

RANIM HADEED
ARCHITECTURE PORTFOLIO

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ARCHITECTURE PORTFOLIO 2021

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SELECTED PROJECTS

PROJECT.1 - MODULAR HOUSING	FALL 2020
PROJECT.2 - HOUSING BLOCK	FALL 2019
PROJECT.3 - BOATHOUSE	SPRING 2019
PROJECT.4 - CLOISTERS MUSEUM EXTENSION	SPRING 2020
PROJECT.5 - DORMITORY	FALL 2018
PROJECT.6 - LIBRARY	SPRING 2017
PROJECT.7 - KINDERGARTEN	FALL 2017

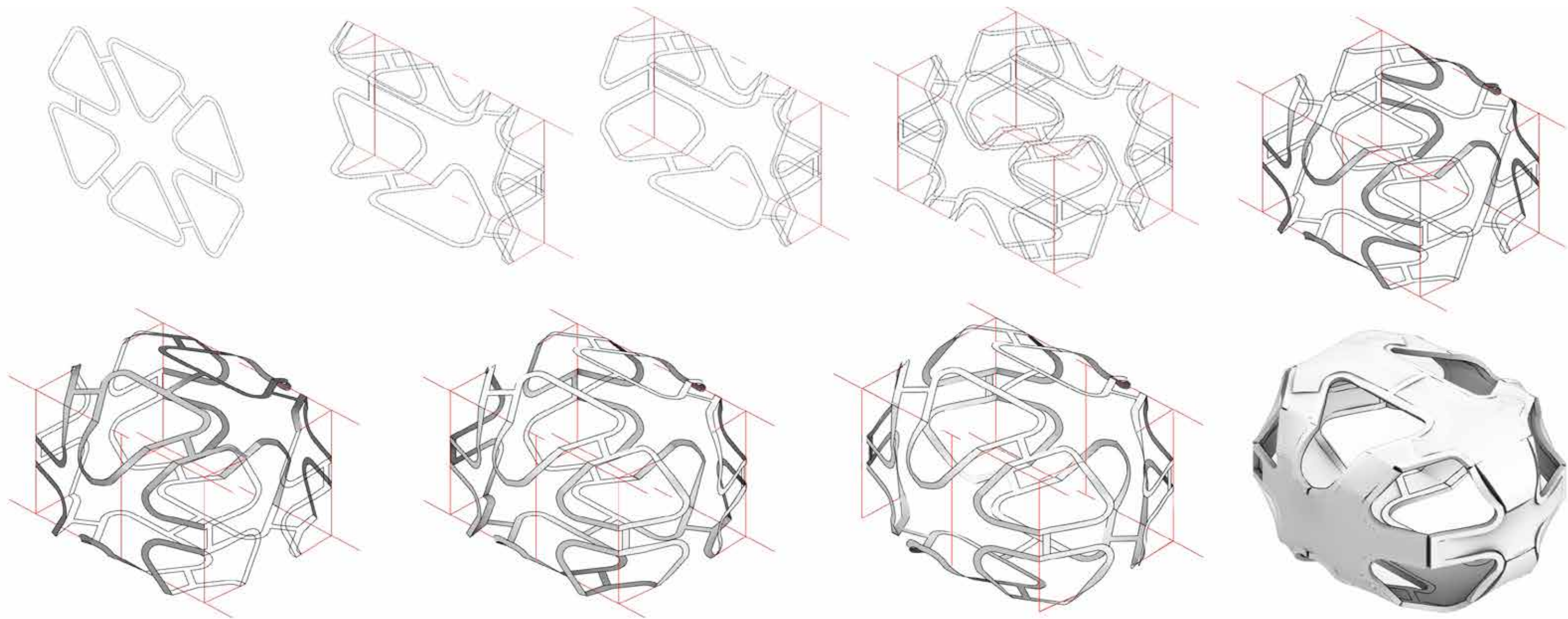


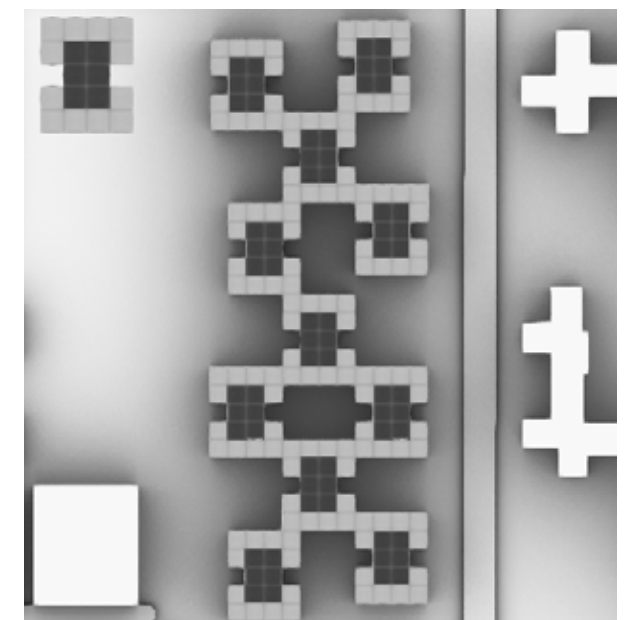
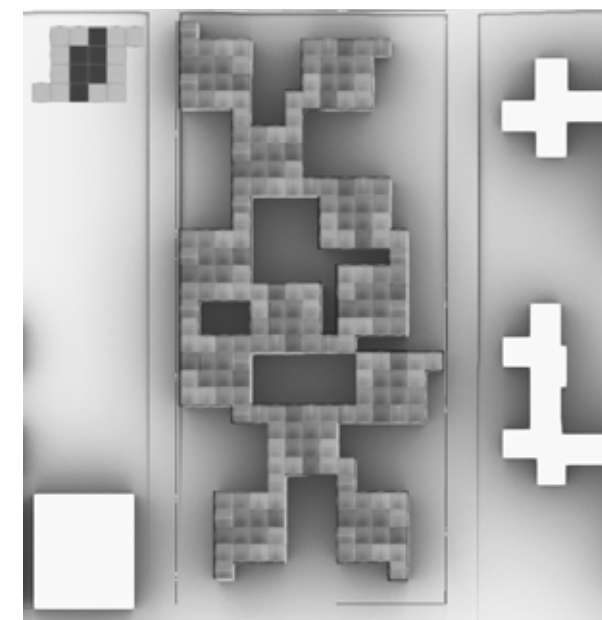
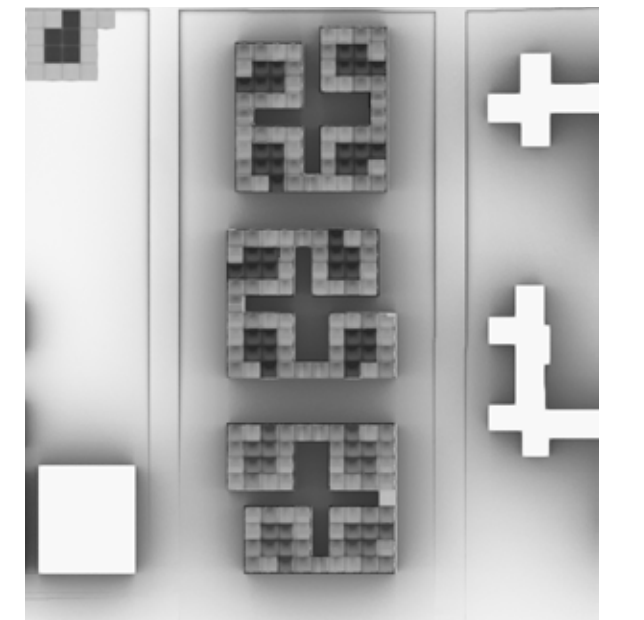
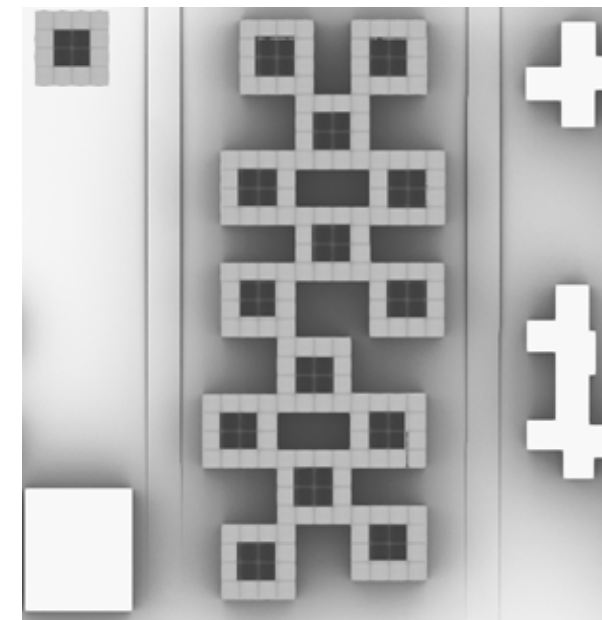
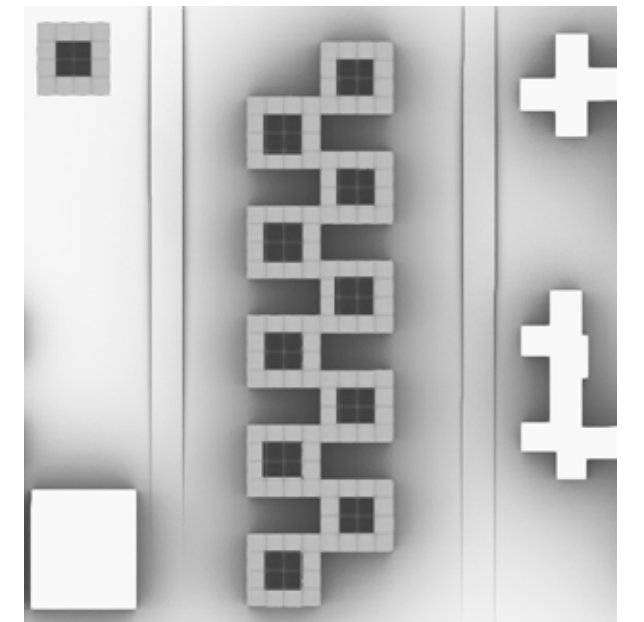
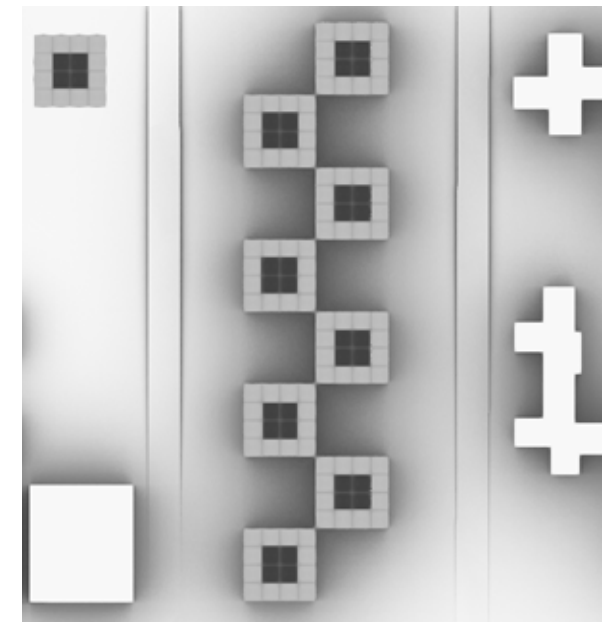
PROJECT.1 - MODULAR HOUSING

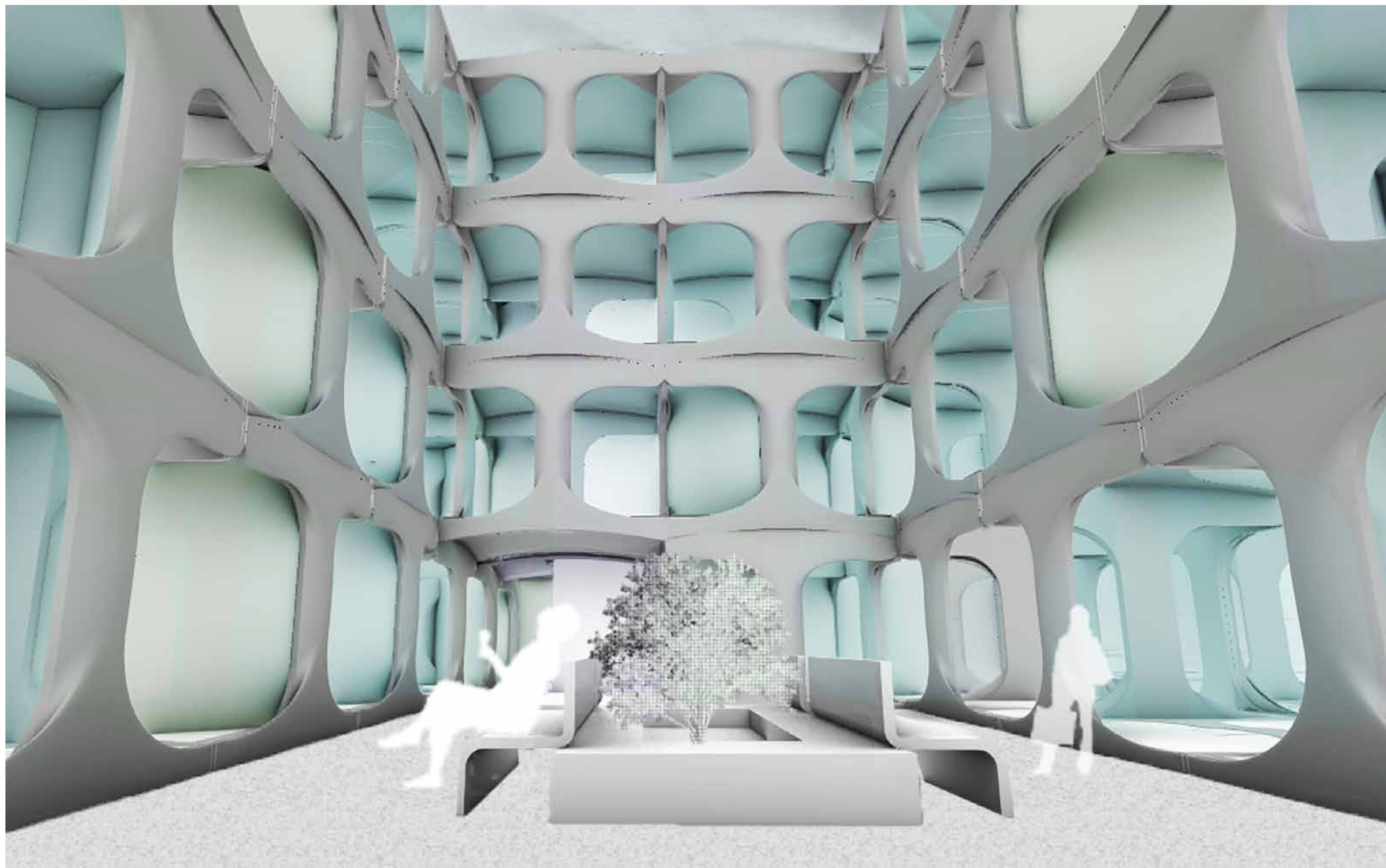
- LOCATION: Brooklyn, NY
- PROGRAM: Modular Housing

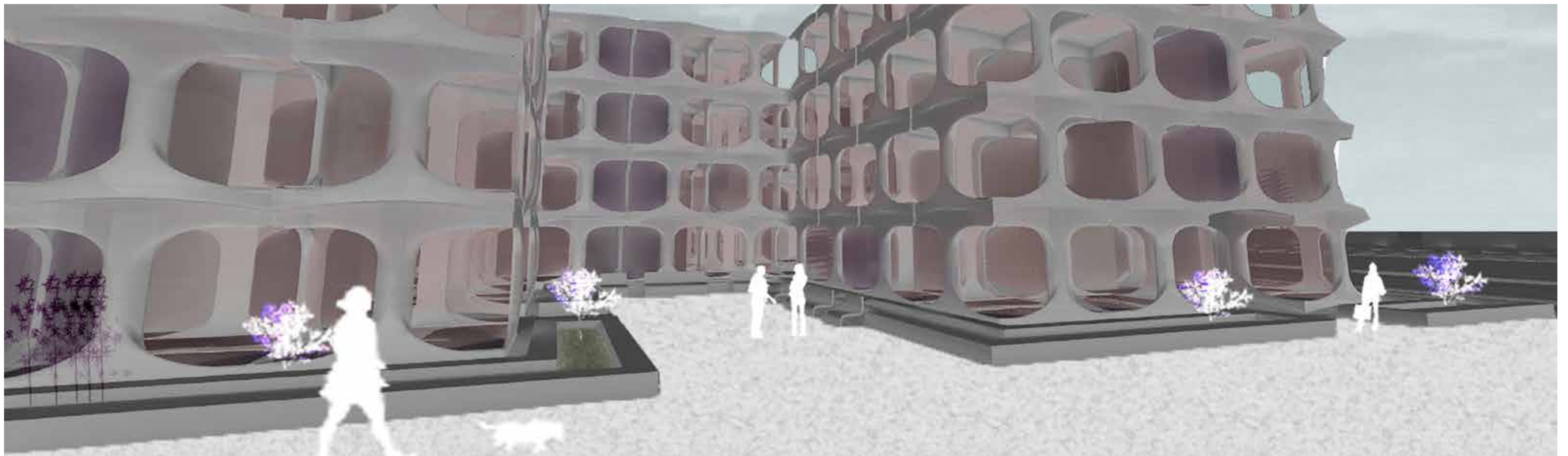
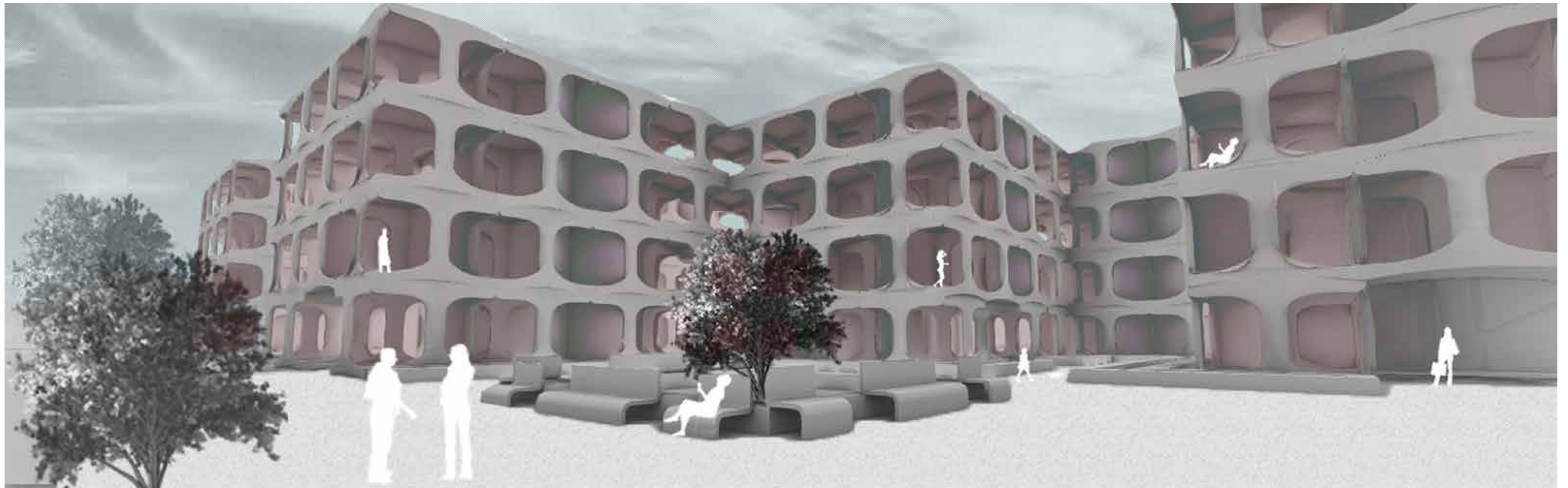
Observing and mimicking the behavior and structural characteristics of organism and intracellular forms found in nature

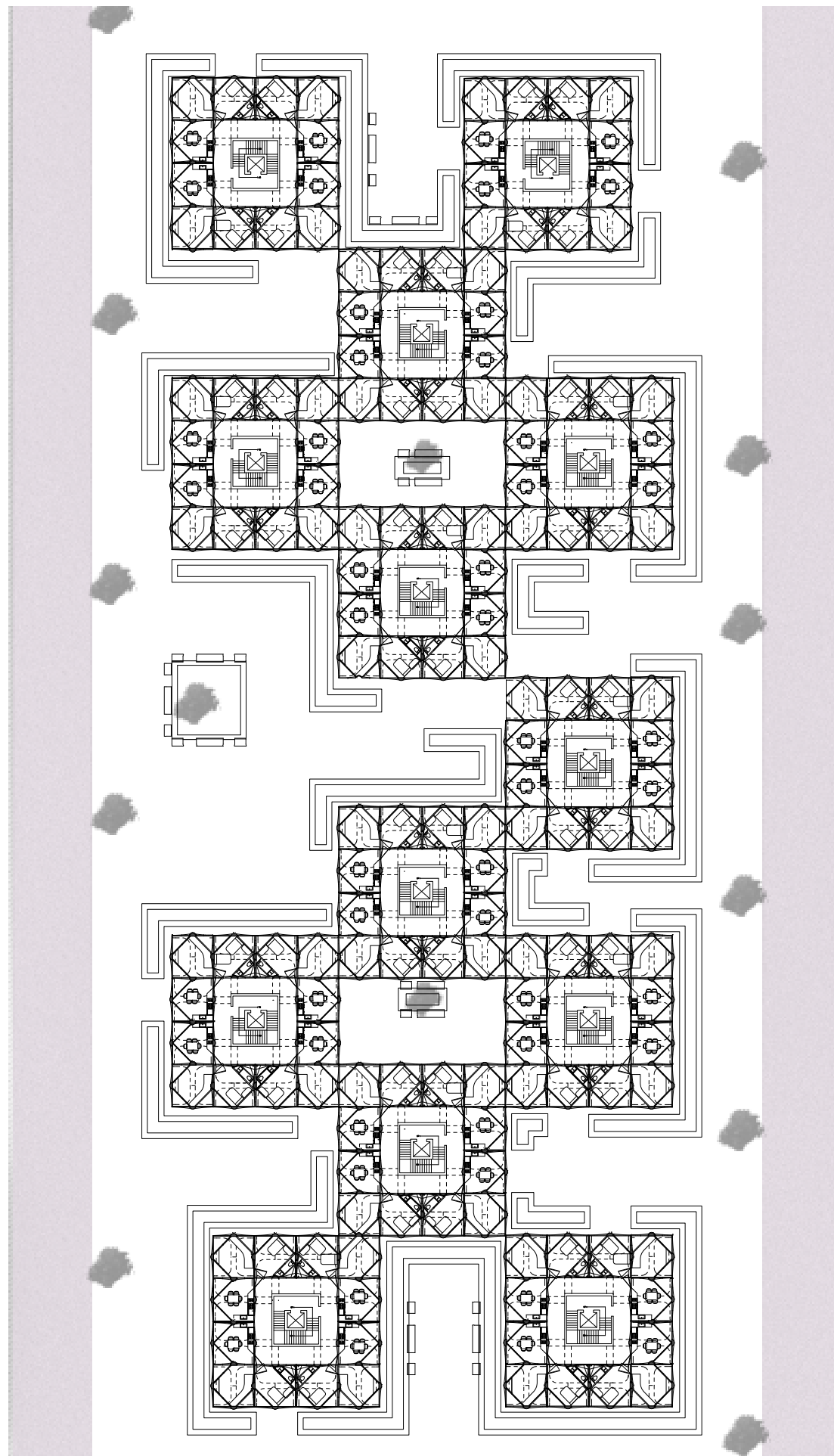
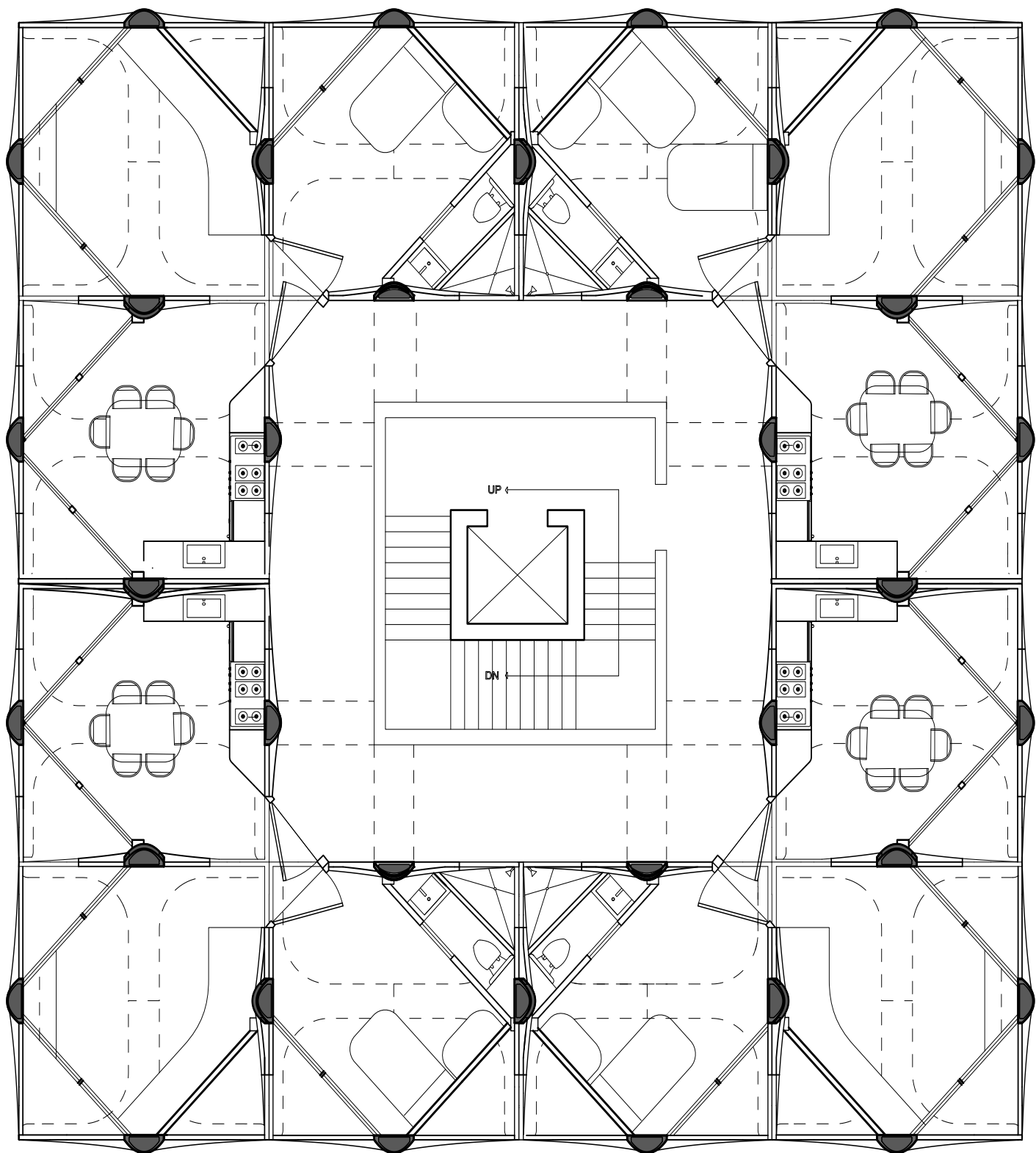
This project is a modular housing influenced by research done on stellate cells that exist in plants, based on what I learned from a book called *Growth and Form* by Darcy Thompson. I was interested in how the cells aggregate in 3 dimensional space as dodecahedron, and want to create a modular unit that gets its structural strength by forming an enclosed structure out of folded continuous surfaces.

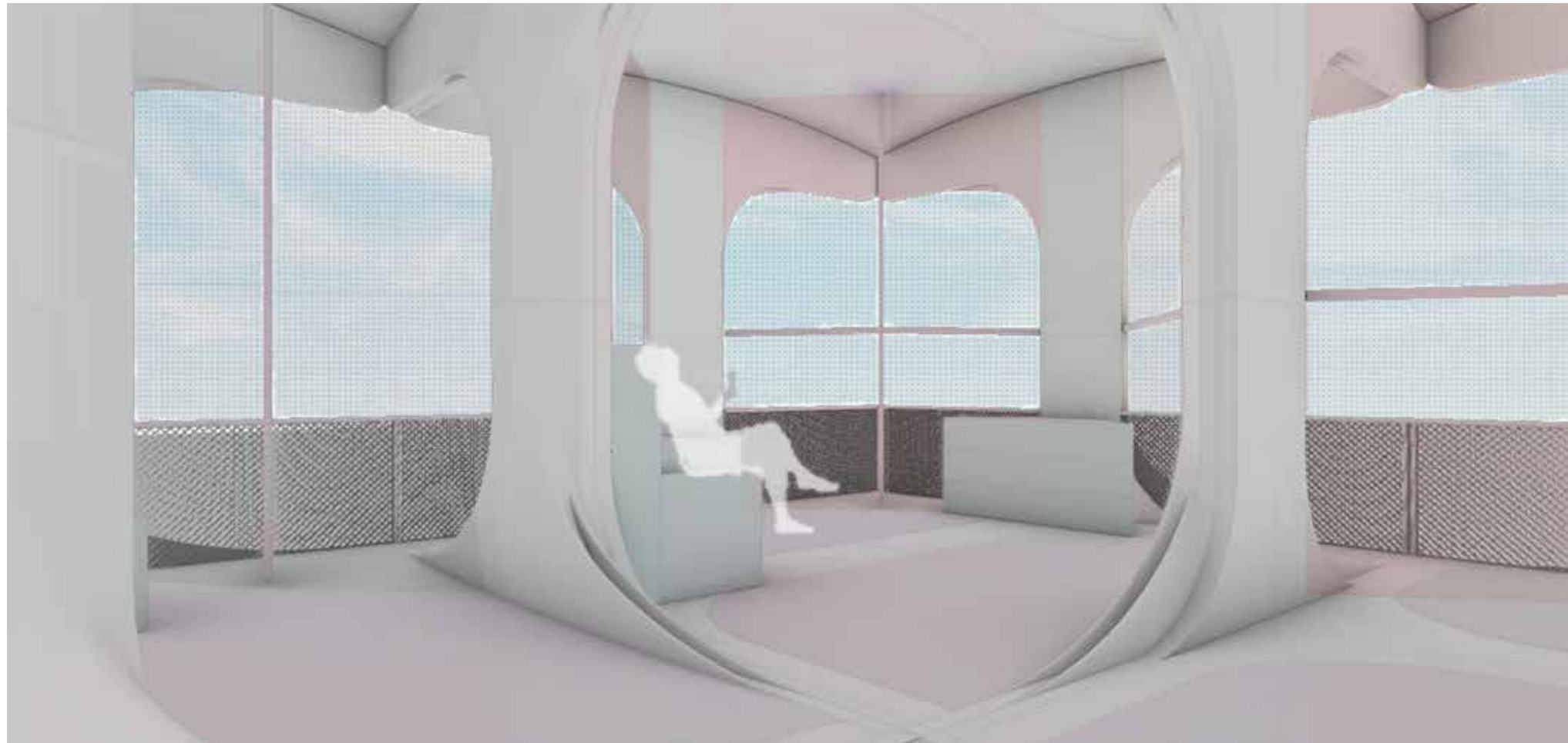








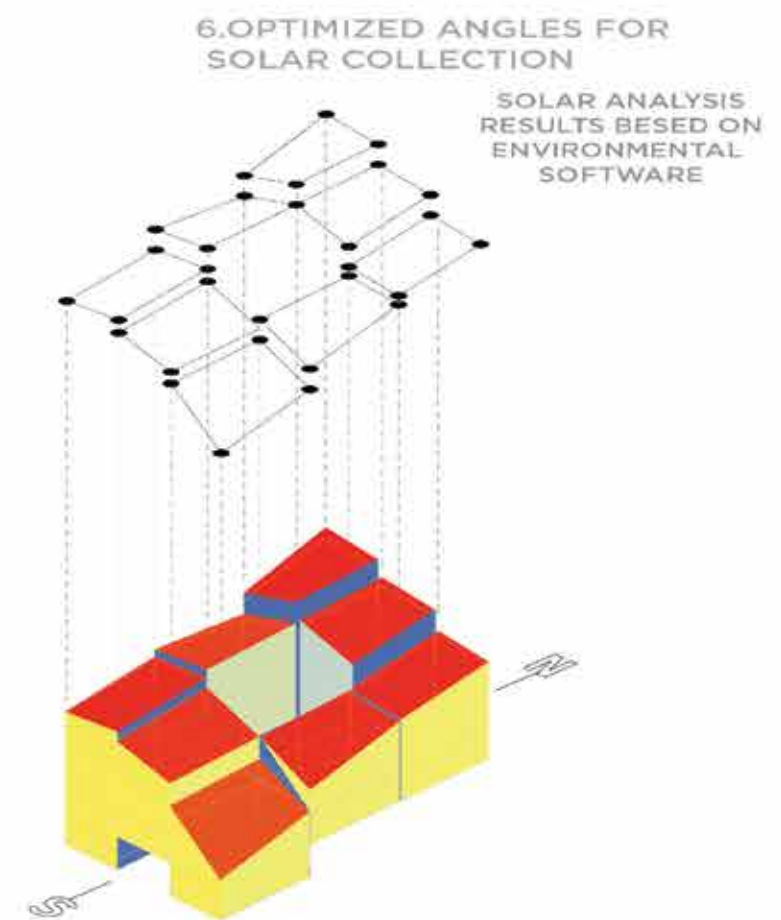
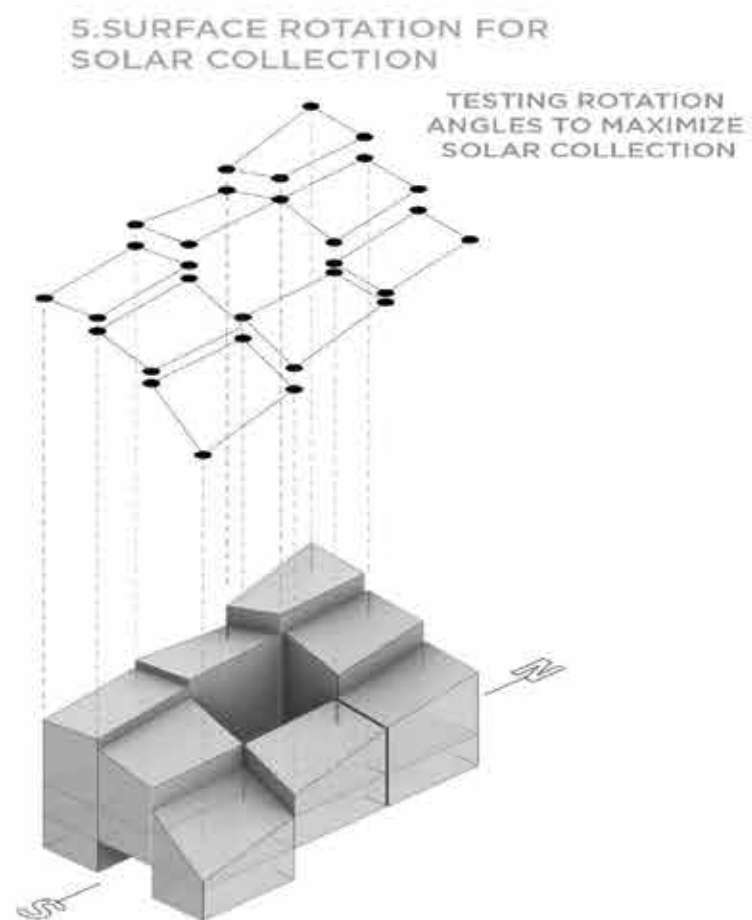
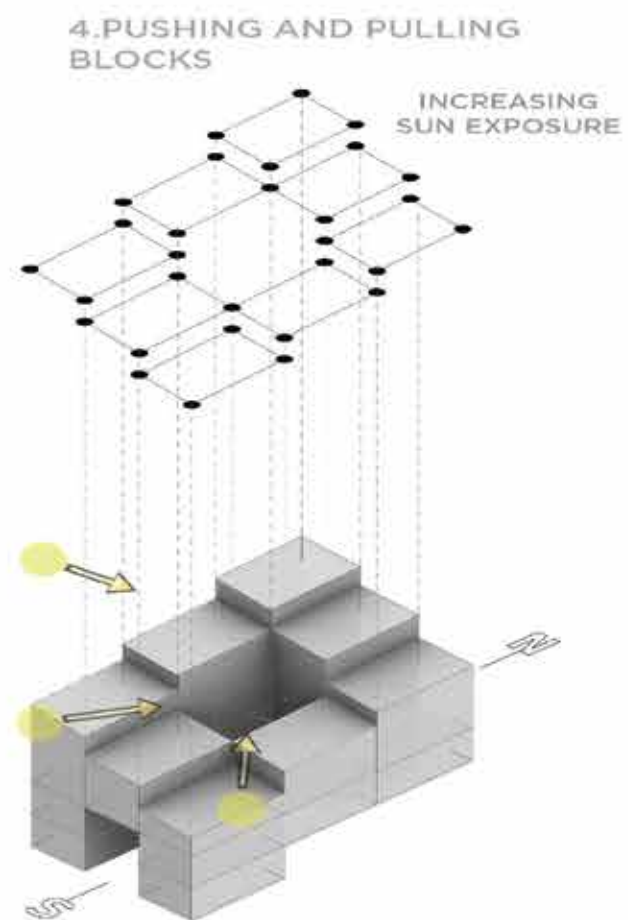
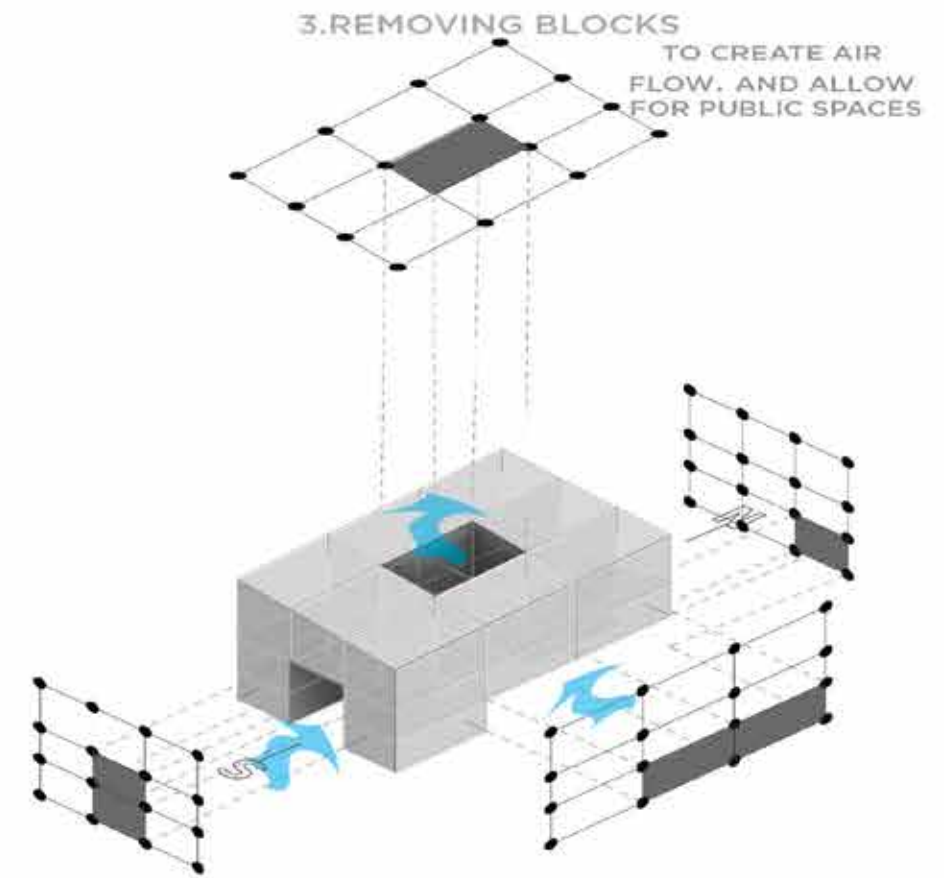
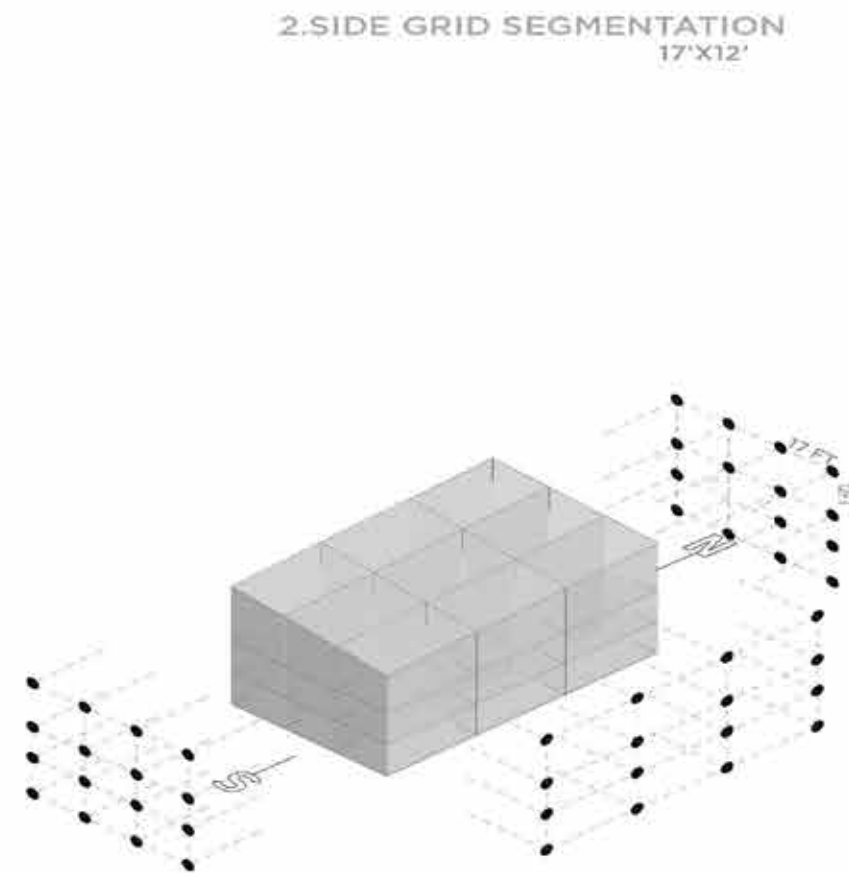
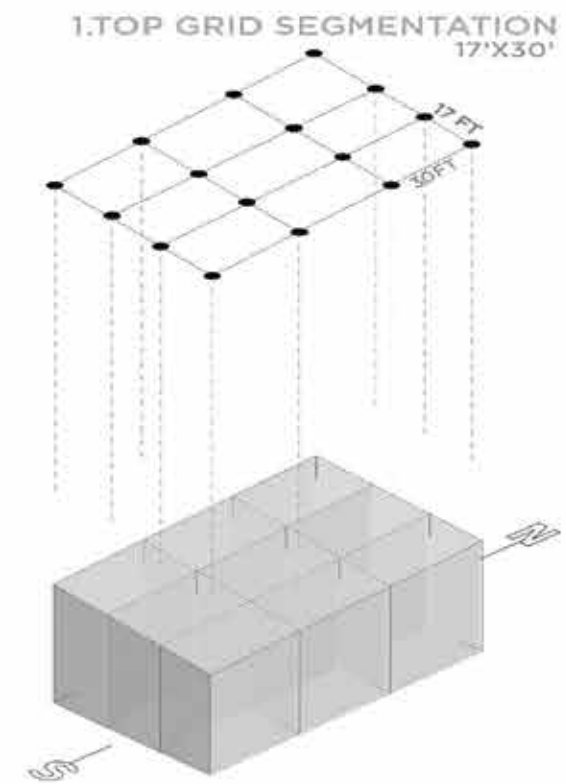


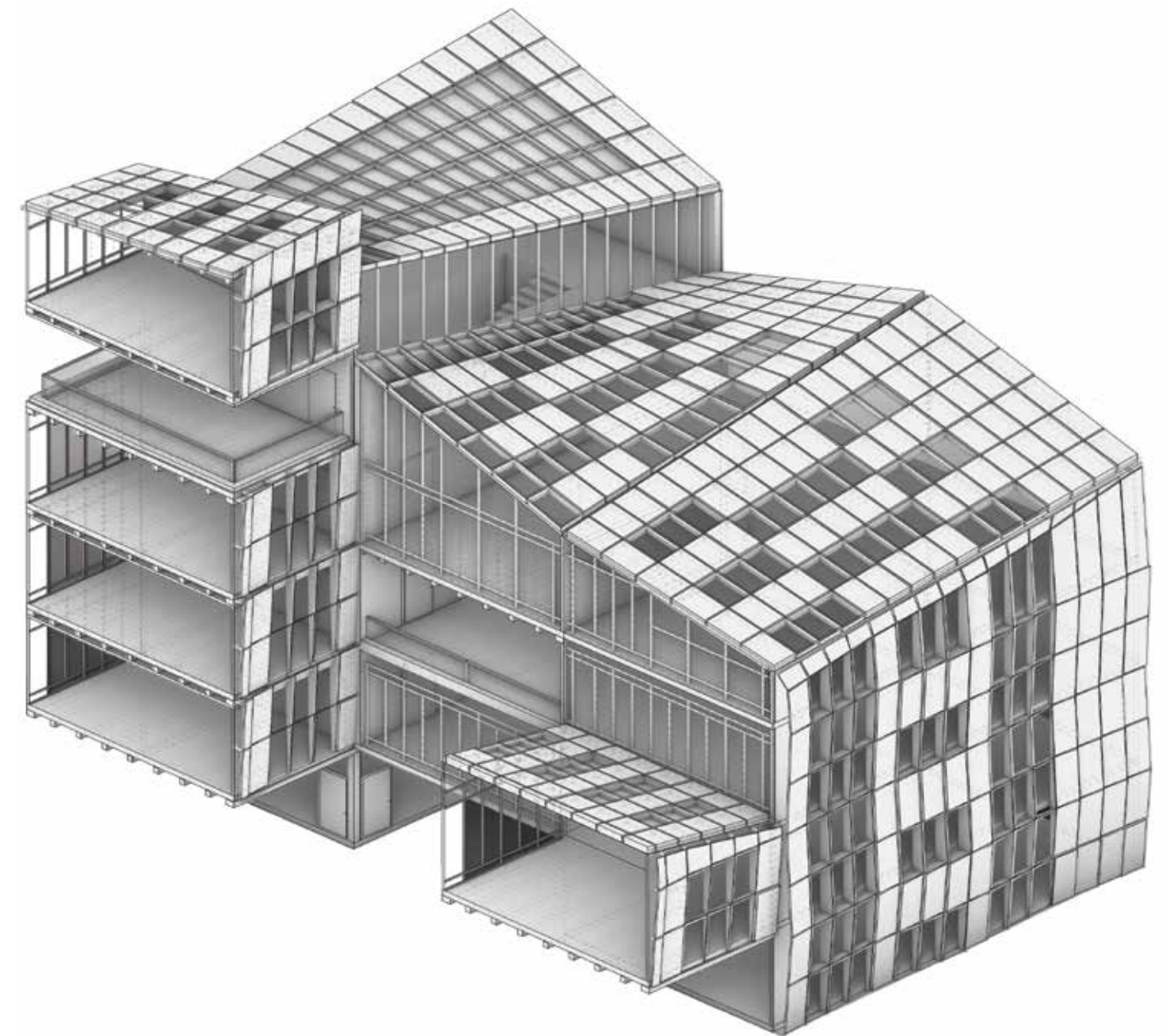
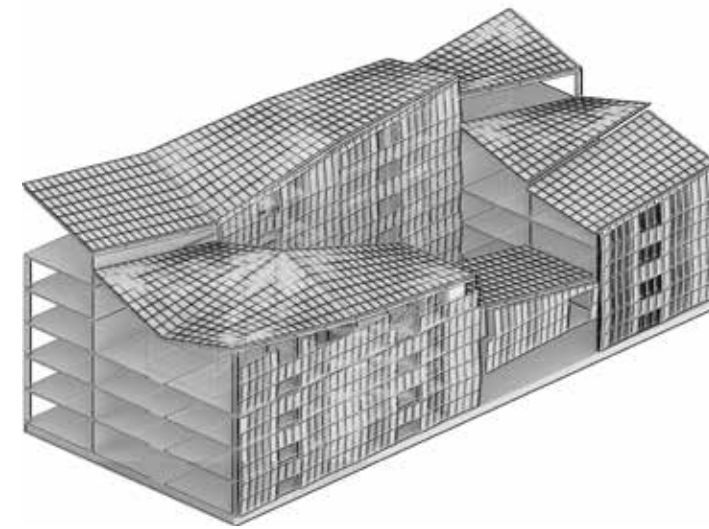
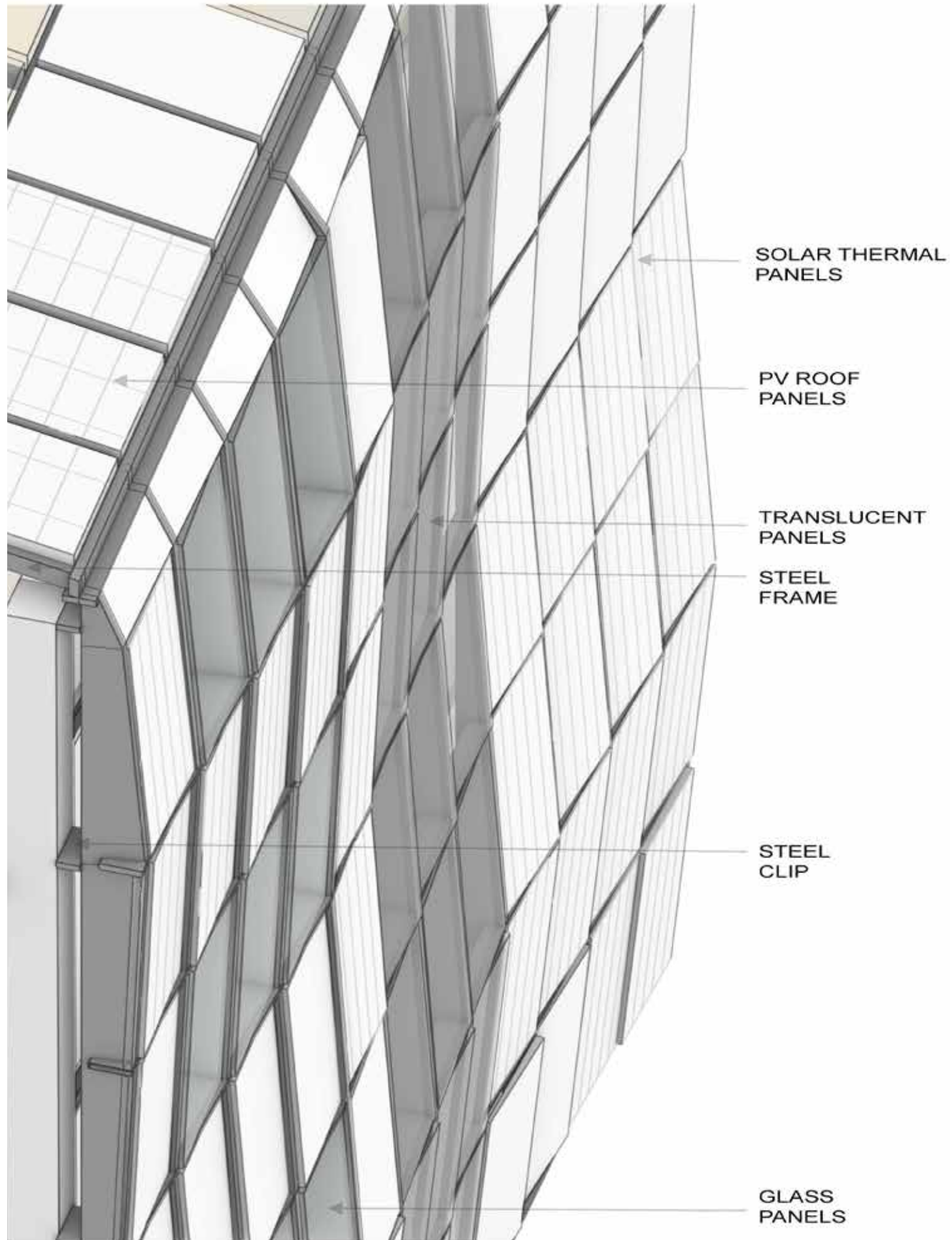




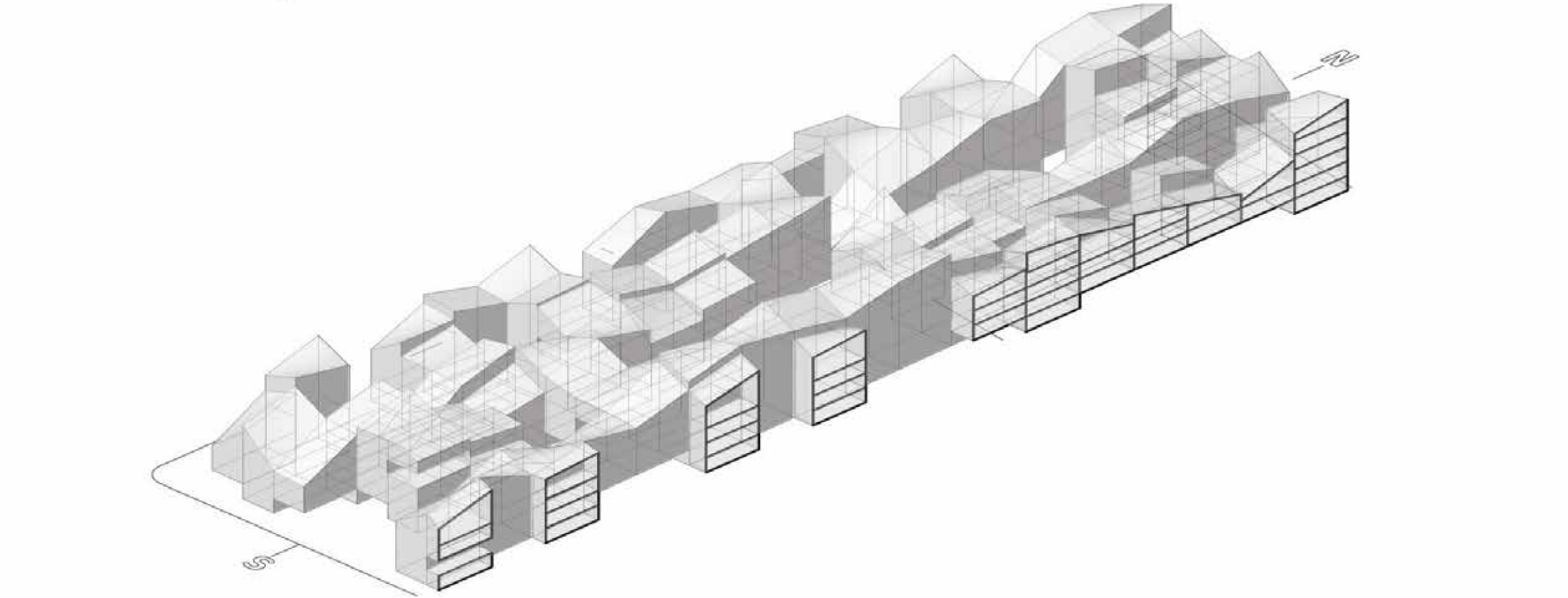
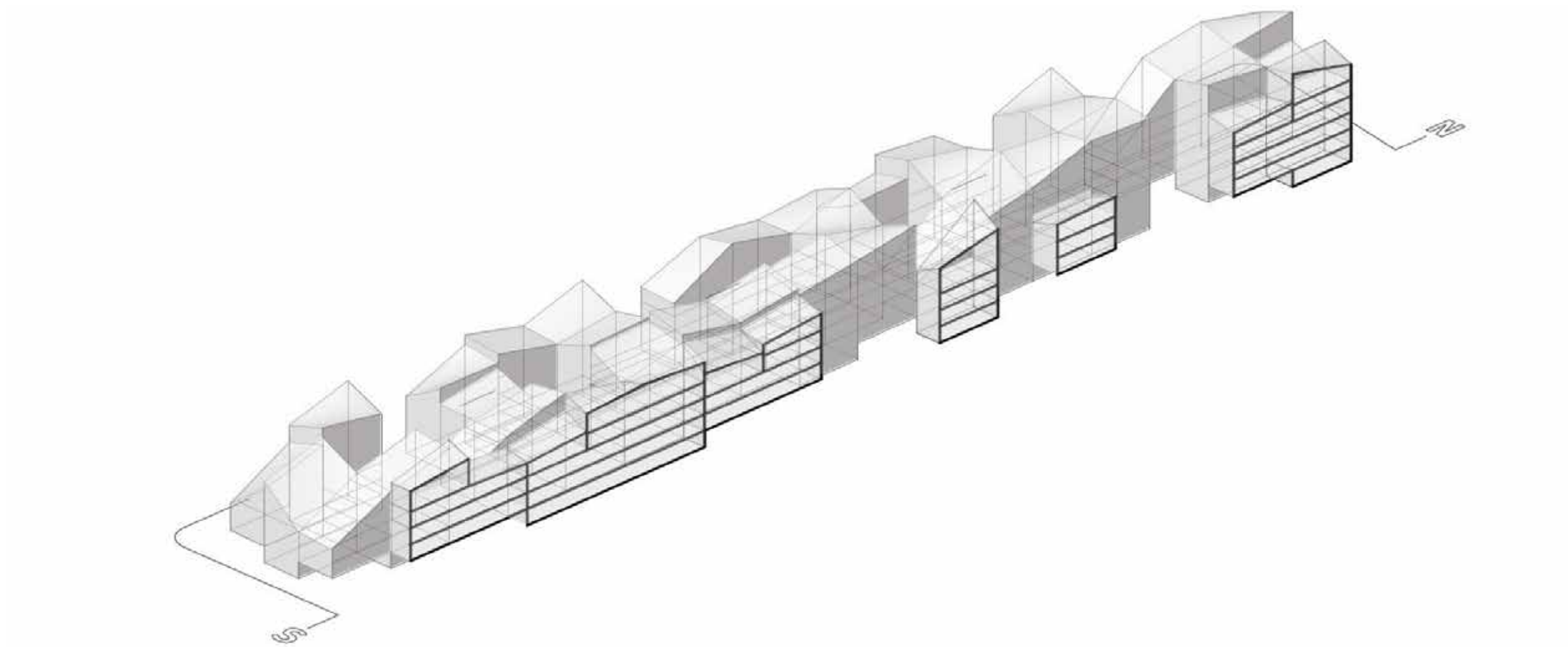
PROJECT.2 - HOUSING BLOCK

- LOCATION: Brooklyn, NY
- PROGRAM: Housing Block
- CHALLENGE: Providing maximum amount of housing units to achieve maximum solar collection, heat gain control, and passive cooling strategies.
- DESIGN STRATEGIES: Creating a system of rectangular grid using three main operations to achieve the design and environmental requirements.
 1. Pushing and pulling points on the grid intersection points to allow visibility and light exposure
 2. Carving out some areas to open up courtyards and wind tunnels to allow for passive cooling, at the same time creating public areas.
 3. Using environmental simulation programs (ladybug), allowed me to determine the angles in which the roof of each module should be rotated on, to maximize solar collection.



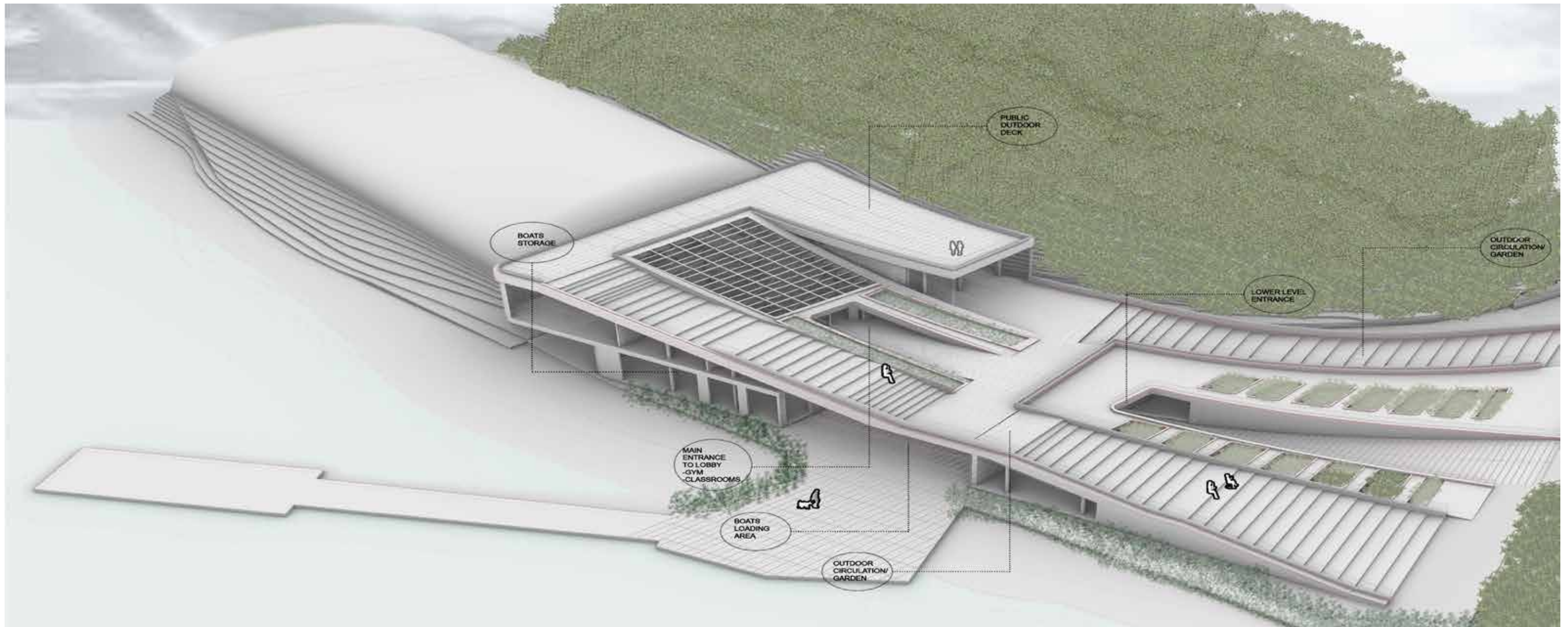


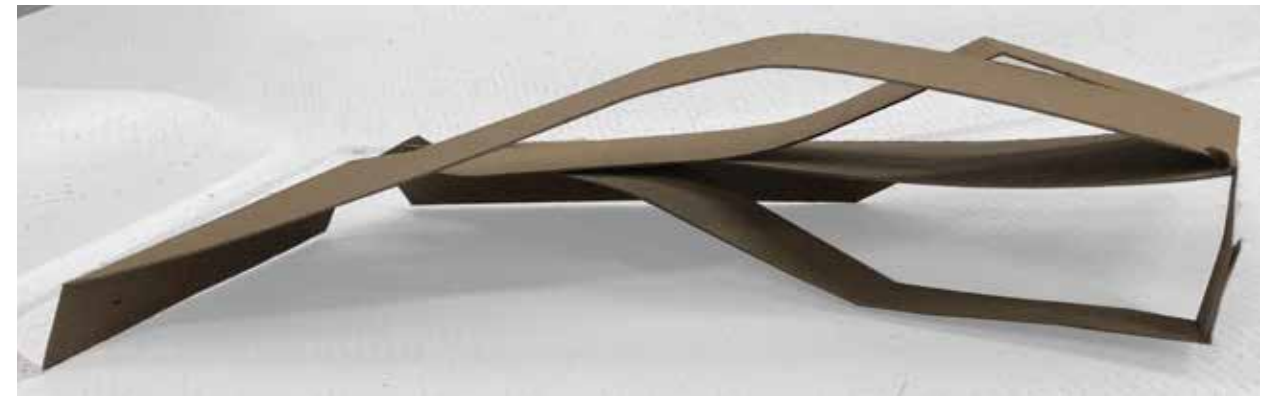
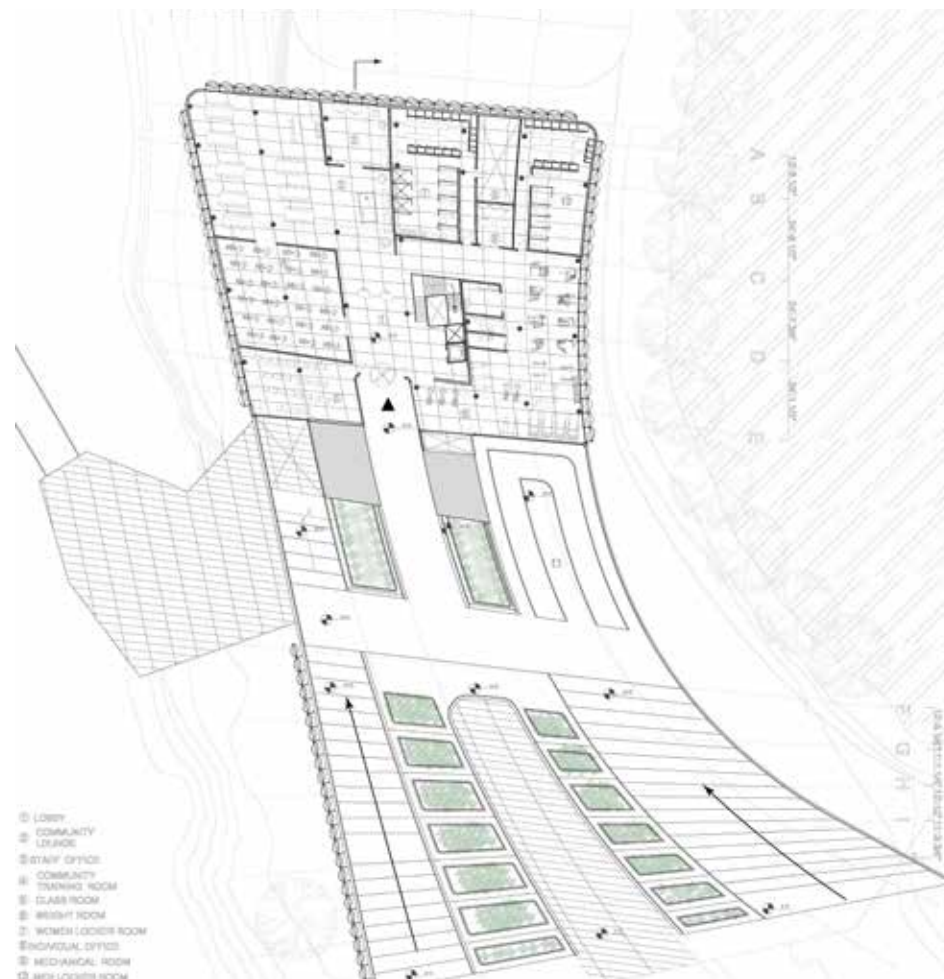


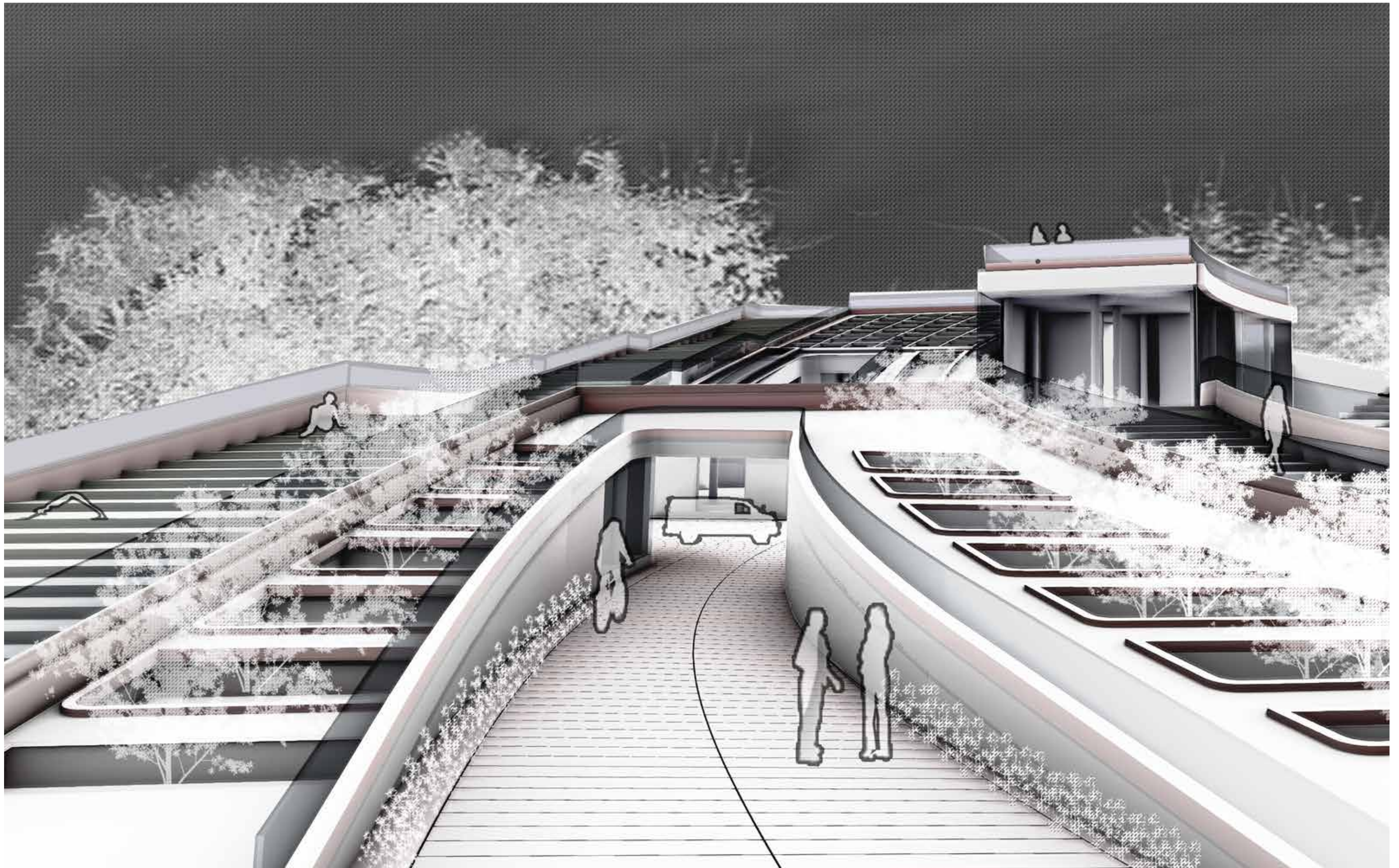


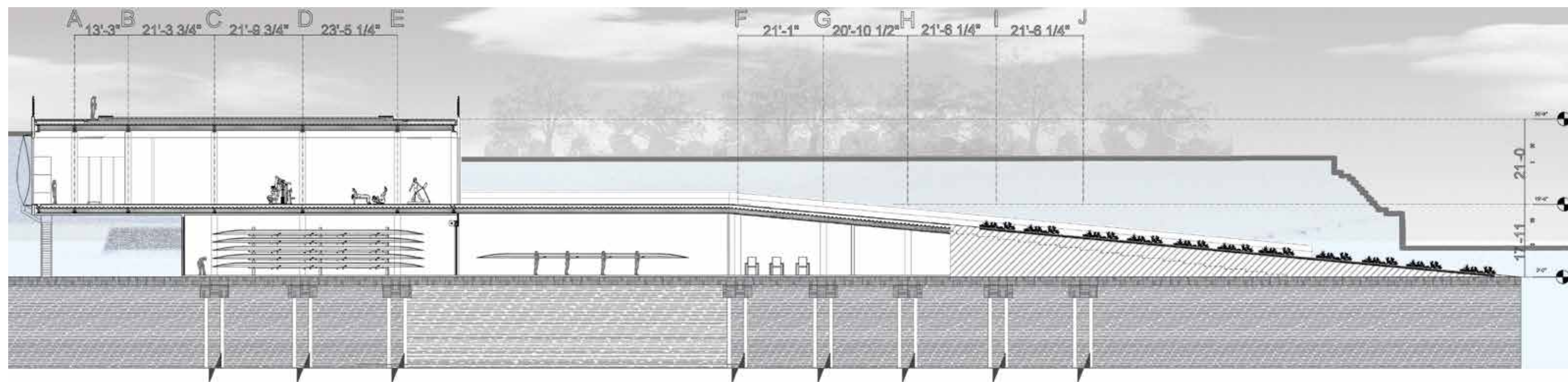
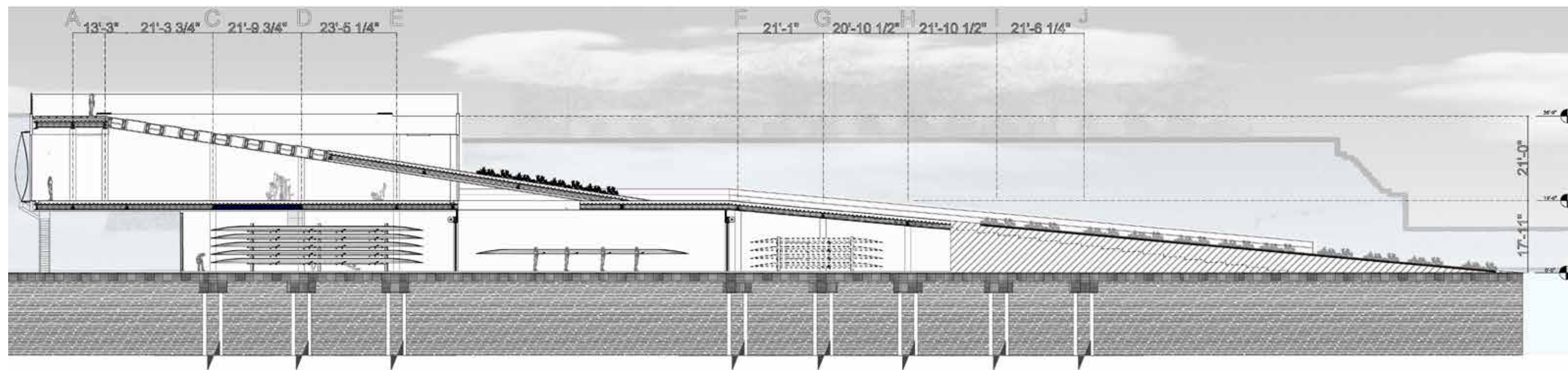
PROJECT.3 - BOATHOUSE

- LOCATION: Inwood, NY
- PROGRAM: Columbia University Rowing Boathouse
- CONCEPT: Creating a continuous surface that becomes a roof garden, observation deck, and an outdoor circulation path, it holds the entire program underneath, bridges the boat storage areas below allowing for enough space for the boat to be transported in and out of the boat storage, and creates an outdoor park below.





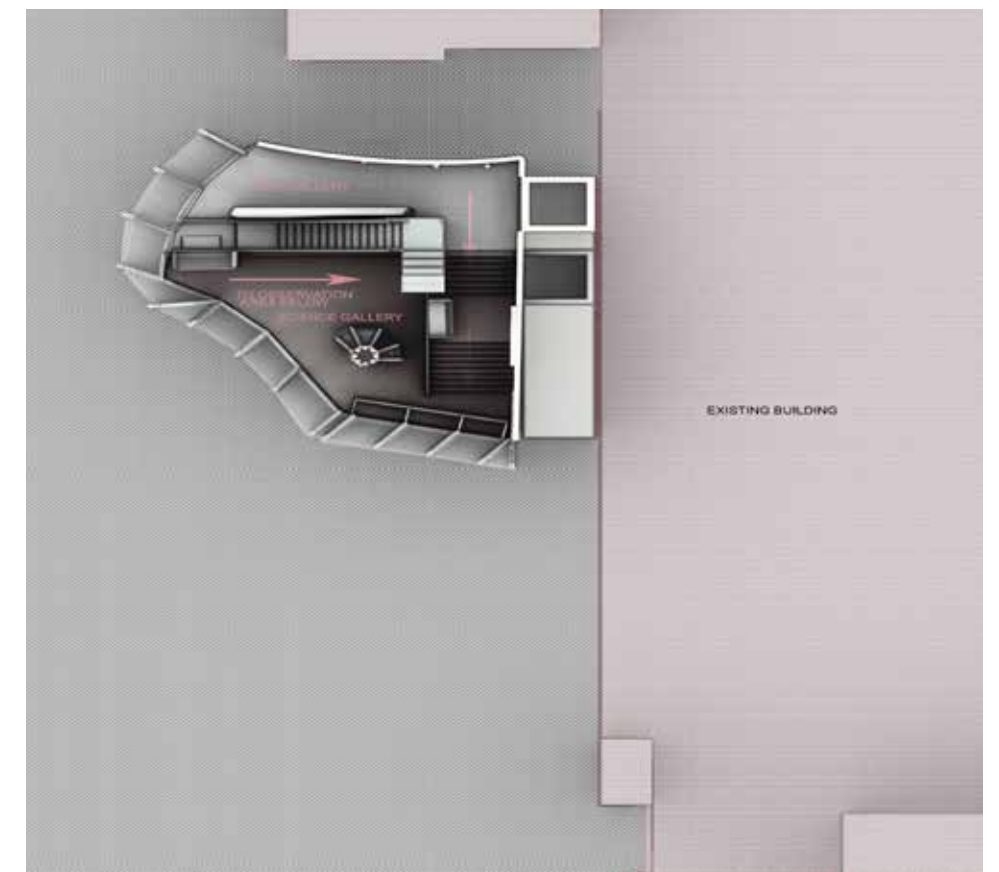
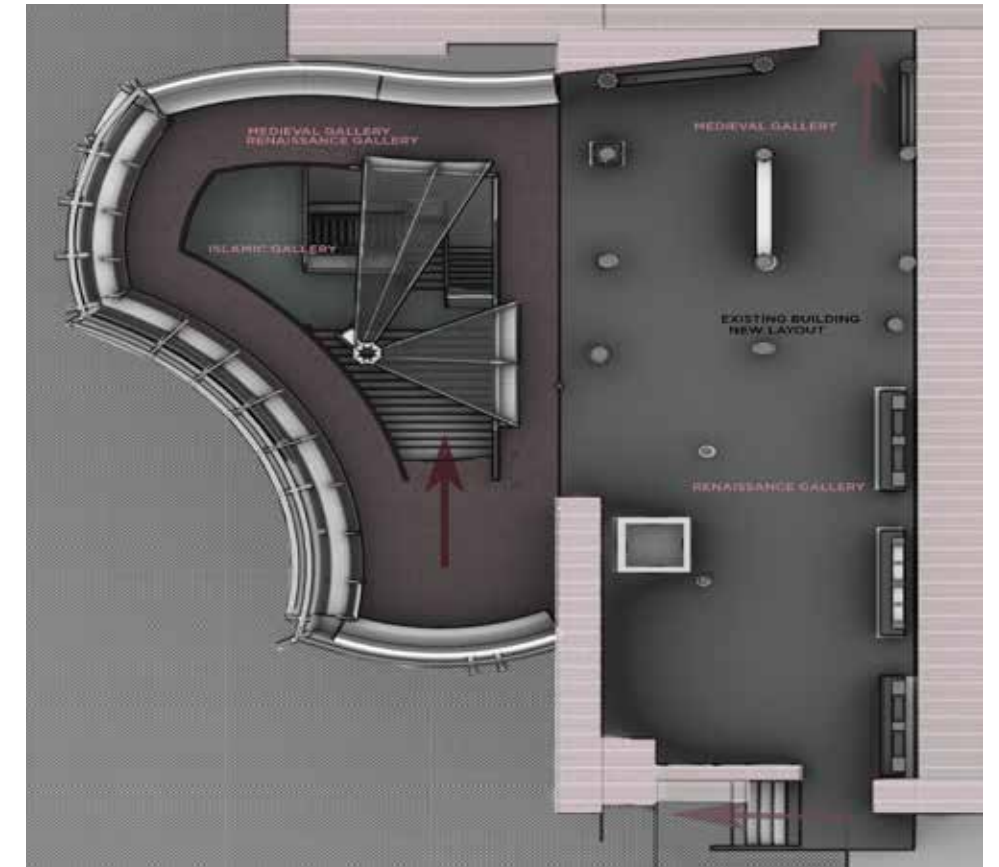


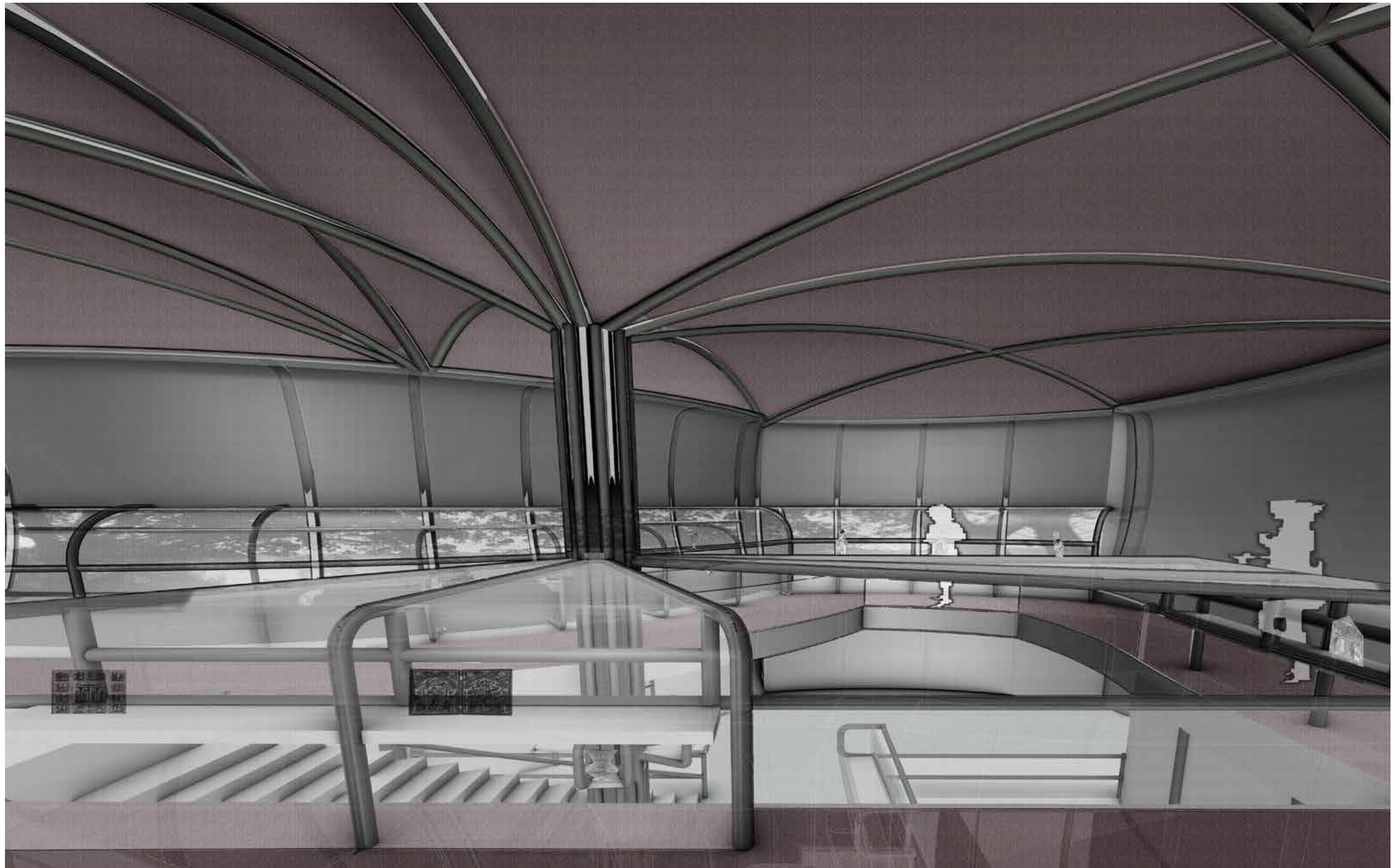




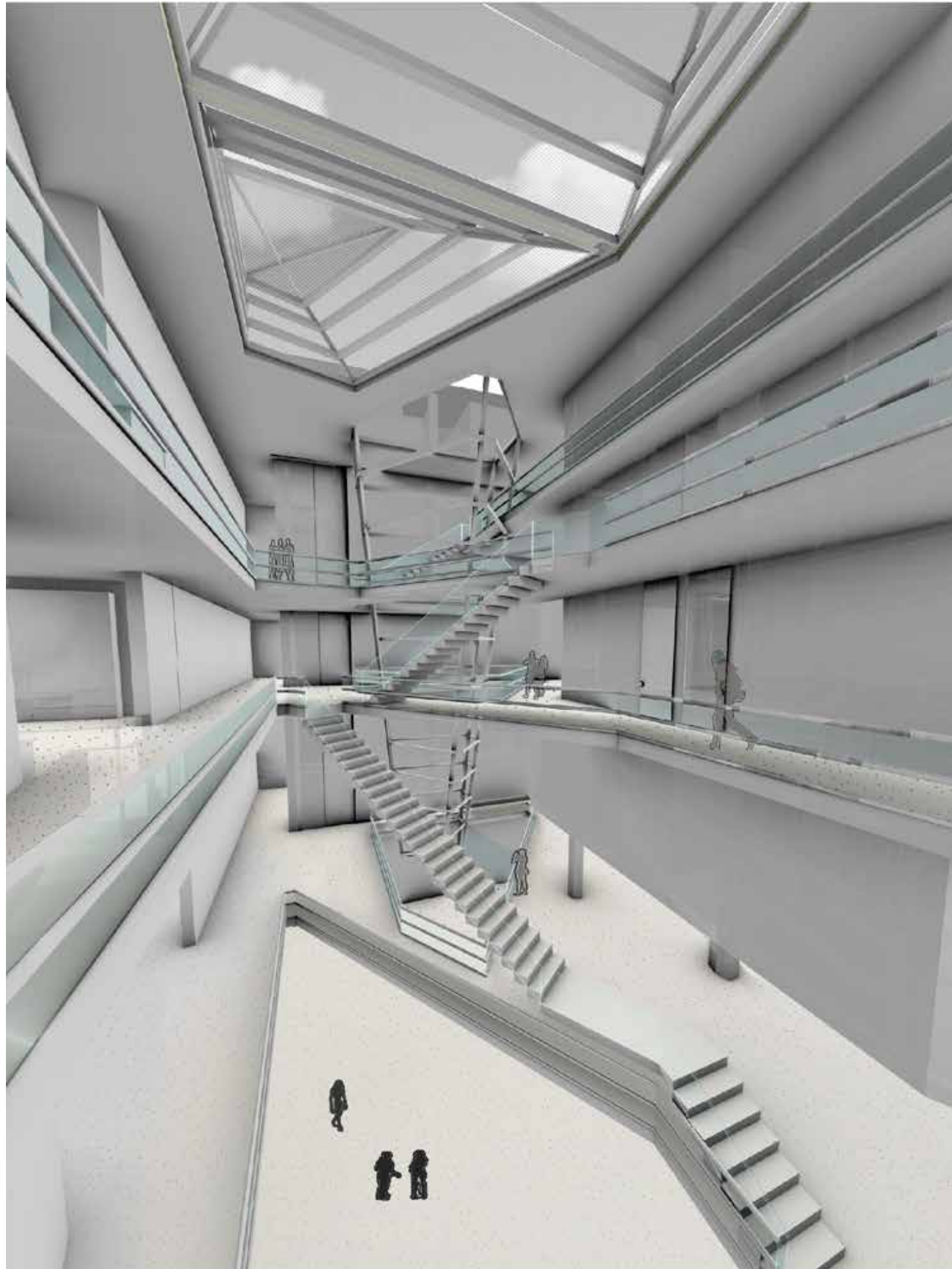
PROJECT.4 - CLOISTERS MUSEUM EXTENSION

- LOCATION: Washington Heights, NY
- PROGRAM: Extension For Cloisters Museum
- FORMAL STRATEGIES:
Taking the structural principles of the existing medieval arches and vaults of the cloisters museum and changing it's form to become the curatorial language on the interior and structural system on the exterior.
- CURATORIAL CONCEPT:
The structural system is a tool to arrange the artifacts across the different galleries, so it transfers information vertically between the galleries to tell the story of medieval period through careful placement of the artifact across the galleries.









PROJECT.4 - DORMITORY

Location: Brooklyn, NY

PROGRAM: ST. Francis University Dormitory

The challenge is to analyze an image of choice and extract qualities that can aid the design and the organization of the dormitory. I chose a tomato, sliced it and looked at what is inside it, and studied what each part of this fruit is responsible for. The analysis influenced the organization of the program.

-The pericarp is the solid part of the tomato that is directly exposed to the sun, therefore I placed the units on the parameter of the building envelope.

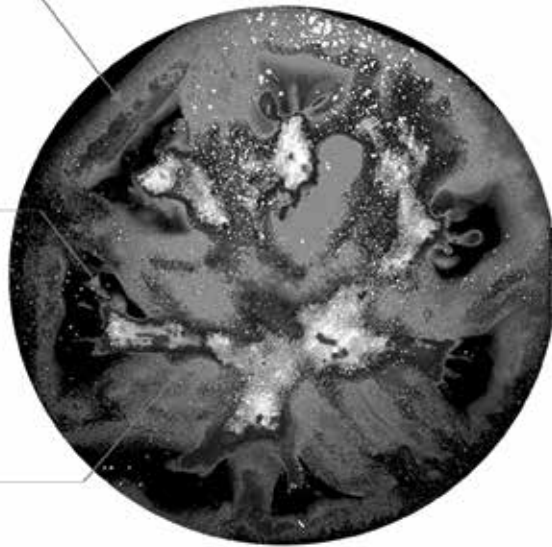
-The Locules are the pockets inside the tomato that holds the fluids and the seeds, therefore the building has atriums that function as vertical circulation and brings light to the corridors and the public spaces in the building, the courtyard brings direct light and ventilation to the units.

-The septa is the solid area that holds the locules pocket, and hallways, when people can engage in social activities and gather in the hallways and around the atriums.

-PERICARP: WHICH WAS
TRANSLATED TO UNITS

-LOCULES: WHICH
WAS TRANSLATED TO
VERTICAL CIRCULATION
AND LIGHT APERTURES.

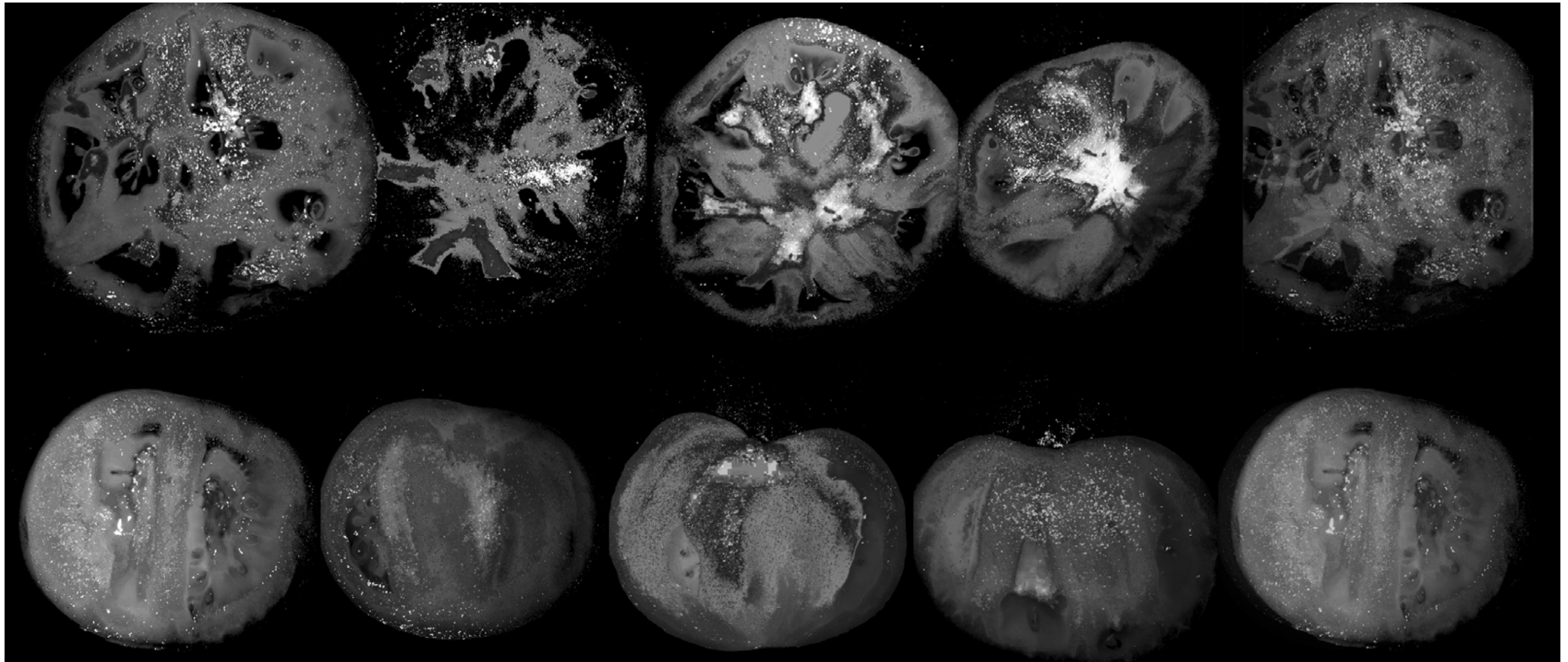
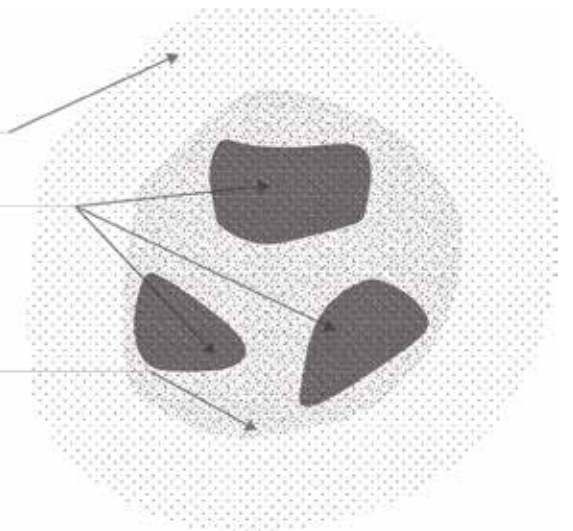
-SEPTA: THE AREA IN
BETWEEN THE LOCULE
WAS TRANSLATED TO
HORIZONTAL CIRCULATIONS
AND PUBLIC SPACES
WITHIN THE BUILDING

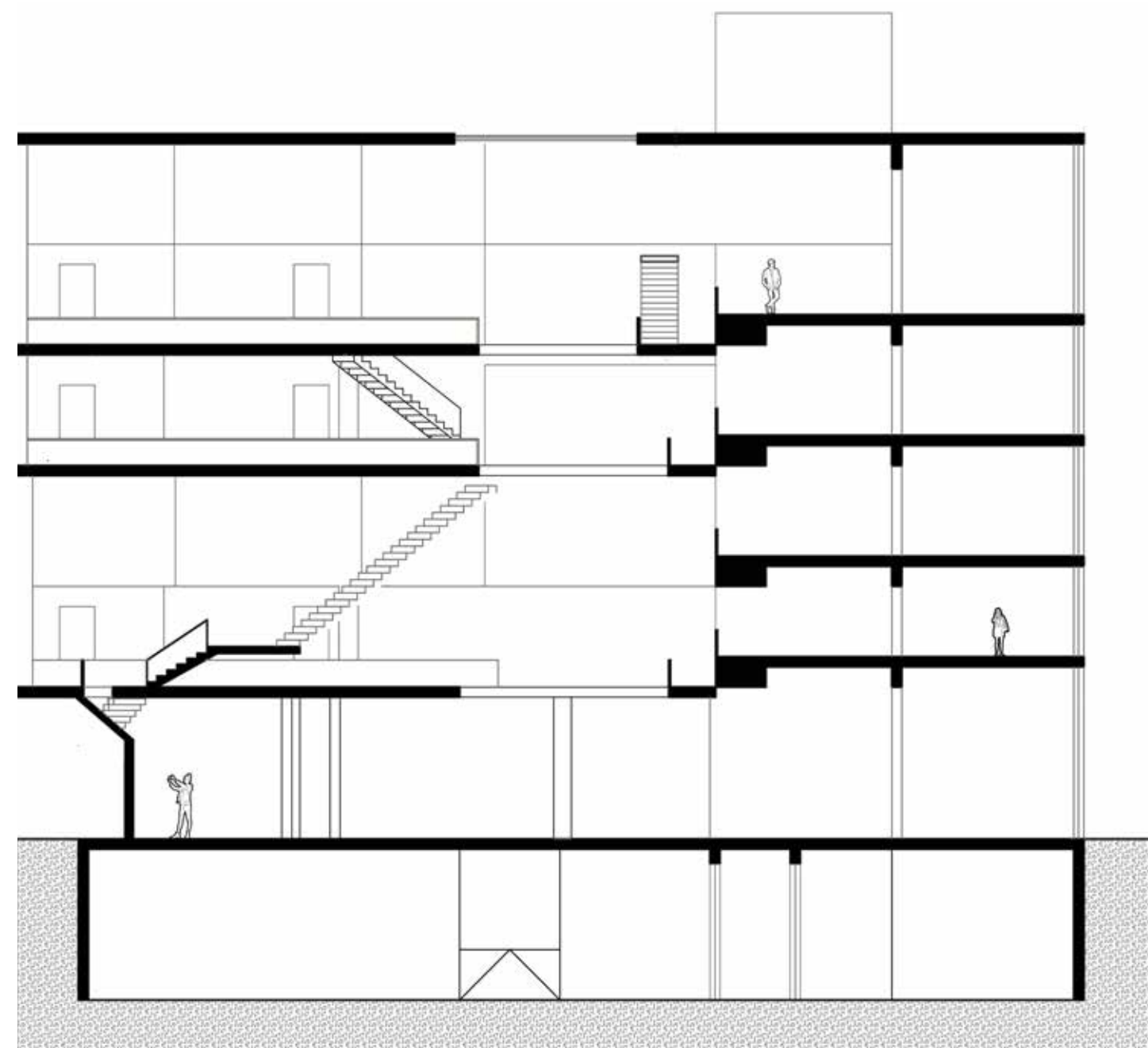
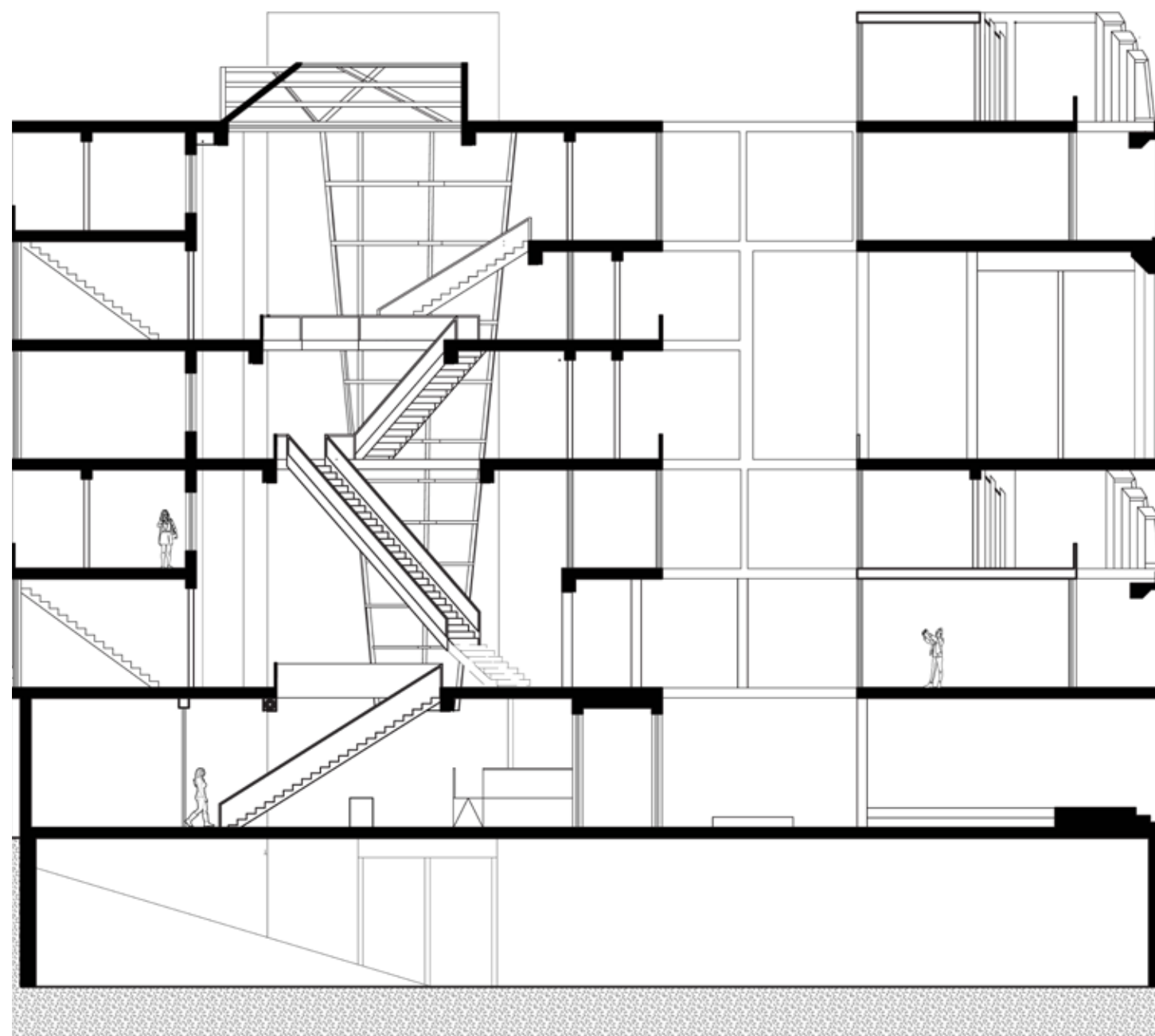


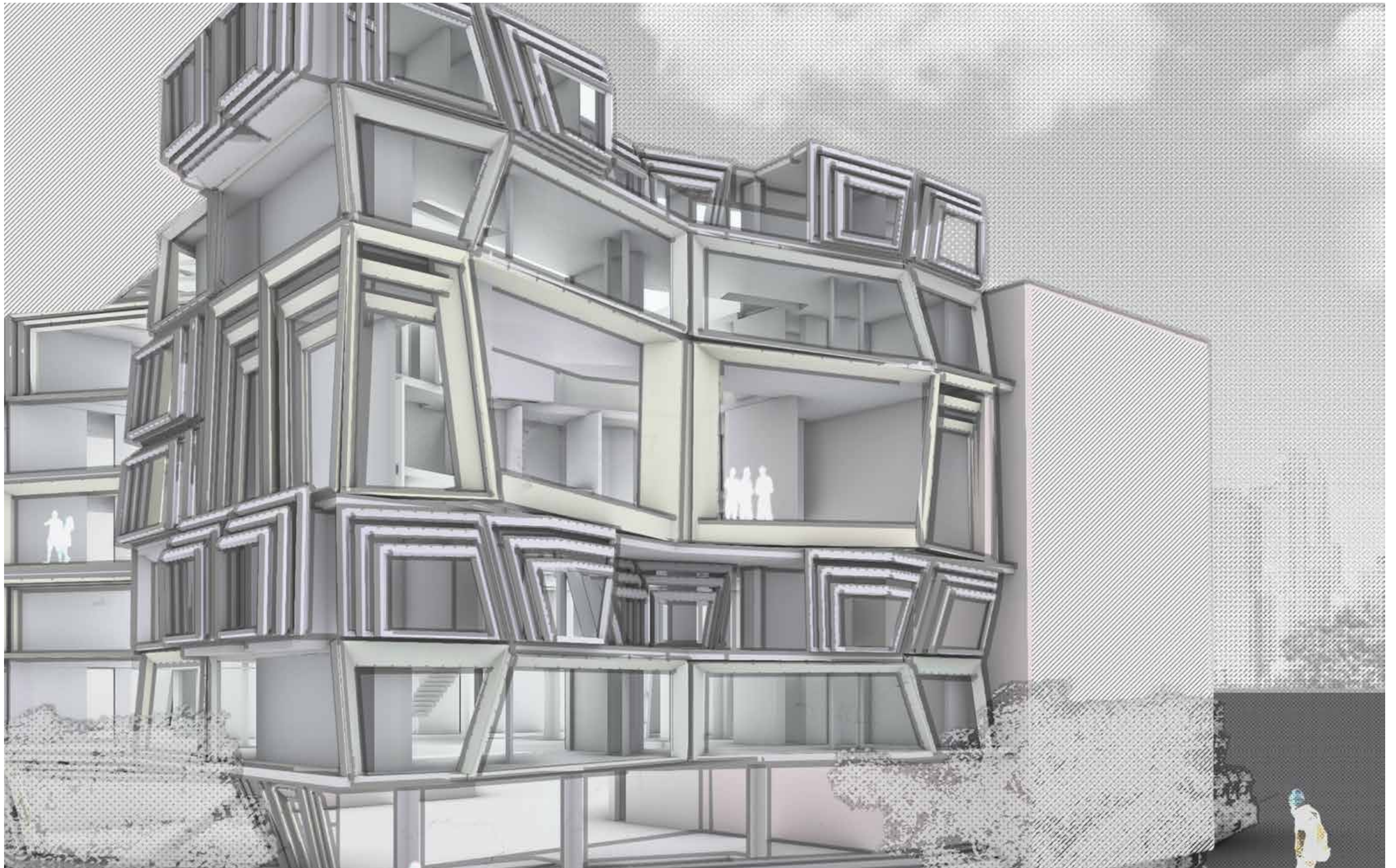
UNITS
LOCATION

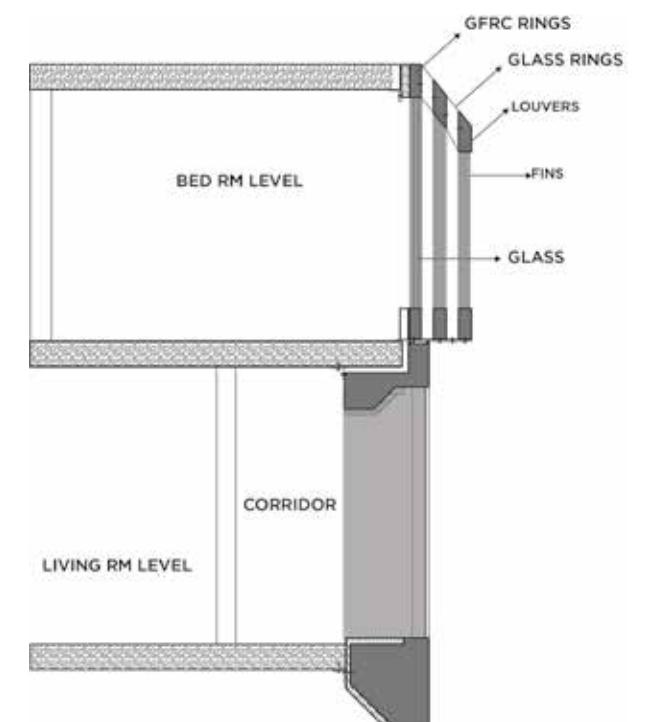
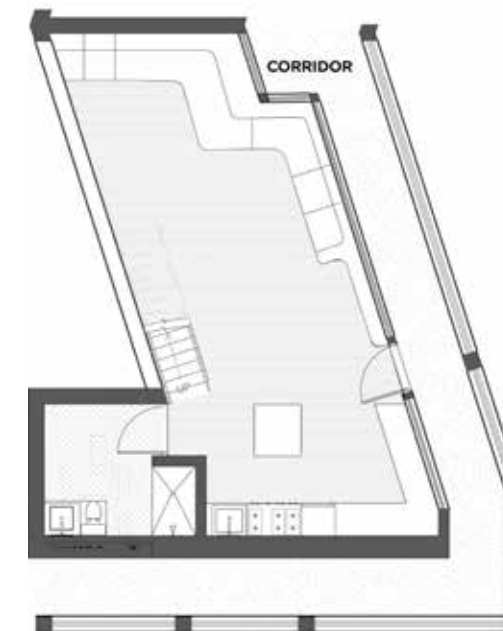
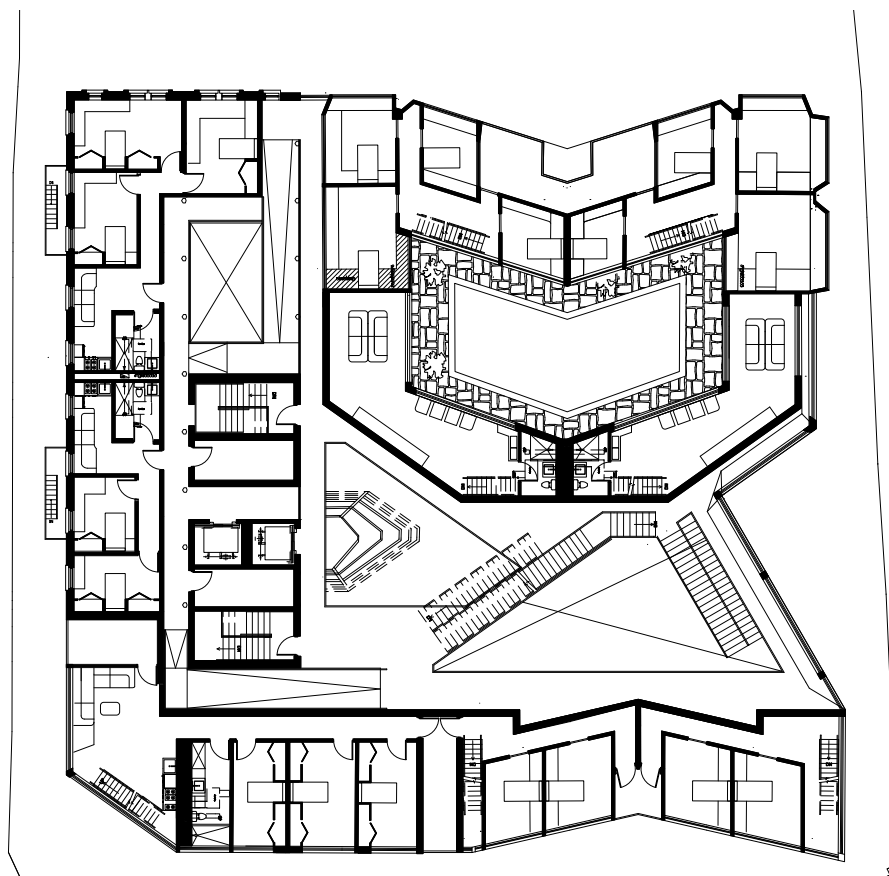
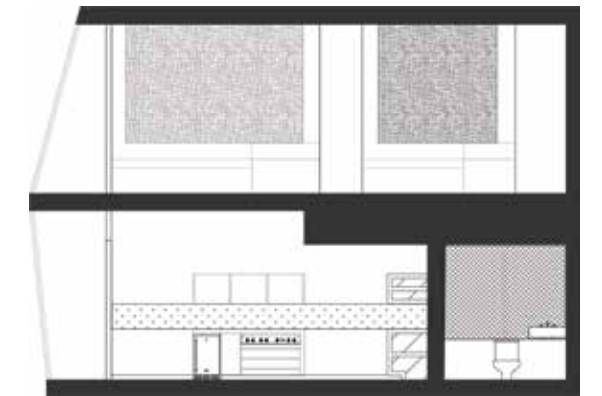
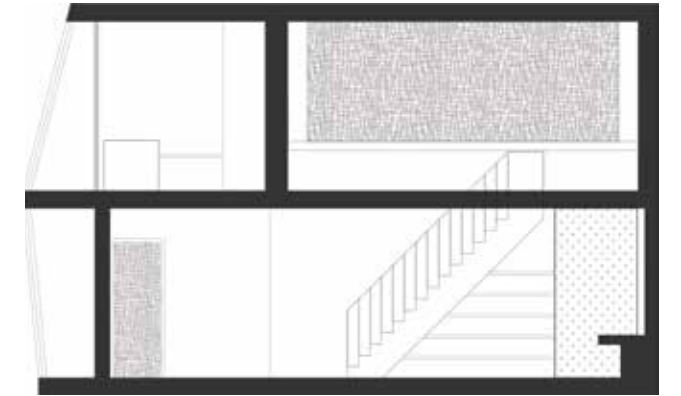
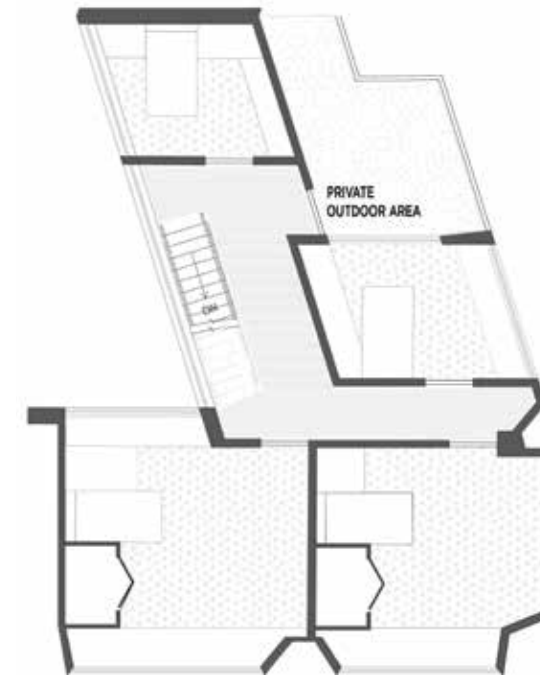
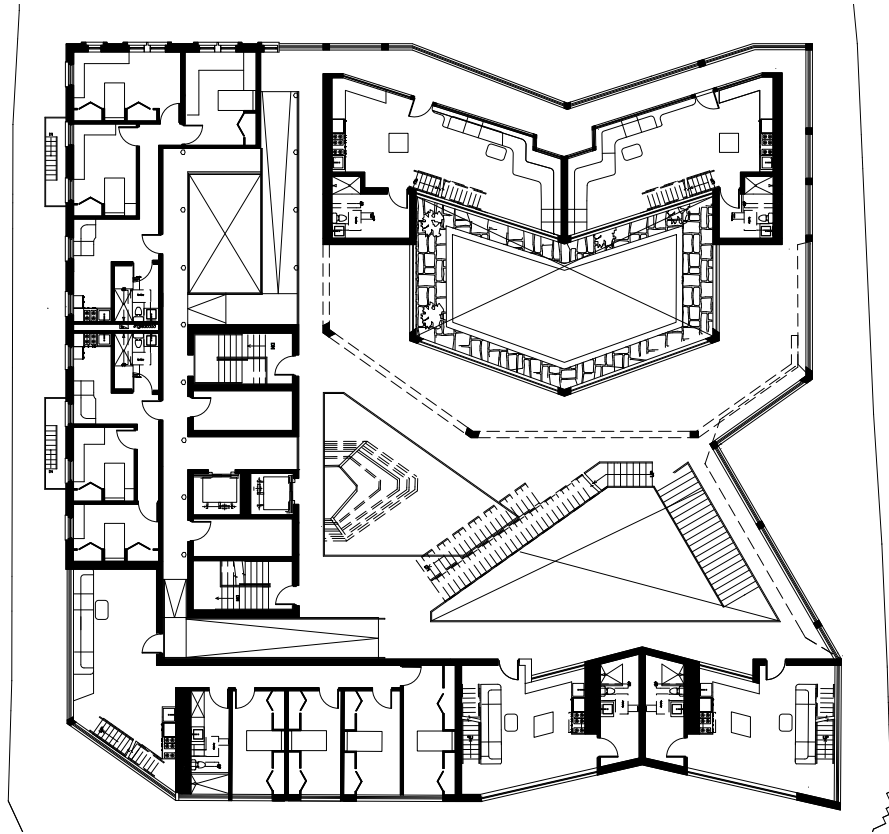
VERTICAL CIRCULATION
ATRIUMS AND
COURTYARD

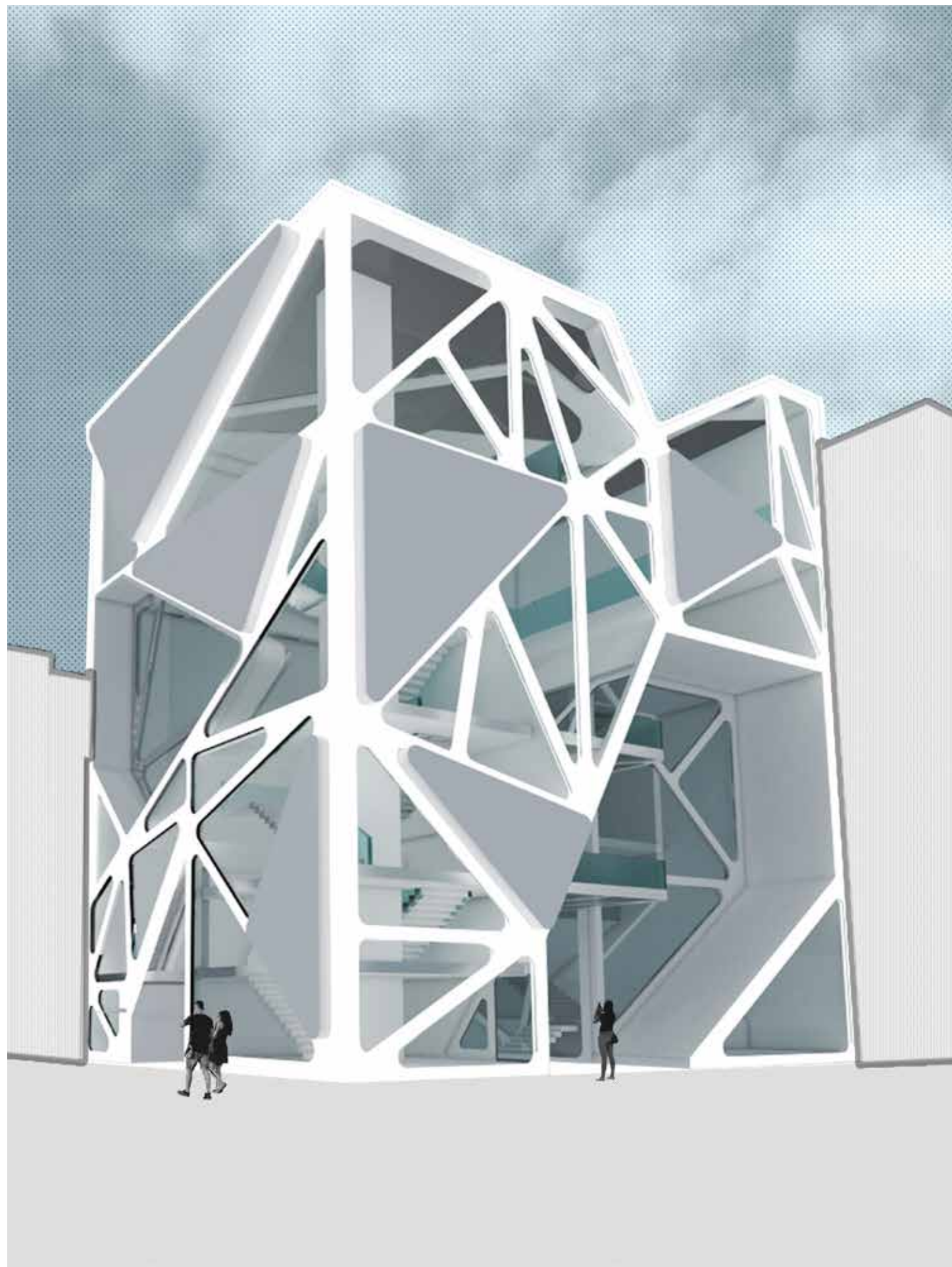
HORIZONTAL CIRCULATION
PUBLIC SPACES
AND CIRCULATION



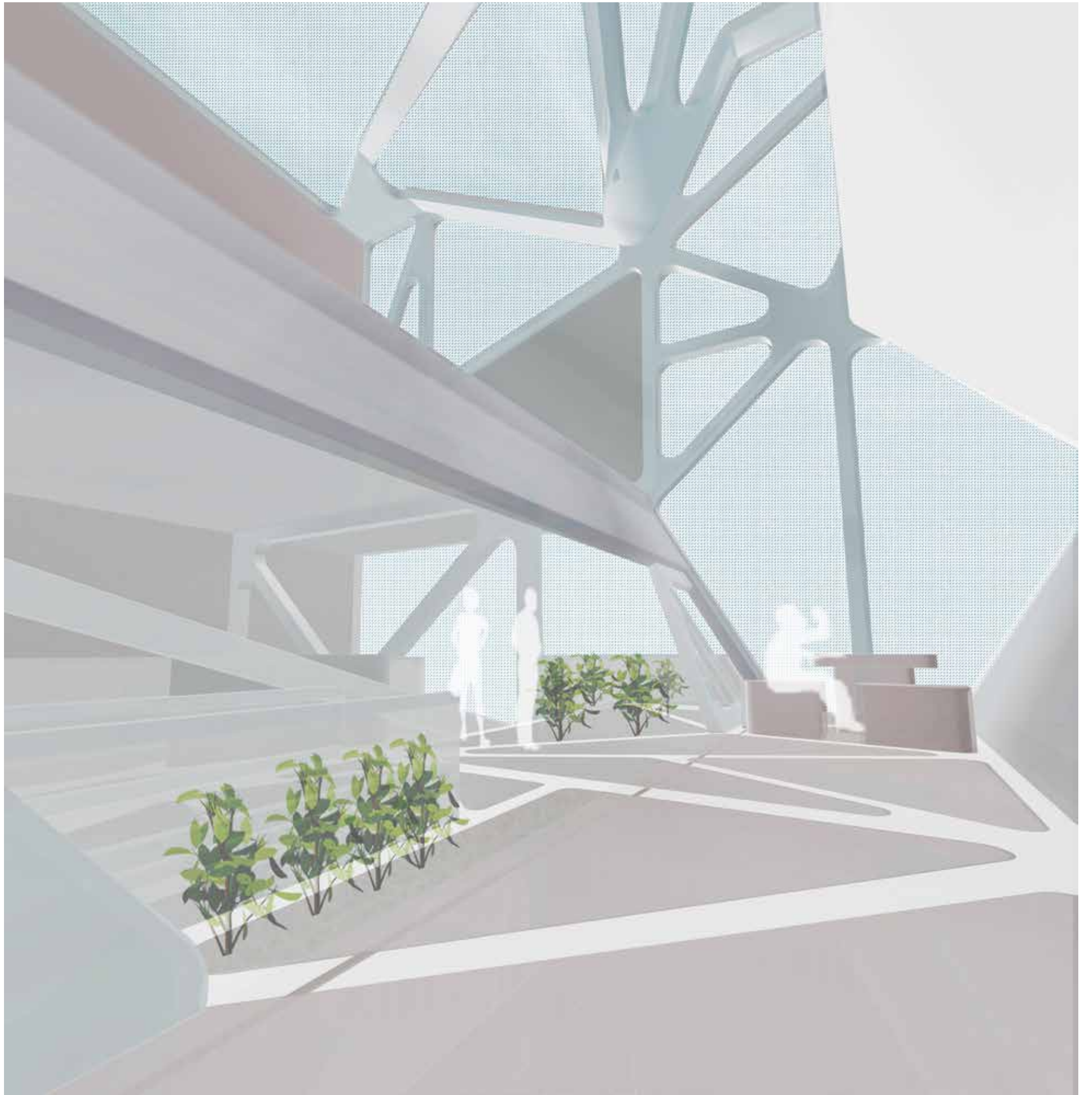
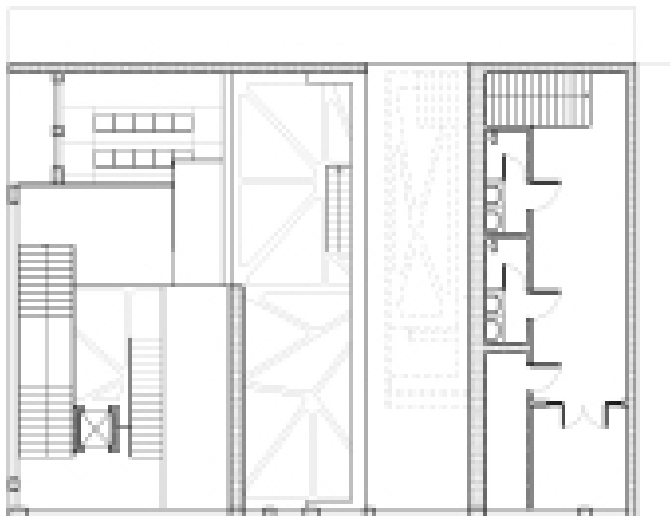
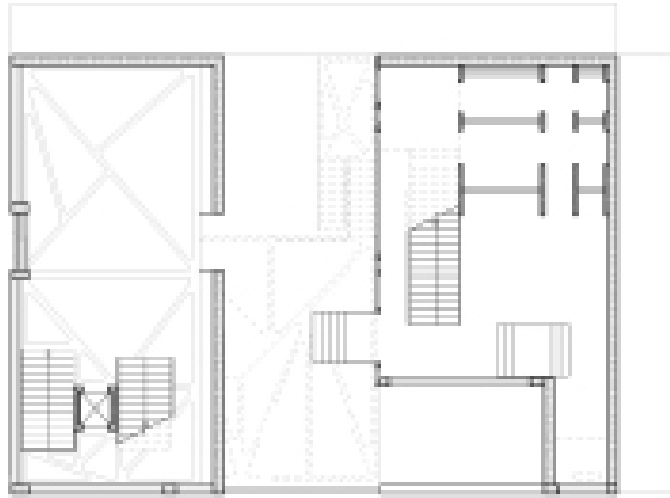


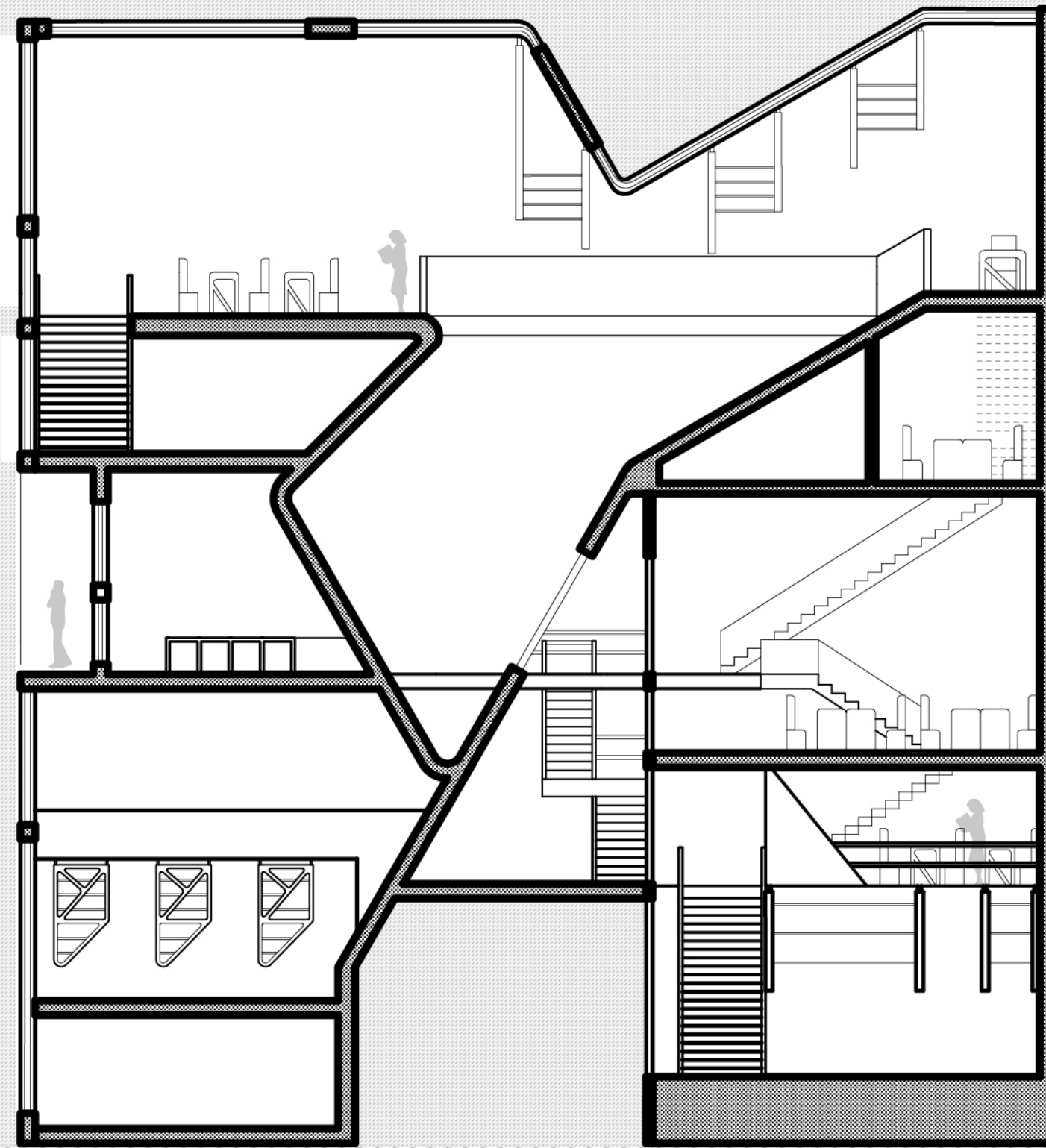
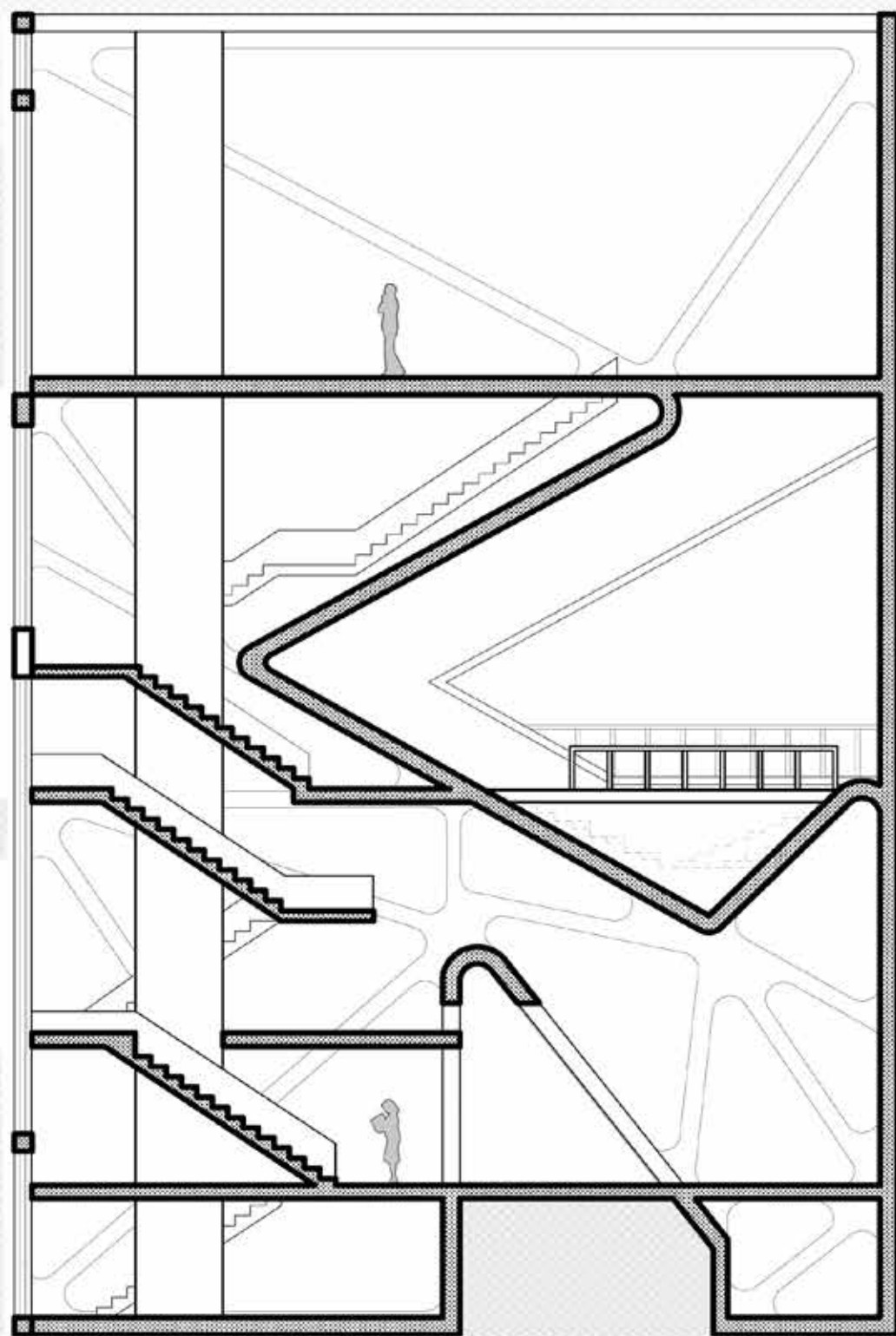






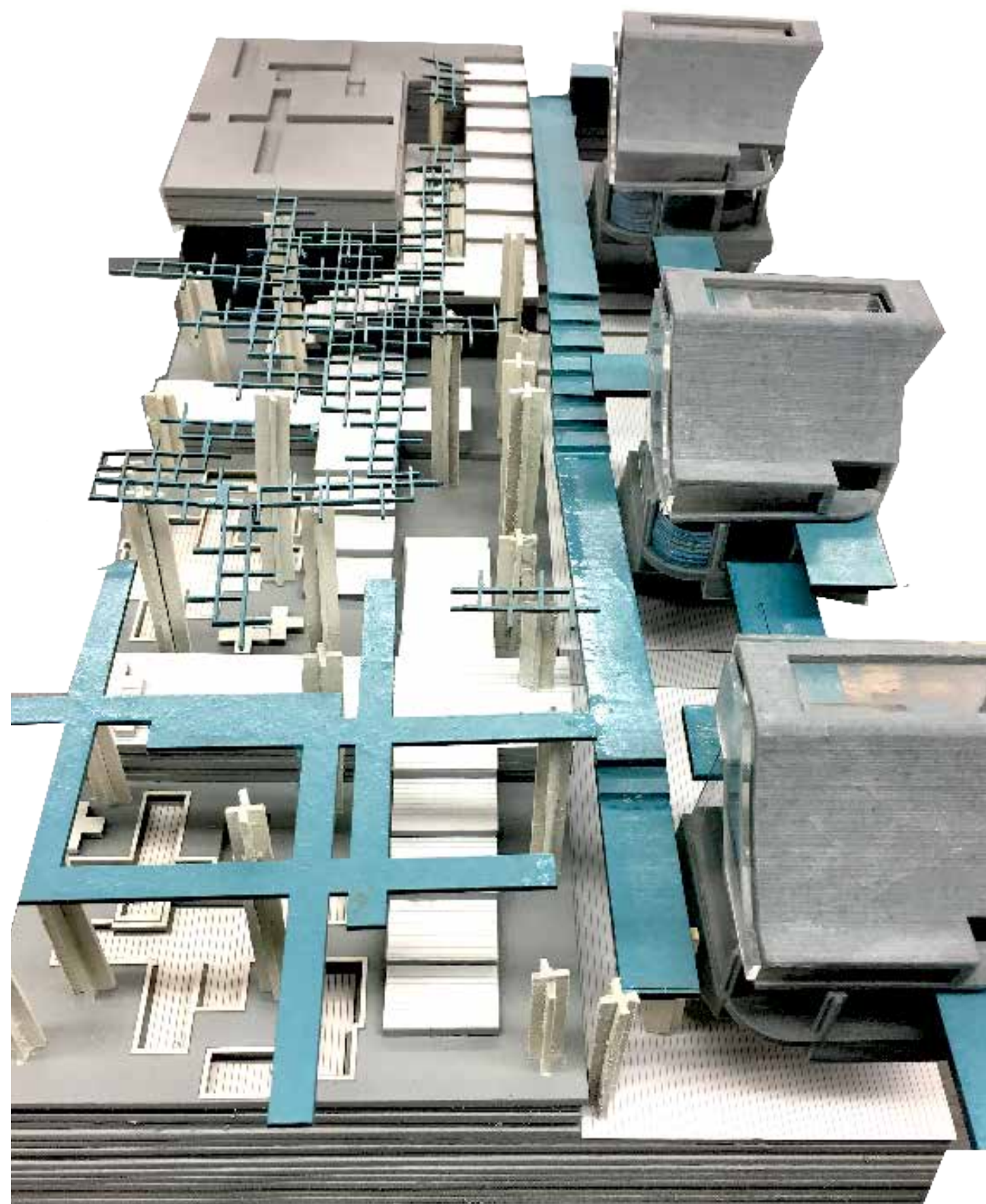
PROJECT.6 - LIBRARY



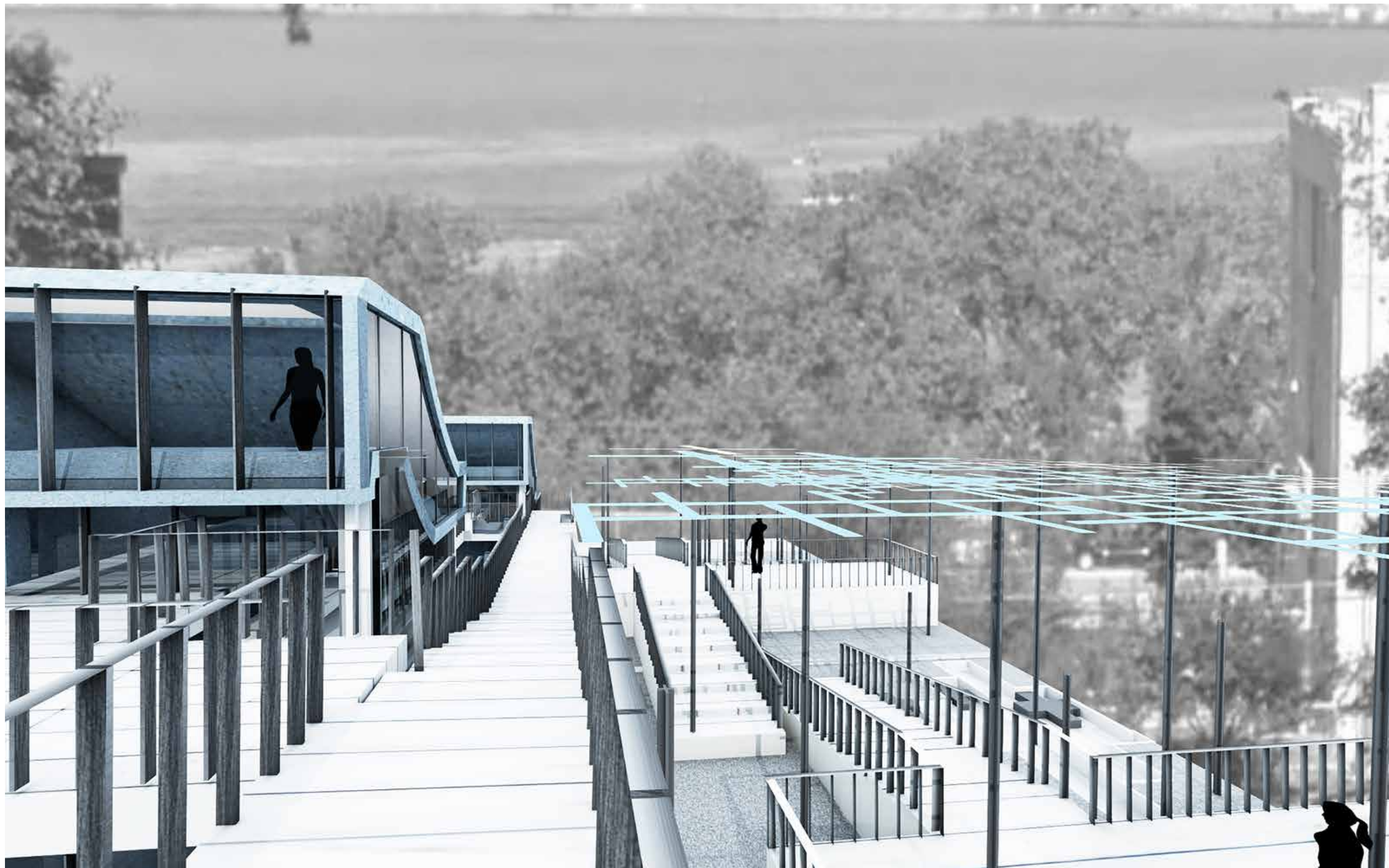




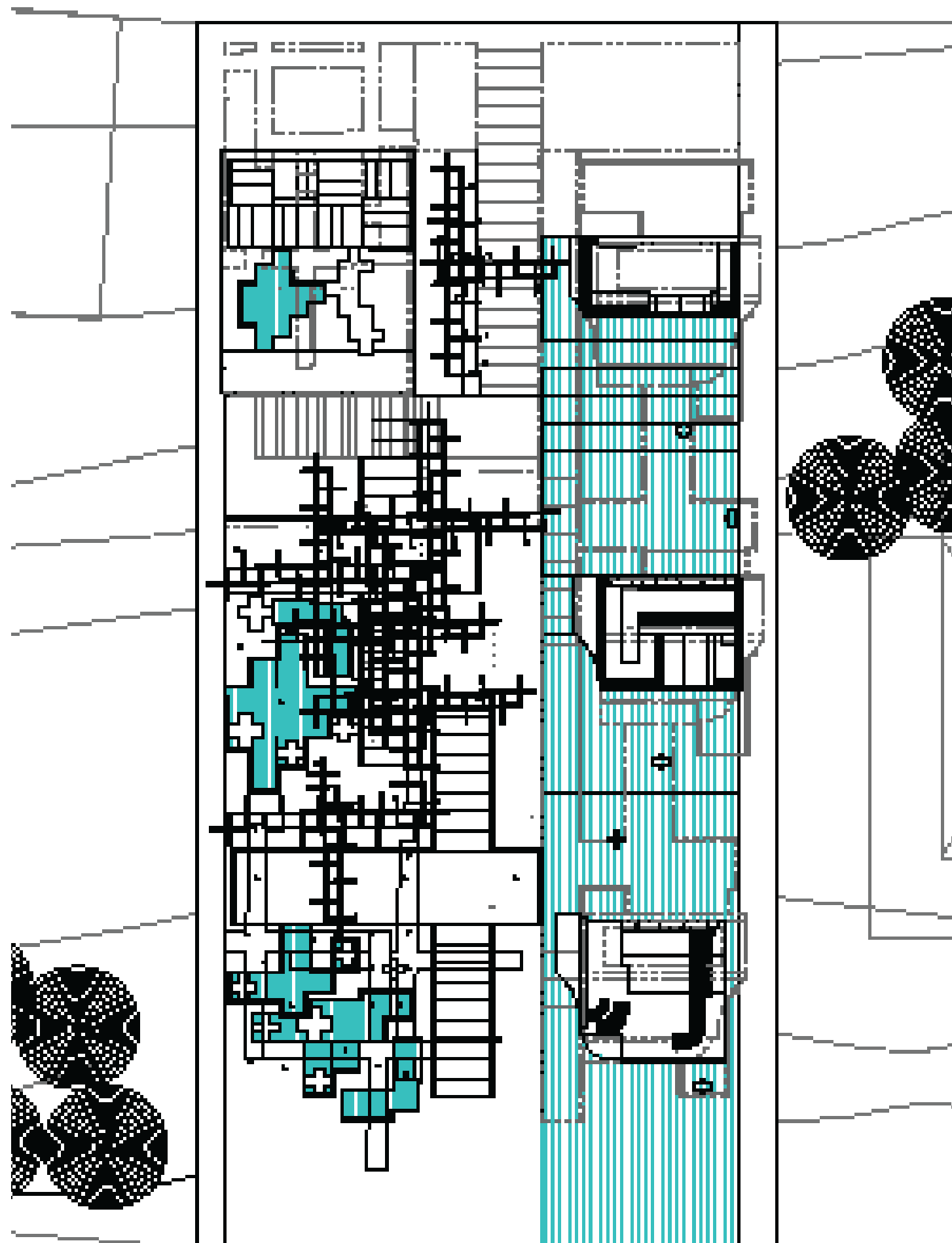




PROJECT.7 - KINDERGARTEN







THANK YOU

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