

PORT

FO

LIO

ECHO. ECHO.

OFF THE WALL.

TIANHAO (HUGH) SHEN
+1 3479786649
ts3554@columbia.edu

TIANHAO(HUGH) SHEN

BACHELOR OF ARCHITECTURE
DALIAN UNIVERSITY OF TECHNOLOGY
MSAAD_GSAPP - COLUMBIA UNIVERESITY
2024 CANDIDATE

CONTENTS

Running,

Running.

Running!

01 WHERE WE LEAVE WHERE WE COME

*Embrace, Respect and Honor Death | NYC, US
Thoughts on Urban Issues | Group Work*



01

02 DATA MOURNING

*One Day We Will Disappear | Funafuti, Tuvalu
Recording & Monument | Group Work*



07

I chase after light and shadow.

I chase for brief moment of eternity.

03 ON THE WAY

*Explore Possibilities of No-Ownership | Auroville, India
Co-Housing Design | Group Work*



12

I chase for the possibility of architecture.

04 OTHER WORKS

18

Where We Leave Where We Come

Embrace, Respect and Honor Death
Transformation and Circulation



Spring 2024, Thoughts on urban issues, GSAPP
Instructor: Karla M. Rothstein, Javier A. Flores Leal
Group Work (With Yansong Wang, Oliver Liao)
NYC, United States

Design Description

The profound effects of the Daily Loss have culminated in mortal fragility and loss. The process of adapting to unforeseen changes is steering the social context towards a renewed epoch. This Transition underscores the resilience, impermanence, transformative potential, commemorative significance, and indispensable nature of accruing losses.

We decided to achieve these through a nuanced practice of mortality memorialization in the area of the Central Park Reservoir in a heterotypic typology in terms of program and landscape.

The loved ones would experience the process of terramation and nourishment of an urban tree nursery, metamorphosing to another form of life that is dedicated to the natural environment and the social fabric of NYC.

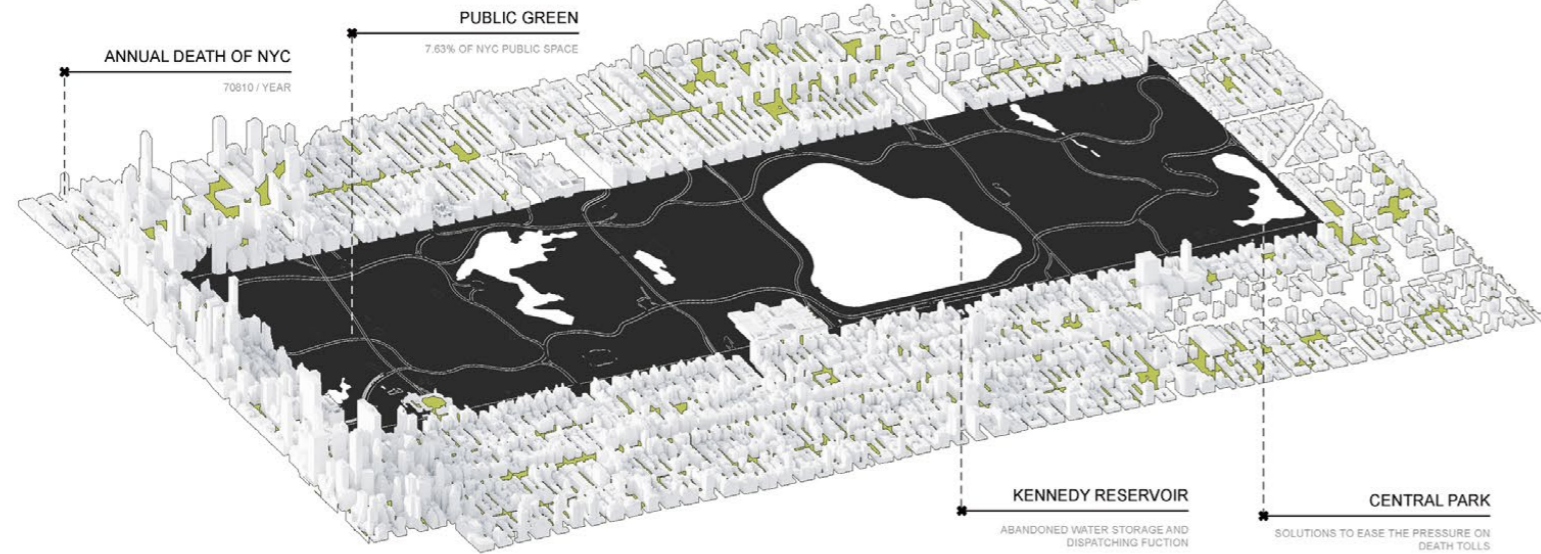


"Everything we design is a response to the specific climate and culture of a particular place."

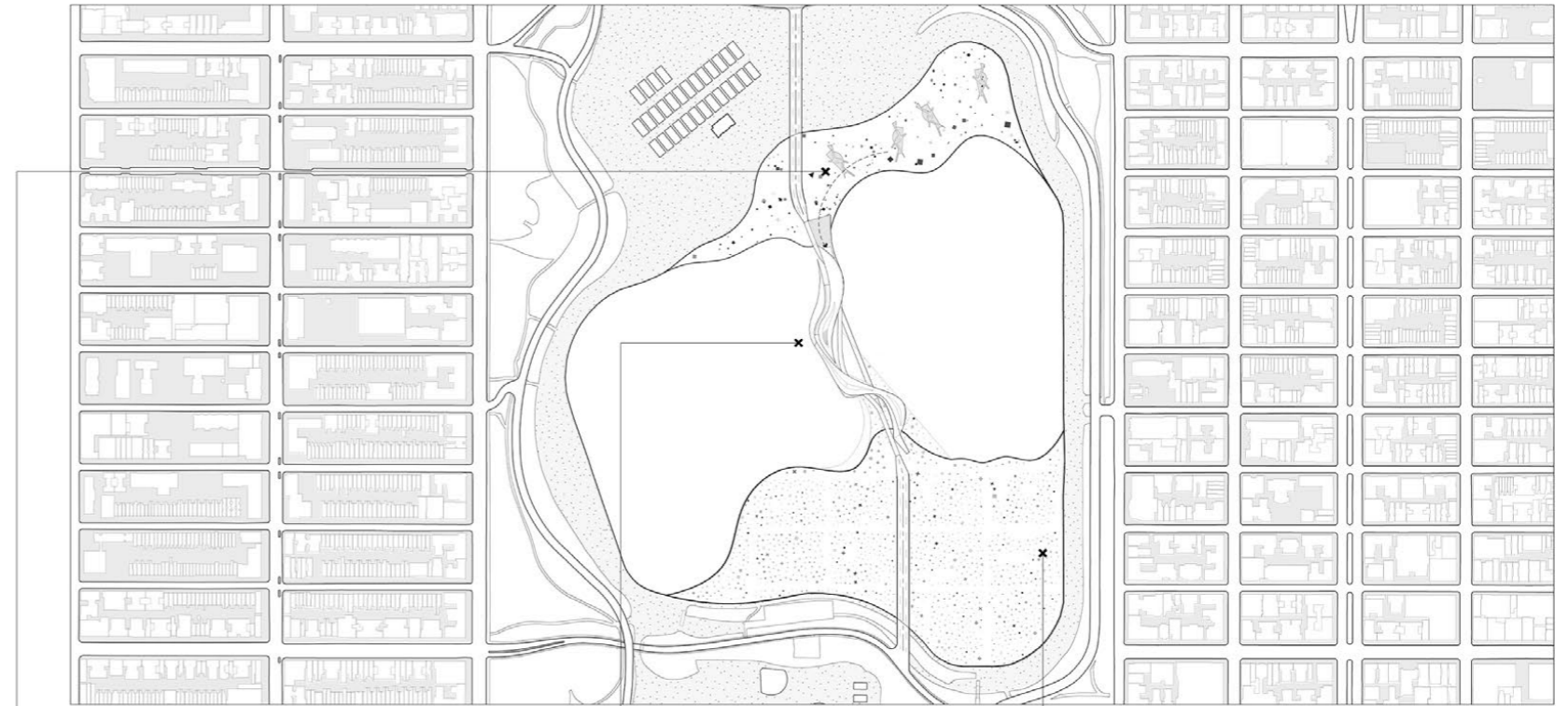
— —Norman Foster

NEW CYCLE OF LIFE, DEALING WITH NYC DAILY LOSS

Many of the deceased cannot be cremated due to subjective and objective factors. This phenomenon brings land use and ethical pressures to NYC. Our design is committed to proposing a new, poetic way of life cycle and solving some related problems. At the same time, it satisfies citizens to return to nature after death and become a part of the city.



SITE PLAN OF RESERVOIR AREA



CEREMONY, JOURNEY & FINAL PHYSICAL GOODBYE

CEREMONY & NEW LIFE
The final physical farewell to the departing life, before they embark on a new journey.

BRIDGE-TERRAMATION
60 DAYS
The body's natural transformation into earth. Producing clean, nutrient-rich compost.

PLANT THE TREE
Three departed individuals share a new plant.

BACK TO THE CITY
Dedicate to the urban environment as a street tree.

3 YEARS

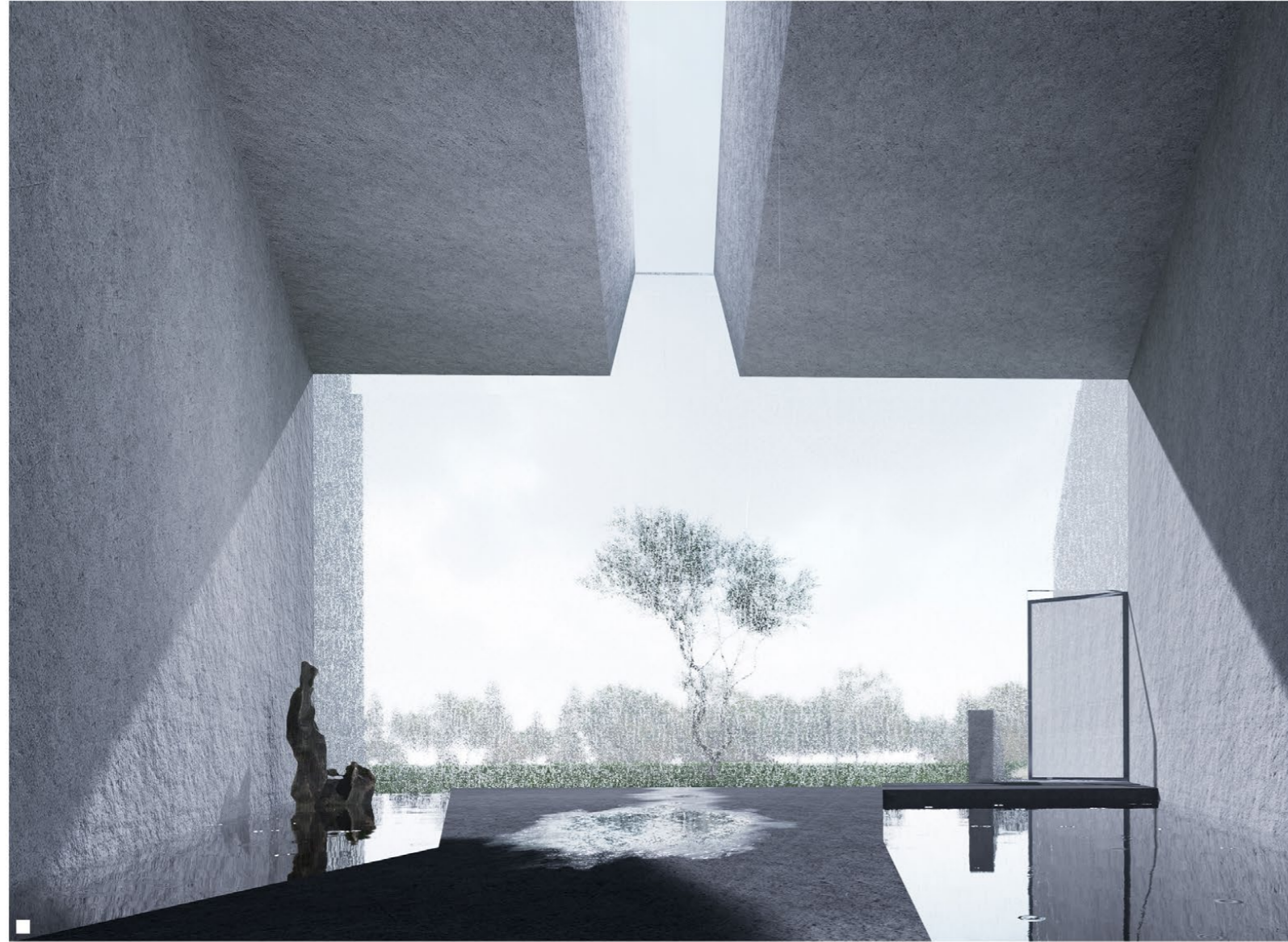
LIFE COMES TO END

To the Site...

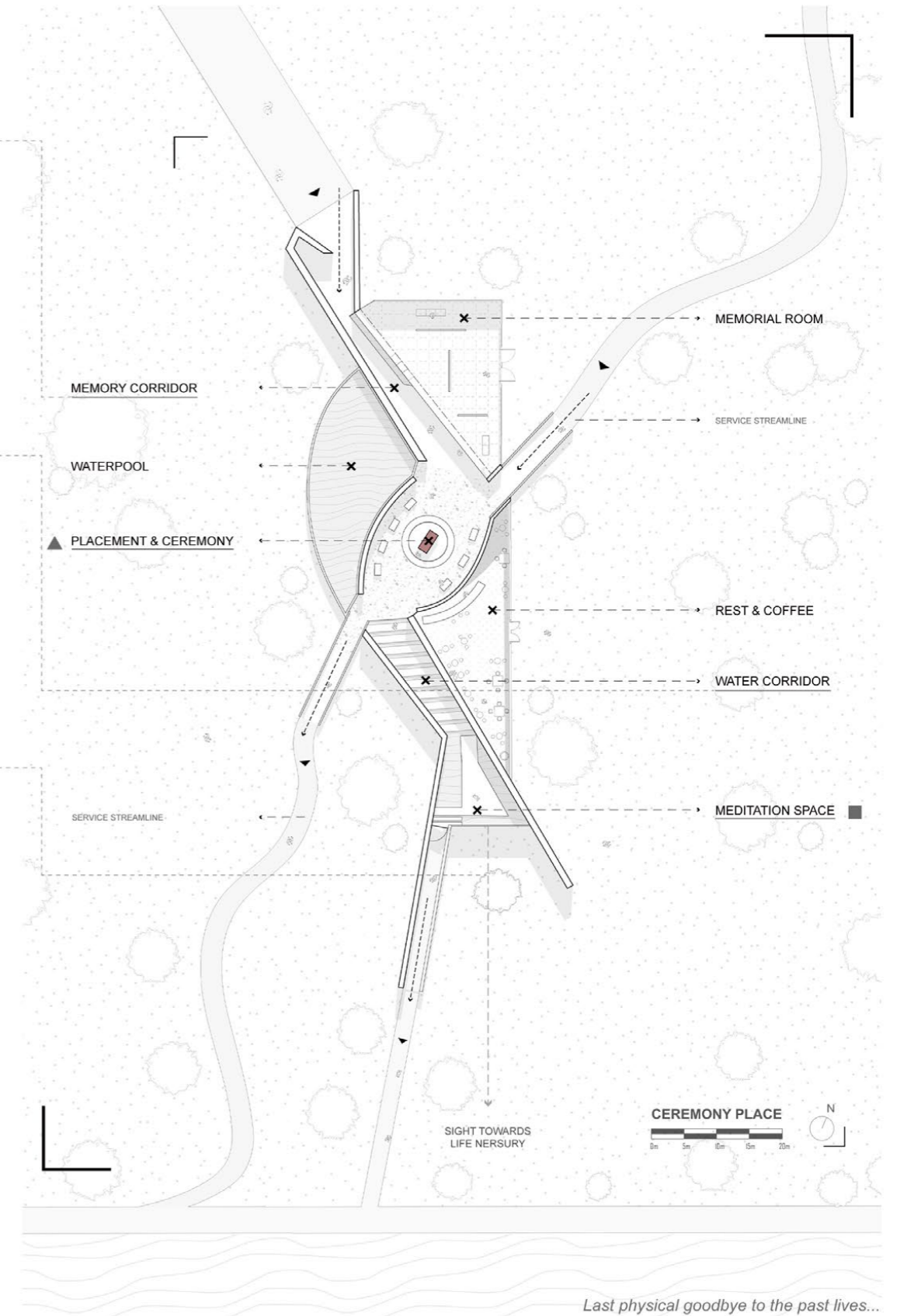
Love letters and flowers.
A bed of straw and alfalfa

Apert from these small banderoles, these trees make no difference from ordinary street trees. But the trees know, the banderoles know, loved ones know, the departed know, we all know this is a brand-new life, embodying the love and respect of people. They once again embrace the sun, wind, and water of the city, casting shade for its residents.

CEREMONY, JOURNEY & FINAL PHYSICAL GOODBYE

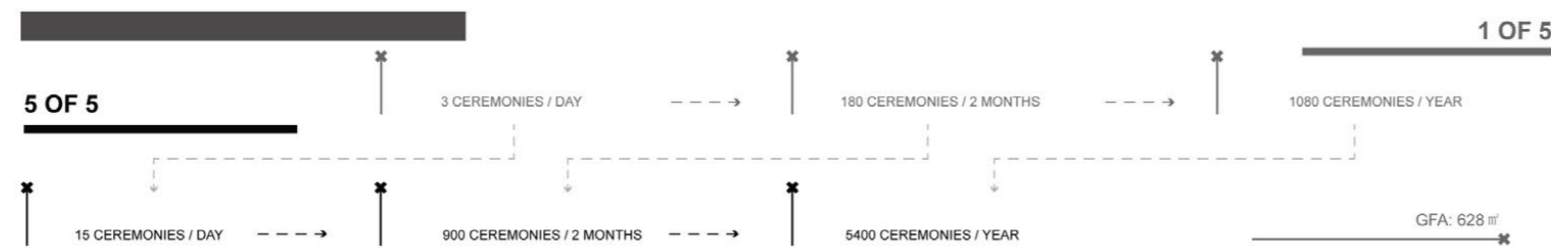


PLAN OF CEREMONY PLACE

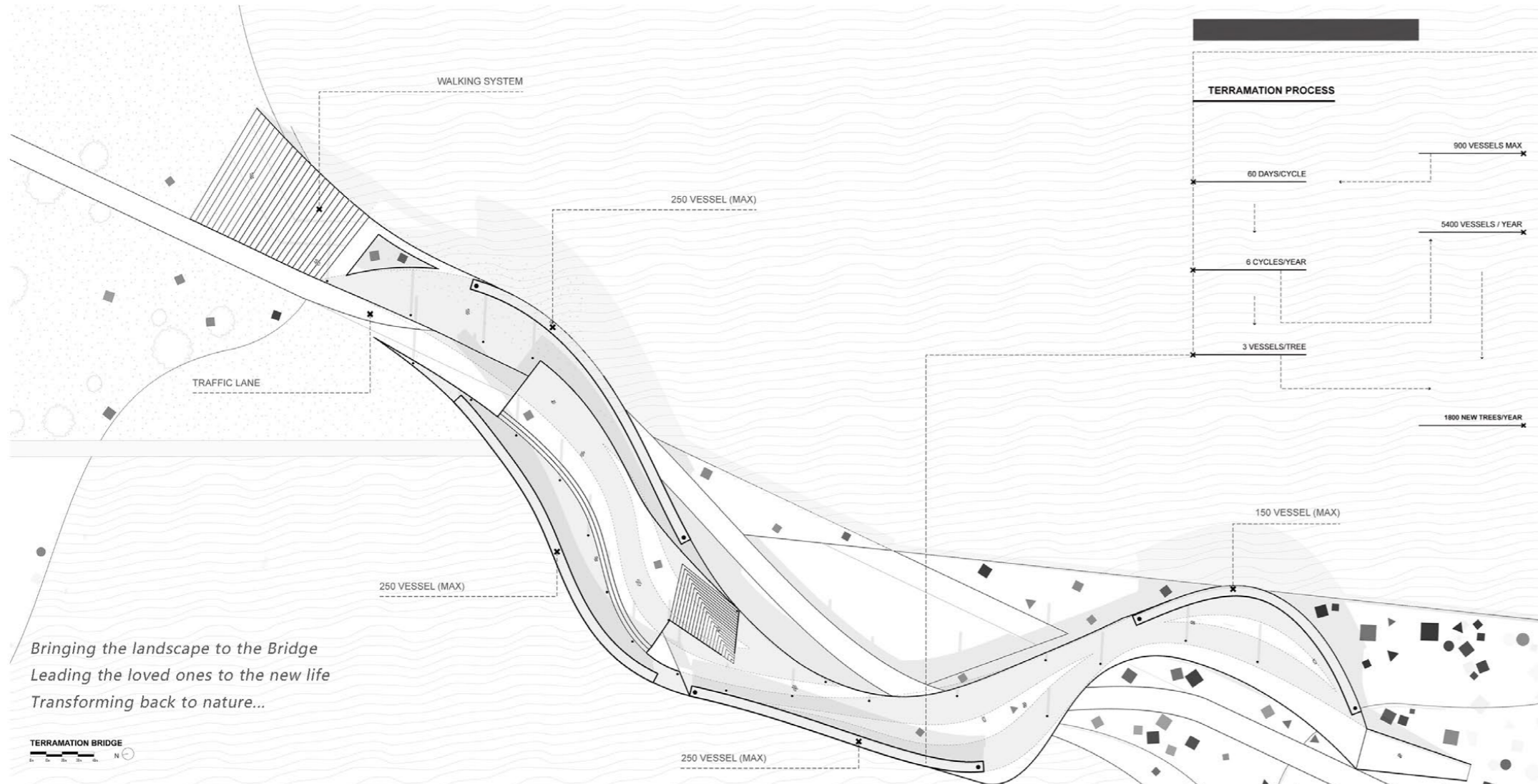


DARKNESS TOWARDS LIGHT OF NEW LIFE

Here, staff assist the departed in dressing in a custom compostable garment, while families and friends could cradle them in their vessel on a bed of straw and alfalfa, a process also known as laying in. Here, ceremonies are conducted, and after mourning, people proceed through the water corridor to the space for meditation and tranquility. People see where their loved ones will be reborn, witnessing the hope and love inherent in it all.



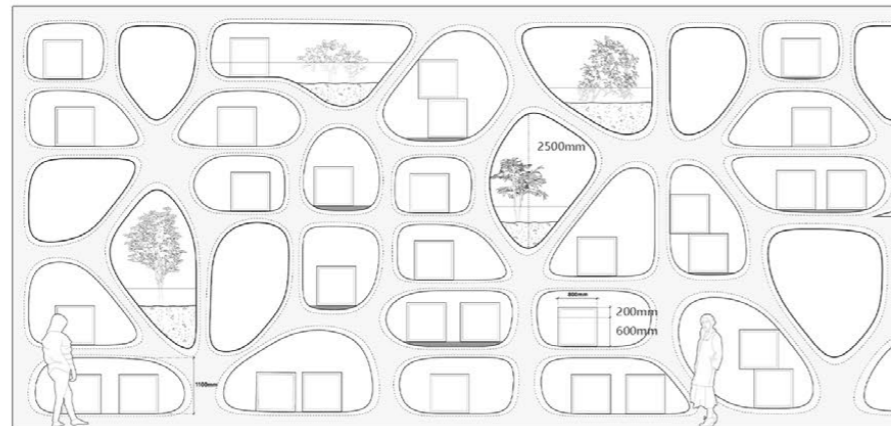
'TERRAMATION' , A PROCESS OF DEDICATING



Bringing the landscape to the Bridge
Leading the loved ones to the new life
Transforming back to nature...

VESSELS ON THE BRIDGE

The vessels remain on the bridges for 60 days, dedicating to the body's natural transformation into earth. From north to south on the bridges within the venue, coffins are placed, becoming part of the natural surroundings and pedestrian life of the park. Breathing, feeling the rain, reflecting new life on the water's surface. Here, the departed become a natural part of the environment, respected and admired.



TRANSIENT, SIGHT & NATURE



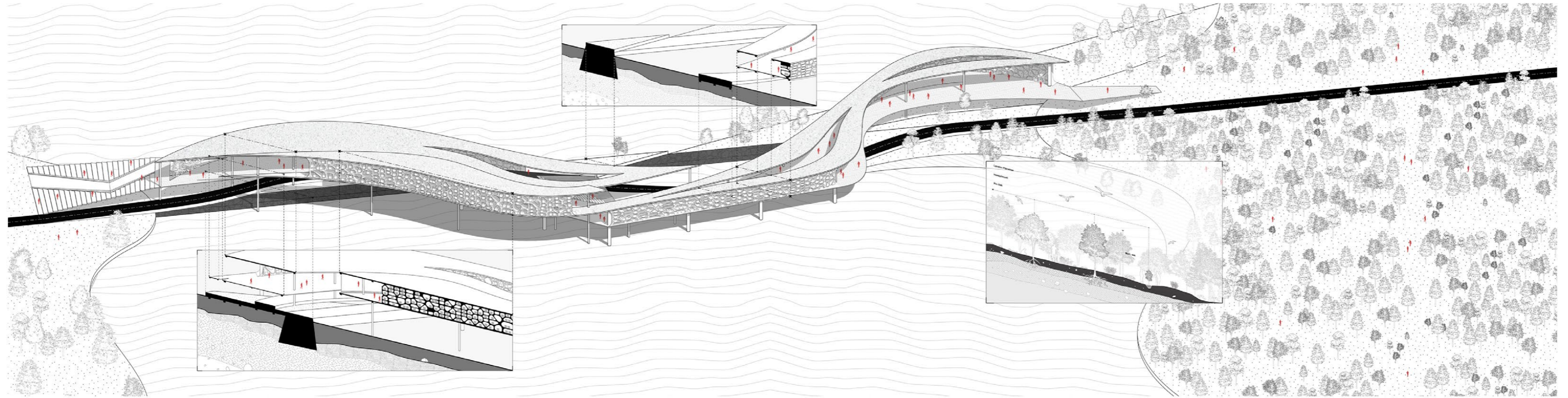
At the lower ends, citizens see the cityscape and landscape. In the middle of the bridge, citizens are enveloped in a serene atmosphere, momentarily detached from the city. Continuing forward, they once again enter the embrace of trees and water, alongside the distant city.

CAPACITY

The bridge has a capacity for 900 vessels in total. Given that each terramation process spans a 60-day period, the bridge can effectively accommodate 5,400 vessels annually, thereby addressing the capacity needs for a full year.

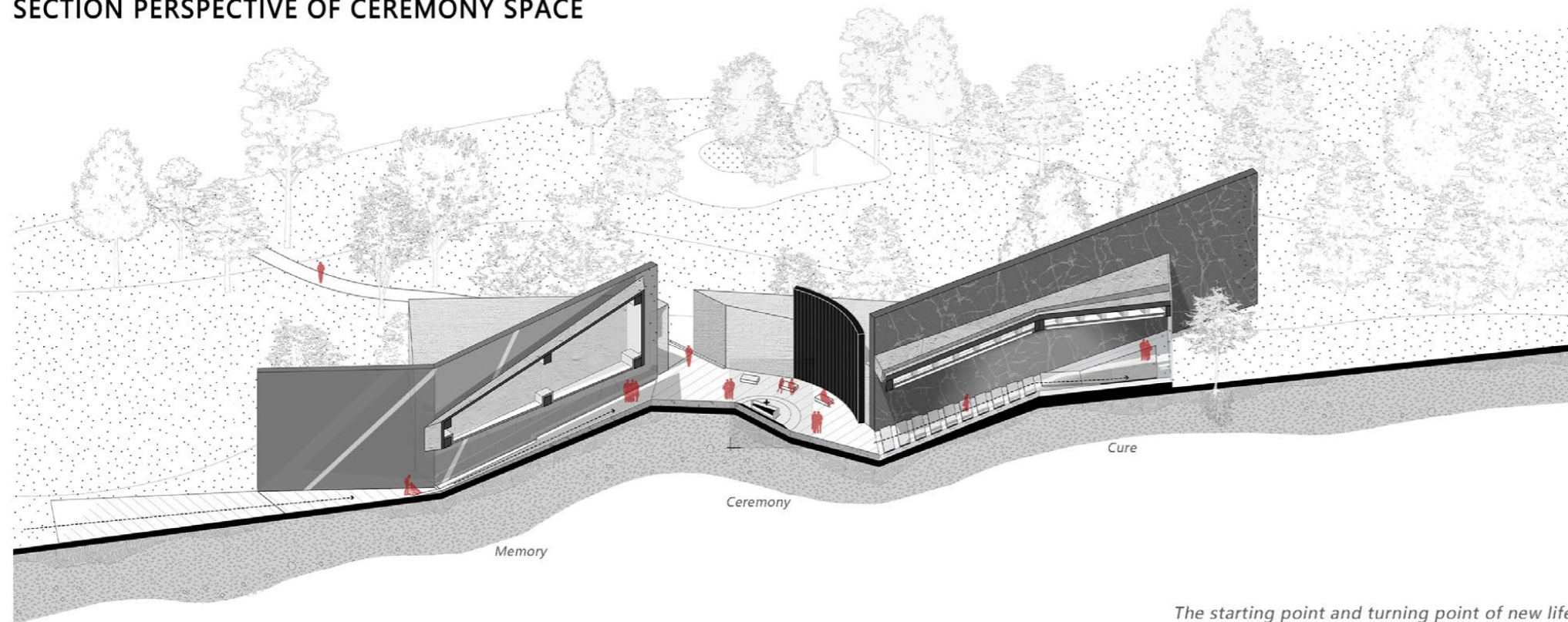


PERSPECTIVE & SECTION OF TERRAMATION BRIDGE



TREE NURSERY

SECTION PERSPECTIVE OF CEREMONY SPACE



A COMPLETE PROCESS OF CIRCULATION

The loved ones would experience the process of terramation and nourishment of an urban tree nursery, metamorphosing to another form of life that is dedicated to the natural environment and the social fabric of the city.

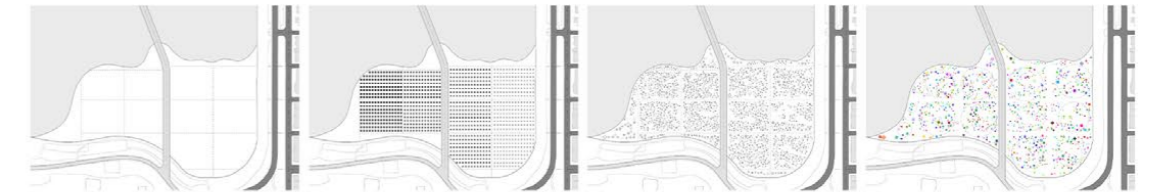
The project is designed to accommodate 10% of New York City's annual death, approximately 5,400 individuals. The nursery will feature four types of trees, which families could make decisions for their loved ones. The trees will undergo a three-year growth period, and they will dedicate to the urban environment after three years.

The starting point and turning point of new life.

LIFE NURSERY, REBIRTH OF LIFE



ORGANIZING & ARRANGING



The city grid has been subtly integrated, not as direct roads but as foundational divisions. The trees within the venue are organized and arranged to mirror the urban street grid, demonstrating a formal connectivity with the broader urban context while distinctively differing from the rest of Central Park from the plan view. Trees of various ages and species are strategically positioned according to this grid, promoting a naturally cohesive environment.

COME & GO



Year1



Year2



Year3



Over time, people come and go, including the deceased ones' families and friends, and citizens entering the realm of fairy tales. During this period, some mature trees are removed. They stand by the trees, sit by the trees, read, daydream. Within three to four years, the trees grow to a size suitable for transplantation. Another new journey begins.

02

Data Mourning

One Day We Will Disappear



Autumn 2023, Recording & Monument, GSAPP

Instructor: Marina Otero

Group Work (With Yansong Wang)

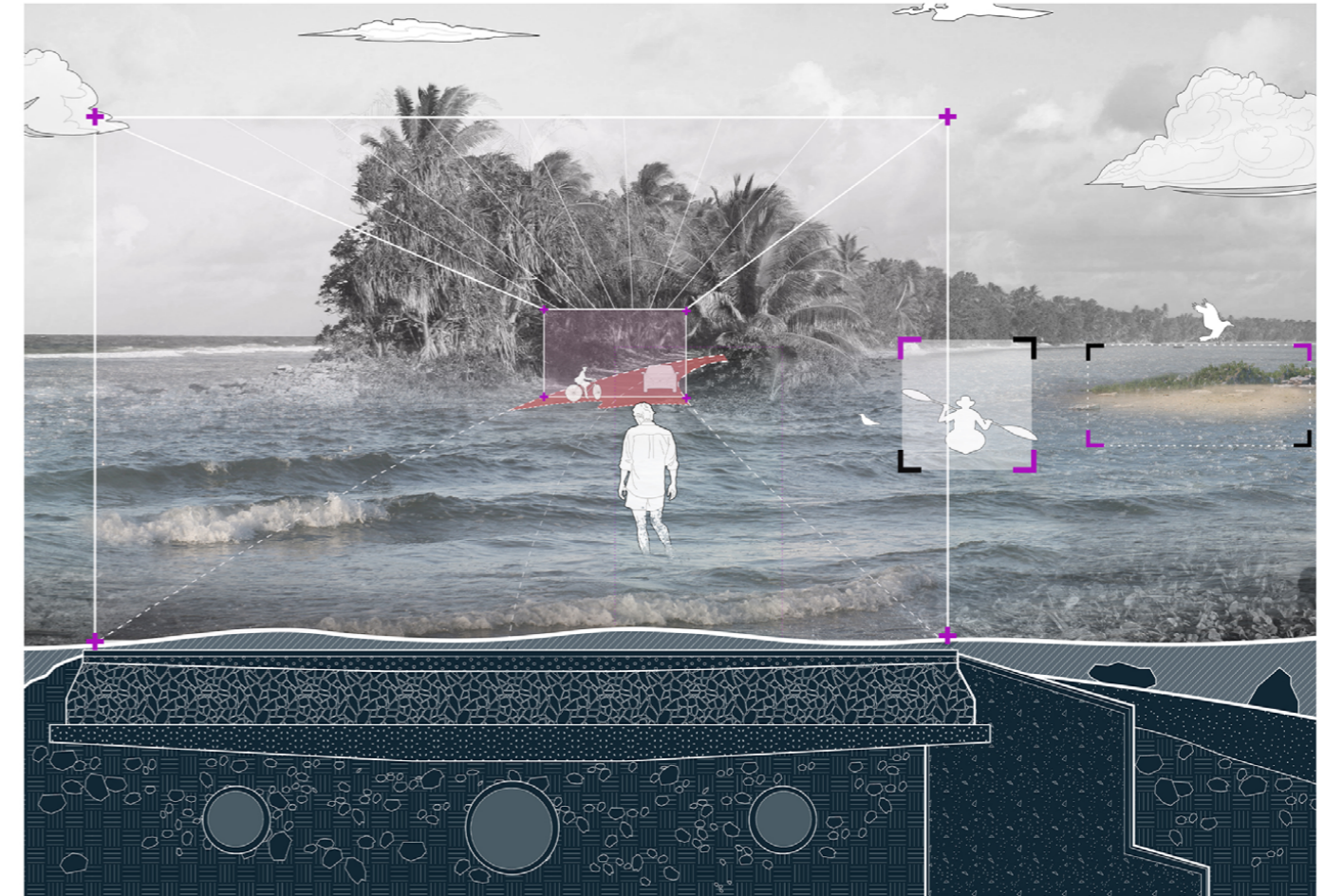
Funafuti, Tuvalu

Design Description

Already, two of Tuvalu's nine islands are on the verge of going under, the government says, swallowed by sea-rise and coastal erosion. The country is planning to upload all the data onto the cloud and migrate from the islands.

Yet during this constant progress of changing, before the country totally transforms itself from physical to visual, onto the cloud, people will still live there, maybe for years, for decades. Our design's goal is not just to record a moment of an island's submergence. Our aim is to document the entire process of the island's changes, capturing dynamic information at every moment.

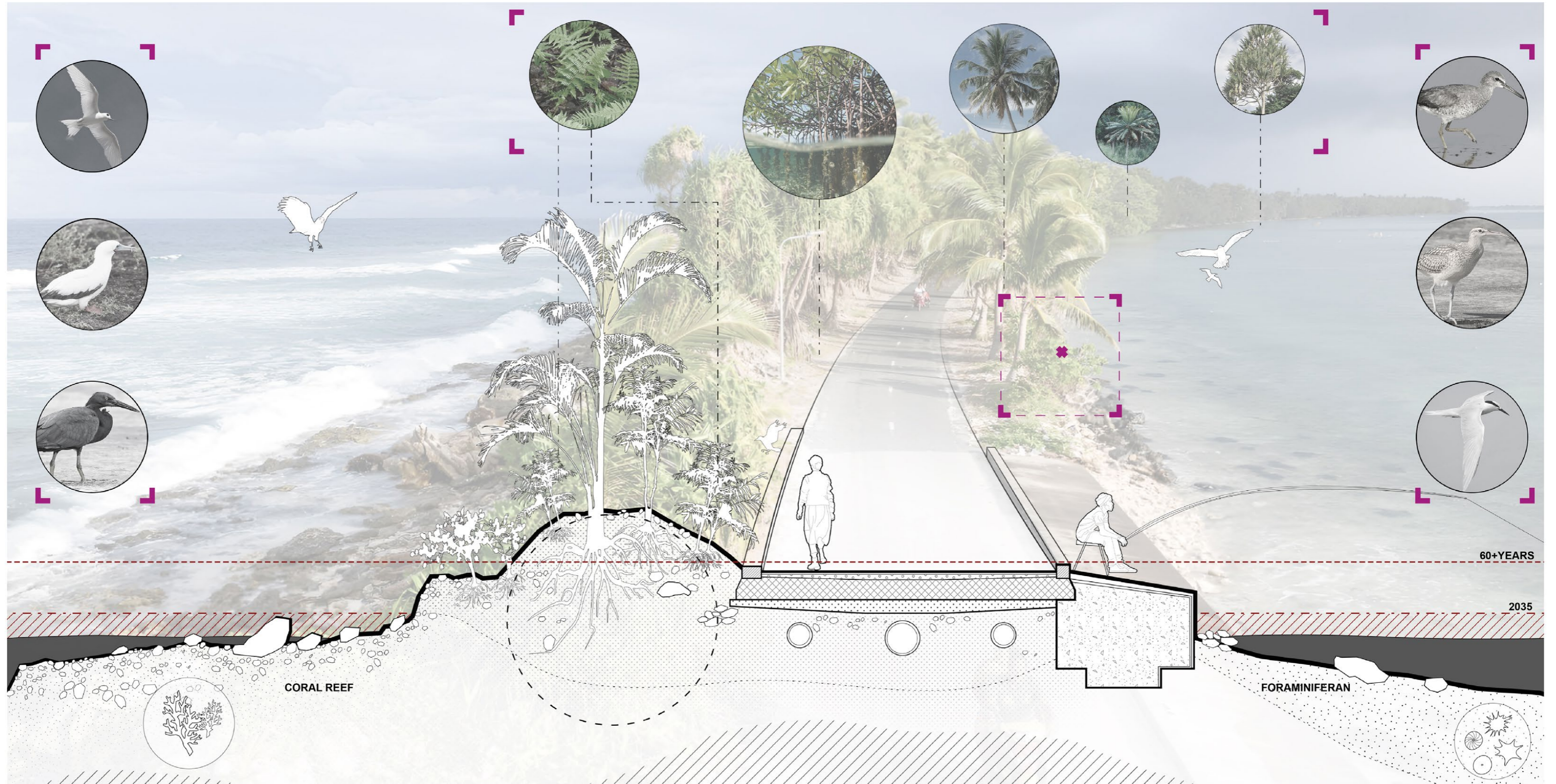
It is a story about harmonious coexistence between humans and nature, the fusion of technology and culture, and a collective effort to face the challenge of climate change.



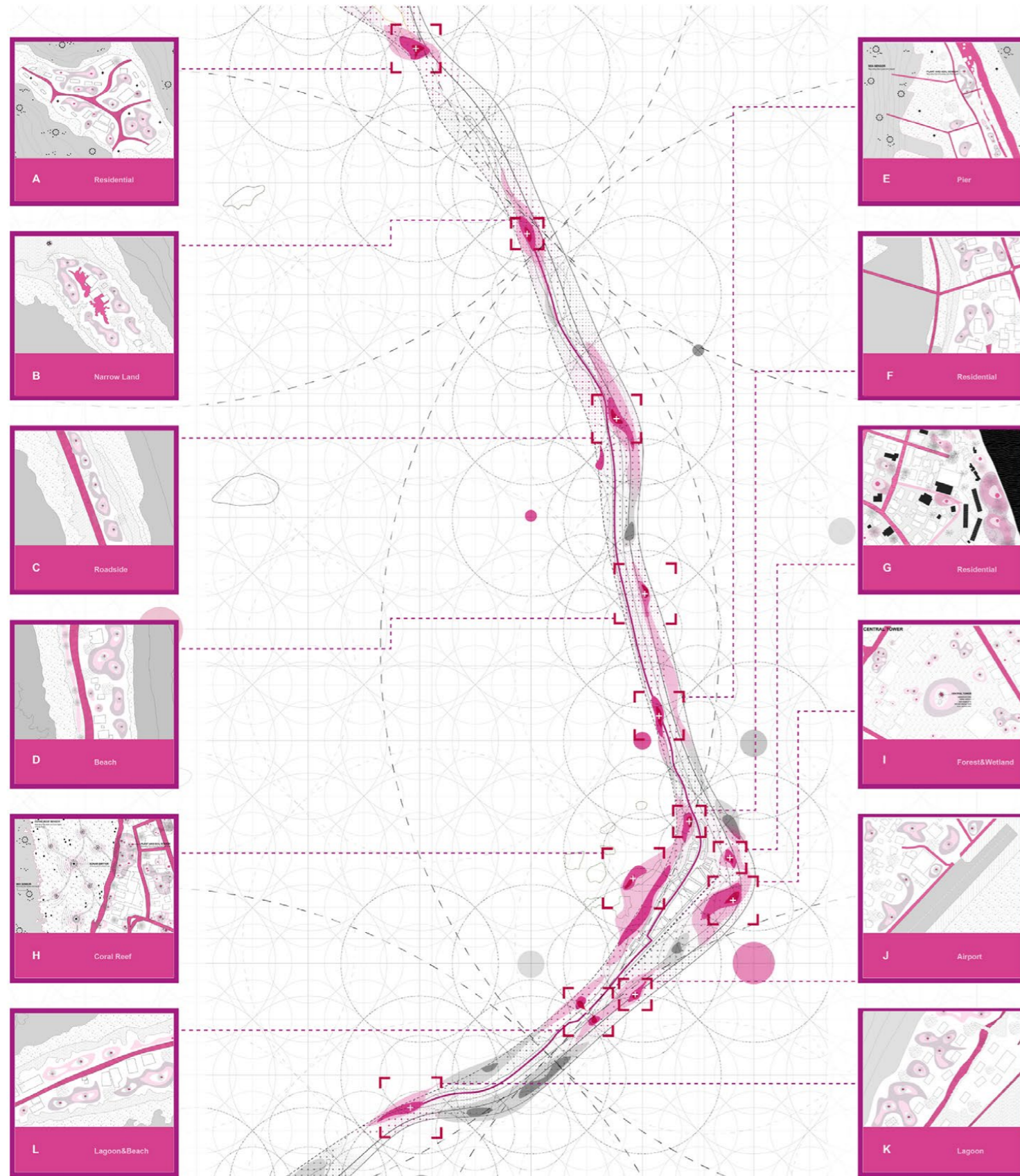
"A proper building grows naturally, logically, and poetically out of all its conditions."

— —Louis Sullivan

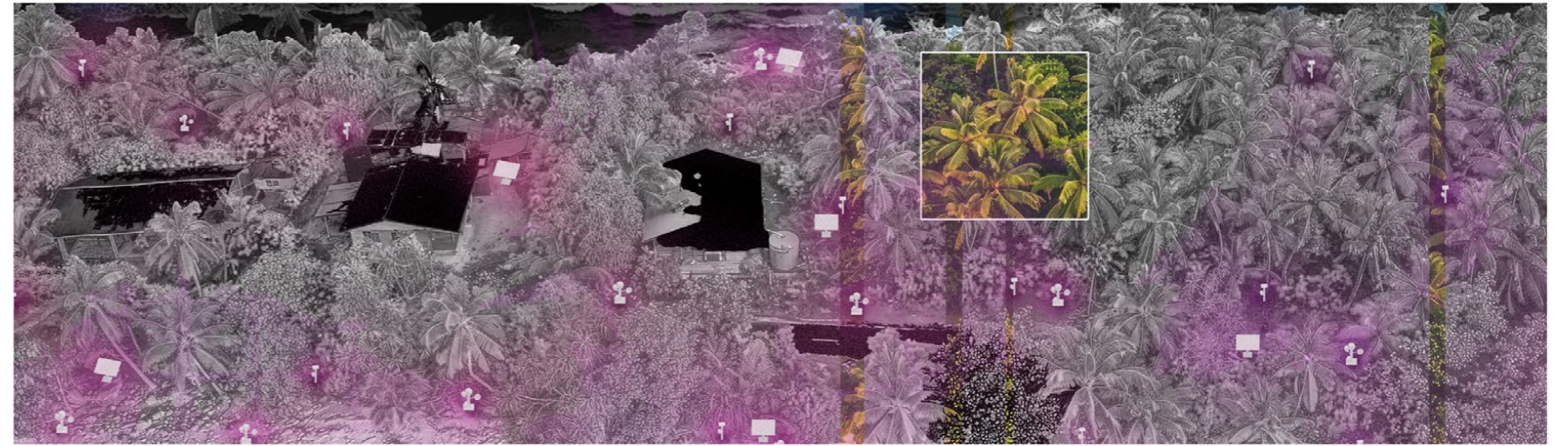
NARROW ISLAND IN FUNAFUTI



ARRANGEMENT OF SENSORS FOR ENVIRONMENT CHANGE

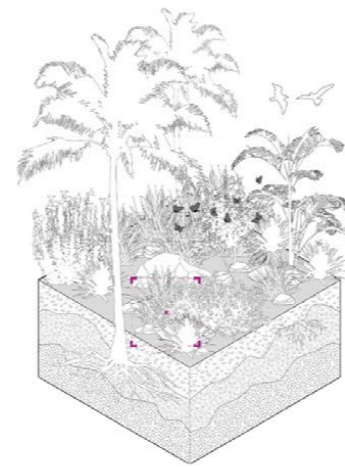


DATA-COLLECTING SYSTEM

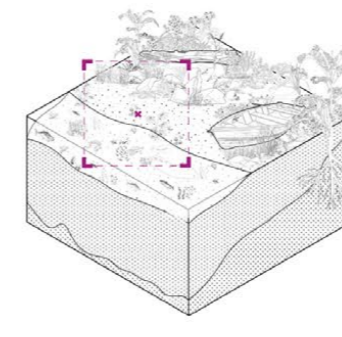


In the system, sensors with different functionalities are strategically placed at key locations throughout the site, according to their detection ranges to carry out environmental monitoring and data collection tasks.

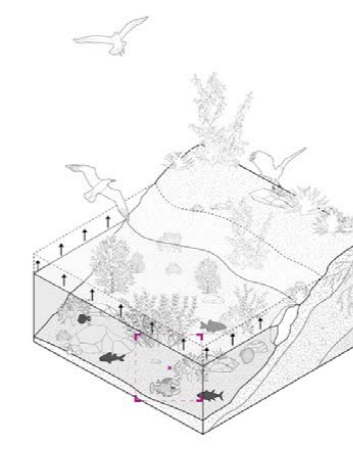
SENSOR TYPOLOGY & FUNCTION



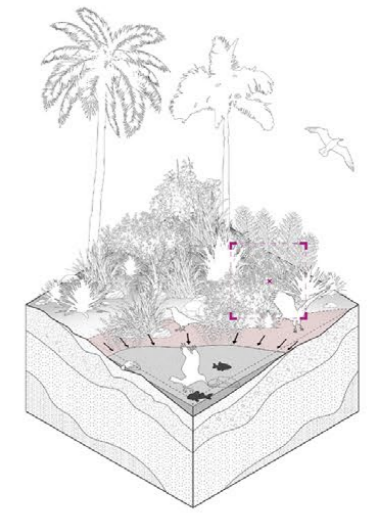
CAMERA & WIND SPEED



AIR HUMIDITY & SOLAR RADIATION

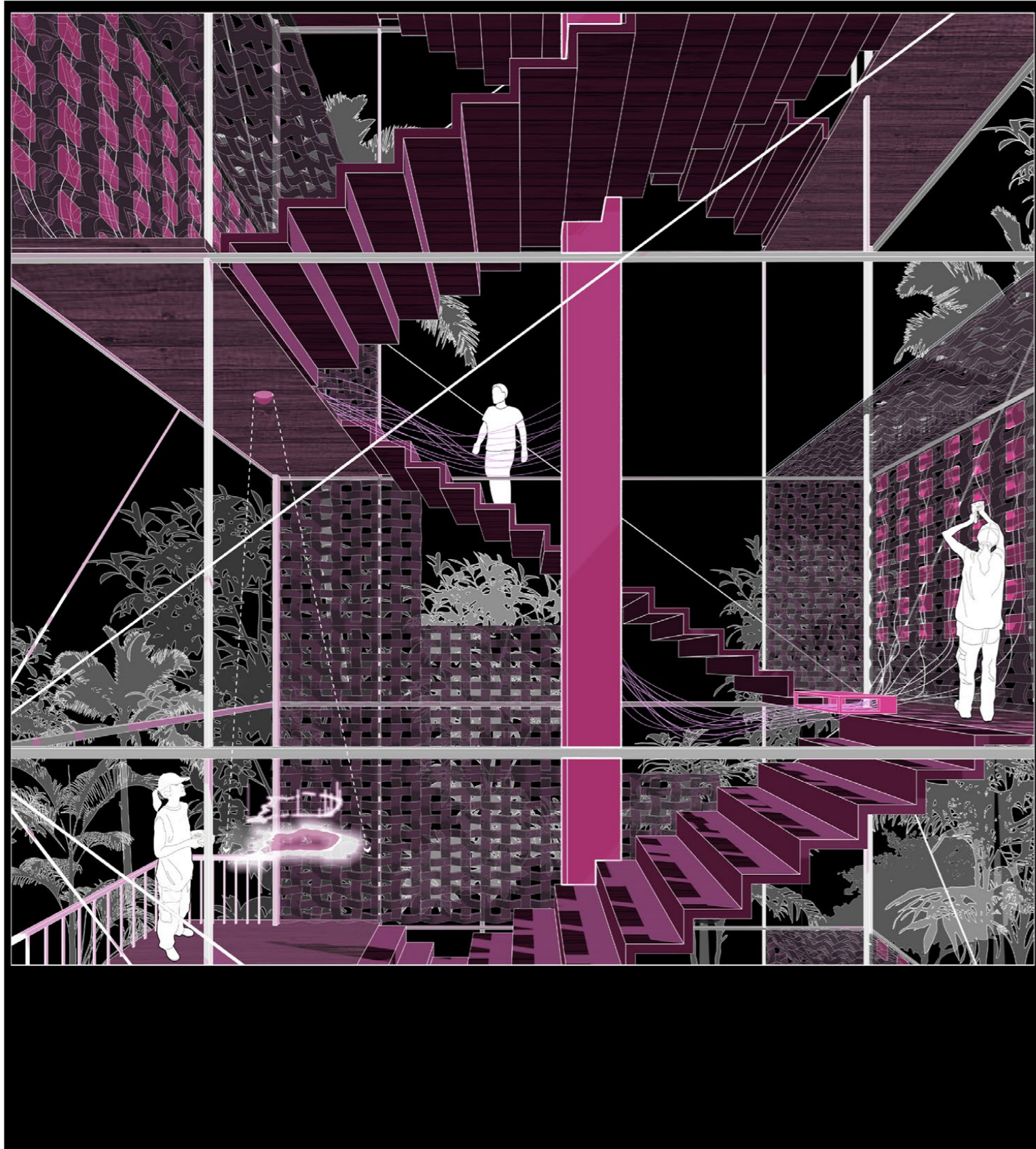


SEA LEVEL

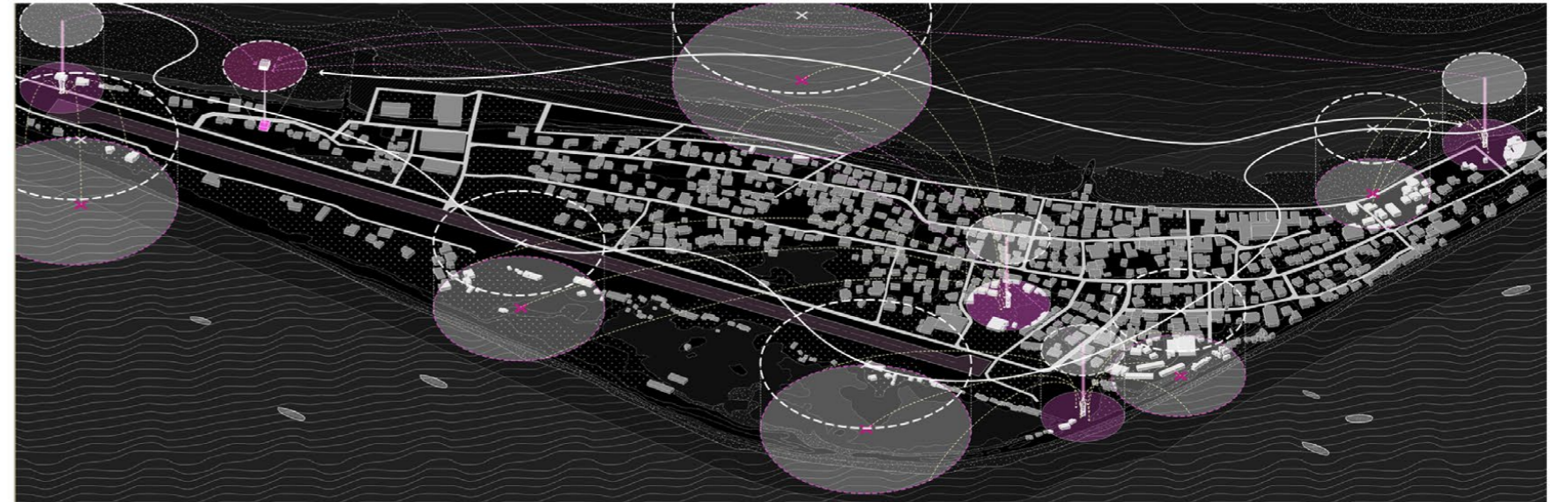


SOIL MOISTURE

ARRANGEMENT OF SENSORS FOR ENVIRONMENT CHANGE

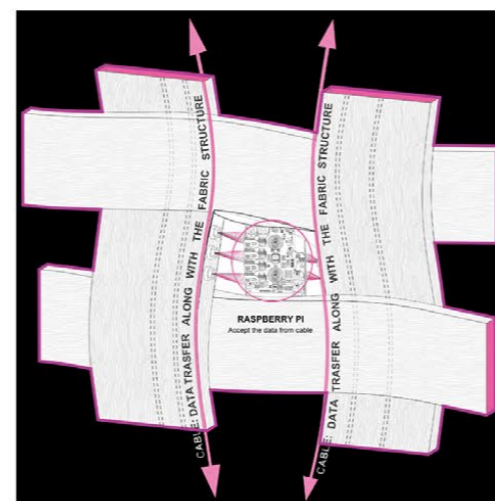
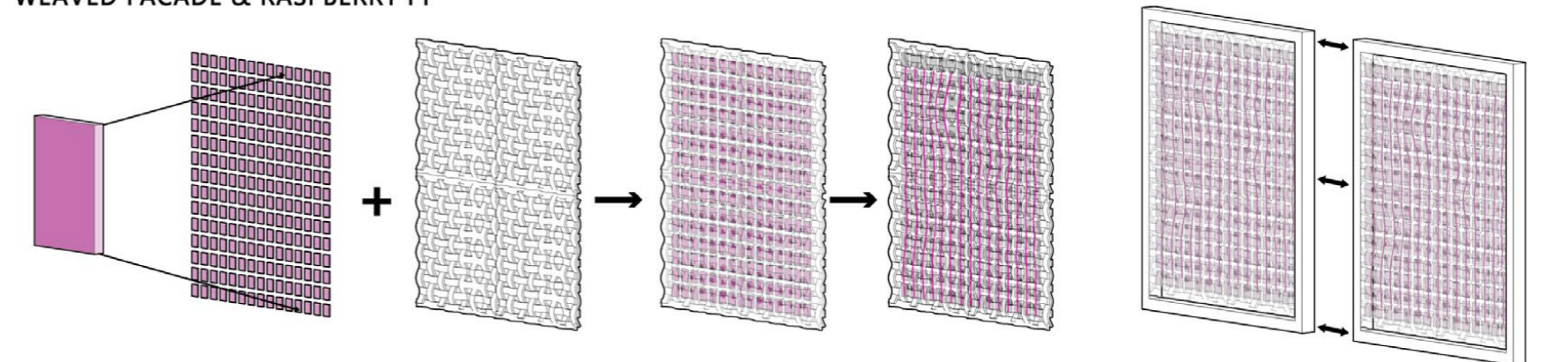


DATA-COLLECTING SYSTEM & DATA TRANSFORMING



The data is then transmitted to the tower, which, after receiving and processing the data, forwards it to the library. The library, by integrating and processing the data, achieves data visualization, thus allowing people to more intuitively perceive the dynamic changes in Tuvalu.

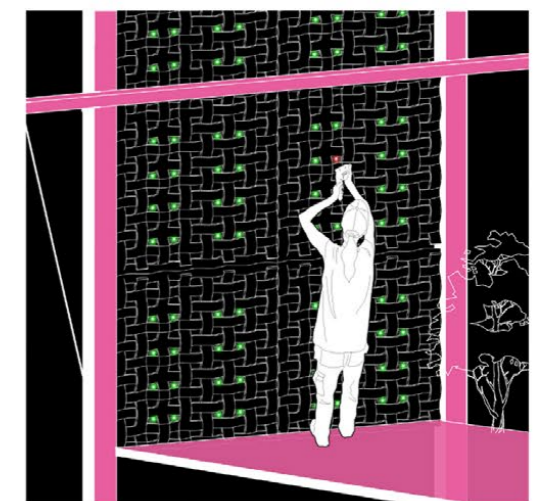
WEAVED FACADE & RASPBERRY PI



Raspberry Pi in the Facade

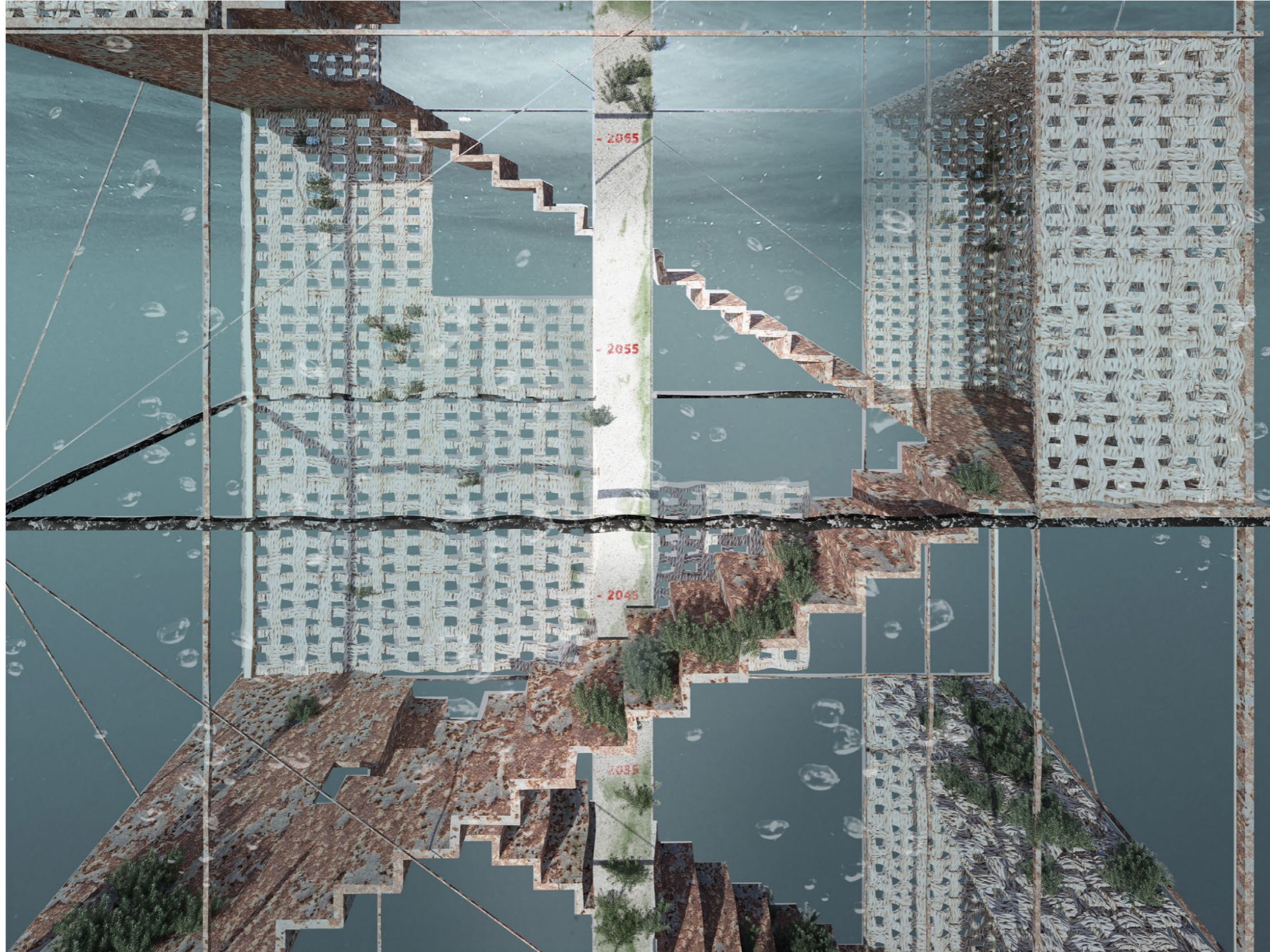


Laptop Connection

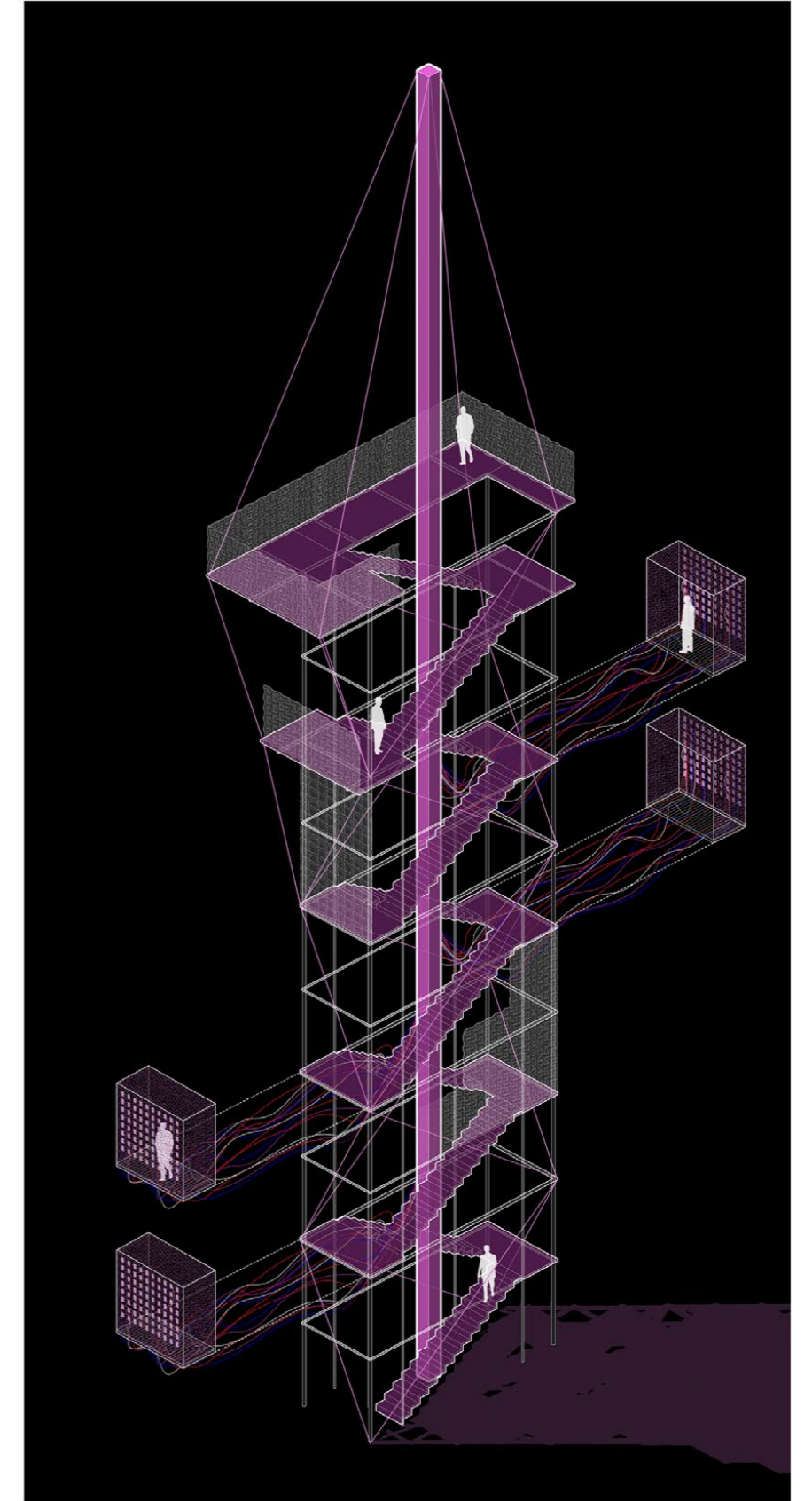


Repairing when blinking red

AFTER SINKING, AS A MONUMENT



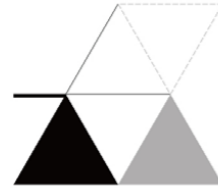
CONSTRUCTION OF THE TOWER



03

On The Way

Explore Possibilities of No-Ownership



Summer 2023, Co-Housing Design, GSAPP
Instructor: Anupama Kundoo, Emily Ruopp
Group Work (With Yansong Wang, Raymond Yu)
Auroville, India

Design Description

The intention of this project is to challenge the tradition of co-housing through redefining the way resources are shared. Through this idea, we kept in mind the original goals of Auroville which include: no private ownership of land and property.

To reach this goal, we chose the line of force situated on the crown, the social zone of the city. Our intention is to extend upon it to establish a new kind of housing where the street continues on the inside of our building.

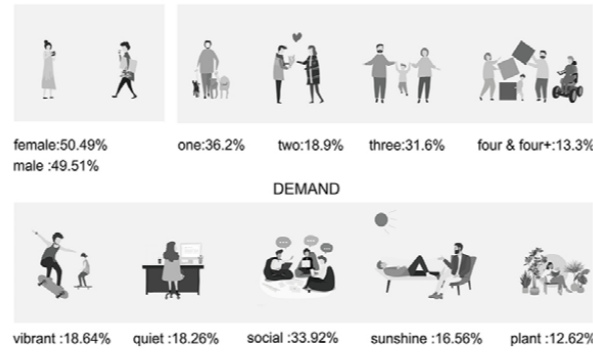
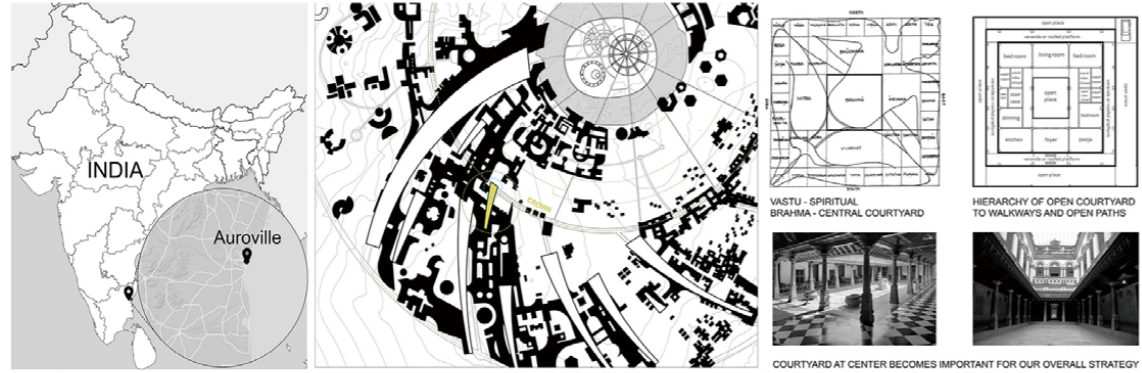
Our project creates a way in which a new social emerges filled with many scales of shared spaces. The scale remains an important part of the design: the way is inherently big in scale, but this transitions to a smaller scale as we transition from the public corridor to the scale of the cluster where there are smaller shared spaces and units.



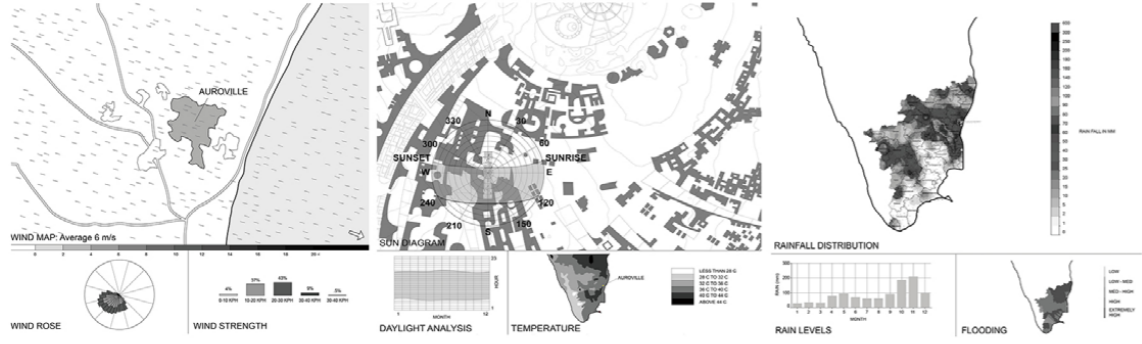
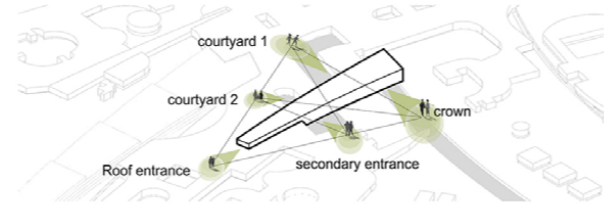
"What we really design are relationships, because cities are about people. They're places where people come together for all kinds of exchange. "

— —Jeanne Gang

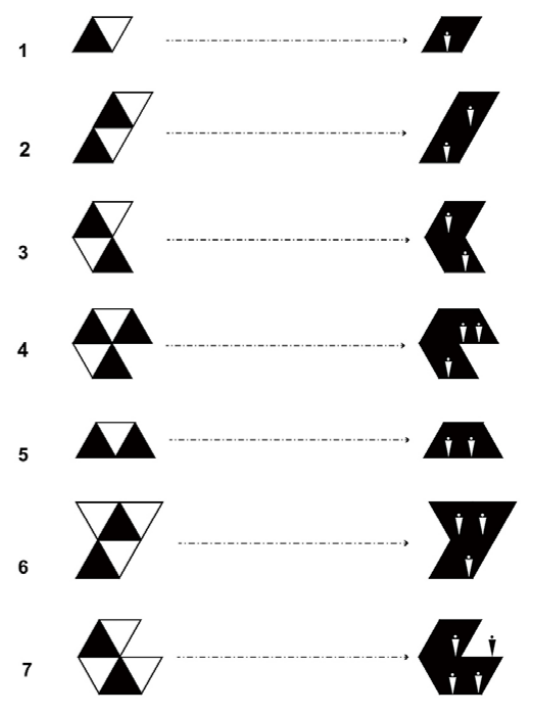
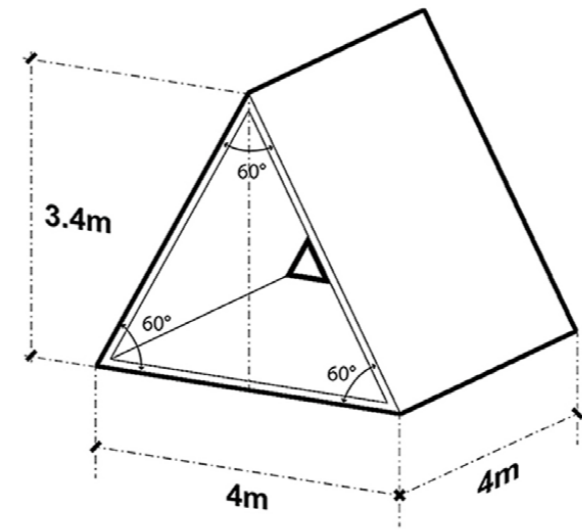
SITE CONDITION



Deviding the crowd in the venue to different attributes and deducing their approximate proportions in order to prepare for the re-organize & prototyping of the different units.

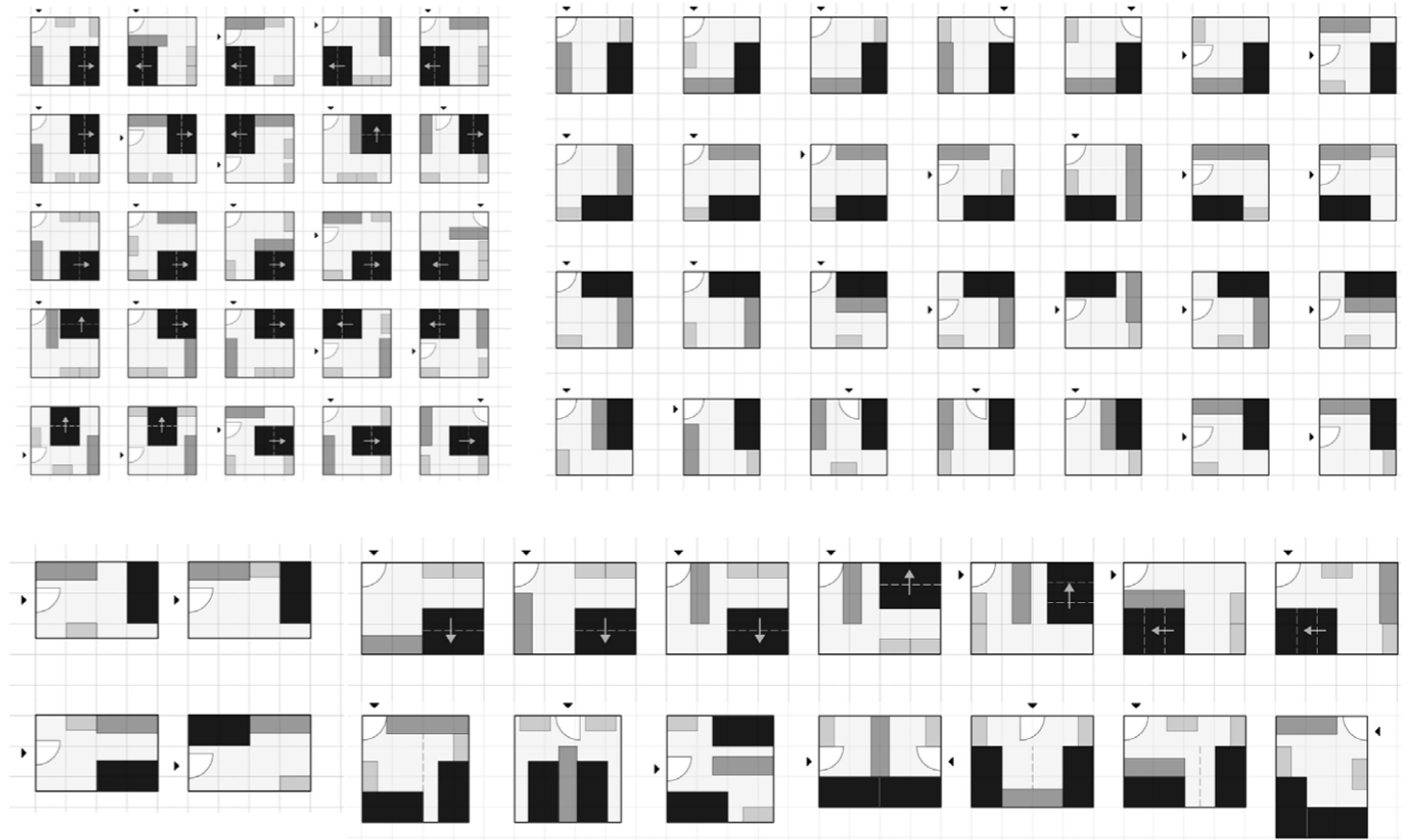
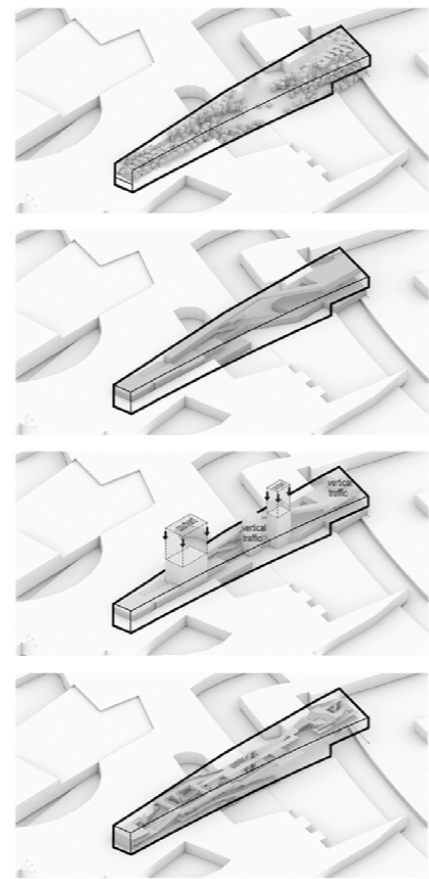
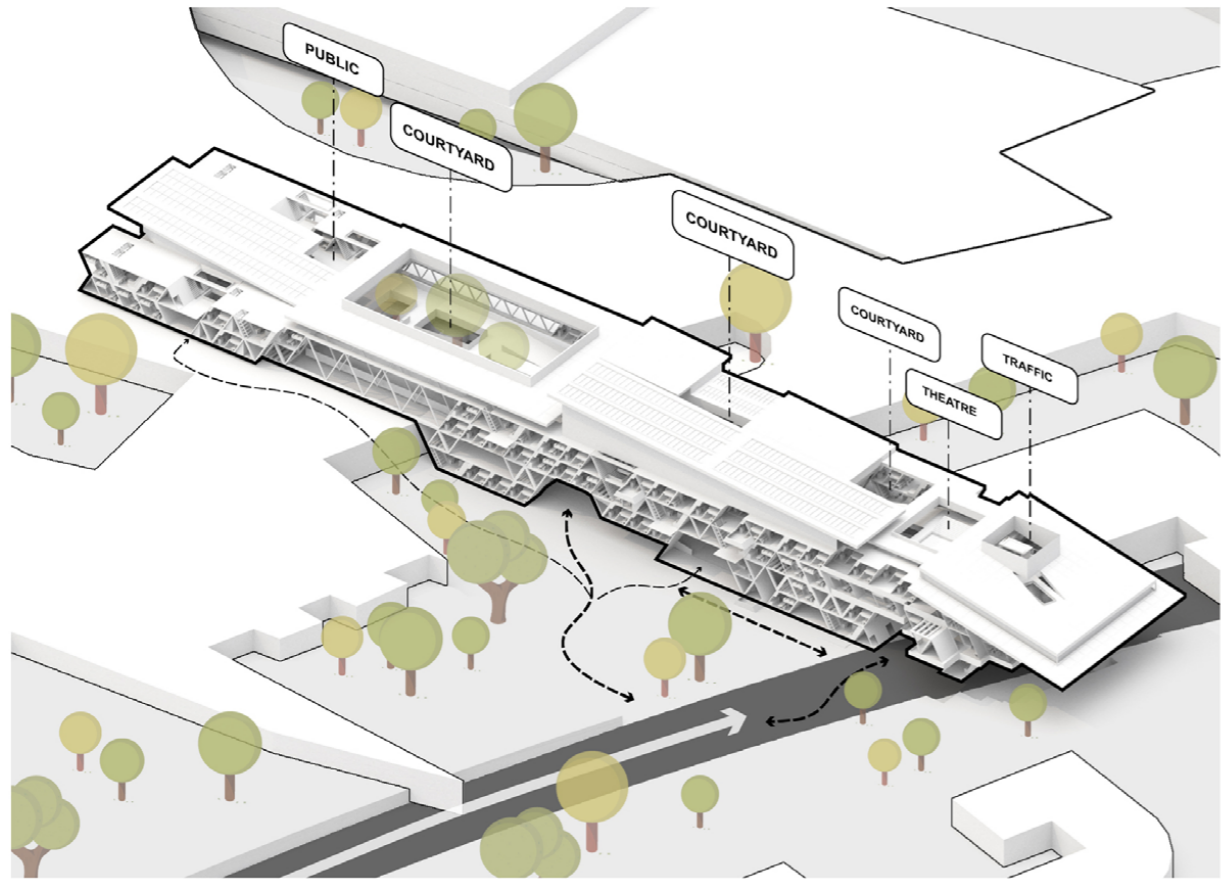


PROTOTYPE

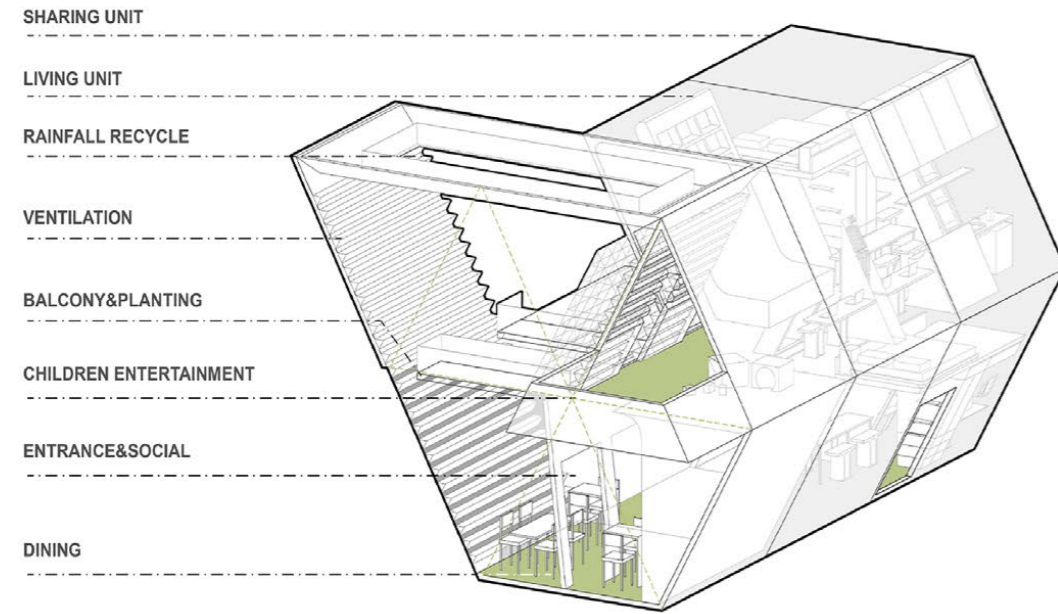


Adopting the triangle form as the basic unit for both living and sharing, can we organize the units in the shape we want. Putting together a space able to be transformed into many ends comes true. For living space, the space of 2-triangular units would be enough for one resident. To meet the need of more users, we are able to adjust by needs.

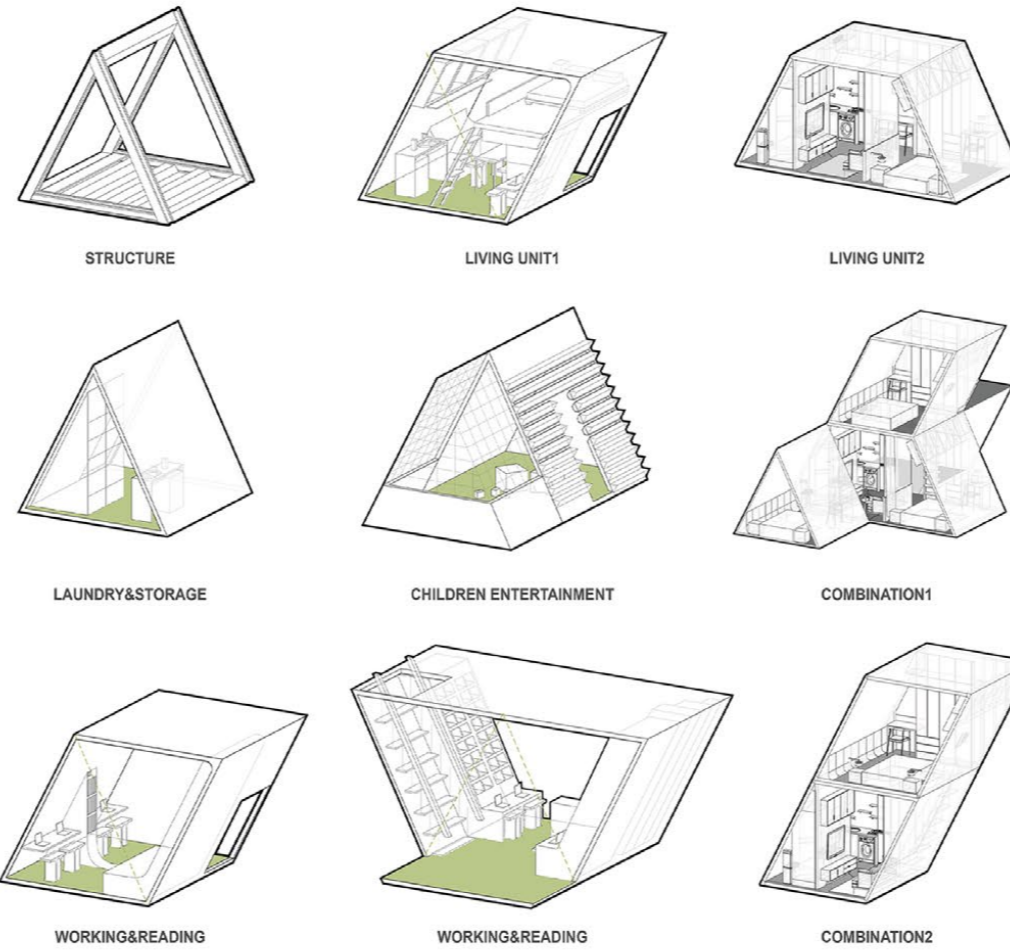
GENERATION OF PUBLIC SPACE



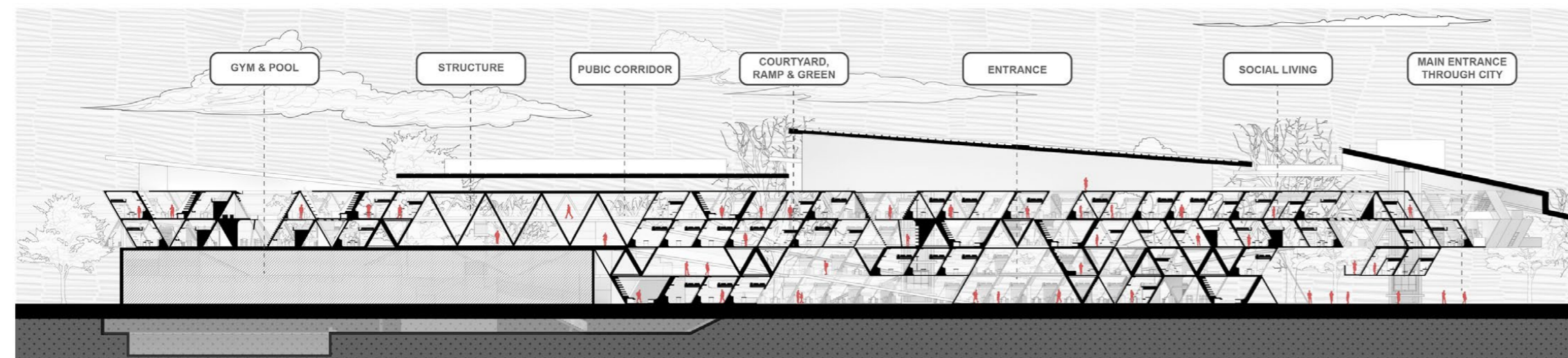
UNIT PROTOTYPE



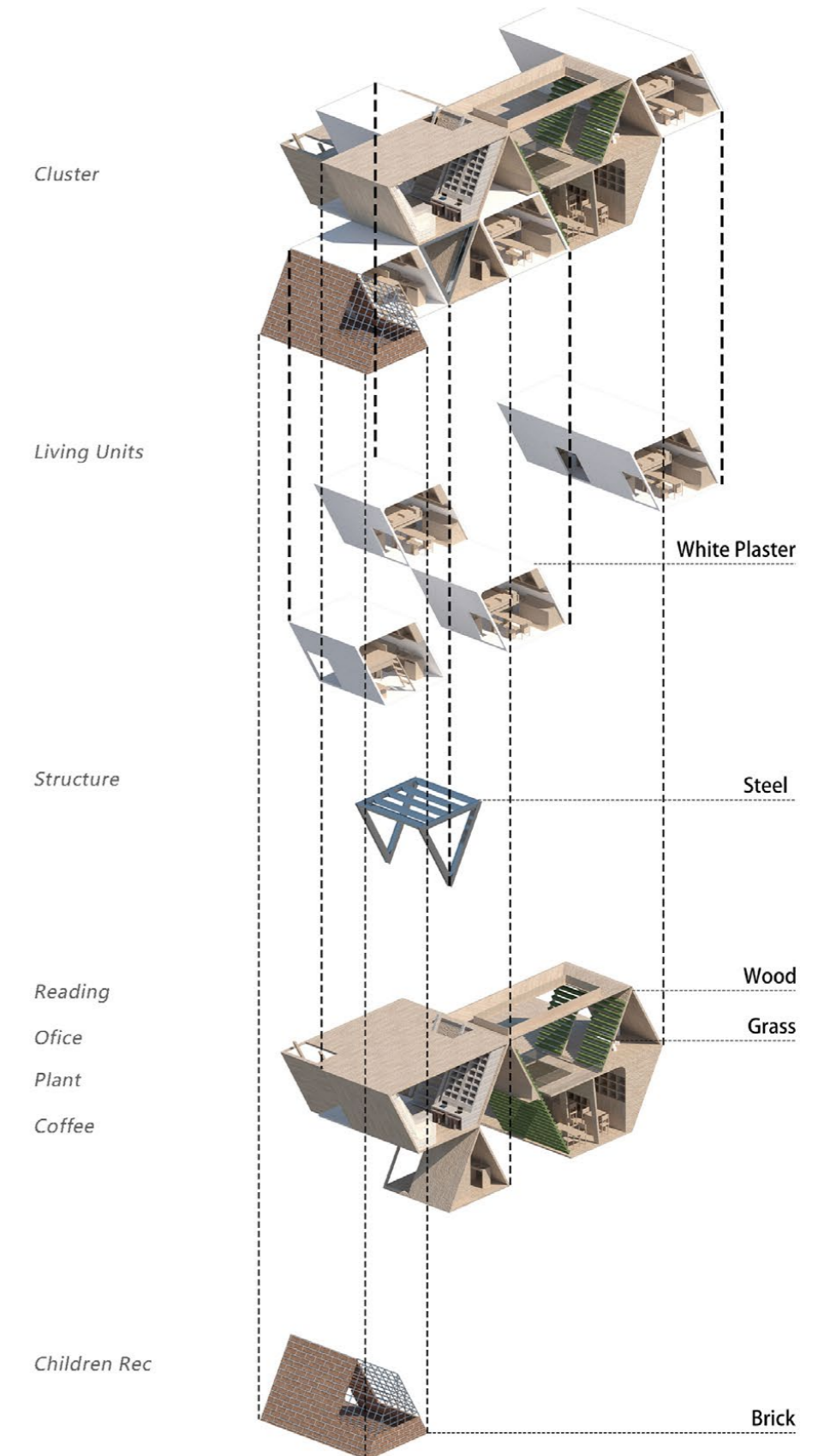
In order to better connect with the site conditions, we've also considered digging below grade to open up more public space and increase the ceiling heights in order to give a change in scale. Architecturally, "the way" is not just performing on a flat plane, but it changes in elevation. It goes up and down. This creates pockets of space at different scales in order to preserve human scale. Some spaces are near the openings because it needs it and some spaces are lower. To address the requirements for ventilation and sunlight, a large central COURTYARD is integrated into this area. The courtyard is strongly designed to open up to the city, combining green spaces and sloping pathways, thereby enhancing the overall urban experience through features, including a library, gardens, sports facilities and also a swimming pool.

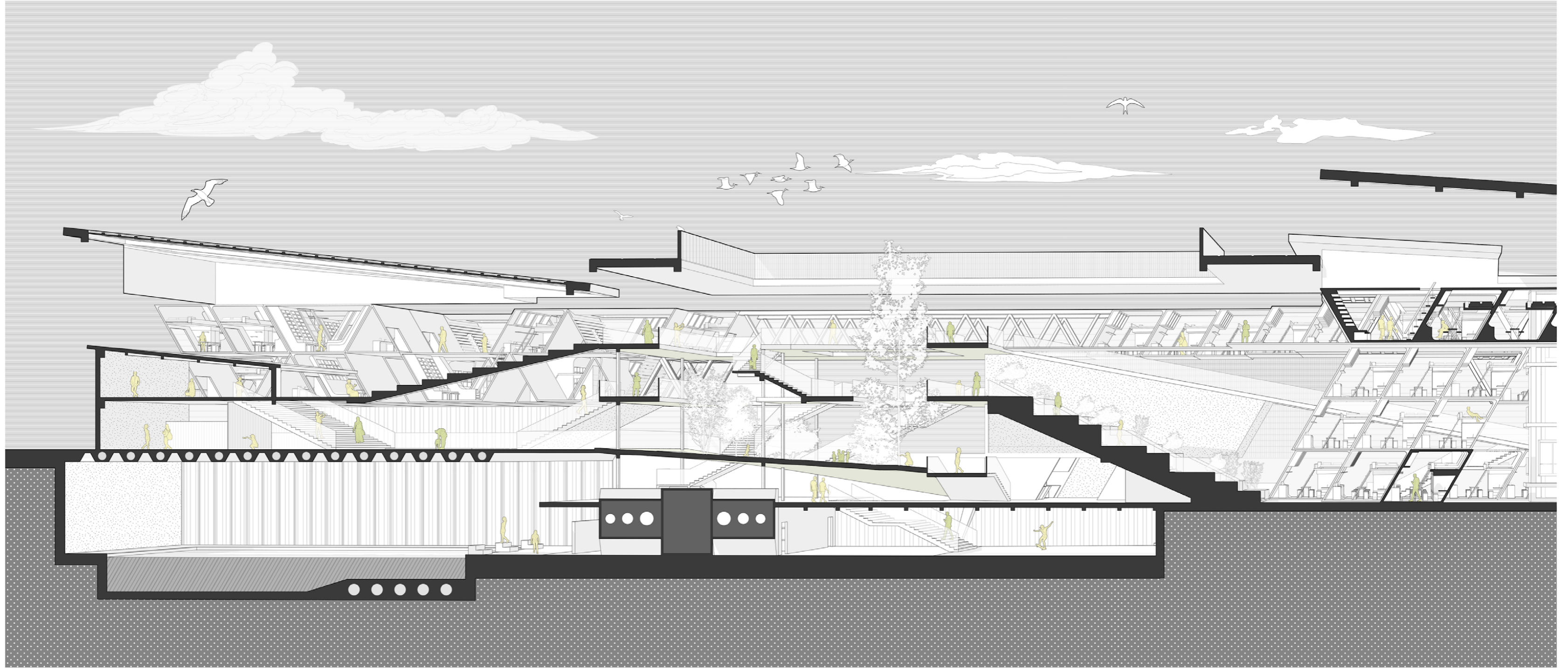


SECTION



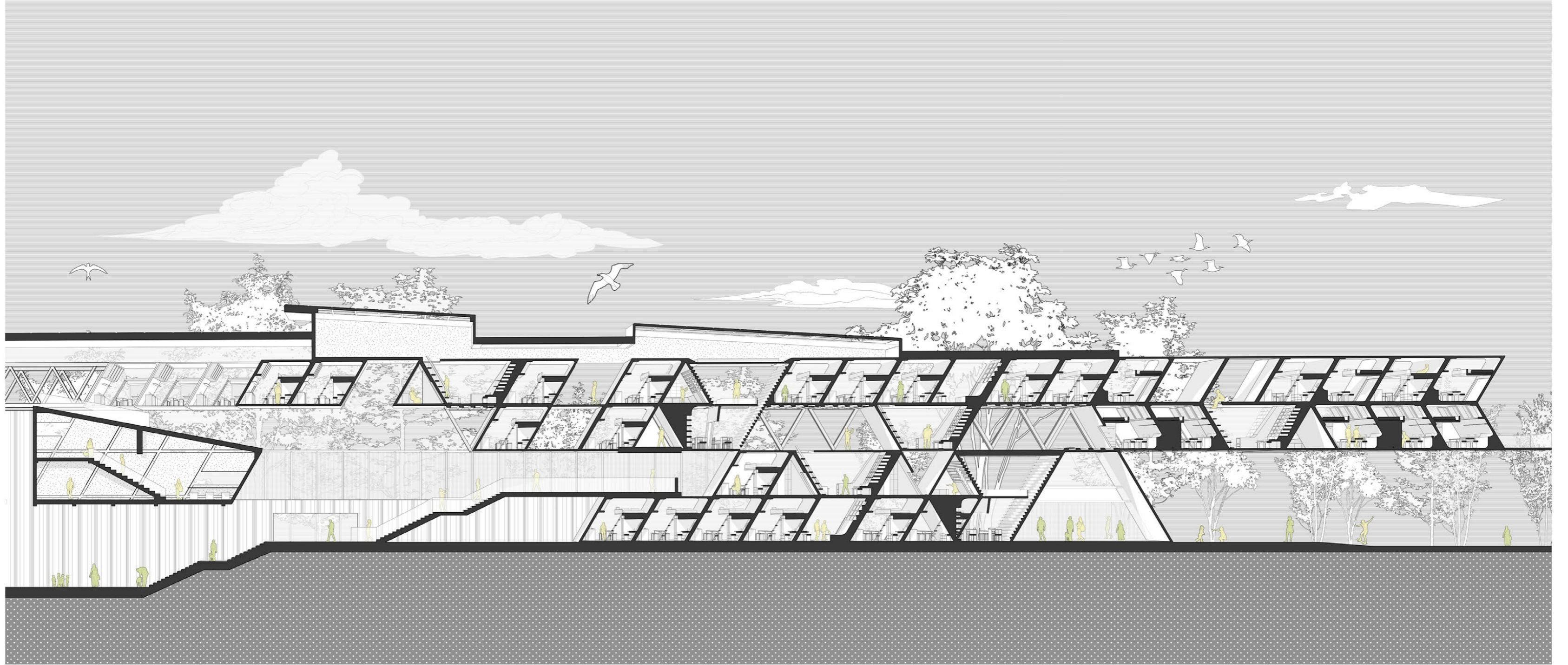
CLUSTER AXONOMETRIC DECOMPOSITION





SECTION PERSPECTIVE: SHARED SPACE

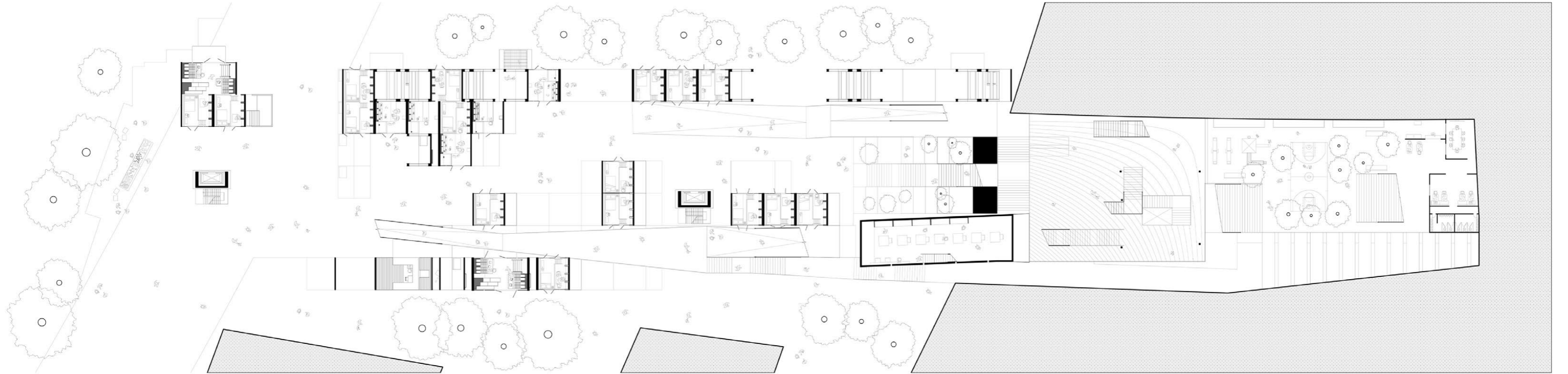
The crown is situated in the lower right corner of this location, with a significant daily influx of people commuting to work. Therefore, subtraction was employed in this corner, excavating the mass, aiming to better integrate with the overall urban space. The area was enriched with functional spaces such as theaters. As a result of the excavation at the lower levels, residential spaces were limited, leading to the allocation of a substantial number of residential units on the upper levels. These units are arranged around shared spaces that harmonize with the urban environment.



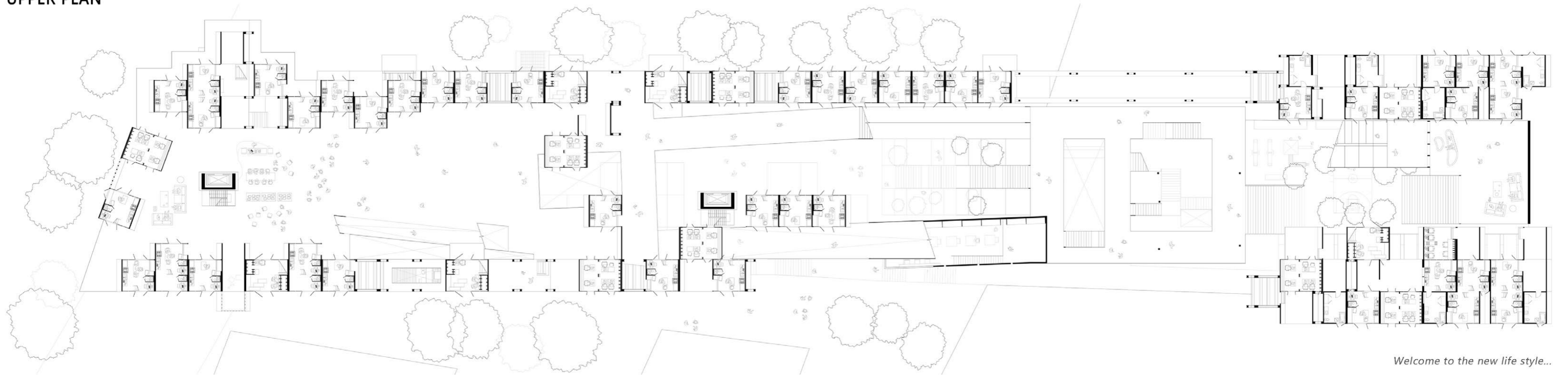
SECTION PERSPECTIVE: LIVING UNITS

The crown is situated in the lower right corner of this location, with a significant daily influx of people commuting to work. Therefore, subtraction was employed in this corner, excavating the mass, aiming to better integrate with the overall urban space. The area was enriched with functional spaces such as theaters. As a result of the excavation at the lower levels, residential spaces were limited, leading to the allocation of a substantial number of residential units on the upper levels. These units are arranged around shared spaces that harmonize with the urban environment.

LOWER PLAN

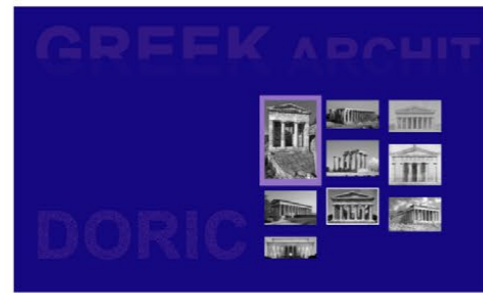
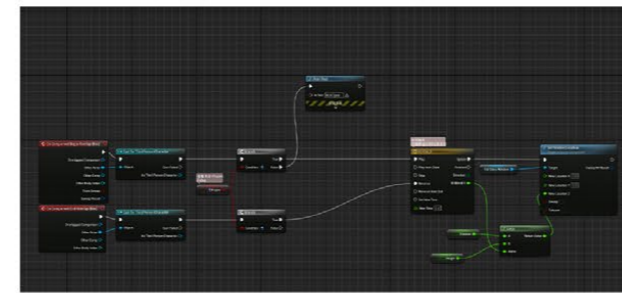
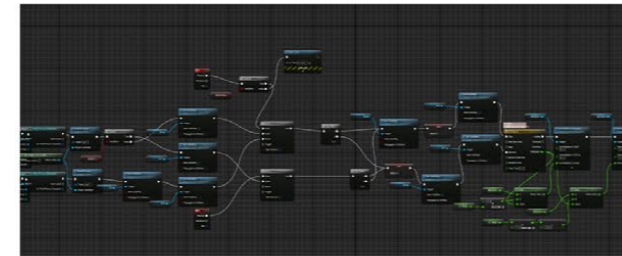
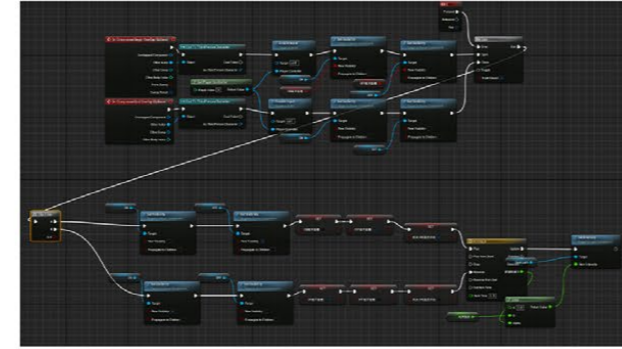


UPPER PLAN



Welcome to the new life style...

Other Works



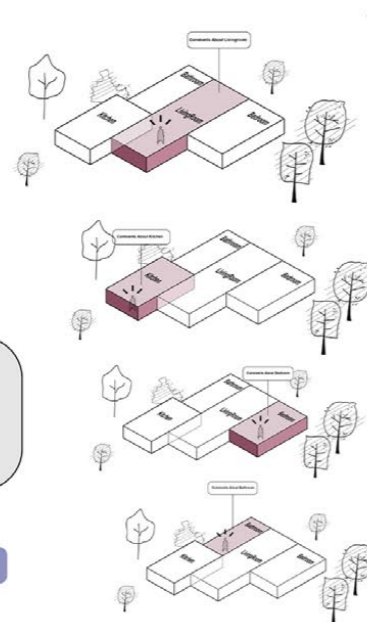
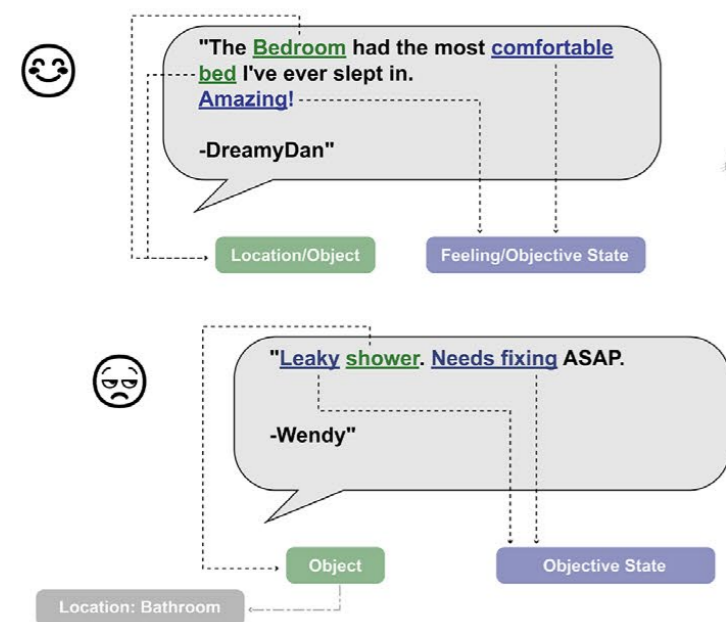
Web Design, GSAPP, Columbia University 2023

Virtual Architecture, GSAPP, Columbia University 2023



Subject_Object, GSAPP, Columbia University 2024

CODING PRACTICE ▲



VISIBLE ADJUSTMENT OF AIRBNB REVIEW ▼

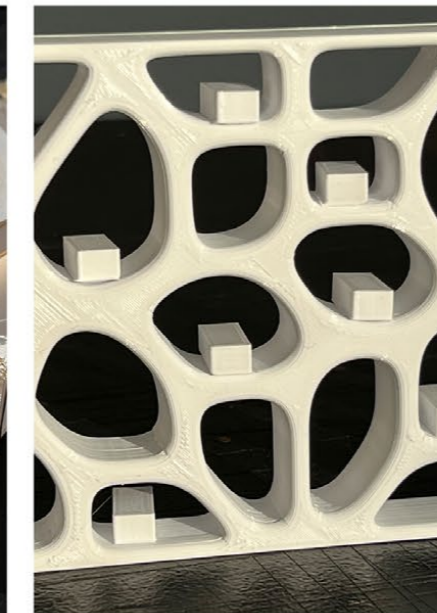
Virtual UX, GSAPP, Columbia University 2023



GAMING DESIGN ▲

MODEL MAKING

Studio, GSAPP, Columbia University 2024



To Be Continued...