

GO BACK
TRY AGAIN

REFLECT

REVISE

REVIVE

SONAM TSERING SHERPA
MASTER OF SCIENCE IN ADVANCED ARCHITECTURAL DESIGN

नमस्कार

EACH DESIGN AND CONCEPT ON THE FOLLOWING PAGES REPRESENTS THE BIRTH OF AN IDEA. THEY PROVIDE GLIMPSES OF THE ENDLESS POSSIBILITIES THAT EMERGE WHEN WE PUSH PAST THE CONFINES OF CONVENTION.

WE MUST NOT VIEW COMPLETION AS A GOAL. MY PROJECTS AND THE STAGES AT WHICH THEY'VE BEEN CAPTURED POSE AS ESSAYS TO PROMPT QUESTIONS RATHER THAN PROVIDE ANSWERS. THEY ARE TO OPERATE AS VIGNETTES OF POTENTIAL. TO SERVE THEIR PURPOSE IN ARCHITECTURAL EVOLUTION BY WAY OF HUMAN PROGRESSION, PLEASE VIEW THIS COLLECTION AS A SKETCH IN ITS ENTIRETY. MAY THIS FRAMEWORK SERVE AS A CATALYST TO FURTHER YOUR CURIOSITY AND EXPLORATION.



EXPLORATIONS

- 01 CHANCE BY CHOICE
- 02 INTERSECTING SPACES
- 03 HANDMADE: EVOLVING MATERIALS
- 04 SOIL-SMART HUB
- 05 MESSA TOWER
- 06 THE VULNERABILITY NEXUS
- 07 EARTHQUAKE RESILIENCE IN RURAL NEPAL
- 08 CONVENIENCE BEFORE CLIMATE & EASE OVER ETHICS
- 09 NESTING GROUNDS

CHANCE BY CHOICE

MANHATTAN, NEW YORK



ADV STUDIO V: THE COMING COMMUNITY | CRITIC: JING LIU | FALL 2023

The circulation of the Guggenheim museum is too forced and *singular*. Although appearing continuous, there is actually a lack of *continuity* between the players inside the museum. The intention is to nest different constraints within the armature to reveal *potentials*. And the combination of these different added formal *constraints* will give more agency to the viewers. This approach allows visitors to form their narratives, explore the diversity of the collection, and correct or nuance their perceptions. Engaging visitors in a playful way and allowing them to make *choices* based on personal interest and curiosity. By orchestrating these *multiplicities* we can change the experience of the Guggenheim from this *bidirectional vector* to a journey that is more multifaceted.

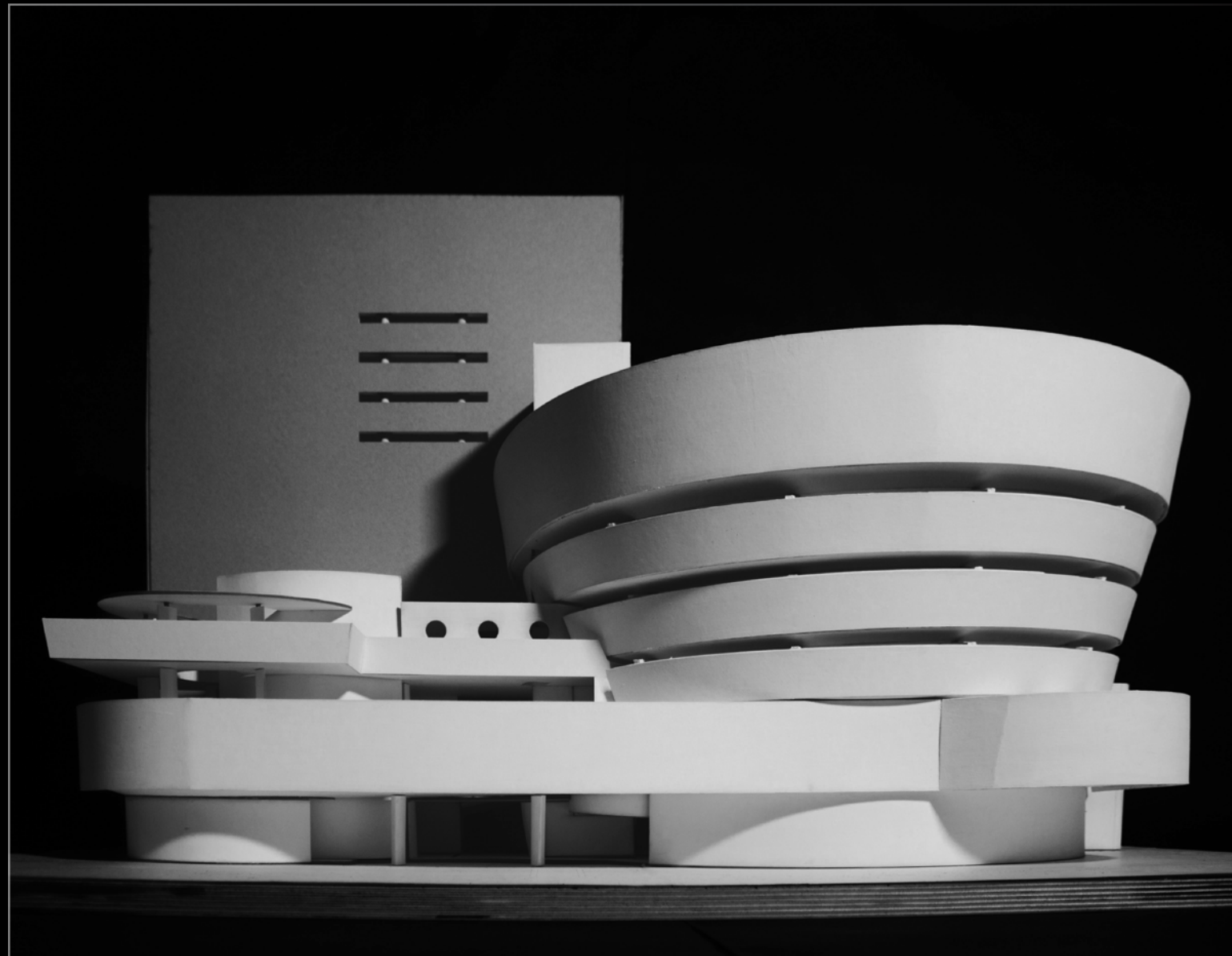
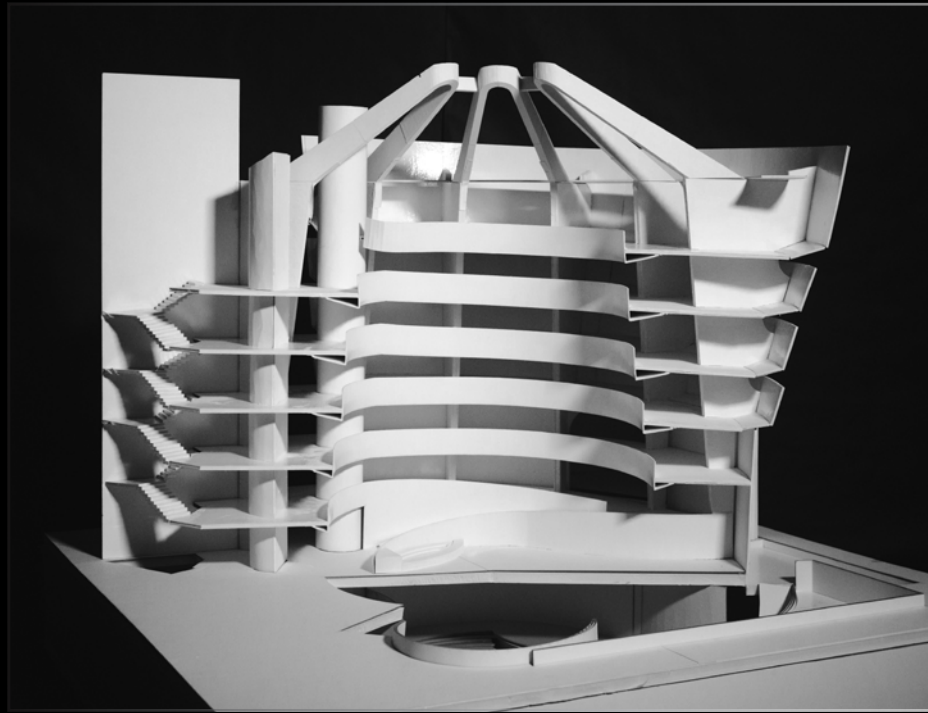
This project was compiled in the form of a short film linked in the QR code above



In the Guggenheim, we see a continuity in the spiral through which the viewers move. The path is linear and fixed: with a shape seemingly fixated on motion. The implied infrastructure is one without brakes. Paradoxically, this prevents continuity in the patron's experience engaging with the displayed art. Museums, ultimately, are built upon symbiotic experiences.

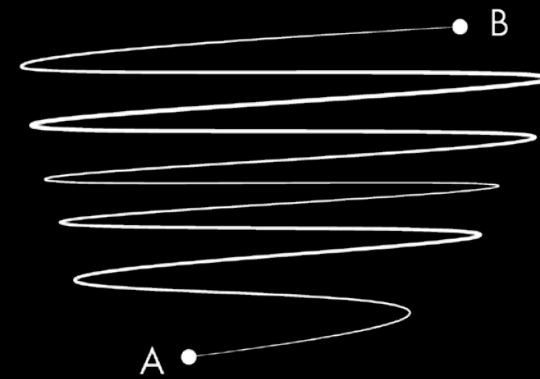
Artists, curators, preparators, designers, architects, visitors — the list of players goes on. They all hold different agendas which create conflicts of interest and conflicts of interpretation.

Continuity then, is far from probable.



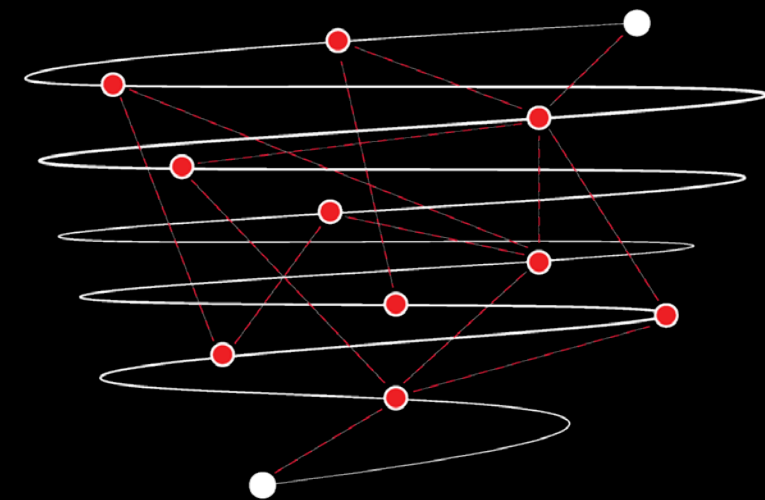
The design of the Guggenheim museum seems to be congruous with a single journey, a continuous path from start to end. Where formalized becomes formulaic.

SINGULARITY



This proposal serves to challenge that; reemphasizing personalization, by giving the viewer opportunities to dictate their own path, their own narrative, their own choices.

MULTIPLICITIES

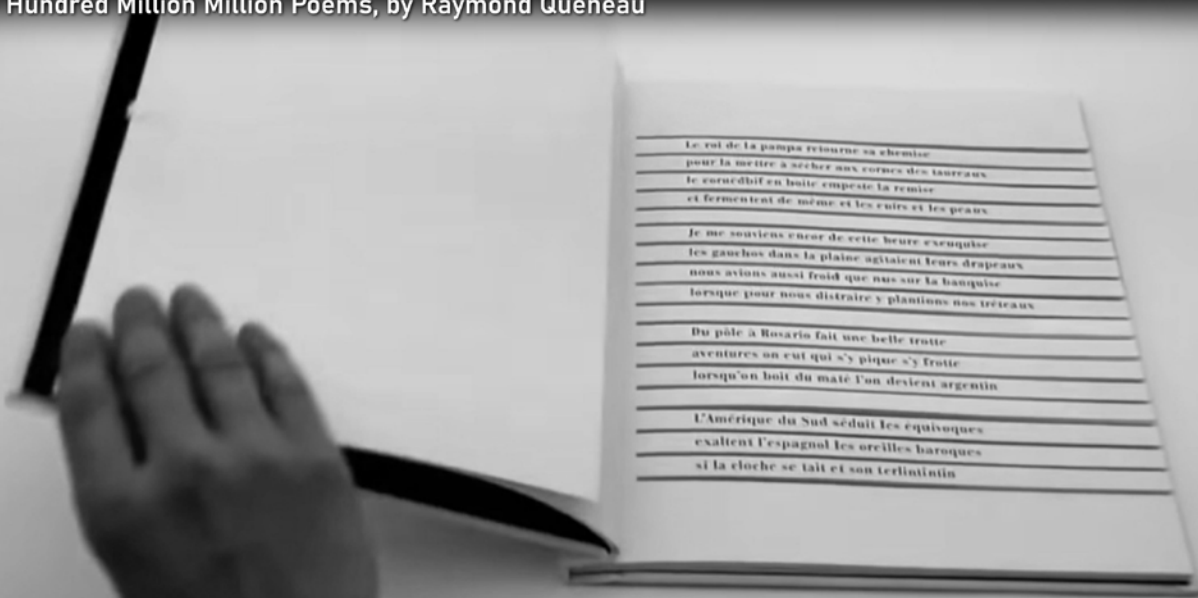




ou/ipo

The **Oulipo**, a French literary group formed in 1960 sought to create works using constrained writing techniques. A workshop for **potential literature**. To inspire creative freedom, they did it by adding formal constraints within existing texts.

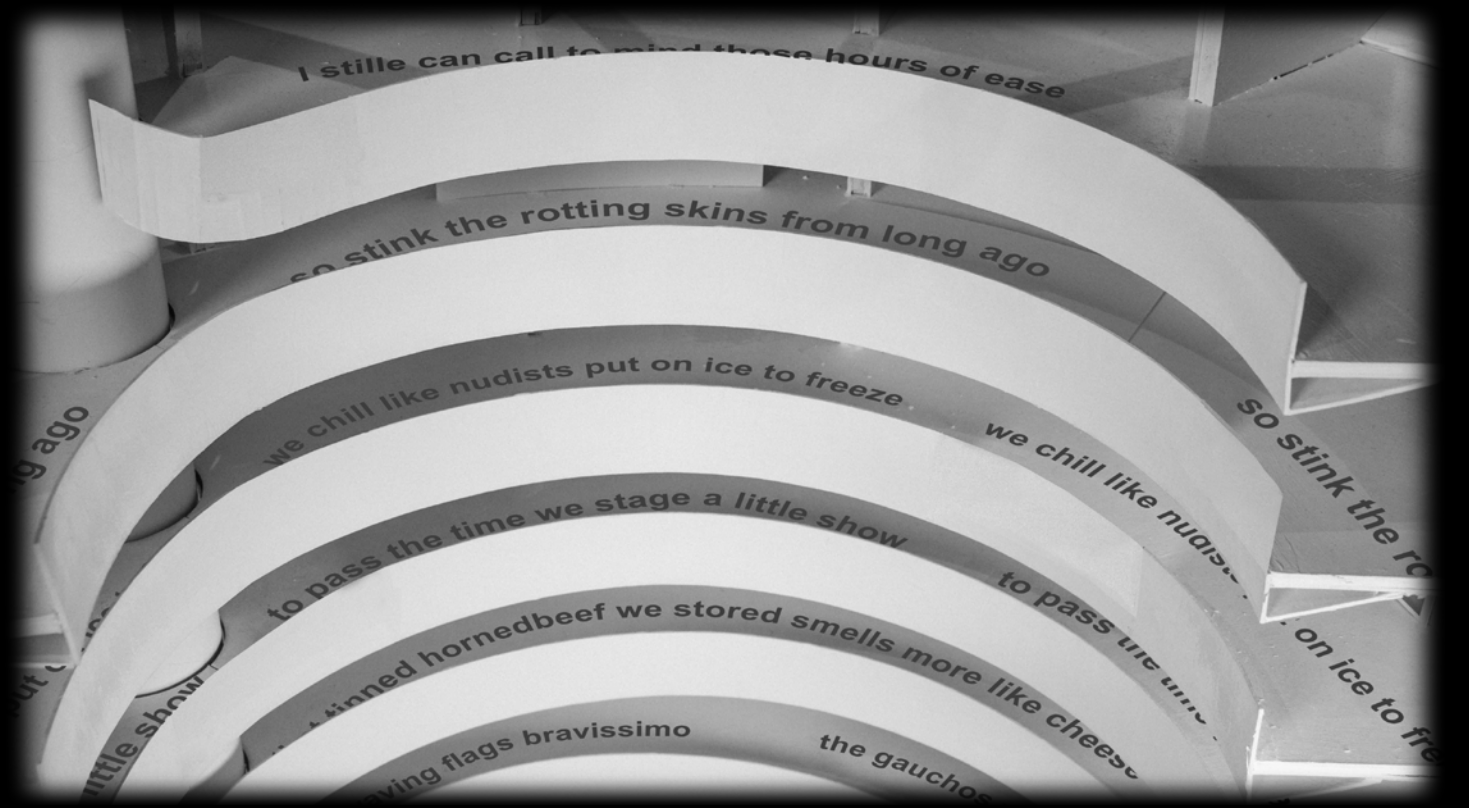
One Hundred Million Million Poems, by Raymond Queneau



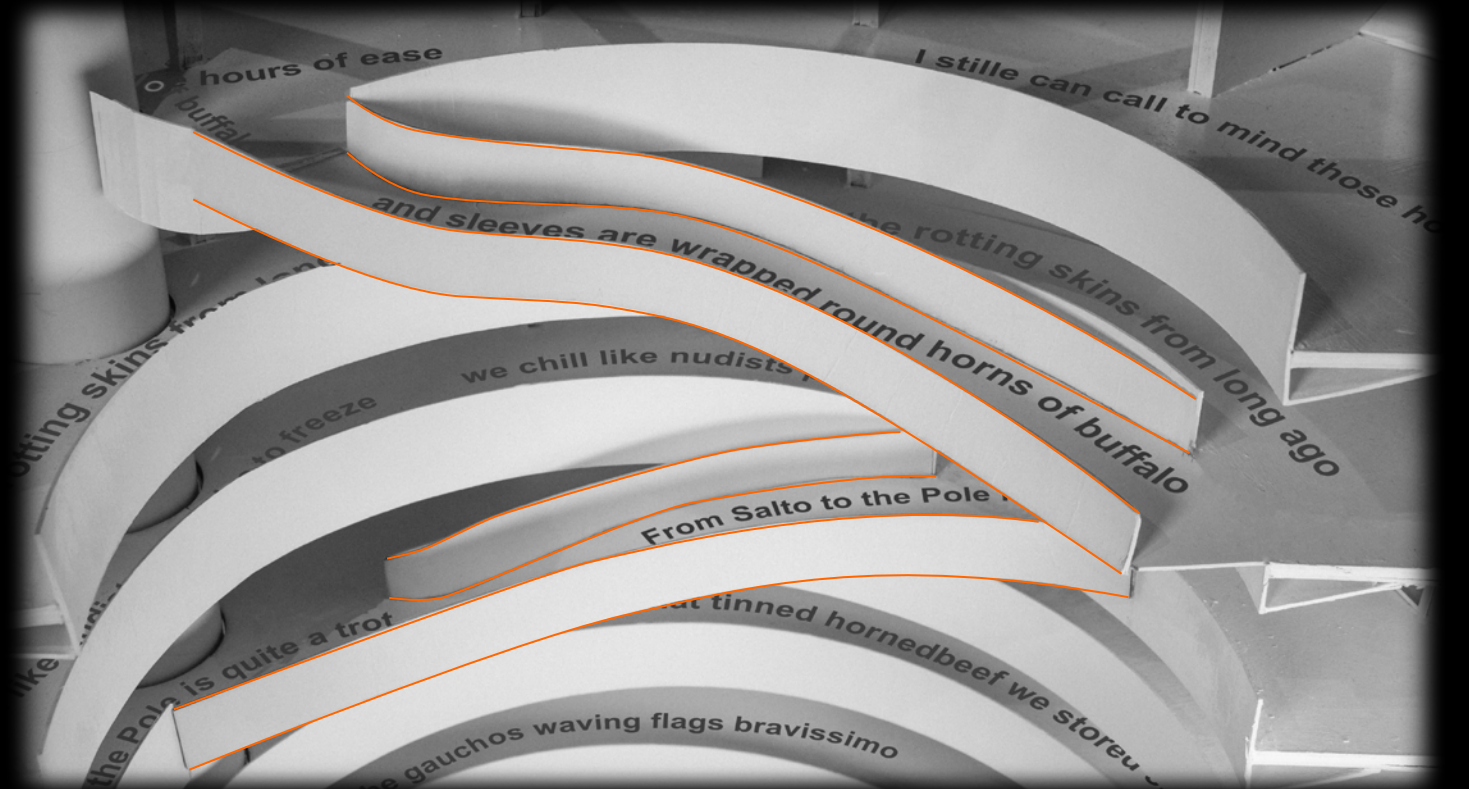
One Hundred Million Million Poems, a book by Raymond Queneau published in 1961, contains 10 sonnets 14 lines each. But every line is on its own strip and can be combined with any from the other 9 sonnets.

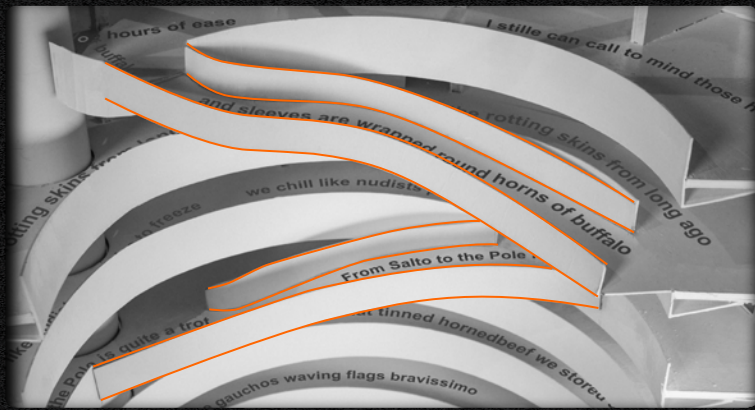
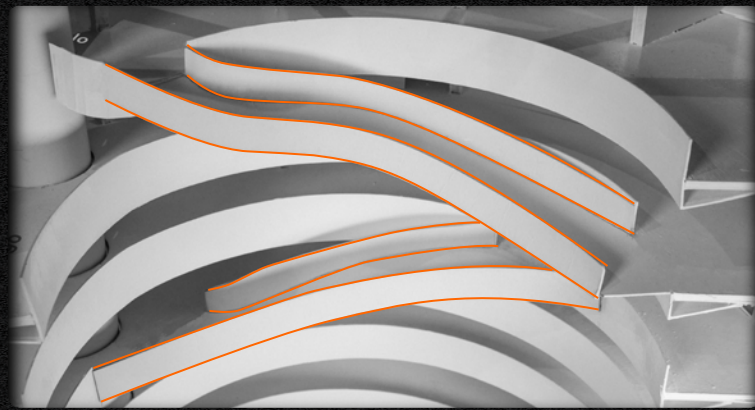
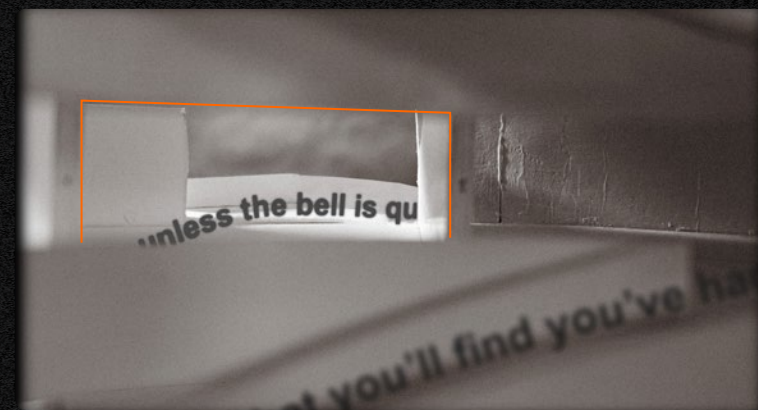
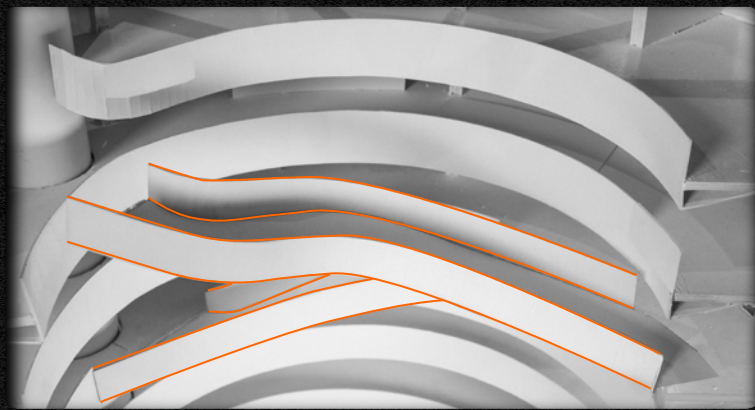
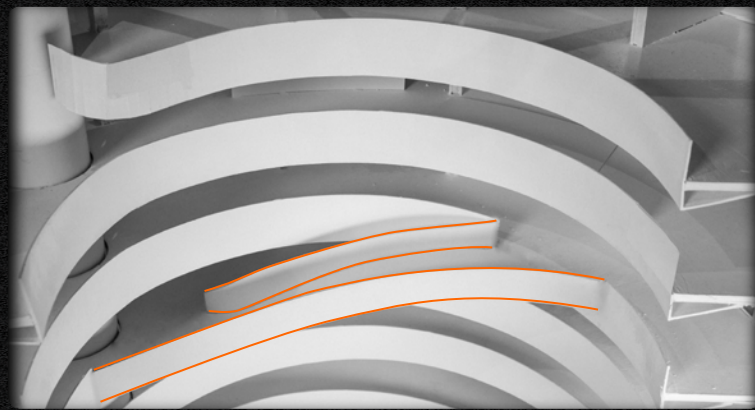
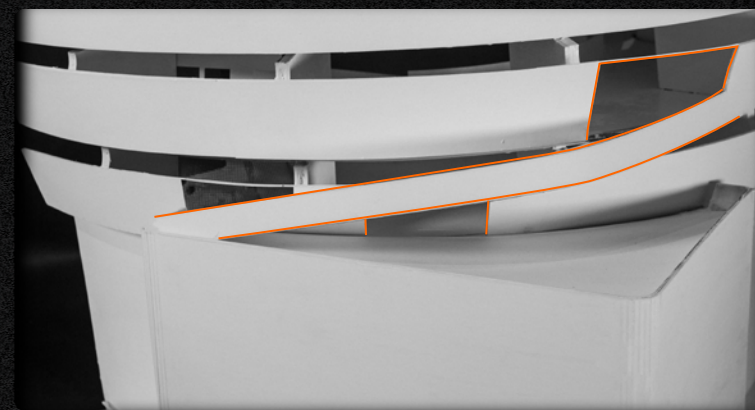
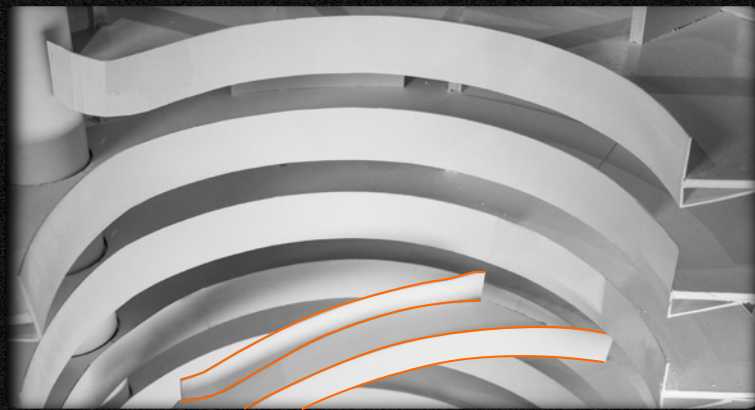
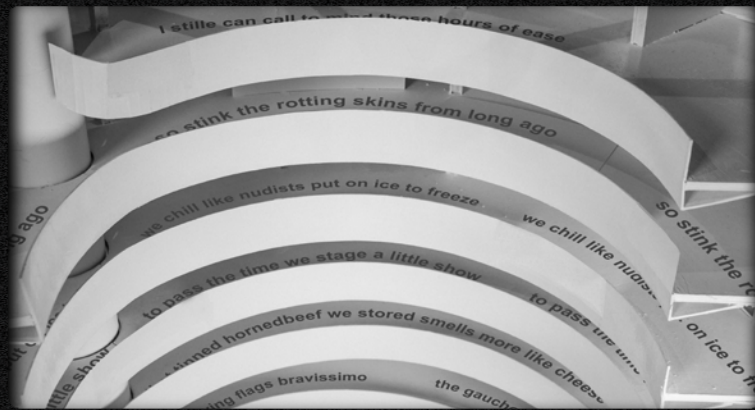


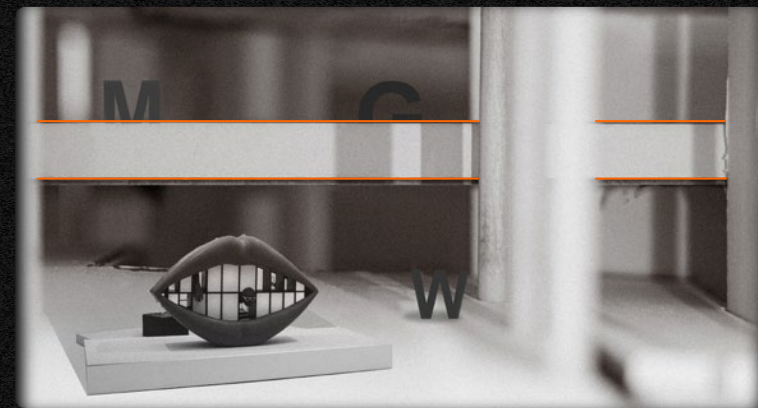
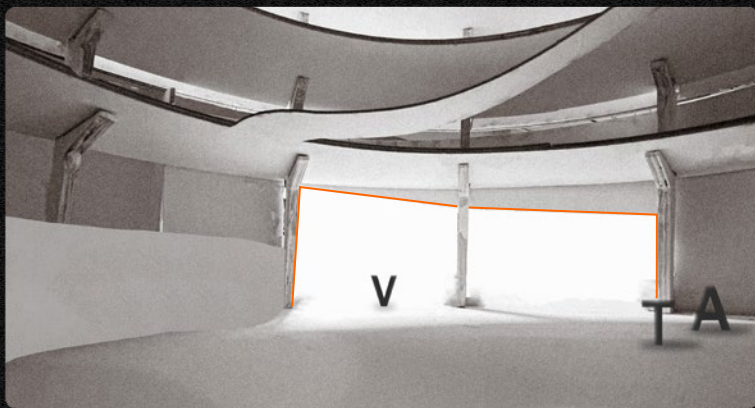
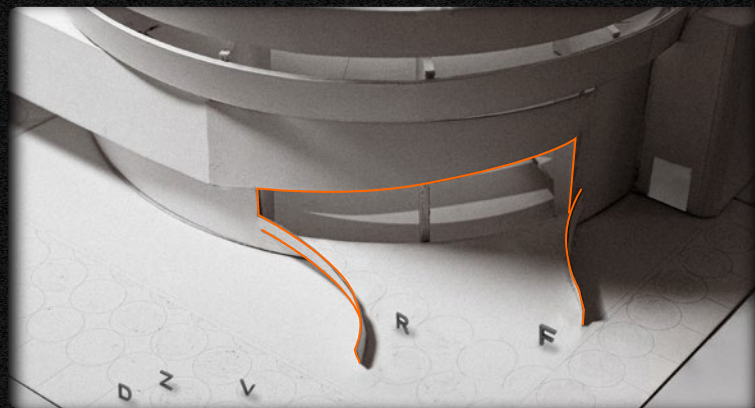
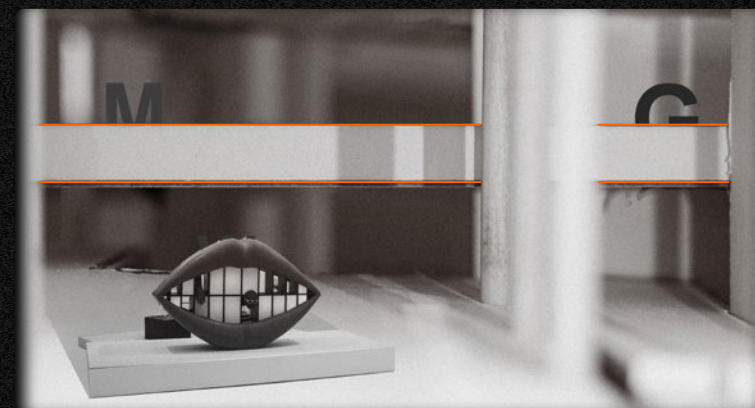
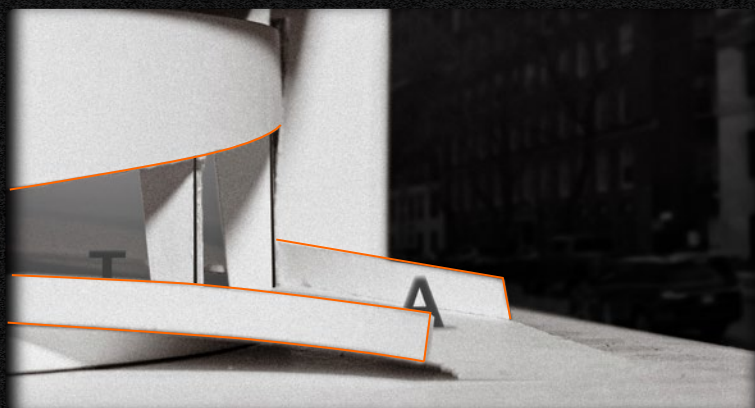
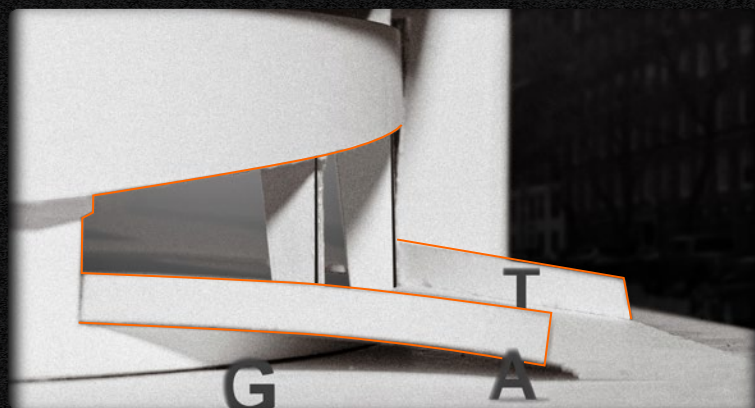
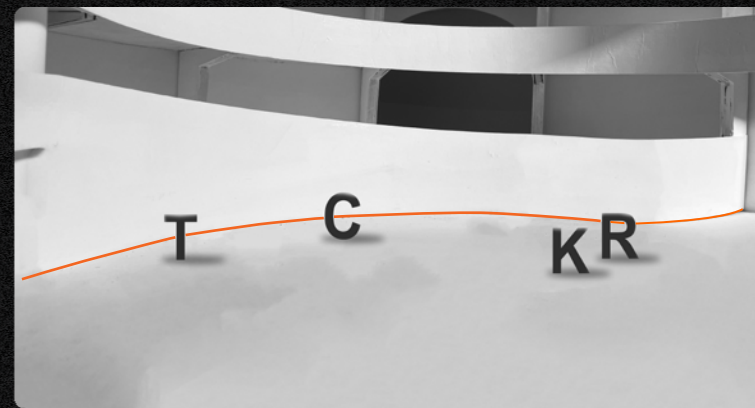
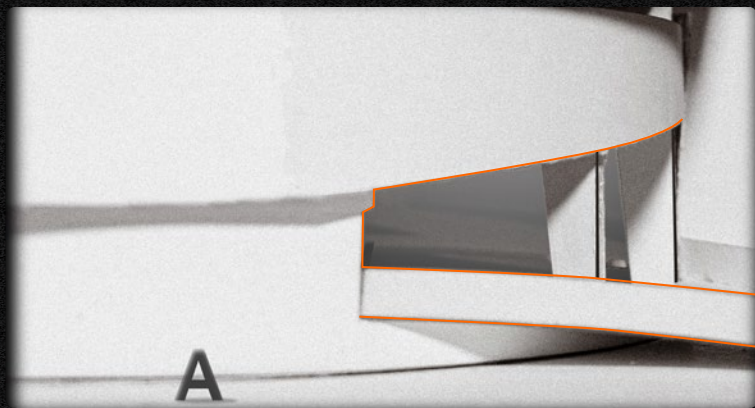
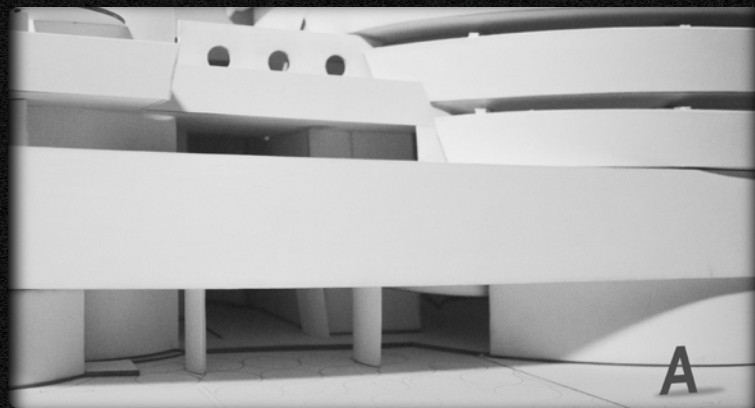
One Hundred Million Million Poems, a book by Raymond Queneau published in 1961, contains 10 sonnets 14 lines each. But every line is on its own strip and can be combined with any from the other 9 sonnets. Making it possible for the reader to flip their way through many different combinations of sonnets, many different paths that **they could choose**.

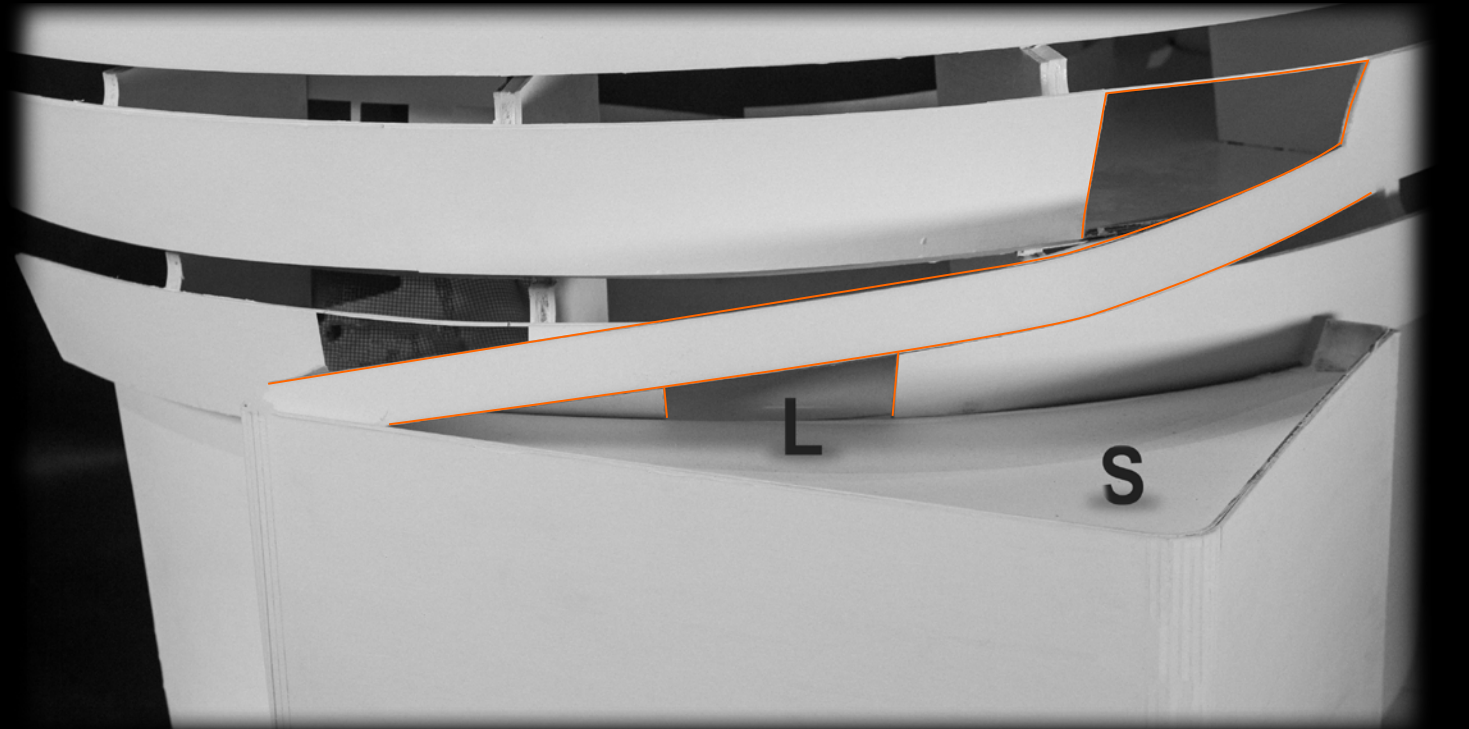
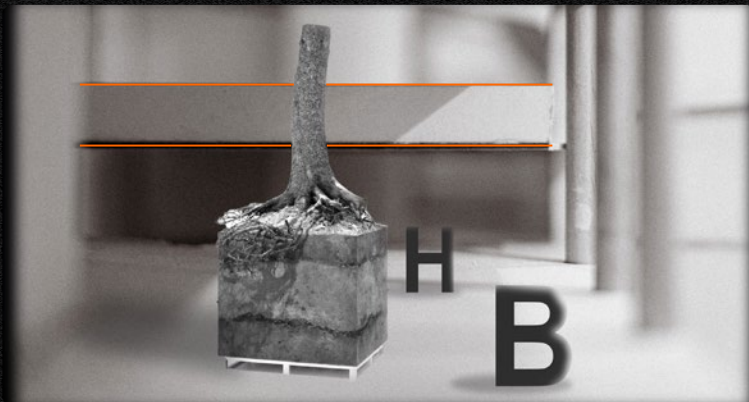
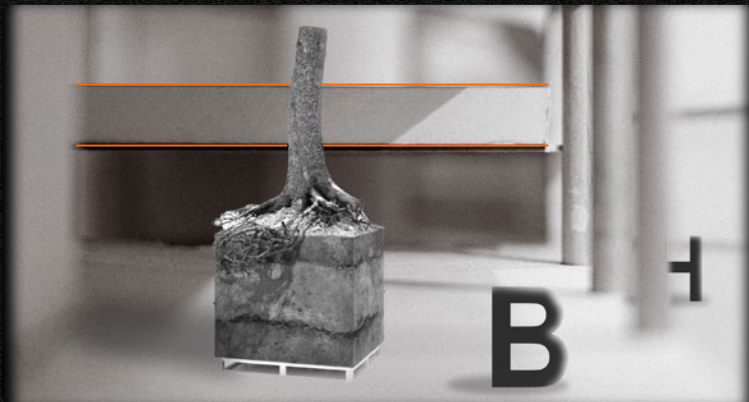
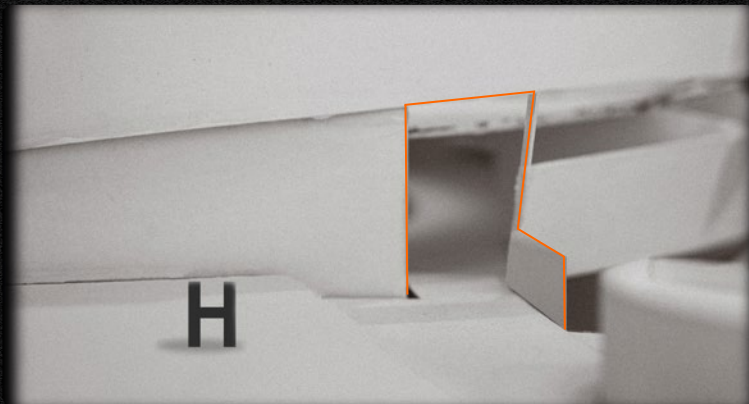
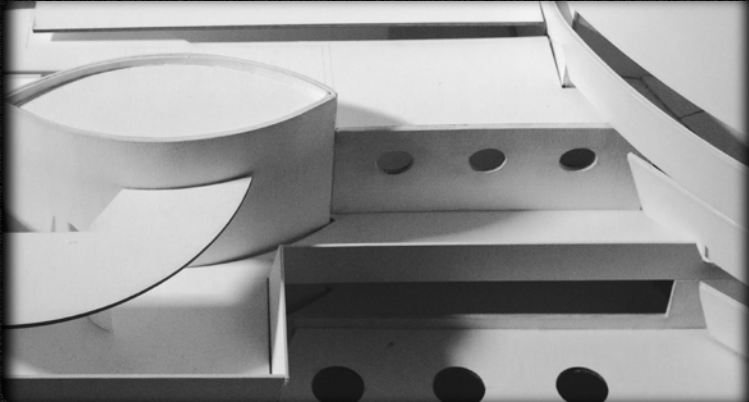


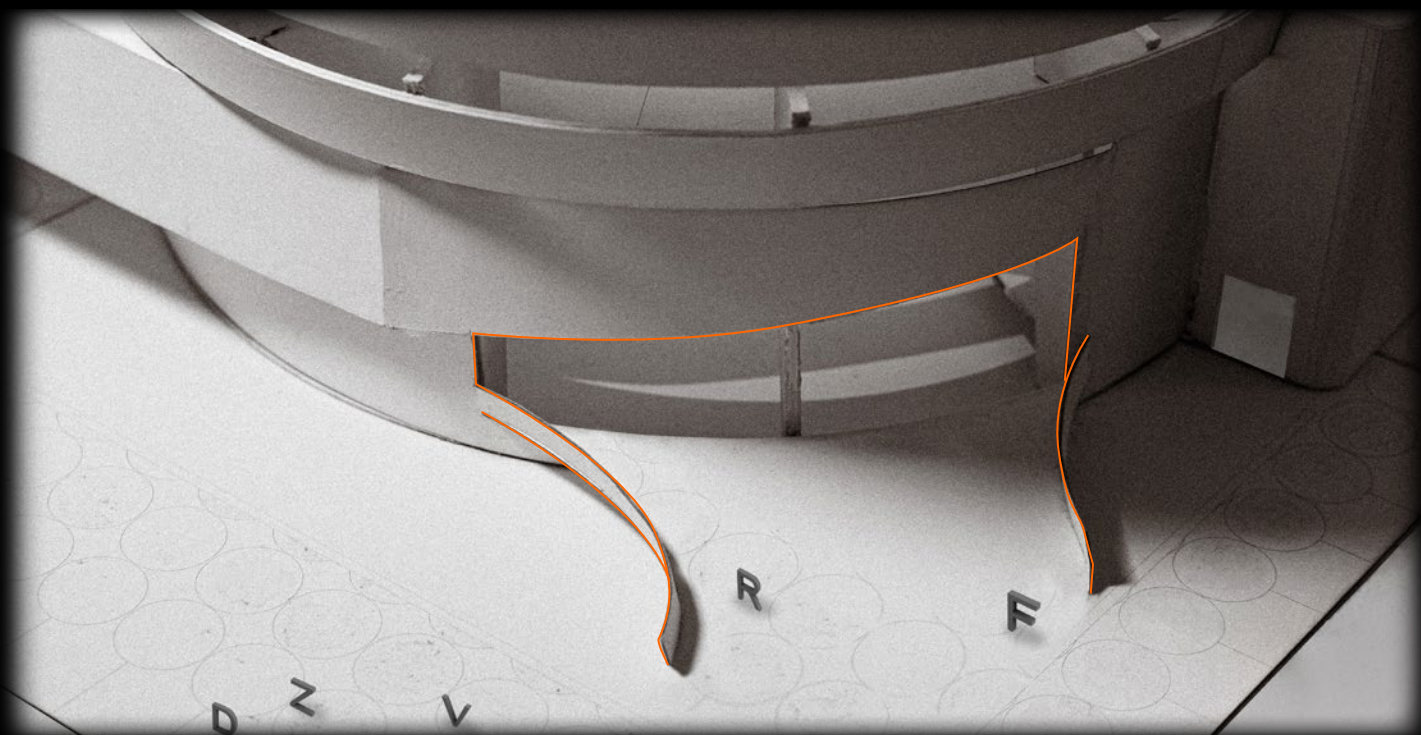
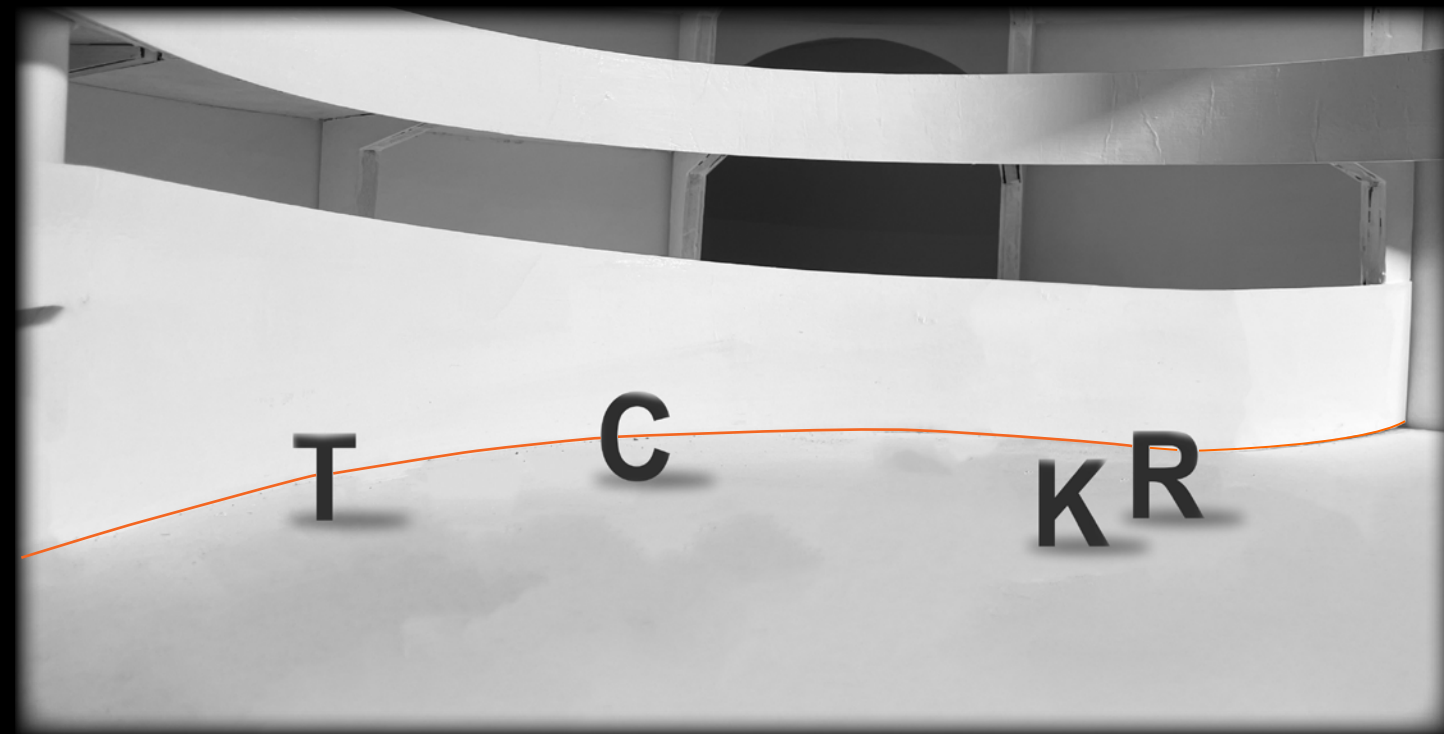
The constraint is a "principle, not a means" for the Oulipo. A principle aiming to uncover potential. The intention is to translate this principle within the Guggenheim by embedding different opportunities within its armature to explore various potentials.

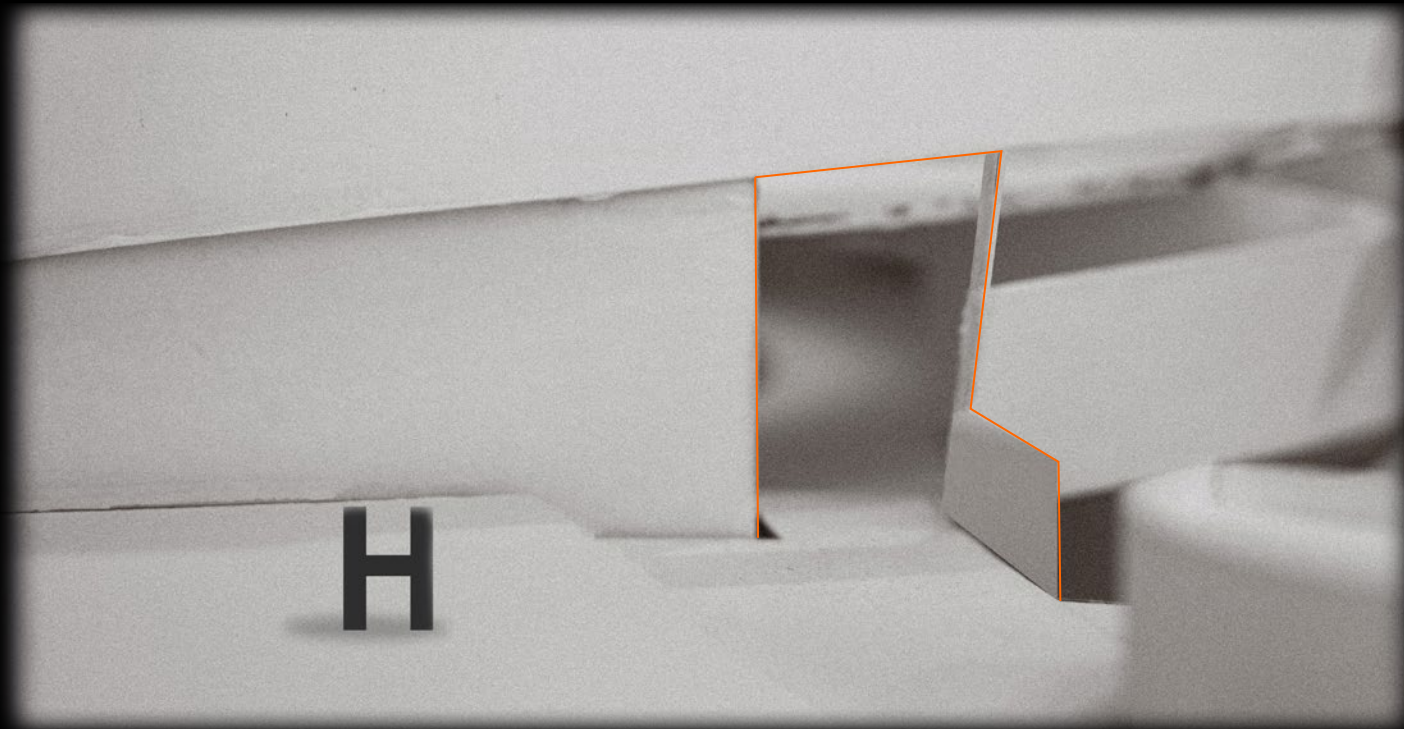












INTERSECTING SPACES

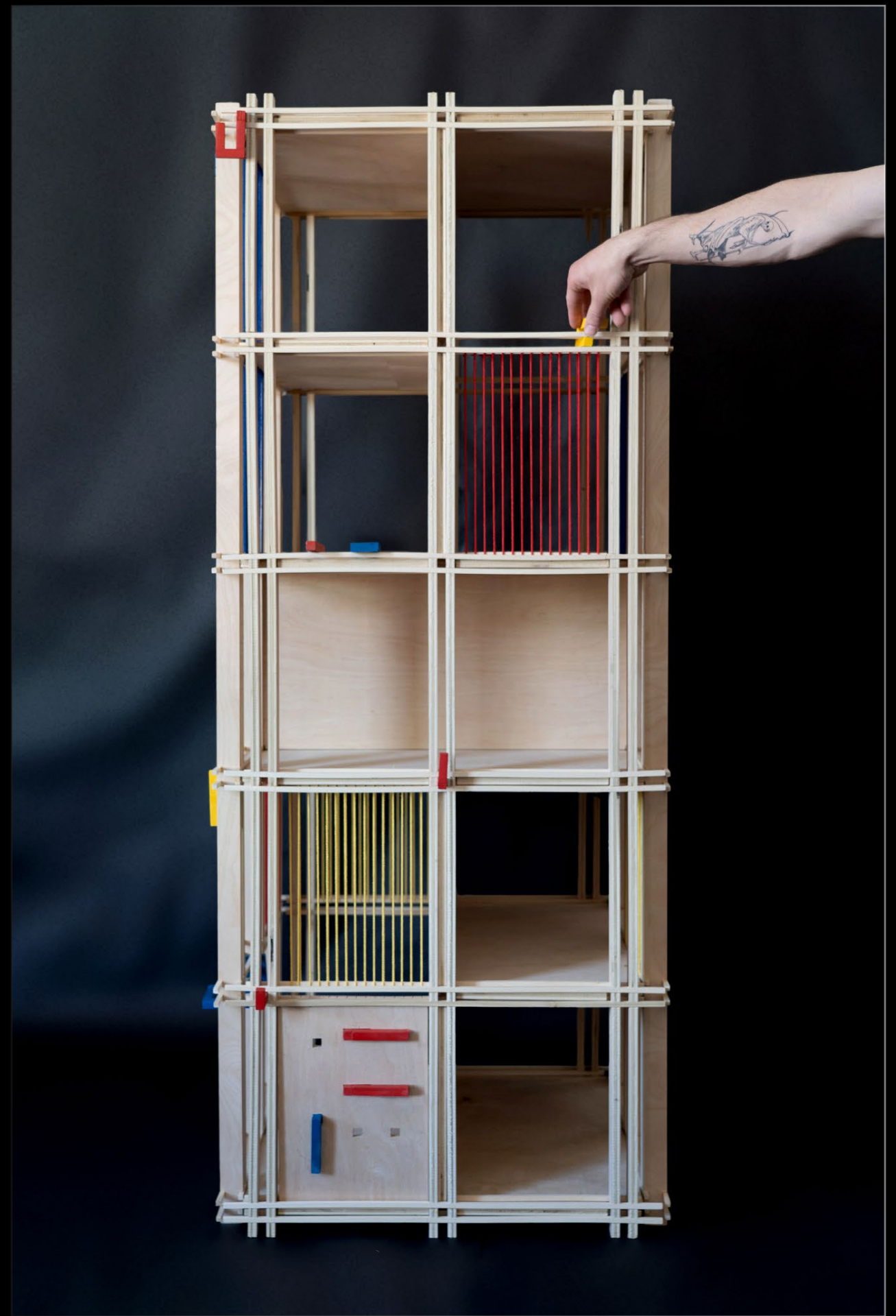
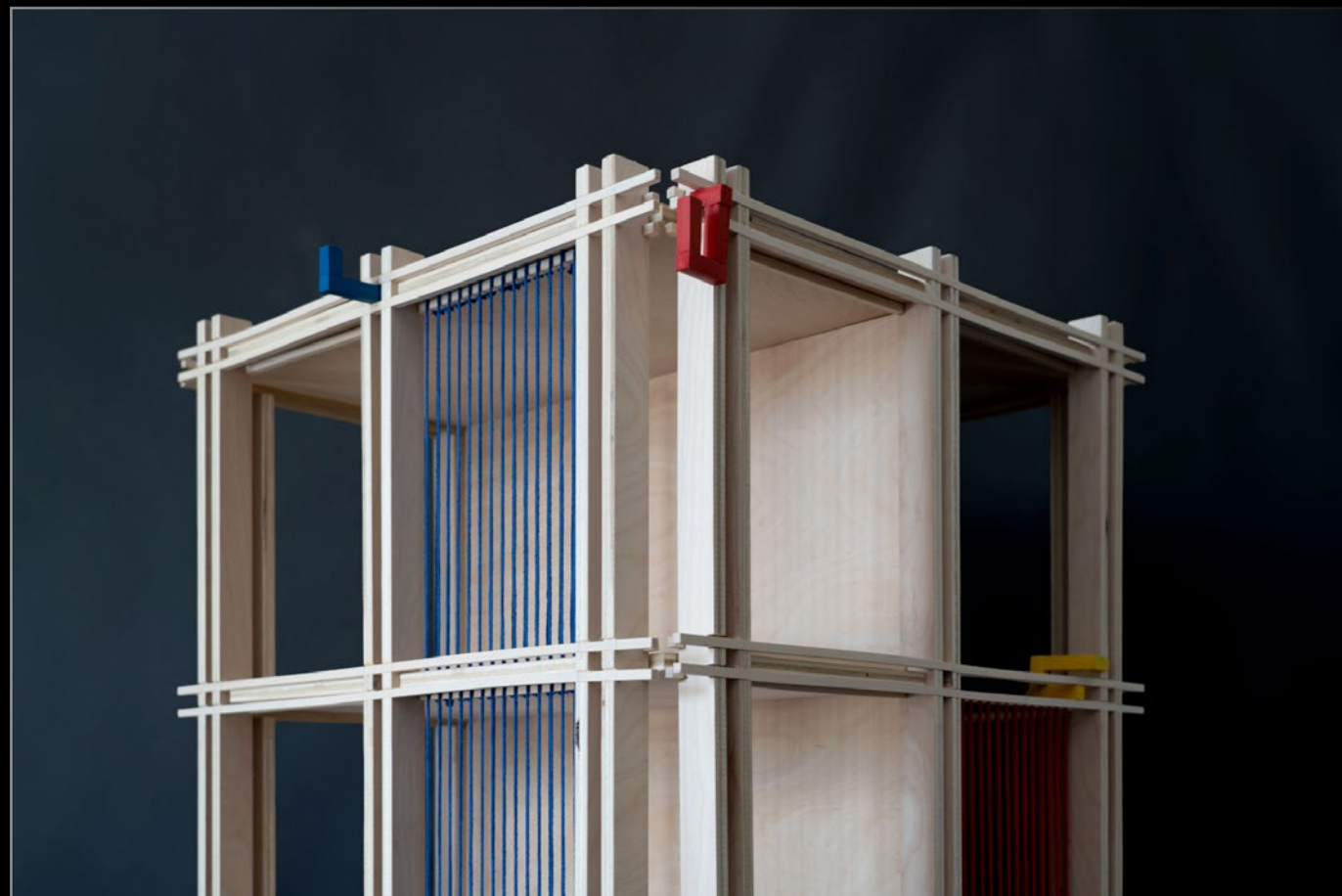
MORNINGSIDE HEIGHTS, NEW YORK

1:1 CRAFTING & FABRICATION OF DETAILS | ZACHARY E. MULITAUAOPELE | SPRING 2024

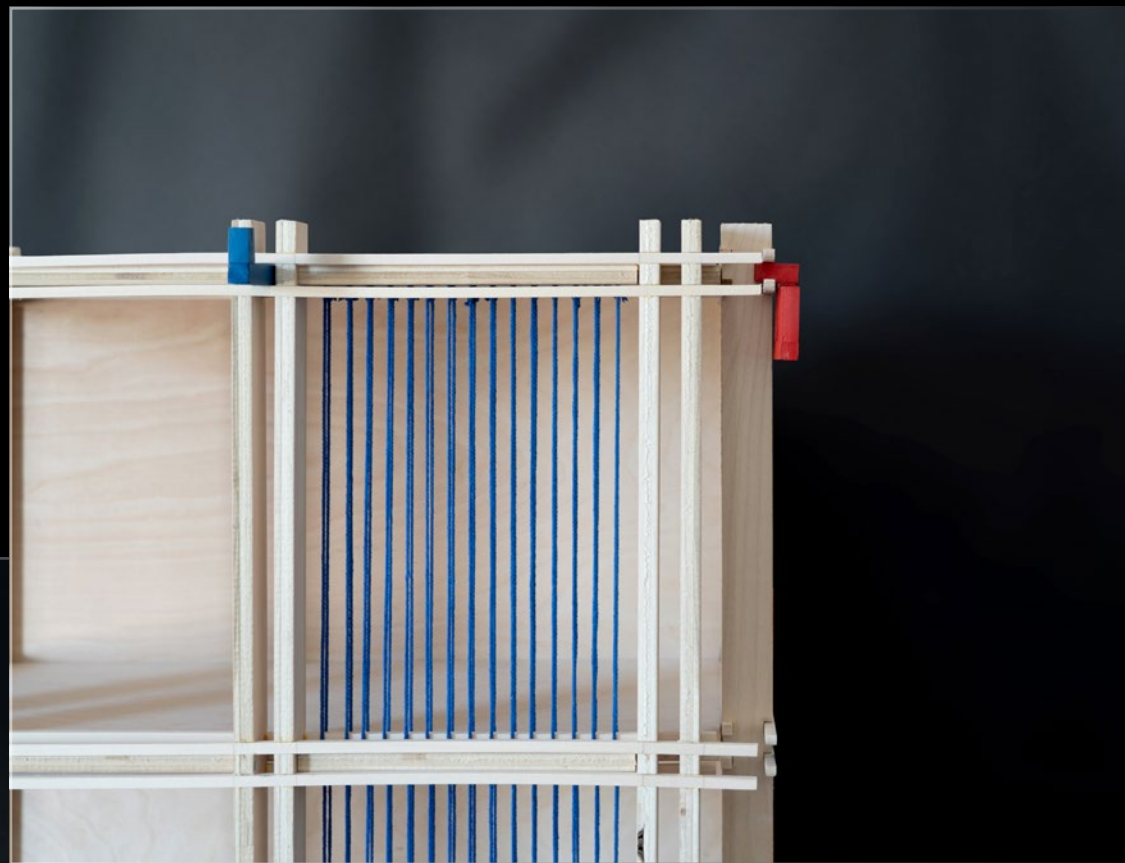
PARTNER: MARTIN LEE

Materials: 1/2" plywood, 1/4" x 1/4" square wood dowels and 2mm colored macrame string

This totem focuses on the art of composition through grids and reveals, employing precise dimensions and interlocking joints for structural integrity and aesthetic appeal. It features a range of modular components, allowing users to create customizable configurations accompanied with playful colored accessories that give users the freedom to deploy and use the shelving system as they deem fit. The system incorporates a grid-based framework, showcasing the beauty of intersecting lines and negative spaces. Our design emphasizes the use of interlocking joints using the square wood dowels, ensuring a seamless assembly process without the need for traditional fasteners.







Through this project, we aimed to explore the interplay between form and function, encouraging users to engage creatively and playfully with their space. The minimalist aesthetic, coupled with the versatility of the modular units and primary colors, enables users to experiment with various arrangements, transforming their shelving into a functional piece of art



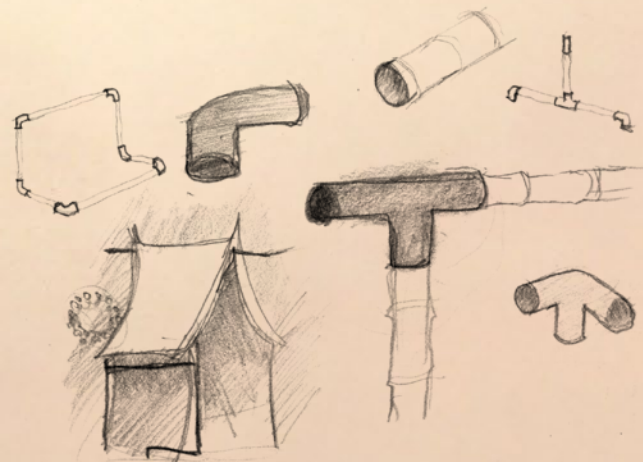


HANDMADE: EVOLVING MATERIALS

NAKHON RATCHASIMA, THAILAND

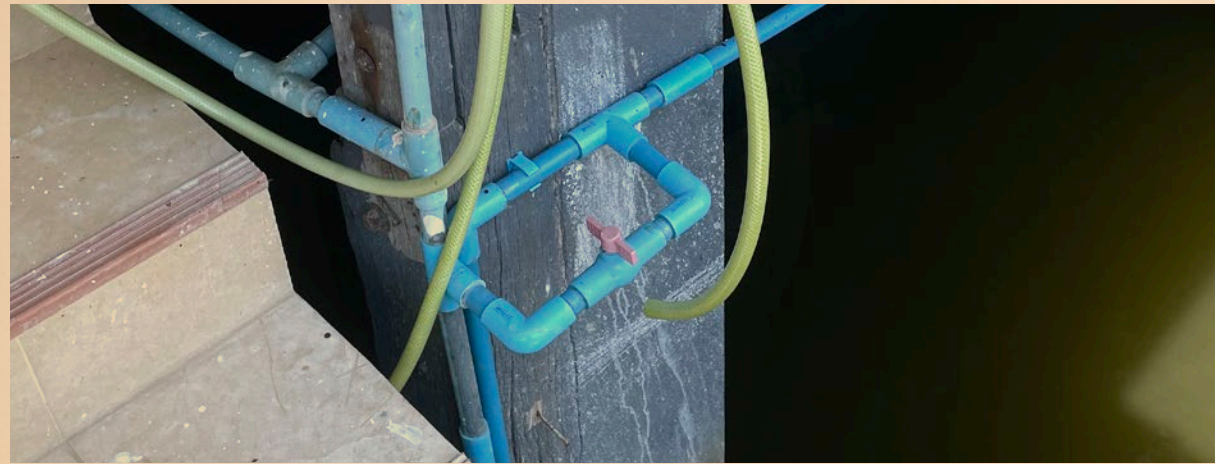
ADV STUDIO VI: PERMANENTLY IN PROGRESS | CRITICS: RACHAPORN CHOOCHUEY & LUCY NAVARRO | SPRING 2024

Located in the Isan Village, this project is an expansion for an Artist residency program in the existing Jim Thomson Farm. Using local technologies and local approaches as the vehicles of interrogation. Rubber plantations, the Terracotta factory, and Bamboo structures are not only acquisitions of existing material capital but also capital in the form of knowledge. The project explores these capitals in new and different scales through which the designs take form.



THAILAND VISIT: BLUE PIPES

In Thailand, the extensive use of these blue pipes is a prominent feature of the country's infrastructure, visible in various scales of plumbing systems. Whether in bustling urban centers or rural communities, these PVC pipes crisscross the landscape.



MUTATED FUNCTIONS

However, beyond their intended purpose, these PVC pipes are often repurposed in ingenious ways by the people of Thailand. From makeshift hangers for clothes and tools to creative stands, fences, and partitions, this one material is mutated by hand to serve functions different from its original purpose.



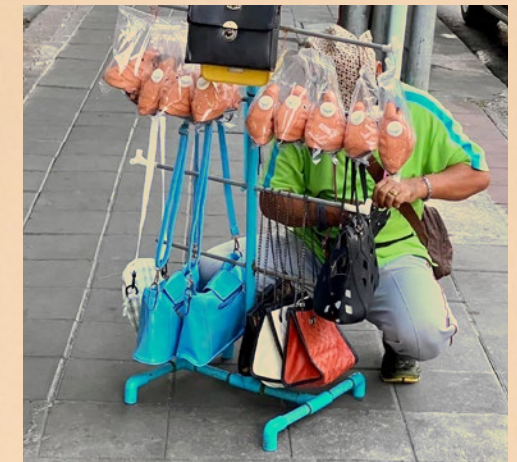
STREET STAND



GARDEN FENCE



STORE PARTITION



PURSE HANGER

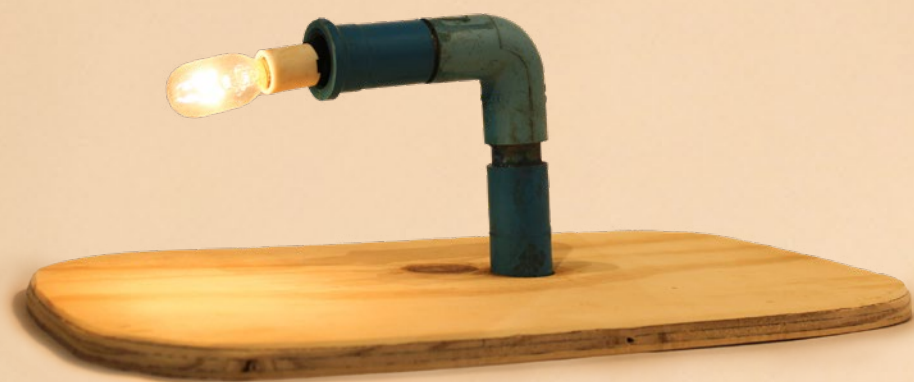


CHICKEN COOP



MOTORBIKE REINFORCEMENT

How can we look at this phenomenon of Thai ingenuity with PVC pipes as an idea to draw inspiration from and explore ways to apply it within the design approach?



LAMP MADE WITH A PVC PIPE FOUND IN THAILAND

Embracing this ethos of resourcefulness, we begin by identifying 3 locally abundant materials with established economies in the Isan village. By exploring these materials' potential for new functions in varying scales, the aim is to integrate them as versatile tools within the design.



TERRACOTTA FACTORY

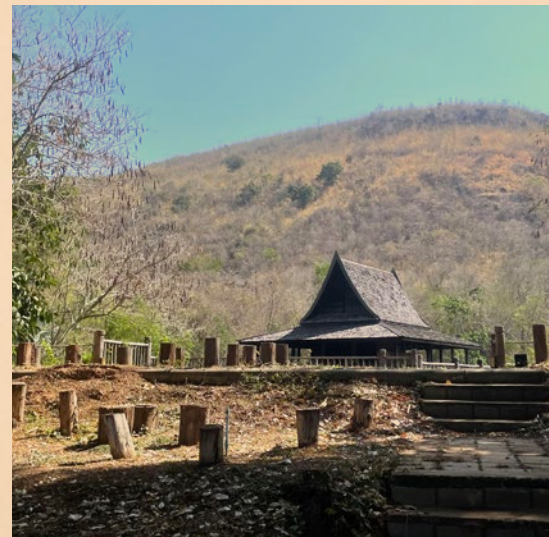


BAMBOO

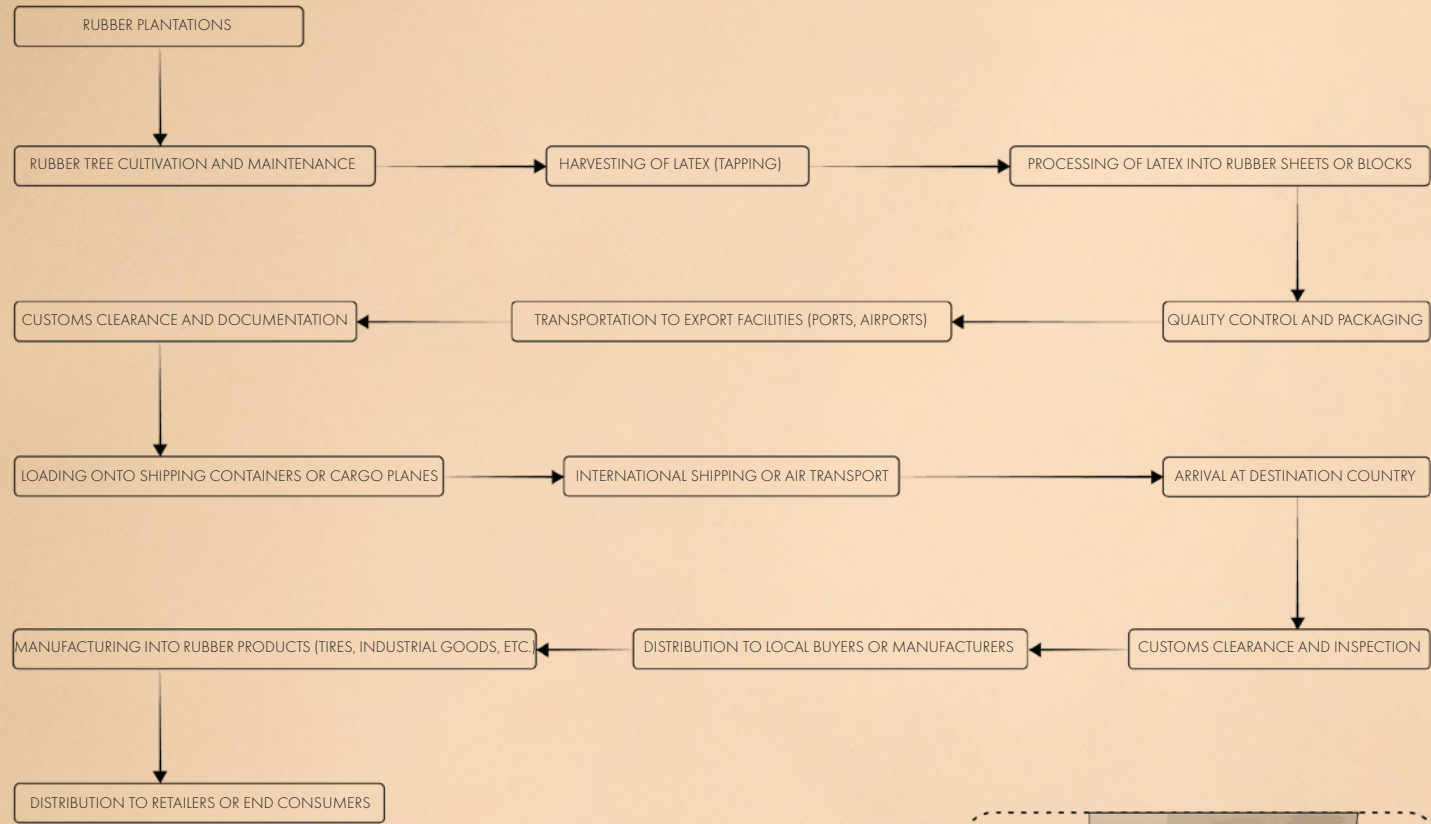


NATURAL RUBBER

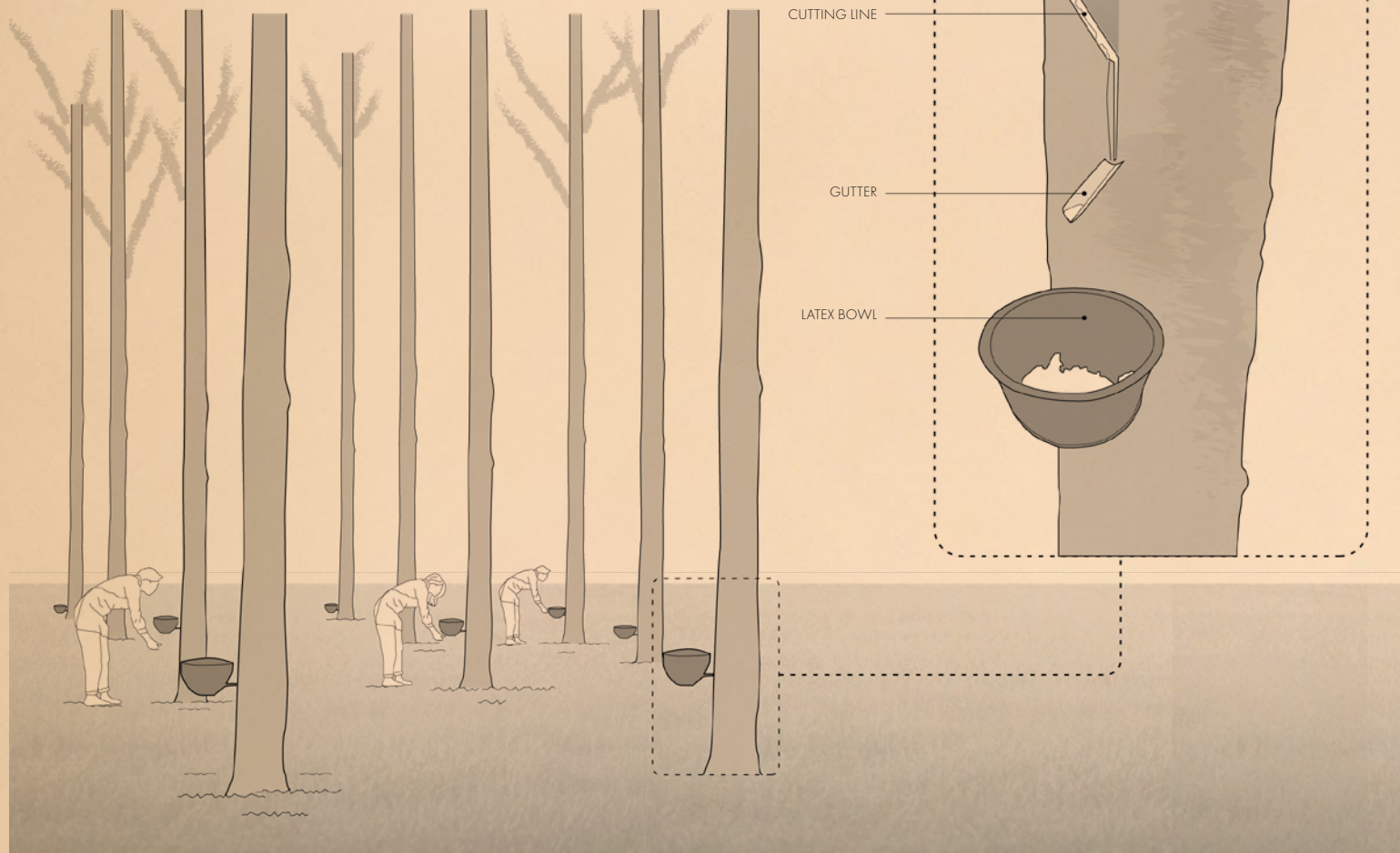
SITE: JIM THOMPSON FARM



OVERVIEW OF THE PRODUCTION, MANUFACTURING, AND EXPORT OF RUBBER FROM THAILAND

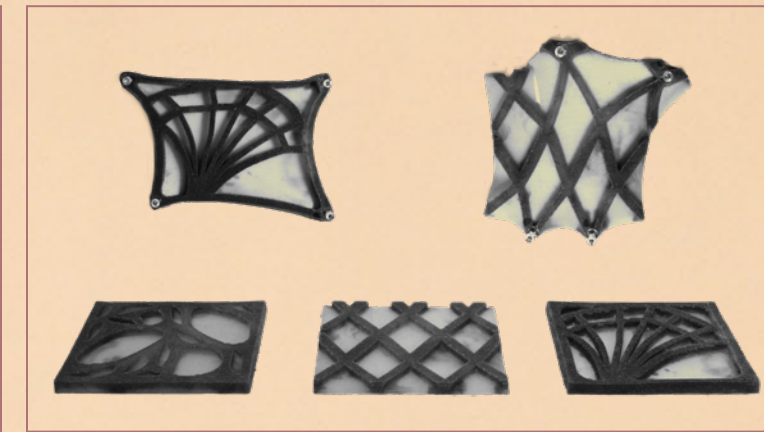
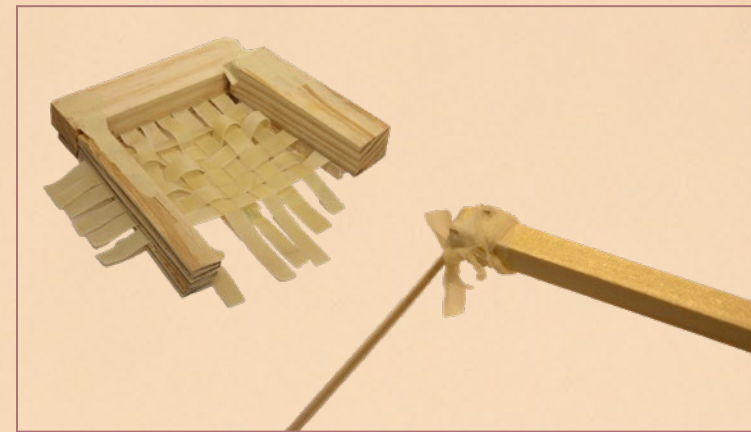
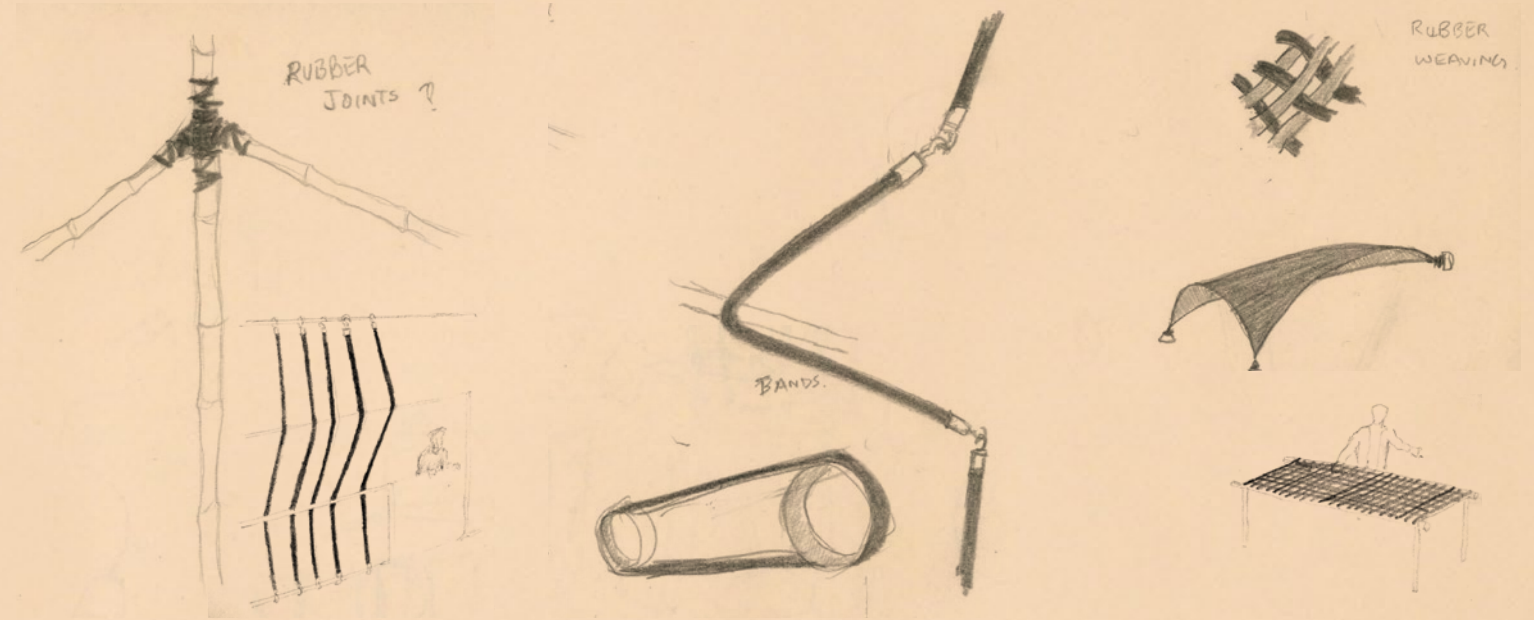


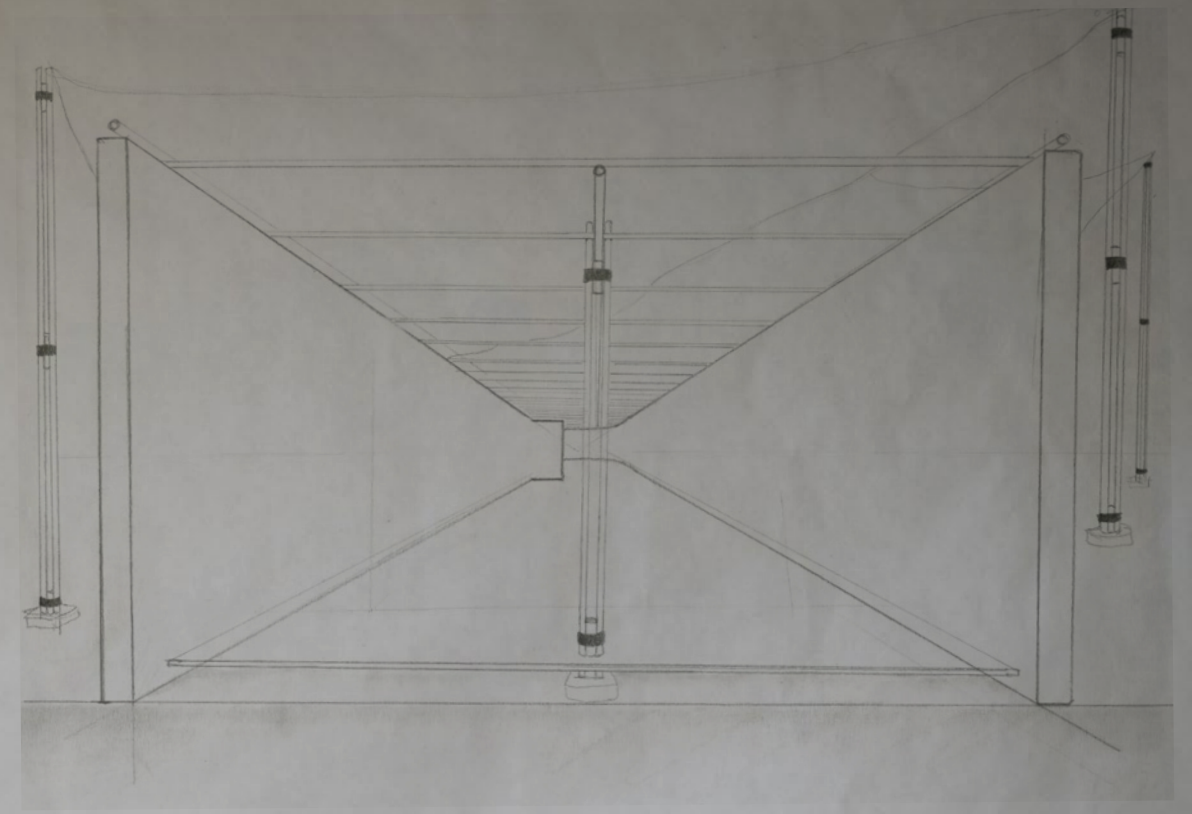
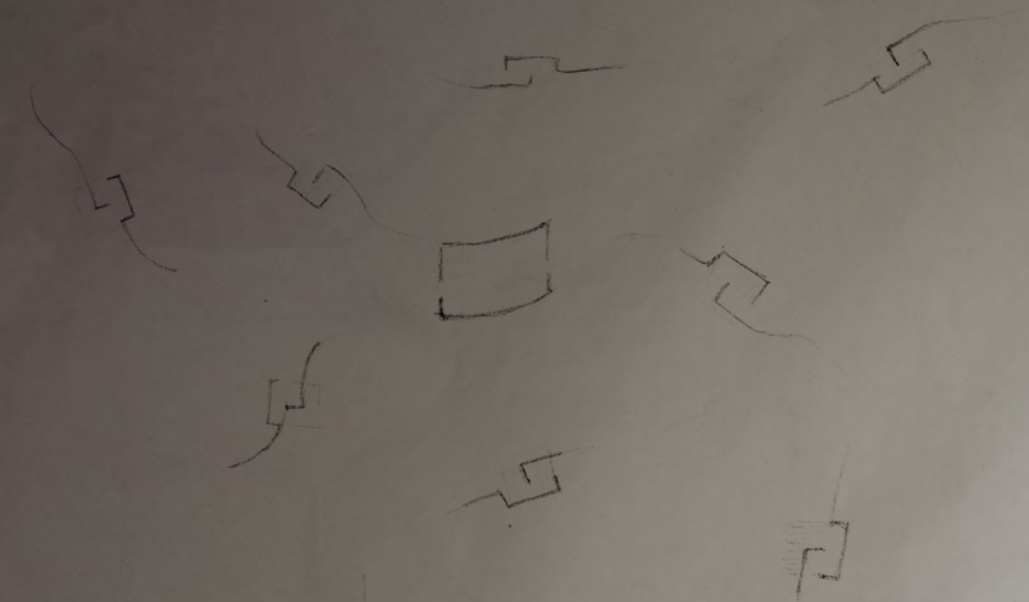
RUBBER HARVESTING



Thailand's rubber industry has been a cornerstone of its economy for decades, generating significant revenue through exports to global markets. The country's favorable climate and abundant natural resources have made it a prime location for rubber cultivation, with vast plantations sprawling across its landscape. Thailand is the world's largest exporter of natural rubber, accounting for approximately 36% of global production in 2020. According to data from the Food and Agriculture Organization (FAO), Thailand had over 3.5 million hectares of land dedicated to rubber cultivation in 2019.

EXPERIMENTS WITH NATURAL RUBBER





ARTIST UNIT: MODEL
SCALE 1:20



BAMBOO + RUBBER JOINT: DETAIL
SCALE 1:1



JOINTS SOLIDIFIED WITH NATURAL RUBBER

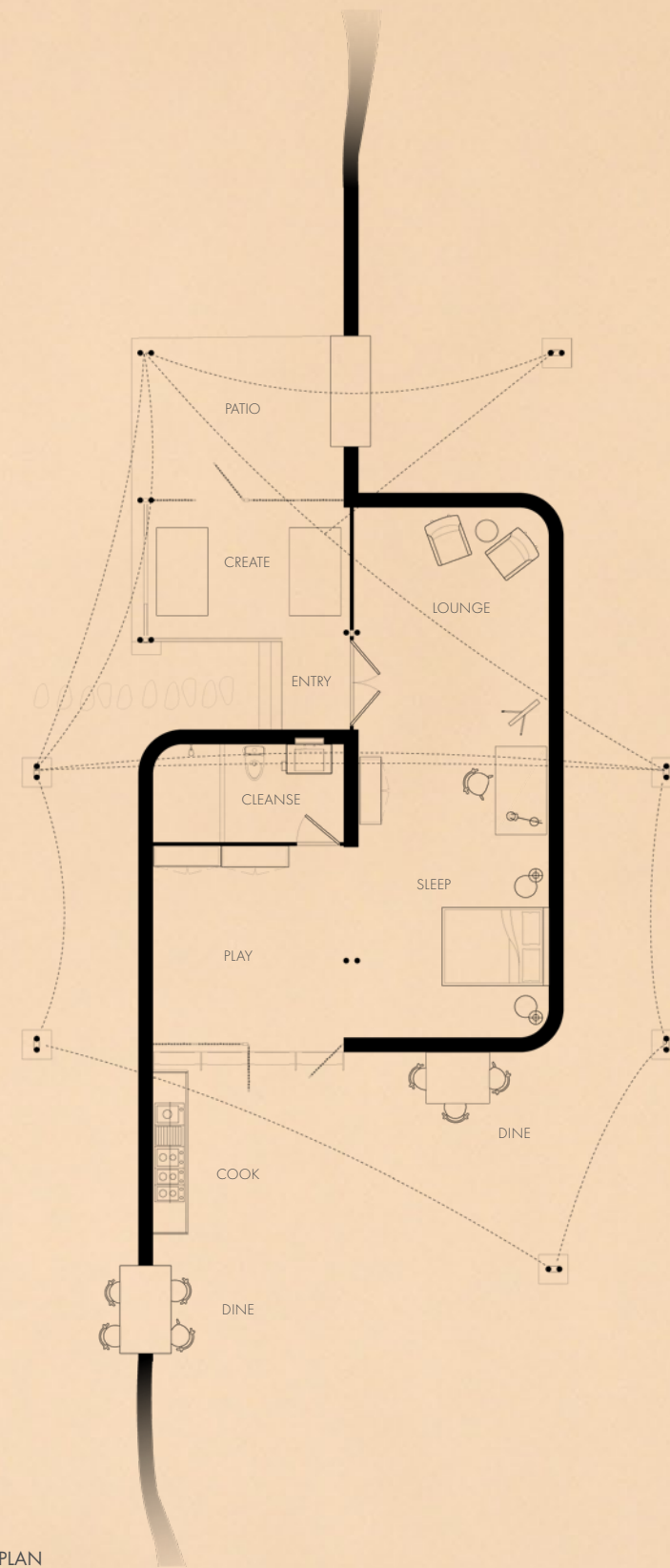
BAMBOO STRUCTURE

SECONDARY TENSILE ROOF

WOODEN FLAT ROOF

TERRACOTTA BRICK WALL

INDEPENDENT STONE FOUNDATION

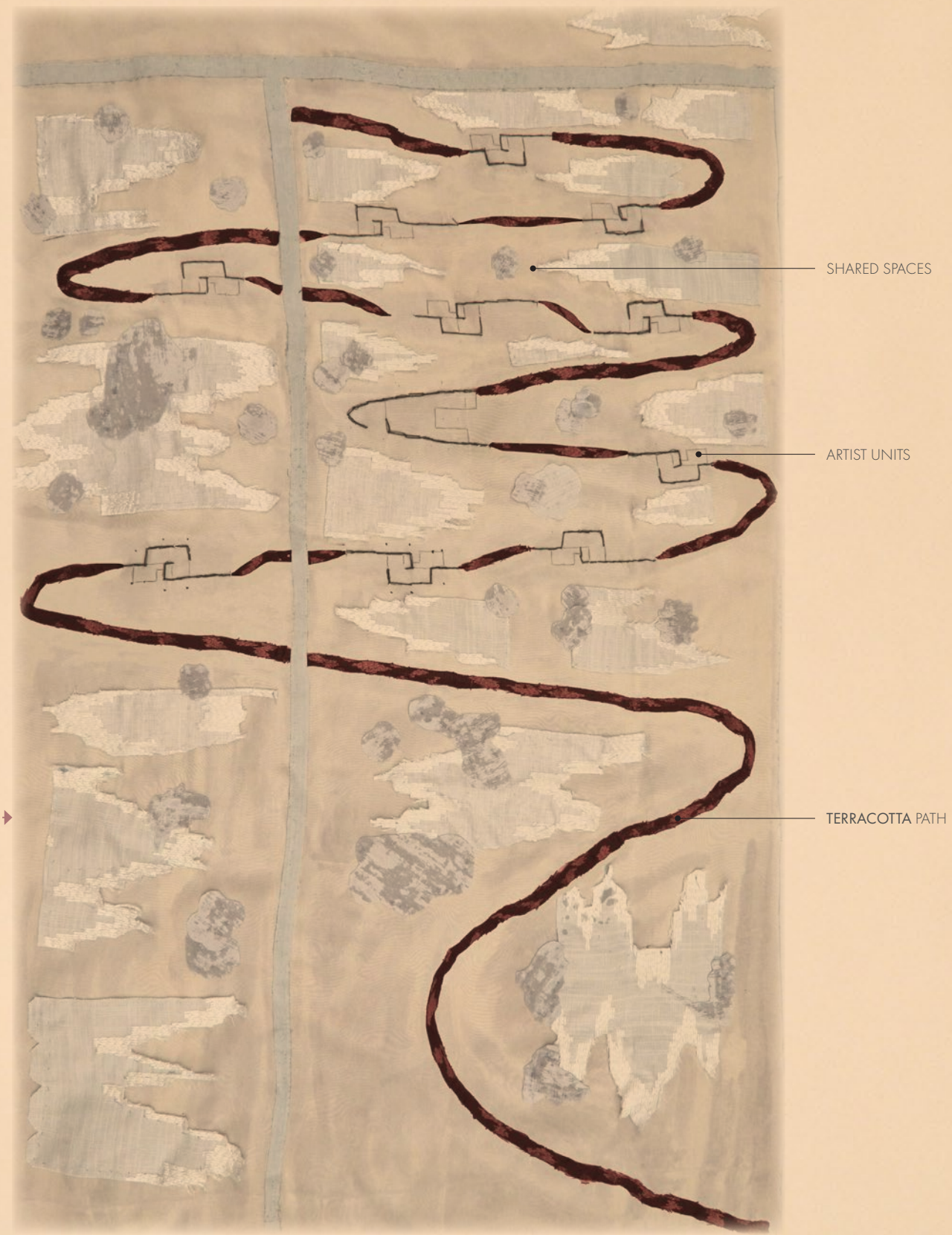


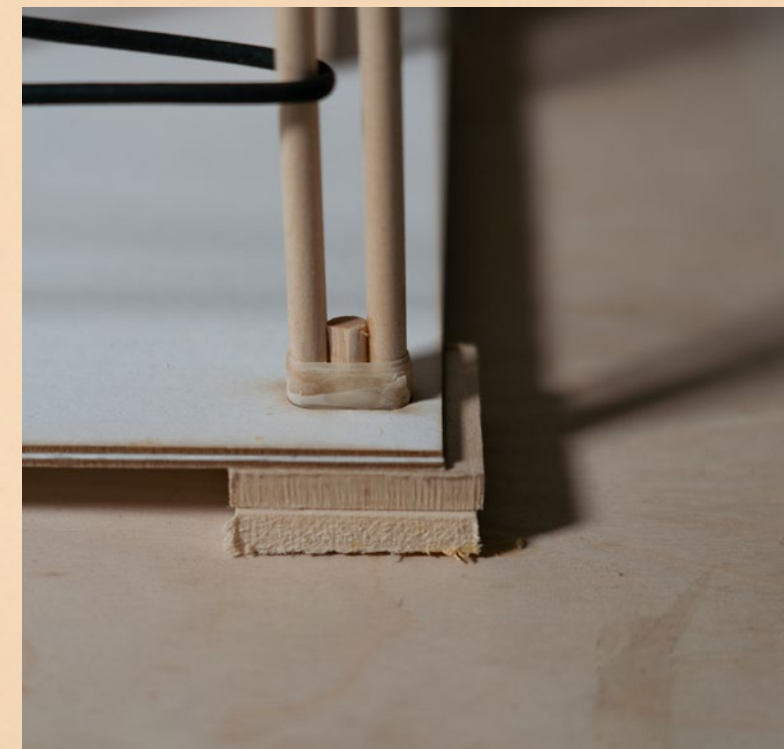
ARTIST UNIT: FLOOR PLAN

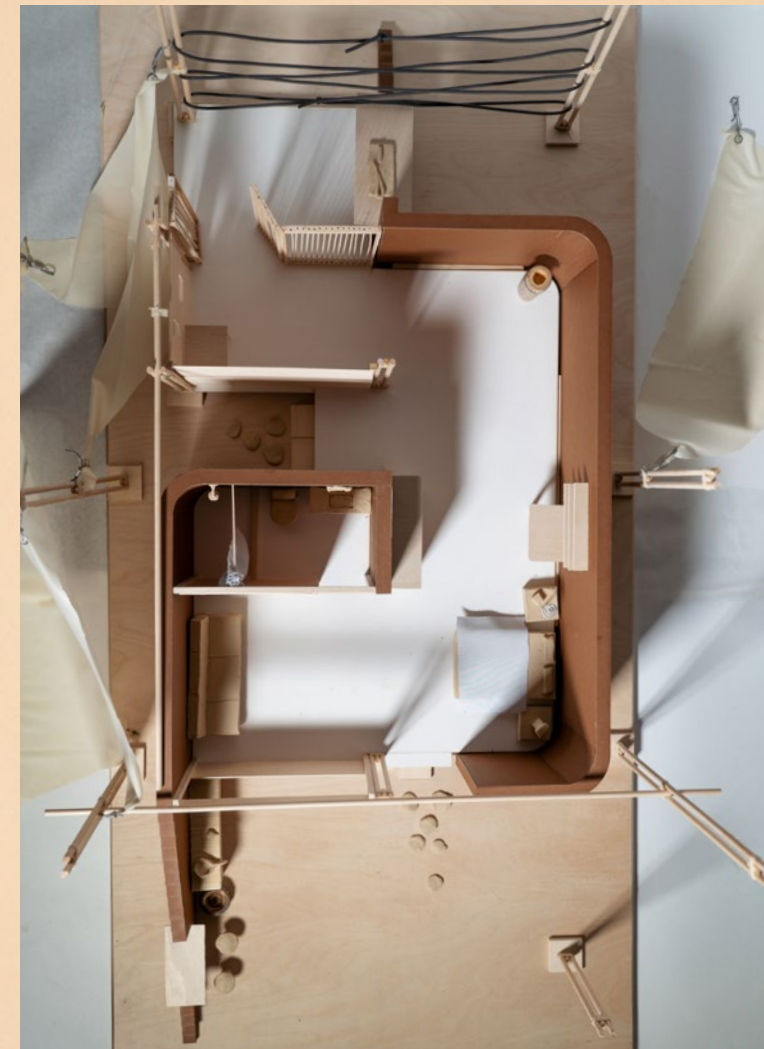
EXISTING SITE PLAN: JIM THOMPSON FARM

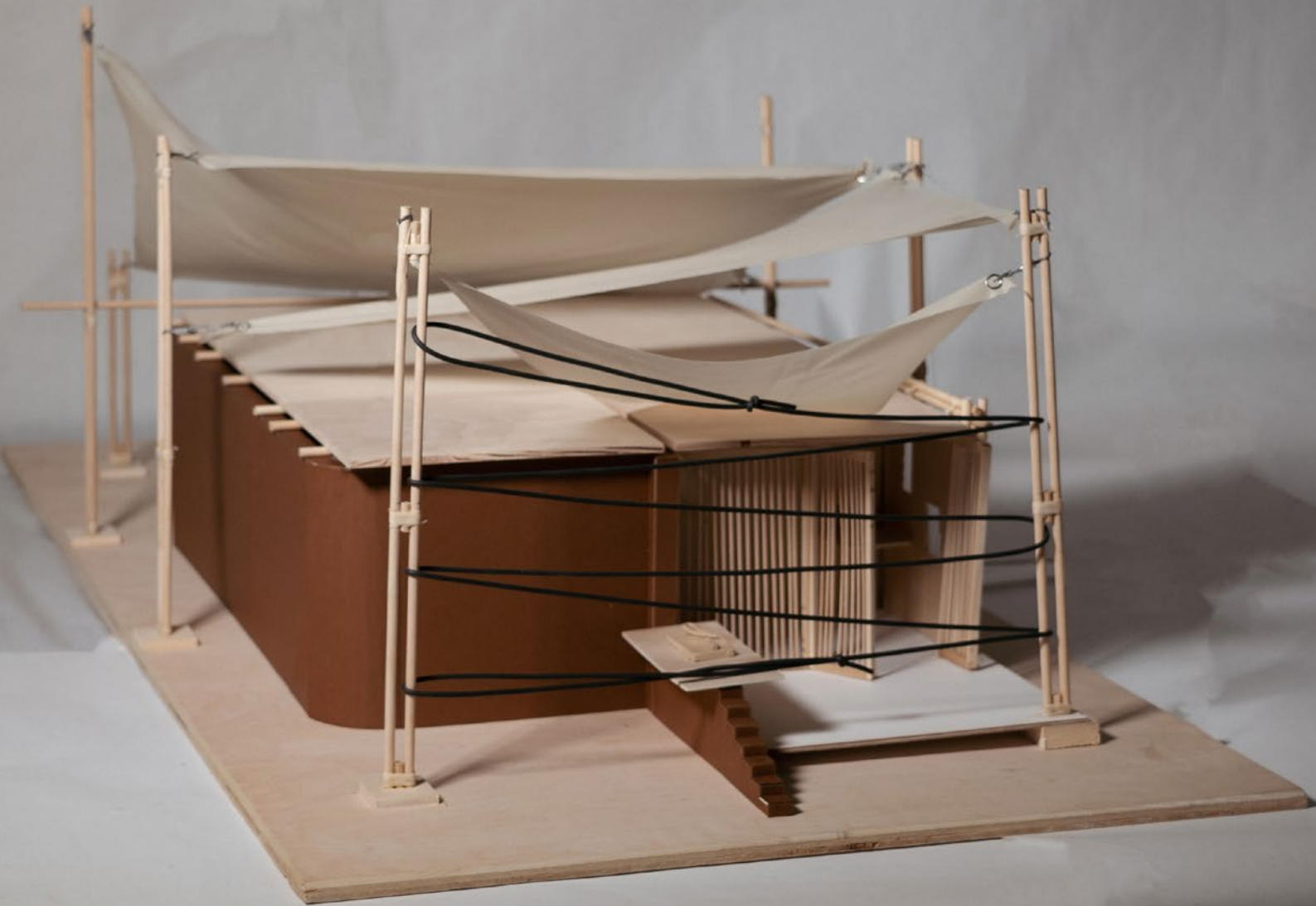


PROPOSED SITE PLAN (HAND STITCHED ON SILK)







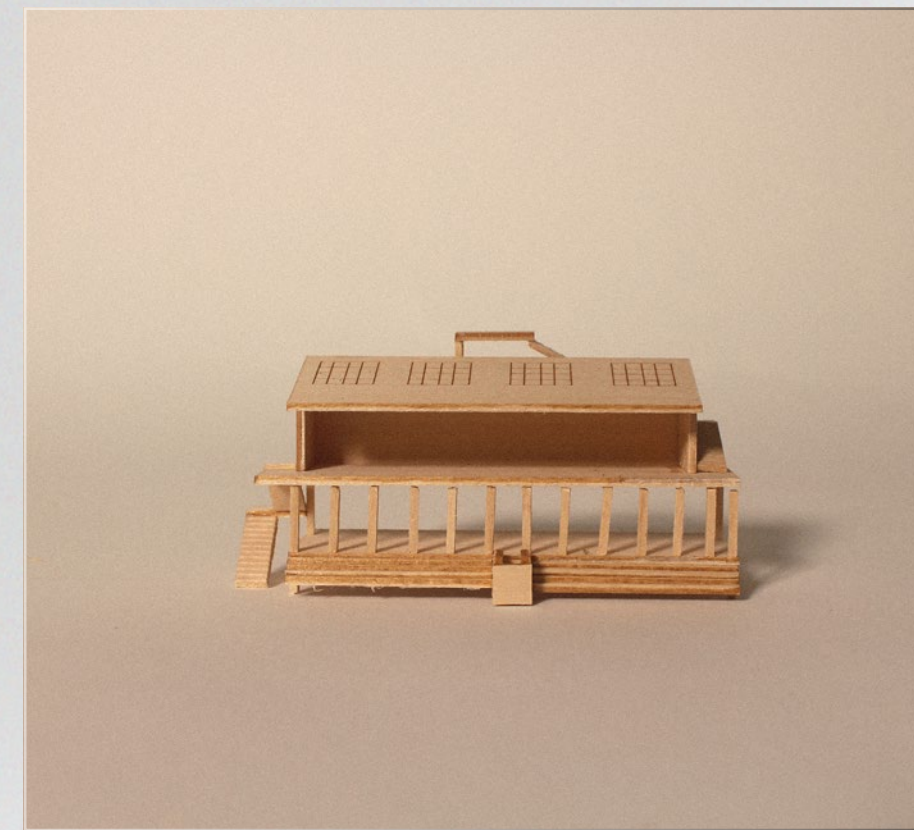


SOIL-SMART HUB

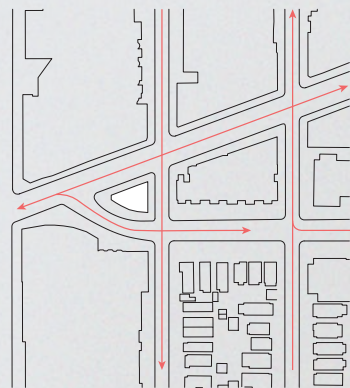
KENSINGTON, BROOKLYN

AAD STUDIO: HABITABILITY WITH URBAN SOIL | CRITICS: FUMINORI NOUSAKU & MIO TSUNEYAMA | SUMMER 2023

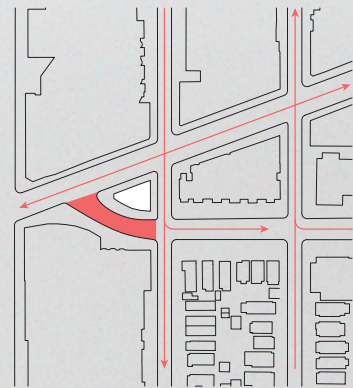
Kensington is a neighborhood of a unique blend of cultures, predominantly Bangladeshi, but also home to Pakistani, Latin American, Russian, and Orthodox Jewish communities. The existing Carnival Fresh Market caters to the diverse community, offering a rich tapestry of fresh produce, multicultural foods, and unique products. Soil-Smart Hub focuses on fostering community connections through the existing market and the Kensington Stewards Facebook group. The proposed multi-functional space connects the new roof garden with the existing market and new ground-level gardens. The network drawing highlights key elements like cultural representation, accessible transportation, youth participation, food banks, sustainable gardening, compost stations, eco-friendly building materials, solar panels, and a central Soil Lab. The lab serves as a knowledge hub, bringing agricultural scientists to share expertise on soil health and phytoremediation with local farmers, who then educate the broader community.



This comprehensive approach aims to enhance the already vibrant Kensington community by promoting diversity, sustainability, and a sense of togetherness. While also aiming to redirect government subsidies towards financing more stable and sustainable methods of urban agriculture. Speculating the future expansion for more hubs in other neighborhoods that serve as anchors for community enrichment and growth.



Existing traffic conditions highlighting major intersection next to the site.



Community currently uses Beverley Rd, temporarily blocking traffic, for occasional cultural and programming events.

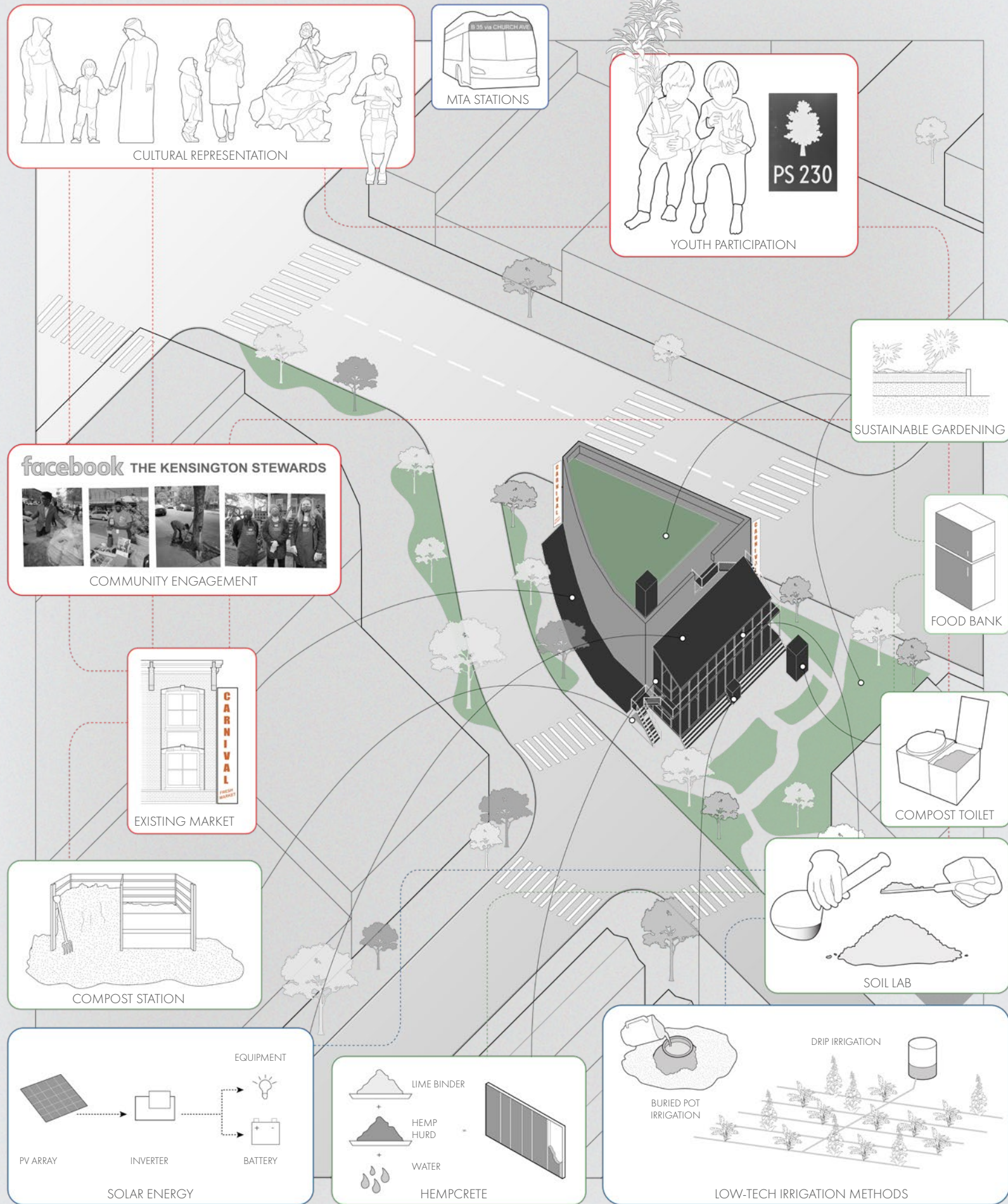


Proposed closure of E 2nd Street to vehicular traffic, creating a safer intersection and open space for events.

PROPOSED SITE PLAN



NEIGHBORHOOD NETWORK DRAWING



ROOF GARDEN

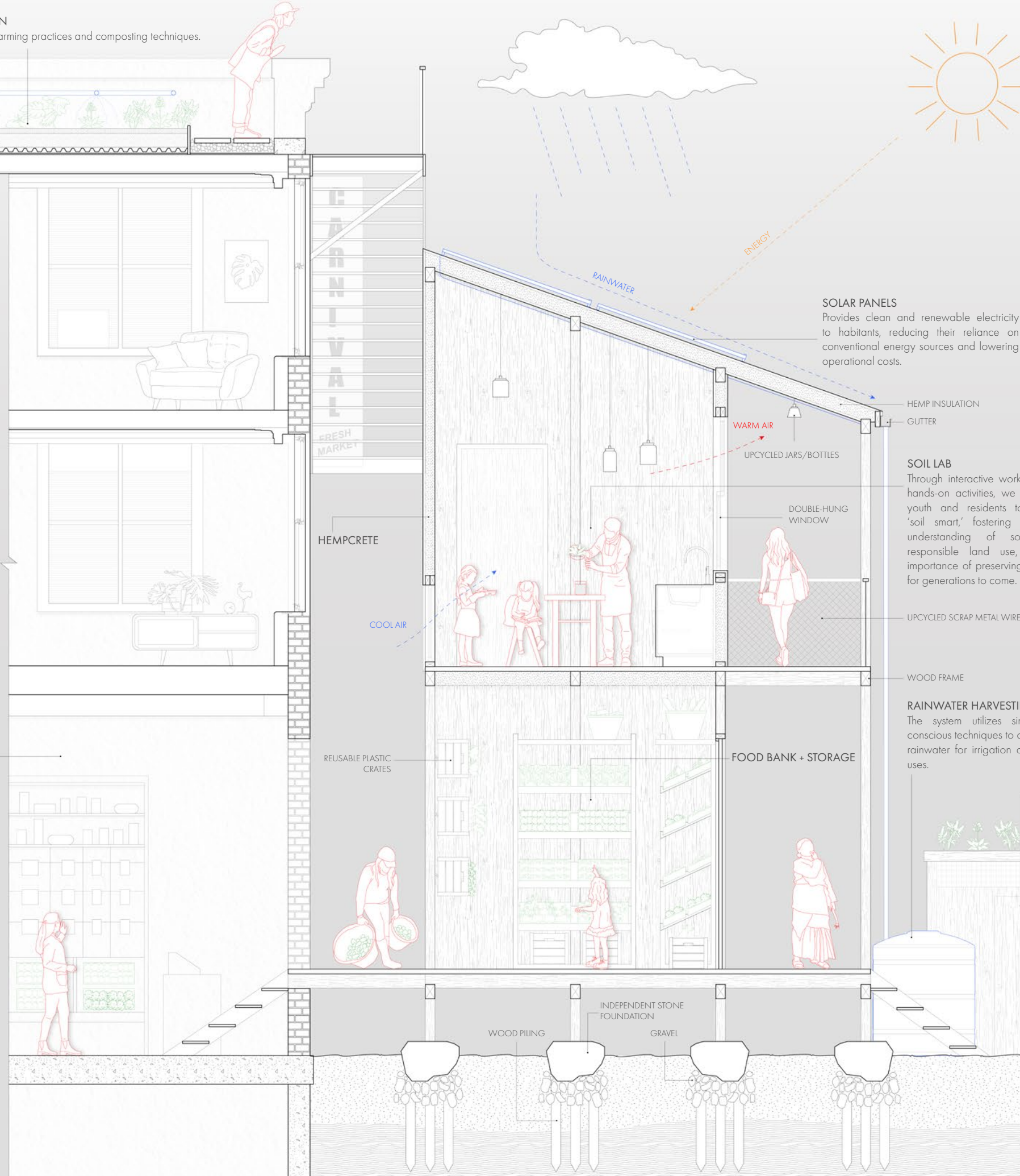
Using organic farming practices and composting techniques.

DRIP IRRIGATION

Through the implementation of drip irrigation and buried pot irrigation, we empower farmers to efficiently water crops while minimizing water wastage.

CONNECTION TO EXISTING MARKET

Connects seamlessly to Carnival Fresh Market through an open ground level. Serving as a vibrant pedestrian-friendly corridor, offering an array of local vendors, and engaging cultural experiences. With its seamless integration, the project enlivens the area, providing a dynamic connection that enriches both the market and the community.



HEMPCRETE

COOL AIR

REUSABLE PLASTIC CRATES

WOOD PILING

INDEPENDENT STONE FOUNDATION

GRAVEL

FOOD BANK + STORAGE

DOUBLE-HUNG WINDOW

UPCYCLED JARS/BOTTLES

WARM AIR

RAINWATER

ENERGY

SOLAR PANELS

Provides clean and renewable electricity to habitants, reducing their reliance on conventional energy sources and lowering operational costs.

HEMP INSULATION

GUTTER

SOIL LAB

Through interactive workshops and hands-on activities, we inspire the youth and residents to become 'soil smart,' fostering a deeper understanding of soil health, responsible land use, and the importance of preserving resources for generations to come.

UPCYCLED SCRAP METAL WIRE

WOOD FRAME

RAINWATER HARVESTING

The system utilizes simple, environmentally conscious techniques to capture, filter, and store rainwater for irrigation and other non-potable uses.

COMPOST TOILET

Educate the community about how their waste can be re-purposed into nutrient-rich compost for the surrounding gardens.

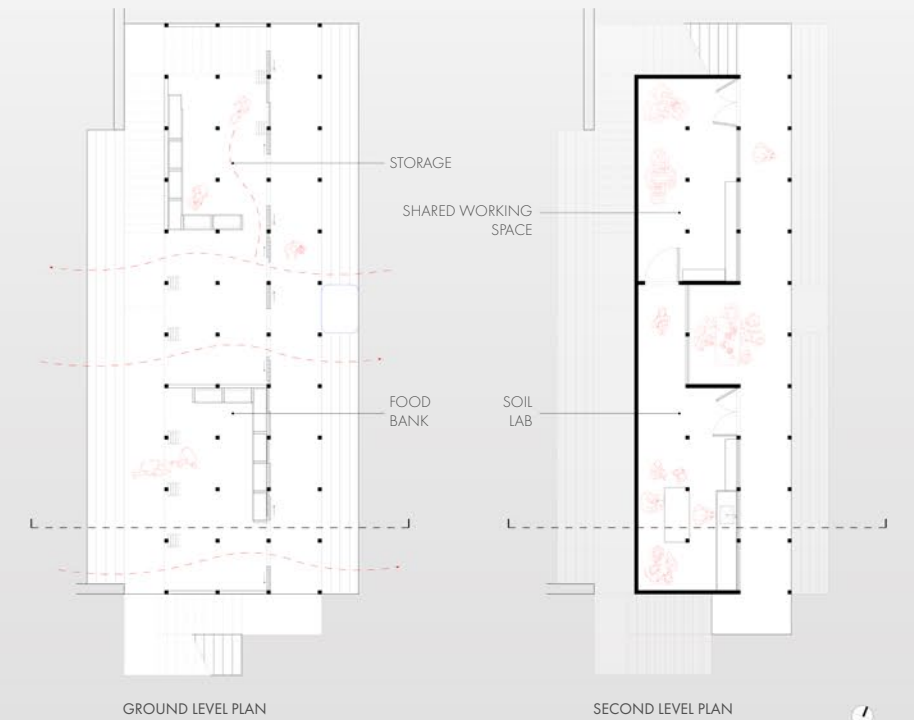
CORE GARDENING

Trench with straw (core). After watering the 'core', moisture is absorbed by the straw and plants could then use this moisture as they needed water throughout the growing season. This keeps gardeners from having to water so often.

RAIN GARDEN

Serves as a natural storm-water management system, capturing and filtering rainwater runoff. The rain garden features a variety of native plants, providing habitat for local wildlife and promoting biodiversity.

PERMEABLE PAVEMENT



GROUND LEVEL PLAN

SECOND LEVEL PLAN



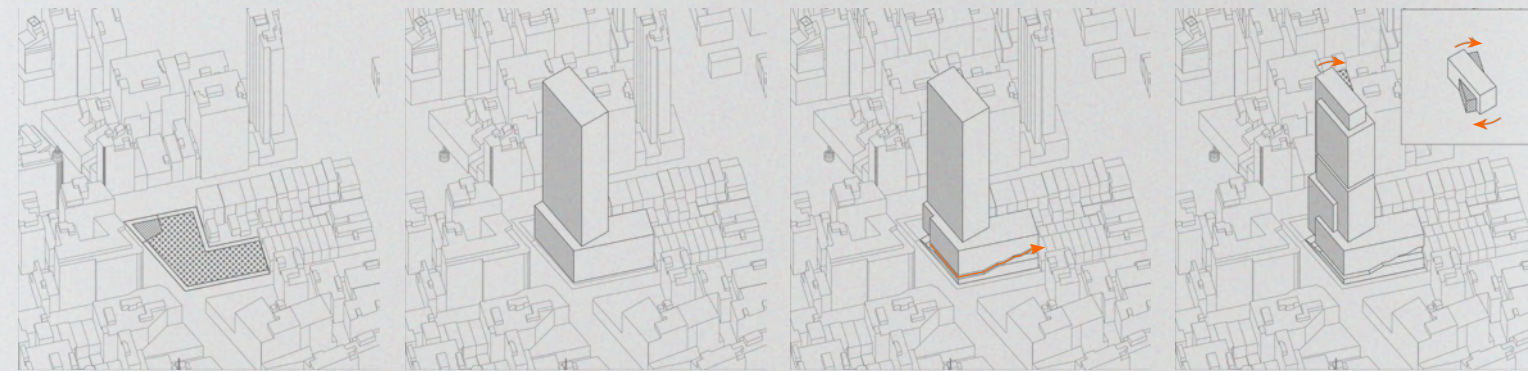
MESSA TOWER

NOMAD, MANHATTAN

RE-THINKING BIM | INSTRUCTOR: JOSEPH BRENNAN | FALL 2023

PARTNERS: ESKINDER FEKADE LAKEW, STEVEN WIDYATMADJA, MINGJIA HU, ALISON LAM

A neighborhood in transition, Nomad, contains a mixture of retail and aging office spaces, but also some historic residences and hotels. With an ongoing initiative to make the area more pedestrian friendly and encourage the growth of retail, this proposed high-rise building envisions a mixed use project that caters to workers, tourists, and local residents through offices, ground level retail, rooftop restaurant, and a hotel component. The overall design strategy conforms to all zoning and program requirements. The project and thinking functions at both the urban and building scale by leveraging new BIM processes to drive better-informed design.



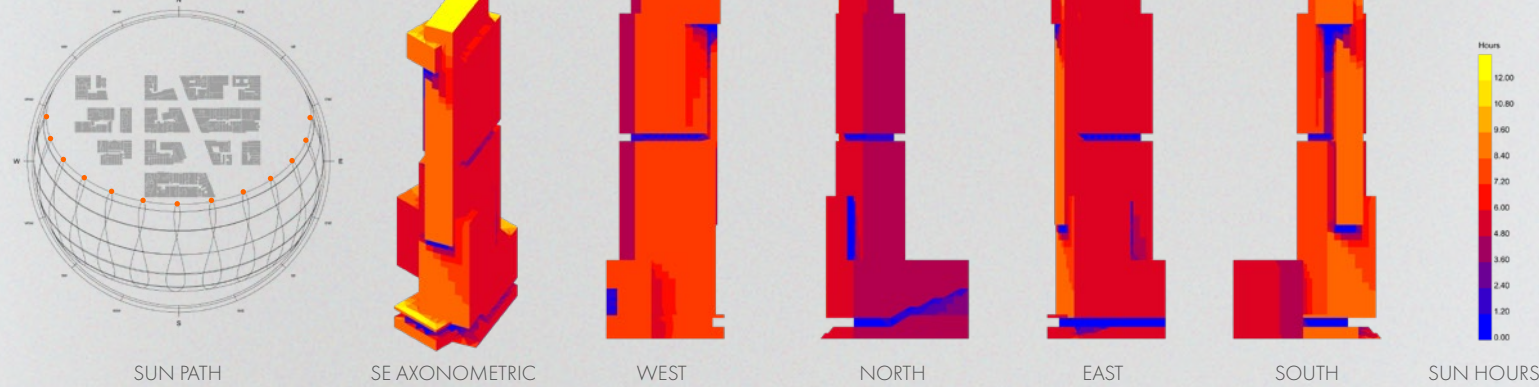
SITE CONSTRAINTS:
Setbacks and public plaza

MASS EXTRUSION:
Maximum allowed floor area

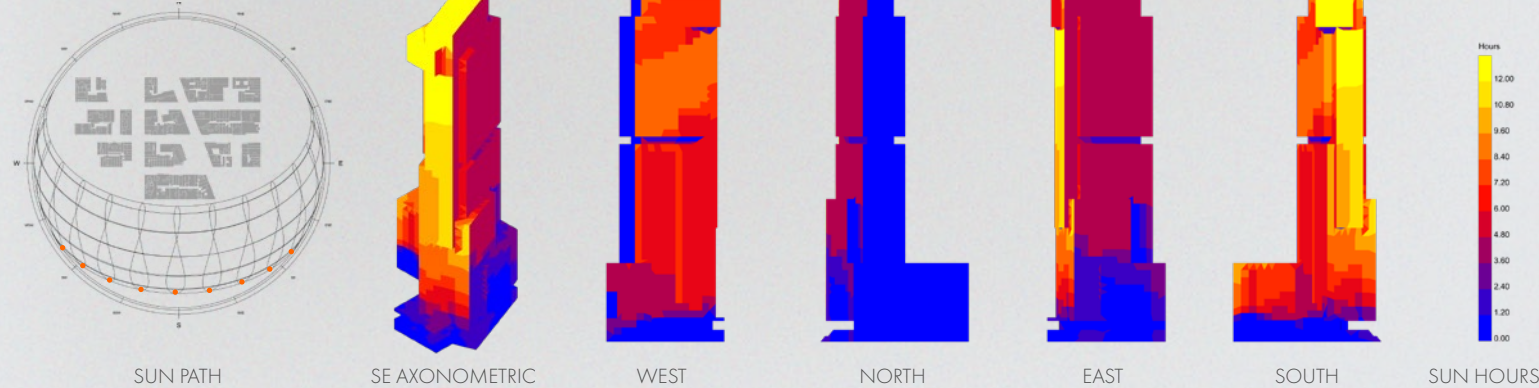
PUBLIC PLAZA CONNECTION:
Carved mass to connect public areas - Sky exposure plane

MASSING TWEAKS:
Extrusions at the tower and tweak at the top

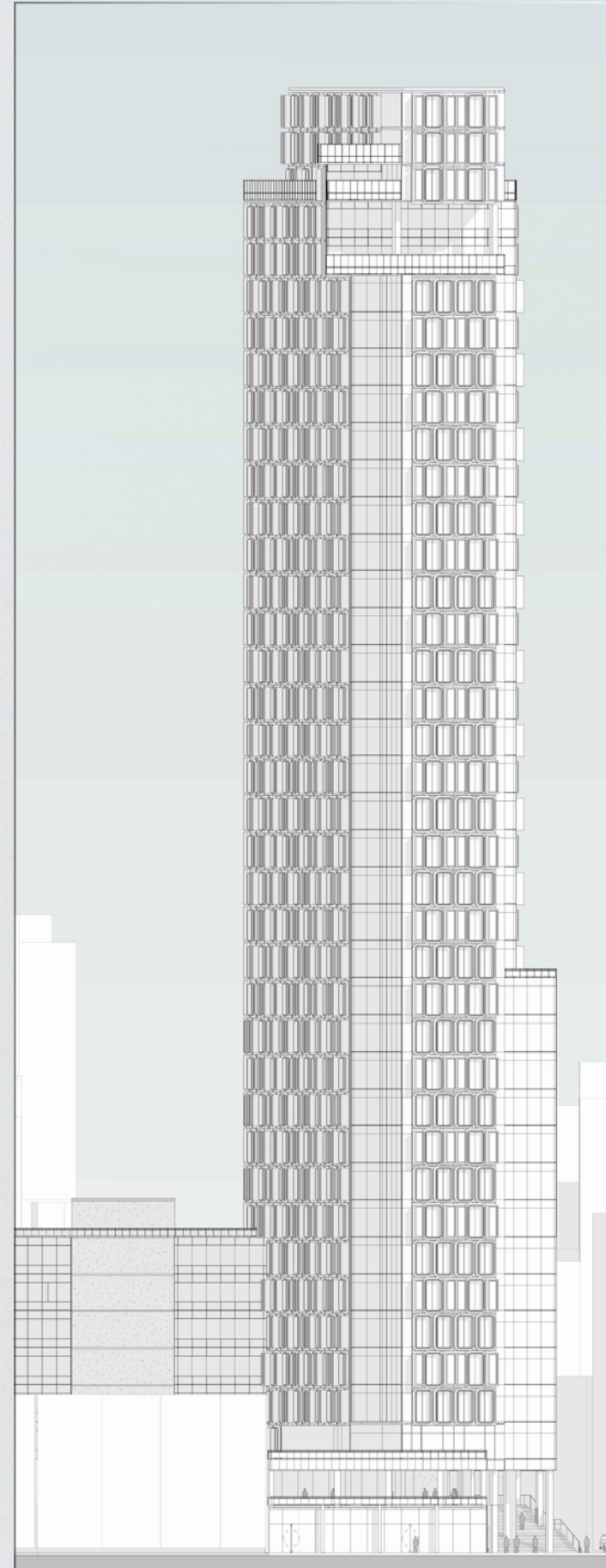
DIRECT SUN HOURS ANALYSIS SUMMER SOLSTICE



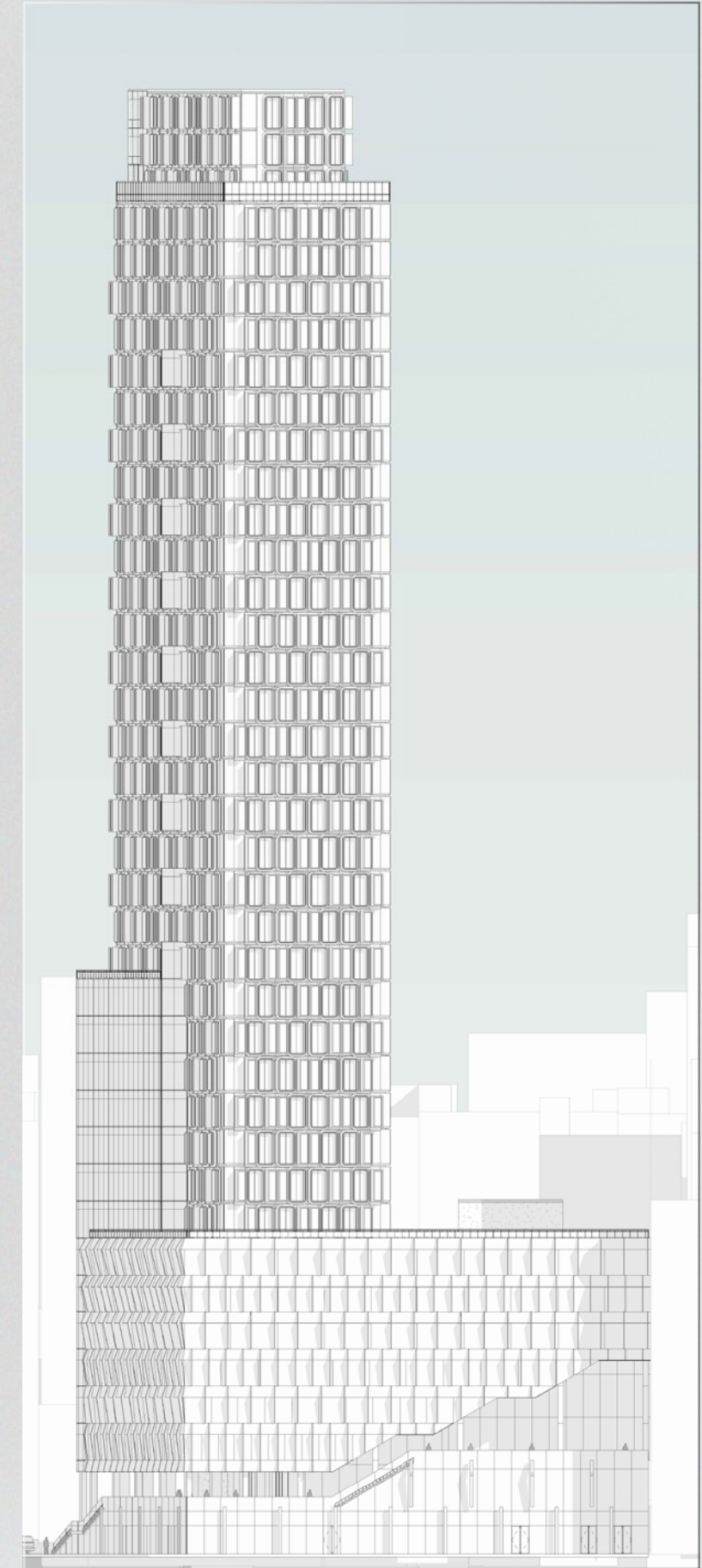
WINTER SOLSTICE

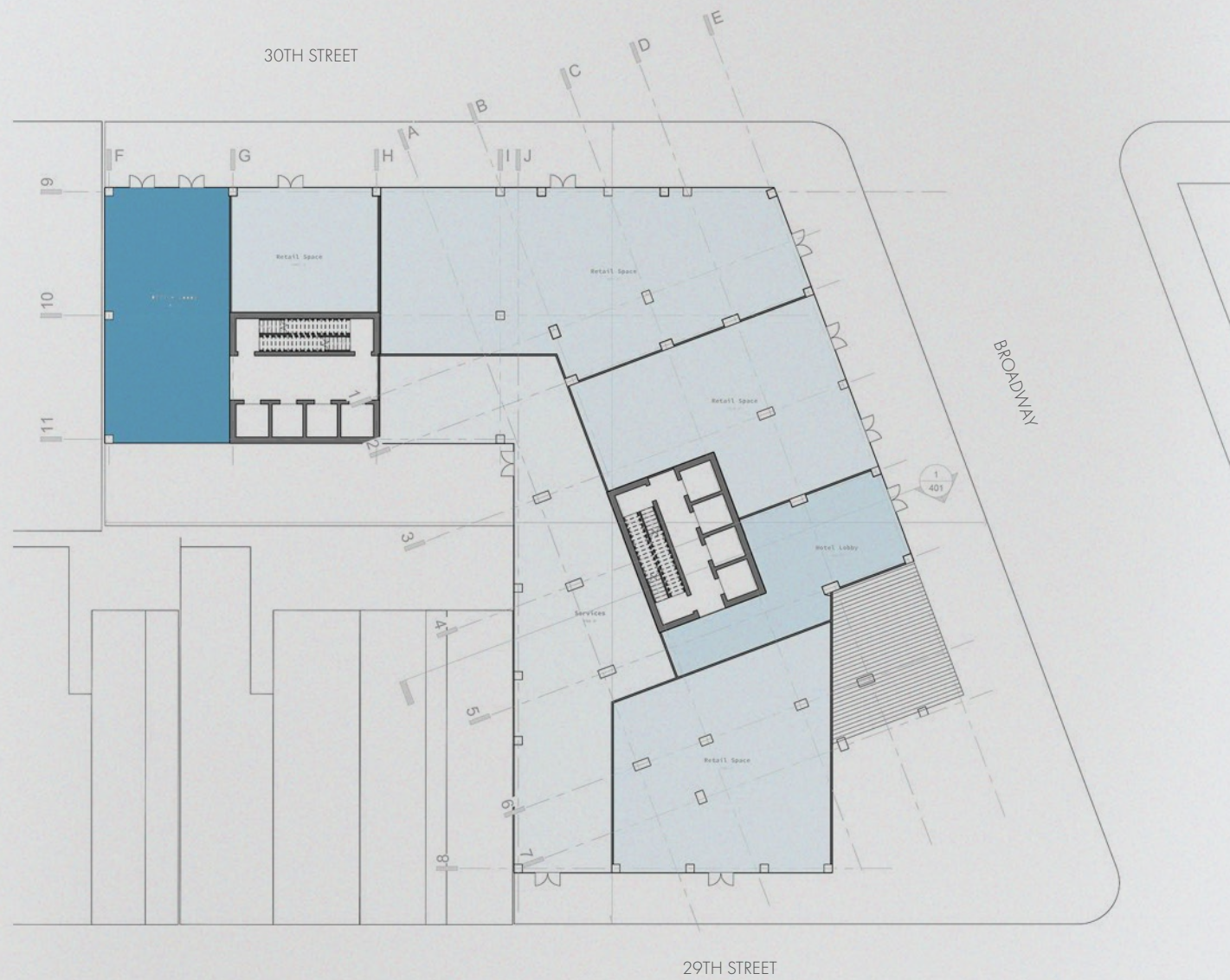


EAST ELEVATION

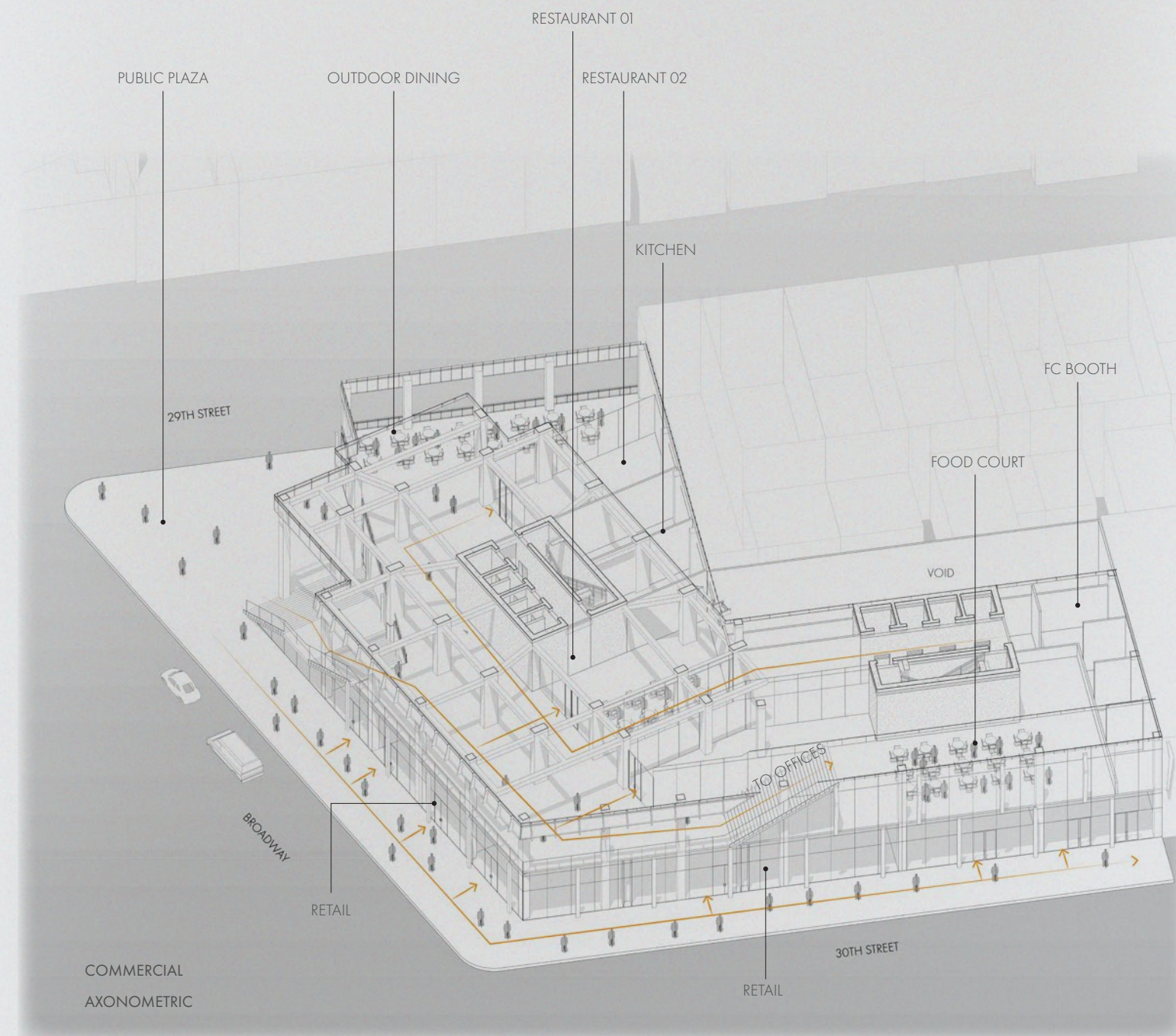


NORTH ELEVATION

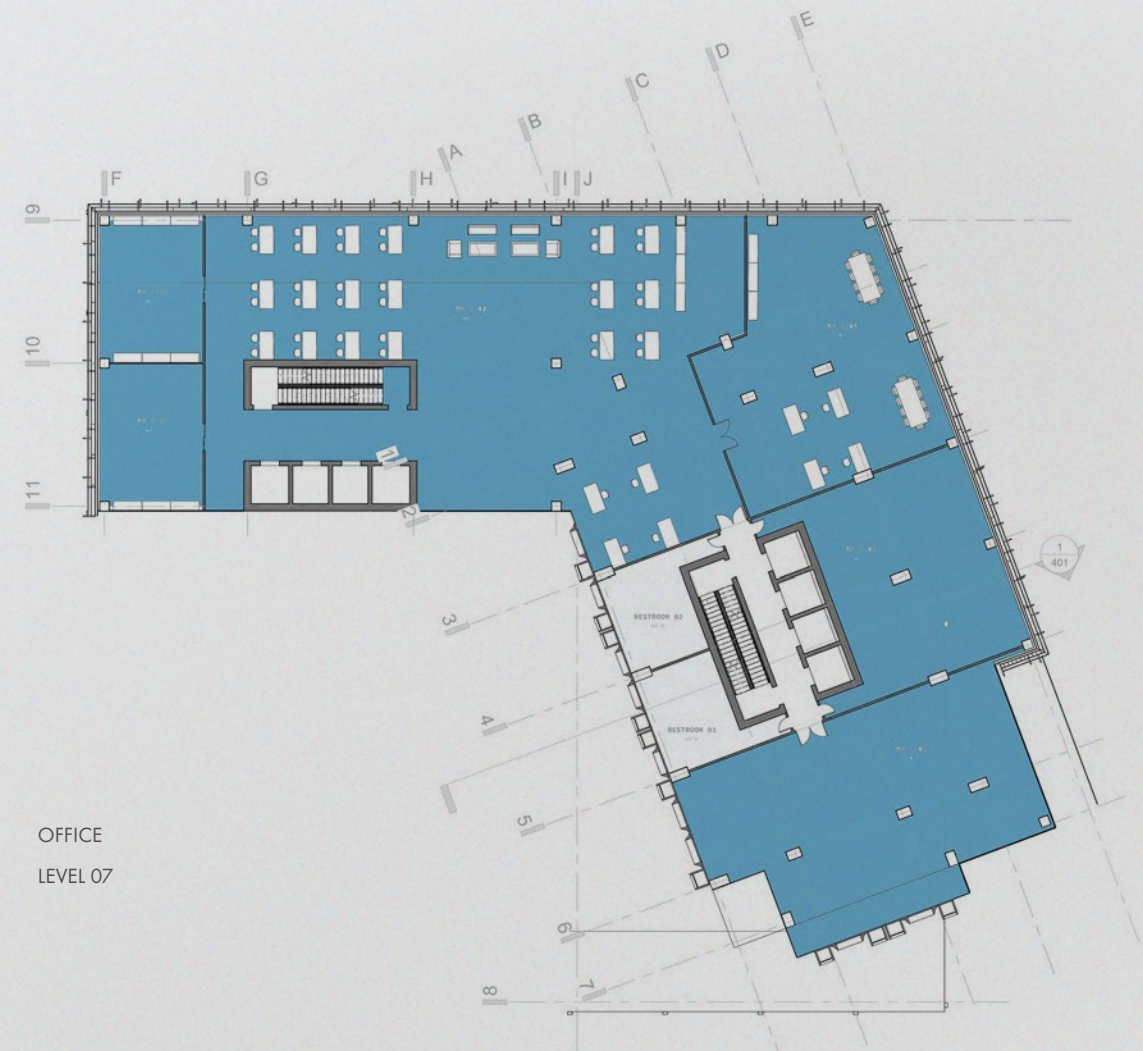




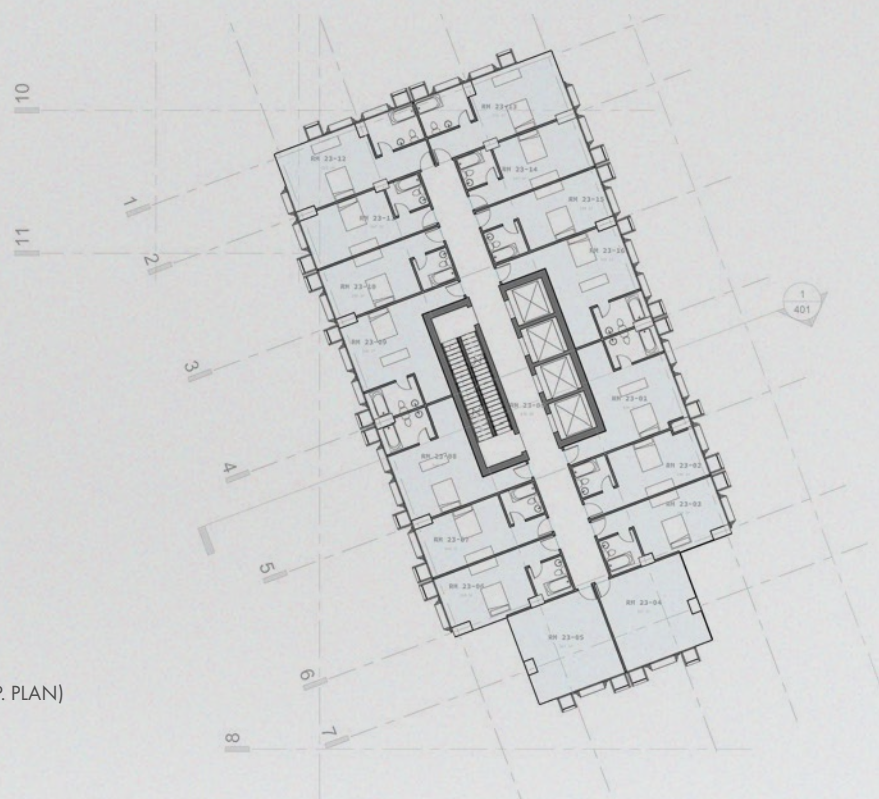
COMMERCIAL
GROUND LEVEL PLAN



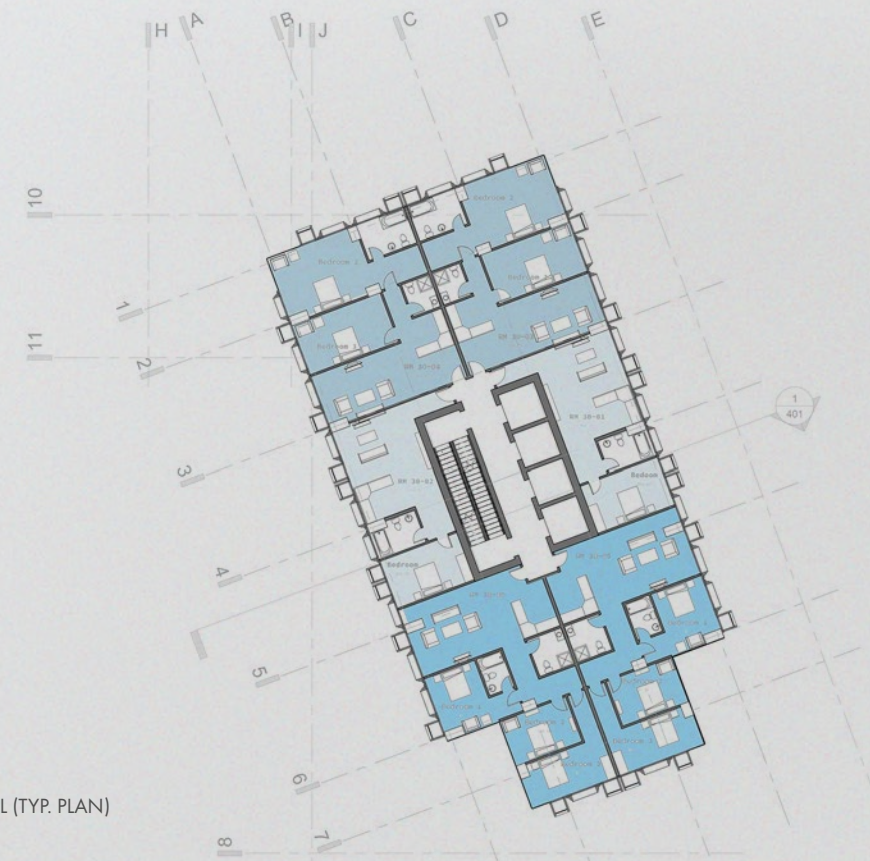
COMMERCIAL
AXONOMETRIC



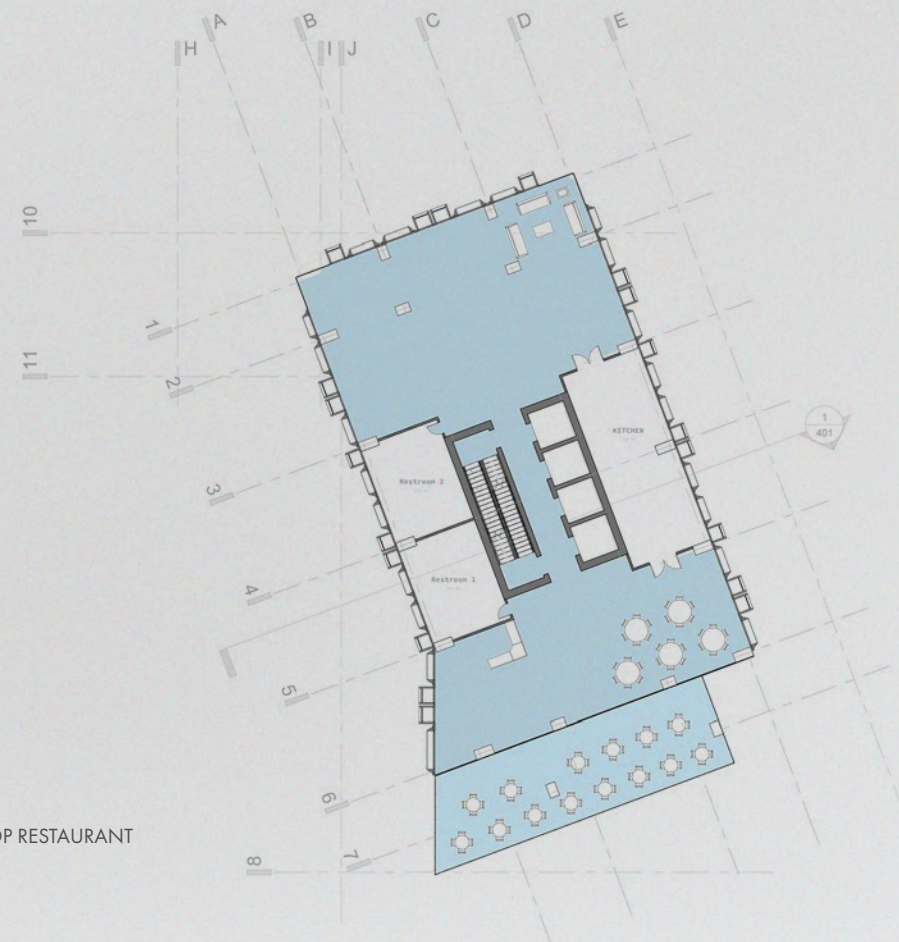
OFFICE
LEVEL 07



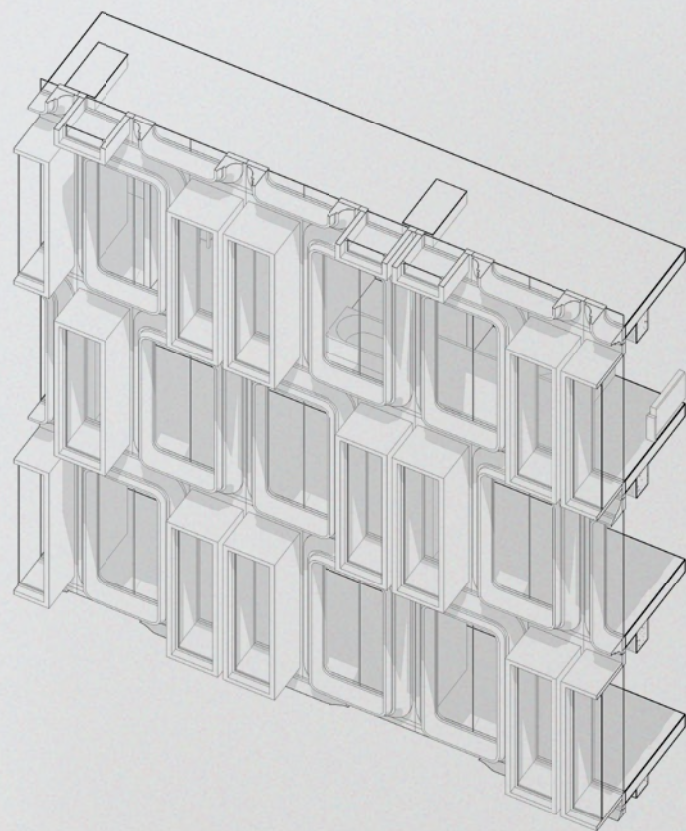
HOTEL (TYP. PLAN)
LEVEL 23



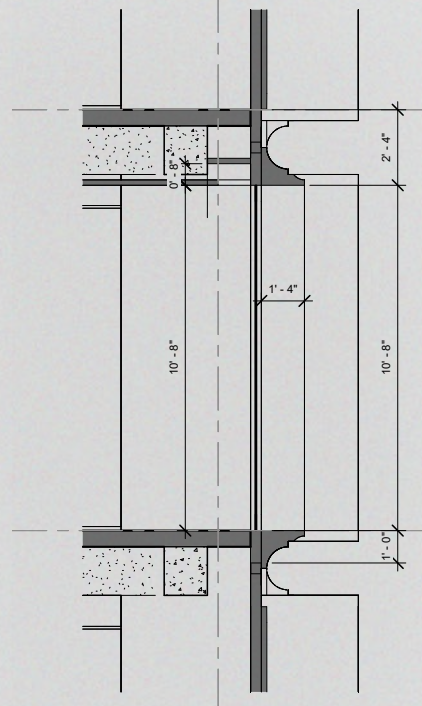
RESIDENTIAL (TYP. PLAN)
LEVEL 30



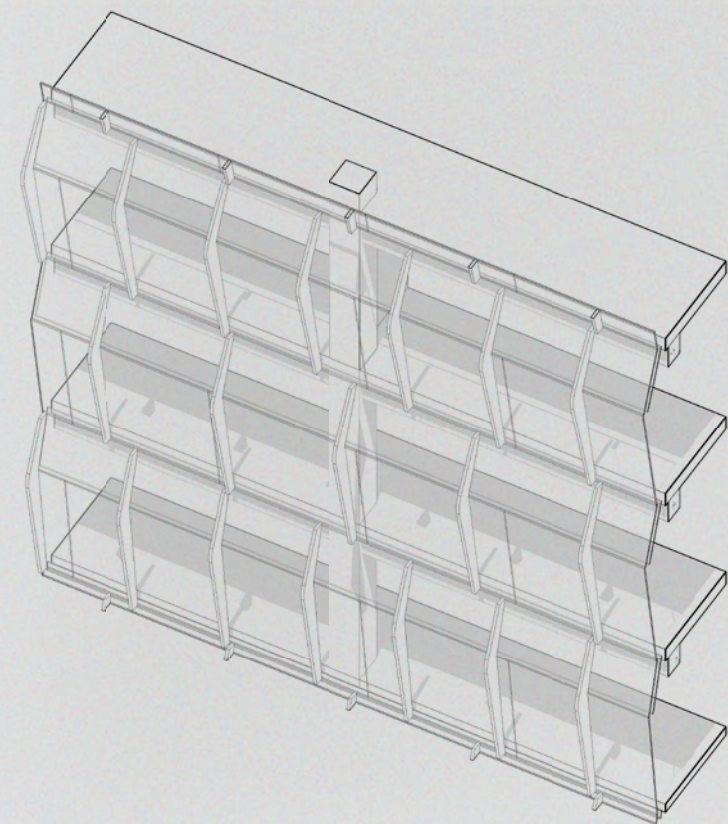
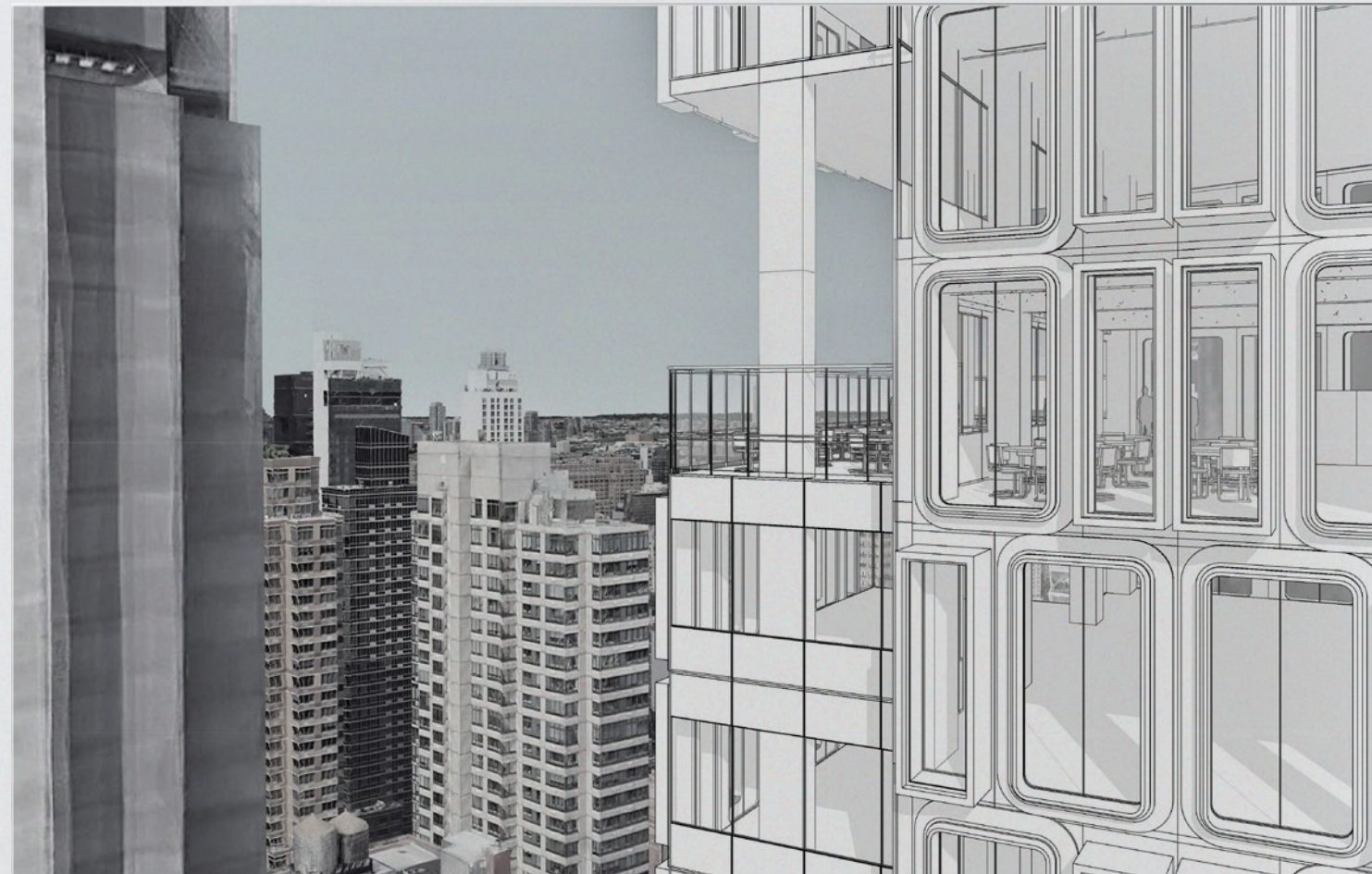
ROOFTOP RESTAURANT
LEVEL 35



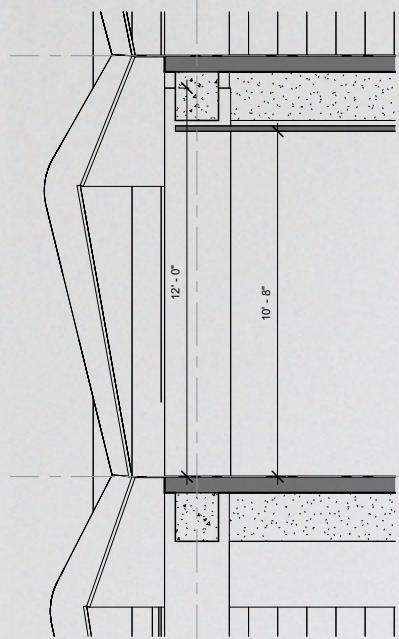
TOWER FACADE



TOWER FACADE DETAIL



PODIUM FACADE

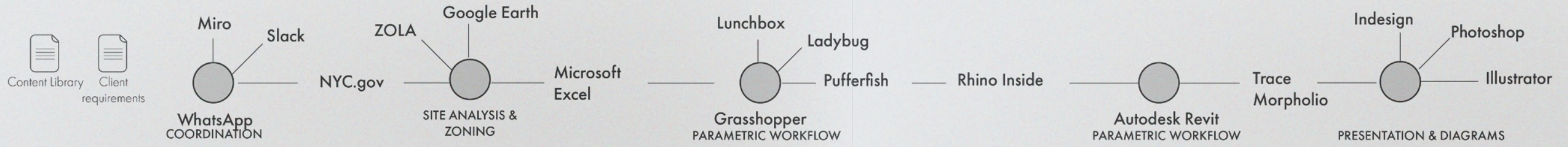


PODIUM FACADE DETAIL



WORKFLOW DIAGRAM

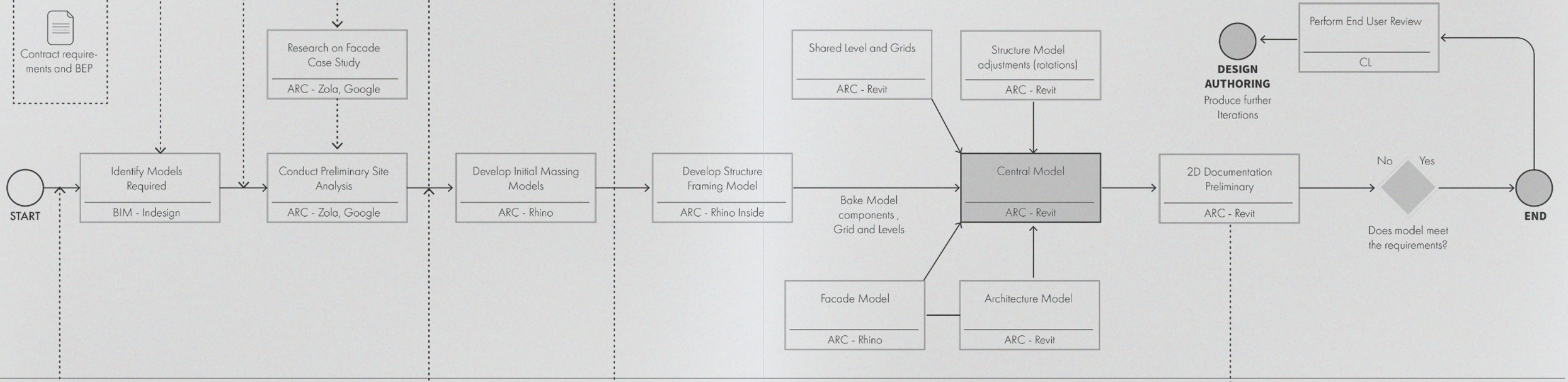
SOFTWARE



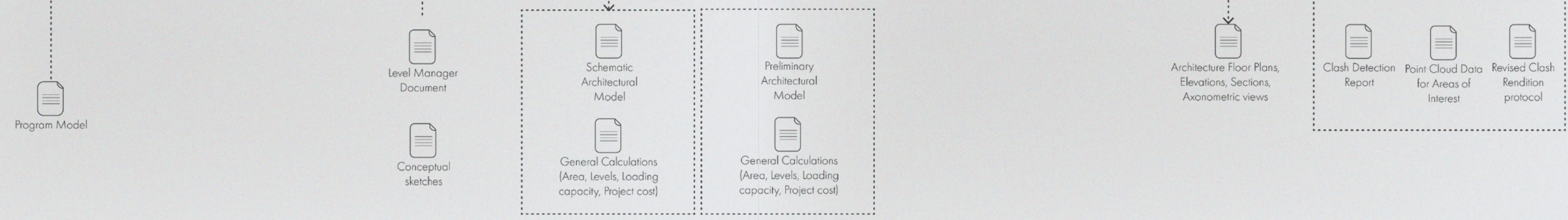
REFERENCE



PROCESS



INFO EXCHANGE



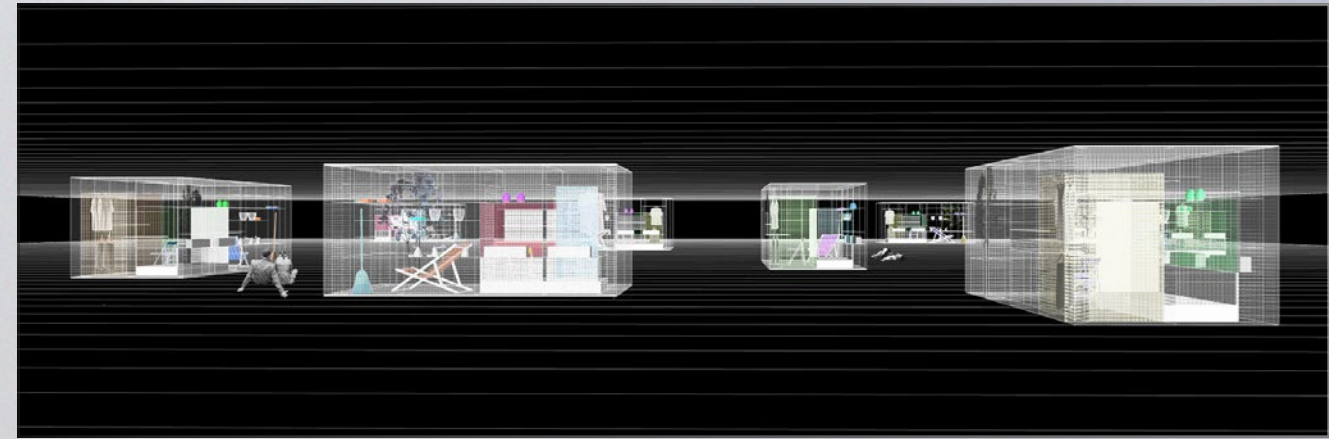
THE VULNERABILITY NEXUS:

URBANIZATION, NATURAL DISASTERS, AND SOCIAL SUSTAINABILITY

ARGUMENTS | INSTRUCTOR: GREGORY CARTELLI | SUMMER 2023



“While urbanization promises economic growth, technological advancement, and improved living standards, it also casts a long shadow over the vulnerability of these burgeoning urban centers to the rise of living costs and wrath of natural disasters.”



Urbanization, the steady migration of populations from rural to urban areas, has emerged as one of the most significant global phenomena of the 21st century. Particularly rampant in developing countries, this process reflects both the allure of opportunities in cities and the retreat from dwindling prospects in the countryside. While urbanization promises economic growth, technological advancement, and improved living standards, it also casts a long shadow over the vulnerability of these burgeoning urban centers to the rise of living costs and wrath of natural disasters. In this era marked by escalating living costs and shifting urban dynamics, “Light House” designed by All(zone) surfaced as a response to the challenges posed by these trends, particularly within tropical metropolises such as Bangkok. This micro dwelling, spanning a mere 11.5 square meters, presents a departure from conventional notions of fixed housing, prioritizing adaptability and flexibility in the face of economic uncertainties. Through resourceful design choices and light weight material utilization, Light House demonstrates its potential to provide both functional living and comfort at an affordable price. While this prototype presents a refreshing perspective on housing, it raises questions about the long-term sustainability of such temporary and mobile dwellings. As urban populations continue to grow, addressing housing shortages and affordability remains a complex challenge. Are these methods scalable enough to accommodate the growing urban populations and the demand for housing without perpetuating slum-like conditions? How large of a factor is social sustainability when space and resources are in such limited supply? Projects like these offer a temporary solution, yet it prompts us to consider how to balance adaptability with the need for stable and enduring homes. While they attempt to redefine conventional housing paradigms, there is still an underlying concern of how it can respond to broader issues of climate change and natural disasters.

Bangkok’s current real estate landscape, intertwined with global investments, restricts the ability of young middle-class individuals and urban poor to access

housing. As a response to this conundrum, All(zone) offers a “nomadic” living solution that can be easily erected, dismantled, and relocated.¹ The polyethylene-coated metal grid frame, plastic-laminated plywood floor, and layered nylon net and fabric walls showcase a creative use of materials to achieve a lightweight and cost-effective dwelling. The intentional perforations in the walls serve a dual purpose, providing ventilation while also acting as a filter for external elements, blurring the boundaries between indoors and outdoors. This dwelling challenges conventional ideas of homeownership and permanence through its resourceful employment of minimal materials, roots in Thai vernacular architecture, and its implications for the broader discourse on sustainable and adaptable urban living. However, in the grand scheme of things this housing methodology does not seem enduring, nor does it seem to be inclusive to every Bangkok resident. This approach ultimately renders the urban poor constantly transient, never having any sort of stability for the people that seek it. Urbanization is frequently heralded as a beacon of progress, with cities often acting as engines of economic growth, innovation, and cultural exchange. The global south, grappling with poverty and underdevelopment, have embraced this trend in hopes of harnessing its promises. As rural populations flock to urban areas in pursuit of better job prospects and improved living conditions, a tale of promise unfolds. Yet, this very promise often remains unfulfilled for many. The voice of the urban poor must be amplified in decision-making processes. Community engagement empowers vulnerable populations, enabling them to be active participants in their own resilience and fostering a sense of agency over their living conditions.

“Half a House” by Elemental is a similar housing methodology, in a different context, that not only challenges traditional design paradigms but also addresses pertinent social issues in the built environment. This innovative approach emerged

¹ Light House, (2015) <https://www.allzonedesignall.com/project/lighthouse-1-0>

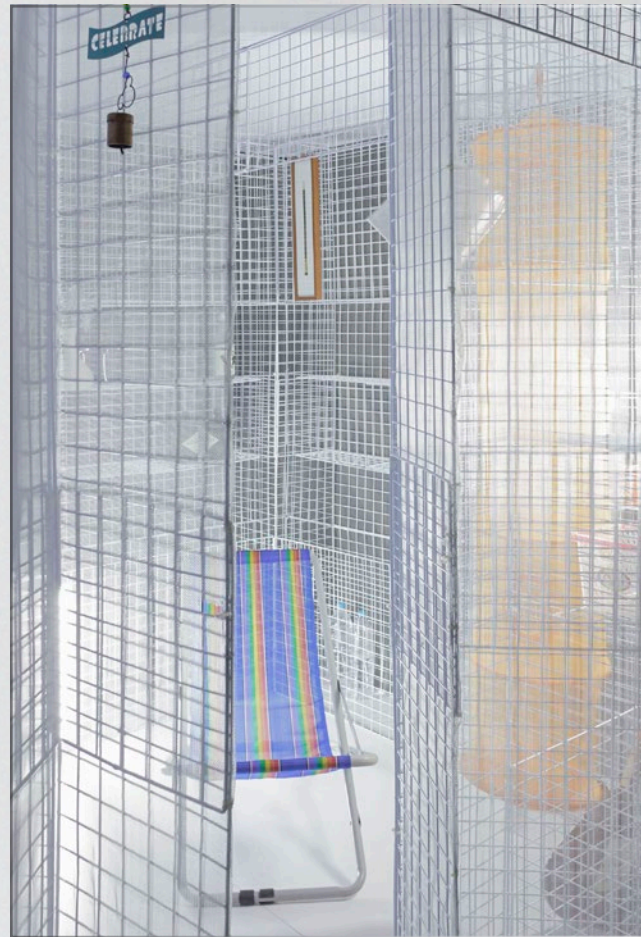


as a response to the widespread problem of inadequate housing and urban poverty in Chile. By envisioning a home that is structurally incomplete yet functionally comprehensive, Elemental's creation redefines the concept of shelter. These half-built houses embrace the notion of co-creation, where homeowners have the agency to complete the second half of dwelling over time, as their financial means improve.² This response to the social issue of housing scarcity not only empowers residents but also promotes a sense of ownership and community engagement. This project exemplifies how architecture can be a catalyst for positive social change, sparking conversations about affordability, accessibility, and the dynamic relationship between built spaces and the societies that they serve. It not only stimulates discourse about the intricacies of affordability and social inclusivity but also questions the ethical responsibilities of architects and urban planners in tackling the complexities of poverty and shelter deprivation.

Cities represent 3% of the world's land surface and consume about 78% of energy while producing about 60% of greenhouse gas emissions. The United Nations predicts that about 68% of the world's population will live in cities by 2050.³ The convergence of people in urban areas leads to an intensified demand for resources. This quest for urban development often disregards environmental sustainability, resulting in unchecked pollution, deforestation, and habitat destruction. Rapid construction leads to the alteration of natural landscapes, making cities more susceptible to the impacts of natural disasters like floods and landslides. Urbanization, often seen as a manifestation of human advancement, thus becomes paradoxically linked to the degradation of the very environment on which it depends. These factors drastically transform landscapes, increasing vulnerability to natural disasters. The concentration of people, infrastructure, and economic activities in densely populated urban areas magnifies the impact of disasters, compounding the challenges that developing countries face. The result is a perilous mix of flimsy infrastructure and burgeoning populations that render cities like tinderboxes awaiting ignition. Earthquakes, floods, and cyclones, which were once isolated incidents, can now turn into full-blown humanitarian crises.

² Half a House, (2016) <https://99percentinvisible.org/episode/half-a-house/>

³ UN, <https://rb.gy/88s91>



Half a House - Elemental

The phenomenon of urbanization stands as a testament to human ambition, innovation, and migration, yet its complexities and challenges must not be overlooked. The case studies of "Light House" by All(zone) and "Half a House" by Elemental shed light on alternative approaches to housing that navigate the intricate interplay between architecture, affordability, and social empowerment. These innovative designs challenge traditional notions of permanence and homeownership, promoting adaptability and co-creation, while raising essential questions about long-term sustainability and inclusivity. The urgency of addressing the repercussions of unchecked urbanization cannot be overstated. As cities swell in size and number, consuming vast resources and emitting greenhouse gasses, they simultaneously become more susceptible to the devastating impacts of natural disasters. The concentration of vulnerable populations and inadequate infrastructure in urban centers creates a precarious equilibrium that can quickly tip into catastrophe. Thus, the juxtaposition of urbanization's promise and perils calls for a reimagining of urban development and a renewed commitment to environmental stewardship, social equity, and resilient design. Moving forward, the trajectory of urbanization requires a multidisciplinary approach that encompasses architecture, urban planning, policy-making, and community engagement. It is incumbent upon architects, planners, and policymakers to navigate the intricate dance between innovation and tradition, between adaptability and stability, and between progress and preservation. Only through such concerted efforts can we hope to forge a path towards urbanization that uplifts societies, safeguards the environment, and paves the way for a more resilient and equitable future.

EARTHQUAKE RESILIENCE IN RURAL NEPAL

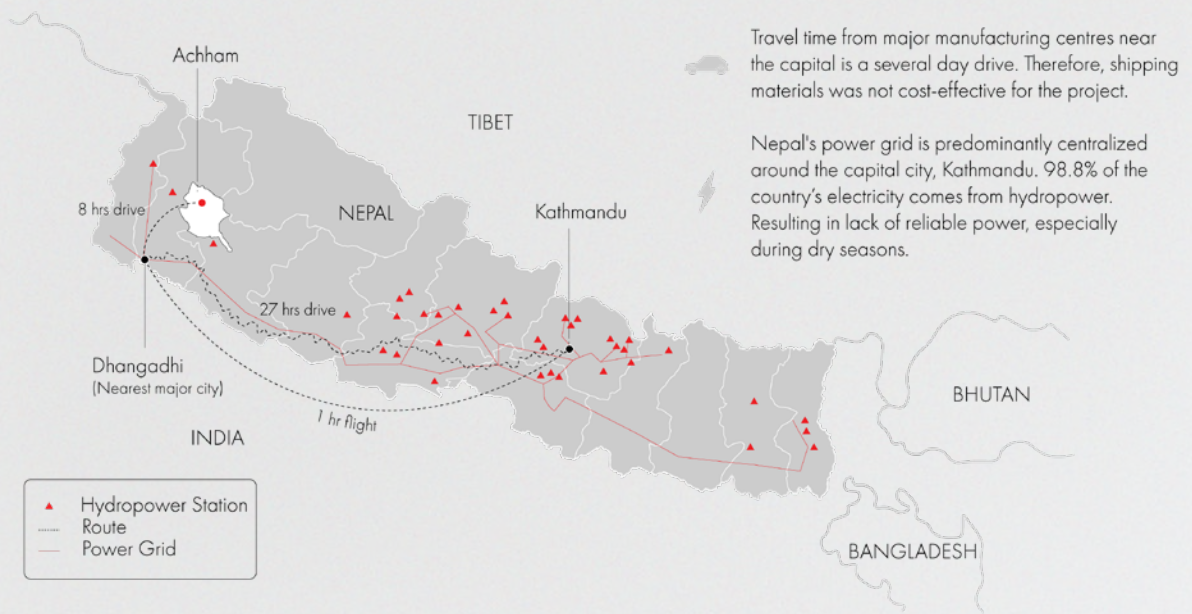
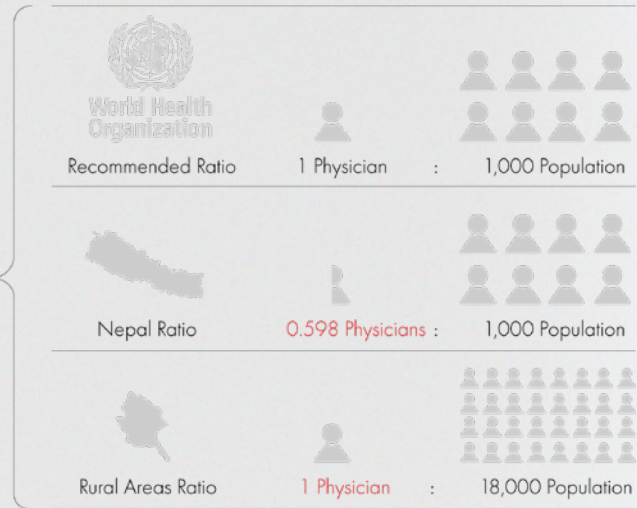
CONSTRUCTION ECOLOGIES IN THE ANTHROPOCENE | INSTRUCTOR: TOMMY SCHAPERKOTTER | FALL 2023



Photo: Elizabeth Felicella

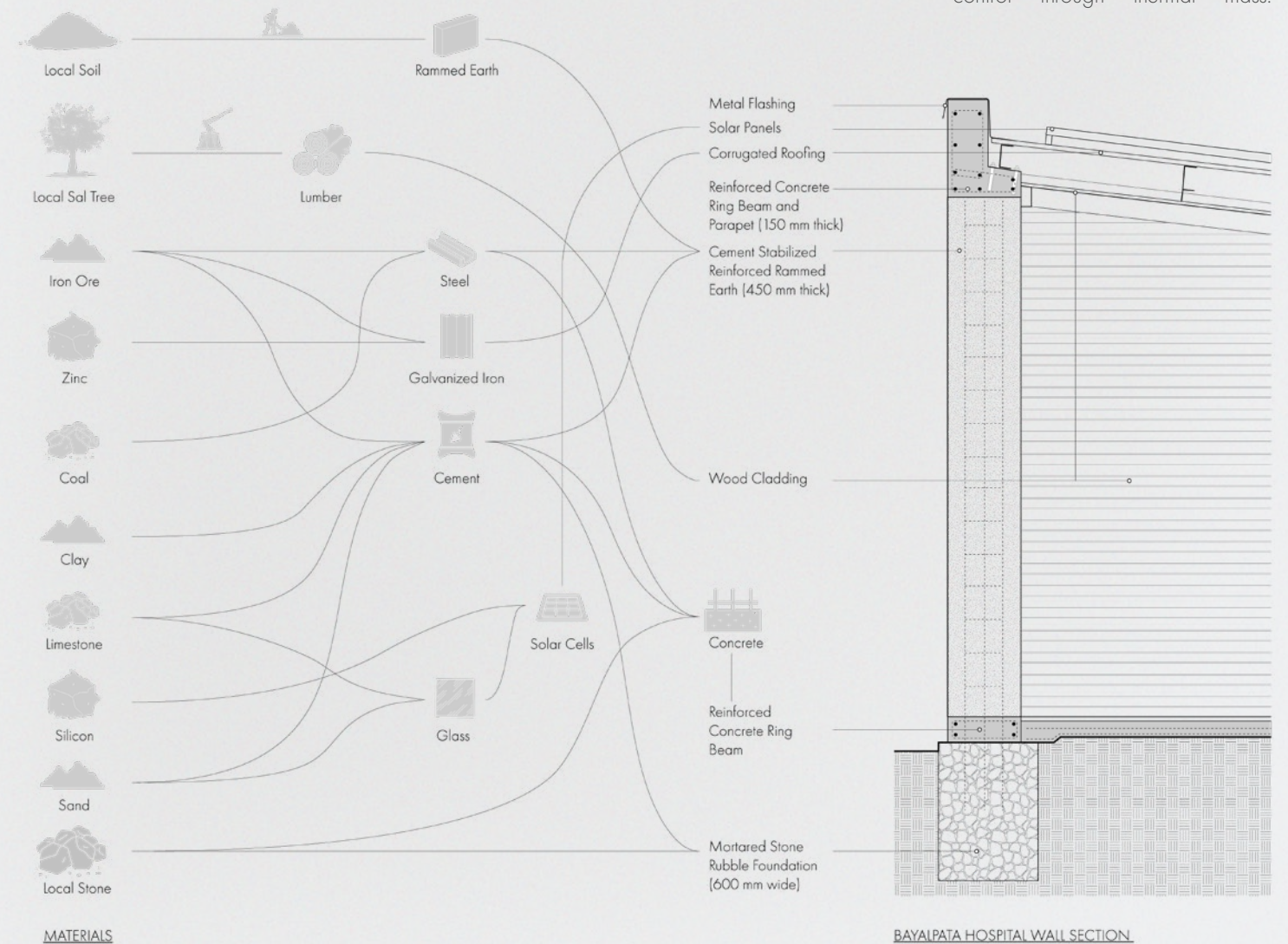
- Case Study: Bayalpata Hospital
- Location: Achham, Nepal
- Owner: Minister of Health & Population of Nepal
- Area: 4,225 sq. m (45,500 sq. ft.)
- Cost: 390 million NPR (\$3.4 million USD)
- Design: Sharon Davis Design (NYC)
- Organizations: Possible Health (NY) + Nyaya Health Nepal
- Sustainability: Transsolar Climate Engineering

+
Lack of infrastructure
in the healthcare system



Travel time for patients by most common method of transportation (walking) from nearby villages to Bayalpata Hospital. The rugged terrain of the Himalayan foothills presents a formidable challenge.

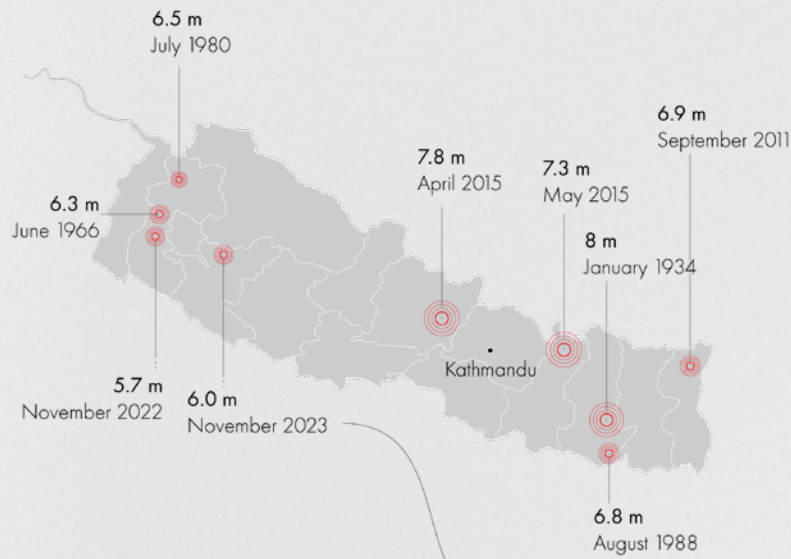
The project demolished the existing hospital to replace it with an upgraded and expanded hospital complex. Due to the site's remote location and challenging terrain, the design practice prioritized building with low-tech locally available materials. The intention was to lower embodied carbon, reduction of transportation costs, labor-intensive but low-tech construction, and passive temperature control through thermal mass.



RAYALPATA HOSPITAL WALL SECTION



Typical Nepali single family house: Constructed primarily with stone walls, these houses feature roofs fashioned from materials such as thatched grass, zinc, or tin. Occasionally, the walls are adorned with a coating of clay and manure. Additionally, wooden pillars reminiscent of log cabins support these structures. Many of these traditional houses suffered damaged in the large earthquakes.



LARGE SCALE EARTHQUAKES IN NEPAL



Hundreds of homes destroyed in the most recent large scale earthquake in west Nepal. November 2023.

PROPOSED CONSTRUCTION METHOD FOR TYPICAL DWELLING:
REINFORCED RAMMED EARTH WITH BAMBOO FRAMING

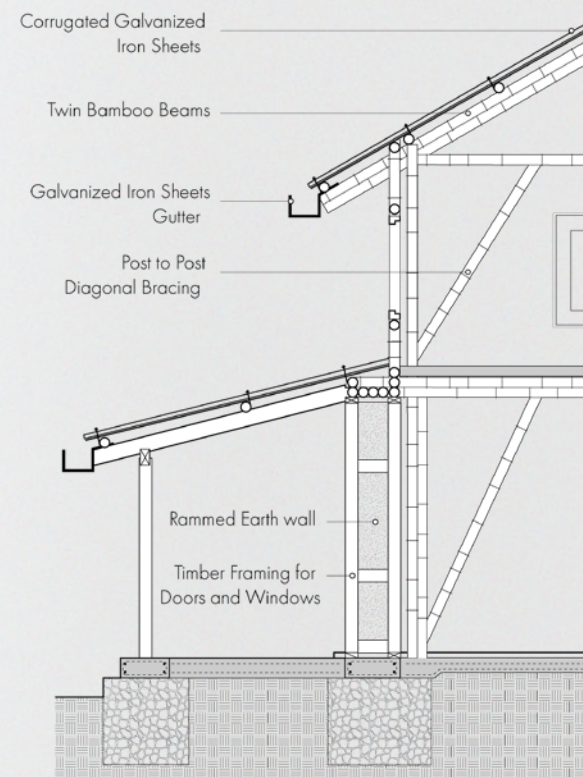
Despite being lightweight, bamboo exhibits impressive strength. Its tensile strength, which is the capacity to withstand tension without breaking, is superior to many other building materials. This combination of strength and lightness helps structures made from bamboo withstand the lateral forces of an earthquake.



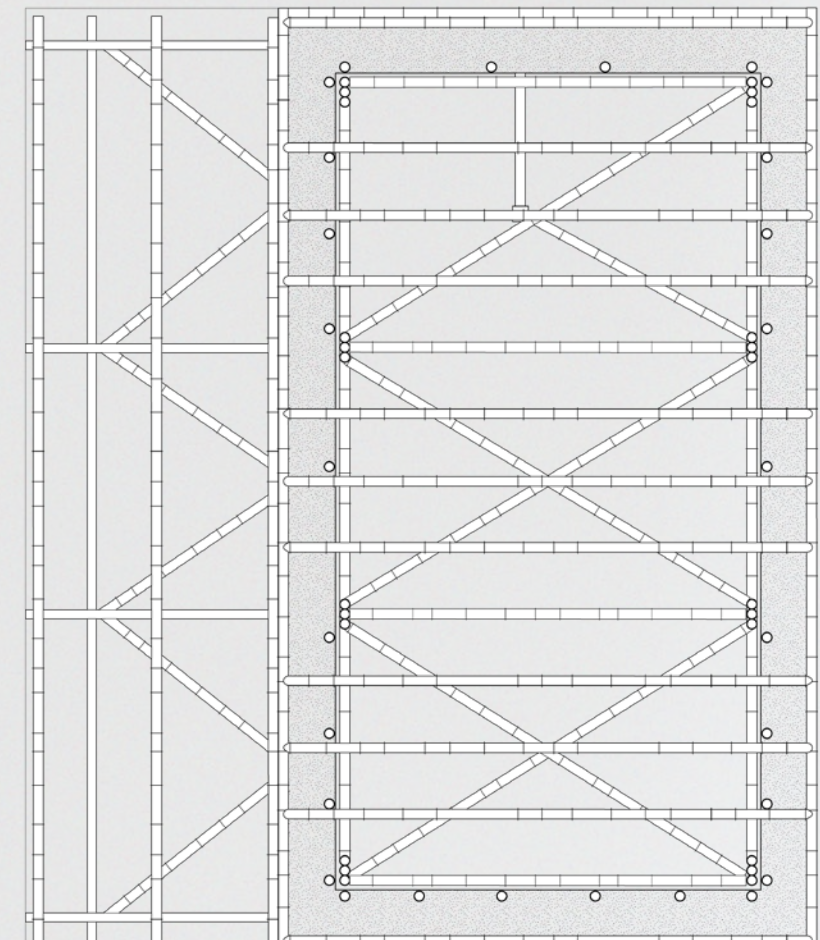
Bamboo is Nepal's most significant forest species and is widely distributed through the country. 93% of the Nepali labor force are rural based and they practice subsistence agriculture. Most of these farming families make bamboo a prominent aspect of traditional Nepali lifestyle.

Bamboo has been used traditionally in Nepalese construction. Local artisans possess the skills and knowledge to work with bamboo, enabling the creation of structurally sound buildings that are culturally and aesthetically relevant to the region.

Bamboo is affordable compared to many other building materials. Its ease of transport and relatively simple construction techniques make it accessible to a wide range of communities, including those in remote or rural areas.



SECTION



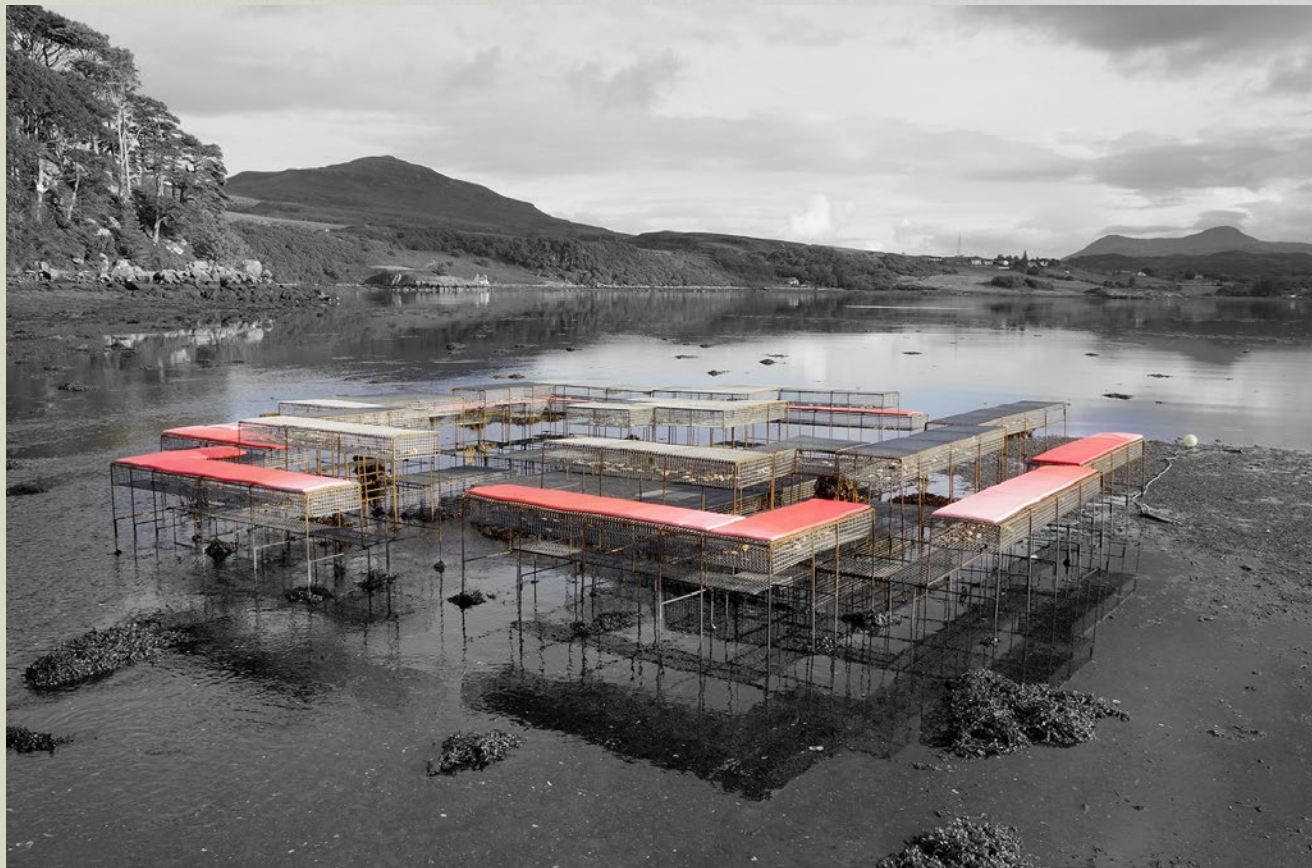
BAMBOO FRAMING PLAN



CONVENIENCE BEFORE CLIMATE & EASE OVER ETHICS:

THE EVOLUTION OF HUMAN HABITS IN DIET AS A GATEWAY TO THE CLIMATE CRISIS AND COMBATING IT

TRANSSCALARITIES | INSTRUCTOR: IBIAYI BRIGGS | SUMMER 2023



“...it is important to recognize that the impact of such initiatives heavily depends on location, culture, and the scale of the operation. While these projects produce meaningful changes on a community level, they may seem minuscule when compared to the immense harm caused by large corporations.”



Climavore explores how climate change affects food systems, biodiversity, and the overall ecological balance. It encourages people to consider the carbon footprint of their food choices, the environmental implications of different food production methods, and the potential for creating more sustainable food systems. How do we eat as climate changes? Climavore is a long-term project by the group Cooking Sections, that involves site-specific interventions which use food as a tool to address environmental degradation. They suggest that as Climavores, individuals can contribute to mitigating climate change through their food choices and develop a deeper understanding of the interconnectedness between food, the environment, and sustainability. Climavore is a form of eating that reacts to anthropogenic landscapes and uses ingredients as responses to man-made climatic events. However, in terms of impact, what makes this concept so different from exposés that are trying to address similar issues? Will these responses have a large enough impact on a global scale?

One notable example of Climavore’s impact is seen in “Climavore: On Tidal Zones,” where Cooking Sections collaborated with residents, restaurants, activists, schools, and the general public in the Isle of Skye, Scotland. This intervention aimed to move away from salmon farming and develop alternative aqua-cultures to address the dead zones created by salmon farms. At low tide, the installation’s 1000 oysters actively filter pollutants from the water, helping to restore the ecological balance. Moreover, the installation serves as a communal dining table during high tide, fostering conversations and workshops with various stakeholders to discuss aqua-cultures for the island. The design of the structure in plan creates an agora that allows the chefs to perform in the center while the learners are seated around them.

However, it is important to recognize that the impact of such initiatives heavily depends on location, culture, and the scale of operation. While these projects produce meaningful changes on a community level, they may seem minuscule when compared to the immense harm caused by large corporations. Agriculture, as the world’s largest industry, significantly contributes to

greenhouse gas emissions, with the food system accounting for up to 37% of global emissions.¹ Pasture and cropland occupy around 50% of the planet’s habitable land and use about 70% of fresh water supplies.² Since the Paris Agreement was signed in 2015, only 67 out of the world’s leading 500 corporations have shown dedication to reducing their emissions in accordance with the agreement.³ Of these corporations, those in the food and agriculture sector stand out as particularly poor performers.

Educating people about mitigating climate change is crucial, but expanding knowledge about the impact of big agro-corporations on climate and food systems is equally important in fostering positive change. These initiatives can help communities understand the complex linkages between these corporations and their practices, enabling them to advocate for policy changes and regulations that prioritize environmental conservation and food sovereignty.

While the impact of individual projects like Climavore may seem limited on a global scale, they play a vital role in raising awareness, empowering communities, and catalyzing discussions about sustainable practices in the food system. By promoting responsible food choices and innovative environmental interventions, Climavore contributes to a broader movement for a more sustainable and climate-resilient future.

¹ https://www.foodandlandusecoalition.org/wp-content/uploads/2020/12/FOLU_Nature-for-Net-Zero_ReportFinal.pdf

² <https://www.theguardian.com/environment/2022/nov/03/big-agriculture-climate-crisis-cop27>

³ <https://grain.org/e/6634>



NESTING GROUNDS

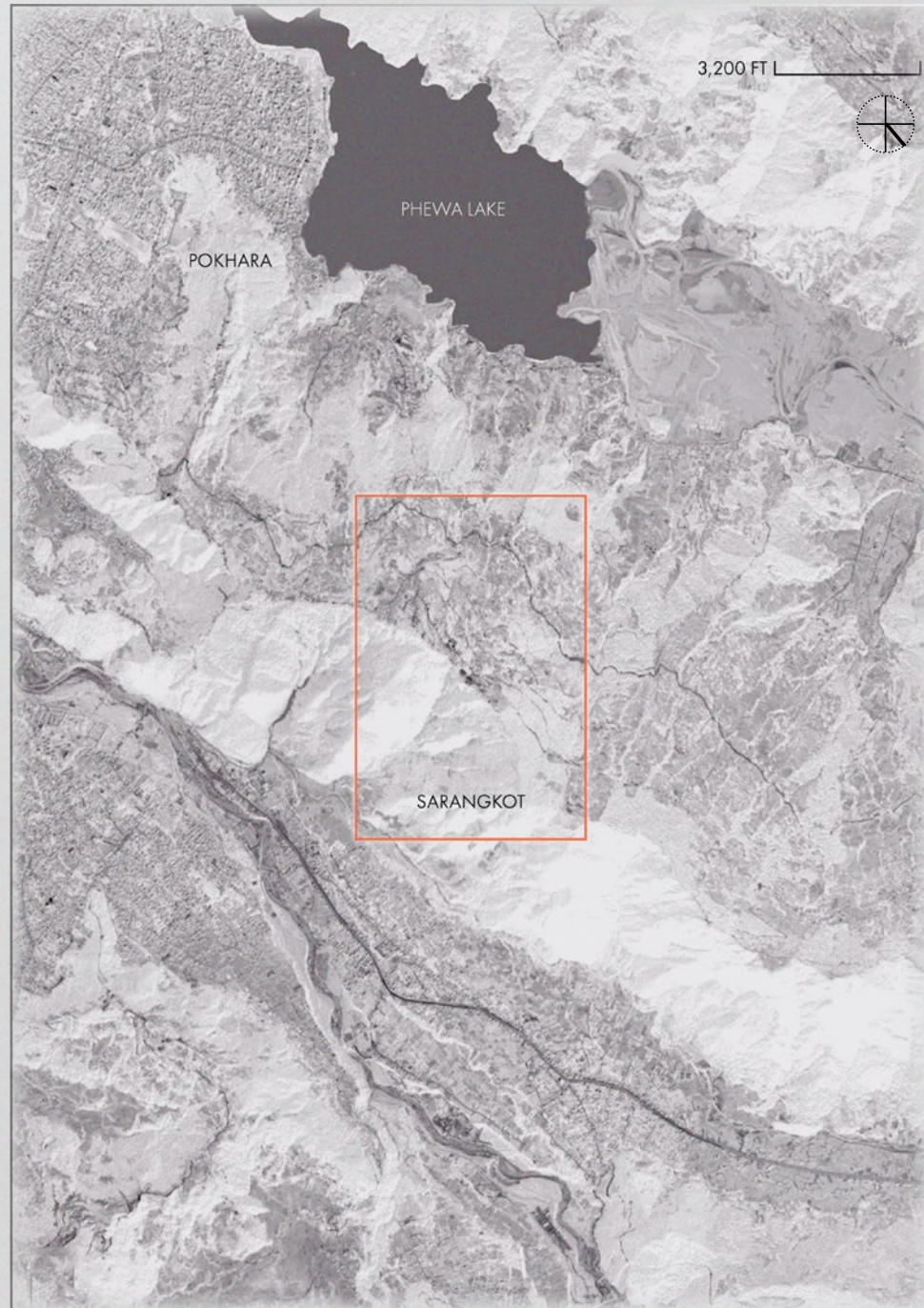
POKHARA, NEPAL

ADV STUDIO VI: PERMANENTLY IN PROGRESS | CRITICS: RACHAPORN CHOOCHUEY & LUCY NAVARRO | SPRING 2024

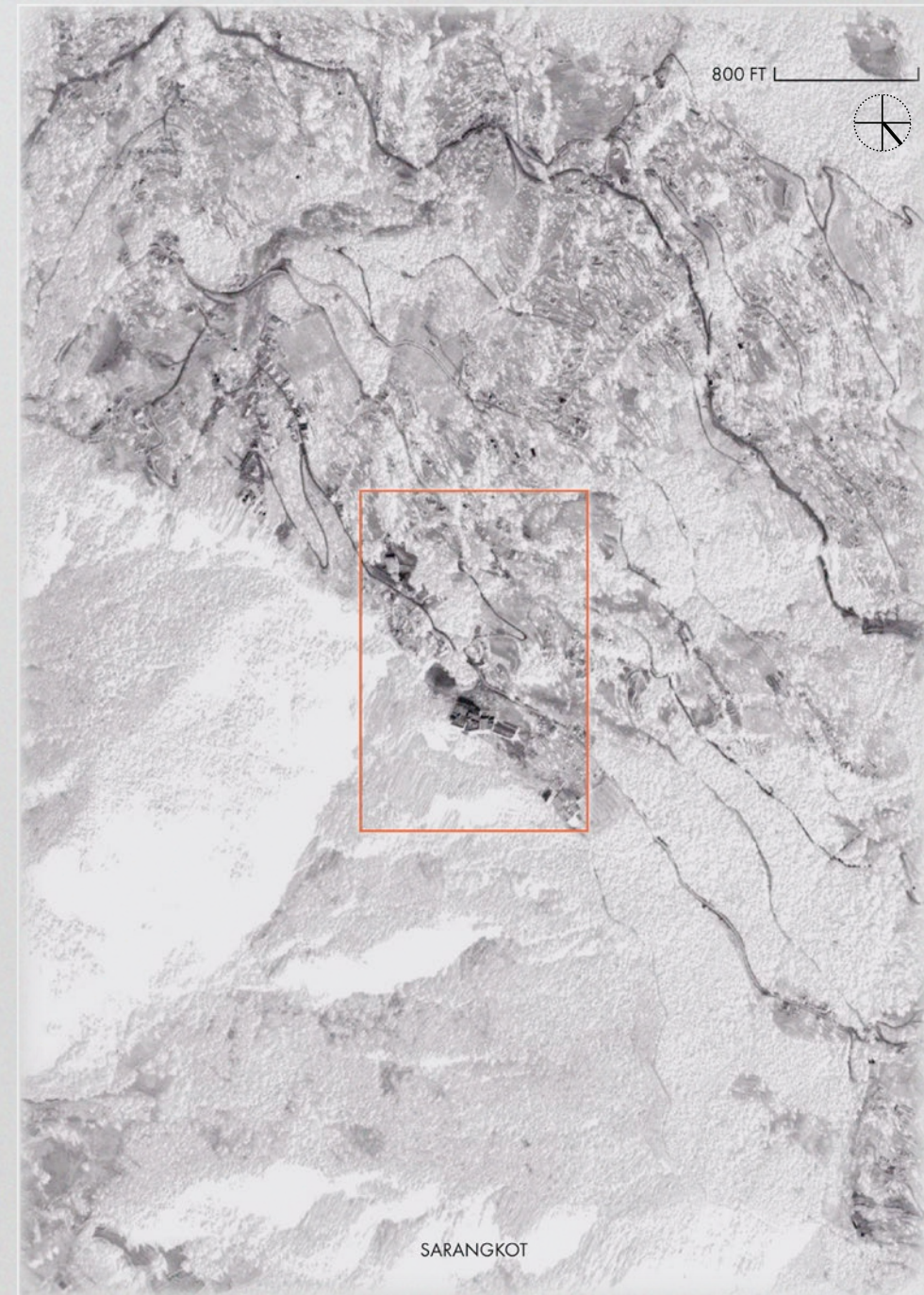
In the picturesque hills of Sarangkot, Pokhara, a determined Sherpa business owner, Mingmar, struggles to sustain his quaint hotel amidst fierce competition from a neighboring, colossal, modern establishment. A stark contrast surfaces between the two establishments. While the larger hotel, constructed by affluent developers and Japanese engineers, effortlessly navigates environmental hurdles, Mingmar faces numerous challenges in maintaining structural stability. Over the years, the intense monsoon seasons cause landslides in the property, and the small Sherpa Resort undergoes a transformative evolution, reflecting resilience and innovation.



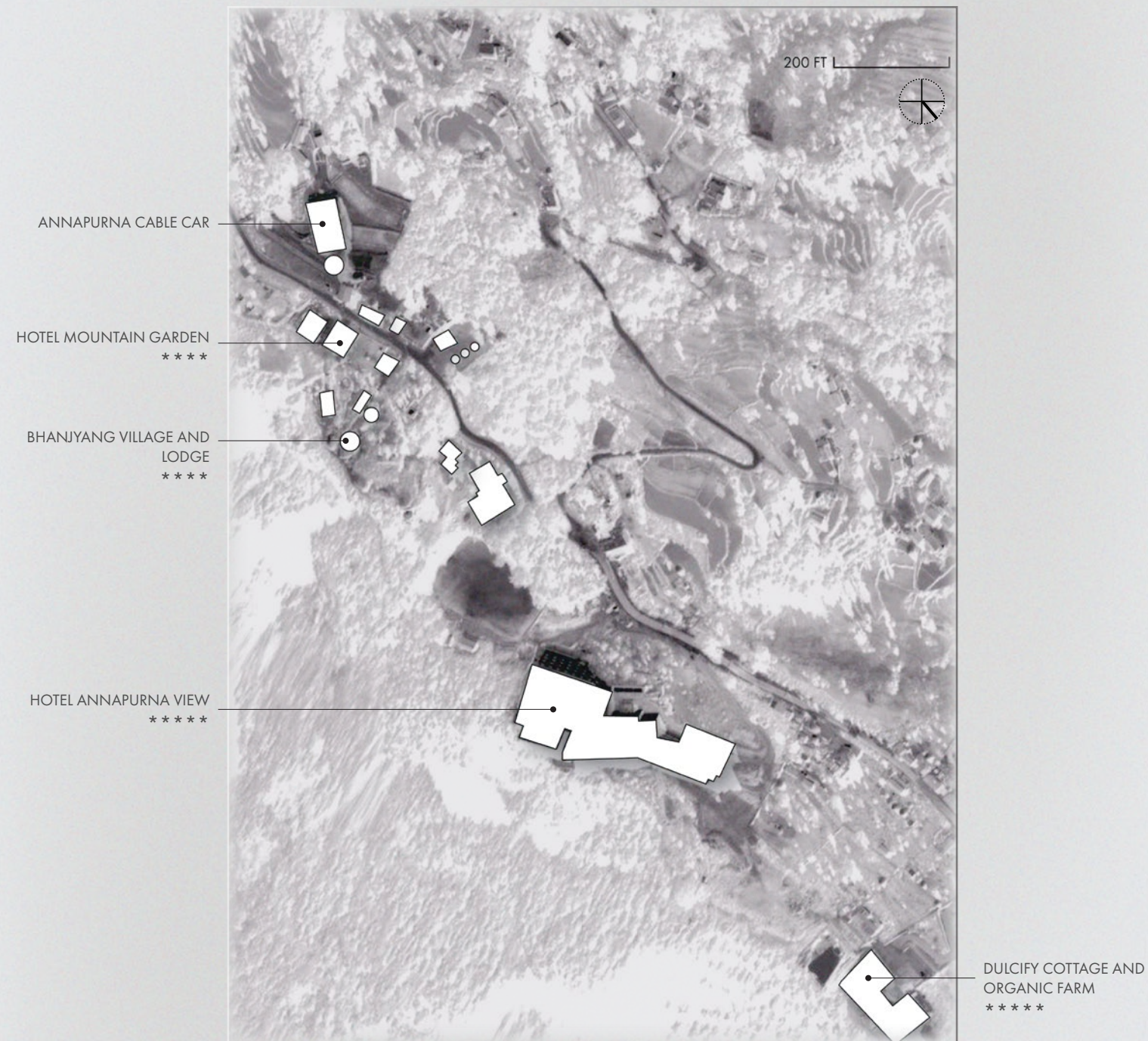
MAP: POKHARA, NEPAL



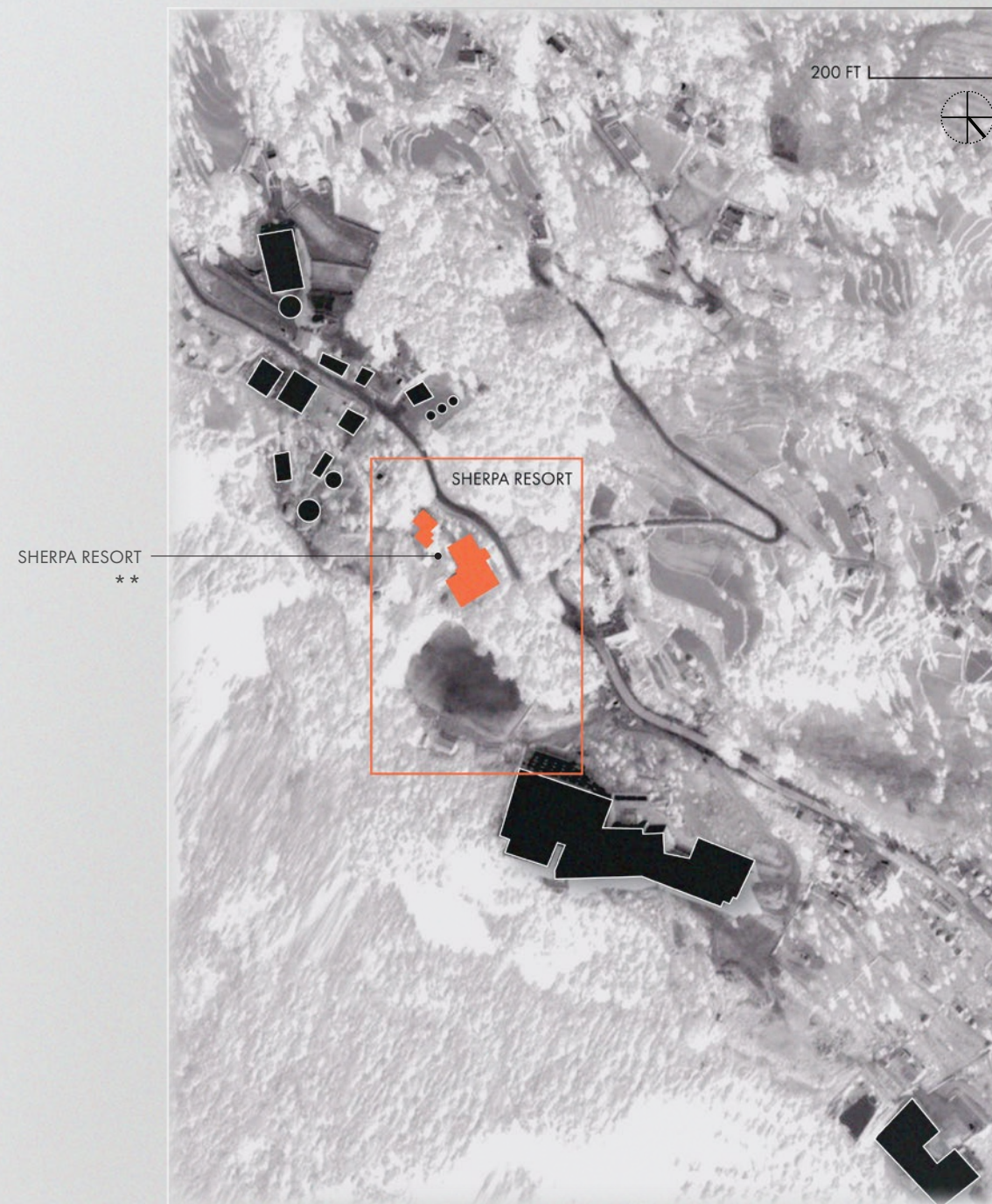
MAP: SARANGKOT HILL



SITE PLAN



SITE PLAN





SHERPA RESORT (2023)

WALLS

STAIR WINDOW

SLABS AND COLUMNS

WINDOWS AND DOORS



CEMENT BONDED BRICK + PLASTER



STEEL



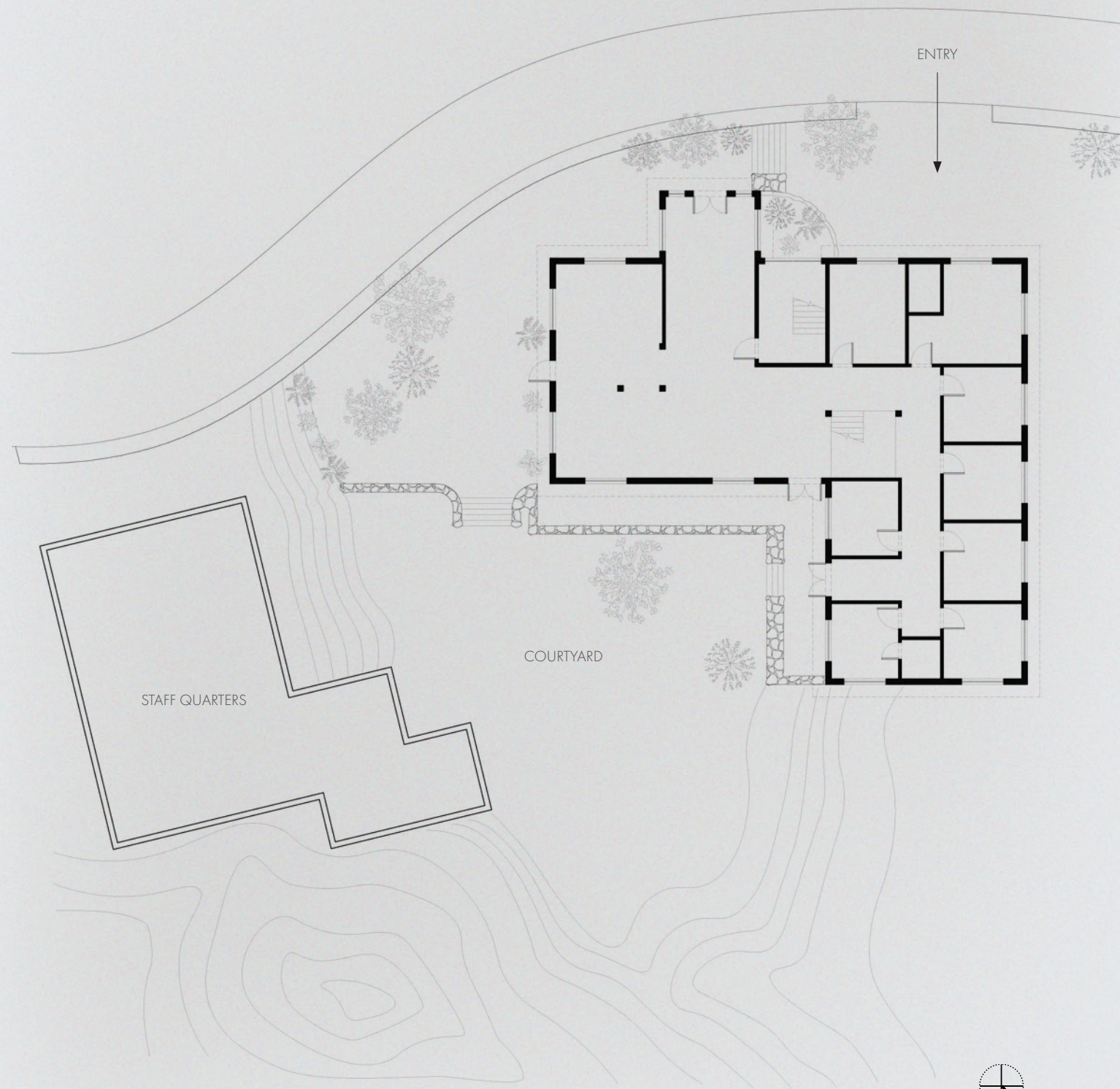
REINFORCED CEMENT AND CONCRETE



LOCAL LUMBER AND GLASS



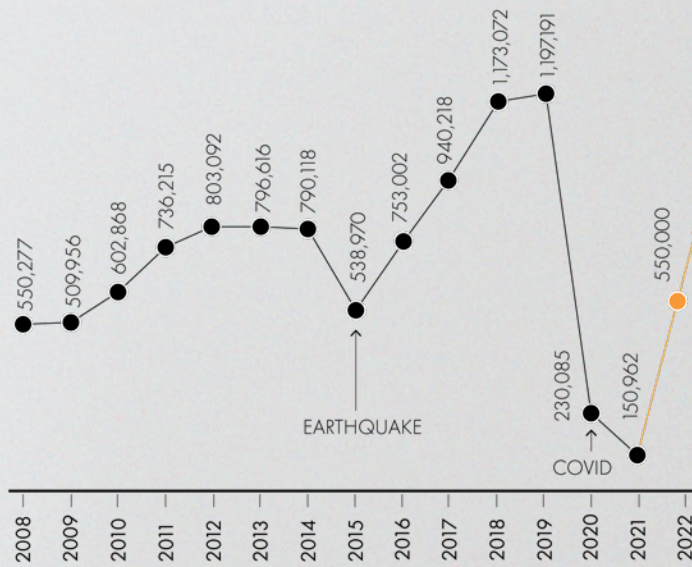
NORTH ELEVATION - EXISTING BUILDING MATERIALS



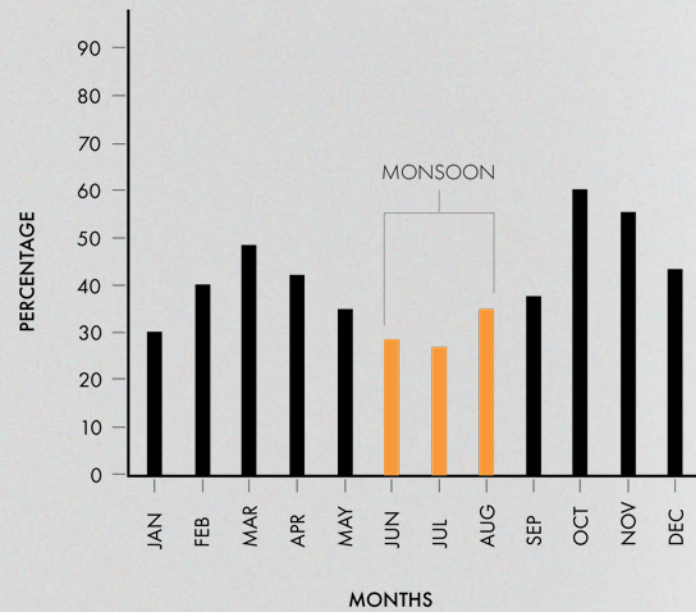
EXISTING PLAN



NUMBER OF TOURISTS IN NEPAL



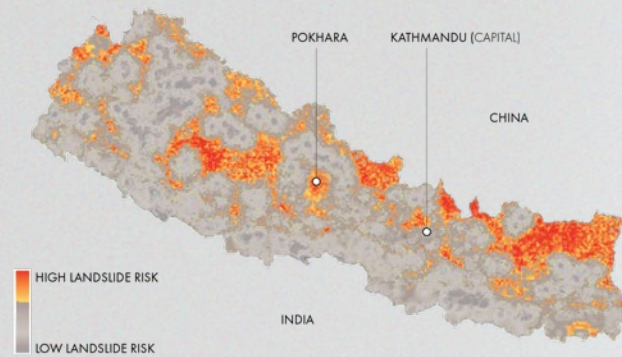
ESTIMATED HOTEL OCCUPANCY RATES



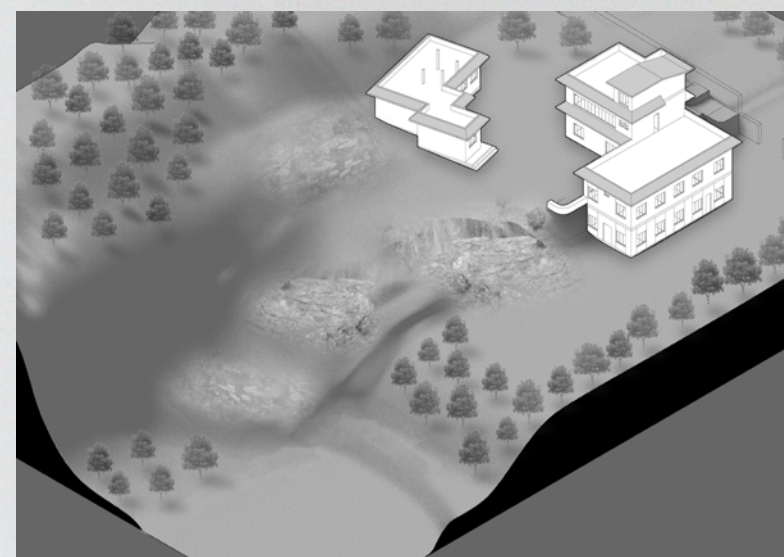
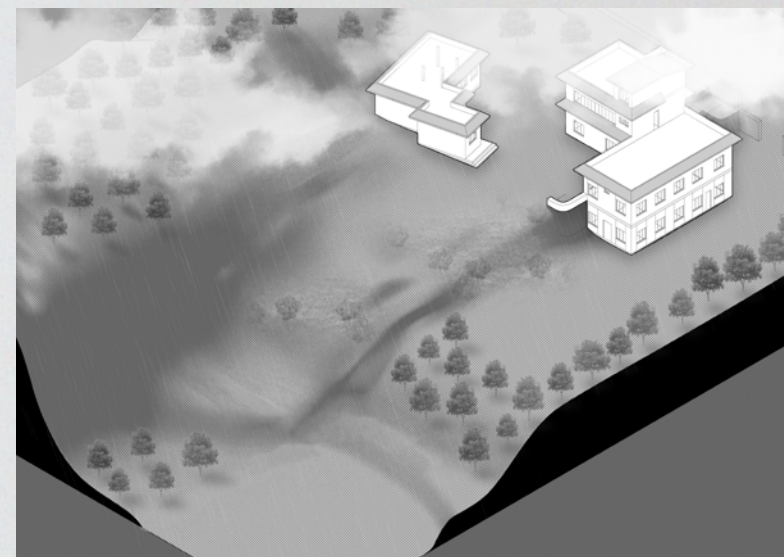
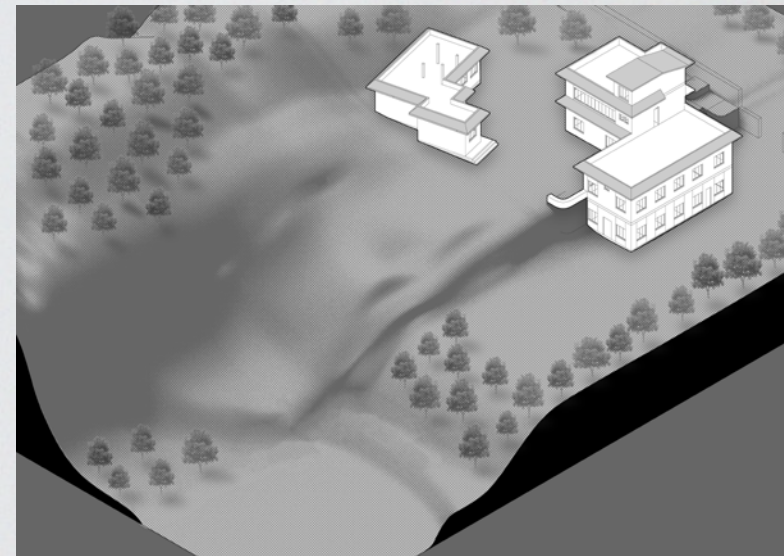
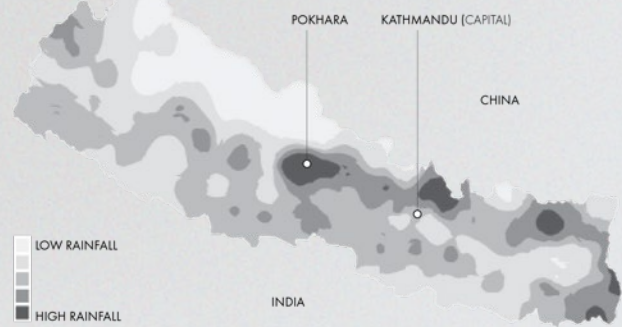
NEPAL TOURISM BOARD REPORTS ROBUST TOURISM INFLUX IN 2023



LANDSLIDE RISK MAP



ANNUAL RAINFALL



MAY

JUNE

JULY

AUGUST

HEAVY MONSOON RAINFALL

LANDSLIDE OCCURS AT THE SHERPA RESORT

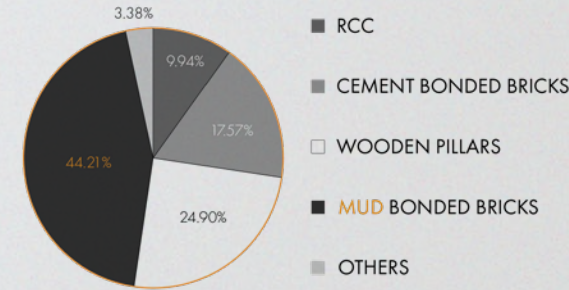


LANDSLIDE RUBBLE

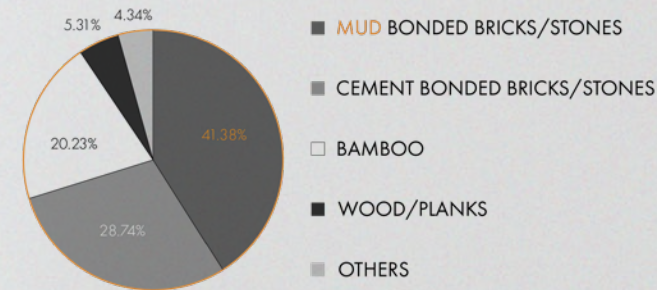


Mingmar now finds himself in a daunting dilemma. Despite his determination and spirit, the landslide threatens the very existence of his quaint Sherpa Resort. As he navigates the aftermath, Mingmar grapples with the difficult decision of whether to rebuild once again or succumb to the overwhelming odds stacked against him.

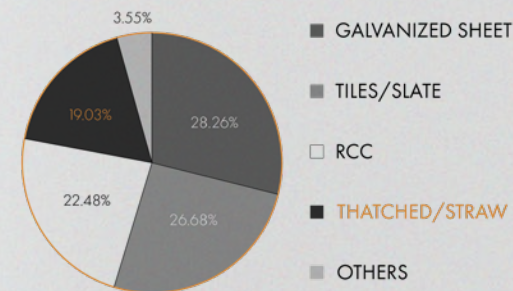
TYPICAL METHODS OF CONSTRUCTION IN NEPAL



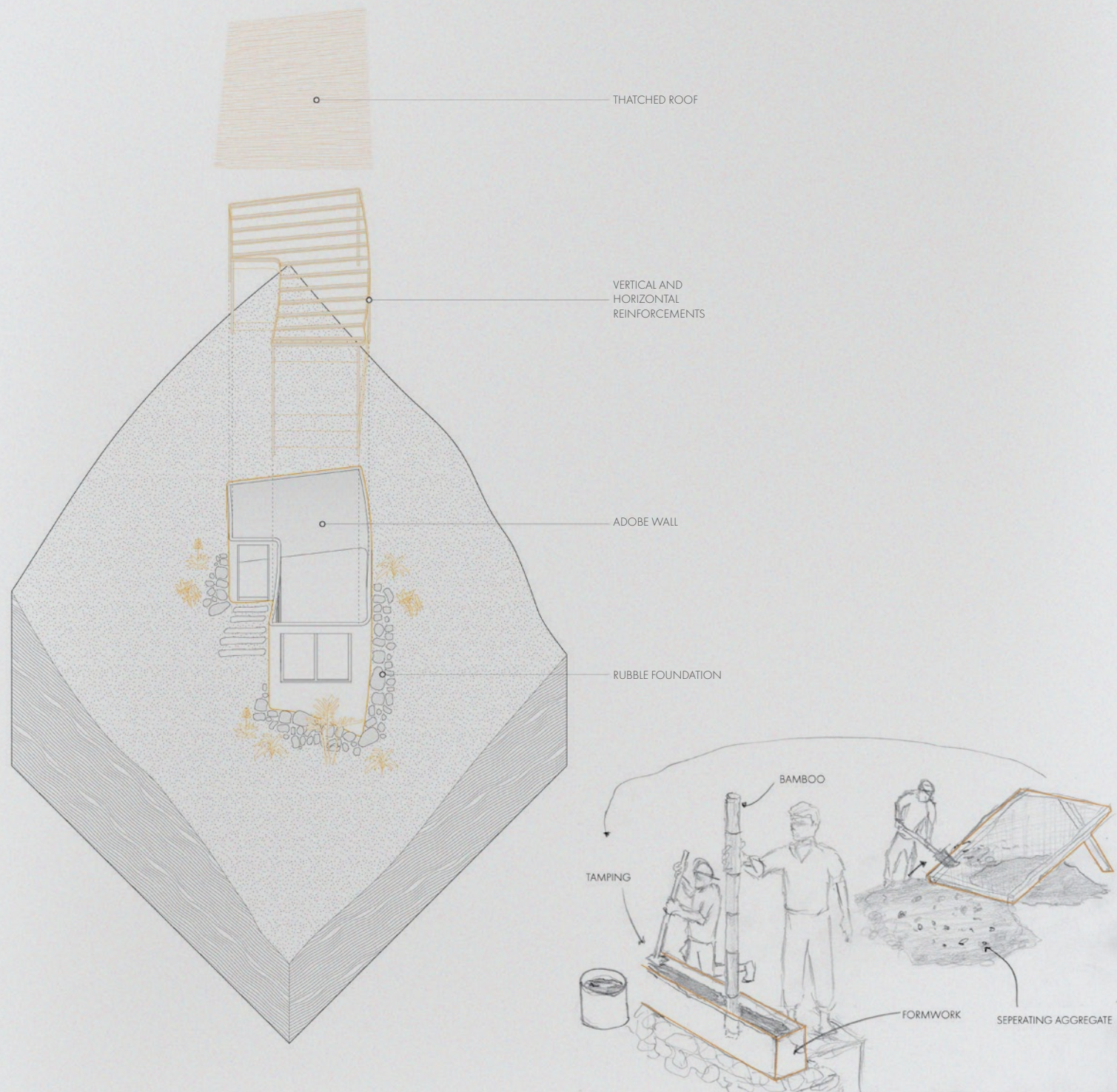
TYPES OF WALL



TYPES OF ROOF



Using the rubble from the landslide, Mingmar builds durable clay-based structures that blend with the landscape. With terrace gardens strategically planted, serving as natural barriers to stabilize the soil and mitigate the risk of future casualties.

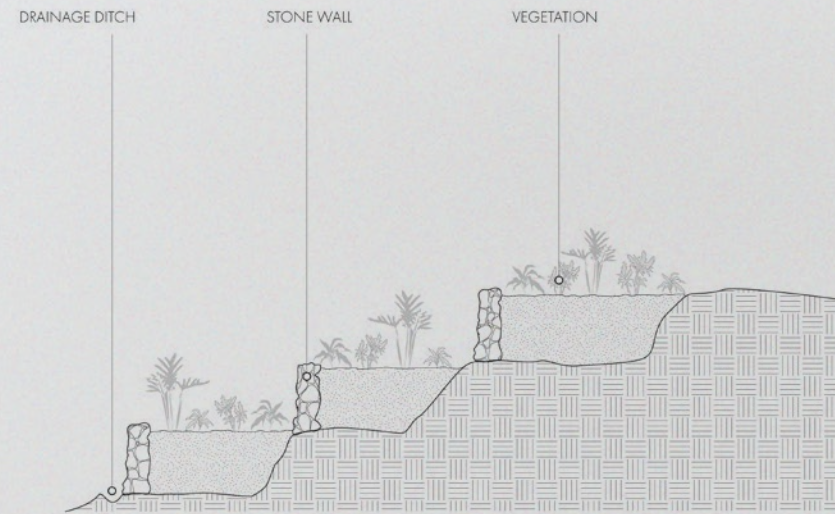


WALL CONSTRUCTION PROCESS

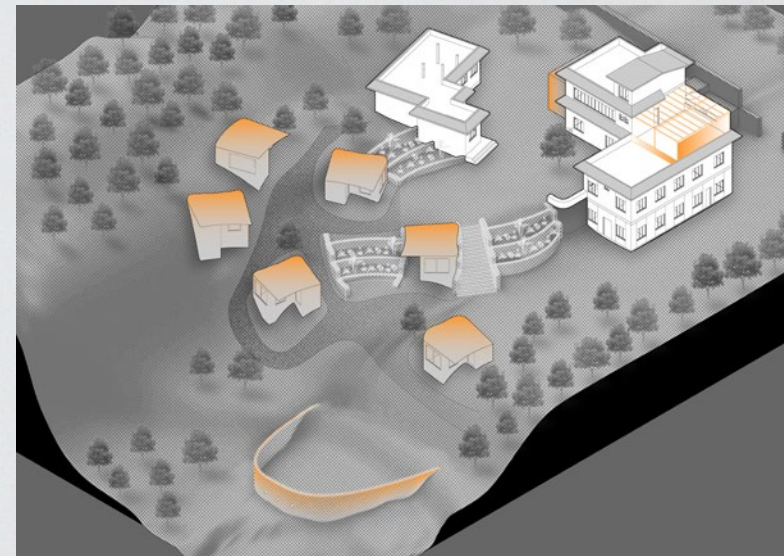
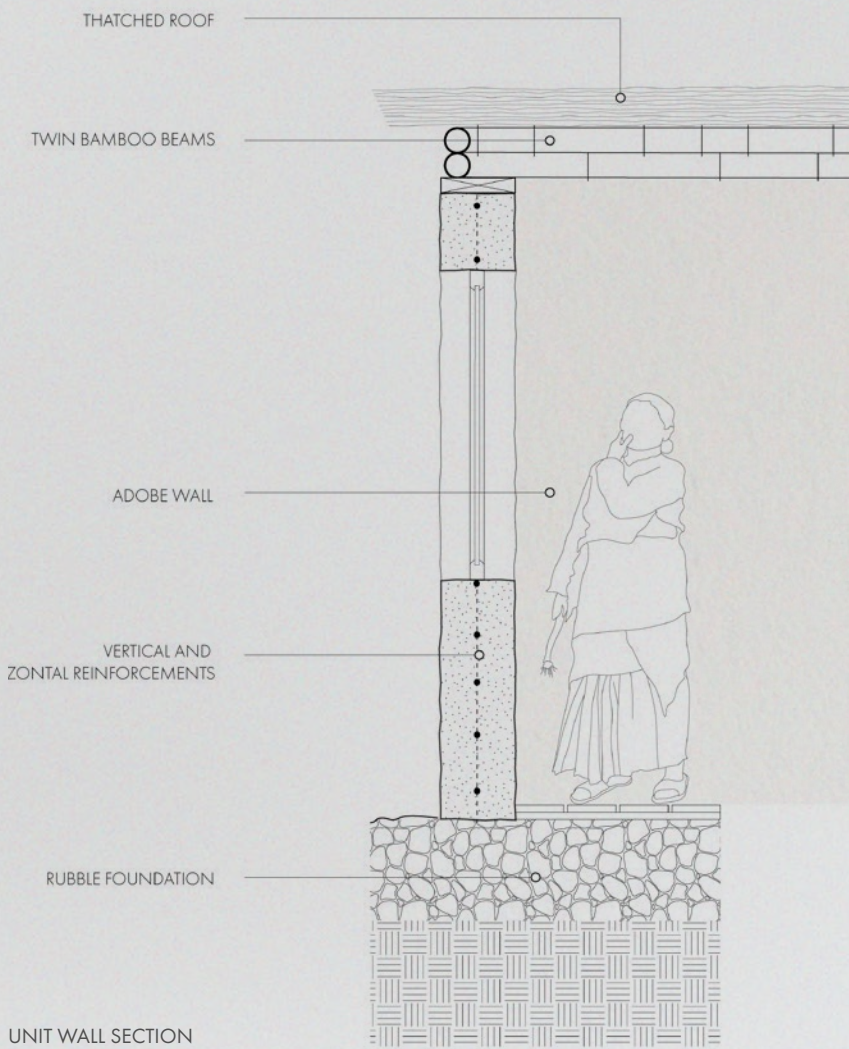
UNIT AXONOMETRIC



NEW MASTER PLAN

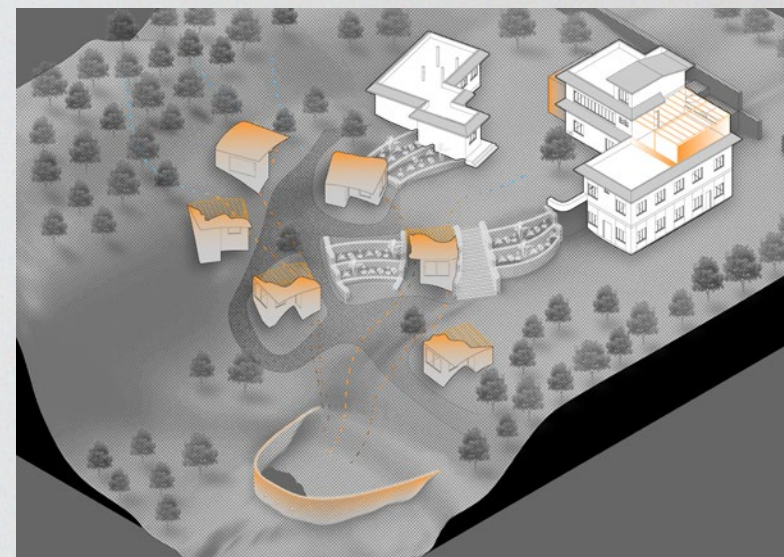


TERRACE GARDENS (CUT AND FILL)



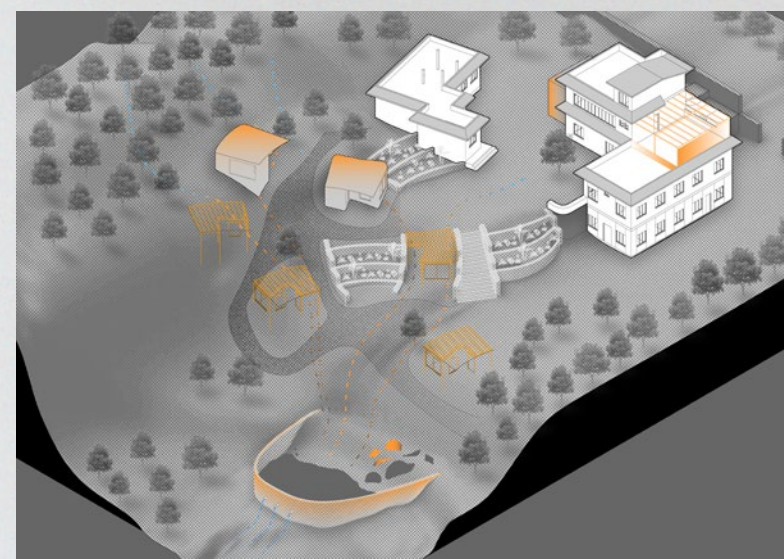
NEW SHERPA RESORT WITH ADDITIONAL CLAY UNITS MEETS THE DEMAND FOR THE SURPLUS OF TOURIST

MAY



THE CONSTANT RAINFALL DURING THE MONSOONS WASHES THE CLAY DOWN THE HILL

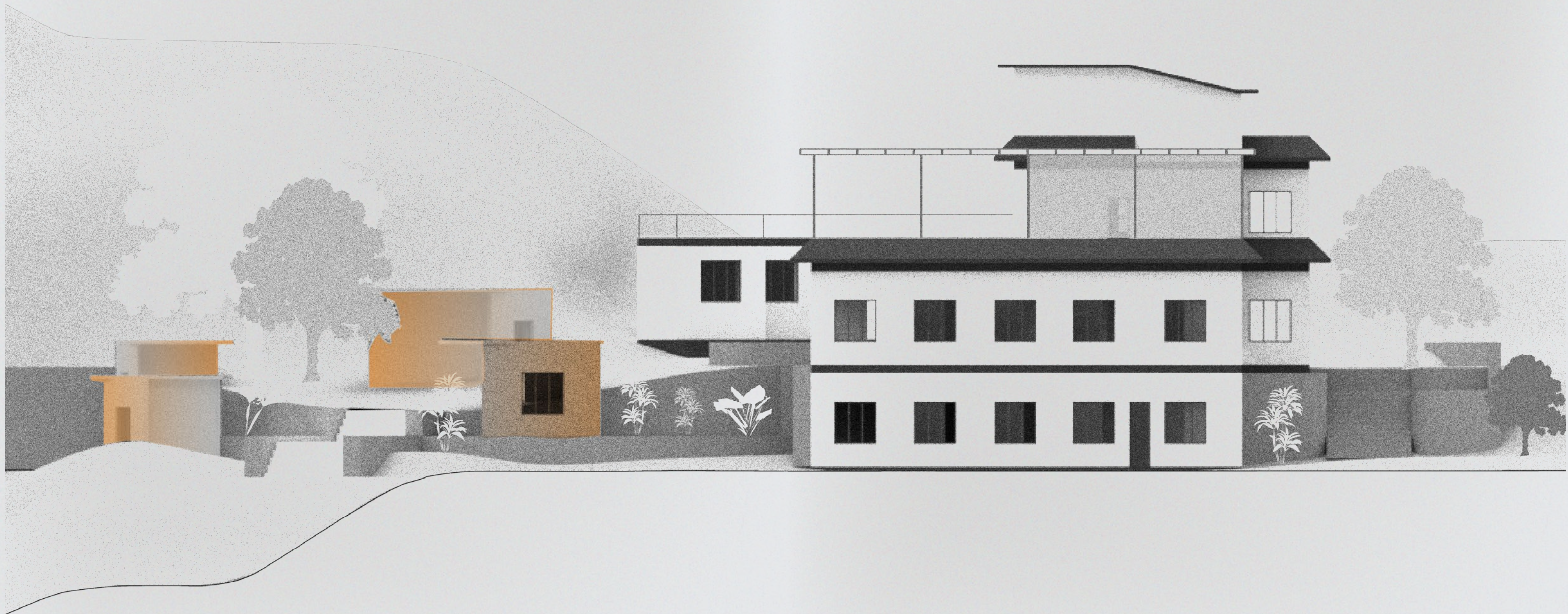
JUNE



THE CLAY GETS COLLECTED IN THE NEW DEBRIS RETENTION BASIN. AS THE NEXT SEASON BEGINS, THE COLLECTED CLAY GETS USED AGAIN TO REBUILD THE UNITS IN NEW LOCATIONS.

JULY

AUGUST



EAST ELEVATION







धैरै धैरै धन्यवाद

MY DEEPEST APPRECIATION TO THE COLLABORATORS WHOSE DEDICATION AND CREATIVITY ENRICHED EACH PROJECT. ALSO TO THE INSTRUCTORS FOR THEIR VALUABLE GUIDANCE AND SUPPORT.

THANK YOU

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