

MAXIM FRAMPTON

Architecture Portfolio 2022

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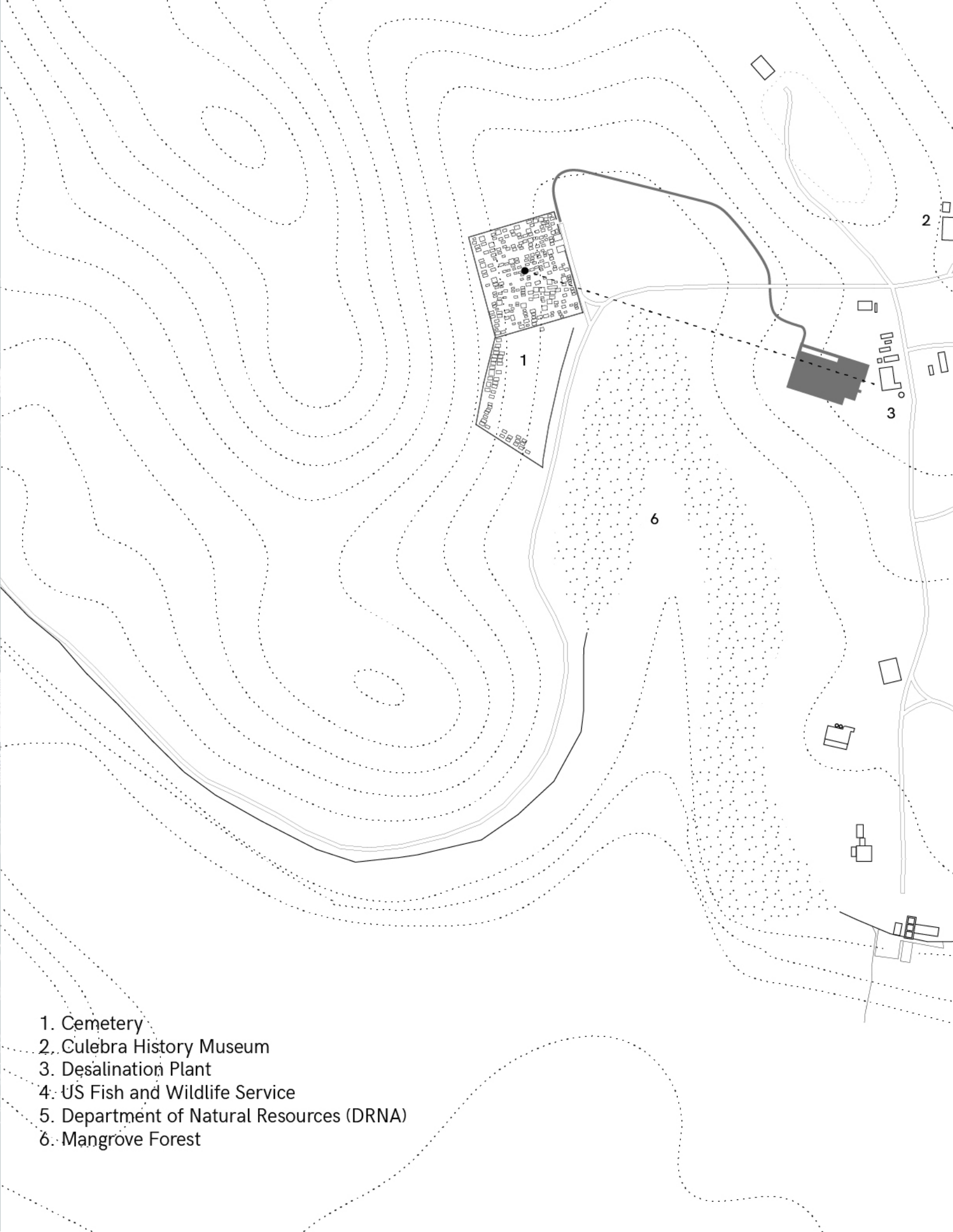
Soil reclamation plant

Culebra, Puerto Rico

Advanced IV design studio, GSAPP
Team: Willy Pan Cao, Jiageng Guo
2021

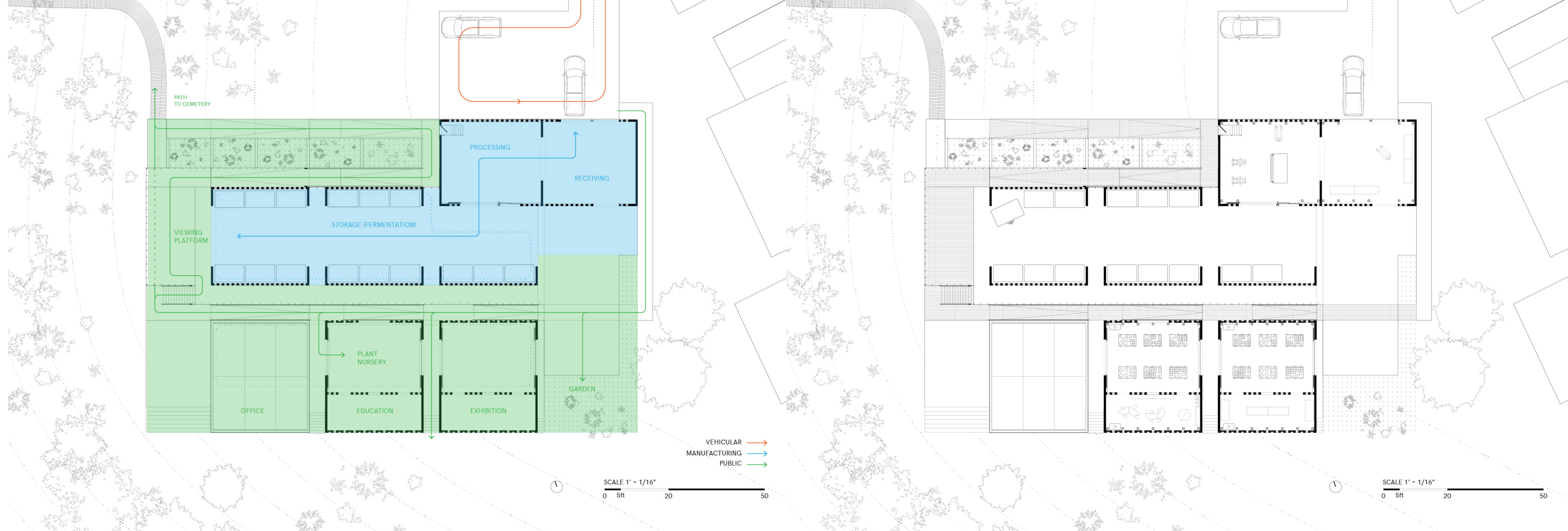
While water is a defining feature of Culebra's precarious condition, it is the land that presents a way of linking past and future narratives for the ecological and civic life of the Puerto Rican island. This project for a food waste upcycling plant and adjoining plant nursery is both a part of the revitalization of the island's soil and a reclamation of historically violated land. Traces of unexploded ordnance and soil contamination dot the island where, for decades, US Navy artillery and bombing ranges were located. This target practice was orchestrated from a central command and military barracks on the site of the original Spanish colonial settlement of San Il Defonso, the residents of which were displaced to the current downtown region. Today the promontory is home to the local offices of US Fish and Wildlife Service, the Department of Natural Resources (DRNA), and an assortment of other recent and archaic ruins.

The proposed facility is sited facing the old town cemetery and within walking distance of the Culebra History Museum. A repeating series of semi-enclosed courtyards extend in parallel - one descending, the other projecting away from the hillside toward a raised viewing platform. The activity of the first series is devoted to the collection and processing the total daily average amount of organic waste for the entire island, currently being committed to an overcapacity landfill. The second series utilizes the outputs of the first process — compost and microbially enhanced liquid fertilizer — in the raising of plants for the benefit of Culebra's erosion resistance and, soil regeneration. The walls of the facility are a perforated seaweed eco-brick the nursery roofs, which contribute to rainwater collection, are framed in bamboo laminate and clad in strengthened polycarbonate sheet.

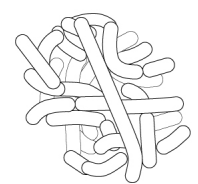


- 1. Cemetery
- 2. Culebra History Museum
- 3. Desalination Plant
- 4. US Fish and Wildlife Service
- 5. Department of Natural Resources (DRNA)
- 6. Mangrove Forest



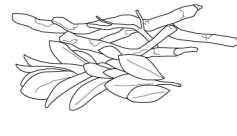


BOKASHI PROCESS



LACTOBACILLI

+

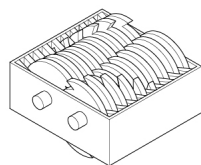


GREEN WASTE

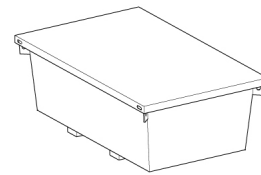
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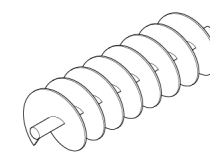
FOOD WASTE



SHREDDING



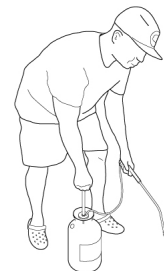
ANAEROBIC FERMENT



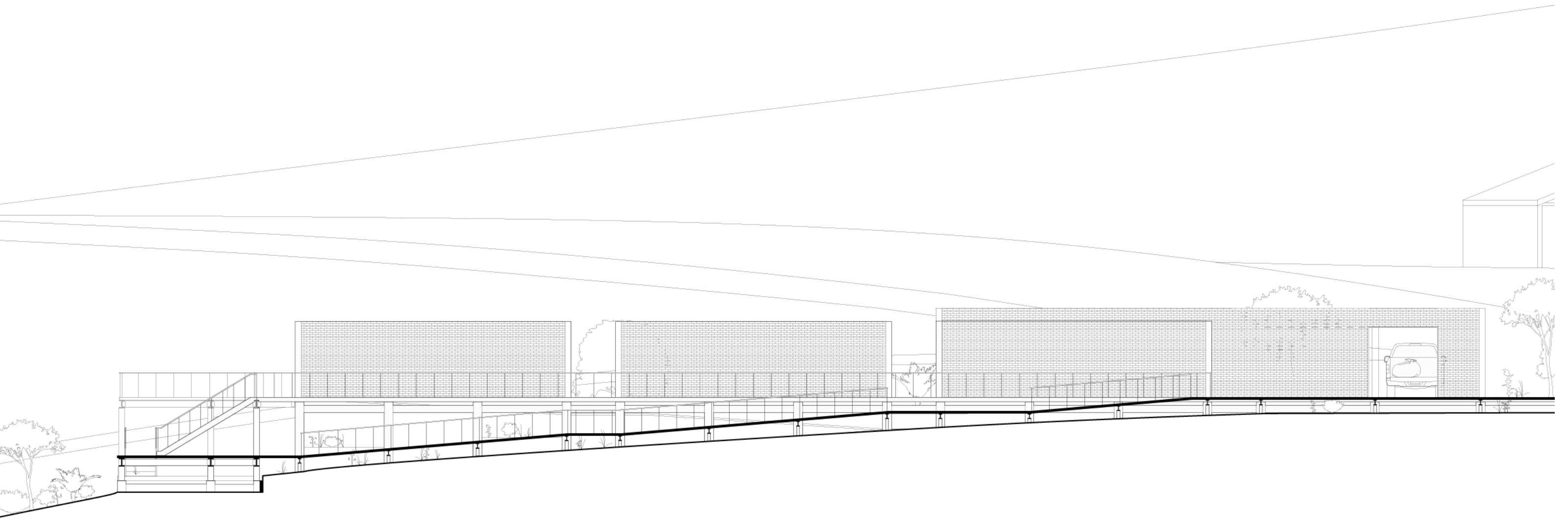
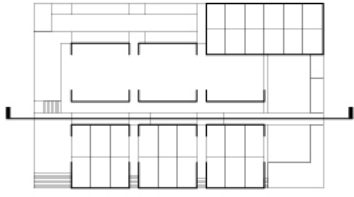
DEWATERING

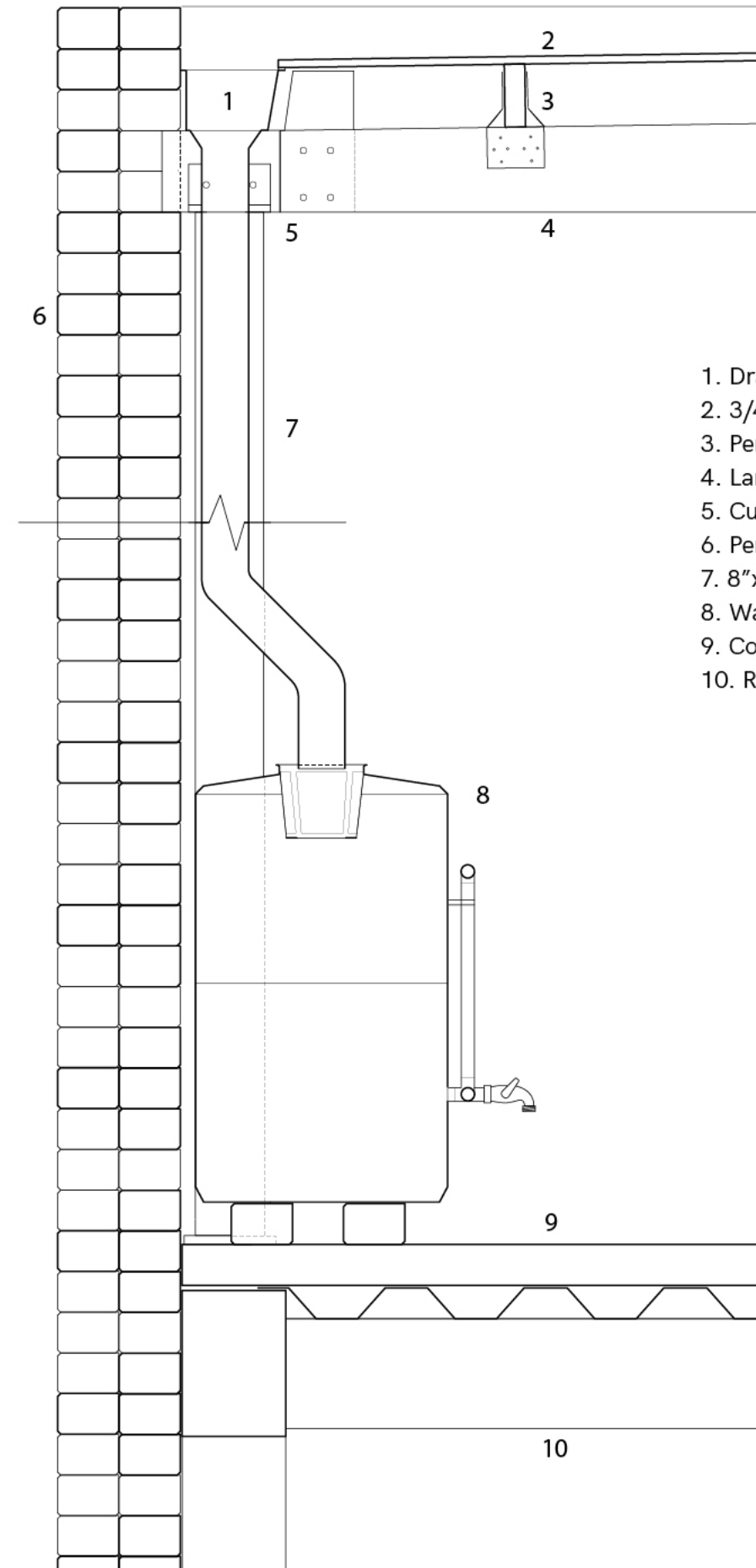
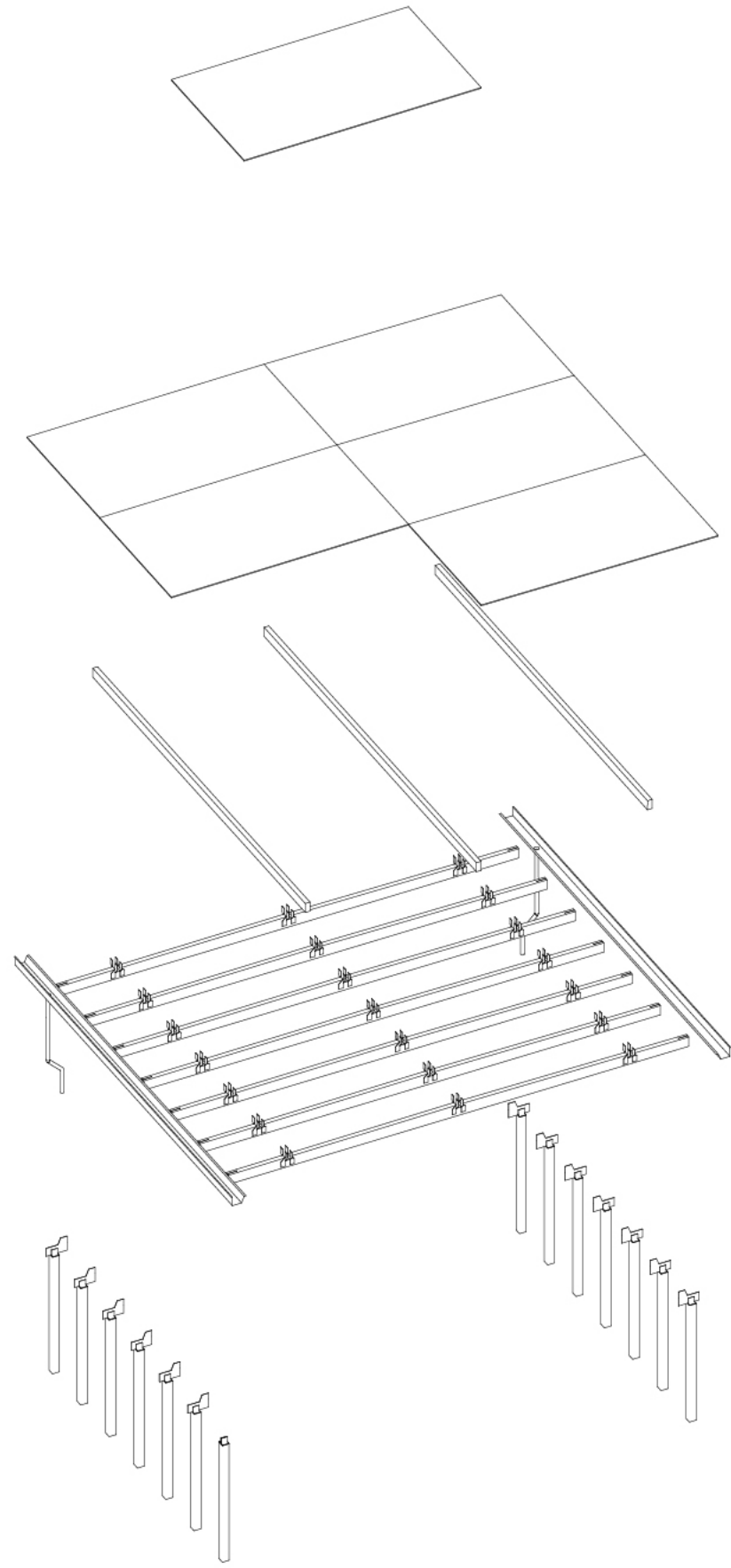


COMPOST



LIQUID FERTILIZER





1. Drain gutter
2. 3/4" strengthened polycarbonate
3. Perlin hurricane bracket
4. Laminated bamboo joist
5. Custom steel plate assembly
6. Perforated biomatter brick
7. 8"x 8" HSS
8. Water tank
9. Concrete slab on metal deck
10. RC foundation



Melrose housing

Bronx, New York

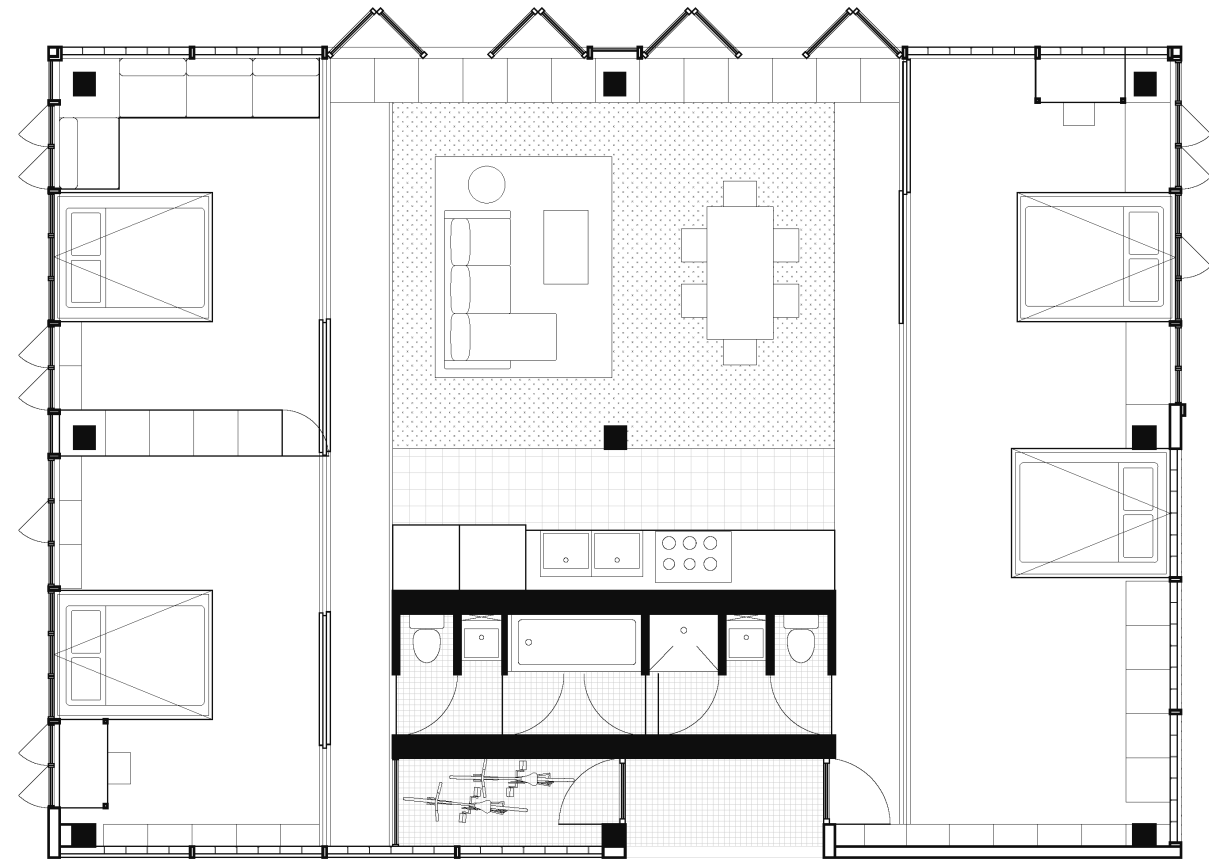
Core III design studio, GSAPP

Team: Jean Kim

2020

Waste—as an index of inequality, as part of a cycle embedded in social reproduction, and simply as a type of labor—forms the basis for the redesign of mid-rise housing typology, in this case located in the Melrose neighborhood of the Bronx. The predominantly individual and atomized experience of recycling and removing trash from the domestic sphere is expanded in the following scheme into a collective activity within three different areas of vertical circulation. Each area is devoted to a different type of waste: recycling, appliance and furniture, and organic matter. These items are “processed” within additional programs at the ground floor, basement, and roof, including an artists’ residency and exhibition space, a lending library and donation center, a roof garden, and a community kitchen. This network of reuse becomes a way of connecting to other adjacent housing proposals and existing complexes such as the tower-block East Side House Settlement retirement home.

The living spaces and facade of the building are designed to work in concert with the system of circulation-turned-reuse. If the latter constitutes an attempt to engage residents in the activity of repurposing waste, the flexibility of the partition system in the individual apartments similarly provides agency by adapting to different living arrangements. Sliding doors and an open metal shelving grid lining much of the building allow for different open or closed conditions within the domestic spaces. A compressed “utility core” provides space for a communal living/dining room that can be converted to a balcony. Work, education, and play are relocated to spaces along the central corridor, the width of which is increased to twenty feet, implying a more civic scale and unifying the adjacent shared programs.





DSNY GARAGE

STUDIO SITE

DSNY GARAGE

GARBAGE DISPOSAL

HEALTH AND MEDICAL WASTE

ACTION ENVIRONMENTAL SERVICES

DSNY GARAGE

HARLEM WASTE

CITY WASTE SERVICES

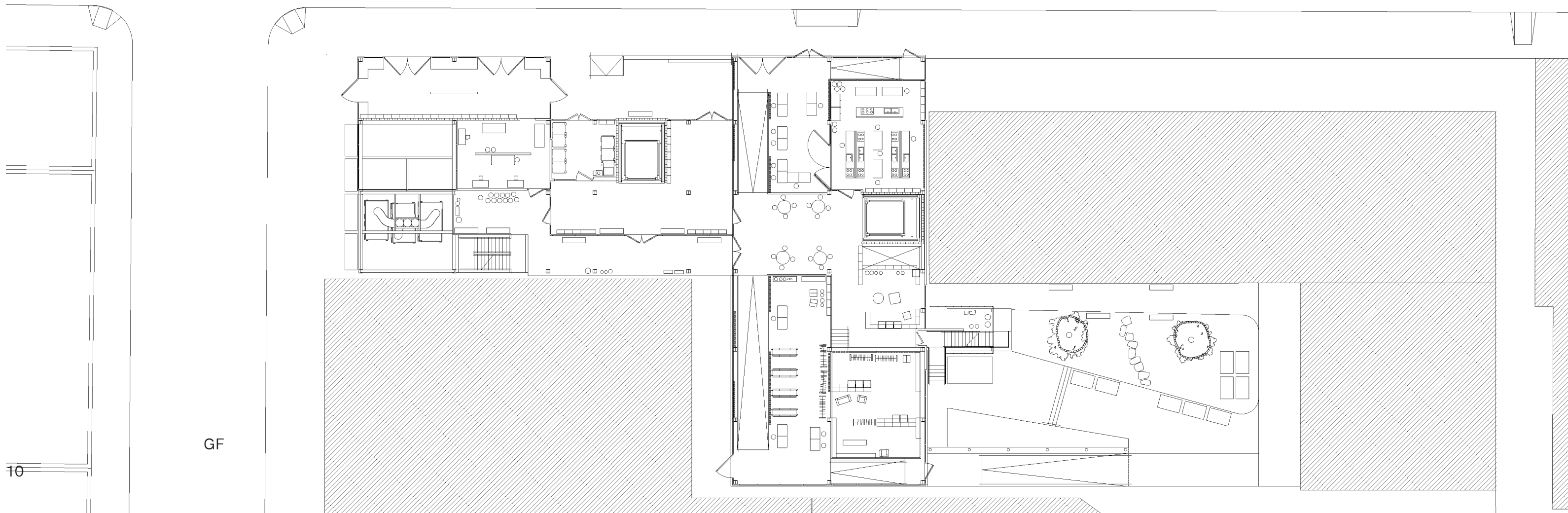
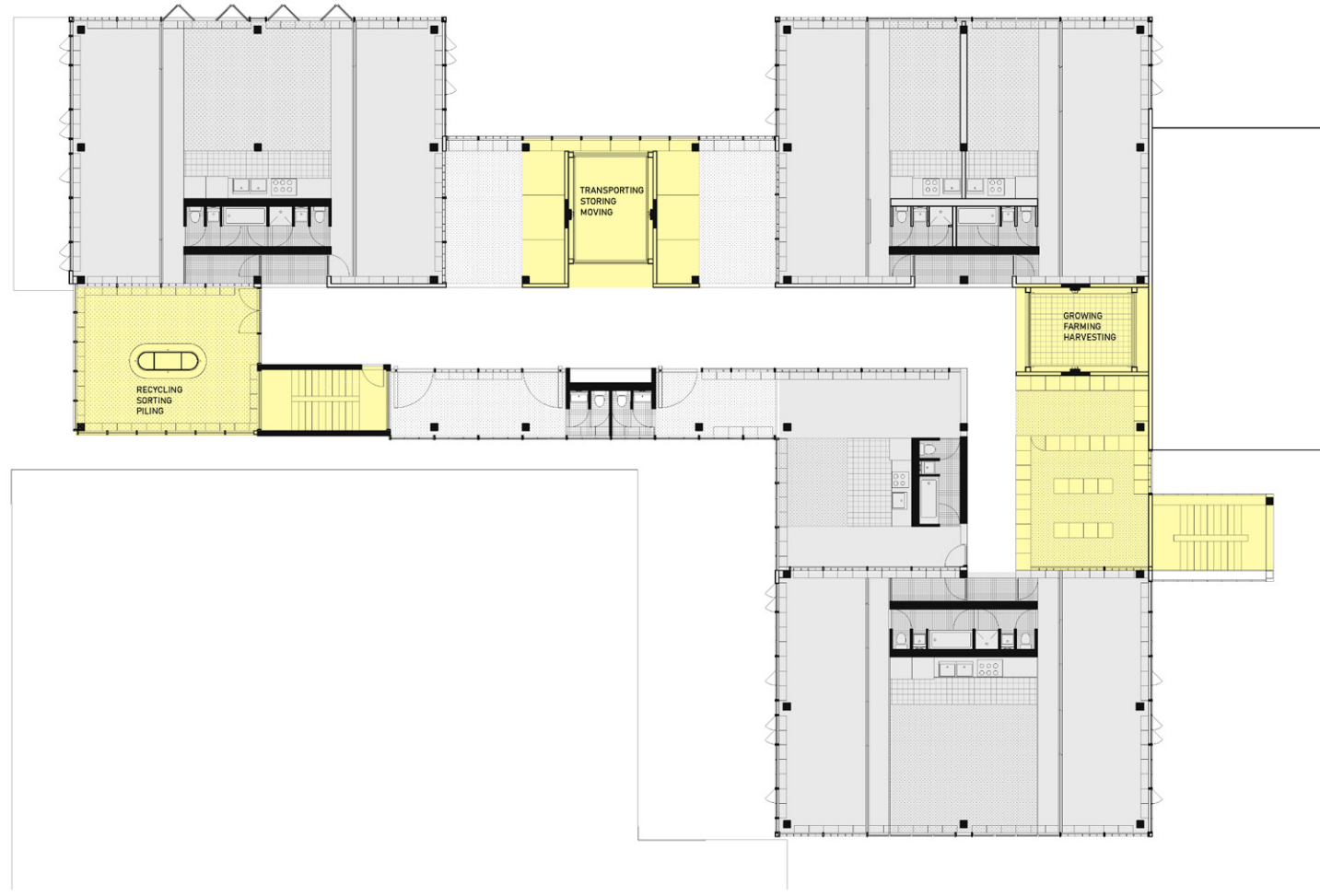
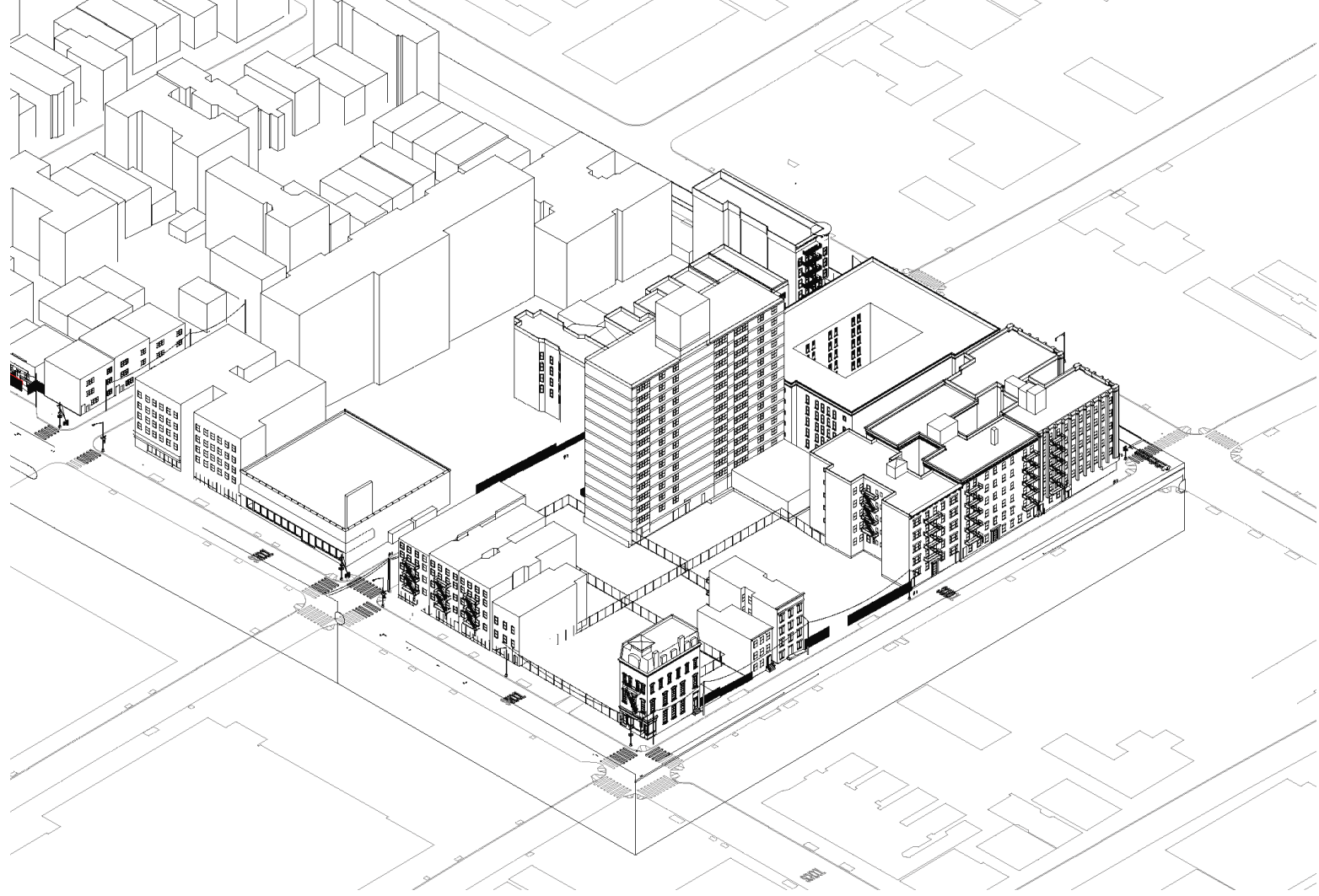
WASTE MANAGEMENT

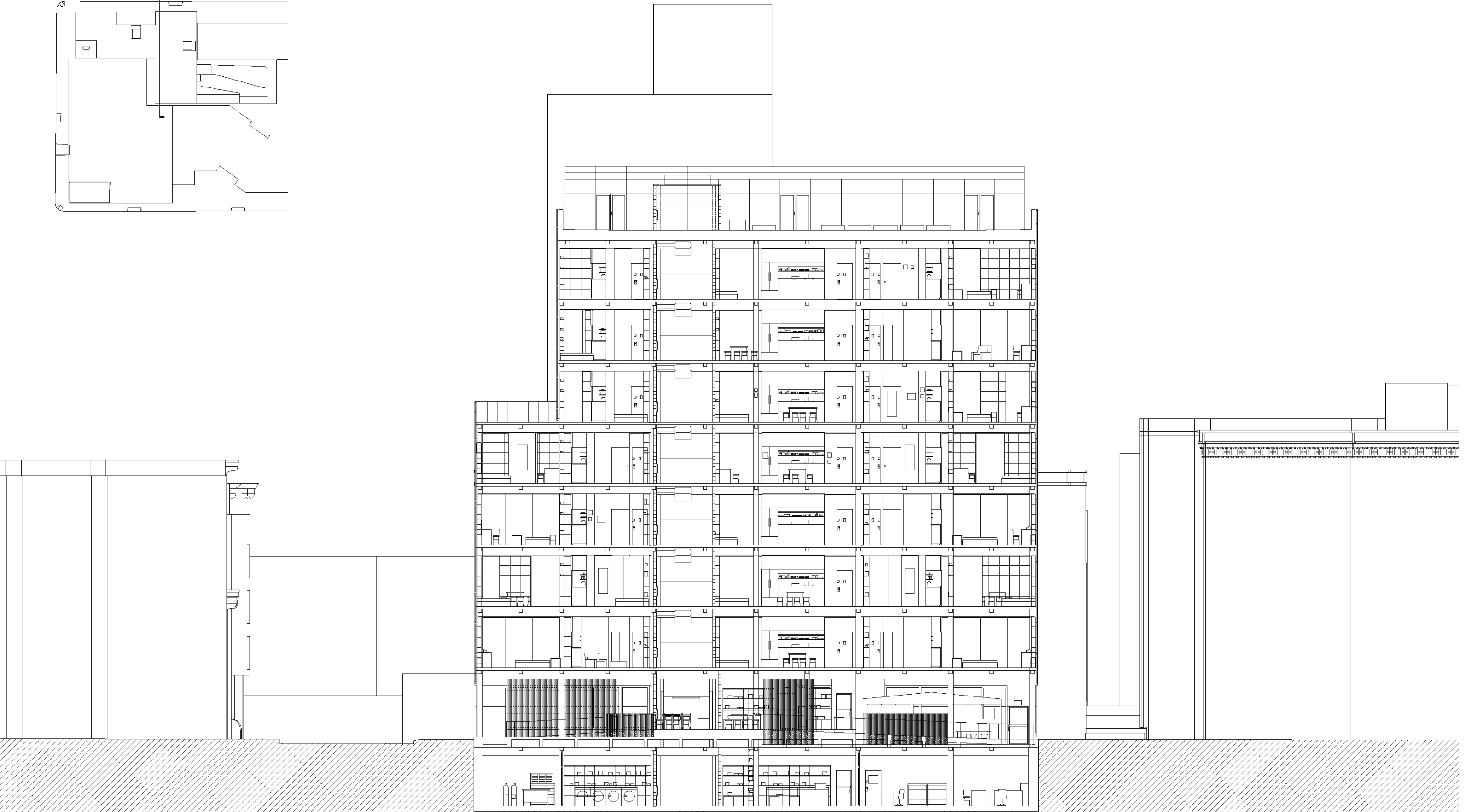
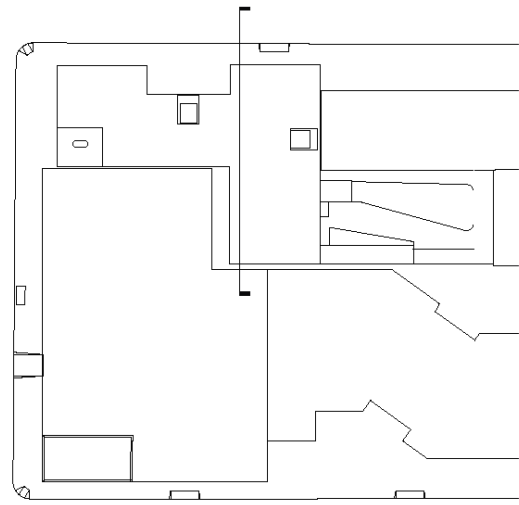
HEALTHCARE WASTE SOLUTIONS

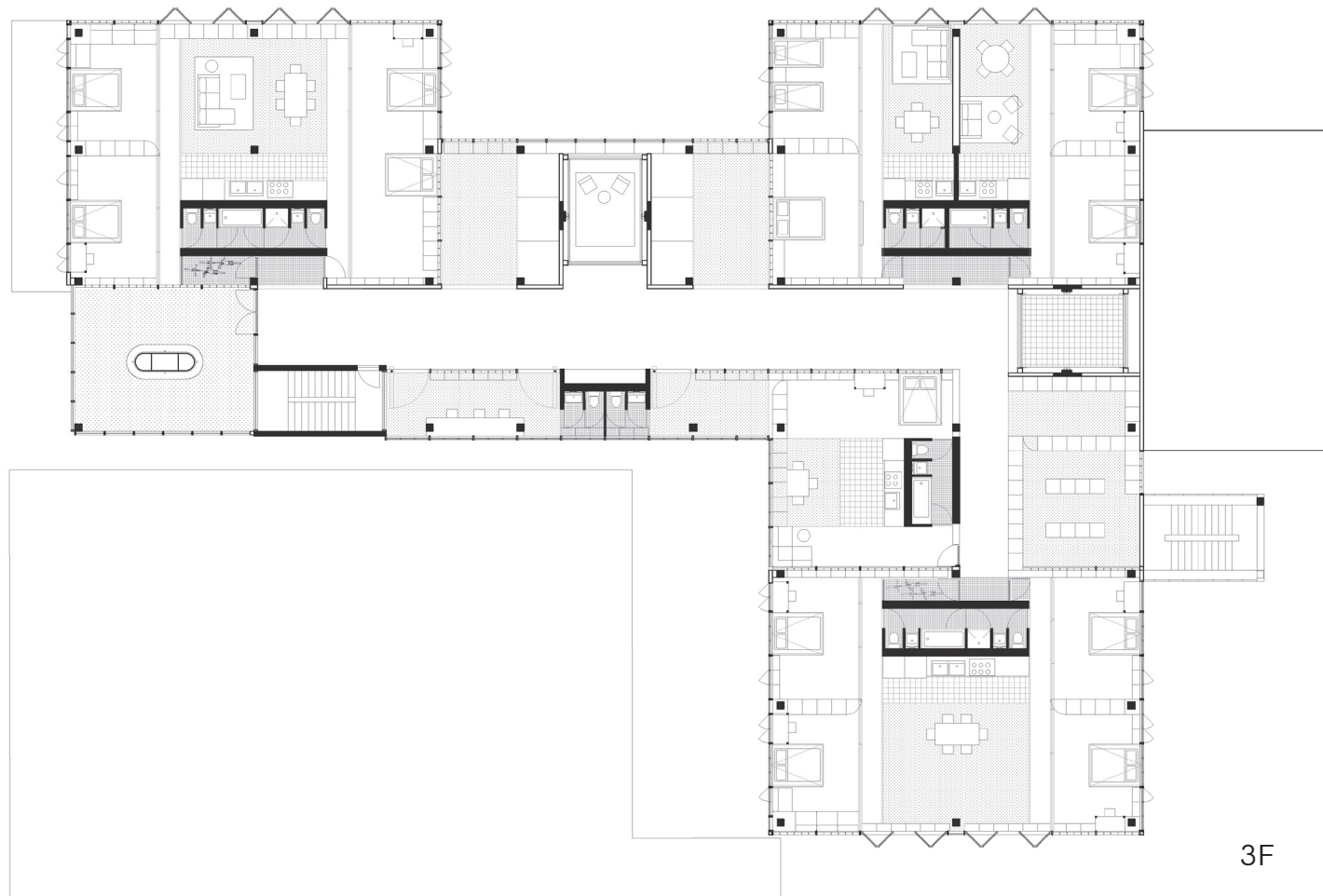
DSNY GARAGE

ALL CITY RECYCLING

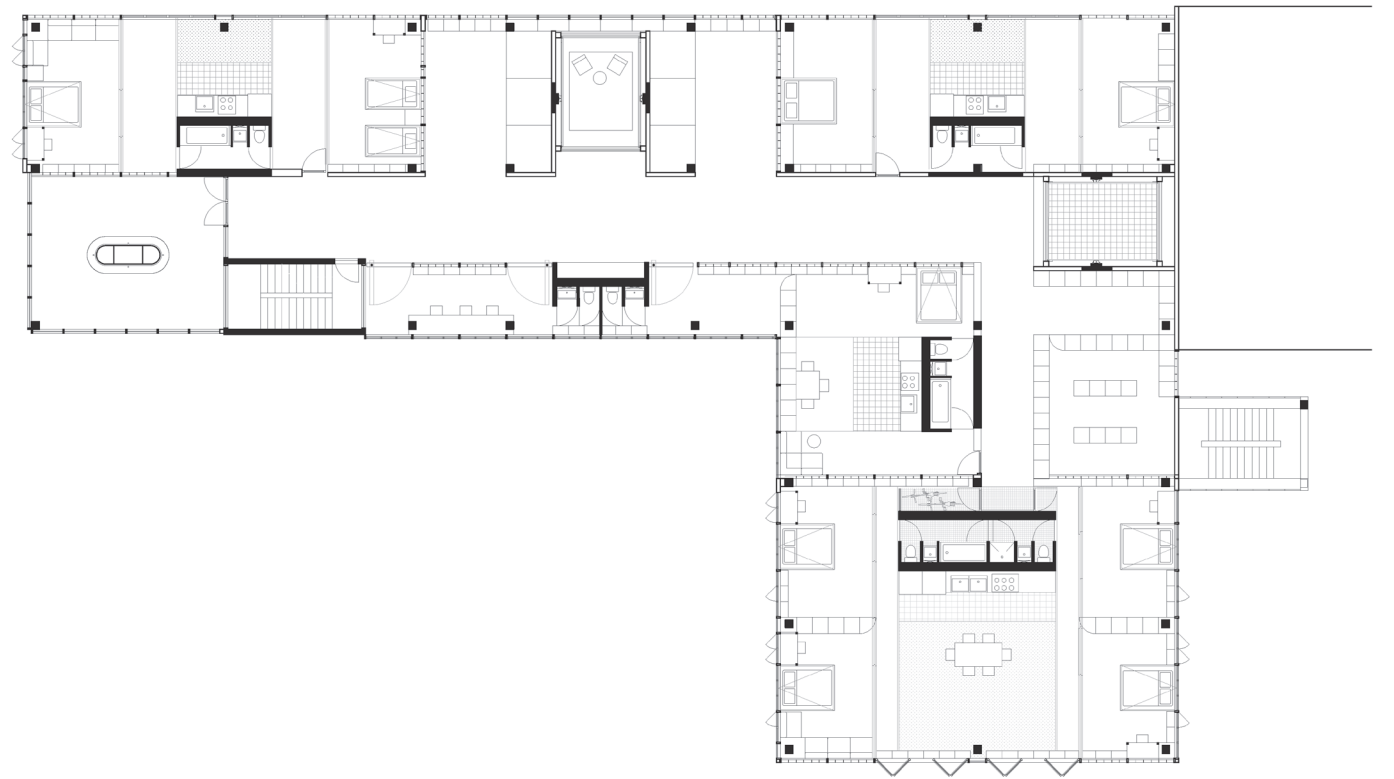
ACTION CARTING







3F



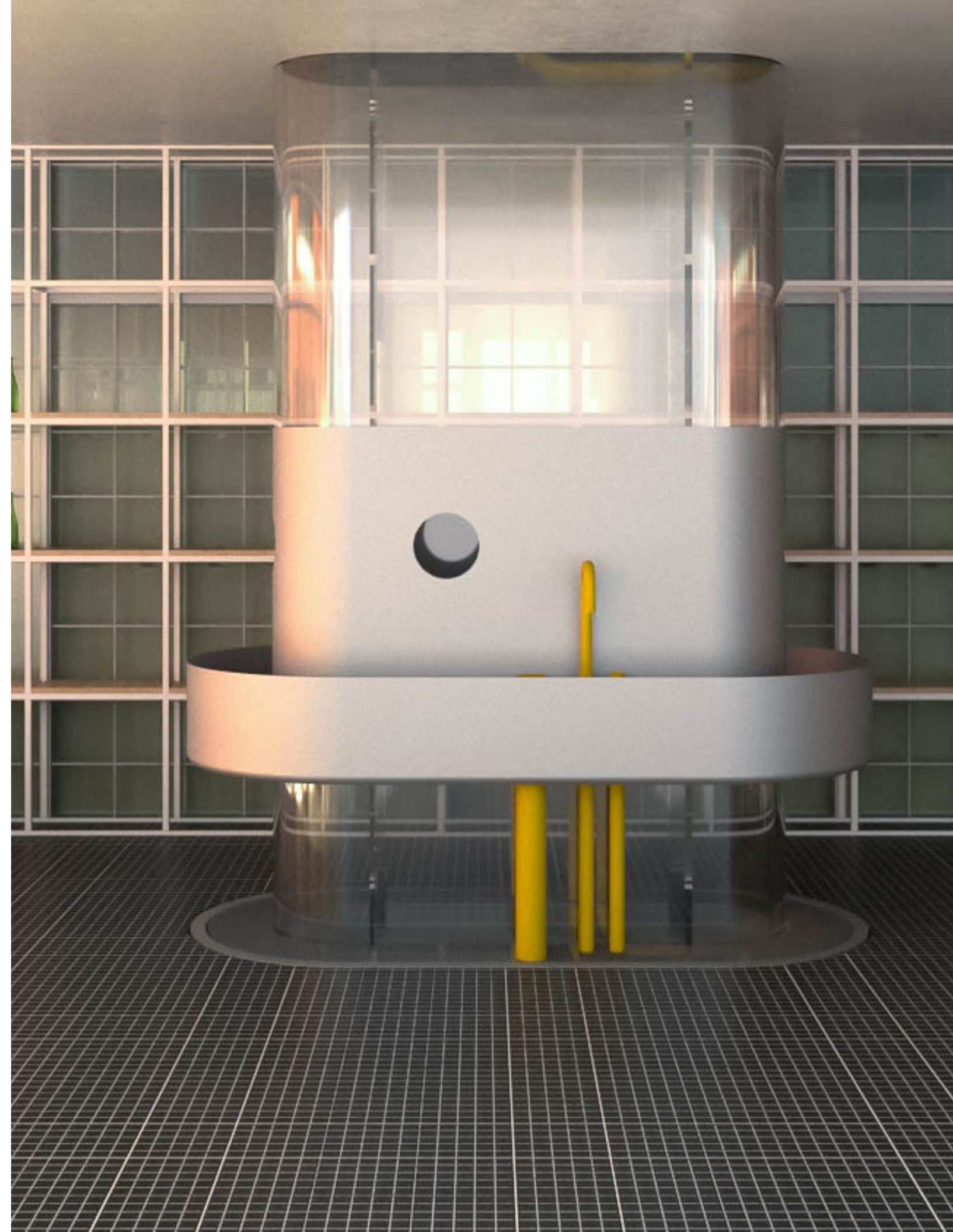
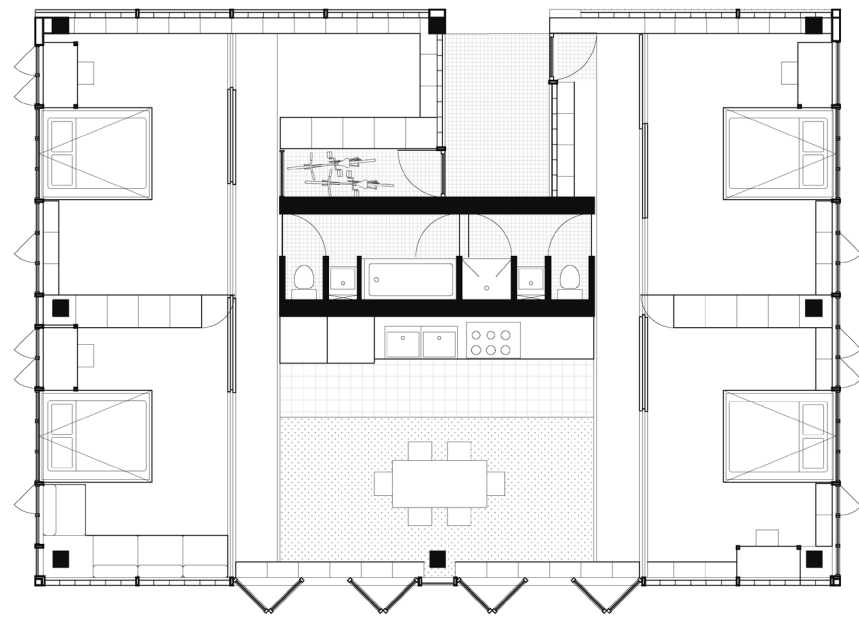
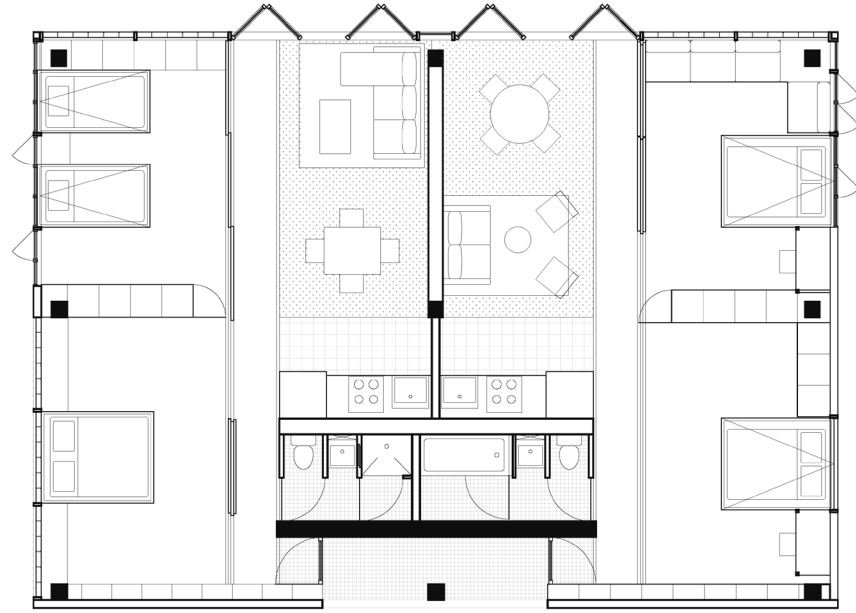
6F

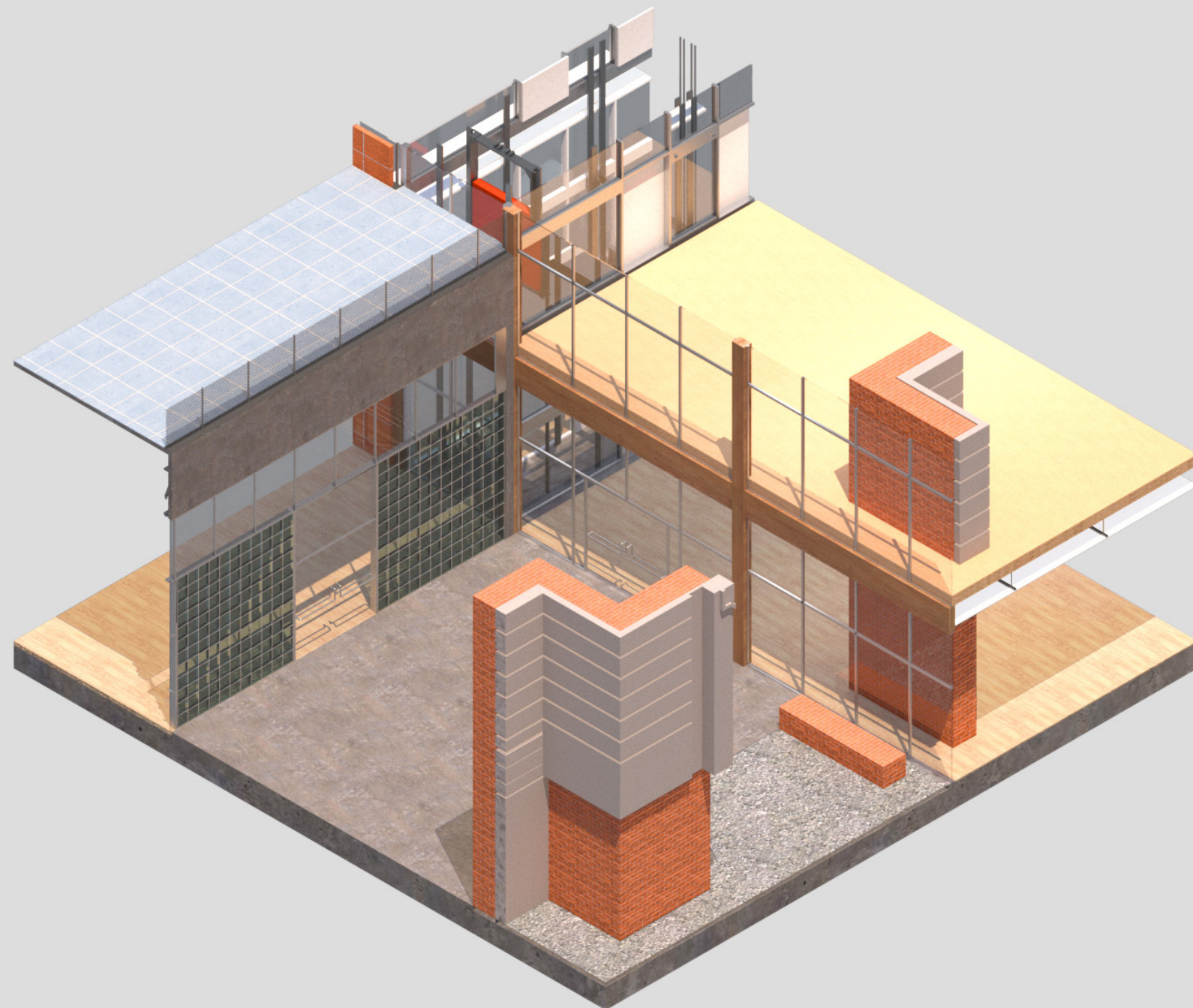


8F









School within a ruin

New York, New York

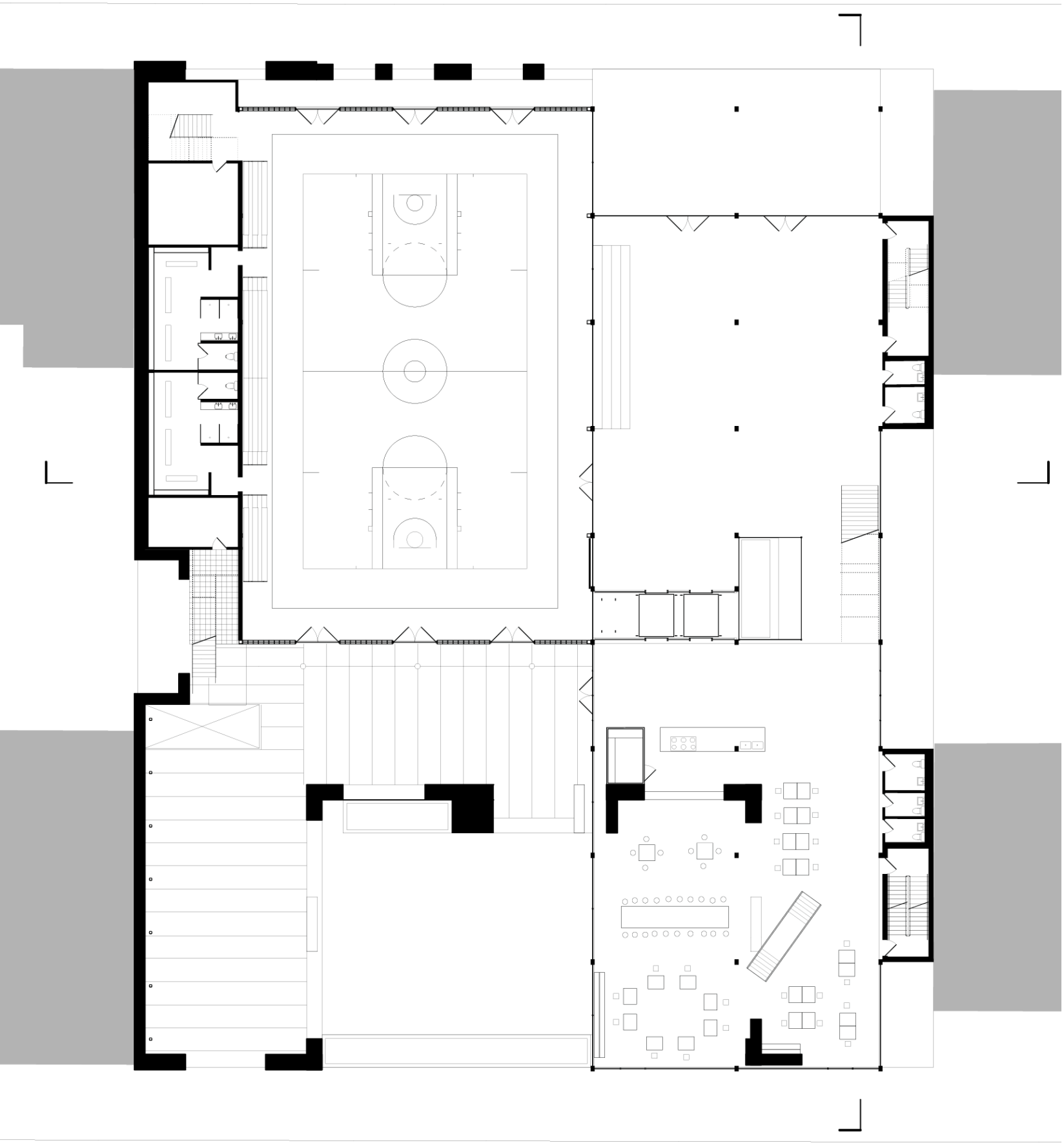
Core II design studio, GSAPP
2020

Rather than re-inhabit the skin and structure of the gutted Public School 64 building, this project proposes to reanimate the site in relation to the school as a ruin. Taking this approach locates the layering of new and old at the ground floor and opens the site's disjointed historical narrative to the street.

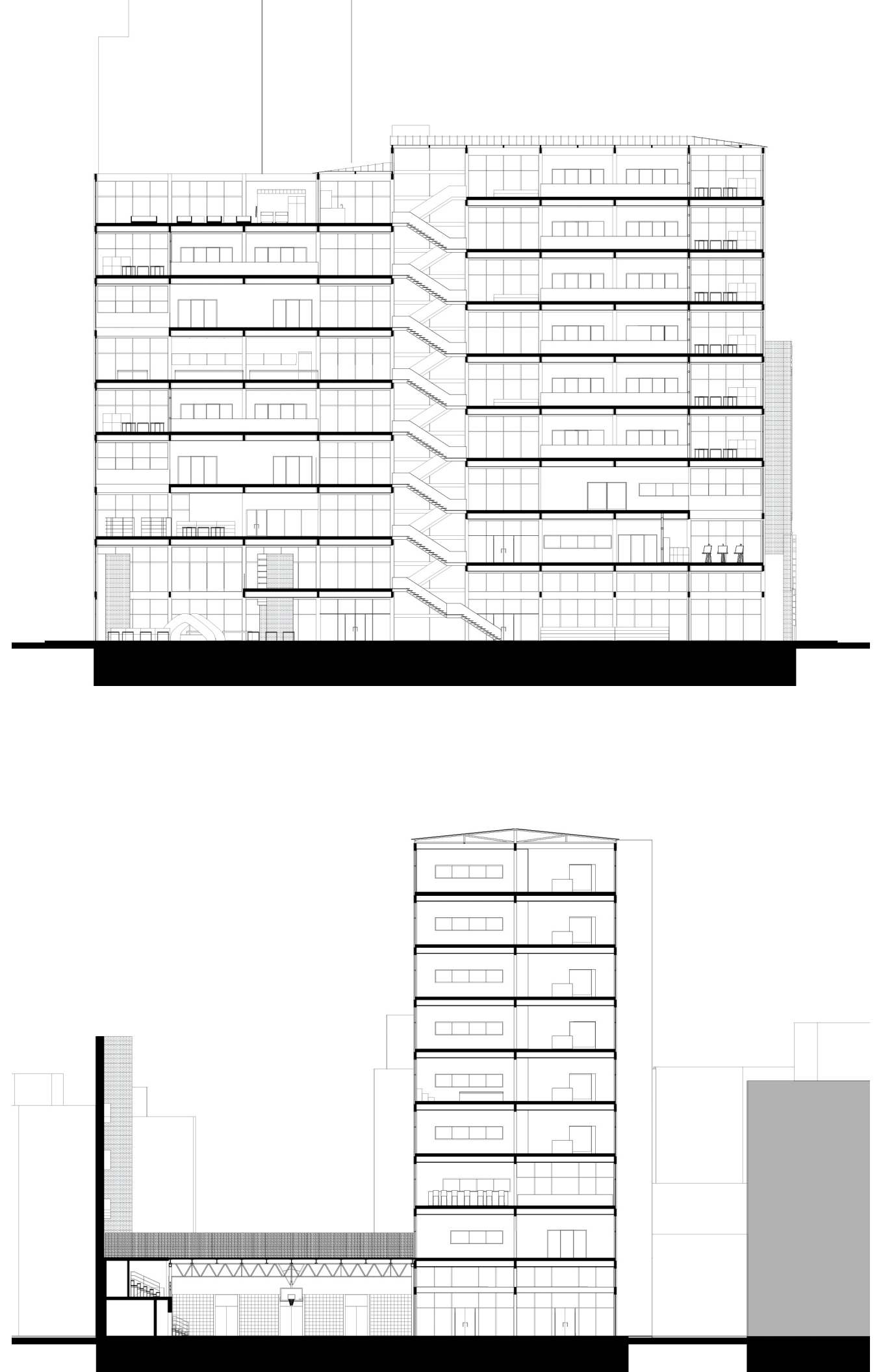
A series of piers are formed out of C.B.J. Snyder's 1906 'H-plan' design by removing the vertical band of windows and horizontal perlines from the structural tile and ornamental stone facade of the original load bearing walls. Sections of this altered brick enclosure, which outline the perimeter of the original building, are also located within the new building where they frame portions of the Kindergarten on the ground floor. A GluLam frame forms the structural grid of the new school, housing two bays of split-level floors organized around a transparent circulation core. The gym with rooftop playground sits at a rough proximity to the original school auditorium and provides a visual connection from the northern 10th Street entrance through the center of the urban block.

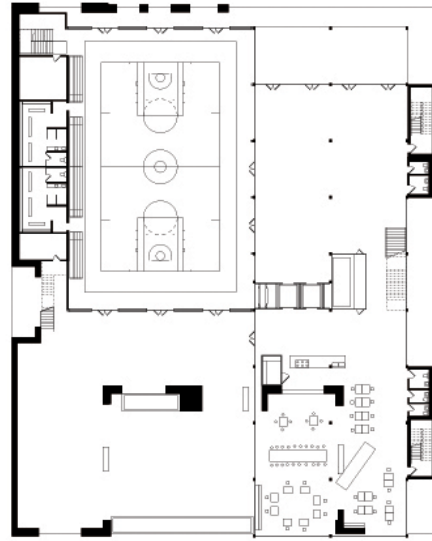
The K - 8 student classrooms are sequenced by age from lower to upper floors and are interspersed with specialized programs and double height spaces for art studio, library and cafeteria. The rooftop on the level adjacent the 8th grade classrooms hosts a garden of raised-bed planters and a small teaching kitchen. The garden and 'ruin' both speak to the history of the neighborhood, while the free plan and openness of the school's design offers a flexibility that can connect to the changing needs of the neighborhood



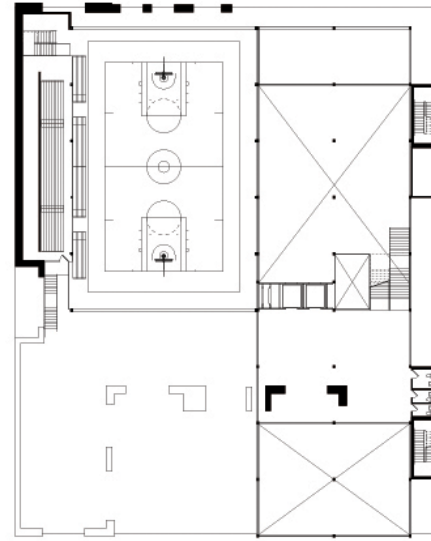


GF

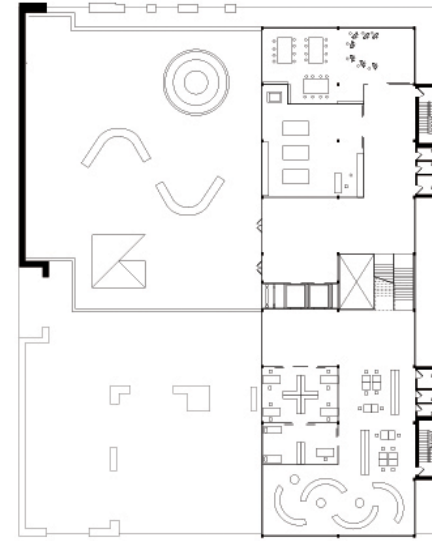




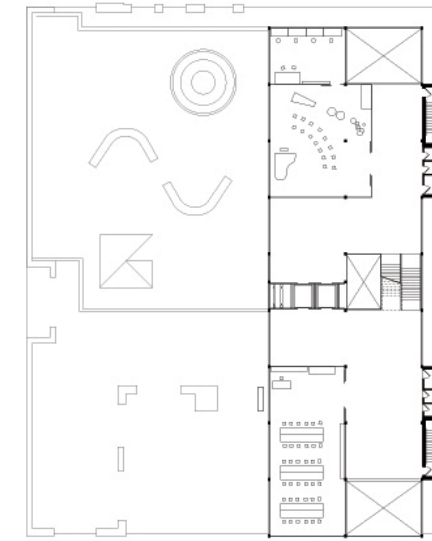
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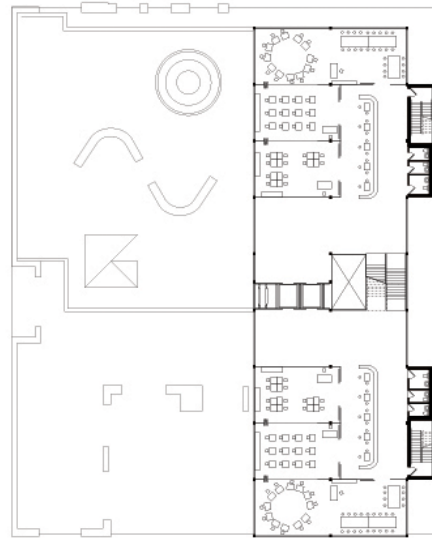
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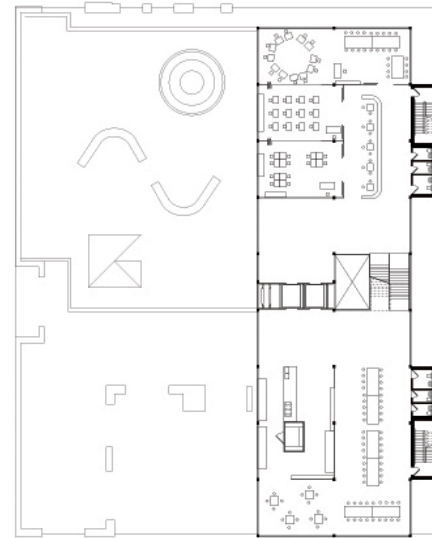
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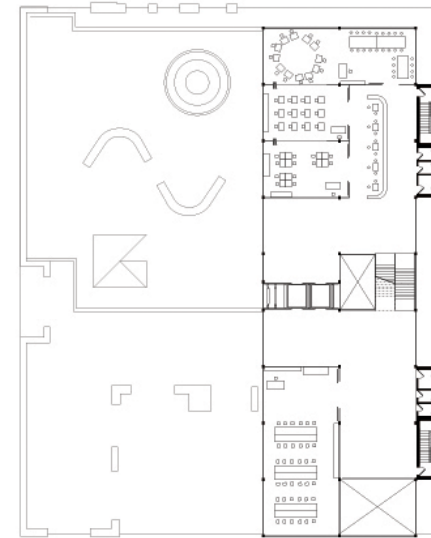
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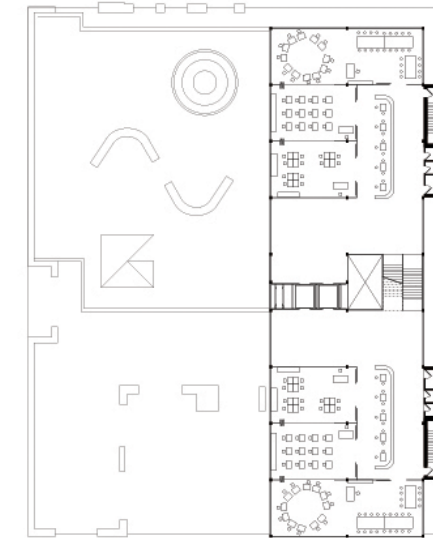
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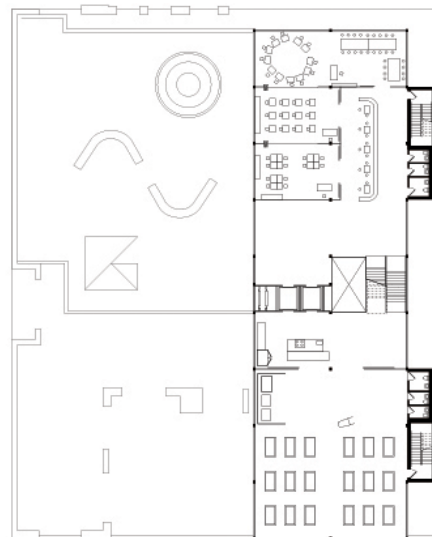
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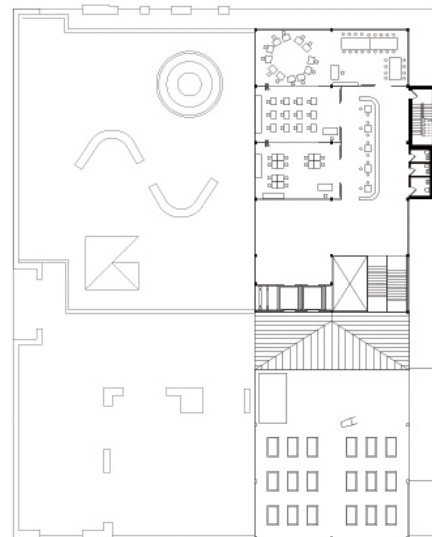
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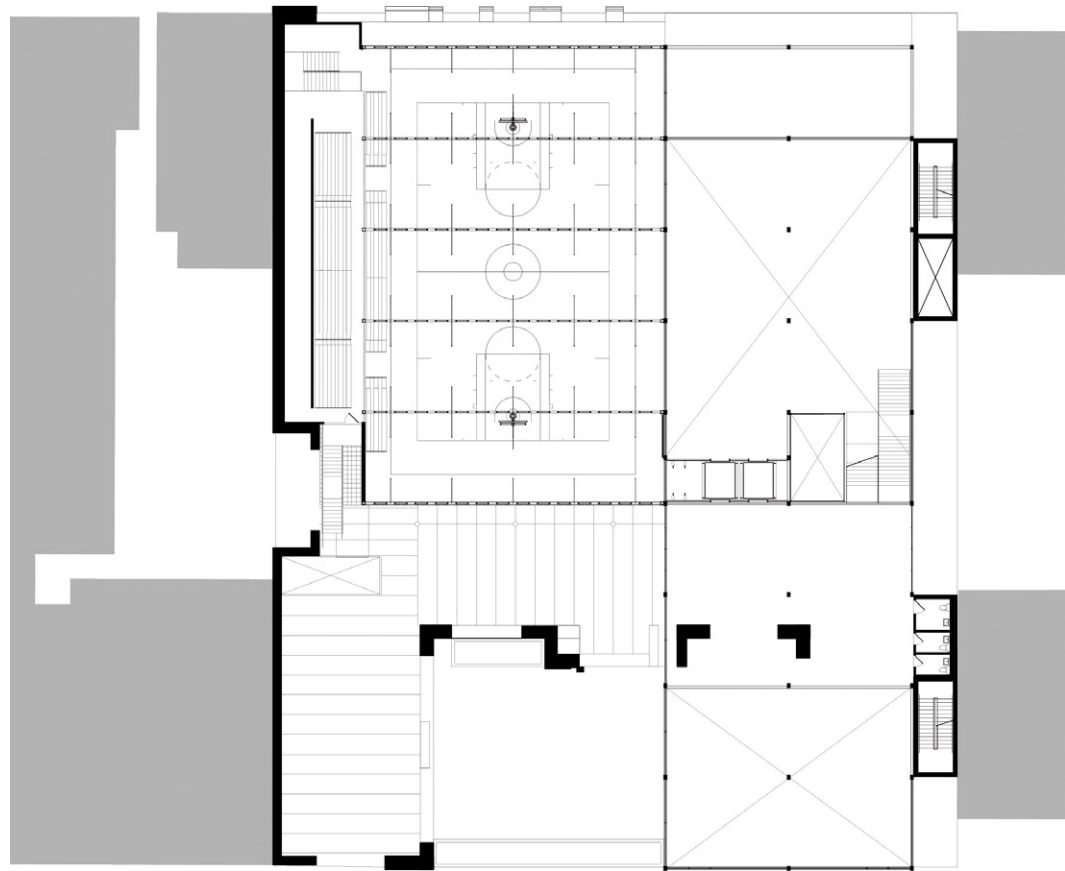
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7 N/S



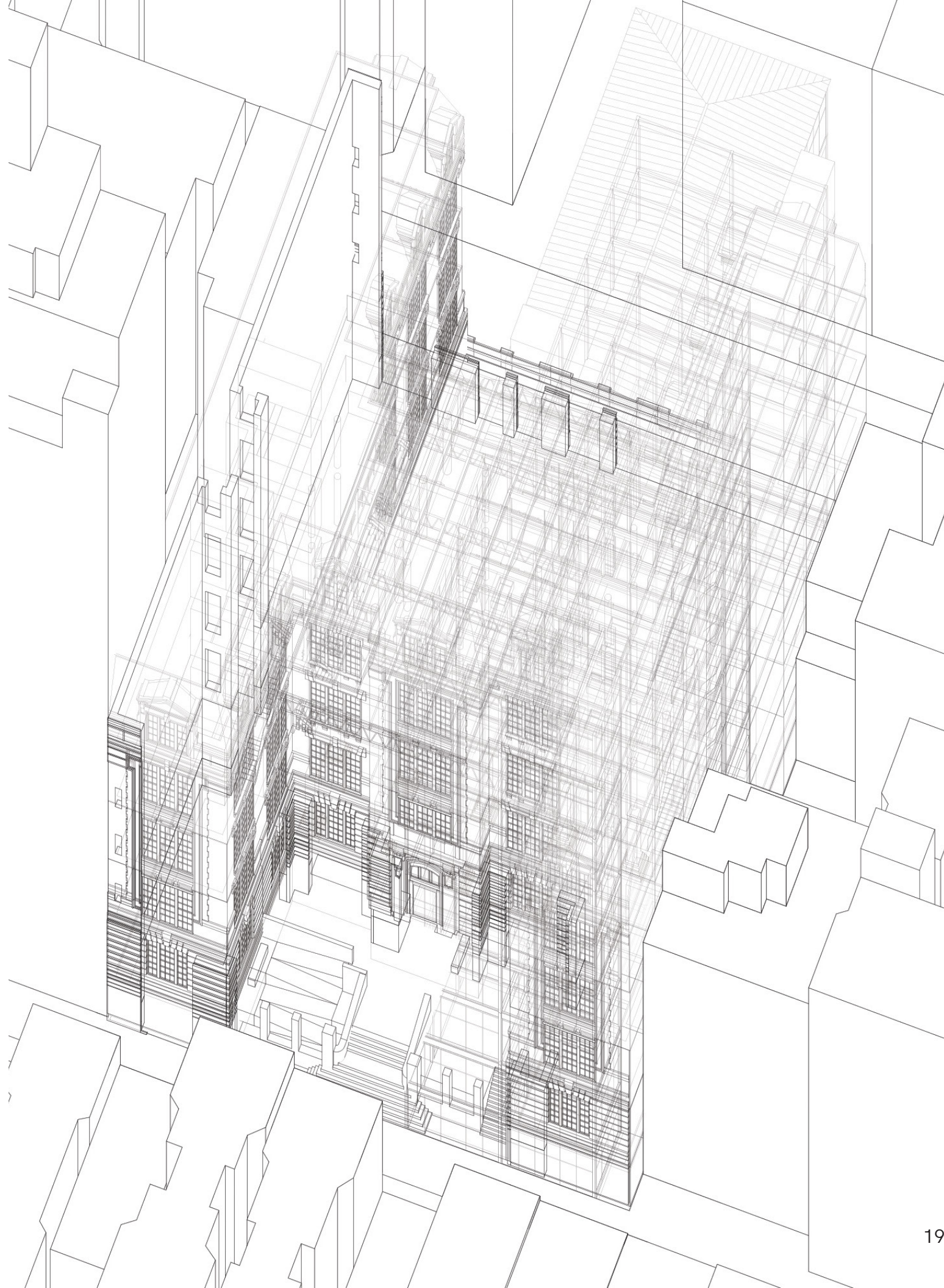
8 N

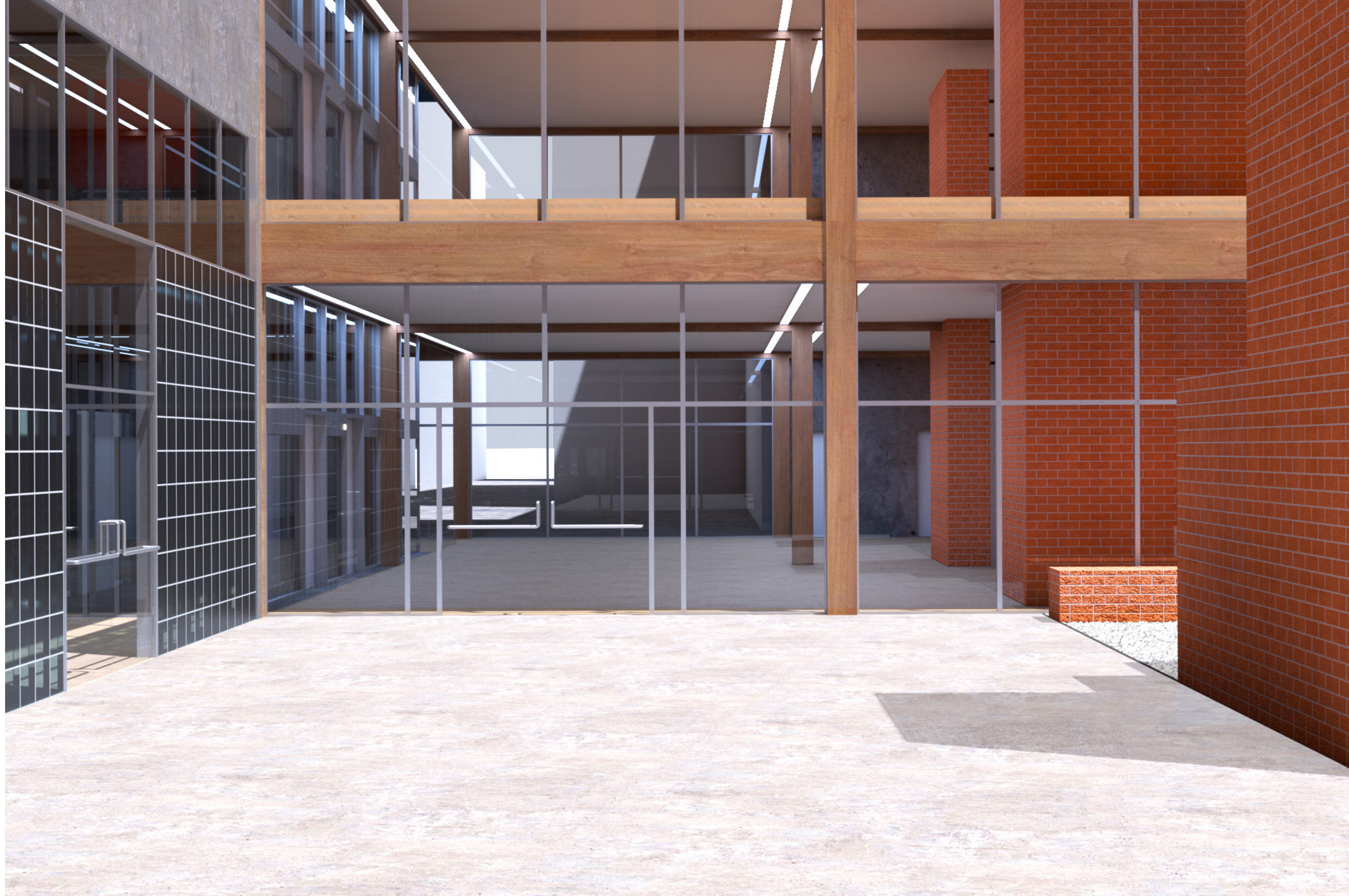


M



TYP







Belnord intervention

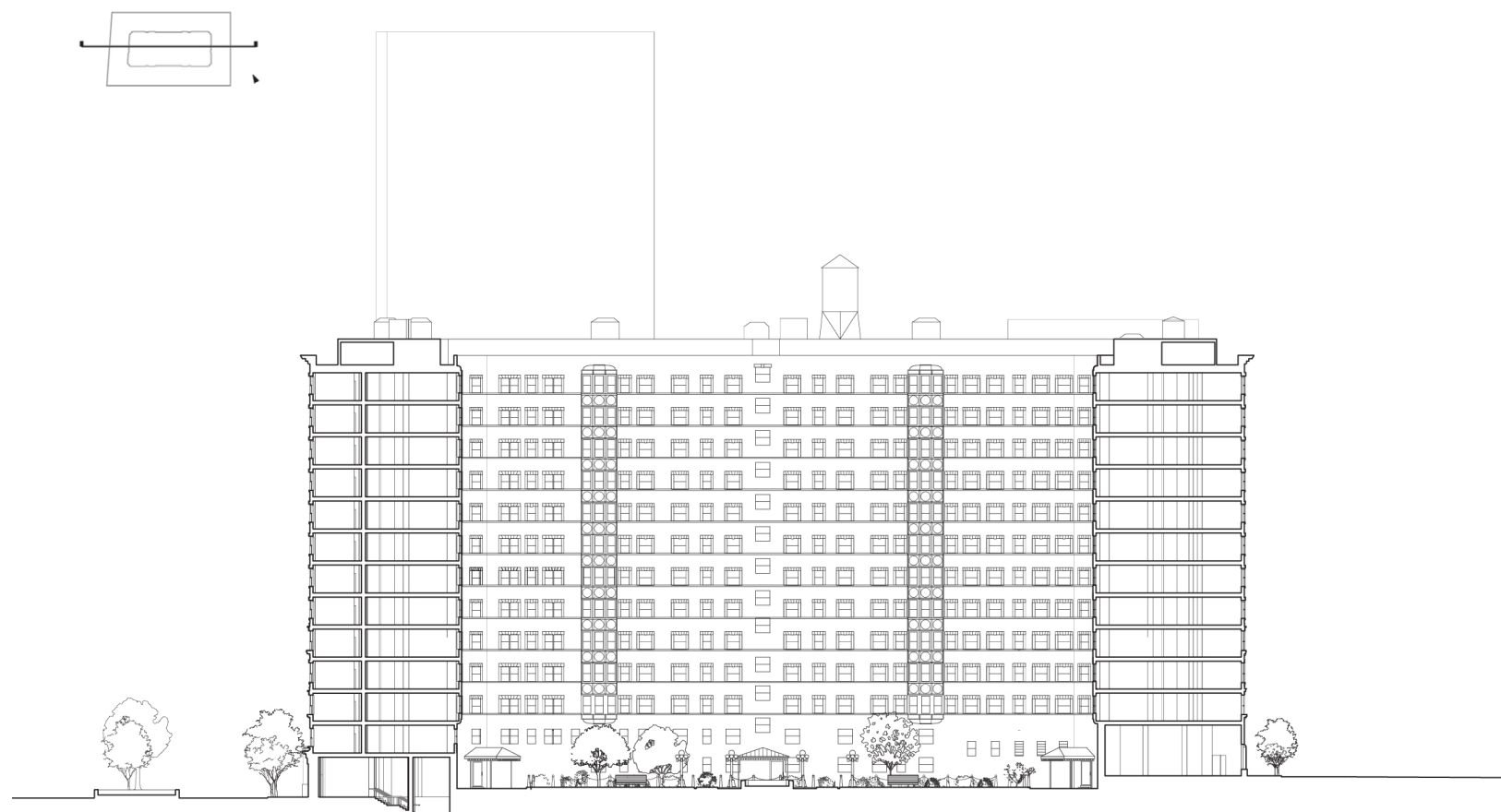
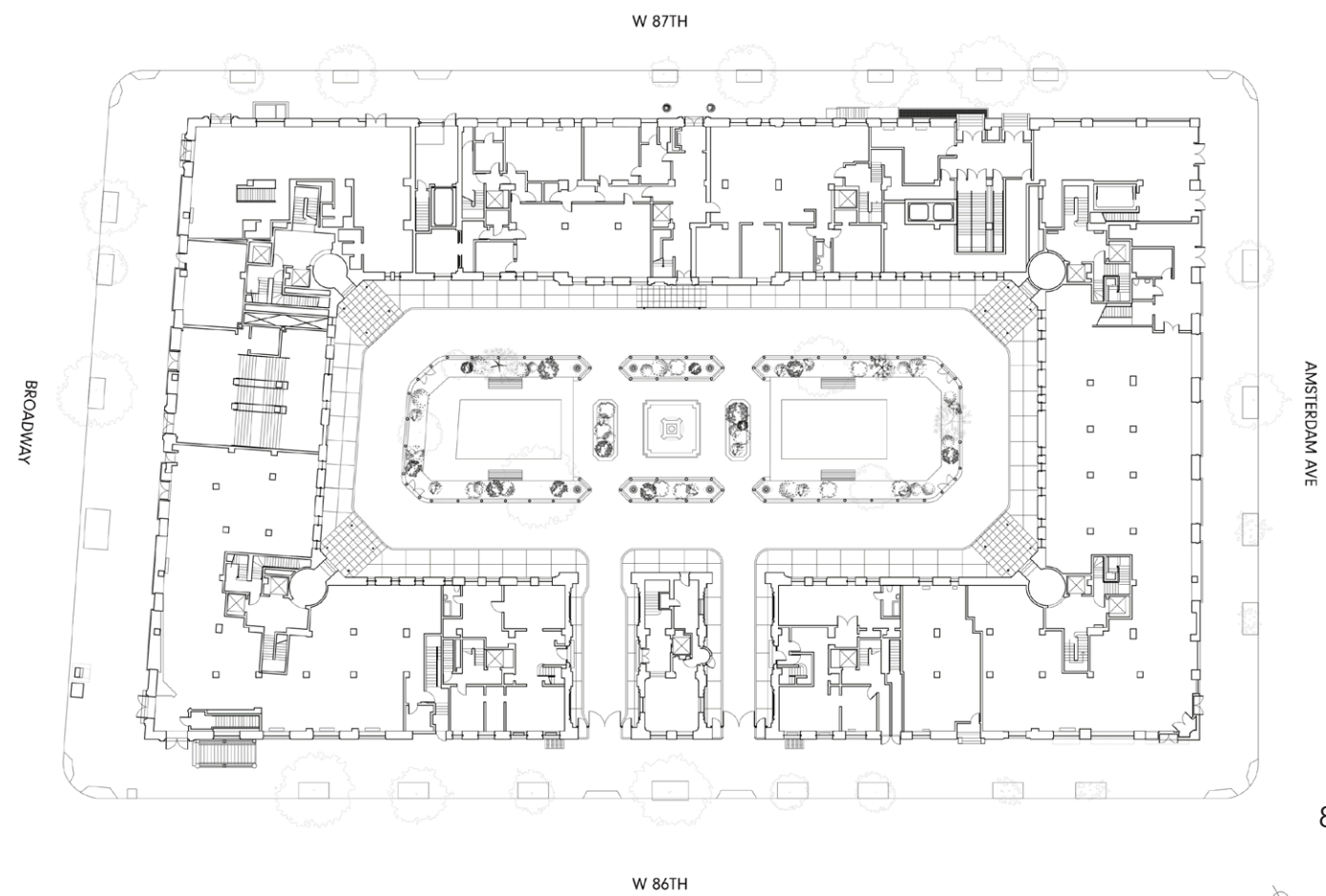
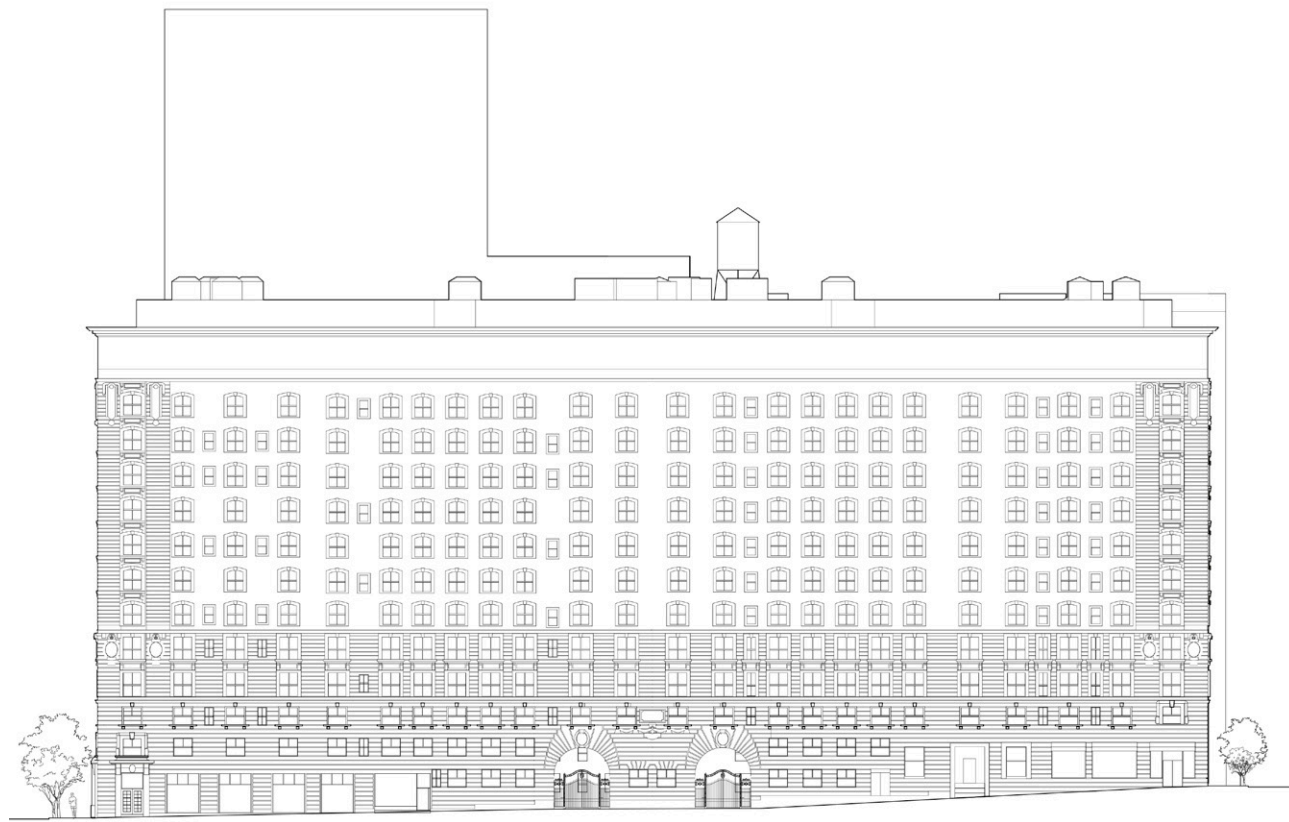
New York, New York

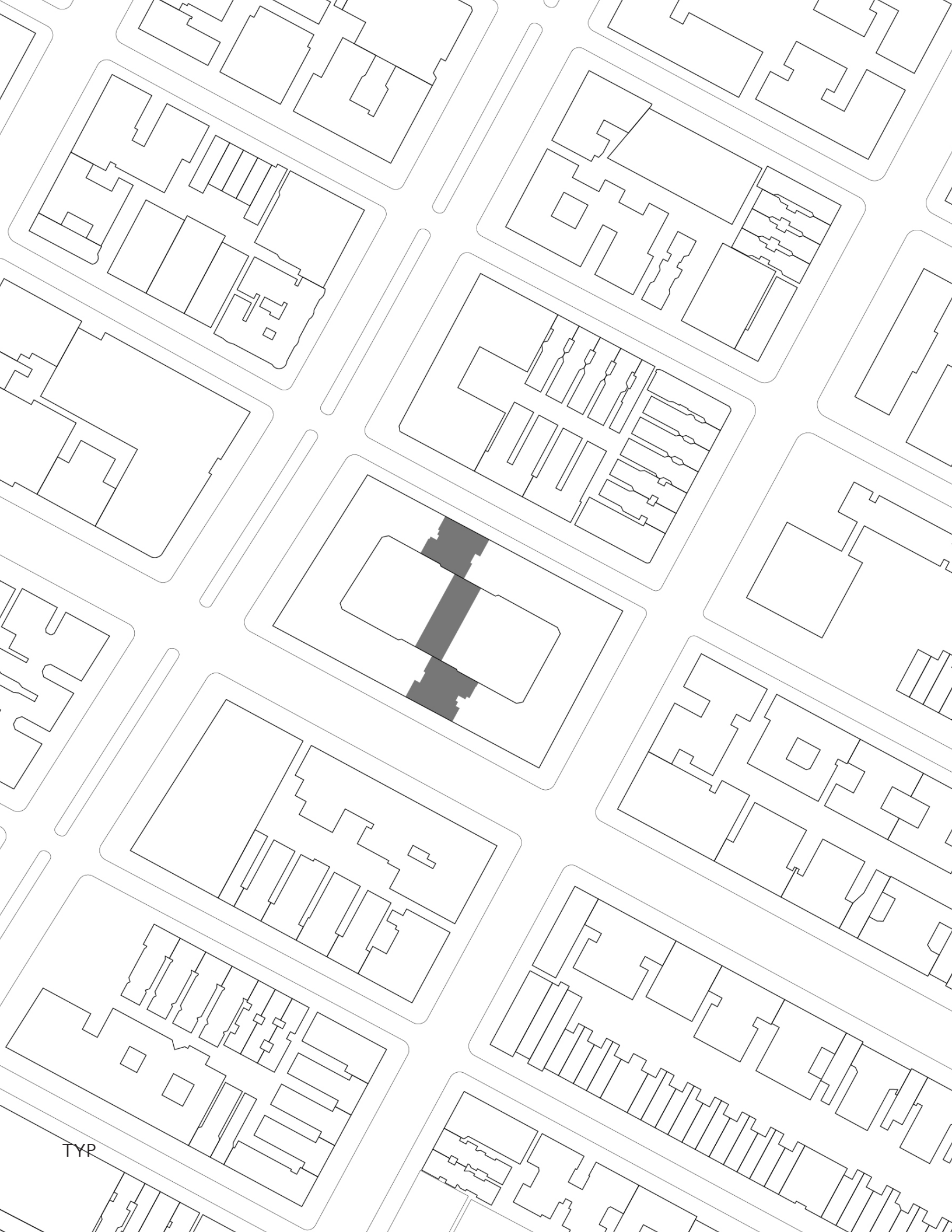
Core I design studio, GSAPP
2019

This project considers dimensions of public and private space via the lens of Broadway as a transect defining New York's Manhattan Island through its opposition to the predominantly uniform grid of streets and avenues. Here the seemingly errant path of Broadway and the life of the street is extended into the negative space of the block.

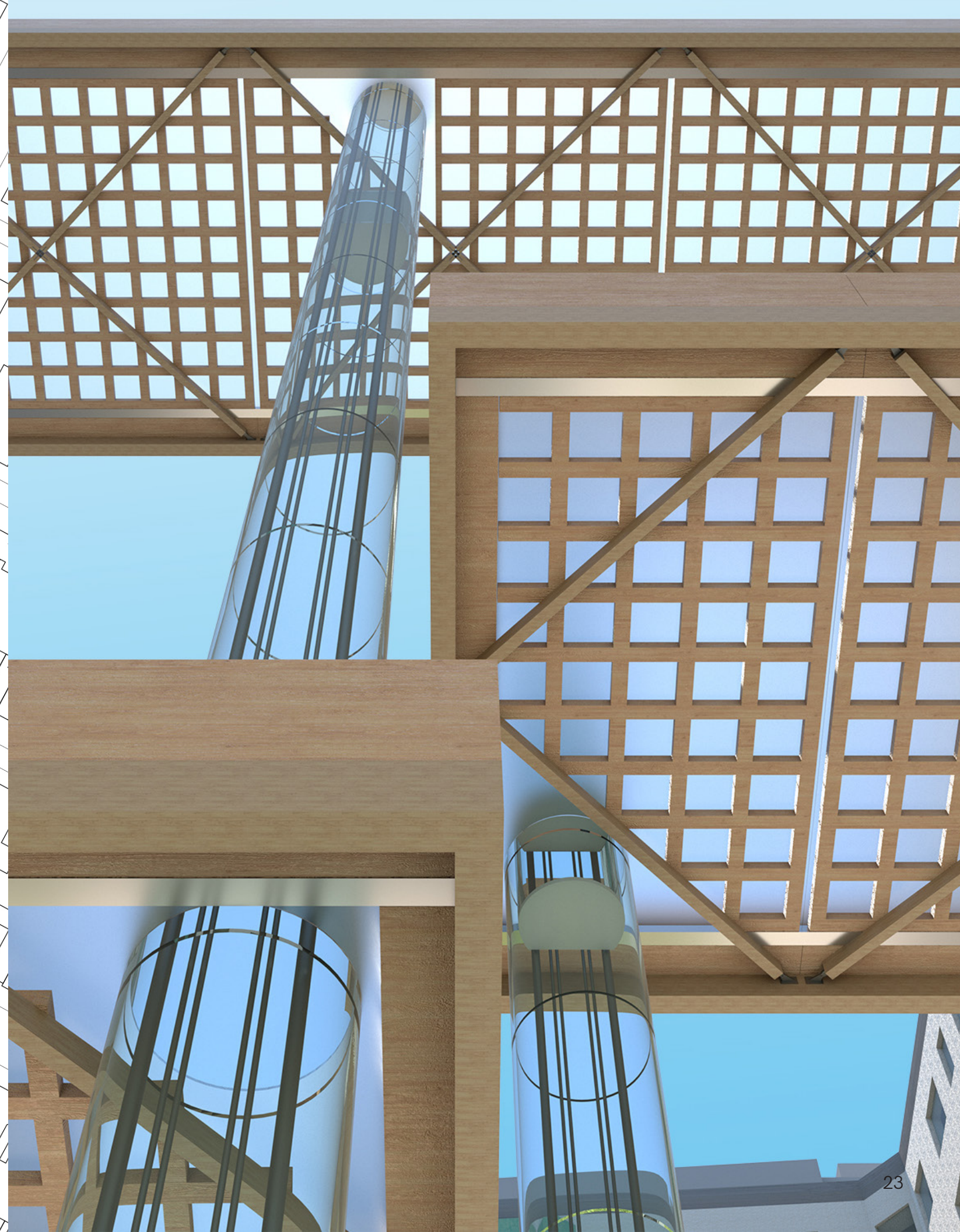
The Belnord is a landmarked building at the intersection of 86th Street and Broadway, designed in a Roman Classical Beaux Arts style by Hiss & Weekes and constructed in 1908. The building, which is unique as one of the few examples of perimeter blocks in New York City, consists of six circulation cores servicing pairs of apartments encircling a central courtyard. Commercial space lines the ground floor and an electronics store occupies the larger portion of a sub-grade level. Once rent controlled, the building is now entirely luxury condominiums recently renovated by Robert A.M. Stern Architects.

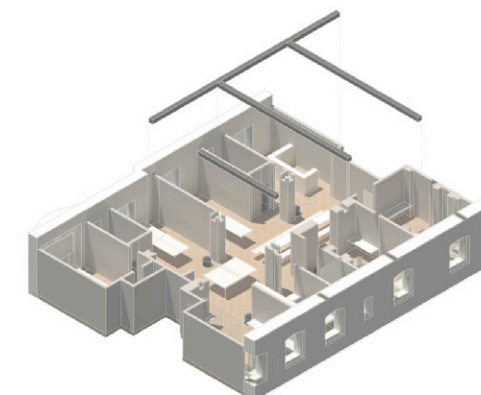
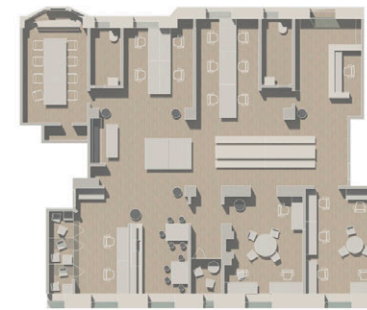
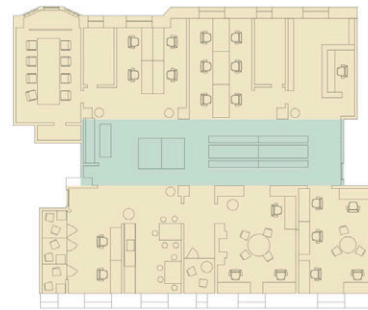
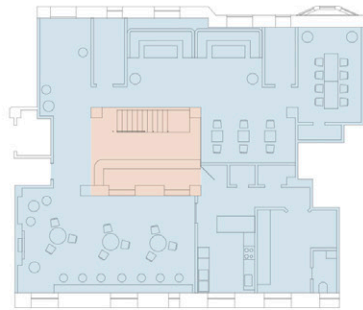
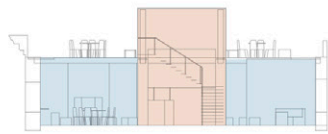
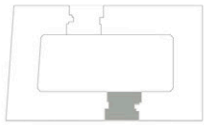
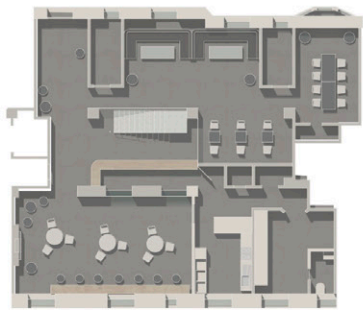
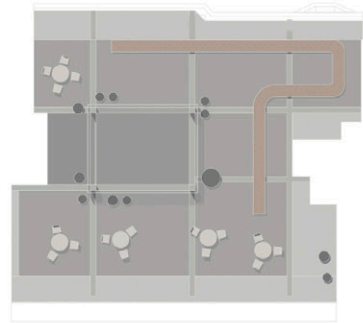
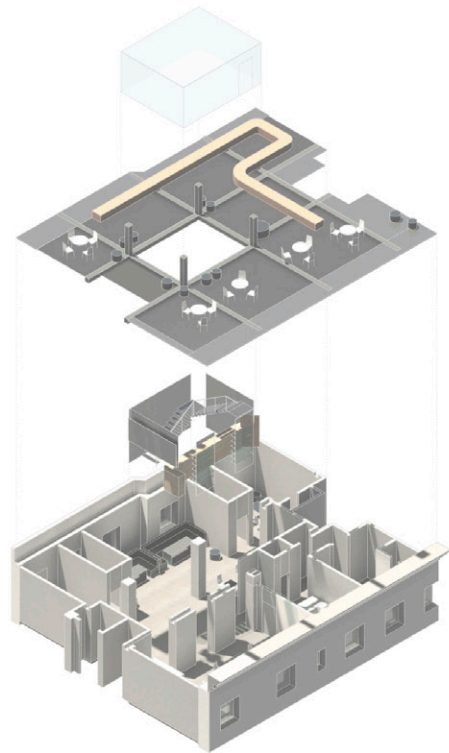
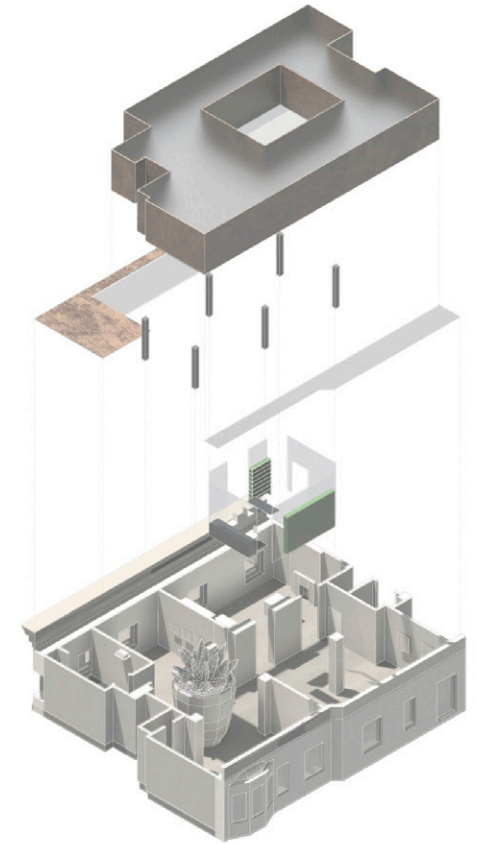
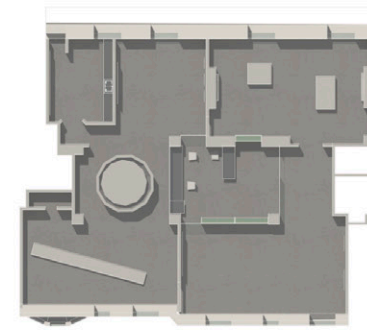
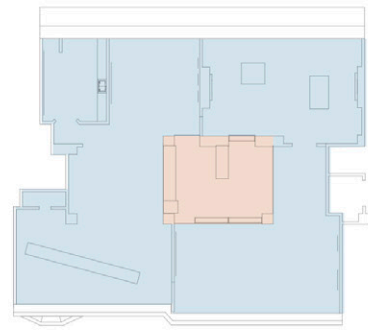
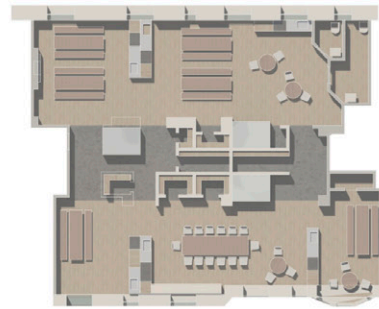
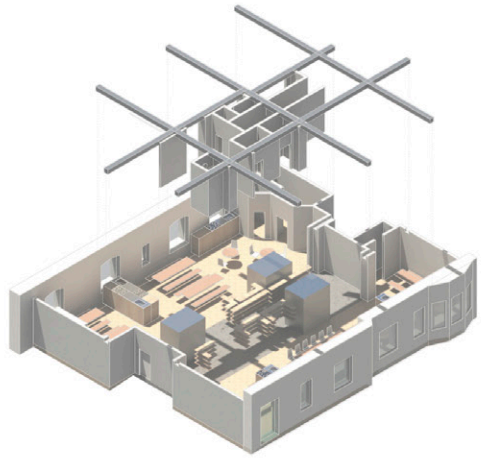
The resulting scheme leaves much of the existing courtyard intact while repurposing four apartments on the 4th, 7th, and 13th floors, for semi-public usage. A rooftop cafe and gallery are located within former penthouse units while a shared kitchen and co-working space are installed in single apartments of the lower floors. Each of the four spaces are accessed from the central courtyard via a pair of machine roomless elevators providing connection between the various programs on three massive GluLam walkways.





TYP

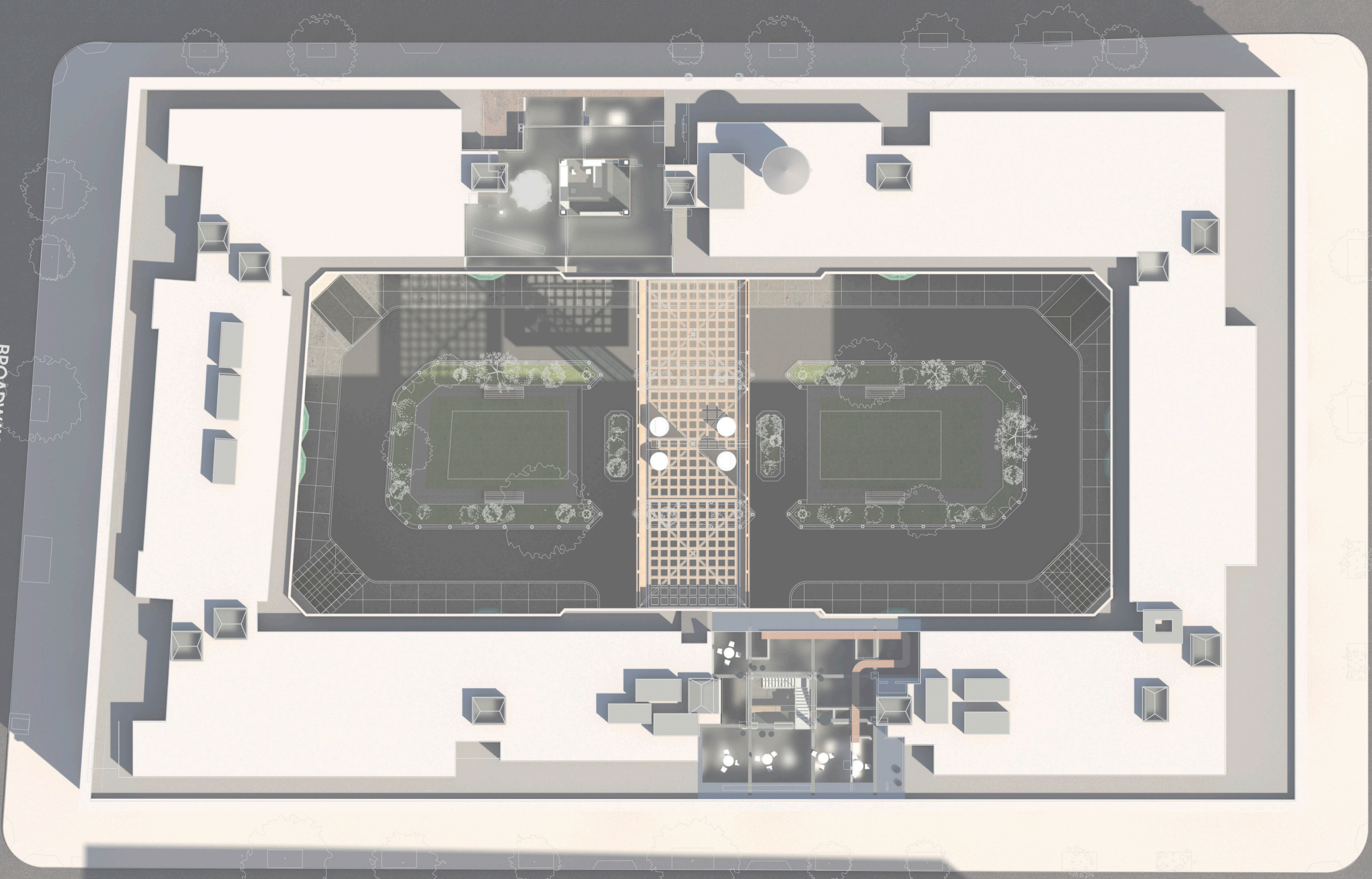


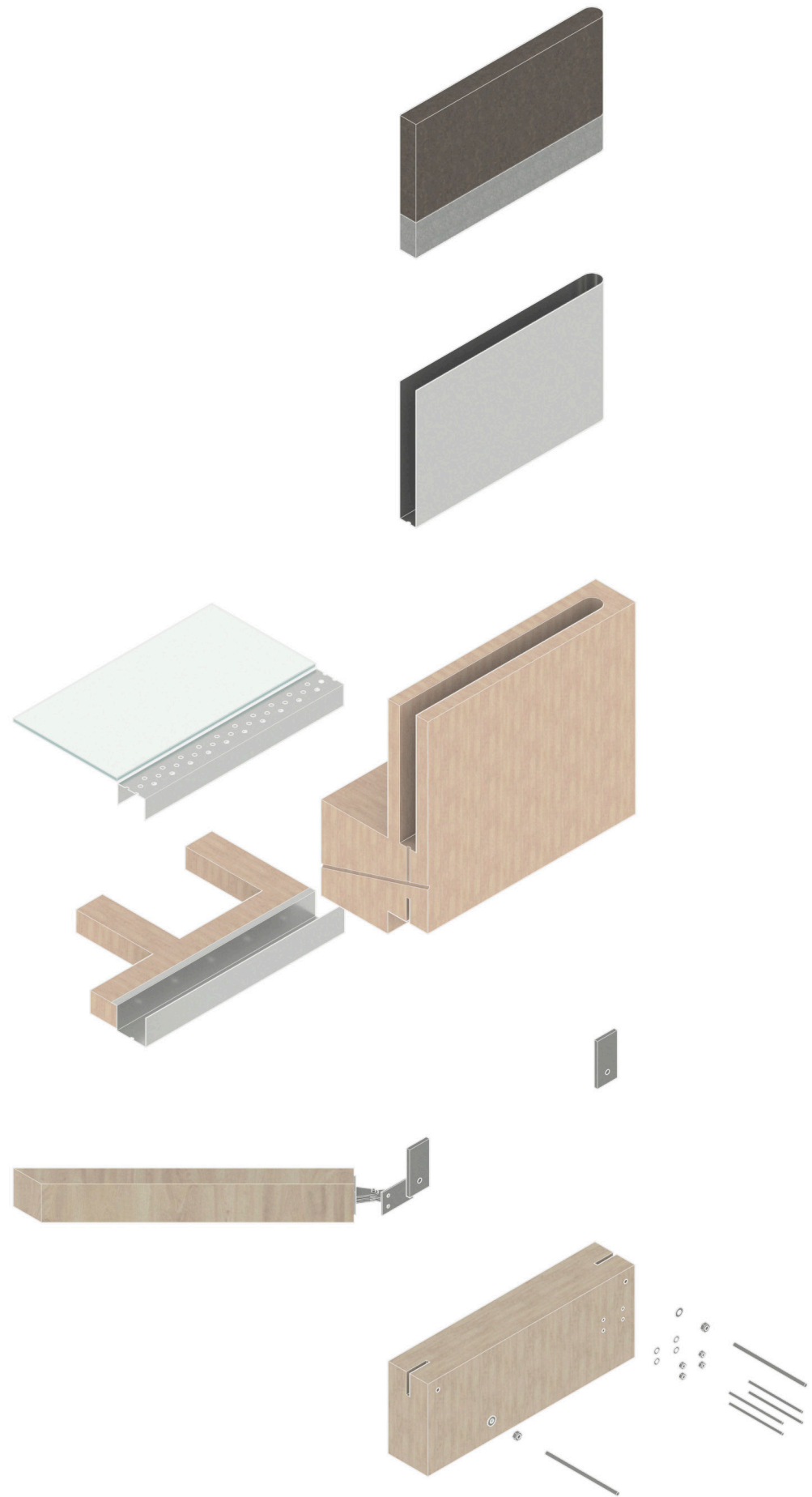


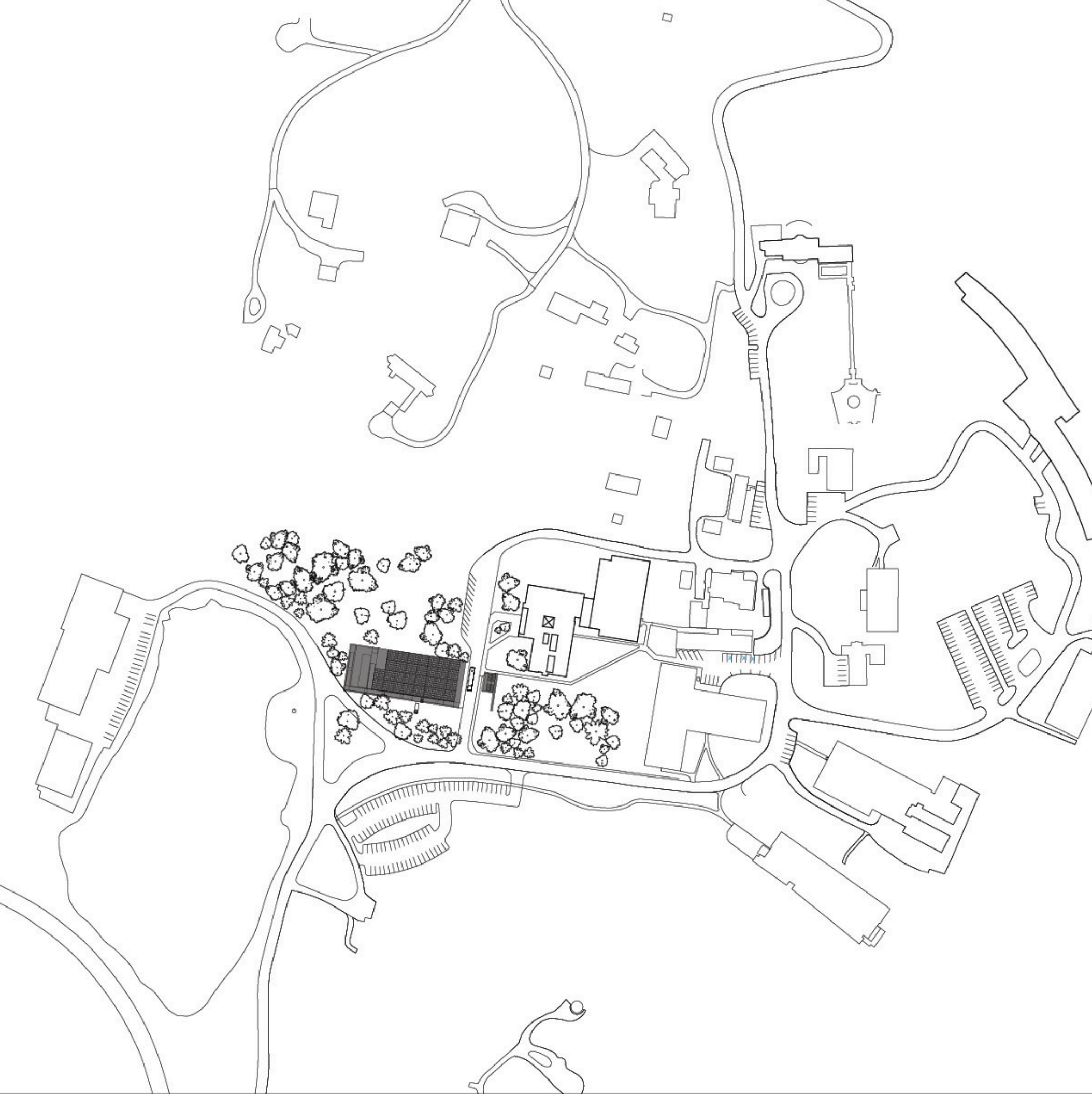
W 87TH

BROADWAY

AMSTERDAM AVE







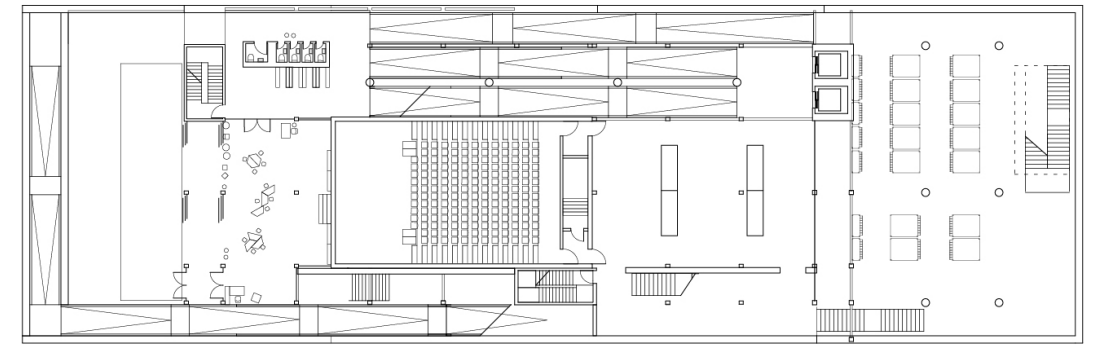
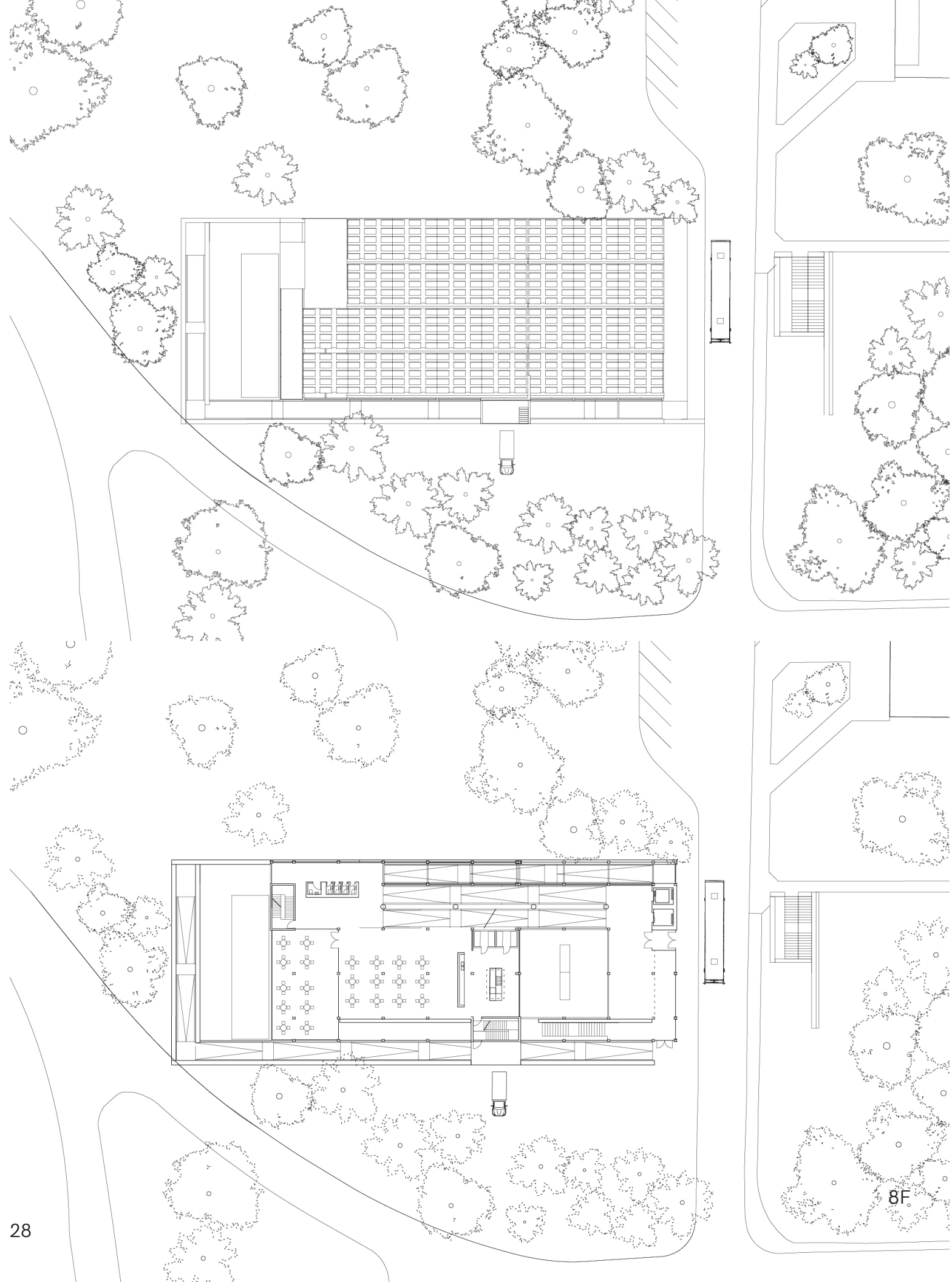
Earth observatory visitor center

Palisades, New York

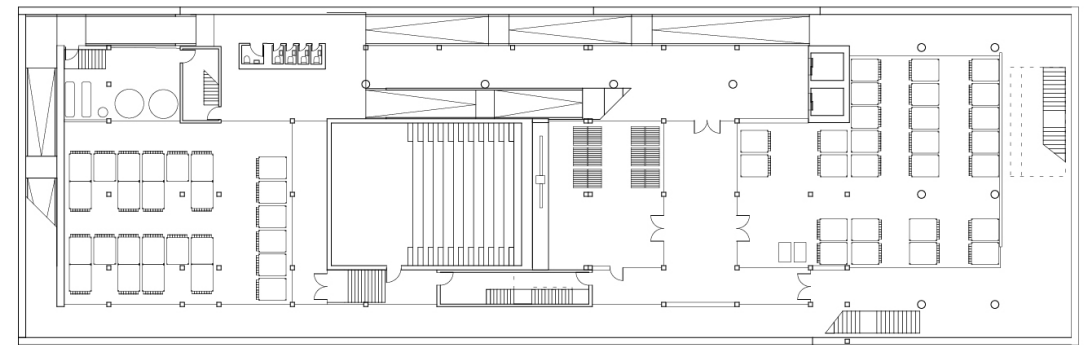
Advanced V design studio, GSAPP
2021

The Lamont Doherty Earth Observatory (LDEO) was founded in 1949 through the donation of a 189-acre estate to Columbia University on behalf of Florence Corliss Lamont in the name of her late husband. Numerous contributions to earth science, seismology, geology and atmospheric studies have emerged from the work done at the LDEO. Although the site is technically a remote location of the Columbia campus, it retains much of the isolated atmosphere and heavy security of its Cold War era collaboration with the US Military. The campus is a haphazard mixture of labs and buildings repurposed from the original estate arranged in a loop between the New Jersey border, Lamont Hall and the Hudson River.

The proposed visitor center is sited at the entrance to the campus across from shuttle bus drop off and the Geoscience building. The program combines exhibitions space, theater, cafeteria and day care facilities with an extension of the existing earth core archive and a small hydroponic farm. These facilities are distributed across a split level section and connected via a 100-foot circulating ramp. The sub-grade location of the daycare and exhibitions in proximity to the earth core archive aims to integrate the buildings social activity with idea of the earth a repository of knowledge.

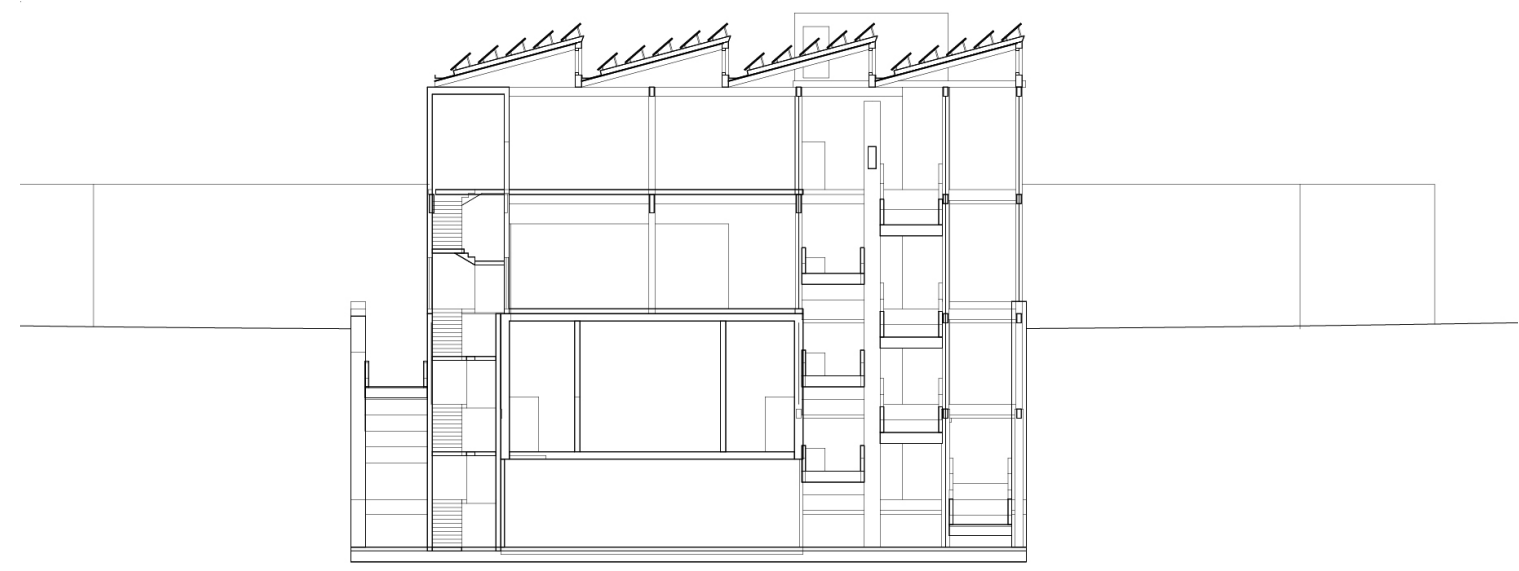
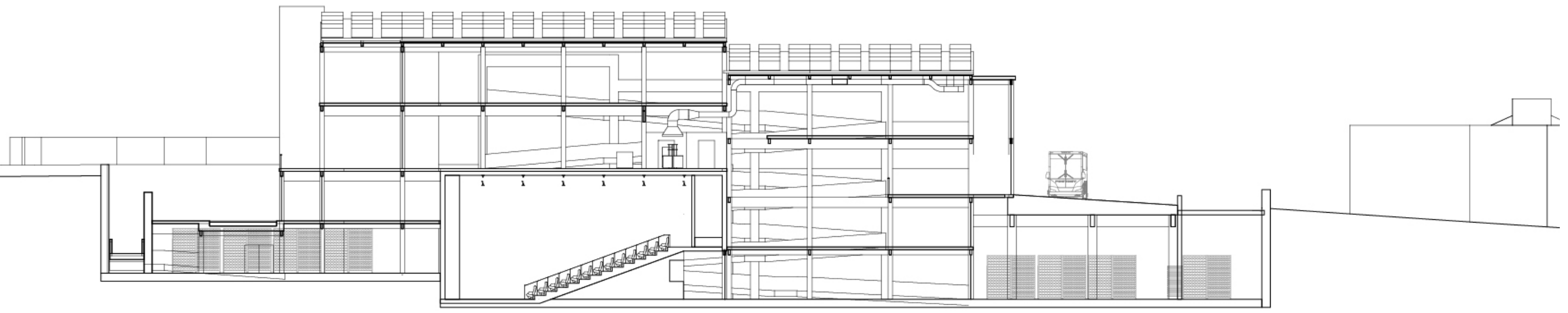
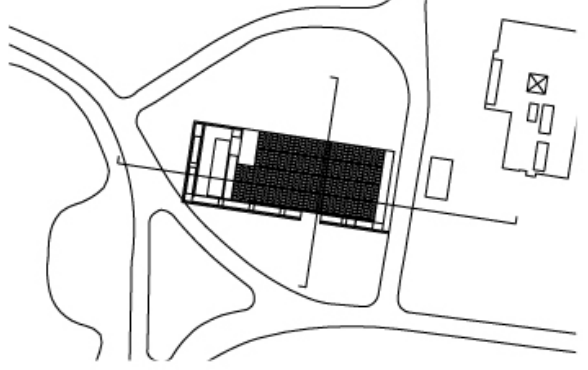


B1



B2

8F



Bamboo brick factory

Brooklyn, New York

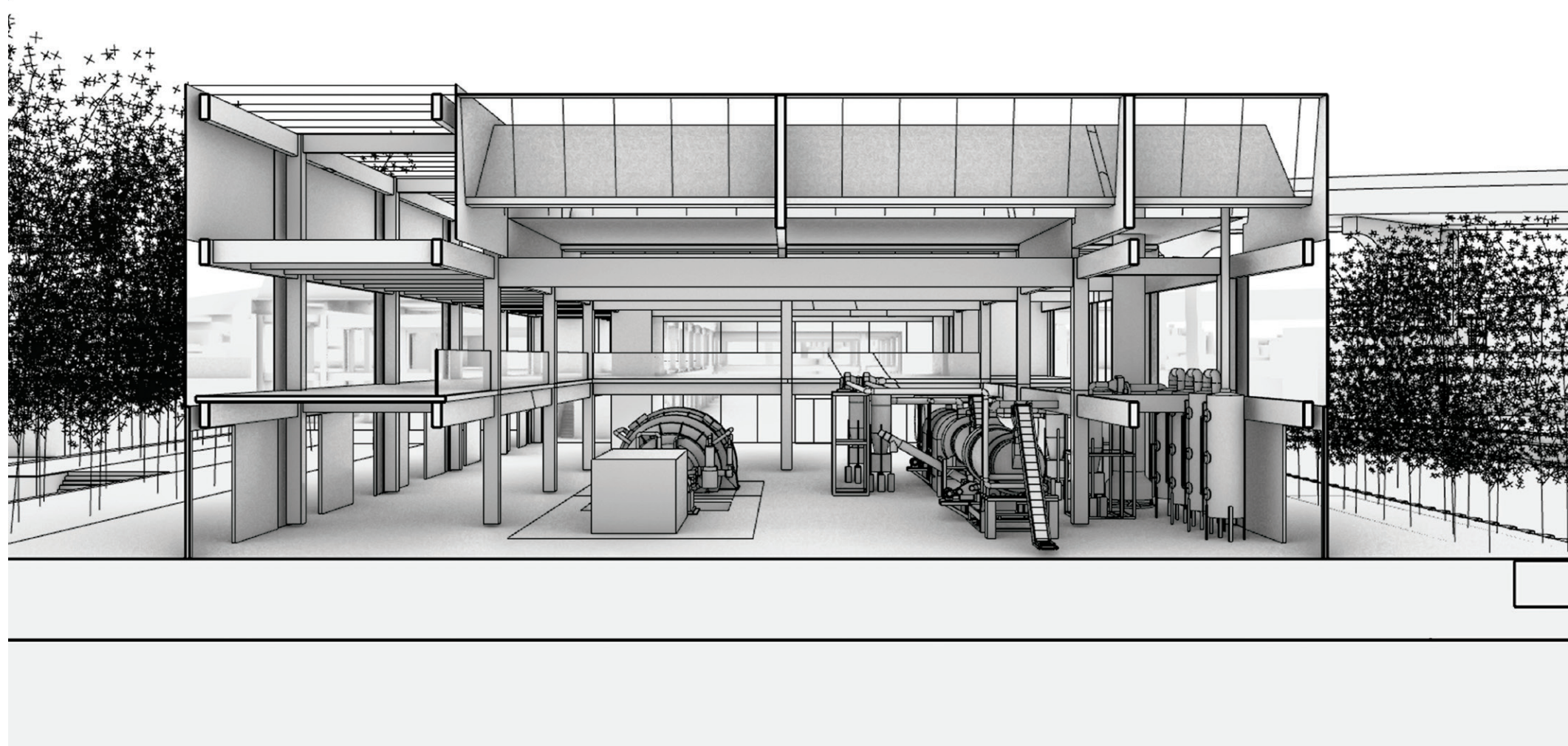
Advanced VI design studio, GSAPP

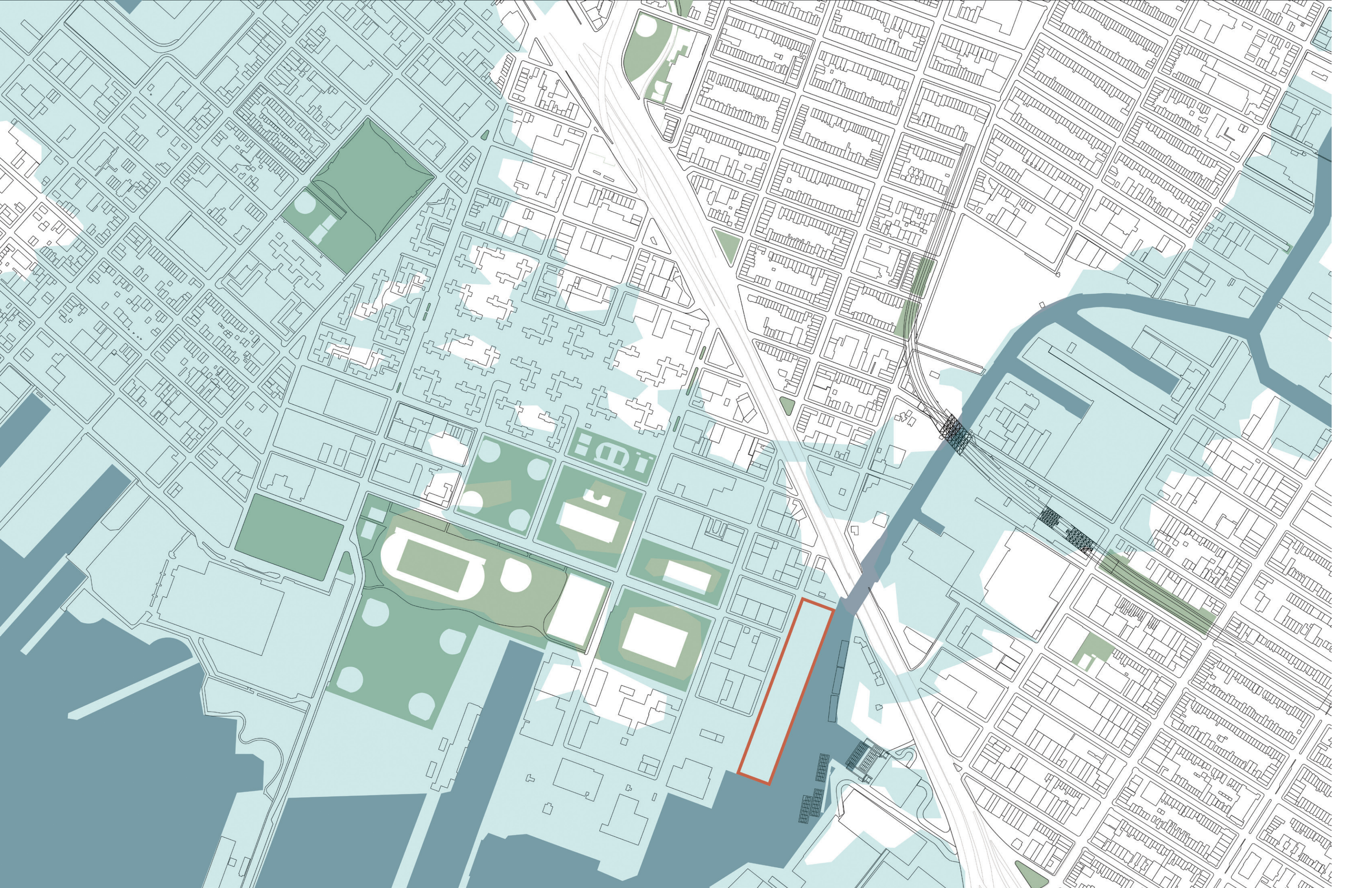
Team: John Trujillo

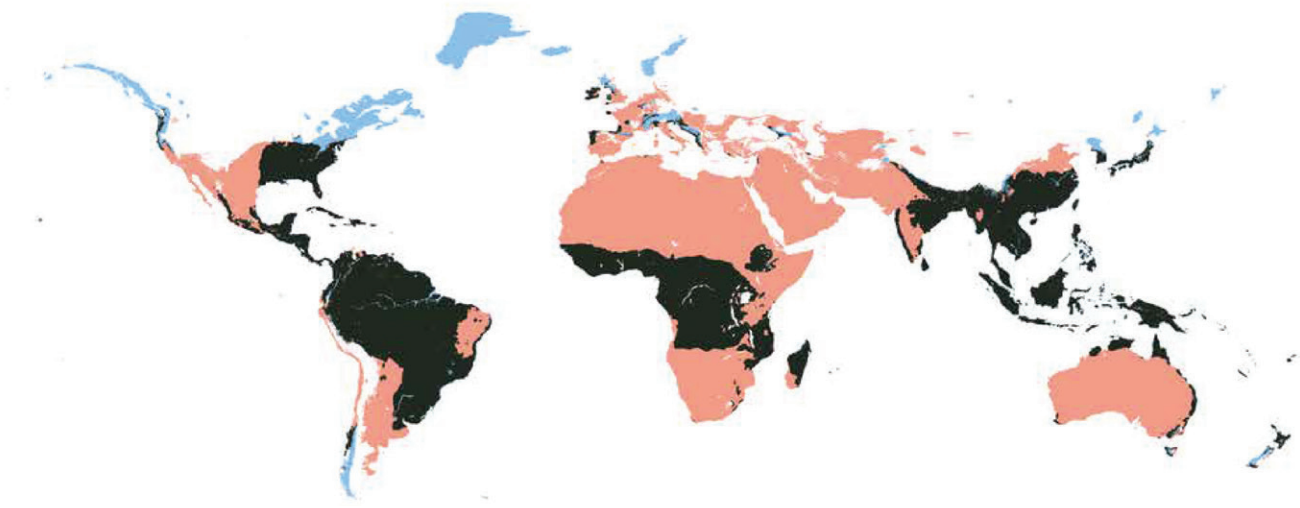
2020

As with much New York's shoreline, Redhook has been shaped by the growth of industry in the first half of the twentieth century and is currently being reshaped by the dual forces of 'last-mile' delivery and heightened flood risk due to climate change. While the former has stimulated plans to replace former industrial sites with shipping centers, the latter has spurred efforts to combine flood protection with a desire to 'green' the former industrial edge.

This project follows these two directions toward a synergistic end and, taking after the William Morris' *A Factory as it Might be*, imagines an integrated bamboo factory and park. This integration extends to the activity of the factory itself, which utilizes bamboo shive as both fuel for a biochar reactor and as aggregate for cementitious bricks. A series of four volumes united by a connecting mezzanine level are elevated on a plinth above the 7 ft. sea level rise projected for 2100 and, together with surrounding bamboo groves, create spaces blurring the boundary between public park and factory floor.







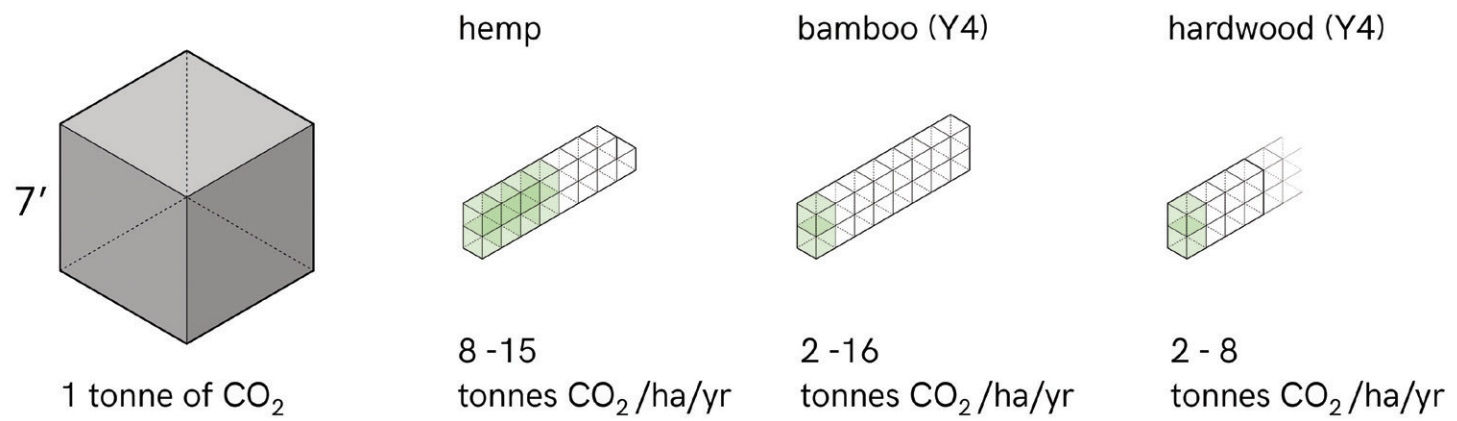
> 1,000 mm avg. annual precipitation * > 50°F avg. annual temp



CENTRAL PARK ≈ 341 ha

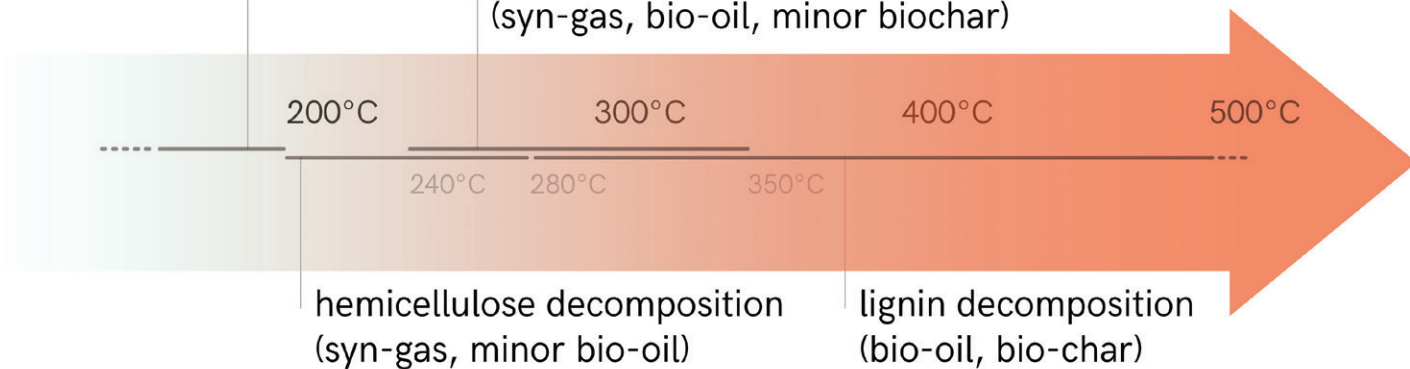
1ha = 10,000 m²

site = 19,340 m²



moisture removal

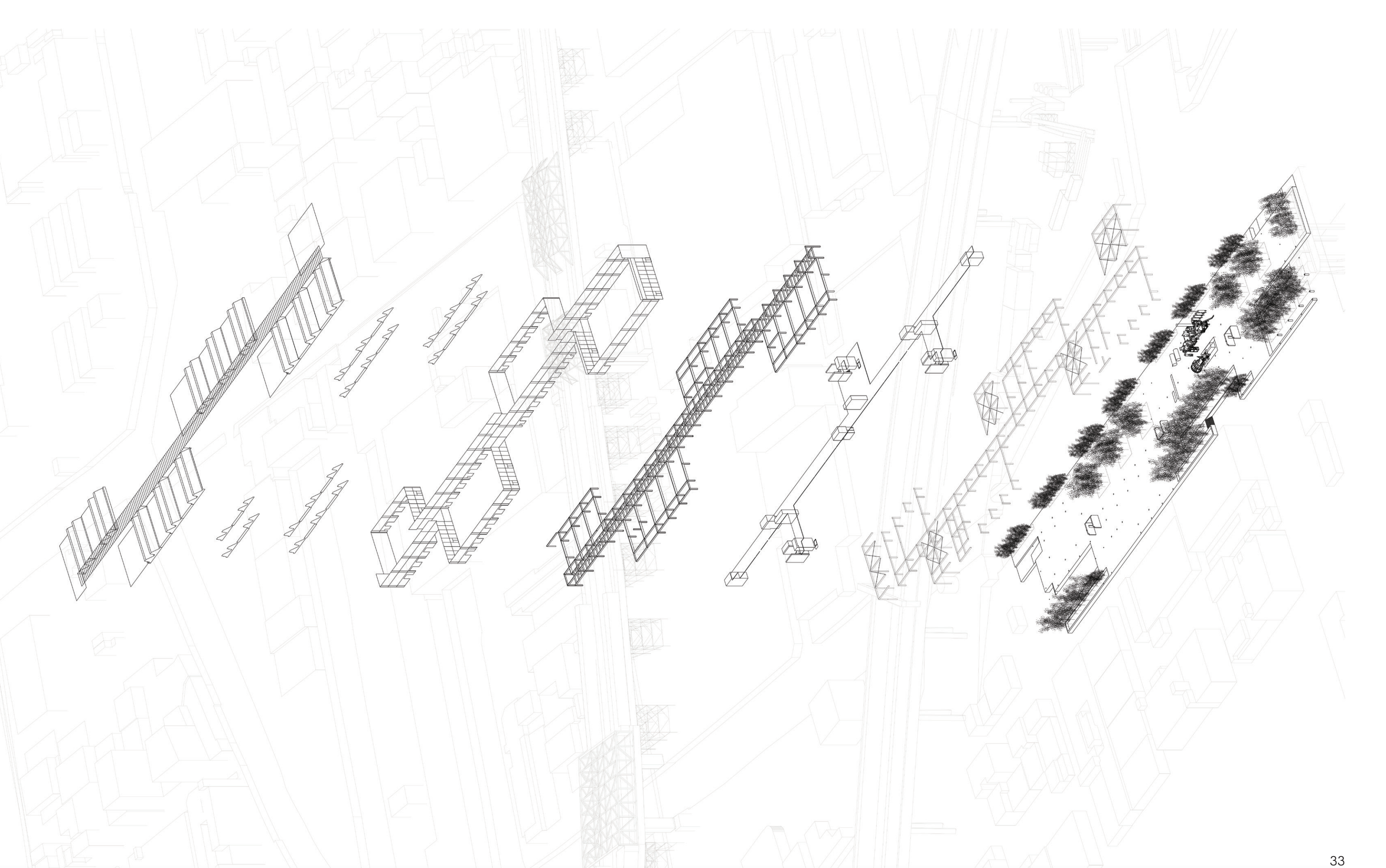
cellulose decomposition
(syn-gas, bio-oil, minor biochar)



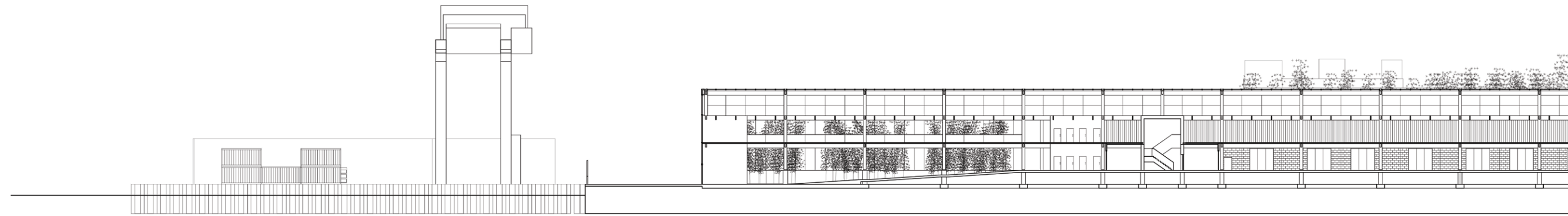
Hachiku
Phyllostachys nigra 'Henon'
50' height
5" diam.
zones 7 - 10

Yellow grove bamboo
Phyllostachys aureasulcata
18' height
2" diam.
zones 4 - 9



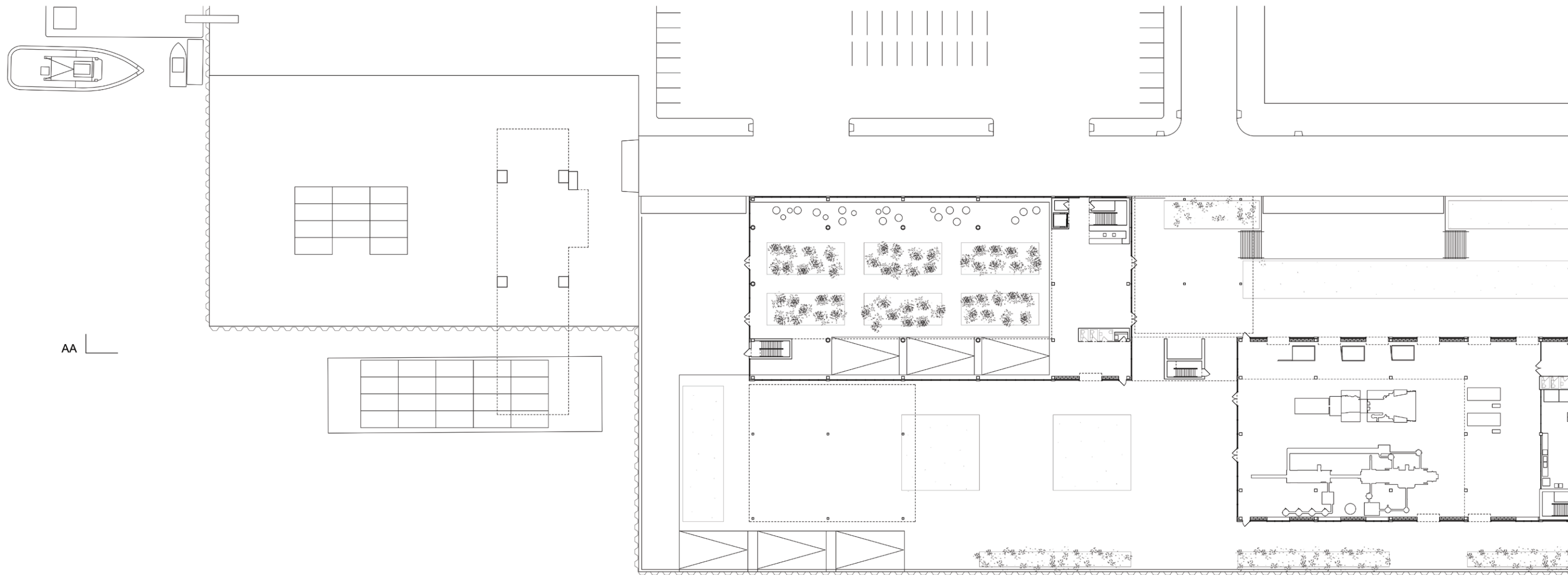


SECTION AA



G

BB



SCALE 1:300



