

# UEL BLOCK F

## Design Guidelines

Prepared by:  
Colliers  
Rositch Hemphill Architects  
PWL Partnership Landscape Architects

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## **APPENDICES**

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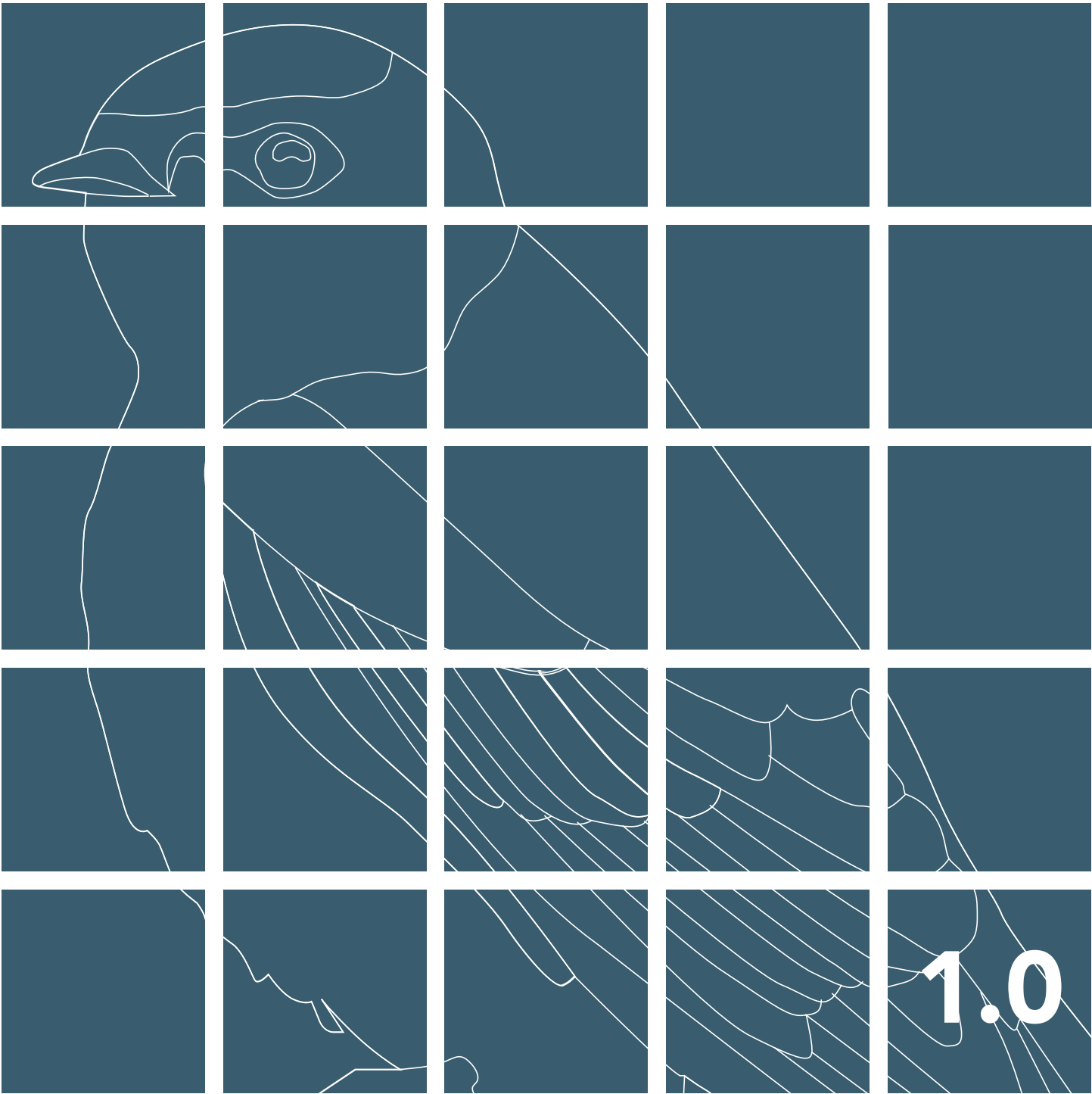
## **SUPPORTING TECHNICAL INFORMATION**

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Additional Reference Material:

Appendix A	PGL July 25th, 2014 Letter Re: Environmental
Appendix B	Diamond Head April 8th, 2015 Tree Management Recommendations Report
Appendix C	Bunt & Associates April 8th, 2015 Transportation Assessment
Appendix D	EXP March 23, 2015 Preliminary Geotechnical Report
Appendix E	Colliers March 27th, 2015 Commercial Demand Study
Appendix G	R.F. Binnie March 17th, 2015 Hydrological Analysis Report





# INTRODUCTION







VIEW WEST THROUGH WETLANDS



# 1.0 INTRODUCTION



## 1.1 THE MUSQUEAM NATION

Musqueam culture today is a blend of the traditional and the modern. We are not people living out of time, nor a relic of the past encapsulated in history. Like any other Nation, we are living, breathing people whose culture continues to adapt and grow; we bring forth a proud heritage as we navigate the changes to our surroundings. The values of our ancestors are still our values today. We are keepers of the river, keepers of the lands, and waters that continue to sustain us. We intend to care for our territory so that our future generations can enjoy the abundance of our predecessors. Perhaps more than ever, we value community.

The rich and dynamic culture of the Musqueam people is seen both in early history and in more recent times as Musqueam adapted to and adopted outside influences. Integrating aesthetic, practical, and essential elements of Musqueam culture into modern building design and construction should contribute to an impressive and dramatic facility that reflects the complexity and sophistication of the Musqueam people.

Musqueam people traditionally lived in harmony with their natural surroundings and all living creatures. The site should facilitate a living environment - one that acts as habitat for birds, small mammals, insects, and marine life indigenous to the region. The western red cedar is integral to both the landscape of the Musqueam people and their culture. A landscape design that includes large trees should greatly contribute to the overall aesthetic and authenticity of the site.

( Extract from *Musqueam - A Living Culture*, 2006 by Musqueam Indian Band )

## 1.2 MUSQUEAM LEGACY AND VALUES

Musqueam has been widely recognised nationally and provincially for their leading edge community planning and development projects. The same commitment is brought to the development of Block F. The design on Block F is to be guided by the following principles and objectives.

1. Protect and enhance open space and community connections
2. Live sustainably
3. Encourage community integration and respect
4. Provide a diversity of housing for a mixed community
5. Provide a range of amenities
6. Engage in responsible development – economically progressive and socially respectful
7. Build a community heart and neighbourhood focus for future residents of Block F and all of the UEL community.

## 1.3 THE VISION

The vision for Block F is to create a mixed-use sustainable community that is integrated into the University Endowment Lands (UEL) and University of British Columbia Lands seamlessly. The project is intended to be a showcase of sustainable development that the Musqueam Nation can refer to that demonstrates respect for the land, the waters, and the community.

Block F will provide a variety of housing types for a wide variety of future residents. The character of the community is residential housing, village retail, and community amenities focused around a beautiful mature forest, wetlands, and greenway trail system.

The overall development will have a Contemporary West Coast look that demonstrates green building and green infrastructure in an innovative and integrated way.



UniverCity: A Mixed-use Sustainable Master Planned Community at Simon Fraser University

## 1.4 PLANNING PRINCIPLES

The following Planning Principles reflect the Musqueam values and their approach to community building:

- » Protect and enhance open spaces and community connections to Pacific Spirit Park
- » Live sustainably; Musqueam's cultural values are founded on stewardship of the natural world; we have walked the talk of sustainability for a long, long time
- » Community integration and respect; encourage good relationships and strive to be good neighbours
- » Provide a diversity of housing for a mixed community and a variety of housing types for a variety of needs including rental and non-market housing
- » Provide a range of amenities and services within the community
- » Engage in responsible development that is economically sound, environmentally progressive, and socially respectful
- » Build a community heart for UEL
- » Create a neighbourhood focus and a centre of activity and services for both future residents of Block F and the existing UEL community

## 1.5 OVERVIEW

Block F is a special place because of the site's natural features and the area that surrounds it; its history; its future uses and the contribution it will make to the larger community. The design of the architecture and landscape architecture will honour these special qualities and build upon them.

This is an urban development, but the presence of the adjacent University Endowment Lands, the surrounding Pacific Spirit Park and University Golf Course, the integration of the mature evergreen trees and a constructed wetland give it a bucolic nature. The architecture and landscape should reflect these features through the selection of good and honest materials, the creation of a human scale, the integration of people with the natural and built environment, and the design of buildings that open up to the sun and shelter from the rain.

The site plan and new CD Zoning have been developed in parallel. The plan embodies features and attributes that are important for the



success of the overall development. The expectation is for designers to follow these attributes as closely as possible. Where a new approach is taken in the design, it must be clearly shown how that new approach meets or exceeds that shown in the design guidelines.

While the design guidelines are, in fact, guidelines, they will be heavily relied on by the approving authorities in assessing whether or not to approve development permit applications. The site planning and Design Guidelines have been shared with the community who will have an expectation that future applications will generally comply with these documents.

The design guidelines are intended to be a framework for future development providing sufficient direction but still allowing for some creativity in keeping with the development vision of this document.



Aerial View of Existing Site



Existing Wetland on Site is the Inspiration for the  
Constructed Wetland





# GOALS AND OBJECTIVES







LIVING IN CLOSE PROXIMITY BETWEEN NATURE AND PEOPLE

## 2.0 GOALS AND OBJECTIVES



### 2.1 DESIGN OBJECTIVES

Following from the Planning Principles the Design Objectives guided the creation of the site plan and the resultant components of the rezoning documents.

#### Preservation of Natural and Existing Features

- » Preserve the mature evergreen tree forest area
- » Retain/enhance the site's hydrological systems
- » Maintain/reinstate the trail networks originally on site

#### Integrated Sustainability

- » Use rainwater Best Management Practices to reduce off-site impacts
- » Utilize green infrastructure throughout the development
- » Include sustainable design initiatives within the public realm and private development areas
- » Explore options to maintain or enhance habitat such as for song birds

#### Community Integration + Respect

- » Provide neighbourhood amenities geared towards all UEL residents
- » Ensure amenities are physically accessible for all ability levels
- » Explore options that provide and enhance connections with existing and planned cycling, walking and transit routes and facilities
- » Ensure the scale and type of development respects the adjacent neighbours
- » Use open space and greenways as guiding features in the design of the community

#### Housing Diversity

- » Provide a variety of housing types to address a variety of needs including rental and non-market

- » Consider social, seniors, and workforce housing
- » Consider providing larger residential units to accommodate families or existing residents looking to downsize

#### Responsible Development

- » Locate the commercial uses to benefit the local surrounding community
- » Ensure businesses support local needs
- » Support a mix of land uses
- » Economically sound, environmentally progressive, and socially responsible
- » Ensure development respects frontages on University Blvd, Toronto and Acadia Roads

#### Build a Community Heart

- » Create a focus that becomes the heart for the wider UEL community
- » Ensure access to new community services for wider UEL community
- » Create a central open space/park related to the commercial and amenity areas as a gathering spot for the local community
- » Provide opportunities for formal and informal gathering places

### 2.2 NEIGHBOURHOOD SUSTAINABILITY

In keeping with the Musqueam commitment to respecting the land, Block F will be developed to a high level of sustainability.

#### LEED

- » The project reflects a number of LEED neighbourhood planning principles and individual buildings will designed to a LEED Gold standard

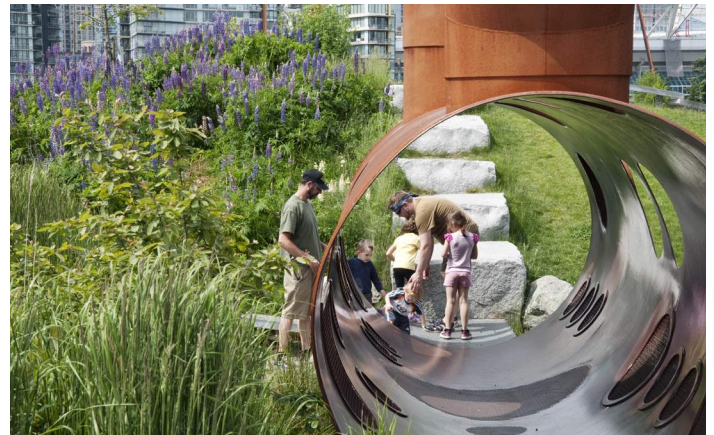


## Neighbourhood Patterns + Design

- » Site plan design focuses on public open space and respects natural features such as the forest
  - › Minimize site area dedicated to vehicular traffic in order to maximize open space and green space
  - › Organize buildings and density to maximize available site area for public open space
- » Site design respects and connects to surrounding neighbourhood
  - › Provide a strong connection to neighbourhood school/childcare facility/community amenity building
  - › Respect existing pedestrian, cycling and vehicular networks
  - › Encourage Future Transit Station at Commercial Village
- » Provide two primary trail routes through the site; one north-south route and one east-west route
- » Site design provides a mixed use compact community
  - › Design provides a variety of housing types and opportunities for local serving businesses
  - › A central commercial area within walking distance for neighbourhood residents
  - › Accessible and integrated open space areas meeting the residents needs
- » Site design preserves connections to Pacific Spirit Park
  - › Maintain on-site trail heads in close proximity to original locations and existing off-site trails
  - › Maintain trail routes through the community retaining broader off-site routes/connections
  - › Explore options for new/enhanced routes



Southeast False Creek Green Street



Southeast False Creek Hinge Park



Sage at the University of British Columbia



- » Site design encourages walkable streets and pedestrian network
  - › Create “green streets” with continuous sidewalks, treed boulevards, landscape bump-outs and a high quality pedestrian experience
  - › Connect to new and existing trail network
- » Site Design creates an accessible open space approach to meet the diverse needs of the present and future community

## Green Infrastructure

- » Create a site wide and holistic green infrastructure rainwater management system
  - › Build a constructed wetland in the vicinity of the original culvert on University Boulevard to treat on-site rainwater, maintain pre-development off-site flow rates, create habitat and be a showcase gateway feature for the new community
  - › Create a bioswale along University Boulevard connecting the individual parcels and the roadway drainage facilities to the constructed wetland
- » Rain water management will be embedded in the site design
  - › Include rain water management facilities in the open space areas, roadway design and on development parcels where appropriate
- » Maintain, to the degree possible, the mature stand of evergreen trees on the site
- » Minimize impervious surfaces
  - › Explore the use of pervious paving within on-street parking to minimize surface runoff and sediment transport
- » Maximize absorbent landscape areas in the public realm and private landscape areas



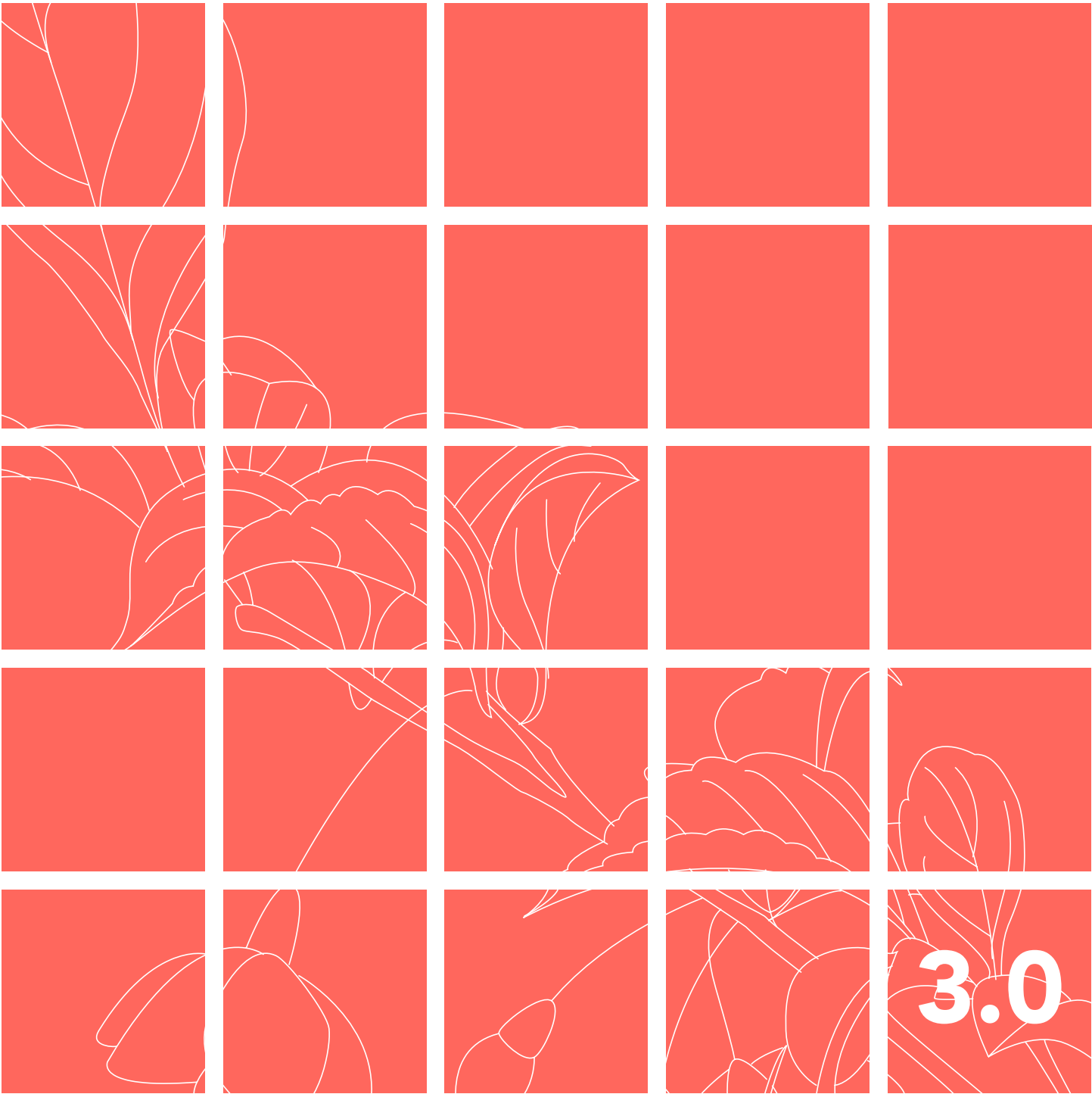
SFU UniverCity Rain Garden



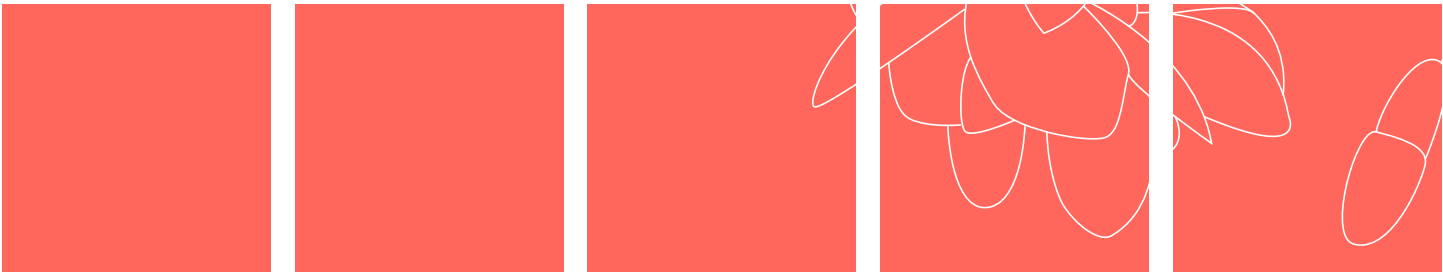
Rain Garden Collecting Run Off from Road and Sidewalk







PUBLIC REALM







VIEW NORTH THROUGH VILLAGE SQUARE FROM SWORD FERN / IVA MAN TRAIL



## 3.0 PUBLIC REALM

### 3.1 PUBLIC REALM CHARACTER: WEST COAST RAIN FOREST

The project has been designed around the strong and unique character of the mature west coast rain forest that exists, and will be preserved, on the project site. Public realm features and elements will work with the character and nature of the forest in both a contemporary and natural manner. The west coast rain forest character will be most prominent in the dedicated Forest Park however; opportunities to use and create this character in the general public realm are to be explored. The character of the public realm shall also reflect the Musqueam's respect for the land and their love and respect for the creeks and streams, which is tied to the importance of fish habitat to their culture.

### 3.2 PUBLIC REALM ELEMENTS

The public realm of Block F is made of several distinct typologies that together will help create the physical fabric that will bind this development together as a whole community. These areas are generally focused on the existing natural amenities of the site but also include urban areas and edges. The public realm elements are:

- » The Village Heart
- » Natural park space
- » Urban plaza space
- » Open space
- » Trails and walkways
- » Wetlands



Interacting with Rainwater Management Features

### 3.3 PARKS + OPEN SPACE DESIGN PRINCIPLES

Create a true village heart for the community by concentrating a variety of community amenities around adjacent land uses that support a wide range of inclusive activities.

The parks and open spaces shall serve the residents' need for active and passive recreational amenities, providing opportunities for social engagement, promote healthy living and encourage connection with the natural environment.

The parks and open spaces shall be safe, welcoming and functional at all times of day and throughout all seasons of the year.

The design of the public realm will be founded on sustainable best management practices and industry leading environmental design.

The spaces shall respond to a wide variety of users from the new resident population, the existing UEL residents and visitors to the area.

These principles can be achieved through the following objectives:

- » Organize the community around the park and open space areas
- » Create a variety of flexible open spaces that support active and passive recreation

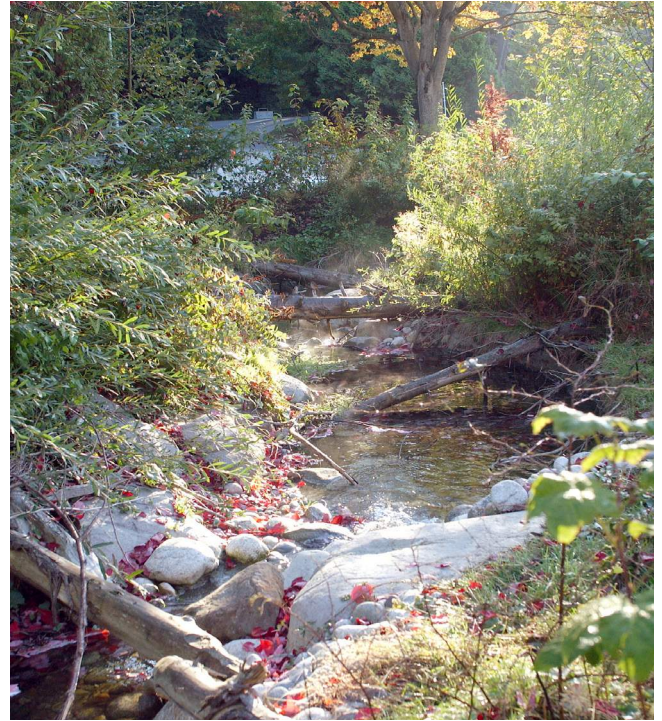
#### LEGEND

- 1 Village square / public plaza
- 2 Community Amenity Building
- 3 Forest park
- 4 Wetland
- 5 Community green
- 6 University boulevard linear park
- 7 Greenways & public access routes
- 8 Ortona trail (off site)
- 9 All weather sport fields  
(available after school hours on VSB property)





- » Provide a diversity of social places in varying scale, character and locations related to adjacent land uses
- » Create flexible urban open space accessible to all residents of Block F and the surrounding community that can support a variety of activities
- » Weave the “forest” throughout the entire development
- » Focus the park and open spaces around, and integrate with, the existing natural features, topography and vegetation
- » Enhance wildlife habitat and plant ecology connectivity throughout the site and to Pacific Spirit Park where possible
- » Provide all-weather and all-season uses and places
- » Provide opportunities for educational elements related to the site, natural ecology and Musqueam culture
- » Ensure the principles of Crime Prevention Through Environmental Design (CPTED) are met



Naturalized Stream



Naturalized Landscape and Habitat Area





Key Plan

### 3.4 VILLAGE HEART

The Village Heart shall be comprised of a series of public open spaces and amenities organized around key neighbourhood facilities that promote social interaction and create a sense of community. The Forest Park is located in the centre of the site at the stand of existing evergreen forest. It is adjacent to the community amenity building and the village retail area. Together, these places connected by walking trails and open space, framed by building edges and containing animated and programmed public spaces will create the Village Heart for this new community. The design of the Village Heart shall be inclusive of all residents, abilities, interests and ages by providing a wide range of fixed elements and flexible open spaces.

The Village Heart will be a destination for UEL residents promoting a larger sense of community beyond the limits of this project area. To do so, the Village Heart is in a visible location and will be easily accessible by multi-modal transportation including walking, cycling, public transit as well as personal vehicles. It shall include services and amenities appealing to the whole of the UEL population.



Village Heart

## 3.5 PARK AREAS

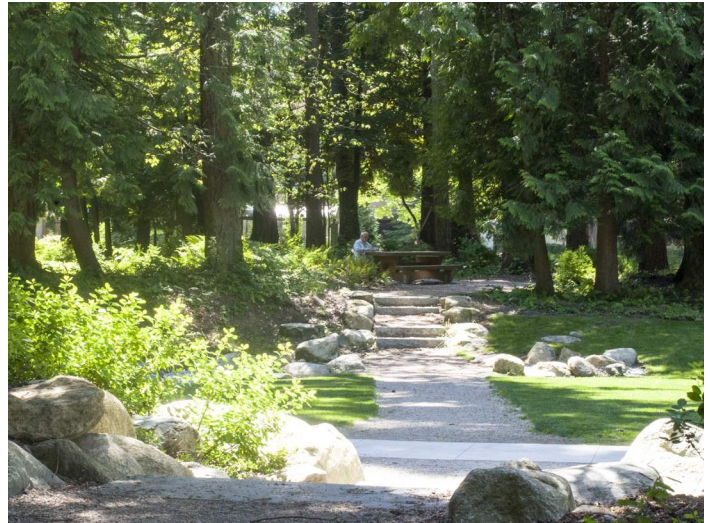
There are three park areas in Block F: the Forest Park (dedicated), the Community Green and the University Boulevard linear park. Together they will provide the open space for passive and active recreation in the new neighbourhood and for the broader UEL community. They will be designed around the natural amenities of the site and the west coast forest theme. The Forest Park and Community Green are located adjacent to each other but separated by Road B where an enhanced pedestrian crossing bridges this physical gap to create a sense of continuity and overall integration with the neighbourhood. All three will be connected to each other by the Block F trail system. These parks are different in size, location, and adjacent to different land uses and development forms. They will be different in character and function in order to meet the varying needs of the community.

All park and open space areas will have the full range of site furniture including dog waste bags, wayfinding and interpretive signage, pedestrian scale lighting, and play features. These areas will be capable of supporting a wide range of active and passive activities. Numerous social hubs will be created throughout the park system at places where people are probably going to congregate. The hubs will be of varying scales, ranging from whole community gatherings to quiet places to read a book or watch the birds, and the associated site furniture will be relative to the intensity of use.

### 3.5.1 The Forest Park

The Forest Park includes a large stand of mature, wind firm, evergreen trees in the centre of the site at the headwaters to the Salish Creek. The design will create places capable of supporting a wide range of community activities while maintaining functional ecological and habitat areas. These areas will include:

- » Open forest meadow areas with turf grass mixed with groupings of retained trees at the north side of the forest stand for flexible open space play and active uses
- » Forest stand with carefully cleared understory forest floor to support constructed amenities
- » Forest stand with managed understory vegetation to create open site lines to allow for comfortable and safe travel through the park
- » Forest stand with retained and enhanced understory vegetation to preserve the ecological services and habitat area



UBC East Neighbourhood Park as an Example of a Naturalized Park Area with a Retained Forest Stand

Wind firm trees are required at the perimeter of the retained forest stand to ensure a stable forest condition protected from storms and winds. The project arborist has identified the wind firm tree perimeter, individual and groups of high value and wind firm trees not specifically required for forest protection. These trees must be protected during adjacent parcel construction and park development.

Prior to development, Sword Fern and Fairview, crossed through the forest connecting to the Pacific Spirit Park and the community beyond. These two main trails shall be re-established and form part of the new Block F trail system. A hierarchy of trails will be provided to facilitate pedestrian and cyclist connections through and around the park in both east-west and north-south directions. Creating trail loops has been given a high priority. Paving surfaces shall reflect the level of use ranging from resilient hard surfacing for high use to crushed stone in low use areas. A variety of seating options will be provided along the trails. Lighting will be provided on the two main trails in order to facilitate safe evening use.

Distinct areas shall be created to support a range of active recreational uses for a variety of age groups including





Key Plan

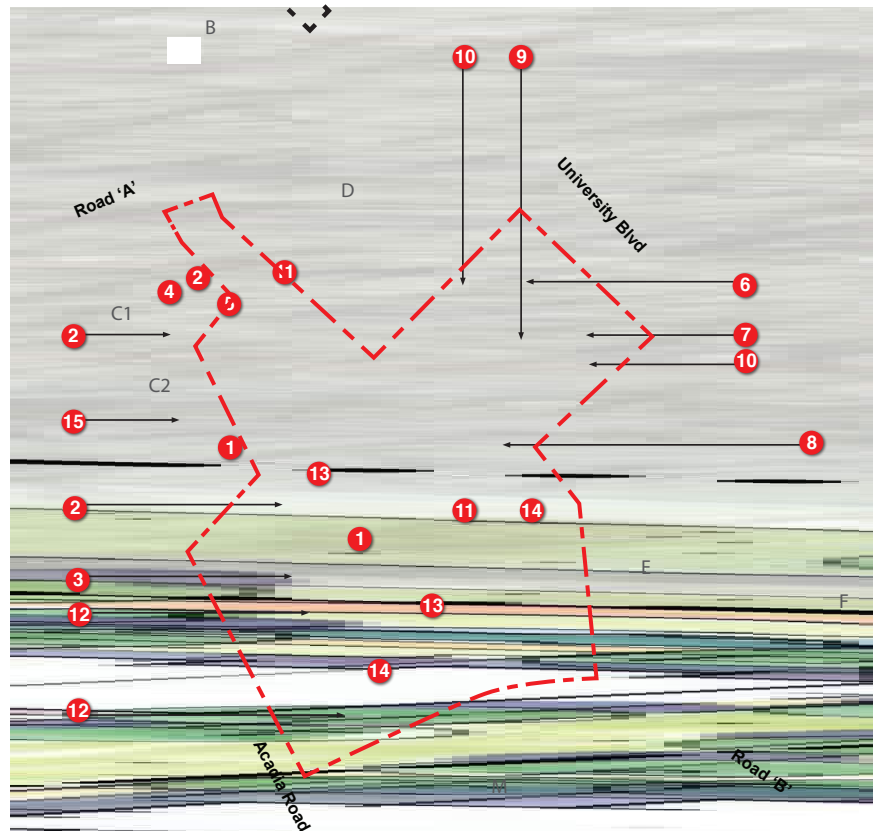
adults. The natural topography and stands of trees have been used to identify areas of opportunity as well as constraints to re-grading and clearing. The types of activities will be reflective of the site and natural conditions so as to support the west coast rain forest theme. These activities and amenities will include:

- » Natural adventure play, or Nature Play, areas for children
- » Natural adventure play areas for teens and adults such as slack lines and parkour
- » Fitness loops utilizing natural materials to create stations
- » Hard surfaced trails to assist people with mobility issues, learning to ride a bike, pushing a stroller etc.
- » Open forest meadow areas for yoga and tai-chi
- » Open flat turf grass area for sport activities such as playing ball, frisbee, or an informal game of soccer
- » A hard court area for basketball
- » Water fountain and bottle filling station

## LEGEND

- 1 Community lawn / flexible open space / play fields
- 2 Playground
- 3 Picnic area
- 4 Community building outdoor amenity area + great lawn
- 5 Hard Court
- 6 Constructed wetland
- 7 Bridge / boardwalk
- 8 Observation area
- 9 Wetland island
- 10 Riparian buffer
- 11 Sword Fern / Iva Mann Trail
- 12 Nature / tertiary Trail
- 13 Nature play
- 14 Habitat and nature trail area
- 15 Outdoor day care play area

- Tall shrub
- Medium shrub
- Meadow
- Wetland planting
- Mulch



Forest Park



The Forest Park will also include areas created to support passive activities some of which should be distant, or thoughtfully screened from the active uses. Again the design theme, the natural topography and stands of trees shall be used to identify areas of opportunity. These activities and amenities will include:

- » Picnic areas including tables and seating
- » Quiet nature trails for bird watching and experiencing the forest character
- » Smaller trail loops for shorter contemplative walks
- » Open flat turf grass areas for passive activities such as reading and sitting in the sun
- » Quiet seating areas

The Forest Park has a significant interface with the constructed wetland, Community Amenity Building and the Village Heart. This interface shall be designed with a seamless visual and physical connection between the areas creating a large unified open space.

With frontage on both Roads A and B as well as Acadia Road, the Forest Park connects the new neighbourhood from north to south and west to the UBC neighbourhood. The perimeter of the park shall be designed to be welcoming and inviting to passersby through controlled views into the park and signage at the Community Trail Heads. The frontage on Road A is of particular importance to emphasize the connection between the park and the plaza at the retail area. The character of these two areas shall be carefully designed to ensure a sense of continuity of the public realm and open space.



An example of Adventure/Nature Play



Seating and Tables by Open Lawn Area



Open Lawn Area with Planted Edges



Furnishing Catering to a Wide Range of Ages

### 3.5.2 Community Green

The Community Green on the south side of Road B is a complement to the activities and amenities of the Forest Park. It will include perimeter trees with planting around an open lawn area offering a different scale than the Forest Park. Framed on the west and southeast by residential development parcels, a buffer between the garden gates to the individual units and the open lawn area will be provided. As an integral part of the Block F trail system, the Sword Fern trail connects with the Forest Park to the north, crosses the park on the west providing direct residential unit access to the trail network and connects with the Ortona Trail and the school to the south.

Also supporting active and passive activities for a range of ages, the park will include:

- » Flexible use open lawn area
- » Seating and tables
- » A small walking loop connected with the overall trail network and the sidewalk on Road B

With no existing mature trees creating shade, the Community Green has an excellent sunny orientation.

The design will be based on the west coast rain forest theme and shall ensure tree growth doesn't create extensive shade on the open lawn area. Through species selection, plant density and contiguousness the planting will provide a habitat corridor from the Forest Park to the Ortona Trail and Cut Throat Creek riparian area.

### 3.6 OPEN SPACE AREAS

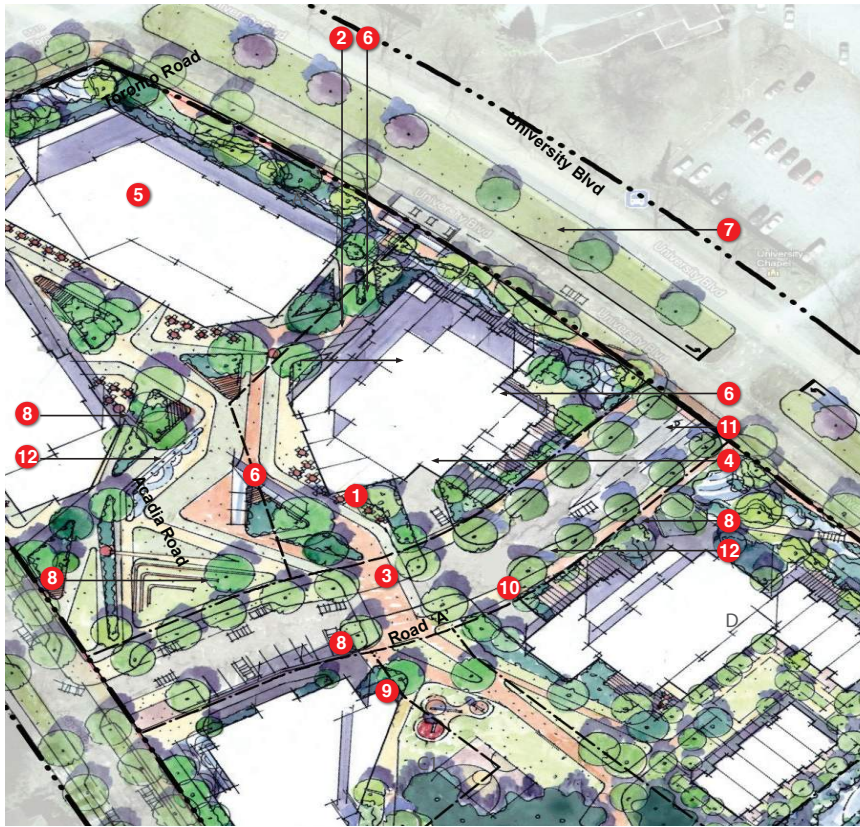
The open space areas are to complement the defined park spaces of the community that reinforce overall connectivity through, and unity of, the new neighbourhood. In some cases they provide unique and different uses than the park spaces offer. They should be connected to each other through the Block F trail system. There are four main open space areas:

- » Village Square
- » University Boulevard Linear Park
- » Public access easements over development parcels
- » Enhanced road boulevards



## LEGEND

- 1 Public plaza
- 2 Seating and raised planters
- 3 Event lawn
- 4 Cafe seating
- 5 Surface parking
- 6 Residential accessible roof areas
- 7 Proposed bus stop
- 8 Parallel street parking
- 9 Perpendicular parking
- 10 Raised cross walk
- 11 Enhanced width sidewalk
- 12 Parkade driveway



Village Square



Key Plan

### 3.6.1 Village Square

The Village Square is located at the north end of Block F by the retail and residential buildings of lots A and B. It will be a publicly accessible plaza for the residents of the new neighbourhood and the greater UEL community. It will support the local businesses through provision of flexible open space for spill out, café seating, and connections to the larger public realm; thereby allowing people to arrive there by foot, bicycle, or transit in addition to personal vehicle use.

The design of the plaza shall be in the character, forms, and theme of the other public realm areas to create a unified neighbourhood. Defined by hard surfacing and punctuated with large planters with "Forest Remnant" character it will be a flexible space capable of supporting a wide range of community oriented programming. The design will provide a variety of edges in order to facilitate activation of the space through daily use; and provide an unobstructed southerly exposure to allow for sun on outdoor seating and dining areas.



Flexible Seating Options





Farmer's Market



Portland's Director Park Operable Water Feature



Dockside Green Development Residential Frontage on Stormwater Management System

A short-term surface parking lot to support the retail uses will be provided at the intersection of Toronto and Acadia and utilized for loading access to the proposed grocery store. Its paving should reference the overall paving pattern to reduce the visual impact of the parking lot. Screening of the parking lot from the roadways though the use of vegetation, walls, and signage will be provided.

The Village Square has an important visual and physical relationship with the community amenity building and the Forest Park to the south. This shall be reinforced though paving, planting character, and pedestrian connections. The Sword Fern Trail will connect from the park through the site to the proposed bus stop on University Boulevard. An enhanced raised pedestrian crossing on Road A will provide a pedestrian first hierarchy and strong visual connection between these spaces.

Features that will be provided in the plaza are:

- » Large built in seating elements
- » Rain shelter/canopy
- » Amphitheatre like berm with seating facing into the plaza
- » An operable water feature that when turned off provides functional hard surface space
- » A paving pattern that identifies the Sword Fern Trail
- » Large planters with forest character planting and trees

### 3.6.2 University Boulevard Linear Park

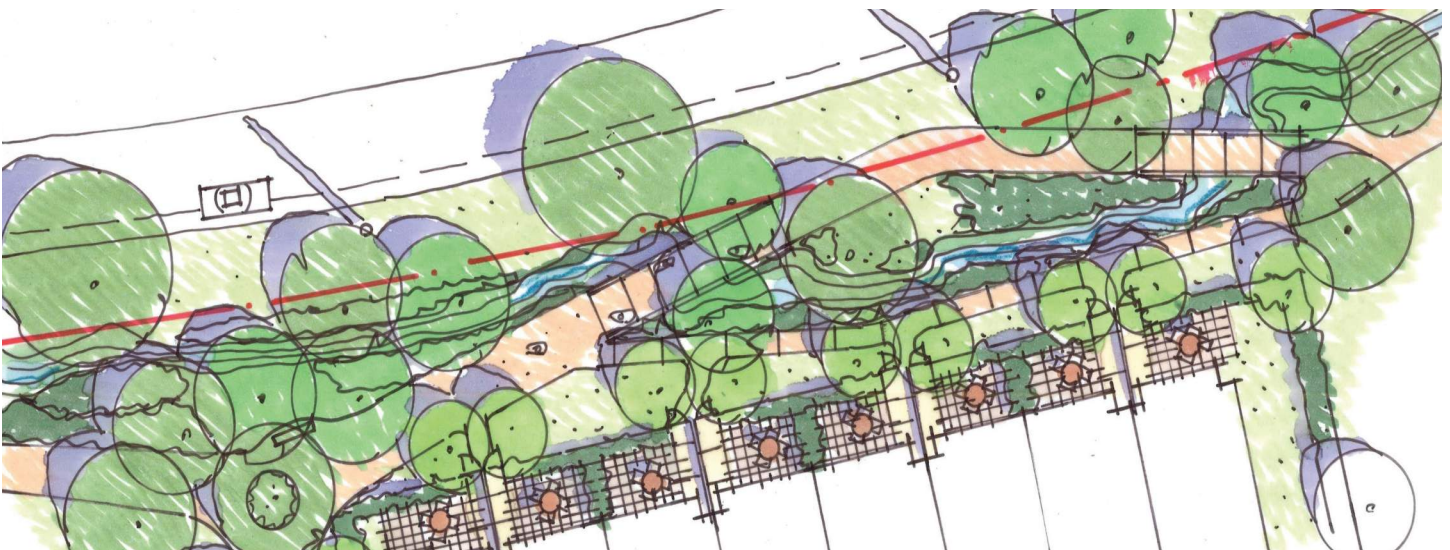
An Statutory Right of Way (SRW) for public access on the University Boulevard frontage will increase the width of the available space for a new multi use trail and allow for the creation of a robust west coast rain forest themed park between the street and the fronting townhouse residential units. Transitioning from a highly naturalized character at the edge of the Pacific Spirit Park on the south, to a more refined character at the Village Square and retail area to the north, the park will welcome people to this new development and be a gateway to the UEL. The adjacent lots located between Road A and Road B will all have fronting townhouse units with private patios and gated entries to the front doors accessible from the trails.

A bioswale with several naturalized pond/wetlands collecting water from development sites, and both roads A and B, will be a defining feature of the corridor. Meandering from the north and south towards the constructed wetland it will convey significant volumes of water creating animation and connections to the natural systems of the environment. Providing both visual and ecosystem services the bioswale will reinforce the Musqueam's connection to water and the site as the headwaters to the Salish and Cut Throat Creeks. Naturalized water features at key locations will be provided to emphasize this design theme and create additional visual interest. They shall be designed with naturalized forms, include native planting and have connections with the bioswale system.



A hierarchy of trails will be provided to create a varied experience for pedestrians and cyclists, and alternate routes to the adjacent residences. The primary trail will provide a direct route along the street and link to adjacent east-west trails. The secondary trails shall branch off to provide discrete walkways to adjacent residential units where the meandering primary trail is closer to the curb line. The design will seek opportunities for the trails to cross over the bioswale at points through the use of bridges to provide visual and physical connections to the water.

The planting design shall reflect a west coast forest character and be an extension of existing forest of the site and Pacific Spirit Park. Existing street trees will be retained and protected. A mix of deciduous and evergreen trees will be placed in a naturalized layout and avoid regular spacing. A low planted boulevard shall be created between the curb and main trail to provide a visual and physical buffer between traffic and pedestrians on the trails. Pockets of lawn area will be provided where sunny exposures can be achieved as areas for active play and activity by the adjacent residents and park users.



Zoom In Plans of University Boulevard Linear Park



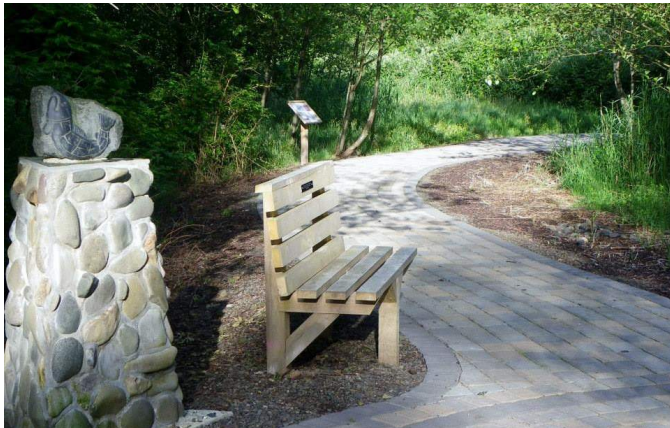


Residential Frontage with Bridge Crossing Over Bioswale

Social hubs will be created at primary intersections of the trails, public access points from adjacent development parcels, and at the constructed wetland and in many other locations. The full range of site furniture including pedestrian scale lighting, a variety of benches, picnic tables, and both recycling and waste receptacles will be provided. Bike racks will be located adjacent to public open space areas. Similar to the road design, social hubs will be created in areas of trail intersection, adjacent to open area and at road intersections. Wayfinding and interpretive signage will be provided to orient people to the Block F amenities, as well as Pacific Spirit Park beyond. As a result of the length of the linear park there will be many locations of benches and other amenities.

### 3.6.3 Public Access Easements

To improve overall walkability and neighbourhood permeability, public access easements will be provided on several parcels including A & B, E & F, and H & I. These connections will be designed in the character and finishes of the Block F trail system, in order to convey visual unity and the clear sense of public access. This will include paving treatments matching the trail widths, forms and materiality, moderate planting, and site furniture where applicable.



Social Opportunities at Trail Intersection



Harbour Green Park, Coal Harbour, Wide Walkway Through Planted Area



### 3.6.4 Enhanced Road Boulevards

The boulevards within the road right-of-way for Road A and B will be enhanced in several ways. These shall include:

- » A widened sidewalk on one side of each street. Refer to the plans and sections
- » Landscape bump outs with naturalized plantings at crossings, driveways, and ends of on-street parking bays
- » Landscape bump outs as rain gardens where grading permits
- » Significant street tree plantings
- » On-street parking laybys with permeable pavers

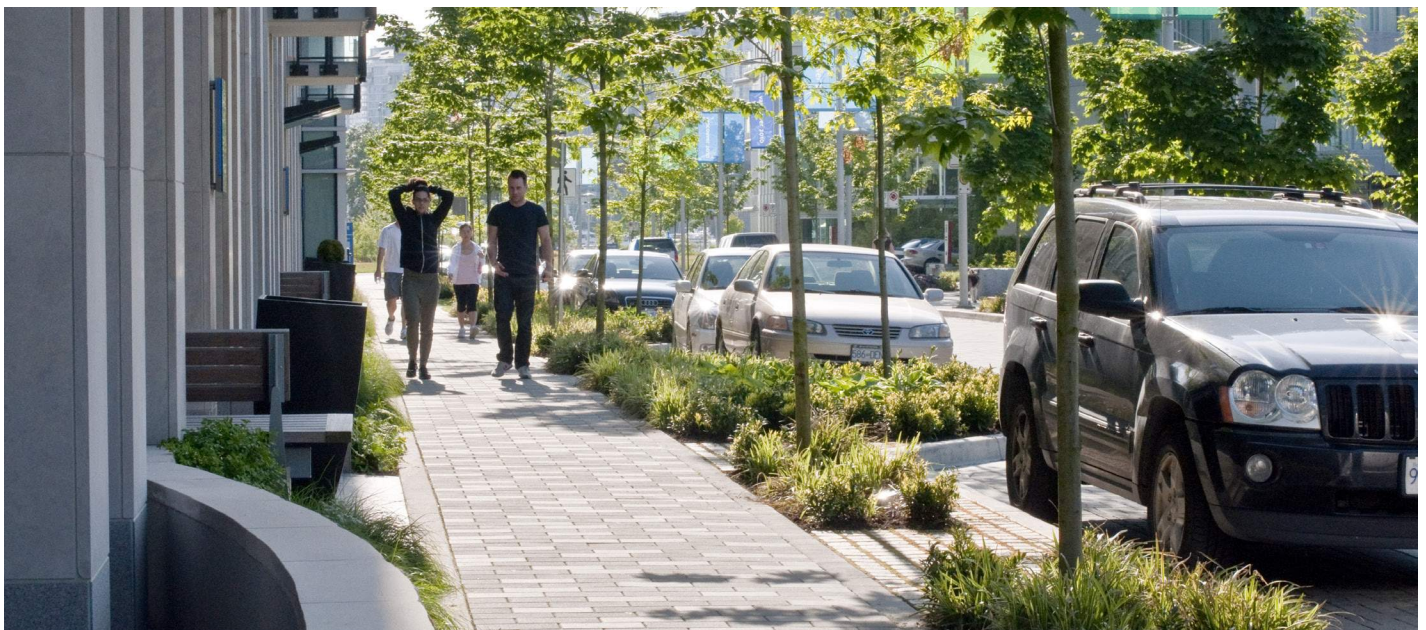
These areas will include widened areas of paving with benches, lighting, and bike parking associated with areas of planting. The purpose of the social hubs is to create opportunities for neighbours to meet and help grow the sense of their community. In other areas recycling and waste receptacles will be provided to help keep the neighbourhood clean. Pedestrian scale lighting will be provided for the sidewalk and social hubs illumination separately from the street lighting.



City of Tacoma's Rain Garden Bump Out



Permeable Pavers



Southeast False Creek Green Street





#### LEGEND

##### Primary Trails

- Sword Fern Trail / Iva Mann Trail
- Fairview Trail
- University Boulevard Trail
- Ortona Trail

##### Secondary Trails

- University Boulevard Trail (Secondary)
- Public right of way over development parcel
- On site trail

##### Tertiary Trails

- Nature trail

- On street shared bicycle route
- On street designated bicycle route (source: Translink)
- Informal bicycle route (source: Translink)
- Trail heads
- Raised crosswalk



### 3.7 TRAILS + WALKWAYS

The proposed Block F trail system will provide a variety of trails and experiences linking the new neighbourhood internally and to the surrounding areas. Of particular importance is maintaining the trail connections with Pacific Spirit Park that existed prior to development. The trails will cross the site in urban areas, through park and open space areas, the mature forest, over wetlands, and development parcels. In all cases they should reflect the character of the setting and the over arching design theme. The trails will serve the wider resident population and provide safe pedestrian and cyclist connections through the new community.

The trail system will have a variety of trails that support a variety of uses and experiences. The primary trails will include Sword Fern and Fairview, routing through the neighbourhood in north-south and east-west directions, respectively, and connect to their original trail heads. The secondary trails shall branch off of the two main routes and connect to the various areas of the neighbourhood, including development parcels and areas of the parks and open space system. A tertiary level of trails shall be provided in the Forest Park for a closer connection to the habitat areas.

All trails shall be universally accessible with adequate path width and avoid the use of stairs. This will allow trail access for all age groups and mobility users.



Primary Trail Through Forest Park



Nature Walk Through Forest Character Area

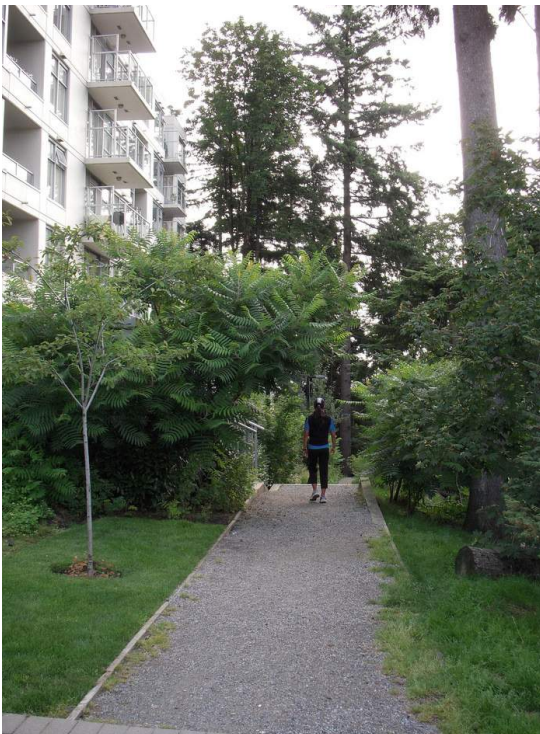


SFU UniverCity Urban Trail with Townhouse Frontage





Trail Through UBC South Campus Parks



Forest Trail Adjacent to Residential Buildings

### 3.7.1 Primary Trails

The primary trail requirements are:

- » Have a unified character through the whole length of the trail
- » Should be less than 5% slope and universally accessible
- » Must be lit with pedestrian scale lighting providing minimum light levels for safety as well as for character and experience
- » The trail will vary in width with a minimum width of 2.5m up to 4.0m
- » Be paved with an identical resilient surfacing along its total length ensuring unity of character and ease of use for all mobility levels
- » Will include benches, recycling and waste receptacles, wayfinding signage, bike racks, and interpretive material at strategic points
- » Bike parking at community amenity destinations
- » Should have a planted landscape treatment that ensures a unity of character

#### 3.7.1.1 Sword Fern Trail / Iva Mann

The Sword Fern trail will start at its original trail-head at the intersection of Toronto Road and University Boulevard and is the most important trail of the community. Its route, generally a north to south direction, will link all of the important community amenities: the new bus stop on University Boulevard (west of Road A), the Village Square and retail services, the Community Amenity Building, Forest Park, and the Community Green. It will end at the Ortona Trail trail-head and the Norma Rose Point School. Moving through urban and natural conditions the trail will be a unique experience for residents and visitors of Pacific Spirit Park, contributing to the identity of the new neighbourhood. The trail will be expressed through paving patterns in the Village Square and return to a more typical trail expression in the Forest Park.

#### 3.7.1.2 Fairview Trail

The Fairview Trail aligns generally in a east to west direction. Its eastern trail-head is in the University Boulevard Linear Park and links the wetland, Forest Park, and the UBC community to the west on Acadia Road. It intersects with Sword Fern in the middle of the park. The experience will be of a natural landscape, as the trail moves through the wetland, over the bridges and islands, and in the mature forest stand. In the wetland area opportunities for overlook and small gatherings shall be provided to view the wetland habitat. It is envisioned that the future development of the Acadia lands (UBC) to the west will provide a trail extension directly across from the Acadia trail-head.

This trail has some additional requirements over and above the typical primary trail standard:



- » Where the trail crosses the constructed wetlands an elevated boardwalk and bridge system with guardrails will be provided
- » The elevated boardwalk and bridge system should utilize built in lighting fixtures rather than pole mounted pedestrian lights to minimize the impact on the wetland habitat

### 3.7.1.3 University Boulevard Trail (primary)

The existing (pre-development) University Boulevard sidewalk was located at a uniform distance back of the curb and offered a typical sidewalk experience with pedestrians close to the traffic on the street and no vegetation buffer. The proposed University Boulevard Trail will meander through the new evergreen and deciduous trees in the linear park, providing a greater separation from traffic, an improved pedestrian experience, and the opportunity for cyclists to come off of the street and into a protected path system. The northern portion of this trail will include the Sword Fern Trail; it will connect with the Fairview Trail at the constructed wetland; and it will return to the typical sidewalk condition at the church site on the south. This trail will also intersect in several locations with the secondary University Boulevard Trails that connect with the adjacent residences.

This trail has some additional requirements over and above the typical primary trail standard:

- » Where the trail crosses over the bioswale a bridge structure with guardrails will be provided
- » The trail should vary in width with a minimum width of 3.5m up to 5.0m

### 3.7.1.4 Ortona Trail

The Ortona Trail will be located within the closed portion of the Ortona Road right-of-way. Its route, in a generally east-west direction, will connect on the east to the University Boulevard trail, Cleveland and Heron trails at Pacific Spirit Park, the proposed public access route over Lots H and I, and on the west to Sword Fern Trail, the elementary school, and Ortona Road. It will parallel and cross over the headwaters of Cut Throat Creek offering a close experience with the riparian environment. Fencing to protect the sensitive natural environment and signage to educate trail users of the unique headwater location will be provided. Signage shall be designed in conjunction

with the Pacific Spirit Park Society. Site furniture elements and lighting will be provided along the Block F property frontage.

## 3.7.2 Secondary Trails

The secondary trail requirements are:

- » Have a unified character through the whole length of the trail
- » Should be less than 5% slope and universally accessible
- » May be lit with pedestrian scale lighting providing minimum light levels for safety, as well as for character and experience if connecting important community facilities; the final plan will indicate lighting
- » The trail should vary in width with a minimum width of 1.5m to 2.5m
- » Be paved with an identical resilient surfacing along its total length ensuring unity of character and ease of use for all mobility levels
- » Will include benches, recycling and waste receptacles, wayfinding signage, bike racks, and interpretive material at strategic points
- » Bike parking at community amenity destinations
- » Will have a planted landscape treatment that ensures a unity of character depending on location

### 3.7.2.1 University Boulevard Trail (secondary)

The secondary trails in the University Boulevard Linear Park will primarily serve the adjacent residences, but will also provide an alternate route and experience. They will branch off of and loop back to the primary trail in locations where the primary trail is closer to the curb line and distant from the adjacent residences.

These trails have some additional requirements over and above the typical secondary trails:

- » Where the trail crosses over the bioswale a bridge structure with guardrails will be provided
- » The bridge system should utilize built in lighting fixtures rather than pole mounted pedestrian lights
- » Will be lit with pedestrian scale lighting providing minimum light levels for safety, as well as for character where there are connections to adjacent residences

### 3.7.2.2 Secondary Forest Park + Community Green Trails

The secondary trails in the Forest Park and the Community Green should provide intermediate connections to various amenities and roadway sidewalks to expand the network of pedestrian and cycling routes improving the walkability of the community.

### 3.7.2.3 Public Rights of Ways over Development Parcels

The trails through public rights of ways over development parcels should match the character and theme of the public realm trails with regards to site furniture and lighting. They should feel public and not private in character in order to convey the sense of public access and remain open and unfenced. Connections to main lobbies and individual front doors of adjacent residential units are strongly encouraged. The trails will connect across the development parcel, linking sidewalks and trails on opposite sides of the parcel and shortening pedestrian travel distances through the neighbourhood. The surface paving shall be unit pavers to facilitate long term building envelope repairs.

### 3.7.3 Tertiary Trails

The only location of the tertiary trails is in the Forest Park. Intended for low use, these trails shall be nature trails through the enhanced and protected understory areas. The tertiary trail requirements are:

- » Be of a highly naturalized character
- » Can include varied slopes based on the location relative to trees and existing grades that may not be adjusted
- » Should not be lit
- » The trail shall vary in width with a minimum width of 900mm to 1.2m
- » Be paved with an aggregate (crushed rock) including an organic binder
- » Shall not include any site furniture
- » Will not have an associated planted landscape treatment due to its location within the retained forest area
- » Utilized boardwalk trail over topography and sensitive areas

### 3.7.4 Trail Heads

Trail heads shall be strategically placed and designed in conjunction with the Pacific Spirit Park Society. Key locations will include intersections with on-site trails as well as the pre-development locations at the perimeter of the site. They will have wayfinding signage, recycling and waste receptacles, map holders, benches, interpretation materials, and other trail amenities such as dog waste bag posts.



Tertiary Trail Through Protected Understory



## 3.8 WETLANDS

In the pre-development conditions the project site was the headwaters to two creeks; the Salish to the east and Cut Throat to the south. Most water flowed to the east over the natural site topography to a swale on the south side of University Boulevard, created by the road construction, and directed water to a lowlands portion of the site. There, a culvert drained to the east and eventually to Burrard Inlet. Predominantly the result of an undersized culvert and beaver activity, the natural lowland area of the site became saturated and held water for parts of the year effectively becoming a wetland. The proposed plan intends to maintain and enhance the original watershed systems, match pre-development run-off rates, and manage water quality on-site prior to release to the Salish and Cut Throat Creeks. The southern portion of the site drains towards the east and eventually becomes Cut Throat Creek.

There are three main rainwater management facility typologies. All are tied to existing drainage patterns, are intended to manage collected rainwater and are connected through surface flow to off-site creeks. As such they require a high degree of ecological integration through materiality and planting. The typologies are:

- » Constructed wetland
- » Bioswales
- » Rain gardens

The rainwater management facility requirements are:

- » West coast rain forest character
- » Native wetland planting with emergent and upper riparian planting including appropriate trees
- » Naturalized organic forms, including islands, reflective of similar natural systems
- » Include natural rock of varying sizes and woody material, such as decomposing stumps and logs
- » Be visually integrated into the adjacent development parcels
- » Be physically and visually integrated into public realm areas to celebrate and raise awareness of rainwater management and the site's deep connection to the local area hydrological system



Block F, Existing Wetland

### 3.8.1 Constructed Wetland

The constructed wetland will be a visual center point to the community along University Boulevard. It is a re-establishment of the emerging wetland existing on site prior to development. With improved ecological function and ability to retain and detain on-site rainwater runoff, it will have a naturalized character with a broad diversity of native wetland plants. The constructed wetland will have important interfaces with the University Boulevard Linear Park, the Forest Park, and the adjacent development parcels. The natural character of the wetland shall extend into these areas to create a seamless natural landscape from the riparian area to the upper and non-riparian areas. A split rail fence will be located just above the high water line in order to prevent human and dog access to the sensitive ecosystem, but not inhibit wildlife access into the water. Open viewing areas to the north and south of the wetland will be provided to promote engagement with the wetland, wildlife viewing, and outdoor education. The east area shall be lawn and similar in character to the University Boulevard Linear Park, while the west one shall be an aggregate (crushed stone) "beach" integrated into the Forest Park character. These viewing areas will be connected to the new trail system.

### 3.8.2 University Boulevard Bioswale

The University Boulevard bioswale will flow from the north by the Village Square and the south by Lot H towards the constructed wetland. Because of the high visibility of this feature, careful attention to its visual character will be important. It will meander through the University Boulevard Linear Park and be crossed by the primary and secondary trails. Its character shall be reflective of a natural intermittent stream, including a range of exposed rocks and woody debris and native riparian plants. Natural materials should be used to construct check dams and weirs. The bioswale will be linked to the naturalized water feature ponds/wetlands to create an enhanced visual amenity at gateway locations.

### 3.8.3 Raingardens

Raingardens will be located in many locations throughout the neighbourhood to manage point source rainwater collection and treatment. Most commonly located at landscape bump outs in the street rights-of-way, the design will take into account roadway pollution and sediment while utilizing native riparian plants for treatment and creating a natural aesthetic. Rocks and woody material will be used to form the swale. Future phases of work shall utilize the first built examples of work to ensure each street has a unified character.

The second common location of raingardens is on lots H, I and J. Here they will collect and treat water prior to release into the Cut Throat Creek system. The design of these raingardens shall express the west coast rain forest theme and extend the natural character and habitat areas into the development parcels. The planting design will weave the development parcel planting into the riparian plants of the raingarden. Careful consideration of the physical constraints due to the proximity to underground parking will ensure the success of these features. Direct as much as feasibly possible of the roof water and site drainage into this system.

## 3.9 SIGNAGE + WAYFINDING

Block F is closely integrated with the trails of the Pacific Spirit Park (PSP) and as such, wayfinding signage at the trail heads, trail intersections, and in the park and open space shall include PSP park signage including trail name and statistics. At select areas Block F scale maps will be provided. The mapping will include key public amenities such as the Village Square, Community Amenity Building, Forest Park, constructed wetland, Community Green, the elementary school, and public transit routes. A notice community board element will be included at the Village Square and Community Green. It is envisioned that the Community Association would manage the community board. The signs shall be designed in keeping with the overall design theme of the west coast rainforest.

Opportunities to include Musqueam, ecological and sustainability content shall be included wherever possible.

## 3.10 LANDSCAPE MATERIALS

A select list of materials will be developed for use in all of the public realm areas in order to create unity among these spaces and a sense of the Block F neighbourhood. These materials shall fit into the West Coast Rainforest/ Natural design theme. Durable, sustainable, and locally sourced materials shall be the preferred choices. These materials include:

- » Locally appropriate stone and boulders
- » Woody material such as logs, preferably sourced from site, for use in soft landscape areas
- » Heavy timber frames for outdoor structures
- » Driftwood

Various paving materials will be used with a hierarchy of scale and use to help create the sense of unity within the public realm. Permeable paving will be used where drainage to adjacent soft landscape cannot be achieved. Typical paving materials shall include:

- » Cast-in-place concrete
- » Unit pavers and permeable unit pavers
- » Aggregate (crushed granite etc)
- » Wood decking for boardwalks. Sustainable composite wood products will be used as alternatives to real wood where possible
- » Asphalt



Typical construction materials should also include:

- » Modular concrete block walls
- » Wood cribbing
- » Metalwork. Where metal is used its assembly methods and end of functional lifecycle finishing should allow for deconstruction and recycling/upcycling

### 3.11 SITE FURNISHINGS

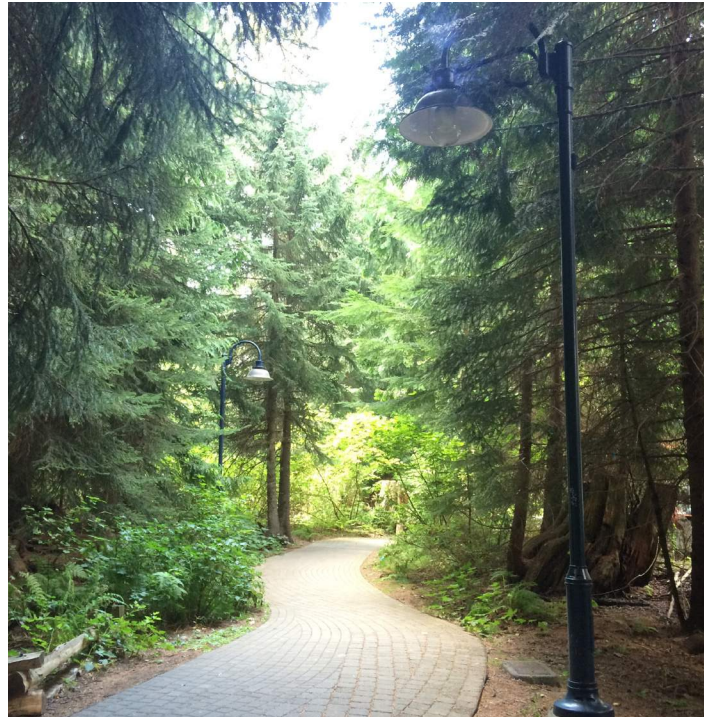
A kit of site furnishings will be selected that is in keeping with the overall design theme and will be applied throughout the Block F public realm. Preference will be given to products that are manufactured from sustainably sourced and/or with recycled content, are recyclable/upcyclable at the end of their functional lifecycle, and are durable in the west coast environment. This kit of site furniture shall include:

- » A variety of seating options including formal and informal elements
- » Bike racks (single and multiple)
- » Bollards (light and security)
- » Recycling and waste containers
- » Dog waste bags

### 3.12 LIGHTING

As with the other public realm elements, the lighting fixtures will seek to create a unity through the Block F neighbourhood. There shall be a distinct hierarchy of lighting ranging from street/vehicle lighting to neighbourhood scale pedestrian lighting and lower level pedestrian lighting in smaller scale spaces, such as around the Community Amenity Building. Lighting will be provided for all key pedestrian routes including the main trails through the Forest Park in order to ensure walkability, neighbourhood permeability, and safety at all times of the day and seasons of the year. Lighting requirements are:

- » LED high efficiency lights
- » High cut off rates to reduce light trespass
- » Dark sky compliant



Pedestrian Lighting Along Forest Trail

### 3.13 PLANTING

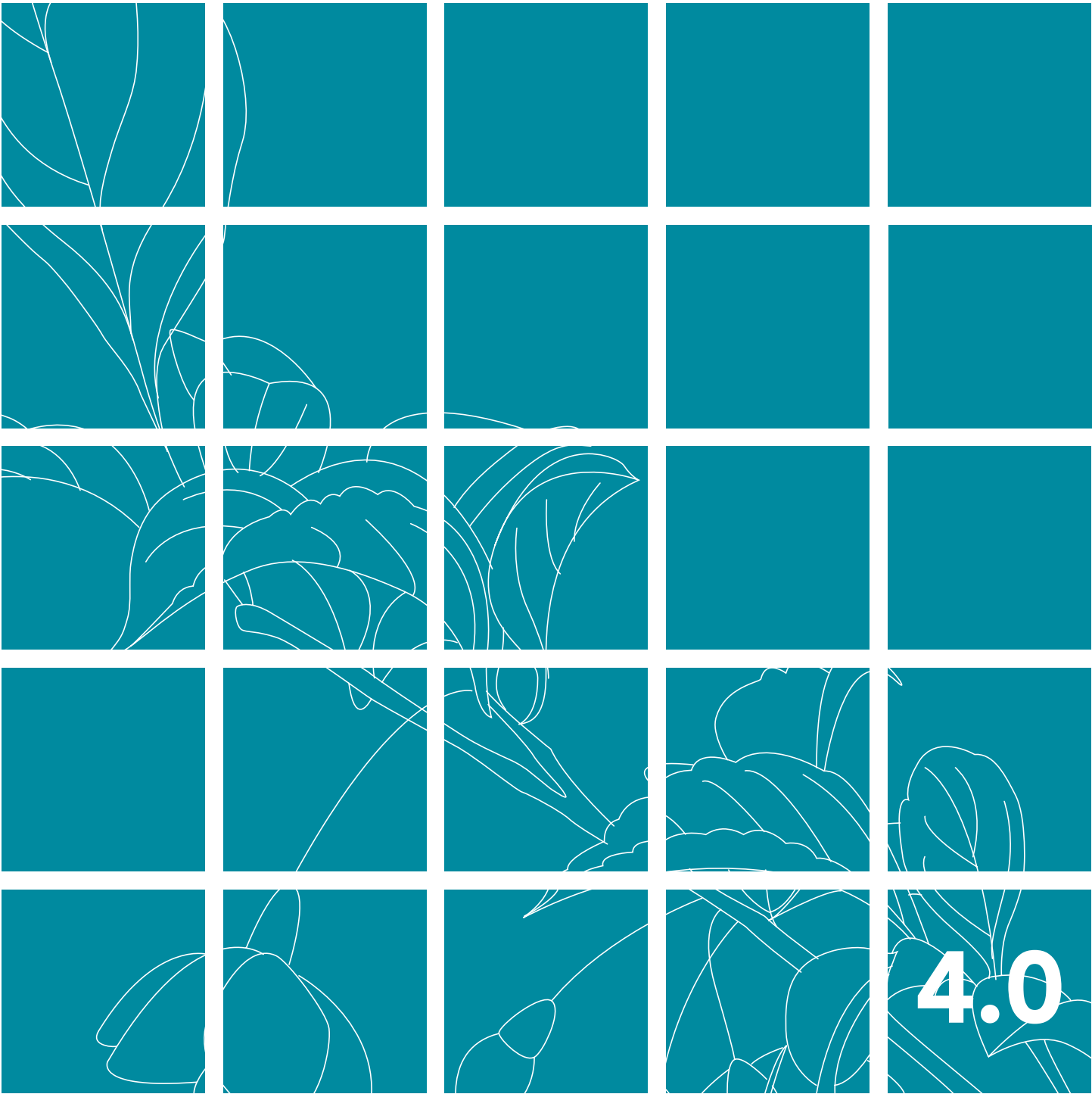
The planting in the public realm will be a critical element in achieving the design intent of a native West Coast landscape. The soft landscape areas will predominantly be large informal groups with naturalistic arrangements. Flowering plants will be used to compliment the typically evergreen native plant palette. Understory vegetation shall be preserved and enhanced where there is no impact to public safety.

The use of native trees, shrubs, and perennials shall be maximized. The tree plantings will be focused on the use of evergreens to be in character with and expand the existing forest stand; however, deciduous trees will also be used in the streetscape and other areas of the site where appropriate.

Plantings shall be appropriate to the micro-climatic conditions such as forest understory, forest edge condition, and wetland. The tree plantings shall also be indigenous to the area and reflective of the plant material important to Musqueam Nation.







4.0

CONCEPT PLANS





MASTER PLAN





### 4.1 PUBLIC INTERFACE WITH DEVELOPED PARCEL

In addition to the site planning incorporated into the zoning document, Concept Plans for each site have been included in these guidelines to further explain the intent of the plans. They offer guidance about:

- » the siting and massing of buildings
- » features that will benefit the overall community and ensure that a proposed development is sensitive to future adjacent developments
- » requirements on how buildings define and address streets
- » recommended locations of lobby entrances and parking accesses

- » locations of open spaces and connections among open spaces
- » and other issues to be addressed and features to incorporate

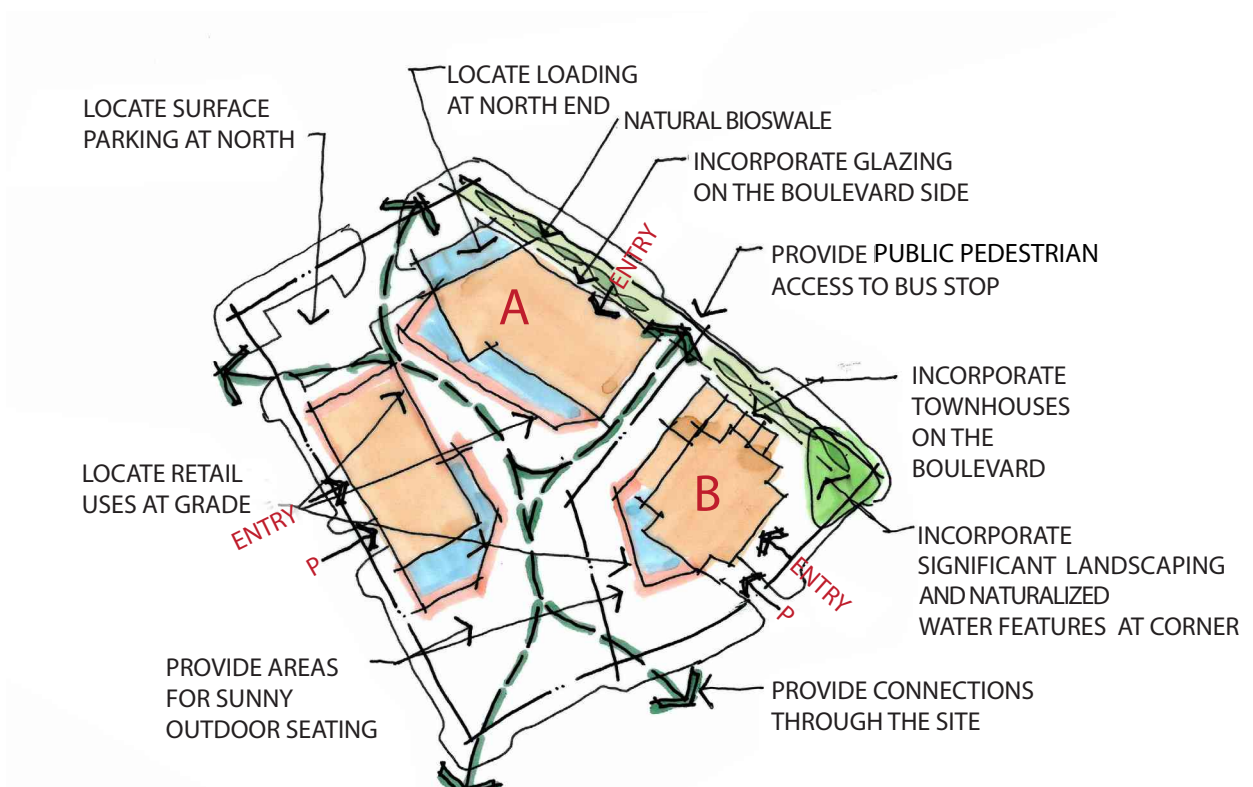
Refer to Section 6.0 for additional development parcel information.

### 4.1.1 Parcel A and B

See Sections 6.4 and 6.5 for additional information.



Key Plan



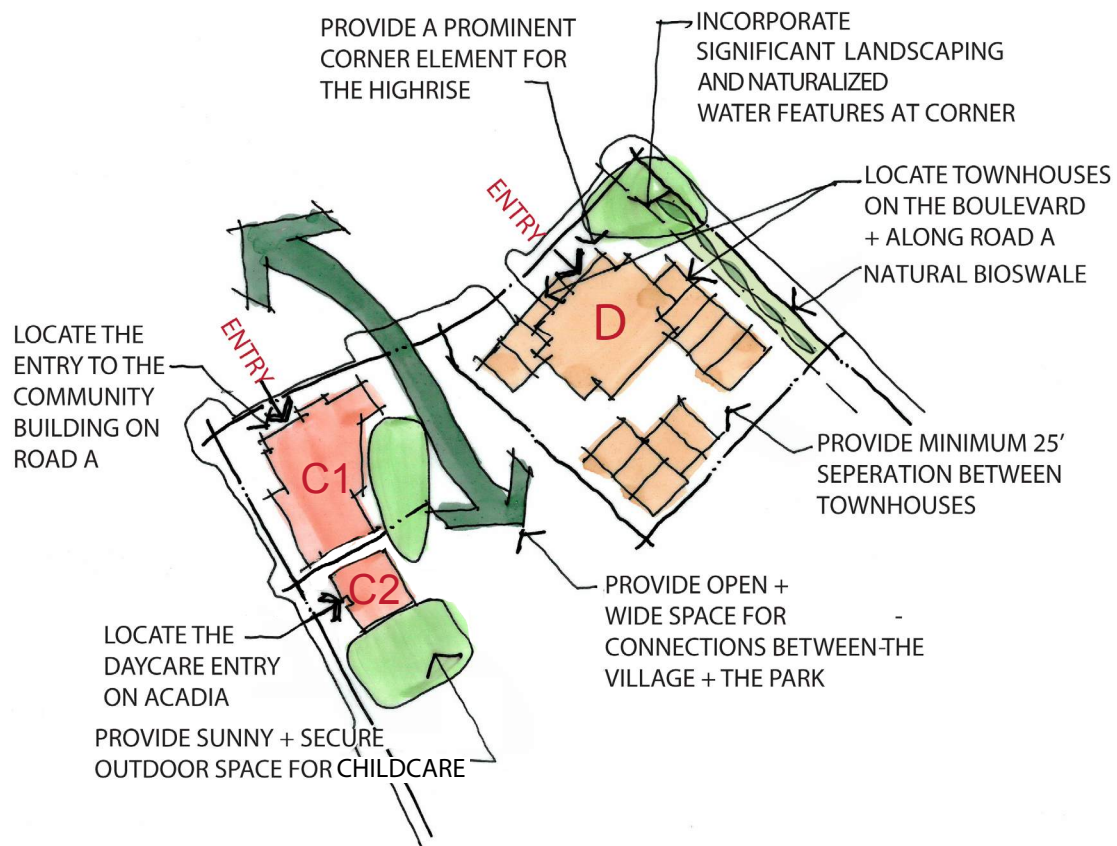


#### 4.1.2 Parcel C1, C2 and D

See Sections 6.5 and 6.6 for additional information.



Key Plan

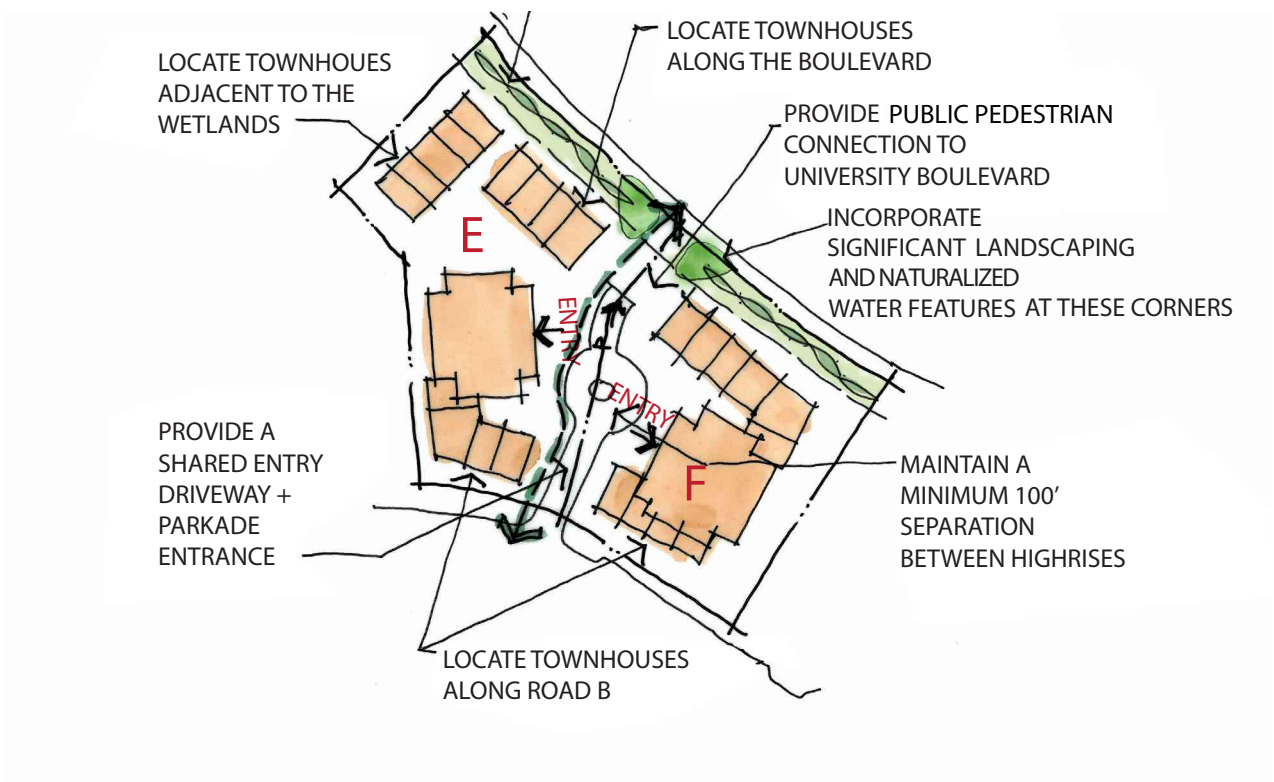


### 4.1.3 Parcel E and F

See Section 6.5 for additional information.



Key Plan



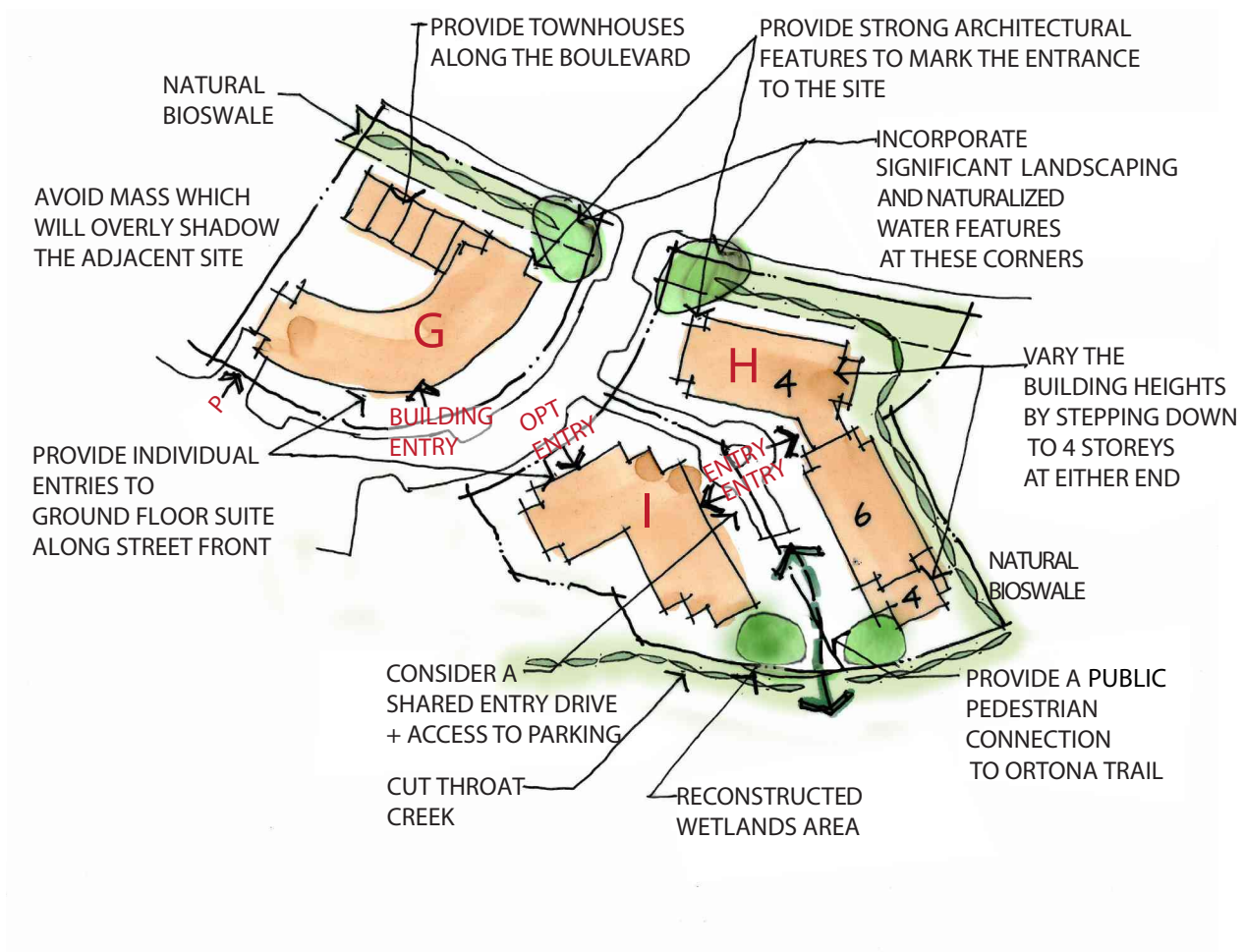


#### 4.1.4 Parcel G, H, and I

See Section 6.5 for additional information.



Key Plan

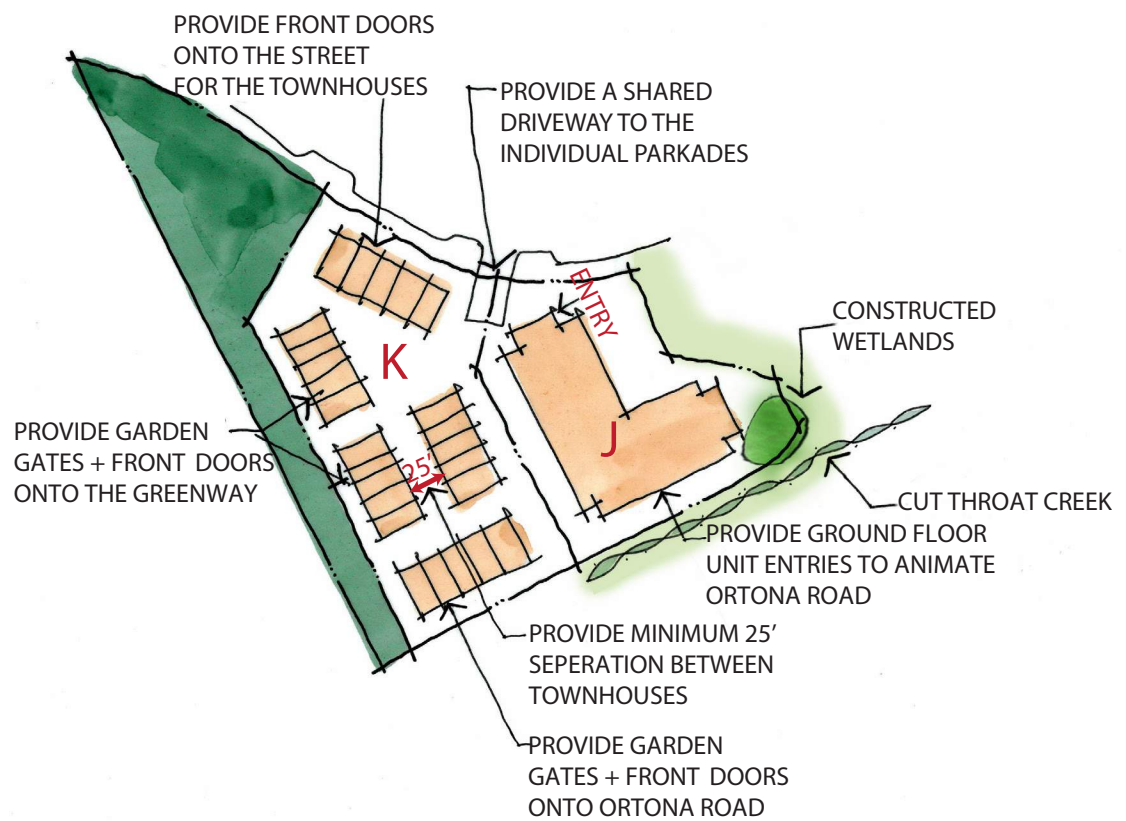


#### 4.1.5 Parcel J and K

See Section 6.5 for additional information.



Key Plan



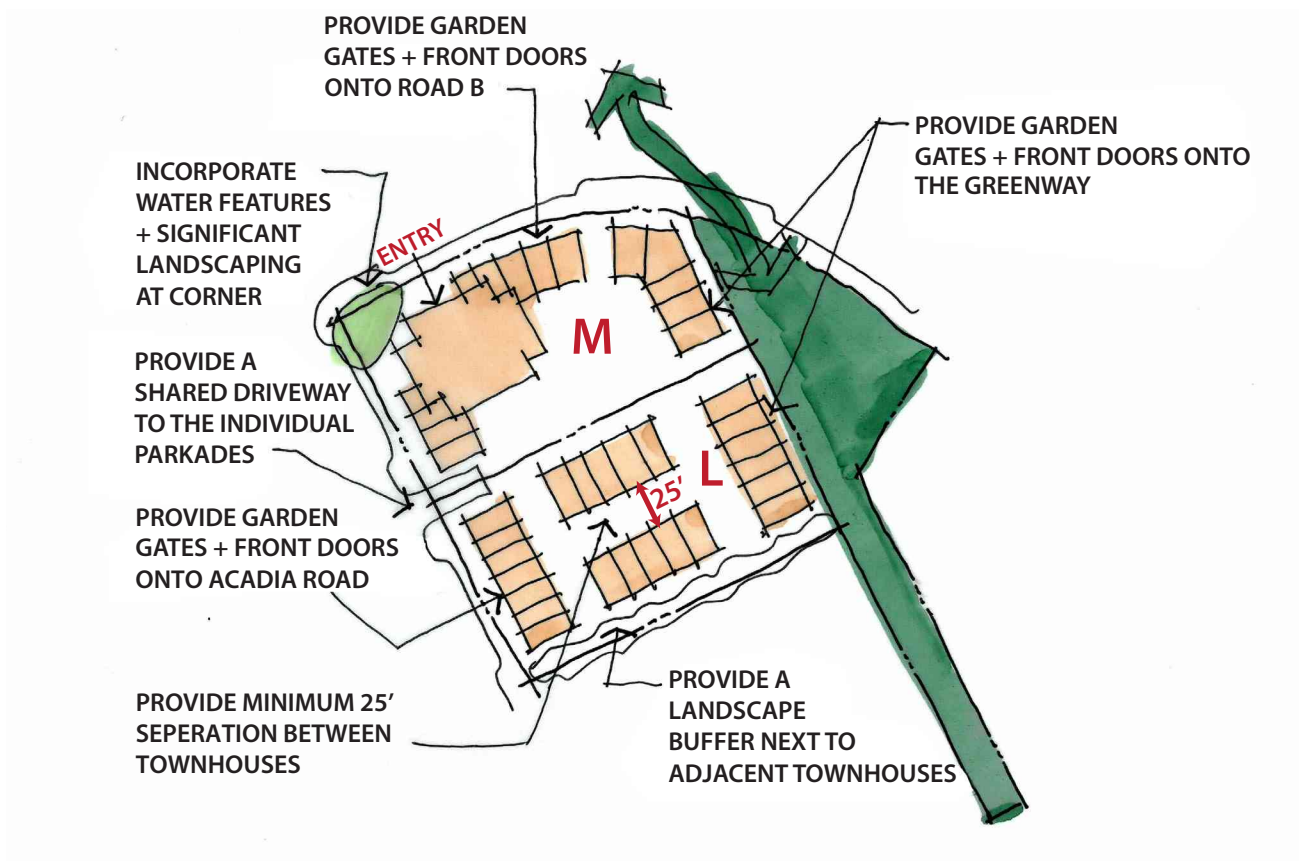


#### 4.1.6 Parcel M and L

See Section 6.5 for additional information.

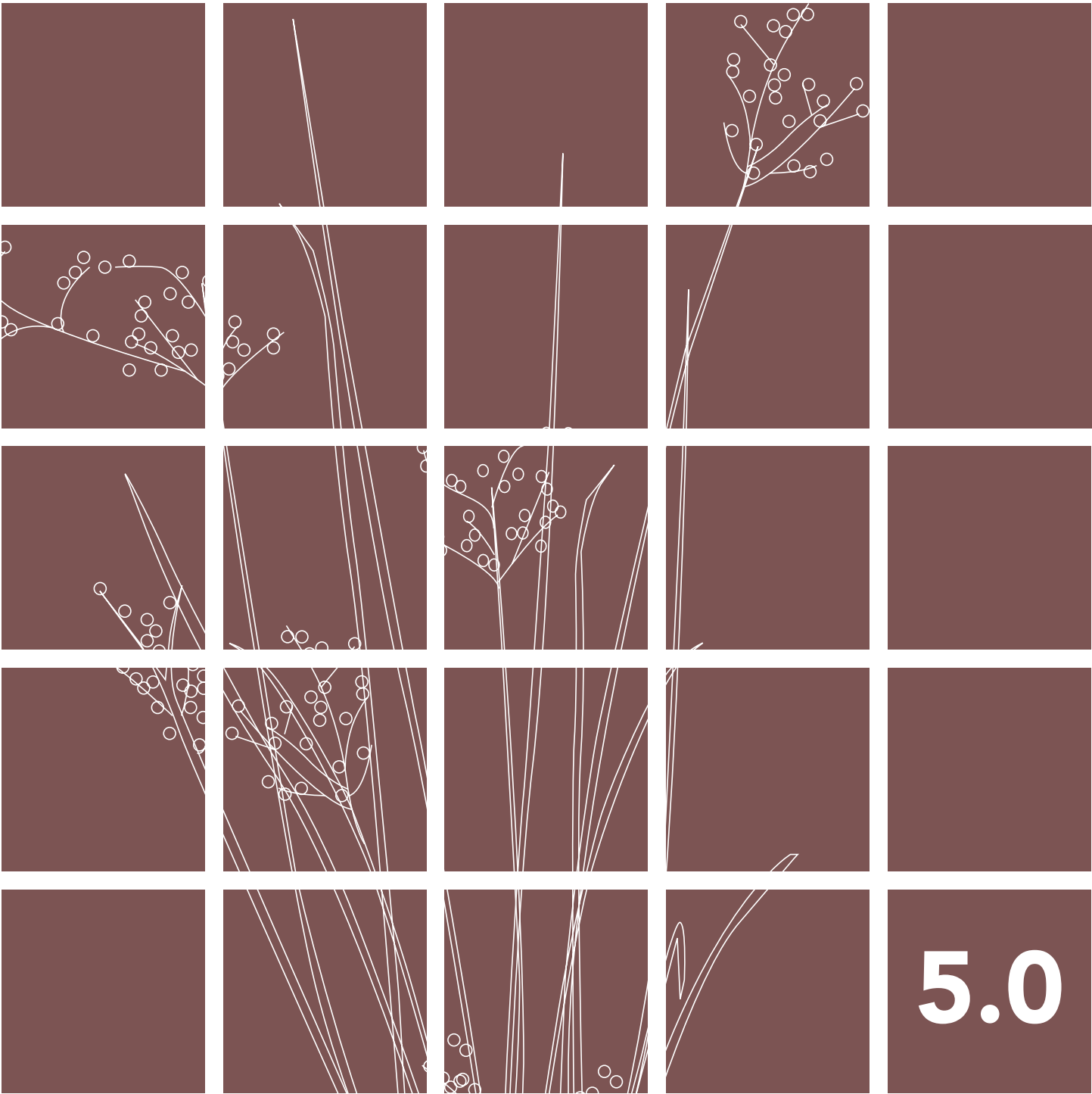


Key Plan



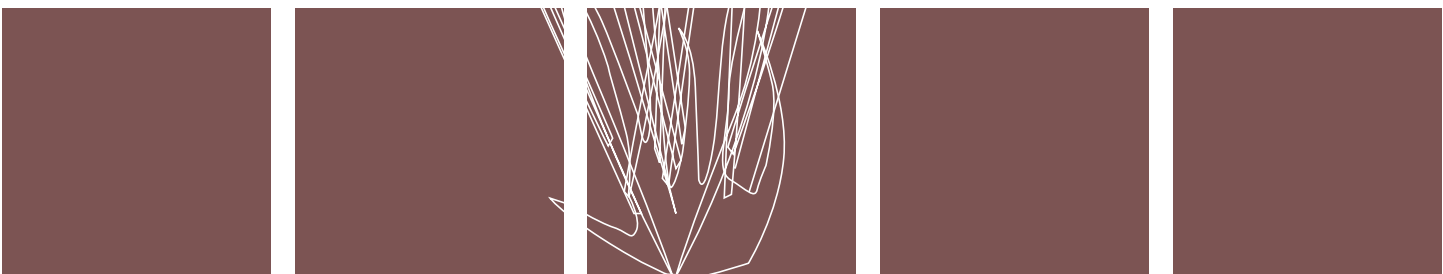






5.0

ROADS





VIEW NORTH ALONG ACADIA ROAD



## 5.0 ROADS AND TRANSPORTATION

### 5.1 STREET CHARACTER

The character of each street is dictated by a combination of factors such as scale and proportion, character of adjoining buildings, layout and organization, adjacency to open space, and finally, materials, furnishings, trees and other soft landscaping. However, an overall unity within Block F will be achieved through the use of a project wide kit of parts. The overall character will be an extension of the existing forest to maximize the visual and functional connections with the park and open spaces, the forest, and the Pacific Spirit Park.

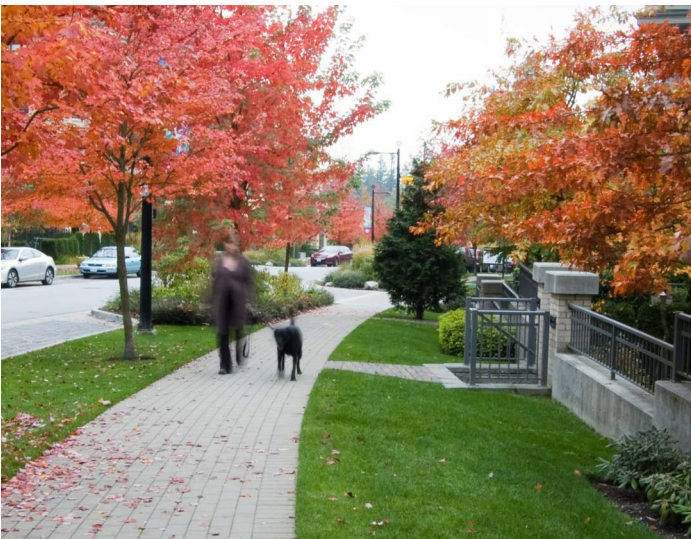
The surrounding and internal roads will include a sustainability component. This will be integral to the forest character through the inclusion of raingardens and connections to bioswales to detain and treat the runoff, the use of ecologically functional planting to support the rainwater management intent, the use of permeable paving in parking laybys and an extensive tree canopy over the roadways to minimize the heat island effect of the paving.

### 5.2 SURROUNDING ROADS

Block F is surrounded on three sides by existing roads, University Boulevard, Toronto Road, and Acadia Road. In addition, Ortona Avenue and its partially undeveloped right-of-way bound the south property line of the site. Each road frontage will see significant improvements.

#### 5.2.1 University Boulevard

The original character of University Boulevard at the forest edge will be recreated and improved with the development of Block F. A right-of-way will be taken along this property line to allow for a 12m wide vegetated buffer to the street. It will be planted with a mix of primarily evergreen with some deciduous trees to create a more diverse and native condition than originally existed. The narrow sidewalk that parallels the curb line will be replaced with a widened walkway that flows through the new forest edge planting. Bicycle lanes along University Boulevard will be retained as part of the development. Refer to Section 3.6.2 for more information.



SFU UniverCity Green Streets



Meandering Path with Evergreen and Deciduous Trees





On Street Parking Separated by Treed Boulevard



Example of Traffic Circle



Social Hubs Within the Road Right of Way

### 5.2.2 Toronto Road

Only the south side of Toronto Road will be redeveloped by this project. The curb will stay in the current location. Block F will provide a wide boulevard (2.0m) with new regularly spaced street trees and a 2.5m concrete sidewalk at the property line. This enhanced sidewalk treatment will also include robust plantings and signage. Combination street and pedestrian lighting will be provided. Due to the proximity with the Village Square and the short length of the block, social hubs will not be provided in the street right-of-way.

### 5.2.3 Acadia Road

Acadia Road will be redeveloped by this project. Block F will organize the on-street parking on both sides to provide parallel new on street parking laybys divided by landscaped bump outs and driveways from adjacent development parcels, new regularly spaced street trees, 1.8m sidewalks on both sides, and a traffic circle for traffic calming and ease of parking search at the intersection of Road B. As per the other road designs the east side of Acadia will have a range of site furniture including street and pedestrian scale lighting, multiple benches concentrated at social hubs, recycling and waste receptacles, and bike parking adjacent to open space areas such as the Forest Park and the Village Square.

## 5.3 INTERNAL ROADS

There are two internal roads proposed in Block F. Both bisect the site from University Boulevard to Acadia Road. Road A is north of the Forest Park and Road B is south of the park. Both streets have an enhanced public realm including site furniture, landscaped bump outs and a widened sidewalk on one side of the street. Raised and widened pedestrian crossings will be provided where the Sword Fern / Ivan Mann trail crosses both Road A and B. These crossings will help reinforce the pedestrian priority and maintain the continuity of the trail across Block F.

At key places, such as the trail crossing, public access easements over development parcels and street intersections where people are likely to bump into each other social nodes or hubs will be provided. These areas will include widened areas of paving with benches, lighting, bike parking and be associated with areas of planting. The purpose of the social hubs is to create opportunities to for neighbours to meet and help grow the sense of their

community. In other areas recycling and waste receptacles will be provided to help keep the neighbourhood clean. Pedestrian scale lighting will be provided for the sidewalk and social hubs illumination separately from the street lighting.

The streets will also include sustainable initiatives such as rain gardens, permeable paving in the on-street parking laybys and the lighting will be high efficiency lighting with cut offs to minimize light pollution. These will not only contribute to the environmental benefits of the development but will also provide high value aesthetic improvements over a typical street.

### 5.3.1 Village Road / Road A

Road A will have a traffic signal-controlled intersection at University Boulevard. A widened sidewalk on the north side will accommodate additional pedestrian traffic for the commercial/retail land uses. The adjacent development parcels will have driveway accesses marked by landscaped bump outs.

Road A is adjacent to the Village Square, Community Amenity Building and the Forest Park. Reflecting this high prominence within the neighbourhood it will receive higher-level finishes and treatments than Road B. This will include additional site furniture, improved paving materials such as discreet areas of unit paving and directional signage for the public realm areas. As part of the traffic calming measures for Road A perpendicular parking in front of the Community Amenity Building will be provided. As with all other on-street parking within the Block F development it will be surfaced in permeable unit pavers.

Based on the traffic volumes that are expected on Road A, it is concluded that marked bike lanes would not be warranted on Road A. As a general rule, marked bike lanes are only useful if daily vehicle volumes are >3,000 vehicles per day, which is not case for Road A.

Instead of installing marked bike lanes on Road A, bike stencils (sharrows) will be installed on Road A to alert drivers of the presence of bicycles. In addition, near the intersection of Road A & University Blvd, a short-section of marked bike lane will be provided between the westbound right-turn and the left-turn lanes, along a bike box at the front of the right-turn lane to provide preferential treatment for cyclists.

### 5.3.2 Forest Park Road / Road B

Road B, south of the Forest Park will not be signalized at University Boulevard. A widened sidewalk on the north side will facilitate connections to the park. The adjacent development parcels will have driveway accesses marked by landscaped bump outs. Similar to Road A, the daily vehicle volumes expected on Road B does not warrant the need to install marked bike lanes. To alert drivers of the presence of bicycles, bike stencils (sharrows) will also be installed on Road B.

### 5.3.3 Sword Fern Trail Crossing at Road A + B

A raised and widened pedestrian crossing will be provided where the Sword Fern / Ivan Mann trail crosses both Road A and B. Enhanced paving materials to demarcate the space and reduce vehicle speeds will be used. These crossings will help reinforce the pedestrian priority and maintain the continuity of the trail across Block F. As key social hubs, these crossings will have a range of site furniture including benches, widened paving, lighting, and recycling and waste receptacles.

## 5.4 SUSTAINABLE TRANSPORTATION FEATURES

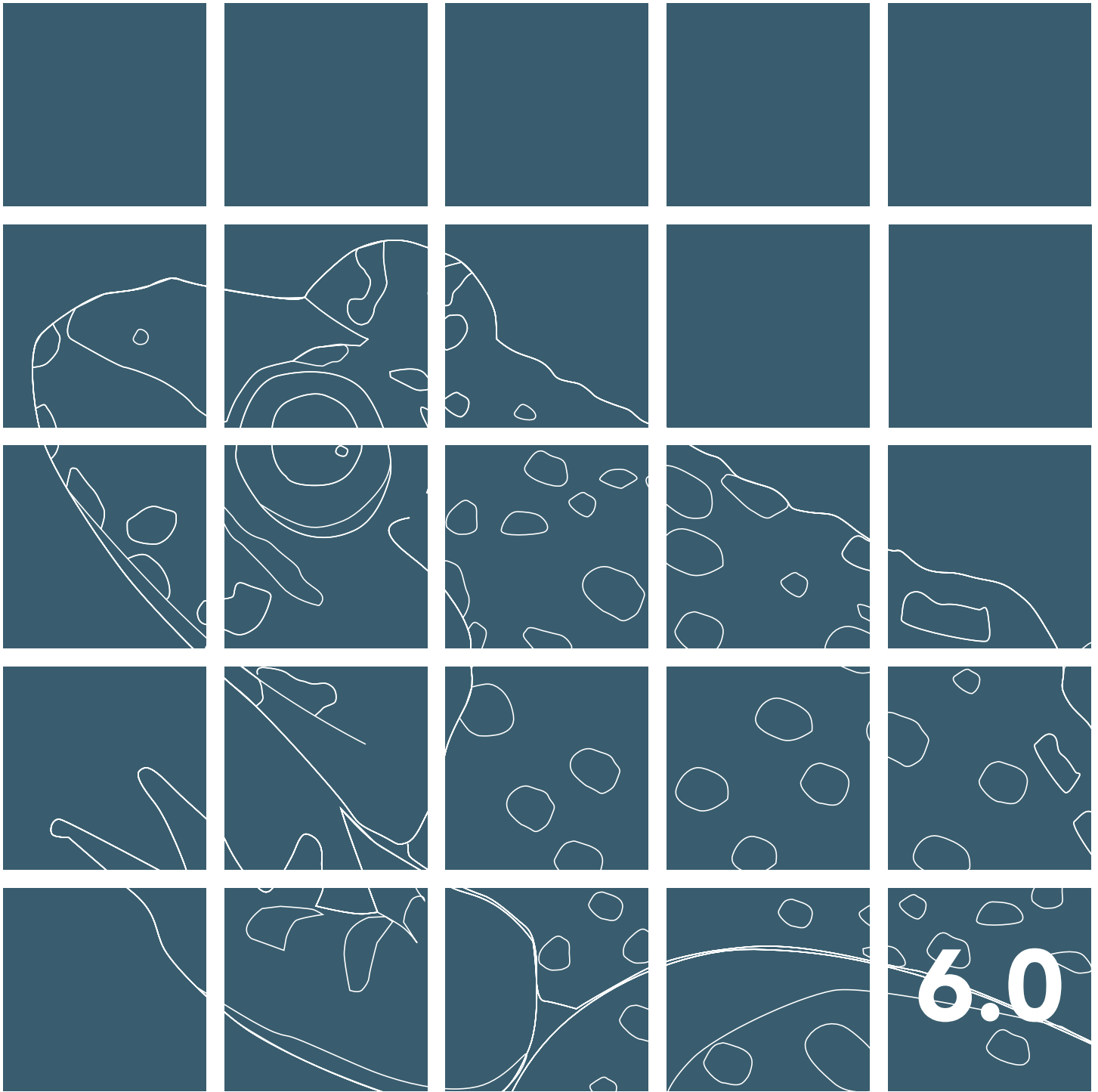
The Block F development will promote non-auto travel through the introduction of a number of sustainable transportation features. Refer to Rezoning document for details.



Cycling Integrated Within the Community







ARCHITECTURE







BUILDING AND LANDSCAPE WALL DEFINING A STREET EDGE



## 6.0 ARCHITECTURE

### 6.1 DESIGN PRINCIPLES

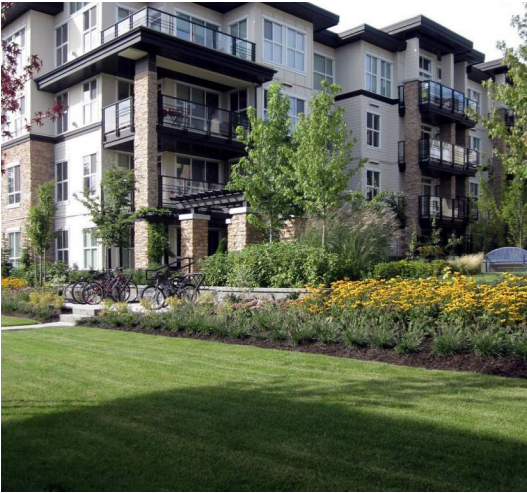
Principles which will guide the design of buildings are:

- » Be responsible - to your neighbour and to those who pass by on the street
- » Be inclusive – design to invite people in visually or actively
- » Be respectful – of the history of the land and of the legacy that will be left behind



View Northwest Along University Boulevard





Private Outdoor Areas Opening onto Public Space



Public Seating on Private Land



Buildings Form a Courtyard

## 6.2 SITE PLANNING/SITING OF BUILDINGS

The master plan of Block F works as a whole. Potential building shapes and locations are illustrated to support the success of the whole: framing open spaces, encouraging connections, providing street energy, respecting views from within and without, and moderating the massing and shadowing of buildings.

The site planning and siting of buildings and open space shown in the zoning document have been carefully considered to ensure the greatest success of the overall community.

- » The commercial development and village plaza are located at the north end to provide easy accessibility to both the existing community and the new community which will come. Buildings are placed to create an open, vibrant public plaza
- » Highrise sites are located closer to the tall stand of mature trees that will remain and to minimize shadowing onto adjacent developments. Townhouses are incorporated at the bases of the highrises and are located along streets and greenways to provide a more intimate scale and sense of neighbourliness
- » The mid-rise and low-rise developments are located further to the south where they will offer a suitable transition to the adjacent community
- » Provide a minimum 100' separation between highrises
- » Within sites, provide a minimum 25' separation between townhouse rows that face each other; provide a minimum 8' between ends of rows



## SETBACKS

The zoning document dictates minimum setbacks from property lines. Note that some properties have more than one setback requirement: one is for the building setback, the other is for the underground parking setback to allow for larger planting to mature over time. These dimensions are set to establish the overall open space for the community and to allow for the necessary amount of landscaping in relation to the built form. They help to moderate between an intimate street presence and a healthy separation between public and semi-private uses. And they allow for important features such as the expanded boulevard and storm management along University Boulevard.

- » Place buildings so that they honor the open space and orientation of other, adjacent buildings and provide opportunities for buildings that will follow
- » Place buildings so that they define the street edge and frame the public realm and open space

## 6.3 ARCHITECTURAL FORM AND CHARACTER

The general approach to the design of buildings and the landscape is to be warmly contemporary, appropriate to its West Coast setting. There should be an integration of natural materials and colours to respond to the forested context in the adjacent area. It should be of its time and have a lasting quality.



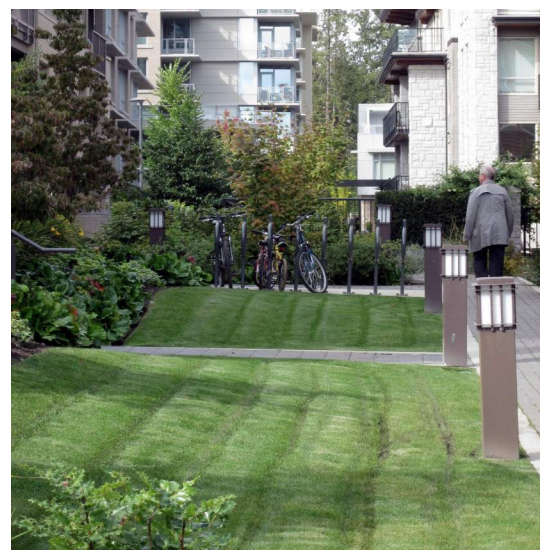
Buildings and Landscape Walls Define a Street Edge



View from Building Entry into a Courtyard



Buildings Define Greenbelt Edges



Buildings Define the Edges of Lawn and Walkways

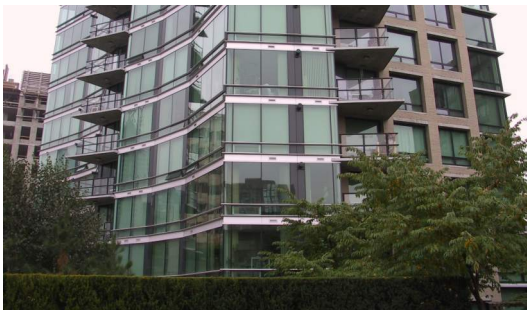




Upper Storey Set Back to Reduce the Building's Impact



More Intimately Scaled Building Works Well Next to Public Greenway



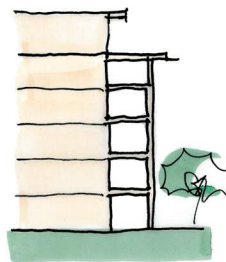
Change in Materials to Reduce the Scale of a Building



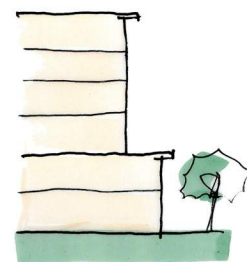
Strong Vertical and Horizontal Elements Break up a Building's Mass

The scale of buildings should be responsive to the generally smaller-scaled and more intimately-textured architecture found in the University Endowment Lands.

- » Create buildings and landscaping that are at a pedestrian scale and that offer delight to passers-by
- » Modulate buildings to reduce the impact of their mass by incorporating changes in facades, setting back of upper levels, incorporating significant vertical and horizontal elements, or introducing mid-level parapets to reduce the overall scale
- » Block F is located in a rain forest. Ensure that the design of buildings recognizes this feature
- » Provide designs that protect the building from rain and rain's weathering aspects by incorporating generous roof overhangs and other architectural elements
- » Design buildings that provide rain protection for front door and lobby entrances, bicycle parking and some outdoor gathering places
- » Integrate elements in the design of buildings and landscaping that create a strong sense of arrival at street corners and at principal entrances to the community



Significant parapet at 5th floor



1st and 2nd floors accentuated



Generous Roof Overhangs Incorporate



### 6.3.1 Building Materials

The palette of building materials used on building should be honest and appropriate to this setting. There is no prescribed architectural style and it is hoped that each building will feel like part of an overall whole while adding its own personality.

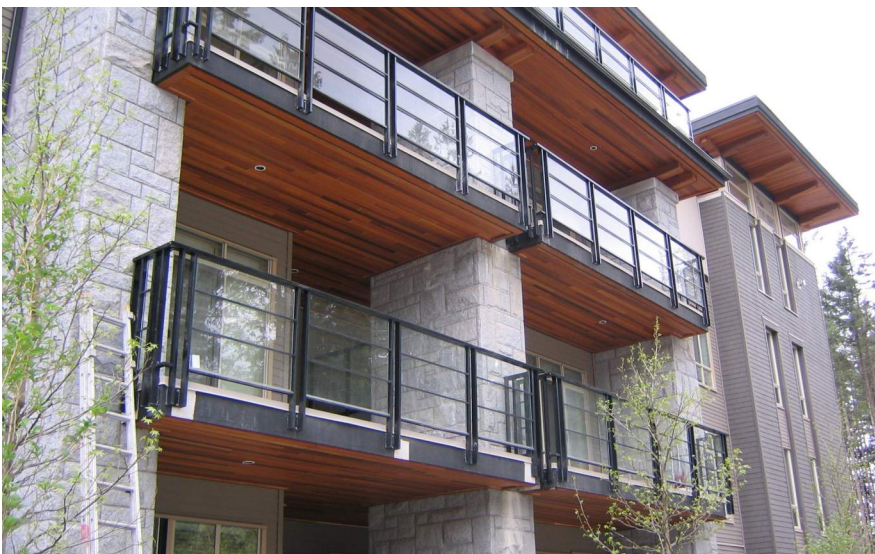
- » On buildings, the use of real brick or natural real stone is encouraged
- » Find opportunities to incorporate real wood – glulams and cedar are recommended for their local nature, appearance and longevity – in areas where the wood will be protected and will provide a warmth and richness suitable to the West Coast setting
- » Cementitious siding, engineered stone and metal or glass panels are all exterior materials that are encouraged
- » Textured or painted concrete is acceptable if they are restricted to a minor portion of the building and will add to the warmth and character of the building
- » Avoid mirrored and highly reflective finishes on solid surfaces
- » Limit the palette of materials – avoid using too many different materials in order to provide a calm, cohesive appearance
- » Ensure that buildings have a richness of appearance and offer delight and charm
- » Detail buildings to provide longevity, recognizing impacts from weather and usage



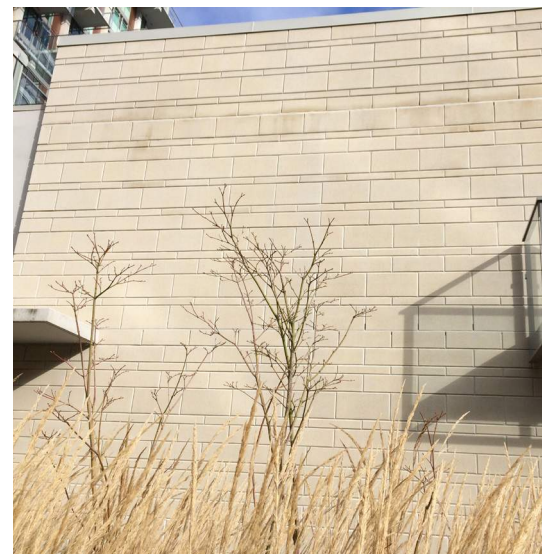
Cedar Soffits Protected from Weather



Detail Buildings for Longevity



Use of Real Stone



Avoid Large Blank Expanses of Wall





Landscaping Used to Create Privacy



Separation of Public and Semi-private Spaces



Building Well Integrated with the Landscape

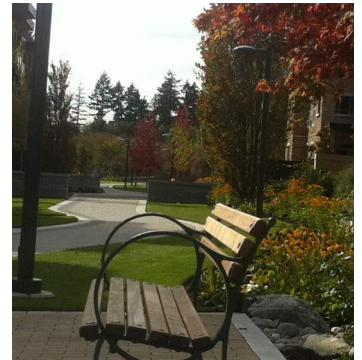
### 6.3.2 Integration of Architecture with Landscape

Design buildings to integrate the hard and soft landscaping with the building. Blend public-to-private so that each component benefits from the other. In a number of locations, easements have been established on private property for public pedestrian access.

- » Provide clear lines of demarcation between the publicly-accessible areas and private areas
- » Allow for visibility from the semi-private areas to the publicly-accessible spaces for security and neighbourliness. Follow good CPTED (Crime Prevention Through Environmental Design) principles
- » Design buildings so that they frame outdoor spaces on the site
- » Use buildings to create smaller and larger outdoor spaces and courtyards that are seen as outdoor rooms, and use buildings to modulate between various sizes and types of outdoor spaces
- » Provide opportunities for sitting, including benches and sit-height walls, on private property where they are at corners, near entries and adjacent to greenways
- » Create "parkettes" and other features at exposed corners of sites that, while they are on private land and will be maintained by the building owners, can be used by the general public



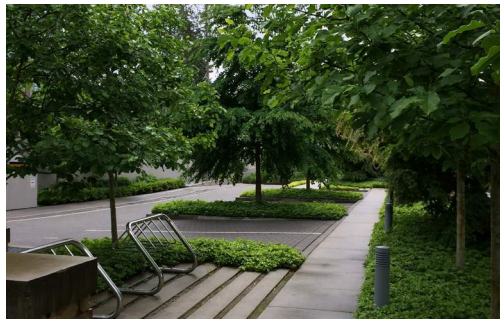
Soft Transition Between Public and Private



Successful Integration Public Access Through Private



Successful Integration of Landscaping and Public Art



Layered Landscaping Between Parking and Building



Outdoor Terraces Raised Above Street Grade



### 6.3.3 Integration of Water Features

The creative use of stormwater to be captured, cleaned and used for down-stream benefits is one of the defining features of this development.

- » Consider ways to incorporate water into the landscaping of private developments, especially at prominent corners and adjacent to public greenways
- » Find ways to utilize water in building design and landscaping; a range of approaches into the way in which water is utilized – formal or informal, still or moving – is encouraged
- » Attractive, soft lighting of water features is encouraged, both for after-sunset enjoyment and for safety. Ensure that water features are safe



Water Feature that Benefits Both the Building Entry and the Public Street



Naturalistic Use of Water Feature



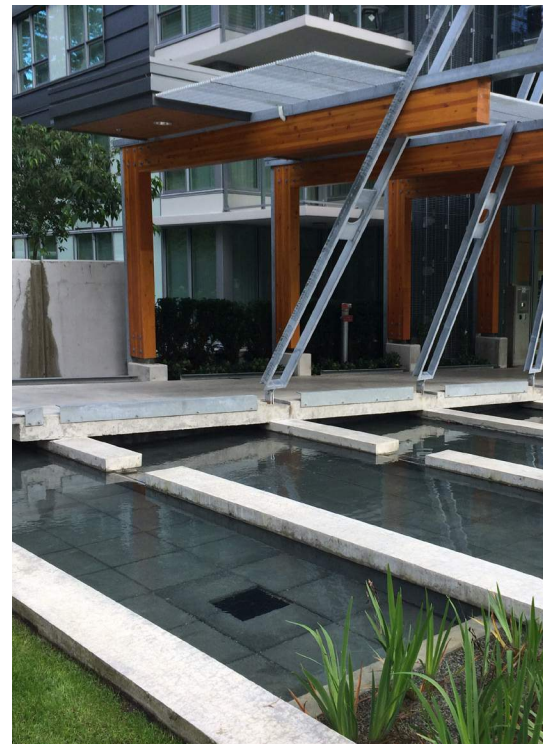
Formal Use of Water



Formal Waterscaping



Successful Integration of Water, Art and Natural Features



Creative Incorporation of Water Elements

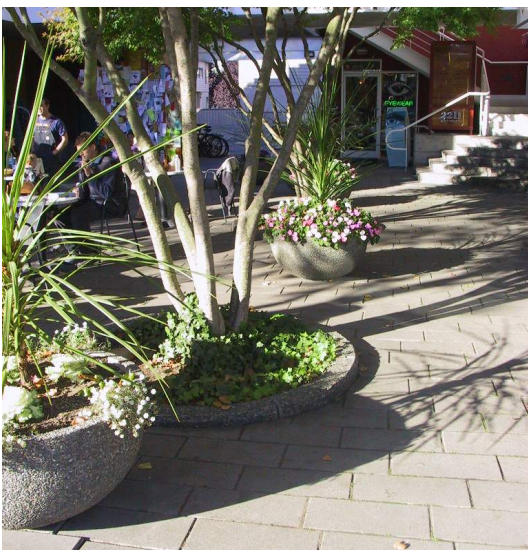




Successful Integration of Hard and Soft Landscaping on Retail Street



Outdoor Restaurant Seating



Landscaping Used to Define Smaller Outdoor Areas in Larger Settings

## 6.4 VILLAGE CENTRE

The Village Centre, along with the Community Building, will provide a heart and focus to the community. The design of buildings, open space, plazas, parking and landscaping should support the community benefit of these features. There is a strong expectation that the final design of the Village Centre incorporates the elements shown in the zoning document.

The Village Centre is both an entrance to the overall site and the location of a continuation of pathways and trails on the site. Right-of-ways are registered to ensure that public access is maintained through the Village.

The locations of the buildings and uses in the Village, as shown in the zoning document, have been established to allow for the optimal utilization of the plaza space.

The Village is intended to be integrated with and an extension of the Community Building. Design the plaza, the roadway of Road A and the front of the Community Building so that activities in each can fluidly mix. It is understood that there may be events which will benefit from a temporary closure of Road A between the Village Square and the Community Building.

Provide clear and easily seen connections between surface parking and plazas, between open spaces and the bus stop, between various uses within the Village.

Surface parking is to be located at the north end of the Village. A maximum of 20 surface stalls is permitted. Access to the loading bay is to be incorporated into the drive aisle of the surface parking.



View North through Village Square



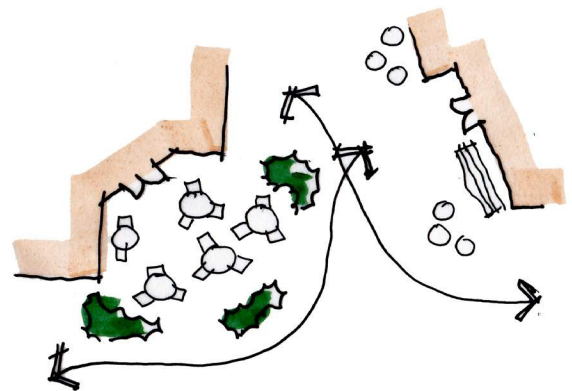
### 6.4.1 Village Square

The Concept Plans show the preferred locations for open and outdoor spaces, pedestrian access routes, surface parking, locations of entrances to underground parking, and locations of lobbies for residential uses above the commercial. It should be recognized that users of the Iva Mann Trail will often continue through the plaza. Allow for this seamless use.

- » Design the plaza areas to allow for a variety of uses and sizes of space, abundant flexibility and a welcoming nature
- » Provide opportunities for outdoor seating that capture the sunshine and which will provide animation in the plaza
- » Some portions of the plaza will allow for retailers to open their storefronts, display goods in the plaza, and have tables and chairs for outdoor food and beverage service; these are encouraged. Ensure that furnishing and displays do not disrupt pedestrian routes
- » Allow for the integration of outdoor commercial uses with open public access
- » Incorporate landscape beds and planters into courtyard and plaza areas
- » Use a variety of hard and soft landscape elements to define smaller outdoor areas within the larger plaza
- » Provide a variety of seating options – fixed and movable – for patrons and the general public to use



Outdoor Plaza Areas with Seamless Public Access



Integration of Outdoor Commercial with Public Access



Landscaping Incorporated into Retail Plaza



Outdoor Courtyard Adjacent to Public Plaza





Weather Protection in Retail Area



Outdoor Covered Areas



Avoid Long Runs of Retail Storefronts



Provide Smaller Scale Texture to Retail Storefronts



Landscaping Well Integrated into the Retail Plaza

## 6.4.2 Commercial/Retail

Design buildings so that they form a variety of outdoor spaces that can be more intimate and that can allow for a more expansive use. Ensure that outdoor spaces benefit from sun exposure. Use scale, rhythm and materials that support a comfortable pedestrian scale.

- » The retail buildings have no back sides ;that is, they are exposed on all four sides. The architecture must respect the aspect of this exposure; all sides should be designed to address the street and should not look like the back of the building
- » Notwithstanding, the main entrances to the retail uses should be located on the plaza. Secondary access can be provided from the surrounding streets
- » Find ways to reduce the bulk of larger commercial spaces though the use of variations along the length of a storefront. Provide a smaller scale texture to the storefronts of the retail. Avoid long, unbroken expanses of storefront glazing
- » Incorporate canopies and other weather projection for retail spaces. Explore opportunities for weather-dependent umbrellas and displays to liven up the plaza space
- » Provide courtyard areas and opportunities for outdoor display and outdoor furniture. In situations where outdoor patio and table spaces are proposed, provide designs that can allow for the use of outdoor heaters in a way that integrates with the design of the building
- » Consider, where appropriate, the design of buildings that allow their storefronts to open onto courtyard and plaza spaces, to encourage the integration of indoor and outdoor uses



Avoid Long Retail Facades Without Landscaping and Weather protection



Back of Building Provides Frontage on the Street



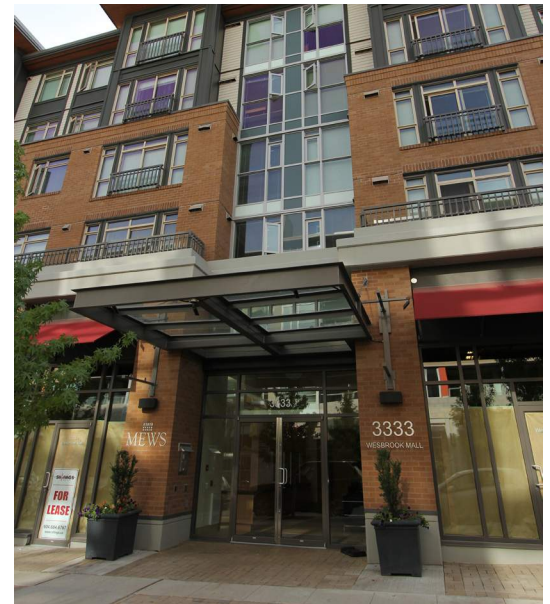
Retail Storefronts Integrated with Awnings and Signage



### 6.4.3 Residential above Commercial

Residential uses are permitted above the commercial buildings on Parcel A. Residential is the principal use on Parcel B, with a small retail component at grade level on the side of the building that faces the Village Square.

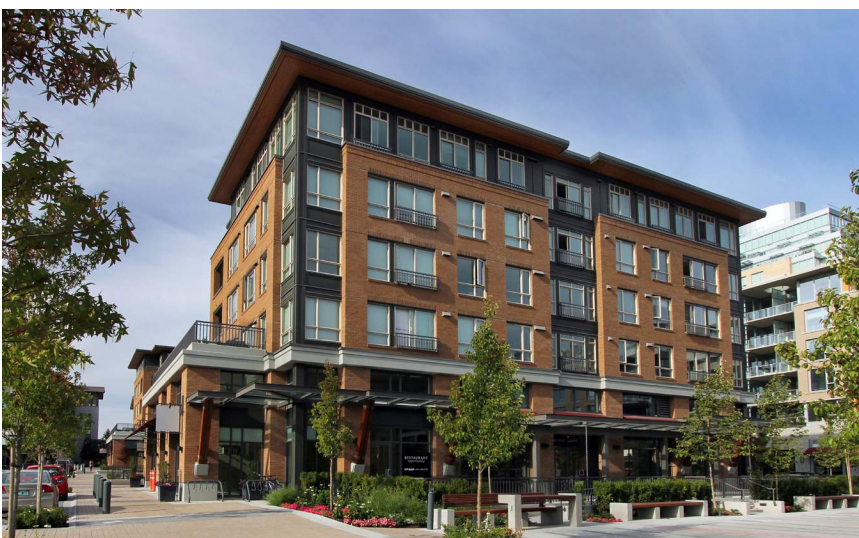
- » Locate lobbies to the residential development in clearly identifiable locations that provide easy addressing on adjacent streets. Avoid residential lobbies that break up the retail storefront continuity
- » Set back the upper residential storeys from the line of retail on the plaza sides of buildings. The use of landscaped patio areas in those locations where the residential sets back from the retail is encouraged
- » Consider providing duct and ventilation provisions in the residential for possible future uses of the retail spaces below



Successful Lobby to Residential Above Commercial



Residential Set Back from Commercial Edge



Residential Over Commercial



Residential Set Back from Commercial with Usable Outdoor Private Space



Loading Bay with Doors



Garbage and Recycling Enclosed within a Building



Retail Hanging Signage

#### 6.4.4 Loading/Garbage

- » Garbage collection and recycling areas are to be contained within a building or in the parkade
- » A loading bay for a larger format retailer must be predominantly incorporated within one of the two buildings
- » A surface loading bay for smaller vehicles can be included in the open retail parking area
- » Provide attractive doors to screen the loading bays and garbage rooms when not in use
- » Provide adequate ventilation of garbage rooms that will not negatively impact adjacent uses and users

#### 6.4.5 Signage

Signage regulations will be included within the Land Use, Building and Community Administration Bylaws. A development permit for an integrated and comprehensive signage plan will be required as part of the development permit application for the buildings. The signage is to be integrated with the building design.

- » Prepare an overall signage package that coordinates the design of individual tenants into an overall signage design
- » Signage which reflects the individual character of the retailer is encouraged
- » Wall mounted and hanging signage is encouraged. Provide front or ambient lighting for the signage
- » Pylon signage will not be permitted

#### 6.4.6 Building Lighting

Incorporate warm lighting – wall mounted and recessed – on the commercial buildings to provide low levels of general lighting to support the safe use of the plaza spaces after dark.

- » Provide building lighting that provides sufficient ambient lighting but that is not over-lit, harsh or glaring. Incorporate good CPTED principles in the design of lighting
- » Avoid harsh lighting from within retail spaces
- » Provide lighting that accentuates the landscaping and water features. Use landscape lighting to supplement the building lighting and provide the safe use of publicly-accessible spaces after dark
- » Lighting should incorporate shrouds to restrict spill over. Avoid lighting which shines up



### 6.4.7 Parking Garages

The locations of entrances/exits from the underground parking are shown on the Concept Plans.

- » Design these entrances so that they are clearly seen and easy to find
- » Treat any portion of the walls and ceiling of the parkade entrances that are visible from the street as a continuation of the exterior finishes of the building
- » Ensure that there are no recesses or obscure areas that cannot be readily seen from other parts of the plaza
- » Locate exit stairwells from the parkade to provide quick and easy access to the retail stores and to the Community Building across the street
- » Design the pedestrian accesses to the parkade so that they can be secured when public access to the parkade is closed



Building and Landscape Lighting



Ground Oriented Townhouses

## 6.5 MULTI-FAMILY RESIDENTIAL BUILDINGS

The zoning document indicates the size, height, use, setbacks and site coverage for each parcel. The Concept Plans in these Design Guidelines indicate preferred locations of building entries, townhouses, open spaces and other features. Refer to each of the above in addition to the guidelines below.

The siting of buildings on each parcel has been developed to create a unified and successful overall development. Any changes to this must be carefully considered and supported to show that the intent of the master plan and the guidelines are being upheld or enhanced.

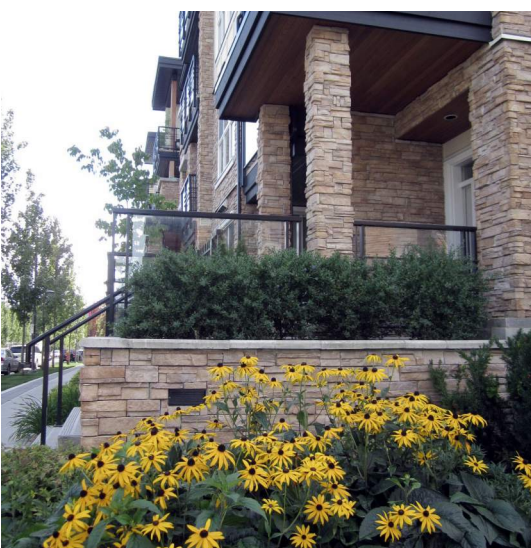
### 6.5.1 Ground Orientation

Note in the Concept Plans requirements for street-facing doors to townhouses and apartments.

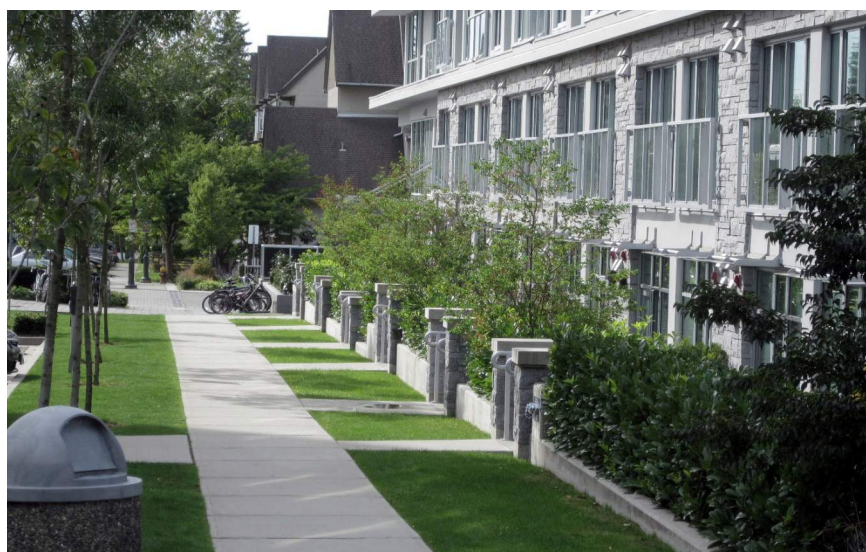
- » Individual doors leading to streets and greenways from first-floor units are strongly encouraged. Include individual garden gates to each home, with direct access to streets and greenways
- » Provide usable outdoor area for the use of each unit and in a way that facilitates social interaction
- » Setting the elevation of outdoor, private patios higher than the adjacent sidewalk is encouraged. The maximum grade difference between sidewalk and outdoor patios should be 3' or less unless it is modulated with landscaping and/or stepped planters
- » The schematic plans show locations in which townhouses should be located. These are typically along streets and adjacent to greenways
- » Townhouses are permitted and encouraged to be located closer to the street than buildings of four and more storeys



Ground Floor Apartment with Garden Gate onto the Street



Individual Entry on a Street



Individual Gates for Ground Floor Apartments



### 6.5.2 Building Entries

Enhance the transition from public spaces to front doors with attractive hard and soft landscaping, water features and similar. (Refer as well to Section 6.)

- » The front doors to lobbies of buildings should be readily visible from the street or internal access road
- » Provide individual townhouse and ground floor apartment entries directly from streets and public greenways where indicated on the Concept Plans
- » Use gates, landscaping and fencing to define the separation between public and private
- » Avoid large areas of hard surfaces in front of buildings



Avoid Wide Expanses of Hard Surfaces in Front of Buildings



Highly Visible Lobby Entry



Building Entrance Visible from Street



Dramatic and Clear Building Entry



Highrise with High Volume Entrance



Highrise with Strong Entry Utilizing Water and Real Wood



Rooftop Gardens Set Back from Building Edge

### 6.5.3 Highrises/Highrise Sites

Townhouses are to be located at the ground level of all highrise parcels. The locations of these townhouses are indicated on the Concept Plans and are intended to provide a finely-textured pedestrian scale for the community, along with private outdoor spaces that provide animation and overview onto the street.

- » A slender profile of highrises is encouraged. The maximum floor plate size of any highrise should be 7,600 sf. or less
- » Stepping and/or other architectural initiatives to reduce the overall mass of the highrise are encouraged
- » Provide clear and open views from public street or interior lane to the lobby and front door of the highrise
- » Integrate entry lobbies with views through to forest/water/courtyards
- » Taller lobby spaces that permit a blending of outdoor to indoor are encouraged
- » The tops of highrises should be part of the design of the building and not merely a mechanical appendage at the top. Be dramatic; be playful
- » Screening and other architectural elements above the habitable area of the building are not included in the height restrictions noted in the bylaws

### 6.5.4 Roofs

For buildings up to 6 storeys, generous roof overhangs are encouraged.

- » Flat roofs are preferred but not mandated
- » While not required, rooftop patios and gardens and other architectural treatments are encouraged, especially on those roofs that will be seen from higher buildings
- » When rooftop patios and gardens are incorporated, set them and their railings back from the edge of the building so that they are not too apparent
- » All roof-top mechanical equipment must be screened on all building types. Design the mechanical equipment and its placement to minimize noise. An acoustical engineer will be engaged at the Development Permit stage to decide use on noise impacts

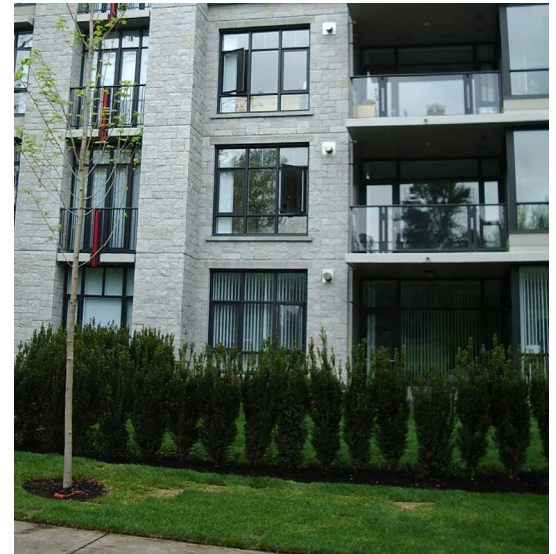


### 6.5.5 Outdoor Private Spaces

- » Large terraces, balconies and rooftop patios are encouraged. Provide usable ground floor terraces along streets and greenways
- » Incorporate gates for individual access to the individual terraces
- » Create some aspect of privacy through landscaping rather than solid walls
- » Designing street-facing patios to be elevated above sidewalk grade to provide some separation between public and private uses is encouraged
- » Where an elevation difference is not possible, provide attractive gates, fences and landscaping to provide a separation



Landscaping Between Street and Building



Successful Division of Private Outdoor Space from Public Walkway



Successful Transition between Public and Private



Parkade Ramp with Special Approach to Design



Shared Parking Garage Entry



Trellis Over Parkade Entrance

### 6.5.6 Parking Garages

The master plan indicates those sites that are to have shared parkade ramps with an adjacent development. The ramp will be constructed by the first development and will be utilized by both sites.

- » Provide some cover or trellises for and enhance the parkade entries
- » Treat them as front doors and make them attractive to those looking down or passing by
- » Special design features for the side walls of parking ramps are strongly encouraged
- » Where the tops of parking garages are above the finished grade of its surrounding, provide finishes to the exposed edge of the parkade and/or provide landscaping to soften the visual impact

### 6.5.7 Residential Garbage

All garbage and recycling for residential buildings must be accommodated within the building, typically in the parkade.

- » Provide a marshalling area adjacent to the top of the parking ramp to place garbage containers for a short term while they await the garbage truck
- » Integrate the marshalling areas into the hard landscaping so that they work even if not be used for temporary placement of garbage containers

### 6.5.8 Building Signage

- » Integrate building signage with the entries closer to the street to aid in way-finding
- » Integrate the signage with landscaping



Building Signage Close to Street



Signage at the Street



## 6.6 COMMUNITY AMENITY BUILDING / DAYCARE

A Community Amenity Building is being offered as part of the rezoning of the site. It will be designed by the master developer with input from UEL administration and the community. The location and schematic program are included in the Concept Plans.

The building will be primarily one storey with a smaller second storey portion and a partial basement. It is to be approximately 15,000 square feet gross area and is to include the following.

- » Lobby and reception area
- » One or two social and multipurpose spaces, near the lobby area
- » A larger and a smaller meeting room
- » Fitness studio
- » Fitness machines and weight room, as part of the fitness studio or as a separate space
- » A half-size or larger gymnasium
- » Small kitchen/coffee station near the multipurpose spaces
- » A large, covered outdoor space adjacent to the multipurpose space
- » Change rooms and washrooms
- » Storage and service rooms

The building should be designed to accommodate a flexibility of uses and occupants. Spaces that open up to each other permanently or temporarily are encouraged for the multi-purpose uses. Provide a logical sequence of spaces that allow for easy orientation by users. Design the building so that a variety of different uses and users can be accommodated at the same time.

The building should reflect a west coast contemporary feeling and be designed to be welcoming to the community. The use of large timbers and stone on the exterior, along with water elements, is encouraged. Interior materials should have good longevity, be resistive to the wear from ordinary use and be low maintenance.

Provide windows that open for natural ventilation. Design the building to protect interior spaces from excessive

sun gain. Where large wall elements, such as for the gymnasium, are exposed to view, create interesting facades that incorporate interesting materials, green walls, art glass or other elements that are attractive to viewers.

The covered outdoor area should be large and dramatic and read as a continuation of the multi-purpose room. Locate the covered outdoor area adjacent from the active open space. The kitchen/servery should be positioned to provide easy access to outdoor users and gatherings.

The roof should be designed to capture rain water and direct it to holding tanks for use in irrigation.

The materials in the building are to be of high quality and long longevity. The building must perform at a LEED Gold standard or better.

The Childcare Facility is to be approximately 4,000 square feet gross area. It should be adjacent to the Community Building. It must have its own private entrance close to the street and separate from other building entrances. A secured outdoor area directly attached to the indoor portion of the Childcare Facility must be provided in a location that will have lots of sunlight during daytime use.







PRIVATE REALM LANDSCAPES







LAYERED TRANSITION BETWEEN PUBLIC AND PRIVATE REALMS



## 7.0 PRIVATE REALM LANDSCAPES



### 7.1 PRIVATE REALM CHARACTER: WEST COAST NATURAL

The design of the private realm landscape should respect and complement the site context within the Pacific Spirit Park forest and be a reflection of the overall landscape approach for the development site. The landscape expression should be one of West Coast Natural. Each parcel should have an individual landscape expression that integrates and is seamless with the building architecture and seeks to blend the edges between the public and private realm and between adjacent development parcels.

### 7.2 LANDSCAPE DESIGN PRINCIPLES

The landscape design should follow the essence of the planning principles for the project.

- » Sustainability: match or exceed the project's stated sustainability targets
- » Landscape expression and character shall have a strong relationship with interior spaces and should act as room extensions in the landscape
- » Private outdoor space should be designed so that it is a functional space suitable to the associated residential unit
- » Semi-private open space should be designed so that it serves all residents of the building
- » Private parcel landscapes shall be well integrated with the public realm and should have a seamless expression
- » Front yards should engage with the street to facilitate "eyes on the street" and activity at street level
- » Explore opportunities for roof top living including amenity and landscape areas
- » The collection of rainwater shall be celebrated and visible within the development parcels

### 7.3 LEED / SUSTAINABILITY

The overall project that will be developed is inspired by the LEED Principles and Requirements. This places an emphasis on the individual development parcels to achieve this level of overarching sustainability and possible certification.

- » All aspects of the landscape design should incorporate principles of sustainability and LEED requirements
- » The collection of rainwater should be incorporated into environmental and landscape features
- » Where possible rainwater should be collected from rooftops
- » Where possible rainwater should be collected from paving areas, roadways, and landscape areas
- » Rainwater collected from road and building areas should treat the runoff for water quality

### 7.4 PUBLIC FRONT ENTRY COURTS

The public entry courts should seek to minimize vehicle use, maximize visibility of the front doors, and promote pedestrian and cycling connections with the community. Large purely aesthetic elements are discouraged in favor of functional landscape areas to promote a sense of community. The development parcel design should utilize these trails as a primary means of access through the site for residents to be individual townhouses and the tower lobbies.

### 7.5 PRIVATE OUTDOOR SPACES

- » All private outdoor spaces should be designed to be functional in size and located adjacent to appropriate residential rooms and maximize solar aspect
- » All patios at grade along a street frontage should have a good relationship and access to the street



Good Relationship of Indoor to Outdoor



Interior Courtyard Patio Entry with Address



Private Yard Separated with Short Fences and Thick Planting

- » Private patios should have a sense of privacy from adjacent patios. Solid fences and / or screens between patios is acceptable. Materials should be durable and attention to detail should match the building architecture. They should be part of the building architecture and integrated with the building design. Side screens max. height is 2m (6'-0")

### 7.5.1 Street facing private outdoor patios + entry courts

- » All at grade outdoor patios and private entry courts that face Acadia, Road A and Road B should have access to the roads with a walkway. Units facing University Boulevard should have bridges over the bioswale with walkways connecting to the sidewalk
- » Unit addresses should be visible on the patio enclosure, gate, and / or plinth
- » Ideally these patios and terraces would have a minor raised grade separation from the street frontage
- » Private patios and terraces should have a sense of transparency and connection to the street frontage. They should not be walled off with high hedges and / or fences. Max. Height of fence, hedge, rail, and planter wall from base of patio / terrace finish grade is 1200mm (4'-0")

## 7.6 SIDE YARD PRIVACY

- » Buildings should be separated by landscaping elements such as natural forest along property lines or robust soft landscape areas

## 7.8 SITE GRADING

Where a development parcel abuts a tree retention area the grading of the site must protect the grades within the critical root zone of the tree and should not significantly alter the watershed from what the existing trees currently experience.

Where an exposed parkade wall is over the permitted height (refer to section 5.4.6) adjust the landscape grades to slope up to the permitted height or use landscape feature walls and/or planters to conceal the parkade wall.

## 7.9 LANDSCAPE MATERIALS

The landscape materials selected should seek to reinforce the overall project approach to landscape and the design theme of West Coast Natural. Durable, sustainable and locally sourced materials should be the preferred choices.



- » Landscape materials shall be durable, regional, and be used to create a strong design sense for the space
- » Landscape materials where possible should be reflective of the Musqueam nation and culture
- » Landscape materials shall be high quality with a more finely grained pedestrian detailed scale

### 7.9.1 Paving

- » Various paving materials should be used to create a hierarchy of use
- » Impervious pavements that cannot be drained to an adjacent soft landscape rainwater management feature should be minimized
- » Opportunities to utilize permeable paving should be explored. The use of asphalt should be minimized

### 7.9.2 Walls

- » Landscape walls should be utilized along street frontages for residential signage and addressing
- » Landscape walls should be designed in scale, proportion and materiality to complement the design theme of West Coast Natural, including natural stone
- » Retaining walls should be designed such that they are integrated into the overall landscape and not negatively impact the sight lines from adjacent development parcels
- » Timber retaining walls should not be used
- » Retaining walls should be under 1.2m in height

## 7.10 PLANTING

- » Plant materials shall influence and contribute to the various habitats including forest, wetland, and adaptive Landscape
- » Plant material selection shall be richly varied, celebrate all the seasons, be sensory, drought tolerant, and have an ecological and design purpose
- » A 50MM depth of composted bark mulch should be applied to all planting beds to minimize water loss due to evaporation

### 7.10.1 Urban Ecology

- » Landscape design and plant material selection shall encourage and create opportunities for urban wildlife to co-exist with humans and the urban landscape
- » Native plants shall be used to enhance the urban ecology of the community and support the various native habitats and bird strategies

### 7.10.2 Turf Grass

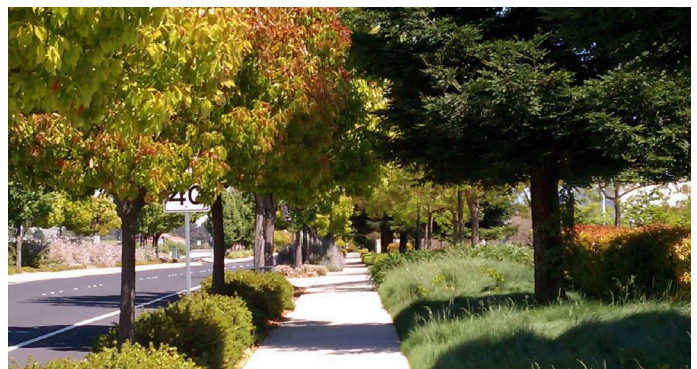
Minimize the use of high maintenance turf grass areas to a maximum of 40% of the total soft landscape area within the development parcel

### 7.10.3 Urban Agriculture

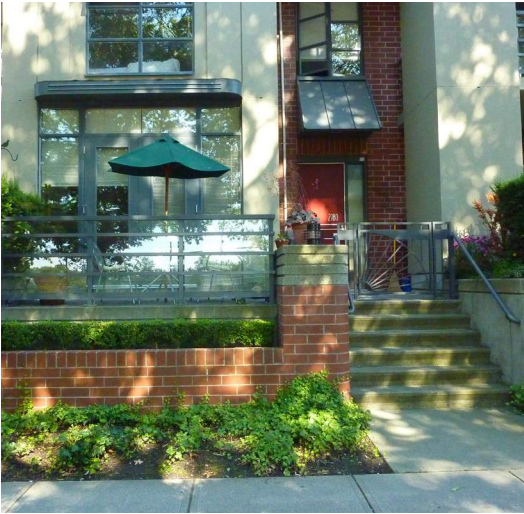
Where appropriate, urban agriculture shall be incorporated into all landscaped areas of the development parcel including roofs, private patios, amenity roof gardens, amenity courtyards, mews and laneways



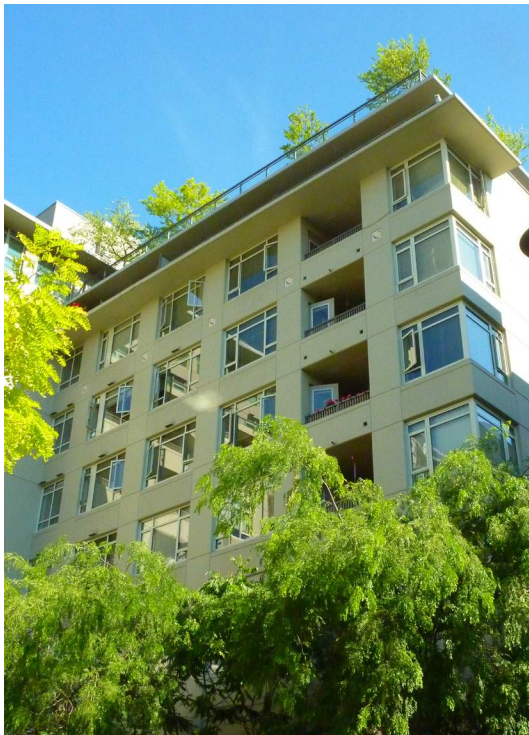
Urban Agriculture Planters



Use of Low Maintenance Turf Grass



Front Entry Patio, Arbutus Walk, Good Relationship to Sidewalk



Green Amenity Roof Deck, Arbutus Walk

## 7.11 PUBLIC-PRIVATE INTERFACE

The private landscape design is to integrate, to the degree possible, with the adjacent natural landscapes and public realm including street and park frontages in order to emphasize the sense of space and contiguous landscape.

- » Match planting design species and layout to hide property lines
- » Observe all easement restrictions that may be in place
- » Blend the off-site topography into the existing surrounding off-site grades for a uniform and contiguous surface
- » Minimize the use of fencing and walls along property lines between natural open spaces and open areas of development sites to minimize visual and physical barriers
- » Use planting at the base of the building to minimize the visual impact of any exposed parkade structure

## 7.12 IRRIGATION

To accommodate the changing climate of the Vancouver area and the extended periods of drought, and to ensure a living functional landscape, a permanent irrigation system is required in the private landscape areas.

- » All landscape areas over structures shall be irrigated with a high efficiency automatic irrigation system
- » All irrigation for non-lawn areas to be drip systems
- » All irrigation systems shall have automatic moisture sensors
- » Areas not over structures are highly recommended to be irrigated with a high efficiency automatic irrigation system
- » The irrigation system is to include the landscape portion of the off-site road right of way in front of the development parcel

## 7.13 LANDSCAPE FEATURES

Landscape features within the private landscape should:

- » Seek to be functional elements
- » Reinforce the West Coast design theme
- » Avoid large visual interest elements with low functional or sustainable use
- » Integrate with adjacent off site landscape features such as wetlands or forest areas
- » Provide unique identity to the development parcel within the overall context of the project



## 7.14 GROWING MEDIUM DEPTH + MATERIALS

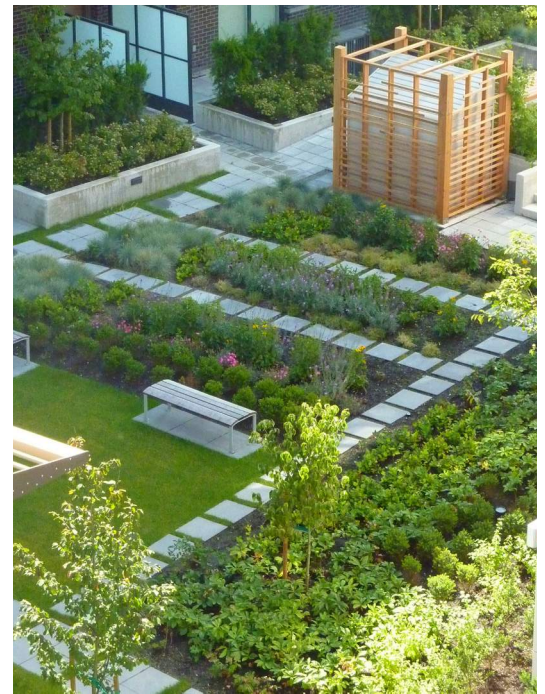
All planting areas over structure shall have adequate growing medium depth to promote healthy plant material. Minimum required depths are:

- » Grass 300mm (12")
- » Groundcover and Shrubs 450mm (18")
- » Trees 900mm (36")

Where urban agriculture is proposed or integrated within the soft landscape avoid the use of growing mediums that contain bio-solids from municipal wastewater facilities.



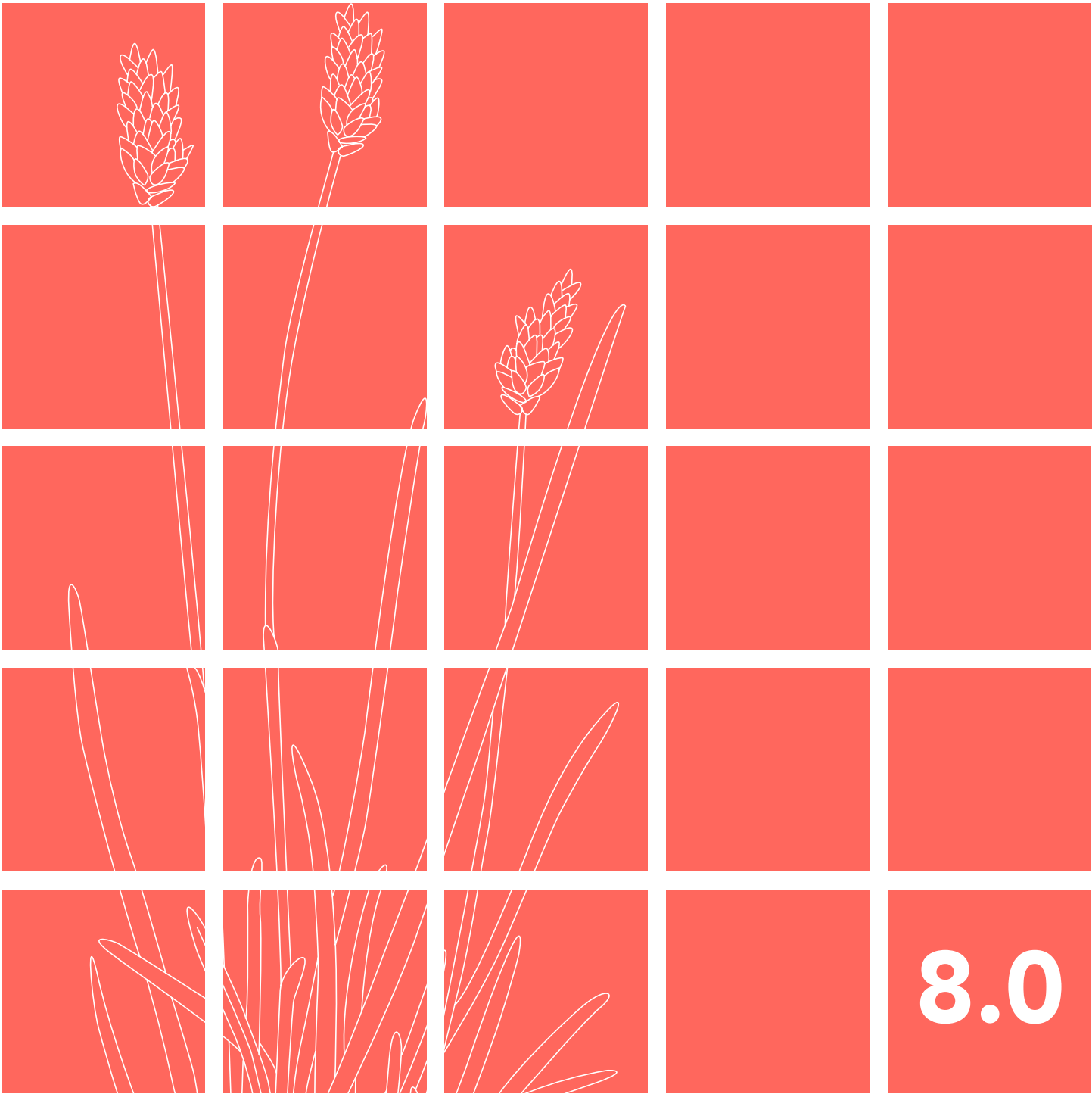
Rainwater Management on Private Parcel



Landscape Spaces on Slab Condition



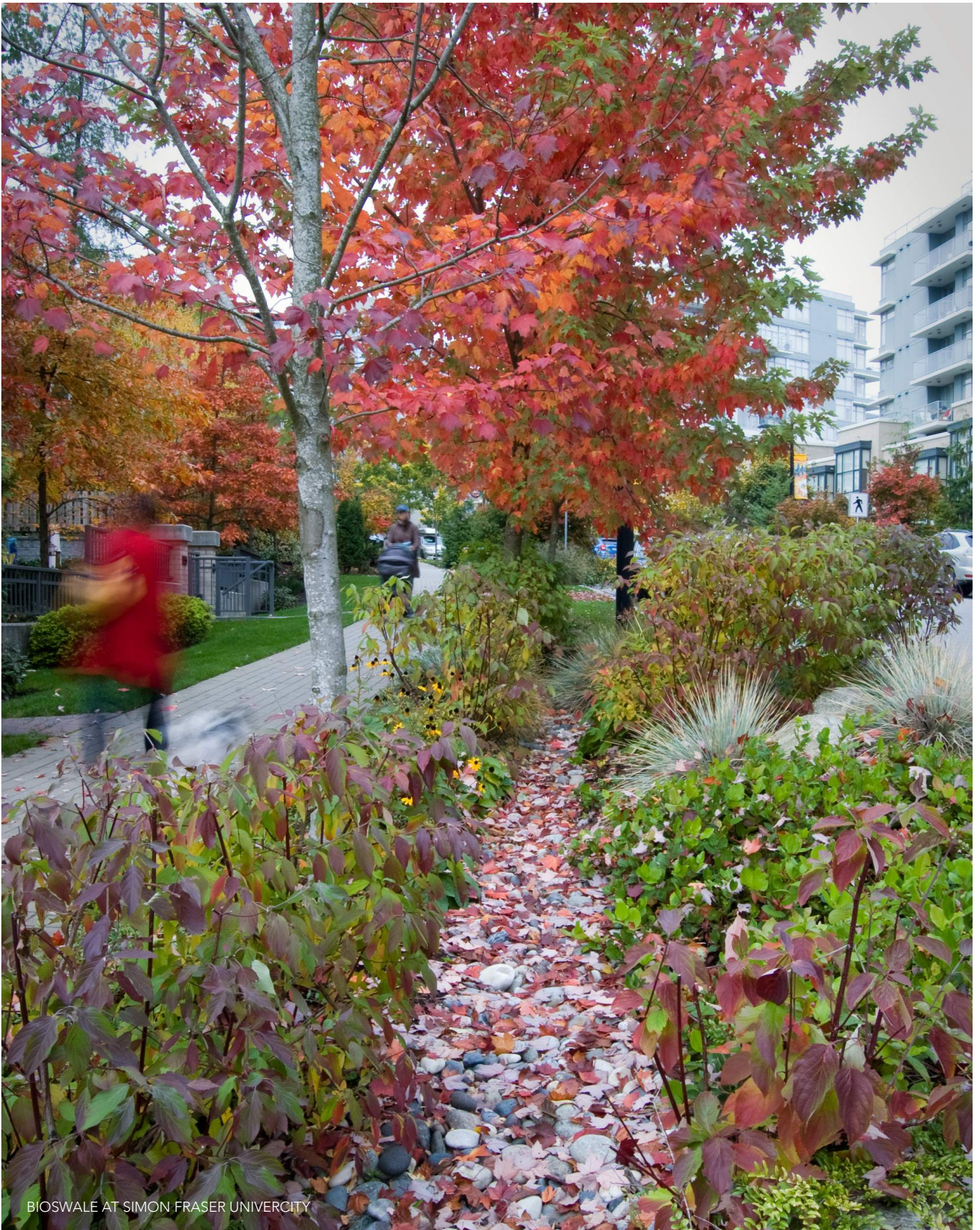




STORM WATER MANAGEMENT







BIOSWALE AT SIMON FRASER UNIVERSITY



## 8.0 STORM WATER MANAGEMENT

### 8.1 PUBLIC REALM

The stormwater management plan is designed to meet/exceed the Department of Fisheries and Oceans (DFO) Stormwater Management Guidelines for Volume Reduction, Water Quality, and Detention in the public realm.

Volume reduction and water quality will be addressed by the implementation of Best Management Practices (BMPs) such as rain garden infiltration systems and bioswales. These facilities absorb stormwater runoff while removing contaminants that are transported from roadways and other impervious areas. Rain gardens and bioswales also promote groundwater recharge through infiltration and can be tastefully integrated into community green space as functional and interesting features. The thickness of growing medium in the raingardens and the boulevard areas will be increased to promote infiltration and retention of stormwater runoff, as well as to improve water quality.

Detention will be addressed by the proposed detention ponds within the development site. The ponds are to have infiltrative bottoms and be sized to reduce post-development stormwater flow rates. Minimizing post-development stormwater flow rates protects downstream wetlands and habitat from increased flows and damaging erosion. In summary, the plan will meet or exceed DFO criteria and UEL Stormwater design criteria.

### 8.2 PRIVATE REALM

The stormwater management approach within the parcels should be designed to create integrated rainwater management facilities that address the sustainability design principles of LEED.

Best Management Practices (BMPs) to be incorporated include designing the storm conveyance system to handle

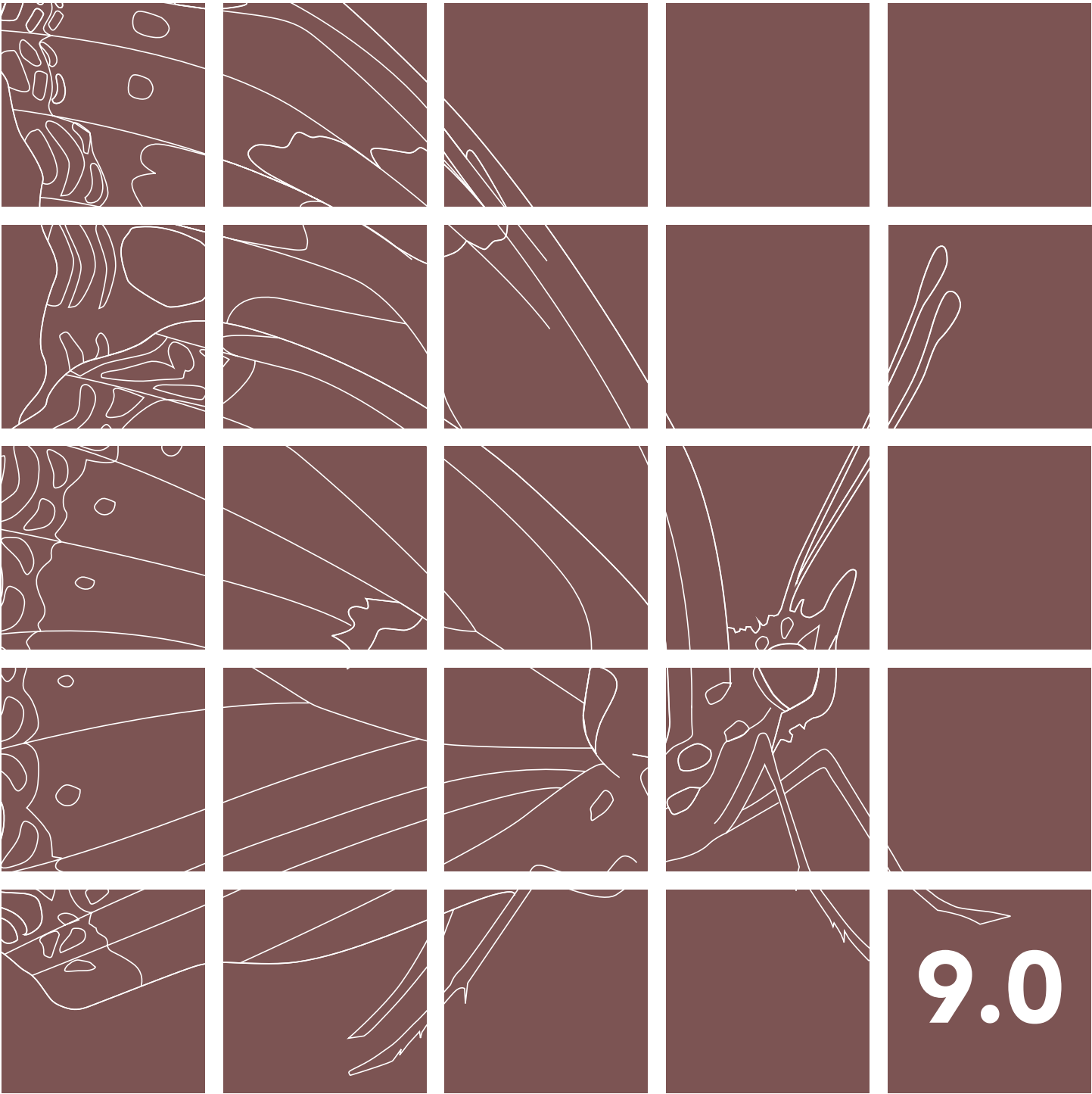
the peak flows for the 1:10 year and 1:100 year design storm events, to meet or exceed the DFO Stormwater Management Guidelines, to protect life and property, and use BMPs that meet environmental guidelines to minimize the effects of development on the natural environment.

BMPs to be used in the detailed design of this development include:

- » An erosion control plan to manage the quality and quantity of stormwater runoff from the site during construction
- » Reduce impervious areas and maximize pervious areas
- » Source control absorbent landscaping where possible
- » A minimum depth of growing medium of 300mm in landscaped areas
- » Source control trapping hoods in all catch basins for environmental control. The hydrocarbons transported in surface water are captured within the catch basin, as they float on top of the water and rise above the trapping hood
- » Pervious pavements can be porous asphalt or concrete, concrete or plastic grid pavers, and permeable unit pavers. They allow water to drain through them to an underlying rock reservoir. On this site pervious pavement would be adequate to capture the 6-month / 24-hour rainfall. Pervious pavements are recommended for low volume traffic and pedestrian routes
- » Rain gardens consisting of a growing medium over a rock reservoir that exfiltrates stormwater to the surrounding soil
- » Oil and Grit separators placed on outlet pipes, sized to meet environmental water quality guidelines to treat 90% of runoff from the impervious areas







9.0

PUBLIC ART









### 9.1 MUSQUEAM ART PROGRAM FOR THE BLOCK F DEVELOPMENT: PROCESS OVERVIEW

The Musqueam people have used and occupied their territory, which includes the lands now known as the University Endowment Lands and Pacific Spirit Park, for millennia. Given Musqueam's deep connection to and current ownership of the Block F lands, Musqueam culture and history will be represented in a variety of ways within the Block F development.

A key method for ensuring Musqueam representation within this development (and future developments), is by implementing a public art program. As stated in the Block F Rezoning Package, the project intends to "introduce public art throughout the Block F site in an effort to strengthen the urban fabric and to contribute to the identity and character of the Block F neighbourhood." The Block F Design Guidelines state that public art should be integrated into the overall design of the development and embedded in aspects of parks, open space, and public realm, with focus on Musqueam people, the forest, the streams, sustainability, and community.

### 9.2 ART PROGRAM OVERVIEW

The Musqueam Capital Corporation will administer the art program on behalf of the Musqueam community. Input from the municipality or agency with jurisdiction over the area will be sought and considered. All of the public art pieces will involve Musqueam community members, including Elders and youth, not necessarily to the exclusion of non-Musqueam artists. Wherever possible, the work of artists will be integrated with the overall design process.

Examples of Musqueam art pieces include weavings; carvings such as house posts, plaques, and spindle whorls; paintings and prints; glass and metal works; and artifact replicas.

The process for each art project will consider the following:

- » What has been done previously?
- » Review past Musqueam art projects. Learn from and build on them or try something new



SEFC First Nations Public Art. Photo credit: Wilco.



qiyəplənəw house post at Allard Hall, UBC. Carver: Brent



Weavings at Marpole Safeway, Vancouver. Weavers: Robyn Sparrow, Krista Point and Debra Sparrow; Photo: Ann Cameron

- » What will the final product involve? What is the message or teaching to be conveyed?
- » Engage with Musqueam staff, leadership, and community members as well as the municipality for input, when appropriate
- » The Block F Rezoning Package notes public art may incorporate the following features:
  - › Welcome: Creation of an entry experience(s) to the Block F neighbourhood would serve to welcome all individuals coming to visit or live in the Block F neighbourhood and make all residents and visitors feel comfortable. Introducing a sense of arrival will create an atmosphere whereby visitors may respond with respect and intrigue
  - › Inform: Opportunities exist to inform visitors, residents and neighbours of the history of the land and the importance to the Musqueam people. This may be told through interpretive signage/storyboards in an effort to share the cultural heritage and archaeological history of the site
  - › Engage: The existing open space features retained, enhanced, and newly created on the site will provide opportunities for all individuals to engage with the natural features and history of the site
- » How will the project be developed? How will proposals be sought and projects selected?
- » Decide on a process for selecting art projects. Determine whether proposed projects meet applicable objectives. These include Block F Planning Principles and Design Objectives, Musqueam Design Guidelines, and the following goals, outlined in Musqueam: A Living Culture for educating and informing the world about Musqueam culture:
  1. To be recognized, valued and respected as a unique culture
  2. To revive our language, to revitalize our artistic traditions, and to restore our entire culture
  3. To be able to share our culture and heritage with the world, to create a venue to showcase our art, our culture
  4. To connect our youth and our elders, so that they may learn from one another
  5. To create jobs, skills and training for our community members
  6. Projects will be reviewed by appropriate band representatives to ensure the artist has consent of use from owners of images and designs and to ensure content is appropriate for public presentation. Credit will be given to community members for the use of their designs and photographs



- » Use of ɬə́ŋqə́mɪ́ŋə́m language is encouraged, in collaboration with the Language Department to ensure correct usage and orthography
- » Does the final piece have the intended impact?
- » Review and evaluate the piece in terms of meeting applicable objectives and note public feedback. Keep lessons learned on file for future reference

## 9.3 FUNDING + IMPLEMENTATION

As noted in the Block F Design Guidelines, ideally every development parcel will provide a public art contribution to the overall development. The public art program will be funded through an allocation of the construction cost of each development parcel, which will be collected by Musqueam (MCC) as part of the business terms with the selected development partner.

The public art can be implemented in a variety of ways:

- » "On site" contributions where the art is commissioned and installed either on the subject property or the immediately adjacent public lands;
- » "Off-site" contributions are pooled to a fund which allocates public art pieces on publicly owned lands; or
- » "On-site/Off-site" contributions whereby there is a combination of art commissioned and installed on the subject property with the balance of funds collected pooled to a reserve fund which may be used for art pieces on publicly owned lands

## 9.4 DOCUMENTS REFERENCED

Colliers, Rositch Hemphill Architects, PWL Partnership Landscape Architects. (2013). UEL Block F: Design Guidelines. Vancouver.

Musqueam Indian Band. (2006). Musqueam: A Living Culture. Victoria: Copper Moon.

Musqueam Capital Corporation. (2013). Block F Rezoning Application Package. Vancouver.







APPENDICES



## APPENDIX A - RECOMMENDED PLANT LIST



### Recommended Street Trees

#### Botanical Name

ACADIA ROAD  
*Acer cappadocicum* '  
*Acer platanoides* 'Emerald Queen'

#### Common Name

Rubrum' Colliseum Maple  
 Emerald Queen Maple

#### ROAD A

*Acer rubrum* 'Armstrong'  
*Acer platanoides* 'Cleveland'

Armstrong Red Maple  
 Cleveland Norway Maple

#### ROAD B

*Acer rubrum* 'Armstrong'  
*Acer platanoides* 'Cleveland'  
*Liquidamber styraciflua* 'Worplesdon'

Armstrong Red Maple  
 Cleveland Norway Maple  
 Worplesdon Sweet Gum

#### UNIVERSITY BOULEVARD

In addition to the existing Street Trees  
*Acer macrophyllum*  
*Acer circinatum* –

Big Leaf Maple  
 Vine Maple  
 Pacific Crabapple  
 Douglas Fir  
 Western Red Cedar  
 White Flowering Dogwood  
 Saskatoon

*Pseudotsuga menziesii* –  
*Thuja plicata* –  
*Cornus* 'Eddie's White Wonder' –  
*Amelanchier alnifolia*

#### TORONTO ROAD

*Acer rubrum* 'Armstrong'  
*Acer platanoides* 'Cleveland'

Armstrong Red Maple  
 Cleveland Norway Maple

### Recommended Parks and Open Space Trees

#### Botanical Name

*Acer circinatum* –  
*Acer douglasi* –  
*Acer macrophyllum* –  
*Acer rubrum* 'Armstrong'  
*Cornus controversa* –  
*Cornus kousa* '  
*Cornus* 'Eddie's White Wonder' –  
*Picea sitchensis* –  
*Pinus contorta* 'Contorta' –  
*Pseudotsuga menziesii* –  
*Thuja plicata* –

#### Common Name

Vine Maple  
 Douglas Maple  
 Big Leaf Maple  
 Armstrong Red Maple  
 Giant Dogwood  
 Kousa Dogwood Varieties  
 White Flowering Dogwood  
 Sitka Spruce var.  
 Shore Pine  
 Douglas Fir  
 Western Red Cedar  
 Saskatoon  
 Cascara  
 Red Alder  
 Pacific Crabapple  
 Bitter Cherry  
 Mountain Ash



Recommended Shrub and Groundcover Plant List

Botanical Name	Common Name	Sun/Shade Conditions
EMEREGENT PLANTS		
Carex aquatilis var dives(sitchensis)	Sitka Sedge	Full Sun/Part Shade
Carex obnupta	Slough Sedge	Full Sun/Part Shade
Carex rostrata	Beaked Sedge	Full Sun
Carex stipata	Sawbeak Sedge	Full Sun
Carex tumulicola	Berkeley Sedge	Full Sun/Part Shade
Deschampsia cespitosa	Tufted Hair Grass	Full Sun/Part Shade



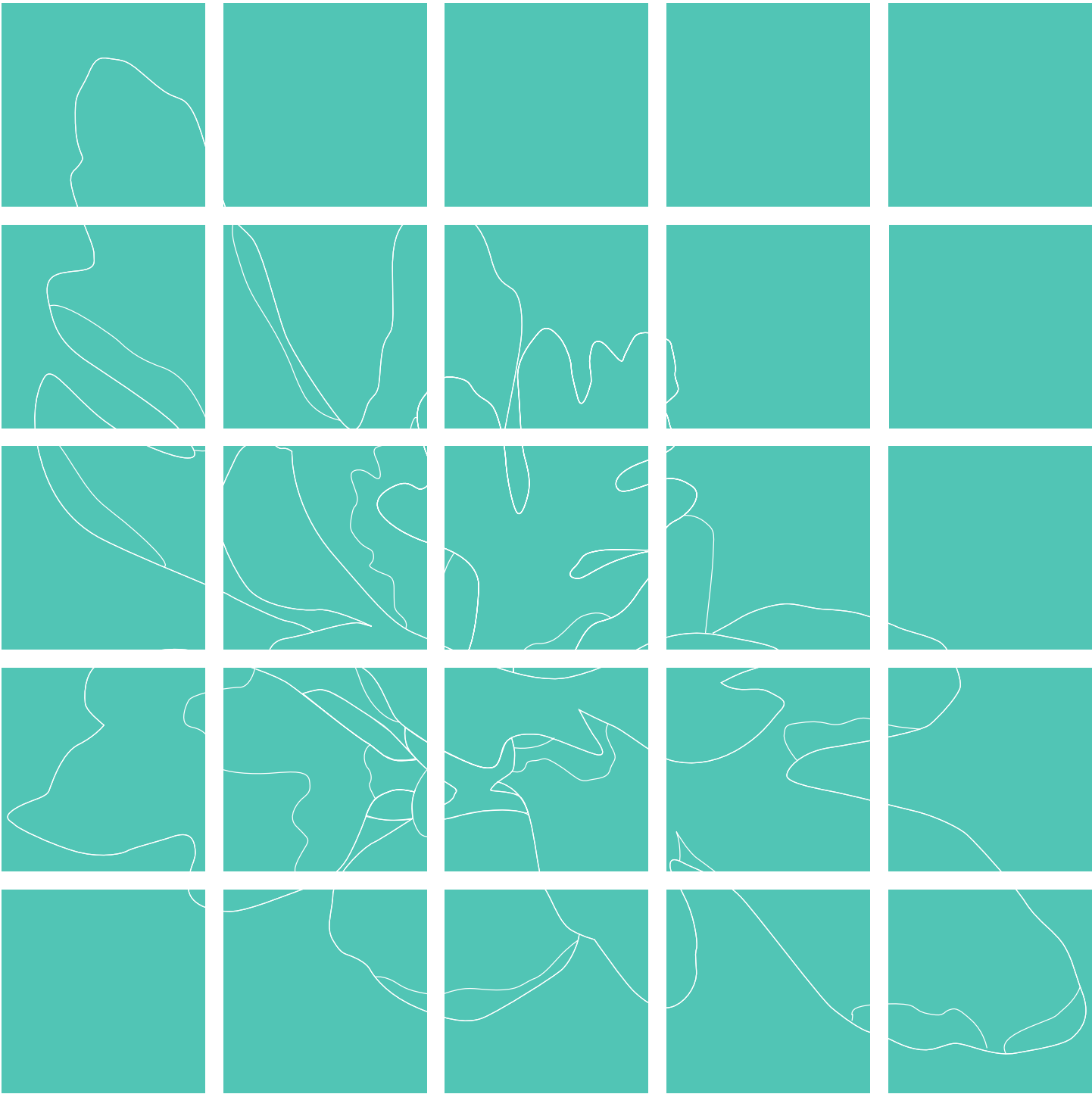
Recommended Rain Garden Plant List

Botanical Name	Common Name	Sun/Shade Conditions
BOTTOM CHANNEL EXPOSURE SIZE		
EMEREGENT PLANTS		
Carex aquatilis var dives(sitchensis)	Sitka Sedge	Full Sun/Part Shade
Carex obnupta	Slough Sedge	Full Sun/Part Shade
Carex rostrata	Beaked Sedge	Full Sun
Carex stipata	Sawbeak Sedge	Full Sun
Carex tumulicola	Berkeley Sedge	Full Sun/Part Shade
Deschampsia cespitosa	Tufted Hair Grass	Full Sun/Part Shade
Eleocharis palustris	Creeping spikerush	Full Sun/Part Shade
Iris douglasiana	Douglas Iris	Full Sun
Iris missouriensis	Western Blue Iris	Full Sun
Juncus acuminatus	Tapered Rush	Full Sun/Part Shade
Juncus effusus	Common Rush	Full Sun
Juncus tenuis	Slender Rush	Full Sun
Scirpus lacustris	Hard Stemmed Bullrush	Full Sun
Scirpus microcarpus	Small Fruited Bullrush	Full Sun/Part Shade
SHRUBS - EVERGREEN		
Blechnum spicant	Deer fern Part	Sun/Shade
Ledum groenlandicum	Labrador Tea	Full Sun
Polystichum munitum	Western Swordfern	Partial Sun/Shade









APPENDICES  
SUPPORTING TECHNICAL INFORMATION

