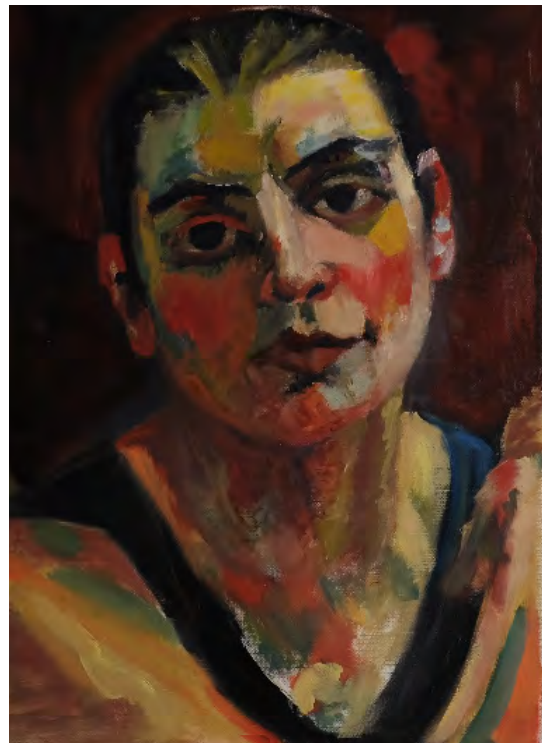


Architectural Fantasies

Portfolio
for internship application

Qing Hou

Current Student in Master of Architecture



Portrait study from Xenia Hausner 2017
Medium: Oil paint on canvas paper

Contents

PROJECT01

Spread 1-4
Study of Aperture
Individual
New York and Paris Program
Columbia University
2018

PROJECT02

Spread 5-9
Melrose Filter
Two-person Group
Master of Architecture Program
Columbia University
2020

PROJECT03

Spread 10-14
Water Catcher for an indgenous future life style
Individual
2021

PROJECT04

Spread 15-17
Bubble School
Individual
2019

PROJECT05

Spread 18-20
Broadway Study
Individual
2019

PROJECT06

Spread 21-23
CBE Equilibrium
Two-person Group
2021

PROJECT01: THE STUDY OF AP-
ERTURE

New York/Paris Program

Columbia University

08/2018 - 12/2018

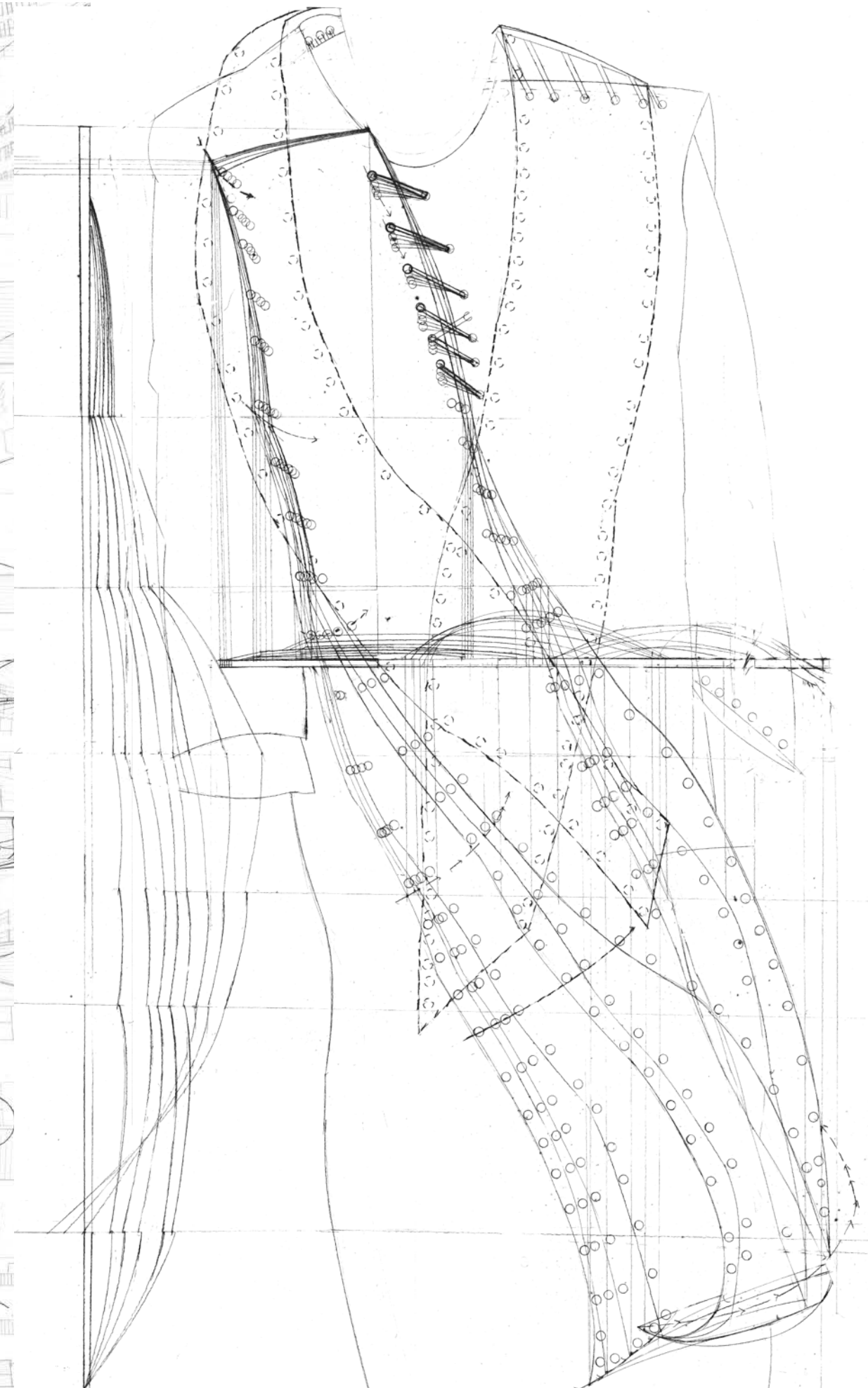
Critique: Miku Dixit

Critique: Thomas de Monchaux

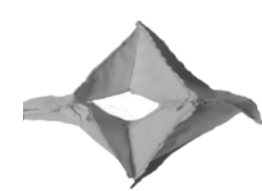
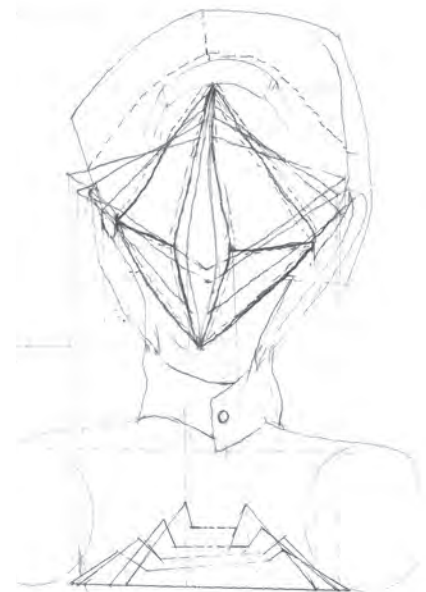
This project is based on the notion that fashion and architecture are incredibly similar. Two scales of site were analyzed, one at the level of the human body, and the other at the level of the building plot. My interest stems from investigation into the influence of aperture on pedestrian circulation. I designed several garments in aims of testing the relationship between the perception of pedestrians and their body movements. Then, based on my observations regarding the garments I created, I built an array of architectural models. The final architectural forms, which are based on previously designed modules derived from the garments, can adapt to any given site



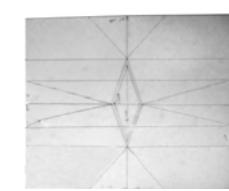
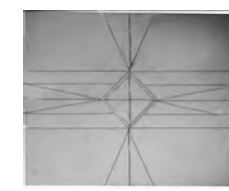
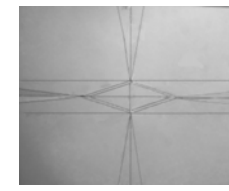
Circulation diagram (before): The binary between circulation of people and the existence of apertues.
Medium: pencil on vellum



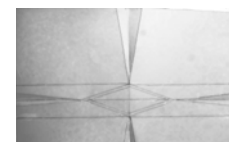
Fabric Motion study of Craig Green's fashion design: Craig Green transforms a stole into a fabric that goes across the body which enables the movements of legs constantly to distort the stole.
Medium: pencil on vellum



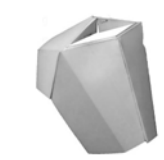
Muslin module from previous study



Pattern developed from the fabric module



Process of transforming 2D drawing to 3D model



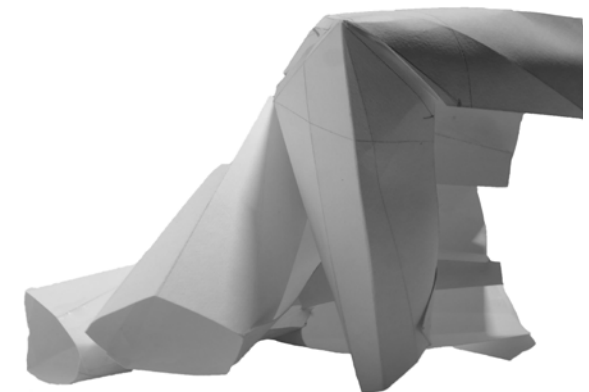
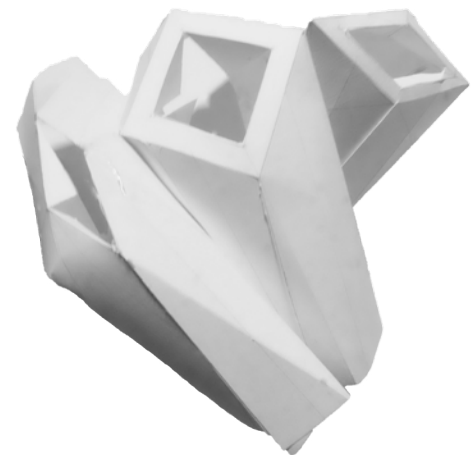
Tape the side and open the center



Photographs of the fabric design and the fabric modules. Medium: muslin

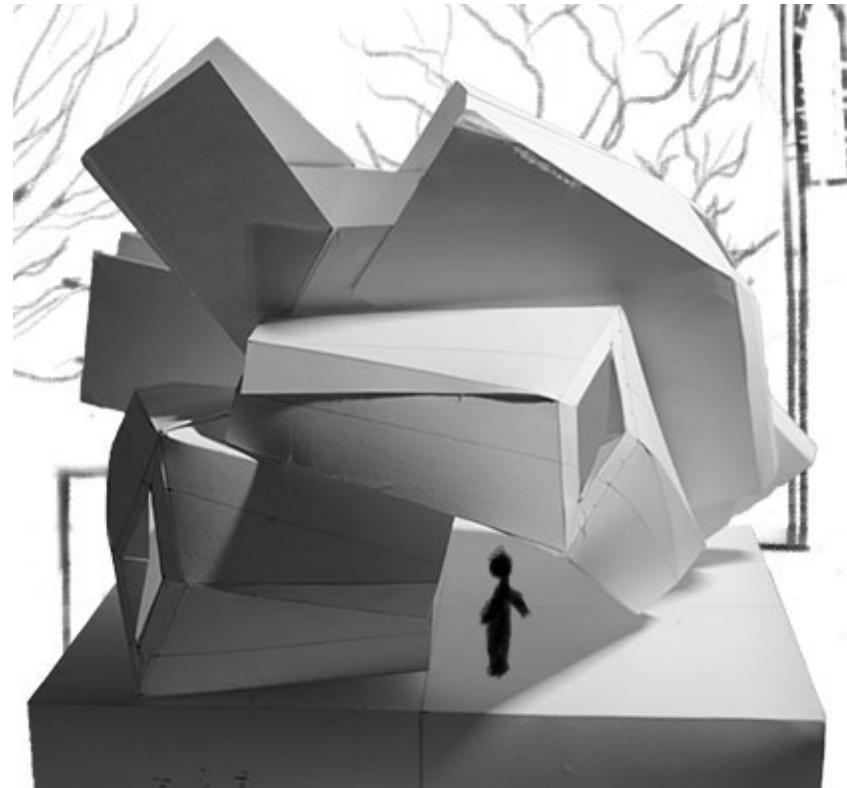


Section of the designed model (changing room)

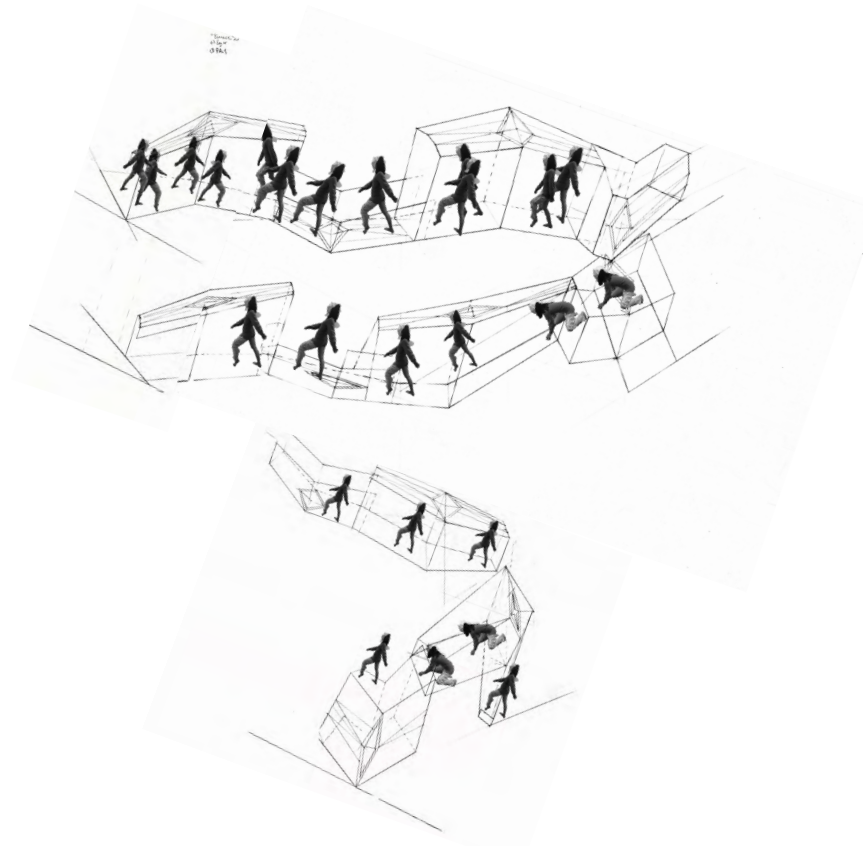


Prototype model: modules arranged in a successive way as the base unit for the viewfinder in Met Cloisters Medium: watercolor paper.

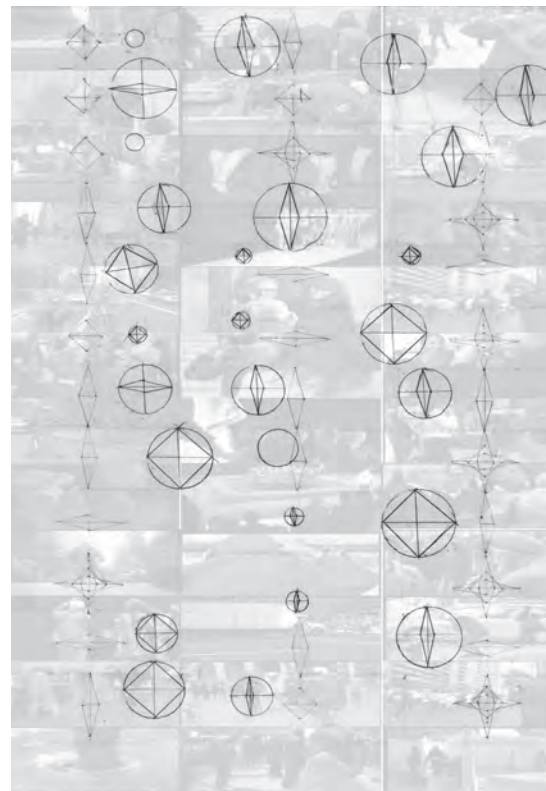
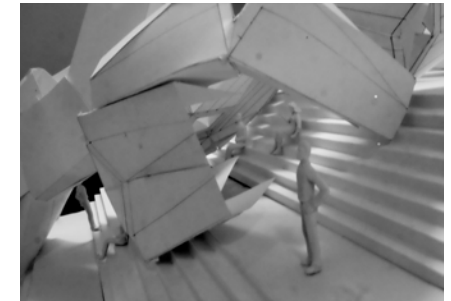
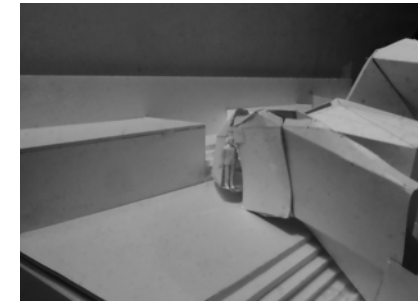
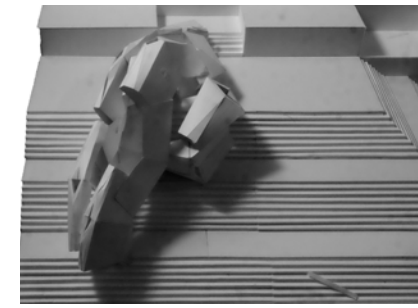
Analysis drawing of the new garment: the degree of leg movements of the subject will be revealed by the changing shapes of apertures of the pants Medium: pencil on vellum



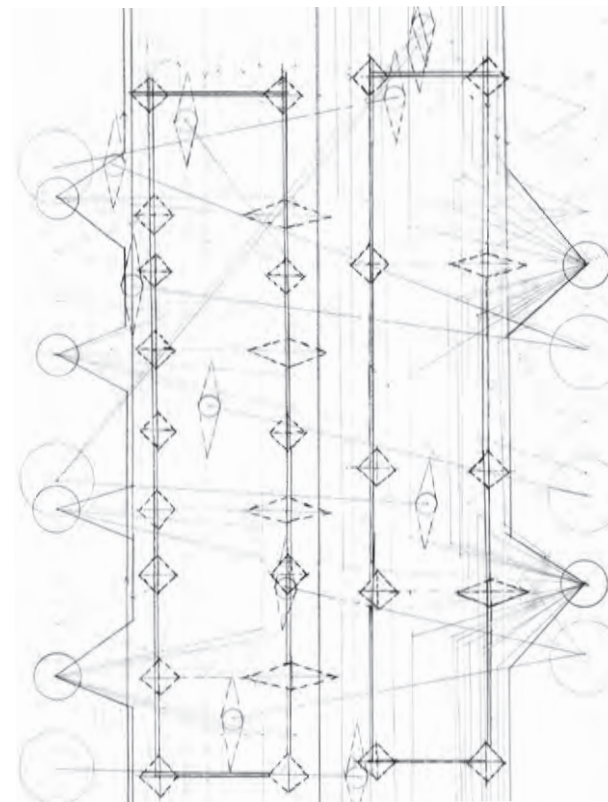
Viewfinder for the Met Cloisters: grow from prototype model
 Medium: drawing with watwecolor paper model



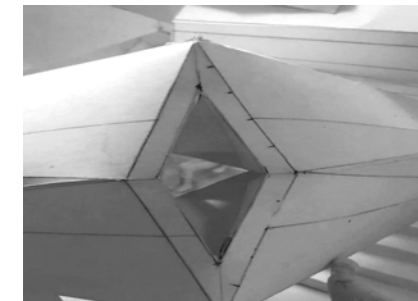
Circulation diagram: binary between circulation typology versus people's tendency to follow other people's attention on nearby stores or scenes; the binary between circulation typology and the specific module that is able to hold the circulation.
 Medium: pencil on vellum



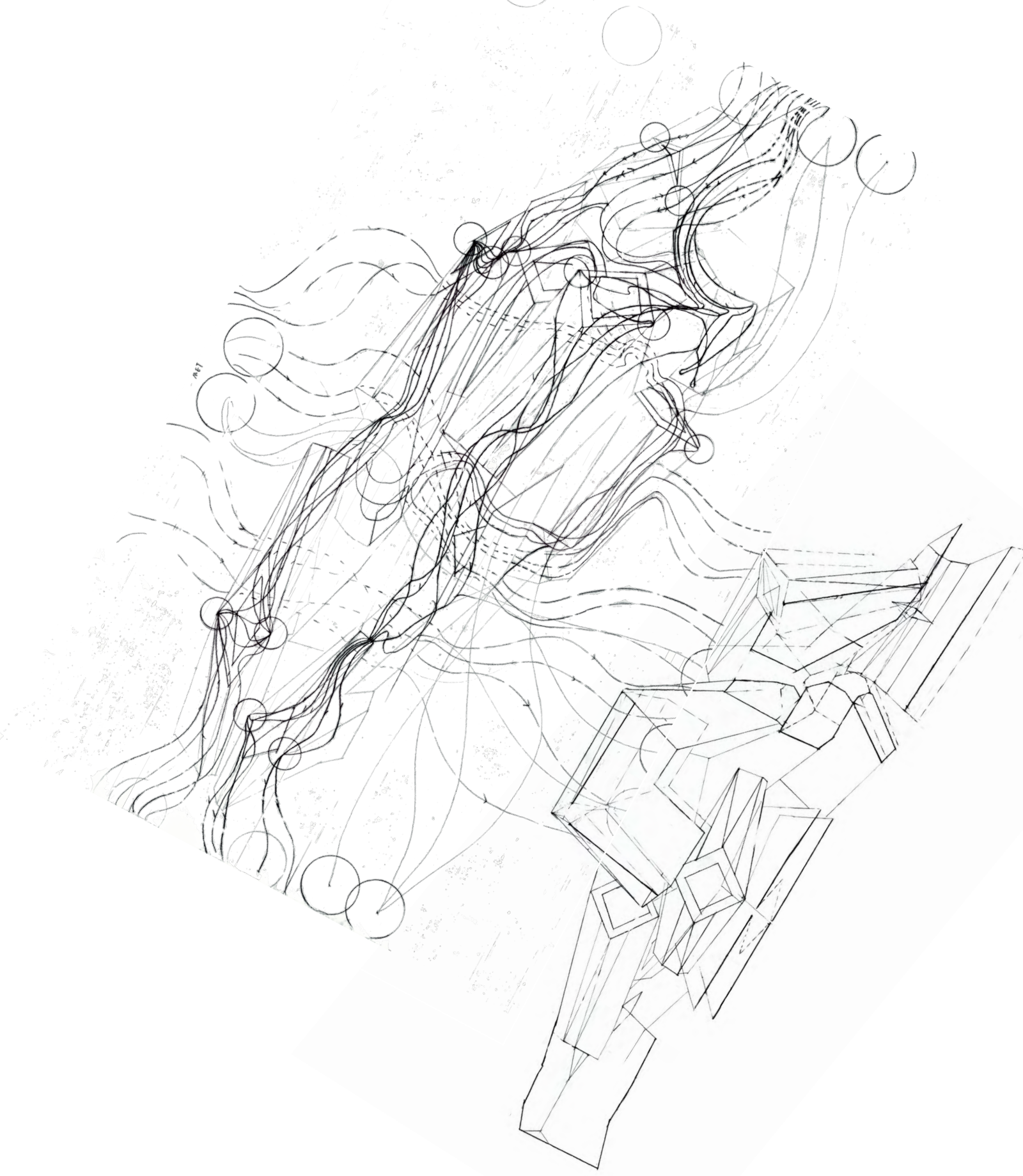
Collage of seeing and being seen: showing the relationship of seeing, being seen, and people's gestures
 Medium: pencil on vellum with photo collage underneath



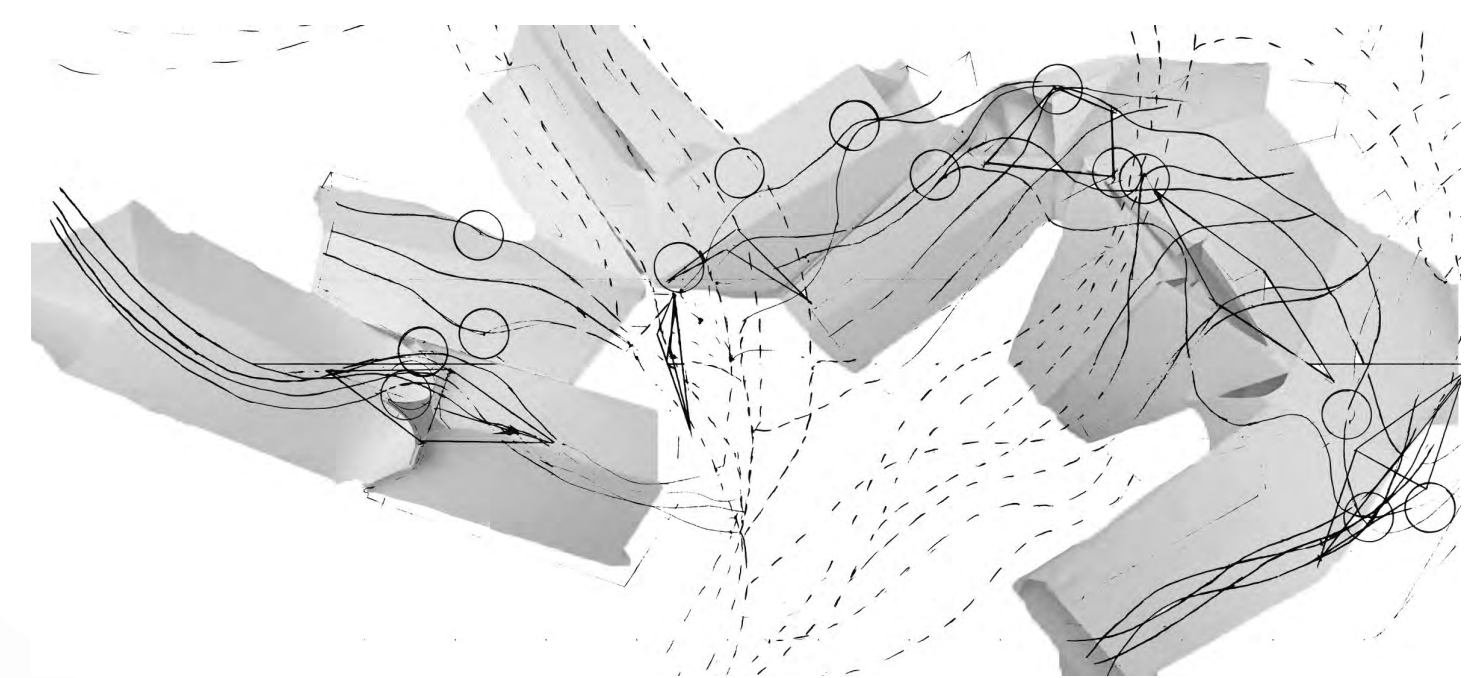
Exploded axon of the model for Metropolitan Museum: showing the density of circulation created by different modules and the gestures of people experiencing each program
 3 Medium: pencil and printed figures on vellum



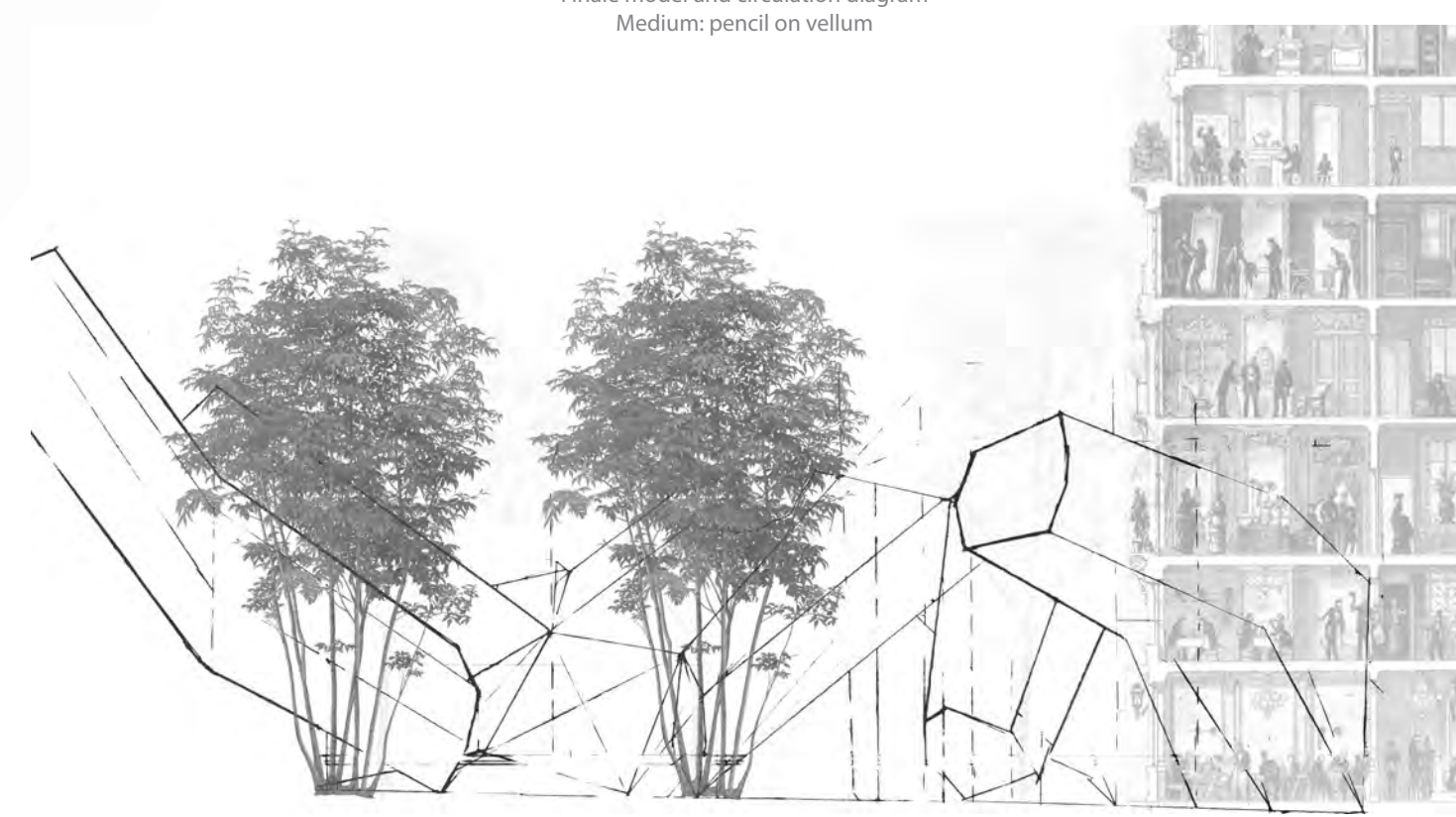
Details of the finale model transforming the stairs in front of the Metropolitan museum
 Medium: photography



Circulation map after the installation of the project on Fifth Avenue: the stairs in front of the Metropolitan Museum



Finale model and circulation diagram
Medium: pencil on vellum



Section for the model
Medium: pencil on vellum with photo collage in the back

Plan of the model: cut from 2.5 feet and see from below to above
Medium: pencil on vellum

Master of Architecture

Columbia University

09/2020-12/2020

Group project with Farouk Kwaning

Critique: Erica Goetz

The housing scheme is confronting the challenge of severe air pollution in Melrose community by imagining a habitable forest which filters air contaminated with allergens, pollutants, carbon and nitrogen dioxide. The modular prefab housing units are organized within a natural air & sound filter (Forest) as well as artificial & mechanical filters as a radical scheme pushing in the future of architecture that improves a way of life in the built environment.

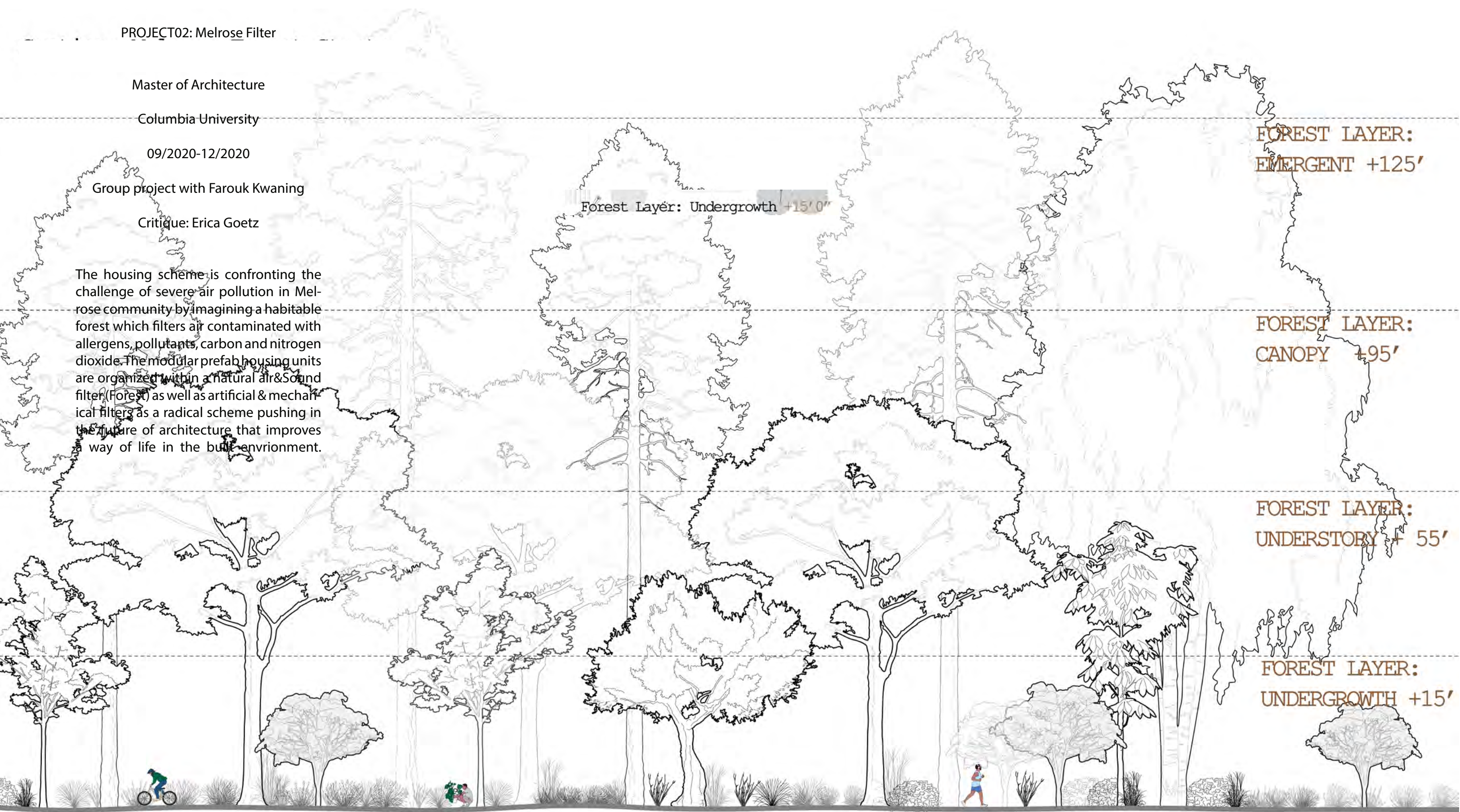
Forest Layer: Undergrowth +15'0"

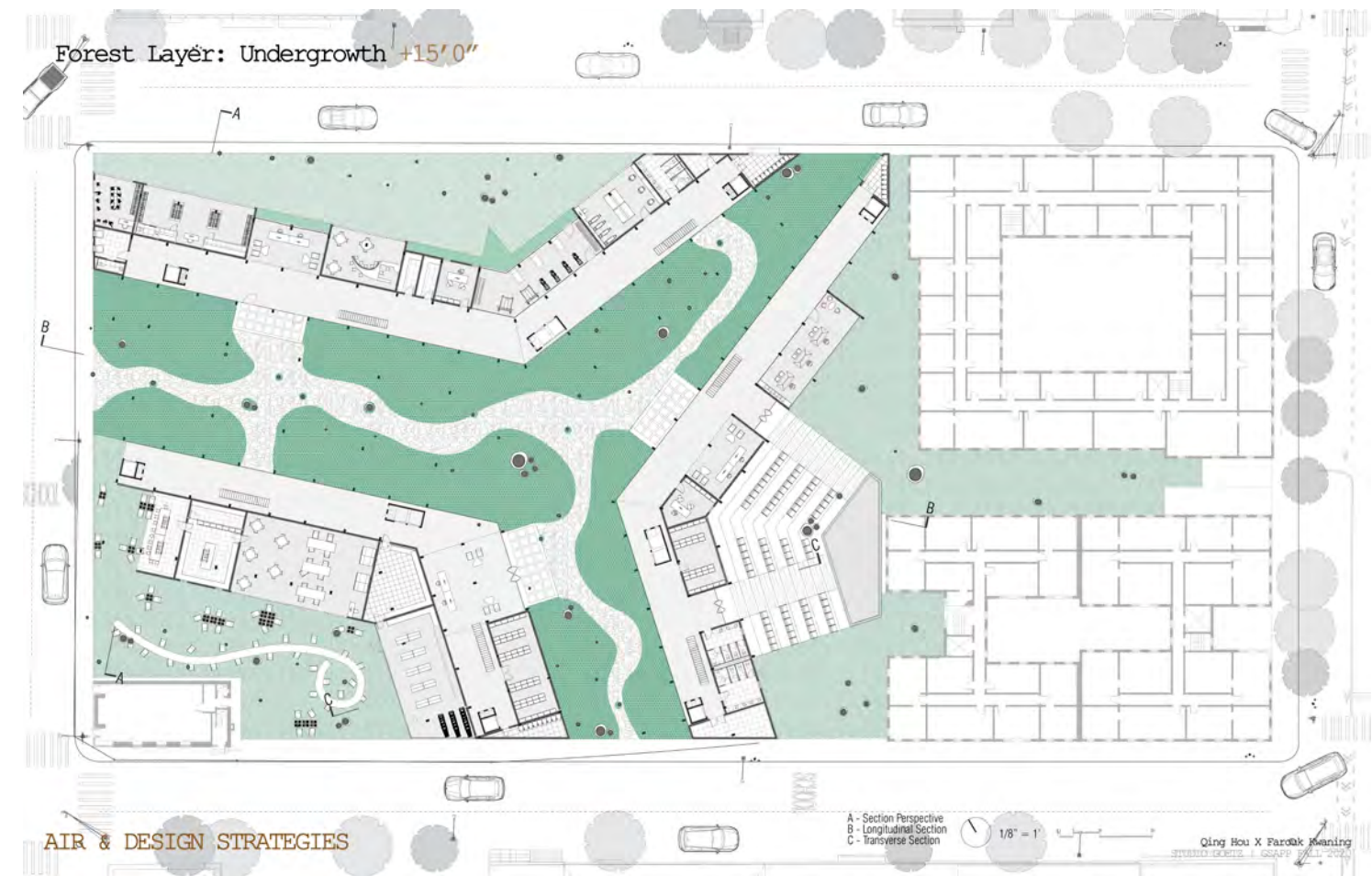
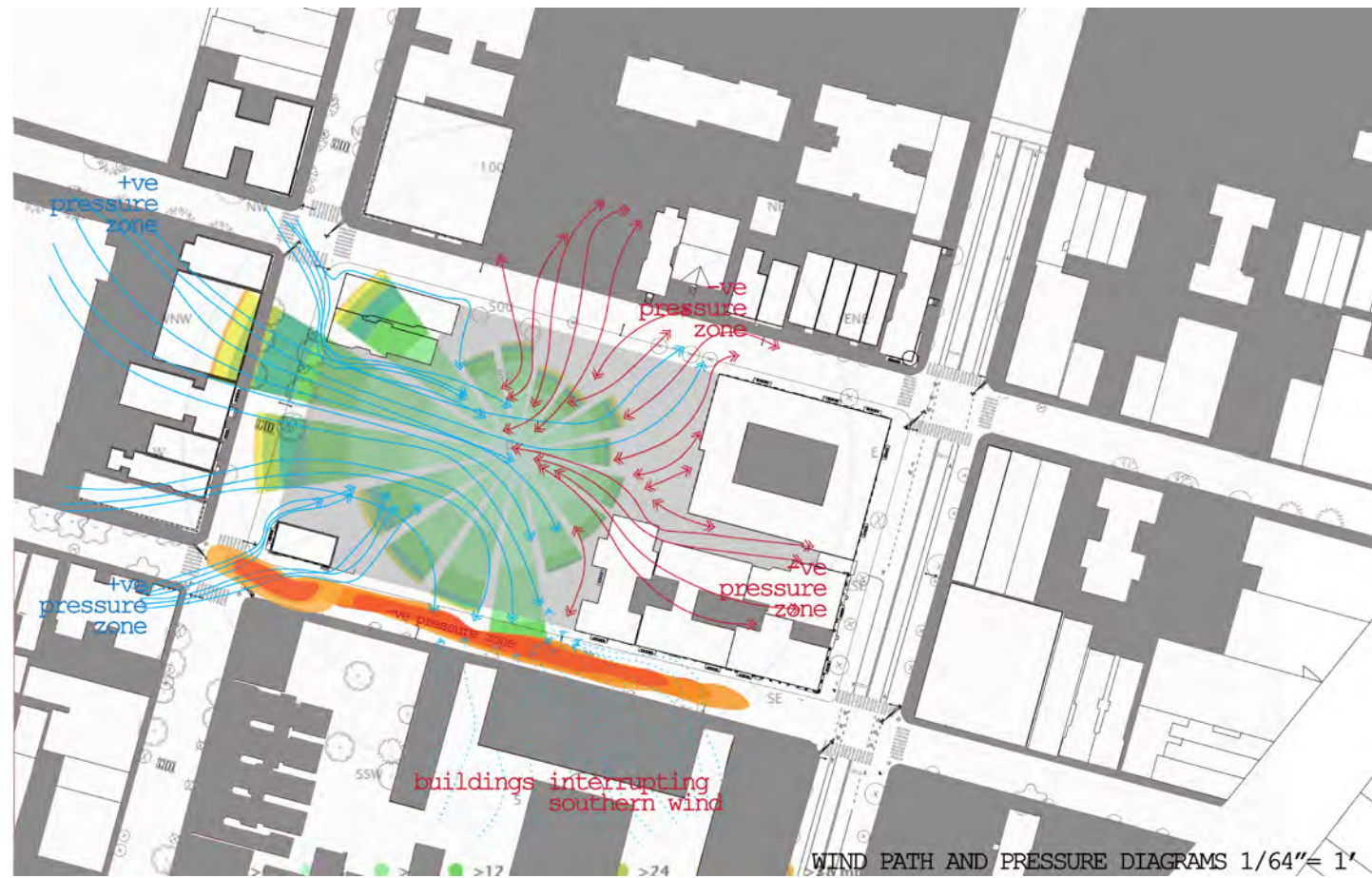
FOREST LAYER:
EMERGENT +125'

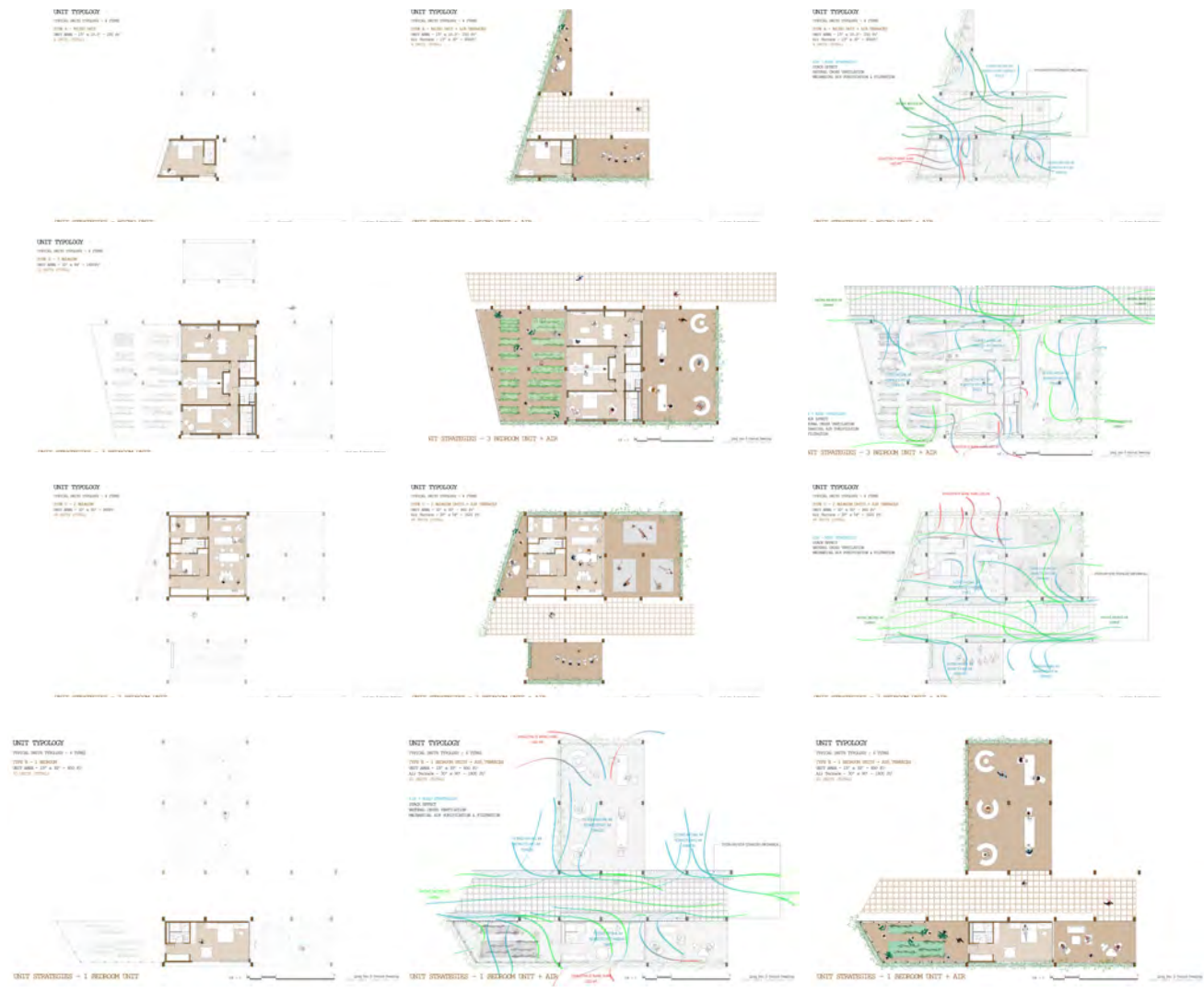
FOREST LAYER:
CANOPY +95'

FOREST LAYER:
UNDERSTORY +55'

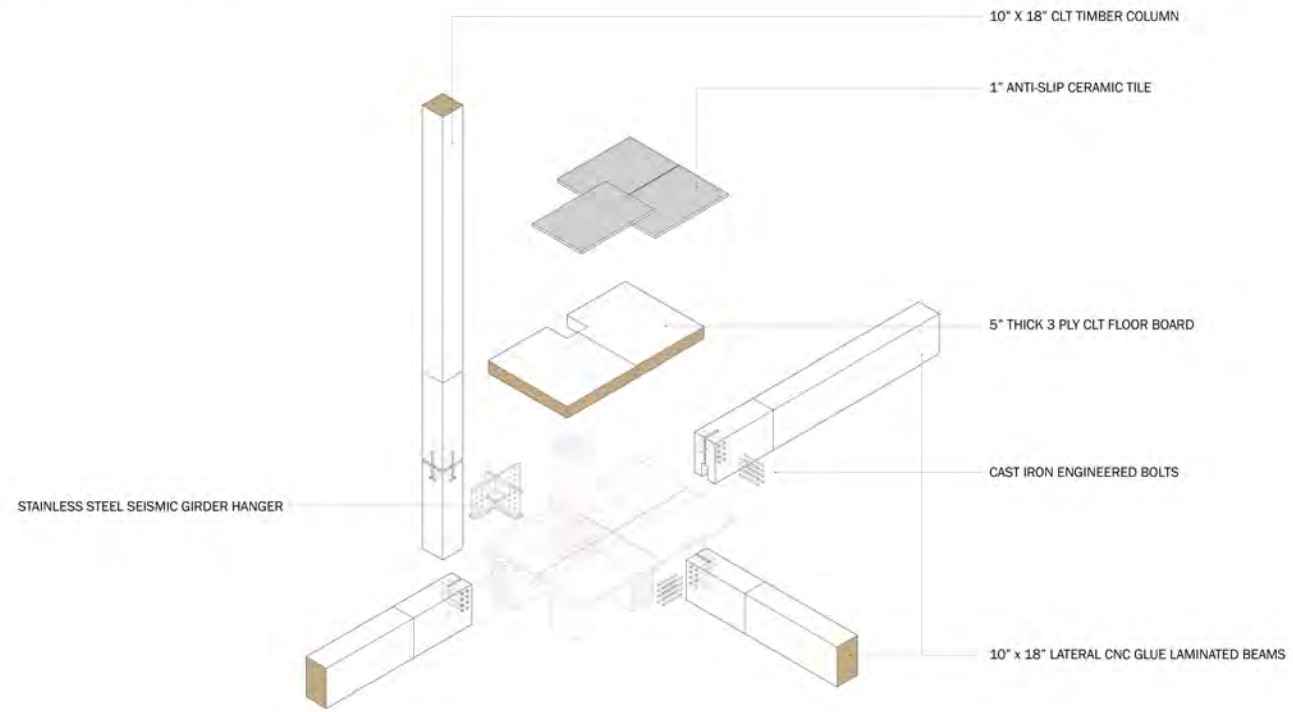
FOREST LAYER:
UNDERGROWTH +15'



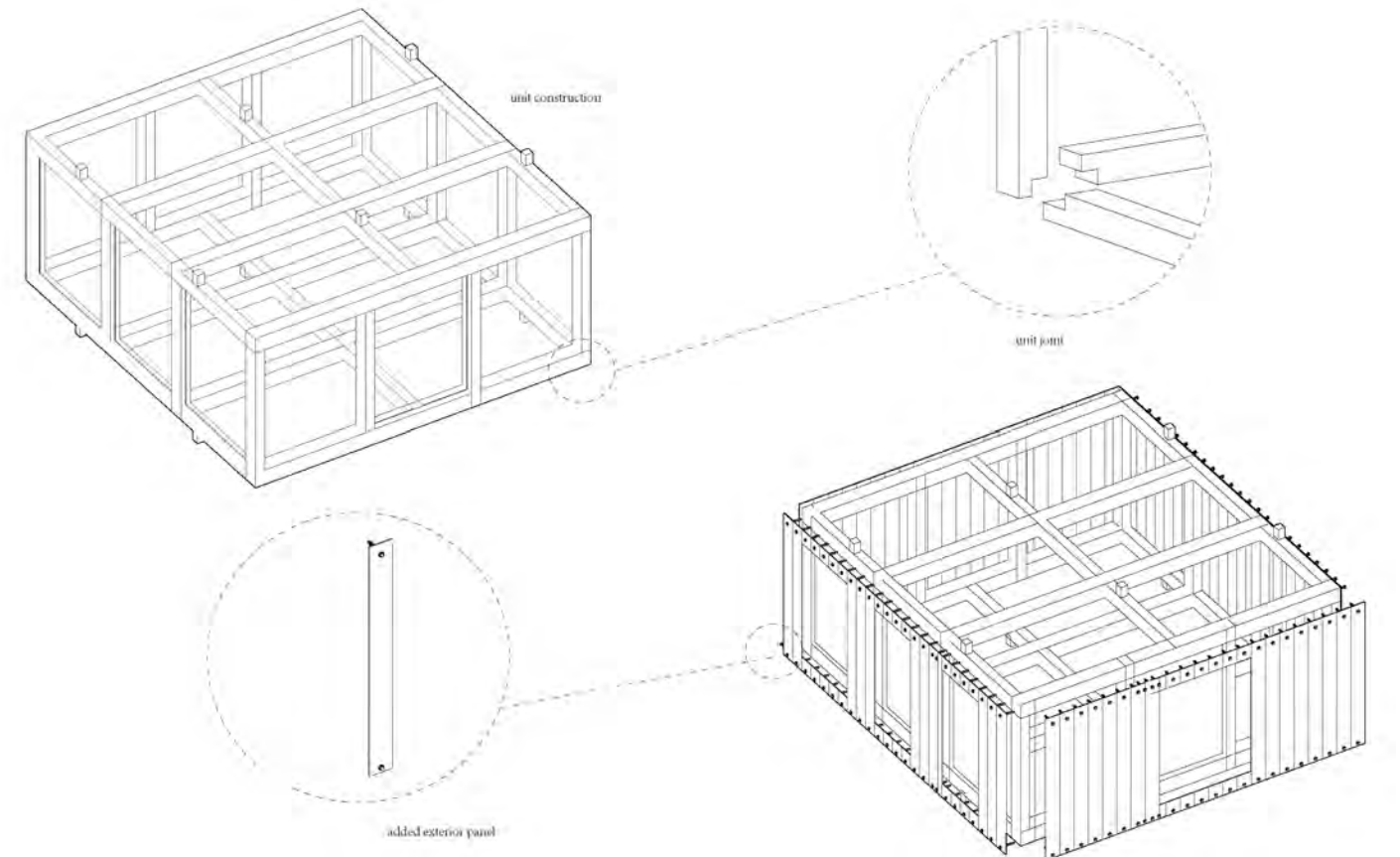
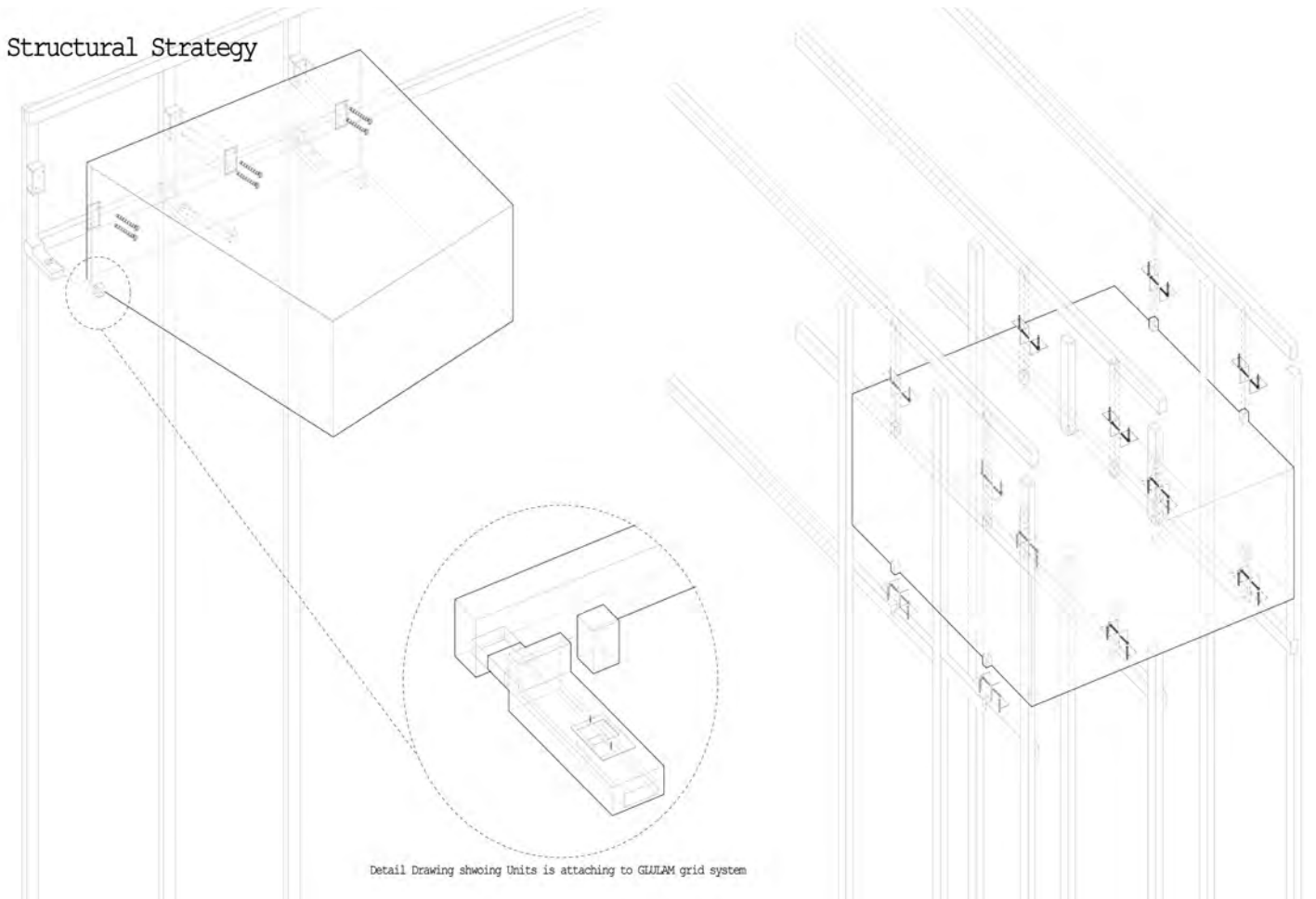




CROSS LAMINATED TIMBER COLUMN DETAIL



Structural Strategy



Section Perspective



AIR & DESIGN STRATEGIES



Qing Hou X Farouk Kwaning
STUDIO 30212 | CSAPP, FALL 2020

Section Perspective



AIR & DESIGN STRATEGIES



Qing Hou X Farouk Kwaning

Wall Section 1/4



AIR & DESIGN STRATEGIES

PROJECT03: Water Catcher for an Indigenous Future life style

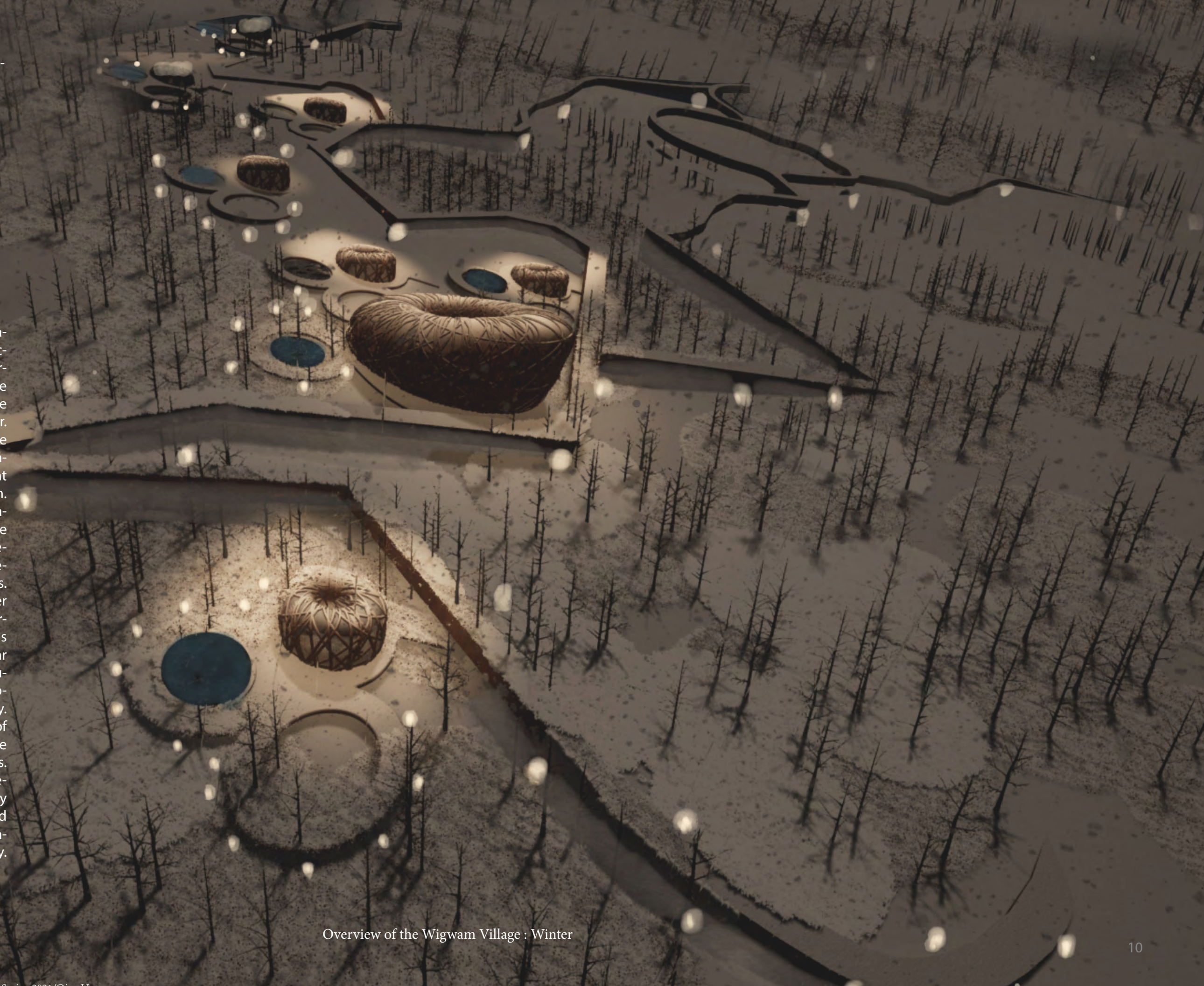
Master of Architecture

Columbia University

01/2021-4/2021

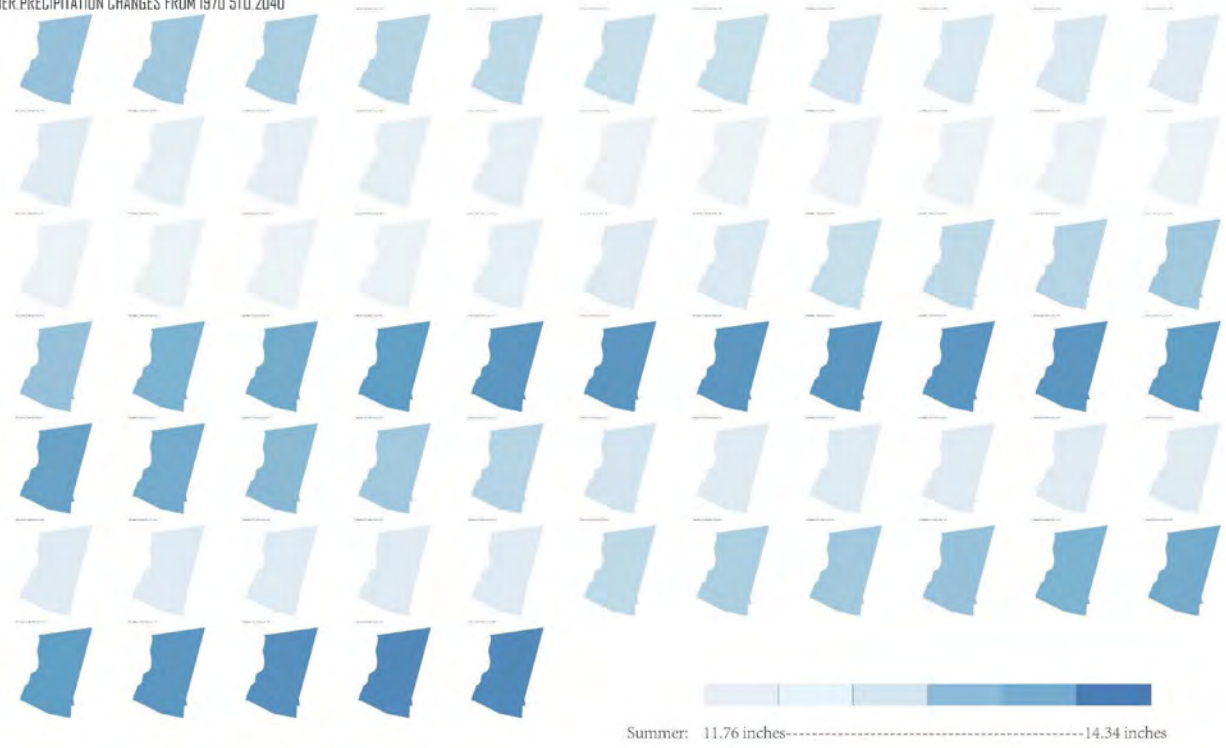
Critique: Vanessa Keith

This project responds to the uneven distribution of water resources and water application of the current site. It is also a response to the more and more extreme climate with dry spring and soaking summer. As it is one of the reserved areas of the native Americans and contains a sacred site, so the project will be a light plug-in considered for future expansion. It proposes that buildings as infrastructures storing water above ground from wet summer and redistributes water in dry spring, preparing for future climate changes. This project stores water from higher lands, preventing them from disappearing from their journey to lower lands. It also offers a possibility of a modular future where accommodations for humans/plants and animals are easily replicated and environmentally friendly. Structurally, it references the form of a native wigwam structure and the semi-permanent nature of its structures. It is because that the specific areas' responses to climate changes may vary year by year. So the structure should be moveable and easy to plug in on-site for adapting to changing reality.



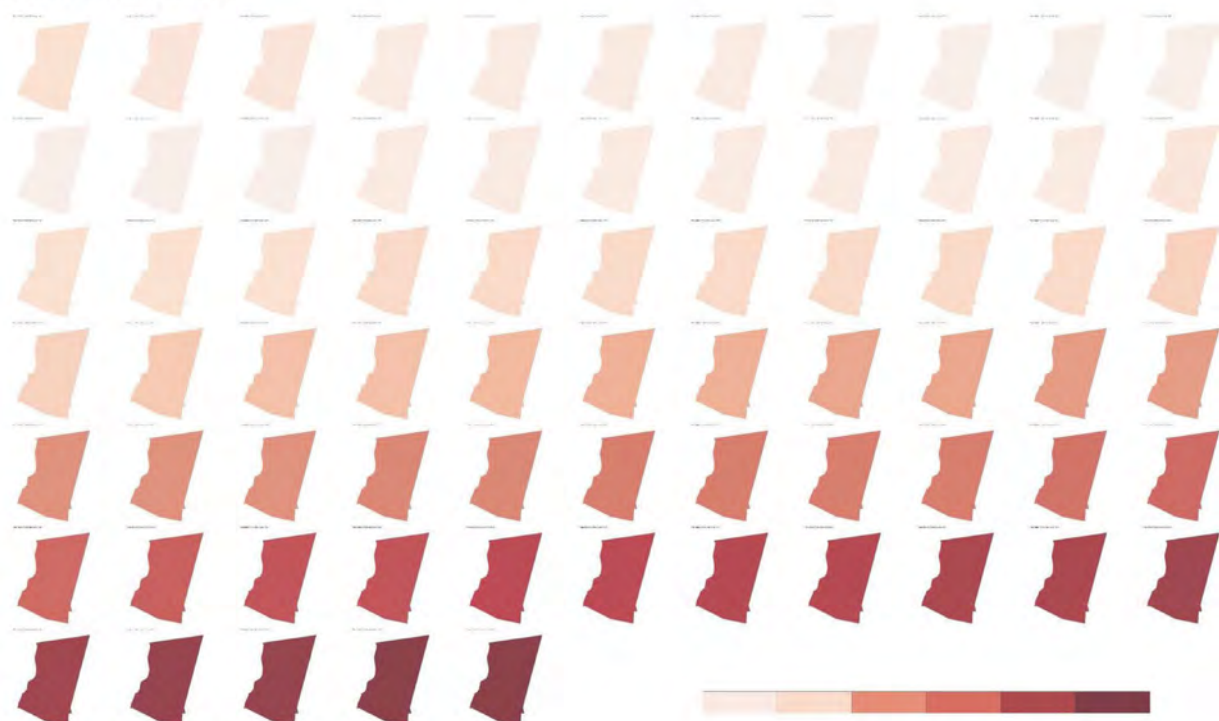
Overview of the Wigwam Village : Winter

SUMMER PRECIPITATION CHANGES FROM 1970 TO 2040



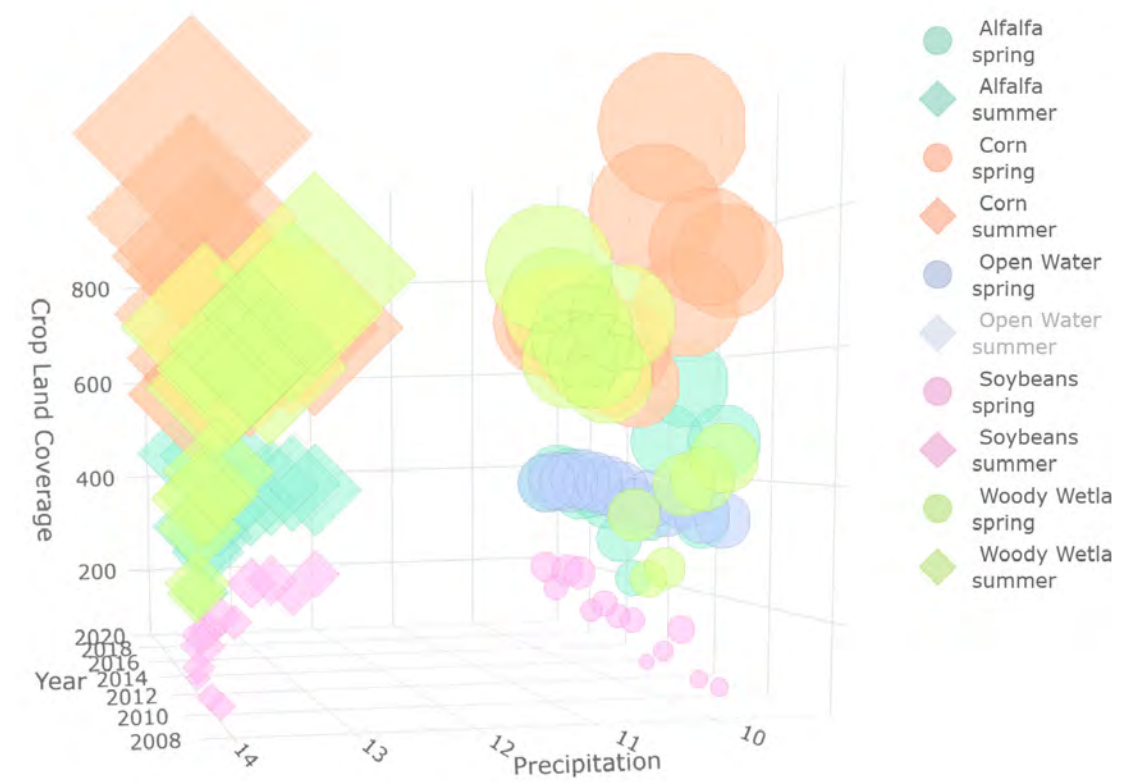
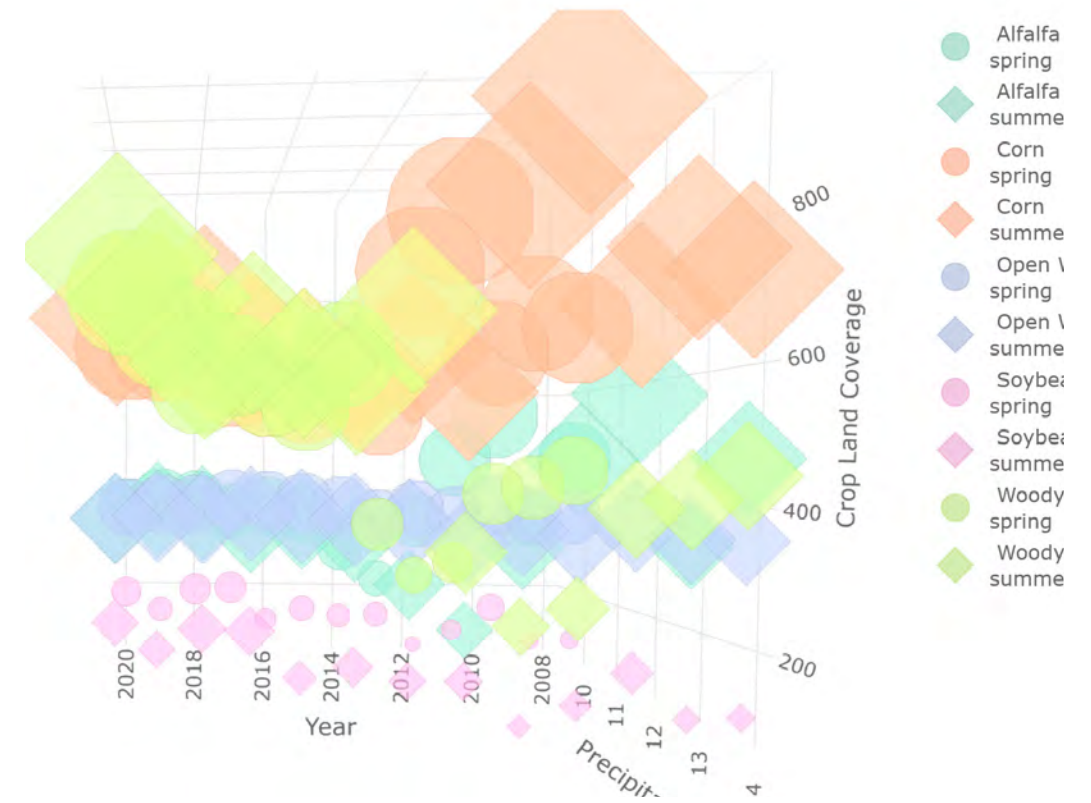
Columbia Graduate School of Architecture, Planning and Preservation / AdjT/ studio / Indigenous future / Spring 2021/ Qing He

COUNTY PRECIPITATION CHANGES FROM 1970 TO 2040



Columbia Graduate School of Architecture, Planning and Preservation / AdjT/ studio / Indigenous future / Spring 2021/ Qing He

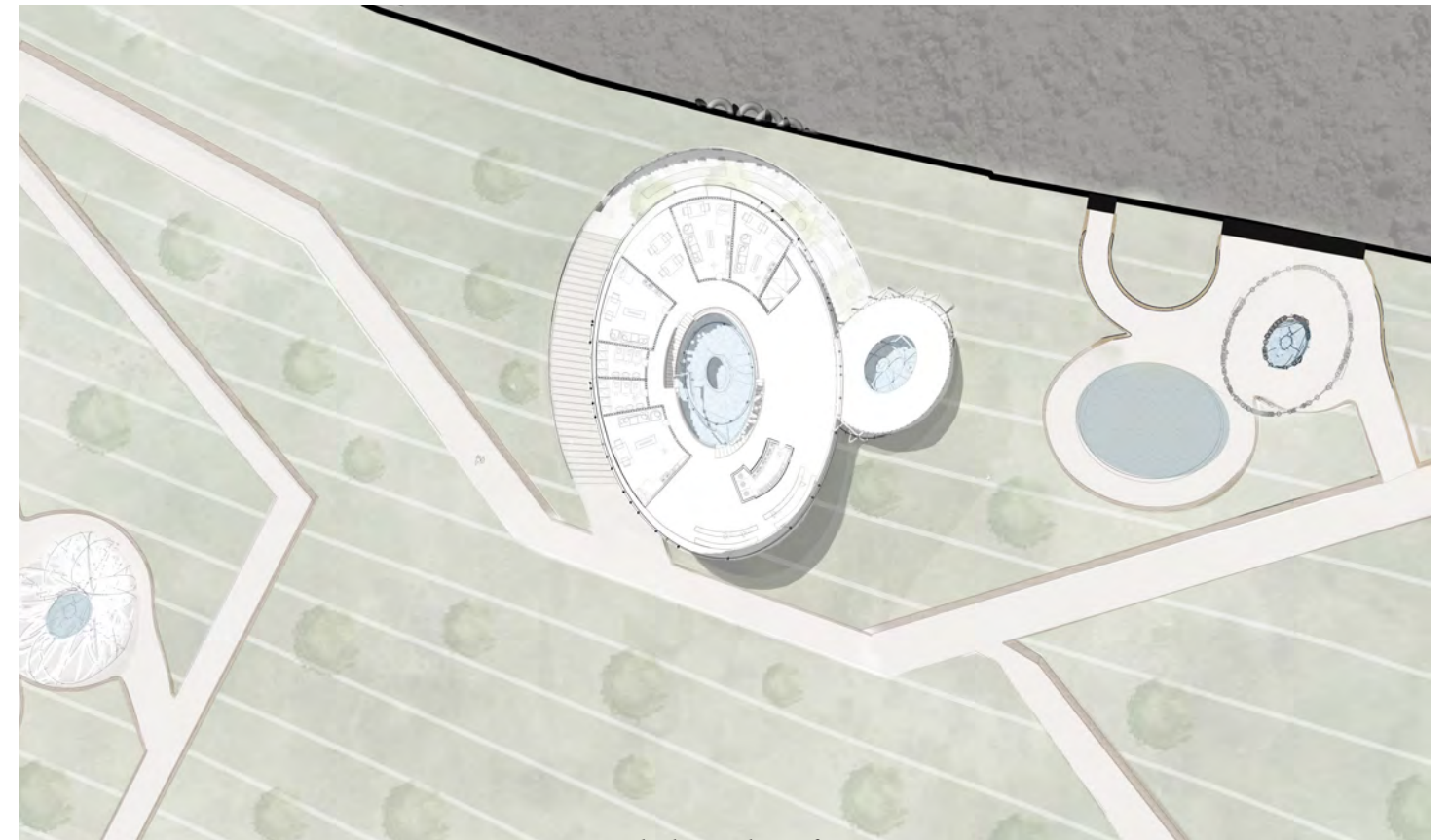
Precipitation study from present to future



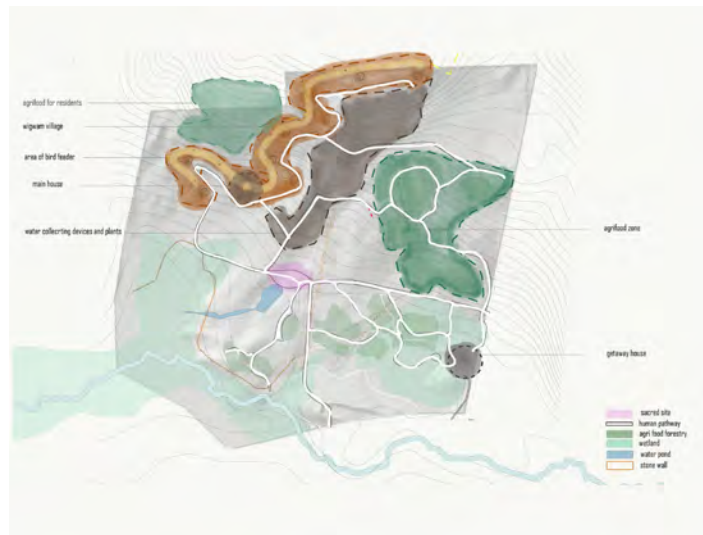
Local Crop Yield 3d Mapping (R programming language)



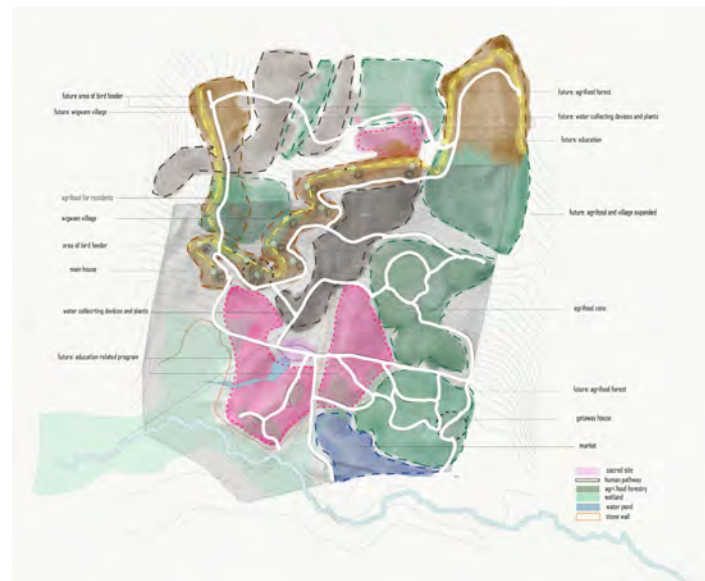
Overall Site Plan



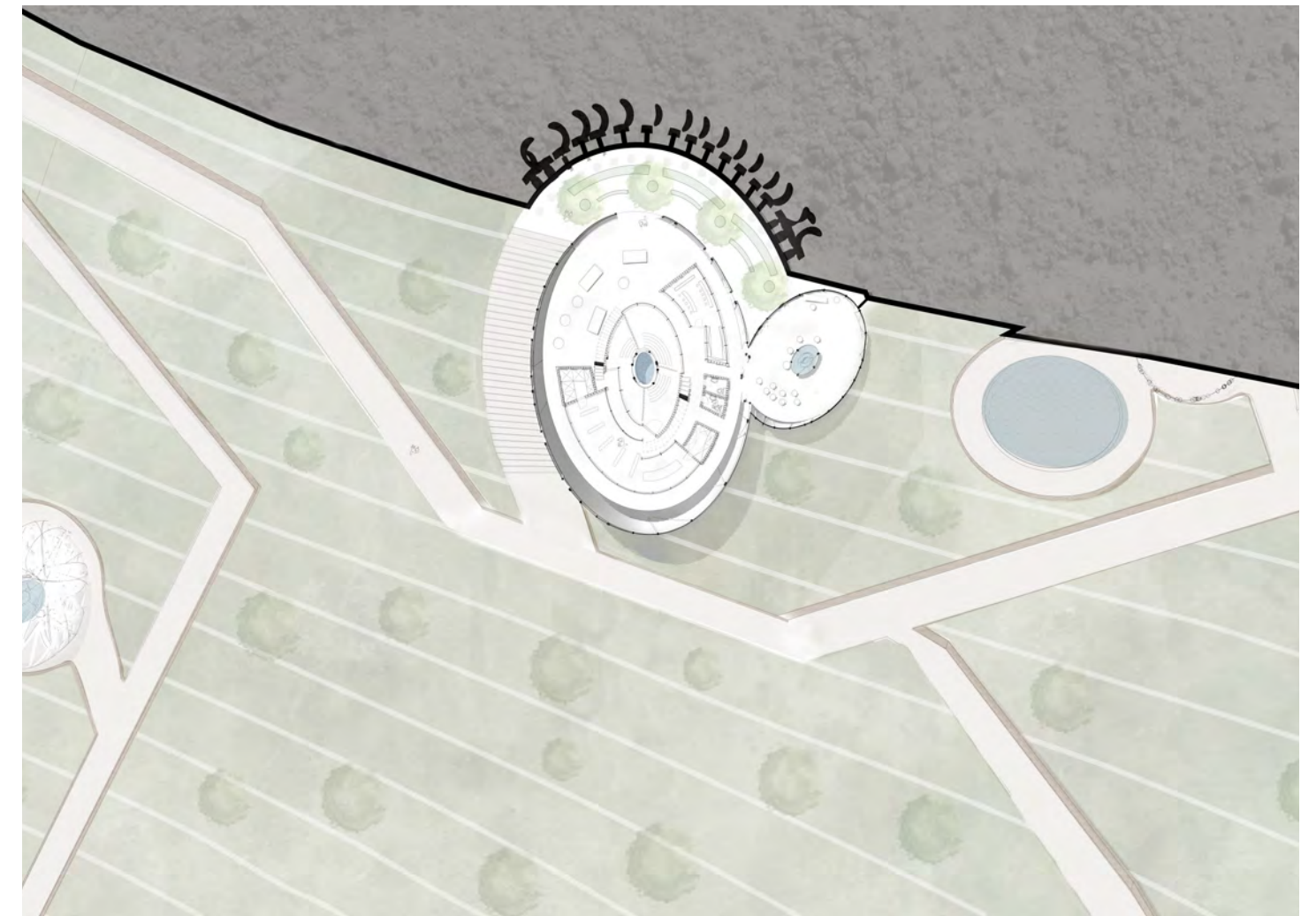
Second Floor Plan of Main House



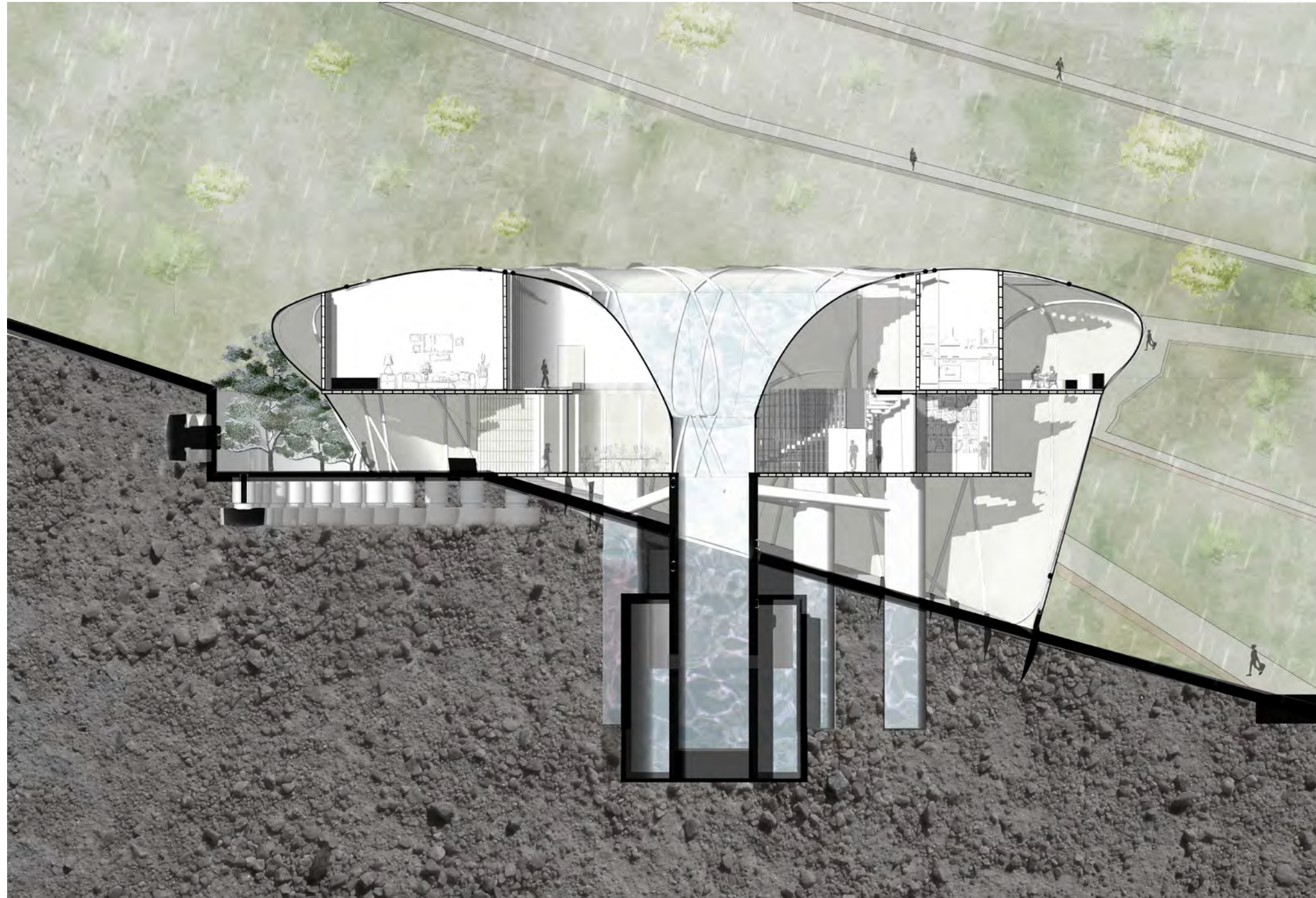
Site Plan after Design



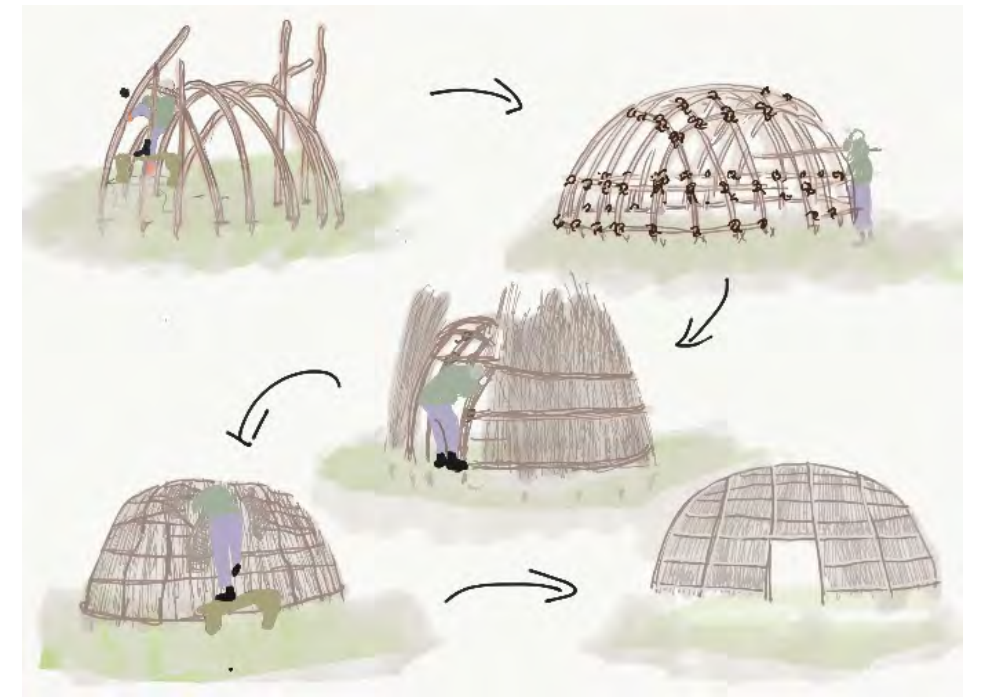
Site Plan in the Near Future



Ground Floor Plan of Main House



Section of the Main House



Study of Local Housing Construction



View of the Wigwam Village from Main House Platform :Winter



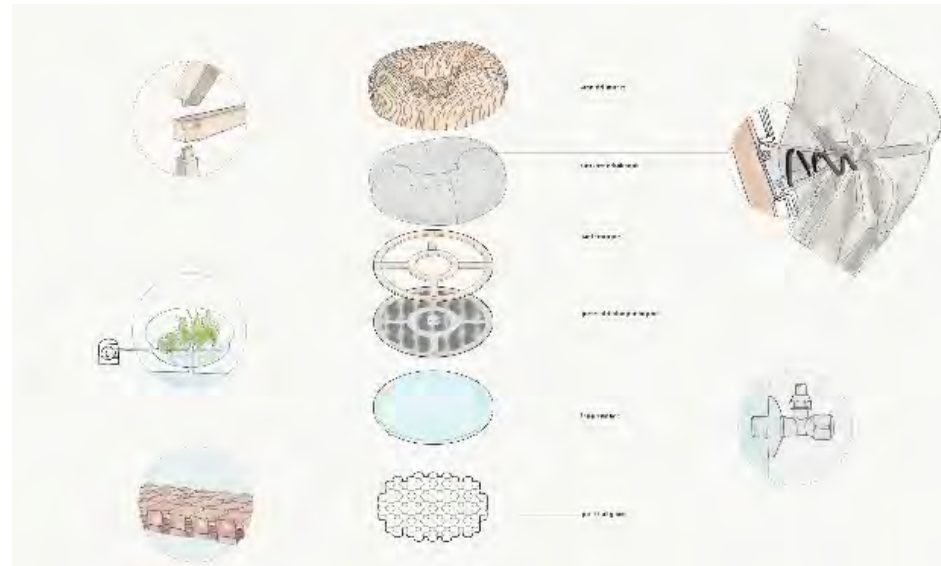
View of the Wigwam Village from Main House platform :fall



New Wigwam unit with backyard wetland and garden



Bird nest area around backyard wetland



Green House Exploded Axon



Get-away House Exploded Axon



Green House Location

Seasonality of the project



Get-away House Site Plan

PROJECT04: BUBBLE SCHOOL

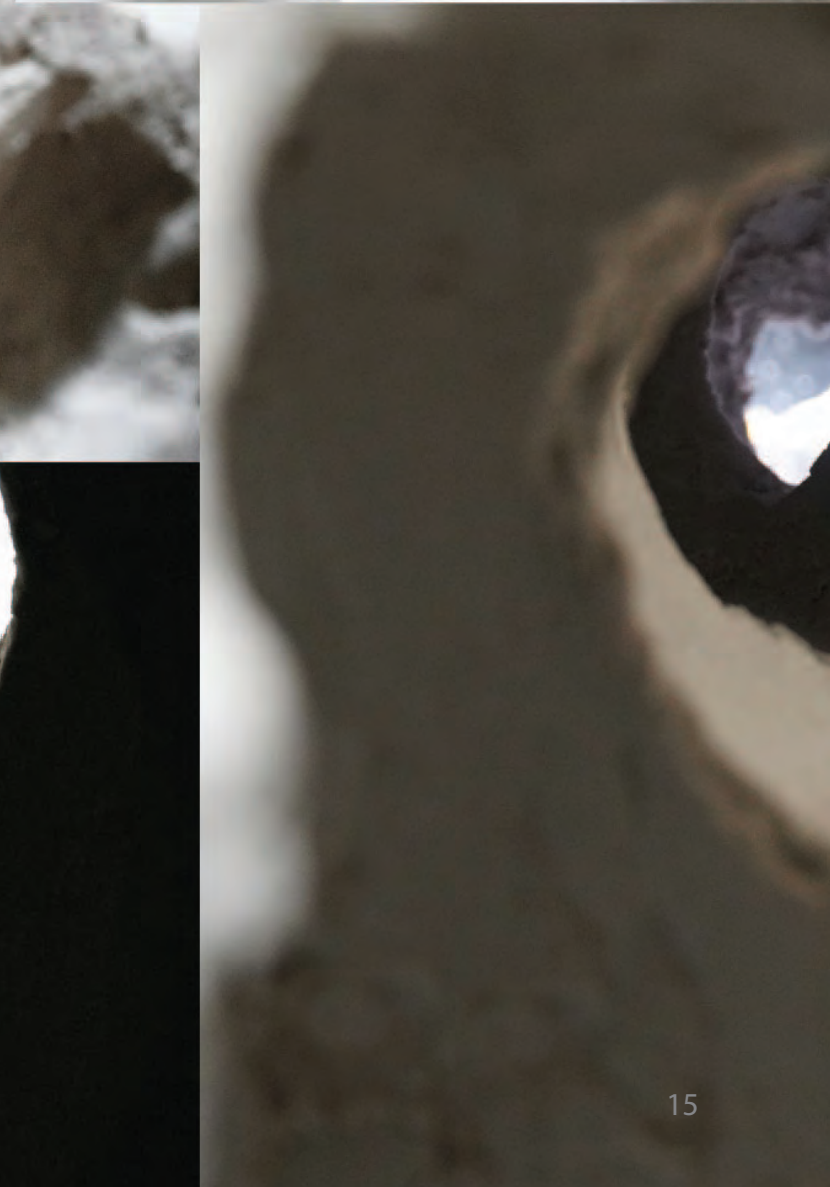
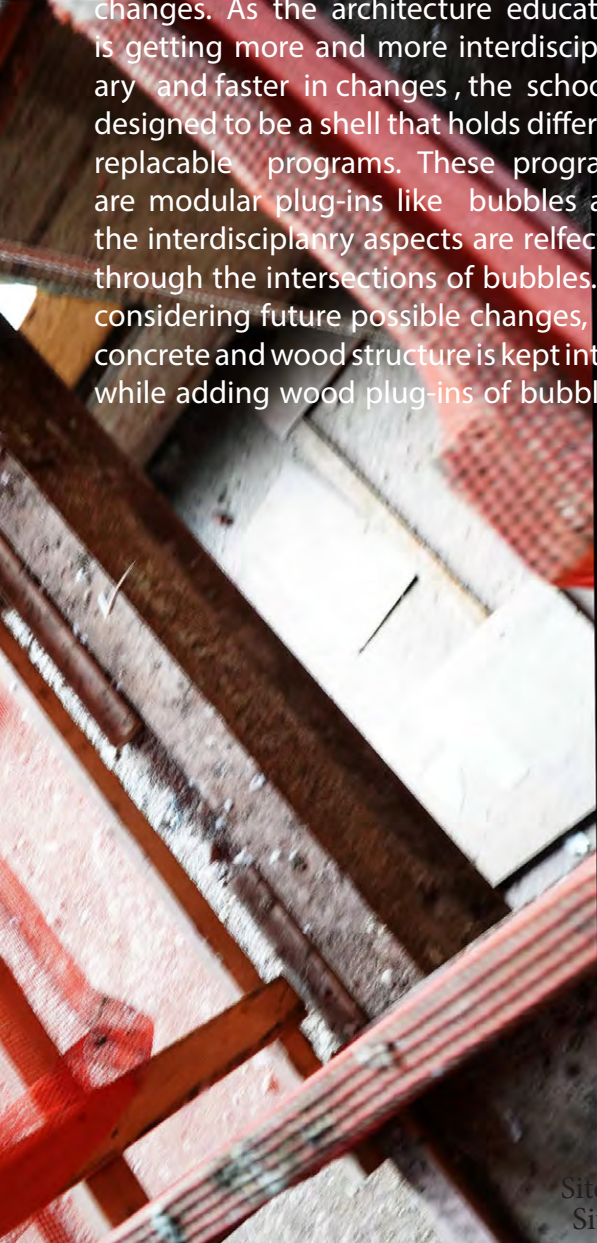
Master: Architecture

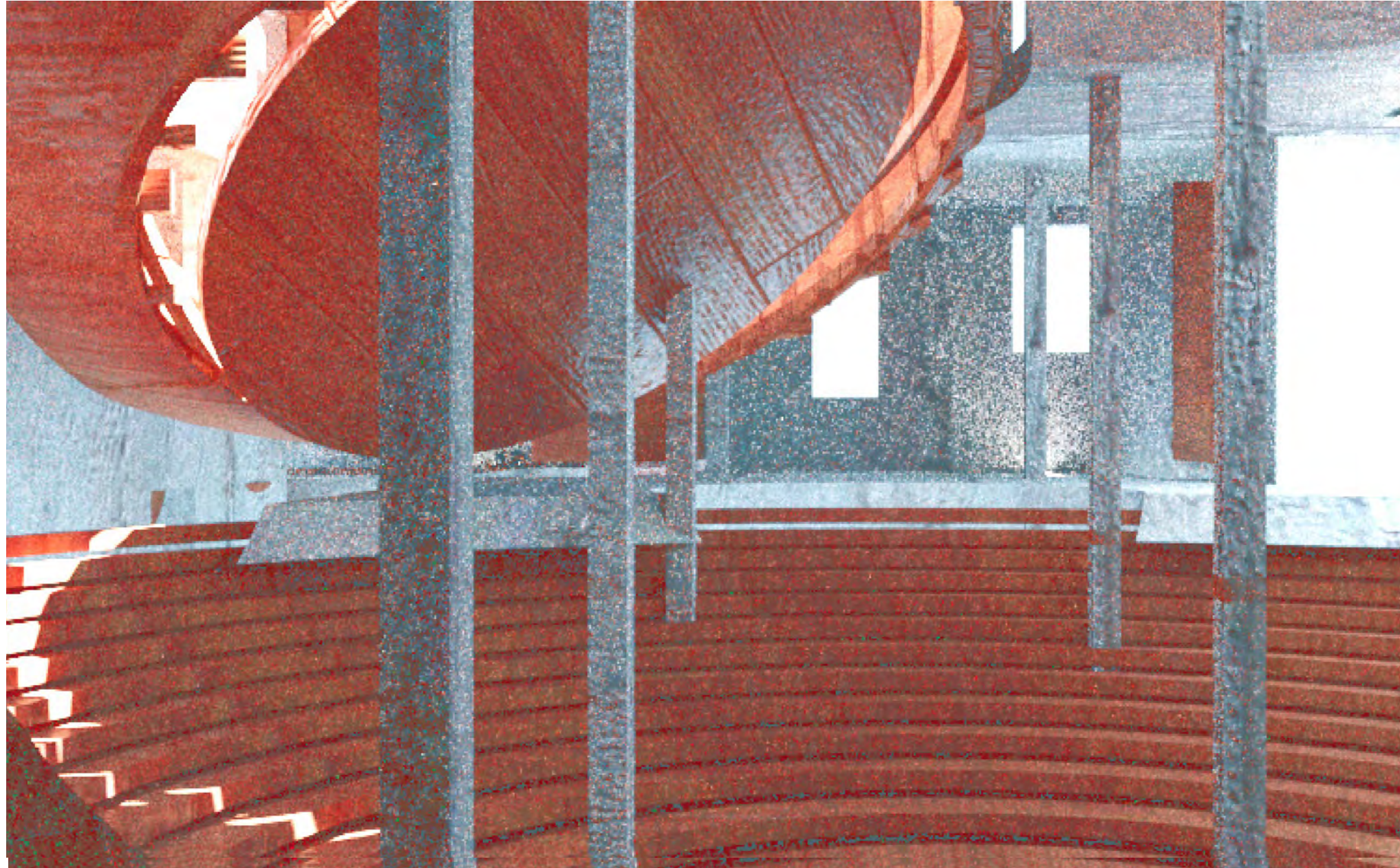
College: University

1/2019 - 5/2019

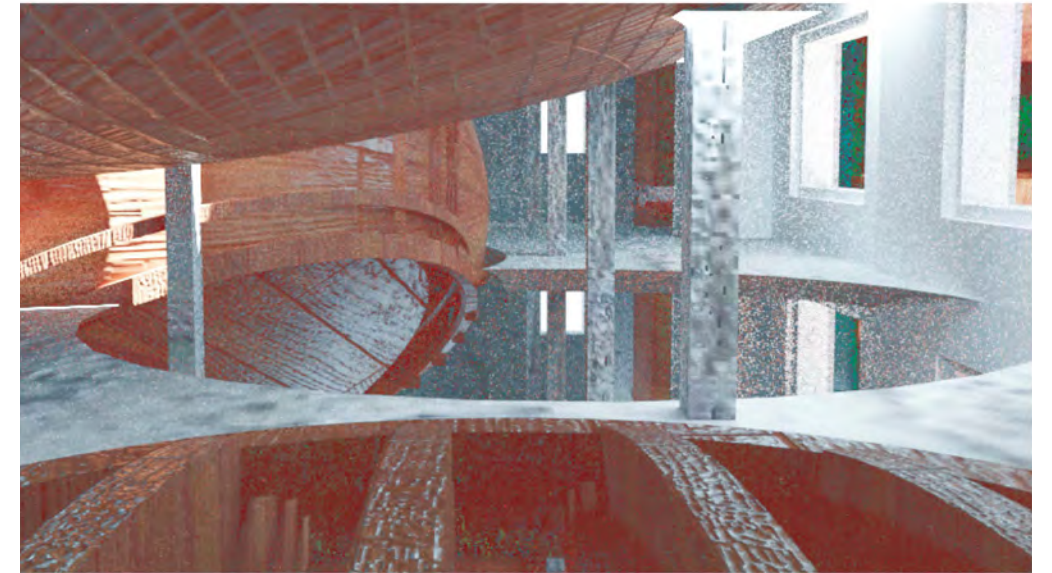
Critique: Erica Goetz

The site is an abandoned building that is getting rebuilt into a school. It is punctured all around after its first life. It sits in East Village, NYC. The program of my project is an architecture school that is accommodative for future curriculum changes. As the architecture education is getting more and more interdisciplinary and faster in changes, the school is designed to be a shell that holds different replacable programs. These programs are modular plug-ins like bubbles and the interdisciplinary aspects are reflected through the intersections of bubbles. In considering future possible changes, the concrete and wood structure is kept intact while adding wood plug-ins of bubbles.





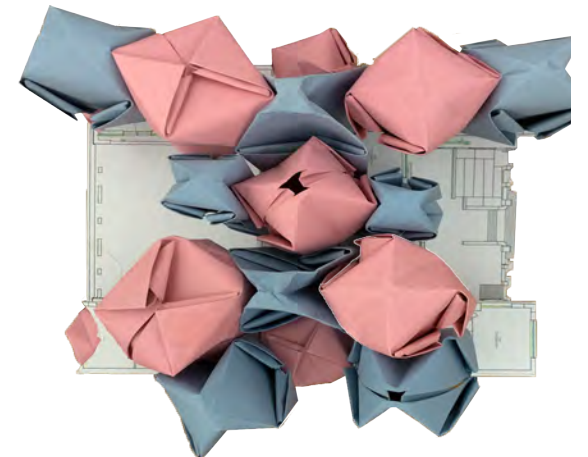
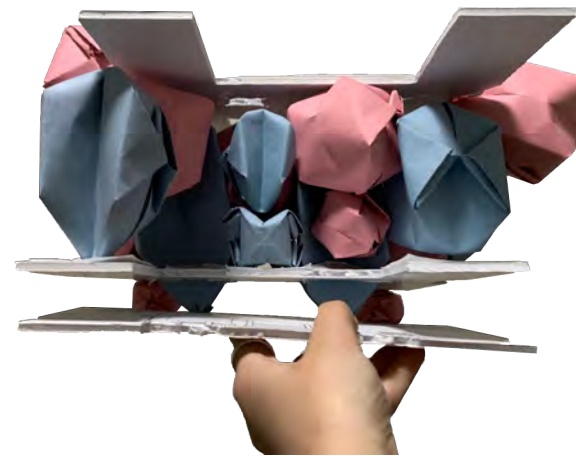
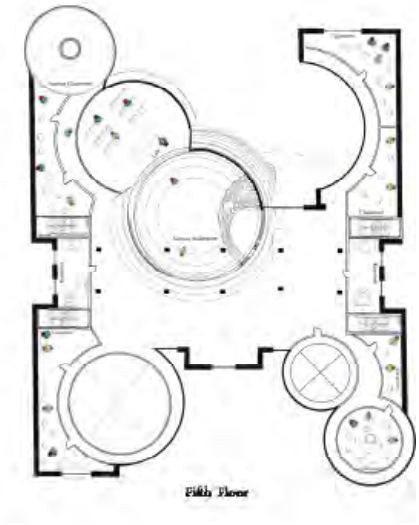
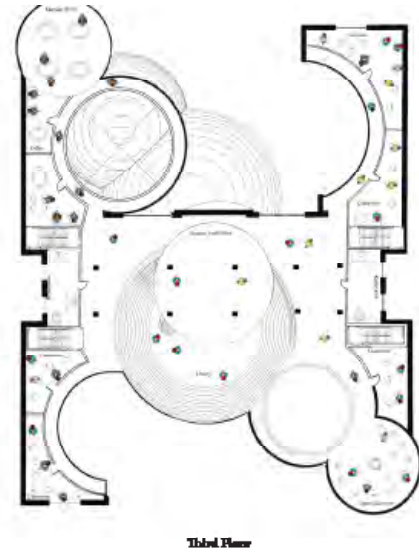
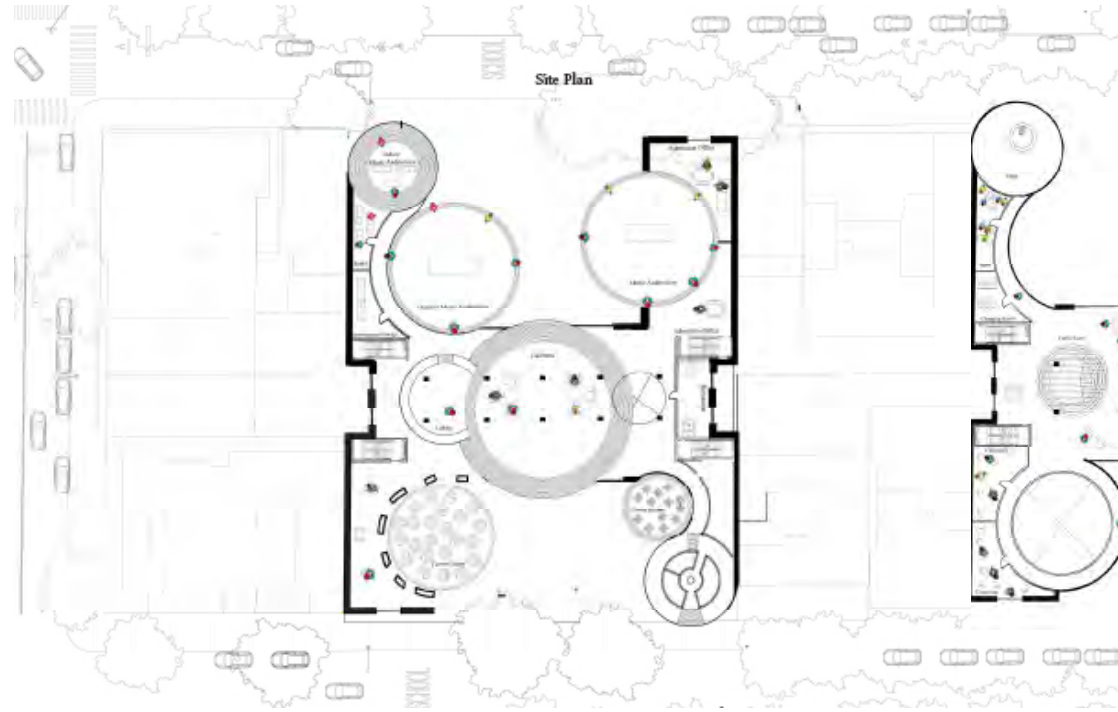
First floor Cafe



Second floor playground



Top Floor observatory



PROJECT05: BROADWAY STUDY

Master of Architecture Program

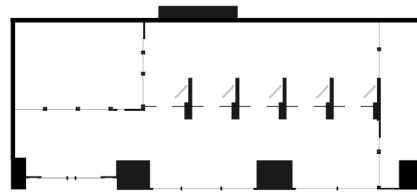
Columbia University

08/2019 - 12/2019

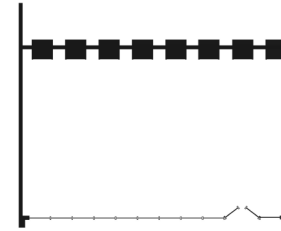
Critique: Lindy Roy

From 80th to 120th street Broadway is the subject of study. This project is based on a sequence of observations from these forty streets of Broadway, New York. The site choice and the architectural interventions are based on the critique of the excessive presence of big private companies like banks throughout these streets. These forty streets, pressed from private space (private business or residential space) and public space (streets) shares the same feature, which is a lack of common space. My project proposes to take the corner banks particularly the ATM banks throughout the forty streets and transforms their lobbies into common space for new community economic activities. My approach is to transform banks' frontage, which is more of a propaganda than an enclosure these days into a gallery for community funding. Theoretically, this project challenges the threshold between public and private space giving room for common activities.

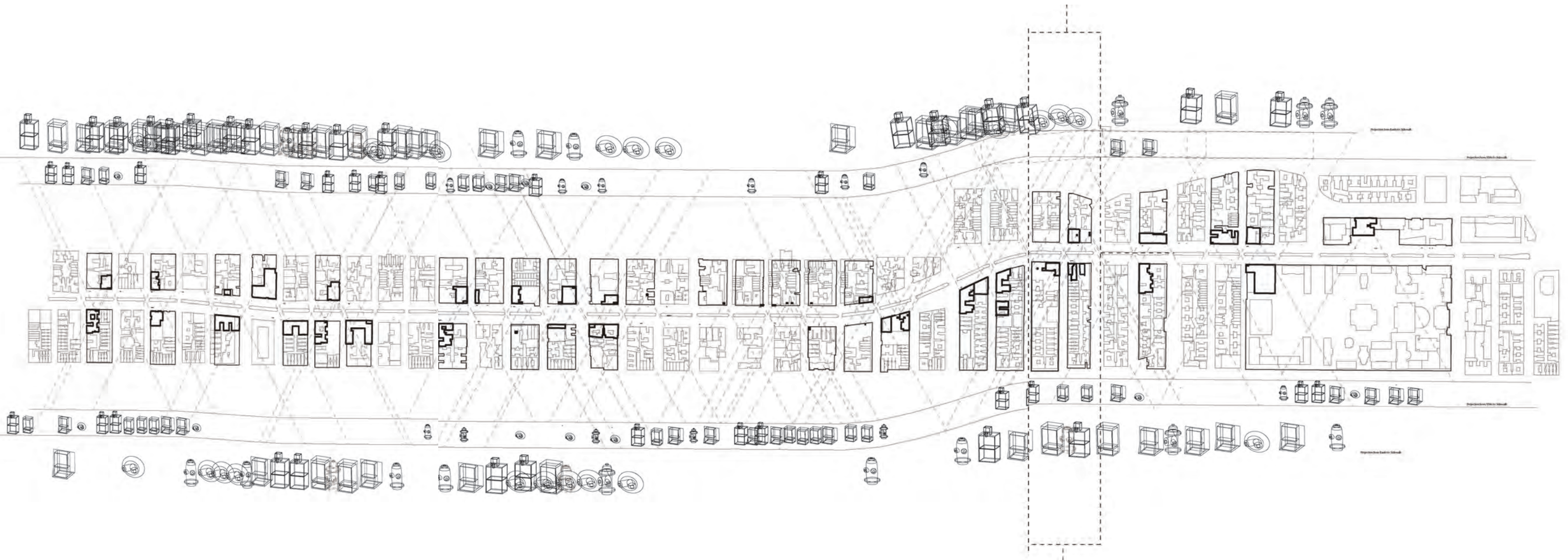




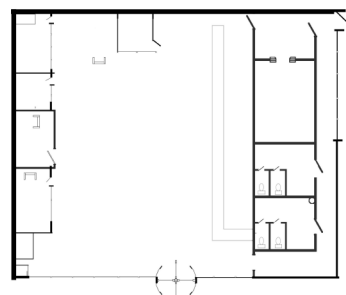
Bank interior typology 1



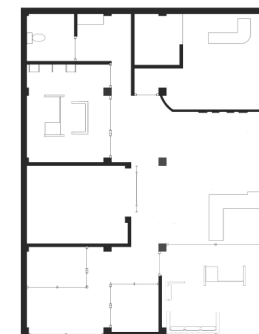
ATM Bank interior typology used in this project



The plan of 109th street where there is a chase bank in the corner and an area of visibility (Cars cannot park within 15 feet from both sides of a fire hydrant) due to the presence of a fire hydrant. This condition, saying the presence of a corner bank and a corner fire hydrant is occurring repeatedly throughout 40 streets and thus becoming a typical condition for a sequence of sites.



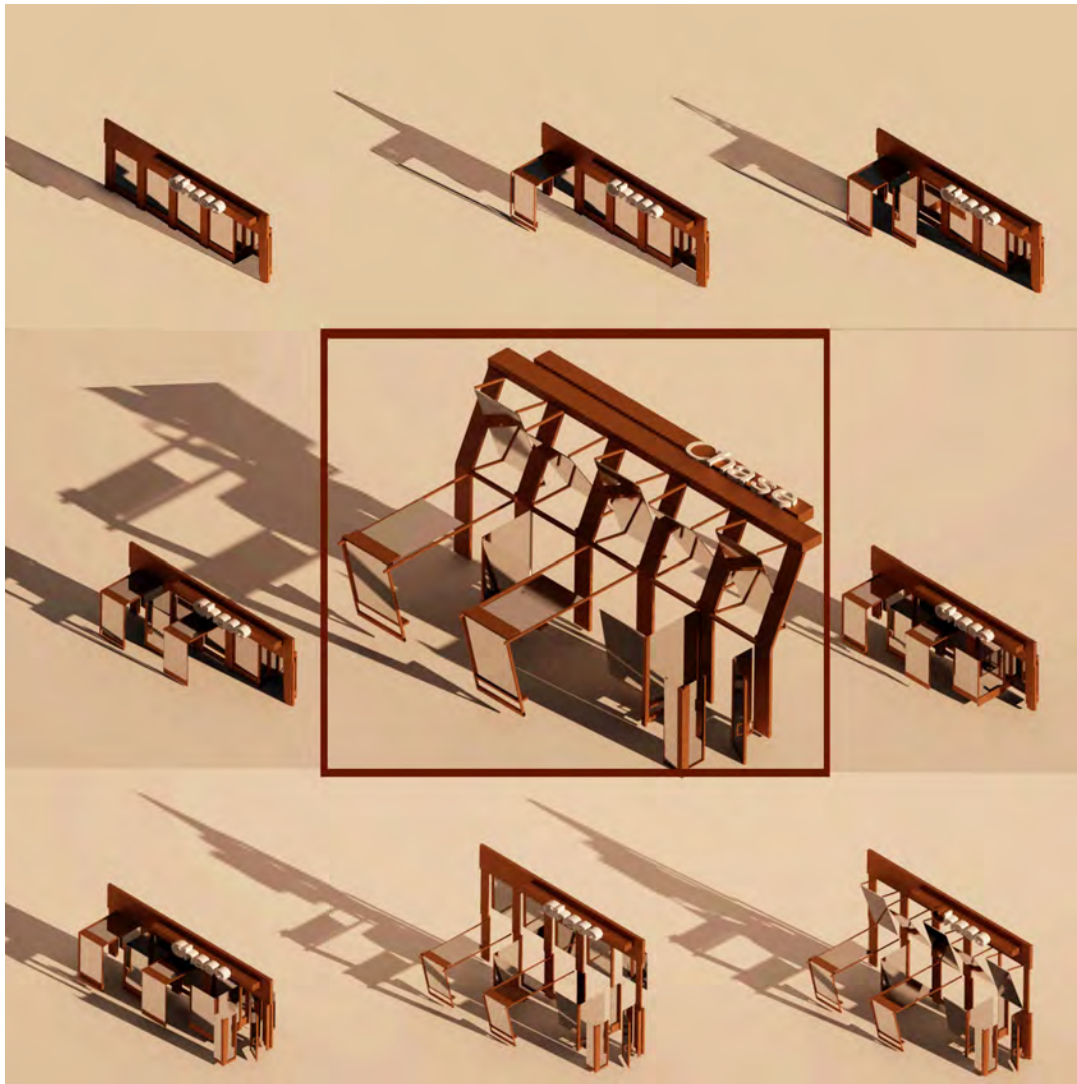
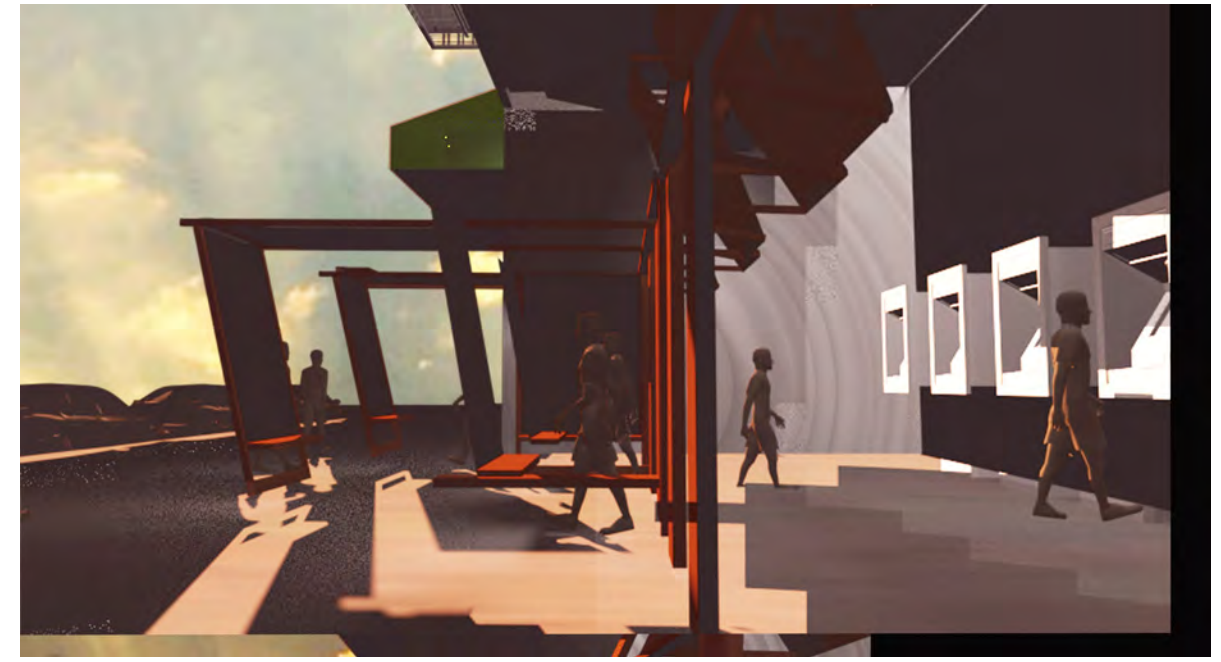
Bank interior typology 3



Bank interior typology 4



Concept model: Night Stadium When banks are Closed



Movement Mechanics of the Facade



Above is the drawing showing the night scene after the transformation of the bank frontage. The mirror helps reverse the activities in the gallery and turn them into public experiences



The interior view after the transformation of the bank frontage where the innermost space is for atm machines as it was and the space in-between public streets and atm area is transformed for common use



PROJECT06: CBE Equilibrium

Master of Architecture, GSAPP

Columbia University

2021/09/1-12/15

Crit: Michael Bell

Partner: Jiafeng Gu

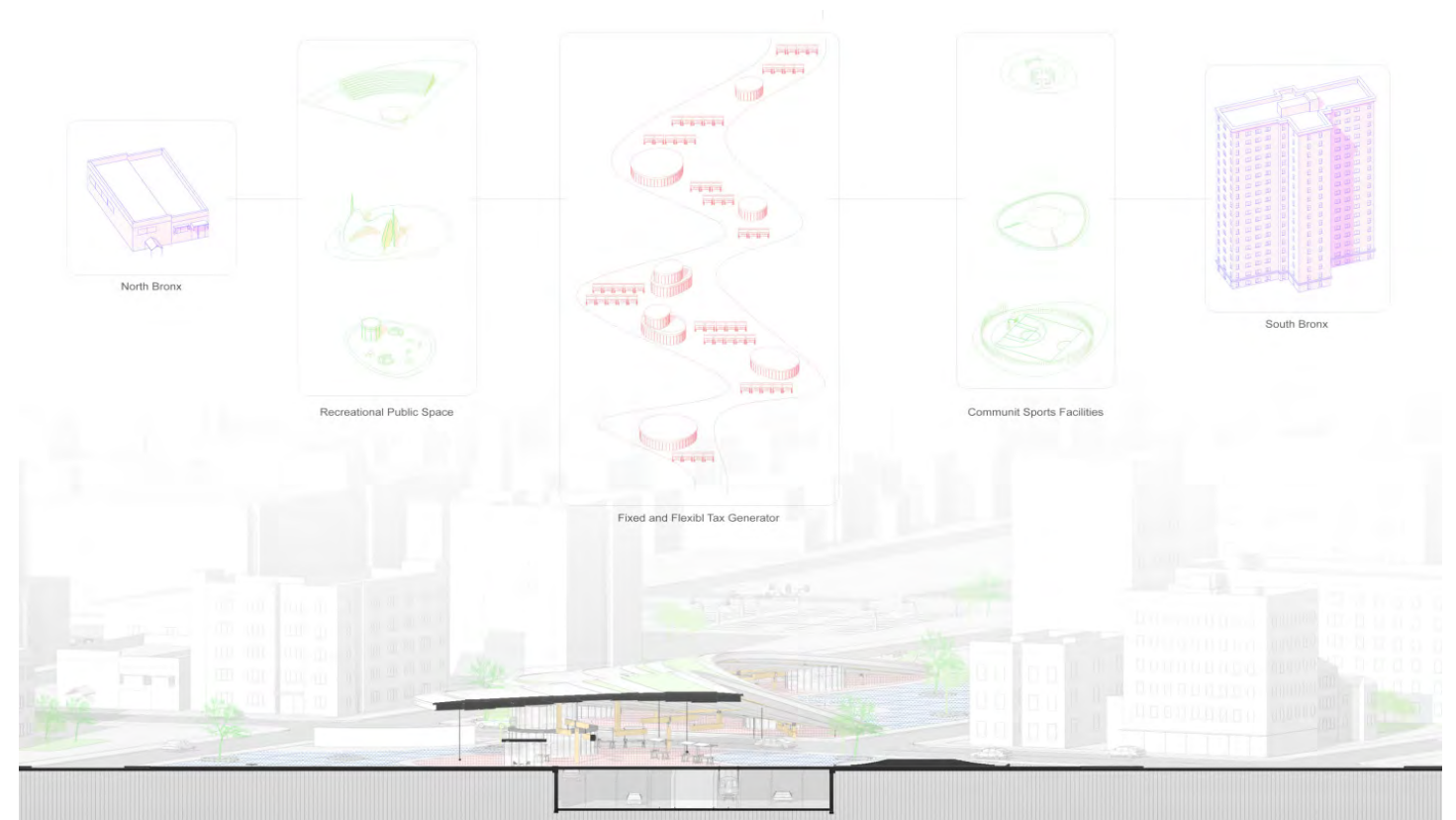
CBE has long been disputed for the air and noise pollution to the surrounding neighborhood. This project is based on the assumption by Professor Peter Muenning from Columbia Public Health that the most cost-effective way to solve the long-term problem of bronx is to cap the below ground CBE. Intending to restore the balance and vigor between the north and south Bronx long separated by CBE, we propose to offer a weaving string of commercial activities offsetting by major public destinations on top of CBE and generate on-site taxes for the imminent neighborhood. These taxes could be utilized for improving conditions of these public space. At the same time, two of the underground lanes are transformed into train lines offering a public pathway across Bronx for residents nearby. The tensegrity structure is chosen especially as an expression of the precarious conditions of life here.

Bird-view of the project along CBE

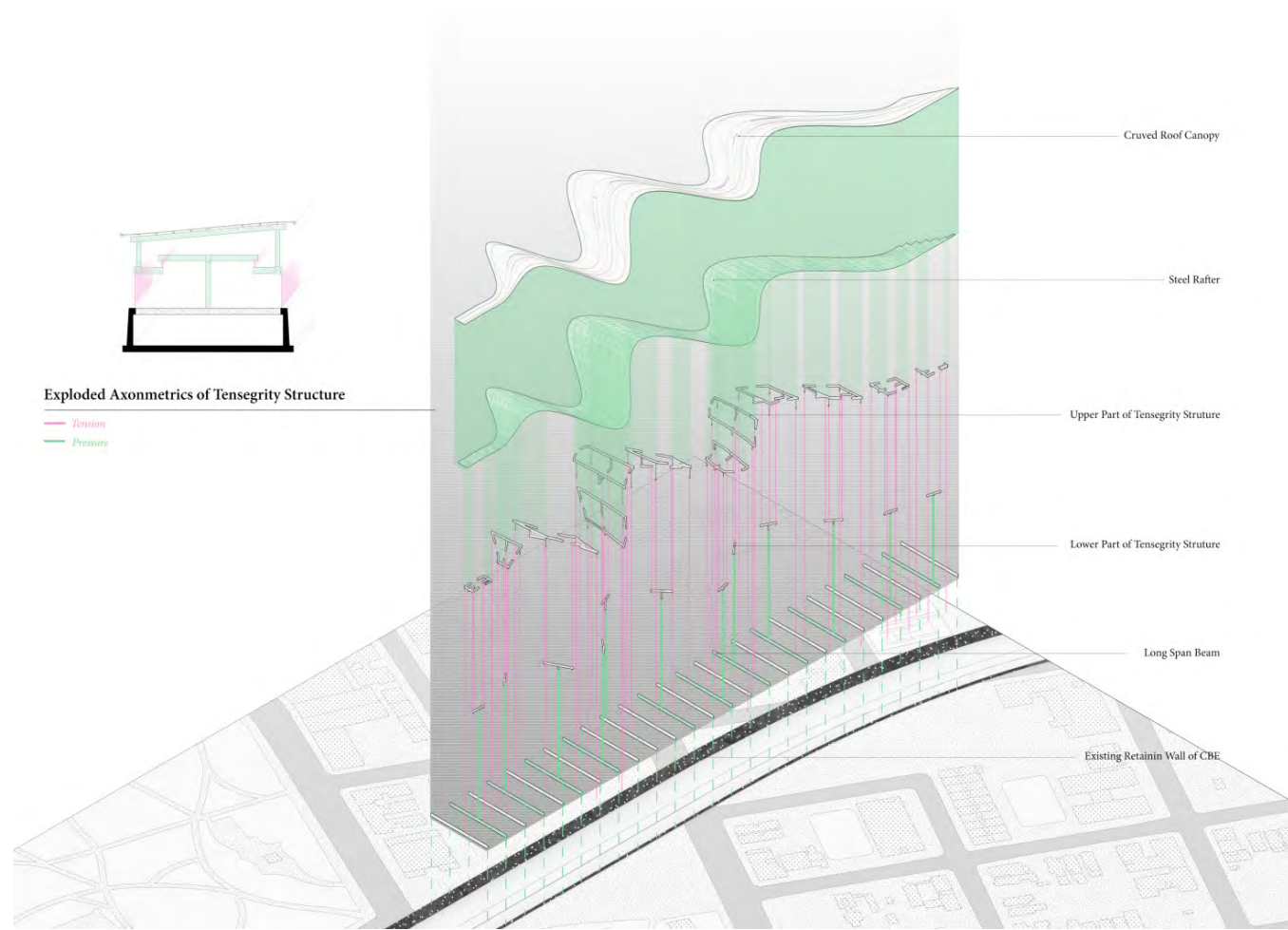
Architecture Form Logic



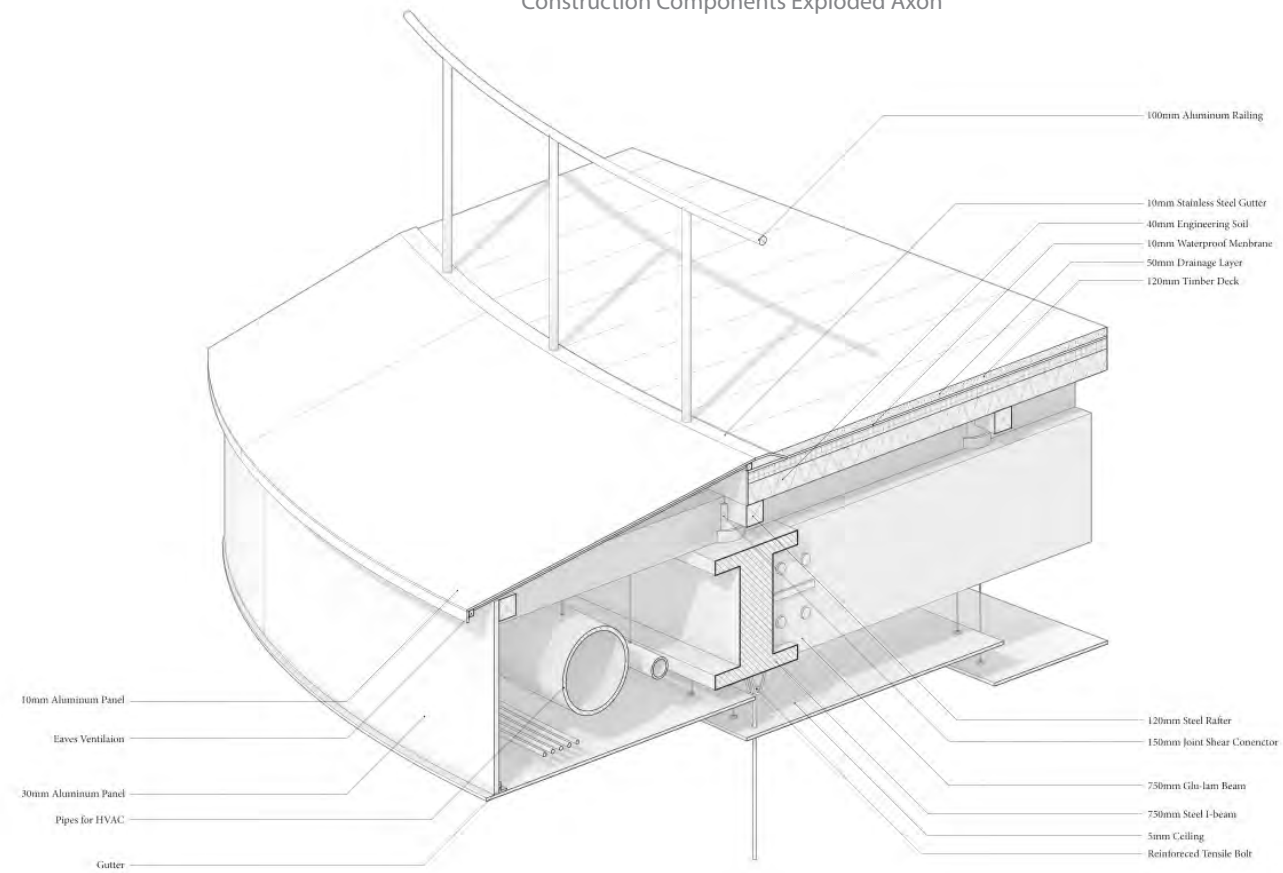
Site plan with ground floor plan



Section



Construction Components Exploded Axon



Construction Detail



OTHER WORK

Individual

Paintings and drawings from class

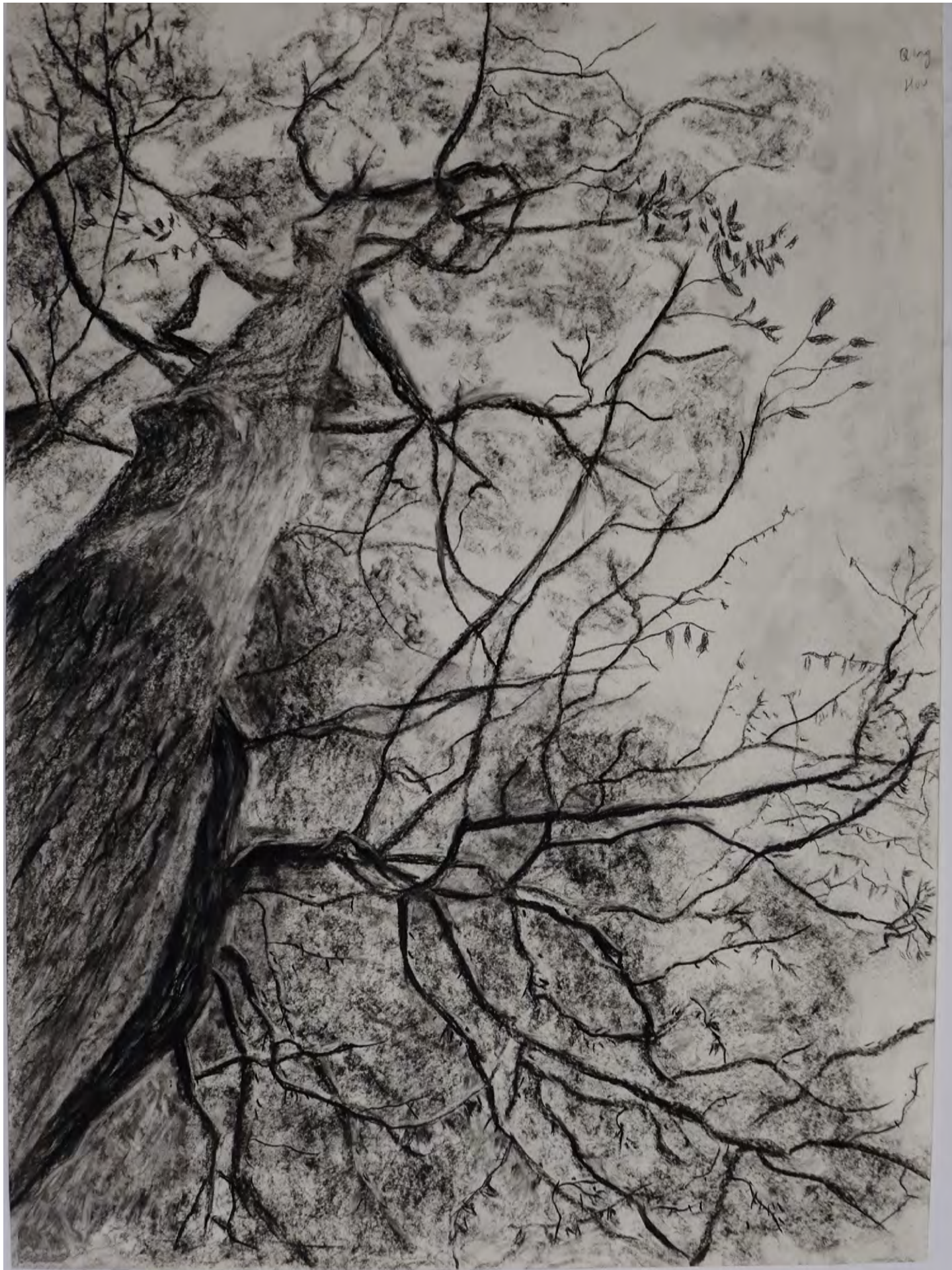
Architecture models from GSAPP

2014-2020

Included are various fragments, final products,
and experiments with model-making materi-
als and architectural forms.



Tree study
Medium: charcoal on canvas paper



Tree study
Medium: charcoal on canvas paper



Rurouni Kenshin inspired Collages
Medium: Ink on acrylic paper