胡奇轩 HU Qixuan

住在边缘 LIVING ON THE EDGE
寨上村外来务工租客的临时住房和避难所
Temporary housing and shelter for the work-ing migrant population of Zhaishang Village

项目关注厦门外来打工租户，在高密度城市中对寨上村面临拆迁的背景下，探讨城市贫民居住权缺失与多方利益交互现象。项目以社会正义的哲学作为理论研究出发点，主张政府应重视权力关系和资源配置，减少对社会关系网络破坏，实现社会正义。同时项目以装配式临时安置住房的表现形式，解构原有板房结构，给予人们最大化的自我资源调配、生存技能学习以及共同社会参与作为解决手段和反映现象的途径。

The project focuses on Xiamen's migrant tenants, exploring their lack of housing rights and the interaction of multiple interests amid the demolition of Zhai Shang Village. It uses social justice as a theoretical foundation, advocating for government attention to power dynamics and resource allocation to minimize social network disruption. The project proposes assembled temporary housing, deconstructing boarding house structures to empower tenants in resource deployment, survival skill learning, and social participation.

导师 TUTOR：陈文捷, Samuel Peen
环境设计 ENVIRONMENT DESIGN

"LIVING ON THE EDGE"

Temporary housing and shelter for the working migrant population of Zhaishang Village
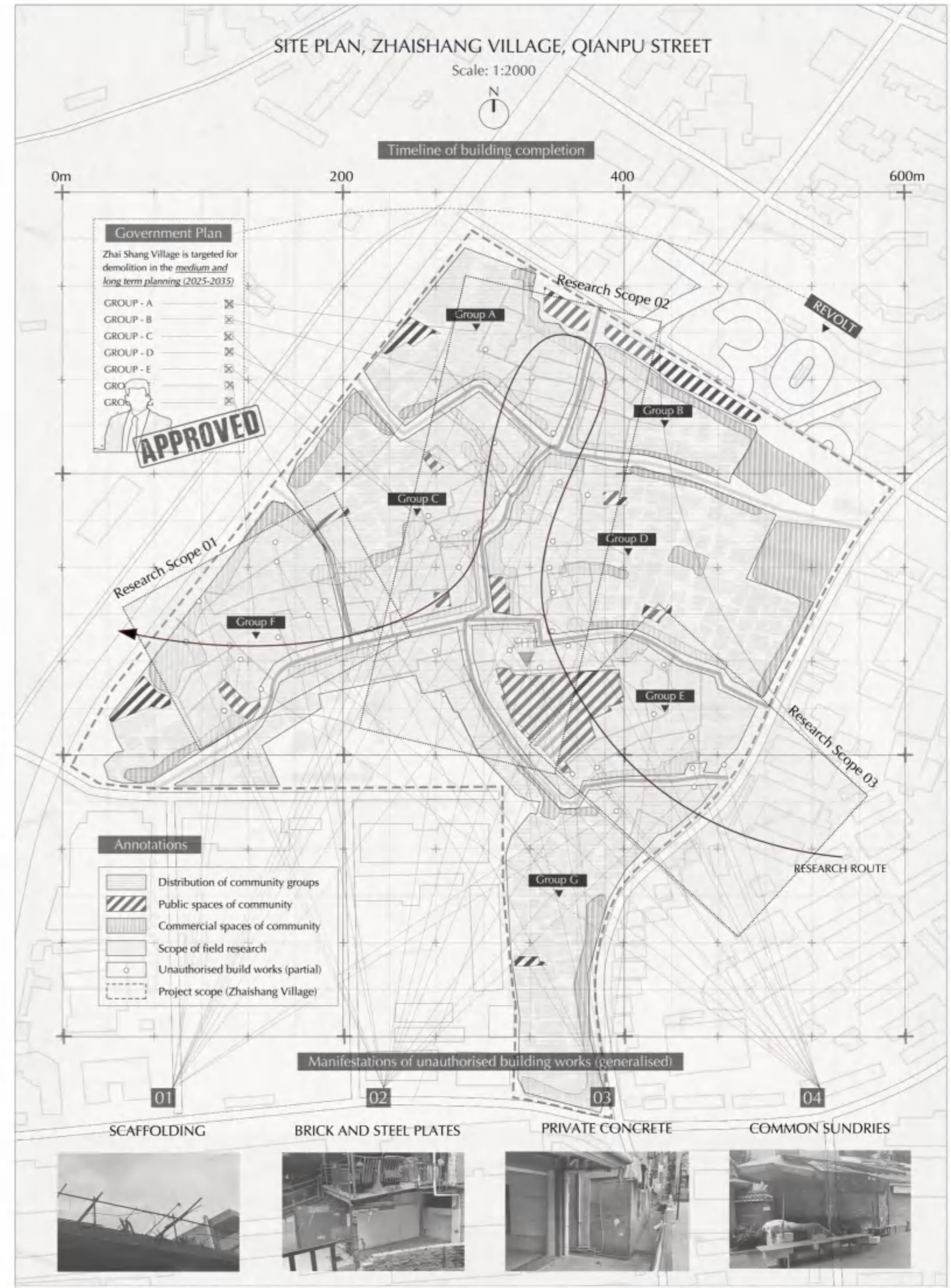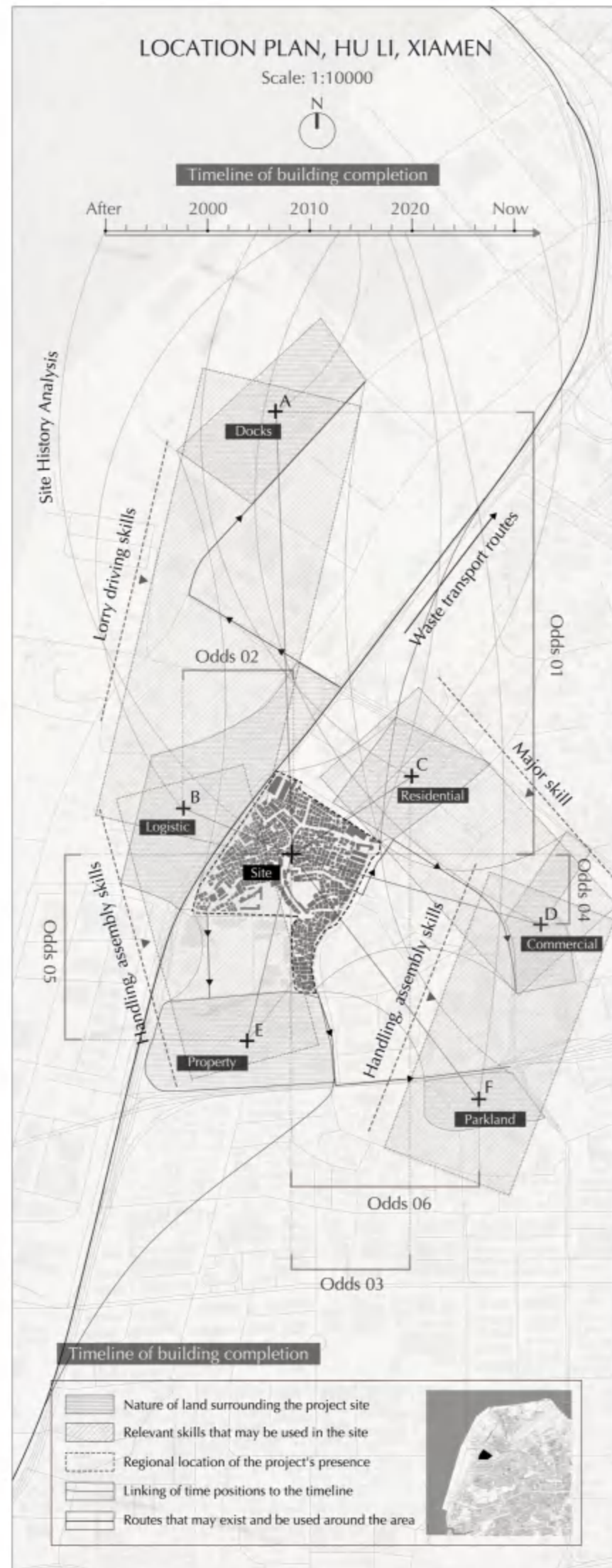
01. ZHAI SHANG VILLAGE - A COMMUNITY FACING DEMOLITION

Urban Threshold Phenomenon:

The village of Zhai Shang has the largest foreign population group and is in a state of wandering between demolition and non-demolition, this is due to a large number of demolition costs, population re-settlement costs and other reasons. The conflicts caused by this come from the worries of the government and the opposition of the tenants of the foreign population, and the unstable state is difficult to destroy.

The growing number of warning signs and public building violations in the neighbourhood seem like a silent struggle between two groups.

The project proposes a strategy of "increase"-"decrease"-"keep" in an attempt to break this state of limbo, while arguing that in the face of the government's resolution to demolish, tenants have the right to raise the issue of unfairness. It is also argued that in the face of the government's demolition resolution, tenants have the right to protest against injustice and the government has the right to collect and pay for the site. Based on this model, the project, through the excavation and deepening of the public illegal structures, proposes appropriate answers to ease the phenomenon of demolition and re location in Zhai Shang Village, and gives both parties a chance to express their views.

Site information and theme extraction
"LIVING ON THE EDGE"   - 01/06

LOCATION PLAN, HU LI, XIAMEN

Scale: 1:10000

N

Timeline of building completion

After — 2000 — 2010 — 2020 — Now

Site History Analysis

Lorry driving skills
Handling assembly skills
Handling assembly skills
Waste transport routes
Major skill

Docks (A)
Odds 02
Odds 01
Odds 04
Odds 05
Logistic (B)
Residential (C)
Site
Commercial (D)
Property (E)
Odds 06
Parkland (F)
Odds 03

Timeline of building completion

	Nature of land surrounding the project site
	Relevant skills that may be used in the site
	Regional location of the project's presence
	Linking of time positions to the timeline
	Routes that may exist and be used around the area

SITE PLAN, ZHAISHANG VILLAGE, QIANPU STREET

Scale: 1:2000

N

Timeline of building completion

0m — 200 — 400 — 600m

Government Plan

Zhai Shang Village is targeted for demolition in the *medium and long term planning (2025-2035)*

GROUP - A
GROUP - B
GROUP - C
GROUP - D
GROUP - E
GRO
GRO

APPROVED

Research Scope 02
REVOLT
Group A
Group B
Group C
Group D
Group E
Group F
Group G
Research Scope 01
Research Scope 03
RESEARCH ROUTE

Annotations

	Distribution of community groups
	Public spaces of community
	Commercial spaces of community
	Scope of field research
○	Unauthorised build works (partial)
	Project scope (Zhaishang Village)

Manifestations of unauthorised building works (generalised)

01	02	03	04
SCAFFOLDING	BRICK AND STEEL PLATES	PRIVATE CONCRETE	COMMON SUNDRIES

"LIVING ON THE EDGE"

Temporary housing and shelter for the working migrant population of Zhaishang Village

02. RESEARCH - SOCIAL JUSTICE PHILOSOPHICAL CATEGORIES AND EVENTS TO EXPLORE
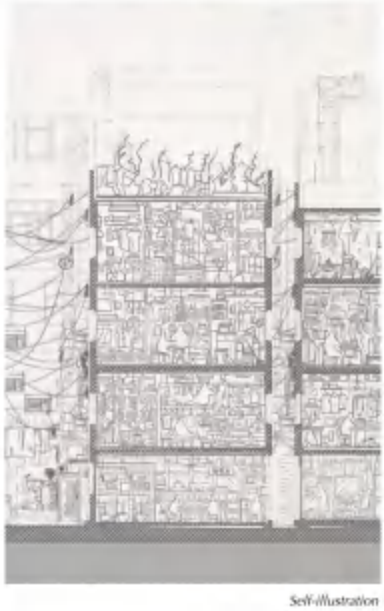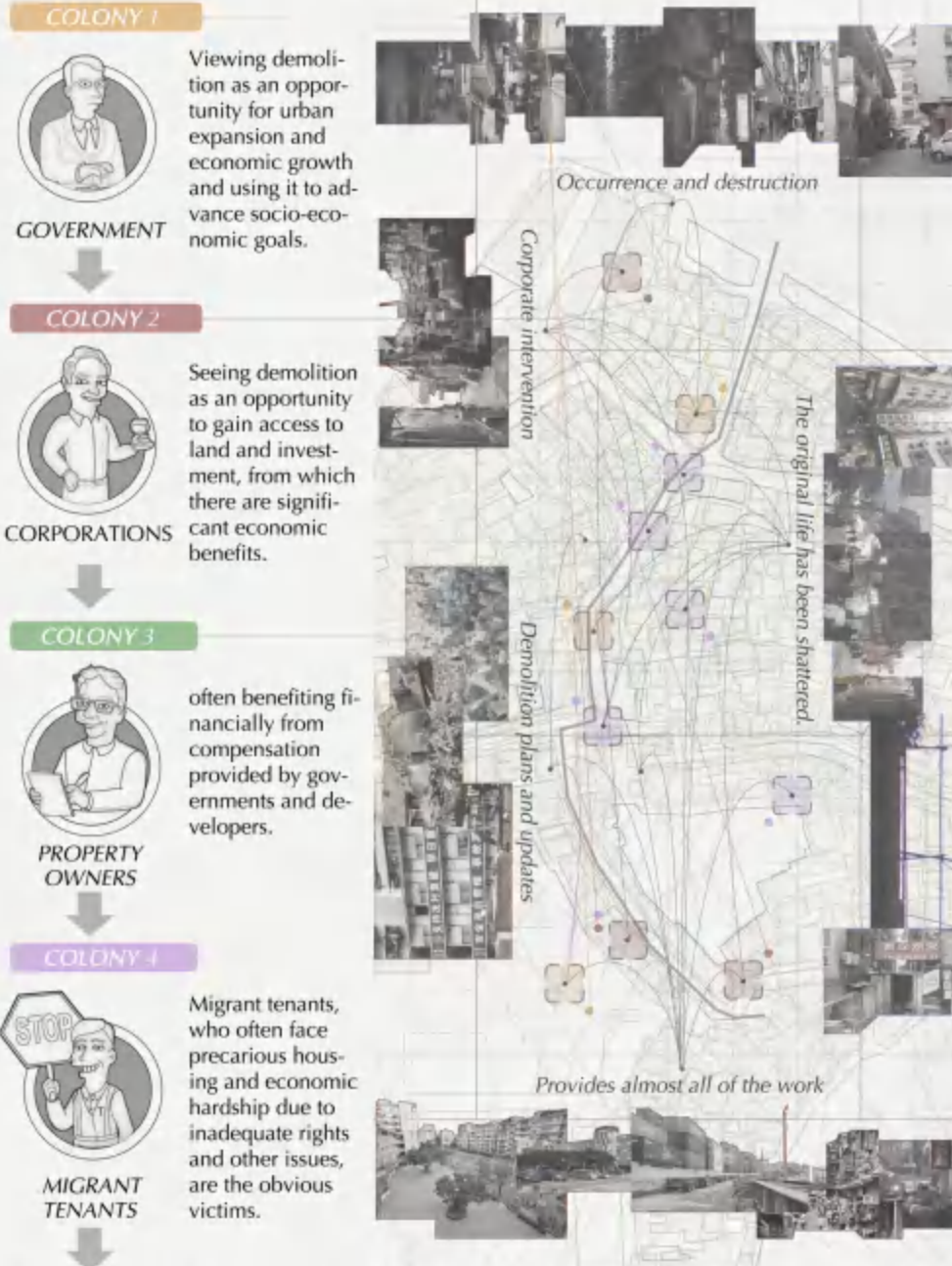
Self-illustration

The analysis of this phenomenon is that the demolition and relocation of Zhai Shang Village, which is in a state of disarray due to the interference and influence of rapid urbanisation, has resulted in a large number of migrant tenants losing their low-cost accommodation, which the project believes is due to the fact that migrant tenants have lost the right to live in a socially and morally acceptable way due to their social status and their status as a tenant.

The project argues that in this context, migrant tenants are culturally, economically and politically excluded, and that their sense of social justice and identity needs to be re-examined, i.e. that the power structures and modes of knowledge production in the process of urbanisation have led to the marginalisation of migrant tenants. The project argues that urban planning from the government's perspective should focus on power relations and resource allocation, and that marginalised groups need to find a place in urban culture by participating autonomously in complex urban spaces and by constructing 'identities' and 'stories'. A place in urban culture

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THRESHOLD PHENOMENON - DEMOLITION AND RELOCATION OF ZHAI SHANG VILLAGE

Due to the interference and impact of rapid urbanization, the issue of demolition in Chaishang Village, which is in a chaotic state, ultimately resulted in a large number of migrant workers losing their affordable housing. The project believes that due to their social status and tenant identity, migrant worker tenants have lost their right to housing at the social moral level.

COLONY 1

GOVERNMENT — Viewing demolition as an opportunity for urban expansion and economic growth and using it to advance socio-economic goals.

COLONY 2

CORPORATIONS — Seeing demolition as an opportunity to gain access to land and investment, from which there are significant economic benefits.

COLONY 3

PROPERTY OWNERS — often benefiting financially from compensation provided by governments and developers.

COLONY 4

MIGRANT TENANTS — Migrant tenants, who often face precarious housing and economic hardship due to inadequate rights and other issues, are the obvious victims.

Occurrence and destruction

Corporate intervention

Demolition plans and updates

The original life has been shattered.

Provides almost all of the work

User Profile of Migrant Worker Tenants (Research)

Name: Zhang** **Age:** 55 **Gender:** Male **Circumstances:** Formerly living in a modest one-room apartment in an urban village, doing manual labour
Concerns about future health and cost of living, and feelings of injustice and helplessness about high rents.

Name: Li** **Age:** 22 **Gender:** Female **Circumstances:** One of the tenants of the urban village, working in the service industry as a catering waiter in a restaurant in the village.
Anxious about not being able to afford city centre rents and looking to the government for support.

Name: **Ming **Age:** 40 **Gender:** Male **Circumstances:** Rent and own shop in a city centre village, mainly engaged in electronic product repair, with a stable customer base.
Reaction to the demolition was muted, but there was concern that rising rents would affect business.

Name: Liu** **Age:** 35 **Gender:** Female **Circumstances:** Mother, living in an urban village with her two children and a husband who works abroad all year round.
Demolition adds stress and the need for better resettlement plans to take care of family members.

Name: Liu** **Age:** 50 **Gender:** Male **Circumstances:** Labourer in the construction industry, renting in an urban village for many years, with family members back home.
Worried about rents and medical facilities, expecting the government to care for the elderly.

Name: ** Yue **Age:** 22 **Gender:** Female **Circumstances:** University graduate, new to the big city and looking for job opportunities, rent in urban villages to save money.
Disturbed by evictions and high rents, they want more government support for young people.

A:Affordability, B:Employment Proximity, C:Health Facility Access, D:Community Services, E:Residential Amenity

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STAGE-01
PHILOSOPHY OF SOCIAL JUSTICE

(John Bordley Rawls, 1921-2002)
① Social justice is based on the principle of equity and the enjoyment of fundamental rights and freedoms by everyone
② "Difference principle"

"A Theory of Justice"

VIEWPOINTS

(Jürgen Habermas, 1929-) ------- *Explanation of the rationality*
Citizens should reach consensus through rational discussion and use this consensus as a basis for political decision-making

STAGE-1.5
JUSTICE IN PLANNING

(Nancy Fraser, 1947-)
Recognition and participation are key to achieving comprehensive social justice

(Ram Koohass, 1944-)
"Delirious New York"

STAGE-02
SOCIAL JUSTICE AND URBANISATION

Urbanisation triggers shifts in the social fabric that exacerbate inequality.

(David Harvey, 1935-)
"Social Justice and the City"

VIEWPOINTS

Cities produce surplus goods and absorb excess capital and labor, helping stabilize capitalism.

(Michel Foucault, 1926-1984)
"Power/Knowledge"
How Power Constructs Social Truth and Order

Marxist theory

(Karl Heinrich Marx, 1818-1883)
Property development in cities and investment in high-yield areas often comes at the expense of low-income neighbourhoods

STAGE-2.5
THE CREATION OF MARGINALISATION

Power structures and modes of knowledge production in the urbanisation process lead to social control and marginalisation of the migrant population.

STAGE-03
IDENTIFICATION OF MARGINALISED GROUPS

In the process of urbanisation, migrant workers face economic, political and cultural exclusion, and their sense of social justice and identity needs to be revisited.

(Henri Lefebvre, 1901-1991)
The capitalist profit-seeking of urban space has led to the alienation of social relations and the alienation of urban dwellers.

(Zygmunt Bauman, 1925-2017)
"Liquid Modernity"
Individuals face uncertainty in their relationship with the environment

(Jane Jacobs, 1916-2006)
"The Death and Life of Great American Cities"
Cities are complex and diverse. In urban planning, it's crucial to involve residents and create multifunctional urban spaces.

INFLUENCE

STAGE-04
CITIES FOR SOCIAL JUSTICE

Urban planning should focus on social justice, equity and transparency in power relations and resource allocation

(Mike Davis, 1946-2022)
"Planet of Slums"
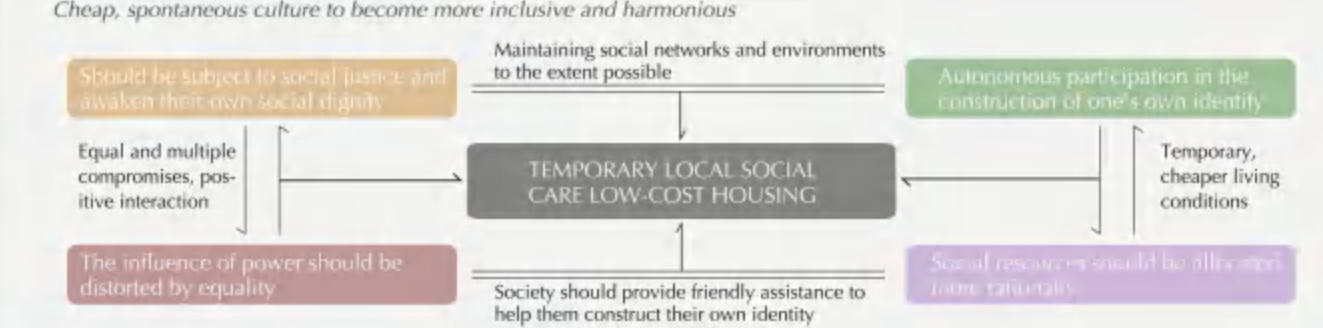Focus on housing, health and work for marginalised groups

(Richard Sennett, 1943-)
"The Culture of the New Capitalism"
To build their own "story" in the city so that outsiders can find a place in the city's culture.

(Stuart Hall , 1932-2014)
"Cultural Identity and Diaspora"
Identity is constantly constructed through difference and dialogue

STAGE-05
WAYS TO RECONSTRUCT THE LIVES OF MIGRANT TENANTS

Cheap, spontaneous culture to become more inclusive and harmonious

Should be subject to social justice and awaken their own social dignity

Maintaining social networks and environments to the extent possible

Autonomous participation in the construction of one's own identity

Equal and multiple compromises, positive interaction

TEMPORARY LOCAL SOCIAL CARE LOW-COST HOUSING

Temporary, cheaper living conditions

The influence of power should be distorted by equality

Society should provide friendly assistance to help them construct their own identity

Social resources should be allocated more fairly

"LIVING ON THE EDGE"

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03. TRANSFORMATION OF MORE SUITABLE UNIT-SITE ELEMENTS AND CONSTRUCTION OF MODULES

The project takes the birth and exacerbation of illegal structures in the area as the core of its research, exploring the social tensions in the process of urbanisation and the right to housing of marginalised groups. Illegal buildings not only reflect residents' adaptation and resistance to the oppressive urban environment, but also map the tension between current urban planning and the needs of the underclass. In these spontaneously formed spaces, residents demonstrate their desire for control over their living environment and their pursuit of autonomy.

The project begins with an in-depth analysis of the context, structural characteristics and functions of illegal structures in the community, as a basis for rethinking how to transform these informal structures into legal, safe and quality-of-life living spaces. Through a detailed investigation of these illegal structures, the proposal uncovers a profound need for personalised and affordable living spaces.

Proposals that are premised on giving people dignity should consider the adaptability and understanding of the site.

Produced by myself

STRUCTURAL RESHAPING

DECONSTRUCT-REDESIGN

Corner pieces
L 178xW 162
xH 118
T 5mm

Steel Tube
H 100xW 100

- **Structural variability:** Has a standardised, single design
- **Ease of assembly:** Usually requires specialised tools and some technical support
- **Eco-friendly:** Cheap material, difficult to reuse
- **Cost-effective:** Higher maintenance costs
- **Space utilisation:** Fixed space layout

By exploring the dimensions, corners, support columns and other details of the original slab, form and composition are extracted and deconstructed

Cross-over X
H 105xW 55
xL 250x250
T 5mm

L-Steel
H 50xW 50
T 5mm

Round tube
H 30xW 30

Tube bar
H 100xW 50

- **Structural variability:** The modular design allows for different combinations and configurations, enhancing flexibility of use.
- **Ease of assembly:** Easy to insert and lock components for rapid deployment
- **Eco-friendly:** Almost steel sandwich panels, completely renewable
- **Cost-effective:** Durability and low maintenance costs
- **Space utilisation:** Space functions can be adjusted to make space applications more efficient and personalised

Steelwork Structure
Thick: 30mm
Size: 298*298cm

Ceiling Composition

Ceiling connection

Ceiling board
Size: 2*10*280cm
Holes: Ø30mm

Steel Tube
Size: 2*10*280cm
Holes: Ø30mm

Steel pipe
Length: 100mm-?
Calibre: Ø30mm

Blockboard
Thick: 50mm
Size: 280*300cm

Steel Linker
Length: 100mm-?
Calibre: Ø30mm

Reinforce
Calibre: Ø15mm
Bearer: 0.75T

Facade connection

Steel Tube Bar

Floor construction

Construction materials
Steelwork Structure	2
Cross-overX	8
L-Steel	16
Round tube	!
Tube Bar	8
M8 nut and bolt	120

Reinforce
Calibre: Ø15mm
Bearer: 0.75T

CUSTOMISING THE WHOLE PROCESS

OFFLINE SHOPPING - MARKET

CHARACTERS → PLACE AN ORDER → Factory → FABRICATION → Logistics company → ASSEMBLE

Prior to the demolition, people in the demarcated areas shop online or offline to place orders for their own "temporary housing".

Customised room sizes and furnishings are selected according to the structure of the family, as well as their needs and budget.

Material vendors complete assembly of base materials and ship to site for pre-assembly and planning process

FACADE ARTICULATION OF PUBLIC ELEMENT TYPES

FACADE MATERIAL ELEMENT TYPE - EXTRACTION SITE

FUNCTIONAL FURNITURE FOR PRIVATE AND PUBLIC LIFE

CUPBOARD
Size: 750*400*550mm
Attributes: Private/Public
Applicants: 1 Person

COMPARTMENT
Size: 1700*420*1600mm
Attributes: Private/Public
Applicants: 2-3 Person

WASHBASIN
Size: 600*750*750mm
Attributes: Public
Applicants: Temporal

WALL
Size: 350*15*2500mm
Attributes: Private/Public
Applicants: 1-∞ Person

ROUND TABLE
Size: Ø1500*700mm
Attributes: Public
Applicants: 5-10 Person

LARGE BED
Size: 2000*1500*500mm
Attributes: Private
Applicants: 2 Person

SINGLE BED
Size: 1900*900*500mm
Attributes: Private
Applicants: 1 Person

LARGE TABLE
Size: 1500*450*450mm
Attributes: Public
Applicants: 2-5 Person

KITCHENS
Size: 1500*600*750mm
Attributes: Public
Applicants: Temporal

TABLE
Size: 750*600*700mm
Attributes: Public
Applicants: 1 Person

MID TABLE
Size: 700*1000*750mm
Attributes: Private/Public
Applicants: 2-3 Person

DEHUMIDIFIERS
Size: 750*400*550mm
Attributes: Public
Applicants: Temporal

SAMLL CHAIR
Size: 500*400*40mm
Attributes: Private/Public
Applicants: 1 Person

LEDGE
Size: 725*200*? mm
Attributes: Private/Public
Applicants: 1-3 Person

COAT/ SHOE RACK
Size: 750*170*1750mm
Attributes: Private
Applicants: 1-2 Person

"LIVING ON THE EDGE"

Temporary housing and shelter for the working migrant population of Zhaishang Village

04. LIVING ON THE EDGE - CREATING COMMUNITY

We explored strategies to meet the diverse needs of residents through community design, with a particular focus on the process of legalising and functionally transforming illegal structures. These unauthorised structures not only reflect the residents' improvised needs for living space, but also reveal their survival strategies in the face of the pressures of urbanisation.

The design goal is to maintain the foundational role of these structures in the culture of the neighbourhood, while enhancing the safety and comfort of the dwellings. By creating multi-functional public spaces, we facilitate daily interactions between residents and strengthen the ties between neighbours, while providing spatial flexibility and allowing residents to reconfigure spaces according to their collective or individual needs.

In addition, emphasis is placed on residents' right to participate in the design of their living units, allowing them to customise their living environment according to their individual budgets and preferences. This participatory approach enhances residents' sense of belonging to the community and allows each family to customise their home to their lifestyle without sacrificing comfort.

The project aims to create a living environment that both reflects the diversity of its residents and promotes positive emotions and healthy social relationships. This design not only enhances the practicality and aesthetics of living, but more importantly, it reinforces residents' participation and satisfaction in community life, making the community a truly supportive and nurturing platform for its members.

Design and the creation of a sense of community
"LIVING ON THE EDGE"   - 04/06

STRUCTURAL RESHAPING

3X3 Small settlements (9m*9m) 5 Floors

4X4 Mid settlements (12m*12m) 4 Floors

5X5 Huge settlements (15m*15m) 3 Floors

ENERGY SYSTEMS

Solar panels

Heat pump air conditioning

Electrical and internal systems

At the same time, the micro-communities formed after the construction of clusters will be equipped with more public facilities and energy systems (4*4 micro-communities as an example).

CONSTRUCTION PROCESS

① DELIVERIES
Customised rear transport kit

② PORTAGE
Workers move kits out for display

③ ARRANGE
Build foundations with three-metre array spacing

④ FOUNDATION
Workers installing baseboards and facades

⑤ ASSEMBLE I
Single-storey erection on the exterior of the foundation

⑤ ASSEMBLE II
Installation by crane and manual fixing according to the structure

STRUCTURAL RESHAPING

2*1 Public toilet
Community enjoyment with provision of public toilets

2*1 Public pavilions
Provide public community rest and socialisation services

1*1 Bulletin board
Provision of public information displays for the community

1*1 Drying area
A communal drying area, drying of clothes and provision of space

1*1 Public planting
Community enjoyment with provision of public toilets

1*1 Public stairs
Provide public community rest and socialisation services

In such a community, people live in their own customised spaces, and their own influence on the space affects their neighbours, as they participate in and shape the community together. The space on the ground floor is equipped with the use of public space, which serves as a transition between the private realm and the outer space, and also draws in the distance between people in and out of the community, just as it did originally.

3X3 SMALL SETTLEMENTS

1 FLOOR: Water bars, small food stalls, etc.
2-5 FLOOR: Small community- (4-8 Person)

3*3 SPACE TYPE (UNFINISHED):

1F   2-5F-T1   2-5F-T2   2-5F-T3   2-5F-T4   2-5F-T5

COMBINED AXONOMETRIC

4X4 MID SETTLEMENTS

1 FLOOR: Chess room, other public areas
2-5 FLOOR: Mid community- (8-20 Person)

4*4 SPACE TYPE (UNFINISHED):

1F   2-4F-T1   2-4F-T2   2-4F-T3   2-4F-T4   2-4F-T5

COMBINED AXONOMETRIC

5X5 HUGE SETTLEMENTS

1 FLOOR: Employment Skills Training Points
2-5 FLOOR: Big community- (10-30 Person)

5*5 SPACE TYPE (UNFINISHED):

1F   2-3F-T1   2-3F-T2   2-3F-T3   2-3F-T4   2-3F-T5

COMBINED AXONOMETRIC

3*3 EXTERIOR AREA ON 1FLOOR

a. ■	Drying areas
b. ■■	Leisure seating
c. ■■	Public toilet
d. ■	Bulletin board

For the 3*3 micro-cluster view. The community can host about 4-8 people, which is favoured by more young people and a few older people in the research. The fast-paced lifestyle and small size of the group shapes a light and simple life.

4*4 EXTERIOR AREA ON 1FLOOR

a. ■	Drying areas
b. ■■	Leisure seating
c. ■■	Public toilet
d. ■	Bulletin board
e. ■■	Public planting

For a 4×4 neighbourhood, it can host 8-20 people. Medium communities are friendly to any age group, while having a comfortable social range as well as being able to host most indoor social events

5*5 EXTERIOR AREA ON 1FLOOR

a. ■■	Parking spaces
b. ■	Drying areas
c. ■■	Leisure seating
d. ■■	Public toilet
e. ■■	Public pavilions
f. ■	Bulletin board
g. ■	Public planting

For the 5*5 community, which can accommodate 10-30 people, the warmth and bustling atmosphere of the research was received with love from the middle-aged and elderly, perpetuating the sense of community.

"LIVING ON THE EDGE"

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05. CREATION OF COMMUNITY GROUPS

The design is placed in Zhai Shang Park in Zhai Shang Village, where the layout of the temporary facilities is arranged according to the surrounding village texture. Zhai Shang Park still maintains its original functions and social spaces, and serves as a transition between the new community and the old one.

The new community maintains the compactness of the original community, the elements of the community depend on people's understanding and perception of the community, and the atmosphere and shaping of the community depend on people's co-creation. In such an environment, the role of the designer is that of a facilitator rather than a designer.

In a 6-monthly turnover environment, the community is allowed to create the spatial composition it once had, the learning of life skills is routine, and businesses are spontaneously formed as part of their learning practices.
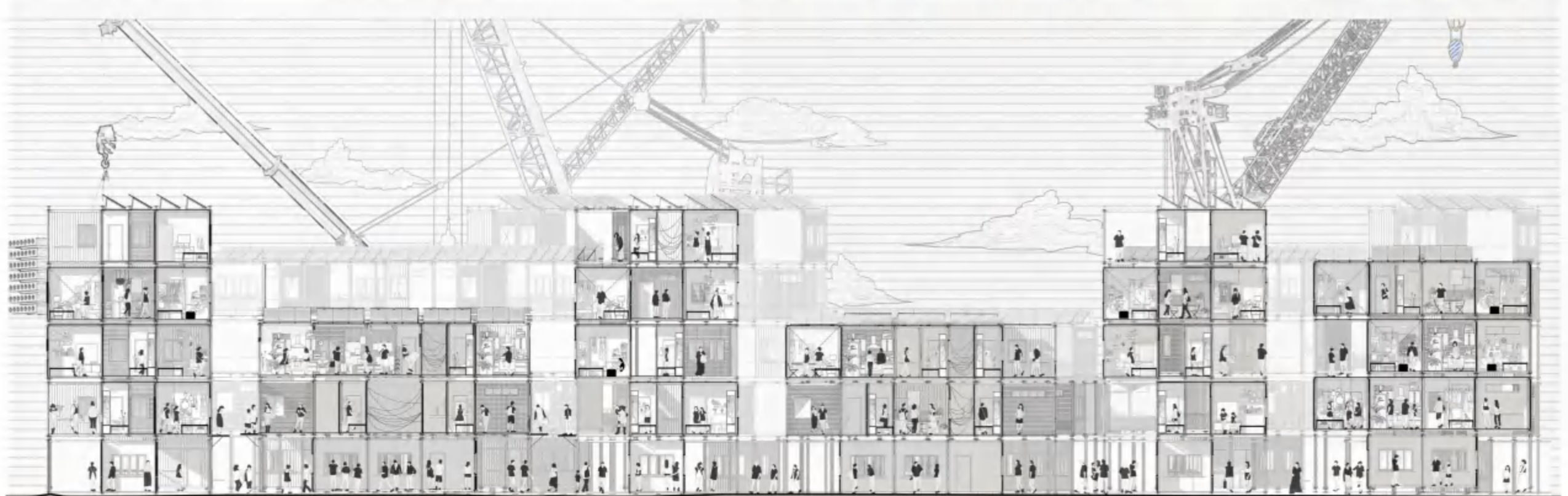
Site model - white dotted line shows Walled City Park

FIRST FLOOR PLAN OF COMMUNITY

N

Scale: 1:300

0   5   15   30
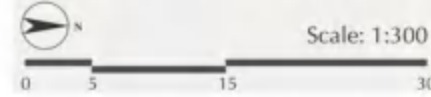
1 -   Original site park landscape
2 -   Formal entrance to the original site
3 -   Community Connections Walkway
4 -   3*3 concentrated residential dwellings
5 -   3*4 concentrated residential dwellings
6 -   5*5 concentrated residential dwellings

COMMUNITY SCENE SECTION DRAWING A-A'

Scale: 1:125

0   2   5   10   20

Drawings of cluster integration and the form
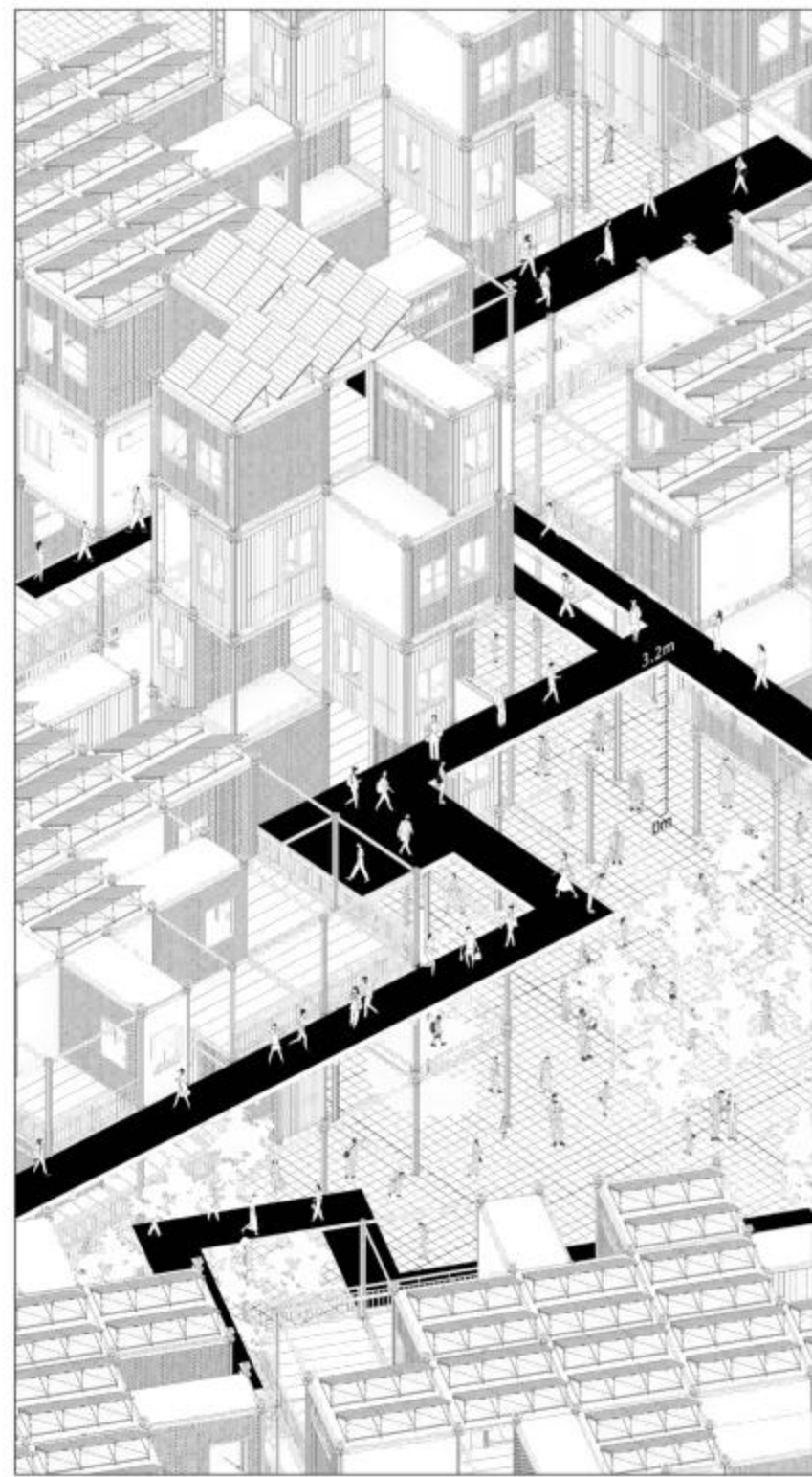"LIVING ON THE EDGE"   - 05/06

"LIVING ON THE EDGE"

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## 06. BIRD'S EYE VIEW OF THE AREA AND PHYSICAL MODELLING

1- The aerial gallery walkway becomes an important component in connecting community happenings, the walkway connects the distance between buildings and the open relationship between the private space upstairs and the public space downstairs. The form of the staircase depends on the position of the rotating staircases between the buildings and the relationship with the central plaza.

2 - A 1:20 physical handmade model of the project, which represents the project's progression over time and shows the flow of the project as it is being built in the early or middle stages, as well as the connectivity of the project's internal and external layouts. The scale of the model better illustrates the enclosing relationship between interior and exterior spaces - a blurring of the boundaries between the public, various and private spheres.

3- The 1:5 model of the project, using the original building materials as an alternative display, can better represent the original building materials feel, accurate calculation of the location of punched holes, in the process of assembling to feel the design of a more realistic and solid.

Demonstration of effects - real and imagined

DESIGN OF FINAL FRAME PRODUCT ASSEMBLY DRAWINGS

FRONT VIEW   LEFT VIEW   TOP VIEW

Model name: 4*4 miniature community physical model
Scale: 1:20
Use of technology: 3D printing, spray paint, glue stick, plate cutting, circuit control
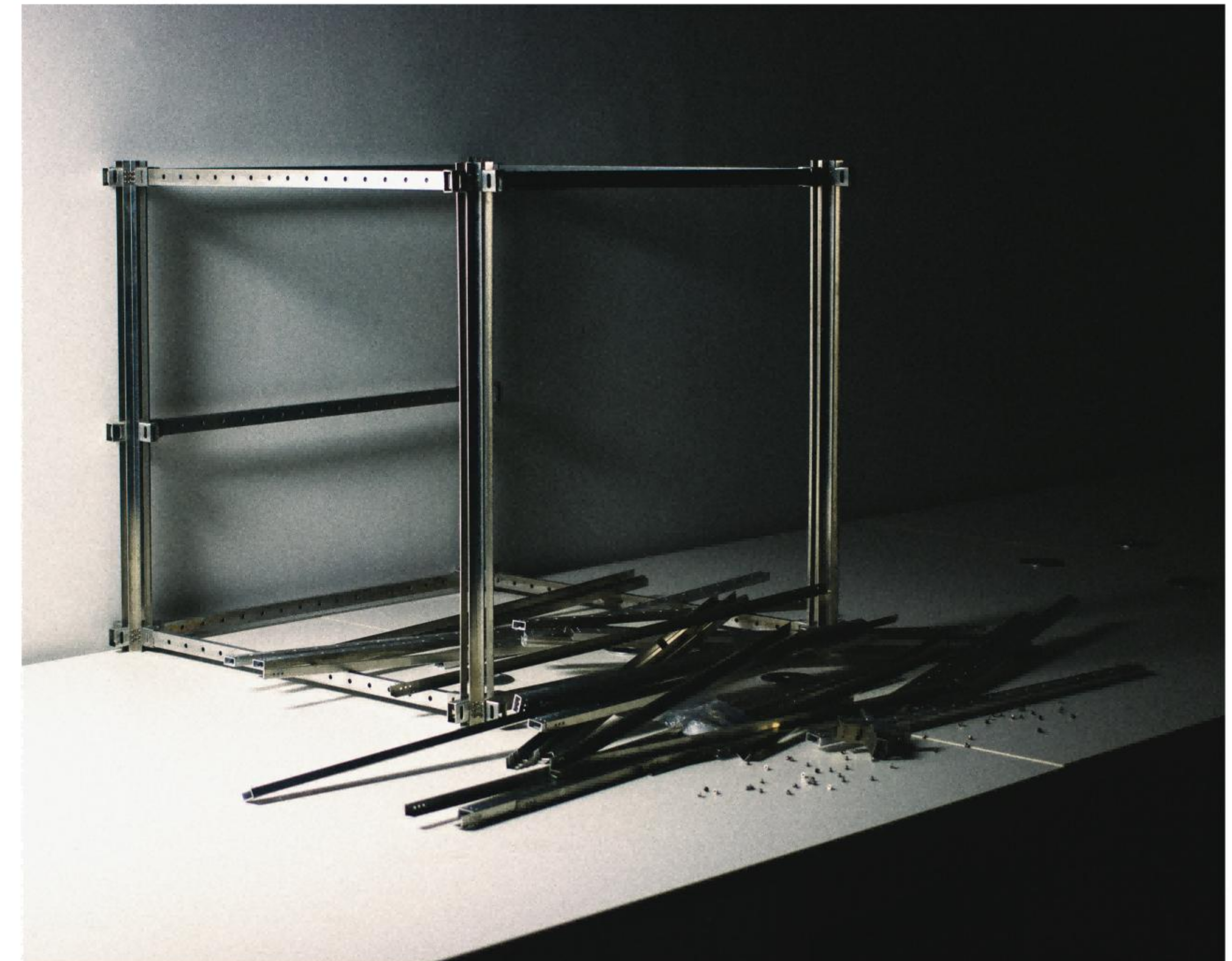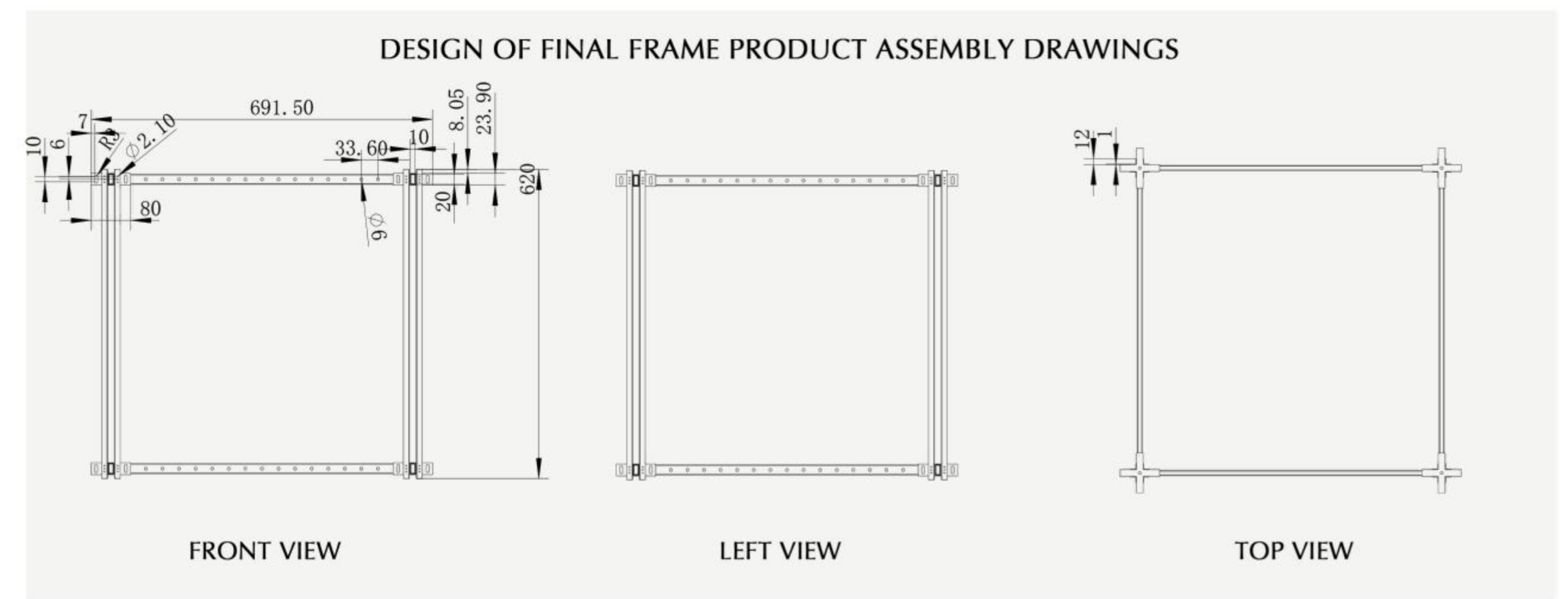
Model name: Module assembly display
Scale: 1:5
Using technology: CNC cutting, hand welding, mechanical skinning, metal cutting, nibbling and punching, screws
Material: aluminium, stainless steel
Size: 62cm*62cm
Model Intent: To show the details of the original design and the way of assembly, to show the feasibility and stability to the audience.
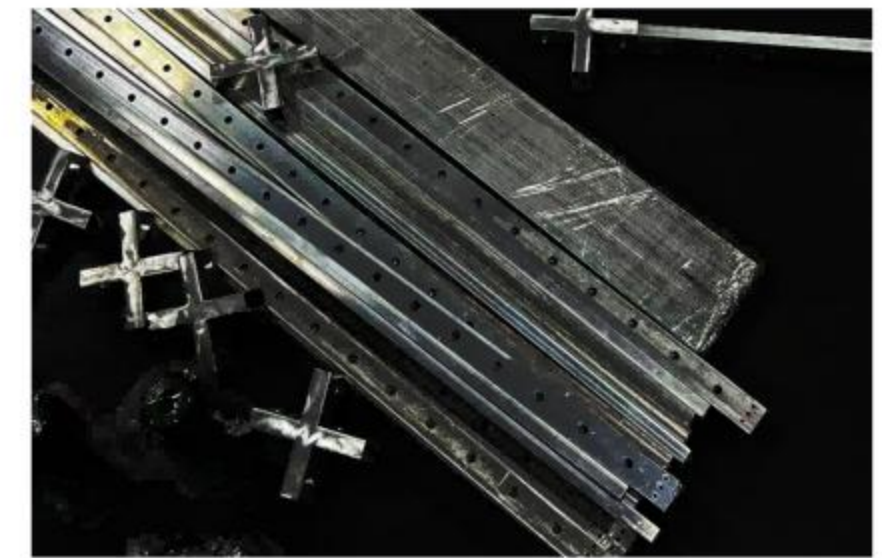
LIVING ON THE EDGE:
Temporary Housing and Shelter for Migrant Workers'
Tenants in Zhai Shang Village
-- Aerial view of the project