



Architecture
Portfolio.

YIQING LIU
Selected Work 2018-2025

CONTENT

01

Sports Condenser

A sports center in an industrial heritage park

02

Recollection

Community centre design in downtown Kitchener

03

Coffee Rail-trip

A Coffee station by the railway

04

Reparative Infrastructure

Research design for informal settlements in Mongolia

05

The Sea Castle

An abortion clinic on the high seas

06

Intern Work Samples

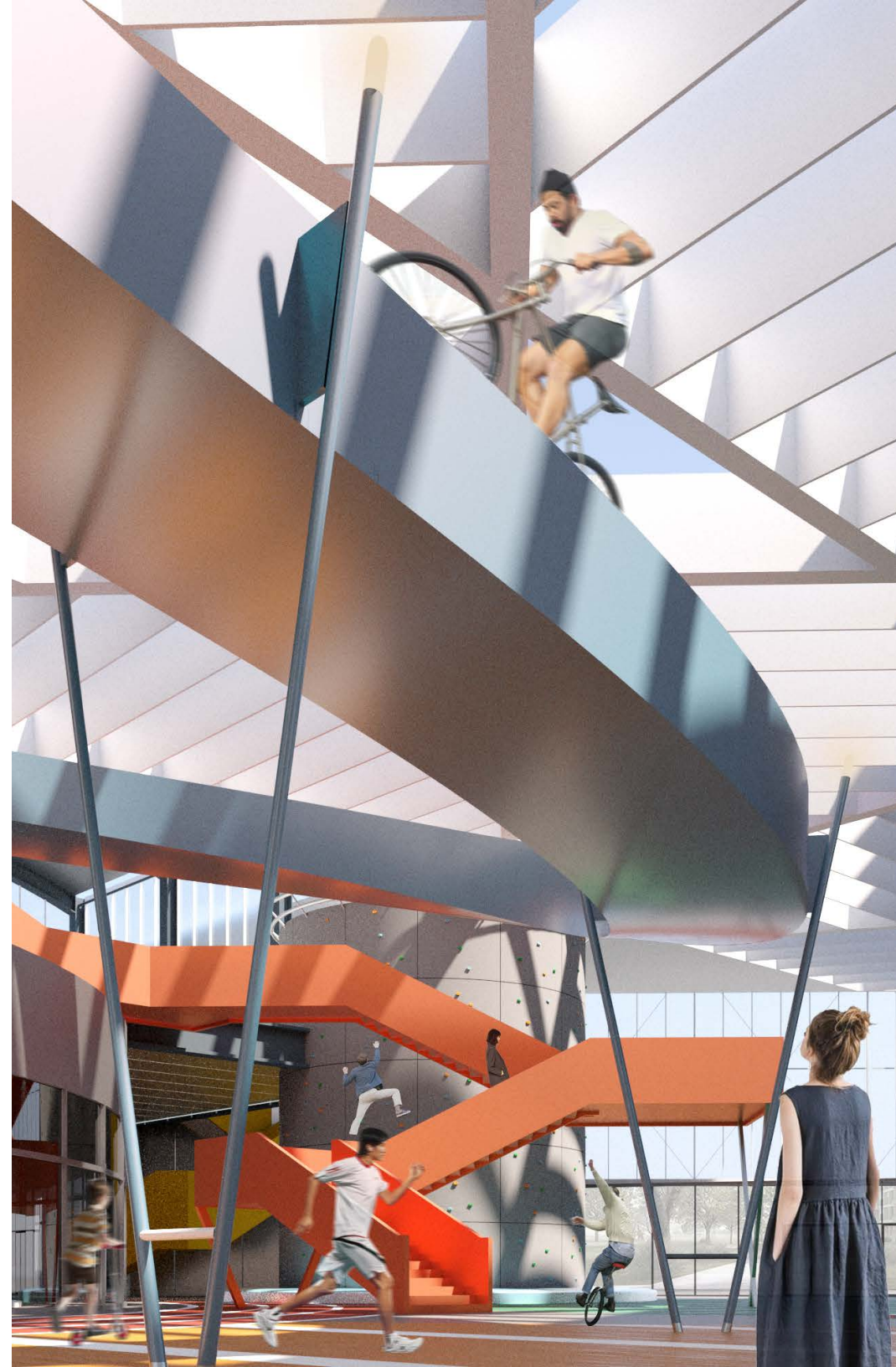
01

-SPORTS CONDENSER-

Type: Individual Work
Industrial Building Transformation
Date: 2021 Spring
Location: Beijing, China

As the largest industrial heritage in Beijing, Shougang Park was once the center of the region until it been shut down and left plenty of industrial constructions in 2003. The complex and scattered industrial structures remained in the northeast corner of the park gave me an opportunity to explore the renovation design.

The starting point is to reconcile these industrial elements and stimulate their vitality to continue the activity of the place. These steel giants conected with trusses remind me of the tension of body movement, so I choose to compose different sports functions as different spaces, accommodate them under a whole, give them "conflicts" and use sports to stimulate social activities, and make the building a condenser to continuously maintain the vitality of the area.

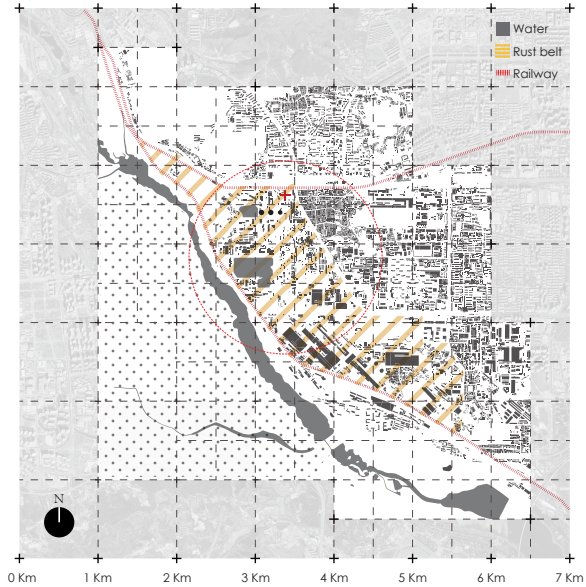


"Rust Belt"

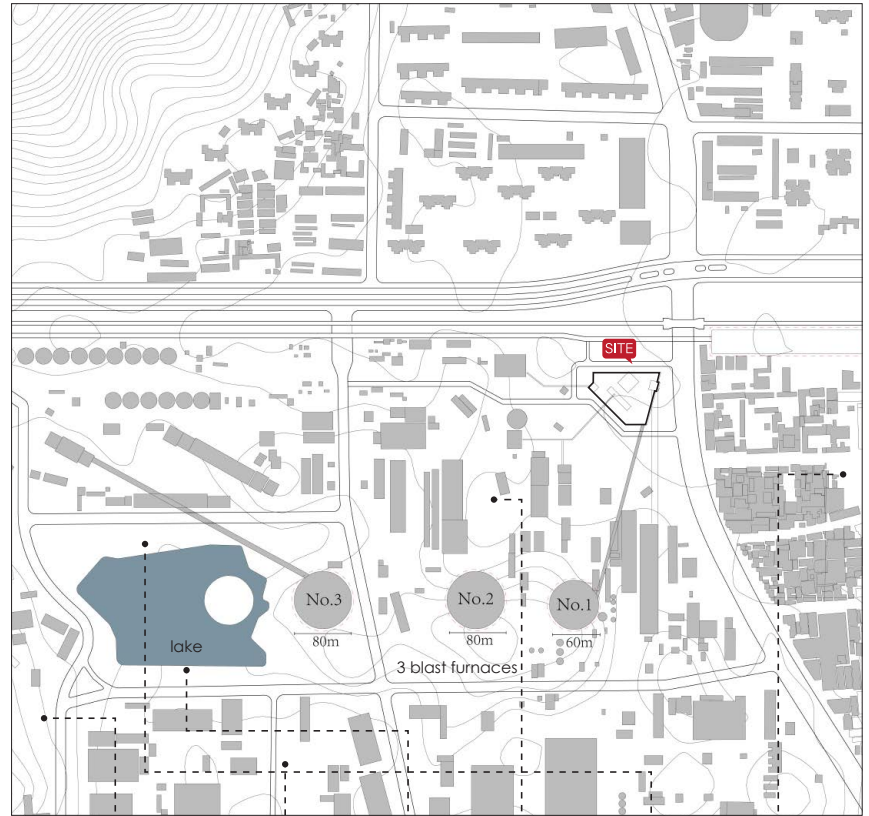


The Shougang area was once Beijing's most important industrial area, near Shijing Mountain, with two railway lines and a river running through it, covering nearly 8 square kilometers.

-MAPPING-



-SITE -



-HISTORY DEVELOPMENT-

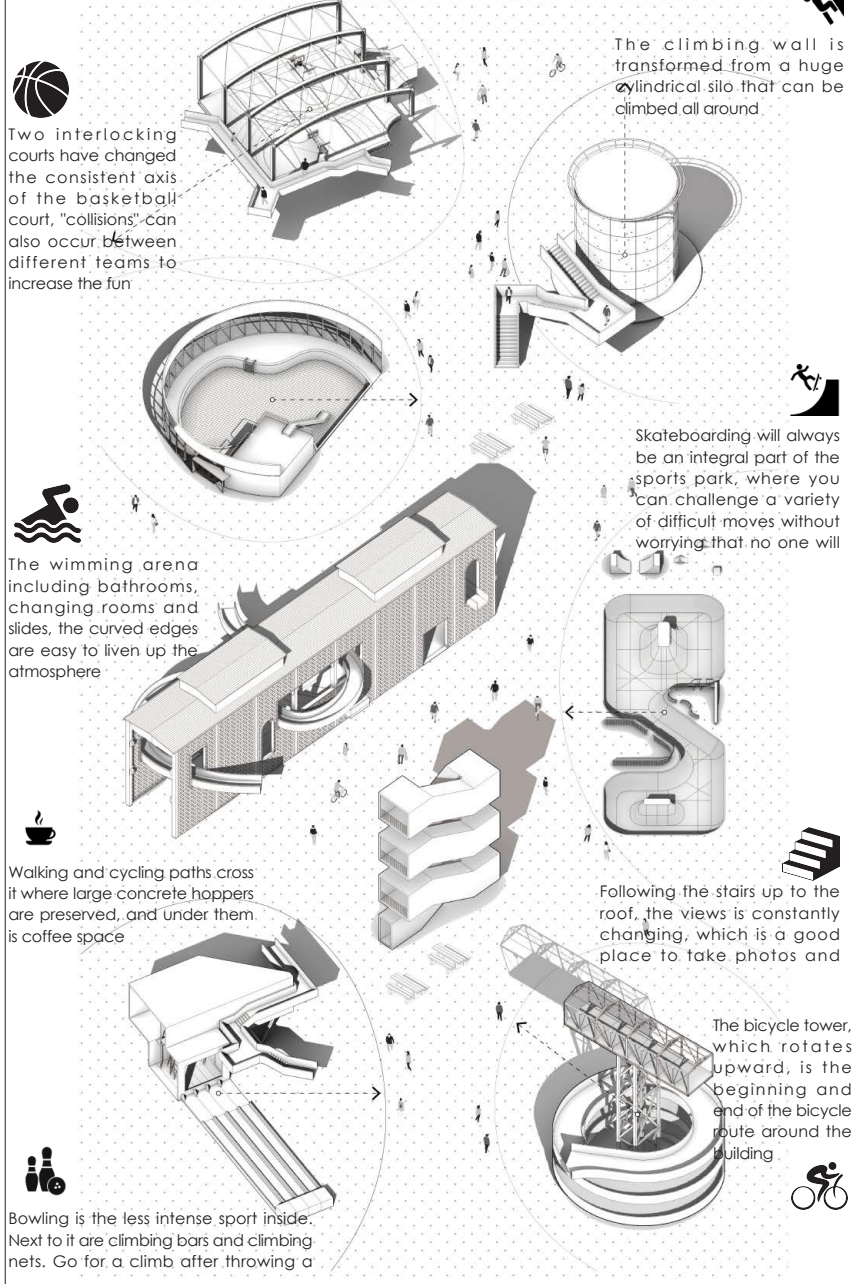
STAGE ONE	<p>1919</p> <p>The plant went through a very difficult process in the early stages of development. It was occupied in the war shortly after its establishment and</p>	<p>During World War II, the Japanese invaders occupied the plant to produce steel</p>
STAGE TWO	<p>1948</p> <p>After the founding of the People's Republic of China, production resumed and production gradually</p>	<p>Shougang plant was originally founded in 1919 at the foot of mountain Shijing</p> <p>After that, the plant took advantage of its geographical advantages to develop</p>
STAGE THREE	<p>1978</p> <p>After China implemented the policy of reform and opening up, steel production increased sharply, and Shougang became the</p>	<p>The plant resumed production soon after the founding of the People's Republic of China</p> <p>In the 1980s, Shougang reached its peak of production</p>
STAGE FOUR	<p>2003</p> <p>Shougang was shut down in 2003 as Beijing's environmental pollution problems became more and more serious</p>	<p>After Beijing successfully bid to host the 2022 Winter Olympics, it began to renovate some buildings in Shougang</p>
	<p>2019</p>	<p>Big Air Shougang was built in Shougang</p>



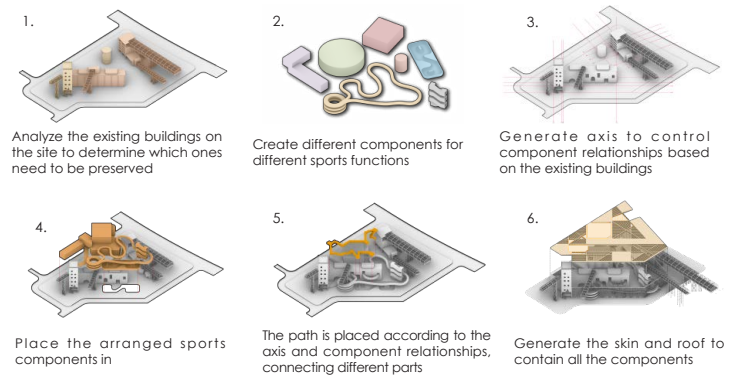
Volleyball Tug-of-war Diving Sports Equipment Climbing Tai Chi

In the 1980s the workers enriched their leisure life with sports activities, which are spread over many parts of the park. Exercise inspires social confidence and energy, even under tough circumstances. Many years have passed, and the sports venues of the past have disappeared, but the spirit of sports has remained. On this basis, I began to think about the space of various sports

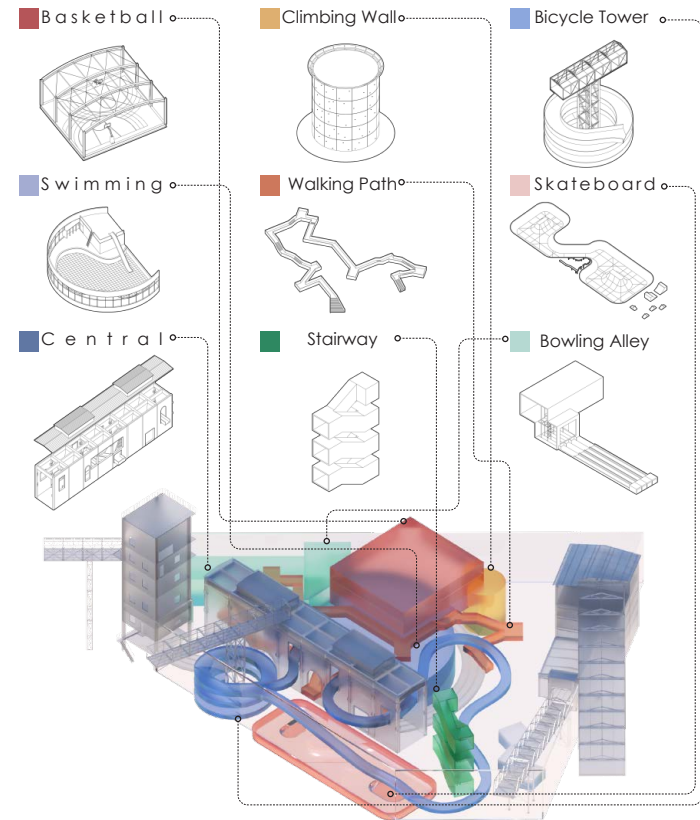
-CONCEPT DIAGRAM-



-MASSING PROCESS-



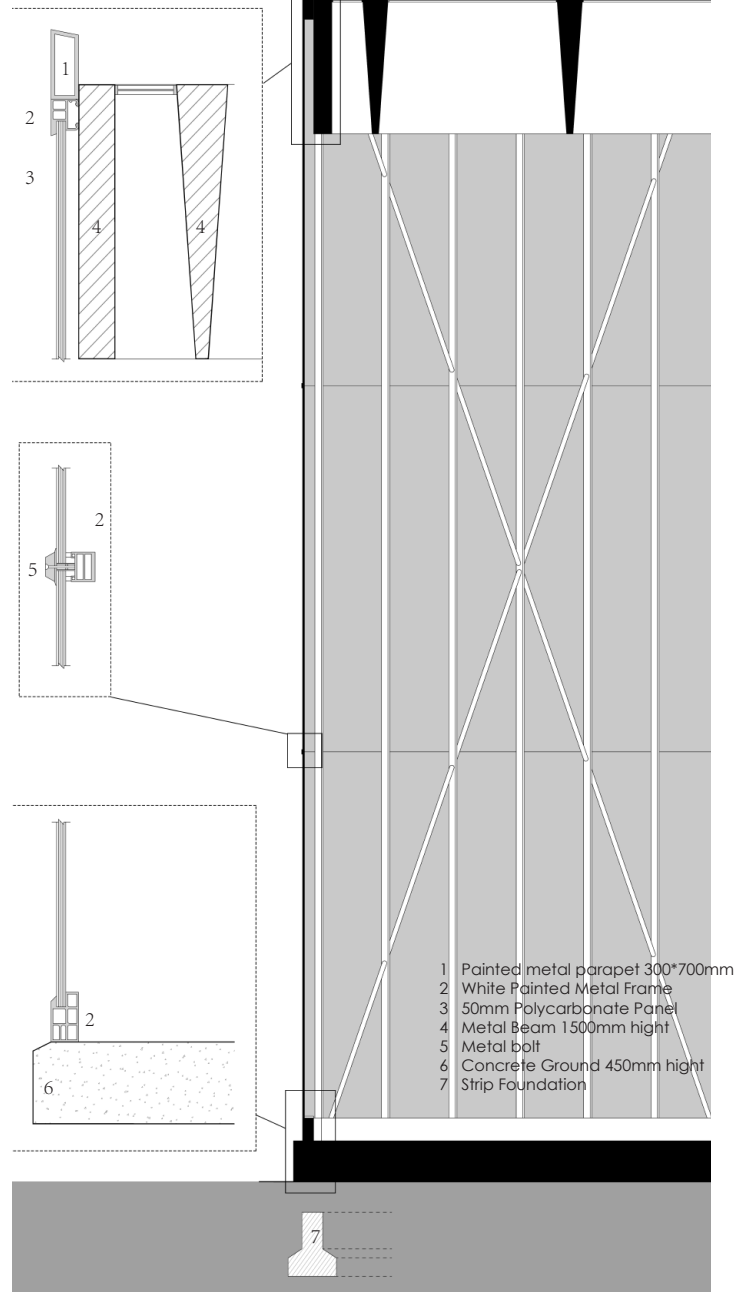
-COMPONENT ARRANGEMENT-





The mian

-FACADE DETAIL-

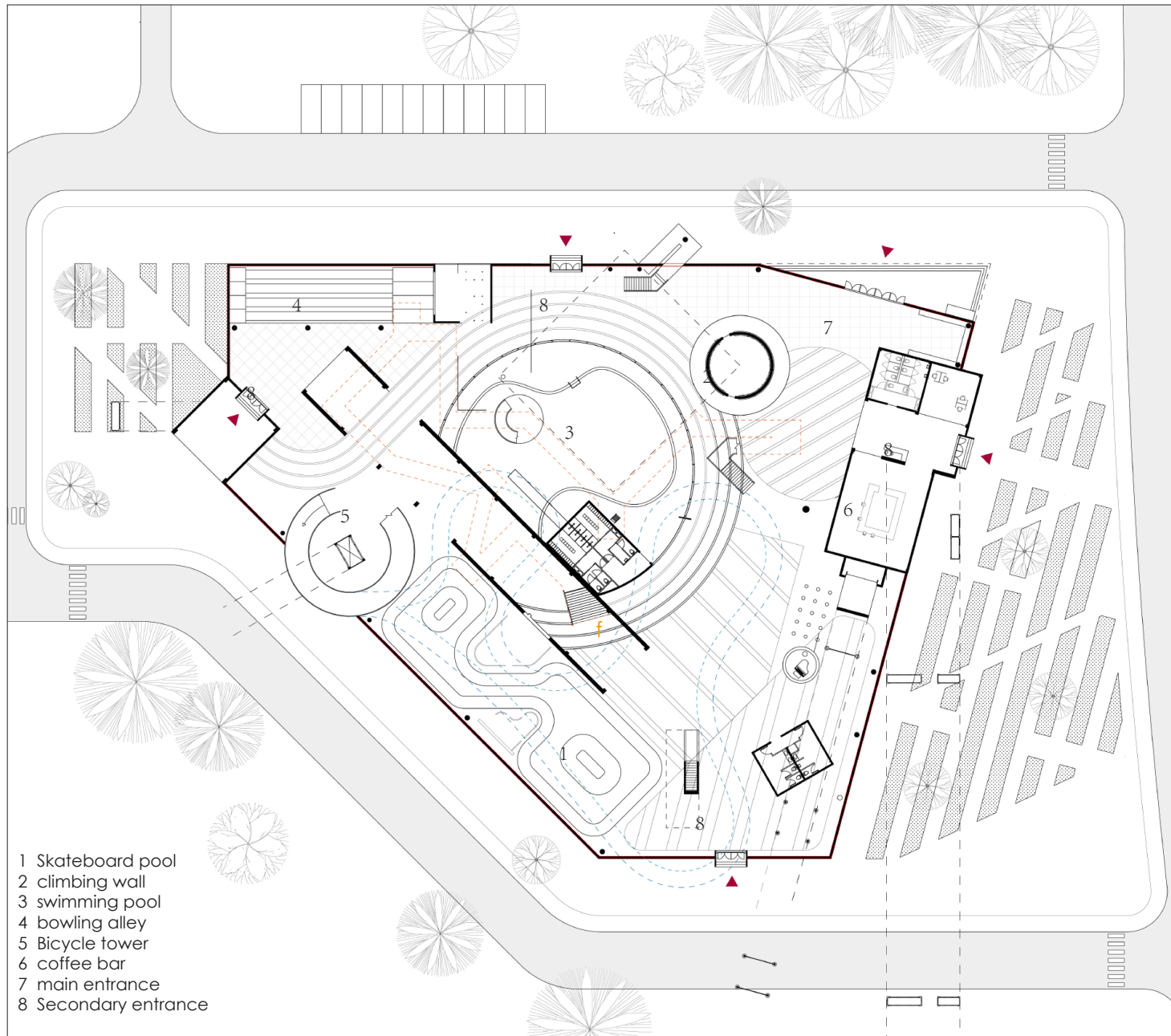


Roof and blast furnace on the site

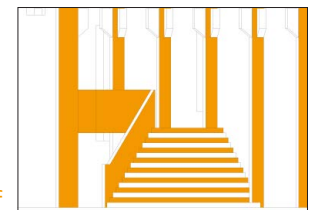
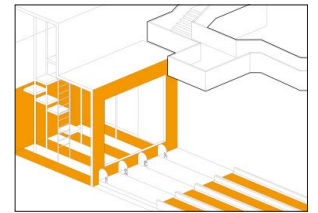
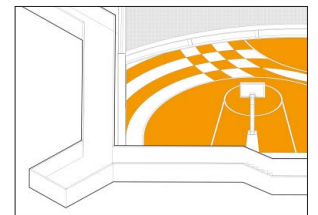
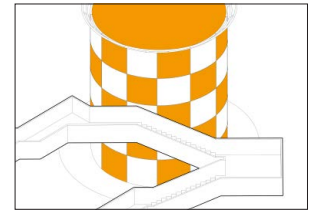
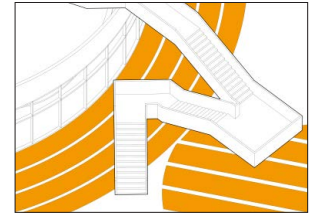


Starting point of the walking path

-GROUND FLOOR-

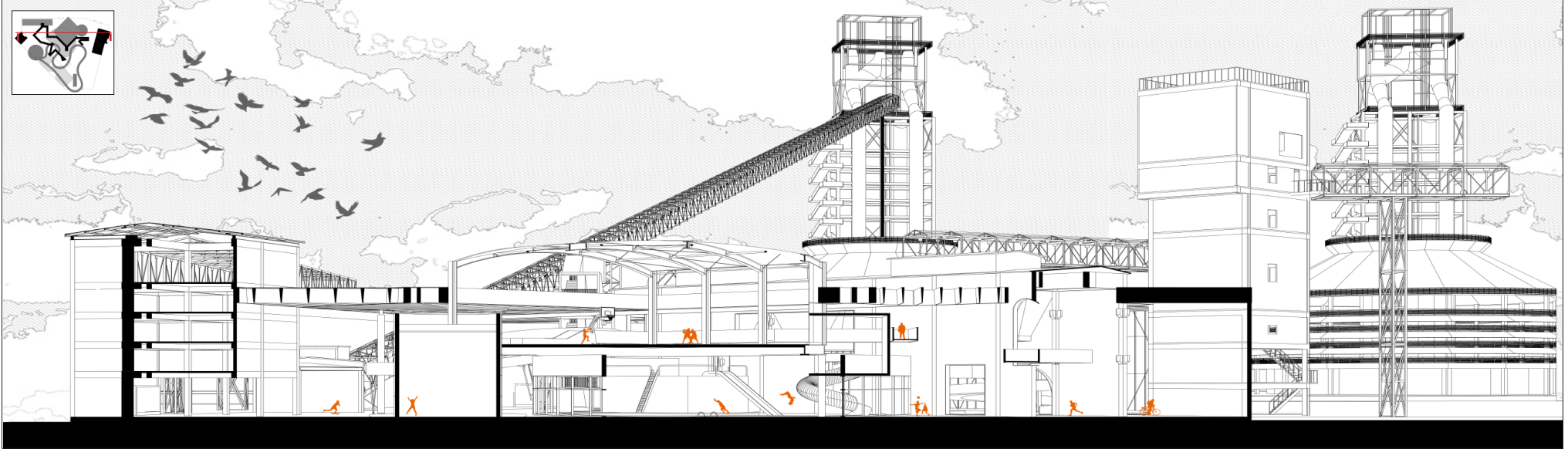


- 1 Skateboard pool
- 2 climbing wall
- 3 swimming pool
- 4 bowling alley
- 5 Bicycle tower
- 6 coffee bar
- 7 main entrance
- 8 Secondary entrance



f





Section



Elevation



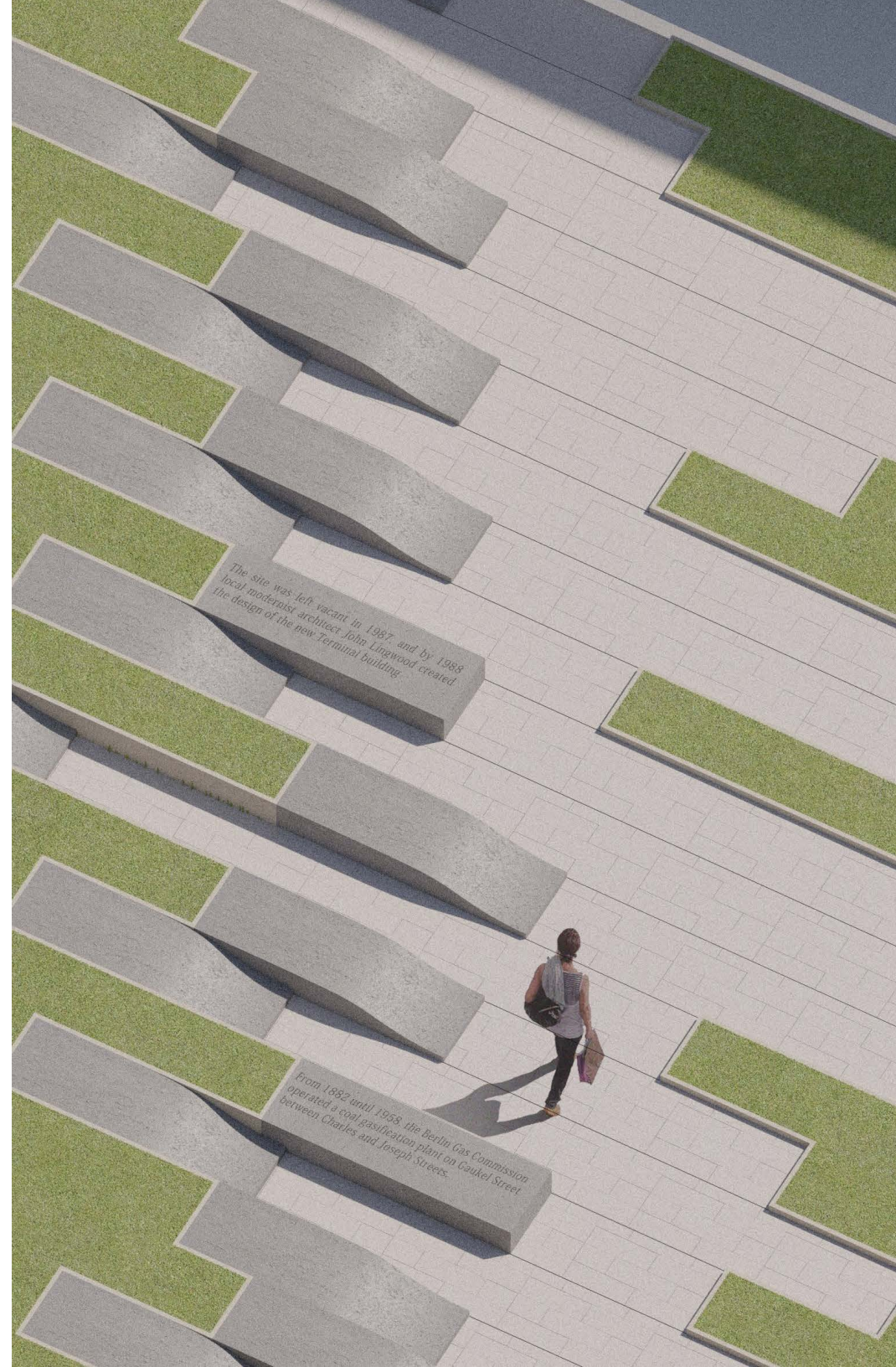
The massive steel constructions connect the sports center to the rest of the site, expressing the same tension as the limbs of the human body. Like these structures, the memory of the Shougang is preserved, and the people who come to play sports are regrouped under a condenser to create more energy for the city.

02

-Recollection-

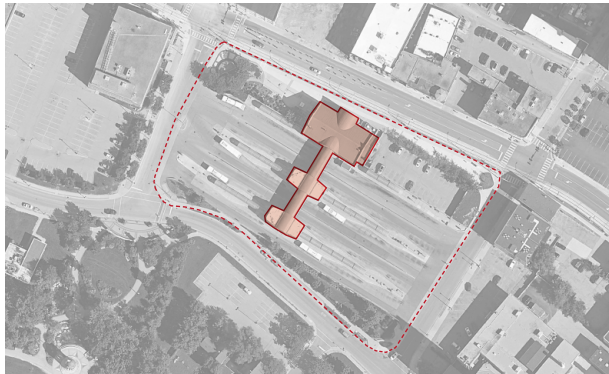
Individual Work
Fall 2023
Charles Street Terminal Renovation
Coursework of comprehensive design studio
Location: Kitchener, ON

Located in the downtown Kitchener, Ontario, the Charles Street Terminal was once a station providing transit service and has since become an regional icon, holding memories for many local residents. The design of this community centre aims to preserve the history and memories carried by the terminal by keeping its main part and unique site texture. Landscape and architectural volumes integrate to create a courtyard park, shaping a space that is both commemorative and inclusive.



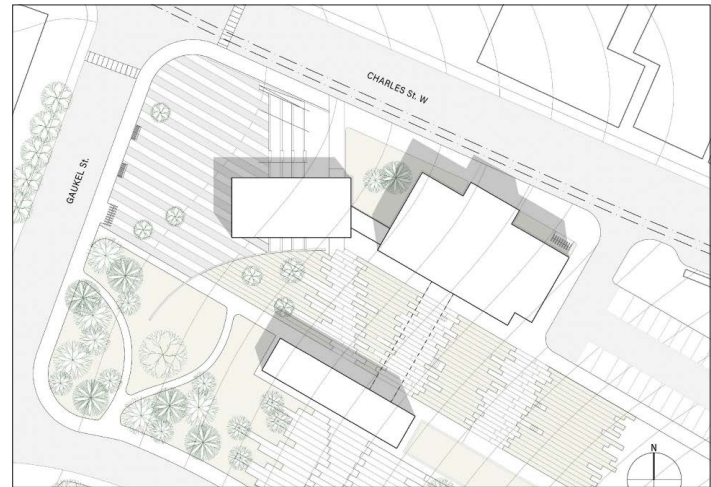


The terminal has a rich history. In 1988, local modernist architect John Lingwood designed the new Terminal building. Till 2019, with the completion and launch of the GRT's Light Trail Transit System, the focal point of transit in Waterloo Region shifted, leading to the cessation of operations at the Charles Street Bus Terminal. From 2020 to 2022, the site served as a temporary COVID Testing and Vaccination Centre operated by Grand River Hospital.

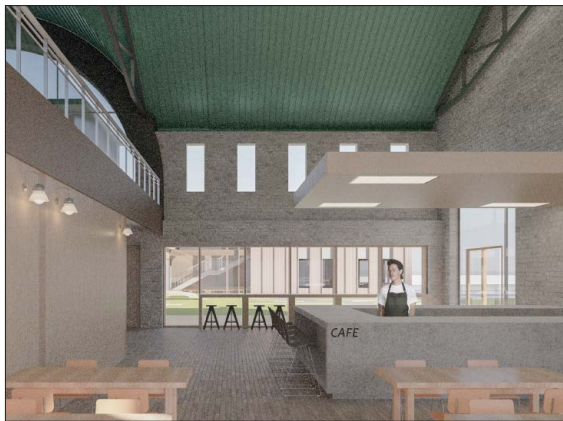


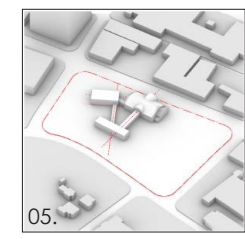
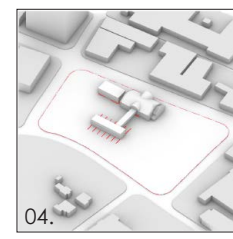
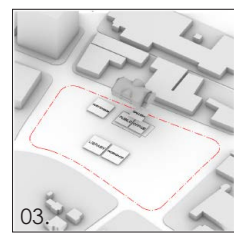
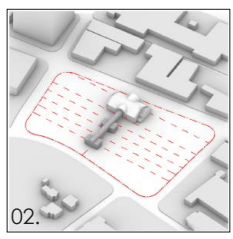
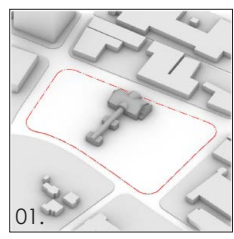
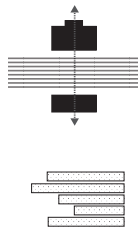
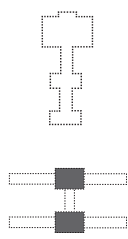
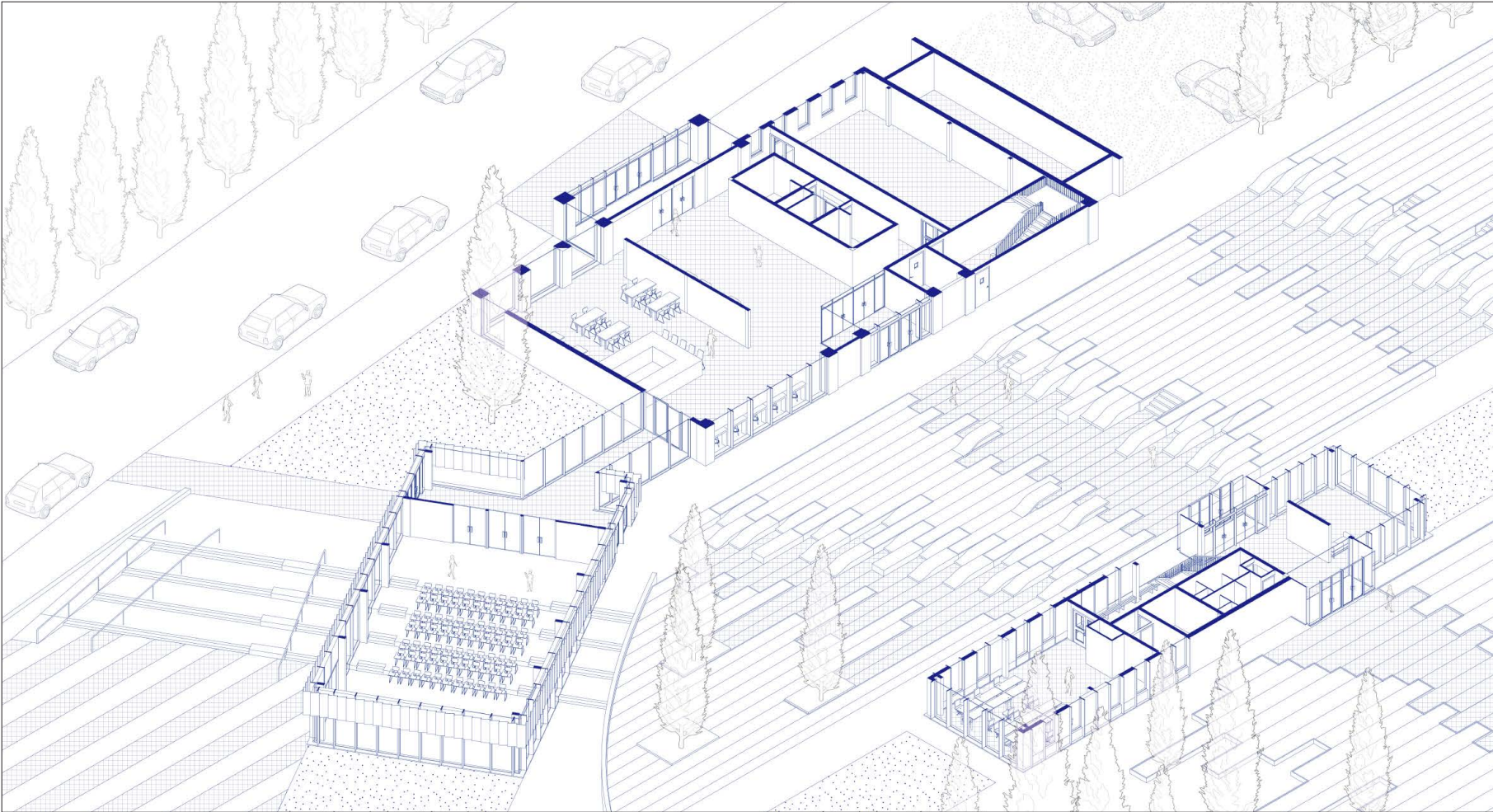
individual story *collective memory*
 via **public space**

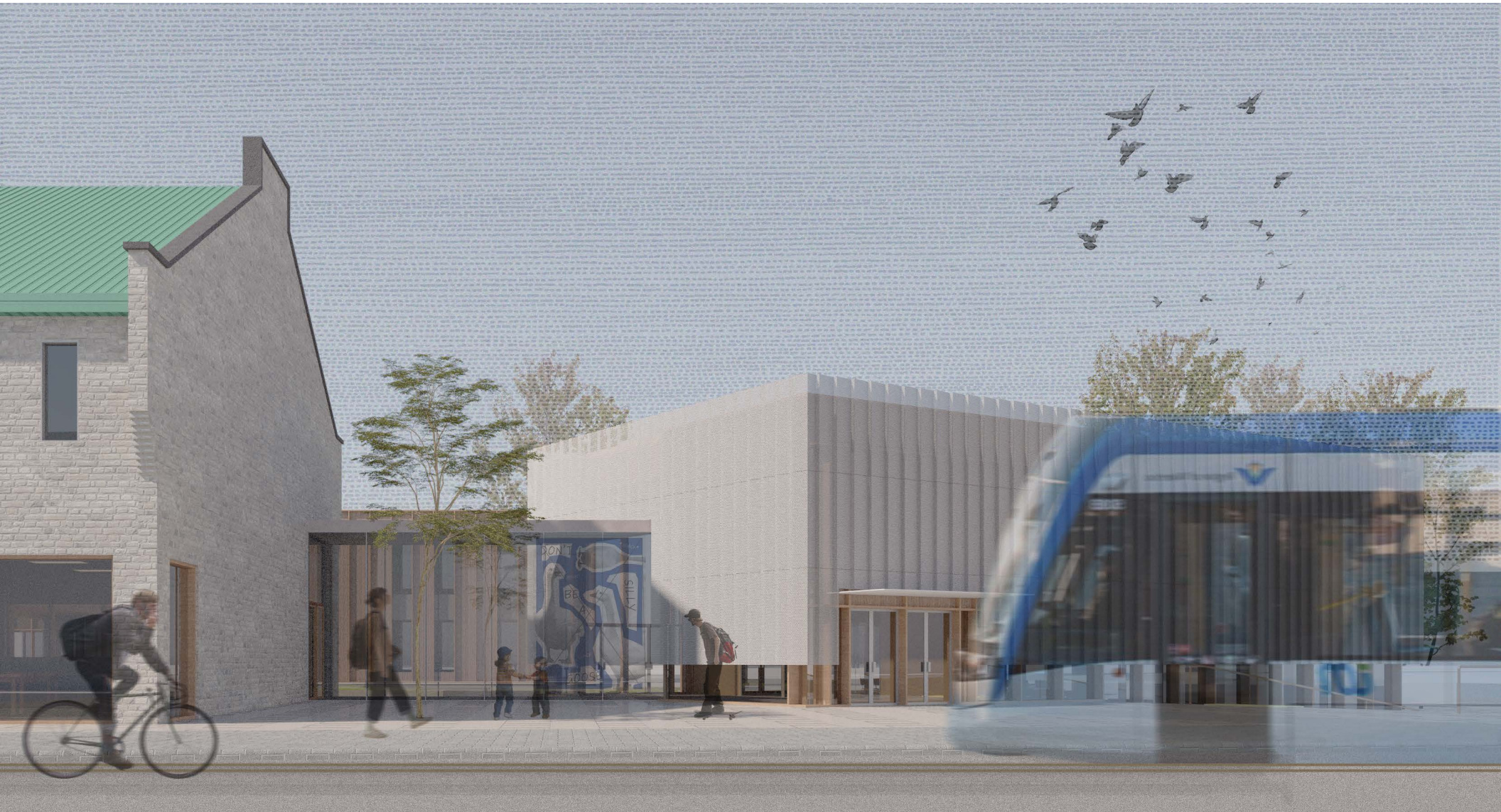
architecture renovation

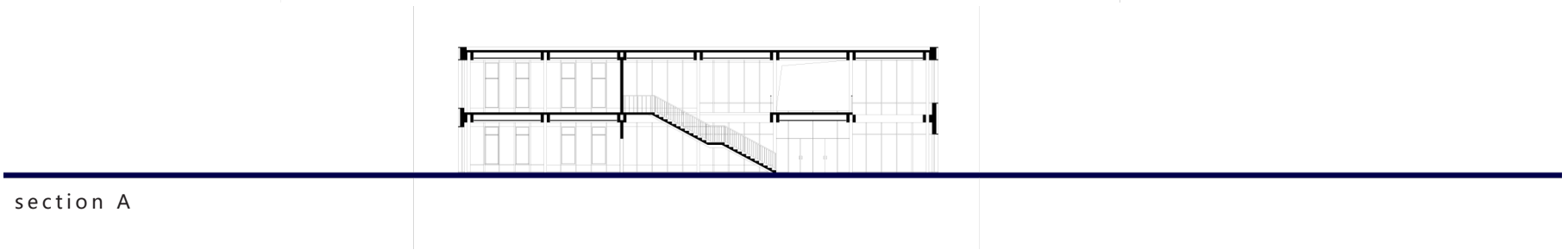
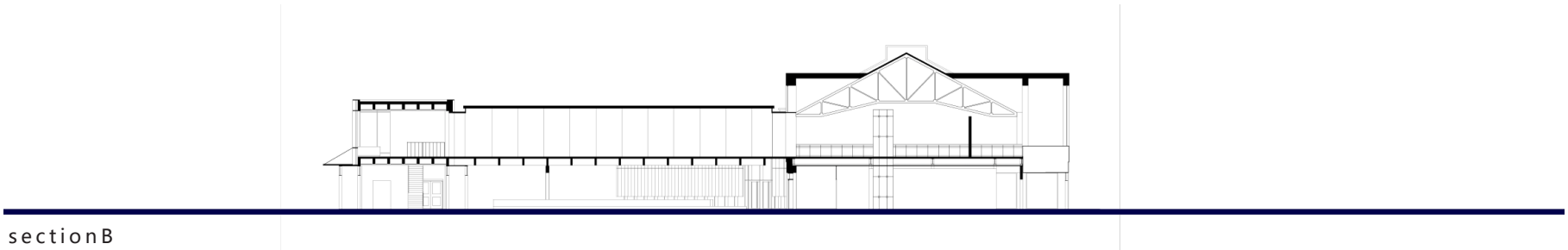
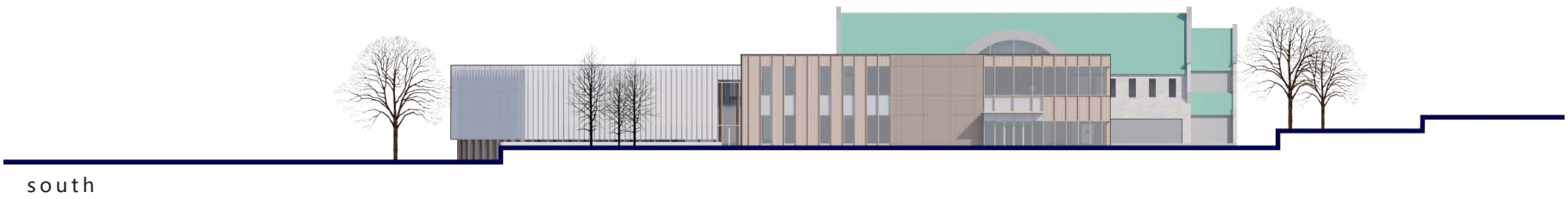
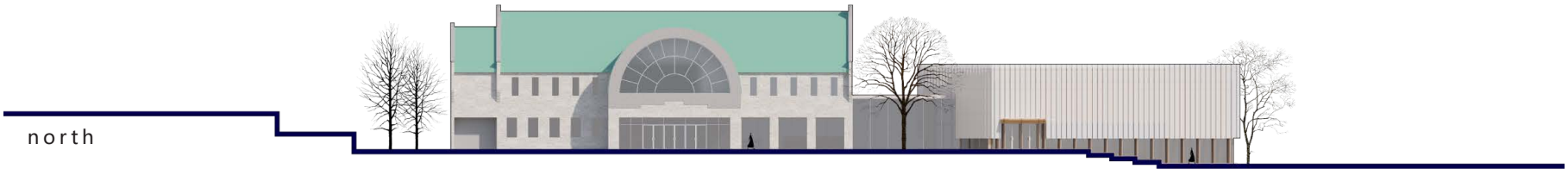


The north side of the building axis is rotated to create a small plaza at the northeast corner of the site where people can gather for activities. This plaza connects to the bustling urban area to the north of the site, while the park to the southwest connects to Victoria Park, introducing greenery into the courtyard

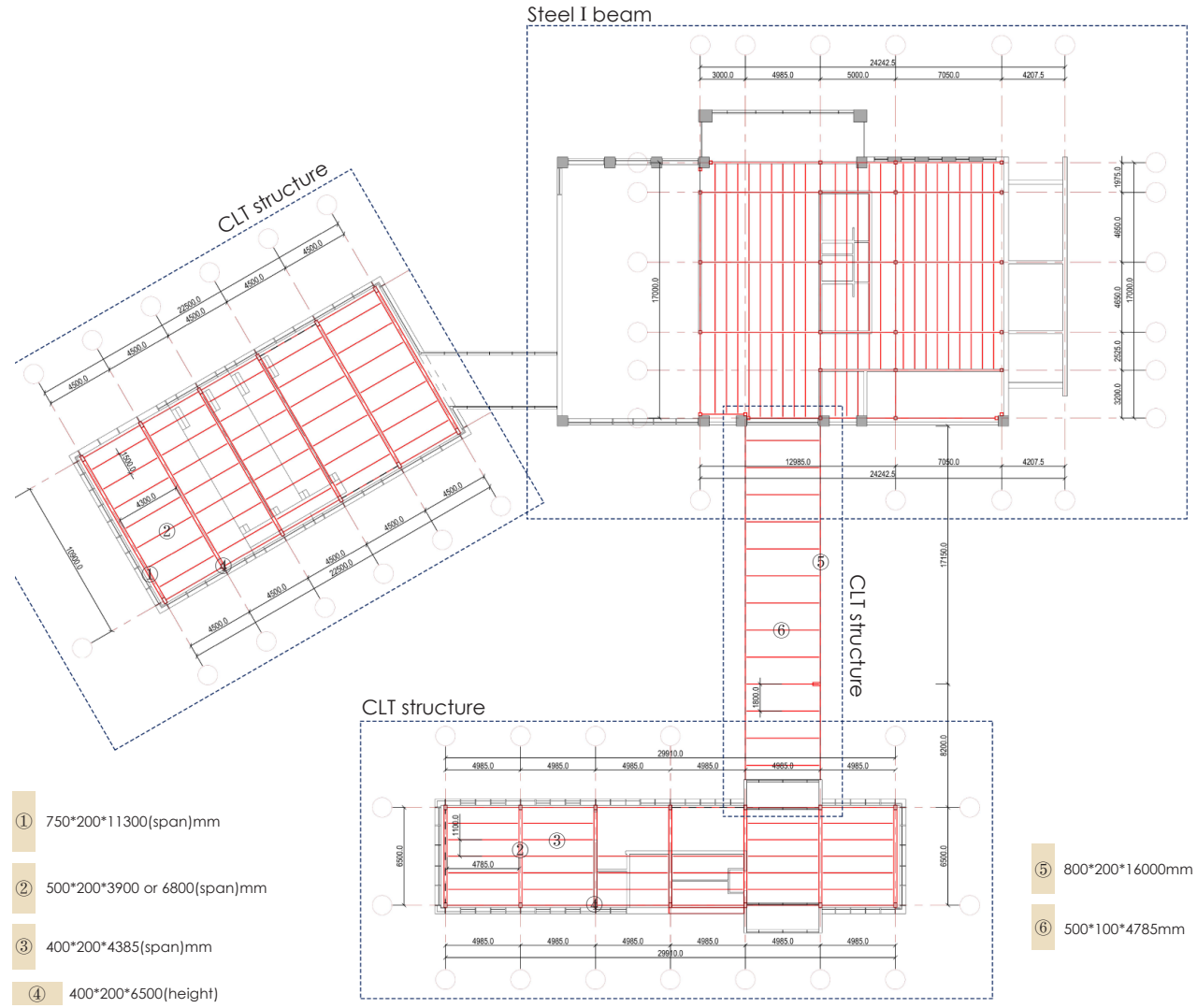
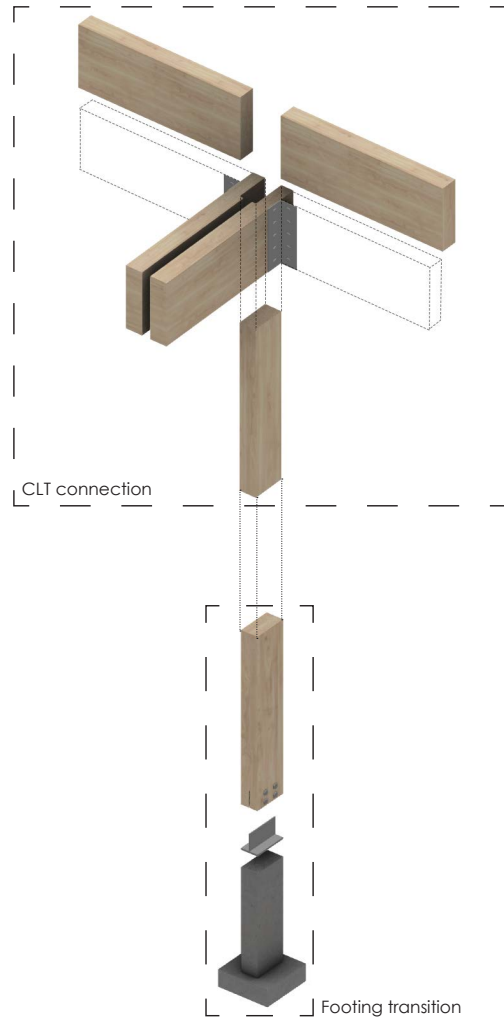




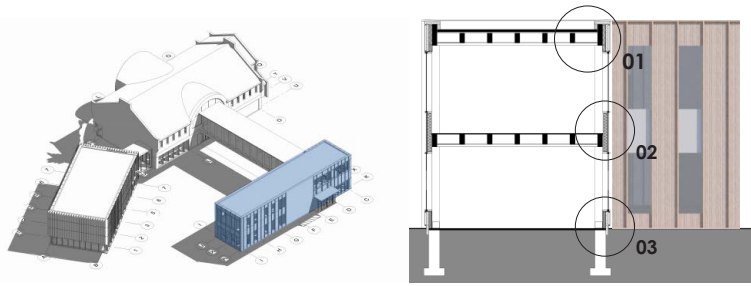
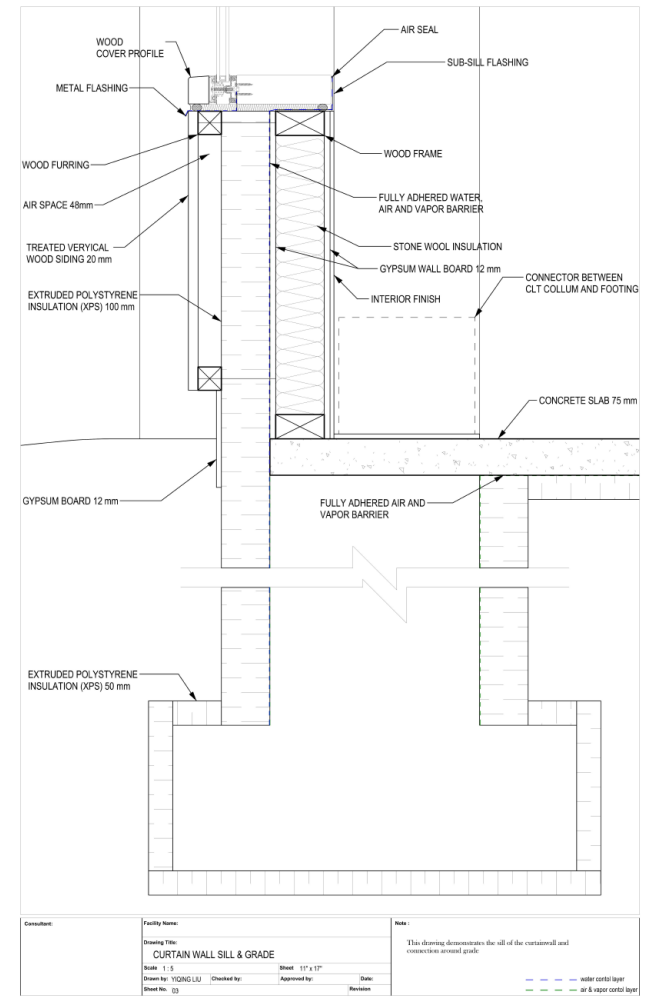
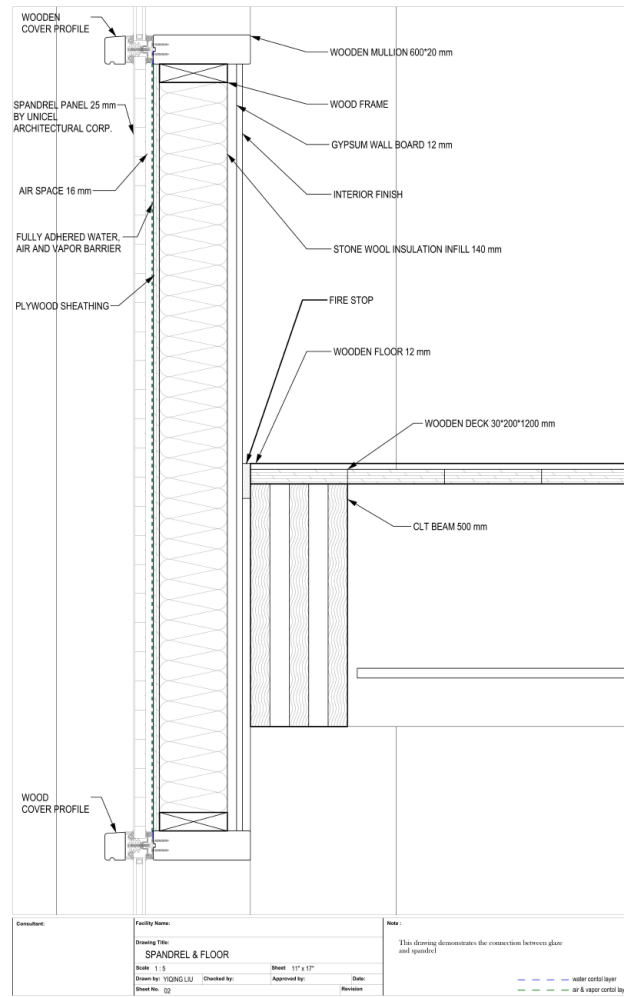
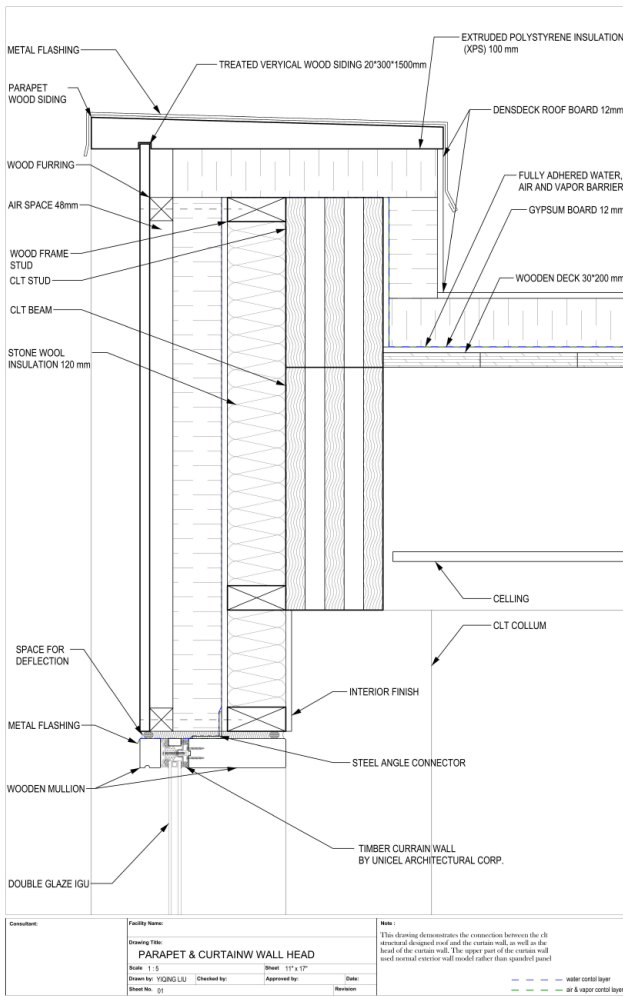




Considering embodied carbon reduction and the relatively small volume of the building, mass timber (CLT) beam and column are applied into the new construction part of the project. Separated from the old structure, steel columns and beams are used in the existing building.



- ① 750*200*11300(span)mm
- ② 500*200*3900 or 6800(span)mm
- ③ 400*200*4385(span)mm
- ④ 400*200*6500(height)



The design consists of three connected volumes. facade of the library (shown as blue) has a large area facing southwest. So in order to coordinate the overall visual effect of the facade and the building performance, vertical sidings and mullions are used to narrow the window. Also, upper and lower parts of the curtain wall are transitioned by walls, rather than directly connected to the roof or the ground. The first and second floors are separated by spandrel with thicker insulation. Wood frame wall are supported by CLT structure.

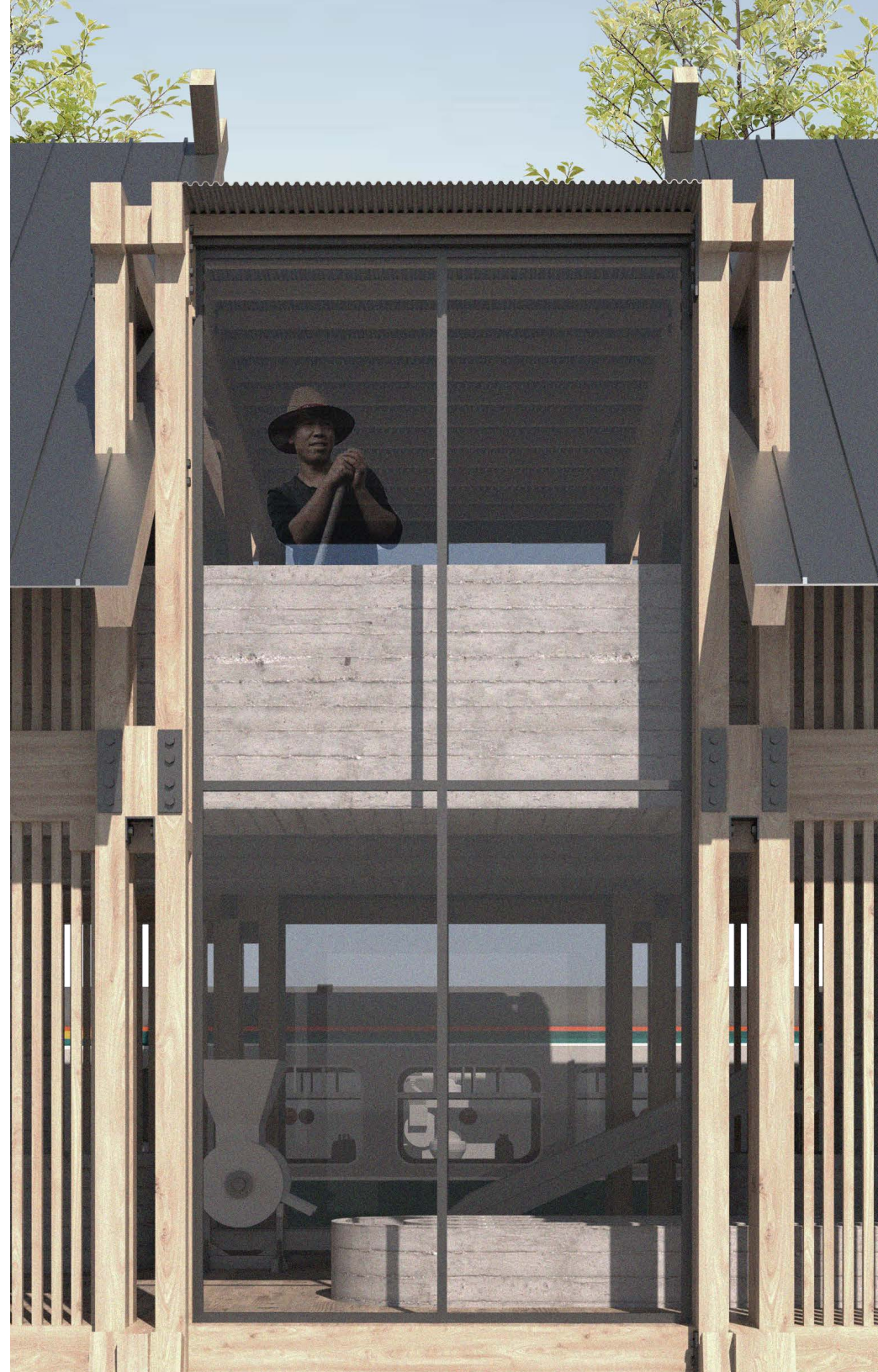
03

Coffee Rail-trip

Type: Individual Work
Date: 2020.Summer
Location: Yunnna, China

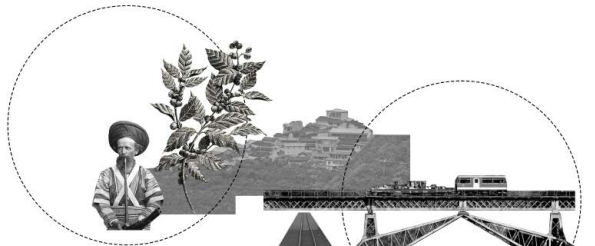
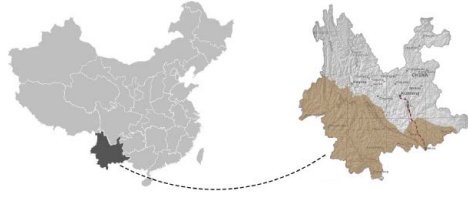
Yunnan Province was the first place where coffee was introduced in China. The unique climate conditions of the region allowed the French who came to colonize the area in the 19th century to bring coffee seeds and plant and harvest them, as well as build the Yunnan-Vietnam Railway, the first railway in southwestern China.

Today, the coffee plantations deep in the mountains face the problem of not being able to export their local products, and this railway line is declining due to the decrease in the number of passengers. The design aims to use the railway line to connect the various coffee production areas along the way, and build a coffee station in each area, integrating various functions from coffee bean processing to tasting, hoping to enhance the local tourism development and create a coffee railway journey.



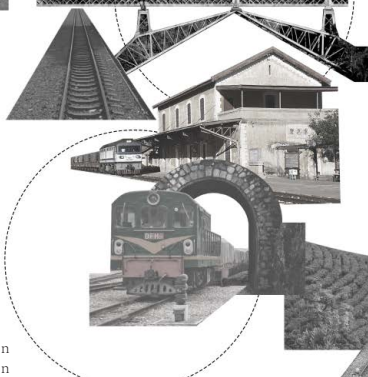
-HISTORICAL BACKGROUND-

Yunnan province is located in southwestern China, with high mountain plateaus and a hot and humid climate, and is one of the few provinces in China where coffee can be grown. The coffee growing areas in Yunnan province are mainly located in the south. The Yunnan-Vietnam railroad starts from Kunming and reaches Haifang, Vietnam, with a total length of 859km, through which there are coffee plantations in Honghe County. The design site is located along the Honghe section of the railroad



A French Catholic priest, Father Tien Duc Nang, personally planted a coffee seedling brought to China by his colleague from Lao Cai, Vietnam through Hekou, planted on the back wall of the Catholic Church of Chu Bit La

1995 Yunnan provincial government officially included coffee planting in the biological resources "18 project", coffee planting has been rapidly developed. The area and production of coffee accounted for more than 95% of the country.



In 2012, Starbucks established a coffee grower support center in Yunnan, starting a deeper commitment to Yunnan coffee

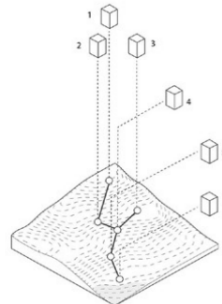
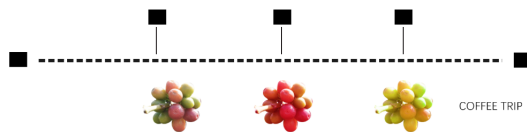
The first coffee bar in Yunnan was opened in Mengzi County, Yunnan - "Yunnan-Yue railroad bar room"

1992 Yunnan Coffee Factory was established, it is a Chinese government-United Nations Development Programme coffee cooperation project

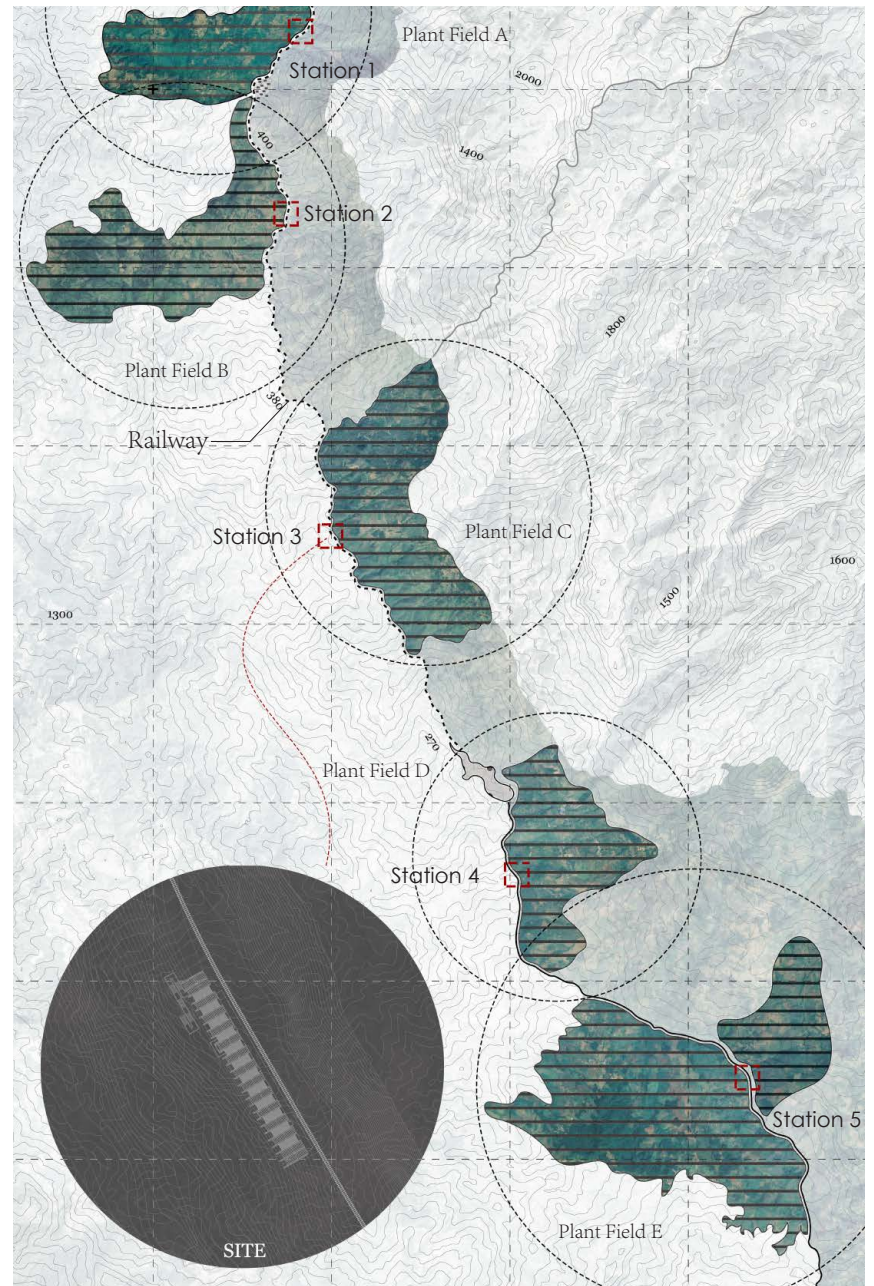


-CONCEPT GENERATING-

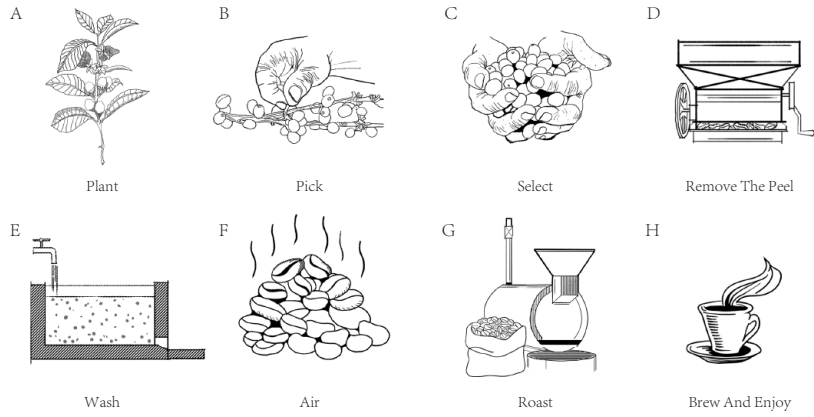
The design places the coffee station next to the railroad in different coffee planting field. Passengers can get off the train to enjoy a fresh cup of coffee and the scenery when passing through one railway station in the area, and then get on the train to the next station to enjoy a different taste of coffee and a different view.



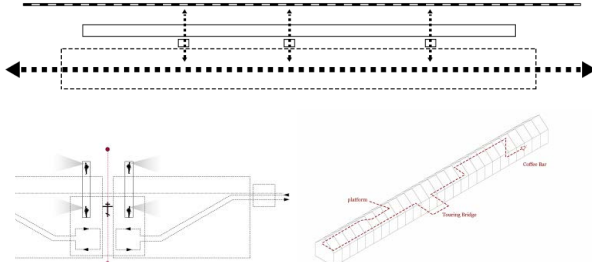
-SITE MAPPING-



-COFFEE PRODUCTION PROCESS-



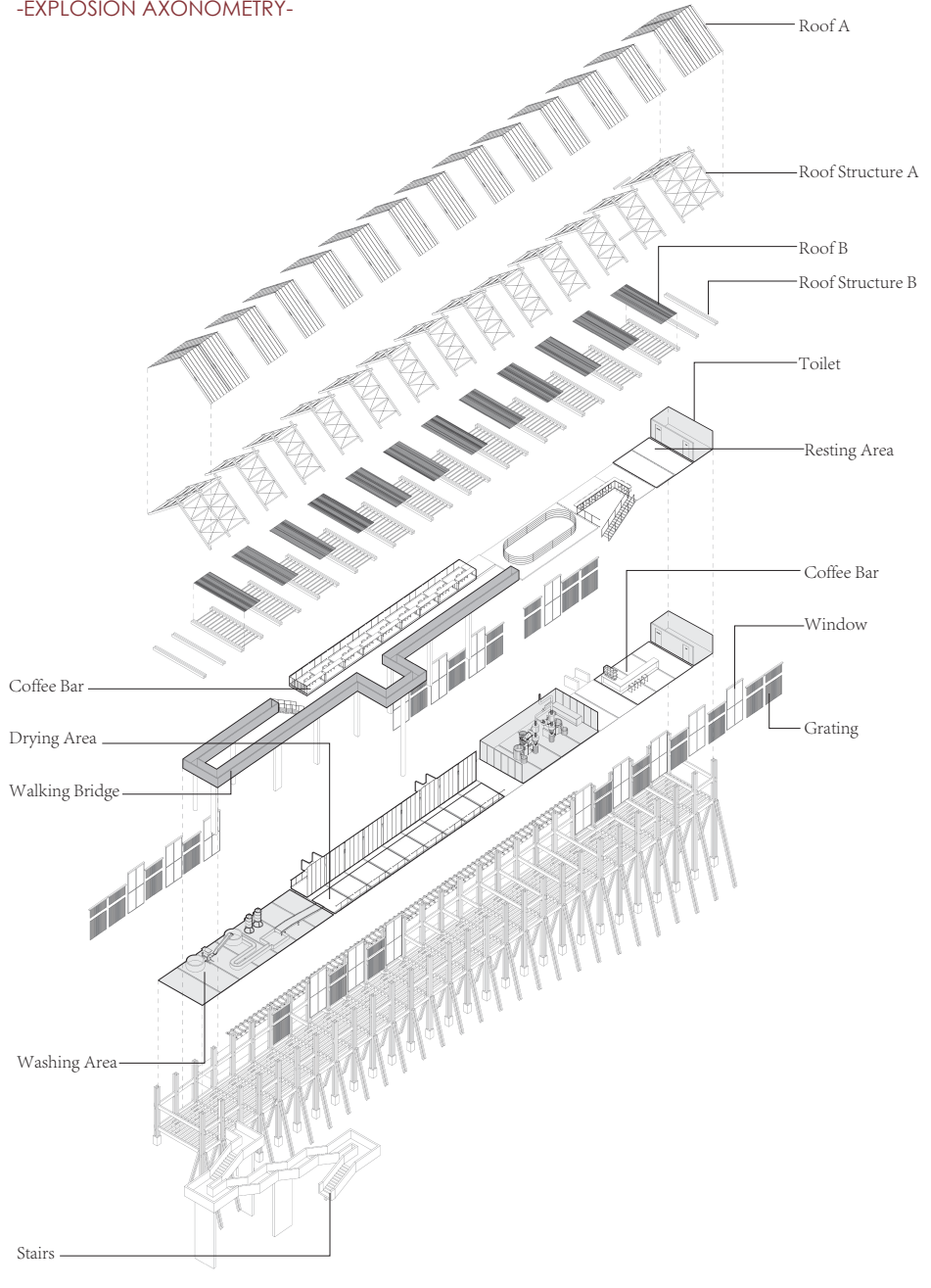
The shape of the coffee workshop is linear based on the railway, which connects the technological process of coffee production in series, and then puts the tourists' streamline into it, avoiding the production space. The two are adjacent but not connected

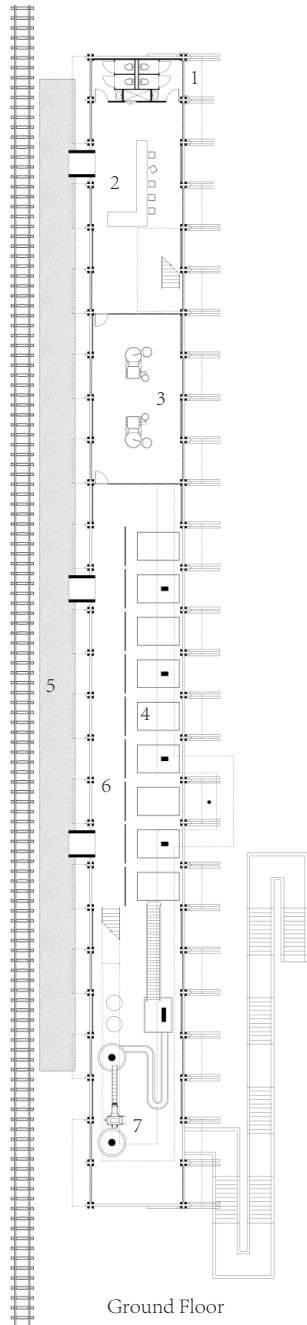


-SITE -

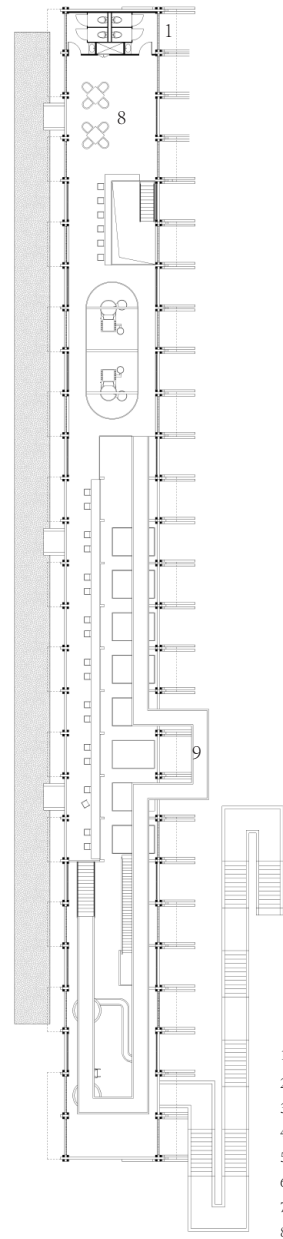


-EXPLOSION AXONOMETRY-





Ground Floor

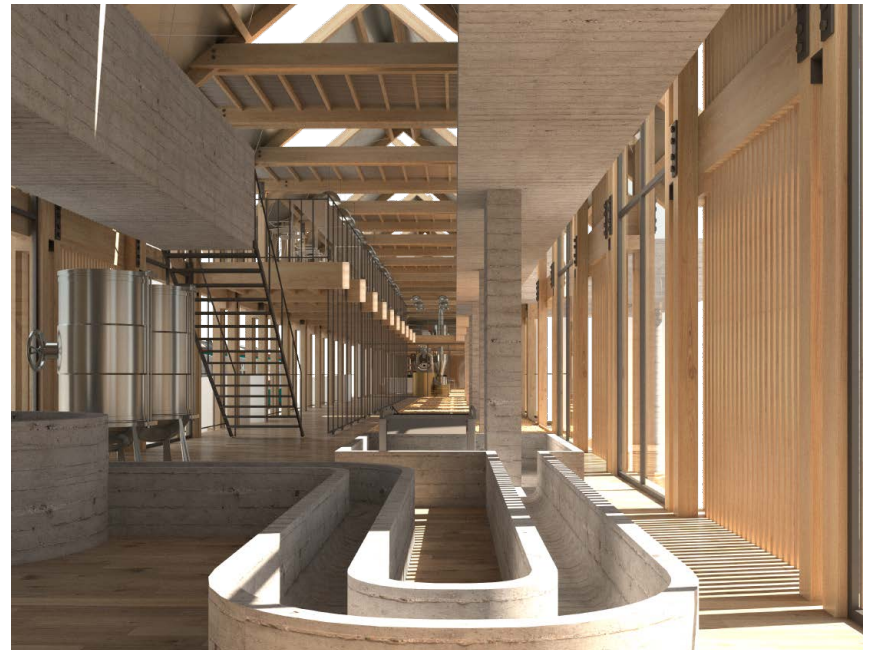


Second Floor

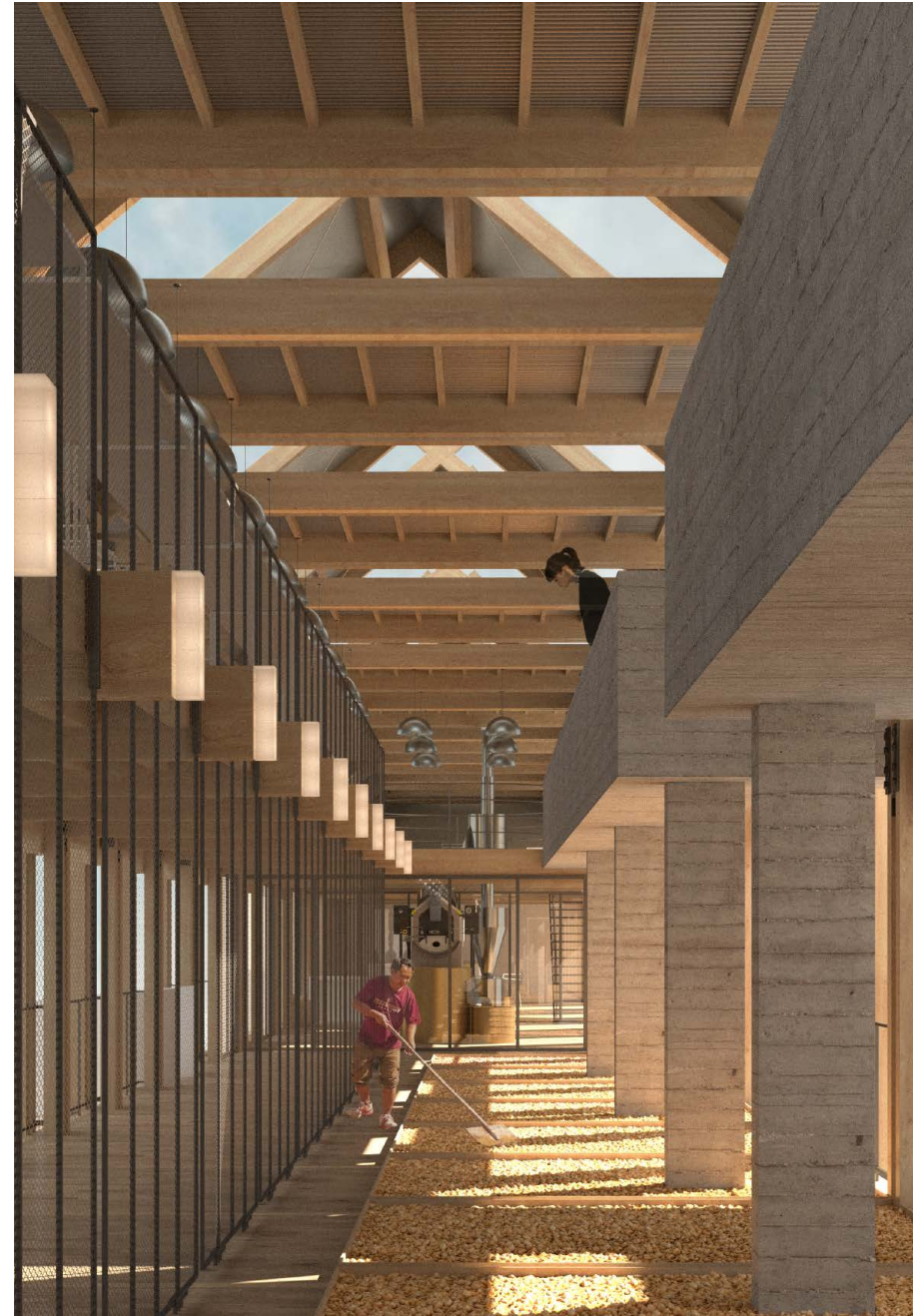
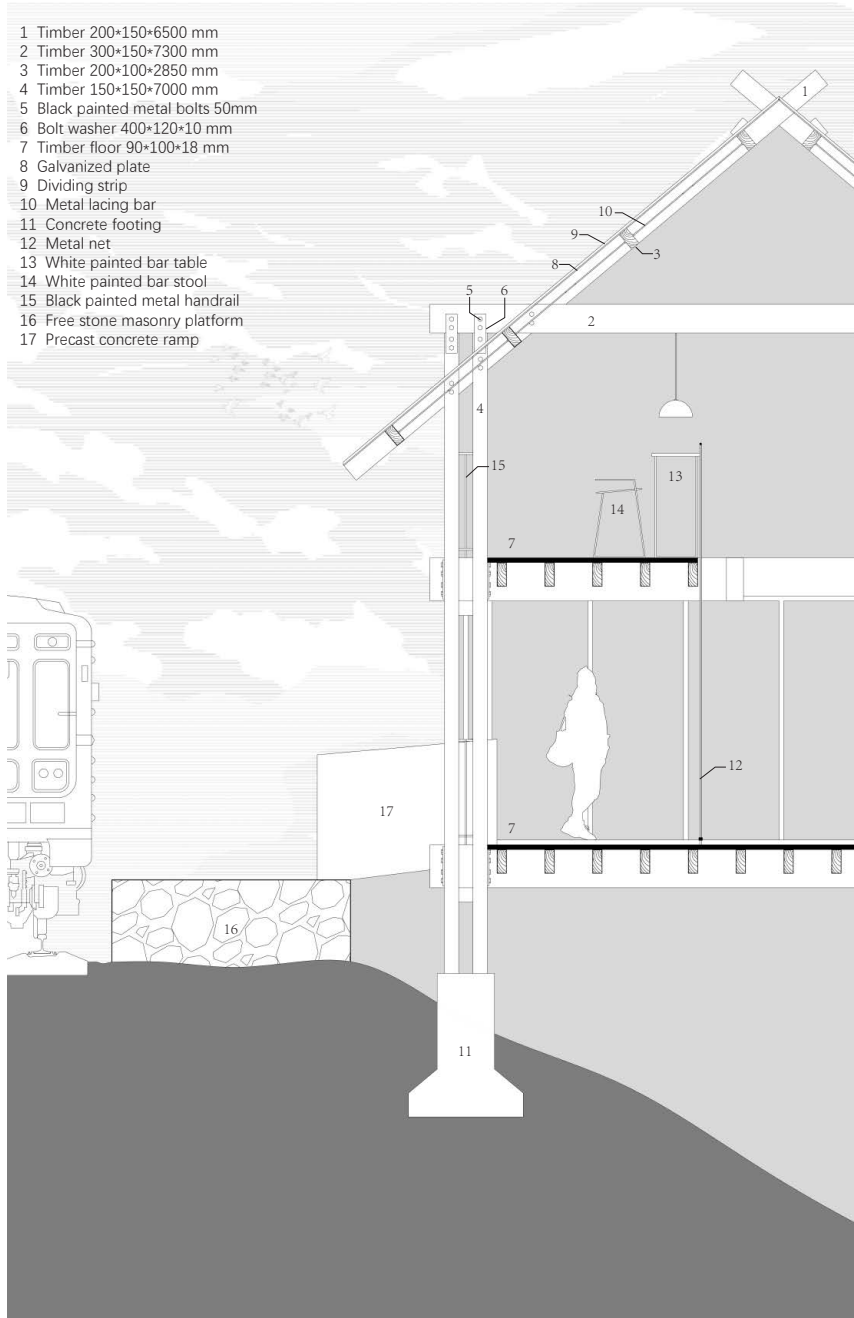
- 1 Toilet
- 2 Coffee Bar
- 3 Roasting room
- 4 Drying Area
- 5 Platform
- 6 Corridor
- 7 Washing Area
- 8 Resting Area
- 9 Walking Bridge



-SERIAL SECTION-



- 1 Timber 200x150x6500 mm
- 2 Timber 300x150x7300 mm
- 3 Timber 200x100x2850 mm
- 4 Timber 150x150x7000 mm
- 5 Black painted metal bolts 50mm
- 6 Bolt washer 400x120x10 mm
- 7 Timber floor 90x100x18 mm
- 8 Galvanized plate
- 9 Dividing strip
- 10 Metal lacing bar
- 11 Concrete footing
- 12 Metal net
- 13 White painted bar table
- 14 White painted bar stool
- 15 Black painted metal handrail
- 16 Free stone masonry platform
- 17 Precast concrete ramp





04

-REPARATIVE INFRASTRUCTURE-

Type: Research Design

Date: 2025 Summer

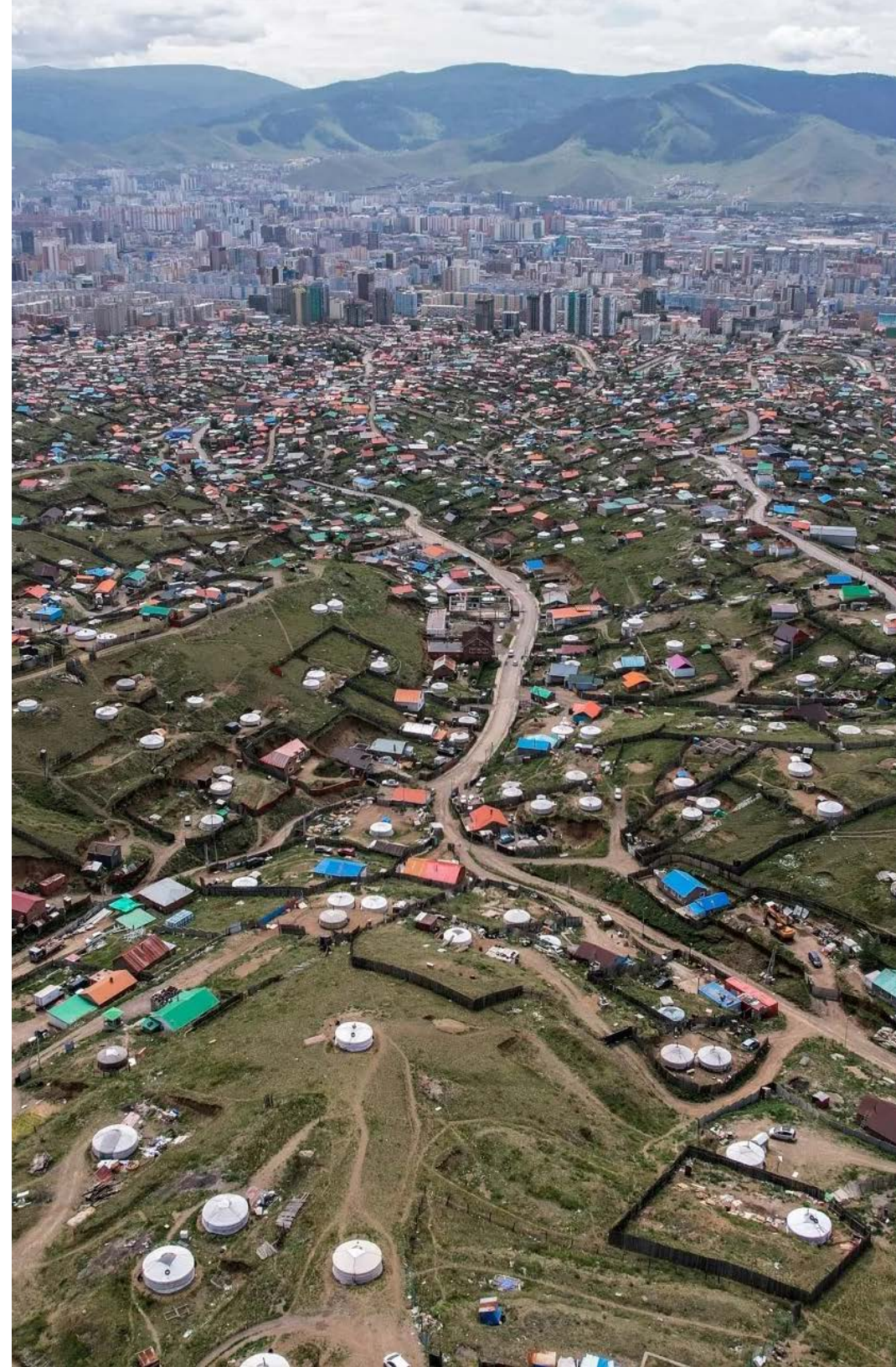
Location: Ulaanbaatar, Mongolia

URL: <https://hdl.handle.net/10012/22592>

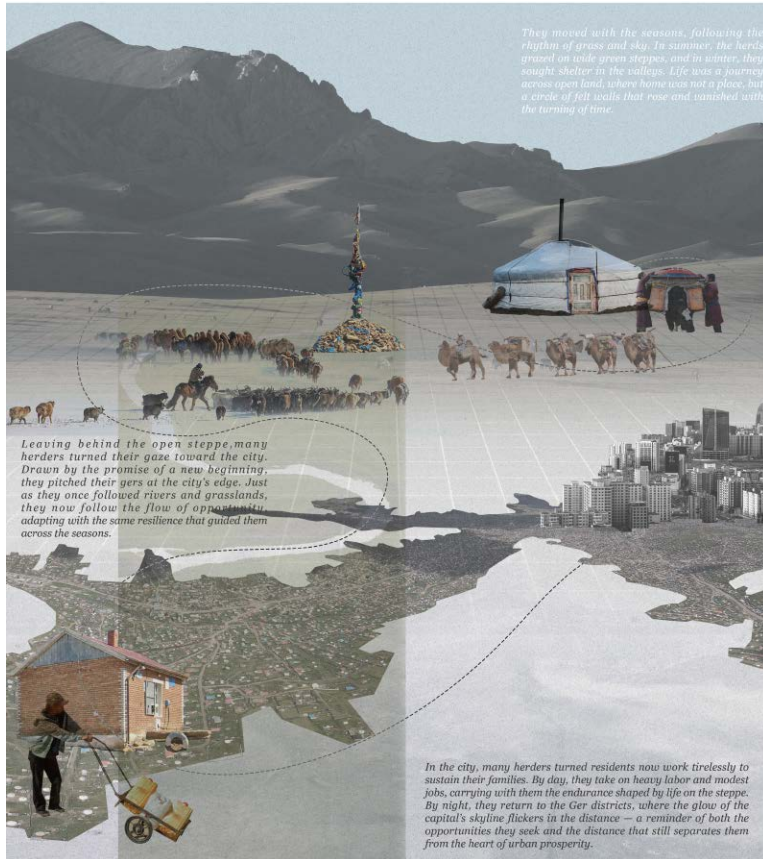
Over half of Mongolia's population lives in Ulaanbaatar, with many settling in ger districts on the urban periphery. These areas, where some residents still live in traditional gers on self-claimed plots, resemble other informal settlements lacking basic infrastructure. Following the political reforms of the late twentieth century, many rural migrants relocated here seeking better opportunities, yet their living conditions remain poor. This thesis investigates how architectural interventions can enhance daily life, public space, and a sense of nomadic identity within these rapidly urbanizing areas.

Focusing on the water kiosks system, it explores how these kiosks can serve as social and spatial anchors for future development. Based on literature review, secondary data, and remote site analysis, the thesis proposes two architectural upgrades in Bayangol District. The study ultimately frames a community-driven approach for informal settlements that promotes local agency and spatial justice through reparative infrastructure.

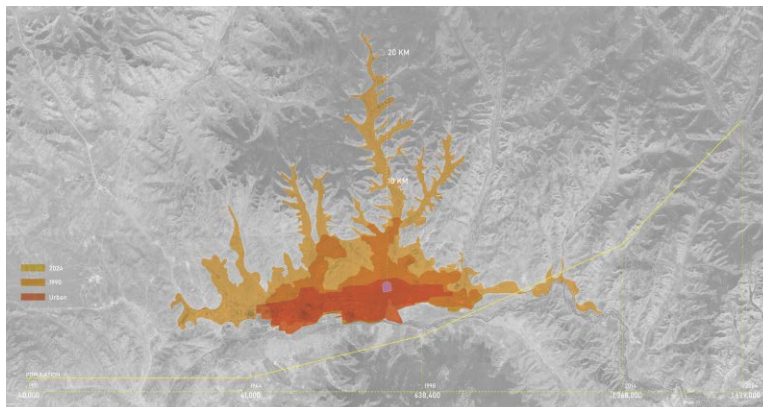
Note: The drawings included here represent only a portion of the materials used to illustrate the final design outcomes in this thesis. For the complete content, please refer to the full thesis document.



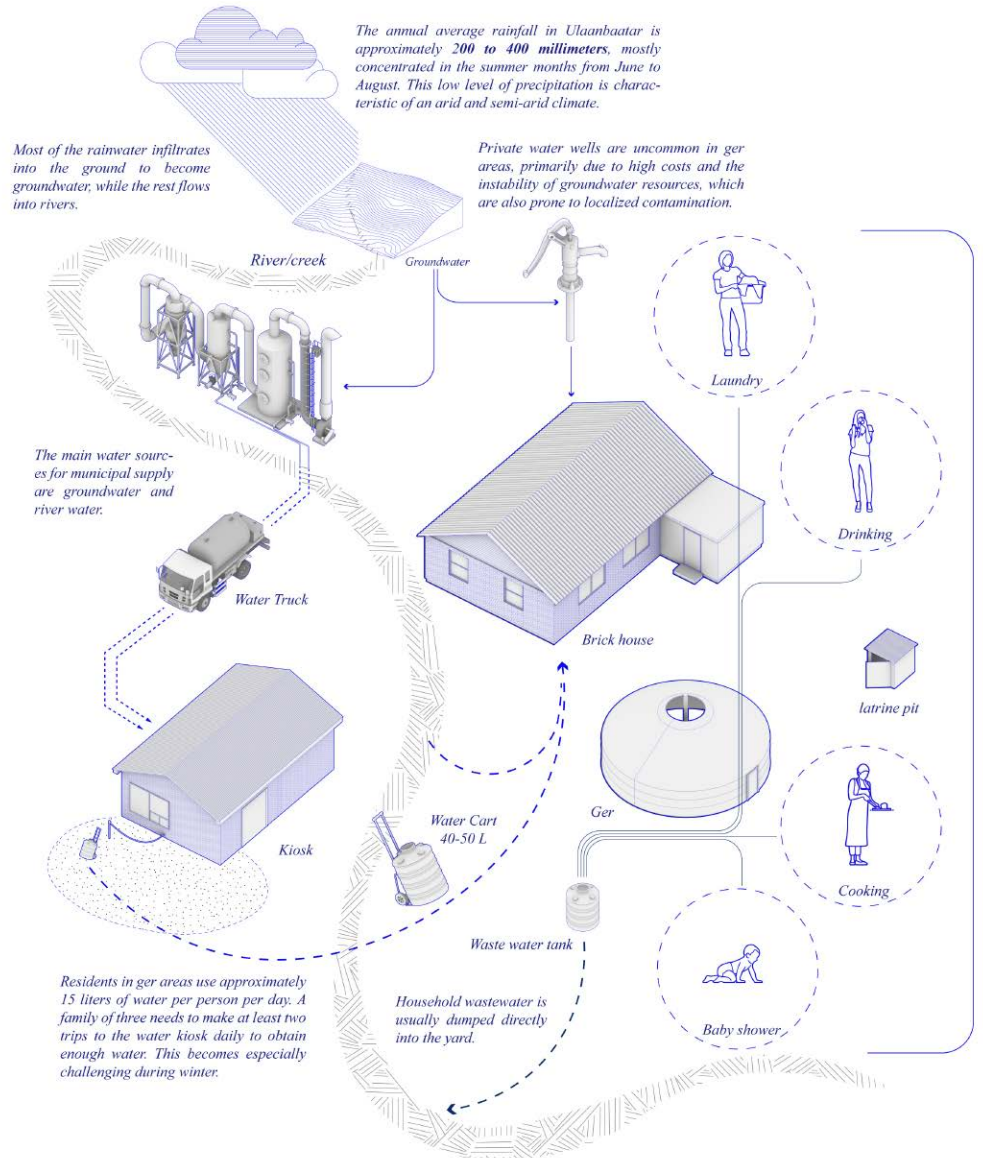
-FROM COUNTRYSIDE TO THE CITY-



-RAPID EXPANSION-

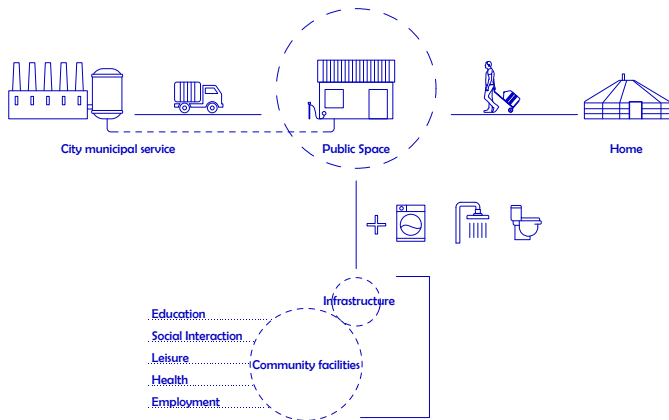


-WATER CYCLE AND WATER USAGE-

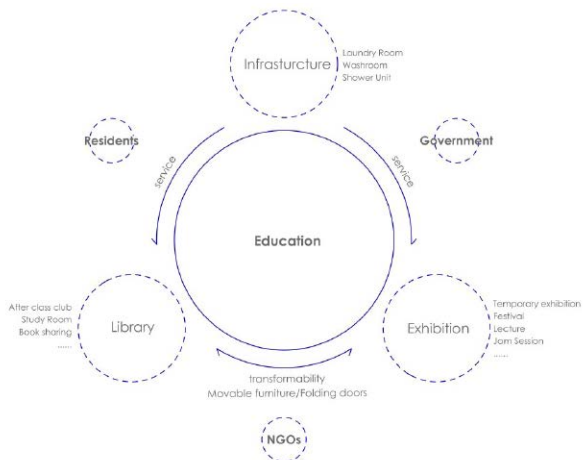


At the outset of the design, the thesis extensively reviewed the historical development and cultural practices of the design area (Ger districts), outlining the unique living habits of local residents, especially their water usage patterns. Using this as a guiding thread, the existing water kiosk system—a government-supported, widely distributed water supply facility primarily replenished by trucks—was set as the starting point for the design.

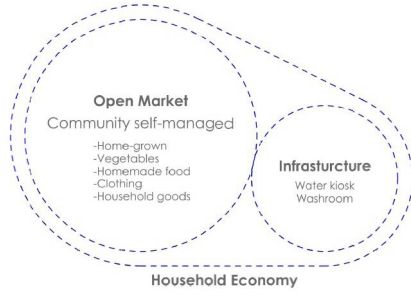
-DESIGN CONCEPT-



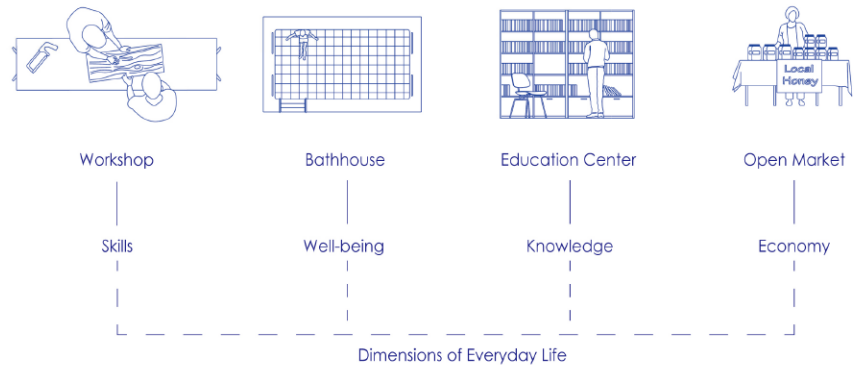
-Overall Strategy-



-Project A Operating Model-



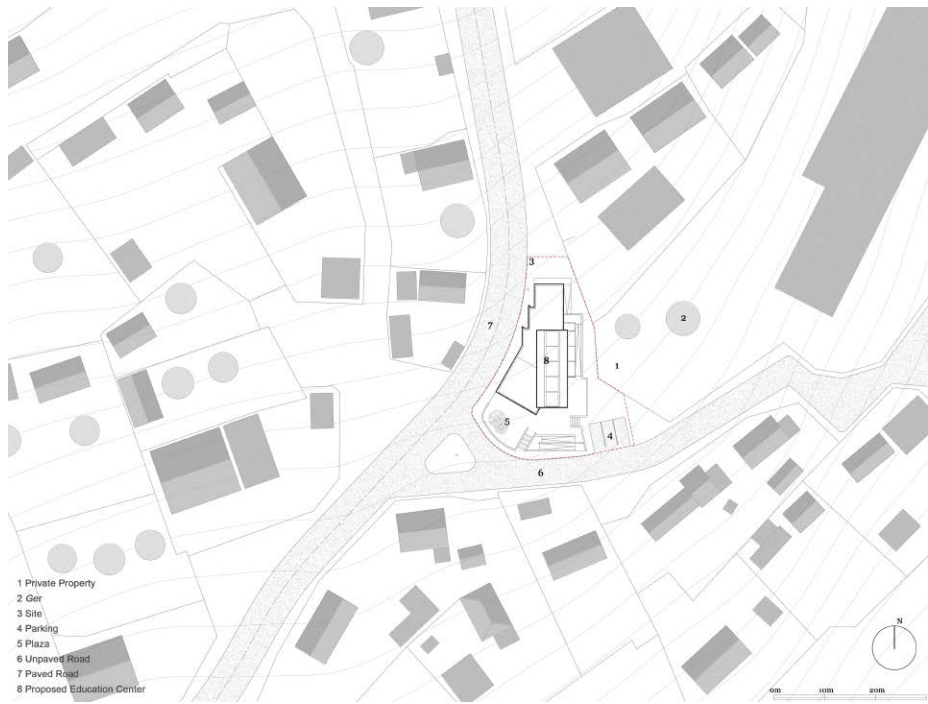
-Project B Operating Model-



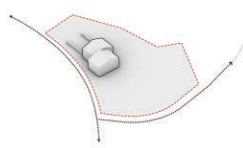
-PROGRAMMING & SITE-



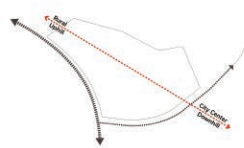
-PROJECT A-



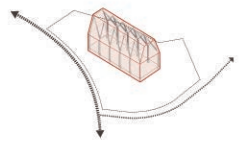
- 1 Private Property
- 2 Gar
- 3 Site
- 4 Parking
- 5 Plaza
- 6 Unpaved Road
- 7 Paved Road
- 8 Proposed Education Center



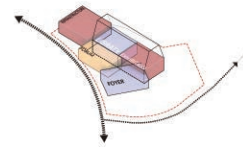
01. SITE CONDITIONS



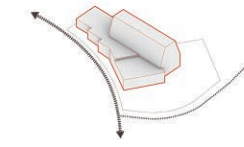
02. AXIS DETERMINATION



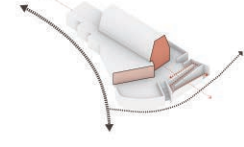
03. TOWER SPACE GENERATION



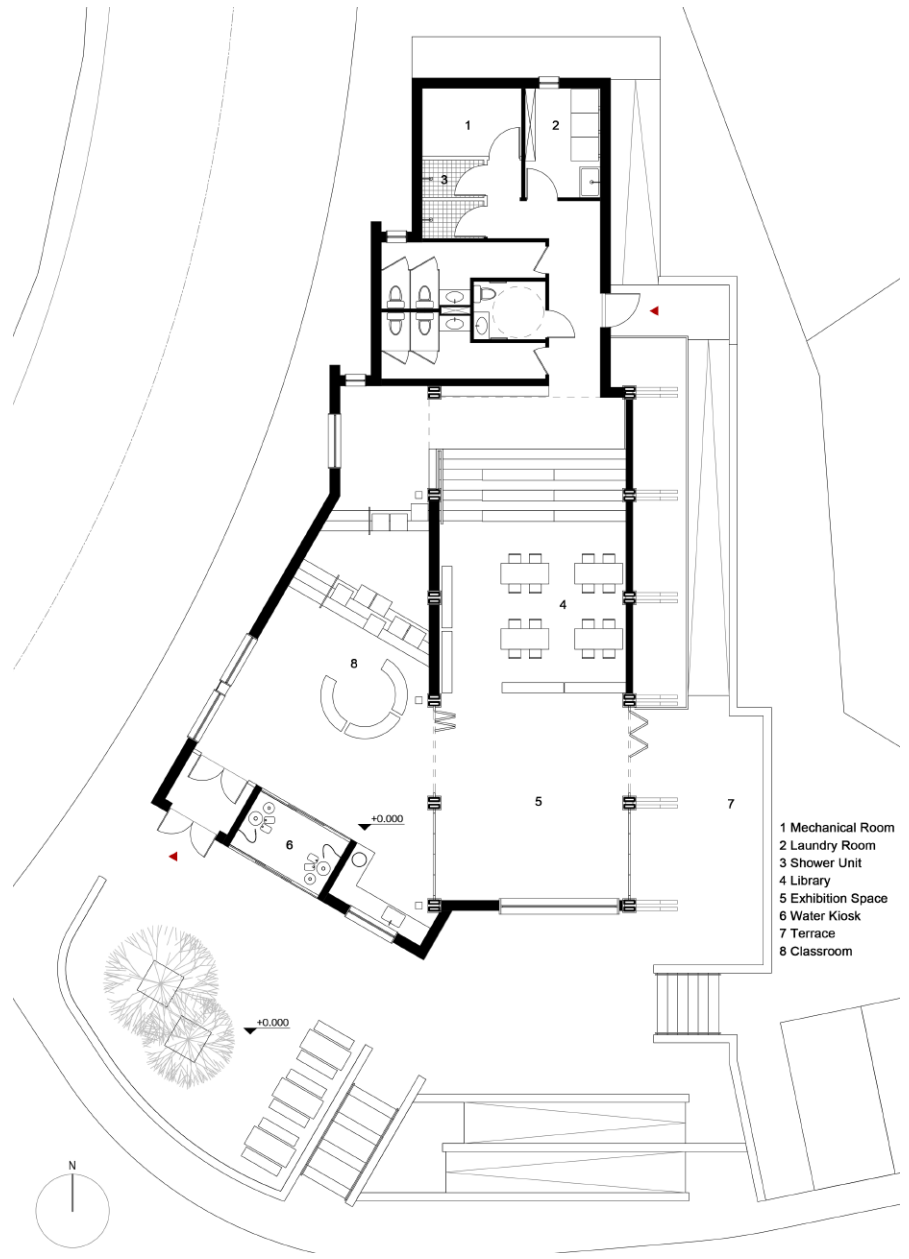
04. FUNCTIONS LAYOUT



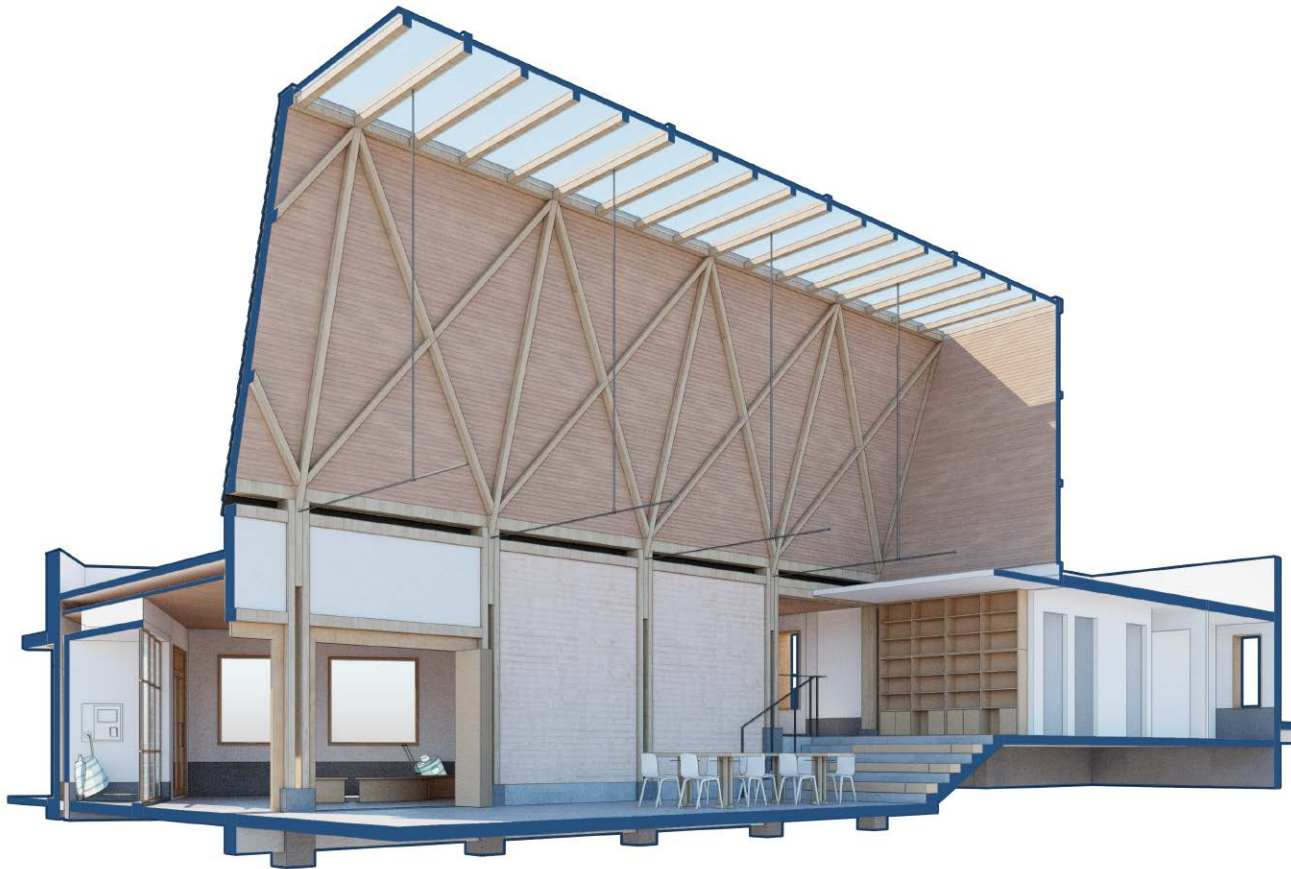
05. FORM DETERMINATION



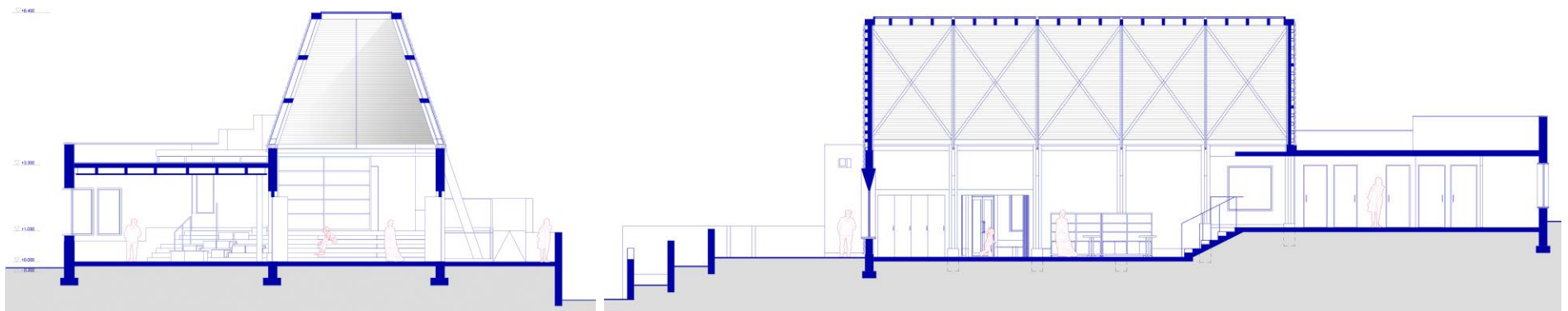
06. SITE DESIGN



- 1 Mechanical Room
- 2 Laundry Room
- 3 Shower Unit
- 4 Library
- 5 Exhibition Space
- 6 Water Kiosk
- 7 Terrace
- 8 Classroom



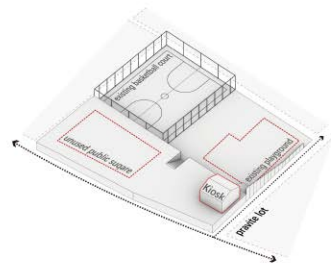
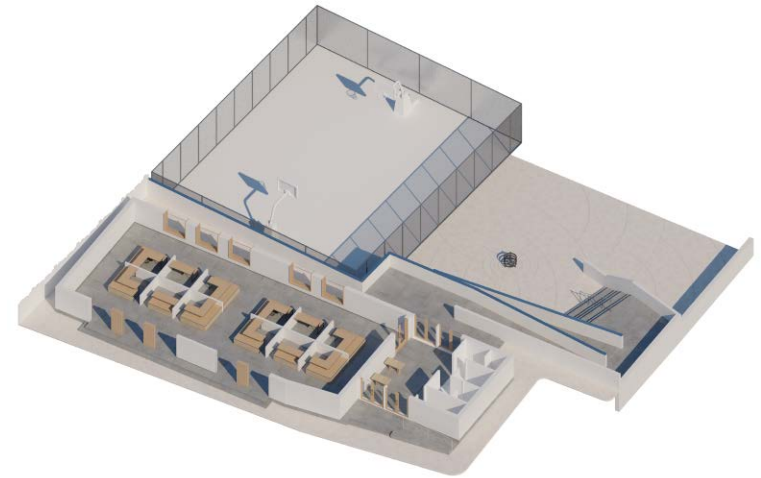
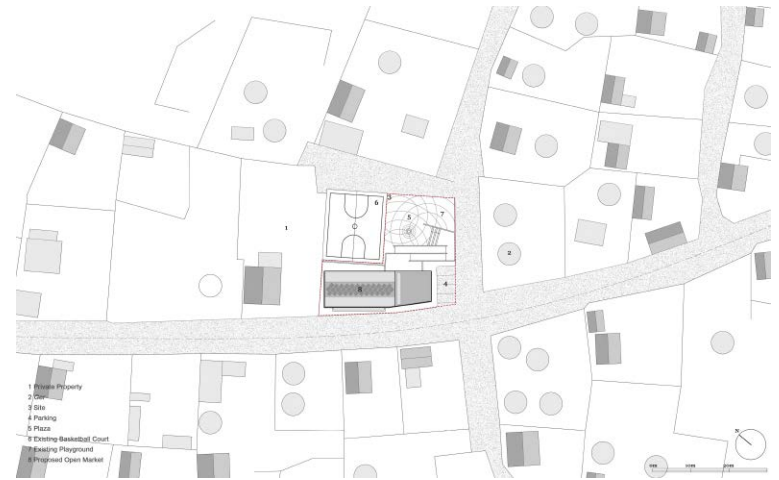
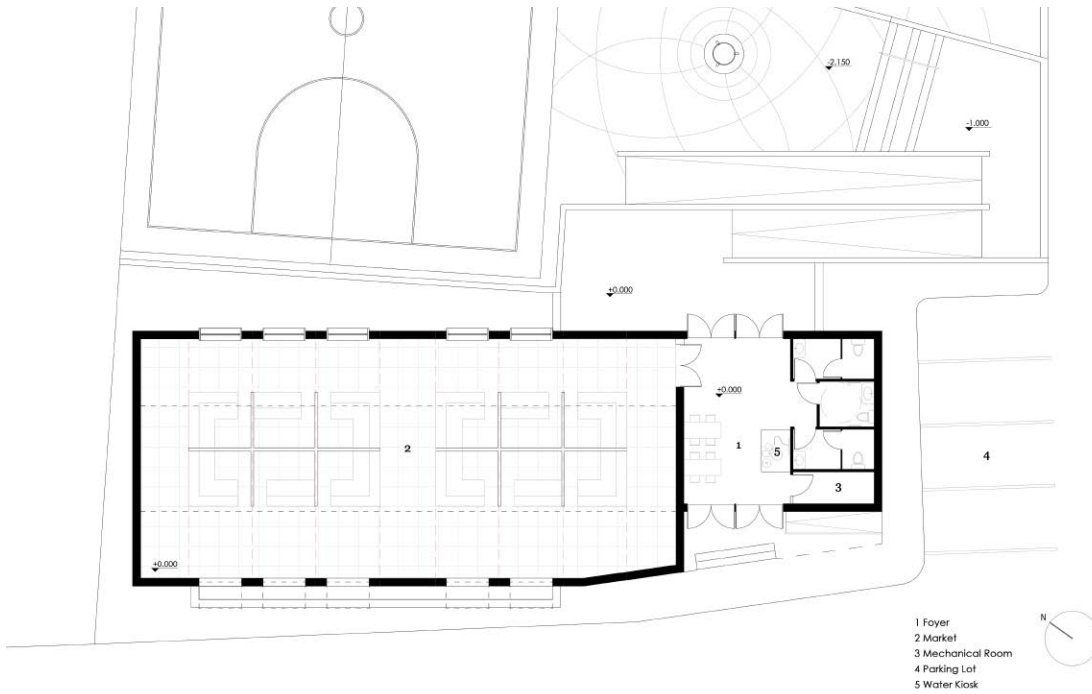
kiosk A is located at a bend on a secondary road, occupying a triangular plot. The site features a dramatic change in elevation yet offers excellent views. From here one can see the sweeping skyline of the city center, also giving the kiosk strong visibility, especially from the downhill side. So, the design proposes a highly identifiable wooden tower as the main exhibition and activity space, with supporting functions unfolding along the terrain around it. The tower is equipped with foldable doors, wheeled movable bookshelves, and mobile exhibition walls. It employs a timber frame combined with steel cables and rammed earth infill walls. On the exterior, concrete walls and wooden beams were applied. The concrete was poured in two layers: the lower part provides structural stability, thicker insulation, and durability, while the upper part features a local white plaster finish. Two contrasting spatial experiences were thus created. Users can feel the shift in height and light between the tall tower and the lower surrounding structures.



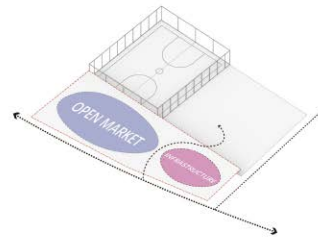




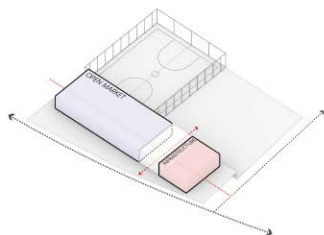
-PROJECT B-



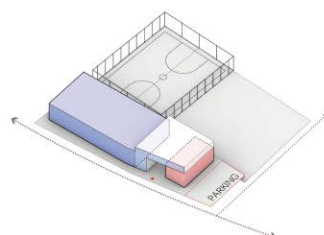
01. SITE CONDITIONS



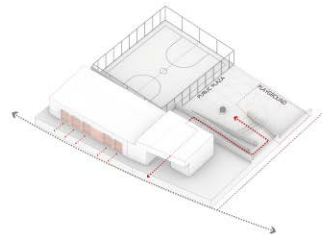
01. FUNCTIONS LAYOUT



01. MASS GENERATION



01. FORM DETERMINATION



01. SITE DESIGN

The site of kiosk B is flat and spacious. Its rectangular shape offers a long street frontage, making it well-suited for a market building. The existing kiosk on the site is currently unused and underutilized. Behind the site, there is a basketball court and a children’s playground, both of which could contribute to a lively market atmosphere. The design follows the character of the site, unfolding horizontally across the plot. The building is divided by a central hall into a market zone and an infrastructure zone. Its structural system consists of load-bearing walls combined with an open truss roof, allowing natural light to enter the market.



05

-CASTLE ON THE HIGHSEA-

In Collaboration with Guanqi Yao
Date: Summer 2022
Location: Gulf of Mexico
Entries of The 49th Nisshin Kogyo architectural design competition
Contribution: Conceptual design,
architectural morphology design, developing technical drawings,
architectural representation and modeling

In the abortion and anti-abortion events staged in the United States in 2022, vulnerable individuals have nowhere to hide under the political confrontation between the two parties, protests broke out in various places, and a storm swept the American society.

The design is to build an abortion and mental hospital on the high seas of the Gulf of Mexico near Texas to escape away from US Anti-Abortion Act. We provide a safe palace for the people in trouble and to intervene in social events through the power of architecture.

-THIS IS AN ADAPTATION BASED ON REAL HISTORY-



Pro-Abortion

Anti-Abortion

In the 17th and 18th centuries, abortion was mostly legal under common law before the woman felt the fetus move (around 16 weeks)



In 1857, Dr. Horatio Storer Helped Start The Movement Called The Physicians' crusade Against Abortion

By the 1900s, abortion was illegal in every state. The laws varied from state to state, with some allowing for abortion to protect the woman's life or to terminate pregnancies resulting from rape or incest.

Throughout the Depression years abortions are believed to have increased due to the higher levels of maternal deaths at this time. Countless women died as a result of botched abortions; underground abortion clinics were raided, and doctors arrested.

1955 Planned Parenthood held a conference titled "Abortion in the United States." A record of the conference is published in 1958, launching a national discussion on reformed abortion laws.

President John F. Kennedy Formed The Commission On The Status Of Women (Pcsw)



There were many advances toward abortion rights in the 1960s include the establishment of The Society for Human Abortion in San Francisco in 1963, which challenged the law by openly providing information on abortion and conception.

By the end of 1972, 13 states had more inclusive abortion laws similar to those passed in Colorado in 1967. During this period, women seeking an abortion would often travel to a state where abortion was legal to undergo the procedure.

In 1973 The Supreme Court Decision In The Roe V. Wade Case Ruled In Favor Of Roe And Abortion Was Legalized Throughout The United States



With the Webster v. Reproductive Health Services case, heard in 1989, the Supreme Court upheld a Missouri law that imposed restrictions on the use of state funds, facilities, and employees in performing abortions.

Bill Clinton signed the Freedom of Access to Clinics Act, on May 26, 1994. The Act makes it a federal crime to physically obstruct the entrance to a clinic or to use force to interfere with, or intimidate clinic workers or women seeking abortions

Planned Parenthood V. Casey (1992), Was A Landmark Case In Which The Supreme Court Upheld The Right To Have An Abortion As Established By The "Essential Holding" Of Roe V. Wade (1973)



George Bush signed the Born-Alive Infants Protection Act in 2002, affirming legal protection to an infant born alive after a failed attempt at induced abortion.



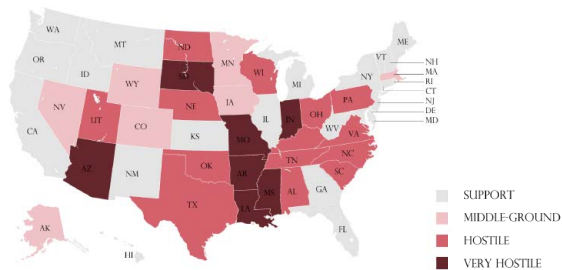
Justice Ruth Bader Ginsburg, Champion Of Gender Equality, Dies At 87 on September 18, 2020

Trump Selects Amy Coney Barrett To Fill Ginsburg's Seat On The Supreme Court On September 18, 2020

Several states passed legislation, including trigger laws, to strictly regulate abortion should the newly conservative court overturn Roe.

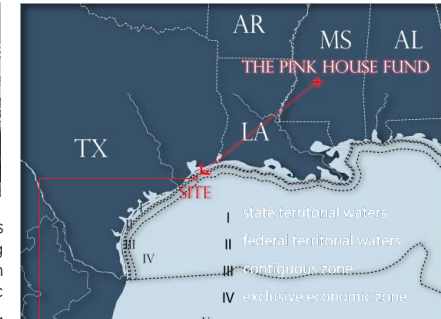
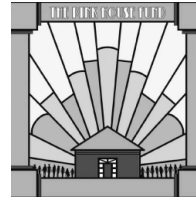


In May, 2022, A Leaked Draft Opinion By Supreme Court Justice Samuel Alito Indicated That The Court Would Strike Down The Landmark Roe V. Wade Decision



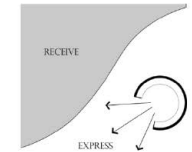
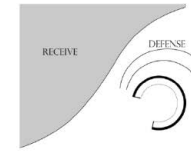
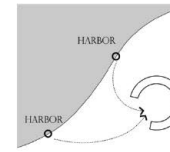
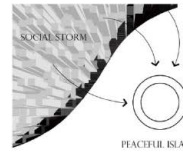
On June 24, The Supreme Court Overturned Roe V. Wade, Leaving Abortion Decisions Up To States, And No Longer A Constitutional Right.

-IDEA GENERATION-



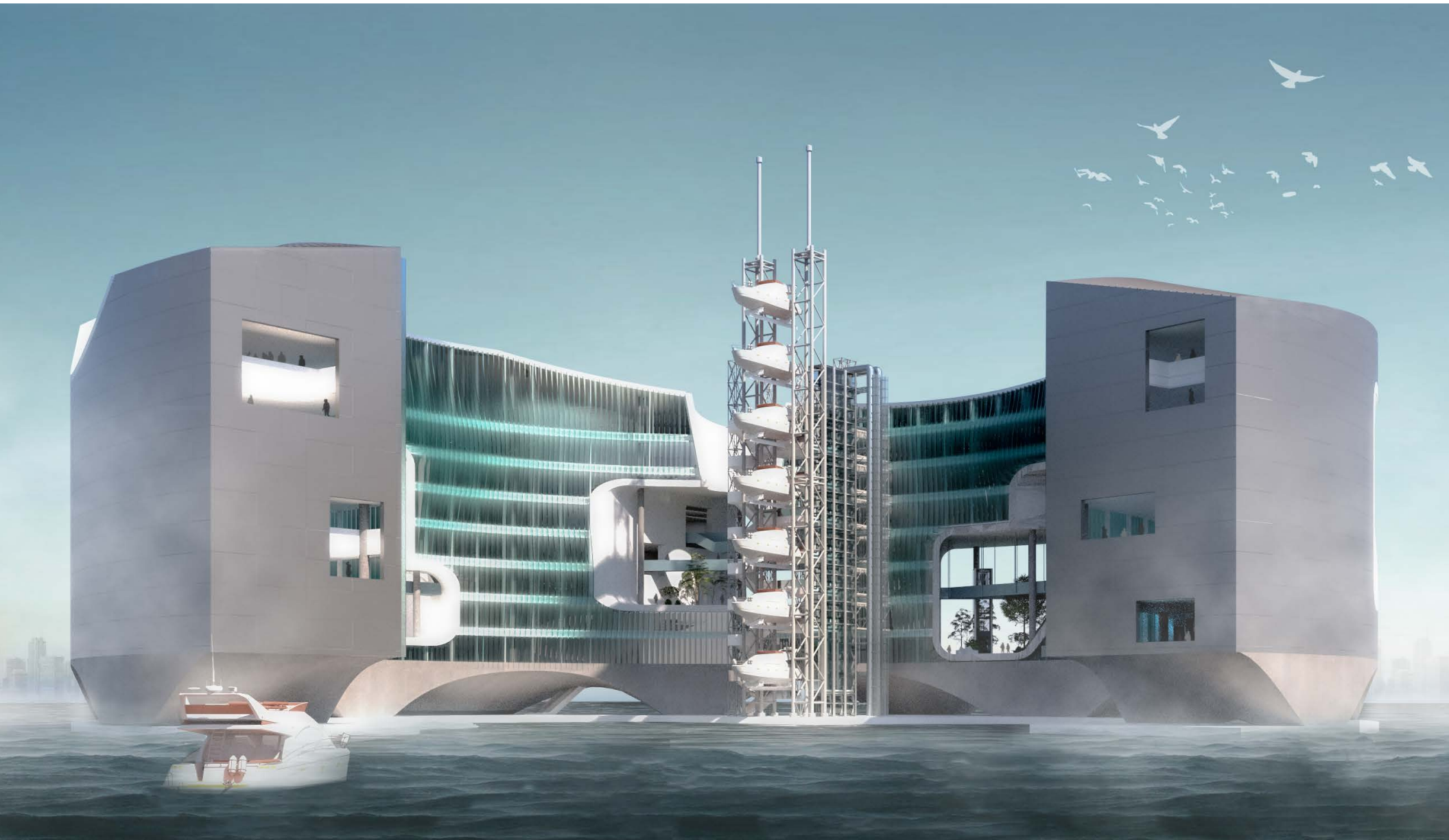
Many states in the US have introduced laws restricting women's abortion right to varying degrees. The Jackson Women's Health Organization in Jackson, Miss. is the only one clinic where a woman can go if she needs an abortion. The state is trying to close it down, because it is no longer protected by law.

Rebuild the hospital on the high sea, where abortion is not illegal



-SITE-





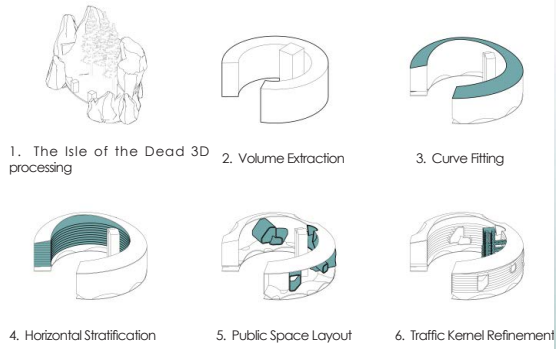
As the boat gets closer to the sea castle, Gerri Twerdy's uneasy heart releases. The refreshing sea breeze touching her face and let her breathing calm down. The hospital's curved skyline gradually revealed, Gerri Twerdy realizes it is not only a soft embrace to contain her sorrow but a solid armor to protect her

-MORPHOGENESIS-

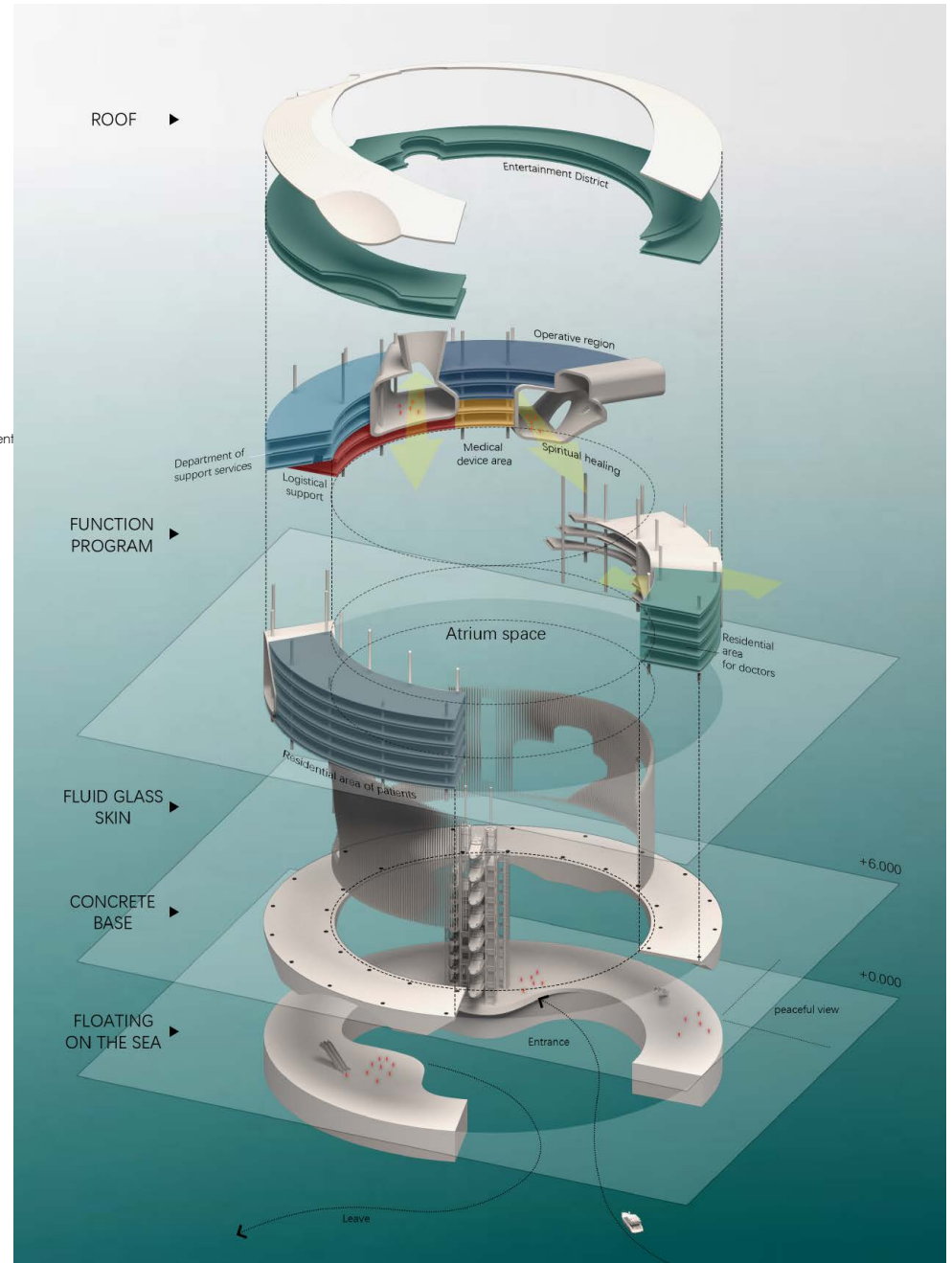
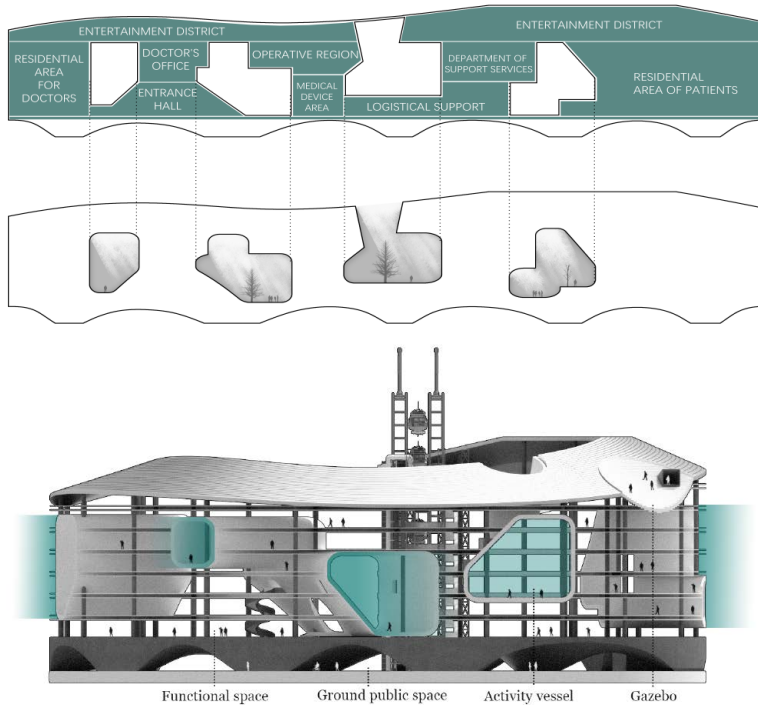


Isle of the Dead
Arnold Böcklin

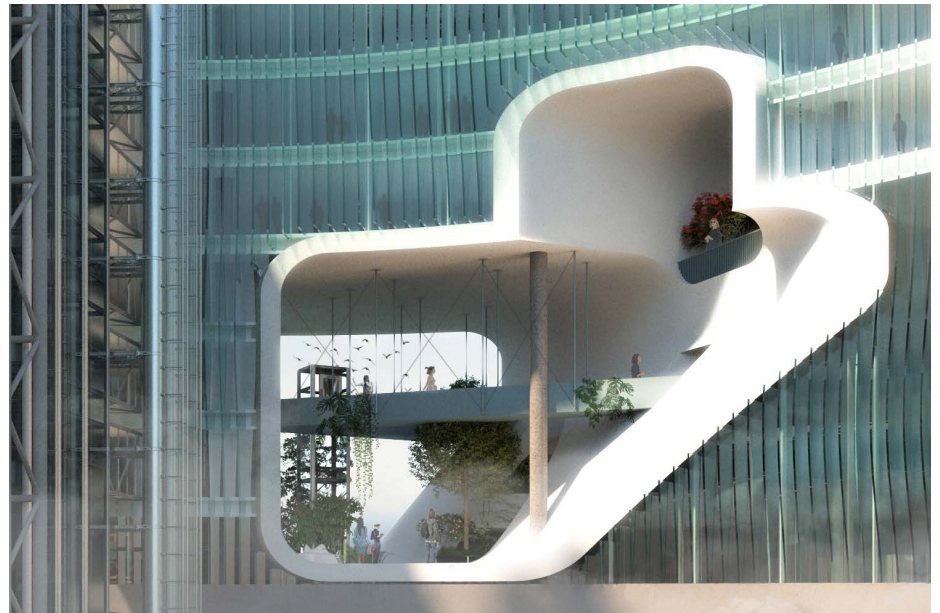
The islands strict symmetry, the calm horizontals and verticals, the circular island surrounded by high cliff walls, and the magical lighting create an atmosphere that is both solemn and sublime, evoking a sense of stillness and

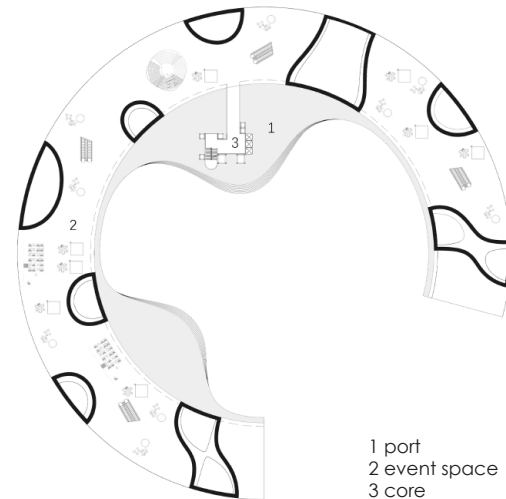
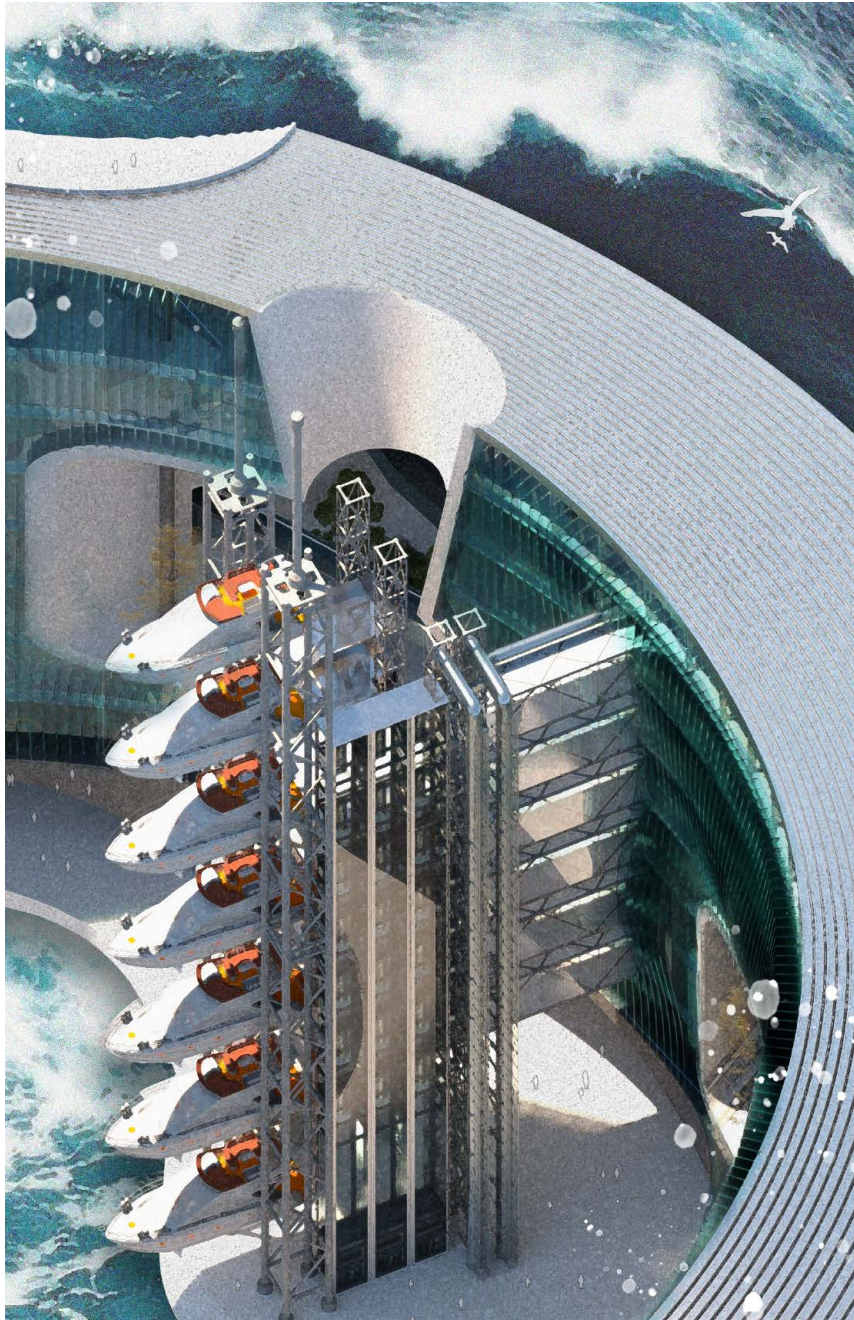


-SPACE STRUCTURE-



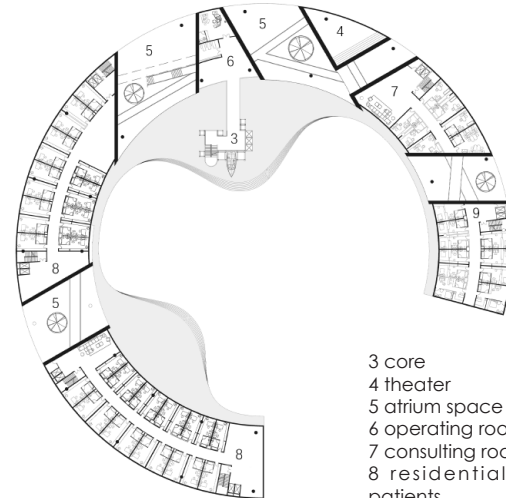
-ATRIUM SPACE-





- 1 port
- 2 event space
- 3 core

GROUND FLOOR PLAN
0 10 20 50 m



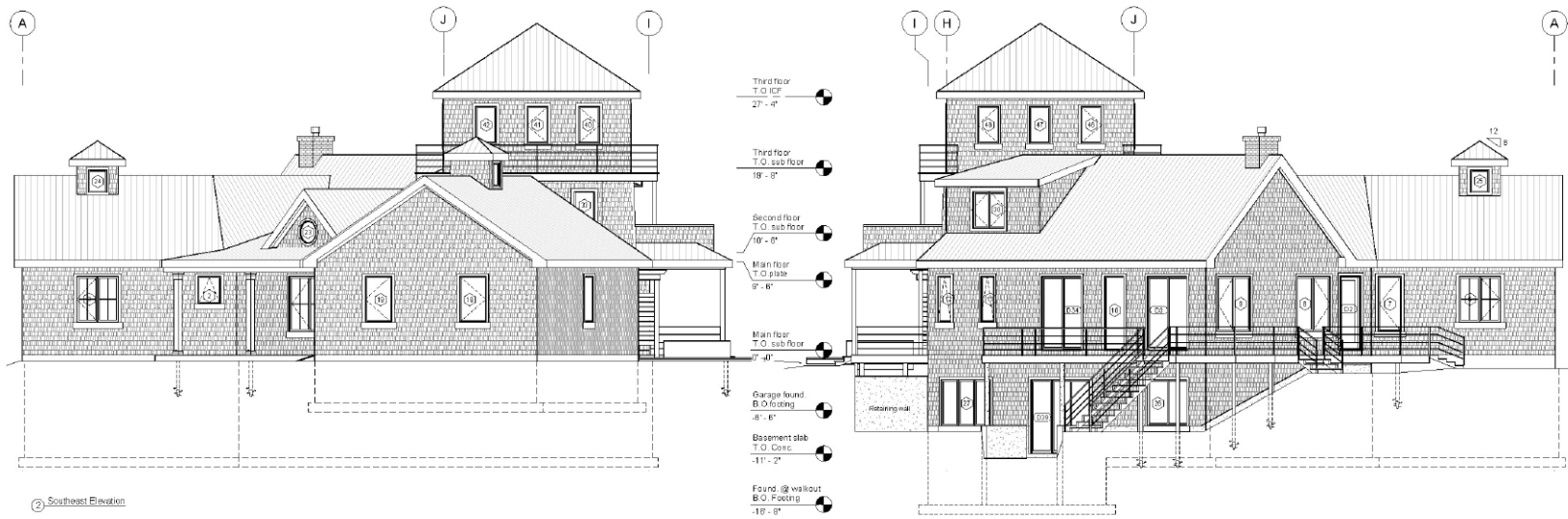
- 3 core
- 4 theater
- 5 atrium space
- 6 operating room
- 7 consulting room
- 8 residential area for patients

STANDARD FLOOR PLAN
0 10 20 50 m



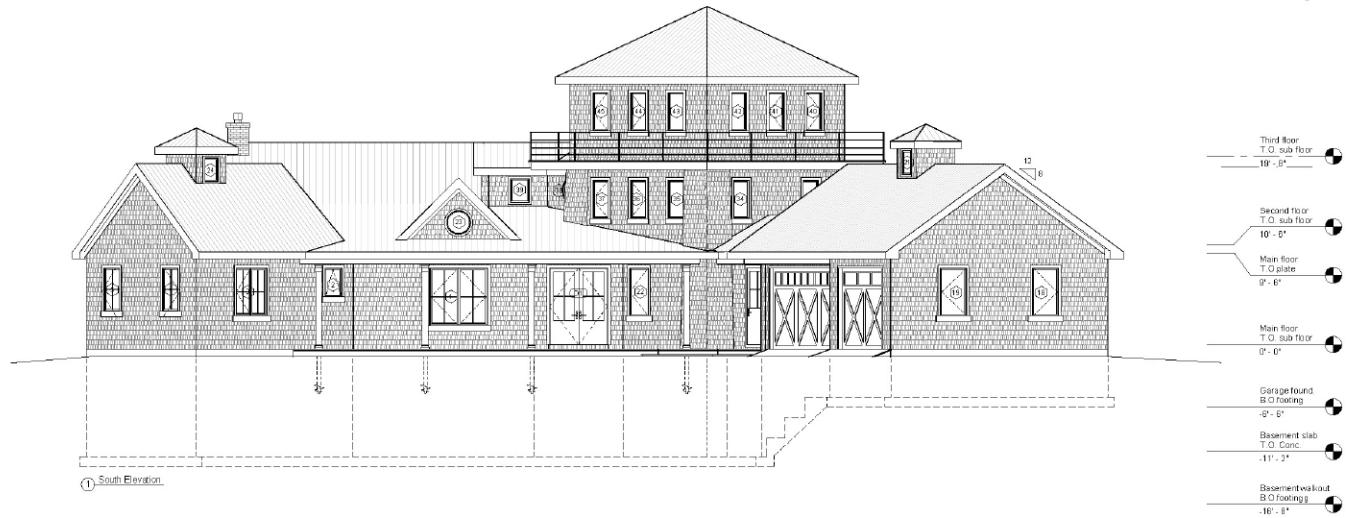
It is a space free of controversy and accusations, and when this fortress was built on the high seas, it did not become a space of escape and hiding, but a new world completely different from the continent

05 Intern Work Samples



2 Southeast Elevation

3 Northwest Elevation

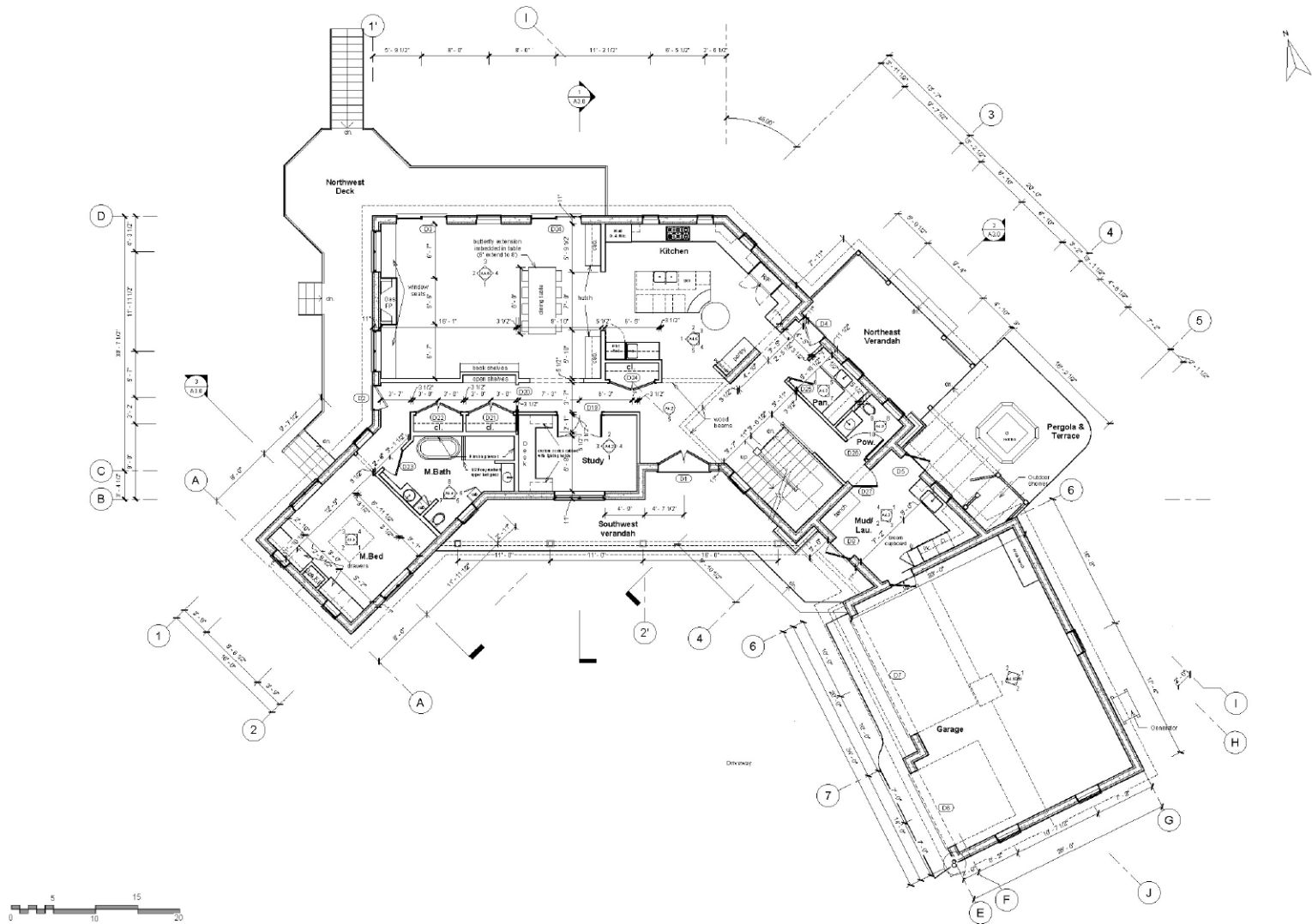


1 South Elevation

Revit drawing for Shafler House project, PEI (2024)



Renderings for Shafler House project, PEI (2024)



Revit drawing for Shafler House project, PEI (2024)



Renderings for Shenzhen secondary school project, China (2022)



Bobbin' - Winter Stations Competition 2024
Collaborative project | Role: Designer