

growing with

Portfolio

Peter Paul Washout

## Colophon

This book was designed by Peter Paul Walhout in New York City during May of 2023 at Columbia University Graduate School of Architecture, Planning, and Preservation. The typefaces used are Cascadia Code and growth. Growth, the typeface on the cover and opening pages of this book, was designed by the author. A by-product of an education in design, its conception was as follows:

While tracing the rings of a longleaf pine tree preserved in a salvaged beam, seven year segments of growth were sliced out: reified memories of that tree. As we do with our own memories, this matter was flipped and fused, joined and juxtaposed; bringing forth a subjective retelling. These slices follow the irregular growth felt by something living, later rearranged as something legible. I've labored the same number of years in formal design education as there are rings on these slices. This document is my retelling of a time of slow and uneven, inexorable and yet-complete growth.



## FURNITURE/OBJECTS

HAND OBJECT

SEVEN YEAR COLUMN

OBJECTS FOR USE



## EDITORIAL/TEXT

JUICE BAR

ACCOUNTABILITY UP IN THE AIR



## ARCHITECTURAL

LISTENING, SANCTUARY

ARCHITECTURAL ADDRESS BOOK

PANTRY PATH

CORE-FLOOR, FORREST-GLADE

AUGMENTED AMPHITHEATER



## GALLIMAUFRY

DAYLIGHT STUDY

GROWTH TYPEFACE

CURTAINWALL ASSEMBLY

ARCHITECTURAL PHOTOGRAPHY

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## CREDITS

### **Hand Object**

Collaborator: Nicolas Ocean Shannon

Work performed under the direction of the course: 1:1 Fabrication of Details. Technology elective with Professor Zachary Mulitaoaopele.

### **Seven Year Wall**

Collaborator: Nicolas Ocean Shannon

Work performed under the direction of the course: 1:1 Fabrication of Details. Technology elective with Professor Zachary Mulitaoaopele.

### **Objects for Living**

Work performed independently.

### **Juice Bar**

Collaborators: Anoushka Mariwala, Juliana Yang, David Zhang

Work performed independently. Issues 02 and up sponsored by GSAPP Student Affairs.

### **Accountability up in the Air**

Work performed independently. Edited by Aleks Bierig, Joanna Joseph, Isabelle Kirkham-Lewitt, and Jacob Moore.

### **Listening, Sanctuary**

Collaborator: Nicolas Ocean Shannon

Work performed under the direction of the course: Choreographies of the Im/Possible. ADV VI Studio with Professor Mario Gooden and Teaching Fellow Gene Han.

### **Address Lab**

Work performed under the direction of the course: Post-Post Office. ADV V Studio with Professor Laurie Hawkinson and Teaching Fellow Lucia Song.

### **Path & Pantry**

Collaborators: Nicolas Ocean Shannon, Aaron Eli Smolar

Work performed under the direction of the course: In the name of GOD, Islamberg. ADV IV Studio with Professor Ziad Jammaladine.



**Core-Floor, Forest-Glade**

Collaborator: Nicolas Ocean Shannon

Work performed under the direction of the course: Nest, Nesting, Nested. Core III Studio with Professor Eric Bunge.

**Augmented Amphitheater**

Work performed under the direction of the course: Broadway Stories. Core I Studio with Professor Lindy Roy and Teaching Assistant.

**Analog Sun Study**

Work performed under the direction of the course: Post-Carbon School. Core II Studio with Professor Miku Dixit and Teaching assistant Audrey Dandenault.

**Growth Typeface**

Work performed independently.

**Curtainwall Assembly**

Collaborators: Madeline Sung, Jordan Trager, Sky Zhang

Work performed under the direction of the course: Construction and Life Cycle Systems. Technology sequence IV with Professor Nicole Dosso and Teaching assistants Gustavo Lopez Mendoza and Daniela Beraun.

**Architectural Photography**

Work performed under the direction of the course: Architectural Photography. Visual studies elective with Professor Michael Vahrenwald.



FURNITURE/OBJECTS

## HAND OBJECT

An Interior expression and an exterior impression. A closed palm and an open hand.

2.75" D x 6.75" L



a. Close-up of *Hand Object* (2022), butternut wood. Created with a multi-step CNC process, based on a cooperer's (barrel maker's) techniques.





“Everything in the shape of our hand, down to the fold of the knuckles, speaks in hollows of a vanished forest. Look at it: its way of remaining half-open when at rest reveals the void, populated only yesterday by the branches of tall trees. It is its hollow that gives our hand its infinite power to invent projects, tools to extend ourselves, and this hollow of the hand, a fertile void, is a gift from the branch, from life in the canopy. This emptiness that calls for contact is the memory of the forest taken with us, when, having become bipedal, we abandoned it to explore open space, curious and fearful, with this specter of vegetation squeezed between our fingers.”

-Baptiste Morizot

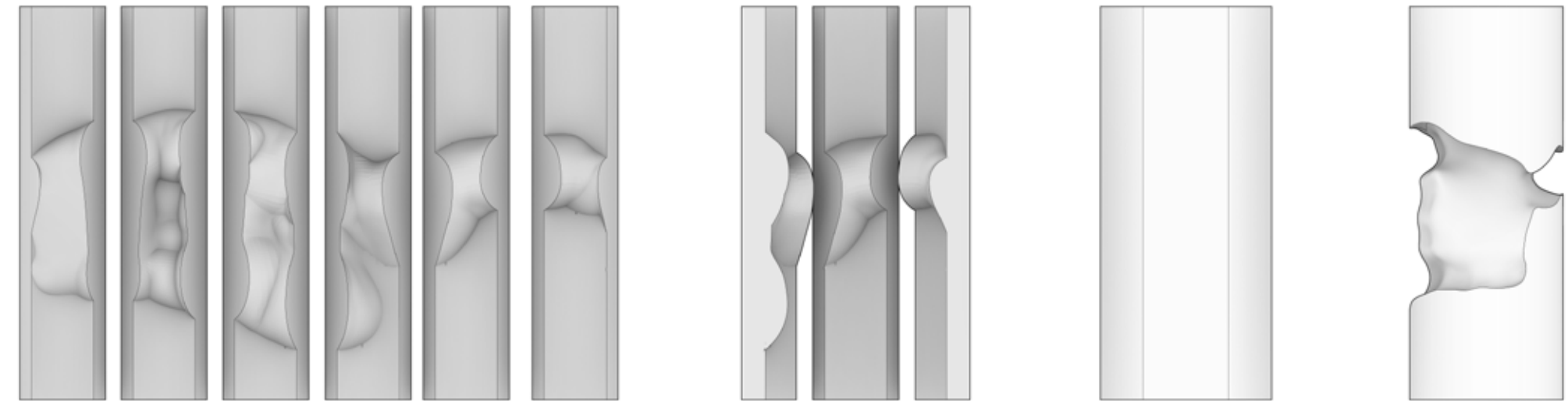
**Opposite page:**

a. Photo of object.  
A 3D scan of a hand was used to model the impression.

**This page:**

b. Handprint of a grasp on a cylinder.  
Acrylic on paper.





**Opposite page:**

a-d. Hand Object

**This page:**

e. Construction process diagram

## SEVEN YEAR COLUMN

The project began with a blank of salvaged heart pine. Tracing its rings in seven-year segments, we sliced into the tree's memory, and—as we do with our own memories—fused, flipped, sutured, and stacked them, creating a semblance of the tree our blank was milled from. Rather than a faithful reconstruction, the work is a nonlinear retelling; an incongruent mosaic of a life.

“A tree's year of growth made up of fingerprints, finger marks, traces of oil, rested upon its bark analyzed, felt, followed, touched, point by point.”  
—Giuseppe Penone



**Opposite page:**

a-b. Assembly of column. Performed by Nicolas Ocean Shannon.

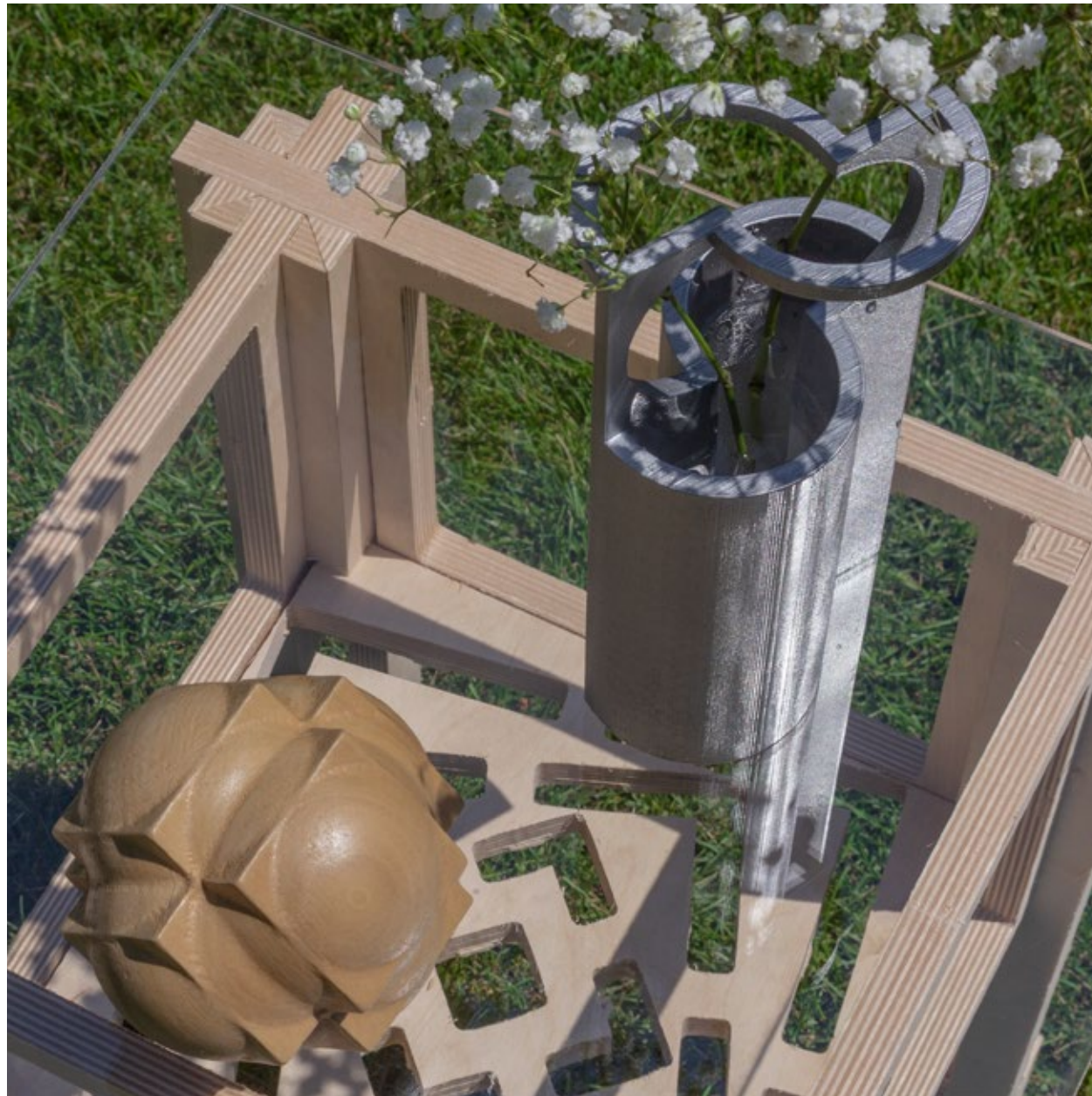
**This page:**

c. Seven year column



## OBJECTS FOR USE

Vase, tables, and an object for thinking. Tables constructed using a unique mitre-castle joinery system without use of glue or hardware.



### This page:

a. *Michaela's object* (2022), laminated poplar.

b. *Half circle vase* (2022), PLA filament. Inspired by the vase drawings of Bruno Munari.

### Opposite page:

c. *Bedside Table 02* (2022), glass and plywood.



**This page:**

a-c. Construction of bedside table 01. 38 total pieces assembled in 15 minutes.

**Opposite page:**

d. Bedside table 01 (2021), glass and plywood.







EDITORIAL/TEXT



# JUICE BAR

Juice Bar is a student publication that is interested in articulating, questioning, and altering the value of and relationship between language and design. It is an archive of what we are thinking, doing, and making at architecture school, and a place to talk about it. Juice Bar began in spring 2021, and celebrated its third issue in Spring 2023.

Core Members:  
Anoushka Mariwala  
Peter Walhout  
Juliana Yang  
David Zhang



a. Issue 02 copies  
b. Issue 02 editorial postscript

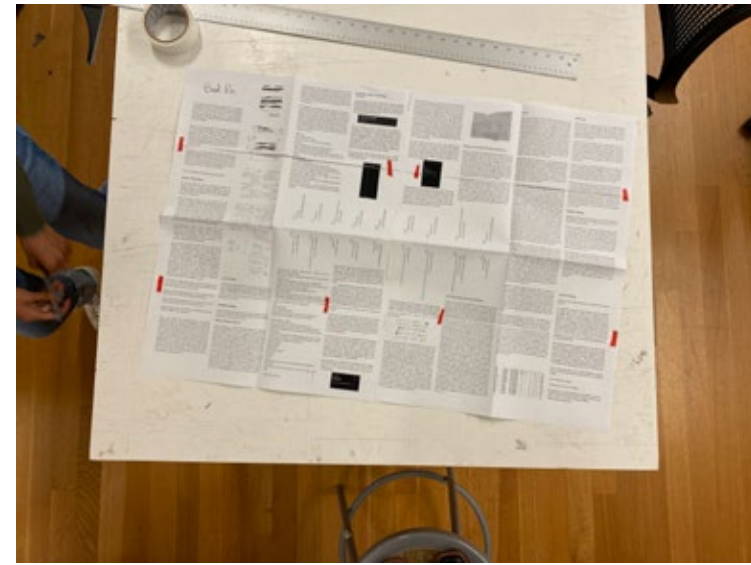
*Postscript - "Democracy"*

After studio, we all sat around a kitchen table and started reading. It was like having a conversation, only silently when I read, I cannot help but to react, respond, have my own different or eerily similar opinions. For me, this is a rare and valuable instance where I can share these with you, and have you respond, react, have your own different or similar opinions about how I read your text... and also how we read each other's notes, and learn to lean into the frequency of editing with four, five voices to go around an object and to change it as it shifts hands and voices as it is increasingly imprinted with as many ways like the closest we have gotten to each other in every way we hope you print, cross over, update, and rewrite similarly. [Handwritten notes in purple and blue ink are interspersed throughout the text.]

Last semester, on the verbal equinox, our office of academics and student affairs and student council's health and wellness committee sponsored a juice bar. An unfolded banquet table covered in a draping, navy tablecloth and plastic equinoxes, bottles was a welcome, if maybe, gesture of care. It was not a site of congregation, not a site of refreshment. And the Juice Bar began a conversation between two people. Somehow - through word of mouth, by pieces of paper scattered around Avery, over emails or by text - the project has grown. The ongoing struggle with making through talk and subsequent written expression seems to serve as a condition in which new understanding is forged. What do we want readers to get out of this issue? More paper? To feel the value of a real thing in their hands. Just to feel better. To have a medium for thinking, for communicating (although I don't know how I feel about that word). What have you learnt, about the process, and yourself? Probably how to have conversations through editing, you know, like in editing each other's notes. Also, how really people are to write. Maybe to channel my energy towards something... shareable? To expand our notion of writing as technology, as artifact, as activity practice, and a form of speaking-making... I think I have more questions now than I thought I did. Anoushka is very good at facilitating ideas and keeping them an unobscured. David's name is in the news. Asking the right questions is one of the highest forms of care, I think. And from Juliana, probably to think about the implications of a thing you are doing, even if only for yourself. "Yeah, study a good one. That's important. What is the relationship between GSAPP, Juice Bar, and Avery? Institutionally, maybe they operate at the intersection of writing and appreciation (they might even be forms of the same thing). There's something about actual sheets of paper around the school, hidden away in desks, it seems like the value of them not being read is as high as the value of them actually being read by people.

Does this read like the call at all? Not really, no... But I can make it read like it, if you want. Does it need to? There's already good stuff in here. Something about the value of editing... of paper... how it started with two and now it's four. There's a lot of stuff about here on here.

[Handwritten notes in purple and blue ink are interspersed throughout the text.]



c-i. (Clockwise from top left):  
c. Issue 02 mock-up  
d. Issue 03 call for submission  
e. Issue 03 submission box  
f. Issue 03 poster  
g. Issue 03 boxed copies and inserts  
h. Issue 01 (in red box)  
i. Issue 02 teaser flyer



Why at all.  
 I don't read, I don't write.  
 This is not cool, not attractive, not purposeful.  
 Not at all.  
 I have thoughts shrouded with sleep deprivation.  
 I have broad strokes of Vitruvius and Boullée.  
 I have chemical imbalances created by rhino and adobe czars.  
 Along with fears and doubts. Fears and doubts. Fears and

09:40  
 Gesture, Field, Gesture  
 by IAN CALLENDER

10:31  
 An Honest Plea & A Moderate Offense  
 by AUTUMN HARVEY

13:16  
 Finger Bits  
 by KAREN WANG

20:39  
 "takes too long" & "less is enough"  
 by DAVID ZHANG

22:24 (CET)  
 Diaries  
 by STEPHEN ZIMMERER

23:24  
 I'll take out my phone and take a picture, too -  
 by ADAM FRIED

00:12  
 There Must Be Some Way to Codify My Spatiality in Words  
 by CAMILLE MCGRIFF

00:26  
 Eleven Ways of Looking at the Yangtze River  
 by HANYU LIU 刘涵雨  
 & MINGYUE ZHANG 章明玥

02:45  
 Hand-Writing  
 by PETER WALHOUT

**"takes too long"**

I discovered my full name a few months ago: David Zhang Jing Wei (Da Wei) (张镜维 (大为)). My father's father (my ye ye) gave me a newly minted ancestral name *Jina*, one he wished to start

I was probably reacting to some negative paparazzi news about him screaming "babe, I wasn't even trying!" at his wife while playing an arcade game. I thought that clip made Justin Bieber seem vivid and memorable.

Some notes were words I heard or read that evoke a strong emotional response in me, like this quote that almost brought me to tears when I read it.

This one confuses me, but I would say it was definitely a revelation I had while doing something else and jotted down on my phone. To interpret it, I had to imagine myself as myself thinking, stepping into my own old shoes. First, I'd like to clarify that I'm no Belieber but I also don't hold any grudges against this celebrity.

10:17  
 Book Rec  
 by CHRISTOPHER SCHEU

11:45  
 Notes On Process  
 by MARIAM JACOB

20:12  
 Public Confessions : Why Lie  
 by KEY AIKEN

21:09  
 a stab in the dark  
 by NICOLAS SHANNON

23:08  
 Warehouse  
 by ZACHARY TORRES

23:34  
 Read, Write, Rewrite  
 by HASEEB AMJAD

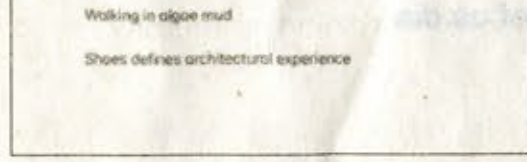
00:17  
 Home-ing  
 by THOMAS OSPINA

01:28  
 and in the midst of this wide quietness  
 by JULIANA YANG

00:00  
 Reading & Writing, Postscript  
 by JUICE BAR EDITORIAL

Anoushka Mariwala, Peter Walhout,  
 Juliana Yang, David Zhang

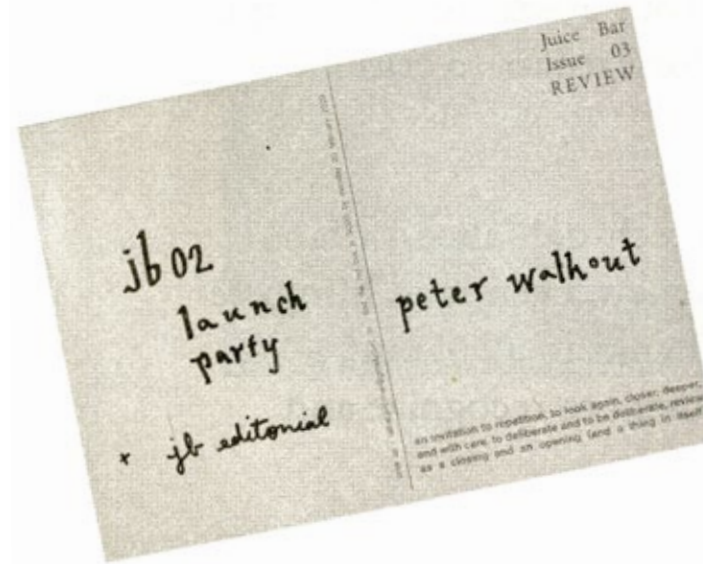
Screenshot from Karen's phone.





Previous spread:

- a. Table of contents from Juice Bar issue 02



Text originally published in issue 03 of Juice Bar.

This page:

- a. Postcard review
- b. Issue 02 launch party poster



On Nov 28th, in the alcove adjacent to the 400-level elevator doors, and at a table just large enough to hold Westside Market catering's poorly apportioned accoutrements, we offered you a spread. We were stumbling in from Thanksgiving break, some of us contented from days of plentiful eating, others anxious to return after an unwelcome interruption. Fresh copies (one thousand, to be exact) of Juice Bar's first official issue dotted the Avery Hall passages, steps, mezzanines, landings. They offered their contents and their paper taped up, draped over, in stacks, and in trash bins. Pinned between arms and torsos, coffees in hand. People pooled around on the fourth floor, not gathered presciently, but passing through: smiling, curious, ready to talk from late morning through to early afternoon. A faculty meeting nearby gave a serendipitous and all-too-rare mingle between instructors and students. We heard stories of long-gone student publications, put names to faces, and smiled as the stoics among us silently accepted a refreshment and left. For a moment, we were there breathing it in. Where were you? Did you miss us? We wanted to feed you, to offer you a moment of rest and share the thoughts of your peers. We return to the spirit of our



eponymous bar, which we both distanced our event from and modeled our event after. We hope to see you again; give you something to gripe about, look forward to, to critique, to cherish.

There you may have been introduced to Stephen's Parisian tech-dalliance, or Ian's theoretical meditation. Chris gave us a world of edges—a review, even—and Mingyue and Hanyu held our attention with the simplest gesture. Thanks to all of our contributors in Juice Bar issue 02. This launch was our moment to recognize and celebrate each other.

Review as a closing and an opening (and a thing in itself).

This spring, in our continued hope to speak with you, to read and write and rewrite, we delivered a heap of postcards to the denizens of Avery. We were delighted to see some write to us, glad to make acquaintances or simply carry on with correspondences. We invite you to meet our latest contributors, who were able to look again, closer, deeper, and with care, to deliberate and to be deliberate: to review.

c. Cover and table of contents of Juice Bar issue 03. Contributors included:

- Mia Winter-Tamaki
- Emily Conklin
- Val Ly
- Hunter McKenzie
- Duncan Tomlin & Sarah Bruce-Eisen
- Yuna Li
- Ben Vassar
- Adam Fried & Sophia Strabo
- Nick Shannon
- Dana Mor
- Meghan Jones
- Omer Gorashi
- J.B. Editorial



# ACCOUNTABILITY UP IN THE AIR

Internet and Inequality in New York City Public Housing

Text originally published in issue 57 of the *Avery Review*.

A signal shakes New York City's air with a familiar frequency: *accountability*. In New York, as elsewhere, signs of inequality have become more pronounced during the COVID-19 pandemic—the delirious ultrathin skyscrapers rising throughout the city are perhaps its most visible evidence, pointed symbols of enormous wealth peering down at people below. [1] Amid this agitated atmosphere, New Yorkers have called for accountability from their political and economic leaders. But what should these calls demand? Should they look to the imagined future of the city? Should they instead locate responsibility for the existing decisions that fashion our unequal present? Ascending into New York City's fraught airspace, unexpected partners are formulating one answer to this question. The problem of internet access in New York has generated unfamiliar collaborations and new flashpoints, and this problem is at the core of City Hall's attempts to address inequality.

In a press release from October 2021, titled “New York to Close Digital Divide for 1.6 Million Residents, Advance Racial Equity,” the office of former mayor Bill de Blasio announced a planned legacy: to expand broadband internet access to

all New York households.[2] The release quotes an array of philanthropists, CEOs, and New York political figures, though its general tone can be summarized in comments by Ford Foundation president Darren Walker: “The last 20 months have made clear what we've long known—fast, reliable, and affordable internet is not a luxury, it's an essential utility.”[3] This internet-as-utility rhetoric is in vogue, and the City of New York is its champion. Politicians appear to have decided that “bridging the digital divide” will resolve a range of inequalities that the COVID-19 pandemic has laid bare.[4]

The digital divide has been a topic of concern for economic and political leaders for decades. It is not only a misnomer but a potentially dangerous fixation.[5] It lies comfortably in a political ethos that prescribes more technology as the solution to historically rooted social imbalances. In light of the pandemic, this techno-optimistic rhetoric has reached new heights through the conflation of broadband internet with more traditional utilities like water and electricity. For instance, the Biden administration's federal infrastructure bill planned to allocate \$65 billion to broadband internet expansion, with private players already lining up to capitalize on those funds. [6] All this has unfolded while more conventional utility access—things like heat and running water—remains less-than-assured for many people living in New York and elsewhere.[7] Solving a particular technological access problem, in short, does not solve the distributional roots of inequality.

Yet, internet access creeps toward being the datum for full political and economic participation. Recent government initiatives, punctuated with uncanny neologisms like digital redlining and internet masterplan, use spatial

metaphors to smooth over the large-scale digitization of the economy.[8] In doing so, they naturalize the internet's position in a society aware of its own inequities yet unable to resolve them. De Blasio's last digital divide initiative, for example, presumes to “Advance Racial Equity” using an exceptional mode and site of broadband expansion.[9]

This fixation on technological access has intersected with the more conventional, physical supports of the city in surprising ways. An iconic and contentious architectural type in New York has become the pulpit for tech evangelists: the vertical housing block. While the management of New York City Housing Authority (NYCHA) properties has typically been overlooked by city leaders, these buildings are home to residents who can speak clearly to the shape of political accountability in the city (or lack thereof). This is evident, more broadly, in the longer history of public housing buildings in New York, where it has served less as a bona fide solution to poverty than as a way to externalize many of the city's poorest citizens.[10] Since the “white flight” of the 1960s, towers have been cast as verticalized hinterlands that housed populations considered irredeemable—often people of color, immigrants, the elderly, and the poor. In these conspicuous structures, residents are subject to new experiments in infrastructure and surveillance, ones enabled by cutting-edge technologies. [11]

NYCHA's most recognizable architectural symbol is referred to as the “tower-in-the-park.” The history of this type, rooted in a prewar European Modernism, is well documented in, among other places, Richard Plunz's *History of Housing in New York City*. Plunz describes a postwar New York where this type of building

satisfied the aims of corporate architects, liberal establishment figures like Nelson Rockefeller, and a bureaucratic milieu figureheaded by Robert Moses.[12] There were, on the other hand, people whom this building type did not satisfy: namely, large numbers of their residents. In studies as early as 1969, a tower-in-the-park-type NYCHA building experienced 40 percent more maintenance requests than an older neighboring low-rise NYCHA building of a similar tenant composition. [13] Cheap construction methods coupled with sheer vertical scale and density led to a greater frequency of utility outages, which were often left systemically unaddressed. Of course, this kind of tower-in-the-park architecture has been subject to much debate, inside and outside its walls, for decades.[14]

Today, these most visible remnants of New York's midcentury social housing intersect with new tech programs full of promises. Beginning in 2021, technicians contracted by Mayor de Blasio's government have worked to install rooftop hardware on 13 NYCHA buildings to enable residents to access the internet through a relatively new form of broadband network known as mesh Wi-Fi.[15] I first discovered mesh internet in 2020 when commiserating with my neighbors over Optimum's unreliable service in my old apartment building in Crown Heights, Brooklyn. I had just started my first year at Columbia University, online, and was frustrated by constant, sometimes debilitating connection disruptions. In the depths of the pandemic, one tenant (an acclaimed visual artist, I later discovered) had organized the installation of a mesh router on our building's roof. Gossip traveled quickly in those indoor days, and, before long, my roommates and I realized we could enjoy a free, high-speed, and more reliable service than what was offered by private Internet

8. “NYC Internet Executive Summary Master Plan,” Mayor's Office of the Chief Technology Officer, January 2020

9. “New York City Announces Free and Low-Cost Broadband Access for 13 NYCHA Developments,” official website of the City of New York, Office of the Mayor, May 6, 2021

10. Peter Marcuse, “Mainstreaming Public Housing,” in *New Directions in Urban Public Housing*, ed. David Varady (New Brunswick, NJ: Center for Urban Policy Research Press, 1998)

11. Richard Plunz, *A History of Housing in New York City*, (New York: Columbia University Press, 2016), 262

12. Plunz, *A History of Housing in New York City*, 260

13. Plunz, *A History of Housing in New York City*, 272

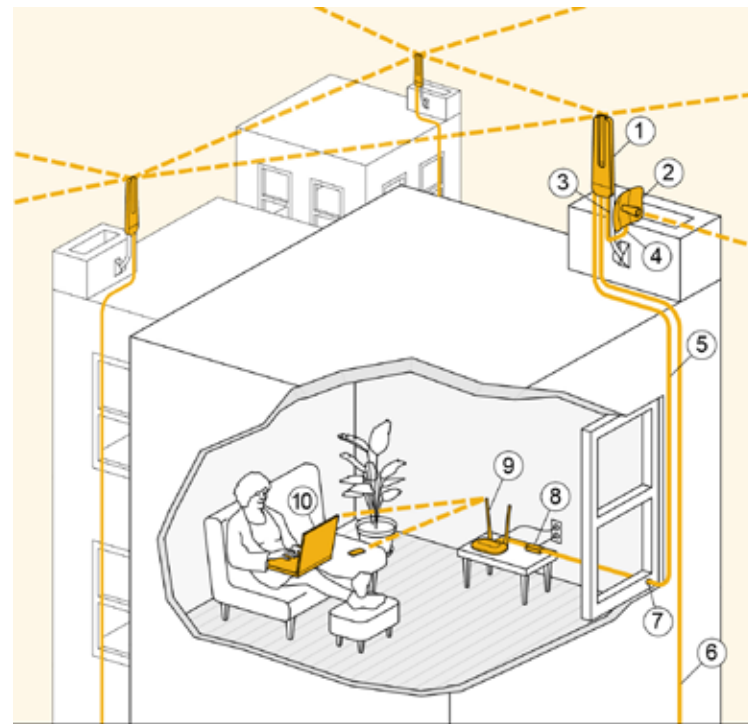
14. Plunz, *A History of Housing in New York City*, 280

15. “New York City Announces Free and Low-Cost Broadband Access for 13 NYCHA Developments.”





**Figure A:** The roof of my old apartment building as pictured by a volunteer NYC Mesh technician. Photo courtesy of NYC Mesh.



**Figure B:** Diagram of the hardware needed for a device to connect to a mesh network. Courtesy NYC Mesh.

16. Michael Del Castillo, "Meet the Mesh Messiah of the East Village," *New York Business Journal*, October 5, 2015

17. Jessie Edwards, "Sick of Traditional Internet Providers, BK Neighbors Are Setting Up Their Own Wi-Fi with NYC Mesh," *Brooklyn Reader*, May 10, 2021

18. Bliss Broyard, "'Welcome to the Mesh, Brother': Guerrilla Wi-Fi Comes to New York," *New York Times*, July 16, 2021

- ① Omnidirectional router
- ② Point-to-point router
- ③ Router mount
- ④ Ethernet cable connecting routers
- ⑤ Ethernet cable to main apartment
- ⑥ Ethernet cable to additional apartment
- ⑦ Hole in wall or window frame
- ⑧ Power over Ethernet injector
- ⑨ Indoor router
- ⑩ Device

Service Providers (ISPs) in our area. Before we even found a cable long enough to span the distance from the roof router to our apartment, we had canceled our Optimum service.

Mesh internet works through nodes and supernodes. Wired supernode signals are sent to a constellation of smaller wireless nodes, each new one making those around it stronger. What makes mesh Wi-Fi exceptional is that the decentralized, versatile framework of its technology is often mirrored in its organizers, especially its earliest evangelists.[16] The network to which our building now belonged, NYC Mesh, is a free service funded by donations and operated by volunteers.[17] Started in 2012, NYC Mesh has an air of vigilantism to its operations. Its volunteers seem proud to deliver a service that neither internet companies nor city government were capable of, especially since the onset of the pandemic. That pride grew further when a NYCHA resident contacted NYC Mesh wanting to install a node on the roof of their building. Through this minor act, a government partnership began that holds the potential to transform lives across the city.[18]

The exceptional formal qualities of the tower-in-the-park afforded NYC Mesh volunteers a kind of beacon. Height and ample sightlines make these buildings perfect candidates for nodes in a mesh network.[19] As NYC Mesh install leader Rob Johnson says, "We've been making the case for a while that the type of service we build is uniquely beneficial to public housing the way it was constructed in New York—these tall buildings amidst fairly short buildings." [20] This tallness, long considered a liability in maintaining NYCHA's utilities, has suddenly become an asset for mesh internet technology, the quintessential "utility" in today's political rhetoric. These megastructural projects, produced through centralized authority, have now been enlisted to mount a decentralized form of infrastructure. This infrastructure has since started to bring traffic.



**Figure C:** Example of tower-in-the-park NYCHA buildings: The Rangel Houses in Harlem, built in 1951. Photograph courtesy of David Schalliol.

One person who saw these beacons clearly was BlocPower CEO Donnel Baird, who has long worked to improve building efficiency in New York's poorest neighborhoods.[21] Nearly 90 percent of NYCHA residents filed a heat and hot water complaint in 2019, over 130,000 complaints in total.[22] Maintenance issues in these buildings are so systemic that the US Attorney for the Southern District of New York recently sued NYCHA, claiming that building maintenance was severely neglected and that their reports to federal agencies were intentionally misleading. As a result, a federal monitor was appointed to oversee the agency.[23] In response to these conditions, Baird's BlocPower has proposed retrofitting NYCHA's mechanical systems with data-collecting, analytic-driven "smart" technologies.[24] Baird imagines that these sensors and networks will help residents hold the Housing Authority accountable when maintenance is required. These new systems need broadband internet (something virtually all NYCHA

lots lack) and the popularization of mesh Wi-Fi arrived at the perfect time for BlocPower's imagined remote sensor ecosystem.

Mesh networks, often referred to as "community internet," span a diverse set of interest groups, properties, and programmed spaces and thus require a certain level of grassroots engagement. This kind of community participation can puzzle startups and tech companies promising quick, product-based solutions. When Baird's BlocPower won a contract with New York City to work on the NYCHA-owned Courtlandt Houses in the Melrose area of the Bronx, they subcontracted with a mesh Wi-Fi service provider. This service, People's Choice Communications, was formed by members of the International Brotherhood of Electrical Workers Local No. 3, a union currently engaged in the longest strike in American history against communications giant Charter Spectrum. [25] Formerly builders of Spectrum's physical internet infrastructure, the member-owners of this independent ISP provide internet in a part of New York where close to 40 percent of households lack broadband access (in some areas, that number may be closer to 50 percent). [26] For their customers and workers alike, New

19. Broyard, "'Welcome to the Mesh, Brother.'"

20. Emily Nonko, "How NYC Will Connect Millions of People to the Internet," *NextCity*, November 9, 2021

21. Donnel Baird, "Testimony: Donnel Baird on Generating Equity and Deploying a Just and Clean Energy Future," Before the House Energy and Commerce Committee and Subcommittee on Energy, April 20, 2021

22. "NYCHA Residents Have Filed Over 130,000 Heat and Hot Water Outage Complaints So Far This Heat Season," *Legal Aid Society*, January 15, 2020

23. Jackson Gandour, "The Tenant Never Wins: Private Takeover of Public Housing Puts Rights at Risk in New York City," *Human Rights Watch*, January 27, 2022

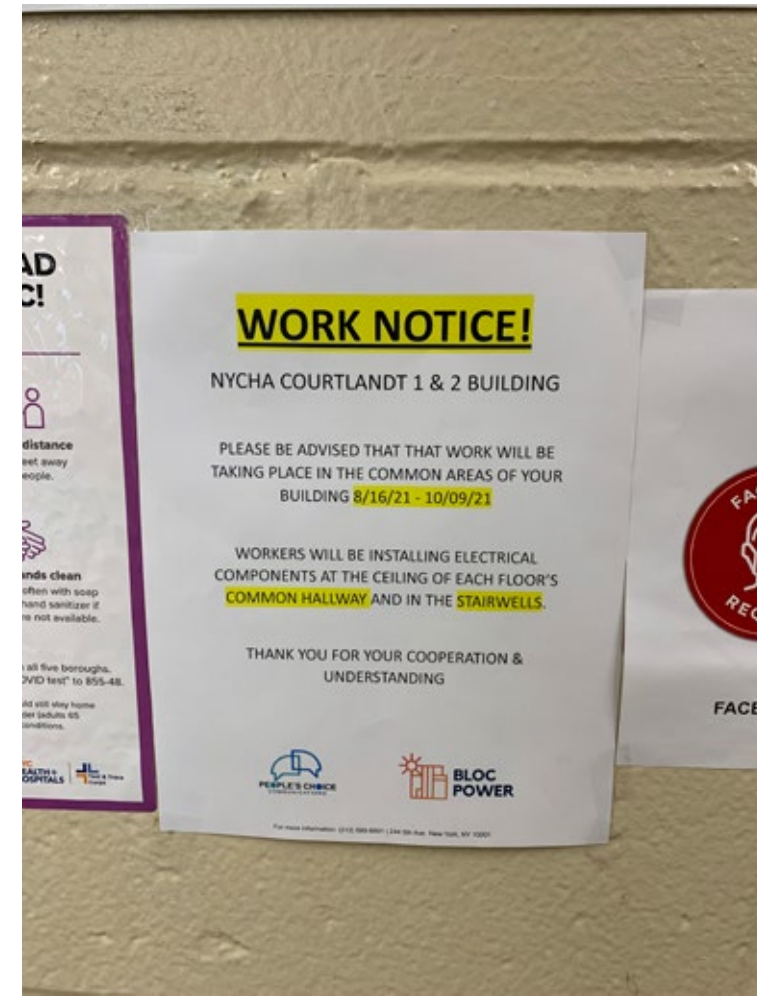
24. "How to Make Wi-Fi Affordable: A Mesh Technology Explainer," *BlocPower*, Youtube, March 30, 2020

25. "About Us," *People's Choice Communications*

26. "NYC Internet Executive Summary Master Plan"



**Figure D:** Work notice posted in the lobby of NYCHA's Courtlandt Houses building 1. Photograph by the author.



van outside. Workers were running cables down from a rooftop node to floors inside the building. Though the installations suffered some delays (an expected completion date posted in the lobby had passed by several weeks), they generally occurred swiftly, representing the most ambitious building-wide project the complex had seen in decades. However, while progress was made on the roof, the senior center and kitchen on the ground floor had been closed for months awaiting asbestos removal. A security guard I spoke with lamented the slow process, predicting it would be many more months before the hazardous material would be removed and the community facilities could reopen.[29] Internet service, which had been installed with the hope of making building repairs easier, was, at least for now, powerless to move the bureaucratic gears behind asbestos abatement.

Setting aside the viability of Baird's ideas, what is the point of residents having Wi-Fi if they shouldn't even be breathing the air it travels through? As Shannon Mattern writes, "Smart technologies often furnish convenient stopgap solutions: they provide a quick, and often lucrative, targeted fix that absolves leaders of the responsibility to investigate and resolve the root causes for health and racial injustices and systemic breakdowns." [30] When New Yorkers and their politicians focus so high up, issues much closer to the ground can go unresolved. What gets overlooked and unresolved when New Yorkers and their politicians only look up?

Another effect of BlocPower's proposed plethora of sensors is that it promises to place NYCHA residents under an unrelenting regime of surveillance. In this imagined world, sensors don't just provide maintenance information

to property managers but also offer a concerning opportunity for less empathetic actors—whether New York's police or its real estate developers—to gain private advantage from public goods. This arrangement and the tensions that come with it have become more palpable since New York inaugurated Eric Adams as its mayor in January 2022. Adams brings a distinct attitude toward technology and accountability to bear on the built environment. A former police officer, he is comfortable with a framework of reform in which technological intervention supplants accountability in either maintenance on the ground or progressive policy change. While tech need not be a foil for accountability, if it is deployed in a manner inattentive of its social determinants and consequences, even well-meaning solutions can quickly become agents of neglect, or worse. As Mattern points out, technological fixes often shift the conversation away from political accountability and deliver results far from the vision promised.

Inspired in part by Baird's proposal for a sensor array that monitors maintenance, Adams's provisional mayoral policy calls for the implementation of NYCHAsat, a nod to the New York Police Department's (NYPD) infamous COMPstat program.[31] New Yorkers may know COMPstat as the initiative that used statistics on crime such as frequency and location to catch and prosecute criminals in the 1990s.[32] This program dramatically reduced the number of crimes committed in the city, but because of its blindness to socially determined factors, it also set the groundwork for overtly racist policing measures like "stop-and-frisk." [33] Adams's NYCHAsat proposal brazenly implies that public housing developments are corollaries of policing. The proposal involves residents' regular use of new portals, apps, and QR codes that are



**Figure D & E:** Equipment and signs for asbestos abatement at Courtlandt Houses building 1. Photographs by the author.



**Fig. E**

31. Ethan Geringer-Sameth, "Can the Next Mayor Save NYCHA? Democratic Candidates Offer Varied Plans for City's Crumbling Public Housing," Gotham Gazette, June 8, 2021

32. Chris Smith, "The Controversial Crime-Fighting Program That Changed Big-City Policing Forever," New York Magazine, March 3, 2018

33. "Stop-and-frisk" refers to a brief police stop of a suspect for whom the police have reasonable suspicion. In 2013, a federal judge deemed the policy unconstitutional.

27. The "Internet of Things" is a group of objects with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the internet.

28. "BlocPower, Metro IAF and People's Choice Narrow the Digital Divide with Innovative Multi-Stakeholder Cooperative Wi-Fi Installation Connecting 2,500 NYCHA Residents in the Bronx," BlocPower, November 29, 2021

29. From an interview with an independently contracted security guard who wished to remain anonymous. Interview by author, Bronx, New York, October 13, 2021

30. Shannon Mattern, A City Is Not a Computer: Other Urban Intelligences (Princeton, NJ: Princeton University Press, 2021)



34. "Eric's Housing Plan," Eric Adams for Mayor, November 8, 2021

35. Jake Blumgart, "The Ghost Tenants of New York City," Slate, March 3, 2016

36. "New York City Announces Free and Low-Cost Broadband Access for 13 NYCHA Developments."

37. "Eric's Housing Plan."

38. Gandour, "The Tenant Never Wins."

39. Gandour, "The Tenant Never Wins."

more effective as surveillance than as the data-backed methods of municipal consolidation they claim to be.[34] Bringing tracking apparatuses into these places risks collateral punishment: it is an open secret that many NYCHA units are overcrowded or home to otherwise unsanctioned residents, residents who often have nowhere else to turn for housing.[35]

New Yorkers should be skeptical of anyone who says that data, a massive and exponentially growing sector of the economy, is actually the raw stuff of accountability, or a solution to long-standing ills on its own. Baird, while not especially critical of big data, has so far been largely successful in uplifting inhabitants of the built environment and holding its makers accountable. His work runs counter to a long history of technological innovations and innovators that bolstered the status quo and its biases. For Baird, adaptive and incremental technological improvements are all that is available to the infrastructurally disenfranchised communities with whom he works. For the city, however, the alluring techno-fx, coupled literally and metaphorically with the airiness of political rhetoric, acts as a substitute for addressing more obstinate problems of inequality. While Baird may see these Wi-Fi networks as a novel air current, they appear to other organizations a lucrative trade wind.

The city has enthusiastically backed organizations like BlocPower in their stated mission to "franchise our way to universal broadband," over the likes of the more grassroots NYC Mesh, whose approach is not as easily integrated into private ownership. BlocPower's conventional corporate organization appeals more to city government than NYC Mesh's vigilante swagger, even if BlocPower's mode of

engagement clashes with the inherently collective tech in question. NYC Mesh, whose ad hoc approach made successful partnerships possible, has received no leg up in recent contracts with the city. In the latest NYCHA initiative, they have been awarded fewer contracts to work on buildings than some private companies that have less experience with the mesh technology being implemented.[36] The most glaring problem in NYCHA's partnership with private mesh ISPs, including several startups, is that it sanctions these buildings as free-market testing grounds. This bias toward private actors now appears to be the prevailing air pattern: Adams also advocates selling NYCHA's physical airspace to developers and eventually transferring entire NYCHA buildings to private management through his fast-tracking of the Permanent Affordability Commitment Together (PACT) program.[37]

What set of relations does this new structure imply? While privately managed NYCHA buildings are still relatively few in number, a recent Human Rights Watch report lays out a concerning picture of the new program.[38] The report, titled "The Tenant Never Wins," is a barometer for things to come. For instance, PACT buildings are not subject to the federal oversight monitor currently assigned to NYCHA.[39] Can we trust financial behemoths to maintain public housing for the city's most under-resourced communities? If accountability has historically been hard for tenants to pin down, it may now be entirely up in the air. Between funding structures and the technological faith of today's city government, any accountability dictated by public housing residents over these new airwaves will likely be in spite of their origins, not because of them. Mesh Wi-Fi installation provides a signal carrying the means for accountability, yet to those with their

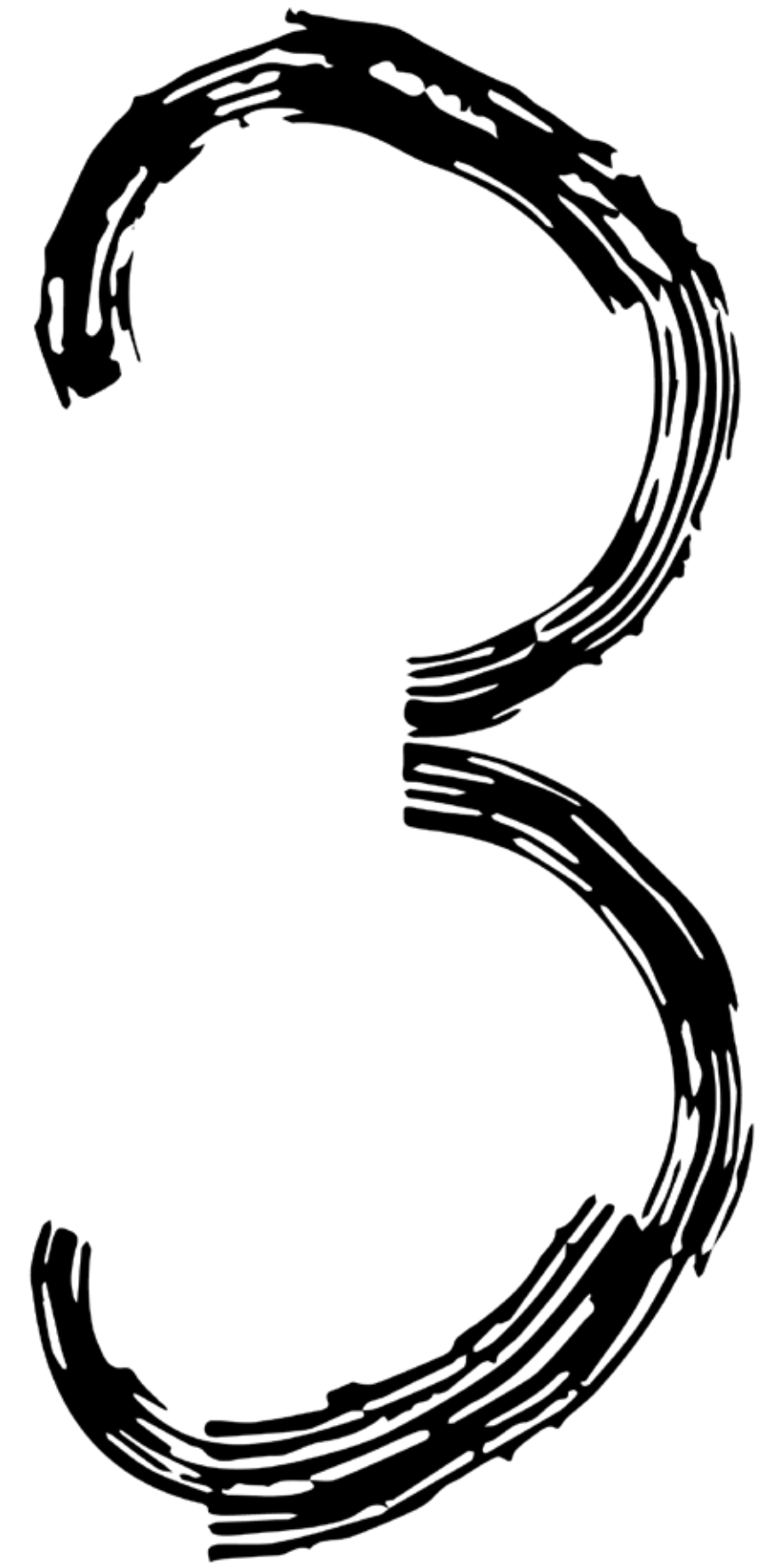
feet on terra firma, it may just be virtue signaling. Accountability, in any form, must take root in the ground before it carries through the air.

#### Note on the publisher:

*The Avery Review* is A Periodical of Critical Essays on Architecture.

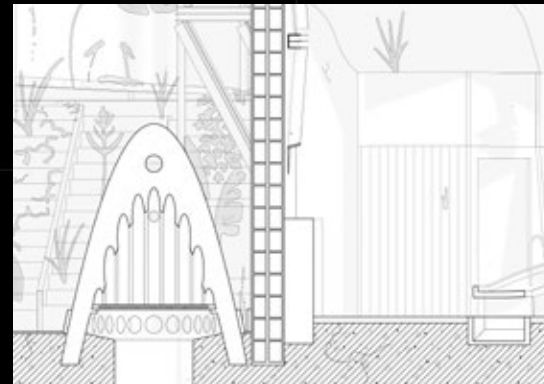
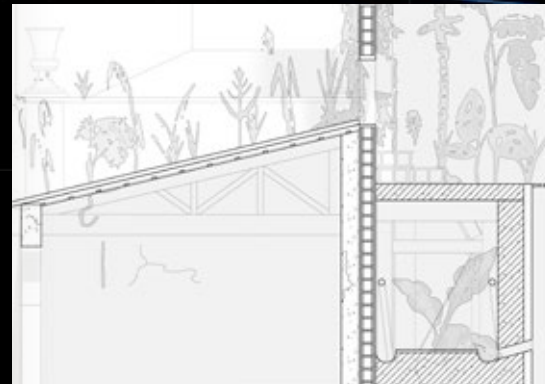
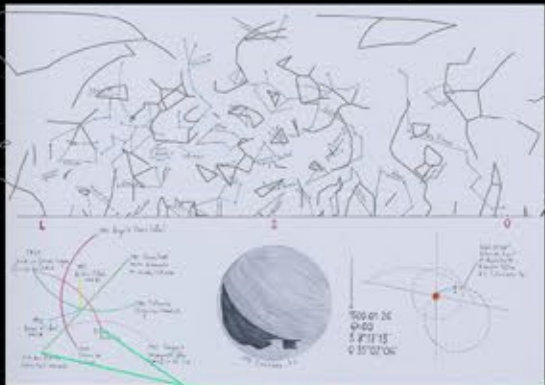
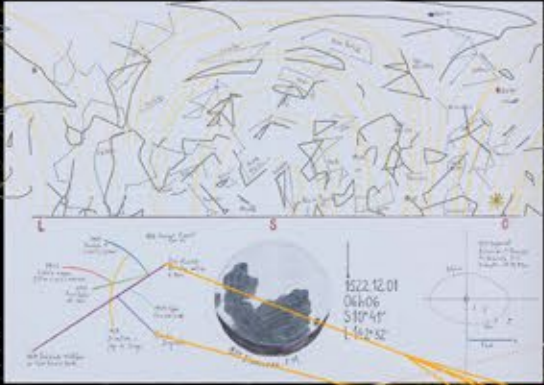
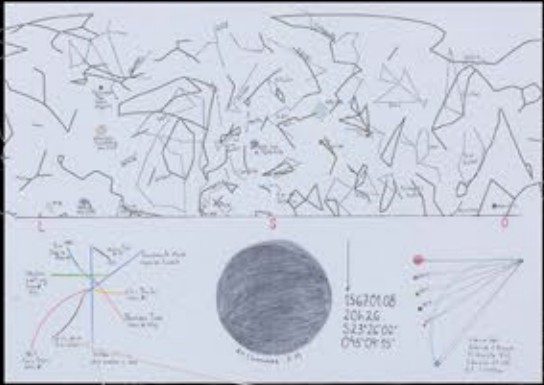
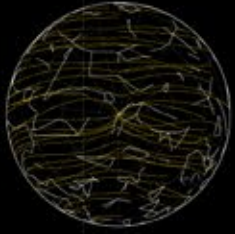
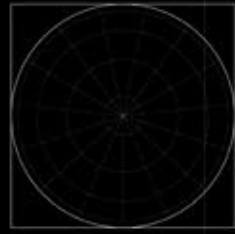
The Avery Review is an online journal dedicated to thinking about books, buildings, and other architectural media. We see the genres of the review and the critical essay as vital but still underutilized ways of exploring the ideas and problems that animate the field of architecture, and we hope to push these genres beyond their most familiar forms, whether journalistic or academic. Our aim is to explore the broader implications of a given object of discourse (whether text, film, exhibition, building, project, or urban environment), to expand the terrain of what we imagine architectural discourse to be, and to broaden the diversity of voices that our field typically hears from. We are interested in reviews that test and expand the reviewer's own intellectual commitments—theoretical, architectural, and political—through the work of others. The Avery Review publishes new essays every other month during the academic year.





ARCHITECTURAL







## LISTENING, SANCTUARY

A long-erased river ecology in Salvador, Bahia, Brazil is sonically resurfaced with the help of a disused movie theater.

### Previous spread:

a. Background:  
Analysis of *Deus Salve o Materialismo Histórico* (2016–2020) Drawings, by Denise Alves-Rodrigues.

b–f. Foreground:  
Detail section drawings.

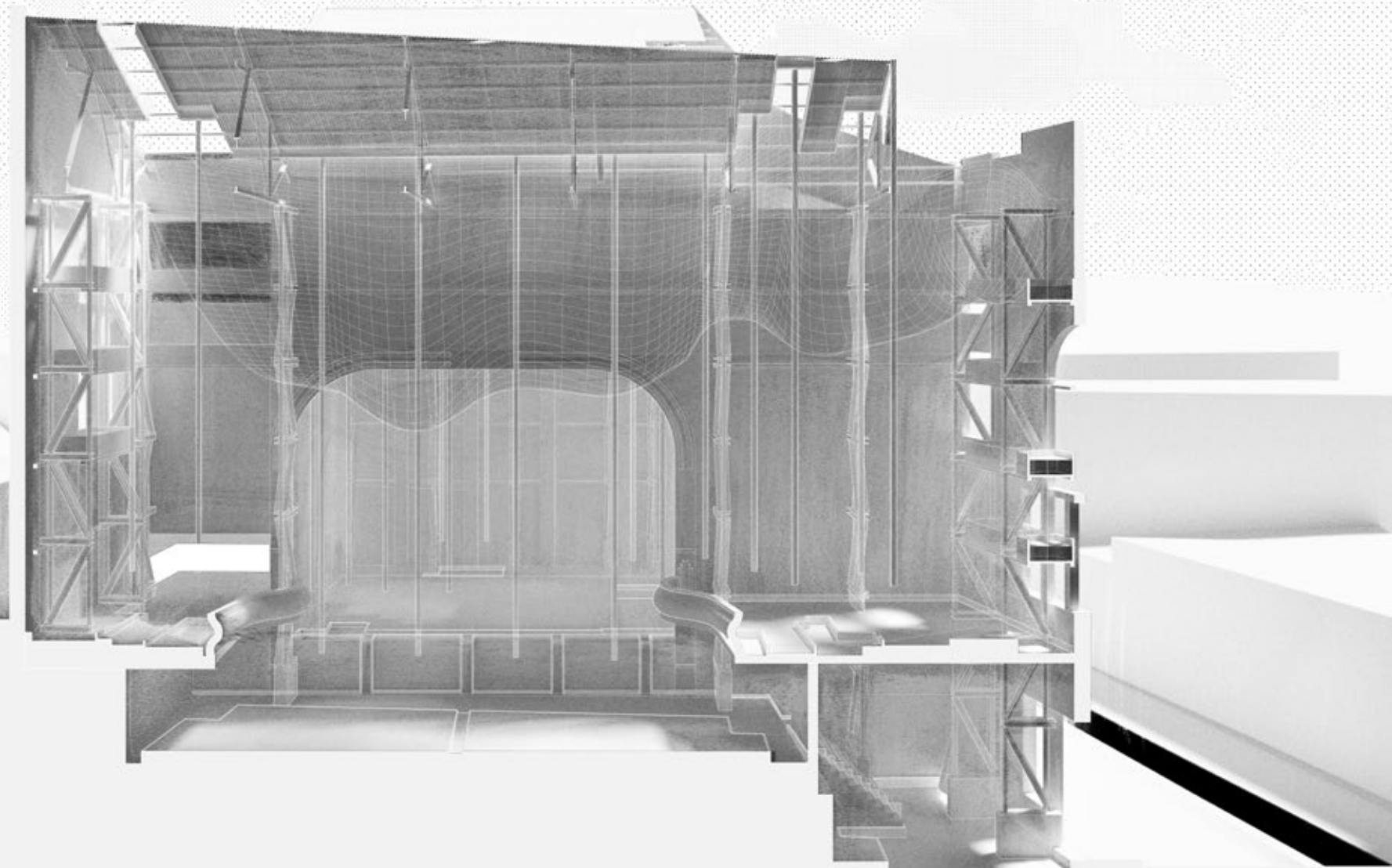


### This page:

a. Photograph of the Teatro Jandaia building from Northwest corner. Photo by Nicolas Ocean Shannon.

### Opposite page:

b. Section perspective





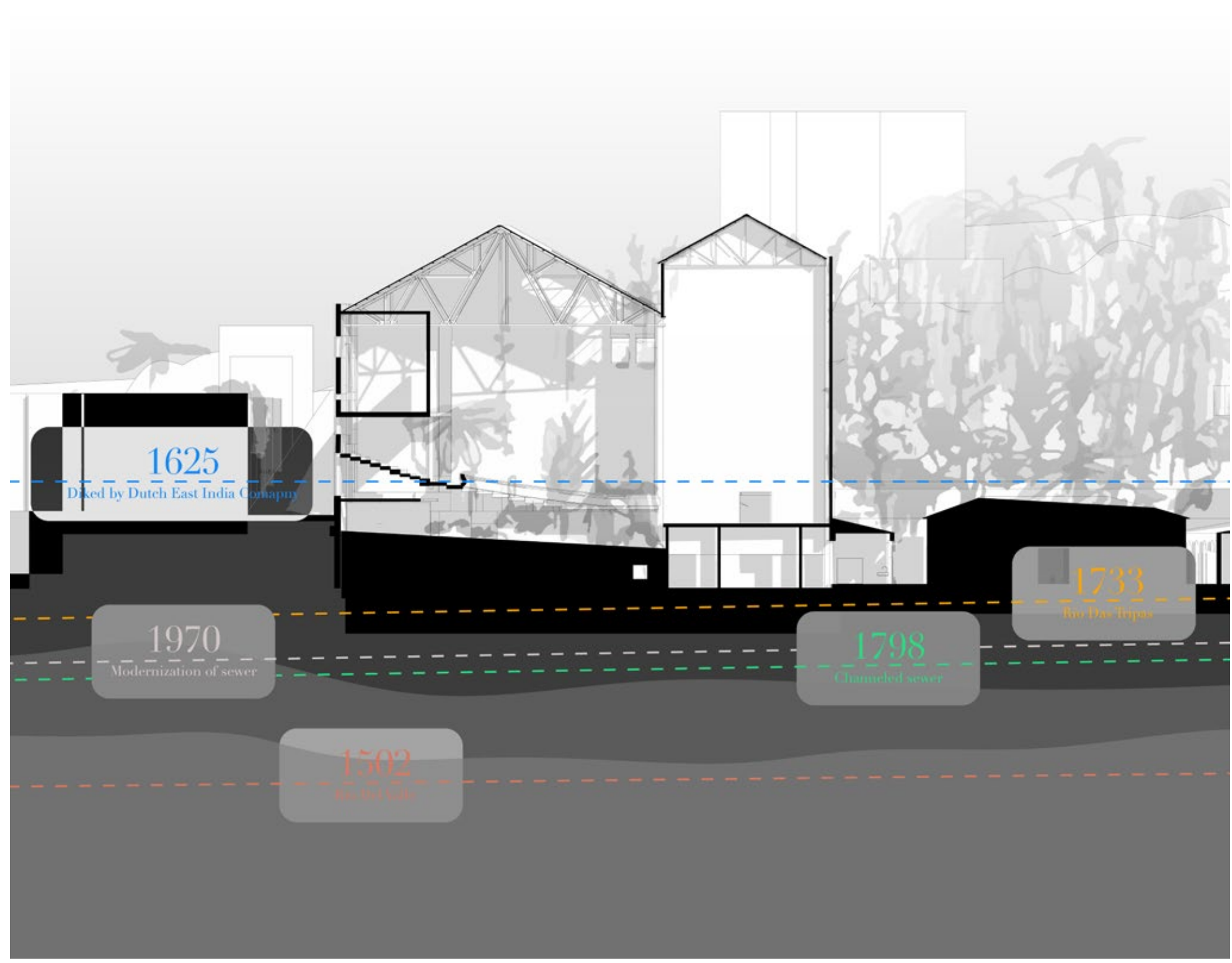
**This page:**

a. Site analysis.  
Project lies between Pelorinho and Saude hills.

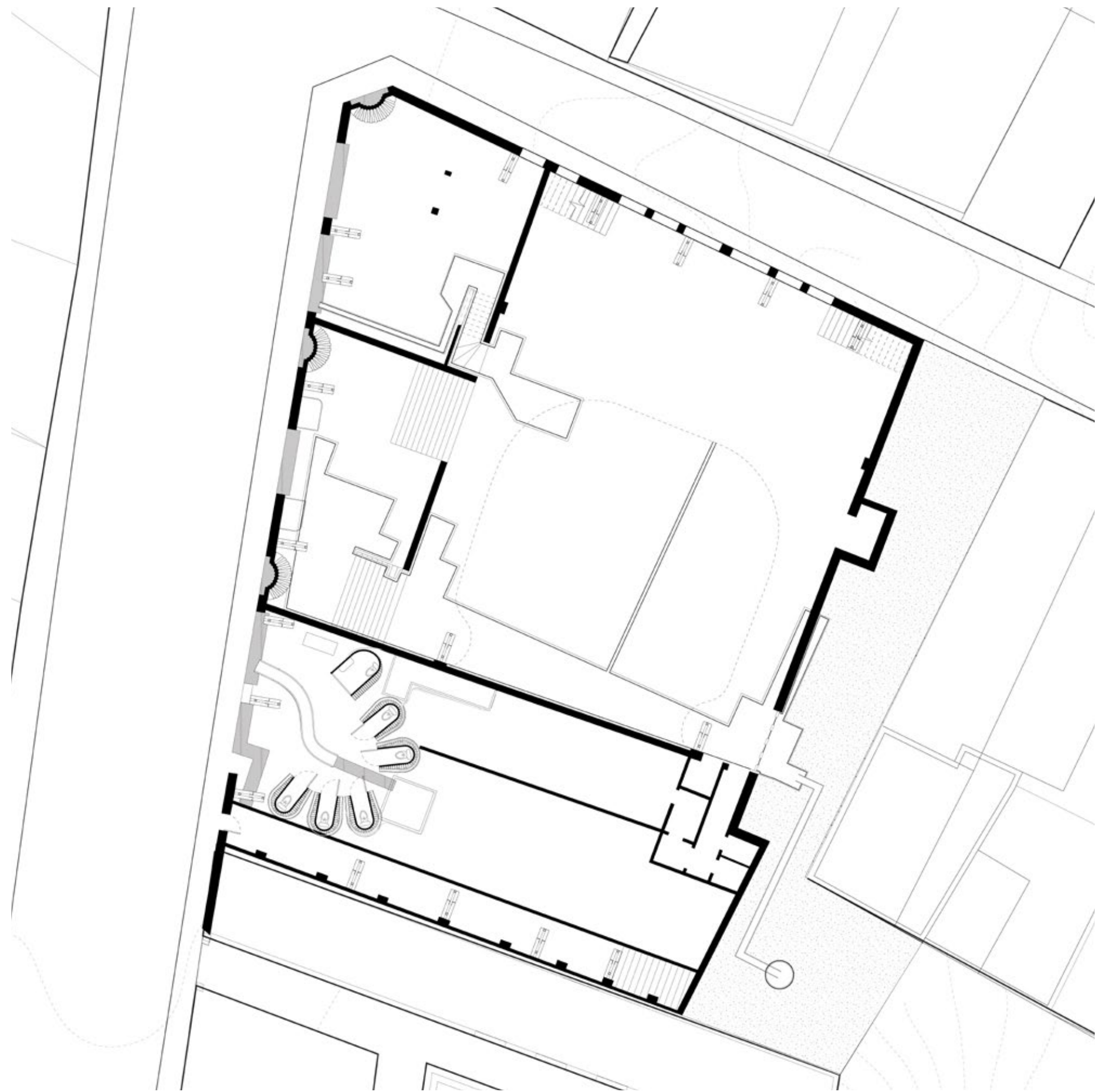
b. Photograph looking towards Pelorinho Hill and the Church of the Blessed Sacrament.

**Opposite page:**

a. Diagram building section. Shows water lines in valley over history.







**Opposite page:**

a. Ground floor plan

**This page:**

b. Roof plan

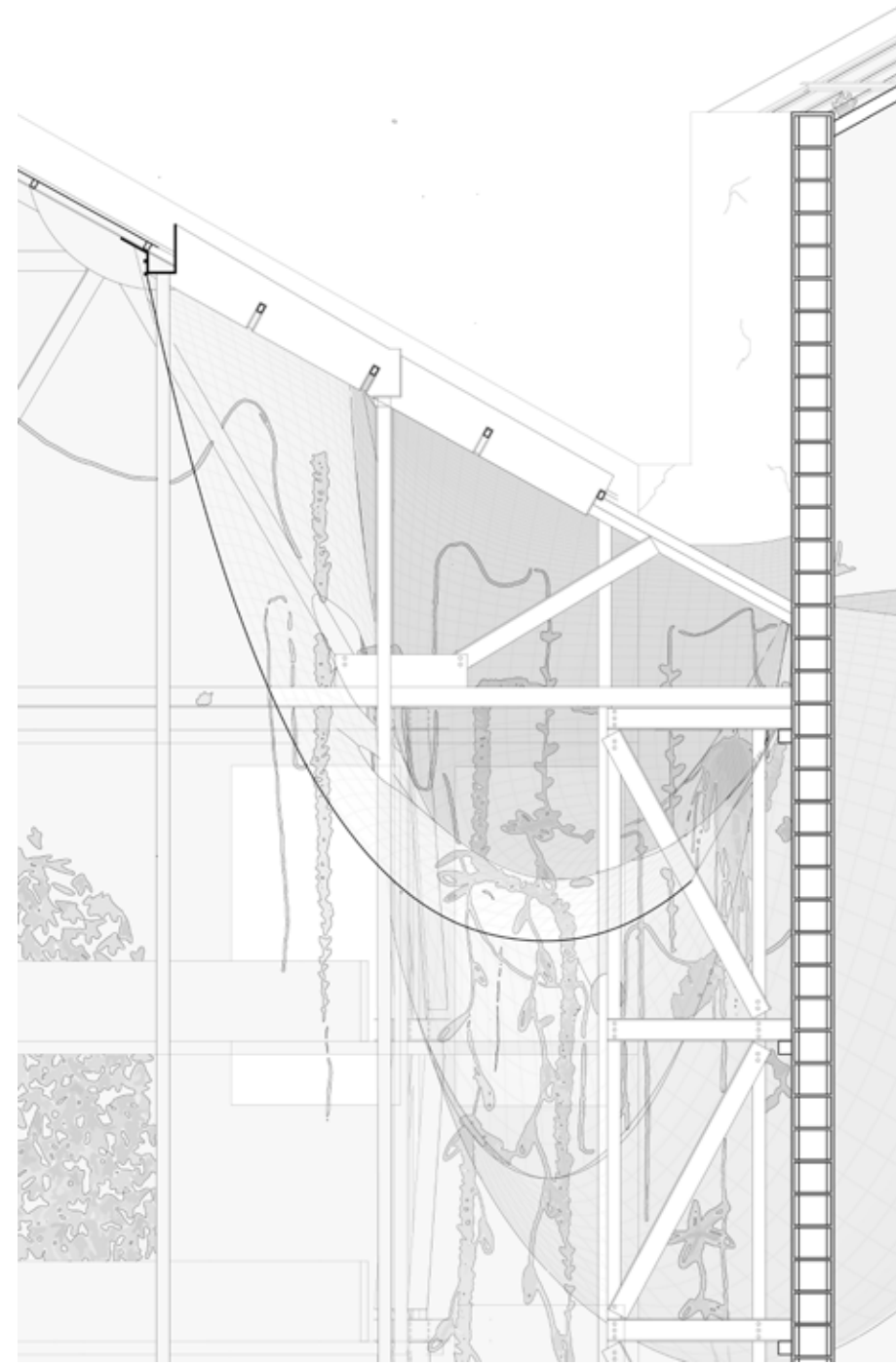
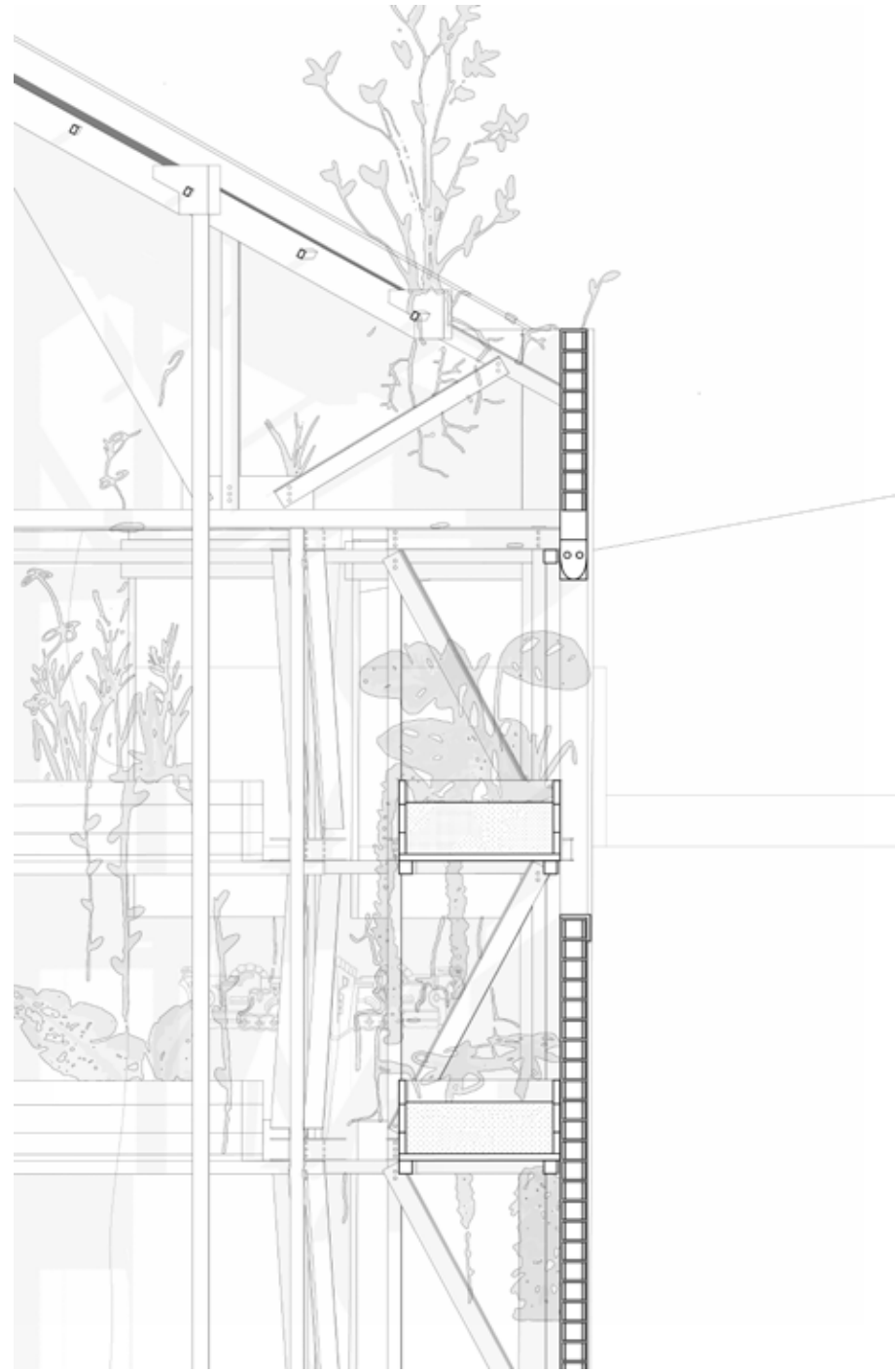
c. First floor plan



This page:

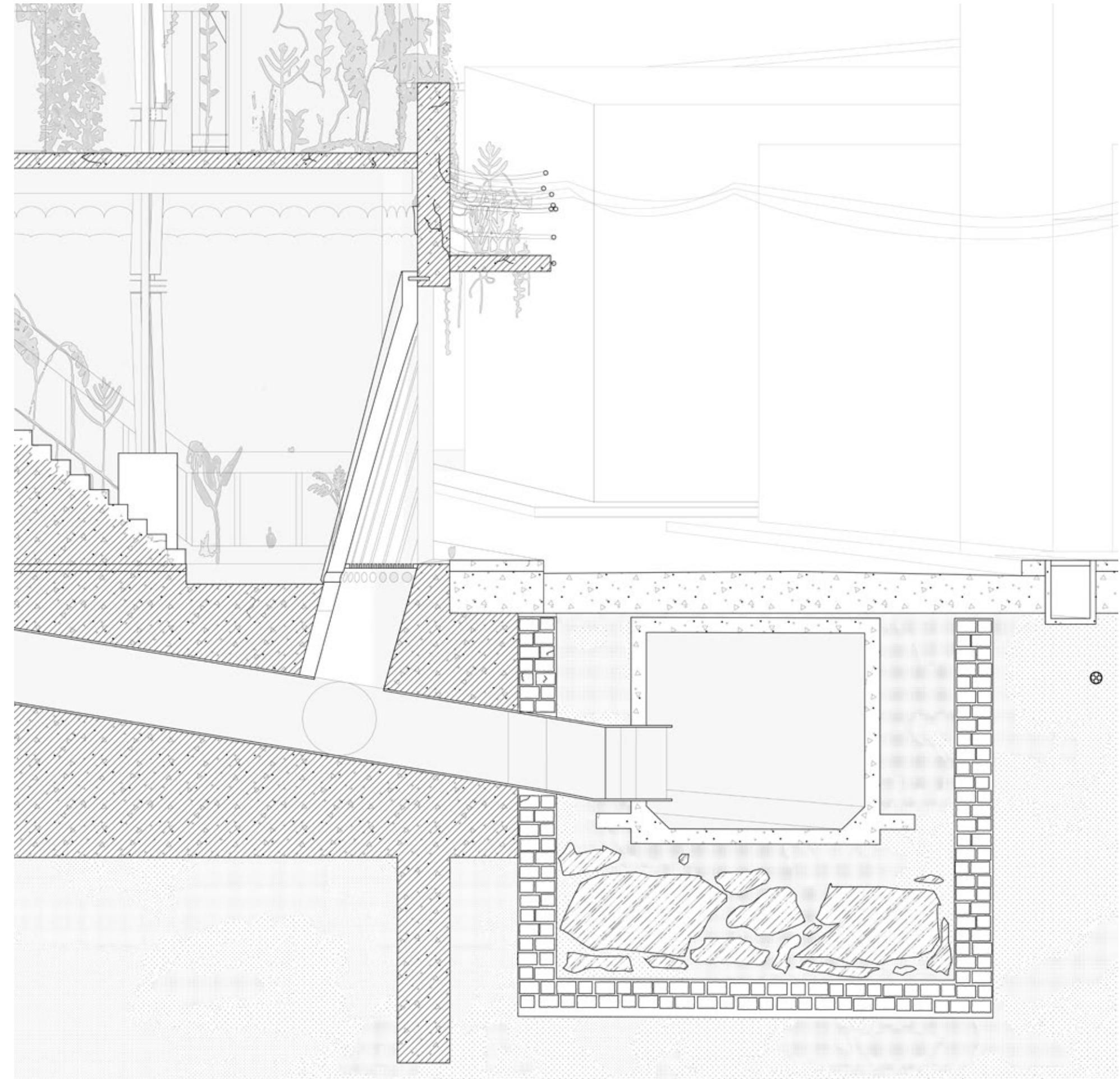
a. Detail section A

b. Detail section B

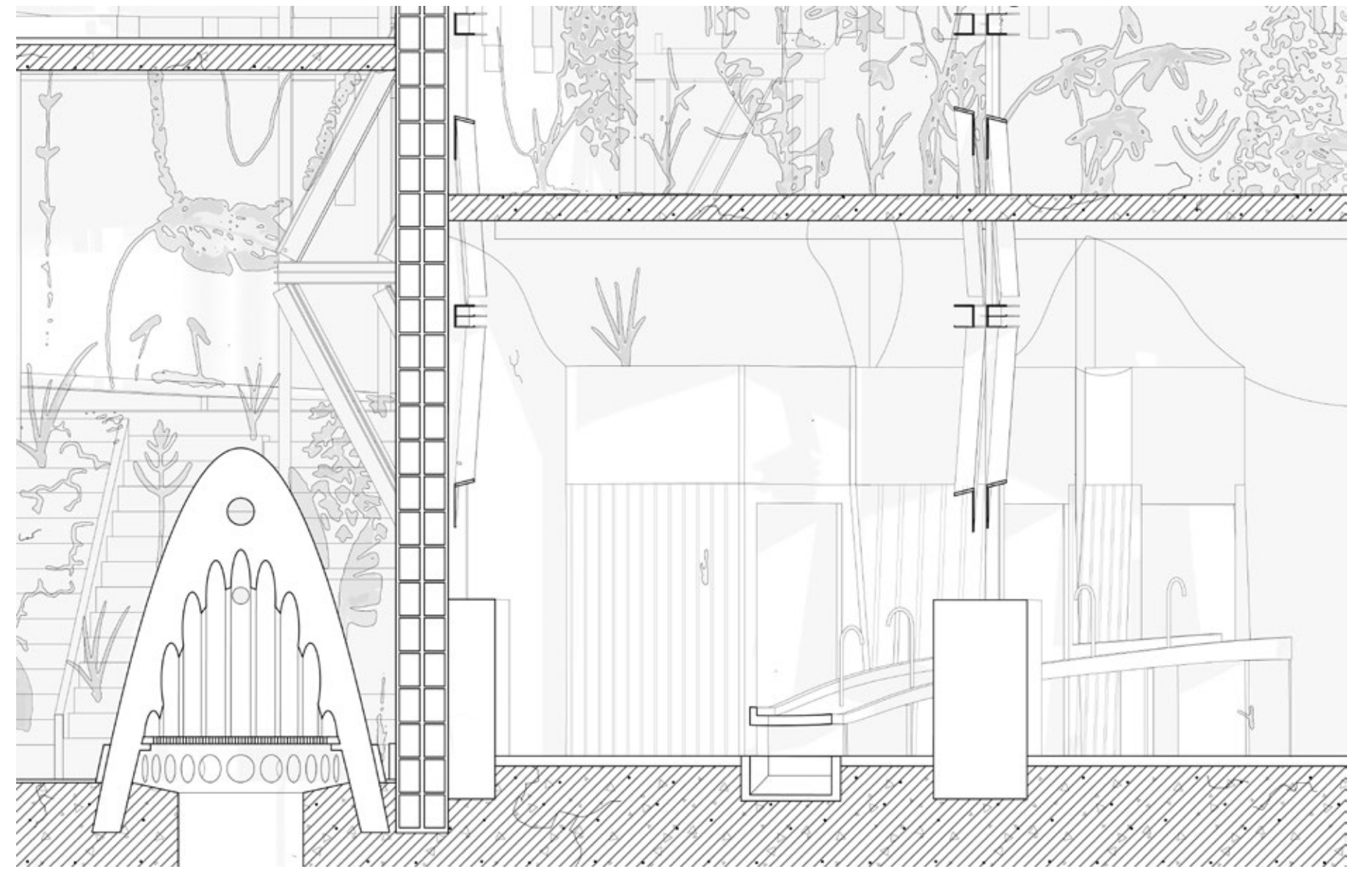
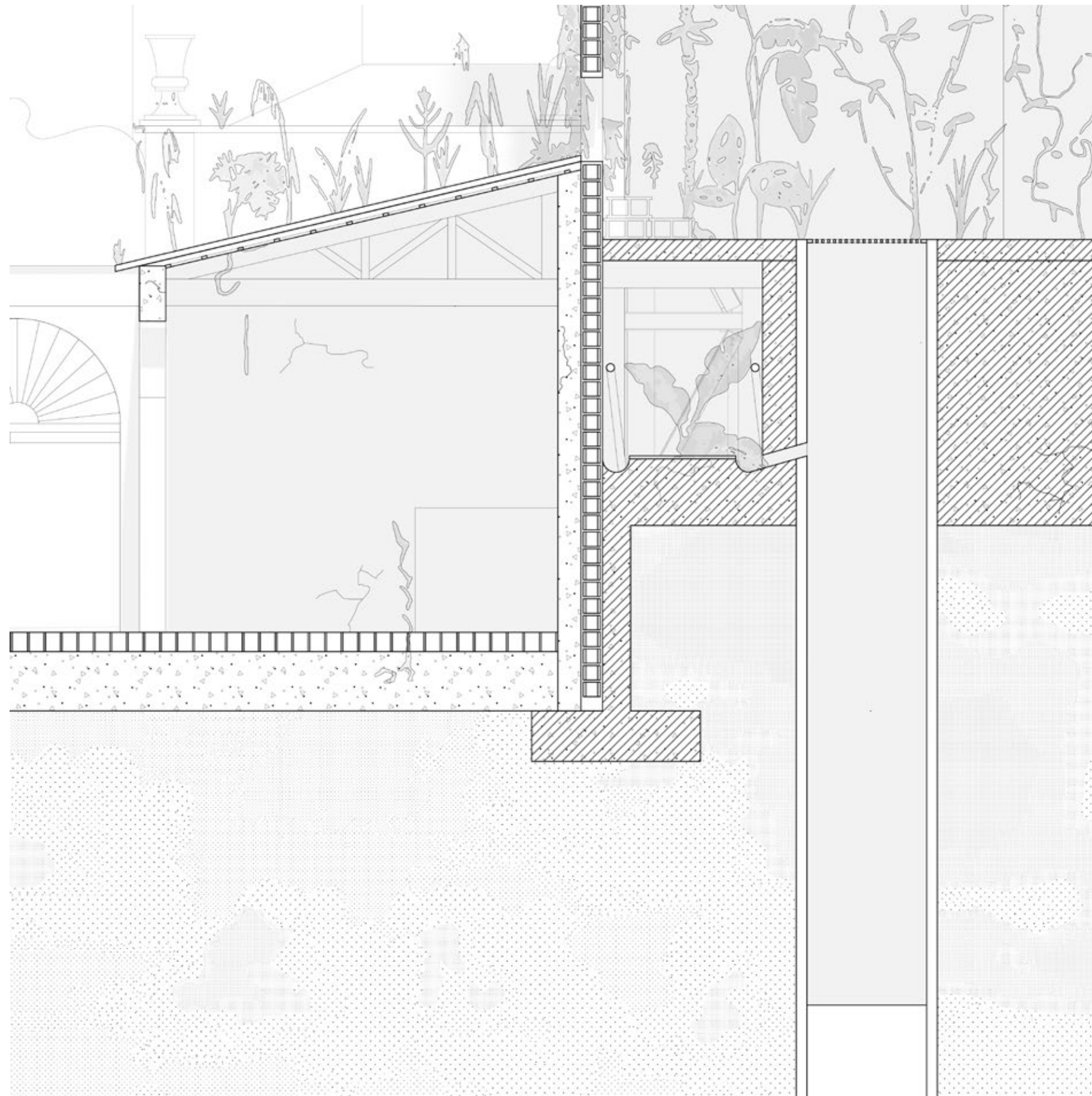


Opposite page:

c. Detail Section C





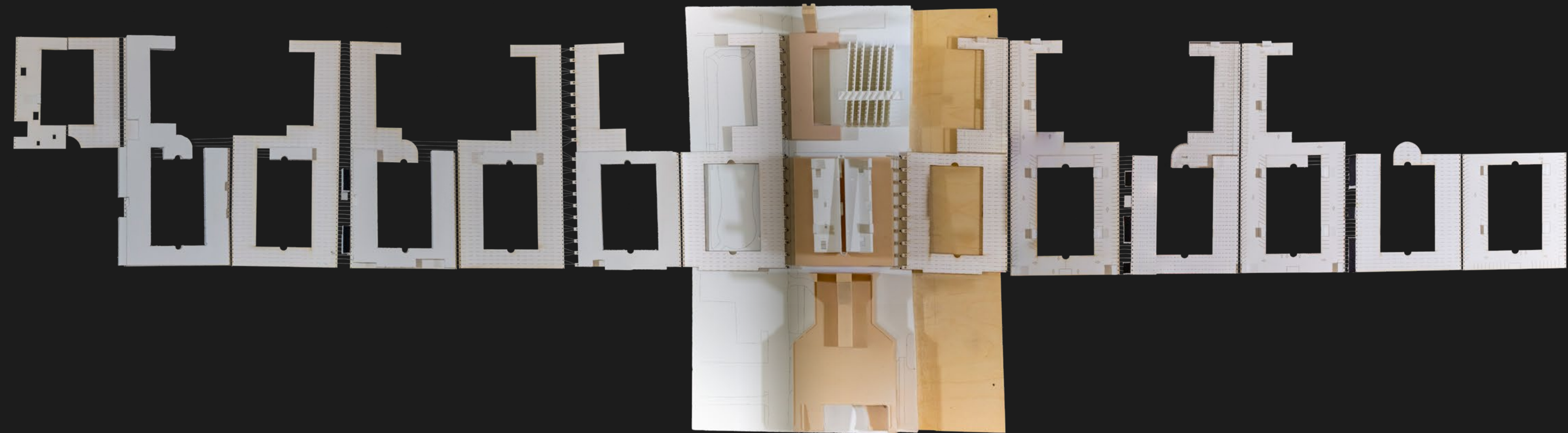


Opposite page:

a. Detail section D

b. Detail section E





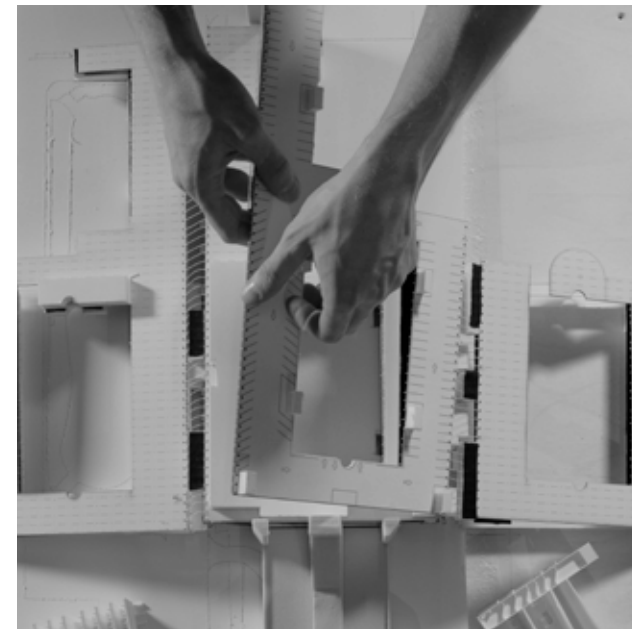
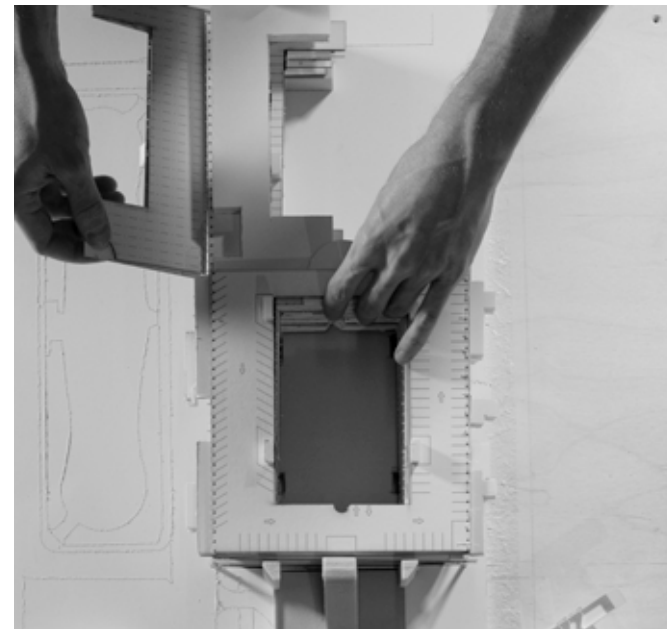


# ADDRESS LAB

What does it mean to address someone? A disused parking garage on Roosevelt Island becomes home to a lab for the USPS, occupying alternating floors. An experimental spirit occupies the project, in which an entire building unfolds—altering the distances from As to Bs.

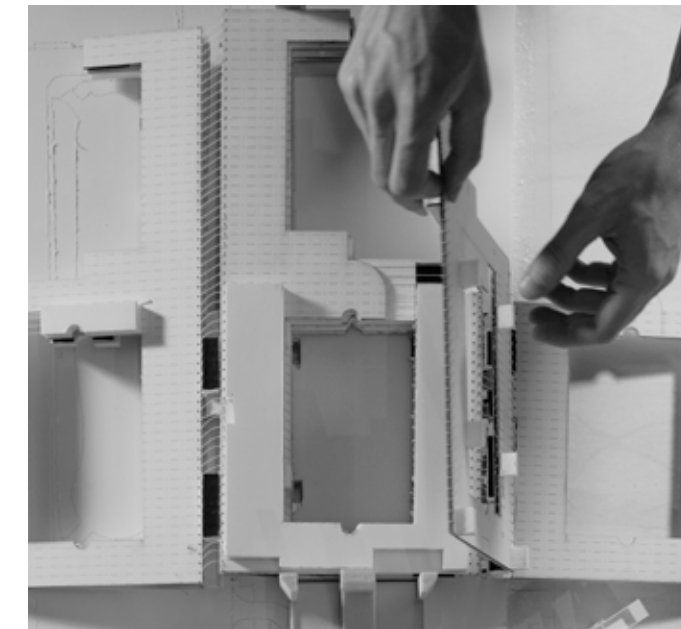
**Previous Spread:**

a. Unfolded model  
left: address lab  
right: existing garage



**Note:**

For the model, the building's structural grid was replaced with string. Structural columns on the facade become binding for an accordion-style book



**This Spread:**

a-d. (left to right)  
Unfolding the model:  
an "Architectural  
address book"

e. Eastern elevation

f. Western elevation





**This page:**

a. Roosevelt Island's Motorgate parking garage facade

b. Exterior egress stair

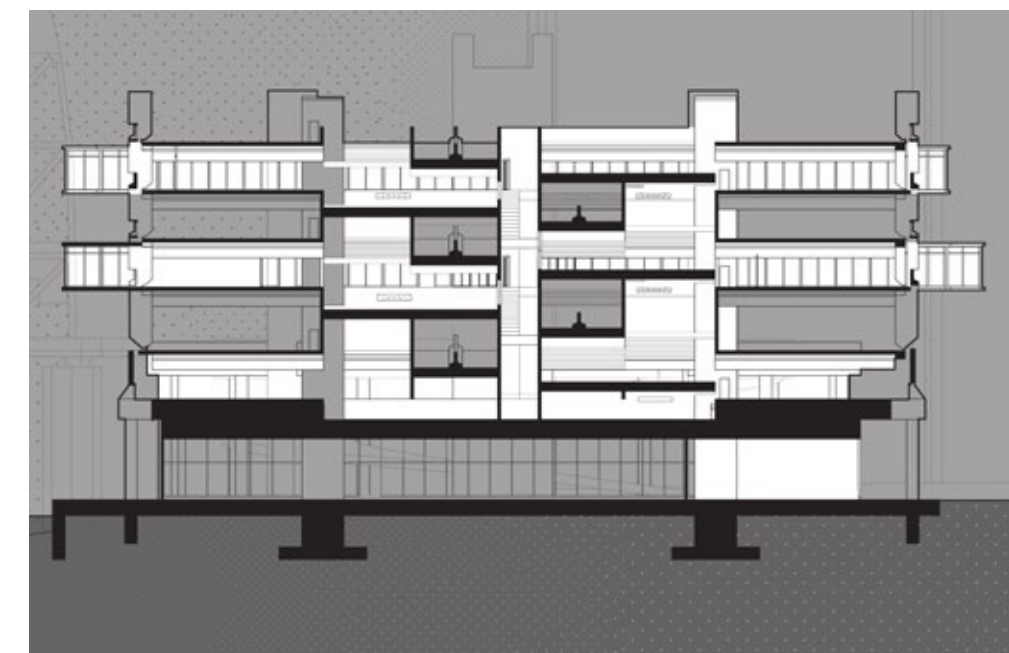
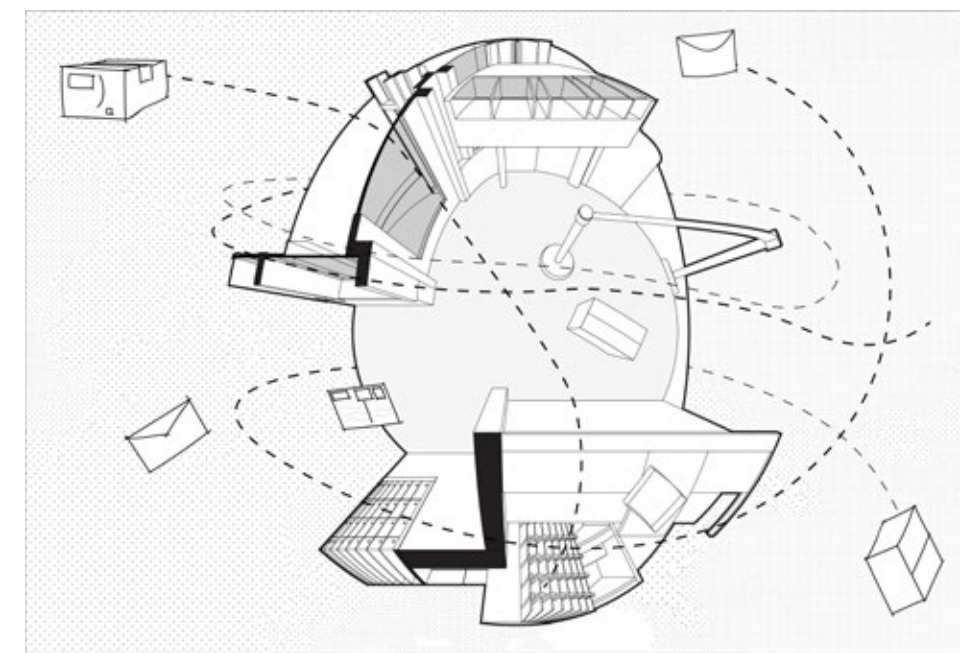
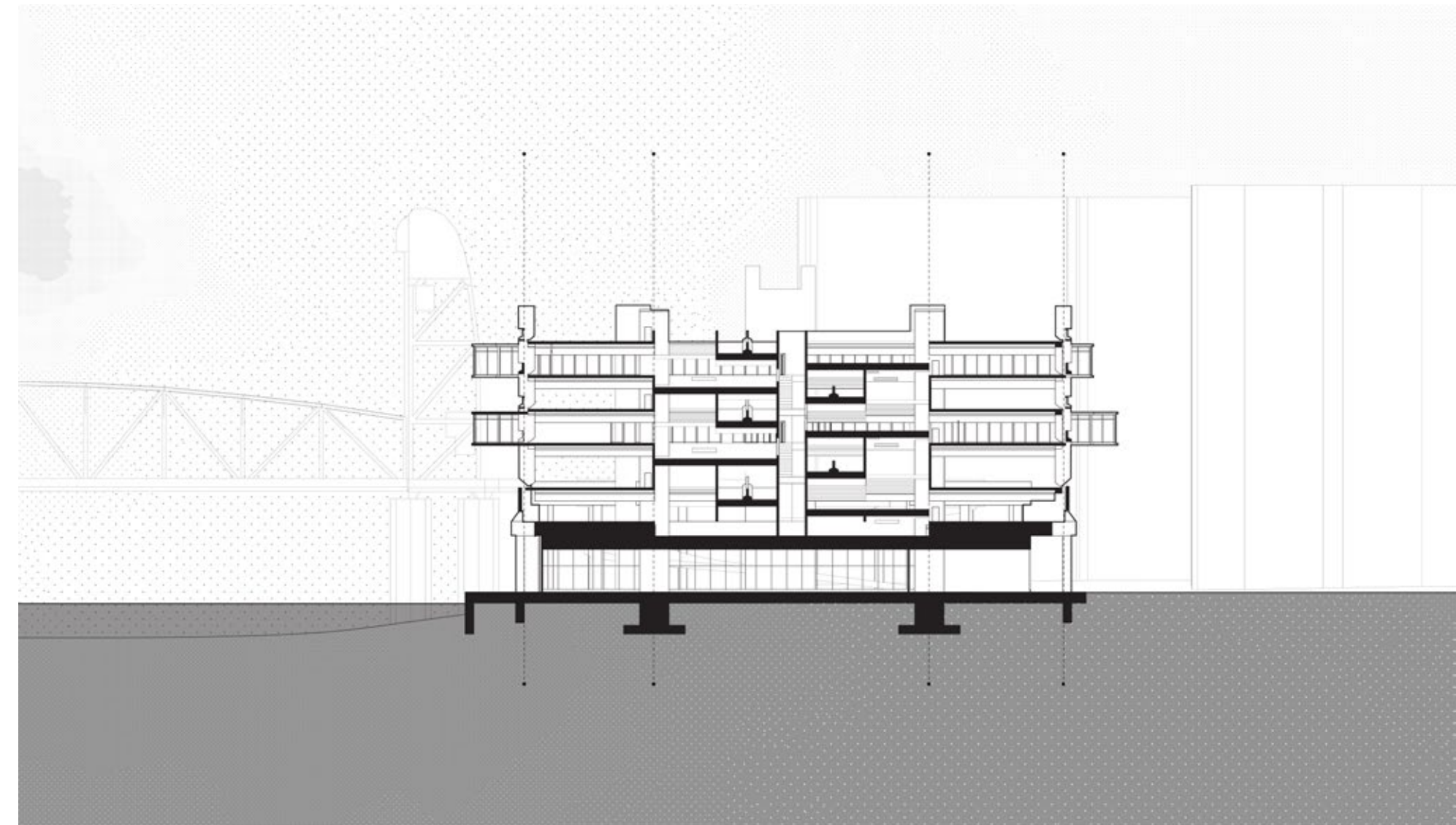
c. Interior signs and door to stairwell

**Opposite page:**

d. Building section

c. Mailroom in the shape of a planet

e. Building section diagram

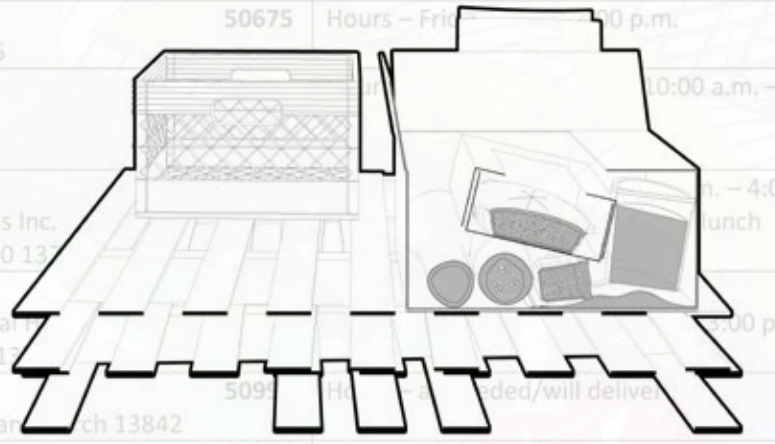




**DELAWARE OPPORTUNITIES INC. EMERGENCY FOOD PANTRIES**

2/8/21

ANDES 266 Depot Street 13731	51242	Hours – Friday, 3:00 – 6:00 p.m.
BLOOMVILLE St. Paul's Episcopal Church 464 River Street 13739		1:00 – 4:00 p.m.
COLCHESTER Methodist Church 15151 State Highway 30 13755		10:00 – 12:00 p.m.
DAVENPORT Route 23 – Near Town Hall 13755		10:00 – 6:00 p.m. & 11:00 a.m. – 12:00 p.m.
DELHI <b>Delhi Food Pantry</b> 1 Church Street		10:00 – 3:00 p.m. & 5:00 – 6:00 p.m.
DEPOSIT 91 Second Street 13754		10:00 – 6:00 p.m.
EAST BRANCH Earl Pomeroy Memorial Center 25 Church Street 13756	50838	Hours – Thursday, 1:00 – 2:30 p.m. or as needed
FRANKLIN 574 Main Street 13755	50675	Hours – Friday, 10:00 a.m. – 12:00 p.m.
GRAND GORGE Civic Center St Highway 30 12434		10:00 a.m. – 12:00 p.m.
HAMDEN Delaware Opportunities Inc. 35430 State Highway 10 13754		10:00 a.m. – 4:00 p.m.
HANCOCK Father Rausch Memorial 346 West Main Street 13754		10:00 a.m. – 4:00 p.m.
KORTRIGHT N. Kortright Presbyterian Church 13842	50911	Hours – Monday, 10:00 a.m. – 12:00 p.m. & Friday, 4:00 p.m. – 6:00 p.m.
MARGARETVILLE 42838 State Highway 28 12455	50104	Hours – Monday, 10:00 a.m. – 12:00 p.m. & Friday, 4:00 p.m. – 6:00 p.m.
MASONVILLE Federated Church Corner Street Route 206 & Route 8 13804	50108	Hours – 3 <sup>rd</sup> Wednesday, 11:00 a.m. – 1:00 p.m.



Source: Delaware Opportunities, INC.

**Rashid Black-Eyed Peas with Spinach Salad**

3 Year visit in the ill should include the horrors of COVID, isolation, and travel bans. We need to visit the sick and but the sick individuals in shaking their hands. The Holy Last Messenger (peace be upon him) has said, "Whoever feeds a sick person what he desires, Allah shall feed them out of the foods of Paradise" (Shihab al-Asnani, 81, chapter 4).

place that he can learn more about Ramadan.

Following Rashid's path is different from living in the U.S., he stated saying that he has a lot to learn from living in a country where restrictions do not allow you to visit the sick and but the sick individuals in shaking their hands. The Holy Last Messenger (peace be upon him) has said, "Whoever feeds a sick person what he desires, Allah shall feed them out of the foods of Paradise" (Shihab al-Asnani, 81, chapter 4).

3 Year visit in the ill should include the horrors of COVID, isolation, and travel bans. We need to visit the sick and but the sick individuals in shaking their hands. The Holy Last Messenger (peace be upon him) has said, "Whoever feeds a sick person what he desires, Allah shall feed them out of the foods of Paradise" (Shihab al-Asnani, 81, chapter 4).

**HAKIMA'S CORNER**

Hakima Raziyah Mumin  
IP Correspondent

**THE POWER OF FOOD**

**Jathiya Apple Salad**

**Ahmad Chicken Kebab**

**Tahirah Rice**

Food plays a major role in our health... The food you eat becomes a part of you. Chemicals should be avoided... The food you eat becomes a part of you. Chemicals should be avoided... The food you eat becomes a part of you. Chemicals should be avoided...

Source: The Islamic Post, November Volume 1, 2021 Rabi-ul-Awwal, 1443





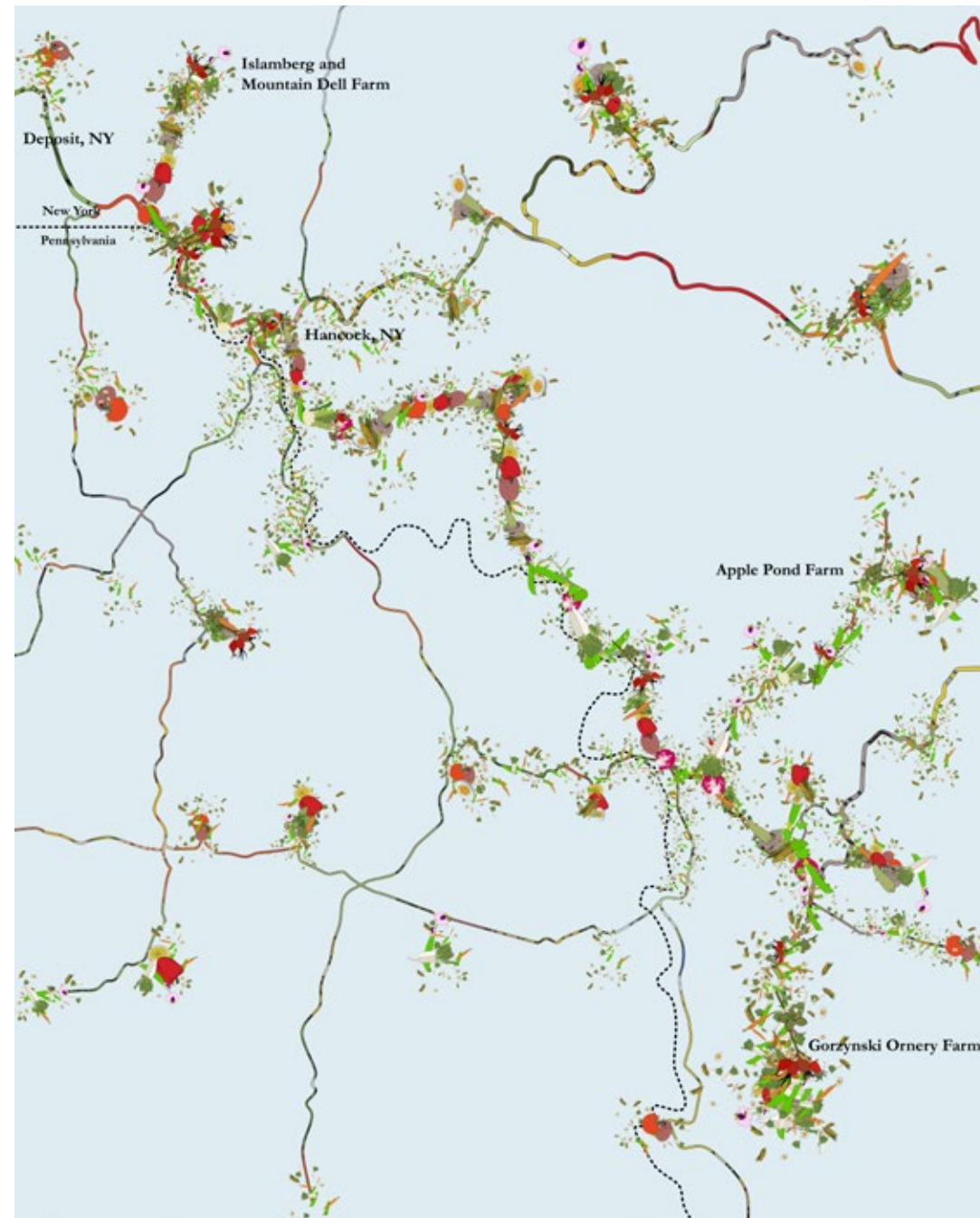
## PANTRY PATH

A biodiverse and productive pathway supplies a pantry, offering charitable food aid for the community near Islamberg, New York. An exurban, locally active community with safety concerns, Islamberg's pantry separates itself from the center of its settlement with a pathway incorporating cenotes, soft hills, and moments of rest. A diverse yield requires diverse methods of storing: the pantry-based on ancient grain storage techniques—makes use of passive systems to create varied conditions.

### Previous spread:

a. Background: food and farm gradient

b. Foreground: charitable meal analyses. Left: Delhi, NY pantry meal. Right: Islamberg informal "potluck" meal.

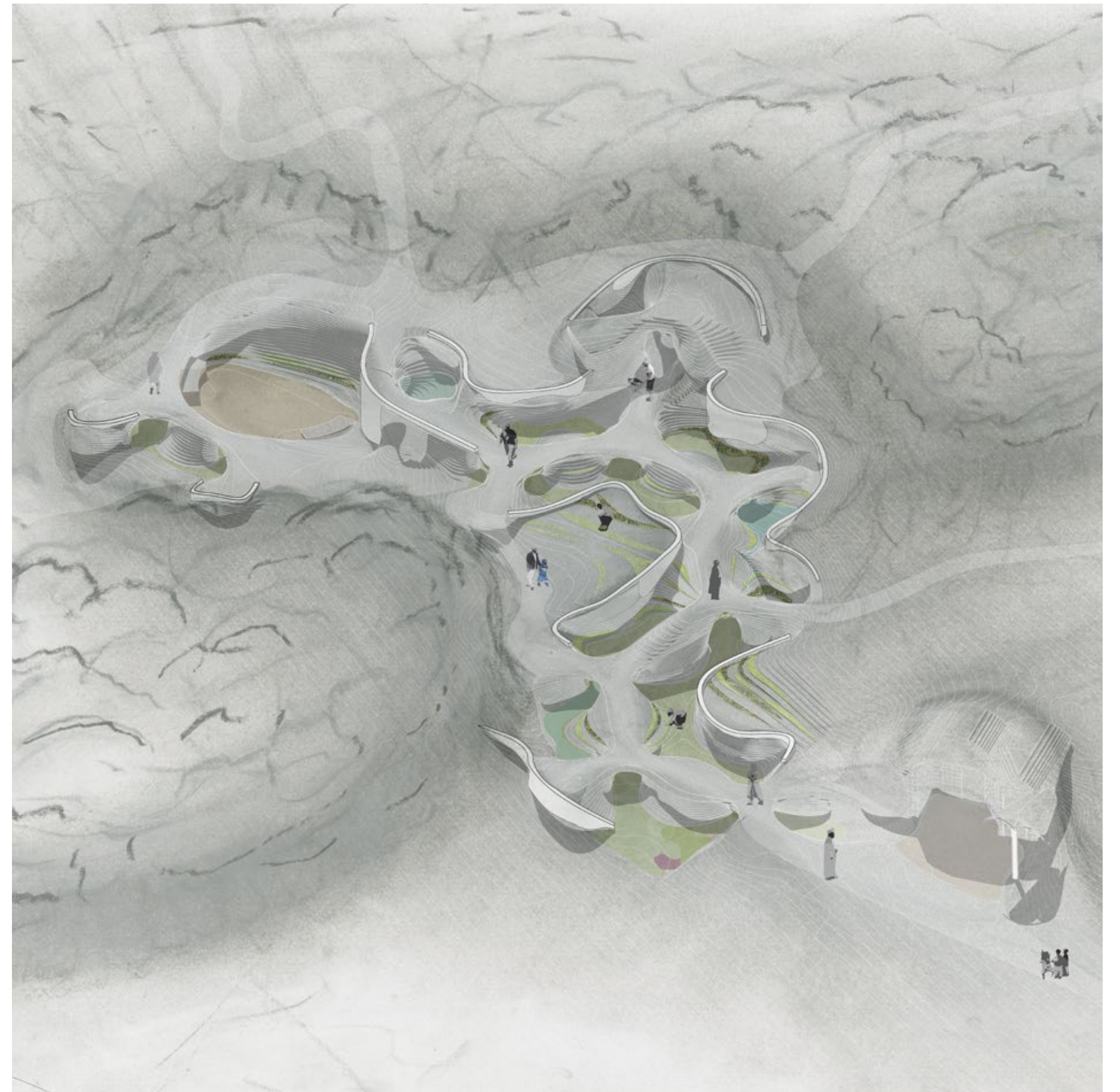


### This page:

a. Farm map, catskill region

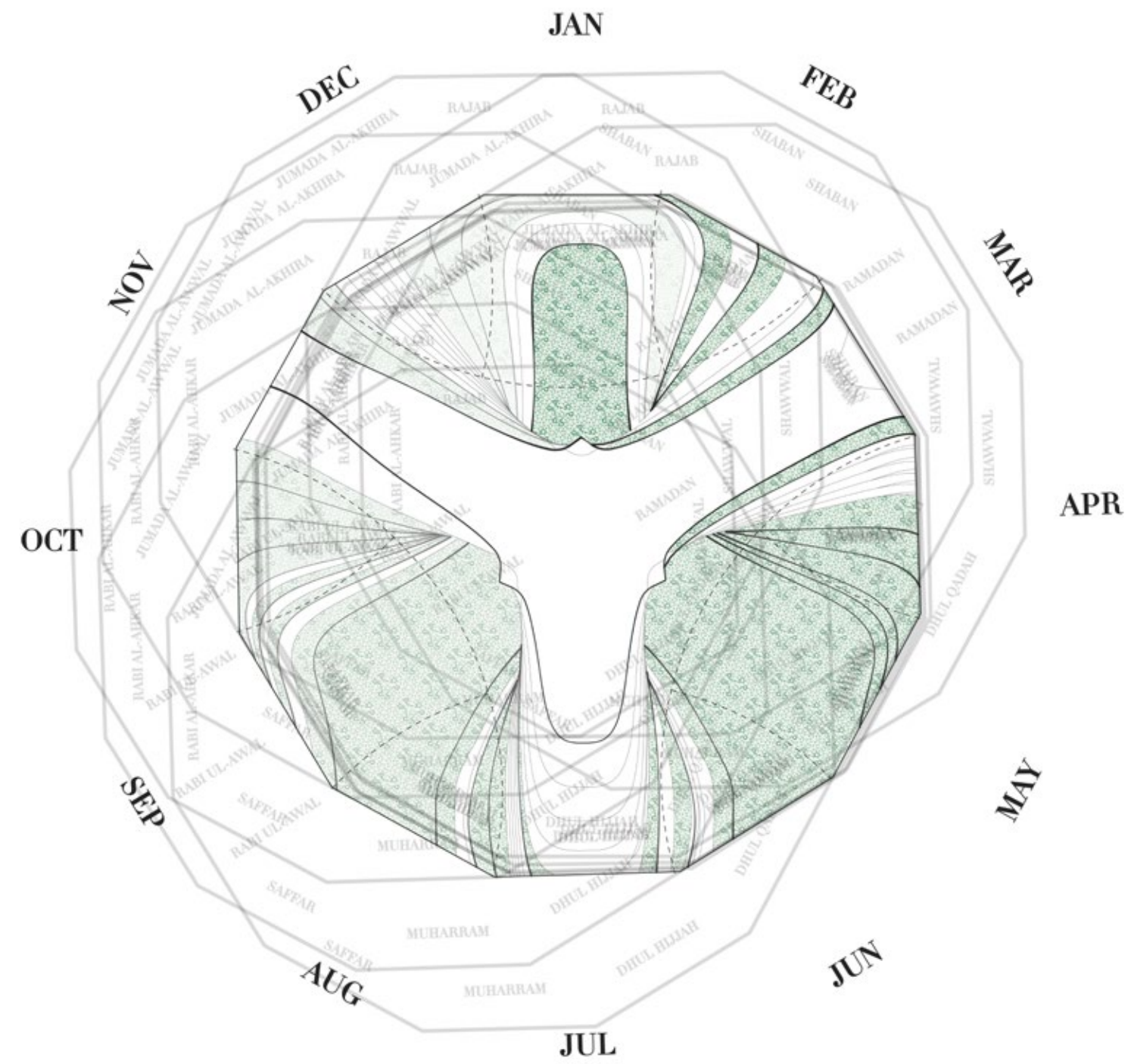
### Opposite page:

b. Path intervention axonometric

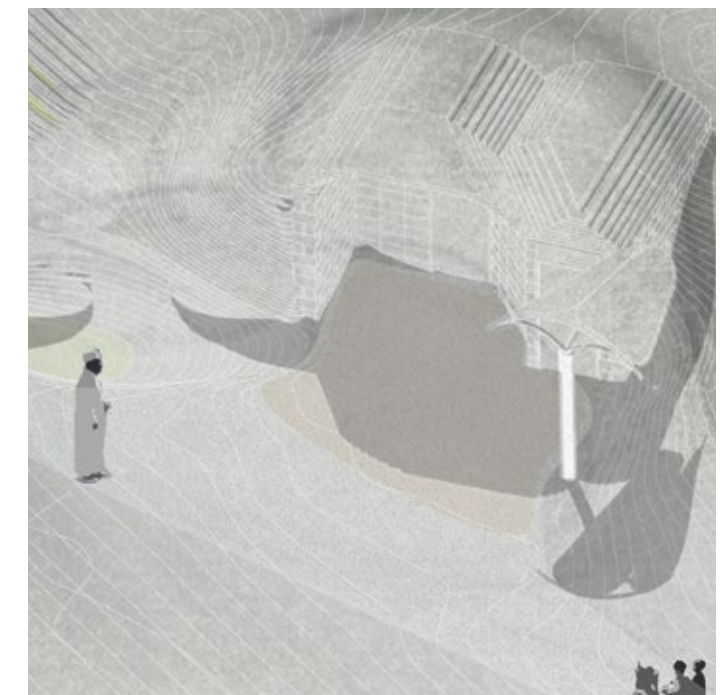
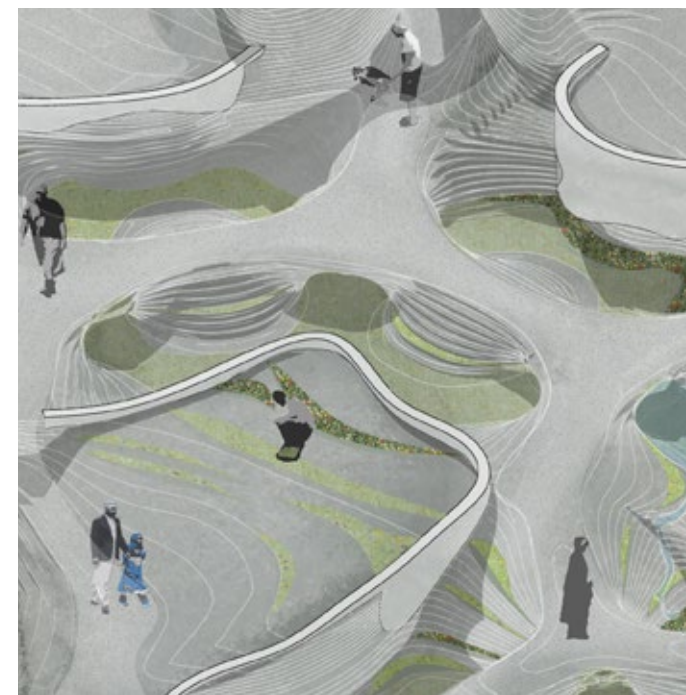
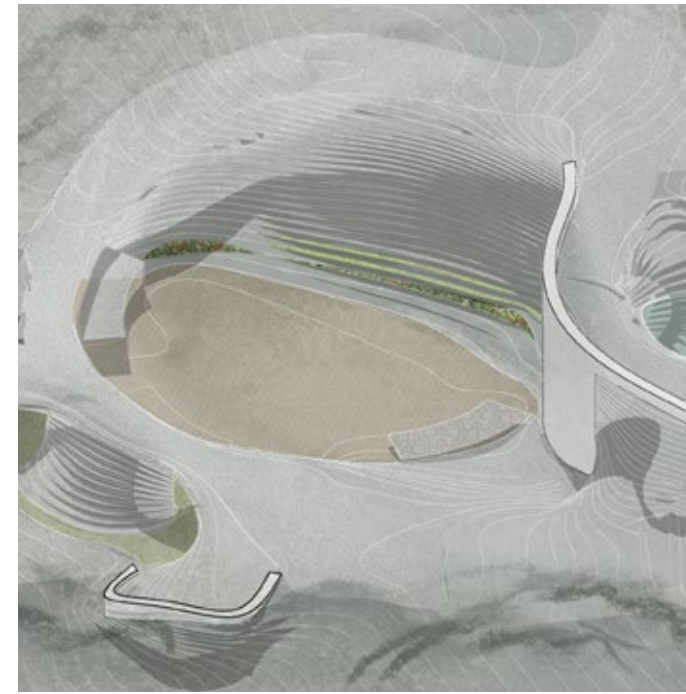




a. Growing calendar, path motif. Lunar arabic and greorian calendars overlaid for one year period.



b-e. Axonometric drawing close-ups.





**This page:**

a. Plan oblique,  
passive temperatures  
diagram

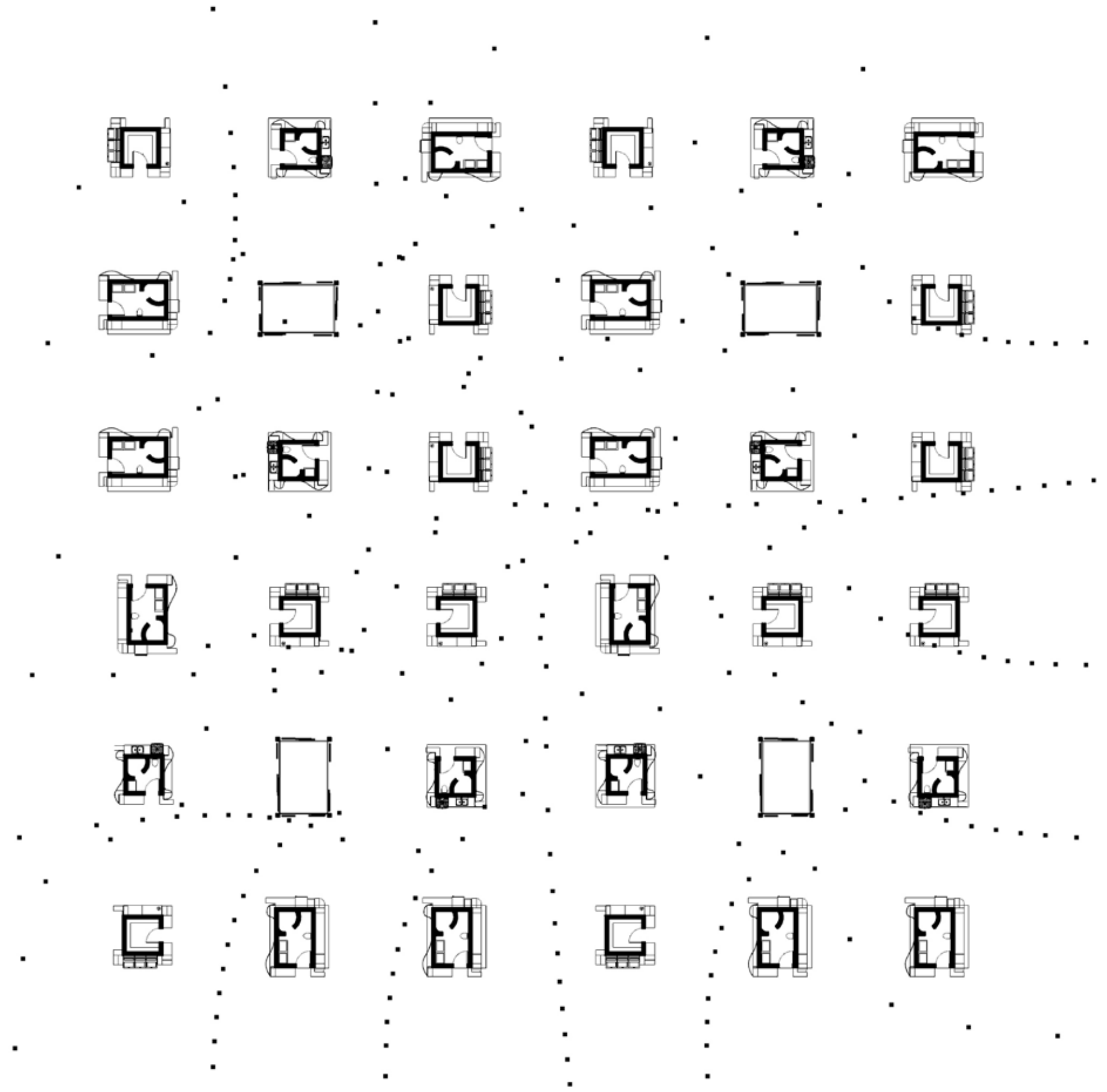
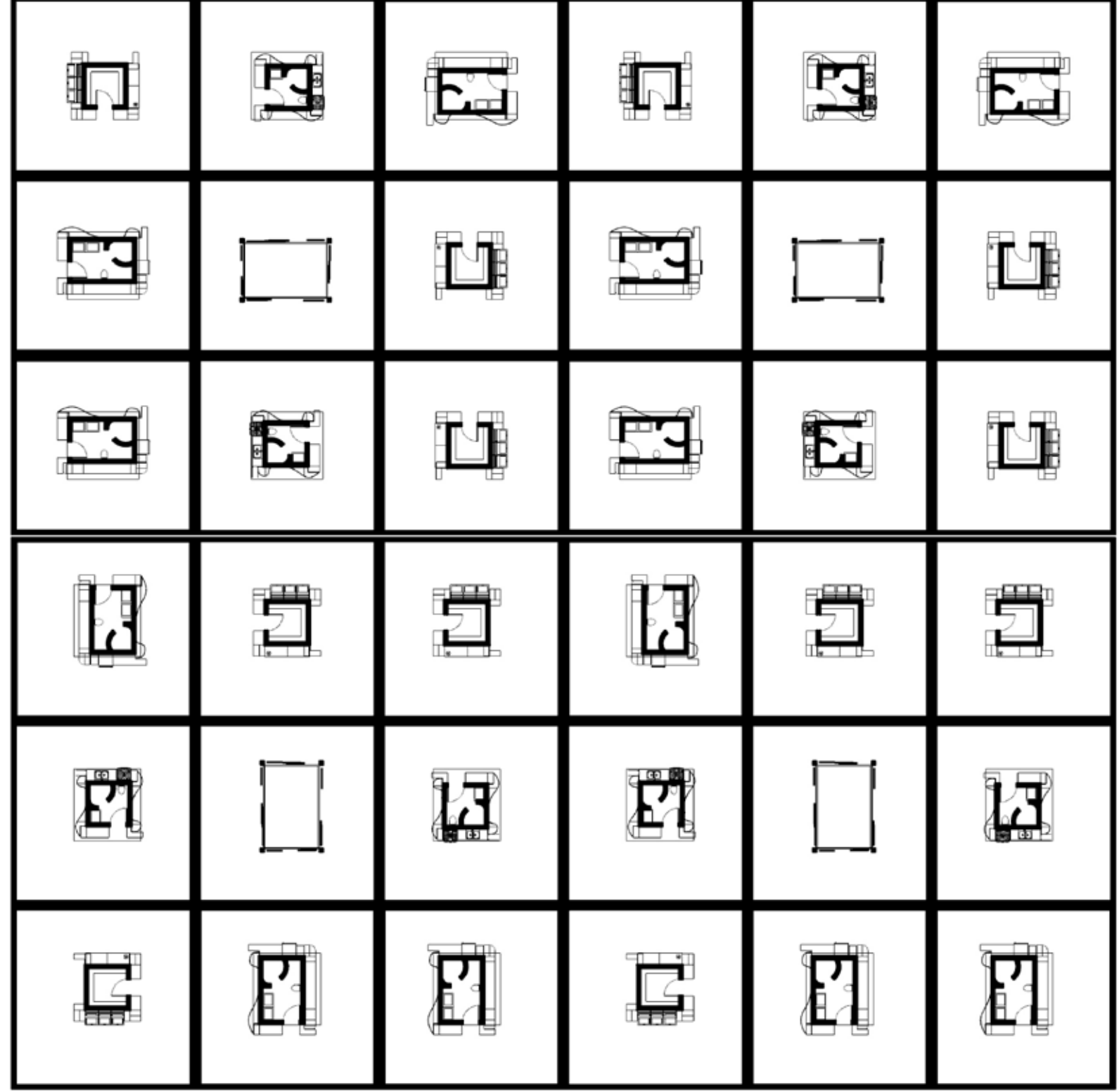


**Opposite page:**

b. Pantry  
intervention  
axonometric







## CORE-FLOOR, FORREST-GLADE

Living in the round. Living together. A housing project in the Bronx.

**Previous spread:**

a. Core diagram. Unit divisions, which create redundancies, are done away with.



**This page:**

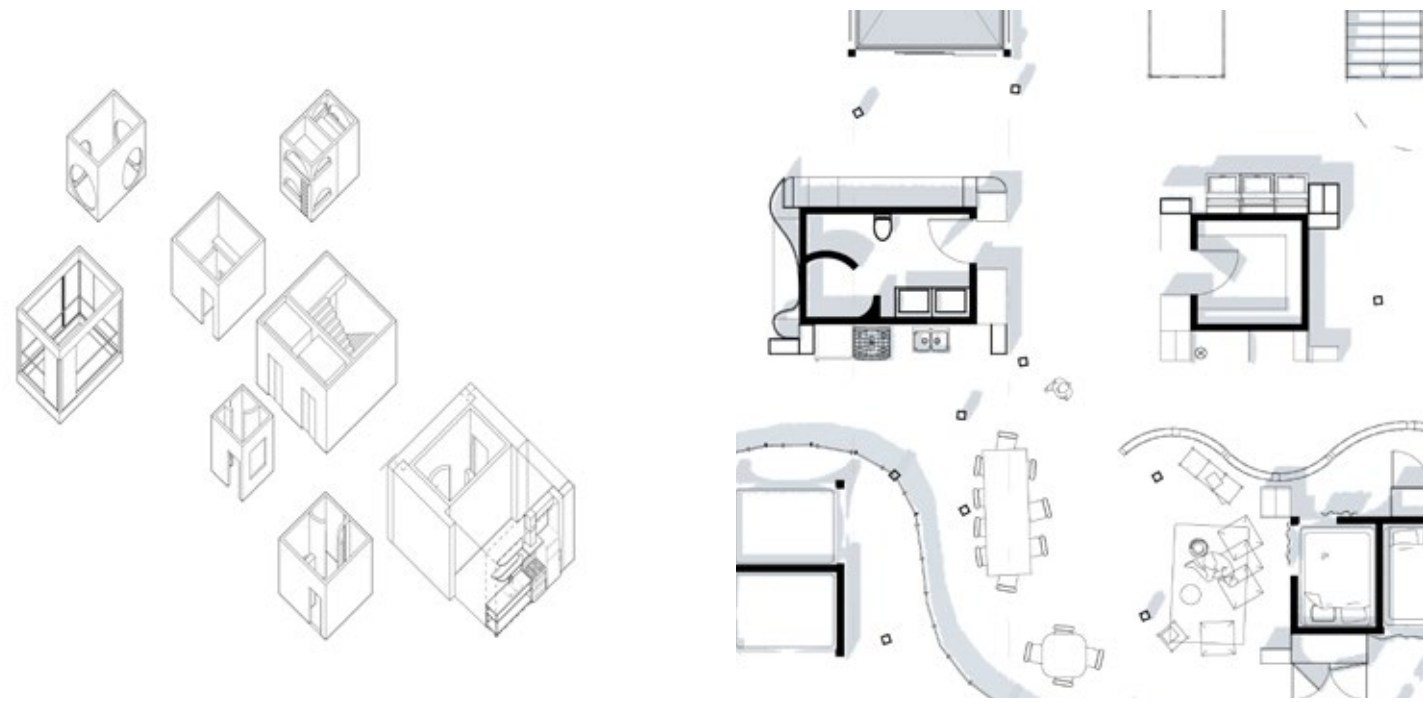
a. Axonometric render

**Opposite page:**

b. Typical plan

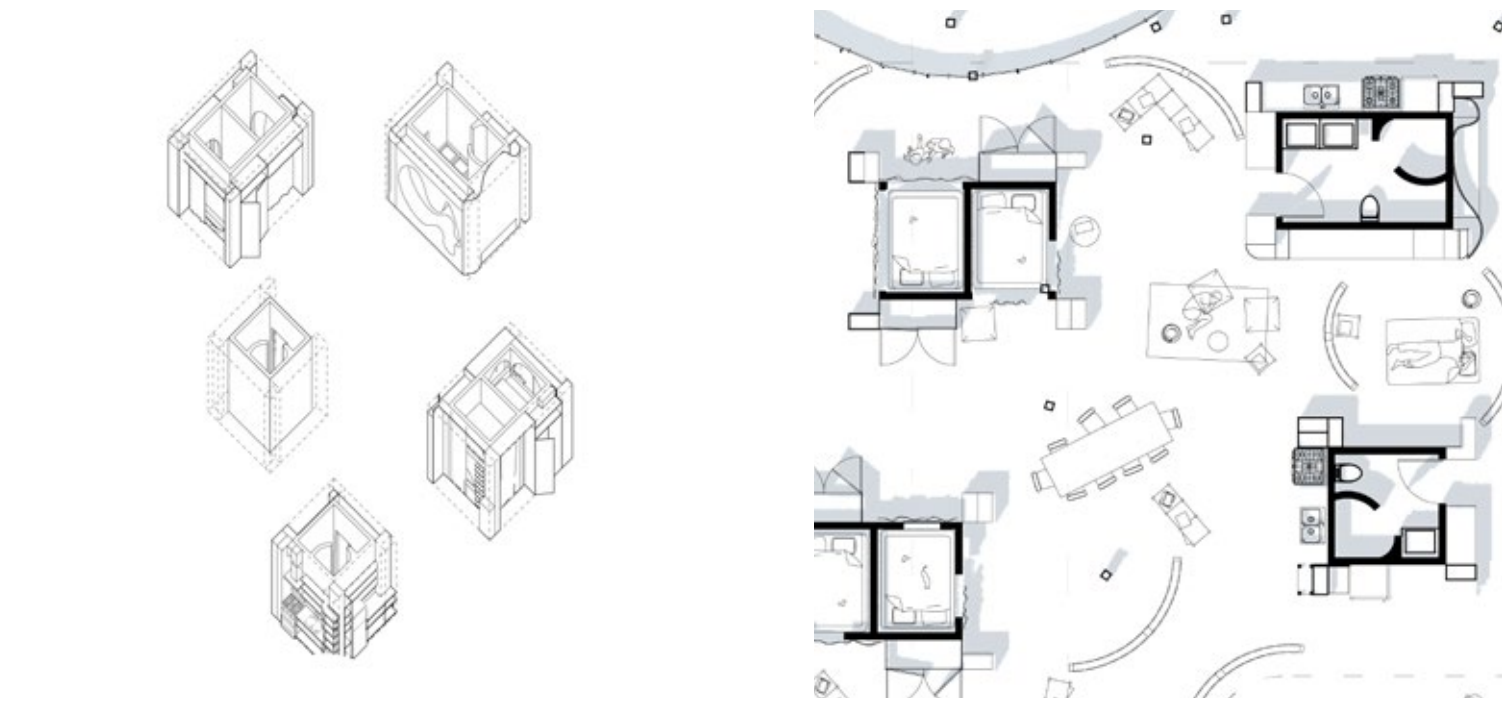
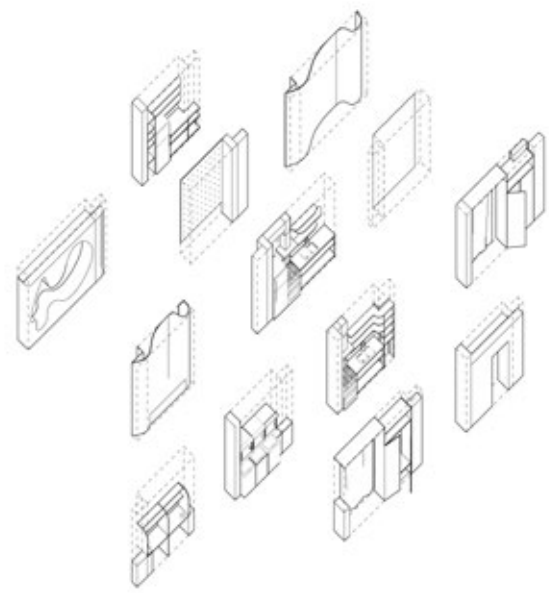






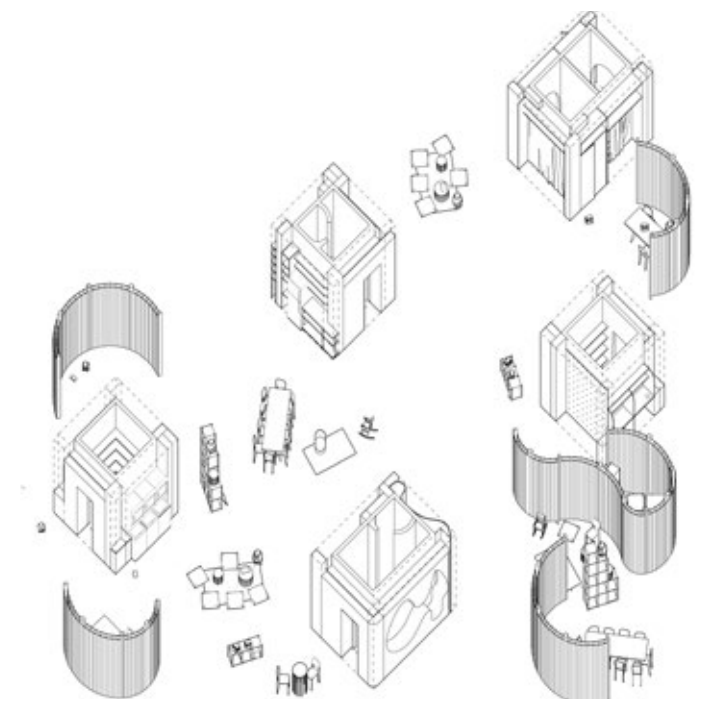
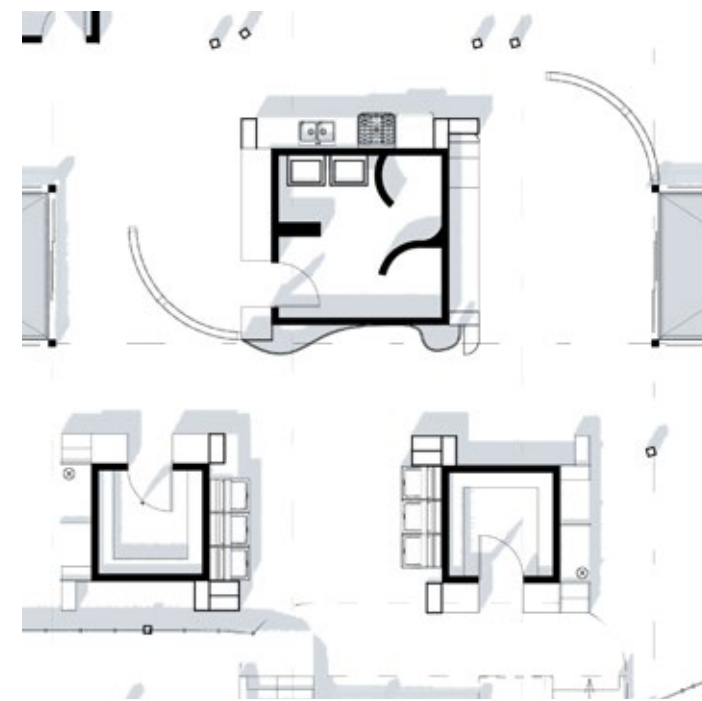
(Clockwise from top left):

- a. Cores
- b. Plan close-up
- c. Faces
- d. Plan close-up

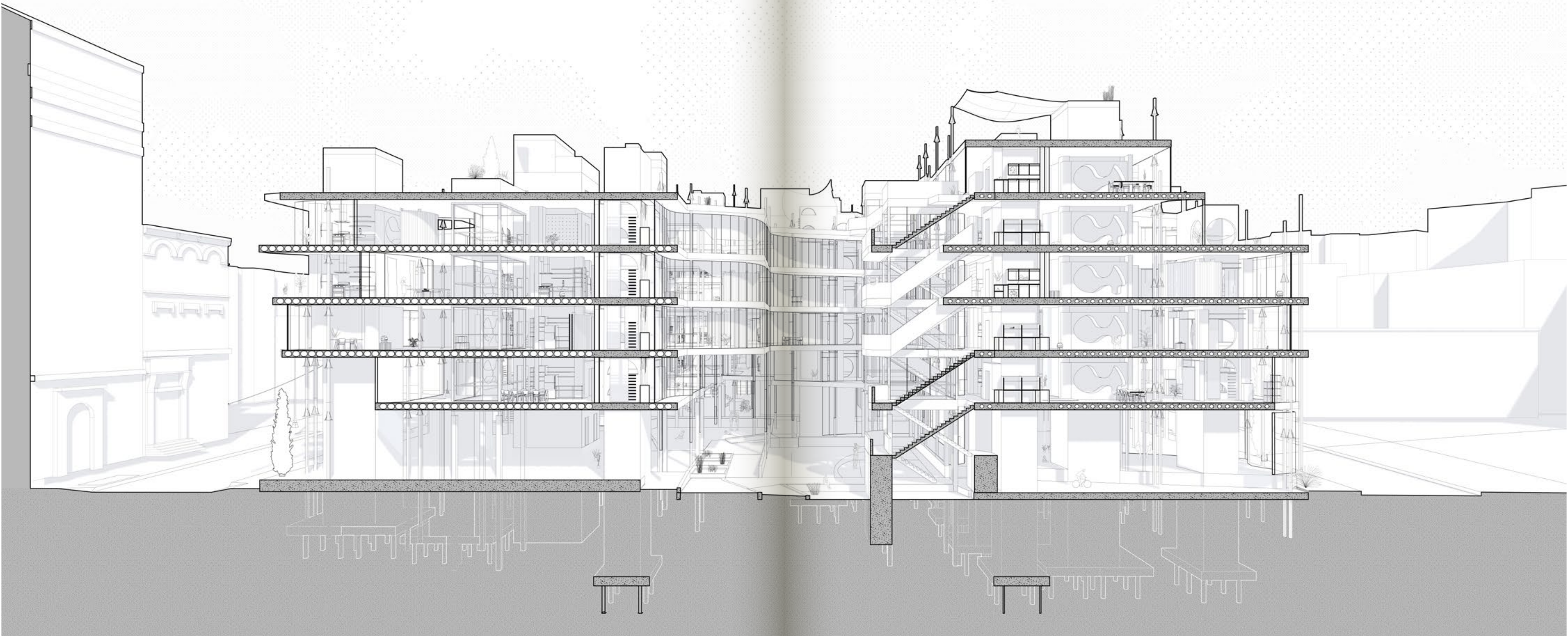


(Clockwise from top left):

- e. Facets
- f. Plan close-up
- g. Furniture
- h. Plan close-up











**Previous spread:**

a. Section perspective

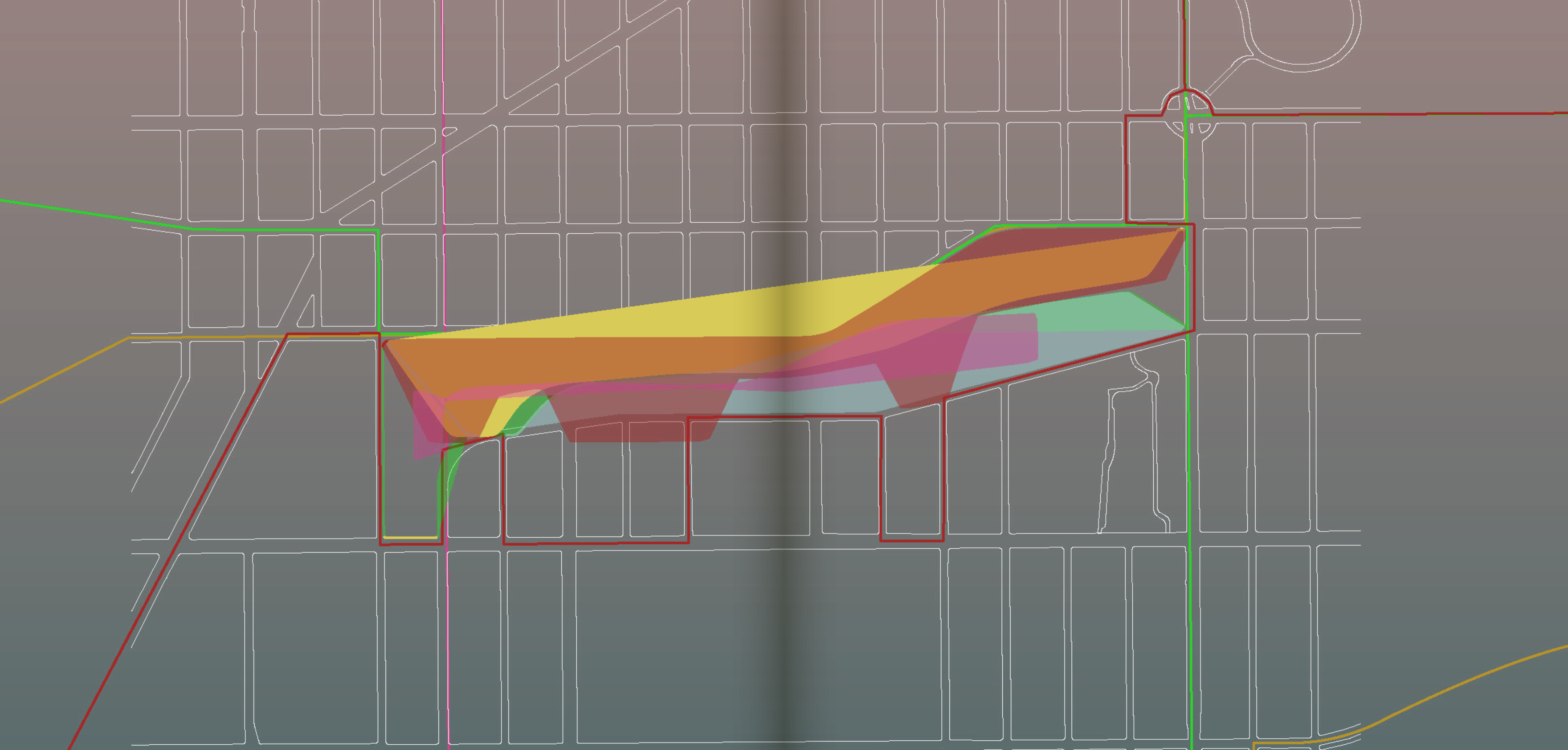
**This page:**

b. Ground floor plan

**Opposite page:**

c. Elevation render







# AUGMENTED AMPHITHEATER

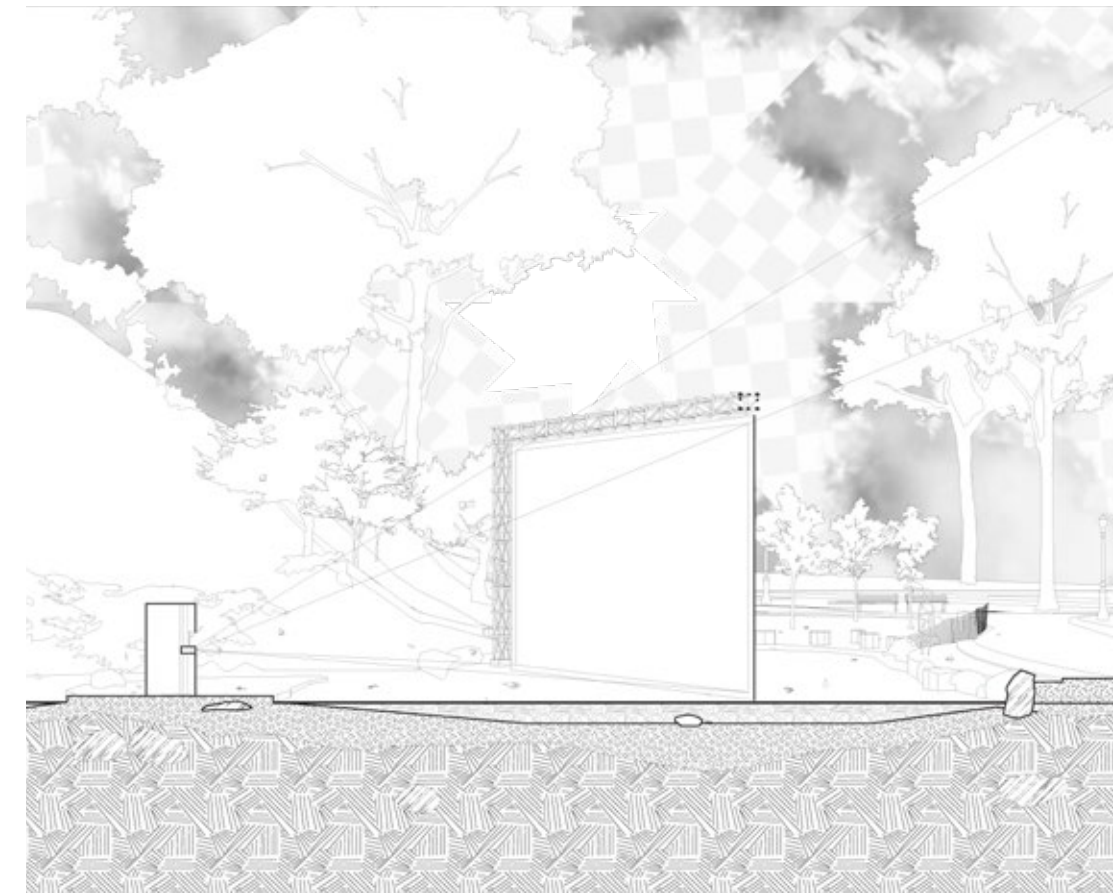
Morningside Pond, a palimpsest of toxicity, the site of Columbia University's halted gymnasium project and now an algae bloom, is reframed through an augmented reality experience. The experience, by mirroring the program of an amphitheater, fulfills an unfulfilled idea the Harlem community generated in the wake of the protested gym project.

**Previous spread:**

a. Area of morningside park as deformed by various district lines that crisscross and border it.

**This page:**

a. Intervention site plan diagram



b. Detail section

c-h. Process drawing (counter-clockwise from top right):

c. Still from *Avenue B* (2019) Video by Jacoby Satterwhite.

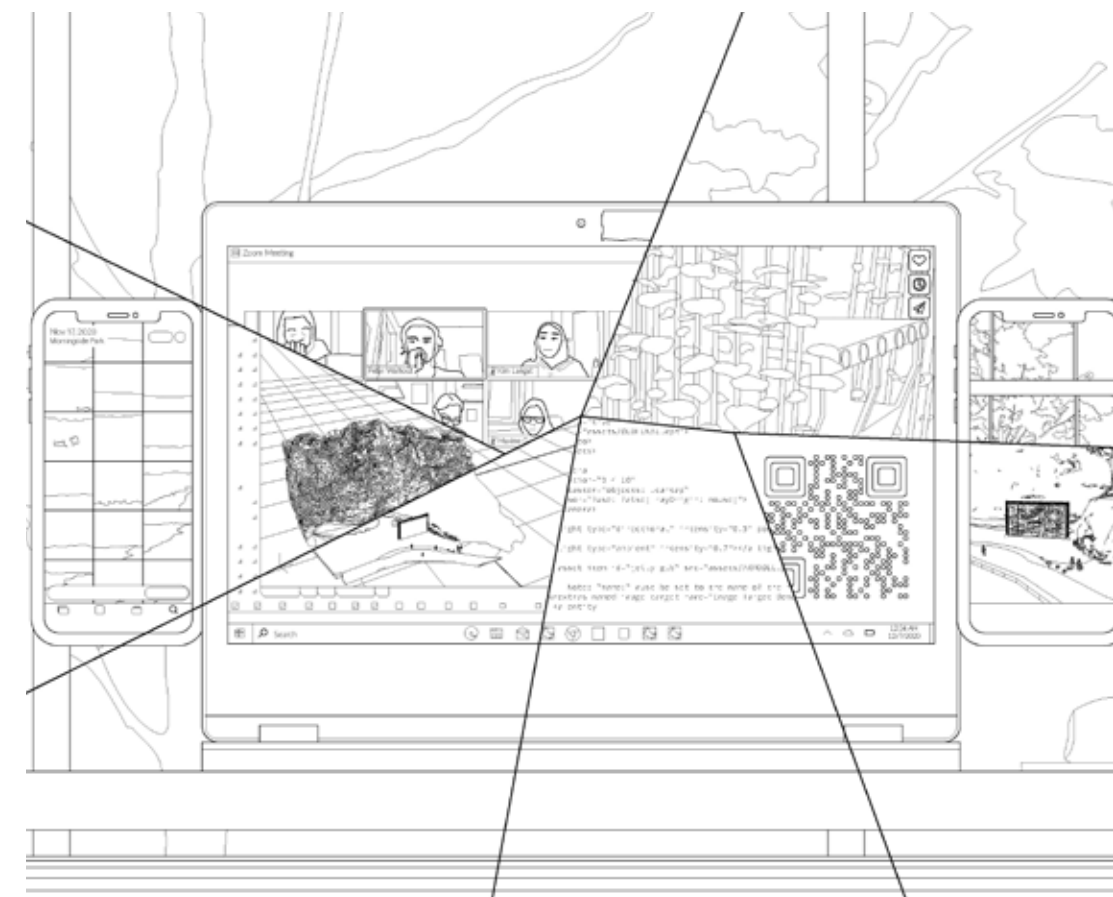
d. Zoom grid

e. Photogrammetry of morningside pond

f. 3D model of amphitheater intervention

g. JSON code

h. Augmented reality experience. Viewing of *Avenue B* in morningside pond happened digitally and collectively on December 4, 2020 approx. 3pm.



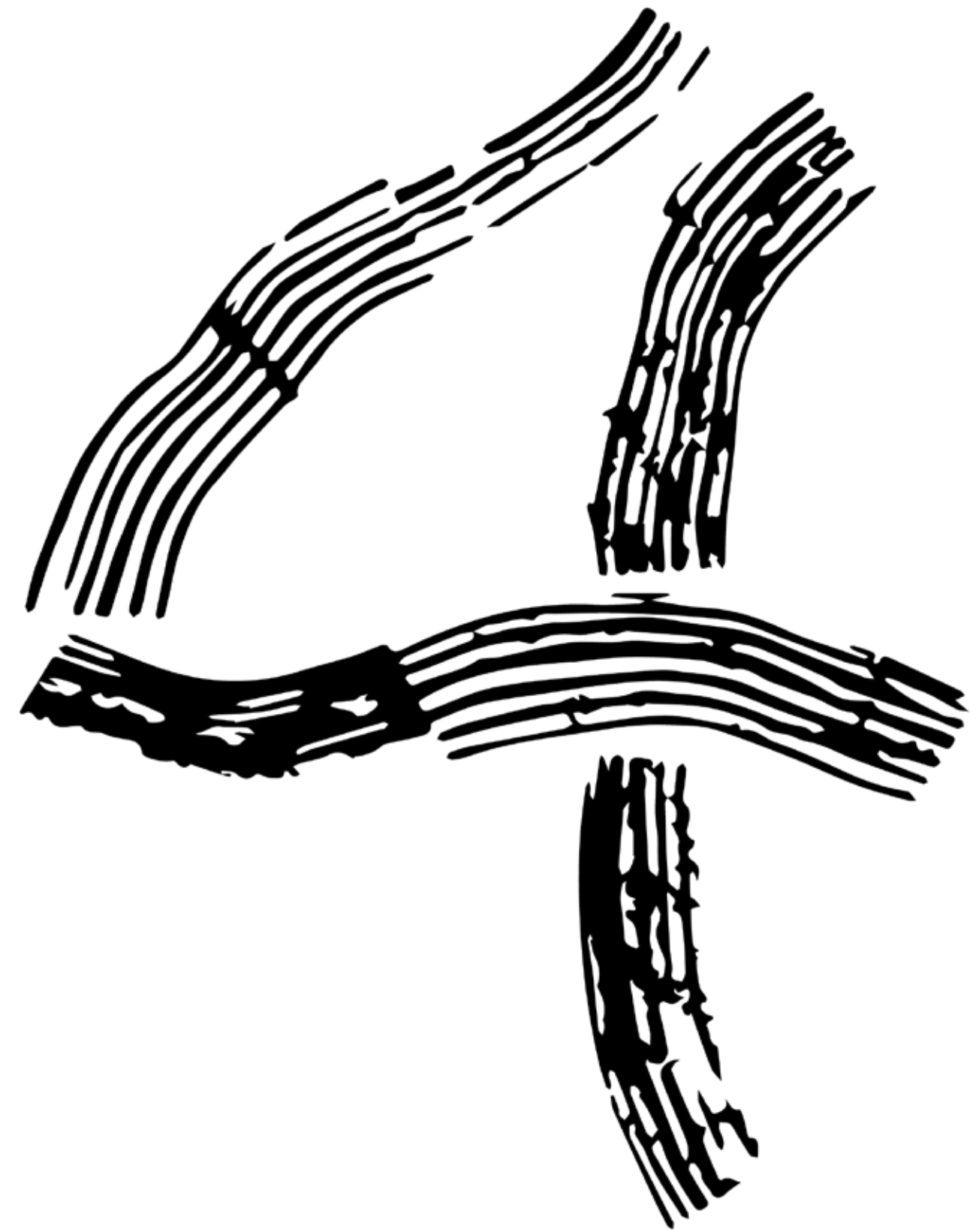


## Note

The word *gallimaufry* is defined as 'a hodgepodge, confused medley, or jumble'.

Its origin, largely archaic and uncertain, is believed to be a medley of the old French *galer* 'have fun' and the Picard *mafrer* 'eat copious quantities'.

Endings are times to be indulgent.

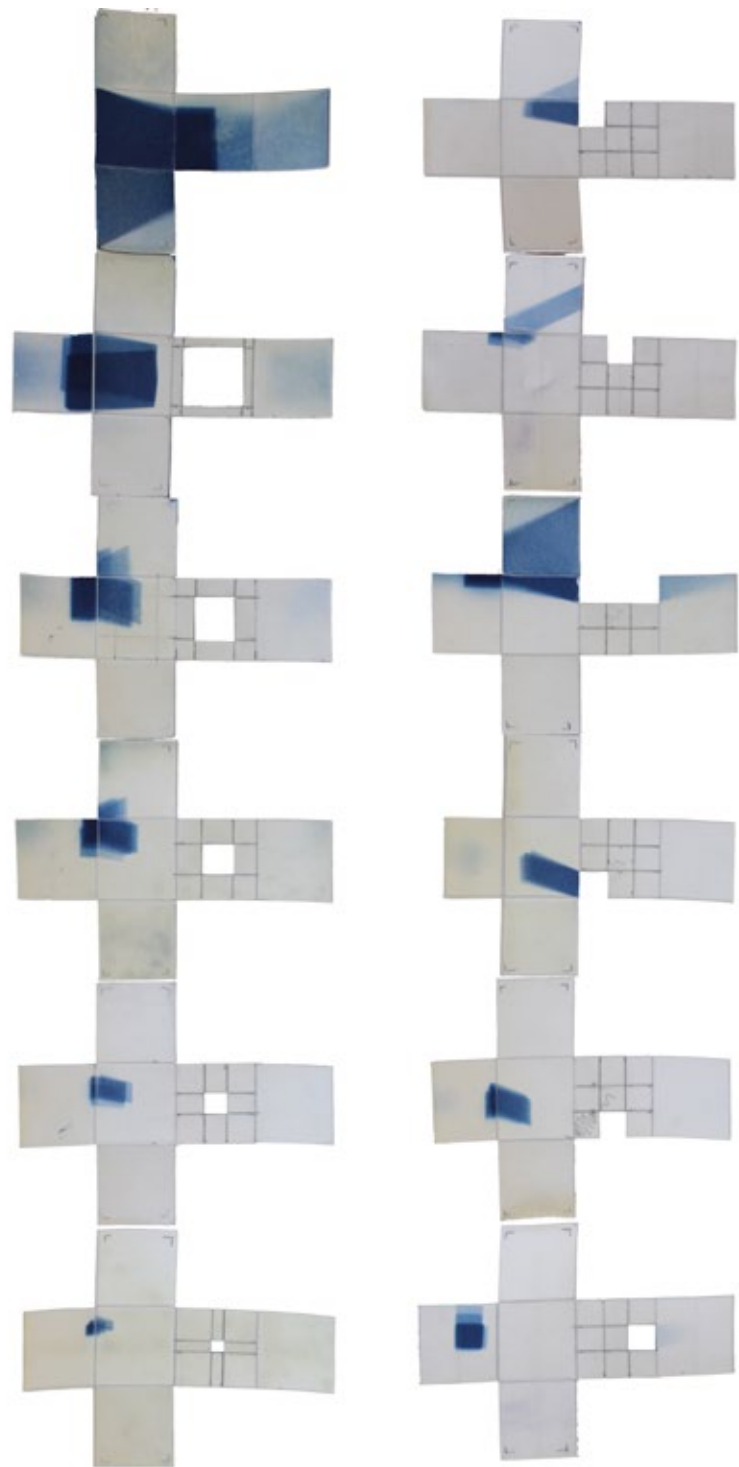


GALLIMAUFRY



## ANALOG DAYLIGHTING STUDY

A swath of a building was made into a scale model that included proposed spatial adaptations. The surfaces of the model were constructed with cyanotype-treated paper. Exposing the model in the location of the existing building, the lighting conditions with the proposed adaptations could be understood.

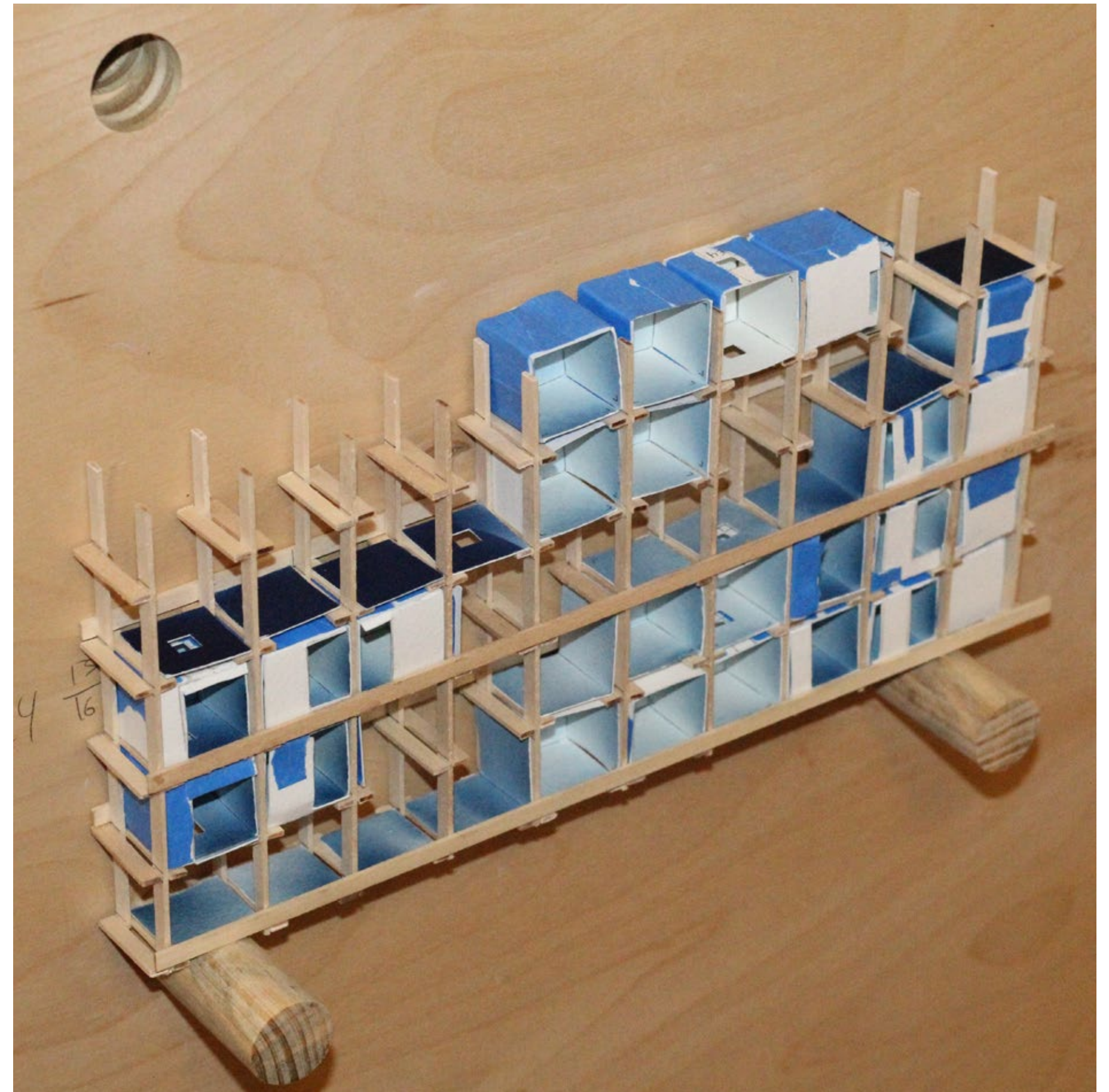


### This page:

a. Unfolded sun studies with varying sizes and locations of opening. Darker areas indicate greater sun exposure.

### Opposite page:

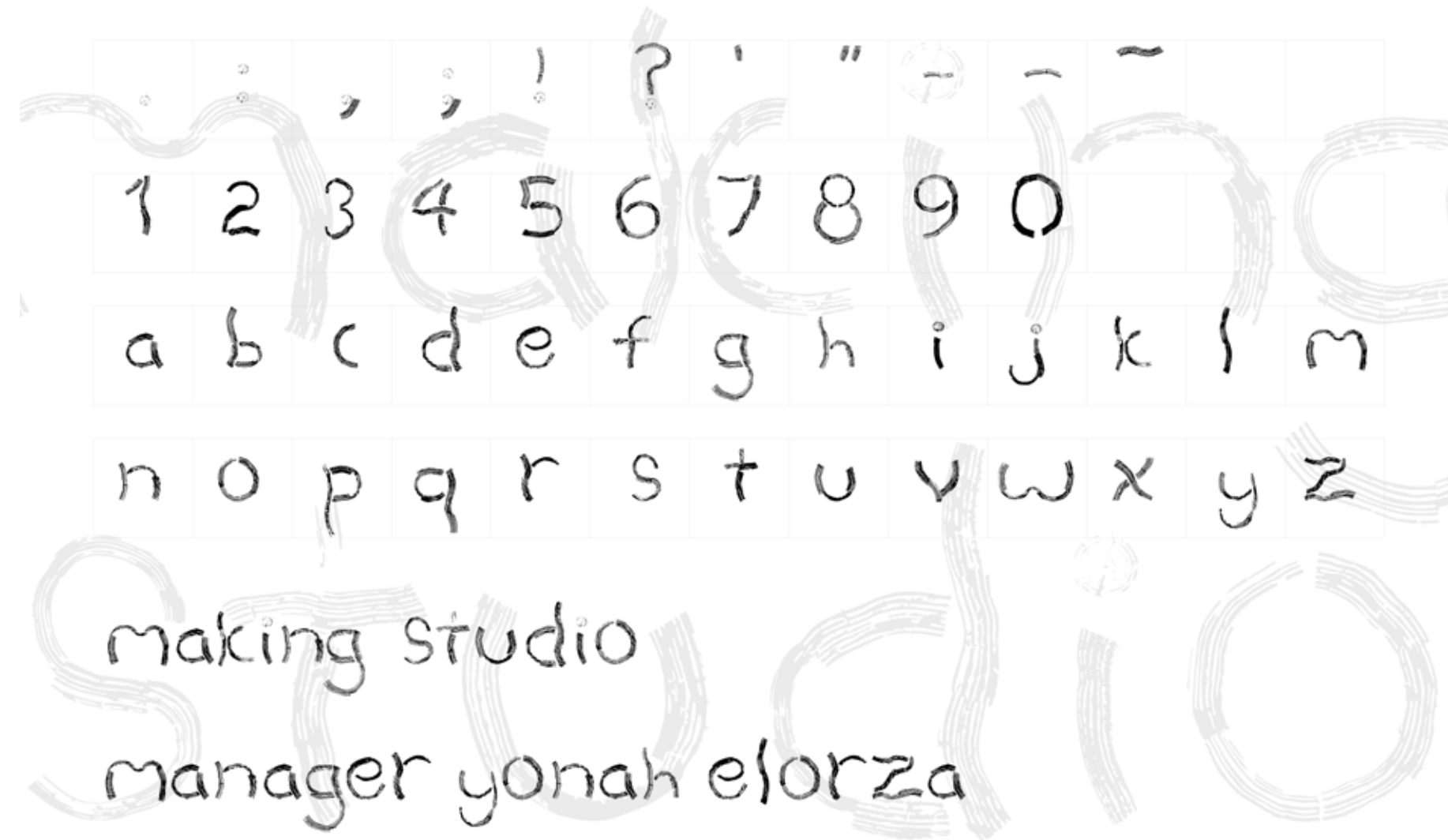
b. Swath model. Sun exposure performed at coordinates:  
 $40^{\circ}43'34''N$   
 $73^{\circ}58'46''W$





## GROWTH TYPEFACE

*Repeated from the book's colophon:* While tracing the rings of a longleaf pine tree preserved in a salvaged beam, seven year segments of growth were sliced out: reified memories of that tree. As we do with our own memories, this matter was flipped and fused, joined and juxtaposed; bringing forth a subjective retelling. These slices follow the irregular growth felt by something living, later rearranged as something legible. This typeface is my telling of a slow and uneven, inexorable and yet-complete growth.



### This page:

b. Longleaf pine beam, planed and scanned.

c. Rings of growth in black & white.



### Opposite page:

a. Growth typeface

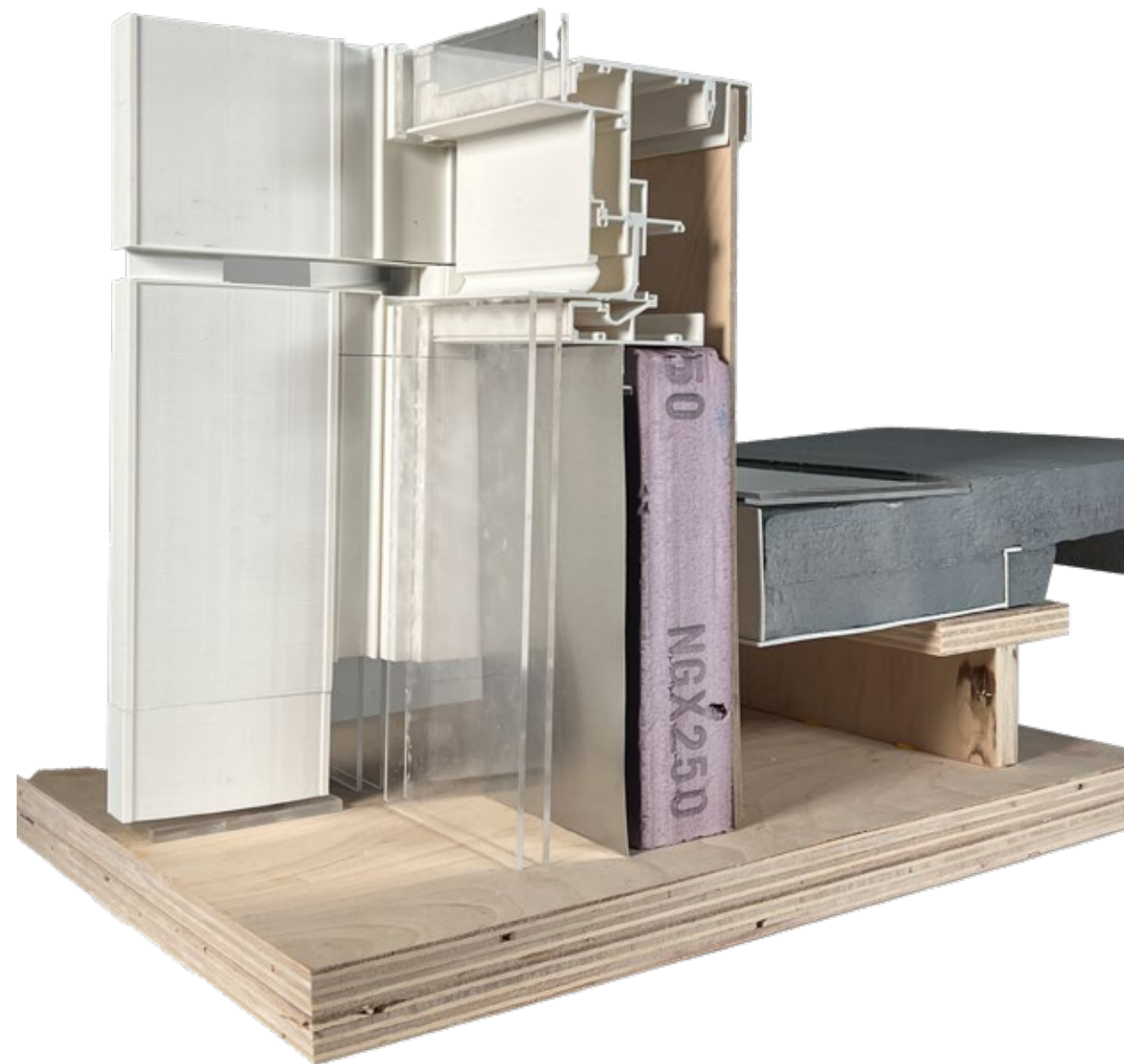


# CURTAINWALL ASSEMBLY

A chunk of a unitized curtainwall, from a commercial type steel frame building.

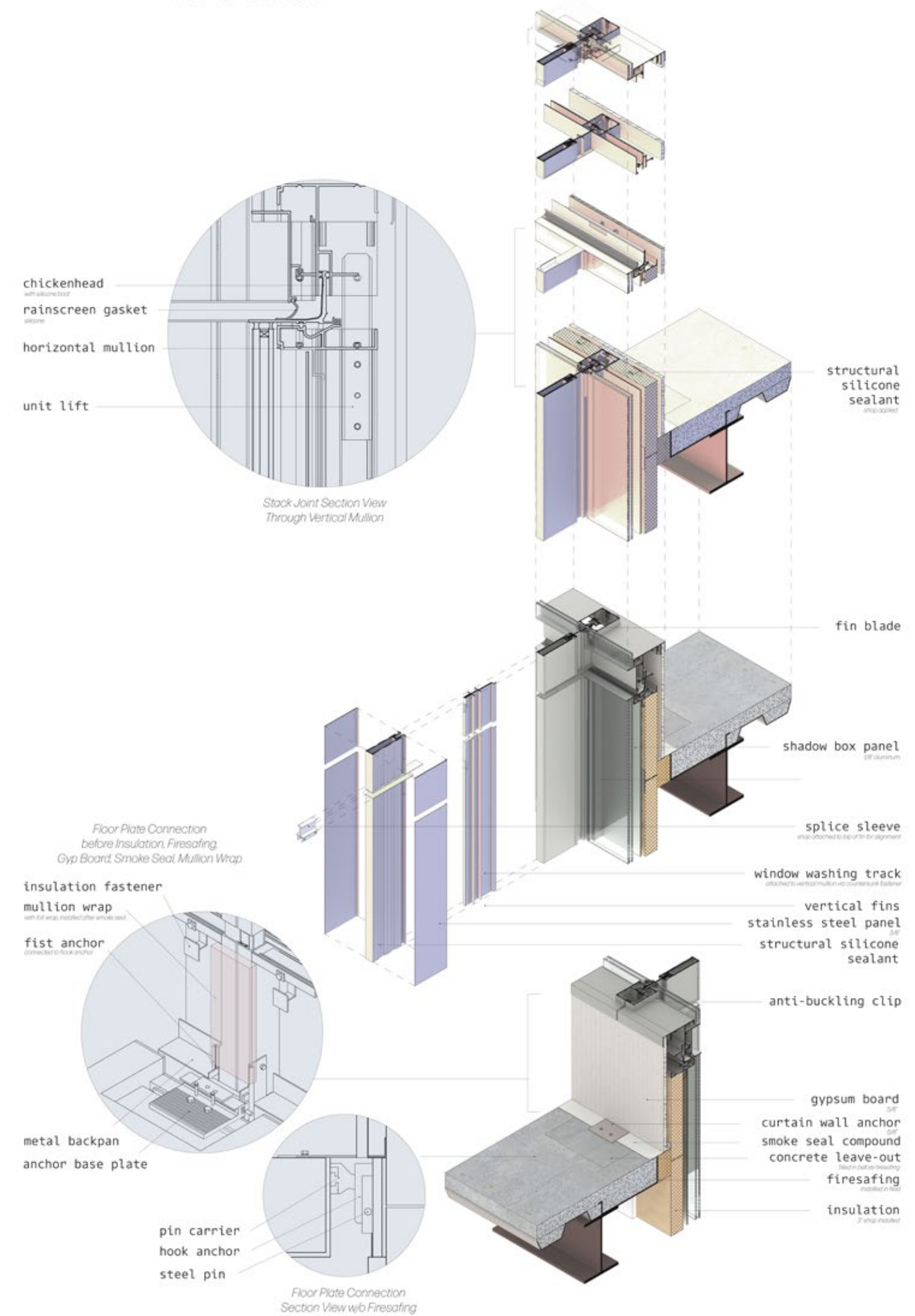
This page:

a. Chunk model



Opposite page:

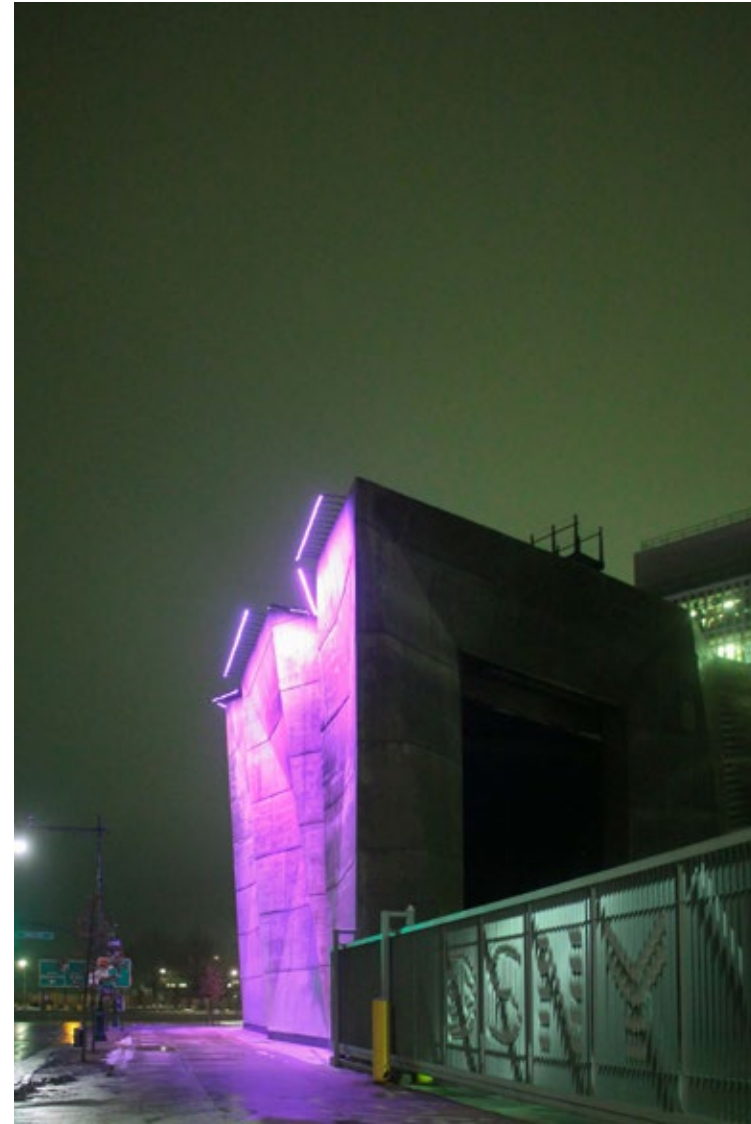
b. Exploded axonometric and call-out drawings





# ARCHITECTURAL PHOTOGRAPHY

a-b. Photos of the  
Spring street salt  
shed





## ACKNOWLEDGEMENTS

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