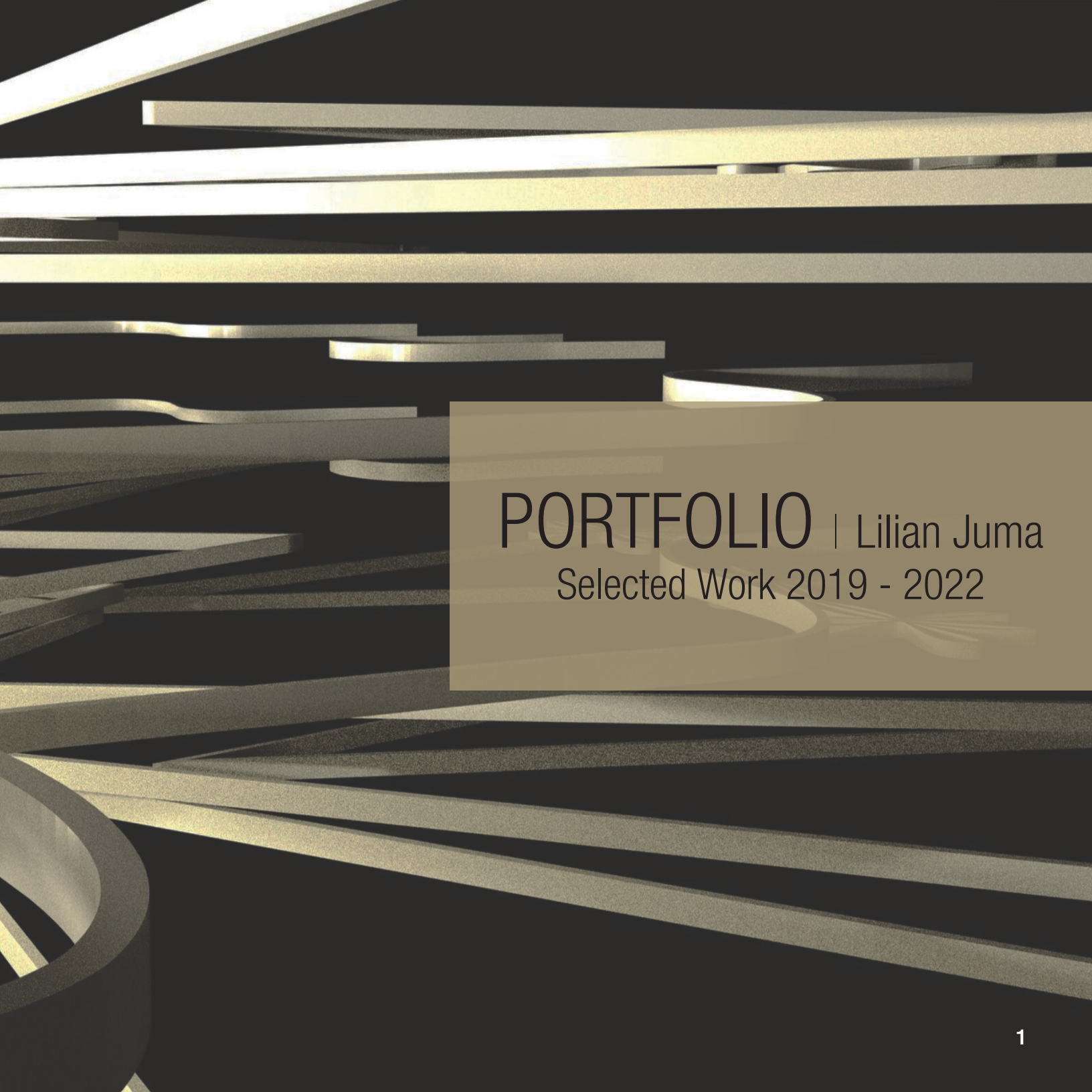


PORTFOLIO | Lilian Juma

Selected Work 2019 - 2022

LILIAN JUMA

KANSAS CITY, MO 64108 | (816) 668- 4003 | LJJUMA14@GMAIL.COM

PROFESSIONAL SUMMARY

As a recent architecture graduate with a rich blend of experience in urban design and historic preservation, I am seeking a position as an Architectural Designer I / Urban Designer I. My goal is to leverage my strong commitment to creating quality, accessible, community-centric designs and my experience in the public sector design to contribute to innovative and impactful projects. Eager to pursue my architecture license, I look forward to bringing my diverse skill set and passion to a dynamic team where I can grow.

SKILLS

- Communication
- Teamwork
- Project Management
- Photoshop
- Illustrator
- Indesign
- Procreate
- Microsoft Office
- Rhinoceros & Grasshopper
- Sketchup
- Lumion
- Climate Studio

WORK HISTORY

May 2023 – Current

Urban Designer • City of Kansas City, Missouri

- Collaborated with contracted designers on deliverables
- Drafted visuals for the KC Spirit Playbook, comprehensive plan
- Designed and illustrated the "Sustainability Guidelines for Historic Buildings"

Historic Preservation Planner • City of Kansas City, Missouri

- Reviewed cases under the historic zoning overlay and presented to the commission for certificate of appropriateness
- Collaborated with developers on design review cases
- Reviewed properties for easements and section 106 funding
- Designed markers for the African American Heritage Trail
- Drafted "Sustainability Guidelines for Historic Buildings"

August 2021 – May 2022

Research Assistant • Iowa State University

- Worked in a multidisciplinary, NSF-funded project to develop interest in STEM career paths using XR-enabled educational delivery models
- Advised on co-design strategies for collaboration with migrant and refugee families
- met with families and youth in Storm Lake, and participate in team events in Storm Lake and Ames

January 2021 – May 2022

BUILD Peer Mentor/ Teacher's Assistant • College of Design, Iowa State University

- Mentored incoming Freshman in college of design who were part of marginalized identities
- Critique on work and advised on maintaining a work life balance
- Facilitated discussions, hosted workshops, and collaborated with faculty

Education

December 2022

Professional Bachelor's of Architecture • Architecture and History Minor

Iowa State University GPA: 3.45/4

Achievements

Arch 403 Architecture Prize Finalist – Fall 2022
Partnered w/US Embassy in Rome Historical Preservation – Summer 2022
Phyllis Holland Recipient for Berlin Academy – Summer 2022
Jeffrey J Pilling Architecture Recipient – Spring 2022
Dean's List – Fall 2019, Spring 2020, Fall 2020, Spring 2021, Spring 2022, Fall 2022
BWBR Architecture Prize Finalist – Spring 2021
Best in Show – Wearable Design Show 2019

Volunteer Work

Equatorian Community Association - Director of Communications
Wearable Design Showcase • 2022
Ames Public Library • Mar 2018 – Feb 2019

Z

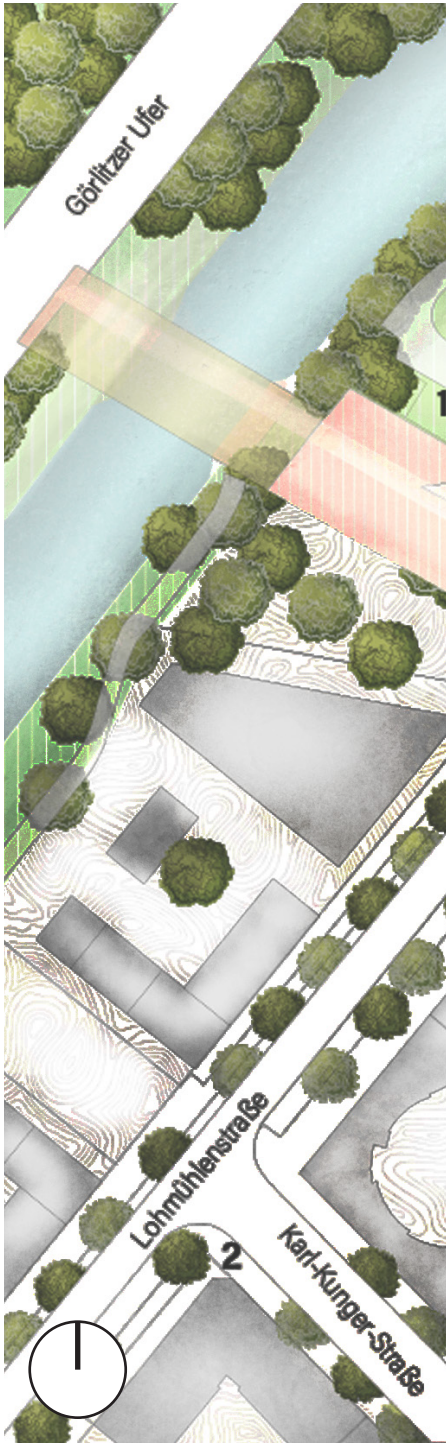
CONTENTS

Programs Used:
3DS MAX
PHOTOSHOP

HIGHLINE LIVING

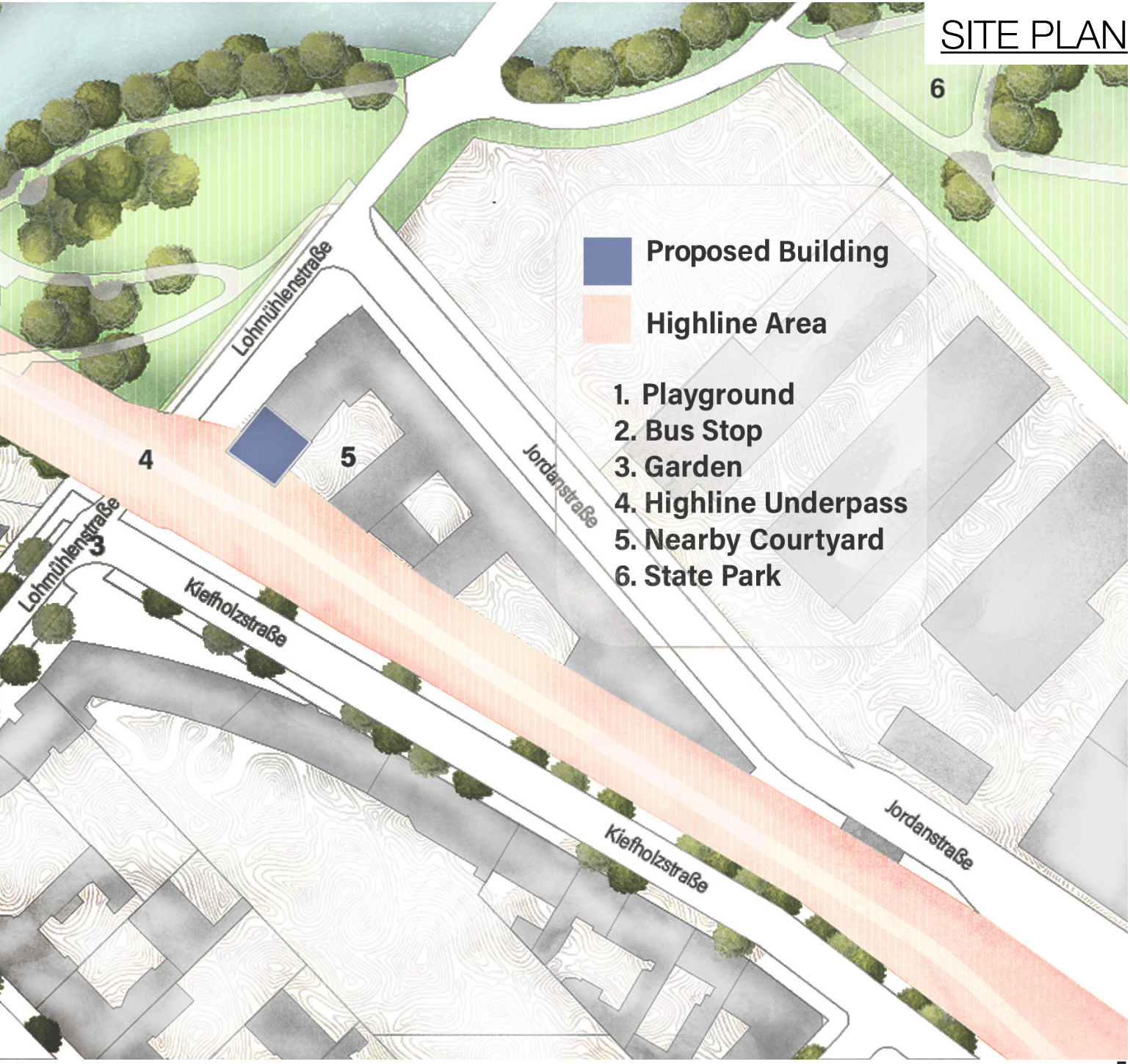
East Berlin, Germany

In Berlin, there is an escalating demand for affordable housing, amplified by recent conflicts in Europe and the challenges posed by climate change. The need for housing that is not only cost effective but also energy efficient and sustainable is becoming increasingly critical. In response to this, I have designed a housing project that repurposes a currently inactive section of the high line to accommodate smaller families in the heart of East Berlin. The chosen site is strategically significant, thanks to its close proximity to transit options and various amenities. This location raises an important question: how can we effectively utilize existing spaces for construction while fostering communal living? Adjacent to this housing project is a private university, and the design incorporates a circulation corridor that doubles as a noise buffer. Additionally, the project offers ample opportunities for harnessing solar power, ensuring that the access to sunlight and light for existing buildings remains uninterrupted.

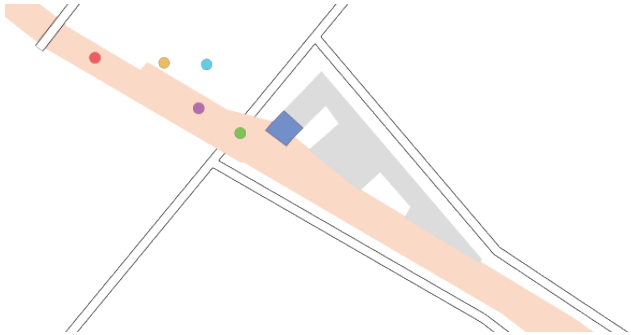


Programs Used:
ILLUSTRATOR
PHOTOSHOP
HAND SKETCH
PROCREATE

SITE PLAN


Proposed Building
Highline Area
1. Playground
2. Bus Stop
3. Garden
4. Highline Underpass
5. Nearby Courtyard
6. State Park
Lohmühlenstraße
Jordanstraße
Kiefholzstraße
Kiefholzstraße
Jordanstraße
Lohmühlenstraße
3
4
5
6

PHOTOS ALONG HIGH LINE



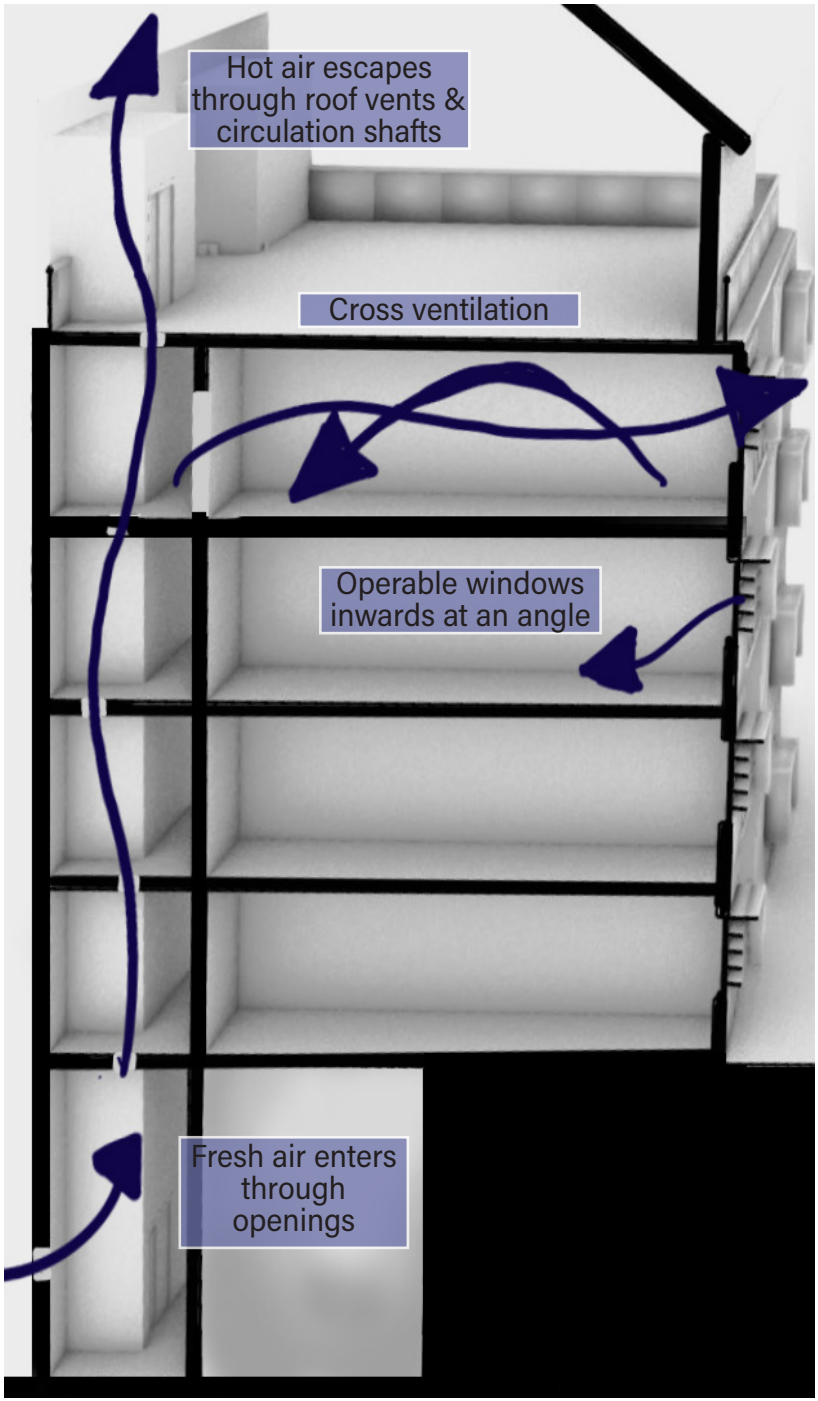
FLOOR PLAN

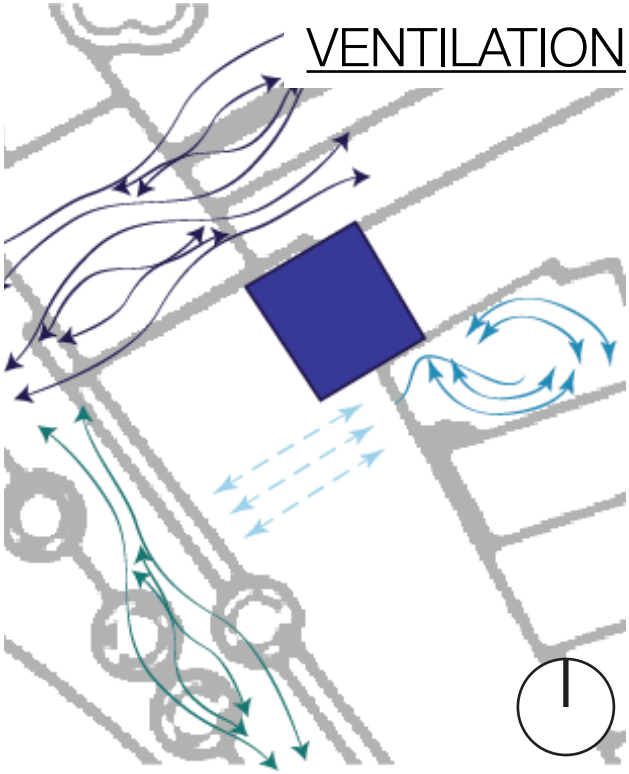
1. Bedrooms
2. Living Room
3. Kitchen
4. Bathroom

Programs Used:
REVIT
ILLUSTRATOR
PHOTOSHOP

ENVIRONMENTAL STRATEGIES

VENTILATION





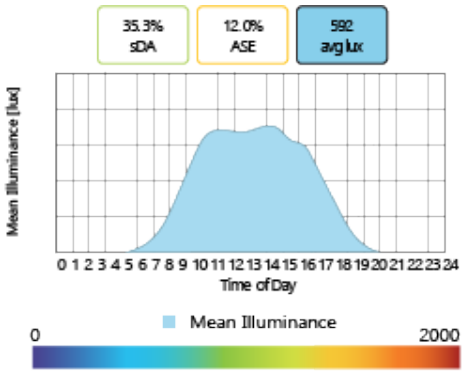
- Site
- Wind circulating under Bridge
- Wind from nearby road
- Circular wind from Courtyard
- Wind pulled under high line to and from the courtyard

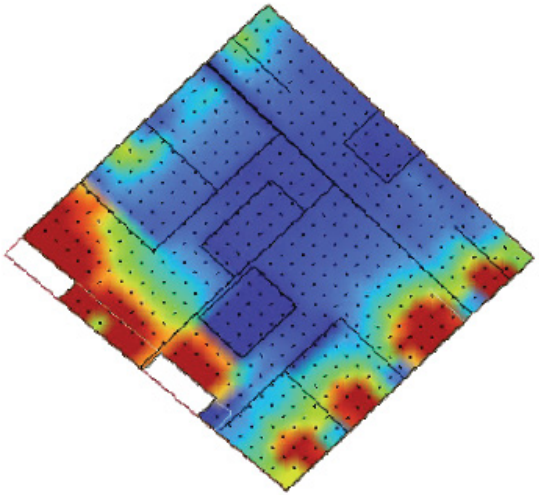
Programs Used:
ILLUSTRATOR
PHOTOSHOP

DAYLIGHTING STRATEGIES

I used Climate Studio as a plug in within grasshopper to create a facade that maximized natural daylighting and minimize radiation and glare in the indoor space. To achieve this result took many iterations of shading devices on each facade and treating each side of the building unique.

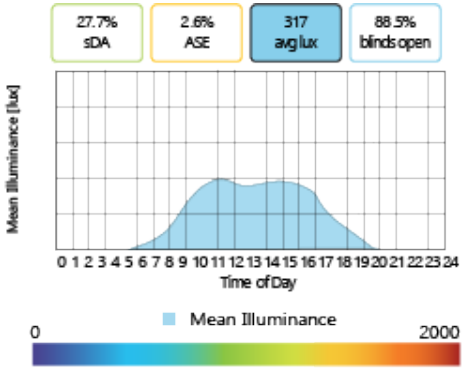
Facade Without Shading

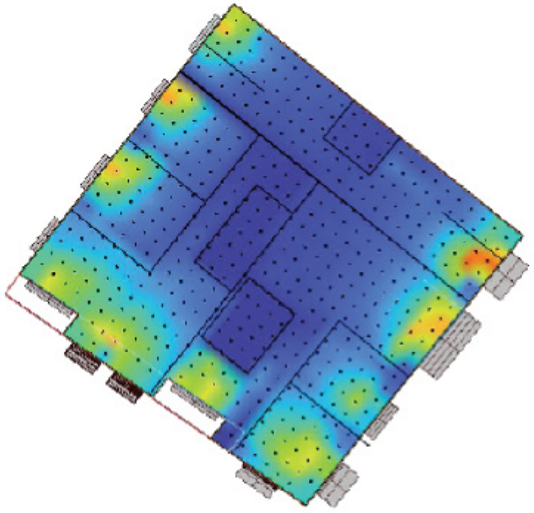




3 ft long single
overhang pane

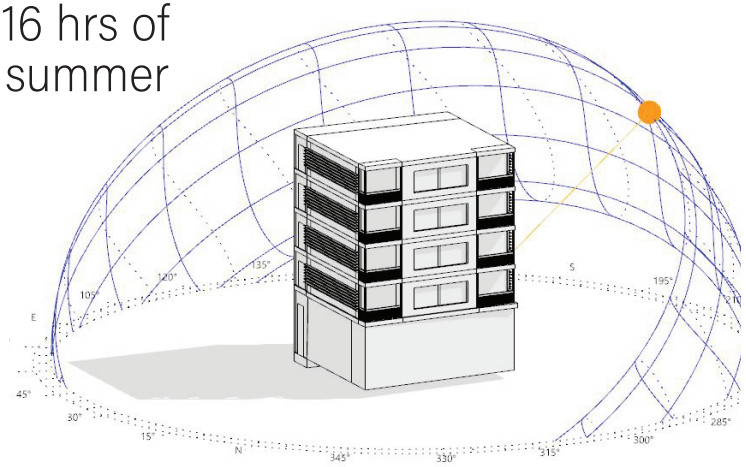
Facade With Shading

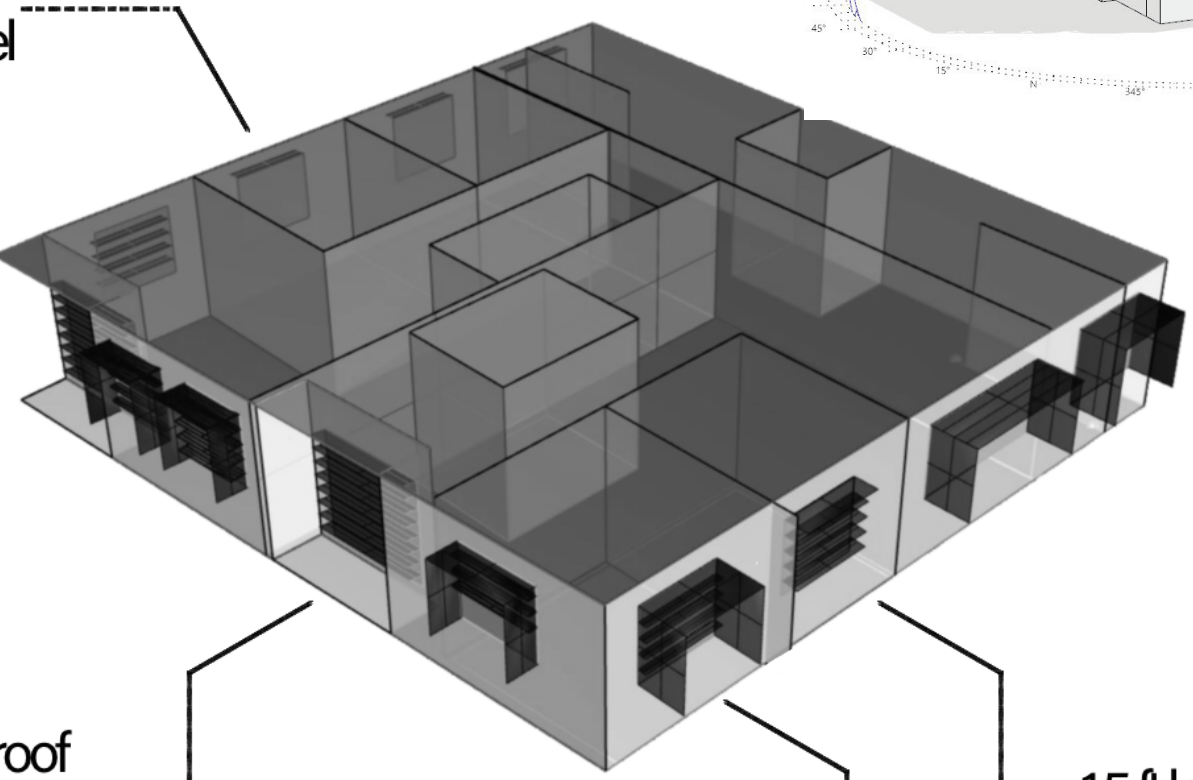




4 ft long
overhang
6 in louve

Berlin has 12 -16 hrs of daylight in the summer





roof

g

ers

3 ft long vertical &
horizontal panels
6 in louvers

1.5 ft long overhang
6 in louvers

Programs Used:
RHINO
CLIMATE STUDIO
PHOTOSHOP

SW CORNER LOOKING UP AT THE HIGH LINE

This architectural render illustrates the seamless integration of the building within its urban context, both complementing and enhancing the existing skyline. The structure's height is thoughtfully designed to align with that of the neighboring buildings, ensuring it captures ample daylight. This attention to positioning also contributes to the vitality of the high line, as the building is positioned to potentially expand into the adjacent underpass. This would offer residents and neighbors greater safety and circulation with improved lighting conditions and an eye-catching timber installation. The render underscores the project's ambition to not only provide residential space but also to invigorate and utilize urban areas that are often overlooked, adhering to the philosophy of 'Highline Living' which emphasizes connectivity and accessibility.

ROOF TOP TERRACE SPACE

The render captures the essence of a rooftop terrace designed to be a communal hub for residents, offering panoramic views that include the High Line and the urban expanse beyond. The design leverages the building's height, maximizing the roof's exposure to sunlight which is ideal for the installation of solar panels to power the building. The terrace itself is depicted as a lively, welcoming space where residents can gather, socialize, and relax, embodying a community-centric approach to urban living. The culture of the building encourages natural cooling practices, with residents preferring to enjoy the open air on the terrace during afternoons and evenings rather than relying on air conditioning. This lifestyle choice not only reduces energy consumption but also fosters a closer connection among the community and with the environment, aligning with the 'Highline Living' project's ethos of sustainability and communal engagement.

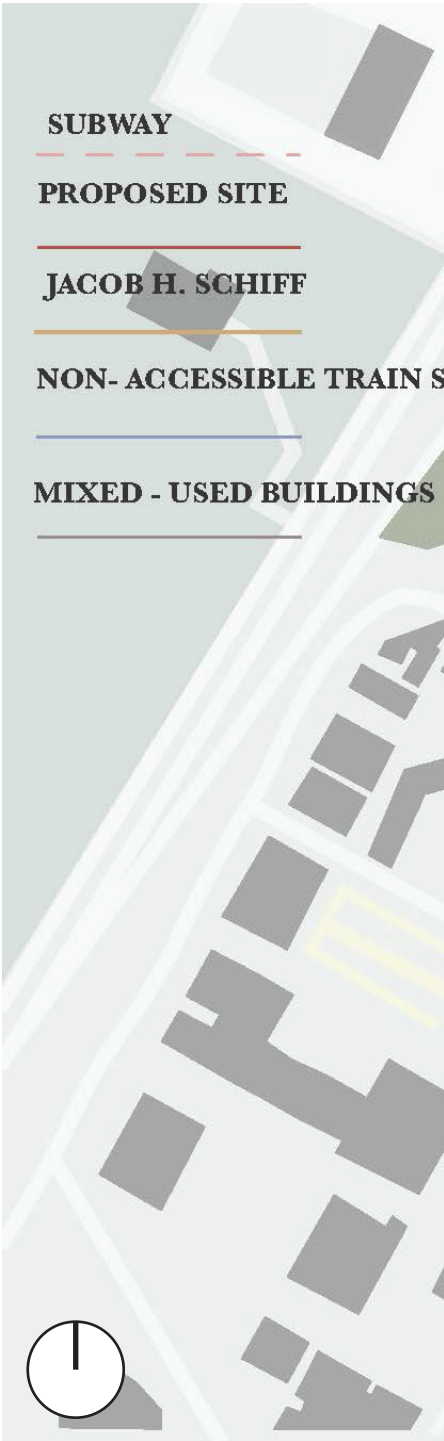
HARLEM NEXUS

Harlem, New York City, New York

This project entails a mixed-use building designed specifically for housing college students at CUNY. Embracing the cultural richness of the Harlem Renaissance, both the aesthetic and functional aspects of our building are crafted to honor this influential movement. A key feature of our design is the enhanced access to the existing subway system, seamlessly integrating the building with the city's transit network.

On the ground floor, the building offers a diverse mix of retail spaces, including a thrift store and a food pantry, alongside rentable office spaces, catering to a variety of community needs. Understanding the diverse requirements of students, we have developed multiple floor plan options to suit different preferences and needs.

Importantly, the unique shape of our apartments has directly influenced the overall architectural design of the building, creating a distinctive and functional structure that reflects the innovative spirit of its inhabitants.



Partner: Mercedes Cooper

Programs Used:
ILLUSTRATOR

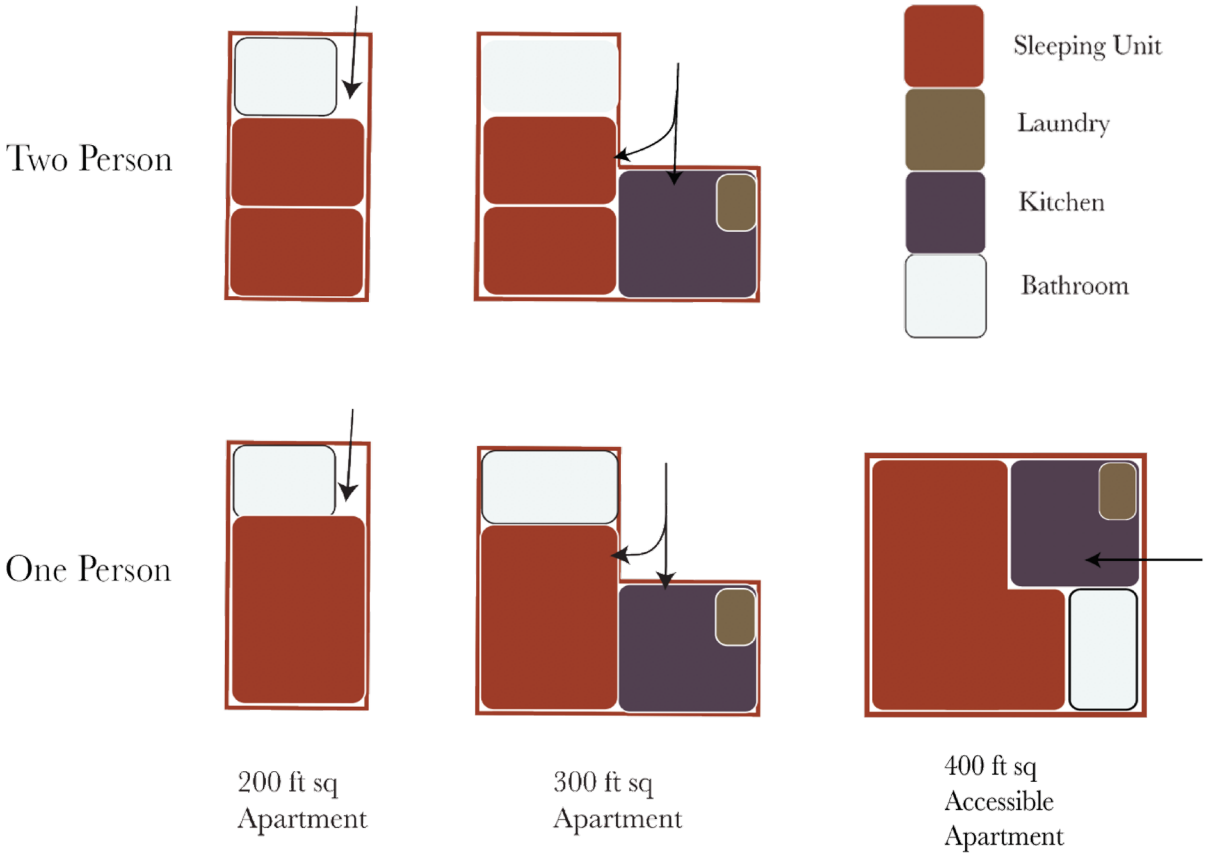
SITE PLAN

BEHIND THE FACADE

The design of the building is intentionally versatile, catering to various student living preferences while ensuring that the structure of each unit is purposefully aligned with its function. The massing diagrams reflects a meticulous ‘form-finding’ process, indicating a progression from initial designs to the completed form, emphasizing functionality and adaptability.

Moreover, the vibrant facade draws inspiration from the Harlem Renaissance, as demonstrated in the color study, ensuring that the building’s exterior is as culturally significant as it is aesthetically appealing. This aligns with the Harlem Nexus project’s aim to create a living space that resonates with historical richness and communal diversity.

Housing Units

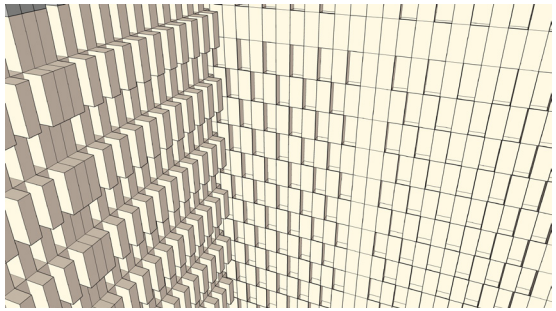


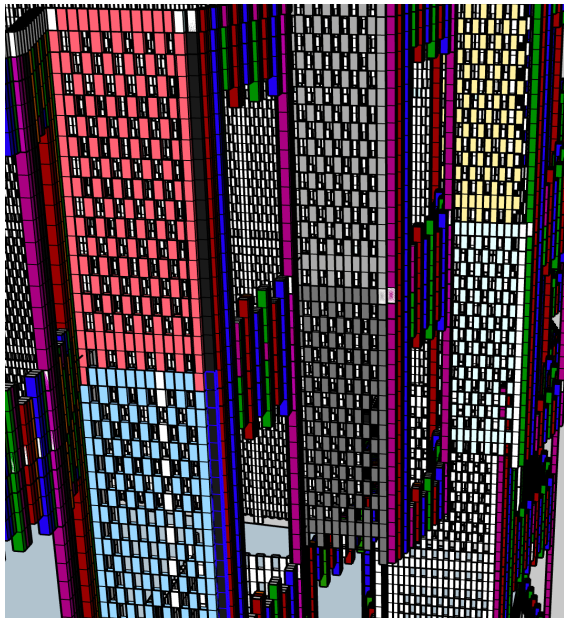
Color Inspiration

Bus Stop - Ekua Holmes

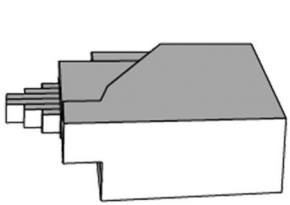
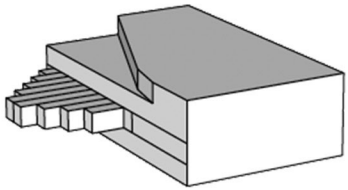
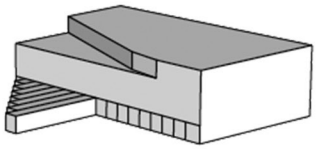
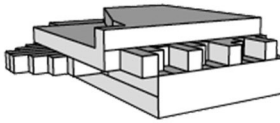
The Migration of the Negro - John Lawrence

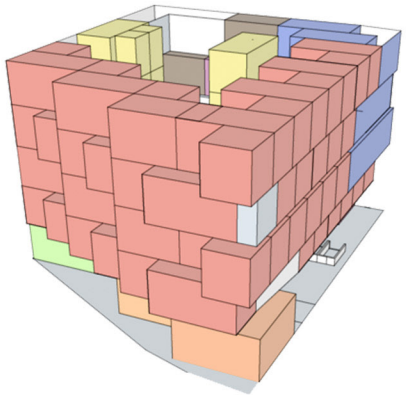
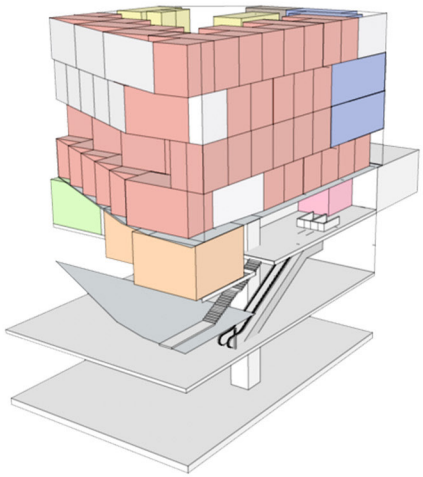
Brickwork





FORM - FINDING

DEVELOPING PROGRAMS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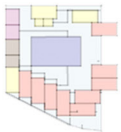
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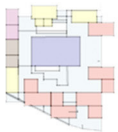
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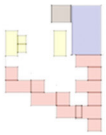

3

4

Residential

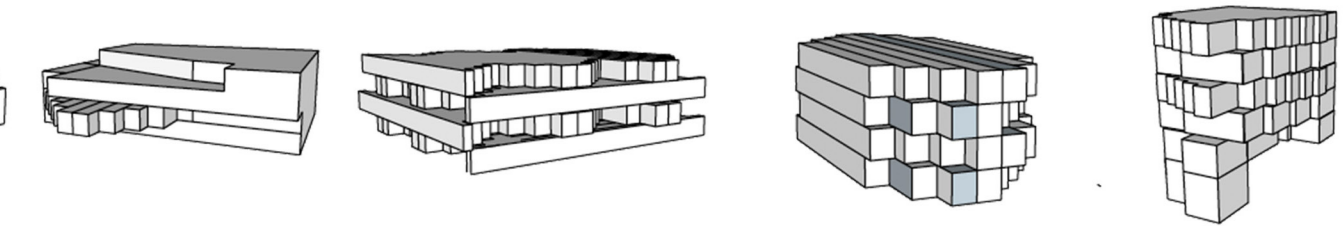
Vertical circulation

Commercial

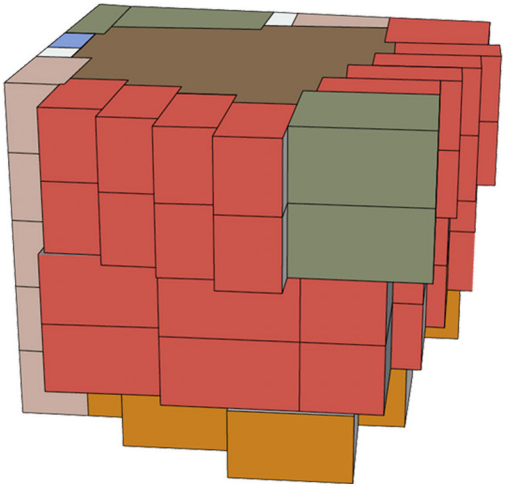
Common area

Janitorial

MASSING MODELS



FINAL MASSING



Residential

Commercial

Common Area

Elevator

Open space

Egress

Janitorial

Programs Used:
SKETCHUP
ILLUSTRATOR

FLOOR PLANS

GROUND FLOOR

1. RETAIL
2. OFFICE
3. WOMEN'S RESTROOM
4. MEN'S RESTROOM
5. LOBBY
6. JANITORIAL / MAINTENANCE ROOM
7. ACCESS TO TRAIN MEZZANINE

FIRST/SECOND FLOOR

1. RESIDENTIAL UNITS
2. ACCESSIBLE UNITS
3. COMMON AREA
4. STUDY ROOM
5. JANITORIAL/MAINTENANCE ROOM

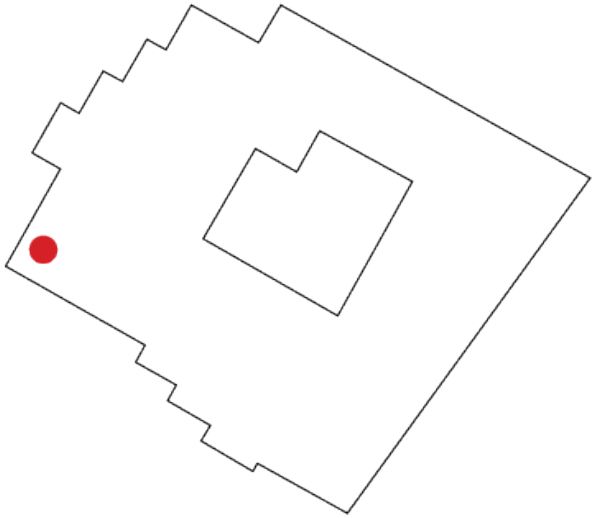
THIRD/FOURTH FLOOR

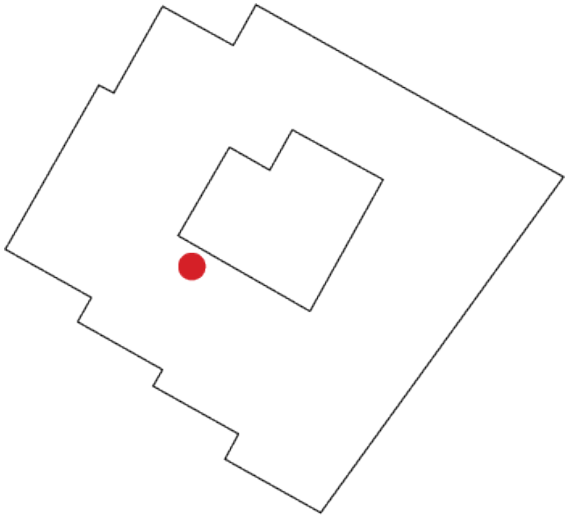
1. RESIDENTIAL UNITS
2. ACCESSIBLE UNITS
3. COMMON AREA
4. KITCHEN
5. LAUNDRY
6. JANITORIAL/MAINTENANCE ROOM

Programs Used:
SKETCHUP
AUTOCAD
ILLUSTRATOR

4TH FLOOR COMMON AREA

The image illustrates the fourth-floor common area, thoughtfully designed to balance intimate private living spaces with larger communal areas, fostering a sense of community among residents. Situated at 136th and Broadway, the space offers expansive views of the cityscape, connecting inhabitants to the pulse of Harlem. The interior is enhanced with glazed brickwork, which echoes the rich hues characteristic of the Harlem Renaissance. Moreover, the walls present a canvas with the potential for local artists to contribute murals, adding a layer of unique artistic expression that celebrates the community's cultural dynamism. This collaboration with local talent not only beautifies the shared environment but also anchors the Harlem Nexus project in the fabric of neighborhood life and creativity.

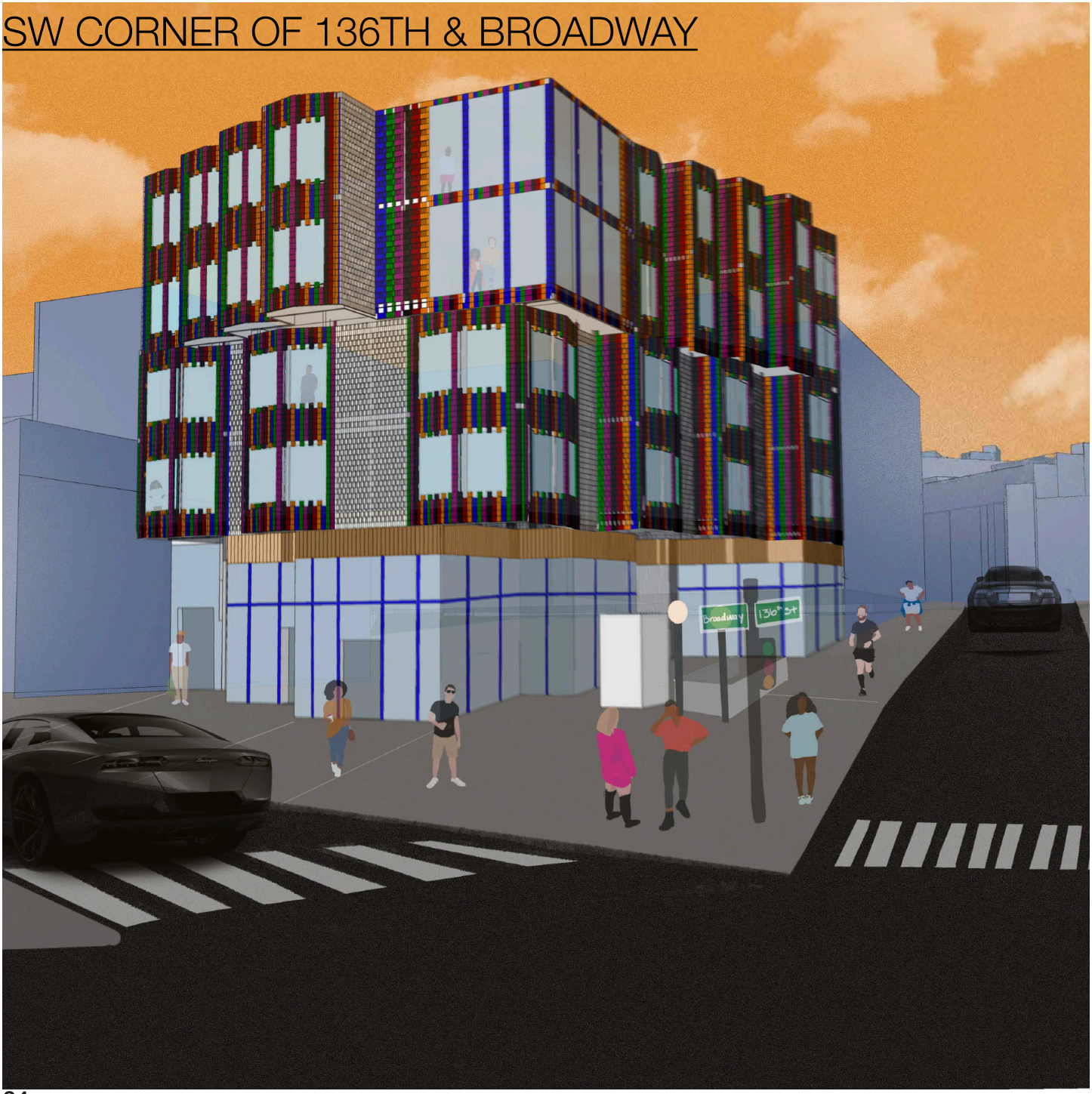




3RD FLOOR MEZZANINE

The mezzanine is designed to house informal communal spaces bathed in abundant natural light. The layout encourages casual interaction among residents, with cozy seating areas that facilitate conversation and collaboration. Visible in the image is a quote, adding an inspirational touch that echoes the building's dedication to individual expression. The openness of the design, complemented by the airy staircase and the spaciousness around it, creates a welcoming atmosphere that encourages residents to pause, connect, and enjoy the light-filled environment.

SW CORNER OF 136TH & BROADWAY



Programs Used:
SKETCHUP
PROCREATE
PHOTOSHOP

FUNGALSCAPES

Haptic Origins, Optic Imaginaries of Biological Disasters

Louisville, Kentucky (A Distant Future)

This project reexamines the spread of biological disasters, which are often visually imperceptible yet tactilely unavoidable. We have termed the phase when a disease is felt but not seen as ‘Haptic’; once fully manifest, it becomes ‘Optic.’ Through the architectural lens, we have studied the dissemination of microscopic entities such as spores, viruses, and locusts to understand the varying scales and scope of disease.

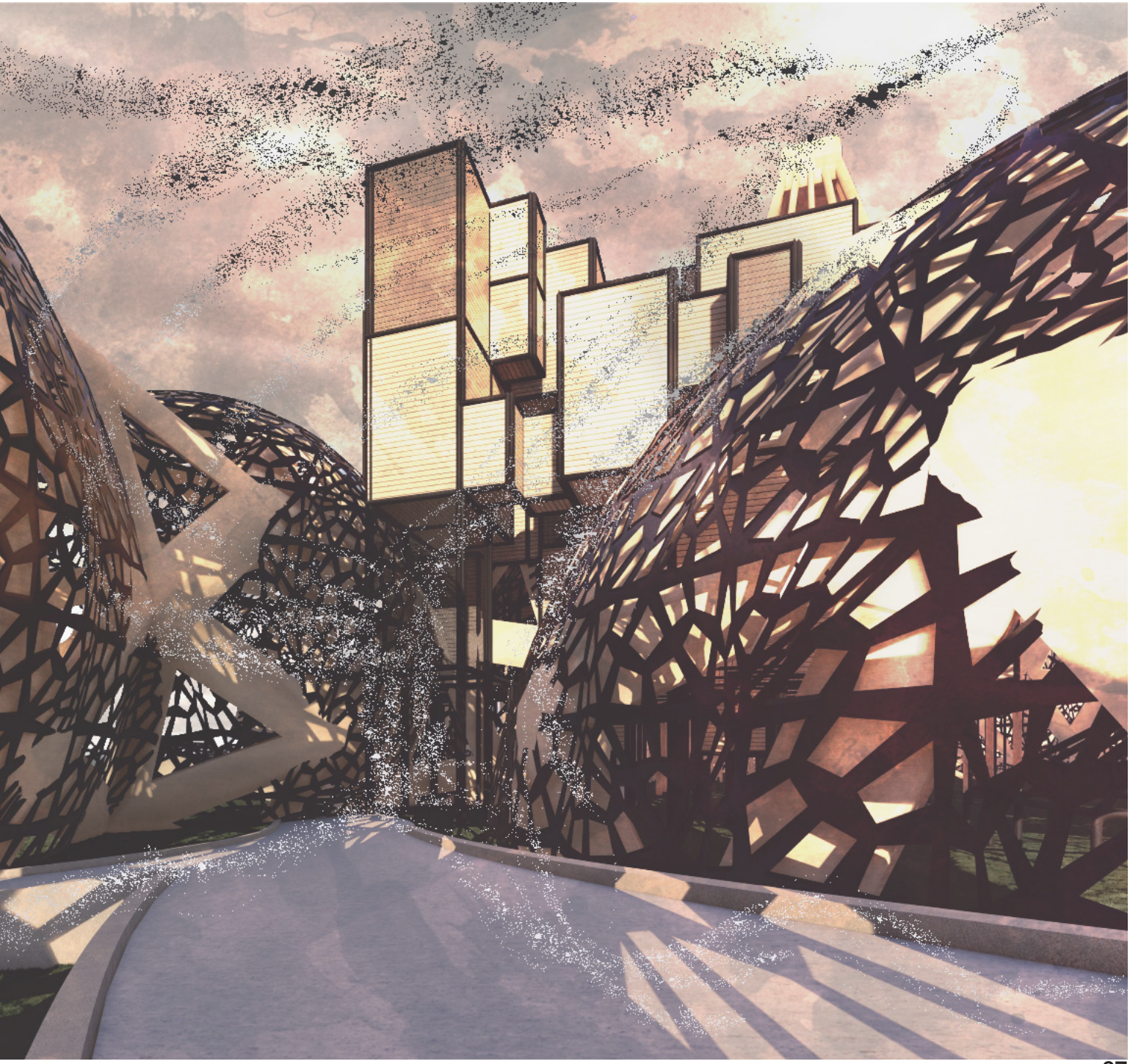
To accommodate the inescapable presence of organisms like fungi, we propose a zoned city that is both pro- and anti-fungal; it encourages the growth and cultivation of fungi in certain areas while preventing it in others.

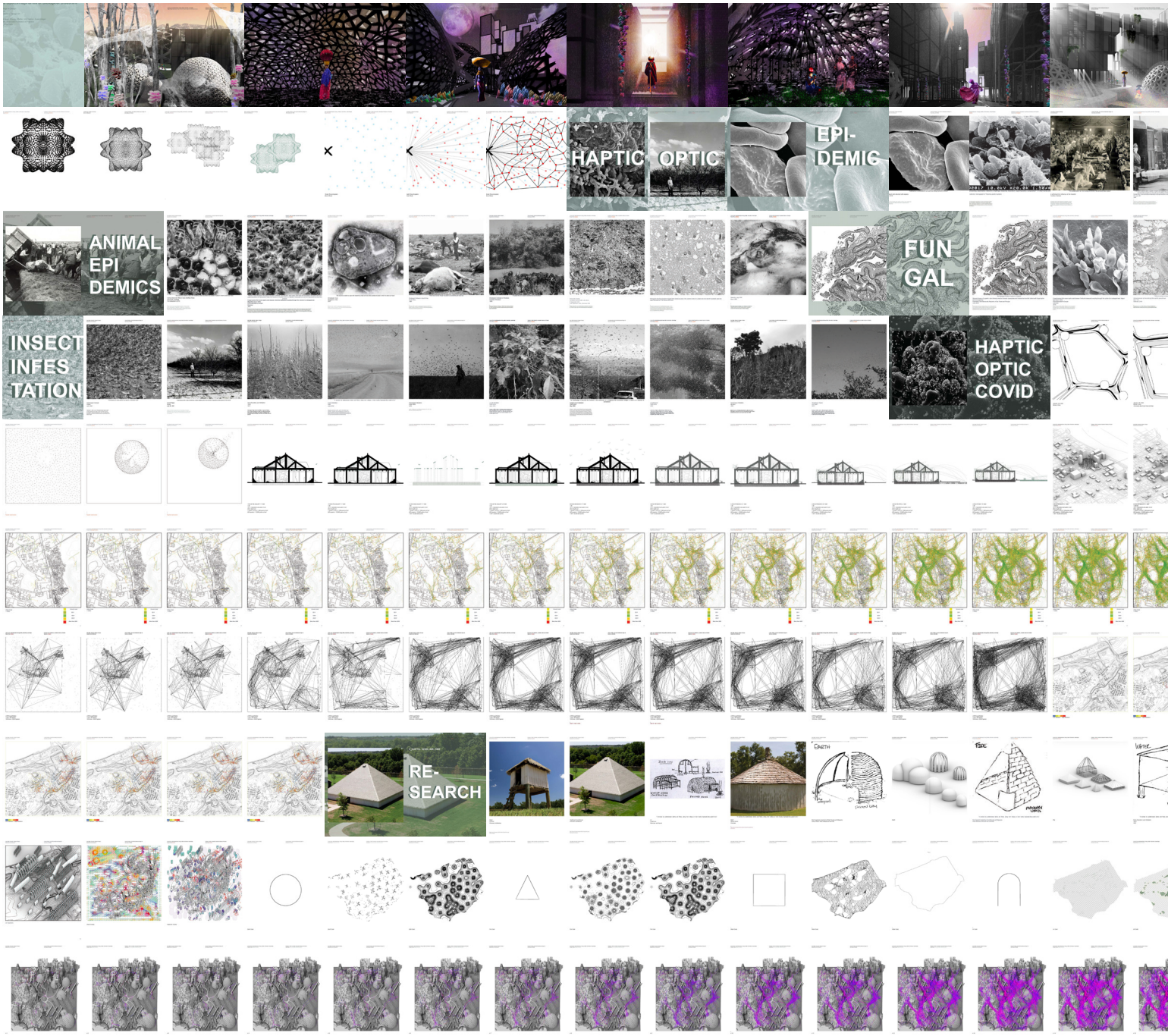
Biological disasters uniquely position the body as both a casualty and a conduit of calamity. The year 2020 witnessed humanity grappling with an uncontrollable pandemic, prompting a reevaluation of our place in the world. This situation underscored the significance of individual actions and the role of the built environment, along with factors such as privilege, in the propagation of disease. For example, the epidemic claimed over a million lives and put many more at risk in the United States alone.

In Module 1, we analyzed case studies across three typologies: epidemics, insect infestations, and animal disturbances. Our experimentation with drawing sought to render the invisible visible and to heighten awareness of these issues at both the microscopic and urban scales. In Module 2, we delved into Louisville, Kentucky, and Histoplasmosis, and developed post-carbon organisms that correspond with the preexisting indigenous architecture. Module 3 saw us further evolving organisms based on their interactions and integration. We envisioned a futuristic iteration of our site as a research campus dedicated to spore studies.

Programs Used:
RHINO
GRASSHOPPER
LUMION
PROCREATE

Partner: Hiba Salih, Utsav Rathi

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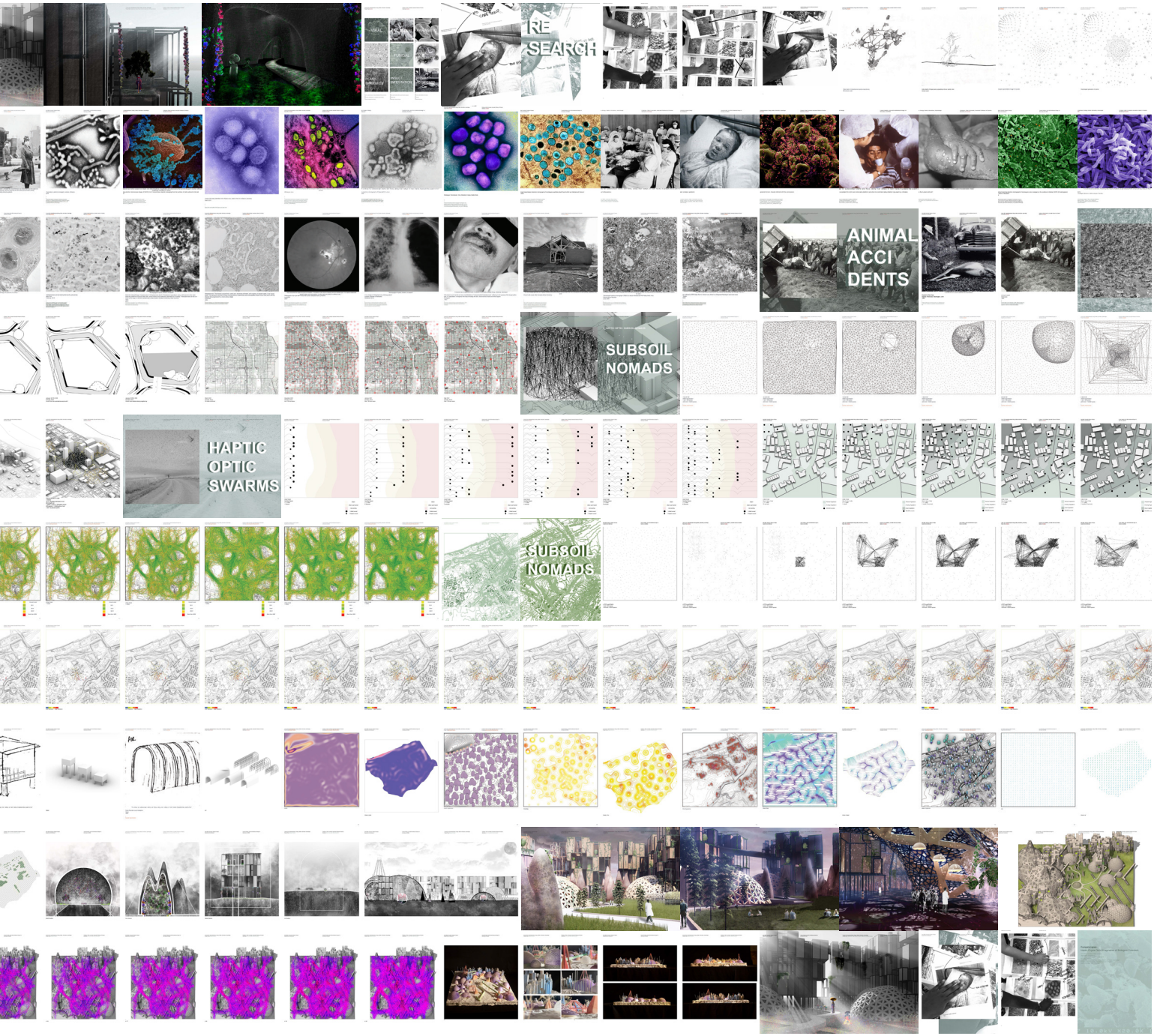
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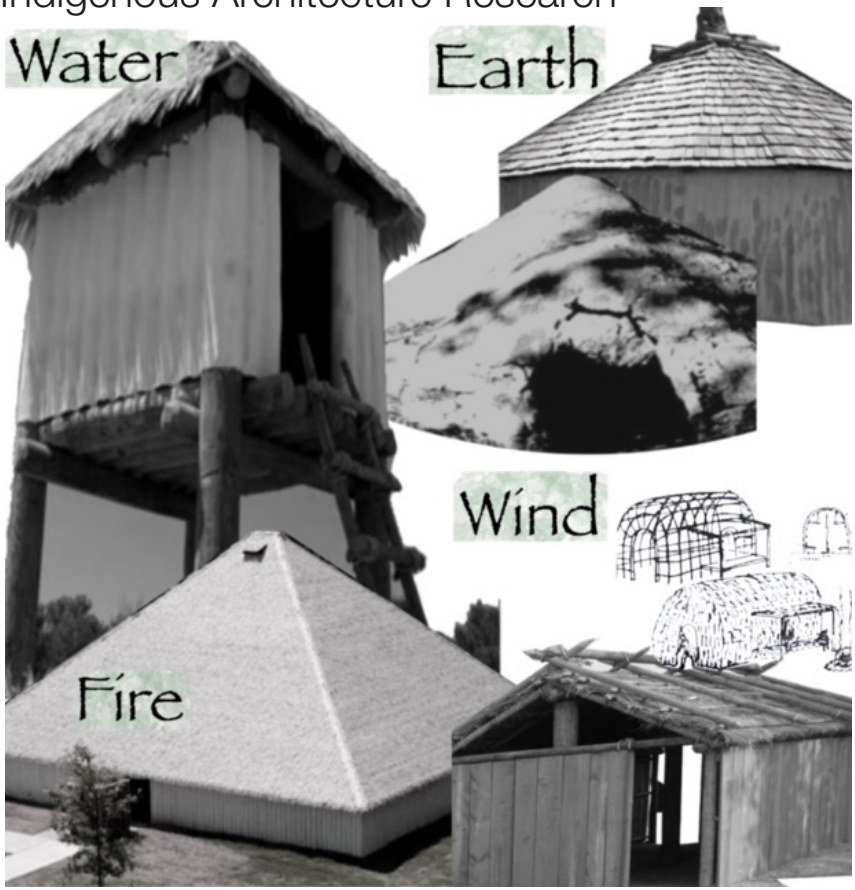
OPTIC
SWARMS
SUBSOIL
NOMADS

CREATING ORGANISMS

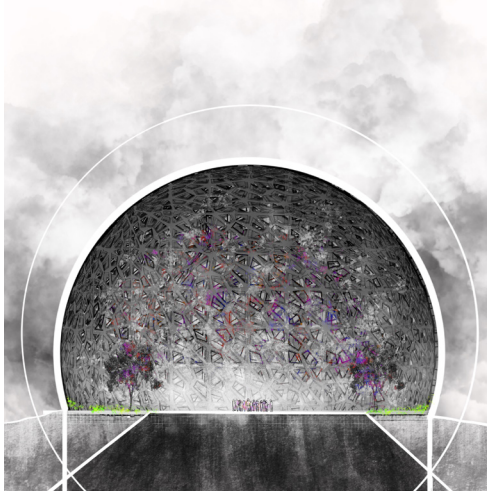
Indigenous Architecture Research



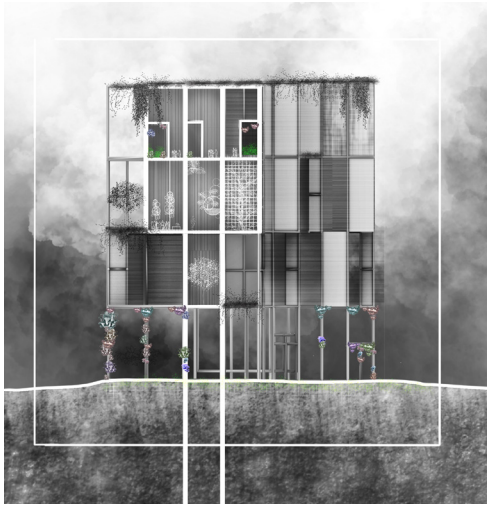
Disclaimer - Our investigation into indigenous architecture was largely internet-based. It's critical to recognize a persistent effort to erase indigenous history, complicating research, especially given the numerous cities and items named after these tribes. Wherever possible, we sourced information directly from tribal websites.

We explored the histories of indigenous tribes in Kentucky, neighboring states, and those along the Ohio River Valleys, focusing on the Shawnee, Chickasaw, Cherokee, and Iroquois. These tribes employed techniques such as rammed earth for impromptu walls and settled near water and grain. Our 'Earth' design is influenced by winter houses, known for their rounded shapes and subterranean construction for warmth, using steam-bent wood and printed clay to maintain sectional integrity.'Fire' draws on the council houses and researched forms with chimney features that optimize fire usage, implemented through masonry. 'Water' emulates the corncrib, constructed with wooden stilts and woven materials.'Air' is derived from the ventilation strategies of traditional summer houses, prioritizing natural air circulation.

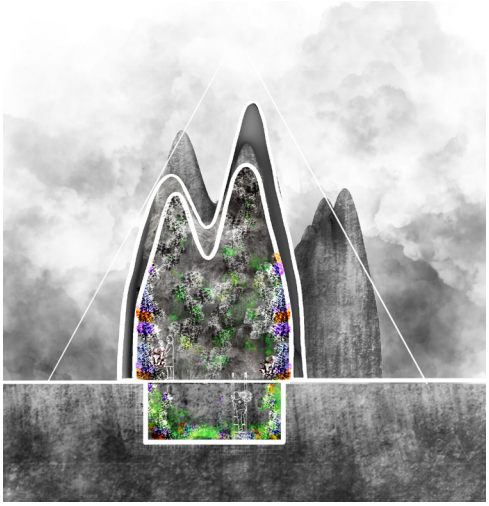
Final Organisms Sections



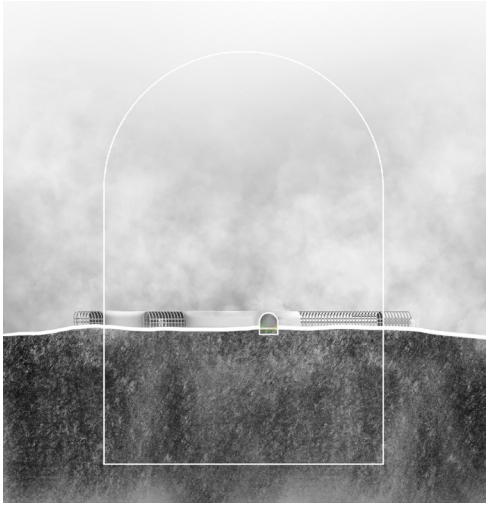
The earth organism is made up of two meshes and serves as canopies and public spaces on the site that are these fungalscapes. It is liken to a microclimate that allows people and fungus to engage side by side.



The water organisms function as both offices and labs to research fungus and alternatively housing for the site. The boxes also create overhangs that form dark and wet spaces for spores to grow.

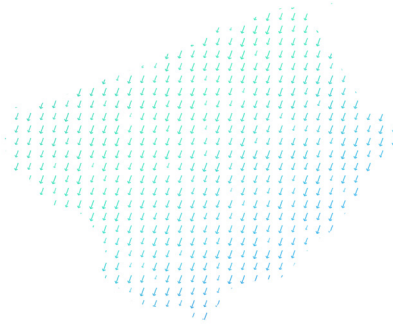


The fire organism functions as pro-fungal spaces that contain fungus that are stored in the dark and cool clay interior then cultivated as needed.

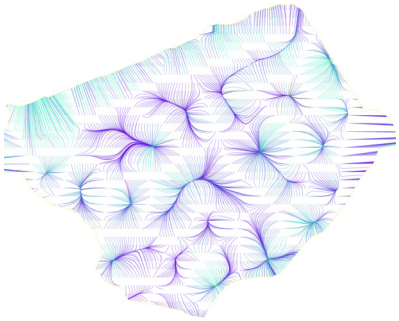


The air organisms are wind tunnels whereas the ones in the air work as bridges and sky walks around the campus and into the other organisms.

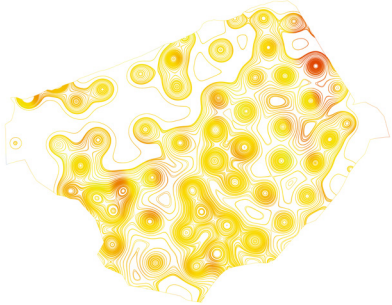
Site Analysis



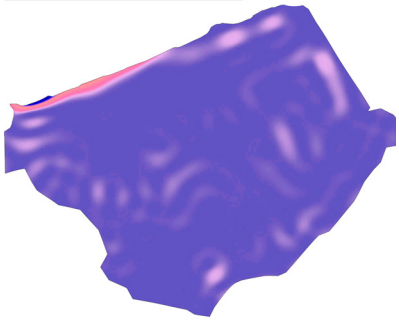
Air



Water



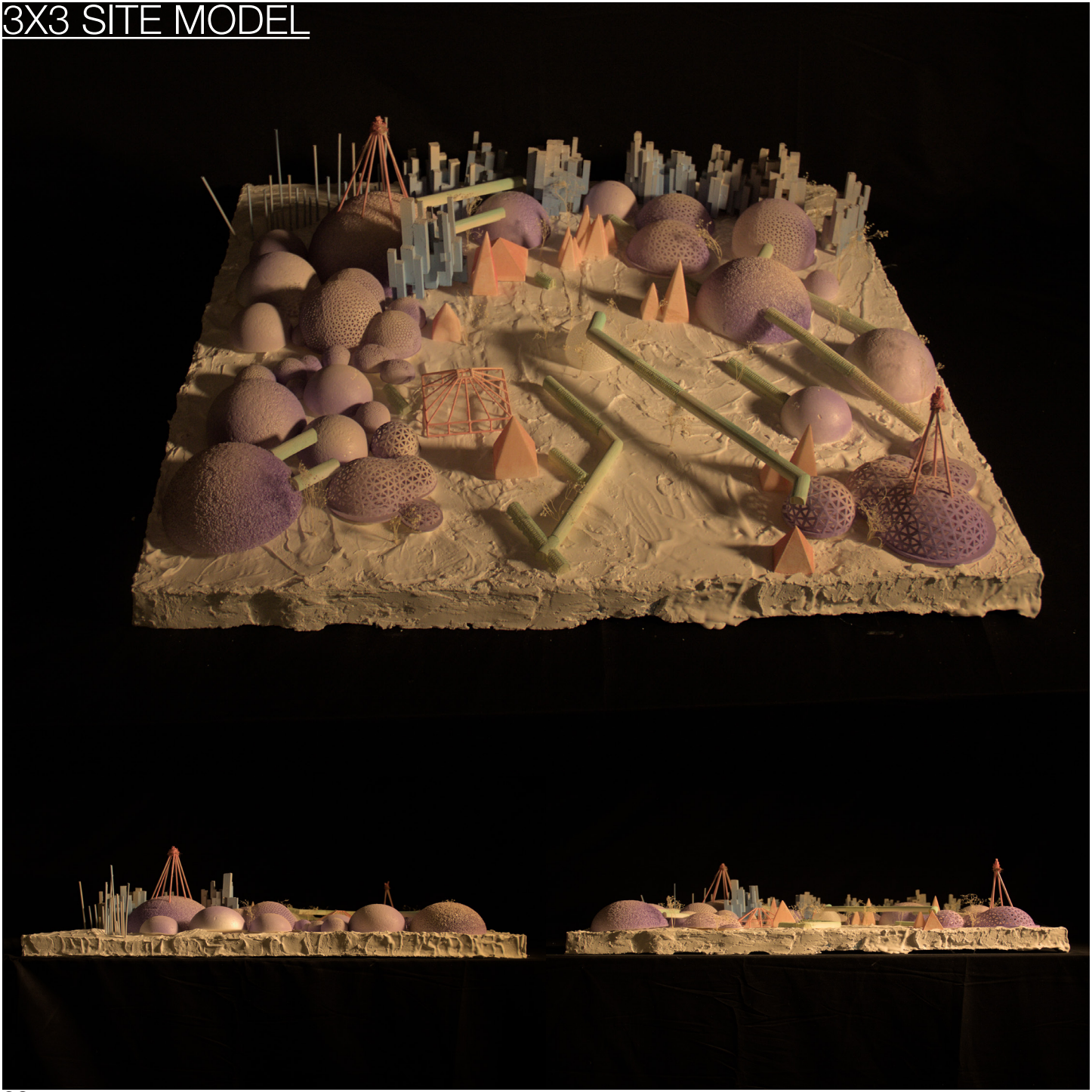
Fire



Earth

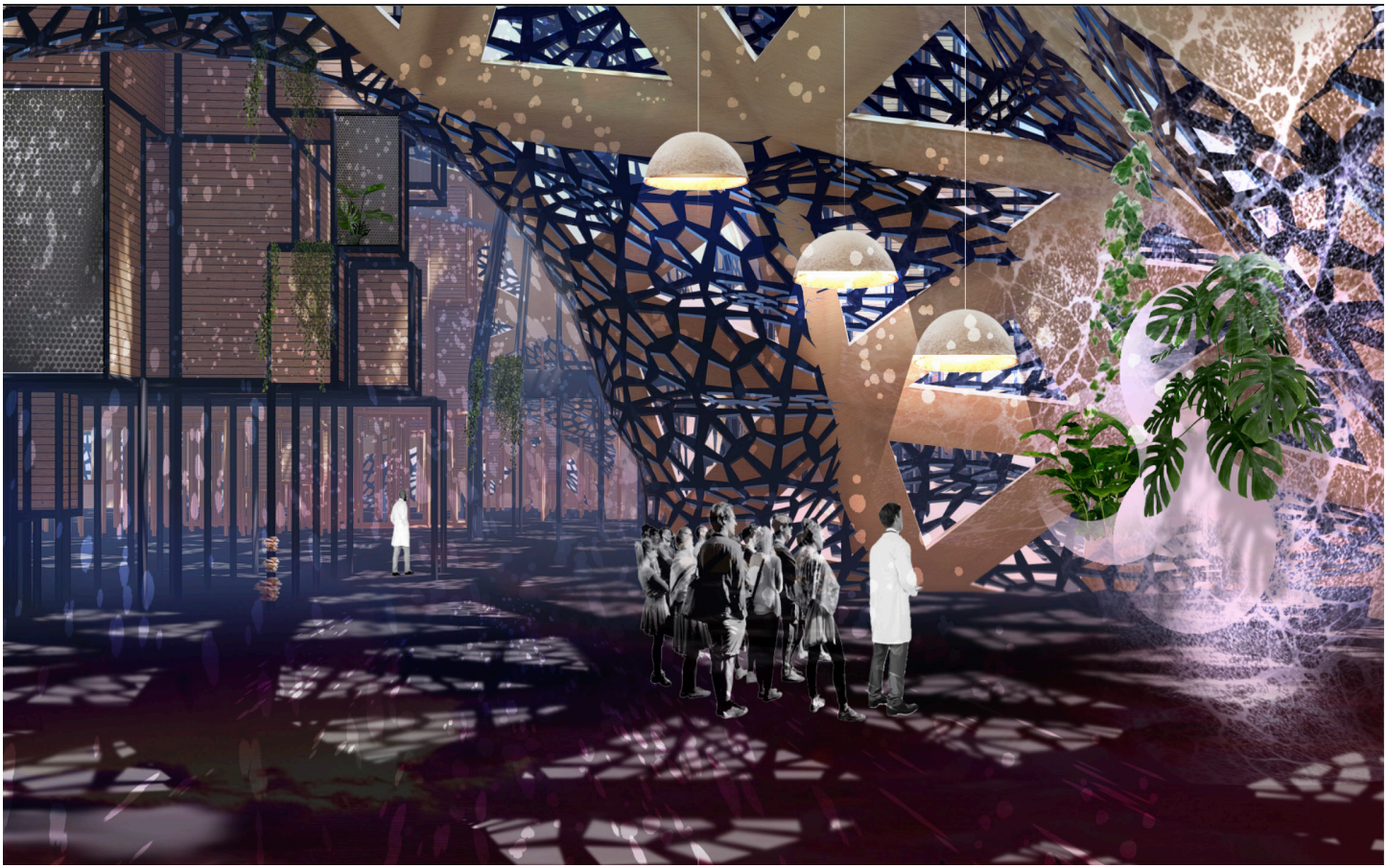
This earth map of Louisville showcases the changes in topography and radiation
This fire map of Louisville showcases central points and contour lines. Each point is from the radiation simulation where the points of higher and lower radiation behaving like electromagnetic fields. The water map of Louisville showcases the annual rainfall and where the rainfall gathers according to the bumpy texture of the land. The air map of Louisville shows how air moves across the site The air flow is constant and largely uninterrupted due to the flatness of the land

3X3 SITE MODEL



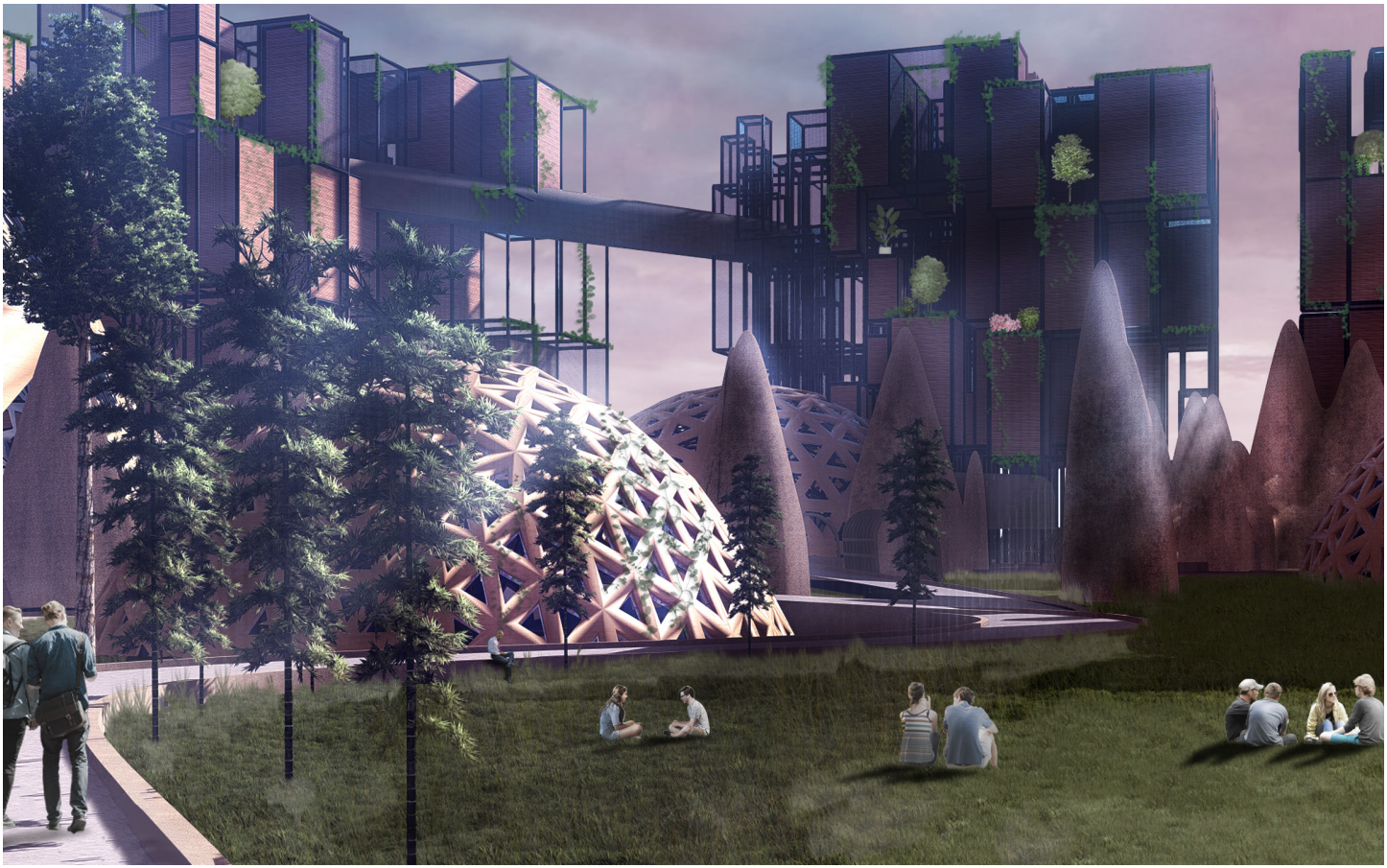

Programs Used:
MODEL MAKING
CNC ROUTER
WOOD WORK
2D PRINTING
SPRAY PAINT

INTERIOR RENDER



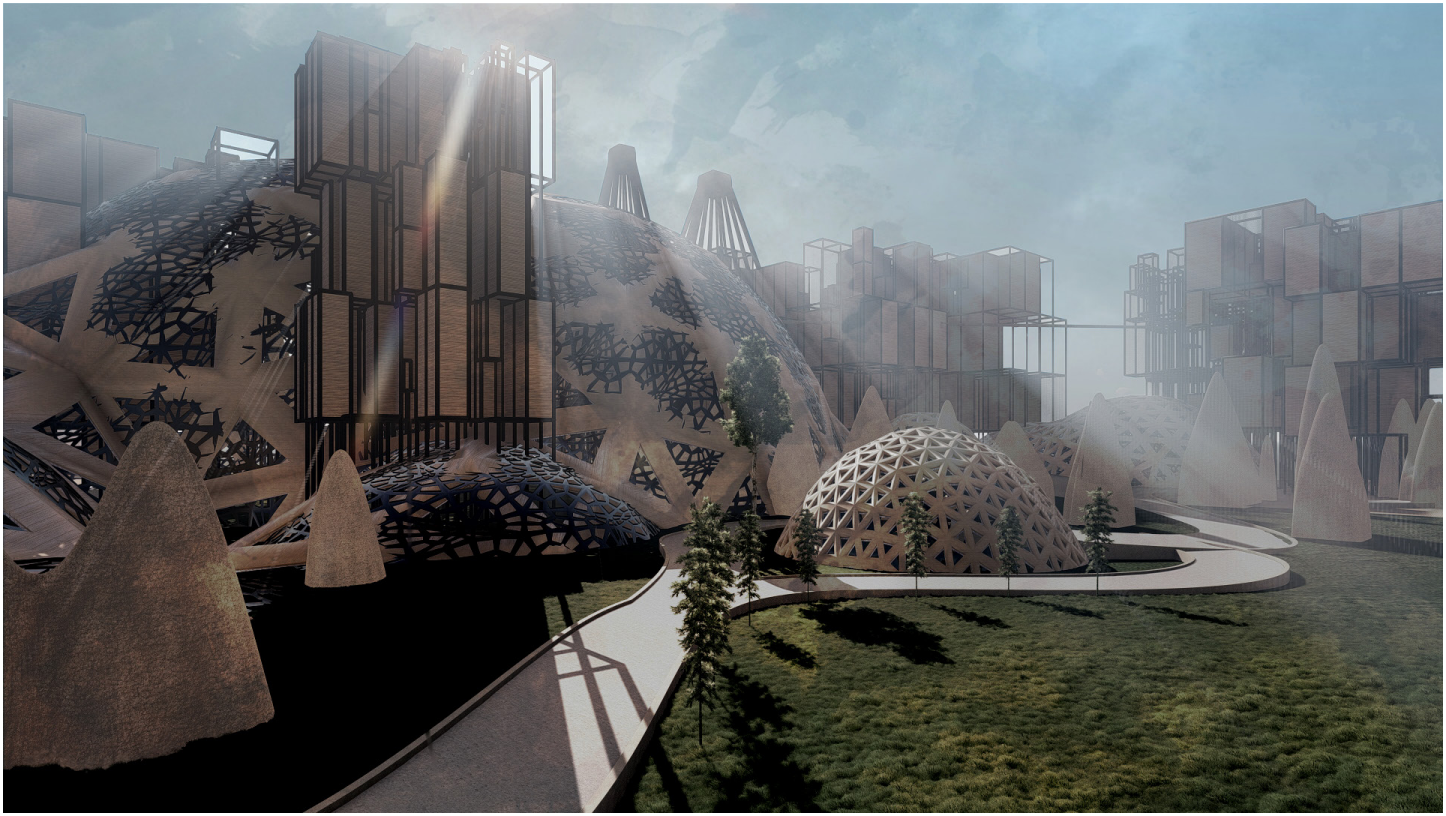
This drawing represents the center of our campus that makes use of warm timber and clay and how visitors and fungal researchers may weave between the spaces. This also shows how the fungus and greenery grows along the exterior and undersides of the organisms. Within the canopies of the earth spaces light and shows create these iridescent in these semi interior zones where visitors are immersed in these optical spores.

EXTERIOR RENDER



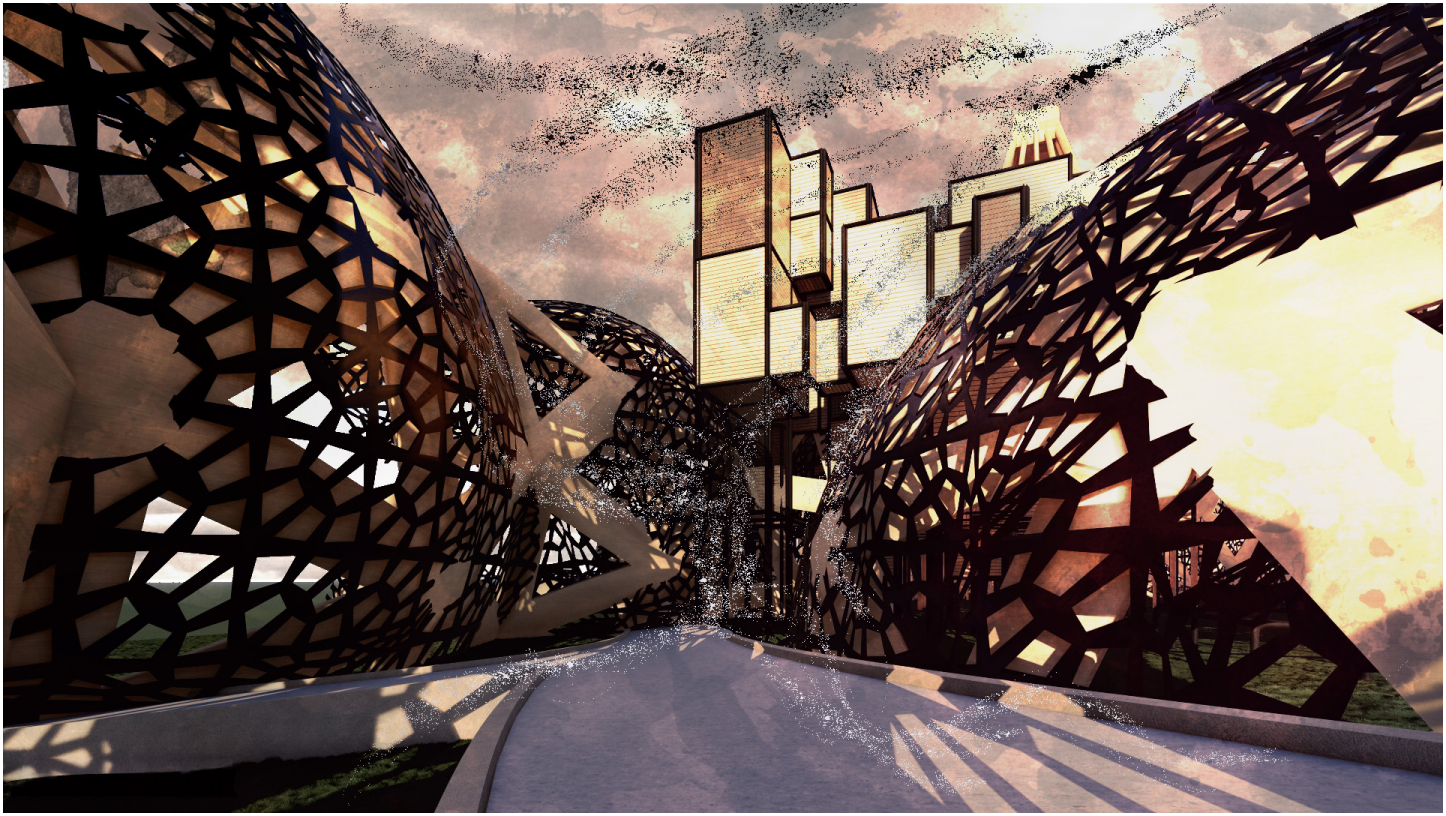
Programs Used:
RHINO 7
GRASSHOPPER
LUMION
PHOTOSHOP
PROCREATE
COLLAGE

FINAL VIGNETTES: BEFORE SPORES SPREAD



Programs Used:
RHINO 7
GRASSHOPPER
LUMION
PROCREATE
COLLAGE

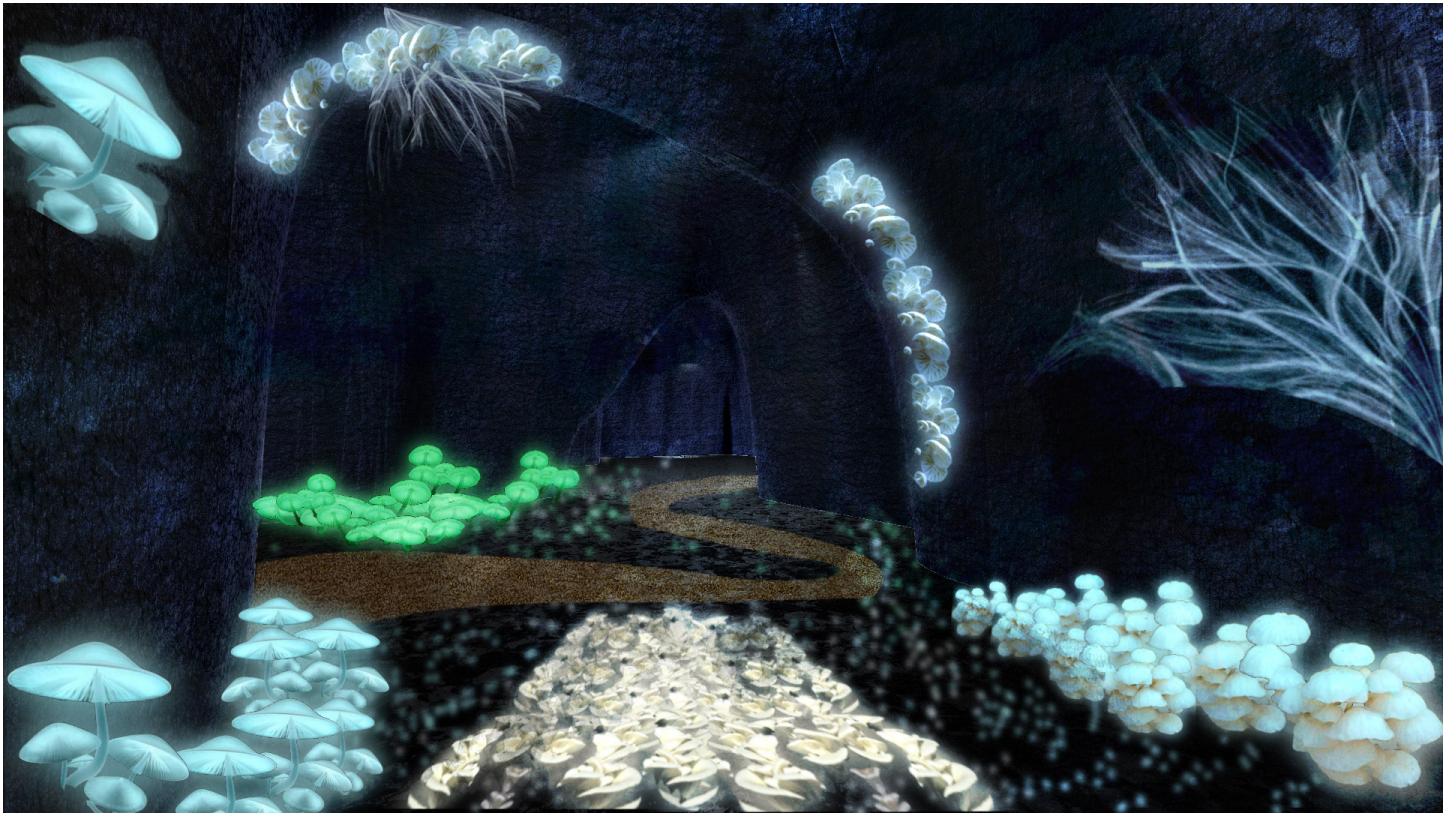
DURING SPREAD OF SPORES



The spread of spores on the site is a haptic experience, not an optic one; however, if they could be perceived over long distances, we would observe them steadfastly navigating towards their ultimate positions. As nomads, they embody a continuous state of becoming, morphing the site's organisms—each on its own grid and pathogeny—into a domain that is both haptic and optic in close quarters. Their navigation towards the horizon line is akin to the quest of we who are both architects and dwellers of space, as we grapple with designing for bodies that are perpetually weathering and channeling disaster.

AIR MODULE: HARVEST

FIRE MODULE: STORAGE



Programs Used:
RHINO 7
GRASSHOPPER
LUMION
PROCREATE
COLLAGE