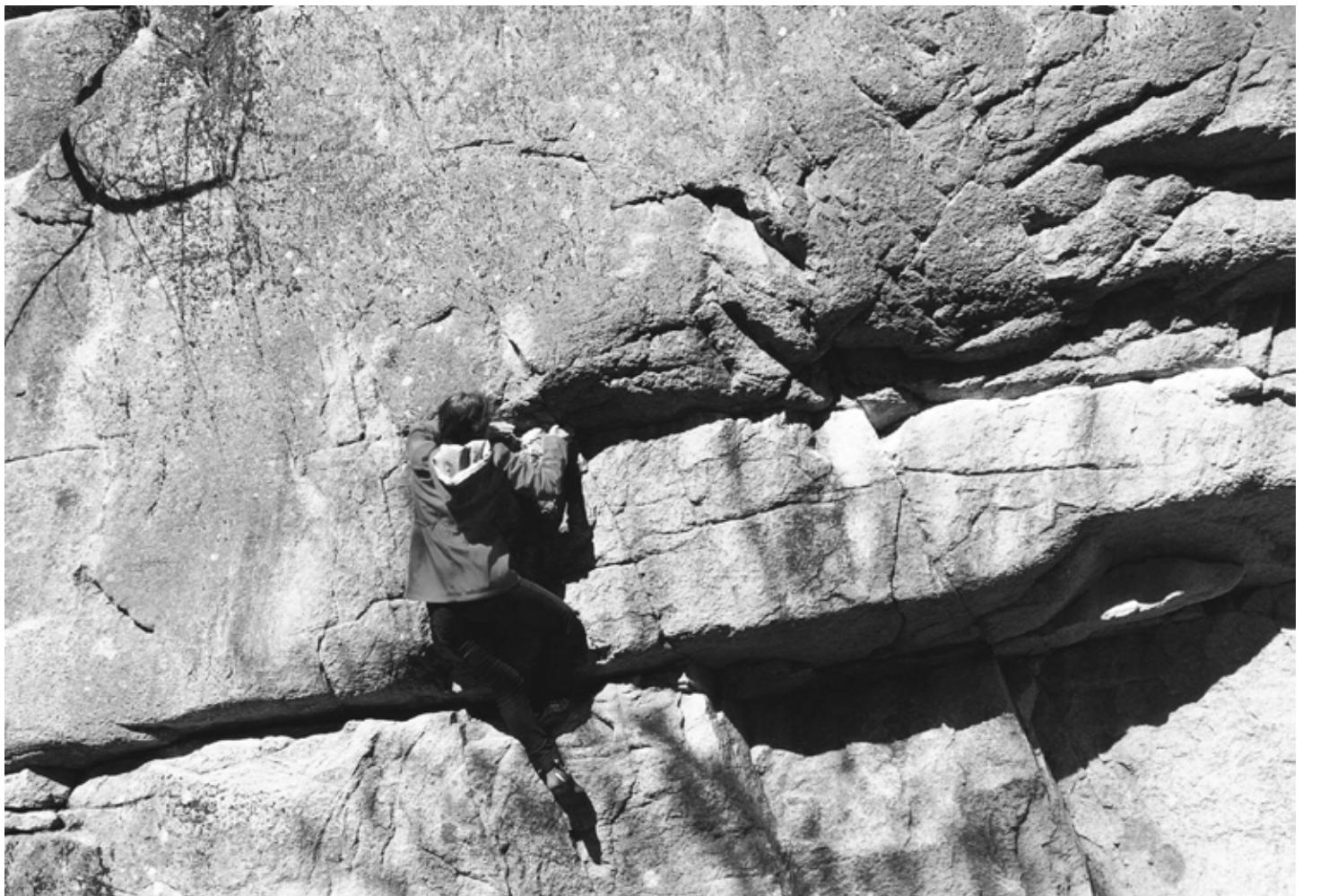


year

2018

suzanne merchant

architecture + design portfolio: selected works
university of waterloo



suzanne merchant

avid climber
nature enthusiast
psychology & philosophy -phile
inquisitive traveller
texture lover

if unable to find me outdoors, please send
all inquiries to:

suzannemerchant@gmail.com

6-8635 French Street
Vancouver BC, V6P 4W4
Canada

RESUME

PROFESSIONAL

proscenium architects & interiors / vancouver, CA
hcma / vancouver, CA

ACADEMICS

unsui
the shadow library
hyperdensity
screened courtyards
columnar forests
food for thought

SELF-GUIDED

upstream
ledlab
photography

PROFESSIONAL & VOLUNTEER EXPERIENCE

2018 Jan. - Pres.	Studio Senbel <i>Design Intern</i>	Vancouver, CA
Worked largely on the Qualicum Beach Inn (in the design development phase), the screen design for a Chicago mosque and few smaller renovation and improvement projects.		
2017-2018 Dec. - Pres.	Muslim Food Bank & Community Services <i>Caseworker, Graphic Design & General Volunteer</i>	Vancouver, CA
2017 Jan. - Aug.	Urban Arts Architecture <i>Design Intern</i>	Vancouver, CA
Worked largely on the University of the Fraser Valley Library Renovation (schematic design to final IFC drawings & some contract administration); also worked on various stages of other projects in the office.		
2017 May - Aug.	Upstream <i>Graphic Design & General Volunteer</i>	Remote & Saskatoon, CA
2017 April - Pres.	BC Poverty Reduction Coalition - Action Team <i>Member & Volunteer</i>	Vancouver, CA
2016 June - Sept.	ZAS Architecture & Interiors <i>Design Intern</i>	Vancouver, CA
Preliminary design, tender, IFC etc. drawings + contract administration for interior renovations of various banking institutions in Metro Vancouver		
2016 May. - June	LEDLab <i>Graphic Design Volunteer</i>	Vancouver, CA
2014 Sept. - Dec.	Proscenium Architecture & Interiors <i>Design Intern</i>	Vancouver, CA
Tender and addendum drawings for West 1st Theatre [Arts Club Theatre + Bard on the Beach] and various other small projects		
2014 Jan. - April	Hughes Condon Marler Architects <i>Design Intern</i>	Vancouver, CA
Various graphics, design development/contract administration drawings, RFPs		
EDUCATION		
2012 - 2018 Sept. - Aug.	University of Waterloo School of Architecture <i>Honours Bachelor of Architectural Studies, Co-op</i>	Cambridge, CA
2015	Gap Year	

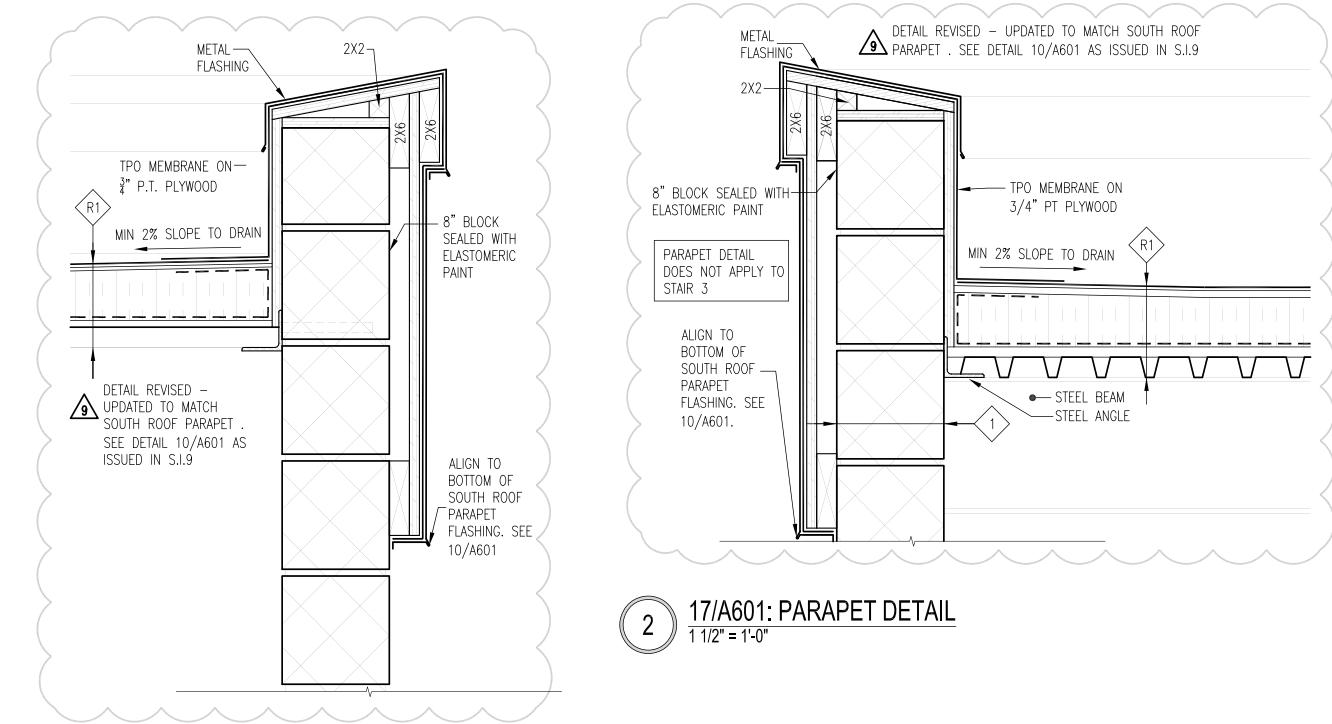
SKILLSETS

Adept & Improving	Learning & Improving
Adobe Suite	ARCGIS
Illustrator/ Photoshop/InDesign	Machine & hand sewing
AutoCAD/VectorWorks/REVIT	Woodshop machinery
Rhinoceros + VRay	
SketchUp	
Hand drafting & sketching	
Hand modelling	
Languages	
English [fluent]	Urdu [intermediate]
French [intermediate]	Hindi [intermediate]
AWARDS	
2017	International Experience Award University of Waterloo
2013	UWSA Projects Review Publication of Studio project at Riverside Gallery
2012 - Pres.	Excellent Academic Standing University of Waterloo
2012	President's Scholarship University of Waterloo
Provincial Examinations Scholarship	
British Columbia Ministry of Education	
Academic Medal and Scholarship	
Point Grey Secondary School	
2010	Shad Valley Alumna Universite Laval, QC
Sears High School Design Competition	
3rd Place - Architecture [Junior]	
references provided upon request	

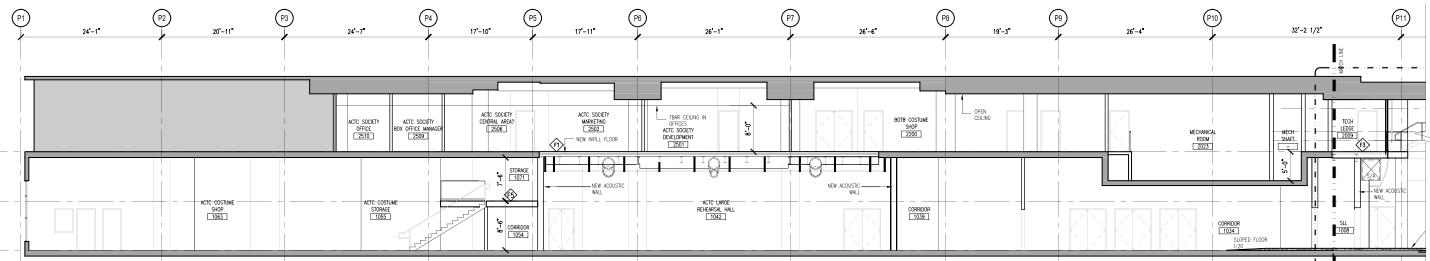
PROFESSIONAL WORK

proscenium architecture & interiors

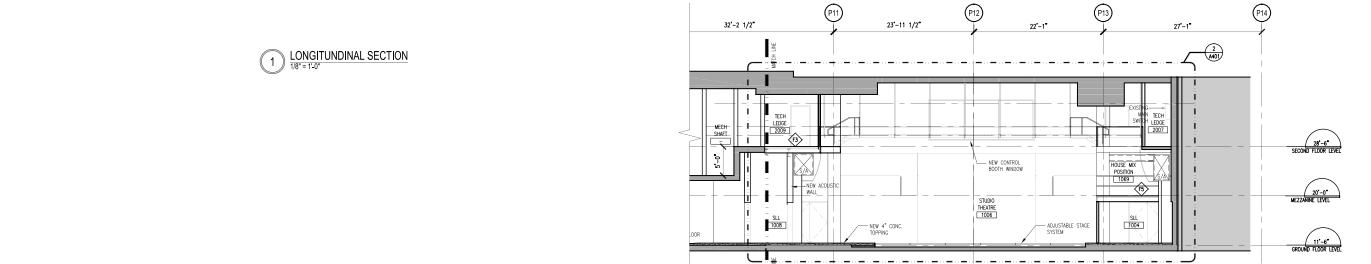
Tender and addendum drawings for West 1st Theatre [Arts Club Theatre + Bard on the Beach] and various other smaller renovation projects that the firm had.



1 4/A601: PARAPET DETAIL
1 1/2" = 1'-0"



1 LONGITUDINAL SECTION

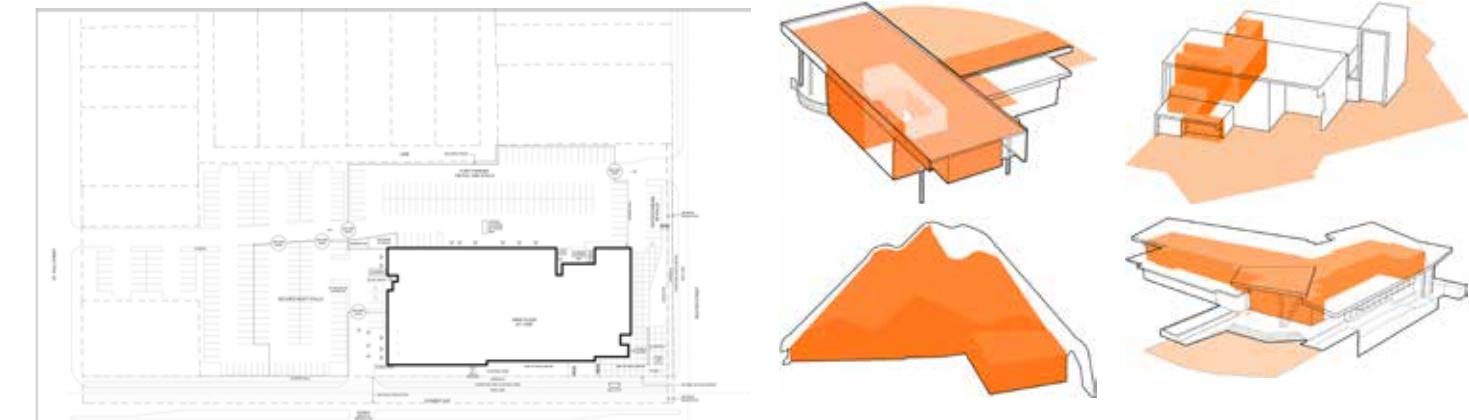


► Roofing details for a large storage building | Set of cross-sections through theatre space for Arts Club Theatre

PROFESSIONAL WORK

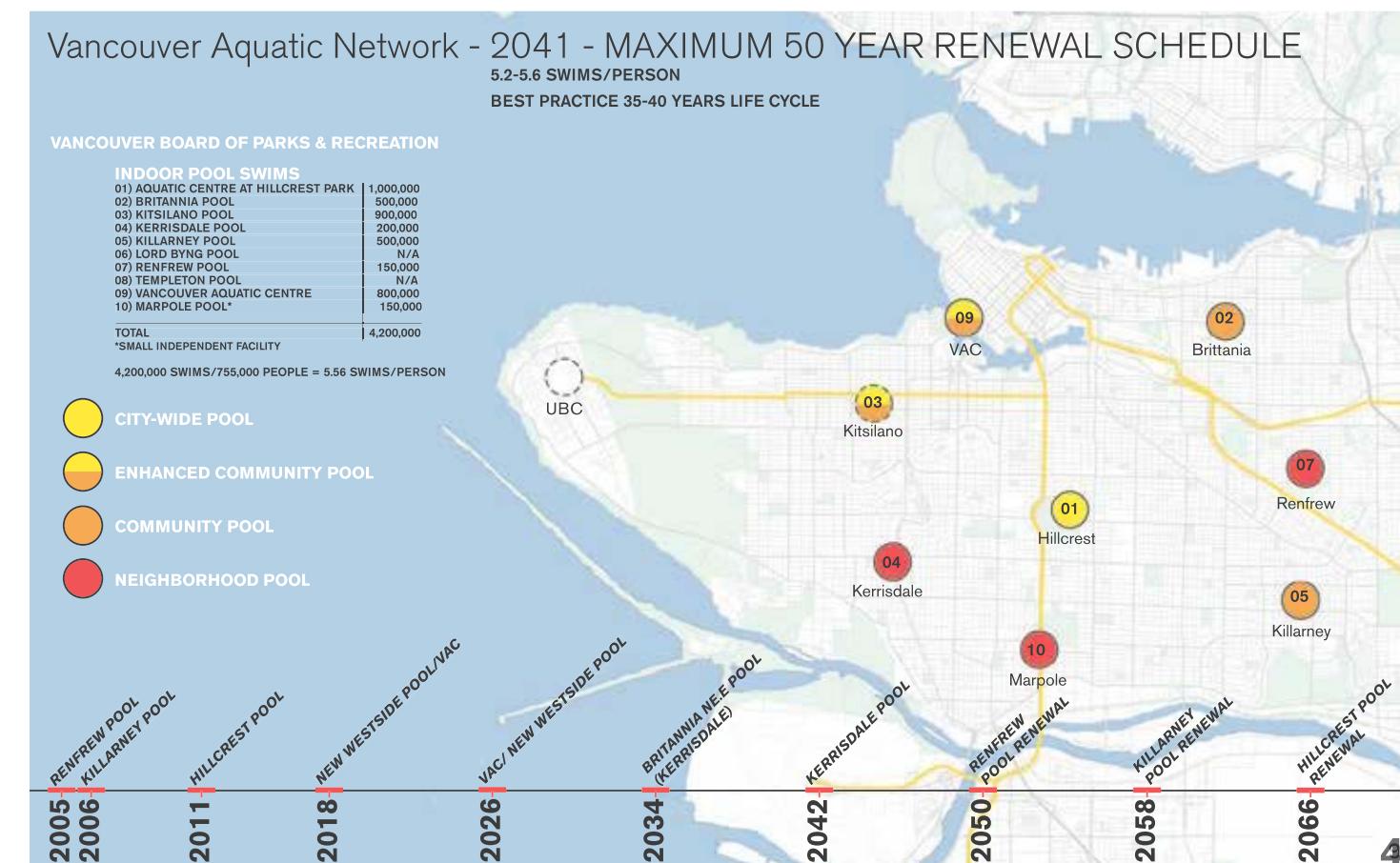
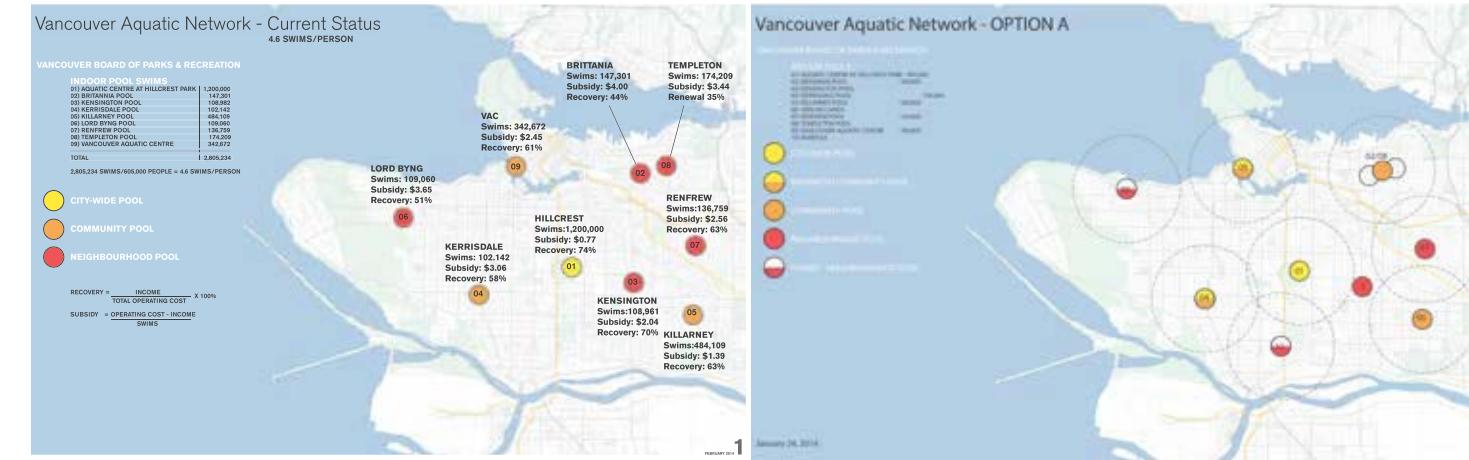
hughes condon marler architects

At HCMA, I mainly worked on drawings for LEED certification (in REVIT) for the UBC Ponderosa Common, drawings for various civic buildings, competitions, RFPs and creating diagrams and images for various projects.



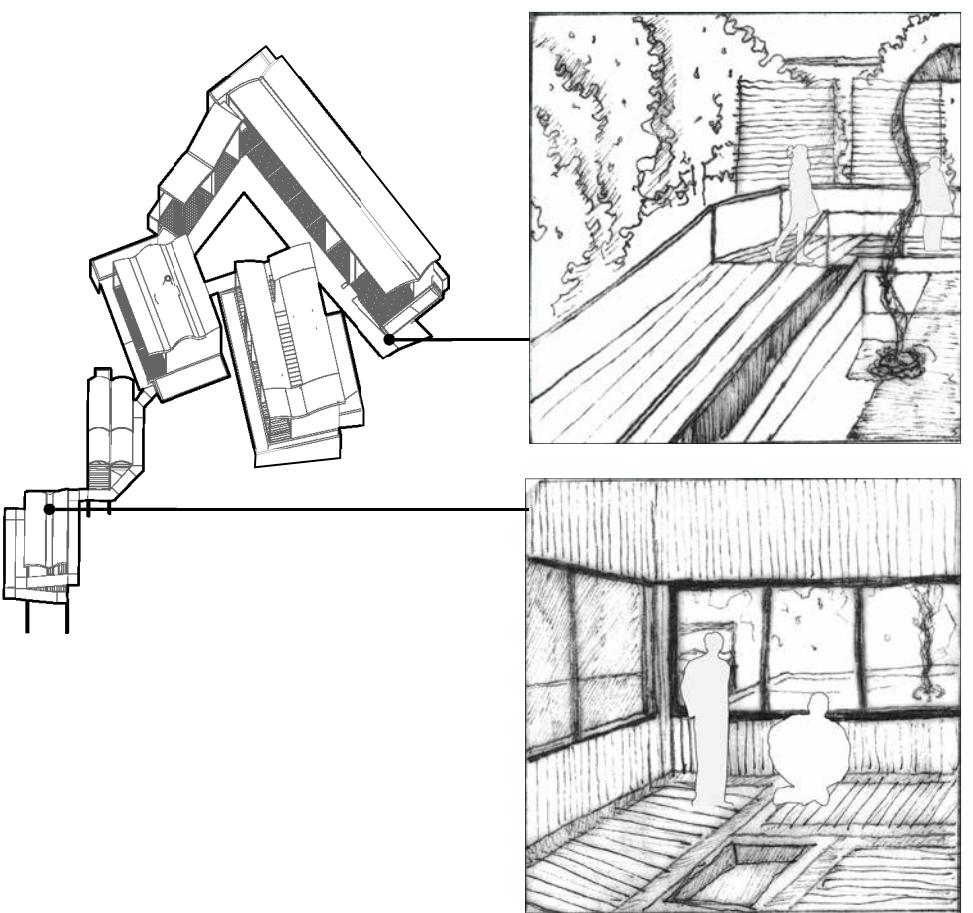
▲ Plan drawing for a civic building in Kelowna | Set of diagrams drawn for the HCMA book.

▼ Maps made to document the current state [at the time] and proposals for changes to Vancouver's pool network.



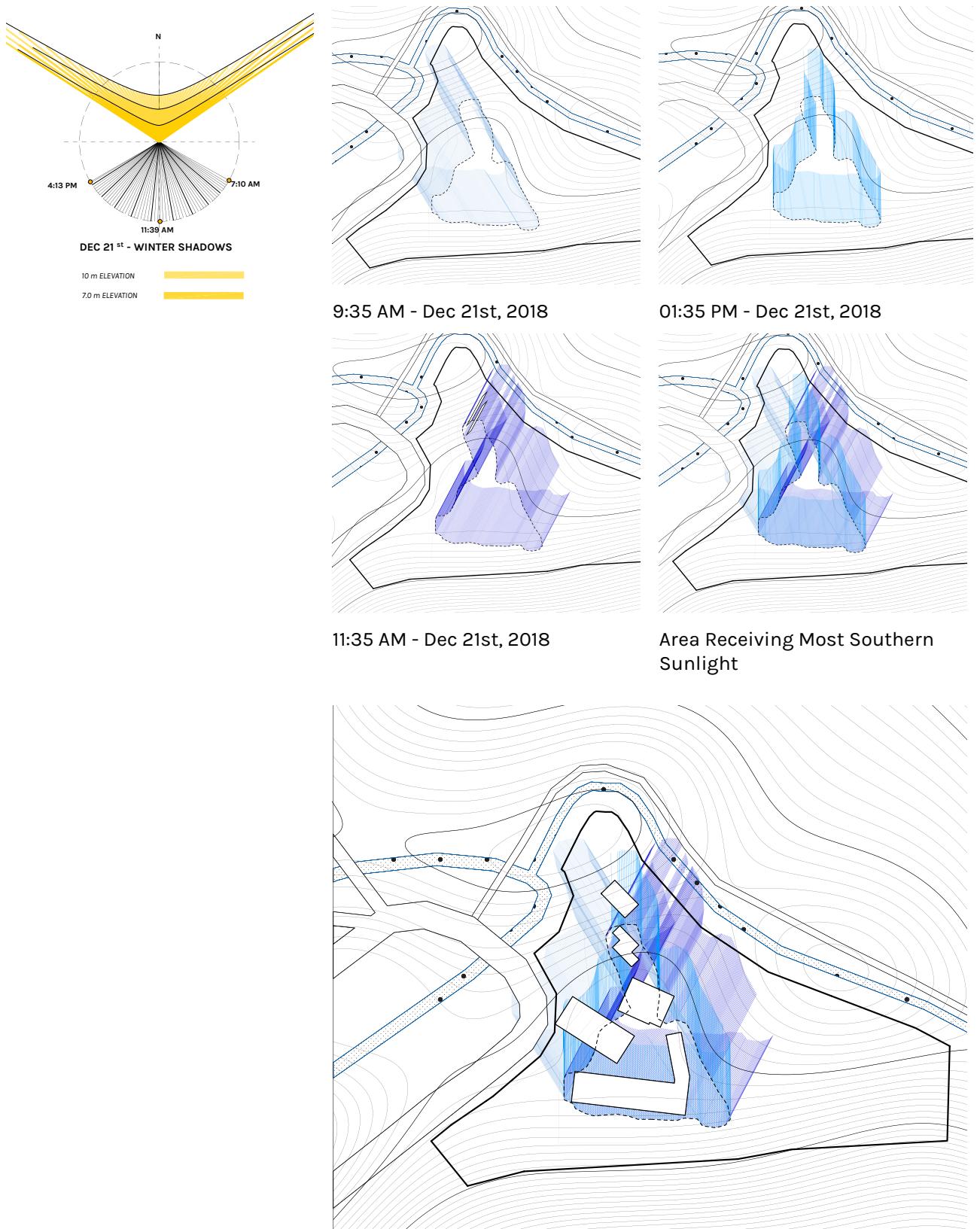
unsui

Water is an essential of human life, but is also one of our planet's increasingly diminishing resources. The Lodge at Oyunama has been blessed with plentiful water by virtue of its location, yet that is no reason to become complacent about how water is used within the site. The building has been designed to showcase both the immense practicality of water and its theatre. Its form and processes showcase water in many ways -- all as a method to get visitors to acknowledge the importance of water in their own lives and meditate on its many processes with its elaborate system of roof-based rain-water collection, treatment and re-use. This re-connection with water and the many systems and activities by which we encounter it in our lives allows visitors to the bathing lodge to meditate more meaningfully on the place that water has in our lives.



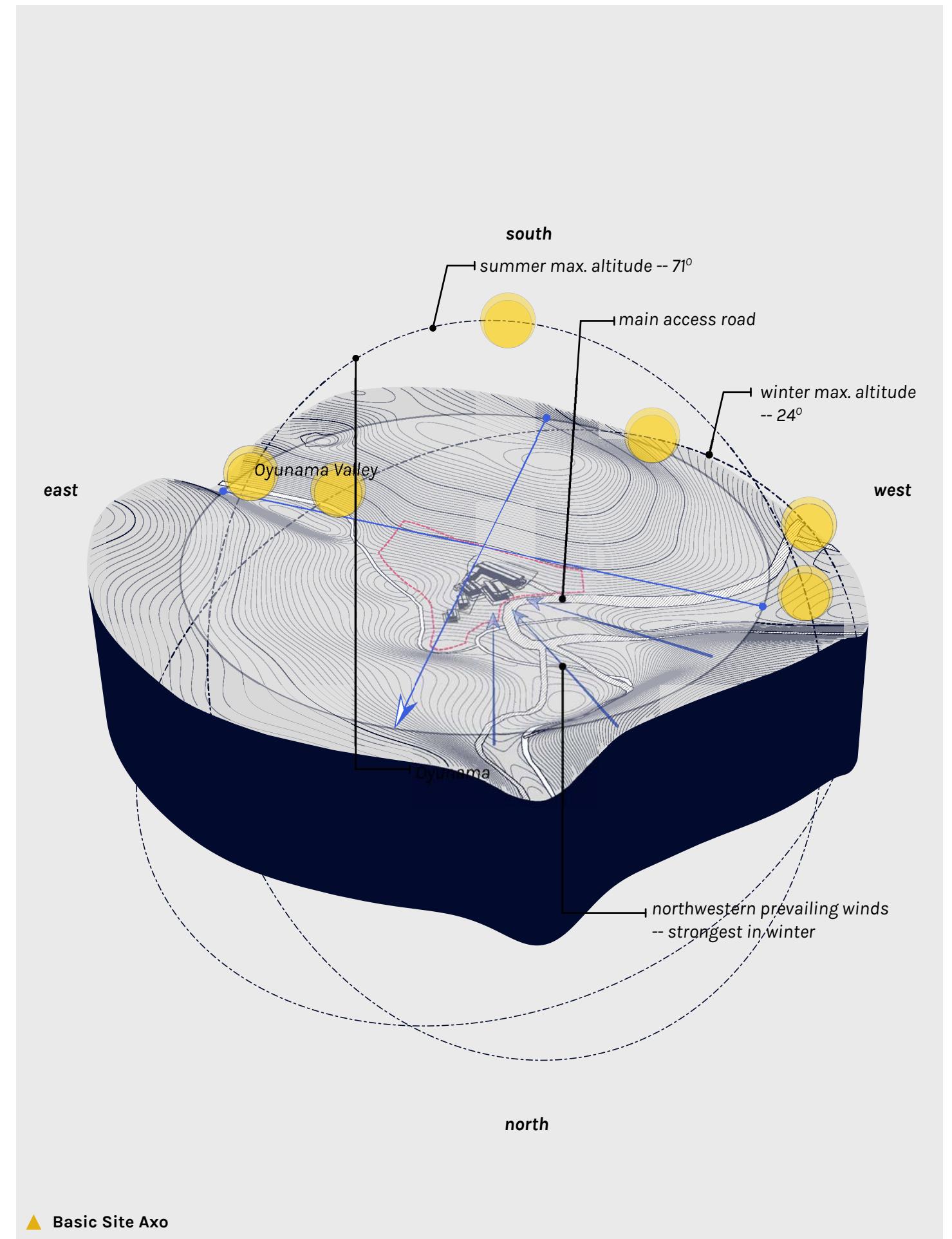
PRECEDENTS

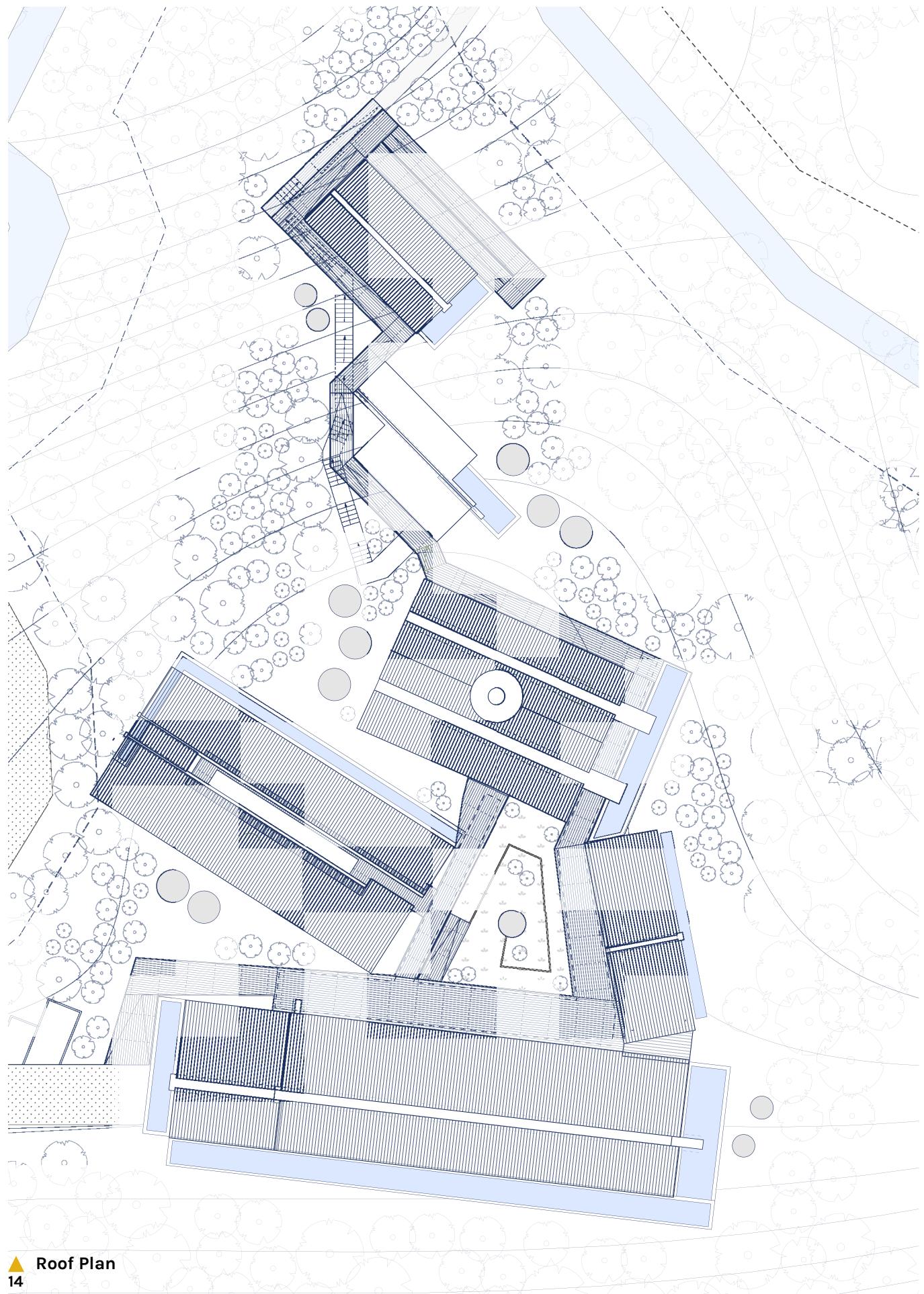




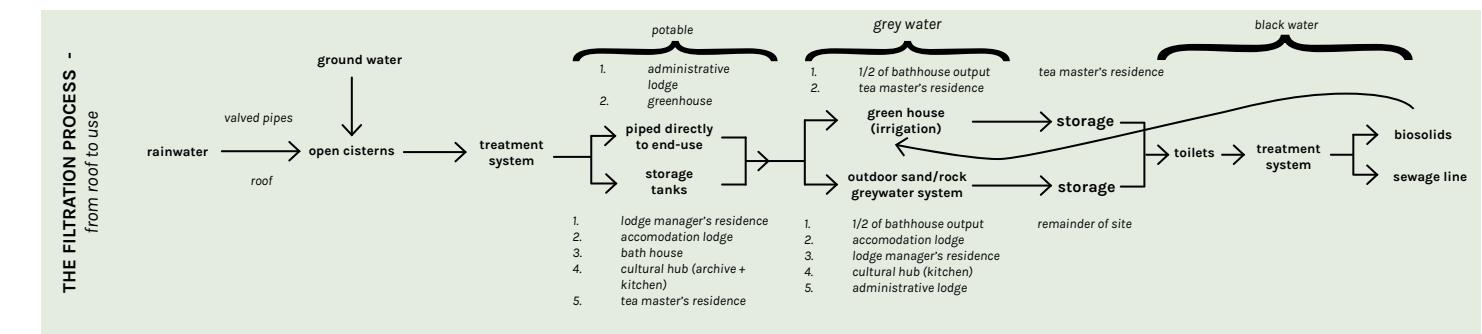
Placing of Massing

One of the key strategies here is to build as much of the complex as possible in the space given by the existing parking lot. The other is that the bath-house must be given central placement in the area that receives the most consistent sunlight in winter time (bath-house is shown by the black circle) as it's a prominent piece of program that highlights the connection to water and is the last major building one encounters on the plateau.

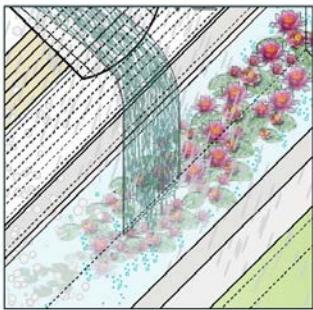
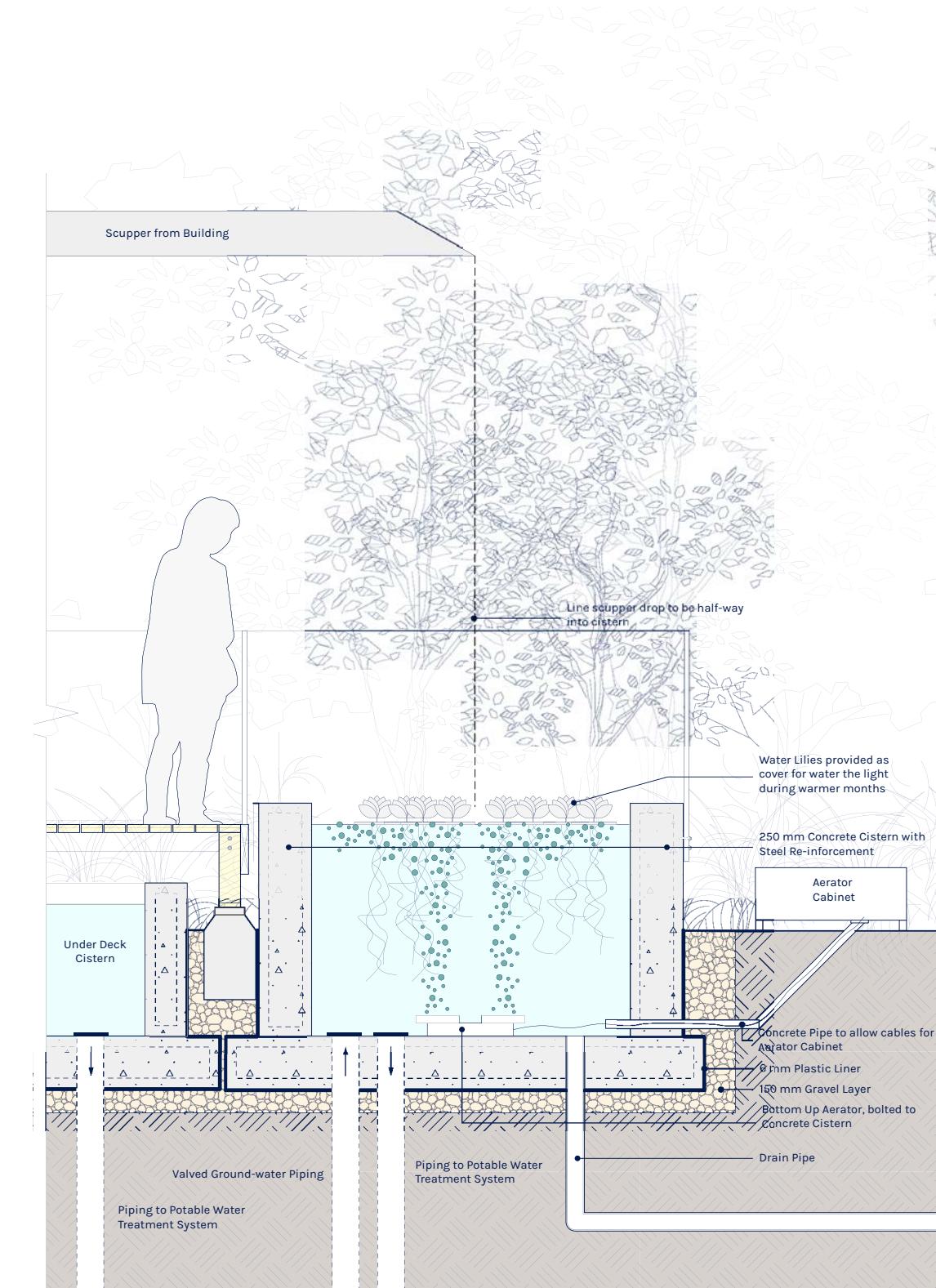


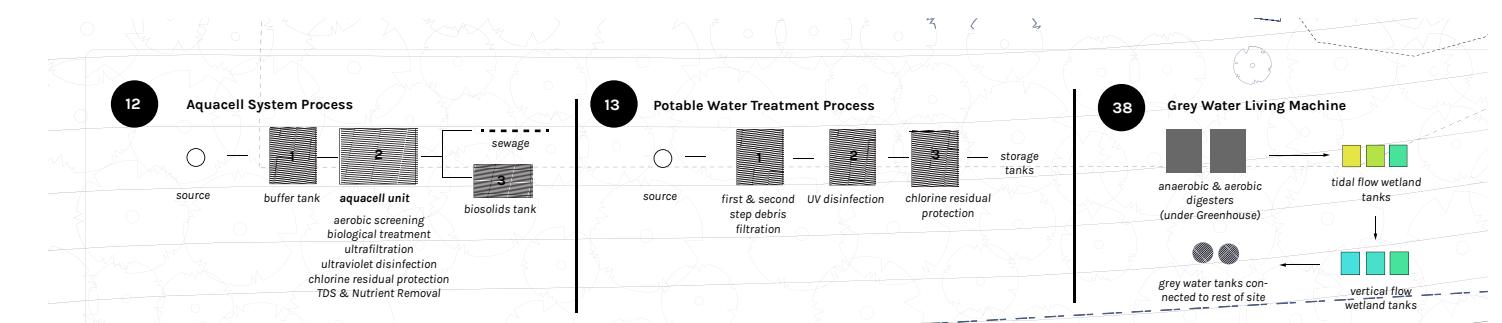
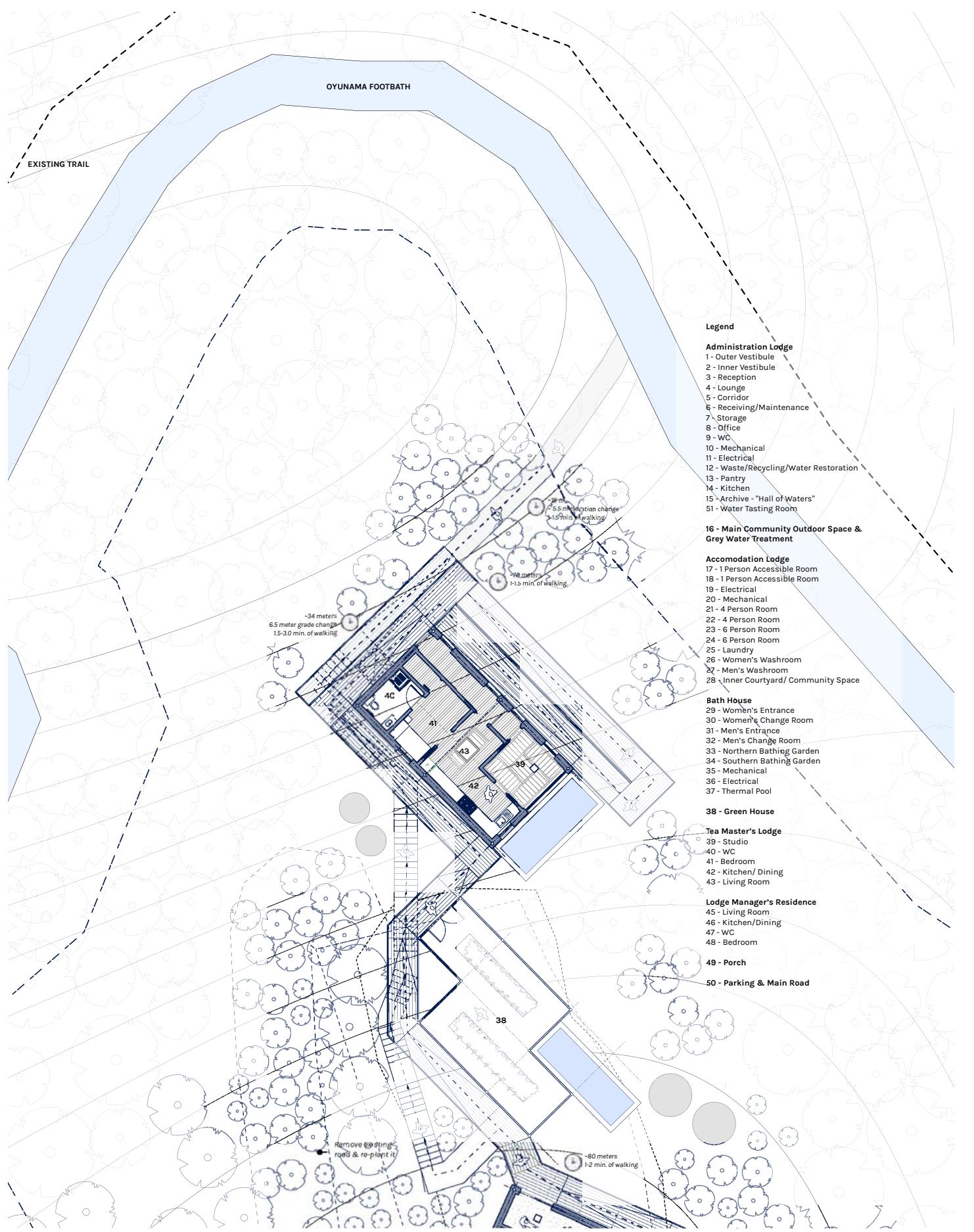


▲ Roof Plan
14



◀ Section Through Open Cisterns

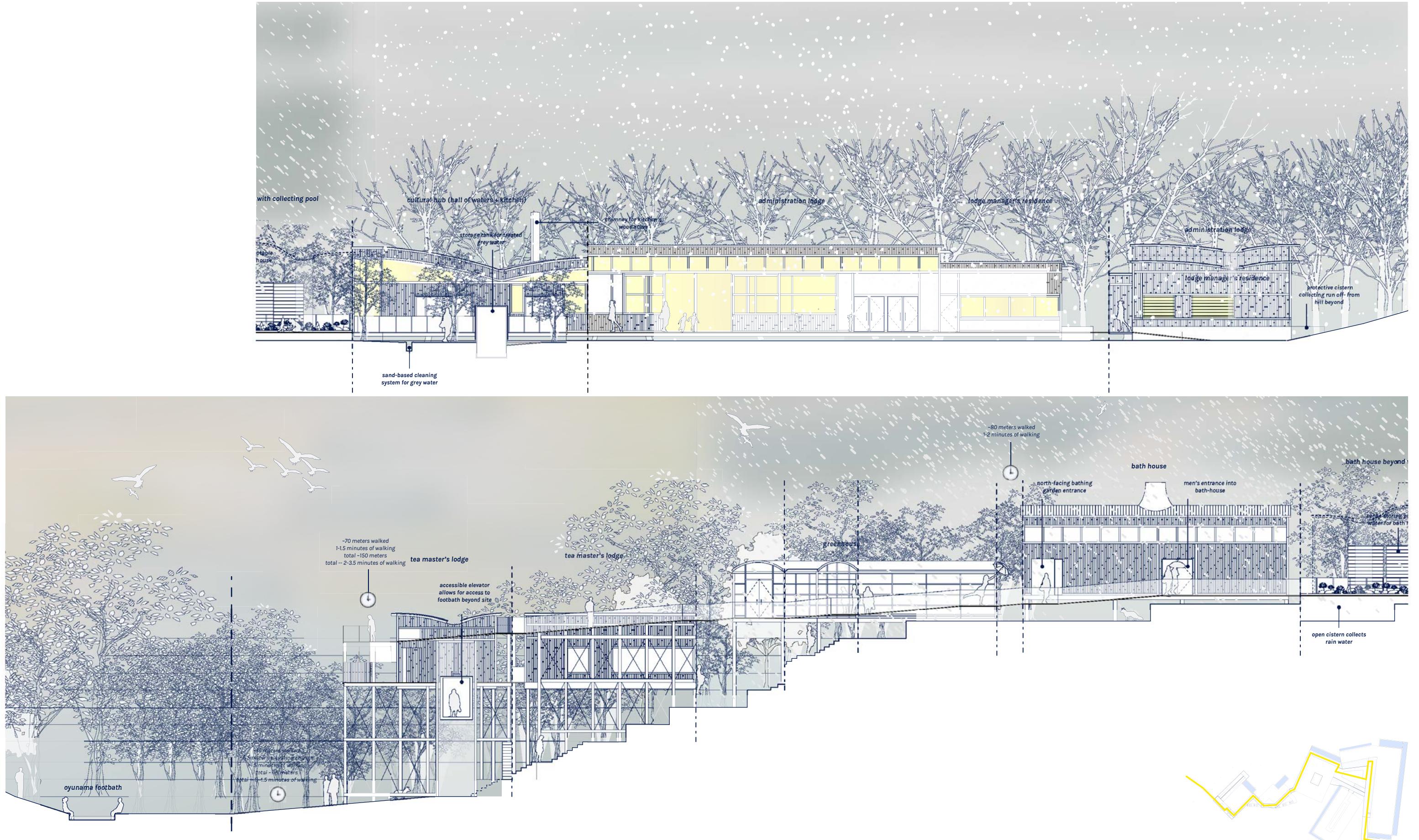




▲ Explanation of Systems

▼ Ground Floor Plan - Cont'd

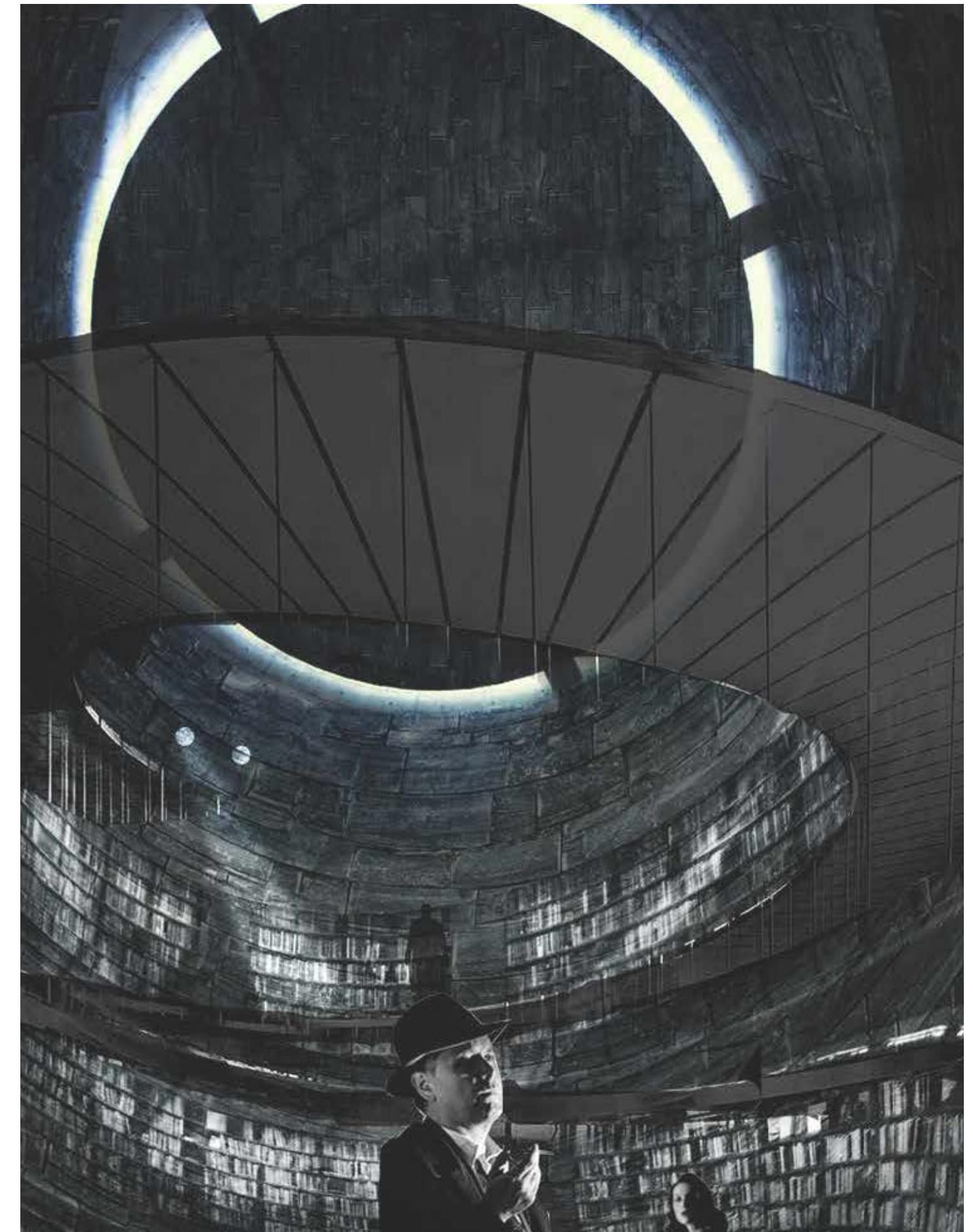




the shadow library

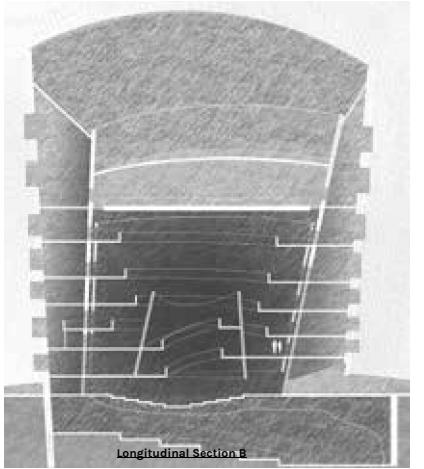
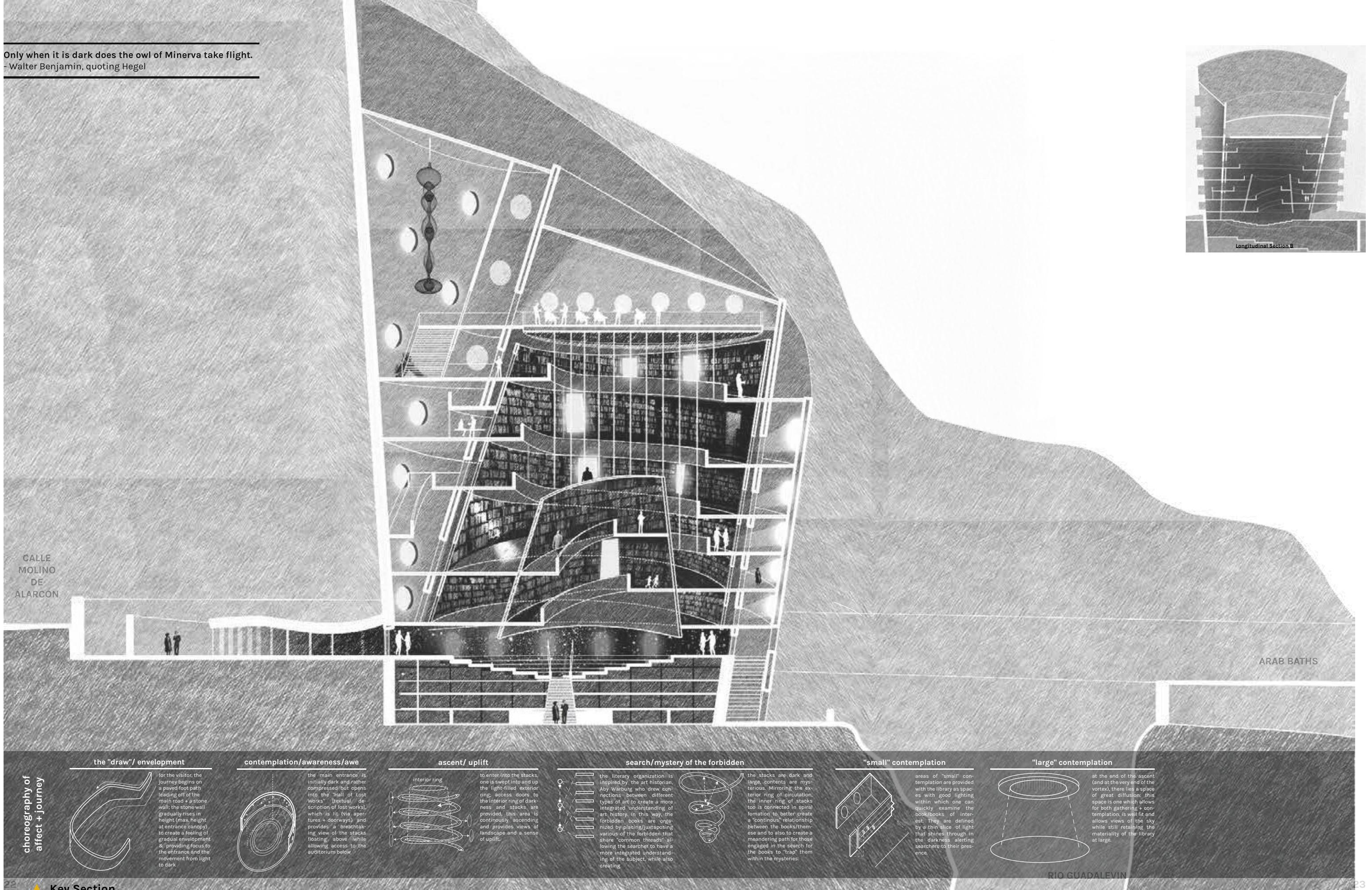
A strange phenomenon is taking place: a vortex is born underwater at the death of a wave. Water - to follow Bachelard - is an element that "always flows" and is in "constant flux", and vortices have long been a symbol of transformation within the realm of the human psyche. These transformations are often characterized by their powerful, perhaps even turmoil-filled, and deep-rooted nature. In the same manner, a library too can be transformative - a book can challenge and transform the way in which a person thinks, and therein lies the power of the library.

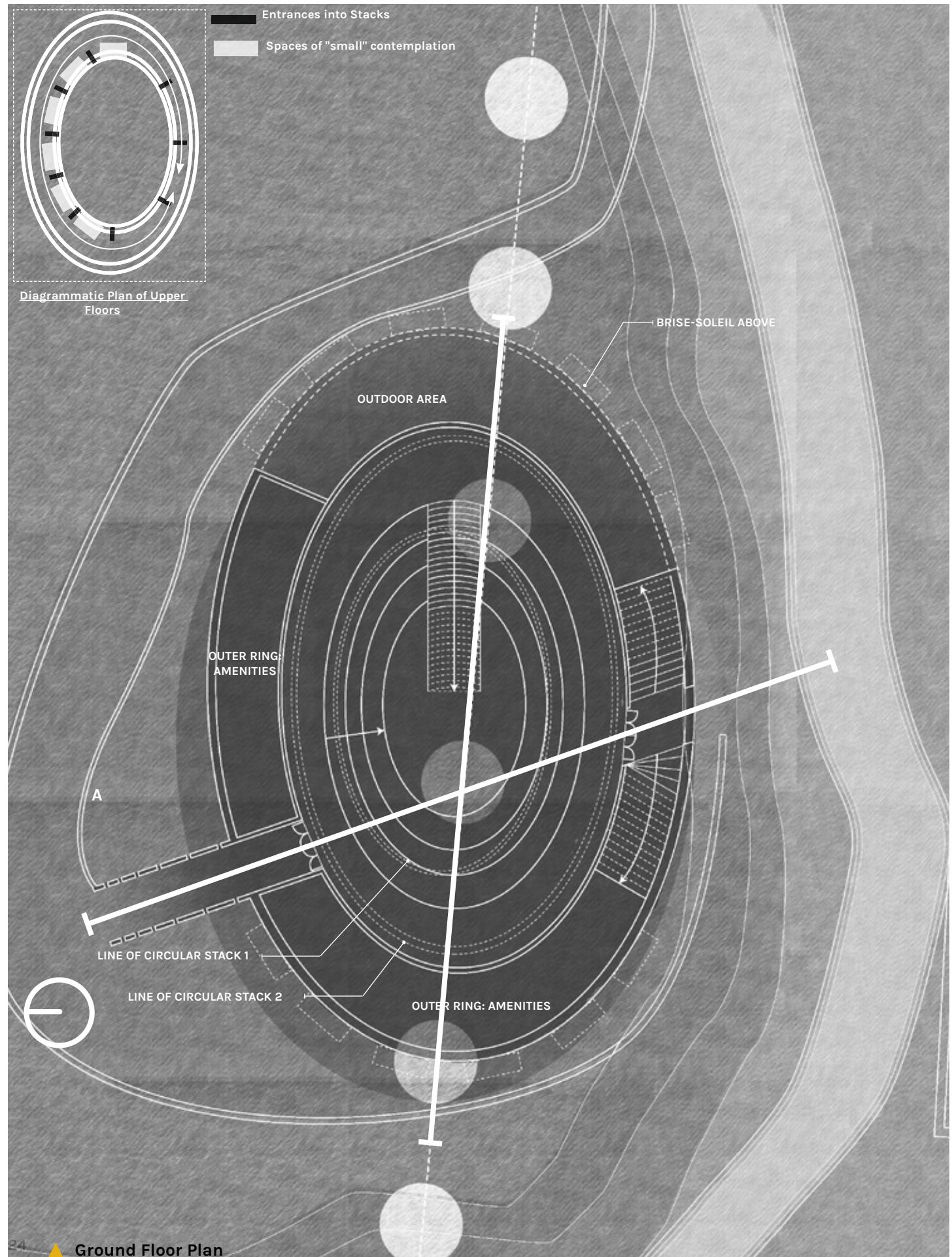
Although it is traditionally assumed that a library is a neutral space that is occupied democratically by both people and content - this is rarely the case. Every library practices some form of exclusive behaviour and due to pressures of (mostly) politics and (to a lesser degree) quality, every library thus has a "shadow" - the inverse of their catalogue choices. The Shadow Library - partially taking inspiration from the Bavarian Giftschrank or "posion cabinet", thus aims to be the inverse of the modern public library. It will stock that which is lost, censored, challenged, and deemed harmful to public "morality". **It will allow the reader/journeyer/ searcher to tap into the darkest, most mysterious recesses of their souls via the written, bring these elements to the forefront of their consciousness, and thus be able to transform themselves.**



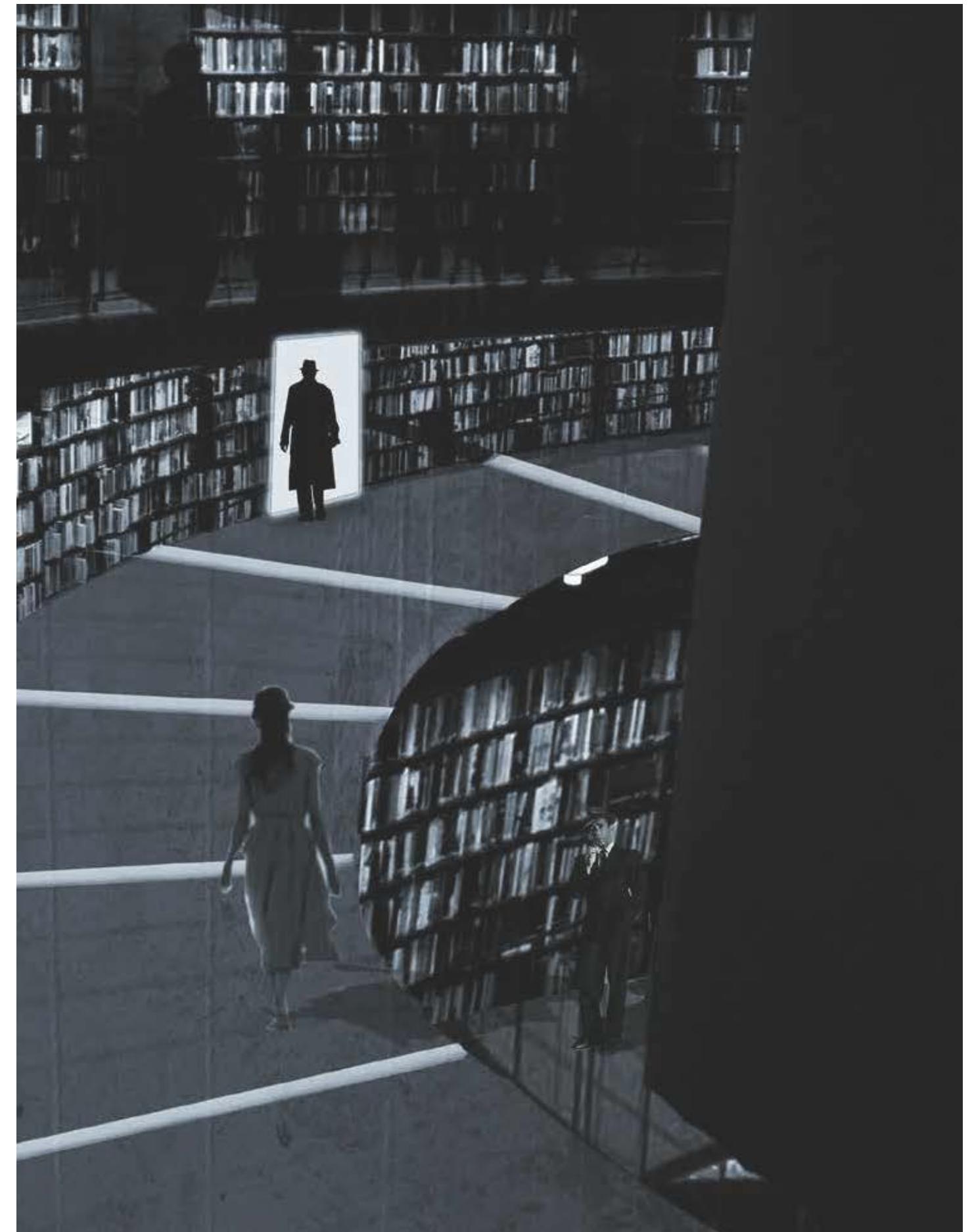
▲ View of Stacks Above

Only when it is dark does the owl of Minerva take flight.
-Walter Benjamin, quoting Hegel





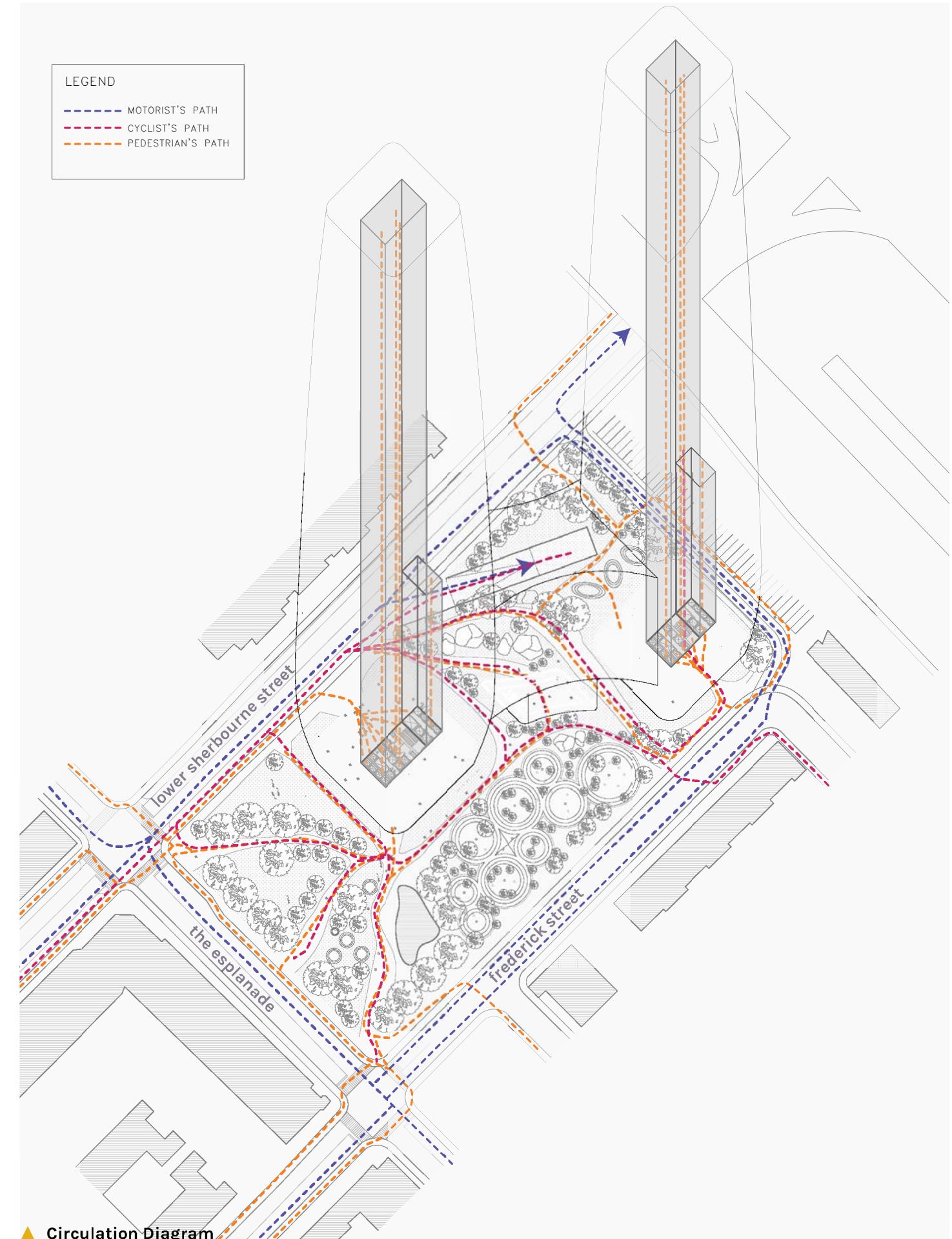
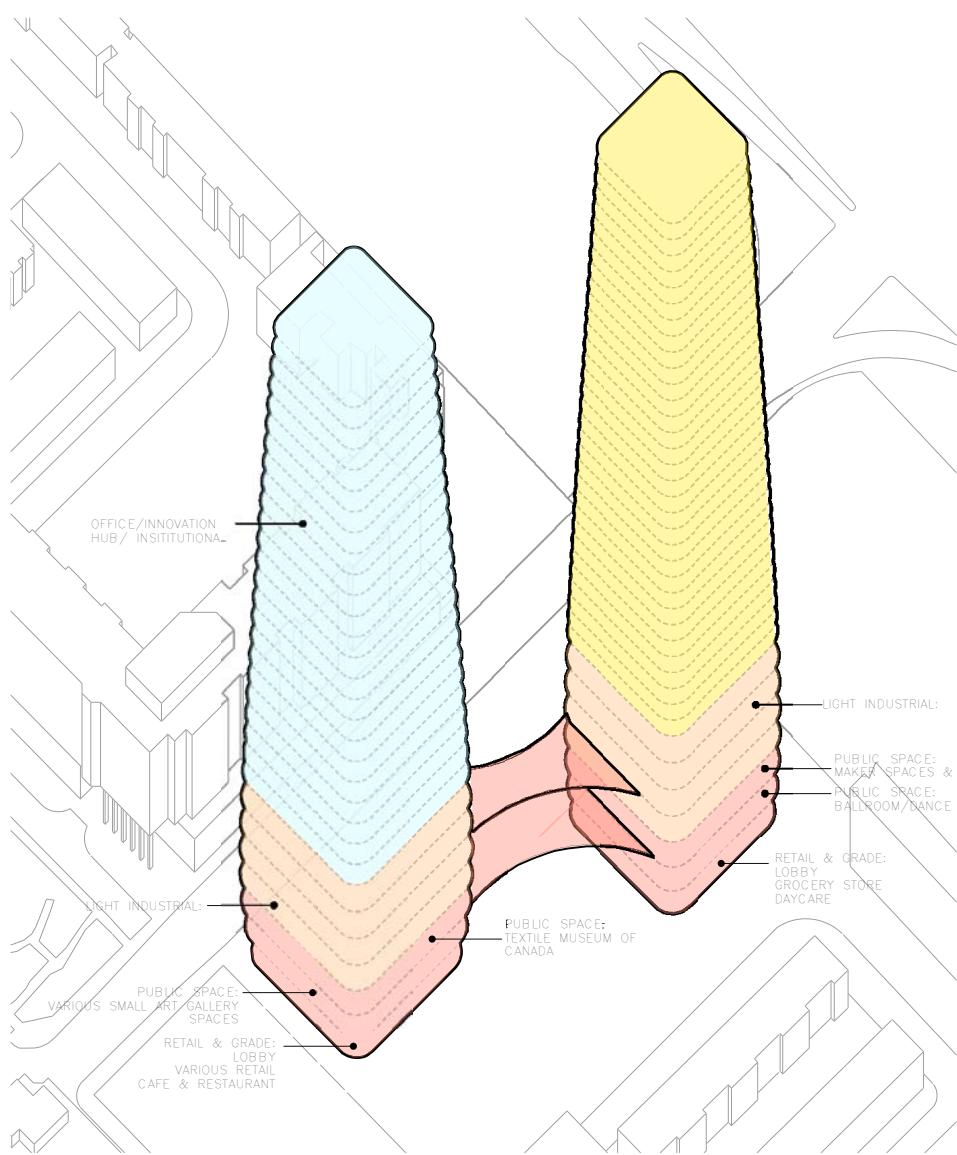
24 ▲ Ground Floor Plan



25

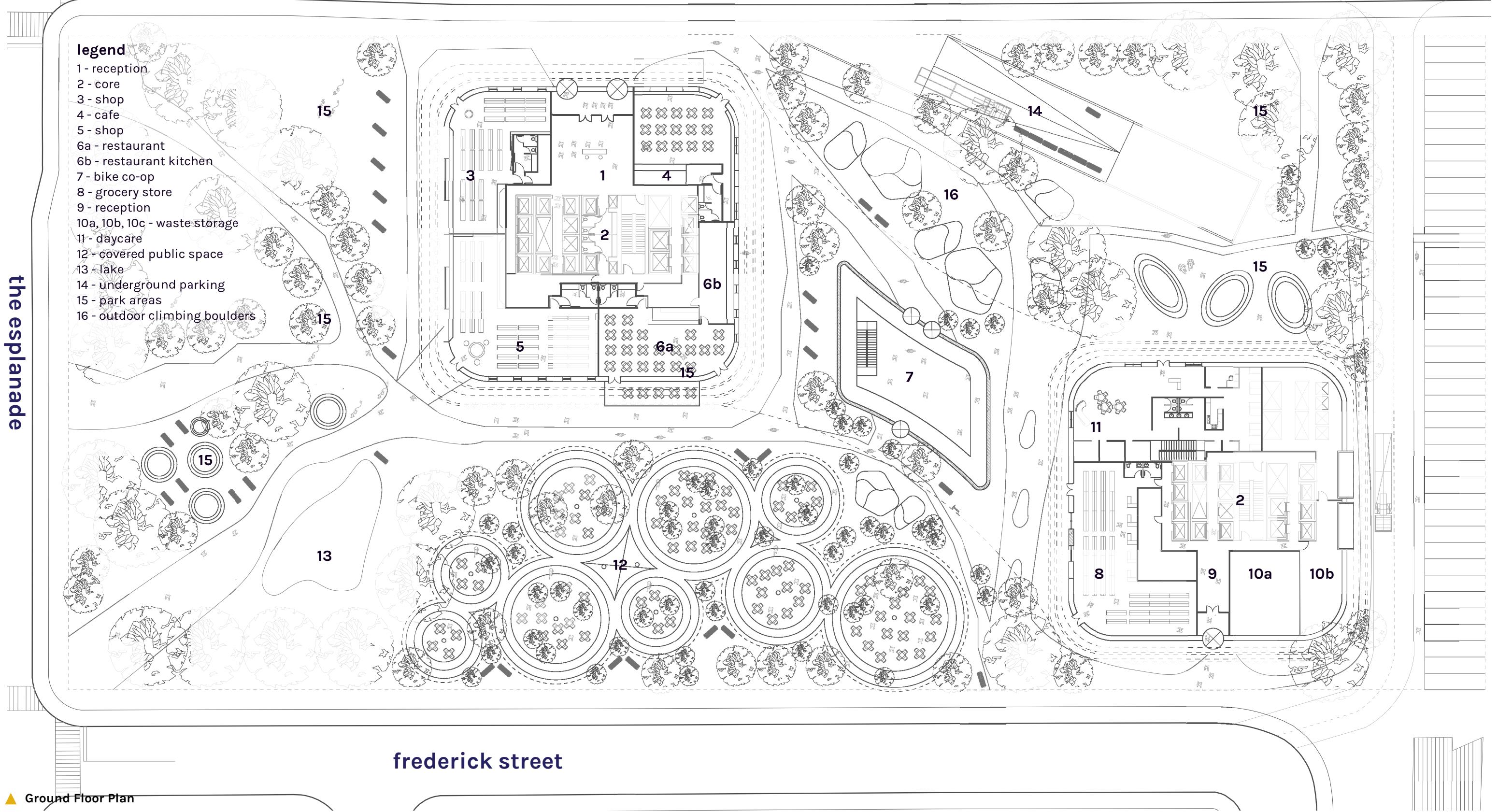
public space and hyperdensity

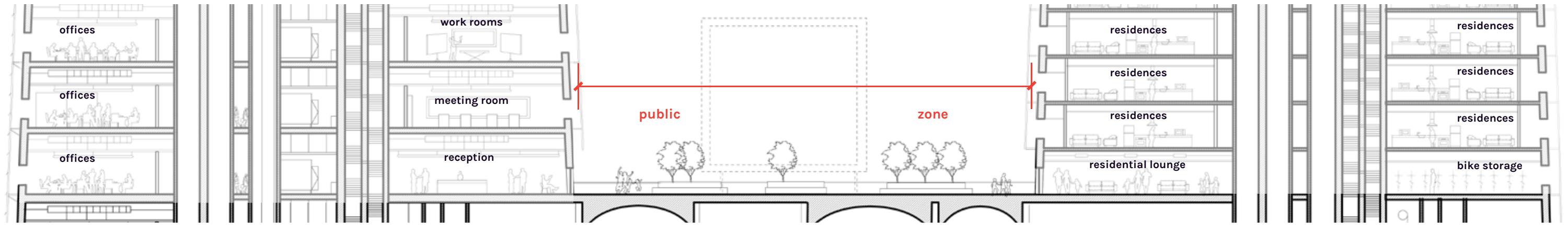
Toronto's new obsession with high-rise condominiums has come with a price - with the large number of high-rise condominiums being built, one finds that adequate park/green space/ public space is not available in comparison to the built forms. This project attempts to combine a high-density (FAR 8) building program while still providing large amounts of public space to the inhabitants of both the building and the surrounding community. The form of the building are two towers connected by a volume. The two towers are populated by offices and residences. The towers are connected by the volume which is composed of a program of generic light industrial program with the capability to be modified over time. There are also art galleries, publicly accessible workshops and makerspaces, a bicycle co-op, various shops, restaurants and a grocery store.



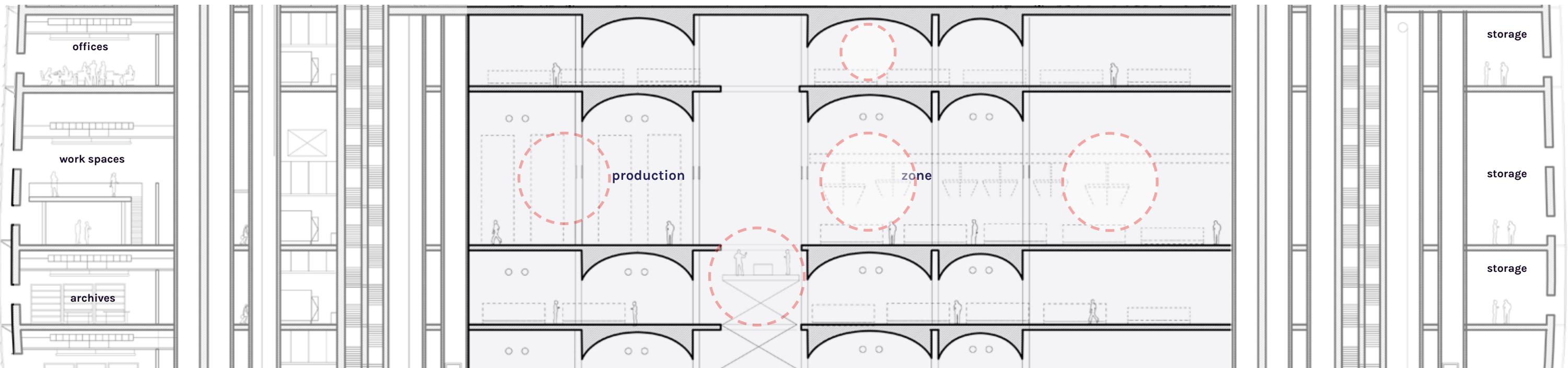
lower sherbourne street

gardiner highway beyond →

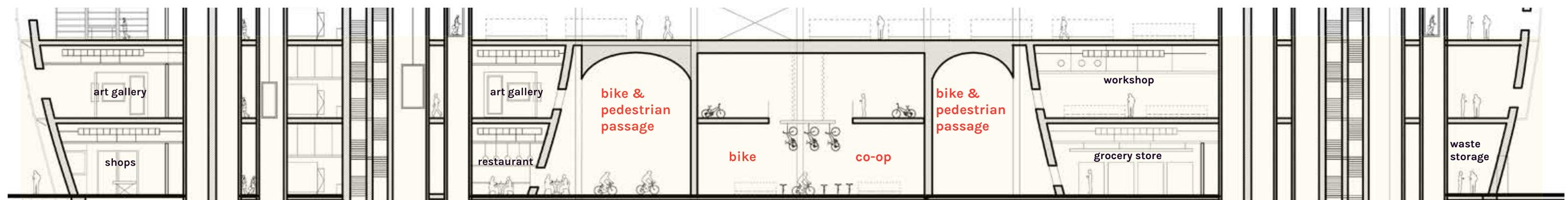




▲ Detailed Section: office spaces & residential areas which merge at a public zone for use by both office workers and residents



▲ Detailed Section: light industry volume -- the main production areas are flanked by offices, storage spaces, and main services; although this area isn't publicly accessible, there are views into the production area for the public

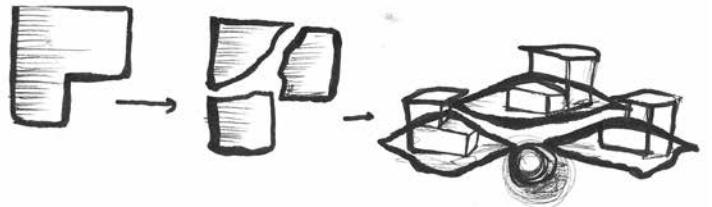


▲ Detailed Section: the public level here extends from the ground level to the second level with shops, restaurant, art galleries, workshops, grocery store, and waste storage.

screened courtyards

This project called for a set of homes to be built in a junk space in Cambridge that could be redeveloped later. Our solution comprised of three light steel framed apartment buildings which surround an internal courtyard. Each home is equipped with a three tier screening system that allows the residents to control shading and public exposure.

Group members: Mark Cooper, Amal Dirie, Ella den Elzen





▲▼ Longitudinal section below, corresponding plan above



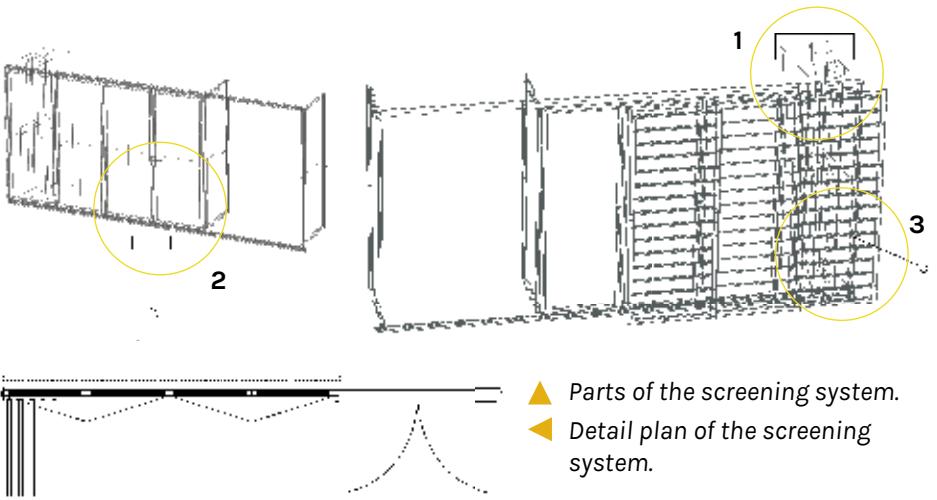
▲ West elevation of buildings

3 TIER SCREENING SYSTEM

Three tier privacy system consists of :

1. Folding translucent paper screens
2. Movable glass doors
3. Operable exterior louvres

This system allows the residents to manipulate their surroundings with regards to both privacy and thermal comfort by opening and closing different combinations of the screening system. The dynamic facade creates a more urbane environment.



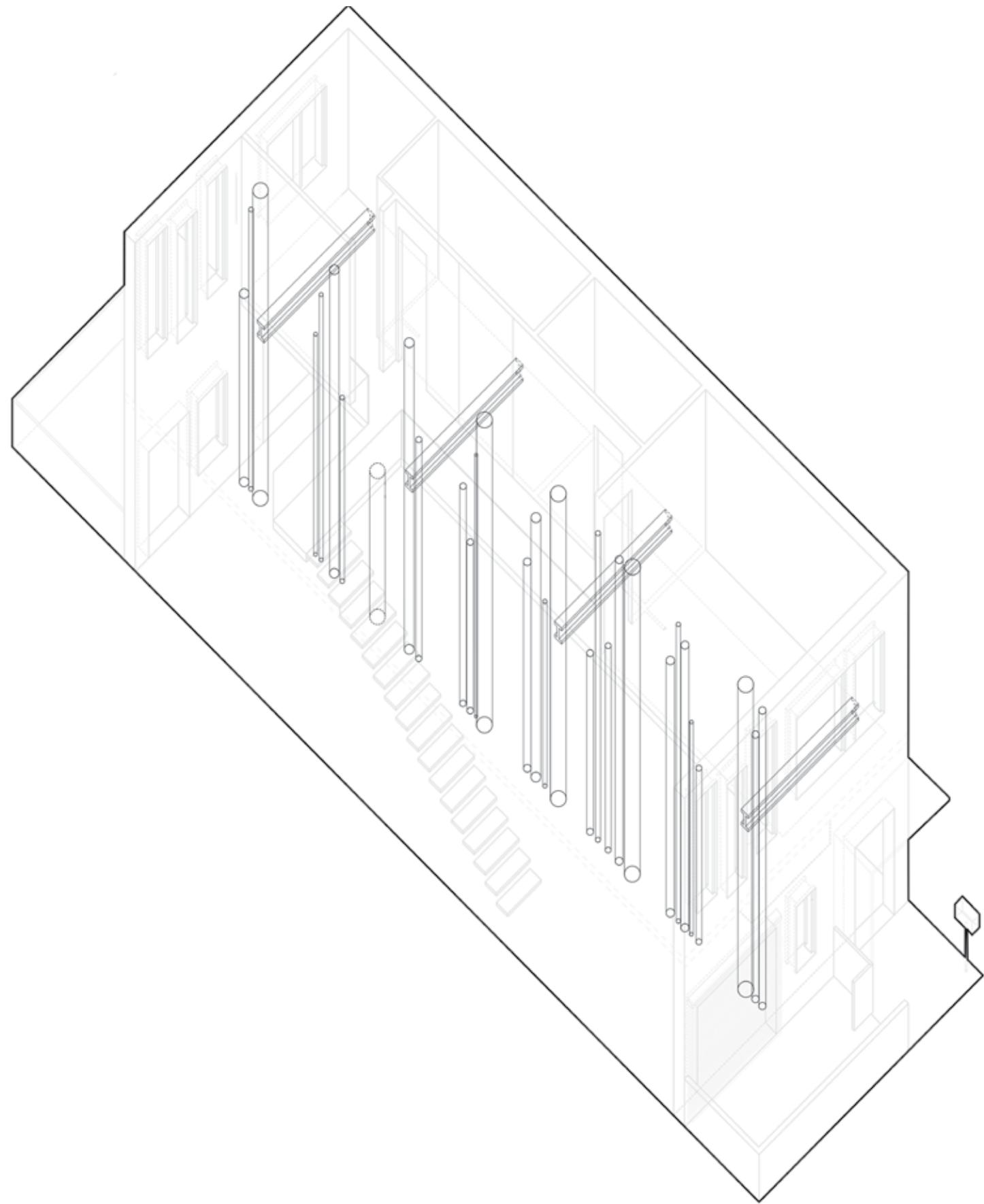
▲ Model of screening system



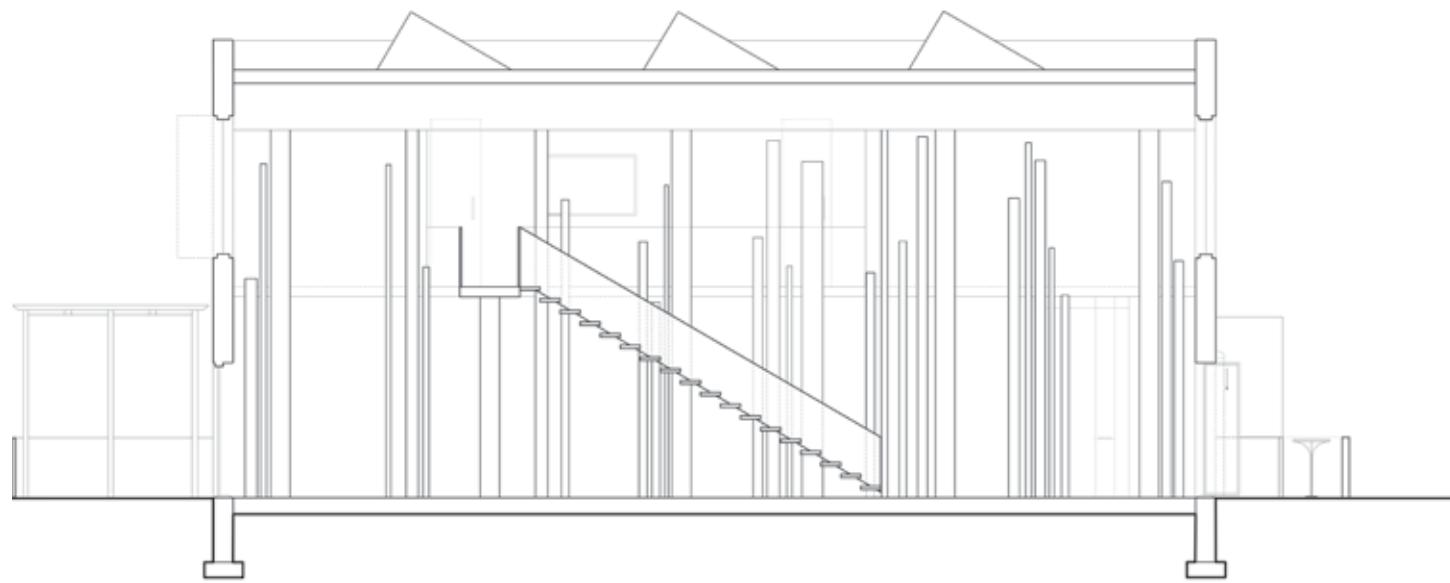
▲ Model of South elevations

columnar forests

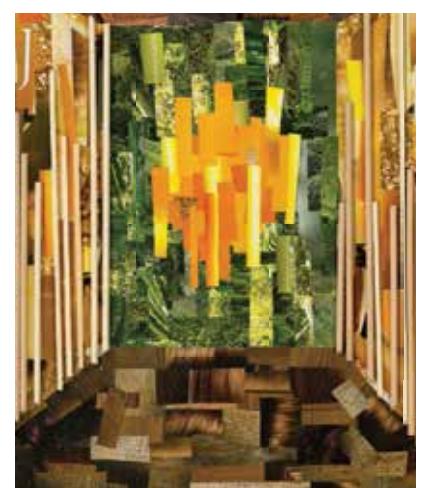
Located in downtown Cambridge, the (imaginary!) clients of this home wished to create a home that catered to both their love of socializing and the forests of their old home. As such, the focus of this tiny little townhouse is in the beautiful, long atrium which is separated and connected to the living spaces by a screen of wooden columns (designed out of recycled cardboard) that are reminiscent of the forests of the clients' previous home.



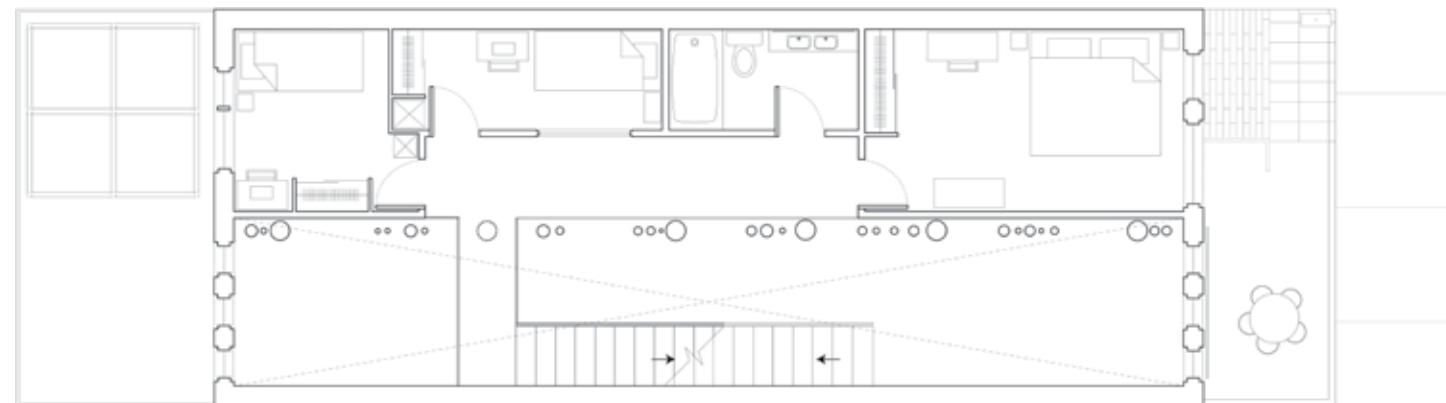
▲ Structural axonometric - structural columns are paired with the steel beams to provide stability to the 2nd floor.



▲▼ Longitudinal section with corresponding ground floor plan below



▲ Vignette | Rough initial elevation model | Interior model of columns and stairs

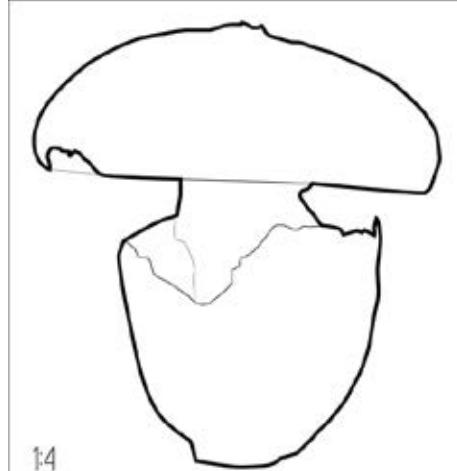


▲ Second floor plan

diagrams + mapping

Right Page: A sample of infographics that detailed the growth requirements of different species of mychorrhizal fungi that would be grown in a horticultural centre in a soon-to-be-abandoned quarry in Ontario.

Next Pages: The Whale Housing Complex by de Architekten Cie is a super-block that I had to research for my current studio which deals with creating large, mixed-use urban buildings. The following pages show some of the diagrams and maps I produced for the case study.



14

AMANITA CAESAREA M

NATIVE DISTRIBUTION MEDITERRANEAN



FACTS & REQUIREMENTS

FRUITING SEASON

J	F	M	A	M	J	J	A	S	O	N	D
---	---	---	---	---	---	---	---	---	---	---	---

HUMIDITY REQUIRED (%)

10	20	30	40	50	60	70	80	90	100
----	----	----	----	----	----	----	----	----	-----

GROWING TEMPERATURE (°C)

16-24°C

SOIL PROFILE: LUVISOLIC

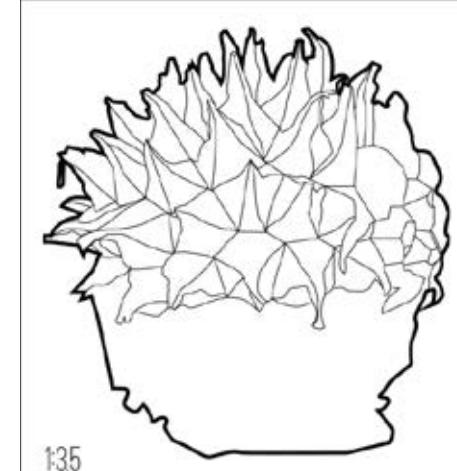
A	B	C
---	---	---

A: SHALLOW SURFACE SOIL FULL OF NUTRIENTS

B: IRON BASED SUBSOIL LEADING TO RED COLOUR.
CAN VARY DEPENDING ON CLIMATE

C: PARENT LAYER - VARIABLE, CAUSING DIVERSE

OTHER TRAITS



135

CALVATIA SCULPTA M

NATIVE DISTRIBUTION TEMPERATE



FACTS & REQUIREMENTS

FRUITING SEASON

J	F	M	A	M	J	J	A	S	O	N	D
---	---	---	---	---	---	---	---	---	---	---	---

HUMIDITY REQUIRED (%)

10	20	30	40	50	60	70	80	90	100
----	----	----	----	----	----	----	----	----	-----

GROWING TEMPERATURE (°C)

8-19°C

SOIL PROFILE: PODZOLIC

0	E	A	B	C
---	---	---	---	---

0: LEAF LITTER/OTHER READY-TO-DECAY MATTER

E: BLEACHED ELEVIAL HORIZON FROM EROSION

A: DEEPER SURFACE SOIL WITH COLOURED BY IRON AND HUMUS

B: ACIDIC SUBSOIL, BLEACHED BY ORGANIC ACIDS

C: PARENT LAYER - SLICEOUS ROCK, QUARTZIC SAND

OTHER TRAITS



12

LACTARIUS INDIGO M

NATIVE DISTRIBUTION TEMPERATE



FACTS & REQUIREMENTS

FRUITING SEASON

J	F	M	A	M	J	J	A	S	O	N	D
---	---	---	---	---	---	---	---	---	---	---	---

HUMIDITY REQUIRED (%)

10	20	30	40	50	60	70	80	90	100
----	----	----	----	----	----	----	----	----	-----

GROWING TEMPERATURE (°C)

16-23°C

SOIL PROFILE: PODZOLIC

0	E	A	B	C
---	---	---	---	---

0: LEAF LITTER/OTHER READY-TO-DECAY MATTER

E: BLEACHED ELEVIAL HORIZON FROM EROSION

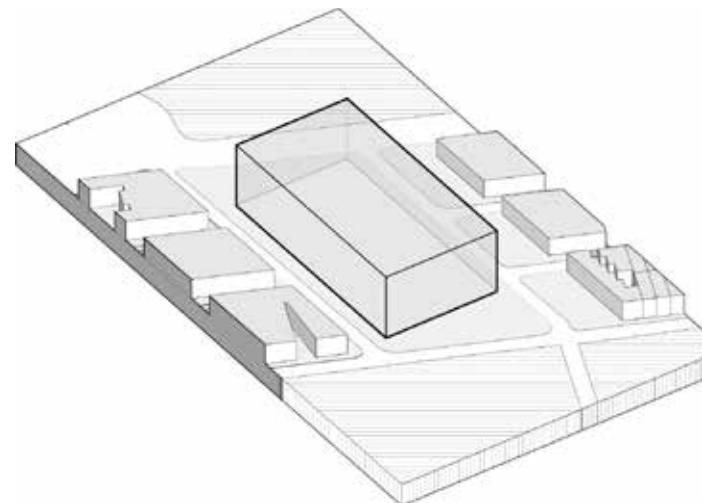
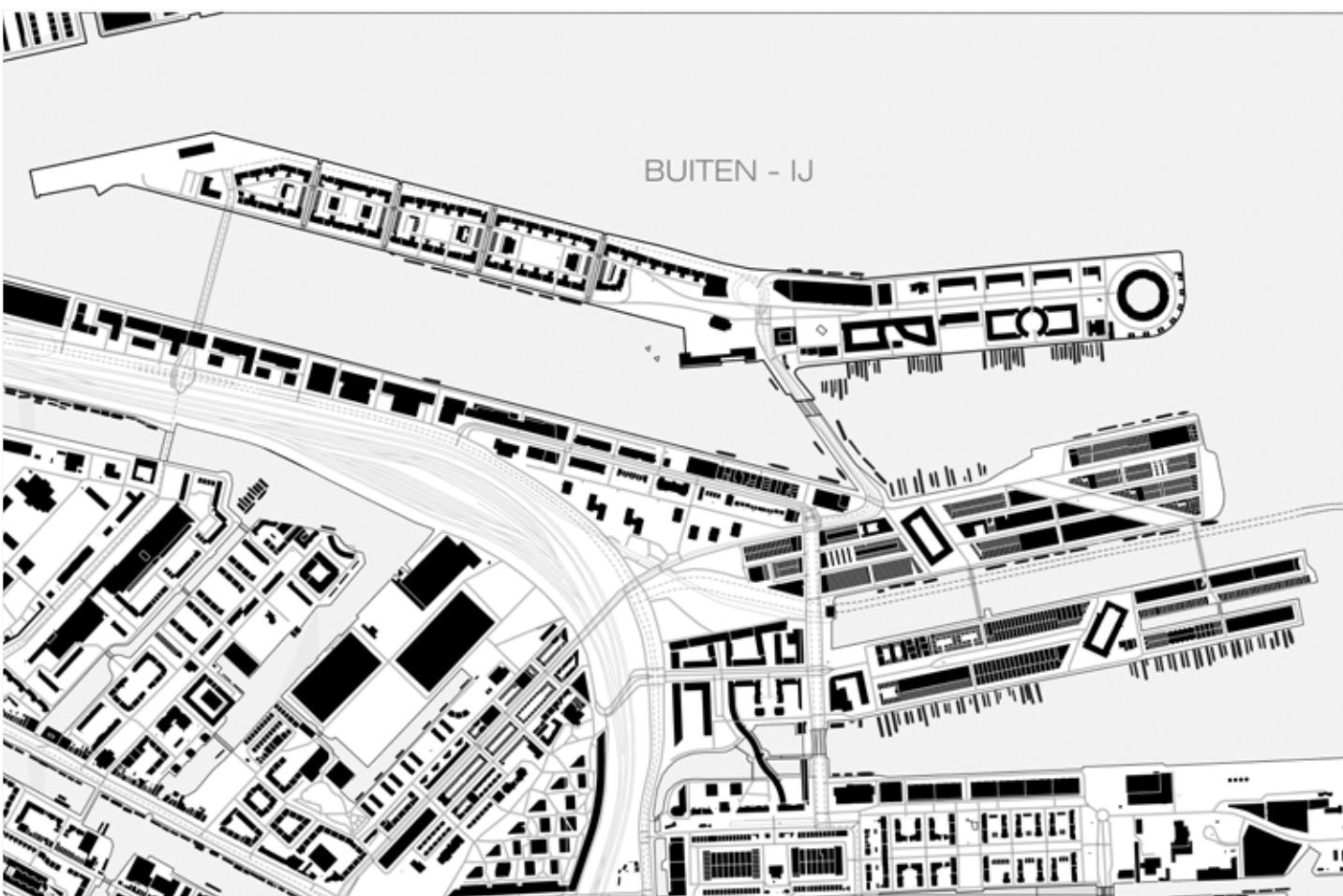
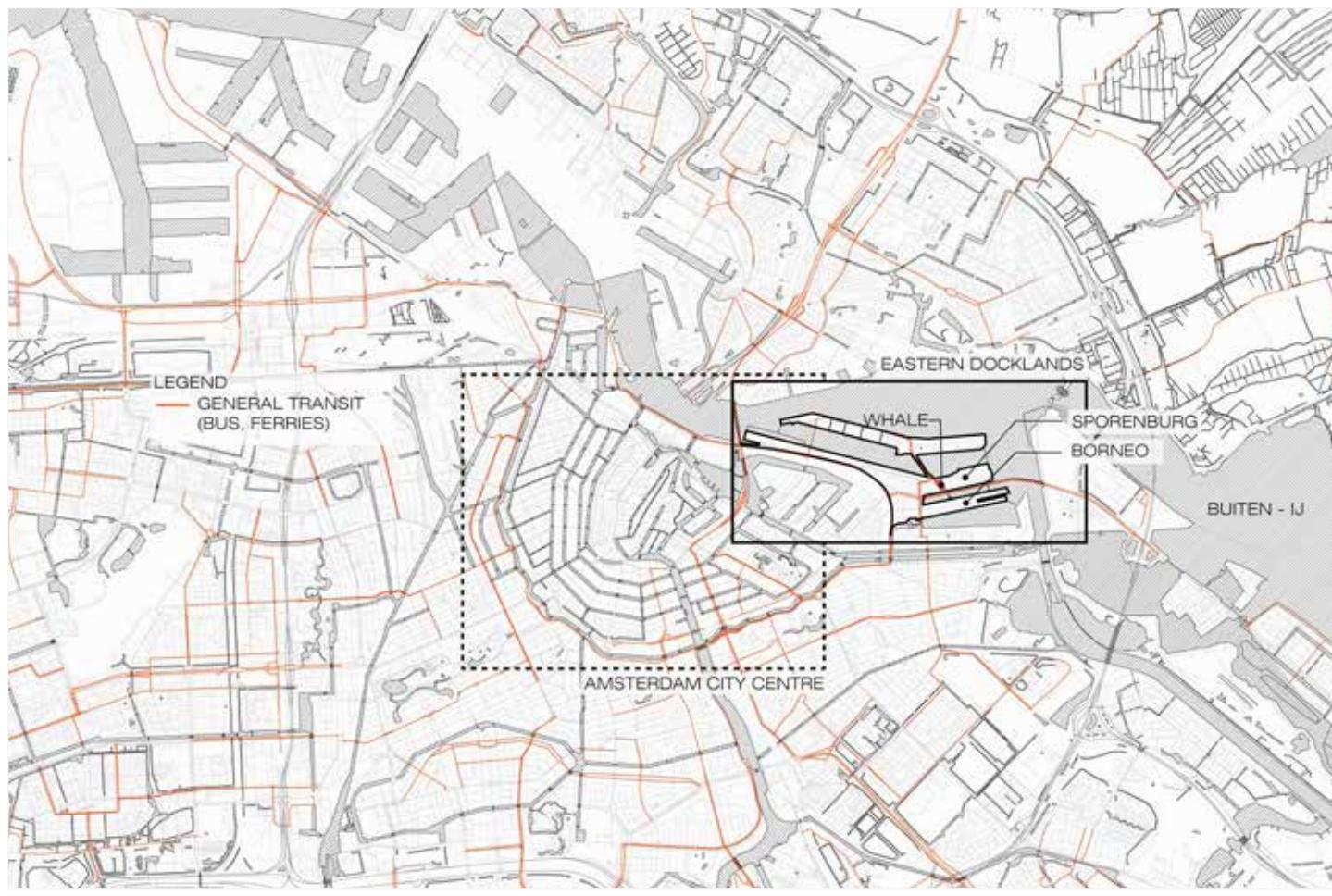
A: DEEPER SURFACE SOIL WITH COLOURED BY IRON AND HUMUS

B: ACIDIC SUBSOIL, BLEACHED BY ORGANIC ACIDS

C: PARENT LAYER - SLICEOUS ROCK, QUARTZIC SAND

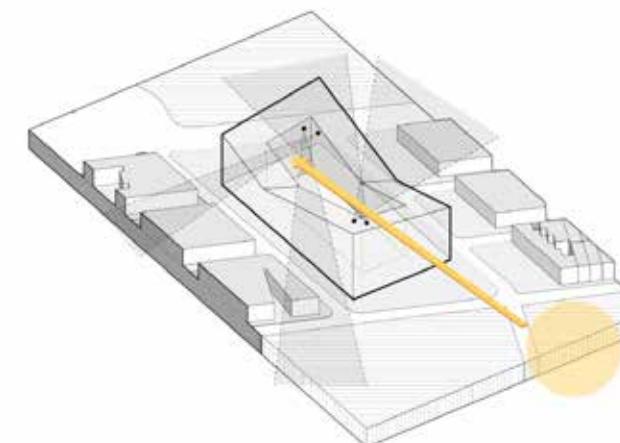
OTHER TRAITS



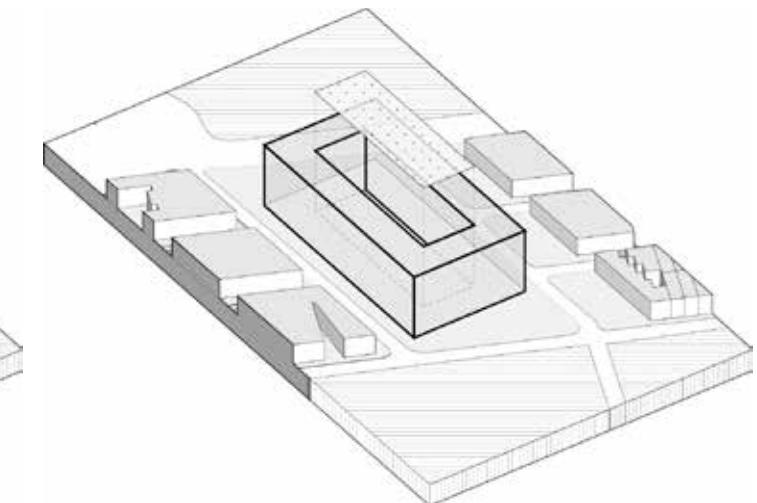


Begin with a typical block on site.

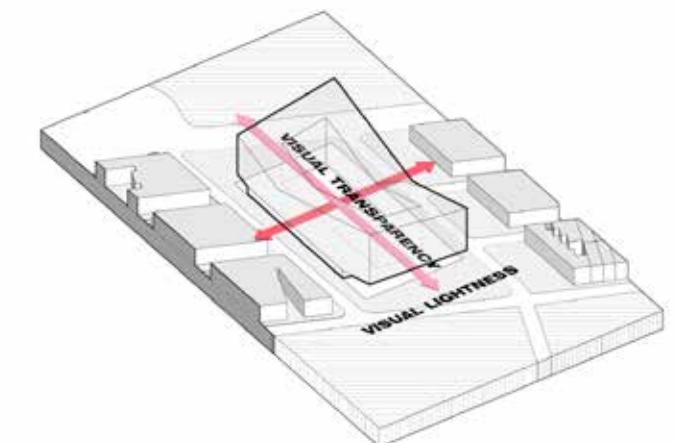
Second floor plan



Raise corners to allow sunlight in and create views for apartments.

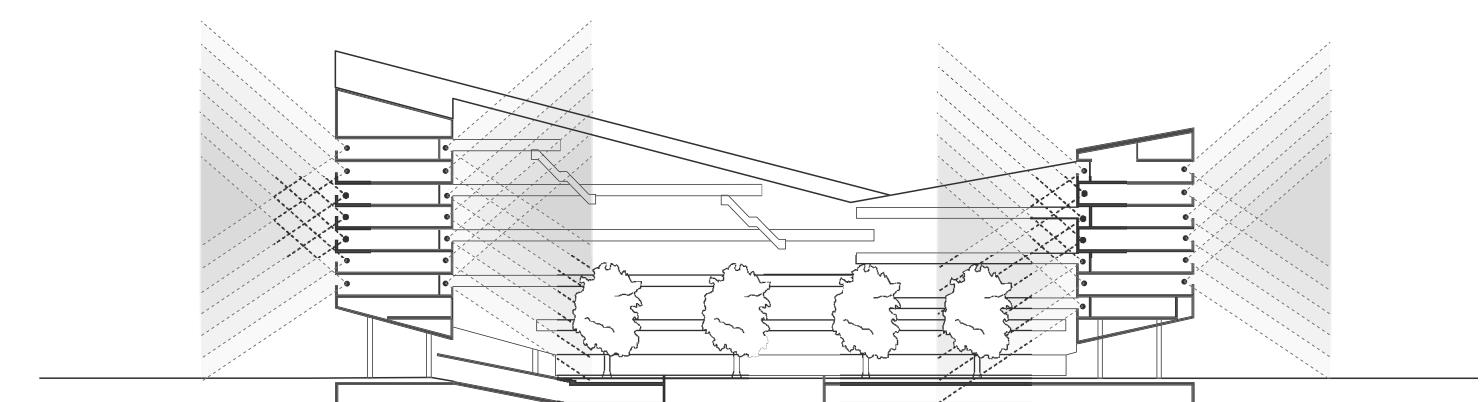


Hollow the block to create a typical perimeter block with a courtyard.



Raise building off of ground to create visual transparency through the courtyard axis, and visual lightness at ground level.

▲ 3D massing diagrams



▲ Sectional parti diagram

▲ Above: Map of Amsterdam including key locations + transit
Below: Nolli map of the Borneo-Sporenburg area

food for thought

Food for Thought is a portable classroom that aims to incorporate the classroom into urban, community areas such as parks to teach about agriculture, horticulture and food systems to the general public with the hopes of increasing awareness and promoting good health.

Group Members: Fiona Lu



SELF-GUIDED

upstream

In the summer of 2017, I had the opportunity to work with Upstream - non-profit organization whose aim was to create a healthier society by re-framing the conversation around social determinants of health. My time was largely engaged at creating graphics for this organization and a major assignment involved working on a campaign to explain (a) why Canadians currently do not pay extremely high taxes and (b) why Canadians could afford their taxes going higher.

upstream

taxes, benefits and you!

Confused about the benefits of taxes? You're not the only one. Most Canadians find it hard enough to deal with the hassle of paying taxes let alone understanding how much those taxes benefit them.

1 THE TAX BURDEN

Let's break down how our tax system works and how much Canadians pay in taxes

Taxes are? normally defined as compulsory payments to the government for which the payer receives no specific benefit.

Income Bracket (\$)	Marginal Rate (%)
0-45,016	15.0
45,016-91,831	20.5
91,831-142,553	26.0
142,553-202,800	29.0
Over 202,800	33.0

The **marginal rate** is not a family/individual's **effective tax rate**. A family/individual's **effective tax rate** is the ratio of income taxes to the income of a family or individual.

So let's calculate an effective tax rate for an individual:

Alexa	Nurse	\$65,000
Most people would assume that Alexa's tax rate would be the marginal 20.5%, but calculations show a much different story.		
According to federal regulations, the first \$11,635 of all income is not taxable.		
\$65,000		
- \$11,635		
\$53,365	Alexa's total taxable income	
The minimum marginal rate is 15%, but only applies to the next \$34,281 of Alexa's income.		
\$45,916		
- \$11,635		
\$34,281		
x 0.15		
\$5,142.15		
The remainder of Alexa's income will then be taxed at 20.5%.		
\$65,000		
- \$11,635		
\$53,365		
- \$18,084		
\$35,281		
x 0.205		
\$3,912.22		
TOTAL TAXES PAID		\$9,054.37
Alexa's effective income tax rate (federal)		\$9,054.37
		= 13.9%
		<small>\$65,000.00</small>

Alexa's **effective tax rate** is a result of Canada's **progressive** taxation system - progressive in that income tax rates increase as income increases.

2 TAX CUTS & BENEFITS OF PUBLIC SPENDING

Let's see how what we pay in taxes affects our ability to access vital services & programs

Did You Know? More than two-thirds of Canadians live in households whose benefit from public services exceeds 50% of the household private income.⁵

Let's consider the following: As benefits of public spending tend to vary with household composition, so we'll consider a case that would affect most Canadians.

As of 2009, 41% of Canadians live in households that are composed of parents with young children. ⁵
The typical household size was 2.6 people.

The average benefit from public services per person for this family type is \$13,332⁵.

Meet the Nizari family - they will be our model for the typical or median Canadian family.

The 2017 **typical/median effective income tax rate** of a Canadian family is **15%** - this value includes federal and provincial income taxes and payroll taxes.⁶

The 2017 **typical/median effective total tax rate** of a Canadian family is **24%** - this value includes federal and provincial income taxes, payroll taxes and commodity taxes.⁶

For the vast majority of Canadians, having public services subsidized by public taxes provides a drastic improvement in quality of life and is the best deal they will get.

References

1. Neil Brooks, "Tax Freedom Day: A Flawed, Incoherent, Pernicious Idea," Canadian Centre for Policy Alternatives, June 2008, 18.
2. Richard Shillington and Robin Shaban, "The Brass Tax: Busting Myths about Overstated Canadian Tax Burden," June 2017, 14.
3. Richard Shillington and Robin Shaban, "The Brass Tax: Busting Myths about Overstated Canadian Tax Burden," June 2017, 14.
4. Hugh MacLennan and Richard Shillington, "Canada's Quiet Bargain: The Benefits of Public Spending," Canadian Centre for Policy Alternatives, April 2009, 6.
5. Hugh MacLennan and Richard Shillington, "Canada's Quiet Bargain: The Benefits of Public Spending," Canadian Centre for Policy Alternatives, April 2009, 6.
6. Richard Shillington and Robin Shaban, "The Brass Tax: Busting Myths about Overstated Canadian Tax Burden," June 2017, 24, Table 4.

Let's consider the following:

As benefits of public spending tend to vary with household composition, so we'll consider a case that would affect most Candians.

As of 2009, **41%** of Canadians live in households that are composed of parents with young children.⁵ The typical household size was 2.6 people.

The average benefit from public services per person for this family type is **\$13,332⁵**.



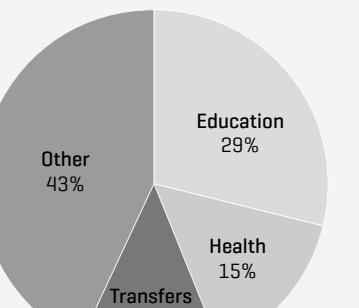
Yassin
\$50,500³
34



Celeste
\$50,500³
32



Jacob
\$0
10



Typical public services accessed by family type.

The Nizaris are fortunate though. Though they each make the median income, their **household income** is above the median. The median Canadian household income is ~ \$66,000.

Meet the Nizari family - they will be our model for the typical or median Canadian family.

The 2017 **typical/median effective income tax rate** of a Canadian family is **15%** - this value includes federal and provincial income taxes and payroll taxes.⁶

The 2017 **typical/median effective total tax rate** of a Canadian family is **24%** - this value includes federal and provincial income taxes, payroll taxes and commodity taxes.⁶

Yassin **Celeste**

\$50,500³ **\$50,500³**

\$101,000

x 0.24

\$24,240

\$101,000

-\$24,240

\$76,760

The Nizari's typical net income

Value of Benefits Received by Family

\$39,996⁵ the cost of the services as paid by taxes

Taxes Paid by Family
\$24,240

Thus, for every dollar that the Nizaris gave in taxes, they received \$1.65 back in services.

If Yassin and Celeste didn't have any taxes to pay....

\$101,000
-\$39,996

\$61,004

Value of services - at cost - previously subsidized by taxes.

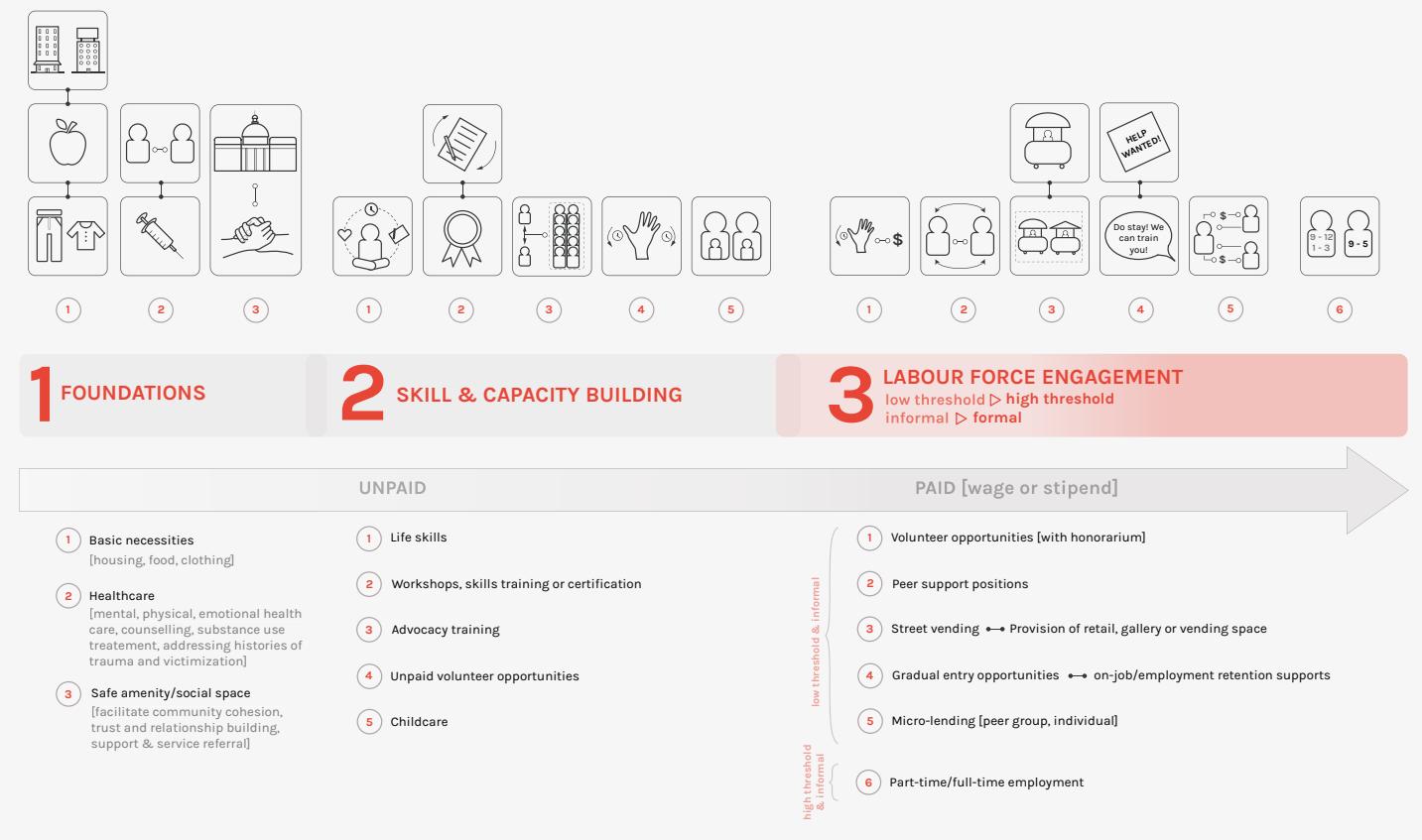
The Nizari's new net income

.... the result of the tax "cut" is that they will now have to pay for the value of the previously subsidized services out of pocket. Why? Because a reduction in taxes means a loss in government revenues which then correlate with a reduction in public spending, not an increase.⁴

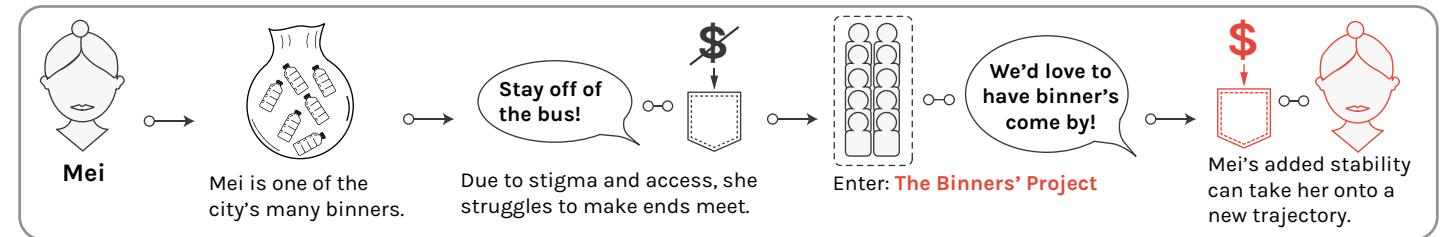
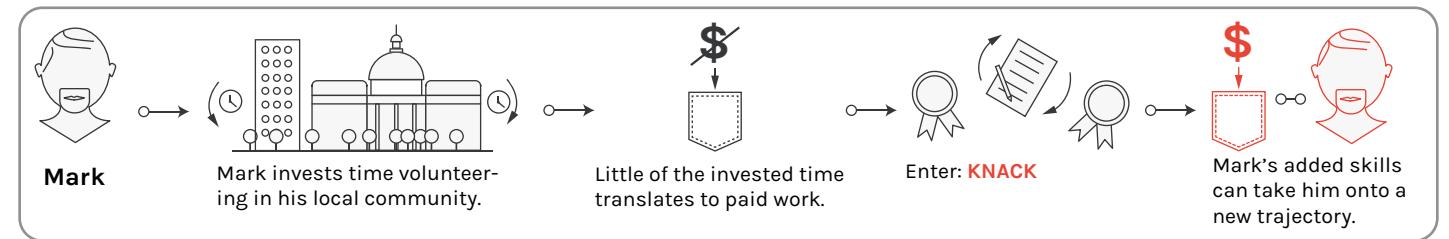
local economic development lab

In June 2016, I had the opportunity to work with LEDlab - a non-profit group in Vancouver that aims to create new economic opportunities for the inhabitants of Vancouver's Downtown Eastside (the city's most impoverished areas) - to create various new graphics for their annual research publication.

INCOME GENERATION CONTINUUM

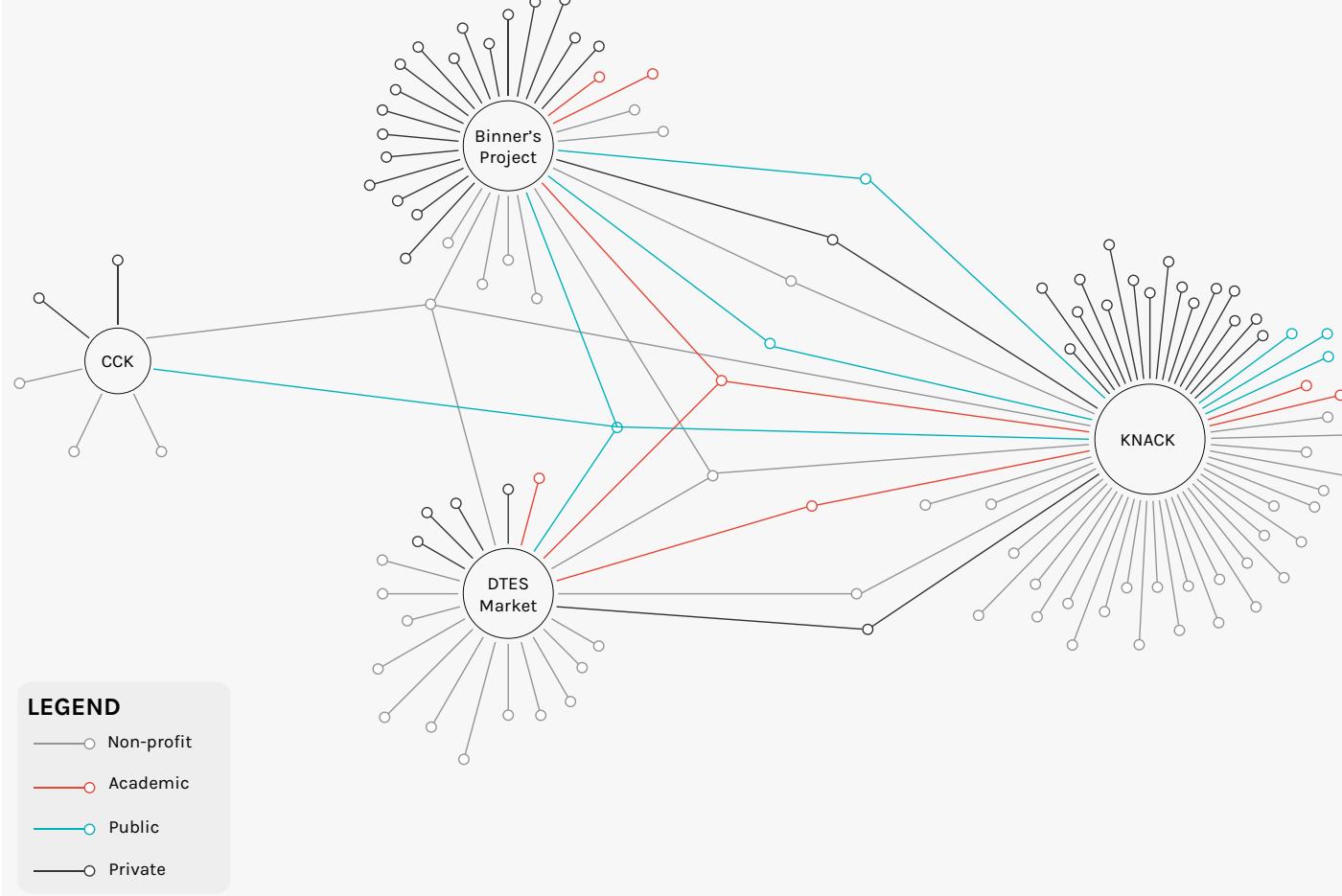


▲ Income Generation Continuum

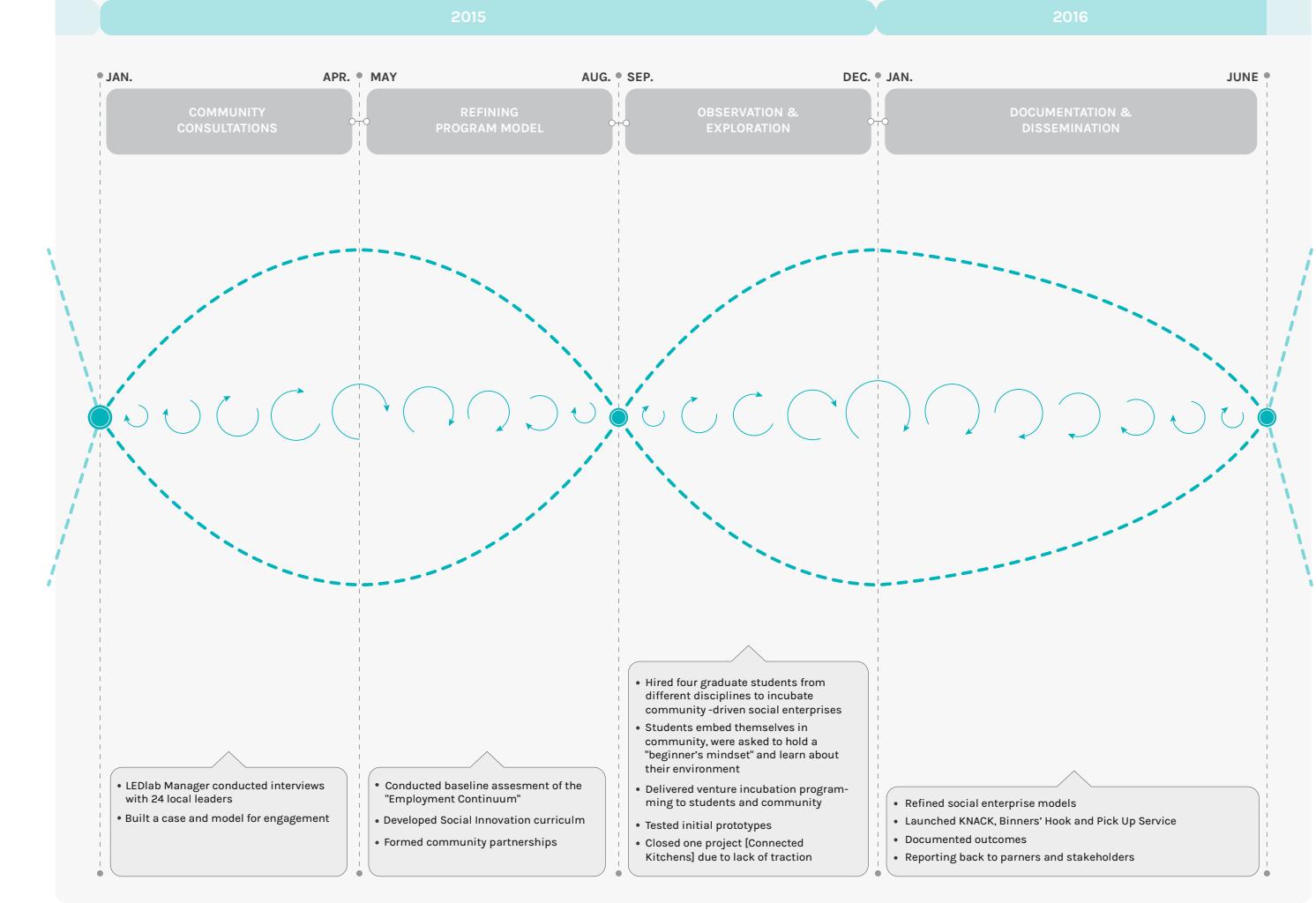


▲ Illustrated Income Generation Continuum: helps to explain how LEDlab's initiatives will impact the local community

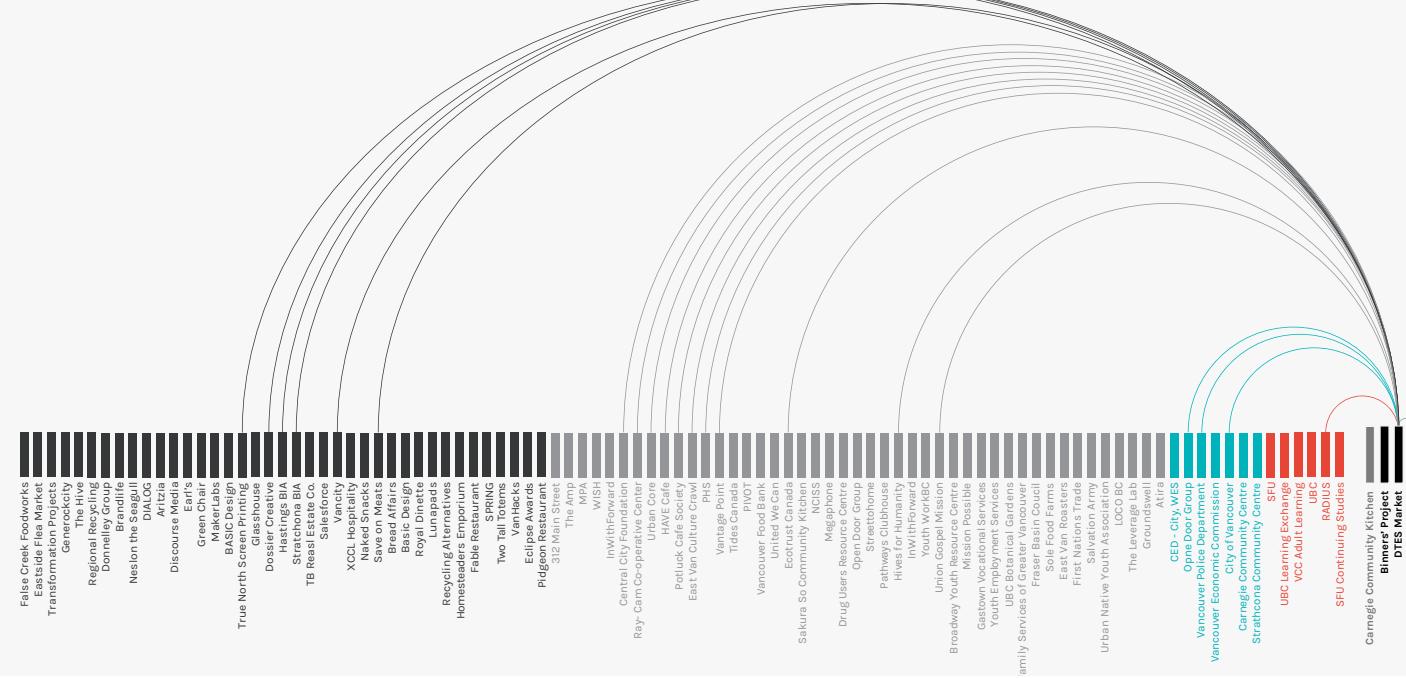
COMMUNITY NETWORKS



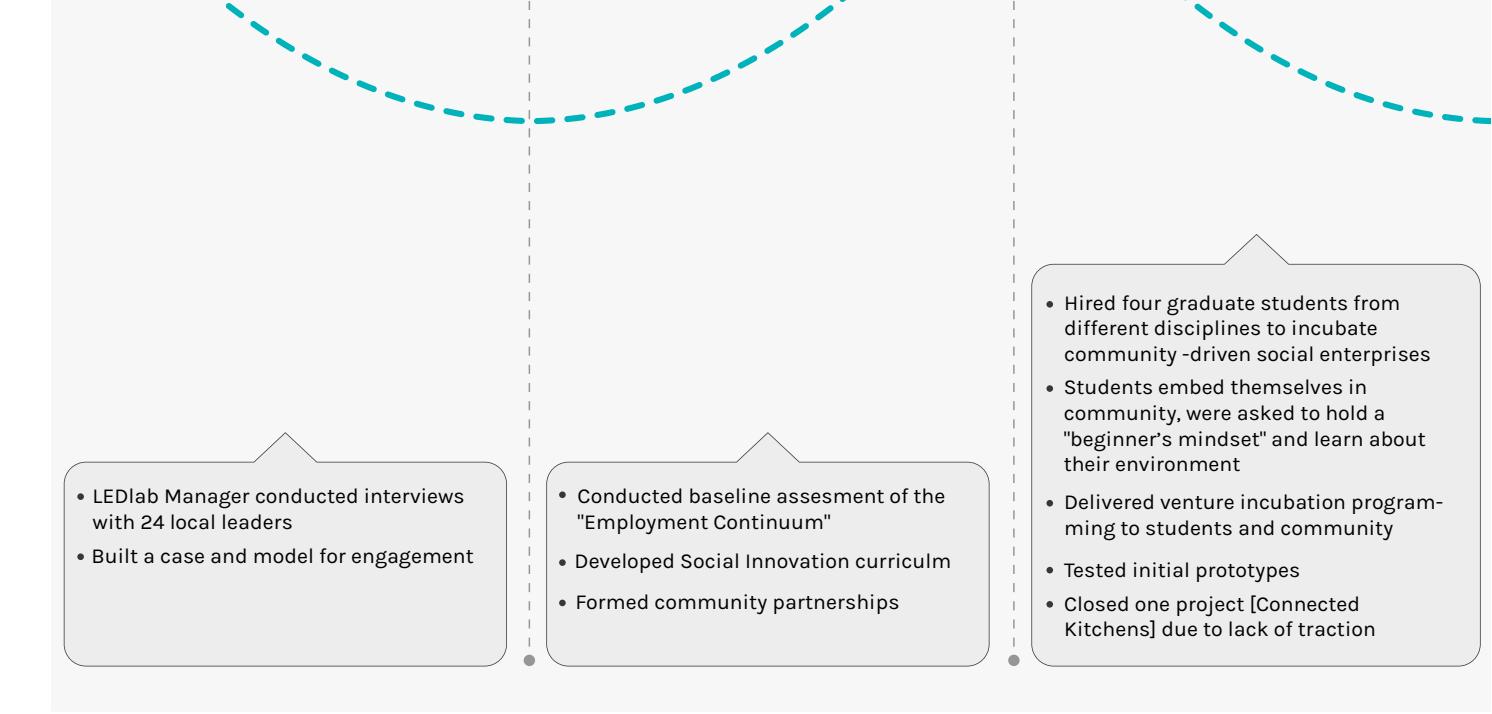
PROGRAM ARC



COMMUNITY NETWORKS - DOWNTOWN EASTSIDE MARKET



▲ [1] General Community Networks Map [2] Example of Detailed Community Networks Map [Downtown Eastside Market]



▲ [1] Program Arc [2] Detail of Program Arc



Colourful bird A [Bloedel Conservatory]



Colourful bird B [Bloedel Conservatory]



Colourful bird C [Bloedel Conservatory]



Colourful bird D [Bloedel Conservatory]



Tiny flowers, big detail [Bloedel Conservatory]



Life at the base of the Stawamus Chief, Squamish

photography

Thank you for your time!

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