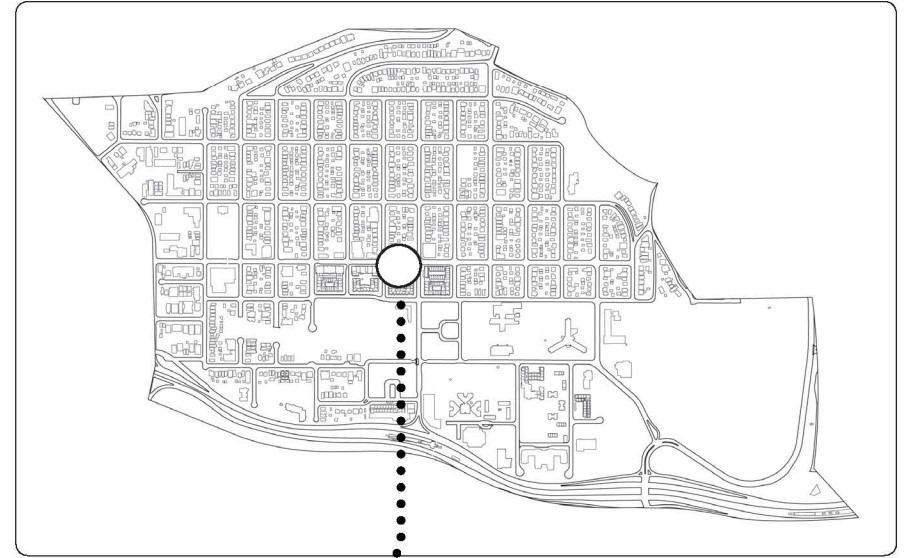
AREA OF FOCUS

General Avenue Square: This four parcel purchase and phased redevelopment of the north side of 1st Avenue between 8A and 9 Streets and the right of way extending south to the Bridges will form an improved community hub. It will act as a meeting place for Bridgelandians that possesses an outstanding public realm, to be used for both casual and event purposes. It will be the future home of a BRCA entertainment space that will function alongside the community hall. The ultimate goal is that this is where Bridgeland will be celebrated. People will no longer go through Bridgeland, but to Bridgeland to enjoy this space. The following phasing to the plan is one suggestion of how the space could be developed. However, this phasing could also be scrapped in favour of a more aggressive and combined redevelopment plan, should the appropriate developer and city divisions be on board and able to provide appropriate financing.

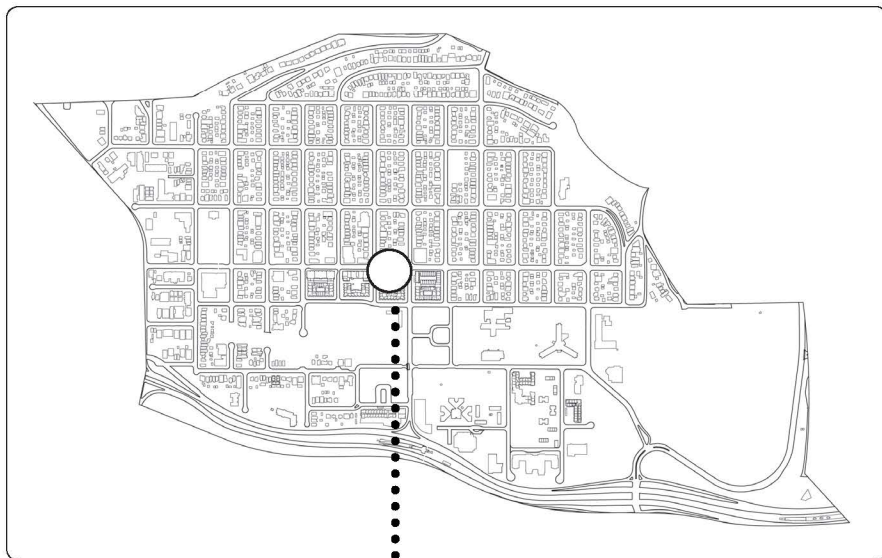
PRECEDENT

4th Street SW (Mission): Mission possesses a similar building scale on both sides of the street and a good mix of amenities at street level, which we believe can be emulated on Bridgeland's commercial corridors. It also has many of the public realm elements we desire to place in the neighbourhood, such as patios, more street trees, and public art.

Phase 1: This first phase will involve the purchase of the four southernmost parcels between 8A and 9 Streets abutting 1 Avenue. These parcels can be bought in partnership with the City. The Calgary Parking Authority will generate revenue on the site in phase 1 via the running of an at grade parking lot that accommodates 114 stalls, more than making up for the parking that was lost from the removal of the parallel lane on 1 Avenue. All buildings on site will be demolished except for the dwelling that currently houses La Brezza Restaurant. This will be taken over by the BRCA as a café-pub, an entertainment venue that will store equipment for events that will take place on the parking lot. We envision fairs, concerts, and cultural events taking place here.



Phase 1 Perspective View



Phase 2: This phase sees 1 Avenue and General Avenue being redesigned to make a better public space. The entirety of the area, existing plaza included, will be paved with cobblestone and have curb cuts for the bike lane added on the north side. Curb cuts will also be made on a gentle arc for the road, slowing down traffic when passing through the area. This road will be lined with bollards and trees for pedestrian safety. Once the area has been paved, street trees and planters will be installed strategically through its remainder, in addition to lighting and mobile furniture, which can be stored in the entertainment facility. The improved public realm allows the BRCA to now extend their event space from the parking lot to the square, priming the parking lot and pub for redevelopment.

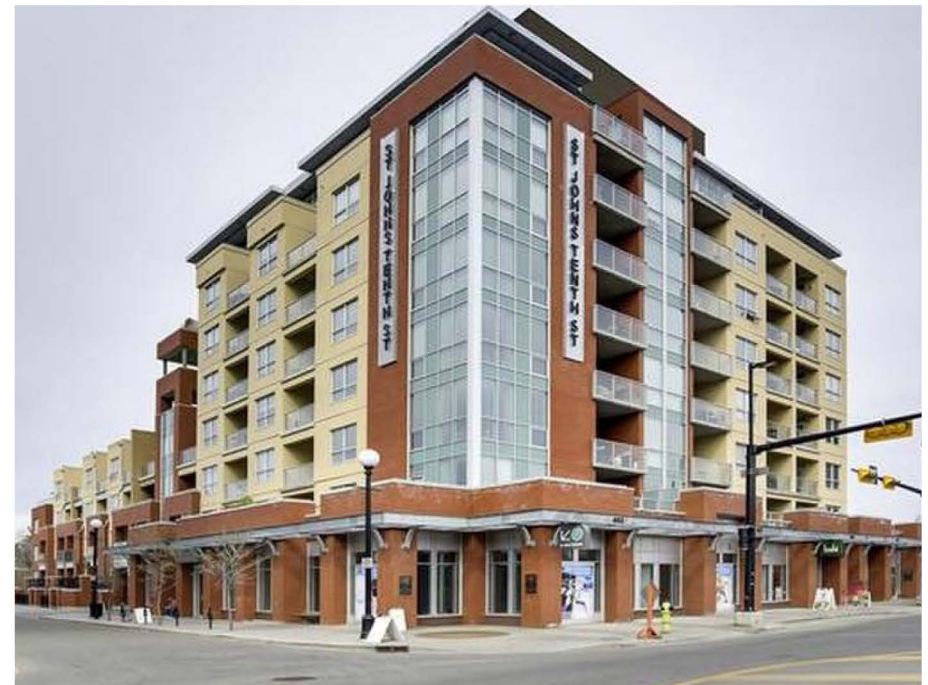
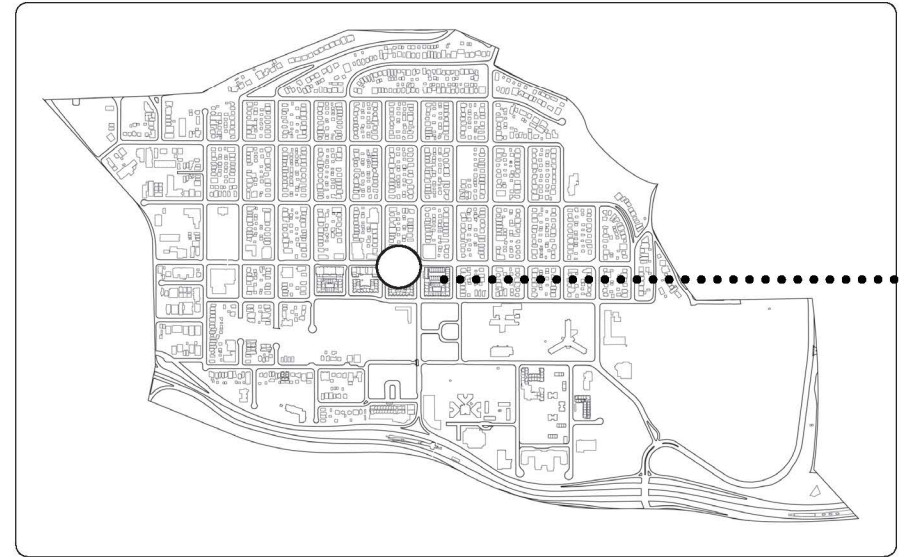


Phase 2 Perspective View

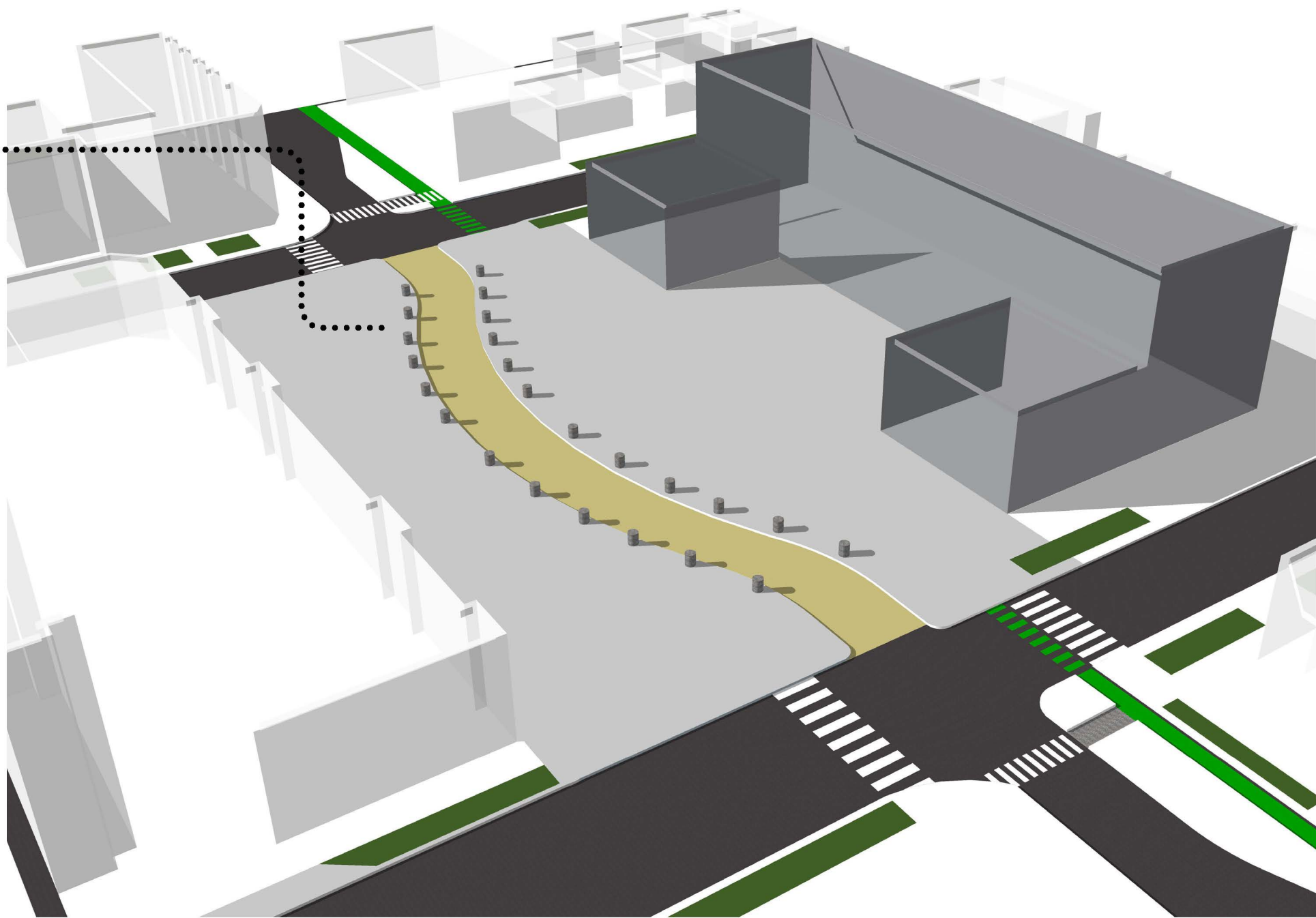
Phase 3: Pairing with a developer, the City and Parking Authority will sell the parcels and allow for development of a mixed use building with ground floor amenities and an underground parking to accommodate for removal of the at grade parking lot. The sale may be reduced in price to allow for the continued use of a parking facility by the Parking Authority, in addition to accommodating unit stalls. The developer will be given a height easement to install more residential to 14 metres. It will be recommended that the building has an open courtyard that faces out into the square, so private businesses that rent out ground floor space have open access to the square and there can be public and private options for those visiting. For the same reason, it is also recommended that the BRCA run its pub and entertainment venue out of the ground floor of the building, so it has access to the square for running larger events in this adaptive space.

PRECEDENT

St John's on Tenth Kensington: Before this apartment building in Kensington was constructed, the parcel initially had a Parking Authority lot at grade. When the building was developed, a deal was made to retain the pay stalls by installing a parking lot underground to help alleviate parking concerns on 10 Street. This deal could be emulated on our site either through a height relaxation or reduction in price on the parcel sale to the developer. It is an important element to the new development here due to the reduction in parking from the 1 Avenue cycle track and identified lack of additional parking for people living in the Bridges.



St. John's on Tenth, Calgary: Public parking on site retained
www.justinhavre.com_st-johns-tenth-st-calgary-condos.jpg



Phase 3 Perspective View



Contextual Plan View: Phase 3 Buildout



Experiential View: General Avenue Square



Perspective View: General Avenue Square upon Phase 3 completion

IMPROVE AMENITY PROVISION ALONG MAIN STREETS AND IN EAST RIVERSIDE

AMENITY PROVISION

INTRODUCTION

There are some holes in amenity provision that the community has identified. These will be addressed in tandem with redevelopment aims to provide a better array of services along Edmonton Trail and 1 Avenue. Additionally, unique, community based amenities will be injected into East Riverside to make this area more of a hub for all of Bridgeland and easier to access for the senior citizens living there.

ENGAGEMENT FEEDBACK

"The community hall is difficult to see, access, and use. Where is the pool, pub, and skating rink?"

"There's a lack of places to interact with friends in the neighbourhood"

"A lack of amenities in Bridgeland means more vehicle traffic in the community as people travel elsewhere"

"Bridgeland needs a community hub to retain its neighbourhood feel as it densifies"

"Makers spaces should be available for all residents who want a large space to create"

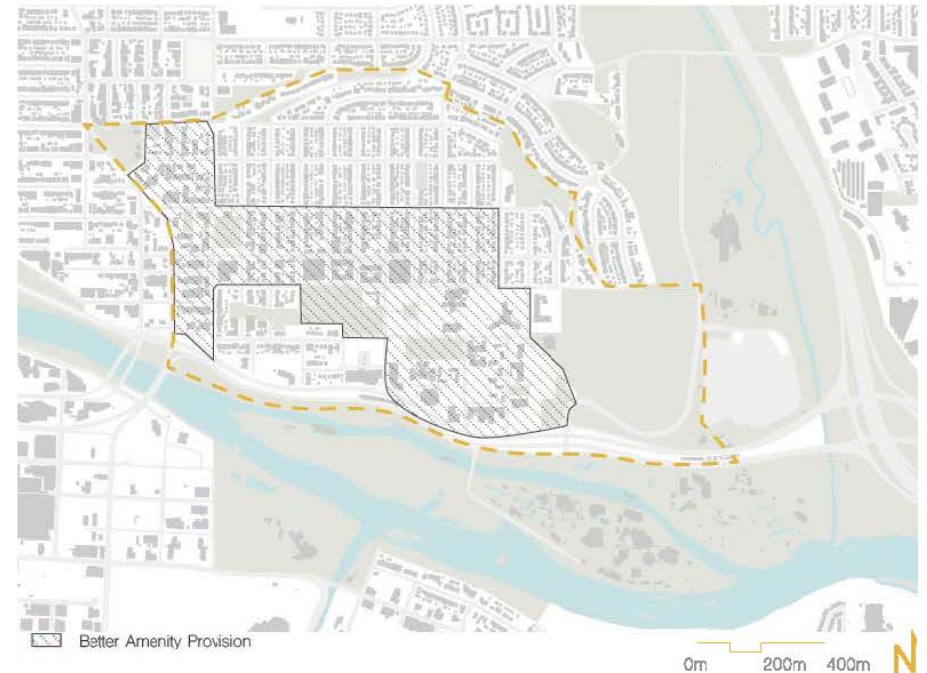
"There are no doctor's offices here"

"The community hall needs a cafe or pub"

"The community hall is impersonal and sterile, it should be renovated to be more comfortable and reflect Bridgeland"

"More pubs, cafes, art galleries and book stores please"

"There aren't any amenities in East Riverside- some here would better connect it to the rest of the community"



Major opportunity for increased amenity provision, 1 Avenue

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to the provision of better amenities neighbourhood-wide:

1. General Avenue Square as Community Centre

Entertainment Hub: We have described the physical space of General Avenue Square at length, but have not focused much on the programming of the space. As outlined in the first section of this chapter, there should be an iconic centre of the square that acts as a daily centre point. We have suggested at fountain that doubles as a holiday tree holder in the winter, but this is up to the discretion of the BRCA. This piece of art will act as a visual for visitors to enjoy from an adjacent patio or in the square from the mobile furniture. The space will also act as an event zone: there can be a vast array of activities held here, such as food booths being set up by local restaurants offering samples on summer days or an annual holiday festival held in December with ice sculpture competitions. The point is that this space is for the public to enjoy, a draw that will bring foot and cycle traffic to the square from the greenway and lead to commercial success for local vendors.

2. Retrofit of the existing Community Centre:

We foresee the main change to the community centre being the satellite pub and café location, but suggest a couple small additions to the existing site in Murdoch Park. Public engagement feedback responses often asked for more services, such as fitness facilities and sports equipment rental. The BRCA may want to invest in these, in addition to some tents for the courtyard to stretch the square footage of the hall, making it a more weather-flexible venue for events like the farmer's market.



Nuremberg, Germany: dining experience as way to activate square

10ft-x-20ft-frame-tent-rental-1038x576.jpg



Urban Precedent: Music in the Square

http://www.time-travel-turtle.com/wp-content/uploads/2015/12/Nuremberg-2015-51_web-1rg.jpg



Urban Precedent: Food stalls set up, selling samples

10ft-x-20ft-frame-tent-rental-1038x576.jpg

3. Commercial Corridor Retail Frontage Guidelines: There should be commercial guidelines set in place for new developments on Edmonton Trail and 1 Avenue to allow multiple frontages in each building. Should there be an anchor tenant that wants more square footage, their frontage should still be small, yet take up more of the rear space of the building, as demonstrated in the images on this page. This is an appropriate way to address the grocery store situation, yet we currently see no need to install one due to the Loblaws now under construction in the East Village.

PRECEDENT

Regus Building at 17 Avenue and 8 St SW: This mixed-use building consists of ground level commercial and retail. The anchor tenant, a Best Buy, is on the second floor. It has the same square footage as all the other retailers combined yet has very similar amount of ground floor frontage as the rest.

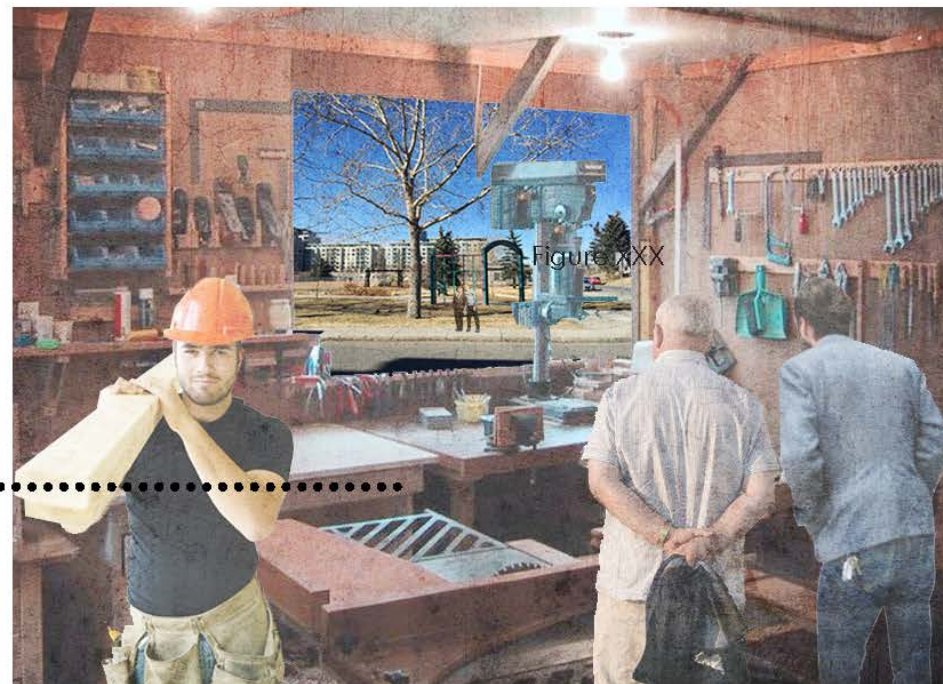
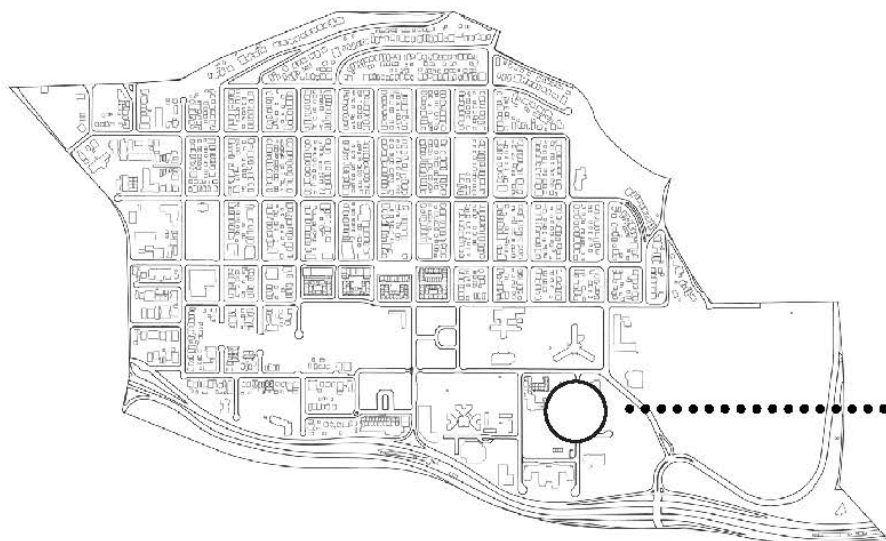
4. 9 Street LRT Corridor as a transition zone: The area immediately north of the LRT station on 9 Street should be a mixed use transition zone into East Riverside, as the bottom floor of these buildings possess spaces for retail and restaurants. The result will be better access to commercial amenities for seniors.



Urban Precedent: sharing frontages despite differing square footage
<http://www.pasynhpost.com/wp-content/uploads/2014/03/broad-and-washington-retail2.jpg>



17 Avenue SW, Calgary: Anchor tenant sharing frontage with others
33rd-avenue-marda-to-open-trance-calgary-hipko-nelson-real-estate.jpg

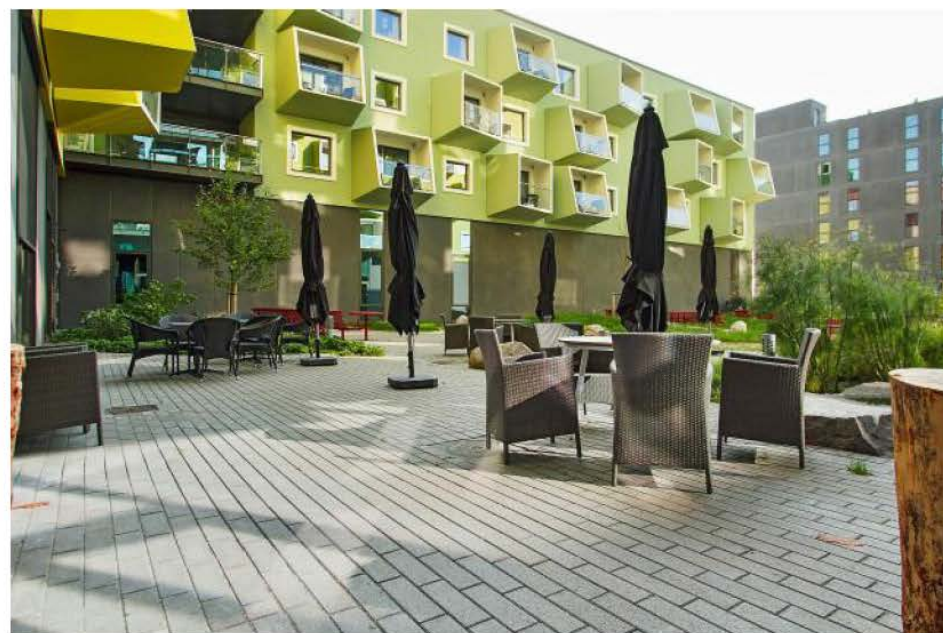


Maker's Space in Silvera

- 5. East Riverside as a community amenity hub:** We propose that the ground floor of senior residences be outfitted with amenities such as doctor's offices, cafes, and maker spaces. These amenities will be available for the entire community to use and draw visitors and residents alike into this currently isolated area. Access to East Riverside will be simplified for visitors as this part of Bridgeland is incorporated into the greenway multimodal network.

PRECEDENT

Orestad Plejecenter Denmark: This new senior housing development has work spaces and a range of service shops on the ground floor friendly to all demographics, resulting in a space that is active not only for its residents but also the surrounding community.



Orejstad Plejecenter, Denmark: mixed use senior housing

http://orestadplejecenter.kk.dk/sites-orestadplejecenter.kk.dk/files-style-node_view_images-public-uploaded-images-24_terrace_1_0.jpg_itol=b3Tfa_4f.jpg



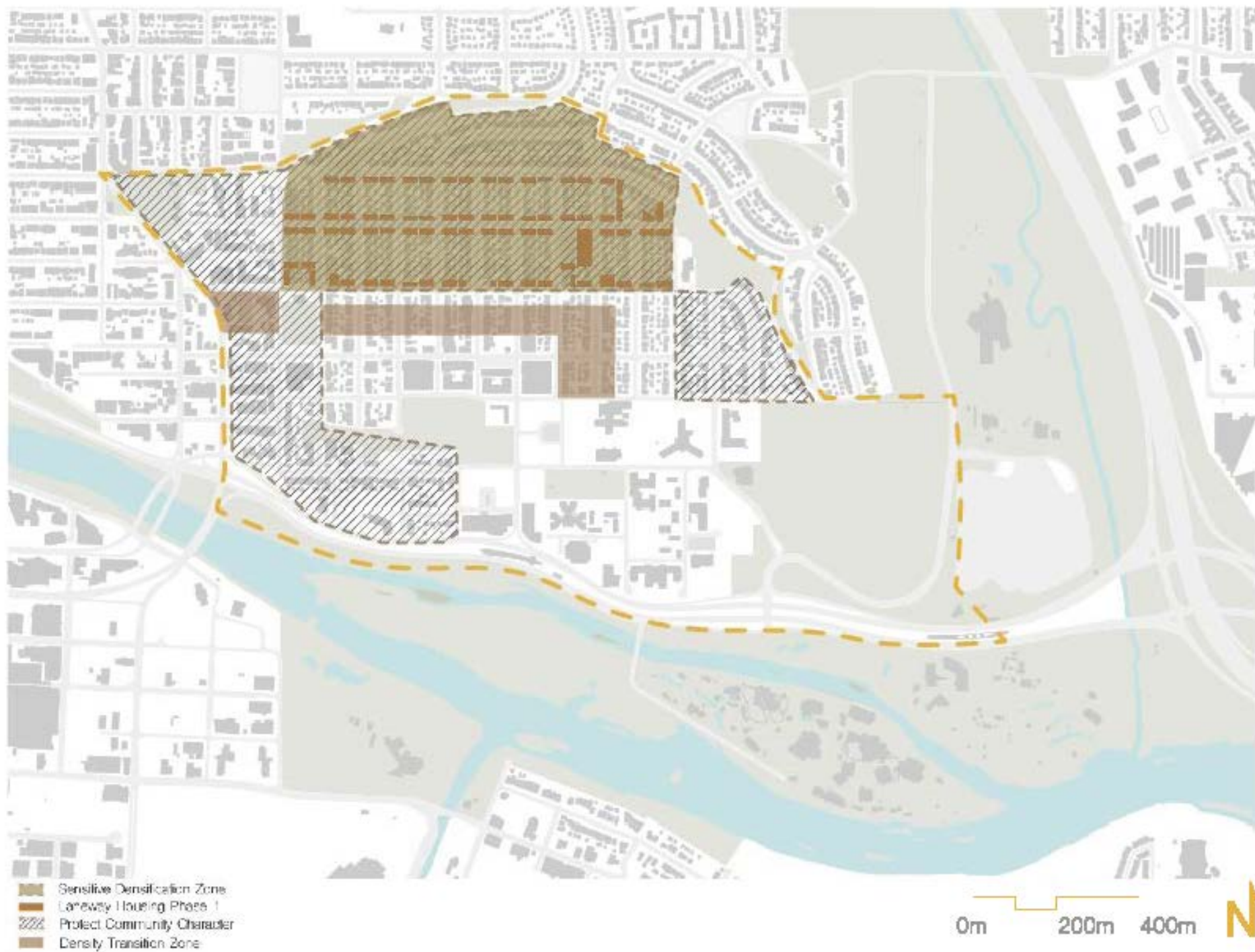


RESIDENTIAL

INTRODUCTION



Our residential goals for Bridgeland primarily involve smarter decisions regarding how building types transition between neighbourhood zones and fit the context of their streetscapes. We will pose solutions to more appropriate residential zoning fanning off of commercial corridors and more sensitive densification measures in single family infill areas, all while establishing measures to preserve locally significant housing and canopy stock.



Layering of Major Residential Interventions

BETTER DENSITY TRANSITION FROM COMMERCIAL CORRIDOR

INTRODUCTION

Commercial corridor transitions into residential areas will need to be better addressed as these corridors grow and develop in the coming years. Transitions will be created via the rezoning of specific blocks to allow for a logical stepdown into lower density areas of Bridgeland. This upzoning serves a dual purpose as it also allows for more densification and a population threshold that supports greater amenity provision on commercial corridors.

ENGAGEMENT FEEDBACK

"There should be thoughtful planning to encourage density but preserve a friendly, family oriented community"

"There is a lack of a comprehensive vision or plan that is trampling over the existing ARP"

"Infill is infusing the neighbourhood with more families which is great"

"Continued family friendly development with affordable mixed residential is ideal"

DENSITY TRANSITION ZONES



Poor density transitions plaguing the neighbourhood

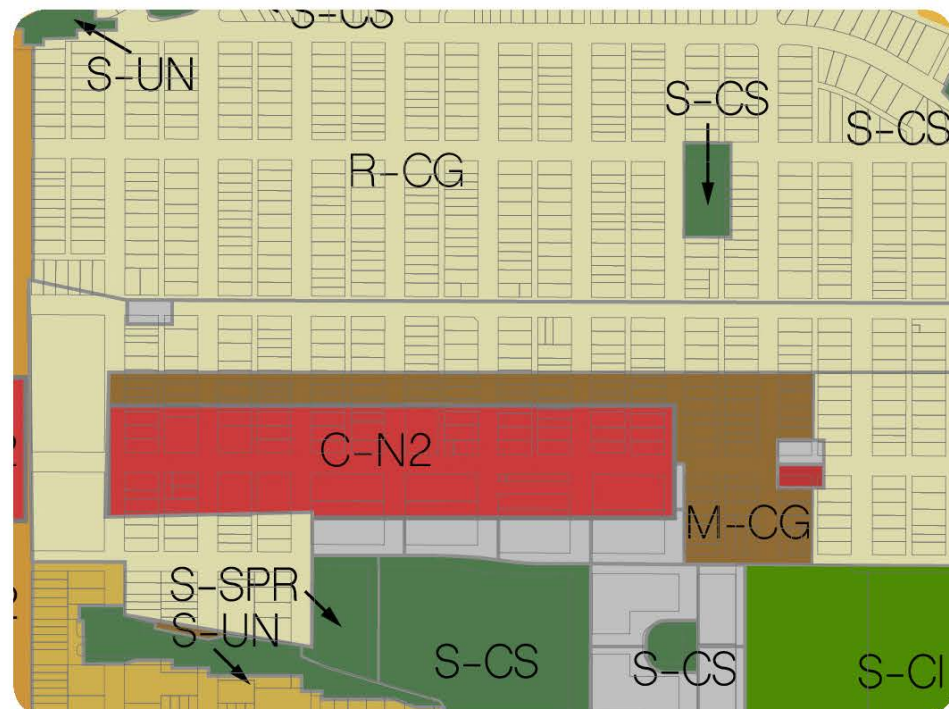
THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to better density transition from commercial corridors:

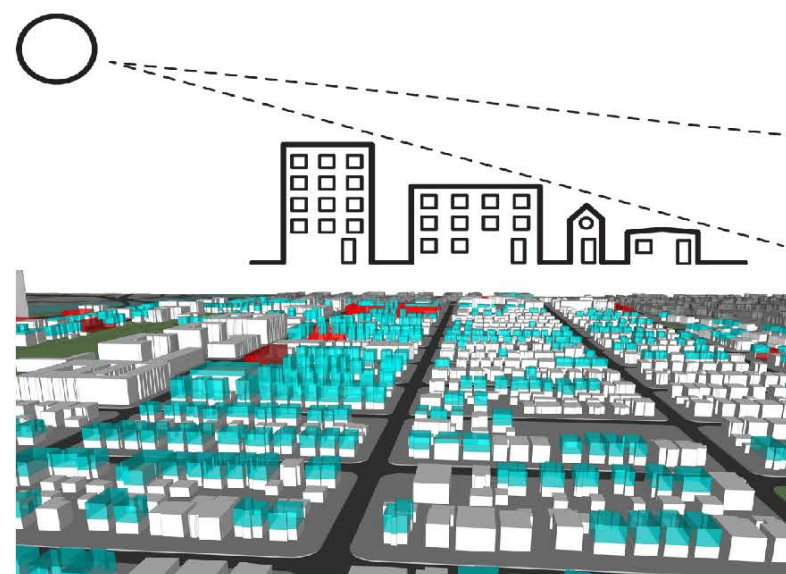
1. **Rezoning:** The zoning around Edmonton Trail makes sense logically, with medium density residential stepping down from higher density commercial and residential. On 1 Avenue, there should be a change in the area immediately abutting the newly rezoned N-C2 district. When taking into consideration that the maximum allowable height on commercial corridors including height easement is 14 metres, it makes sense that a Multi-Residential Contextual Grade Oriented, or M-CG zoning district, which also has a maximum height of 14 metres should be selected for these adjacent areas. This zoning district will serve to densify the area immediately surrounding the 1 Avenue commercial corridor and provide population support for increased services and amenities on commercial corridors. It will also provide a logical transition between N-C2 zoning to the south and the R-CG zoning to the north, as the maximum height of an M-CG parcel adjacent to any low density parcel is 9 metres.

POLICY GUIDANCE

City of Calgary LUB 1P2007: We employed the Land Use Bylaw when determining which land uses would be best to recommend that specific parts of the neighbourhood change to. N-C2 was selected for its building use flexibility, M-CG was selected as a logical stepdown transition zone meant to provide added population support to the neighbourhood, while R-CG was selected in the single family zone for its reduced parking demands for infill housing in comparison to its original R-C2 designation.



Proposed zoning transitions from commercial into low density residential



Massing of proposed density transitions that protect sightlines

SENSITIVE DENSIFICATION IN LOW DENSITY AREAS

INTRODUCTION

Infill in Bridgeland often takes on a boxy form that is not context sensitive to the remainder of the streetscape. We will not propose architectural guidelines for infill, however, we will describe how to achieve a context friendly streetscape. Infill homes on average are also very expensive. To respond, we will propose laneway housing strategies that allow for more affordable, context sensitive infill to be constructed in the neighbourhood.

ENGAGEMENT FEEDBACK

"Low profile versions of high density protects the character of the neighbourhood and keeps the views"

"Current infill projects generally look good"

"Laneway housing is intrusive to neighbouring backyards"

"Laneway houses are good, but they should look better than they do currently"

"Stronger design guidelines for infill properties is an opportunity for Bridgeland"

"Too much cookie cutter infill. Infills are great but need more variability in design to remain a bit eclectic and unique"

SENSITIVE DENSIFICATION AREA



Poorly executed infill and laneway housing

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to densifying in novel ways:

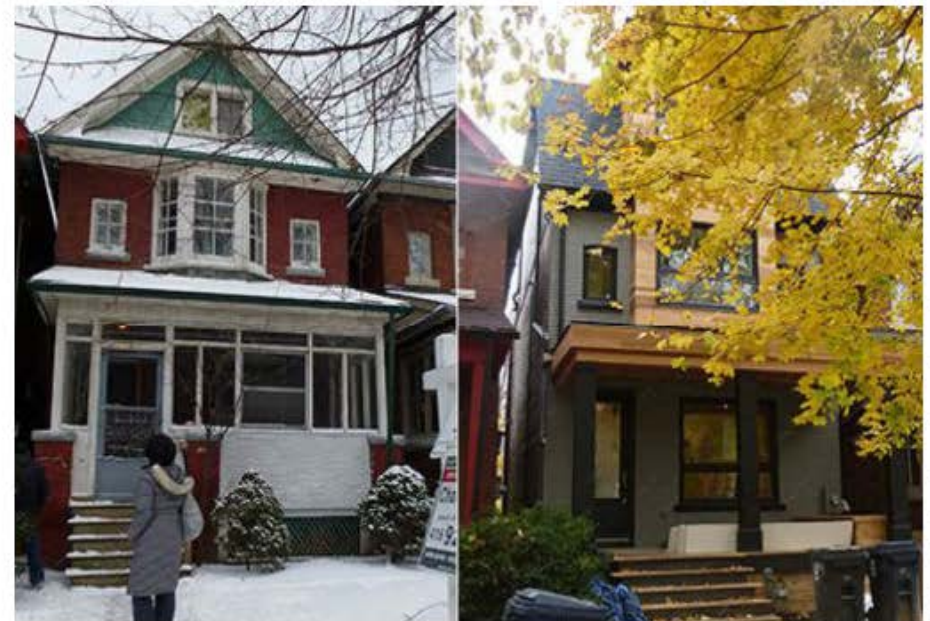
1. **Context Sensitive Infill:** As already stated, we do not want to force architectural guidelines on homeowners in Bridgeland. Instead, we want to celebrate strong existing streetscapes, and enhance those that could be improved. The protection of significant streetscapes will be covered in the next section of this chapter. Should the BRCA want to develop strict infill guidelines, we recommend looking at Edmonton infill guidelines for more specific strategies in relation to setbacks, roof pitch, and height for context sensitivity. We also recommend emulating our laneway policy, but for larger dwellings on an R-CG parcel.



Infill Precedent: Not overwhelming to adjacent properties
<http://michaehomeinc.ca/wp-content/uploads/2016/01/24020209.jpg>



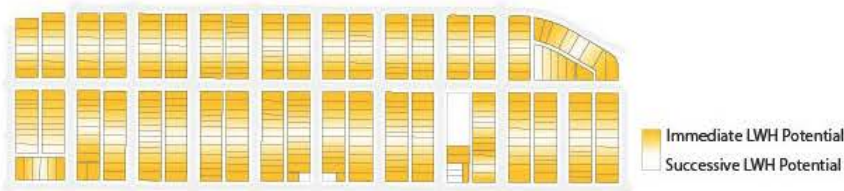
Infill Precedent: Context sensitive materials
<http://static.materialicious.com/images/early-1900-toronto-home-chaire-with-a-glassy-modern-renovation-m.jpg>



Infill Precedent: Maintenance of setbacks and roof pitch in massing
http://www.thestar.com/content/dam/thestar/business/2014/11/14/the_great_toronto_rebuild_542beforeafter.jpg size: xlarge promo.jpg

2. Laneway Primer Guidelines and Proposed Pilot Project:

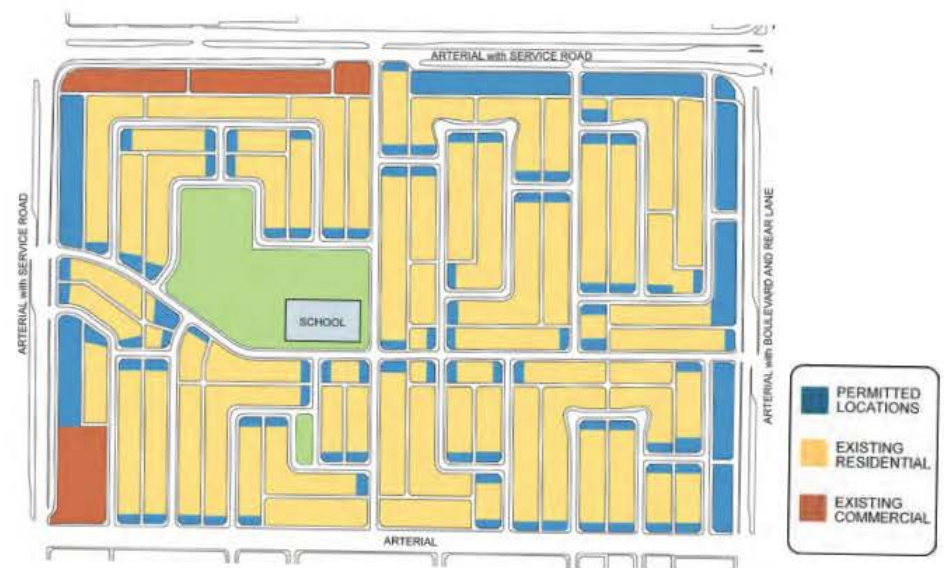
We have determined that the best way to densify this part of the neighbourhood is not through traditional infill methods that merely increase the square footage of a single dwelling, but through the less intrusive densification practice of developing a secondary streetscape, the laneway. In order for these spaces to be developable, laneway primer guidelines must be created to make laneways safer. Lighting will need to be installed in addition to some sort of paving (we suggest permeable because it is environmentally friendly and would give these spaces a unique look). The dwellings themselves will have to face onto the lane in order for these spaces to be well surveilled and remain safe for residents. Furthermore, we suggest a construction phasing gradient: at first only homes within a certain distance from a street corner can build a laneway house. Once one of these parcels has built its laneway house, the next few parcels over can become eligible for construction and so on. This phasing is just a suggestion, however. If a laneway has been properly primed for development, any parcel should be considered safe enough and well surveilled to build on.



Proposed phasing gradient



Laneway housing zone



City of Edmonton, Residential Infill Guidelines: Permitted locations for laneway housing

http://www.edmonton.ca/city_government/documents/PDF/Residential_infill_Guidelines_Sept_2009.pdf

Pilot Project: Mobile Laneway Housing Block:

In order to test the viability of laneway housing in Bridgeland for both market and physical fit, one selected laneway could be targeted for beautification, followed by each home receiving a tiny house on wheels to act as a laneway house. This pilot project would need joint city and homeowner participation. Again, this idea is not meant to be prescriptive, just another option for the BRCA to consider.



Mobile Laneway: Example of potential massing
<http://canhometeam.com/wp-content/uploads/2013/12/woodwellshouse.jpg>

MAIN FLOOR



LOFT



Mobile Laneway: Example of a floor plan
<http://tinyproject.com/wp-content/uploads/2013/12/woodwellshouse.jpg>



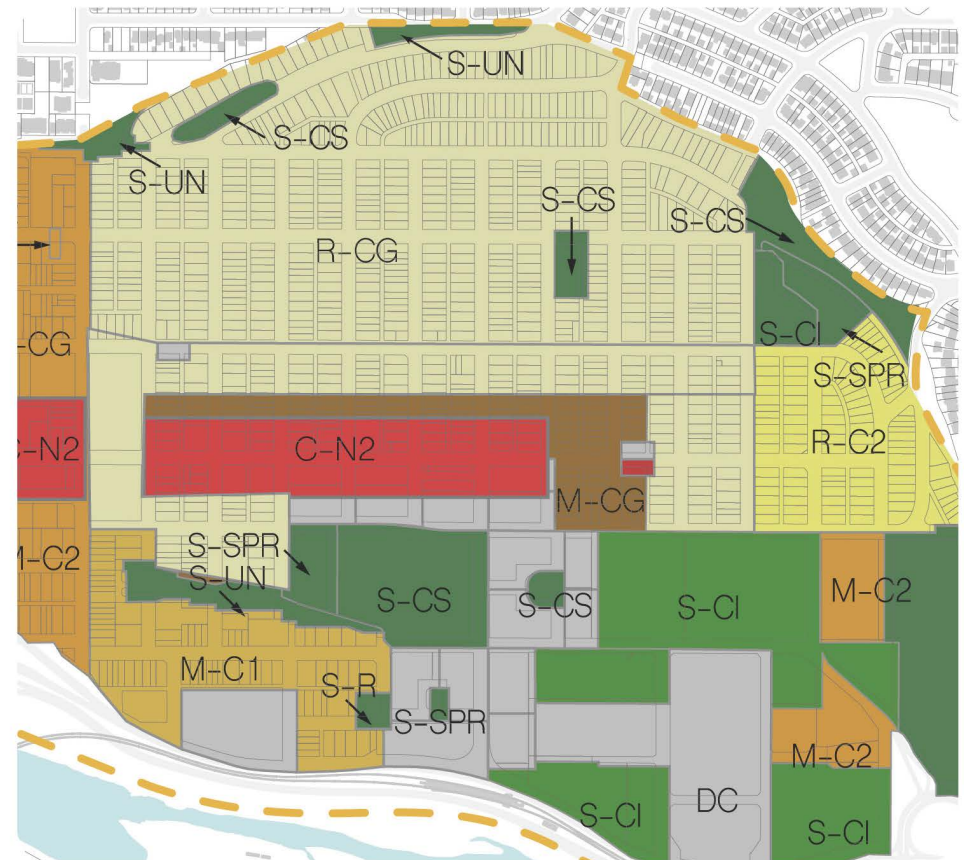
Mobile Laneway: Example of potential massing
<http://www.thetinyhouseproject.com/news/asset>

3. Laneway Housing Parcel Zoning:

Concerns have been brought up regarding the legality of laneway houses with the current land use assigned to the parcels targeted for sensitive densification. In order to legally align with parking restrictions in the Land Use Bylaw, we are proposing to change the zoning to a Residential-Grade Oriented Infill District, R-CG. This reduces the number of parking stalls required to one per unit, and allows for more leeway in building laneway housing.

Policy Guidance: Vancouver Laneway Housing Guidelines and Edmonton Residential Infill Guidelines:

These policies have set rules for laneway housing in regards to windows facing the lane, roof pitch, and stepbacks that allow for context sensitive, non-intrusive construction and safe, well surveilled lanes. They have also provided our guidelines with specificity in relation to phasing and construction of these homes.



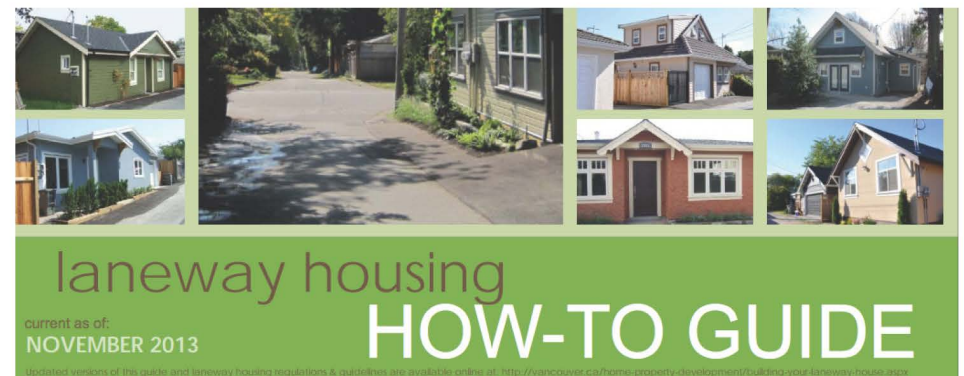
R-CG rezoning to accommodate laneway housing

Residential Infill Guidelines

A Manual of
Planning and Design Guidelines
for Residential Infill in Mature Neighbourhoods

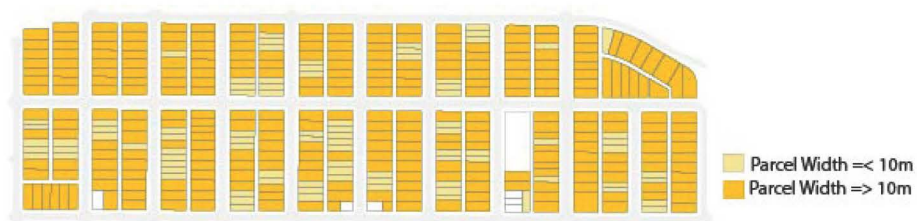
Best Practice: Edmonton Residential Infill Guidelines

http://www.edmonton.ca/city_government/documents/PDF/Residential_Infill_Guidelines_Sept_2009.pdf



Best Practice: Vancouver Laneway Housing How To Guide

<http://vancouver.ca/files/cov/laneway-housing-howto-guide.pdf>



Parcel widths, predetermining what type of laneway home can be built

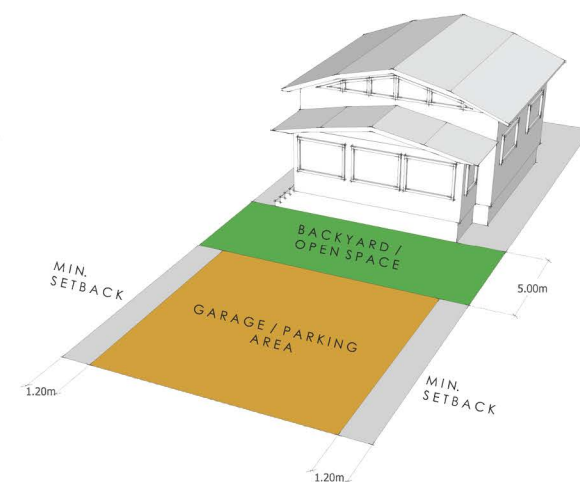
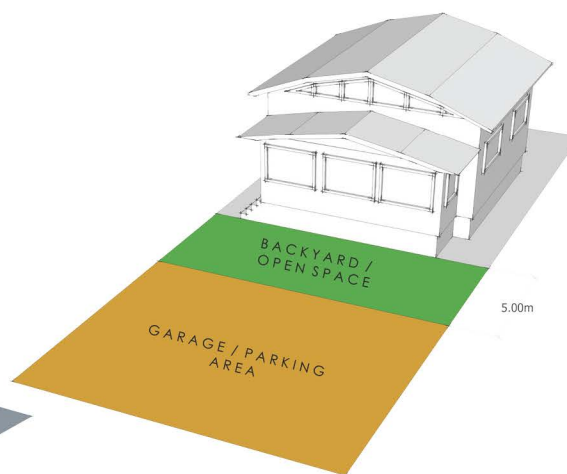
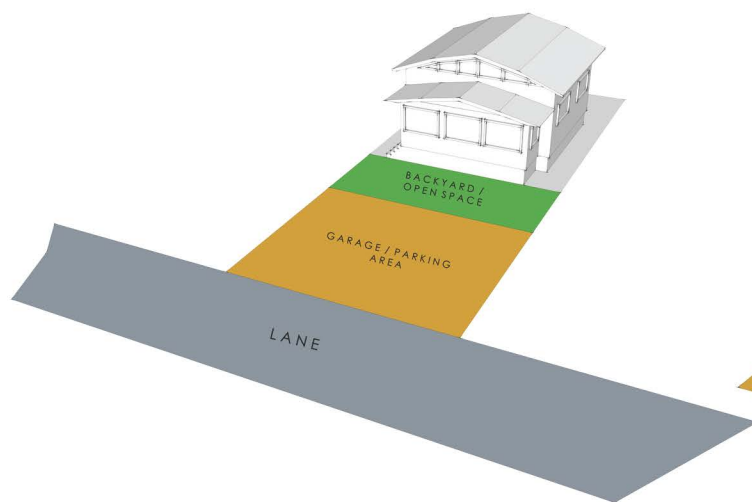
Area of Focus: Bridgeland Laneway Housing Guidelines:

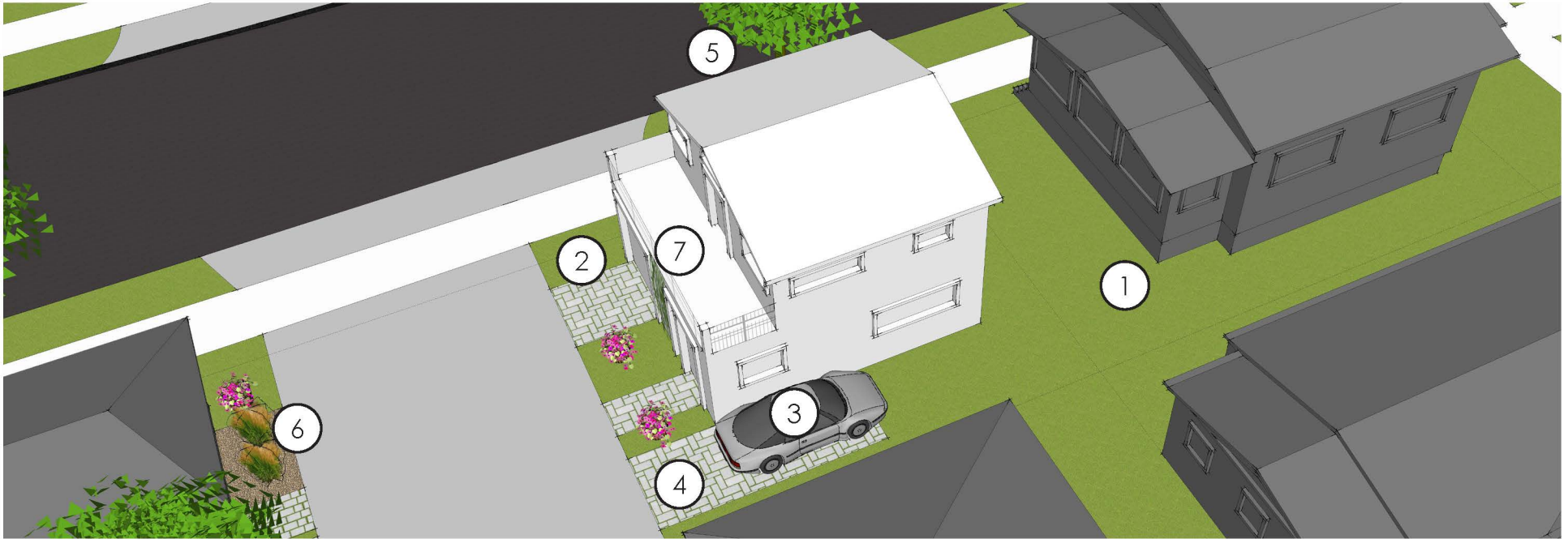
Basic policy regarding laneway homes in Bridgeland are that the dwelling must be on a laneway and that it follows the phasing set out in the primer guidelines. They require a minimum lot width of 10 metres for a garage suite, while those parcels with widths under 10 metres will only be eligible for a garden suite or mobile laneway housing. The lot must be deep enough to allow for a 5 metre backyard separation between the main dwelling and the laneway home.

MUST BE ON LANEWAY

MIN. 5m BACKYARD

MIN. SETBACK 1.2m





SETBACKS

- ① Side setbacks should not exceed those of the original dwelling for emergency access purposes.
- ② The setback from the lane should be at least 1 metre, and more if possible. Finally, entries facing the lane must be set back a minimum of 1.5 metres to allow safe entry and exit to the dwelling.

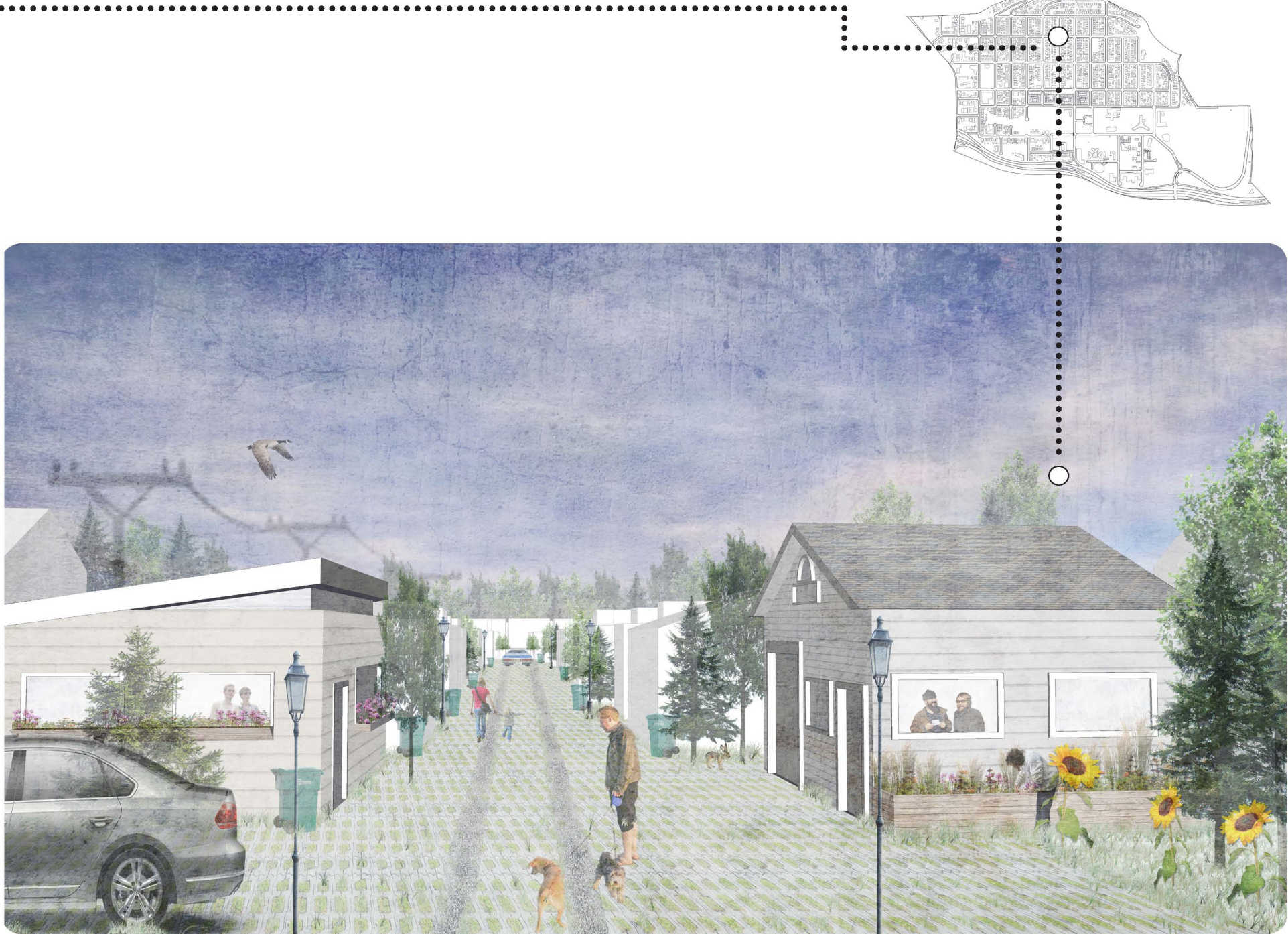
PARKING GUIDELINES

- ③ A minimum of at least one unenclosed parking spot must be provided on properties with laneway homes. This space can be used by either house.
- ④ For corner lots, this parking must be located on the interior of the parcel and not face the road for curb appeal purposes. These parking spots require a 1 metre landscaped side setback, and the ground where the car sits must be constructed of a permeable surface.

LANDSCAPING

- ⑤ Laneway houses should be positioned in a way that preserves existing trees. Relaxations may be given to construction guidelines if existing trees are protected.
- ⑥ Landscaping should feature native plant species that are diverse and drought resistant to provide interest to the lane. For the same reason, colourful flowering plants are recommended to give the lane a bright and welcoming tone.
- ⑦ Finally, green roofs, walls and the planting of deciduous trees are encouraged to break up the material monotony.

LANEWAY: EXPERIENTIAL VIEW



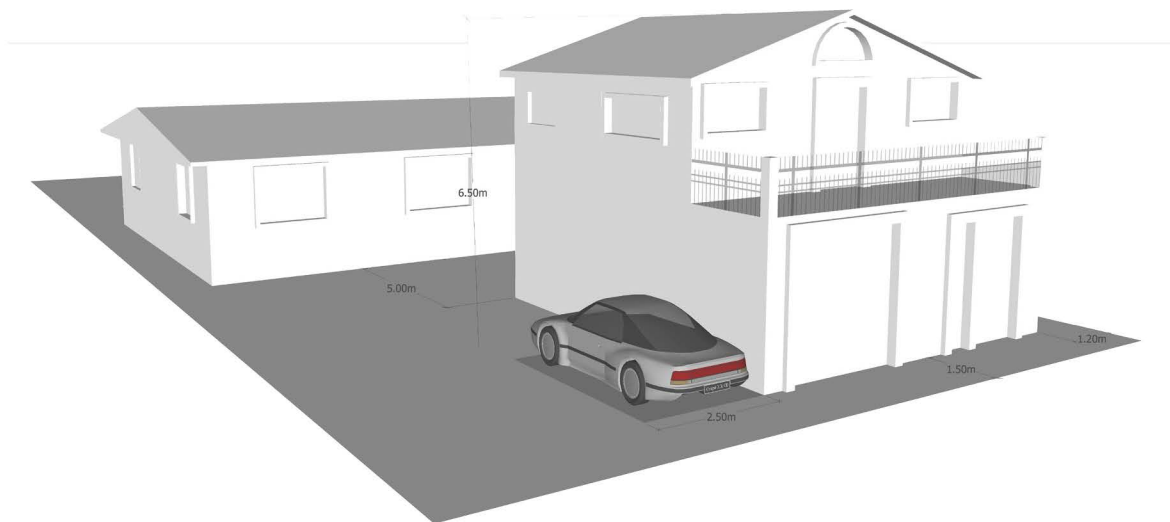
LANEWAY HOUSE TYPE: GARAGE SUITE

Garage Suite Design Guidelines:

- 1 A garage suite should have a front entrance separate from the garage door.
- 2 With a sloped roof, its height must not exceed 6.5 metres. For a flat roof, the maximum height lowers to 5.5 metres, or no higher than the primary dwelling on the site in order to retain privacy and minimize shading.
- 3 Windows should face onto the lane, especially upper level ones. This is to allow privacy for neighbours and surveillance for the laneway.
- 4 Upper level decks are encouraged to promote liveability, however, they must also face the lane, again for privacy purposes.
- 5 Finally, garage suites should aim to achieve material and proportional consistency with the principal dwelling, ensuring quality construction and neighbourhood integration.

Garage Suite Stipulations:

A maximum of one garage suite can be built per lot, and may not be built on any parcel already possessing multi-family construction. The partial upper level of a garage suite is also limited to 60% of its ground floor footprint, in order to minimize shadow and overlook onto adjacent properties.

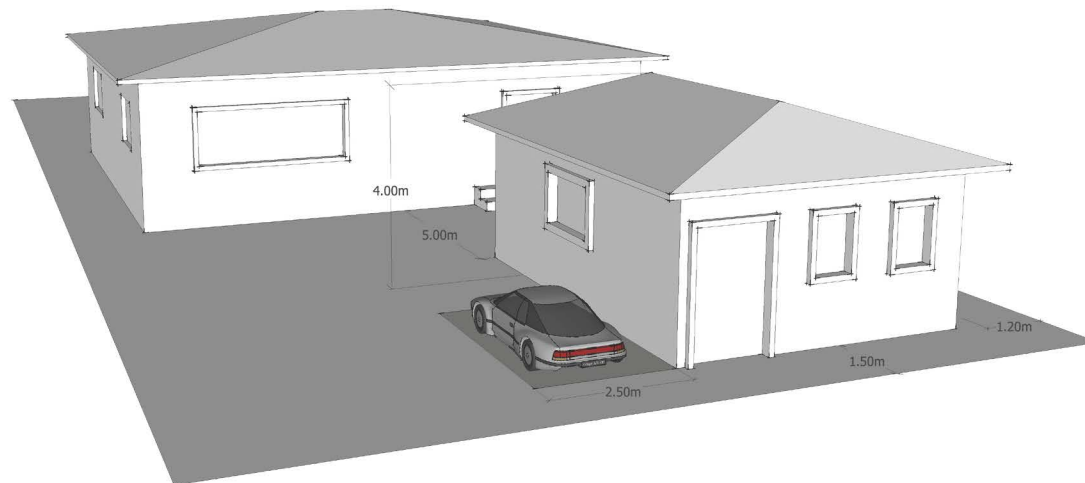




LANEWAY HOUSE TYPE: GARDEN SUITE

Garage Suite Design Guidelines:

- ① One storey garden suites are permitted. If it shares a wall with a detached garage and creates the appearance of one structure, the longest wall should face the principal dwelling to reduce impacts on adjacent properties and also be set back significantly from them.
- ② It should also incorporate design features that reduce the massing and monotony of a long, unbroken wall.
- ③ Like garage suites, garden suites should be contextually sensitive in materials, roof slope, and massing to the primary dwelling.
- ④ Windows should be offset from adjacent structures and larger ones should be facing the larger side yard for privacy purposes.
- ⑤ Finally, the porch should be facing the laneway.





PROTECT AND ENHANCE NEIGHBOURHOOD CHARACTER

INTRODUCTION

Much of the existing housing stock and tree canopy has been removed in thanks to infill practices in the single-family zone north of 1 Avenue. In order to combat this trend and protect mature trees and heritage dwellings, we will propose both developer and community oriented defense mechanisms.

ENGAGEMENT FEEDBACK

"The character of the old houses is lost as infill keeps happening"

"Mature trees are being torn down to make way for infill"

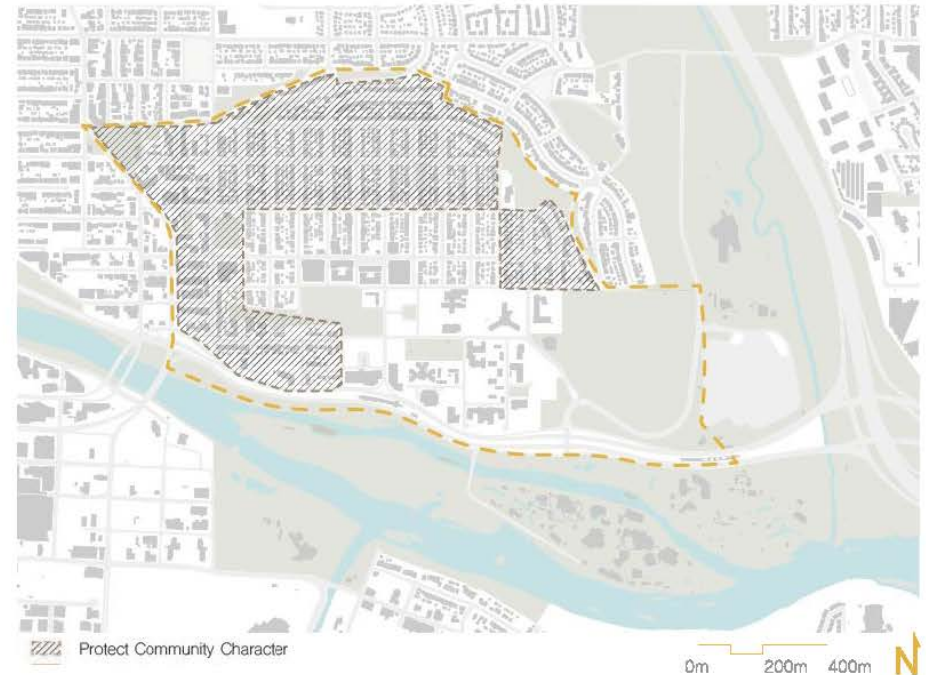
"All streets should have canopies like 8 St and 8A St"

"Infill streets are becoming the new norm: they are taking over"

"I like laneway housing, it lets my neighbourhood keep its character while adding houses"

"Neighbourhood history should be visible on signs and plaques"

PROTECT NEIGHBOURHOOD CHARACTER



Canopy and heritage housing stock is being lost to infill practices

THE PLAN

Taking into consideration both engagement feedback and site analysis findings, the following interventions are planned as they relate to the establishment and protection of neighbourhood character:

1. **Heritage Dwelling Identification and Protection:** The housing ages map isolates homes that were built before 1945. We believe that some of these dwellings are very worth protecting from infill, and that the BRCA should further isolate character homes from this era that they deem most significant. From this list, they can establish a program to celebrate Bridgeland heritage, getting the community involved to select their favourite dwellings. The top five or ten as voted by the community each year could receive a heritage plaque to be mounted on the front façade, inspiring others to look at their older houses and preserve their own heritage. This program is not meant to be prescriptive: the interior of the home can be renovated and used as the owner sees fit. The overarching goal is to preserve and celebrate high quality streetscapes.

POLICY GUIDANCE

Edmonton Historic Resource Management Plan: This document should be used to guide Bridgeland's long-term heritage strategy. It gives tips on how to establish a heritage register and inventory, incentivize preservation for homeowners, and monitor how identified dwellings are affected by the development process. The ultimate goal of this policy is flexibility for owners, so long as they prioritize context sensitivity of the streetscape and respect the original character of their dwelling.



Dwellings highlighted in green were constructed before 1945



Historic Resource Management Plan

Best Practice Document: City of Edmonton Historic Resource Management Plan
http://www.edmonton.ca/city_government/documents/PDF/HistoricResourcePlanMay2009.pdf



Potential Heritage Plaque

2. Increasing the Canopy through Developer Levies: The canopy study we have completed shows that there are 2,953 trees missing on both residential and commercial blocks in Bridgeland. In addition, many of the mature canopied street trees will soon be coming to their end of their lives, and as a result, the community needs to be proactive about planting new trees to protect existing streetscapes and the public realm. The first step to solving this problem is to make a tree inventory that can be reflected on the trunk with a barcode, for the BRCA to keep track of what kinds of trees of which age are located on which blocks. This will help to make decisions about where it is most important to plant first and on species variation in establishing a healthy urban canopy. As already discussed in the commercial corridors chapter, developers may be rewarded with a height easement in their mixed use buildings should they contribute to the public realm. This scenario should also be extended to a canopy contribution fund, whereby the BRCA determines where the money goes for future greenway planting. Furthermore, to protect the canopy in the single family zone from infill construction, we recommend adopting a tree deposit strategy, where the owner must pay a fee to cut down any trees, only to be returned when they have replaced said tree with one of equal or greater value.

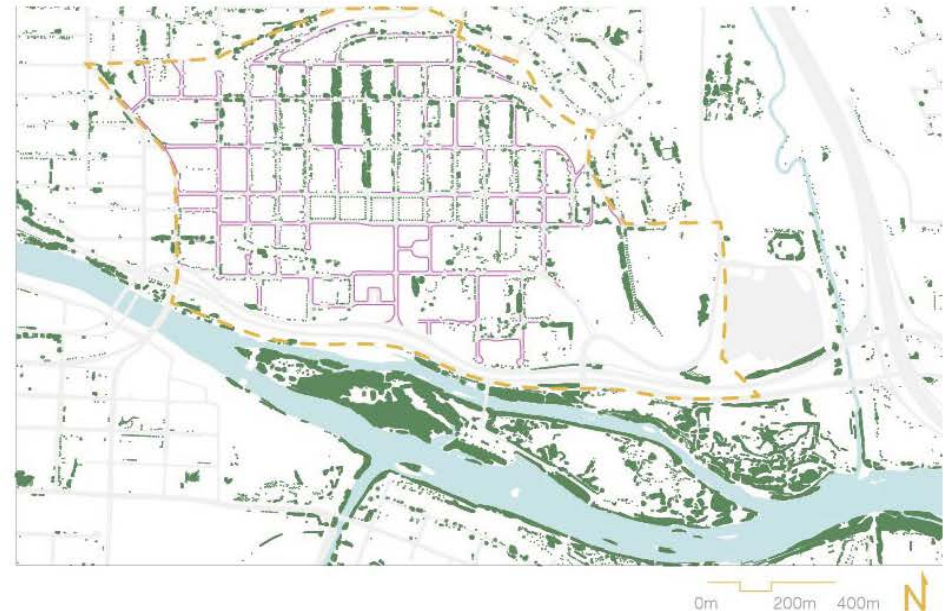


Best Practices: Canopy retention and Urban Forest Strategies

<https://digbyhall20.files.wordpress.com/2014/04/melb-urban-forest-strategy.png?w=347&h=493>



<http://vancouver.ca/files/cov/Urban-Forest-Strategy-Draft.pdf>



Missing tree canopy, assuming 5 metres separation between street trees

PRECEDENTS

City of Melbourne Urban Forest Visual: This interactive map tells the user the age and species of any inner city tree, as well as its expected remaining life. It uses colour coding to show very accurately where future planting efforts should be focused.

Vancouver Tree Replacement Deposit: The City of Vancouver is enacting a deposit system for homeowners and developers that remove trees on their property: it costs \$500 for a tree under 8 centimetres in diameter and \$750 for one greater. This fee is not returned until a tree of equal value is replanted on their property. The City should combine this rule with their existing tree protection bylaw that dictates a certain number of trees need to be planted based on parcel width for any infill or new build. There should also be a larger deposit range: should you want to remove a tree, you will have to pay a lot more if it is mature. This will dissuade developers from removing mature canopy and protect the streetscape.



Experiential View: combination of heritage plaque and canopy strategies

SECTION 5.0 - SOURCES

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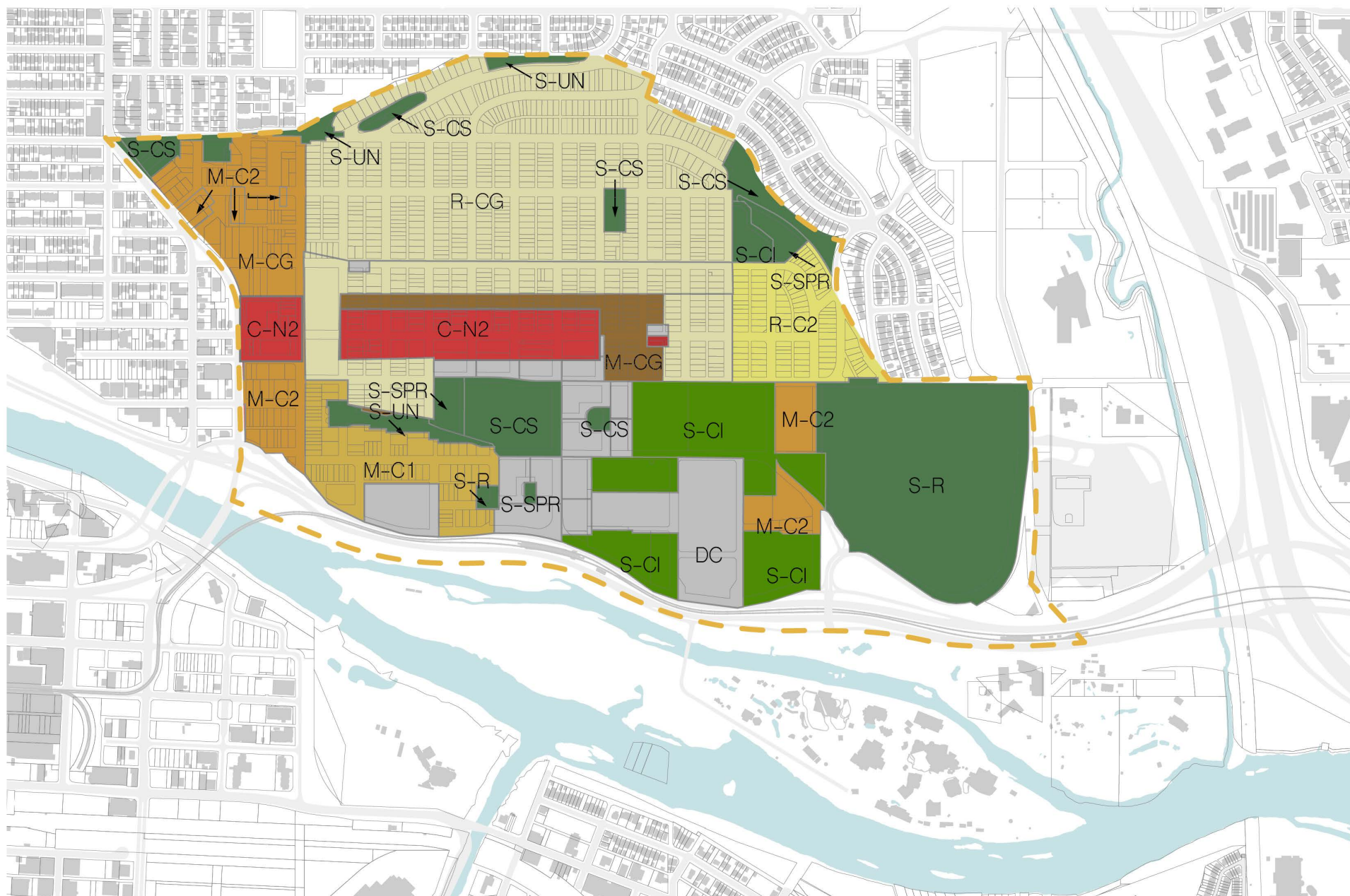
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The map displays the following land use designations and their distribution:

- Low Density Residential (Yellow):** Primarily located in the northern and central parts of the community, including areas labeled R-C2, S-UN, S-CS, S-CL, and S-SPR.
- Multi-family Residential (Orange):** Located in the western and southern parts, including areas labeled M-C2, M-CG, M-C1, and S-R.
- Commercial (Red):** Located in the central part, including areas labeled C-COR1 and C-COR2.
- Direct Control (Grey):** Located in the central and southern parts, including areas labeled C-N1, DC, and S-SPR.
- Special Purpose (Green):** Located in the southern and eastern parts, including areas labeled S-CL, S-SPR, and S-R.

The **Bridgeland Community Boundary** is indicated by a dashed orange line. The map also shows the community's proximity to a river and surrounding residential areas.



Proposed Zoning for Bridgeland

0m 200m 400m

