



PORTFOLIO

JiaKang Sun

Application number:

Application date:

Program:

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new system plug-in city



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residential reconstruction



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REMINISCENCE OF MY HOMETOWN

culture

urbanization
recalling hometown
nature

Academic
Research Direction

Old and new alternation

My three projects have a common theme, which is to help people meet their needs and solve problems in the transformation of the old and the new.

The first project is to solve the problem of "social isolation" of the elderly against the background of the aging trend in Shanghai.

The second and third projects are based on the urbanization trend of Taizhou, and the second project is to solve the problem of "demolition".

The third project is to solve the problem of "unfinished building".

Project type: urban design
Project number: Cooperative projects
Author: Sun Jiakang, Wang Kecheng
Cooperative roles: outdoor design, system construction, modeling and rendering
Time: December 2021 - October 2022
Address: Weinan Campus, Pudong New Area, Shanghai, China
Total area: 31729.87 M²
Key words: Reconstruction, Elder College, new system, plug-in city
Name of Tutor: Hou Lianglu



PLUG-IN UNIVERSITY FOR THE ELDERLY



Project introduction:

Today, with the increasingly serious aging in China, the fact that many needs of the elderly can not be met is becoming more and more obvious, especially the elderly feel disconnected from the society and have negative emotions.

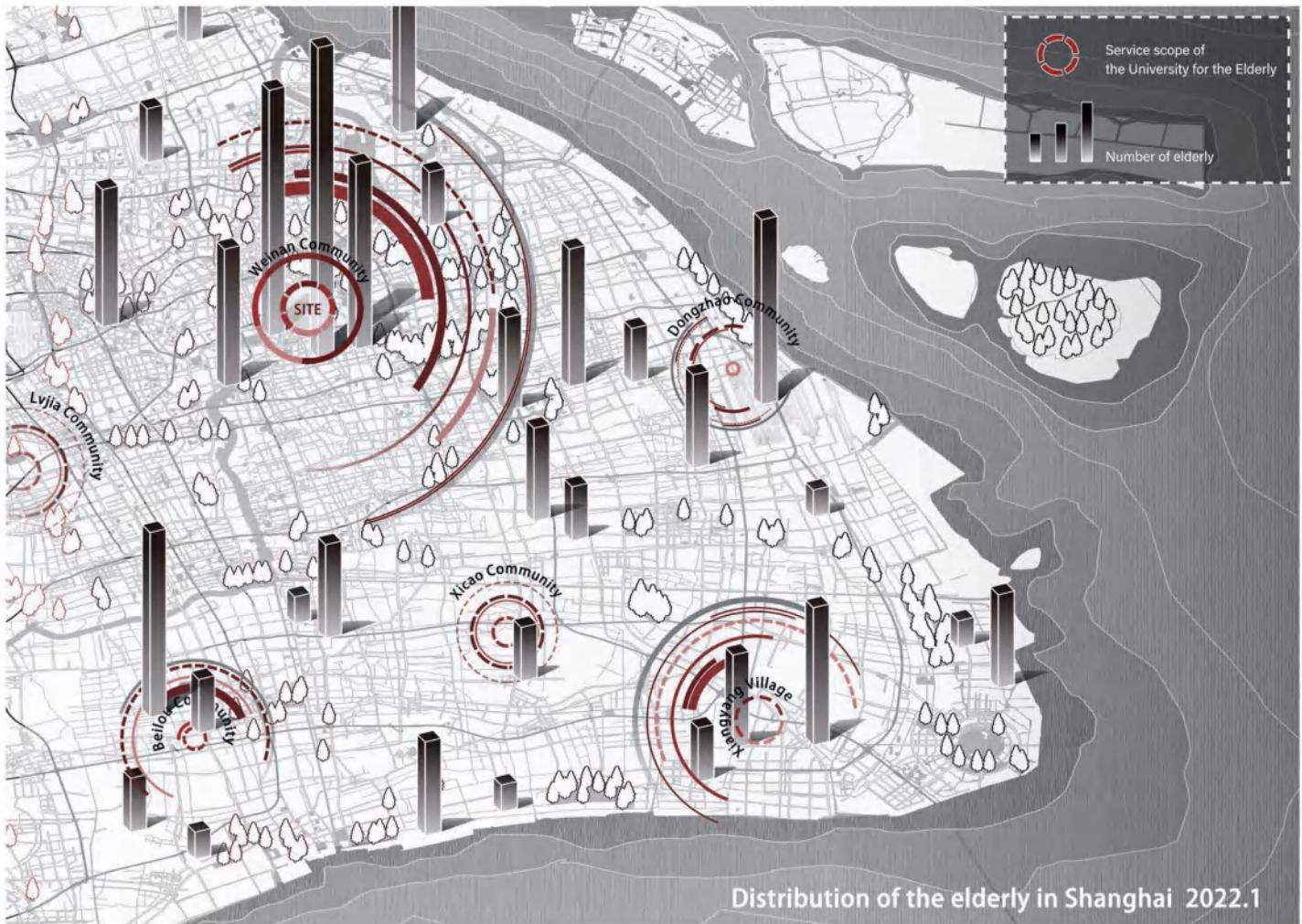
So I chose Shanghai, the oldest city among the developed cities in China, as the site for the design project.

In terms of space strategy, combined with the theory of Peter Cook's plug-in city, the residential areas in Shanghai are transformed - that is, the idle space of residential buildings is selected to be transformed into plug-in universities for the elderly. Attract the elderly in this way of being close to the community.



In terms of system strategy, we abandoned the old system of traditional universities for the elderly, developed new eight distinctive systems through research, research and innovation, solved various problems faced by the elderly in a unique and innovative way, and helped the elderly to reintegrate into society.

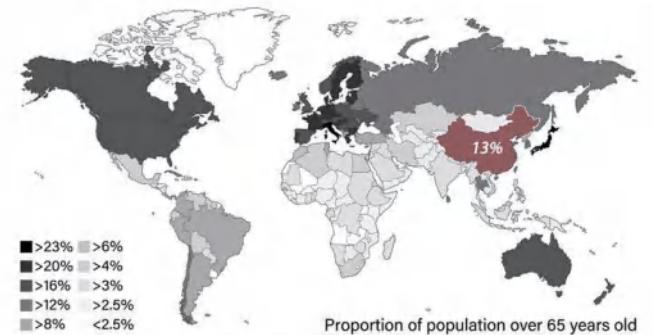




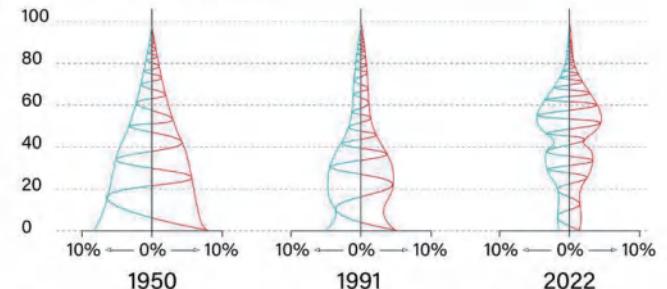
Psychological status of the elderly in Shanghai



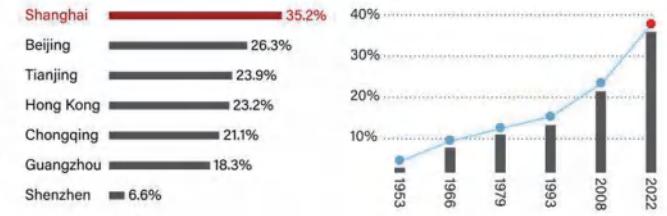
Analysis of world aging



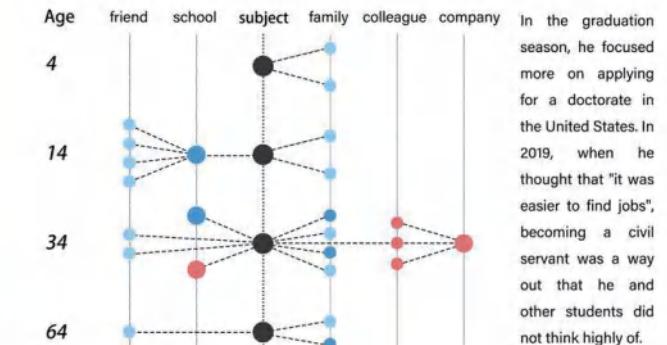
China's aging process



Aging proportion of first tier cities Aging trend in Shanghai



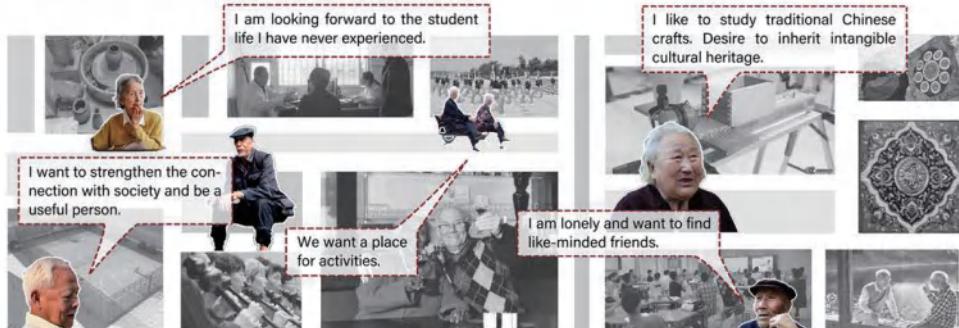
Trend of age segregation



Analysis of aging population

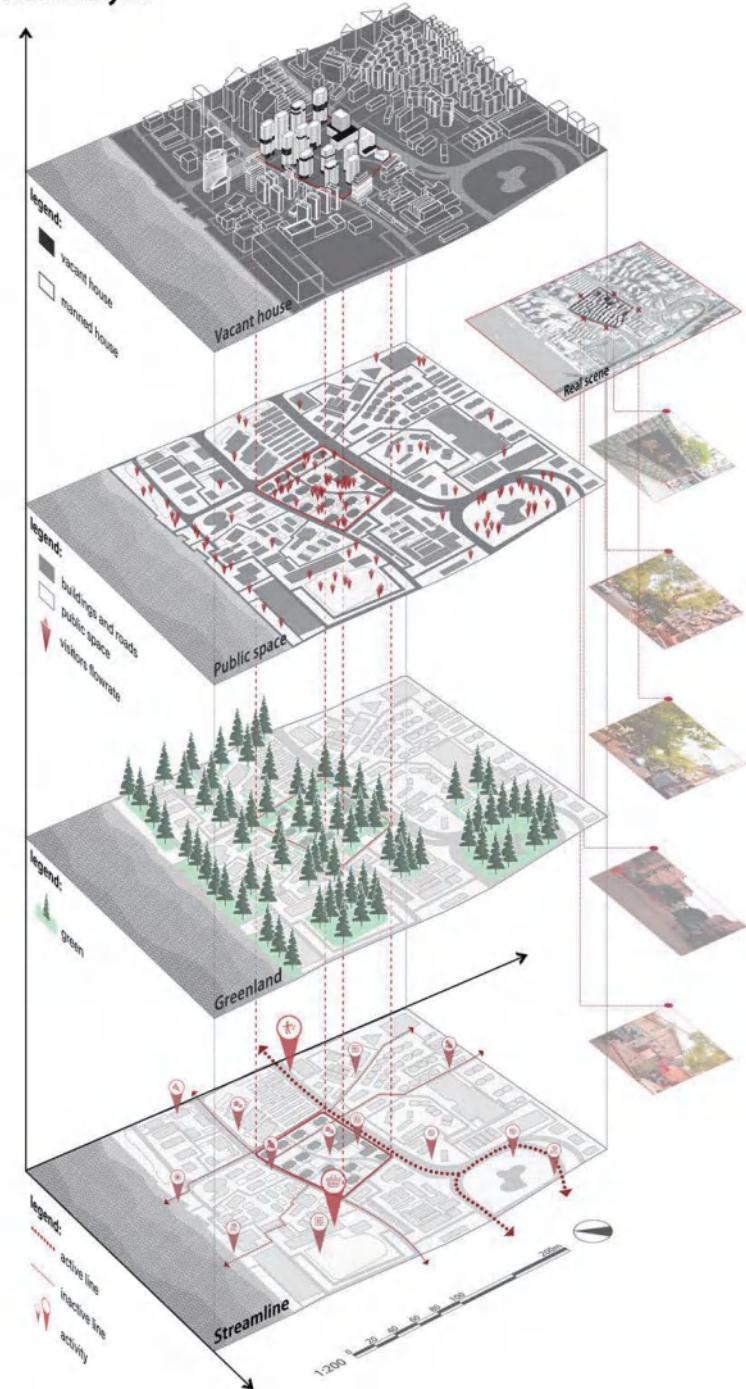


Analysis of the needs of the elderly



Faced with the dilemma of social isolation, the local elderly have a variety of needs, such as social interaction, learning, sports, health care, employment, entertainment, etc. Based on these needs, the author believes that setting up a modular university for the elderly can solve these needs one by one in a comprehensive and diverse way.

Site analysis



design strategy — plug-in city



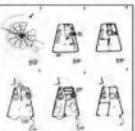
Sir Peter Cook, a British architect, professor and writer, is a leader in the global construction industry. He led the establishment of the "Archigram", which advocates cash technology in the 1960s, and proposed his most famous idea, "The Plug-In City", which immediately caused a huge sensation and has a great impact today.

"Plug-in City" is actually the sum of a series of ideas from 1962 to 1964. The metal car type residential space is the prototype of plug-in city, and its essence is to put the movable house into a large concrete structure.

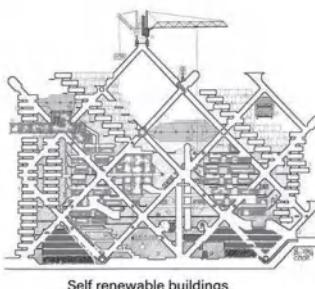


Mobile housing unit

Later, the discussion on Plug in City has changed from mobile housing units, to self renewable buildings, and to the whole city into a stylized and variable structure.



These metal plastic living units were made of mass-produced, cheap and affordable materials, which could largely alleviate the problem of insufficient housing at that time.



Self renewable buildings

New system of universities for the elderly



Select a group of suitable young people to join the school as volunteers to help the elderly learn and live. The elderly students can also go to the community as volunteers.



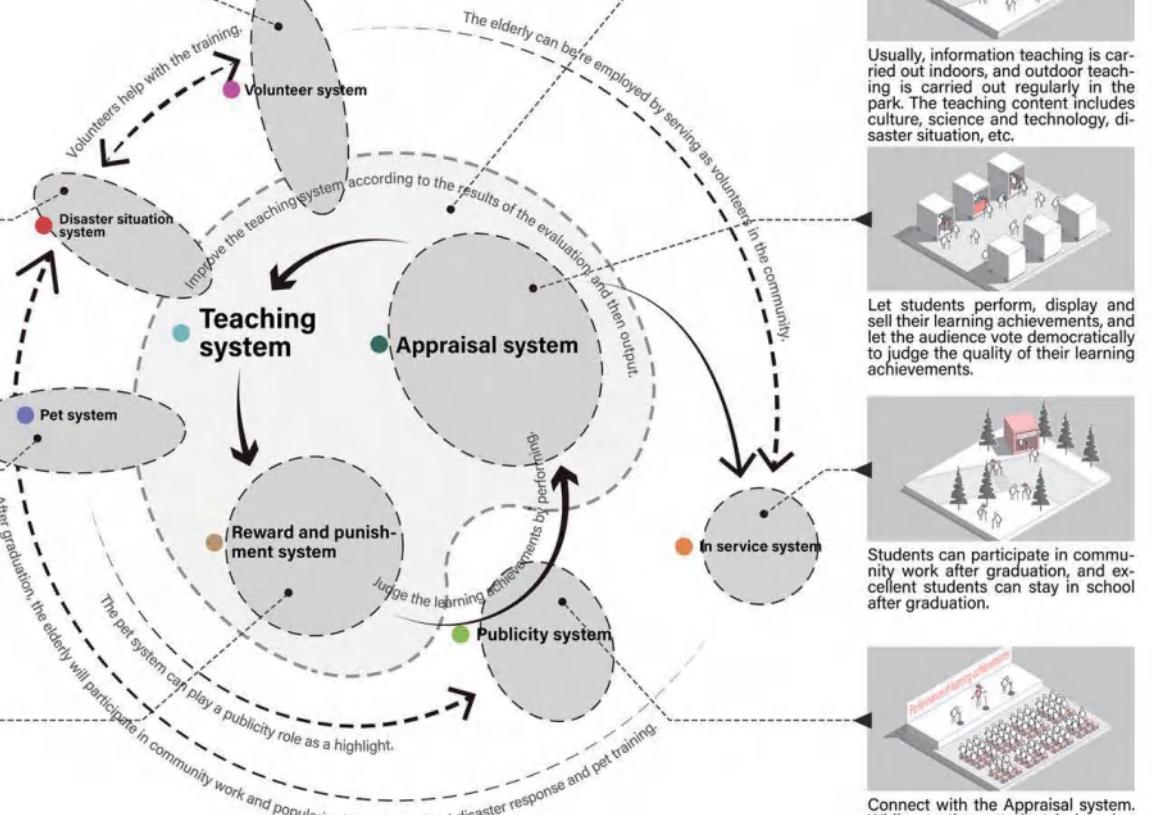
Disaster courses are arranged at ordinary times to prevent sudden disasters in the school, and students act as community volunteers in case of sudden disasters.



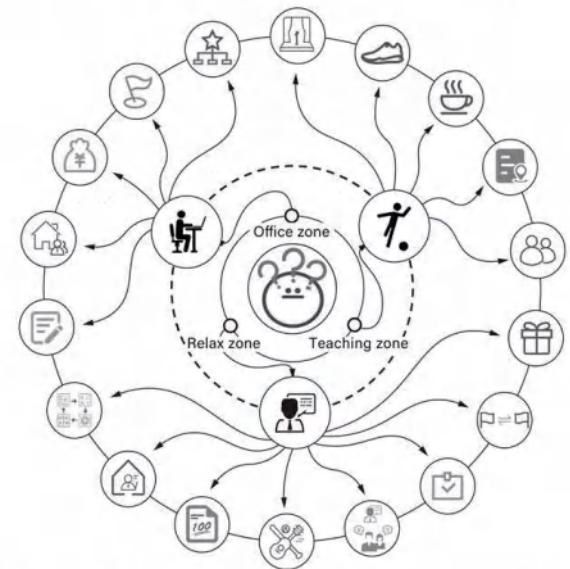
At the time of enrollment, each new student will be given a pet and accompanied by graduation. Pet training courses and pet activities are usually arranged.



award medals to students who perform well at ordinary times, and material rewards to students who perform well in examinations (such as supermarket coupons, massage equipment, etc.)

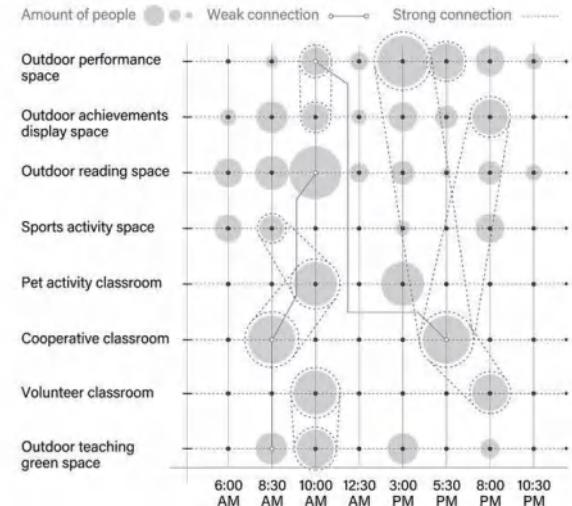


Old system of universities for the elderly



The system of most universities for the elderly in China is composed of three parts: Teaching, Relax and Office, with different functions. This rigid system is not attractive to the elderly, and it is difficult to adapt to many needs of the elderly in the new era.

New system function analysis



Function Usage Summary

My design strategy consists of "eight systems" and several functions, of which 8 are listed in the table above. The systems and functions complement each other and are connected with each other, strengthening the sense of connection between the elderly and the society.

Important nodes



There are four important nodes, corresponding to four systems of "publicity", "teaching", "evaluation" and "re employment".

Relationship of sight



There is a connection and blend of lines of sight between different functional nodes.

Functional layout



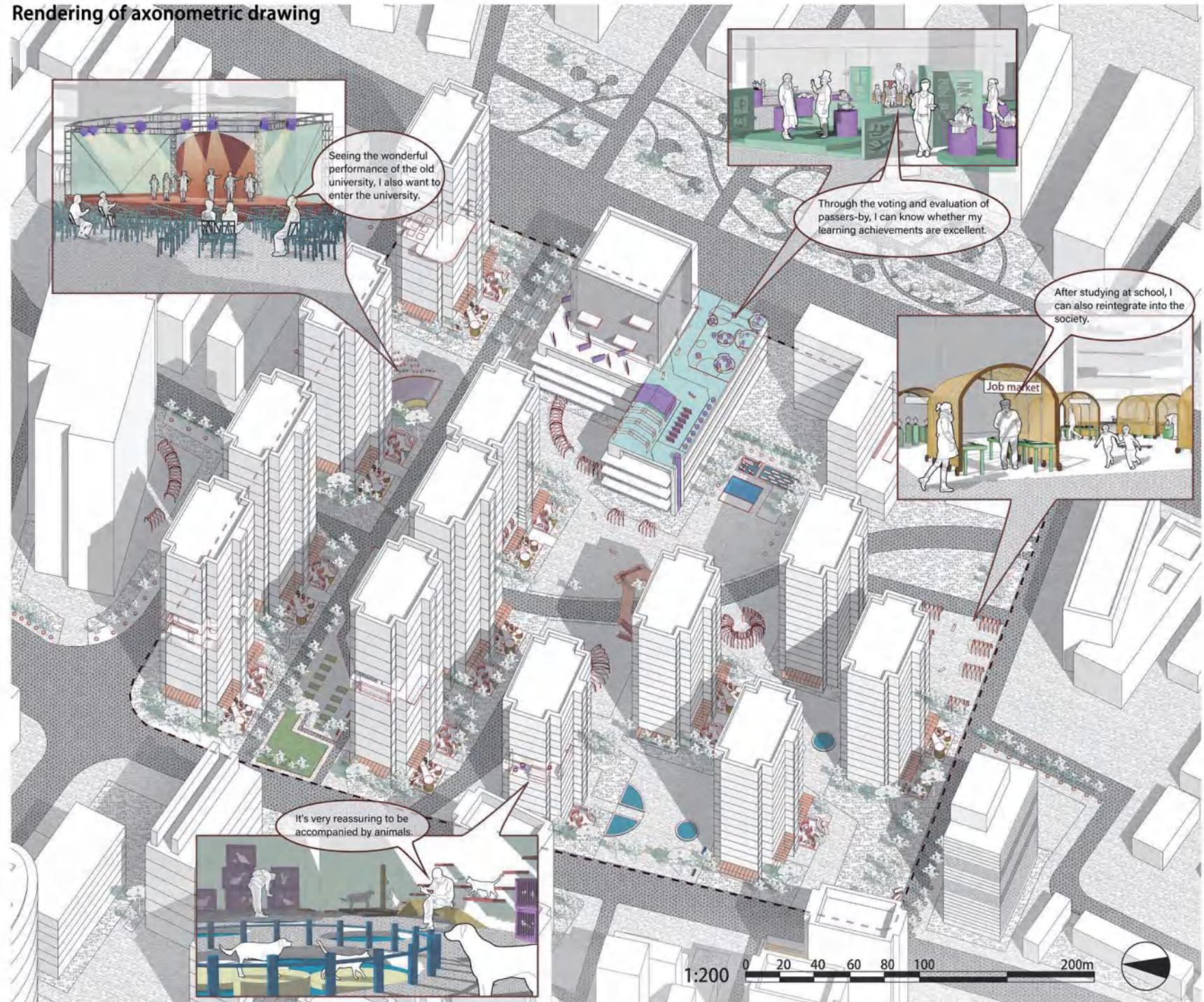
It has four main functions, namely "small theater", "multi-functional employment shed", "evaluation platform" and "pet activity room".

Morphogenesis

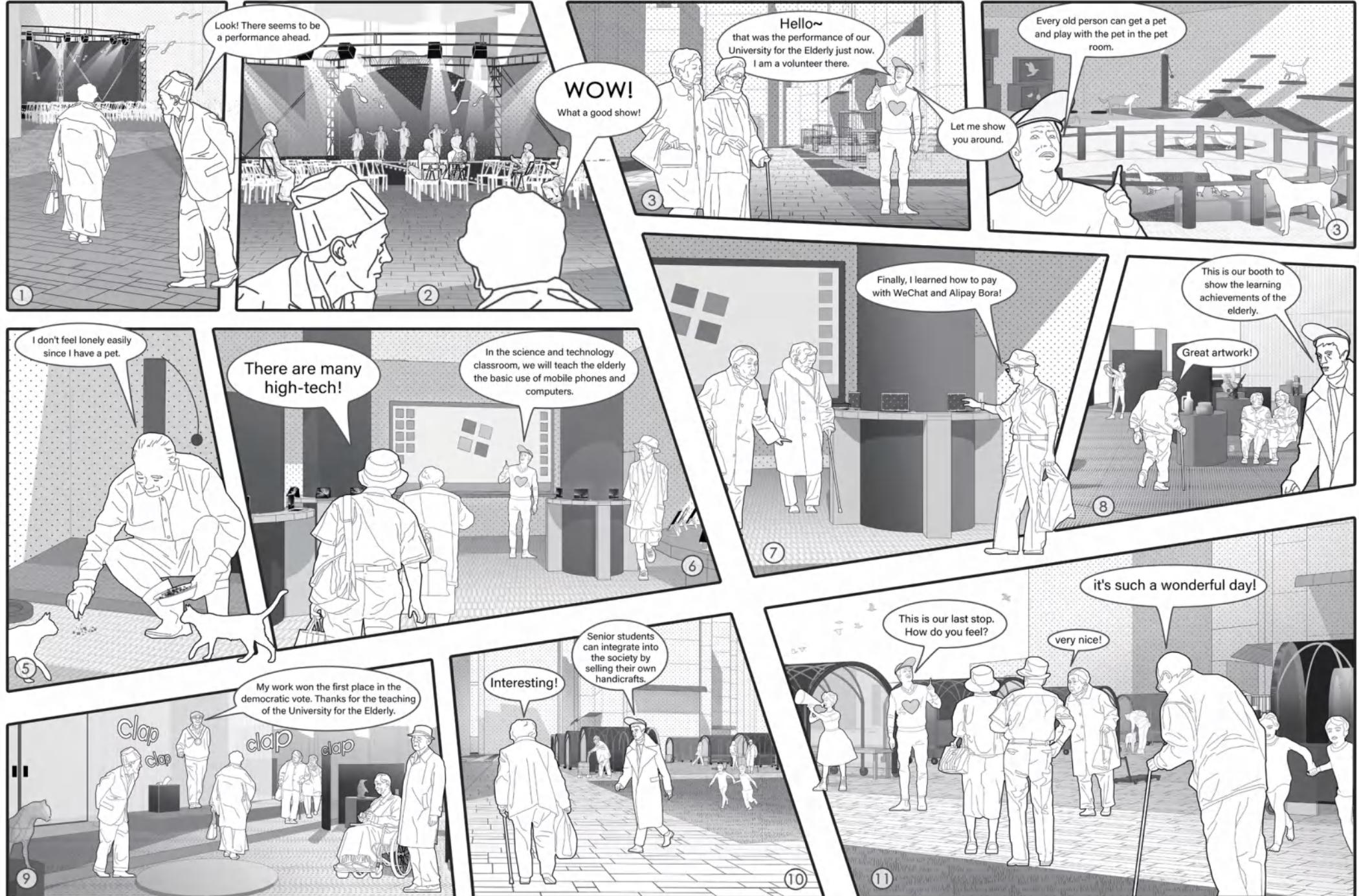


According to the theory of "plug-in city", the space technique of inserting small blocks and hollowing out small spaces is mainly used.

Rendering of axonometric drawing



Storyboard



Project type:
landscape design / urban
design

Project number:
Personal project

Author:
Sun Jiakang

Time: February 2022 - August
2022

Address: Shiplock Community,
Hailing District, Taizhou City,
China

Total area: 6690.64 M²

Key words: Hanging garden,
pedestrian street, residential
reconstruction

Name of Tutor: Li Mingxin



Project introduction:

Today, with the increasingly serious aging in China, the fact that many needs of the elderly can not be met is becoming more and more obvious, especially the elderly feel disconnected from the society and have negative emotions.

So I chose Shanghai, the oldest city among the developed cities in China, as the site for the design project.

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In terms of system strategy, we abandoned the old system of traditional universities for the elderly, developed new eight distinctive systems through research, research and innovation, solved various problems faced by the elderly in a unique and innovative way, and helped the elderly to reintegrate into society.

Location analysis



The ship lock dormitory is located in the west of Nanguan river ship lock in Taizhou City, Jiangsu Province, China. The idea of this design is to explore its canal culture and find spiritual support for the local elderly.



Historical photos

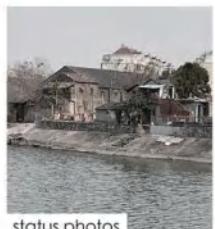


Historical photos

The ship lock dormitory is the staff dormitory of the ship lock organization of Nanguan canal in Taizhou.

With Nanguan river no longer performing the function of the canal, the ship lock dormitory has gradually developed into a small village. Now it faces demolition in the context of urbanization.

In the process of demolition, most residents gladly accept and have moved away, but there are still a small number of elderly people who are unwilling to leave the land where they have lived for a lifetime. In addition, due to the government's funding problem, the demolition plan is currently at a standstill.



status photos

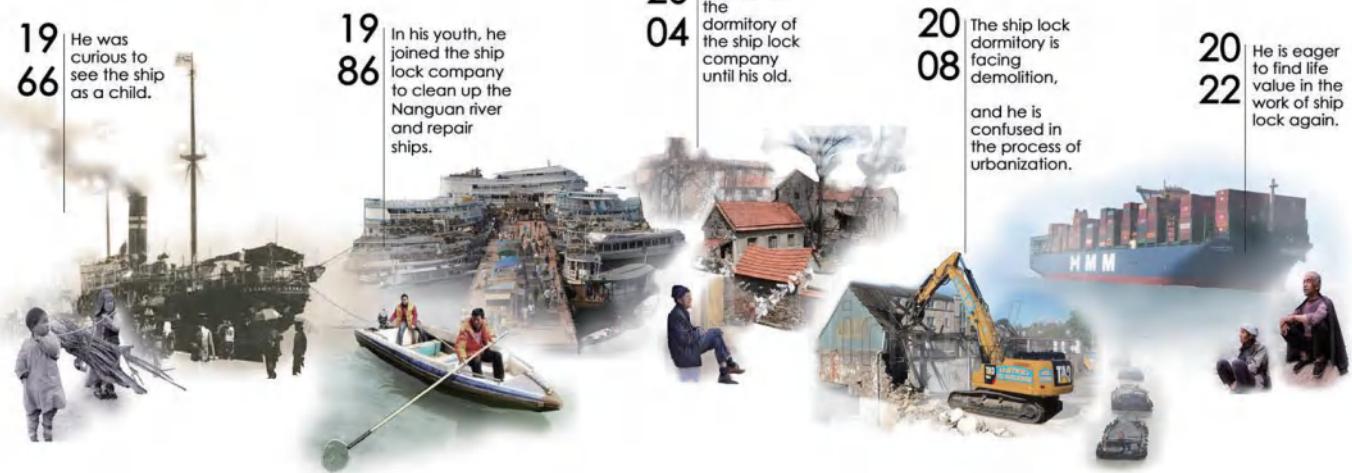


status photos



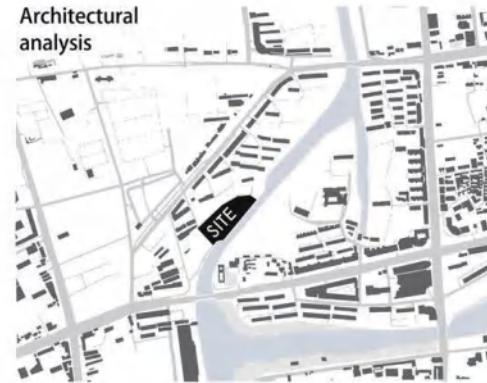
status photos

Historical streamline



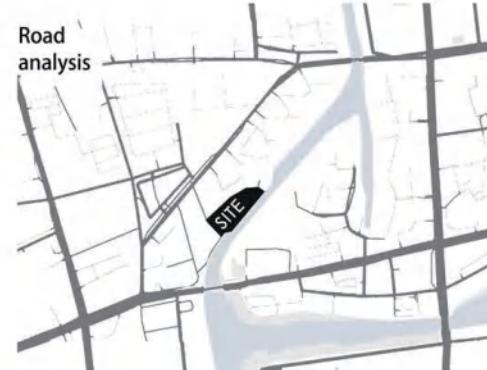
Site analysis

Architectural analysis



At present, the ship lock dormitory is a village dominated by the elderly, with large shopping malls, schools and residential buildings nearby.

Road analysis



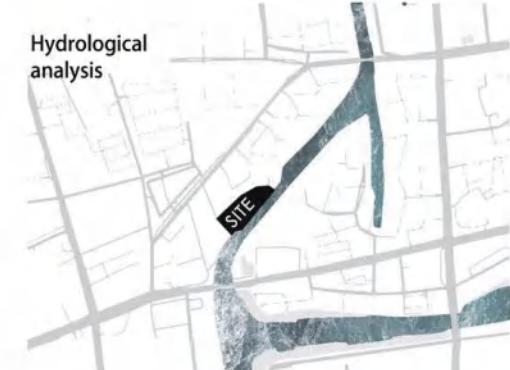
And we can see the traffic is convenient nearby, and there is a small parking lot.

Landscape analysis



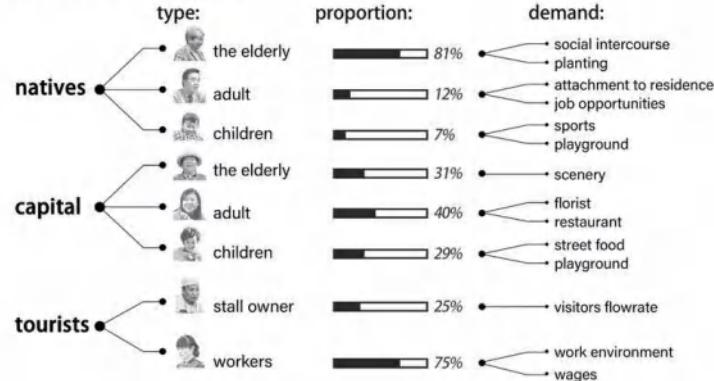
Besides, due to the development of urbanization, the local green plants have been damaged and the greening rate is low.

Hydrological analysis



Finally, the site is located on the streamline of Nanguan River and is influenced by canal culture.

Population analysis



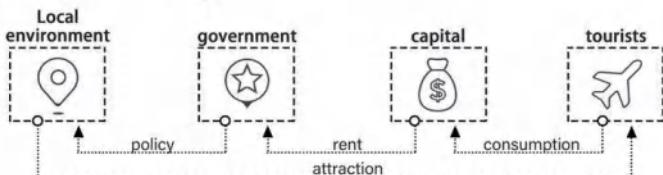
Space status analysis



1. The site is too closed and there are too many fences.
2. The walkway is narrow and crowded, and people and vehicles are mixed.
3. The brick concrete structure is illegal, and the self built house has potential safety hazards.
4. The 2f balcony is empty and wastes space.

design strategy

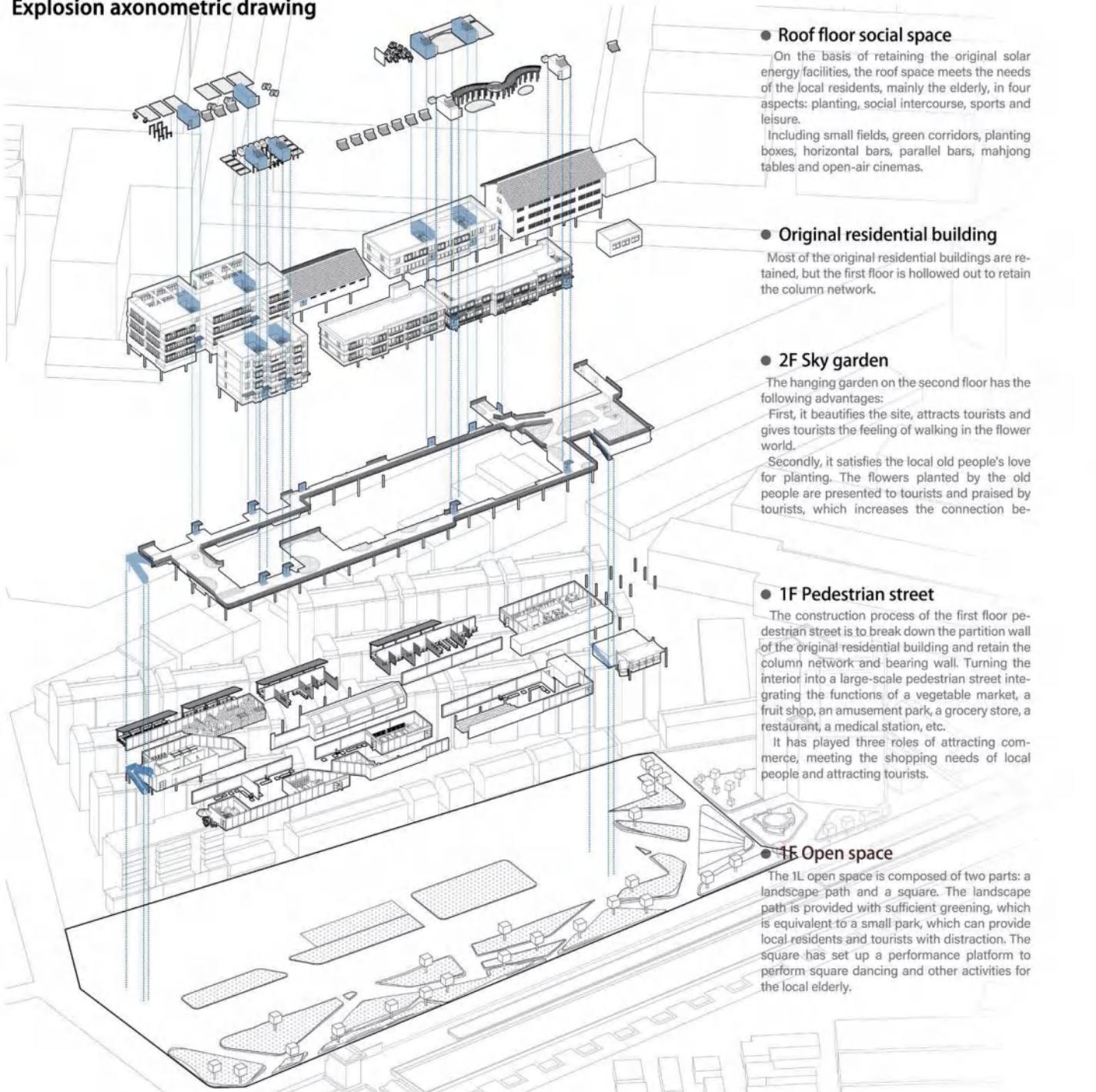
1.socio-political strategy



2.space strategy



Explosion axonometric drawing



General layout



Vegetation strategy

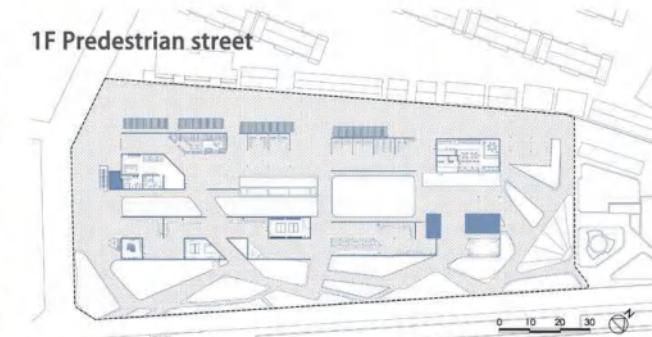


General section



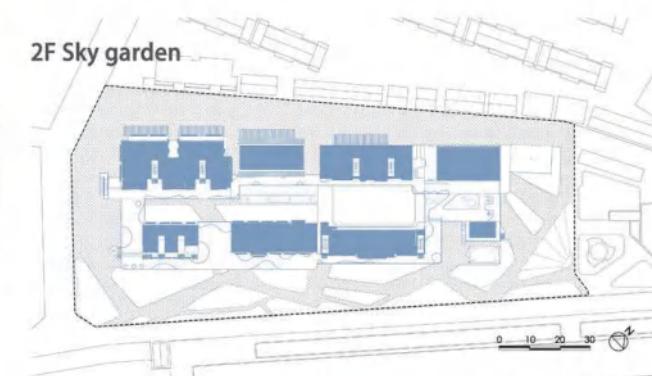
Plan of each floor

1F Pedestrian street



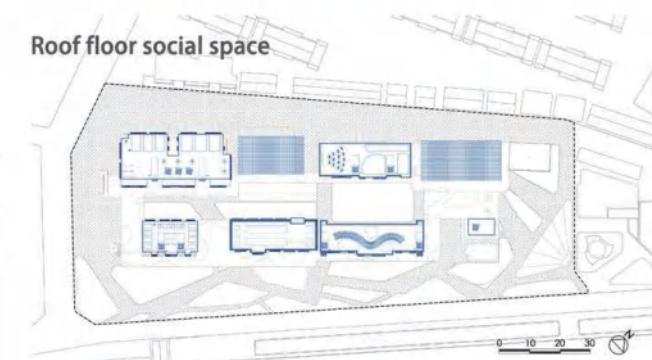
The first floor breaks the original partition and builds a new partition according to the column network to build a semi indoor shopping pedestrian street. A landscape walk is built in the outer open space as a walking park.

2F Sky garden



The second floor is connected with the original balcony to form an air garden, beautifying the site to attract tourists, and equipped with mahjong tables to meet the leisure needs of the local elderly. So that the idle second floor has vitality.

Roof floor social space



The roof building will transform the idle roof space into a place for planting, socializing, fitness and entertainment for the elderly, meet the needs of local residents and make the elderly feel warm in collective activities.

Outdoor rendering



Outdoor plan

The "walking Park" is arranged on the original open space in the southeast square of the residential buildings, breaking the original wall barrier, improving the ecology of the community, and providing a quiet leisure space for residents and tourists.



Outdoor profile



Indoor rendering



Outdoor plan

Pedestrians on the first floor enter the indoor pedestrian street from the park for shopping, including vegetables, fruits and various daily necessities. Blend with the outdoor nature, and sweep away the depressed and estranged space feeling.



Indoor profile



Entrance rendering



Entrance plan

At the entrance of the pedestrian street on the first floor, the original open space is turned into a planting area, which meets the needs of local residents for planting fruits and vegetables. The fruits can also be sold nearby.



Entrance profile



Entrance plan



Entrance plan

The stall on the left side of the venue is made of simple PVC materials. It can sell breakfast and traditional handicrafts to meet the shopping needs of tourists. Residents can also participate in the interaction.



Entrance profile





Project introduction:

This project aims to retrieve the author's memory of his hometown.

Taizhou City, the author's hometown, has undergone earth shaking changes in the urbanization process over the past 20 years. Although the people's living standards have been improved, there have also been problems such as the reduction of green space rate, air pollution, removal of cultural relics, etc., and the unique culture of Taizhou has been diluted, making the author feel that the memory of Taizhou in his childhood is becoming more and more blurred.

Therefore, the author took the private garden of Taizhou - Qiao garden as the idea, and a poem by Tao Yuanming, a Chinese poet of Qiao garden, as the theme to create a series of spatial sequences with emotional changes, so as to awaken the local people to the happy childhood life of old Taizhou and create a natural pure land in the downtown.

REMINISCENCE OF MY HOMETOWN

Project type: landscape design / urban design

Project number: Personal project

Time: May 2021 - August 2022

Address: Yingchun East Road, Hailing District, Taizhou City, Jiangsu Province, China

Total area: 109489.22 M²

Key words: urbanization, recalling hometown, nature

Name of Tutor: Xu Chang

Analysis of hometown change background

2002

A beautiful childhood



When I was a child, I played all kinds of games with my friends on the field path of my hometown.

2008

Demolition of former residence



But as we grow older, the old house is facing demolition, the sustenance of childhood disappears, and we feel helpless and confused.

2014

The city came to my hometown



When I became a teenager, the process of urbanization was vigorous, high-rise buildings blocked out the sun, and air pollution increased. The author felt confused.

2020

Feel confused and depressed

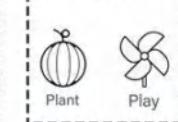


LOST

Loss of substances



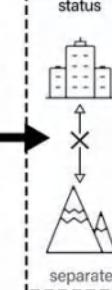
Loss of substances



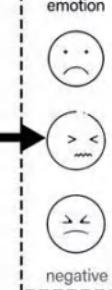
Taizhou



Environmental status



Human emotion



separate

negative

future

Reminiscence



So I began to yearn for "depart from the world" in urban society, return to my childhood, achieve the state of the unity of nature and realm of Taoism.

Design concept

Background

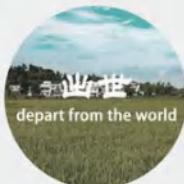


"into the world" is a departure from "depart from the world", which is a Chinese Taoist thought. It mostly refers to the behavior of ancient literati who chose to leave society and live in seclusion in the mountains and forests in the face of the chaos of the world.

Definition



Struggle for fame and wealth, worry about trivial things, and live a mediocre life in the world of mortals.



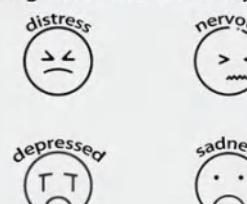
A Taoist thought that does not pay attention to secular things. Return to the countryside and live in the fields.

Negative environmental impact



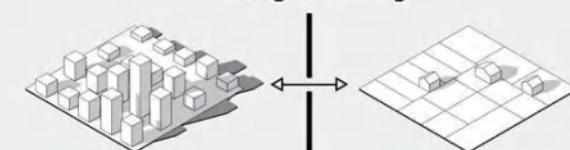
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Negative emotion analysis



"Into the world" brings hard life and anxious emotional experience.

Strategic Planning



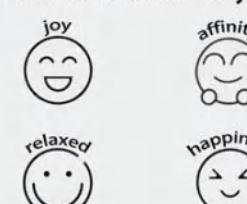
Break the gap between urban and rural areas.

Positive environmental impact



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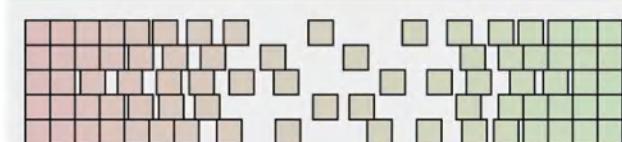
Positive emotion analysis



"Depart from the world" brings a relaxed life and a happy mood.



Strengthen the magnetic attraction between urban and rural areas.



Promote the integration of urban and rural areas.

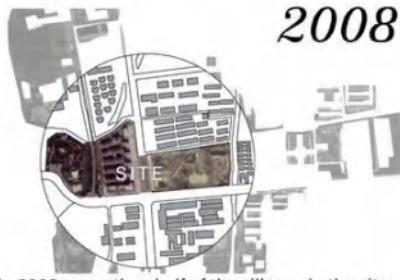
Historical axis

2002



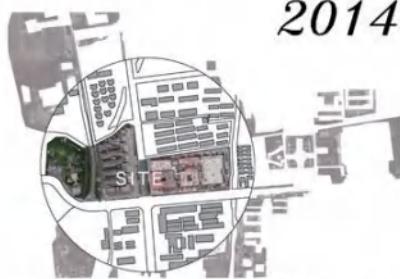
In 2002, the site was dominated by villages, surrounded by many fields, with a good natural environment.

2008



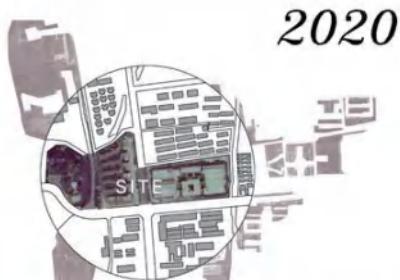
In 2008, more than half of the villages in the site were demolished, many fields became wasteland, and only part of the green space was removed.

2014



By 2014, the villages in the site had been completely demolished, all the fields had become construction sites for large-scale construction, and the green space rate was very low.

2020



By 2020, the construction has been suspended for some reason. The land has become a waste of urban area and an uncompleted residential building without aesthetic value until today.

Site detail analysis

1. Plum garden



The plum garden is a tourist attraction in memory of the drama master Mei Lanfang. Its problem is that it is too closed and generally not open to the public, and the interior of the venue is mostly private space, lacking public space.

2. Jintong residence



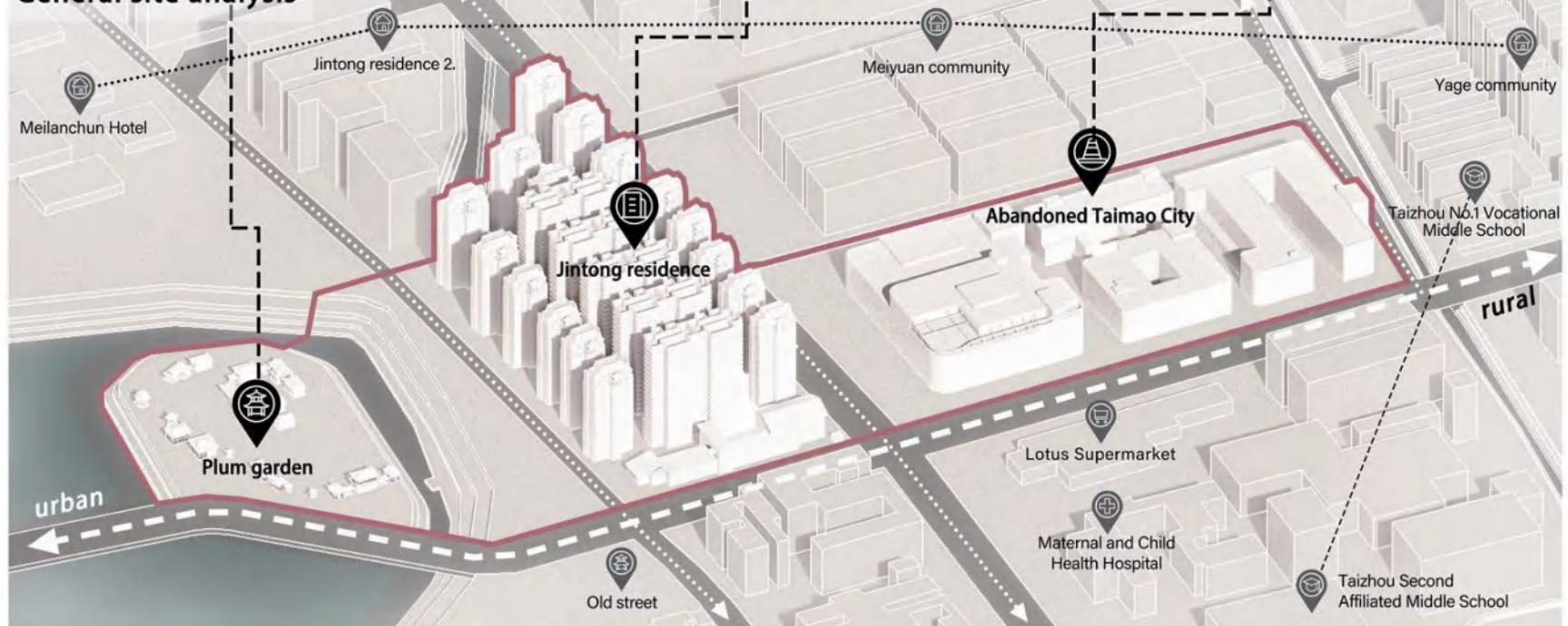
Jintong residence is a residential area next to the Plum garden. Its problems are too dense residential buildings and too little greening rate, lack of a sense of nature, and give people a sense of depression and suffocation.

3. Abandoned Taimao City



The site was supposed to be built into a large commercial complex called Taimao city; but the construction was suspended for some reason. It has become an uncompleted residential building and a wasteland in the city for 6 years, lacking functional and aesthetic value.

General site analysis



Retrieve childhood memories

Natural hot bath



The childhood memories of bathing in the old public bathroom "bell tower bathroom" in Taizhou.

Melon field play



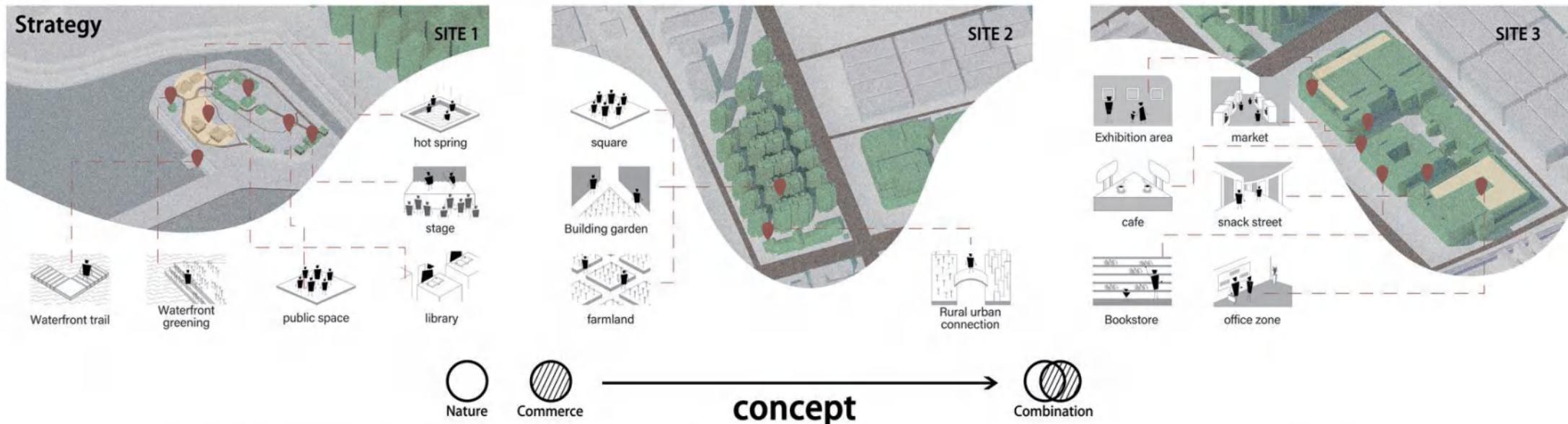
Good memories of picking and eating melons with friends in the melon field in childhood

Quiet reading



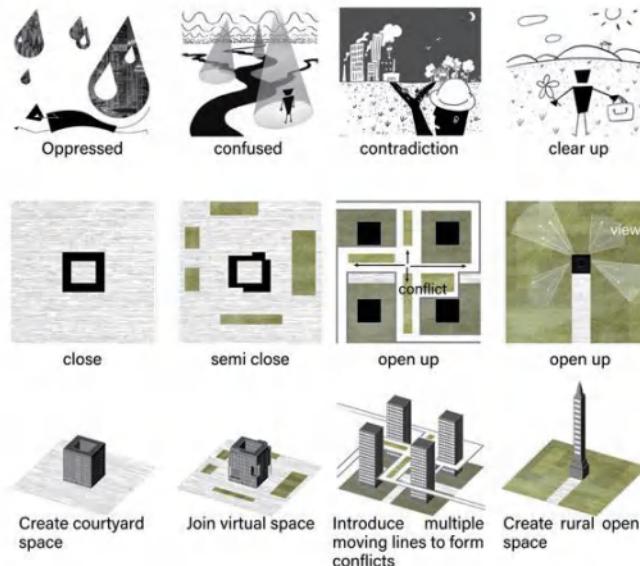
Reading in a quiet library, a beautiful experience away from the hustle and bustle of the city.

Strategy

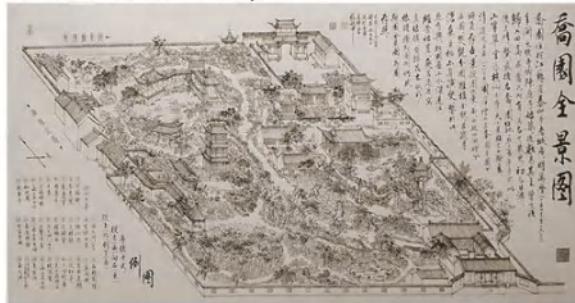


《归去来兮辞》 *Ci of returning home*

Ci of returning home is an article by Chinese poet Tao Yuanming. It describes the poet's complex mental process when returning home, and expresses the process from contradiction to harmony between "出世" and "入世". I will take the changes of the author's mood and surrounding environment described in this article as the starting point, and transform it into the logic and formal language in the design.



Classical Garden - Qiao yuan



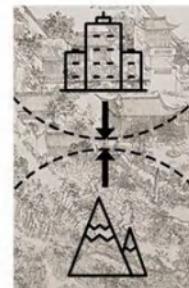
Combine Qiao yuan's spatial language with the emotional streamline of "Ci of returning home" to form a series of changes in spatial emotion as a design strategy.



oppressed



confused

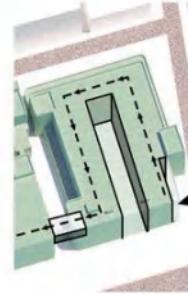


contradiction

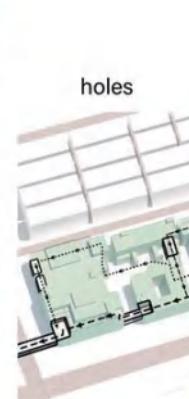


clear up

Site



Enclosure



holes

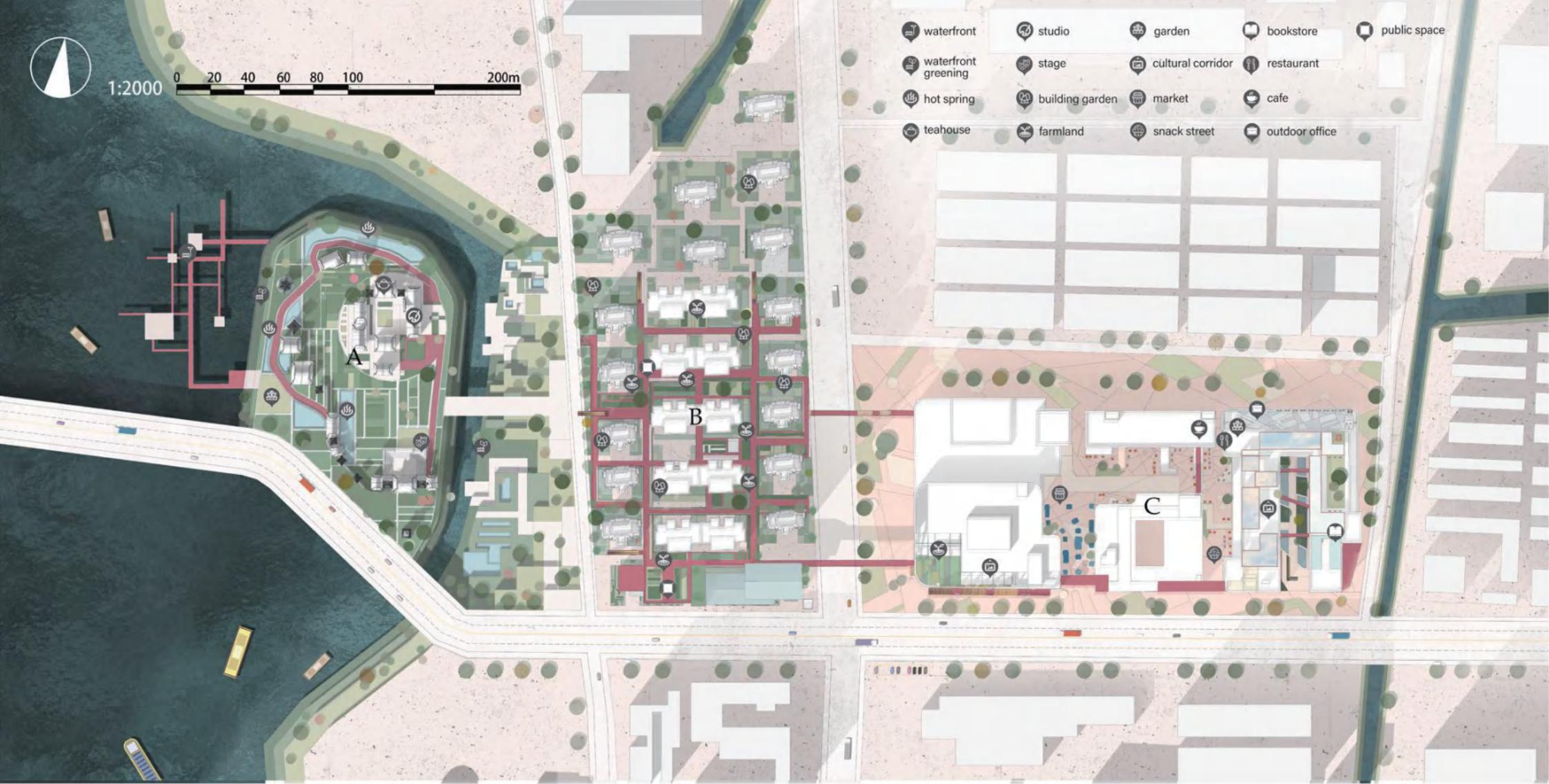


high points

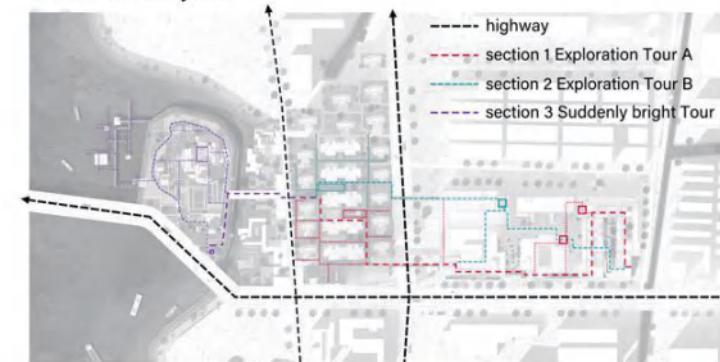


multiple moving lines

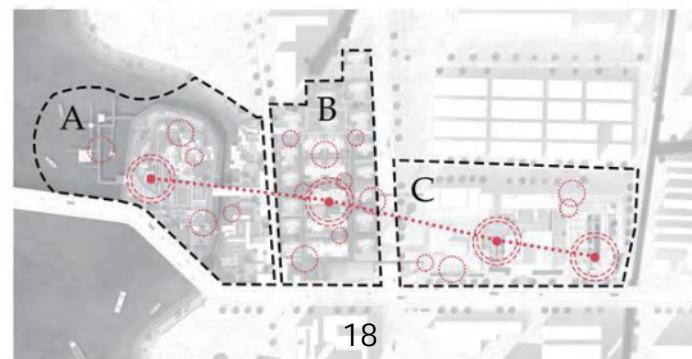
Apply the sequence of spatial emotion excavated from Qiao yuan to the actual site.



Traffic analysis



Node analysis



18

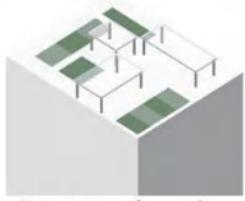
Green space analysis



General rendering



Design detail analysis



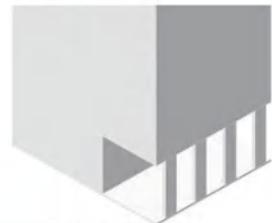
Increase roof greening



Build a retreat platform to form a vertical greening system



Create virtual space



Create semi open space

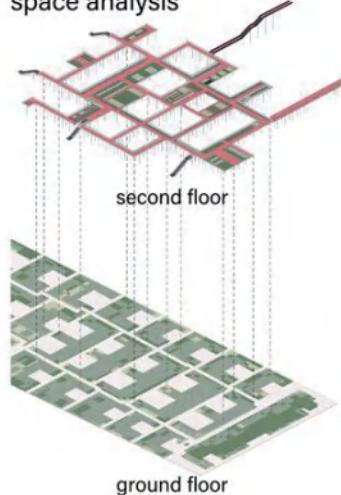


Establish public corridor on the ground floor



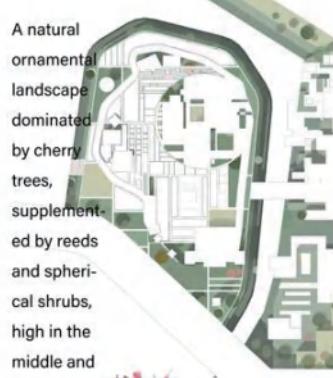
Establish air corridor

Traffic and green space analysis



ground floor

Natural viewing area



A natural ornamental landscape dominated by cherry trees, supplemented by reeds and spherical shrubs, high in the middle and sparse on both sides.



Pastoral planting area



An idyllic planting landscape dominated by wheat fields and supplemented by vegetables and fruits for residents and tourists



Node rendering



Roof Gallery



market



Mall entrance and roof Gallery



Open office platform



OCBC Skyway



Exit landscape