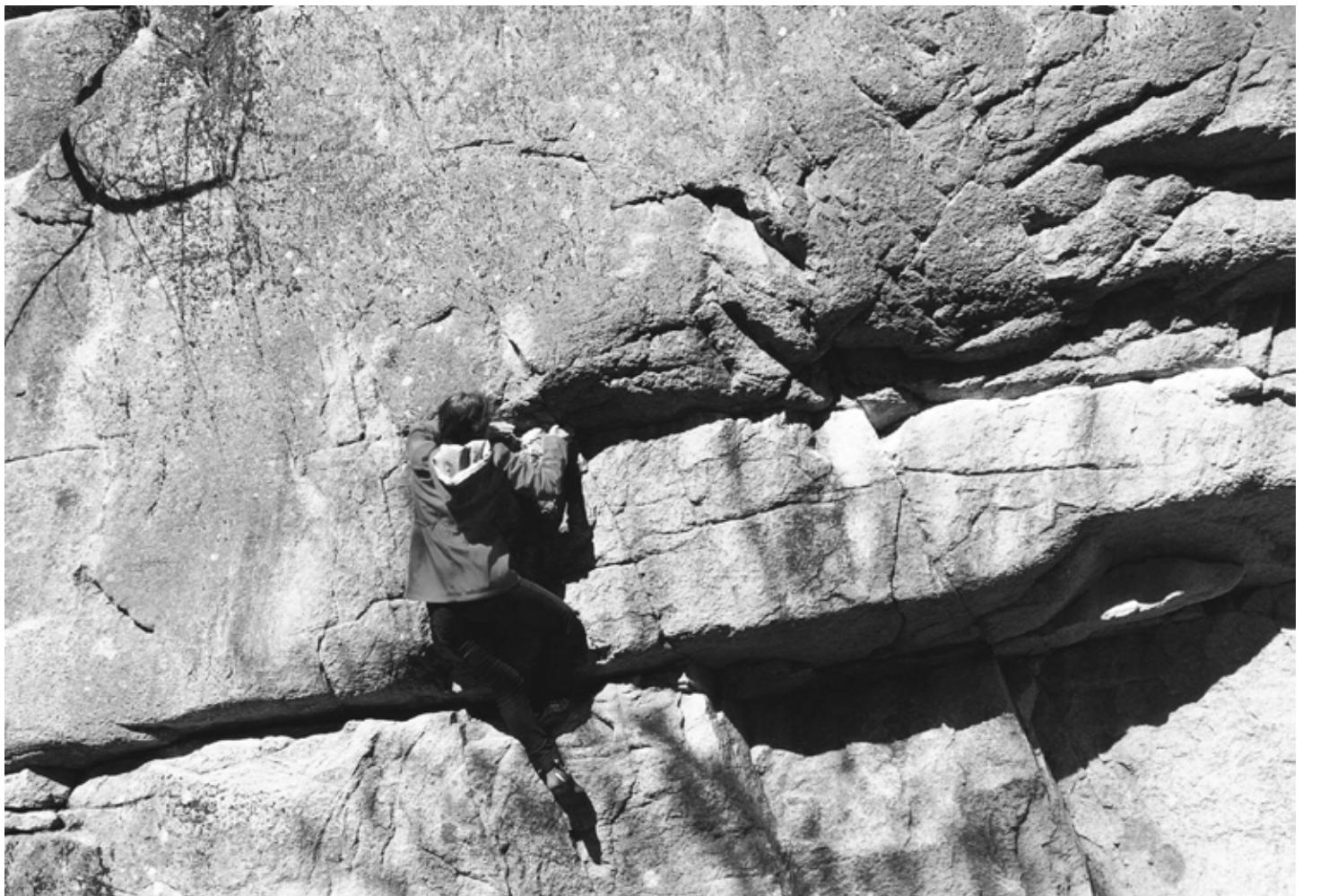


*year*

**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](mailto: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.	<b>Studio Senbel</b> <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.	<b>Muslim Food Bank &amp; Community Services</b> <i>Caseworker, Graphic Design &amp; General Volunteer</i>	Vancouver, CA
2017 Jan. - Aug.	<b>Urban Arts Architecture</b> <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.	<b>Upstream</b> <i>Graphic Design &amp; General Volunteer</i>	Remote & Saskatoon, CA
2017 April - Pres.	<b>BC Poverty Reduction Coalition - Action Team</b> <i>Member &amp; Volunteer</i>	Vancouver, CA
2016 June - Sept.	<b>ZAS Architecture &amp; Interiors</b> <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	<b>LEDLab</b> <i>Graphic Design Volunteer</i>	Vancouver, CA
2014 Sept. - Dec.	<b>Proscenium Architecture &amp; Interiors</b> <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	<b>Hughes Condon Marler Architects</b> <i>Design Intern</i>	Vancouver, CA
Various graphics, design development/contract administration drawings, RFPs		
<b>EDUCATION</b>		
2012 - 2018 Sept. - Aug.	<b>University of Waterloo School of Architecture</b> <i>Honours Bachelor of Architectural Studies, Co-op</i>	Cambridge, CA
2015	<b>Gap Year</b>	

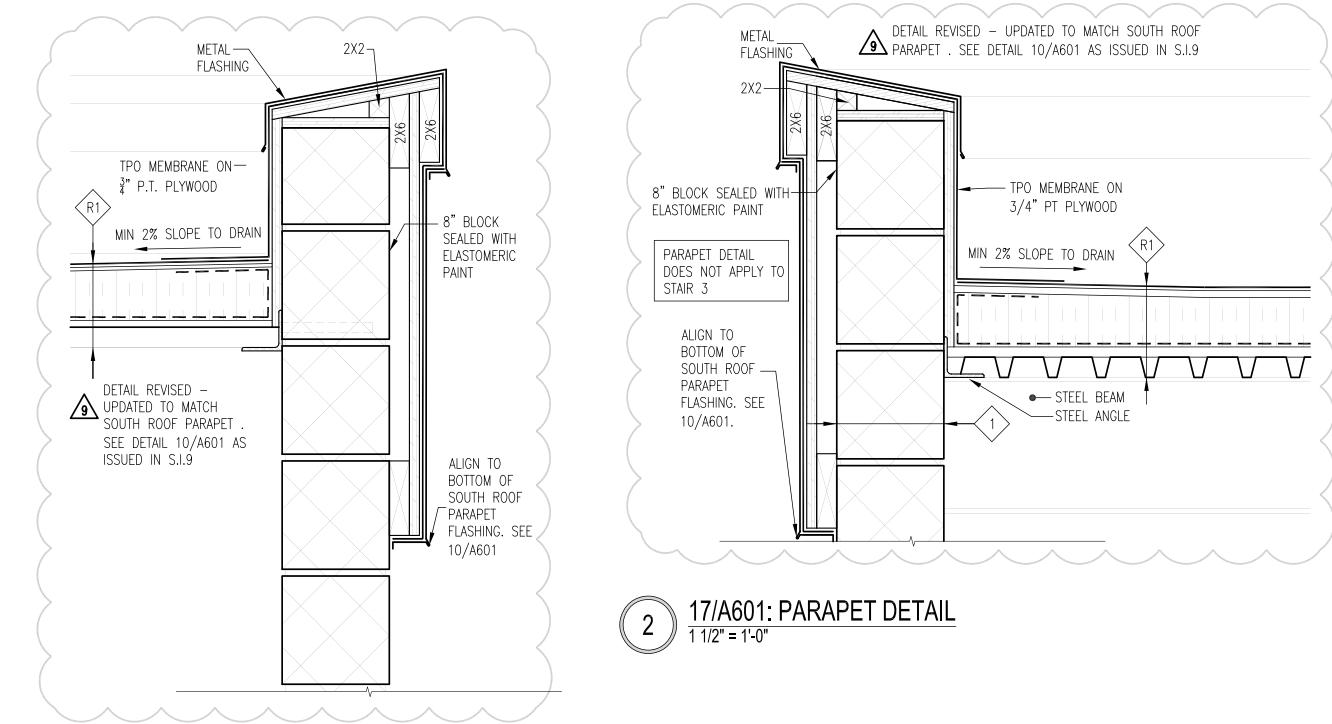
### SKILLSETS

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

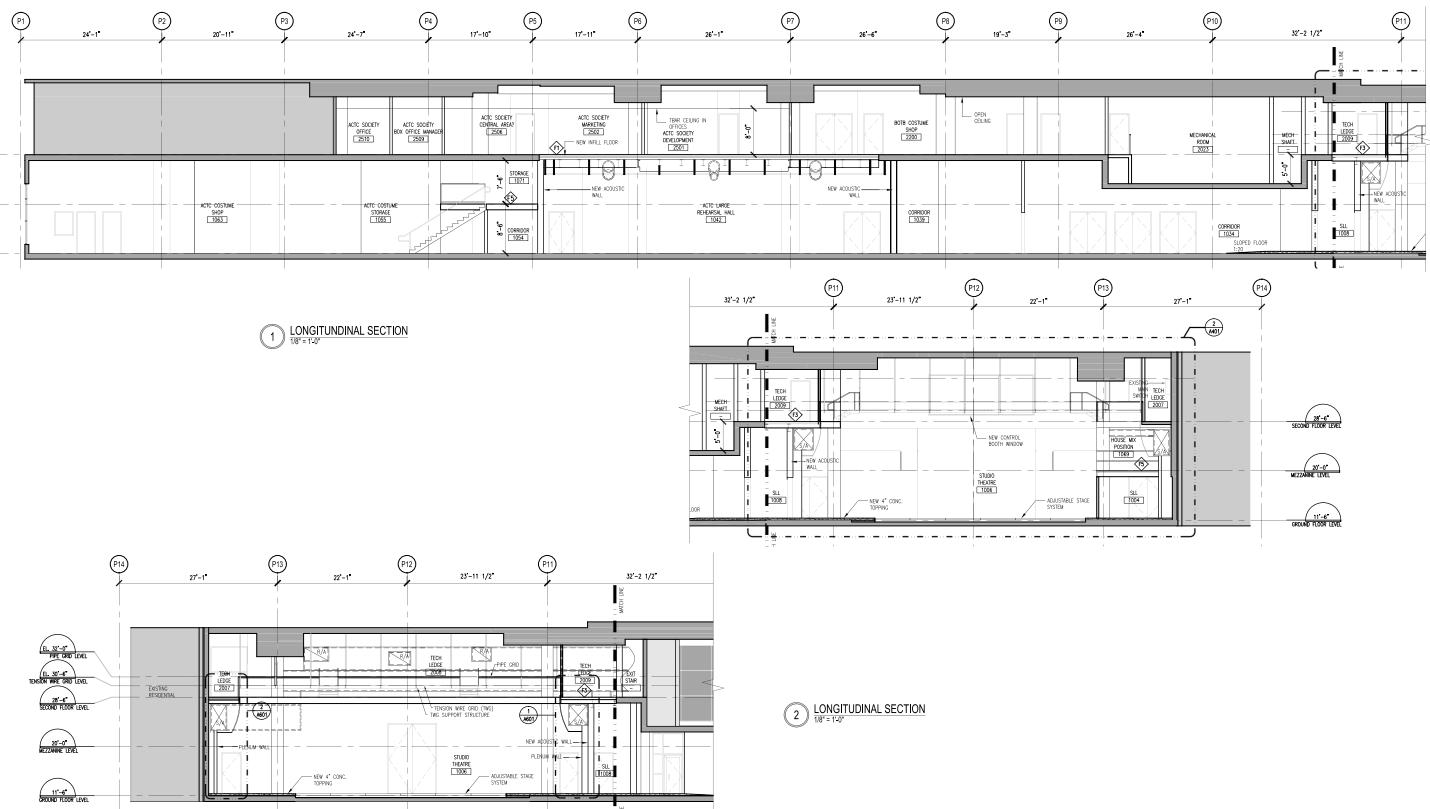
## PROFESSIONAL WORK

## 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"

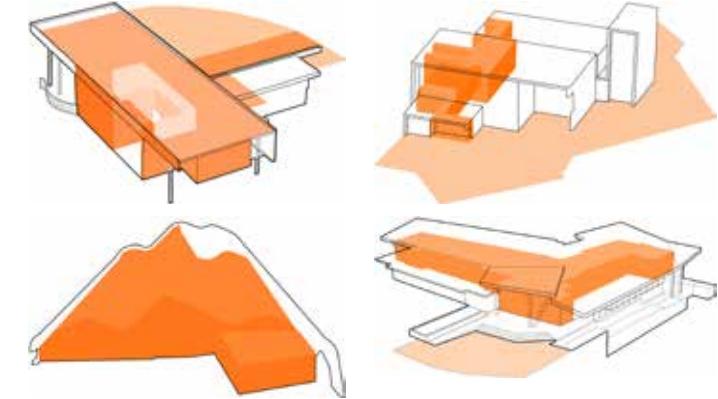
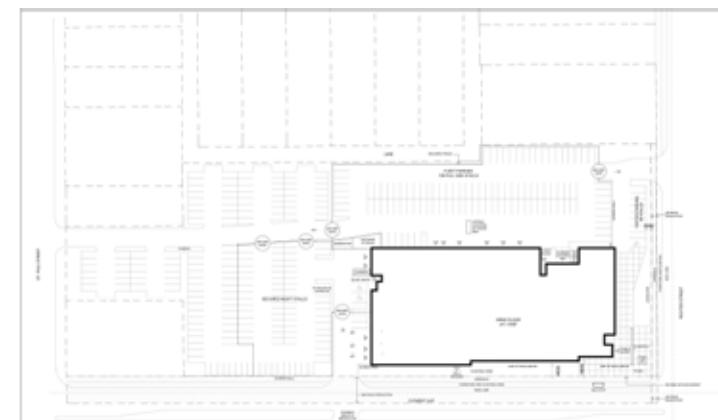


► Roofing details for a large storage building | Set of cross-sections through theatre space for Arts Club Theatre

## PROFESSIONAL WORK

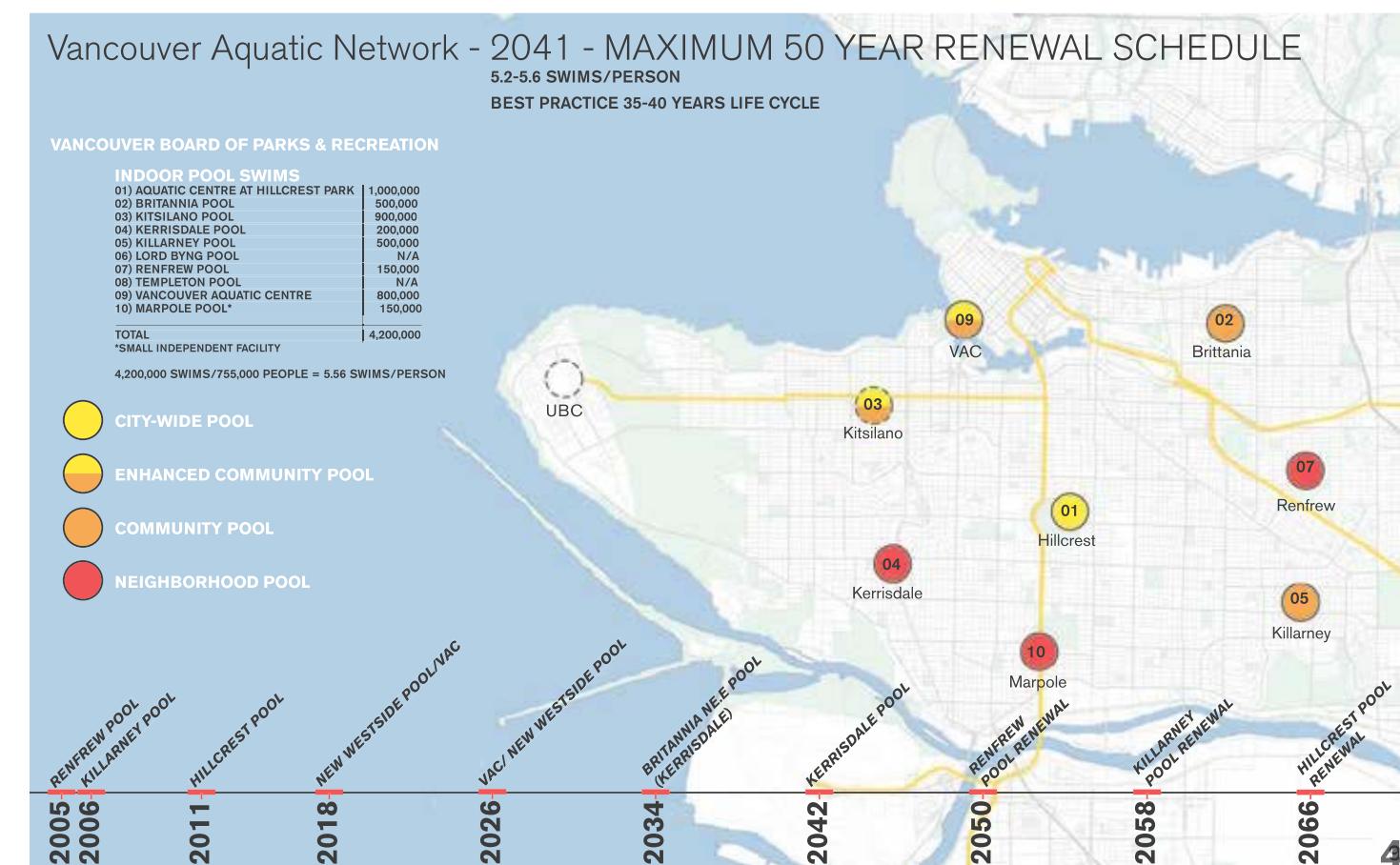
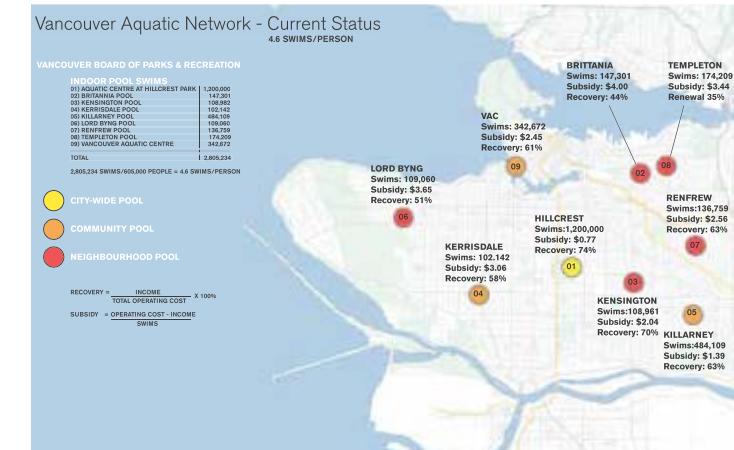
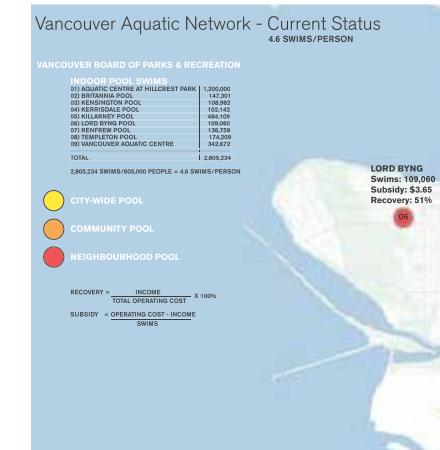
### hughes condon marler architects

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.



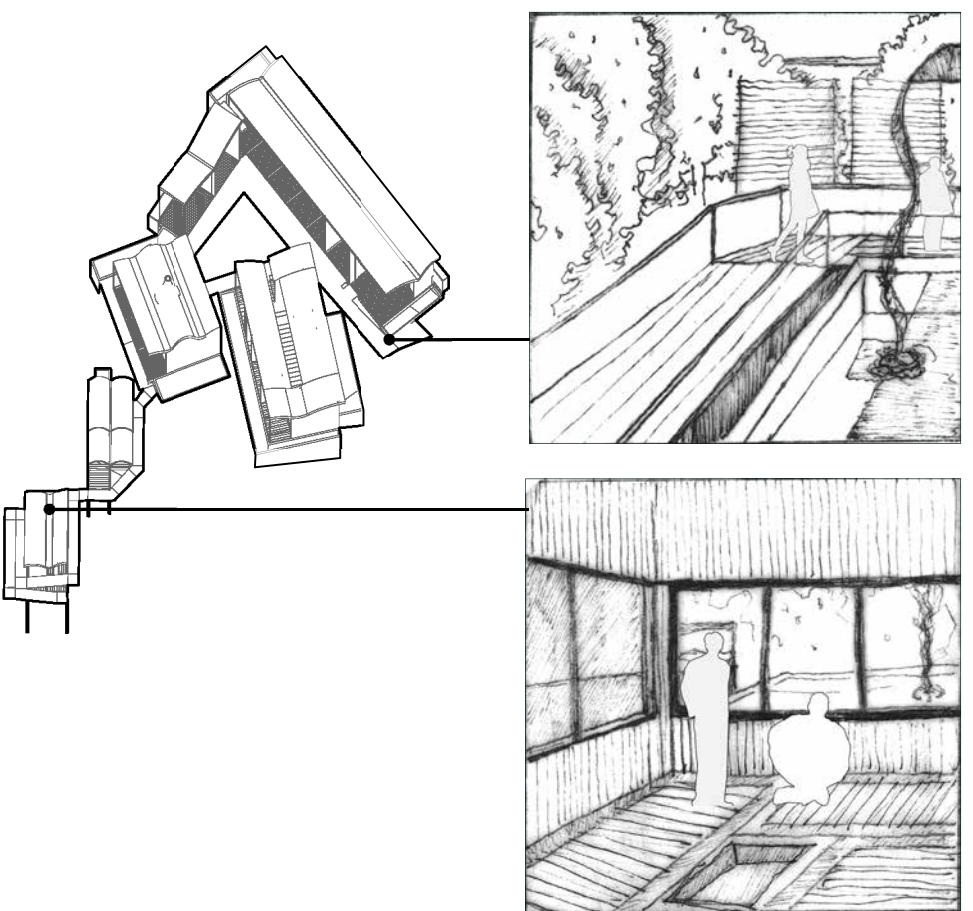
▲ Plan drawing for a civic building in Kelowna | Set of diagrams drawn for the HCMA book.

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



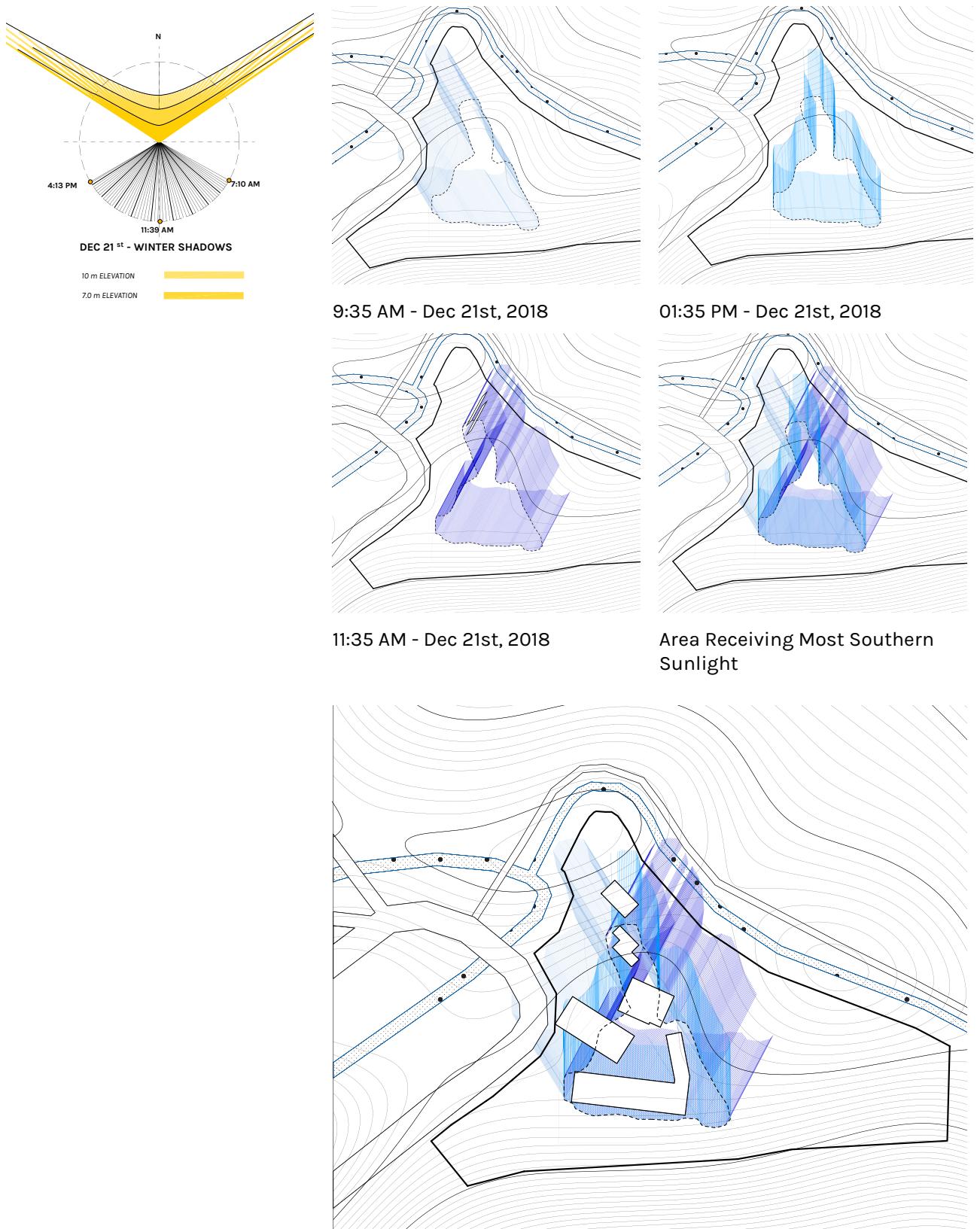
**unsui**

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.



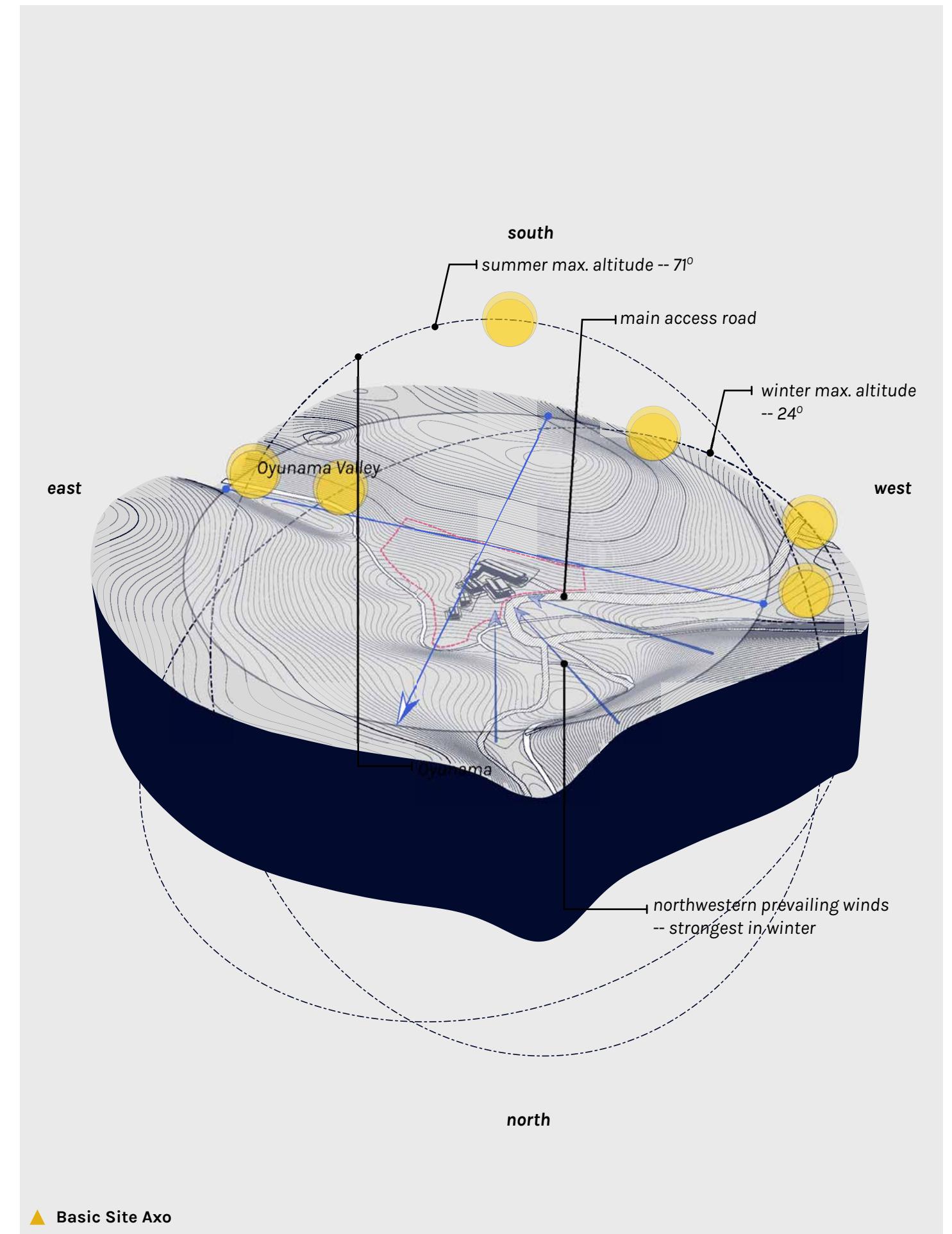
PRECEDENTS

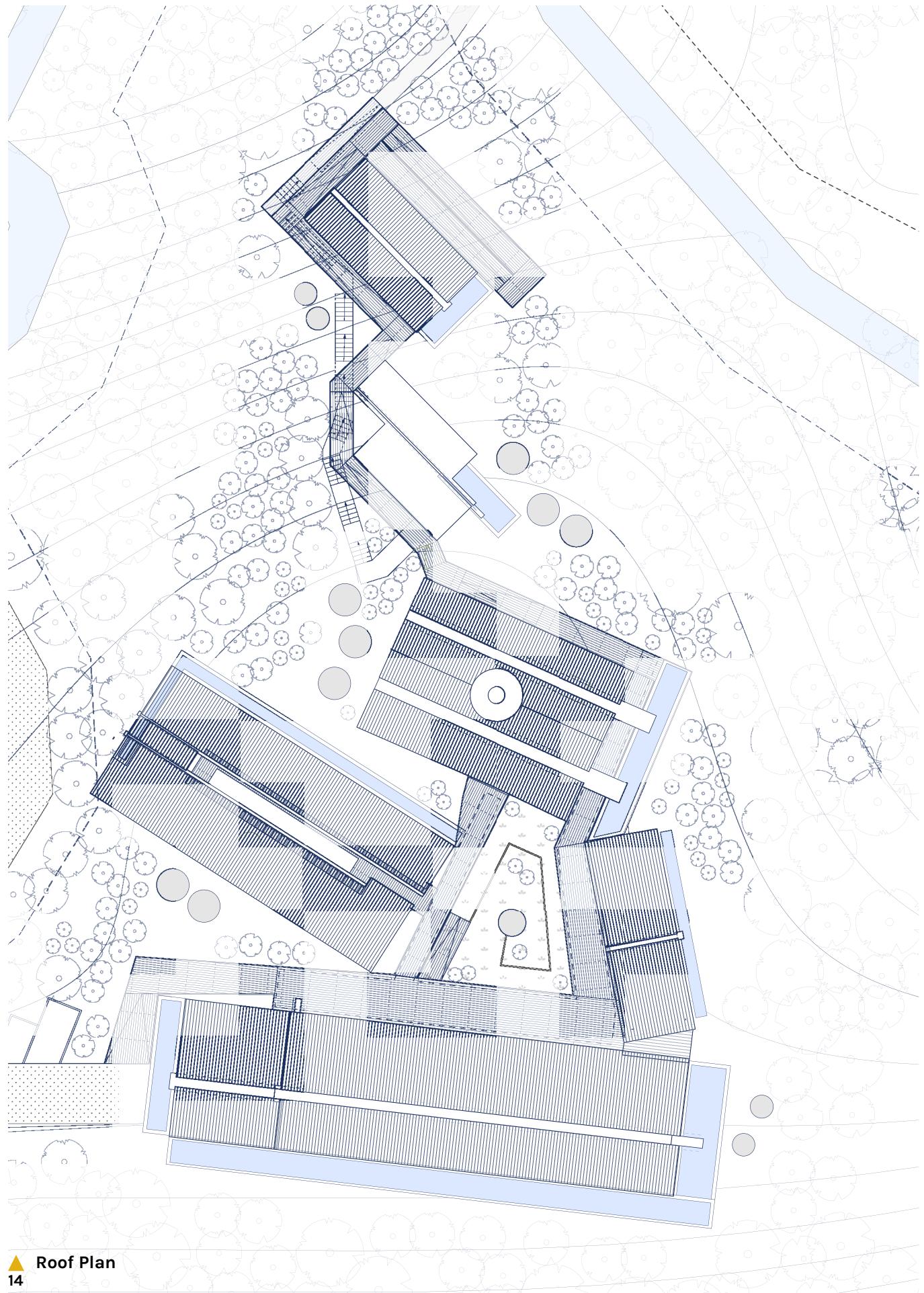




#### Placing of Massing

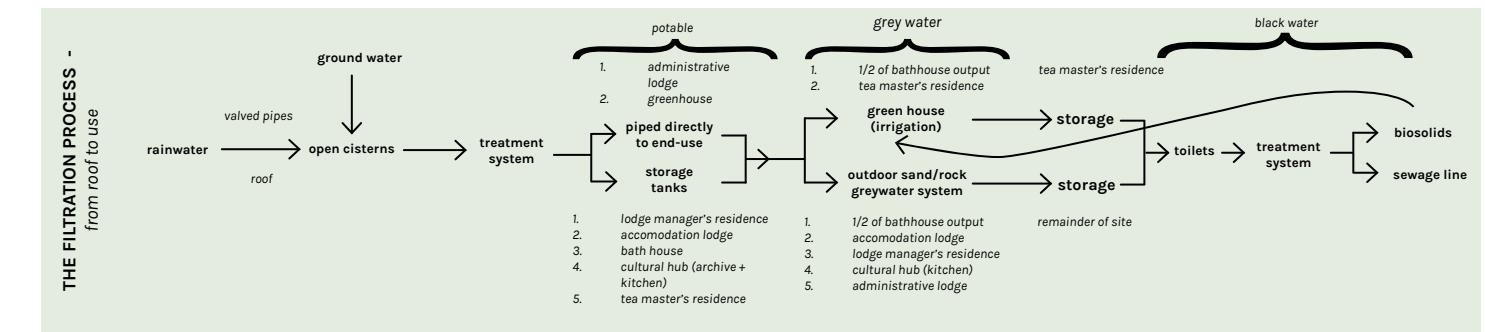
One of the key strategies here is to build as much of the complex as possible in the space given by the existing parking lot. The other is that the bath-house must be given central placement in the area that receives the most consistent sunlight in winter time (bath-house is shown by the black circle) 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.



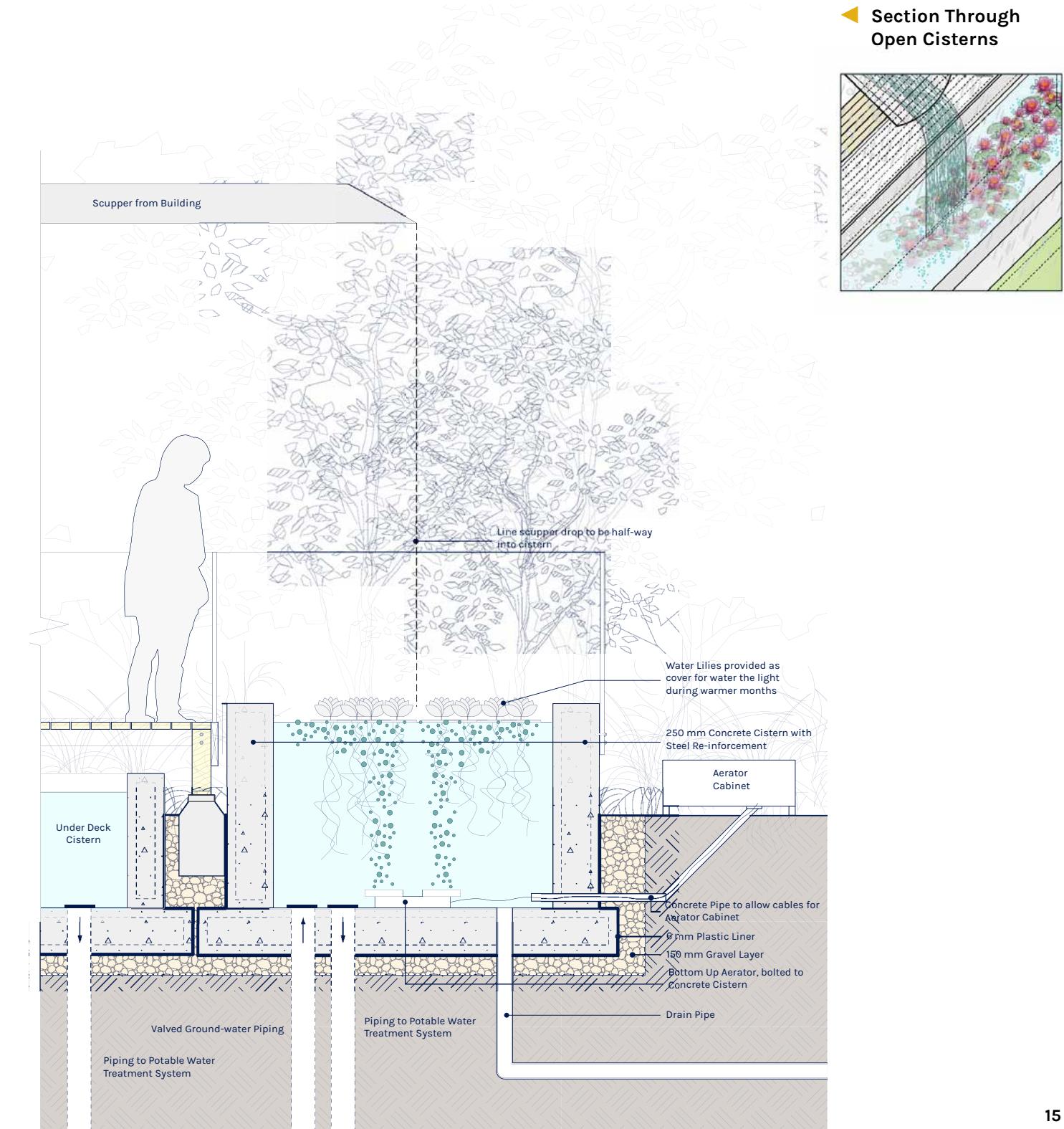


▲ Roof Plan

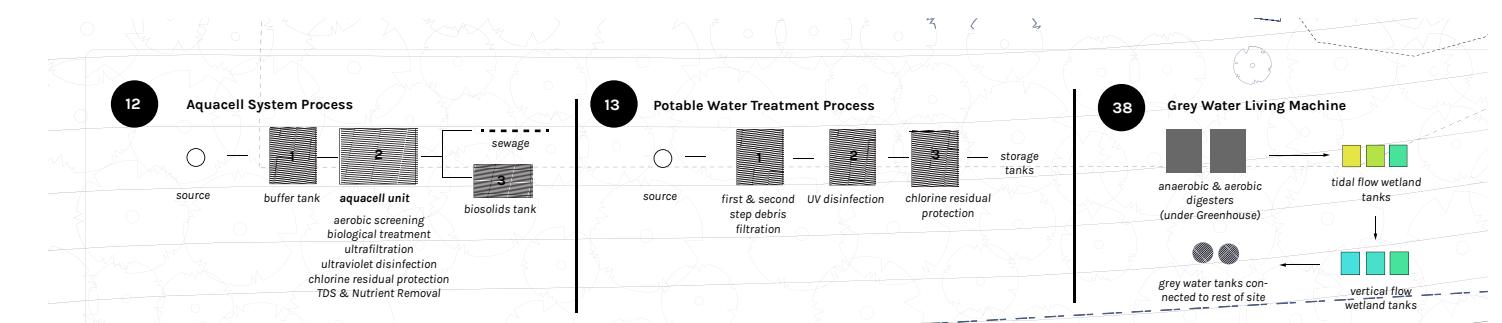
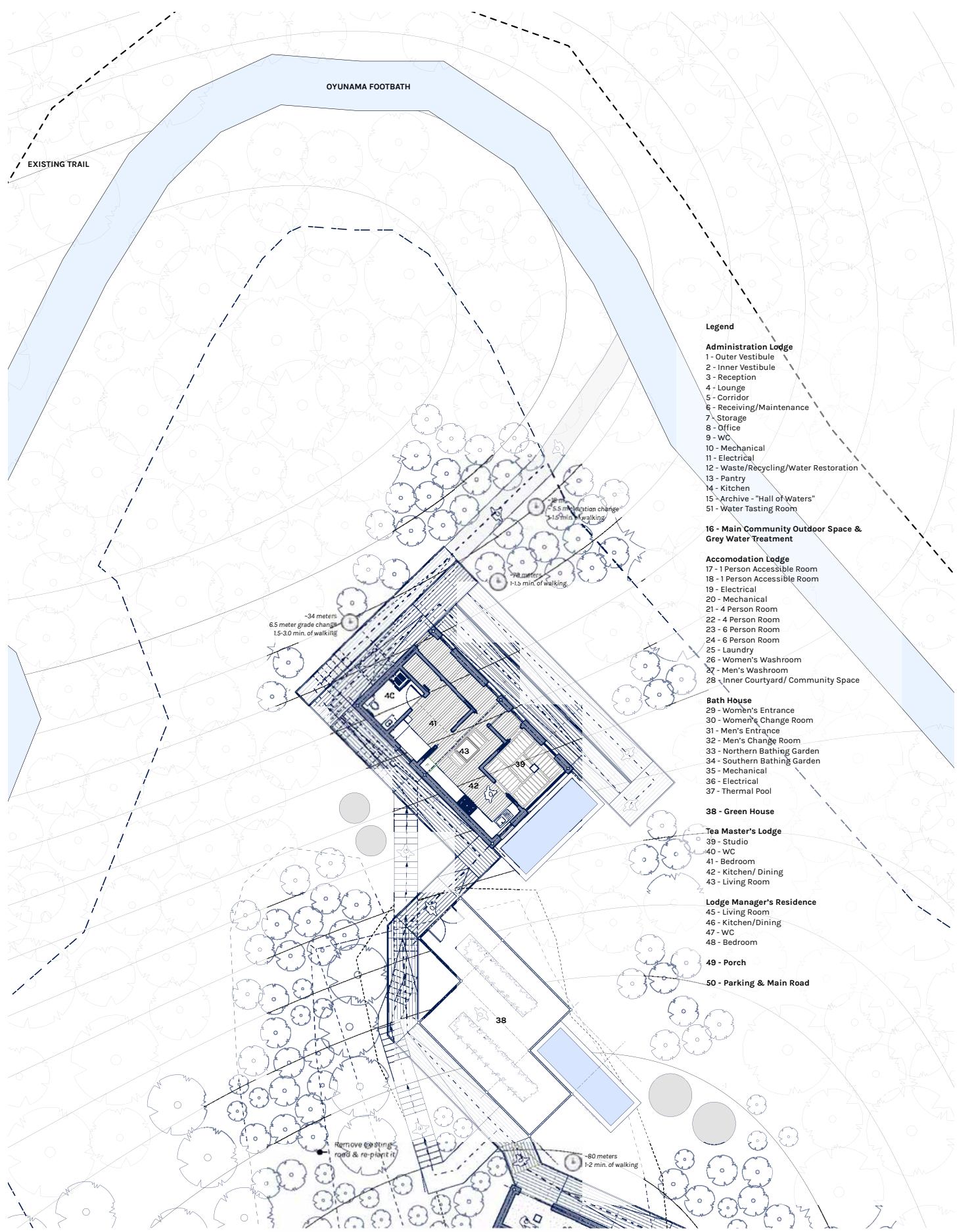
14



◀ Section Through Open Cisterns



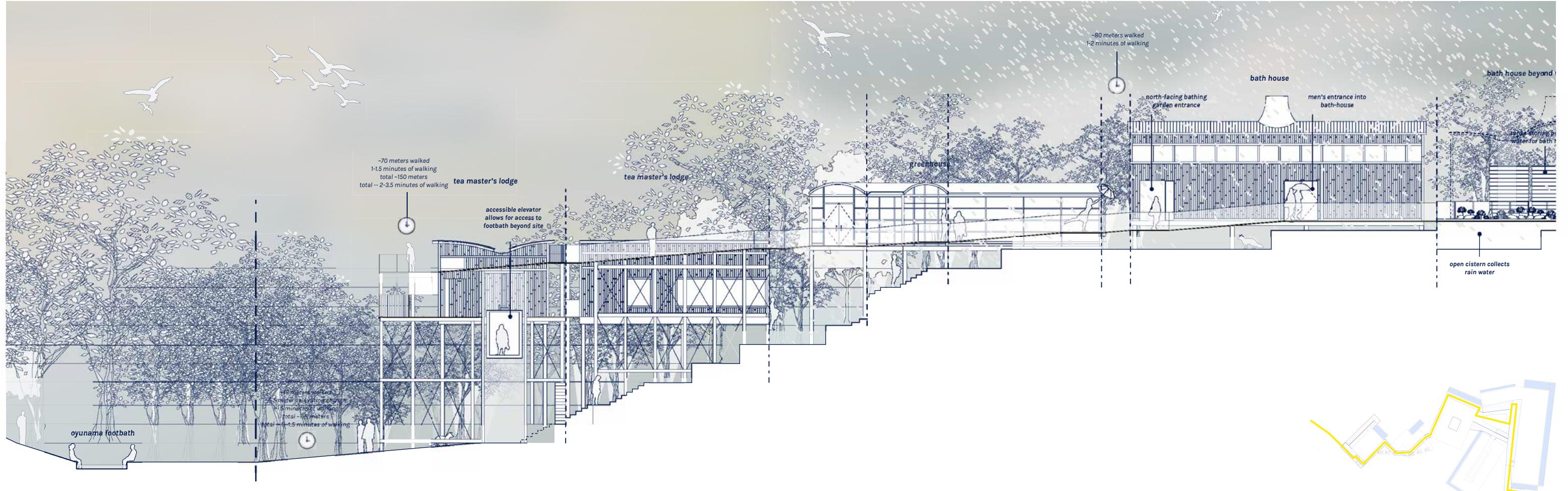
15



**▲ Explanation of Systems**

**▼ Ground Floor Plan - Cont'd**



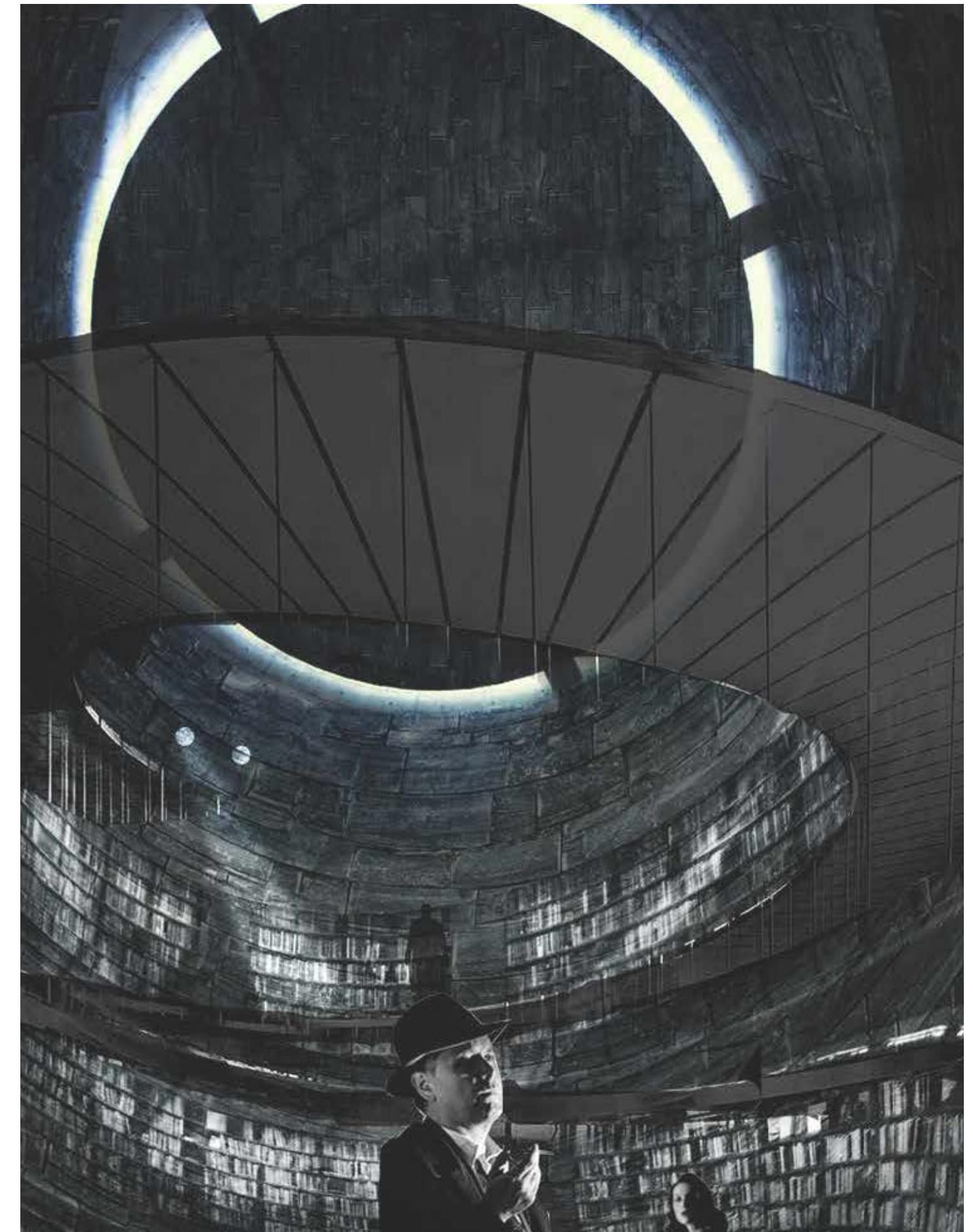


### ▲ Key Section

## the shadow library

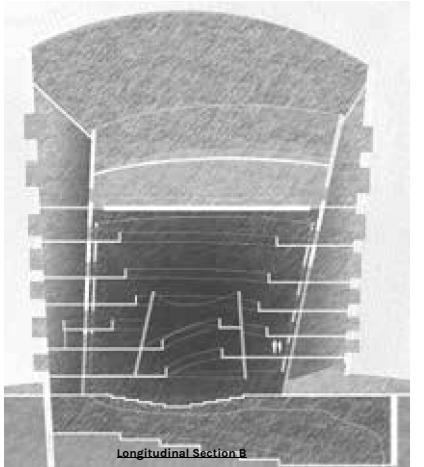
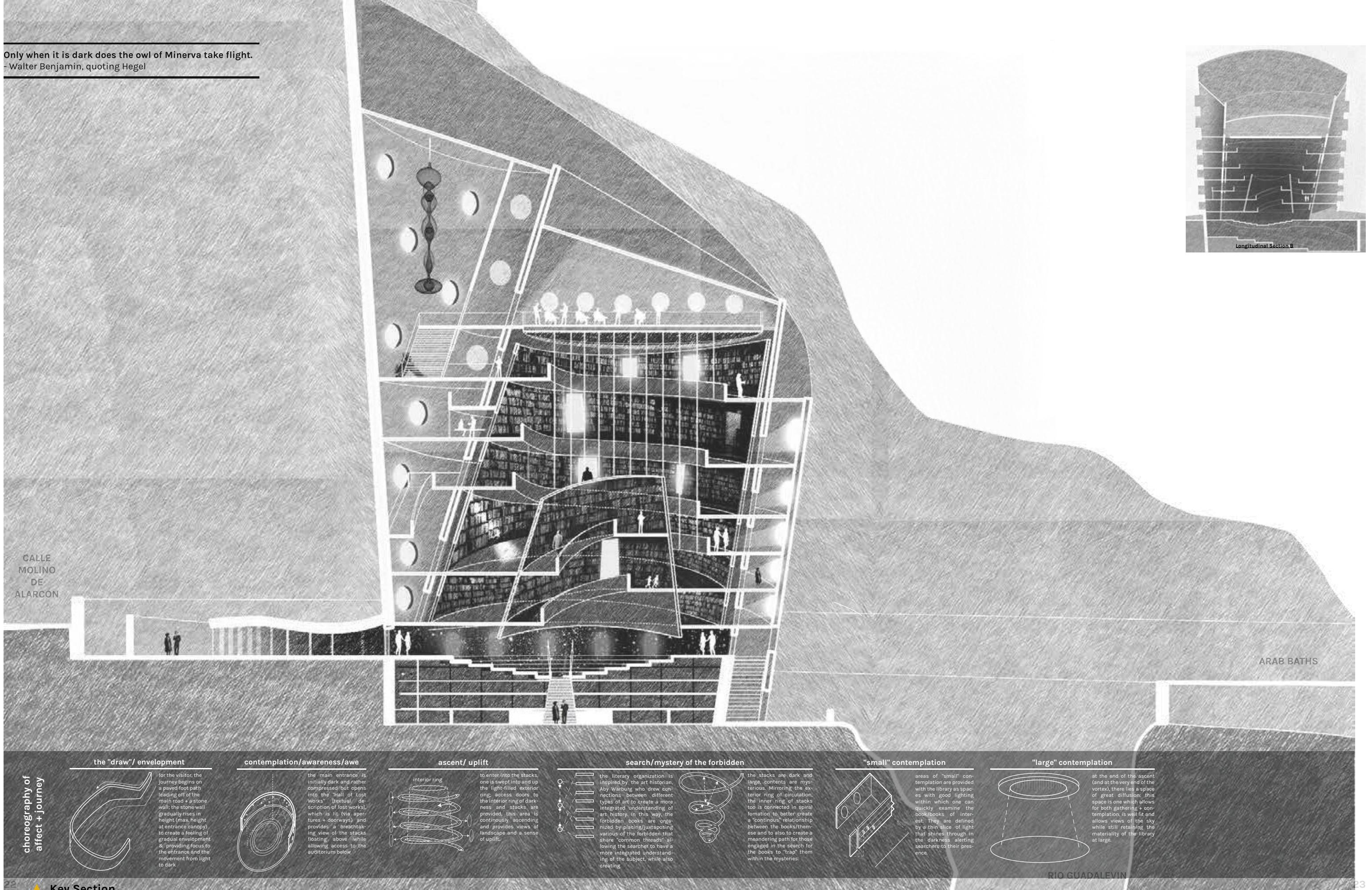
A strange phenomenon is taking place: a vortex is born underwater at the death of a wave. Water - to follow Bachelard - is an element that "always flows" and is in "constant flux", and vortices have long been a symbol of transformation within the realm of the human psyche. These transformations are often 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.

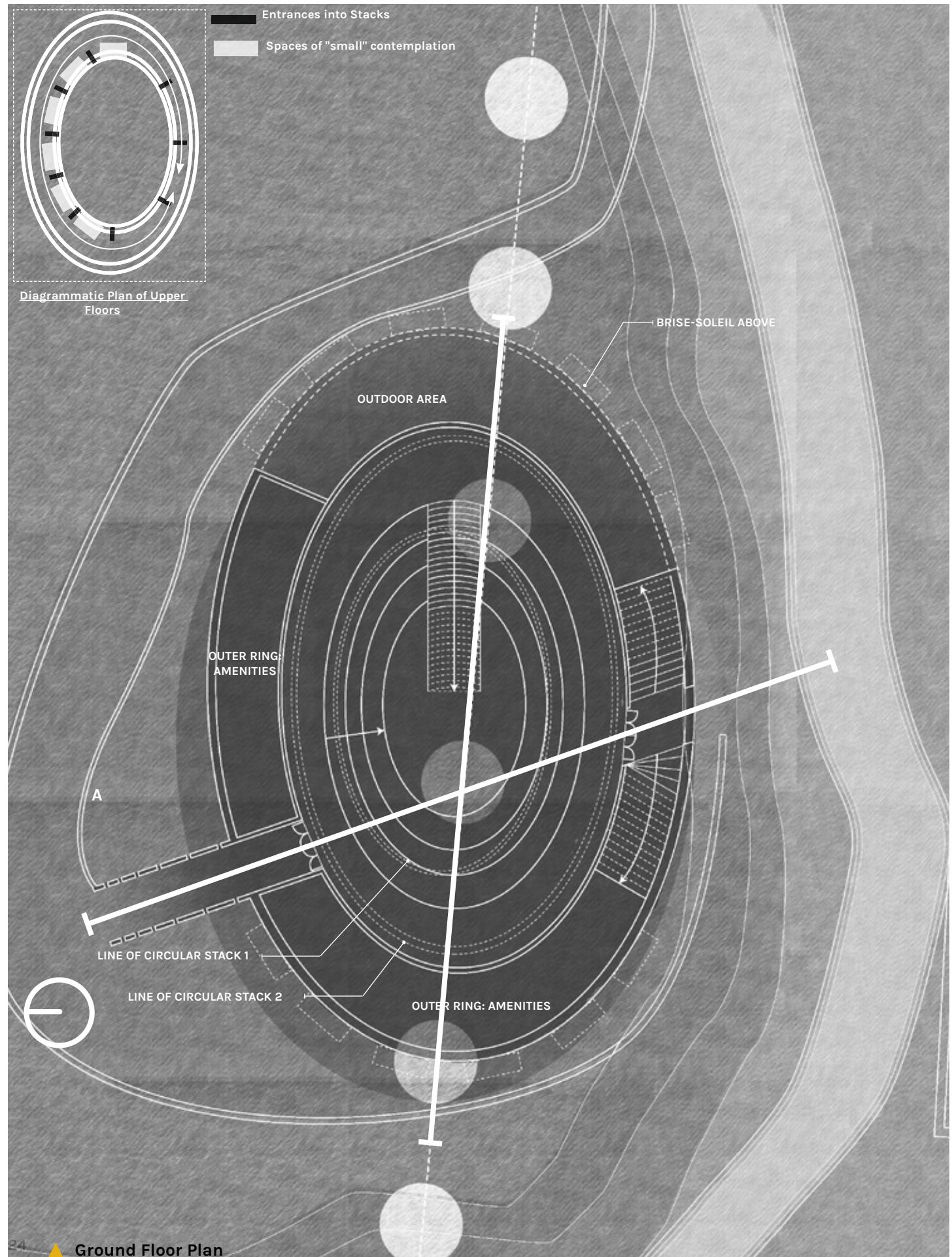
Although it is traditionally assumed that a library is a neutral space that is occupied democratically by both people and content - this is rarely the case. Every library practices some form of exclusive behaviour and due to pressures of (mostly) politics and (to a lesser degree) quality, every library 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.**



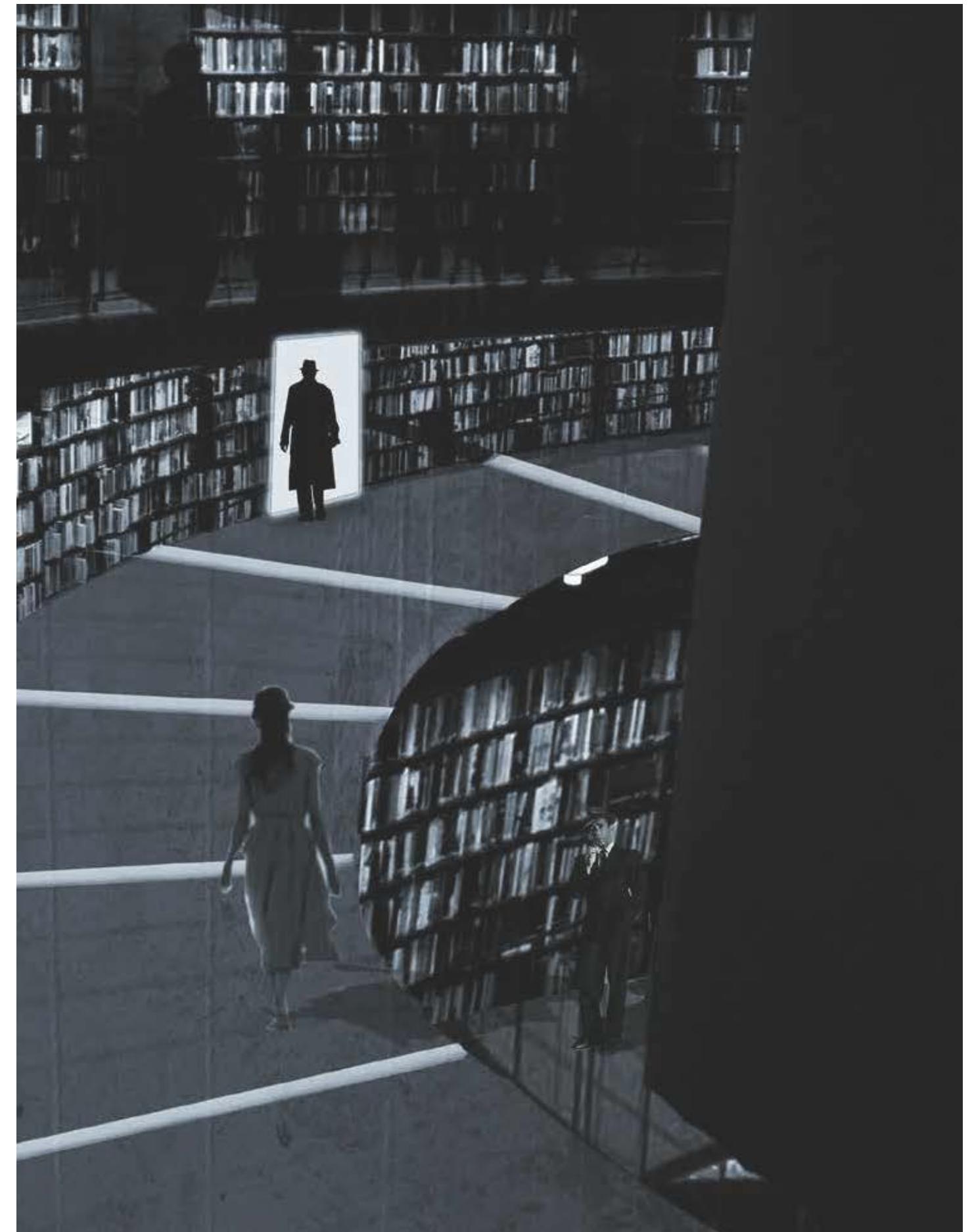
▲ View of Stacks Above

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





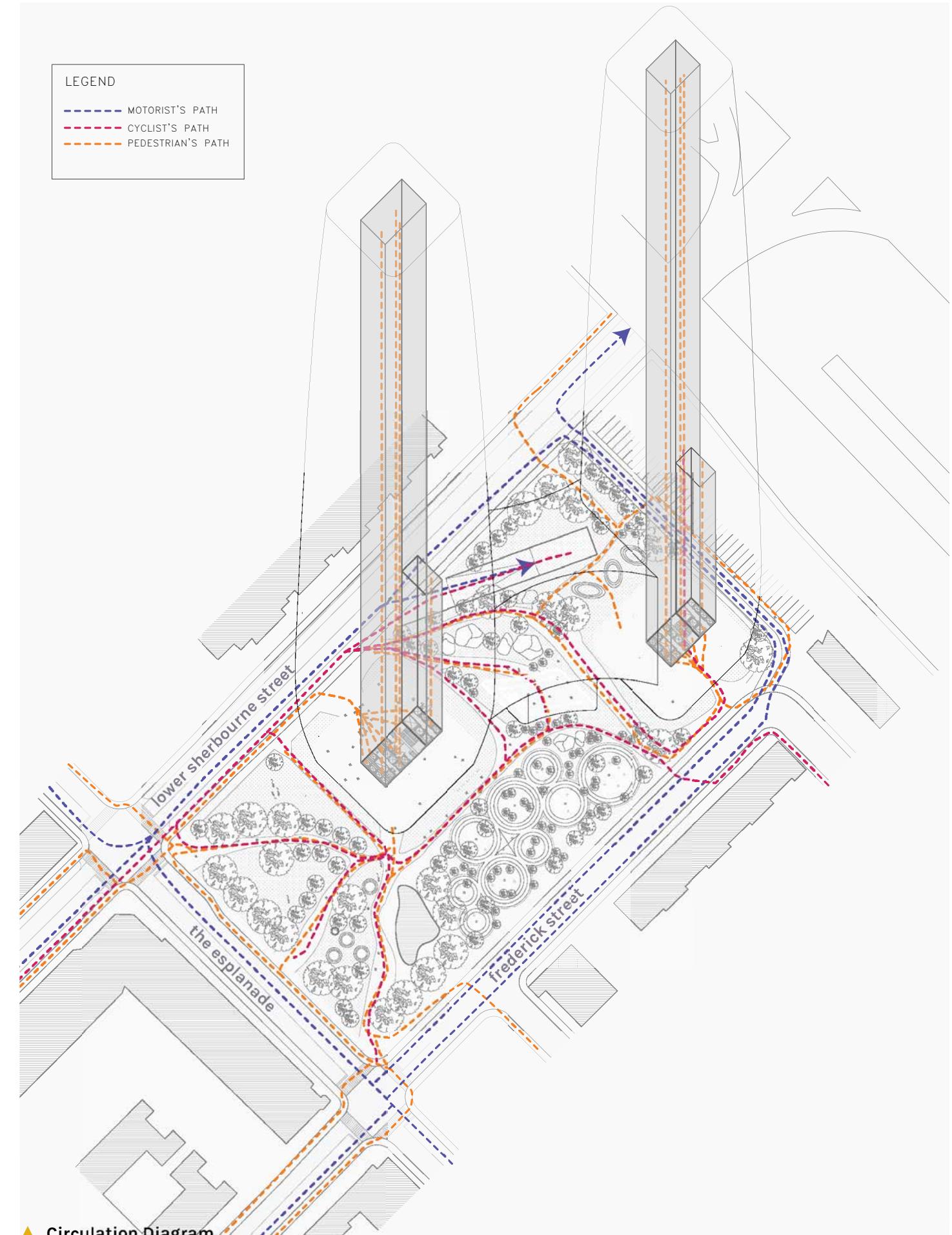
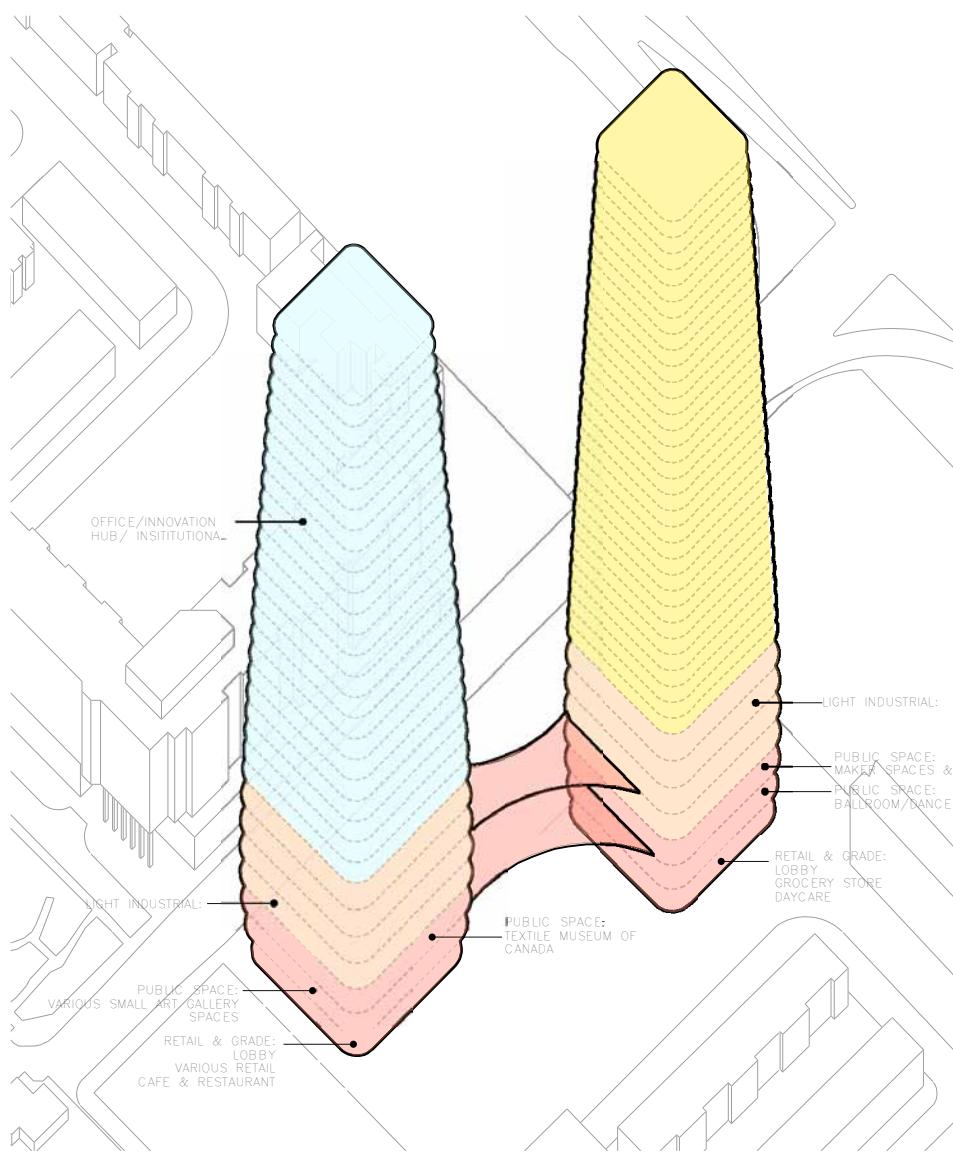
24 ▲ Ground Floor Plan



25

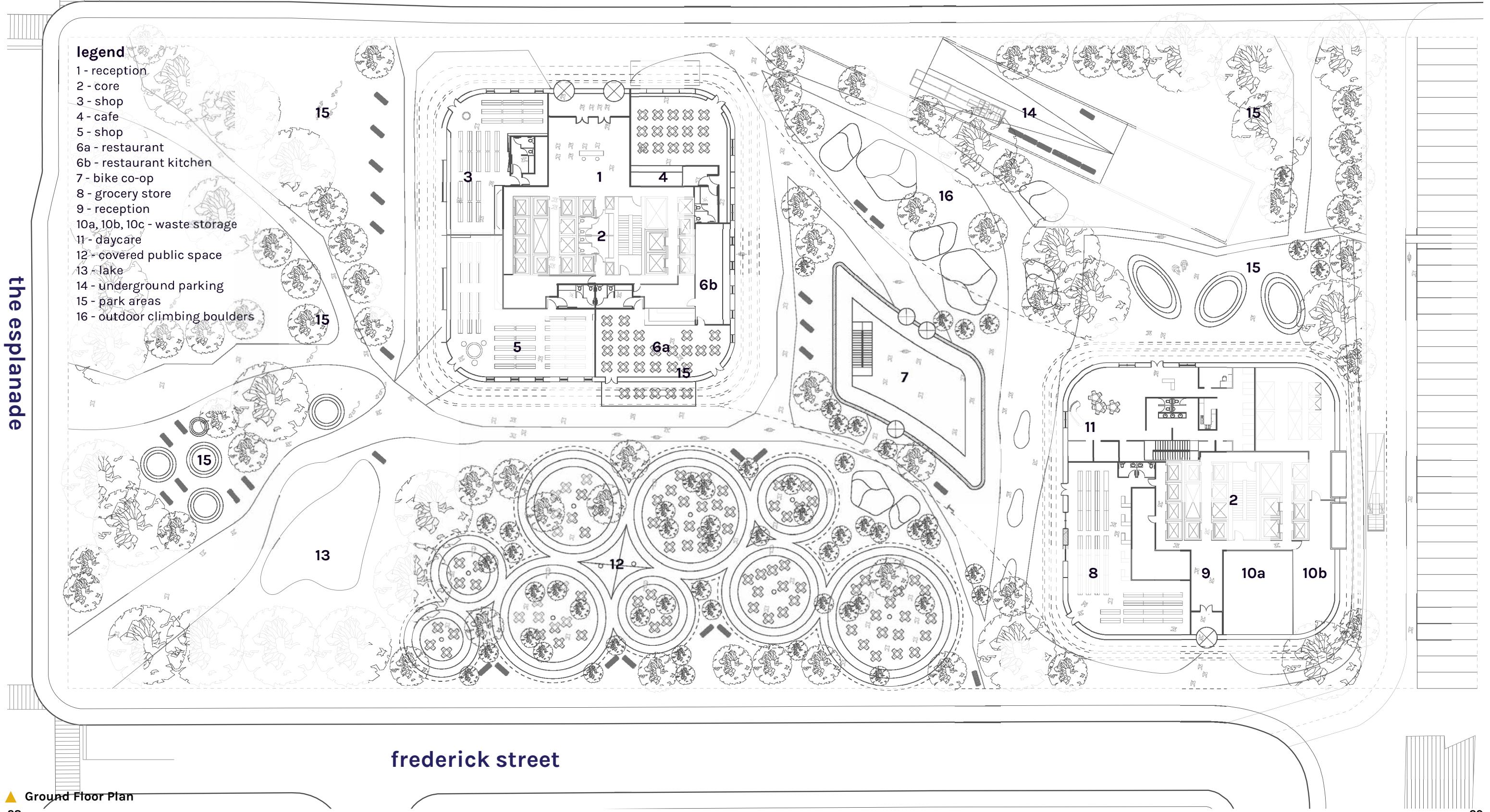
## public space and hyperdensity

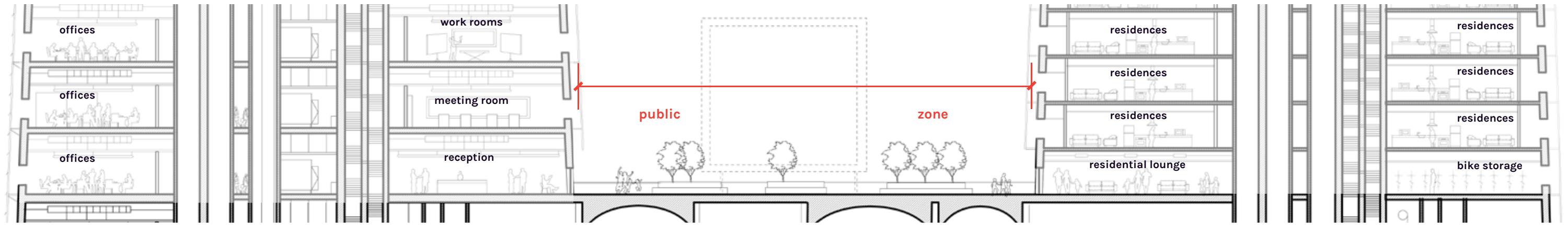
Toronto's new obsession with high-rise condominiums has come with a price - with the large number of high-rise condominiums being built, one finds that adequate park/green space/ public space is not available in comparison to the built forms. This project attempts to combine a high-density (FAR 8) building 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.



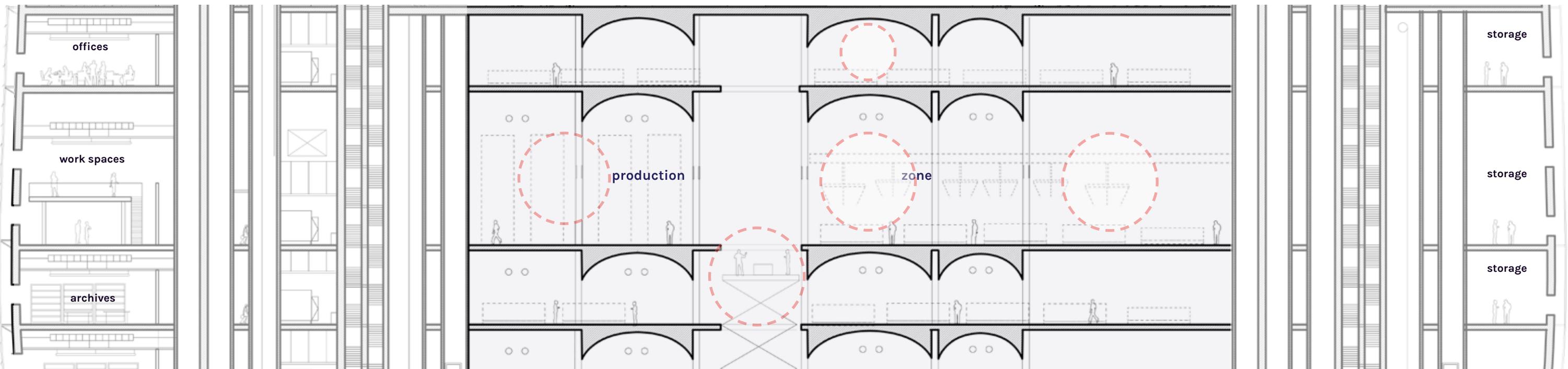
lower sherbourne street

gardiner highway beyond →

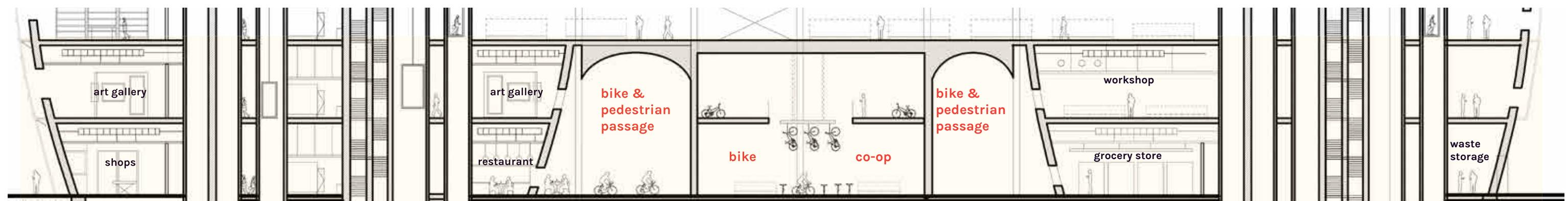




▲ Detailed Section: office spaces & residential areas which merge at a public zone for use by both office workers and residents



▲ 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

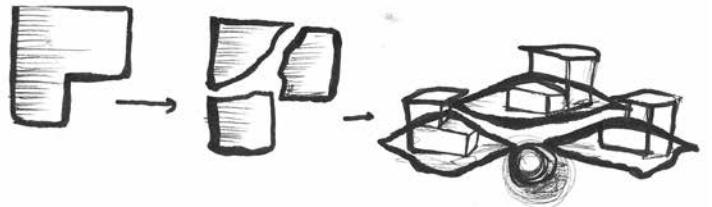


▲ Detailed Section: the public level here extends from the ground level to the second level with shops, restaurant, art galleries, workshops, grocery store, and waste storage.

## 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



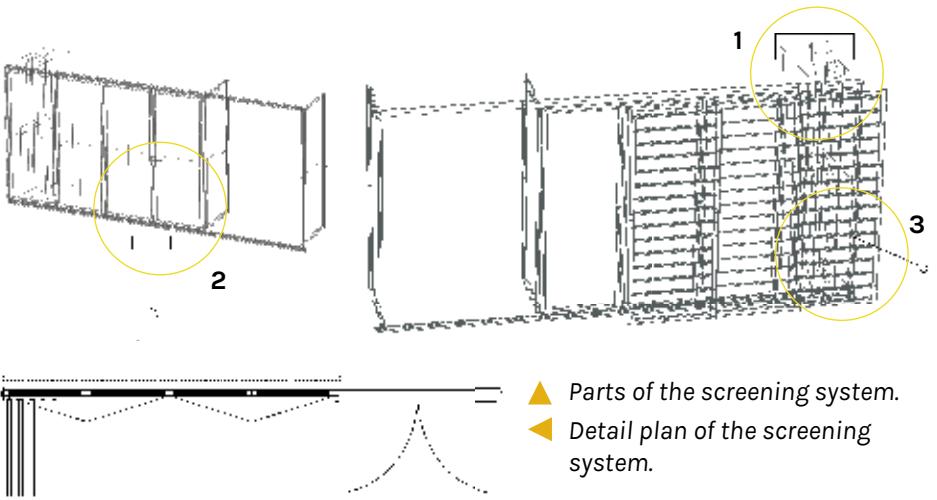
▲ West elevation of buildings

### 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.



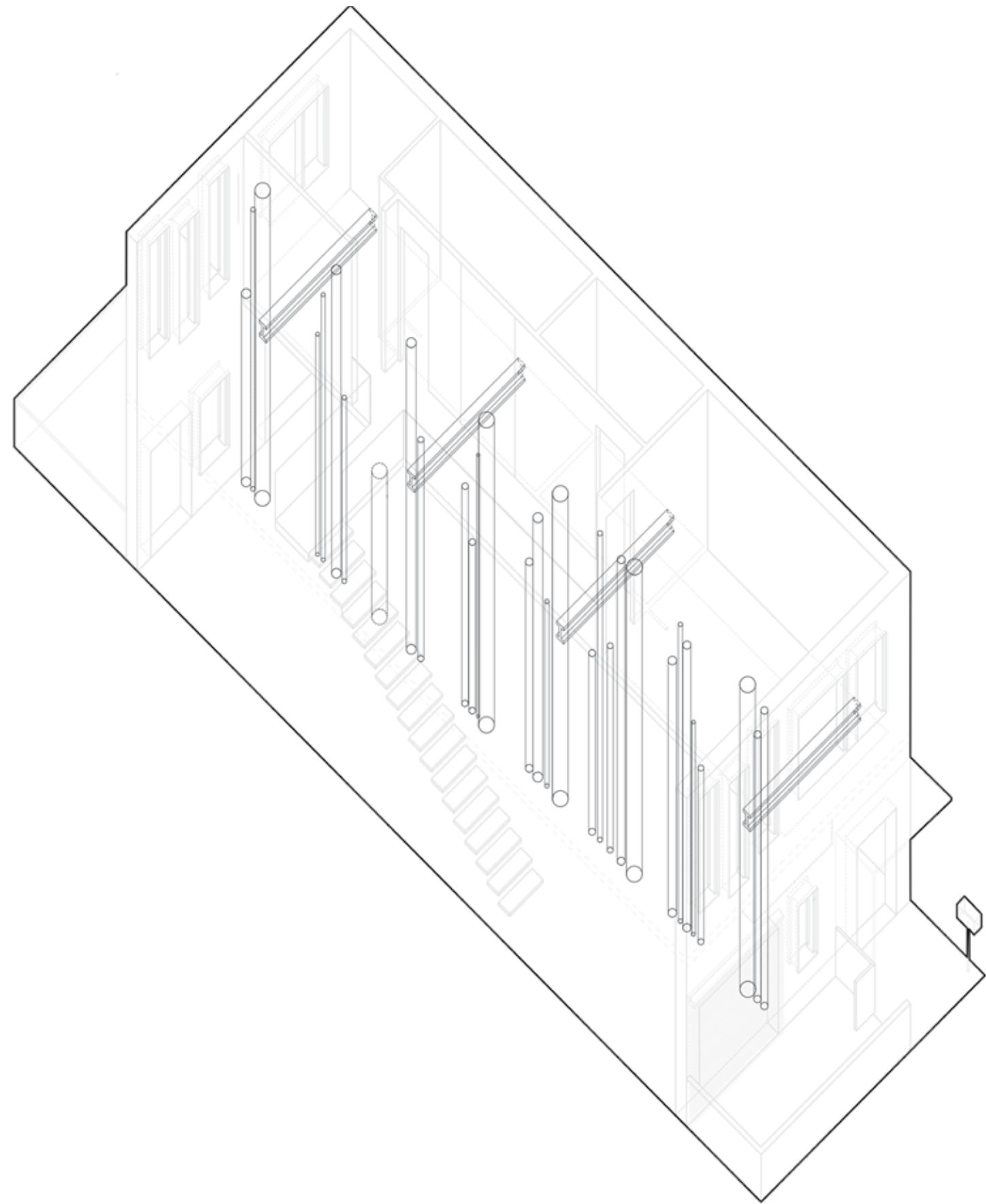
▲ Model of screening system



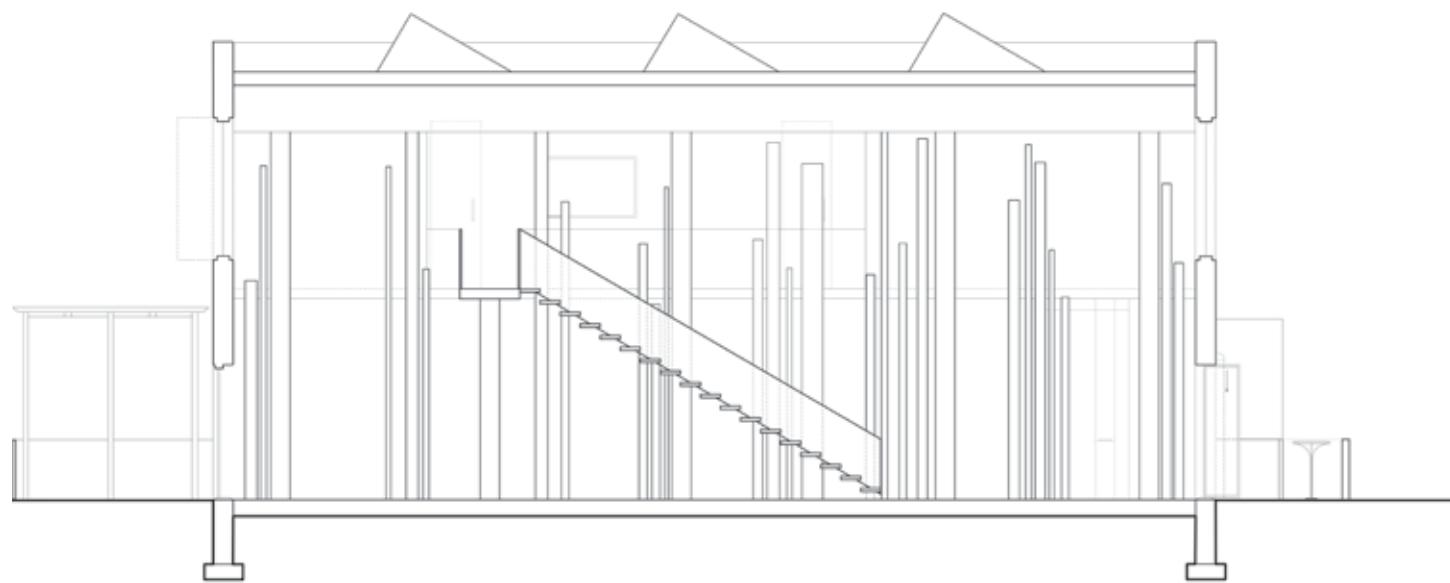
▲ Model of South elevations

## columnar forests

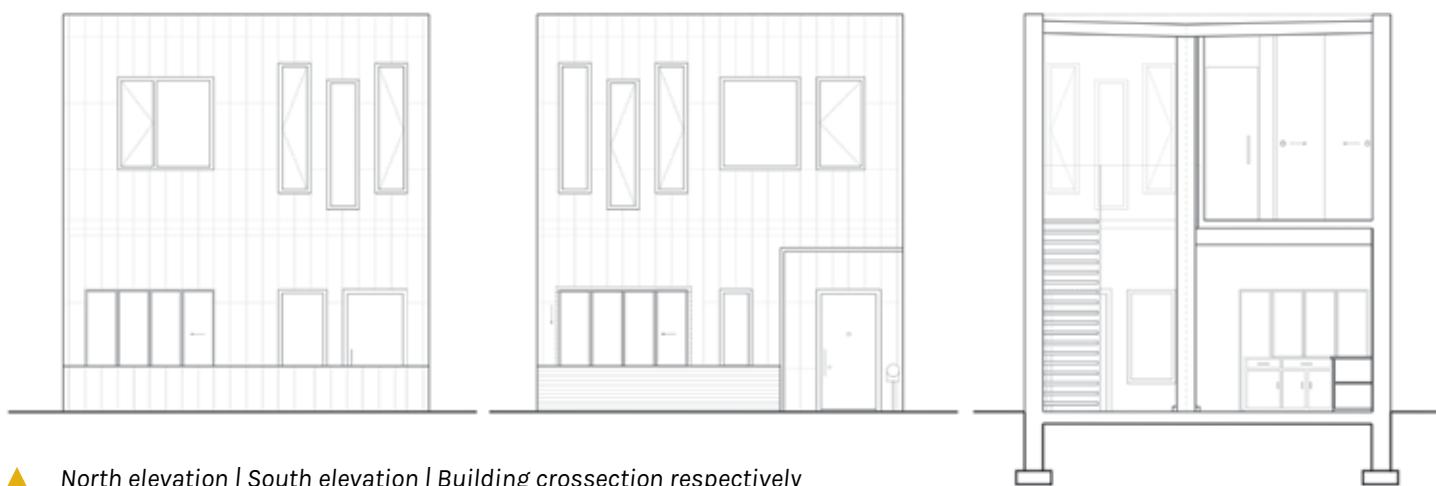
Located in downtown Cambridge, the (imaginary!) clients of this home wished to create a home that catered to both their love of socializing and the forests of their old home. As such, the focus of this tiny little townhouse is in the beautiful, long atrium which is separated and connected to the living 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.



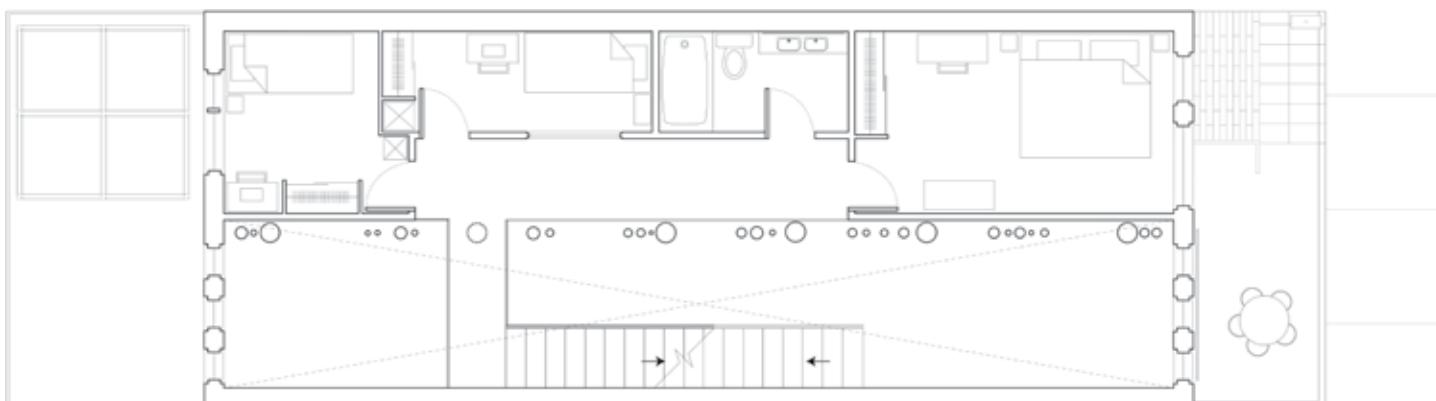
▲▼ Longitudinal section with corresponding ground floor plan below



▲ North elevation | South elevation | Building crossection respectively



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

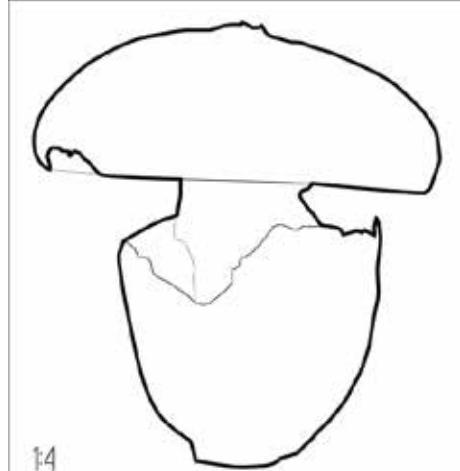


▲ Second floor plan

## 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 &amp; REQUIREMENTS

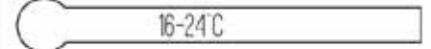
## FRUITING SEASON

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

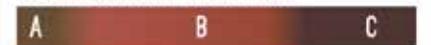
## HUMIDITY REQUIRED (%)

10 20 30 40 50 60 70 80 90 100

## GROWING TEMPERATURE (°C)

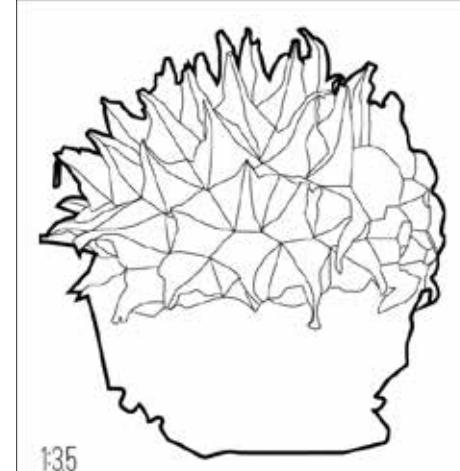


## SOIL PROFILE: LUVISOLIC



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 &amp; REQUIREMENTS

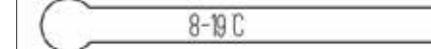
## FRUITING SEASON

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)

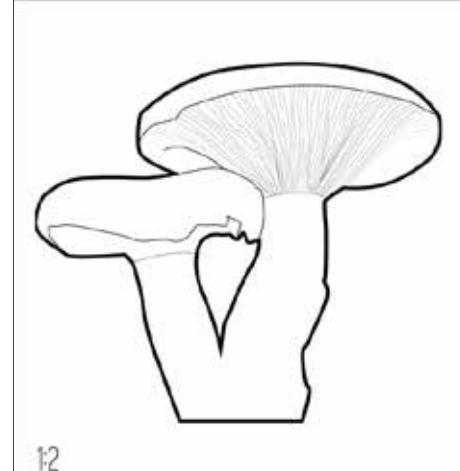


## SOIL PROFILE: PODZOLIC



O: 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 - SILICEOUS ROCK, QUARTZIC SAND

## OTHER TRAITS



12

**LACTARIUS INDIGO** M

NATIVE DISTRIBUTION TEMPERATE



## FACTS &amp; REQUIREMENTS

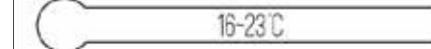
## FRUITING SEASON

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)



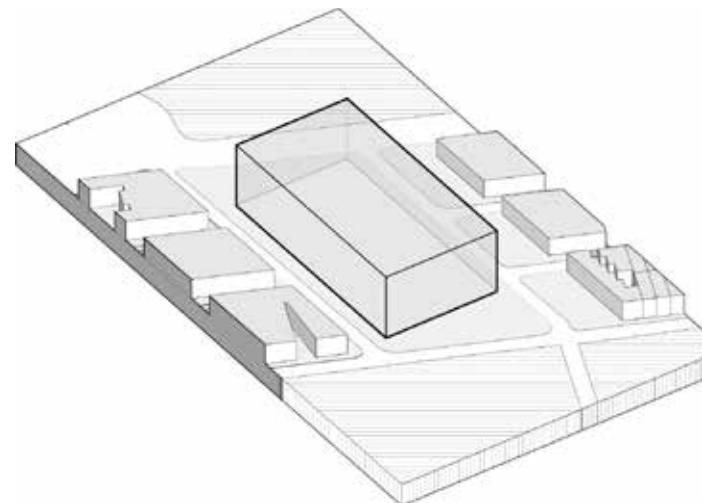
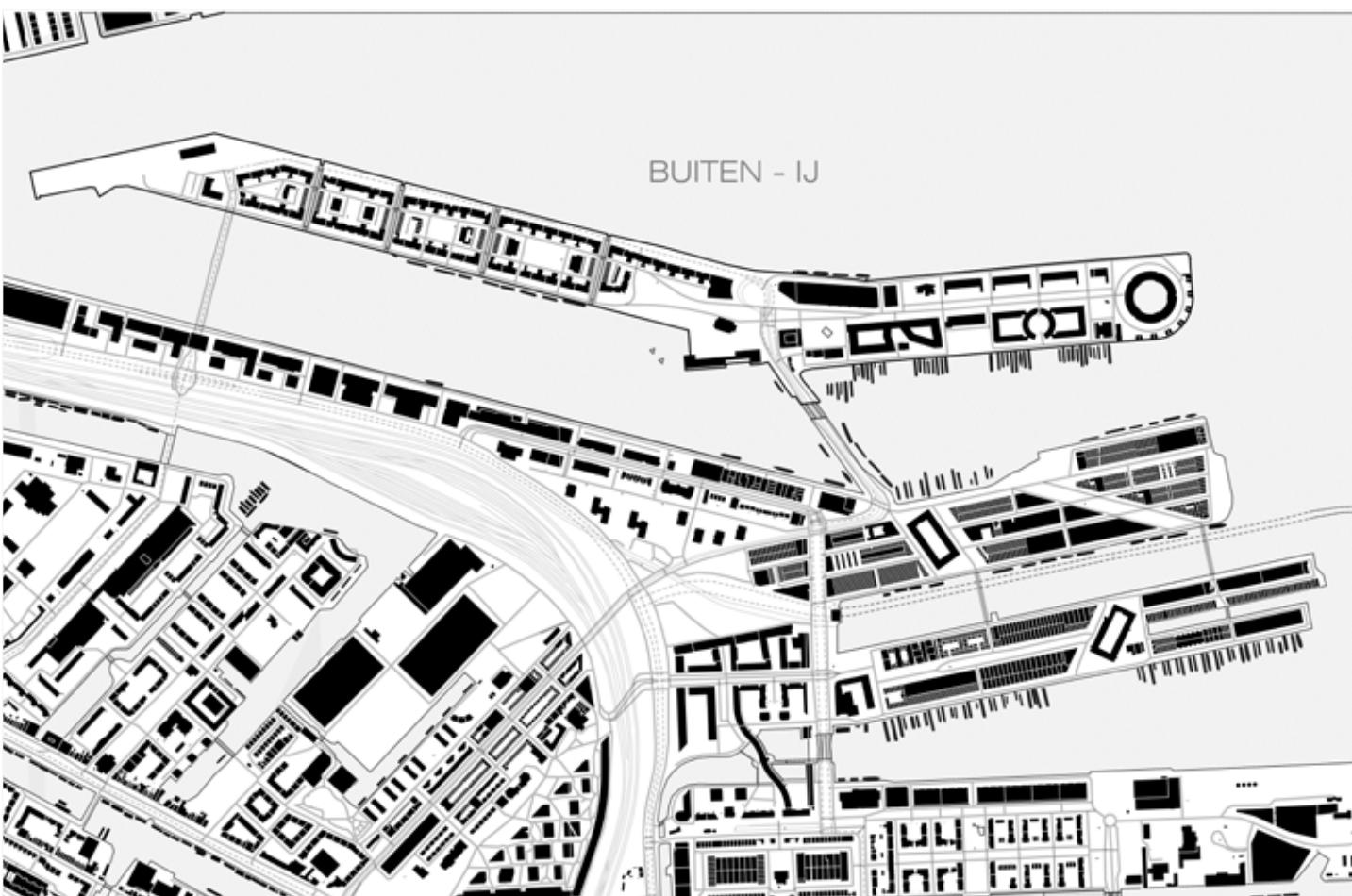
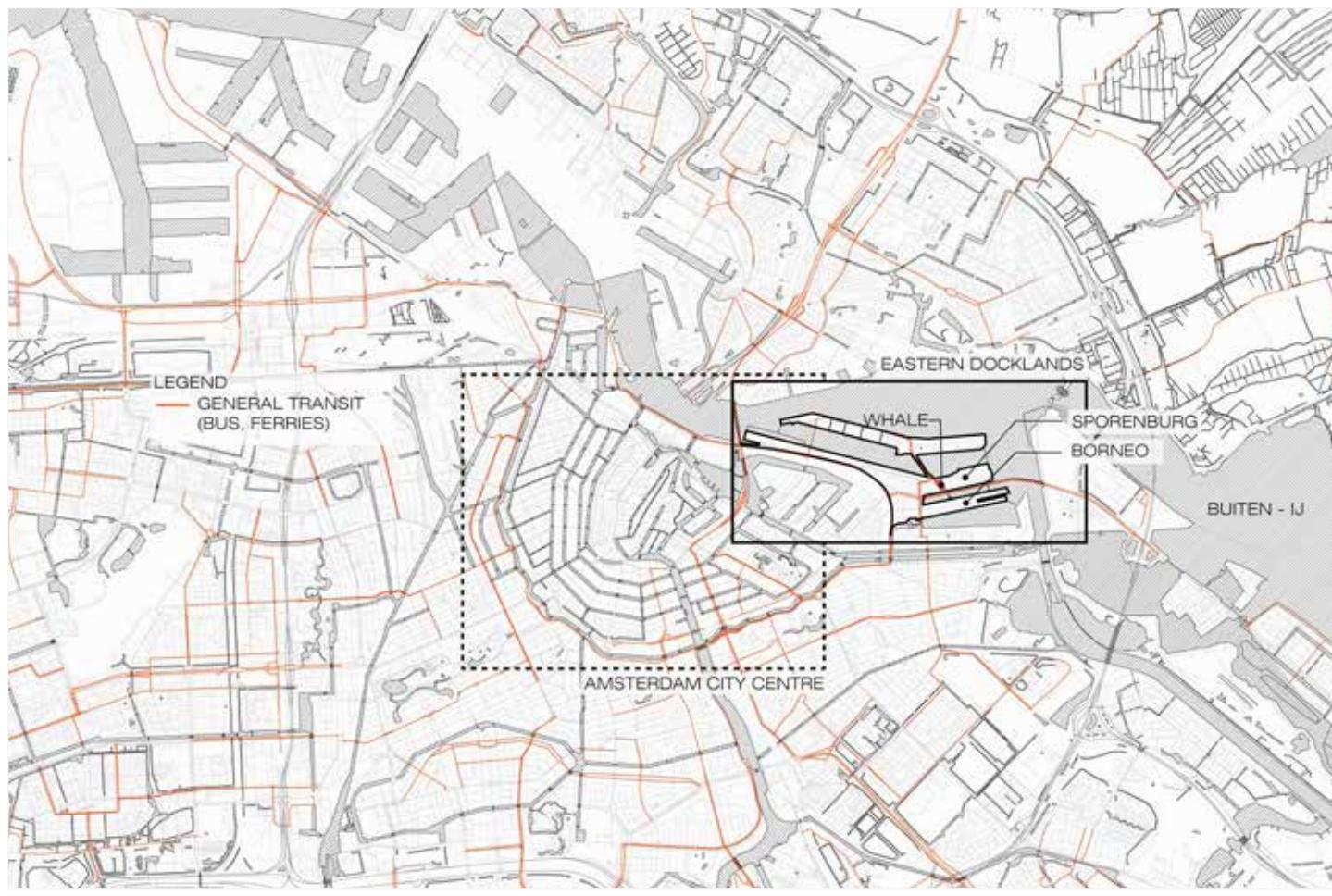
## SOIL PROFILE: PODZOLIC



O: LEAF LITTER/OTHER READY-TO-DECAY MATTER  
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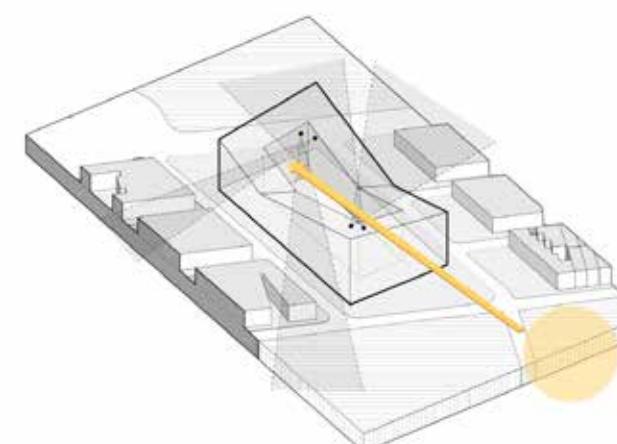
## OTHER TRAITS





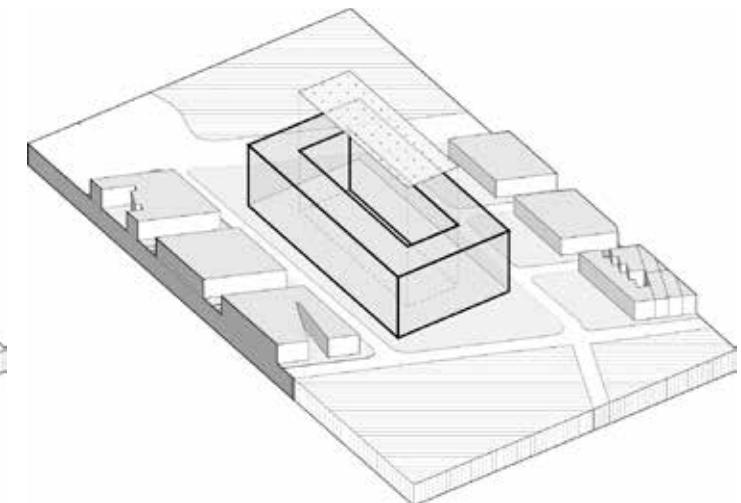
Begin with a typical block on site.

Second floor plan

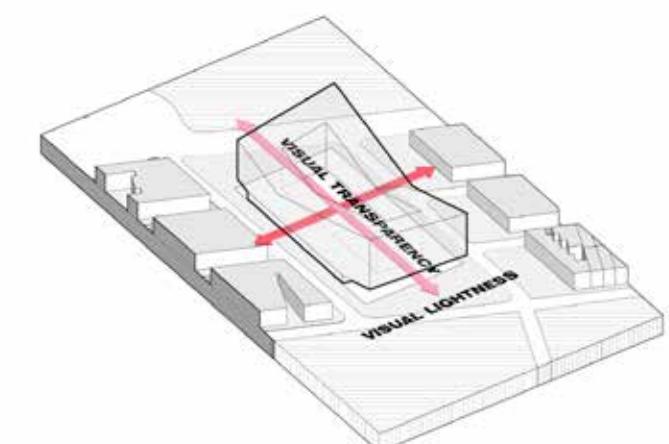


Raise corners to allow sunlight in and create views for apartments.

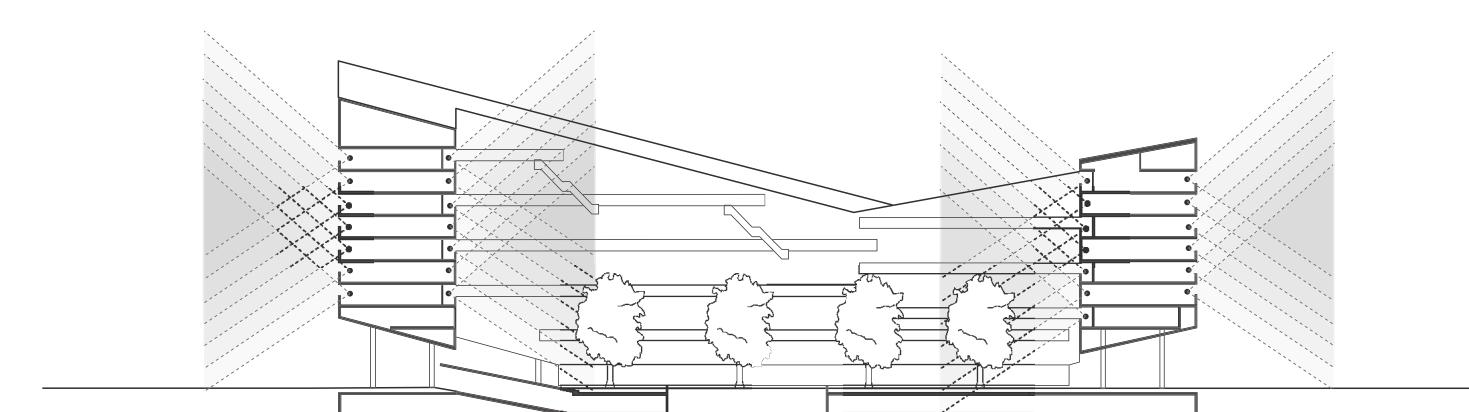
▲ 3D massing diagrams



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.



▲ Sectional parti diagram

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

## ACADEMIC

### 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

**What is a tax?**  
Taxes are "normally defined as compulsory payments to the government for which the payer receives no specific benefit."

**Federal Marginal Tax Rates & Tax Brackets, 2017**

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

**Typical taxes include your federal/provincial income tax and sales taxes such as the PST, HST, and GST. These taxes are paid by individuals in exchange for services and goods we buy."**

**The marginal tax 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 an individual's income is not taxable.  
  

$$\begin{aligned} \$65,000 \\ -\$11,635 \\ \hline \$53,365 \end{aligned}$$
 Alexa's total taxable income

The minimum marginal tax rate is 15%, but only applies to the next \$34,281 of Alexa's income.  
  

$$\begin{aligned} \$45,916 \\ -\$11,635 \\ \hline \$34,281 \\ \times 0.15 \\ \hline \$5,142.15 \end{aligned}$$

The remainder of Alexa's income will then be taxed at 20.5%  
  

$$\begin{aligned} \$65,000 \\ -\$11,635 \\ \hline \$53,365 \\ -\$5,142.15 \\ \hline \$38,222.85 \end{aligned}$$

**TOTAL TAXES PAID** \$9,054.37

**Alexa's effective income tax rate (federal)**  $\frac{\$9,054.37}{\$65,000.00} = 13.9\%$

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.<sup>5</sup>

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.

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.<sup>6</sup>

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.<sup>6</sup>

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 Overfunded Canadian Government Spending," Broadbent Institute, June 2017, 18.
3. Richard Shillington and Robin Shaban, "The Brass Tax: Busting Myths about Overfunded Canadian Government Spending," Broadbent Institute, June 2017, 24.
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 Overfunded Canadian Government Spending," Broadbent Institute, June 2017, 24, Table 6.

## 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.<sup>5</sup> The typical household size was 2.6 people.

The average benefit from public services per person for this family type is **\$13,332<sup>5</sup>**.



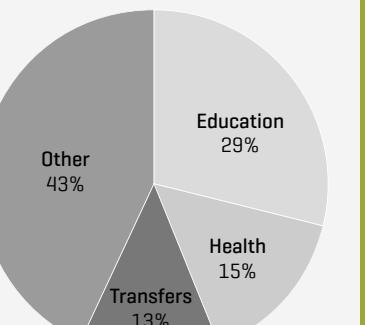
**Yassin**  
\$50,500<sup>3</sup>  
34



**Celeste**  
\$50,500<sup>3</sup>  
32



**Jacob**  
\$0  
10



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.<sup>6</sup>

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.<sup>6</sup>

**Yassin**      **Celeste**

\$50,500<sup>3</sup>      \$50,500<sup>3</sup>



\$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

**\$39,996<sup>5</sup>** 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.**

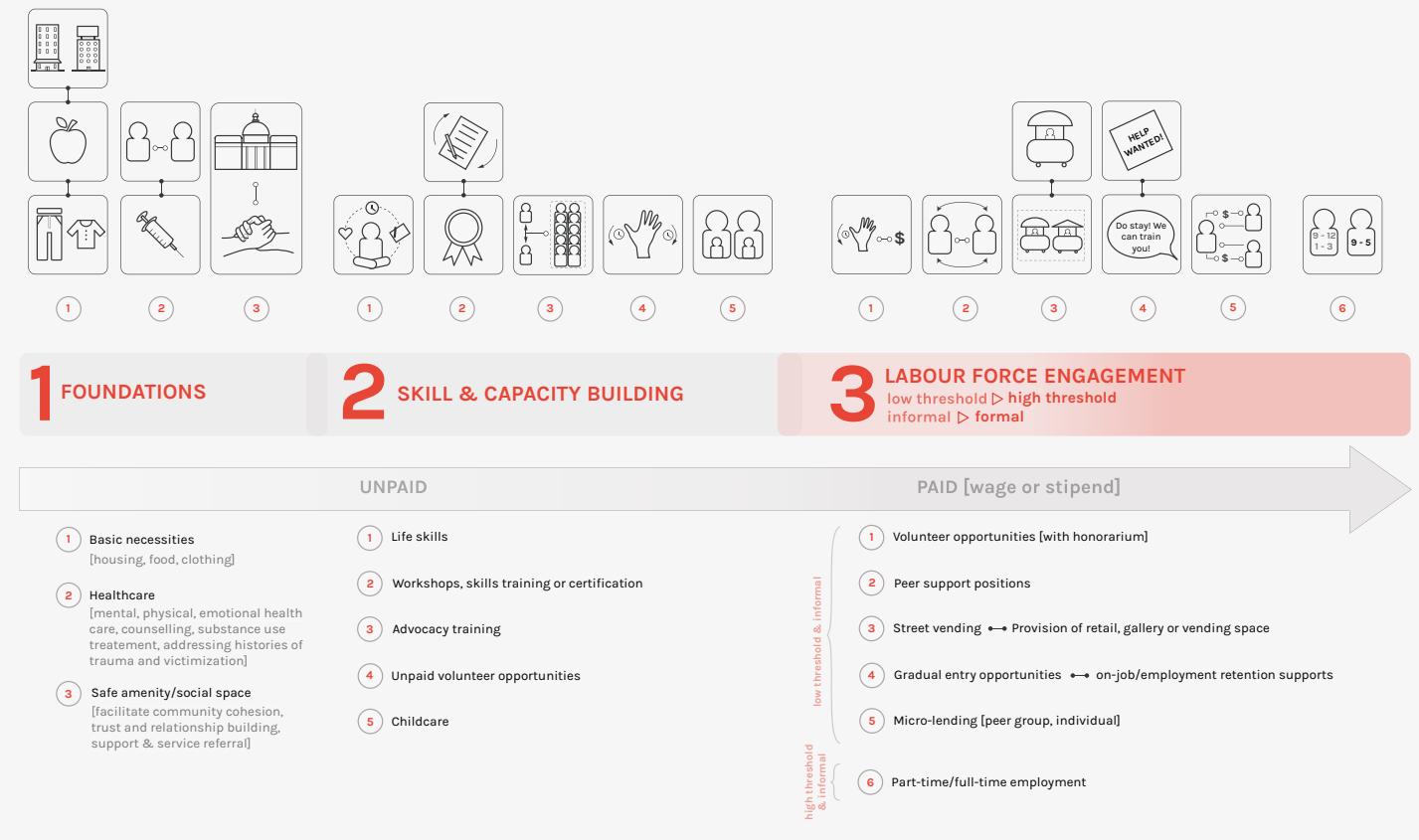
The Nizari's new net income

.... 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.<sup>4</sup>

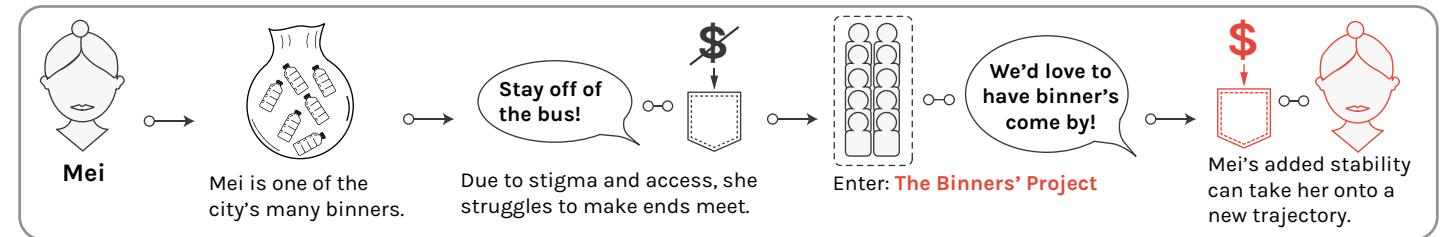
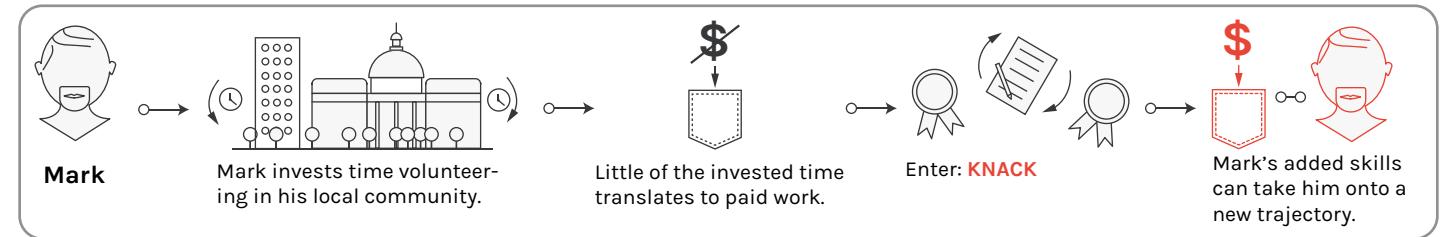
## local economic development lab

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

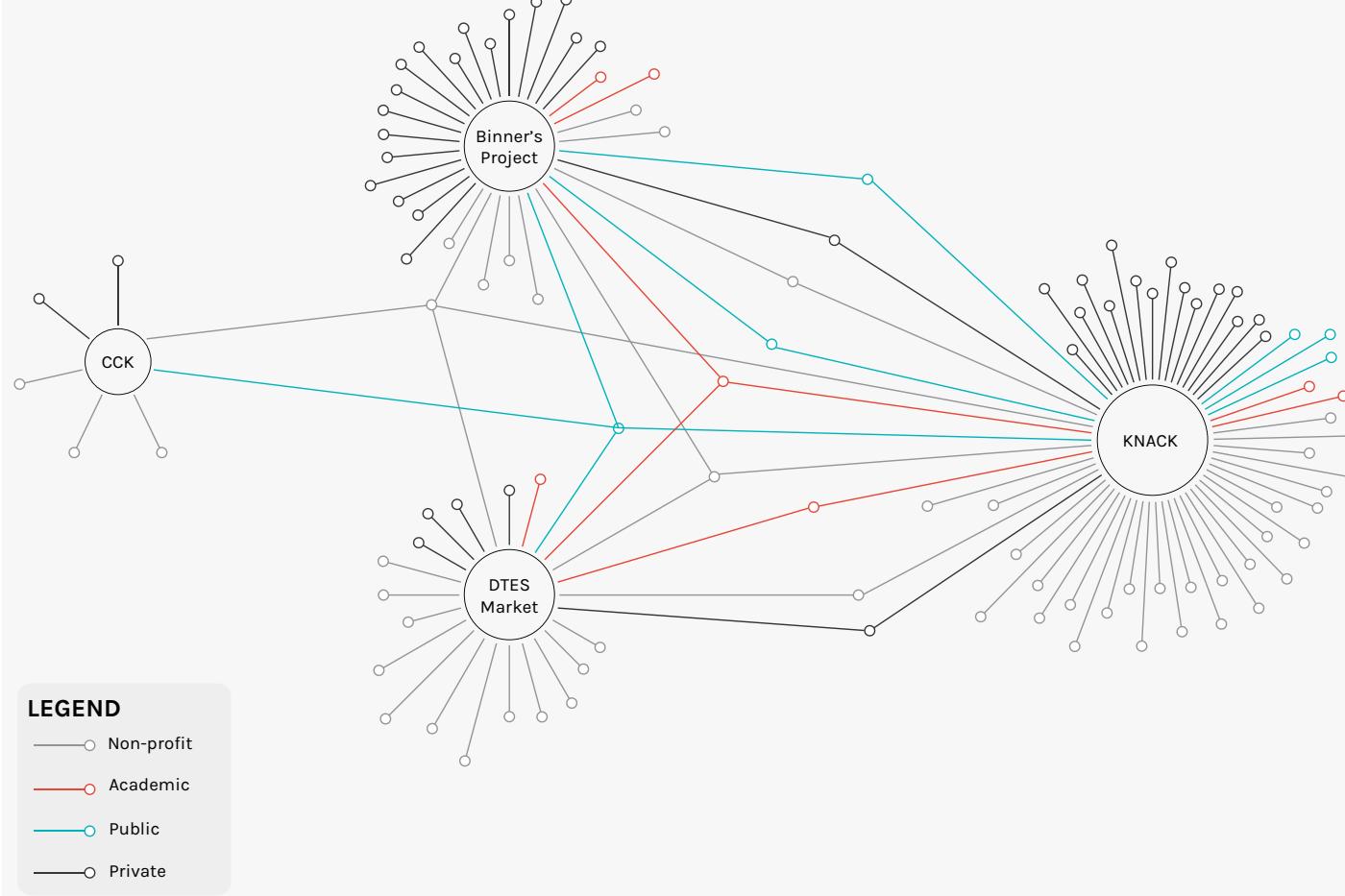


▲ Income Generation Continuum

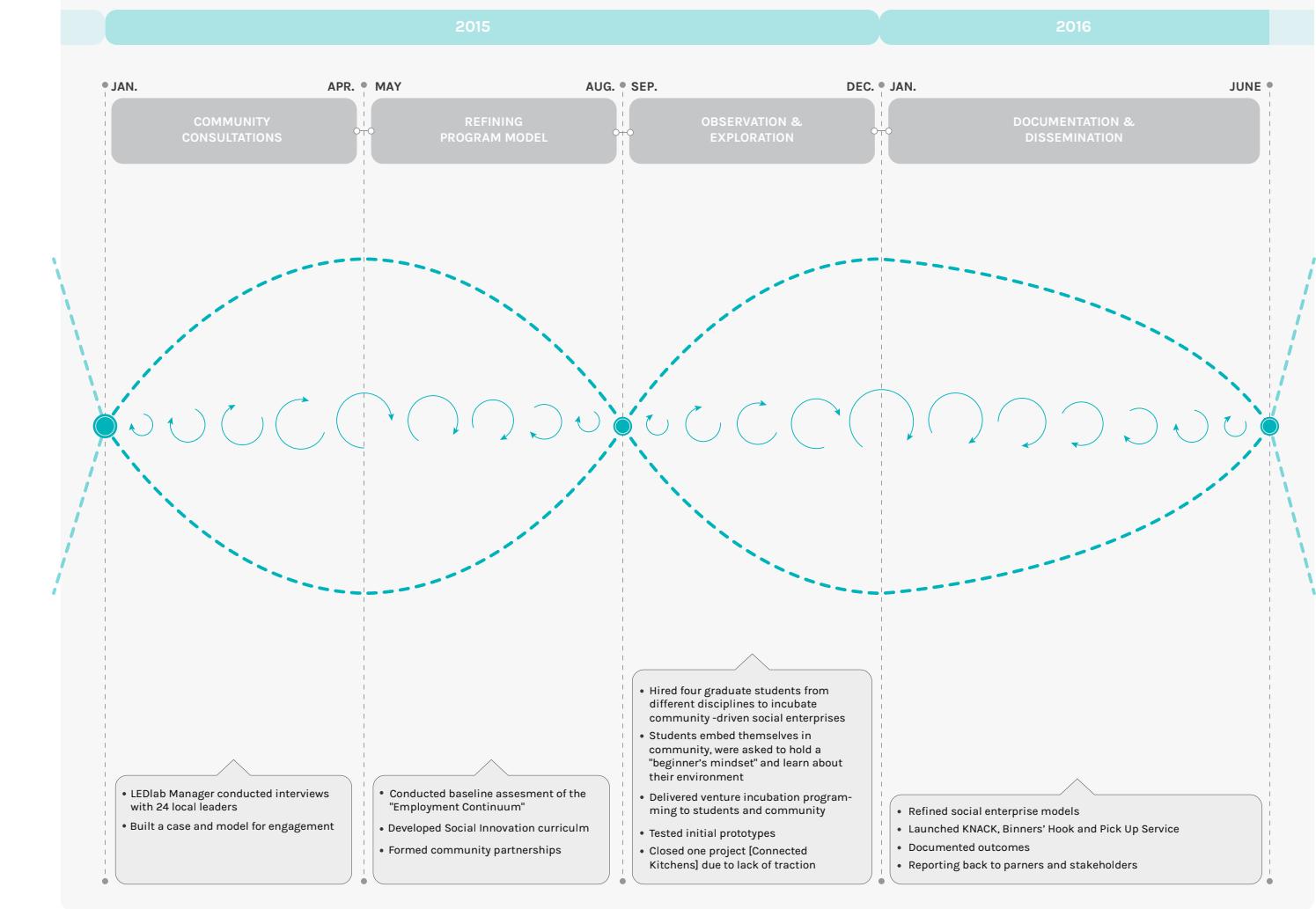


▲ Illustrated Income Generation Continuum: helps to explain how LEDlab's initiatives will impact the local community

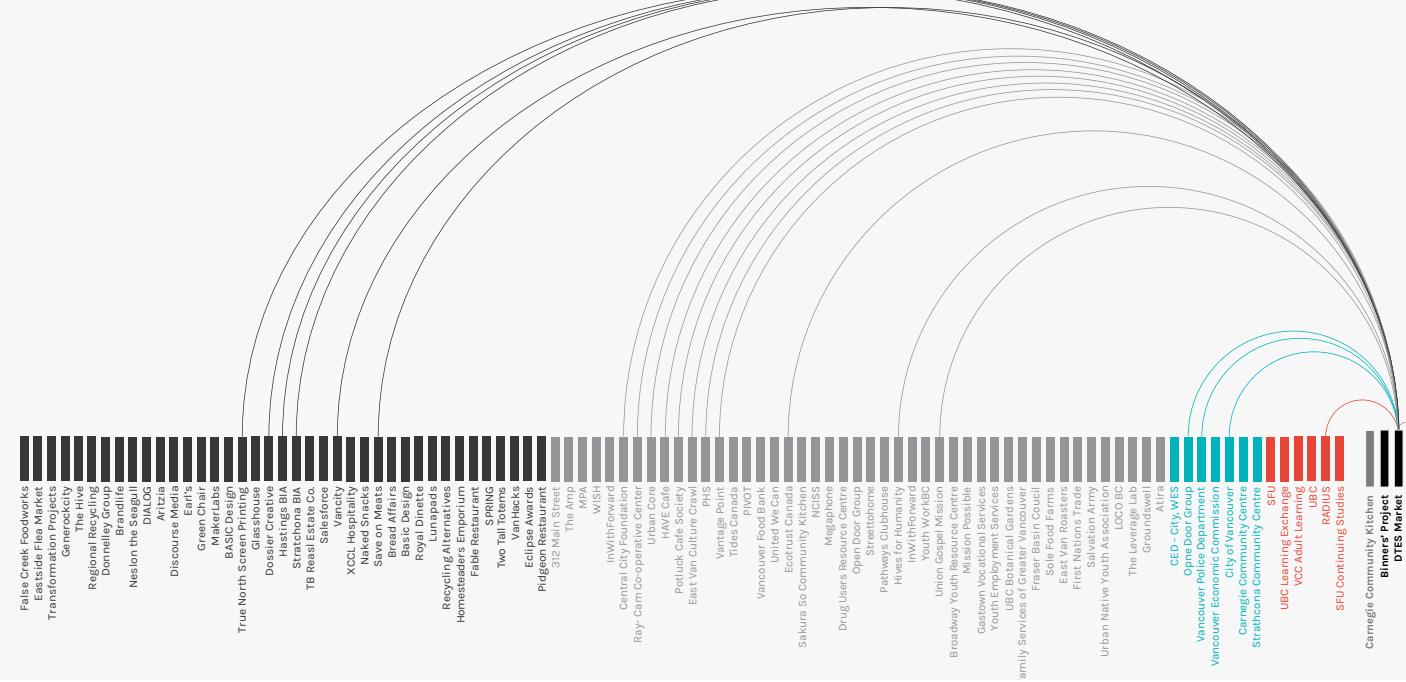
## COMMUNITY NETWORKS



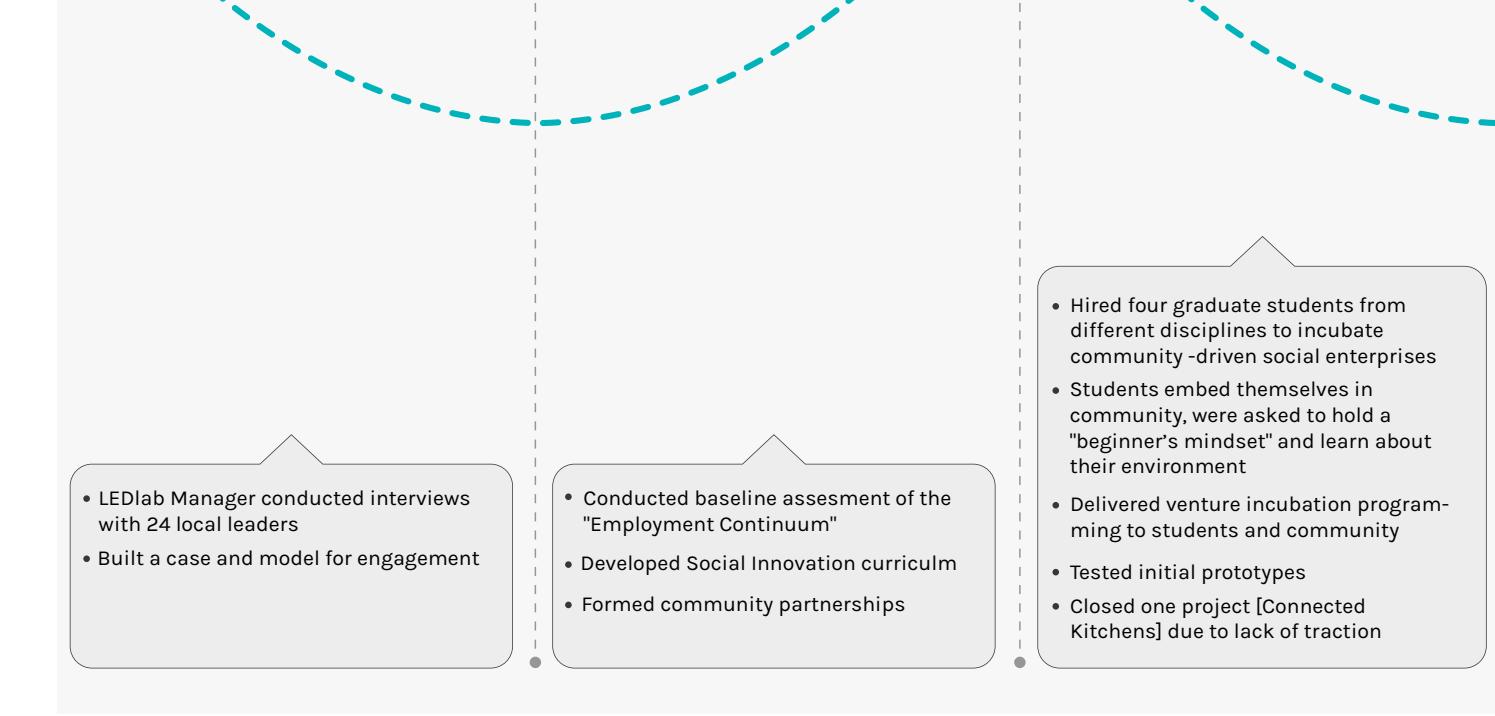
## PROGRAM ARC



## 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

**Thank you for your time!**

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