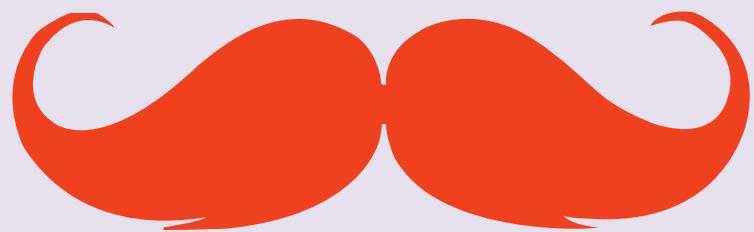


2015/2016

# VOLUME 3

*a portfolio by Suzanne Merchant*



# Why, hello there!

My name is Suzanne Merchant, and I am a second year architecture student at the University of Waterloo.

My design interests lie primarily in the realms of **architecture** [the act of transforming an idea to a physical reality], **computation**, **industrial design**, and **graphic/print design**. I have a great interest in understanding how a material behaves; its strength's and weaknesses, and how one can use this understanding to fabricate better "objects" regardless of the scale.

In addition, I am an avid rock climber and I have a great passion for singing and for drawing interesting moustaches.

e : [suzannemerchant@gmail.com](mailto:suzannemerchant@gmail.com)  
p : +1 (226) 600 8321

# Curriculum Vitae

## WORK EXPERIENCE

September 2014 - December 2014

**Proscenium Architecture and Interiors / Vancouver, Canada**  
Student Designer

January 2014 - April 2014

**Hughes Condon Marler Architects / Vancouver, Canada**  
Architecture Co-op Intern

## EDUCATION

September 2012 - Present

**University of Waterloo / Cambridge, Canada**  
Candidate for Hons. B. Architectural Studies

## SKILLS

### Digital

Adobe Suite	Grasshopper
Illustrator/ Photoshop/	Processing/Arduino
InDesign	Python
AutoCAD	HTML/CSS
Rhinoceros + VRay	

### Analog

Hand drafting - ink, pencil
Hand modelling
Laser cutting
CNC

## EXTRACURRICULARS

May 2014 - August 2014

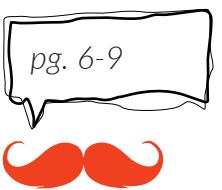
Waterloo Architecture Student Association - Junior Secretary

Rock climbing (spec. Bouldering)  
Singing classical music (spec. Medieval, Impressionist)  
Sketching  
Learning languages  
Mathematical puzzle solving

References provided upon request.

# Contents

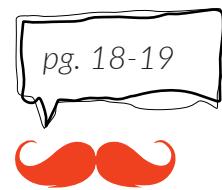
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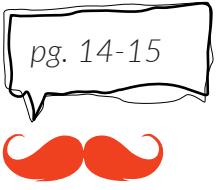
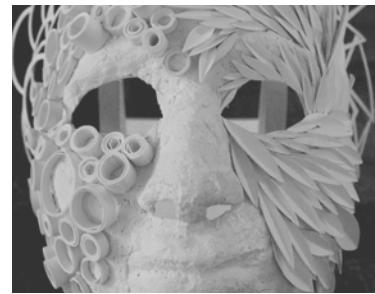
SCREENED COURTYARDS



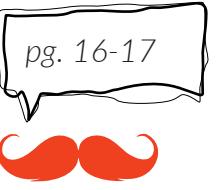
COLUMNAR FORESTS



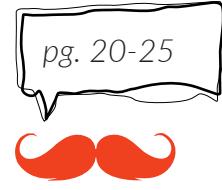
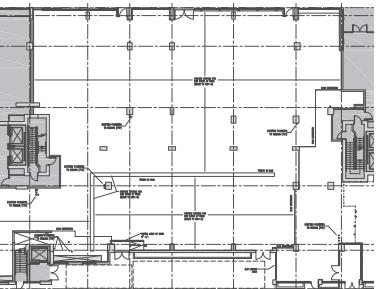
MASKING IT ALL



FUNGI FACT SHEETS



CO-OP: PROSCENIUM



PHOTOGRAPHY



Affordable housing with user controlled building interfaces/public exposure

## SCREENED COURTYARDS

This project called for a set of homes to be built in a "junk", leftover space in Cambridge that could be re-developed 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.

**Studio Supervisor:** Don McKay

**Collaborators:** Amal Dirie, Mark Cooper & Ella den Elzen





▲ ▼ Longitudinal section below, corresponding plan above



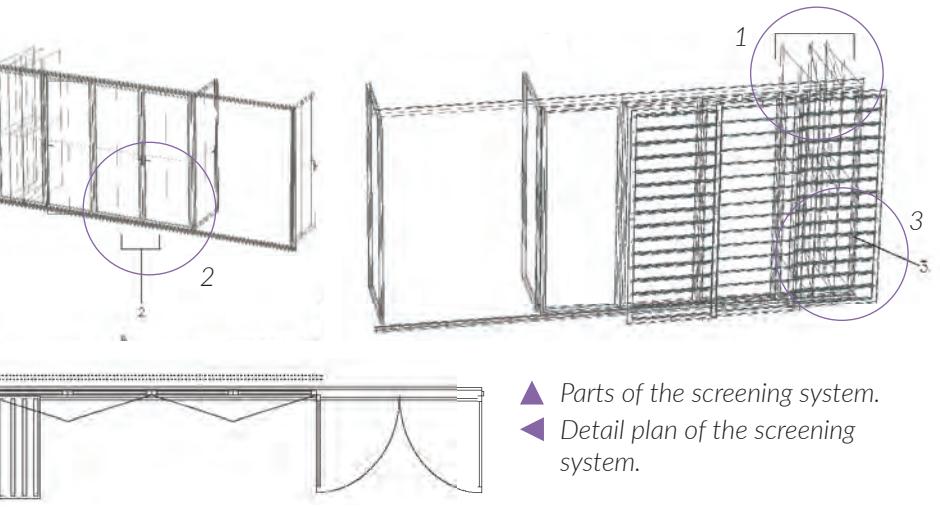
▲ West elevation of buildings

### 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.



▲ Parts of the screening system.  
▼ Detail plan of the screening system.



▲ Model of screening system



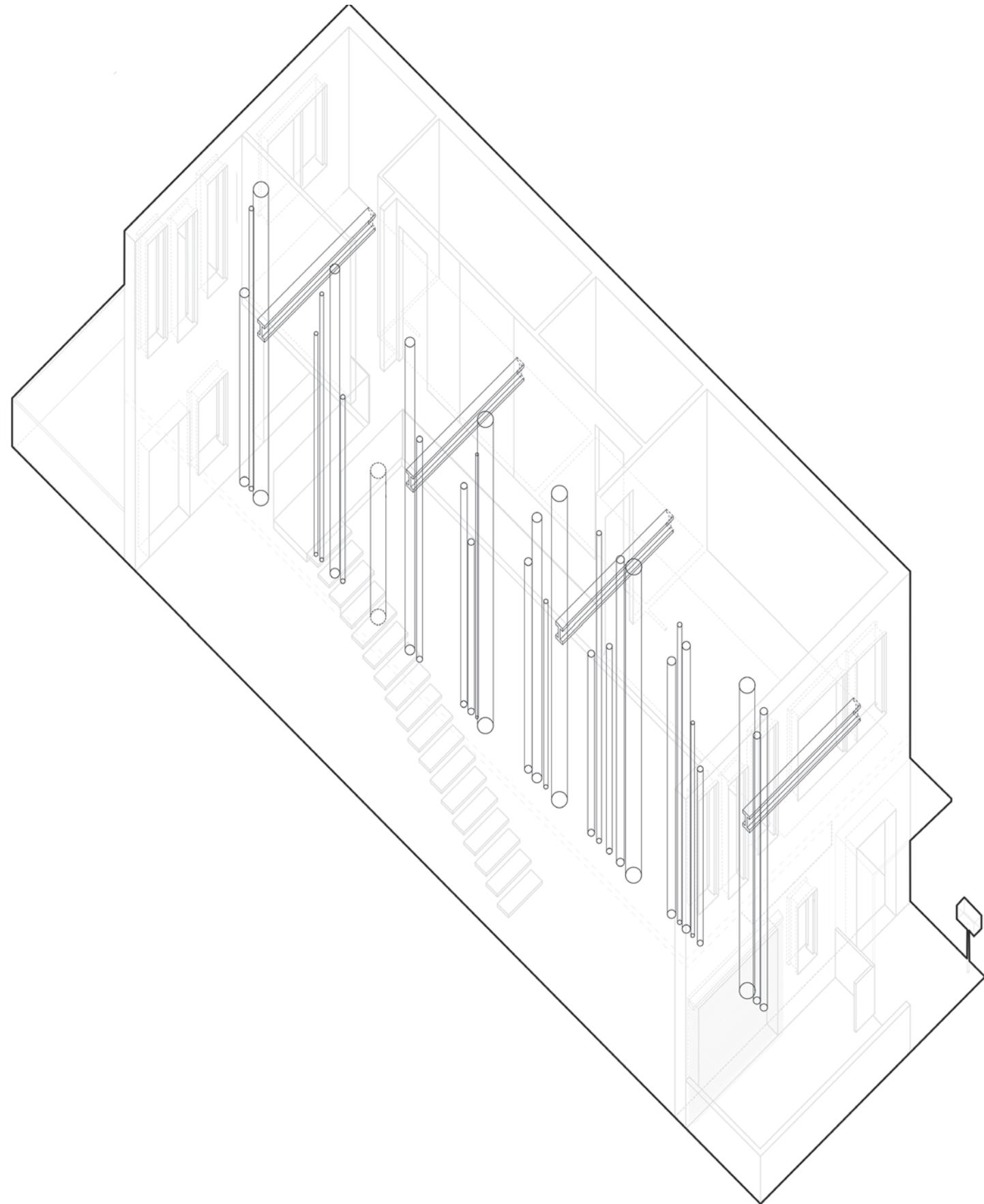
▲ Model of South elevations

Urban luxury townhome proposal for select clients

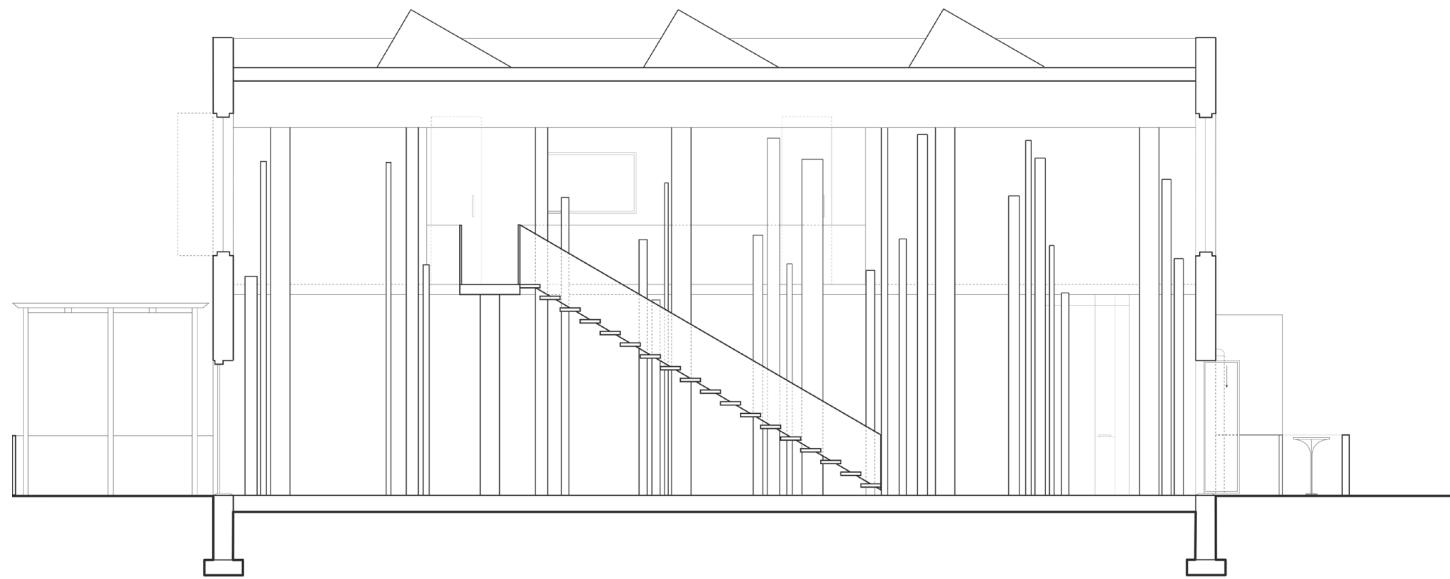
## COLUMNAR FORESTS

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.

**Studio Supervisor:** Val Rynnimeri  
**Collaborators:** None



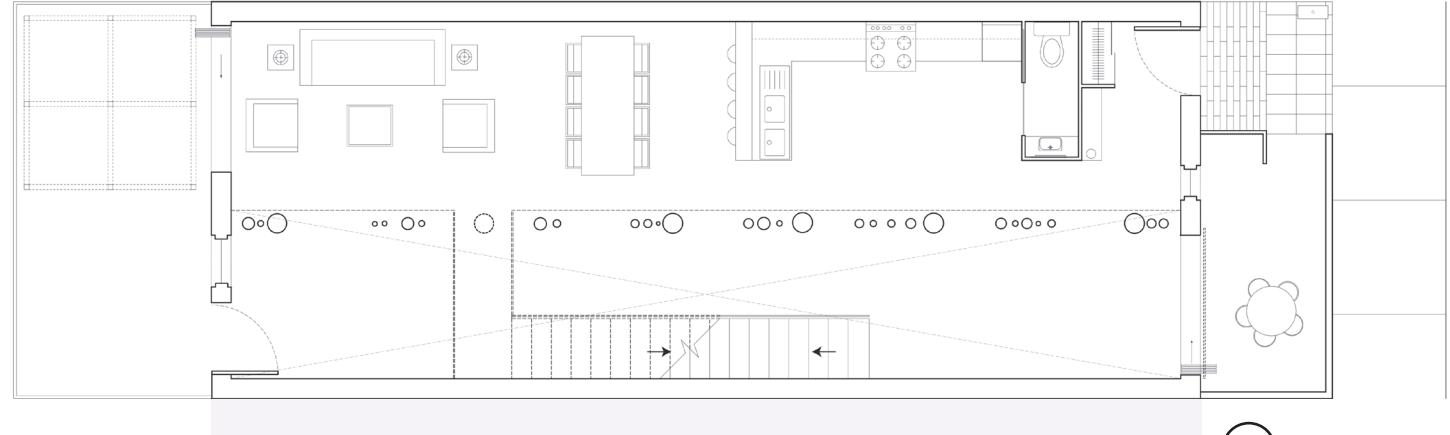
▲ Structural axonometric - structural columns are paired with the steel beams to provide stability to the 2nd floor.



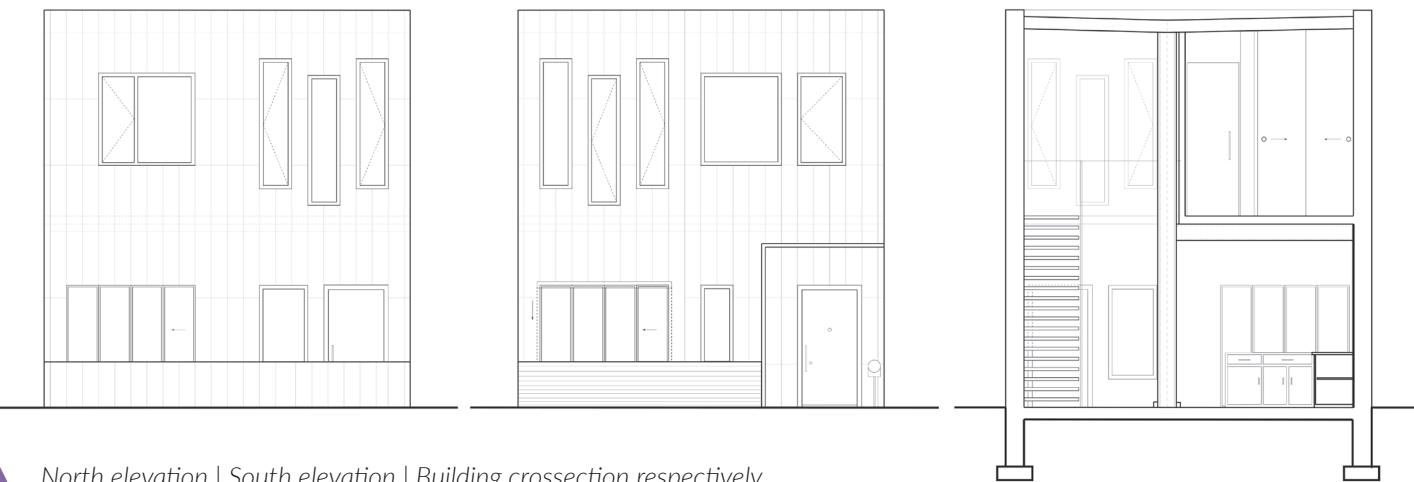
▲▼ Longitudinal section with corresponding ground floor plan below



EXISTING TOWNHOME



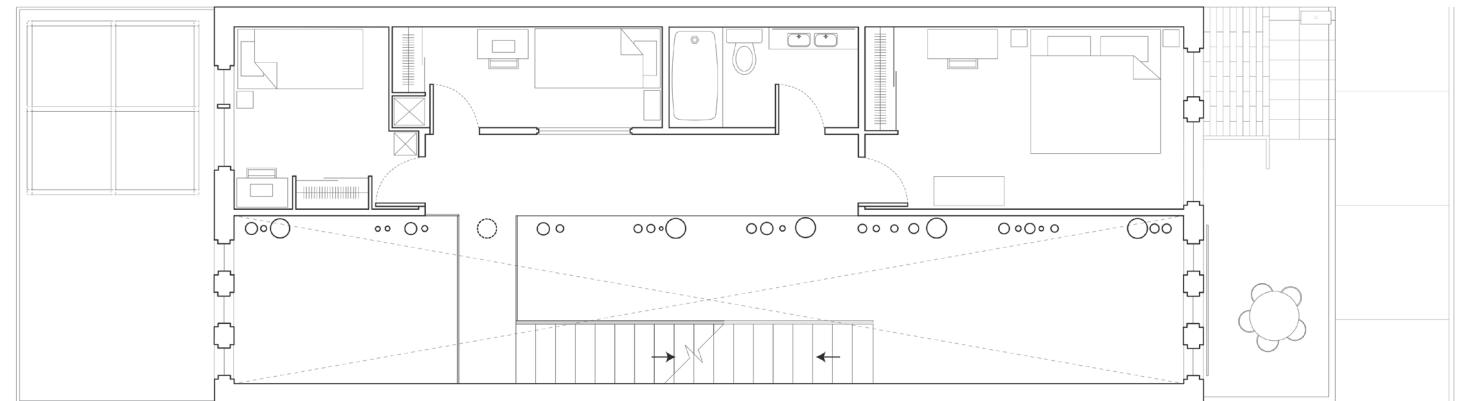
EXISTING TOWNHOME



▲ North elevation | South elevation | Building crossection respectively



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



▲ Second floor plan

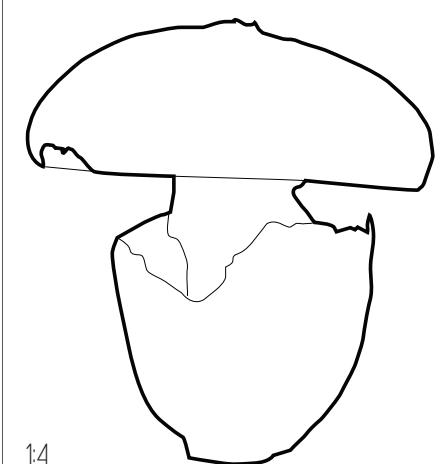
An excise in mapping  
and presenting data

## FUNGI FACT SHEETS

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.

Fungi, for many people across the world are a vital source of income, a tasty, healthy (and many times lucrative) dietary staple and for the scientific community a host for unfound medicinal value.

**Studio Supervisor:** Lola Sheppard  
**Collaborators:** None



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### 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)

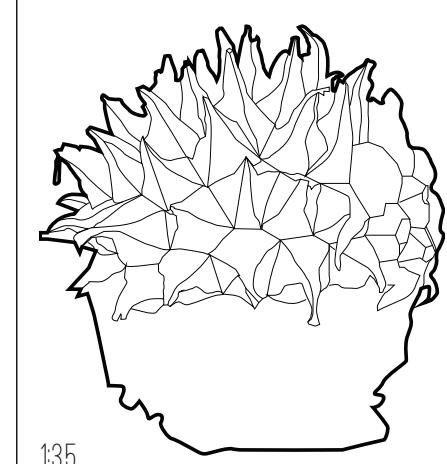
16-24°C

##### 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



13.5

### 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)

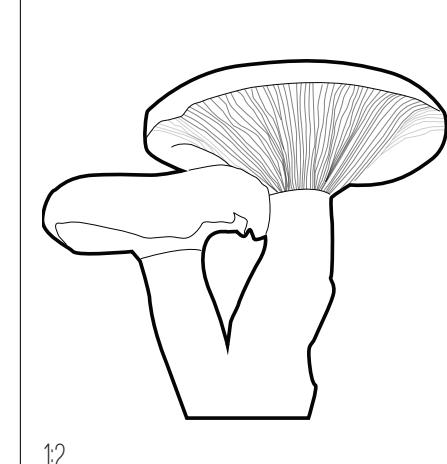
8-19°C

##### SOIL PROFILE: PODZOLIC

O E A B C

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



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### 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

O E A B C

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



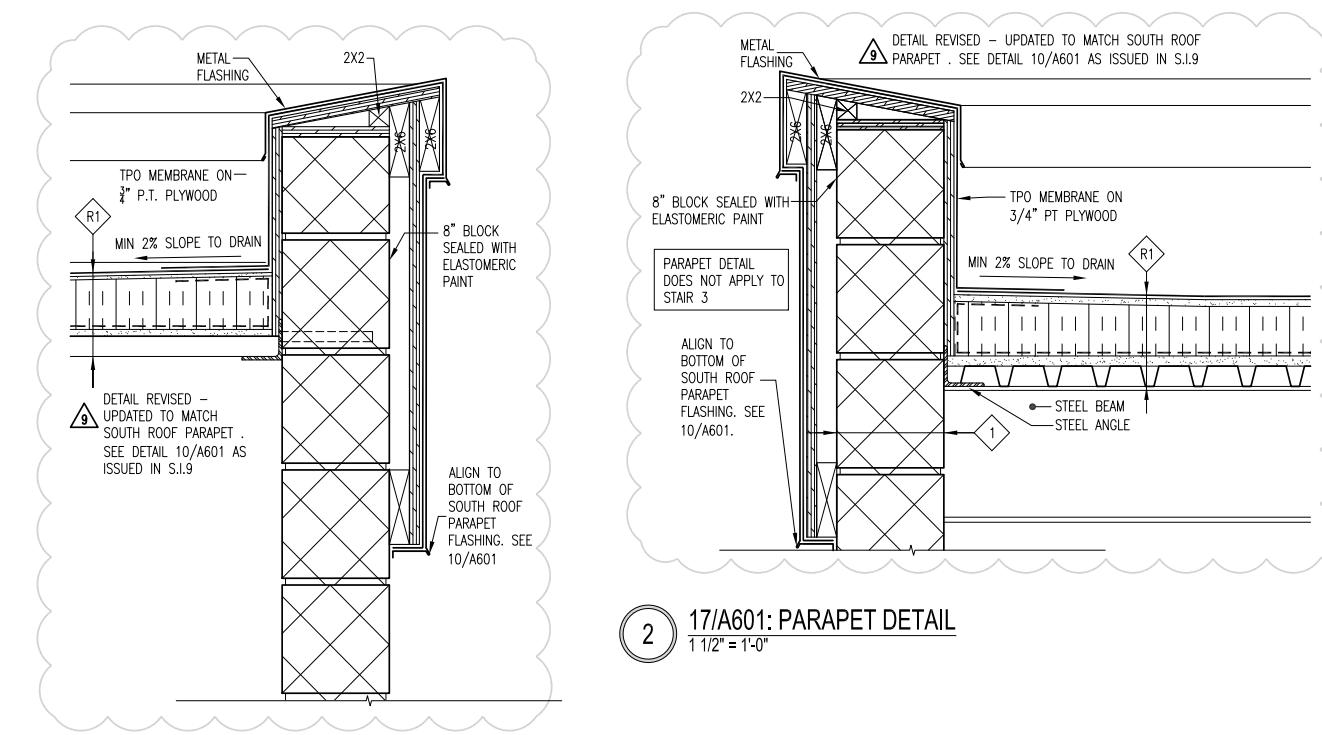
Professional practice term from  
September - December 2014

# CO-OP: PROSCENIUM

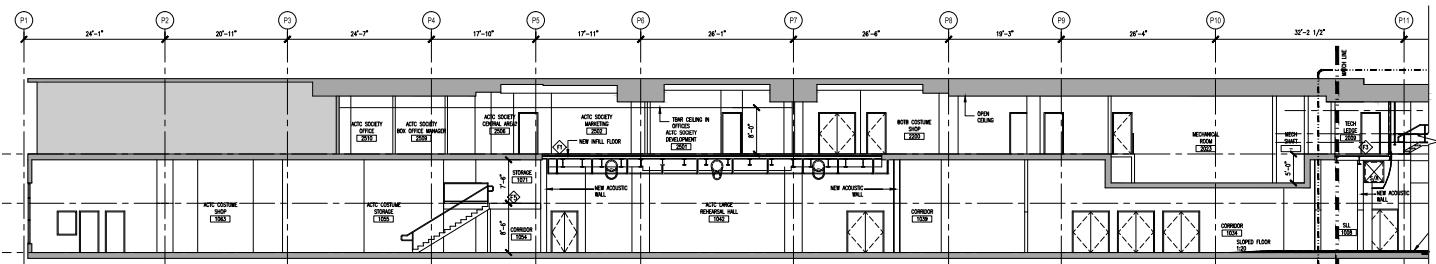
As per the requirements of the University of Waterloo, I undertook a co-operative work term at Proscenium Architecture + Interiors where I mainly worked on construction drawings for a theatre/office project for Arts Club Theatre and Bard on the Beach. I also worked on construction drawings for a few other smaller projects that the firm had.

The drawings shown on the next page are a few of the construction drawings that I had worked on during my time at Proscenium.

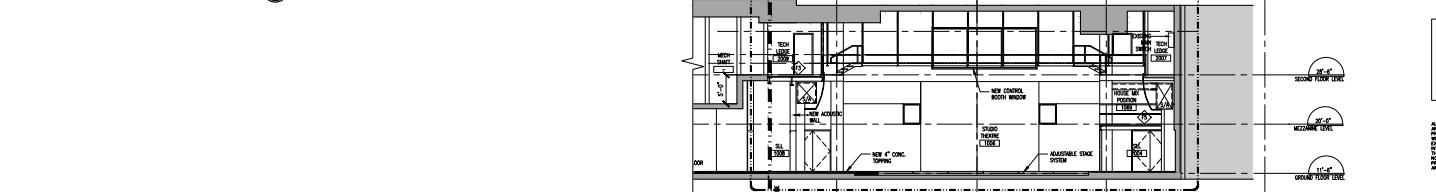
**Supervisor:** Hugh Cochlin, Principal



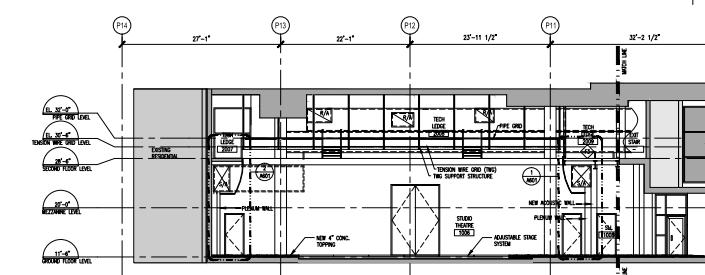
**1** 4/A601: PARAPET DETAIL  
1 1/2" = 1'-0"



**1** LONGITUDINAL SECTION



## LONGITUDINAL SECTION



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



## MASKING IT ALL

"Man is least himself when he is in his own person. Give him a mask and he'll tell you the truth."

- Oscar Wilde

**Supervisor:** None

**Collaborators:** None



▲ Top view of completed mask | 1st trial of mask form | 2nd trial of mask form | Test of paper shapes on mask

# PHOTOGRAPHY

*Tiny flower, big detail*



Life at the base of the Stawamus Chief, Squamish



Fields of light flowers in a dark wood, Queen Elizabeth Park



# THANK YOU FOR YOUR TIME!

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Feel free to contact me at:

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P/ +1 226 600 8321

