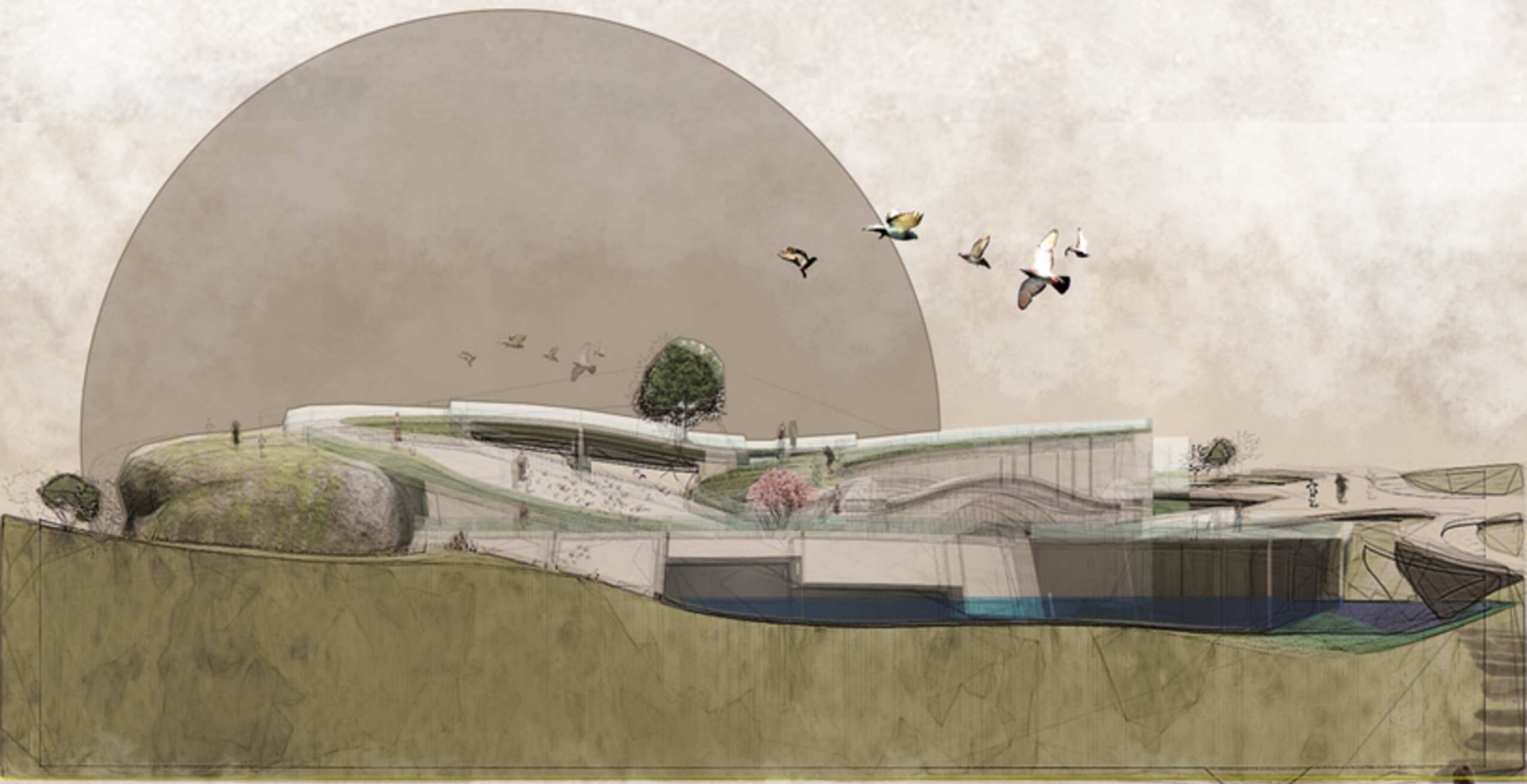


PORTFOLIO



MANASI BHISE

mbhise@nyit.edu/manasibhise25@gmail.com
(678) 430-1955

New York Institute of Technology





MUSEUM/ART GALLERY

4-13
PG:



RESIDENTIAL PROJECT

14-23
PG:



COMMUNITY
CENTER

24-29
PG:



LIBRARY

30-37
PG:



RENEDRS&MODEL
IMAGES

38-39
PG:

C
O
N
T
E
N
T

Howard & Caudwell's Space



MUSEUM/ART GALLERY

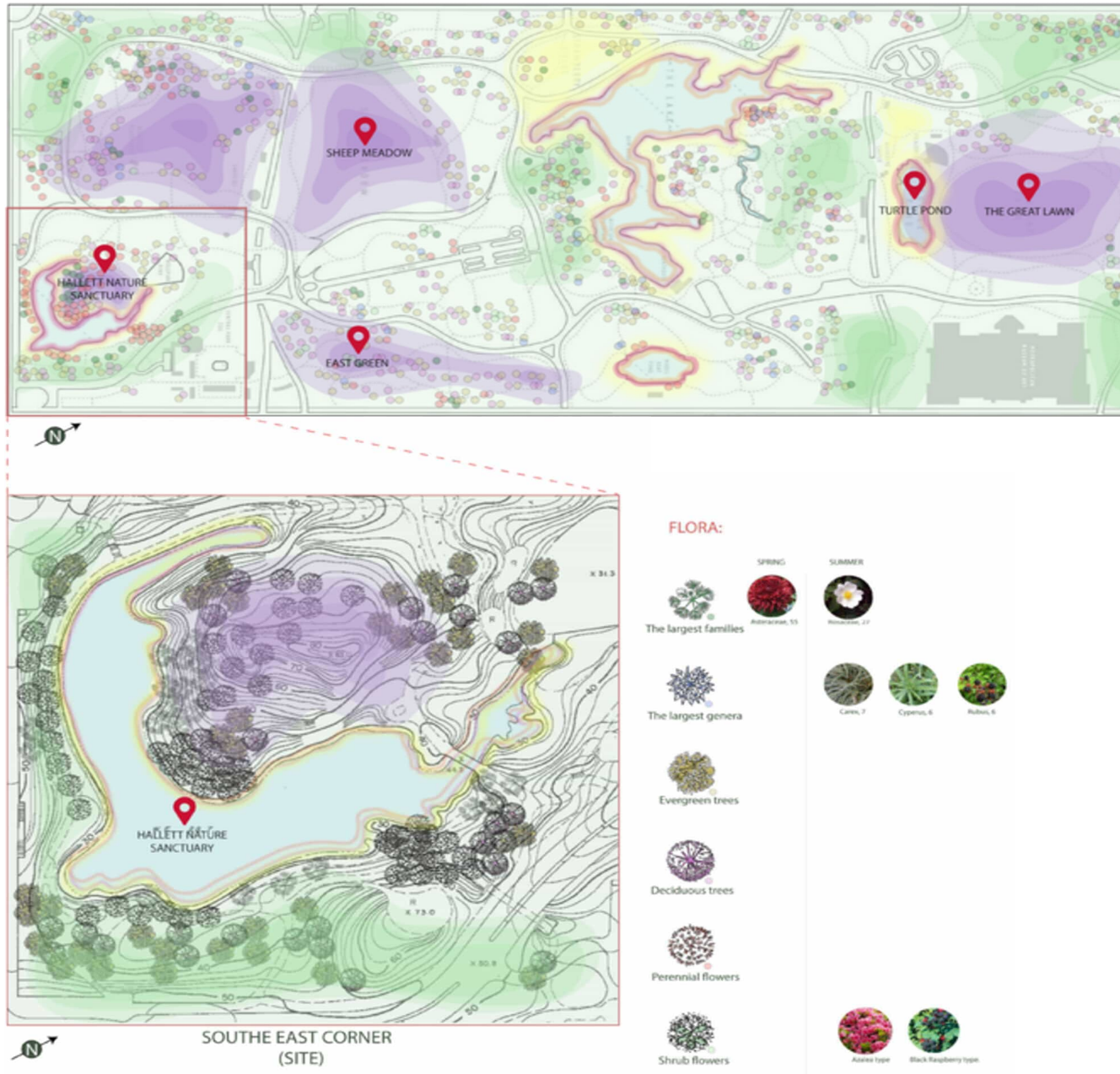
Location: Central Park

Howard & Caudwell's Space, a community center and gallery nestled near Gapstow Bridge in Central Park. This unique center seamlessly integrates with its natural surroundings, symbolizing the harmony between earth, water, and sun. Located strategically in an area lacking vegetation, the project aims to enhance the greenery while providing an accessible and inclusive space. Wheelchair-friendly green roofs not only facilitate circulation but also contribute to sustainability efforts. A key aspect of the design is its direct connection to the nearby pond, emphasizing the importance of water ecosystems. While preserving the existing Gapstow Bridge structure, new components are added to showcase both its original form and a modern interpretation. The center serves as a hub for education and preservation, inviting visitors to explore Central Park's rich history and biodiversity. Through various meeting spaces, exhibition galleries, rooftop gardens, and cafes, visitors are immersed in an environment that fosters learning and appreciation for nature.





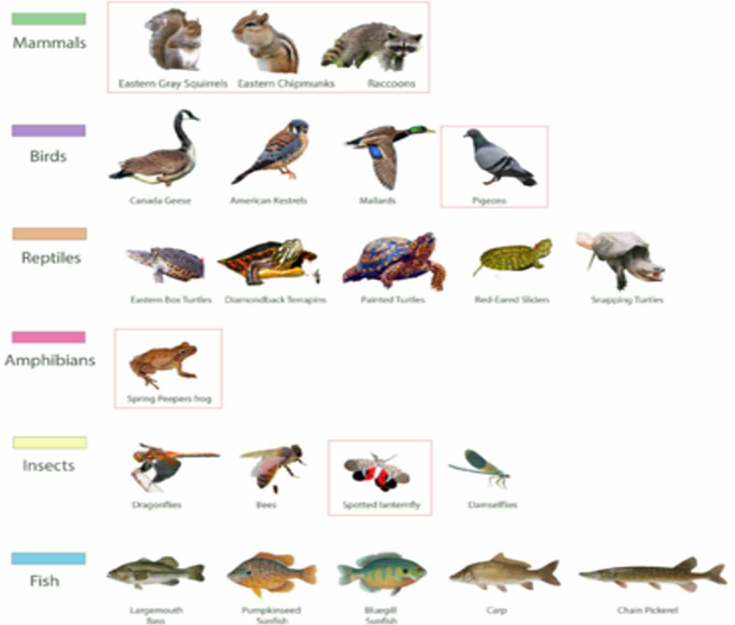
BIODIVERSITY (Research)



My research group and I selected biodiversity as the focus for our studio project because we were deeply interested in exploring how its principles could be integrated into my final design. This topic not only aligns with our collective curiosity but also provides an opportunity to address critical environmental concerns. By studying biodiversity, we aim to uncover innovative ways to enhance ecological balance and sustainability within architectural spaces, ensuring our designs contribute positively to the environment.



FAUNA:

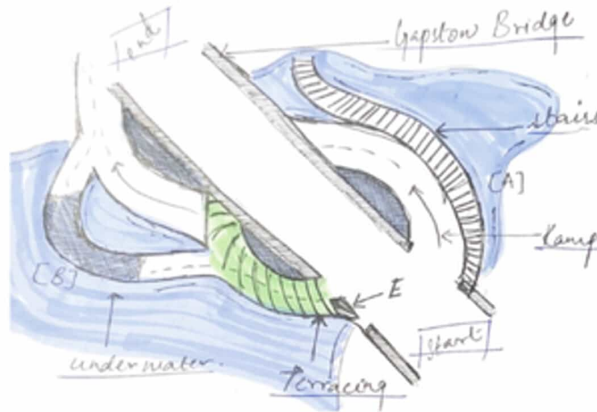
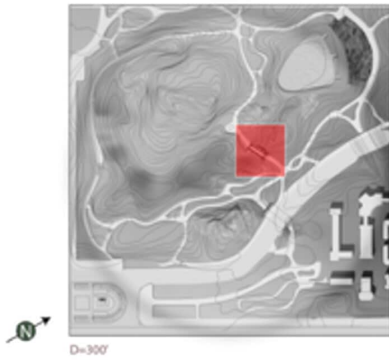


FACTS:

1. The are known to get close to park goers for food, but it is advised to keep a distance from them.
2. are known to get into trash or to try and grab your food and they carry rabies.
3. are not native to New York, but have made it their home when they were brought here from Europe hundreds of years ago.
4. are known to seriously harm trees.
5. At the Harlem Meer, catch-and-release fishing is allowed with fishing poles offered adjacent to the water.



SITE SELECTION AND MAIN CONCEPT



WHY THIS LOCATION?

- . Does have direct and easy connection to the main road.
- . Can see different elevations from the Gapstow bridge.
- . Has mid-low frequency sound level.
- . Receives light most of the day.
- . Vegetation and wildlife is comparatively moderate than the entire park.
- . Vegetation near the pond and the bridge mostly consists of shrubs and having a project there would not disturb much of it.



MAIN IDEA...

The main objective was to create a precedent that originally fits the topography. I found that this particular location's entire south-east corner lacks much vegetation, and that by building a project there, the vegetation will be taken care of. It will also be less complicated to build a useful drainage system that connects to the park's surrounding drainage system. Even on the project's roof, circulation will be helped in part by wheelchair-accessible green sloping roofs. Due to the fact that it serves as both a bridge and the project, it may feature some tessellations for optimal lightings. I wanted to explore the concepts of over vs under, rigid vs flux and repetition vs layering. And the primary goal is to demonstrate a direct relationship with the pond. In order to demonstrate both the actual Gapstow bridge and my version of the structure, I wanted to leave the previous structure in place while also adding new components.



SITE SELECTION AND MAIN CONCEPT

THE IDEA OF GREEN ROOFS

- TO REDUCE STORM WATER RUN OFF
- FOOD AND SHELTER FOR BIRDS AND ANIMALS
- LOWER ROOF SURFACE TEMPERATURE
- LASTS 40+ YEARS

ANIMALS FOUND



BIRDS FOUND



MILKWEED BUTTERFLY



MONARCH BUTTERFLY



MILKWEED BUTTERFLY



BIRDS FOUND



BIRDS FOUND



EDGE EFFECTS

TREES FOUND



DOGWOOD



DOGWOOD



DOGWOOD



DOGWOOD



DOGWOOD



HOWARD&CALDWELL'S SPACE EXPLODED PROGRAM AND CIRCULATION

MAIN CIRCULATION

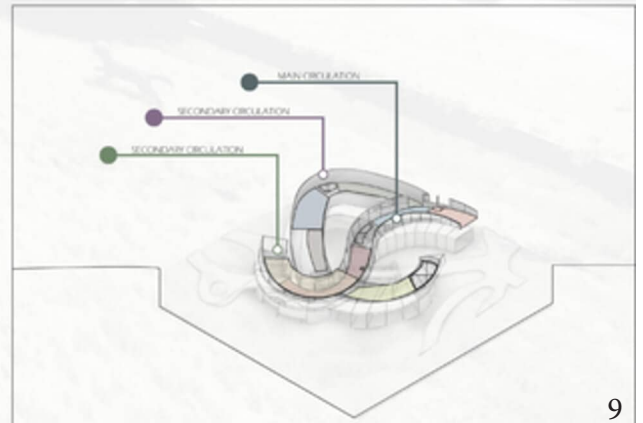
- LOBBY (750 sqft)
- GALLERY 2 (1649 sqft)
- OUTDOOR GARDEN
- CLASSROOM (1588 sqft)

SECONDARY CIRCULATION

- OUTDOOR EXHIBITION SPACE (1875 sqft)
- GALLERY 1 (1870 sqft)
- ADMINISTRATION (1011 sqft)

SECONDARY CIRCULATION

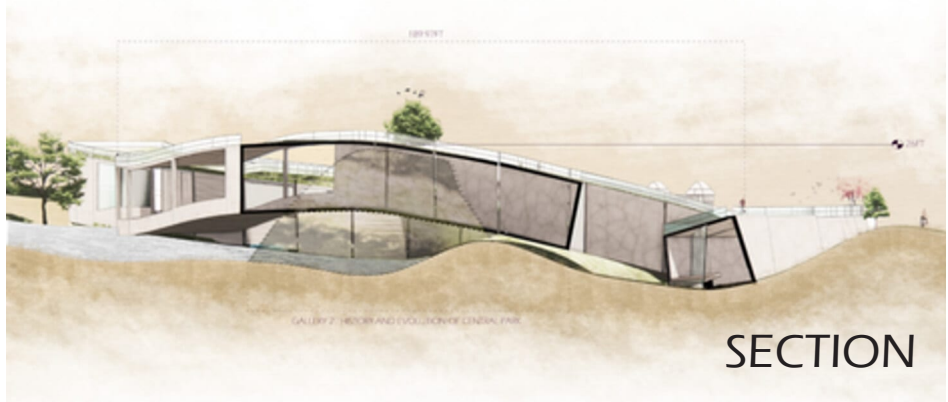
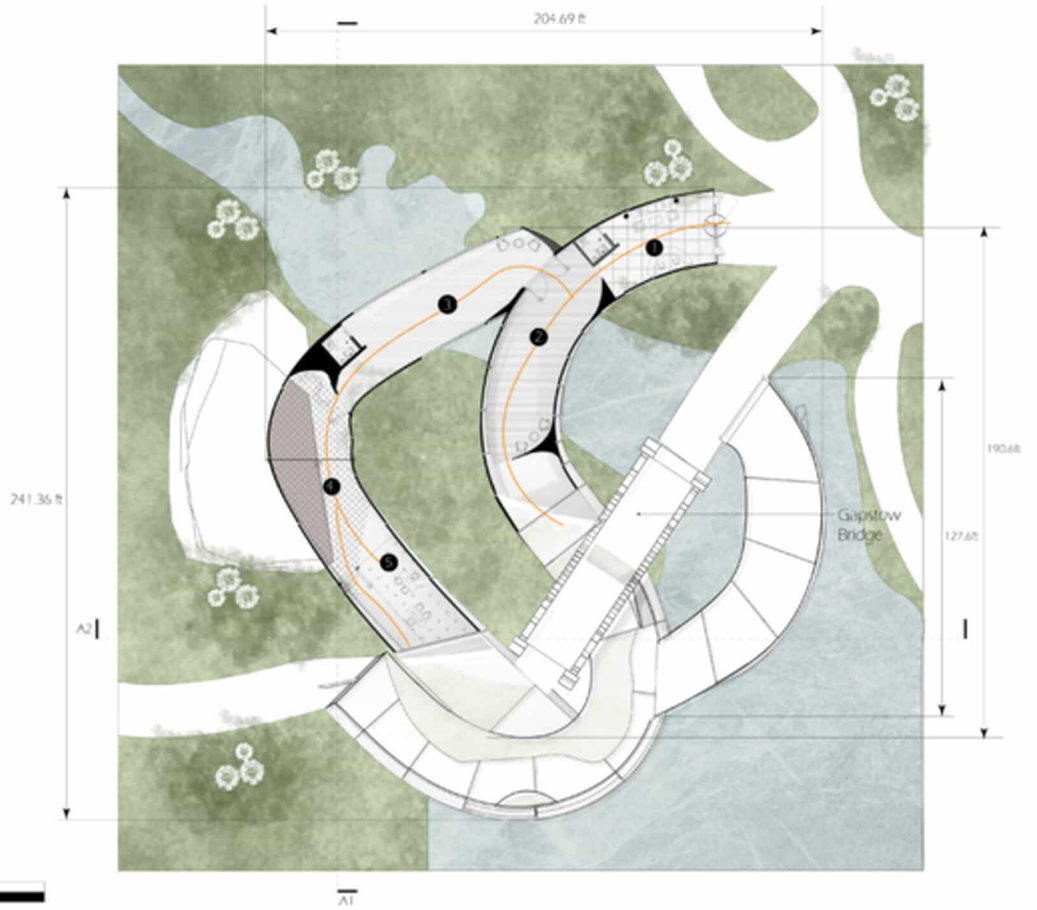
- CAFE (1270 sqft)
- MULTI PURPOSE SPACE (1300 sqft)
- RESTROOM (550 sqft)



PLAN

HOWARD&CAUDWELL'S SPACE FLOOR PLAN I

1. LOBBY (750sqft)
2. GALLERY 1 (1870 sqft)
3. OUTDOOR EXHIBITION SPACE (1857 sqft)
4. GALLERY 2 (1649 sqft)
5. ADMINISTRATION (1011 sqft)



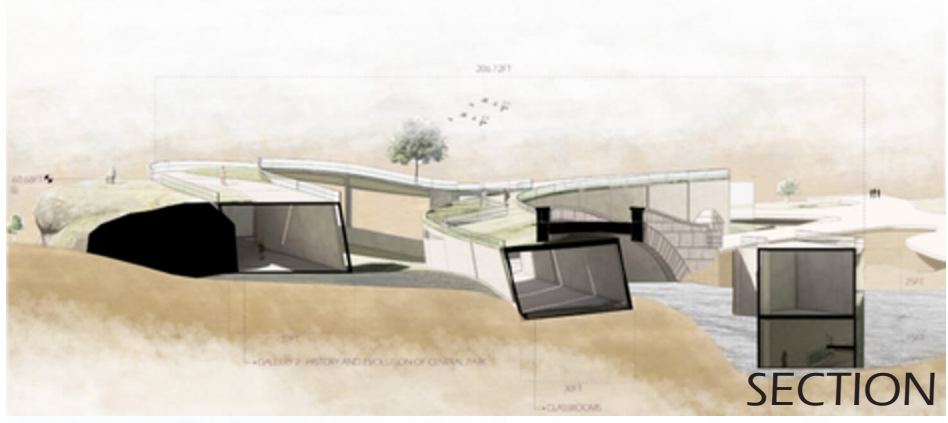
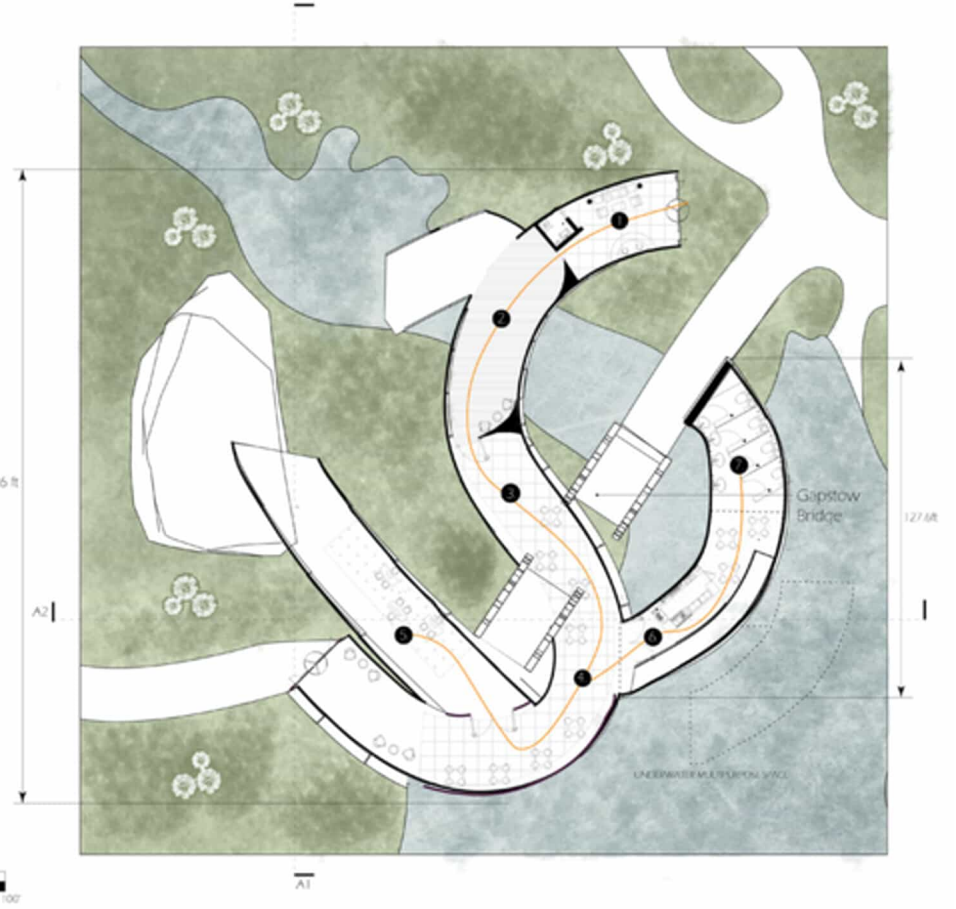
PLAN

HOWARD&CAUDWELL'S SPACE FLOOR PLAN 2

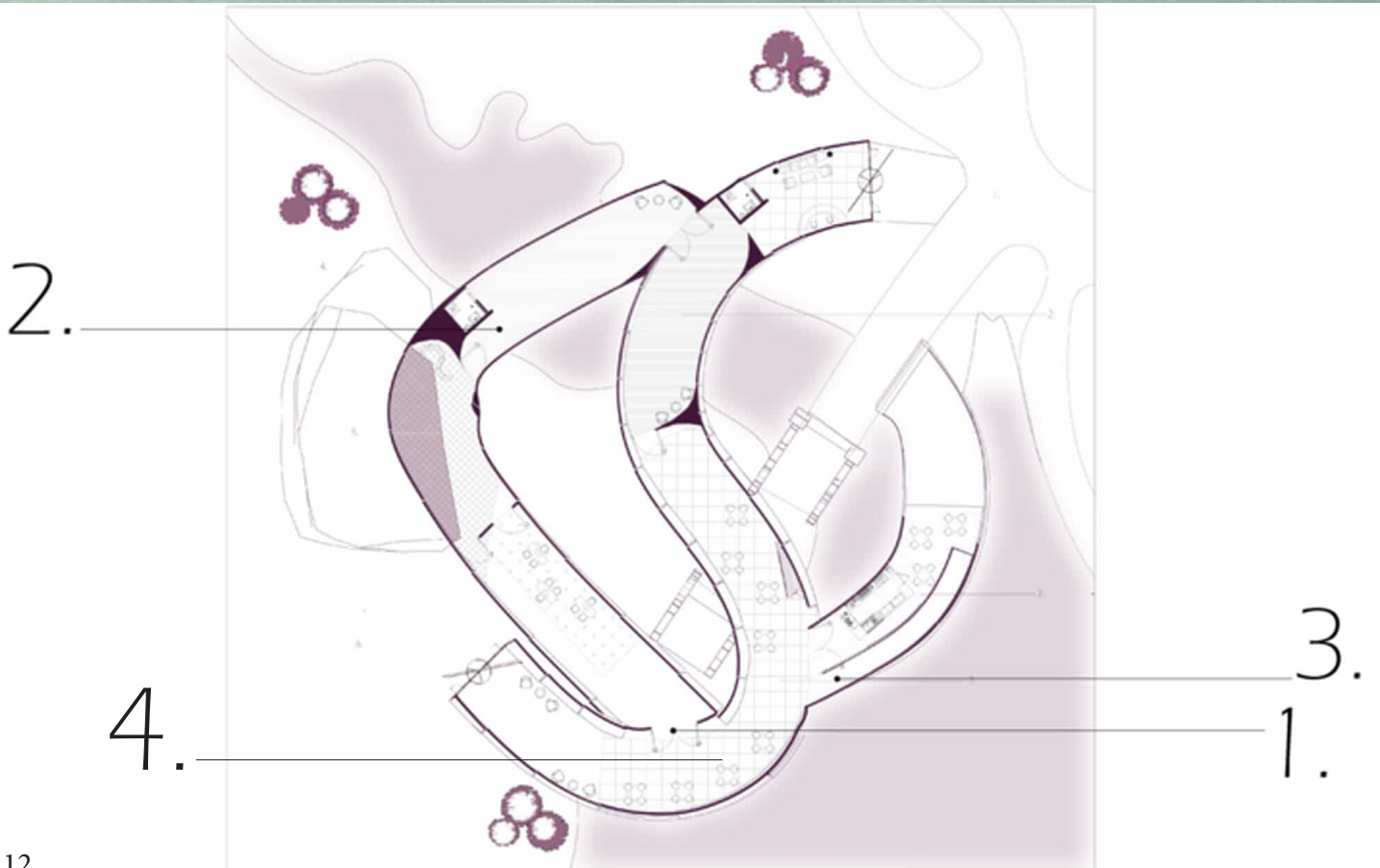
1. LOBBY (750sqft)
2. CLASSROOM (1588sqft)
3. GALLERY 2 (1649sqft)
4. ADMINISTRATION (1011sqft)
5. CAFE (1207sqft)
6. WASHROOM (550sqft)
7. MULTI PURPOSE SPACE (1300 sqft)



SCALE- 1/32"



RENDERINGS





1
ROOF-TOP GARDEN



2
OPEN-EXHIBITION
SPACE



3
CAFETERIA



4
CLASSROOM

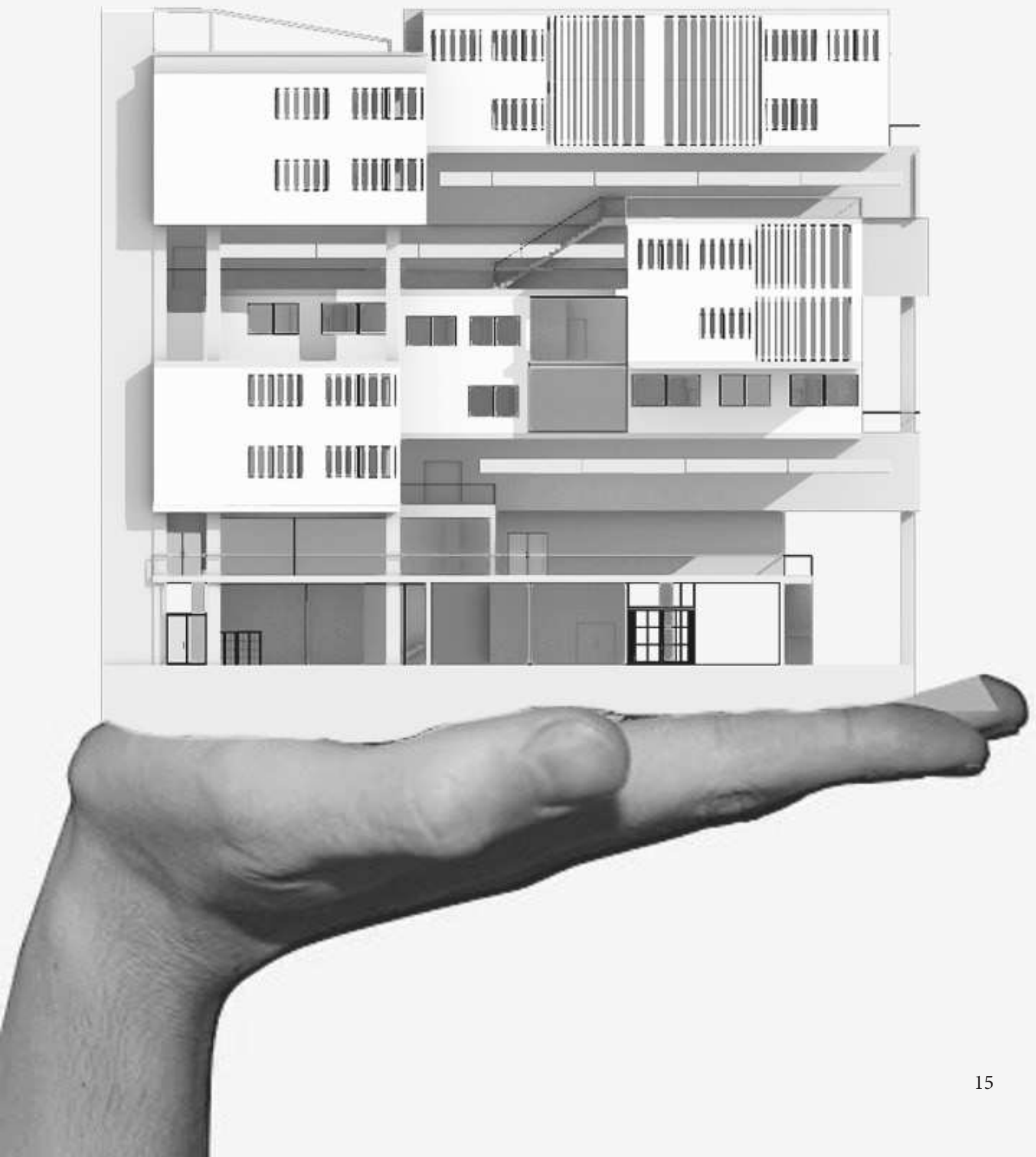
“STUYGROVE RESIDENCE”



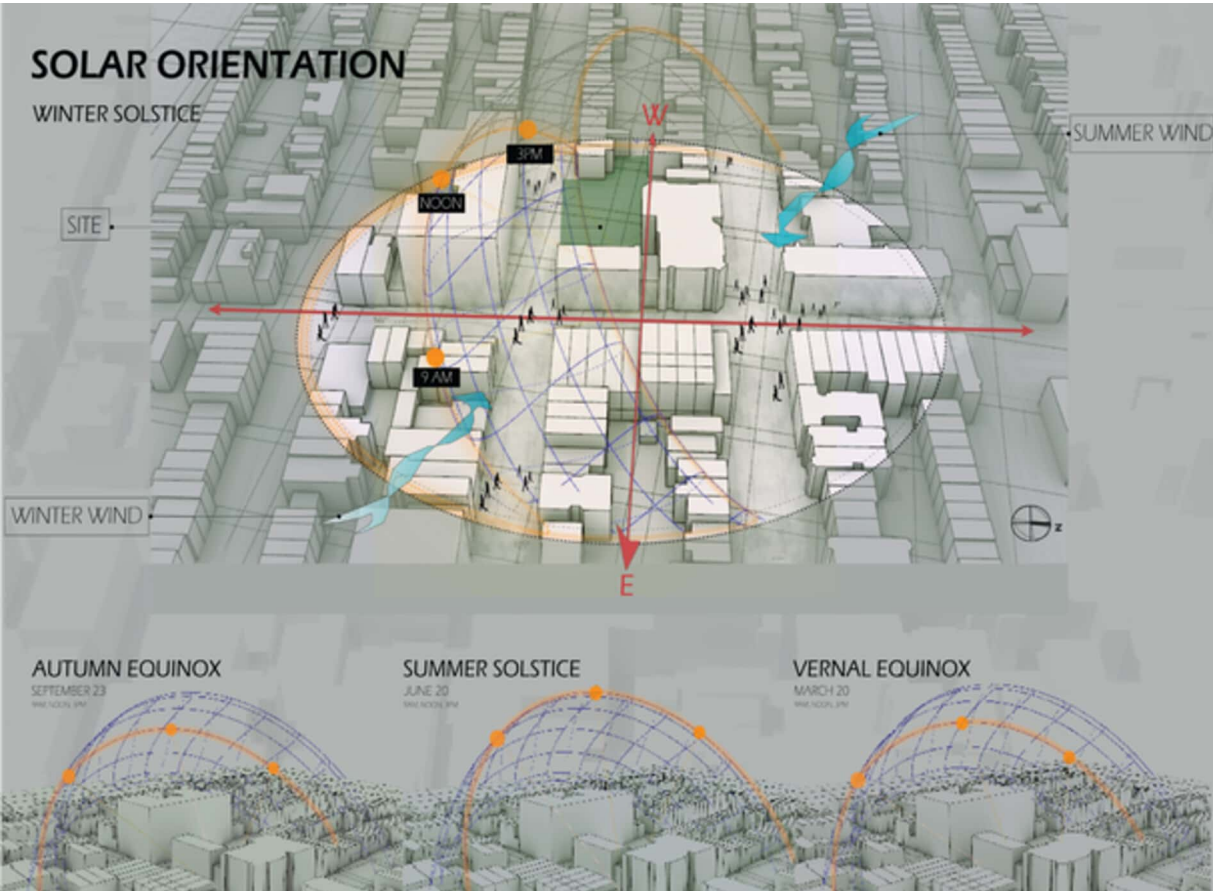
RESIDENTIAL PROJECT

Location: Bed-Stuy (Brooklyn)

The Stuy-Grove Residence is an multi family eight-story building nestled in the heart of Bed Stuy, boasts a captivating architectural design that seamlessly integrates with its urban surroundings. This contemporary structure harmonizes modern aesthetics with functionality. StuyGrove Residence “resonates well, emphasizing both the residents and open spaces. The term “Grove” evokes images of a communal gathering spot within nature, symbolizing a natural, open area. It implies a serene and communal environment, suggesting that the residents will have ample open spaces within the complex. It not only caters to the people living there but also hints at the presence of green spaces or communal areas within the project where residents can gather, socialize, and enjoy open, natural settings. The interior design likely focuses on maximizing space efficiency and comfort. The layout is meticulously planned to accommodate various amenities, such as communal areas, perhaps a gym or lounge, and potentially a rooftop garden or terrace for communal use, enhancing the residents’ quality of life. Additionally, the building incorporate sustainable features, such as energy-efficient systems or green spaces, aligning with contemporary architectural trends focused on environmental consciousness.

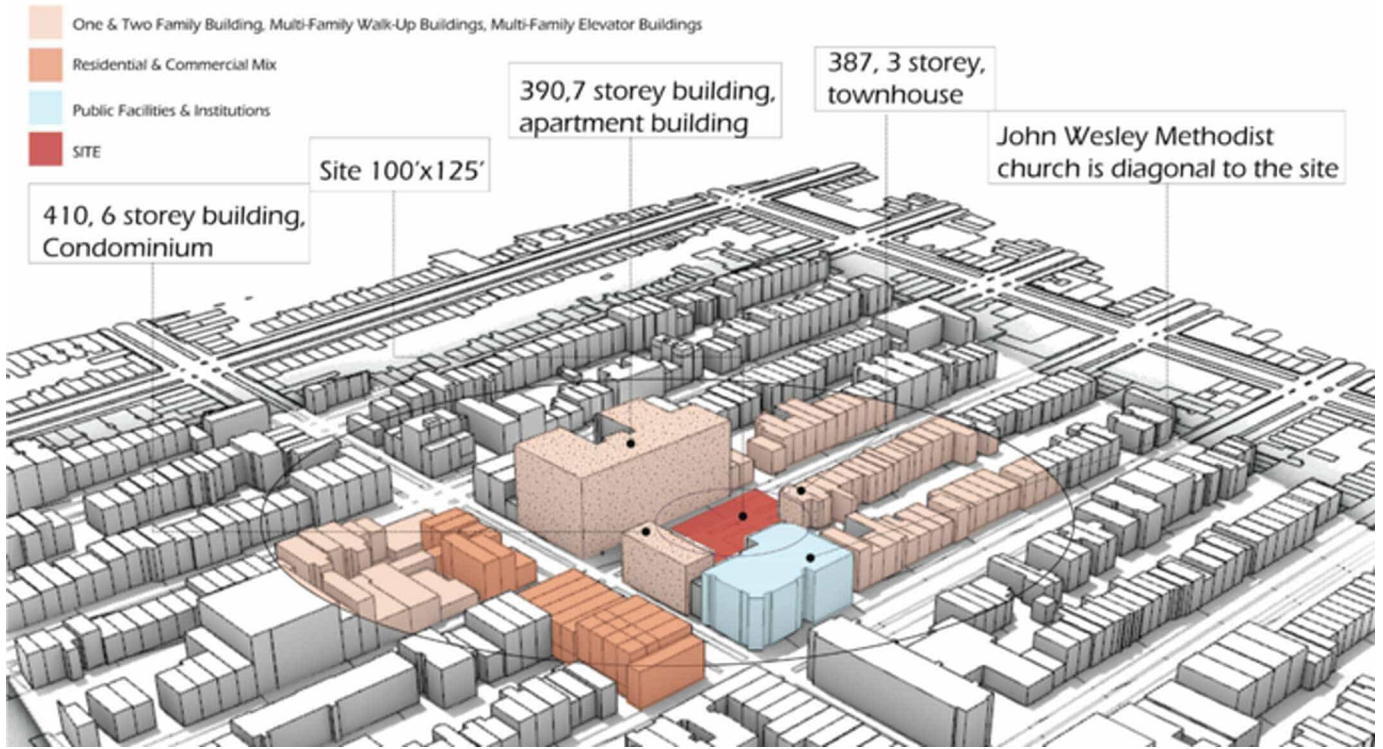


SITE ANALYSIS



ADJACENT BUILDING:

Use of adjacent building on and near the site :



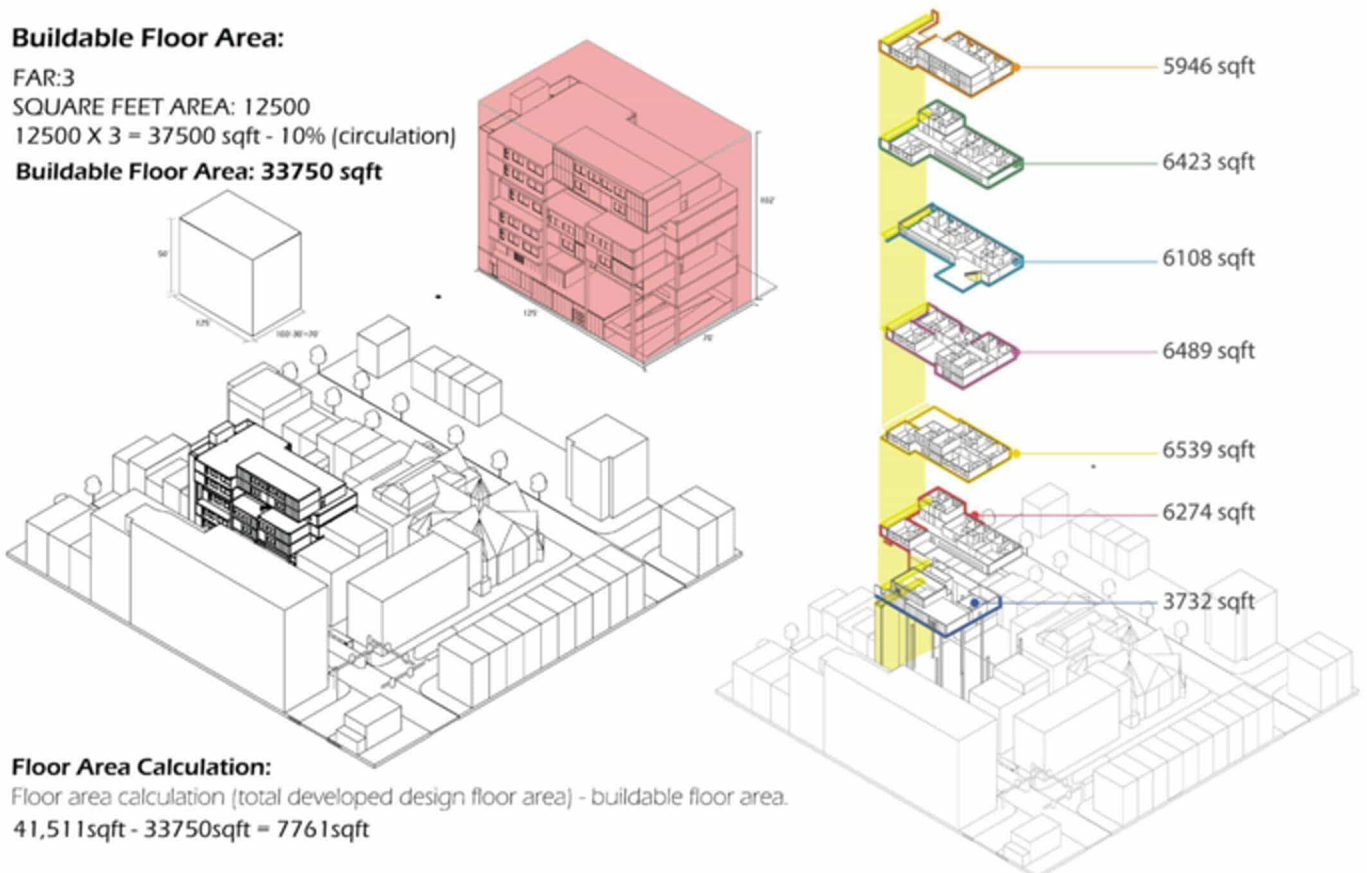
Buildable Floor Area:

FAR:3

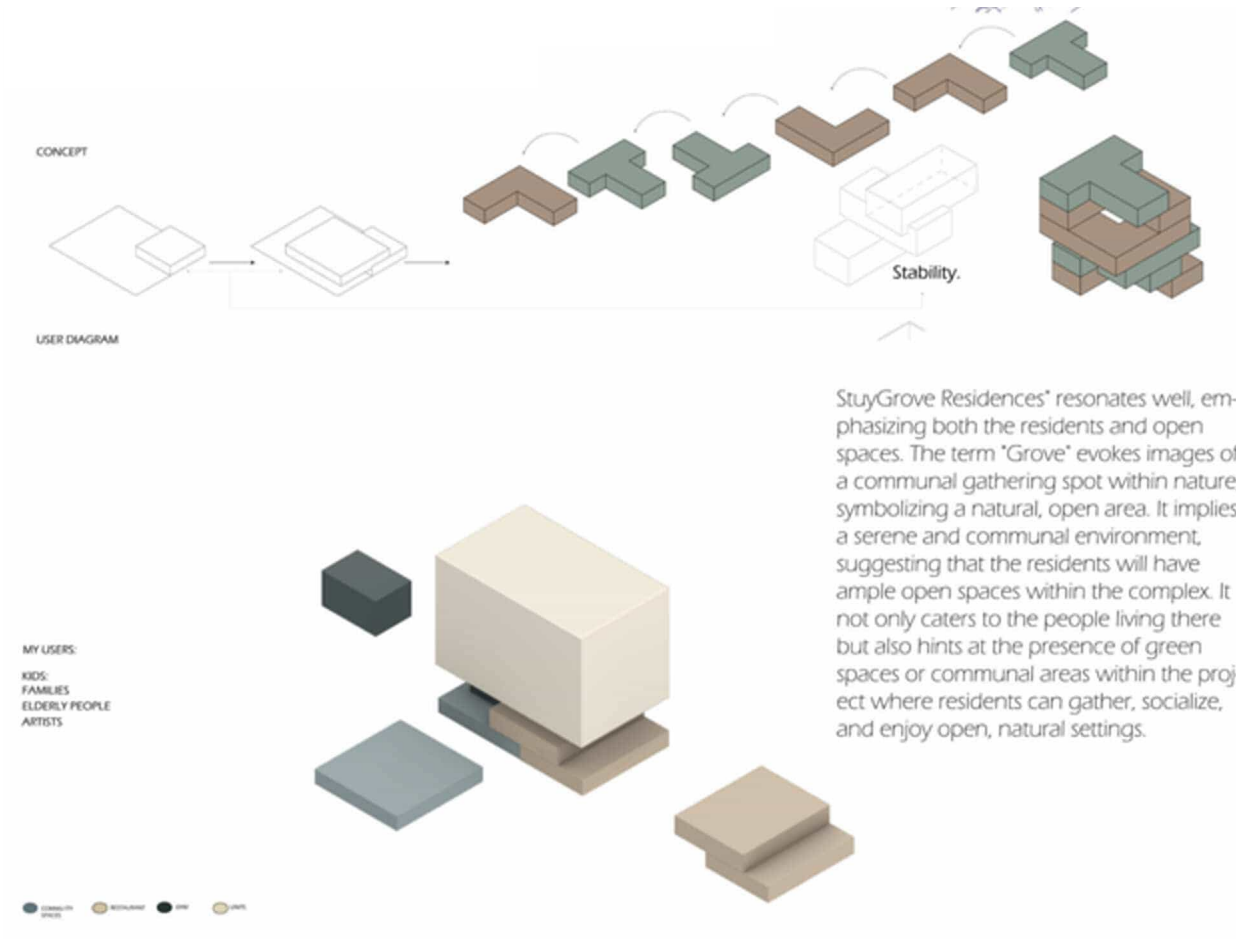
SQUARE FEET AREA: 12500

$12500 \times 3 = 37500$ sqft - 10% (circulation)

Buildable Floor Area: 33750 sqft



CONCEPT



APARTMENT LAYOUTS

STUDIO APARTMENT 1



LEGEND:
 Living Room
 Kitchen
 Bathroom

25X16

ONE BEDROOM APARTMENT 1



LEGEND:
 Living Room
 Kitchen
 Bedroom
 Bathroom

25X30

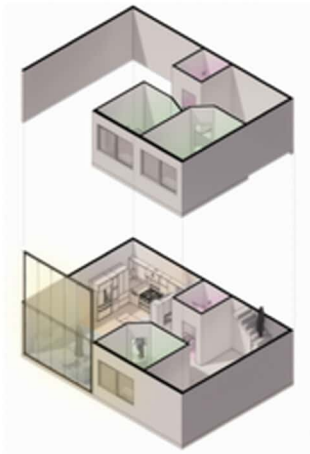
TWO BEDROOM APARTMENT 1



LEGEND:
 Living Room
 Kitchen
 Bedroom

25X36

THREE BEDROOM APARTMENT 1

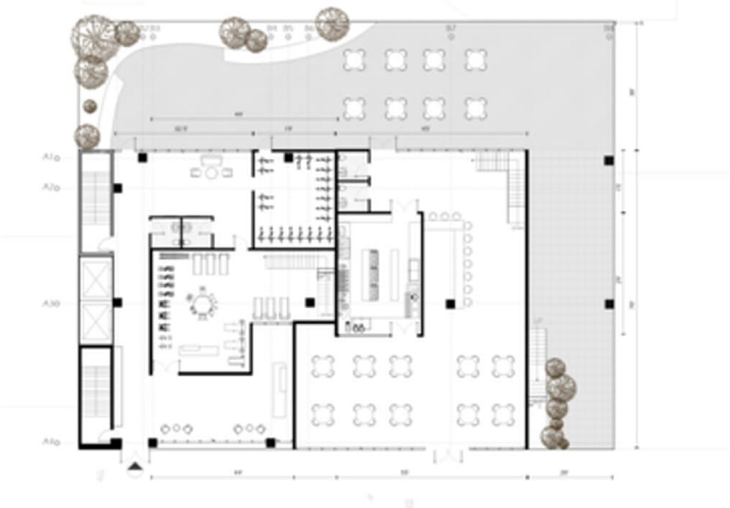


LEGEND:
 Living Room
 Kitchen
 Bedroom

25X36x20

LEGEND:
 BEDROOM
 LIVING ROOM
 KITCHEN
 BATH-ROOM

PLANS



GROUND FLOOR PLAN



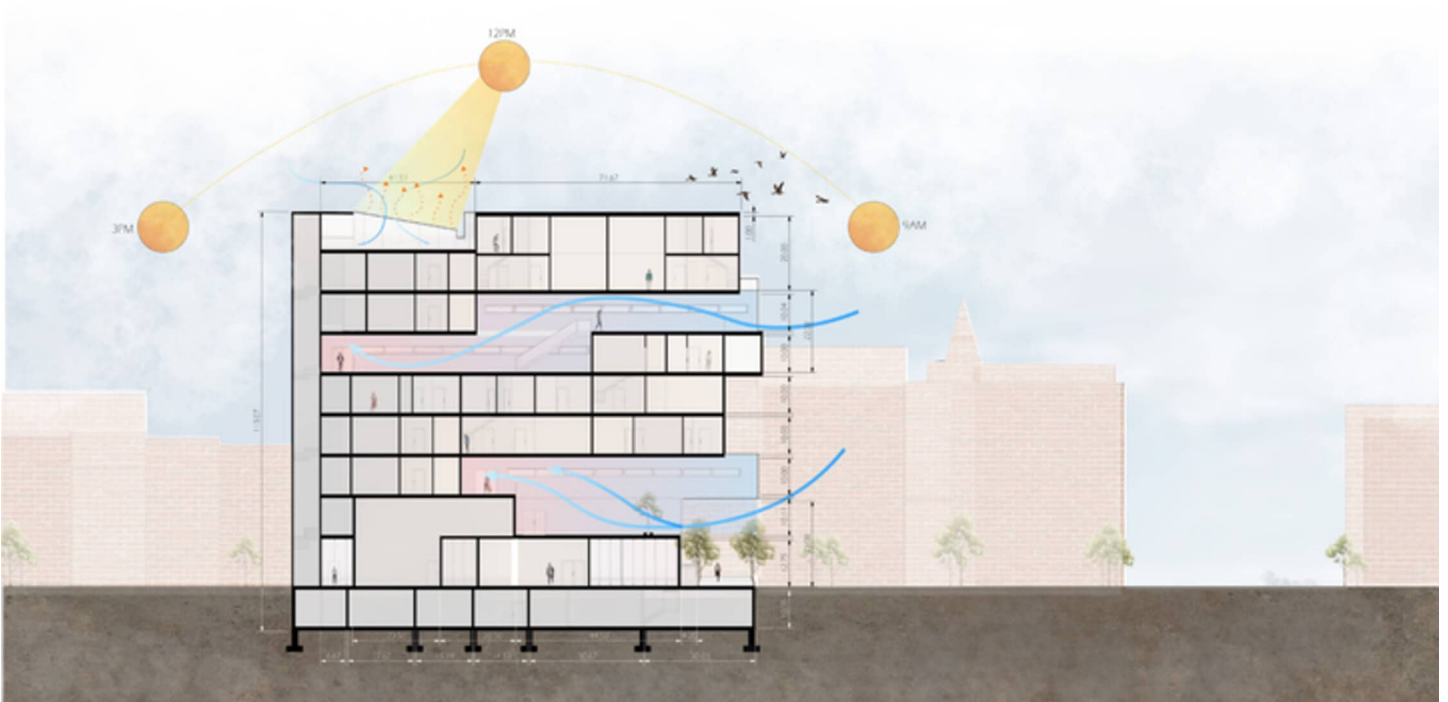
SECOND FLOOR



FIFTH FLOOR

SECTION A A
-(South east section)

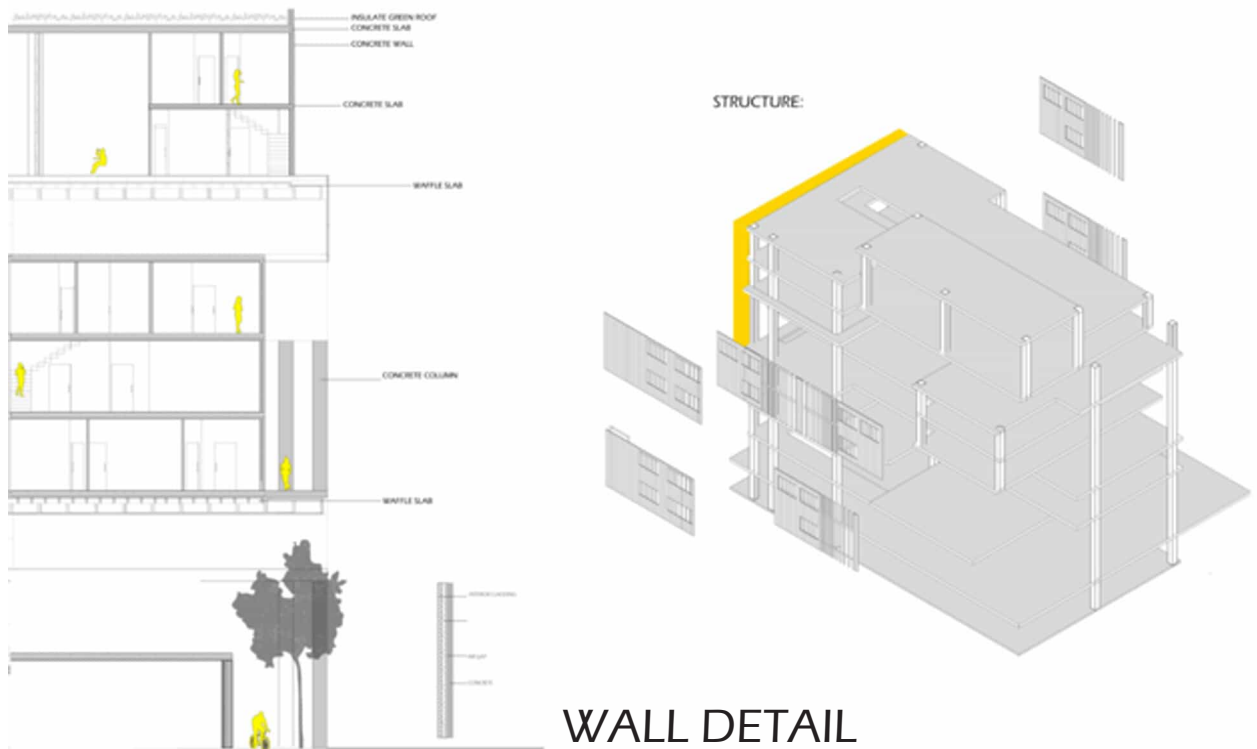
- UNITS:**
- 1. Studio - 400sqft
 - 2. One Bedroom - 750sqft
 - 3. Two Bedroom - 900sqft
 - 4. Three Bedroom - 447+900= 1347sqft



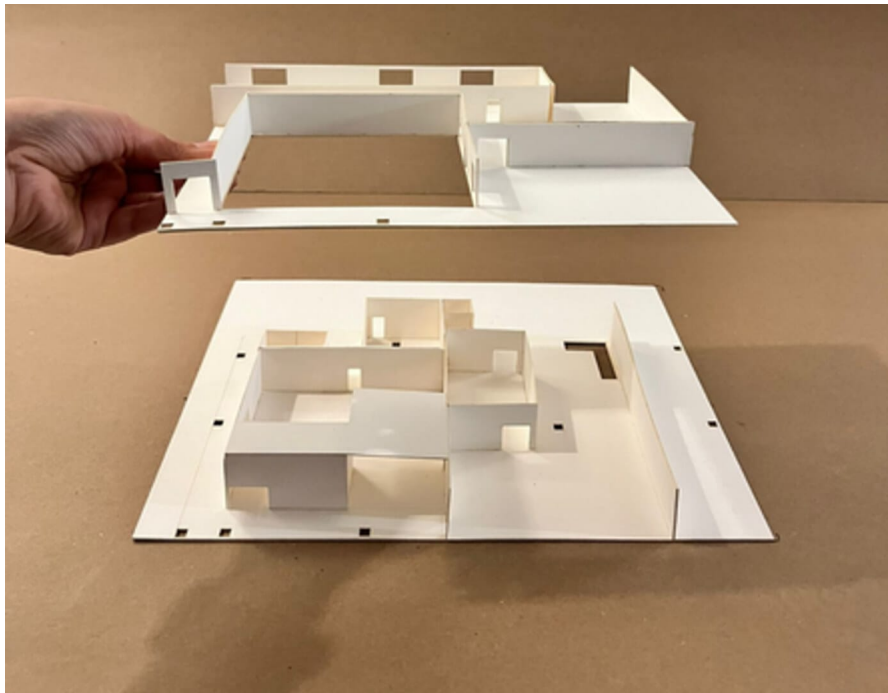
ELEVATION



An apartment building with a facade combining wood louvers and concrete exudes a contemporary yet warm aesthetic, blending the natural warmth of wood with the robustness of concrete for a harmonious urban look. The incorporation of double-height spaces within this 8-floor structure introduces a sense of spaciousness and vertical connectivity, enhancing natural light penetration while creating dynamic living areas that foster a sense of openness and modernity within each apartment unit.



WALL DETAIL



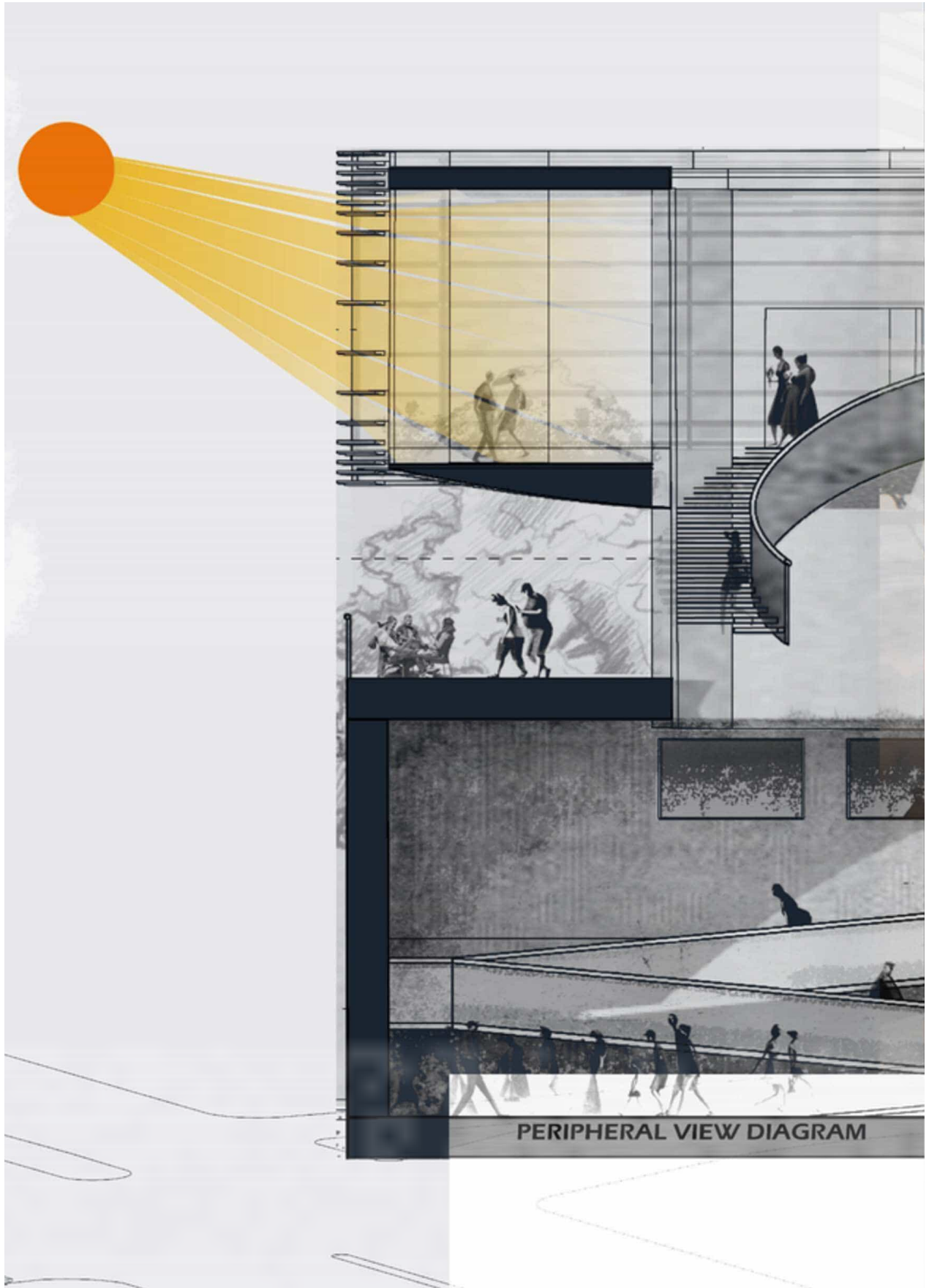
“PANORAMIC PERCH”



COMMUNITY
CENTER

Location: Sara D'Roosevelt Park (Lower Manhattan)

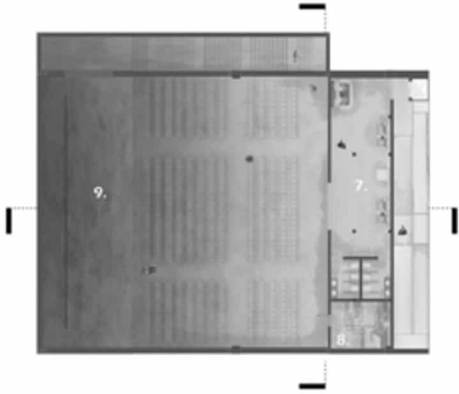
The community center's groundbreaking design seamlessly blends symbolism and functionality, with a glass ring representing the boundless sky resting atop a solid concrete base that anchors it to the earth. At its heart lies a distinctive reading room, nestled within the transparent glass structure, where visitors are immersed in an abundance of natural light and expansive panoramic views of the city. This design not only provides a tranquil retreat from the city's hustle and bustle but also fosters a deep connection with nature and the surrounding urban environment. By harmonizing modern aesthetics with purposeful symbolism, the space offers an inspiring setting for reflection, learning, and community engagement.



PERIPHERAL VIEW DIAGRAM

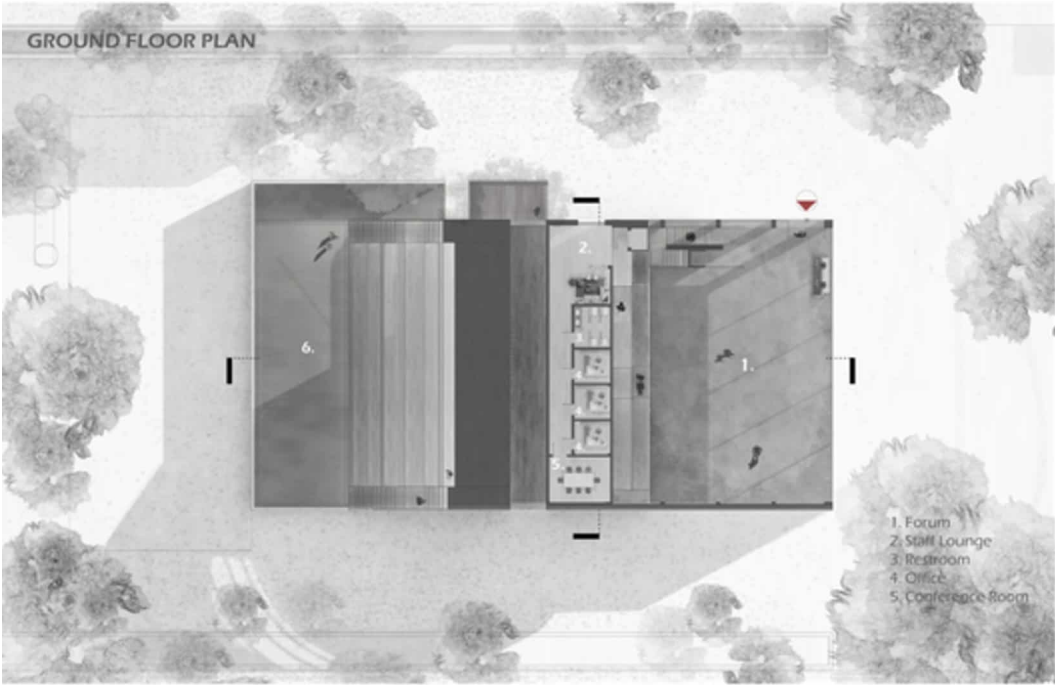
PLANS

BASEMENT FLOOR PLAN



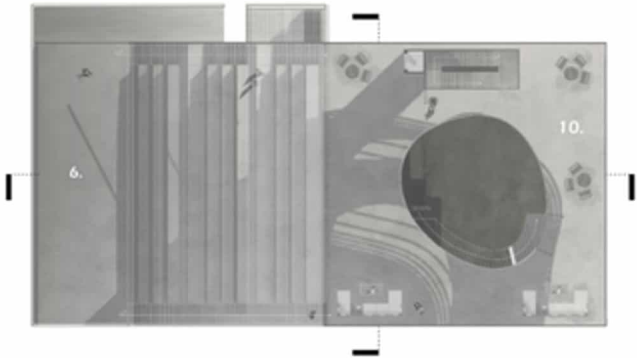
- 7. Prefunction Room
- 8. Mechanical Room
- 9. Theater

GROUND FLOOR PLAN



- 1. Forum
- 2. Staff Lounge
- 3. Restroom
- 4. Office
- 5. Conference Room

SECOND FLOOR PLAN



- 6. Outdoor Amphitheater
- 10. Outdoor Seating

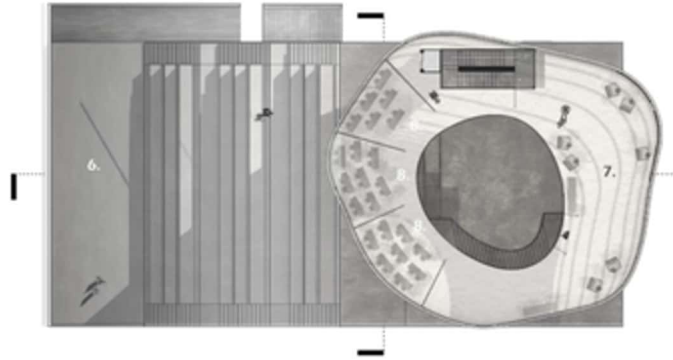


EXTERIOR RENDERING

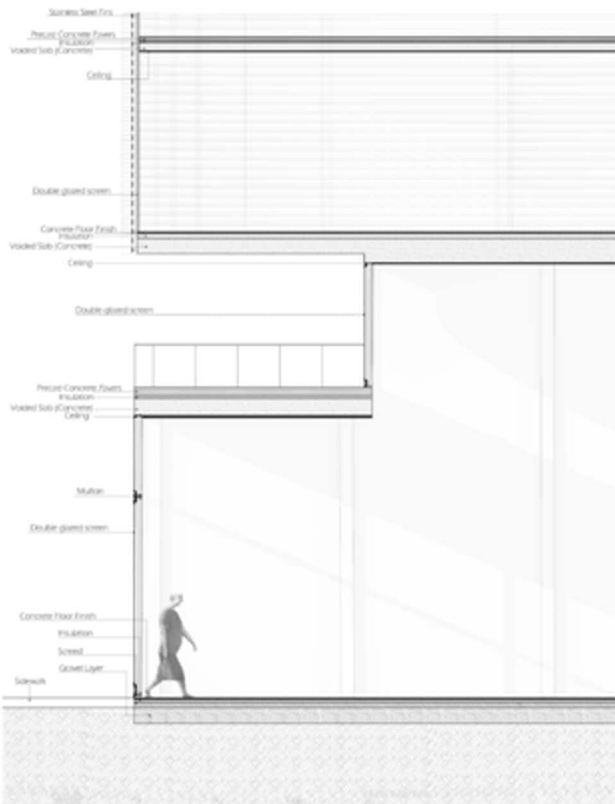


PLAN

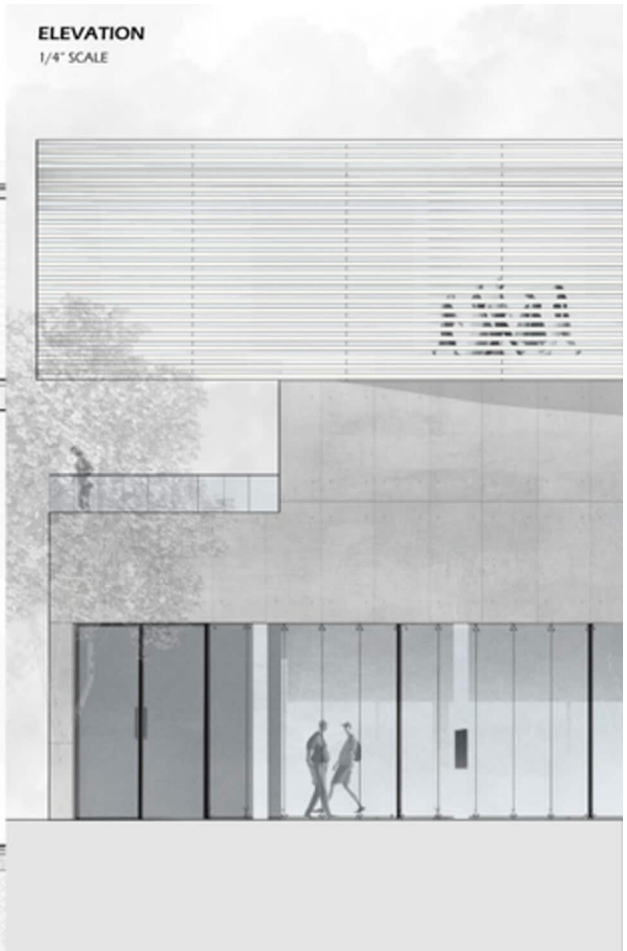
THIRD FLOOR PLAN



SECTION DETAIL 1/4" SCALE



ELEVATION 1/4" SCALE

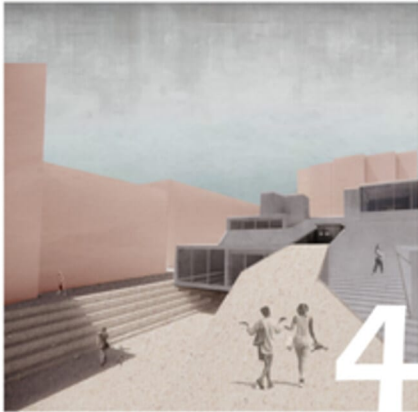




INTERIOR RENDERING



CLINTON HILL LIBRARY



LIBRARY

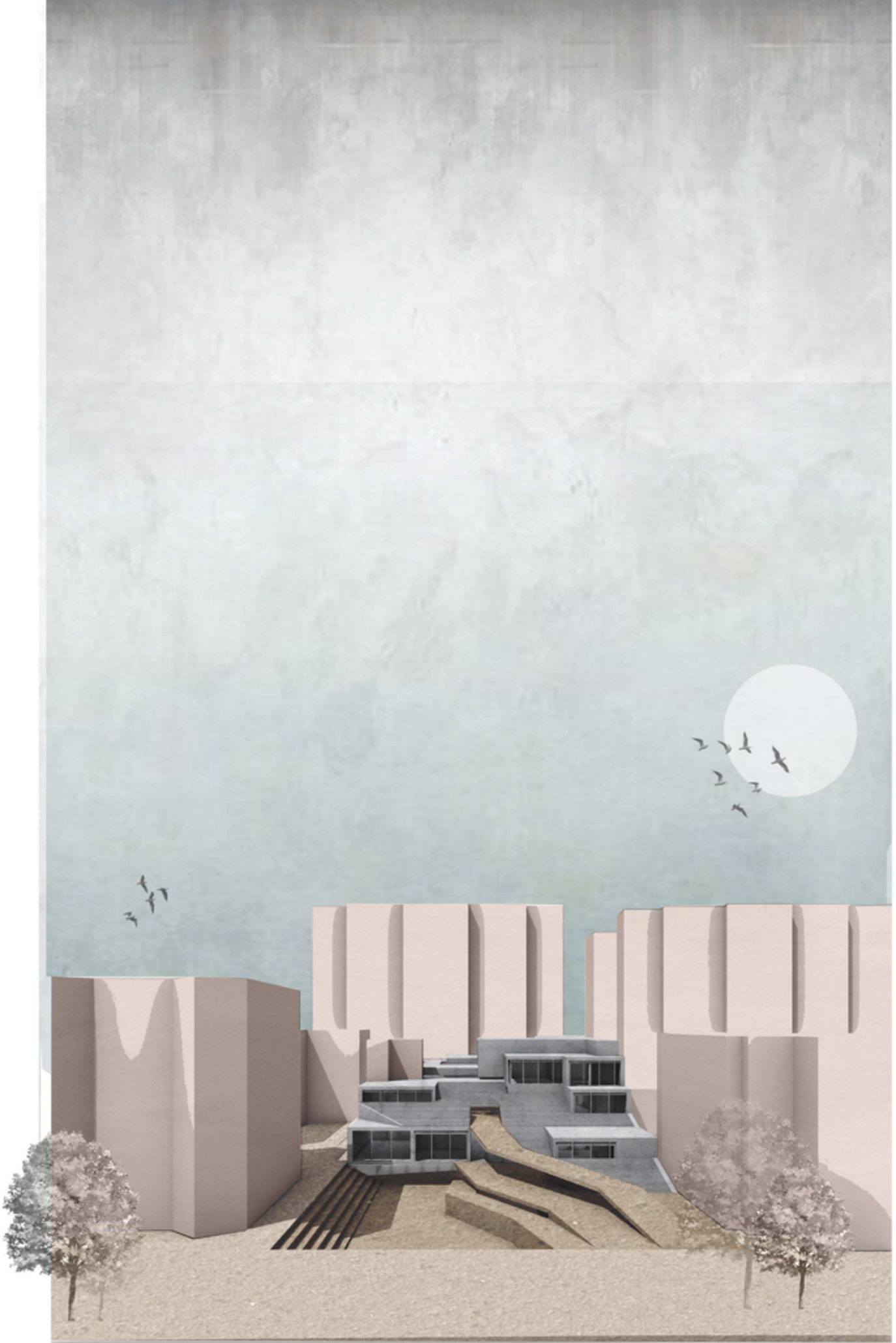
Location: Clinton Hill (Brooklyn)

INTRODUCTION:

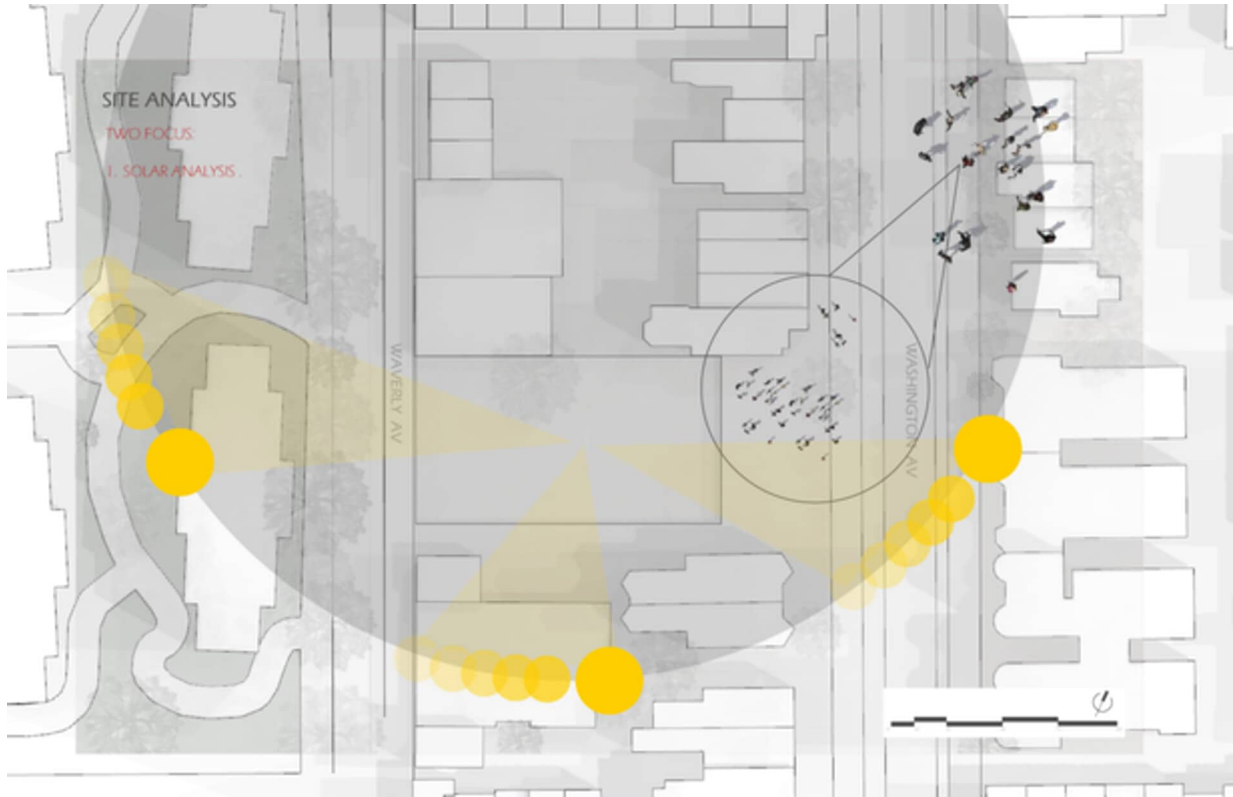
Located in the vibrant, historic neighborhood of Clinton Hill, Brooklyn, the Clinton Hill Branch Library sits at 380 Washington Avenue, extending through two adjacent lots to the west. This project aims to achieve a synergistic integration of sustainable and equitable architectural and structural expression, addressing key issues such as spatial and haptic qualities, ecologic material choices, and innovative construction solutions. The design prioritizes passive energy strategies, rainwater capture, and shading systems to reduce reliance on active energy, while leveraging landscape elements like roof gardens and terraces to enhance the building's sustainability. By carefully considering materiality, local context, and resilient systems, the project reimagines a community-centered library that responds to its environment and promotes responsible design practices.

THESIS:

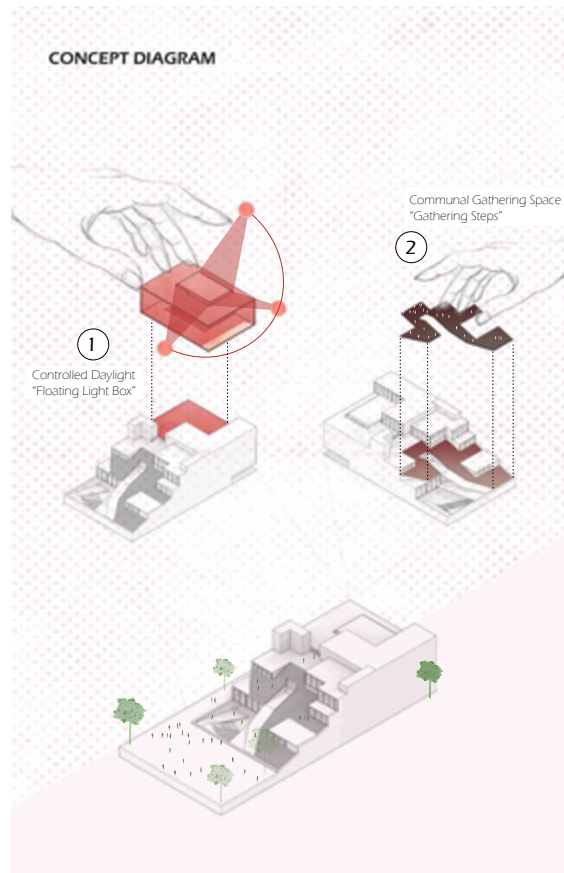
The project envisions a dynamic, multi-functional space that fosters community engagement and connection. At its core, a grand staircase acts as a central spine, leading visitors to a welcoming café that doubles as a vibrant, open public area for gathering, socializing, and contemplation. The integration of a floating box with external walkways creates a seamless dialogue between interior and exterior spaces, encouraging fluid movement and interaction while blurring the boundaries between public and private realms. By emphasizing transparency, circulation, and spatial layering, the design not only accommodates diverse user activities but also enhances the architectural experience, making the library a place of discovery, exchange, and community connection.



SITE ANALYSIS



CONCEPT



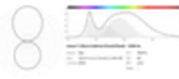
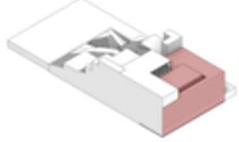
SIMULATIONS

Artificial Lighting (POINT IN TIME ILLUMINANCE):

IT 2 : Linear 4 Direct/Indirect (Fixed/Fixed) - 8200 lm

What lighting beams and layout did you choose and why?

Answer:
I chose the Linear 4 Direct/Indirect (Fixed/Fixed) - 8200 lm lights for my library study project because they provide the required lumens, ranging between 200-500 lux needed for adequate lighting in my general reading space. These lights efficiently meet the illumination needs while maintaining a balanced and comfortable environment for reading.

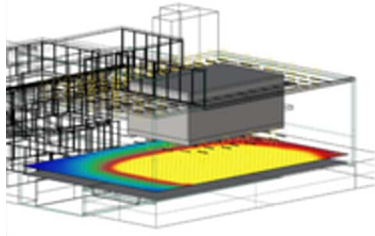


Supplementing Daylighting :

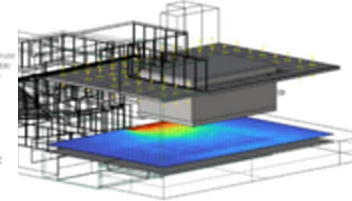
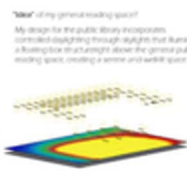
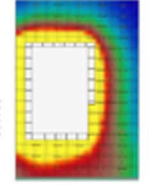
IT 1 : Solaube_3000L_CO46LS

What lighting beams and layout did you choose and why?

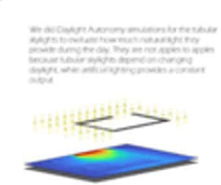
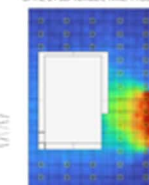
Answer:
I chose the Solaube_3000L_CO46LS lights for my library study project because they provide the required lumens, up to 18, needed for adequate lighting in my general reading space. These lights efficiently meet the illumination needs while maintaining a balanced and comfortable environment for reading during the daytime.



DATE: 21 SEPTEMBER, TIME: 12:00PM



DATE: 21 SEPTEMBER, TIME: 11:30AM



We do Daylight Autonomy simulations for the library design to measure how much sunlight may provide during the day. They are not applied to spaces because natural daylight depends on changing daylight, whereas artificial lighting provides a constant output.

SOLAR SHADING:

BASELINE SIMULATION (Radiation map):



Original

I want to minimize sunlight on the east and north-facing façades, as I plan to incorporate windows with louvers to create distinctive shadow patterns. Most of my roofs are non-occupiable, but I do have an exterior seating area at ground level. Ideally, I aim for my space to balance shade and sunlight, staying cool and shaded in summer while allowing more sun during the winter months.



Roof Average lux: 1450

Openings Average lux: 650

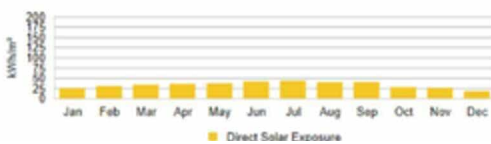
Programs (behind the wall): 350

Roof Average lux: 1450

I need to carefully evaluate both the quantity and placement of solar panels to optimize energy harnessed from the sun for my project. This involves determining how many panels are necessary and strategically positioning them to maximize efficiency, ensuring they effectively contribute to the energy needs of the design.

Openings Average lux: 650

I need to incorporate louvers and partially enclose areas around the planned openings to regulate the amount of sunlight entering those spaces. This approach will allow me to maintain a thoughtful balance, ensuring that each program receives an appropriate and comfortable amount of natural light.



SOLAR IRRADIANCE:



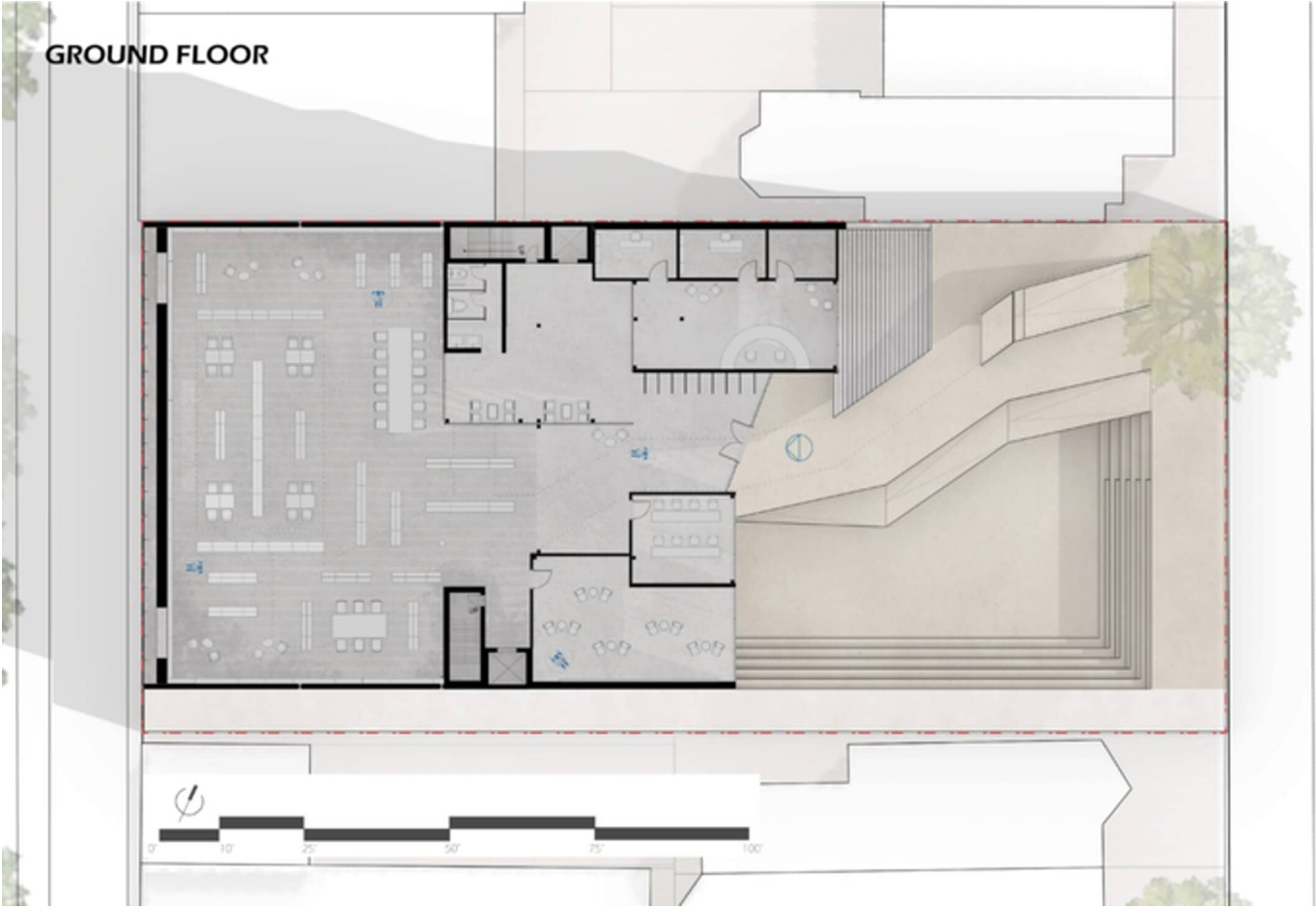
SOLAR PANEL CALC:

Average lux per year: 3000
 Average lux value per month: 3000/12: 250kWh
 Average lux value per day: 250/30: 8.3
 Solar panel size: 3x5
 Average energy from solar panel: 1.25kWh
 Total solar panels needed: 8.3/1.25: 6.6
 7 SOLAR PANELS

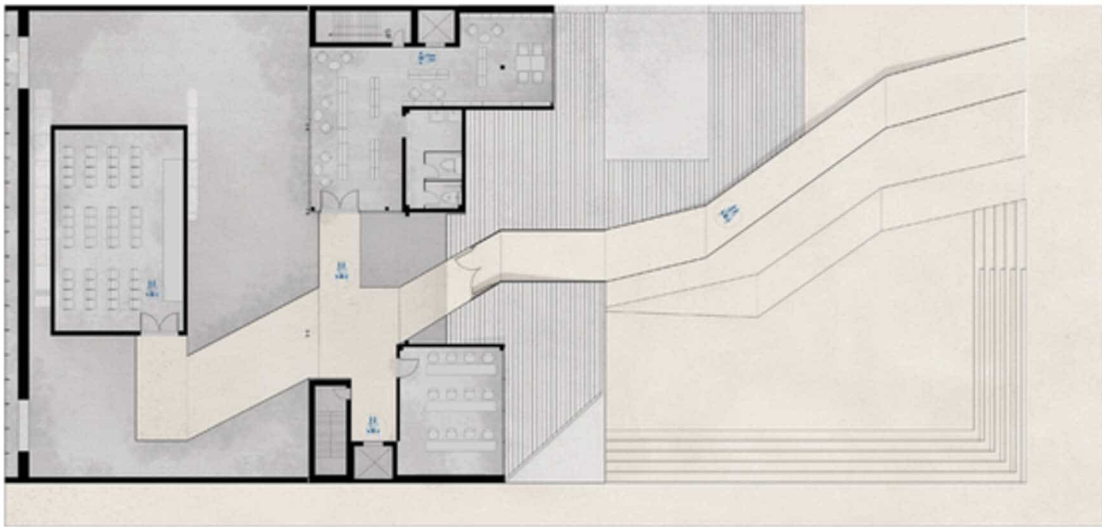
7 SOLAR PANELS



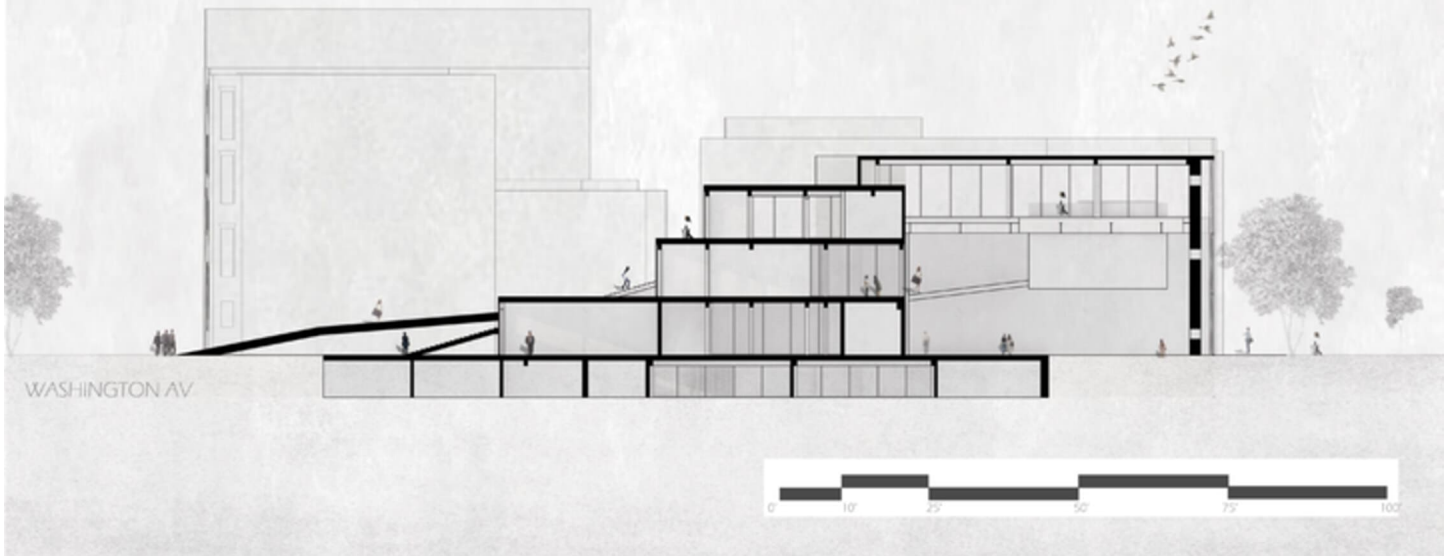
GROUND FLOOR



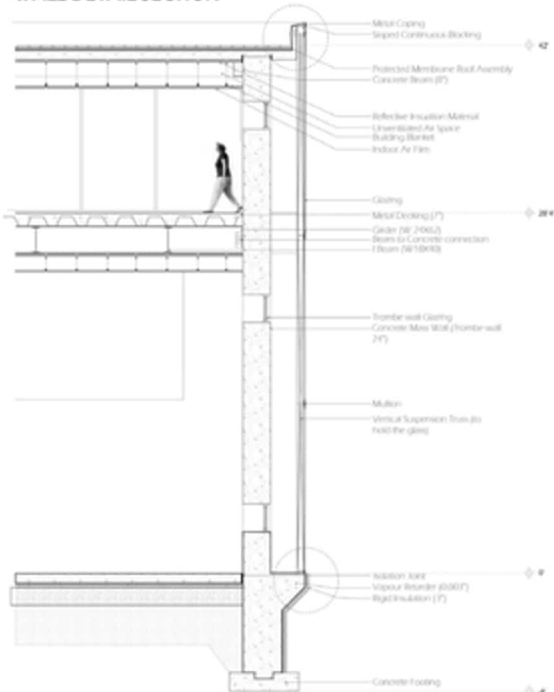
SECOND FLOOR



SECTION (Washington Av)
1/16" = 1'0"



WALL DETAIL SECTION

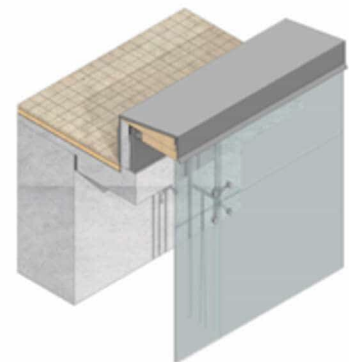


PARTIAL ELEVATION DETAIL

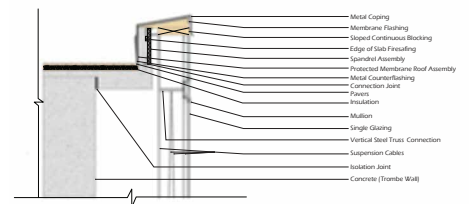


PARAPET DETAIL

PARAPET AXONOMETRIC DETAIL



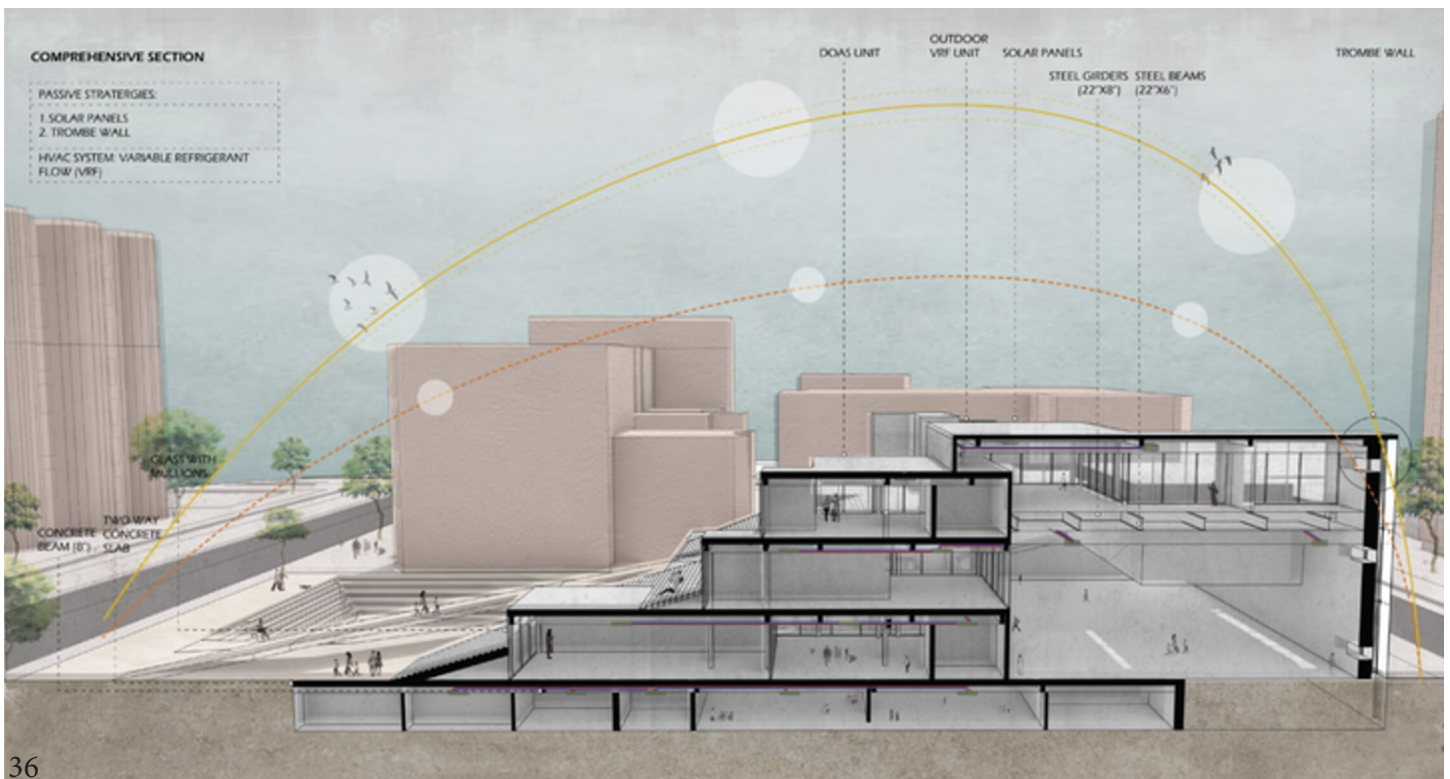
PARAPET SECTION DETAIL - 3/4 SCALE



EXPLODED DRAWING

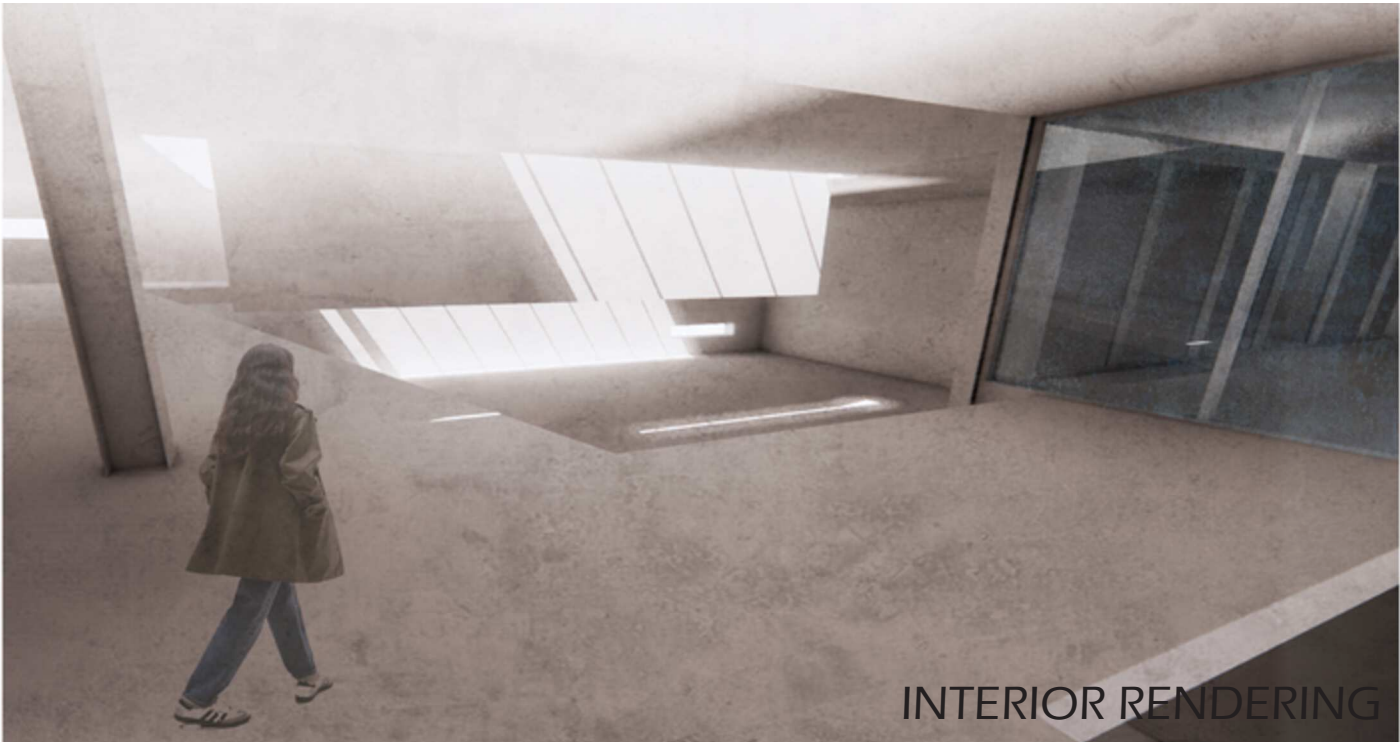


COMPREHENSIVE SECTION





EXTERIOR RENDERING

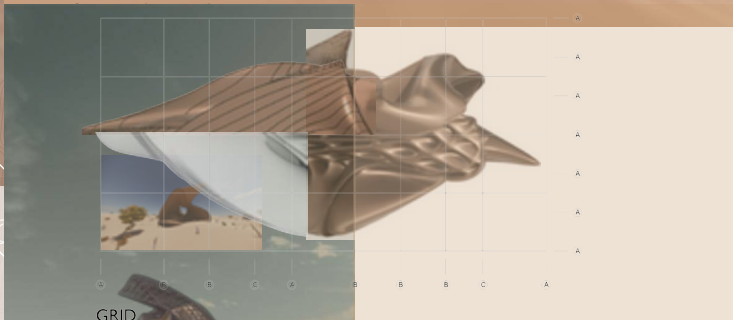


INTERIOR RENDERING

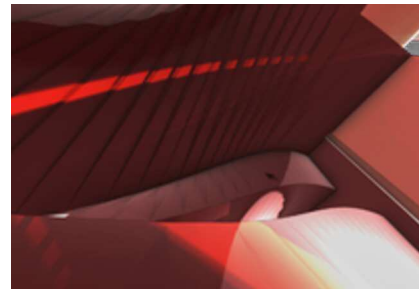
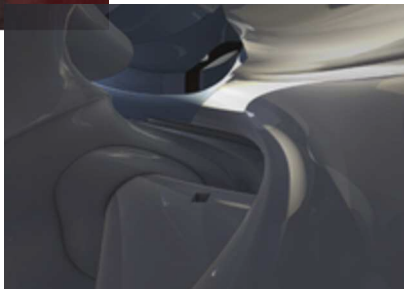
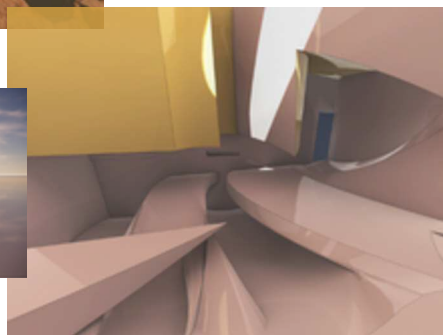
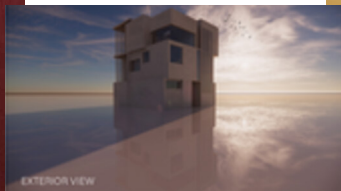
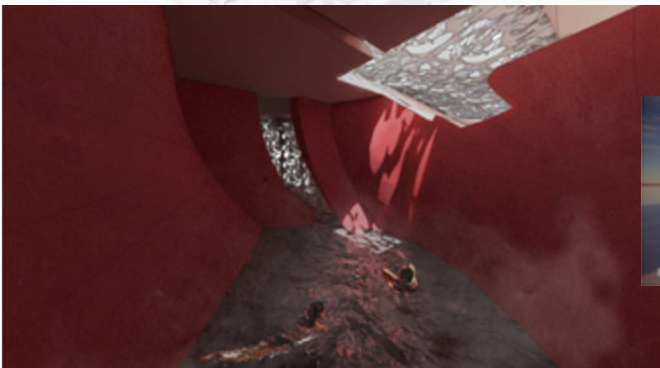
GRAPHICAL REPRESENTATION



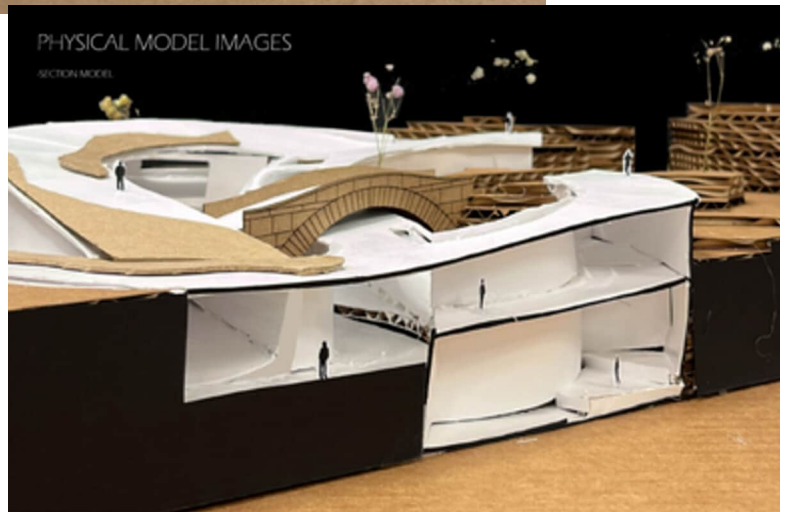
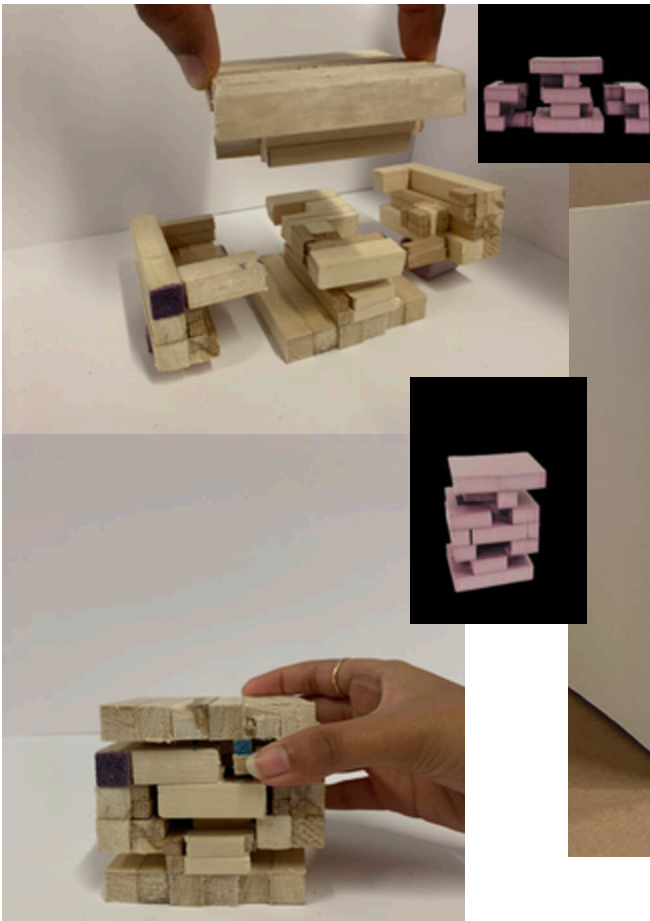
PAVILION EXPLODED



PERIPHERAL VIEW DIAGRAM



MODEL IMAGES



THANKYOU