JERRY SCHMIT

Master of Architecture Portfolio
Columbia GSAPP
Spring 2025

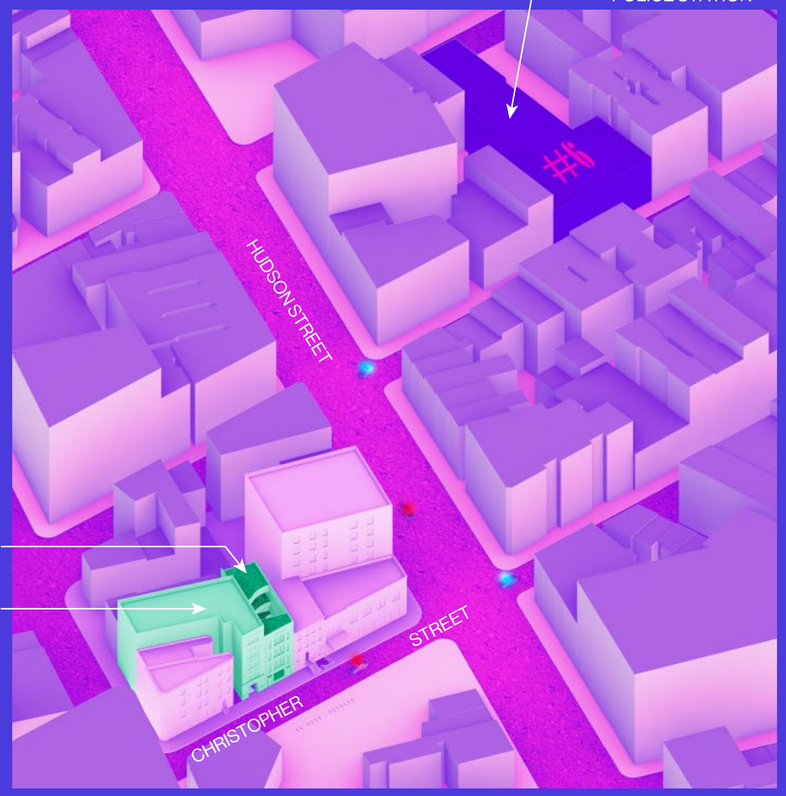
CORE I:

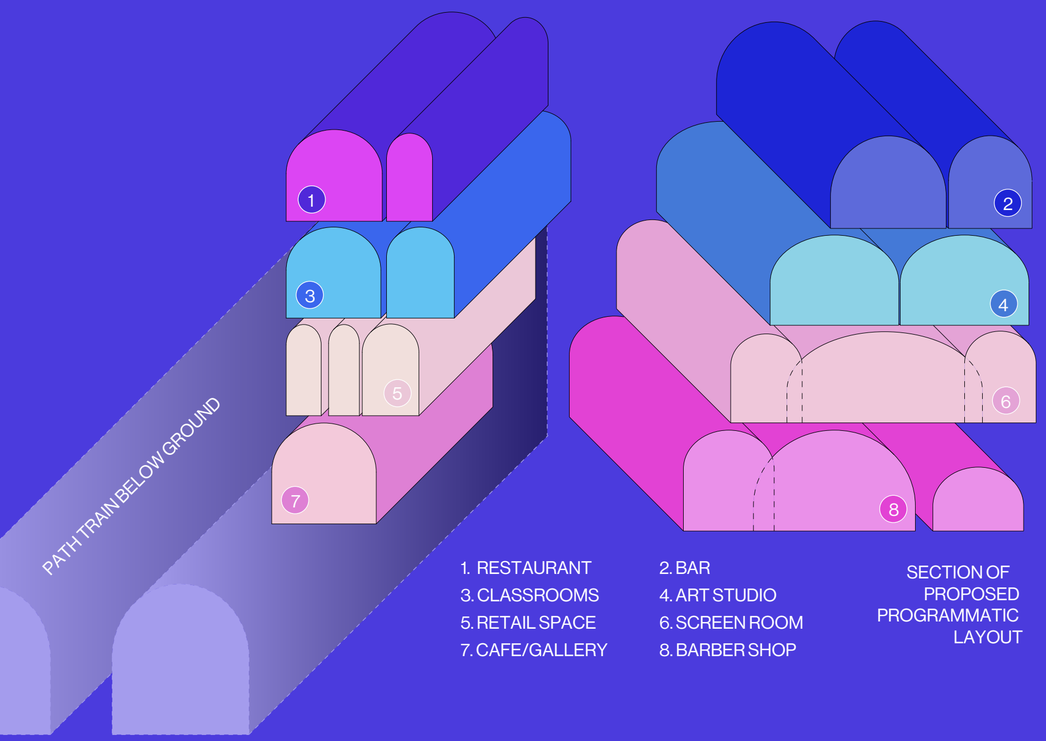
• RE-INSTATION

• CRITIC: AMINA BLACKSHER

• FALL 2022

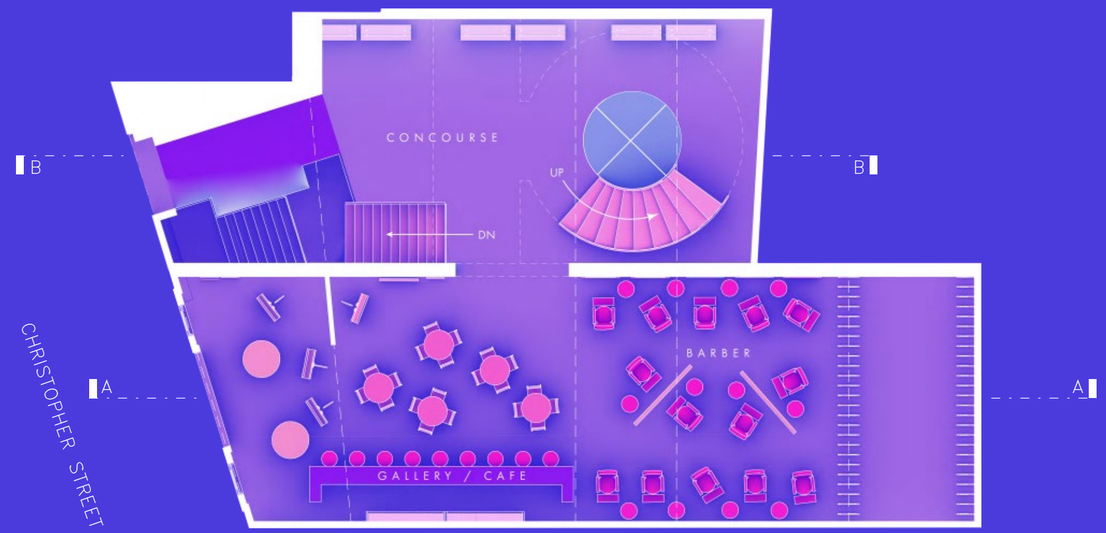
REINSTATION



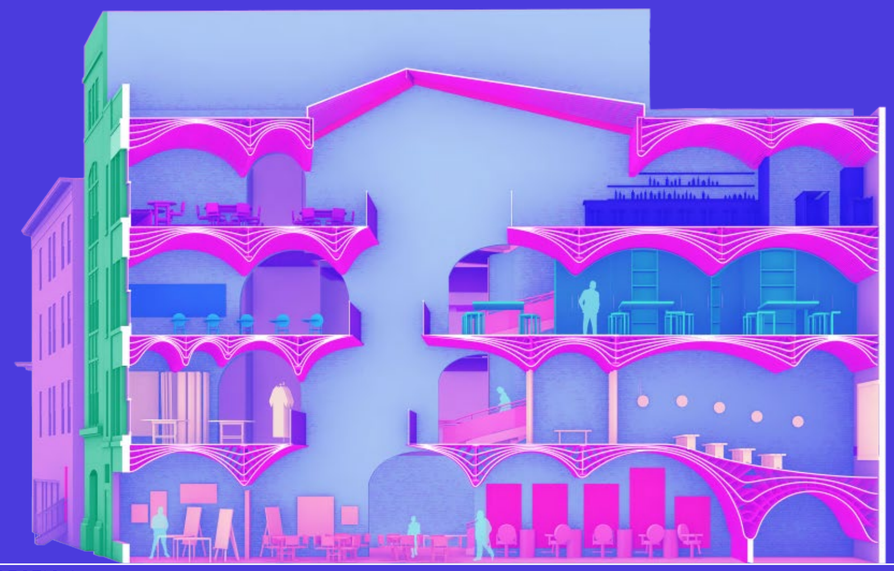


1. RESTAURANT
2. BAR
3. CLASSROOMS
4. ART STUDIO
5. RETAIL SPACE
6. SCREEN ROOM
7. CAFE/GALLERY
8. BARBER SHOP

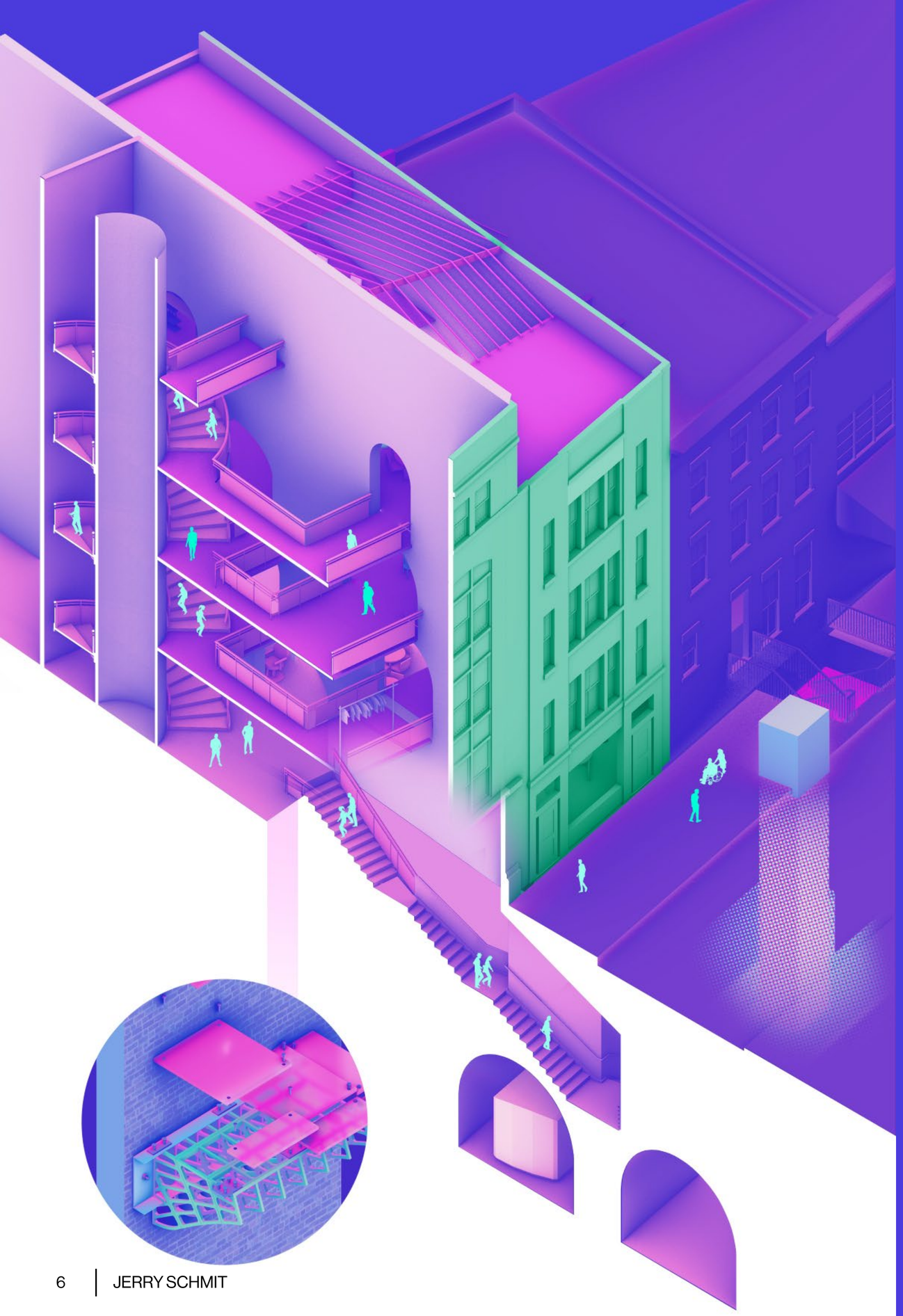
SECTION OF
PROPOSED
PROGRAMMATIC
LAYOUT



GROUND FLOOR PLAN



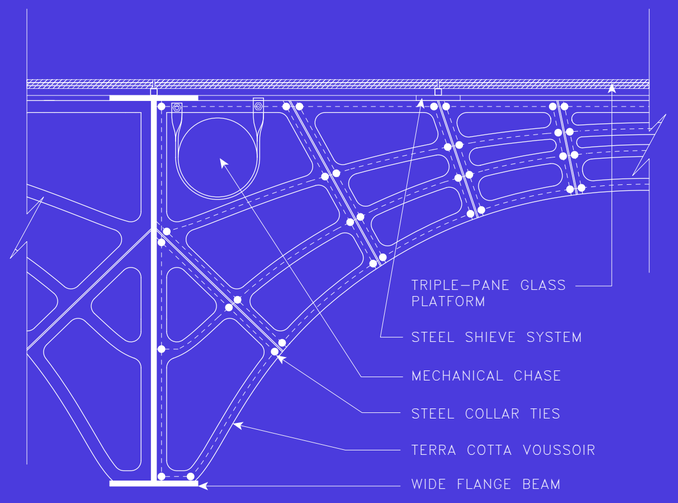
SECTION A–A

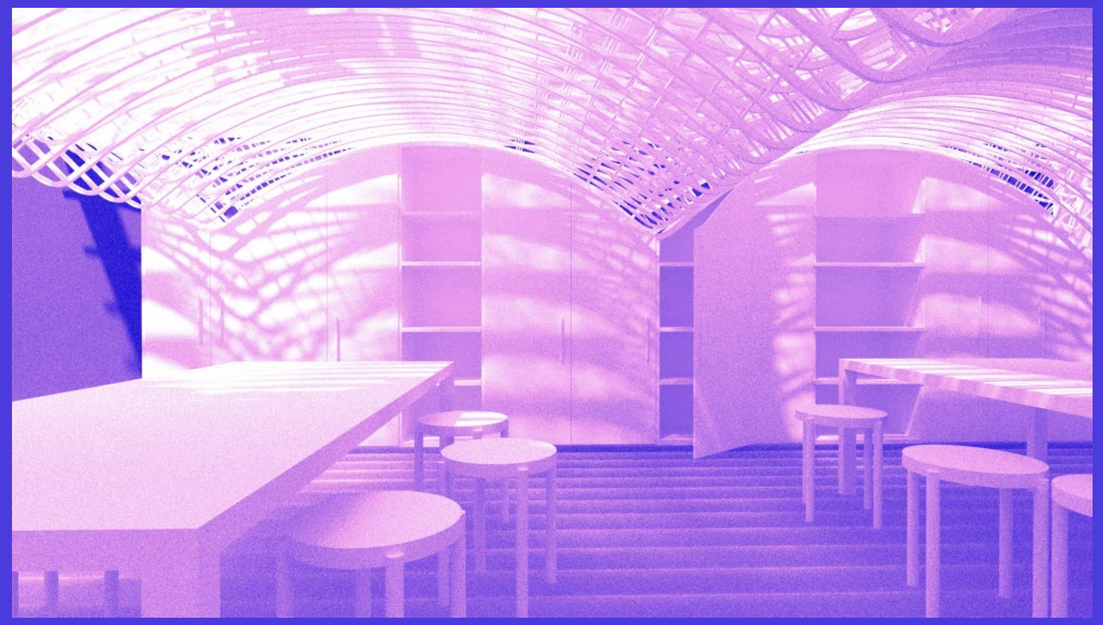


ENTRY FROM PATH STAIRWAY

REINSTATED BAR

NEW STREET ENTRANCE

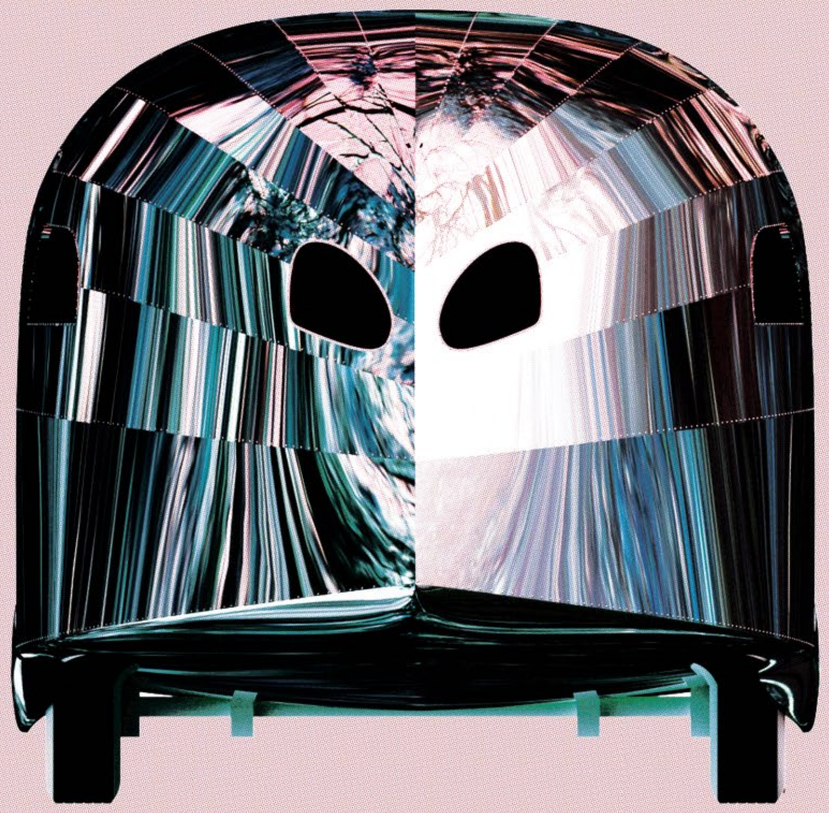




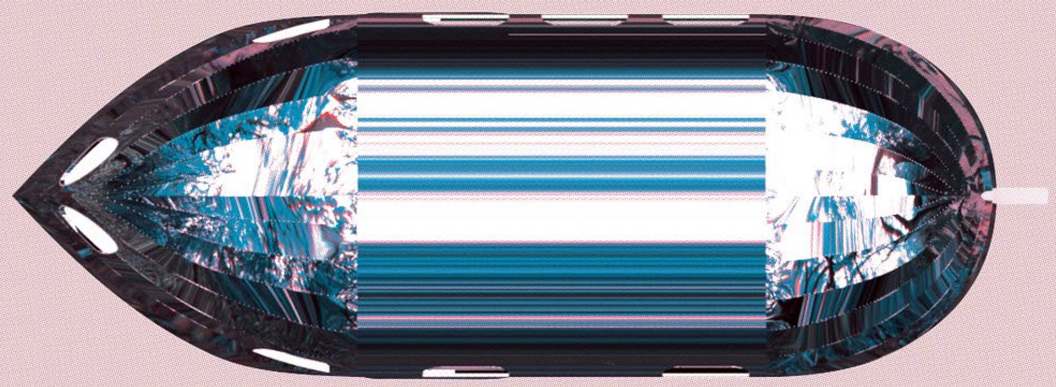
ARTISTS' STUDIO, CEILING AND CASEWORK DETAIL – LEVEL 3

ARCHITECTURAL DRAWING & REPRESENTATION I

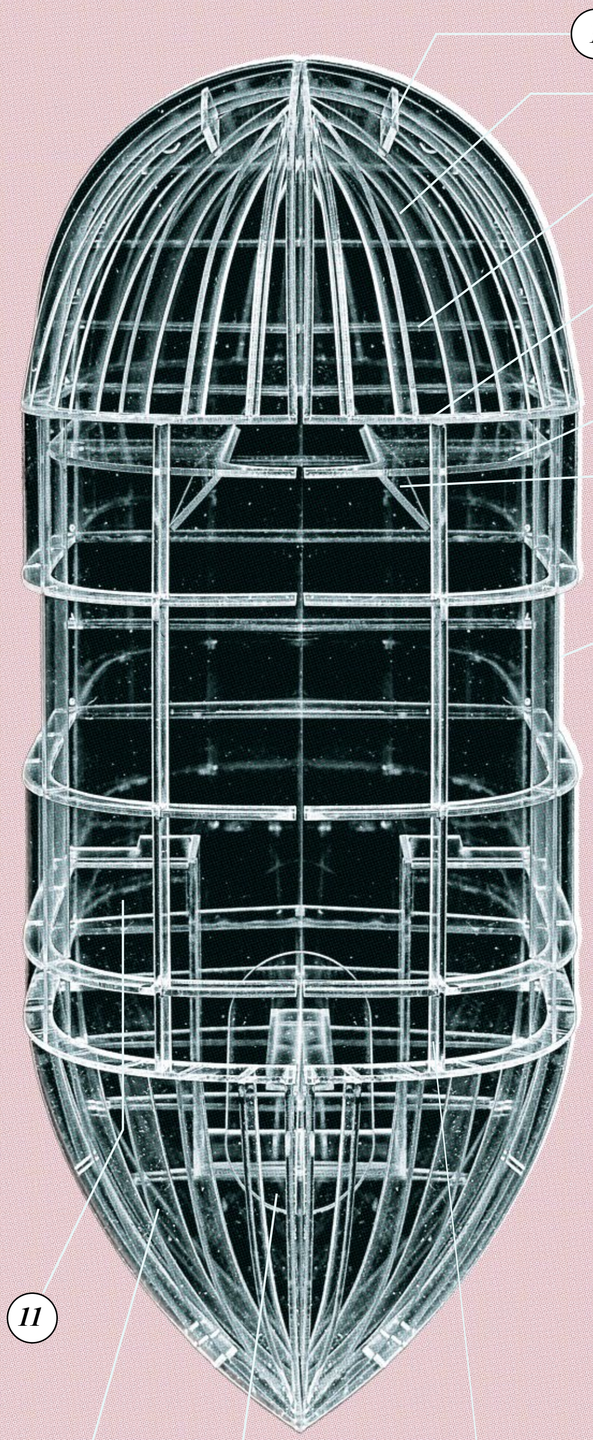
PROFESSOR RAY WANG - THE 1936 AIRSTREAM
FALL 2022



ELEVATION

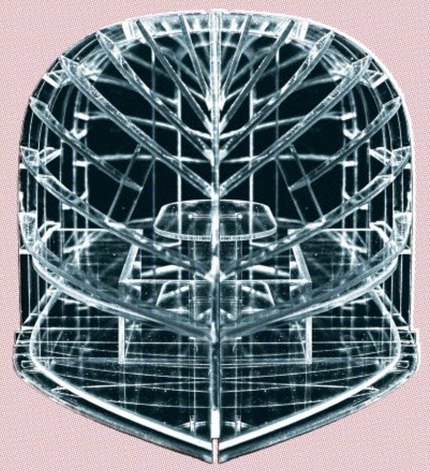


ROOF PLAN



LEGEND

1. *port window framing*
2. *windward supports*
3. *floor joist*
4. *barrel frame junction*
5. *interior partition*
6. *french doors*
7. *entry*
8. *lateral bridging*
9. *built-in table*
10. *leeward supports*
11. *built-in seating*



FRAMING PLAN

ARCHITECTURAL DRAWING & REPRESENTATION II

PROFESSOR LORENZO VILLAGGI
SPRING 2023

INPUT:

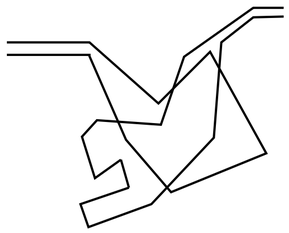
POLYLINES

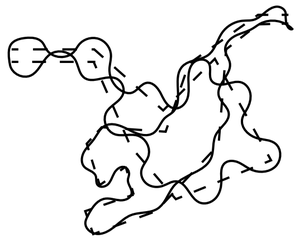
MODIFIED BY:

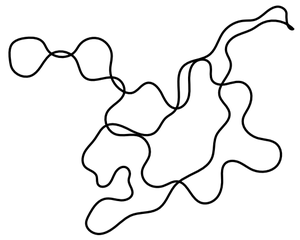
CULEBRA PLUGIN: WEAVING PATHS ARE GENERATED BY A **CREEPER ENGINE** WHICH DRIVES WANDERING PATHS WITHIN A PRE–DEFINED RADIUS OF THE POLYLINE INPUT.

OUTPUT:

PATHS OF CIRCULATION IN PUBLIC SPACES



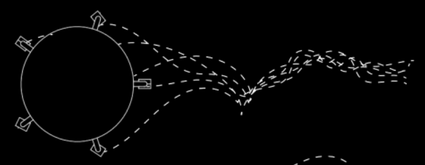




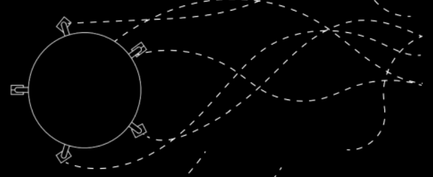
This project aims to speculate on the paths of circulation made by pedestrians in public places in New York. Three sites were selected for study, one being in interior privately-owned public space. In creating this machine to speculate on human movement, it was important for the end product to be able to show not only horizontal movement, but also vertical movement through three-dimensional space. A grasshopper plugin Culebra was used to for its creeper engine in order to spawn a set of points, drive these points along pre-determined curves, and to vary their pathways so as to simulate multitude of autonomies that humans are.

ASSIGNMENT II

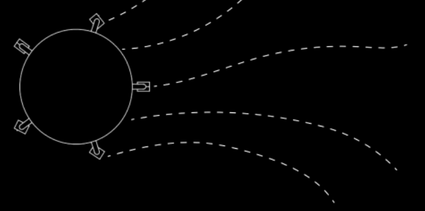
Cohesion_+0.79
Max_Speed_+0.12

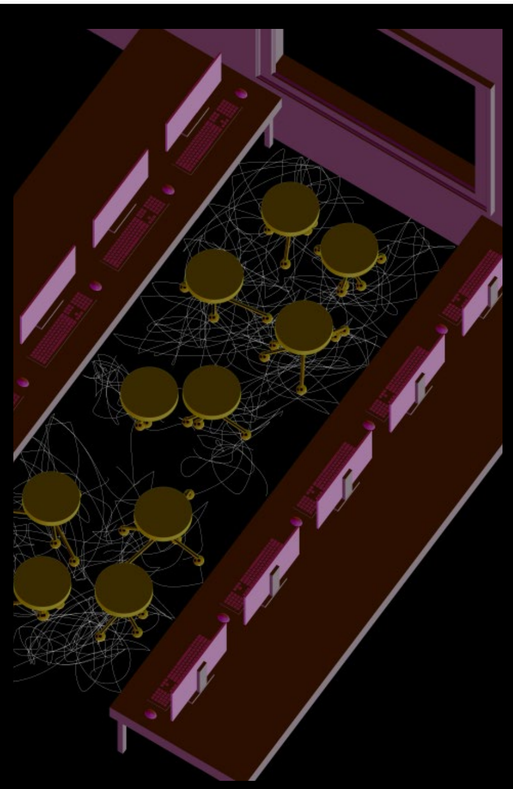


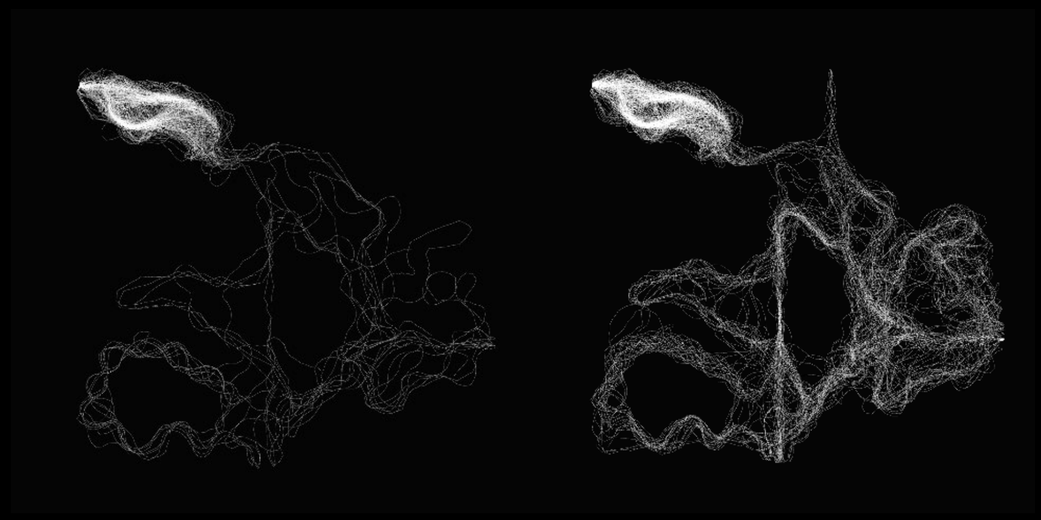
Cohesion_+0.43
Max_Speed_+0.35

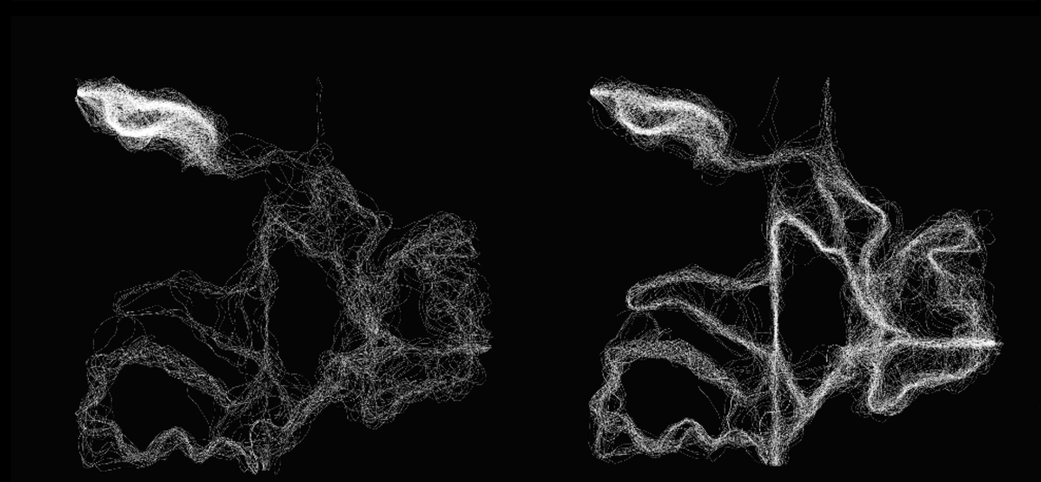


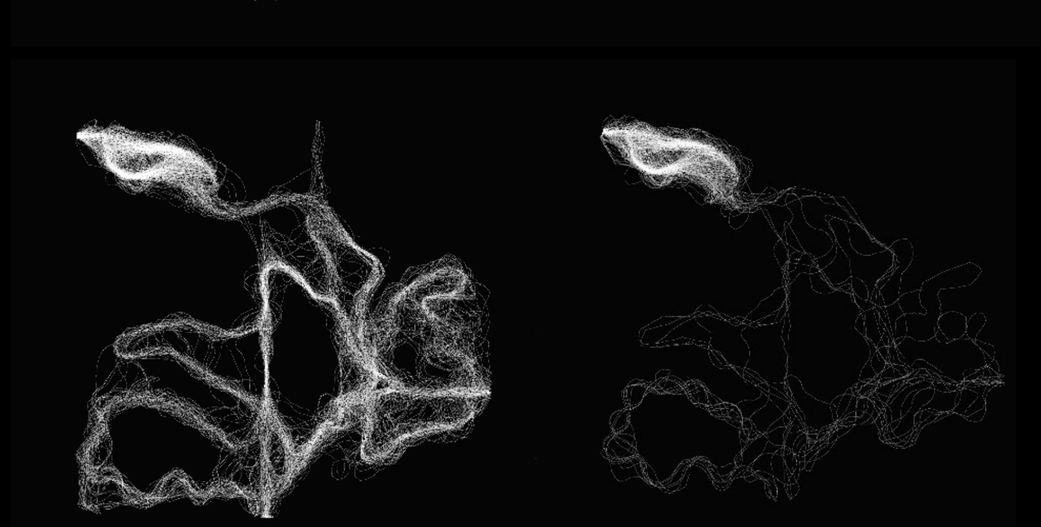
Cohesion_+0.08
Max_Speed_+0.50

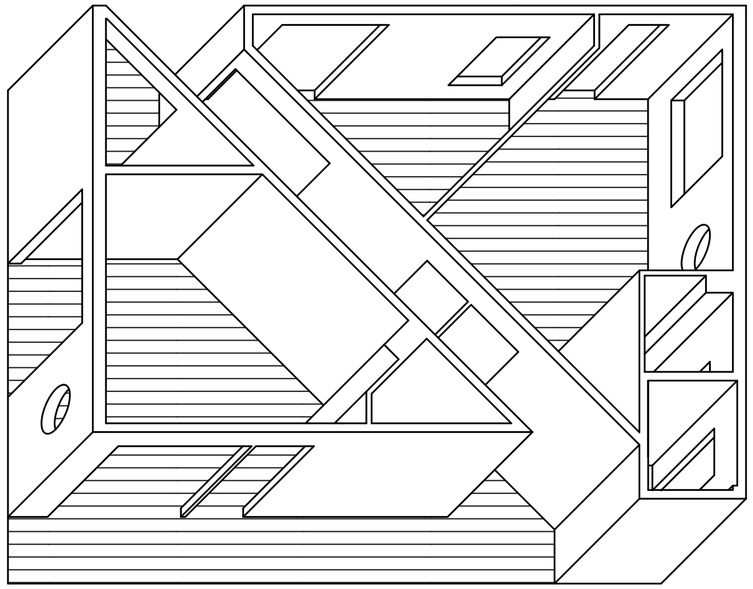


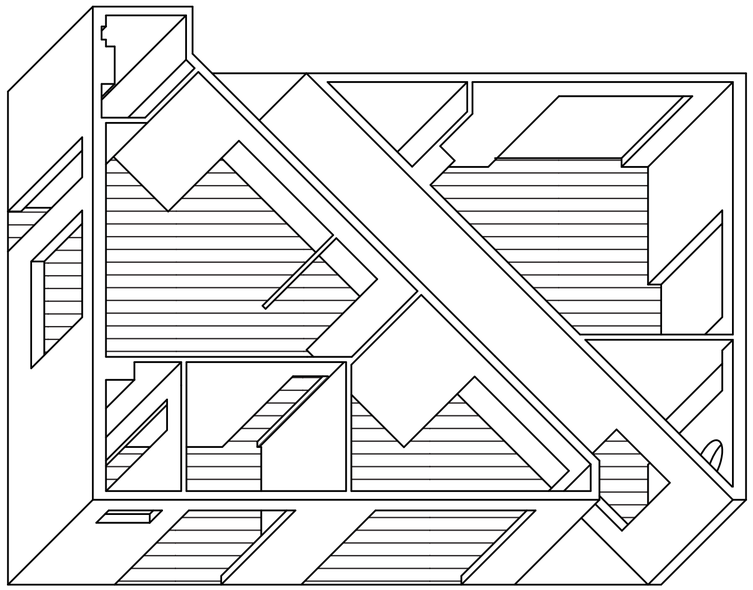




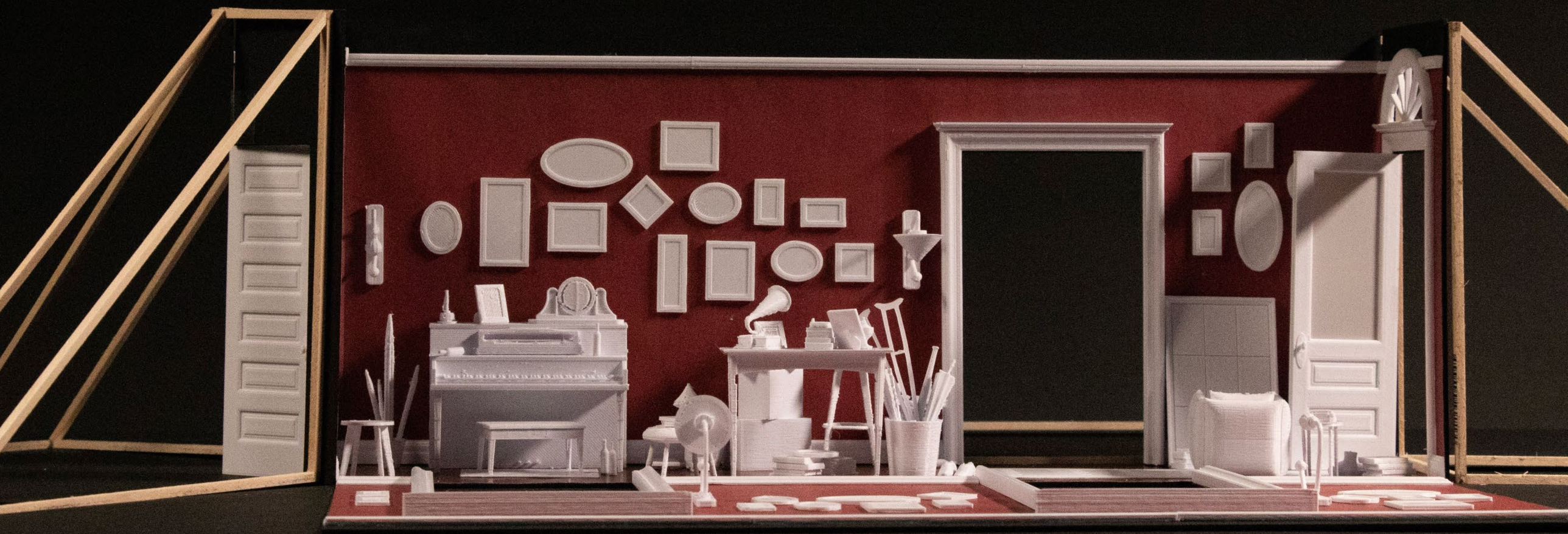


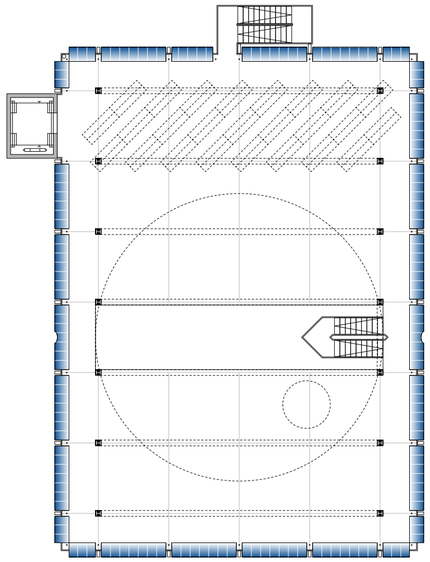


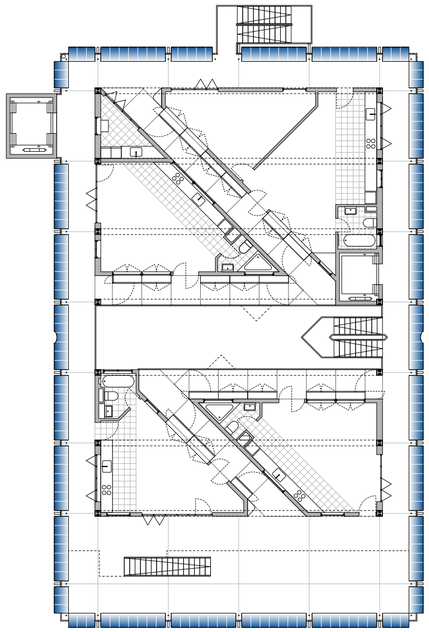


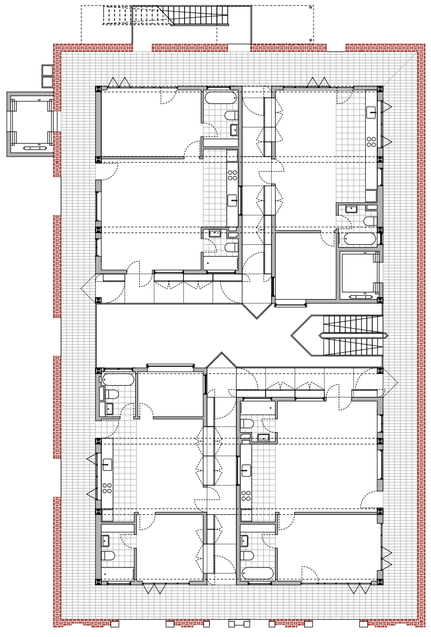


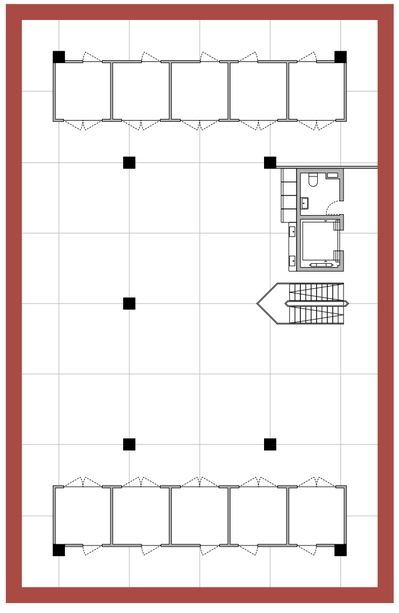
CORE III:
• VACANT HOUSE
• CRITIC: HILARY SAMPLE
• PARTNER: XINKAI (DJ) FAN
• FALL 2023

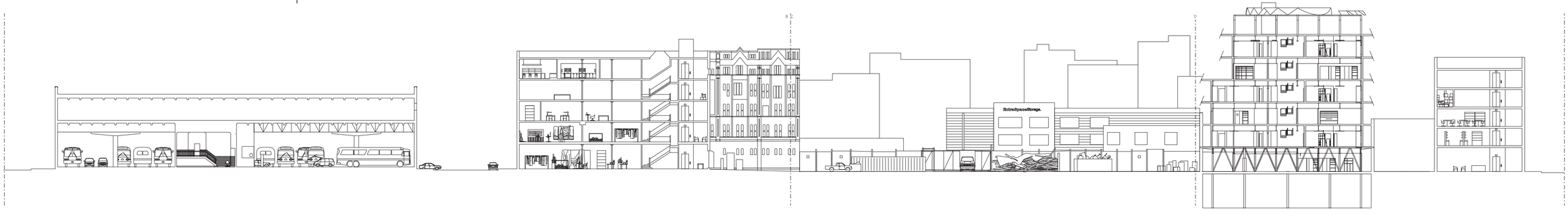


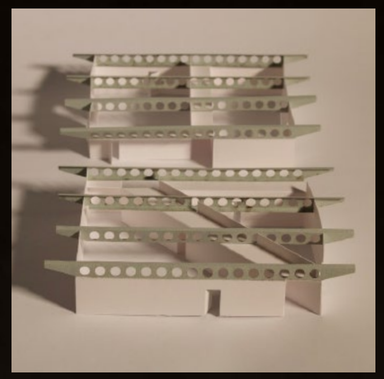
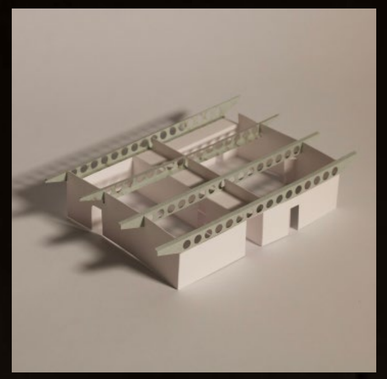
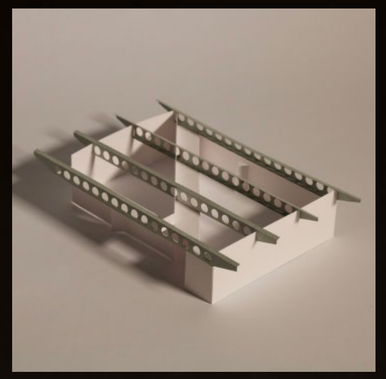


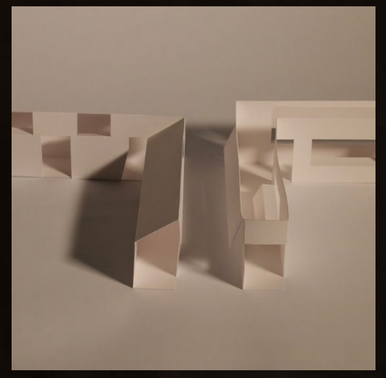


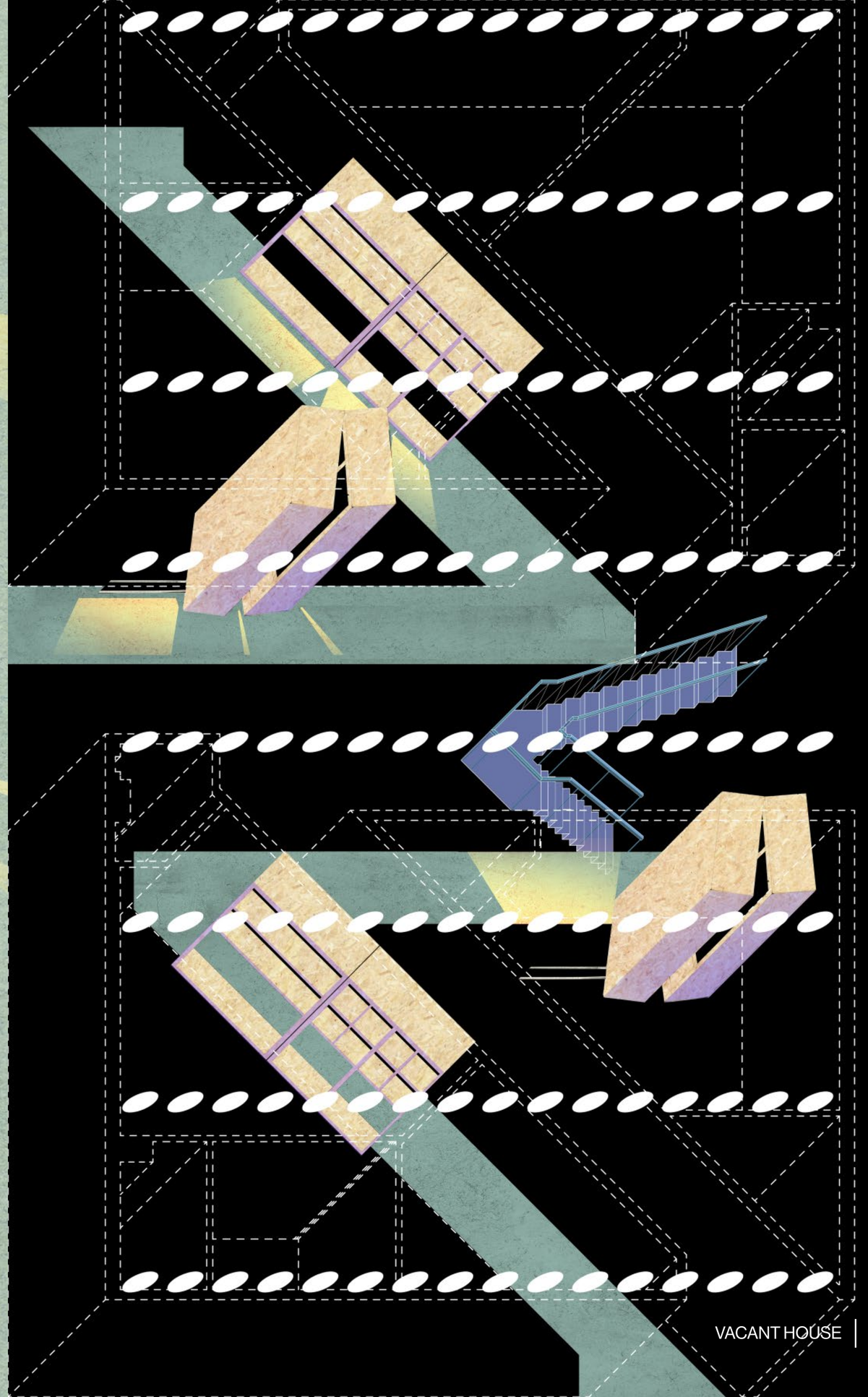


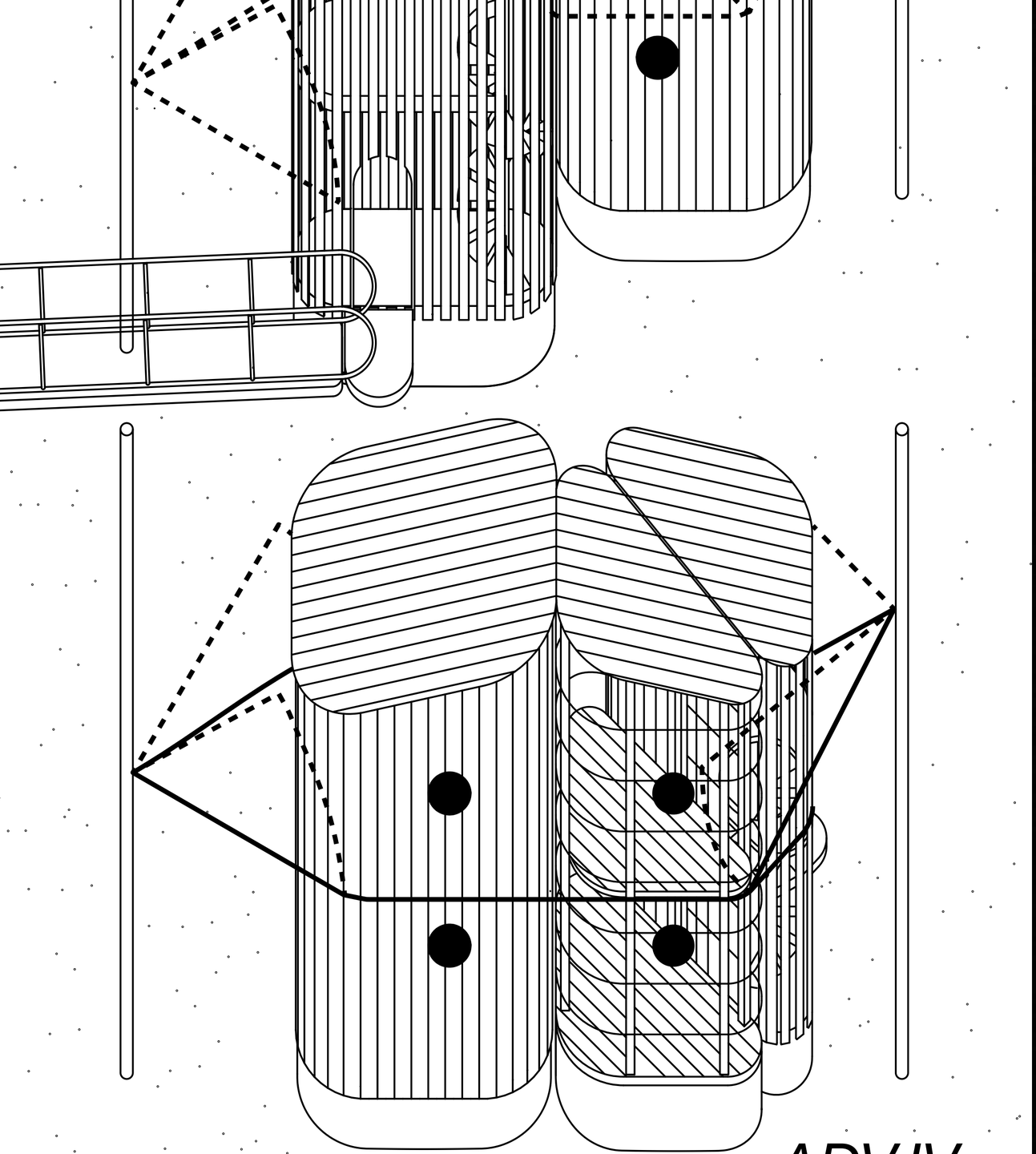




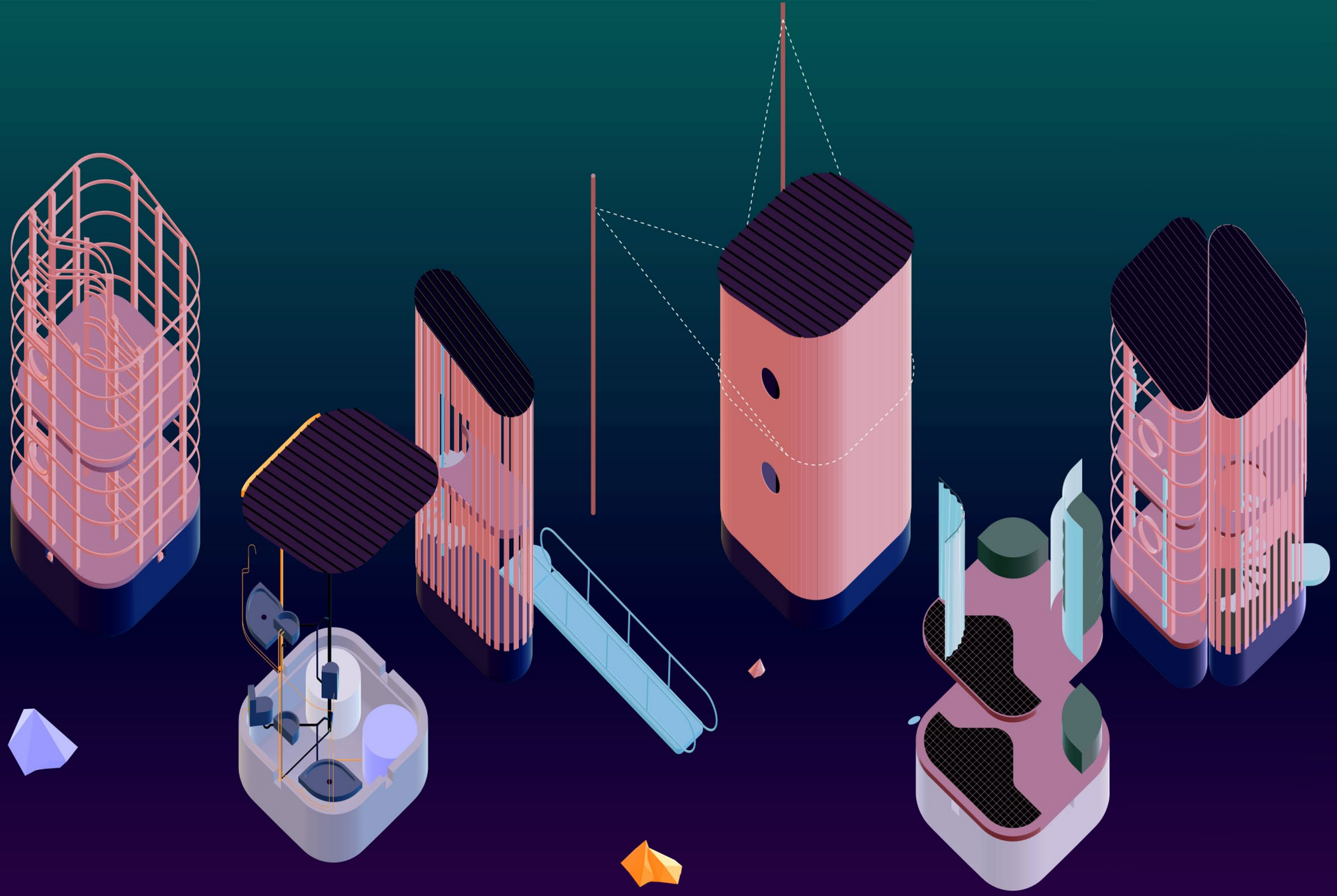




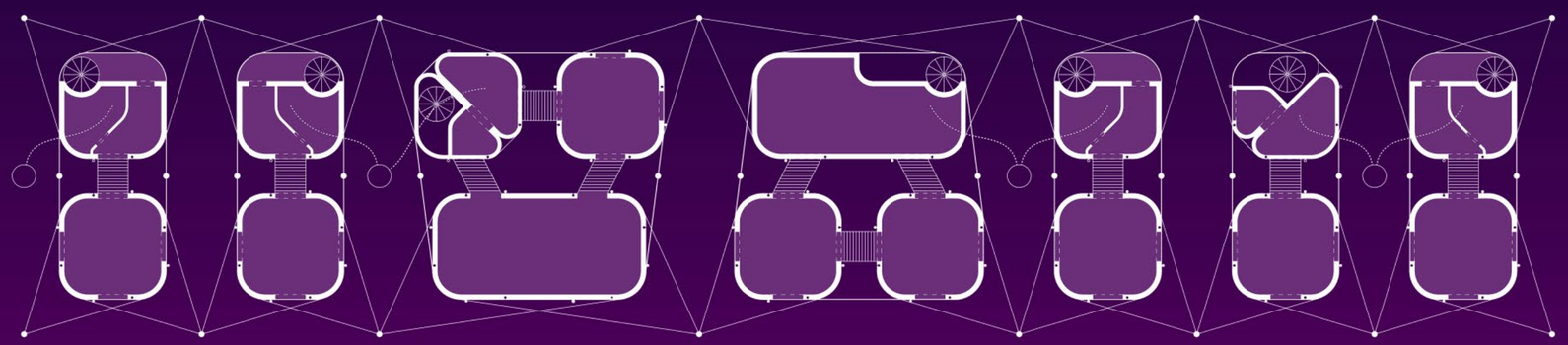





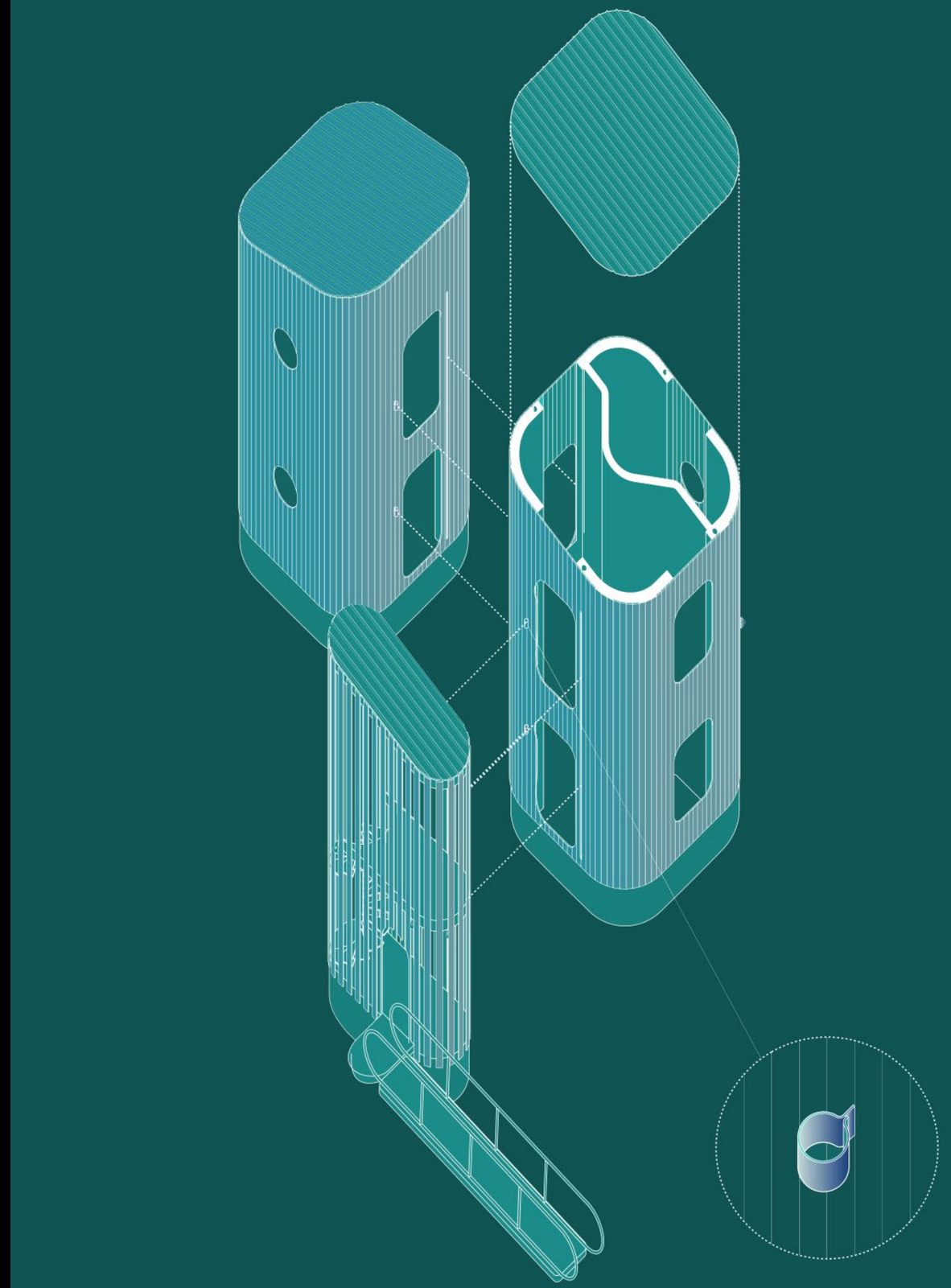
ADV IV:
• MONTAUK BLUE HOTEL
• CRITIC: ROBERT MARINO
• SPRING 2024

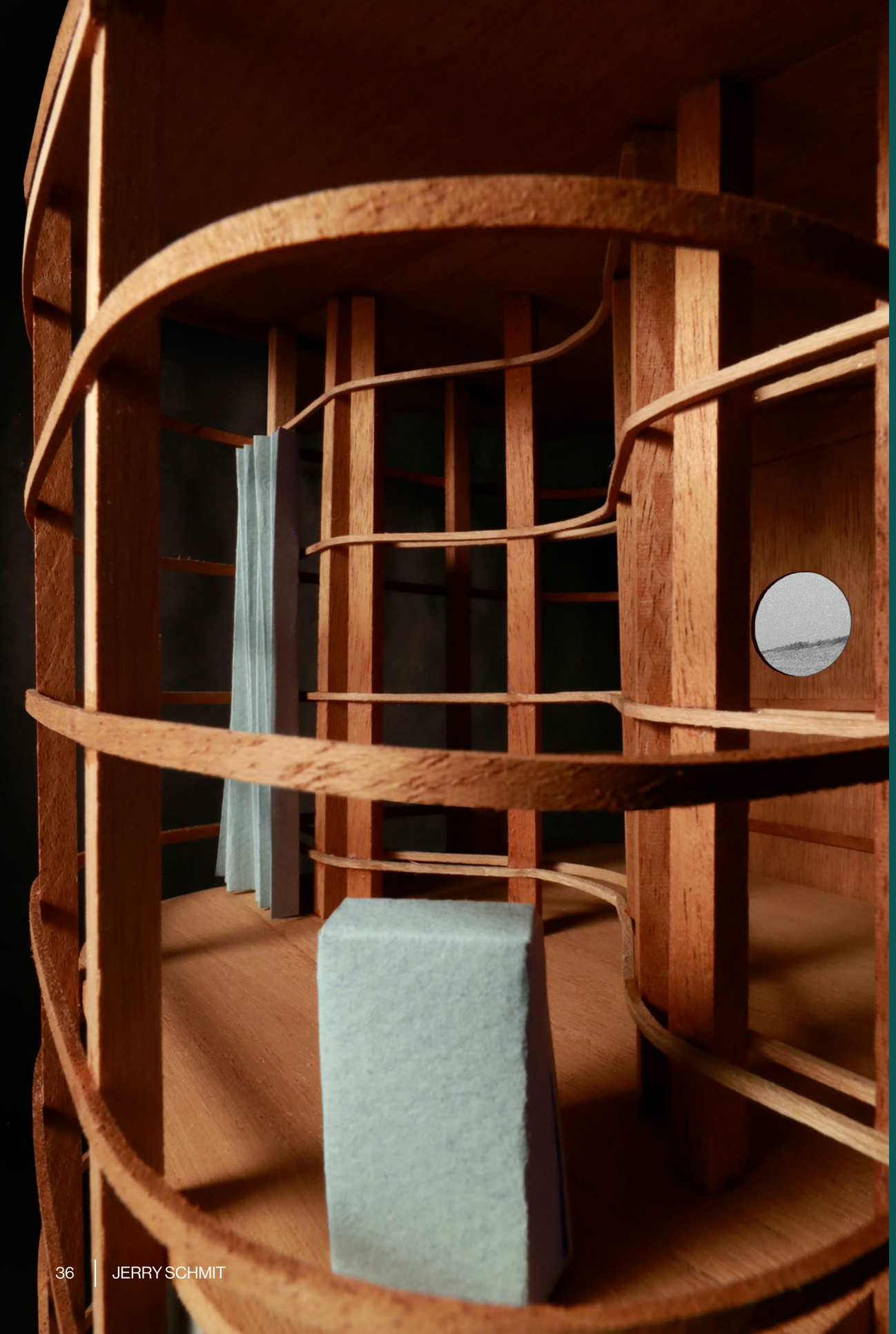


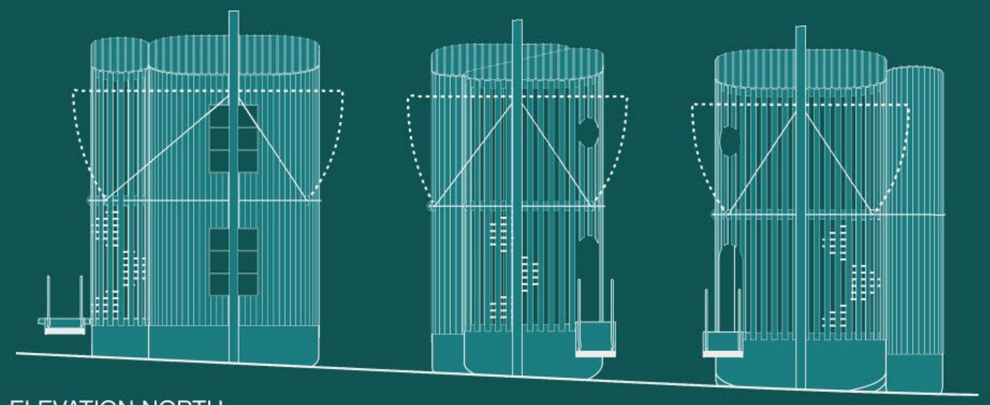


The current Montauk Blue Hotel was built in 1981 following the erasure of the naturally-occurring dunes along the southern shores of Montauk. Like many of its neighboring buildings that have replaced the natural protective dunes, the Montauk Blue's precarious siting has proven a perpetual challenge for the long-term sustainability of the facility. Increasingly, eroding shores and a series of failed attempts to curtail them have threatened to completely undermine the building's foundations, along with the community's confidence of a conceivable solution to this environmental challenge.

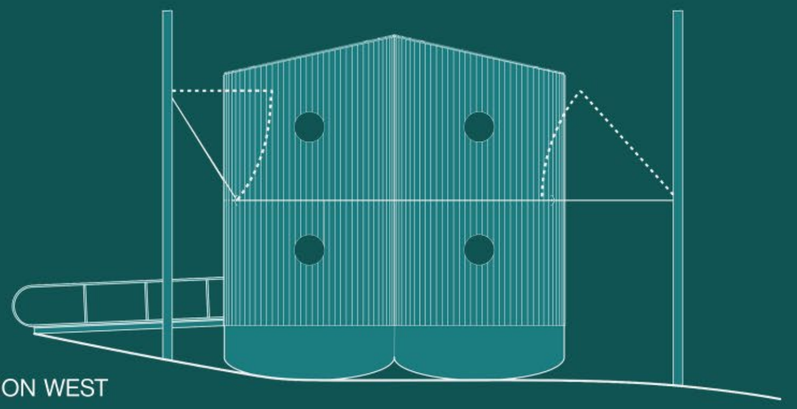
Acknowledging the resistance of shore front property owners to relinquish their tracts and relocate their business further up shore, this project proposes a replacement for the hotel that subdivides the building into a series of buoyant modules. Drawing inspiration from the vessels moored in Montauk harbor to the north of the town, this project utilizes a tensile system of moors and fixed steel posts to give the complex the ability to float in times of a tidal surge. Through this, the building aims to largely eliminate its reliance on stable earth, upon which the existing hotel's foundations depend. The bundling of modules, combined with a network of lateral cables provides lateral stability in both a wet and dry field condition.



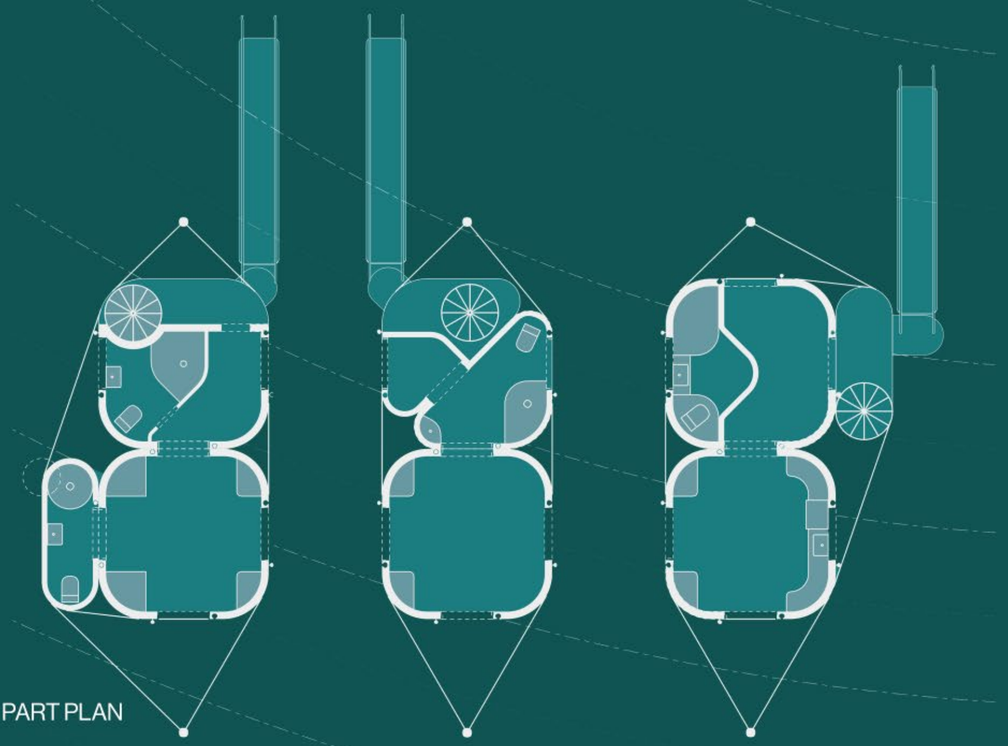




ELEVATION NORTH

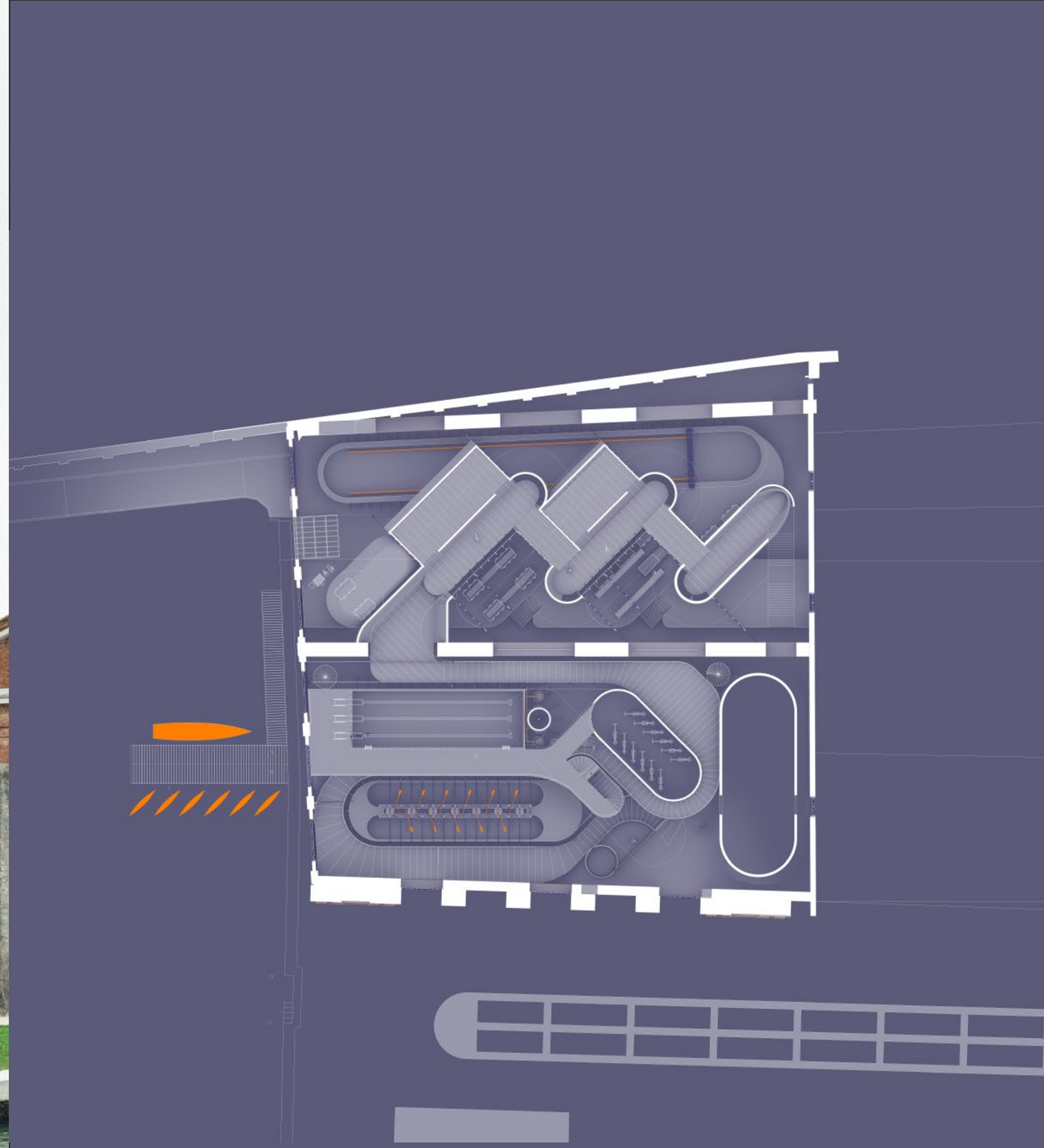


ELEVATION WEST

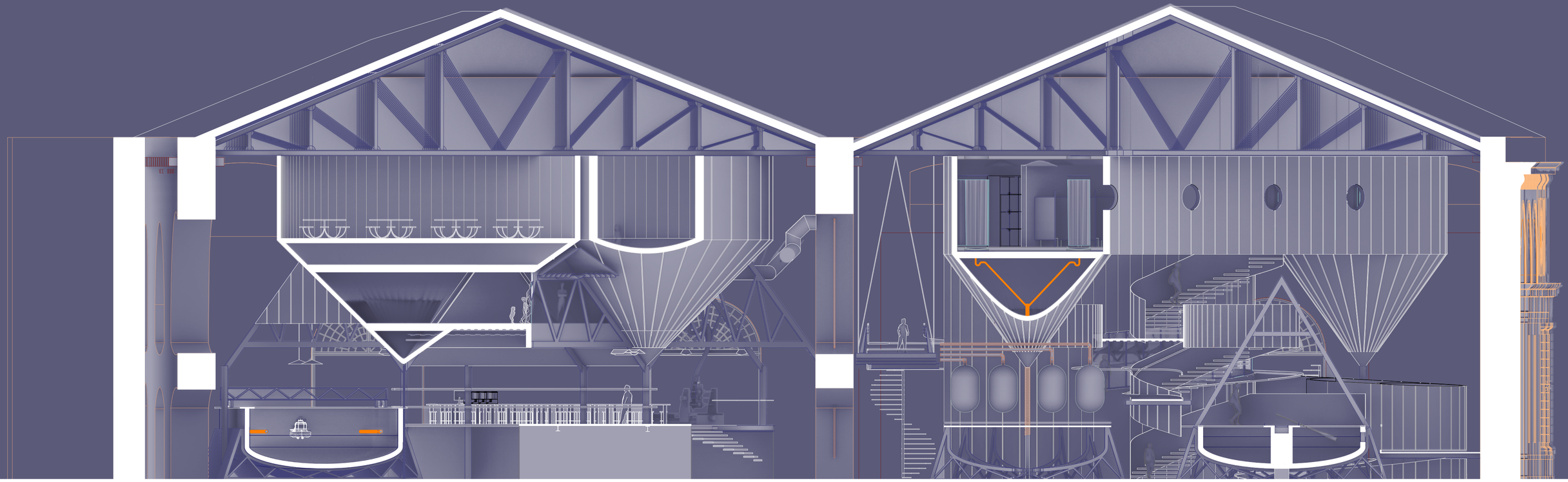


PART PLAN

ADV V:
• VENICE CENTER FOR MARITIME TRAINING
• FALL 2024
CRITICS:
• JORGE OTERO-PAILOS
• MARK RAKATANSKY



GROUND FLOOR PLAN



TRANSVERSE SECTION

The Venice Center for Maritime Training pays homage to the history of the Arsenale and the rich history of the Venetian Navy. This project proposes the insertion of the training facility within the Galleazze de Arsenale, a warehouse in which Venetian galley ships were assembled. Drawing inspiration from the rowing teams that powered the Venetian naval vessels, this project proposes a training center for maritime students in which activities like rowing, diving, vessel engine repair, and vessel model workshops are provided to help train a new generation of Venetian maritime workers. This program acknowledges the heightened presence and volume of tourism in Venice that threatens all of its other economies.

The project takes interest in the capture and reuse of waste heat as a by product of the welding and fabrication shops. It uses this waste heat to preheat the water for the diving pool and rowing tanks. Formally, the interior volumes reflect this collection of water and heat. The locker rooms are located in a volume suspeded at the third level. This allows for heat to be collected from its wastewater. Additionally, given the pressing climate challenges that the world and Venice face, all of the occupied spaces are suspeded at least eight feet from grade to prevent damage to interior spaces. The building is essentially floodable.

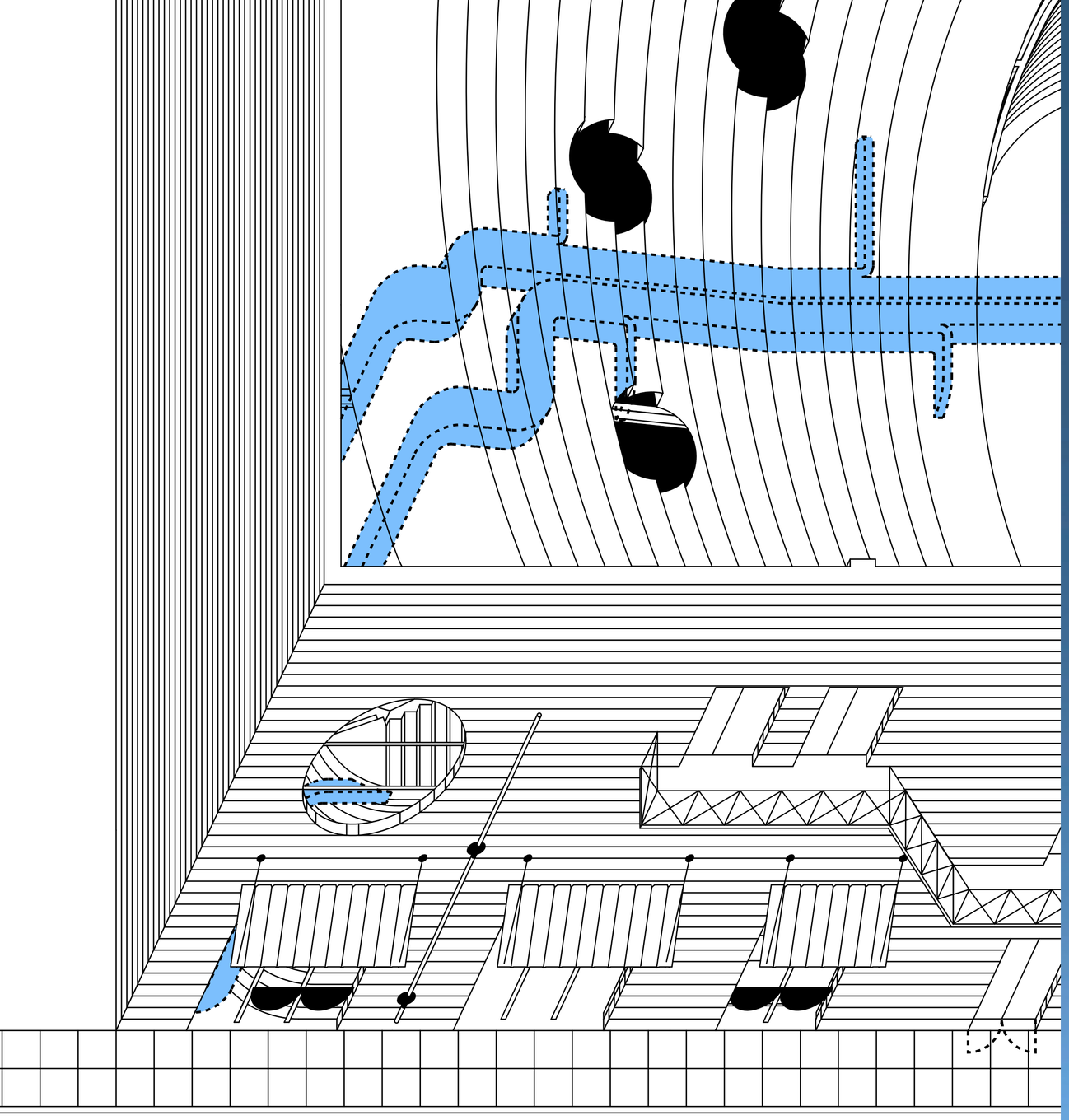
INTERIOR PERSPECTIVE OF TOWING TANK

INTERIOR PERSPECTIVE OF VISITOR WALKWAY

INTERIOR PERSPECTIVE OF LAP POOL

INTERIOR PERSPECTIVE SHOWING ROWING TANK ENCIRCLED BY VISITOR WALKWAY

INTERIOR PERSPECTIVE SHOWING ROWING TANK ENCIRCLED BY VISITOR WALKWAY



ADV VI:

- *HAMILTON COOLING CENTER*
- *SPRING 2025*
- *CRITIC: HILARY SAMPLE*

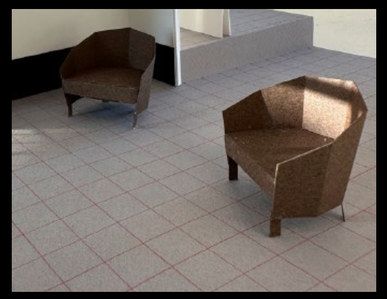
Maison de Verre was commissioned by Dr. Jean Dalsace in 1928 and was completed in 1932 in Paris. The original plan called for the demolition of the existing Parisian townhouse to make way for Dalsace's new residence and gynecological clinic. One tenant however refused to vacate their apartment, forcing the new clinic to be constructed beneath the existing residence.[1]

The building is ventilated through a combination of natural and mechanical ventilation. A system of ductwork is fed through the basement and floor plenums of the building to supply hot air to the various clinic/living spaces in the dwelling.[2]

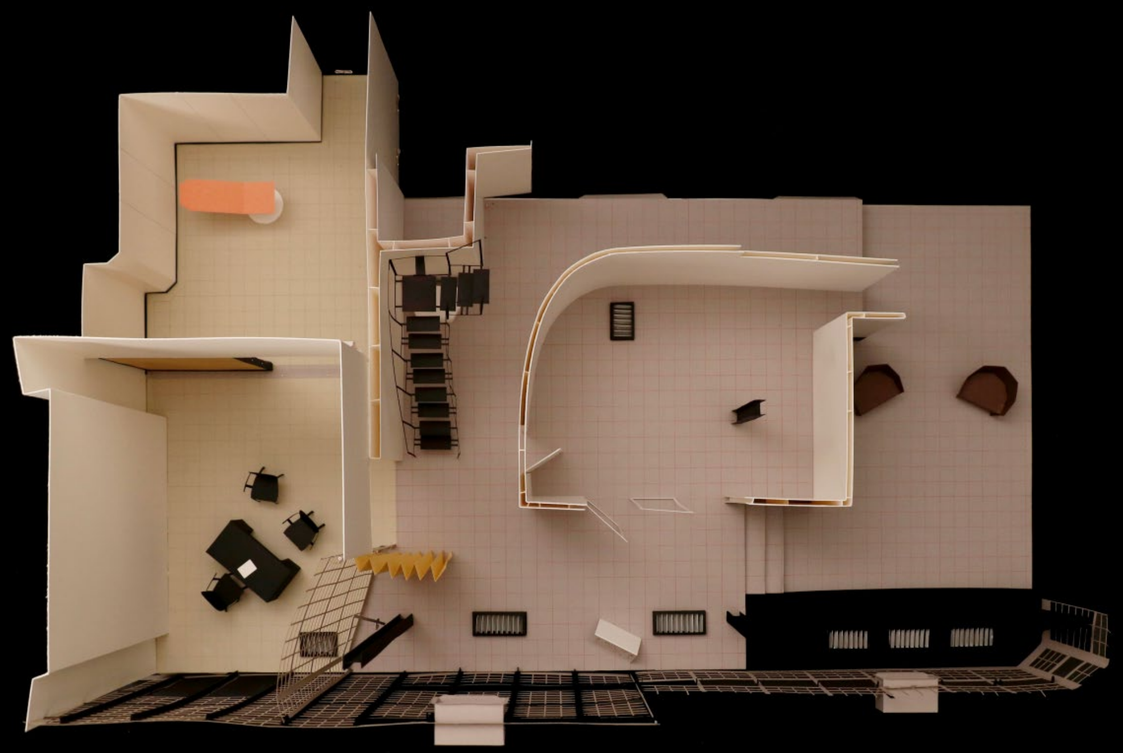
Dispersed throughout the glass block facade are a series of operable windows and louvers to supply fresh/cool air to the building, weather permitting. Brad Gellert, AIA, Will Slater, and Adam Bondor studied the Maison de Verre, aiming to determine whether such an expanse of glass could be used in a contemporary application, given increasingly stringent energy consumption restrictions, particularly in Europe.

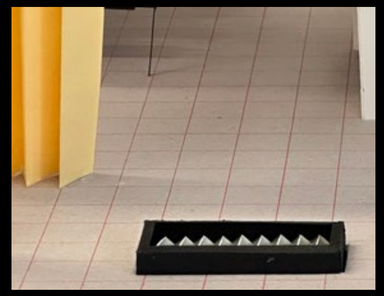
After determining the R-value of the prismatic tiles (0.9), the team underwent a digitial simulation using its current glazing system and a modified system using double-layered insulated glazing units.

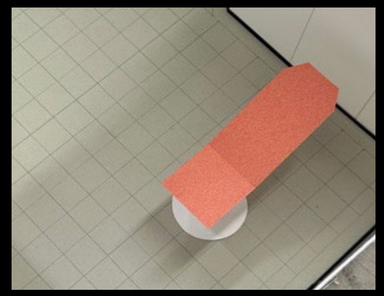
They concluded that the Maison de Verre could realistically be recreated with code-compliant energy performance given this modification to the glass screen along with the introduction of a variable refrigerant flow heat recovery system to leverage the building's solar heat gain from its extensive glass.

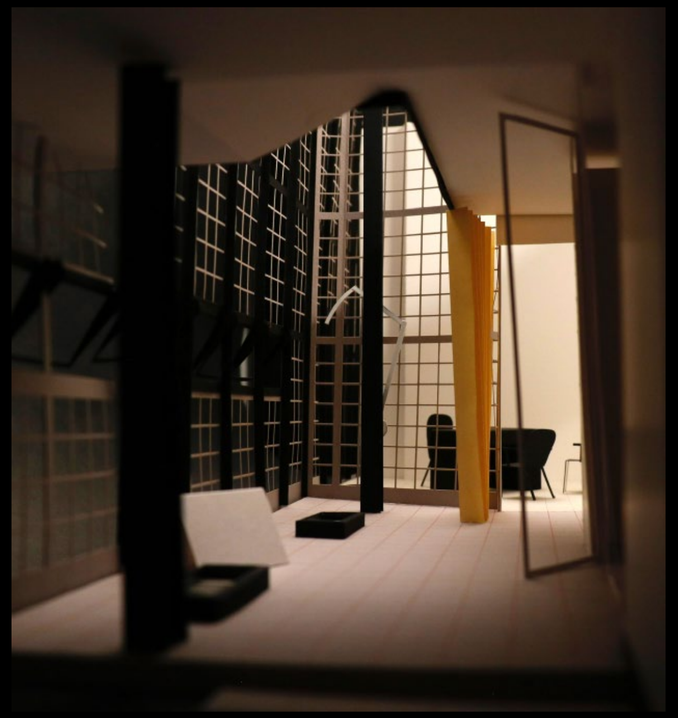


1 The Maison de Verre. Accessed January 20, 2025. http://architecture-history.org/architects/architects/CHAREAU/OBJ/1928-1931,%20Maison%20de%20Verre,%20Paris,%20FRANCE.html.
2 Gellert, Brad. "Blogs." The Maison de Verre, a Building for Our Time? Accessed January 20, 2025. https://network.aia.org/blogs/e-gellert/2017/09/27/a-building-for-our-time.
3 Ibid.









While New York City actively operates some 500 cooling centers to the public, they are not well known, and a number of factors dissude potential visitors from utilizing them.

These factors include differing desires between people of different age groups: elderly visitors are discouraged to visit when they see children playing loudly in them, and yearn for a quieter envrionment to stay cool in.[1]

Limited hours: most cooling centers are not open at night, despite the fact that the infrastructure of New York is largely comprised of thermal masses that radiate all night long. Many cooling centers provide beds which tees them up well to provide overnight shelter.

Lack of activities to entice people to visit: many accounts of cooling centers are simply that they are not exciting places to be, and they they might be better utilized if they possessed more activities/program.

Stigmatization: some people who do not have adequate access to air conditioning refrain from utilizing cooling centers because they are afraid of being seen using one.[2]

Finally, another major reason for their underutilization is simply due to a lack of awareness of their existence.

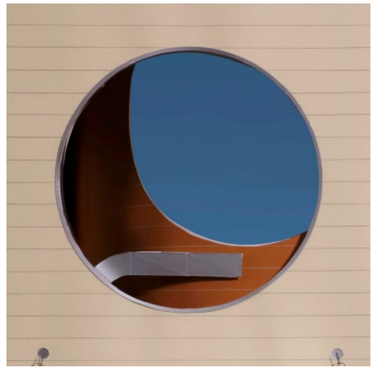
The foregoing project should therefore take into account all of these factors and aim to create a space that is more inviting, well-known, active, and free of stigmatization. It should be a place that people take delight in visiting, regardless of age. It should aim to take advantage of part New York City's vast world of vacant spaces.

With its emphasis on providing adequate cooling space for those who are otherwise deprived of or in need of it, the cooling center should take advantage of a historic, vacant theater in Manhattan.

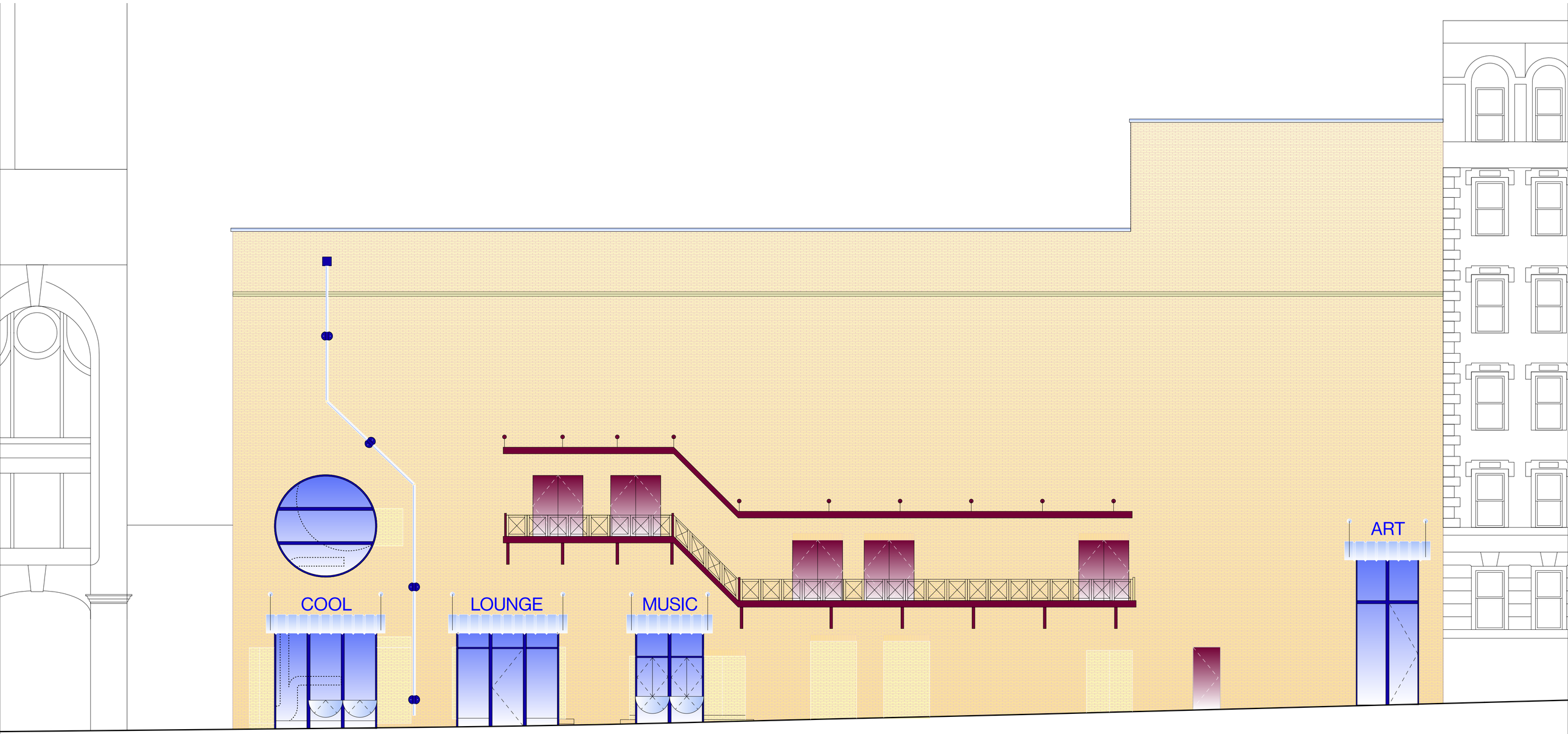
The theater acts as an ideal typology for conversion to a cooling center. Theaters historically give special attention where ventilation is concerned, given their occupancy requirements. In a contemporary sense, theaters, both new and old, often act as informal cooling centers in the summer because they are always well-ventilated and equipped with air conditioning. They provide a public refuge from the summer sun and heat.

This project will utilize the former Hamilton RKO Theater at 3650 Broadway in New York, an underutilized theater built in 1912-1913 whose auditorium sits unused.

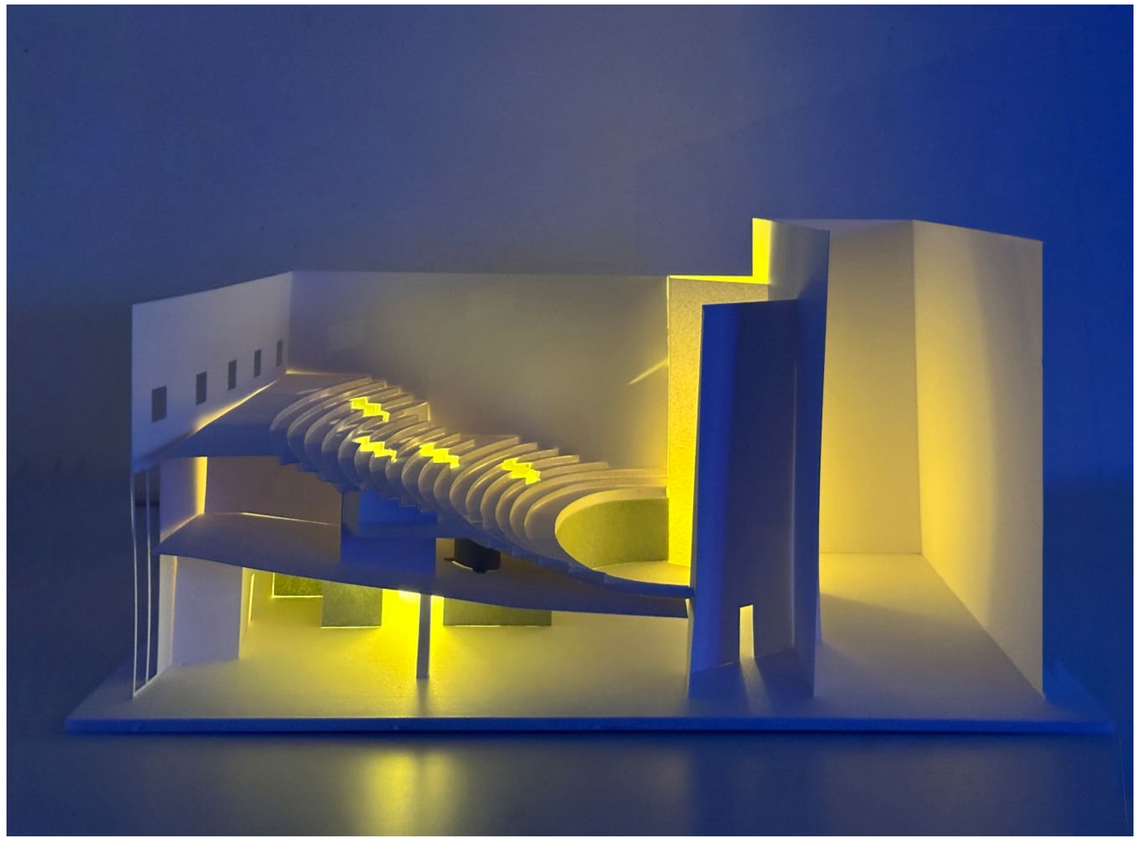
146TH STREET ELEVATION SHOWING EXISTING CONDITION

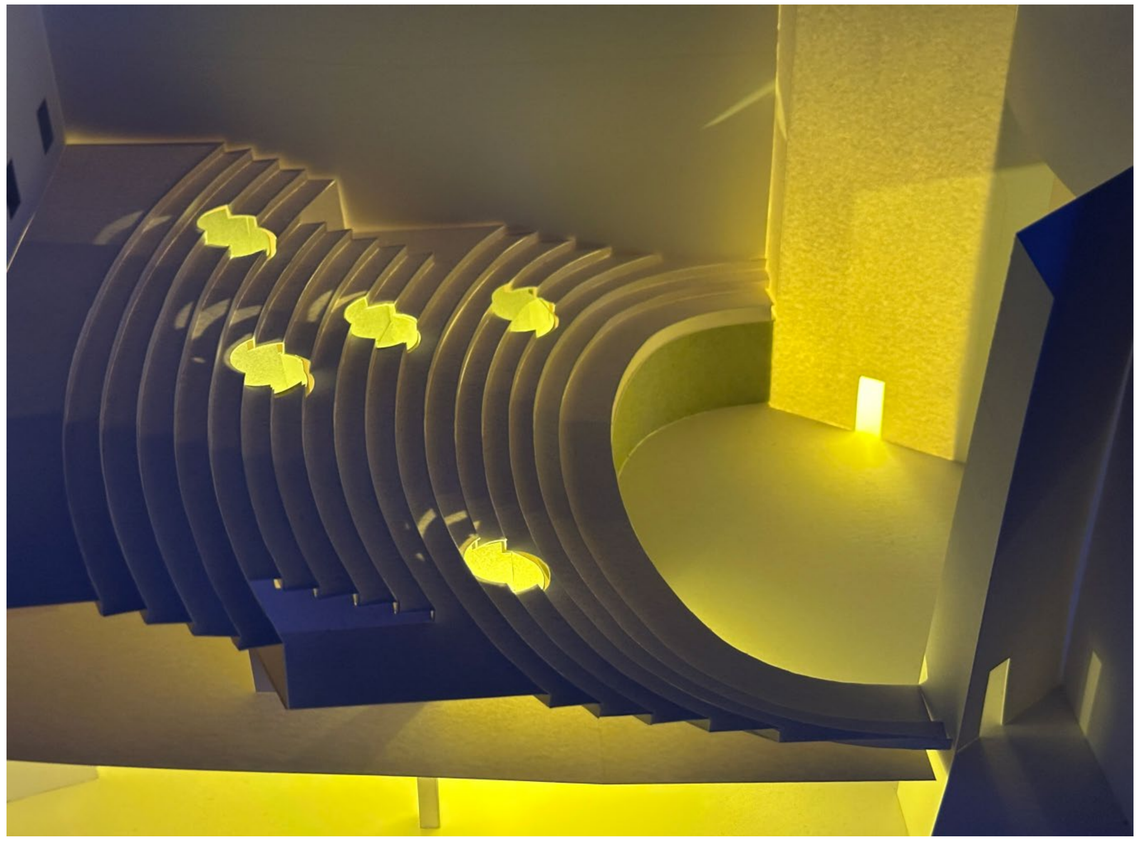


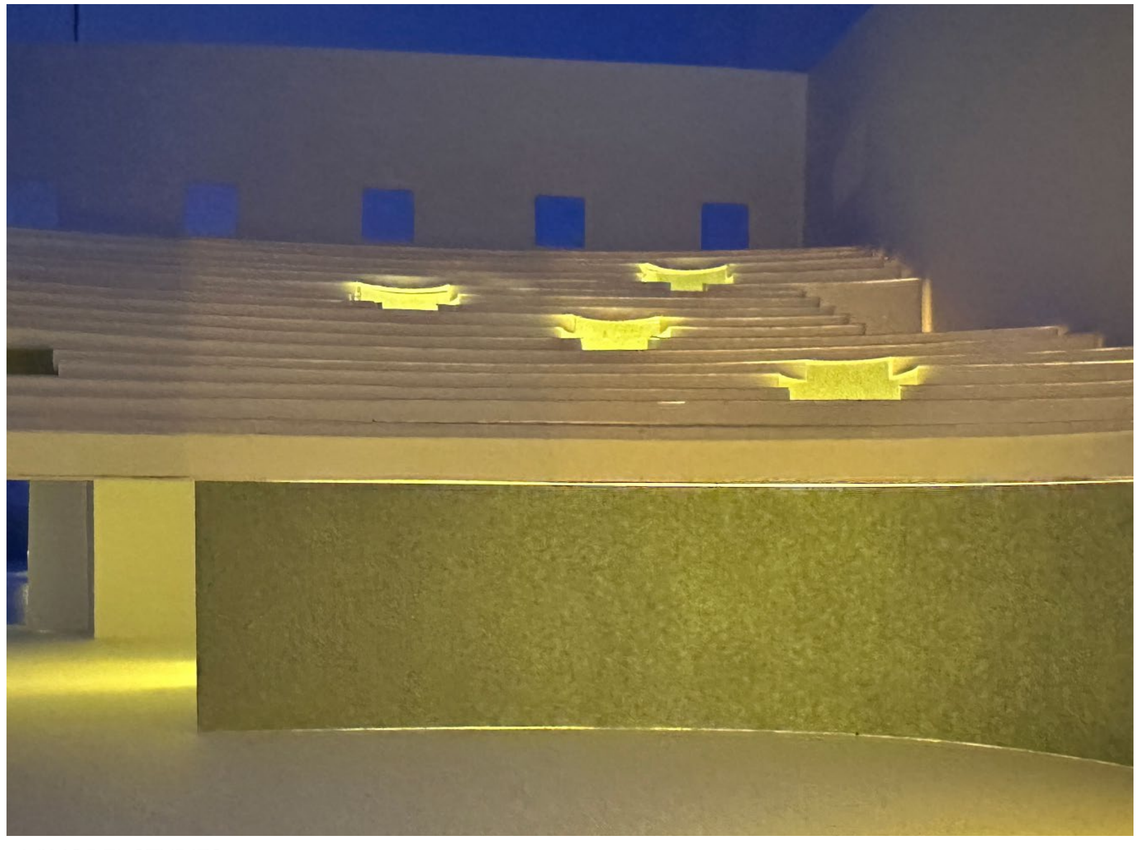
1/2" MODEL STUDIES

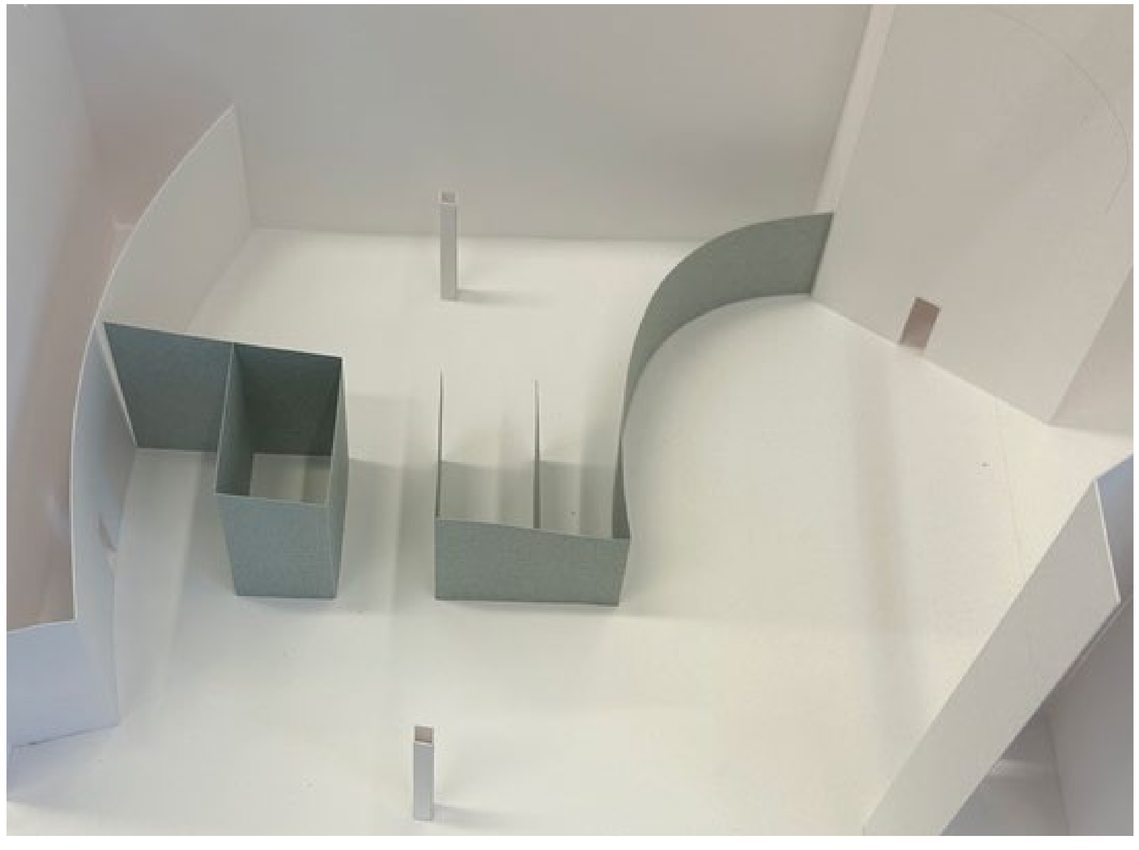


PROPOSED 146TH STREET ELEVATION



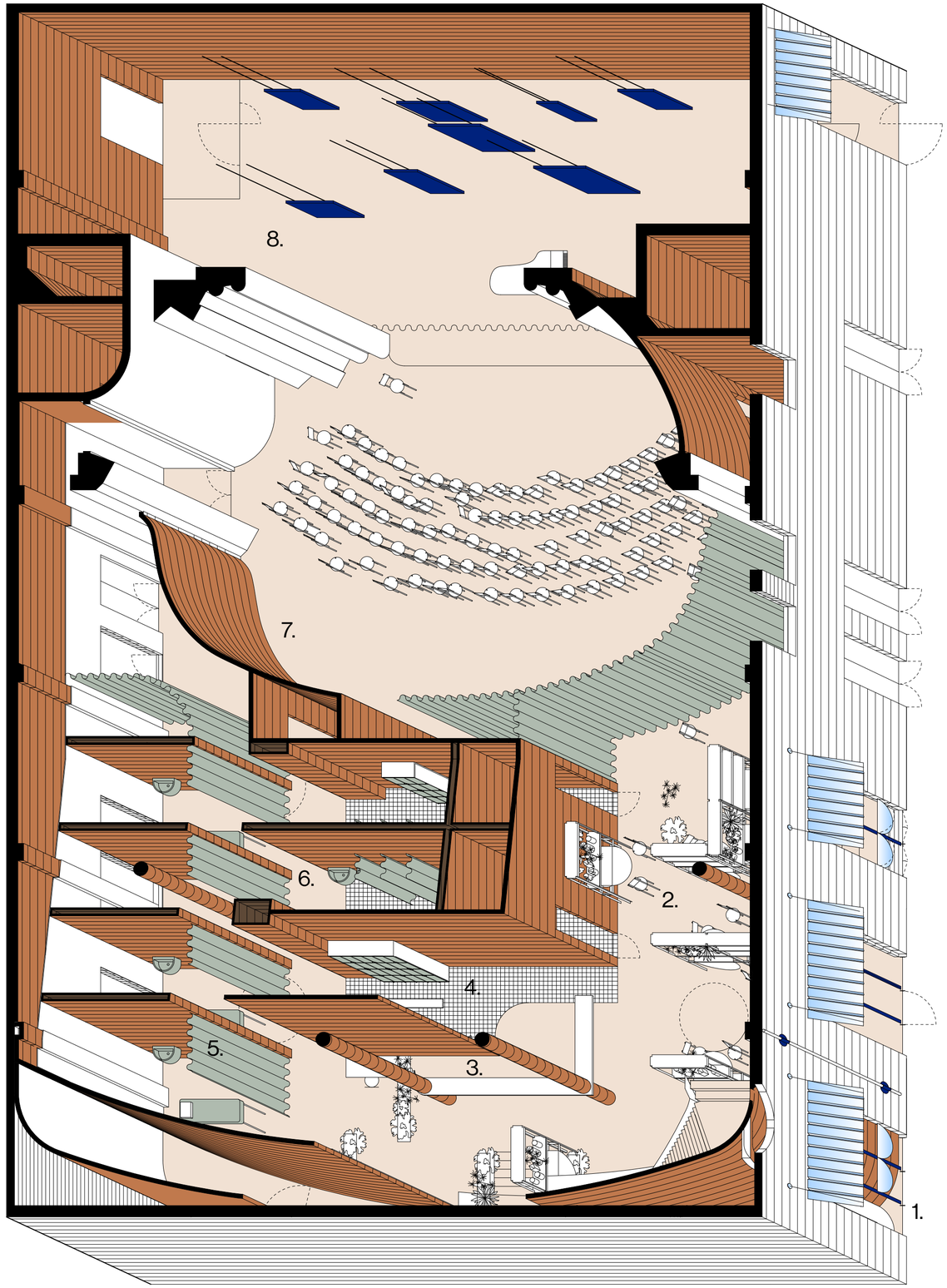






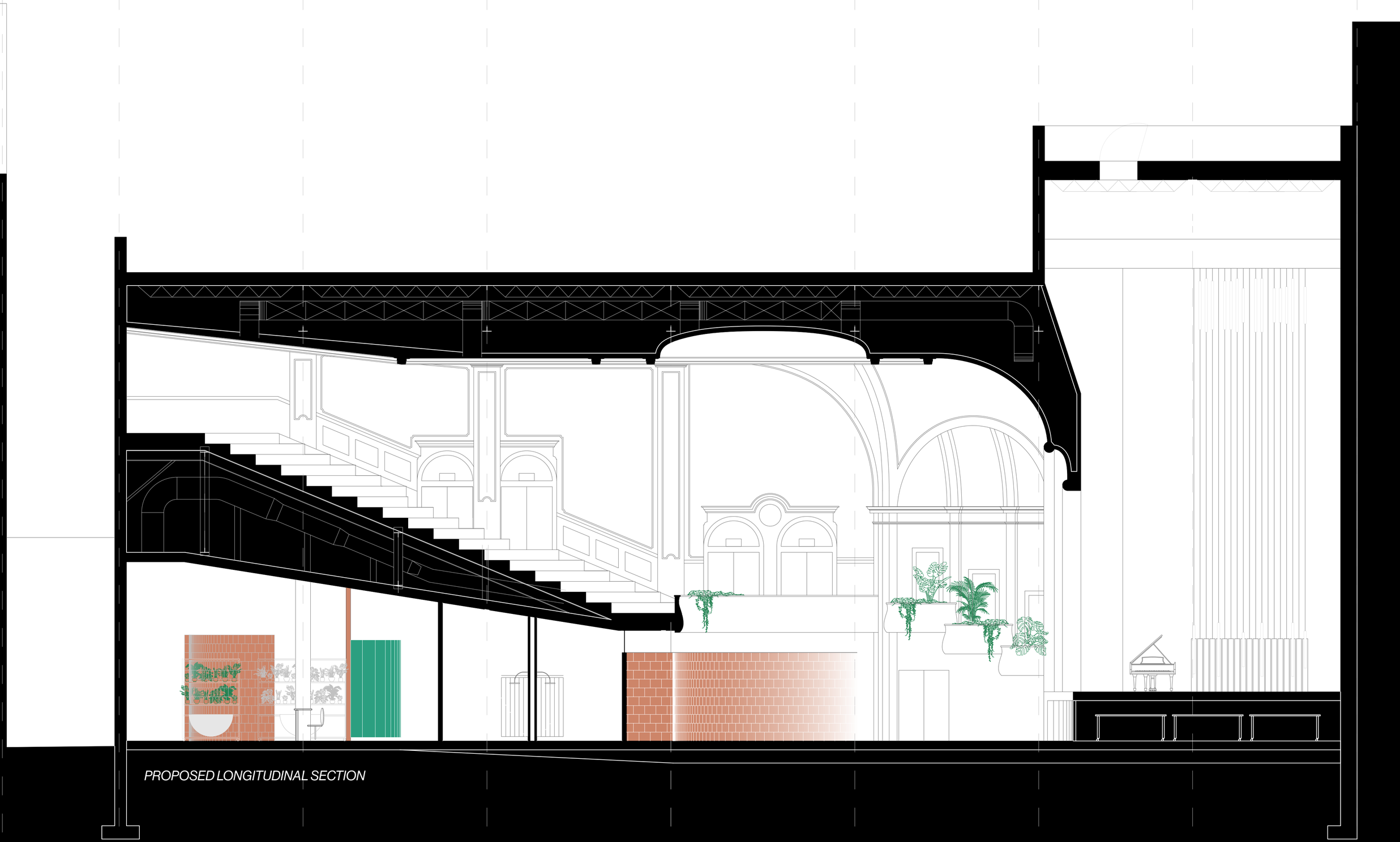
1/8" MODEL STUDIES

SECTION PERSPECTIVE THROUGH EXAM ROOM



1. *Storefront.* Openings cut into existing masonry wall to flood space with light.
2. *Cooling Lounge.* Open to the public, offering shared book library and refreshments.
3. *Reception.* Both for visitors and patients.
4. *Locker Rooms.* To store things.
5. *Treatment Rooms.* For mild heat-related illnesses.
6. *Showers.* To cool down. And to bathe.
7. *Performance Space.* To fill the space with music. To calm patients.
8. *Gallery.* Artwork to be suspended throughout stage using existing fly system.

GROUND FLOOR PLAN OBLIQUE



PROPOSED LONGITUDINAL SECTION

INTERIRORS OF COOLING LOUNGE AND RECEPTION AREA

ORIGINAL STAIRCASE