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*DISSIPATING IMAGINARIES*

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## *Vaporized Vandalistic Voyeurism*

ADVANCED V STUDIO  
 Professor Mario Gooden  
 Mentor Gene Han

**Scarred and scarce through US militarization, the erasure of Bikini Atoll has been fetishized to progress the perversion of Western Advancement.**

Bikini Atoll is a coral island in the Pacific Ocean of Micronesia, located in the country of Marshall Island which was a nuclear testing site in the 1940s and 1950s. It is located roughly halfway between Hawaii and Australia. The United States conducted these tests after the indigenous population of 167 individuals was removed. They were then displaced for a total of 3 more times due to the effects of the testing.

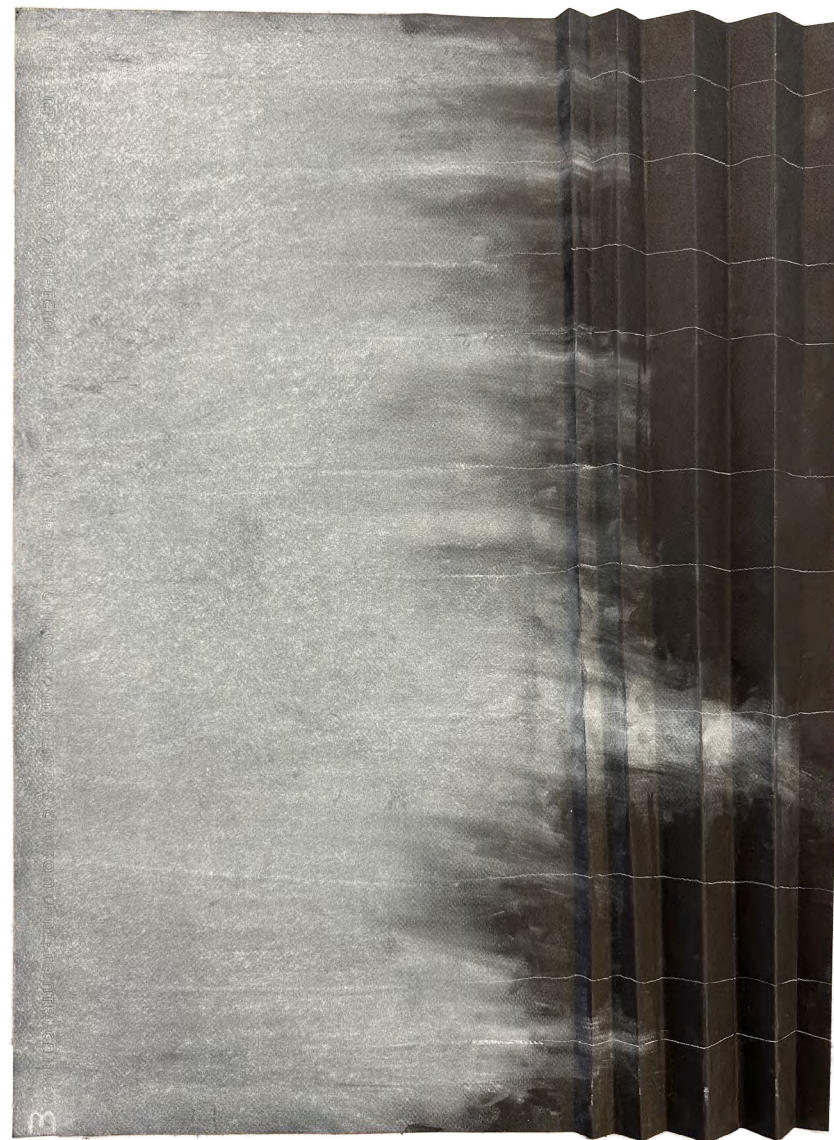
A total of 23 nuclear devices were detonated at seven test sites, on the reef itself, on the sea, in the air and underwater. One of the bombs, Crater Bravo, was 1,000 times more powerful than the one dropped on Hiroshima and vaporized three islands in the lagoon with a yield of 15 megatonnes of TNT. The crater left by Castle Bravo vaporized 3 islands on the atoll leaving a crater 6,510 ft wide with a depth of 250 ft, the

plumage reached 130,000 ft. A total of 23 Nuclear tests were done with 20 Hydrogen Bombs and 3 Atomic bombs, mimicking the atomic fusion of a sun/star. This spewed Uranium, Plutonium, and Cesium all over the islands contaminating everything with radioactive waste.

The implications of this testing can be seen by radioactive fallout burning people's skin, falling of hair, causing tumors and cancers, and a wide array of unexplained illnesses. The local ecosystem is still showing signs of radioactivity 76 years after with 42 coral species locally extinct at Bikini Atoll. However, the US treated this as a display of power and fetishized the testings with bomb viewings inviting other countries' heads of state and cake-cutting celebrations. These forms of representation of Bikini Atoll further its fetishization through the vandalism of these islands.



AIR  
*Smog Pollution*



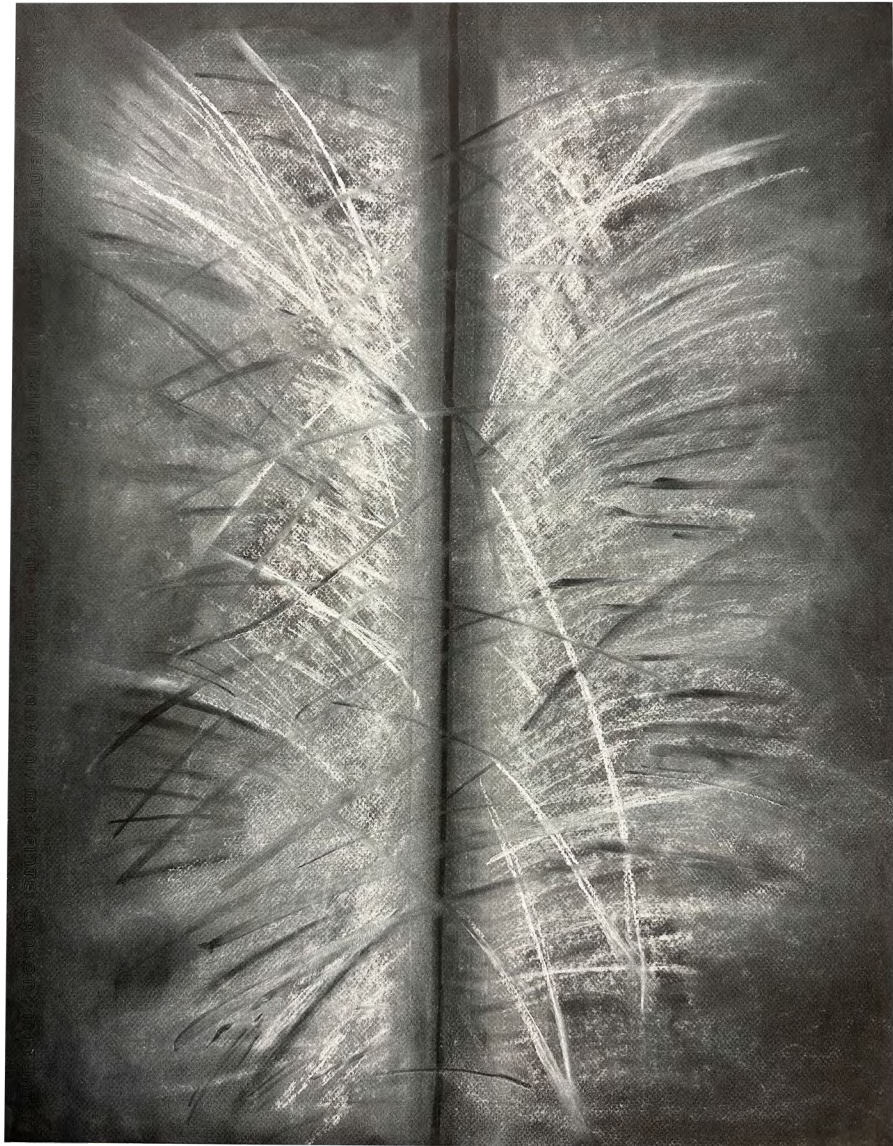
EARTH  
*Overstepping Boundaries*



Water  
*Invasive Species*

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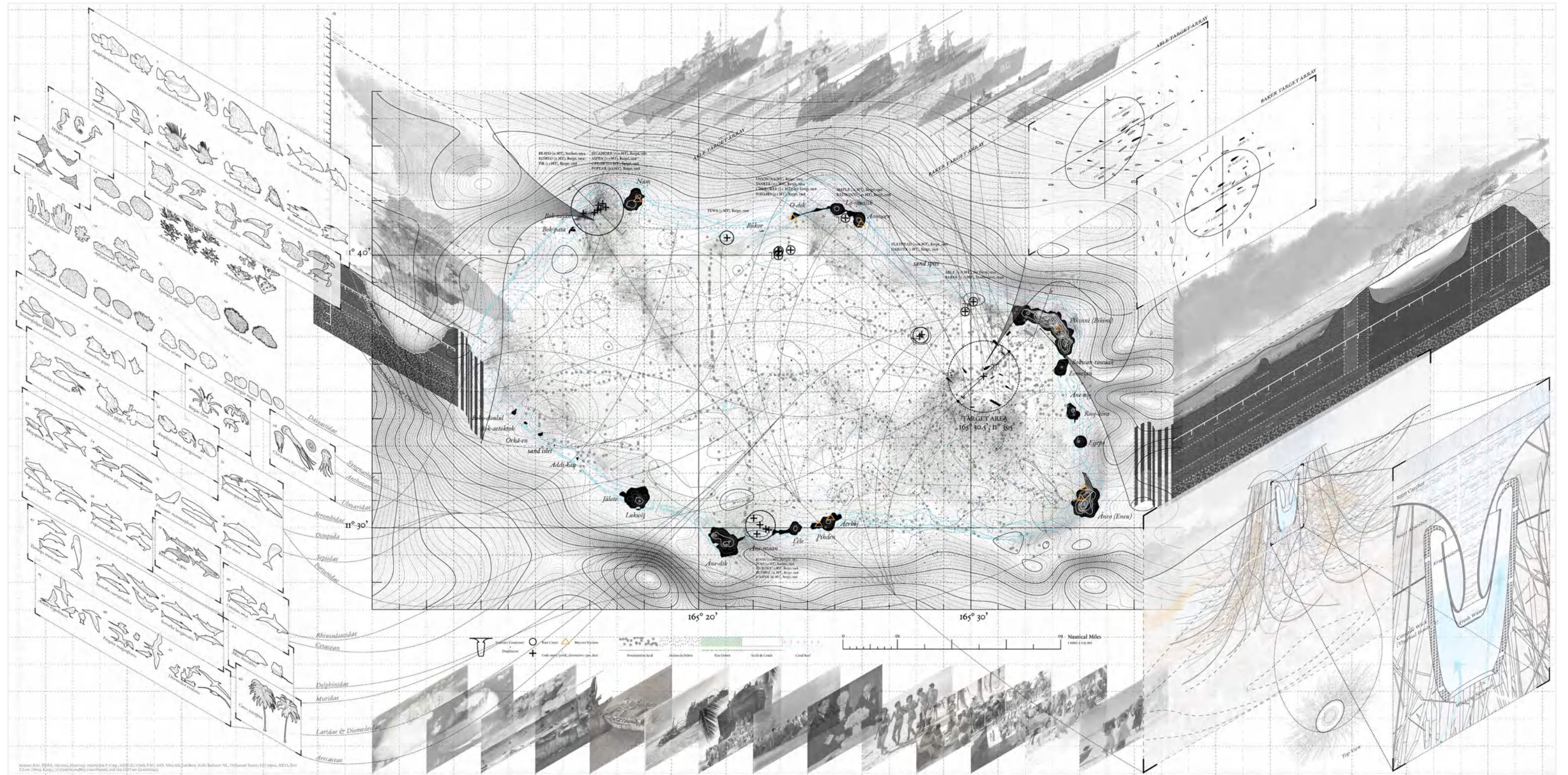
AIR  
*Commodification of Fog*



EARTH  
*Gardening and Gridding*



Water  
*Comfort vs. Fear*



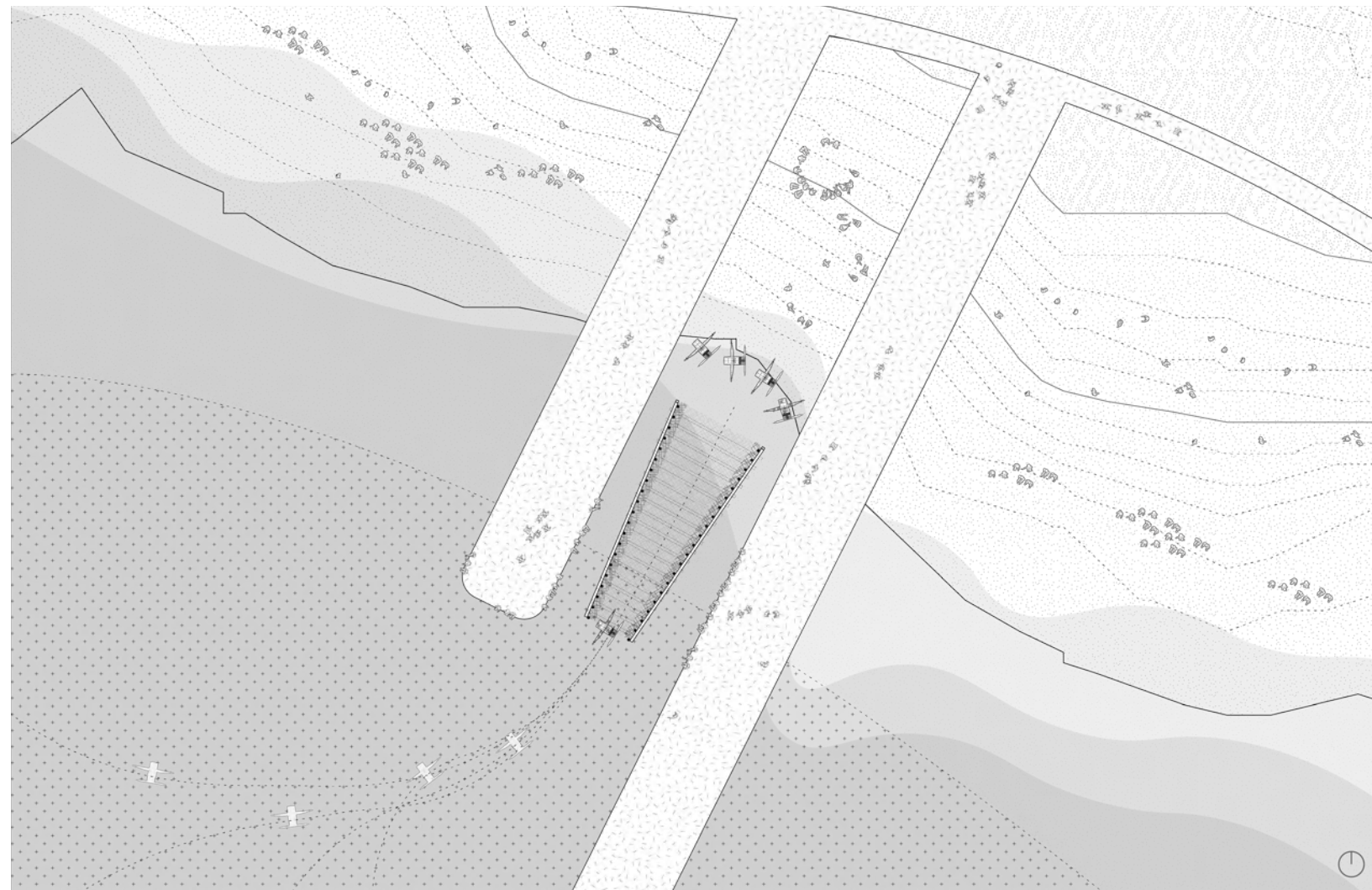
Bikini Atoll meticulously mapped through surveys displaying ecosystems, sunken ships, and bombing devastations.

## Sunrise/Sunset Gateway

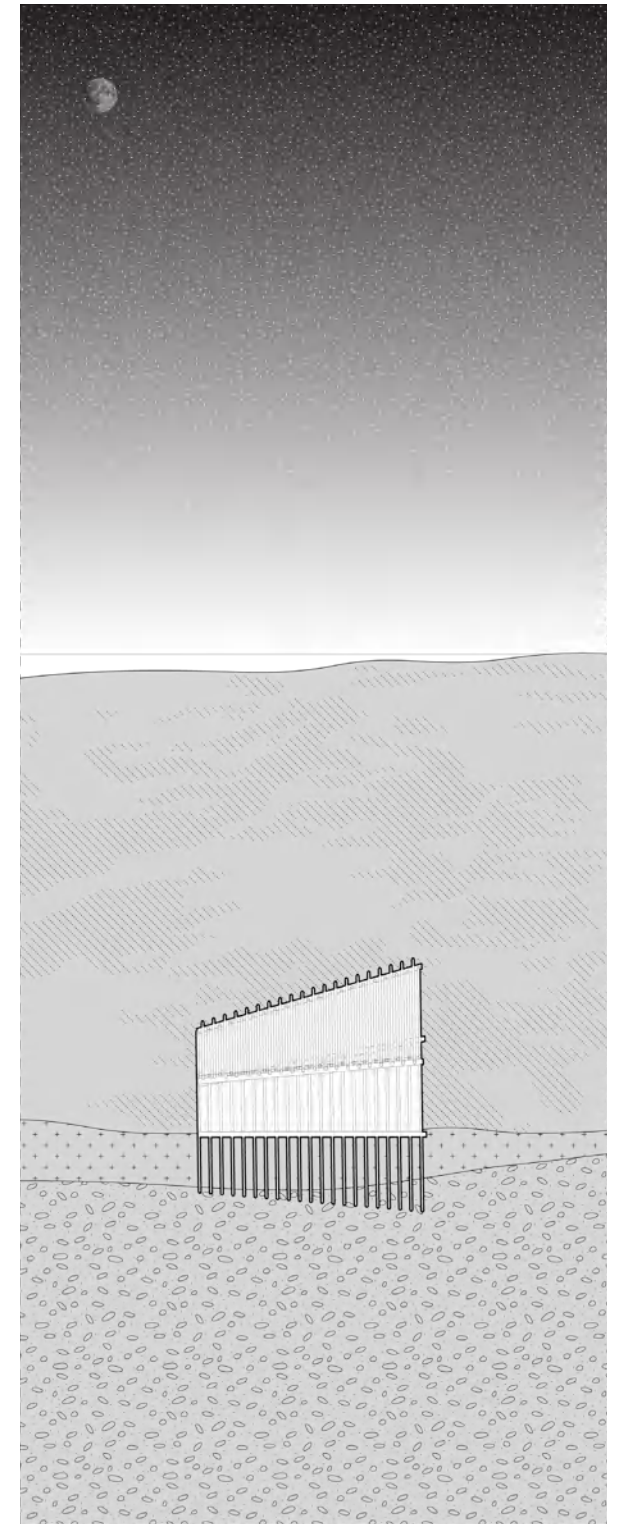
Through notions of homage, the current proposal aims at revitalizing the lost connection between the land and the descendants of Bikini Atoll and the native Marshallese.

Governed by a ritual, the journey starts at sunrise and ends at sunset, paying its respect to honor all the land that has suffered as a casualty of war not frequently counted for. A series of 3 shrines weave a network to provide spaces of grief, contemplation, and production.

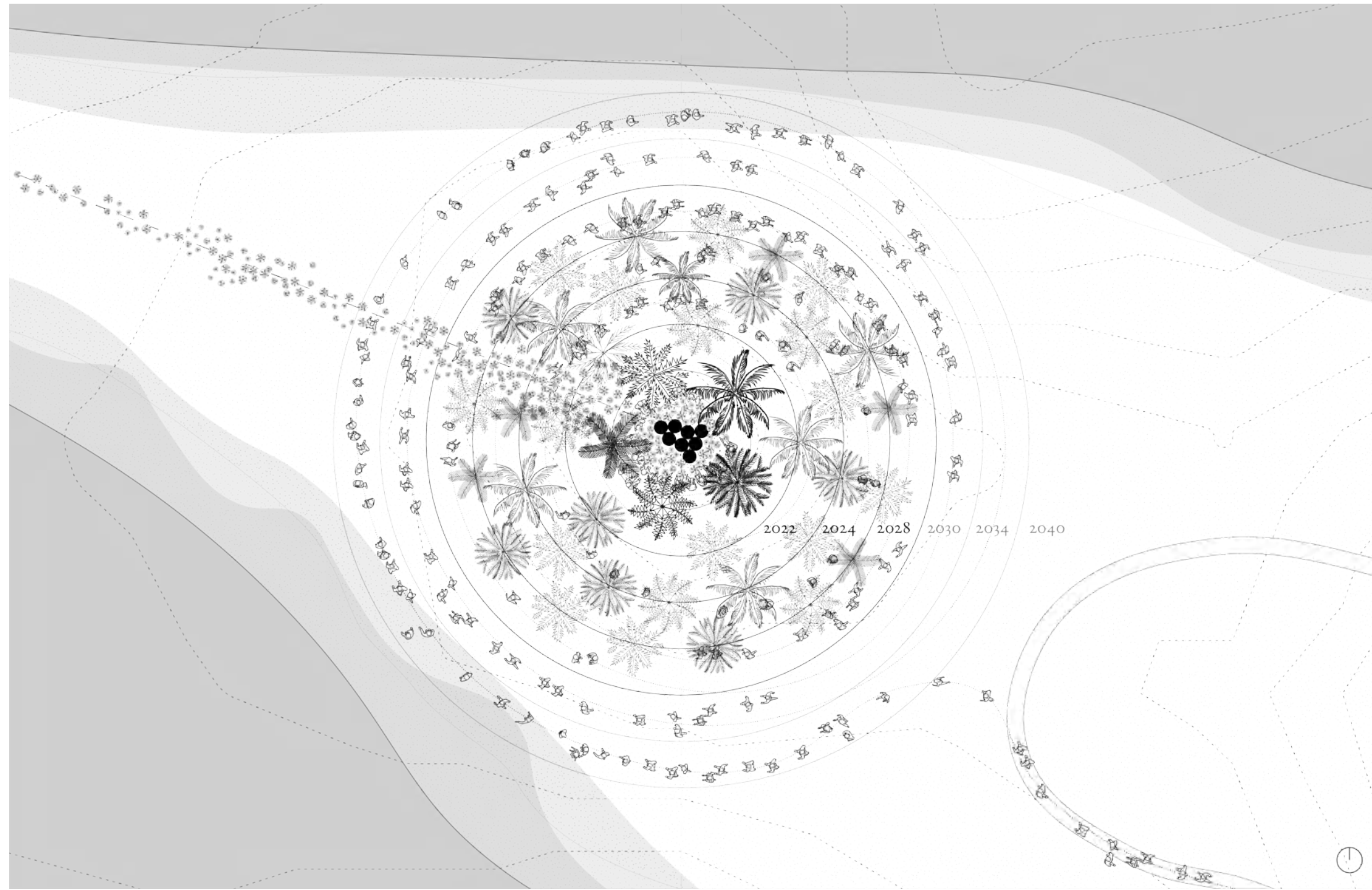
Taking place in the month of March, as March 7, 1946 was when Bikinians were evacuated, this ritual acts as a pilgrimage back to their homeland. Passing through the gateway at sunrise, the inward-facing thatch intertwines the tactility of the native palm fronds, gently brushing upon them and welcoming them back *home*.



Sunrise and Sunset Gateway Procession Plan



Sunrise and Sunset Gateway



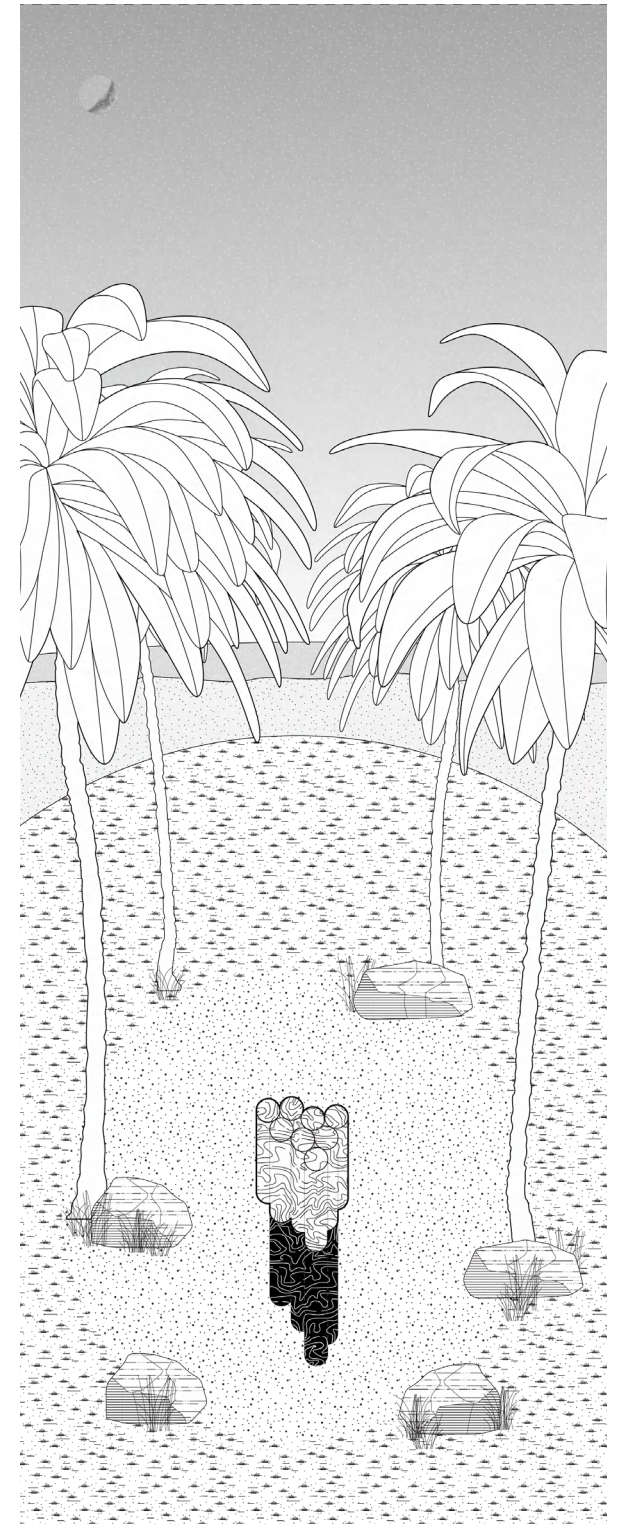
Land Shrine Procession Plan

## Land Shrine

Upon the morning arrival, descendants gather towards the most northern tip of the island and circumambulate around the circular palm grove towards the Shrine devoted to the land. An offering

table made of palm trunks inlays into the ground at various lengths, fitting like a key, providing a surface for devotion. Through the passing of each year, the shrine expands as each descendant can plant palm

trees, growing the concentric grove, intertwining the human connection with the land as an act of care which are at the core of the ritual.



Land Shrine

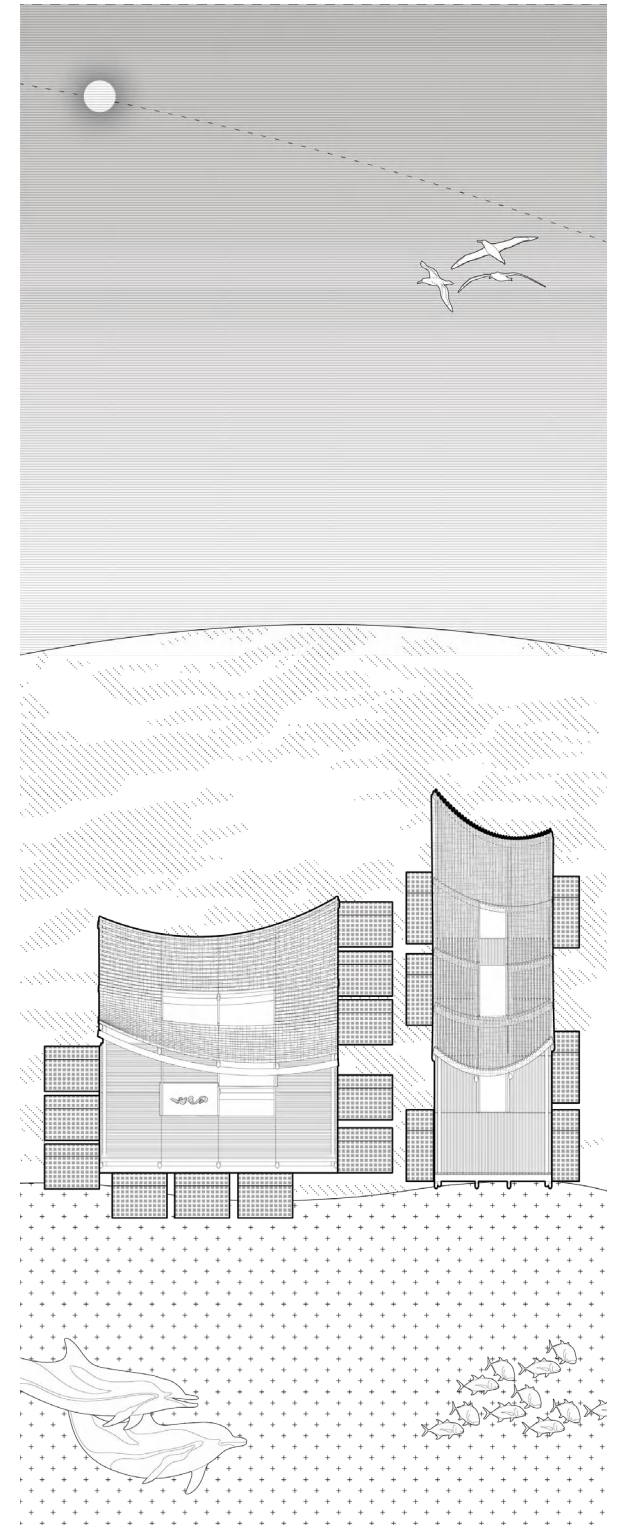
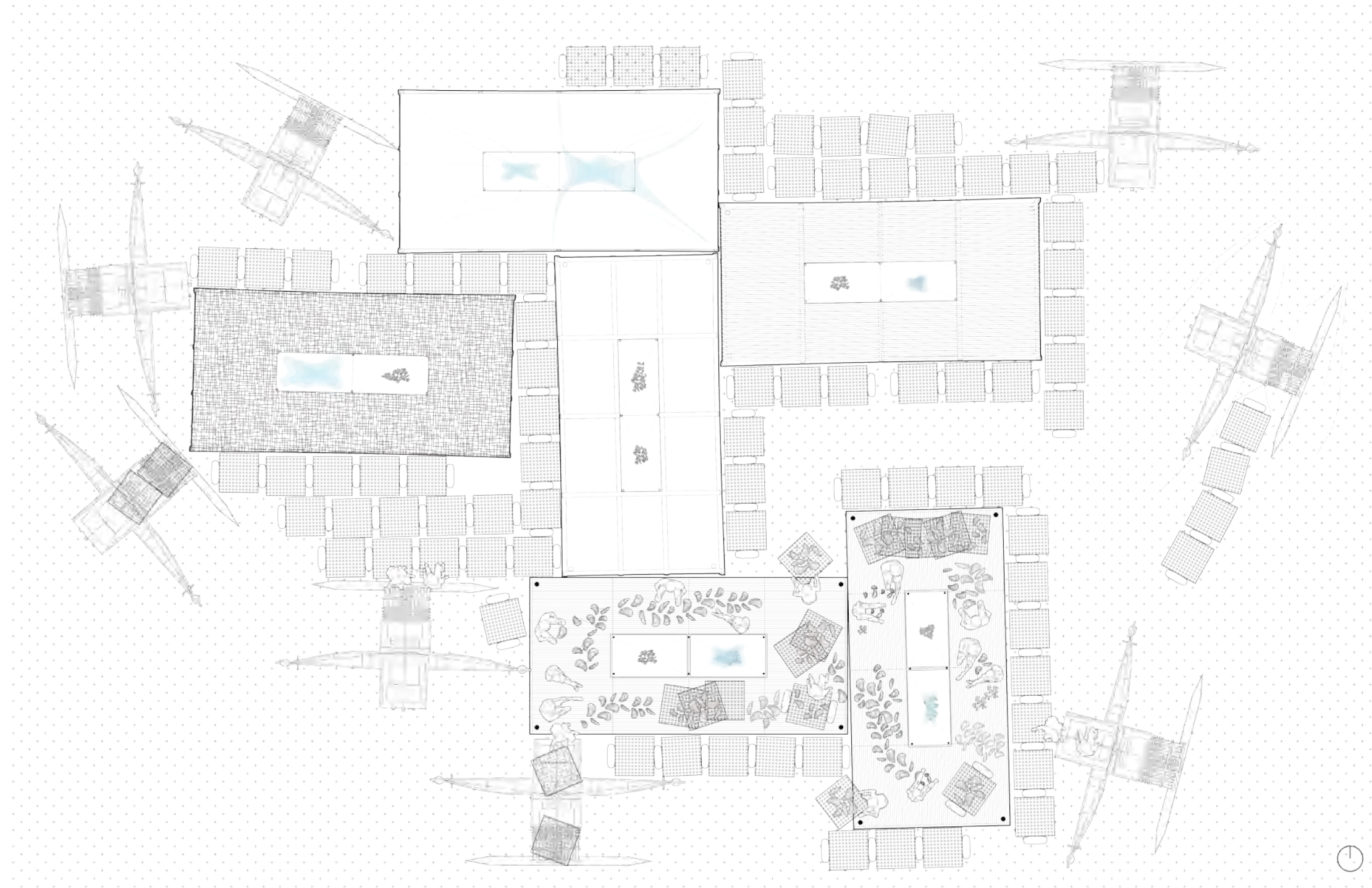


# Water Shrine

Around noon, the ritual activity moves toward the middle of the lagoon as this is a shrine devoted to the water. This working shrine aids in the removal of radioactive materials from the

lagoon as this ritual entwines the ecosystem of the sea, sealife, and descendants. Cages cluster around the shrine, nurturing giant clams, oysters, mussels, etc. which are a vulnerable species after the

bombing. Each mollusk can filter around 50 gallons of water a day trapping radioactive isotopes, forming them into pearls that are harvested.

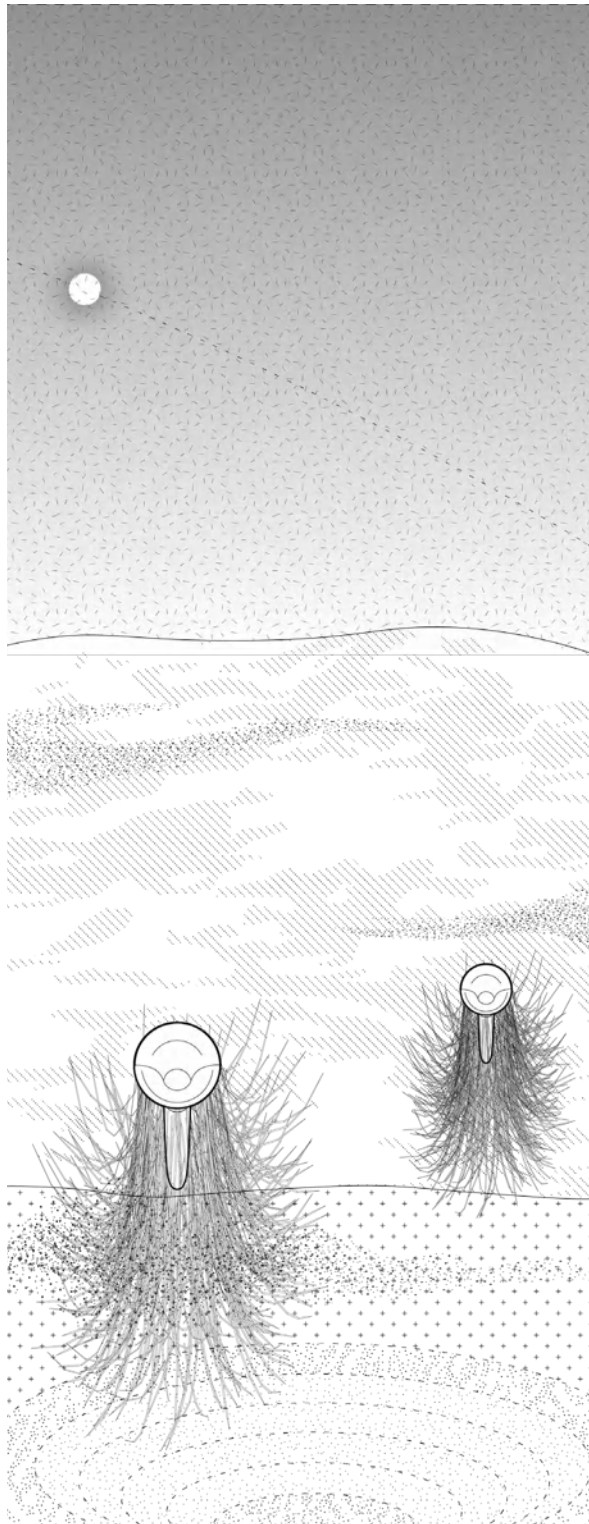


Water Shrine Procession Plan

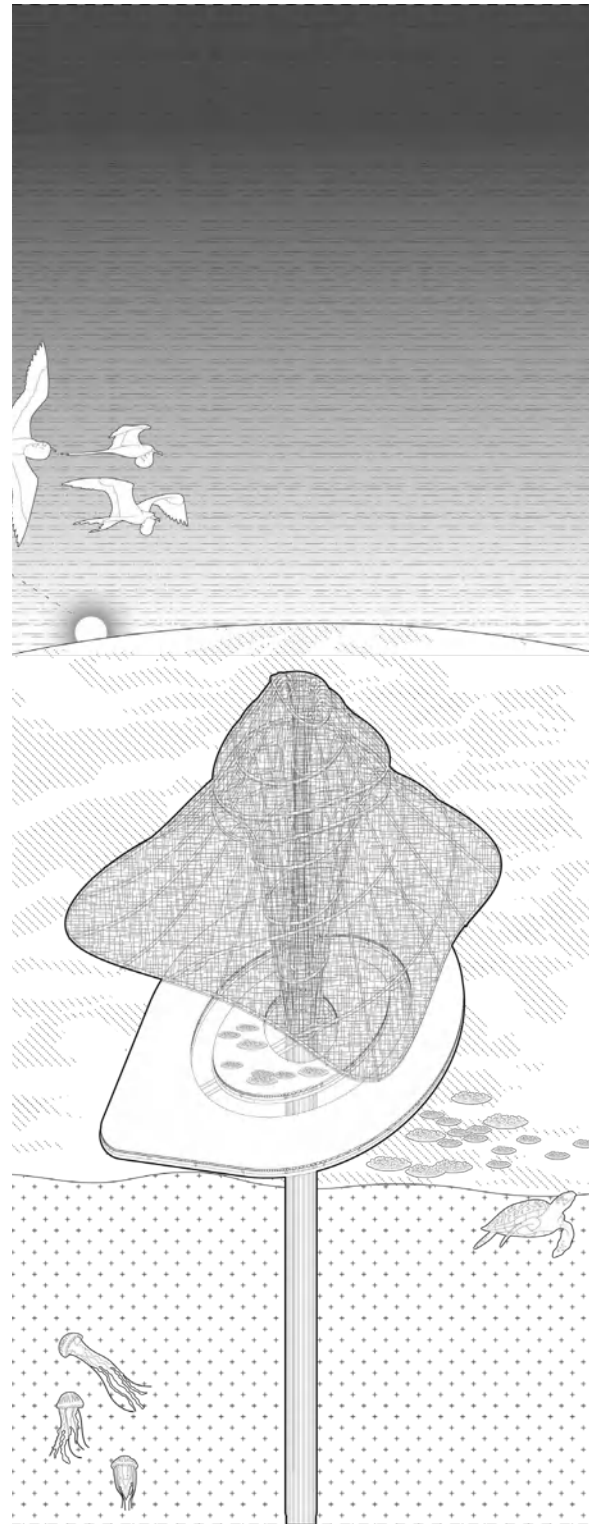
Water Shrine

## Air Shrine

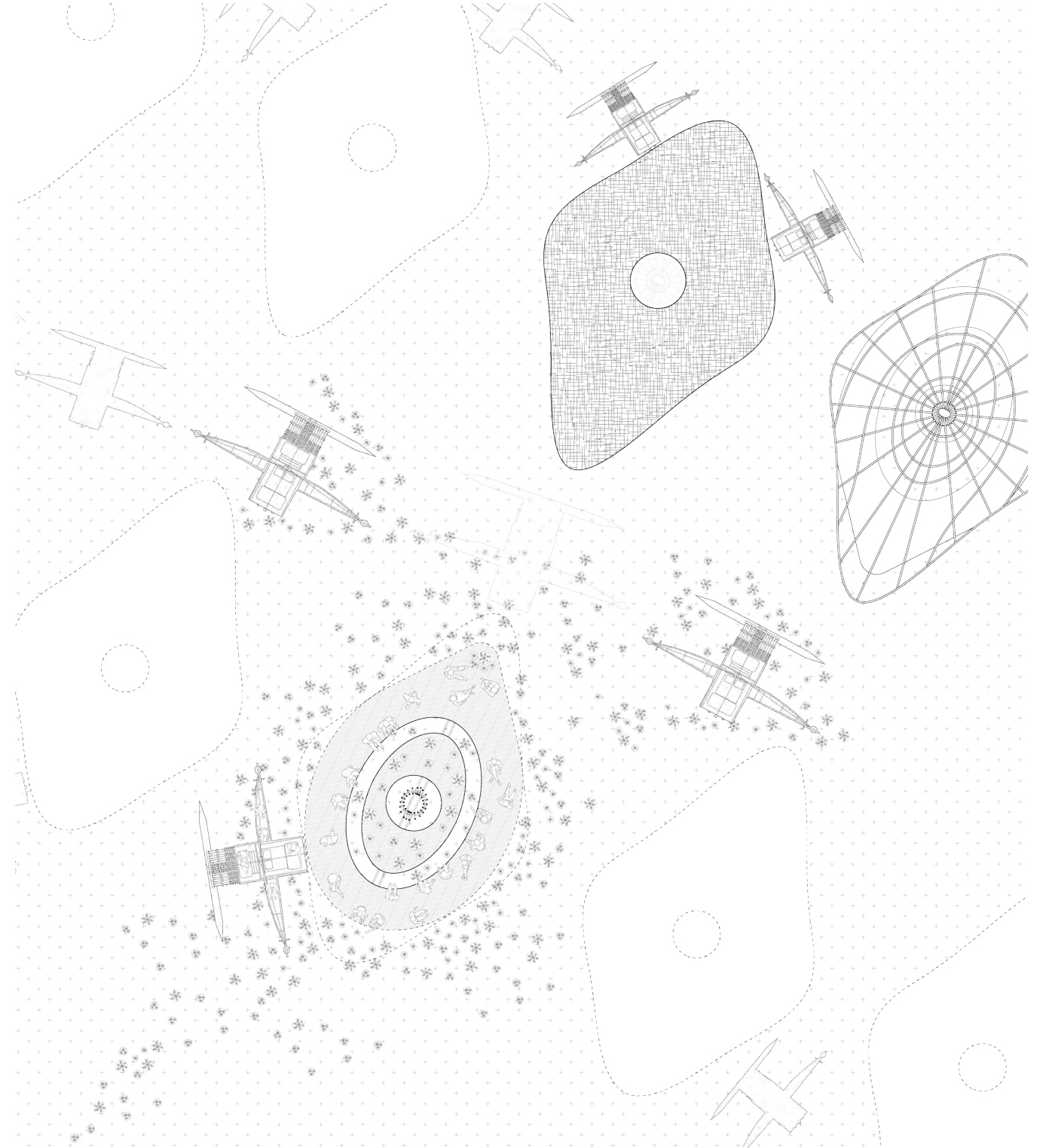
Reaching late afternoon, it is time to Journey to the Shrine devoted to the air. Upon passing by, a small network of devices with recycled acrylic wool traps the radioactive particles while the core evaporates the sea water and collects the freshwater condensation. Stopping at the Shrine devoted to the air and cosmos, the shrines are placed on axis to the Castle Bravo crater memorializing the 3 islands vaporized as well as the native Bikinians lost to the testing. The axial reading of the crater to the sky is emphasized as descendants grieve both the land and their people through their traditional practice of placing floating offerings interlacing the spiritual realm with the physical.



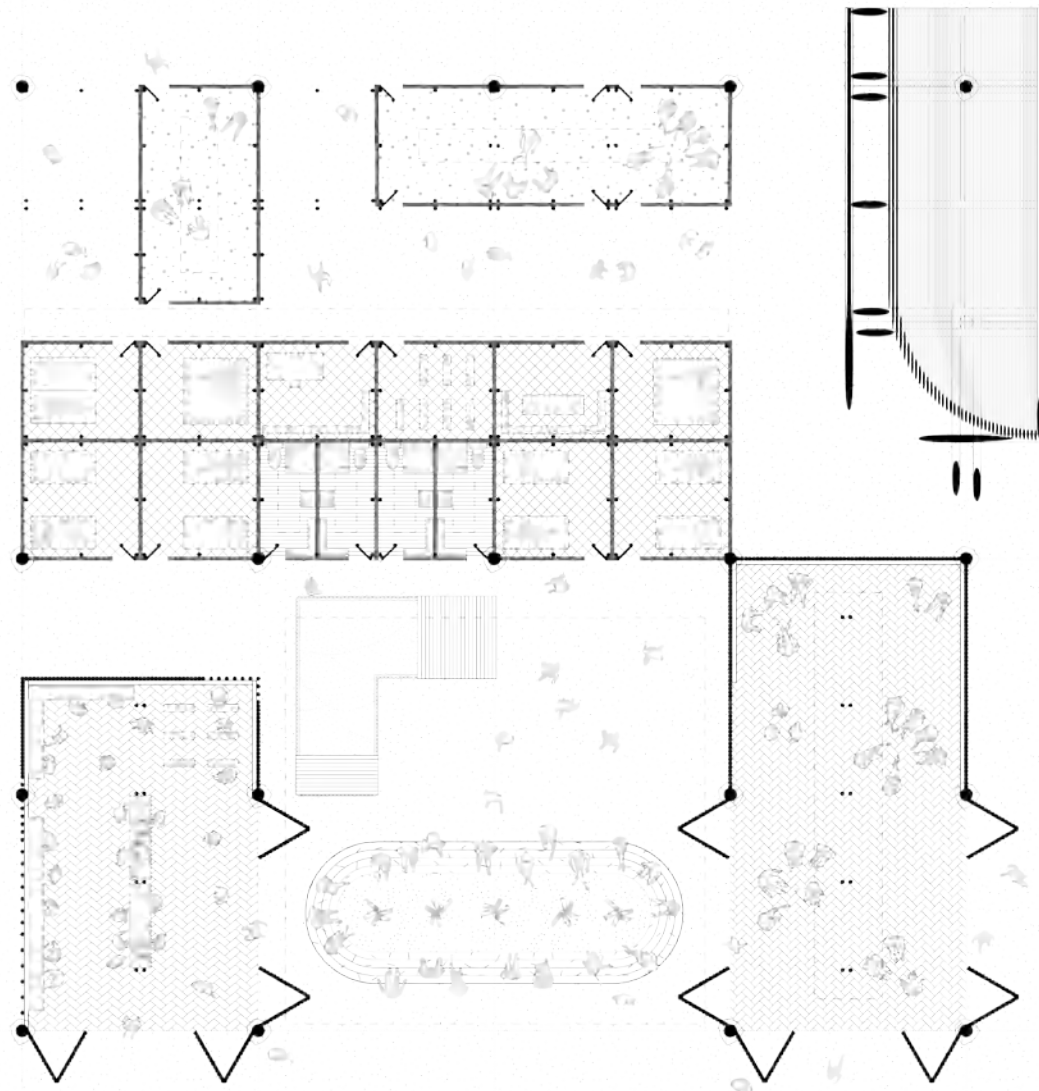
Radioactive Trapping Device



Air Shrine



Air Shrine Procession Plan



Communal Home Plan based off the Weto

## Communal Home

Upon the return back to Bikini Island, the sunsets and their arrival is greeted by the Communal Home. Modeled after a traditional Marshallese home, the Communal Home utilizes the 30' by 30' grid of palm trees planted by the US as a failed attempt to try and establish the wildlife after the testing wiped

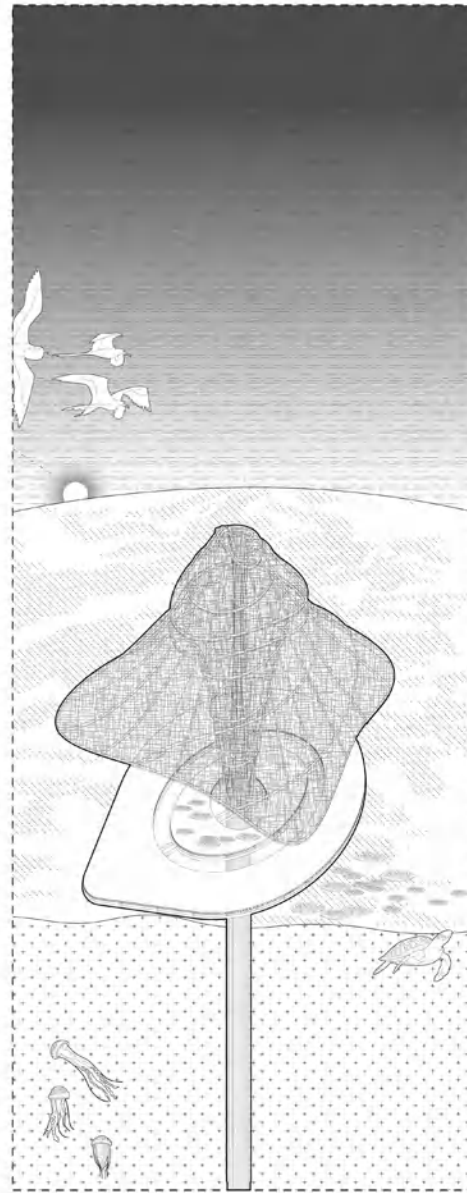
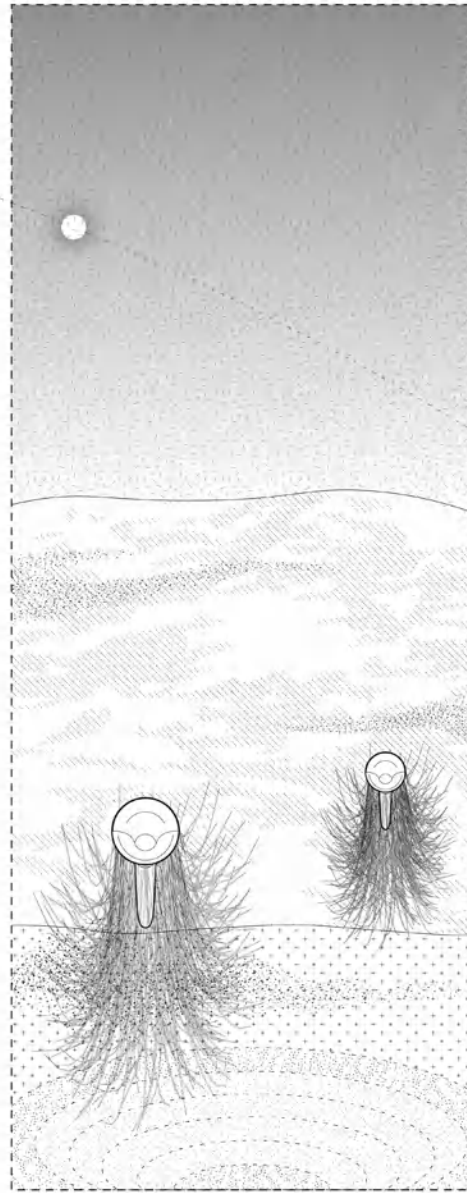
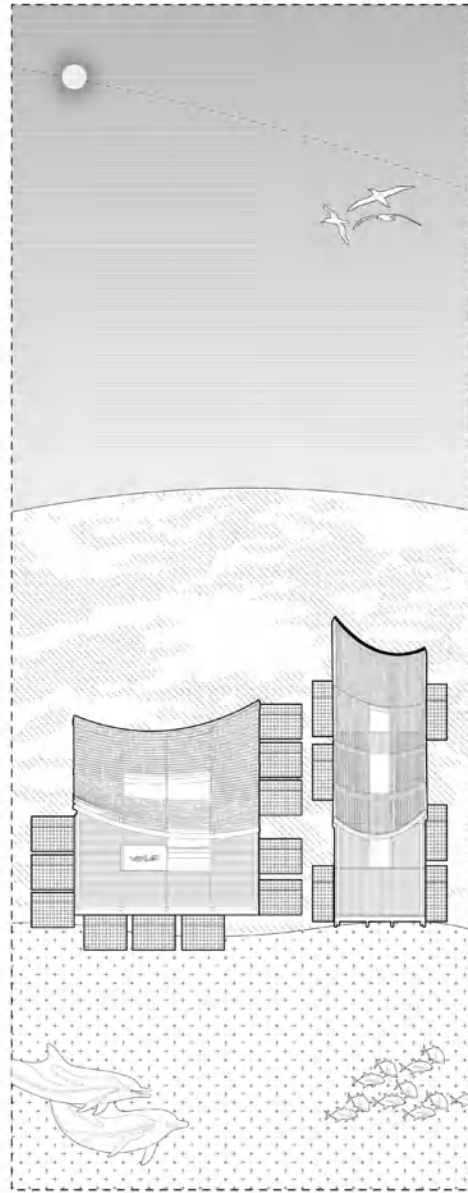
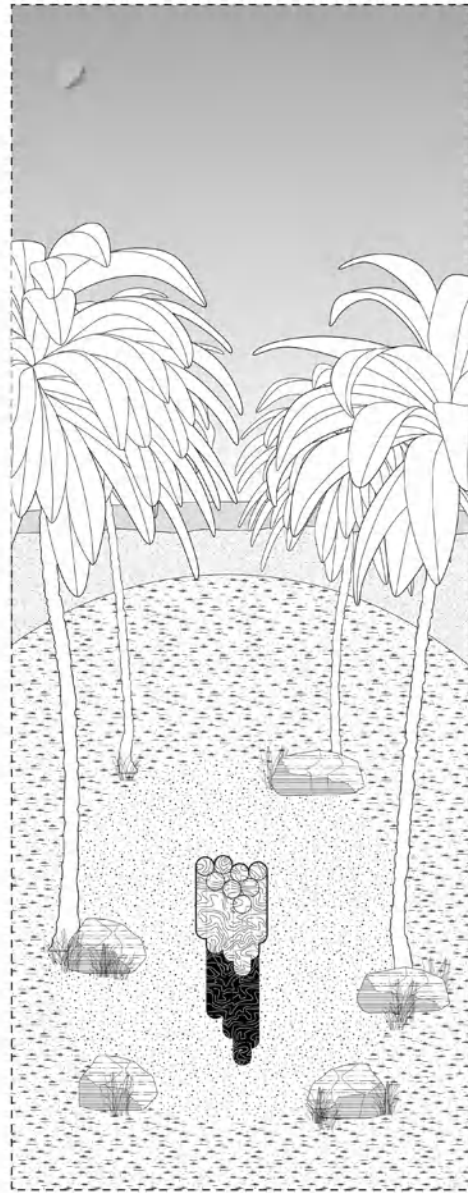
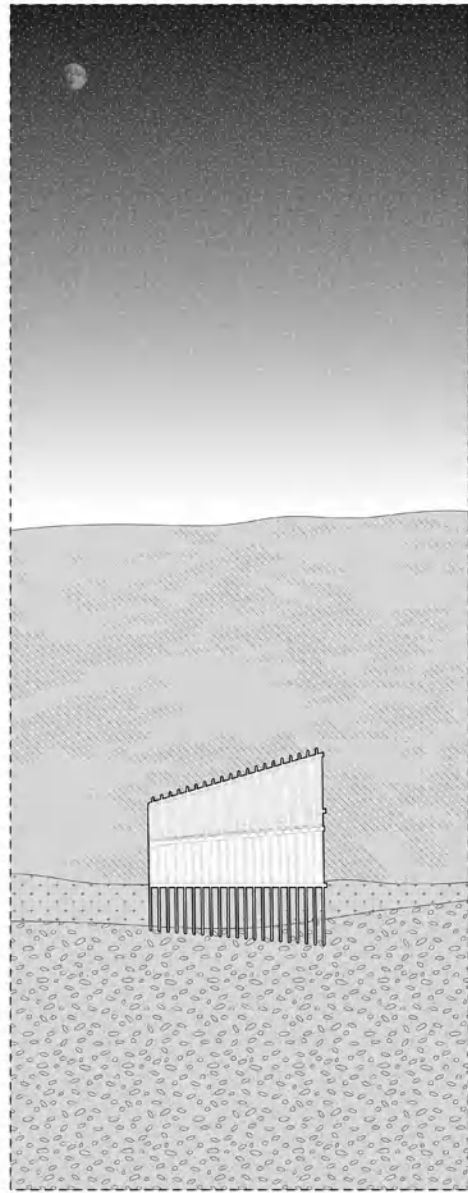
the island clean. The Palm trees lend themselves as the vertical support to an overhanging roof sheltering vernacular notions of separate living, sleeping, drinking and eating. The *weto* or the family unit is represented through the flexibility of expanding and contracting for multi-general usage.

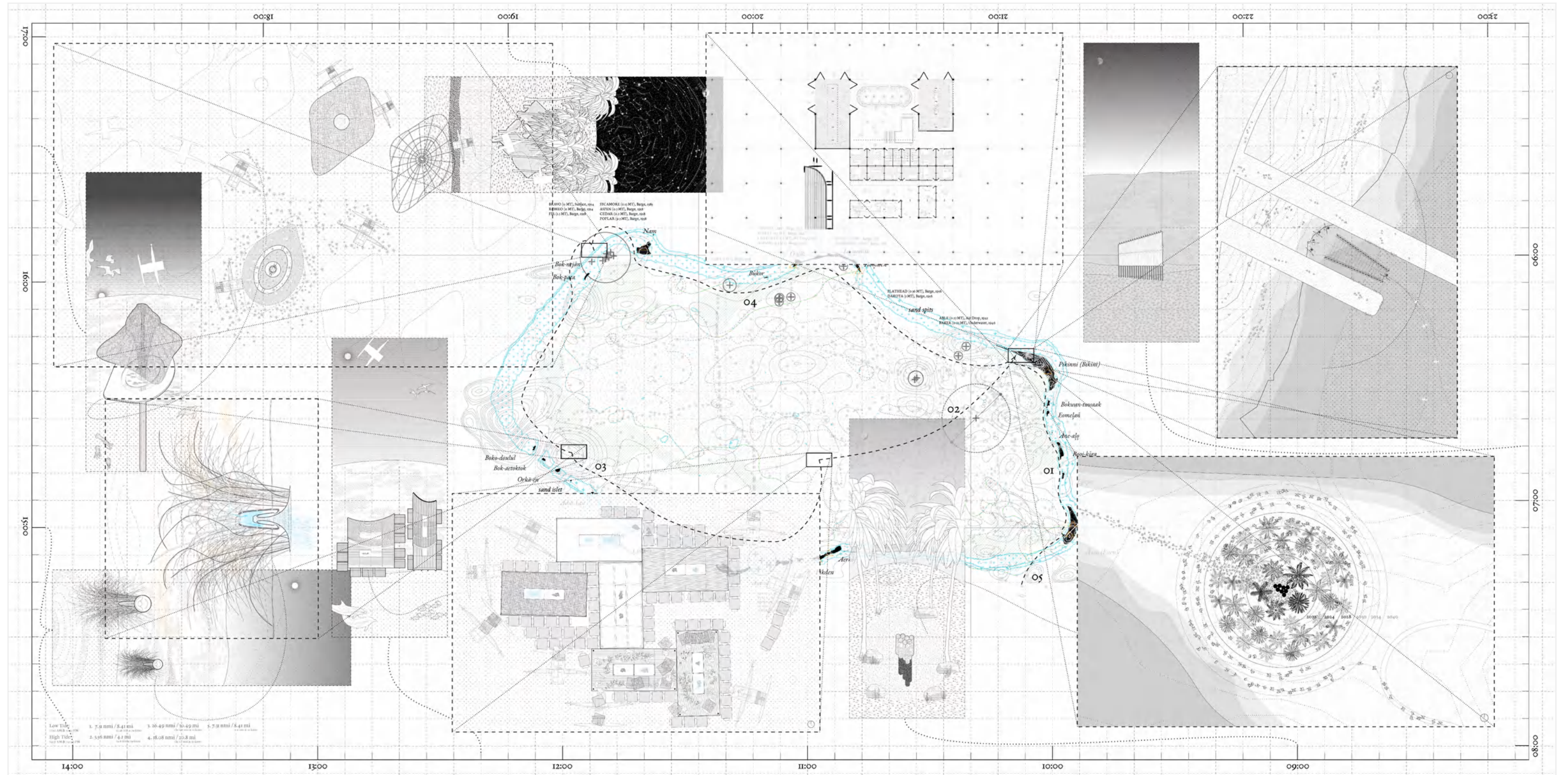
In the middle sits a communal open fire that represents their traditional saying of "one fire, one family" which is accessible to the communal kitchen and living on either side. The last activity of the ritual after sunset is a communal celebratory dance and feast commemorating the ancestors and

the living descendants. The journey is now at an end and individuals choose to stay over a night or to boat back. Cutting through the darkness of night, stars gleam with constellations their ancestors used to navigate as they navigate from the motherland.

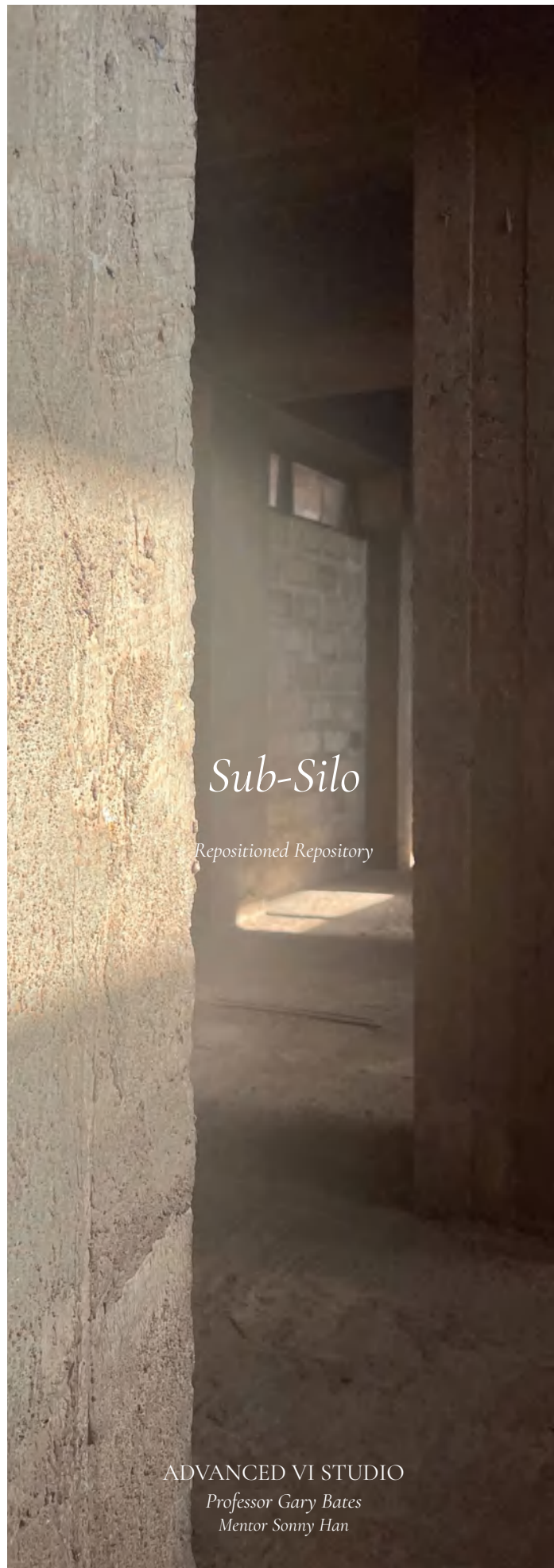


Communal Home





Bordering the map, a timeline from sunrise to sunsets informs the duties taking place throughout the day.



## Sub-Silo

Repositioned Repository

ADVANCED VI STUDIO

Professor Gary Bates  
Mentor Sonny Han

Through stratas of inhabitation, formal tension is materialized into spaces for production and the concentration of knowledge. Perceptions of space are temporal with an ever-changing understanding of coexistence. Synchronously jointed and disjointed at the same time, this allows for the manifestation of unexpected narratives to facilitate new spatial typologies.

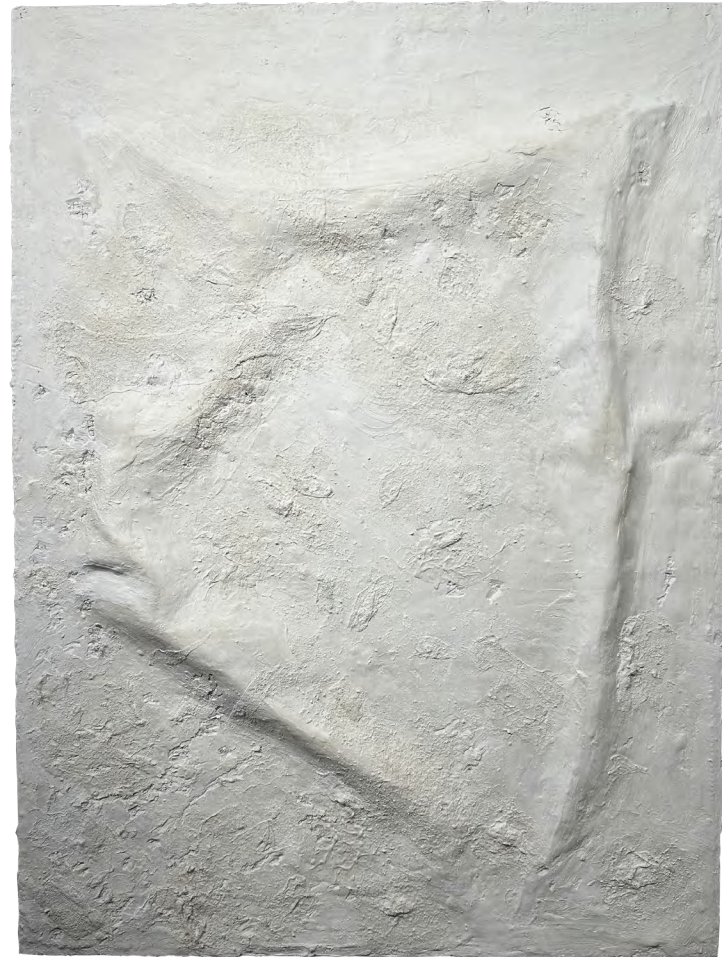
Set to the aspect ratio of a movie widescreen, the notions of individual cognizance define the perceptions of space, engaging the sensory senses of the audience. Frames are dissected and screened over plastic film to examine the connection between blur frames and reality. Images projected are all synchronously focused and unfocused allowing for personal experiences to reconfigure the frames into new narratives. The strata of activity splice spatial experiences celebrating/honoring the respective singular perceptions of civic space while also interconnecting each person through a collective view.

On temporality, anonymity, and perception

Ghana's current civic space typology does not allow itself to provide the necessities of a civic space tailored to its environment. Large wide plazas mimic the Modernist tradition that is inflexible to the ebbs and flows of life. Through strata of gridded layers, architectural tension is materialized into spaces

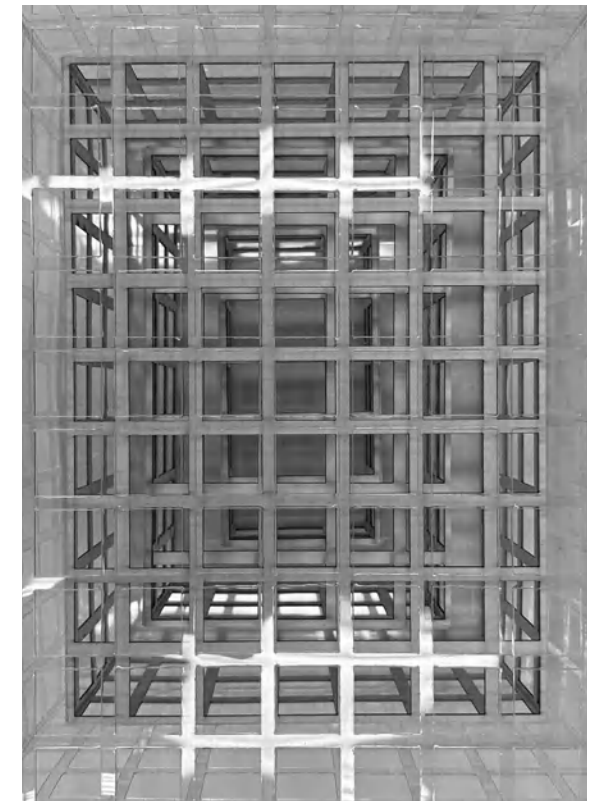
of privacy and veil. Perceptions of space are temporal with an ever-changing understanding of space, synchronously jointed and disjointed within the same view, unexpected narratives are facilitated to form new spatial typologies.



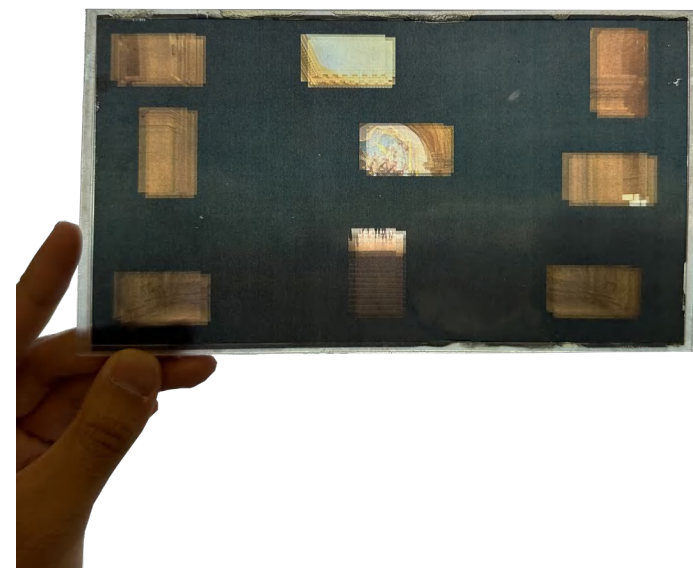


*Textural Mapping: Ghana*

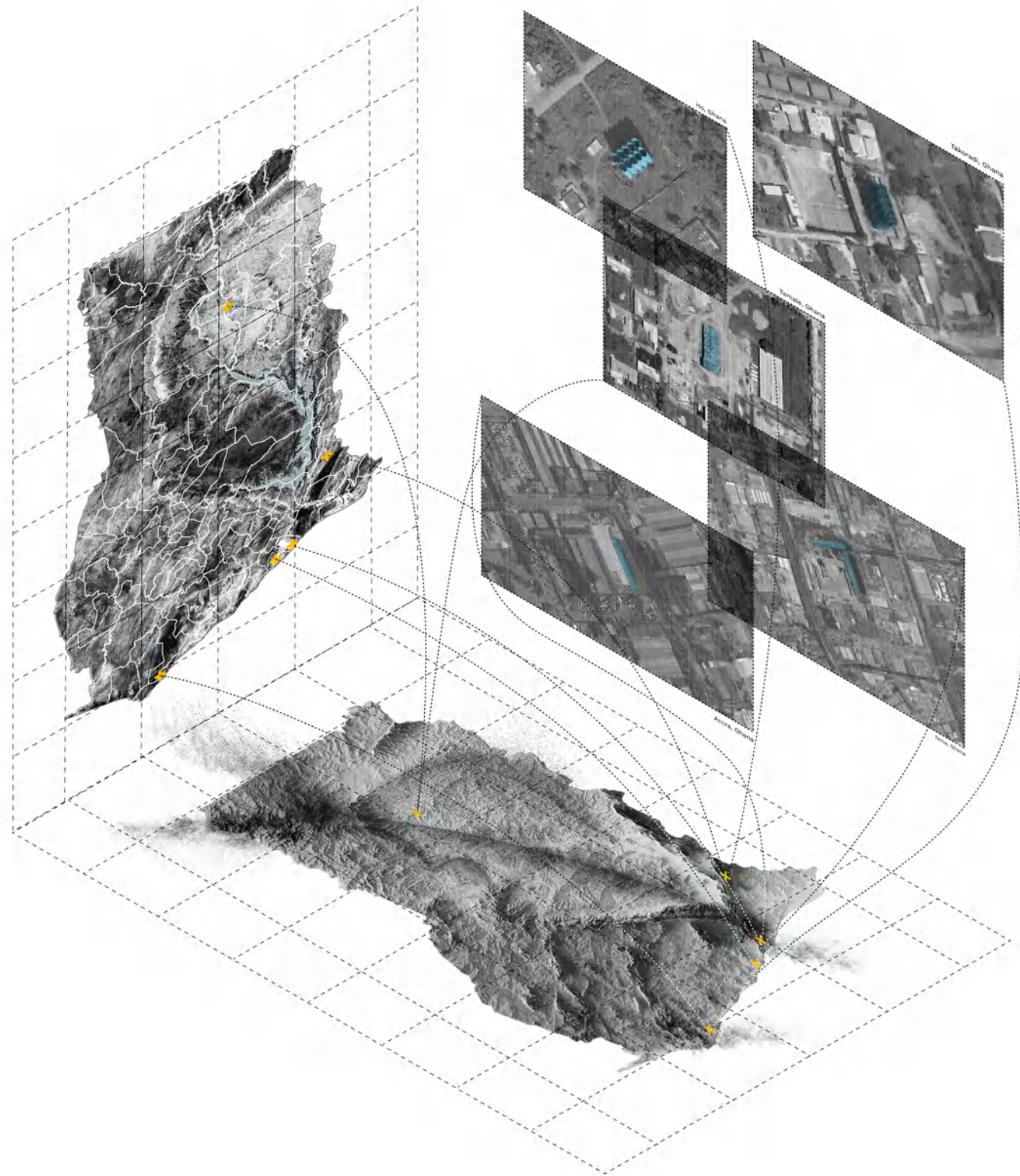
*Model as Tool: Aspect Ratio of a Screen*



*Perception through Gridded Veils*



*Dissected Frames*



The site is located in Tamale, the Northern region of Ghana. Notable sites include Ibrahim's Red Clay Studios and his art foundation SCCA (Savannah Contemporary Art Centre). Visiting one of the late president's (Nkrumah) silo, that has been left unfinished and abandoned, Ibhramin has bought the rights to the property, utilizing it as an art gallery. The dilapidation of the site allowed for new inhabitants (non-human/more than human) to concentrate within the basement. Bats, owls, frogs, and pythons are the main species, forming a new ecosystem within the silo.

The silo is locally known as Nkrumah Voli-ni, *Voli-ni* roughly translates to "inside the hole", *Vo* meaning to extract, *li*: to transfer, and *ni*: here and now.

Referencing this concept, this notion starts to inform the influence of the proposed intervention. On a macro scale, many variations of this silo were implemented country-wide, through the Ghana National Geological radiometric study, it is juxtaposed with the terrain to cross-reference the specific site locations in relation to land fertility and species concentration or migration patterns. This provided sites like Ho, Accra, Tamale, etc. to support the storage of coca and grain production.

Diving into the micro-scale, the site of Tamale is my main case study. The contours of the site are overlaid onto settlement patterns, omitting the current road infrastructure. These contours meld into the reading of the structure producing a spatial condition based on native and migrating species' interaction. The proposed intervention is a repository that meanders along the curvature to bring life to its form.

Serving as a framework to curate civic space and civic knowledge, the repository is influenced by site adjacencies, absorbing the talents around the site to support native wildlife, farmers, metal workers, and masons.

Shown in the basement plan, carving into the site, Sub-Silo inverts the relationship between the ground floor and roof providing an intersectionality of space.

The proposal aims to reposition the silo with hopes of generating new forms of production; the production of food and the production of knowledge between humans and non-humans.

By housing a concentration of active knowledge, whether physical in the form of books or mental through human knowledge, resources stemming from materials are openly provided to facilitate new forms of civic sharing.

Knowledge and natural ecosystems are intertwined as the native wildlife are encompassed in this new understanding of civic space. The basement plan is drawn in two strata, humans on the bottom, and more-than-humans on the top, showing the simultaneous occupation of space. Original residents like bats are shown in the roof plan which is flipped and mirrored up throughout the entire drawing.

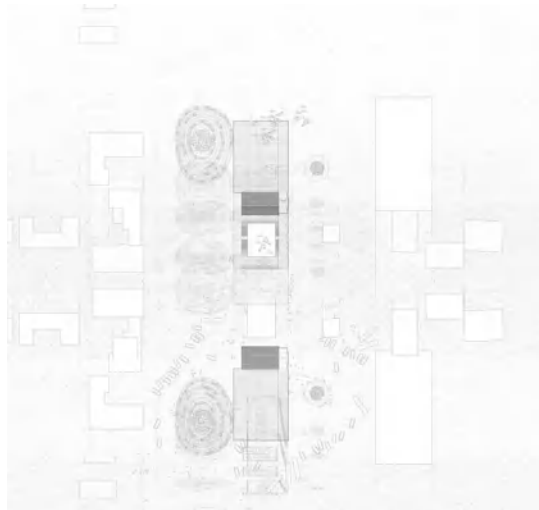
A section perspective better informs us about this relationship as the repository acts to store the active completion of an ecosystem. The inter-strata of the roof dip in and out to support overlapping activities on both sides. Moments that are convex below allow for cavernous conditions for bat occupation while concave conditions above provide space for agricultural production.



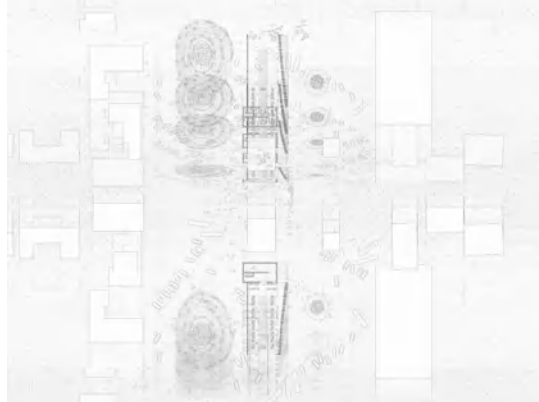


*Tamale Silo Site Analysis*

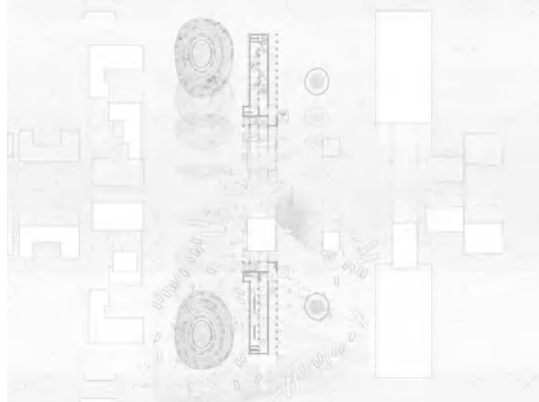
*Trellis Floor and Roof Plan*



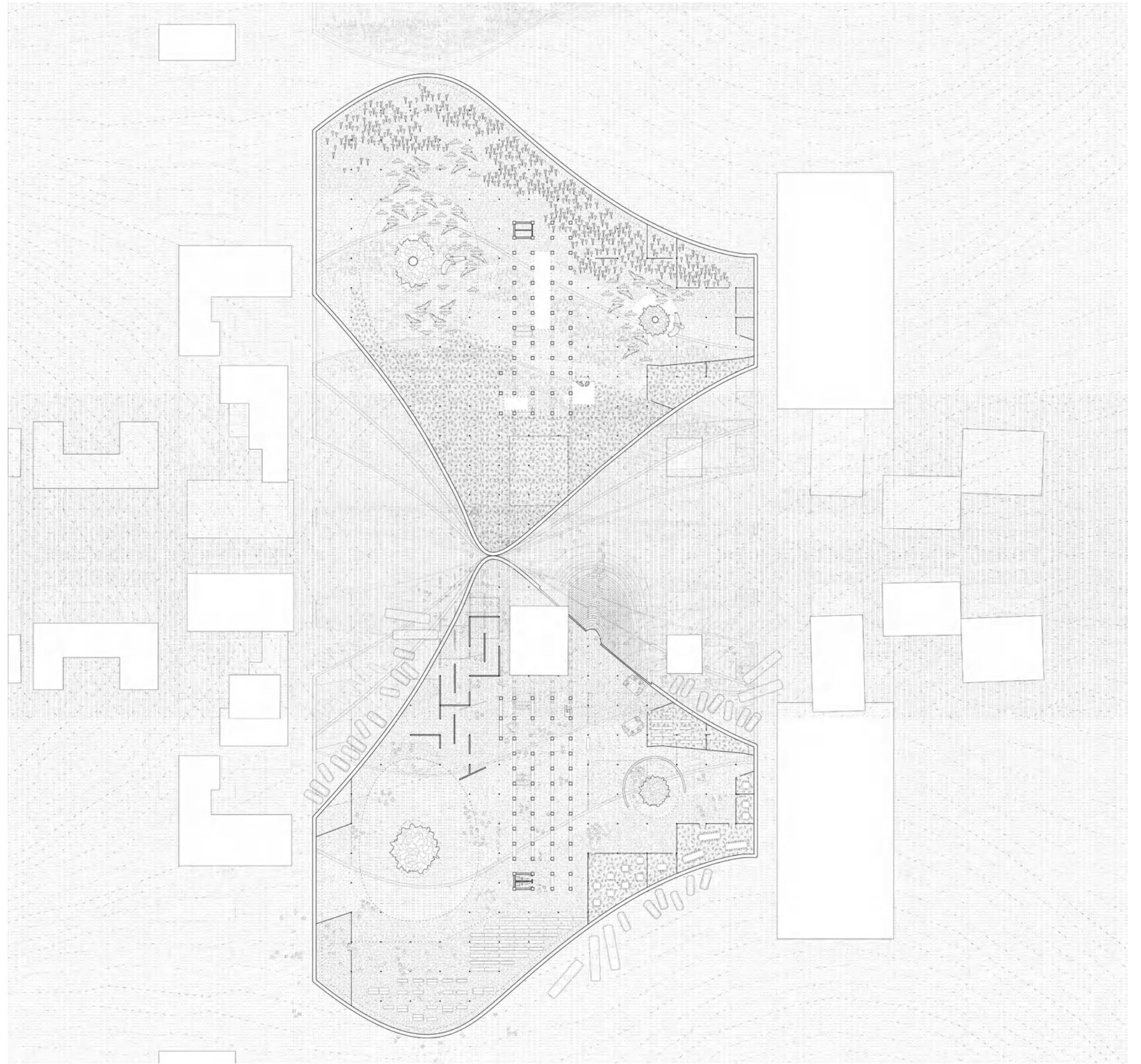
*Second Floor and Roof Plan*

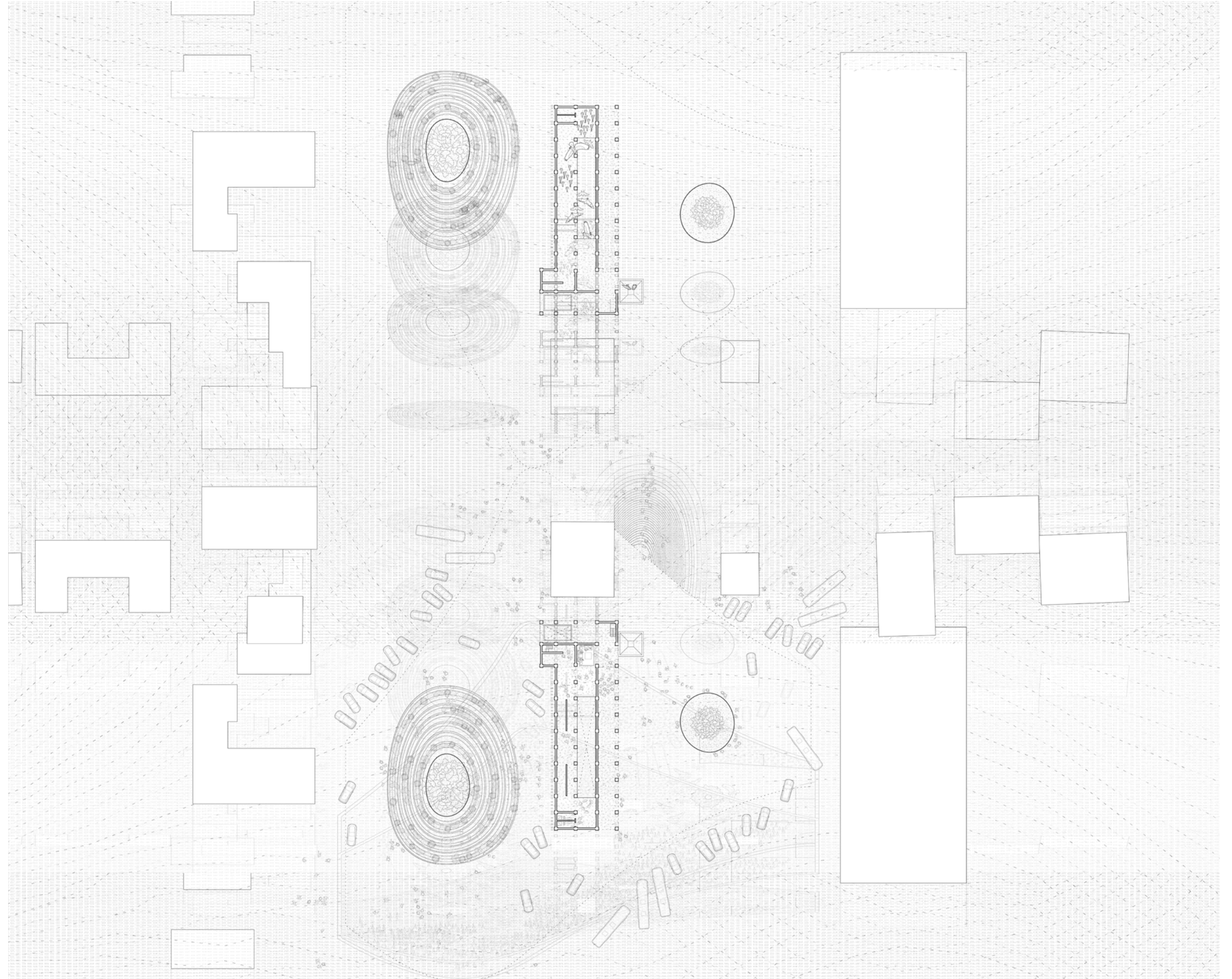
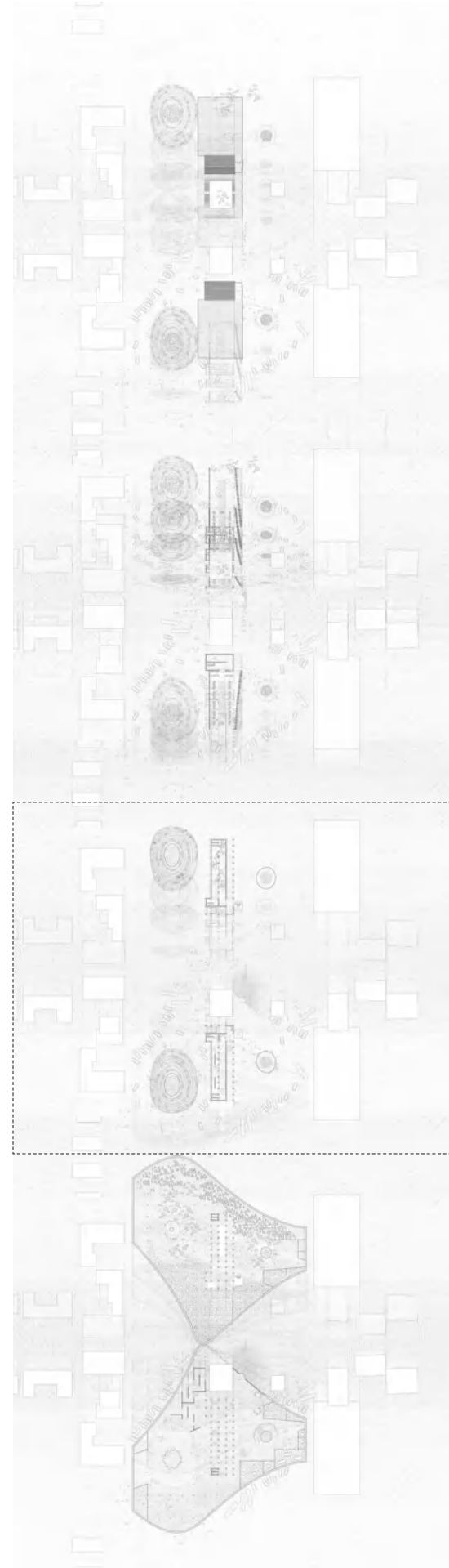


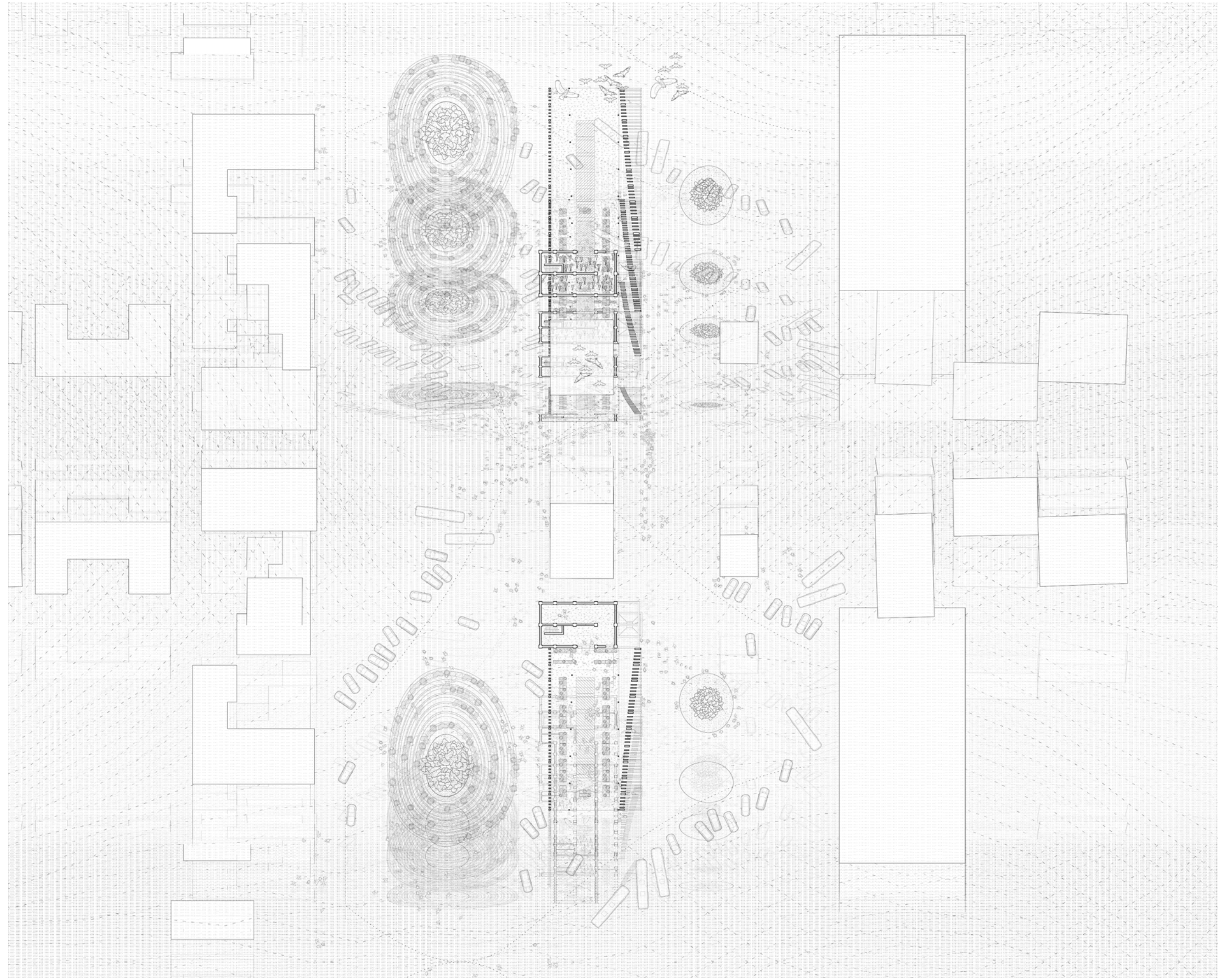
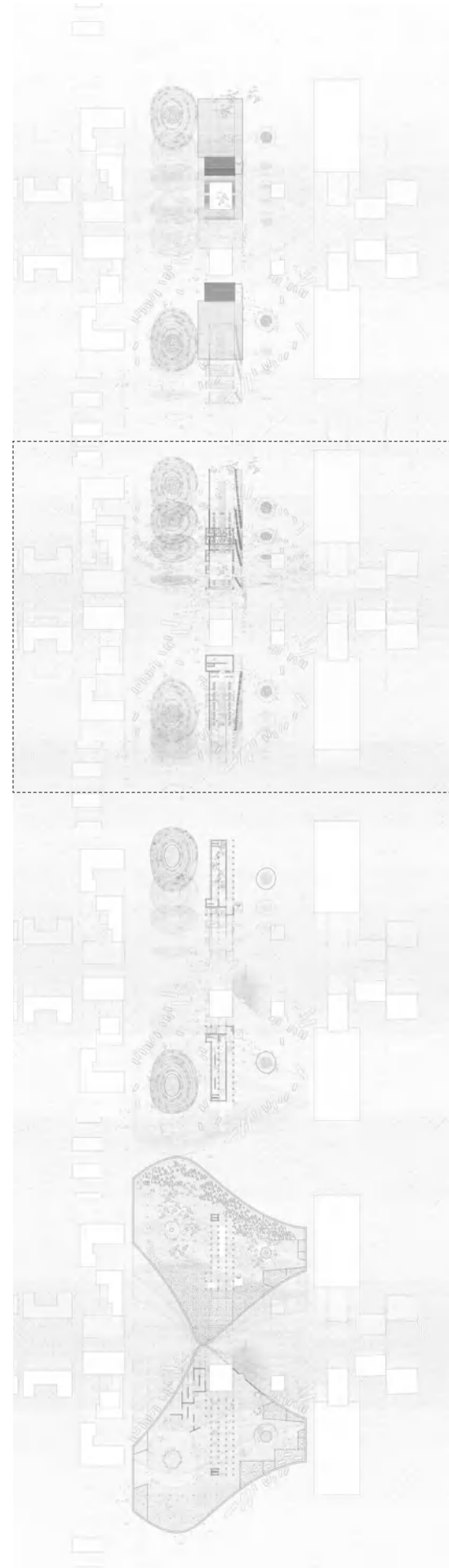
*Ground Floor and Roof Plan*

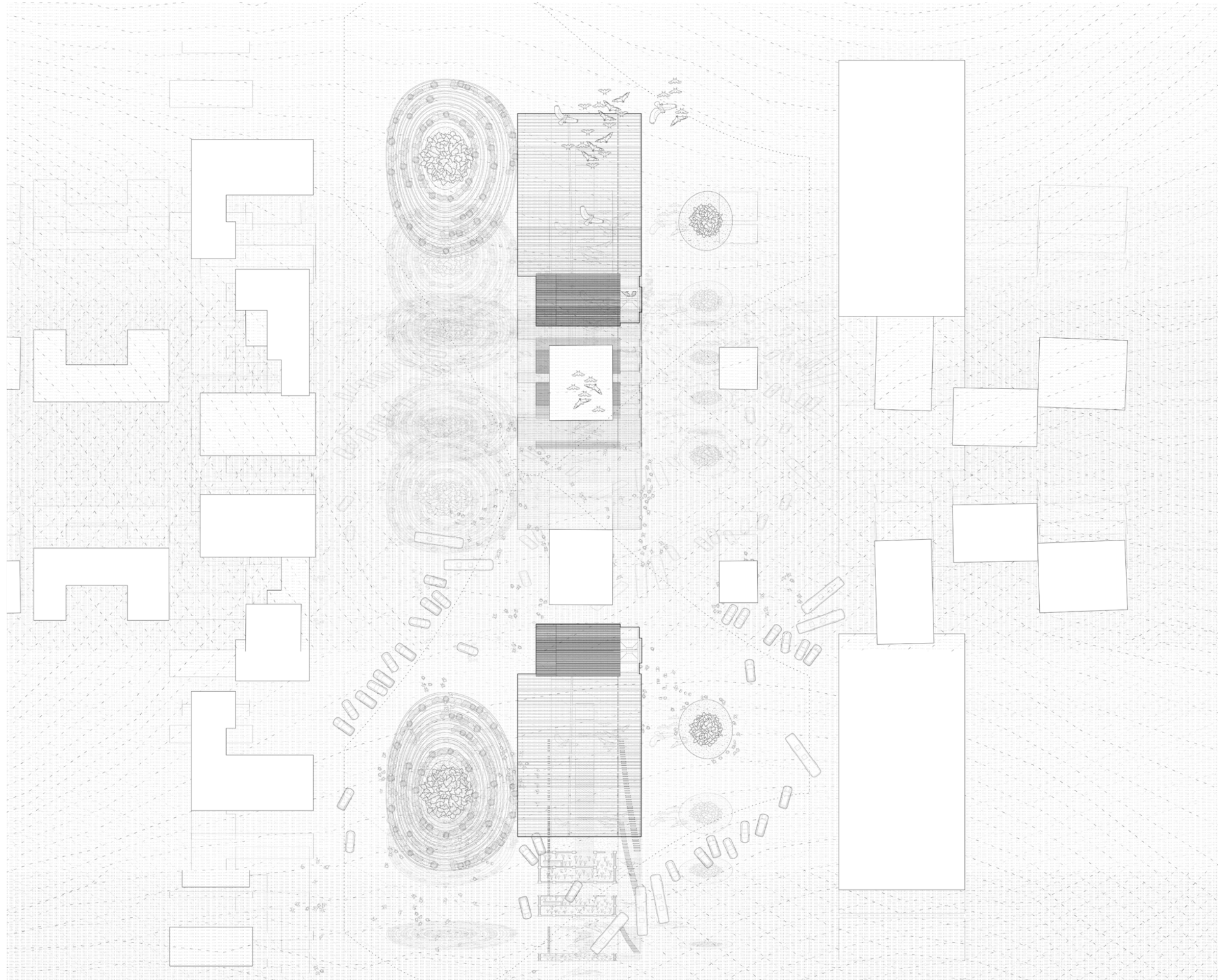
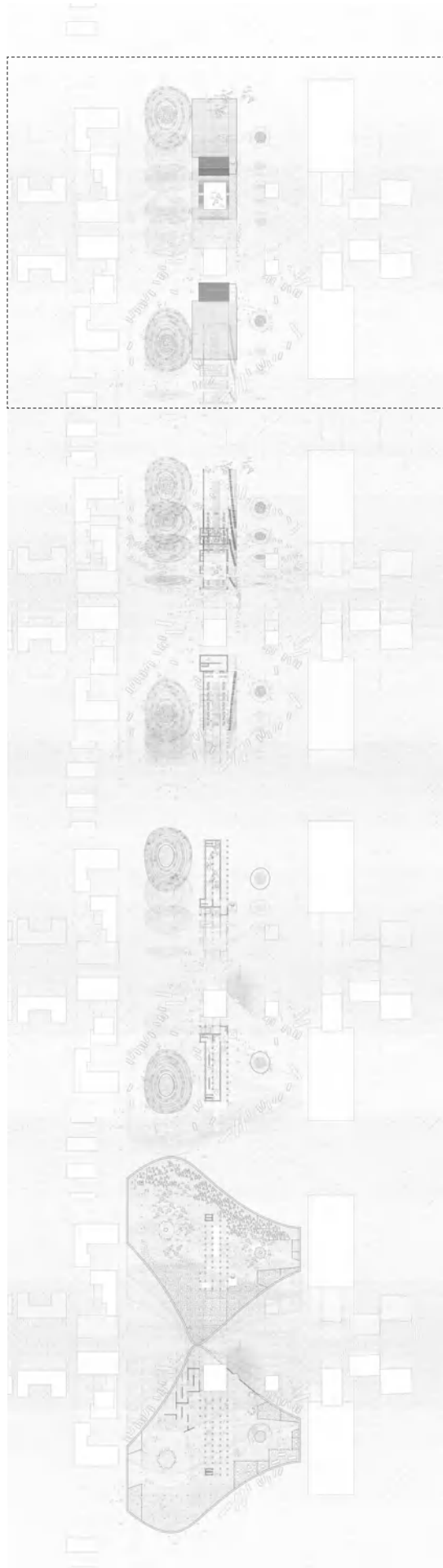


*Basement Floor and Roof Plan*











Section perspective indicating human and non-human strata.

42

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## Bat's Perception

**R**enders mimic the experience of a bat utilizing echolocation and ambient lighting. An array of visual particles generate static visuals similar to the conditions provided by screening ink onto the wood. The grain mixed with bleeding ink, condenses to form loose pointillistic imagery. A series of these were produced to visualize

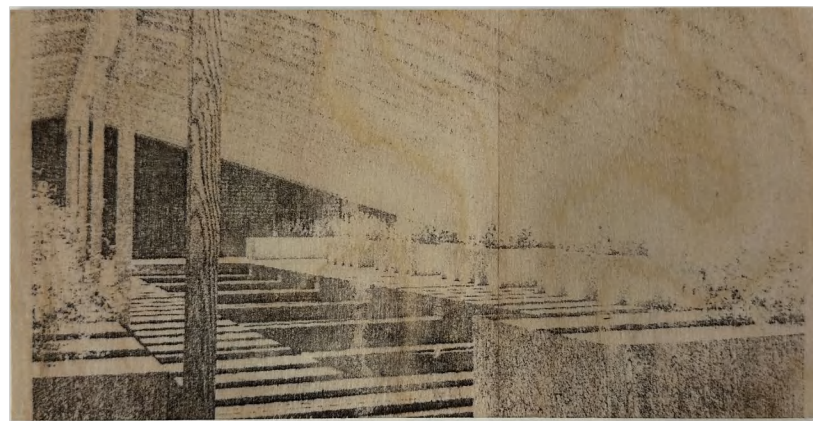
an understanding of how the silo provides civic spaces for nocturnal more-than-human entities

This conceptual understanding of stratified inhabitance, informs the perceptions of temporal space to achieve a unified coexistence.

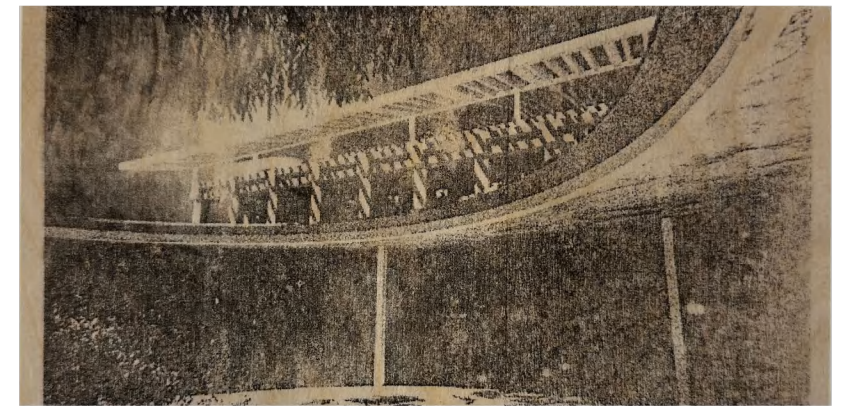
44



*Library Stacks*

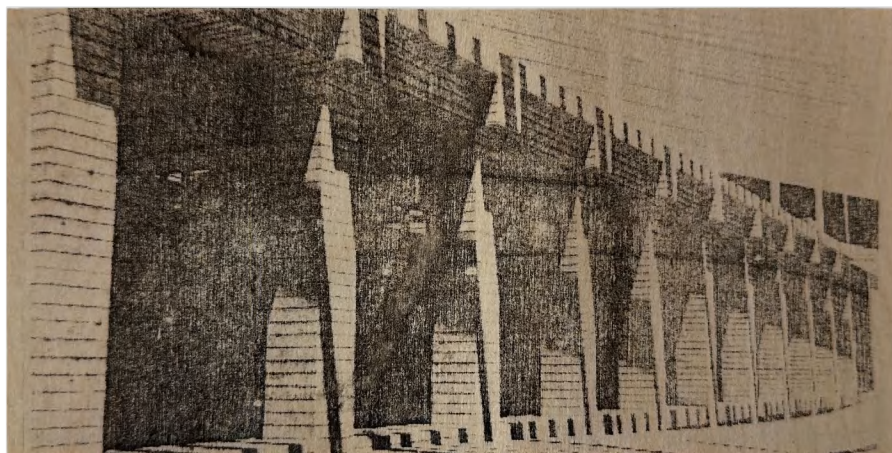


*Greenhouse with Glass Floor*



45

*Basement Courtyard*



*Exterior Colonnade*



*Greenhouse for Food Production*



*Basement view of Sub-Silo*



## *Killing to Live(ing)*

*Repositioned Repository*

ADVANCED IV STUDIO  
 Professor Nahyun Hwang  
 Mentor Gene Han  
 Collaborated with Emma Faith Sumrow

In researching the Hudson Valley, often a place of escape and rest for the select few, it became apparent that this place of refuge is resting on the support of the many - specifically animals or those that are more than human. By following the life trajectories of various species, we discovered how animal labor and commerce are the driving forces behind the site typologies and facilities which they reside within or pass through - and ultimately determine when they meet their date of expiration. Among these are farms, petting zoos, hunting preserves, and slaughterhouses, as the drawing shows on a spectrum from most domesticated to most wild and least occurring to most occurring within the Hudson Valley.

Delving deeper into a smaller scale, we started mapping out life-cycles of common animals within the Hudson River Valley. Bisecting the page, animals are distinguished from domesticated to wild and a detail of their biographies drawing from biographies from that of an animal sanctuary located in Hudson Valley. The timeline indicates the expected life-cycles vs. the life-cycles actually faced with human interaction.

The middle vignette unravels into a pano displaying common types of experiences/typologies each species faces. The most poignant example would be the biography of a chicken. We can see the expected lifespan of 10 years, but on average chickens only live for 6 weeks max within the area. Lastly, the far right shows the divergence of the trajectories in which each animal goes after they outlive their economic value as well as the most common influences for their end of life with thin lines drawing back to the moments in the timelines in which this happens.

With this, we narrowed our focus on hunting preserves and specifically chose the TMT Hunting Preserve in Staatsburg Dutchess County as our site. Hunting preserves control and monetize wild animals and dedicated pieces of land by offering guided hunting for a fee during a 6-month season and everything here, though seemingly wild and natural, is manufactured or manipulated for the sake of increasing the odds of customers leaving with at least one kill.

From the clearings of the land to the trails and constructed features, the landscape is deliberately designed for the benefit of the human visitor's experience and sport. This land positions itself as a warped entanglement between reserve and commerce, life and death, natural and fabricated. The TMT preserve is located on a current bird migratory pathway that provides more optimal hunting, which is controversial when discussing the sport aspect behind this current site activity. Our site is over 300 acres comprised of a variety of land types and ecologies which the current hunting trails are manipulated around and through. Through activists efforts and site economics, we plan to reverse the site's identity from a machine of death to an instrument of rescue and rehabilitation. We are projecting that site economics will not be stable based on U.S. average hunter spending and prices increases in comparison to Dutchess County's average annual income. Additionally, during the height of COVID-19, there was a large increase in outdoor activities that has been on the decline more recently, thus contributing less money to gun sales, preserves, and therefore indirectly less to conservation.

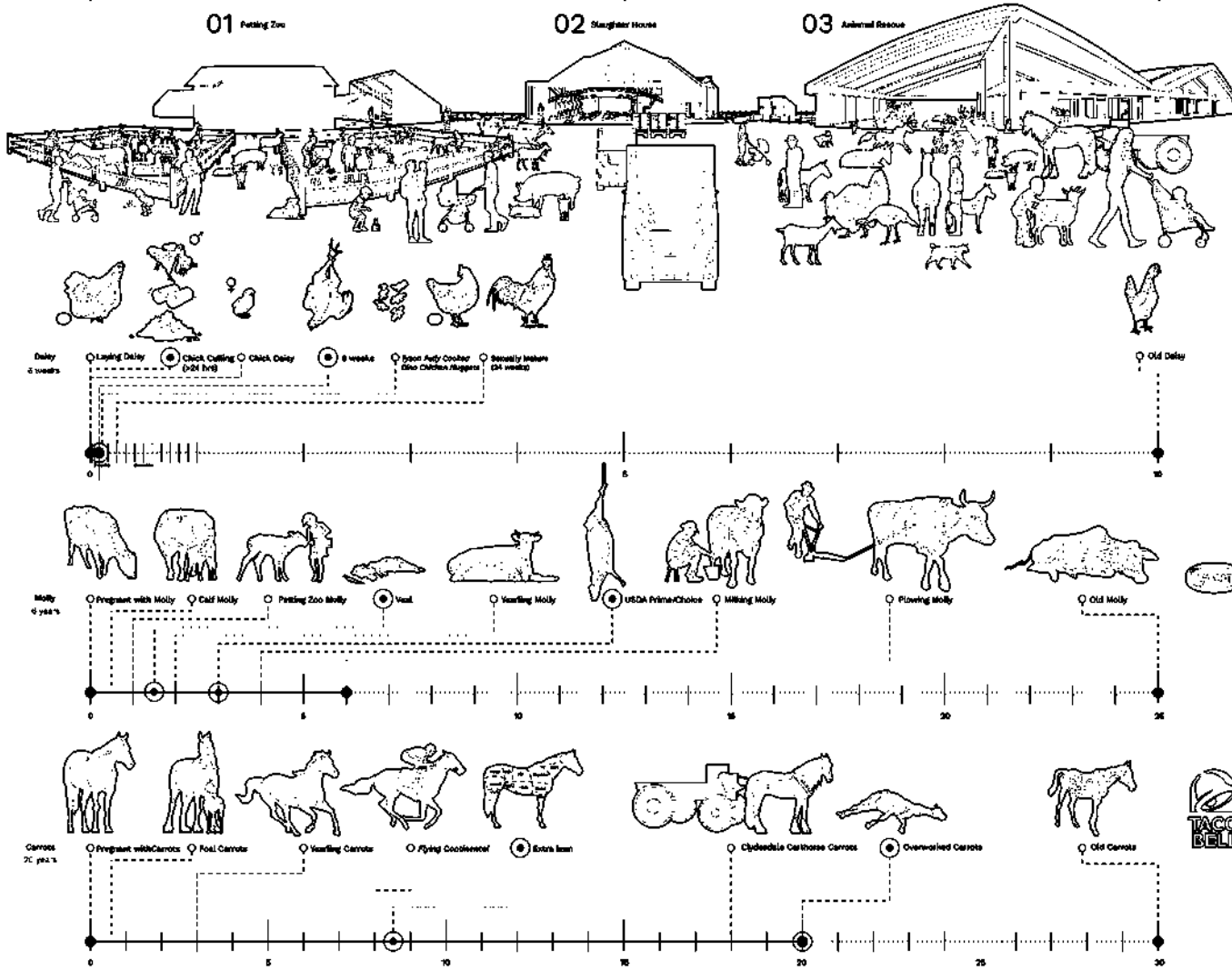
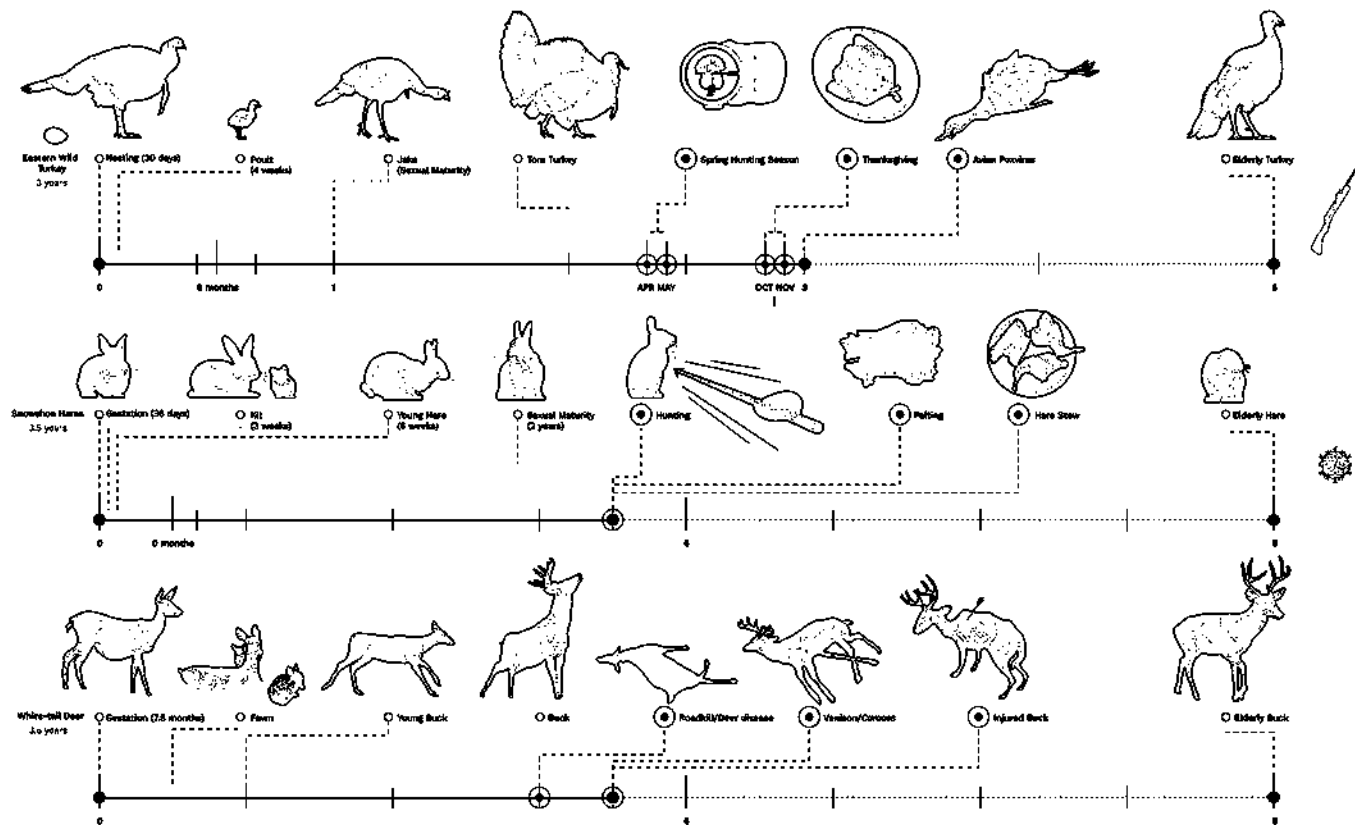
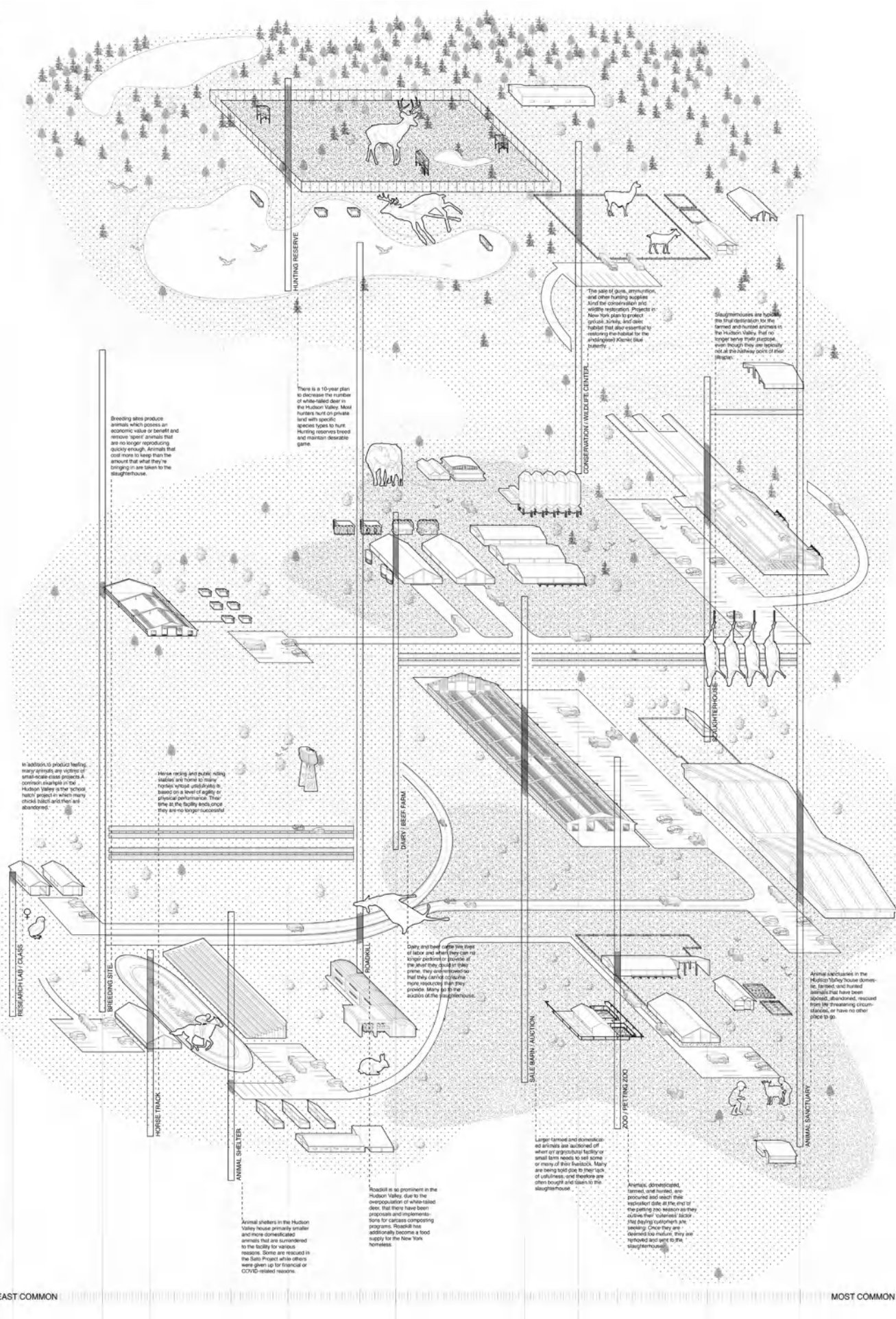


WILDERNESS

MANMADE

LEAST COMMON

MOST COMMON

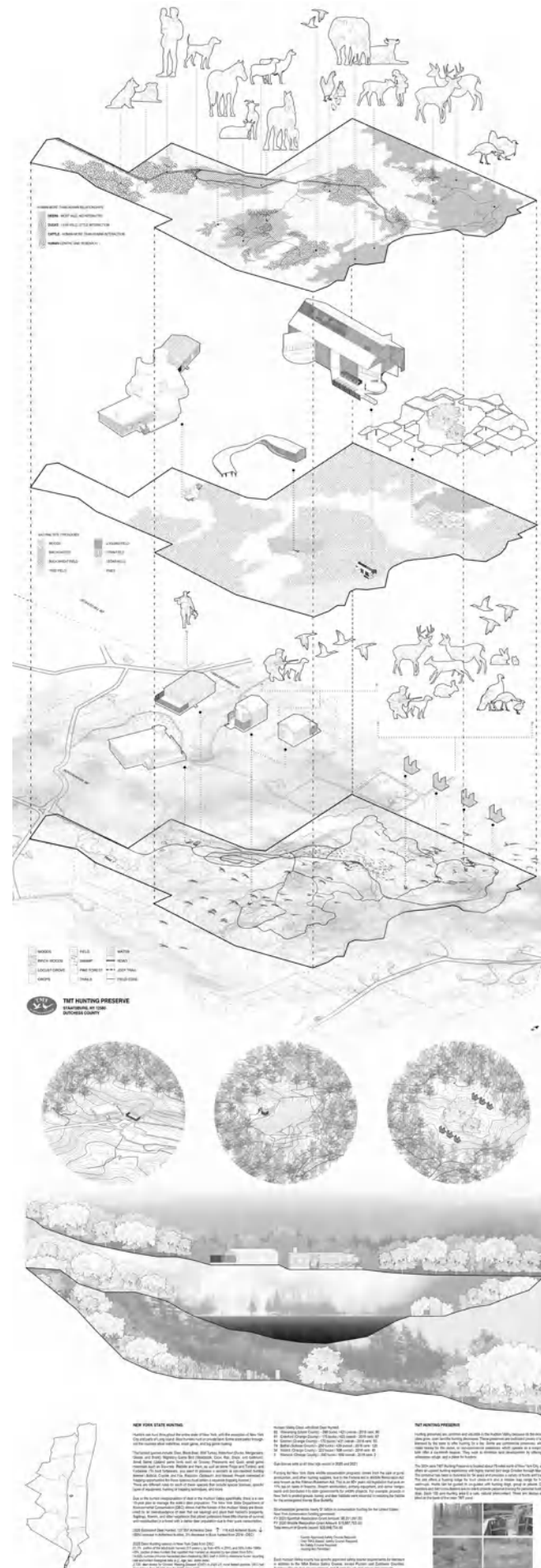


In addition to a lack of funding, bird migratory patterns are assumed to shift in the long term due to their adaptive survival skills if the site were to continue to function as a hunting preserve. The research and design proposals plan to respond to the site evolutions and ecological conditions utilizing current existing structures from the site. Through a series of interventions that range in typologies for the benefit and wellbeing of animals on a spectrum, the existing human centric voyeurism disintegrates and animals become autonomous and personified. We chose to narrow our focus to just a few animals that will be residing on the site: deer, birds, and cattle and made a series of interventions across the site, shown here, to address the needs and wellbeing of these selected characters. The first proposal makes an addition to the existing hunting lodge and offices and converts its use into a space for researchers, volunteers, and clinicians in the original more orthogonal spaces, while the curved addition is utilized for smaller animal treatment, therapy, and living - thus erasing the original program from a tool to perpetuate death. The original is designed at the scale of the human, while the addition articulates the overlapping relationship between the human and non-human. Materials were chosen for animal comfort and play as the rammed earth wall is pushed and pulled to create spaces of comfort for animals to navigate through or nestle within on both the interior and exterior. The collage displays multiple view angles from humans and animals, with a constant oscillation between the two perspectives.

Located within the upper right corner of the site, this chosen

ecological location is dedicated to white tail deer. Within its proximity, the zone contain different species and ecologies all around such as a locust grove, birch woods, pine forest, oak forest, and a river, providing constant and changing stimulation to the deers making that zone the most ideal habitat. Also located within the site are man made clearings used to place skeets for hunting and clay shooting. Our design intervention aims to re-wild those man-made clearings through a sheltered pavilion comprised of printed mycelium columns intermixed with replanting of trees. The goal is for new planted trees to grow into maturity while the pavilion provides temporary shelter as it slowly decomposes back into the landscape supporting more growth. Each column also supports the growth of dandelions and other mushrooms to allow deers the ability to graze off the columns. Furthermore the collage is done in a style to mimic the natural eyesight of a deer to gain the perspective in which they would be experiencing the pavilion.

Readapting a duck blind, once a place for hunting of ducks has been transformed into a place of refuge. Located next to the lake on the site, the duck blind is stripped of its facade to allow the studs to show through. A new facade of wooden mesh flows over the surface providing nesting spots for duck and other birds alike. The roof extends from the original duck blind which now serves as a research field study location is at a human scale and flows to meet the river coming back up to create a coop at the scale of a duck.





A cow's field of vision is monocular with no depth perception on either side of the head with binocular frontal vision. This collage above imitates the 330° arc that a cow would experience within the cattle barn.



A deer's field of vision is mainly peripheral with a small concentrated focal center. This collage above imitates the 280° arc that a deer would experience within the pavilion.

Over time, the presence of the human will become less apparent and the animal's self-sustainment and interactions will increase. Each animal, from the domesticated to the farmed to the wild, re-connects with its own ontology and gains agency, which the project begins to navigate through by creating a platform to amplify these origins and overlaps.

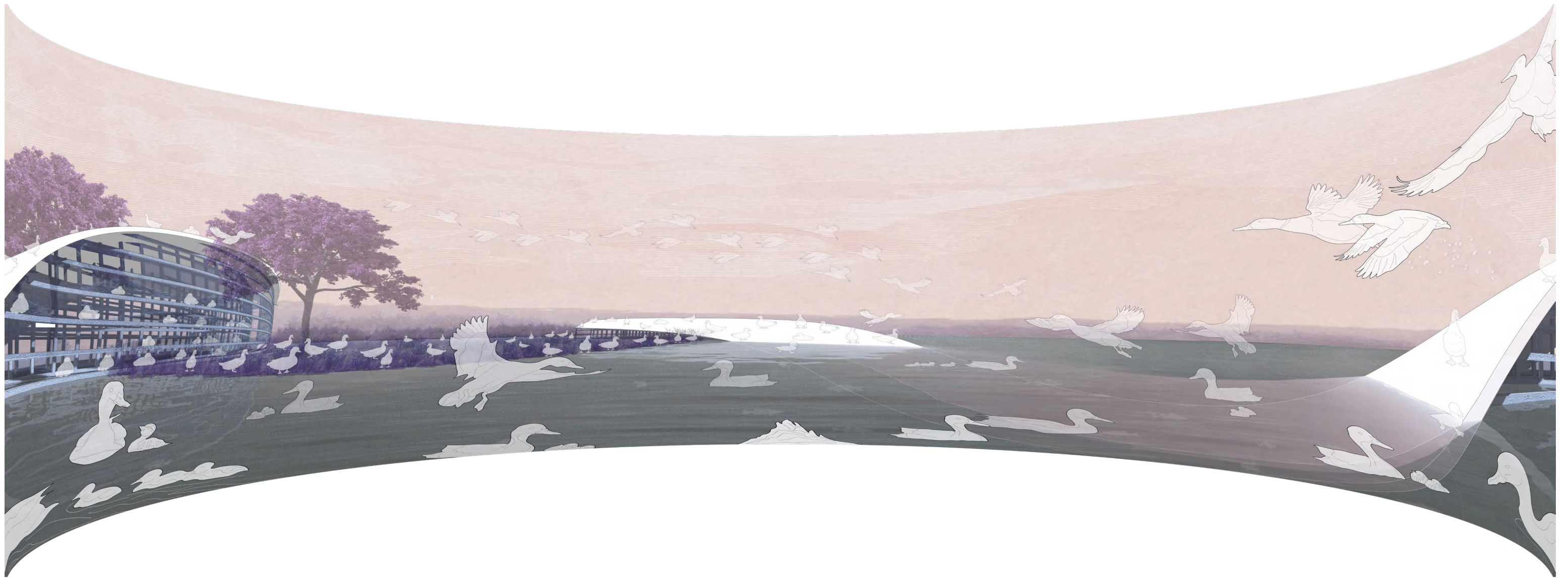


Collage showing the atrocities more-than-human entities suffer from.

The barn's forms and plan imitate many notions and curvature of that of Temple Grandin's squeeze chute inventions. These curves initiate a more comforting way-finding experience for a variety of cattle types as they move through the feeding spaces, treatment areas, social regions, and therapy zones. Cows are social animals that prefer to be in open spaces as opposed to others that prefer thicker habitats. The barn aims to give them shelter while simultaneously dissolving the exterior facades through full or partial disintegration and material use. The human space above is secondary to that of the cattle and is for research and treatment purposes. Cows see the sides of their bodies and not what is in front of or above them, therefore, the human space is primarily out of view so that the cattle can begin to have their own autonomy and comfort.



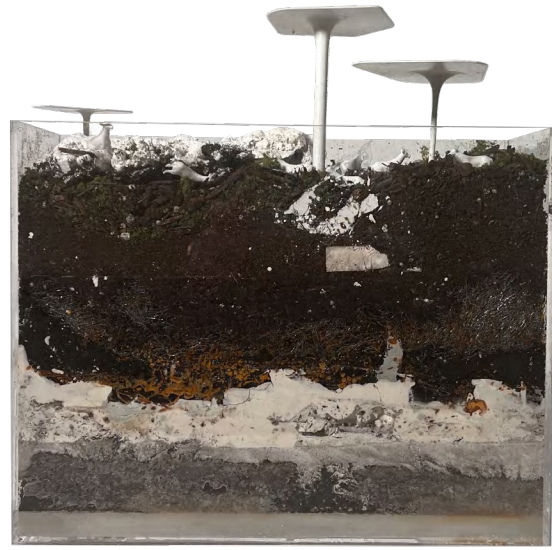
Clinic through a non-human's point of view.



*A duck's field of vision is a 360° spherical panorama. Stimulated with a broad UV wavelength perceived by ducks, the collage is seemingly purple to accommodate for the hyper-color. Both edges of the graphic bleeds onto one*

56

57



*Deer Pavilion Soil Condition Section*



*Duck Shed Soil and Lake Section*

*Deer Pavilion Perspective*



*Duck Shed Perspective*



*The image of the casbah from the sea, described, drawn, painted, and photographed repeatedly by travelers, artists, and architects, became engraved in the collective imagination and, nurtured with the Orientalist cultural repository on Islam, enhanced the creation of a ‘myth’.<sup>1</sup>*

This *myth* described by Zeynep Çelik, an architectural historian with an emphasis on nineteenth and twentieth century cross-cultural relations, refers not to the casbah itself, but to the discourse of French colonization. Such discourse superimposed a target onto the Northern African country of Algeria, specifically the city of Algiers, as an example of colonial Orientalism manifested through modes of visual representation. Depictions of colonization could be traced via the usage of oil painting, early photography, and architectural representations, whether built or unbuilt. Each medium never strayed far from the common objective of spotlighting Algerian culture by exposing their women, homes, and urban forms. Weaponizing these forms of representation to target specific *vulnerable* area in Algerian culture, allowed the French to penetrate into the most sacred part of Algerian society, the family unit. This can be visualized primarily through the use of photography to penetrate into the private Algerian home, to infer false narratives of the locals as being unsophisticated, and to conjure notions of a passive and feminine city. Arguably, I make the case that such mode of representation was further deployed as a type of warfare; a weapon of cultural and societal destruction aimed at dismantling Algerian lifestyles from within.

During the French intervention in North Africa during the 1830’s to 1950’s, the government sent multiple expeditions of artists and photographers to document the lifestyle, landscape, and labyrinth of Algiers. Artworks came pouring back to France ranging from paintings, etchings, photographs, plans, and various arrays of mediums. However, the most prevalent representation was the photograph. Although still considered new technology at the time, photography was widely used to capture scenes of Algiers due to its *scientific* and *objective* nature, as if the man behind the camera did not possess any biasness towards what is to be selectively framed and photographed. Due to the relatively quick nature of reproduction when compared to the conventional method of oil painting, a plethora of stills could be taken within a short amount of time. This allowed for the quick classification, domination, and universal commodification of space as if each sight could be easily categorized and filed away neatly. Complex cultural interactions were reduced through a set of familiar procedures, producing familiar results. Centuries of customs were now being translated as mere surface level readings that depicted clear and simple representations, enabling foreigners to easily understand and participate in. As a consequence, stereotypical images flooded the French media and “flattened the diverse human,

1. Çelik, Zeynep, *Urban Forms and Colonial Confrontations: Algiers Under French Rule*, (Berkeley, University of California Press, 1997), 21.

## Capturing Colonization:

*Photography as French Colonial Warfare*

2. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 151.

3. Said, Edward W, *Orientalism*, (New York, Pantheon Books, 1978), 63.

4. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 151.

5. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 134.

6. *Ibid*, 135.

7. Hadjri, Karim, *Vernacular Housing Forms in North Algeria: Traditional Dwellings and Settlements Review*, (Berkeley, IASTE, 1993), 69.

cultural, and visual landscapes of Algeria into simplified and comparable categories”.<sup>2</sup> Notions of Orientalism further expanded, especially under the context of colonialization. The French advertently picked characteristics of Algerian society they deemed worthy of representing while completely disregarding other aspects to dramatize *Oriental life*.<sup>3</sup> Algiers became a spectacle promoting the “new product designated for the consumption of the colonizers”.<sup>4</sup> On the other hand, the French public consumed these imaginative images with voracity, constantly wanting more. Images were being widely disseminated through prints and publications, often romanticizing the city of Algiers to promote tourism, immigration, and most importantly to provide views of the Northern African city as a way to promote colonial unification; Algeria is now a colony of France.

More heinous was the urge to penetrate and photograph the domestic realm of the Algerian household. The French government fully believed that in order to fully conquer Algeria, one must enter the household and break down the nucleus, its most persistent and unyielding element.<sup>5</sup> Compared to its Western counterparts, the Algerian home looks inward forcing the introverted spaces to open up towards a central courtyard and faces its back against the social promiscuity of the exterior streets.<sup>6</sup> The courtyard is regarded the hearth of the home, a space traditionally reserved for women where the most intimate, domestic, social, and cultural activities take place, shielding the women from the gaze of foreign men.<sup>7</sup> By being introverted in nature, the house echoed familial unity providing refuge from the colonizers while

strengthening the Algerian identity. Due to this perverse intention to capture the most sacred realm of Algerian society that representations of domestic life started to be documented. It is with careful diction that I used the term *representation*, as these images were no more real than the fanciful imaginations of what Westerners expect the Orient to encapsulate. However, I am not stating that all captured within these photographs are in fact false, but merely the reconstruction of Algerian domestic life weaponized in a way to expose the impenetrability of such realm.

Eugène Delacroix’s *Femmes d’Alger dans leur appartement* done in 1834, also known as Women of Algiers in Their Apartment, laid the foundation for the photographic exploitation of the Algerian female, showcasing such an intimate setting (Fig. 1). Due to its early adaptation, this piece was done not in photography, but in painting which was widely influential in setting the unspoken cannon of capturing domestic scenes. Delacroix’s representation depicts three Algerian women without their veils in the middle and lower left of the composition being attended by a servant in the upper right. Immediately, notions of race and gendered space are interjected into this piece providing a glimpse into the private life of an Algerian harem. The three women are highlighted either facing or displaying their profile towards the audience while the degrading portrayal of the black servant is shown facing her back with a partial head turned towards the viewers. Each of the Algerian women are dressed richly in brightly gleaming fabrics adorning the most extravagant of jewelry. These figures intentionally contrast the monotone and drab clothing of the

servant woman and the background introducing a compositional hierarchy while also reinforcing the introverted nature of a casbah.



servant woman and the background introducing a compositional hierarchy while also reinforcing the introverted nature of a casbah. Orientalism can be seen perpetuated where each individual lounges haphazardly around the “exaggerated wealth of the decorative paraphernalia.”<sup>8</sup> Gilded red heels are strewn about on the intricately woven clustered tapestry as if it possessed the ability spill out from the frame and onto the viewers. The bottom central composition is deliberately left bare, drawing the audience into the scene and inviting each to imaginatively participate. Subtle rays of sunlight pierce the gloomy interior from the left edge further highlighting the fantastical depiction staged no more accurately than that of a Walt Disney’s Aladdin set. Furthermore, the dim secluded nature of the room reflects the reserved societal customs of Algerian women who are depicted inward-looking, silent, and shy. It is through the conscious portrayal of such material that the French dominance is present, spearheading

the manifestation of the Algerian conquest.

Imitating Delacroix’s domestic illustration, Félix Jacques

Antoine Moulin, a notable Parisian photographer persuaded by the government to document Algiers, was also particularly fixated on the gendered readings of space and strove to capture this novel notion he had freshly encountered during his eighteen month expedition in Algeria.<sup>9</sup> Back in

France, his complete collection of six volumes, each containing fifty photographs, was regarded as one of the most “substantive reportage for the visually literate public.”<sup>10</sup> Photographs of Algiers produced by Moulin received extensive coverage as his work was popularized to perpetuate public support of Algiers as part of France. This virtual experience quenched the thirst for those who are fascinated with the Orient, but would like to feel protected from its *savage* encounter. A clear demarcation of subject and viewer constructed a barrier of comfort for fellow French citizens to visualize the new extent of their empire, enabling an immersive escape without any unpleasanties.

Moulin’s most captivating, but detrimental work was the popularization of interior domestic scenes via photography. *Mauresques en Visite, Costume de Ville, Alger* photographed and printed in 1860 depicts a composition strikingly similar to that of *Femmes d’Alger* by Delacroix (Fig. 2).

Figure 1. Eugène Delacroix, *Femmes d’Alger dans leur appartement*, 1834

8. Çelik, Zeynep, *Urban Forms and Colonial Confrontations: Algiers Under French Rule*, (Berkeley, University of California Press, 1997), 107.

9. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 101.

10. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 101.



Figure 2. *Mauresques en Visite, Costume de Ville, Alger, 1860*

In order to achieve a comparable degree of intimacy, Moulin had to reconstruct the Algerian home within his photography studio as foreigners, especially being associated with the French colonizing male, were not permitted to enter such a sacred space. This falsified depiction was included in his album as an *honest* documentation of Algerian culture.

Just as *Femmes d'Alger* overly Orientalized and exaggerated the setting, Moulin selectively stole and superimposed segments from Delacroix's painting incorporating them into *Mauresques en Visite, Costume de Ville, Alger*.

Unlike Moulin, Delacroix was able to penetrate the domestic realm traditionally off-limits to foreigners by attaining access to a harem from an Algerian official.<sup>11</sup> Moulin's photographic representation lacks the first-hand observations garnered by Delacroix, leaving his representation symbolic to that of a childhood game of telephone. Telephone, in a sense where the words were initially altered and then re-scrambled before reaching him, leaving nothing more than an assortment of decontextualized terms recklessly reinterpreted. This distorted translation purported by colonization frames the stage, figuratively and literally, for his reenactment of female Algerian domestic life.

Comparing the two works, it is immediately noticeable where *Femmes d'Alger* leaves off and Moulin's work picks up. In *Mauresques en Visite, Costume de Ville, Alger* the seating composition

as well as the subject matter reflect that of Delacroix's painting where the Algerian women are lavishly dressed in traditional costumes done in the most intricate of detailing are depicted lounging around in an inward-facing circular composition. Race and gendered space are adherently incorporated as the introduction of a black servant and



black child can be seen in both the lower left, and lower right. Both figures occupy the smallest volume of space as their presence is deeply minimized with their backs turned towards the viewers; only being able to catch a glimpse of their jawline and the peak of their brow ridge. Meanwhile, the Algerian women are all frontal facing, directing their gaze towards the audience to emphasize the social and racial hierarchy ever present in *Femmes d'Alger*. A contrasting gloomy background is utilized in a similar fashion to direct the attention towards the center of the composition further underscoring the introverted nature of the casbah, but in this instance without the slightest suggestion of an opening anywhere. The dark tapestry encompasses the whole room with elaborate oriental artifacts hung slightly above the seated figures. The Orientalist theatricality has been

expanded upon by Moulin where an excess of exotic paraphernalia has been carefully positioned across the whole space, concentrating in the center. Keeping in mind, this representation is not so much a voyeuristic glance into a domestic sphere, but a meticulously planned and crafted scene. Coffee, tapestry, cushions, rugs, and a hookah set the stage in which each individual item evoked the fantasy of the unfamiliar, but most importantly, provided a contrast as to what France is not.

Preserving cultural integrity was not at the core of Delacroix's painting, but it was evidently closer resembled when juxtaposed to Moulin's phantasmagorical recreation. Knowingly fabricated, Moulin set out to capitalize on these stills, extorting the intimacy of Algerian life. This was exceptionally offensive as it violated every Algerian home, specifically targeting and fetishizing their women. Such depiction defines representational warfare equating to the symbolical unveiling of the Algerian woman, reducing them to objects of fascination. Domestic scene so intimate, where even those within your community did not have access to, was being widely disseminating around in a foreign European country full of malnourished war-hungry men craving for a taste of the Orient. Craving for notions conjured through Moulin's hallucinatory scenes, craving for which that does not exist.

Moulin's metaphysical manifestation of cultural conquest did not end there.

*The drive to colonize beyond domestic aesthetics led to an influx of amateur photographers eager to capture and monetize on the prodigious cultural repertoire of Orientalist desires.<sup>12</sup>*

The locals depicted were treated as "raw material that could be molded to fit the needs of the motherland".<sup>13</sup> Children frequently appeared as props, posing alongside street and alleyways to excessively sensationalize the feeling of authenticity.<sup>14</sup> However, the most sought after was the use of Algerian women as it was a sight for the French to behold, seeing them out of the domestic realm and into the



public realm (Fig. 3). Engulfed head to toe in white fabric with their faces shrouded behind a white veil not only complimented the composition visually, but also was a metaphorical representation of the concealing nature within the casbah.<sup>15</sup> The intrigue generated by such image triggered a rise in the tourism industry, each wanting their own encounter with the romanticized indigenous culture.

Reproduced in tones of sepia and ecru, photographers intentionally selected soft hues to replicate an inviting and welcoming sensation, fabricating a narrative of civilizing the savage. European audiences felt protected as any possible threat was not within the bounds of directly affecting them, providing a taste of danger accompanied with the privilege to devour freely and

12. Said, Edward W, *Orientalism*, (New York, Pantheon Books, 1978), 63.

13. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 163.

14. *Ibid*, 144.

Figure 3. *Algers, Street in Arab Quarter, ca. 1895*

15. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 144.

11. Vogl, Mary B., *Using the Arts to Teach Assia Djebar's 'Femmes D'Alger Dans Leur Appartement'*, (Carbondale, Illinois, AATF, 2003), 696.

16. Çelik, Zeynep, Clancy-Smith, Julia, and Terpak, Frances, *Walls of Algiers: Narratives of the City Through Text and Image*, (Los Angeles, Getty Research Institute, 2009), 167.

comfortably. Photographers noticed that earlier methods of shooting images, such as film noir, could have depicted the shaded casbah's narrow passages as a "gritty, lice-infested labyrinth", which would not be as marketable.<sup>16</sup> This resulted in many representations of Algiers around the 1900's to possess a light and luminous quality, contributing towards the notion of an oriental daydream. Within this instance, photographic stills were utilized as a way to evoke false rhetorics of being welcomed into a locale in which the indigenous were fighting to preserve their way of life.

*Impregnating the notions of gentrification within vacation acting to transform the local's cultural oppression into that of a palatable retreat is immensely understated.*

Unequivocally, this led to the formulation of introducing color into photography as a way to familiarize and civilize Algerian confrontations. Photocrom prints gained popularity as they were more practical than true color photography, which was also commercially impractical at the time. However, the process of colorizing images was troublesome since the original photos still captured in black-and-white, retaining no color information whatsoever, forcing photographers to selectively make notes and chose colors on how the negative was to be painted.<sup>17</sup> In doing so, this left a lot of room for self-interpretations and biases to penetrate this scientific documentation. Another limitation was the array of colors present making photocrom prints distinctly homogenous, each reproducing the delicate tinting of water color. In the piece *Luce Ben Aben, Ecole De Broderies Arabes II*

17. *Photochrom Process: Articles and Essays: Photochrom Prints: Digital Collections: Library of Congress, DC, The Library of Congress, Web.*

shot in 1899 encapsulates the both the notions of colors to humanize as well as the notion of education to civilize (Fig. 4). Analyzing the composition, Delacroix's *Femmes d'Alger* could be seen referenced once again with the inward facing circular composition of the female figures. Each girl fixates their gaze towards the center of the casbah. In this instance, the courtyard is depicted, signaling that the space most sacred to Algerian society has been indefinitely penetrated. However, the French were only able to get ahold of such scene because this casbah has been usurped by Madame Luce, a French educator seeking to provide French knowledge and textile skills for those less fortunate within Algiers. The image glows soft and luminous with the girl's dresses in brightly pigmented attire. The process of photocrom is evident as each figure holds the exact same hue of skin complexion without any variation. The pastel blues are seemingly indistinguishable from one another, ranging from background drapery to headdresses, each colored in the same manner. When contrasted to *Luce Ben Aben, Ecole De Broderies Arabes I*, 1899 shot in the same perspective, we can clearly see the differences in interpretations (Fig. 5). The readings of Delacroix's *Femmes d'Alger* is faint, but still ever present. The rich green tilework and the opulent red window frame in the background of *Ecole De Broderies Arabes II* is visibly missing from *Ecole De Broderies Arabes I*. If photography was truly scientific in nature, how could the readings of the same image shot within the same perspective and lighting produce two very different representations? In both stills, the columns are represented identically with exact hues and brightness, but in *Ecole De Broderies Arabes I* colors

are not overly exaggerated to fit an audience's taste for the Orient. This leads me to believe that *Ecole De Broderies Arabes II*, which was shot sequentially hence II, had to be intentionally doctored in order to present the scene as ever whimsical to cater towards the French's taste for imperialism. In *Aben, Ecole De Broderies Arabes II* every hue is harmonious, every hue is uplifting. Is this what proper civilization looks like?



Good intentions aside, both pieces also highlight a quintessential problem of colonization, the urge to force imperialistic aid onto those who seem less fortunate simply because they are unable to comprehend another's customs. As a result, this ignorance prompted Madame Luce to travel to Algiers and ultimately decided that she wanted to "plan for the education of Moorish women, — a school in which girls of Mohammedan family should be taught the language and somewhat of the civilization of the conquering race."<sup>18</sup> She had full intentions of creating a "fusion of the races...to change native morals,

prejudices and habits...These young girls would leave school grateful to the French state...and one day they would become mothers of a new generation..." in which the French influence would then be intergenerational, forcing Algerian erasure.<sup>19</sup> By quoting verbatim, the diction used informs us with the view in which the French saw the indigenous. Instead of trying to fight the indigenous, they sought to assimilate and to extort them, providing both civility and colonial domination. Ironically, Madame Luce forced the notion of Western morality upon these Algerian adolescent girls, when she herself was a woman of indignity. Leaving behind her husband and young daughter to pursue educational conquest, she was later discovered to be living out of wedlock with another man, Louis Luce, only to return back to France to collect her compensation when widowed.<sup>20</sup> The white savior complex taught less about raising a "more rational and civilized race of Mussulmans"<sup>21</sup> but more about the subliminal messages of imperial dominance used to manipulate the Algerian population into promoting French colonial unity.

Further analysis of *Luce Ben Aben, Ecole De Broderies Arabes II* depicts textiles full of embroideries currently in the process of completion in which pieces produced would then be displayed in both the London Exhibition of 1862 and the 1893 World's Columbian Exhibition at Chicago entitled *Ouvroir Musulman*. Western visitors acclaimed that these textiles were "the most lovely specimens of embroidery"<sup>22</sup> with "one of the most worthily-earned prizes at the late Paris Exhibition bestowed on a deaf and dumb Arab girl, who was educated by Madame Luce, for samples of embroidery."<sup>23</sup>

18. Belloc, Bessie Rayner, 1829-1925, *Vignettes: Twelve Biographical Sketches*, (London: A. Strahan, 1866), 195.

Figure 4. Luce Ben Aben, *Ecole De Broderies Arabes II*, 1899

Figure 5. Luce Ben Aben, *Ecole De Broderies Arabes I*, 1899

19. Rogers, Rebecca, *A French-woman's Imperial Story: Madame Luce in Nineteenth-Century Algeria*, Stanford, Stanford University Press, 2012, 65.

20. *Ibid*, 66.

21. Belloc, Bessie Rayner, 1829-1925, *Vignettes: Twelve Biographical Sketches*, (London: A. Strahan, 1866), 199.

22. *ibid*, 254.

23. Willem, Madame Eugénie Luce (1804-1882), Leiden, TRC Leiden, 2017, Web.

Presumably accompanied with these exact stills showing the Algerian girls hard at work, Westerners had the impudence to equate their work as *specimens* created by *deaf and dumb Arab girl(s)* to further perpetuate the French agenda of civilizing the Algerian population as belonging to their empire. However, most problematic was that photography aided in providing a platform to allow the hyper-fixation of foreignness within the children's work. The textiles displayed out of context would not be as easily understood when contrasted to the influence of a single photograph. Such passive performative indulgence of the Orient reduced Algerian cultural goods to that of a visual souvenir.

It is soon realized that the French wanted more than just a souvenir, leading to the requisition and urbanization of Algiers's lower town for the construction of a public plaza.<sup>24</sup> Definitions of public space in Algerian society drastically differed from that of the French. The French saw public space as wide-open plazas with straight clear-cut boulevards while the Algerians saw the public realm as organic concentric growth of intertwining streets. Without hesitation, the French army engineers pierced new wide geometric arteries through the tightly condensed ancient fabric of Algiers, a forceful symbolic entry mirroring the penetration of the Algerian female domestic realm.<sup>25</sup> The relentless cutting and slicing of Algiers culminated in the creation of *Place des Armes*, a large public square at the foot of the casbah where troop demonstrations took place following an invasion.<sup>26</sup> The Algerian population suffered a big loss as their beloved *al-Sayyida Mosque* was demolished to make place for the plaza causing public

outcry. To twist the knife in deeper, the French resurrected a five-meter-high equestrian statue of the Duke of Orleans, a memorial to the French royal who fought to invade Algiers, within the general vicinity of the demolished mosque as shown in Jean-Baptiste-Antoine Alary's *Place du Government*, 1857 (Fig. 6). Photographic documentation of this memorial was used to express colonial hierarchy enforcing the oppression of the Algerian people. Furthermore, disseminating such image could be roughly interpreted as, "the French are here and they are here to stay". *Place du Government*, referring to the new plaza could be seen taking in the stylistic characteristics of utilizing sepia to create a light ambiance around the surrounding. This tonal quality was not only visually appealing, but also aided in capturing deeper subliminal messages of colonization. By erecting this monumental statue in front of another heritage Mosque, the *al-Jadid Mosque*, this single image shot encapsulates the French intervention in a single unified lens, normalizing the imperial experience. Intentionally casted in a dark metal and elevated on a formidable base, it was made to contrast the clean white geometric forms of the mosque in the back. The statue symbolically turns its back against the mosque, facing its march towards the casbah as if it were to set its horizons on penetrating the intimate Algerian home in order to conquer the old city next.<sup>27</sup> Jean-Baptiste-Antoine Alary's *Place du Government* is more so French propaganda as it is documentation. If one wanted to truly record the locale, the perspective should aim to capture the surroundings and all influencing factors around the square, not specifically utilizing the mosque as a backdrop for the

equestrian portraiture. This was the French equivalent to urinating on a tree, marking their territory through the laying of plazas, boulevards, arcades, and other forms of civic infrastructure to slowly engulf the city. The retention of notable Algerian structures was not done in favor for the indigenous, but preserved in order to contribute to the Orientalist aesthetic, hopefully attracting tourists causing the mass displacement of local residents.

Once these photographs were distributed via postcards, the interest in Algiers rose exponentially, attracting the attention of notable figures such as Le Corbusier. Le Corbusier, a prominent French architect known for his work in Modernism, had an affinity towards the Orient. His infatuation with Islamic architecture stemmed from travel accounts and paintings, without a doubt he has at some point came across the plethora of Algerian documentative photography flooding into the market.<sup>28</sup> Accounts written by J. Lorraine and Lucienne Favre, just before the turn of the century, noted the city of Algiers as a "wise and dangerous mistress" bearing a "capricious feminine charm" with a great "sex appeal".<sup>29</sup> Inducing his desire to see Algiers for himself, he arrived in 1911 via boat, taking in the first sights of the city scenery by sea.<sup>30</sup> His personal documentations of the city showed just how powerful representation was in influencing his impression of Algiers, he was the epitome of an Orientalist fetishizer.

Sketches from his travel certainty emphasized the sensuality of Algiers, fixated on the gendered readings of spatiality. Le Corbusier equated the city to that of a woman stating, "Algiers drops out of sight... like a magnificent body, supple-hipped and full breasted...A body

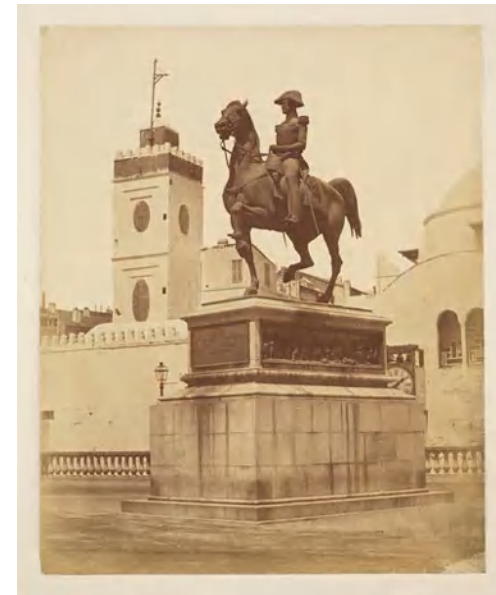


Figure 6. Jean -Baptiste-Antoine Alary, *Place du Government*, 1857

which could be revealed in all its magnificence, through judicious influence of form and the bold use of mathematics to harmonize natural topography and human geometry."<sup>31</sup> The undulating curves of the city characterized the passive and feminine quality of Algiers. If the West was masculine then the East, or in this case Algiers, had to be feminine since the Orient defines all that the West is not.<sup>32</sup> Le Corbusier wanted to unlock the secrets of Algiers, to metaphorically unveil the city, to penetrate the intimate feminine casbah. Not to mention, he even painted his own version of *Femmes d'Alger* depicting abstracted Algerian women wearing traditional costumes displaying their bare breast. Accompanying such twisted fascination, quick studies of Algerian women juxtaposed to a progression of imaginary nudes aimed to expose what she might have looked like under her clothing further solidifies his perverse fetish.

Additionally, within his sketches he consistently depicted the casbah as a veiled head with the words scribbled "La Casbah" besides it. Most infamous was his sketch of Algiers's itself, represented as a winged woman with a zoomorphic head (Fig. 7).

28. Çelik, Zeynep, *Le Corbusier, Orientalism, Colonialism*, (Massachusetts, MIT, 1992), 60.

29. Çelik, Zeynep, *Urban Forms and Colonial Confrontations: Algiers Under French Rule*, (Berkeley, University of California Press, 1997), 22.

30. Çelik, Zeynep, *Le Corbusier, Orientalism, Colonialism*, (Massachusetts, MIT, 1992), 61.

31. Çelik, Zeynep, *Urban Forms and Colonial Confrontations: Algiers Under French Rule*, (Berkeley, University of California Press, 1997), 22.

32. Said, Edward W, *Orientalism*, (New York, Pantheon Books, 1978), 138.

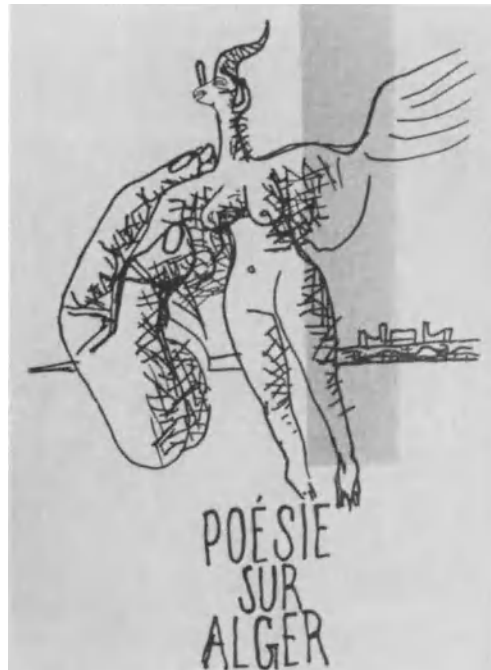
24. Çelik, Zeynep, *Clancy-Smith, Julia, and Terpak, Frances, Walls of Algiers: Nar-*

25. Grabar, Henry S., *Reclaiming the City: Changing Urban Meaning in Algiers after 1962*,

26. *Ibid*, 392.

27. Grabar, Henry S., *Reclaiming the City: Changing Urban Meaning in Algiers after 1962*, (London, Sage, 2014), 392.

Figure 7. Le Corbusier, *Poesie sur Alger*, 1942



Algers has now taken the form of a supple-hipped curvaceous woman with a full bust. A hand reaches out to touch the figure which is seen as the symbolic touching of the female bodily curves. Within the publication in which this image resides, he describes the city in a poem mentioning how his gentle hands caresses against the skyline of new Algiers in a proposal he designed for.<sup>33</sup> Even though this image is not photographic in nature, his sketch culminated in the influence photography has produced in excessively Orientalizing Algeria. Turning every novel notion of Algiers into the exotic, the uncharted, and the submissive as a way of justifying the horrendous French intervention of providing a protective masculine embrace.

Reaching new heights of degradation, Le Corbusier proudly showcased his Obus plan for Algiers to the French government. Many praised his plan or the ingenuity and boldness of introducing such revolutionary adaptations into a city. I however will not be doing that. From what I interpret is the complete disregard of social and cultural heritage,

enforcing Orientalist notions of hypersexualizing the city. From a photograph of his masterplan for Algiers, immediate forms of curvilinear contours carve up the city, deliberately separating the local's access to the coast line (Fig. 8). The curvaceous nature of the form is reminiscent of his writing mentioned where his intervention aims to glide and mimic the plasticity of a female Algerian body.<sup>34</sup> Completely walling in the city of Algiers, he plays with the notion of the intimate casbah. Just as how within the safety of the casbah, women were allowed to be exposed, Le Corbusier walls in all of Algiers wanting exhibit the Algerian female. Furthermore, the terraces of the casbah are also traditionally within the realm of the female as it allowed them to socialize and perform chores with other neighboring women without worrying about the foreign gazes of men down below the streets.<sup>35</sup> Leisure time would also be spent up there as the roof terraces provided stunning views towards the Algerian coastline. With this new proposed intervention, Le Corbusier would gain vantage of every roof top terrace, peering into the private life of Algerian women. With most of the new French interventions outside the walls, a clear demarcation of French versus Algerian is denoted. The ancient fabric is encompassed and put on display as if it were a museum relic to be observed. Noticeably, the photograph of the Obus plan showed is captured in a traditional black-and-white, without the use of a more luminous sepia denoting that if it is French in origin, it does not require the touching up that the Orient requires. The Obus plan is already marketable without the need to emphasize its friendly or playful quality. Additionally, the black



tones accentuate the reading of the curvatures immersing the audience into the monumentality of his proposal. Never allowed to progress or advance, the city of Algiers has to be kept within the shadow for the consumption and entertainment of the colonial empire. Everything the light touches is within the domain of the French.

Through this formulaic lens, the progression of photography was implored as a medium to implicitly harm and to contribute false impressions of Algeria as well as the Orient as a whole. Visualized through photography, photographers such as Moulin sought to penetrate into the private Algerian domestic life through the use of staged sets and internalized notions of the Orient. Other images reproduced attributed to the narrative of the helpless Algerian population, which required the aid of the French public. Lastly, images rendering the city as passive and complicit, utilized as a mere backdrop for monumental statues or overly sexualized to fulfil twisted fantasies publicized the city as

inherently feminine. Representation weaponized is just as sinister as committing acts of violence as these predispositions will not only affect those currently residing within colonial powers, but also influence those even after gaining their independence in 1962.

Further avenues of investigation would be to track and delve into the impact in which existing built French infrastructure, such as housing projects, arcades, and roads still impact Algerian society to this day and age. Moreover, how other forms or representation utilized by Algerian freedom fighters would counteract the propaganda inflicted by the French such as slathering paint on colonial statues or counteractive graffiti.

**Regardless of the counterrevolution, colonization impregnated palpable notions of otherness, which ironically also fueled France's obsession with Algiers.**

Figure 8. Le Corbusier, *Algiers Master Plan*, 1931

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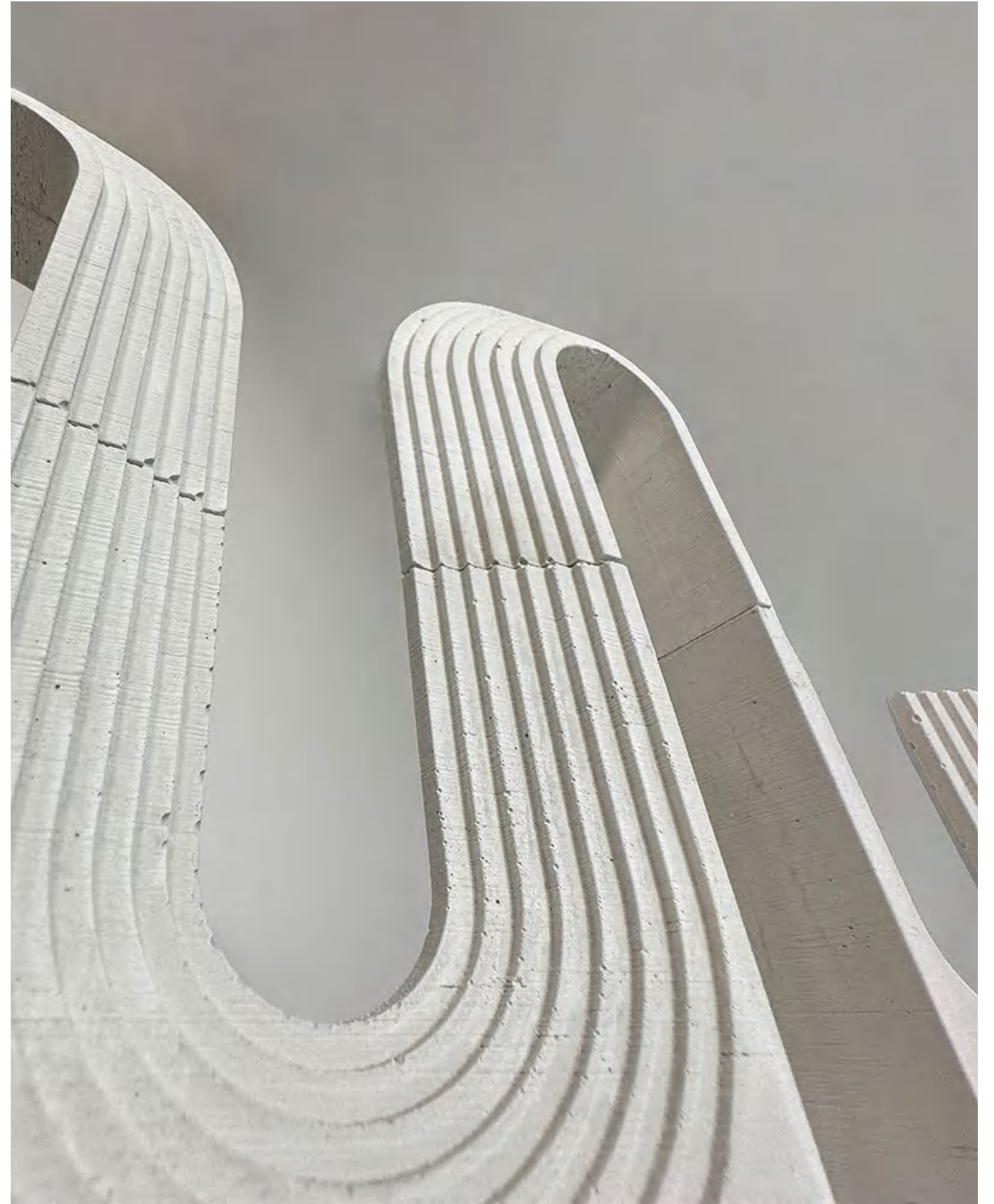
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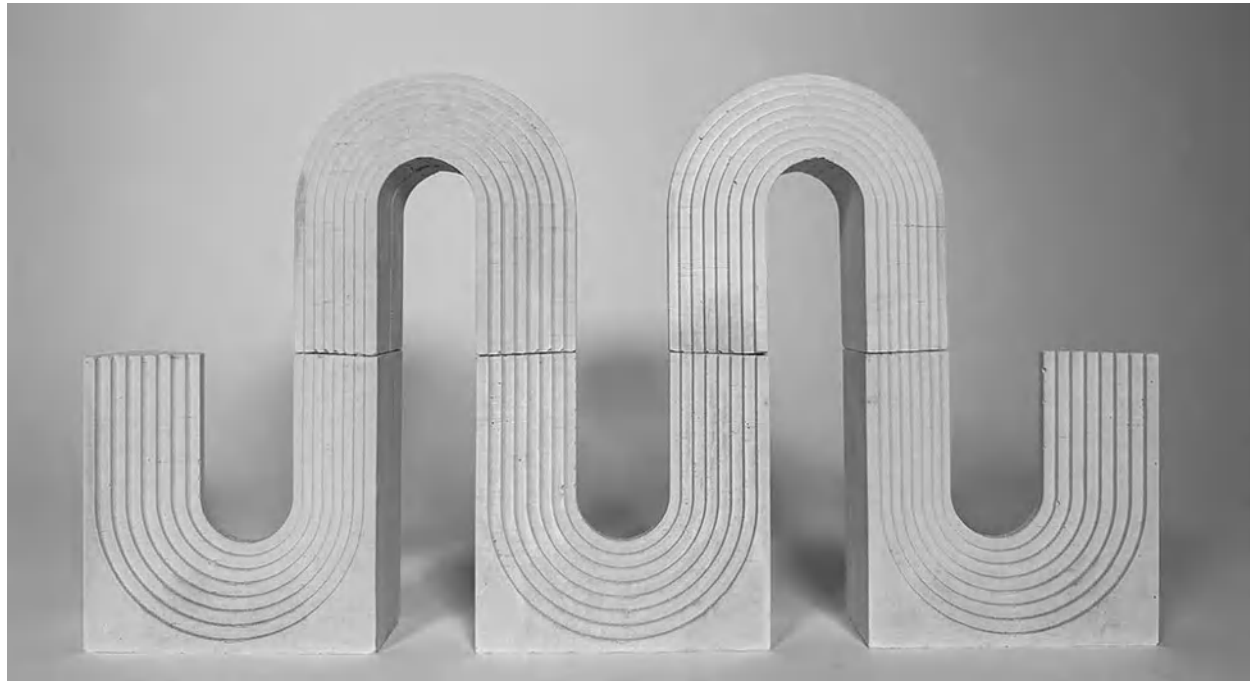
35. Hadjri, Karim, *Vernacular Housing Forms in North Algeria: Traditional Dwellings and Settlements Review*, (Berkeley, IASTE, 1993), 68.

*Transitional Geometries*

*Modulated Archways*



*Skewed perspective looking up.*



1



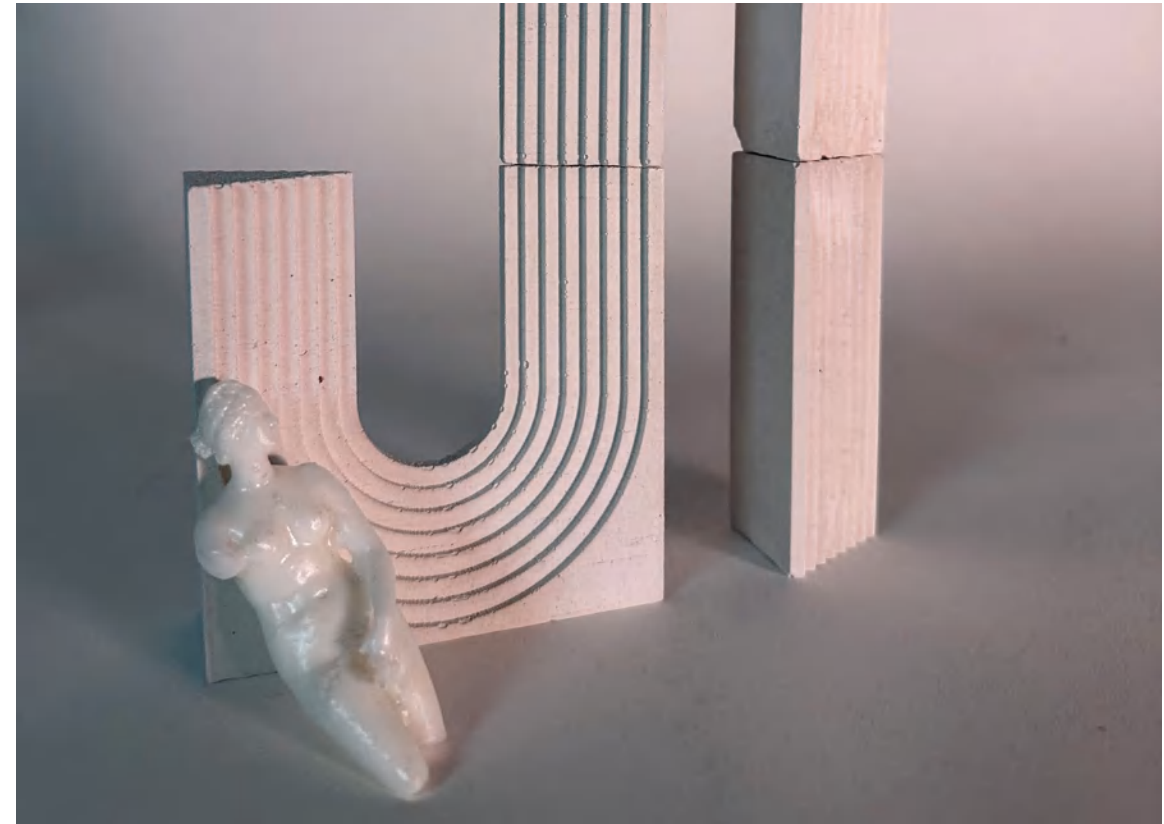
2

**Negative and Postive of Arches**

- 1. *Continual fluting along arches.*
- 2. *Ruin like vignette*



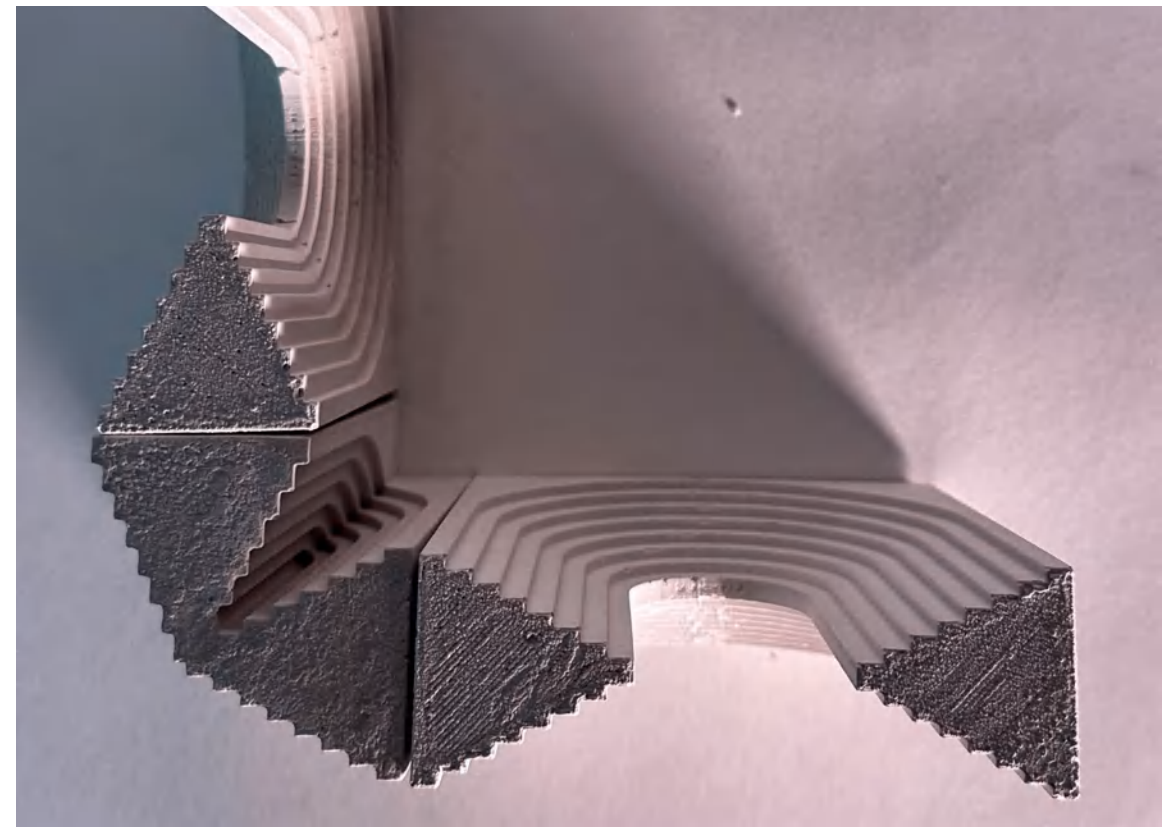
1



2

**Addition of a Third Component: Corner Condition**

1. Three components stacked.
2. Venus de Milo Scale Figure
3. Corners meeting



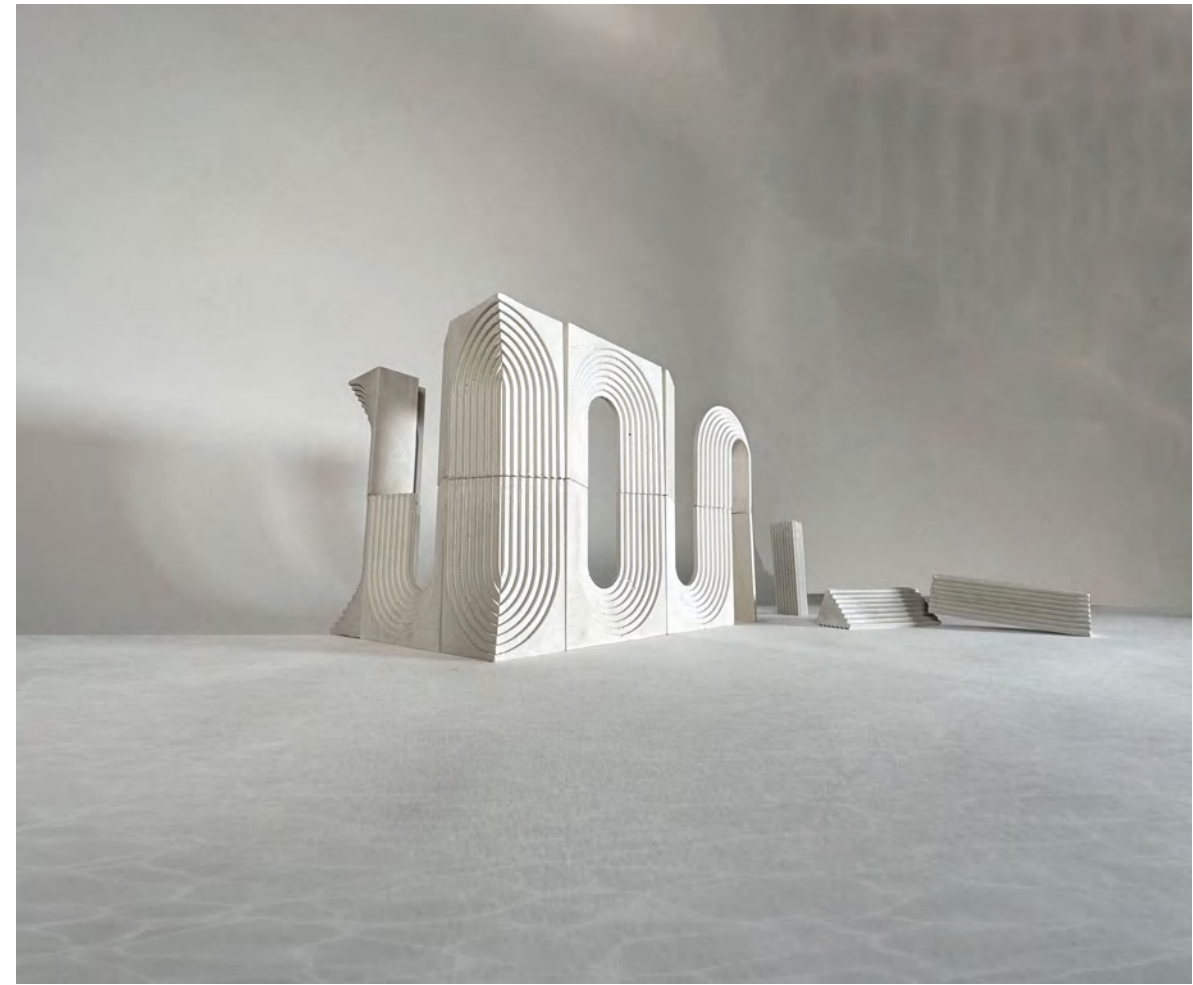
3

**Addition of Fourth Component: Columnar Module**

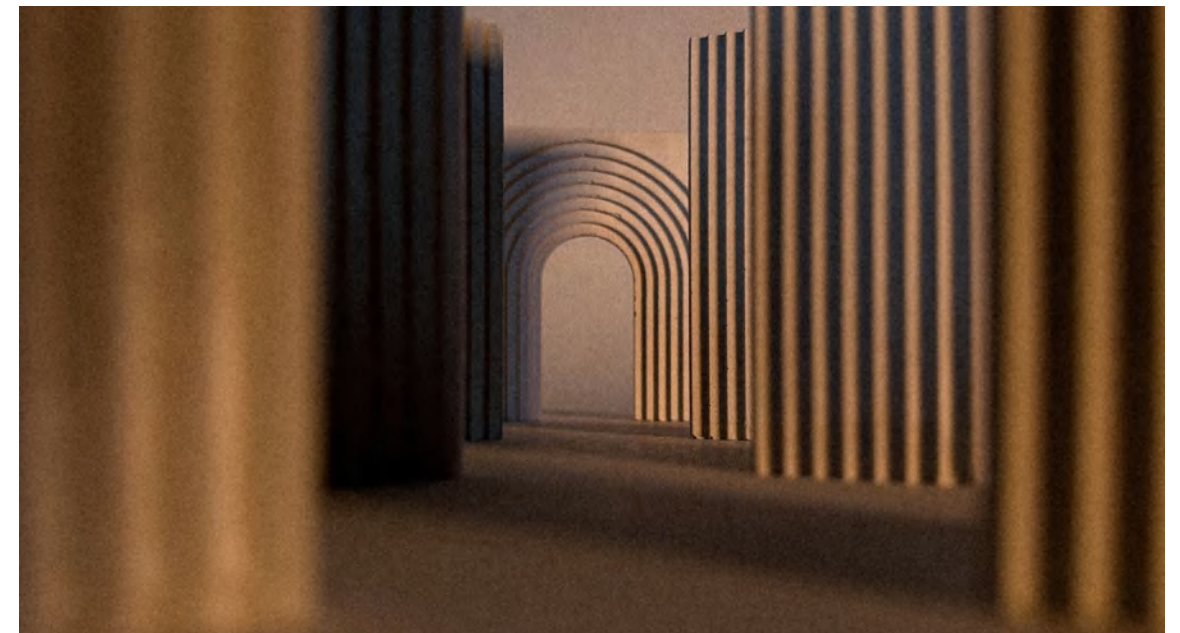
1. All four components
2. Water reflection
3. Sunset between the arched colonnade



1



2



3





## AfterLight

*in collaboration with Columbia University DeathLAB*

*Professor Karla Rothstein*

*Research and Design Team with Maclane Regan and Nicolas Nefiodow*

What we do with the remains of our dead reflects the character of the living—affecting both the environment and experience of the metropolis. At AfterLight we design new models of mortuary infrastructure which embrace biologically sensible alternatives; we support innovative civic spatial constructions that are ecologically progressive; and we expand forms of intimate and social remembrance.

AfterLight reimagines how we handle death, and, in turn, how we live.

We are developing AfterLight in response to environmental urgencies, urban spatial constraints, and a growing desire for conscientious after-death options.

In dense cities all over the world, access to urban land dedicated to burial and memorialization is becoming increasingly scarce. Staggering amounts of energy, chemicals, heavy metals, hardwoods, and concrete are being consumed by cemetery burials.

We have redesigned these unnecessarily consumptive mortuary methods to celebrate the human body's organic connection to the planet.

AfterLight supports funerary rituals through an intimate and spiritually resonant experience, elevating dignity and remembrance through a natural and sustainable process.

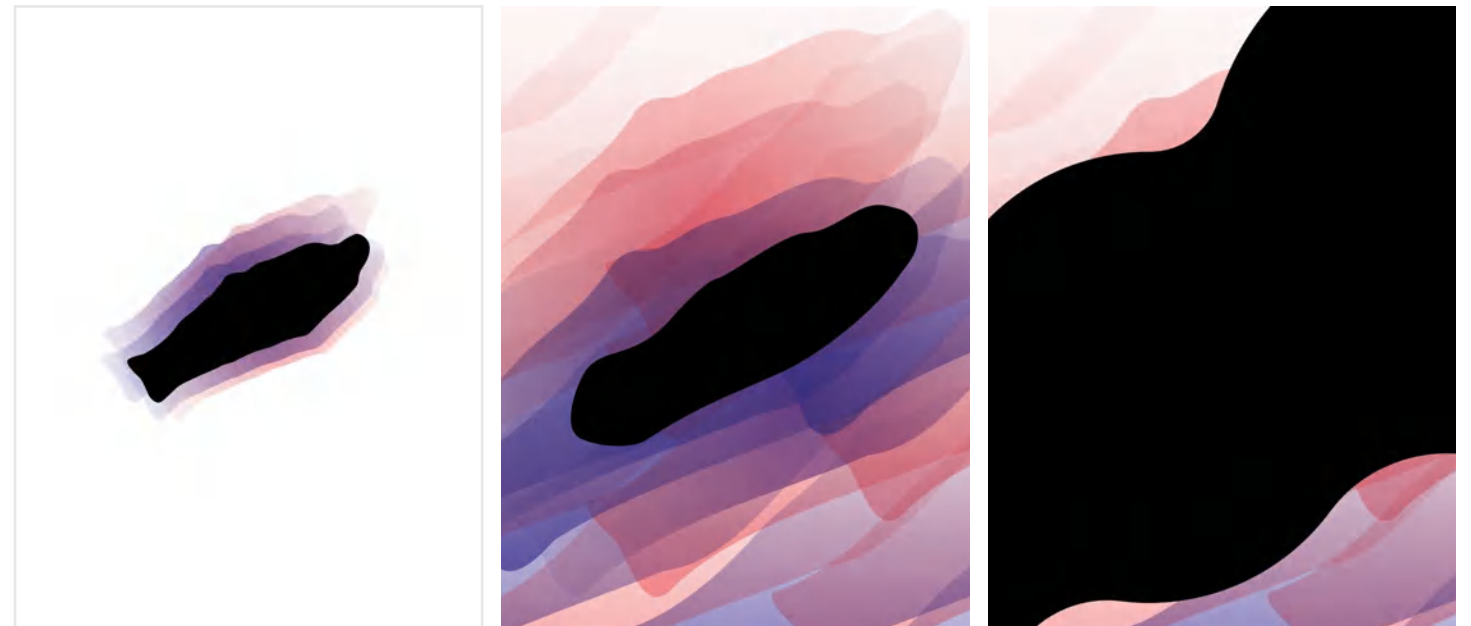
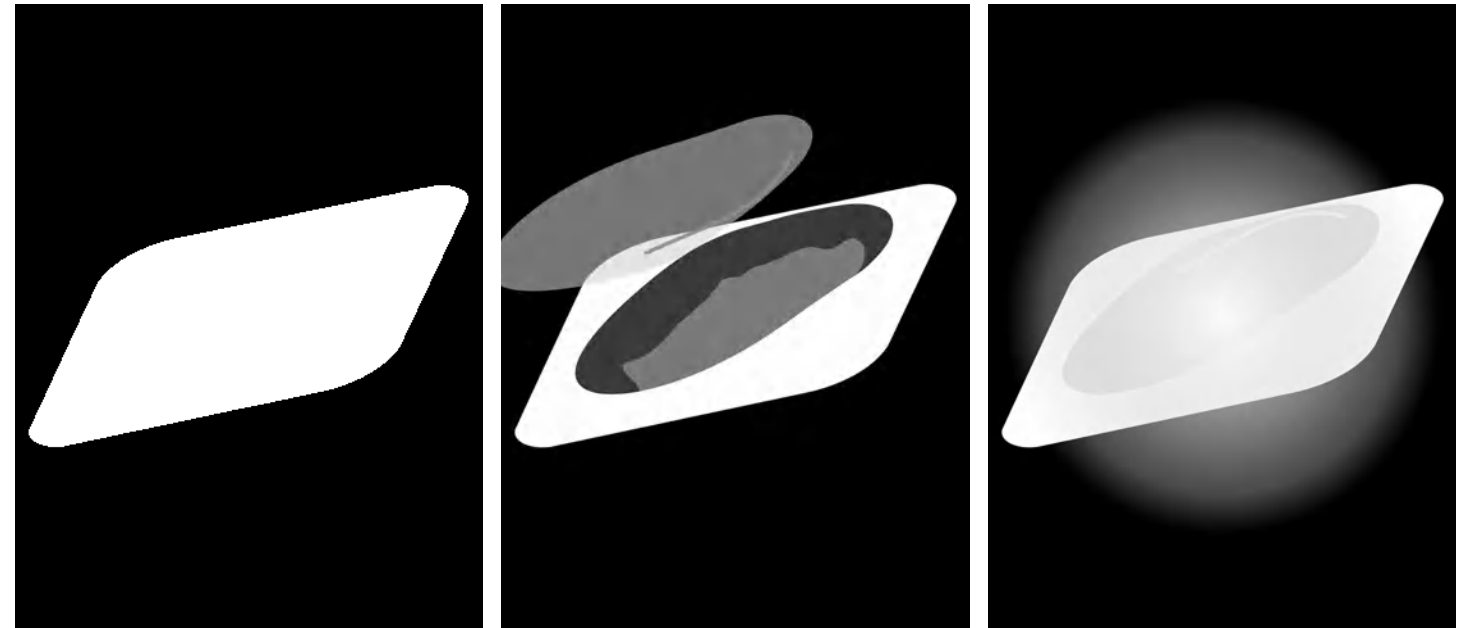
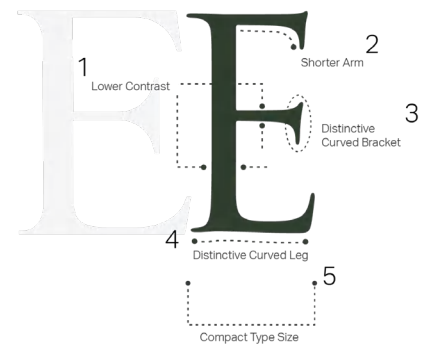
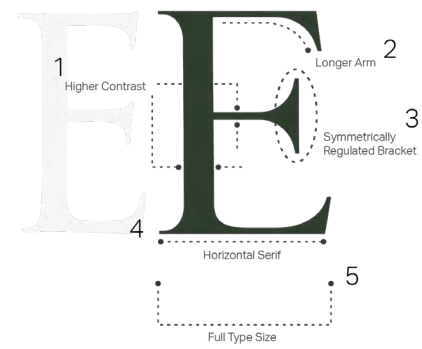
In a mosaic of memorial illumination, a space of sorrow, honor, and celebration, we can better steward of the planet, while creating tributes to individual and interconnected lives.

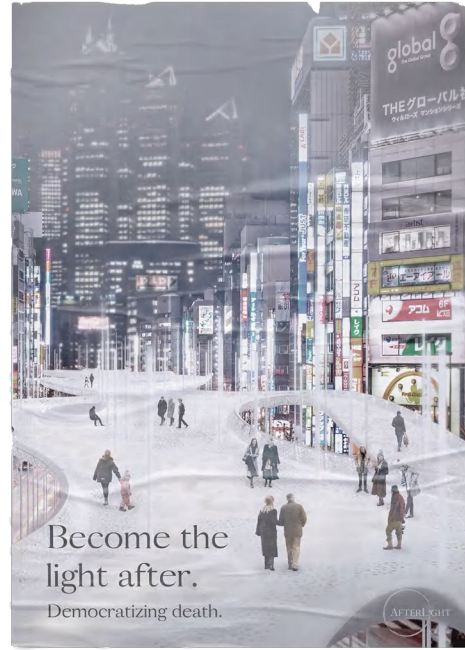
AfterLight's self-contained reusable vessels link technology and design to create a new sustainable paradigm for corpse disposition and memorialization.



AFTERLIGHT  
proposed

AFTERLIGHT  
original





1



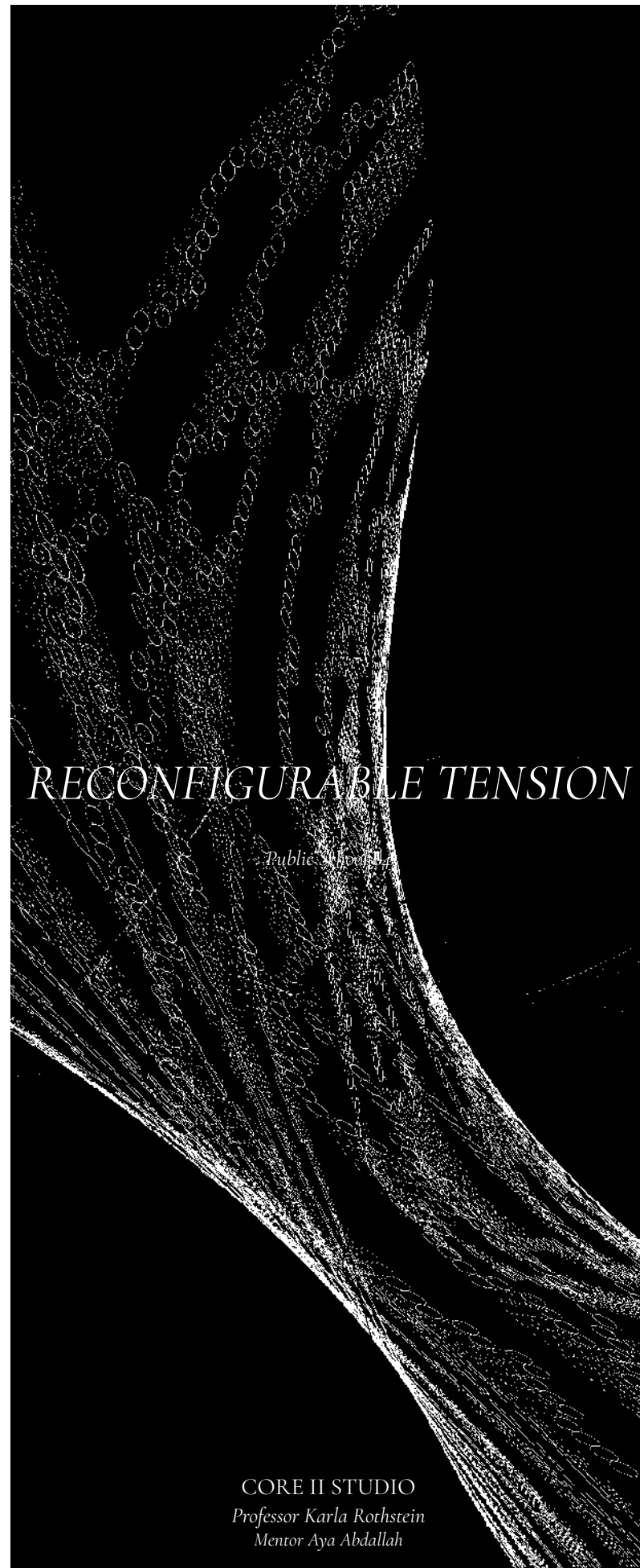
2



3

AfterLight Campaign Posters

- 1. Become the light after campaign
- 2. Death done differently campaign
- 3. 96th Street Subway Poster



Through a tensional negotiation, classrooms and other programs reconfigure and accommodate new spatial readings. Floors, ceilings and wall systems create gradients of layering and veiling to facilitate shifting degrees of privacy and seclusion.

Reconfigurable Tension aims to capture and re-translate the tensions of the existing site.

PS64 was dilapidated before the LatinX community took over and created a community there dedicated to arts and rehabilitation.

Tensions soon arose when the building was sold and the LatinX community was evicted off the property. Carrying these themes of tension into my project, I started with a material study that aims to displace, shift, and reconfigure the translation of spatiality. Further abstracting this, a series of graphics was produced to measure and evoke the sense of tension/compression.

There are three notable tensions on-site whether it being visual tension via program placement, social tension through the LatinX community, and spatial tension through formality.

The programs highlighted are hung from a structural waffle grid roof that pushes them in and out of the existing structure. This centrality makes it difficult for them to be neglected as they produce spatial tension. By compressing the floor plates together, I impregnated each level with programs providing me with my formal language of the curvatures.

These curvatures undulate and wrap spaces of social tension that overhang out into the atrium. Such spaces are of focus are:

1. Auditorium: LatinX community occupied it beforehand
2. Classroom: (speaking upon Access to education)
3. Library: Access to resources  
Cafeteria: Access to healthy food

Ground Floor provides flexibility as it is dedicated to the arts as an homage to the LatinX community and features dynamic partitions.

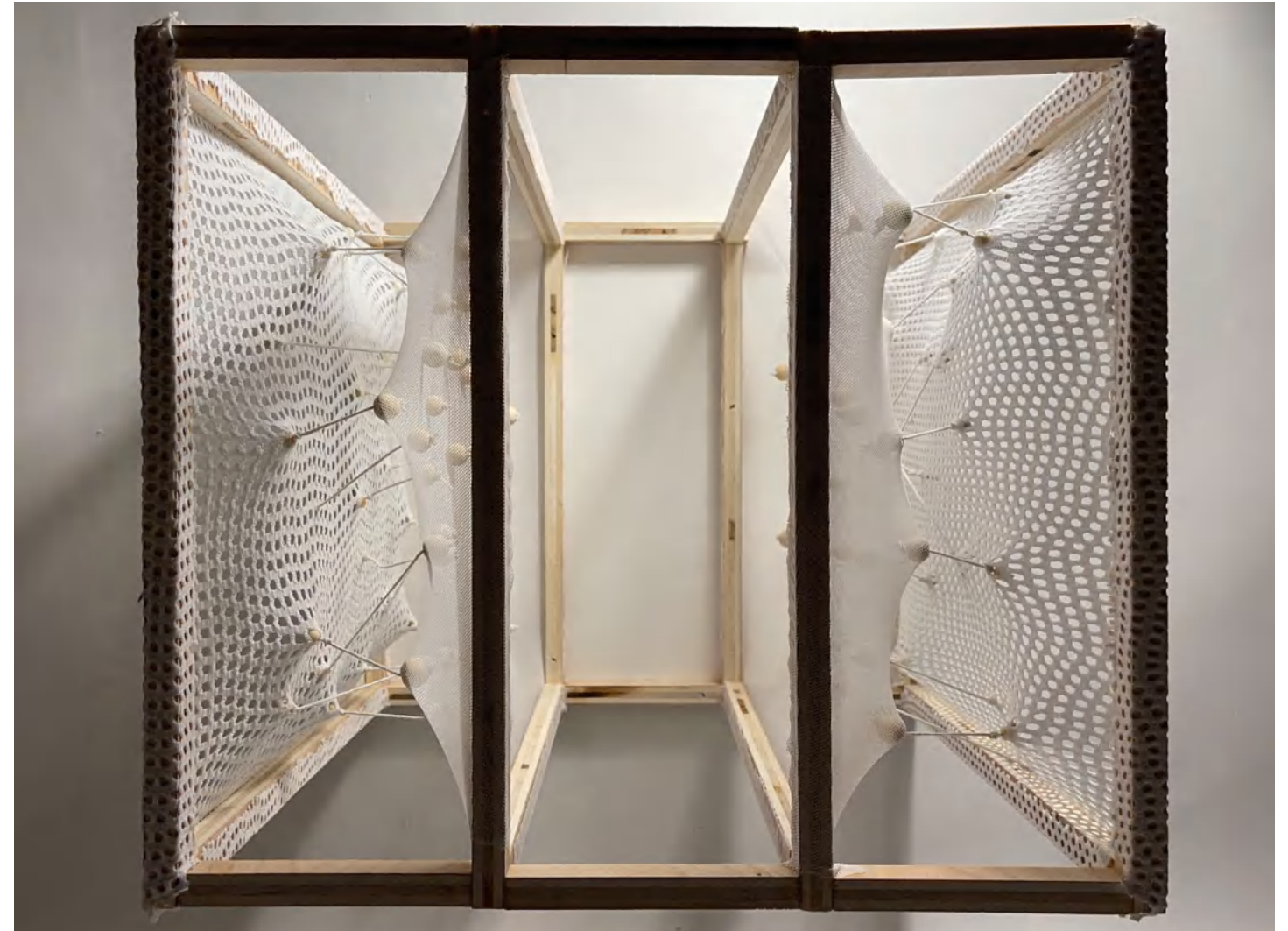
Interior walls provide shifting degrees of boundary depending on a need basis, veiling and concealing to facilitate shifting degrees of privacy and seclusion.

Moving up the tower, spaces become more specialized as well, the top is for 6-8 (middle school) while the bottom is for k-5 (elementary school). Coming together, the atrium provides a sense of release from the compression of spatial tension. The undulating lattice frees up the ground floor and gives it back to the community where I envision the usage of transparent EFTE to provide shelter.

**Tension and Compression Study Models**

- 1. *Inward tension*
- 2. *Both tension and compression study*
- 3. *Outward Compression*

1



2

3



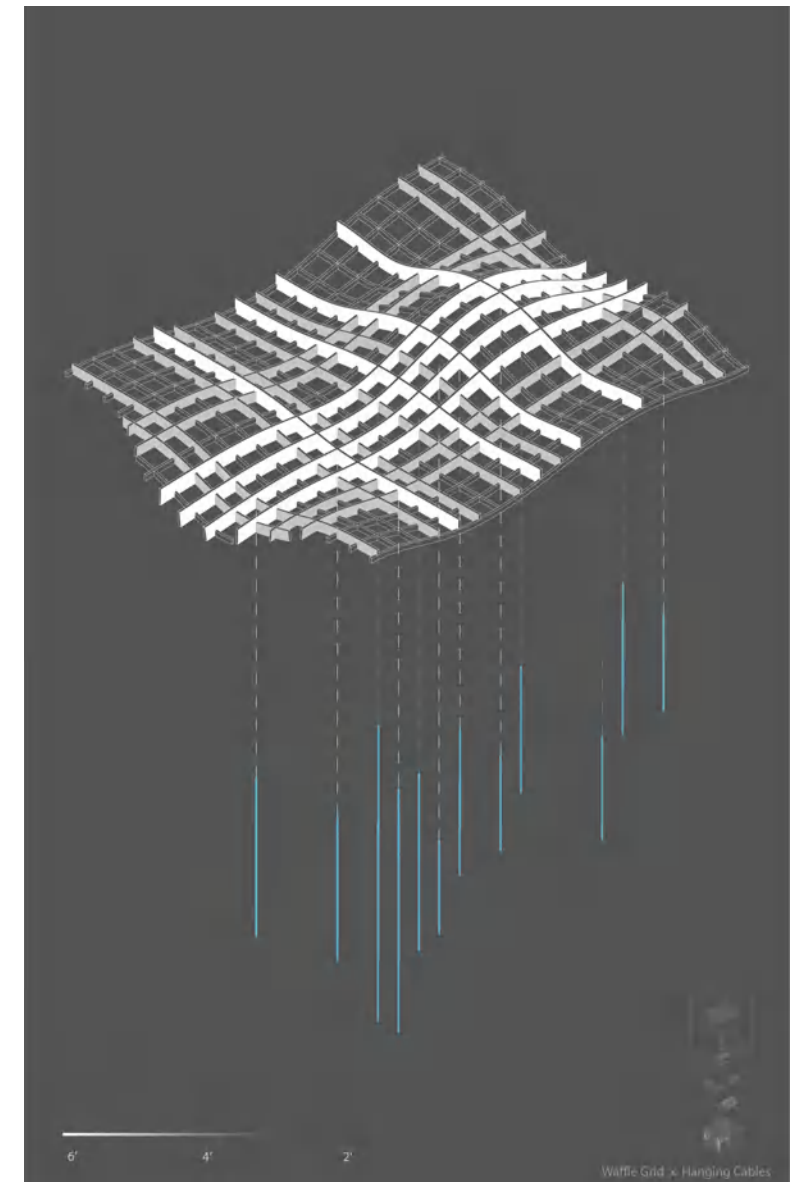
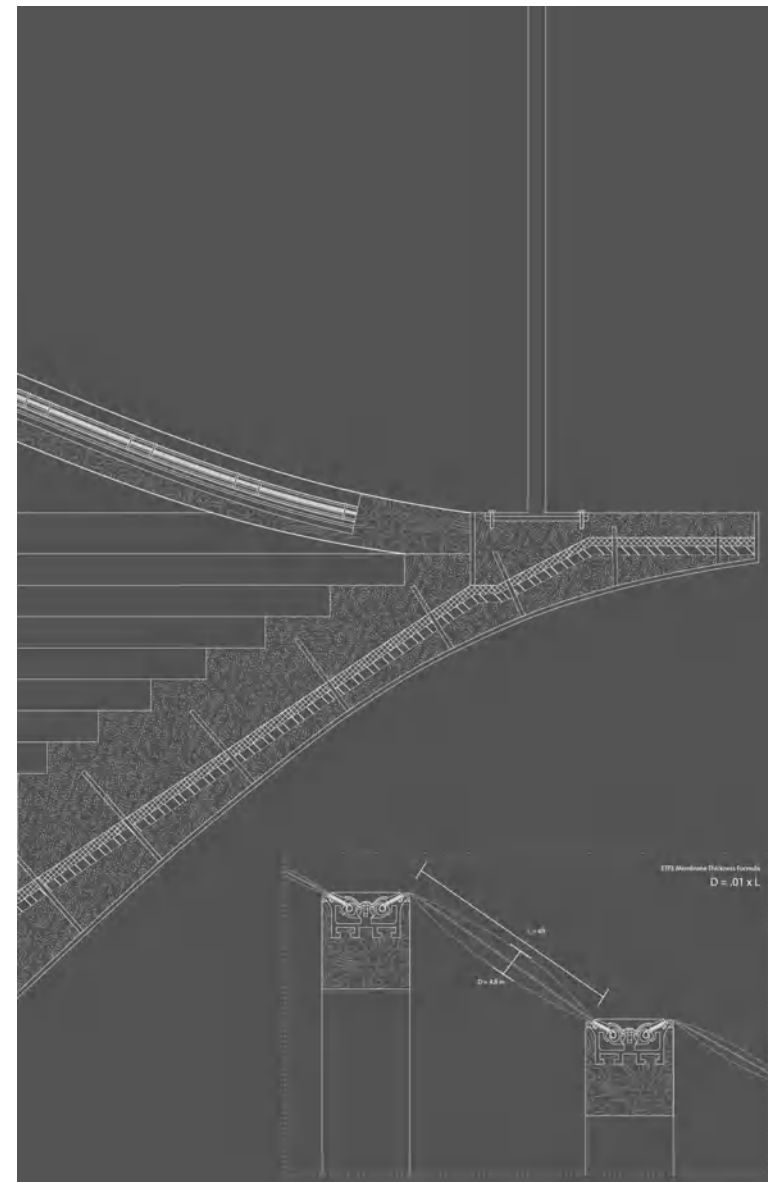
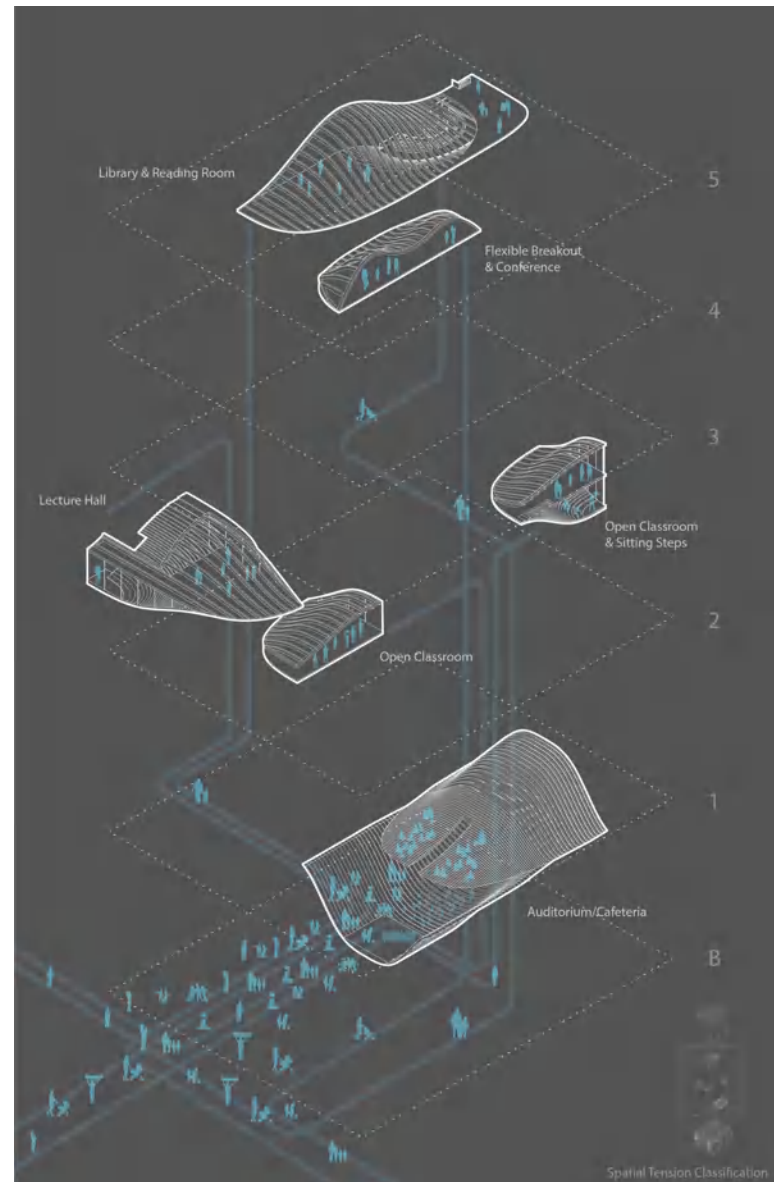
88

89

My intervention would allow for conversations regarding the ethics and neglect in the neighborhood as well as the American public school system overall.

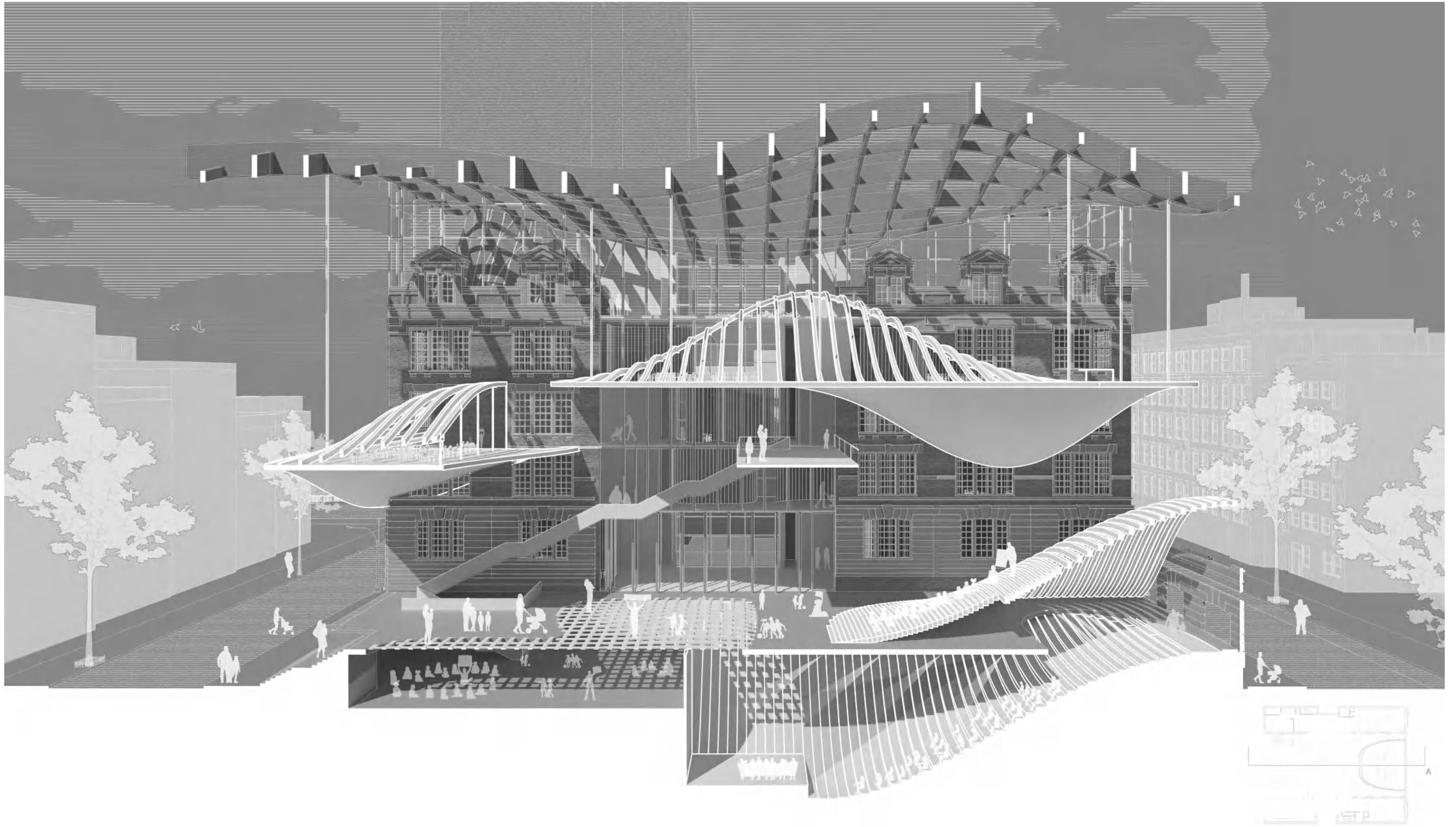
A structural grid-shell roof spans the two wings and supports public programs in spatial and underlying socio-political tension. These programs push in and out of the existing structure and are located centrally, prioritizing the programs and history of these spaces within the context of the school.

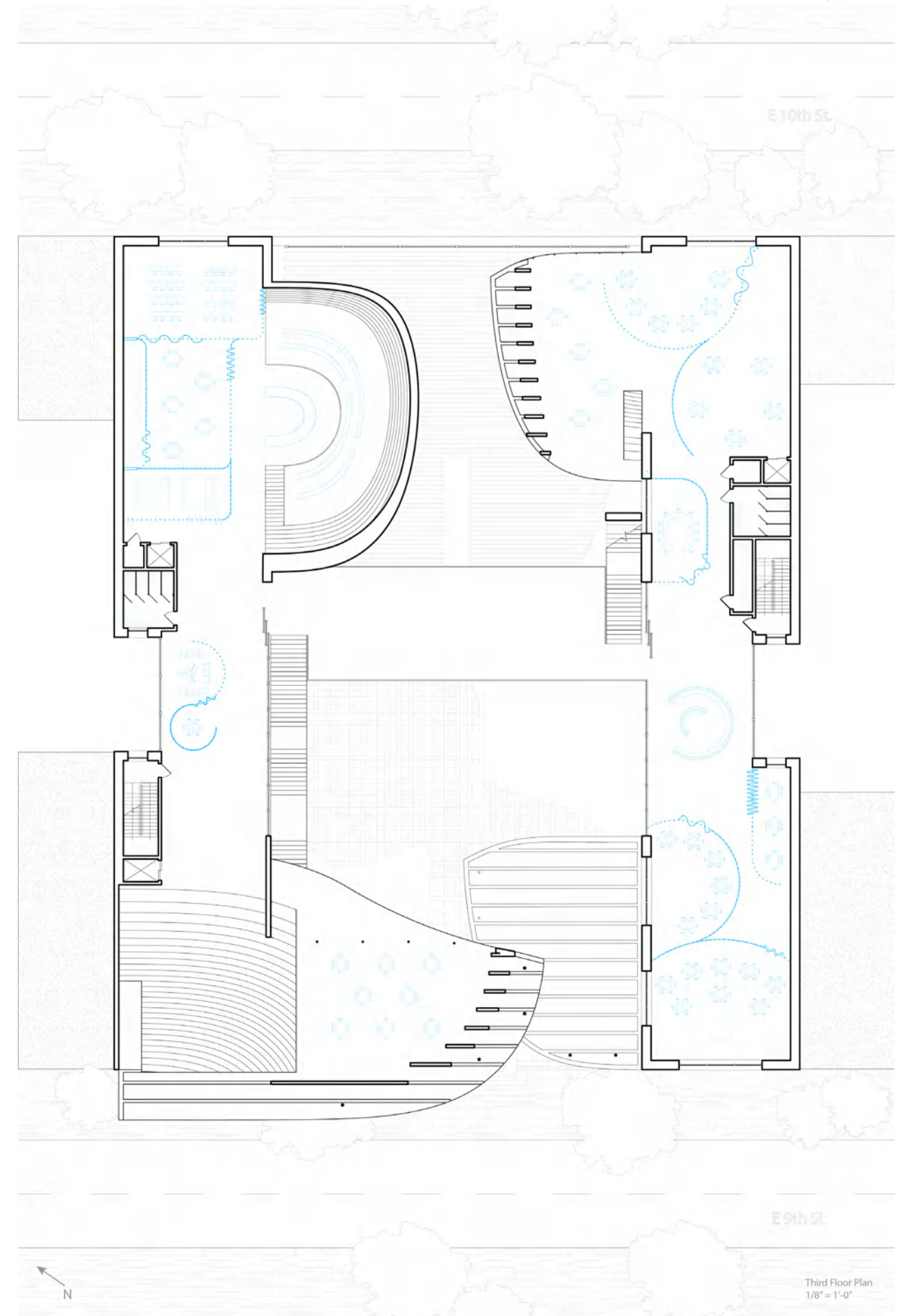
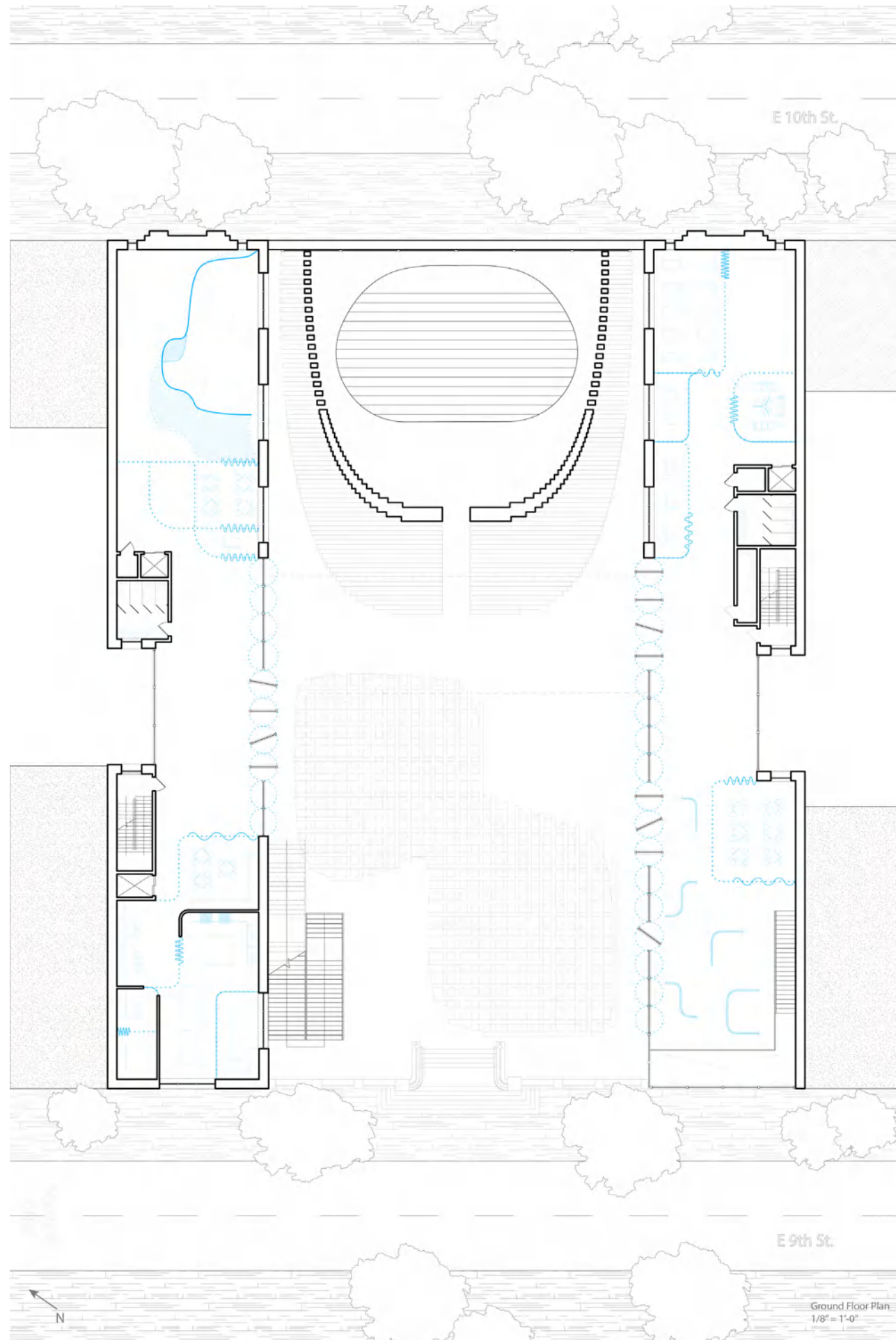
This undulating lattice frees up the ground floor to allow for a multitude of temporally shifting uses throughout the day and seasons where shared resources are programmatically compressed, unifying the site. The first graphic shows the tensions on-site whether it being visual tension via program placement, social tension through the LatinX community, and spatial tension through formality.



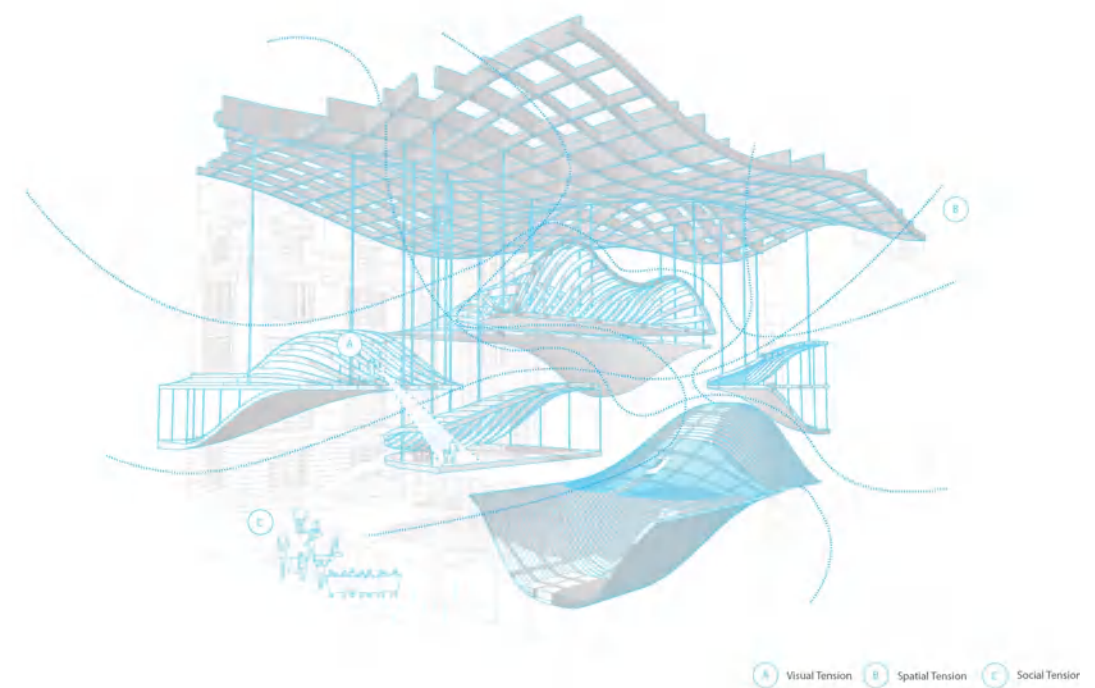
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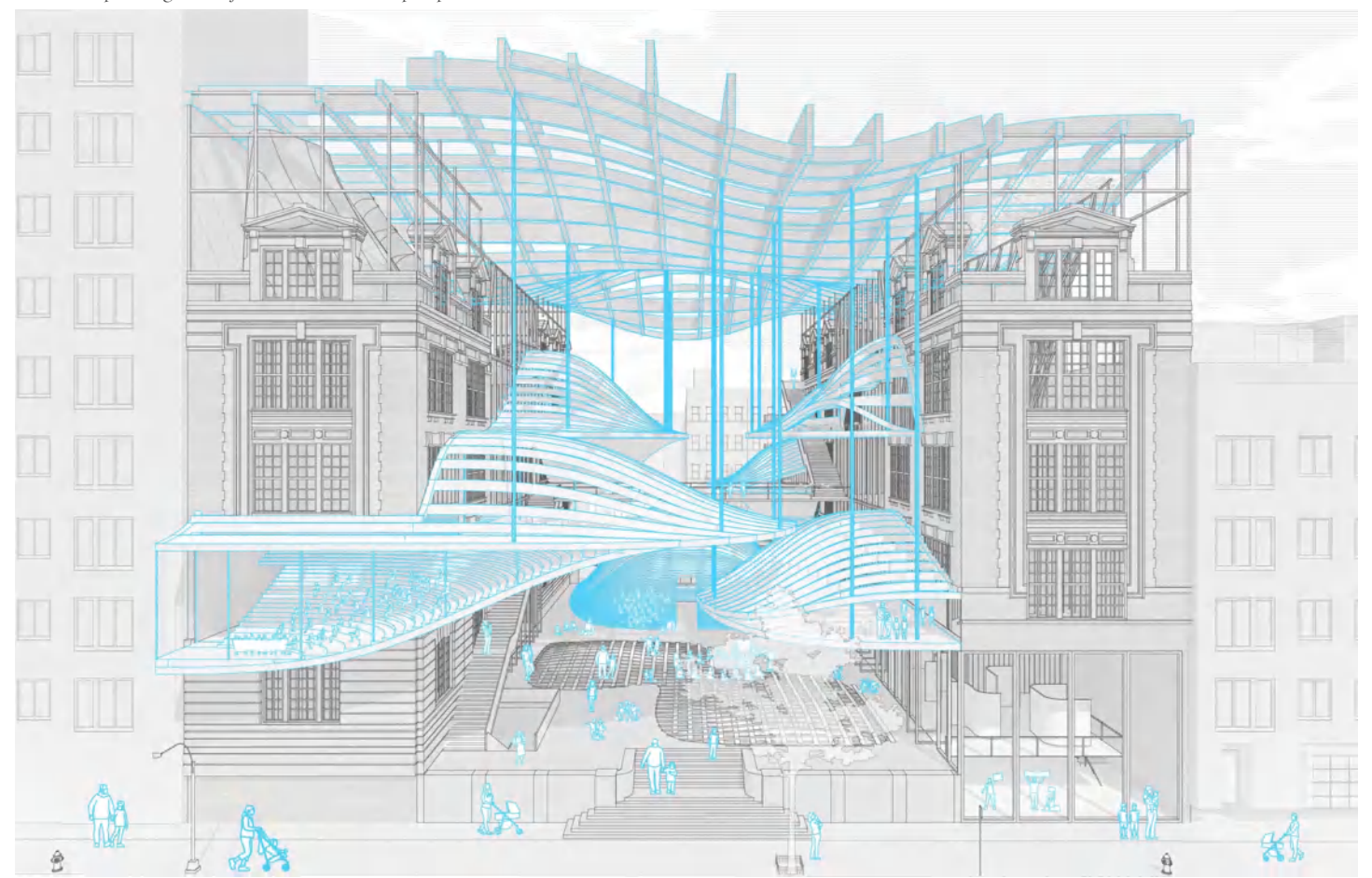


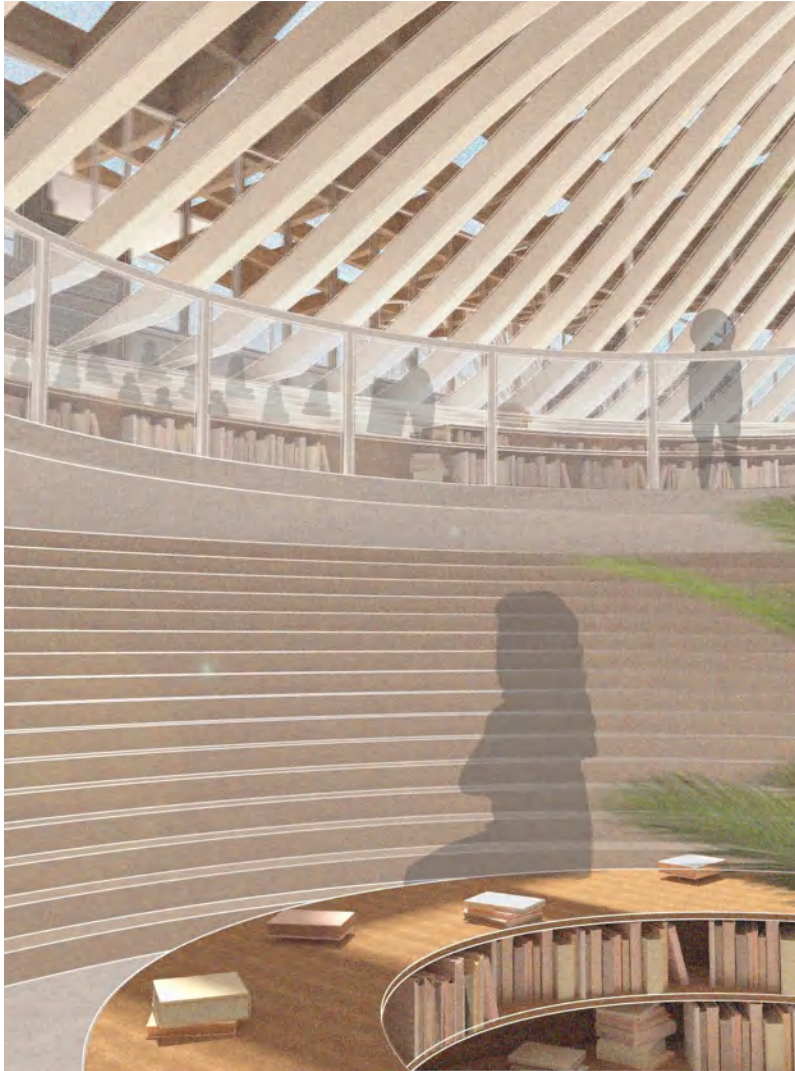




Three levels of tension at play.

Activated public ground floor in elevational perspective.

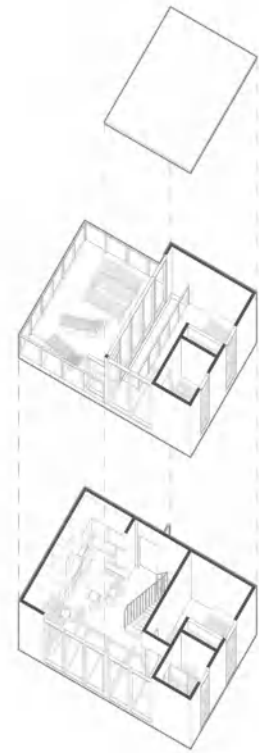




Multi-tier library with auditorium seating.



Roof top atrium with trellis garden.

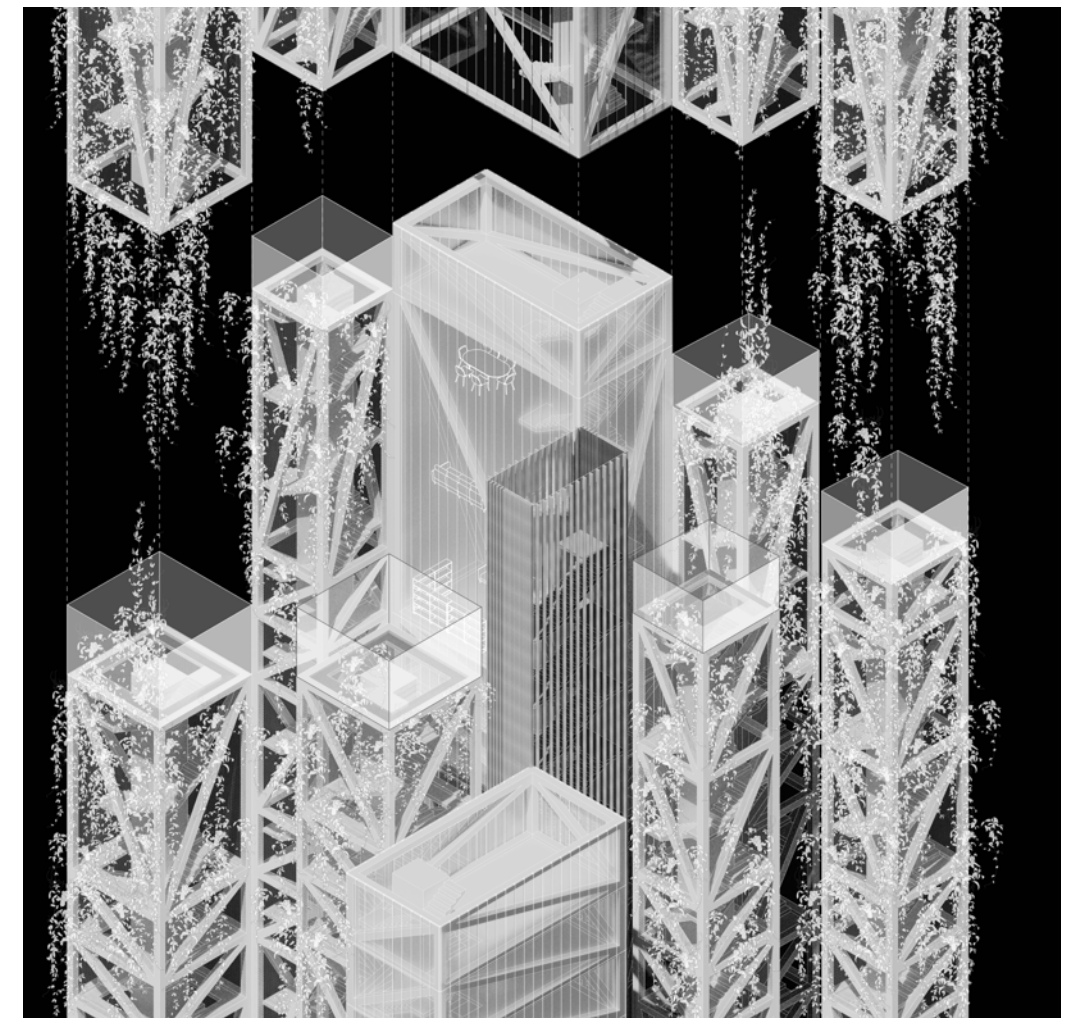


## RE-FIGURE

*Multi-generational Housing*

CORE III STUDIO

*Professor Hilary Sample-Meredith  
Mentor Gene Han  
Collaborated with Emma Faith Sumrow*

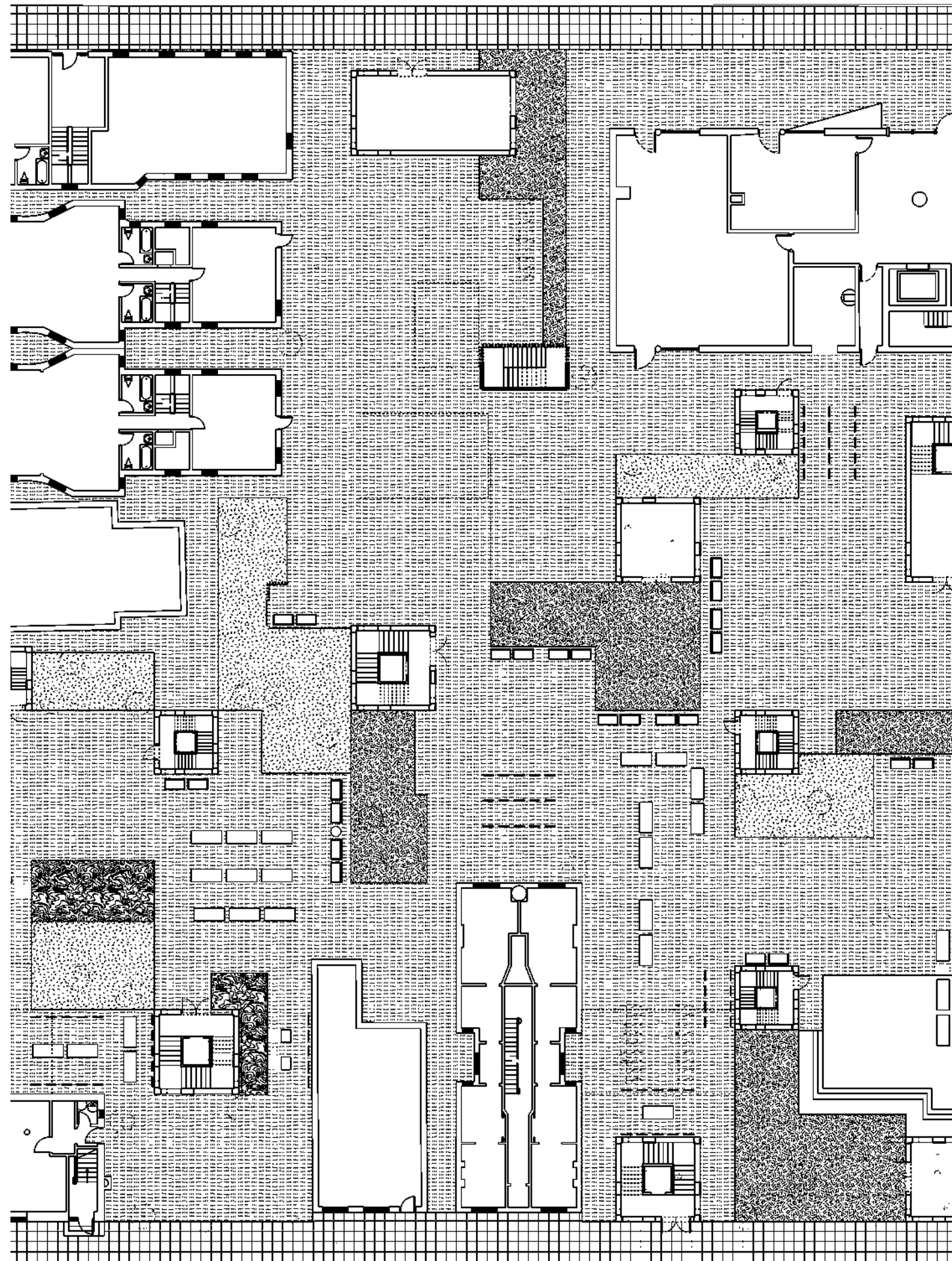


The installation of multi-generational housing creates a performance in the neighborhood which remains stable and lacks temporality.

Actors inhabit and execute daily life which is ever changing within this structured installation; the only constant is that the actors' lives and routines are perpetually in a state of flux.

The levitating neighborhood hovers above the site, providing interconnected spaces that force exposure and interaction between the cast members, both below and within the complex.

Multiple relationships are established and explored in the show: housing unit-to-unit, unit-to-ground, unit-to-exterior, unit-to-circulation, and unit-to-public.



Gentle sunlight filters through the canopy of multi-general housing providing an oasis of activity of unobstructed space. The community activating the ground floor is sheltered by the hanging units above, units that provide for those inside as well as those outside. Latticed vertical circulation cores ascend from the ground nurturing vines to climb above the canopy of housing.





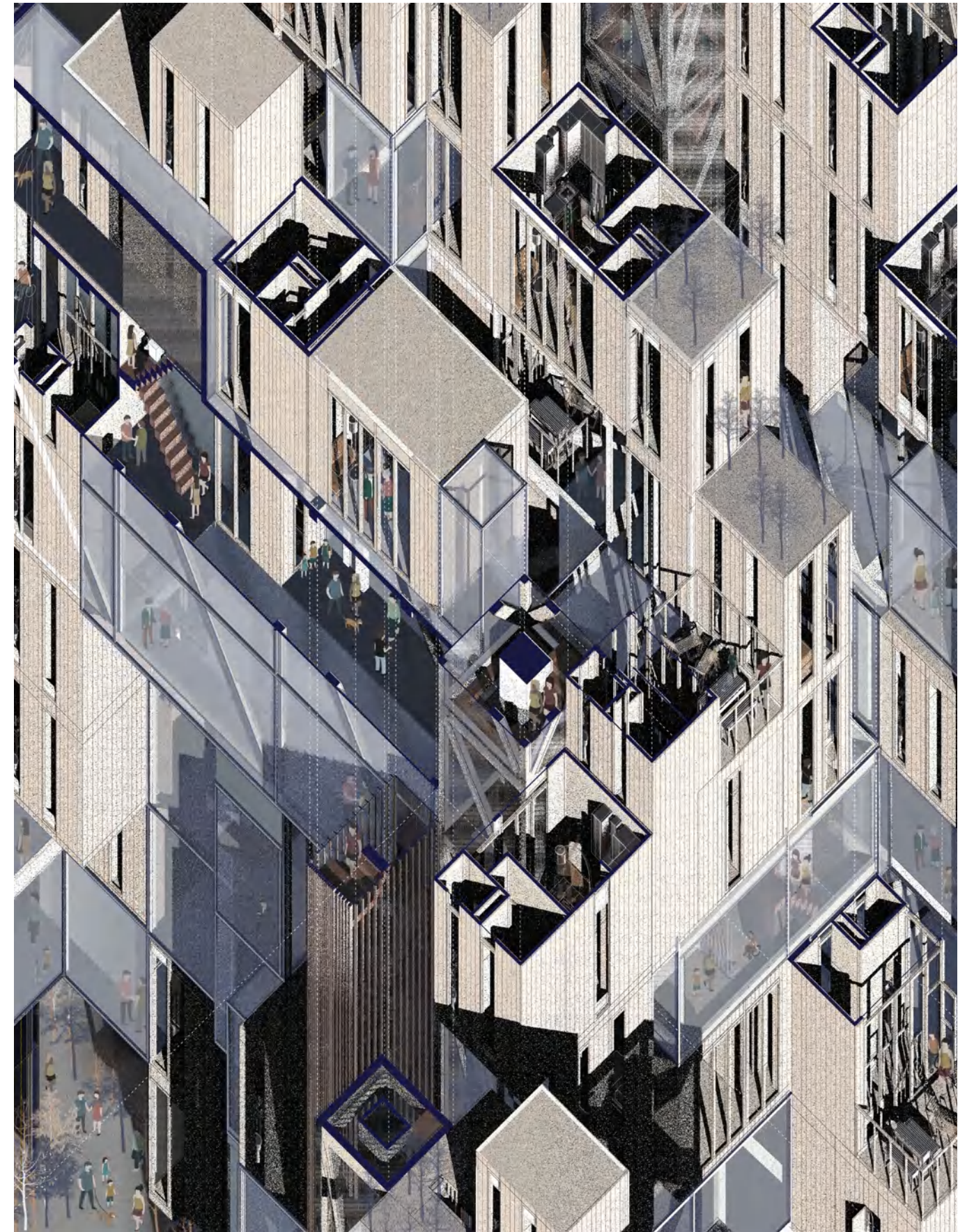
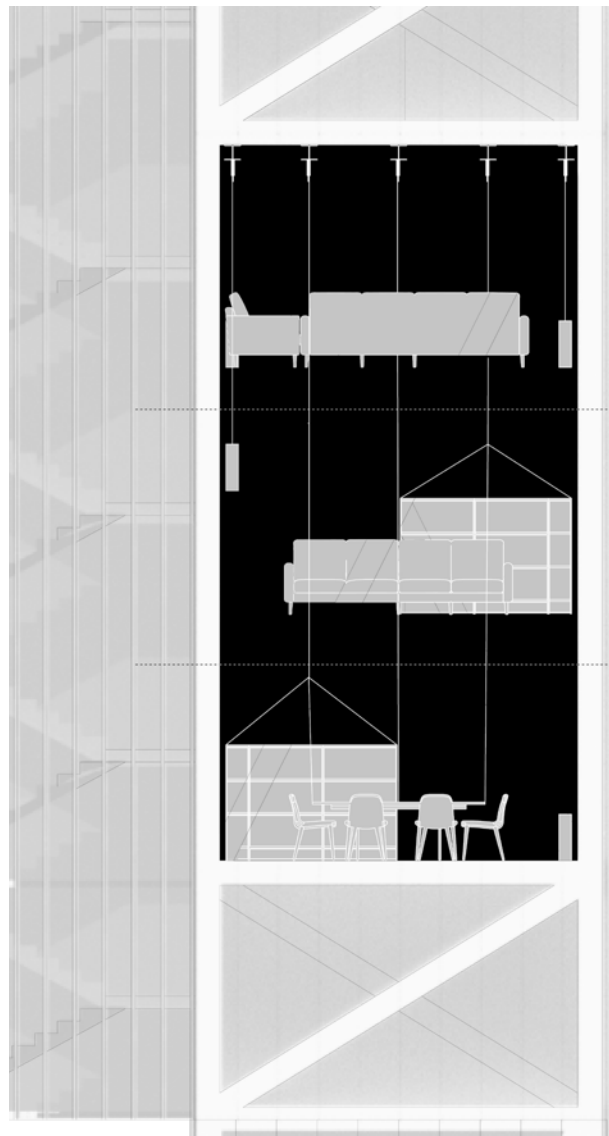
Longitudinal Section



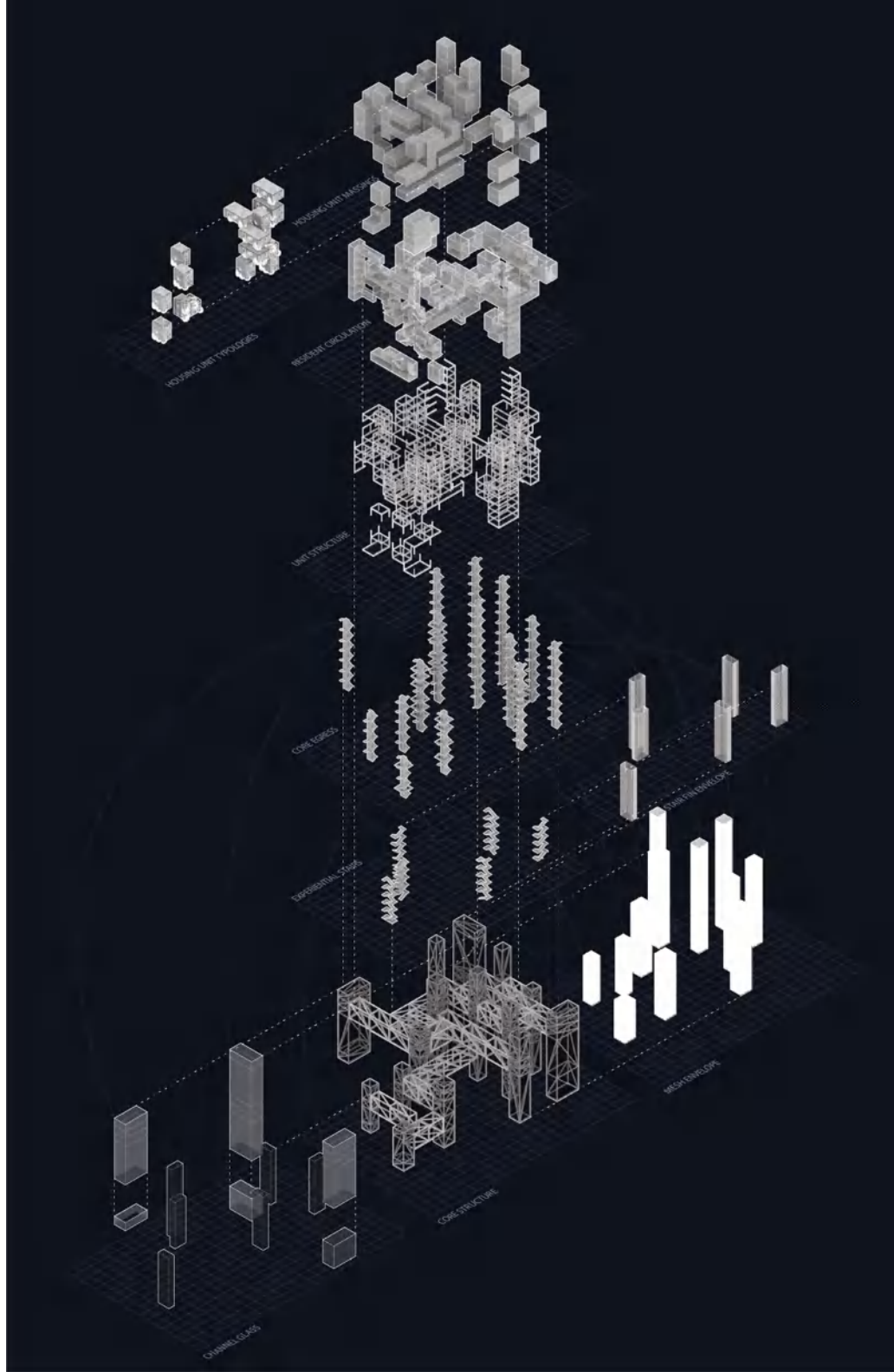
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105

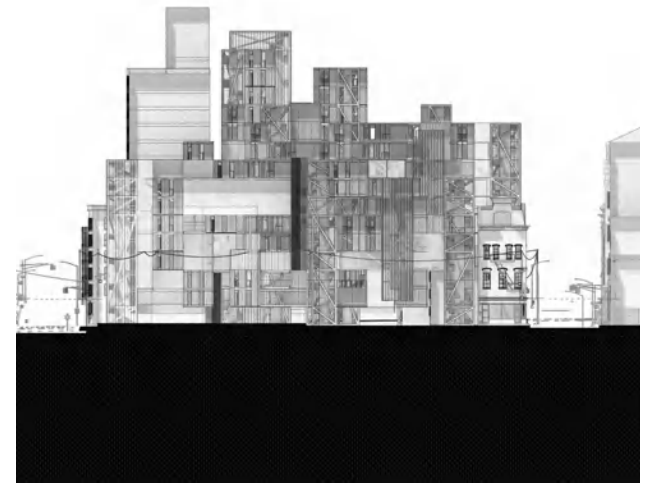
Circumambulating the living core at the center, circulation cores comprised of a truss system negotiates the definition of common space and its functions. Pulled apart, a typical experience of each core is revealed differentiating the living core from that of pure circulation.



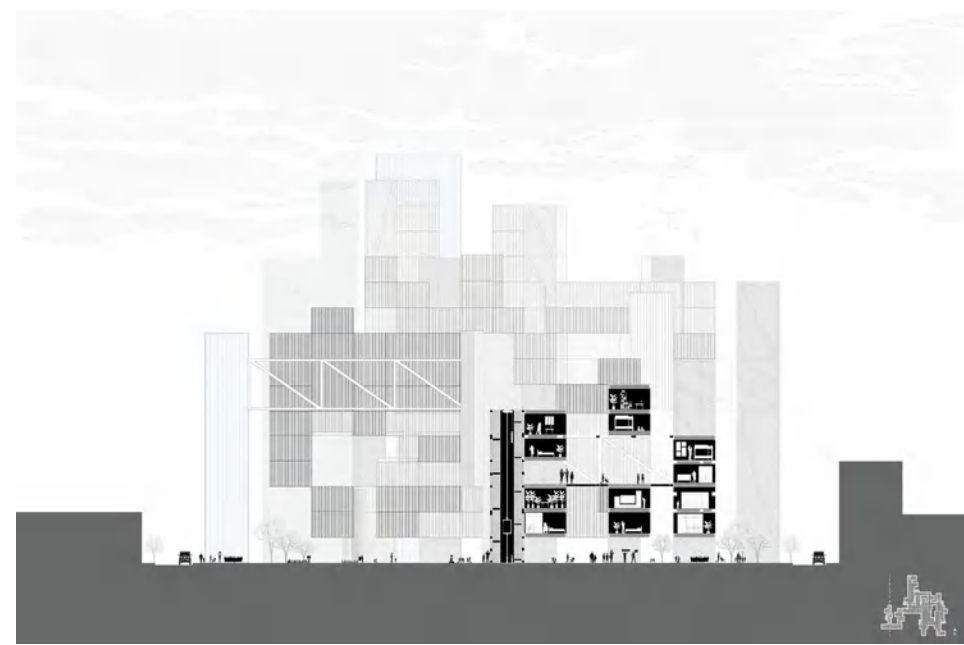
*Plan Oblique of Multi-generational Housing Units.*



1

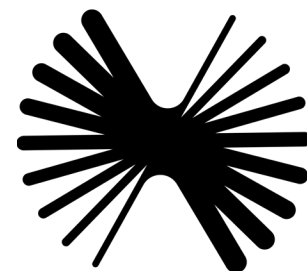


3



2

**Inhabitable Structural Core**  
 1. Exploded Axonometric  
 2. Transverse Section  
 3. Exterior Elevation



UnionBOND

Multi-generational Housing

REAL ESTATE CAPSTONE  
Professor Patrice Derrington

26.5%

Levered IRR

1.48x

Equity Multiple

6 yrs

Holding Period

\$27.5M

LP Equity Ask

UnionBond consists of a 22-story residential tower over a 4-story commercial podium, a public waterfront, and a floating barge. At the podium level, 4-stories encompass 88,805 sq ft of commercial space housing tenants like the MOMA, Park Slope Food Co-Op, Pig Beach, and 10 spaces of parking. Nested on top, 17 stories of residential space provide 147,120 sq ft or 223 units of housing for Gowanus.

UnionBond is a novel residential and mixed-use development project that aims to radiate creativity, bonding community, culture, and with a collective social condenser. Art and food are central to the identity of one's lived experience and through this strategic linkage, UnionBond melds the community together with new experiences of what a civic and residential space could be.

The current proposal does not aim to fight the condition and limitations but rather welcomes it in and mitigates the shortfalls in a daring approach. New members are welcomed into the community, making sure to not overstep the boundaries of the original residents.

As identified by the current community, three main concerns are housing, economic development, and

infrastructure recovery. UnionBond addresses these concerns through the infusion of art and people to heal all that the land has suffered through exploitative and extractive practices of the 16th through 19th Century.

The act of bonding is not only symbolic but restorative to both the community and the land through the tailored programs of a museum, local food co-operative, quintessential BBQ eatery, mixed-income residential tower, and a floating garden.

UnionBond welcomes 88,805 sq ft of new commercial space, providing exciting opportunities along with 147,120 sq ft of 223 new residential units for desired respite. Striving towards equitable development, UnionBond has taken mixed-income housing with the highest regard, gearing a quarter of total units for affordability, specifically targeting

- Address: 452 Union Street, Brooklyn, NY 11231
- Community District: BK 06
- Block: 438
- Zoning Map: 16c
- Zoning District: M1-4 / R7-2

- Land Use: Residential & Mixed Use Commercial
- Lot Area: 28,500 sq ft
- Lot Frontage: 80 ft
- Lot Depth: 300 ft
- Building Height: 225 ft



# Reshaping the Waterway

## A fresh new start for Gowanus Canal

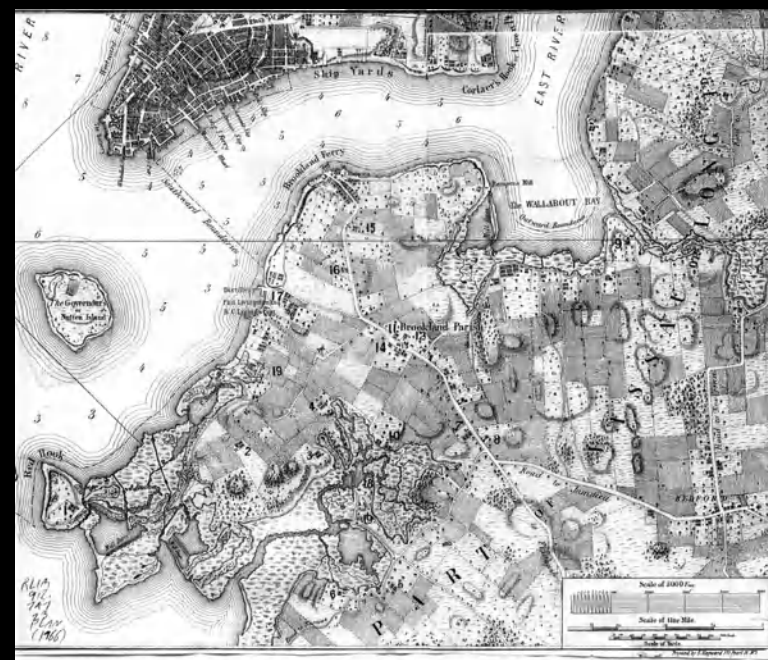
1600

**1600**

A tidal inlet of small saltwater marshland creeks of South Brooklyn, early settlers named it "Gowanes Creek" after chief Gowanes, leader of the local tribe of Native American Canarsees.

**1636**

Many Dutch farmers who settled along the banks fished oysters and shipped them by barrel back to Europe, making Gowanus oysters Brooklyn's first export.



**1636**

Dutch made an initial purchase near Gowanus Bay and three years later, the earliest recorded real estate sale was made between settlers: land for a tobacco plantation.

**1776**

Battle of Long Island, American troops fought the British Army at Old Stone House in Gowanus.



1800



**1770**

Tide-water gristmill was built and operated on the marshes for the production of flour. Cole's Mill Pond was excavated out of the Gowanus Marshes by slave labor.

**1836**

New York State's Commissioner's Plan of 1811 gridded up the marshland for the sale and development of land. Topography was ignored and marshes became the dumping spots for urban waste.



**1869**

Canal completed, became a hub of Brooklyn's maritime and commercial activity with many factories and residential communities arising.



1900



**1849**

New York State Legislature authorized the construction of the Gowanus Canal to widen and deepen the creek into a canal, 100' wide and 1.8 miles long.

**1890**

Gowanus Canal was home to a number of industries, including manufactured gas plants, foundries, coal yards, and shipyards. These uses contributed to pollution in and around the canal as well as the discharge of CSO (combined sewage overflow).



**1890**

Army Corps of Engineers stopped the dredging of the canal and loss of industrial jobs forced a mass migration leaving over 50% of buildings to be derelict.



**2021**

NYC Planning proposal for Gowanus to be a Special Purpose District.

**2010**

US Environmental Protection Agency (EPA) declares Gowanus Canal as a Superfund site with \$506 million dedicated to the cleanup.



2000

Gowanus Neighborhood Curated Moments

- 1 Gowanus Canal
- 2 Union Street
- 3 Industrial Charm
- 4 Brownstones
- 5 Hip Eatery
- 6 Young Families
- 7 New Breweries
- 8 Cultural Green-spaces



1



2



3



4



5



6



7

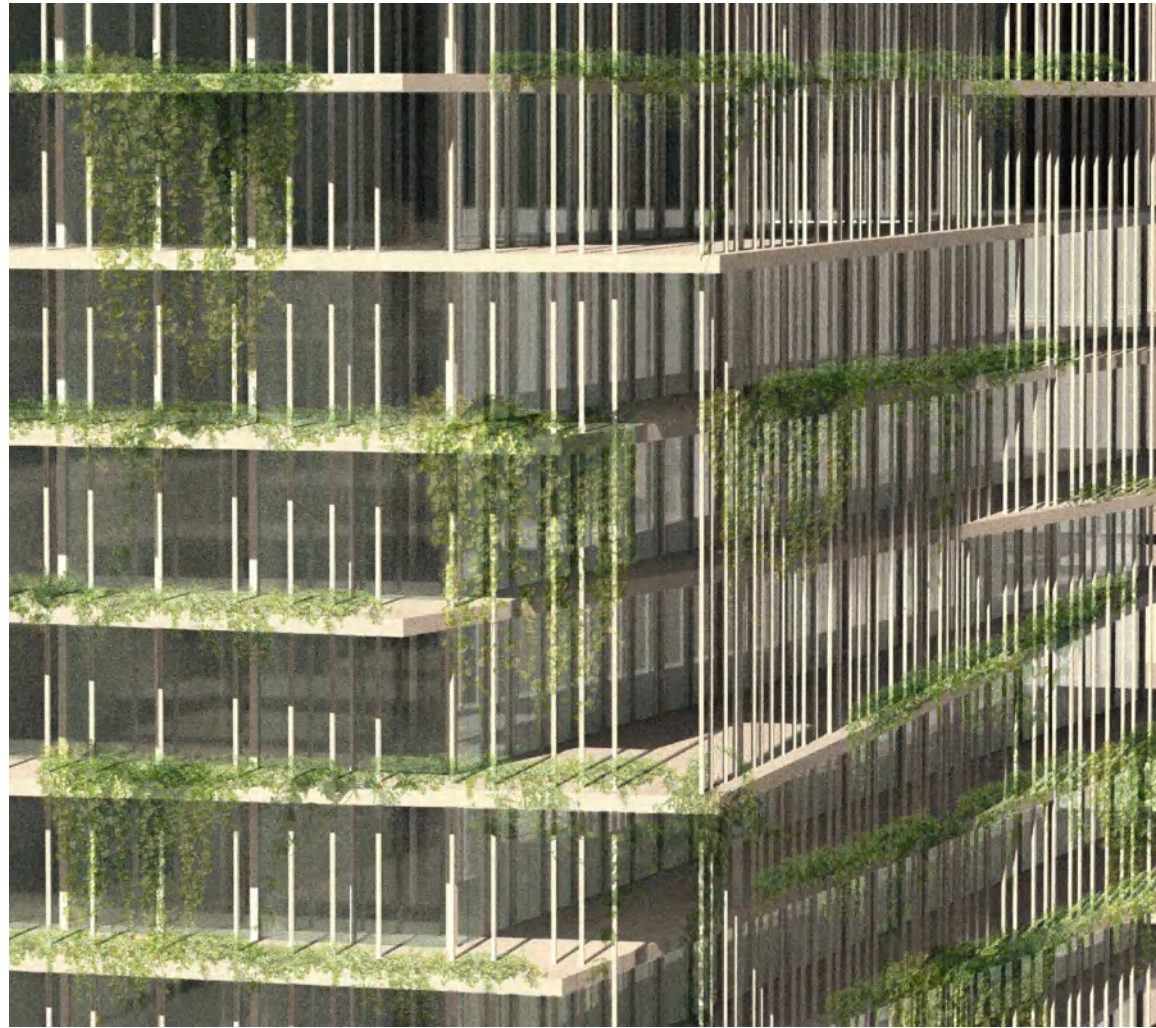


8

Gowanus is charming in a very heavy industrial way. Once derelict warehouses are now opportunities for adaptive reuse, such as venue spaces and art galleries. With the Superfund site, the Environmental Protection Agency has been putting in immense work, dredging 35,000 cubic yards in October 2021 alone.

This revitalization of a once-historic Brooklyn neighborhood has attracted many local artists and young professionals back to the neighborhood, with independent businesses springing up. Novel breweries, hip restaurants, and an influx of clubs bring a flare of youth and rebellion into an aging and rigid space.

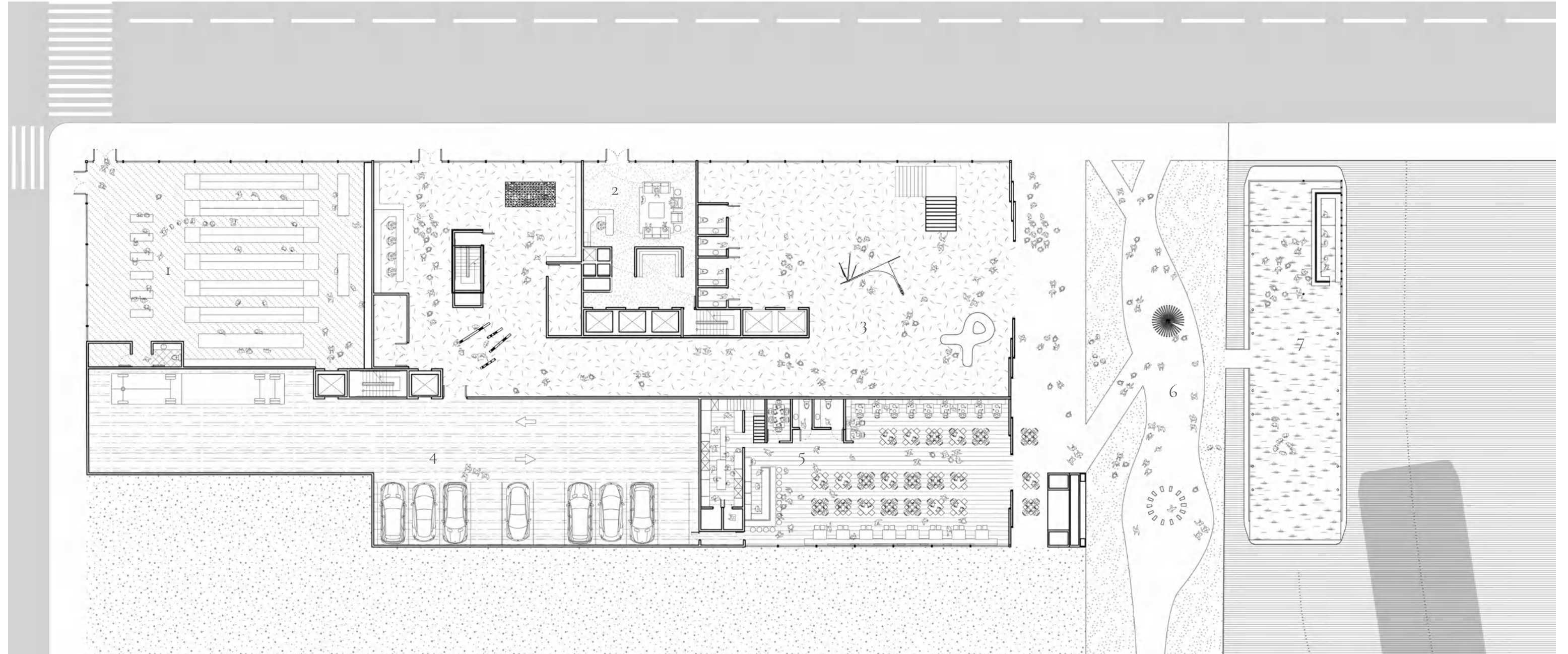
Disused warehouses create the perfect environment for art studios creating art and culture for all Brooklyn residents. A new creative and stylish



Residences are a mix of market rate and affordable housing, roughly 25% is set aside for affordable units for individuals and families making around 60% AMI. Through the unit mix, there are 20 studios, 14 one-bedroom units, 14 two-bedroom units, and 8 three-bedroom units with a total of 56 affordable units. An emphasis is placed on studios as there is currently an influx of creatives looking to move within the neighborhood. Within our housing, we are aiming to

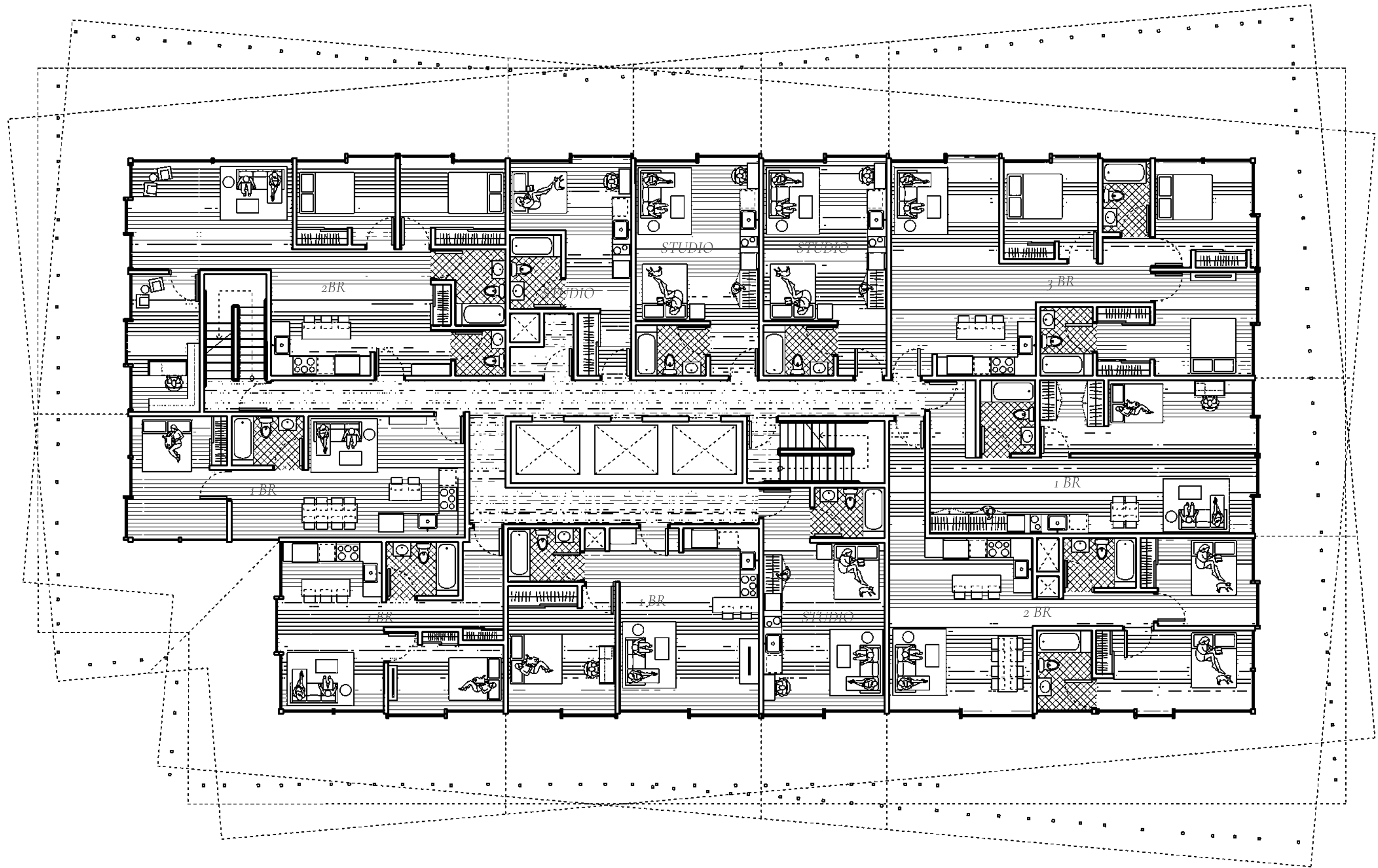
bring an annual Public Artist in Residence Program supported by New York City Cultural Affairs and MOMA within our development. Artist residences are more commonly reserved for high-end developments, but UnionBond aims to break that notion by providing this program to support both artists and the community in tandem. Works created by the artist will be available for public and private consumption to support an inclusive and welcoming development.



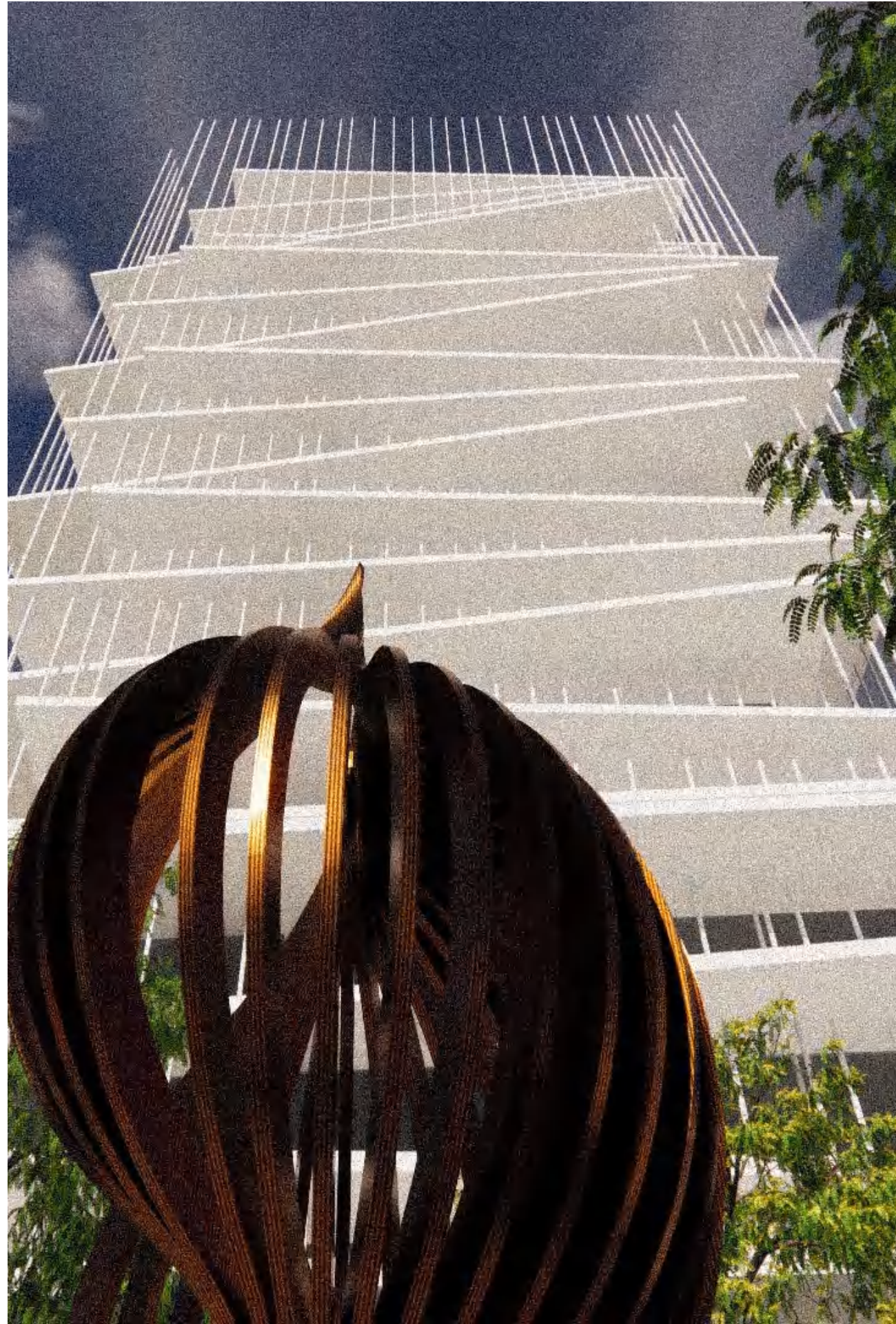


**Ground Floor Plan**

- 1 Park Slope Food Co-Operative
- 2 Residential Lobby
- 3 MOMA
- 4 Parking
- 5 Pig Beach
- 6 Public Waterfront
- 7 Floating Garden







1



2

Public Waterfront Pedestrian Experience

- 1 Sculpture Garden
- 2 Waterfront Walkway
- 3 Radial Sculpture



3

Development Sources and Uses

Sources and Uses				
	Total	\$/GSF	\$/RSF	%
<b>Sources</b>				
GP/LP Equity	\$27,449,431.43	\$112.83	\$133.73	10.00%
Construction Loan				
HPC Mixed Income M2, 1st Mortgage	\$53,623,578.56	\$220.42	\$261.25	19.54%
HPC Mixed Income M2, Subordinate	\$15,000,000.00	\$61.66	\$73.08	5.46%
Senior Construction Loan	\$178,421,304.26	\$733.40	\$869.27	65.00%
<b>Total Sources</b>	<b>\$274,494,314.25</b>	<b>\$1,128.30</b>	<b>\$1,337.33</b>	<b>100.00%</b>
<b>Uses</b>				
Acquisition Cost				
Acquisition Price	\$40,950,000.00	\$168.32	\$199.51	14.92%
Closing Costs & Title	\$126,015.00	\$0.52	\$0.61	0.05%
<b>Total Acquisition Cost</b>	<b>\$41,076,015.00</b>	<b>\$168.84</b>	<b>\$200.12</b>	<b>14.96%</b>
Construction Cost				
Hard Cost	\$190,797,793.70	\$784.27	\$929.57	69.51%
Soft Cost	\$20,296,184.37	\$83.43	\$98.88	7.39%
Developer Fee	\$6,332,819.34	\$26.03	\$30.85	2.31%
<b>Total Construction Cost</b>	<b>\$217,426,797.42</b>	<b>\$109.46</b>	<b>\$129.74</b>	<b>79.21%</b>
Financing Cost				
Financing Cost	\$3,657,636.74	\$15.03	\$17.82	1.33%
Capitalized Interest	\$12,333,865.10	\$50.70	\$60.09	4.49%
<b>Total Financing Cost</b>	<b>\$15,991,501.84</b>	<b>\$65.73</b>	<b>\$77.91</b>	<b>5.83%</b>
<b>Total Uses</b>	<b>\$274,494,314.25</b>	<b>\$344.03</b>	<b>\$407.77</b>	<b>100.00%</b>

Development Assumptions			
	Price	Price/GSF	%
Acquisition Cost	\$41,076,015.00	\$168.84	14.96%
Hard Costs	\$190,797,793.70	\$784.27	69.51%
Soft Costs	\$20,296,184.37	\$83.43	7.39%
Developer Fee	\$6,332,819.34	\$26.03	2.31%
Financing Costs	\$15,991,501.84	\$65.73	5.83%
<b>Total Development Cost</b>	<b>\$274,494,314.25</b>	<b>\$1,128.30</b>	<b>100.00%</b>

Development Schedule			
	Start Date	Duration	End Date
Acquisition			6/30/22
Predevelopment	6/30/22	6 Months	12/31/22
Soft Cost	7/1/22	24 Months	6/30/24
Hard Cost	12/31/22	24 Months	11/30/24
Demolition/Remediation	12/31/22	5 Months	5/31/23
New Construction	6/1/23	24 Months	5/31/25
<b>Design and Construction</b>	<b>7/1/22</b>	<b>35 Months</b>	<b>5/31/25</b>
Lease Up	5/31/25	24 Months	5/31/27
<b>Total Development Duration</b>	<b>7/1/22</b>	<b>59 Months</b>	<b>5/31/27</b>
Hold (after completion)	5/31/27	13 Months	6/30/28
<b>Total Investment Period</b>	<b>7/1/22</b>	<b>72 Months</b>	<b>6/30/28</b>

Project Financing

Financing			
<b>Construction Loan Assumptions</b>			
Start Date	6/30/22	Origination Fee	1.00%
Loan to Cost	65.00%	Mortgage Recording Tax	0.00%
Loan Amount	<b>\$178,421,304.26</b>	Brokerage Fee	0.40%
Acquisition	\$26,699,409.75	Title Insurance	0.15%
Construction	\$151,721,894.51	Legal/Diligence/Closing	0.50%
Spread over LIBOR	5.00%	Exit Fee	2.50%
Repayment Date	5/31/27		
Term Outstanding	59 Months		
LIBOR Floor	1.00%		
<b>Perm Loan Assumptions</b>			
Start Date	5/31/27	Repayment Date	6/30/28
Start Year	Year 5	Amortization	360 Months
Debt Yield	10%	LIBOR Rate	1.50%
DSCR	1.25	Spread over LIBOR	2.50%
LTV	70%	Fixed Rate	7.00%
Valuation	<b>\$322,469,052.03</b>	Origination Fee	0.50%
NOI	\$16,313,128.01	Recording Tax	0%
Loan Amount (DY)	\$163,131,280.06	Brokerage Fee	0.35%
Loan Amount (DSCR)	\$163,465,773.08	Title Insurance	0.10%
Loan Amount (LTV)	\$225,728,336.42	Legal/Diligence/Closing	0%
<b>Permanent Loan Amount</b>	<b>\$163,131,280.06</b>		

\$27.7M

Seeking GP/LP Equity

\$53.6M

HPC Mixed-Income M2  
1st Mortgage

\$15M

HPC Mixed-Income M2  
2nd Mortgage

\$178.4M

Senior Construction Loan



### Unlevered DCF Pro Forma (Annual)

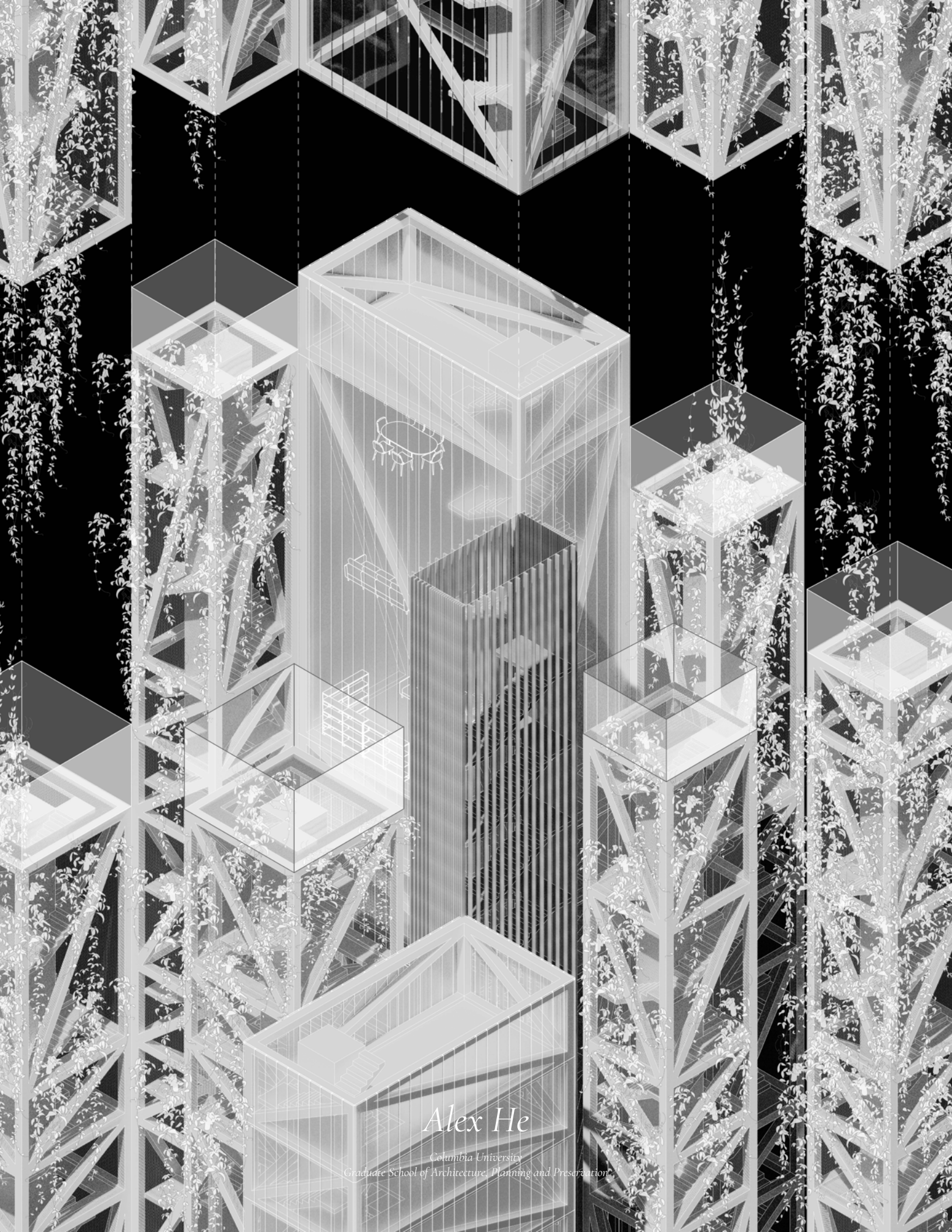
Unlevered Cash Flow							
<b>Project cost</b>							
Acquisition Cost	(\$41,076,015.00)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Hard Cost	\$0.00	(\$55,649,356.50)	(\$95,398,896.85)	(\$39,749,540.36)	\$0.00	\$0.00	\$0.00
Soft Cost	\$0.00	(\$10,148,092.19)	(\$10,148,092.19)	\$0.00	\$0.00	\$0.00	\$0.00
Developer Fee	\$0.00	(\$2,171,252.35)	(\$2,171,252.35)	(\$1,990,314.65)	\$0.00	\$0.00	\$0.00
<b>Total Project Cost</b>	<b>(\$41,076,015.00)</b>	<b>(\$67,968,701.03)</b>	<b>(\$107,718,241.38)</b>	<b>(\$41,739,855.01)</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Potential Revenue</b>							
Residential	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Commercial	\$0.00	\$0.00	\$0.00	\$127,848.18	\$4,225,075.03	\$6,347,112.37	\$6,655,935.71
<b>Total Potential Revenue</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$127,848.18</b>	<b>\$4,225,075.03</b>	<b>\$6,347,112.37</b>	<b>\$6,655,935.71</b>
CAM (2% of Revenues)	\$0.00	\$0.00	\$0.00	\$2,351,769.31	\$14,110,615.86	\$14,110,615.86	\$14,110,615.86
<b>Total Potential Revenue</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$2,479,617.49</b>	<b>\$18,335,690.89</b>	<b>\$20,457,728.23</b>	<b>\$20,766,551.57</b>
<b>Concessions</b>							
Residential	\$0.00	\$0.00	\$0.00	\$49,592.35	\$366,713.82	\$409,154.56	\$415,331.03
Commercial	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Concessions</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$49,592.35</b>	<b>\$366,713.82</b>	<b>\$409,154.56</b>	<b>\$415,331.03</b>
<b>Total Revenue</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$177,440.53</b>	<b>\$18,702,404.71</b>	<b>\$20,866,882.80</b>	<b>\$21,181,882.60</b>
Expense Recoveries	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Potential Gross Income (PGI)</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$177,440.53</b>	<b>\$18,702,404.71</b>	<b>\$20,866,882.80</b>	<b>\$21,181,882.60</b>
<b>Vacancy</b>							
Residential	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$27,025.69)	(\$332,796.79)
Commercial	\$0.00	\$0.00	\$0.00	\$0.00	(\$423,318.48)	(\$423,318.48)	(\$423,318.48)
<b>Total Vacancy</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$423,318.48)</b>	<b>(\$450,344.16)</b>	<b>(\$756,115.26)</b>
<b>Effective Gross Income</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$177,440.53</b>	<b>\$18,279,086.23</b>	<b>\$20,416,538.63</b>	<b>\$20,425,767.34</b>
<b>Operating Expenses</b>							
Residential	\$0.00	\$0.00	\$0.00	(\$25,569.64)	(\$845,015.01)	(\$1,269,264.57)	(\$1,316,581.58)
Commercial	\$0.00	\$0.00	\$0.00	(\$312,916.60)	(\$2,424,991.50)	(\$2,424,991.50)	(\$2,424,991.50)
<b>Total Operating Expenses</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$568,486.24)</b>	<b>\$3,269,006.51</b>	<b>\$3,694,256.07</b>	<b>\$3,741,573.08</b>
Residential NOI	\$0.00	\$0.00	\$0.00	\$102,278.55	\$3,380,060.02	\$5,050,822.12	\$5,006,557.34
Commercial NOI	\$0.00	\$0.00	\$0.00	(\$312,916.60)	\$11,262,305.89	\$11,262,305.89	\$11,262,305.89
<b>Net Operating Income (NOI)</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$210,638.05)</b>	<b>\$14,642,365.91</b>	<b>\$16,313,128.01</b>	<b>\$16,268,863.23</b>
<b>Leasing Cost</b>							
Tenant Improvements	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Commercial TI	\$0.00	\$0.00	\$0.00	(\$6,410,498.50)	\$0.00	\$0.00	\$0.00
<b>Total Tenant Improvements</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$6,410,498.50)</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Leasing Commissions</b>							
Residential LC	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Commercial LC	\$0.00	\$0.00	\$0.00	(\$340.93)	(\$2,045.57)	(\$2,045.57)	(\$2,045.57)
<b>Total Leasing Commissions</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$340.93)</b>	<b>(\$2,045.57)</b>	<b>(\$2,045.57)</b>	<b>(\$2,045.57)</b>
<b>Capital Expenditure</b>							
Residential CapEx	\$0.00	\$0.00	\$0.00	(\$9,862.50)	(\$59,175.00)	(\$59,175.00)	(\$59,175.00)
Commercial CapEx	\$0.00	\$0.00	\$0.00	(\$7,822.92)	(\$46,937.49)	(\$46,937.49)	(\$46,937.49)
<b>Total Building CapEx</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$17,685.42)</b>	<b>(\$106,112.49)</b>	<b>(\$106,112.49)</b>	<b>(\$106,112.49)</b>
<b>Total Leasing and Capital Cost</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>(\$17,685.42)</b>	<b>(\$106,112.49)</b>	<b>(\$106,112.49)</b>	<b>(\$106,112.49)</b>
<b>Sales Proceeds</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
Sales Amount	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$330,737,489.26
Sales Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$8,268,437.23)
<b>Total Sales Proceed</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$322,469,052.03</b>
<b>Net Cash Flow (before Debt Service)</b>	<b>(\$41,076,015.00)</b>	<b>(\$67,968,701.03)</b>	<b>(\$107,718,241.38)</b>	<b>(\$52,652,706.72)</b>	<b>\$14,534,207.85</b>	<b>\$16,204,969.95</b>	<b>\$338,629,757.19</b>

Unlevered Return Metrics	
IRR	7.15%
Equity Multiple	1.37x

### Levered DCF Pro Forma (Annual)

Levered Cash Flow							
<b>Acquisition Loan Balance</b>							
Beginning Loan Balance	\$0.00	\$493,658,518.00	\$498,617,792.16	\$503,626,887.00	\$506,359,031.97	\$464,162,445.97	\$0.00
Interest Charge	\$0.00	\$411,382.10	\$415,514.83	\$419,689.07	\$421,965.86	\$386,802.04	\$0.00
Repayment Amount	\$0.00	\$0.00	\$0.00	\$0.00	(\$421,965.86)	(\$386,802.04)	\$0.00
Ending Balance	\$40,950,000.00	\$494,069,900.09	\$499,033,306.99	\$504,046,576.07	\$506,359,031.97	\$464,162,445.97	\$0.00
<b>Construction &amp; Lease up Draws</b>	<b>\$0.00</b>	<b>\$67,968,701.03</b>	<b>\$107,718,241.38</b>	<b>\$52,652,706.72</b>	<b>\$108,158.06</b>	<b>\$99,144.89</b>	<b>\$0.00</b>
<b>Equity Balance</b>							
Beginning Balance	\$27,449,431.43	\$63,302,407.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Equity Amount Contributed	(\$14,332,500.00)	(\$13,116,931.43)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ending Balance	\$13,116,931.43	\$50,185,476.46	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Construction Loan Balance</b>							
Beginning Loan Balance	\$0.00	\$142,005,701.66	\$1,286,848,169.32	\$2,466,068,596.87	\$2,788,774,741.09	\$2,557,517,012.22	\$0.00
Construction & Lease Up Costs	\$0.00	\$54,851,769.60	\$107,718,241.38	\$52,652,706.72	\$108,158.06	\$99,144.89	\$0.00
Interest Charge	\$0.00	\$820,239.46	\$5,810,693.38	\$10,494,672.10	\$11,620,345.41	\$10,656,733.99	\$0.00
Repayment Amount	\$0.00	\$0.00	\$0.00	\$0.00	(\$11,620,345.41)	(\$10,656,733.99)	\$0.00
Ending Balance	\$0.00	\$197,677,710.72	\$1,400,377,104.08	\$2,529,215,975.69	\$2,788,882,899.15	\$2,557,616,157.11	\$0.00
<b>Cash Flow from Acquisition &amp; Construction Loan Financing</b>							
Loan Draws	\$40,950,000.00	\$54,851,769.60	\$107,718,241.38	\$52,652,706.72	\$108,158.06	\$99,144.89	\$0.00
Repayment Amount	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$275,756,356.19)	\$0.00
Origination Fee	(\$1,784,213.04)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Debt Brokerage Fee	(\$713,685.22)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Title Insurance	(\$267,631.96)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Legal/Diligence/Closing	(\$892,106.52)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Cash Flow from Acquisition &amp; Construction Loan Financing</b>	<b>\$37,292,363.26</b>	<b>\$54,851,769.60</b>	<b>\$107,718,241.38</b>	<b>\$52,652,706.72</b>	<b>\$108,158.06</b>	<b>(\$275,657,211.30)</b>	<b>\$0.00</b>
<b>Refinance</b>							
Beginning Loan Balance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$326,797,554.64	\$1,787,579,319.55
Debt Service	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,175,083.73	\$11,962,960.54
Interest Payment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,906,319.07	\$10,427,546.03
Principle Payment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$268,764.67	\$1,535,414.51
Ending Balance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$326,528,789.98	\$1,786,043,905.04
<b>Cash Flow from Refinance</b>							
Loan Draws	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$163,465,773.08	\$0.00
Interest Payment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$1,906,319.07)	(\$10,427,546.03)
Repayment Amount	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$268,764.67)	(\$163,197,008.42)
Origination Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$817,328.87)	\$0.00
Debt Brokerage Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$572,130.21)	\$0.00
Title Insurance	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	(\$163,465.77)	\$0.00
Legal/Diligence/Closing	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Cash Flow from Refinance</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$159,737,764.51</b>	<b>(\$173,624,554.45)</b>
<b>Net Cash Flow (after Debt Service)</b>	<b>(\$3,783,651.74)</b>	<b>(\$13,116,931.43)</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$14,642,365.91</b>	<b>(\$99,714,476.85)</b>	<b>\$165,005,202.74</b>
<b>Levered Return Metrics</b>							
IRR	26.57%						
Equity Multiple	1.48x						





*Alex He*

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