

# SOCIAL INFRASTRUCTURE

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Jiafeng Gu  
Graduation Portfolio

## PROLOGUE

*'The spectacle is not a collection of images, but a social relation among people, mediated by images.'*  
- Guy Debord (*La Société du spectacle*, I-16)

In this graduation portfolio, no spectacles is created to satisfy capitalism and elitism for their devastation to social life. Architecture and urban environment are not images of spectacles for selling but a infrastructure of social life for everyone's engagement. Five projects are presented to attempt to define different social infrastructure in response to the undergoing social transformation, such as the decomposition of nuclear families , the interdisciplinary development and the emergence of other new social relations. By reinventing the lifestyle of collective life in cities, architecture and urban space as social infrastructure tries to change the false diversity by capital to a real harmonious diversity.

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## The Interim City

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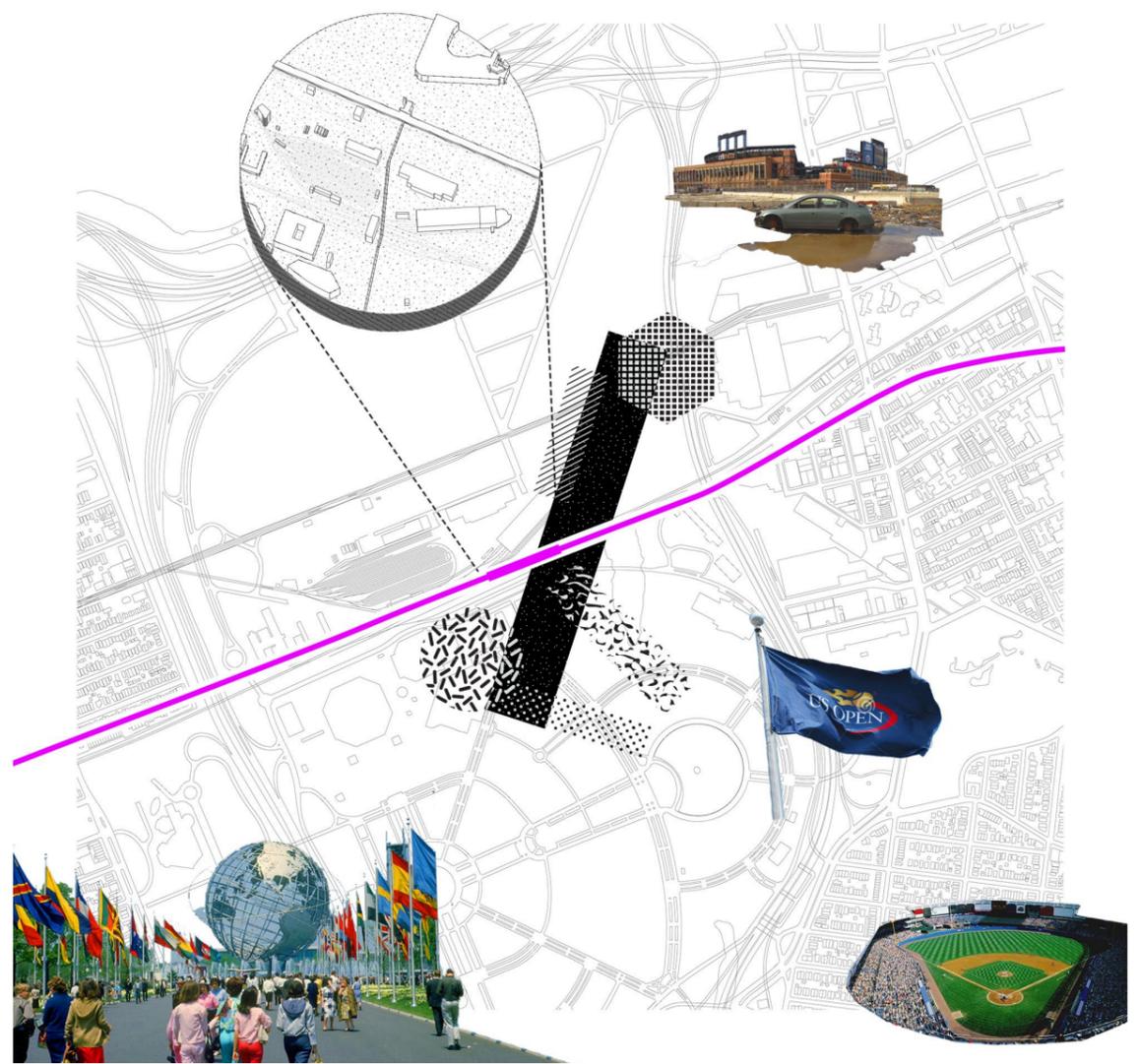
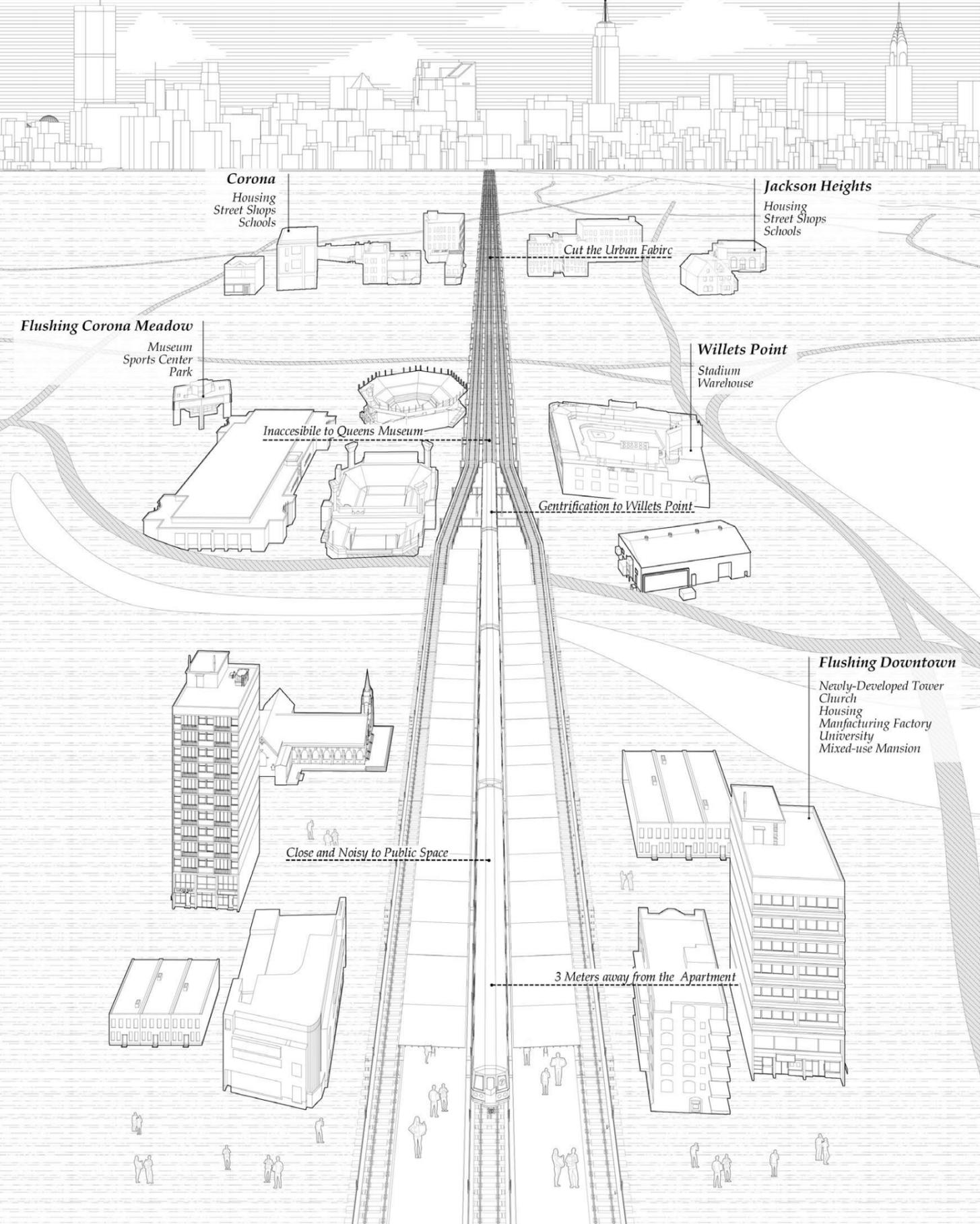
Critic: David Eugin Moon  
Studio: Adv SM Studio  
Site: Queens, NY  
Teamwork with Danlei Yang

*In response to the re-development crisis that takes place in Willet Point and Flushing Meadow during the first phase and the second phase of Mayor Bill de Blasio's plan, we propose developing a distributed interim community. This community would offer an alternative development as well as act as informal land use and economic framework for development for the neighborhood and empower the neighborhood to become a developer of its housing stock. The community facilitates construction permits and alternative mixed uses and densities to provide micro-loans by managing the break-up of large construction loans and subsidies.*

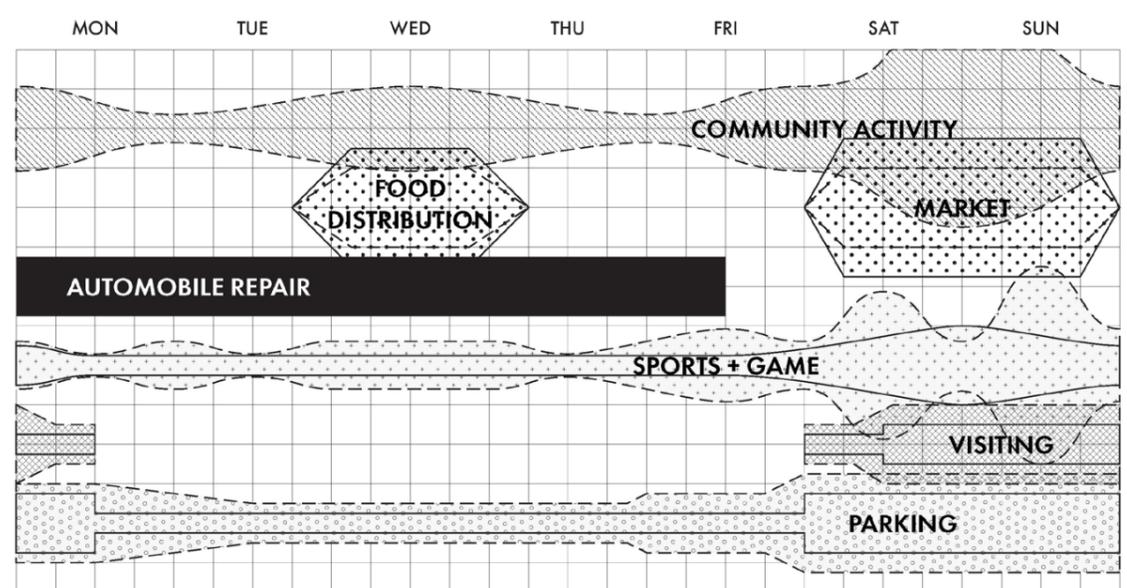
# Infrastructure for Marginalization

Residential
  Urban Block
  Manufacturing
  Commerical

Widely recognized as the 'International Express', the Line 7 transits the residents from Queens to Manhattan on a daily basis. While this transportation infrastructure is carefully underground, it is directly exposed on the ground, cutting the urban fabric into several parts along with other infrastructures. Moreover, the architectural typologies along it shows a clearly stratification, in which different station refers to different zoning. While the residents in flushing and corona are generally recognized the marginalized group, the MTA Line 7 itself serves as a infrastructure for marginalization for its role of blocking the urban accessibility and defining the boundary of community activities.

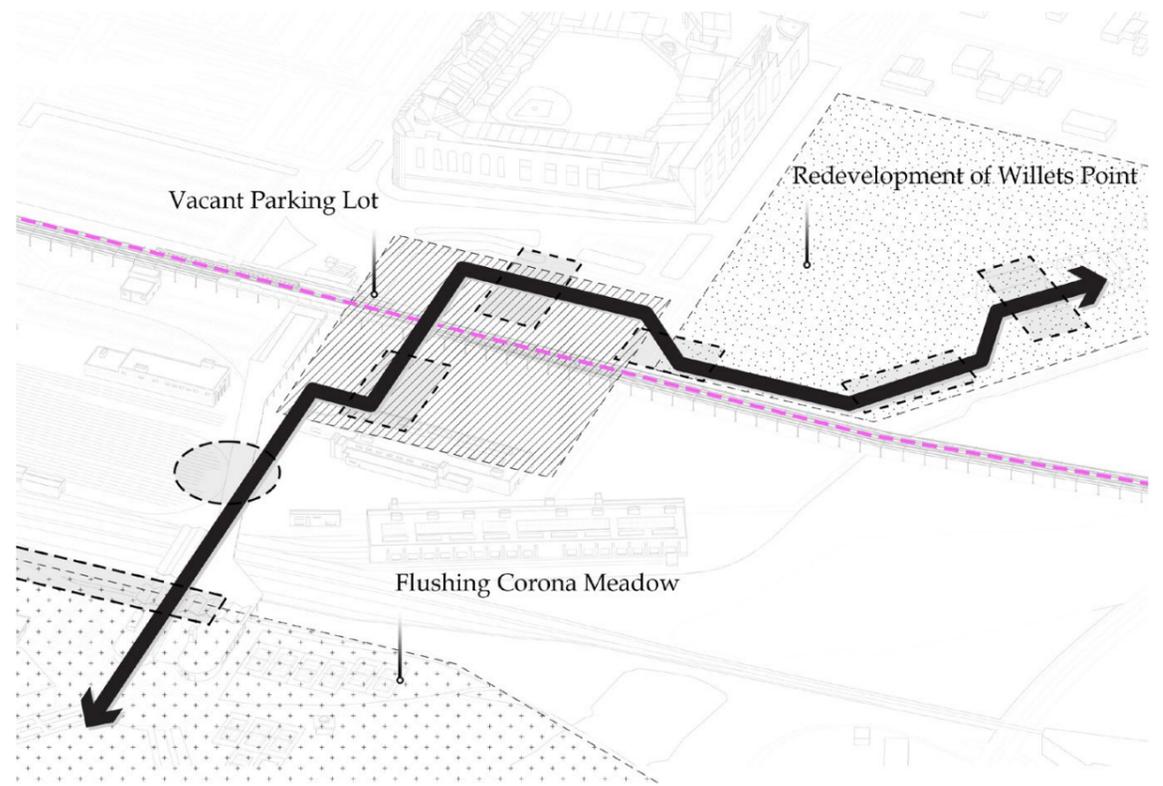


Temporal Activities in the Neighborhood

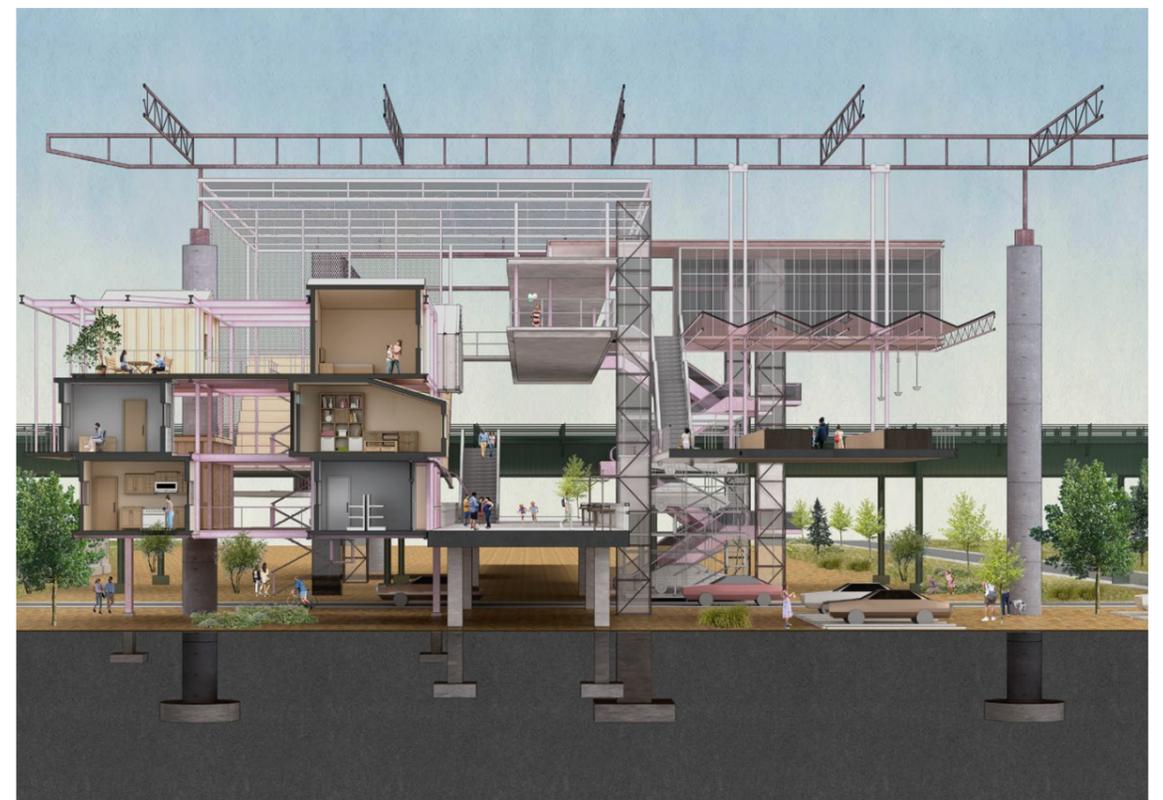




Second Floor Plan



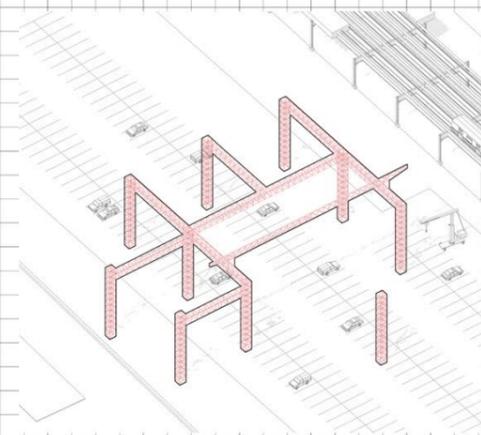
Urbanism Gesture



Section: Living and Producing

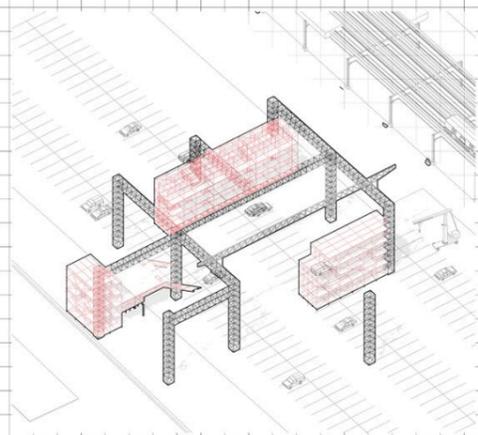


**Transformable Phases of Temporal Architecture**



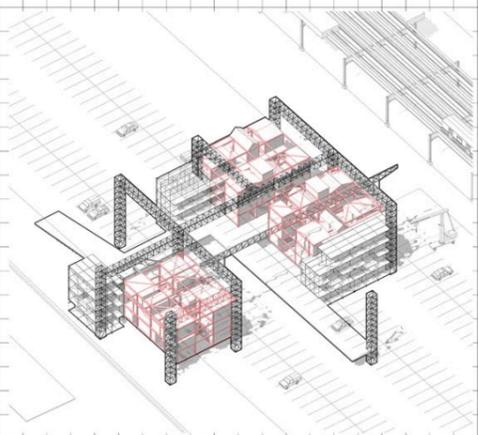
2021 / NYCHA

Structure and Circulation Space  
Vierendeel Truss



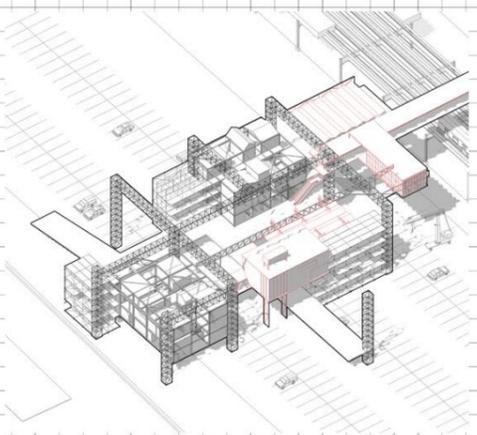
2025 / NYCHA + Architects

Vertical Parking and Repair Shop  
Scaffolding Framework



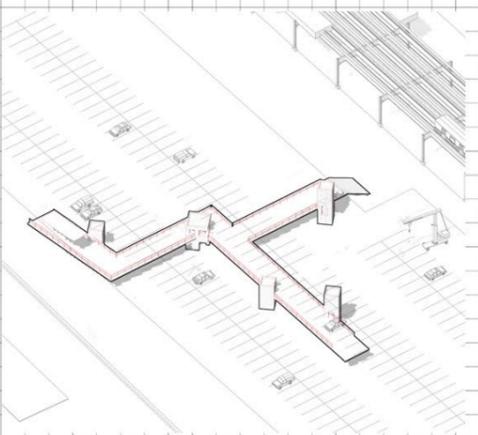
2030 / NYCHA + Architects + Community

Temporal Housing Units  
I-beam Framework



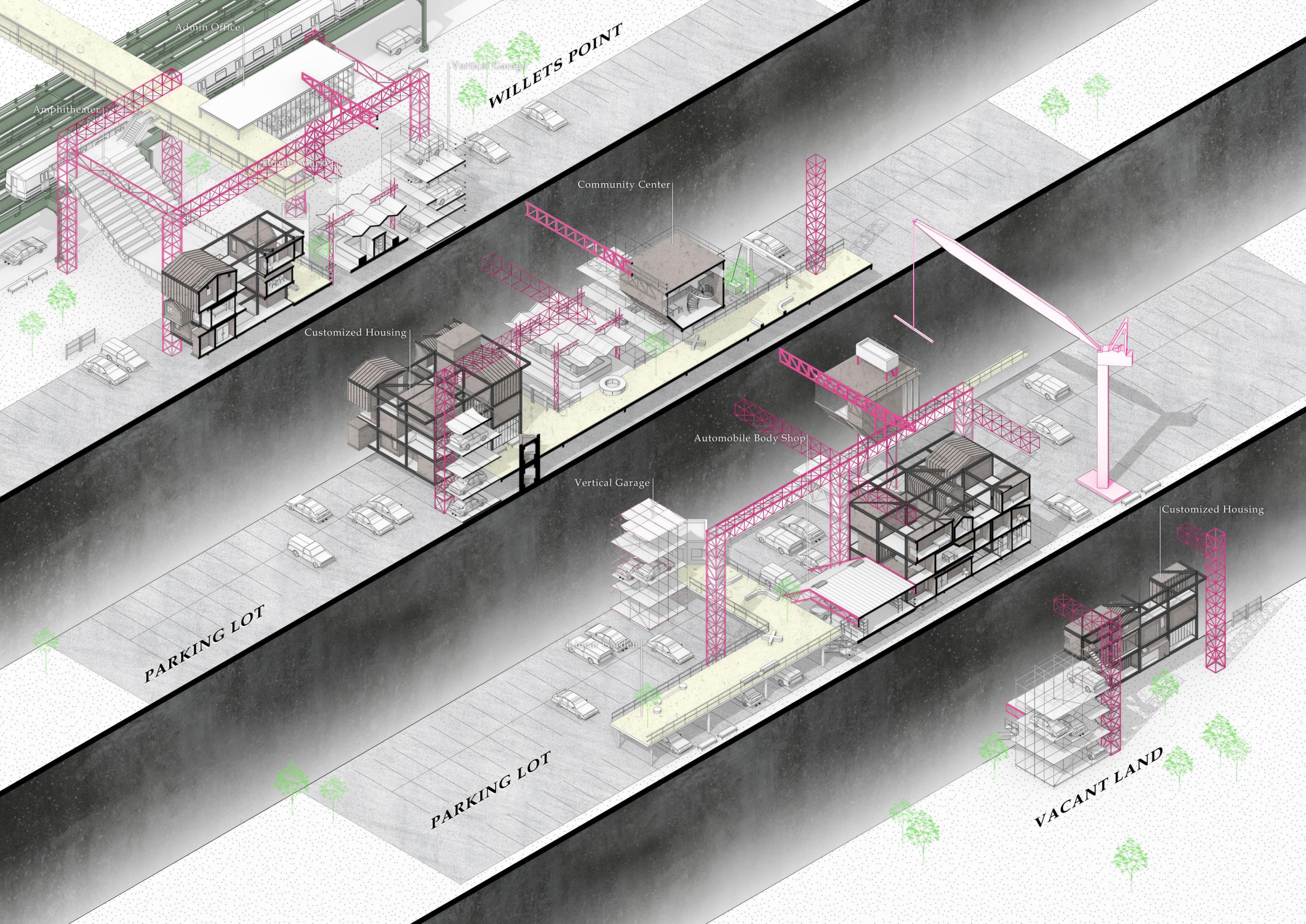
2040 / NYCHA + Architects + Community

Community Amenities and Civic Space  
Truss Beams and Columns



2050 / Government

Public Promenade  
Concrete



Admin Office

Amphitheater

WILLETS POINT

Vertical Garage

Market

Community Center

Customized Housing

Automobile Body Shop

Vertical Garage

PARKING LOT

PARKING LOT

Urban Garden

Customized Housing

VACANT LAND



## Cross Bronx Incentive

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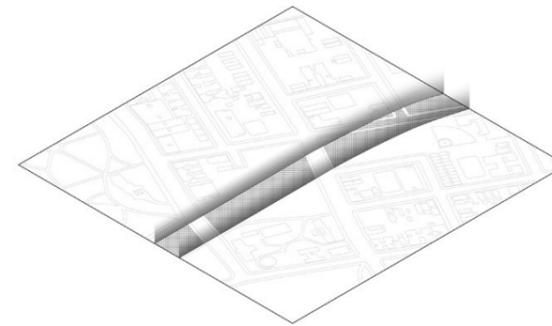
Critic: Micheal Bell  
Studio: Adv V Studio  
Site: Bronx, NY  
Teamwork with Qing Hou

*This collaborative course will imagine new ways to collaborate and expand what we see as the intermarriage of social policy and design intended to re-envision infrastructure that has harmed the well-being of those who are of colour or socio-economically disadvantaged.*

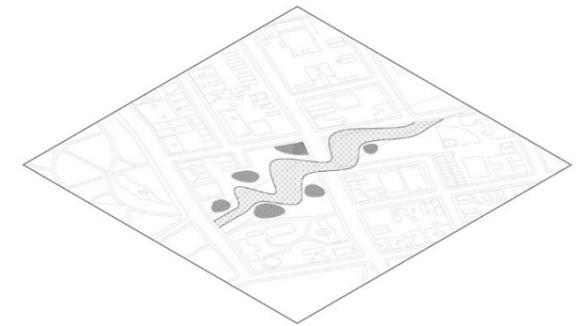
*To be more specific, the freeway, Cross Bronx Expressway is sunken at grade that physically separates the north and the south Bronx. In this project, I first analyze and design those needed public space and community service for the neighborhood, and then took those as attractions to squeeze and define a wavy gesture in response to the context. Then, it is lifted up to a curved roof structure for market as tax incentives to benefit the community both spatially and economically.*



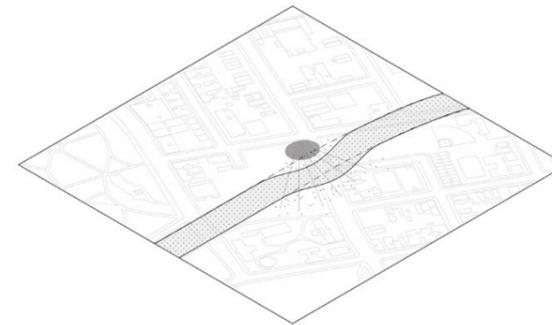
Economic Disparities between South and North Bronx



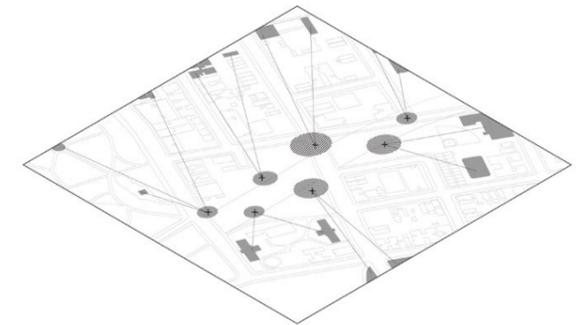
**01 Existing**  
CBE as Structured Barrier



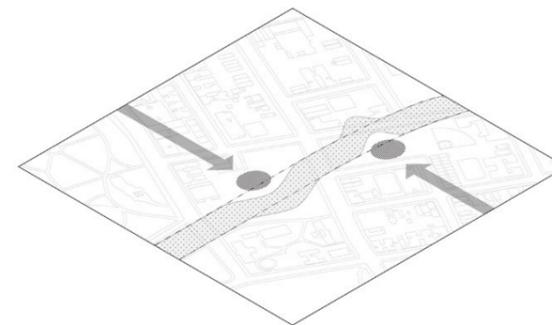
**04 Strategy**  
Use public space define Curvature



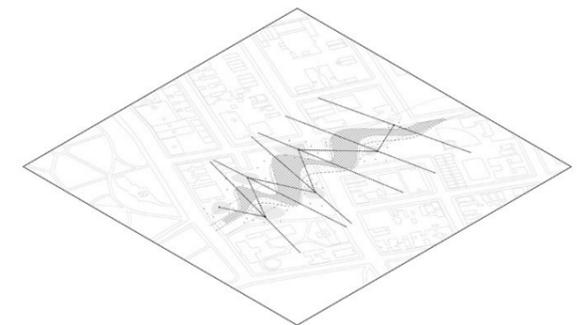
**02 Idea**  
Transform Barrier into Places



**05 Connection**  
Public space connects neighborhood



**03 Method**  
Reshape the line into a Curve for Interaction



**06 System**  
Squeezed public market evens the disparities



Construction Mock-up



01  
Retaining Wall



02  
Long-span Beam



03  
Cap CBE



04  
Primary Column



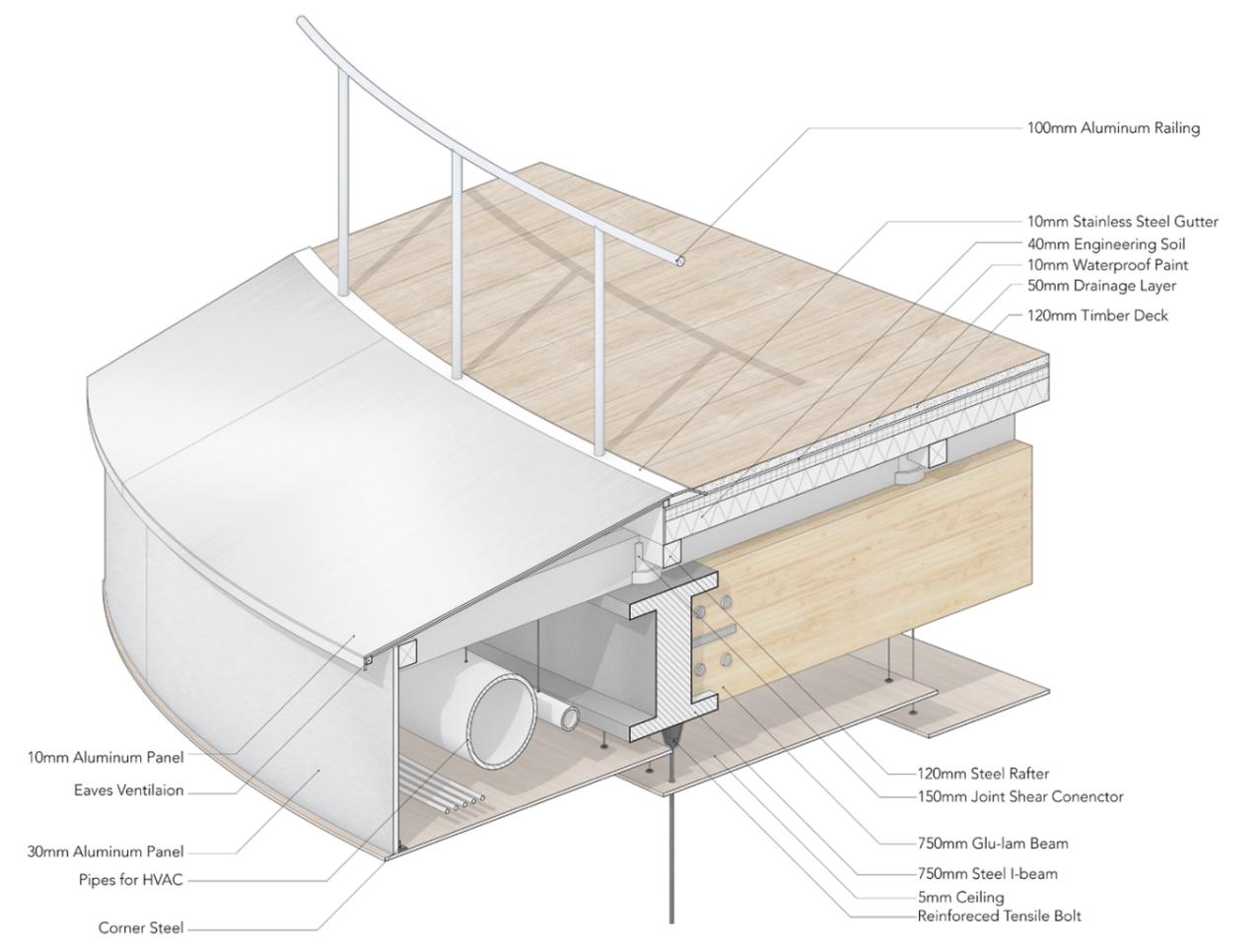
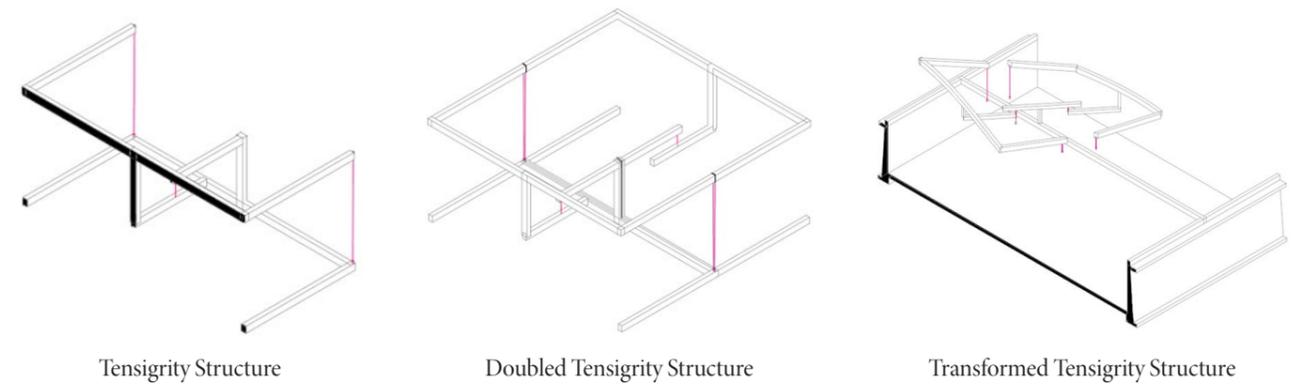
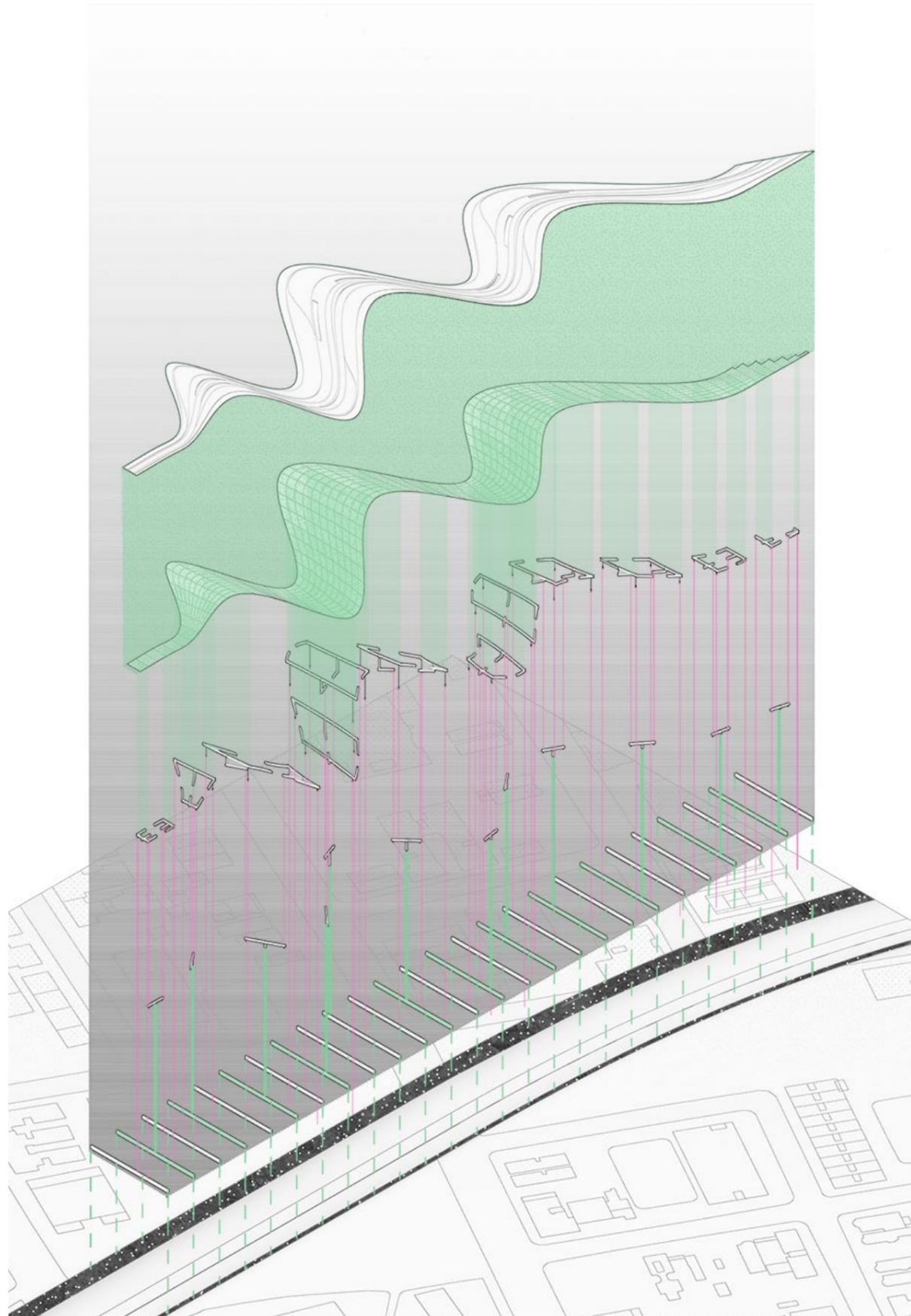
05  
Tensigrity Structure



06  
Rafter Frame



Ground Floor Plan



Tectonics of Roof and Structure





## The Medical Re-gaze

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Critic: Hilary Sample  
Studio: Adv VI Studio  
Site: Manhattan, NY  
Individual Work

*The medical re-gaze, takes a vacant standard lot in Clinton neighborhoods to experiment an architectural critique on the relationships between the nurses and the patients, based on Michel Foucault's books, the birth of the clinic. In his book, Michel described the modern medical practices as a medial gaze. Once patients step into the clinic, they were gazed by the doctors and nurse's as objective cases rather than humans or patients who probably need care more than cure. Therefore, this project explore how clinic and nurse housing can co-exist and interact with each other to provide the patients a place for care.*

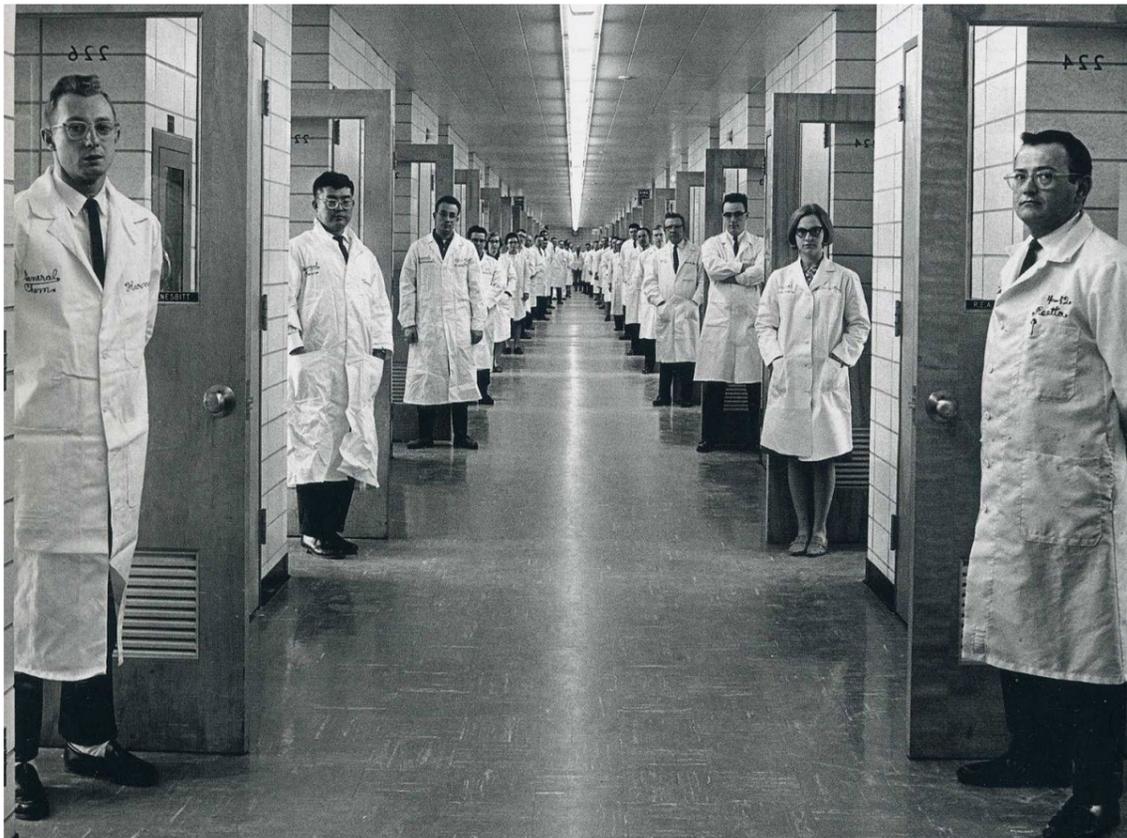
*The design strategies begin with idea of the motion of circulation and public space in the lot. The backyard is firstly transformed into a courtyard in the middle of two blocks. Then a continuous L-shape circulation pierce through the courtyard to connect the street and the blocks. The corridor as a promenade visually interact with the courtyard. Eventually the void is transferred again into the solid as the clinic, where waiting area and the treatment area are juxtaposed against each other.*

*It ain't about the body, folks. It's about the words.*

...

*The clinic (the doctor's office) is built around the idea that the patient's body is doing the talking, and the doctor is only an objective observer.*

*-Michel Foucault*



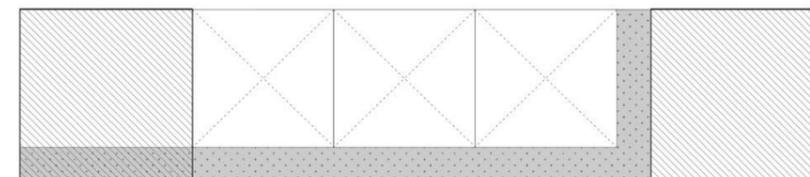
Typical NYC Lot



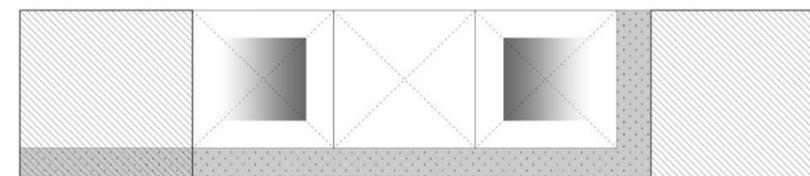
Backyard to Courtyard



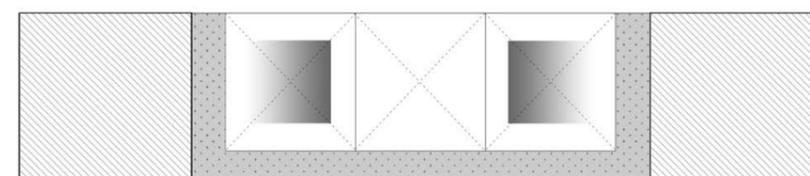
Street to Block



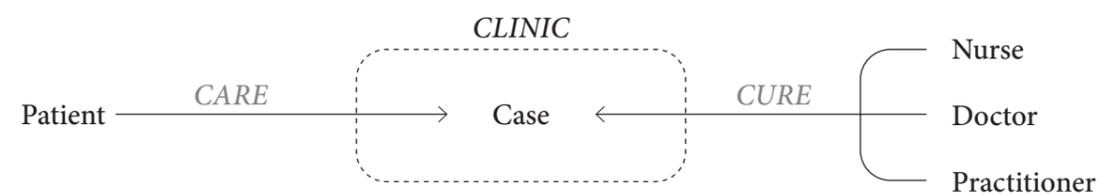
Corridor to Promenade

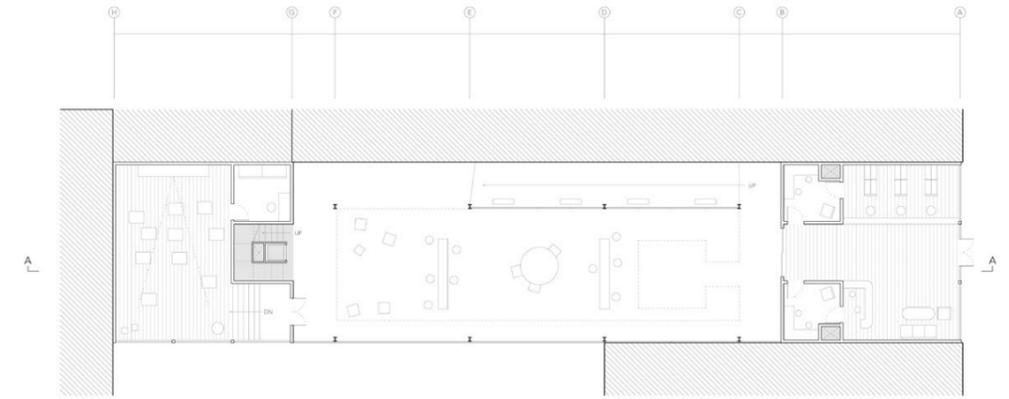
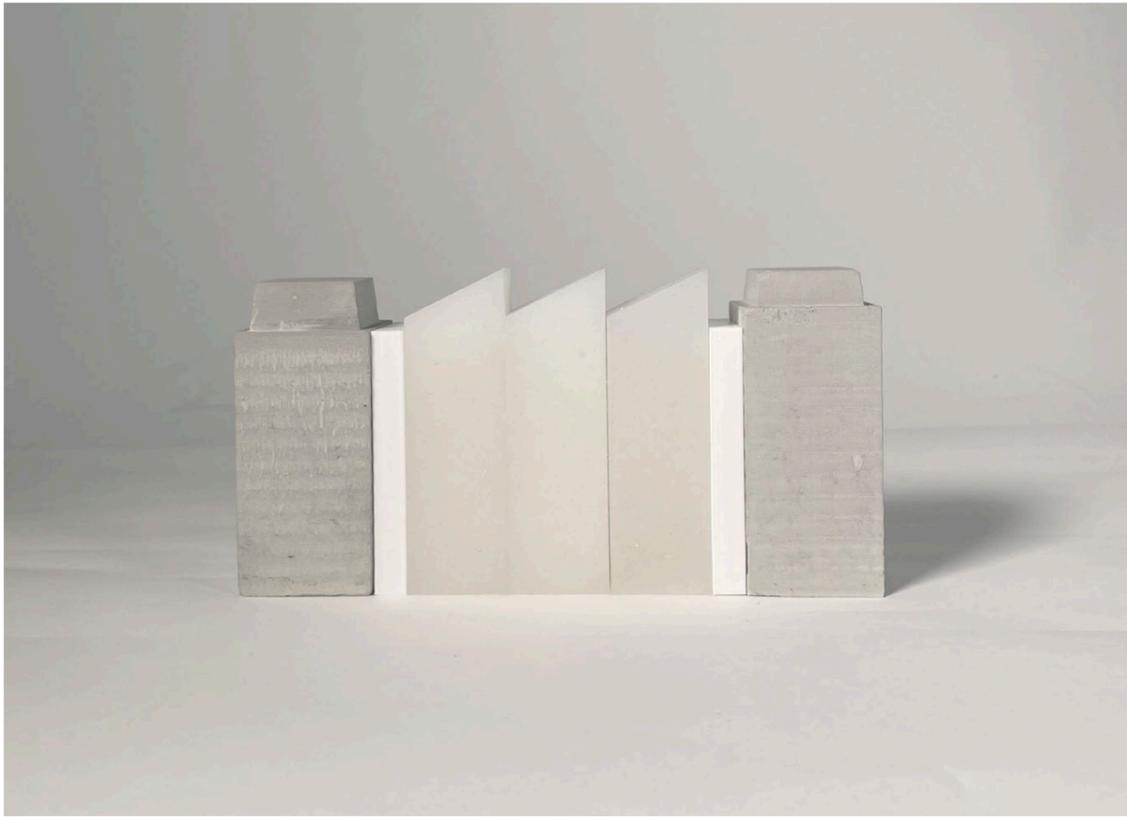


Void to Solid

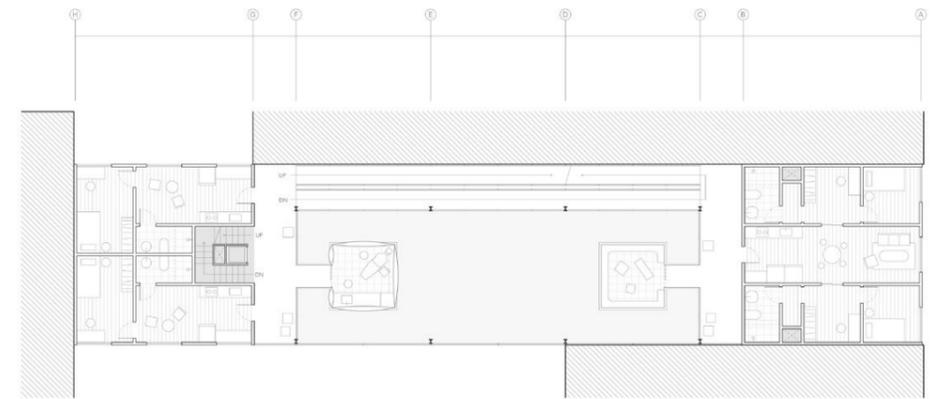


Housing to Clinic





Ground Floor Plan



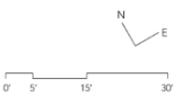
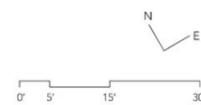
Typical Floor Plan



Roof Plan

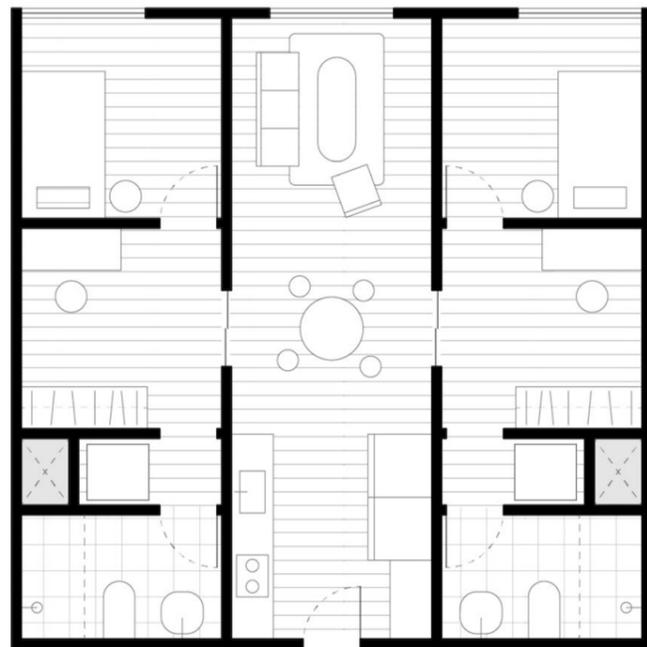


Site Plan





Housing: Shared Living



Clinic: Waiting Area



Clinic: Treatment Room

Casted Concrete Tile

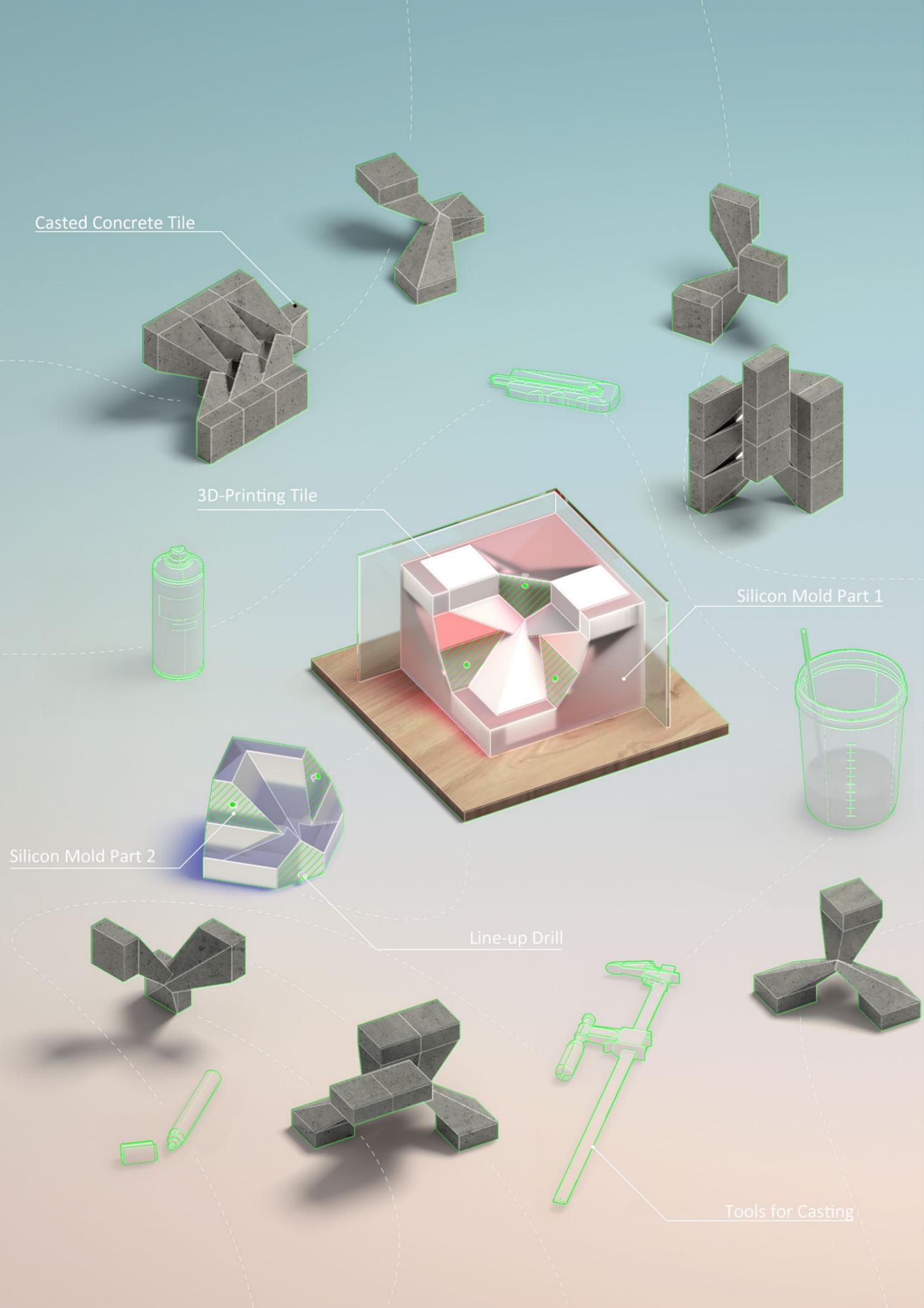
3D-Printing Tile

Silicon Mold Part 1

Silicon Mold Part 2

Line-up Drill

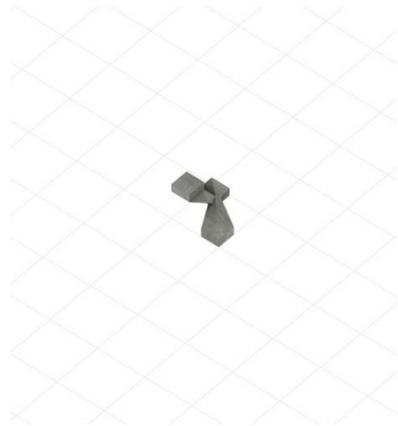
Tools for Casting



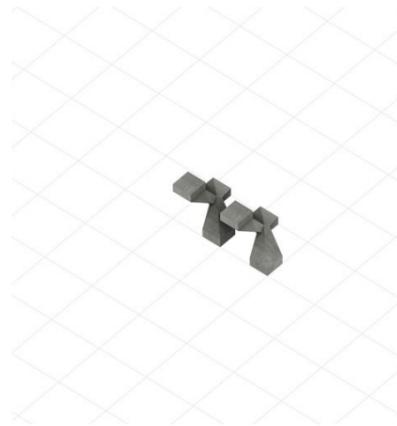
### Re-imagining Grid

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Critic: Joshua Jordan  
 Course: Transitional Geometry  
 Individual Work



Unit



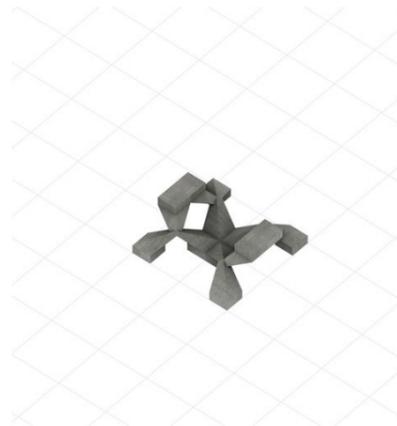
Linear



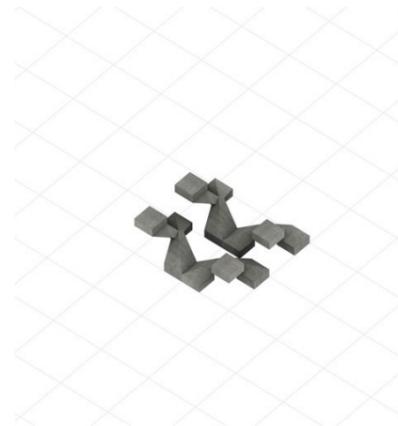
Matrix



Aggregate



Sprawl



March



Podium



Block



Tower



The Block



Vertical Grid



Planar Grid

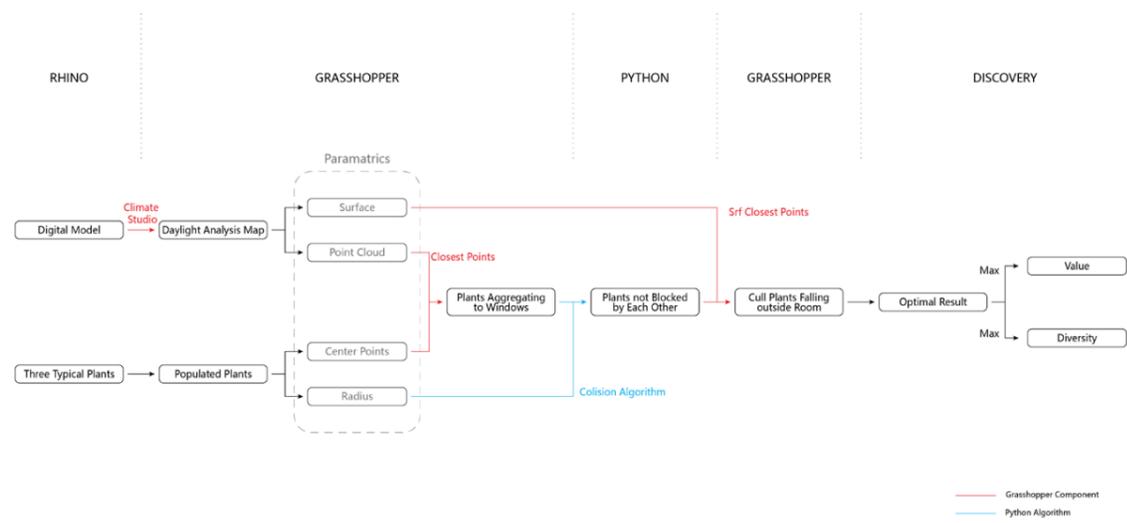


## Avery as a Garden

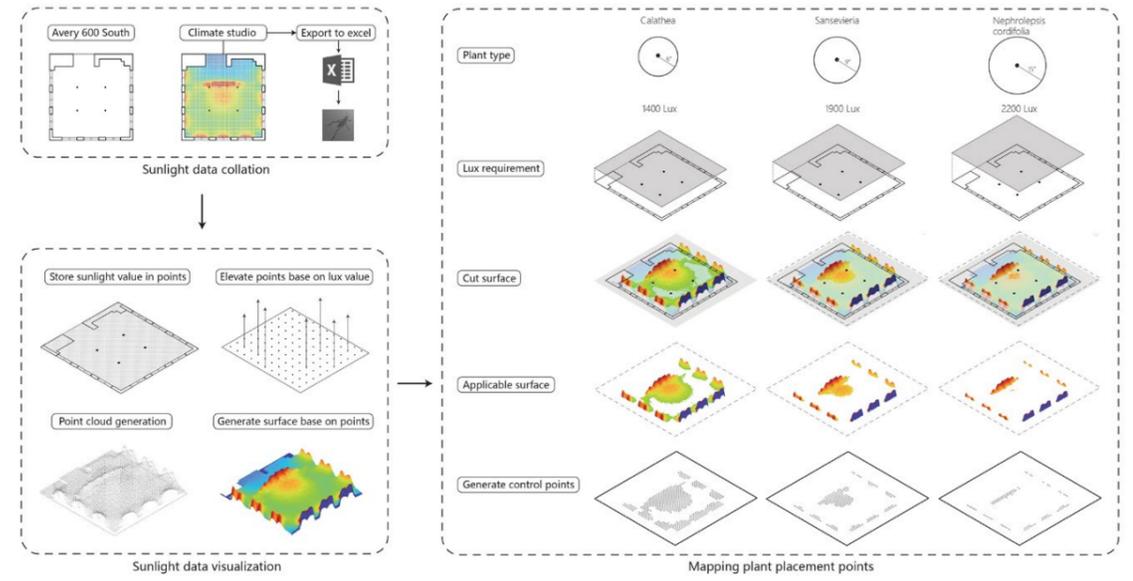
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Critic: Danil Nagy  
Course: Generative Design  
Teamwork with Ruisheng Yang, Qingning Cao, Yifei  
Yuan, Wanqi Jiang

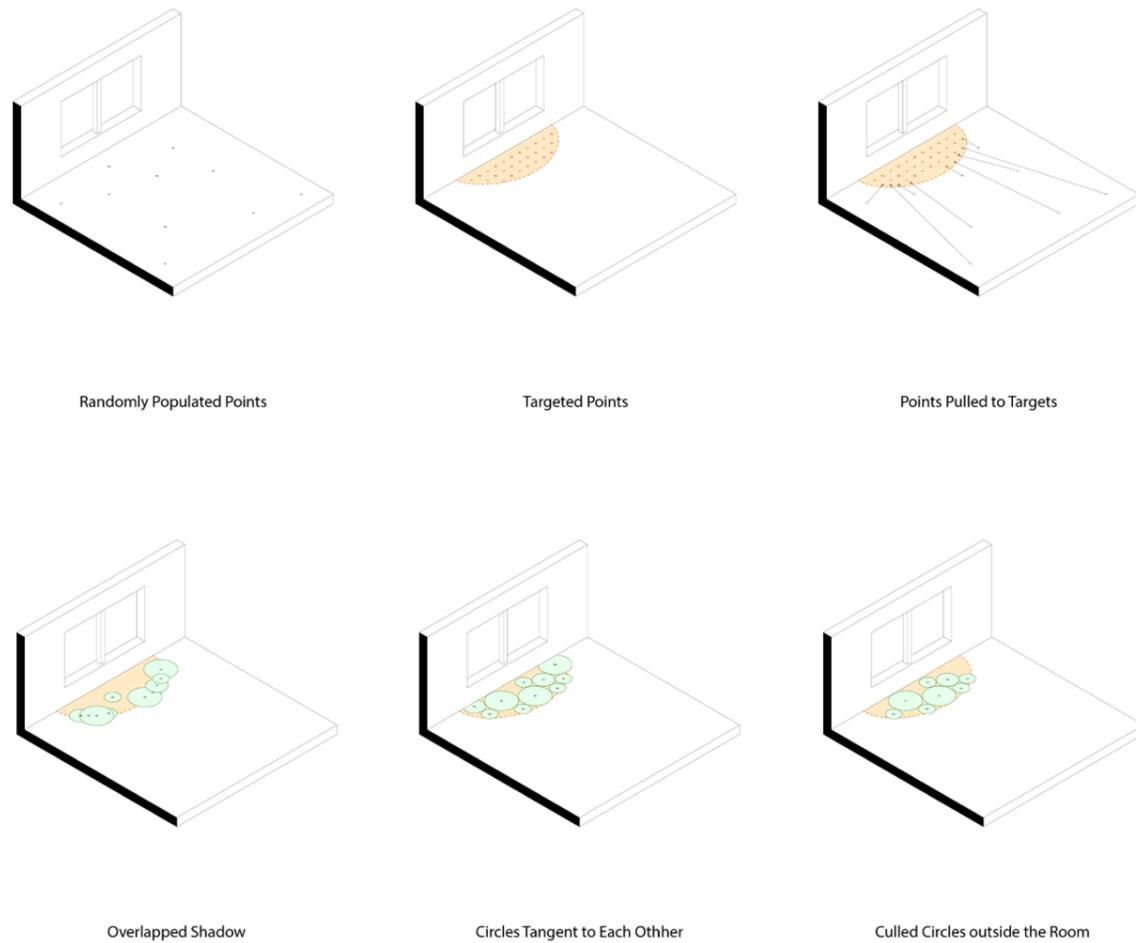
## Methodology



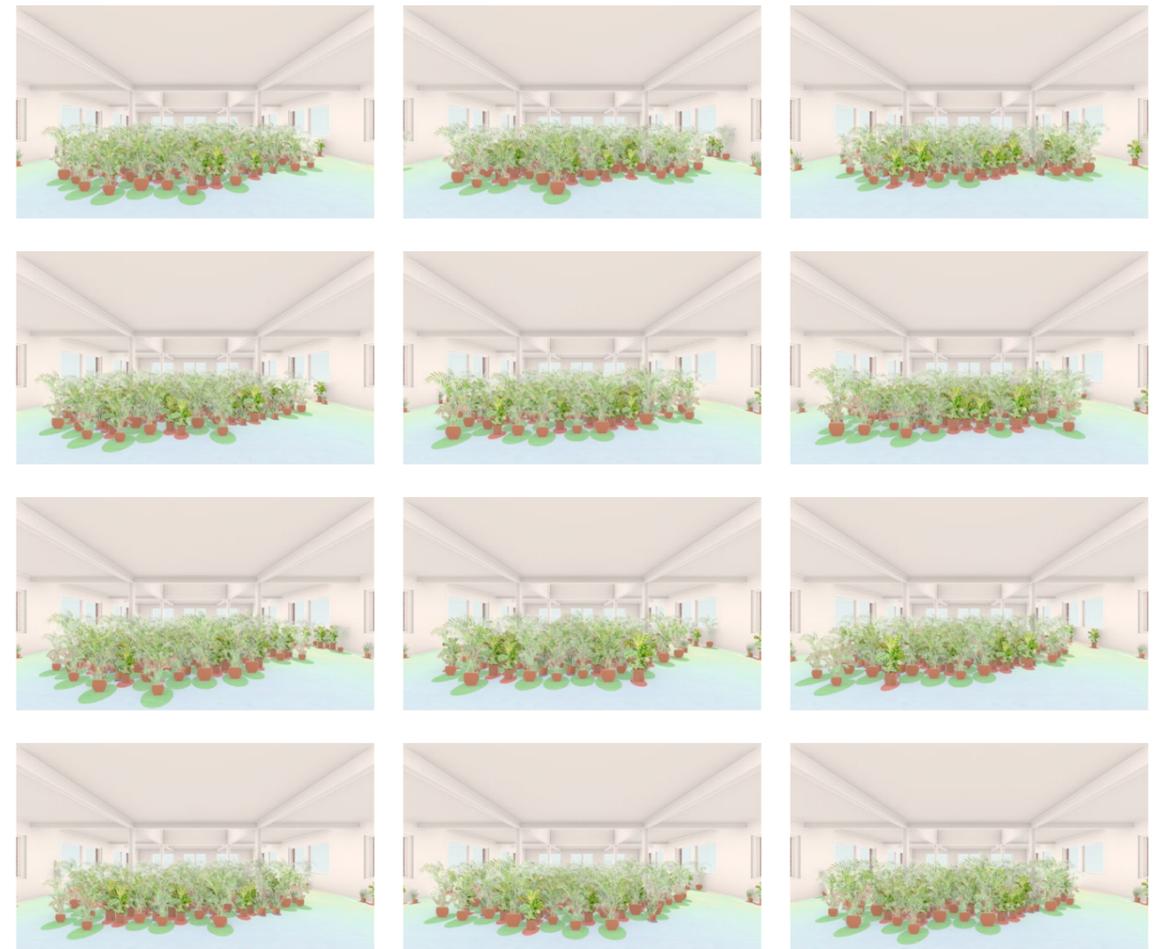
## Sunlight and Plants Placement



## Optimization

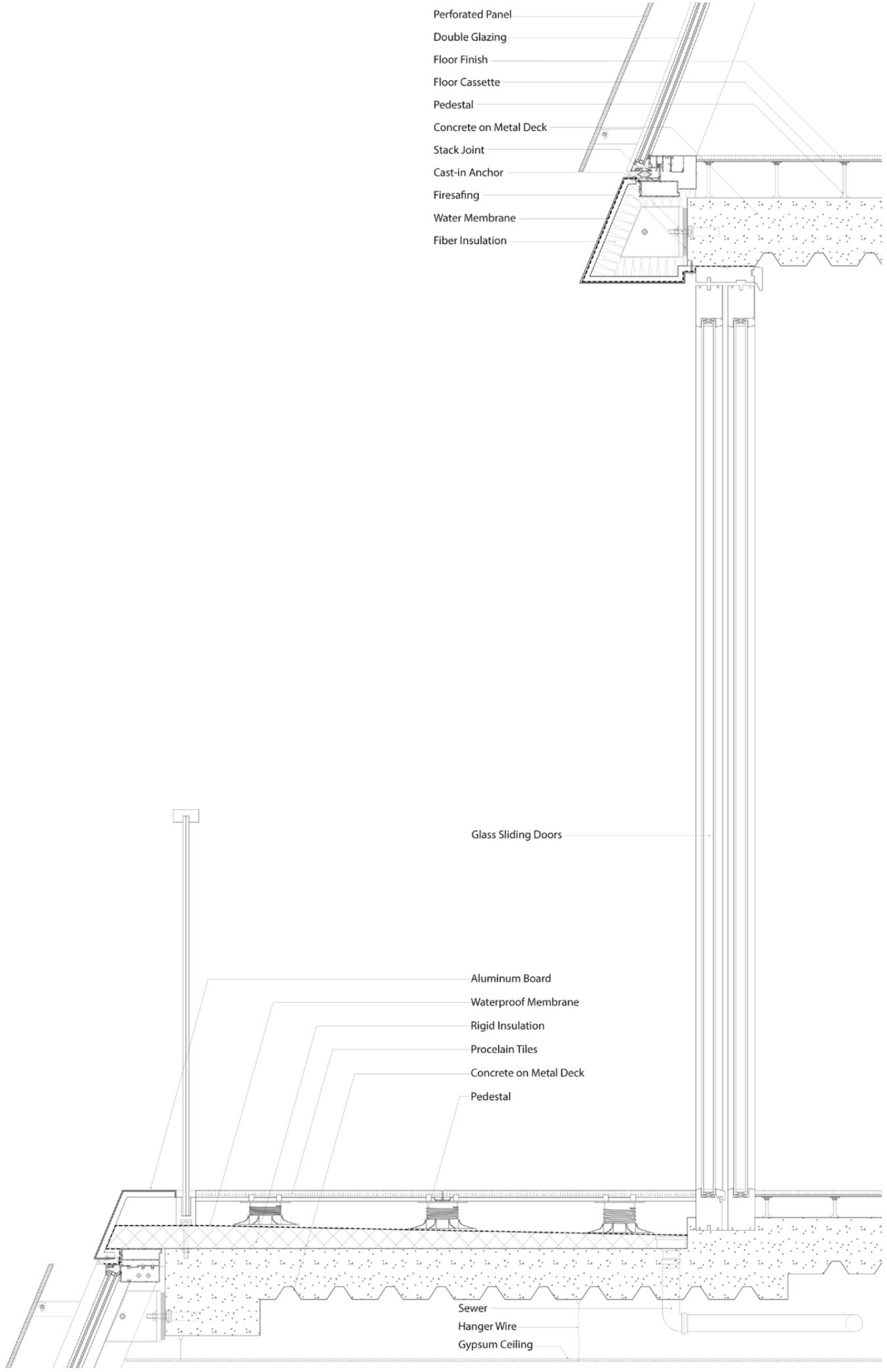


## Options





- Perforated Panel
- Double Glazing
- Floor Finish
- Floor Cassette
- Pedestal
- Concrete on Metal Deck
- Stack Joint
- Cast-in Anchor
- Firesafing
- Water Membrane
- Fiber Insulation



Glass Sliding Doors

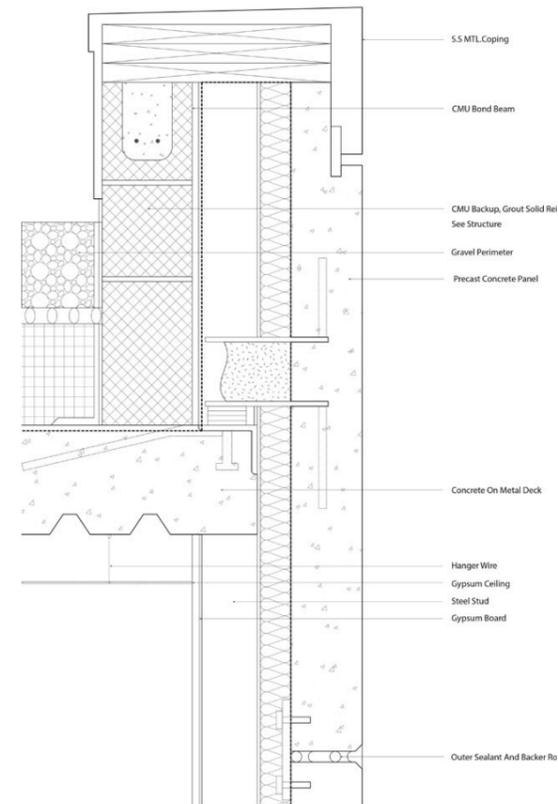
- Aluminum Board
- Waterproof Membrane
- Rigid Insulation
- Procelain Tiles
- Concrete on Metal Deck
- Pedestal

- Sewer
- Hanger Wire
- Gypsum Ceiling

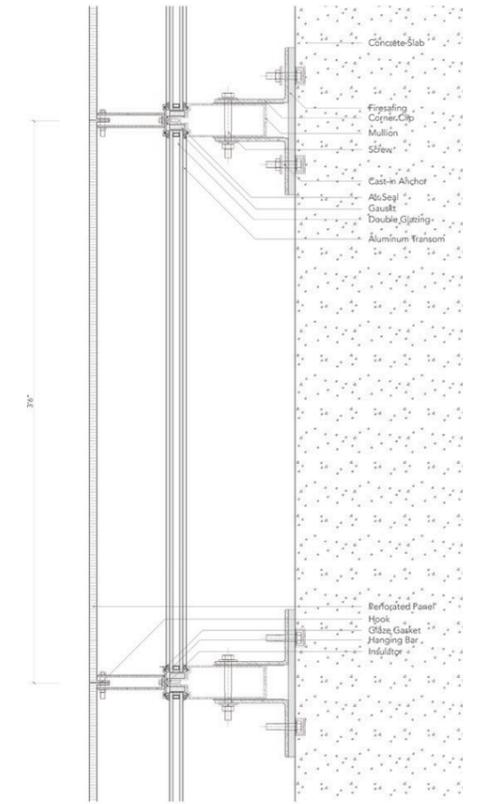
### Sharing as Armature

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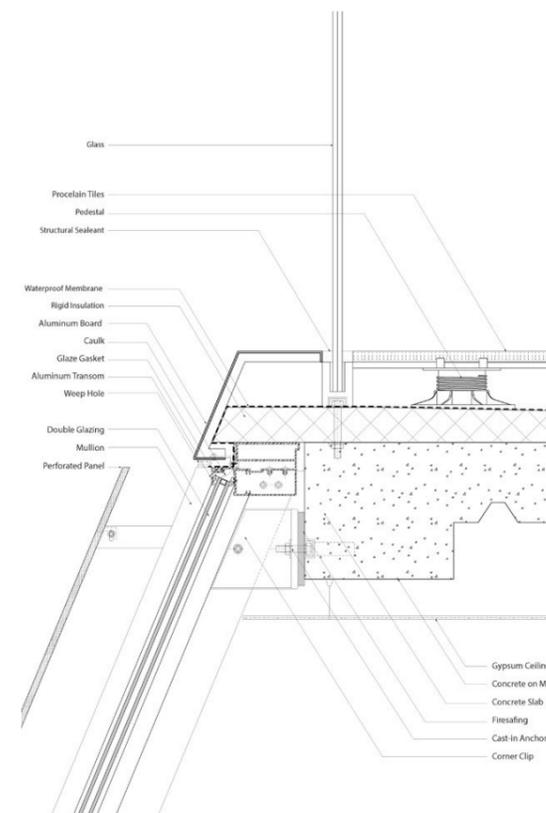
Critic: Kevin Schorn  
 Course: Facade Detailing  
 Team Work with Duo Xu, Hao Ma



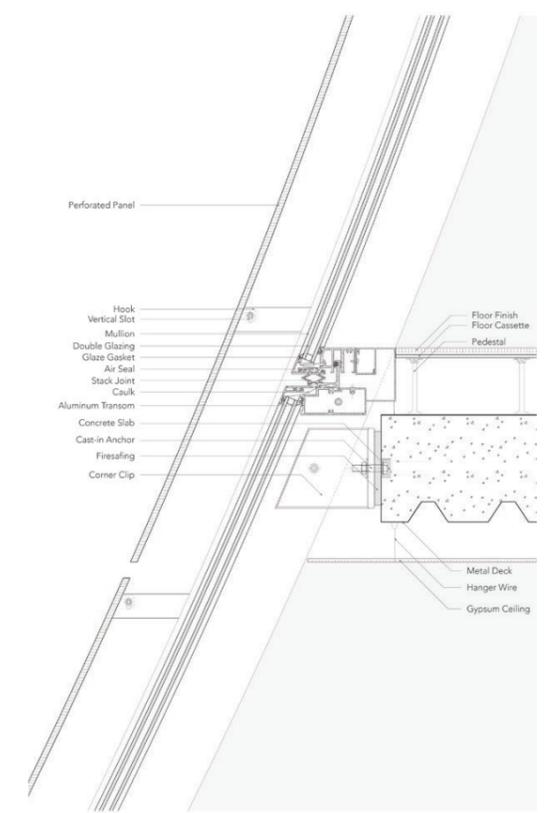
Cladding Detail Section



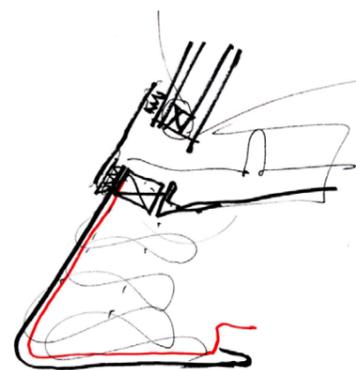
Curtain Wall Detail Plan



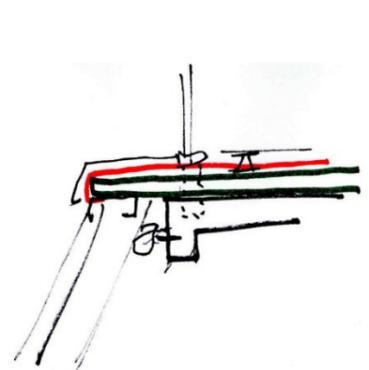
Balcony Detail Section



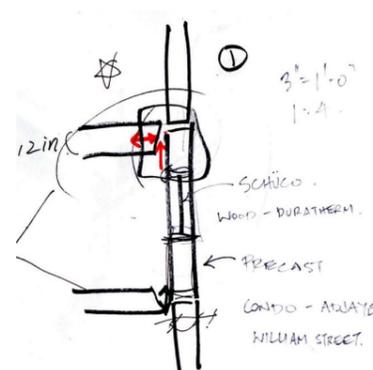
Curtain Wall Detail Section



Curtain Wall Sketch



Balcony Sketch



Cladding Sketch

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