

# ARCHITECTURE DESIGN PORTFOLIO

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建筑设计作品集



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安徽省岳西县“慧可居”山地酒店  
二期项目；基于 VR 技术的城市及  
建成环境实验平台等

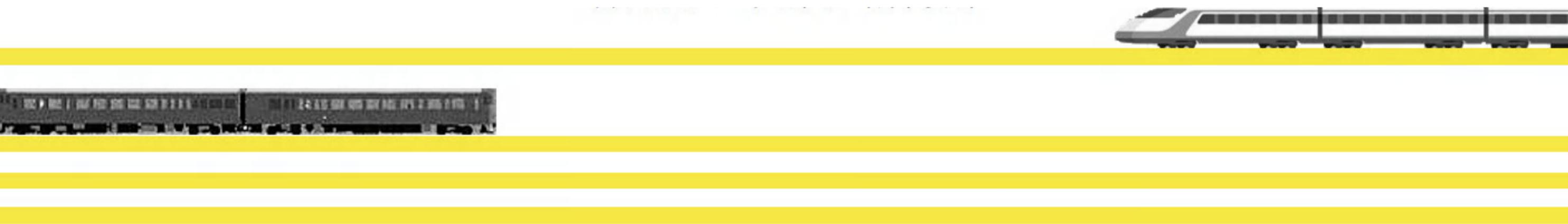
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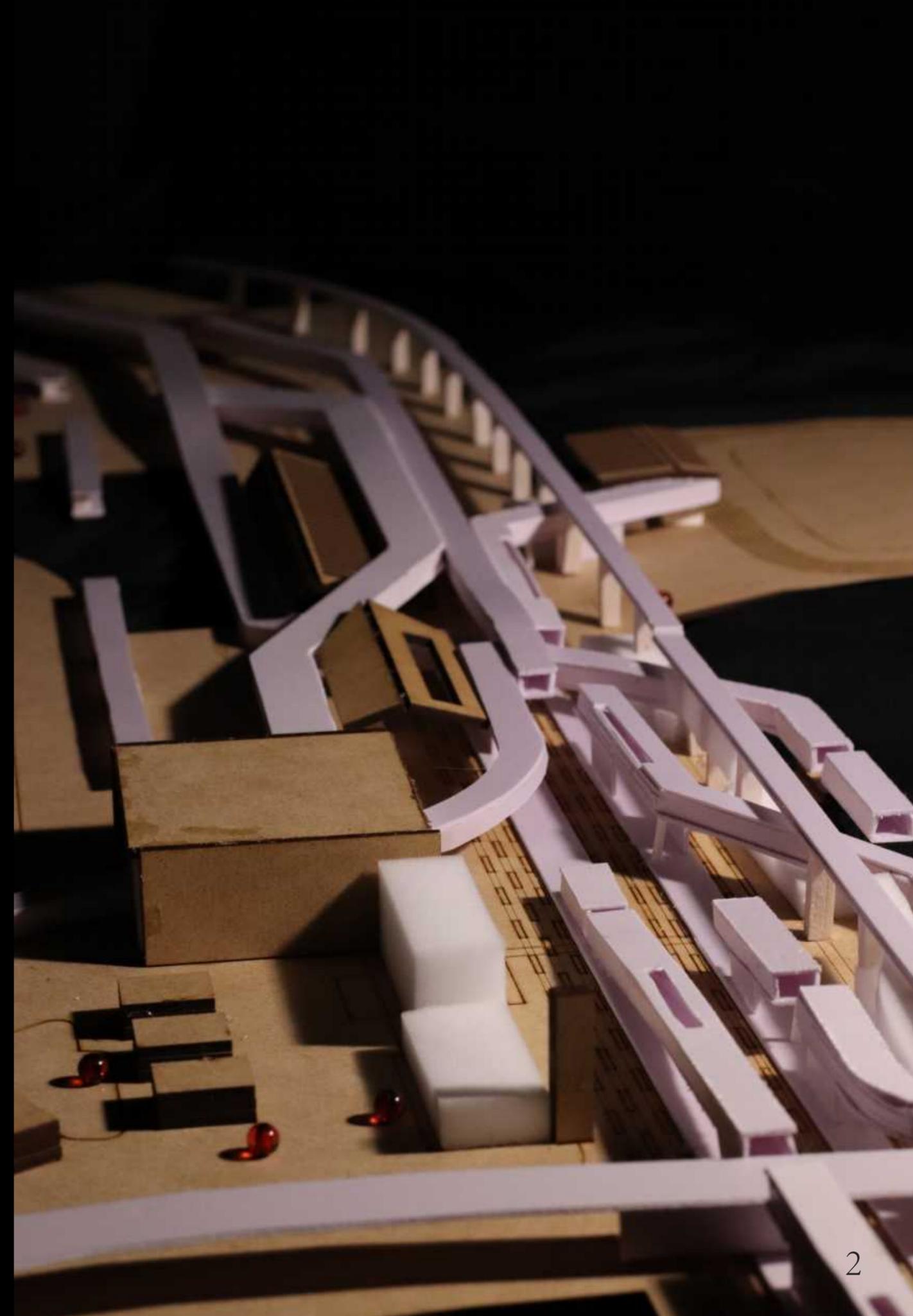
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# 铁轨上的街市

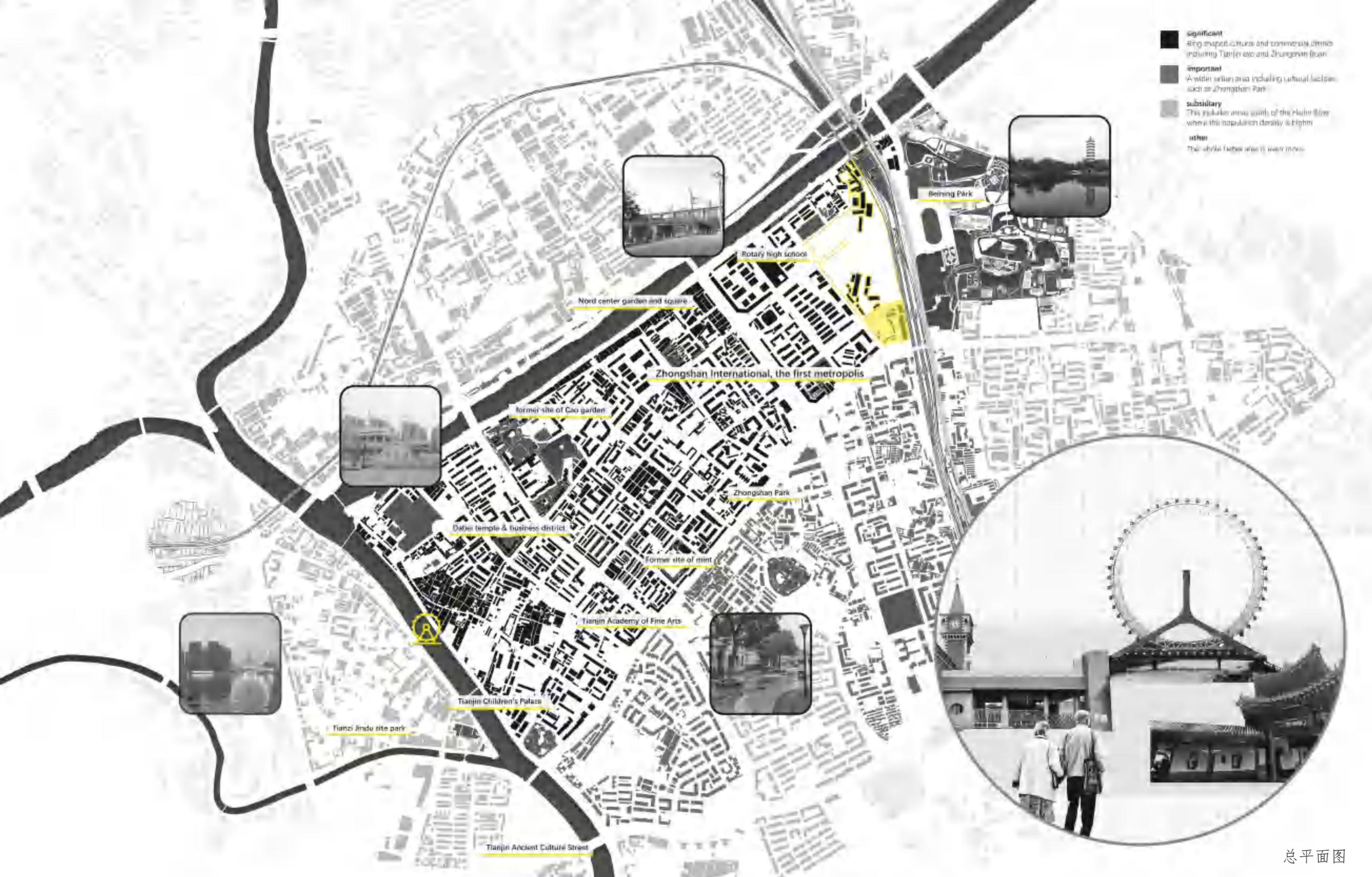
1.1 明日旧区——天津北站城市更新改造



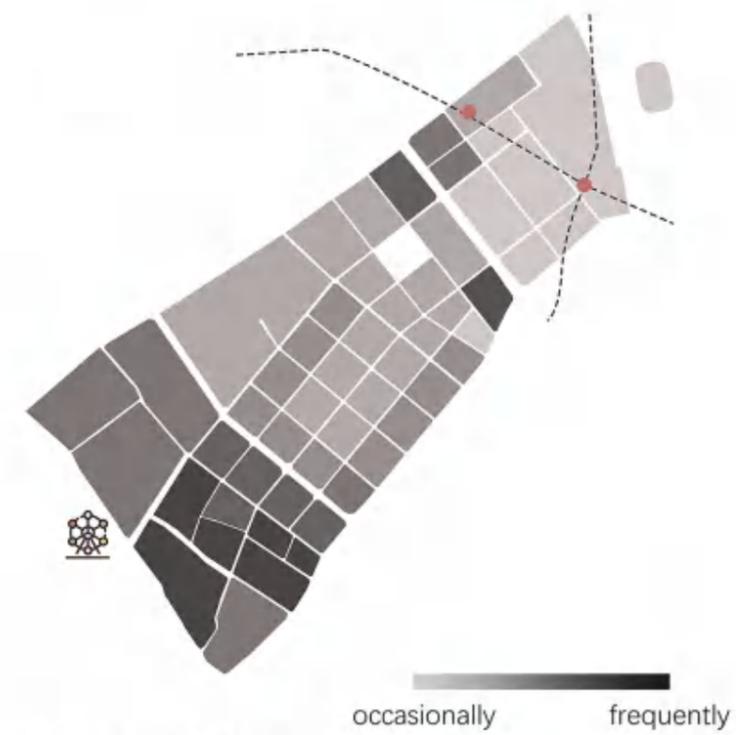
## 模型迭代



内容：根据天津北站的空间特点和需求，我们设计了一个建在铁轨上的街市，打造拥有老天津工业风格的、融合商业售卖售卖、公众展演、艺术教育等的街区，去激发该区域的社会活力，并解决由铁路带来的区域交通等问题。

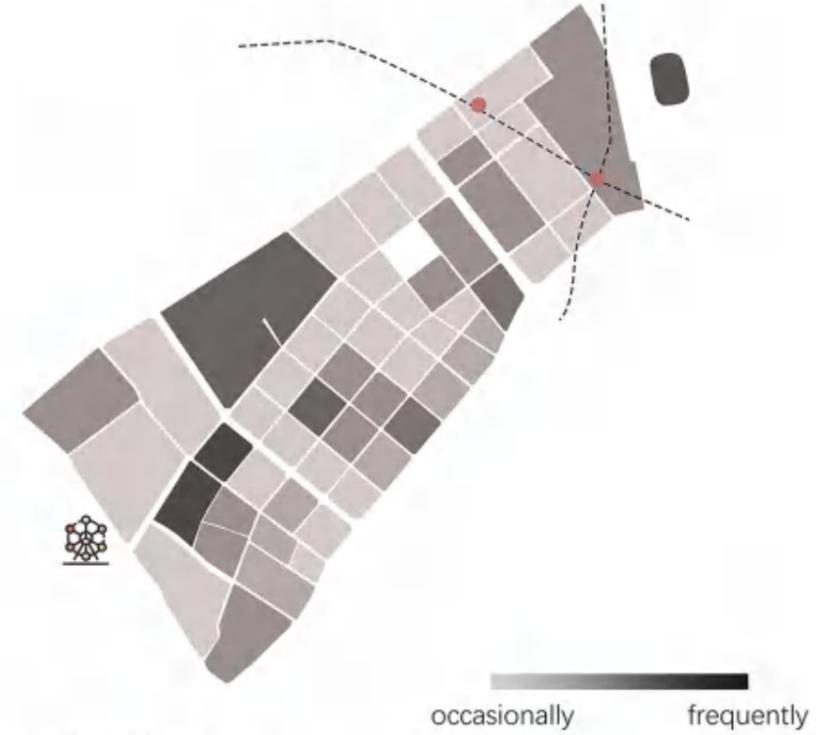


总平面图



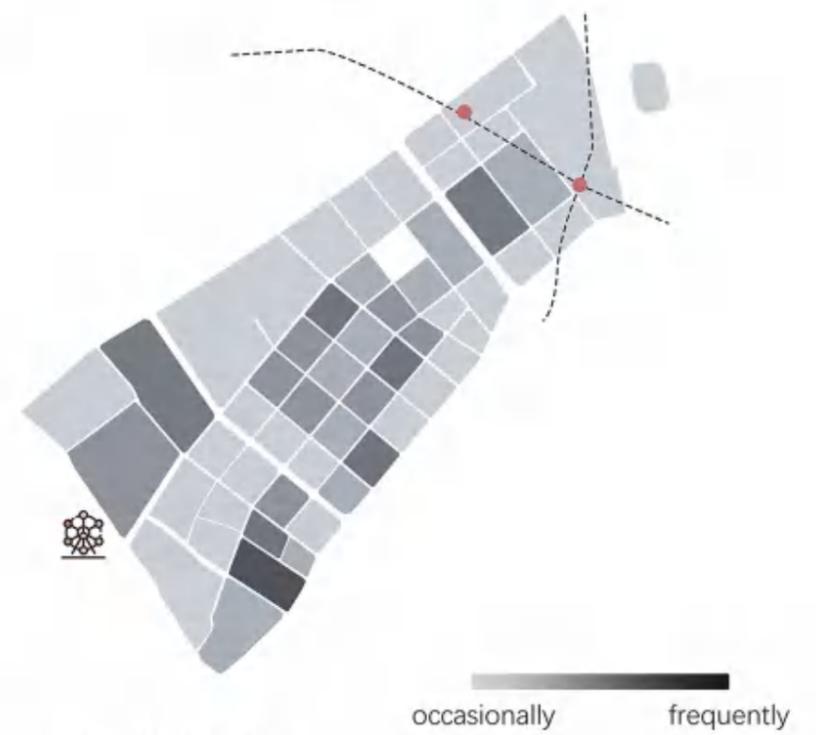
**Business activities**

Taking Zhongshan Road as a clue, the commercial vitality gradually decreases from the direction of Tianjin eye to the north railway station



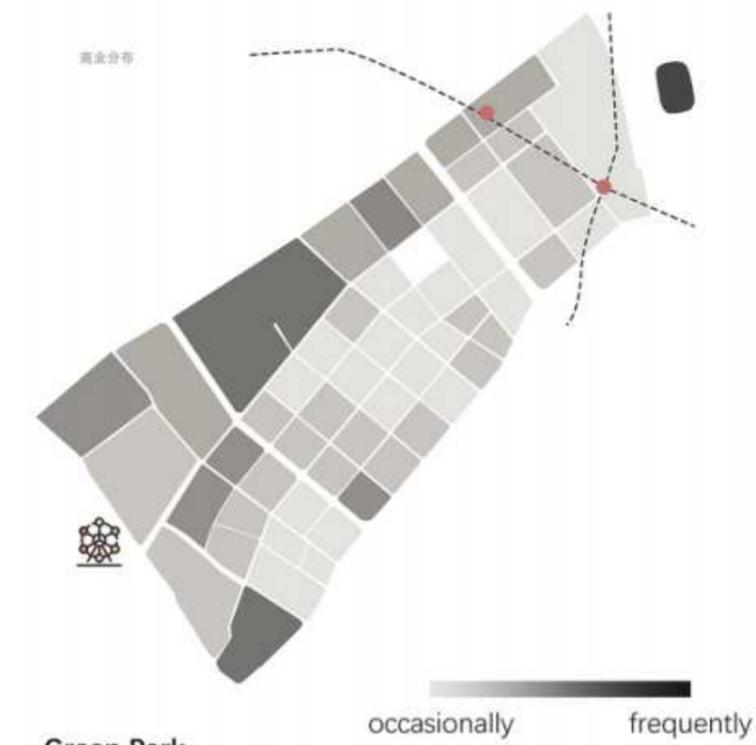
**cultural heritage**

The cultural heritage in the study area is mainly distributed on both sides of Zhongshan Road and Wuma road



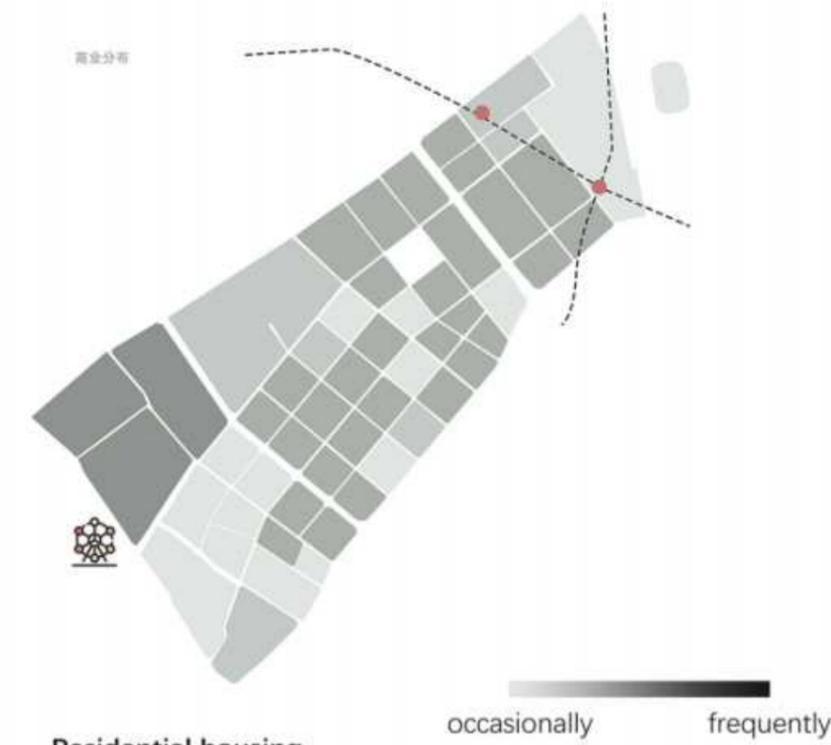
**cultural education**

There are many fine arts colleges and universities, which are distributed in residential areas in a mixed and scattered way



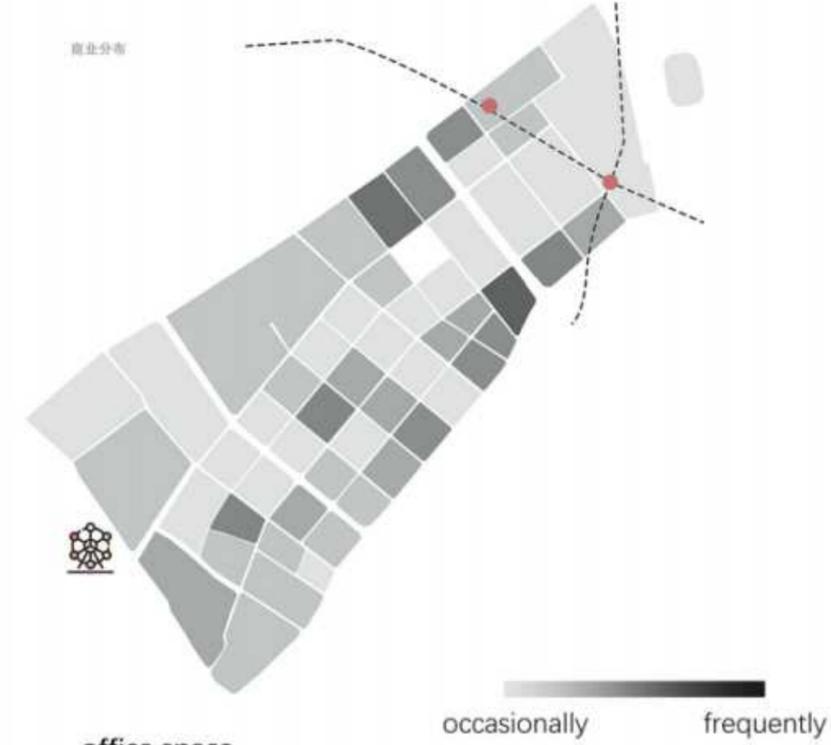
**Green Park**

Green parks are mainly distributed along the banks of Xinkai River and the periphery of Ningyuan research area



**Residential housing**

The study area is mainly composed of low-rise residential areas



**office space**

Office space is concentrated in Zhongshan Road and other intersections, including large and medium-sized commercial enterprises



Ningyuan West Road is a narrow linear space limited by the low wall and high-speed railway line in the west of Ningyuan. Motor vehicles, non motor vehicles and pedestrians share a long and narrow road section with a width of only 6 m. There are some problems, such as weak functionality, low efficiency and increasing uncertainty.



The rail falls on the ground, so the pedestrian crossing the railway needs to pass through the underground culvert, which is very unfavorable for the exchange of space on both sides and the pedestrian experience. The space is also narrow and slender, which not only has many problems, but also provides space intention for the transformation direction.



The steps of the platform provide the possibility of vertical traffic linking up and down the railway space. As shown in the figure above, it brings the streamlined space to the vertical direction, which conforms to the surrounding space under the influence of railway symbols, which also provides ideas for the direction of transformation.



In this plot, the relationship between people and trains is very close. The most direct expression is the distance between people and trains. The diagram shows the parallel relationship between the author and the train during the investigation. As well as the emergence of narrow roadway, railway track, high-speed rail three-level scene.



The elevated section beside the north railway station is a typical representative of three dimensional traffic. The viaduct makes a long and narrow flow linear space under it, which blends with other pedestrian spaces on the side, and can exchange materials directly. This is of great significance to the north railway station.



TianjinBei Station



The train is the most distinctive and spatial thing in this area



Under the condition that the dynamic population is solidified, the region still has commercial foundation and commercial potential



Locomotive Stadium

Beining Park

Beining park is adjacent to the station, which has the highest green area, service facilities and historical and cultural attributes

- Node
- Activity line
- Rails



Lorem Ipsum is simply dummy text of the printing and typesetting industry.



Locomotive stadium is a public space with historical and cultural attributes

Beining park has a large space, some people are singing, dancing and other recreational cultural activities.



A retired person who had worked in the railway department setting up roadside stalls, the memory of the old city and the possibility of a silver haired economy.



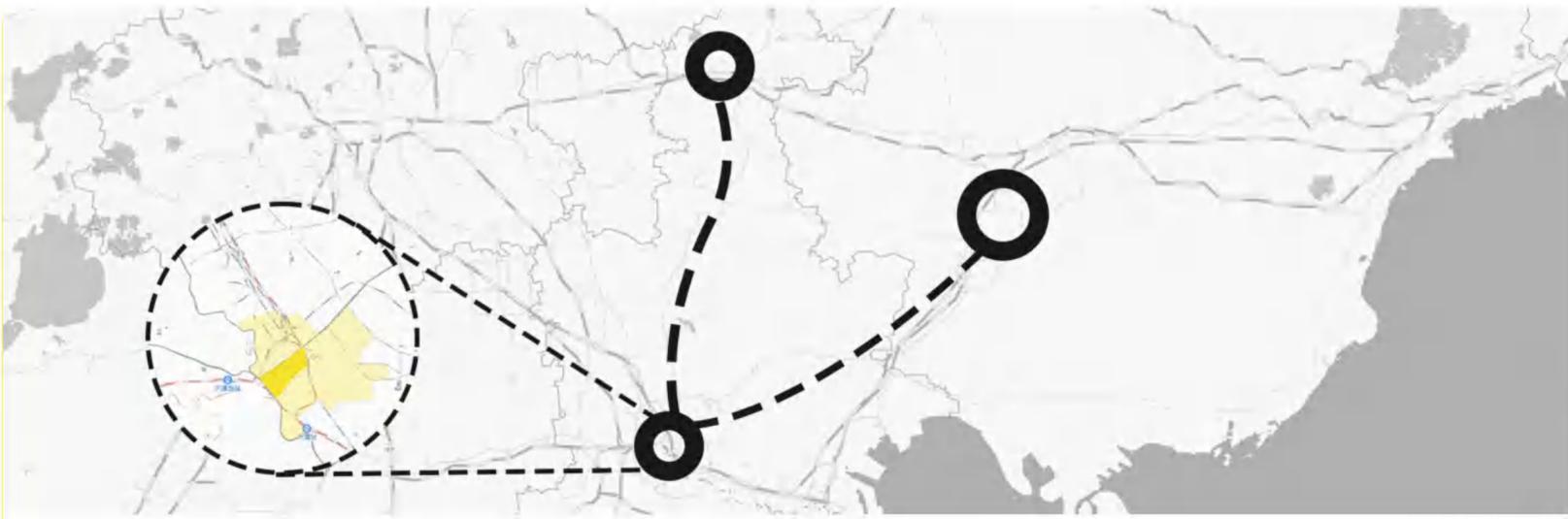
The same street stall culture exists in the narrow roadside, where there are many memories of the old city, serving themselves and the surrounding silver haired people.



We have photographed a lot of elderly people playing cards in the park, and they are in great need of some community space suitable for the elderly.



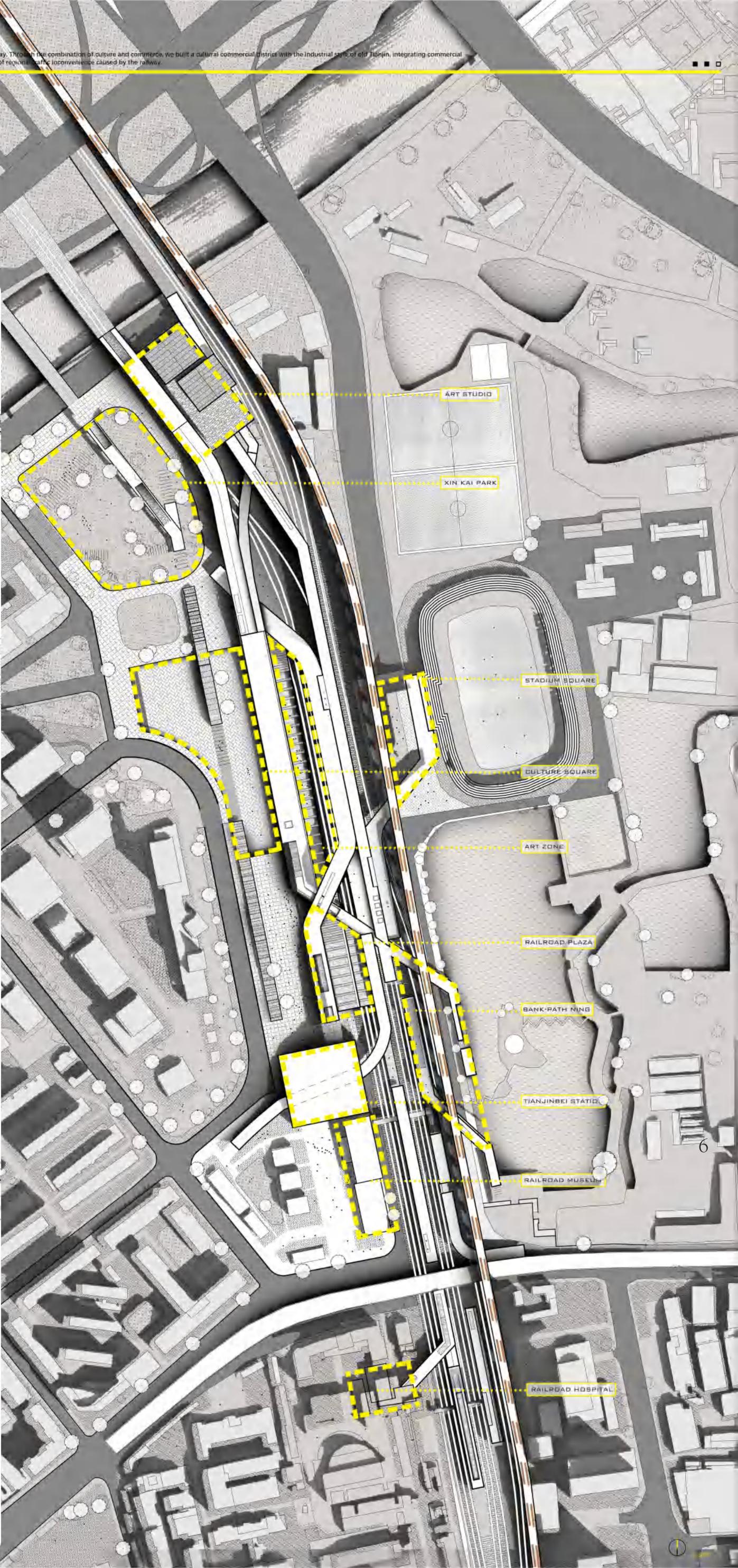
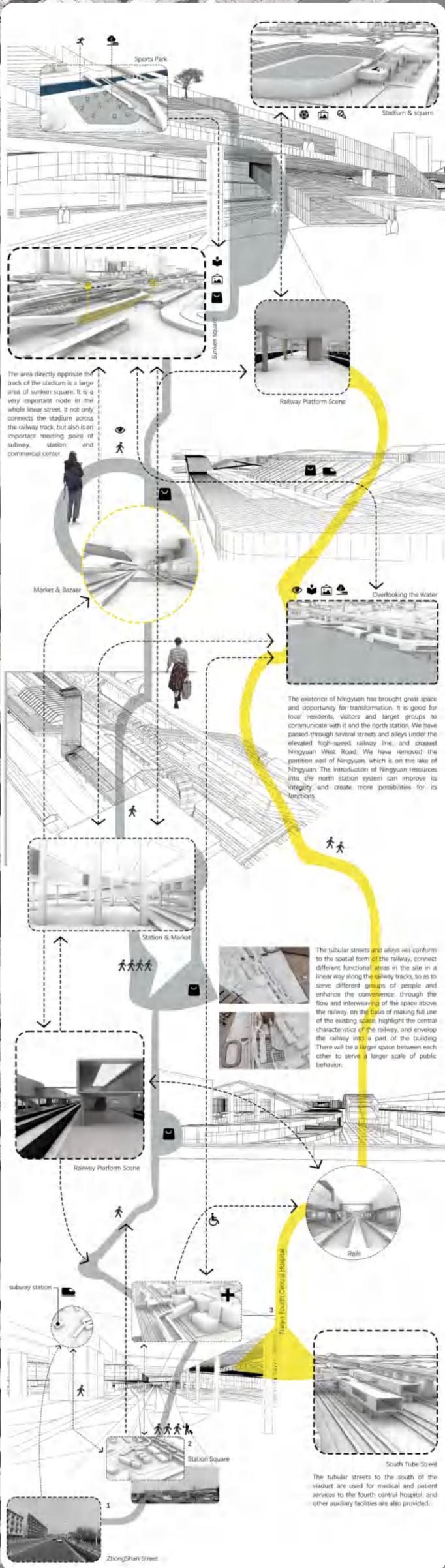
There are a lot of abandoned space around the north railway station, all of which show the decadent appearance when eliminated by history.



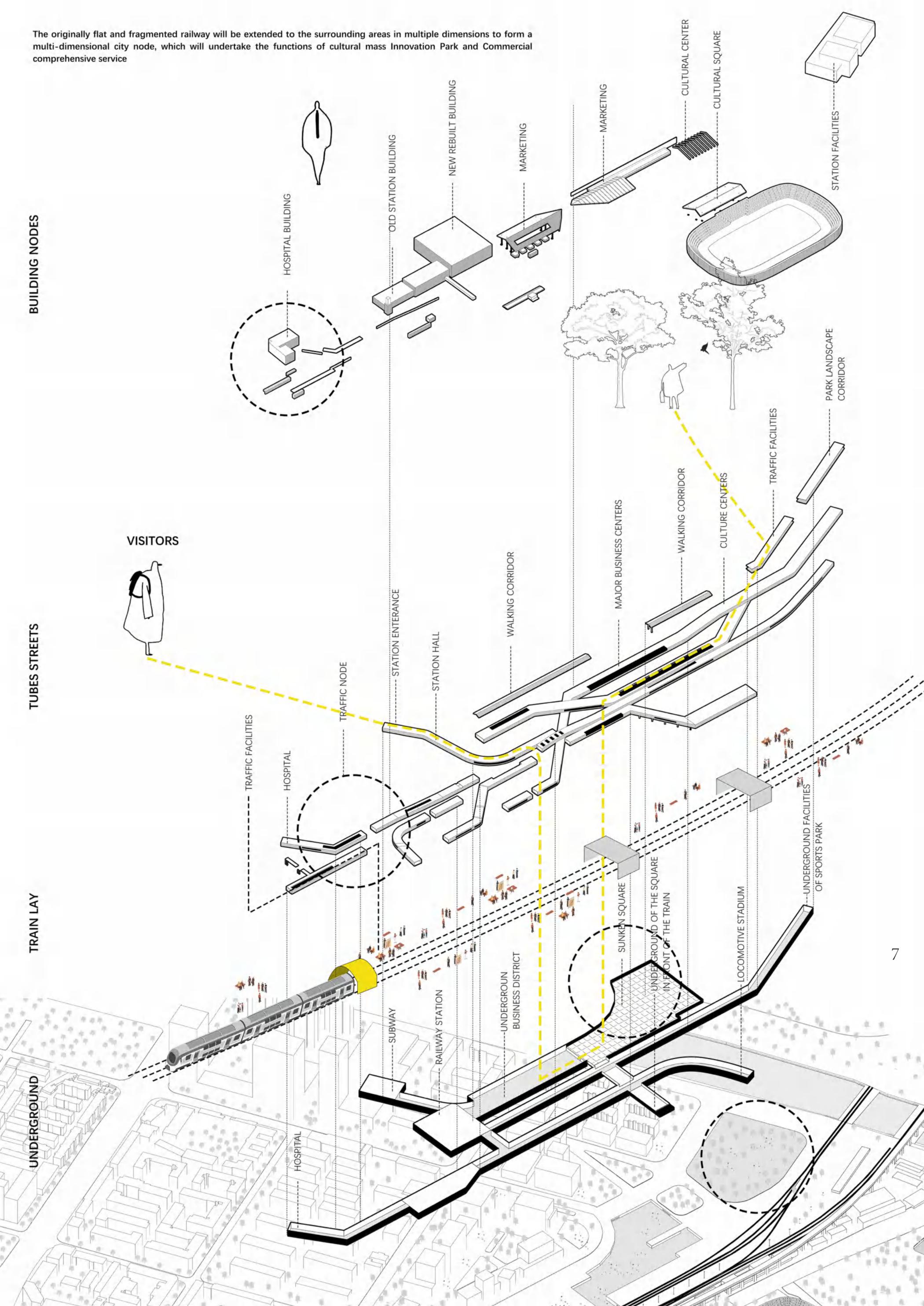
The important position of Beizhan in history is no longer exist now. The reconstruction of its vitality needs to give play to its unique historical and cultural value, and realize a wider range of value through theme.

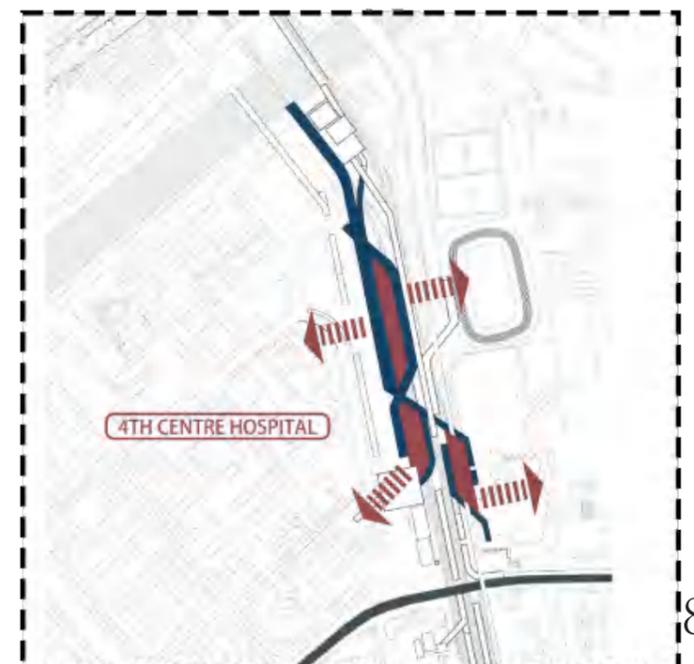
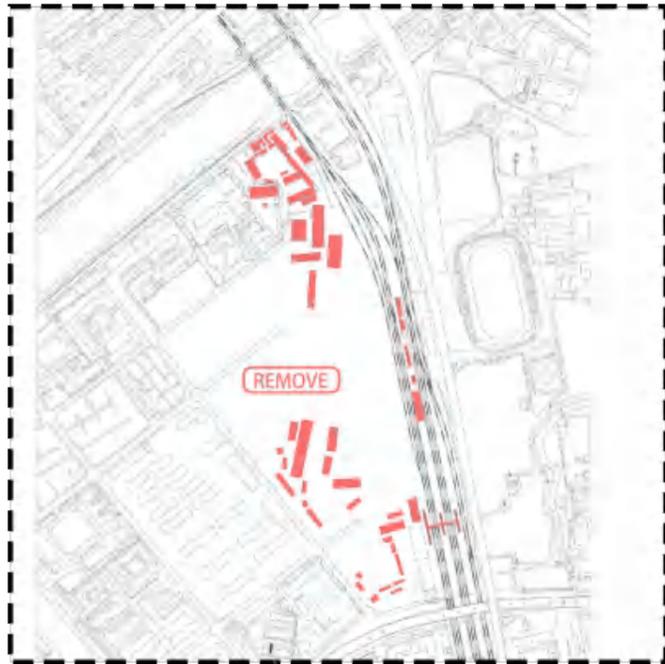
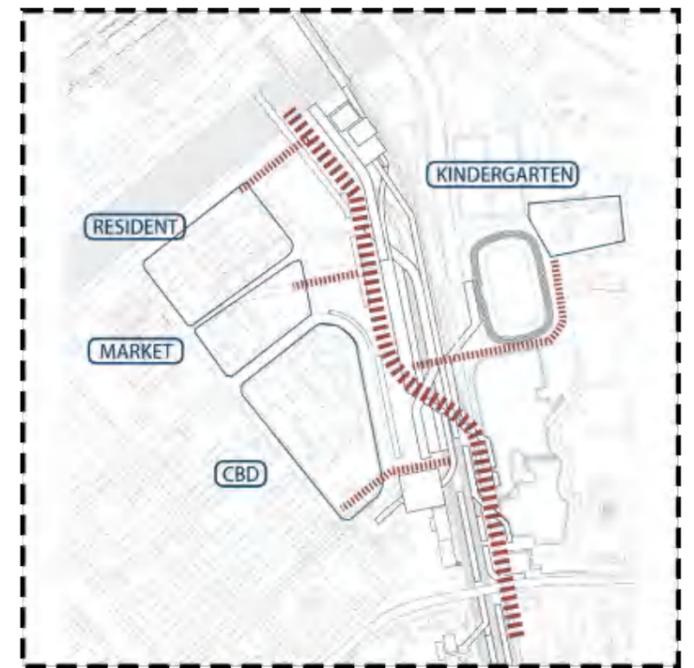
# Above Rails 铁轨上的街市

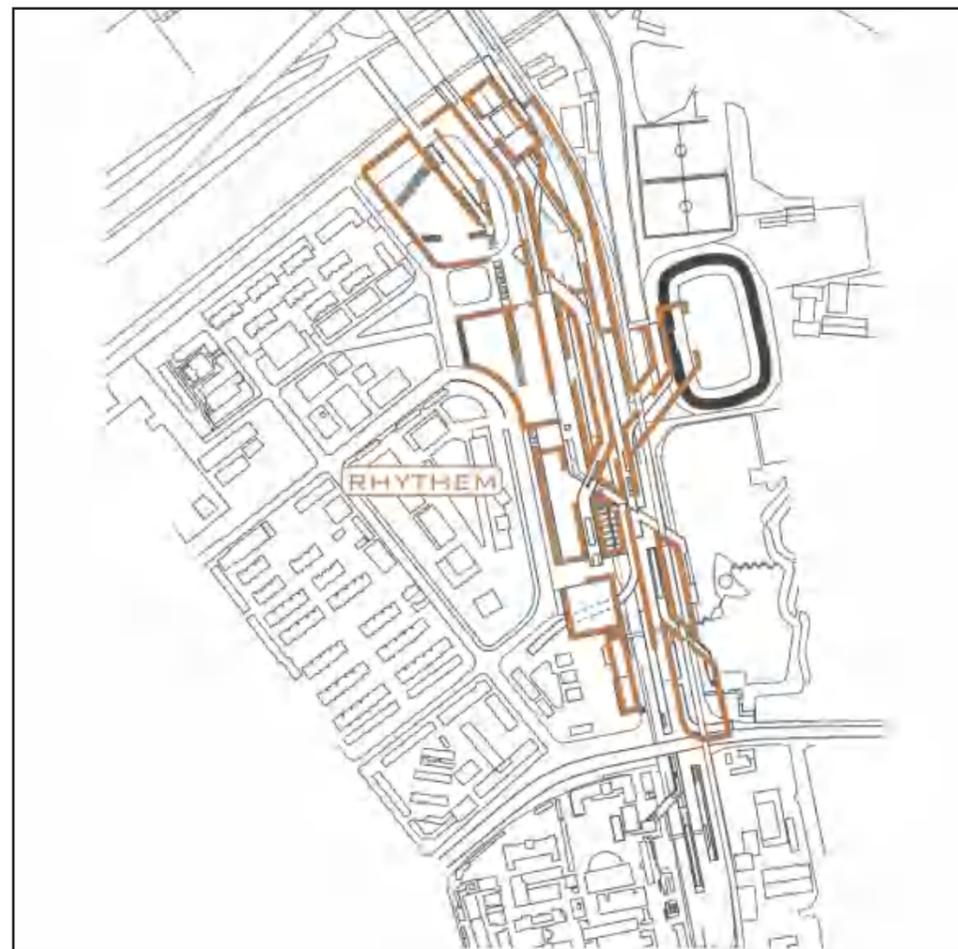
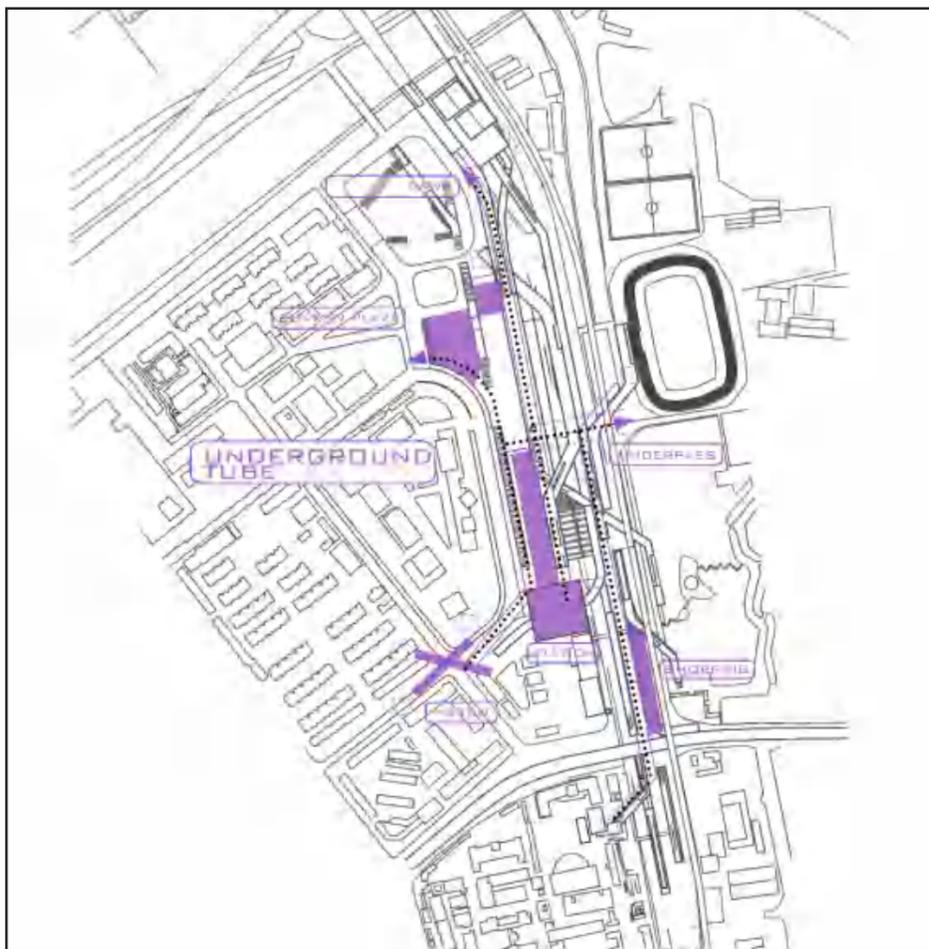
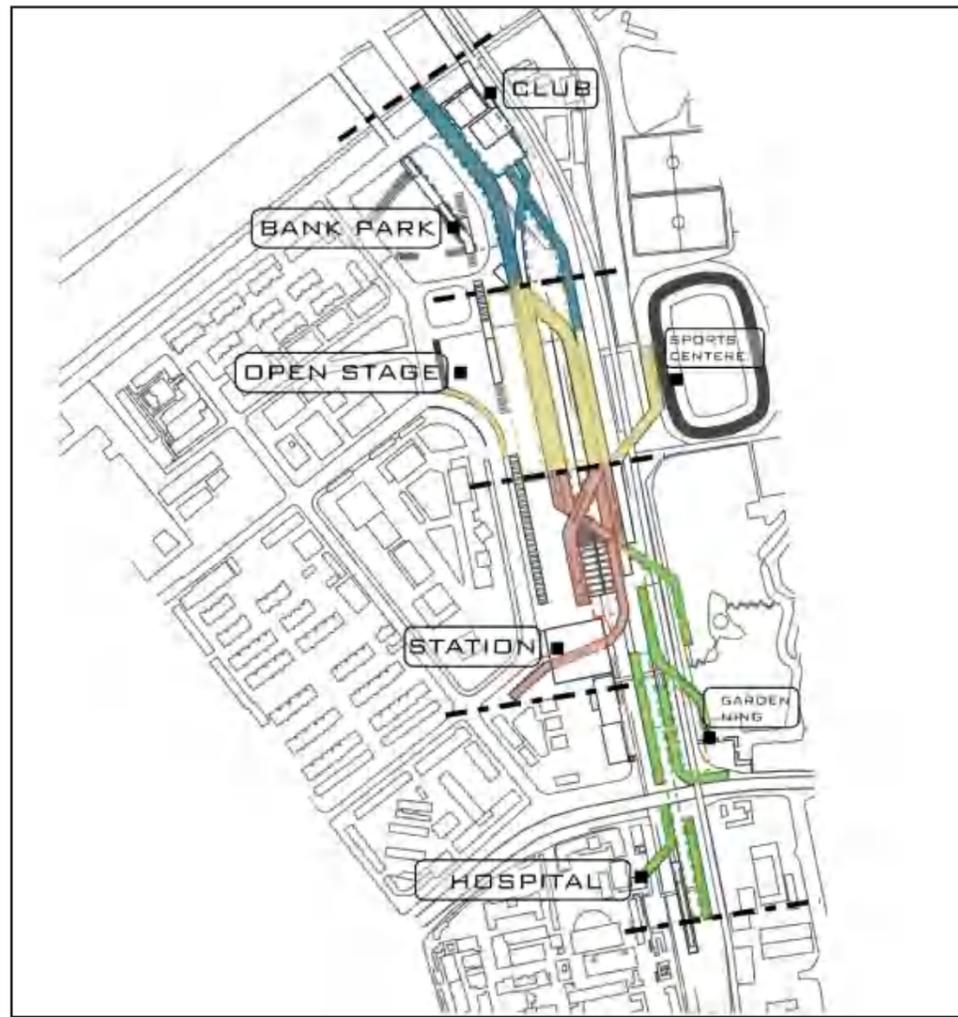
Based on the railway characteristic factors of Tianjin North railway station, we designed a street market on the railway. Through the combination of culture and commerce, we built a cultural commercial district with the industrial style of old Tianjin, integrating commercial sales, public performances, art education, etc., to stimulate the social vitality of the area, and to solve the problem of regional traffic inconvenience caused by the railway.

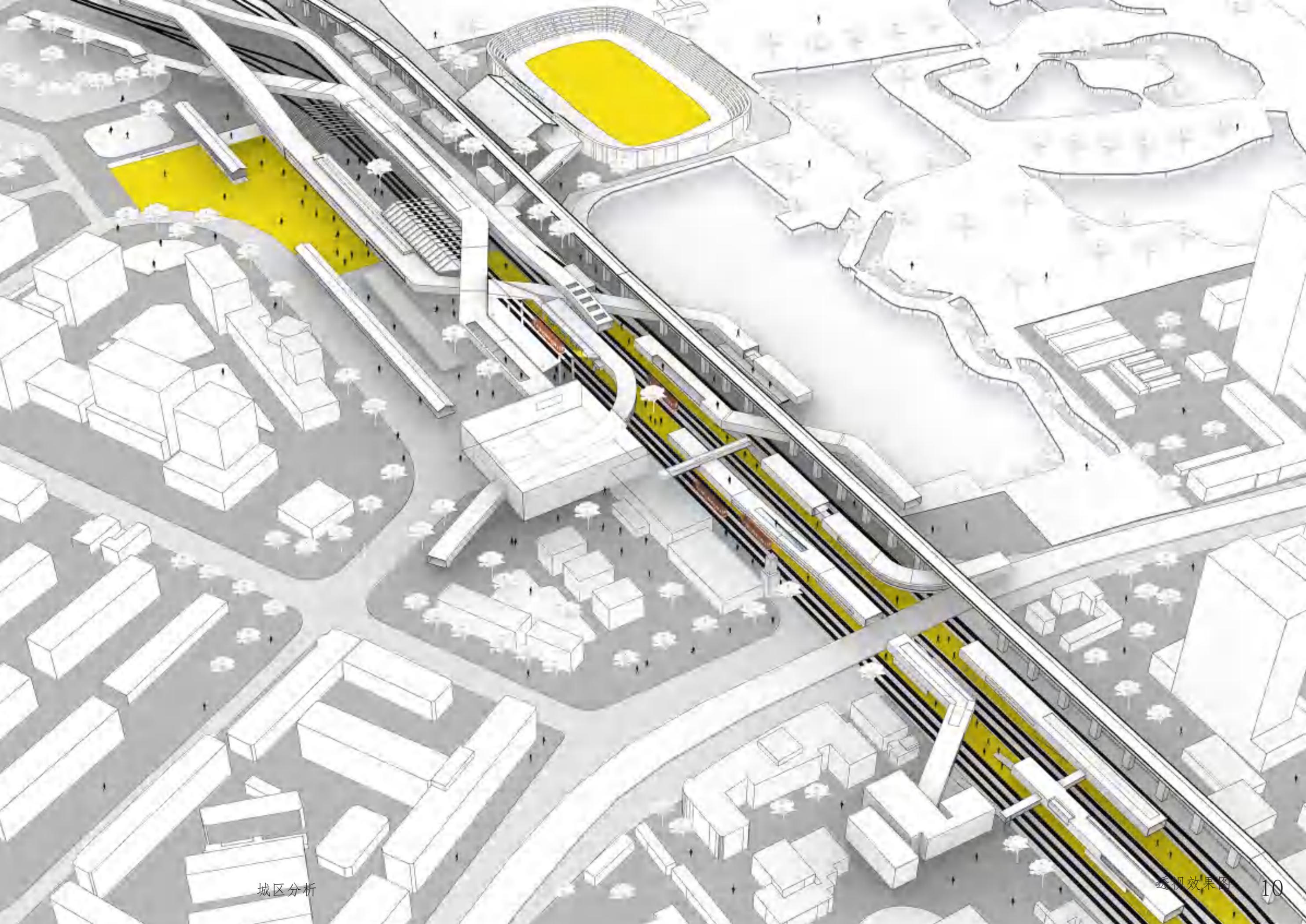


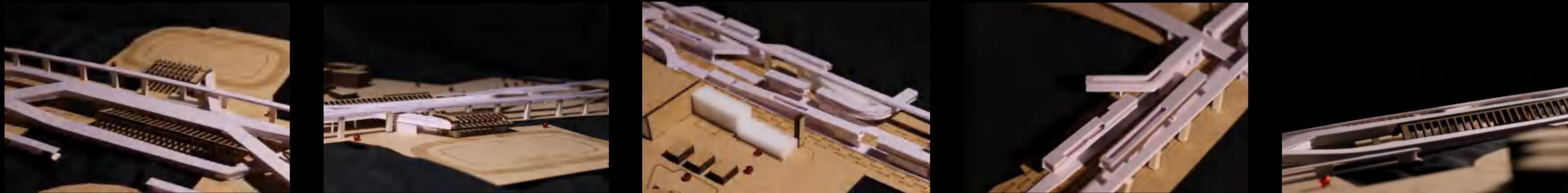
The originally flat and fragmented railway will be extended to the surrounding areas in multiple dimensions to form a multi-dimensional city node, which will undertake the functions of cultural mass Innovation Park and Commercial comprehensive service











模型效果





# 1 铁轨上的街市

## 1.2 火车头体育场改造与扩建



## HISTORY BACKGROUND:

Founded in the early 1950s, it is the position and place for the staff and family members of Tianjin Railway Bureau to carry out sports activities, and also the base for the training and competition of Chinese locomotive Football Team in the 1950s. In 1992, the Ministry of railways, the Railway Bureau and the sub Bureau jointly invested 16 million yuan to rebuild the existing stadium at the original site, which was completed and put into use in 1994. The new stadium covers an area of 7200 square meters.



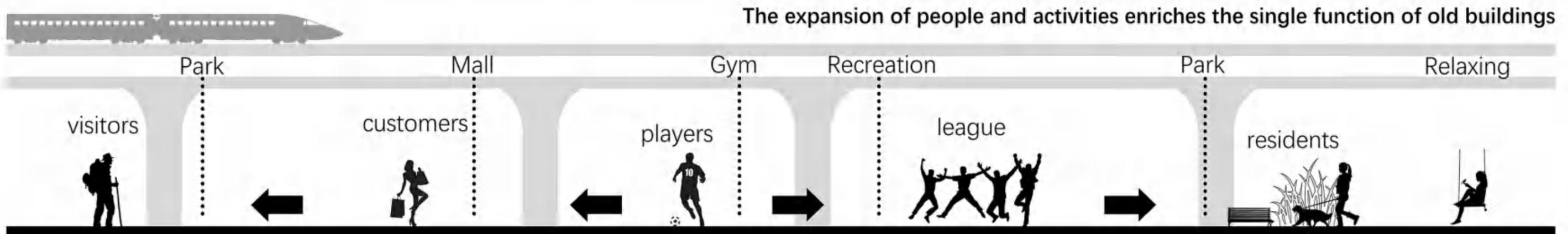
The interface of Southwest facing the lake is very closed, and the stadium, road and lake are blocked by the wall, which can not make good use of the site environment.

The picture above shows the gate at the entrance and the temporary security room beside it. The relatively rough ones are placed at T-junction, and there is no place spirit.

Facing the railway on the west side are heavy stone buildings. So that the vitality of the whole site is greatly reduced. The square is also blocked by a wall and cannot be used.

Wanliuchun tunnel passes through the underground of the square on the west of locomotive stadium. At the same time, it also increases the wildness of the whole square.

The form of the old stadium comes from its structure. The exposed structure of the stadium can be clearly seen from the South Road.

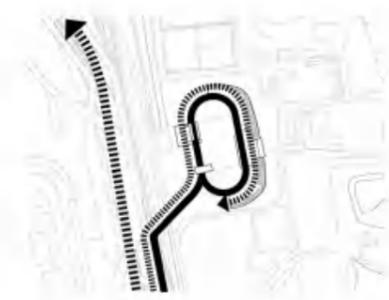




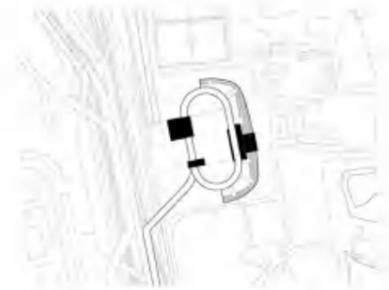
graphics



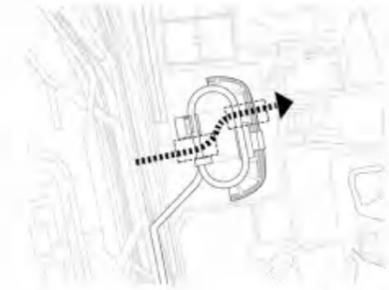
delete



extend



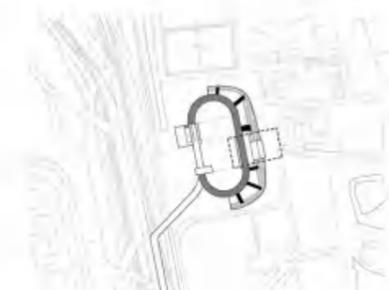
boxes



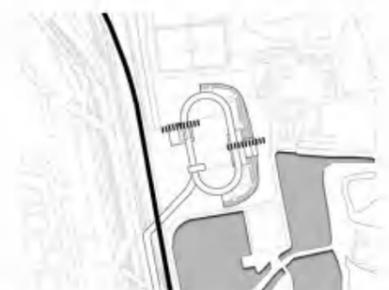
Void



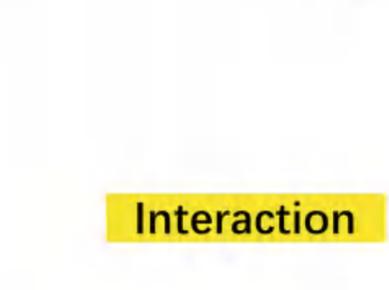
double face



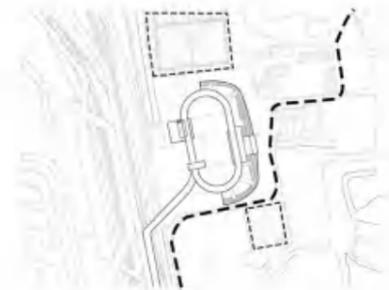
connect



sight view



external scenic



crowd source



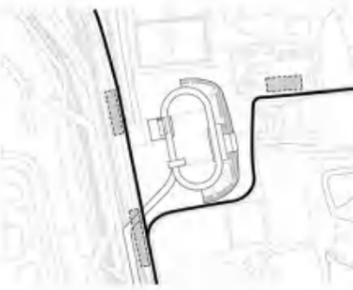
green



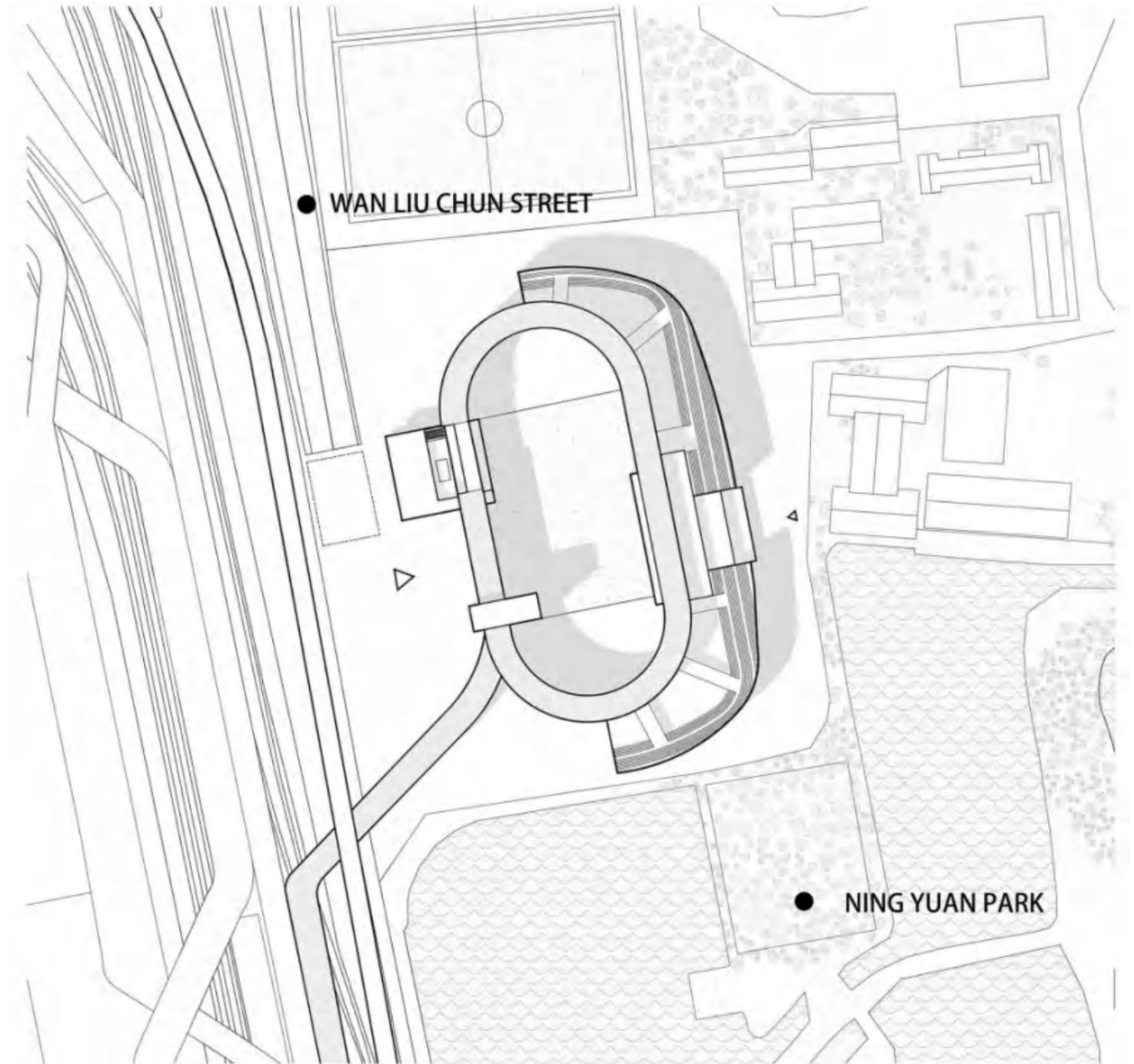
external

## Formation

## Interaction



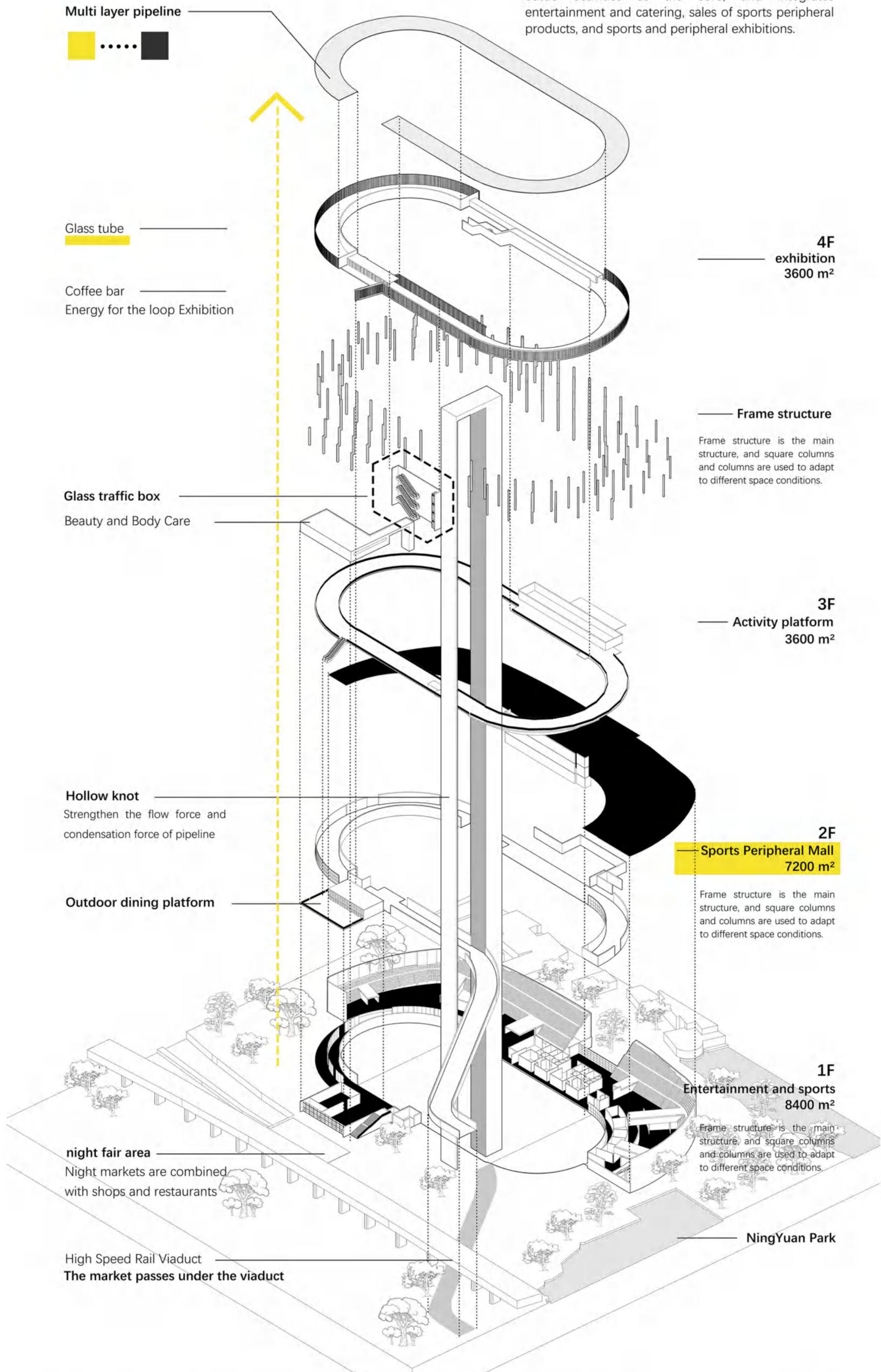
parking



# Site Describe

In terms of graphic relationship, the site mainly deals with the relationship between the oval shape of locomotive stadium and the linear space of market on the urban rail. Through the extension of a branch line in the market, the core of the stadium is wrapped up, and a new space is formed in front of and above the grandstand, putting the relationship between the new and old buildings on the table. It will also break the original closed buildings which lack vitality and openness, and connect with the whole market and external park greening.

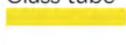
The arrangement of multi-layer functions takes the sports functions of League building activities and Sutuo activities as the core, and integrates entertainment and catering, sales of sports peripheral products, and sports and peripheral exhibitions.



Multi layer pipeline



Glass tube



Coffee bar  
Energy for the loop Exhibition

Glass traffic box

Beauty and Body Care

Hollow knot

Strengthen the flow force and condensation force of pipeline

Outdoor dining platform

night fair area

Night markets are combined with shops and restaurants

High Speed Rail Viaduct

The market passes under the viaduct

4F  
exhibition  
3600 m<sup>2</sup>

Frame structure  
Frame structure is the main structure, and square columns and columns are used to adapt to different space conditions.

3F  
Activity platform  
3600 m<sup>2</sup>

2F  
Sports Peripheral Mall  
7200 m<sup>2</sup>

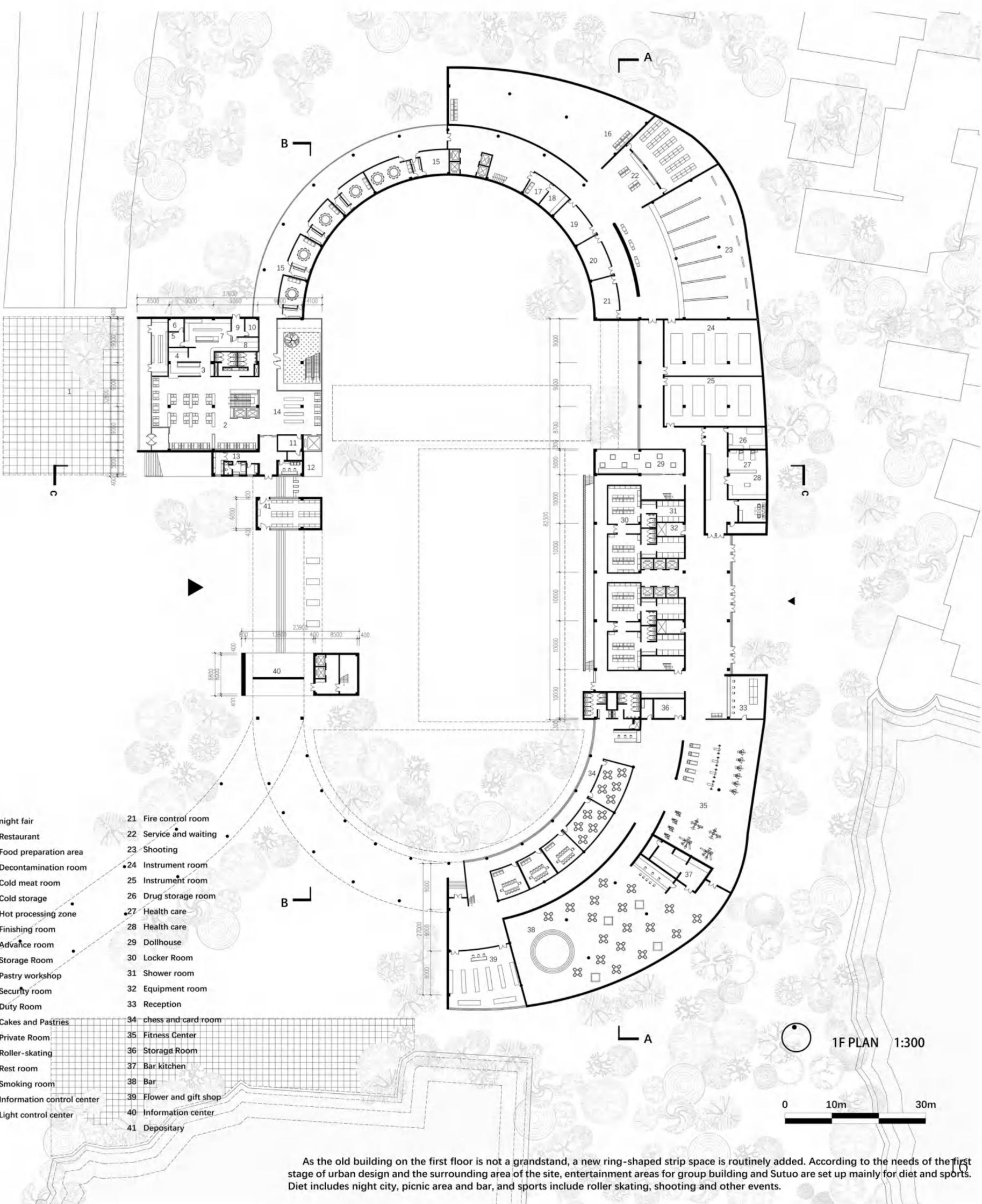
Frame structure is the main structure, and square columns and columns are used to adapt to different space conditions.

1F  
Entertainment and sports  
8400 m<sup>2</sup>

Frame structure is the main structure, and square columns and columns are used to adapt to different space conditions.

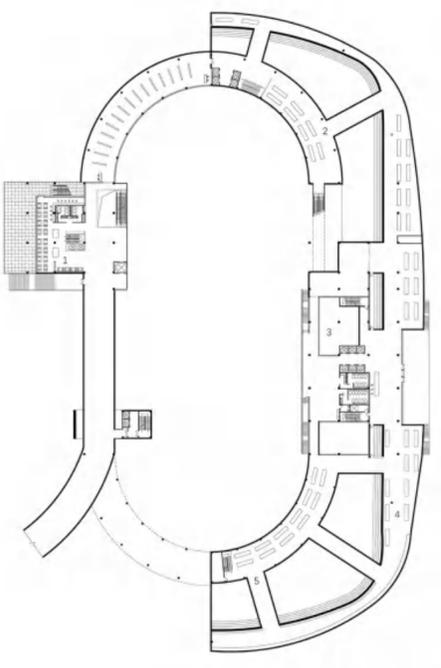
NingYuan Park

In order to alleviate the problem that it is difficult to develop and utilize the internal function organization of linear space, through the superposition of multi-layer annular pipelines, to broaden the indoor space. At the same time, the loop pipeline naturally forms three spaces: the outer space, the inner space and the surrounding space, realizing the multi-dimensional function and moving line.

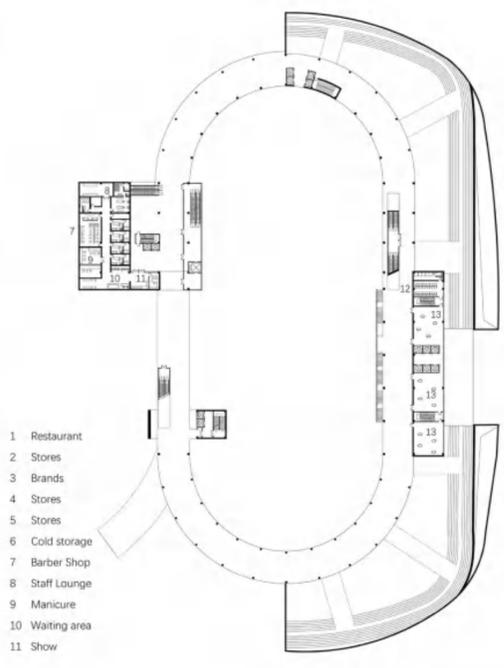


- 1 night fair
- 2 Restaurant
- 3 Food preparation area
- 4 Decontamination room
- 5 Cold meat room
- 6 Cold storage
- 7 Hot processing zone
- 8 Finishing room
- 9 Advance room
- 10 Storage Room
- 11 Pastry workshop
- 12 Security room
- 13 Duty Room
- 14 Cakes and Pastries
- 15 Private Room
- 16 Roller-skating
- 17 Rest room
- 18 Smoking room
- 19 Information control center
- 20 Light control center
- 21 Fire control room
- 22 Service and waiting
- 23 Shooting
- 24 Instrument room
- 25 Instrument room
- 26 Drug storage room
- 27 Health care
- 28 Health care
- 29 Dollhouse
- 30 Locker Room
- 31 Shower room
- 32 Equipment room
- 33 Reception
- 34 chess and card room
- 35 Fitness Center
- 36 Storage Room
- 37 Bar kitchen
- 38 Bar
- 39 Flower and gift shop
- 40 Information center
- 41 Depository

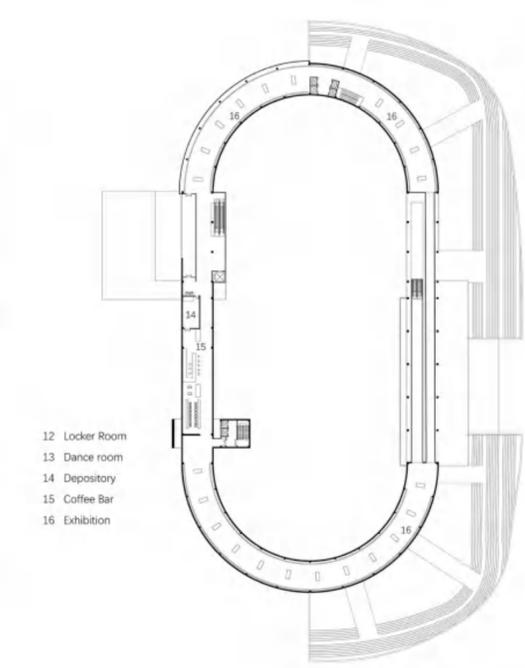
As the old building on the first floor is not a grandstand, a new ring-shaped strip space is routinely added. According to the needs of the first stage of urban design and the surrounding area of the site, entertainment areas for group building and Sutuo are set up mainly for diet and sports. Diet includes night city, picnic area and bar, and sports include roller skating, shooting and other events.



2F PLAN 1:500



3F PLAN

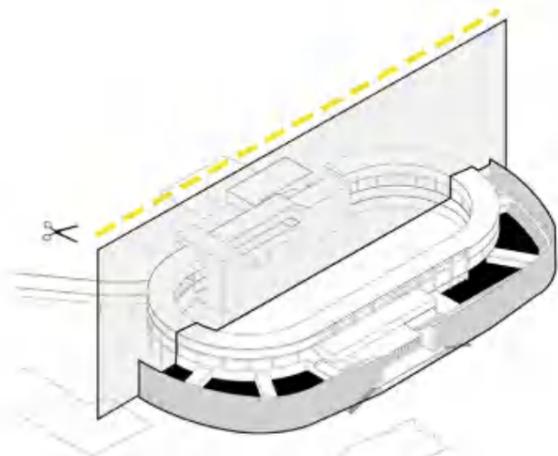


4F PLAN

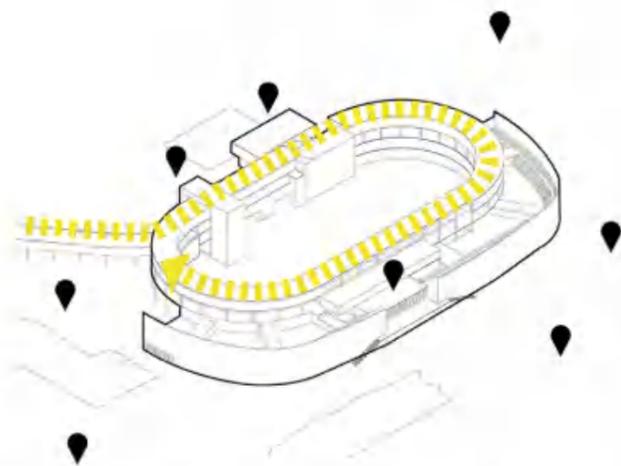
- 1 Restaurant
- 2 Stores
- 3 Brands
- 4 Stores
- 5 Stores
- 6 Cold storage
- 7 Barber Shop
- 8 Staff Lounge
- 9 Manicure
- 10 Waiting area
- 11 Show
- 12 Locker Room
- 13 Dance room
- 14 Depository
- 15 Coffee Bar
- 16 Exhibition



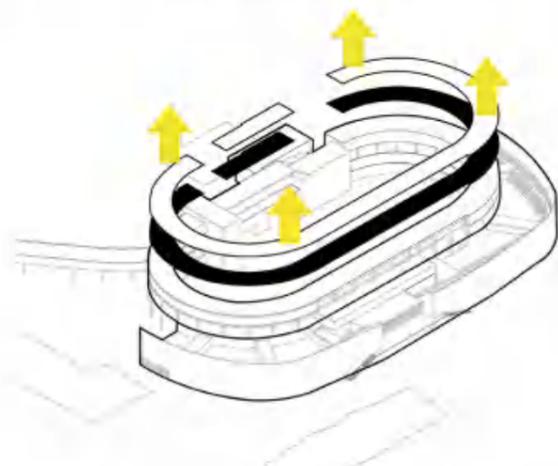
Perspective Render



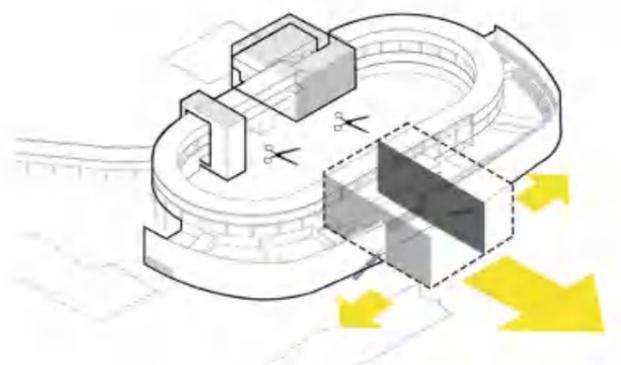
Keep the area of the old building's East stand, remove all the closed buildings in the west, open the whole building to the market, and welcome the coming pipeline.



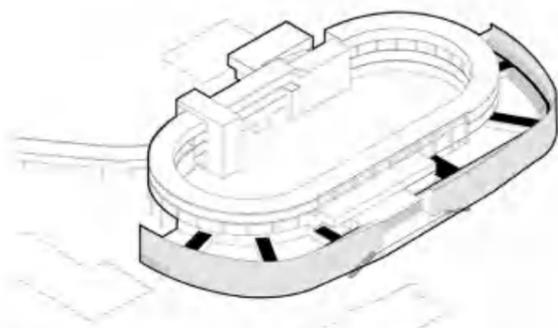
The important nodes and function settings in and around the site are connected in series by pipelines to form the main space for the reconstruction of the building.



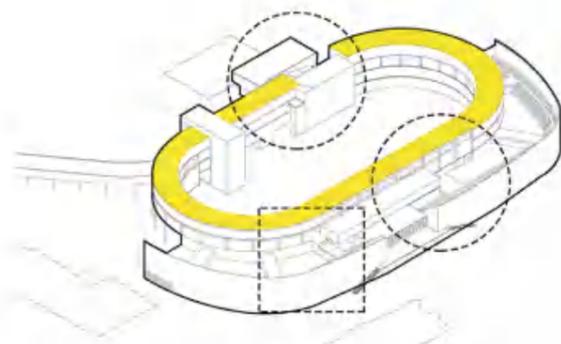
The organization form of pipelines in the stadium is upward spiral replication, forming the image like a wire coil, and shaping the sense of flying and space interest.



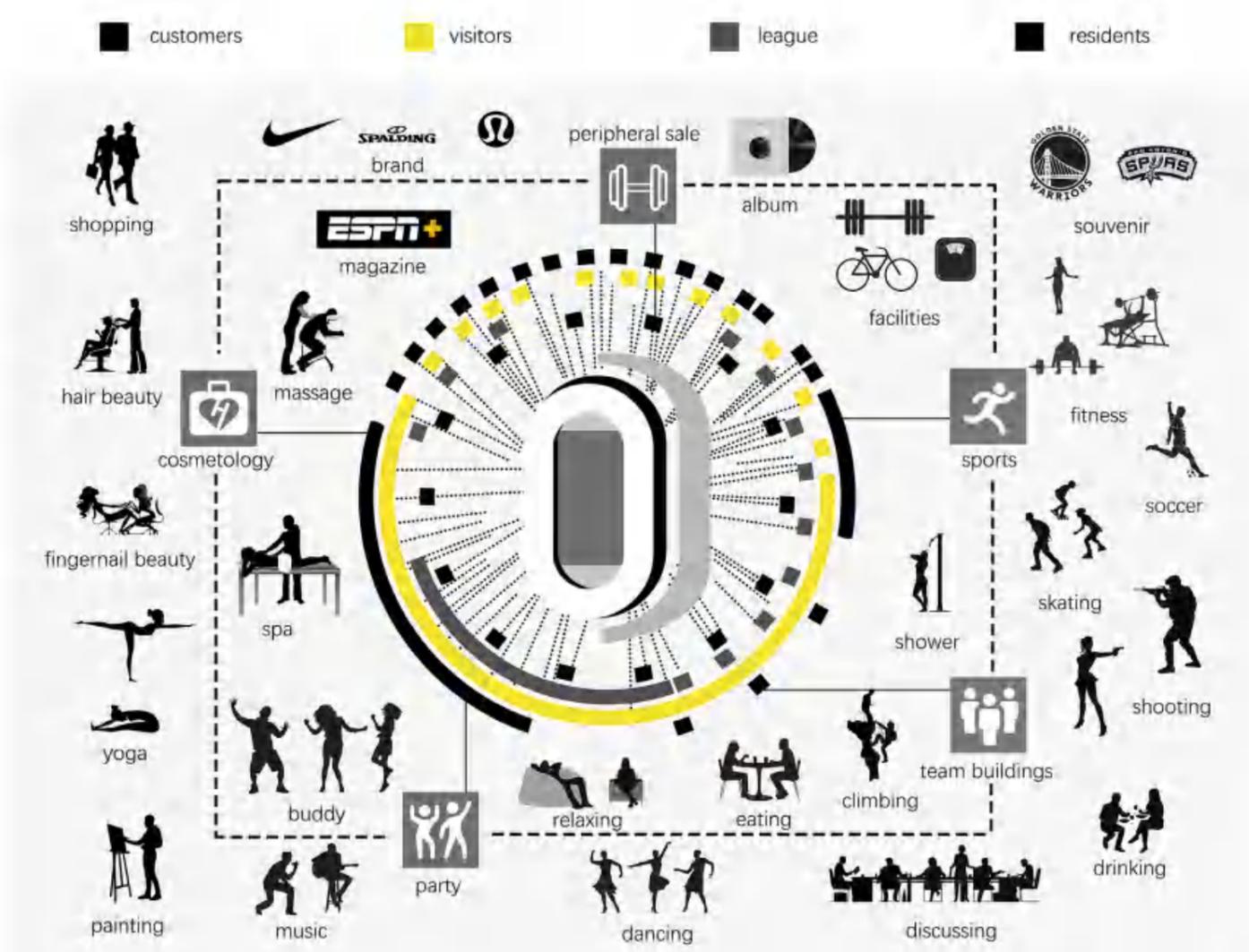
The construction of the nodes in the circular pipeline can enrich the space form, increase the vitality of the space, and improve the atmosphere of the whole building.



Through the two-story space directly Datong loop pipeline and the original space under the grandstand, the new and old buildings are connected contrastively.



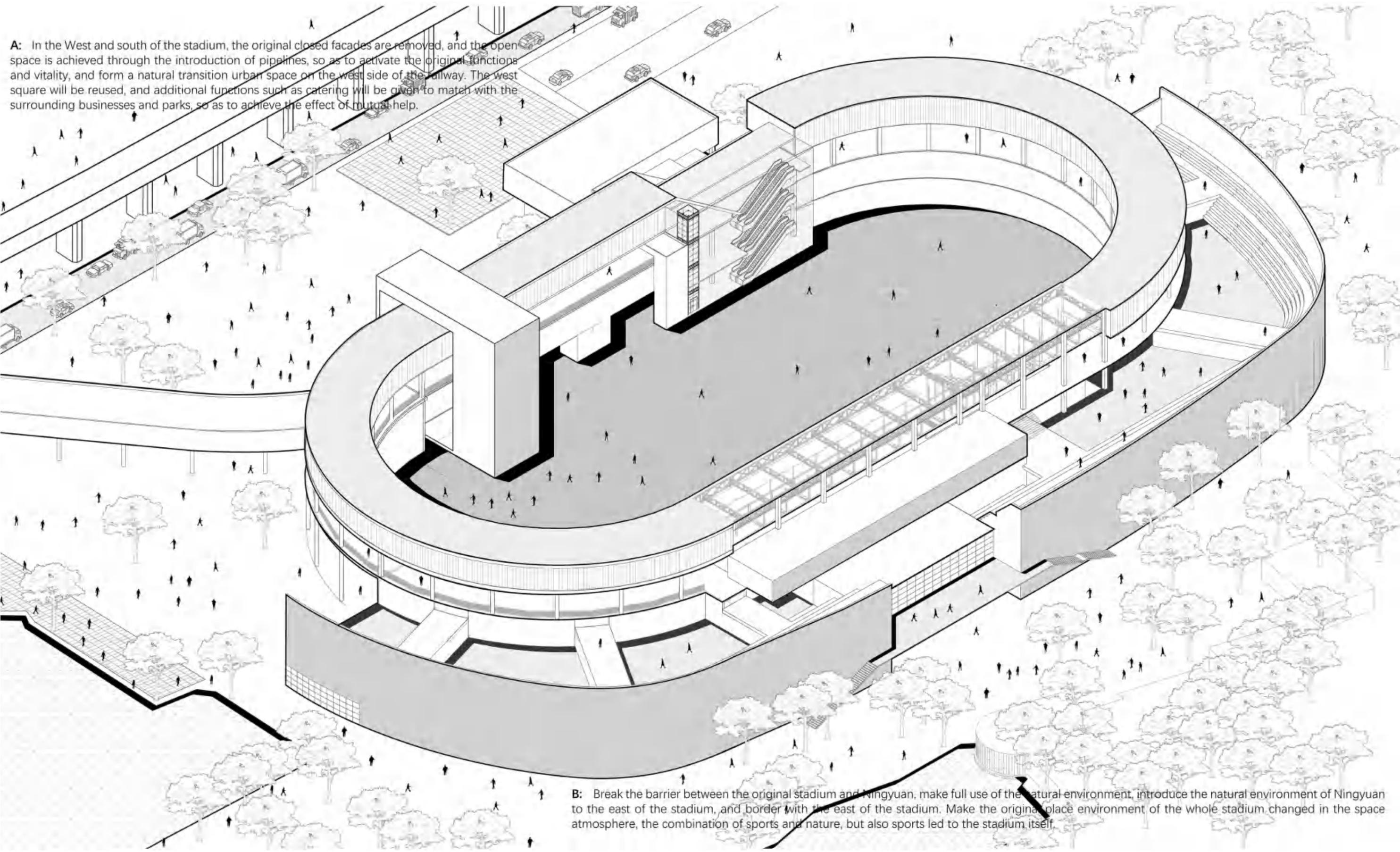
Focus on the optimization and in-depth design. It includes the creation of virtual real interface, the optimization of vertical traffic and the details of the junction of buildings.



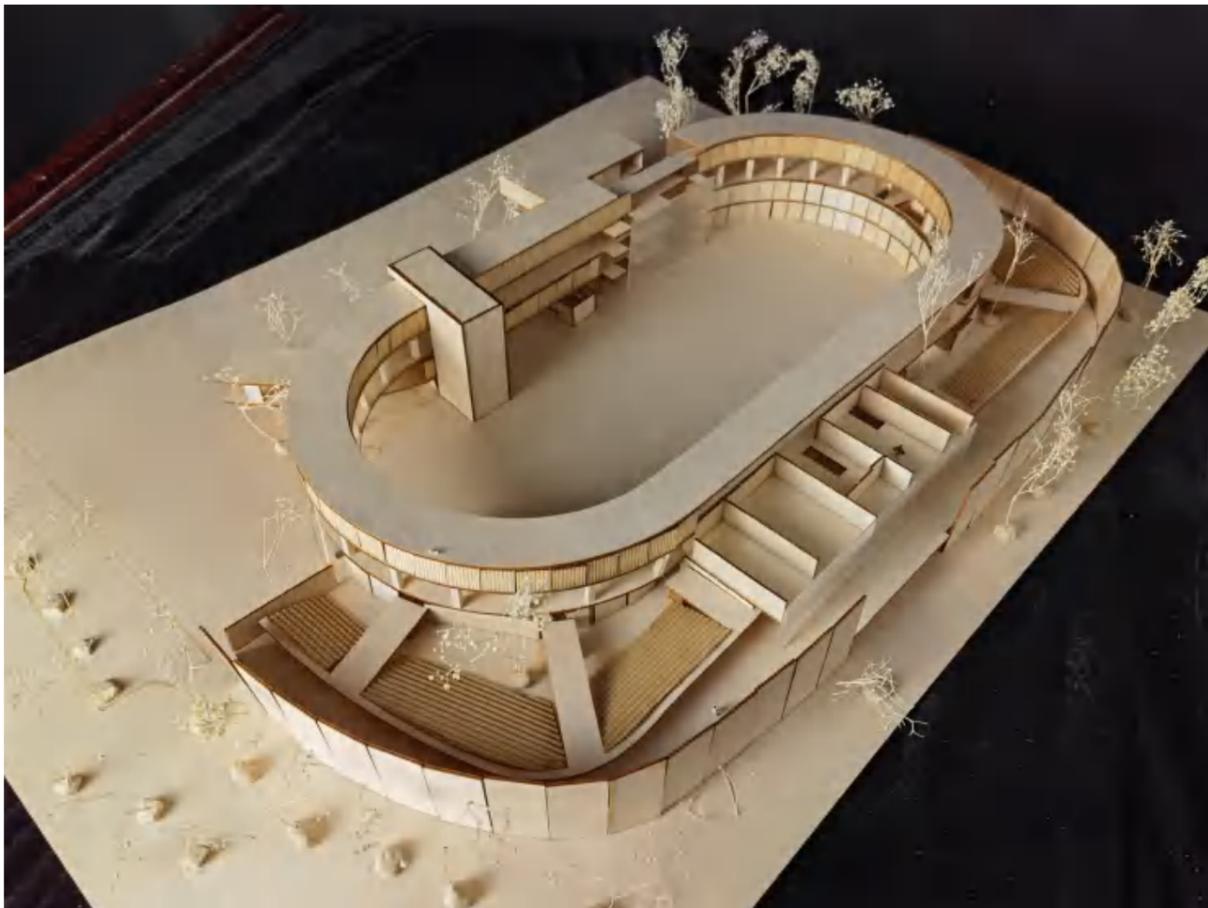
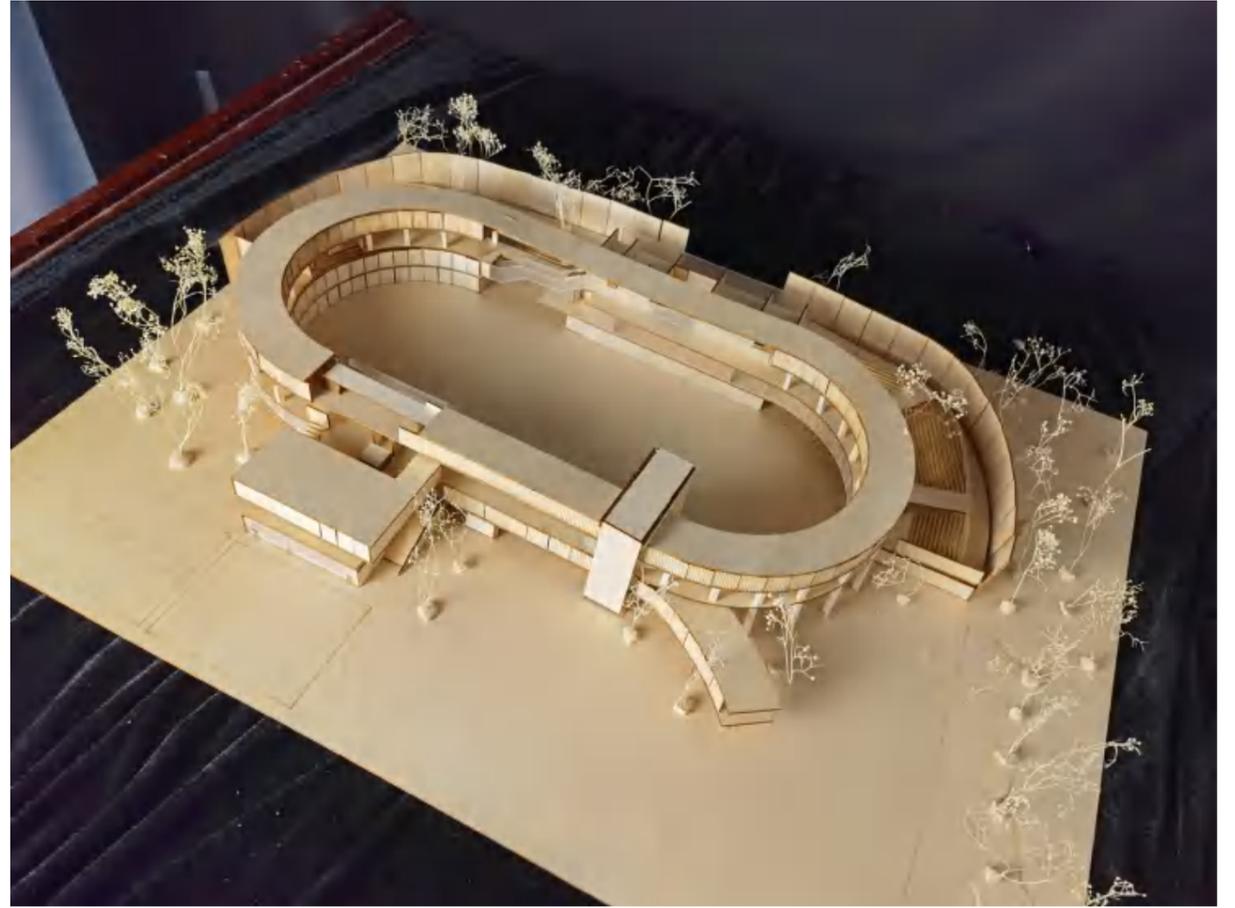
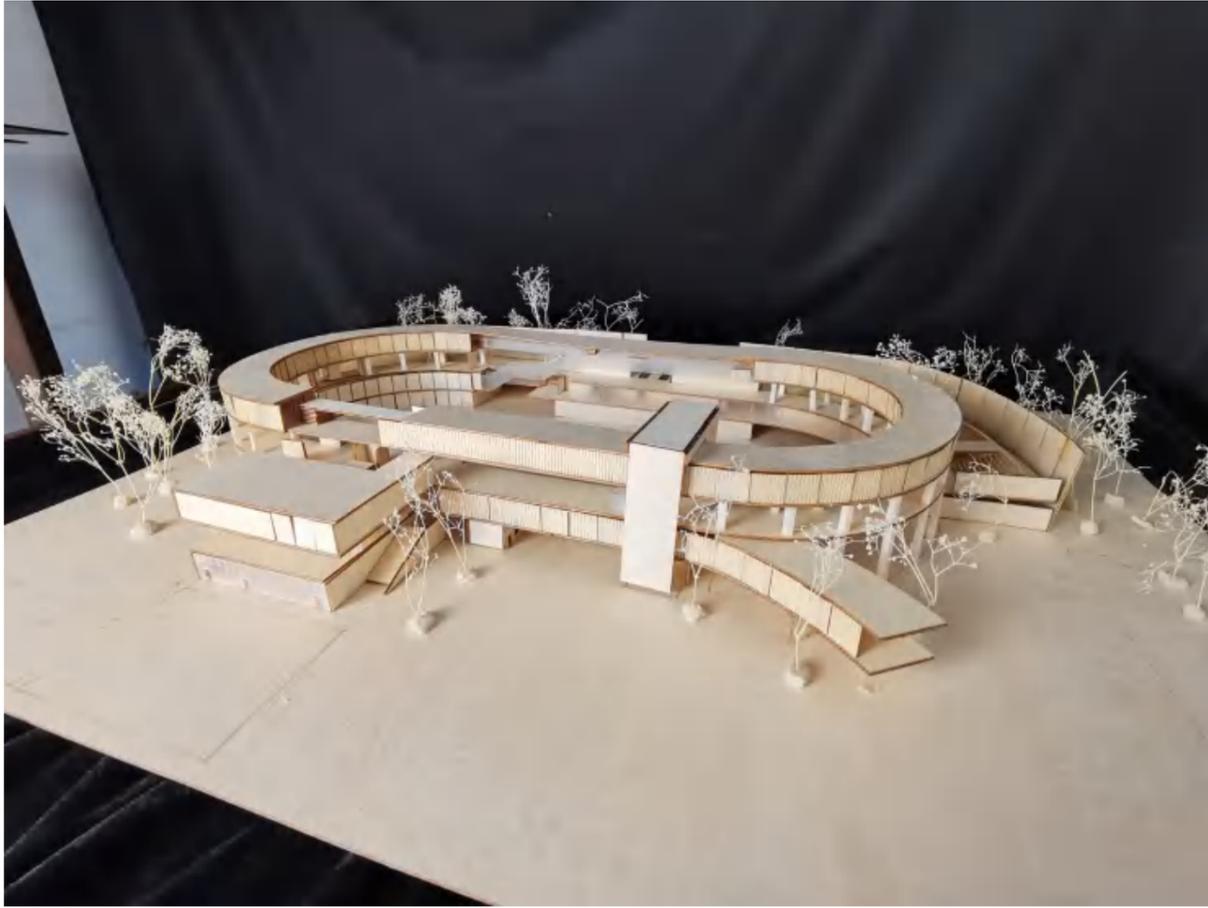
FUNCTION & POSITION

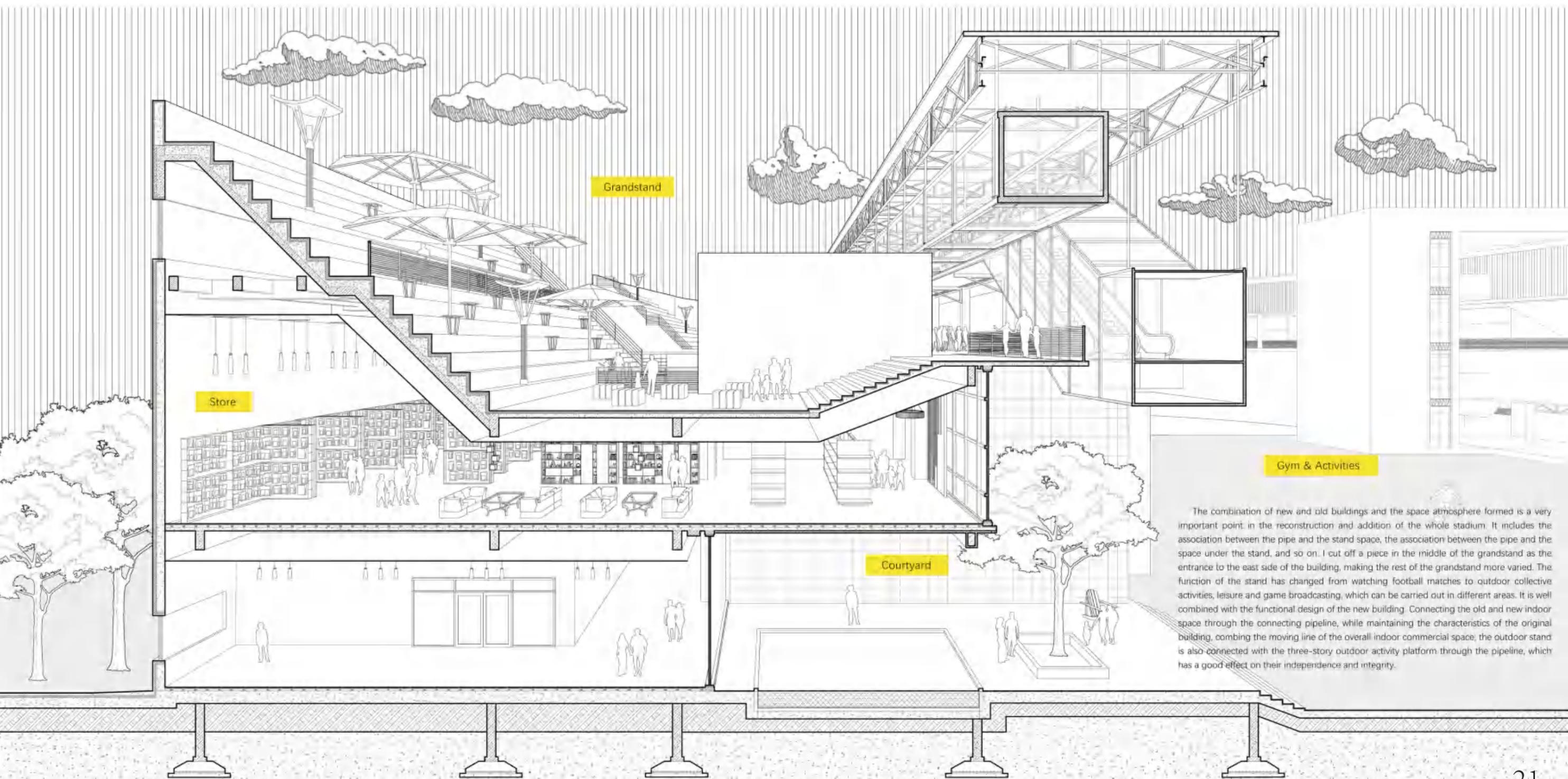
形态与功能

**A:** In the West and south of the stadium, the original closed facades are removed, and the open space is achieved through the introduction of pipelines, so as to activate the original functions and vitality, and form a natural transition urban space on the west side of the railway. The west square will be reused, and additional functions such as catering will be given to match with the surrounding businesses and parks, so as to achieve the effect of mutual help.



**B:** Break the barrier between the original stadium and Ningyuan, make full use of the natural environment, introduce the natural environment of Ningyuan to the east of the stadium, and border with the east of the stadium. Make the original place environment of the whole stadium changed in the space atmosphere, the combination of sports and nature, but also sports led to the stadium itself.





Grandstand

Store

Courtyard

Gym & Activities

The combination of new and old buildings and the space atmosphere formed is a very important point in the reconstruction and addition of the whole stadium. It includes the association between the pipe and the stand space, the association between the pipe and the space under the stand, and so on. I cut off a piece in the middle of the grandstand as the entrance to the east side of the building, making the rest of the grandstand more varied. The function of the stand has changed from watching football matches to outdoor collective activities, leisure and game broadcasting, which can be carried out in different areas. It is well combined with the functional design of the new building. Connecting the old and new indoor space through the connecting pipeline, while maintaining the characteristics of the original building, combining the moving line of the overall indoor commercial space, the outdoor stand is also connected with the three-story outdoor activity platform through the pipeline, which has a good effect on their independence and integrity.

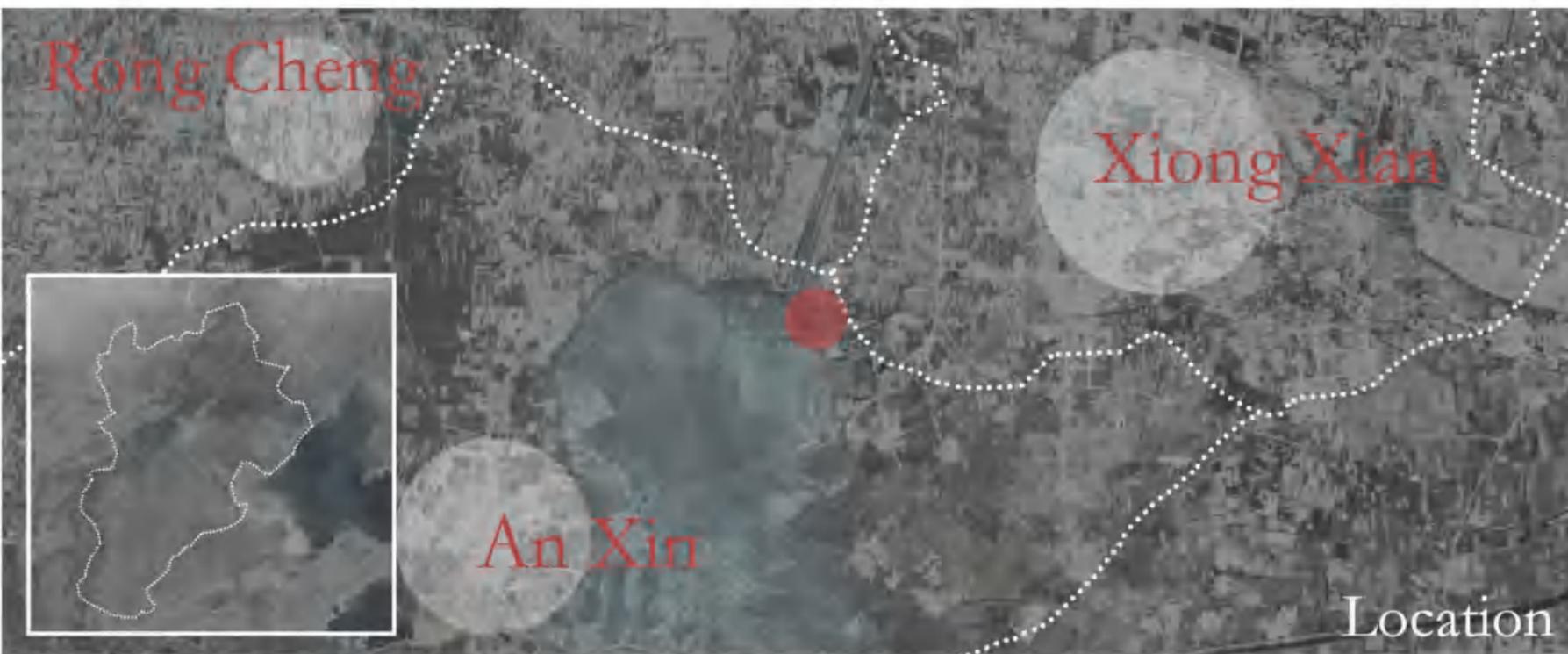
- myth with nature -  
山 水 迷 津



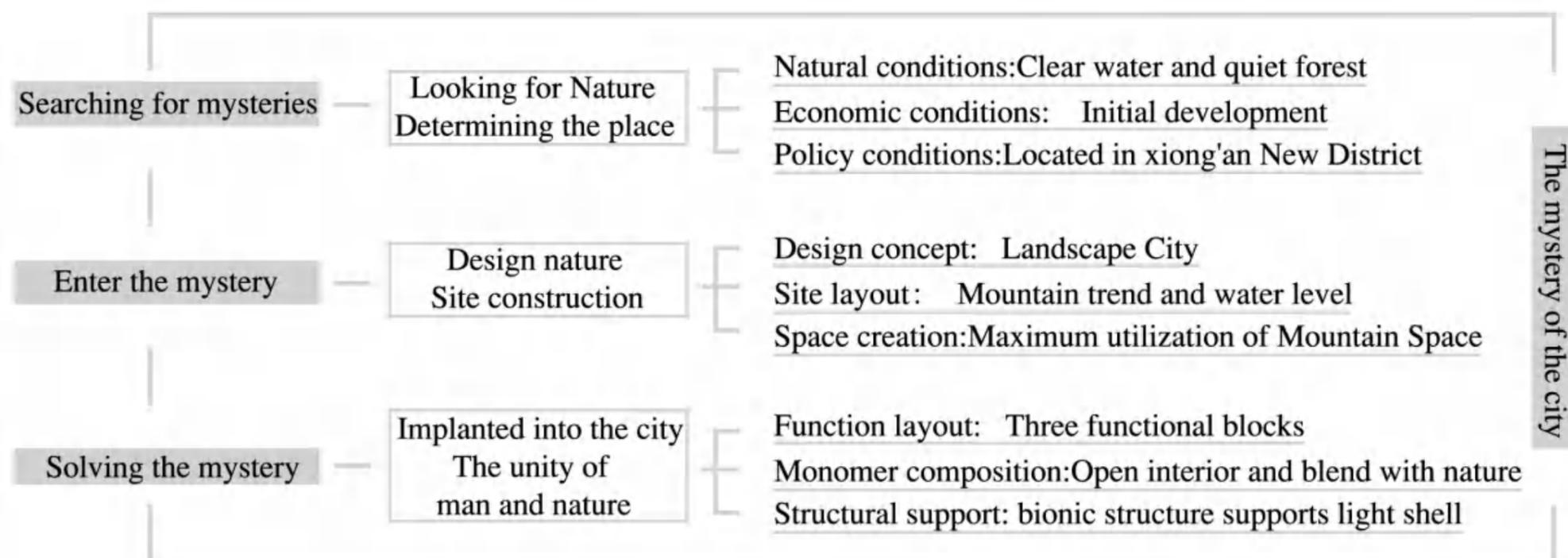
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## 山水迷津铁轨上的街市

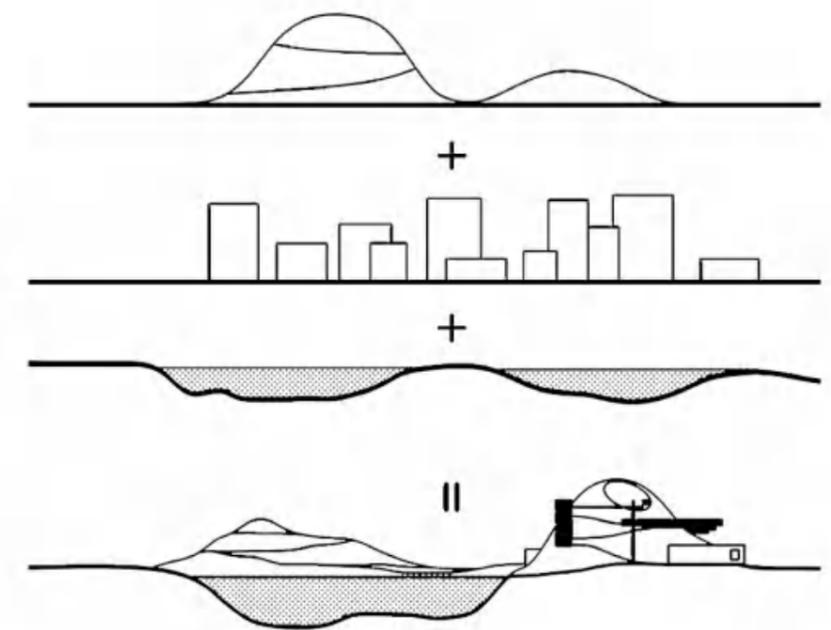
城市设计竞赛方案

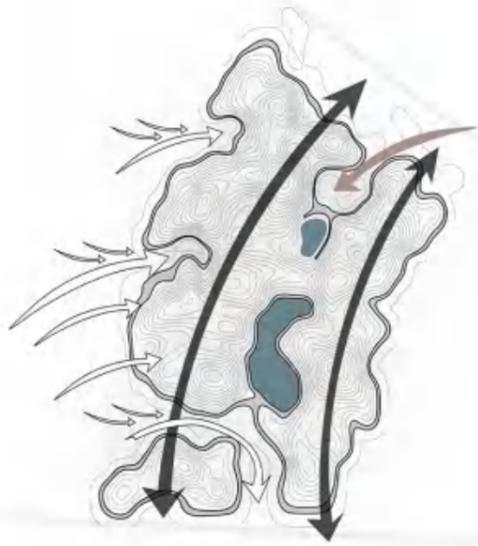


Baiyangdian Lake, with an area of 366 square kilometers and a maximum water depth of 6.0 meters, has a complex topography with mountains, hills, plains and depressions. The total terrain naturally forms three geomorphic types of mountains, plains and depressions from west to East. Baiyangdian Wetland and its surrounding hills form a complex natural landscape of mountains and rivers. In the 1960s, the water quality of Baiyangdian Lake was excellent and clear to the bottom; since the 1960s, the runoff and water storage conditions have changed, and it has experienced six times of drying up in the past 20 years. From 1983 to 1988, there were five consecutive years of dry lake. It was not until a large rainfall in 1988 that Baiyangdian Lake was able to store water again. In history, the water level of Baiyangdian Lake has been alternately dried up and impounded.



The mystery of the city

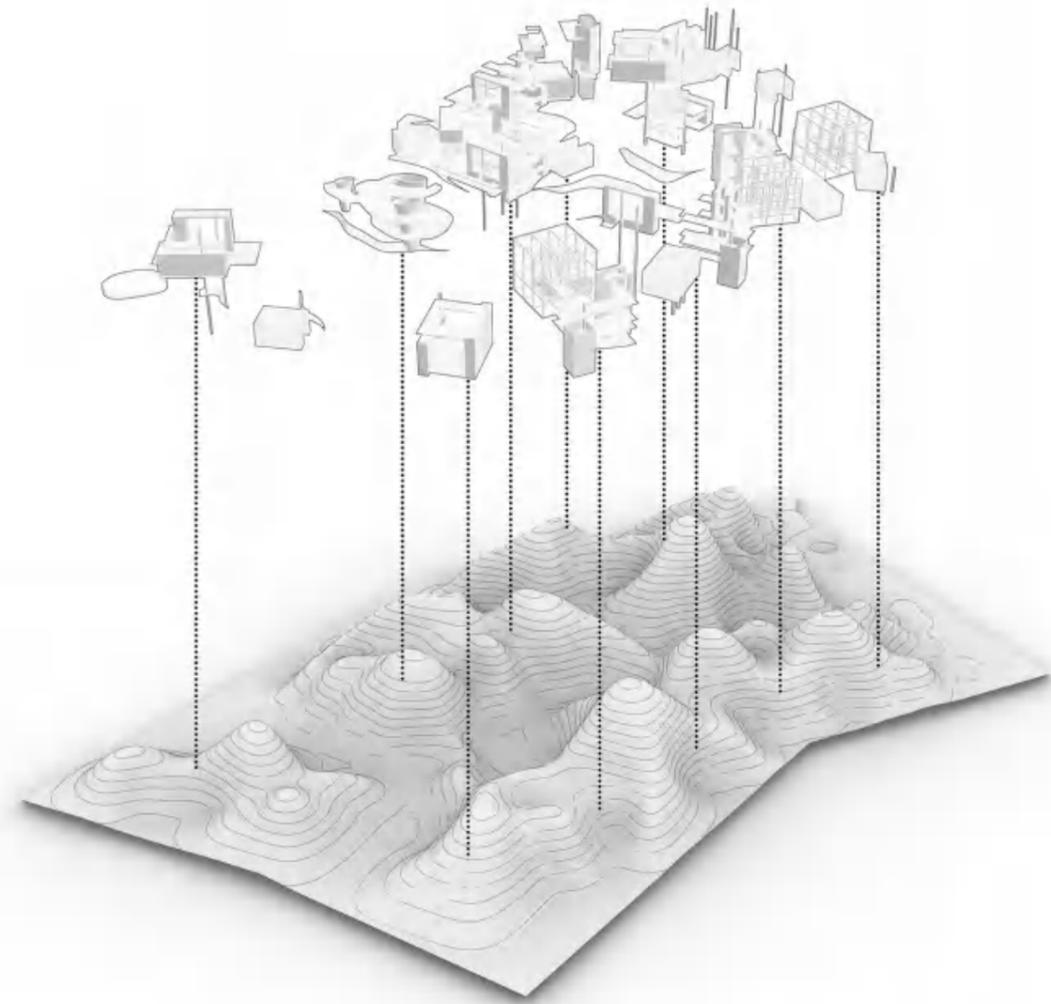




Layout Formation



Stereogenesis



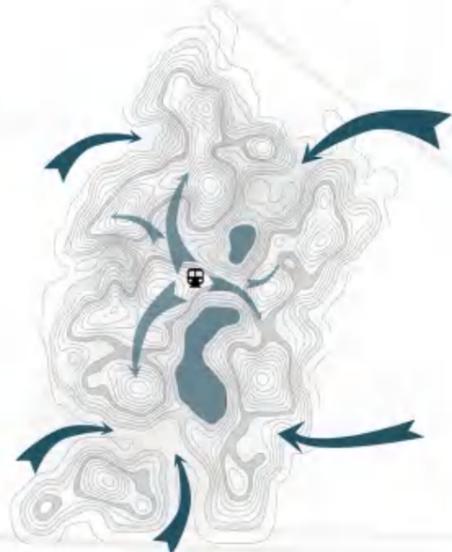
Block Mapping



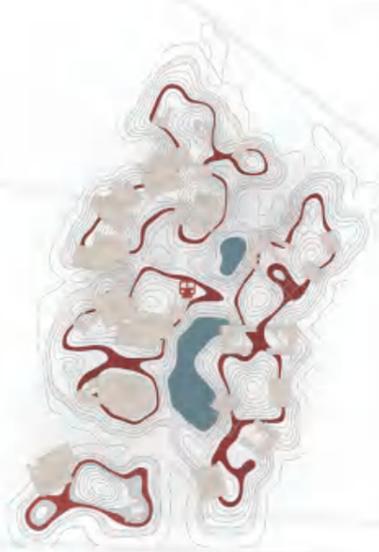
Natural Introduction



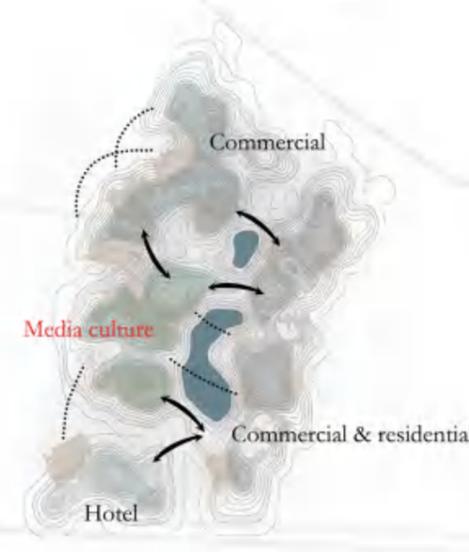
Housing Unit Implantation



Entrance Layout



Inner Circulation

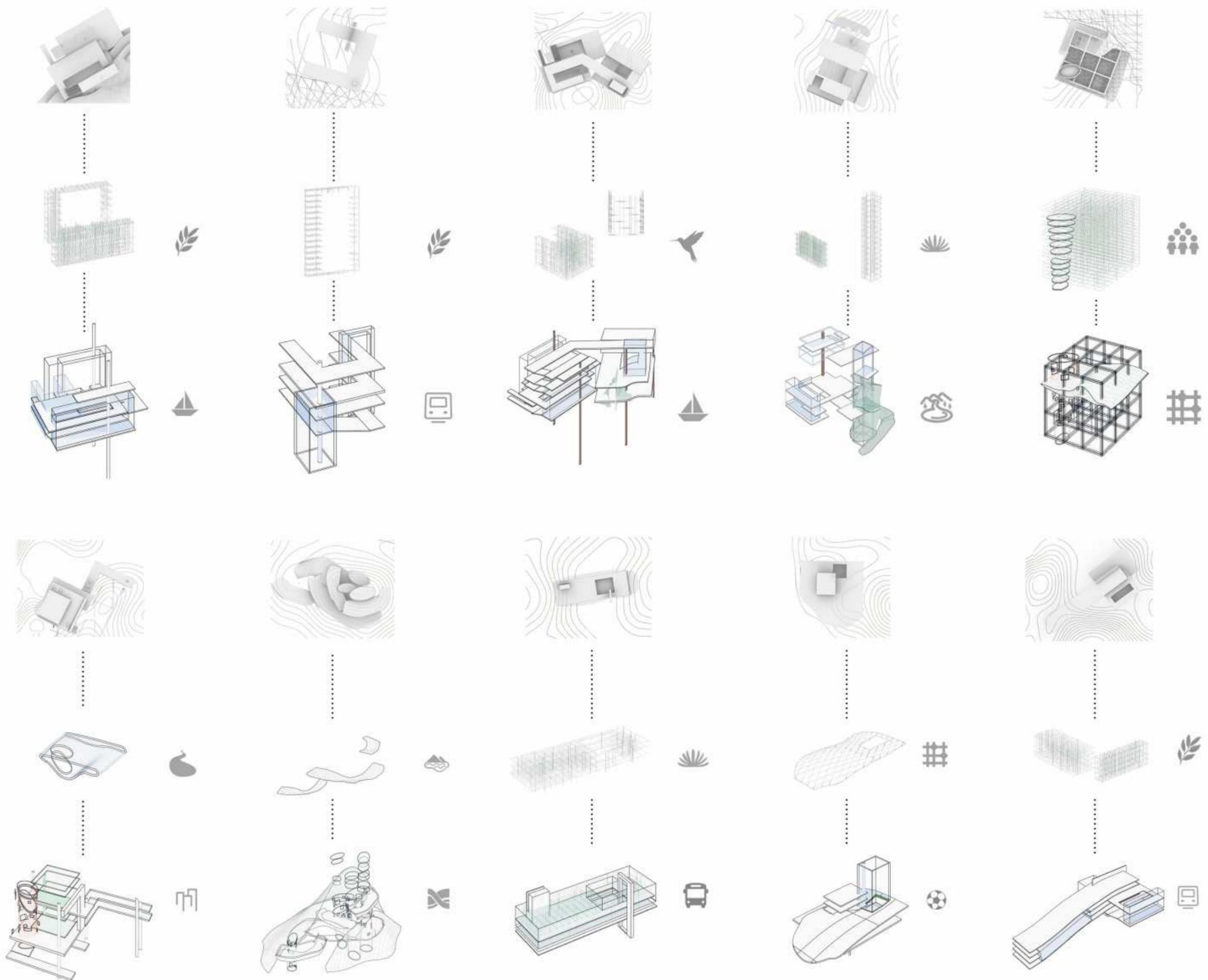


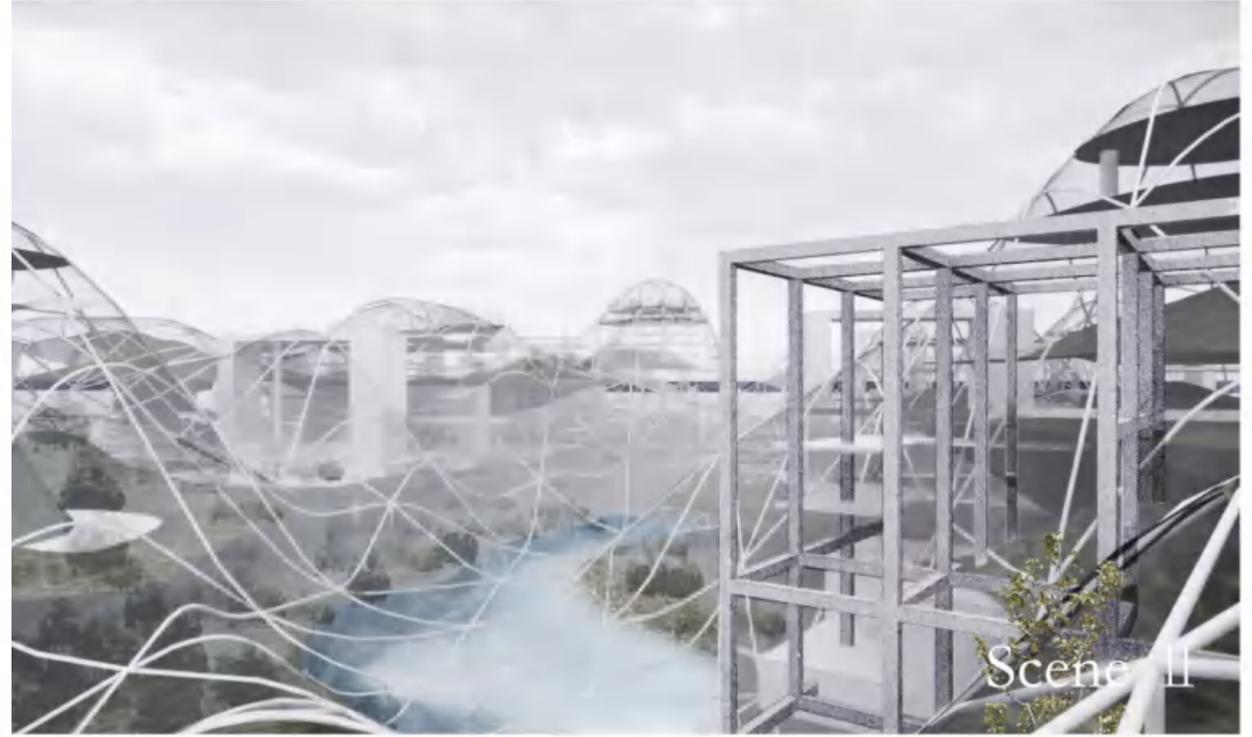
Function Partition



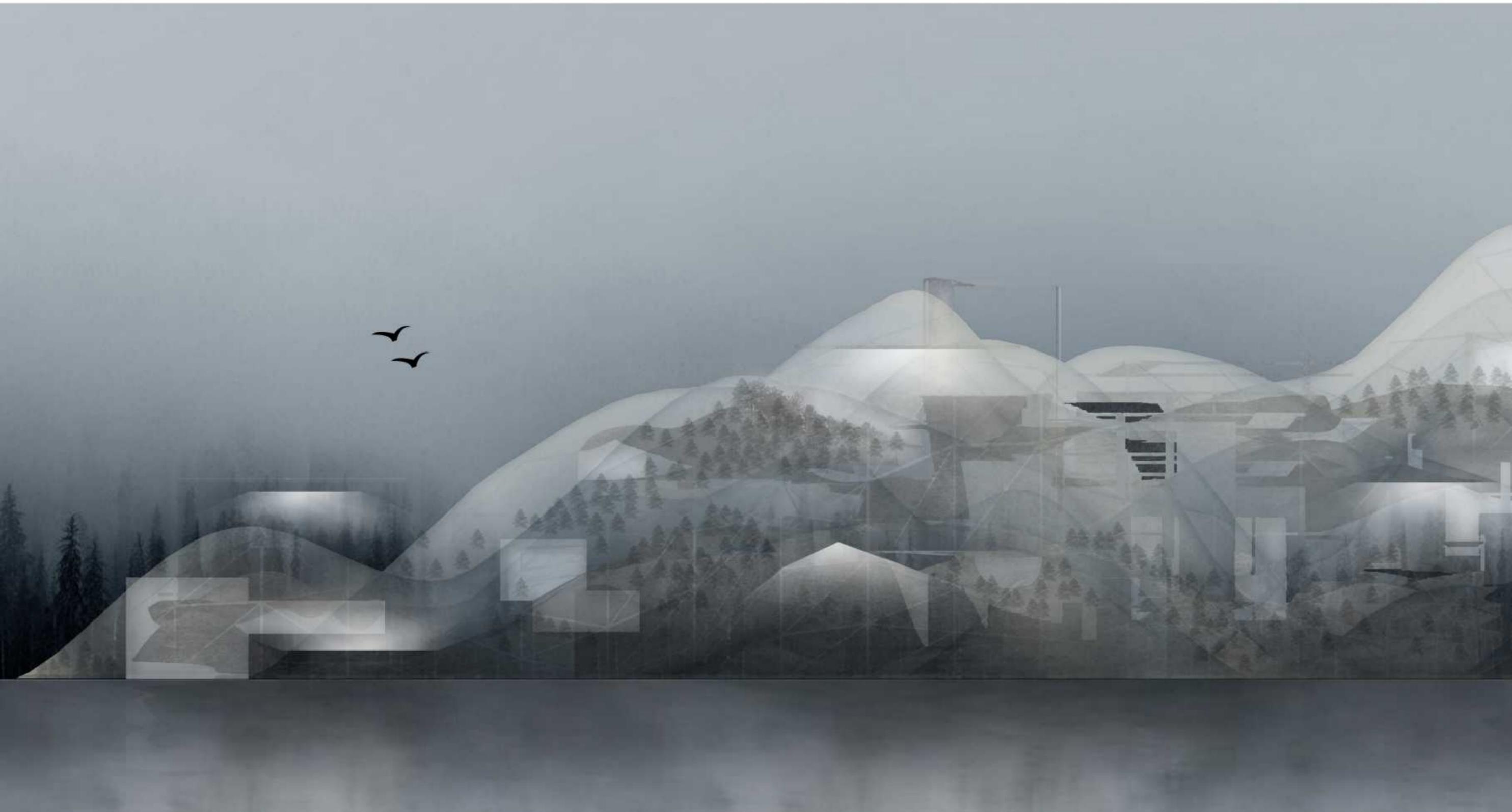
Activity Structure





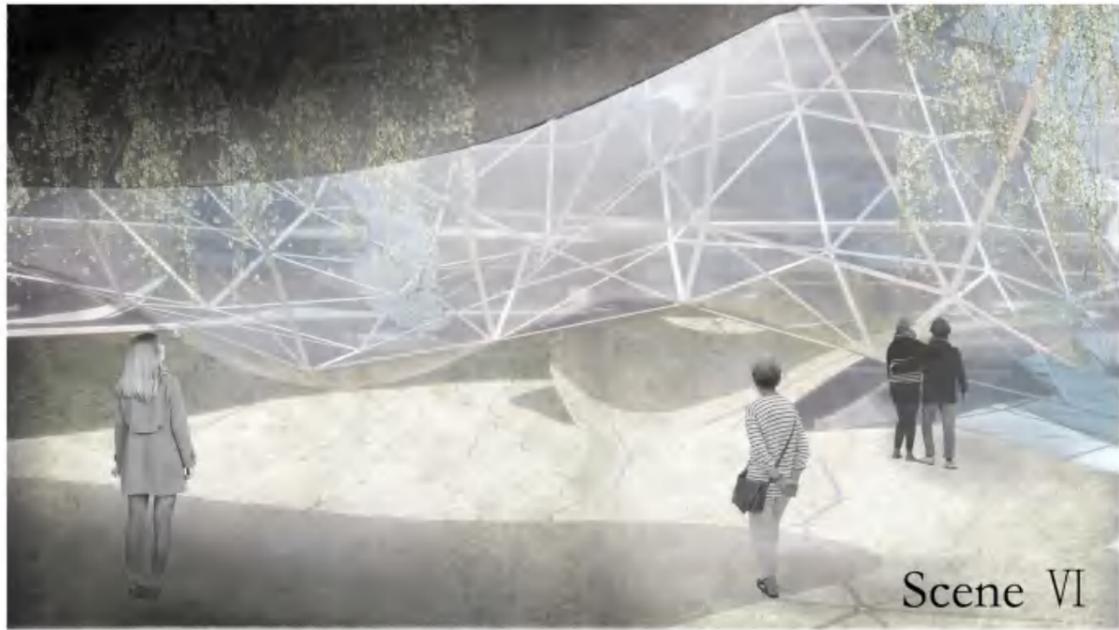


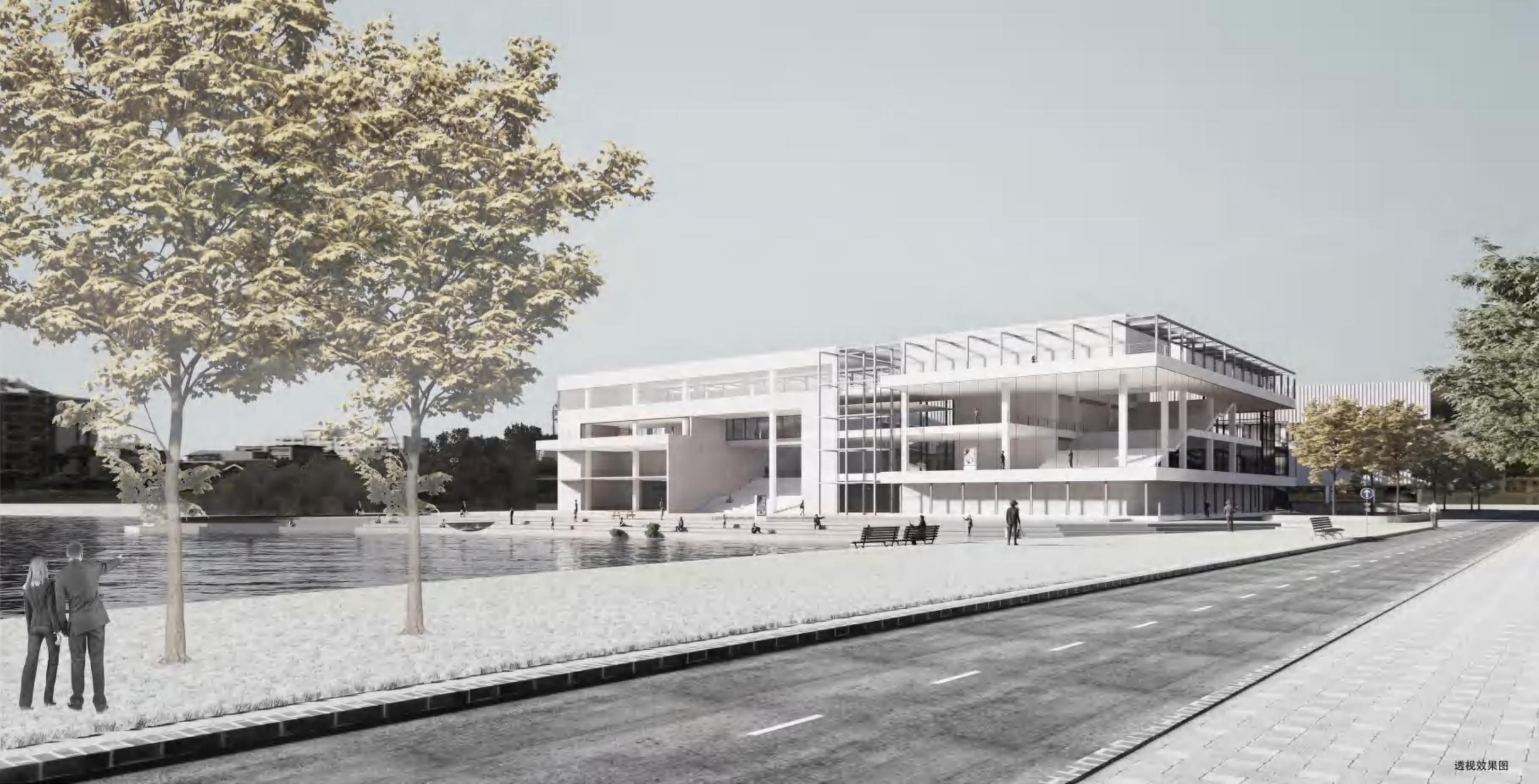
渲染效果图





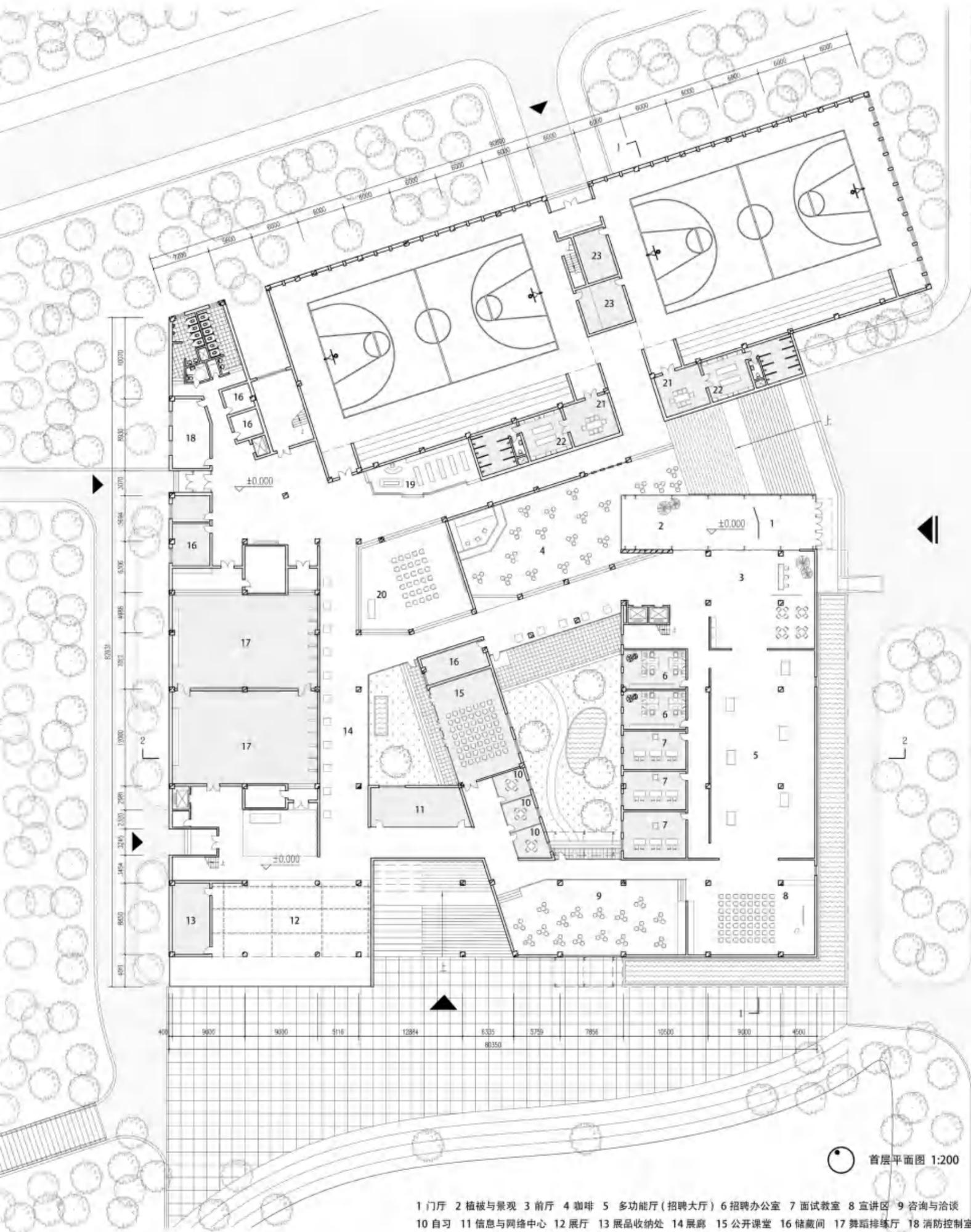
Facade Render



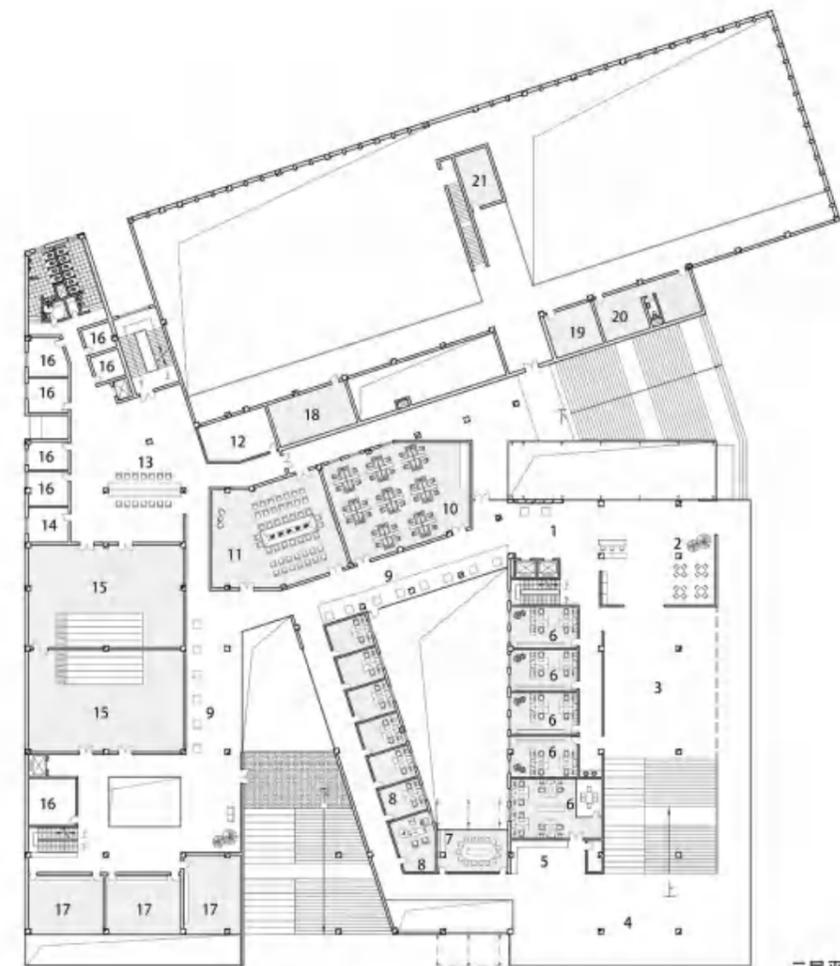


透视效果图

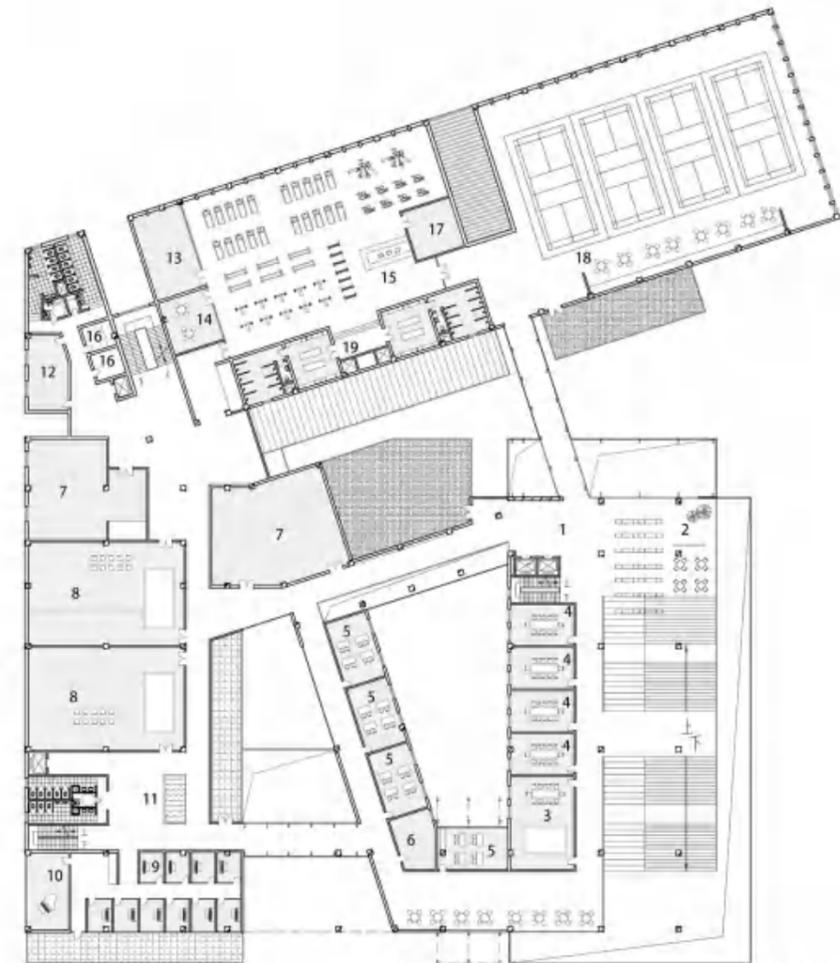
# 3 天津工业大学大学生活动中心方案

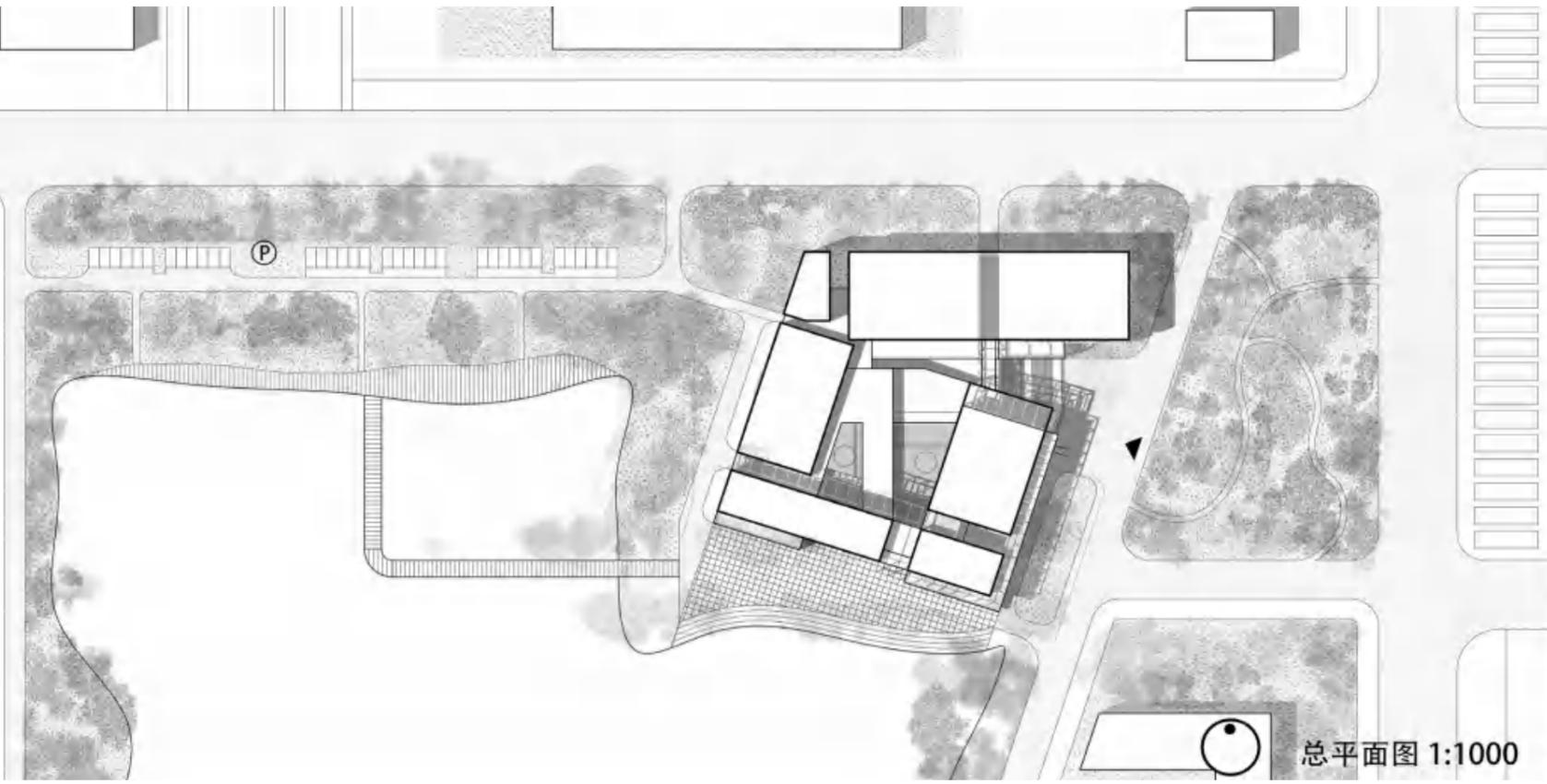


- 1 门厅
- 2 休息区
- 3 师生活动厅
- 4 主厅
- 5 茶水间
- 6 学生思政与教育办公室
- 7 小型会议室
- 8 团委办公室
- 9 荣誉作品展廊
- 10 学生事务办公室
- 11 大型会议室
- 12 资料档案室
- 13 便餐与讨论
- 14 休息室
- 15 音乐排练厅
- 16 储藏室
- 17 电声乐器排练
- 18 学生活动室
- 19 设备控制室
- 20 体育管理室
- 21 灯光控制室

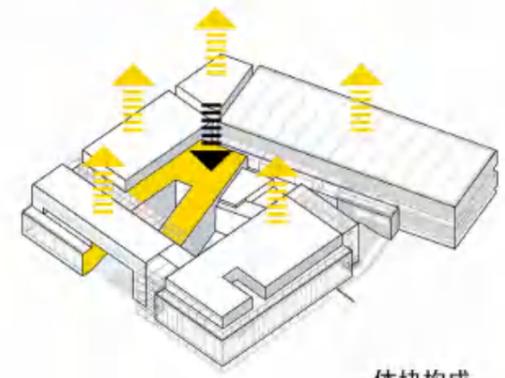


- 1 前厅
- 2 阅览区
- 3 社团活动室
- 4 社团活动室
- 5 声乐教室
- 6 多功能室
- 7 民乐排练室
- 8 排练室
- 9 琴房
- 10 琴房(高配)
- 11 前厅
- 12 乐器储藏室
- 13 健身房
- 14 休息区
- 15 健身房
- 16 储藏间
- 17 物品存放与休息
- 18 羽毛球中心
- 19 更衣与淋浴

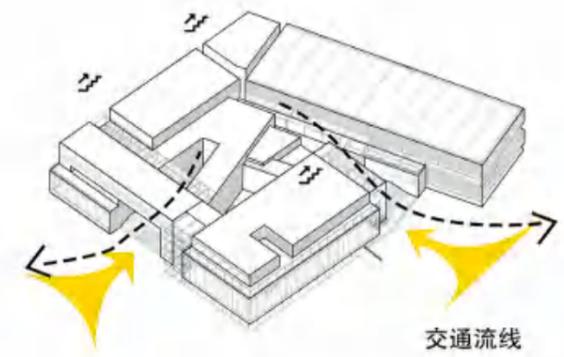




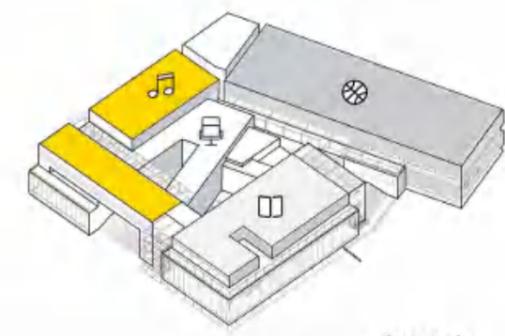
总平面图 1:1000



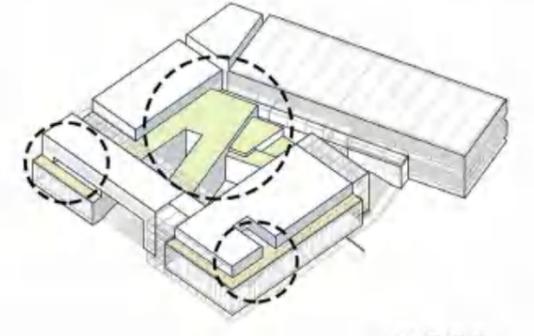
体块构成



交通流线



功能分布



景观绿化



东立面图 1:200



南立面图 1:200



阅览与观景台阶

位于东南向的出挑的玻璃盒子搭配面向湖面的大台阶，构成阅览、讨论、观景的极佳空间氛围

主入口

主入口使用竖向长条形玻璃盒子，起到提示作用的同时，也作为景观成为通透空间营造的重要元素



风雨球场

仍然希望户外的光线能够照进风雨球场当中，为解决眩光问题，可能要在玻璃内部增设遮阳设施

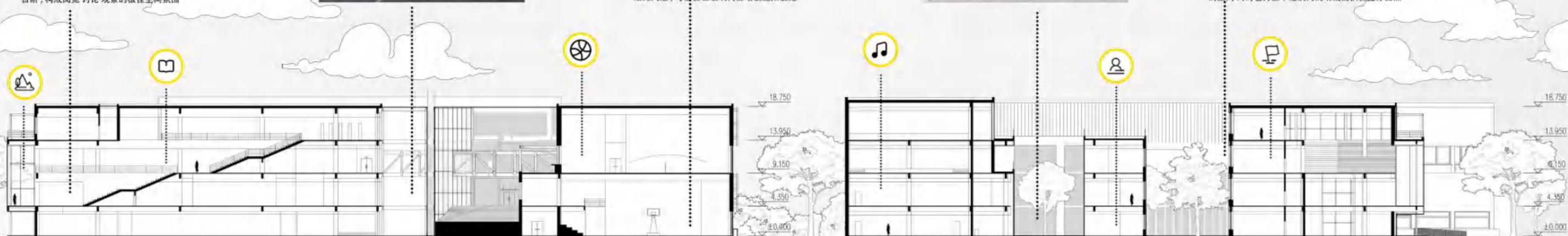
观景平台

临湖面的休息台阶沟通了内院和外界，大台阶正对着庭院的一棵树，别致的空间体验



庭院一角

内向型庭院让开放的社交环境中出现了较为私密的空间，同时也为整个建筑内的动线提供视觉停留点



1-1 剖面图 1:200

2-2 剖面图 1:200

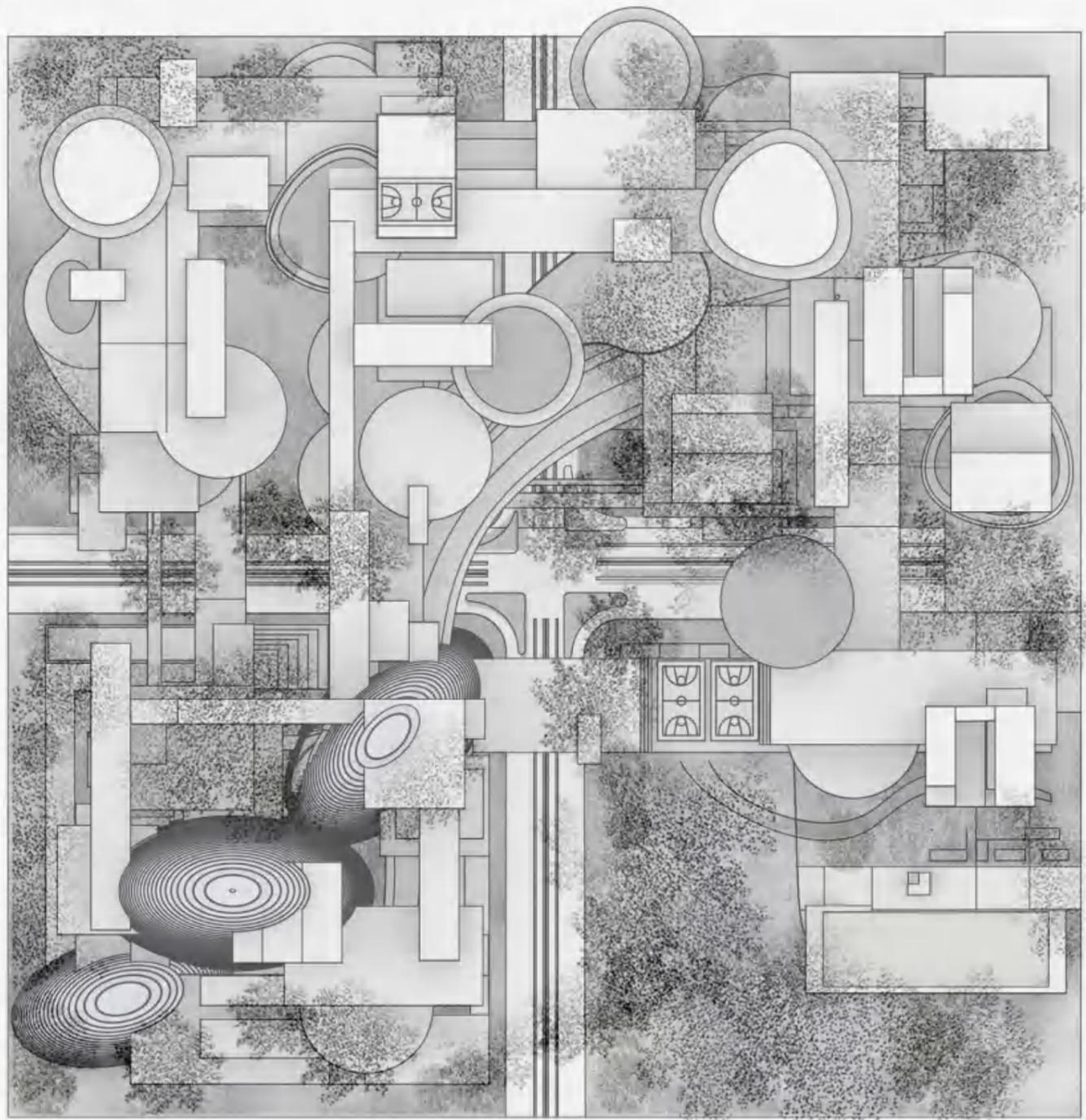


# 4

# 消失的地平线

媒体文化中心设计竞赛方案



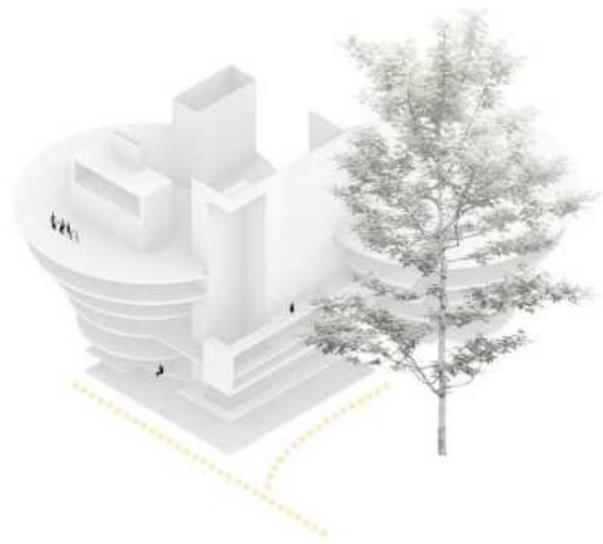


Site-Plan 1:2000

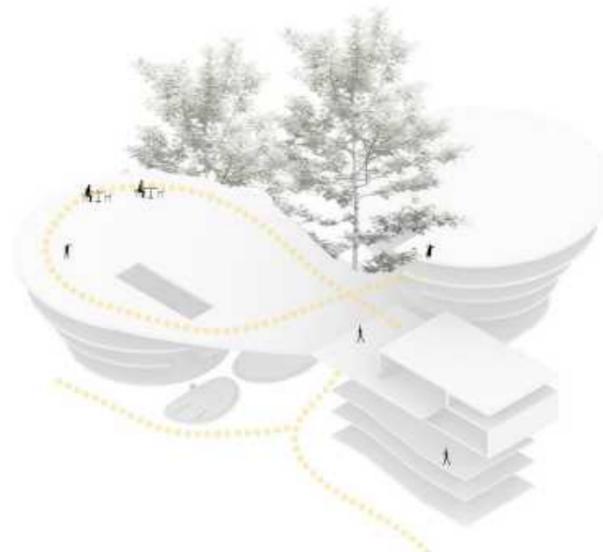


Horizon, the reference of architecture, the origin of all things, people can not do without horizon. However, with the rapid expansion of urban density, a single horizon is not enough to support the continuous development of the city. Therefore, we try to reconstruct the horizon after it is broken, so that the horizon can be reborn in the process of stereoscopic construction.

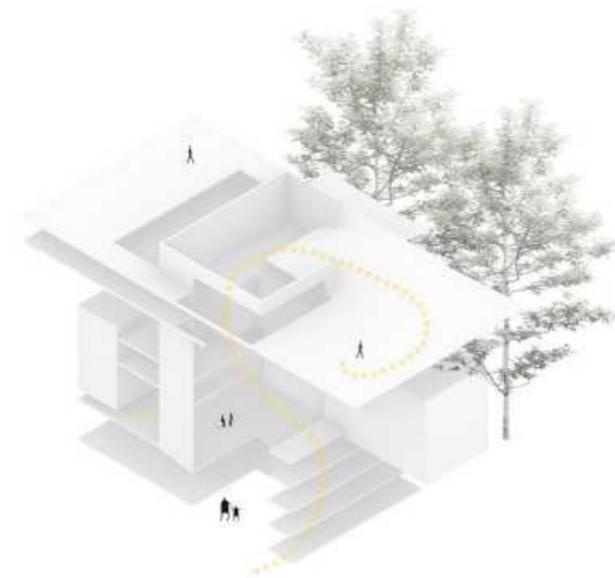
The scheme takes the reconstruction of the base as the core and stacking as the means to build a city unit with no absolute height, convenient travel for residents and interwoven functions by generating spatial form structure, growing three-dimensional functional network and cross collaborative form function.



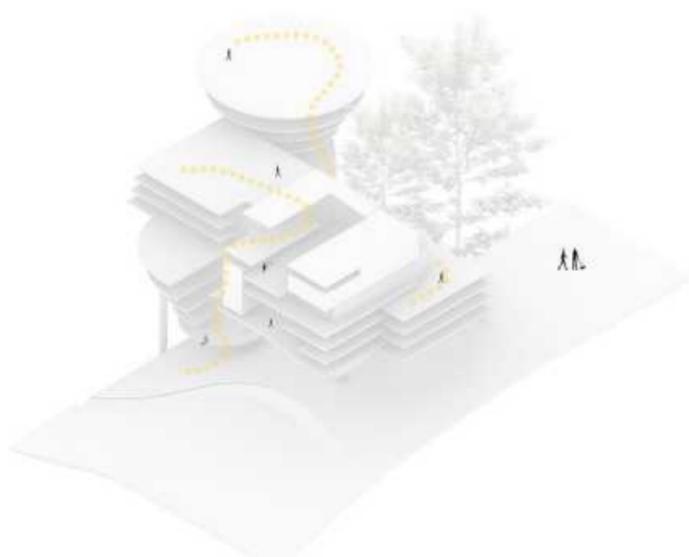
Office



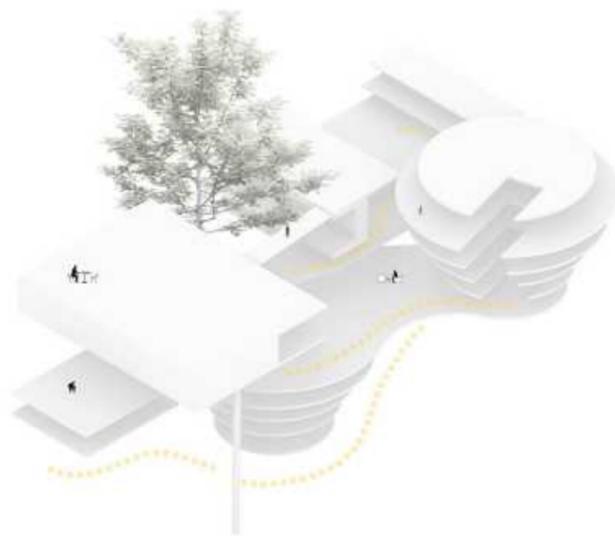
Theatre



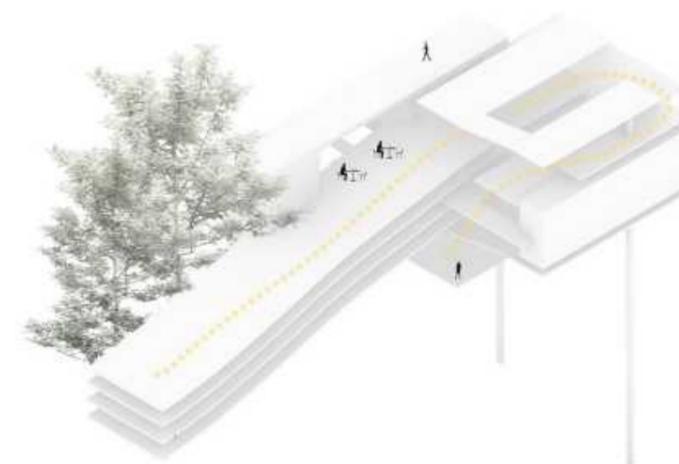
Metro Business



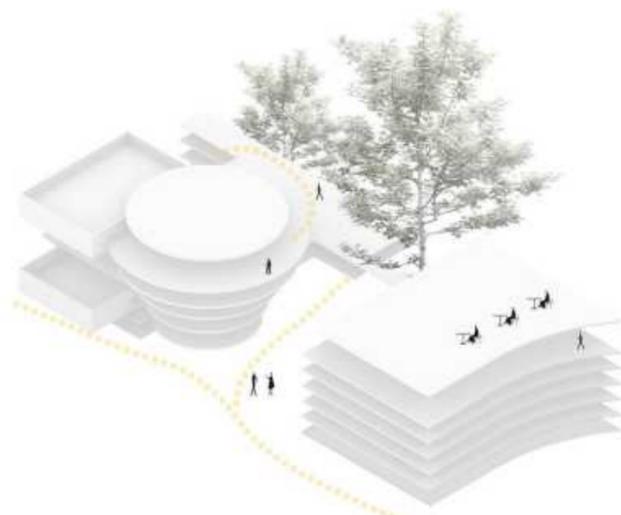
Hotel



Art Gallery



Service Centre



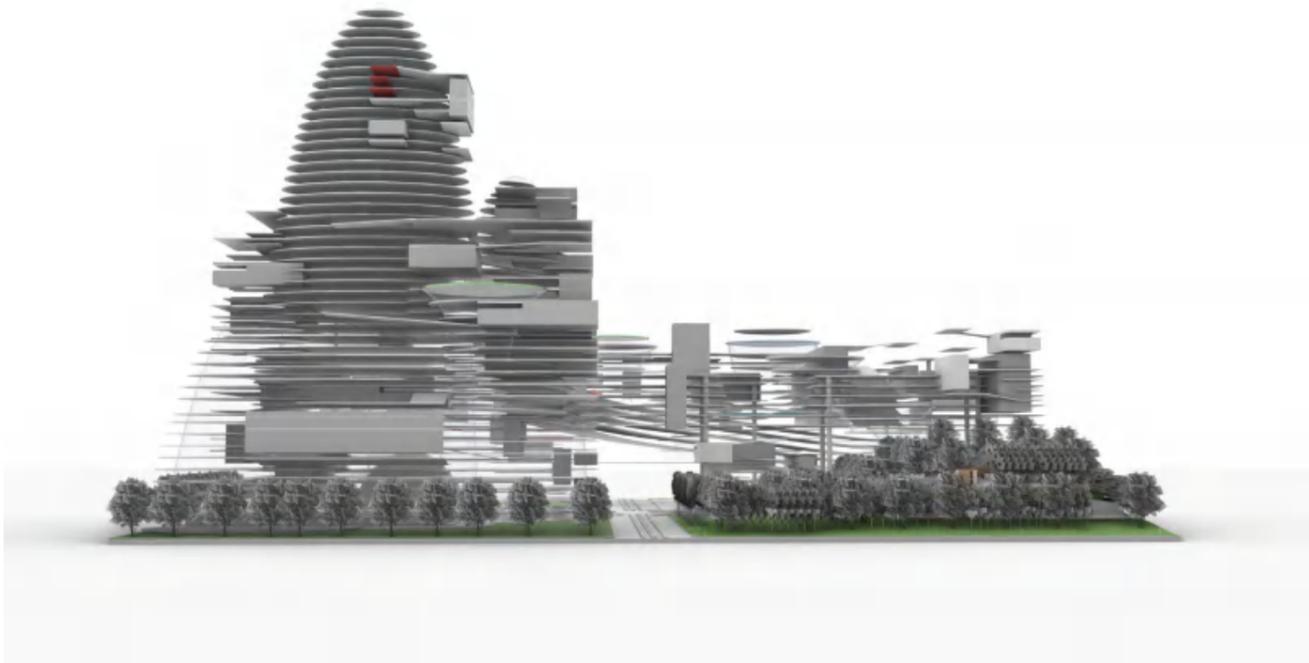
Business&Education



Business



Film&Periphery





## Functional Partitioning

- Ecological Habitable
- Business Entertainment
- Media Culture
- Office Activities

**SHAPE GENERATION:** Based on spatial accessibility, the multi-layer spatial structure is generated, and the multi-layer traffic is organized by distance, function, mode and demand. In the process of constructing the transportation system and establishing spatial accessibility, the whole spatial form is formed by stacking based on rebuilding base.

**FUNCTIONAL STRUCTURE:** Take the human demand as the core, carries on takes the transportation as the guidance system the reverse expansion. According to the needs of people in the city, a residential, office, entertainment and Shopping Unit for personal life is constructed, and the functional structure is organized with the unit drawn in modules, and deduced into the traffic system.

**ORGANIZATION LOGIC:** Take the slow traffic system as the space organization way, through the construction point, the line, the surface interweaves the transportation system, will the modular function unit to carry on the series connection, realizes the space interior interaction. At the same time with the urban public transport system to connect, attract external flow of people.



Through the combination of different spatial units and different contact ways, a new spatial form is formed. From the perspective of human centered interpretation of the city, the disappearance of absolute height of the city, people will take their own position as a high reference.

Under the multi-scale reconstruction of spatial structure form and functional form, realize the real three-dimensional city.

Use lost horizon to express the image of urban form and structure and the vision of social life, and reflect the interaction between cities, buildings and their residents.



5

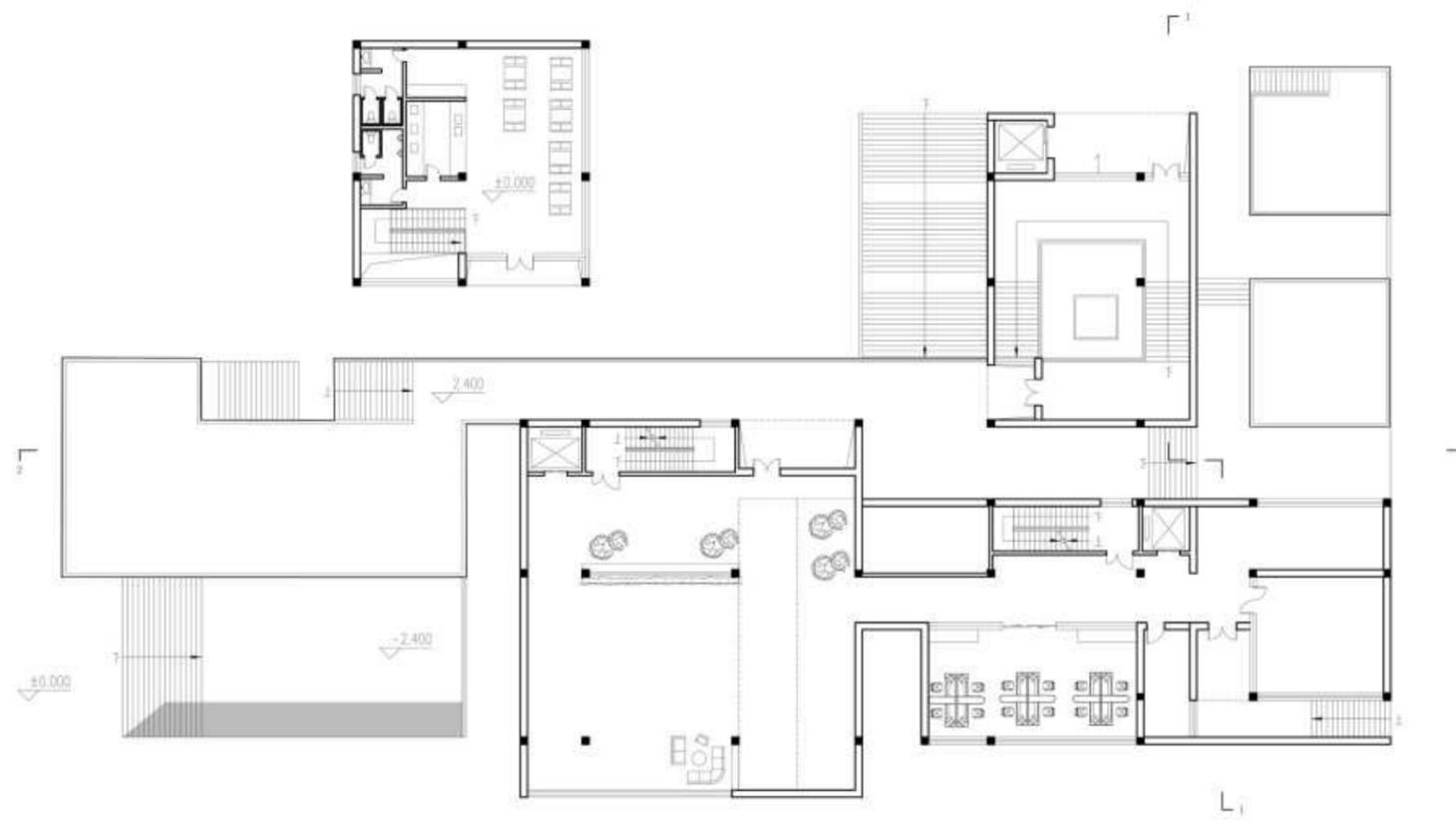
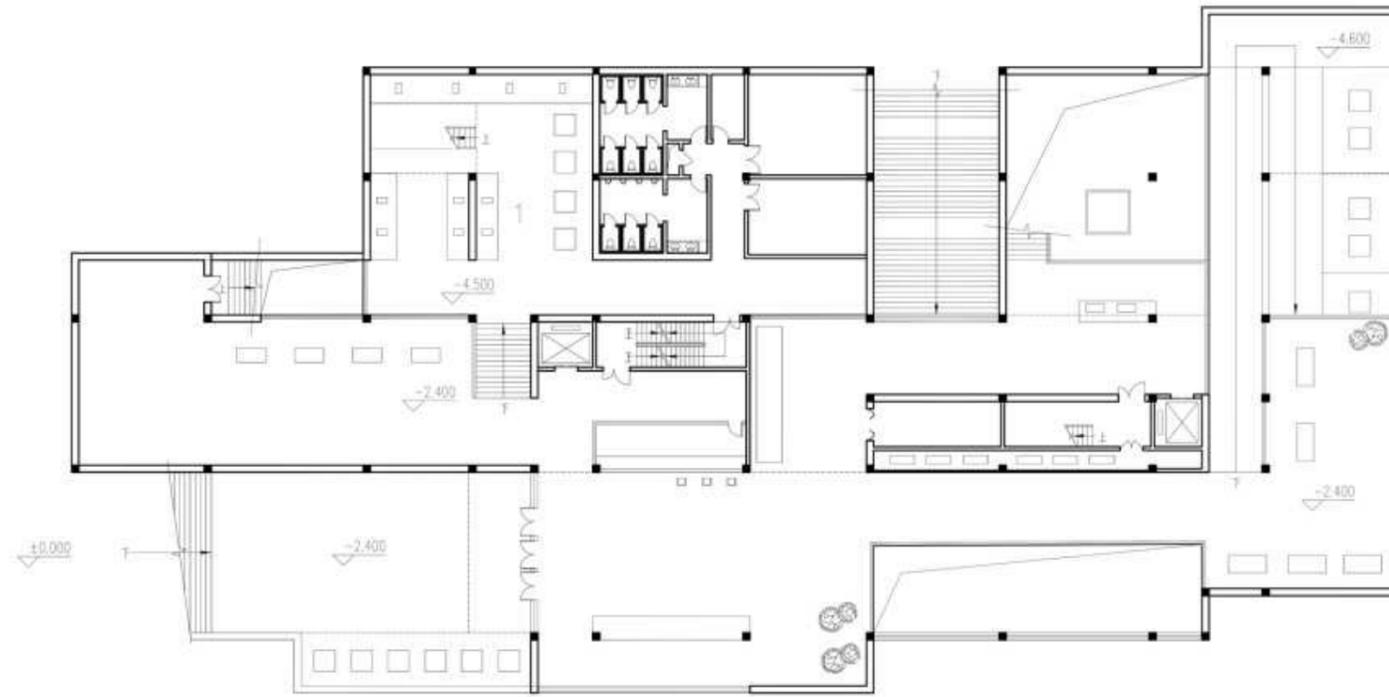
## 地下深处的美术馆

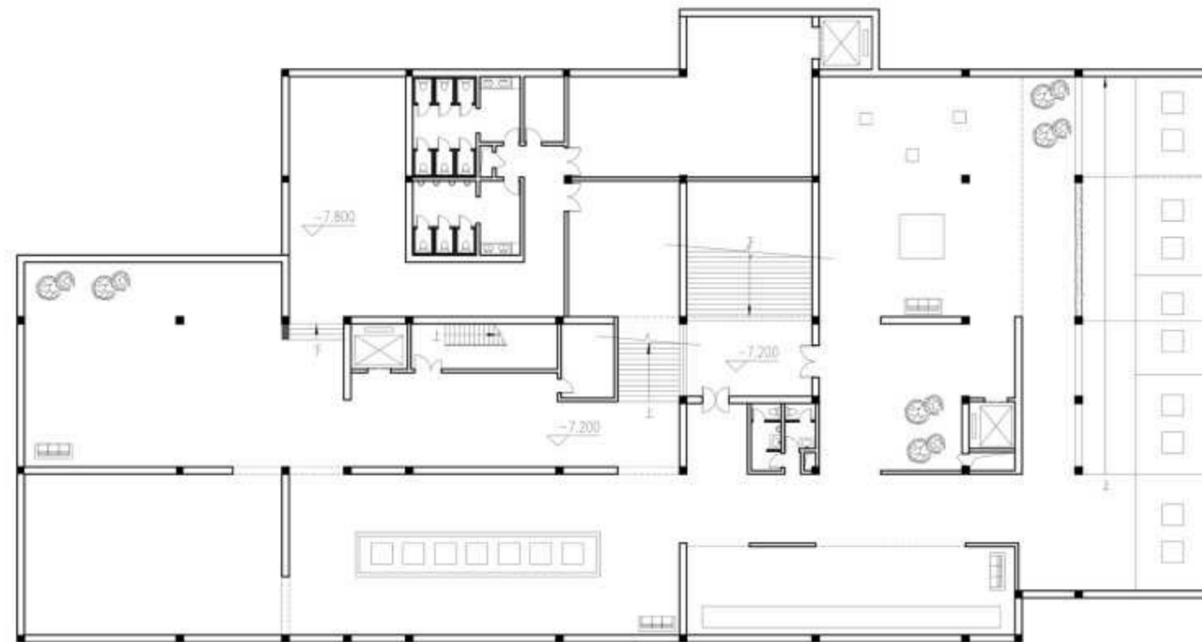
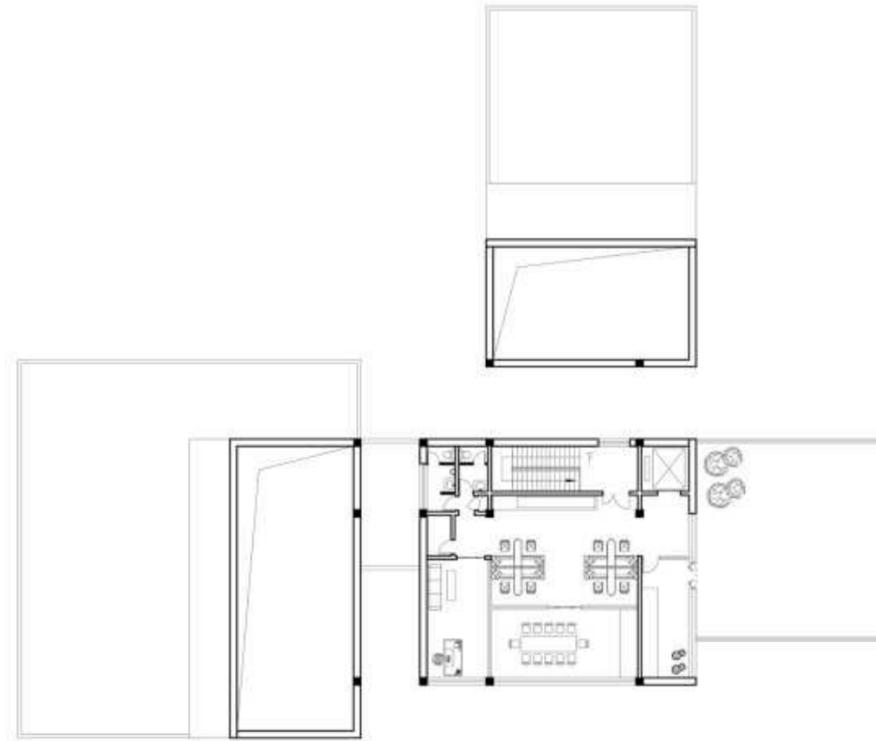
视频链接: <https://www.bilibili.com/video/BV1pv411k7AD/>

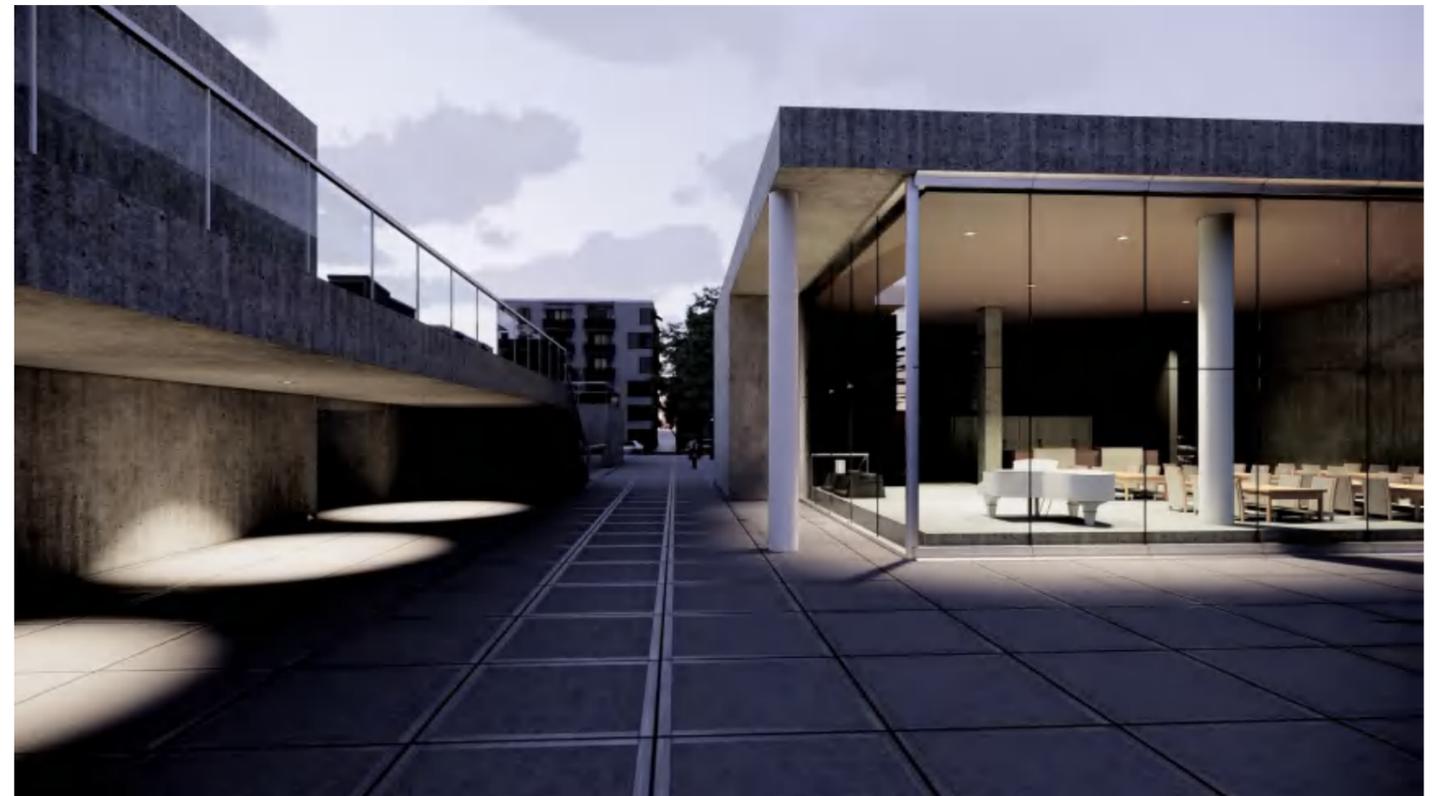


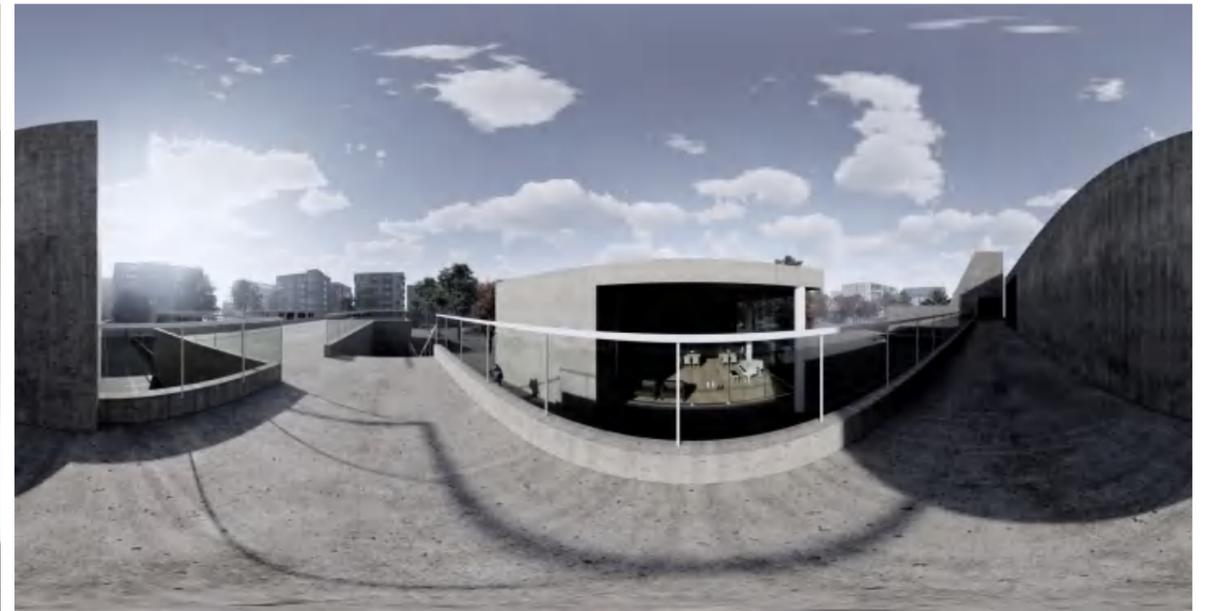
总平面图 1:500









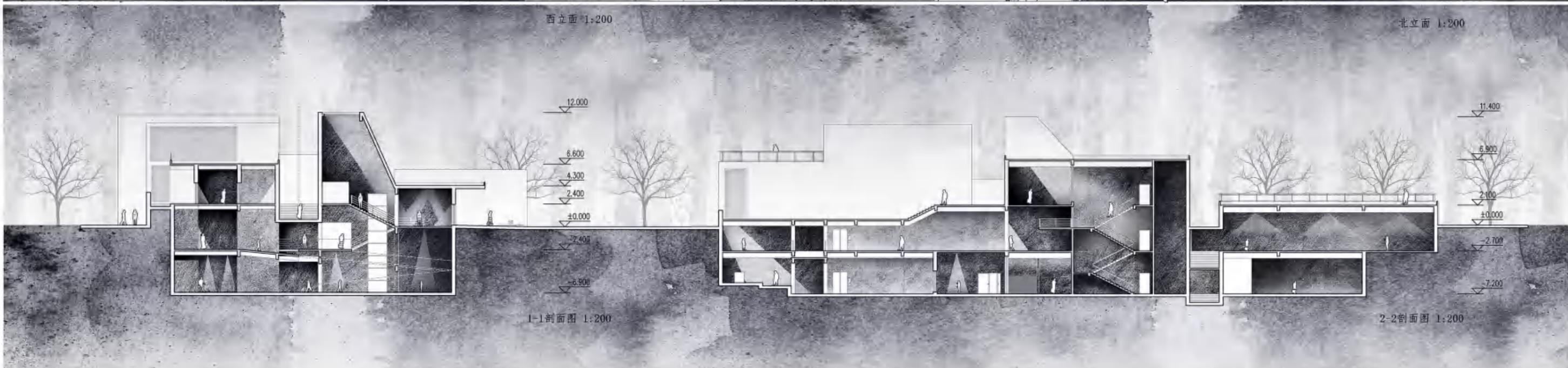


全景透视效果图



西立面 1:200

北立面 1:200

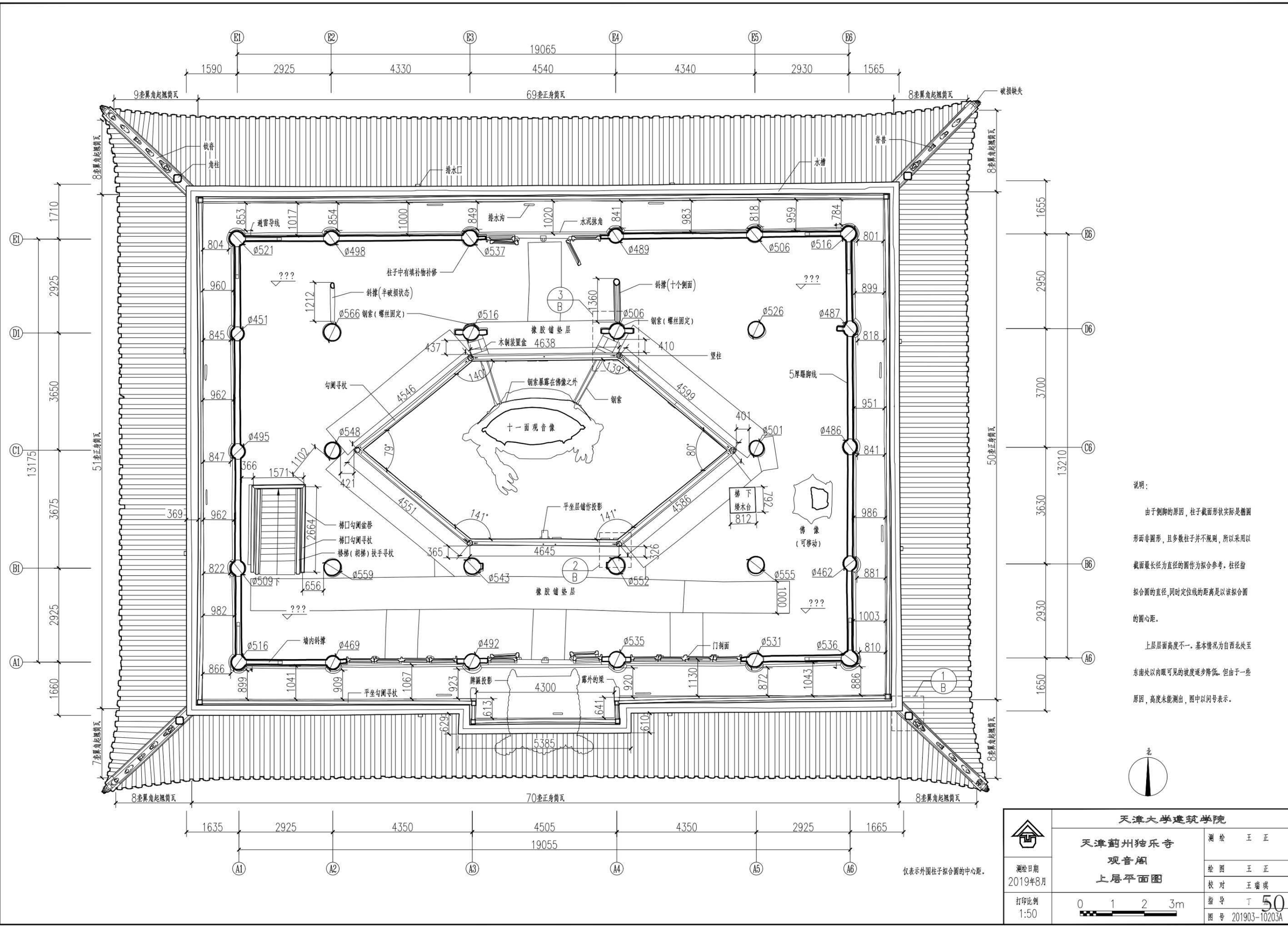


1-1剖面图 1:200

2-2剖面图 1:200



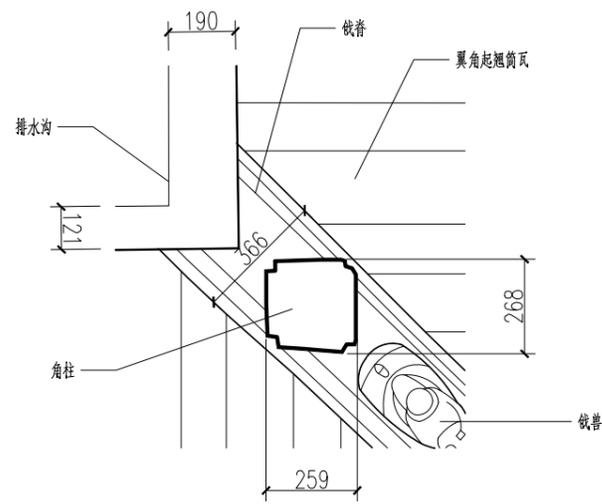
# 6 独乐寺观音阁测绘



说明：  
 由于侧脚的原因，柱子截面形状实际是椭圆形而非圆形，且多数柱子并不规则，所以采用以截面最长径为直径的圆作为拟合参考。柱径指拟合圆的直径，同时定位线的距离是以该拟合圆的圆心距。  
 上层层面高度不一，基本情况为自西北处至东南处以内眼可见的坡度逐步降低，但由于一些原因，高度未能测出，图中以问号表示。

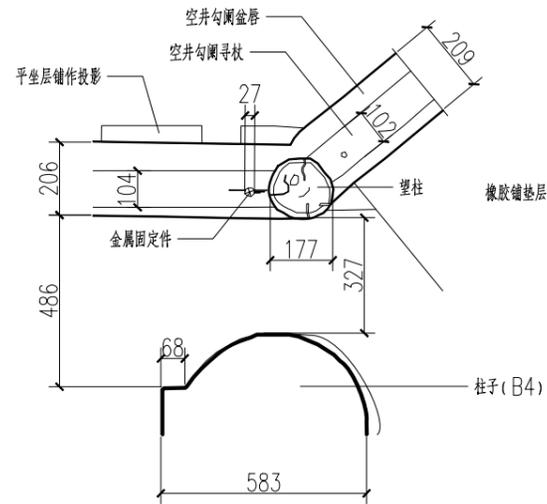
<b>天津大学建筑学院</b>		测绘	王正
<b>天津蓟州独乐寺 观音阁 上层平面图</b>		绘图	王正
测绘日期 2019年8月		校对	王瑞琪
打印比例 1:50	0 1 2 3m	指导	丁 50
		图号	201903-10203A

仅表示外围柱子拟合圆的中心距。



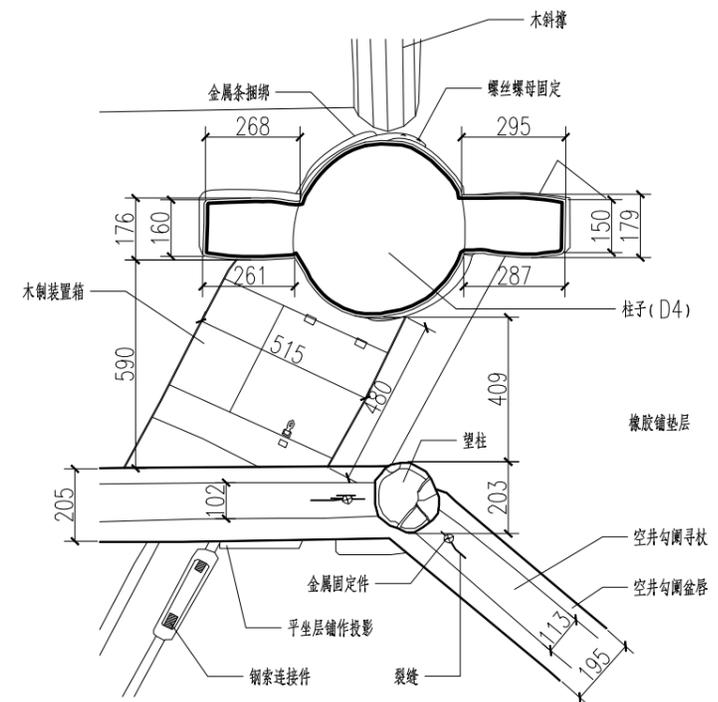
1/B 局部大样图 1:10

- 1 角柱的四个角均作缺角处理, 其他三个角柱也类似。
- 2 排水沟有可蓄水的凹槽, 排水口从凹槽内接出。



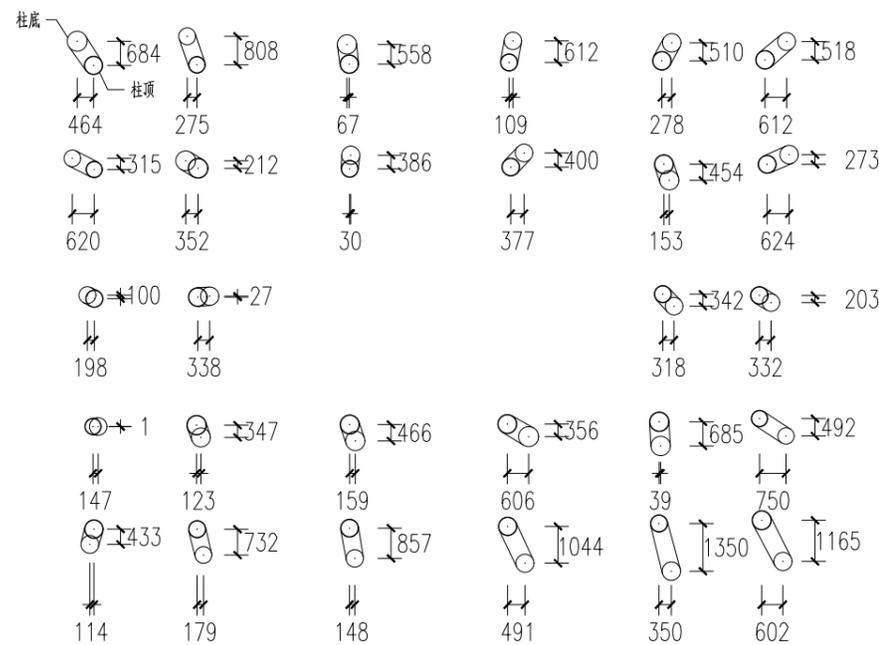
2/B 局部大样图 1:10

- 1 柱子(B4) 只有一侧有辅柱, 且比其他的辅柱都小。
- 2 柱子与勾阑之间仅可一人侧身通过。
- 3 盆唇在望柱处用钉子与望柱连接。



3/B 局部大样图 1:10

- 1 柱子东西侧的辅柱并非方形, 而在各自的长边微微隆起。
- 2 金属条带搭接处用螺丝固定。
- 3 斜撑与柱子之间有很小的间隙, 推测在层面以下是撑在了柱子之上。



柱身倾斜示意图 1:100

说明:

- 1 柱顶和柱底的圆形拟合方式与上层平面图的拟合方式一致。
- 2 由于技术条件有限, 在拟合过程中存在偶然误差。
- 3 柱身倾斜形态以柱顶为基准, 柱底偏移放大10倍。
- 4 柱底截面并非在实际意义的柱底位置, 而是在三层面面处。
- 5 为区分需要, 柱顶向内加粗0.3mm(实际图面), 柱底不变。

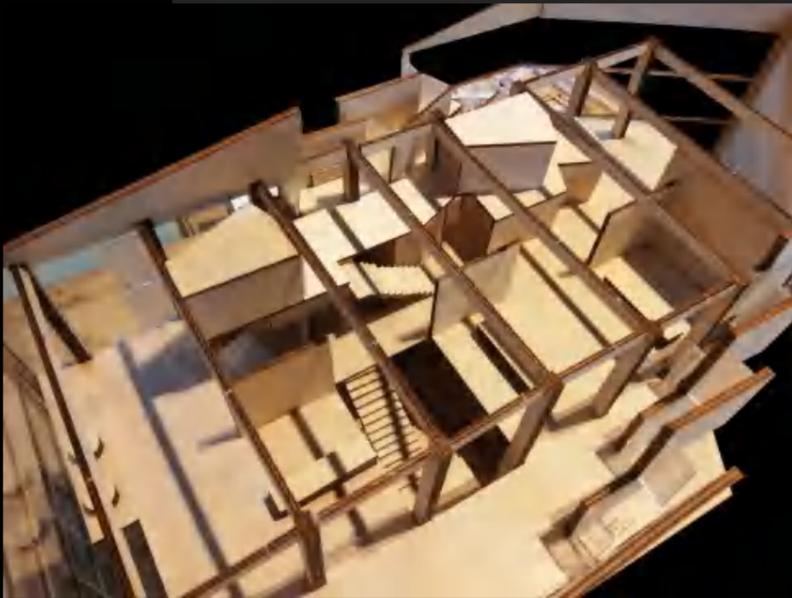
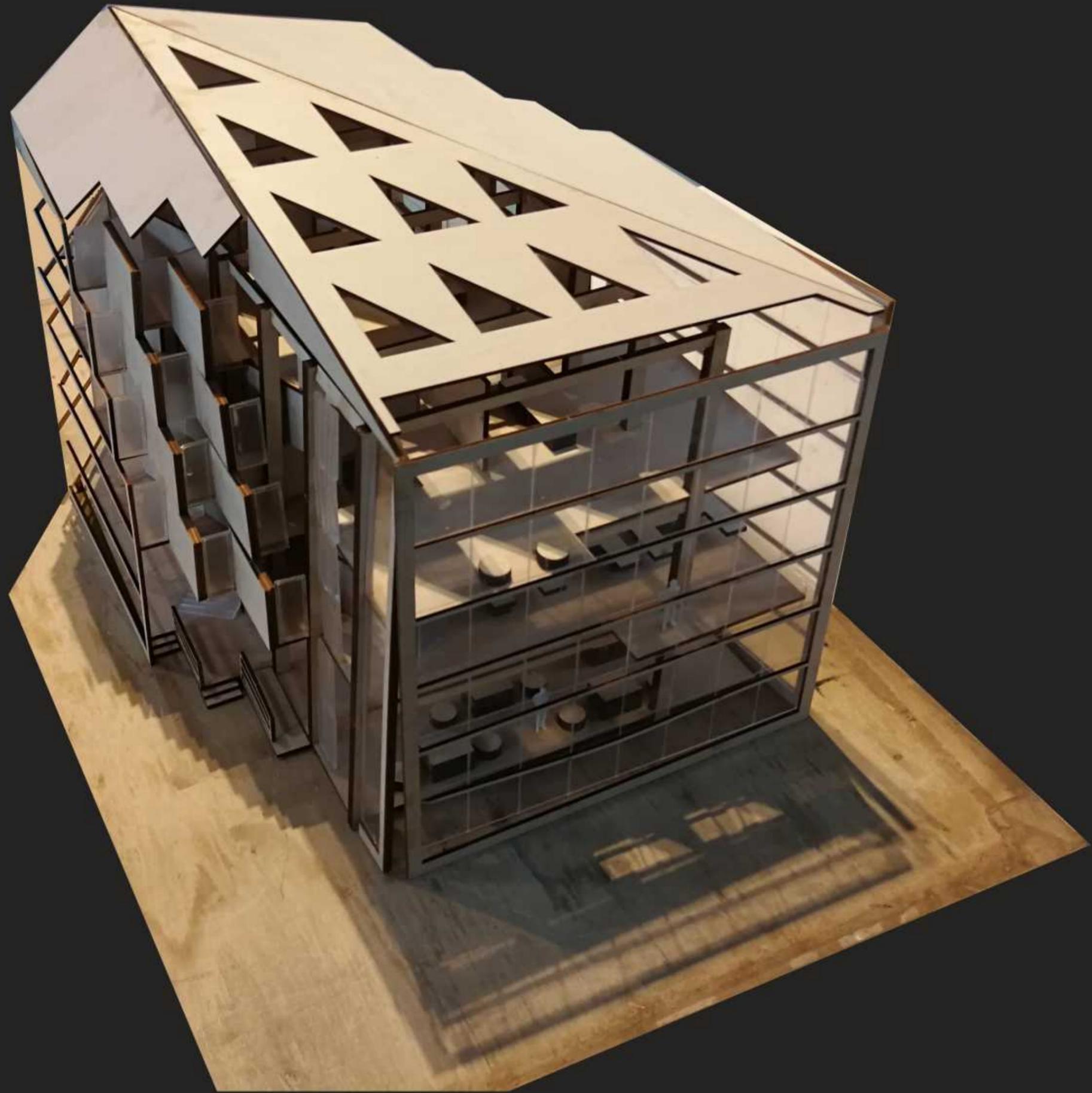


		天津大学建筑学院	
		天津蓟州独乐寺 观音阁 上层平面图	
测绘日期 2019年8月		测绘	王正
		绘图	王正
		校对	王瑞琪
打印比例 1:10 1:100		指导	丁 51
		图号	201903-10203B



## 其他

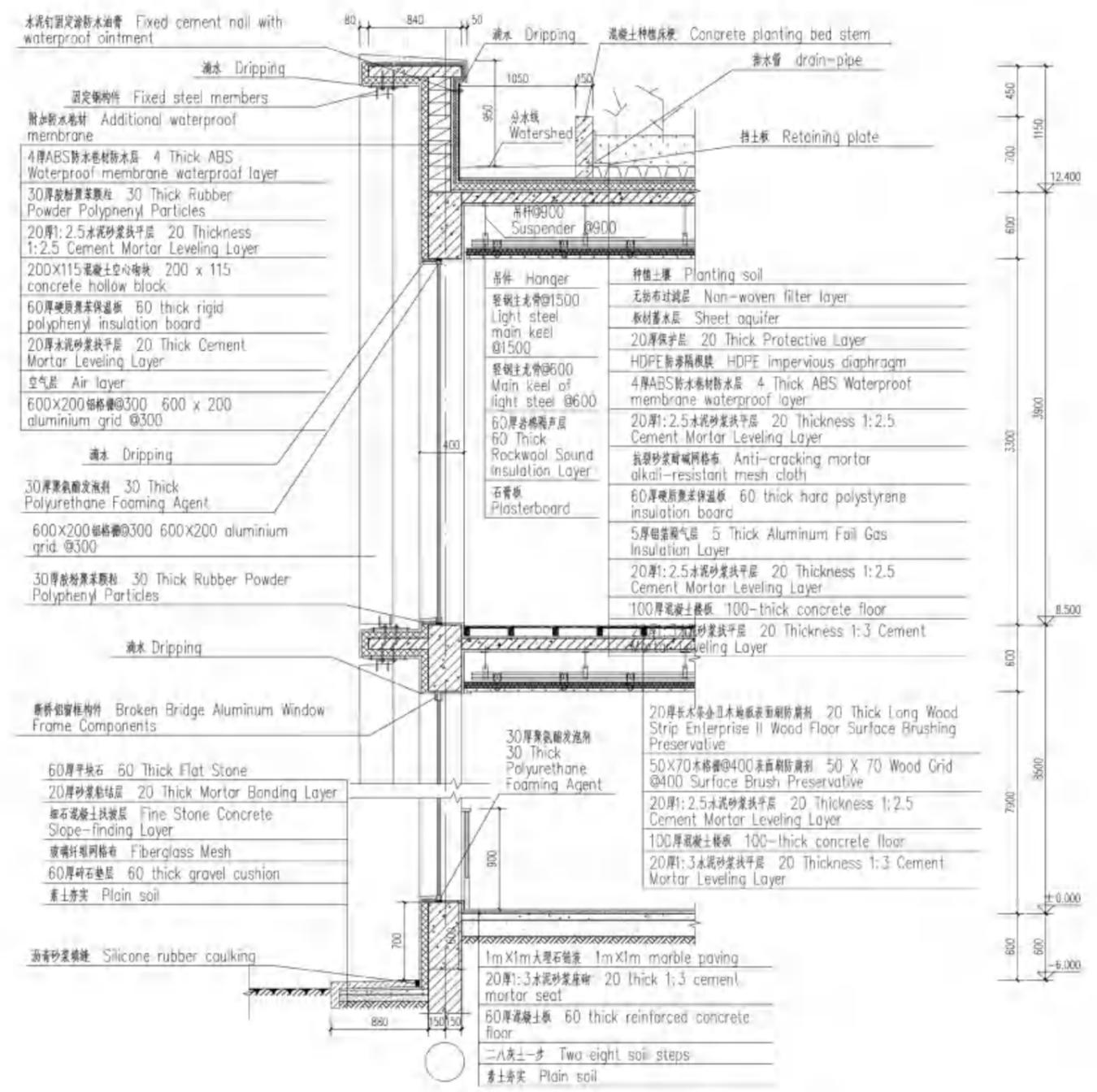
水利馆旧厂改造建筑学院绿色生活馆、南开大学图书馆、湖畔咖啡馆、建筑构造设计等等





楼梯节点大样构造 1:10

垂直绿化构造详图 1:50



檐口至室外地坪构造剖面图 1:25

以上，感谢阅读