GSAPP, Columbia University
M S Advanced Arhitecture Design, 2020

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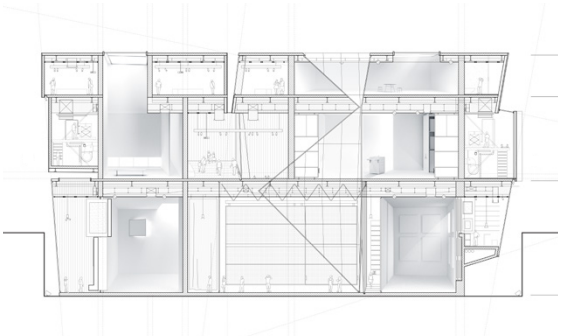
01 Museum With Only Galleries

Summer 2019
Advanced Arch Design Studio, GSAPP
Critic: Mimi Hoang, Eric Bunge
Teammate: Yining He

As with most culture and technology shifts, the transformation of the museum as a type has been gradual enough to go largely unnoticed, or at least incrementally accepted, by the public. Meanwhile, the development of new art forms either outpaces or is sometimes constrained by the spatial and technical capacities of the spaces in which they are displayed or enacted to the public. Has the museum as a builiding type grown too complex? Or should we, as architects, embrace this increasing complexity?

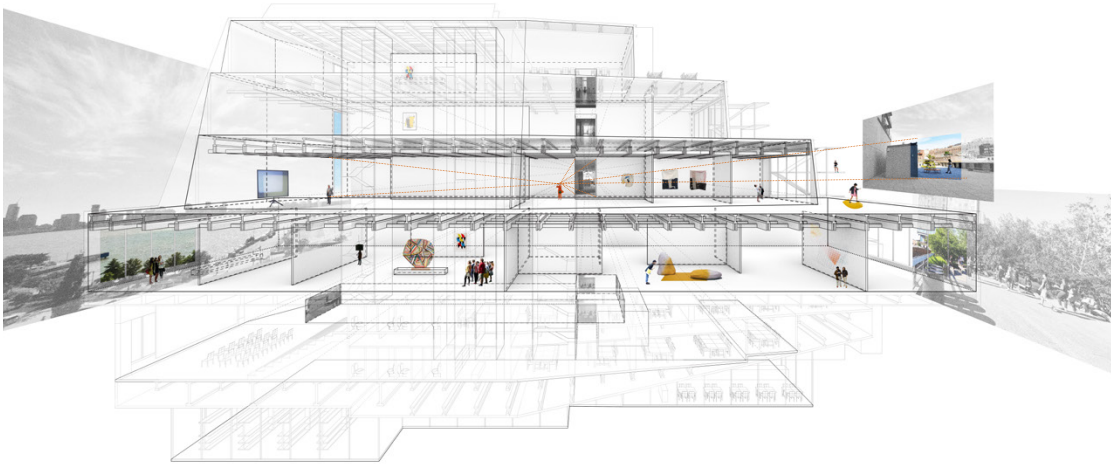
In the world of museums, as more portions of non-gallery space are becoming galleries, we envision a museum with only galleries, an architectural device that downplay such binary program distinction by creating a binary spatial prototype. Meanwhile, the binary spatial experience provides a more dynamic and flexible alternative for institutions and curators.



Precedents Study

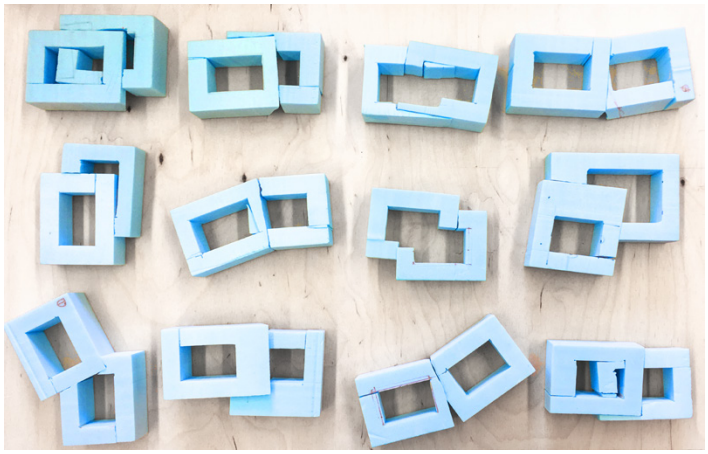
From our precedents, both the diverse room-scales created by poché in Sir John Soane's Museum and the glass door which allows visitors to peak through workspace in the Whitney Museum suggest a certain flexibility for galleries / museums.

Sir John Soane's Museum



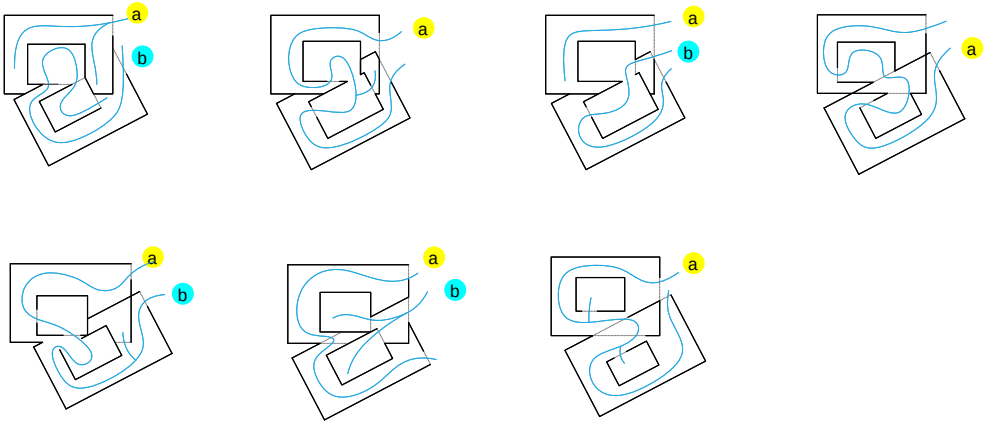
Whitney Museum

Form Study Model

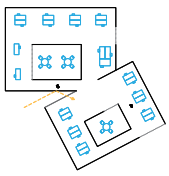


We proposed a prototype with the back of house wrapping the front of house. By paring such units, we can create more scales and connections between the two spaces. The wrapping layer acts as the armature for art which has the spatial quality on the contrary to the neatness of the wrapped layer.

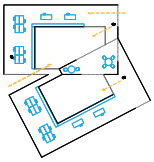
Combo Circulation



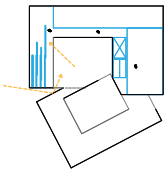
Program Combination



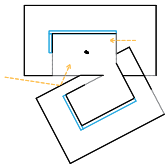
[office as gallery]



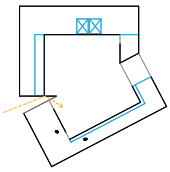
[library as gallery]



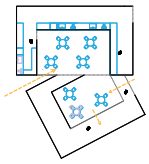
[storage as gallery]



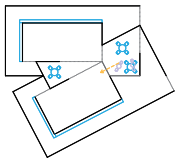
[gallery with gallery]



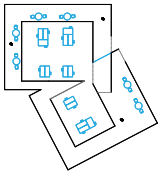
[reception as gallery]



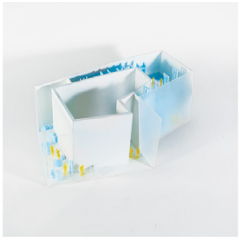
[restaurant as gallery]

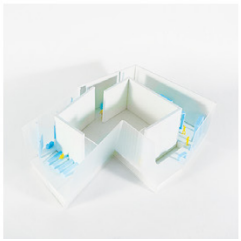


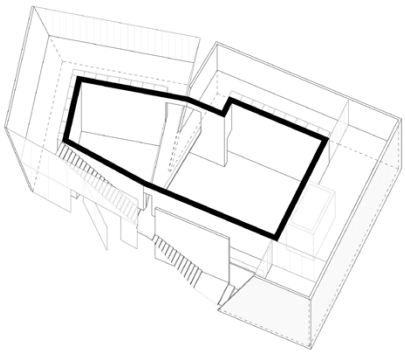
[lounge as gallery]



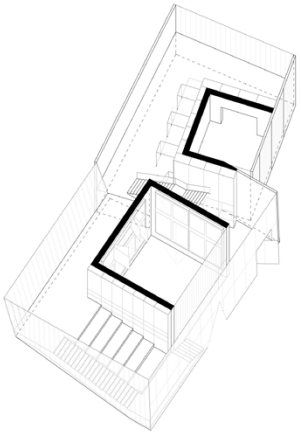
[lab as gallery]



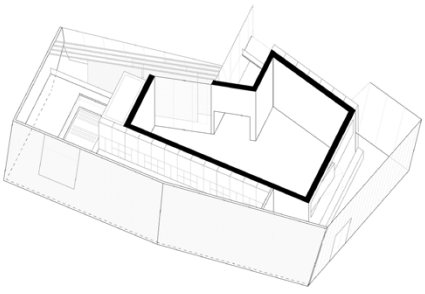




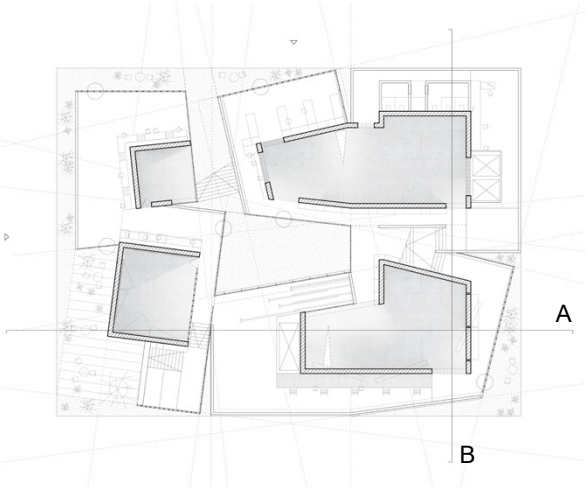
Reception as Gallery



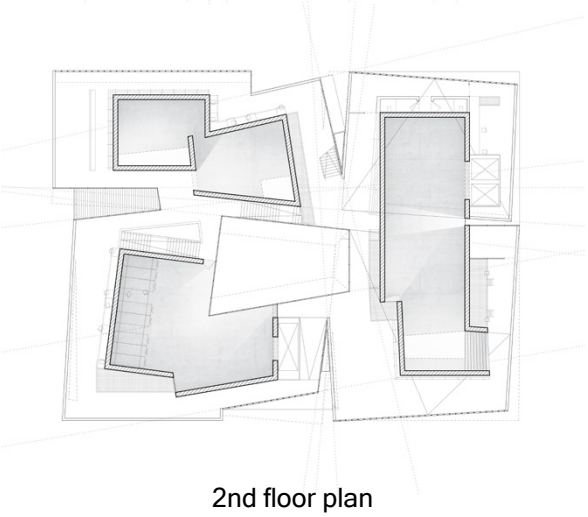
Library as Gallery



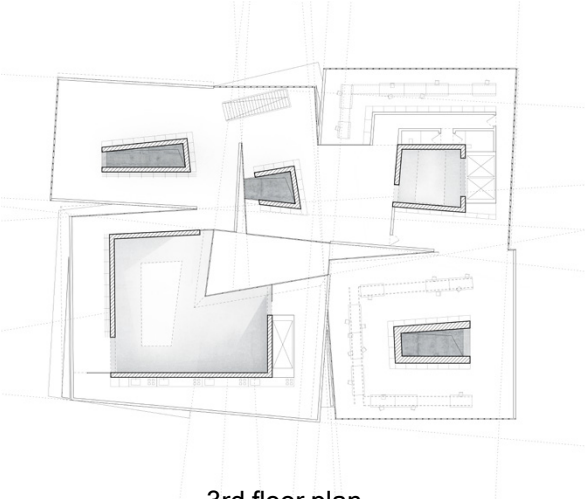
Storage as Gallery



1st floor plan

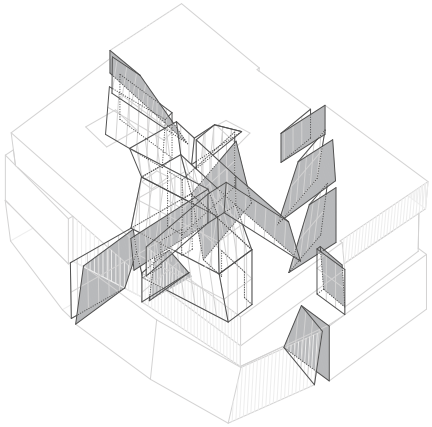


2nd floor plan

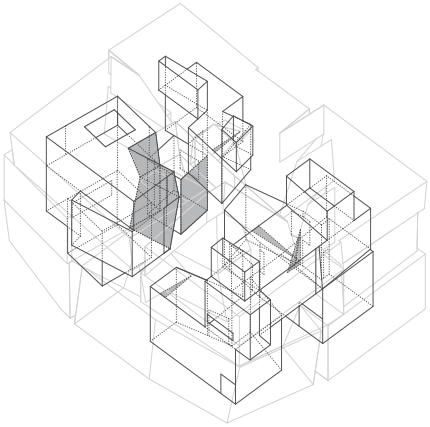


3rd floor plan

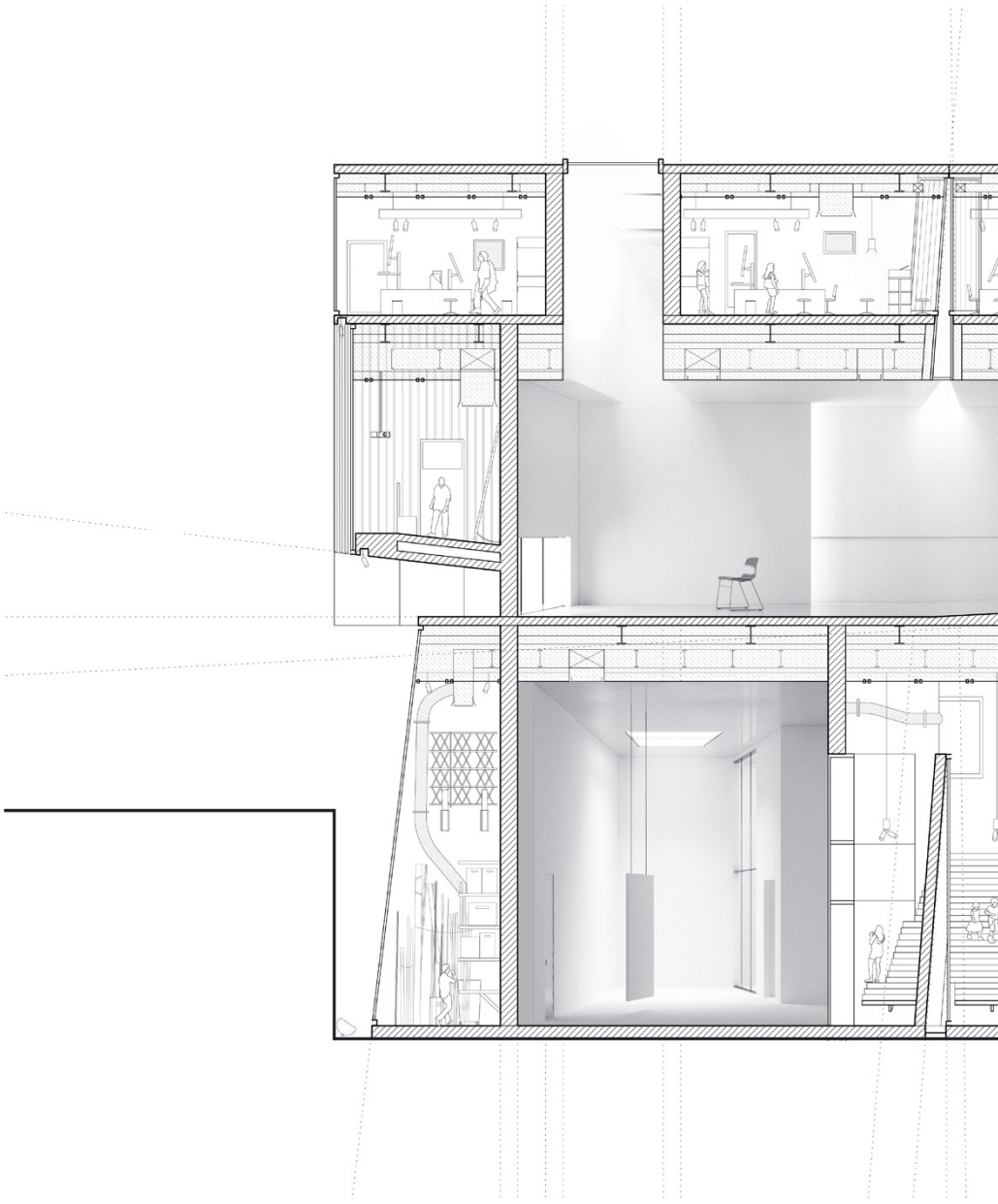
The operation of paring introduces a third spatial type – the crack. The crack brings light to the wrapped layer both in plan and section. It also brings forth a gallery type that is interactive with the city.

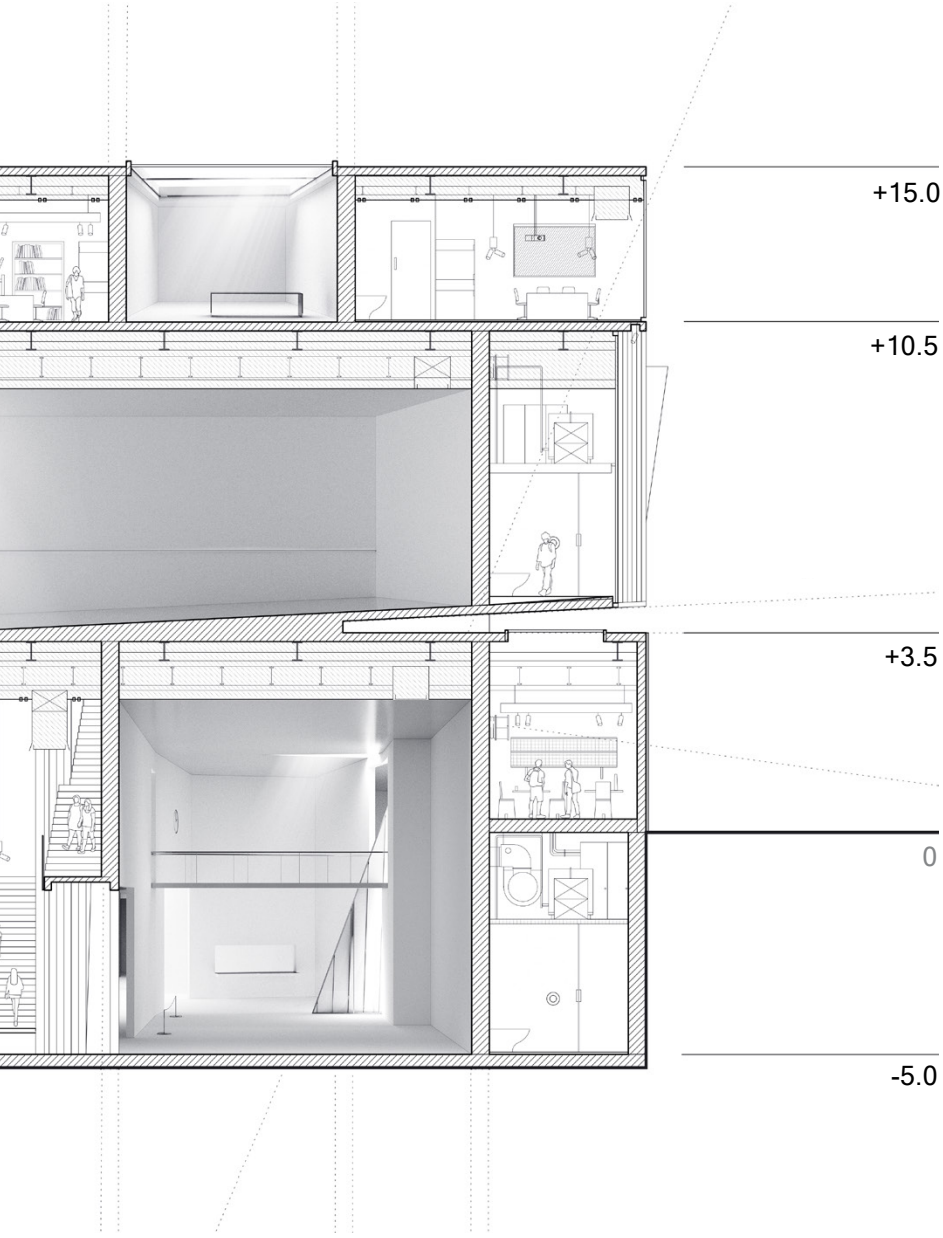


cracking system

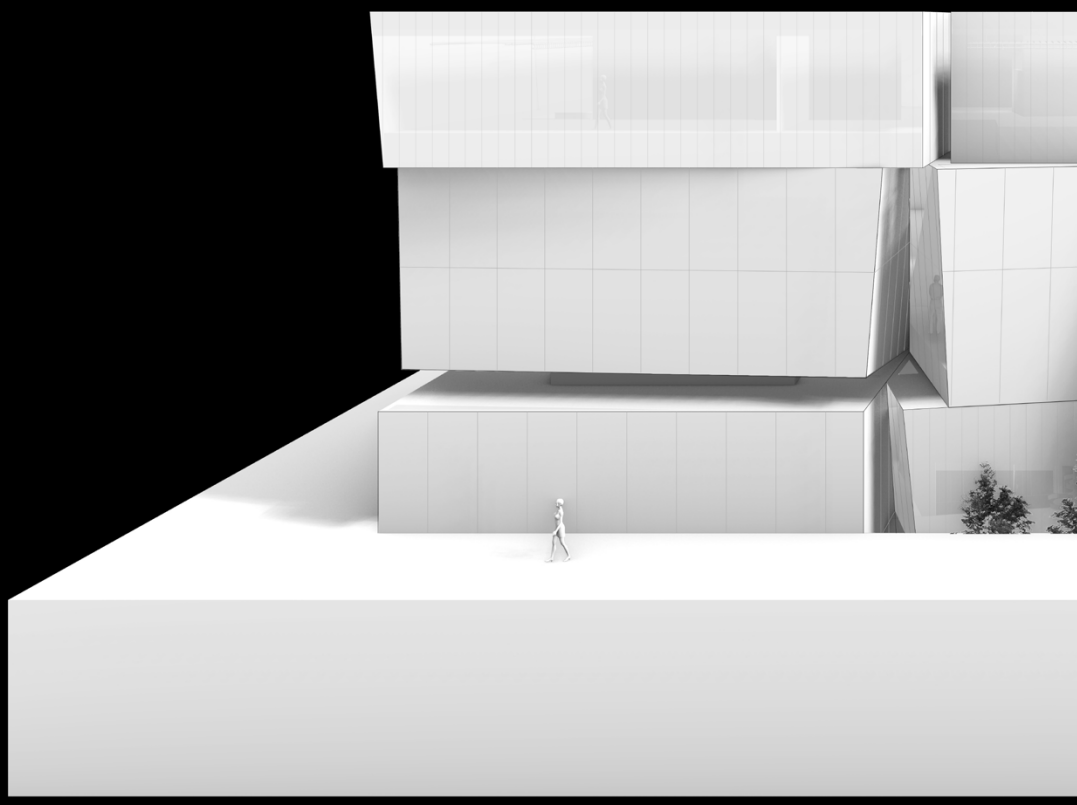


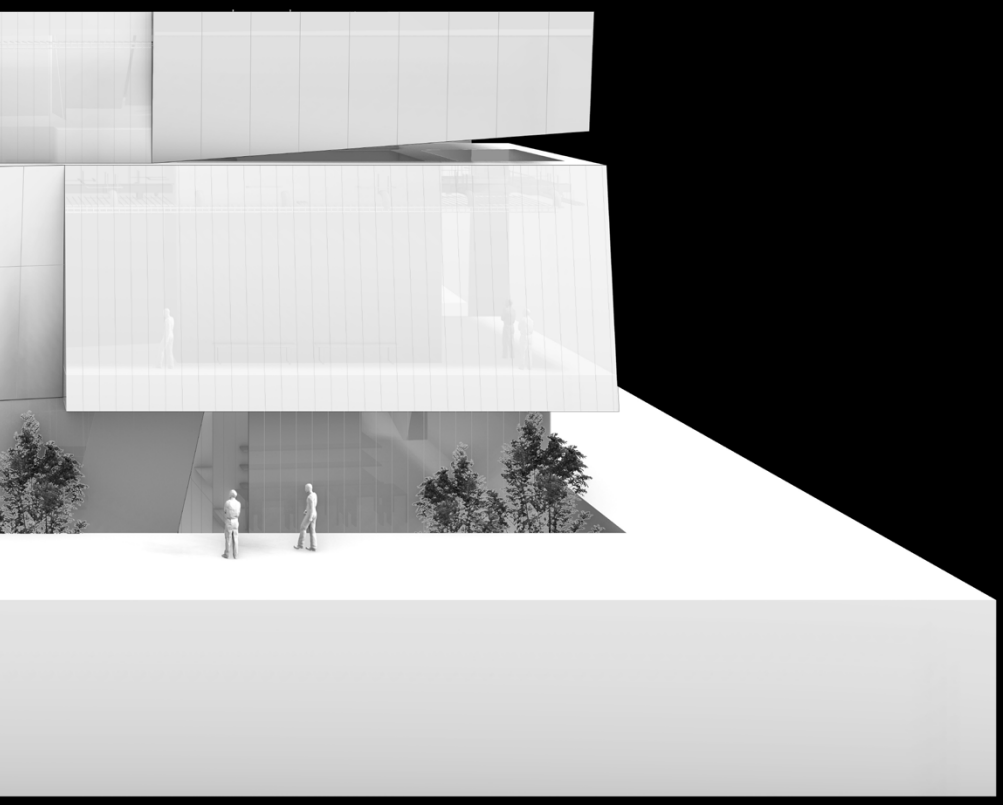
cracking interface





Section B





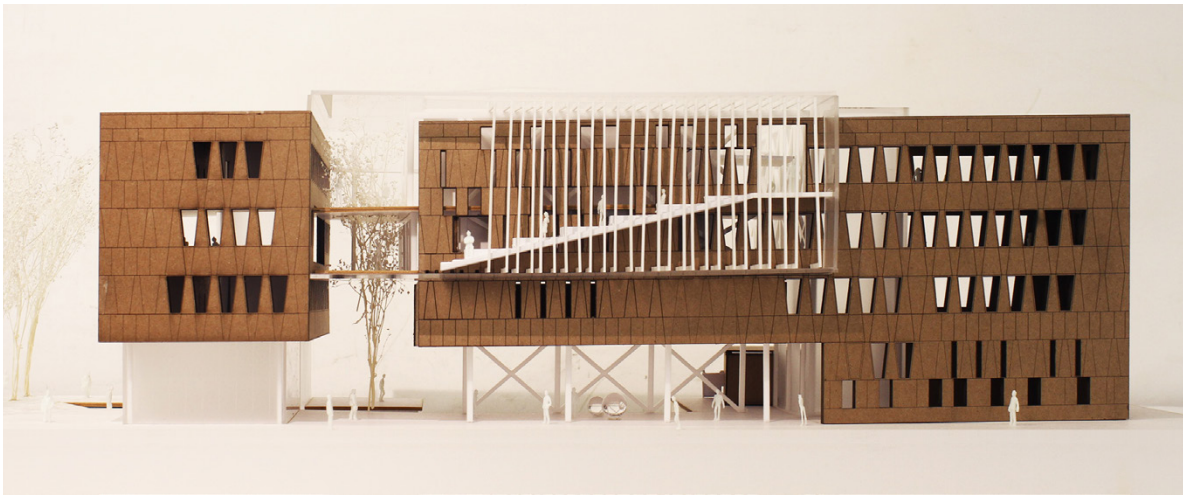
02 Renovation of US Eembassy in The Hague

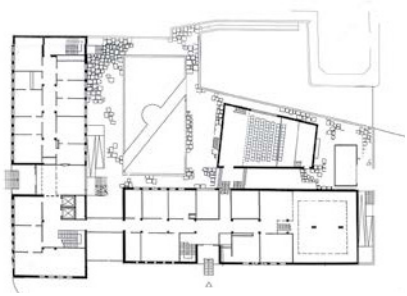
Fall 2019
Advanced Studio V, GSAPP
Critic Mark Rakatansky, Kim Yao
Teammate: Aseel Sahab

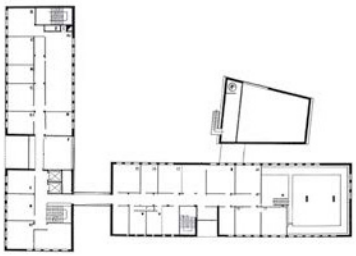
Embassy in The Hague, Netherlands, designed by Marcel Breuer and completed in 1959, is no longer viable post 9/11 for security reasons and thus has been decommissioned and is being renovated for contemporary use. In various ways the actual current plans to reuse the building for a hotel and a new home for the museum of the Dutch artist M. C. Escher resonates with this mixture of a commercialized cultural hospitality, the circulations and mixings of local and non-local culture, residents and non-residents.

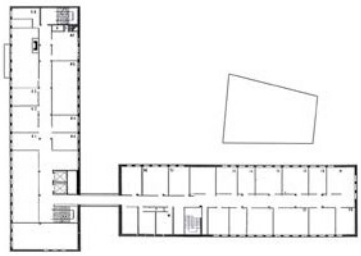
Aiming to explore the programmatic co-incidence of hotel and museum, we alternate two kinds of programs both in plan and section, increasing interaction between visitors and residents and meanwhile creating more public space shared by two programs. And as an augmentation to these two programs, considering the programs more relevant to the local context in the Hague and newly-developing curatorial methods, we narrow the hotel program, for local artists, and create art working space between the old builidng and new addition which is a huge free-plan gallery meeting contemporary curatorial needs.

With its heavy political history and brutal stone facade, this embassy building never showed a friendly or open manner to citizens in The Hague. By breaking its original heavy stone facade and open more public space on the basement and first floor, we want to rebuild an approachable image of this old embassy building and let it contributes more to the urban life in Hague.









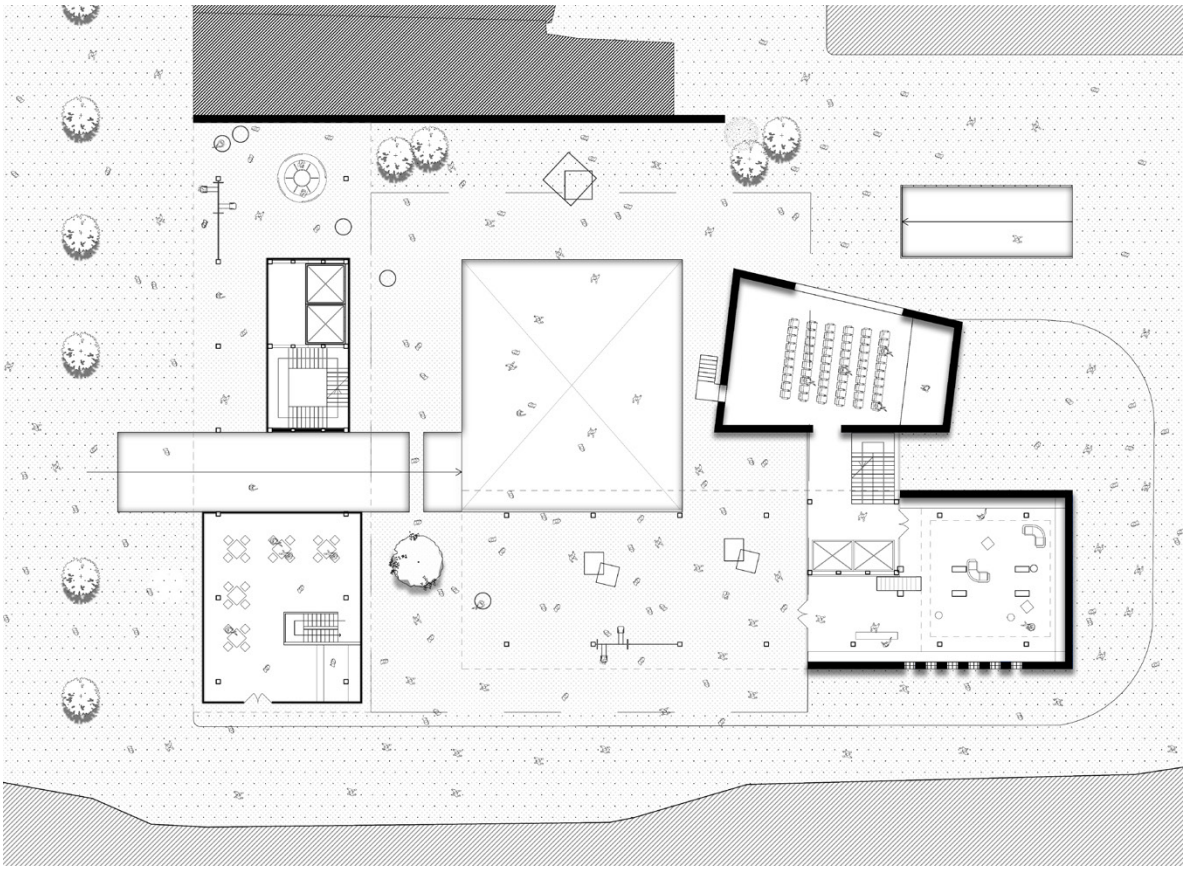
Marcel Breuer's Design

In the period when the embassy was constructed Breuer's work underwent a stylistic development: the pure modernist architectural idiom changed into a more personal idiom. In the embassy building this is expressed in the stone facade facing and the characteristic trapezoidal windows, which are unique in style. The distinctive features of architecture are its clear design idiom, the use of modest natutal materials and restrained colors, and well-considered dimensions and details.

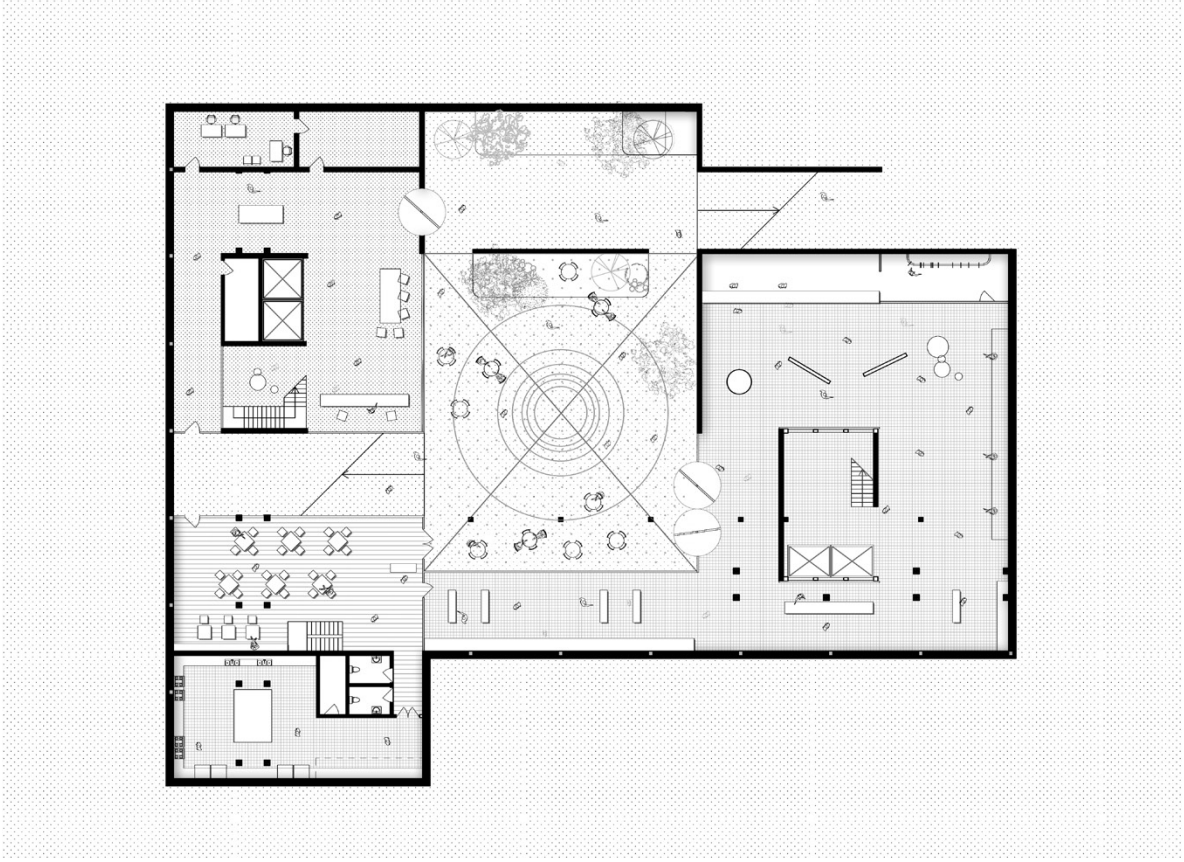
The layout of the building is clear and well-ordered, in both programmatic and spatial terms. The two main edifices each have their own entrance and are linked by a glazed connecting structure that benefits the flow. The bulding is relatively enclosed, with several sightlines through the building to the courtyard.

1 Lange Voorhout
2 Courtyard
3 Entrance Lobby for Museum
4 Entrance Lobby for Hotel
5 Museum Shop
6 Cafe
7 Auditorium

8 Hotel Guest Rooms
9 Gallery I
10 Gallery / Hall
11 Art Studio
12 Bar
13 Gallery II
14 Roof Cafe



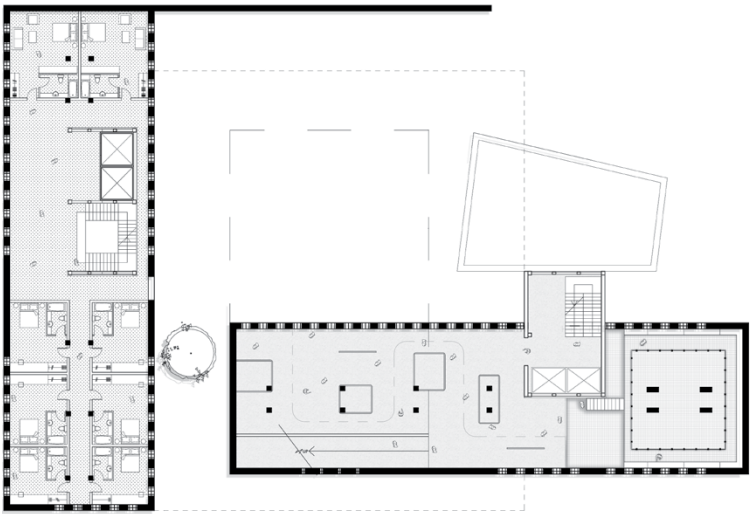
First Floor Plan



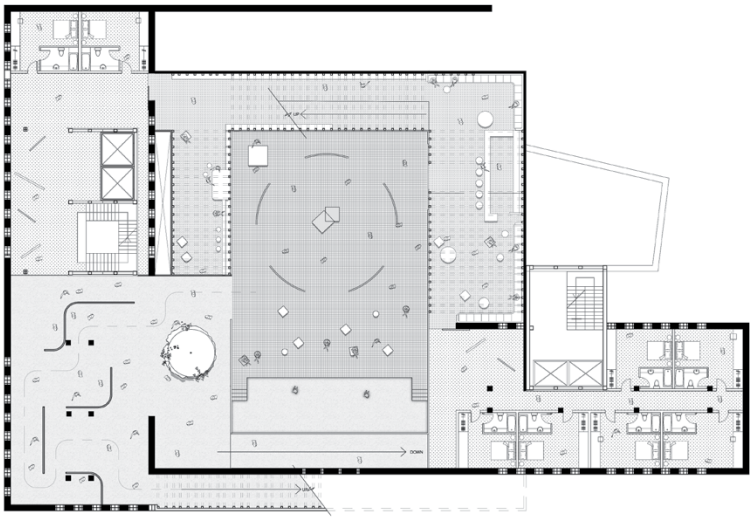
Basement Plan

Perspectiv

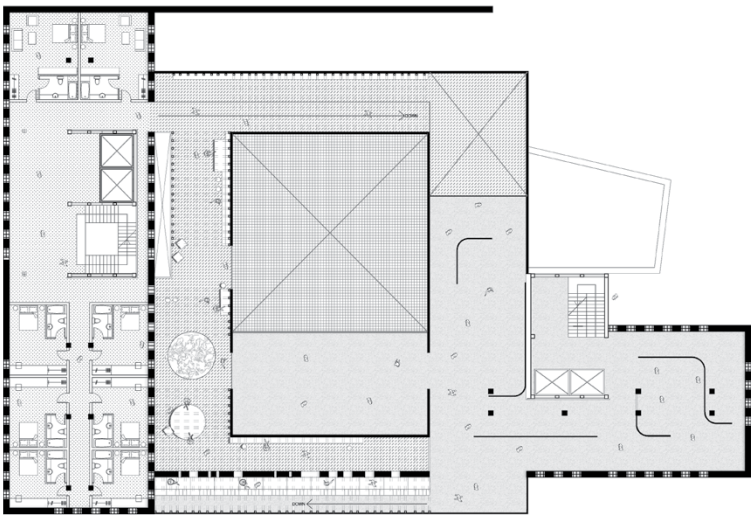
ve Section



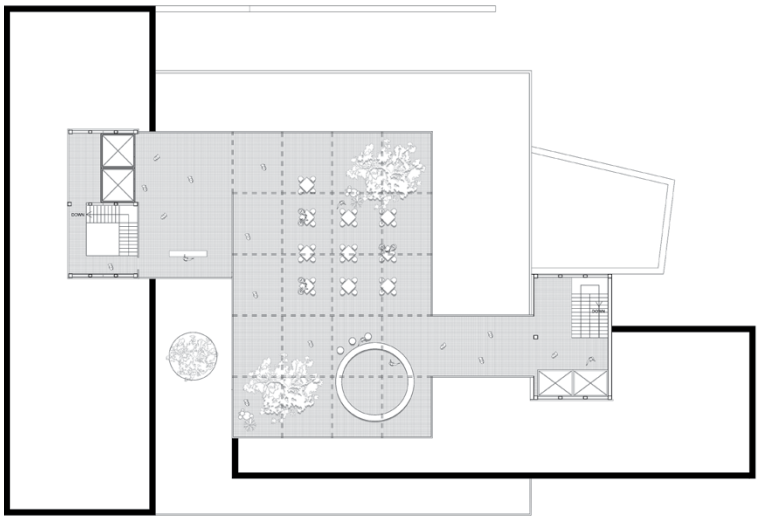
Second Floor Plan



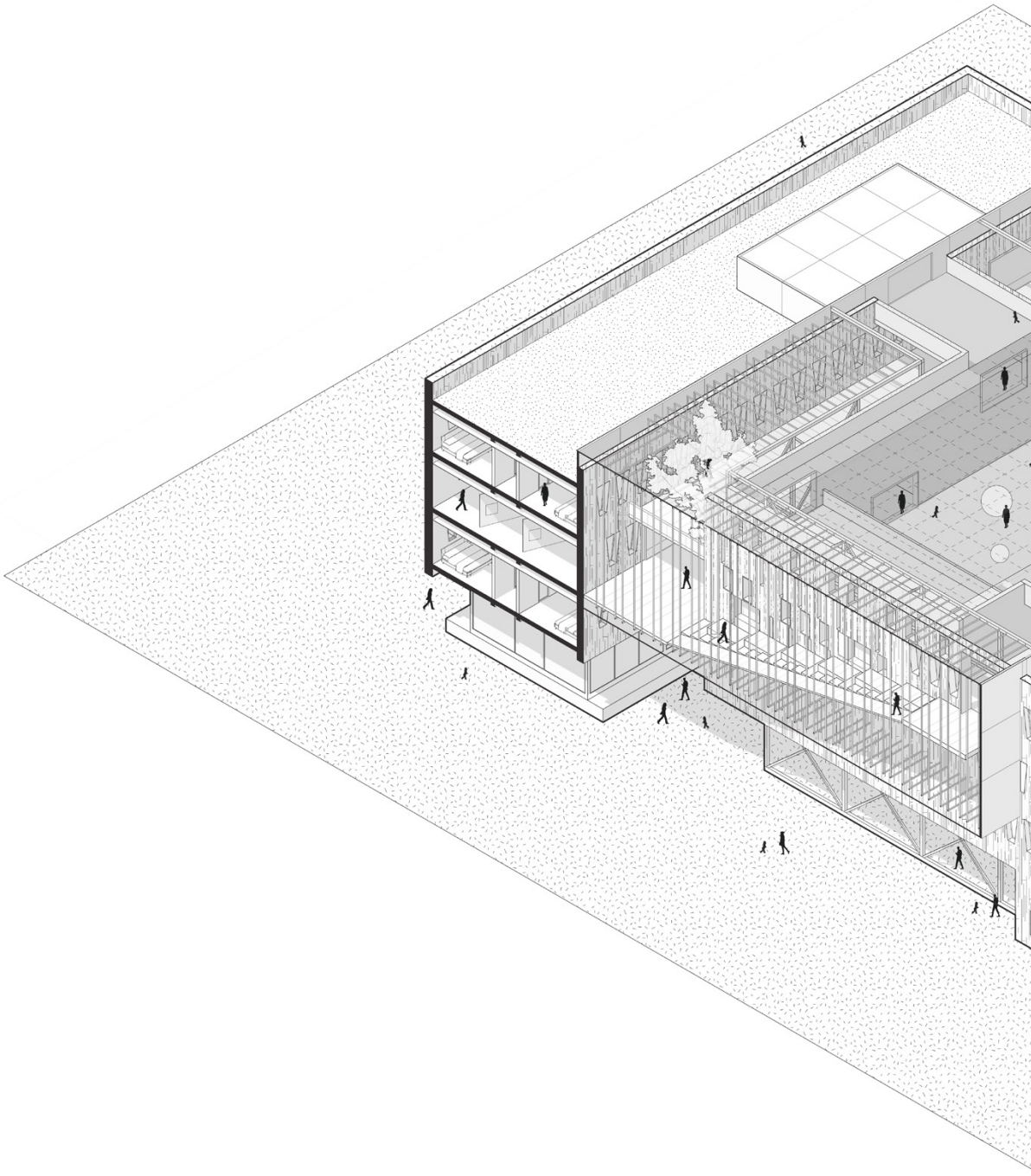
Third Floor Plan



Fourth Floor Plan



Roof Plan



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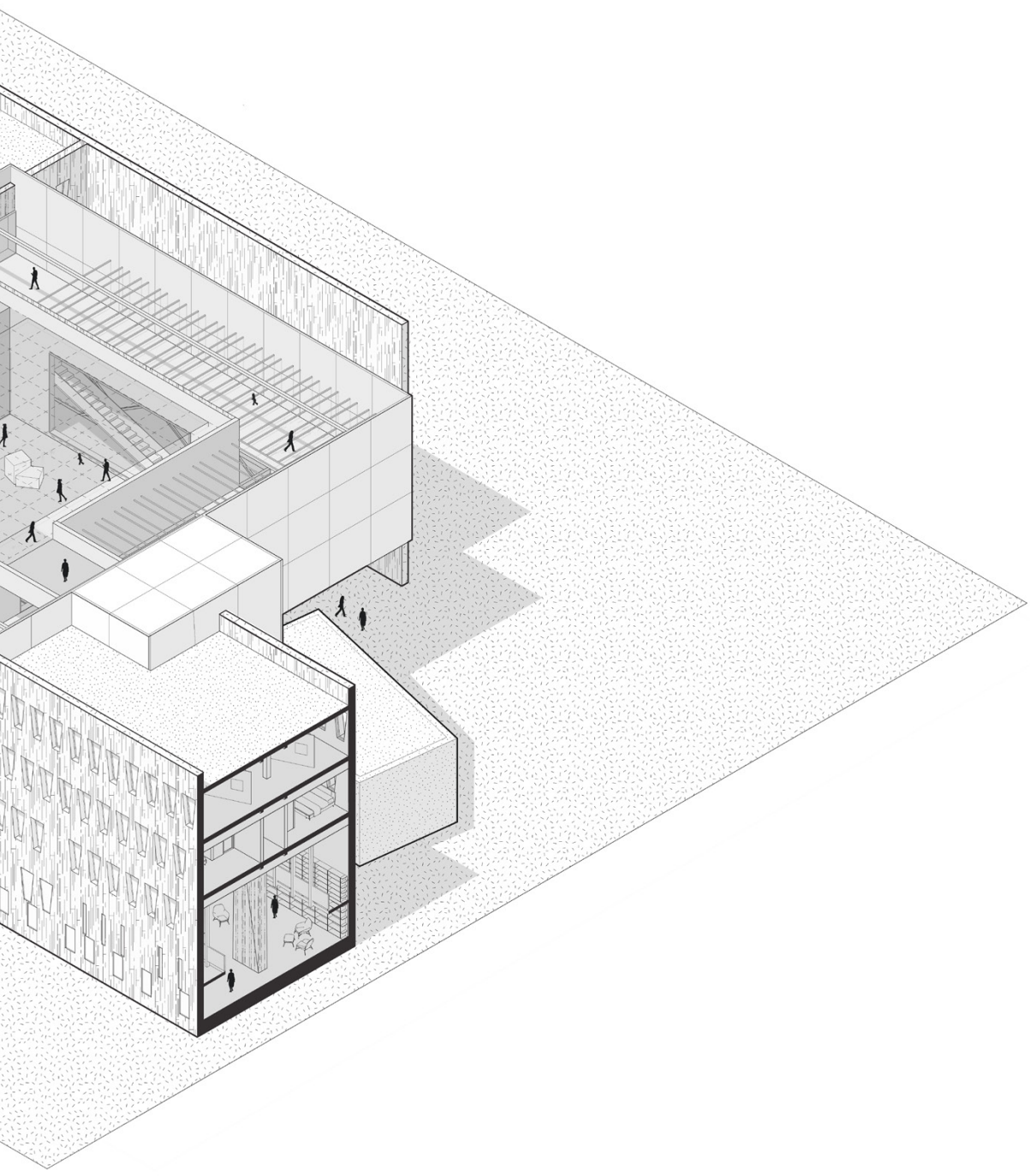


tric Drawing

03 Pollination on Fulton Street

Spring 2020
Advanced Studio VI, GSAPP
Critic: Liu Jing, Kevin Lamyuktseung

The Street Studio

In late Modern city planning, street design was almost entirely driven by traffic planning parameters with moderate consideration for vegetation. Today, from the homeless population in LA's Skid Row and London's tunnels, to the surveillance system deployed via street cams in Beijing and Hong Kong, from google's much contested sidewalk lab pilot in Toronto, to the pink Pussyhats and the yellow vests, the street in the new millenia is nothing short of the new frontier of cultural expression, public discourse and technological transformation.

Thus in the streets around the world, along with the apparent as well as latent fault lines of social fabrics and technological apparatuses, profound fractures can be seen everywhere. Domesticity of the disenfranchised confronts civility; camouflage tactics evades state control; the under-represented parades in a rainbow of colors. The old discourse of street design rooted in managerial ethos is fundamentally insufficient. With critical urgency, a new discourse fueled by new polemics needs to be forged in the emergent void.

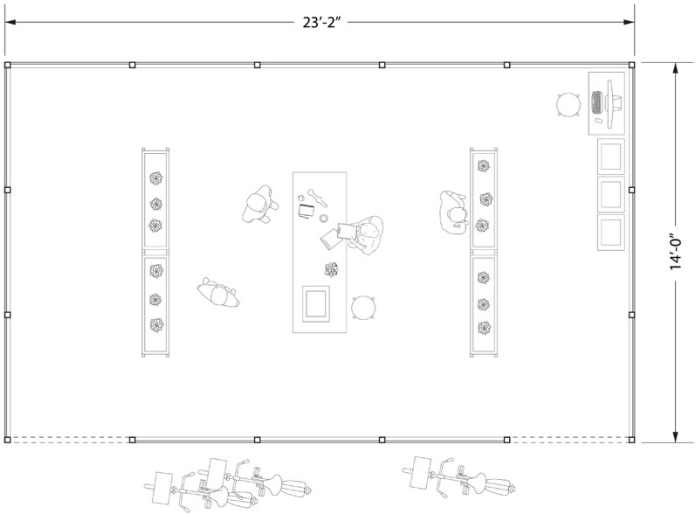
Prececdent Conceptual Model

Precedent Study

Pollination, SO-IL, 2011

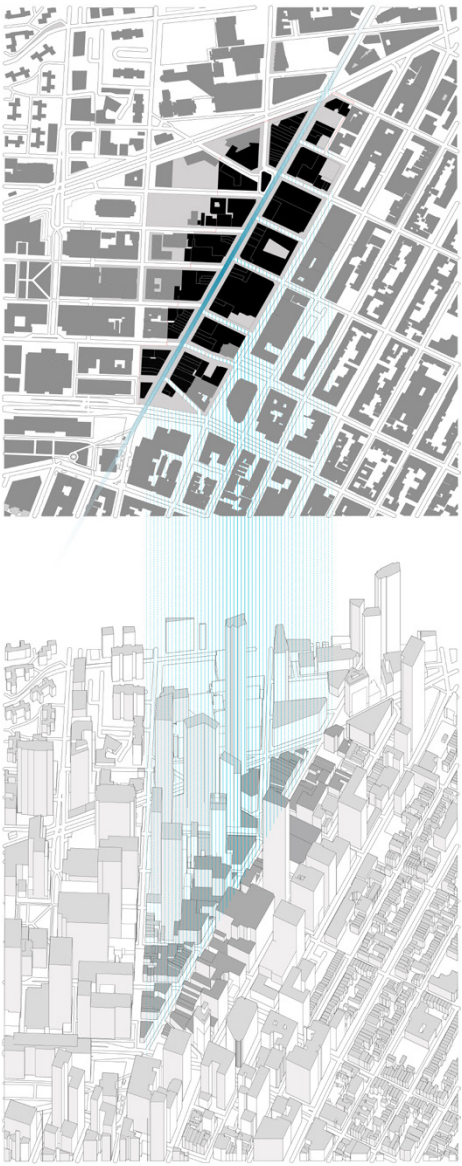
Pollination is a participatory ‘rogue’ city park for Chengdu, the capital of Sichuan Province in China, as part of the 2011 Chengdu Biennale. The installation consists of a lab, located at the Biennale ground where seed-bombs are produced, along with bicycles to carry them, and a live website to track their locations. Volunteer lab technicians create seed-bombs—compressed bundles of soil, seeds, fertilizer, and water. Participating residents then take a carton of these bombs on the designated bikes to a preferred spot in the city and throw them. The fertile mixture seeps into the cracks of the city and new plants find roots. The participants geo-tag the location by sending a text message or picture on their cellphone to a website that tracks the new distributed, participatory, and evolving park across the city.

Pollination provokes a discussion around the idea of the fertile ground in the context of Chengdu’s urbanization. What does it mean to transform, rather than starting anew? How to anticipate public green space beyond government planning? Pollination provides an infrastructure for residents to participate in the creation of greenery for the city.



Installation Plan

Pre-midtern Research



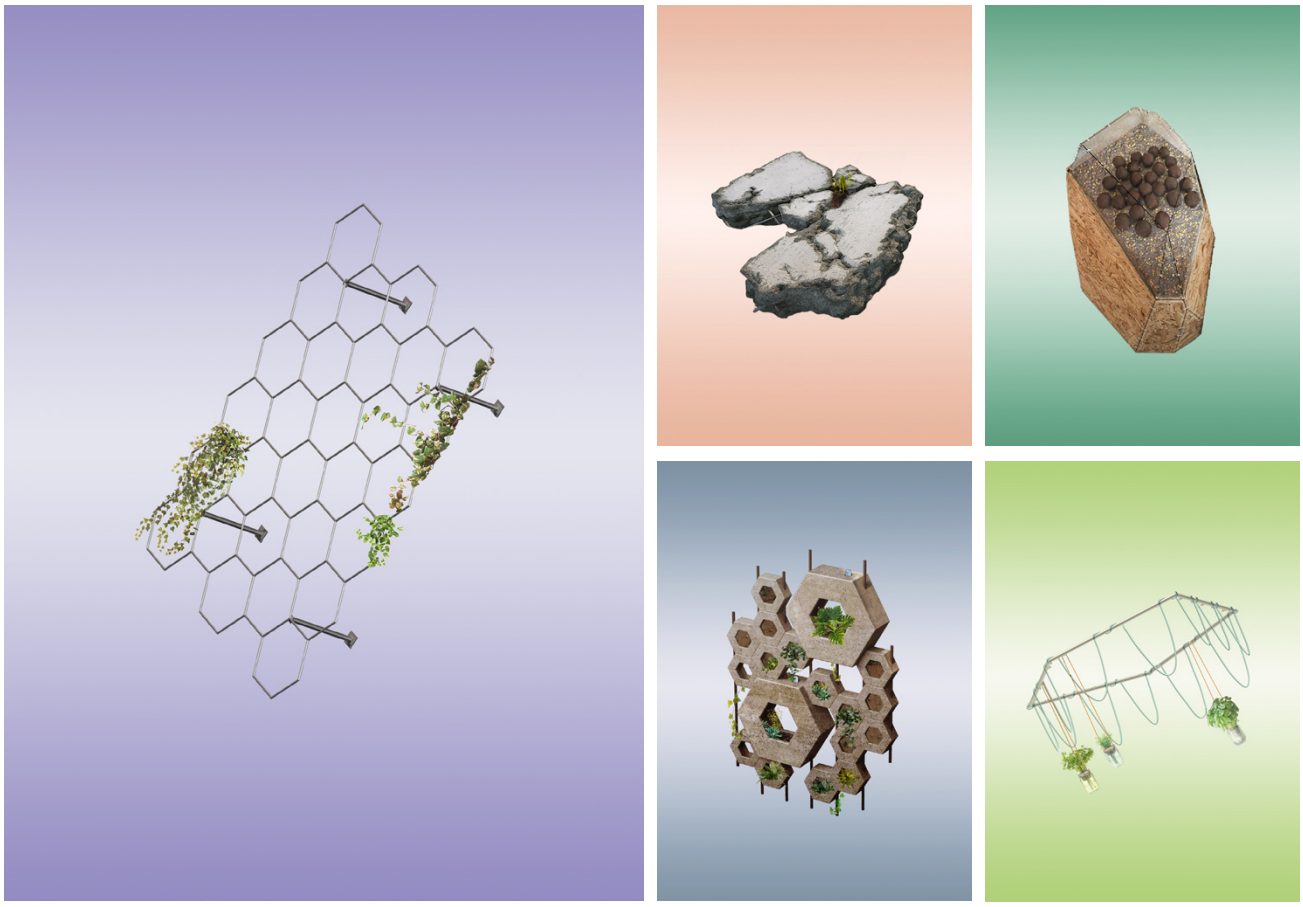
9 blocks of Fulton Mall

Here on the islands of New York City, several high profile and high stakes public realm projects including the highline, Governor's Island, Brooklyn Bridge Park and the Hudson Yard were completed in the past decade, changing how New Yorkers relate to each other and the real-estate landscape tremendously. We will map the studio project onto Fulton Mall in downtown Brooklyn, where the site is steeped in history, which is rapidly disappearing amidst rising new developments triggered by upzoning. Is it too late to rescue its history? Is it possible to imagine a streetscape that flows like a river of time and brings together the past, present and future?

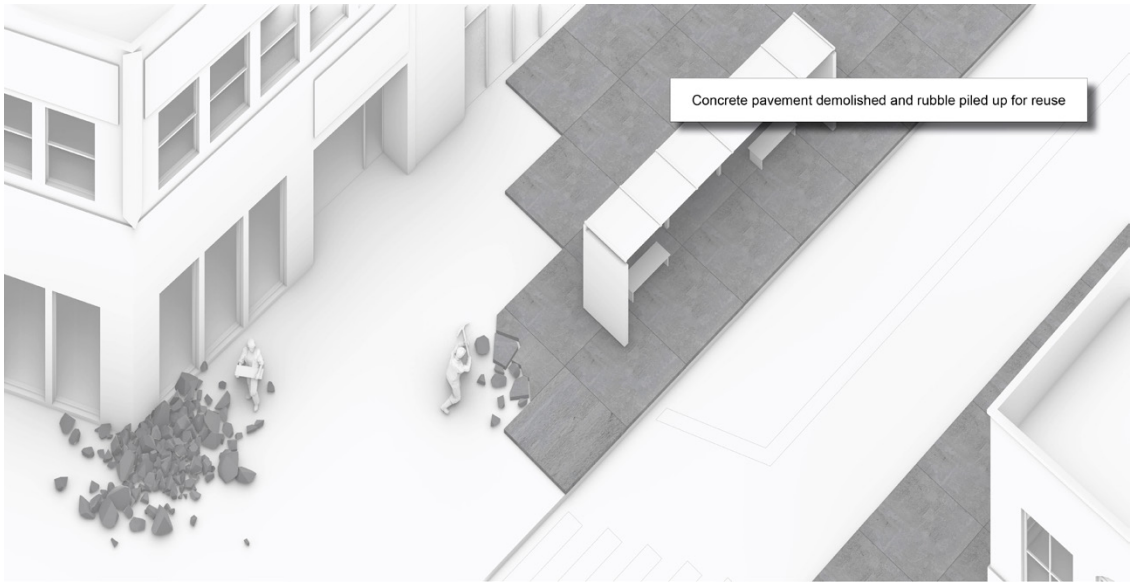
Inspired by Pollination, I envision that providing an infrastructure for people to participate in creating a growing streetscape in Fulton Mall will be the way out. By throwing seed-bombs in the crack of pavement, at the spaces between buildings, on the bared façade which is waiting for a new round of renovation and on the upper floors of many stores whose windows are boarded-up, people make Fulton Mall more vibrant and occupy the street in a more meaningful way. Those forgotten corners are always the last space developers think about and we could reverse that, looking at what we need and how we could achieve it by using them. The street can not continue to be just about economic growth, but to be about people's willingness and wellbeing. Once throwing your own seeds or buds at the street, you are no longer just a consumer here, but also a designer, a builder, a producer and an owner in Fulton Mall.

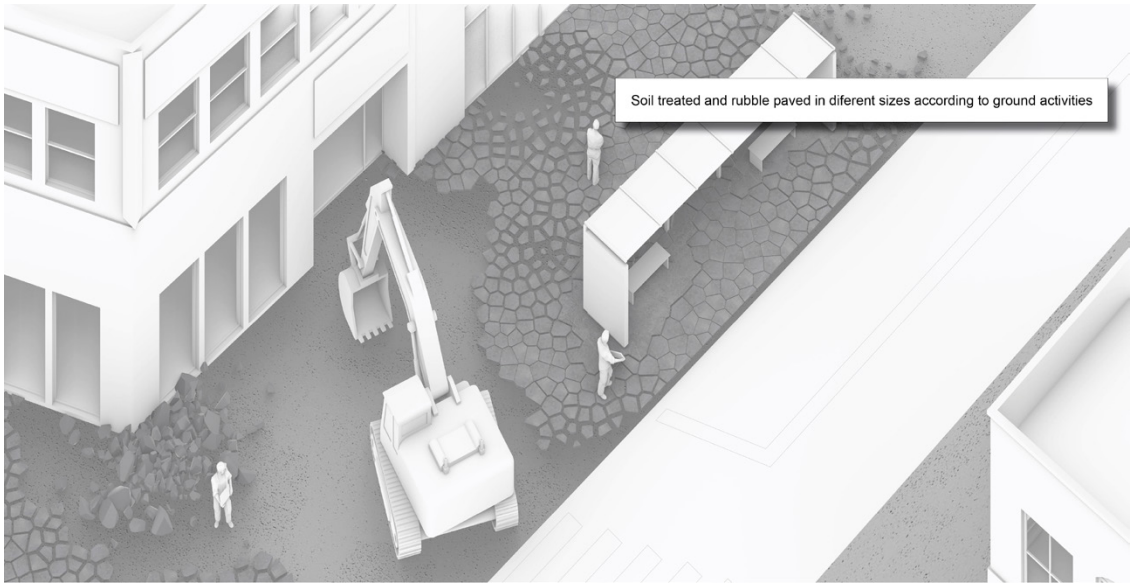
plant characteristic research

urban elements on Fulton Street

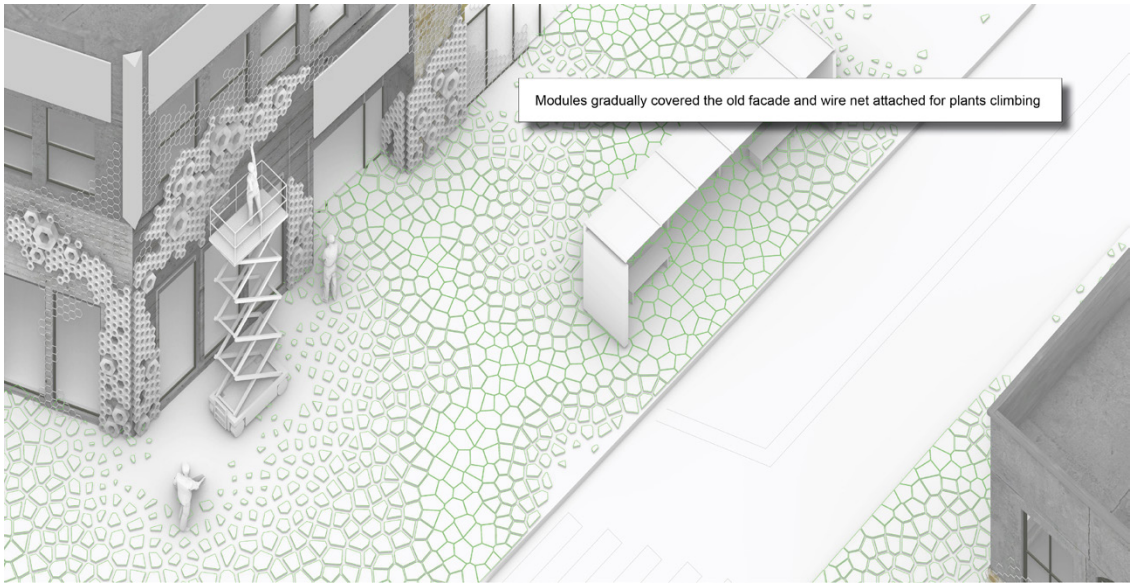


Plantable Modules

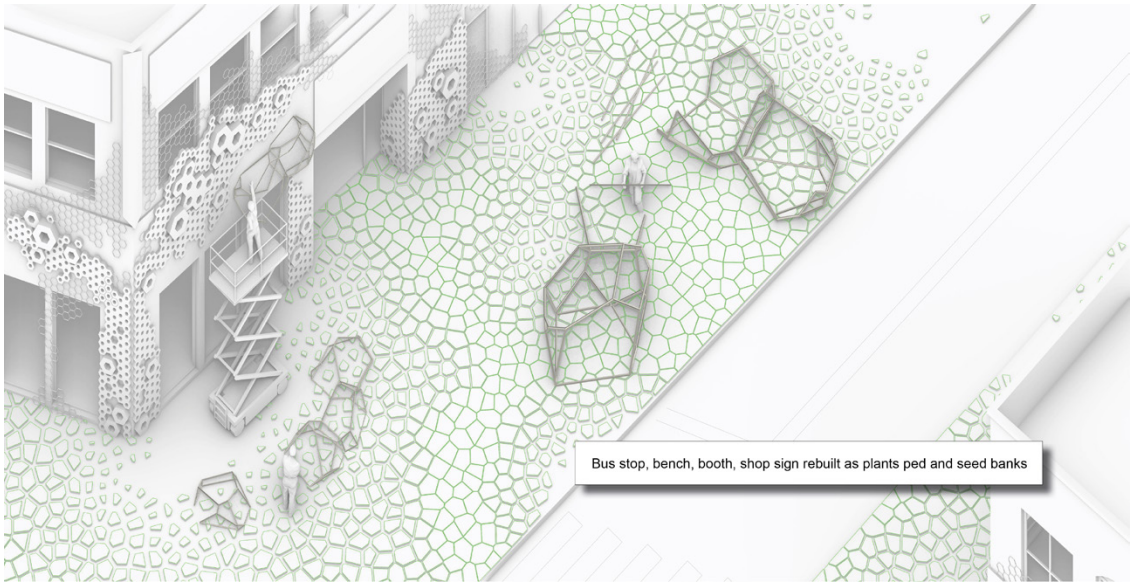




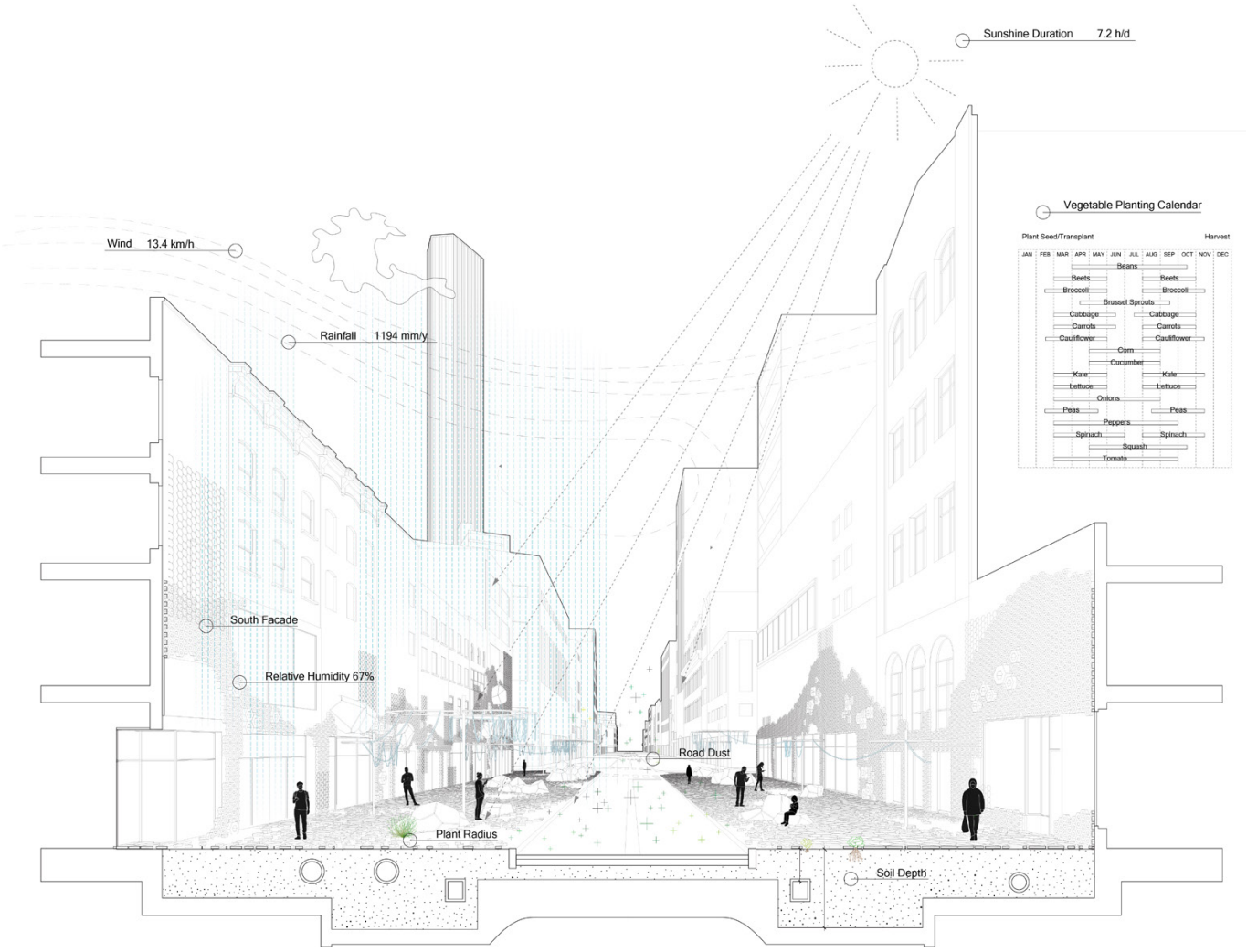
Construction Process I



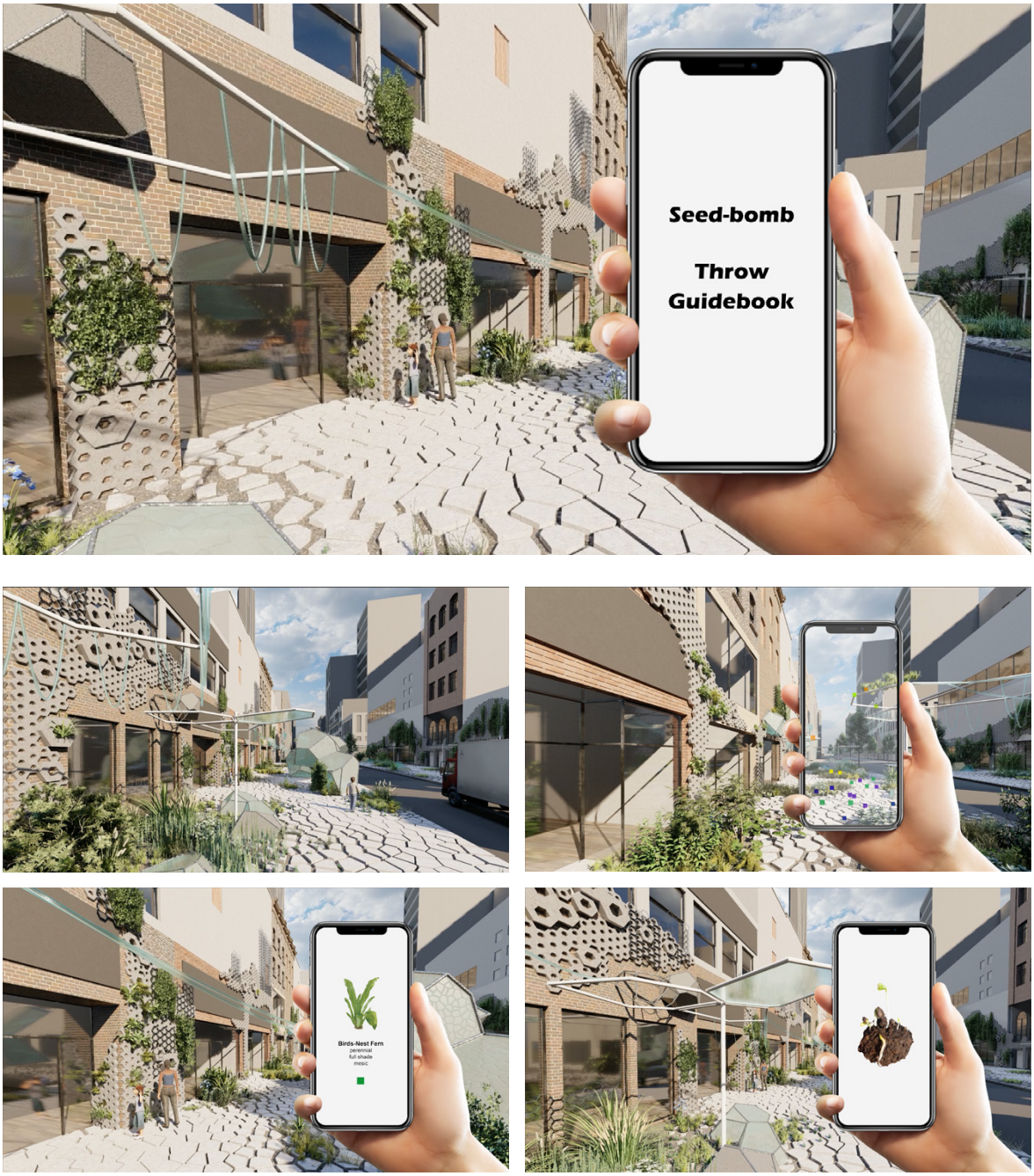
Construction Process II



Construction Process III



Conceptual Drawing



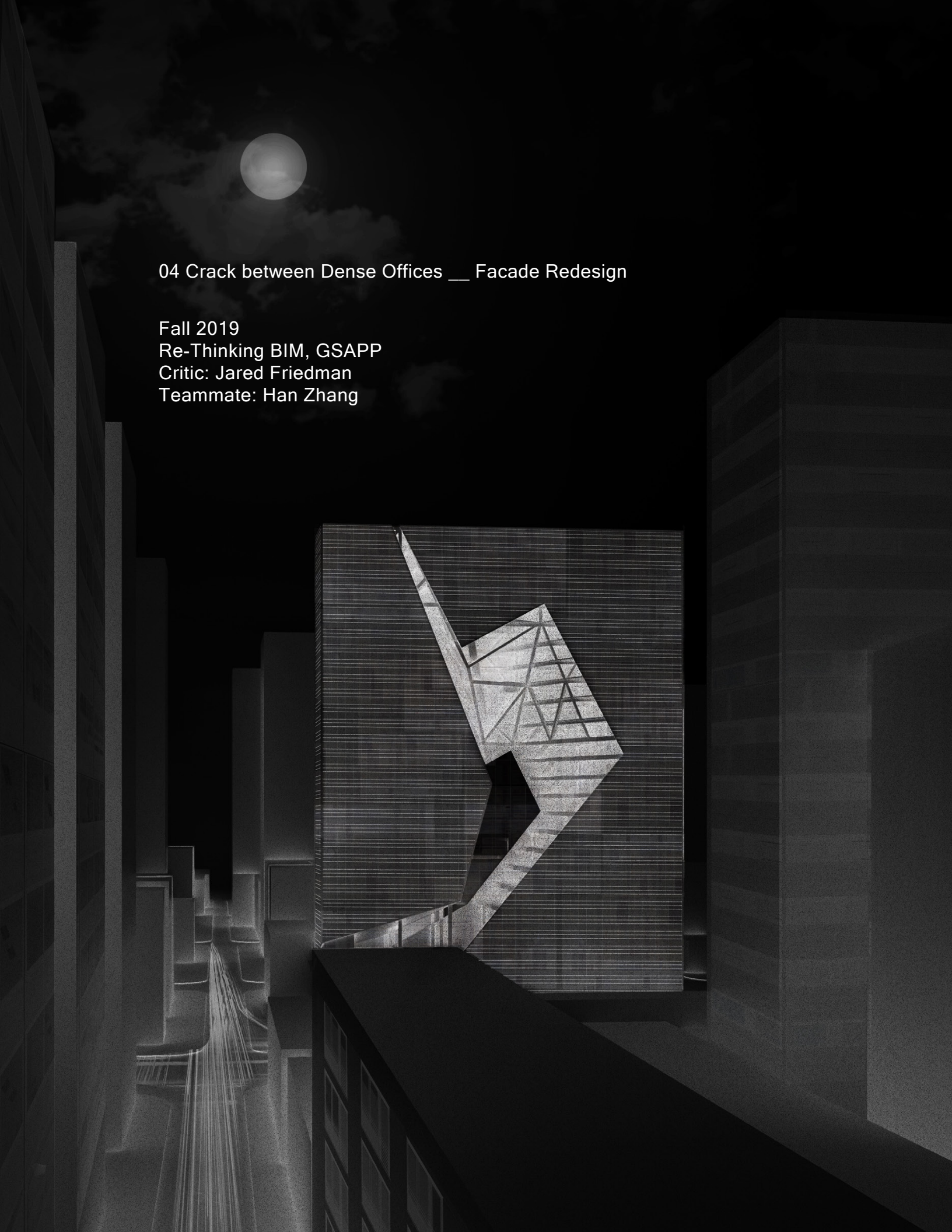
AR Guidebook System


SUNNY
MARKET
CHOICE
SOUND
ONETTE
Coca-Cola


GIFT Shop
WATCHES BELTS TOYS

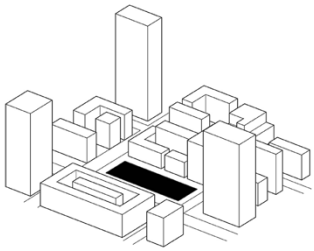
04 Crack between Dense Offices __ Facade Redesign

Fall 2019
Re-Thinking BIM, GSAPP
Critic: Jared Friedman
Teammate: Han Zhang

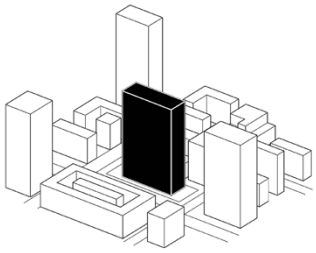


The project is located in Future Sci-Tech City, Hangzhou. This district is an important incubator for many large IT companies in China, among which the the most famous one is Taobao, Alibaba. The Future Sci-Tech City covers an area of 113 square miles with dense office buildings. Tens of thousands of employees are working here and more than half of them are programmers.

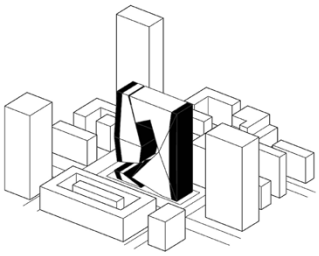
According to the report: China Programmer Research 2018, the programmers in Hangzhou need to work for 49 hours weekly in average. Many of them spend more time in their office than at home. In addition, a report from CBRE in 2015 shows that the work environment is more and more crowded in the big city of China: the working space for one employee is only 50 square foot in average. The lack of meeting rooms and rest areas is one reason to force employees keep staying in their own working seat. Both the long working hours and the crowded office space make people ask for a "crack" in daily tedious life, through which they can snatch a little leisure from a busy life.



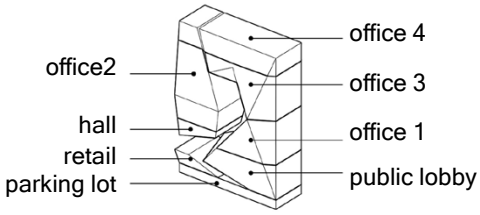
Site 2500㎡



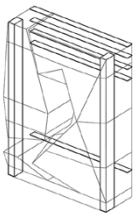
Volume & Height: 30000m², 96m



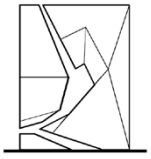
Massing Development



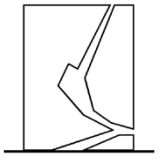
Program



Circulation

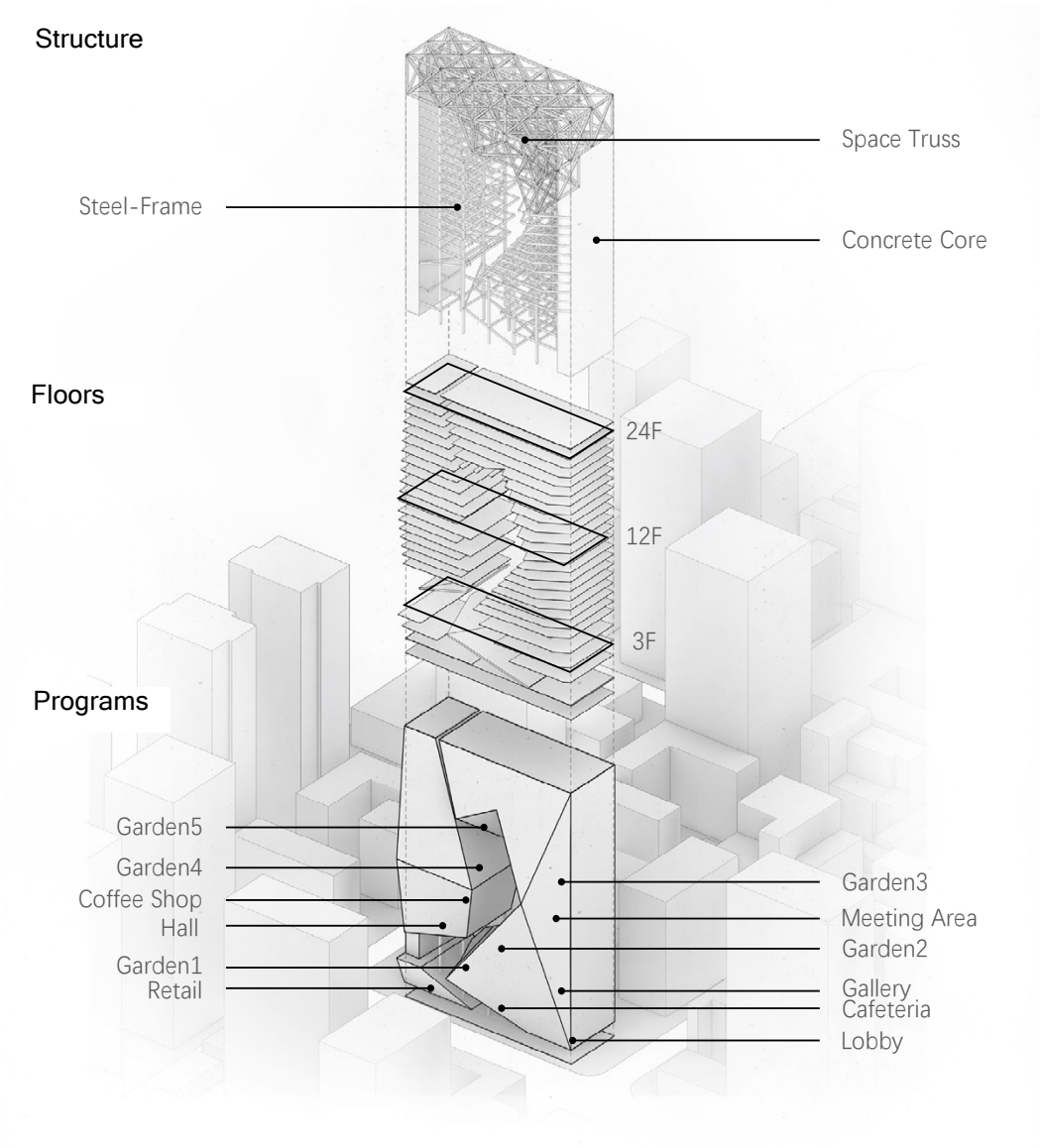


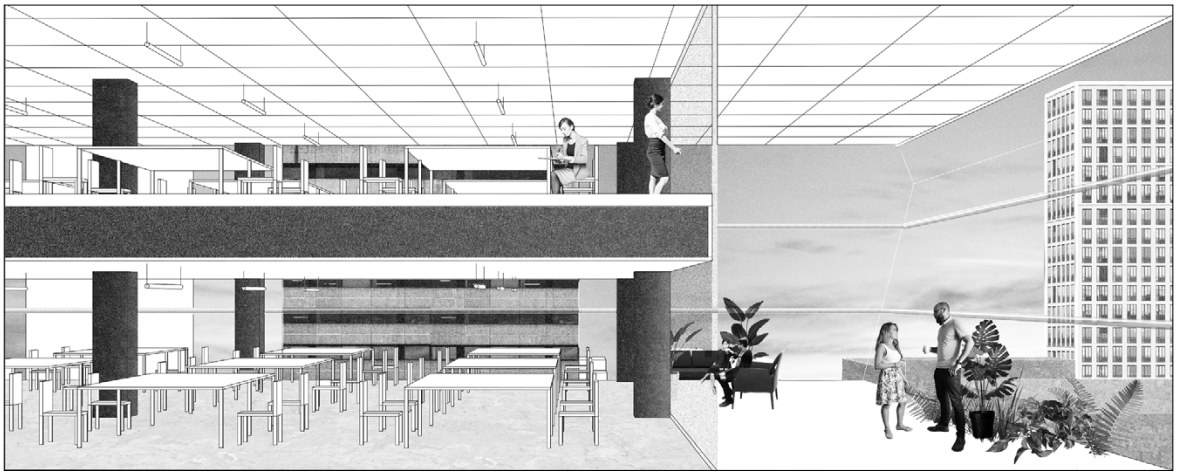
South Elevation

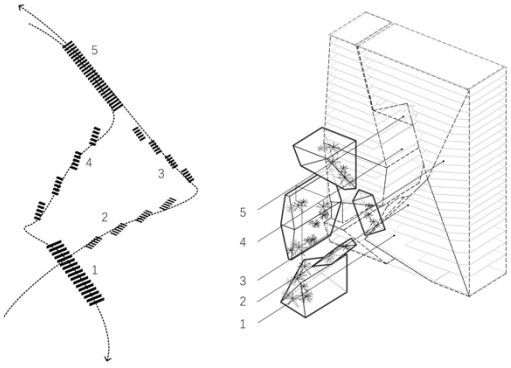


North Elevation

West Elevation


Structure
Space Truss
Steel-Frame
Concrete Core
Floors
24F
12F
3F
Programs
Garden5
Garden4
Coffee Shop
Hall
Garden1
Retail
Garden3
Meeting Area
Garden2
Gallery
Cafeteria
Lobby





The strategy to trigger social contact is to set those around the Crack:

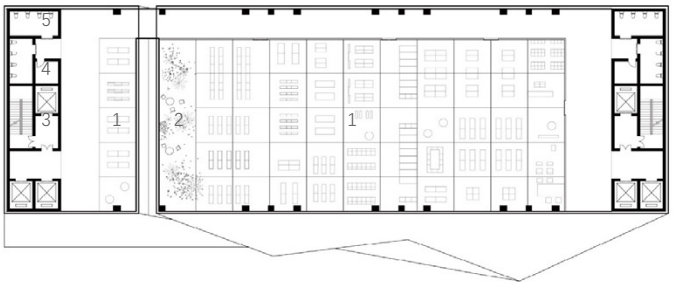
The view of vegetation helps to create an active and intimate environment. People in different offices make use of informal connections in these five gardens to get to various public program, increasing the chance to make new acquaintance in the same building.

3rd floor plan

1. gallery
2. video screen
3. lobby
4. cafe
5. garden
6. fire front room
7. equipment room
8. restroom

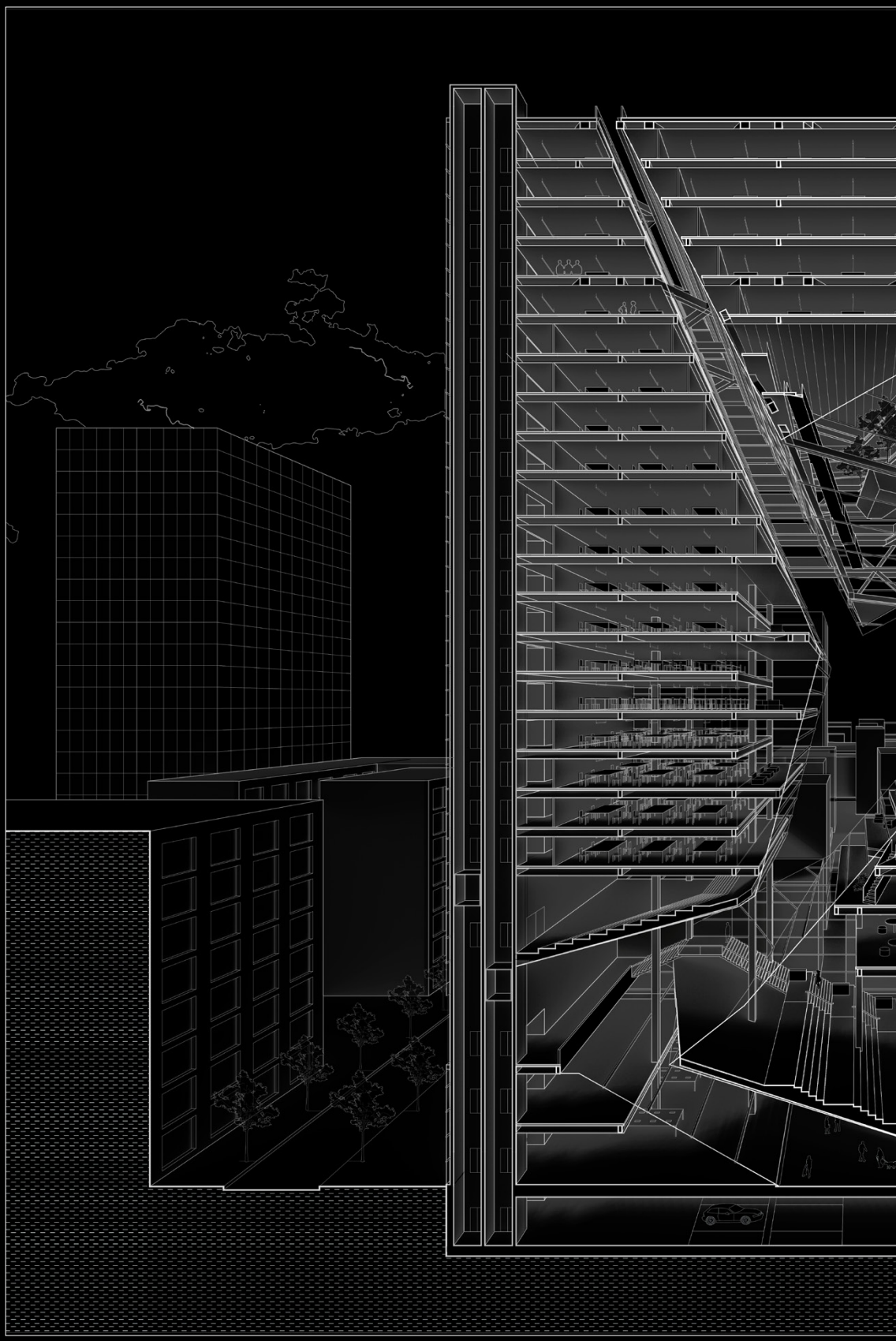
12th floor plan

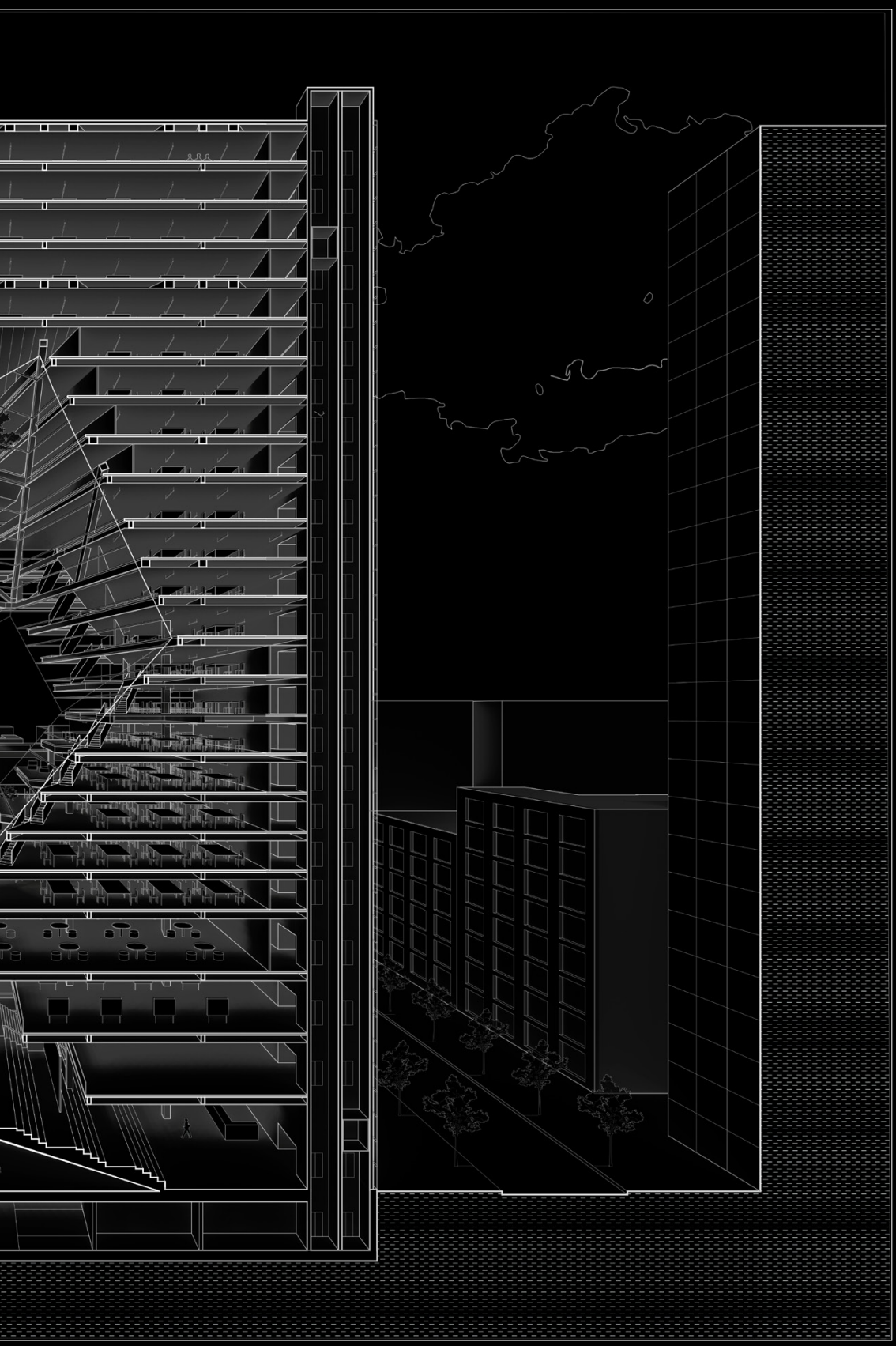
1. office
2. meeting area
3. garden
4. fire front room
5. equipment room
6. restroom

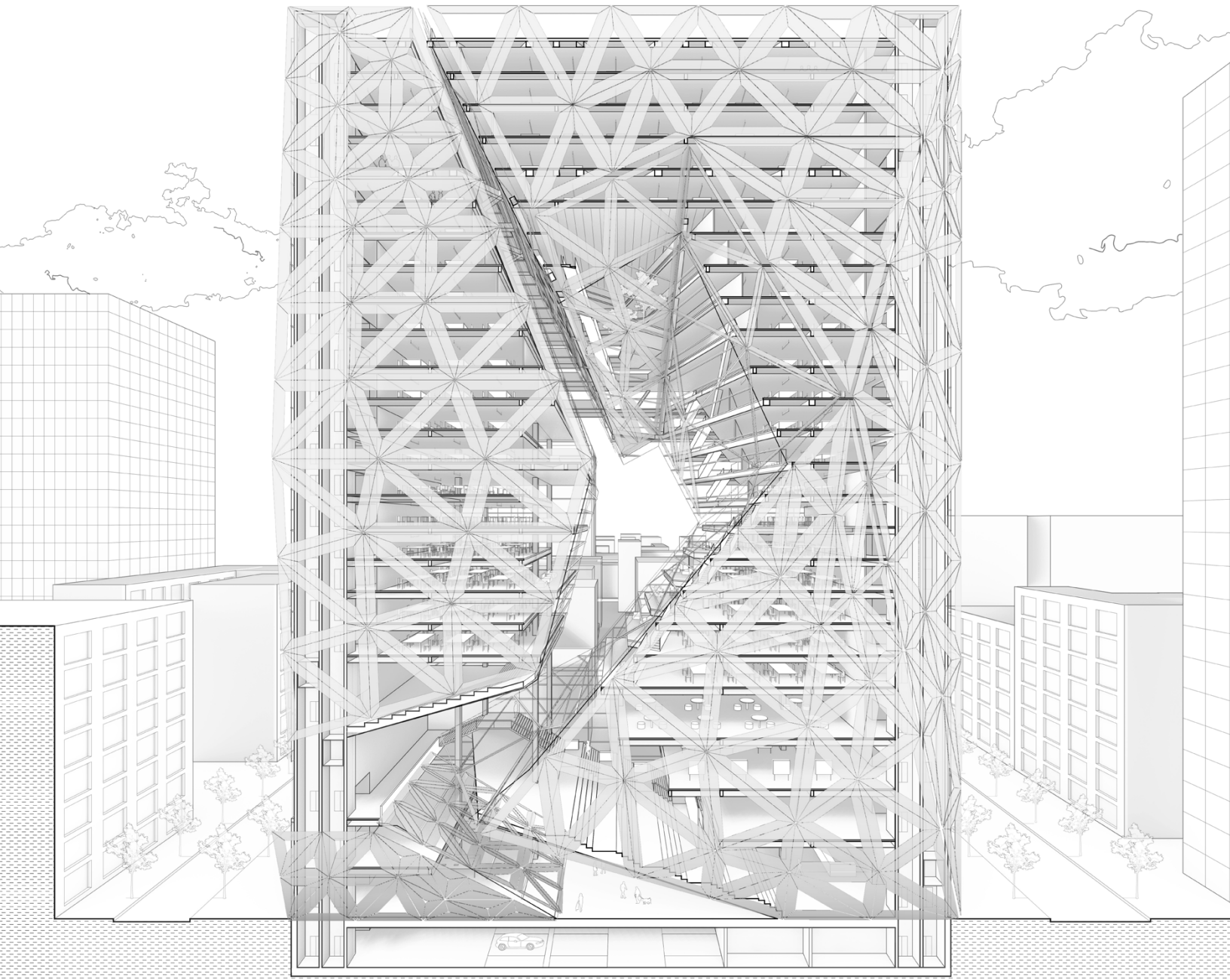


20th floor plan

1. office
2. garden
3. fire front room
4. equipment room
5. restroom

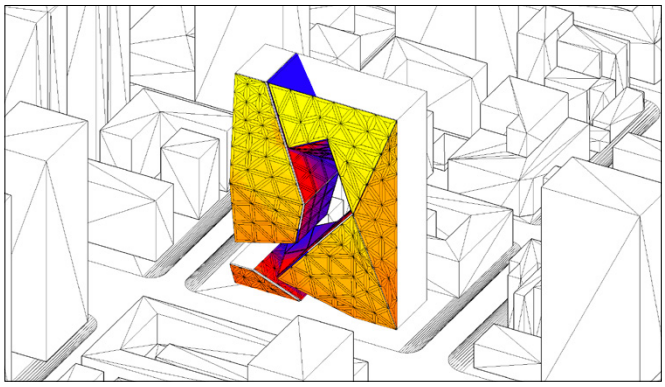




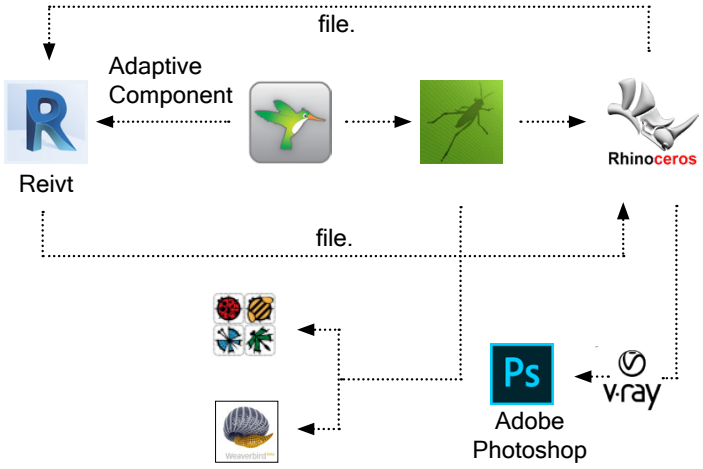


The original high-rise building is totally exposed under sunlight with a clear galss skin especially its main facade facing south. In order to avoid too much solar radiation all year round, we design this exterior skin for the main facade.

The new skin is composed with 328 triangle metal panels each having openning in different size and the size of the openning is set according to the annual sunlight hours.



Work Flow



Demo Video: www.youtube.com/watch?v=ooix-seKbNI

05 Techniques of the Ultrareal

Fall 2019
Visual Elective, GSAPP
Critic: Joseph Brennan, Philip Crupi
Teammate: Jingyuan Zhang, Hongyi Chen, Shaolin