

C P D / O DC

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C P D / O DC

Chris Deegan

agency

agency

C P D / O DC

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C P D / O DC

personal statement

*Yes, “architects” draw, but, to be clear, we have the **agency** and **capacity** to do so much more. For me, our agency begins with the hand and the pen: the drawing of our first line, searching, iterating, refining—always in progress, even when done. The lines we draw represent a remarkable ability to reach beyond ourselves and touch the future.*

***We are interventionists.** We listen, unite, synthesize, and transform ideas, words, and sentiments into action—to illuminate, alleviate, and agitate.*

We adapt and evolve through the built environment, engaging with and testing social norms, advocating for and building community. We are fluid but rigorous. Our “projects” are deceptively static snapshots of an intimate power—like a mountain reflected in water, an immense force. But our work is also a humble, quiet power that embodies the aspirations, energies, and dedication we commit to ourselves, each other, and our planet.

*Beauty and struggle surround us almost equally, but we will be on the side of the light. What we say, do, write, and create matters. **Our work matters.***

While the following projects resemble a direction and framing that is always a work in progress, I sincerely hope that my aspirations to dream of, draw, and, maybe most importantly, build the world we want to make for each other are clear.

4

26

30

32

40

55

64

92

100

104

A LINE IS _

ADVANCED STUDIO IV

A REPRODUCTION LINE SPRING 2023

ARCHITECTURAL REPRESENTATION II

A REGISTER OF JOY SPRING 2022

CORE III STUDIO

A PARTY WALL FALL 2022

BUILDING TECHNOLOGY III

A CONVENTION FALL 2022

CORE I STUDIO

A CONNECTION FALL 2021

SEED BOMBS

A FISHING LINE FALL 2023

ADVANCED STUDIO V

A SITE OF (THERMAL) EXCHANGE FALL 2023

TENSILE SURFACES

A CORRUGATION FALL 2022

RECOMBINANT RENAISSANCE

HISTORY THEORY SPRING 2023

ADVANCED STUDIO VI

A NEW HORIZON SPRING 2024



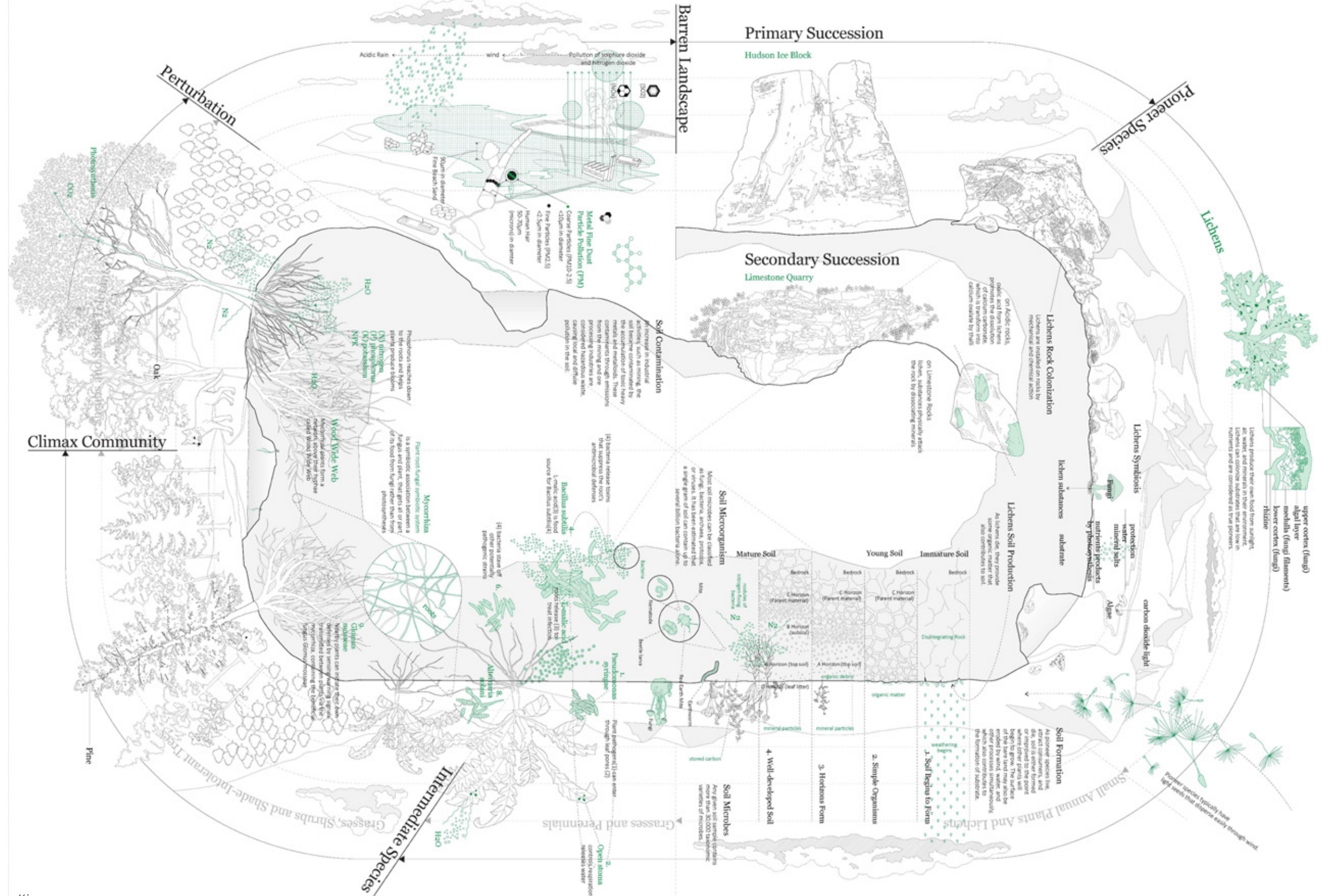
Midterm Thematic Collage by Anna Kim

ADVANCED IV SANCTUARIES STUDIO
Teammate to Midterm - Anna Kim
Spring 2023

IS A A LINE PRODUCTION LINE

This investigation of Sanctuary introduces a new type of campus - and condenses the spatial patterns and objects of 4 "actors" - the local agricultural worker, the Holcim hourly wage laborer, students and researchers at SUNY Albany who will move to a research campus in Ravenna, and the existing members of The Grange.

The project seeks to re-introduce Ravenna Grange as an institutional structure to flatten the landscape of production and knowledge accumulation - eliminating the sense of abstraction that separates consumers of architecture from the environmental damage wrought at the sites of extraction, asking the question; what kind of architecture will be born once its primary purpose is serving communities and not capital accumulation? Implicated in this exploration is also questioning what we as a society choose to value and what we value people for.

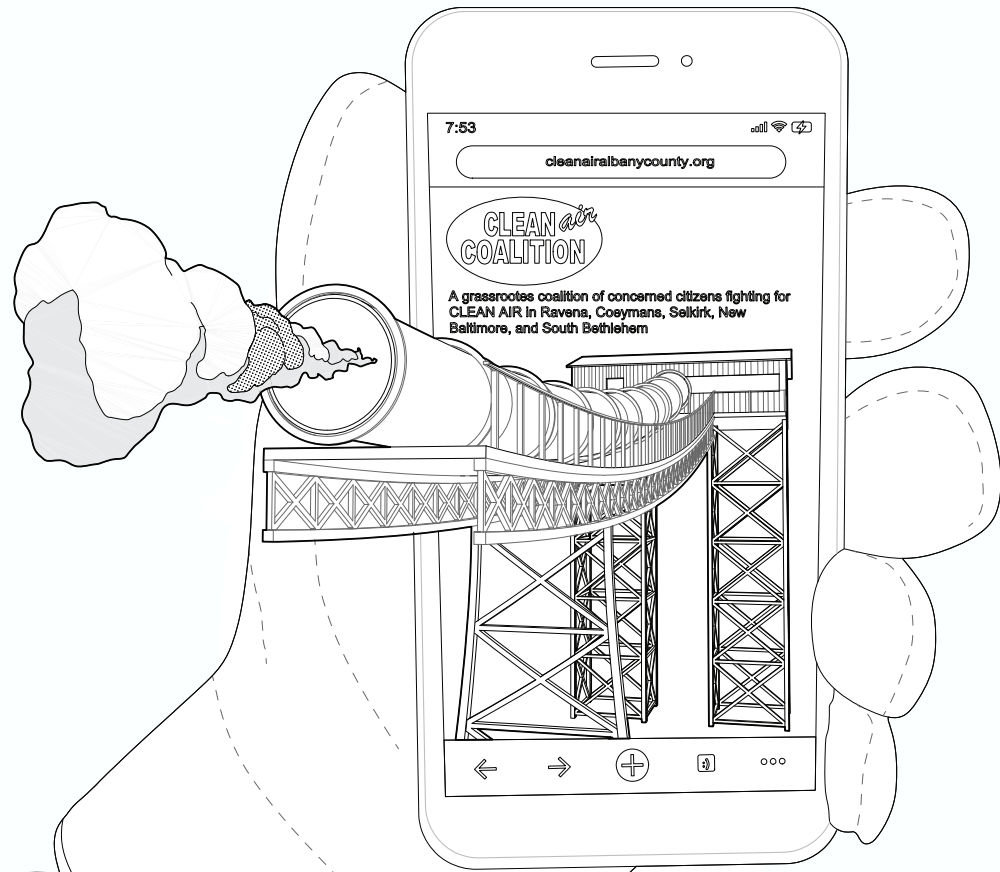


Drawings produced in collaboration with Anna Kim



The collage identifies how the Hudson River Valley became the geologically rich and aesthetically beautiful landscape to be commodified and exploited. The collage depicts the logging industry, ice harvesting, brick making, reservoirs, cement industry, and resort industries. This long-form view connects the vast time scale of our natural resource world and how we assign value to it.

Drawings produced in collaboration with Anna Kim

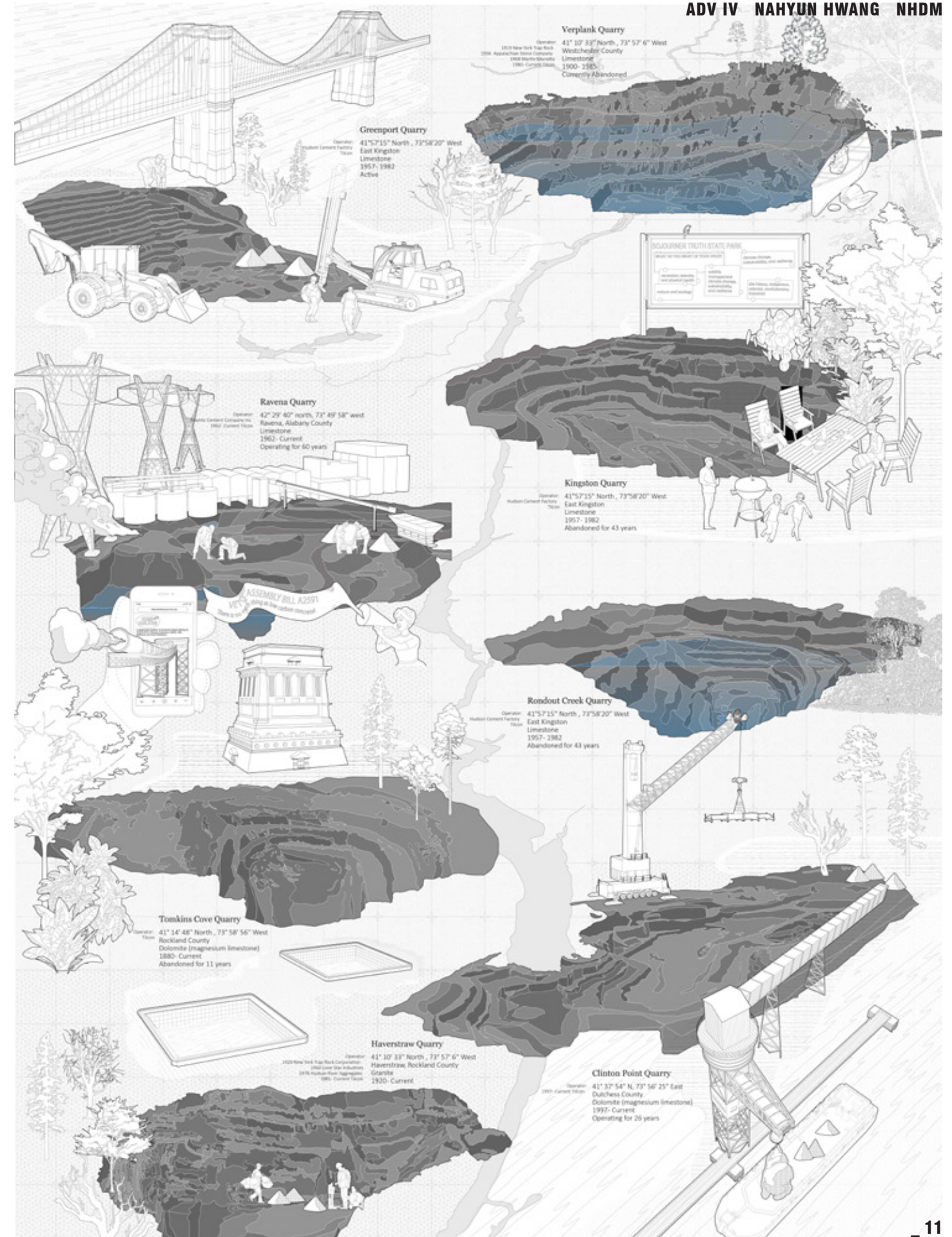


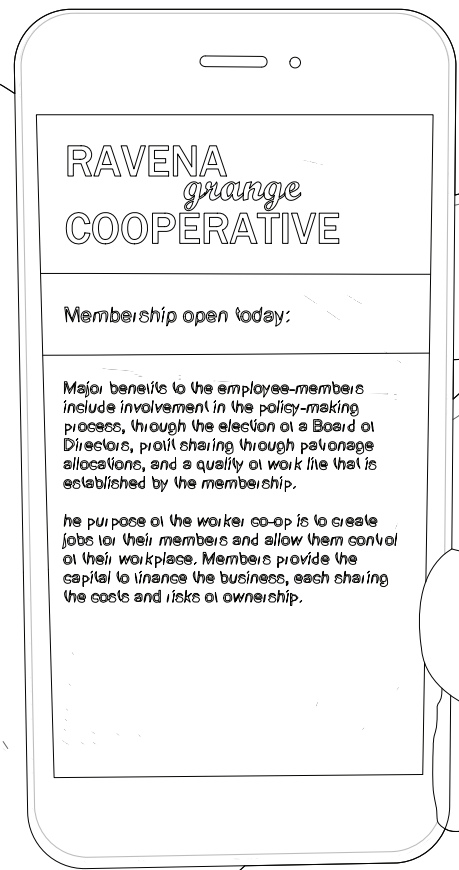
There are at least 15 quarry sites along the Hudson River; on this drawing, we identify 8. We float the quarries as “holes” along the riverfront, exaggerating the reading of a rough, re-shaped earth, representing the process of a continuously fragmented man-made extraction. Over half of the 35 million tons of natural cement produced in the United States at the industry’s height originated with cement rock mined in Hudson Valley. Material excavated in these mines went to NYC to build some of the most famous landmarks, including the Brooklyn Bridge, the pedestal of the Statue of Liberty, the Federal Hall National Memorial, and even to DC to construct the west wing of the United States Capitol building.

The quarries are in different conditions - if abandoned from 10 to 50 years they become rainwater lakes (with perfect pH as a result of acidic rainwater and alkaline limestone) and used for recreation - Sojourner Truth State Park.

There is constant tension with the school and village, evidenced by an ongoing state legislative battle to address pollution and unsafe emissions from the mine and production tower.

In collaboration with Anna Kim





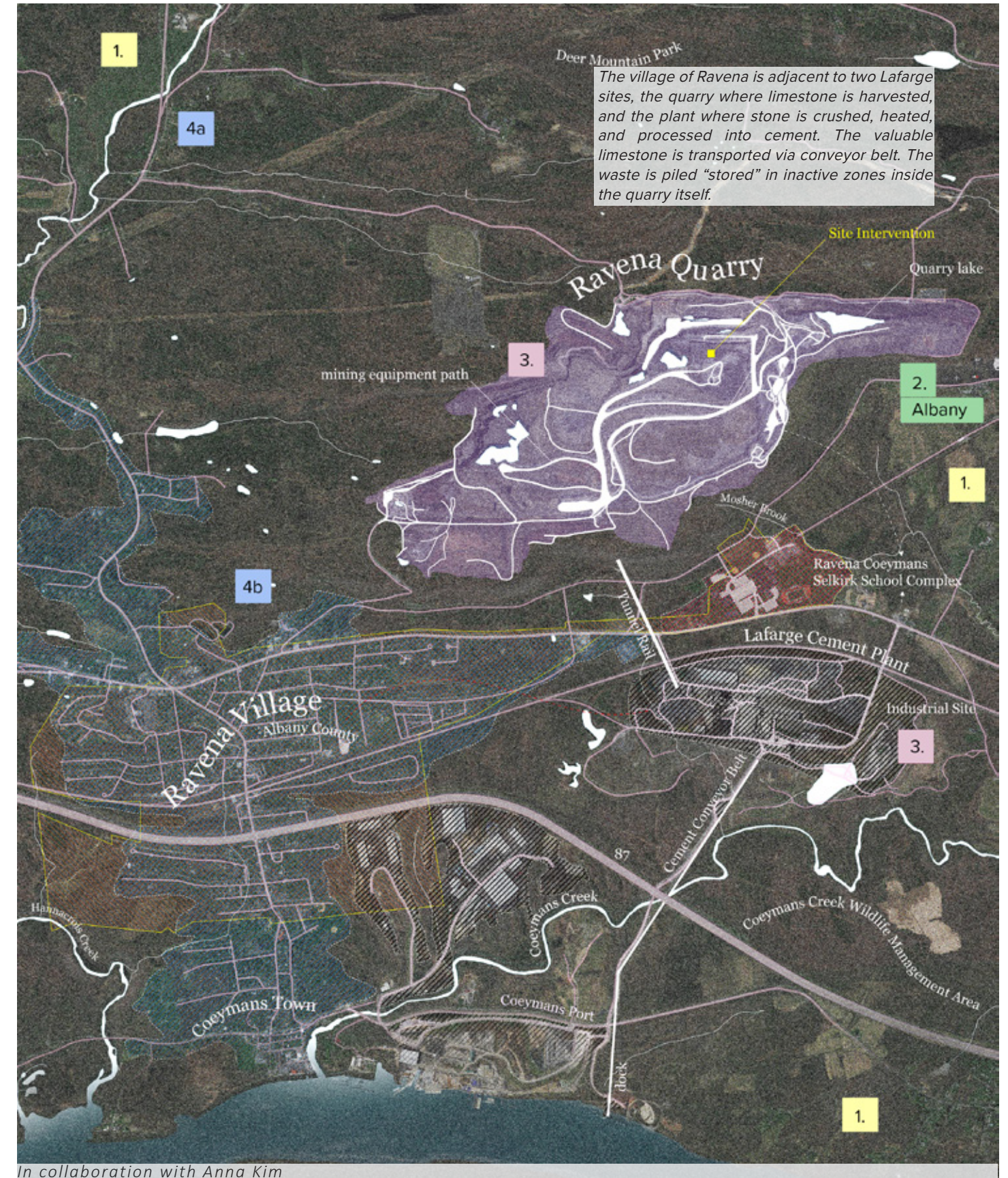
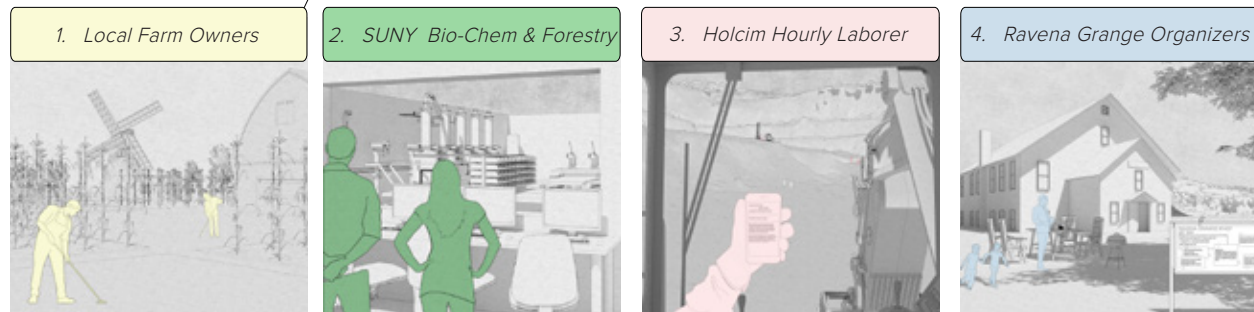
RAVENA
grange
COOPERATIVE

Membership open today:

Major benefits to the employee-members include involvement in the policy-making process, through the election of a Board of Directors, profit sharing through patronage allocations, and a quality of work life that is established by the membership.

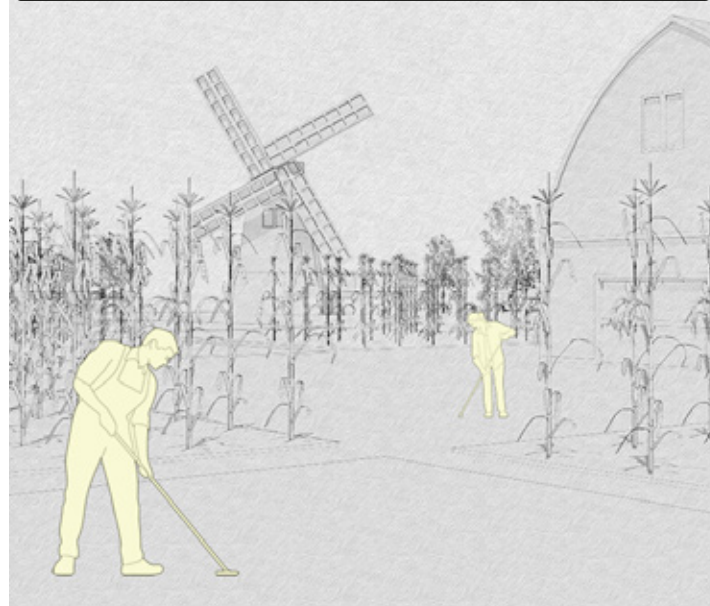
The purpose of the worker co-op is to create jobs for their members and allow them control of their workplaces. Members provide the capital to finance the business, each sharing the costs and risks of ownership.

The four actors are currently sequestered in their isolated industries, but The Grange Cooperative is recruiting! Holcim's Ravena Plant is the Hudson River Valley's last operating cement production facility. This is an opportunity to revive a prestigious and vital industry.

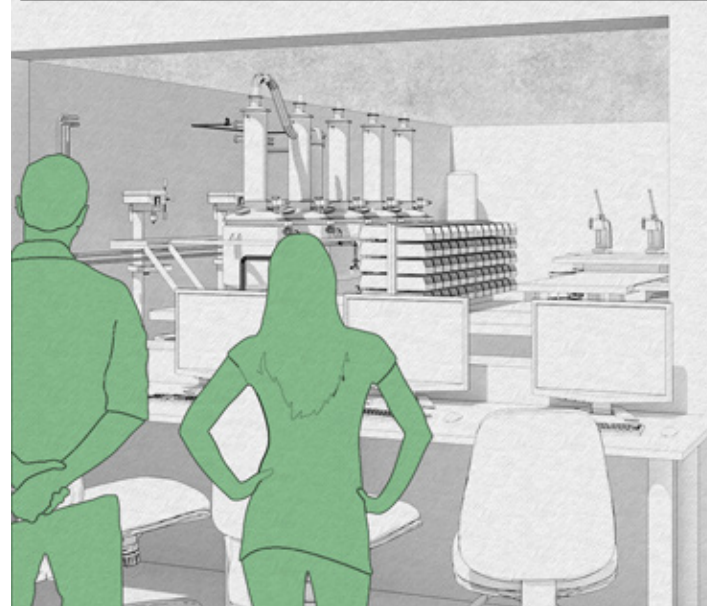


In collaboration with Anna Kim

1. Local Farm Owners



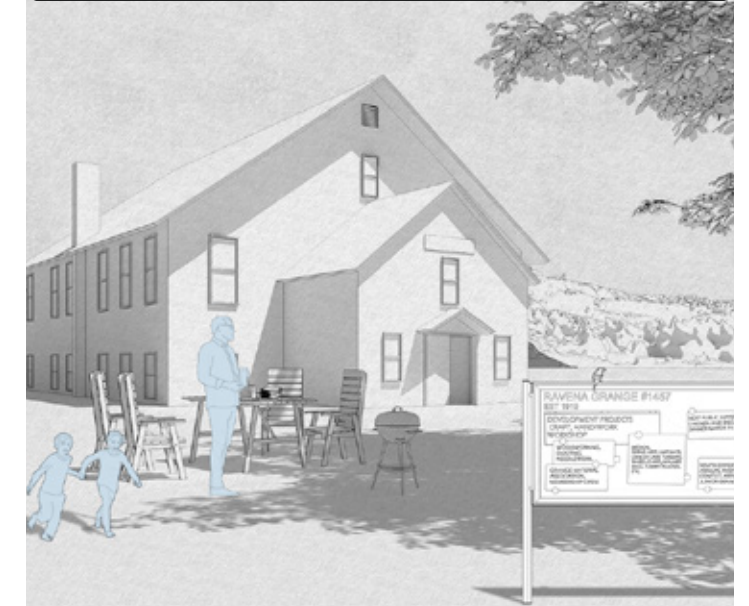
2. SUNY Bio-Chem & Forestry



3. Holcim Hourly Laborer



4. Ravenna Grange Organizers



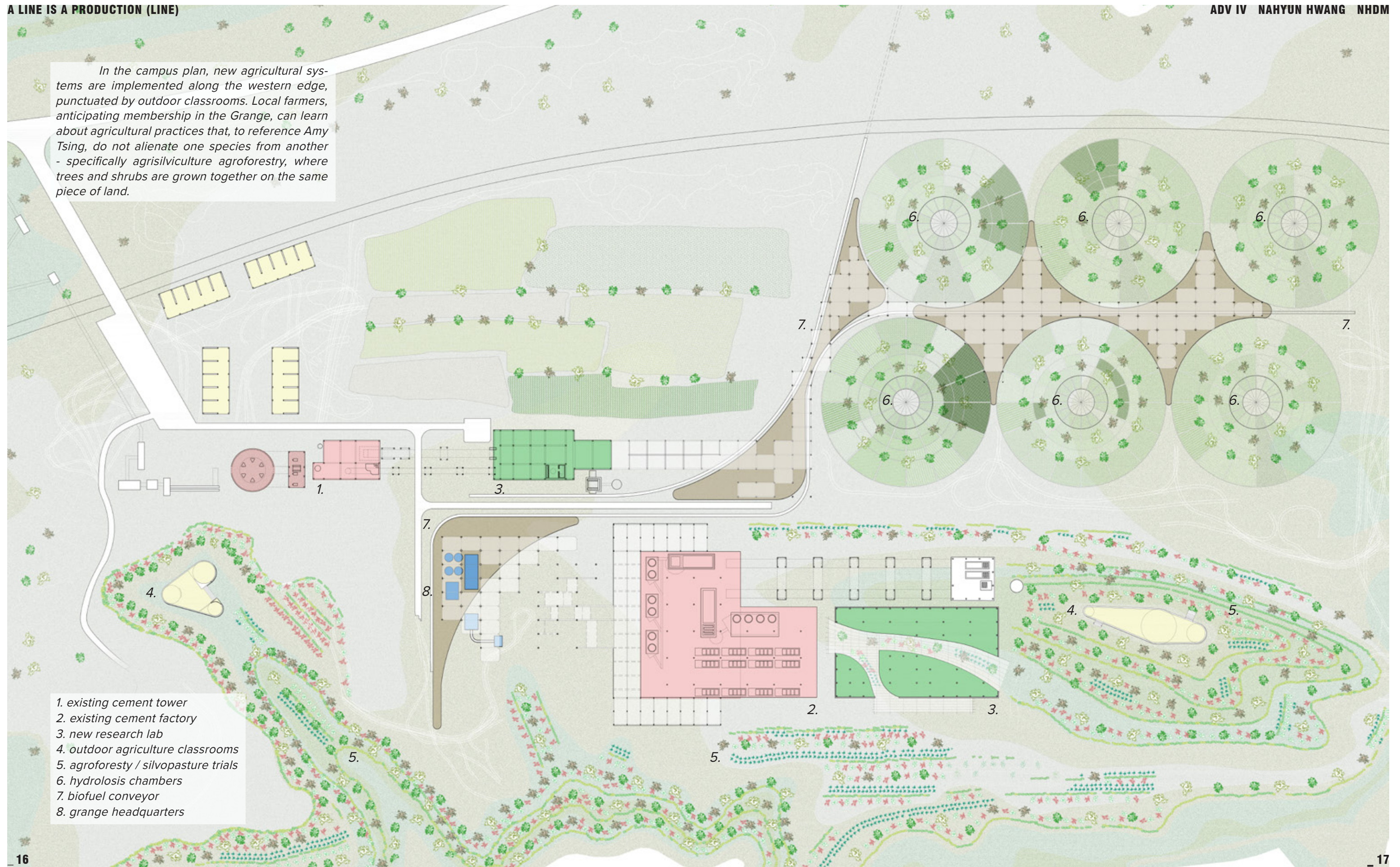
The hudson river valley is known for it's rich black soil, contributing to a booming onion industry. One of our biogenic materials will be created in part from onion skin waste that has been processed via organic hydrolysis.

SUNY Albany reserchers will open a satellite lab on the site of the sanctuary, enabling close collaboration to grow and process new organic material for building products.

Eighty percent of Holcim's workforce is already hourly. Flattening the landscape of labor and production in a new material industry will allow Holcim workers to acquire practical training for a new industry.

The Ravenna Grange will host and coordinate farmers, transitioning Holcim laborers, and Ravenna residents to introduce sustainable farming practices, and training for new biogenic materials.

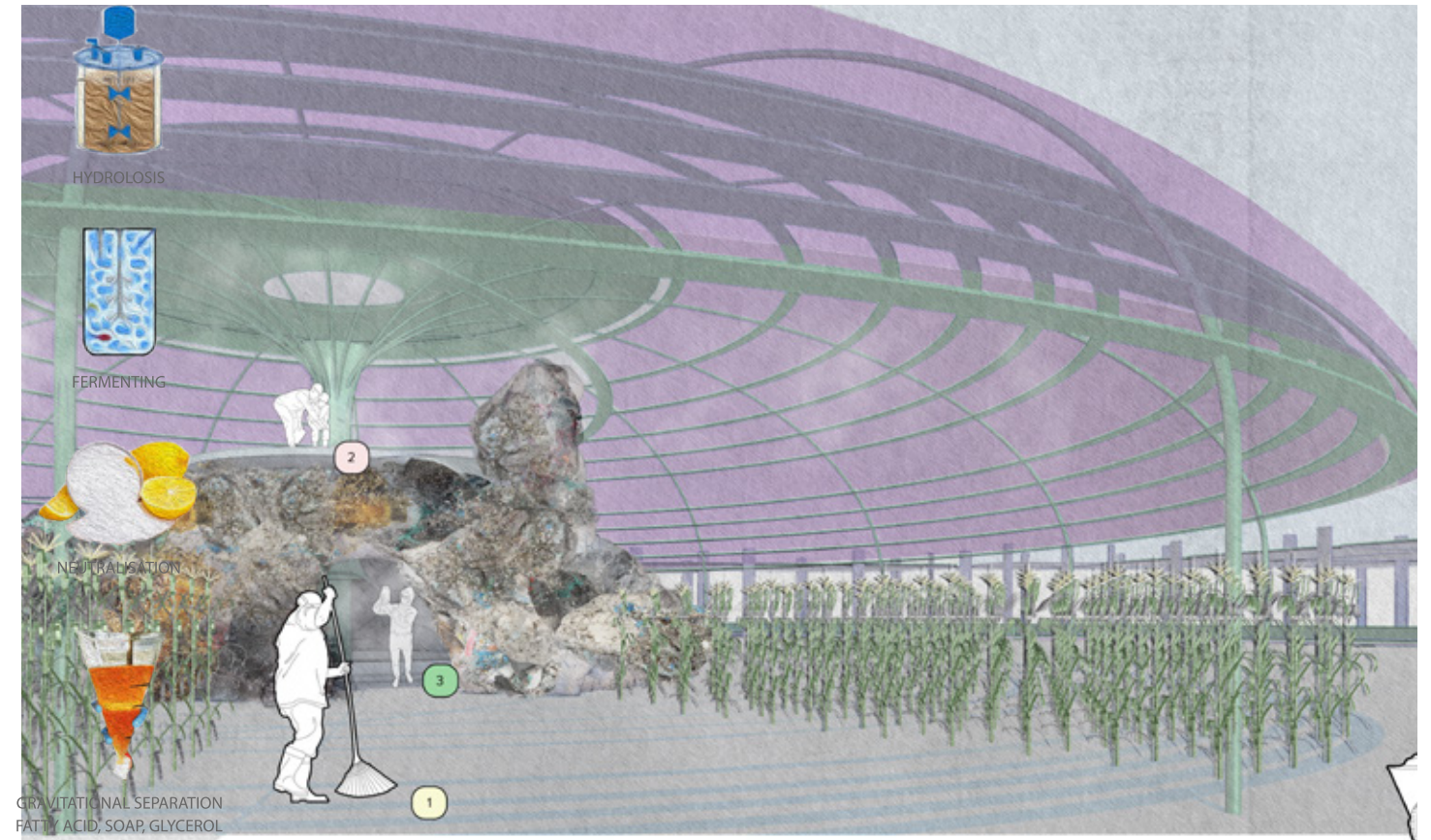
In the campus plan, new agricultural systems are implemented along the western edge, punctuated by outdoor classrooms. Local farmers, anticipating membership in the Grange, can learn about agricultural practices that, to reference Amy Tsing, do not alienate one species from another - specifically agrisilviculture agroforestry, where trees and shrubs are grown together on the same piece of land.



- 1. existing cement tower
- 2. existing cement factory
- 3. new research lab
- 4. outdoor agriculture classrooms
- 5. agroforestry / silvopasture trials
- 6. hydrolysis chambers
- 7. biofuel conveyor
- 8. grange headquarters



The site plan combines the four actor's programs by appropriating the existing cementer tower and production facility, allowing SUNY scientists, with the help of local agricultural leaders to adapt the existing processes and develop new glycerin-based bio-materials that accumulate iron oxide, kspars, quartz, and feldspar



GRAVITATIONAL SEPARATION
FATTY ACID, SOAP, GLYCEROL



EVAPORATION
METHANOL + WATER

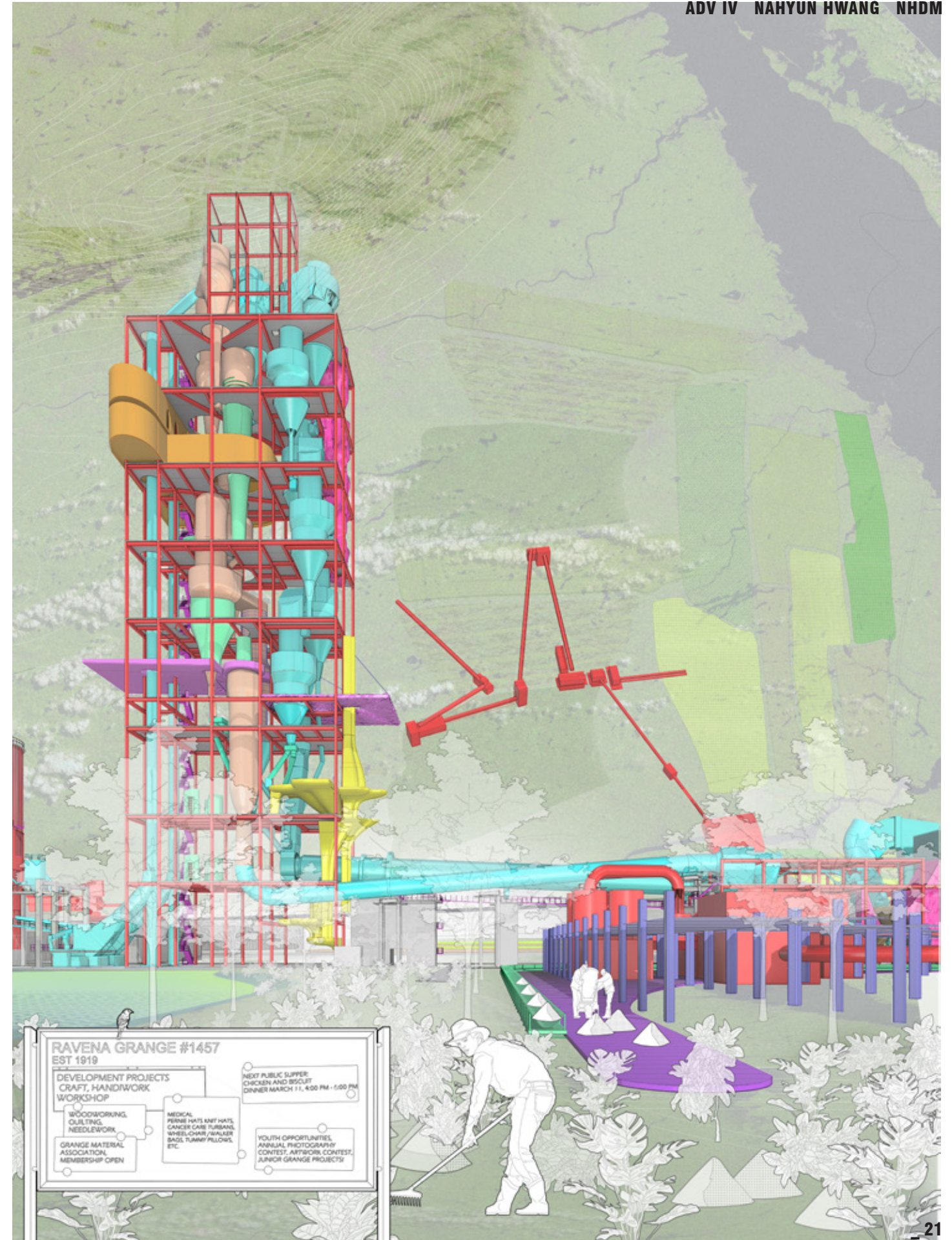
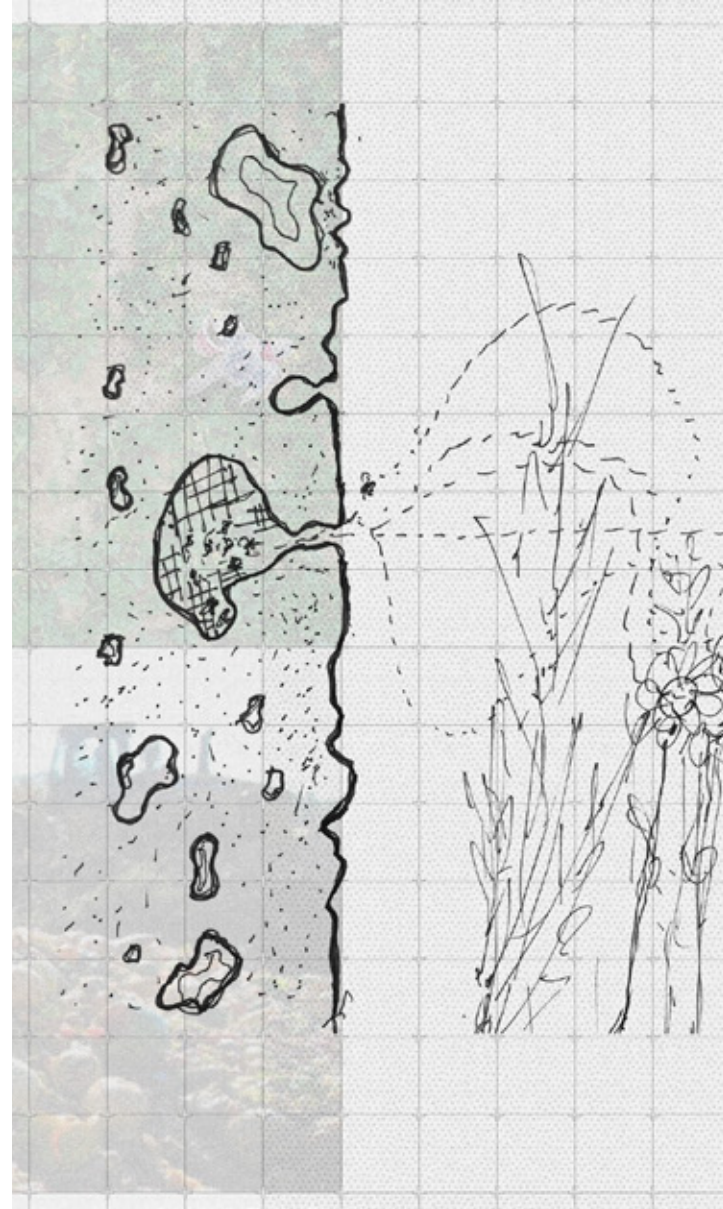
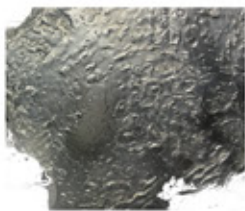


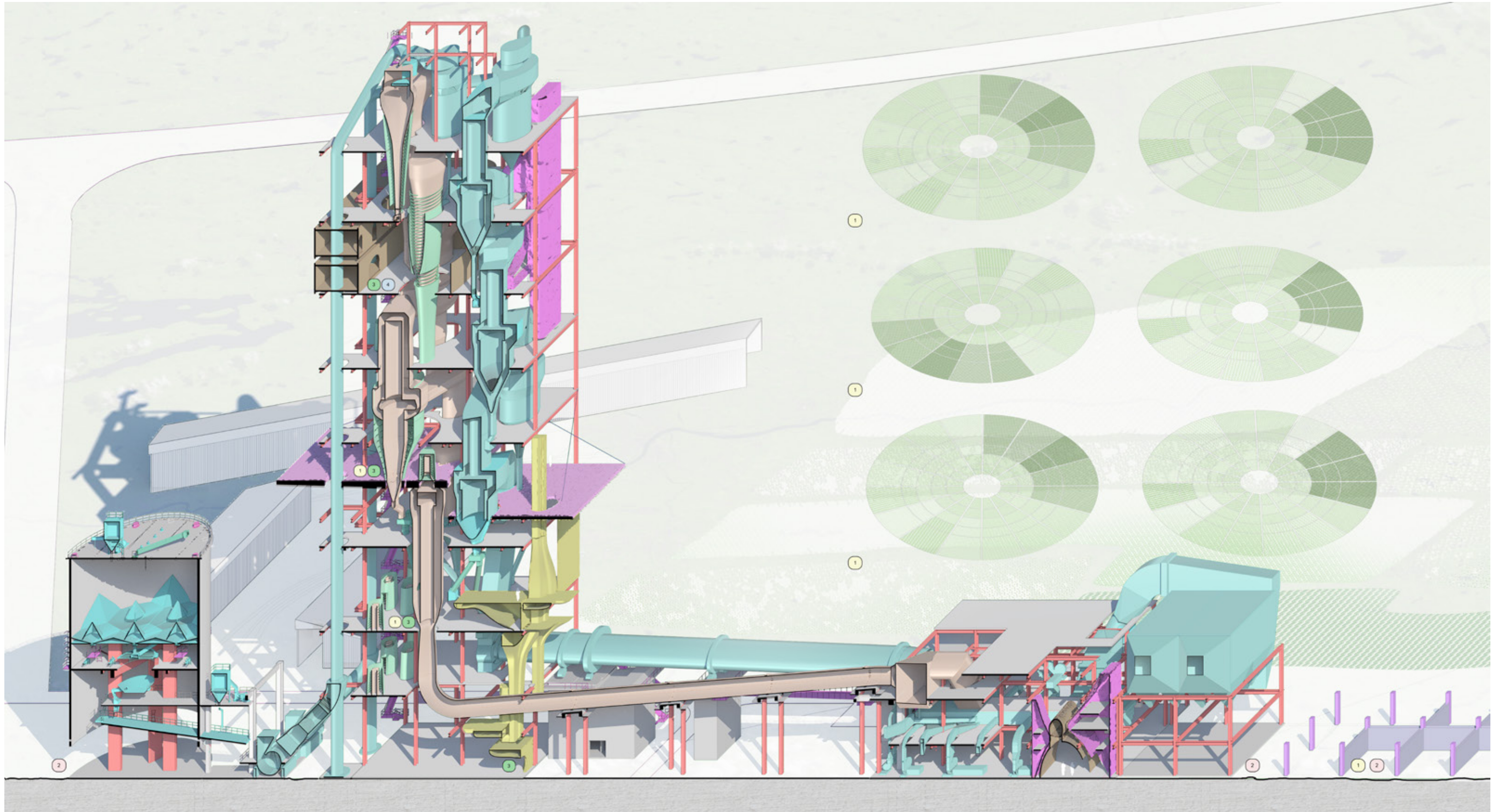
ISOPROPONAL WASH

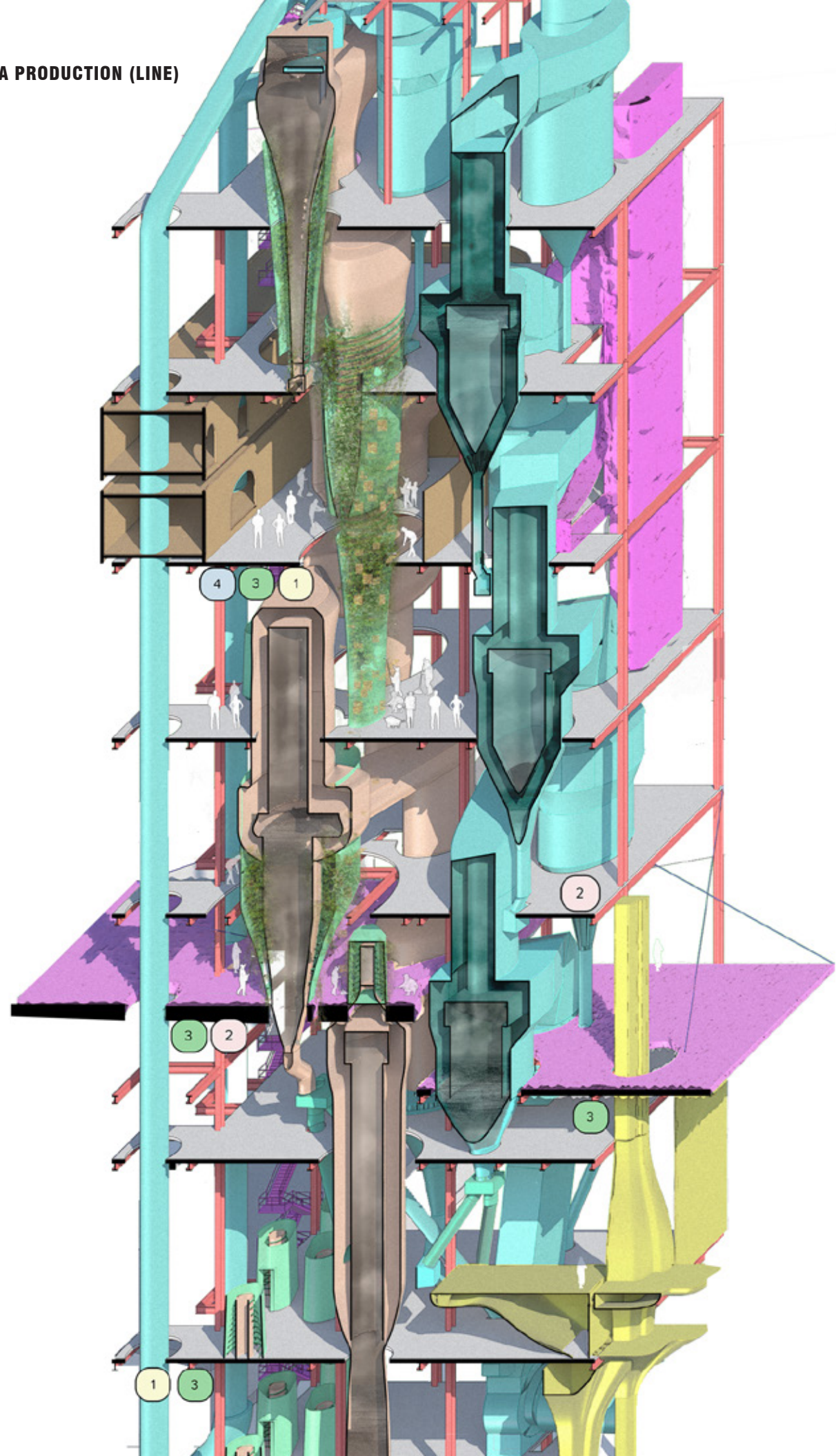


PURIFIED GLYCEROL

Eventually, new material production and the relationship between agriculture and synthesizing new materials could create alternative spatial practices, where waste material accumulation from existing and future mine operations - point to tailing - can become a plastiglomerate-esque enclosure for the distillation of base materials, in this case, glycerol.

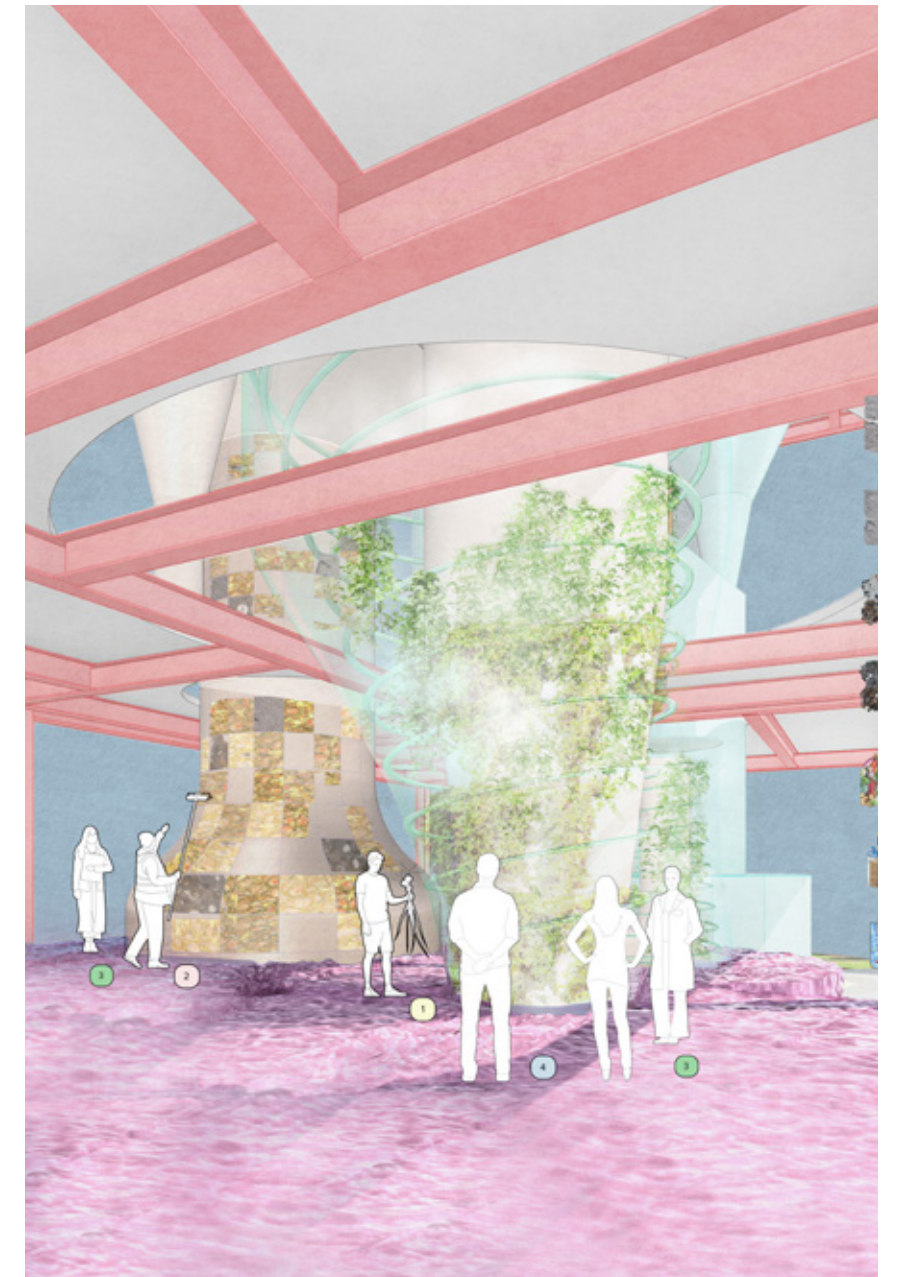






In the tower, a monument to production, we can see that waste streams from the return side of the cement production process are captured for new material research, diagrammed here, and shown in this perspective.

The tower hosts research labs, grange classrooms, and will continue to produce cement during a transition period. Waste heat is used as an incubator for organic material to reinvent new biogenic materials for building construction.

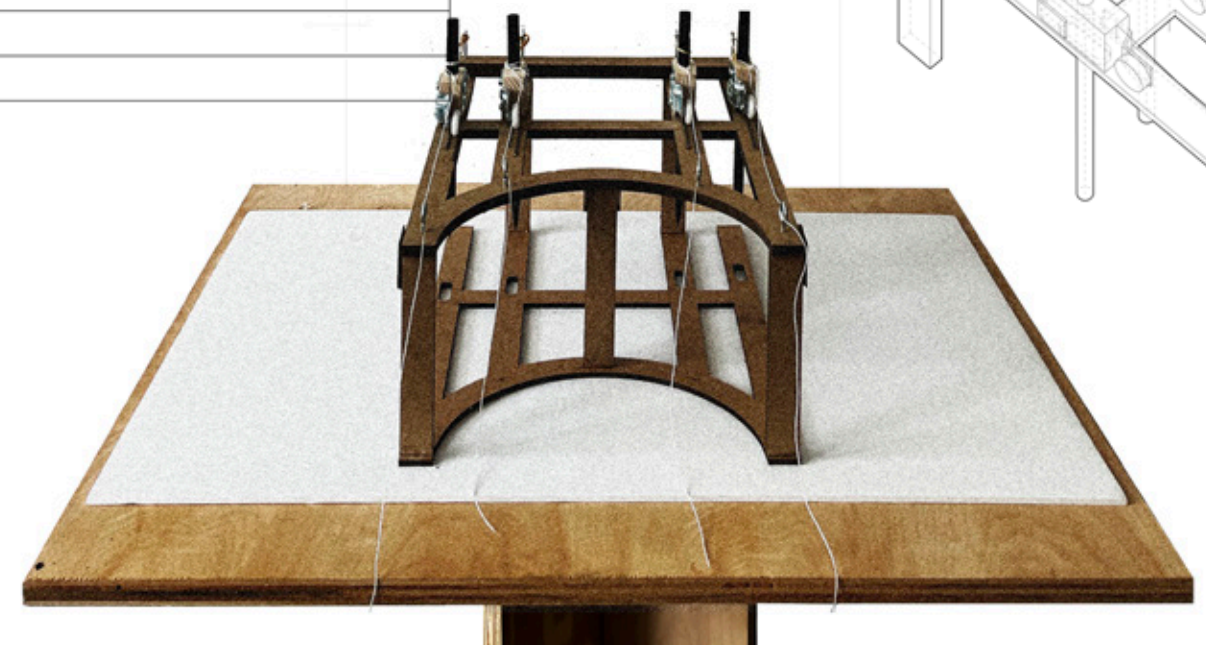
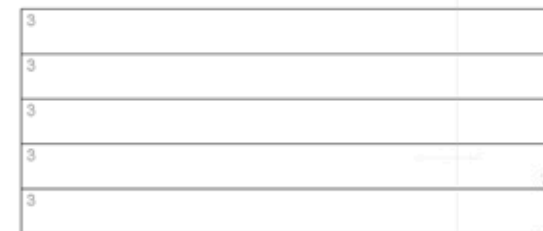
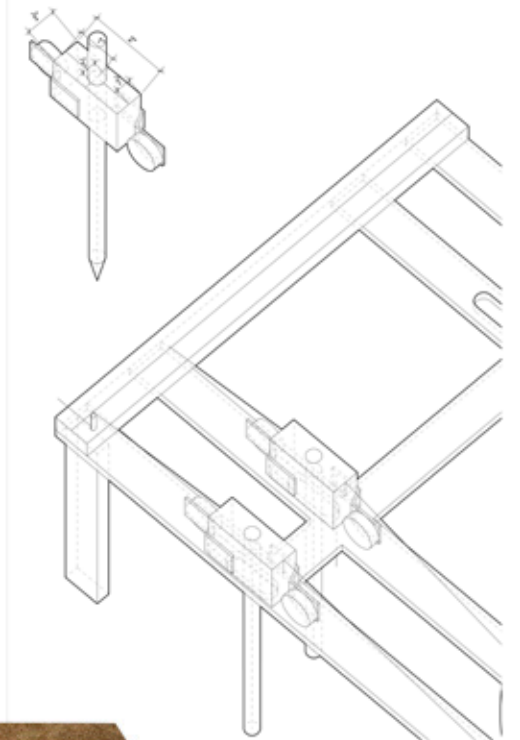
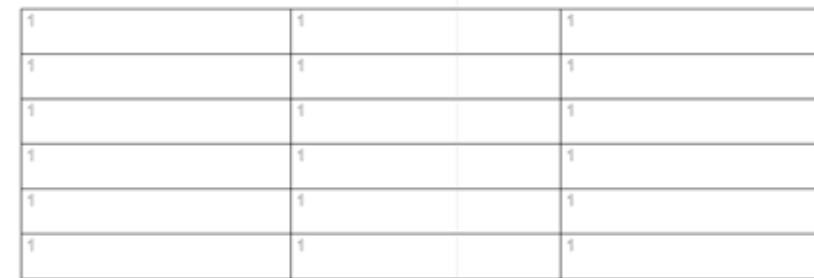
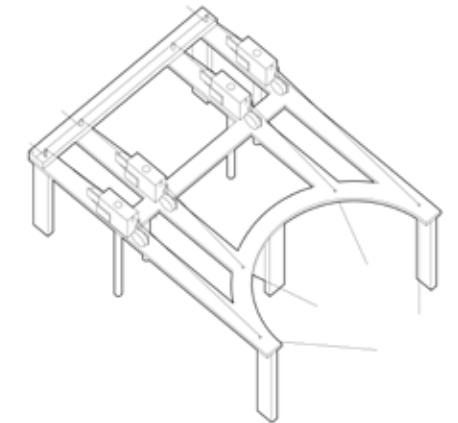
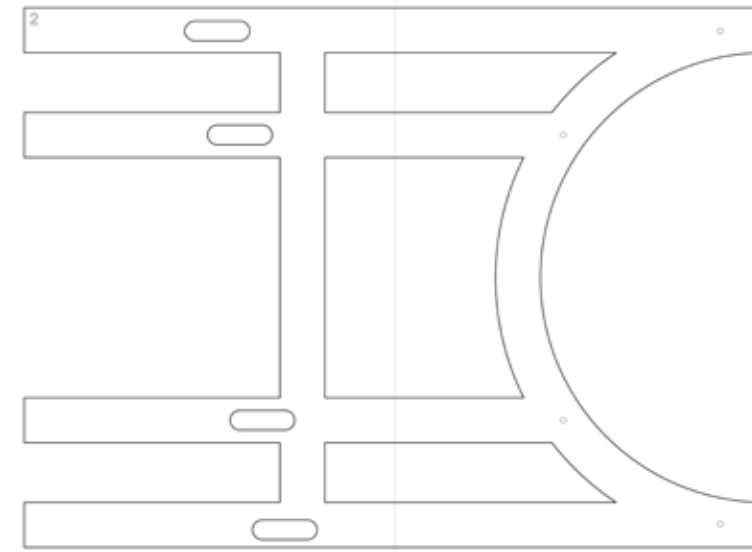


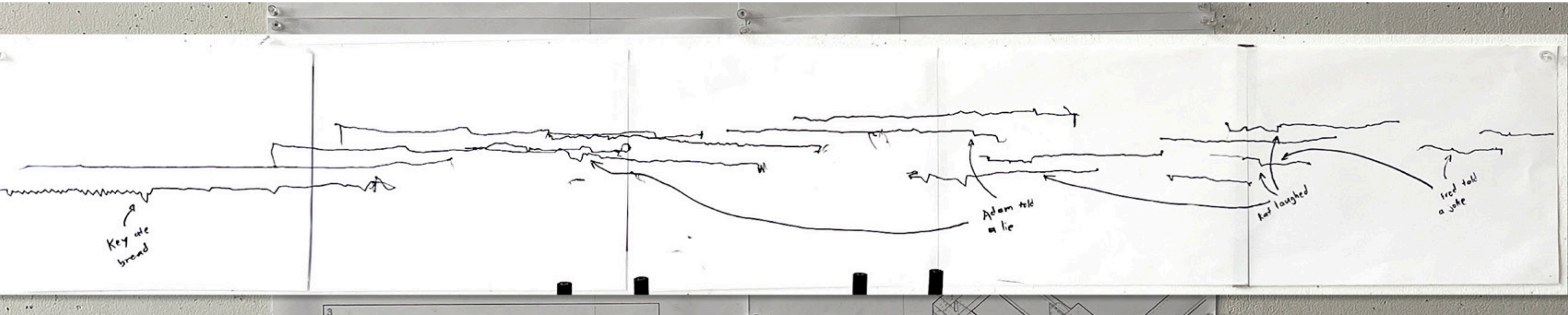
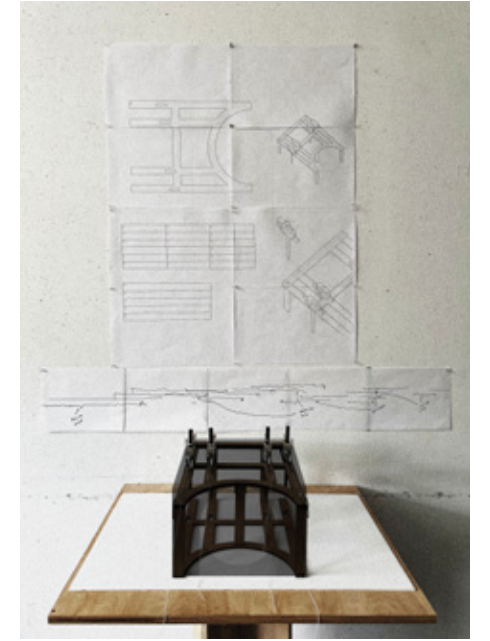
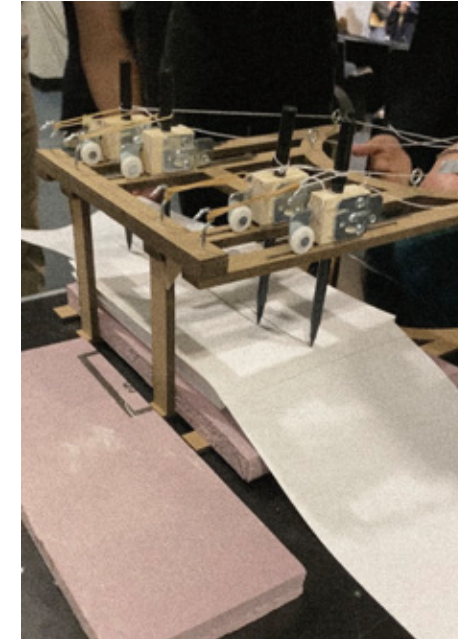
A LINE IS A REGISTER OF JOY

ARCHITECTURAL DRAWING + REPRESENTATION
 Teammate: The Brilliant Duncan Tomlin
 SPRING 2022

Instead of distilling data to isolate individual identity in a digital world, we wanted to abstract an individual's emotional agency as it relates to their identity, creating a profile of emotion; and in this case, joy(!), or celebration and social connection. In contrast to typical facial recognition software, measuring deviation from a baseline and not recording an individual's "baseline" facial structure generates emotional profiles that disallows the dangerous accumulation of data that could be used to violate civil liberties.

Tools and machines have always been a form of prosthetic, an extension of the human capacity for "productivity" and communication - verbally, graphically, and emotionally. In our interpretation of the "black box" our drawing machine translates space and experience through time; documenting an emotional experience, a "vibration", through its many intermedialities. We also sought a drawing machine that would bring us together as peers and contribute to collective joy.







CORE III Housing
Teammate to Midterm: Will Cao
Fall 2023

A LINE IS A PARTY WALL

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Architectural Technology IV

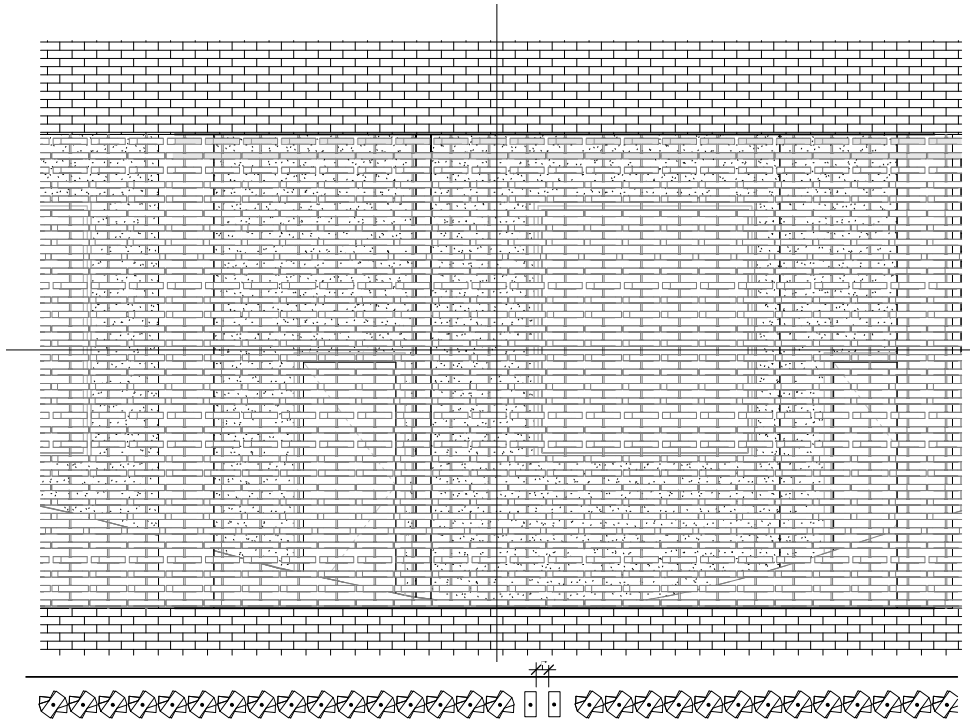
Teammates: Will Cao, Key Aiken, Olivia Braun, Genevieve Jones, Mariam Jacob

Fall 2023

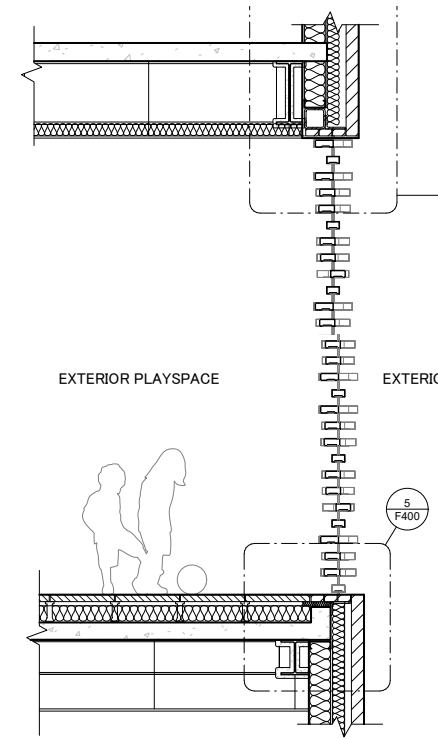
A LINE IS A CONVENTION

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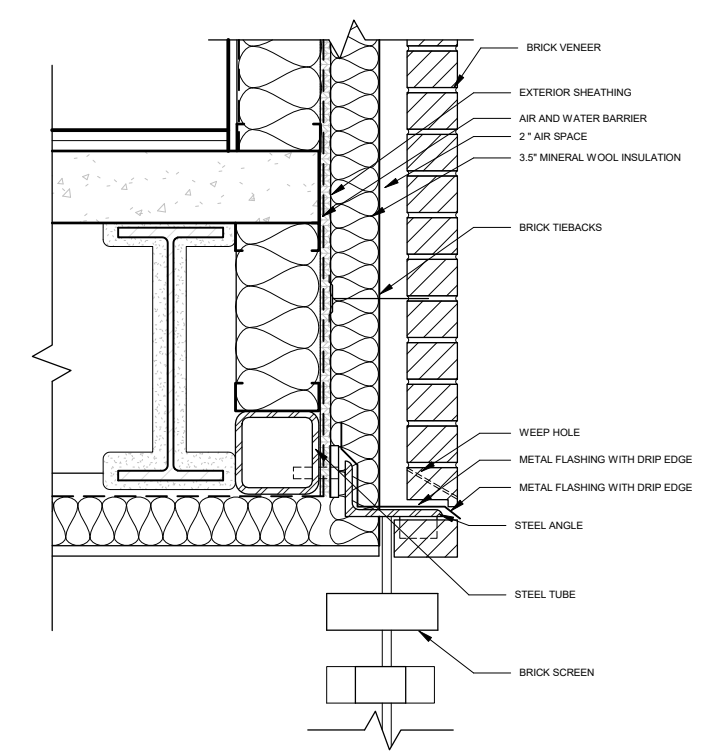
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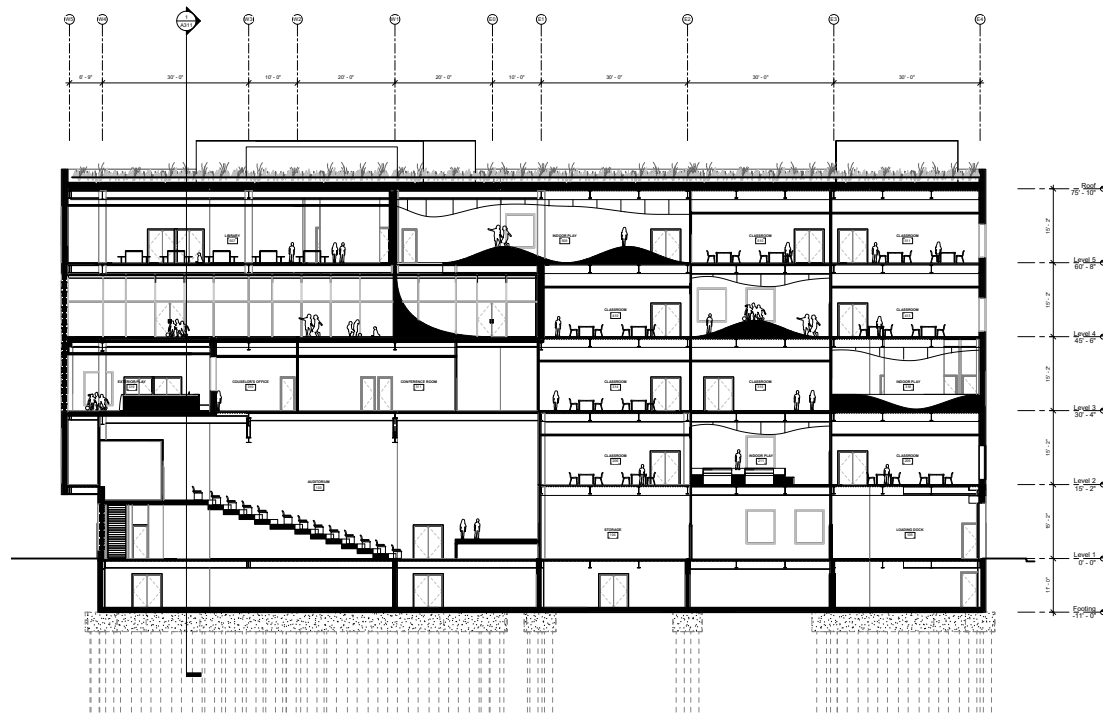
1 - BRICK SCREEN PLAN & ELEVATION



2 - BRICK SCREEN SECTION



4 - SLAB EDGE DETAIL - BRICK SCREEN HEADER



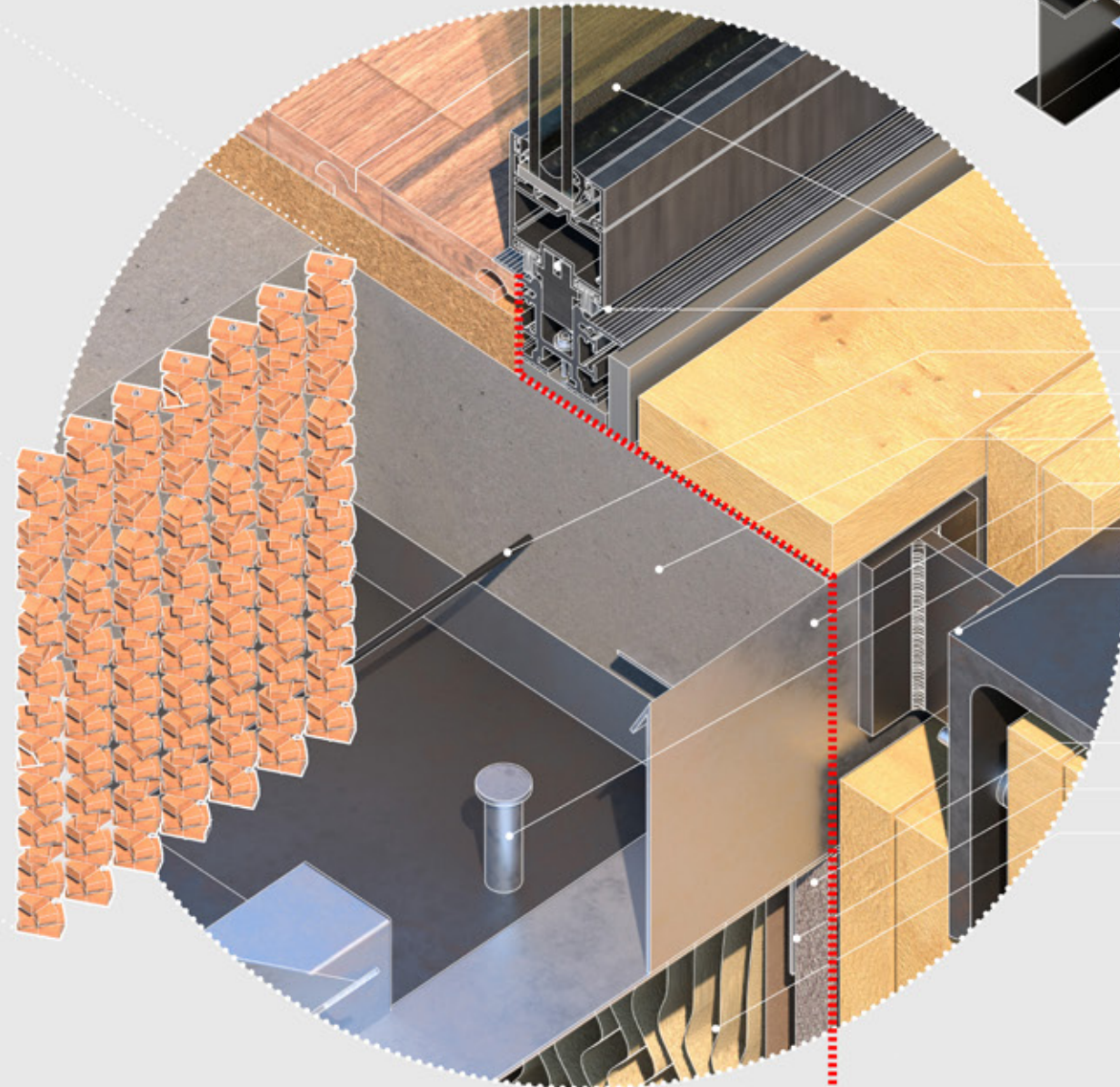
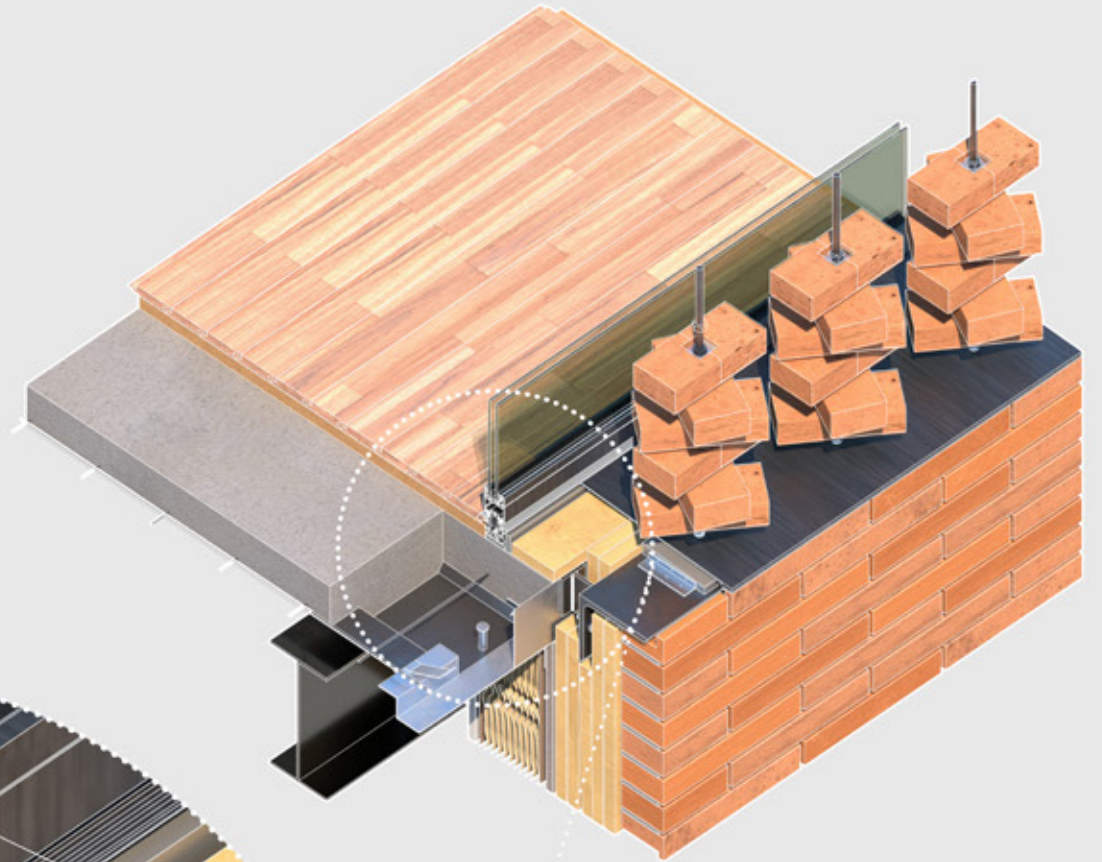
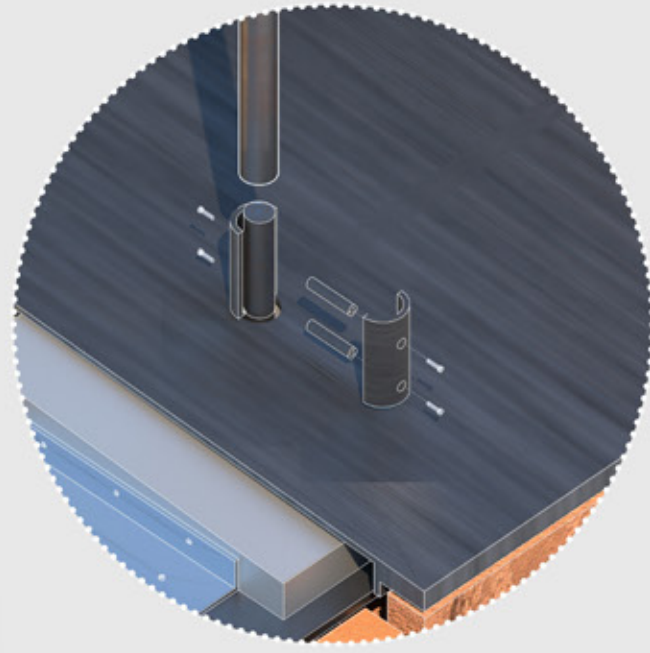
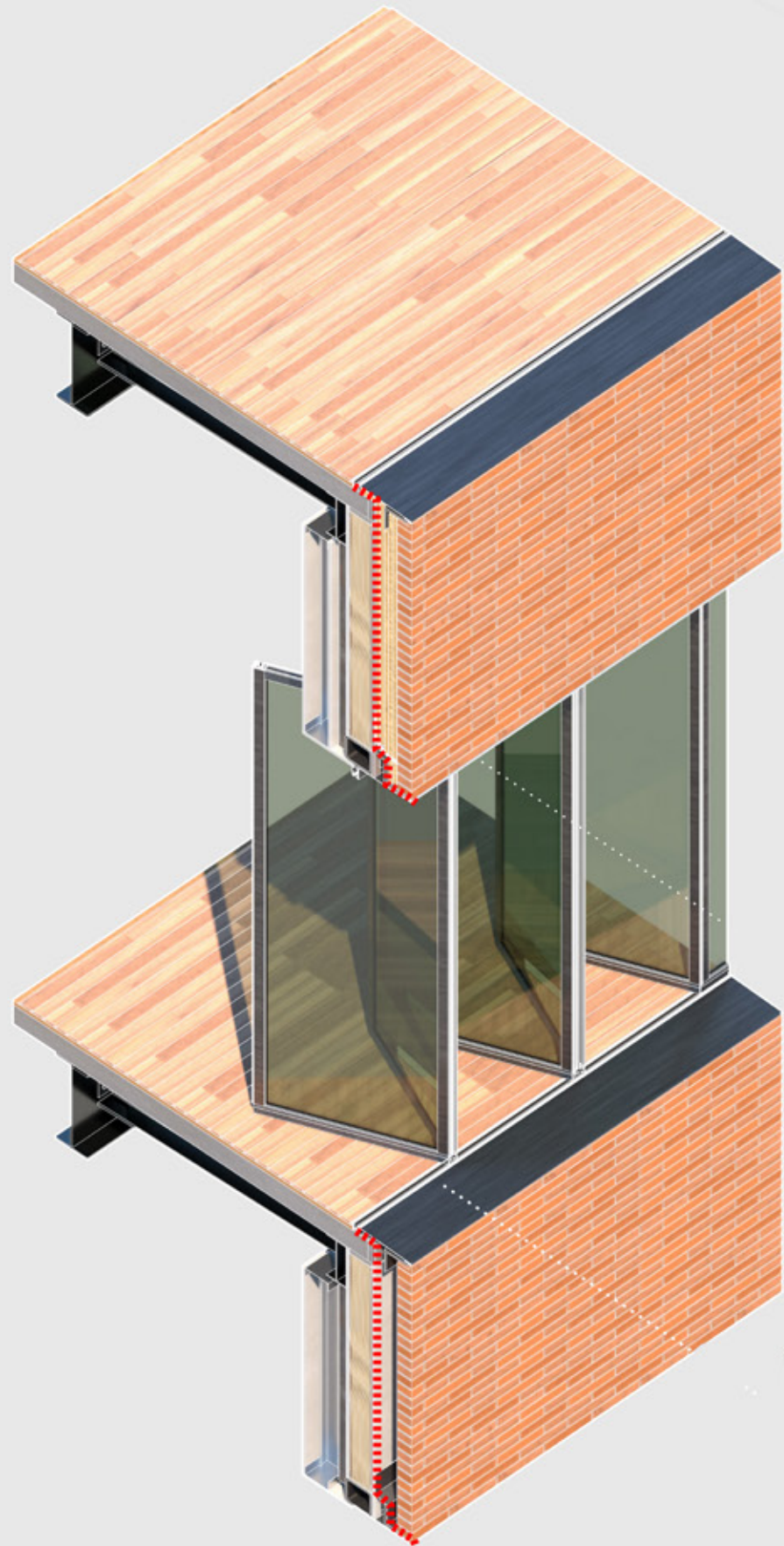
2 - BUILDING SECTION 2-2



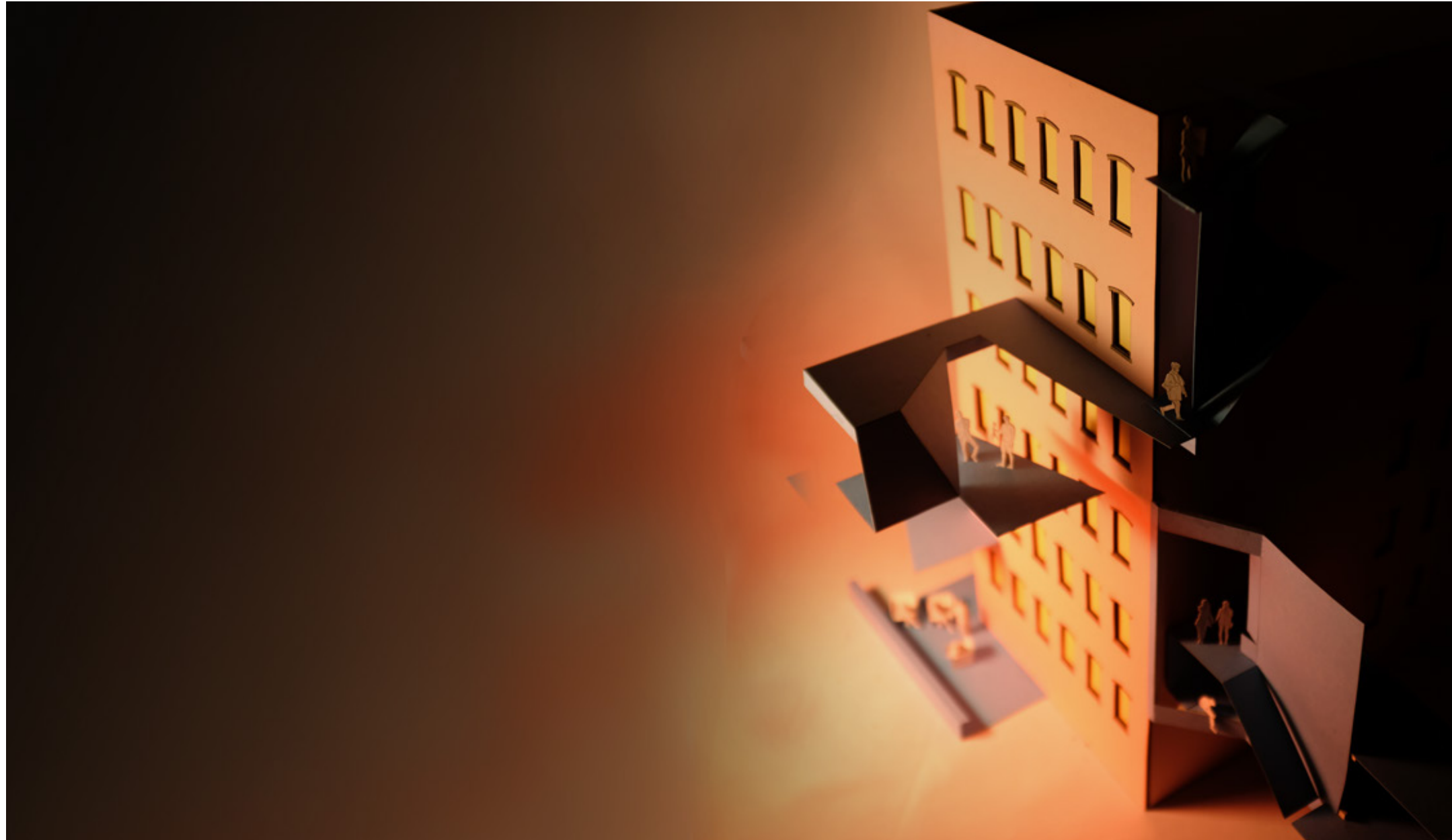
TYPICAL CLASSROOM INDOOR / OUTDOOR EXTENSION



SECTION PERSPECTIVE - INDOOR/OUTDOOR PLAY ZONE



- LOW - E GLAZING
- NANAWALL TRACK + MULLION
- SLAB REINFORCEMENT
- CONTINUOUS MINERAL WOOL
- CONCRETE SLAB
- POUR STOP
- SHEAR KEY
- OFFSET BRICK SHELF ANGLE
- CEMENT BOARD SHEATHING
- AL. STUD FRAMING
- BATT INSULATION



Core I STUDIO - STORIES ON BROADWAY
Fall 2021

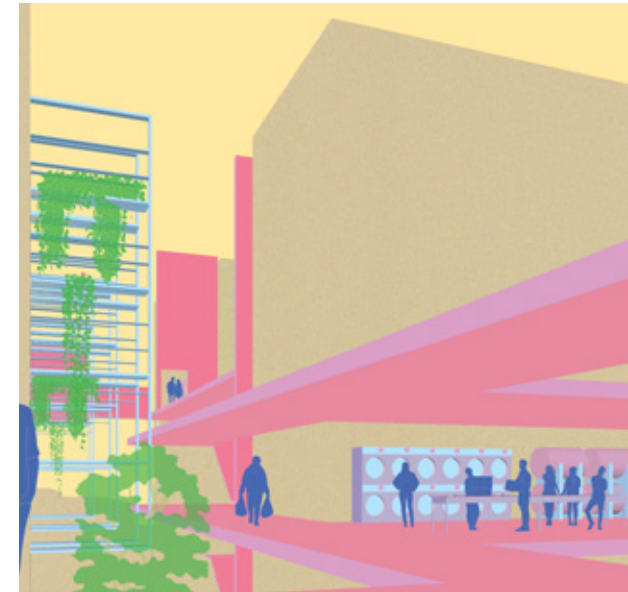
A LINE IS A CONNECTION

The “block as life raft” seeks to augment the atomized, outdated 19th—and 20th-century fabric of New York with resilient, shared, social infrastructure. This would allow for systems of mutual aid and shared space as we move forward into a future where adaptability and big “extended family” can provide support networks.

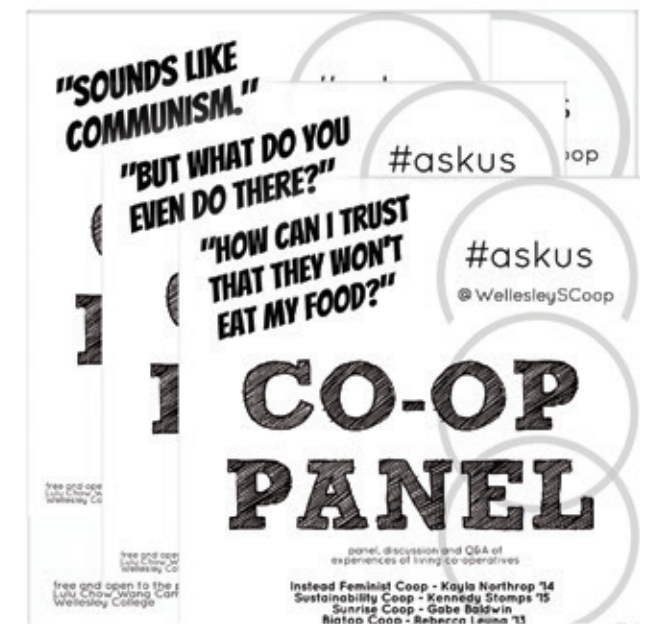
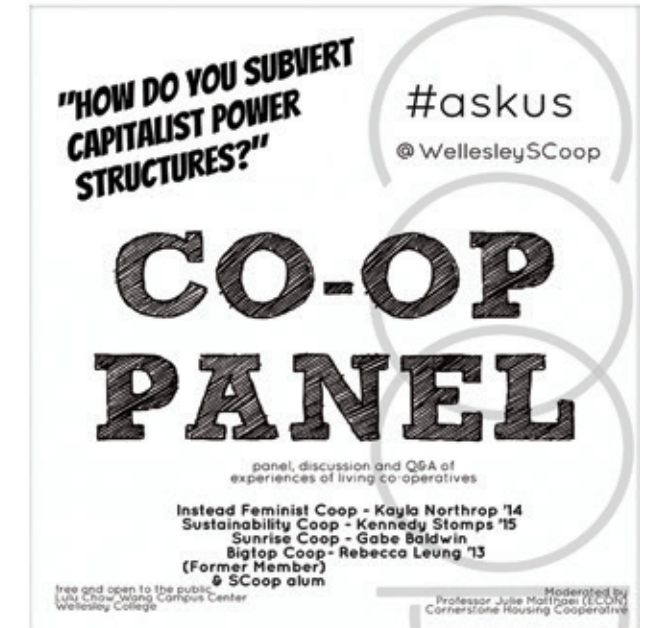
Derived from a conceptual liner that “coats” the interstitial block interiors, the architecture seeks to act as a vessel for the society within; to invoke Ursula LeGiun’s optimistic take on human history, a carrier bag to bring “energy” back to the community. The architecture will take advantage of time cycles and shared programming, energy harvesting, recycling, and storage. The architecture will make public the private interior space to live with grace as we approach an uncertain future with mounting social and environmental pressures.

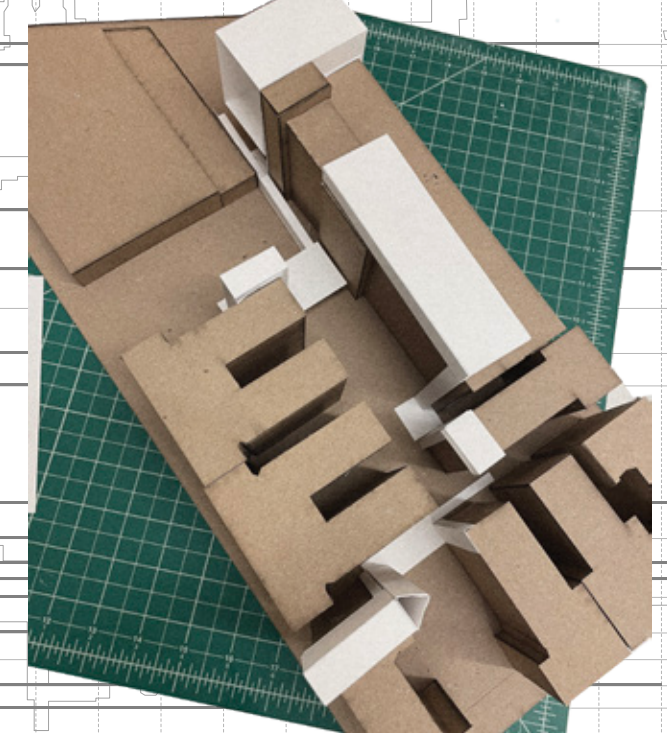
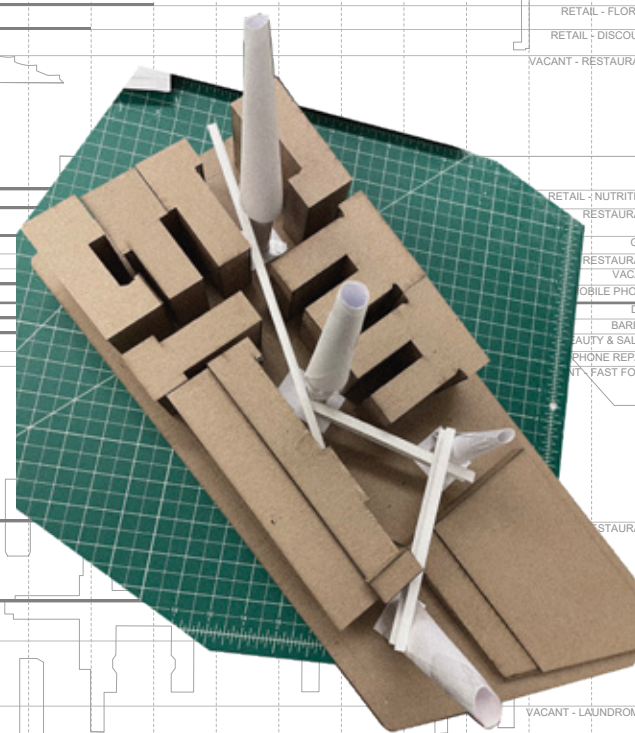
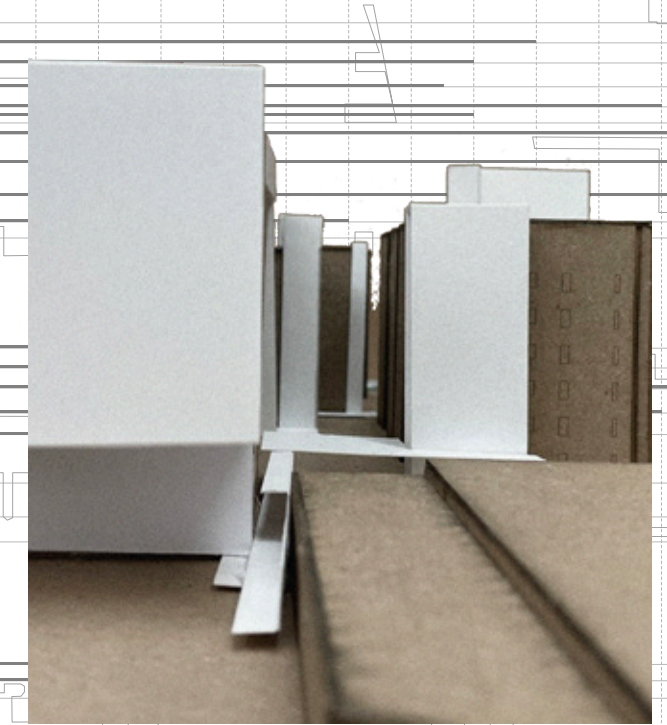
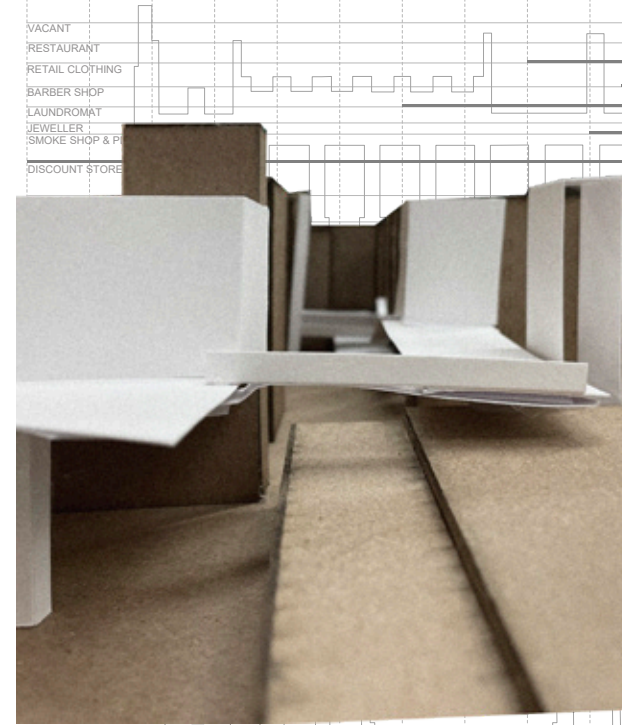
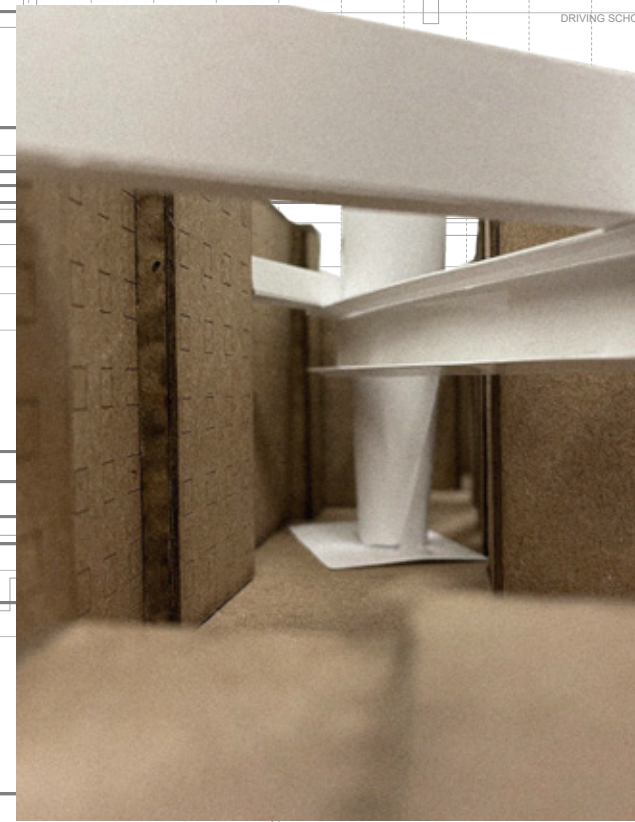


Antiprecedent: A private generator operated by JP Morgan keeps lights on for Battery Park City in the aftermath of Hurricane Sandy. The rest of Lower Manhattan sits in darkness. How can intrablock communities build resilient "energy" systems?



Future public health and environmental crises are inevitable, but a social crisis has been continuously exploited by an increasingly acerbic, unsustainable, and undemocratic political realm. The result is a weakening of the collective and the individual citizen's ability to exercise their right to a representative government. We are interested in the social structures and conditions supporting healthy social relationships – education, apprenticeships, housing and shelter, worship, and congregation. Allowing the architecture to promote an "extended family" to build community and an understanding of others' identifying characteristics.

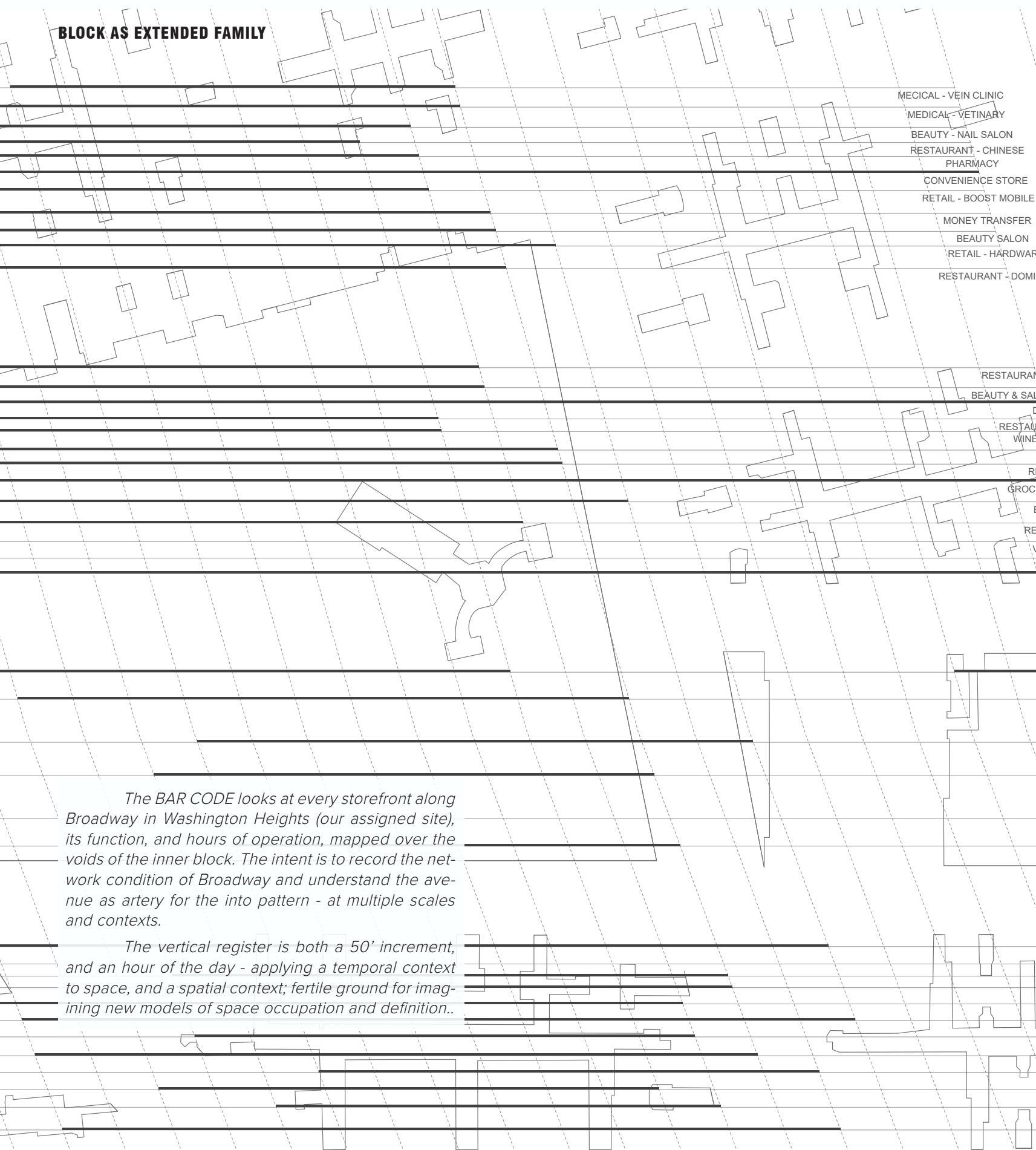




Vessel Finding!

Acknowledging the history of light and air legislation in New York City as documented by Richard Plunz - from the Old Knickerbocker Dwelling, tenement housing, rear tenement caves, packing box tenement for renting, first introduction of light and air shafts, double decker tenements, and finally the Tenement House Exhibition prize winner in 1900 - is critical.

What is the orientation, organization, and opportunity of the liner to improve connection but not further diminish critical access to light and air?

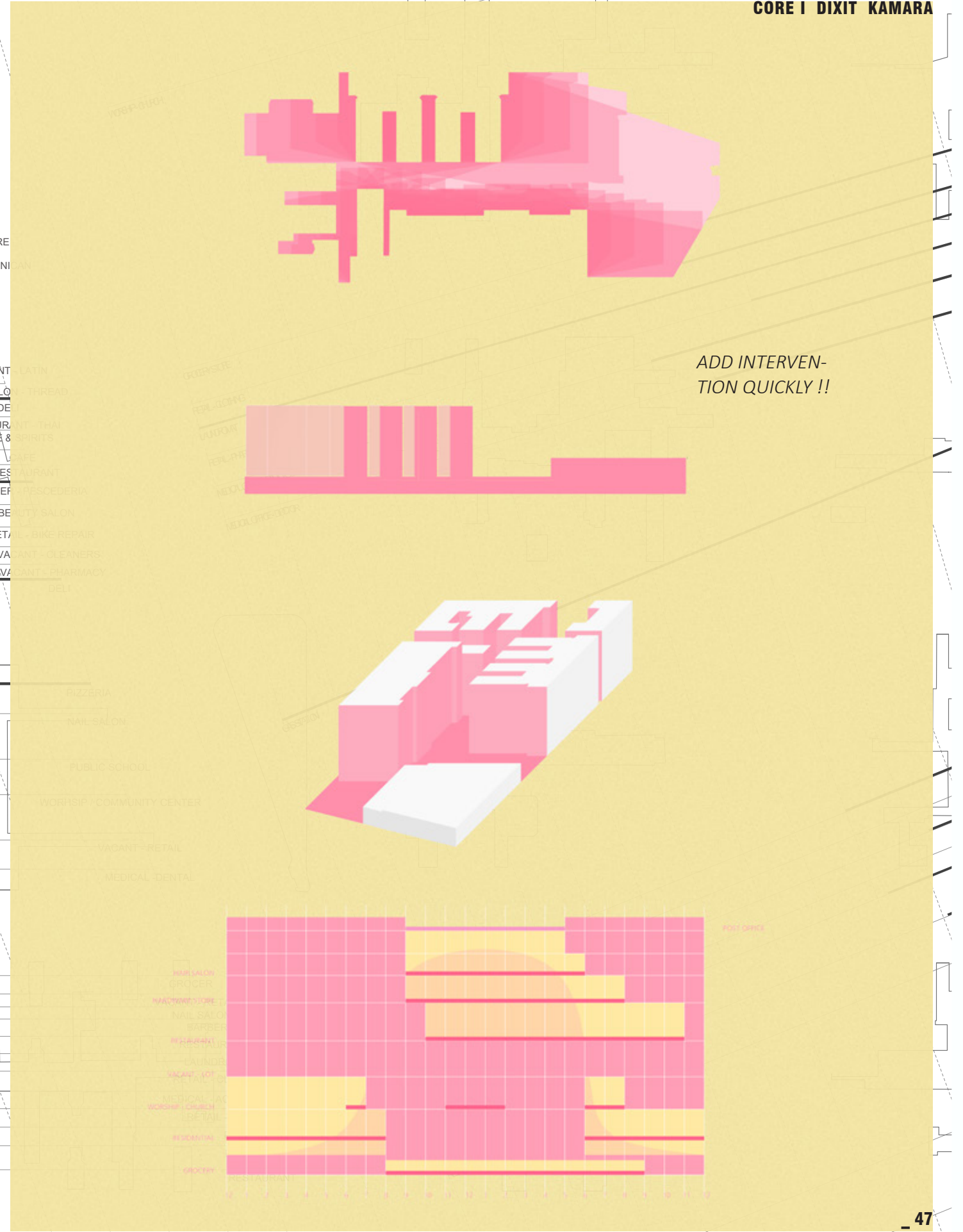


- MEICAL - VEIN CLINIC
- MEDICAL - VETINARY
- BEAUTY - NAIL SALON
- RESTAURANT - CHINESE
- PHARMACY
- CONVENIENCE STORE
- RETAIL - BOOST MOBILE
- MONEY TRANSFER
- BEAUTY SALON
- RETAIL - HARDWARE
- RESTAURANT - DOMINI

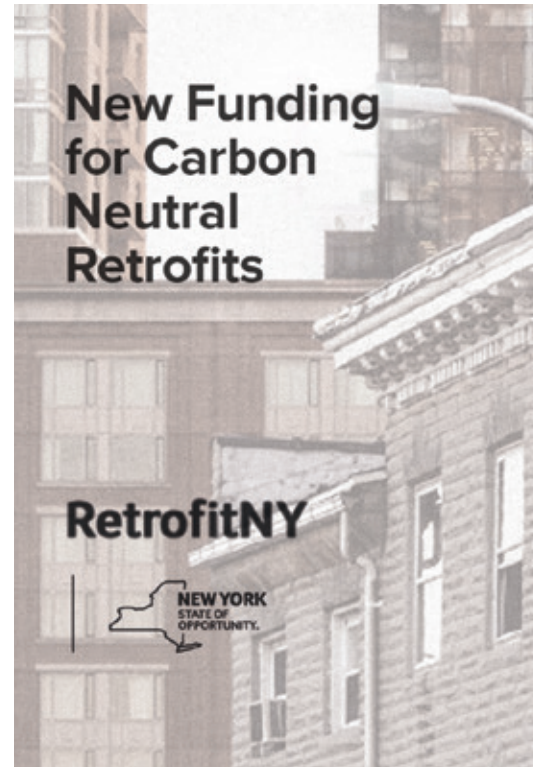
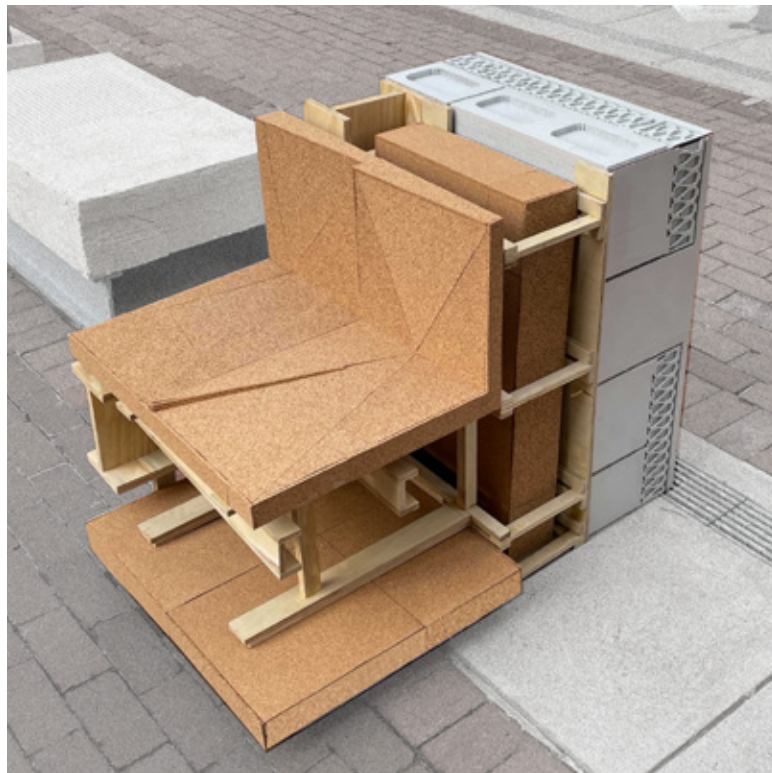
- RESTAURANT
- BEAUTY & SALO
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- RESTAUR
- WINE &
- RES
- GROCEP
- BE
- RETA
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- VA

The BAR CODE looks at every storefront along Broadway in Washington Heights (our assigned site), its function, and hours of operation, mapped over the voids of the inner block. The intent is to record the network condition of Broadway and understand the avenue as artery for the into pattern - at multiple scales and contexts.

The vertical register is both a 50' increment, and an hour of the day - applying a temporal context to space, and a spatial context; fertile ground for imagining new models of space occupation and definition..

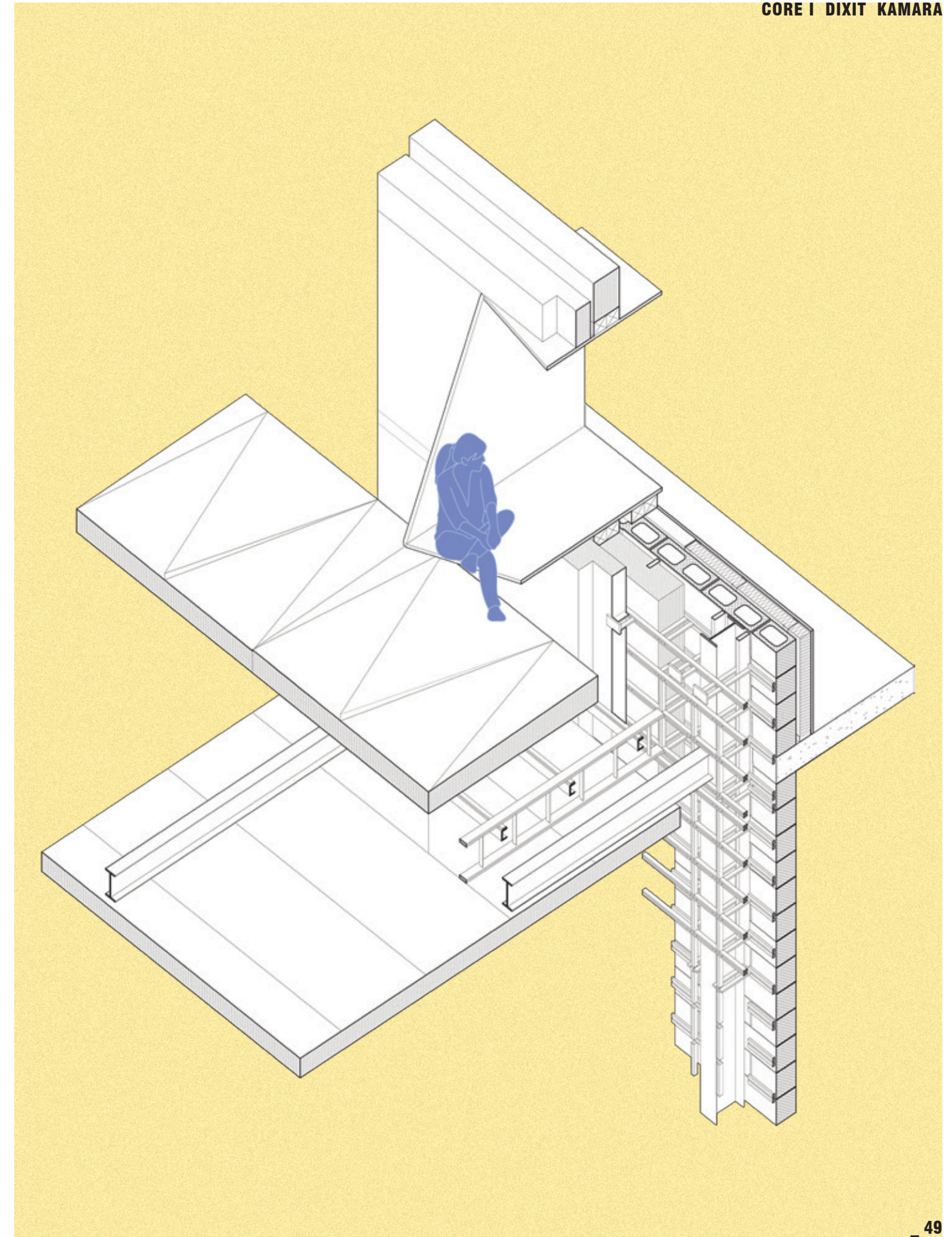


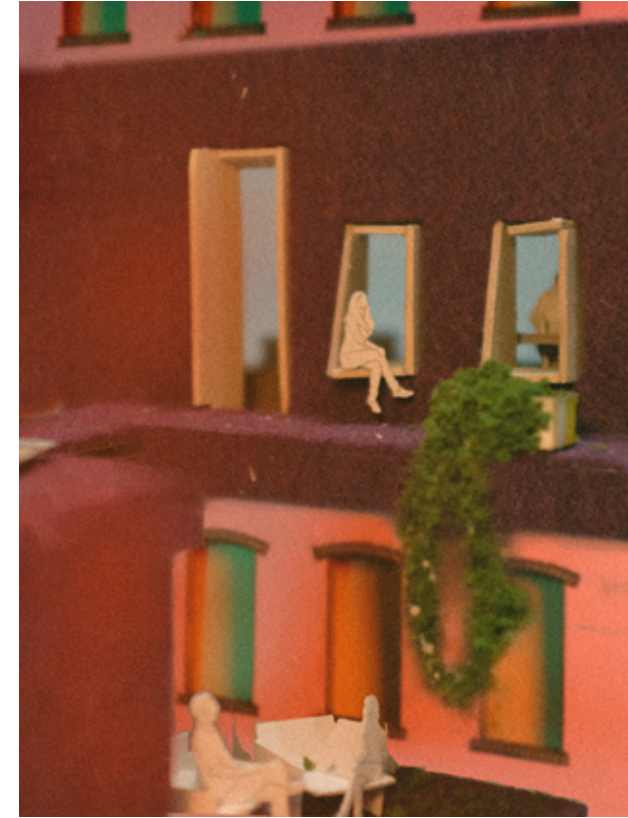
ADD INTERVENTION QUICKLY !!



Here we see the conceptual liner as cork or latex armature that will wrap the existing architecture of New York.

The project is grounded in pooling together time, money, agency ("energy") to more successfully leverage existing City, State, and National policies for available funding. As designers and interventionsists, we have the knowledge, skillset, and opportunity to connect at so many scales - with our efforts and with our work..





In "The Carrier Bag Theory of Fiction", author Ursula K. Le Guin tells the story of human origin by redefining technology as a cultural carrier bag rather than a weapon, and that "before the tool that forces energy outward, we made the tool that brings energy home."

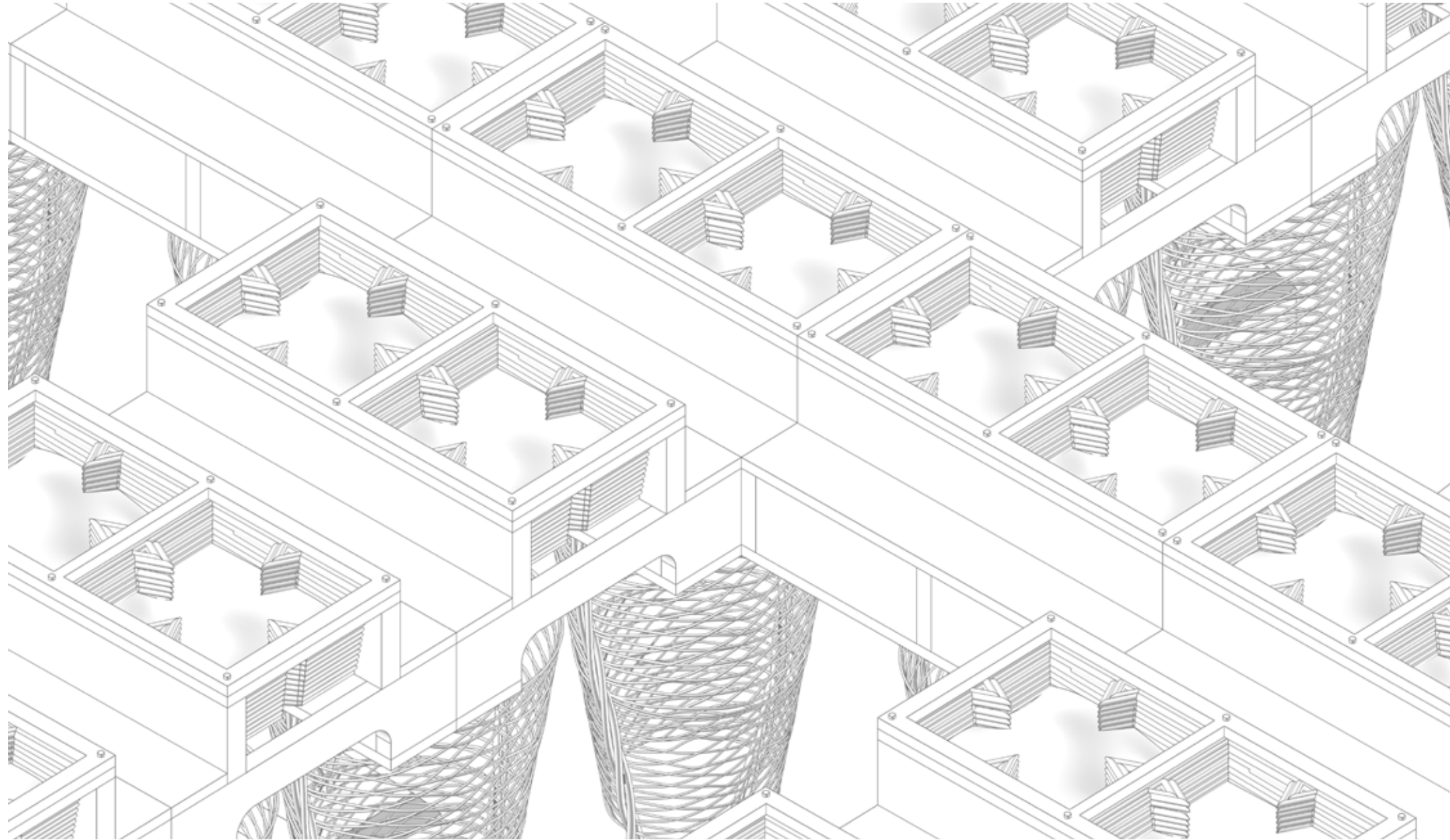
"Light" is a motif as we journey through the story in images. A single parent and child cook together. The block community pools NYSERDA funding to create their first collective spaces. The spaces flourish! Energy in calories and electricity is shared by neighbors. The collective grows. The dwelling unit is both expanded and appropriated; a new collective for parent and child.



We are interested in the social structures and conditions supporting healthy social relationships – education, apprenticeships, housing and shelter, worship, and congregation. Allowing the architecture to promote an “extended family” to build community and an understanding of others’ identifying characteristics.







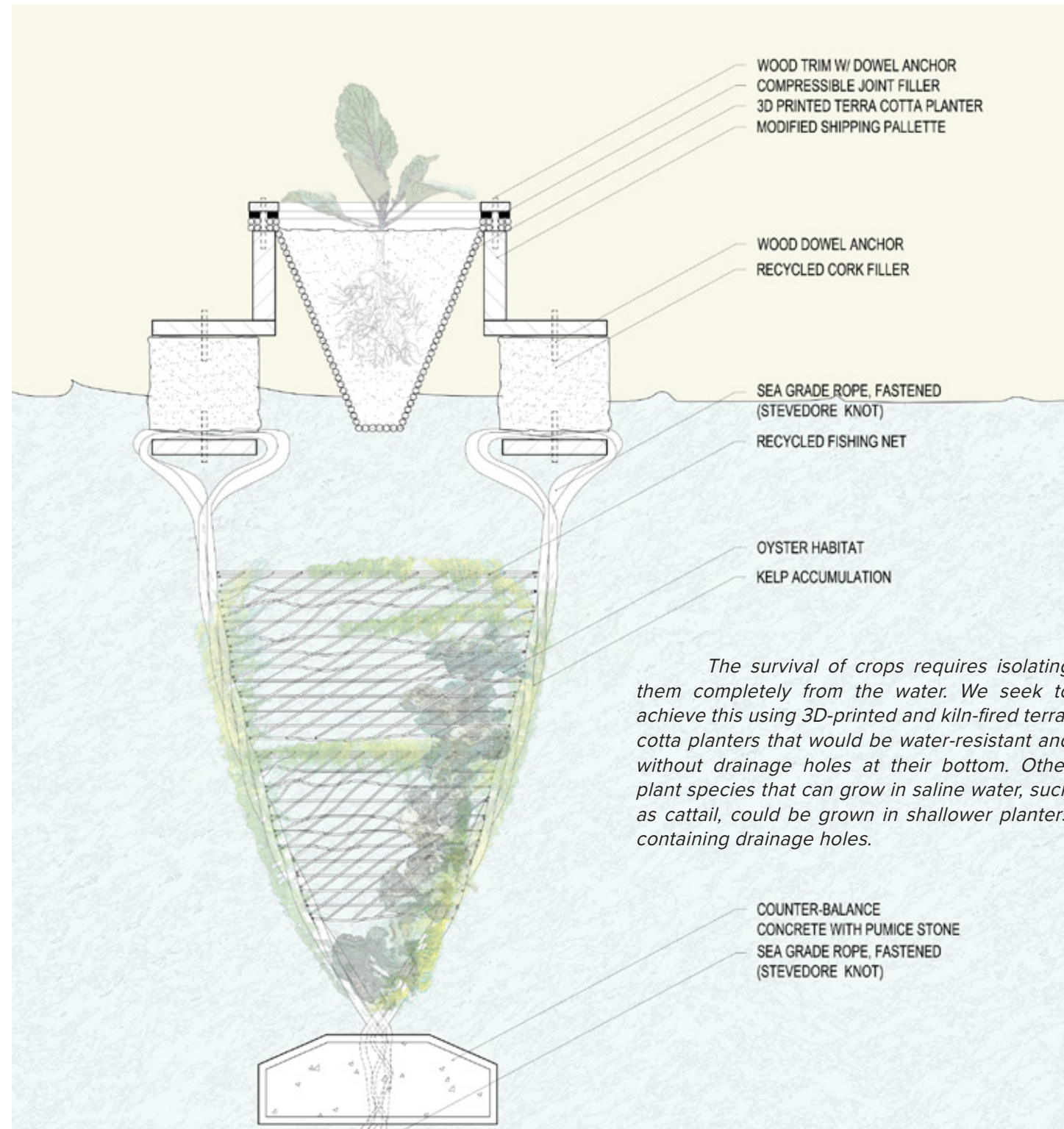
SEED BOMBS - TECH ELECTIVE
Teammate: Ben Vassar
Fall 2023

IS A A LINE FISHING LINE

Our float seeks to act as a new node in a complex web of existing mutual aid infrastructure across Brooklyn by providing a novel design for a float supporting a vertical underwater reef ecosystem and an above-water crop polyculture.

This project responds first of all to the needs of the Billion Oyster Project by providing them with additional surface area upon which to grow oysters to adulthood. These reefs would take the form of intertwined marine-grade netting suspended in the intertidal zone beneath the floating crop polyculture above.

The second aim of the project is then to provide new ground for planting and harvesting a variety of crops. This above-water polyculture could serve firstly to educate youth from in and around Red Hook on how to grow their own food and secondly could provide fresh produce to food pantries and mutual aid organizations like Feed the People Bed Stuy and Masbia of Flatbush.



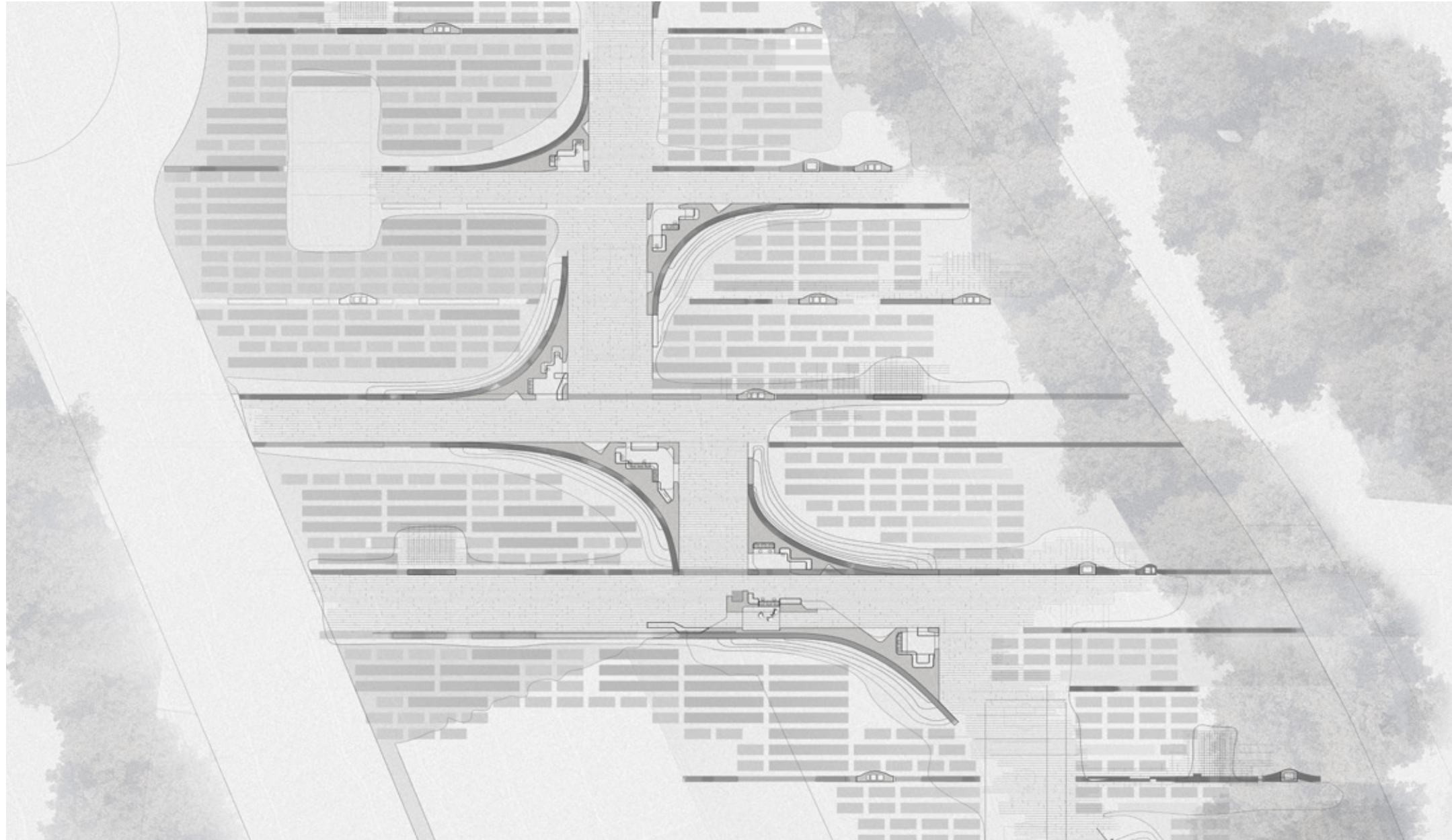


The float was launched at the RETI center, and it was a success! Below is the fishing wire we wove together to accommodate our burgeoning oyster reef. To the left is a WIP capture just for fun.





We imagine our float to grow endlessly, with a constant supply of shipping crates from the industrial surroundings, sustainable materials such as clay, and an active student and local population to contribute to this new ecosystem of resilience.

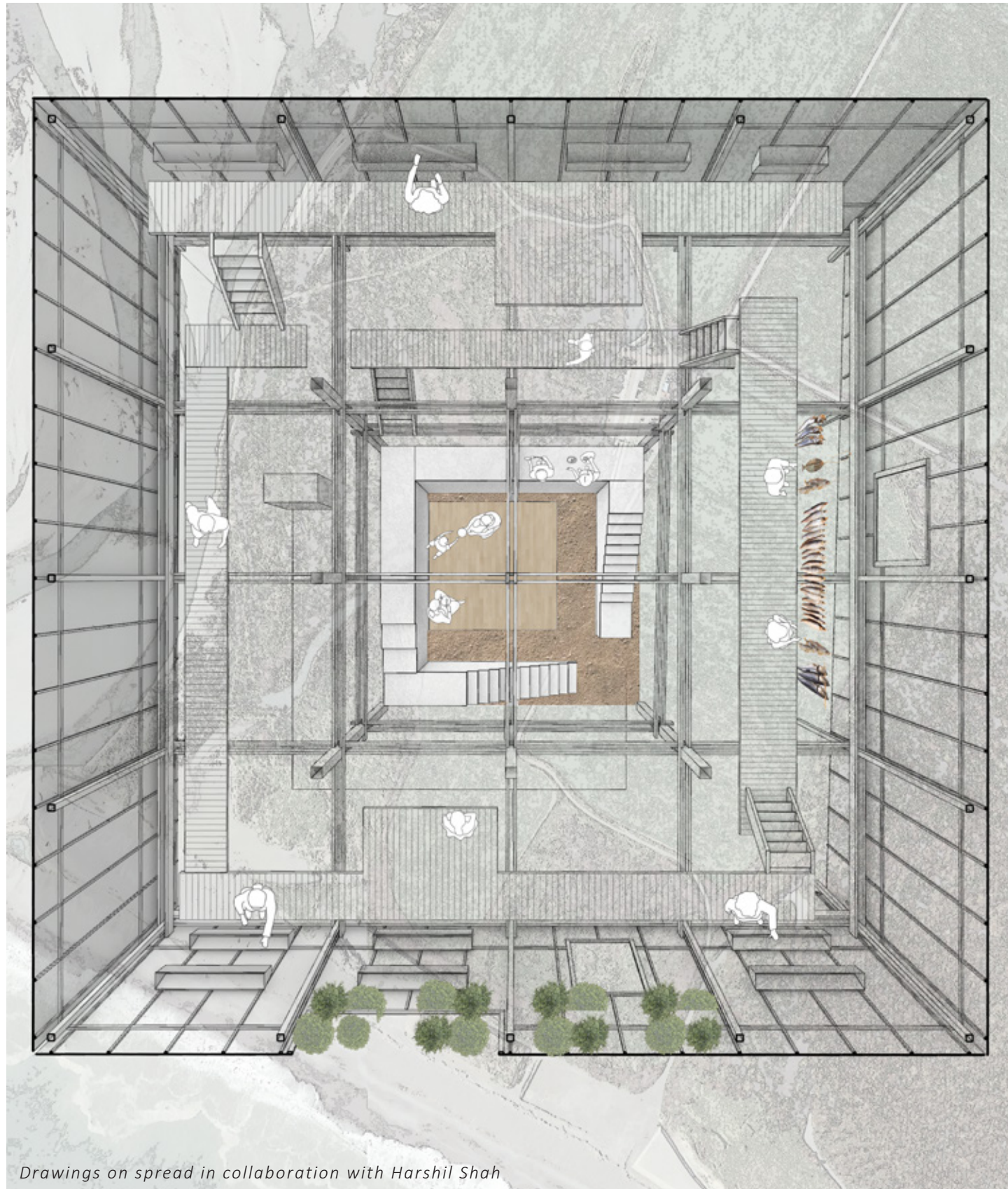


ADVANCED V STUDIO - ENTROPIC PRACTICES
 Partner to Midterm: Harshil Shah
 Fall 2023

A LINE IS A THERMAL EXCHANGE

This project developed from the simple idea of expanding the growing season of a community garden by using the heat generated by compost. What emerged was a park typology of horizontal, thermally active earthen walls. Through a gradient of activity, earth is manipulated for seating, heating, enclosure, barbequing, smoking, and learning.

The thermal walls expand and contract in plan and section to adapt to their program based on location. Fire pits line the area to the east, nestled under an abundance of tree canopy, while trombe wall outdoor classrooms and meeting rooms occupy the areas of the plan that have an abundance of sun. The compost cycle keeps greenhouses warm through the winter, with a steady supply of fresh herbs and spices to local kitchens used by Queens Night Market vendors, or families who sign up for a spot in the new community garden.



Drawings on spread in collaboration with Harshil Shah



nest we grow

Our case study directly evolved into the thematic exploration of my project. The building is meant to engage with the human and natural cycles of food production and consumption - growth cycle, gathering cycle, and consumption cycle nested on catwalks that also serve as structural bracing.

In the research drawing on the left, four landscapes of Hokkaido, river, sea, forest, farmland, and how the building could represent an object to be "deployed" into this varied landscape, but also to contain the function of these four landscapes - absorbing nature in the form of air, water, and light, and programmed according to the lifecycle of local or regional foods.

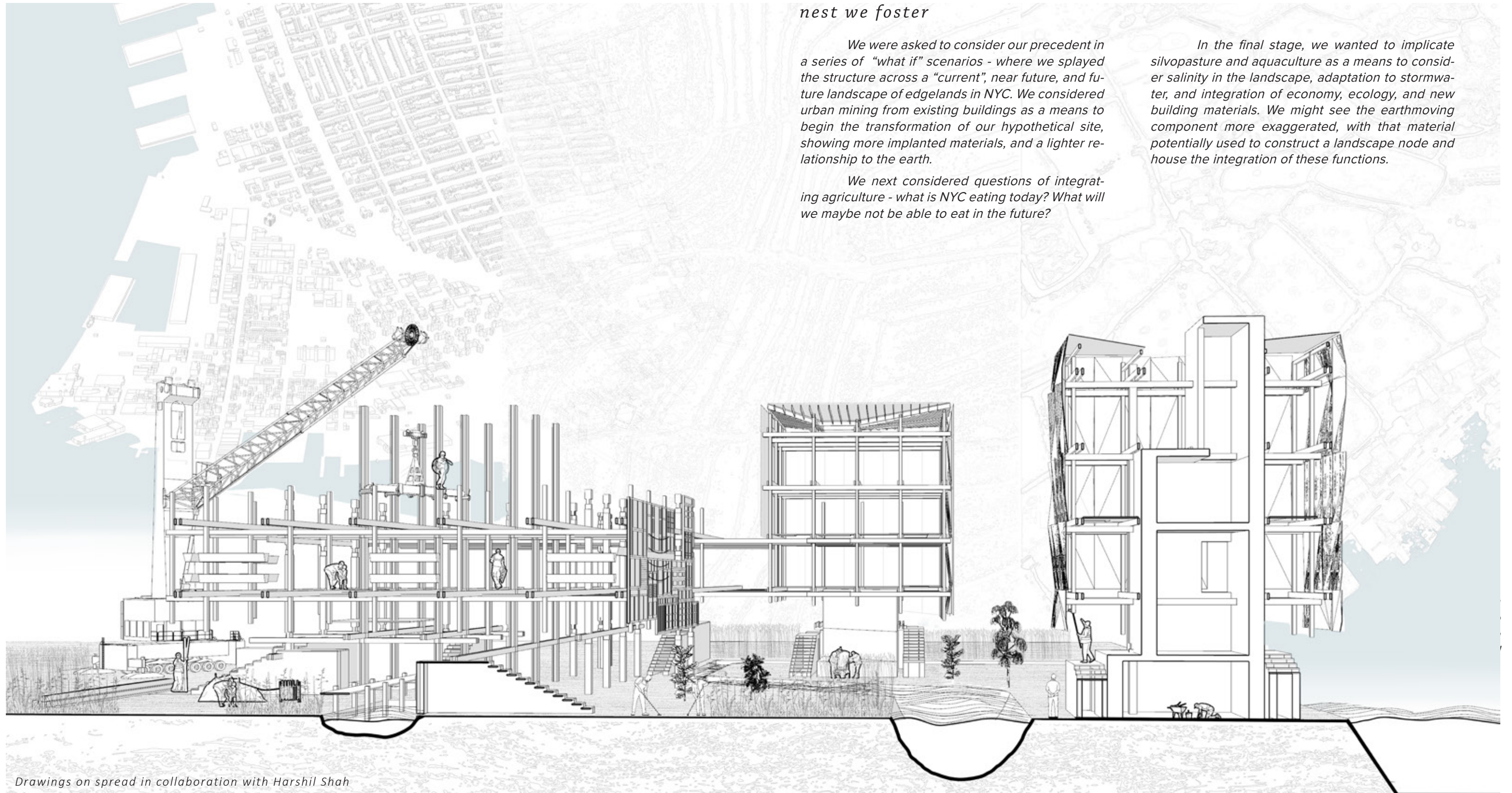
From here, our question is what is a building that forms a ritual of shared experience, or commune through the structural and material nesting of sustenance - labor spending calories, gathering or storing calories, cooking or sharing calories

nest we foster

We were asked to consider our precedent in a series of “what if” scenarios - where we splayed the structure across a “current”, near future, and future landscape of edgelands in NYC. We considered urban mining from existing buildings as a means to begin the transformation of our hypothetical site, showing more implanted materials, and a lighter relationship to the earth.

We next considered questions of integrating agriculture - what is NYC eating today? What will we maybe not be able to eat in the future?

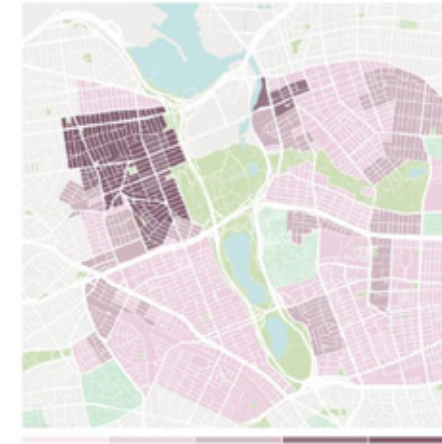
In the final stage, we wanted to implicate silvopasture and aquaculture as a means to consider salinity in the landscape, adaptation to stormwater, and integration of economy, ecology, and new building materials. We might see the earthmoving component more exaggerated, with that material potentially used to construct a landscape node and house the integration of these functions.



Drawings on spread in collaboration with Harshil Shah



Foreign-born Population: Latin America



80% of the population in Corona has Latin immigrants.

Foreign-born Population: China



60% of the population in Flushing has Chinese immigrants.

Foreign-born Population: Korea

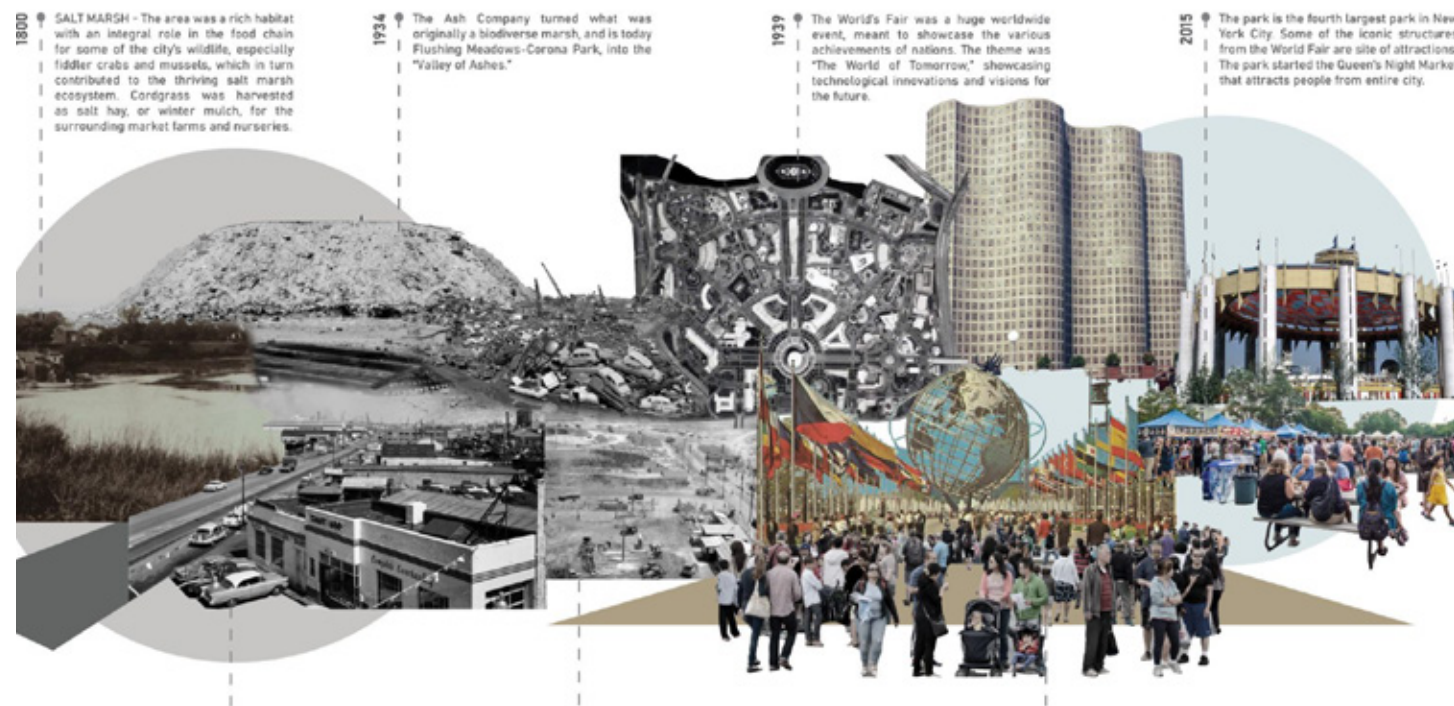


Korean immigrants are more concentrated in northern parts Flushing and sparsely on both sides of the park.

Our search for urban edge lands of enough area that could accommodate agricultural practices or production, and also hold a relationship with NYC food culture led us to Corona Park / Flushing Meadows in Queens ... because everyone knows Queens has the best food in New York! The park is buffered by Corona, with a predominantly Latin (Puerto Rican and Dominican) population, and Flushing with predominantly Chinese and Korean populations.

Flushing Meadows has had a long and interesting history. Historically, the site was marshland with a rich habitat with an integral role in the food chain for some of the city's wildlife. During the Industrial Revolution, it was seen as a wasteland and used as a dumping site. The Ash Company turned the biodiverse marsh into the "Valley of Ashes" with Mount Corona as the peak.

Robert Moses started the transformation of the dump land into a park. The park also hosted two World Fairs -1939 and 1964 with themes of "world of tomorrow" and "peace through understanding". While most of the pavilions were brought down, few still stand on the site. Some are in use while some are abandoned. The park also hosts the famous Queens Night Market during some time of the year.



Drawings by Harshil Shah

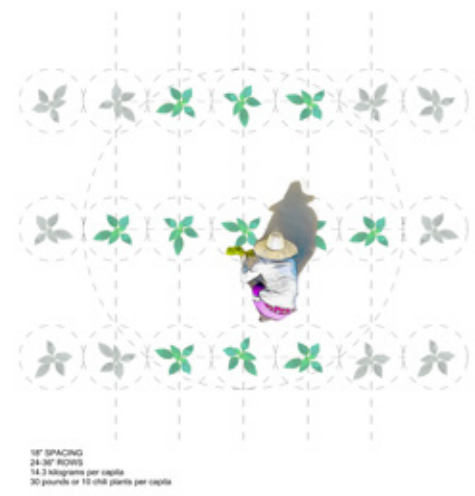


Through research and our conversations with food vendors at the night market, we identified ingredients that share ritualistic practices, and contribute to cultural identity, social or familial customs, or even nostalgic childhood memories.

We identify the red chili - in this case Chile de Arbol, Gujillo, Ancho, and Gochugaru - for its connection to Latin American and Korean Cuisine. For example, red chili is used in a staggering 90% of Mexican dishes, hangs in a ris- tro outside of doorways during fall harvest festivals, and apparently has even been used to punish children.

Maze - as the principal ingredient of Masa - requiring Nixtamalization - which is a traditional maize preparation process in which dried kernels are cooked and steeped in an alkaline solution, usually water and food-grade lime (calcium hydroxide) to increase the bioavailability of vitamin B3 and iron, calcium, it makes the kernels more fibrous, and reduces the presence of mycotox- ins

Cabbage - as the principal ingredient of Kimchi - is usually a communal process that takes place outside, intergenerationally amongst members of the same family, or socially among friends and neighbors. Traditionally Kimchi is stored in terra cotta pots.

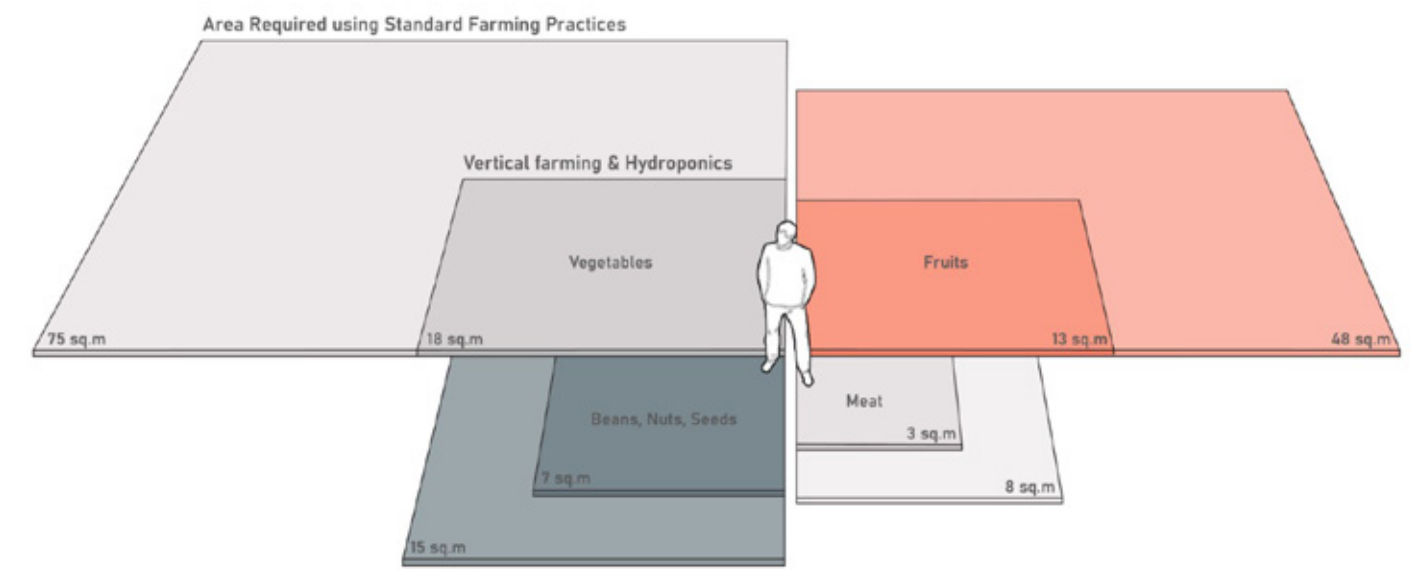
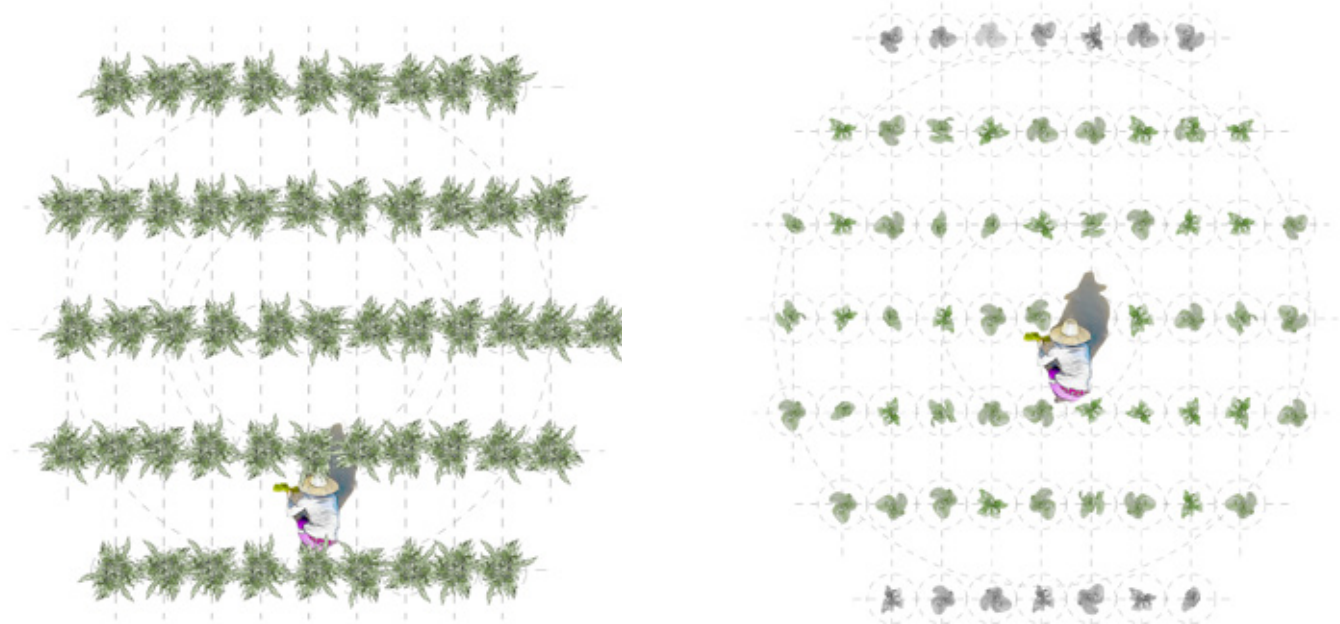


By the year 2050, the population figure is predicted to rise to 9 billion and at the same time, climate change could lower crop production by 25%.

Currently, with the expansion of cities & exhaustion of the rural lands, a vegetable growing on farmland travels about 2400 km before it reaches households. It is sprayed with pesticides and chemicals to keep it fresh and edible. The food that one eats thus gets reduced to 50% of its nutrients, even 100% in some cases. Also, permaculture practices and vertical farming can allow for more efficient production. Hence, the future of farming is being brought to cities worldwide through vertical farming.

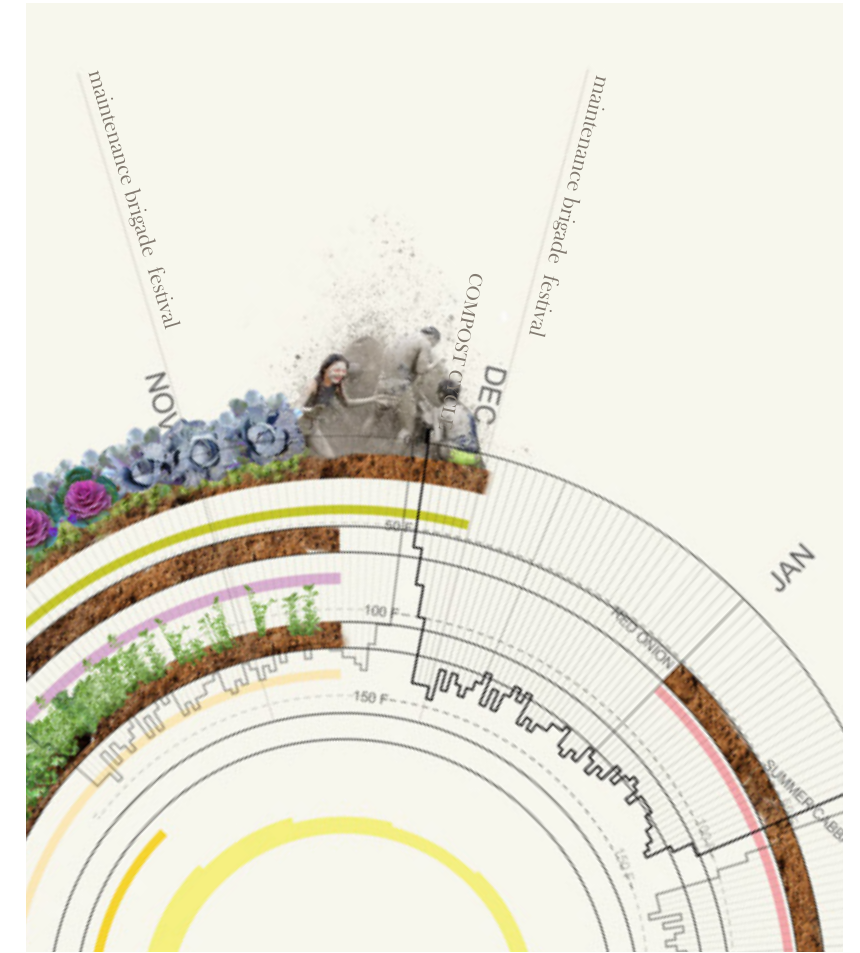
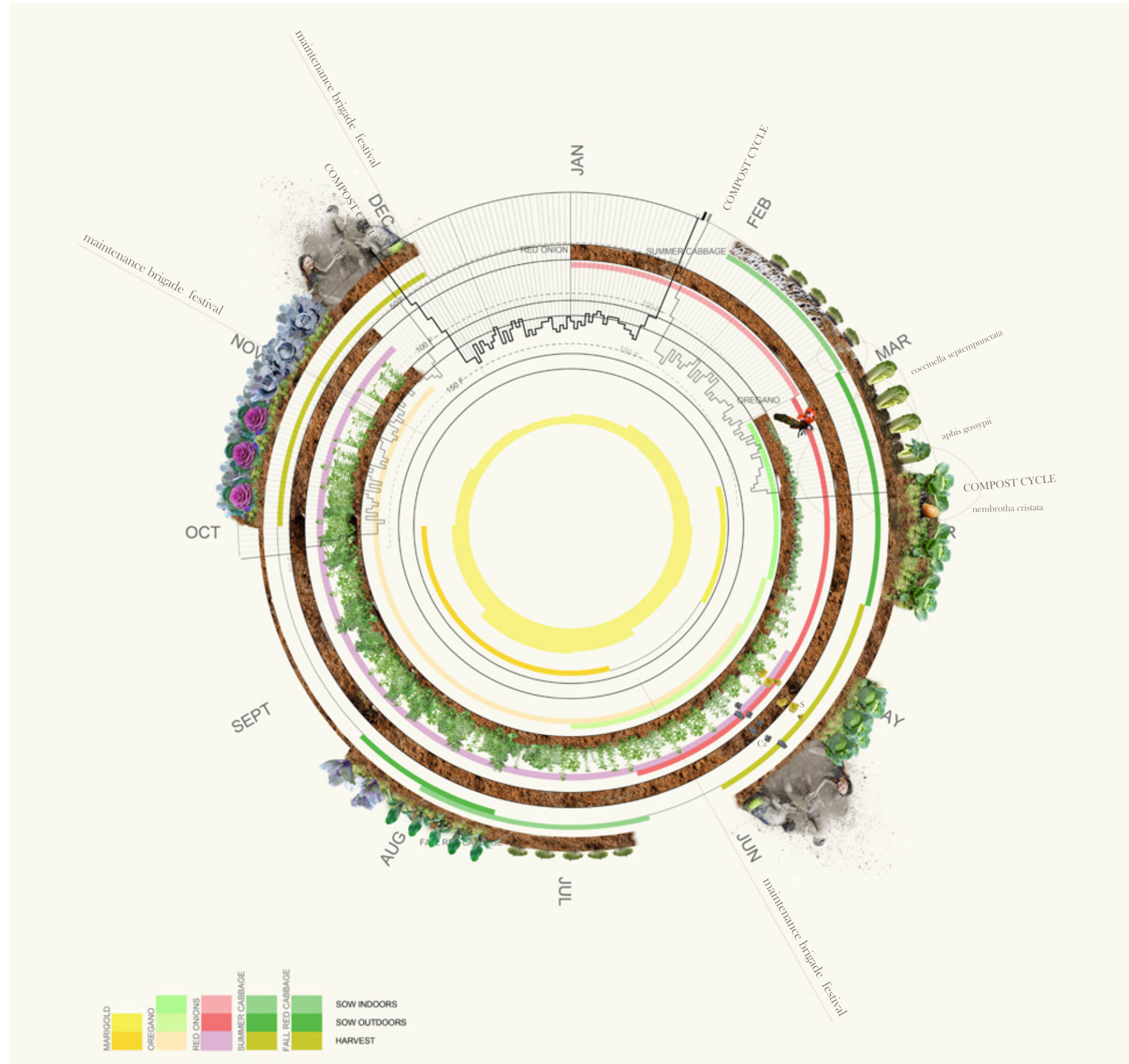
The outer regions of the diagram above represent the spatial requirements of farming one human's annual diet in vegetables (top left, grey), fish (right, red), meat (lower right, grey), and beans, nuts, and seeds (lower left, dark grey).

The planting diagrams to the right map the human body across the amount of each crop (cabbage, maize, chili) consumed by the Average US citizen annually, and the agricultural dimensions of



Standard farming Practices V/S Regenerative Farming

Area Diagram by Harshil Shah

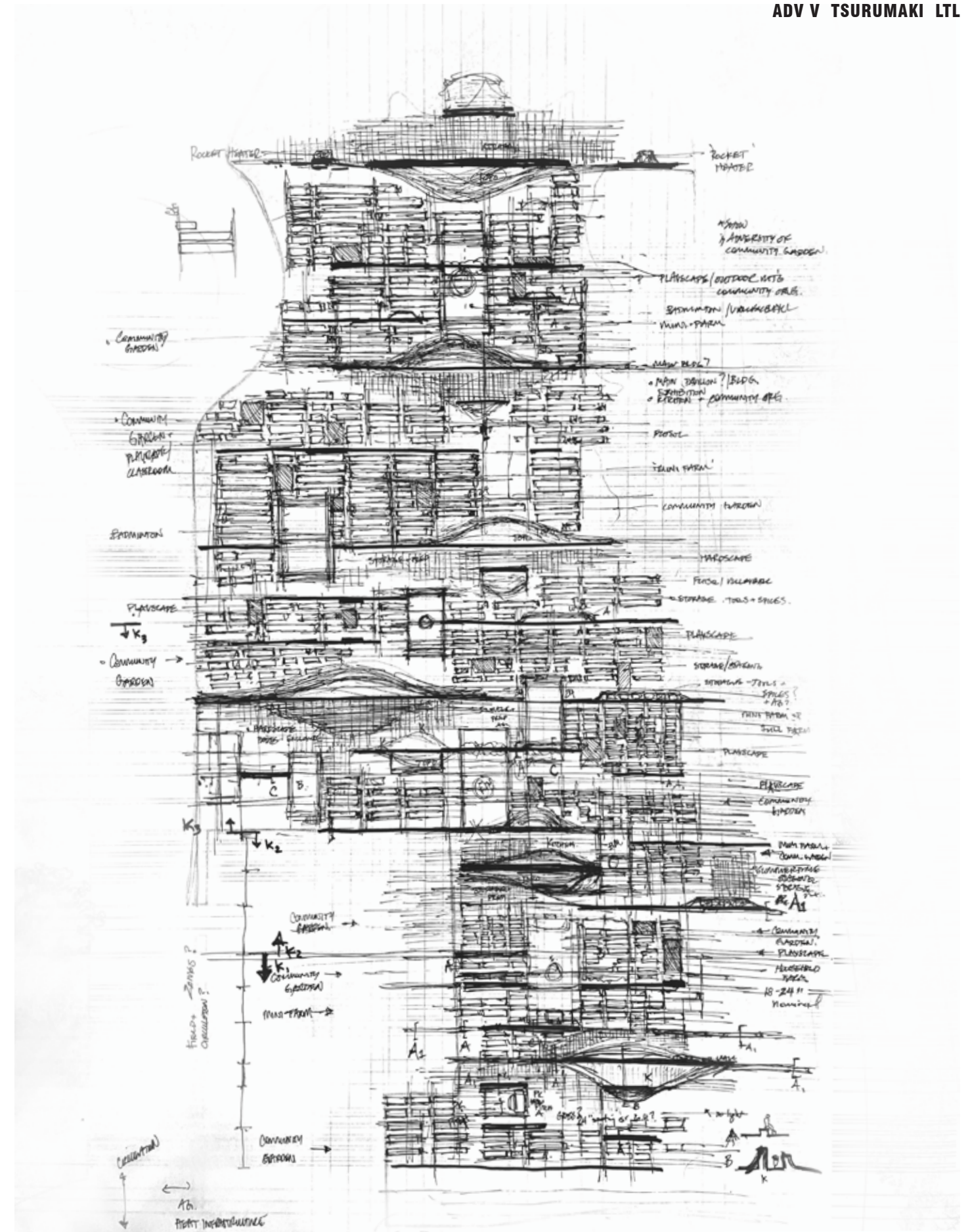
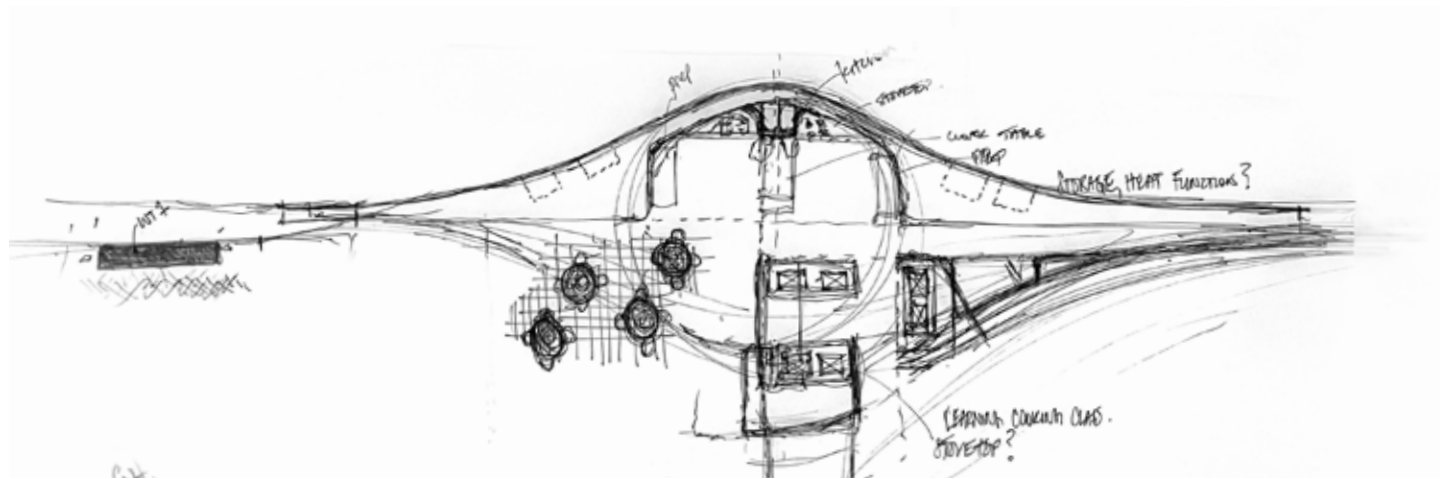
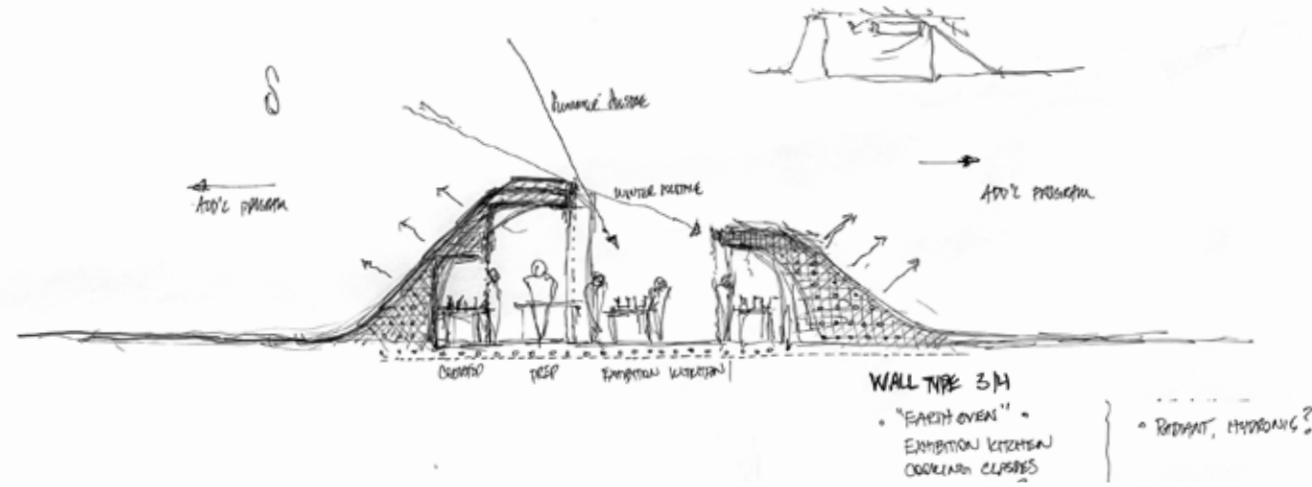
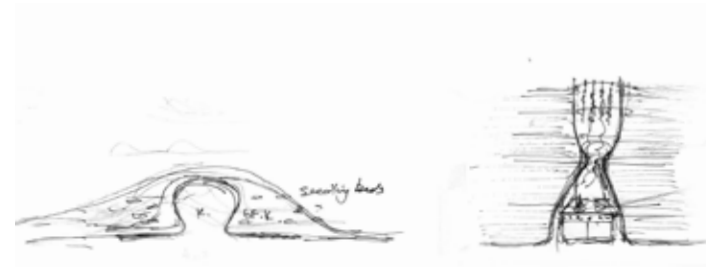


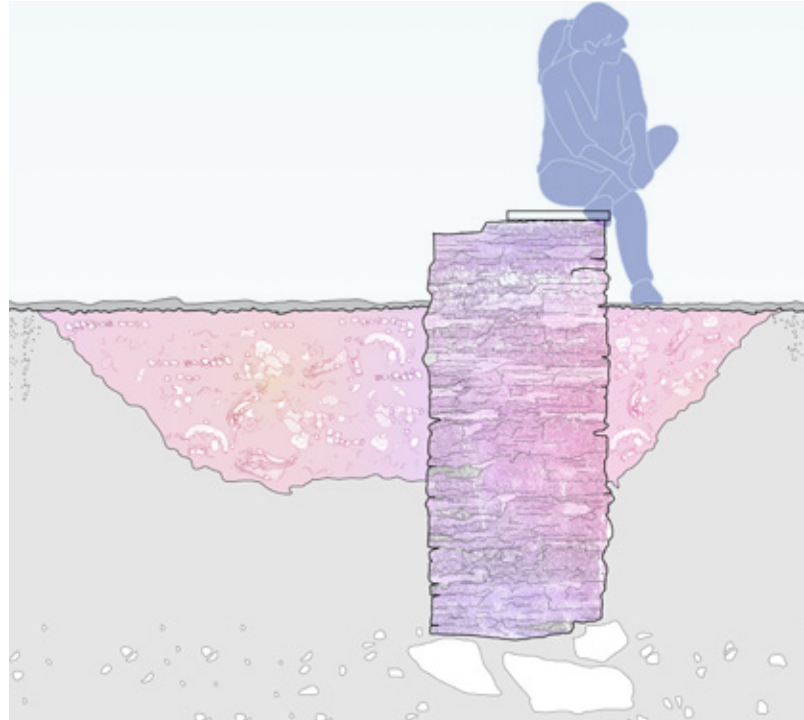
agriculture, sustenance, and ritual care

The growth chart superimposes our key ingredients with their annual growth cycles, known beneficial regenerative farming companion crops, as well as companion insects, and pests. The community garden can hold bi-annual harvests, imagined as a “maintenance brigade” mud party of sorts, where crops are harvested while the community also engages in some (good not so clean) fun.

compost and thermally active architecture

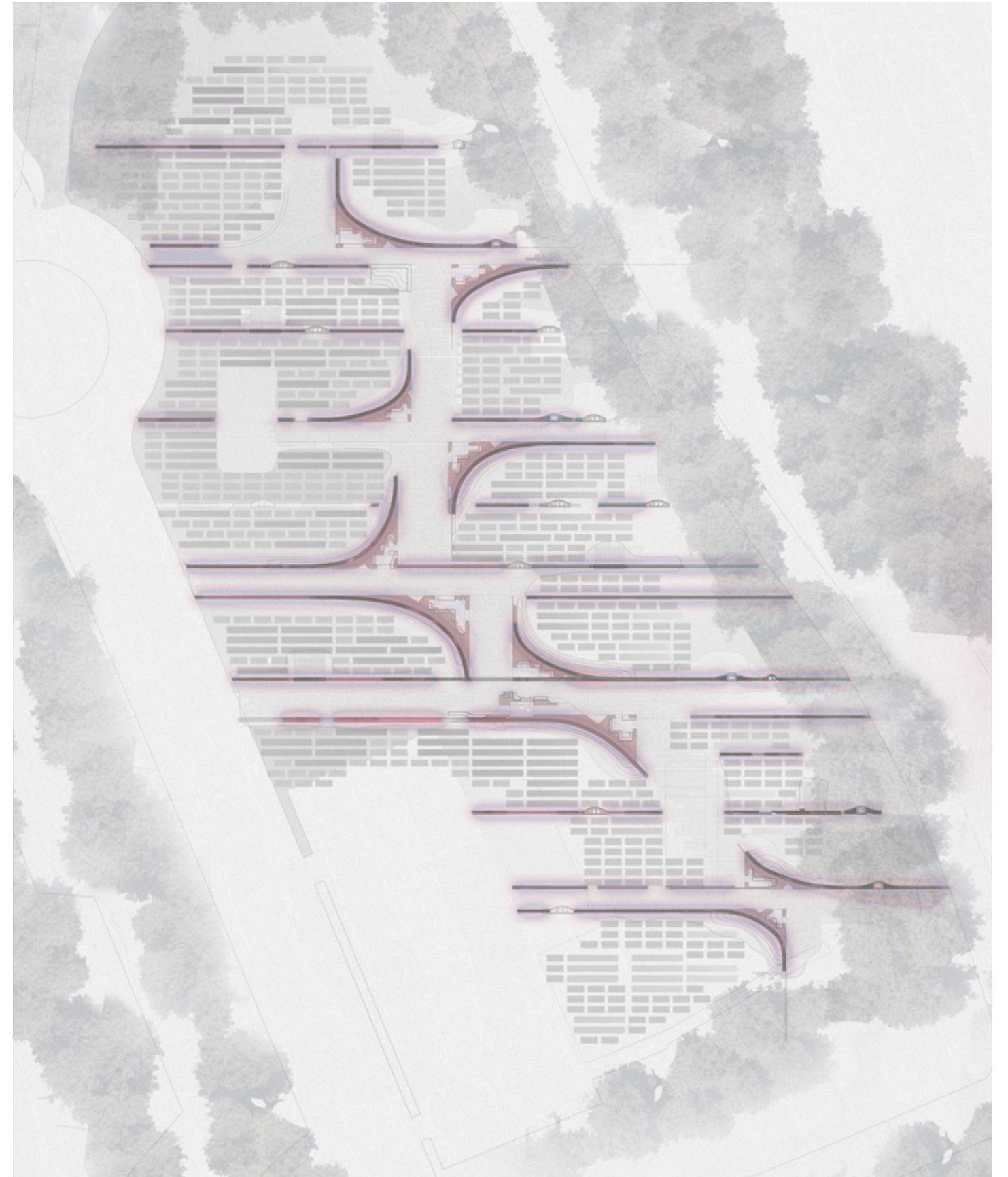
Compost heats to remarkable temperatures - averaging roughly 100-130 degrees fahrenheit for 3 months in a small community garden sized bed, and is already used in the construction of seasonal greenhouses. The proposal starts with the simple aspiration to extend the growing cycle to include the winter by using compost to heat earthen furniture and walls. The scheme grows into an array of thermally active wall types - and includes fire pits, barbecues, smokers, and trombe walls.





At the beginning of the new Community Garden, food waste from the Queens Night Market can be used as composting material for the first installments of thermally active earthen walls, or benches. The benches can operate seasonally and provide a base for temporary wintertime greenhouses.

The architecture consists of thermally active benches and walls - aligned east-west, and connected by a center string of futsal and badminton fields. The necklace scheme curves the kitchen walls from the planting axis to the circulation axis, connecting the recreation fields with the culinary programming. Plots can belong to vendors using the kitchens, or to families who have signed up.¹





In the section we can see progression from left to right - the Night Market stalls, food waste being stored alongside earthen benches and furniture, a barbecue complete with a smoker, and a local kitchen.

A trellis creates opportunities for enclosure seasonally, or temporarily, while introducing a strong horizontal datum, connecting the project. Community Garden members can be seen re-applying a cob liner to their local kitchen while others use the cooktops and taps.



in the exhibition kitchen, visitors can learn about the harvesting, storage, and preparation of authentic ingredients and dishes. The thermally active earthen architecture grows into a chimney, for exhibition cooking and dining. In the kitchen below, a cooking course introduces New Yorkers and tourists to the joys of food culture in Queens.

MASA MADE from SITE GROWN MAIZE

SMOKING PRACTICES OF MEAT on DISPLAY



The community garden will also have courses and trainings to help others grow a successful, authentic spice garden, and introduce visitors to the Queens Night Market.

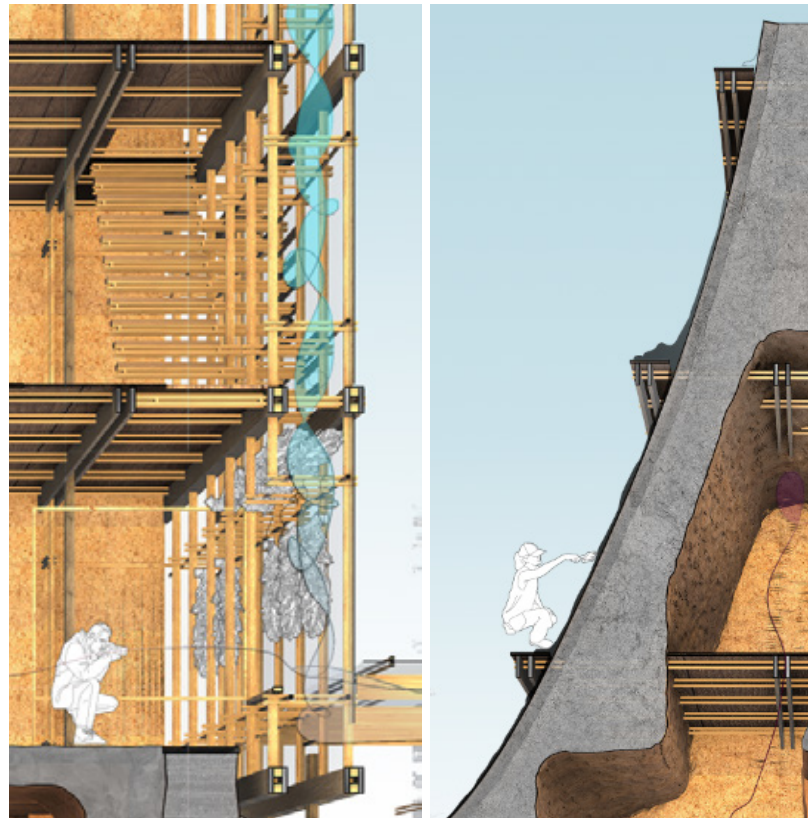
Families or neighbors can sign up for a plot and opt to participate in cooking courses, or the kitchens can provide an extension of the night market, allowing vendors to shift in and out of a soft infrastructure provided by the thermally active pattern language. of gentle earthen manipulations. Which plot will you pick? (scan QR code above, click on vegetables to receive seeding and growing information - mobile version in beta!)



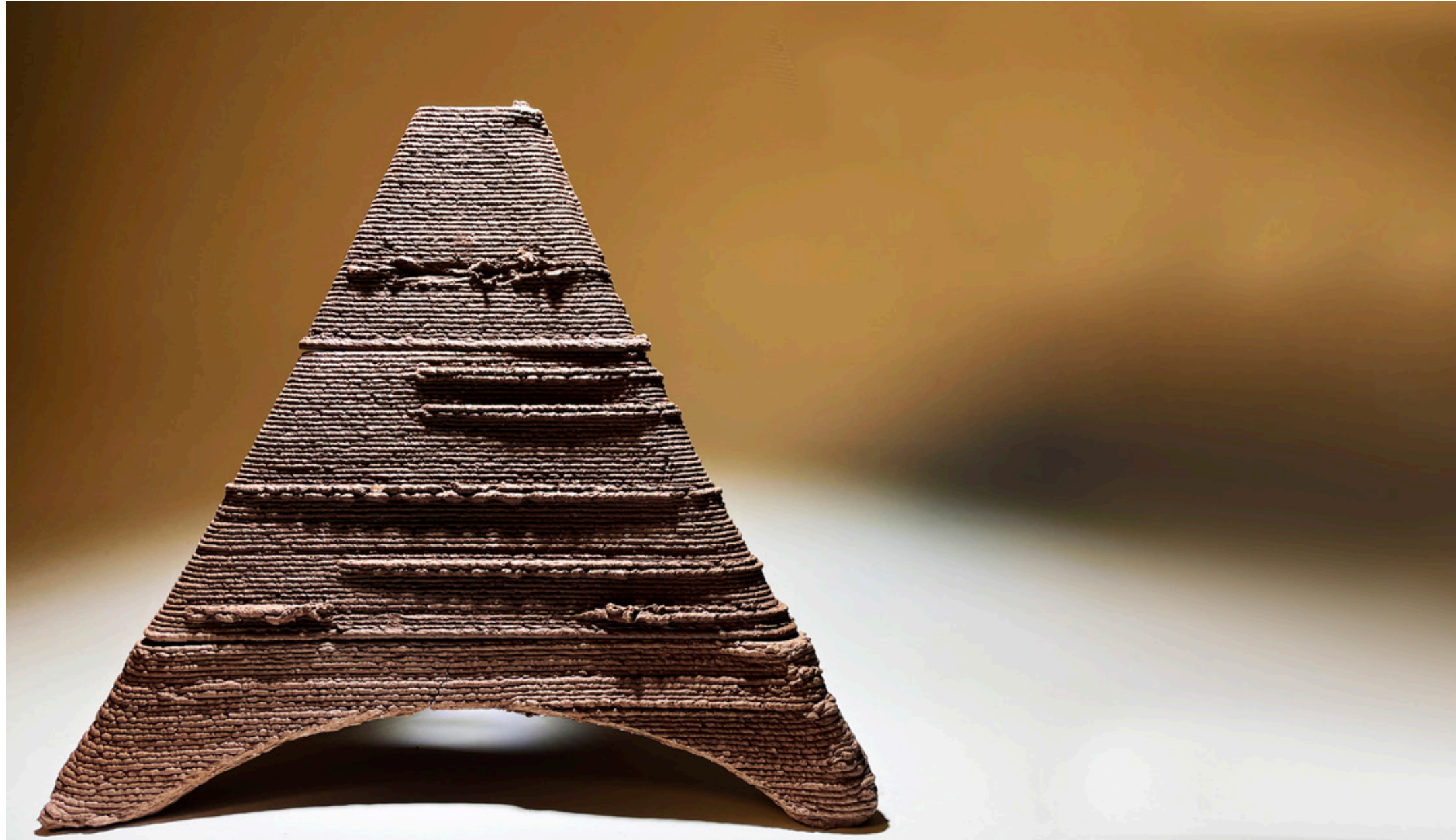


A tourist captures the exhibition kitchen's double skin facade, venting building spaces that host cooking classes and tours, and drying chili to be used in the classes.

The facade is a functioning and articulate billboard for the Community Garden and its ability to connect native New Yorkers, and tourists, visitors of all kinds, to the remarkable food culture of Queens.



A community garden member replenishes the sacrificial cob liner of the kitchens, made from soil dug up for rammed earth buildings. Rain will wash this layer away in yearly cycles, purifying both soil and rainwater before it meets the ground, where it will be mixed with mineral rich compost soil and used for Community Garden beds.



Tensile and Compressive Surfaces
Fall 2022

A LINE IS A CORRUGATION

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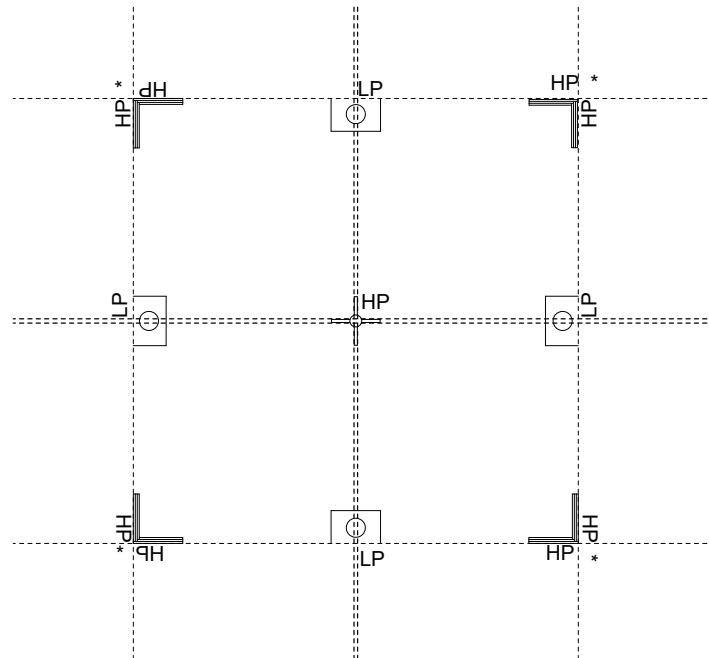
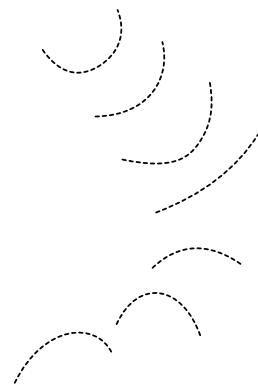
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CAPITAL HP

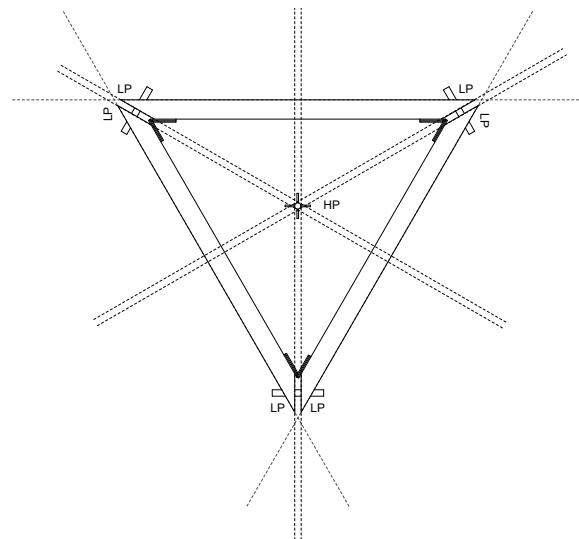
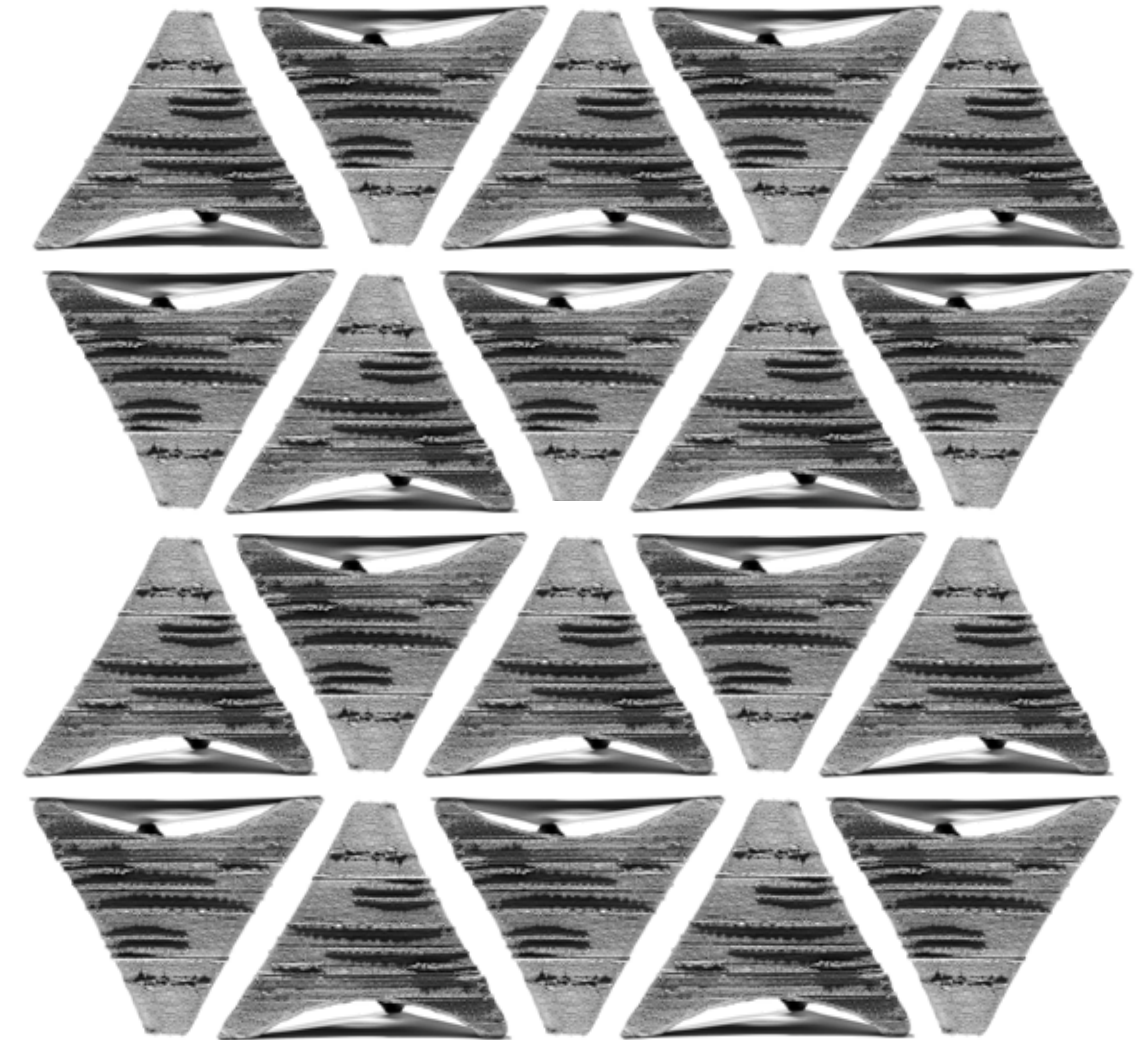
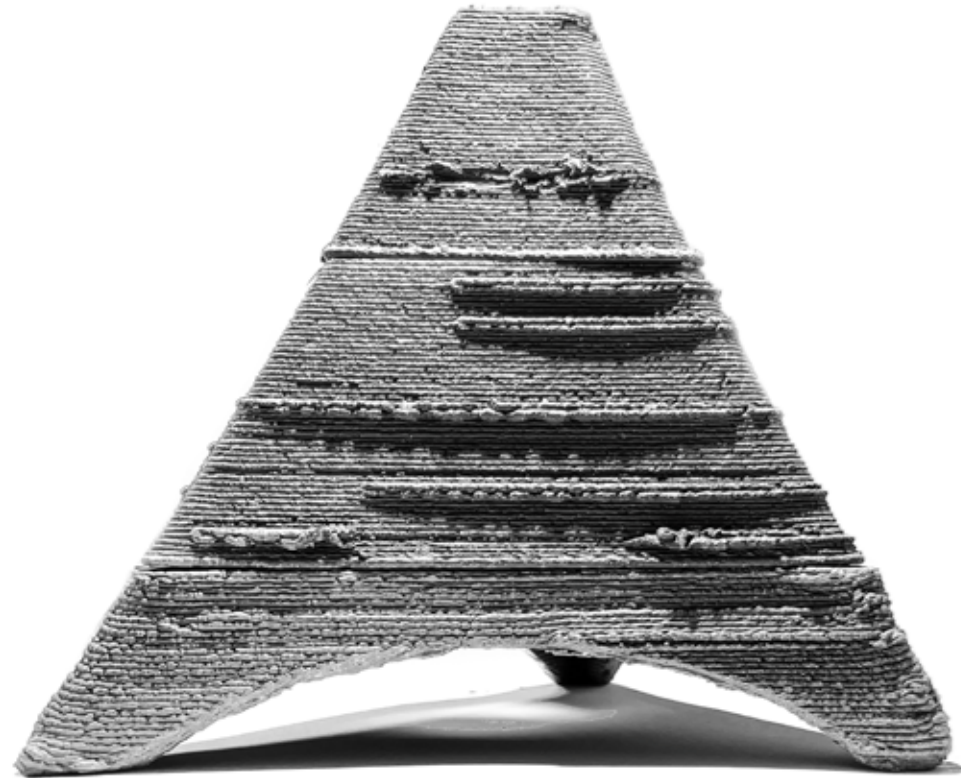
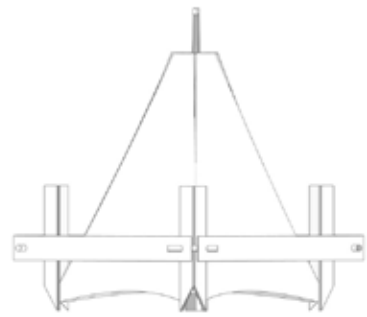
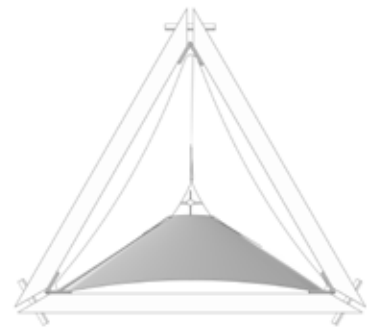
CENTER HP

GROMMET LP



The first iteration of my tensile surface organized 5 high points (corners and center) of a square, and 8 low points, each halfway between their adjacent corners and fastened inside & outside of the wood base via a grommet. The anchor details were designed to create smaller found forms in the shape of an arc in section, creating a tensile surface comprised of nested, scaled, arcs in a 3D array.

Since all tensile surfaces are found forms, I wanted the base to also have a "found" quality. I salvaged scrap pine wood from the shop. The holes from the plunge router have a nice analogy to the grommet detail.



CENTER COL HP

INVERTED CAPITAL LP

INVERTED CAPITAL LP



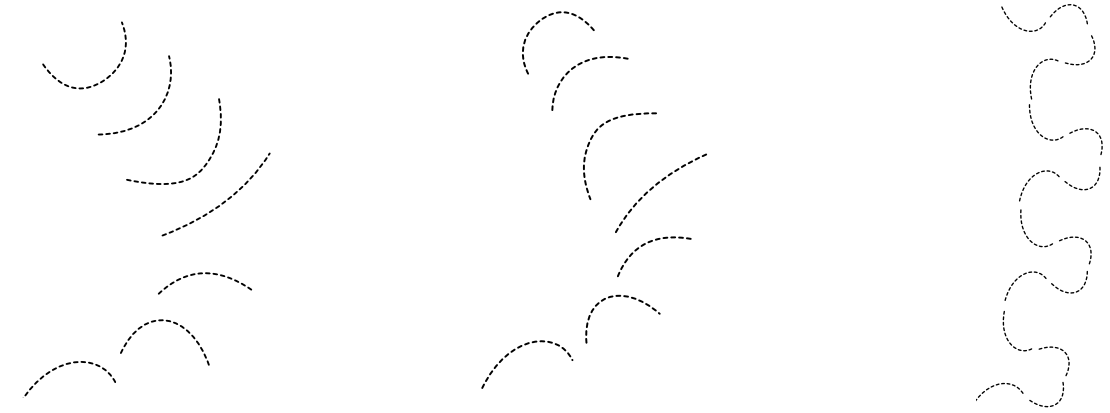
CENTER COL

INVERTED CA

INVERTED CA

The second iteration of my tensile surface (top left) reduced the number of anchor points by moving from a square to a triangle in plan, and in preparation for translation into a compression shell, inverts the "columns". Sadly this model was accidentally discarded from the shop.

The first iteration of the compression shell translates the tensile surface directly. It is 3D printed terra cotta, a beautiful material that I am very fond of. The pattern on the right is a provocation representing the many scales and projections a compression shell can aggregate into. At a small scale a sub-floor, at a large scale a 3d matrix for a spatial diagram of a school or an apartment building,



The final iteration of the nested arc (found form of the line), is a complete in-volution ex-volution of the arc into a corrugation. The corrugation is more rigid, and allows for the compression surface to operate in either orientation. In a nod to the course, the form prints in tension (top orientation), and rests in compression (bottom orientation).

An offset of the outer (or inner) corrugations allows for an "architectural" reveal, and further tests the limits of the material and process. I also tested a 12" version of this form with wider reveals, unfortunately the single surface on the interior of the reveal started to rip under the weight approximately four hours into the print.

AUTONOMOUS VOID

/INTERSTITIAL SOLID An Examination of the Void-Forming Domed Organism

Recombinant Renaissance Spring 2023 - Prof: Mark Rakatansky



Research Position

The tempietto represents an incredible evolution in Bramante's conception of the domed organism that is often objectified as a masterpiece of perfectly harmonious architecture. The building is a significant achievement that combines a powerful symbolic program by grafting the Doric order onto a round temple form at St. Peter's crucifixion site. Bramante merges the "Etruscan" (Doric) order with the form and function of a Christian martyrrium and the Greek tholos, evolving the doric from classical tradition in a clear separation from Vitruvian rules. Bramante displays a remarkable process for creating "modern" spaces in this exploration, which we will eventually see in the transformation of his study and execution from Santa Maria presso San Satiro in Milan, San Pietro en Montorio, and finally to his sketches for Basilica Papale di San Pietro in Vaticano both in Rome. The tempietto and Bramante's relationship with Julius II, absorbed by his goal of achieving an *instauratio imperii*, meant that Bramante could explore a visible, convincing synthesis of a "national" or "universal" language in architecture, another attribute linking Bramante's engagement as an architect with an emergent practice resembling contemporary practitioners. After all, the search for a "universal language" often frames the ideals of the Modernist movement.

Manipulation of the Doric

Alleviating the pressure of aligning the frieze between inside and outside elevations, Bramante could also imbue the inside shell niches over the diagonal plan axis - aligning the square niches through the arcade and forming additional entrances - with a grander scale, emphasizing the dynamic rotation to the secondary axis and beginning to break down the envelope of the building into a series of in-volutions and ex-volutions, which will ultimately become a spatial prototype in its own right. Unlike the constrained shell niches usually seen in Renaissance architecture, Bramante varied the form of the hinge and the number of flutes, resulting in shells that possess a fresh vitality and suggest a natural origin. Bramante was consistently attempting to reconcile an architecture corresponding to the divinely ordered harmony of the world, searching for ways to transform Antiquity into an instrument that could be easily identified and used. The shells in the Tempietto are placed with hinges at the top, allowing the flutes to radiate downward and give the impression of being independent objects affixed to the architecture, perhaps providing an example of Bramante's taxonomic and iterative process.

Square panels added to the base of the interior pilasters mimic the square base and Doric pilloving at the base of the exterior columns, using offsetting concave bands at the floor level and convex bands at the top beginning of the pilaster. Bramante paired the elevated interior pilasters, breaking from an orderly offset, again allowing for the interior shell niches to expand in width and further accentuate the dynamic composition of the chapel interior. This double pairing positions the interior shell niches between the exterior pilasters in the solid wall between the outer shell niches, revealing the rhythm of the carving operations (Figure 3).

1. Freiberg, Jack. Bramante's Tempietto, the Roman Renaissance, and the Spanish Crown.

2. Rowland, Ingrid. "Bramante's Etruscan Tempietto."

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Figure 3

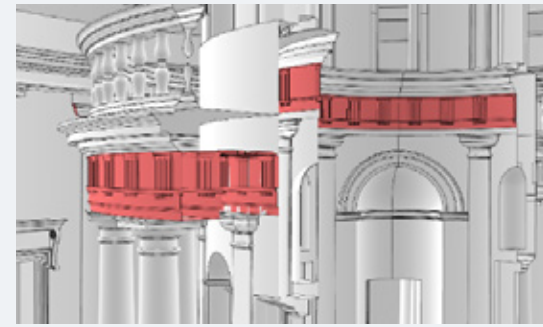


Figure 4

The windows themselves have no frame on either the outside or inside face of the building, the
surfaces wrapping into the opening and participating in the rhythmic disintegration of the wall as an enve-
lope. These operations may have contributed to or been the source of Bramante's investigation of plasticity
in the wall surface through the projection of the Doric column system and the integration of Roman niches
with the programmatic requirements of the Tempietto.

While other notable transformations are happening in the drum, for example, the "attic" pilas-
ters becoming flattened into square panels, the adaptation of the doric as it expands or projects outward
through the space of the cella and ambulatory zone is incredibly fascinating, and possibly where Bramante
begins to recognize the potential of a space-defining void. The exterior columns project outwards from the
colonnade of the chapel, through the open-air ambulatory zone, to the arcade of the cloister frame (Figure
7); this module forms one of several geometric relationships that can be identified in the plan (Figure 8).
The dual axis of the plan creates three spatial hierarchies, the primary axis responds to the axis of the three
entrances and the altar, and the secondary axis responds to the four corner apses. Finally, the tertiary axis
of niches further articulates the relationship between the arcade and the cella wall. Critically, all of these
geometric relationships occur between different zones in the plan, potentially hinting at Bramante's archi-
tectural exploration of the void, all of which occurs through the requirement of fusing the Doric order into
the circular plan incorporating Roman and classical motifs in the shell niches. This geometric and spatial
exploration radiates from the center of the Tempietto plan in the projection of the Doric, but also spatially
hints at controlled, organic budding (Figure 8,9), anticipating the autonomous void scheme deployed in
Bramante's sketches for St. Peter's, with an unmistakable line of inquiry adjacent to Leonardo's Domed
Organisms.



Figure 7

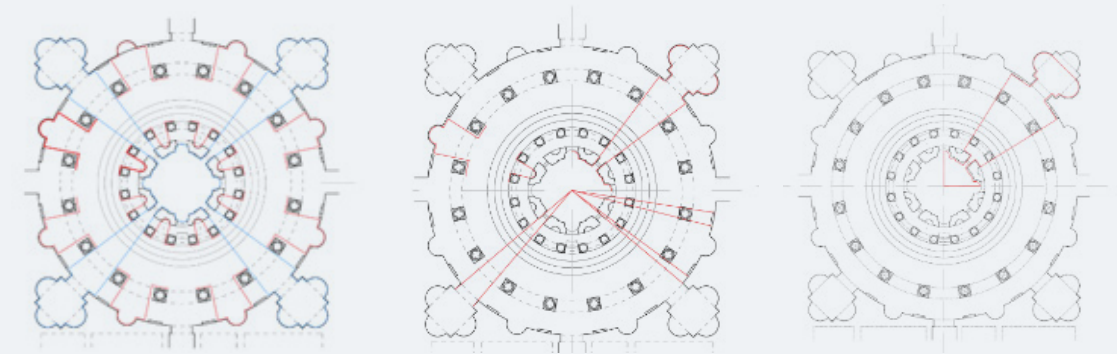


Figure 8

Bramante displayed a remarkable figural play of solid and void in the tempietto, which he further
developed and refined in his plan for St Peter's in Rome. The tempietto scheme begins to investigate ex-
ploiting the interplay of void on almost competing primary, secondary, and tertiary diagonal axes, which
he directly translated into plans for the basilica. Instead of the mixed hierarchy of voids, Bramante intro-
duces the diagonal axis as the solid in a play on the quincunx plan that produces a square with eroded
corners, introducing an apparent hierarchy of solids. This is a delightful interpretation of the structural
requirements of the dome, fused with the dynamic aspirations of a three-dimensional space, conducting
space and volume into an organism with an effective spatial context of its own. Ironically, this project and
the suppression and possibly elimination of the corner comes after the Tempietto, where Bramante cre-
ated corners in the arcade surrounding his tholos scheme but was otherwise free of them. It is also ironic
that the Tempietto and St. Peter's presented two projects at the most extreme scale spectrum. While the
compression of the classical and programmatic motifs may have helped Bramante see this dynamism more
clearly in the Tempietto, he magnified the intensity and recombinant budding overlay of the void in his
plan for St. Peter's, where the void is the form of the building. The building is conceived as a series of voids
(Figure 10), the mass assuming an entirely different relationship of part to whole, in constant tension to
the void, compressing the solid from virtually every side. The structure becomes a definition of force, no
longer the static load-bearing requirement. In this reading, the void becomes autonomous, the space itself,
the solid becoming interstitial, or simply what happens between the void.

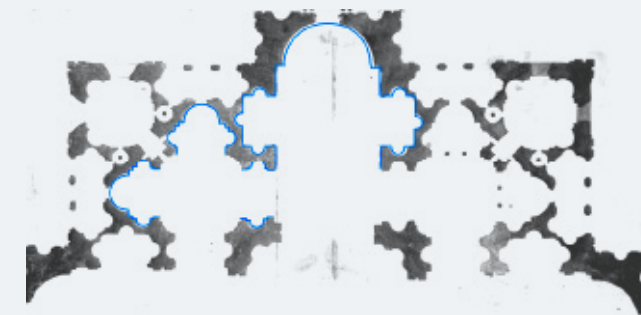


Figure 10

Bramante's exploration of "modern" spaces is evident in the transformation of his study and ex-
ecution from Santa Maria presso San Satiro in Milan, San Pietro en Montorio, and finally to sketches for
Basilica Papale di San Pietro. Bramante sought a visible, convincing synthesis of a "national" or "universal"
language in architecture, undoubtedly assisted by his commissions' programmatic and political require-
ments. The evolution of volume and the disintegration of the membrane evolved from the Tempietto into
the ever-present, constantly tense void-forming space evident in St. Peter's displays a recombinant process
of nested geometry, deployed in a rigorous method evoking contemporary practice.

1. Rowland, Ingrid. "Bramante's
Hetruscan Tempietto."

2a. Transformational diagrams
depicting manipulation of the
Doric by author.

2. Transformational diagrams
depicting radial array and
manipulation of the Doric
by author.

3. Transformational rendering and
plan diagrams by author.

4. Plan drawing of Bramante's last St.
Peter's iteration



ADVANCED VI STUDIO - IMPERMANENT ARCHIVES
 Teammate: Audrey Hampton
 Spring 2024

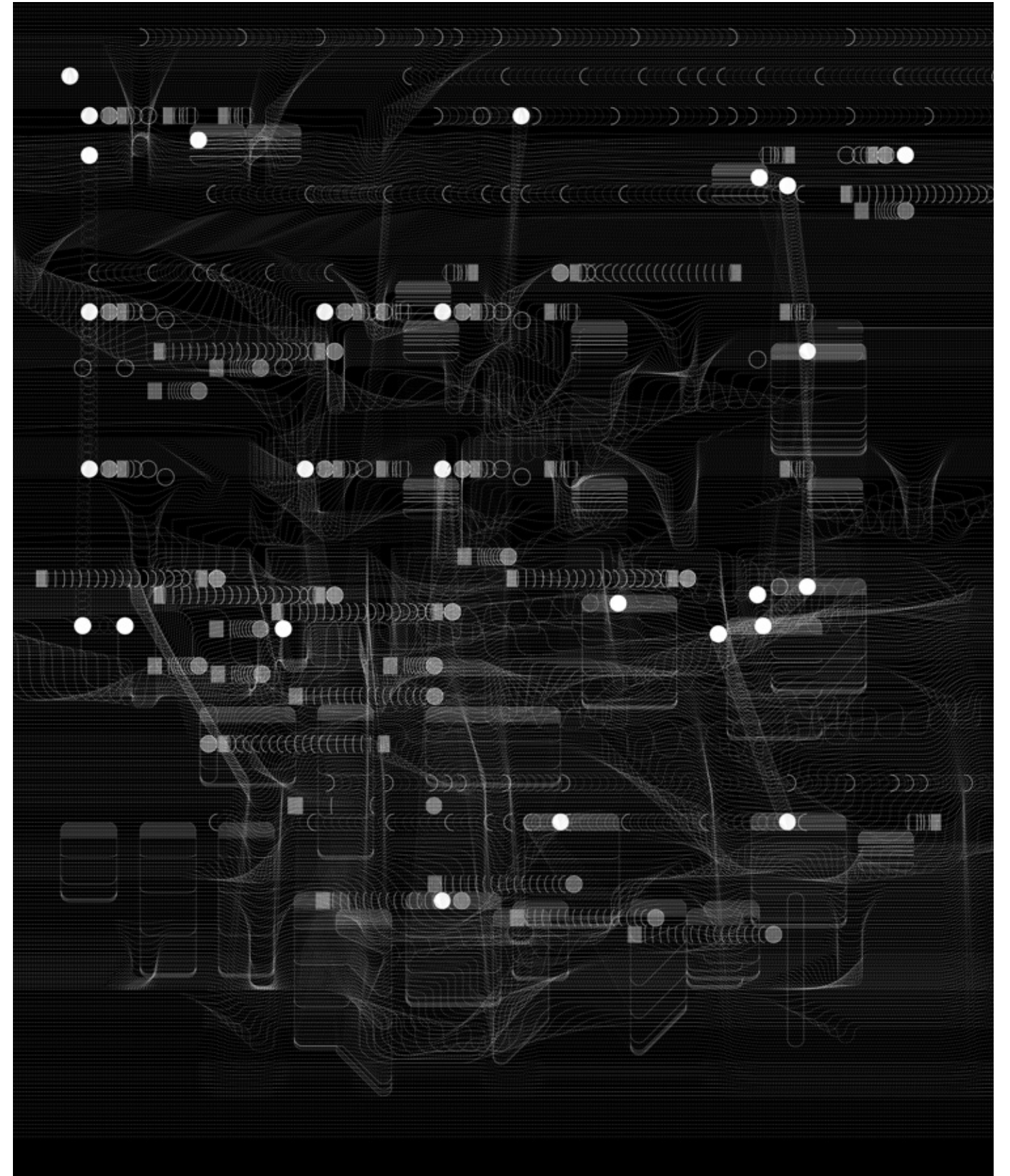
A LINE IS A HORIZON NEW

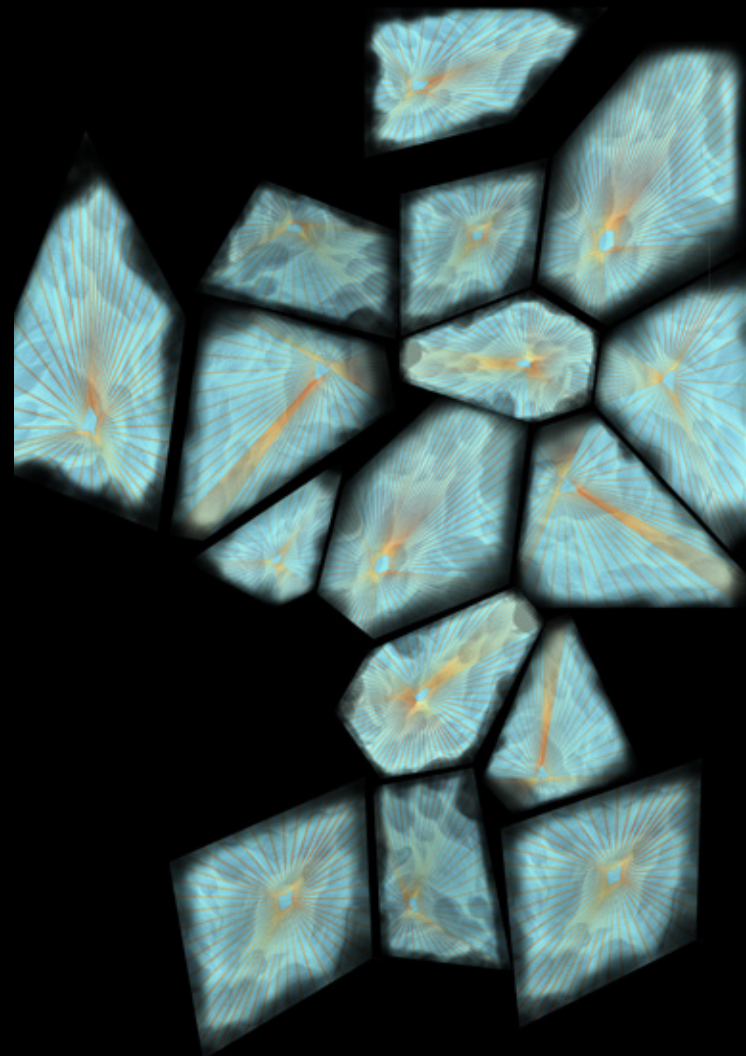
Entropy in the natural world is necessary for re-ordering and continuance; a fundamental phase of the biological cycle where material loss transforms the corporeal to the sublime. The project represents a shift in the societal practices surrounding death and its presence, or absence, in the city. The archive facilitates a more humanitarian and environmentally sustainable ritual for remembrance, allowing tangible post-mortem practices to enable the continued ephemeral collective experience of urban life. The prototypical urban waterfront site within Central Park allows for the disruption of sequestration of death in the city, while offering individual choice and agency in death. The systemic practices address both the pragmatic and ephemeral aspects of death by accommodating interminable accumulation and creating spaces for remembrance and reflection, for life, death, and all gradients of grief and joy.



Analyzing and translating material studies created an abstract, but critical and nuanced framework to interrogate the impermanent archive. Our translation focused on loosening, phase change, displacement, accumulation, and re-ordering in relation to an input of heat, or an increase in enthalpy.

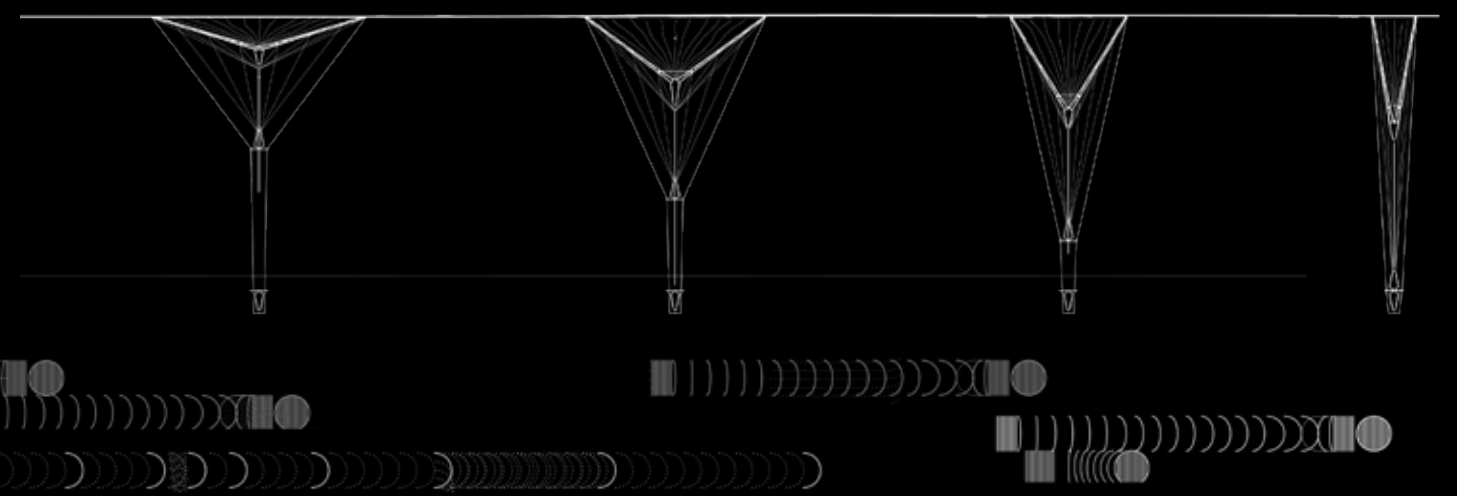
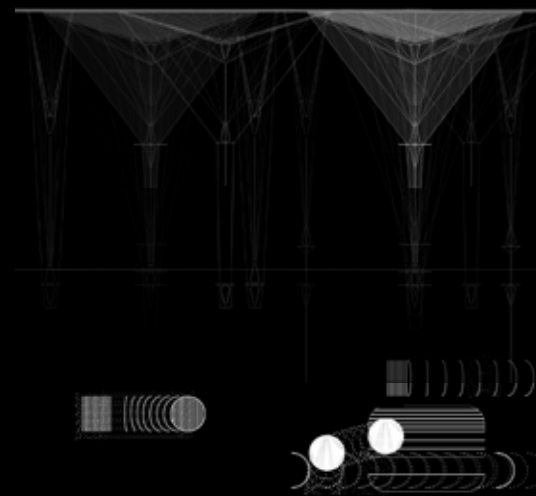
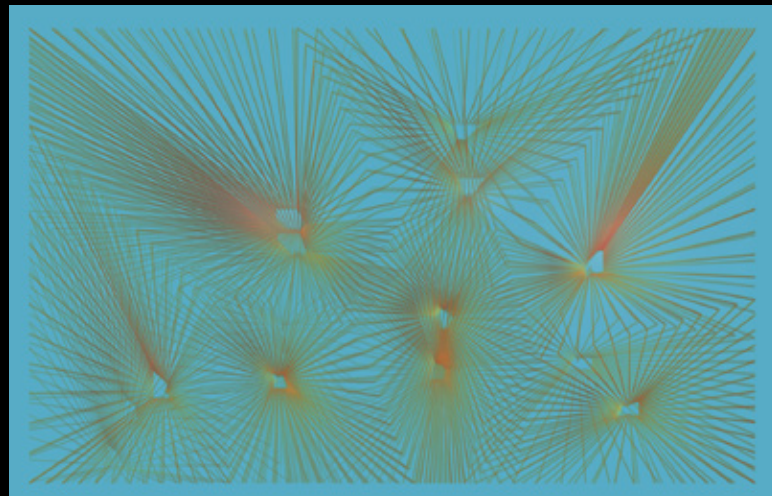
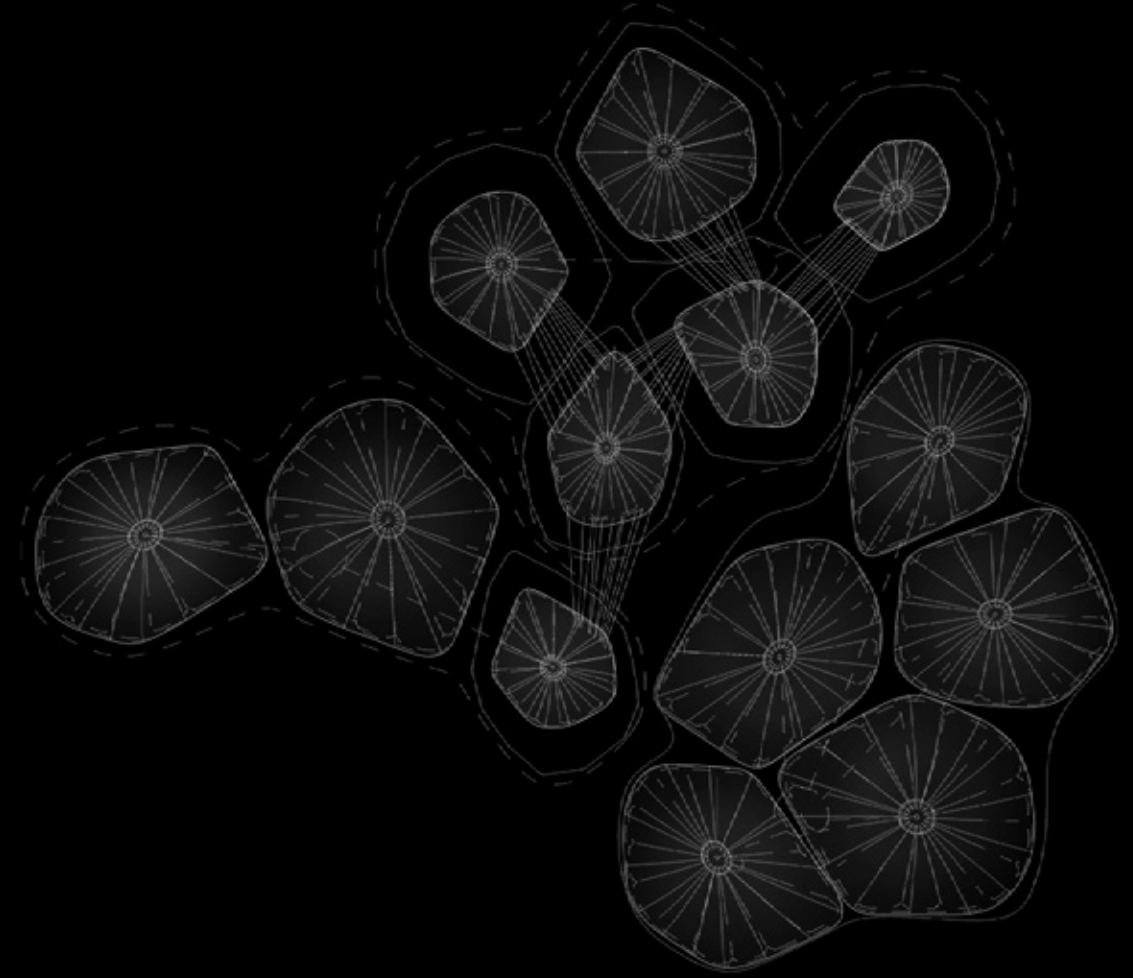
The reciprocal relationship between enthalpy and entropy became central to our architectural investigation of alkaline hydrolysis and our aspirations for what the project could do.






Interpreting the nodes of accumulation from our analytical drawing allowed us to derive our scheme directly from our ideas on the impermanent archive, and put the operable lily pad holding the human remains at the center of the kinetic, experiential, and philosophical aspirations of the scheme.

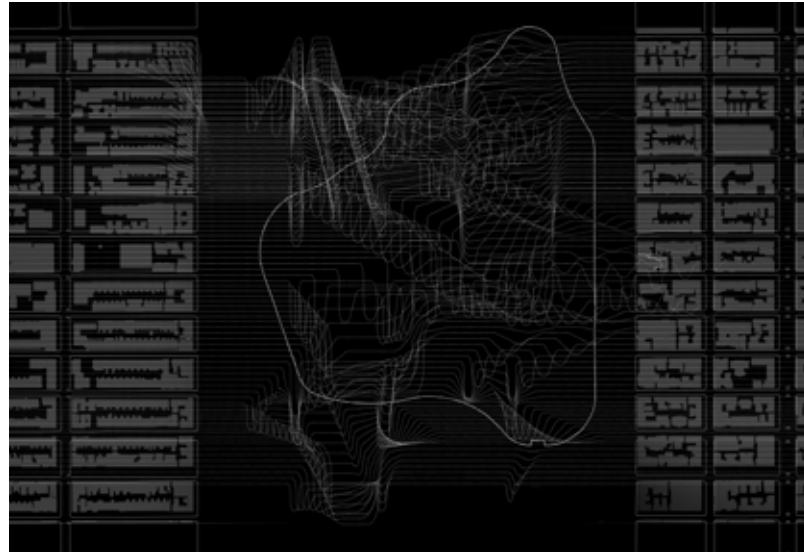
The voronoi pattern can be observed in countless natural forms - cells, clay, flowers. It is a geometry governed by physics, or forces. Investigating a project shaped by forces, the voronoi was the start of our exploration into a project entirely shaped by these "natural" forces. The lily pads float in the reservoir water, gently drifting (bottom left).





The investigation of the voronoi pattern continued into our site plan logic. The “second” translation begins to disaggregate the voronoi into a fractal pattern of civic sacred gardens. Nutrient rich effluent from the reservoir will pass through earth and tree canopy, creating serene pockets to reflect, or picnic.

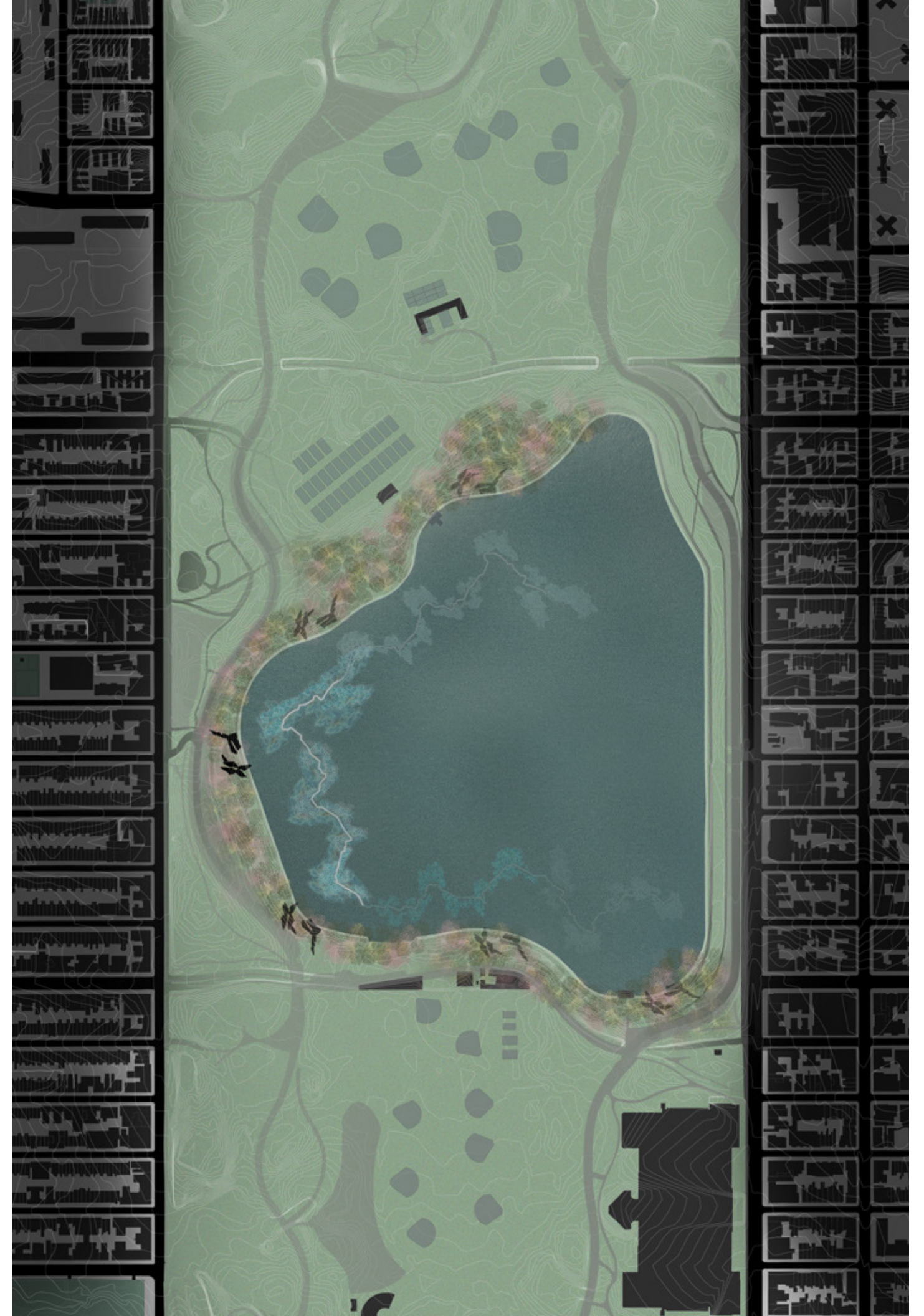
The darkest geometries mostly running left to right represent the path of the water, splintering in a gradient as one is returned from water, to earth, to city.



The diagrams on the left were produced earlier on in the semester, investigating the provocation of returning oneself back to the city.

The site plan shows the small pavilions and their relationship to an altered park landscape, transforming the area around the reservoir (and beyond) into civic sacred gardens able to host and abundance of life.

The lily pads continue to aggregate in the reservoir, bound together daily to include all ceremonies, another dynamic between individual and collective.

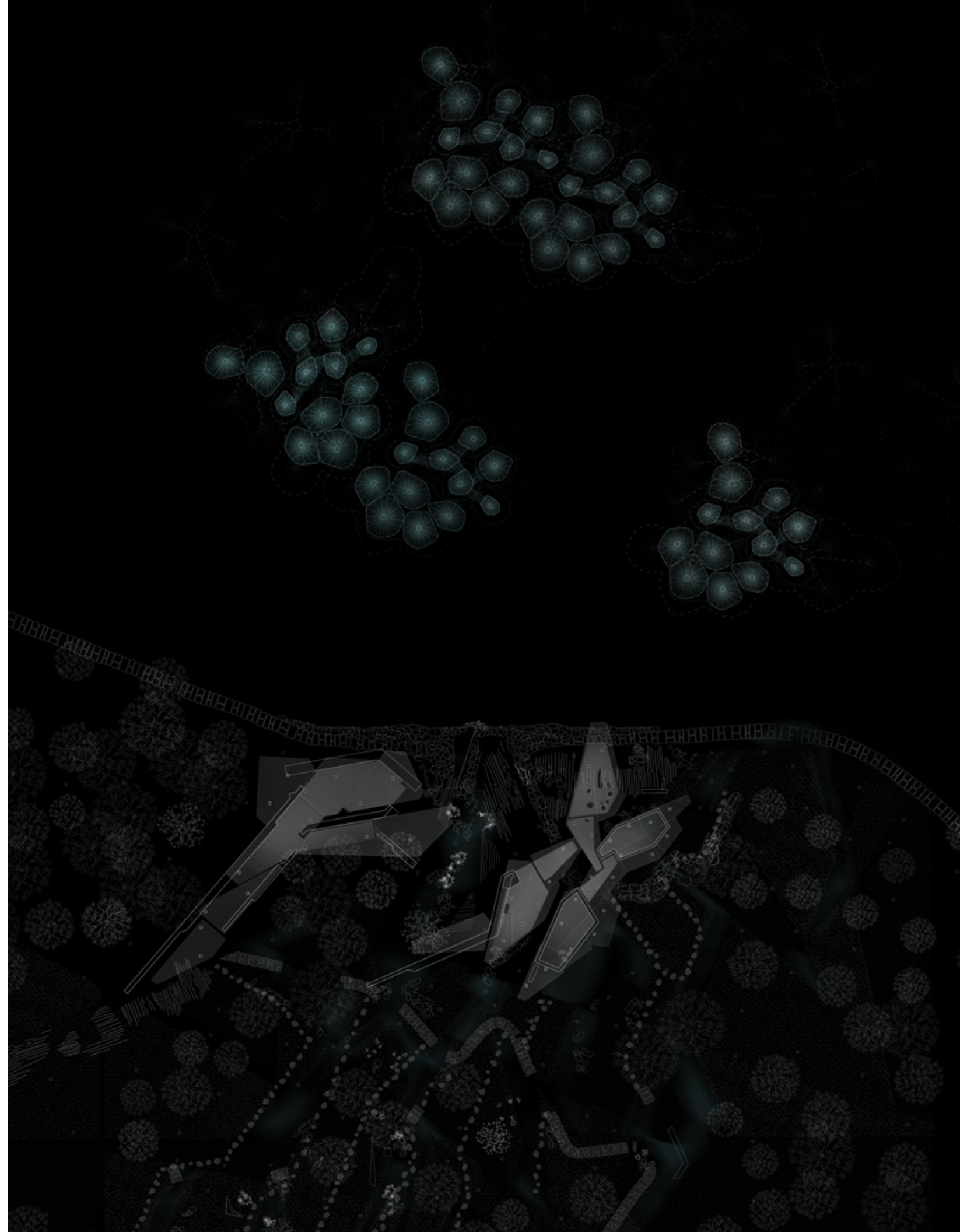





The building strives to be defined by its relationship to exterior spaces that carve through the massing. A pinwheel zone of connectors binds the four nodes through a rain garden that invites the riff raff of the deconstructed reservoir wall through the space.

Visitors can occupy the pavilion during ceremonies, or the pavilion can be open to the park for other collective programming - town hall meetings, clubs, game board night, after school programs, etc.

With smaller paths navigating the gardens that are sometimes wet and sometimes dry, there are many opportunities for reflection and recreation. The intervention strives to be a new kind of public space.



A night photograph of a city skyline, likely New York City, reflected in a body of water. The sky is dark and cloudy. The city lights are visible, and their reflection is seen in the water. A teal digital overlay, consisting of a network of lines and nodes, is superimposed on the water and the lower part of the skyline. The overlay appears to be a complex, interconnected structure, possibly representing data or a network. The overall mood is futuristic and technological.

The horizon is always an aspiration—a journey, sometimes to conquer, but hopefully, in the future, to illuminate. At the horizon, light rays literally bend as they pass through steep thermal inversion in an atmospheric duct. The horizon, in the mountains and the sea, has always beckoned us forward. We can do better, and we will.

The new horizon is an opportunity to imagine a beautiful, soulful, and collective human future where we can be generous to generations of future New Yorkers even in our final act.

Thank you.

with immense gratitude

To the professors for all of their hard work, dedication, insight and exhilarating conversations:

Miku Dixit, Benjamin Cadena, Mimi Hoang, Nahyun Hwang, Marc Tsurumaki, Karla Rothstein, Mark Rakatansky, Michael Bell

To the Shop Crew for keeping us making, and the Output Shop for keeping us drawing.

To the peers who delighted and inspired me with their diligence, talent, and passion.