

# **JUNOH LEE**

ARCHITECTURE PORTFOLIO

## **WORKS VOLUME**

### **01 T = [A/O + S] / [A + D]**

*Modular system with Bird, New York, USA*

### **02 Arts School Infrastructure**

*Modular system with School, New York, USA*

### **03 Oblique Space**

*Oblique space with Studios, New York, USA*

### **04 Negative Space with Water**

*Modular system with Spa, Jeju Island, Korea*

### **05 Oblique Field in the House**

*Voronoi modular system with Housing, Seoul*

### **06 Density of Void**

*Void with Office, Seoul*

### **07 Three and Four Library**

*Difference Elements with Library, London*

### **08 Experimental City**

*Three Experiments with Architecture, DMZ*

***Columbia University WORK***

**01 T = [A/O + S] / [A + D]**

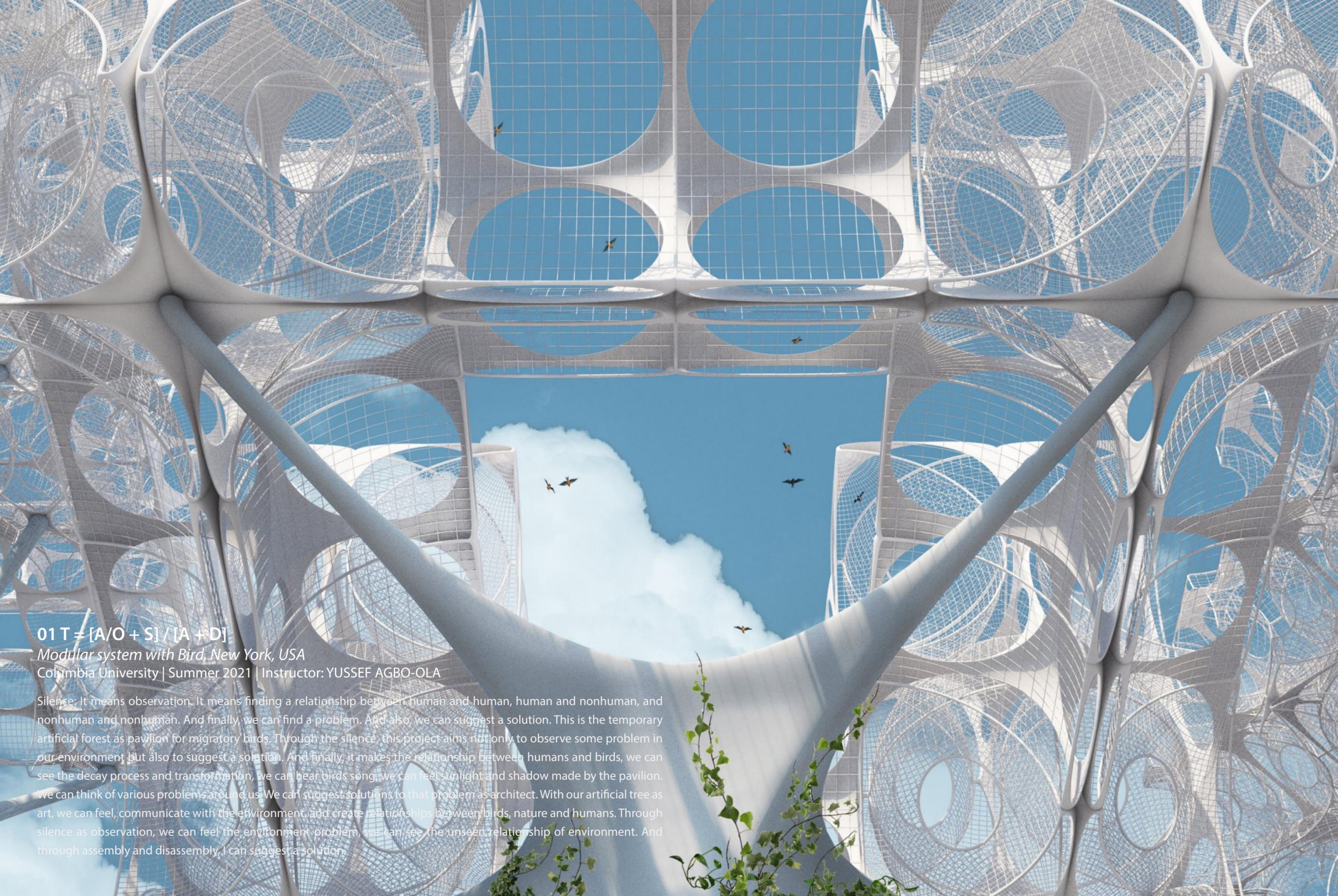
*Modular system with Bird, New York, USA*

**02 Arts School Infrastructure**

*Modular system with School, New York, USA*

**03 Oblique Space**

*Oblique space with Studios, New York, USA*



**01 T = [A/O + S] / [A + D]**

*Modular system with Bird, New York, USA*

Columbia University | Summer 2021 | Instructor: YUSSEF AGBO-OLA

Silence: It means observation. It means finding a relationship between human and human, human and nonhuman, and nonhuman and nonhuman. And finally, we can find a problem. And also, we can suggest a solution. This is the temporary artificial forest as pavilion for migratory birds. Through the silence, this project aims not only to observe some problem in our environment but also to suggest a solution. And finally, it makes the relationship between humans and birds, we can see the decay process and transformation, we can hear birds song, we can feel sunlight and shadow made by the pavilion. We can think of various problems around us. We can suggest solutions to that problem as architect. With our artificial tree as art, we can feel, communicate with the environment, and create relationships between birds, nature and humans. Through silence as observation, we can feel the environment problem, we can see the unseen relationship of environment. And through assembly and disassembly, I can suggest a solution.



**Killdeer**  
Identification

Habitat Large fields and Grasslands  
 Nesting materials Grass  
 Nesting place Ground, Gravel  
 Nesting height 0-2000mm  
 Size body: 20-28cm / wing: 59-63cm



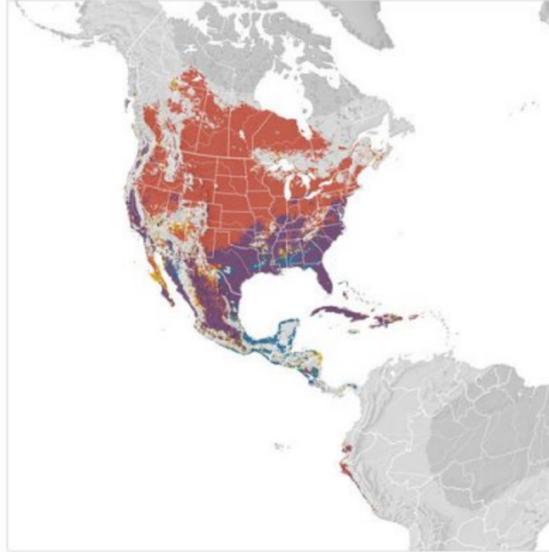
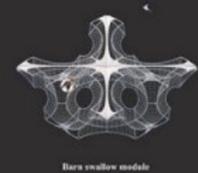
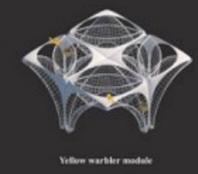
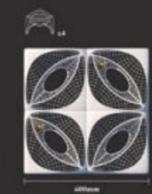
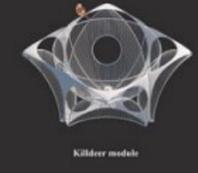
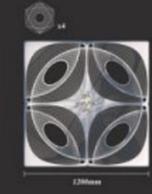
**Yellow Warbler**  
Identification

Habitat Thicket, Streams and Wetlands  
 Nesting materials Grass, Bark, Plants  
 Nesting place in the vertical of a bush or small tree  
 Nesting height 3000-6000mm  
 Size body: 10-18cm / wing: 16-22cm



**Barn Swallow**  
Identification

Habitat Large fields and Wetlands  
 Nesting materials Mud, Grass  
 Nesting place under the eaves of barns and stables, on structures near playing fields, or under bridges  
 Nesting height 2000-3000mm  
 Size body: 17-19cm / wing: 32-34.5cm



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

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

**Killdeer**  
OCCURRENCE

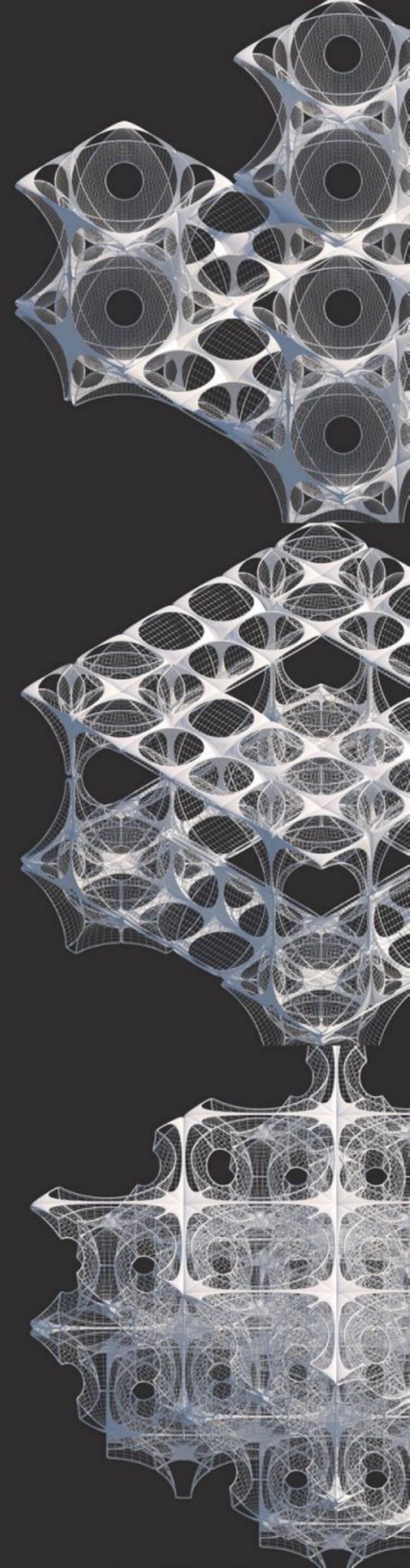
- Year-round
- Breeding season May 10 - Jun 28
- Non-breeding season Dec 21 - Jan 25
- Pre-breeding migratory season Feb 1 - May 3
- Post-breeding migratory season Jul 13 - Dec 14

**Yellow warbler**  
OCCURRENCE

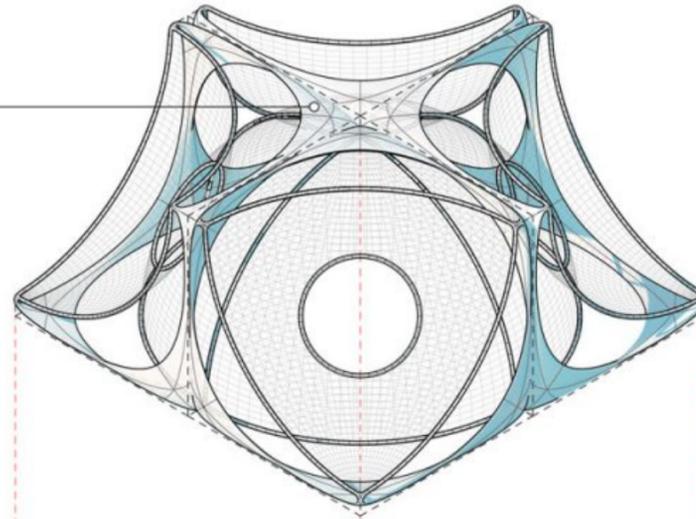
- Breeding season Jun 21 - Jul 13
- Non-breeding season Nov 16 - Feb 15
- Pre-breeding migratory season Feb 22 - Jun 14
- Post-breeding migratory season Jul 20 - Nov 9

**Barn Swallow**  
OCCURRENCE

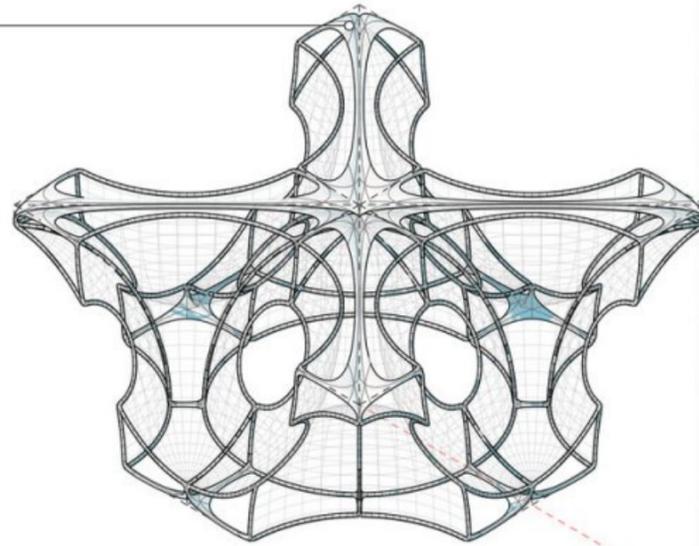
- Breeding season Jun 7 - Jul 13
- Non-breeding season Dec 21 - Jan 25
- Pre-breeding migratory season Feb 15 - May 31
- Post-breeding migratory season Jul 20 - Dec 14



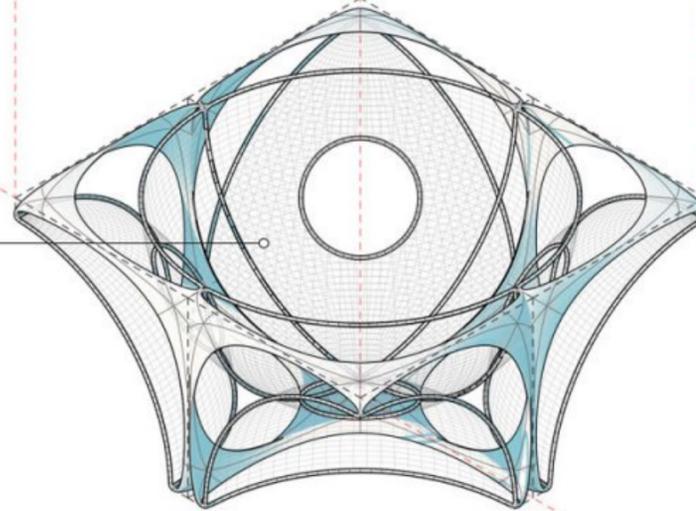
*White Steel*



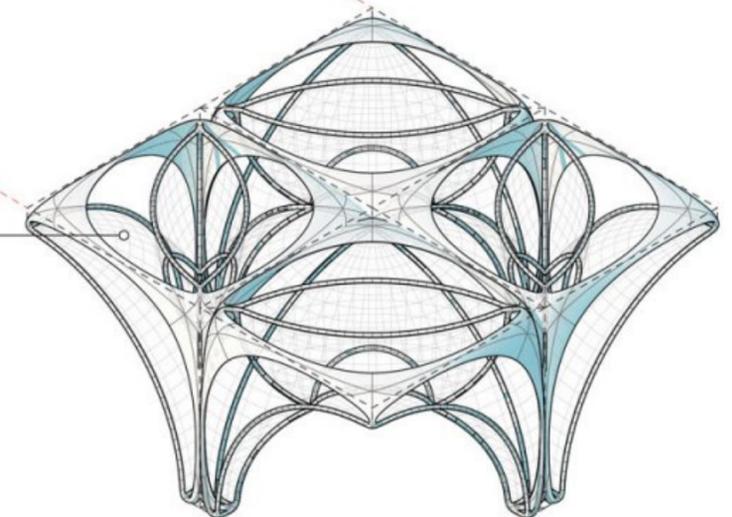
*Metal 3D Printer*



*Fishing Net (upcycling)*



*Net with Robotics*



Material and Detail



## 02 Arts School Infrastructure

*Modular system with School, New York, USA*

Columbia University | Fall 2021 | Instructor: MARC TSURUMAKI

Today, concrete and iron together account for more than 20% of CO2 emissions. As CO2 increases, global warming is causing serious problems day by day. Man has no privileged place in the world over any other object. And there may be opportunities to shift the design paradigm in a radical way.

The first thought is the idea of Assembly, a thought similar to other architects. Objects (parts) with different characteristics will form an assemblage through interaction. Furthermore, the assemblage becomes a building with a new character. The second thought is about disassembly and reassembly as well as assembly. In the future, I believe that architecture will be assembled and disassembled according to needs. In other words, each part of the building will not be destroyed but will be disassembled and reassembled again.

Disassembly and Reassembly, in my opinion, is not a simple lego combination and disassembly logic. This logic is closer to the concept of reuse. We must consider the pre-and post-life and long-term impacts of systems of extraction, manufacturing, demolition, and disposal of constructed artifacts. The majority of construction waste goes to landfills, exacerbating environmental inequality and increasing construction-related carbon emissions. In other words, the Disassembly and Reassembly system is not a simple lego system but amplifies the potential of a new material economy and logic of reuse. Rather than generating human conditions through the built environment, the system's primary goal is to combat climate emergencies.

# Arts School Infrastructure with Disassembly and Reassembly

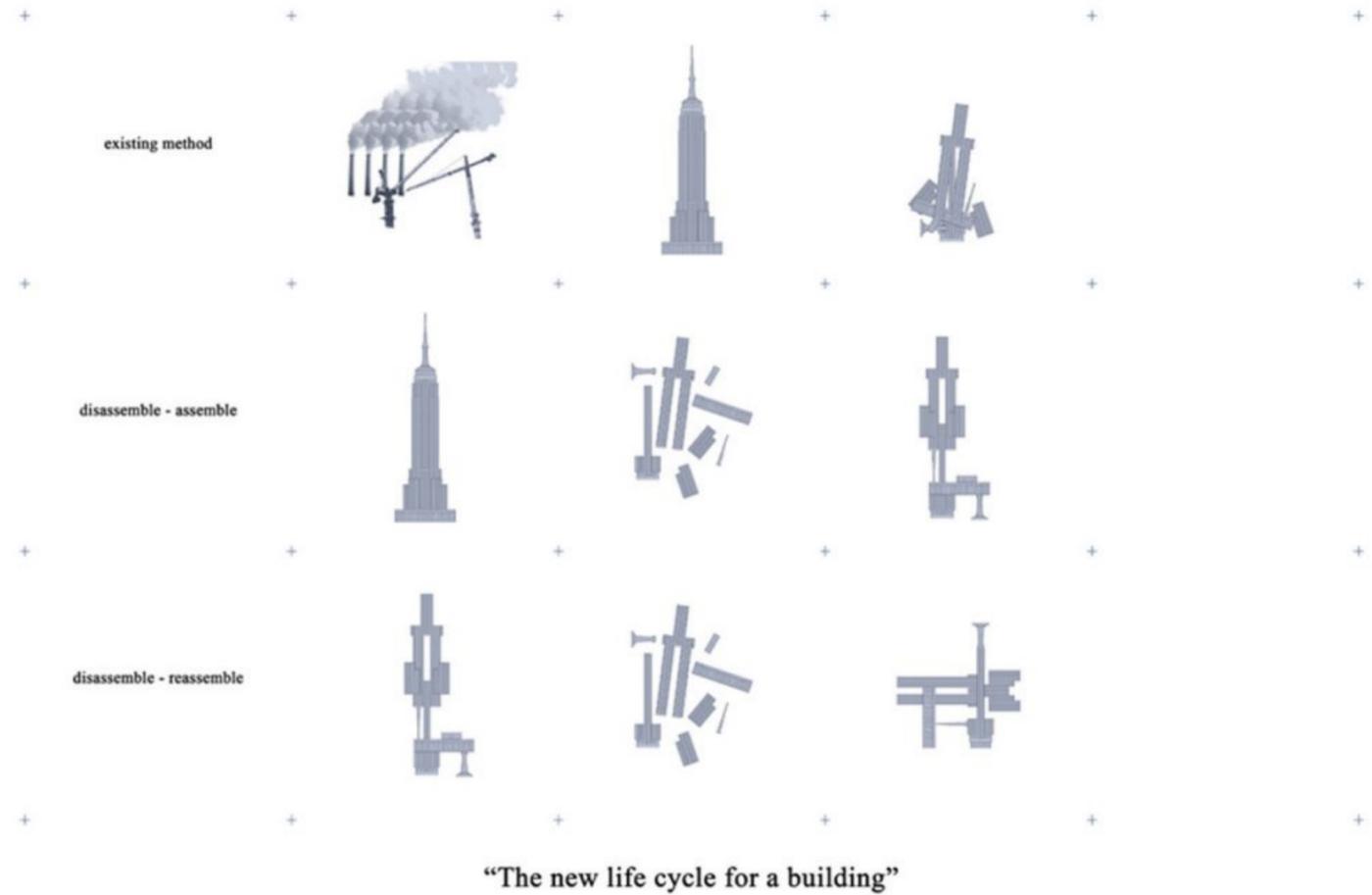
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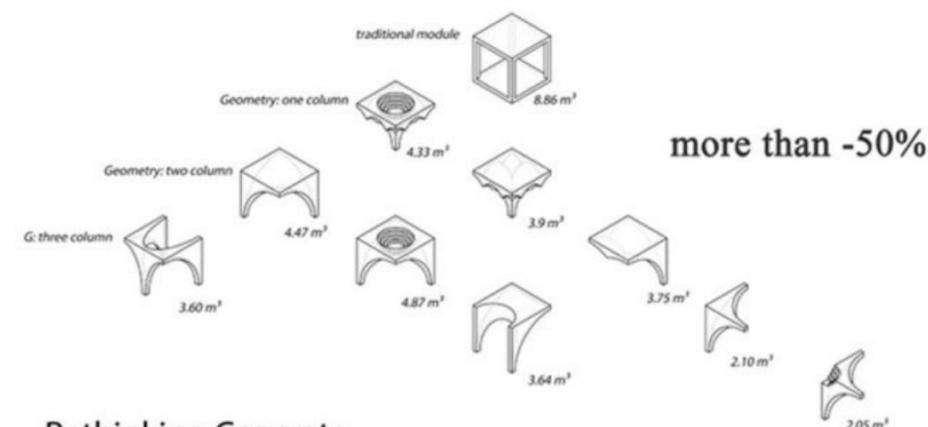
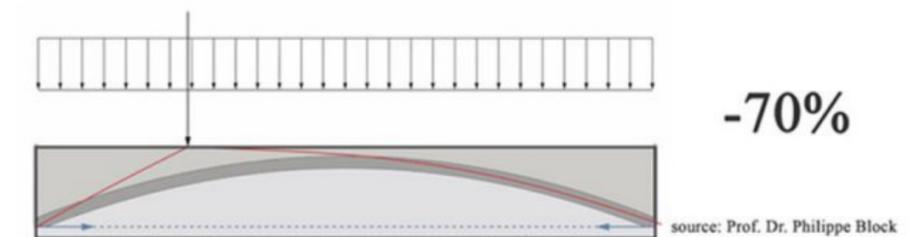
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The project is located in port morris. Port morris has high rates of violence and poverty, and a high percentage of students who do not graduate from high school. And, there is only one school in port morris where students can attend. In the South bronx, an organization called the Dream Yard teaches art to children. So, in association with this organization, I am going to set up an art school in port morris. The art school will transform the industrial atmosphere of factory districts and warehouses, and will give students new opportunities.

In addition, I will recycle abandoned traditional gantries and abandoned container boxes, increasing local value. Finally, the project will experiment with future depopulation-related reuse of buildings. So after several years or decades, the building will be disassembled, and then reassembled on north brother island. The north brother island is an abandoned land that is losing its potential value. Also there are traditional gantry. The gantry there will also be recycled and linked to the art school. If port morris revives like the second Soho, north brother island will no longer be an abandoned land, but will erase the pain of the past and be reborn as a new art island.



We need to change the way we **design** structures



Rethinking Concrete  
“Structural Geometry”

1 Recycle gantries



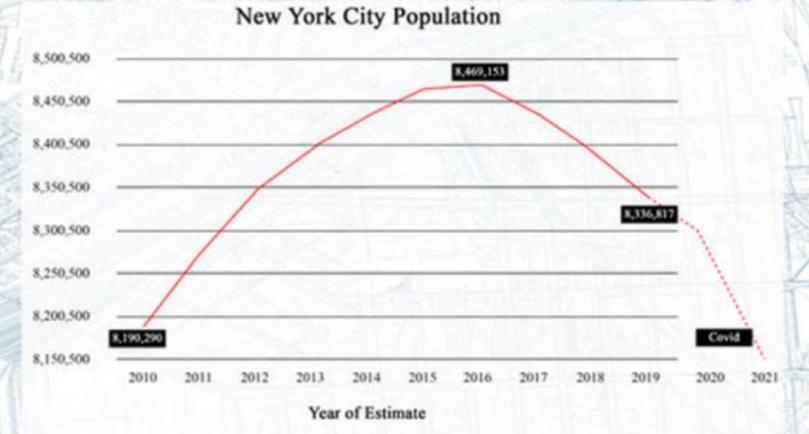
2 Recycle container box



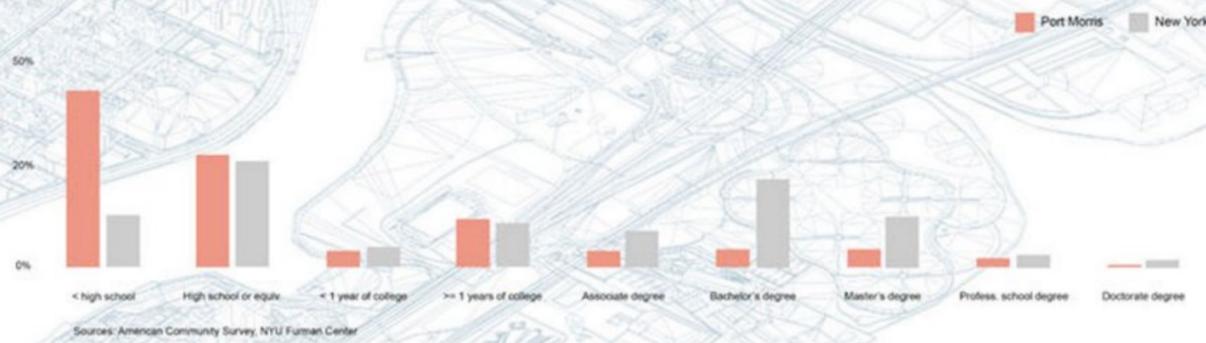
3 Recycle gantry and reassembly



Why we need the Disassembly and Reassembly System



Educational Attainment in 2019

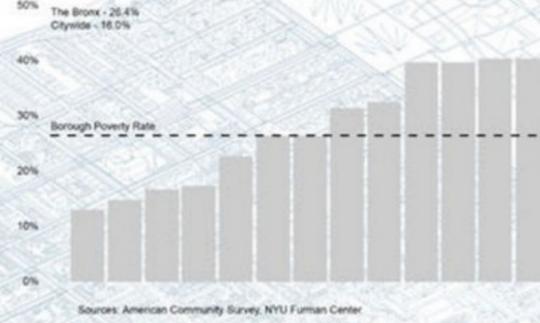


XL: Disassembly and Reassembly

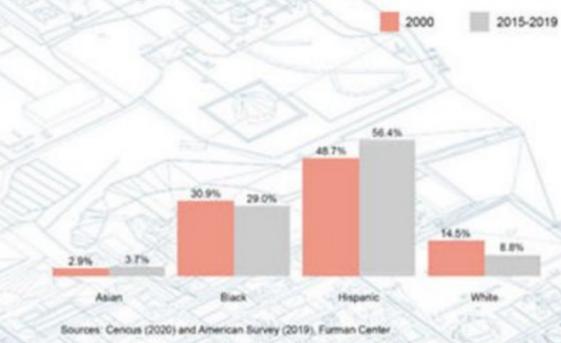
Household Income Distribution in The Bronx (2020S)



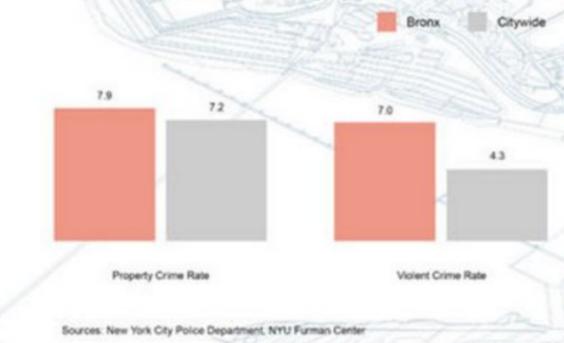
Poverty Rate in The Bronx, Overall and by Community District, 2019



Racial and Ethnic Composition of The Bronx



The Bronx Serious Crime Rate Per 1,000 Residents, 2020



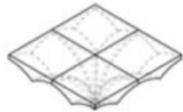
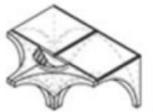
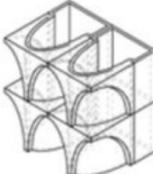
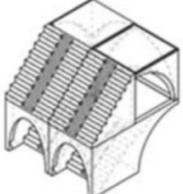
# XS

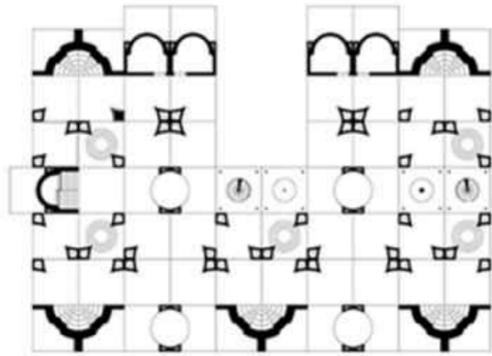
## Base parts of arts school

 <p><i>one column part</i></p>	 <p><i>one column part</i></p>	 <p><i>one column part</i></p>
 <p><i>one column part</i></p>	 <p><i>two column part</i></p>	 <p><i>two column part</i></p>
 <p><i>two column part</i></p>	 <p><i>two column part</i></p>	 <p><i>three column part</i></p>
 <p><i>stair part for classroom</i></p>	 <p><i>stair part for classroom</i></p>	 <p><i>outdoor stair part</i></p>
 <p><i>bath room part</i></p>	 <p><i>stair part</i></p>	 <p><i>personal space part</i></p>
 <p><i>community space part</i></p>	 <p><i>elevator</i></p>	 <p><i>spiral stair</i></p>

# S

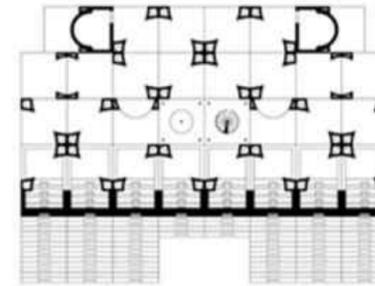
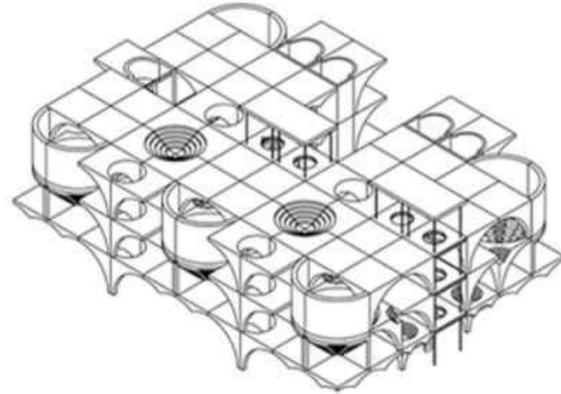
## Space units

 <p><i>structure of lower part</i></p>	 <p><i>outdoor common space</i></p>	 <p><i>small common space</i></p>
 <p><i>light well / void</i></p>	 <p><i>big class</i></p>	 <p><i>small class</i></p>
 <p><i>personal rooms with terrace</i></p>	 <p><i>community space</i></p>	 <p><i>vertical circulation</i></p>



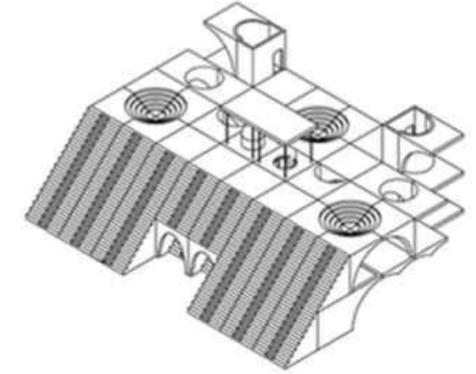
*Five small classrooms*

+5400



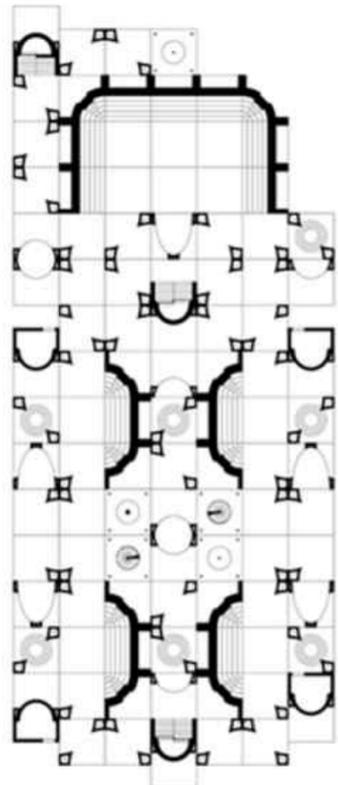
*Community space and outdoor space with water*

+5400



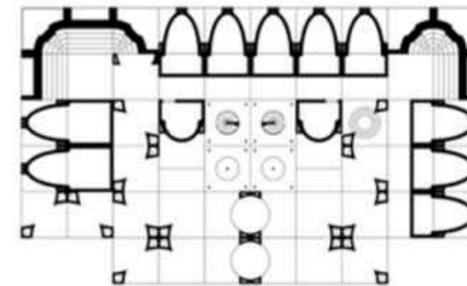
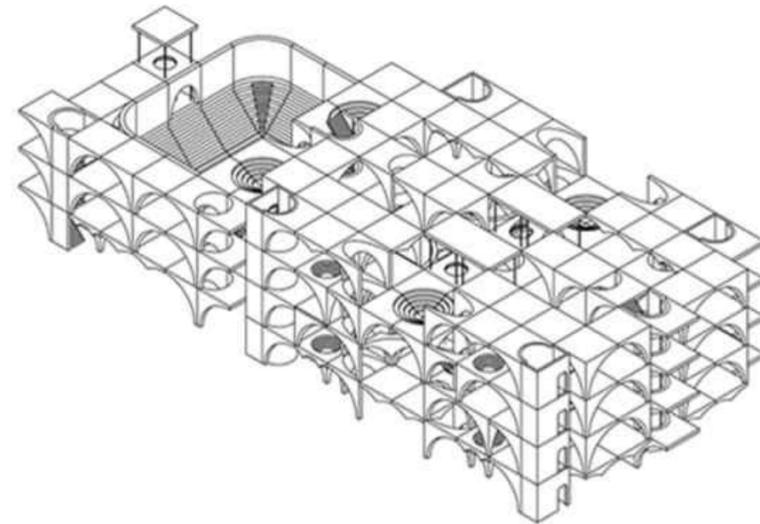
# M

Program with system



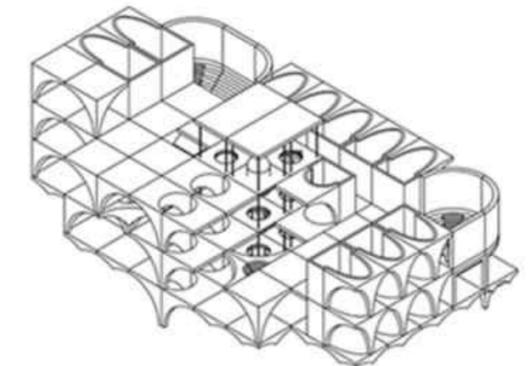
*Four big classrooms and Library / Gallery*

+5400



*Personal space rooms  
for recording / arts / teachers*

+5400



*L* 2022

*in Port Morris*



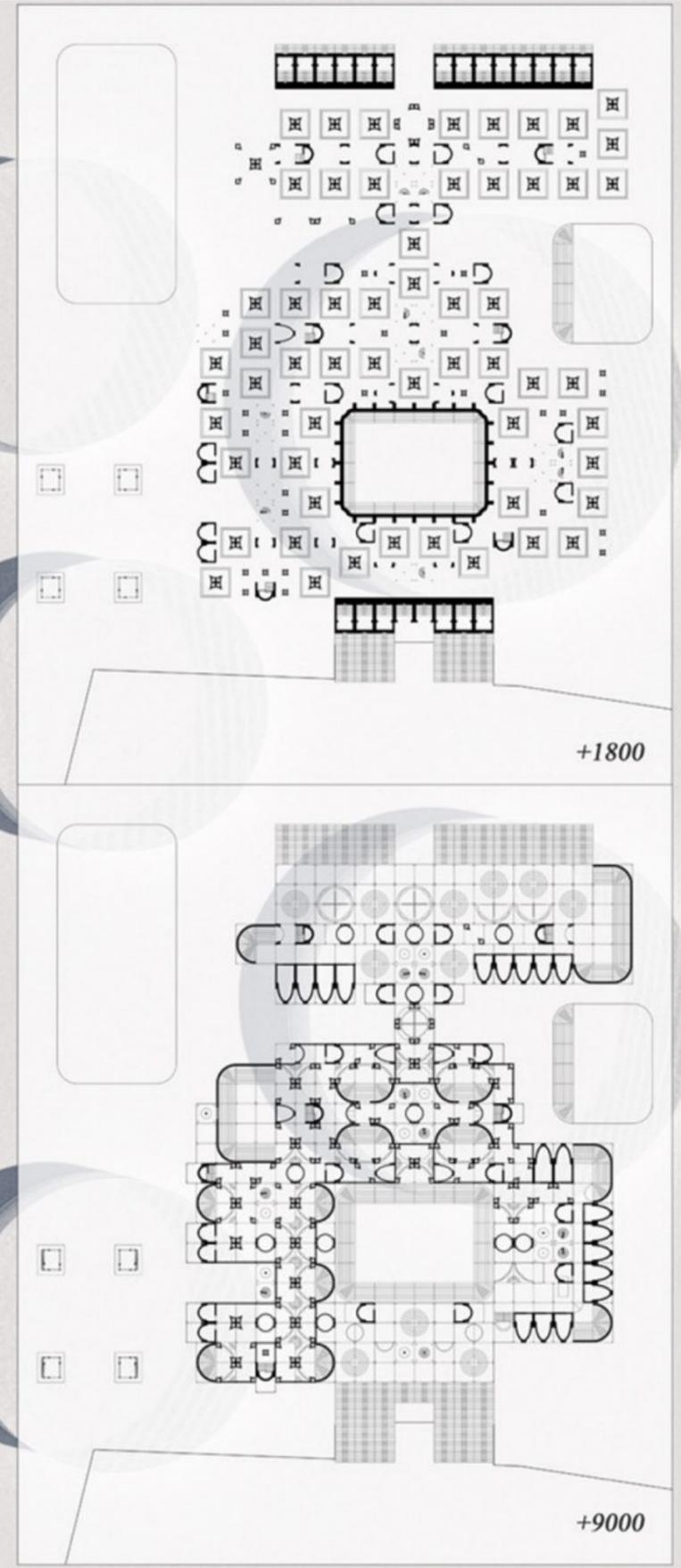
# L 2022

in Port Morris

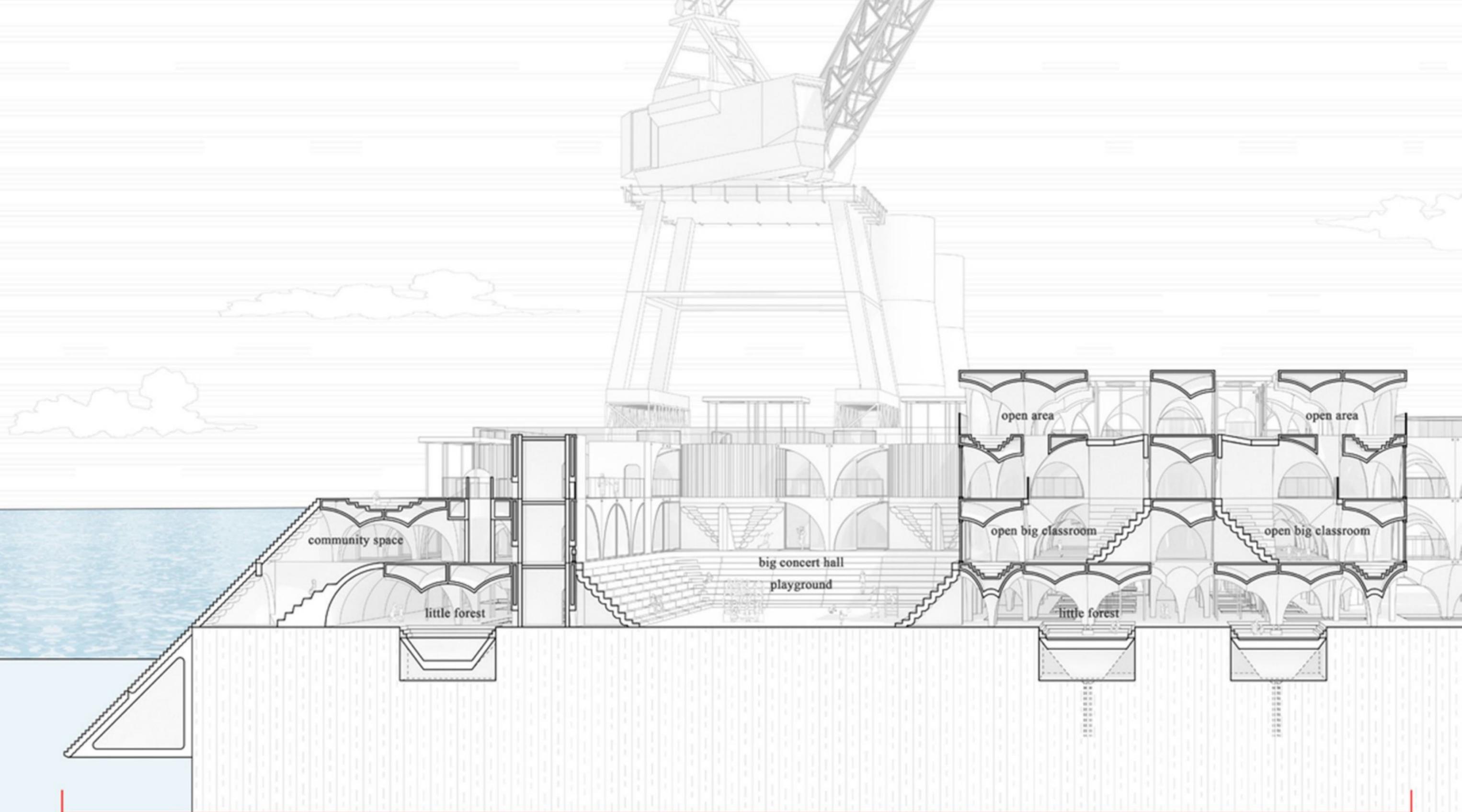


Art studio and gallery  
for artist (teacher)

Art school  
for children



+5400



community space

little forest

big concert hall  
playground

open area

open big classroom

little forest

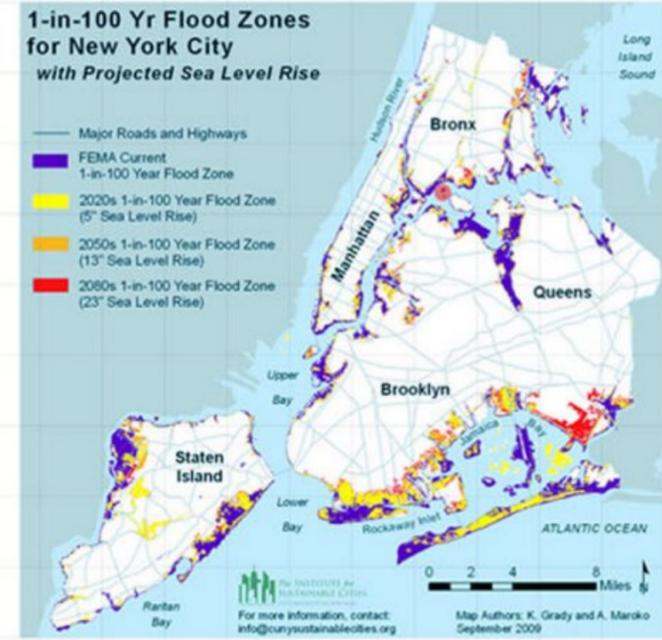
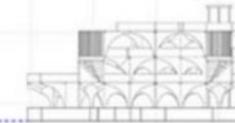
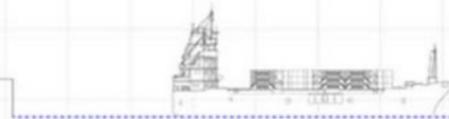
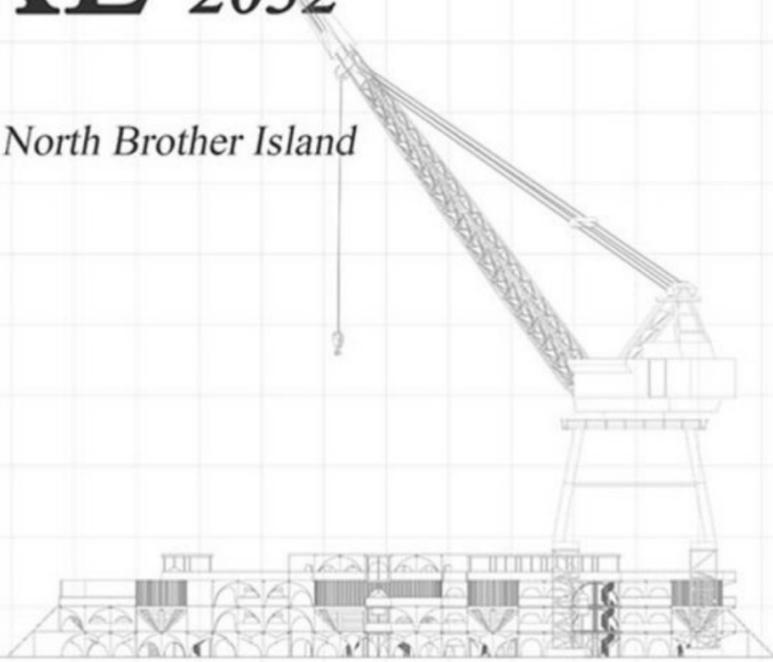
open area

open big classroom

*Art school  
for children*

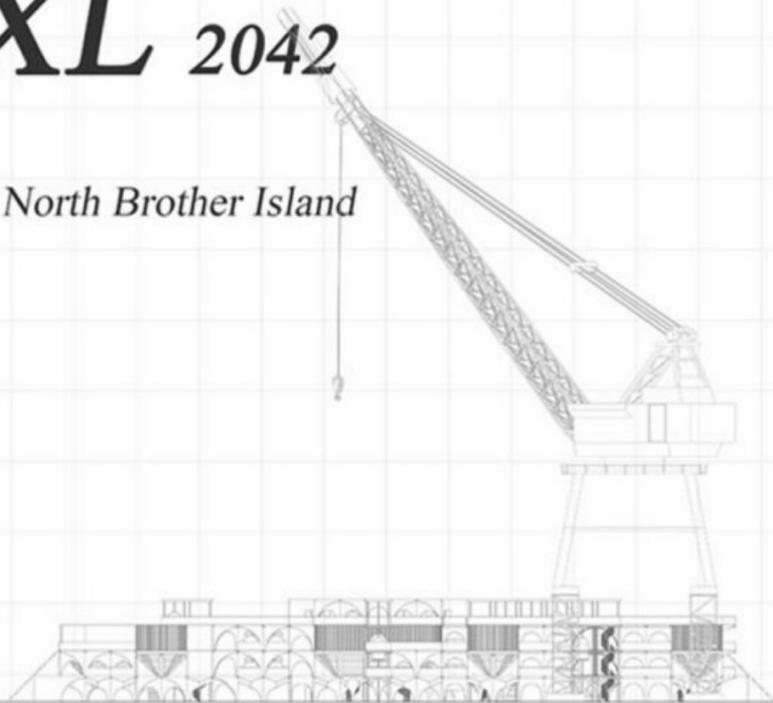
# XL 2032

in North Brother Island

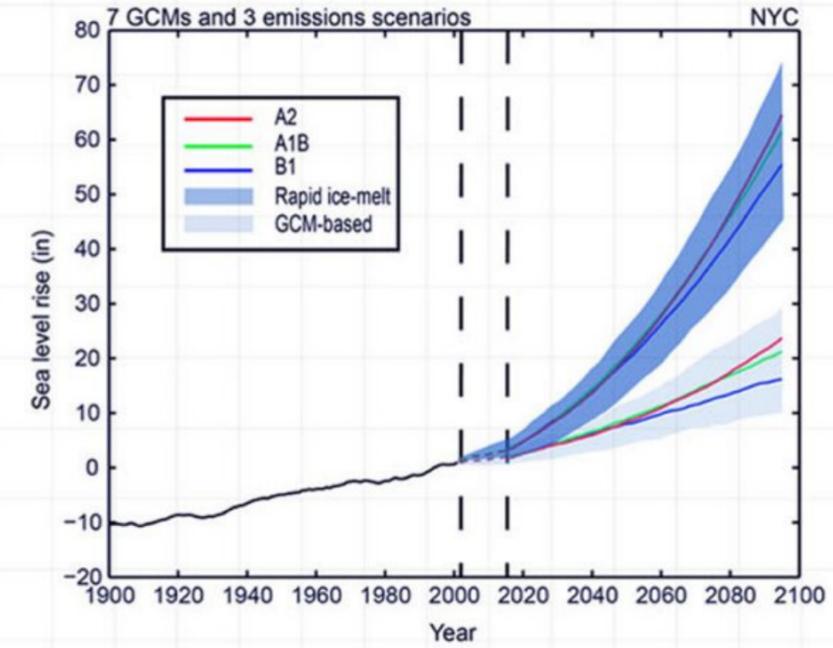
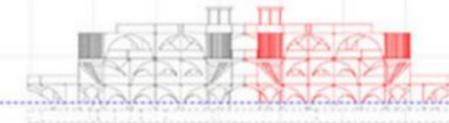


# XL 2042

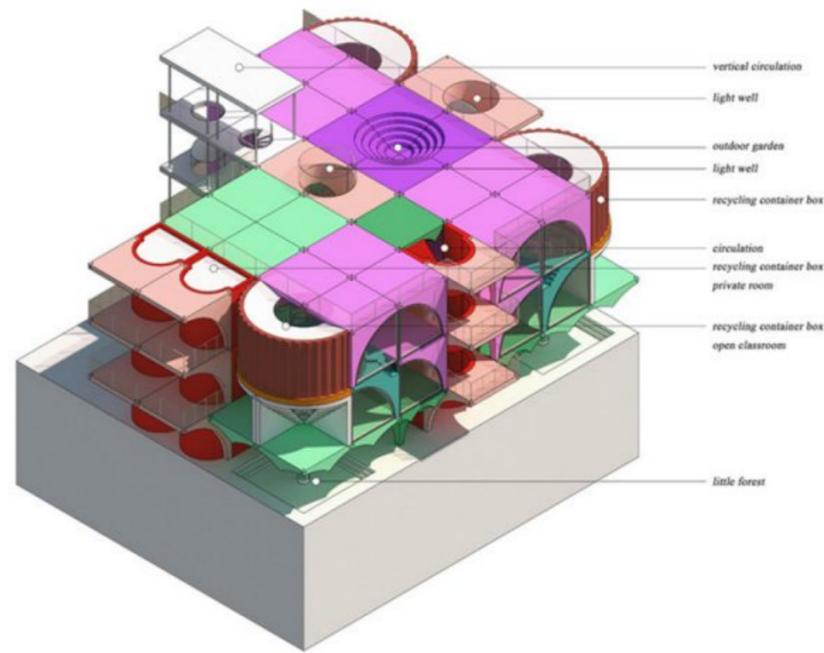
in North Brother Island



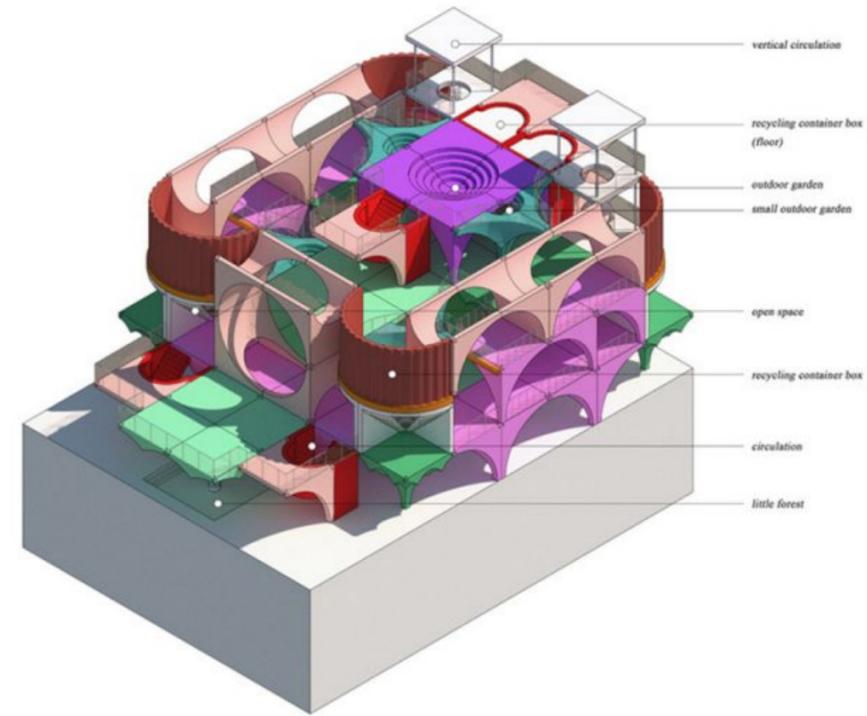
Disassembly and Reassembly in North Brother Island  
revitalize the abandoned Island



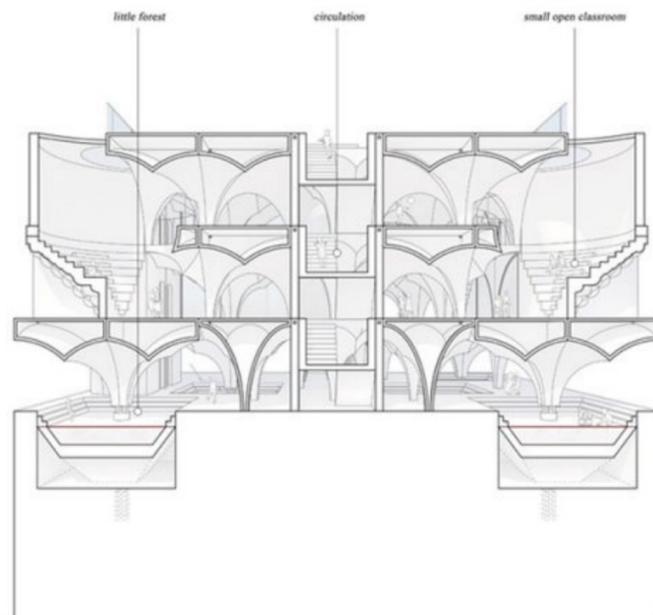
Expandable System responding to Flooding and Sea level ise



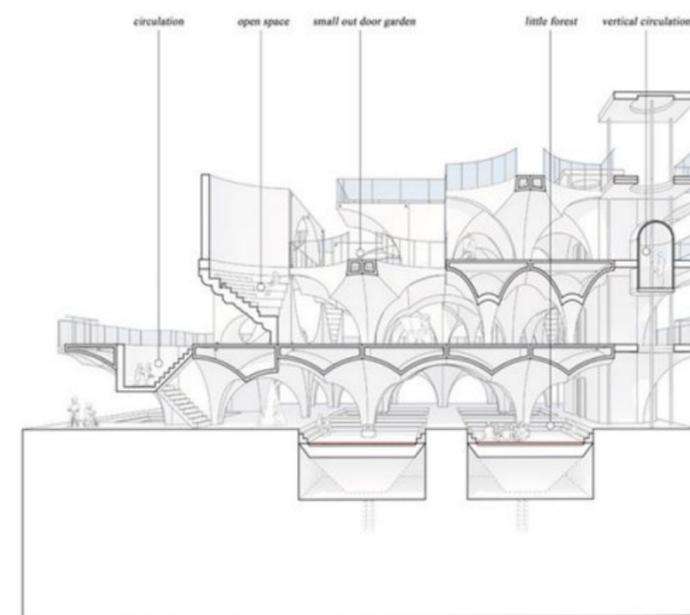
Art classroom for students



Gallery and Open public space



Perspective section of art classroom



Perspective section of open public space

Different Spatial Typology  
using same part



# ***XL*** 2032

*in North Brother Island*



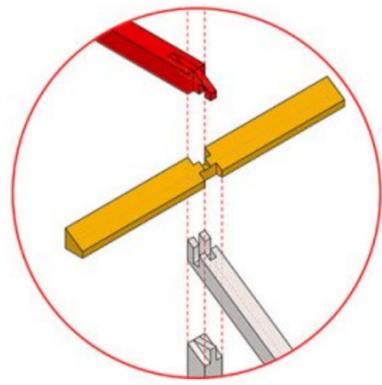
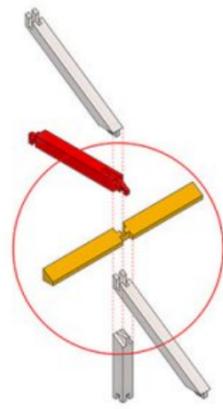
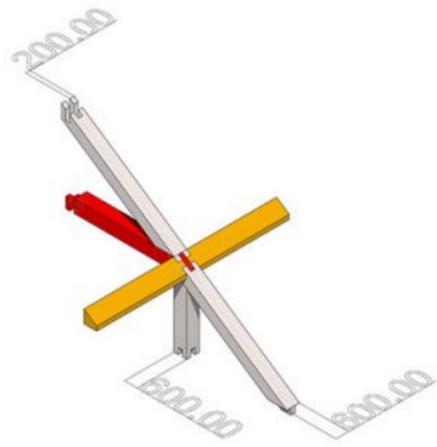


### 03 Oblique Space

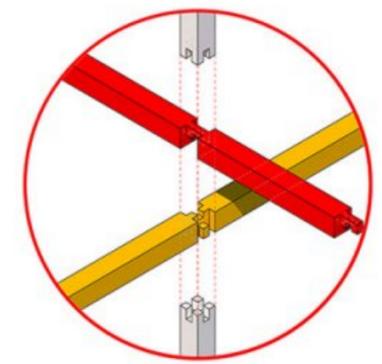
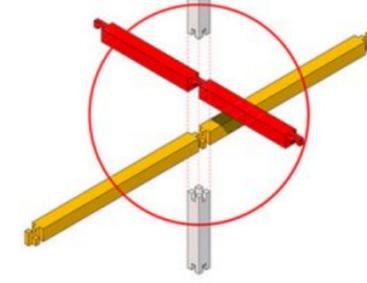
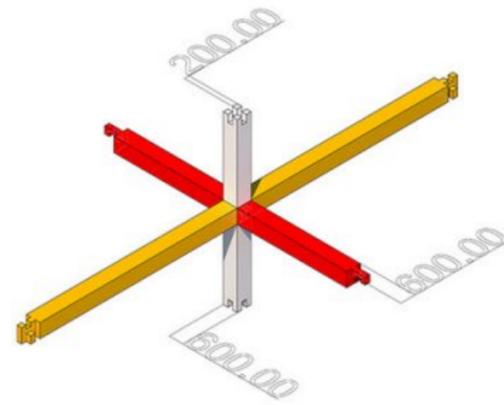
*Oblique Space with Studios, New York, USA*

Columbia University | Spring 2022 | Instructor: GORDON KIPPING

Today, concrete and iron together account for more than 20% of CO2 emissions. As CO2 increases, global warming is causing serious problems day by day. The goal of this project is to build a spatial typology only with wood, without using steel or concrete. And also, by changing the existing spatial typology of the studio, I changed the studio to an oblique spatial typology that receives an equal amount of sunlight. Furthermore, I want to make people realize the importance of plants by participating in planting like urban gardening, not just looking at them. Urban farm roof is very efficient depending on the season. When the sun is high in summer, the angle of the flowerpot blocks the sunlight. And, the grown plants prevent strong sunlight from coming through in. Conversely, when the sun is low in winter, this system allows sunlight to come through deep into the studio. Even in winter there are no crops to block the ingress of sunlight. Therefore, it is possible to reduce the use of unnecessary heat and cooling energy in summer and winter.

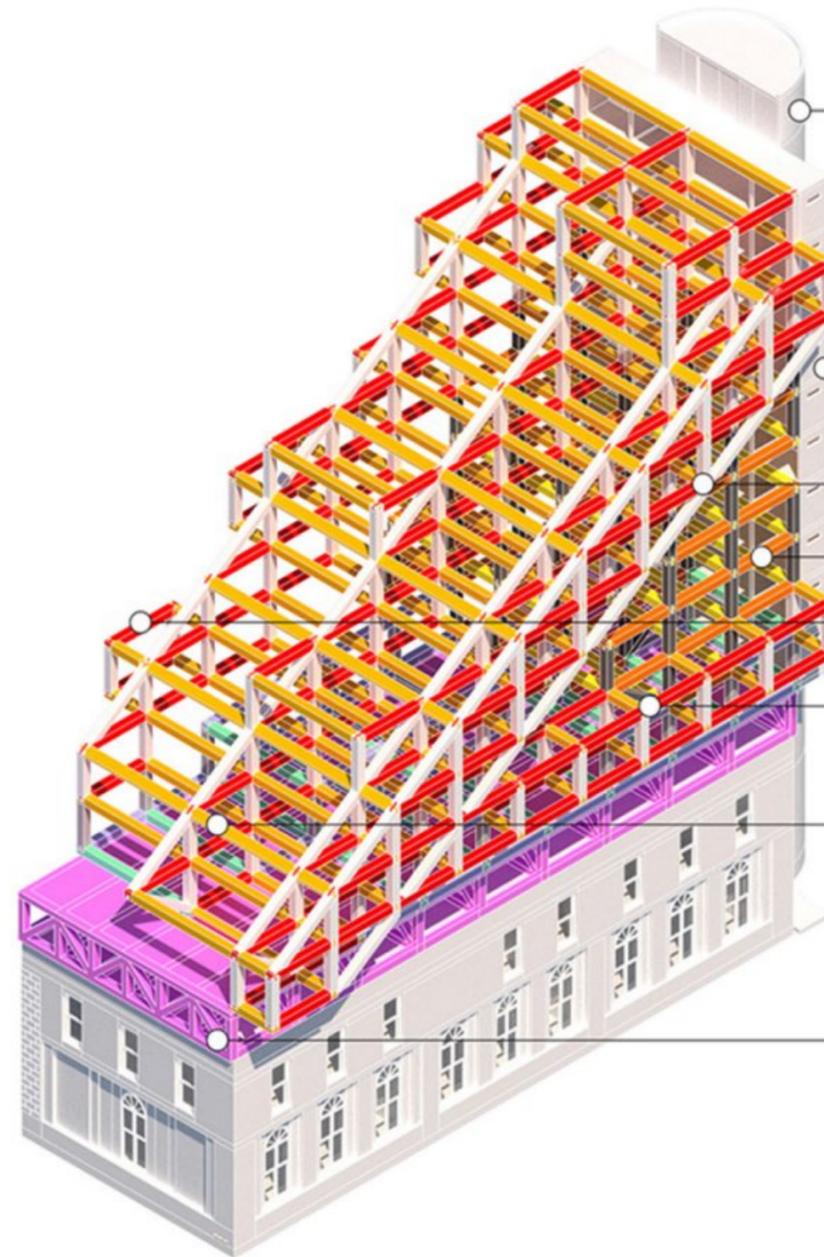
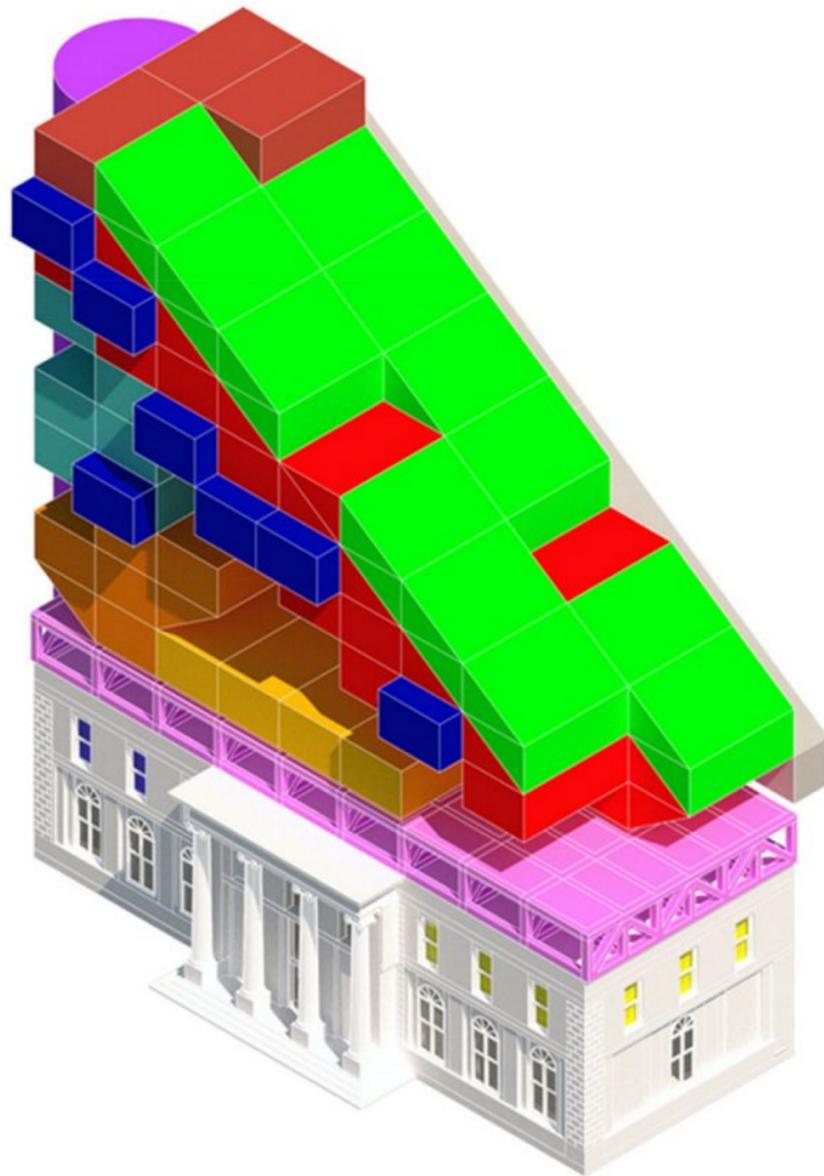


Wood Structure 1



Wood Structure 2

- Auditorium (classroom)
- class room
- exhibition and cafe
- bath room
- OPS
- Office
- Preservation Technology Lab
- Studios (oblique)
- Core and Gallery
- Make and Wood (shop)
- Urban Gardening
- class room (small auditorium)
- terrace
- restaurant and cafe
- stair



core

bathrooms

stair structure

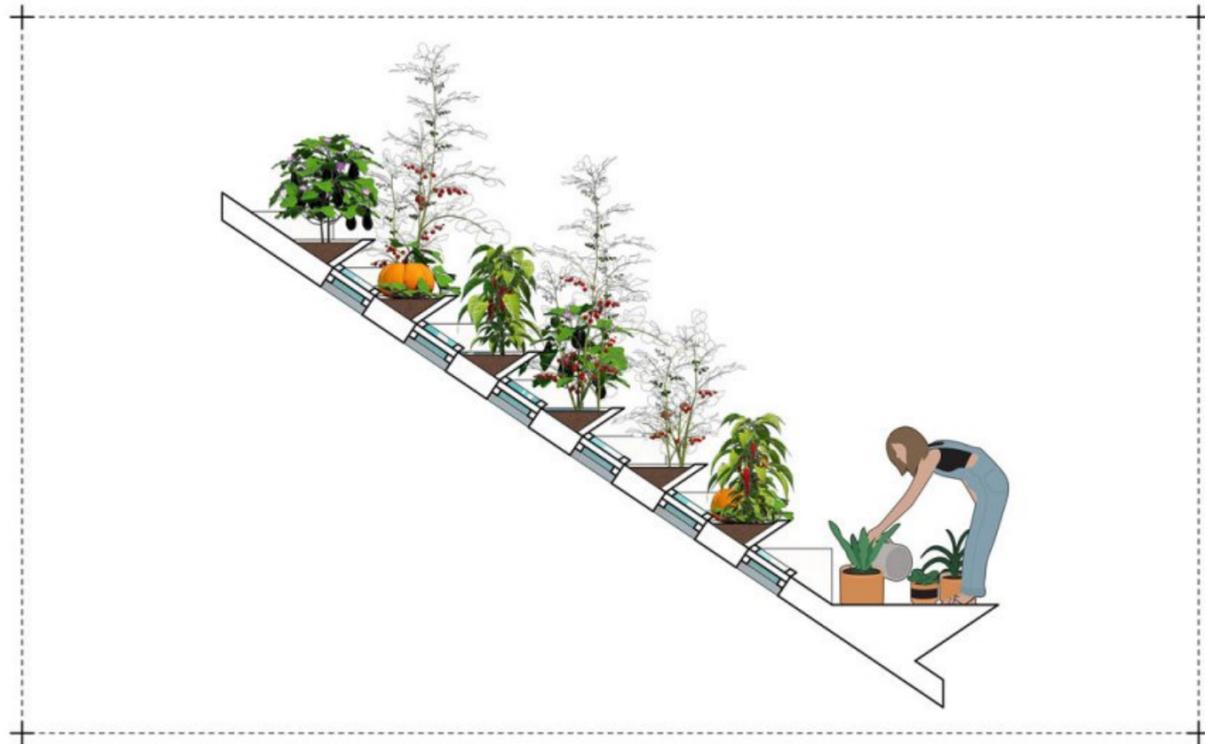
classroom structure

terrace structure

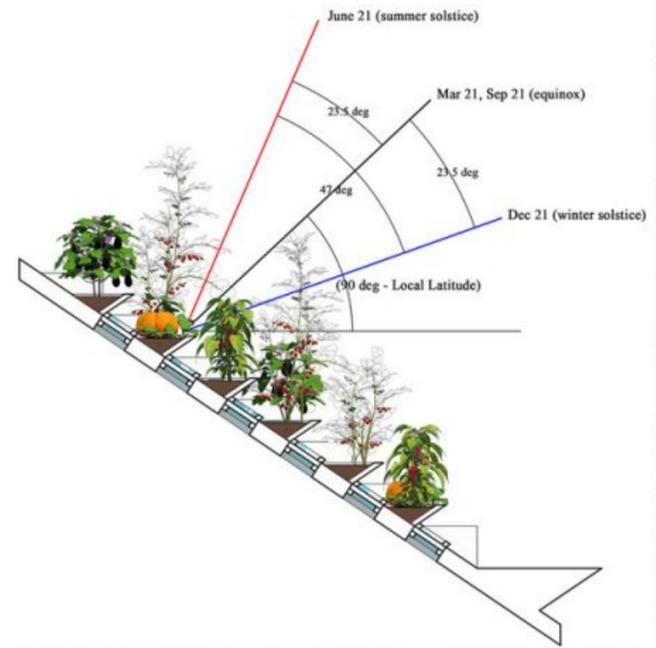
bridge structure

studio structure

truss structure

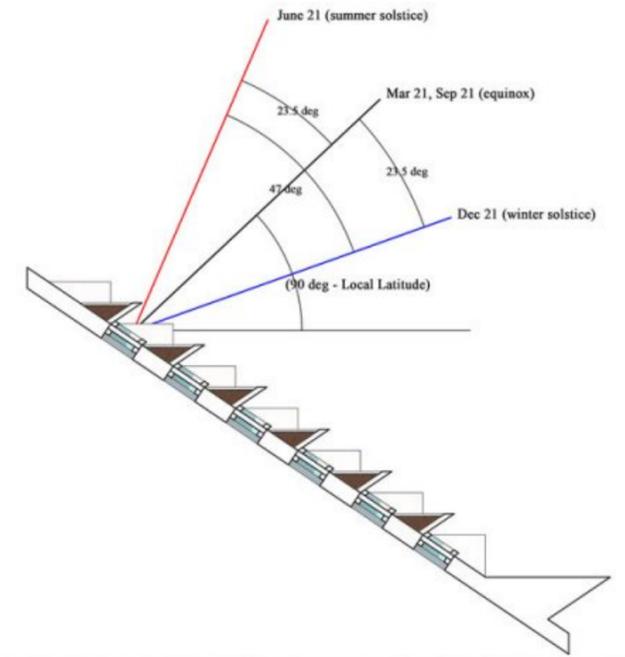


Urban Farm Roof



Summer - plant and oblique pot

Adjusts the amount of sunlight when the sun is high

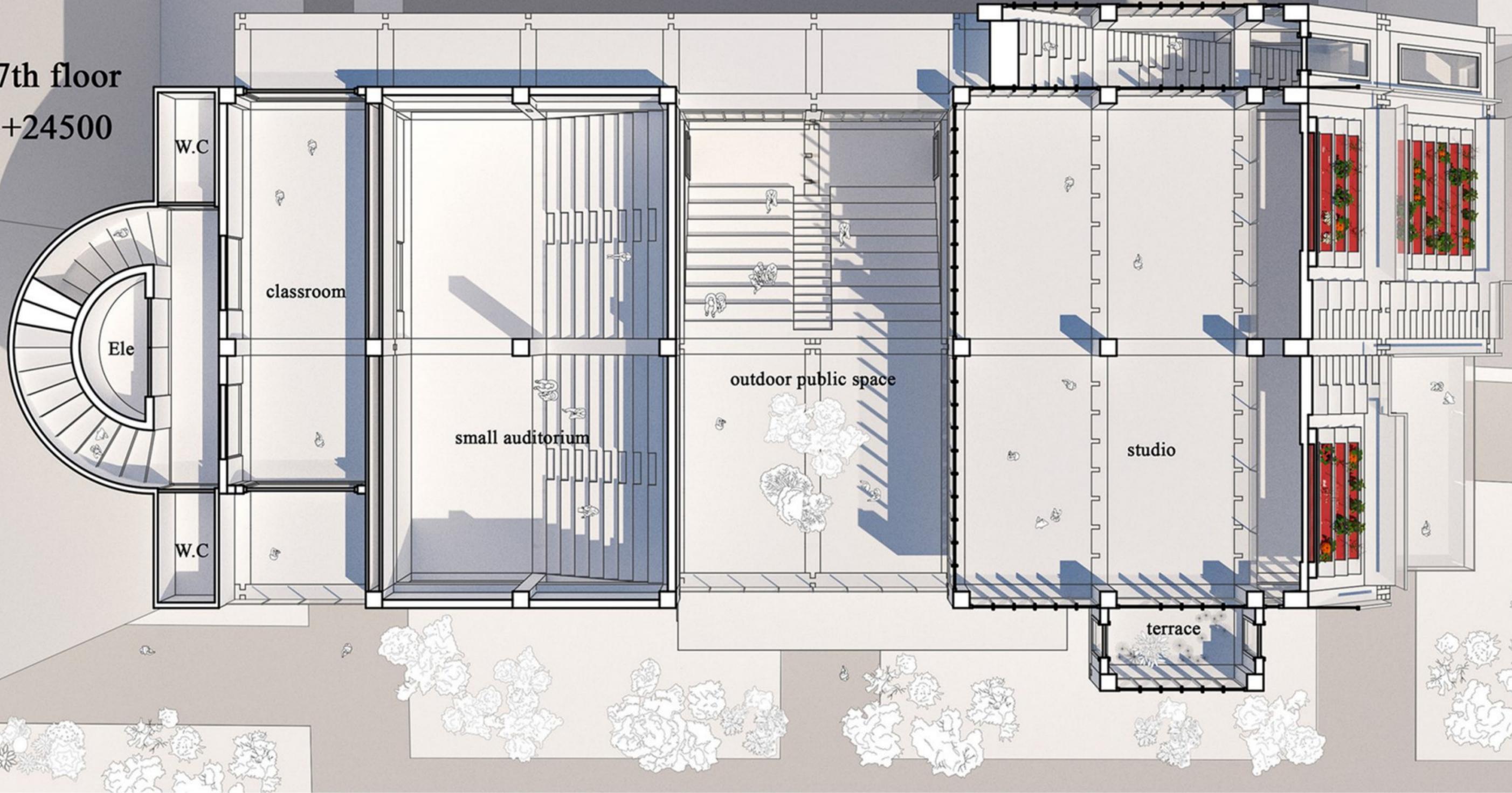


Winter - plant(x) and oblique pot

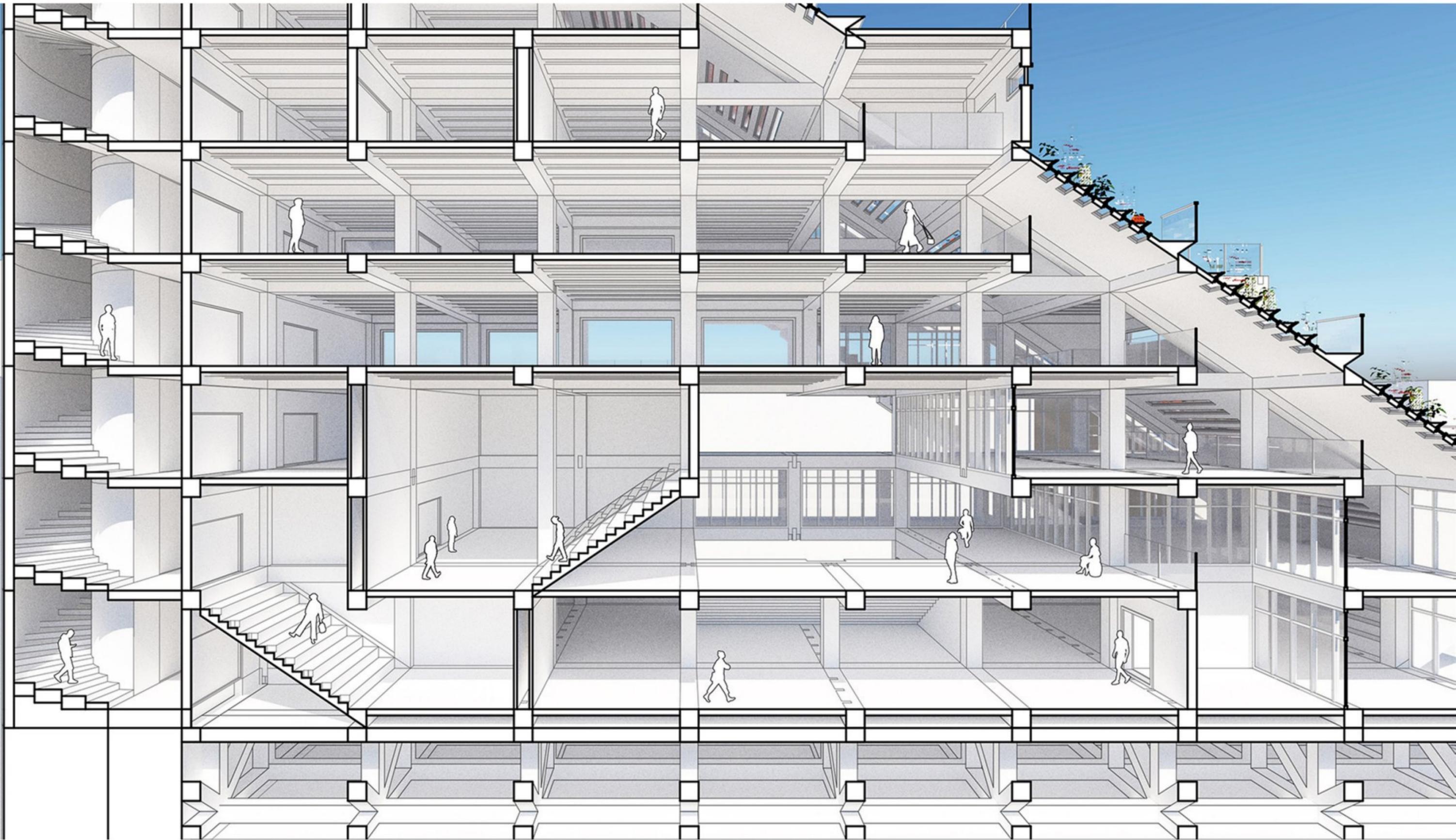
When the sun is low, sunlight enters the studio.



7th floor  
+24500



Perspective Plan



Perspective Section





***PERSONAL DESIGN RESEARCH WORK***

**04 Negative Space with Water**

*Modular system with Spa, Jeju Island, Korea*

**05 Oblique Field in the House**

*Voronoi modular system with Housing, Seoul*

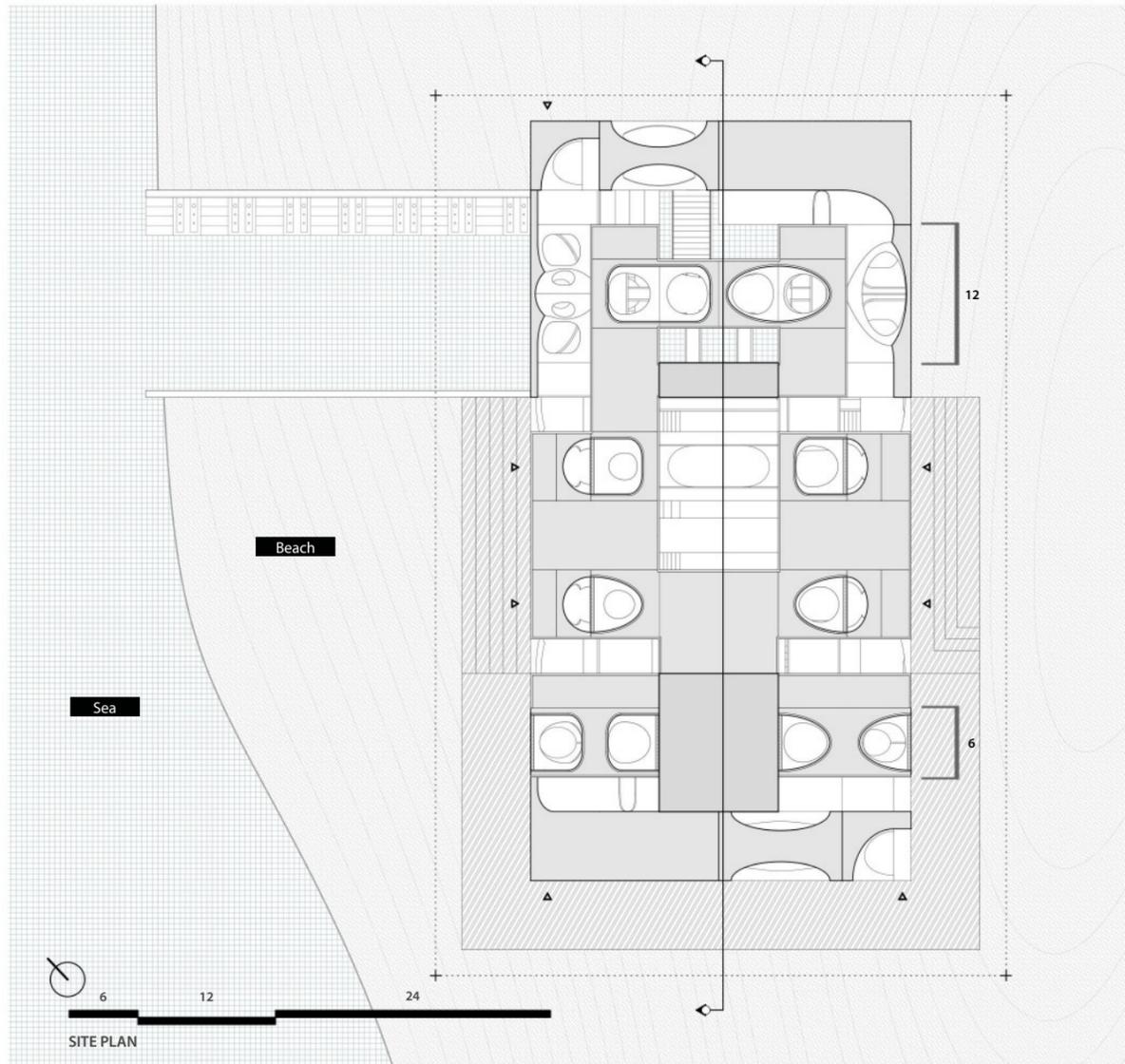


## 04 Negative Space with Water

*Modular system with Spa, Jeju Island, Korea*

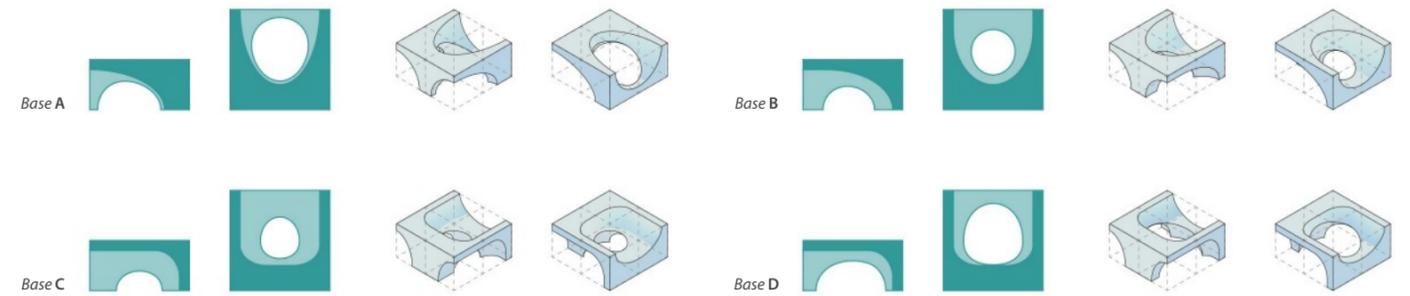
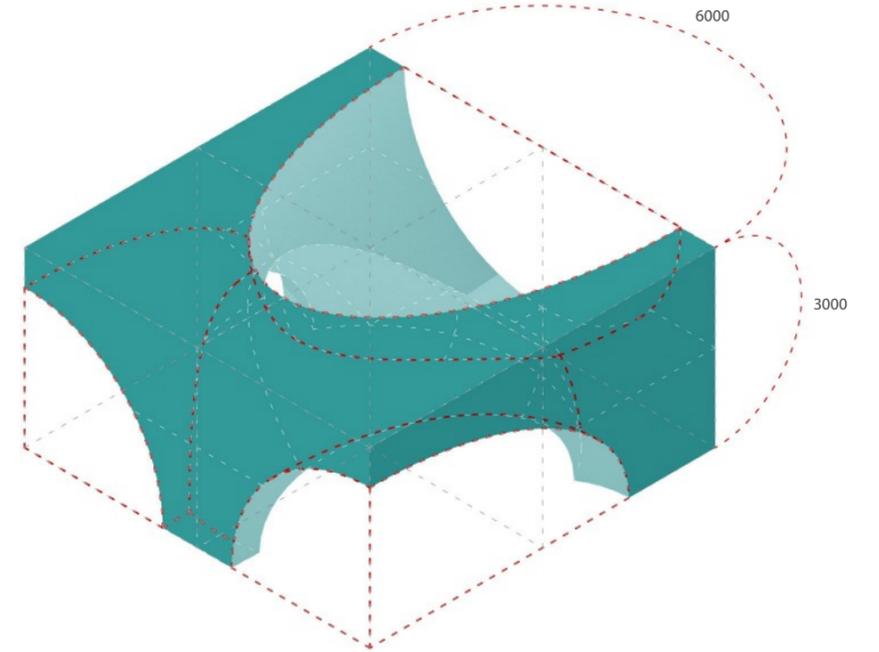
Personal Work | Professional Design Research Project | Summer 2020

This project is SPA designed as part of an experiment by the module. The design concept is a spatial device that mediates between Jeju Oreum (parasitic cone) and the beach. It aims to provide people with exterior and interior spatial experiences through water, light, wind, and steam. The single module that combines structure, skin, and space is combined with vertical and horizontal expansion. This method is also combined with various architectural components such as columns, floors, walls, and ceilings to create various languages and rhythms in the space. Inside the building, there are three main areas: Ocean water pool, Hot and Cold water pool, providing people with various spatial experiences based on the depth and temperature of the water.



### Modular System

Through the geometrical and topological logic, voids are applied on the rectangular box. The main negative space is replaced by the water space. A total of four modules created through A's transformation are modules that combine structure, skin, and space. This is my alphabet.



Twins / Spa

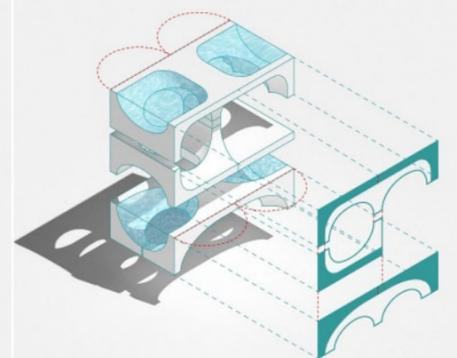
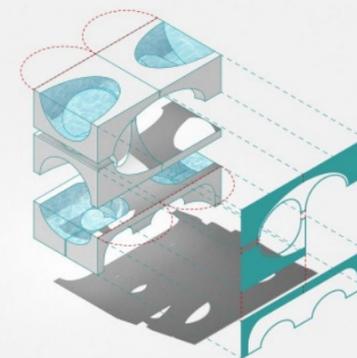
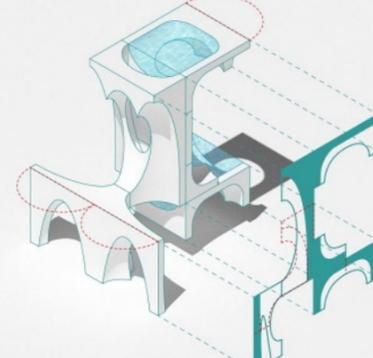
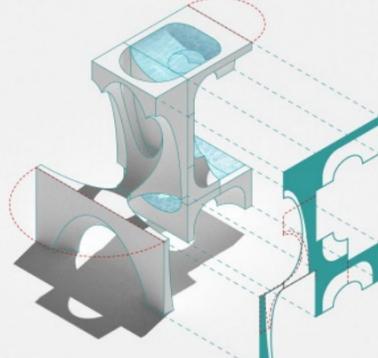
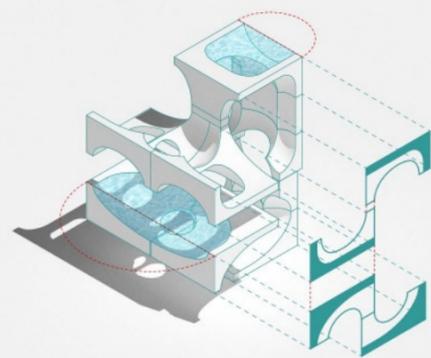
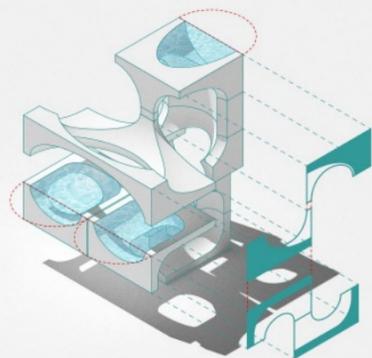
Big / Spa

AC Loggia / Entrance

BD Loggia / Entrance

AC Décalcomanie / Spa

BD Décalcomanie / Spa



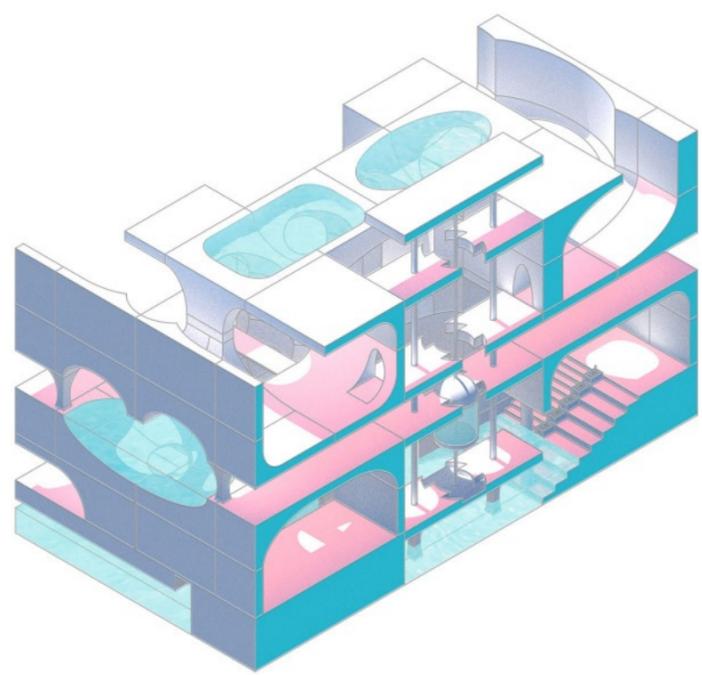
### Vertical and Horizontal Expansion

The combination of ABCD's vertical and horizontal expansion creates a total of six systems. These are my words.

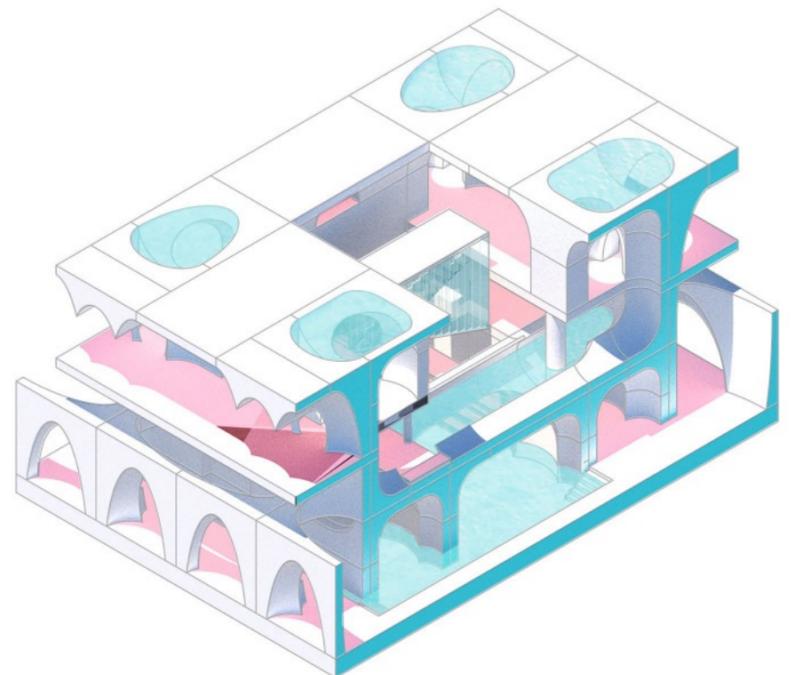


Space Organism

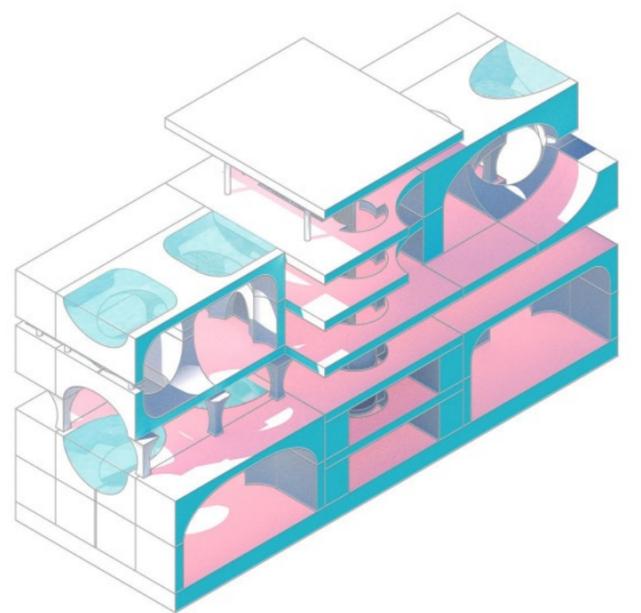
The six words are combined with various architectural components such as core, walls, ceilings, floors, columns, and stairs. I create a total of three main spaces, and these are my sentences.



Ocean Water pool (Twin + Big)



Cold and Hot water pool (ABCD Loggia)

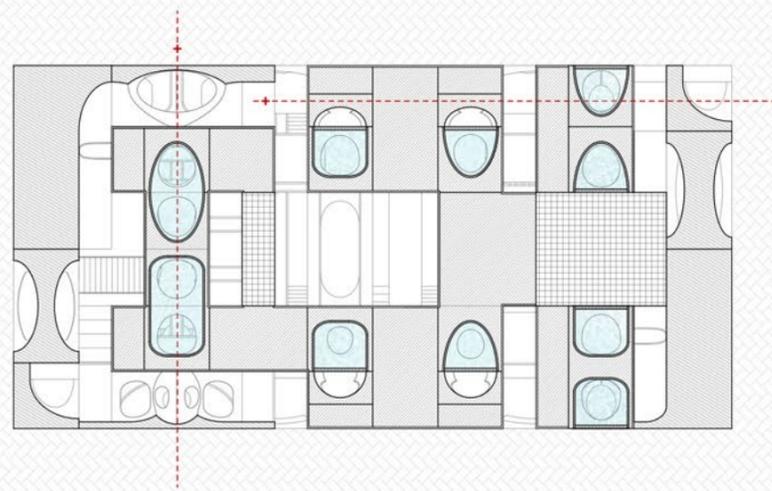


Core and Public (ABCD Décalcomanie)

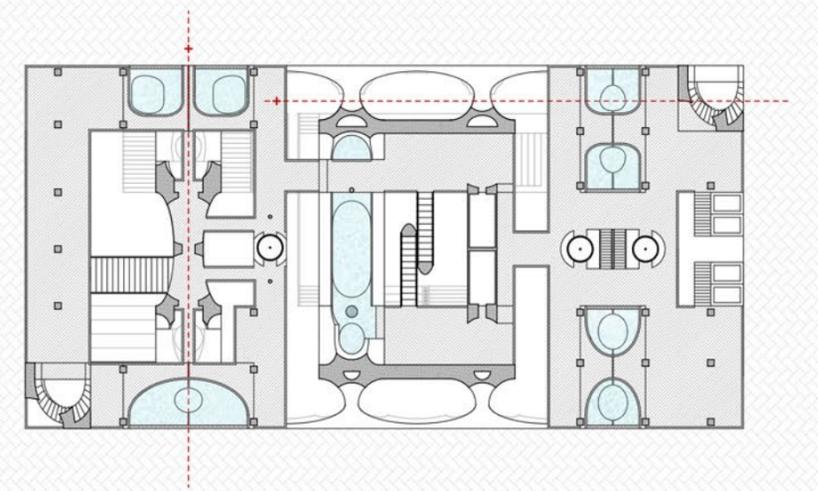


**Tang (water space)**

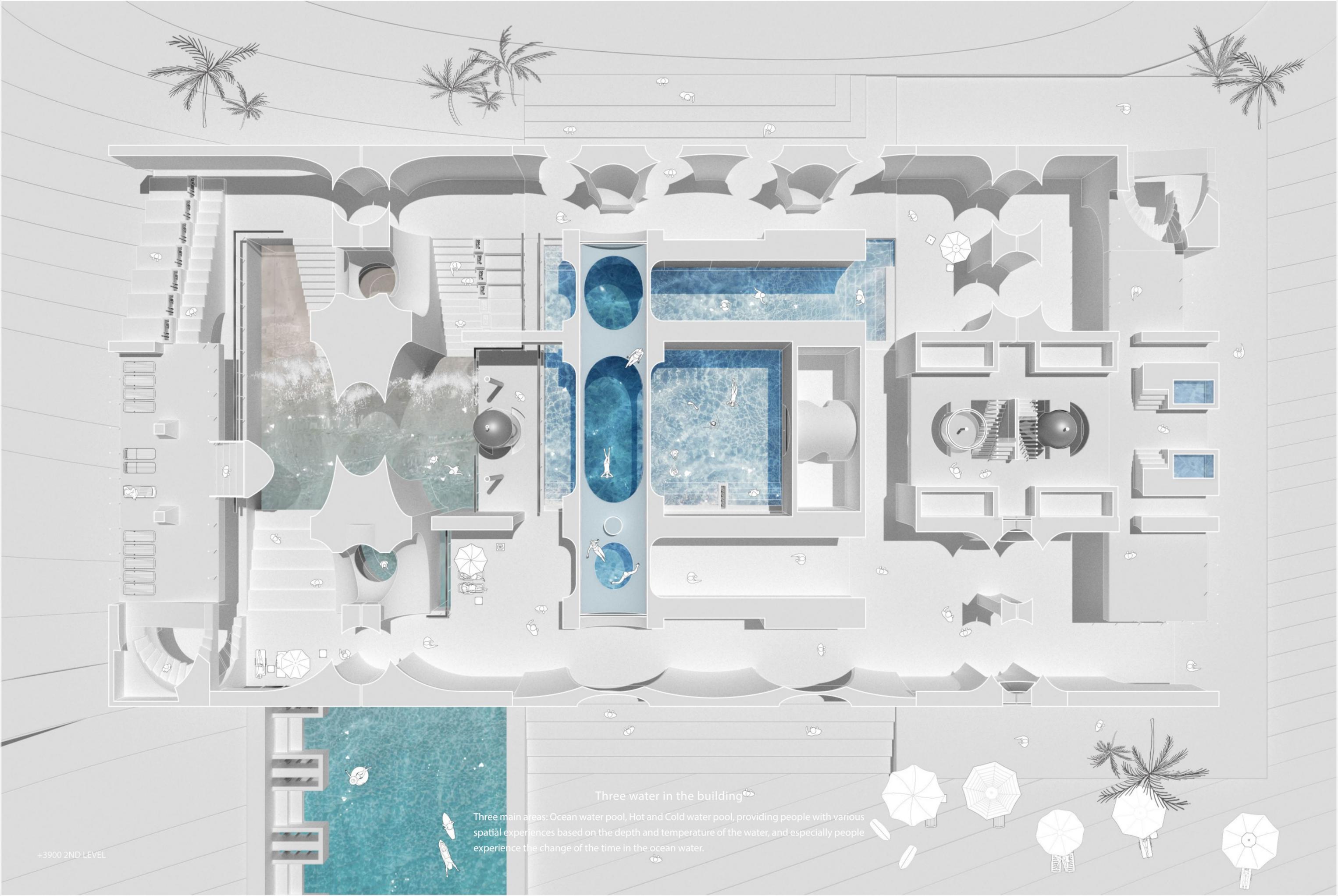
The main negative space is replaced by the water space. The space of 'tang(water space)' extends the interior space and the rooftop space.



SITE PLAN



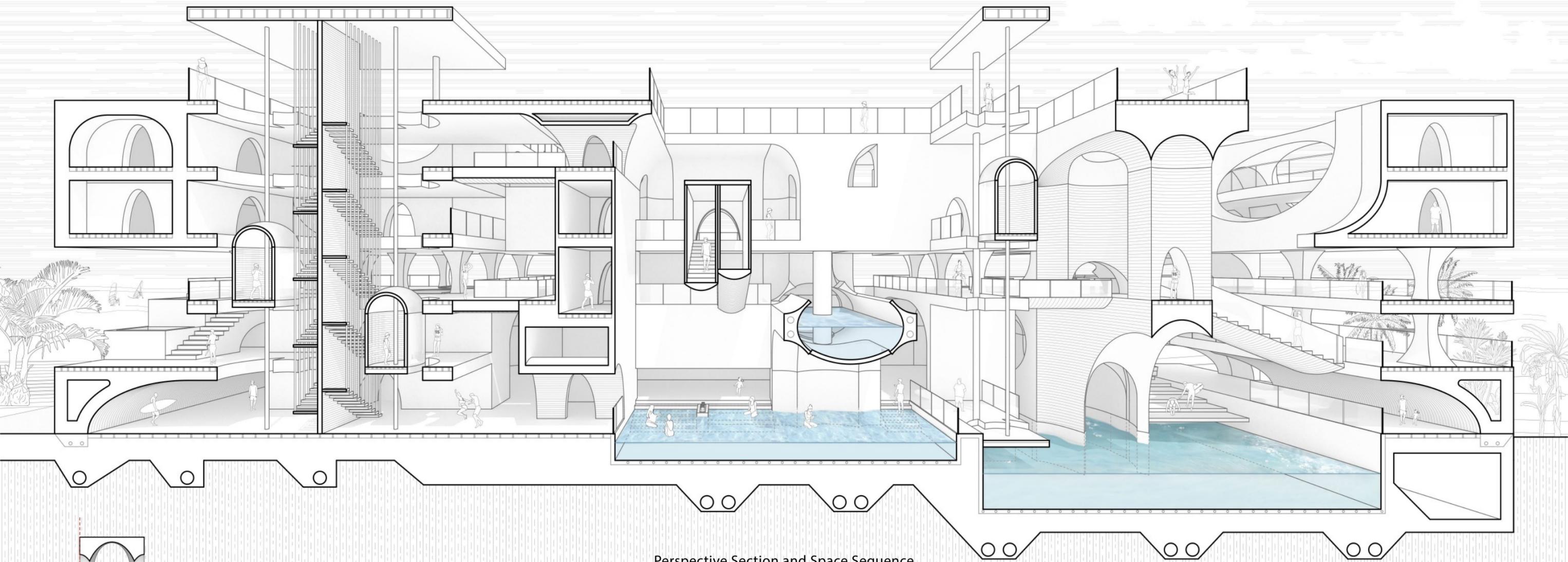
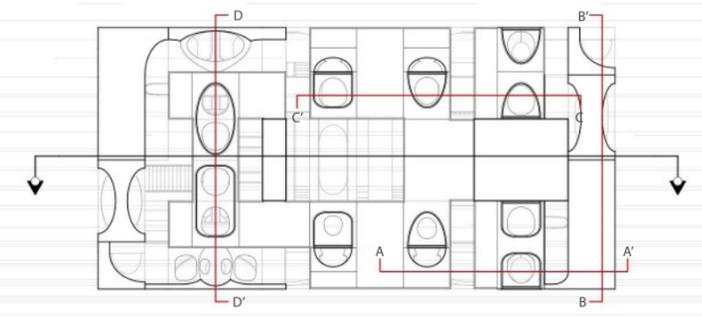
+7500 3RD LEVEL



+3900 2ND LEVEL

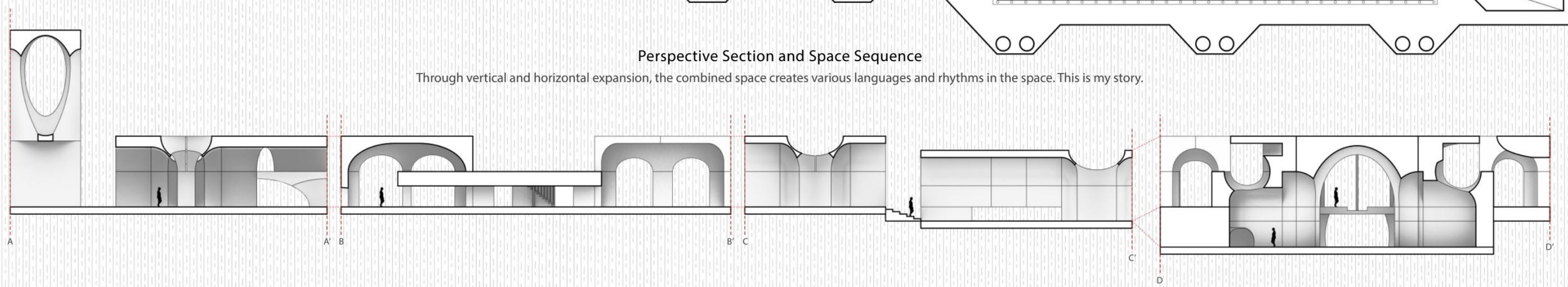
Three water in the building

Three main areas: Ocean water pool, Hot and Cold water pool, providing people with various spatial experiences based on the depth and temperature of the water, and especially people experience the change of the time in the ocean water.



**Perspective Section and Space Sequence**

Through vertical and horizontal expansion, the combined space creates various languages and rhythms in the space. This is my story.



## 05 Oblique Field in the House

*Voronoi modular system with Housing, Seoul*

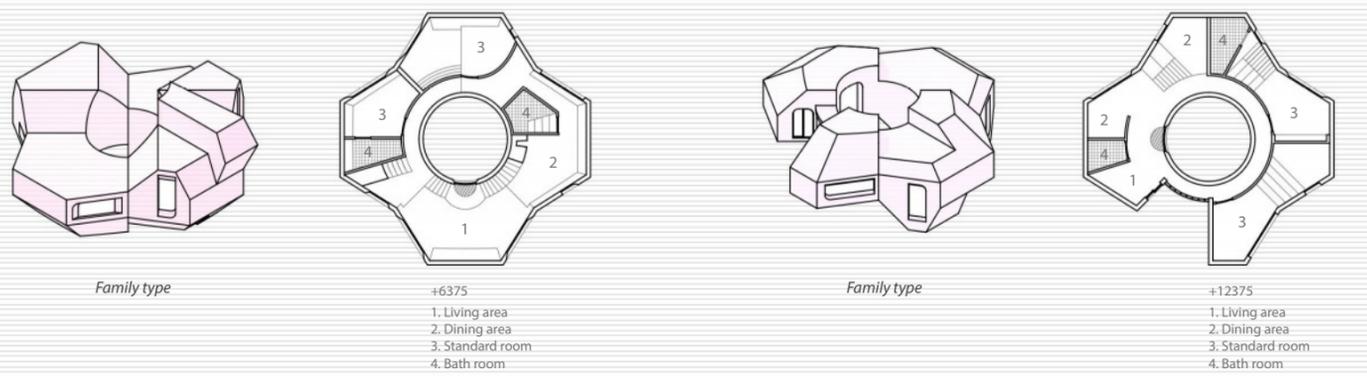
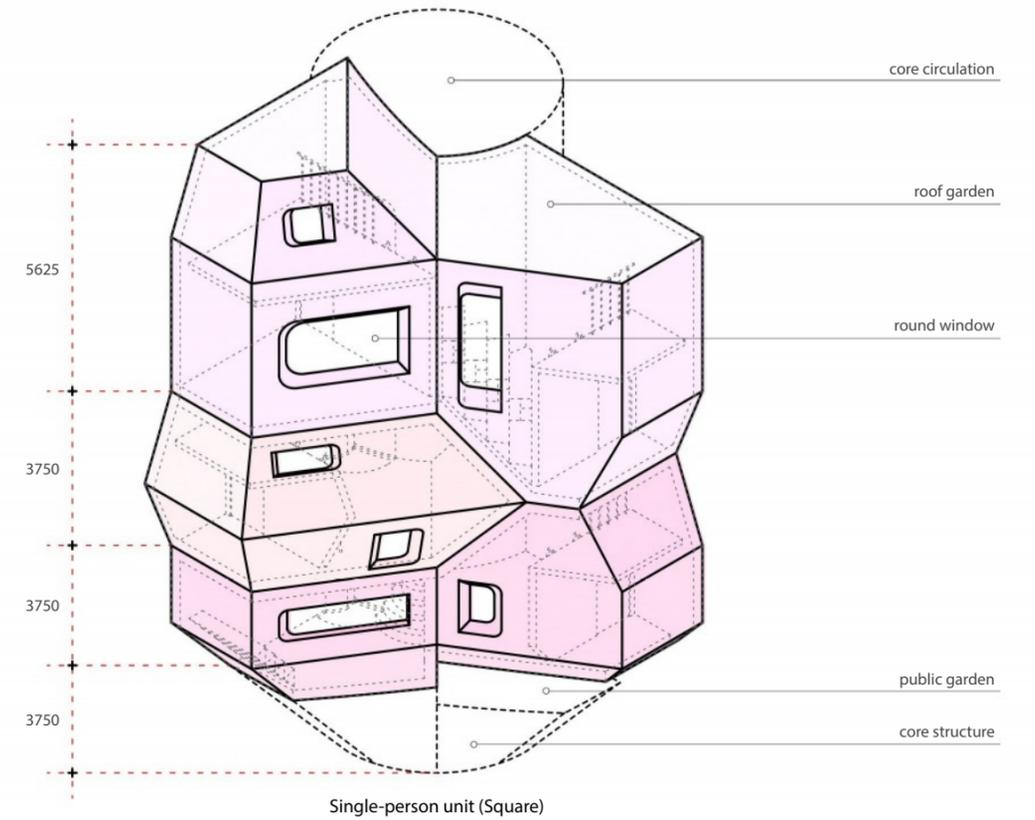
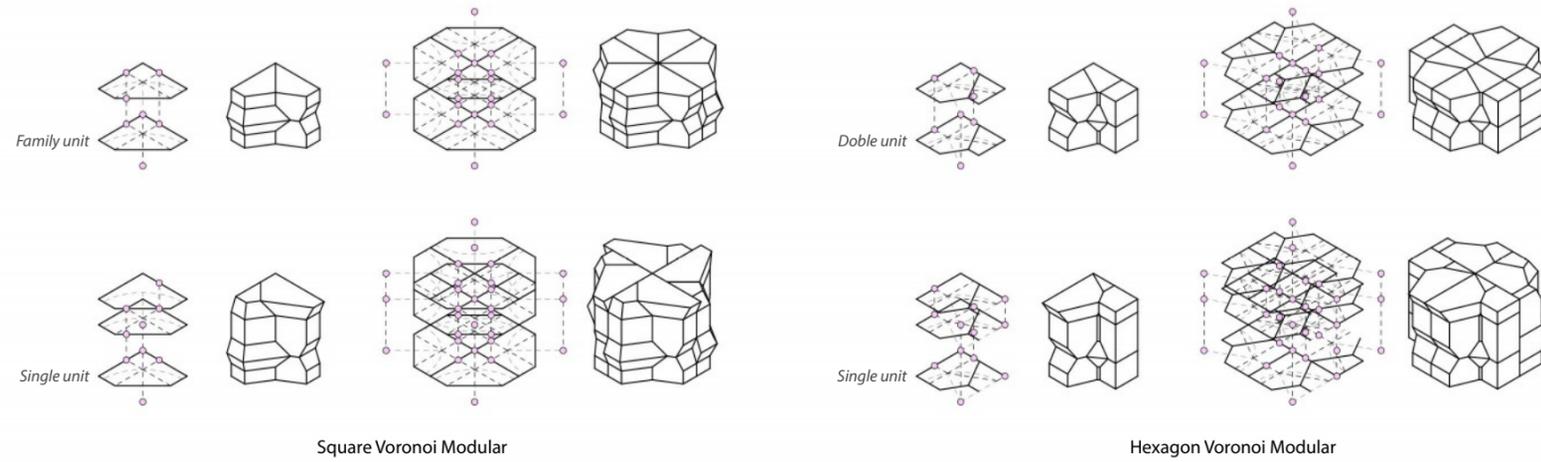
Personal Work | Professional Design Research Project | Fall 2020

This project is the housing designed to experiment with the effects of modules on the human scale. The design concept is an intermediate spatial device that connects the city and the mountain. It creates harmony between private space and public space. The module is created using the Voronoi diagram to blur the existing city's vertical and horizontal interrelationship. As an oblique field is placed within the interiors of the house, it highlighted the spatial uncertainty and liquidity. The collection of individual modules aggregated serially through a scale creates various spatial typologies of the house. The house types are combined to create a unit, and the unit creates a modular repeatable system of organization, provided by a grid. The space formed by the aggregation of private units and public units provides people with various experiences like a forest.

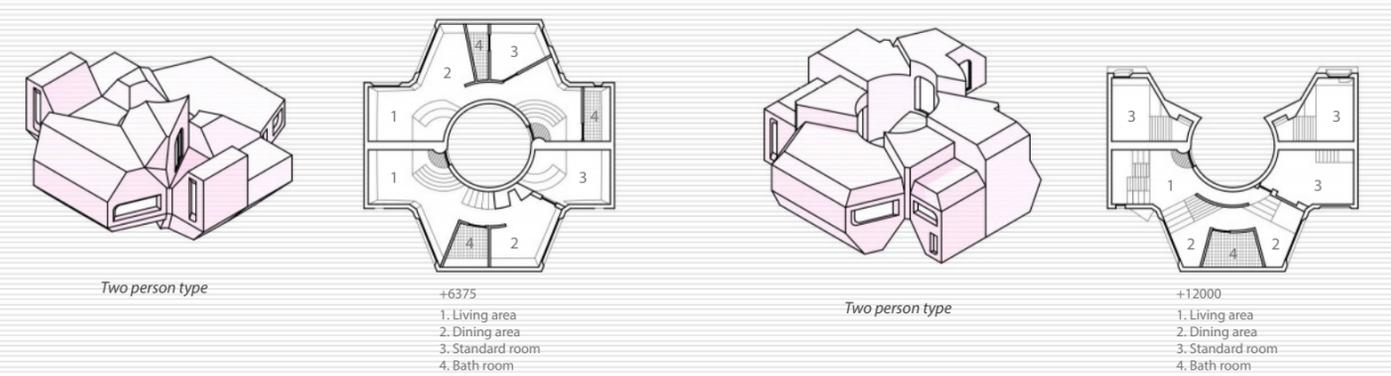
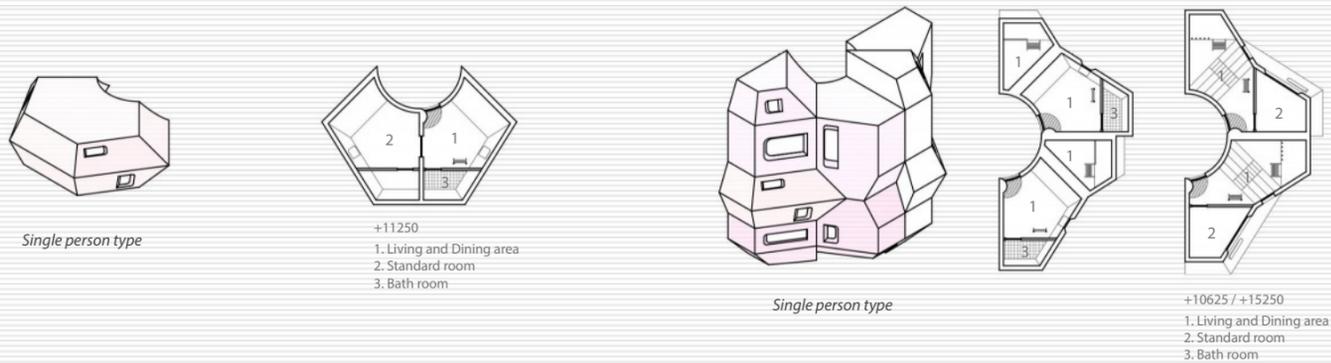


## Voronoi Modular System

The module is created using the Voronoi algorithm to blur the existing city's vertical and horizontal interrelationship. The oblique surfaces created the interior and exterior space highlight the spatial uncertainty and liquidity. The modules are aggregated by determining the space's scale, creating a variety of spatial types and spatial relationships.

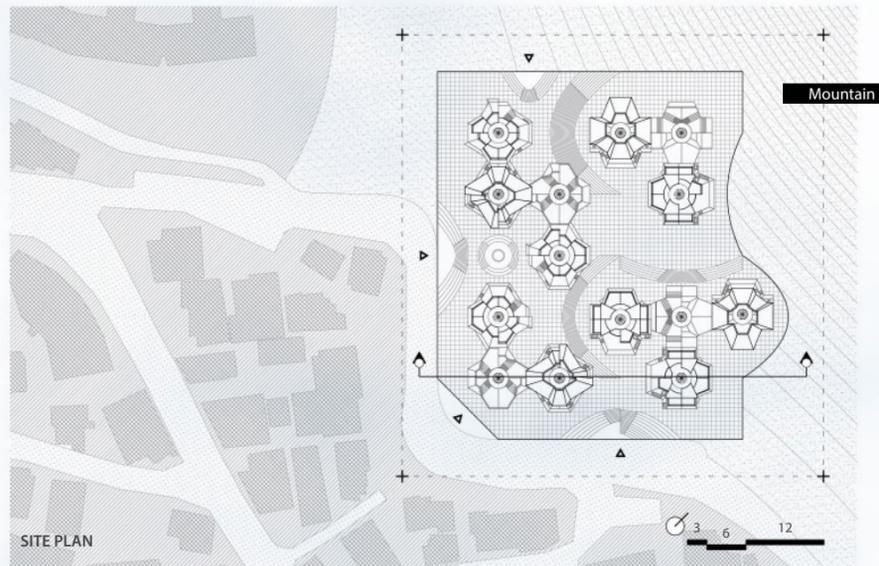


Aggregation of the square voronoi modular



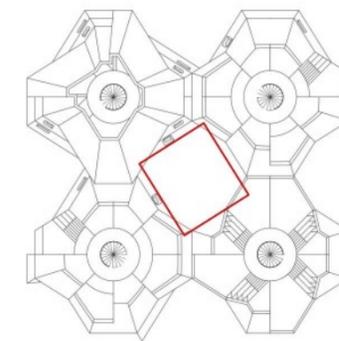
Aggregation of the hexagon voronoi modular



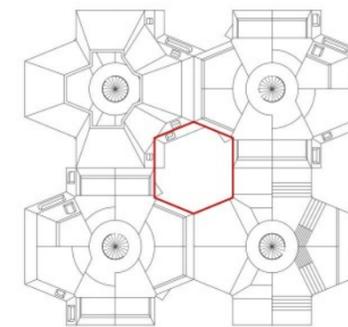


### Aggregation of the Units

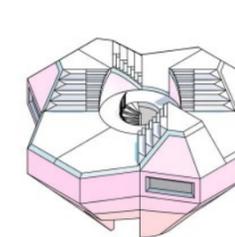
The aggregated modules are determines as public and private units. Blending of public and private units, creating a modular repeatable system, provided by a grid. The combined units play a part in connecting the city and the mountain.



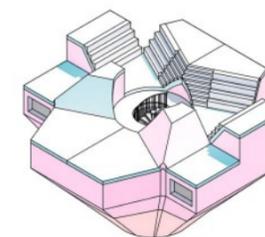
Aggregation of the square unit



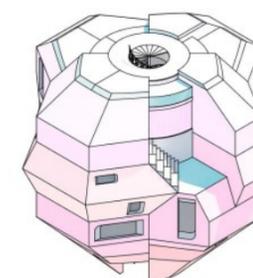
Aggregation of the hexagon unit



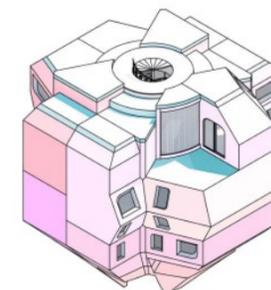
Public Space Unit (Square)



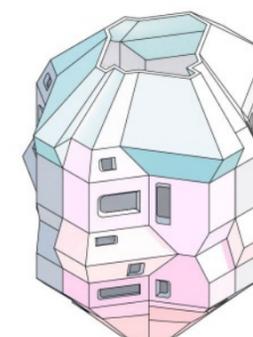
Public Space Unit (Hexagon)



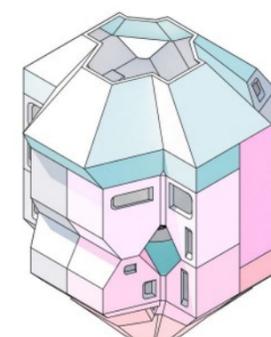
Family Unit (Square)



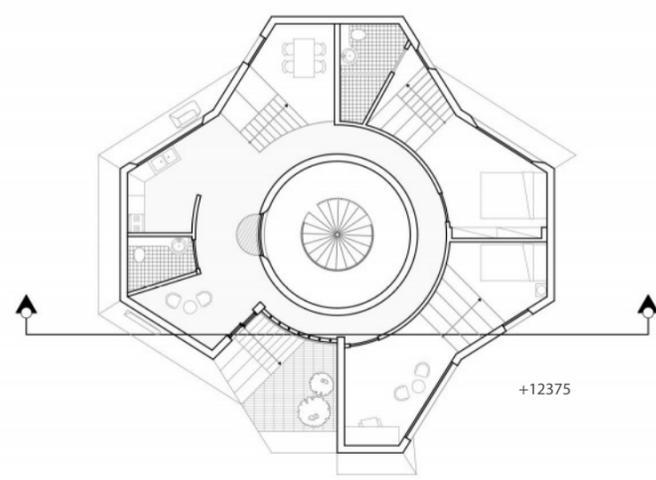
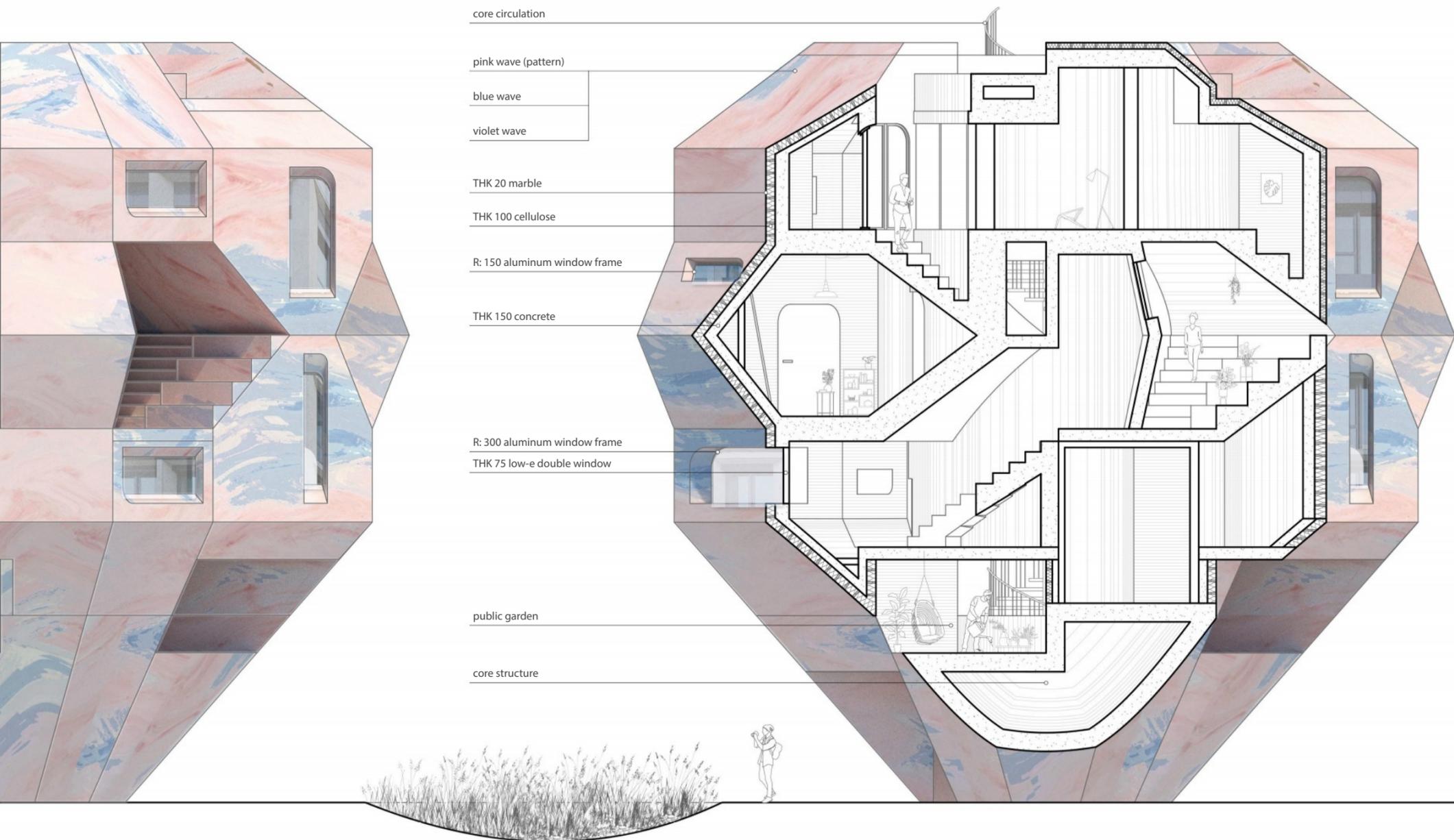
Two person Unit (Hexagon)



Single Person Unit (Square)

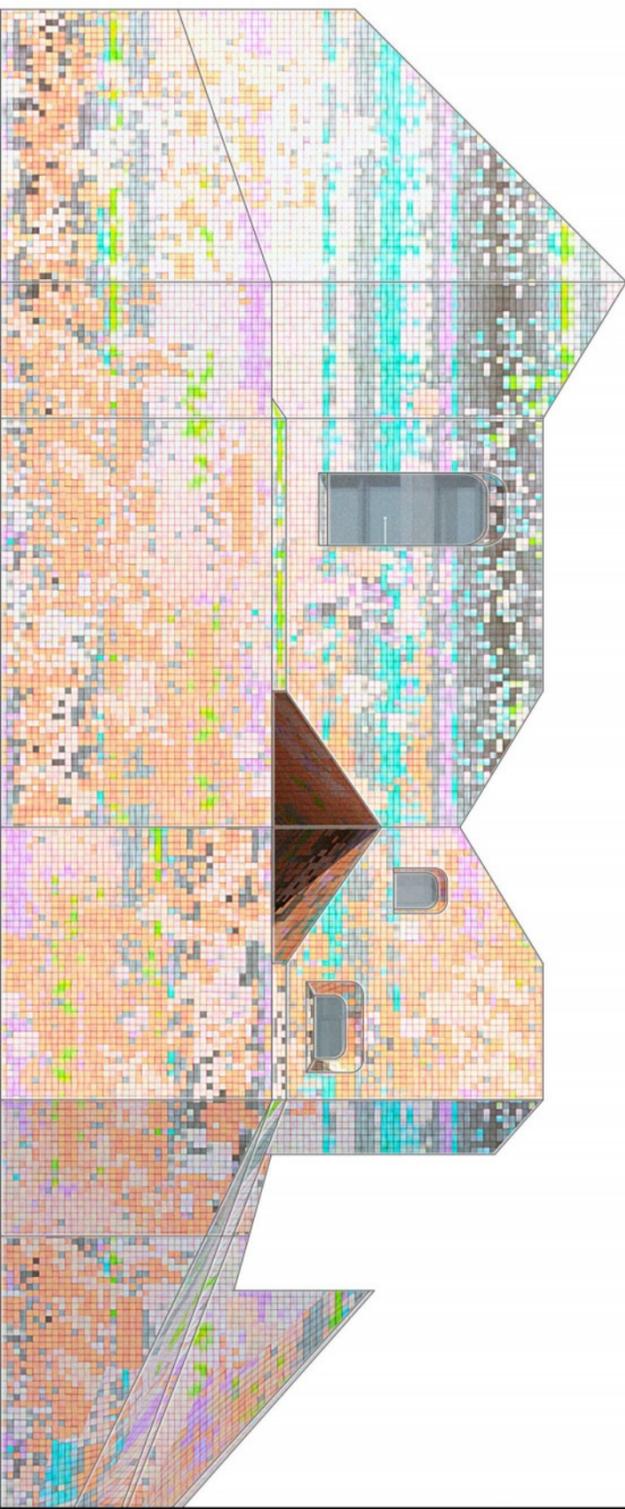


Single Person Unit (Hexagon)



Section of the Family Unit (Square)

Relationships of public space and private space, relationships of material and elevation



100 x 100 mosaic panel  
pink panel  
green panel

roof garden

THK 30 metal panel

THK 100 cellulose

THK 150 concrete

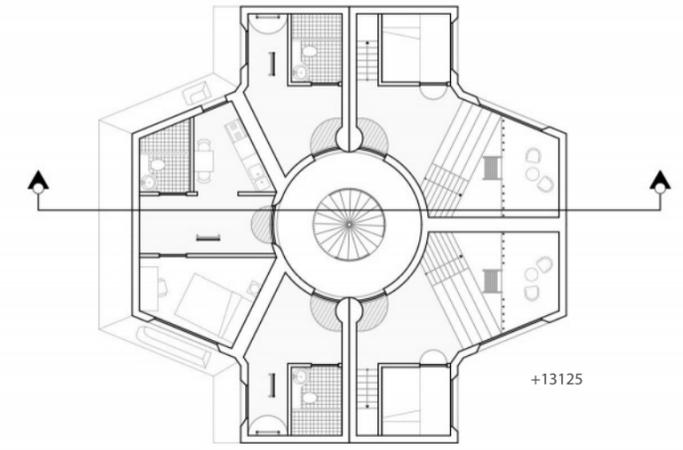
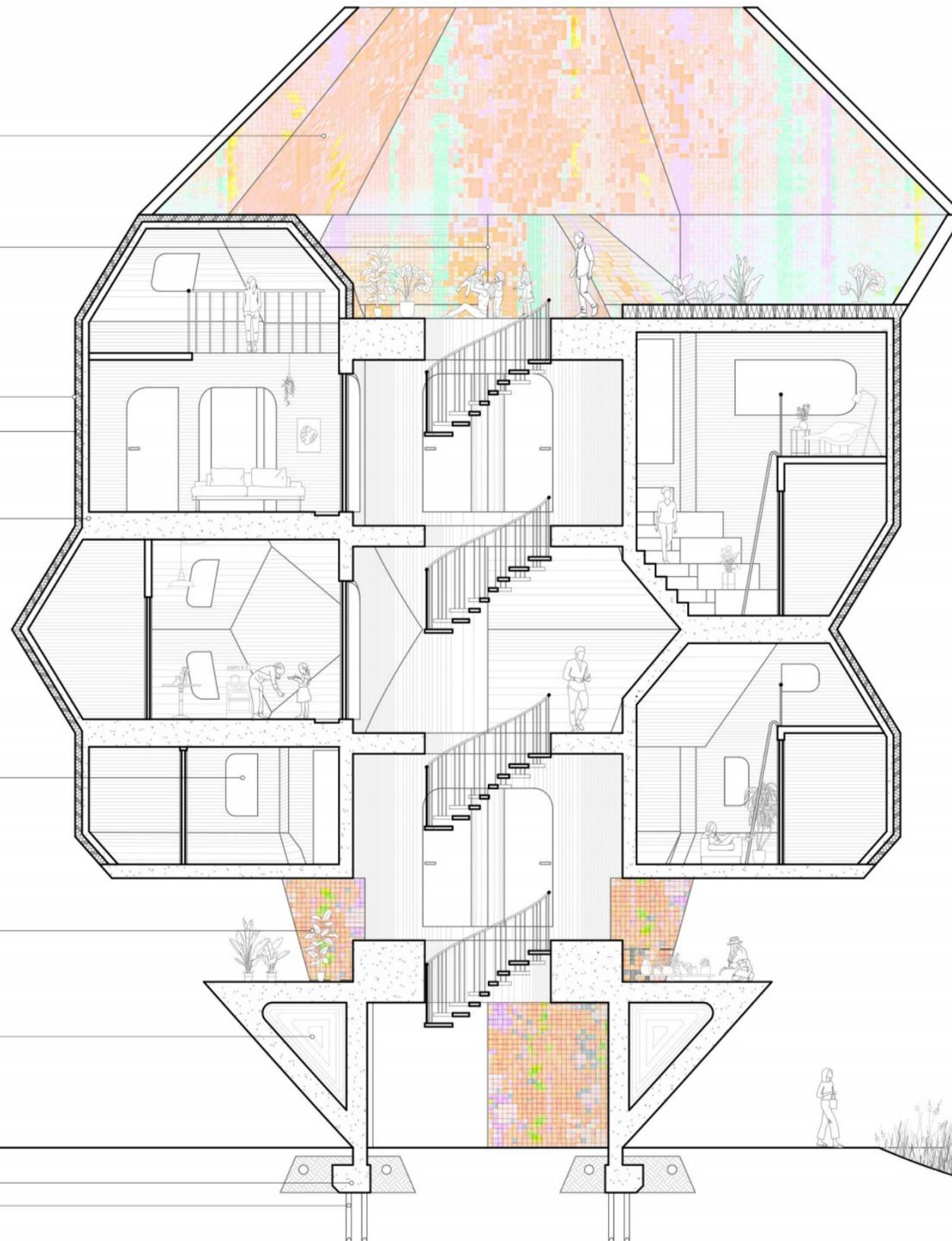
R: 150 round window

public garden

core structure

concrete foundation

PHC pile



### Section of the Single Person Unit (Hexagon)

Relationships of public space and private space, relationships of material and elevation



### Section of the Housing

The spaces created by the aggregation of private units and public units, provided by a grid, provide people with various experiences like a forest.

## **ACADEMIC WORK**

### **06 Density of Void**

*Void with Office, Seoul*

### **07 Three and Four Library**

*Difference Elements with Library, London*

### **08 Experimental City**

*Three Experiments with Architecture, DMZ*

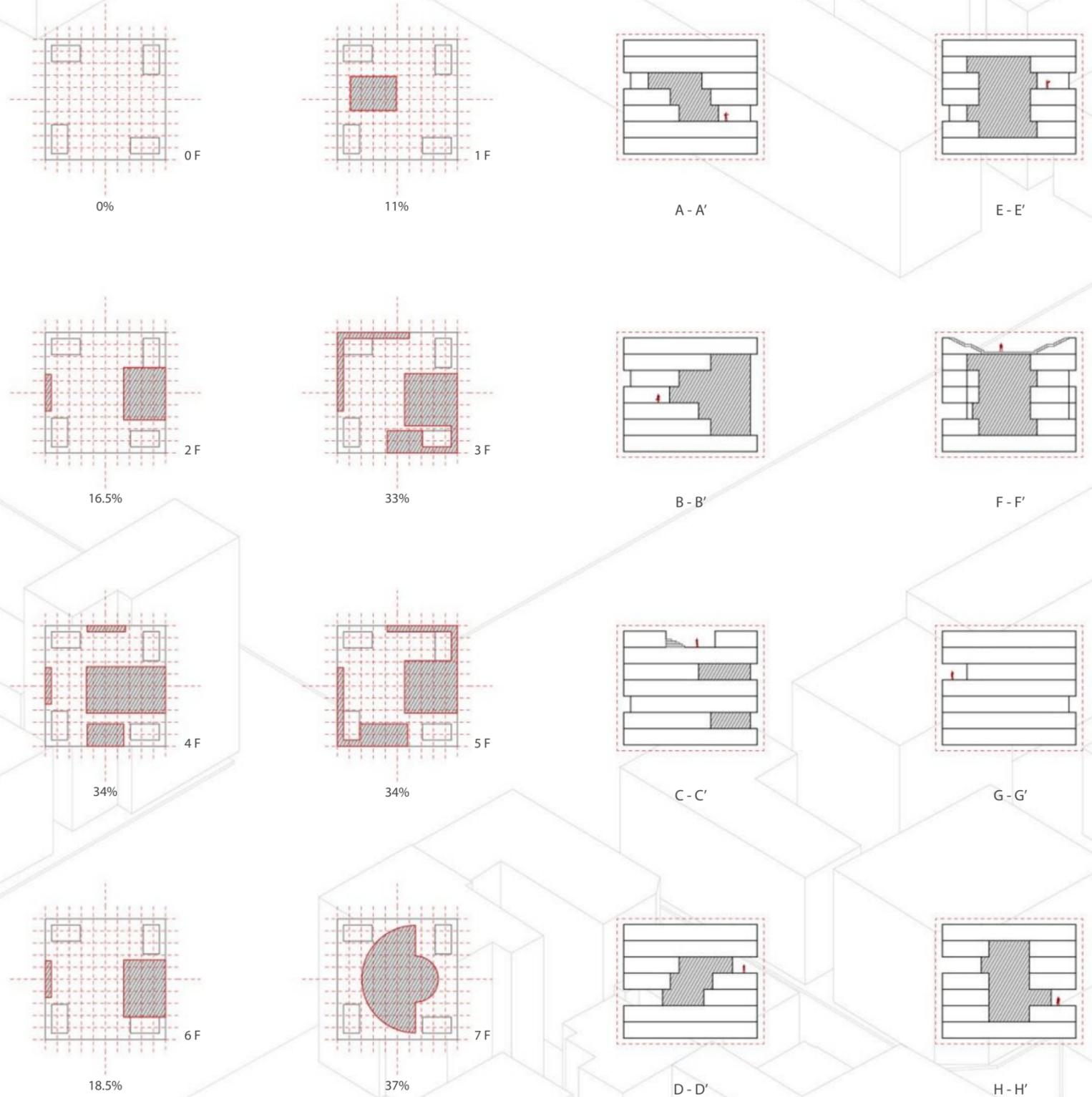
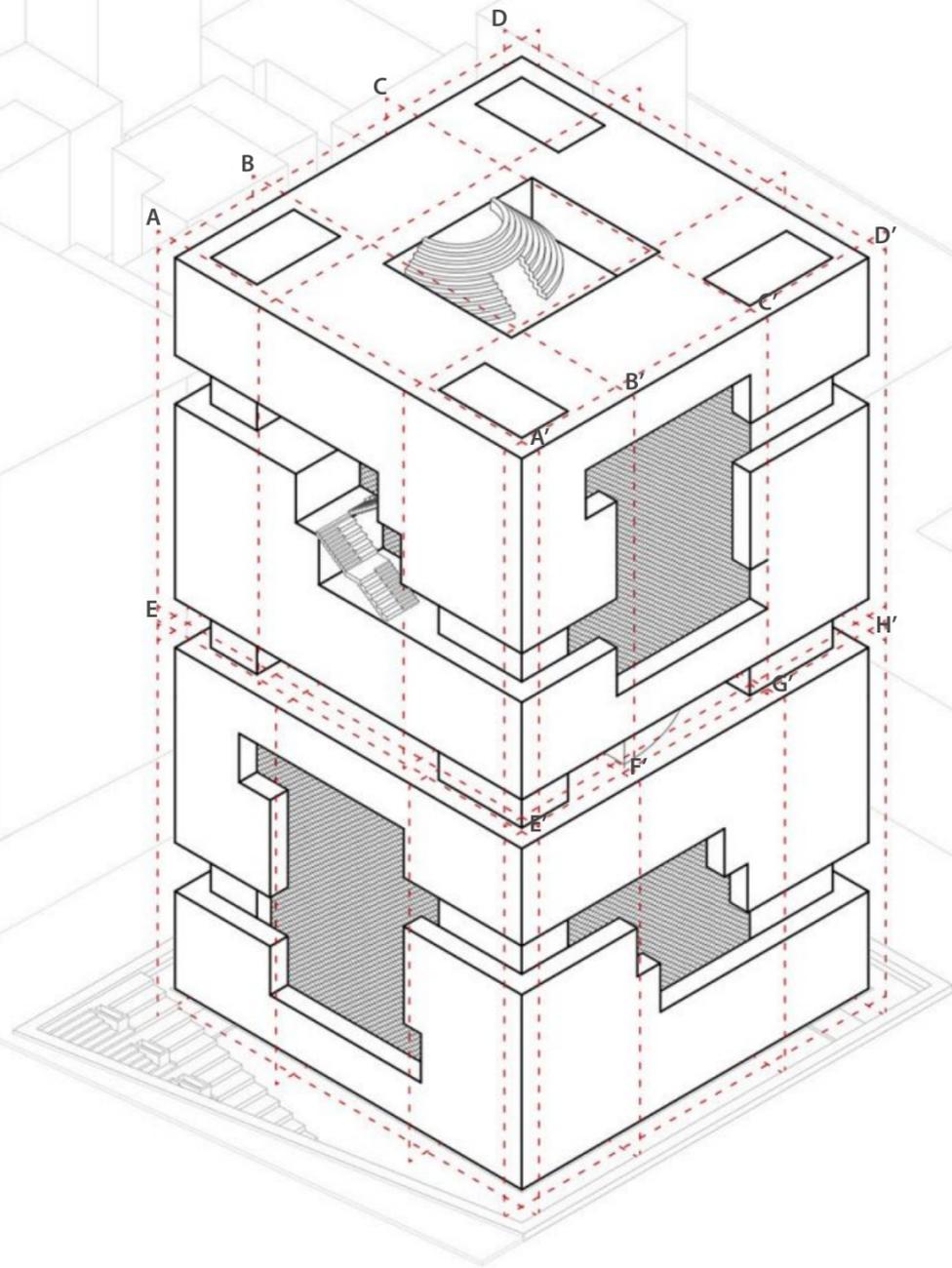


## 06 Density of Void

*Void with Office, Seoul*

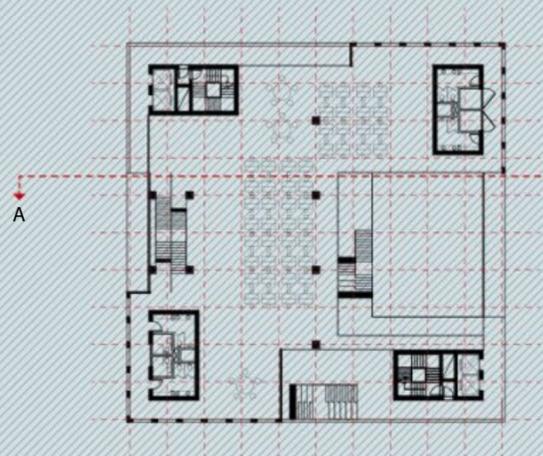
Seoul National University of Science and Technology | Spring 2015 | Instructor : Nakhoon Kim

This project reinterprets void, a basic element of architectural design. In architecture, void has a possibility to build a space beyond a vaguely empty one. I experiment different types for the density of void and ensure that the sum of all voids construct the huge space inside the building. By using an architectural word 'clone' in a big hexahedron, I give legitimacy to the axes of each direction. Unlike other works, I experiment with types for the façade. Using 4 materials of glass brick, I experiment the density of void on light. Thus, this project is meaningful because it shows a proactive attitude of building a space rather than a passive attitude of architect for void in this project.

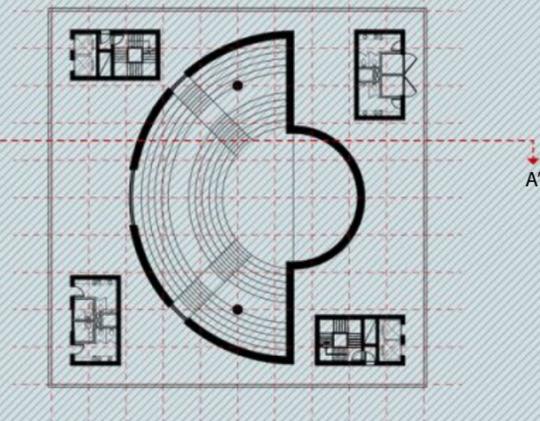


**Density of Void**

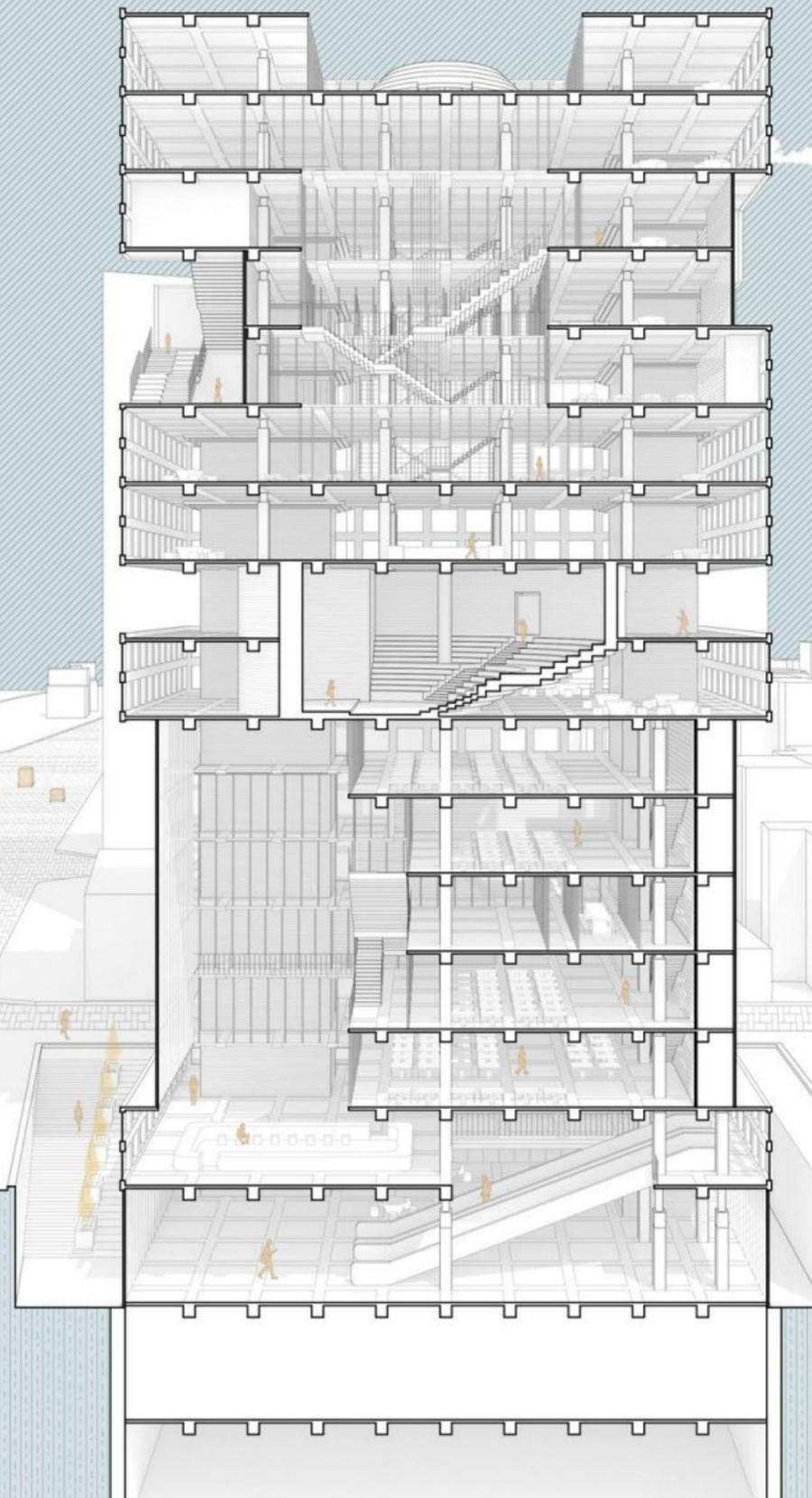
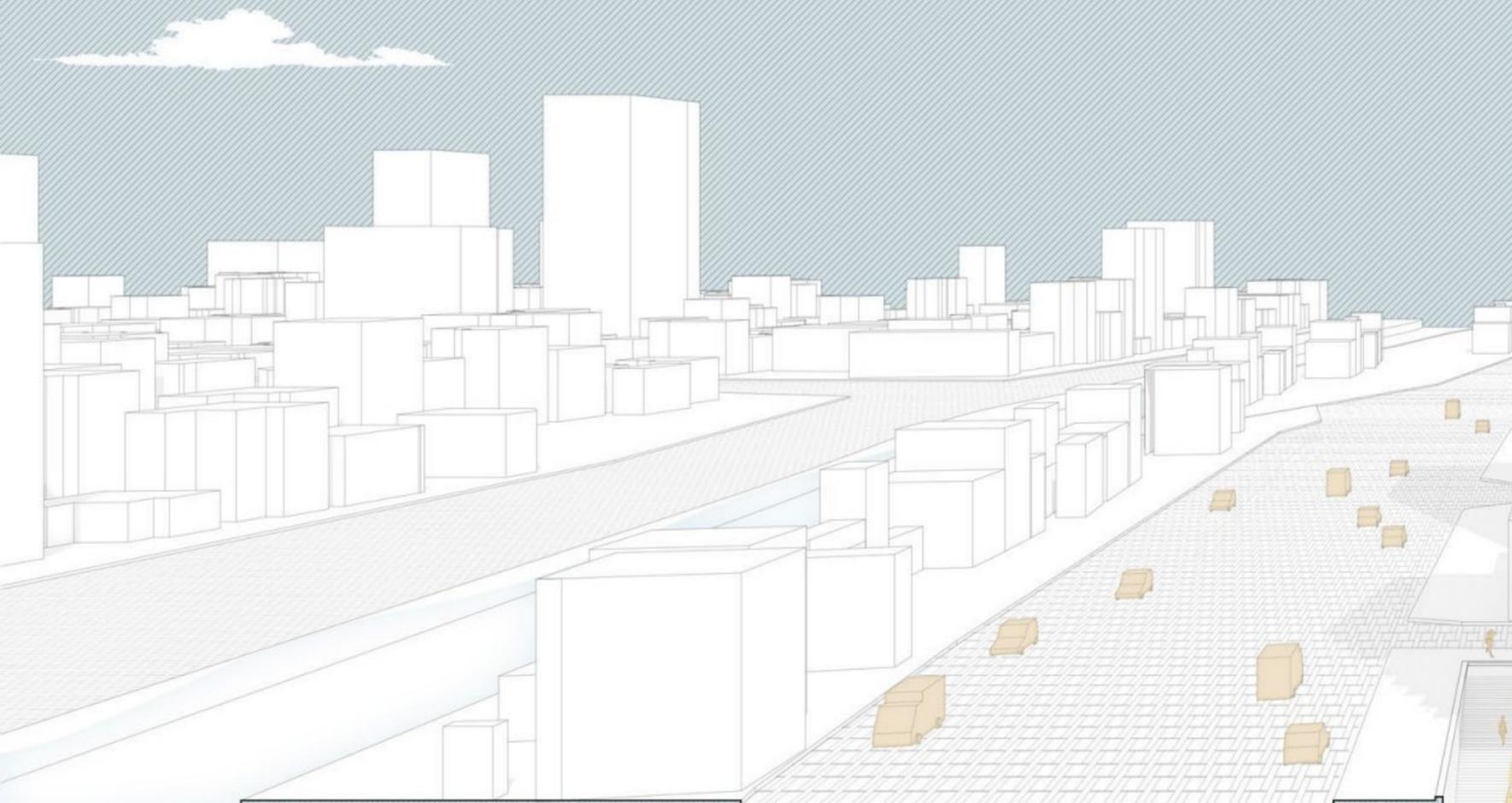
The density of void was experimented with 8 floors in total, which results in the construction of a huge space. Not only place but cross-sectional spaces were also built in this experiment.



+18000  
5th Floor plan

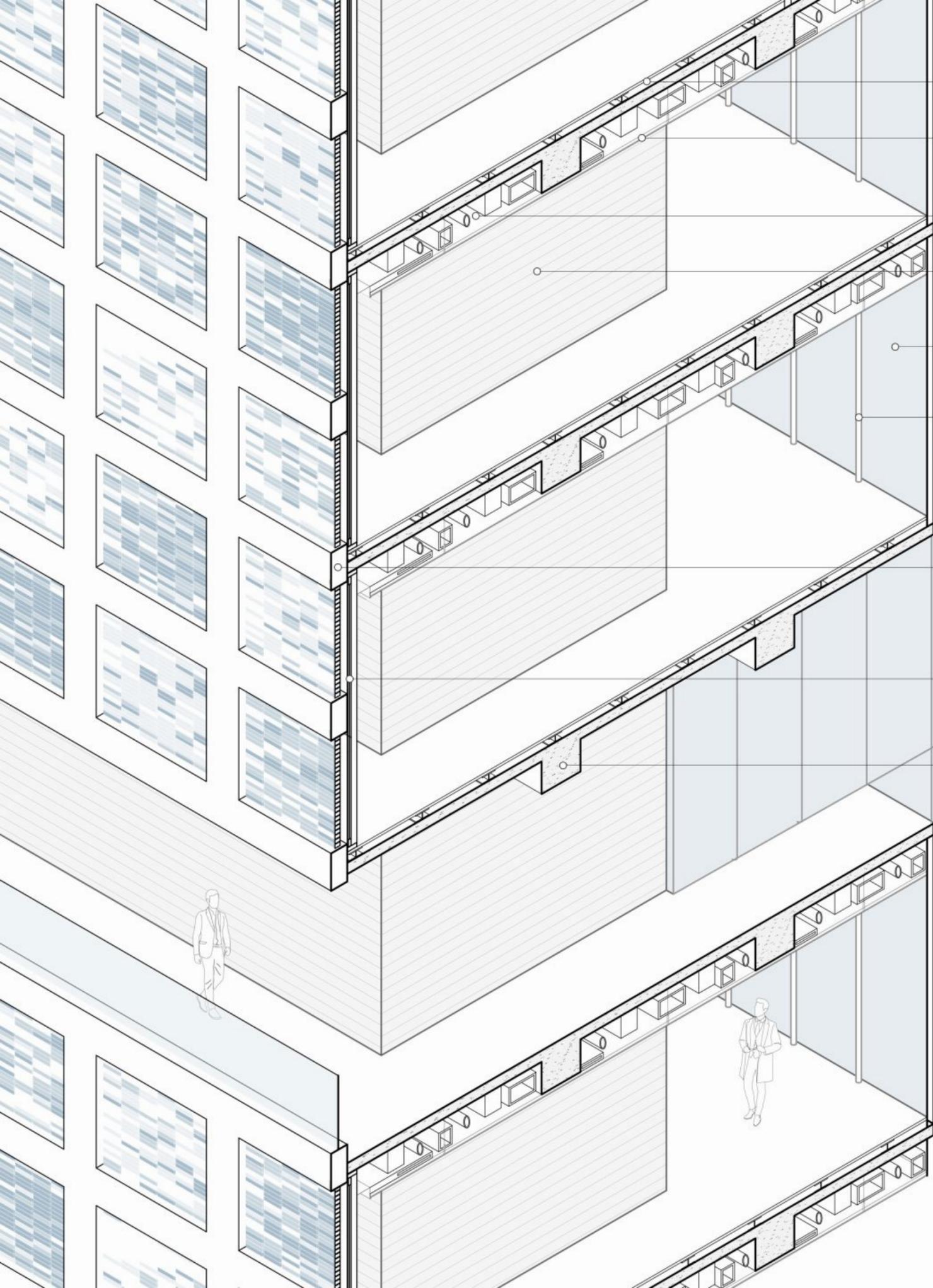


+30000  
8th Floor plan



### A-A' Perspective Section

The office is connected directly to a subway station, so people enter from the first underground level. This shows a big void inside the office and a big void between two big masses through the density of void to build a space, using void actively rather than the passive use of void. Detailed pillars, grid-form beams, intersecting stairs, and the escalator across the space enable a fantastic architectural experience for people.



raised floor grid system

aluminum ceiling frame grid system

conditioner air supply

core structure

THK150 low-e double glazed curtain wall

ø25 circular mullion in curtain wall

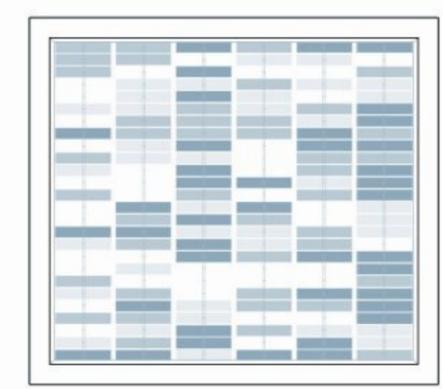
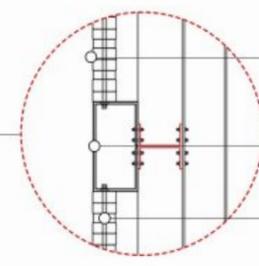
THK50 glass brick (4 types)

THK500 square aluminum tube

ø8 round steel tube (support glass brick)

THK100 reinforced glass windows

concrete beam



- glass brick 100%
- glass brick 50%
- glass brick 25%
- glass



**Glass Brick Types**

The percentage of glass brick signifies opacity proportion of light. After creating 4 glass bricks, I experiment different combinations using the density of void on light, which starts from the experiment of void density on space.

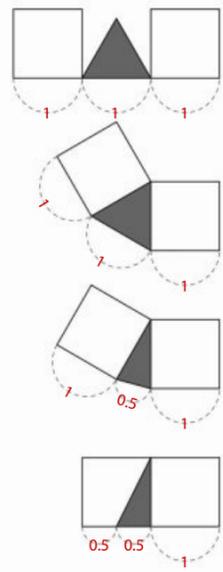


## 07 Three and Four Library

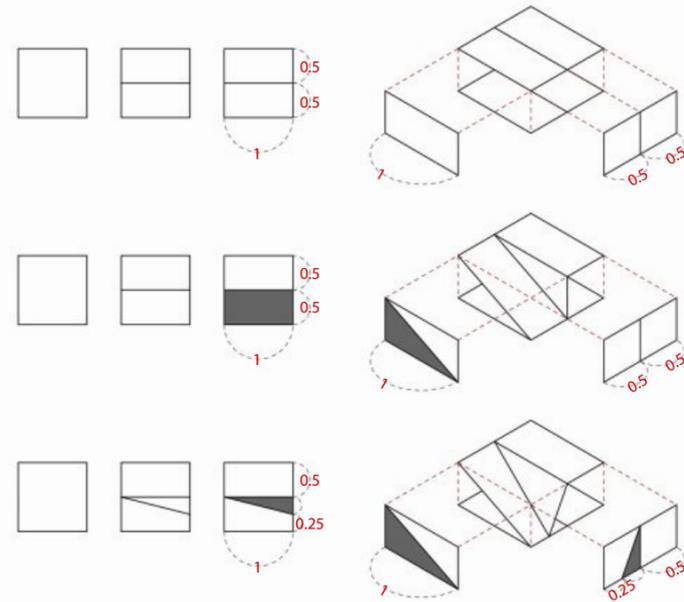
*Difference Elements with Library, London*

Seoul National University of Science and Technology | Fall 2015 | Instructor : Mannyong Chung

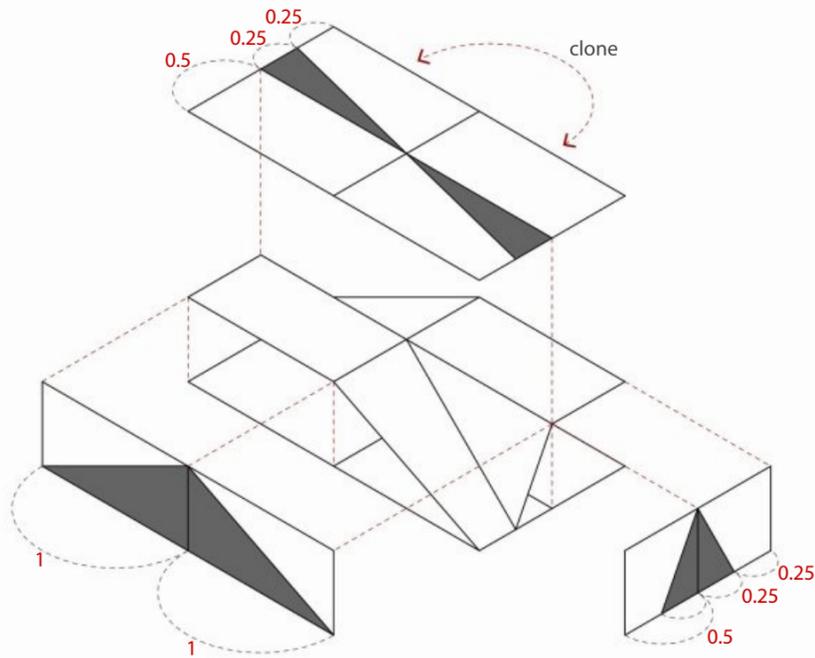
This project clearly shows the 'Difference in Thinking,' which is my basis. To stay away from quintessential library, I have formed a diagonal space using the logic of '3 and 4' through triangular and square proportions, instead of abstract or esthetic logic. To add differences to the diagonal space, this experiment adopts the 7 elements including 4 different oblique plates and a bridge, big void, and small void. To make a change and a new type of library, I have endlessly experimented in this project beyond developing the logic of space. Furthermore, my pursuit of huge difference in thinking from others was reflected in the final model. Instead of following my school's request to create in 1/200 scale, I chose the 1/100 scale which overwhelmed people. This work enabled me to discover the 'difference in thinking' from other students and compose my own architectural difference.



3 and 4 logic

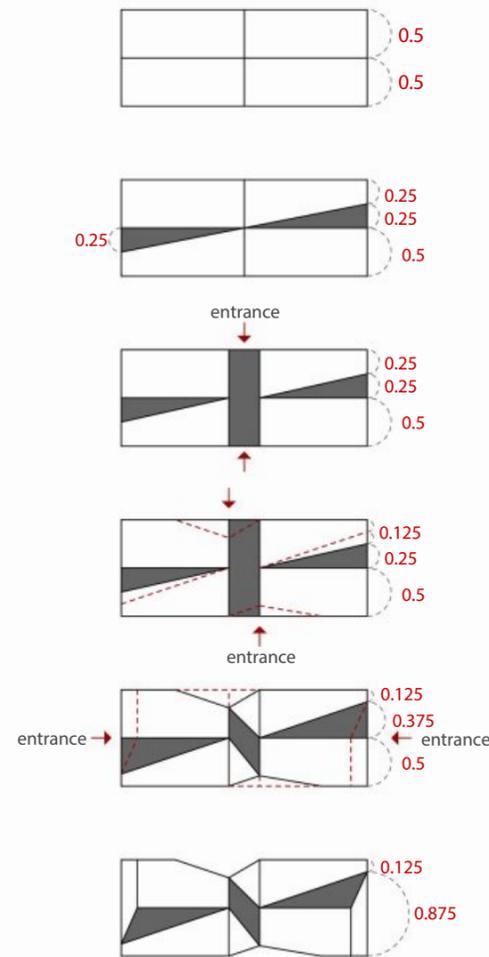


Transformation phase of 3 and 4

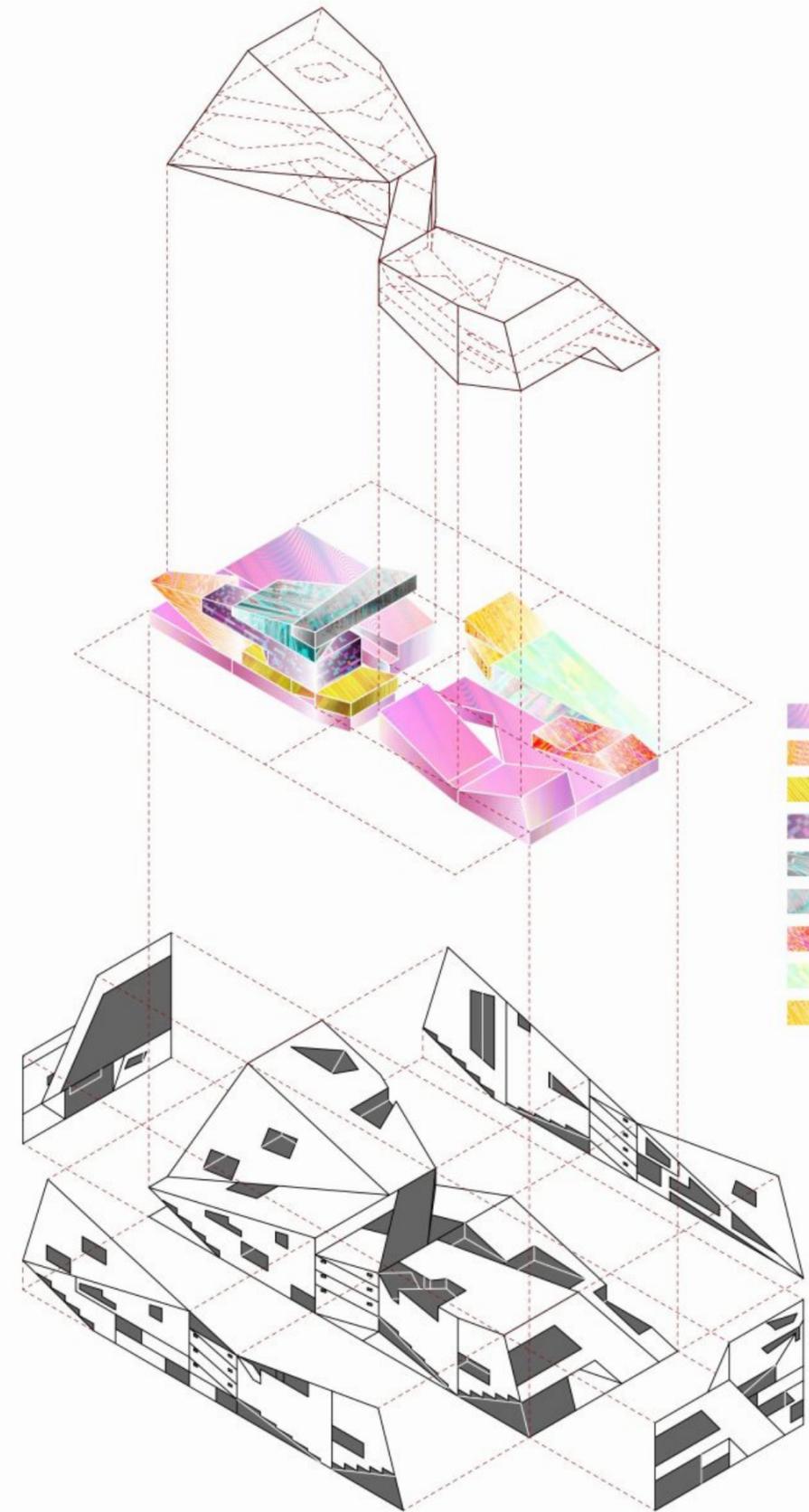


3 and 4 system

A diagonal space is formed through the logic of 3 and 4, and the same logic is applied on the opposite side using the language of 'clone'.



3 and 4 process

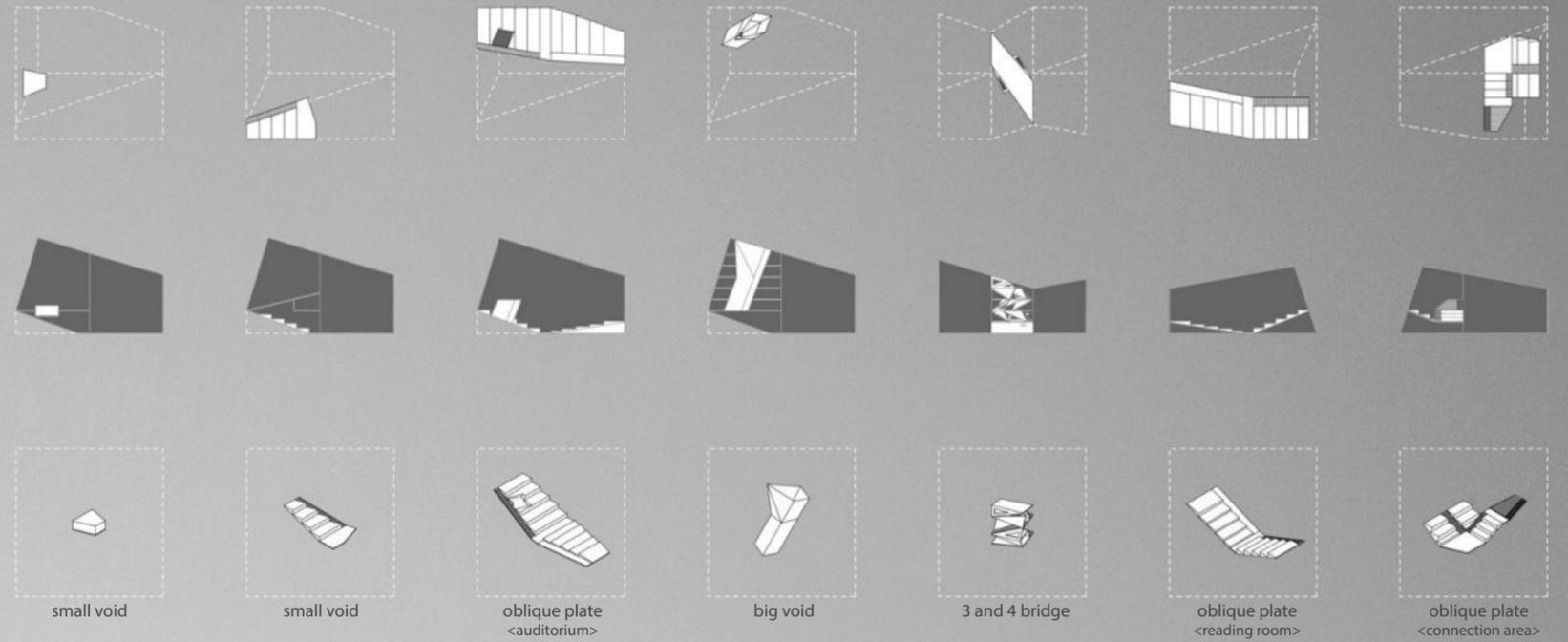


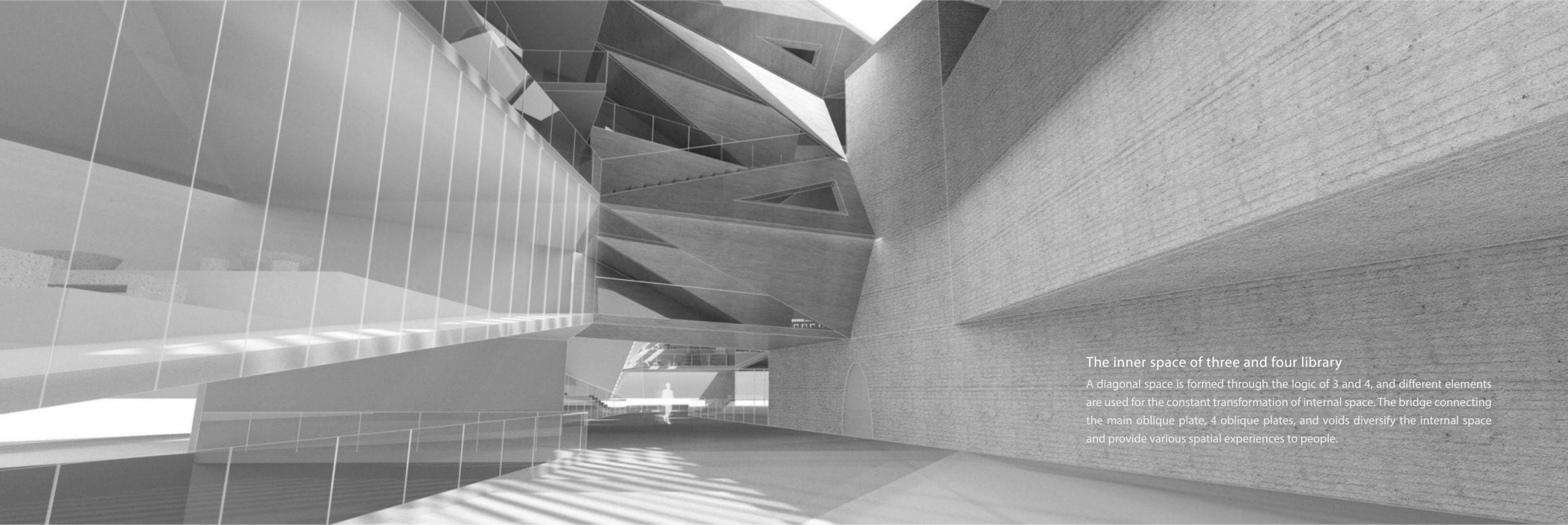
Cross Programing

Inside are the open space of library and various masses entangling and intersecting with one another, and the intersecting open space is connected through the bridge.

## Difference Elements

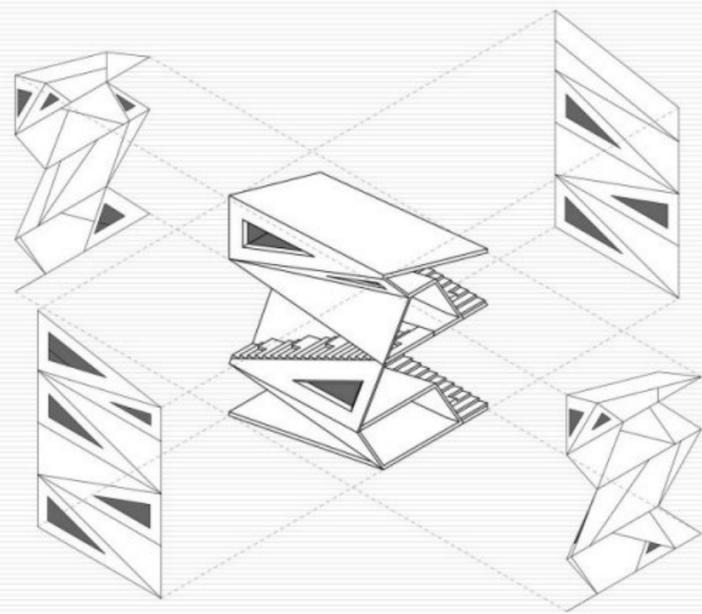
7 difference elements have been created to make the spatial change and the new type of library.





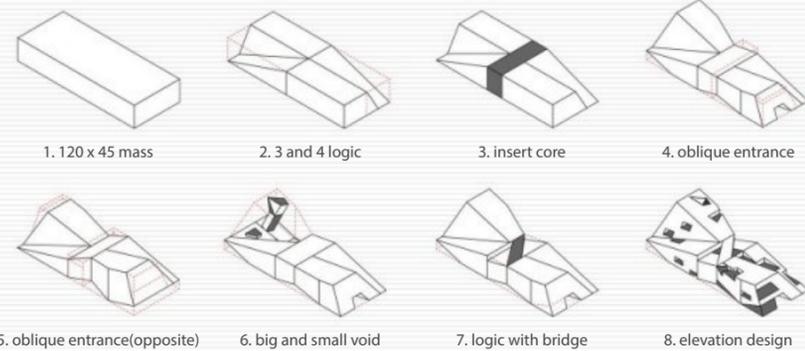
The inner space of three and four library

A diagonal space is formed through the logic of 3 and 4, and different elements are used for the constant transformation of internal space. The bridge connecting the main oblique plate, 4 oblique plates, and voids diversify the internal space and provide various spatial experiences to people.



Transformation of 3 and 4

The logic of 3 and 4 is applied to the bridge connecting the main space.



1. 120 x 45 mass

2. 3 and 4 logic

3. insert core

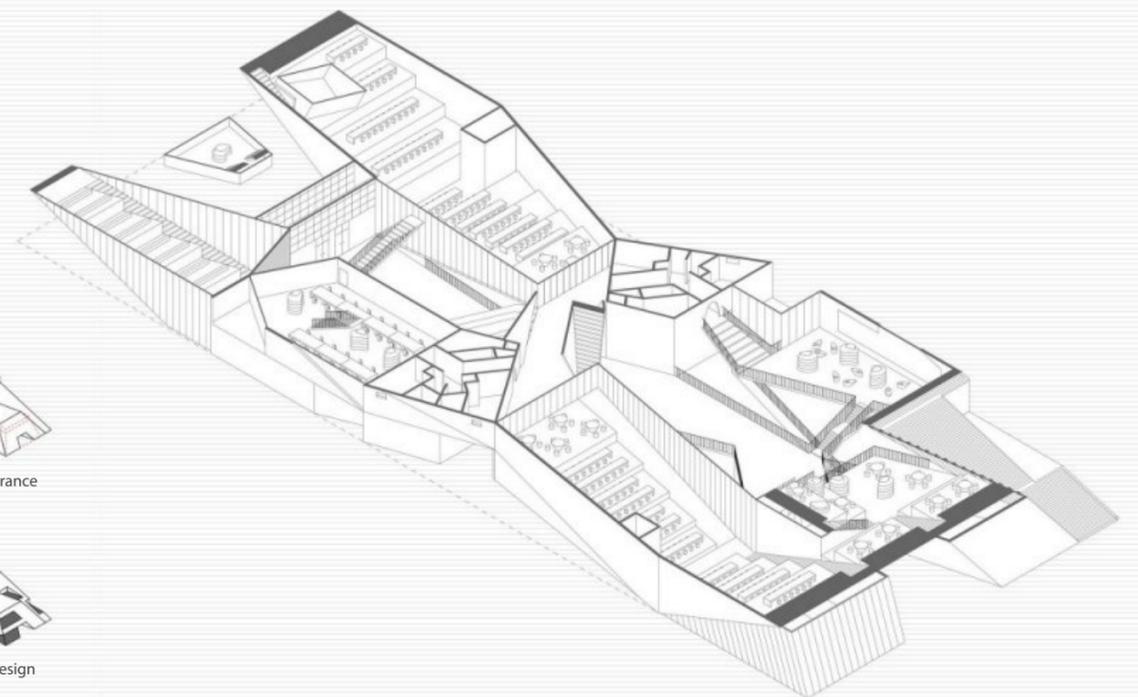
4. oblique entrance

5. oblique entrance(opposite)

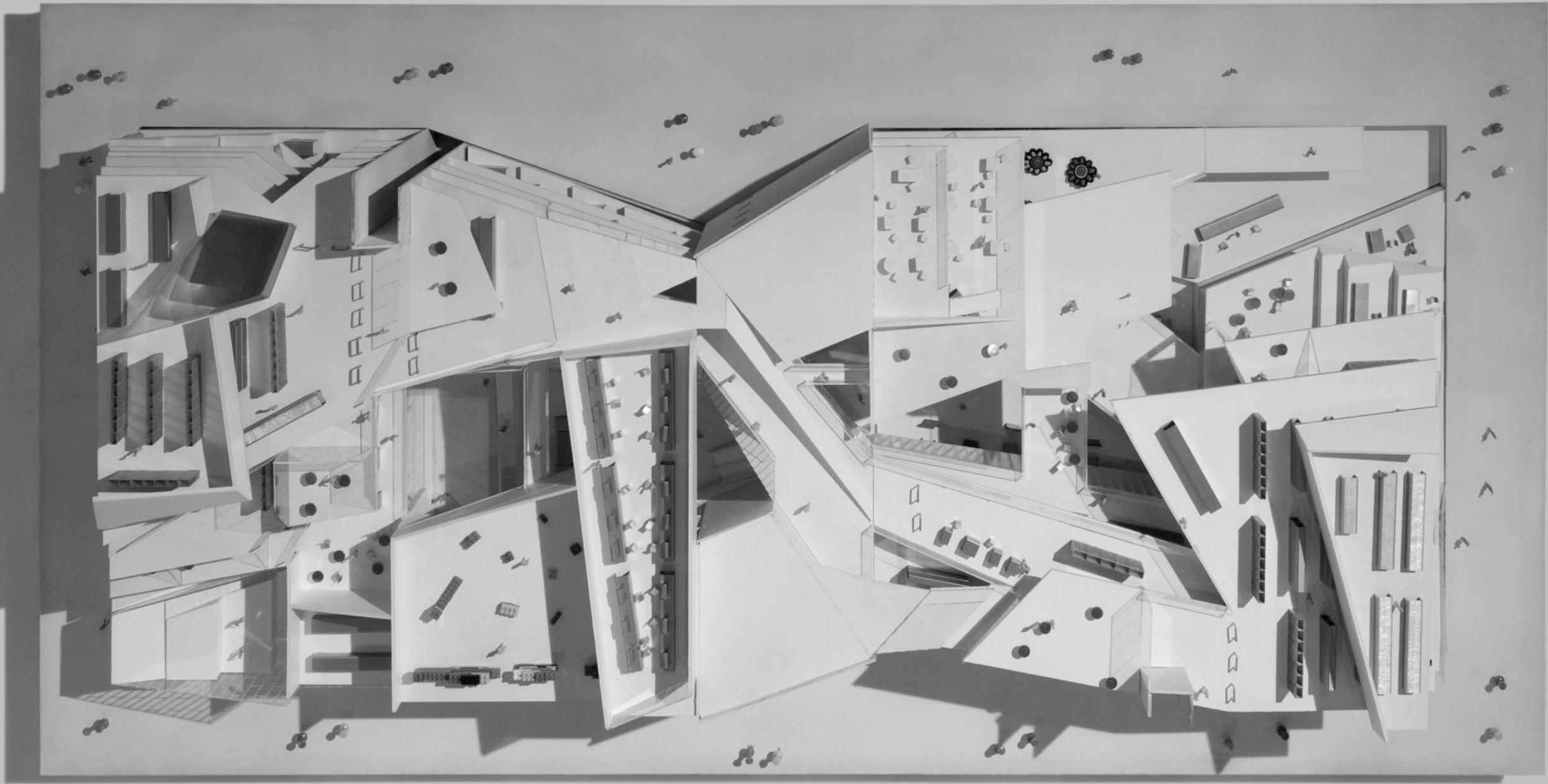
6. big and small void

7. logic with bridge

8. elevation design

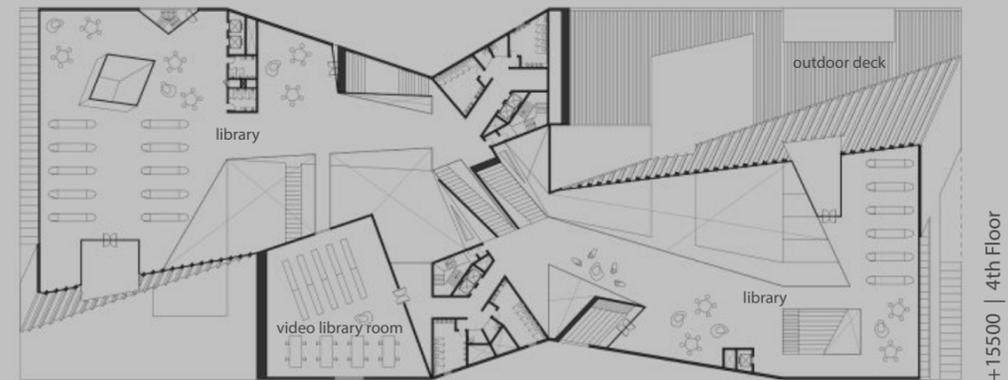
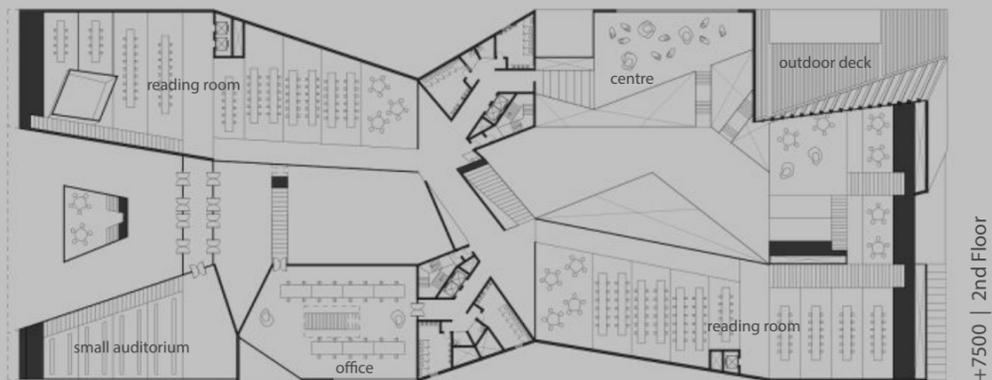


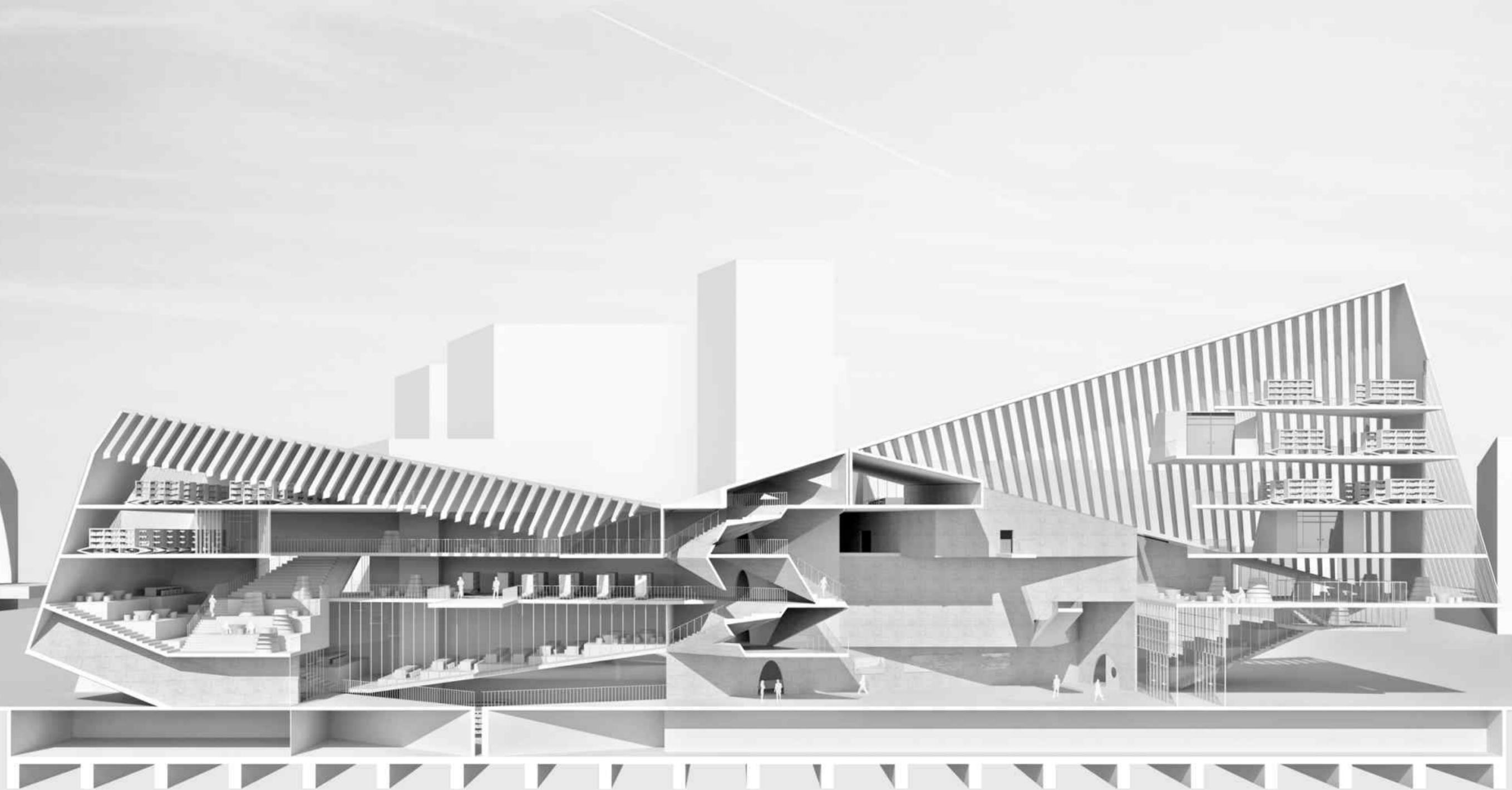
Section of the inner space



Model plan's layer

In a model created at a scale of 1:100, the layers and masses on the floor intersect with each other.





Perspective Section

This project is located with a low contour line of the Thames River in the background, and shows an internal oblique plate, bridge, and the huge space.



**XL**

**08 Experimental City** Architectural Experiment on <Can a Megastructure Itself Develop a New City in the Absence of Context?>

*Three Experiments with Architecture, DMZ*

Seoul National University of Science and Technology | Thesis | Summer 2016 | Instructor : Jungmin Nam\_OA LAB

Minister Prize Award | Fall 2016 | Awarded by Architectural Institute of Korea

This architectural experiment is based on the reunification scenario after the longstanding ceasefire ends between South and North Korea in 2036. The disconnected railway in DMZ is linked to the mega-structure and acts as a new city. To construct a new city, I use Rem Koolhaas's Bigness concept and grid system for expandability. A total of 3 experiments are conducted in <Experimental City>, and using the logic of 'Pentomino' puzzles in the first one-that is, it creates 15 types to demonstrate the potential of space construction and new housing functions through a combination method. The second experiment builds cities with 19 space types using topology logic and becomes my architectural database as an experiment to construct a new space. Finally, a megastructure itself acts as a new city, that is, it reinterprets the infrastructure of the existing urban structure.

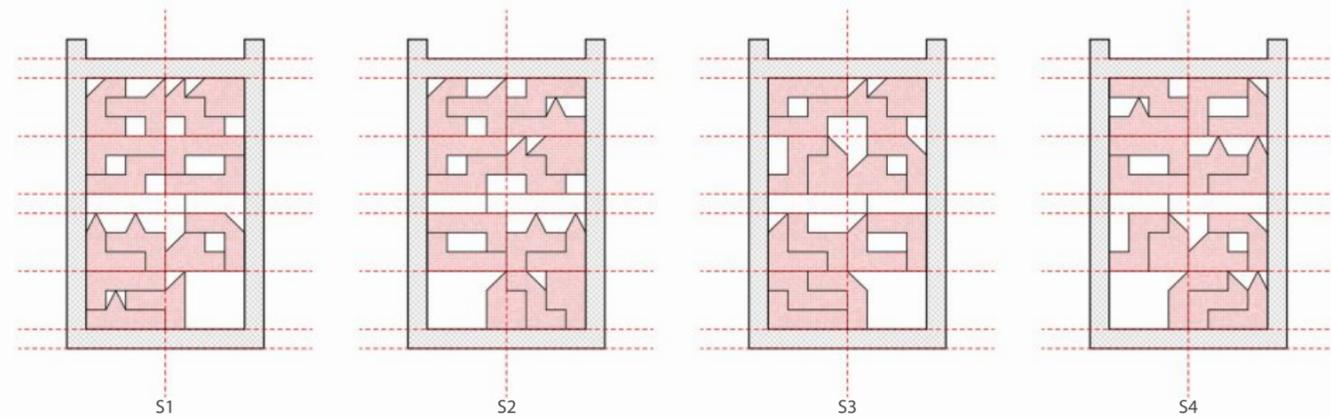
JULY 2056

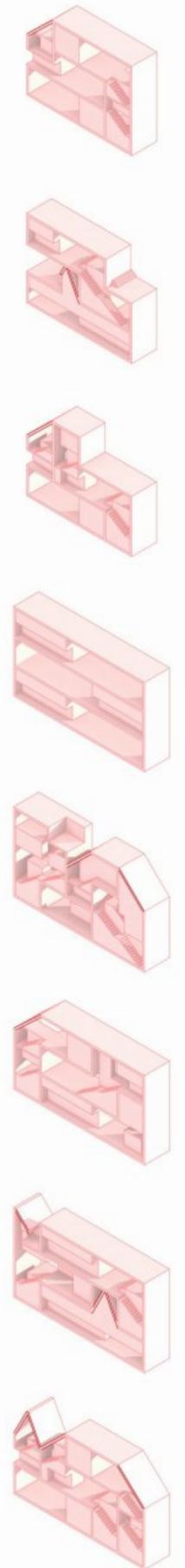
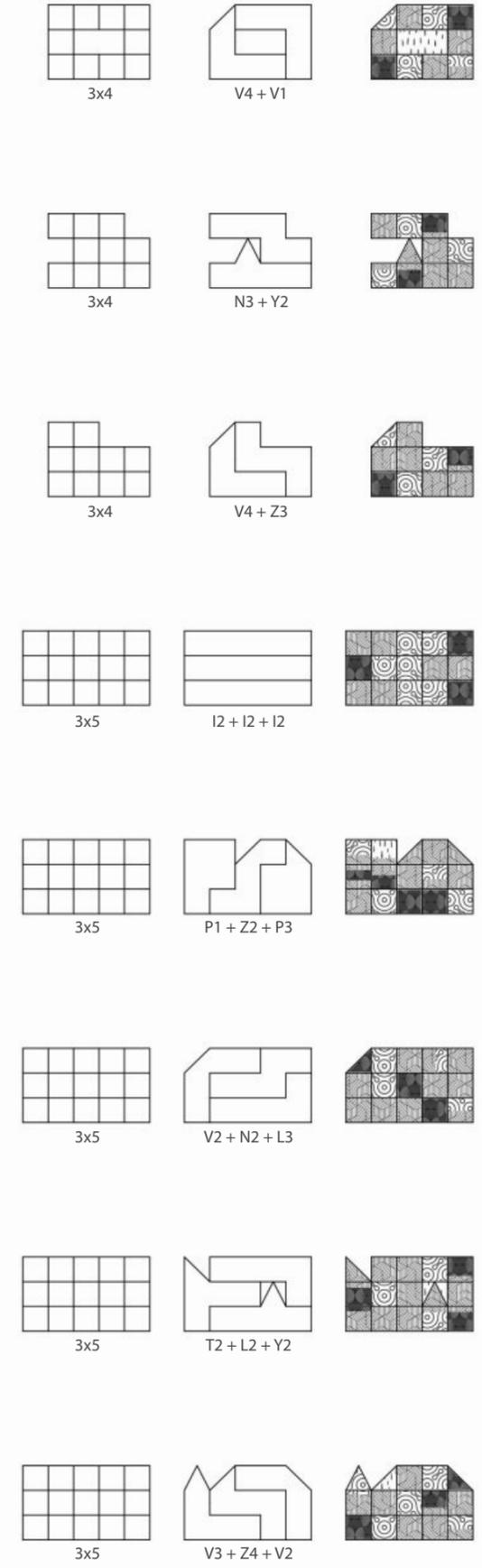
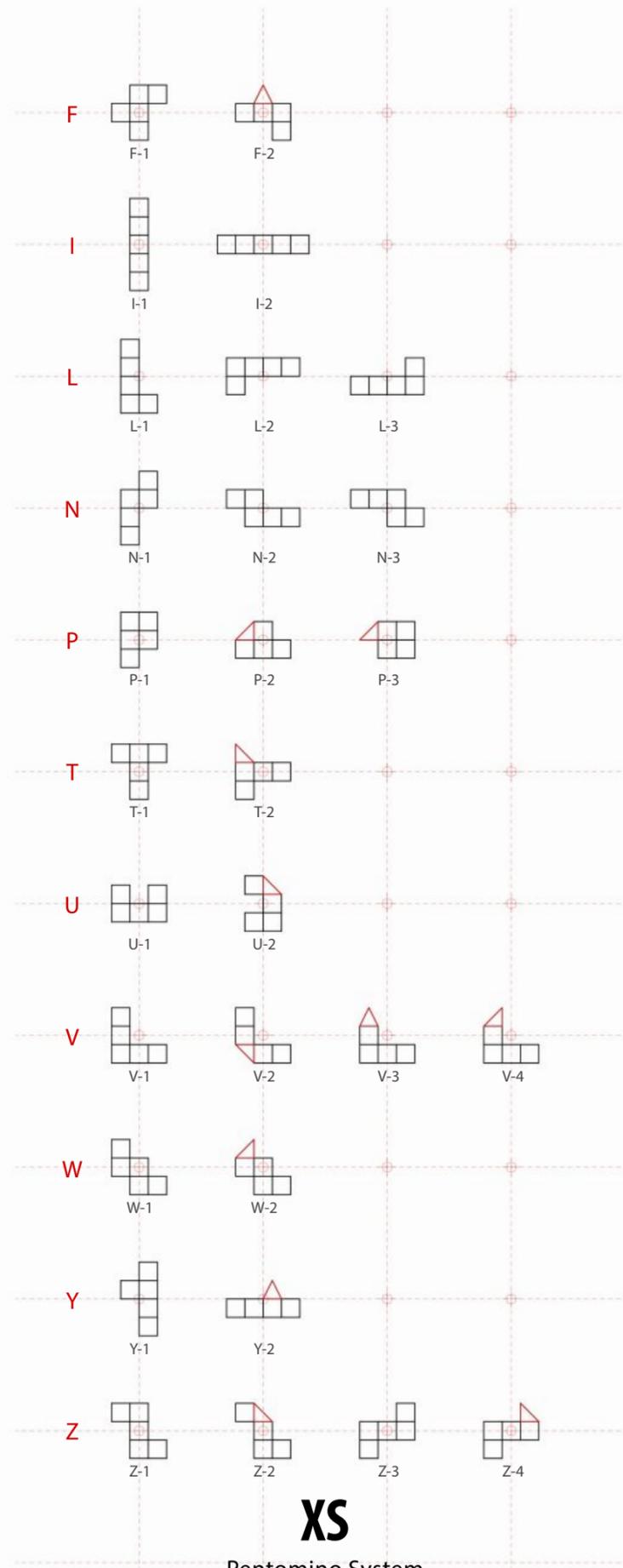
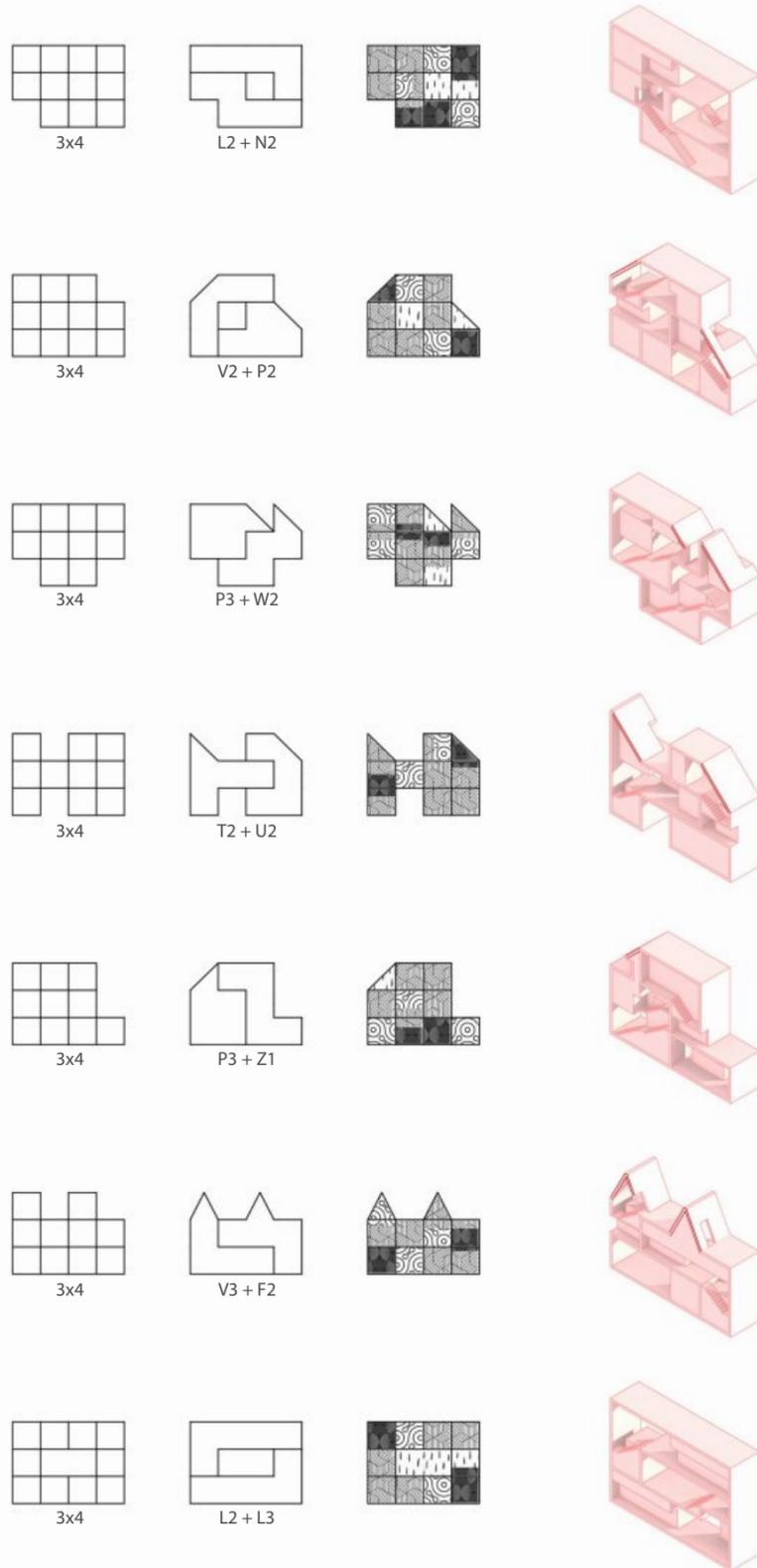
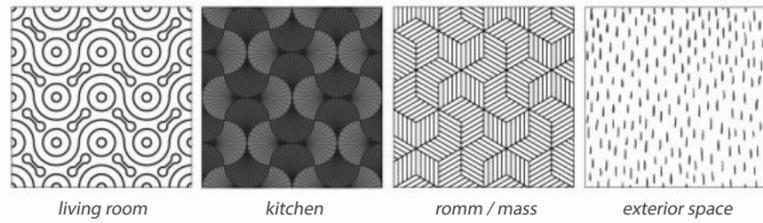


# S

## Experiment 1

Using the logic of 'Pentomino' puzzles, the first experiment creates a total of 15 types to construct housing typologies and housing organizations through spatial construction. Also, the potential (between spaces, diversity, index of complexity, and the effect of void) expected from the combination has fascinated me.





**XS**

**Pentomino System**

This system creates the experiment result of type using Pentomino logic, and the total of 15 housing types can be assembled in various ways.

Energy Storage

Roundabout

Atrium

Machine Room

Sunlight Panel

Void : Natural Ventilation

Tram rail and Sidewalk

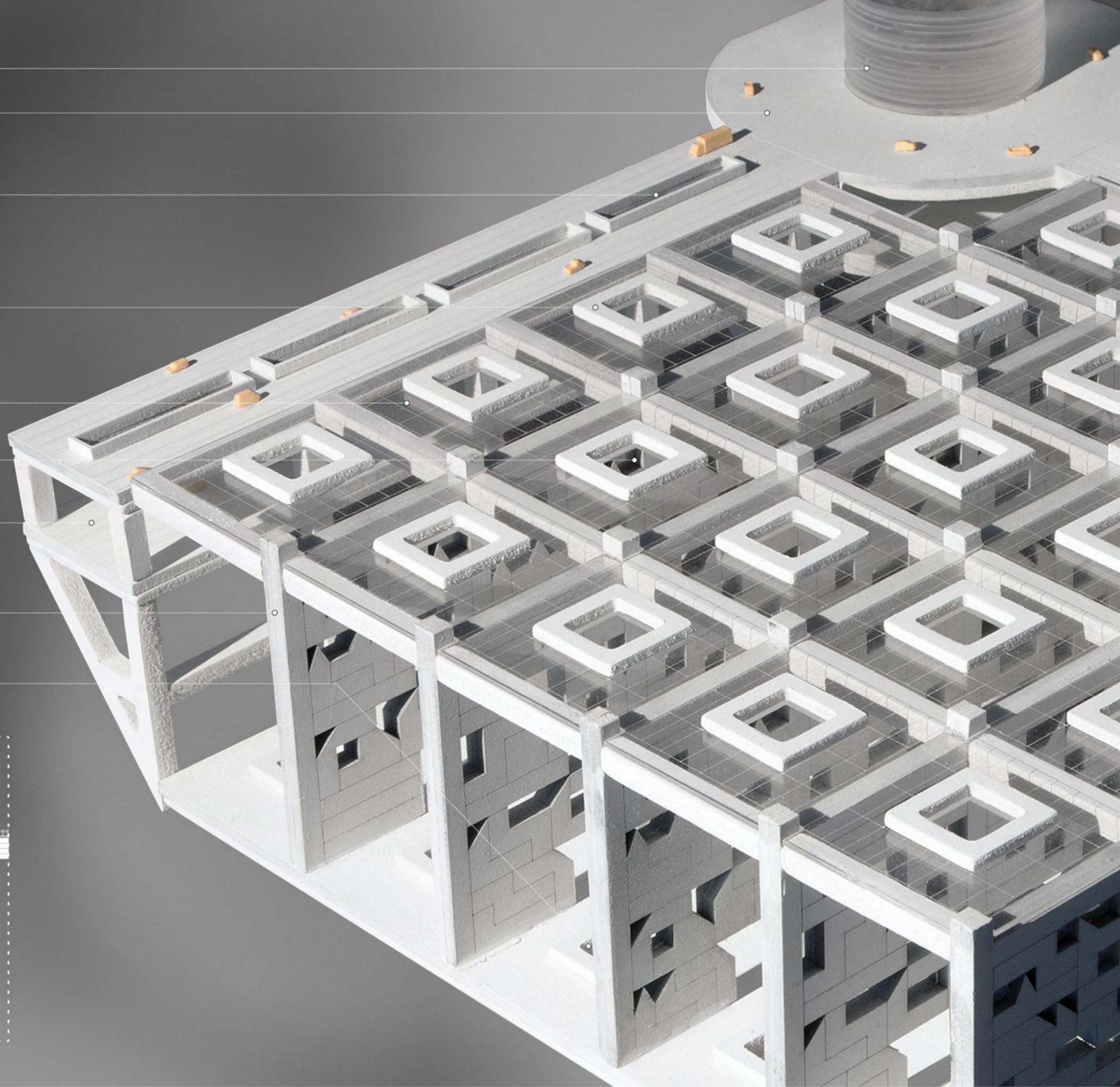
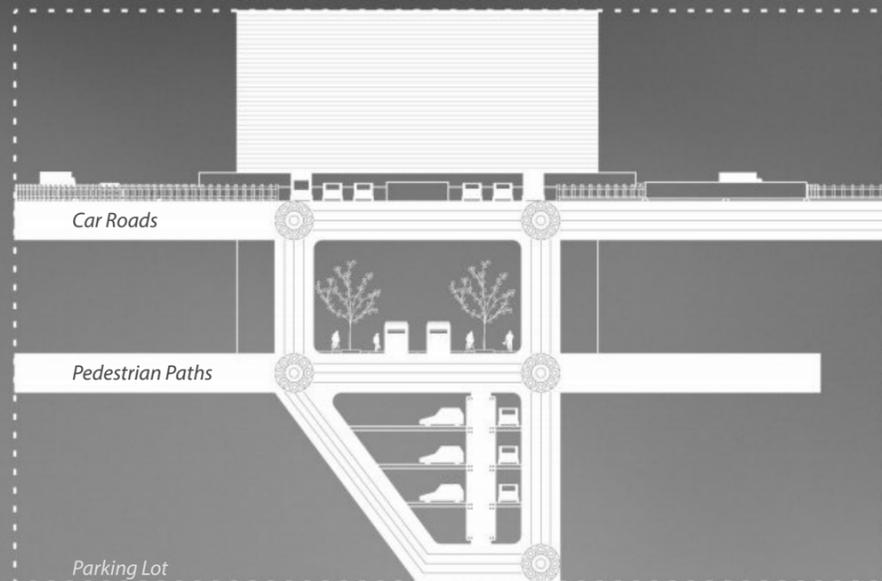
Housing Core / Infrastructure

Void : Natural Ventilation

**1/4 M**

### Housing System

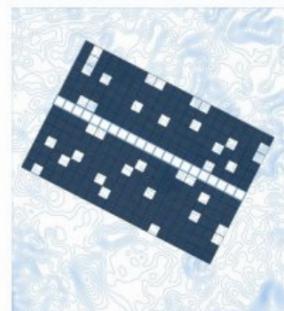
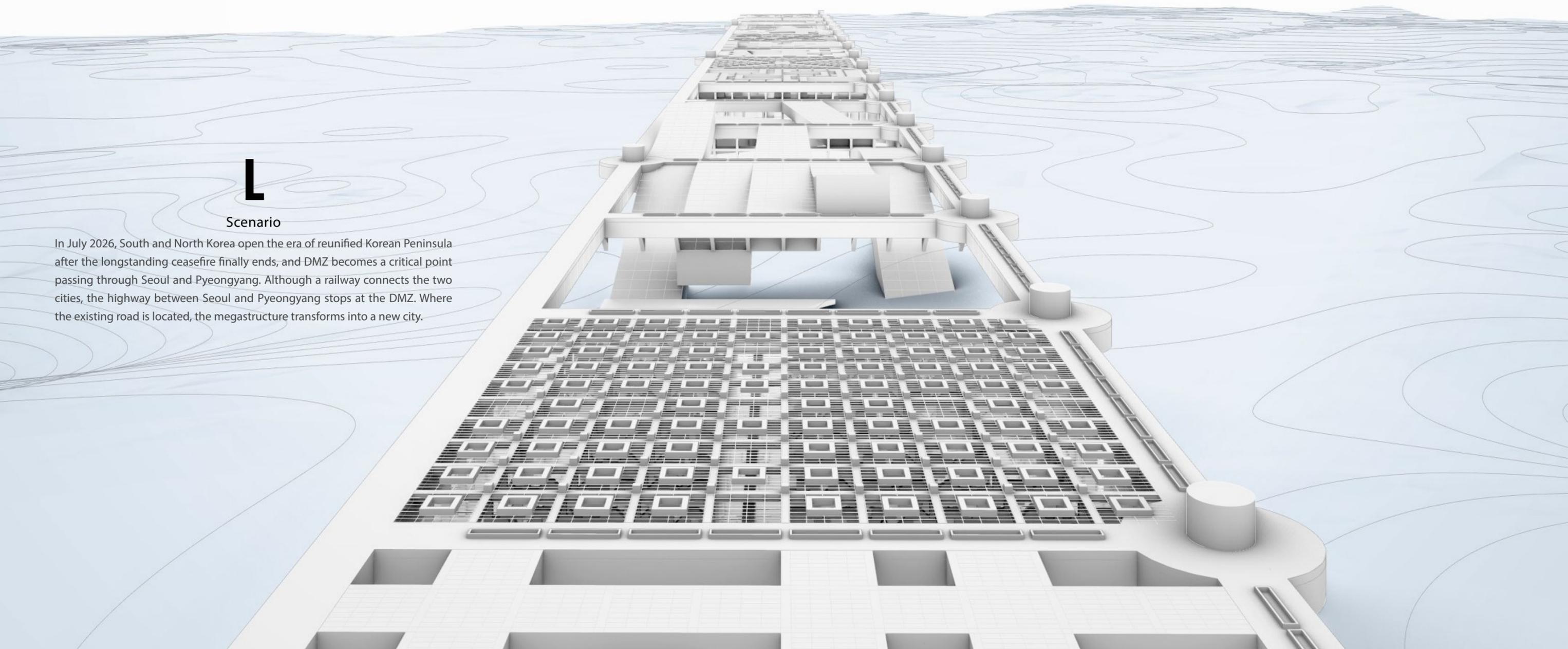
This model shows the housing system composed of the necessary architectural components such as core, energy system, road, sidewalk, and infrastructure.



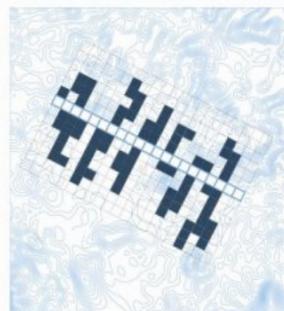


### Scenario

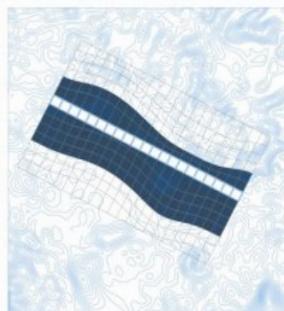
In July 2026, South and North Korea open the era of reunified Korean Peninsula after the longstanding ceasefire finally ends, and DMZ becomes a critical point passing through Seoul and Pyongyang. Although a railway connects the two cities, the highway between Seoul and Pyongyang stops at the DMZ. Where the existing road is located, the megastructure transforms into a new city.



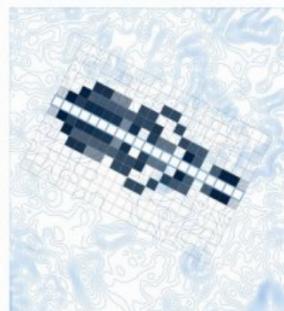
Rectangle \_ void



Ameba \_ proliferation



Nonlinear system \_ unexpected



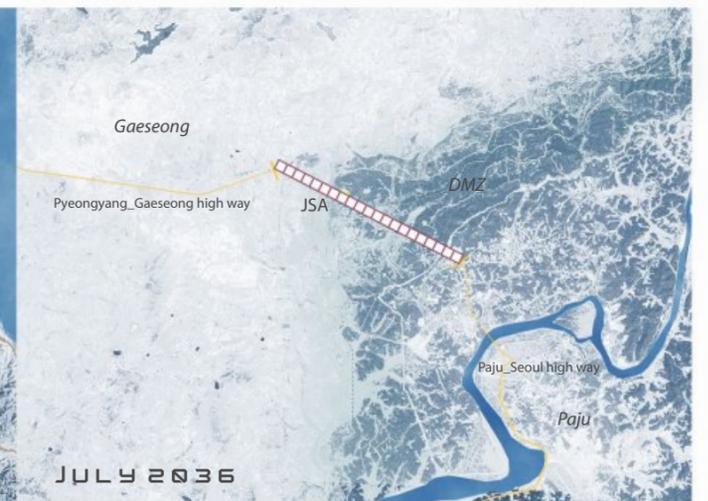
Vitalism \_ Conway's Game of Life

### Grid's Expandability

Using grid, an architecture tool, I sought to regulate differences between the two cities. While the clash of different ideologies, cultures, and customs after reunification is inevitable, the grid aimed to ensure the autonomy of differences rather than forcing them to be identical. In addition, the expandability of grid is employed with the development of a city, which can be proliferated by various methodologies through self-organization.



Link : Pyongyang -Gaeseong - severance - Seoul



Link : 8.4km / Megastructure in the absence of context

JULY 2036

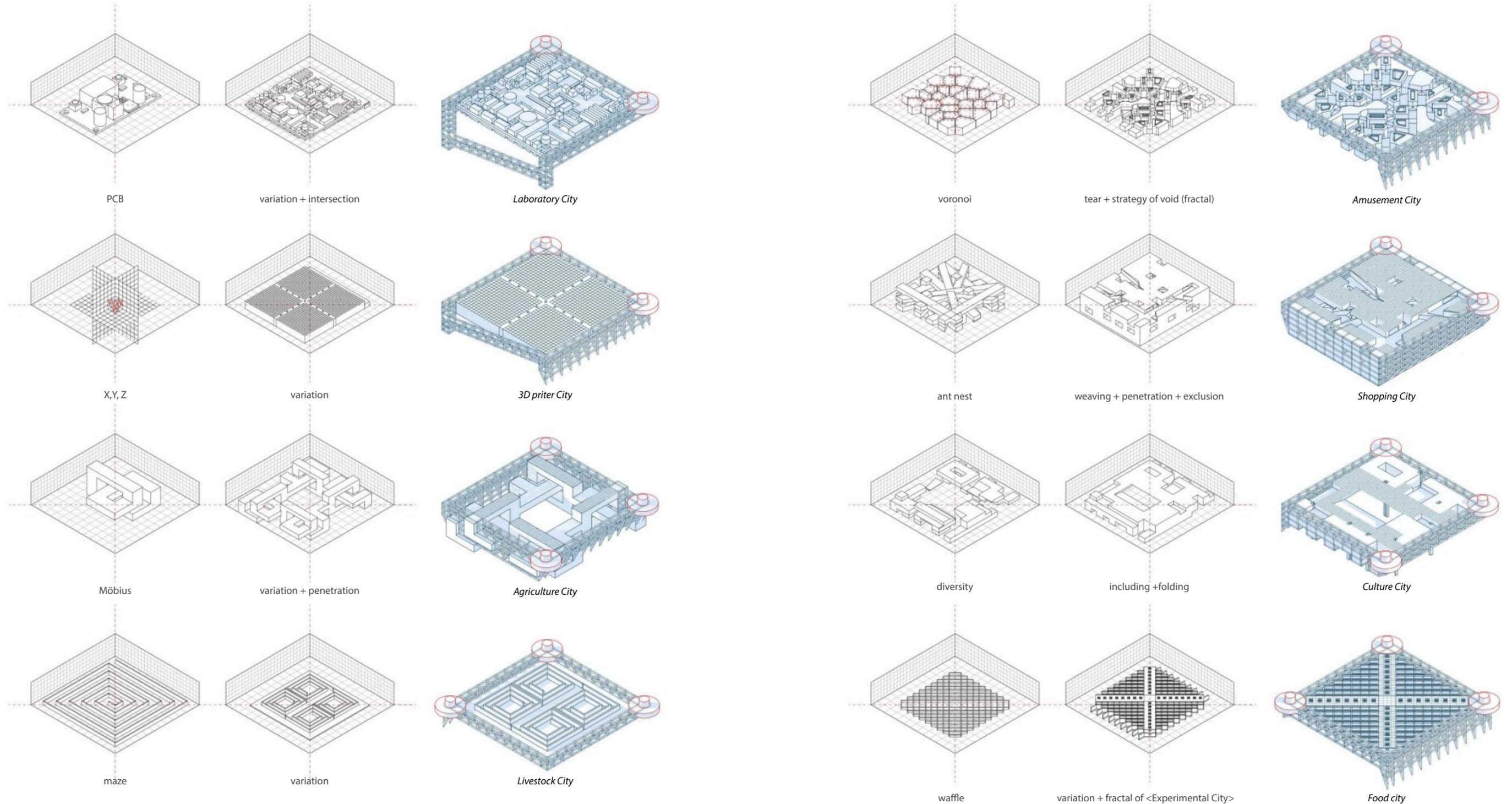
# M

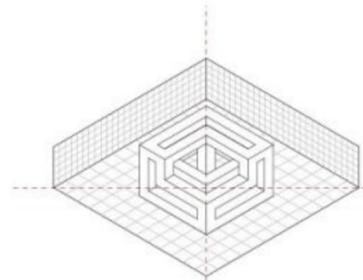
## Experiment 2

The second experiment builds cities with a total of 19 space types using topological logic, as an experiment for a new space type. Each of the prototypes has become the database for my methodology.

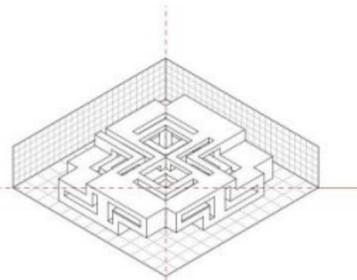
### Topology operation

- Variation
- Penetration
- Folding
- Including / Exclusion / Intersection
- Weaving
- Tear
- Strategy of Void

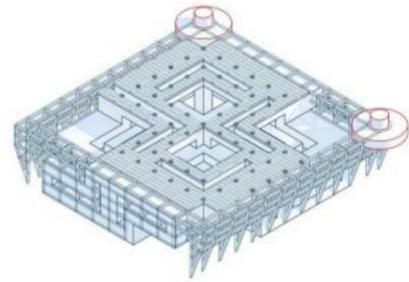




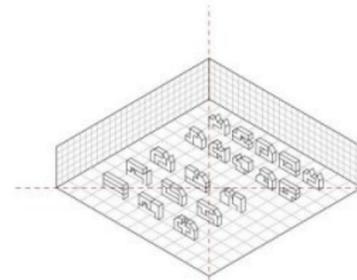
4D cube



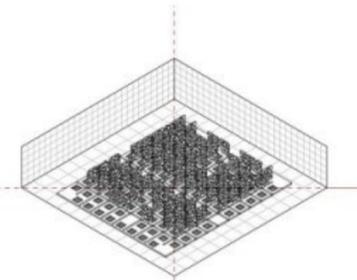
variation + intersection(x,y,z)



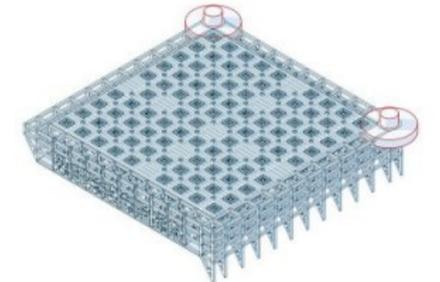
Office City



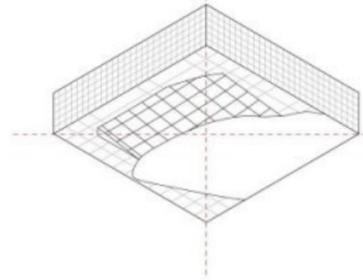
pentomino



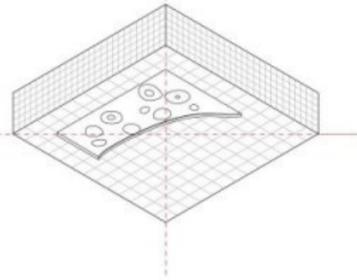
variation + strategy of void(grid)



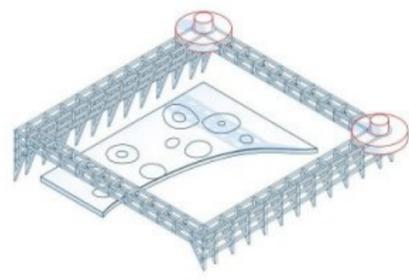
Housing (Middle)



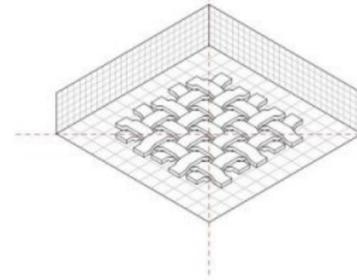
DMZ river



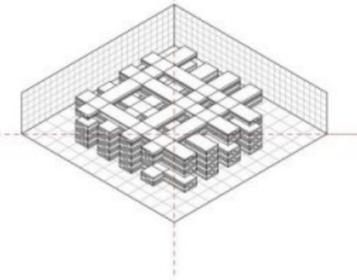
restoration + time



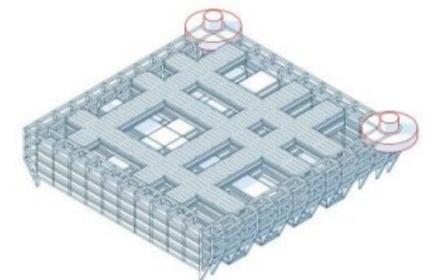
River



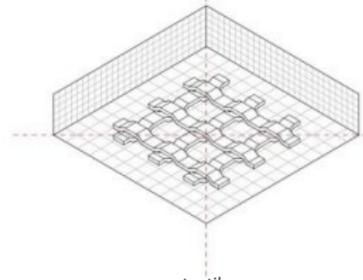
textile



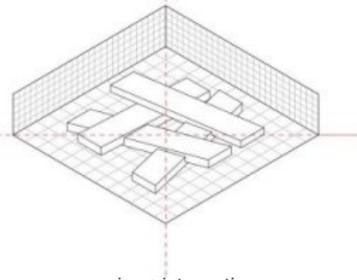
weaving + variation(Le corbésier's structure)



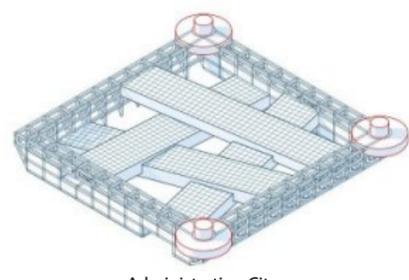
Housing (High)



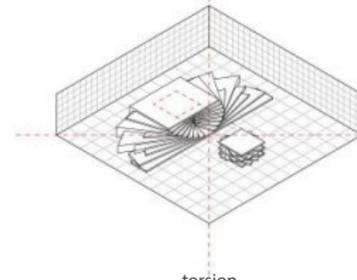
textile



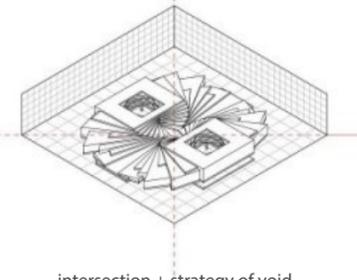
weaving + intersection



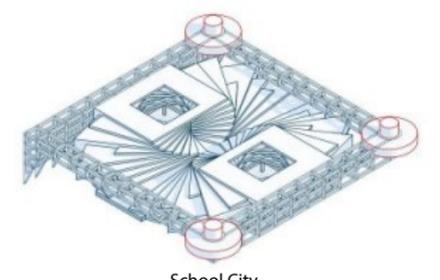
Administration City



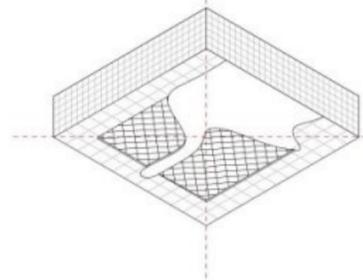
torsion



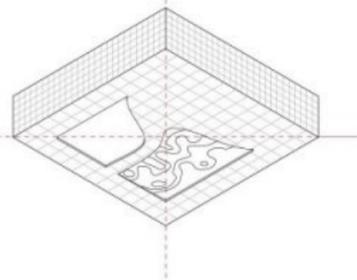
intersection + strategy of void



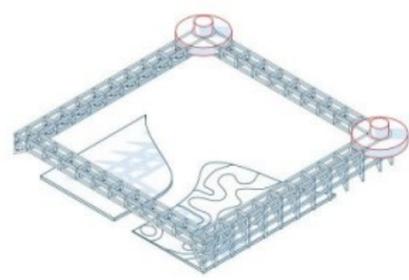
School City



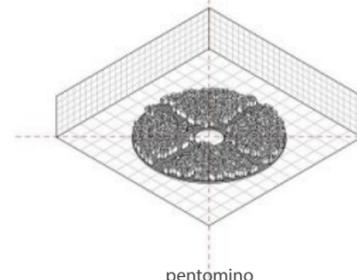
DMZ river



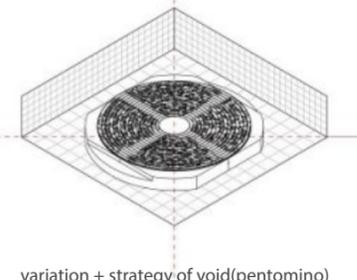
restoration + time



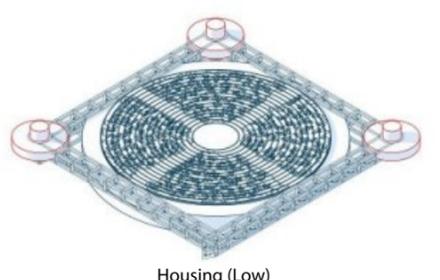
River



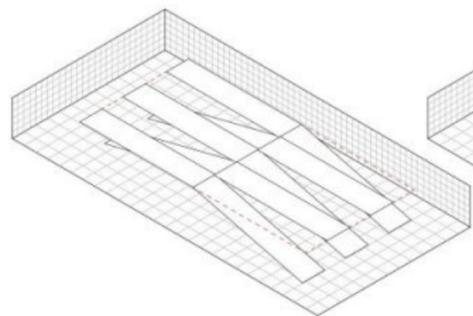
pentomino



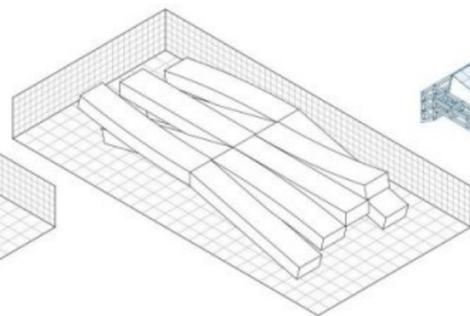
variation + strategy of void(pentomino)



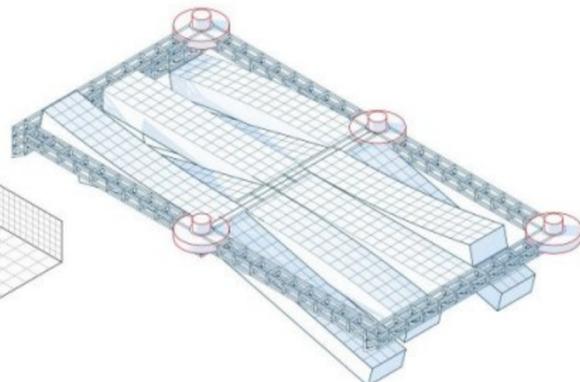
Housing (Low)



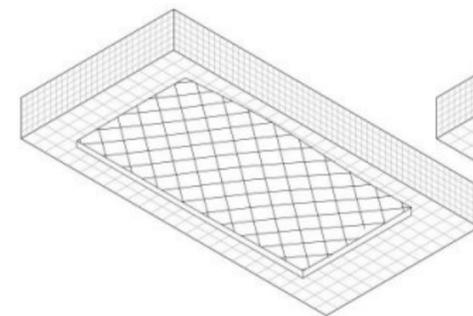
separation



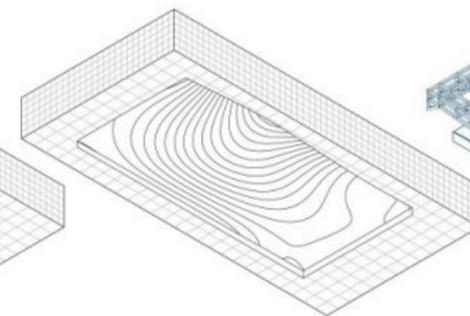
folding + penetration



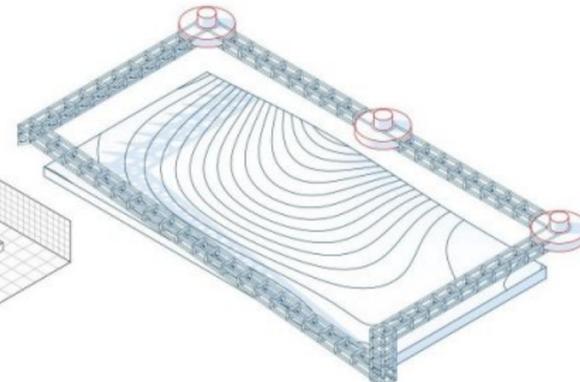
Welfare City



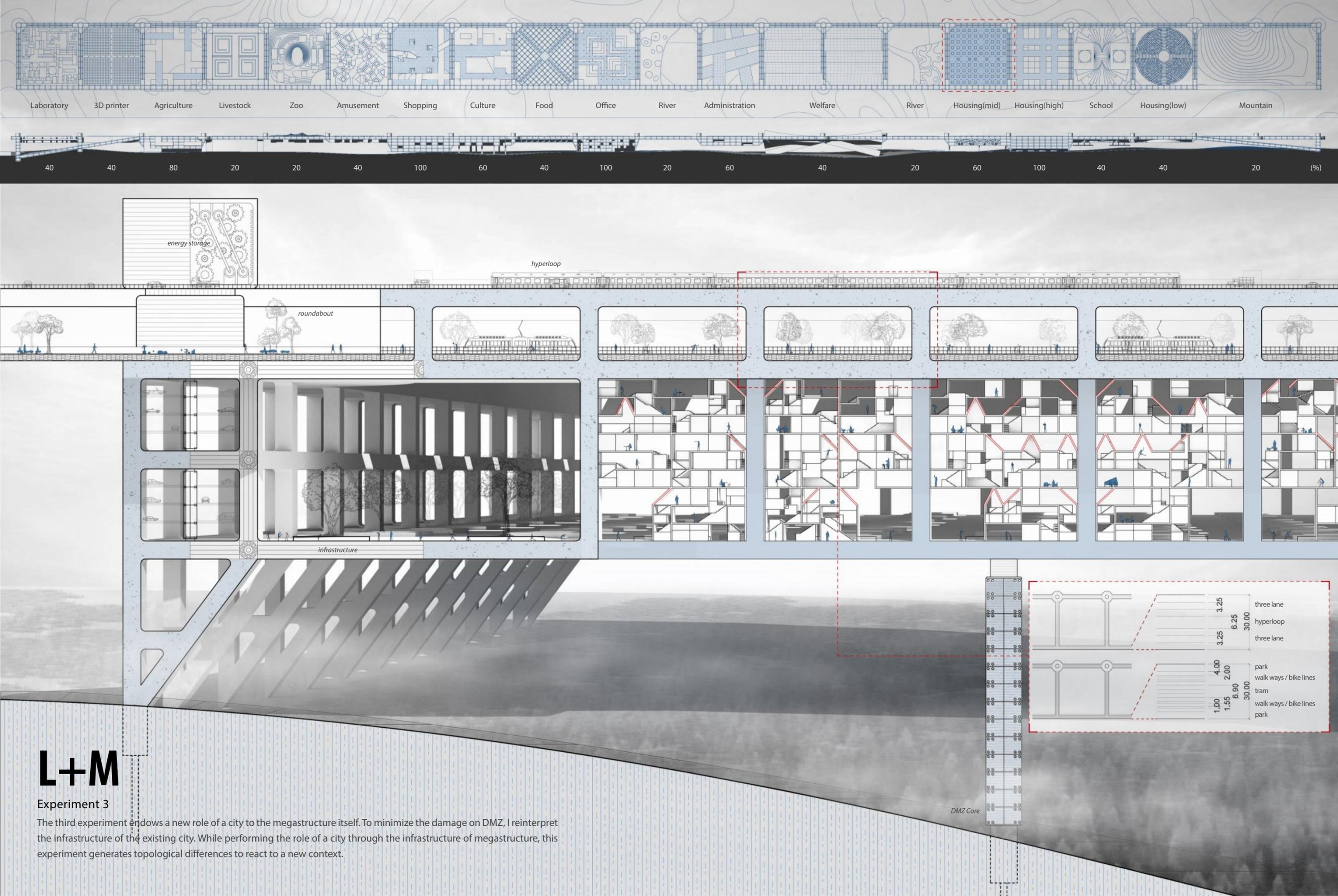
DMZ mountain



restoration + time



Mountain



# L+M

## Experiment 3

The third experiment endows a new role of a city to the megastructure itself. To minimize the damage on DMZ, I reinterpret the infrastructure of the existing city. While performing the role of a city through the infrastructure of megastructure, this experiment generates topological differences to react to a new context.

DMZ Core

JUNOH LEE · SELECTED WORKS · ARCHITECTURE PORTFOLIO · 2014 - 2022



## EDUCATION

<b>Columbia University</b> , New York, USA Master of Architecture, Advanced Architectural Design (MSAAD)	May. 2021 - May. 2022
<b>Gangnam-University of California, Riverside International Education Center</b> , Seoul, South Korea Studied in the Intensive English Language Program	Fall 2018
<b>Seoul National University of Science and Technology</b> , Seoul, South Korea Bachelor of Architecture, School of Architecture (Architectural Design Course) Cumulative GPA 4.26 / 4.50 scale Academic Scholarships 2013 - 2016	Mar. 2010 - Aug. 2017 10 Semesters

## WORK EXPERIENCE

<b>MILITARY SERVICE</b> , Hongcheon, Republic of Korea <i>Republic of Korea Army Sergeant</i> Assistant Construction Manager: supervised construction and reading drawings	Feb. 2011 - Nov. 2012
<b>Lifethings</b> , Seoul, South Korea, lifethings.in [Soo-in Yang] <i>Architecture Intern</i>	Summer 2015
<b>Apmap 2015</b> , Yongin researcher's way, Sculpture, Yongin city Designed proposals for various scales of public design competitions including pavilion installations and sculptures   Tested alt designs   Produced 3d modelings, architectural drawings, and panels	
<b>Jonghyuk Park's Laboratory</b> , Seoul, South Korea [Jonghyuk Park] <i>Architecture Intern</i>	Sep. 2016 - Mar. 2017
<b>Three Halls</b> , Sculpture, Pohang city Made schematic designs for a new sculpture of an apartment   Participated in meetings with clients   Analyzed site conditions   Produced 3d modeling and physical models   Tested elevation designs	
<b>OA LAB</b> , Seoul, South Korea, oa-lab.com [Jungmin Nam] <i>Architecture Intern</i>	Dec. 2019 - Jan.2020
<b>Fire Department</b> , Building, Seoul Developed Developed physical models	
<b>Le Arch</b> , Seoul, South Korea, Personal studio [Junoh Lee] <i>Personal Studio [Professional Design Research]</i>	May. 2020 -
<b>Negative Space with Water</b> , Design Research, Jeju Island, Korea <b>Oblique Field in the House</b> , Design Research, Jeju Island, Korea	

## HONORS & AWARDS

<b>MINISTER PRIZE AWARD</b> Received the Grand Prize, AIK 2016 Student Architectural Exhibition Title of design submission: <Experimental City> Awarded by: AIK (Architectural Institute of Korea)	Oct. 2016
<b>The 25th Seoultech University Graduation Exhibition</b> Received the First Place, <Experimental City>, Seoultech University	Sep. 2016
<b>THE FIRST PRIZE AWARD</b> Received the First Prize, LINC 2015 'Solving Community Problem' Awarded by: Nowon-gu Office	Feb. 2016
<b>EXCELLENCE AWARD</b> Received the Excellence Award, Seoul City Hall 'Competition of Nuri Space' Design competition submission titled <Different Sense> Awarded by: Seoul City Hall	Jun. 2015
<b>Department Honor Scholarships</b> Spring / Fall 2013   Spring / Fall 2014   Spring 2015   Spring 2016	

## PUBLICATION & EXHIBITION

<b>Three Halls in Apartment</b> Sculpture installation in an apartment, <Three halls> published and exhibited, at Pohang City	Mar. 2017
<b>2016 AIK Student Architectural Exhibition Magazine</b> <Experimental City>, No. 8 - 13, Sep. 2016, ISBN 978-89-6225-742-7	Sep. 2016
<b>2016 AIK Student Architectural Exhibition</b> <Experimental City> in BEXCO, Busan	Oct. 2016
<b>The 25th Seoultech University Graduation Review 2016</b> <Experimental City> in Seoultech University	Nov. 2016
<b>Three and Four Library's Model Exhibition</b> in Seoultech University	Dec. 2015 - Present
<b>Competition of Nuri Space Exhibition</b> <Different Sense> in Seoul City Hall	Jun. 2015

## ARCHITECTURAL TRIP

<b>1st 'First Trip Abroad'</b> <i>Roma - Florence - Venice - Milan, Italy</i>	2 weeks, Jan. 2011
<b>2nd 'Between Traditional and Modern'</b> <i>Paris [Le Corbusier - Jean Nouvel - Frank Gehry - Renzo Piano - Bernard Tschumi], France</i>	2 weeks, Dec. 2014
<b>3rd 'Beauty of Nature'</b> <i>Paris - Zurich - Therme Vals - Luzern - Interlaken, France and Swiss</i>	2 weeks, Sep. 2018

## SKILLS

**Drawing, Modeling & Rendering**  
*AutoCad, SketchUp, Revit, Rhino, Rhinoceros V-ray and Grasshopper, 3ds Max with V-ray*

**Graphic Picture**  
*Adobe program (Illustrator, Photoshop, Indesign, After Effects)*

**Model-making | Craft**  
*3D Printing, Laser Cutting, CNC Milling, Casting, Photography*

**Office**  
*Ms (Word, Excel, Powerpoint)*

**Languages**  
*Korean (Native fluency), English (Professional working fluency)*

## JUNOH LEE

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