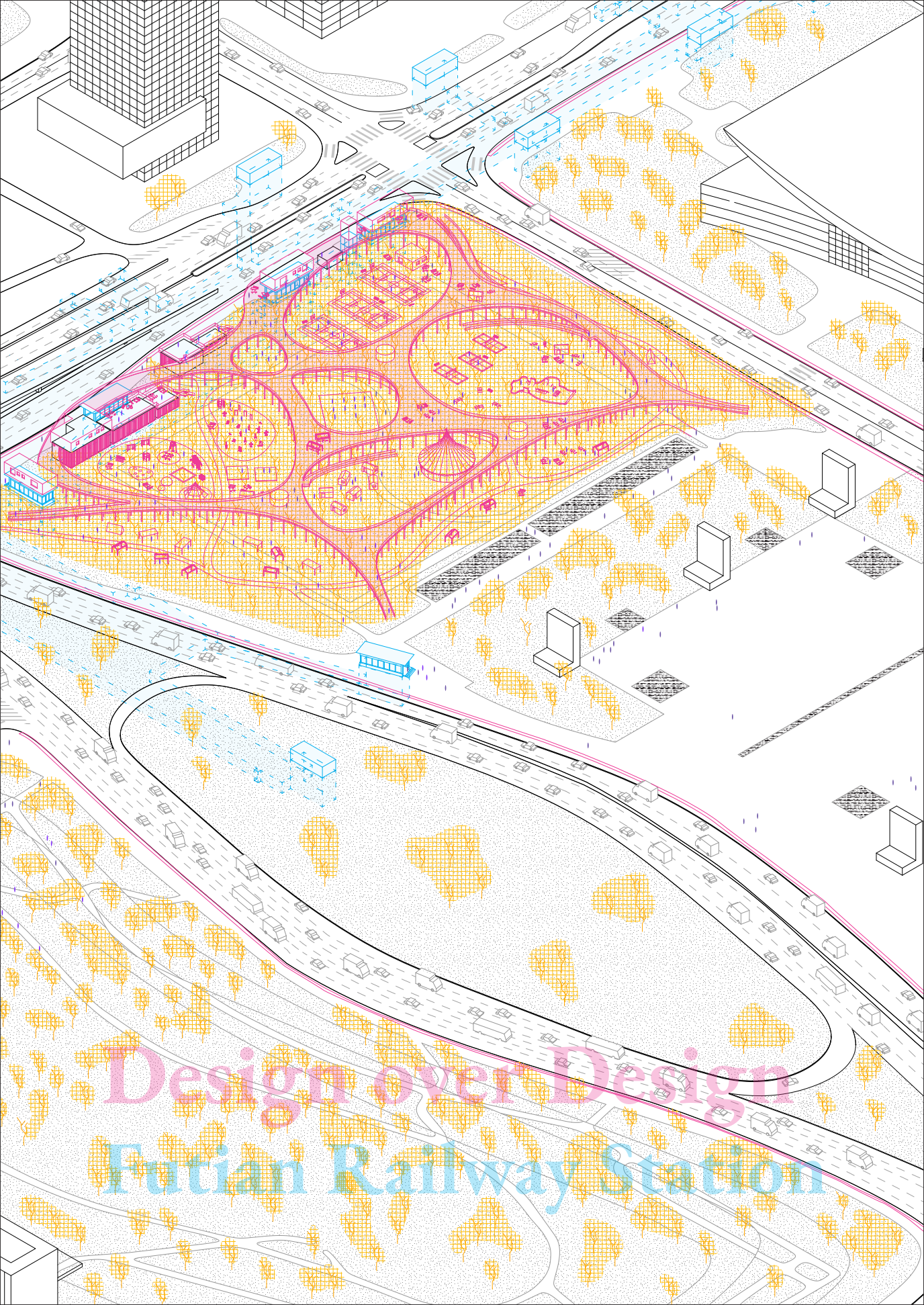
Design over Design
Futian Railway Station

POLYTECHNIC OF TURIN

MSc degree program in

Architecture Construction and City

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MASTER THESIS

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to all the people that arouse my curiosity

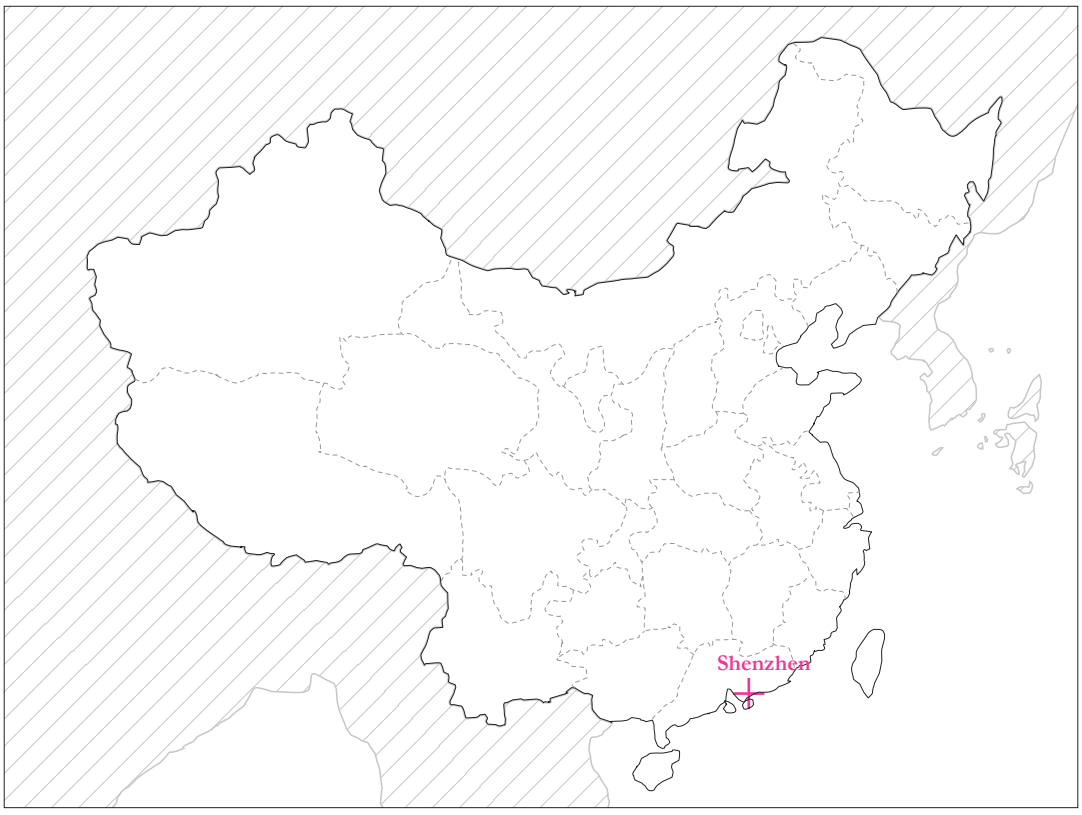
Index

1. Introduction

The development of Shenzhen follow the Chine's city trend, in particular the high speed growth is due to the continuously increase of incoming population to the city . However, it's fast process is not immune to the problem caused by the rapid development and the city have to continuously adapt the planning proposal. In 2005, the major of Shenzhen declared four main problem: limited land, shortages of supply like energy and water, demographic pressure and environmental contamination. In particular the conventional strategy to rise the GDP through the increase of labor was unsuitable because the city was already devoted to demographic congestion. Shenzhen necessitated a realignment and provided: more restriction to the land approval, higher minimum wages respect to the others Chinese cities and rise the environmental standards banning the high pollution industry. (Hu, 2007)

Nevertheless the first advantages that brought to the rapid development of the city, the next phase of restrictions brought to an exodus of the first stakeholders. Shenzhen reacts with a series of plans that enhance the primary intention to became an economic pole, it refocused the target of investors to an export-oriented light industries and high-tech industries, however this process create a disequilibrium and leave some void in the Shenzhen's industrial basis. The city develop the skills to became also the designer of goods and not just the purely production, therefore, in 2008, the national government elect the city to became the first innovation center.

Shenzhen became an innovative and replicable model for reforms, after the first economic reorganizations some institutional and political reform was needed. The political reform have brought to a reshape of the municipal government from an omnipresent to a more limited one, from a regulator/ administrator to a service provider, and from a power holder and influence-wielder to one with a greater civil service identity and accountability. (Chen & de'Medici, 2010)



Location of Shenzhen

1.1. The Neoliberalization Process

Nowadays, the growth and transformation of the cities is strictly correlated with the political project of neoliberalization. A propensity to prioritize the global market forces, the interest of the private sector and the logic of efficiency and competition at the expense of others social and political concerns. The neoliberalization have brought an ideological approach of "growth first" urbanization. (He & Wu, 2009)

Many cites in the world have adopted this neoliberalization approach, the privatization of urban economy, marketization of urban services and commodification of the public goods and the resource left in the "Commons". (Harvey, 2005) (Ong, 2007)

The perception of cities change from a new centralized point at regional and national level to an arenas and exchange platform for foreign stakeholders. The "creative destruction" of urban land and the political projects related have been seen as a forced step to the neoliberalization. The commodification of land resources and public assets has determined the process, the phenomenon it's not linked to a unique model of governance but it's connected to the multiple and various institutional forms. (Brenner & Theodore, Cities and the geographies of "Actually Existing Neoliberalism", 2002) (Brenner, Peck, & Theodore, Variegated neoliberalization: geographies, modalities, pathways., 2010) (Peck & Tickell, 2002) (Wilson, 2004)

In particular more phenomenon have been noticed: marketization of land property rights, privatization of state-owned enterprise, growth of the private sector and individual business, establishment of the labor market, influx of foreign investment and expansion of international trade. Even the socialist welfare system such as education and public health care services have subject to commodification and marketization. However, in contraction of the neoliberal policy that prioritize the markets force and reduce the influence of the government, the socialist state have always been present during all the market transition. (Liu & Lin, 2014)

1.2. Neoliberalization in China

During the last 30 years, neoliberalization have brought China in a marketisation of the economy and an entrance to the global world. The rapid urbanization means an high augment of urban population and a rapid expansion of urban land at the expense agricultural and unused land. Chinese local and municipal governments took the opportunity of land urbanization for capitalize on land resource for follow them economic and political purpose. The phenomenon is called "the urbanization of local states". (Hsing, 2010).

The land revenue became soon an important supplement to local public finance, normally they are not considered under the regular budget but is categorized as extra-budgetary or extra institutional revenue and they are regulated and supervised from the superior government. (Wong, 2010)

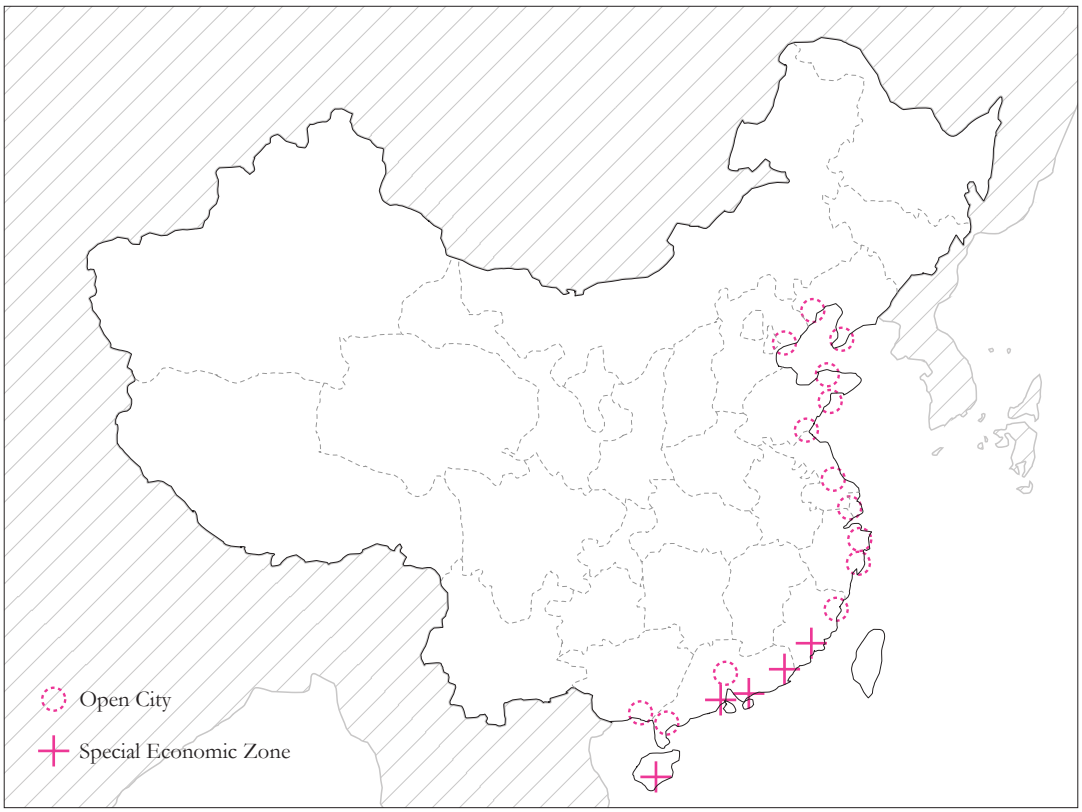
The practice was not limited to the coastal cities, also in the hinterland they adopt this practice in order to generate more urban development at the expense of the peripheral land. In 1994, considering that liabilities and responsibilities or urban development was decentralized, China's central local power introduce a tax-sharing system whereas the tax revenue collection was recentralized. The local government need to sale or leasing land to generate incomes for the urban development, this has led to an important involvement of industrial stakeholders. The cheap land sales didn't generate an immediate income for the local government but was in optic to gain subsequent budgetary revenue and create a more interesting area for the next activities.

Two type of land commodification was created, a first one based of negotiation for the industrial land sale at low price and a second one based on auction for the commercial and residential development at high price. The phenomenon was initially concentrated in the eastern coastal region, in particular in Zhejiang, Jiangsu and the Pearl River Delta's region; after a decade the trend changed and the trend move to the hinterland and the western coastal region.

The Central State, the ultimate owner of urban land, was not only focused in providing space for the urban development and revenue base for local government but it was also focused to maintain a minimum quantity of agricultural land, to preserve environment protection and sustain social equality. (Ho, 2005) (Hui & Bao, 2013) (Ito & Ni, 2013) (Skinner, Kuh, & Joseph, 2001) (Xie, Mei, Tian, & Xing, 2005)

The Ministry of Land and Resource have faced these problems introducing two regulation to monitor and facilitate the urban development of the land market: The Regulation on Transferring the Use Right of State-Owned Land by Tender, Auction and Listing; The Regulation on Transferring the Use Right of State-Owned Construction Land by Tender, Auction and Listing. The first one regulate the conveyance and land right for commercial, tourism, recreation, residential, and other types of profit-making activities; the second one instead regulate the industrial land. As a main action they provide more income for the municipal government rising the land's price.

The high presence of foreign stakeholders was important for the land commodification, initially possible just in the Special Economic Zone of Shenzhen, it was the principal impulse to increase the transaction. In particular, cities with an high level of fiscal pressure get more income from land commodification and depend from the conveyance's land. (Lin, Li, Yang, & Hu, 2014)

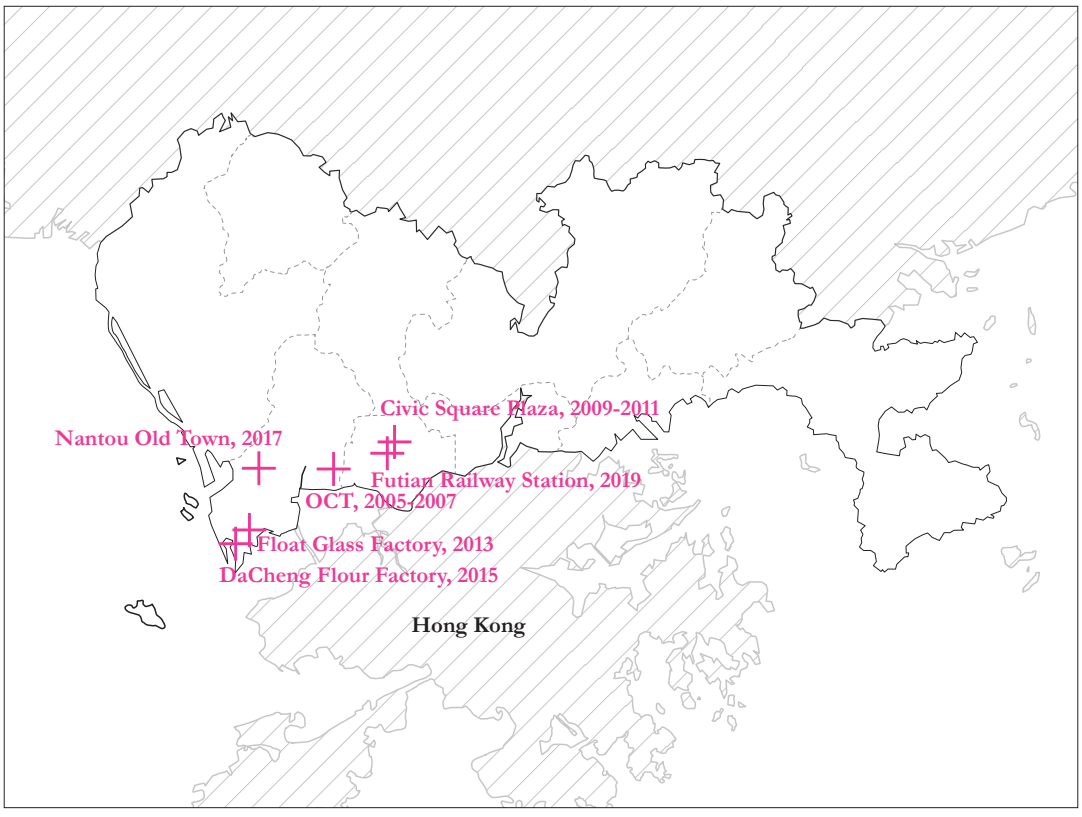


Redraw of Open Cities, and Special Economic Zones. Source: Lin G. C., 2002

1.3 By-City Biennale of Urbanism and Architecture

Bi-City Biennale of Urbanism\Architecture (UABB) is currently the only biennial exhibition in the world that is based exclusively on the set themes of URBANISM AND URBANIZATION. Co-organized by the two neighbouring and closely interacting cities of Shenzhen and Hong Kong, UABB situates itself within the regional context of the rapidly urbanizing Pearl River Delta, concerns itself with globally common urban issues, extensively communicates and interacts with the wider public, is presented using expressions of contemporary visual culture, and engages in international and avant-garde dimensions as well as discourses of public interest.

Initiated by Shenzhen in 2005 and joined by the adjacent city Hong Kong in 2007, the Bi-City Biennale of Urbanism\Architecture (hereinafter referred to as UABB) has evolved into a unique breed among its kind that is held and interacted between twin cities: a Bi-city Biennale. UABB was originally conceived by the urban planning department of Shenzhen Municipal Government for the purpose of constructing a more influential, more professional and more interactive exhibition. Although UABB embraces the general name and system of Biennale in arts and architecture exhibition, its intention is divergent from being merely an architecture showcase, but focusing on the macroscopic background of unprecedented rapid urbanization in China and issues of cities and urbanization (In the name of UABB, "Urbanism\Architecture" implies the idea that architecture belongs to cities and the discussions should be made under the context of cities). Already held in Shenzhen and Hong Kong for the sixth time, UABB is the only international biennale that sets "urban & urbanization" as its permanent theme. With about 930 pieces of excellent exhibits and 520 activities, UABB has attracted over 1.1million visitors worldwide. UABB takes full advantage of multi-media, such as design, image, installations, drama, public art, monographic study and discussion, and reveals different aspects of the progress of urbanization and human habitation of Shenzhen, Hong Kong, China and worldwide. (UABB, 2019)


Civic Square Plaza, 2009-2011
Nantou Old Town, 2017
Futian Railway Station, 2019
OCT, 2005-2007
Float Glass Factory, 2013
DaCheng Flour Factory, 2015
Hong Kong

UABB Venues

1.3.1. "City, Open Door!", 2005

Curator: Yung Ho Chang
Venue: OCT Contemporany Art Terminal (OCAT, south area of OCT Loft)
Projects: 82
Academy Forum/Events: 9
Visitors: 30.000

The biennale took place in the OCT Contemporary Art Terminal Shenzhen, the headquarters of OCAT Museums. Even if Shenzhen is the city know for the rapid growth and urbanization, Chang organize the exhibit in the different elements that define the classical city of todays: Urban Village, University Town, Outer City, Inner City, Film City, etc. Indeed, from an Architectural point of view, Chang take a position that conflict with the Chinese urban ambition and speculative investment, he present an analytical, sensitive and reconstructive way for the development of the City.

In addition, also the title: "Open City, Open Door!" can suggest an ambiguous reading, it can allude to a democratic and political opening that contrasts the current Chinese political line.

For the exhibition, each Chinese Architect have to the develop a personal cluster for this concept, under the supervision of FCJZ studio, according to the scale of the old urban structure. Among the principal exhibitions the group URBANUS developed a concept for the small cities of Gangsha and Fuxing providing green roofs and adding new level at the building. (Doderer, 2006)

source: szhkbiennale.org

1.3.2. "City of Expiration and Regeneration", 2007

Curator: Ma Qingyun
Venue: OCT Loft, north Area
Projects: 138
Academy Forum/Events: 44
Visitors: 70.000

From this year the biennale become the first By-City Biennale of the world in collaboration with the nearby Hong-Kong, it was organized in "One Theme, Two City".

This biennale face the questions about expiration, aging and regeneration of the city. The exhibition is not organized following the architectural model-description line but it's integrated with mixed media such as video and sound installation or lighting projection.

The project presented are mostly real project and not academical work. Between the most appreciated there are the working-class housing complex in Nanhai from Urbanus that reinterpret the traditional tulou type into a big complex that include residential, commercial and social space. The winning entries are rpaX and MVRDV that for a competition for a new Town in Shenzhen developing a city balanced between privacy and density. (Law, 2008)

source: szhkbiennale.org

1.3.3. "City Mobilization", 2009

Curator: Ou Ning
Main Venues: Shenzhen Civic Square
Sub Venue: Shenzhen Wan Avenue; Yitian Holiday Plaza
Projects: 64
Academy Forum/Events: 13
Visitors: 60.000

The biennale is organized in the most emblematic place of the Chinese city: the Civic Square, during the 30 anniversary of the economic zone. The square is located in front of the government and it's expressly over-sized as the principal function is to represent the government's political power and induce a sense of inferiority in the Citizens. The exhibition want to convert this empty and inhospitable place into a public space with playful installation and temporary architecture in order to involve people to live it.

That the reason why between the exhibitors there are architects, designer and artists. The most fruitful exhibition belong to: Futerfarmers with a structure in centre of the plaza that children can climb on it; instead Sou Fujimoto that deal with the availability of public space in Japan. Alongside the exhibition have been organized also other "events" as for example non-stop marathon, among them Rem Koolhaas and Hans Ulrich Obrist was speaking about "The Chinese way of Thinking". Was also organized an analyse and critique from 10 architects to 10 buildings already built somewhere in China. The Overall idea is to debate and discuss the over-urbanization and the not equal distribution of resource in China. (Hornsby, 2010)

(Shenzhen/Hong Kong Biennale 2009, 2009)
(Ning, Pai, Huangsheng, & Bauer, 2012)

source: szhkbiennale.org

1.3.4. "Architecture Creates Cities. Cities Create Architecture", 2011

Curator: Terence Riley
Venues: Shenzhen Civic Square
Projects: 60
Academy Forum/Events: 30
Visitors: 150.000

The statement of the biennale want to explore the cyclical growth pattern of urban city, defined by the endless circle where architecture creates cities and cities creates architecture in a time when sustainability is so critical and it is the point that stimulate a self-renewal.

The curatorial plan is in line with the past editions and feature a lot of international guests. Also this year part of the exhibition is in the Civic Square with the aim of give vitality during the all the day through some experimental installation by John Bennett and Gustavo Bonevardi and the "Urban Light Village": 6 statues that connect the plaza with the Lianhua Mountain Park passing through the Government Center. The main exhibition focus spread between: a critic about the success and failure of 6 cities < 60 years; 8 urban plans' studies on urbanization of the city level in China; "In my perfect world" a selection from some architects of the more sustainable project and others investigation about the changes due to the real estate boom. (Hackethal, 2011)

source: szhkbiennale.org

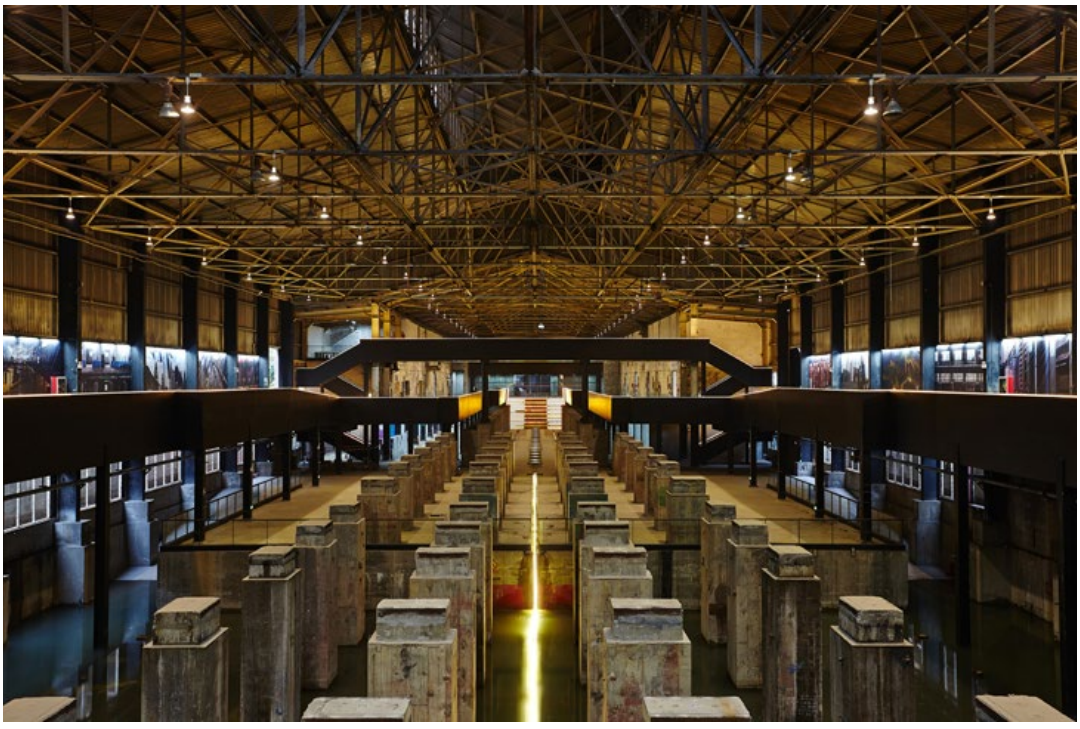
1.3.5. "Urban Border", 2013

Curators: Ole Bouman (Venue A) ; Jeffrey Johnson & Li Xiangning (Venue B)
Venues: Former Guangdong Float Glass Factory (Venue A)
Old Warehouse at Shekou Ferry Terminal (Venue B)
Projects: 135
Academy Forum/Events: 104
Visitors: 150.000

This edition is divided in two different section. The Venue A, curated by Ole Bouman, site in the Guangdong Float Glass Factory, one of the first industries in the region and the world's largest manufacturer of curtain-wall glazing factory that run have been in function from the 1986 to the 2009. Venue B, curated by Li Xiangning and Jeffrey Johnson, is located in the Border Warehouse, the old Warehouse at Shekou Ferry Terminal.

The renovation project of the Float Glass Factory, named Value Factory, was held by a group of 15 architects that have worked together in order to preserve and keep alive the existing value of the factory. A lot of institutions, such as MAXXI, MoMA, Victoria and Albert Museum took part at the exhibition along the architecture offices and debate trough installation and also documentary with case studies the past, the present and the future of Urban Borders.

The Venue B, the Border Warehouse, was also rehabilitated and host 70 projects divided in a five part exhibition explore the issue of Urban Borders, analysing the growth of this division and argue how it'll be in the next future. (Lilly, 2013) (Wainwright, 2013) (Bedir, 2014)



source: szhkbiennale.org

1.3.6. "Re-Living The City", 2015

Main Venue Curator: Aaron Betsky, Alfredo Brillembourg, Hubert Klumpner, Doreen Heng Liu
Sub-Venue Curatorial Team: Yong Yang, See You Tomorrow
Venues: DaCheng Flour Factory (Shekou) and NO.8 Warehouse
Sub Venue: District Xipu New Residence (Longgang)
Projects: 72
Academy Forum/Events: 180
Visitors: 200.000

This Biennale question about the value and how we can reimaging, repurpose, remaking our urban space and architecture. Already from the David Harvey's quote in the first page of the brochure: 'We have sleepwalked unknowingly into a full blown "crisis of planetary urbanization"' it's clear that we'll discuss the problem of urbanization in China. Aaron Betsky declare that the Biennale "is not about building but about non-building".

The Main Venue is located again in the Shekou District, this year the Dacheng Flour Factory will be renovated from the curatorial team and the Shenzhen based office NODE. The aim is to preserve the essence of the derelict factory and adding just few new solutions.

The Biennale is organized in 5 main exhibition: "Collage 3d City" is a collage of image, form and life of the Pearl River Delta's cities; "Maker Maker" is the connection between the most expressive digital world and the hand-crafting; "Pearl River Delta" explore the different future of the region; "Social City" are thought of expert and architects of the desired Social City; "Radical Urbanism" is a exhibition about real informal alternative cities. (Williams, 2016) (Digicult, 2015)

source: szhkbiennale.org

1.3.7. "Cities, Grow in Difference", 2017

Main Venue Curators: Hou Hanru, Liu Xiaodu, Meng Yan
Main Venue: Nantou Old Town
Sub Venue: Luohu, Yantian, Longhua Shangwei, Longhua Dalang, Guangming New District
Projects: 64
Academy Forum/Events: 180
Visitors: 300.000

The biennale is located in the Nantou Old Town, an Urban village founded more than 1700 years ago. From the 2016 Urbanus was involved in the Preservation and Regeneration Project of the Village, it was involved to maintain the historical traces and the cultural layers. The purpose of the Biennale is to revitalize the old center reconstructing the public open space through an exhibition route composed by architectural spaces and outdoor venues.

The exhibition is divided in 5 main venue: Factory Zone, Cross Road Zone, Southern Gate Zone, Historic Building Zone, Chunjing Street Zone.

source: szhkbiennale.org

1.3.8. "Urban Interactions", 2019

Curators "Eyes of the City": Carlo Ratti, Michele Bonino, South China-Torino LAB
Curators "Ascending City": Meng Jianmin, Fabio Cavallucci
Main Venue: Futian Railway Station
Sub-Venue: Yantian, Bao'an, Longgang, Longhua, Guangming, Dapeng New District and Qianhai Free Trade Zone

The Biennale aim to explore the evolving interactions between urban spaces and technological innovation, in particular between cities, city and inhabitant and between urban dwellers.

The exhibition is divided in two section: "Eyes of the city, curated by Carlo Ratti and SCUT, and "Ascending City", curated by Meng Jianmin and Fabio Cavallucci.

The "Eyes of the City" topic question how the artificial intelligence is going to impact architecture as well as people's daily life. The exhibition will collect design hypotheses and suggestions—imaginative, ironic, practical, visionary—so as to reflect on what kind of digitally-augmented city we want to build tomorrow.

The "Ascending City" will be divided in 3 parts: "Empowering Citizens in Progressive Cities", "Urban Alchemist", "Daily Sci-Fi" and will be powered by works from architect, artist, filmmakers, writers, museum advisor as well as interdisciplinary professionals.

The exhibition will be located fir the 3rd time in the CBD Center, in the Futian Railway Station. (Ratti & South China-Torino Lab, 2019)

source: szhkbiennale.org

1.4. Critical Comment

The biennale was planned by Mr. Wang Peng, the head of planning department of Shenzhen at the time. At the time there was already an architecture prize but it was without any influence, as he was not satisfied with the local scene for architecture, he decided to create a new platform for promote architecture in the city. With Huang Weiwen they agree to create a biennale that was different from the others, too focused on individual architects and buildings, so they thought that was a great opportunity to create an event able to involve all the stakeholders in making cities. The biennale, declined into an Urbanism/ Architecture biennale, wished to re-establish the Architecture as a subcategory of the Urbanism, in this period Chinese architect was too focused on building that they forgot the city, the integration. (O'Donnell & Weiwen, 2016)

The first biennale, so, took place in 2005 during the 25th anniversary of the Shenzhen Economic Zone. The curator, Yung Ho Chang, as is an interdisciplinary Architect focused also in Industrial Design and Fashion Design he brought a huge variety of material at the exhibition. The theme of the biennale was a good starting point: "Open Door: the Strategy of the City", it follow the Deng Xia Ping strategy "Open City" that helped the development of Shenzhen. This biennale took place at the OCT, an old factory building that was under development, already from this case the landlord was involved in the process of the transformation, but he invest just in the biennale, knowing that can take an advance from the development of the site. (Doderer, 2006)

The Biennale be tied to the OCT also for the second edition and it became the first By-City Biennale of the world in collaboration with Hong Kong. Unfortunately the statement "One Country, Two System" is present also in this case. They have, still now, two different type of organization but, at least, they agreed on the same theme. The curator Ma Qingyum focus on the theme "City of Expiration and Regeneration", reflecting the aim of the biennale of critically analyse the development of the city trough a contribution of different media not used for the-classical architecture exhibition of text-model. (Law, 2008)

After the Olympic Games China is becoming more careful to the raw development and the overload of new architecture, the lack of connection and space for engage with people is becoming more consistent. Shenzhen, in particular, is the youngest megacity of the world and is marked by the insufficient of soft and civil infrastructure and poor quality of public space. The 2009 Biennale could not be better placed, the Civic Square Plaza is an oversized empty space. In China, normally the government buildings are fronted by large public space that aim to frame the power being more higher than authority than public servant. The curator Ou Ning want to revitalize and give a human scale to the square through installations that communicate to the public, to engage it with some playful installation or temporary architecture. (Hornsby, 2010)

In 2011, the curator Terence Riley continue to discuss about sustainability and urban vitality with the theme "Architecture Creates

Cities. Cities Create Architecture." For the first time there is a non-Chinese curator, that brought the biennale into a more international ambient selecting real important foreign institution and featuring some Venice Biennale Pavilion. (Hackethal, 2011)

The next Biennale move on the Shekou area, which was the testing ground of the Special Economic zone. Here, it's where China, for the first time, flirted with land reform and private enterprise and the area embrace the free market capitalism policy. The main venue, the Float Glass Factory, has been derelict since 2009, the curator Ole Bouman not only provide an unique exhibition space for the biennale but restore a piece of heritage and history calling it the Value Factory, the manufacture of idea and knowledge. In the masterplan of the investor China Merchants there was to not the will to maintain the Float Glass Factory, the biennale tried to postpone, and maybe avoid, the demolition of it. The biennale reach the goal to became a catalyst for the development of the area, the renovation of the building was not just a background task and that's why the sponsor turn into an investor. Also if the renovation was headed by a group of 15 international architects they agree on do almost nothing and to

maintain the existing value. . (The future of Architecture Biennales worldwide, 2018)

Two years later the biennale maintain the purpose to re-use the Shekou urban past to the many new residential, commercial and cultural development in the area. As the curator Aaron Betsky says: "This Biennale of Urbanism in not about building, but about unbuilding.". The DaCheng Flour Factory was kept as the original atmosphere and the Shenzhen based firm NODE Architects revaluate it through punctual intervention. (Williams, 2016)

In 2017, the biennale moved in the Nantou, Urban Village like this one host almost half of the population of Shenzhen in just one-sixth of the land urban area. The choice of the location is against the "centralists" view on urban development and want to preserve the diversity and the balance between this two ecosystem. The curators use this reality to change the visitors point of view of how a city can be, they want to bring the people inside this reality and give the possibility to experience and reflect. Meng, Xiadou and Hou Hanrum preserve the existing fabric in the core of Nantou and act with a archi-punctural interventions for it and for in the

Nantou Old Town. They regenerate the community facilities, based upon the desires of the local community, for hosting the venues of the biennale and for serve the community in the future in order also to educate them to gradually improve and maintain the environment. (The future of Architecture Biennales worldwide, 2018)

For the next exhibition the Biennale is coming back to the Futian CBD, inside the newly opened Futian Railway Station, exploring the evolution of urban interactions through the use of new technologies.

Along all the years the biennale growth exponentially and it have been faithful to the purpose to rethink how China is making cities. Every edition had given doubt and suggestion about how we should reinterpret the existing space, in particular every year the action to re-design the unused space or to solve existing design problems had become more tangible. For this reason the purpose of the biennale to don't be just an exhibition but to design and leave some architectural interventions have been fundamental. The biennale is giving the suggestion to shifting the point of view from a quantity design to a quality design, trying to rehabilitate the human scale in the process of design.

2. Planning Shenzhen

The institution of the SEZ in 1980 was a great opportunity for experiment new urban planning ideas. China was used to plan with ideas coming the Soviet Union and, in particular, Soviet experts took part and guided Chinese urban praxis. In 1980, also if the Guangdong Province provide urban planning resource by way of Guangzhou, the principal part of the urban planning was generated by the Central Urban Planning in Beijing. Then, four years after, in 1984, a new division was located in Shenzhen, but it's just in 1990, that the local Shenzhen Urban Planning was established.

Chinese urban planning is a top-down system. Shenzhen urban plan is re-created every 10 years, starting from a new overall plan and then declined in district and sub-zone. The ratification is approved during a public meeting by the Major and department planning and land commission. Just after the ratification and the establishment of the "controlled detailed plan" it's possible to start urban construction. The top-down system give a general idea about the direction of the development. The young planners, not so experienced, started proposing to build up a particular area but they don't completely define what should be built. The planners are not so precise about what should be built in a specific area also because sometimes they nether know what is already existing in the area.

The two important value of the planning are the trajectory and the speed of urban development: the city is organized in Cluster developed along streets that define the axis of development. (O'Donnell & Weiwen, 2016)

1980 "Overall Plan for the Planning and Construction old Shenzhen City".

Planning of the 327.5 km2 for the area of Shenzhen Economic Zone and 60 km2 for the build-up area of Shenzhen City. The plan estimate a population of 300,000 for the 1990, rising to 600,000 in 2000. The plan is focused on industry-led development, a combination of industry and agricultural growth for the SEZ and define the border of the city.

1982 "Outline of the Social Economic-Development Plan for Shenzhen Special Economic Zone"

Extension of the 1980 plan as urban development and define Shenzhen as a comprehensive economic with a strong industrial base supported by commercial, agricultural, housing and tourism development. The population projection was raised to 250,000 by the year 1985; 400,000 by the year 1990 and 800,000 by the year 2000. This plan was the first proposal of the polycentric linear-clustering spatial structure for SEZ. It was already revised in 1983, based on the development of that time, the unexpected growth allow to reach the prefixed goal of the 1985 previously in the 1984.

1986 "Master plan of Shenzhen Special Economic Zone 1986-2000"

The plan revised the estimated growth of the 2000 and set it at 1.1 million and a urban built-up area of 123 km2. Even though the main focus of the plan was the Shenzhen SEZ, it determined a more advanced framework of the infrastructure construction and the polycentric linear-clustering spatial structure was revised.

1989 "The Urban Development Strategy of Shenzhen City"

The previous planning-led urban development was largely centred on the Shenzhen Special Economic Zone, this led to a problem of unbalanced development of inside and outside SEZ. The disparity property rights between urban and rural land and, as well, the contrast between the outside and inside Shenzhen was for the first time considered as a whole identity. The spatial development strategy was positioned as a city-wide development and progressive urban growth. The urban built-up area was enlarged to 150 km2 and the population growth established to 1.5 million by the yard 2000.

1996 "Shenzhen Master Plan 1996-2010"

The plan englobe the whole administrative area of Shenzhen city, 2020 km2. By 2000 the urban built-up area was estimated to cover 380 km2 with a population of 4 million. The urban built-up was expected to 480 km2 for a population of 5.1 million in 2010. The plan continue to develop the polycentric clustering structure along axes and corridors.

2006 "Shenzhen Urban Development Strategy 2030"

The first strategic urban plan for Shenzhen that aim to identify and resolve the urban development problems in order to strengthen the policy of a polycentric urban spatial structure. The objective was: “strengthen the city centre, stretch toward both wings, penetrate north and south, connect the west part and expand eastward”

2010 “Shenzhen Master Plan 2010-2020”

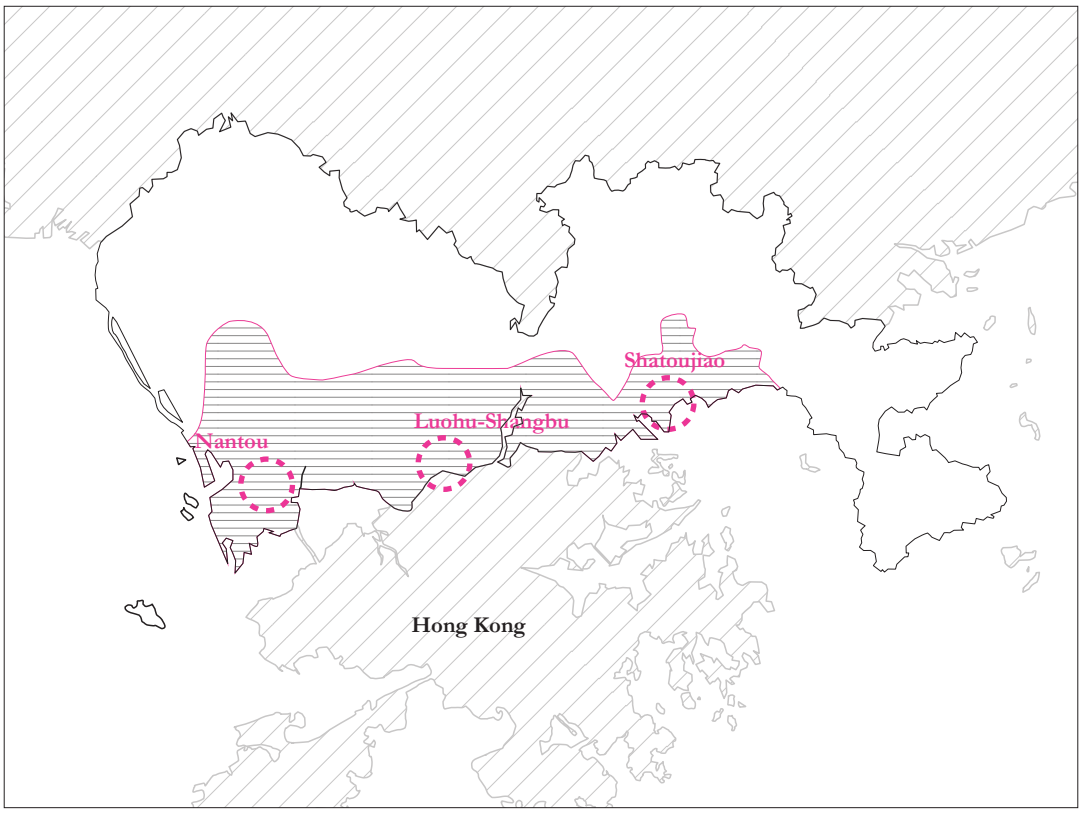
The plan’s regulated to population growth to 11 million and the urban built-up area to 890 km2 by the year 2020.

The Master Plan can be divided in two phase: before 1996, aimed to define the urban development, and after 1996, which identify the problem of the development and propose a goal-oriented strategy. The detail of the masterplan show the conversion from an industry-led, combined industrial and agricultural, during the early 1980s; into an industry-led, export-oriented, multi-functional, highly developed comprehensive economic zone in the late 1980s.

With the return of Hong Kong in 1997 and the China’s accession to the World Trade Organization in 2001, Shenzhen set up another set of challenges. Shenzhen’s Masterplan have been modified in term of focus and targets of planning, however the creation of a polycentric urban spatial structure was common in all the masterplan.

2.1 Master Plan, 1982

The 1982 Master Plan is the first one to define the SEZ, it start tracing the concept of multicentre linear axis between the three areas of Nantou, Luohu-Shangbu and Shatoujiao. The clusters have been connected from Est to West through Shennan Road, the first and principal axe that set the fundament of the next developing plans. The Luohu-Shangbu cluster, due to the central position and the proximity with Honk Kong, was the central development area of the plan, there was where the investment from Hong Kong have to pass by. Immediately was revealed how the large-scale, high-rise and high density development bring to environmental problem and didn't stimulate the Hong Kong investment to come by. As they was used to this kind of city and was necessary to attract them, the SEZ authority adopt a different style of development: low-down the high of the building from 80-90 to 40-50 level and set the plot ratio to no more than 5. In this way a medium congested and noisy area was created. The west cluster of Nantou, in the Shekou area, was designed by the Commercial Investment Bureau of the Ministry of Communication as in Industrial District for seat internal investment. Close to the see it as an advantageous position for develop a sea port thanks to the supplying of electrical



Schematization of the Plan

energy and fresh water. The Commercial Investment Bureau, as was located in Hong Kong from the early of 1970s, had already a good knowledge in the market economy for attract foreign investors. Under its control, the development of Shekou was definitely more dynamic and able to attract more Sanziqiye rather than Sanlaiyibu investors, that was predominant in Luoho-Shangbu. The success of the area was also due to the help from the local authority of the Bao'an Country, the provincial authority of Guangdong, and in particular for the infrastructure supply. The Shatoujiao Cluster, advantaged by the position advantages, became quickly one of the first processing areas based on developed processing, breeding and trading industries. The opening, in 1984, of the port facilitate the growth of the residential and service function.

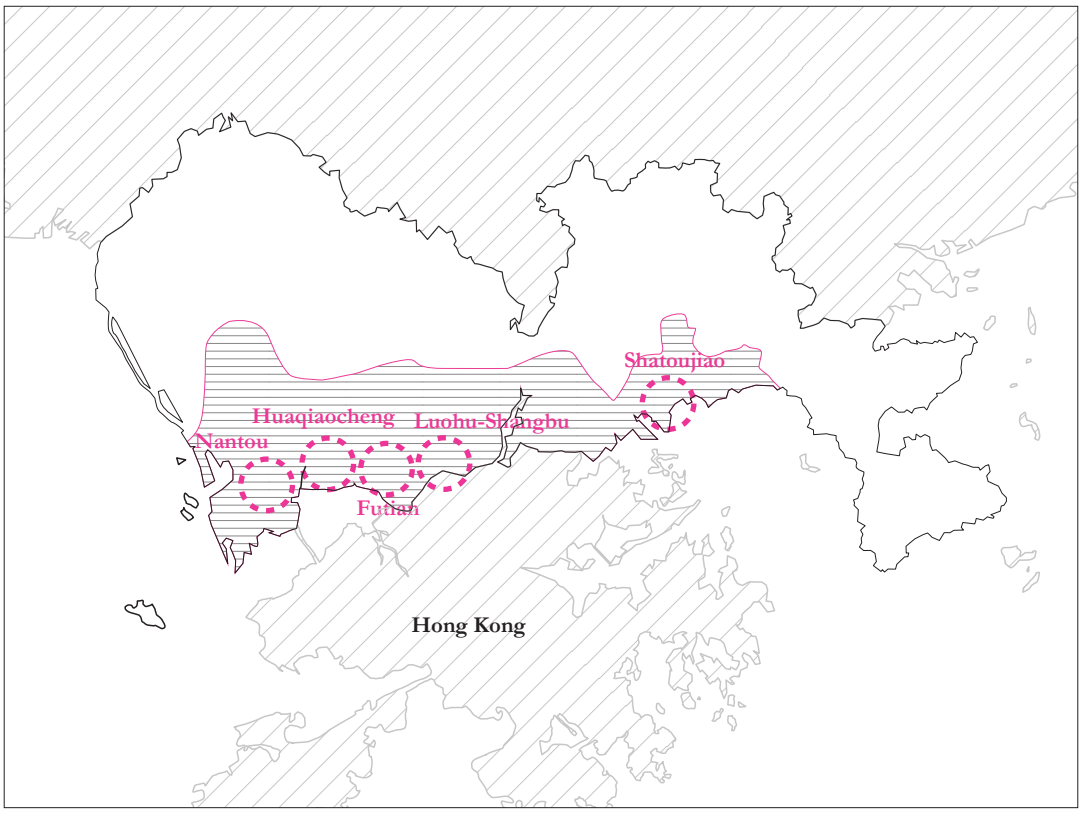
The infrastructural development was the starting point for the SEZ. The municipality understand how was important to create a strong and functional infrastructure through the clusters, after the planning of the street network it decide to implement on site Qitongyiping: electrical, water, drainage, telecommunication, ... in order to give a solid base for urban development for the next years. (Huang & Xie, 2012)

The Spatial Structure of 1982 SEZ Master Plan. Source : (Huang & Xie, 2012)

2.2 Master Plan, 1986

The 1986 Master Plan in addition to assure and strengthen the linear structure of the past one, creating a second one more in the hinterland, and it enable the function of promoting the sustainability of the industrial development. Compared to the past one ensure a more strategic fruition of the urban land and guarantee high-standard infrastructure for the urban development. The linear belt of Shennan Road was redefined and implemented with five principal cluster: Nantou, Huaqiaocheng, Futian, Luoho and Shatoujiao. Nantou Cluster improve commercial and industrial function, Huaqiaocheng Cluster range from industry, tourism, real estate and commerce, Futian Centre became the new City Centre with administrative and commercial functions, Luoho improve the residential and industrial function, Shatoujiao became the main important industrial area. The Cluster took natural element as border, such as river or orchards, in order to provide natural green corridor for augment the quality of life and environment.

The Plan also define the technological and capital intensive quality of the new industry, rejecting the one that will have brought environmental pollution. It define



Schematization of the Plan

fifteen industrial zone of different sizes where can be developed industry in the sector of electronics, light industry, building materials, machinery manufacturing and textile industries. Furthermore, the plan also allocate 179 residential areas for a total of 30 km2 with different density. To complete and create a balanced development it established 22 district parks, 5 litchi orchards and a 140 km green belts along the street and 10 tourist destination.

As mentioned before, the urban extension was reserved to the hinterland. The Luohu Cluster was developed and intensified forming the city centre. In Futian Cluster the industrial area had a fast growth thanks to the combination of residential and industrial coordination, instead the Futian centre, reserved for the Administration remain empty waiting to the high-end services and business industries. The Huaqiaocheng Cluster also had a rapid development in both part, in the industry area thanks to the high-tech industries and in the tourism part thanks to the soon opening of project "Splendid China" and "China Folks Culture Village". As well in Nantou Cluster the large-scale industrial project have been implemented soon thanks to secondary sector industry. Thanks to the rapid expansion, during the early 1990s the West Area was widely supported by the beneficial position of Shekou, instead the Est Area had several lag, in particular in the Yantian port area.

The planning in 1986 was limited to the north border of the SEZ, the developing of Bao'an Country was still managed as a separate area.

Fortunately the urban land reform of the 1980s stimulate also the production of the manufactory industry. As the central government didn't provide any direct financial support, the SEZ adopt the strategy to impose fees on land-use, in order to raise found for the urban development. In this way they separate the land development right from the land ownership and the permission of land-use transfer has been crucial for attracting local investment. Before 1987, the

The Spatial Structure of the 1986 SEZ Master Plan. Source : (Huang & Xie, 2012)

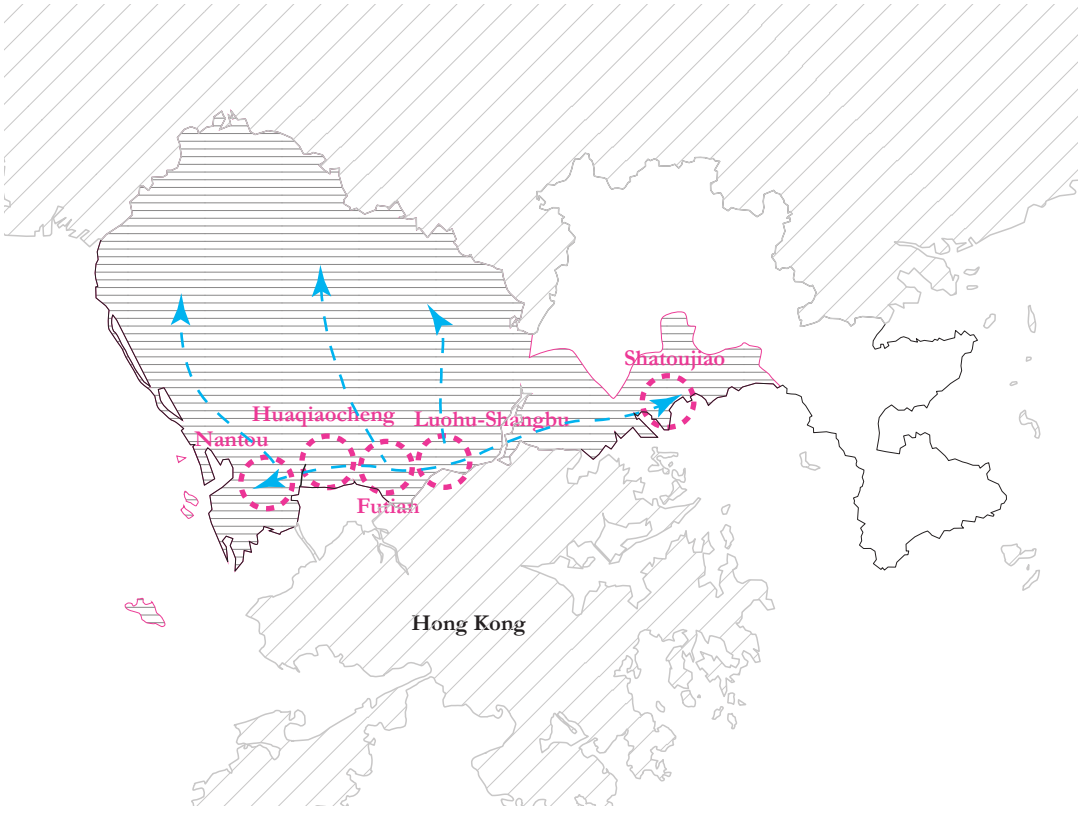
allocation land was managed directly from SEZ, after that the state Land Administration Act was established and followed by the Provincial Regulations on the Planning and Management of Development Land. A new system was established in order to facilitate the coexistence of land market and the administrative control through transfer of land-use right by agreements, tenders or auctions.

The transfer by agreements, in particular with SEZ, was the principal format for regulate the land-use, the absence of control government set a fast enrolment from the investors. The land was normally shifted for really low fees, the objective was to quickly generate income for cover the expense of the rapid urbanization. The lower land cost have also helped to maintain the production cost lower and keep the city's competitiveness. (Huang & Xie, 2012)

2.3. Master Plan, 1989

Though the acceleration of industrial growth in 1987, the expectation of population was early reached, a revision of the spatial structure was already needed just three years later, in 1989. The second line of the SEZ was not enough for hosting all the development, in particular large-scale industry. Furthermore, urban disaster and social turmoil indicated the overload of pressure, due to the scarcity of management and social equality. A new strategy was adopted: "The development strategy of Shenzhen", the construction land area of Shenzhen was enlarged to 150 km2, over the existing border. A lot of voluntary manufactured move voluntary to the new assigned area, they abandoned and rent the actual buildings in the newly Shangbu for moving in lower price land and loss controlled in Bao'an Country or Dongguan City. This allow to explore the whole area around Shenzhen and, for some researchers, this approach was seen as a compromise for managed the chaotic land use in the non-SEZ.

This approach focalise Shenzhen as the centre of the City and allow the gradual expansion in non-SEZ, where have been located the labour-industry and the polluting industries. The whole area was organized in three rings. The first one host the high-tech industry, trade and



Schematization of the Plan

finance; the second one, that include the town around SEZ, is the base of urban industries, warehouse industries and transport station; the external rings concern the others town and its reserved to the agricultural export. In this way was fundamental to upgrade the industrial structure and the urban land intensification in order to contrast the urban sprawling.

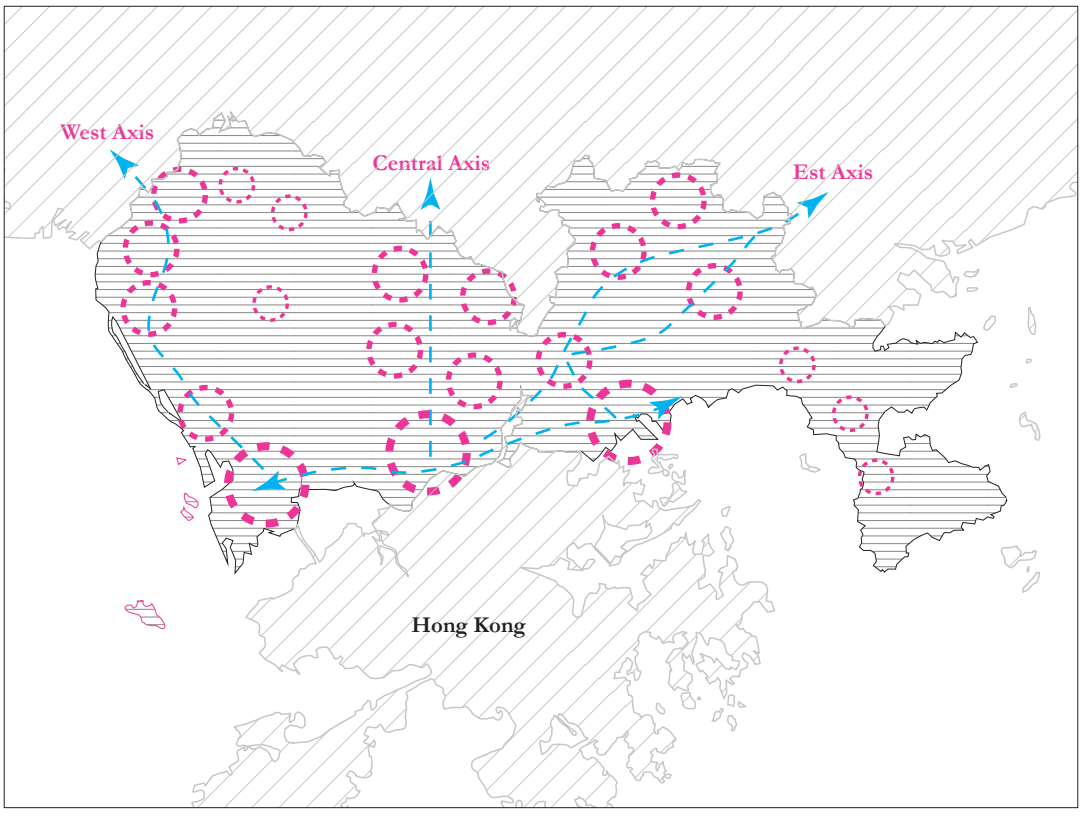
The strategy moved a lot of speculative intention across the area, especially after the second line and in the Bao'an Country, where the SEZ authority was unable and too weak to control it. This phenomenon was already present from the land-use right profit of the late 1980s.

The development result quite chaotic in the external area, the speculative approach generate bulldozed area for selling and re-selling, without any real development. The most critical areas was located in the Bao'an Country and along the main corridor: Xin'an to Songgang, Buji to Longhua and Buji to Longgang. While the East-West linear connection in the hinterland was largely ameliorated and take real active role in the development. (Huang & Xie, 2012)

2.4. Master Plan, 1996-2010

During the Southern tour speech in 1992, Den Xiaoping deadlock his reform by opening more the policy of the country and move forward the policies of economic transformation. In this way Shenzhen had more opportunity and challenges for develop the spatial area and turn the plan of new economic zone into a development for a new expanding city. The area that until now was outside the plan of the economic zone became, as well, process of planning urbanization. The Master Plan was approved at the municipal level in 1996 and at the State Council in 2000. (Xie, Hou, & Herold, 2018)

The development follow the three vertical axes in the West, Centre and Est part of the region, beyond which was planned nine new Cluster and planned six new cities; the southern linear City Core was still reinforced. The region kept a hierarchical structure organized on linear-cluster. The plan also aim to recover the land rights and avoid the illegal and casual transfer of land. The Cluster system took a "W" shape and was completed by a "M" shape that represent the conservation of the environmental space. The combination was ideal for both the industry that had an easy access of all the area and also for the citizens that can easily reach the nature. The previous



Schematization of the Plan

five Cluster in the SEZ was divided in a macroscope level in three Cluster. The West axis starting from Nanshan Cluster, follow the Pearl River though the Bao'an Country and end in Guangzhou. The Central axis start from the Central Urban Cluster, continue through Longhua and Guanlan and finish in north of the city. The Eastern axis start from Eastern SEZ Cluster, passing in Buji, Longgang Huizhou, Shantou. The new six town were: Gongming, Guangming, Shiyan, Kuichong, Dapeng and Nan'ao, located in strategical position for balance the ecological preservation and regulate the development.

During this planning the Luoho District focused mainly in urban renewal, instead new construction project start in Futian District, Nanshan District, Yantan District.

The infrastructure of the Futian District was finally finished and brought, in 2004, the 70% of Headquarters of the region there; the planning of the Central Station was if particular interest in this case and augmented the later congestion of the area. The construction of the main building, such as the Civic Centre, had started, also the government move in the District.

The non-SEZ area availed a proficient transformation: high-tech parks, logistic parks and transformation hub headed by the government act as central point for the transformation. In particular the towns of Shiyan, Guanlan and Fuyong growed very fast; Pingshan and Kengzi was pull by Longgang industrial area. Longhua and Buji was the hearth of real estate investment. (Huang &

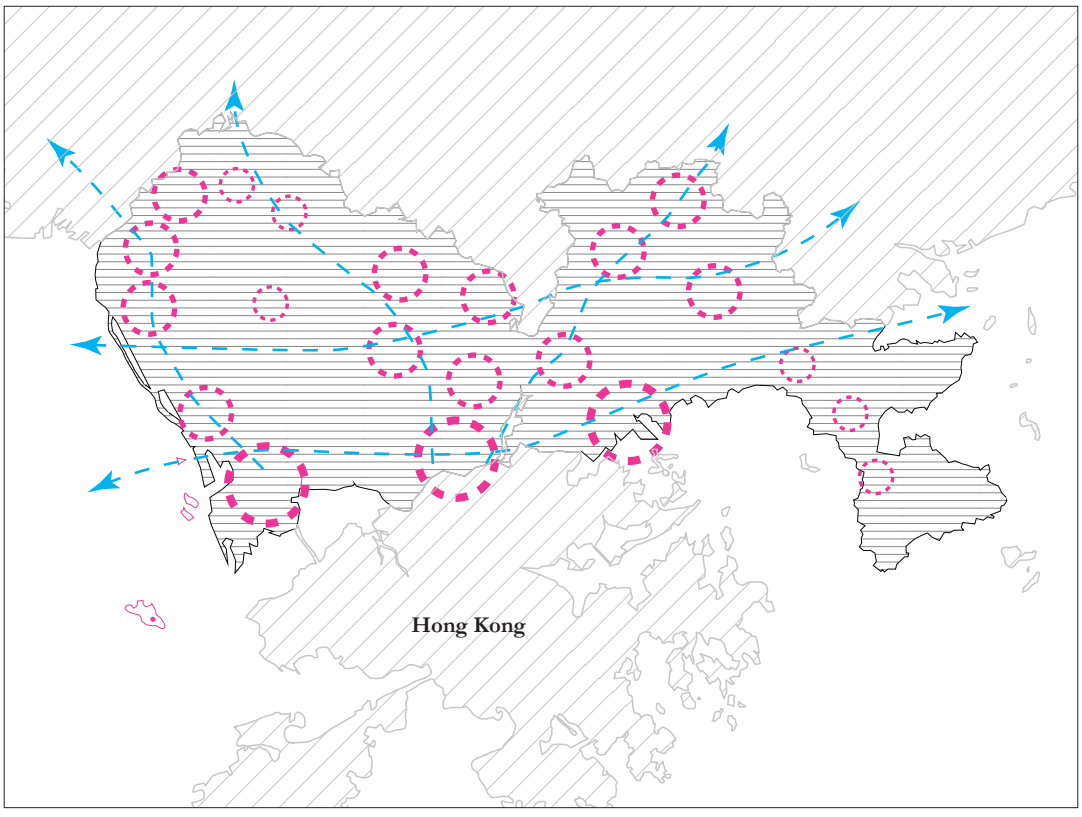
The Urban Structure of The Master Plan of Shenzhen 1996-2010.Source : (Huang & Xie, 2012)

2.5. Master Plan, 2010-2020

After 10 years of development the urban structure of the city was mainly formed, the SEZ had pretty followed the plan, instead the non-SEZ had several problem of extensive land use. Then the Master Plan was principal focused on the non-SEZ but also enhancing the guideline of the 1996 Master Plan. The structure had started to been organized in three hierarchical layer: Municipality, District and Cluster.

The Qianhai Centre and the Futian-Luohu became the two municipal centre. Due to the strategic position of Qianhai, in the corridor between Guangzhou and Hong Kong, the area was used as business centre to serve an international production service. The area Futian-Luohu Center and Shatoujiao Cluster, the land was almost completely built by old industrial areas, old residential building and urban village. This situation don't really represent the ideas of the plan and was successively renewed implementing the infrastructure and industries.

In the 2010 the SEZ limit was extended to the full region in order to benefit from the whole land resource. Anyway, an "Ecological Control Line" was established to control the environment and the state government put



Schematization of the Plan

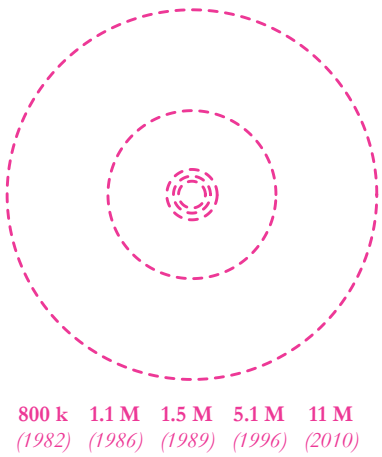
a limit to the build-up area. As Shenzhen didn't have enough space to effort the development, the previous area of non-SEZ became the new focus of extension. The Cluster outside take a decisive role and infrastructure outside Shenzhen was implemented in order to fill to void kept by the past urbanization's step. (Huang & Xie, 2012)

The Urban Structure of The Master Plan 2010-2020. Source : (Huang & Xie, 2012)

2.6. Analysis of the Planning

The predominant aspect of the Master Plans is flexibility, the rapid and massive growth need continuous adaptation and rethinking. The transformation of a small village into a megacity, in just three decades, is an unprecedent situation. Although every Plan outline a prosperous and strategical development, the reality is constantly struggling with these limit and look faster than ever. Nevertheless the Plans have been readapted and strengthen every time.

At the first step, Shenzhen adopt a flexible belt composed by three Clusters, each one is independent and have a god openness to the outside though the others. Every change or development in a Cluster wouldn't affect the others. The three are connected through a commercial axis, the Shennan Road. With the development every Cluster growth along the axis. The industrial area had been defined in the North of every the Cluster, in turn connected by the freight trunk road Beihuan Road. Simultaneously, along the Nanhuan Road, leisure and education functions had started to growth.



Estimated planned population

This spatial organization could satisfy the industrial development, so, during the expansion, the same policy had been adopted for the whole region. However, the timely land supply is fundamental for the development of Shenzhen. In order to ensure the land supply, the government bypass the existing construction area and start to develop empty land. This cause the resistance of many Urban Villages inside the area. The Shenzhen Municipal government negotiated with individual government's land, due to the scarcity of finance each village was left a parcel of Land know as Home-Based-Land (HBL) for village industrialization and residential building. After many relocation and negotiation the Urban Village decrease from 2000 to 300. Anyway, thanks to the cheap rental, markets, small shops, they continue to be among the most vibrant parts of the city. (Juan, 2016)

The Urban Village, thanks to the cheap rent, are the favourite migrant's place. For so many years the migrant had been disadvantaged in comparison to the local population, they usually had higher cost for services, lower salary and a medical assistance sponsored by the employer. Just in 2008, the Shenzhen government had start to release "Permanent residence Card" to temporary migrant workers and they finally had the same rights of the hukou. (Chen & de'Medici, 2010)

Of particular attention was the previous

non-SEZ, as was located close to the SEZ, the situation was chaotic and there was a lot of speculative investment that had brought the development. Later, when the SEZ was enlarged, the government try to regulate and control the area but was already too late. By the way, the local farmers was normally not considered, the agricultural activities was declared illegal in order to incentive new investors. The News Cluster was created according to the Master Plan and the border defined by the Ecological Control Line. However, outside this line the farmers was losing land in favour of the urban grid. The urban grid doesn't consider too much the original landscape form and the nature of the soil and broke the relationship between human settlements, nature and agriculture. During the redaction of the last Master Plan and land use regulation they realized the conspicuous lack of resource.

As the territory of Shenzhen is almost entirely urbanized, the future development have to act in the existing urban fabric. In contradiction to the "tabula rasa" approach, the city have to find a sustainable way of developing the existing built-up areas in order to reshape urban forms for new social relations. Collaboration between stakeholders and different sectors have to work together. Empty areas and urban border should be reshaped, urban design should become the collaboration's tool for create more liveable and vital spaces. (Lei, 2016)

"Learning by doing"

3. Central Business District

The Central Business District (CBD) is one the most important Chinese government project of nowadays. The cities, in order to support the rapid development and the coming of information-based economy, had started to project new infrastructure and buildings in these new central place, far from the original city centre.

The phenomenon started during the 1980s, in the socialist country there is no need of such central place because the social organization, the economy and the culture are normally centralized. (Wang, "Commercial Structure of Beijing in the Reform Era."). The government-led project in China represent perfectly the "socialist market economy", also if the CBD superficially appear as the Western late modernist building. In contrast to the market-driven development in North America, the Chinese CBD is leaded by the city government for accomplish his purpose. Facing the open-led policy of urbanization, the first cities to develop a CBD was Beijing, Shanghai, Guangzhou and Shenzhen, in particular in the Pearl River Delta region where the costal location brought a lot of transaction and investment. In the first phase the CBD was planned, following the Western reference, prevalently based on road structure. Late, in 2000s, the cities shift and implement high-speed railways connection and a secondary metro structure. The cities aim to bring themselves in an high position at regional, national and international level, on order to be considered in the main economic transition; in this case the private stakeholders just play a secondary role.

Recent study have took particularly attention at the spatial design as an active tool for shape social and economic development. In particular we can read how the Chinese government didn't plan the space as an instrument for social and cultural change but it's more focused on plan it for satisfy the data's development. In contrast with the Western CBD that are planned with mixes-use the Chinese's CBD are mostly economic area, the residential settlement are located in the border and they are connected through public transport to the other cores of the city. The CBD is planned in order to be an hierarchical assemblage of singular place and not a network of entities. In this place the human scale, seen as fruition and transformation of the urban space is missing. (Zacharias & Yang, 2016)

The CBD can be read as an objective response to the development need that are enclosed in the five-year city development plans:

Post-reform core regeneration, (1982)

There was a rising of commercial district close to the ports and along the new axis, that brought the redefinition of single buildings or entire blocks, thanks to the expropriation, but with not a lot of planning control. That happened in Luohu District in Shenzhen for example during the initial period of the Opening reform. The multi-centered layout aim to condensate these urban phenomenon in few places. Instead, the plan didn't assign a specific area for commercial activities, but they was just planned as sub-centers of local service functions. This sprawling of business

and office function brought the plan-led's development of the next years. (Zhou, 1998)

CDB concept plans. (1992)

At the end of 1980s, even if the government was already arguing about the absence of a civic focus or business center the construction of the CBD was still missing from the plans. In Shenzhen, the 1985 Masterplan already designed the central space of Futian District as a space of unique significance in the city, without mark the leading economic role. In the beginning of 1990 the government perceive the needed of a CBD in order to find a place for the economic sector's development. (Shenzhen City Planning and Land Resource Committee, 2010) In the next years was established limited international competition for the CBD of the principal Chinese cities to collect new and foreign ideas in order to align the development of the area to similar globalized cities. Even if the planning took spatial inspiration from the West, and in particular from North America, the planning framework was quite standardized. At the land-use was attributed simply guidelines of density and height of building and was completely missing the urban design scale. The growth was the main objective and was obtained through the simple parcelization of land and the construction of a basic infrastructure road. (Zacharias & Yang, 2016)

CBD grand visons, (2001)

The government perceive the lack of coordination and organizational spatial concept was introduced. New spacious and formal landscape was planned for replace the precedent small and unusable space, like the Futian central park. In Shenzhen, the presence of government building and high-end cultural venue in the CBD denote the civic identity of the area. (Zacharias & Yang, 2016)

Industrial district regeneration (2000)

Former industrial district, such as Huanqiangbei, Bagualing and Tina'an, turn the policy of land use development in order to facilitate the formation of new economic activities, start-up business and services. These new areas, in contrast of the principal CBD, was developed according to the main guidelines of the plan but not with a direct control of the government and in a land-use mix policy. Moreover with also the old property lease of the industrial land the areas had a rapid and uneven growth. Thanks to these characteristics they differ from the main CBD and they are a complement of it. (Zacharias & Yang, 2016)

Special purpose CBDs in the emergence of a local CBD hierarchy (2005)

After the conceptualization of one singular CBD in the 2000s, there was an emerging of second-level economic district in Chinese cities. Many cities in North America and Europe avoid the creation of sub-urban economical areas and they try to concentrate all the economic activities in one central place. These new places was hosting several electronics development, import-export and financial activities or district-level business. Qianhai district and Nanshan district, for example, are the second level CDBs, smaller but with same attitude and able to overtake

the development of the main one. (Zacharias & Yang, 2016)

CBD amenity development (2012)

Some cities had started to develop studies that aim to ameliorate the development of these places. They introduce new activities, amenity space, new infrastructure at a cities level, such as railway and metro station to allow to affluence of more workers and at the pedestrian and cyclable one, creating friendlier spaces. (Shenzhen Urban Planning and Land Resource Research Center, 2013).

4.1. Futian District

Futian Central Business District and the city's central axis was originally proposed in the 1986 Master Plan, this was one the most in-depth study of planning in the city. In just two decades of planning and development the District have almost been completed. The area is centered on the Civic Center and surrounded by the cultural facilities, convention and exhibition center, commercial facilities and office buildings. The planning of the area is aloof from the usual Chinese city and it's largely influenced by the Globalization process and the Western planning (Xue & Zhai, 2011).

The CBD had been largely developed in foreign countries, it wasn't really typical of the Chinese culture. During the imperial period, the center of the city served principally as political function. Later, in the socialist period, urban development was located was led by state-controlled resource allocation. After the Opium Wars, in the early 20th Century, the planning had started to be influenced by Western culture but in a limited way. However, the CBD's planning follow some shared theoretical perspective: the CBD is defined by it's centrality, accessibility, and concentration of top-end business; the CBD is characterized by the highest land value and rent in the urban settlement and by the highest intensification and land use in the city; the CBD is the symbolic, physical and economic reference of the others areas. (Tang & Yeung, 2011)

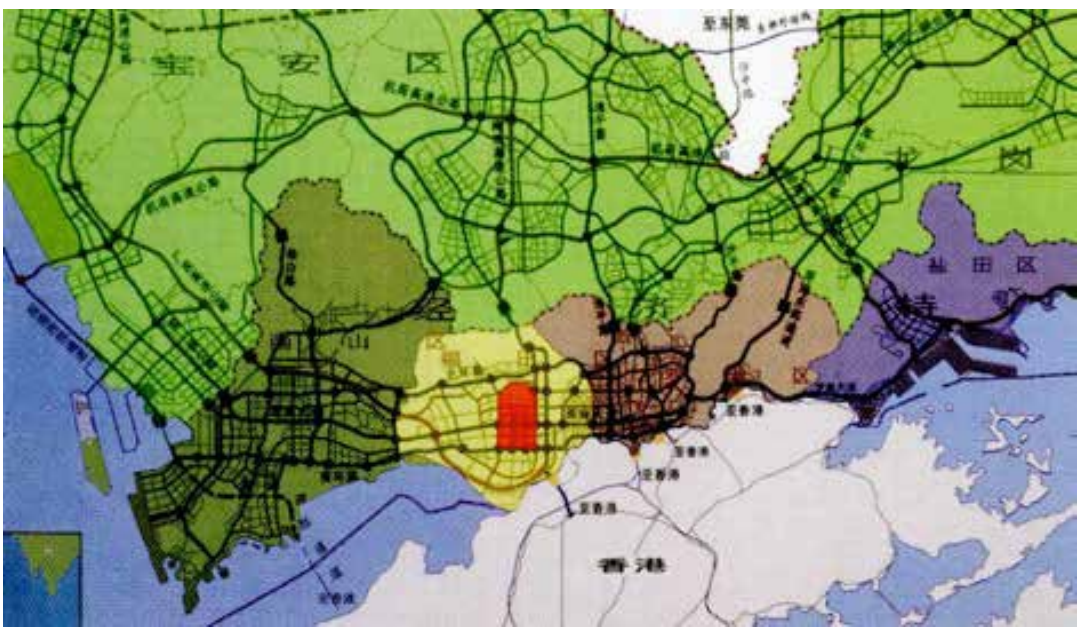
Also if Futian CBD already appear in the 1986 Master Plan, it was just in an embryonic phase because the local economic development and the planning system was still forming. In the same years the concept of CBD had started to take form in China.

The Chinese Party-led state had reformed the economic system, but not at a political level: it privatize urban land by pay-to-use policy but retains partial government allocation and decentralizes decision-making power to the local level but retains strong central control political appointments. (Wang C.-Y. , 2013)

The concept of the CBD of Shenzhen evolve progressively, the Shenzhen's municipal government was following the urban development by introducing foreign ideas with local legitimacy of execution.

The first development strategy of the city was quite similar to the others SEZ in China, although it was a significantly bigger zone to the others SEZ. The city was principally oriented to an import-export zone, due also to the proximity of Hong Kong, where multinational investor had been attracted. The first phase of development was mostly oriented into the traffic system, infrastructure and living condition of the investors; at the same time urban design was neglected. It's around 1982 that the Futian District was firstly designed but just in 1996 there was the first framing. (Wang C.-Y. , 2013)

The original city center was Luohu District, located next to the Shenzhen-Honk Kong checkpoint. The large development of the industry has created a necessity of industrial services. The municipality idea was to promote real estate development and to construct a new image able to attract more



The location of Futian Central Business District (CBD)
Source: Shenzhen Municipal Urban Planning (2002a: 13).

domestic investment, that's was the aim of the project for the new Futian district.

The CBD measure 4.2 km2, it's constrained between Lianhua Mountain in the North; Bija Mountain to the east; Mangrove Eco Protection District to the west; and Shenzhen Bay and Yuanlang of Hong Kong to the South, with a North-South visual and spatial axis perpendicular to the est-west Shennan Boulevard.

During the first phase of planning many offices had participated at the first study and they provided different schemes. The main layout and street system was decided in 1994 thanks to few conceptual Masterplan such as Futian Plan and the traffic design plan of 1989, which was drafted in 1988 by Shenzhen Urban Planning and Design Institute.
In 1989, the Urban Planning Act was established, for the first time a comprehensive urban planning system was set up at two different level: initially was set up in the "Shenzhen Development Strategy in 1989" by the Shenzhen Urban Planning and Land Resource Bureau and then by the Shenzhen Urban Planning and Design Institute. During the same years, four offices have developed a solution along the lines of the last Master Plan: Huayi Design Consultant from Hong Kong, PACT International Consultancy from Singapore and two Chinese Institute: the Shenzhen Branch of the Architectural Design and Research Institute of Tongji University.

In 1991 a new Masterplan based on the previous conceptual scheme was developed by a joint work of the Shenzhen Urban Planning and Design Institute and the Shenzhen Branch of Design and Research Institute of Tongji University. The area was divided into 25 parcels, according and following the main direction of the north-south axis and the east-west axis. The most internal ring of building was reserved to commercial function, instead the remaining part was reserved to a mixed function of residential and commercial. In the North of the area there was allocated the public facilities and the south for business and commercial; along the North-South axis a large amount of green spaces had been reserved for leisure.

All the first place had the common purpose to fill the gap between the district plan and the detailed plan in order to explore an appropriate urban design practice and prepare for the establishment of the statutory graphic plan.

In 1992, the Control Detailed Plan of Futian District was created by the Shenzhen Urban Planning and Design Institute. Furthermore, in 1993 the Urban Infrastructure Design was finalized by a joint work of the Shenzhen Urban Planning and Design Institute, the Shenzhen Branch of Wuhan Steel and Iron Design Institute, and the Beijing Urban Infrastructure Design. The proposal was an high-density development and the construction of the first street began. Since the very first moment they perceive a lack a human scale, the original block was too large, they was reduced and a greenery path was added to approach the human scale, the urban planning department was conscious of the lack of urban design guidance and the

Topographic map of Futian Central District in 1984
Source: Shenzhen Municipal Urban Planning (2002a: 12).

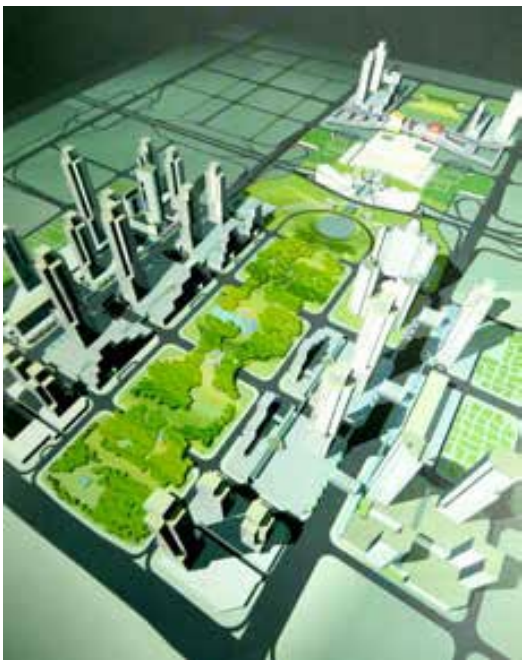
buildings' level and the design outcome was out of control.

In 1994, based on the detailed plan, the urban design for Futian district was proposed by the Shenzhen Urban Planning and Design Institute and the first idea to introduce the urban design approach was introduced. In 1995, the Urban Planning Board of Shenzhen was suggested that international design consultant should be introduced in order to acquire the best plans for the area.

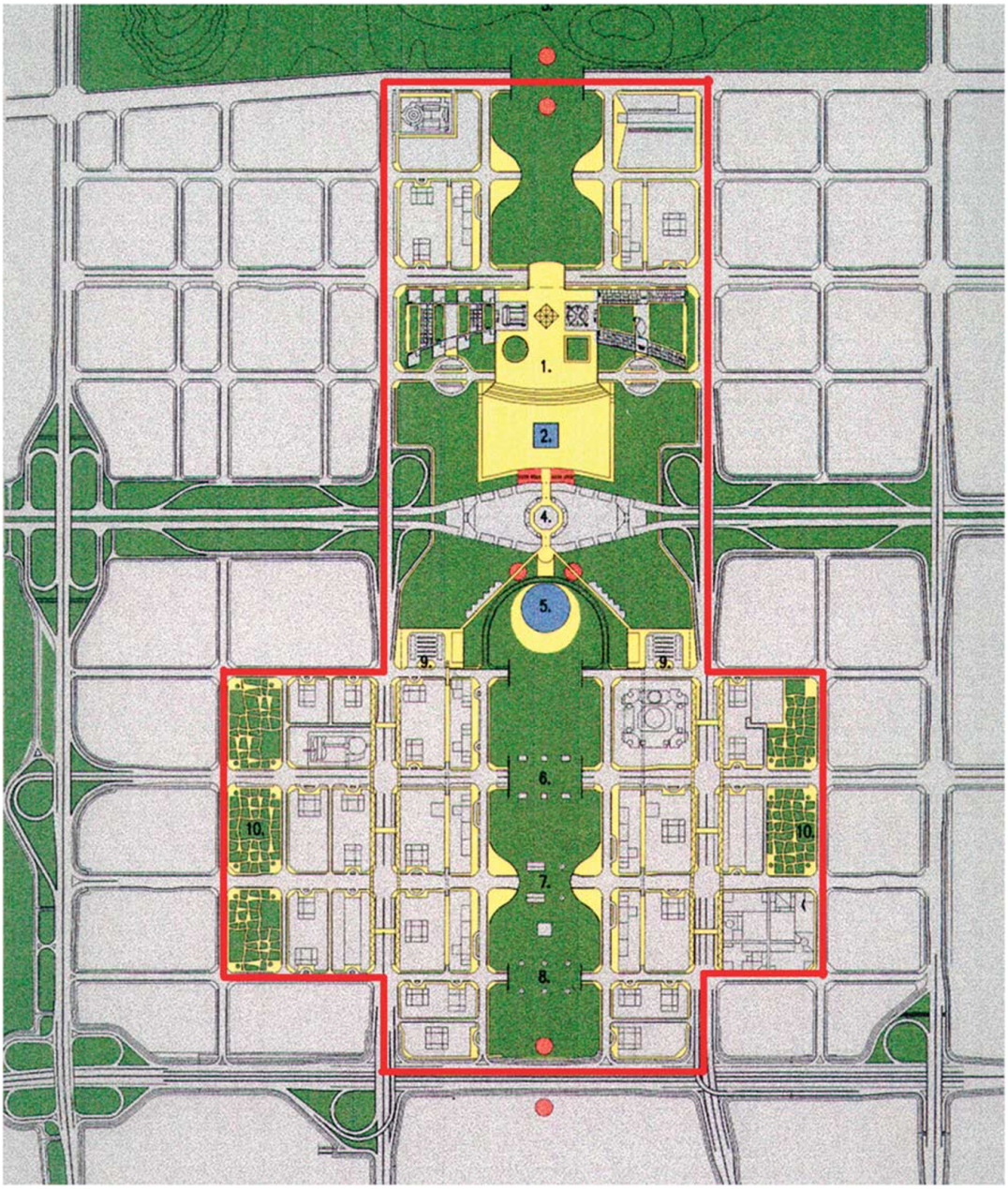
In 1996, was organized an international urban design consultant of four design foreign firms from America, France, Singapore and Honk Kong. The concept propose by John Lee/Micheal Timchula Architects, from United States, was selected as the winning scheme. It's composed by a continuous and undulating park along the North-South Axis and passing though the main Shennan Road, maintaining an high visual connection to the Lianhua Mountain. The new City Hall was commissioned by the winner Architect with a giant curved roof atop that represent the "gate" image of central axis. The curved roof was inspired by the wings of an eagle, a symbol of the Shenzhen Special Economic Zone.

This scheme has mainly followed the traditional scheme of Chinese urban layout, such as Beijing 's Forbidden City, and have been adapted to the Chinese socialist Image. Symbolically the orientation of the central axis from the Lianhua Mountain to Hong Kong should represent the intention to the future connection.

In 1997, the Japanese studio of Kisho



Shenzhen CBD Urban Design of 1996
Source: Shenzhen Municipal Urban Planning (2002a: 127)



Shenzhen CBD Urban Design of 1996
Source: Shenzhen Municipal Urban Planning (2002a: 127)

Kurokawa Architects, was invited to design the central axis of public system, the major open space and greenbelt of the district. Kisho Kurokawa prosed his Eco-Media City Project Plan, based on his symbiosis theory and avant-garde ideas. He proposed an open space of 174 hectares distributed along the 3 km axis, with the city hall in the middle. The park is developed on two different layers, the first composed by a man-made turf supporting park. The other layers, is composed of different facilities, between then: city offices, a business support center, an art gallery, a shopping mall, etc...

The main purpose of the Architect was to include ancient Chinese philosophy in the modern urban structure and use the central axis as an ecological core of the district. Some new technologies was implemented into the park: rainwater collection system; purification of exhaust gas from parking; solar and wind energy installations. The Kisho Kurokawa inspiration from the ancient Chinese culture was widely acclaimed for the political appeal.

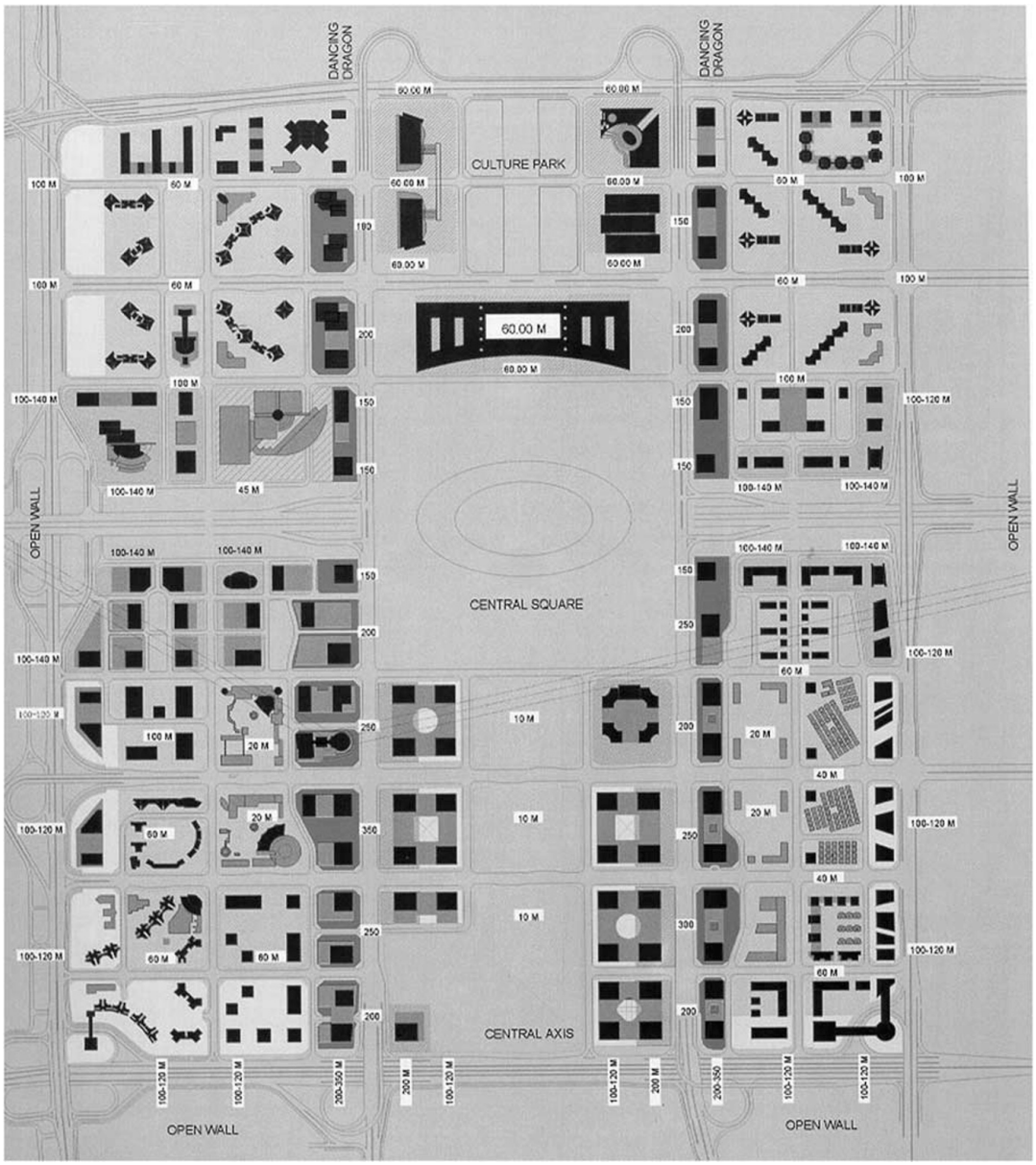
The Shenzhen Cultural Center, designed by the famous Japanese architect Arata Isozaki, follow the centrality of the scheme and consist of central library and a concert hall. They express the modern cultural perspective.

In 1995, Shenzhen began to draft the Urban Planning Ordinance of Shenzhen Municipality, enacted in 1998. Shenzhen have introduced the Statutory Graphic Standard (Fadingtuze). It enhanced the urban design role within the urban planning system, however the problems with the urban design start to appear as the original layout was not detailed at the neighborhood scale. Each block parcel was divided into giant parcels but the lack of guided instruction for the urban design level was visible in each block as the main purpose was to maximize the economical return, a design control was urgently needed.

In 1998, the design of the parcel 22 and 23 was commissioned to Skidmore, Owings & Merrill LLP (SOM). They modify the delivered form of block and parcel, they started to introduce a new urban landscape design that add value and usability to the plot area. The project became the reference design for the district. At the end of the years, six governments projects in Futian started, in addition to the urban renewal of the Gangsha Urban Village.

In the next years, several foreign consultancies have been requested by the local planning department. In particular the German design consultant Obermeyer Planen + Beraten produced a comprehensive plan for urban design, traffic and underground space for the Futian District. The view change from a rigid required for individual building to a more harmonious and coherent image of the district incorporated in every one. The Master Plan was acclaimed for be representative of the Chinese tradition. In particular the plan set two rows of high-rise buildings along the central axis and one row of high-rise building along Shennan Road. The design concept applied the traditional nine-compartment Chinese chessboard and the images of "Waves of Dancing Dragons" defined the high of the building along the North-South axis. The residence buildings was located in the four

Central axis public space system of Futian Central District 1997
Source: Kisho Kurokawa Architects (Japan)



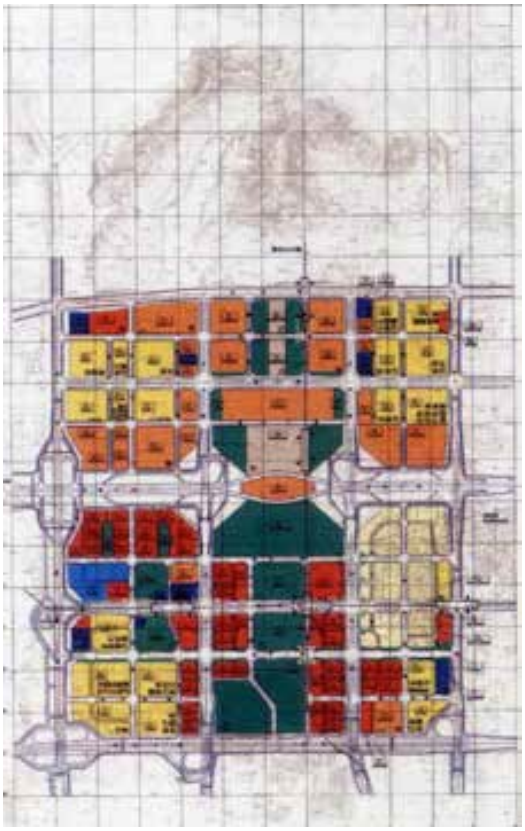
Obermeyer's masterplan 2001
Source: Shenzhen Municipal Urban Planning (Chen, 2002)

The future schema of Futian Central District made in 2002
Source: Shenzhen Municipal Urban Planning (2002a: 27).

corners and represent the ancient Chinese community surrounded by a fortress. (Wang C.-Y. , 2013)

In 2000, the major mission was to speed up the construction following the several studies produced in the past year, in particular the shopping street industry, the underground walkable system, the water feasibility study, the central plaza, the south axis detailed design and the blocks along the latter one. The Shenzhen Conference and Exhibition Center was moved at the end of the Futian CBD in order to stimulate the economic development and the formal layout of the central axis. (Wang P. , 2002)

From 2002, more improvements have been developed in the area, in particular the studies for the central plaza and the pedestrian area. The graphic urban plan was updated and the project continued along the line. All the new architectural and landscape projects in Futian had to be submitted to a design competition, the level of design arose and the quality of the project have been seen as a balance for the rigidity of the original Master Plan. (Wang C.-Y. , 2013)



Statutory Graphic Standard (Fadingtuze) (1999)
Source: Shenzhen Municipal Urban Planning (2002a: 19)

4.2. Futian Railway Station

The Futian Railway Station is located in the Futian District along the North-South axis of Yitian Road between Fuzhong 3rd road and Shennan Avenue. It is now under the jurisdiction of the China Railway Guangzhou Group. The station allow the interchange between the Guangzhou-Shenzhen-Hong Kong Express Rail Link, the future Shenhui intercity lines, the Shenzhen airport and also with the Shenzhen metro's Line 2, Line 3 and Line 11. Thanks to the new highspeed line is possible to reach the West Kowloon in just 15 minutes and Guangzhou in 33 minutes.

In december 2005, the leadership of the Ministry of Railways of China proposed to the Shenzhen Municipal Government that a railway station in the downtown area of Shenzhen should be added to the Guangzhou-Shenzhen-Hong Kong high-speed railway. At the same time, it provided several site selection schemes such as Central Park, Xiangmihu and Yitian Road. (CRI Online, 2006)

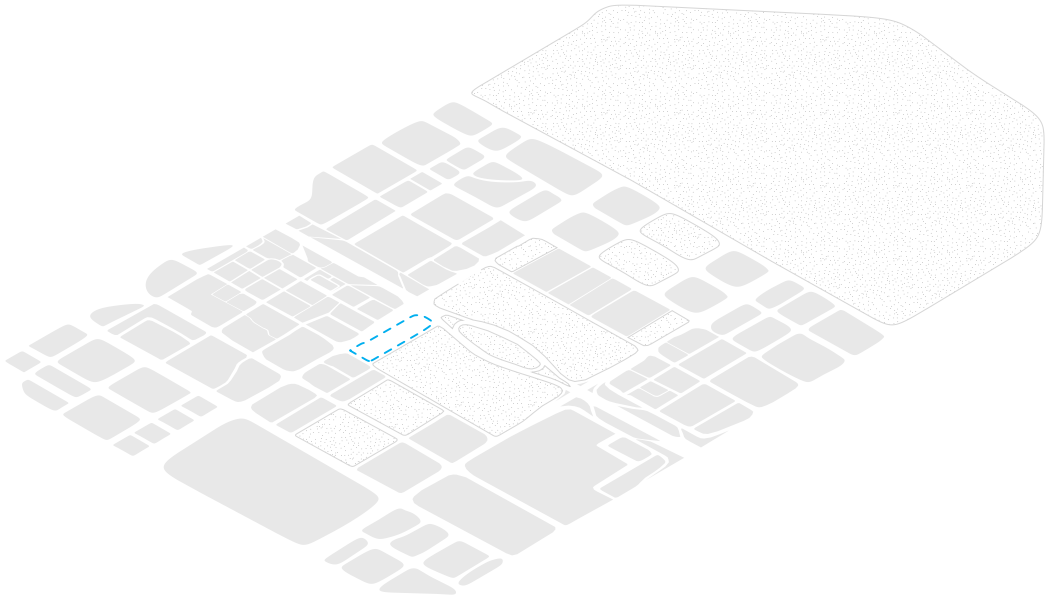
Some month later, in the 22 August 2006, Shenzhen Mayor Xu Zongheng and Vice Minister of Railways Lu Chunfang signed a "Memorandum of matters stand Shenzhen city features the Guangzhou-Shenzhen-Hong Kong Passenger", which determined to set up a highspeed train stop at the underground Station of Futian. The Yitian Road was selected as site for the Station.

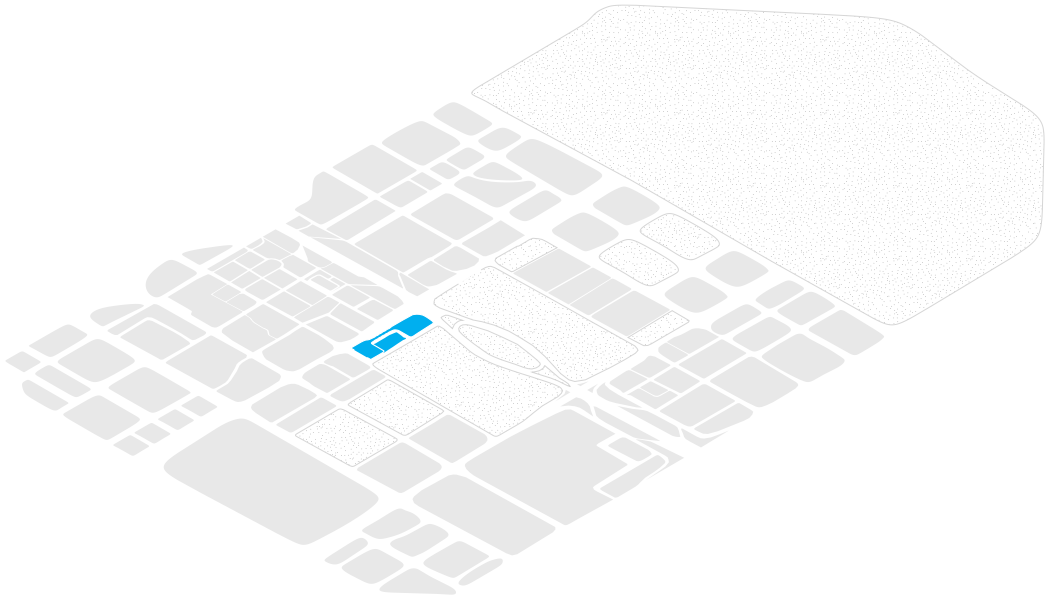
On the 20 of August 2008 the work for the Futian Station and the Futian Comprehensive Transportation Hub officially started. (China News, 2008)

The opening date of Futian Station was delayed several times. It was originally expected to open in 2012. However, after the 2011 Wenzhou high-speed rail collision accident, the high-speed railway project was suspended for approval and the opening date was postponed to 2014 .

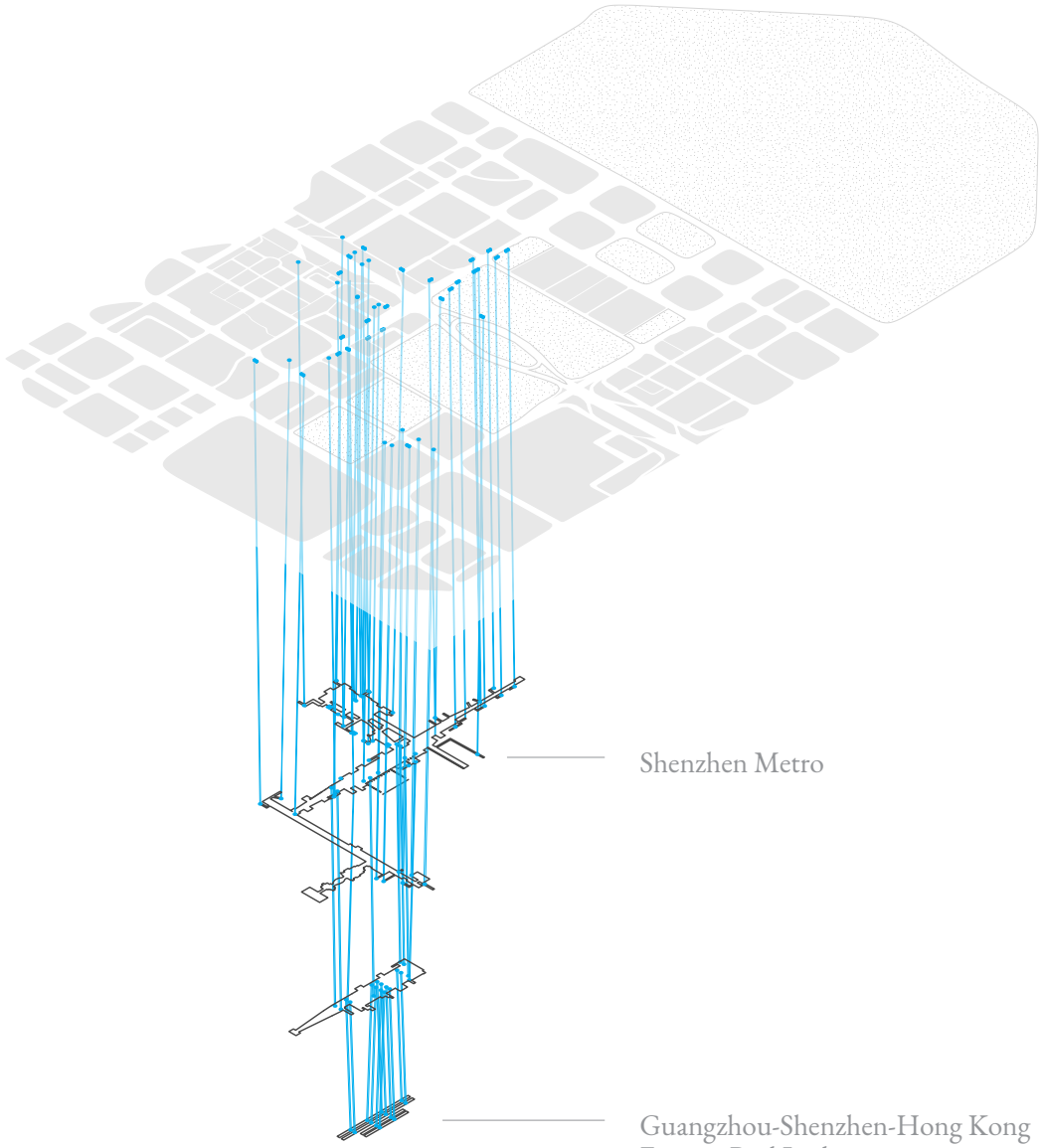
On the 25 of November 2015, Guangzhou Railway Group announced that Futian Station began trial operation. Just one month later, at the 30 December, the Futian Station officially opened.

With the adjustment of the National railway map, the 15 May 2016 Futian became active also for two long-distance trains to Changsha South and the station substitute and implement the North Railway Station for others route. Also in 2018, with the opening of the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link, many train was implemented at the Futian Station.

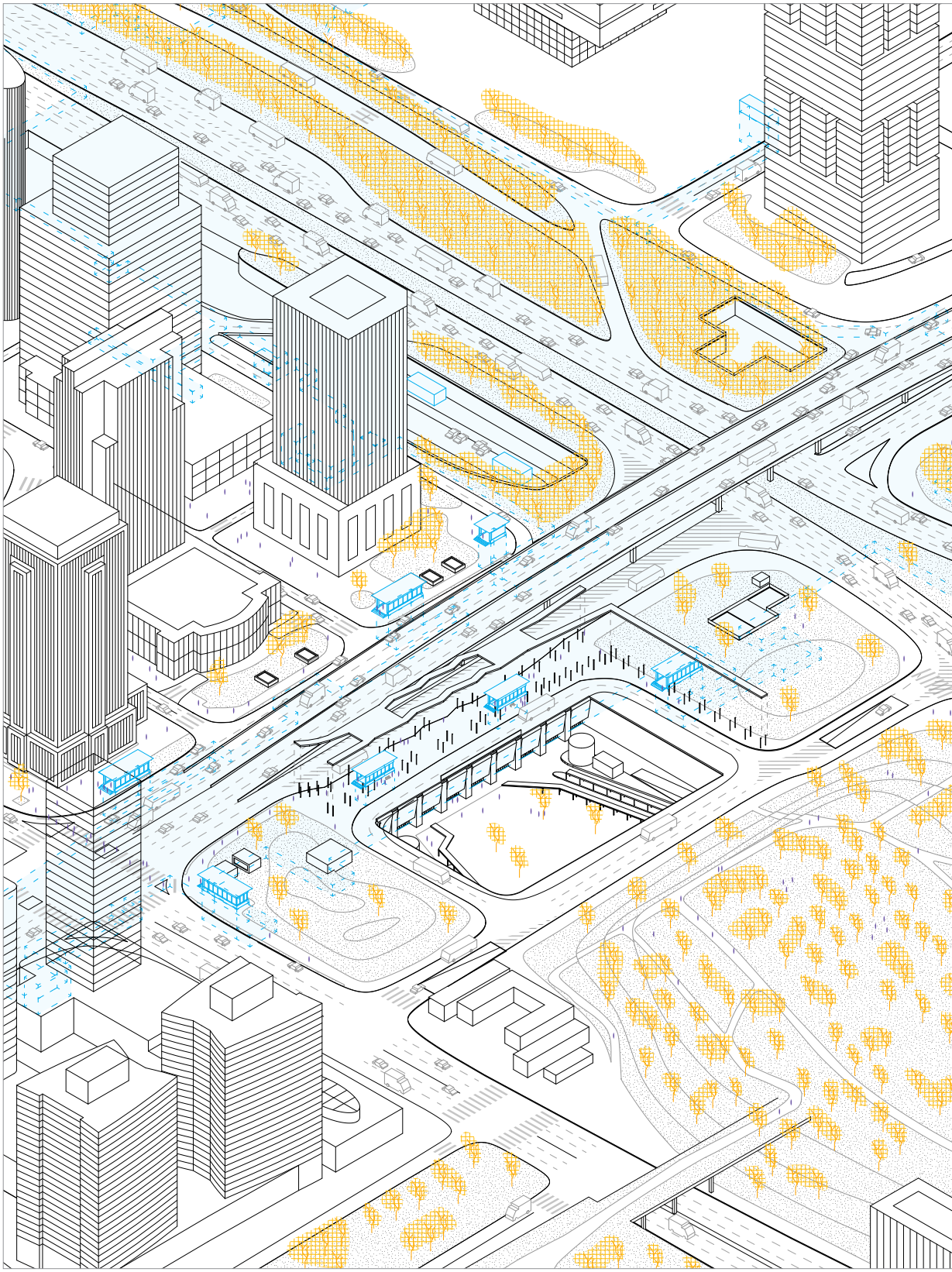


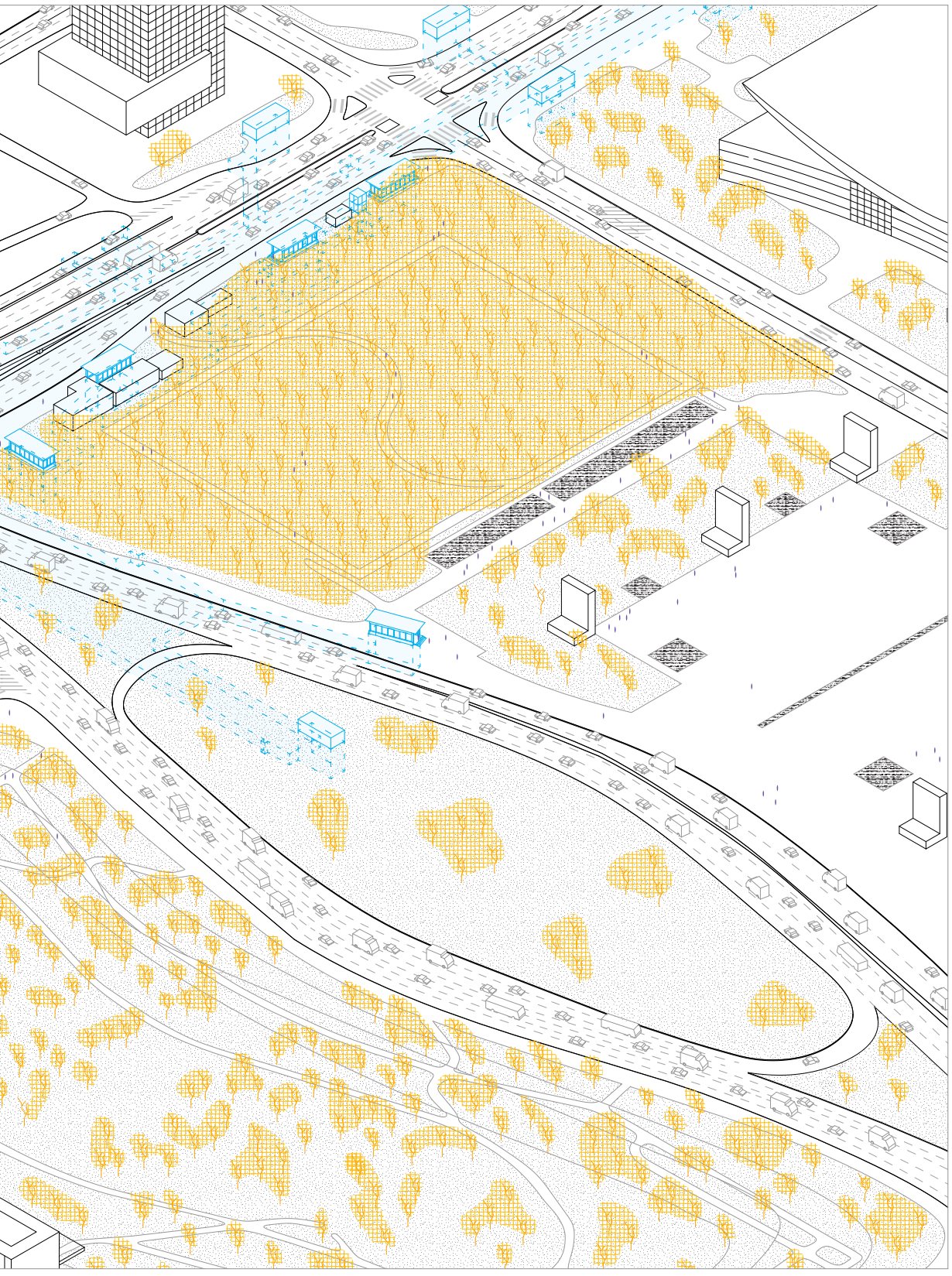


Two Level Plaza



Connection through underground





Axonometry of the Futian Railway Station

The Station, located in the center of the Central Business District of Futian, was planned as a subtraction from the Park of the Central Axis.

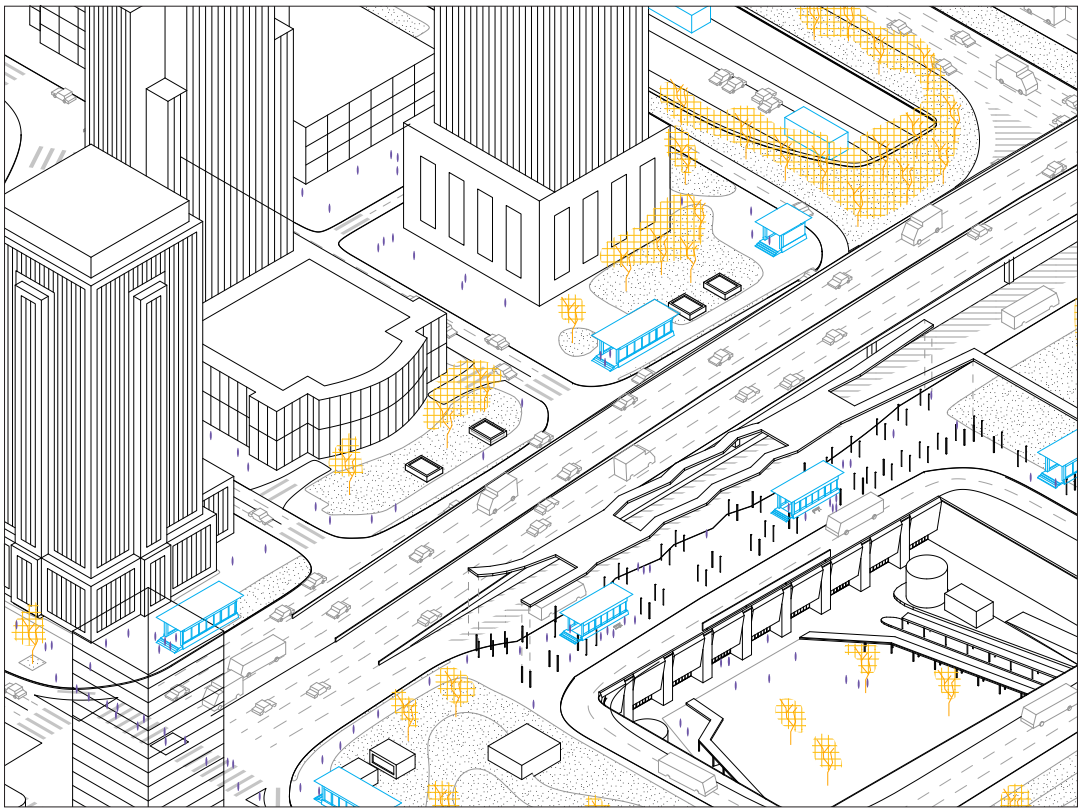
The exterior part of the Station is splitted in two level: the upper one, the level of the street, host the Bus station and two small parks; instead the lower one, the main level of the station, host the taxi stop and a plaza.

The station offer an high level of connection to the main cities of the Pearl River Delta through the High Speed and inside the city and to the airport with the Shenzhen Metro.

All the blocks emerged as separate entities, in particular the Park and all the block facing Shennan Road and Yitian Road. The area appears fractionated and not well connected on the superficial level.

The Futian Station create a new layer of underground connections that allow the people to move along the area.

5.1 Problems of the Area

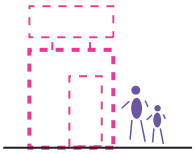


Typical Block

Technical Equipment

Relax Area

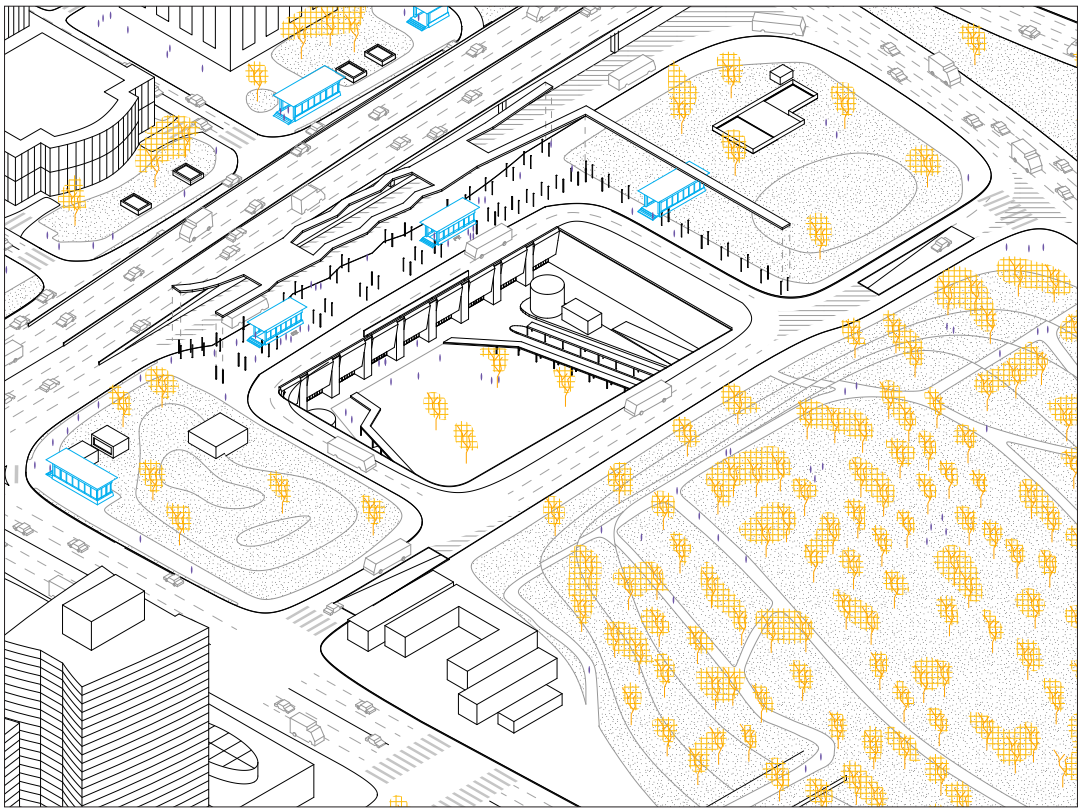
Cyclable Path



Small Activites

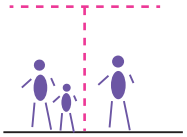
All the blocks present similar problems, the entrances to the Station are distributed all along the street, just like the technical equipment.

The space between the buildings and the main street is not well organized: there isn't any cyclable path, the green space facing the buildings are not equipped with benches. Any kind of space for social activities or for relax is provided.



Futian Railway Plaza

Technical Equipment

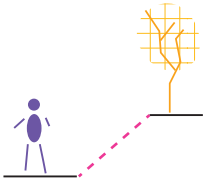


Shadow

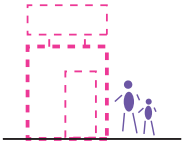
Relax Area

Playground

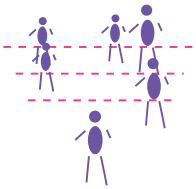
Cyclable path



Connection to the park



Small Activites



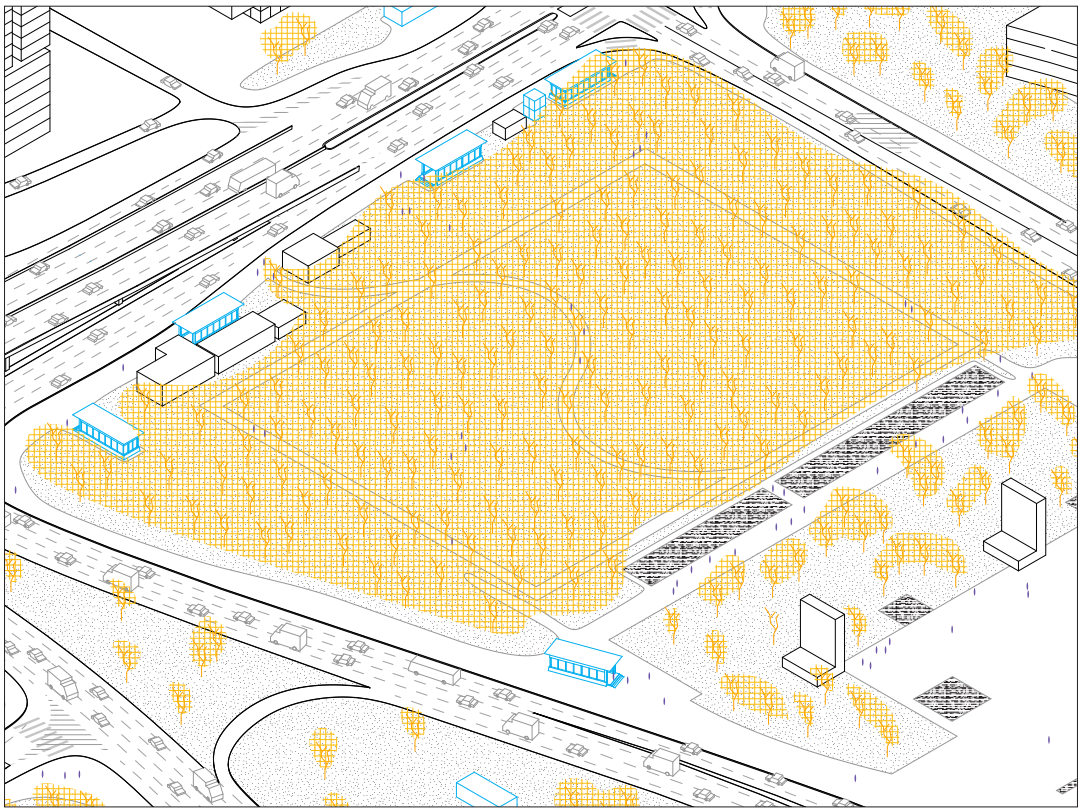
Gathering Space

The upper level of the station is reserved to the bus station but there are not enough sitting places for the passengers.

The two park are quite inhospitable, they don't have any sitting, gathering space or playground and any activities, such as shops or café, is present. There are just few sparse trees that don't create a proper park and shadow. The technical equipment are sprawled in the area.

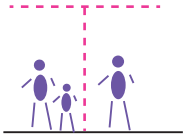
The lower level is reserved for the taxis, there are not enough sitting places and the plaza result as an empty and unused space.

Also if the station was subtracted from the park, it's not well connected with it. People should take advantages of these, the two crossing are far, isolated and don't stimulate the connection. In particular the lower plaza, and therefore the interior level of the station, loose connection with the park.



Western Gardens

Technical Equipment



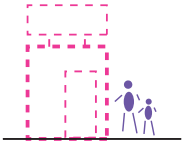
Shadow

Relax Area

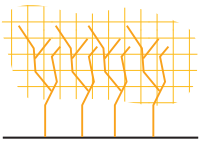
Playground

Cyclable path

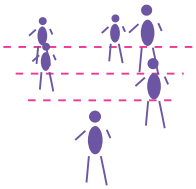
Connection to the Square



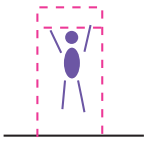
Small Activites



Park too thick



Gathering Space



Sport Facilities

The sidewalk along Yitian Road is composed by a large way where the technical equipment take turns to the numerous entrance of the Station. It's possible to enter in the park just in few points and unfortunately any view to the Civic Center is provided.

The Park is covered with high and thick trees, the area result unsafe and a lot of crime was registered. (Chen, Liu & Liu, 2015).

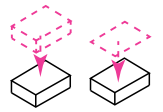
All the area is definitely not being used by the people, a park was planned but the absence of interesting places and activities make the area inhospitable and the connection with the Civic Center Plaza fails.

5.3 Interventions

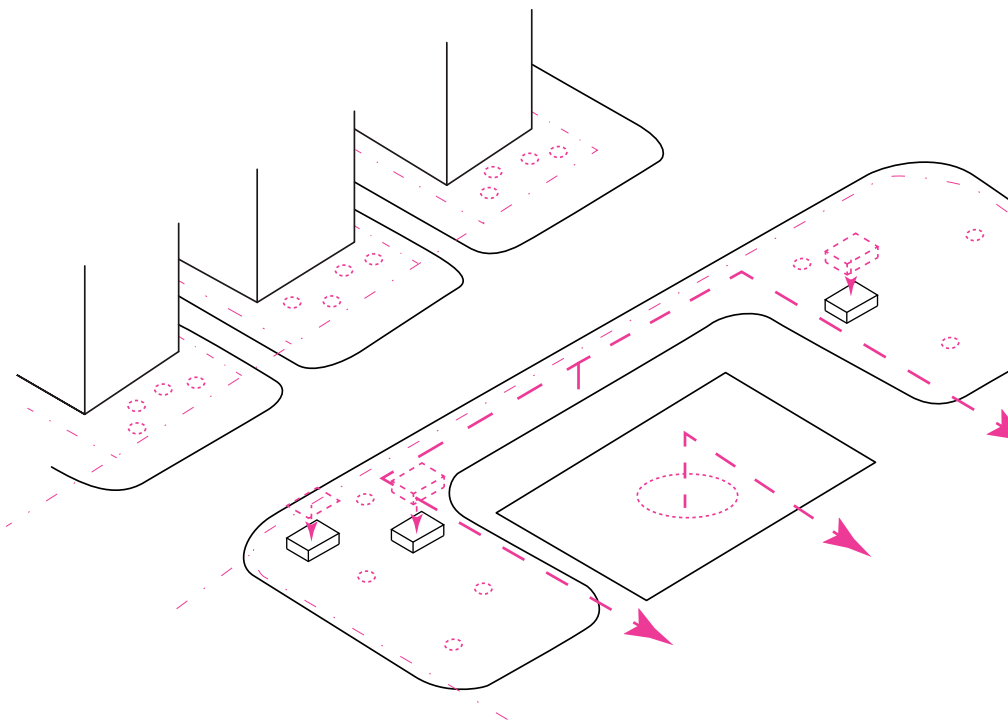
Small - Medium - Large Activities

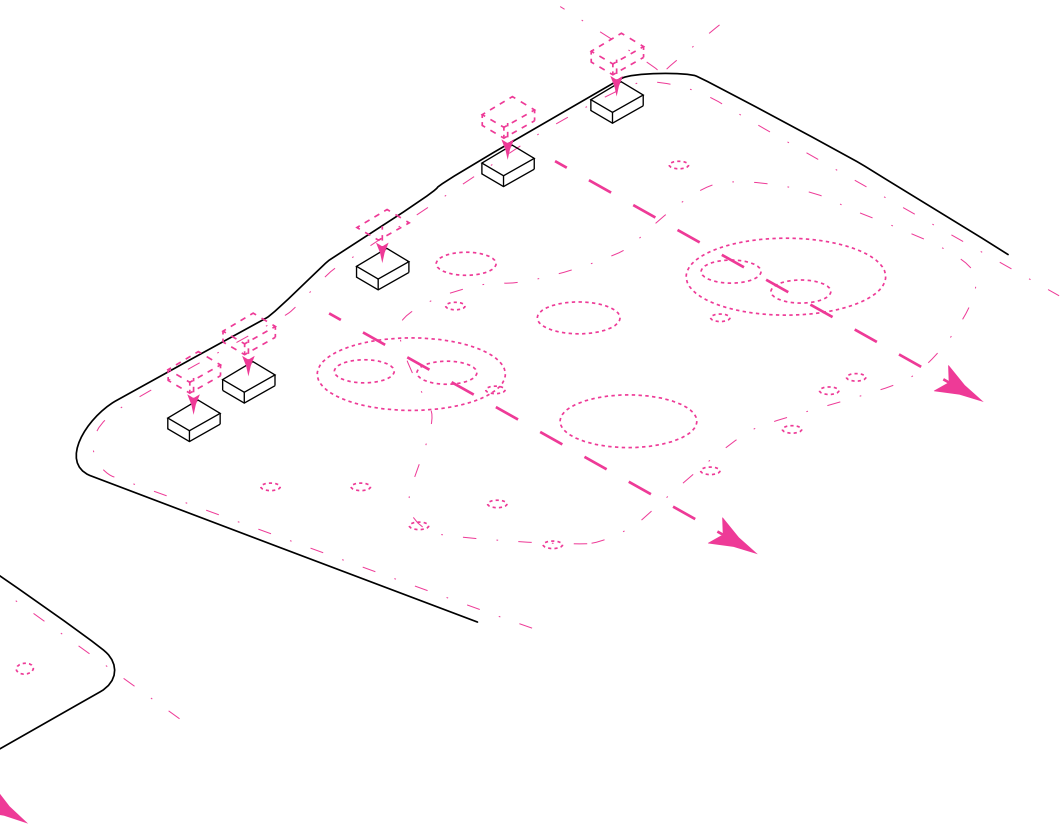
Bycicle Path

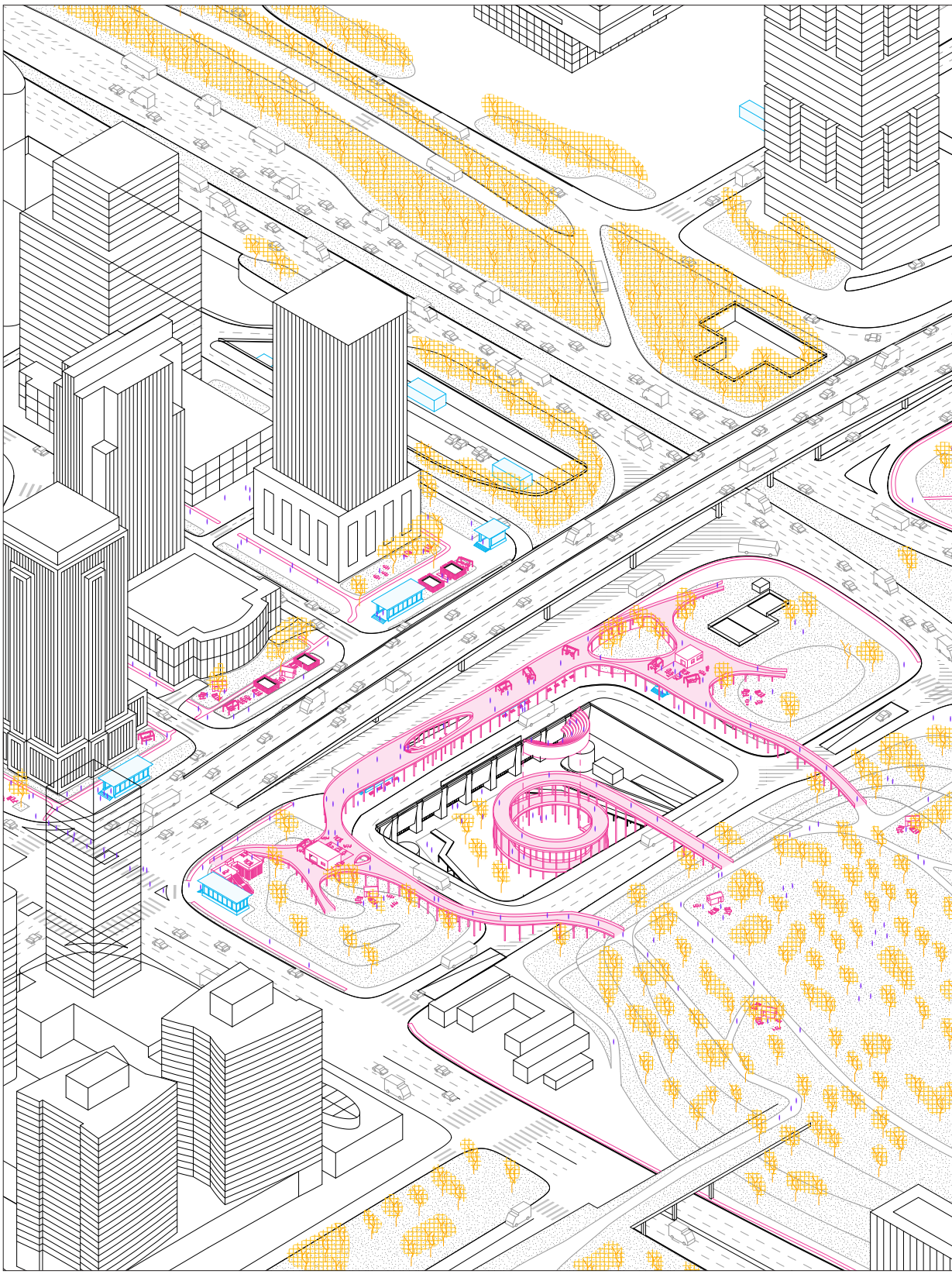
Connection to the Central Axis

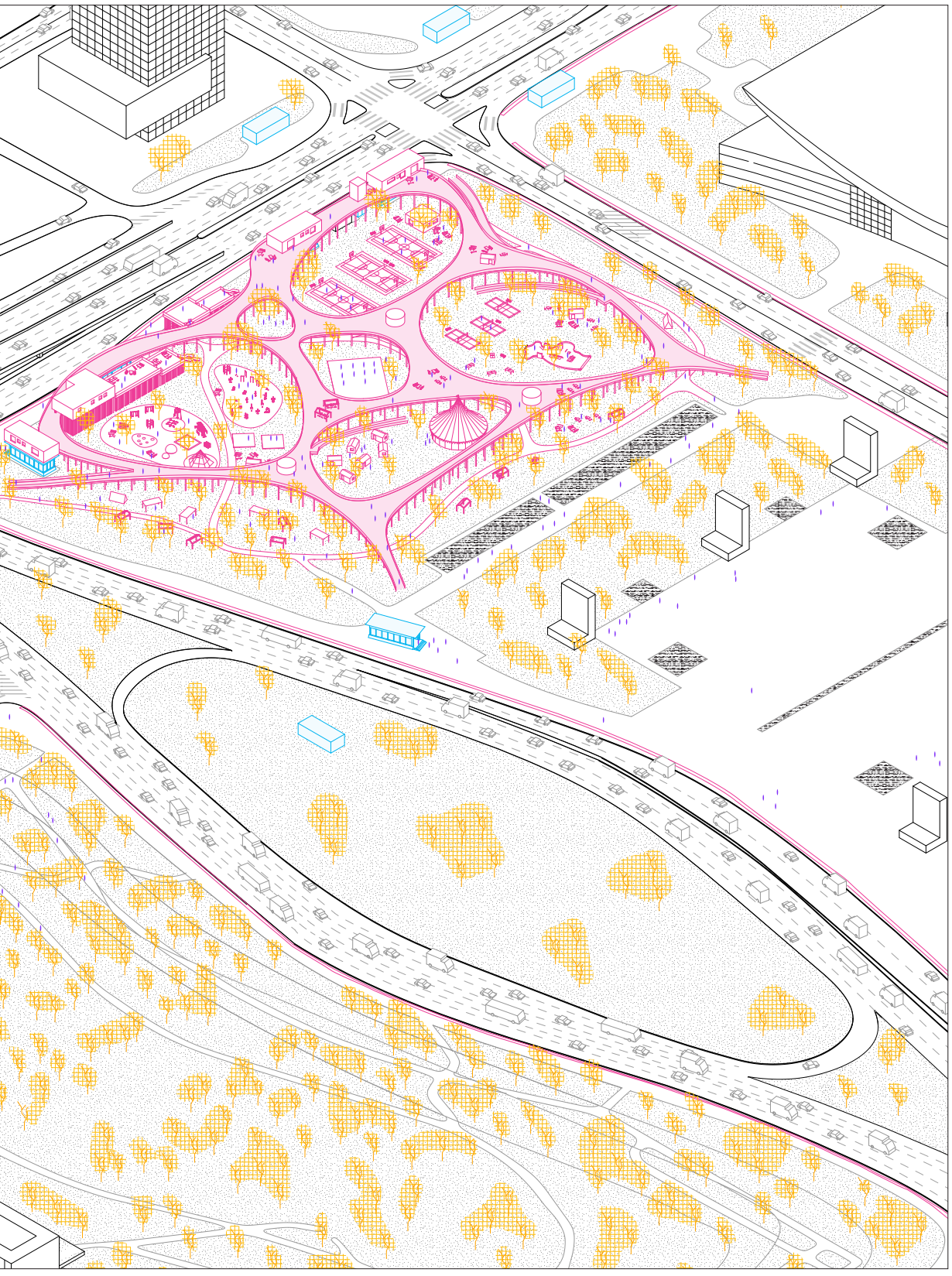


Activites over preexistence

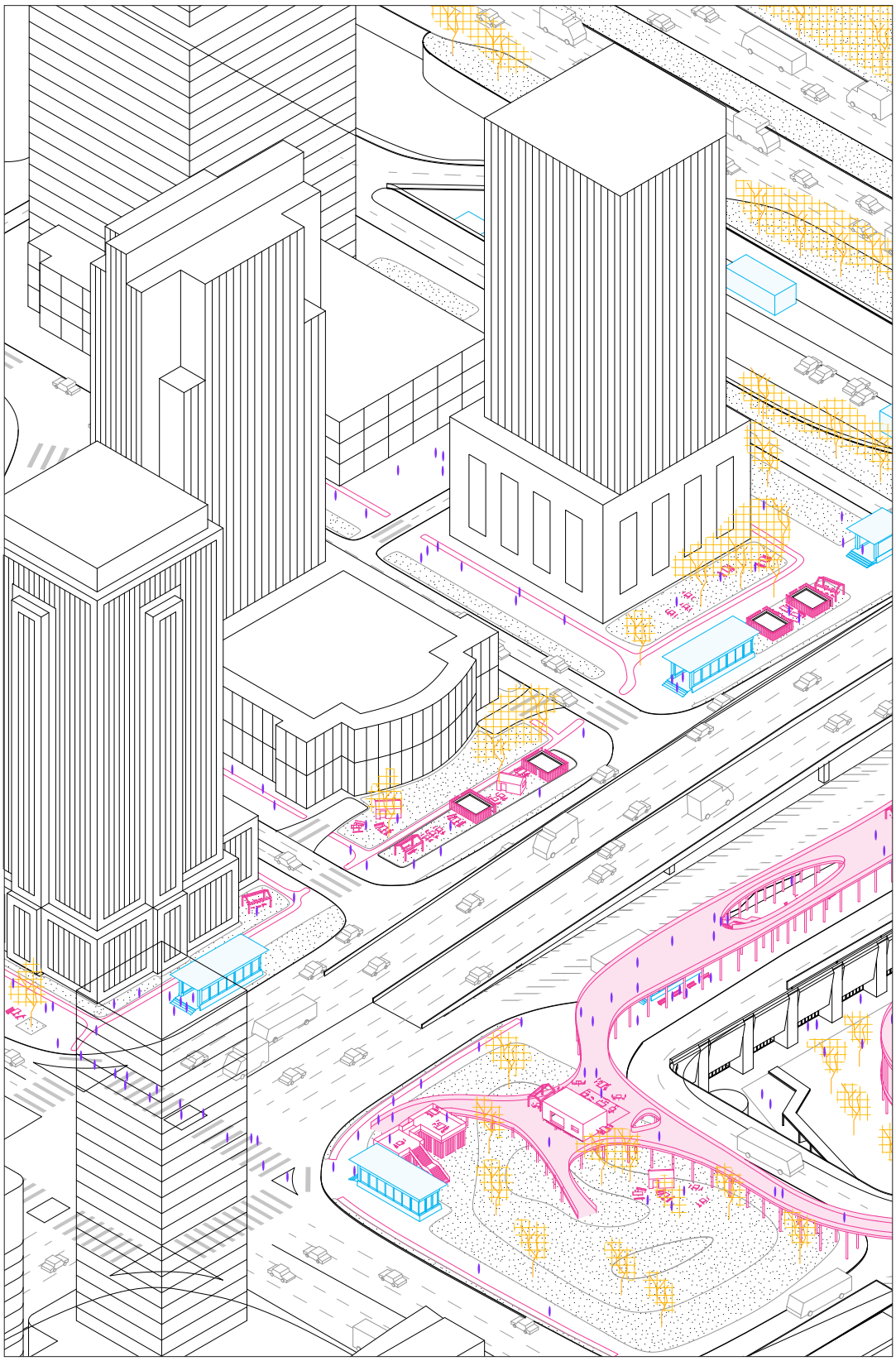




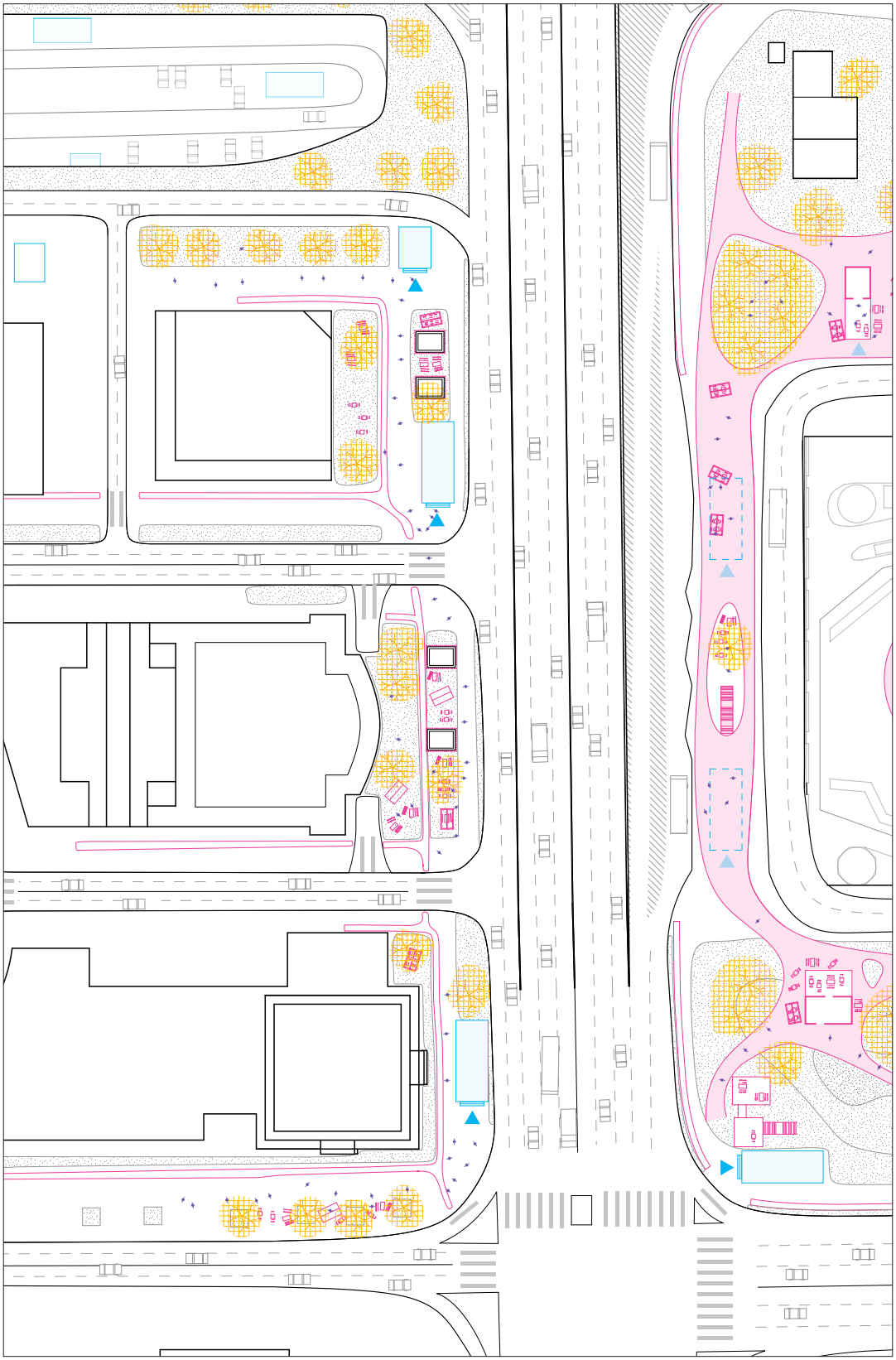




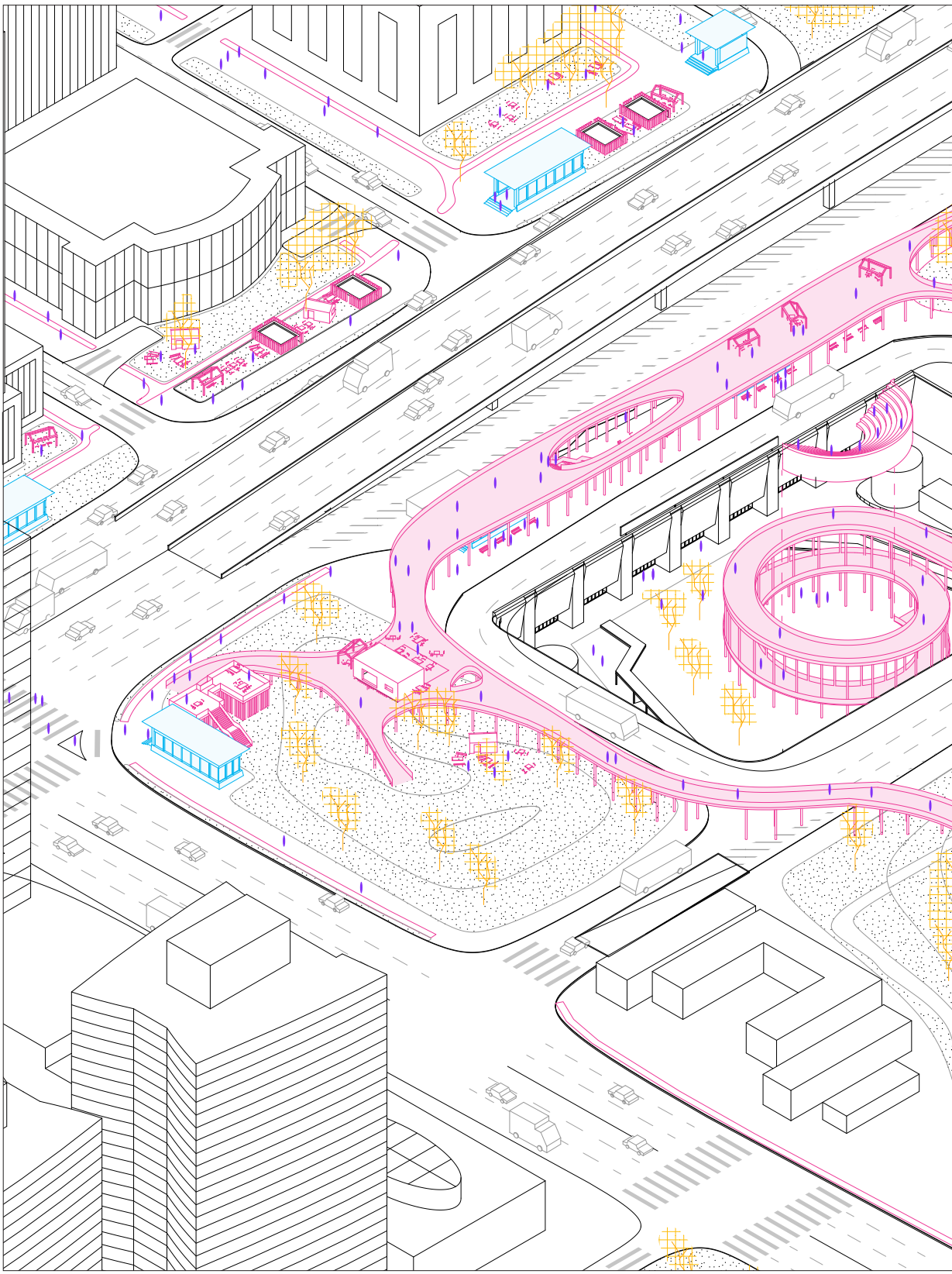
Project's Axonometry

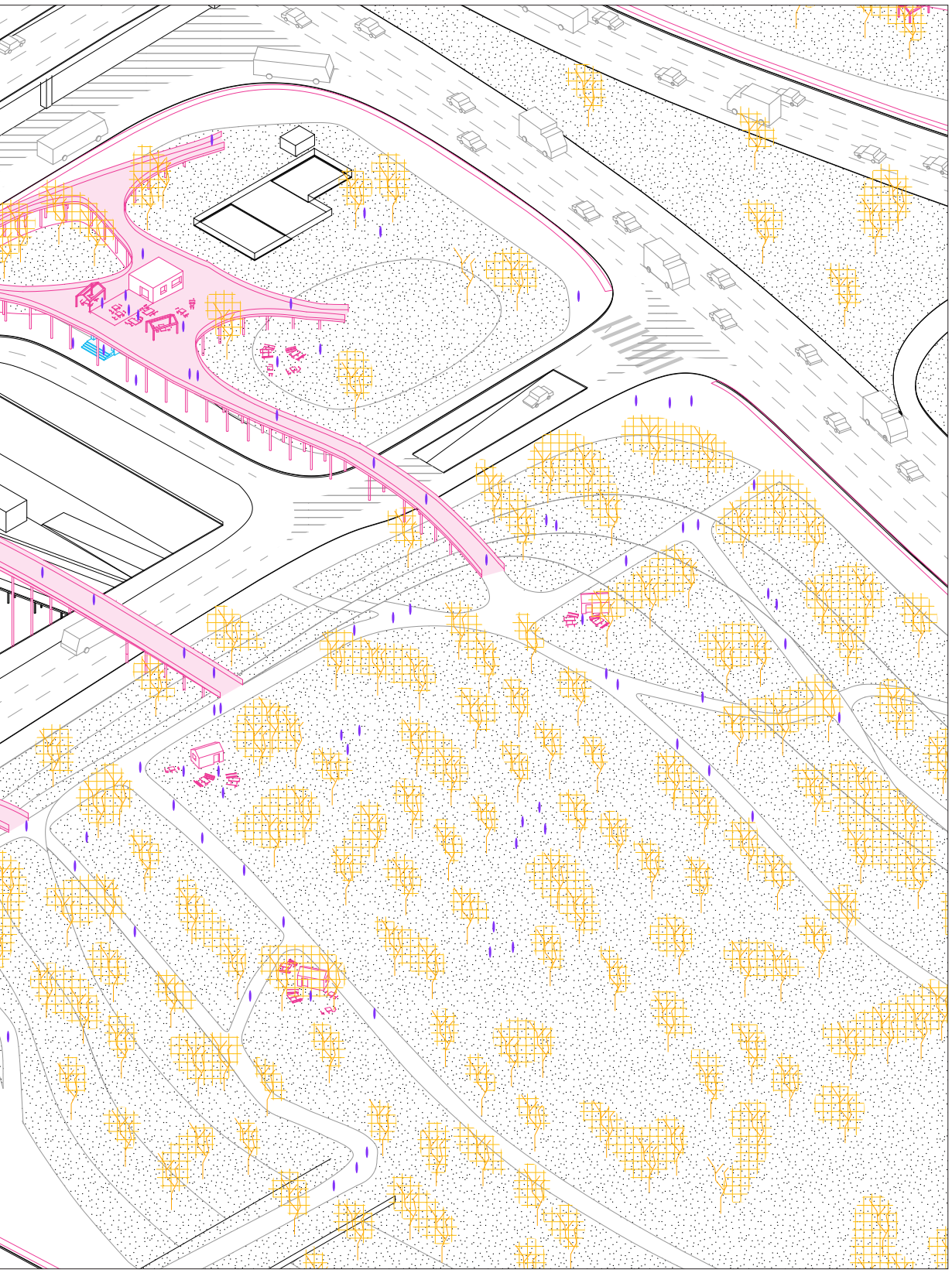


Project's Axonometry of the Typical Block

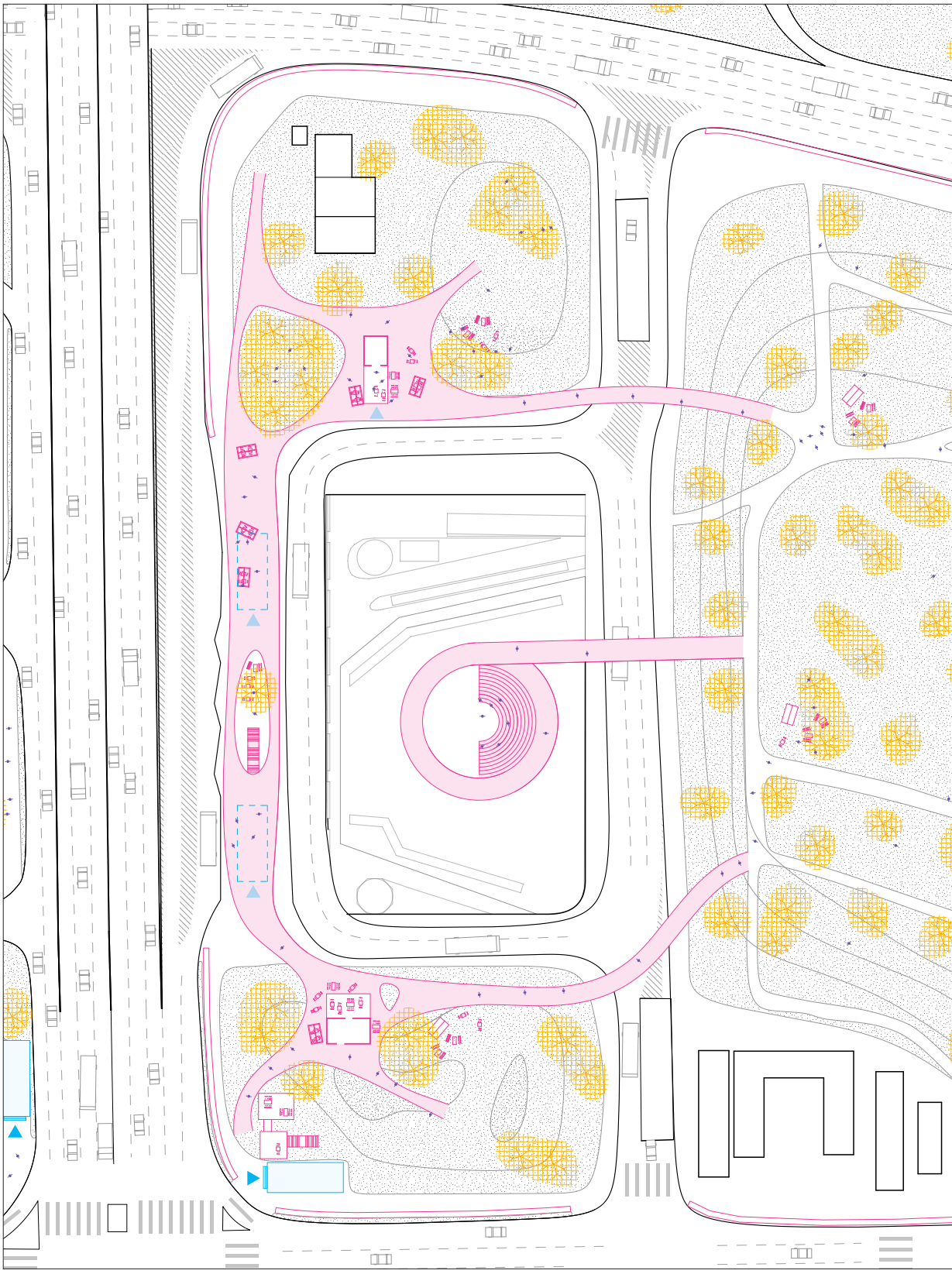


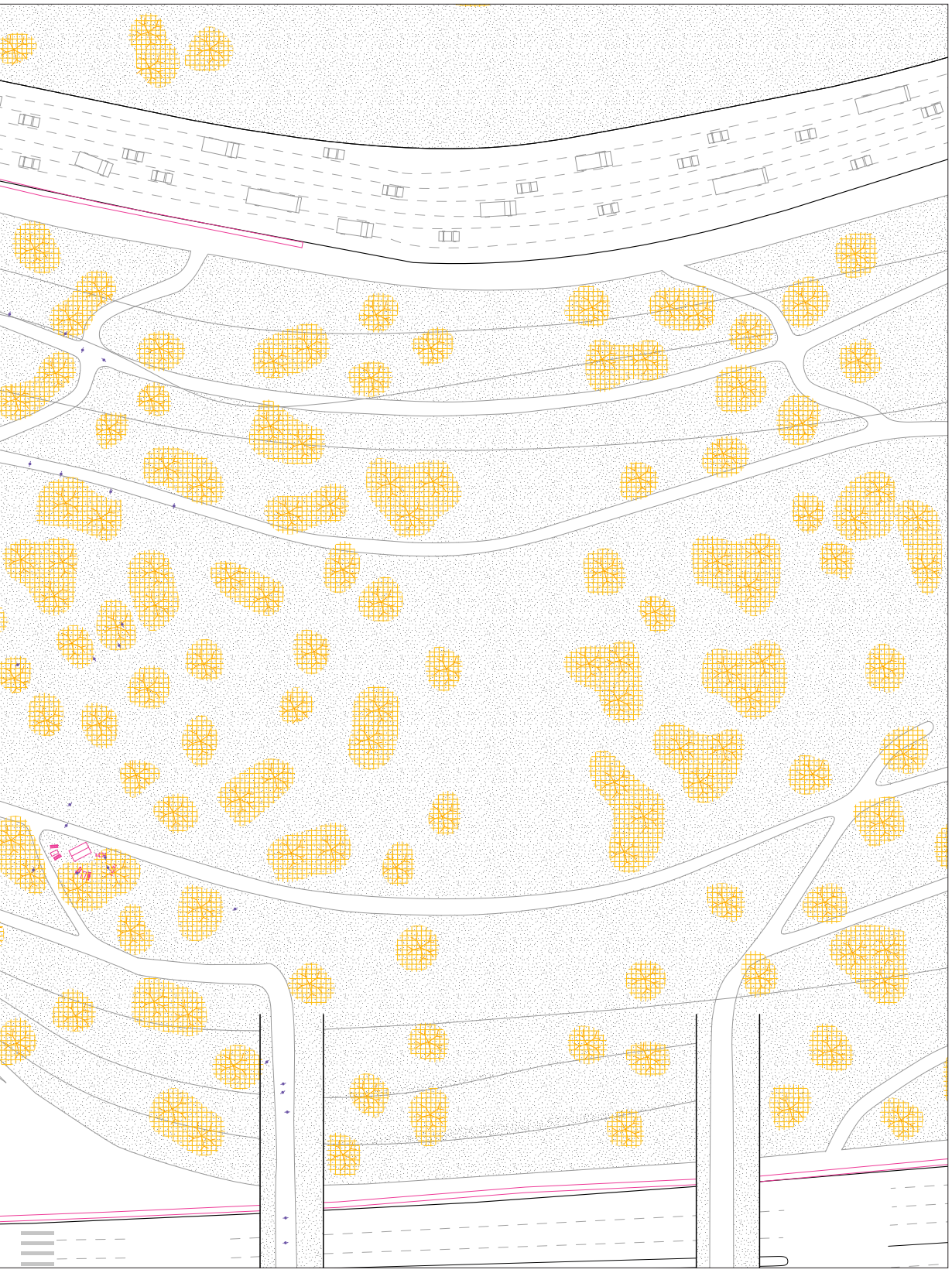
Project's Plan of the Typical Block



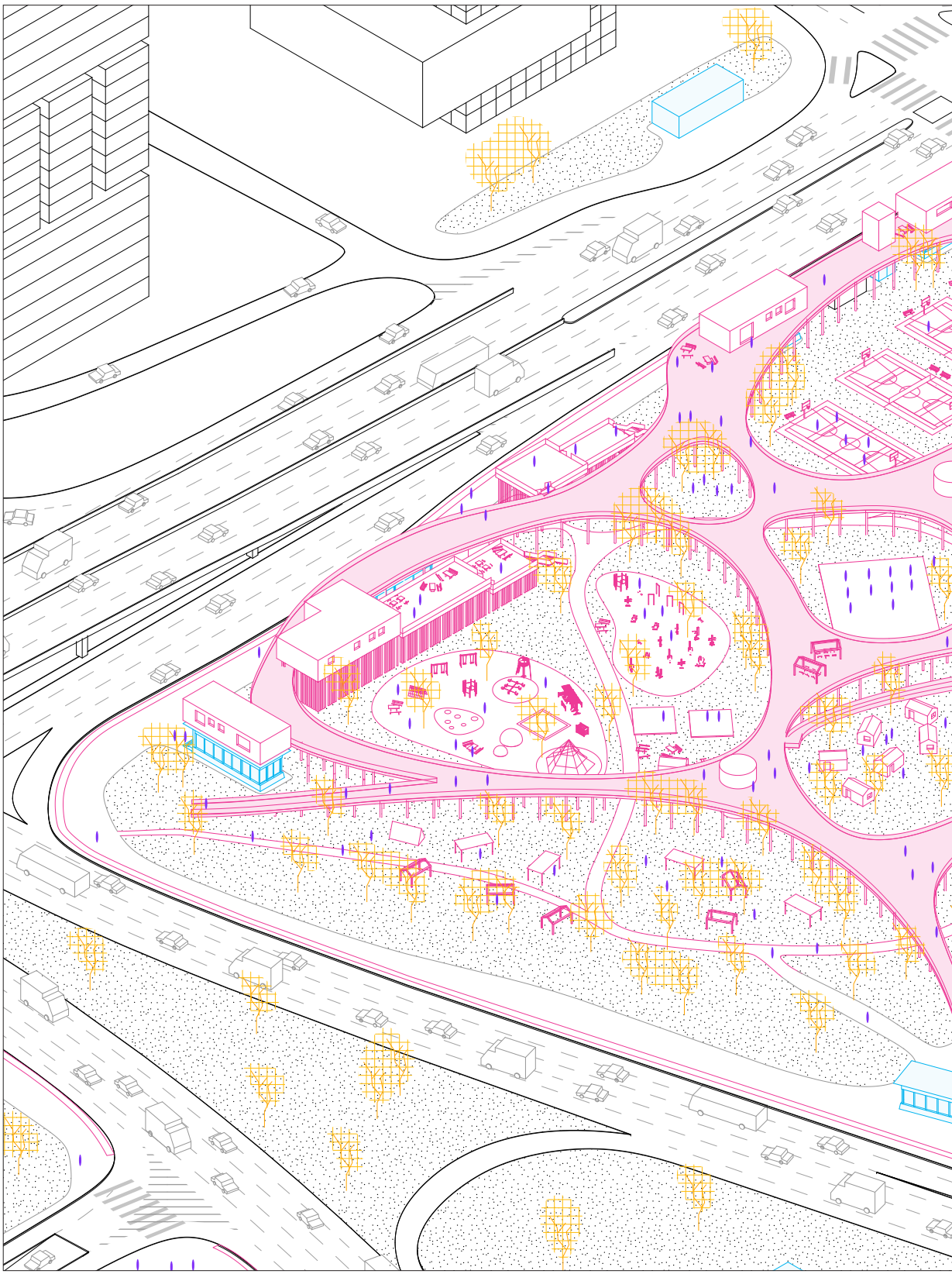


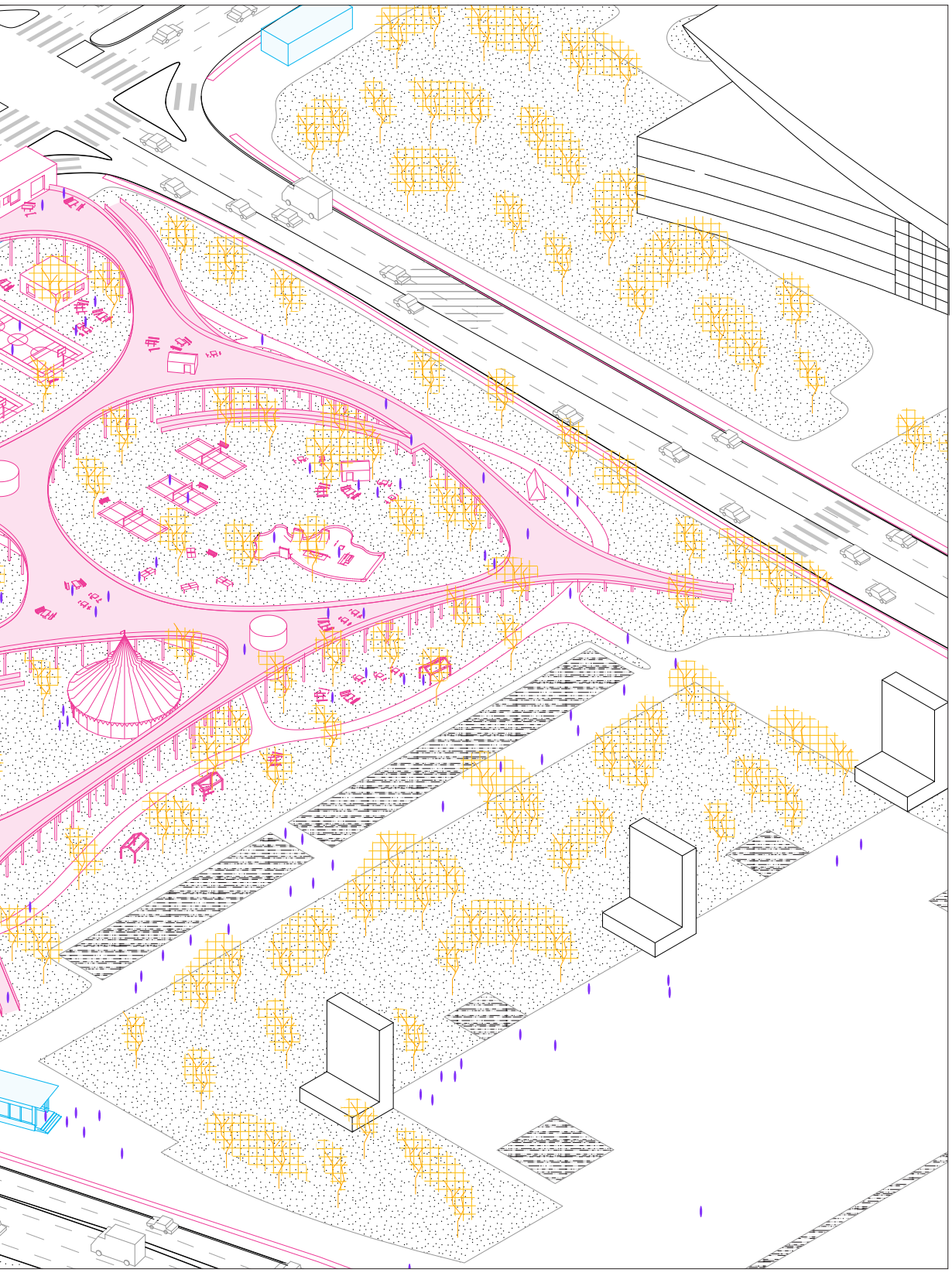
Project's Axonometry of the Futian Railway Plaza



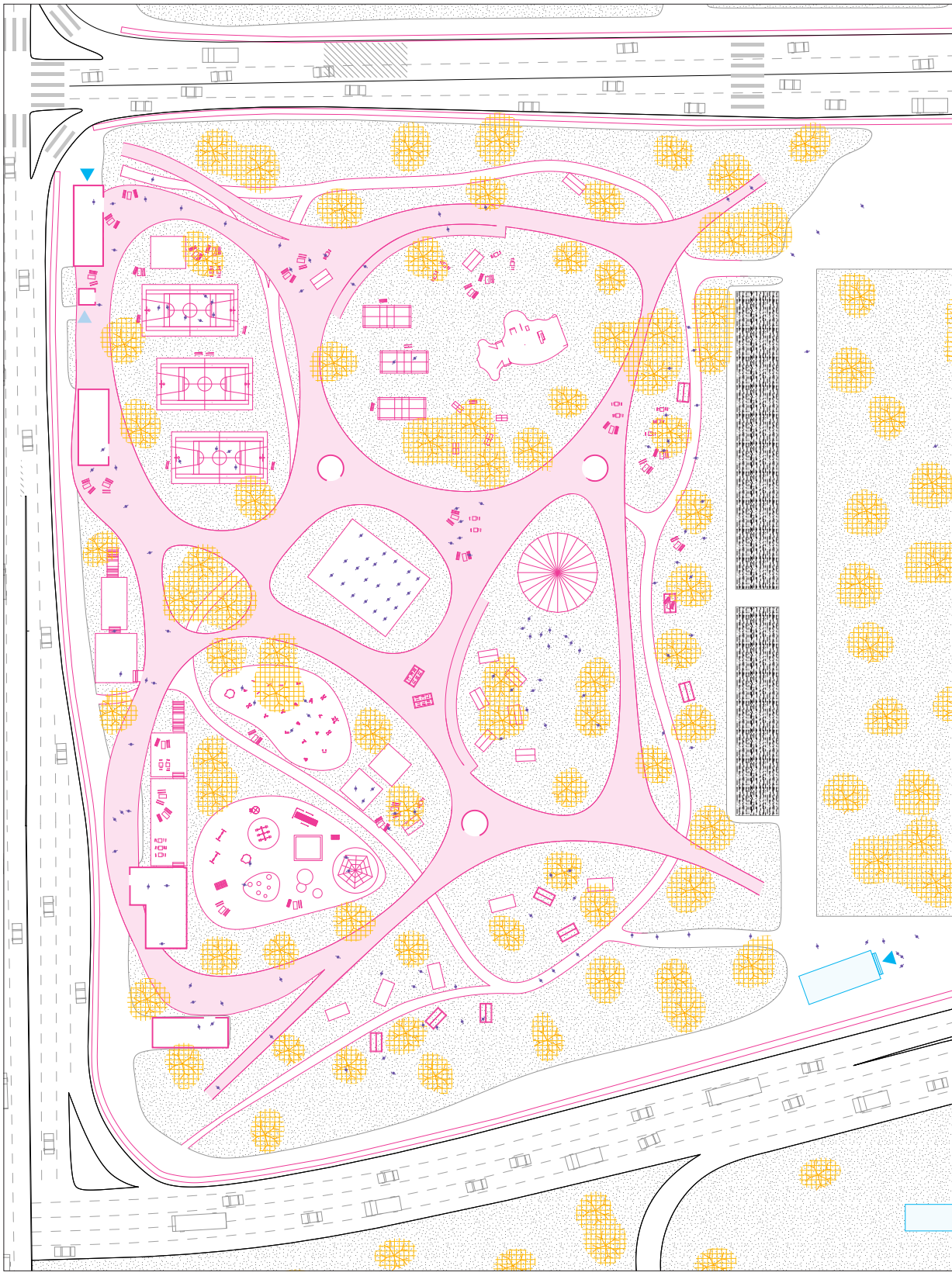


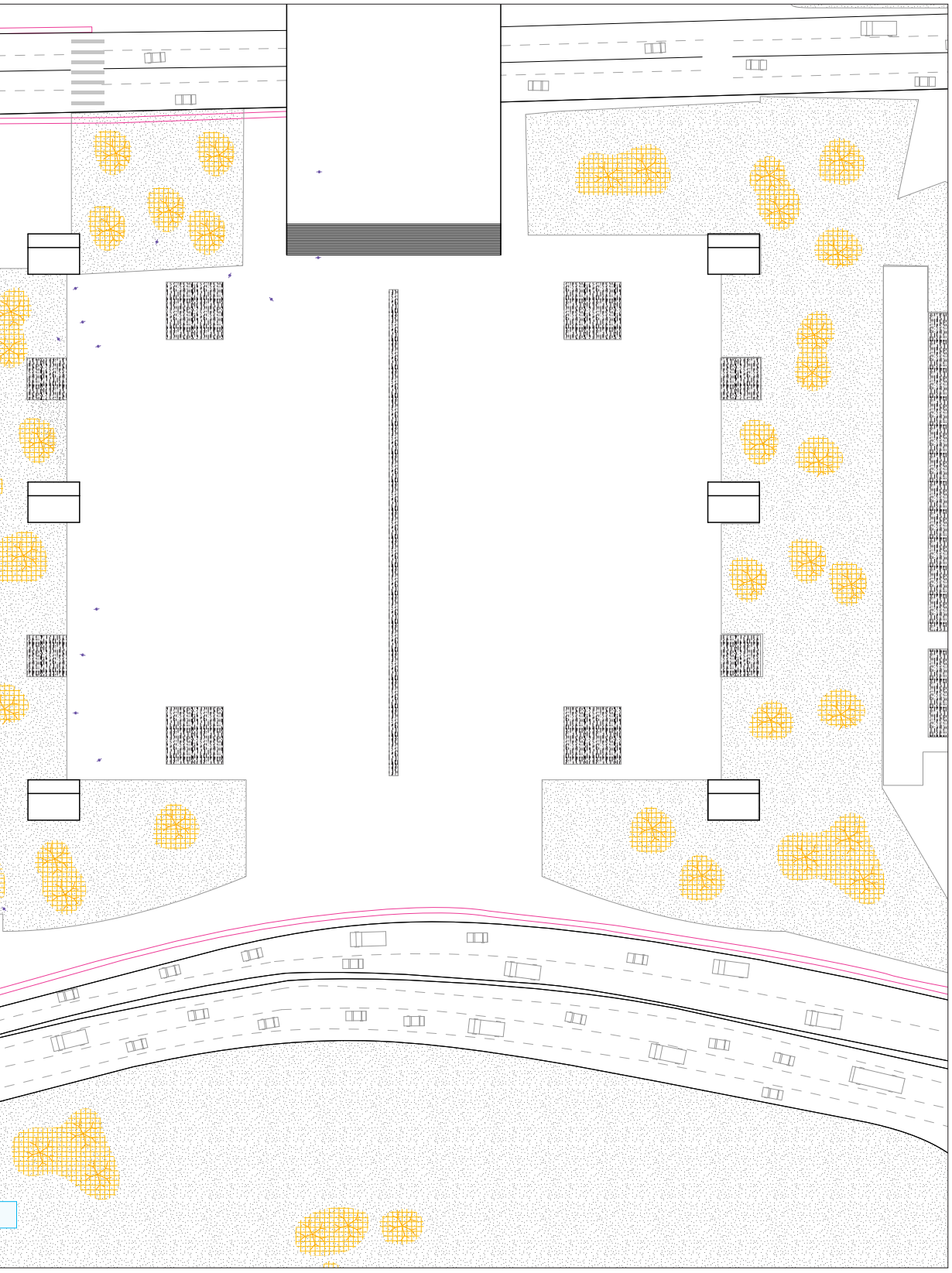
Project's Plan of the Futian Railway Plaza



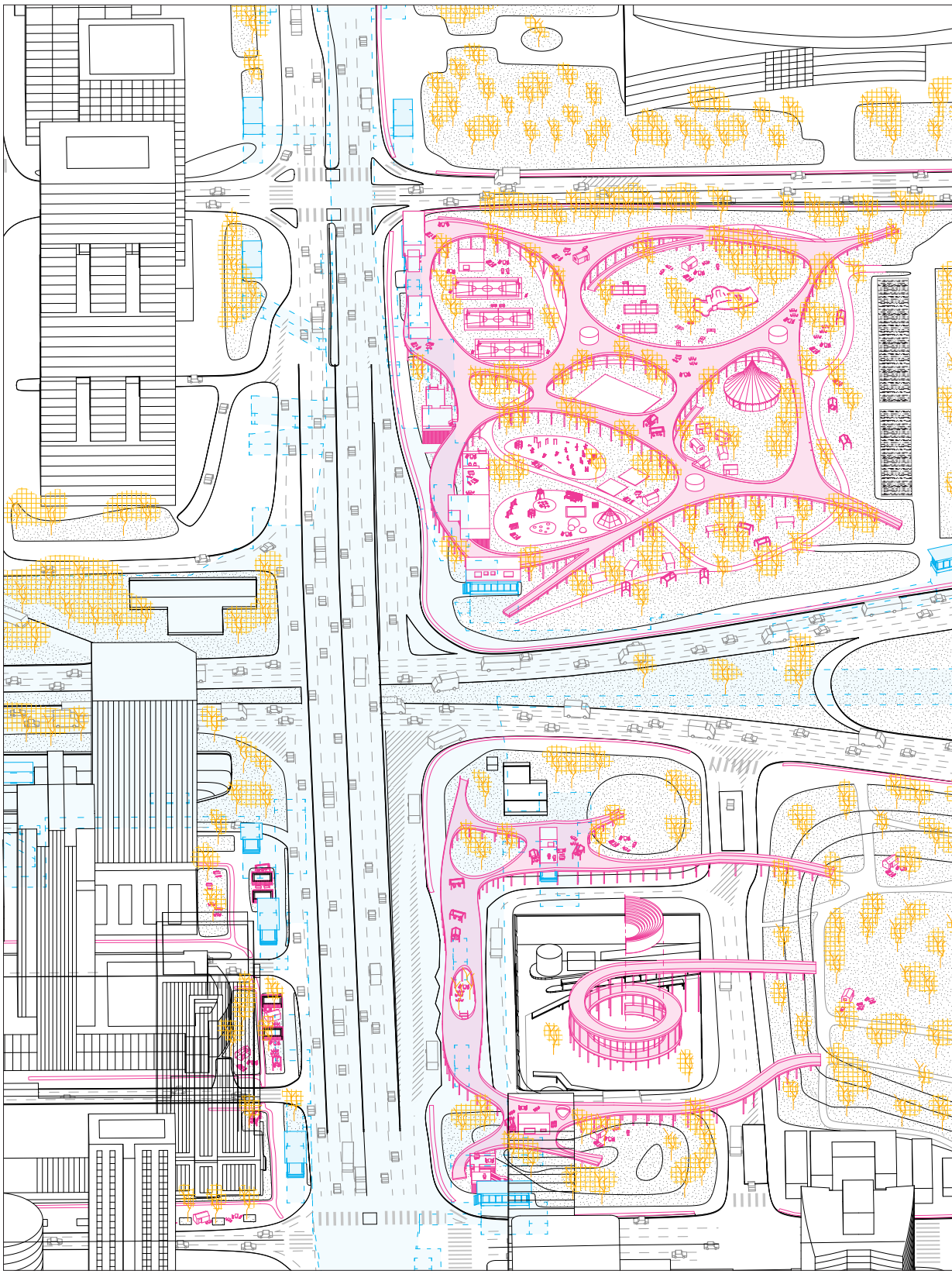


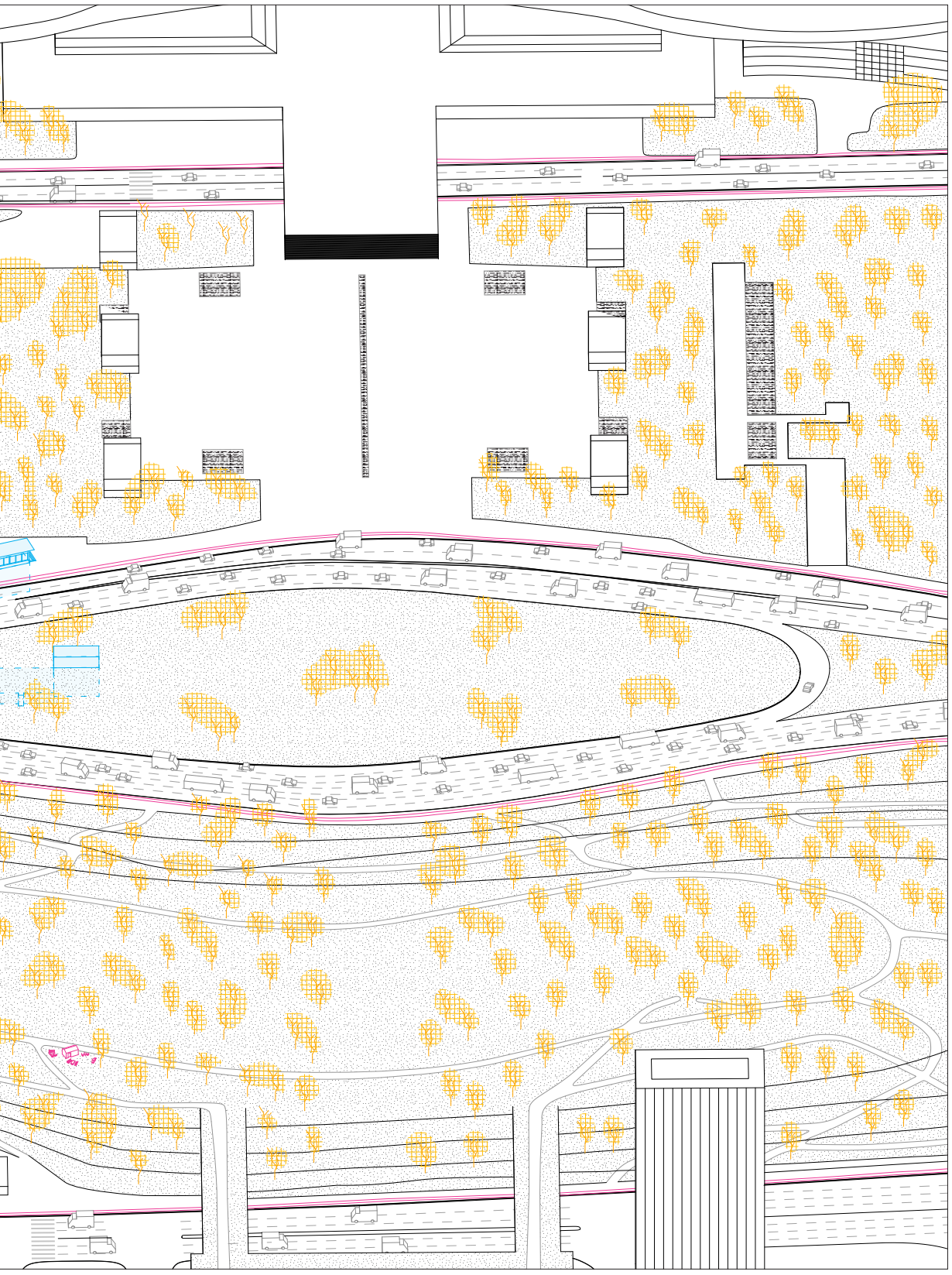
Project's Axonometry of the Western Park

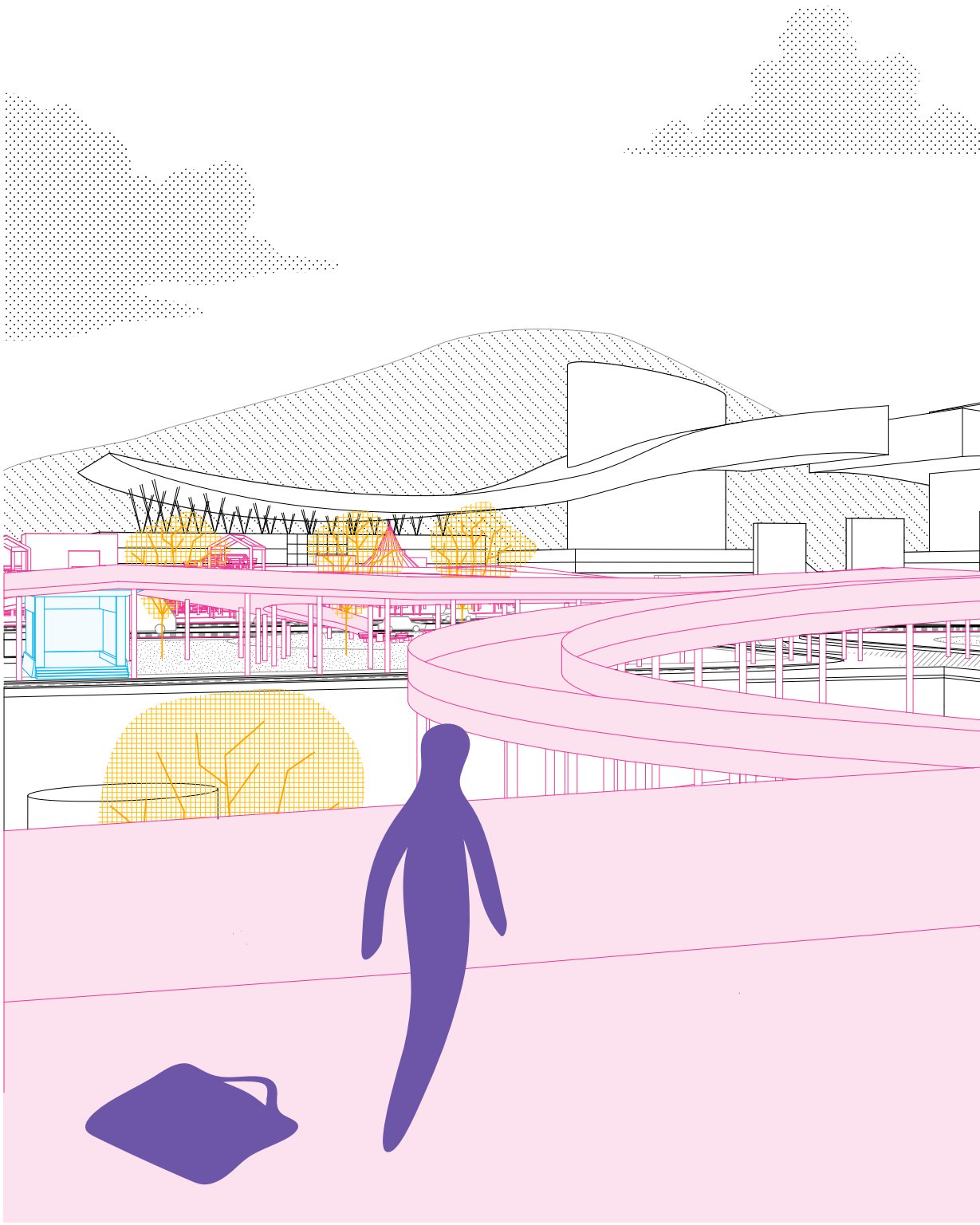


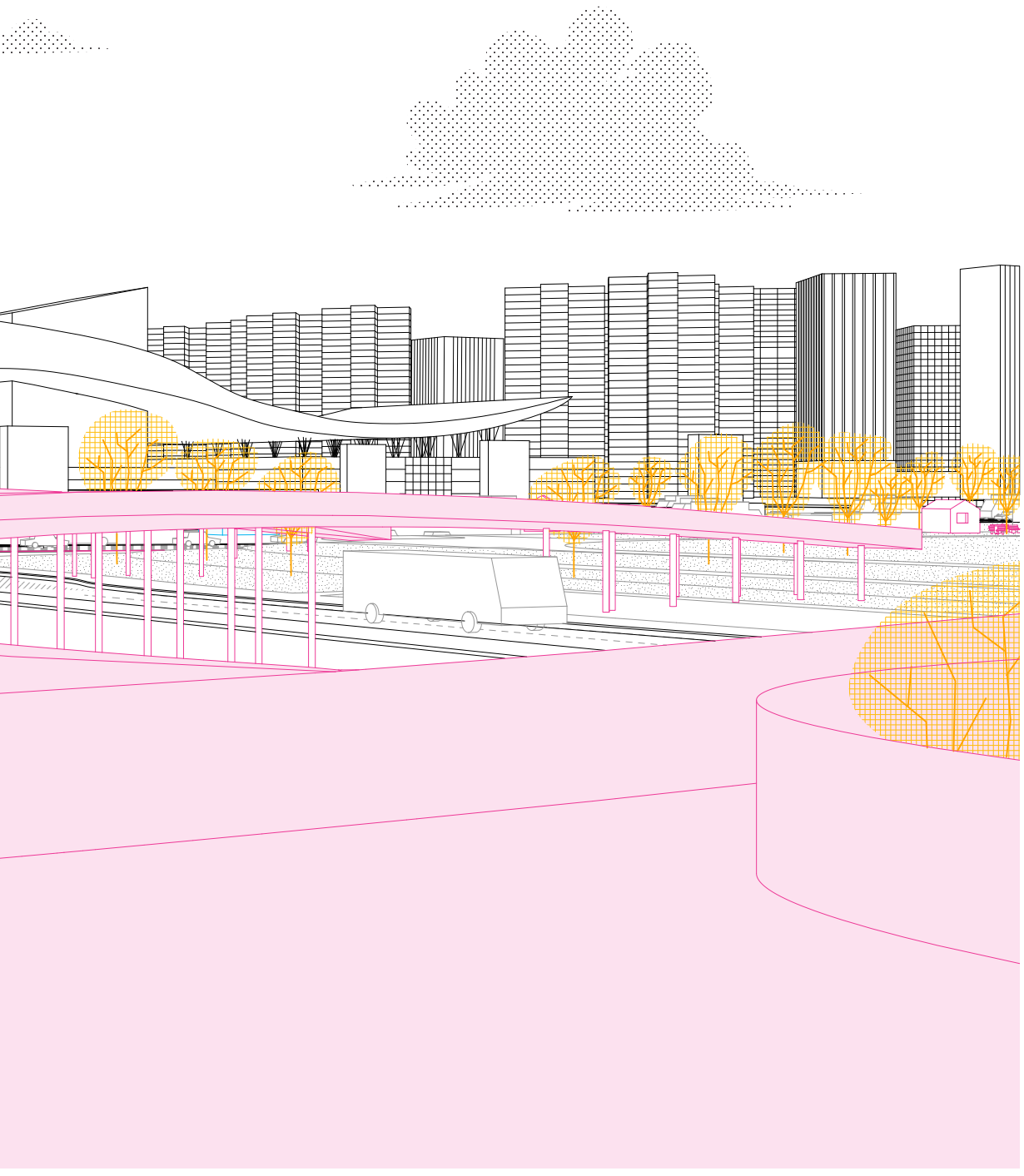


Project's Plan of the Western Park

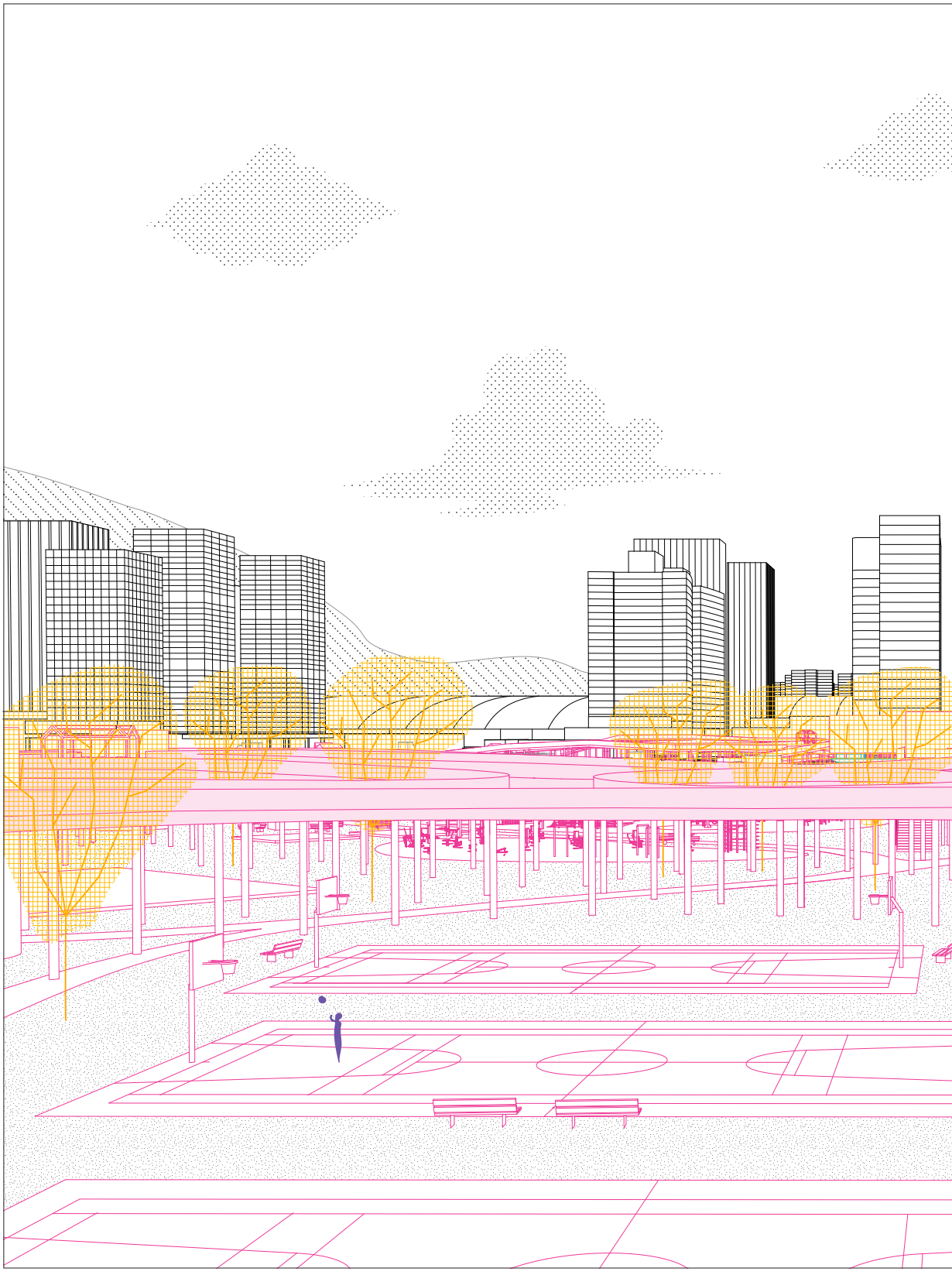


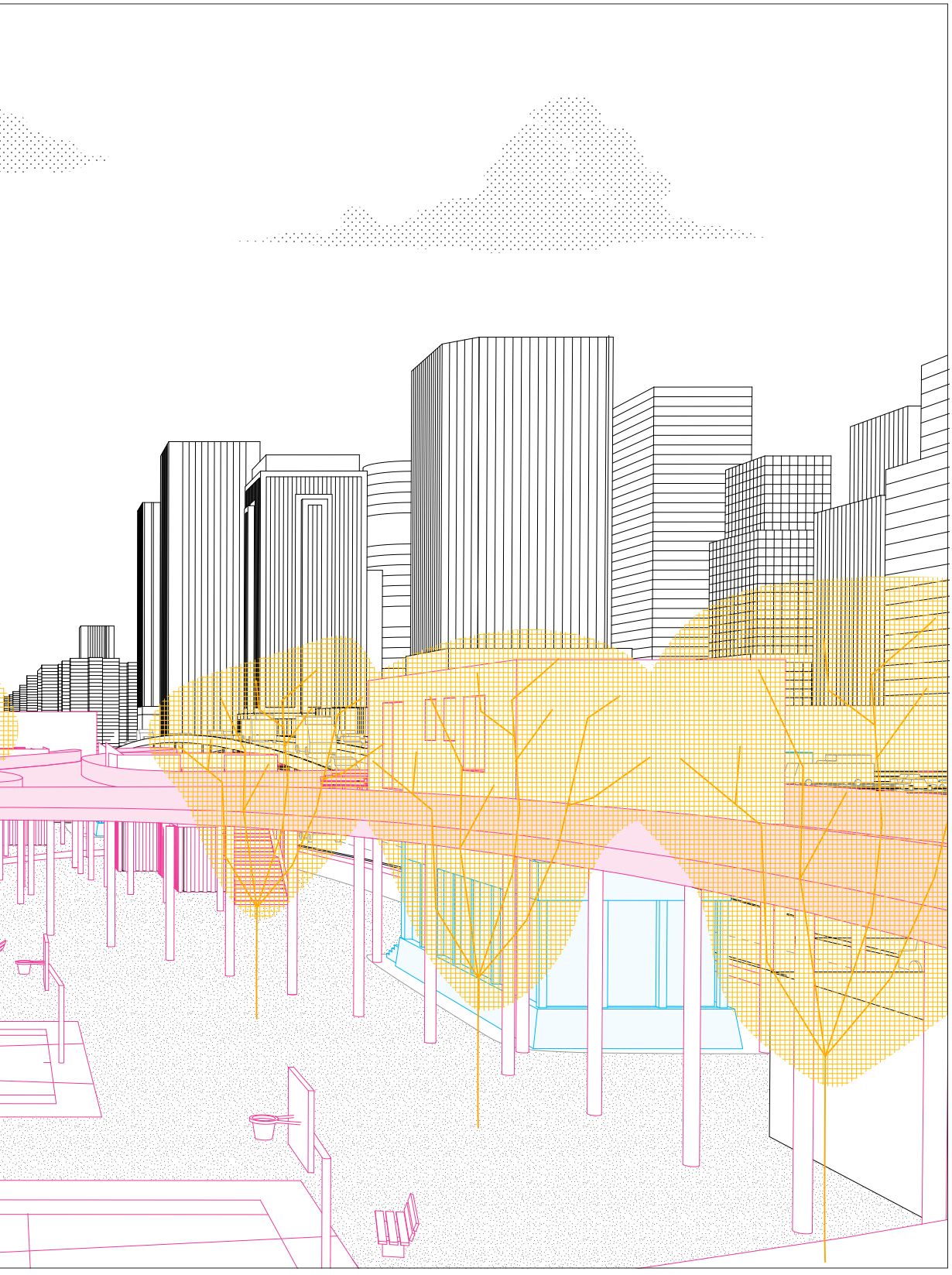






Vision of the Futian Railway Plaza





Vision of the Western Gardens

6. Conclusion

The rigid grid imposed by the Masterplan had been the first step towards the fragmentation of the area and the peculiarity to be crossed by Shennan Road have increased the problem. All the area was planned for a car-oriented and public mobility and the block was defined as a quantity to develop, not enough attention had been reserved to the human scale.

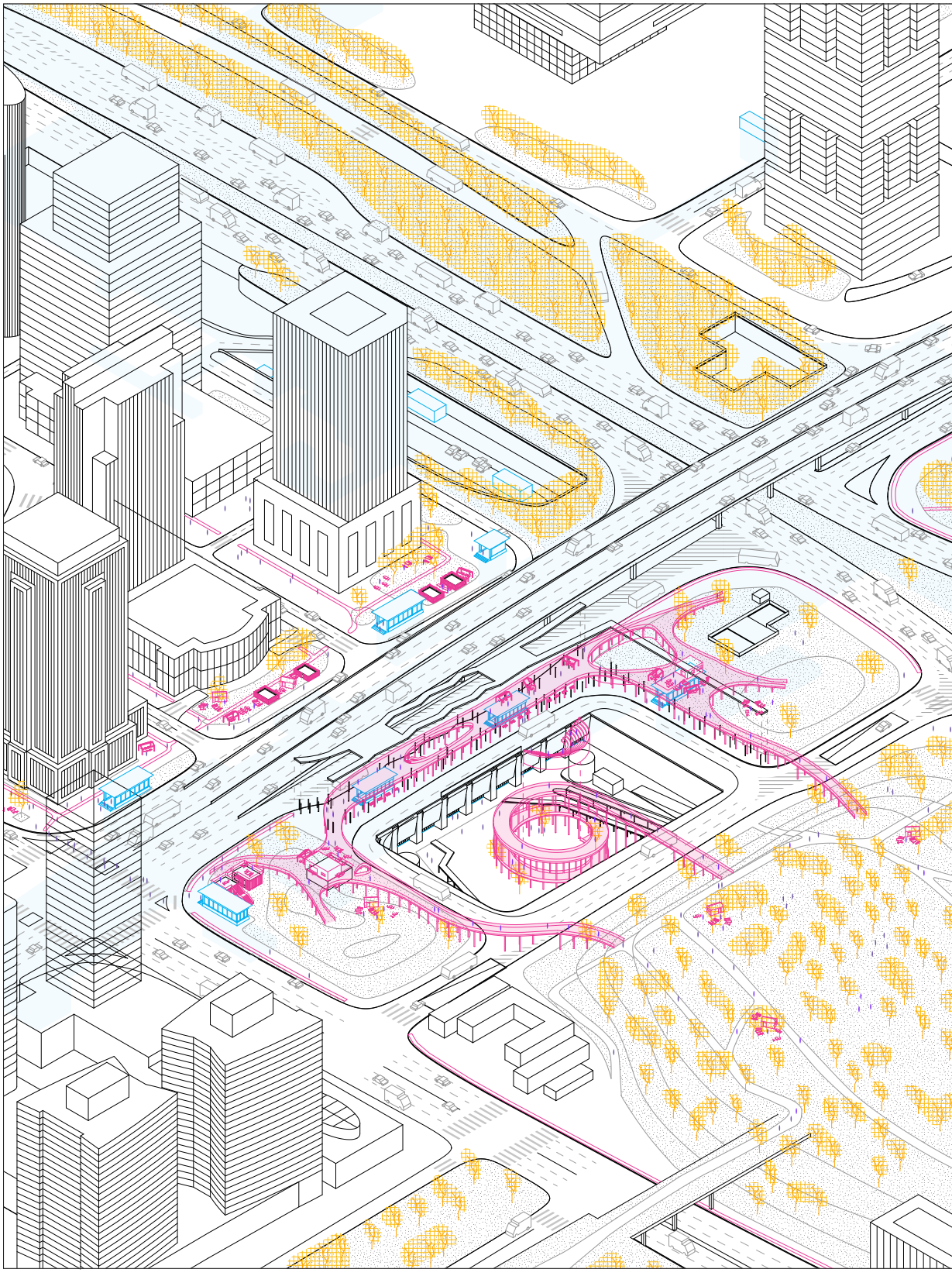
With the establishment and construction of the Futian Railway Station also a new layer of pedestrian distribution have been added ad the district, it have improved a lot of connection not possible at the street level. In particular the Central Axis, planned as the ecological core of the district, was physically split by Shennan Road and anyway it was not easily reachable from the surrounding neighborhoods.

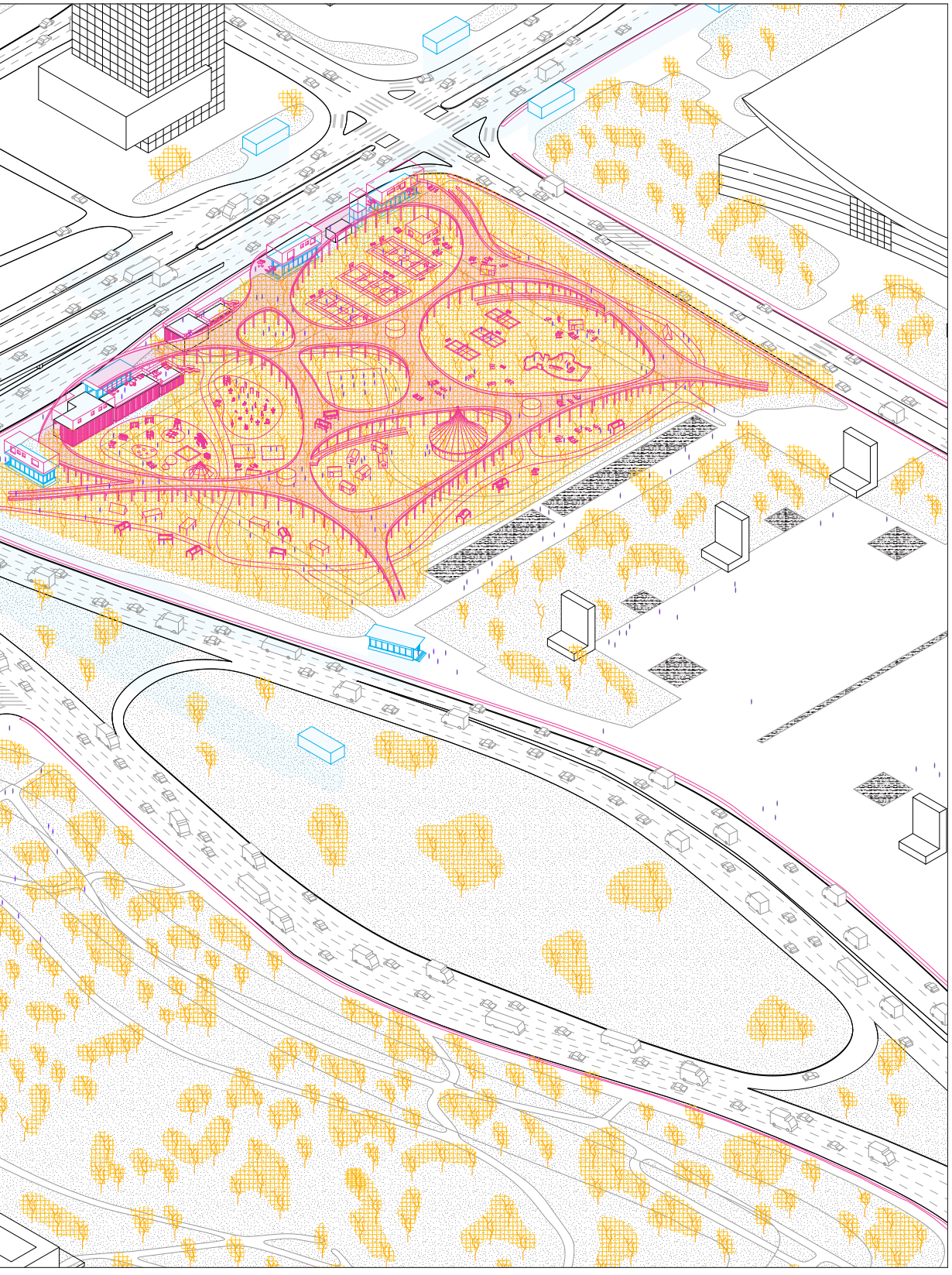
The areas choose as analysis are the one that differ in their peculiarity and are close related to the central axis. The three subdivision bring out the problems already identified in the research.

The project aim to follow the ambition of the Masterplan and convert the Central Axis in a more livable space. The interventions overlap the pre-existing technical equipment along the street and, in particular in the Futian Railway Plaza, establish a new floating layer that connect the station to the Central Axis.

A series of activities have been established in the Western Gardens, this was the most problematic area because the park was too thick and the long distance to the Civic Square make the connection fail. In order to create more ambience a series of facilities have been implemented in the park, in particular the one that was missing in the Central Axis and forbidden in the Civic Square. A lot of sport facilities, small and big squares for social activities, a big space for hosting public events, and some areas have been left as park. The activities are close and people can now enjoy this new space.

The project resolve the lacks of urban design through the use of light architectural interventions and rethinking the unplanned spaces.





Design Over Design

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