



SCAFFOLDING THE MARGIN

—New Settlement Place for the Unhoused to Co-Exist In the Tenements

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FIG. 1 COLLAGE COMPARISON OF NYC FIRESTAIR ESCAPE WITH COFFIN HOUSING

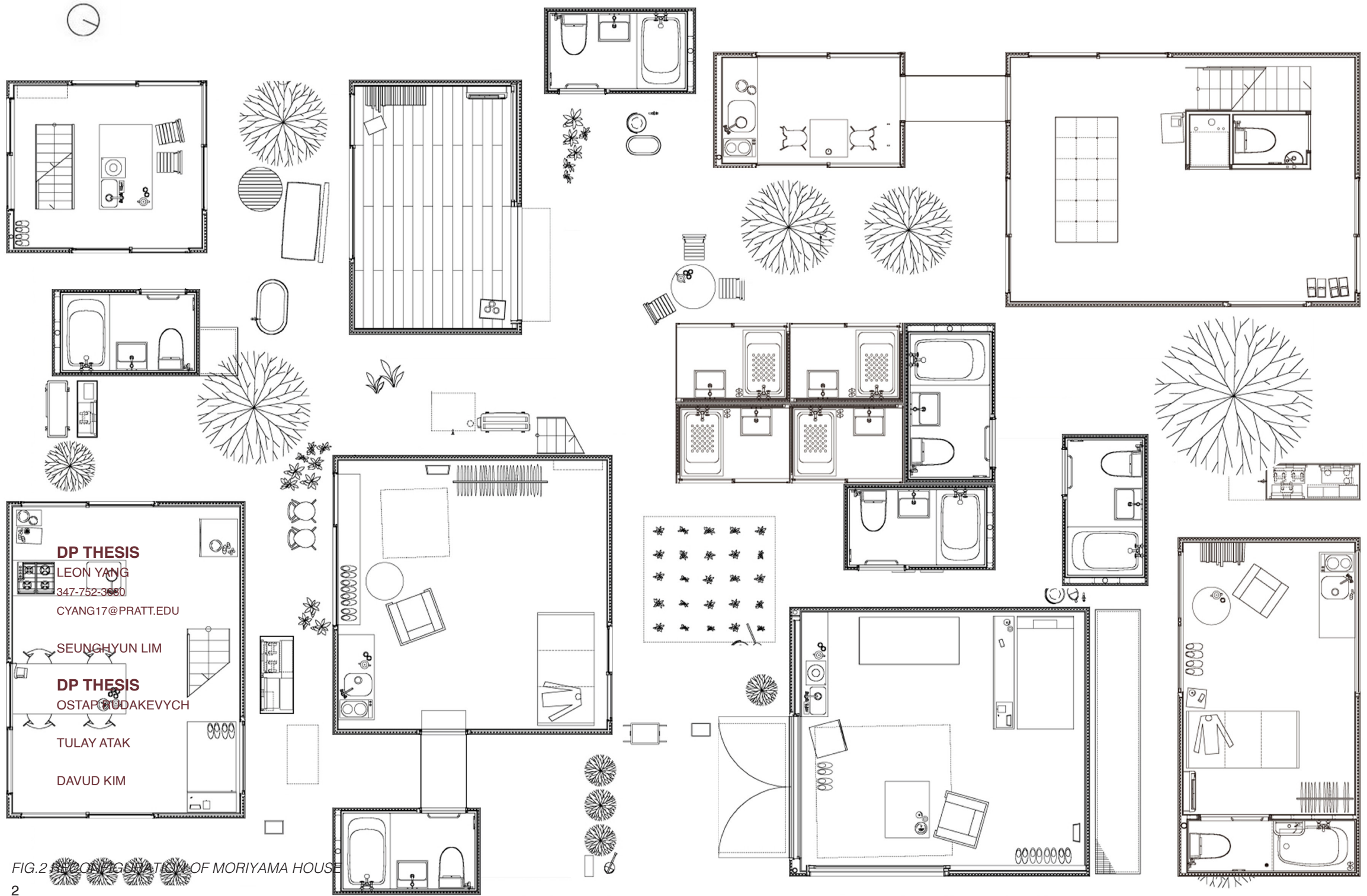


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FIG.2 SITE CONFIGURATION OF MORIYAMA HOUSE

ABSTRACT

Gentrification has become the main method for developers to gain extra profit, resulting in wealthy people becoming more wealthy and poor people becoming even poorer, creating a social inequality gap. Meanwhile, the unhoused homeless population becomes a problem that cannot be ignored anymore. According to the report from the White House, 0.2% of the American population lives in a state of homelessness without proper shelter and the 5 areas with the most homeless are the District of Columbia, New York, Hawaii, Oregon, and California.

As it becomes more and more gentrified, New York City still has many residual spaces that are left underdeveloped. As Manuel Castells and David Harvey have written, inequality in investment leads to uneven development throughout cities. Yet underdeveloped areas have the potential to become a place for social welfare as living spaces for unhoused people.

Using those existing buildings as the reference to constructing a scaffolding condition allows building programs to become fragmented, it becomes possible to introduce different programs in different places freely, while allowing the circulation to connect with existing buildings in order to create a large field condition.

FIG.3 HIGHWAY RESIDUAL SPACE INFRASTRUCTURE



UNHOUSED HOMLESS

Why focus on homelessness?

Hypothermia kills an estimated 700 people experiencing, or at-risk of homelessness each year, according to the National Coalition for the Homeless. Every day, street outreach workers in cities across the nation go out into communities to encourage people on the street to take shelter, but many homeless people refuse.

Why choose New York City as the site?

As the most populous city in the United States, it may come as no surprise that New York City tops the list of largest homeless populations. HUD estimates that New York City has 78,604 homeless people that live in shelters and without shelter.

Problems:

1. Pets, possession, partner
2. Safety
3. Shelter restrictions
4. Limited supply of beds
5. Public health concerns
6. Personal issues

Facts About Homelessness

13% of our nation's homeless population lives right here in NYC, outstripping every other city in the nation.

An estimated 1.5 million New Yorkers are food insecure. That's about one in every six.

Nearly 80,000 people are experiencing homelessness in NYC. That's about one in every 106 people.

An estimated 3,857 people are living unsheltered in the subways (43%), on the streets of Manhattan (33%), or in one of the other boroughs (24%).

Research shows that the primary cause of homelessness, particularly among families, is lack of affordable housing. Surveys of homeless families have identified the following major immediate, triggering causes of homelessness: eviction; doubled-up or severely overcrowded housing; domestic violence; job loss; and hazardous housing conditions.



FIG.4-7 HOMELESS PEOPLE IN NYC

LIMINAL RESIDUAL SPACE

New York City is an international city, but its unhoused population cannot be ignored anymore. According to the report from the White House, 0.2% of the American population lives in a state of homelessness without proper shelter and the 5 areas with the most homeless are the District of Columbia, New York, Hawaii, Oregon, and California.

As it becomes more and more gentrified, New York City still has many residual spaces that are left underdeveloped. As Manuel Castells and David Harvey have written, inequality in investment leads to uneven development throughout cities. Yet underdeveloped areas have the potential to become a place for social welfare as living spaces for unhoused people. We take one such area, namely the Allen Street intersection with Delancey Street as the site for our project "Scaffolding The Margin". Scaffolding in pedagogical meaning is a method where teachers offer a particular kind of support to students as they learn and develop a new concept or skill and eventually become self-reliant. In the social context, the unhoused people are regarded as marginal, people who are left behind. In an architectural context, marginal space would be those leftover residual spaces. Scaffolding the margin means using the architectural residual spaces to help the unhoused people eventually form a self-reliant community.

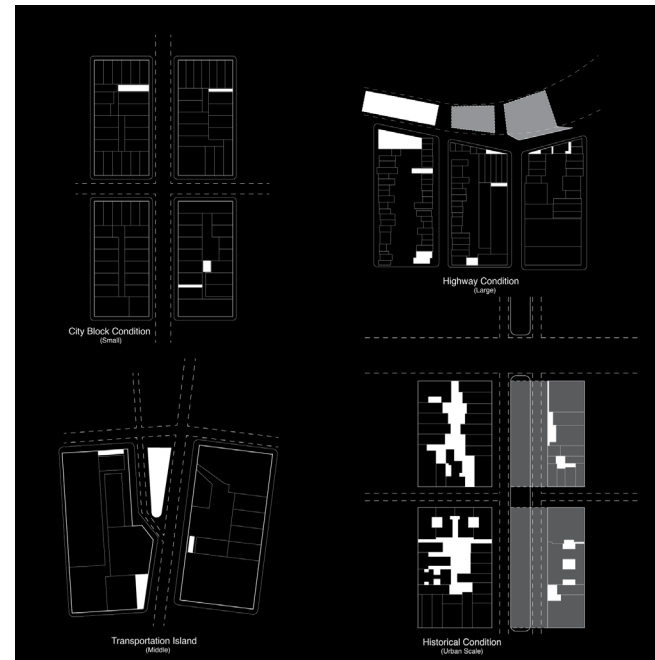


FIG.8 RESIDUAL SPACE CONDITIONS

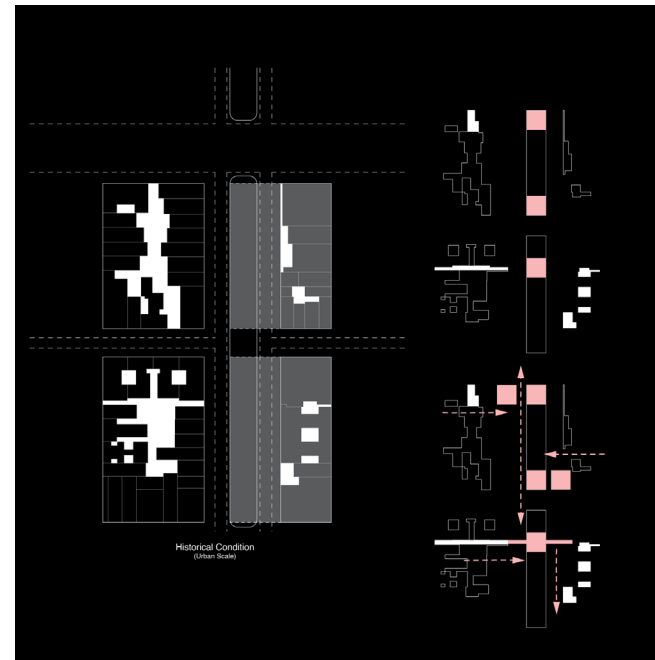


FIG.9 RESIDUAL SPACE CIRCULATION STUDY

Categorize different city residual spaces which are intersected with infrastructure and private development.

City block conditions with small residual spaces, mostly enclosed and narrow.

Transportation island condition has the most access to the traffic.

Highway condition has the largest space allows the potential for various programs.

In historical conditions, the block was separated in half, what's was inside residual space become a transportation island and traffic circulation.

In this historical condition, to remedy those residual spaces give back to public areas by connecting to the center island and to the other side of the street. Those new programs could be intersected to the center island and give new urban circulation driven by programs.

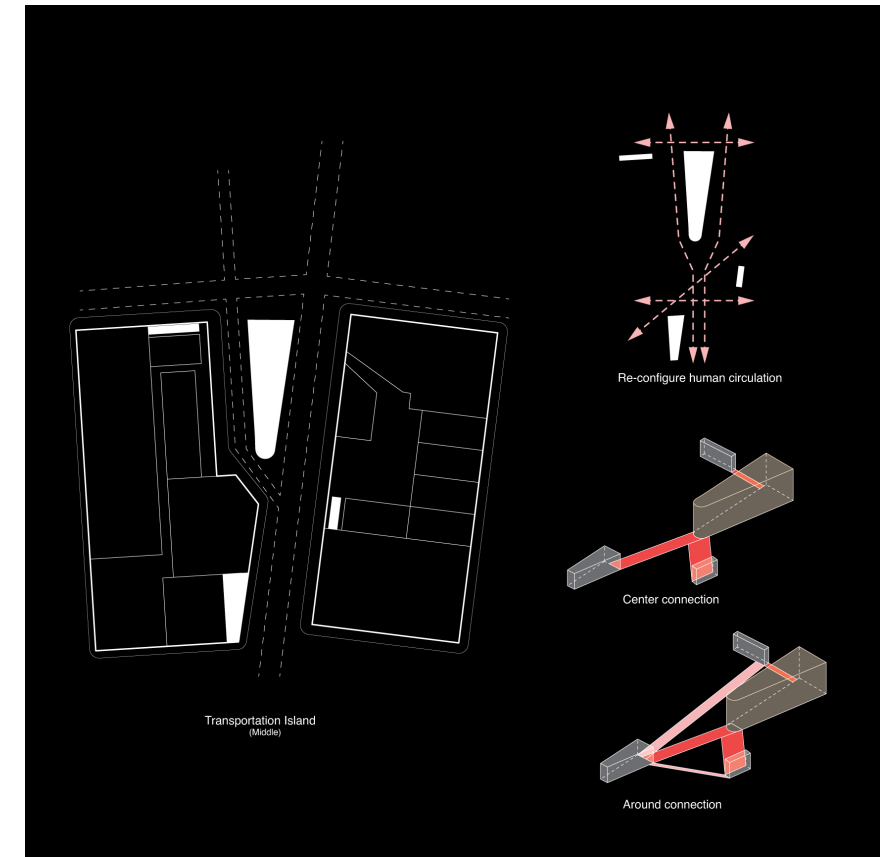


FIG.10 RESIDUAL SPACE CASE STUDY

The center transportation area is reprogrammed to be the most essential function of daily lives which is the sensation, by reprogramming it allows surrounding smaller urban spaces to become active as sleeping sheltering spaces, places of security for homeless people.

It also creates a different architectural hierarchy, giving new urban circulation, that could be fed back to the center program.

SCAFFOLDING THE MARGIN

Scaffolding in pedagogical meaning is a method where teachers offer a particular kind of support to students as they learn and develop a new concept or skill and eventually become self-reliant. In the social context, the unhoused people are regarded as marginal, people who are left behind. In an architectural context, marginal space would be those leftover residual spaces. Scaffolding the margin means using the architectural residual spaces to help the unhoused people eventually form a self-reliant community.

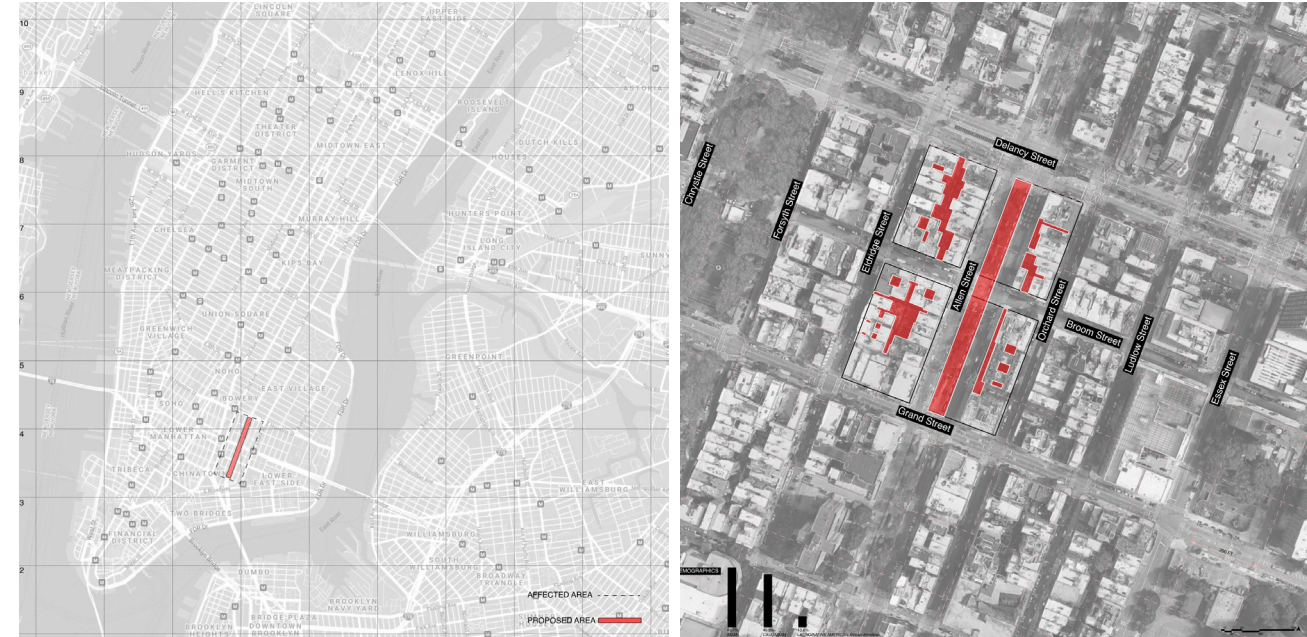


FIG. 11 PROJECT ELEVATION RENDERING

SITE STATEMENT

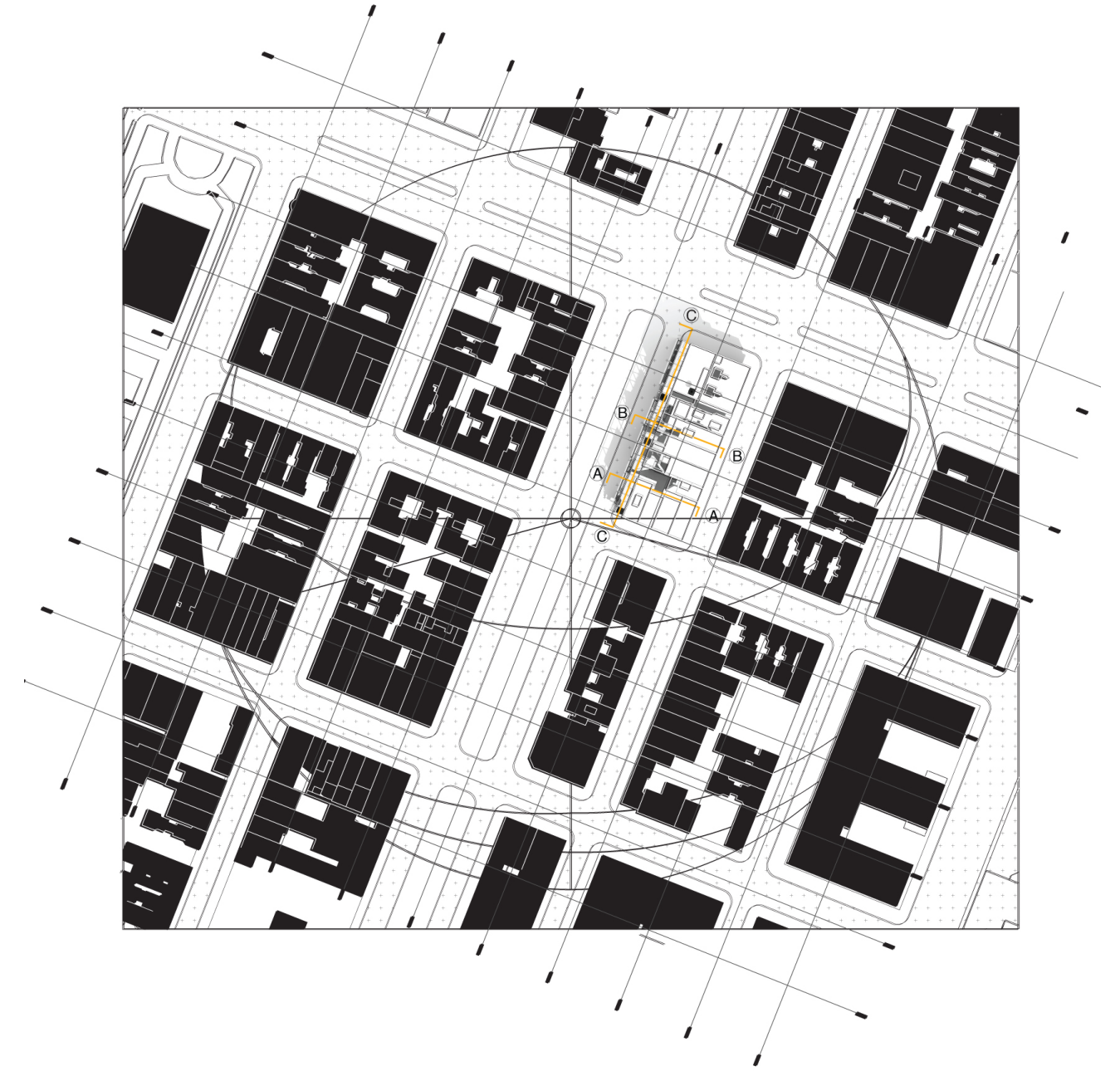
As it becomes more and more gentrified, New York City still has many residual spaces that are left underdeveloped. As Manuel Castells and David Harvey have written, inequality in investment leads to uneven development throughout cities. Yet underdeveloped areas have the potential to become a place for social welfare as living spaces for unhoused people. We take one such area, namely the Allen Street intersection with Delancey Street as the site for our project "Scaffolding The Margin".

Allen Street has a unique characteristic that was the result of the city's development: Half of the city block was demolished in order to create a wider driveway. For those city blocks, what was the backside of the building became the front facade of the building, and buildings lost their rear yards and were left with some liminal residual spaces in front of the facade



CLIMATE: HUMID SUBTROPICAL CLIMATE ZONE
TOTAL AREA: 302.6 MI²
POPULATION: 18,823,000 (2021)
GDP: \$1.4 TRILLION (2020 IN US DOLLAR)

FIG. 12- 14 SITE MAPS IN DIFFERENT SCALE



SCAFFOLDING SYSTEM

Our project is proposing a new scaffold that is embedded within the existing city block's DNA. Our project constructs a new public forum by bringing individuals back to collectives, connecting individual buildings to become a large public field, and possibly becoming a macro field condition for the city.

Using those existing tenement buildings as the reference to constructing a scaffolding condition allows building programs to become fragmented, it becomes possible to introduce different programs in different places freely, while allowing the circulation to connect with existing buildings in order to create a large field condition.



FIG. 15 SCAFFOLDING DIAGRAM

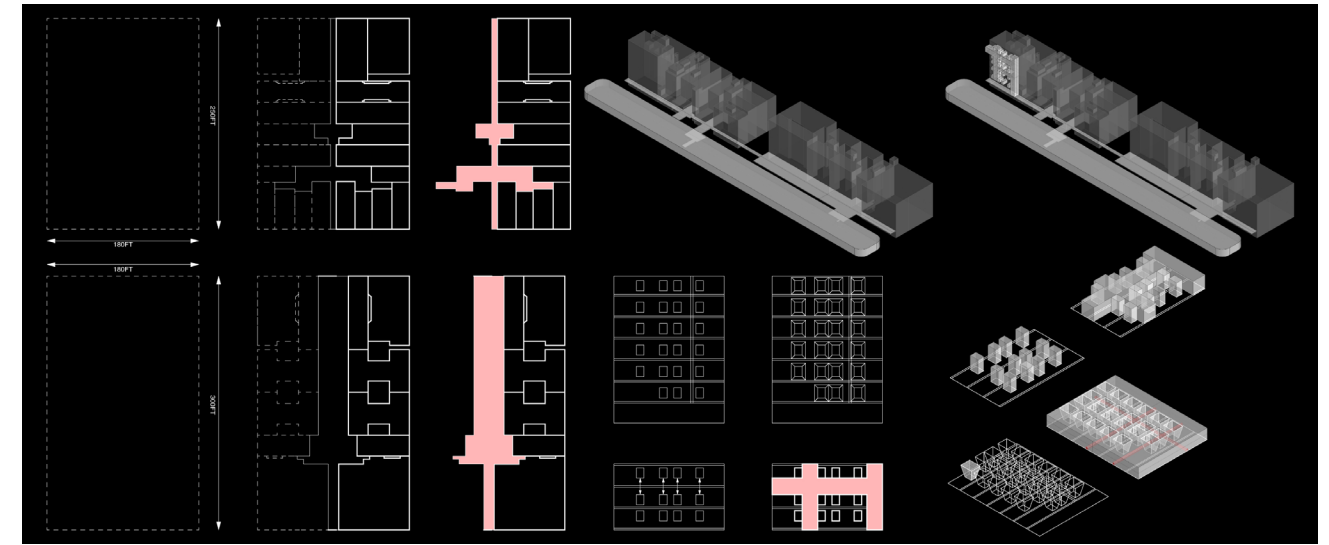


FIG. 16 RESIDUAL SPACE DIAGRAM

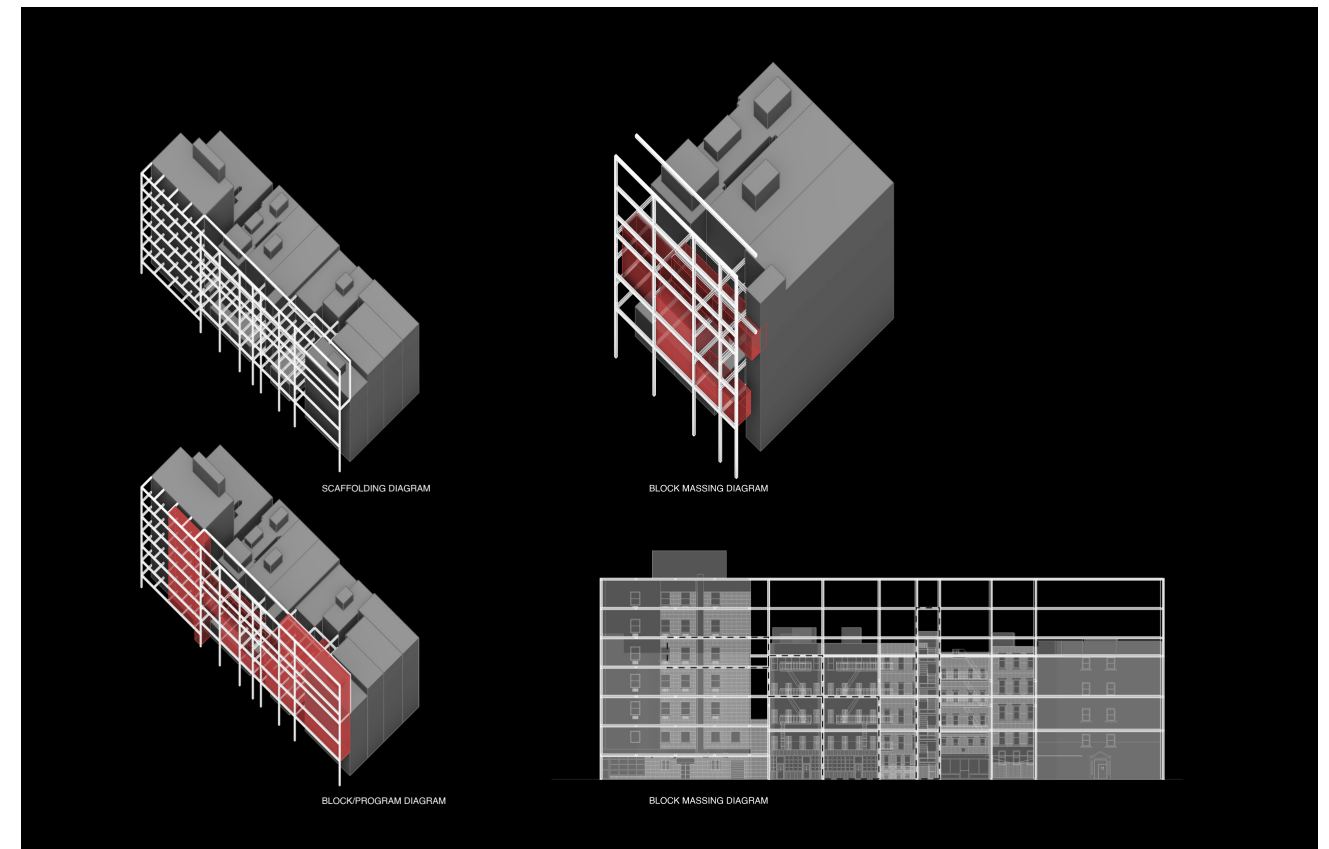


FIG. 17 SCAFFOLDING THE RESIDUAL

DESIGN METHODOLOGY



FIG.18 NORTH-WEST ELEVATION



FIG.19 FIRST FLOOR PLAN

The concept of this project is to challenge the notion of gentrification and reprogram those residual spaces dedicated to those people who desperately needed such as homeless people. The homeless people would bring a new perspective thinking of a community and challenge the idea of over gentrification. By reprogramming different spaces, it sets different special hierarchies, such logic and arrangement could be applied to the entire community.

The advantages of this approach are the flexibility of different programs and it creates large field conditions, that could be applied to different places of the city. I think the difficulty of this approach is the idea of individuality between homeless people, and the collectiveness of the community, how to work with different groups with architecture operations and how to defend private space from public space, and how to introduce publicness into privacy.

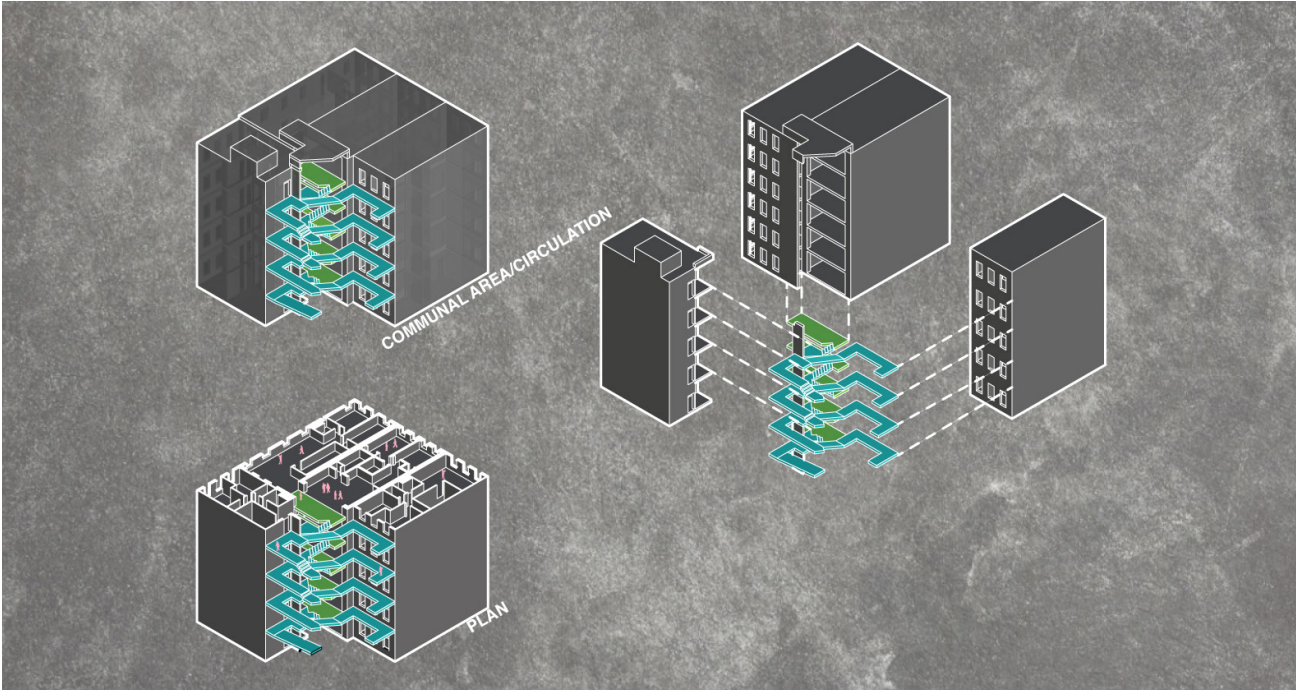


FIG.20 COMMUNAL AREA CIRCULATION

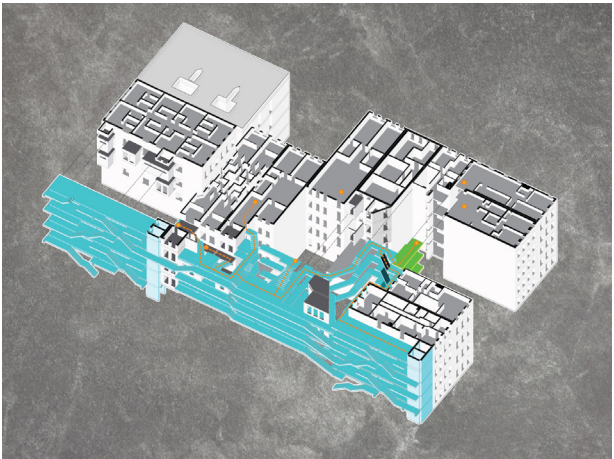


FIG.21 CIRCULATION DIAGRAM

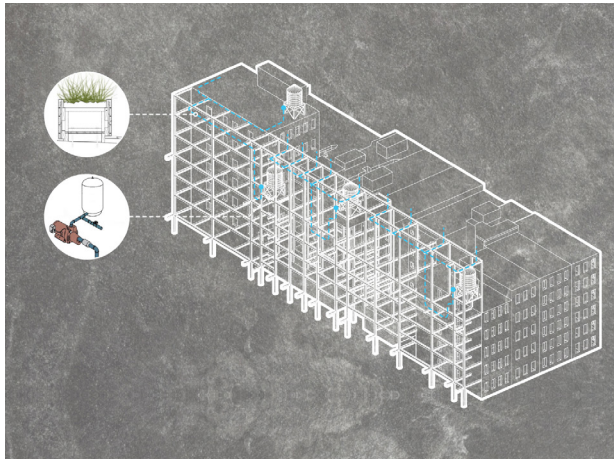


FIG.22 WATER FILTRATION SYSTEM DIAGRAM

DESIGN METHODOLOGY

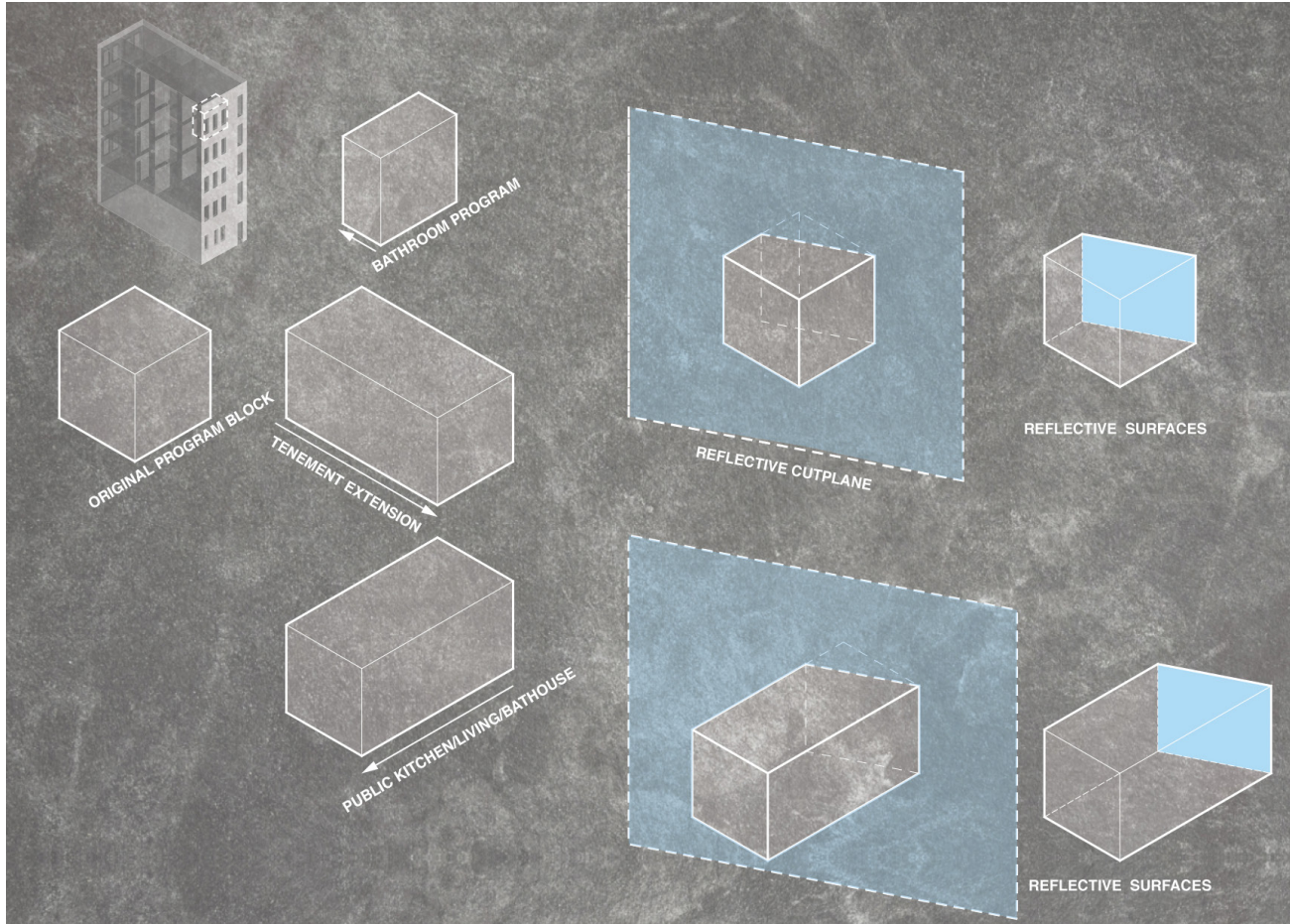


FIG.23 PROGRAM MASSING DIAGRAM
 Those fragmented programs compose a new way to experience the city, pedestrians could walk up to different parts of buildings to prepare their meals, or take a hot bath after running or exercising in the city, or even come to the public living room to catch an NBA game. Using those fragmented programs in the scaffolding would not only give homeless people a place to live but also would help them come back to the collective community.

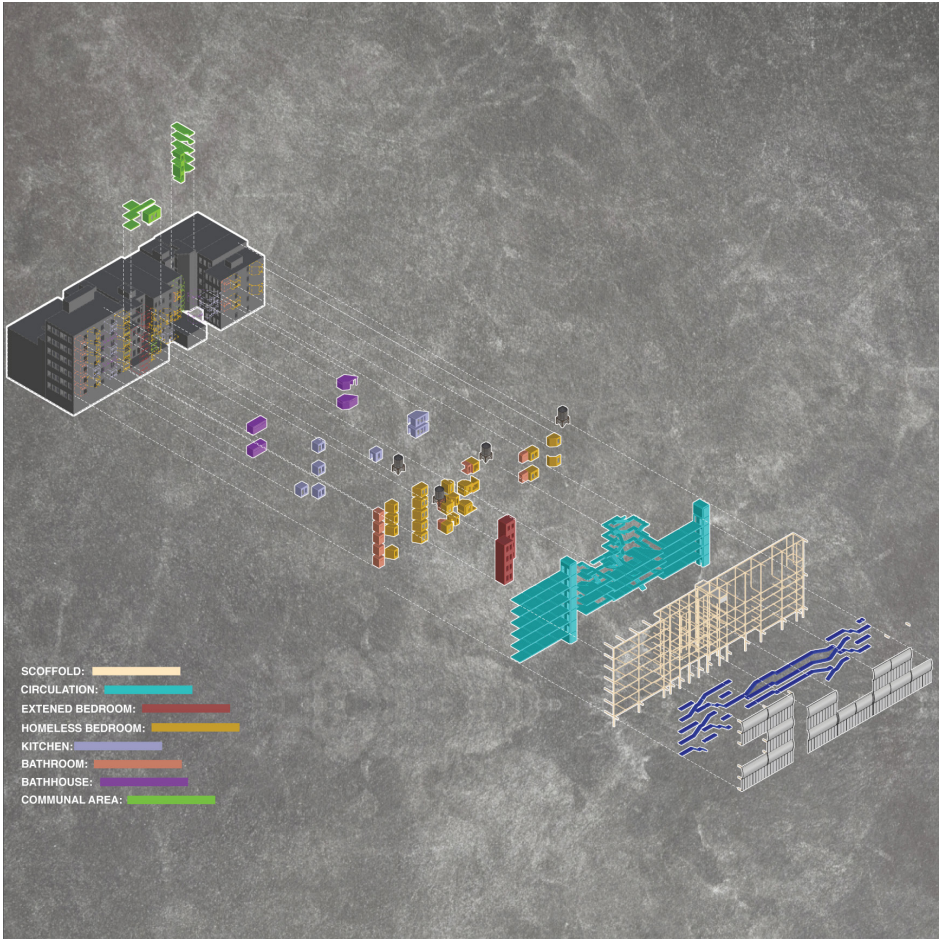


FIG.24 PROGRAM CONFIGURATION DIAGRAM
 Because the scaffolding structure was based on existing tenement buildings, the circulation would also connect to existing buildings, which means the community would merge together and share those public spaces. By opening parts of those existing tenement buildings and modifying programs, the individual building would also be merged and share a common program. In other words, those field conditions are not only happening within the scaffolding structure but the entire city block. Scaffolding the margin enables editing the city by editing the city blocks, editing the city blocks by editing existing individual buildings, and editing individual buildings by editing fragmented programs.

DESIGN METHODOLOGY



FIG.25-27 SECTIONS

This project rethinks the relationship between programs and buildings, how individual program fragments could change the civic experience; public and private, how private space would be open up and become public and shared with; existing buildings with ordinary people, and new buildings with homeless people.



FIG.28 PROJECT RENDERING



FIG.29 PROJECT RENDERING



FIG.30 PROJECT RENDERING

PRECEDENTS

Ryue Nishizawa / SANAA – Moriyama House, Ohta-ku, Tokyo, Japan, 2005

In the president Moriyama house by SANAA's Ryue Nishizawa, it illustrates an idea about re-interpret city blocks, re-think in-between space, and how those spaces could allow different programs and activities to happen by themselves. Those conditions could be applied to the urban fabric with infrastructure and utilize those residual spaces, reconnect those spaces to the urban fabric.



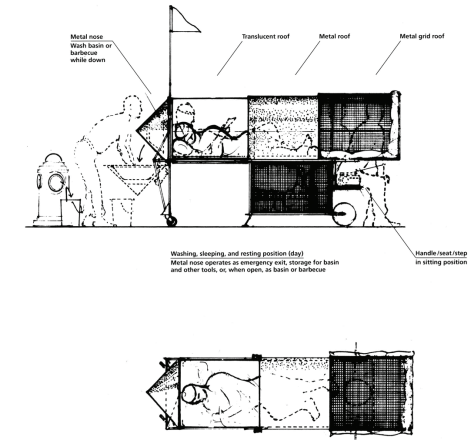
Jakub Szczesny – The Keret House, Warsaw, Poland, 2012

This precedent which proposed a narrow house intersected in between 2 large adjacent buildings, which inspired me about utilizing residual areas, reprogram them to create new possibilities of community.



Krzysztof Wodiczko – Homeless Vehicle Project, 2012

This precedent illustrates how a homeless person uses different spatial conditions, as well as key programs for them.



Sou Fujimoto Architects – House NA, Koenji, Tokyo, Japan, 2015

This precedent illustrates how a scaffolding system could be used in different program conditions.



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