

1. 现状分析图 ANALYSIS OF CURRENT SITUATION

总部经济区的基地位于广州市的外围。区域有很好的经济发展潜力，它有方便的交通，同时它位于一个快速增长的工业园区和高新教育科技地区的中心地带，这样的富于战略性的位置。

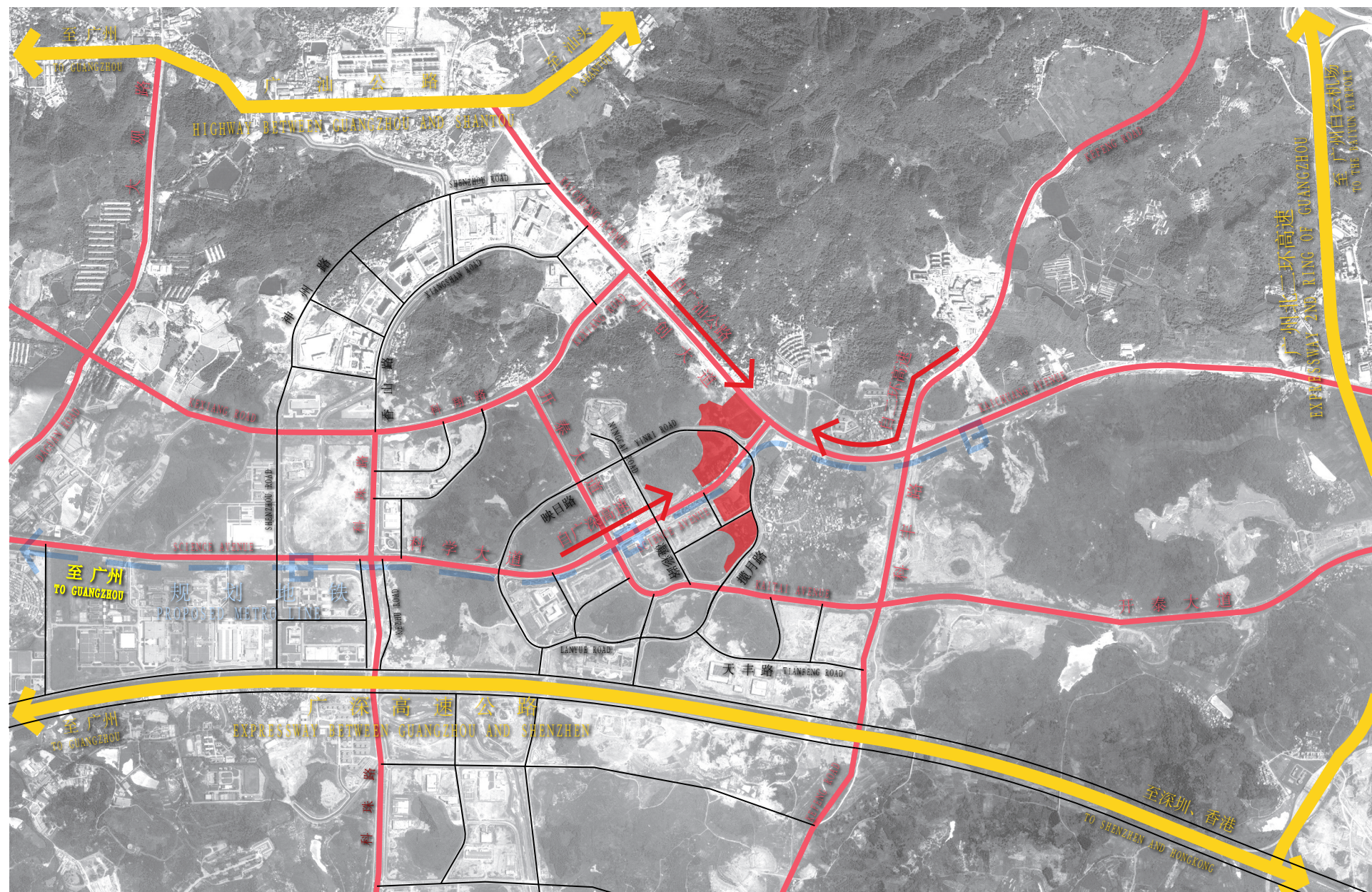
The site for the Headquarter Economic Zone is positioned just outside of the centre of Guangzhou. The site has an enormous potential for a future developments because of its good accessibility and is the strategic place in the heart of rapidly growing zone for hi-tech and scientific industry.

1.1 现状道路交通分析

1.1 ANALYSIS FOR CURRENT TRANSPORTATION

利用公共道路交通是很容易到达的总部经济区。它位于在三条高速公路之间。广深、广汕、广州二环高速公路汇集于此。计划新建地铁站将有一个站点离这个基地仅仅200米,并增加可达行。计划中将建一个地铁站出入口直接进入到这个地区。

The Headquarters economic zone is very well accessible as well with from the road as well with the public transport. The site is located in the middle of three highways: the expressway from Guangzhou to Shenzhen, the highway from Guangzhou to Shantou and the expressway 2nd ring of Guangzhou. A new proposed metro line will have a station on 200 meters from the site and will optimize the accessibility. Nearby the entrance to the site and will optimize the accessibility. Nearby the entrance to the site a metro station if planned



1.2 现状用地功能结构分析
1.2 ANALYSIS FOR CURRENT FUNCTIONS

基地位于快速发展的高新技术产业的园区。有生物机械工业组团，微电子、软件产业组团，管理服务、科研中心区组团，新材料、新能源产业组团和其他高新产业组团

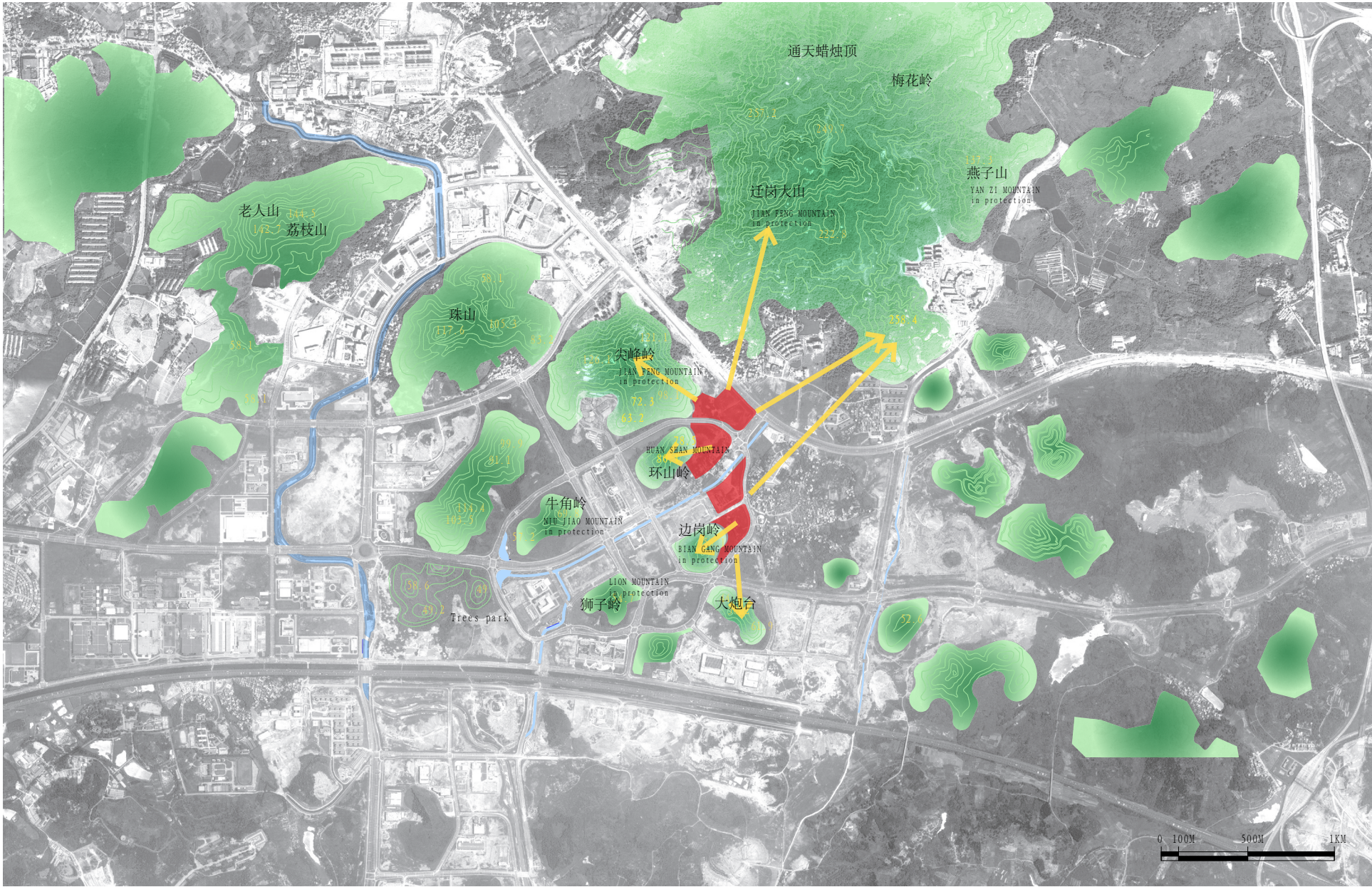
The site is located in the centre of a modern industrial zone with fast growing industries: biological engineering industry, microelectronics and software industry, the centre of management service and scientific research, new material and new material energy industry and hi-tech industry.



1.3 现状空间景观分析
1.3 ANALYSIS FOR CURRENT LANDSCAPE

最后值得注意的是基地拥有一个风景秀丽的自然景色。四面环山，绿树如荫。从所有的建筑望去都有很好的视线和景观。北部有尖峰山和燕子山，南部还有许多小山，这一些小山营造出令人期待的新的环境。

Last but not least the site is in the middle of a beautiful nature. The site is surrounded by beautiful hills with green hills and beautiful trees. There are direct views possible from all the offices to the high Jian Feng Mountain and the Yan Zi Mountain in the north. In the south there are some smaller hills witch create a spectacular setting for the new development.



- 总部经济区规划用地
SITE FOR THE HEADQUARTER ECONOMIC ZONE
- 山体保护
MOUNTAIN IN PROTECTION
- 等高线和山峰高度
CONTOUR LINES AND MOUNTAIN HEIGHT
- 河流水体
RIVERS
- 关键山体视线
VIEWS TO MOUNTAINS



2. 城市策略 URBAN STRATEGY

2. 1城市发展和营销策略

我们建议将最重要的商业建筑和办公楼沿着现有道路建设，并尽可能远离现有山体，不造成山体和自然环境的破坏。

- a) 生态城市：在道路和山体之间我们保持一个较大的开敞空间，保护现有的绿化植物。
- b) 景色宜人的环境：我们在自然景观与城市之间建立一个缓冲区，并设计一个具有居住、娱乐等各种功能的城市公园。同时建议设计一个绿色区域——一个安静并能激发人们创造性的地方。
- c) 城市化：我们将突出作为活动主要通道的现有主要道路的城市特征。在沿着公共道路两侧摆放最主要的公共建筑。以最合理和方便的方式使人们能集中于此，并进行交流和相互影响。同时考虑到人与人之间关系，塑造出友好和高效的形象的城市规划是吸引各类公司在次投资的重要因素。
- d) 商业价值：我们设计的办公楼和商业大楼位于最便利、最显眼的位置，由此来提高它们的商业价值和吸引力。
- e) 统一：我们将创建一个强大的城市模式和清晰的建筑结构，能满足以后不同个人或者公司进行不同开发的要求，但不会破坏城市的整体性和中心的总体模式。
- f) 灵活性：不同单元和组成部分按照要求有所差异和自己的个性。在体块和形象方面，采用灵活而可行性的解决方案。
- g) 功能开发：我们将开了一种实际、易于实施、简单而明确和便于操作的发展性系统。
- h) 成本型解决方案：我们建议沿着现有道路设计一个结构紧凑的建筑区，这种解决方案不必大量投资建设新的道路和基础设施。方案特别选择在这个地方的平坦区域进行建设，因此不需要因土方工程、基础或水平面差异而准备特殊而繁复的基础建设方案。将设计出一个标准化、模块化，可重复使用的具有经济可行性和技术可行性施工系统。并将使它尽可能简单和容易操作使用。
- i) 城市生活品质：现有村庄具有真实性的城市生活的特征，并为提高城市生活品质的一个潜在源泉。我们设计一个城市广场来加强新旧建筑物相互之间的积极关系和相互对话，努力开发利用当地历史和文化资源。
- j) 顾客化和营销：办公楼租户可通过面向所有入口道路的正立面的“广告栏-塔”广告形式表现他们的商业的独特性和个性。这种立面广告设计能获得无限的建筑景观，同时使建筑具体化，同时并不会对城市的总体性和连续性造成任何不利的影响，保持城市景观的完整性。
- k) 阶段性和财产群聚：办公室和住房土地高效使用和简单的分配适应各种可持续发展和增长的情况。开发计划的线性和可持续发展性的弹性特点可以应对所有风险管理和当经济不断增长时发生的一些状况。
- l) 内部沟通：两旁人行道和商业楼作为不同办公室之间内部沟通和协同增效的主要通道。在公园内的2个会议中心能举办大型会议、交易会 and 辩论会。

2.1 Urban development and marketing strategy

We propose to concentrate the most important commercial and office buildings along the existing roads, as far as possible from the hills.

- a) Ecological urbanism: we keep free a large space between the roads and the mountains respecting the existing vegetation
- b) Landscaped environment: we create a buffer zone between the nature and the town, we make possible to develop an urban park with residential and recreation functions, we propose a green quarter, a place for peace and creativity
- c) Urbanity: we reinforce the urban character of the existing large roads as activity spines, we concentrate exchanges and interactions in the most logical way along the public roads; a relation-oriented urbanism is also an element of attraction for all kind of companies.
- d) Commercial value: we profit by the most accessible and visible location for the office and commercial buildings improving their commercial value and attractiveness
- e) Unity: we create a strong urban pattern and clear architectural frame, that are able to accept the variations of different future individual developments without undermining the global identity and the general order of the center
- f) Flexibility: the different units and components have to be differentiated according to the demand, the system should allow the widest range of solution in size and image
- g) Functional development: we develop a linear system with clear and easy circulation, visibility, orientation and operational qualities
- h) Cost oriented solutions: we propose a compact building area along the existing roads which is a solution without the necessity of big investments for new roads and infrastructures; we build especially in the flat areas of the site, we don't need special solutions for earth works, foundations or level differences; we propose a construction system using standardization, modularity, repetition; we keep it as far as possible simple and easy!
- i) Urban life quality: the existing village is a potential source of authenticity and urban life quality; we create an urban square which opens a positive relationship between the old and the new buildings, an attempt to develop a local history.
- j) Customization and marketing; each respectful office tower tenant is having a chance to express their business core identity with the so-called "billboard - tower" facades which are all facing the entrance roads. Endless architectural scenarios and materializations are enabled, without any loss of overall urban compactness and continuity.
- k) Phasing and property clustering; a very efficient and simple distribution of the office and housing plots is allowing numerous scenarios of the sustainable development growth. A linear phasing of the development plots is dealing with all the aspects of the risk-management and the progressive growth.
- l) Internal communication: the pedestrian walk side and commercial floor function as spine for internal communication and synergies between the different offices. 2 congress centers in the park give the opportunity to organize bigger meetings, fairs and congresses to stimulate the debate.



3. 景观视线 VISUAL QUALITIES

3.1 视觉感受

北部和东部连绵起伏的山脉和蔚蓝天空是这个基地视觉焦点。与建筑区相邻的起伏而葱郁小山使得基地充满乐趣、不单调乏味。建议在山和新建筑物之间设计的具有居住和娱乐功能的城市公园，作为自然景观和城市之间的过渡区，成为一个安静迷人的地方。与这相邻的是带有商业和办公楼群，它们具有高度雅致性的元素，是一个适于生活和交流的“体验场所”。

在我们的设计中，自然景观和城市在实际的联系和开放的视觉获得新的统一，处于在一个完整的整体系统之中。新建筑物通透，使视野更为开阔和没有阻挡。从道路这边望去，可穿透建筑看到一系列的具有连续性和层次性的优美环境，感受到新中心主要道路与天际、山和公园相连。

办公楼是建筑区间的独立单元，这使得城市和公园之间有了视觉和空间上的“既分又合”的联系。办公楼和商业楼本身也是优美环境中一道独特的风景。公园绿色陡坡“绿指”和屋顶花园从小山自然延伸到道路。它们既是是建筑物的一部分，同时也延续绿色景观的自然韵味，使所有的建筑和景观处于同一乐章之中。公园绿色景观沿着斜坡一直延伸到办公楼绿色墙壁和建筑物的屋顶花园。

公园里的住宅区本身也是新的景观——城市混合景观的一部分。有5个小塔，自然景色从山到城市公园在几个小塔之间有连续性地渗透到城市。住宅的形态本身就如在自然中生成而成。在公寓和城市公园，人们都能举目远眺，享受大自然。

3.1 Visual qualities

The north and the east mountain's skyline is the landscape spot giving to the site a specific identity. Next to the building areas the smaller hills with trees make the shape of the site more interesting and complex.

Between the hills and the new buildings the proposed urban park with residential and recreation functions works as a transition zone between nature and town, a space of peace and beauty.

Next to this, the existing roads with the concentration of commercial and office buildings are the elements of an intensive urbanity, a space rich of life and exchanges. Natural and artificial have to become a new physical and visual unity. The new buildings have to be transparent.

A sequence of perspectives will visually connect the main roads of the new center to the far skyline, to the hills and to the park.

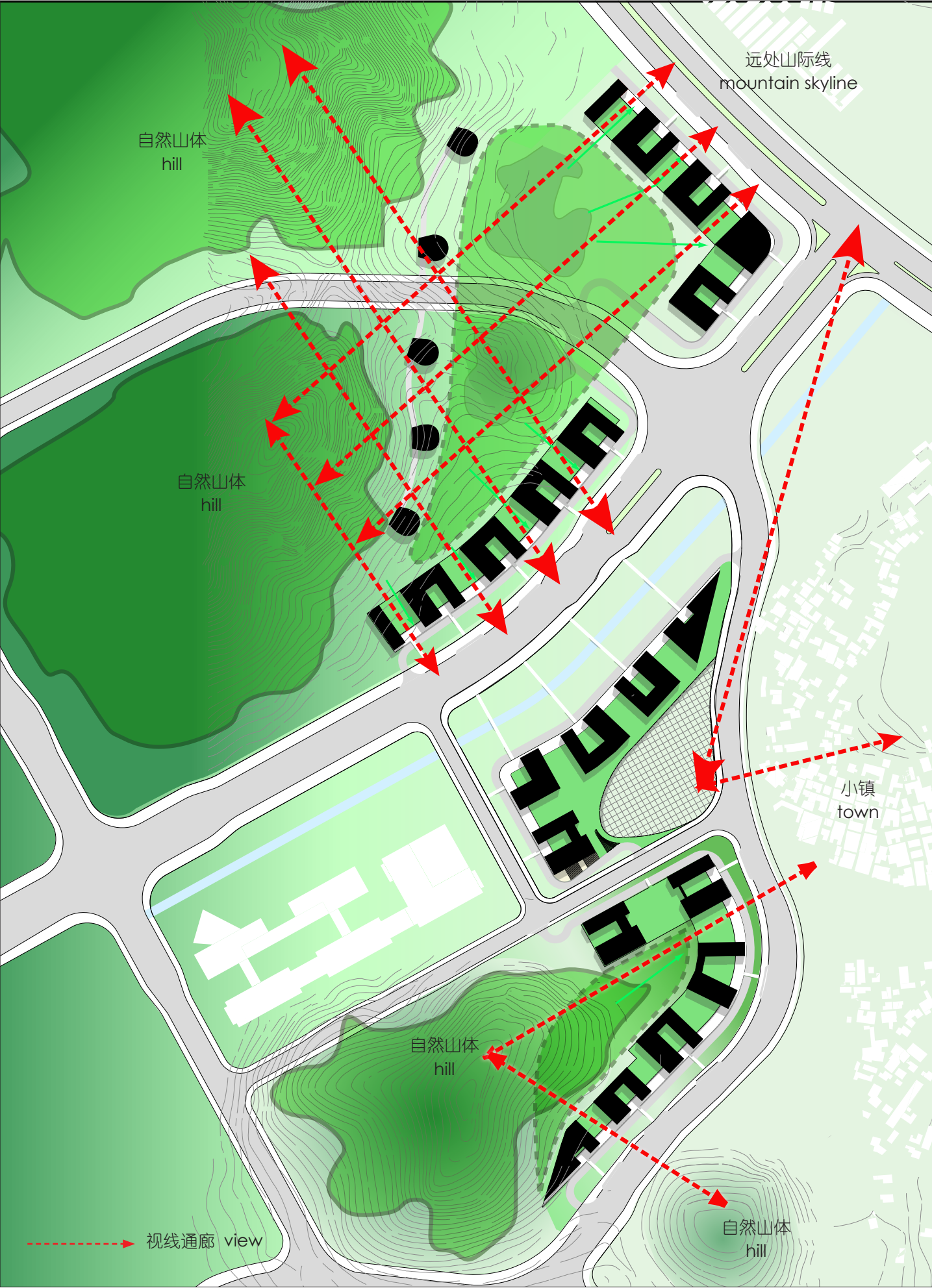
The office buildings are fragmented units with building intervals that make the visual and physical connections possible between town and park. The office and commercial building have also to be part of the landscape.

From the hill to the roads the park is a sequence of large green slopes and roof gardens characterizing the section of the buildings and carrying out a physical green continuity.

The park climbs up along the slopes to the green wall behind the façade of the office buildings and end on the green roofs of the building. The residential buildings in the park are also a part of the new hybrid nature-town landscape: 5 thin towers between which the nature flows from the mountain to the urban park with continuity.

The shape of these residential buildings is also a kind of development of the natural movement of the hills.

From the apartments and from the urban park people can enjoy the long distance views to the landscape spots.

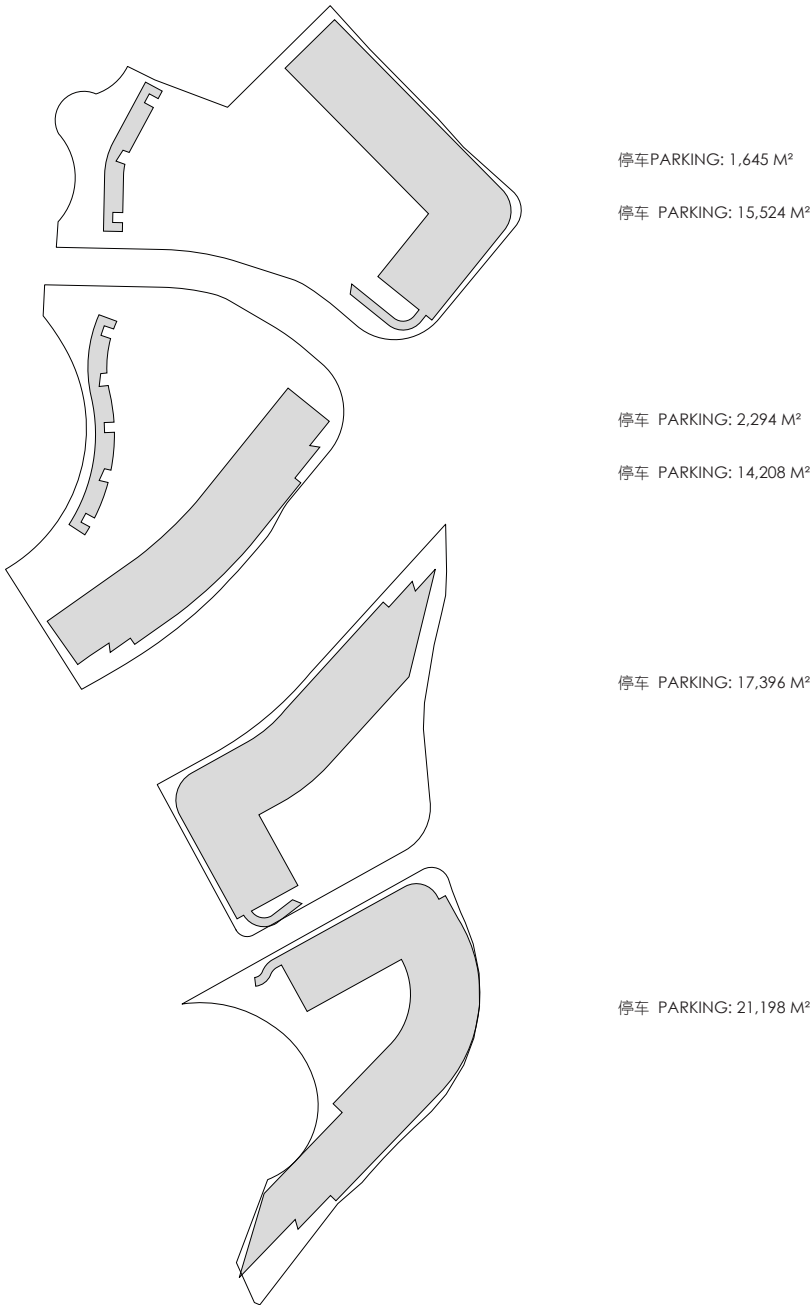


4. 方案 PROGRAM

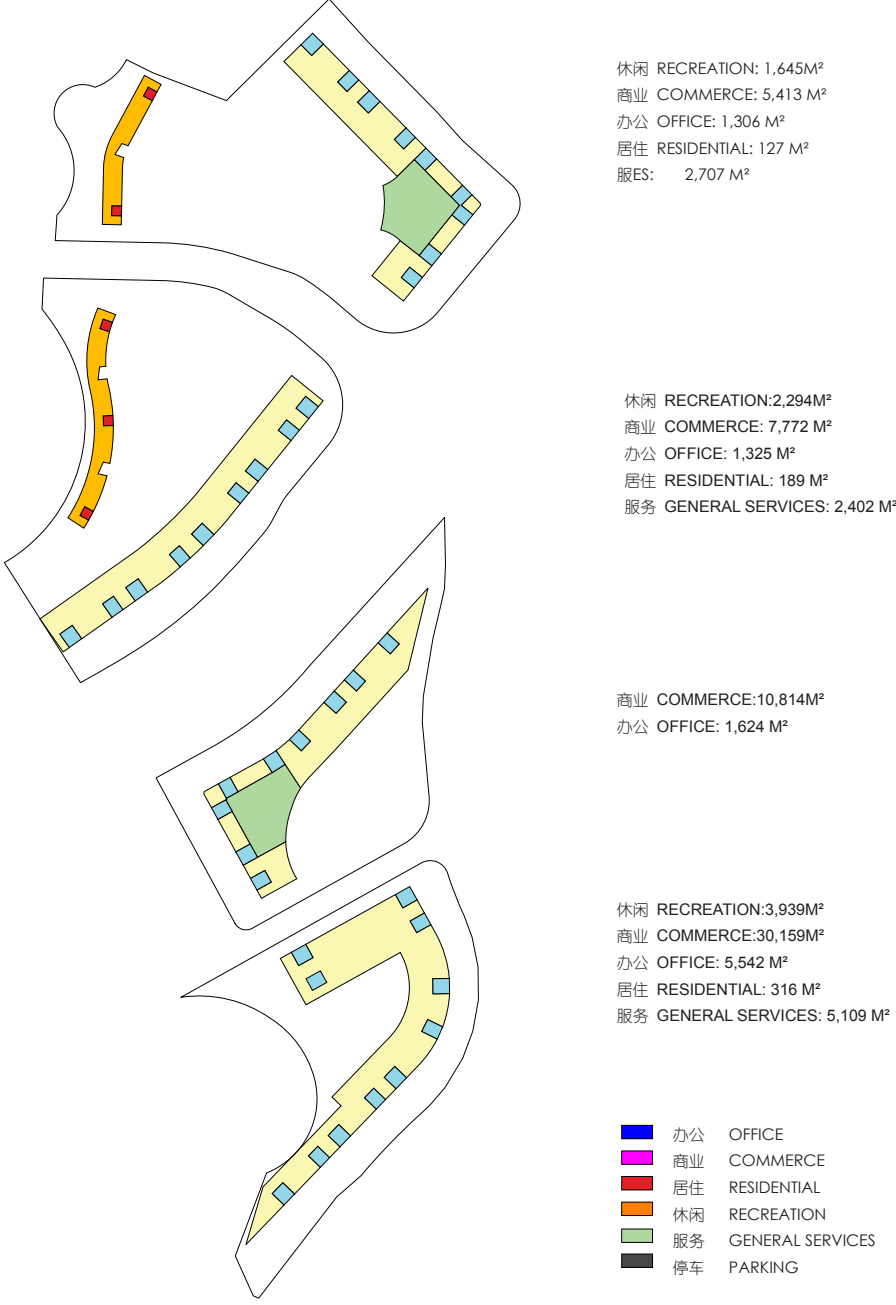
- 1) 沿着现有道路和屋顶公园下的线性和连续性的底层空间是商业基础设施（总面积：30159 m2）
- 2) 除了具有商业功能外，办公室也是模块化单元，能实现独立建设，范围从3000m2到8000m2及以上（总面积：217872m2）
- 3) 地下停车面积和技术用房被组织在连续的基础上（总的室内面积：21021m2，总的室外面积：51245 m2）
- 4) 在城市停车场和公共广场，我们设计具有公共性的建筑物，比如会议室、旅馆和宴会厅（总面积：5109m2）
- 5) 在城市公园最高处的为娱乐和住宅区的线性底层（总面积：3939m2）。
- 6) 5个住宅塔是可变而灵活的元素，既可用作私人公寓，又可用作住宅（总面积：20266m2）。

- 1) A linear and continuous groundfloor along the existing road and under a landscape roof garden is the commercial infrastructure (total area 30159 m²)
- 2) Above the commercial functions the offices are modular units able to realize independent building with a variable range of surfaces from 3000 m² to 8000 m² and more (total area 217872 m²)
- 3) Under the groundfloor the parking areas and the technical rooms are organized in a continuous basement (total area interior 21021m2 total area exterior (=visitors parking) 51245 m2)
- 4) The urban park and the public square where we allocate buildings for general services as conference room, restaurant, and banquet (total area 5109m2)
- 5) A linear groundfloor for recreation and residential parking on the top of the urban park (total area 3939 m2)
- 6) The 5 residential towers which are flexible elements offering the possibility to be used for private flats or residence (total area 20266 m2)

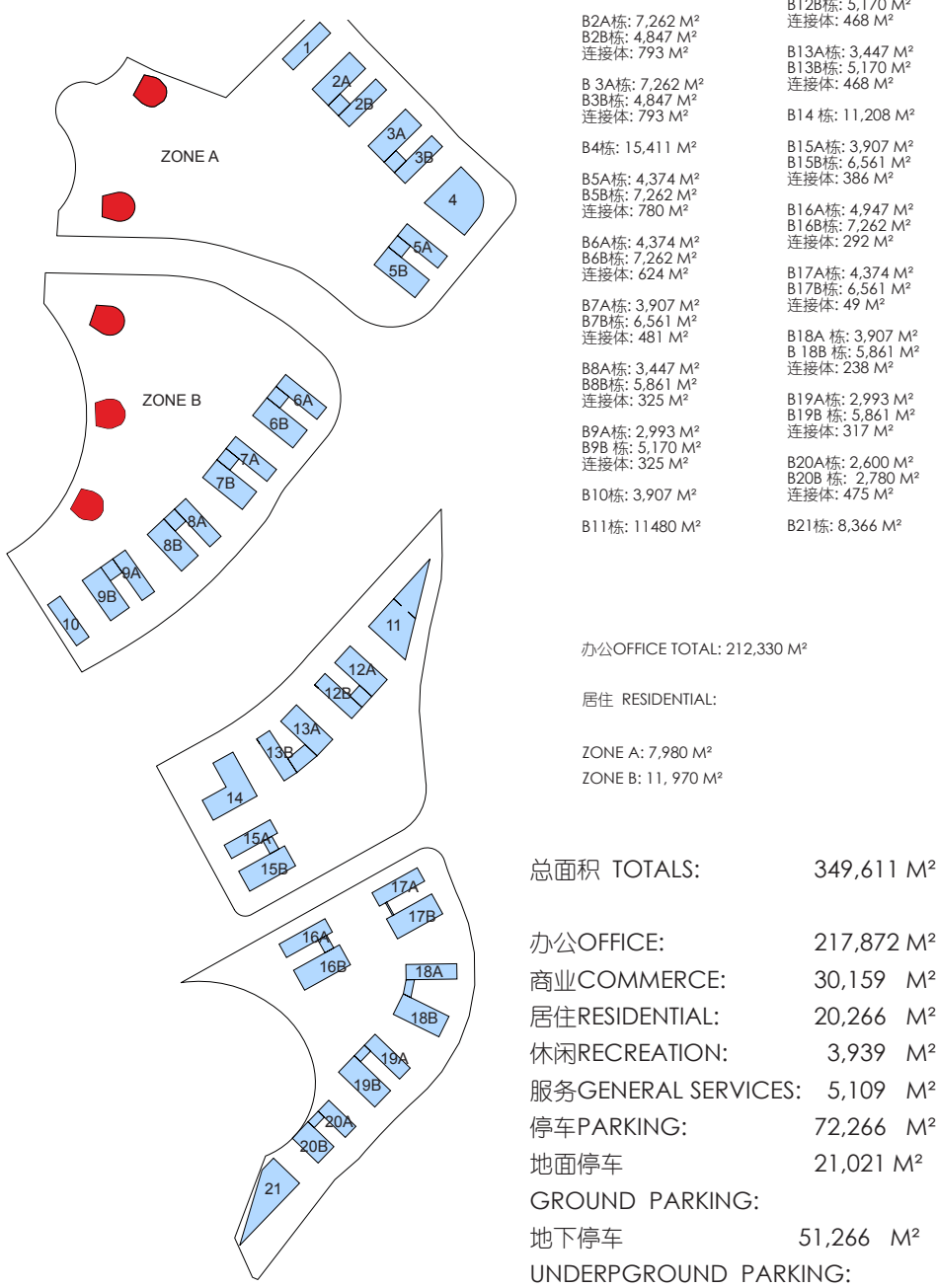
负一层 LEVEL -1

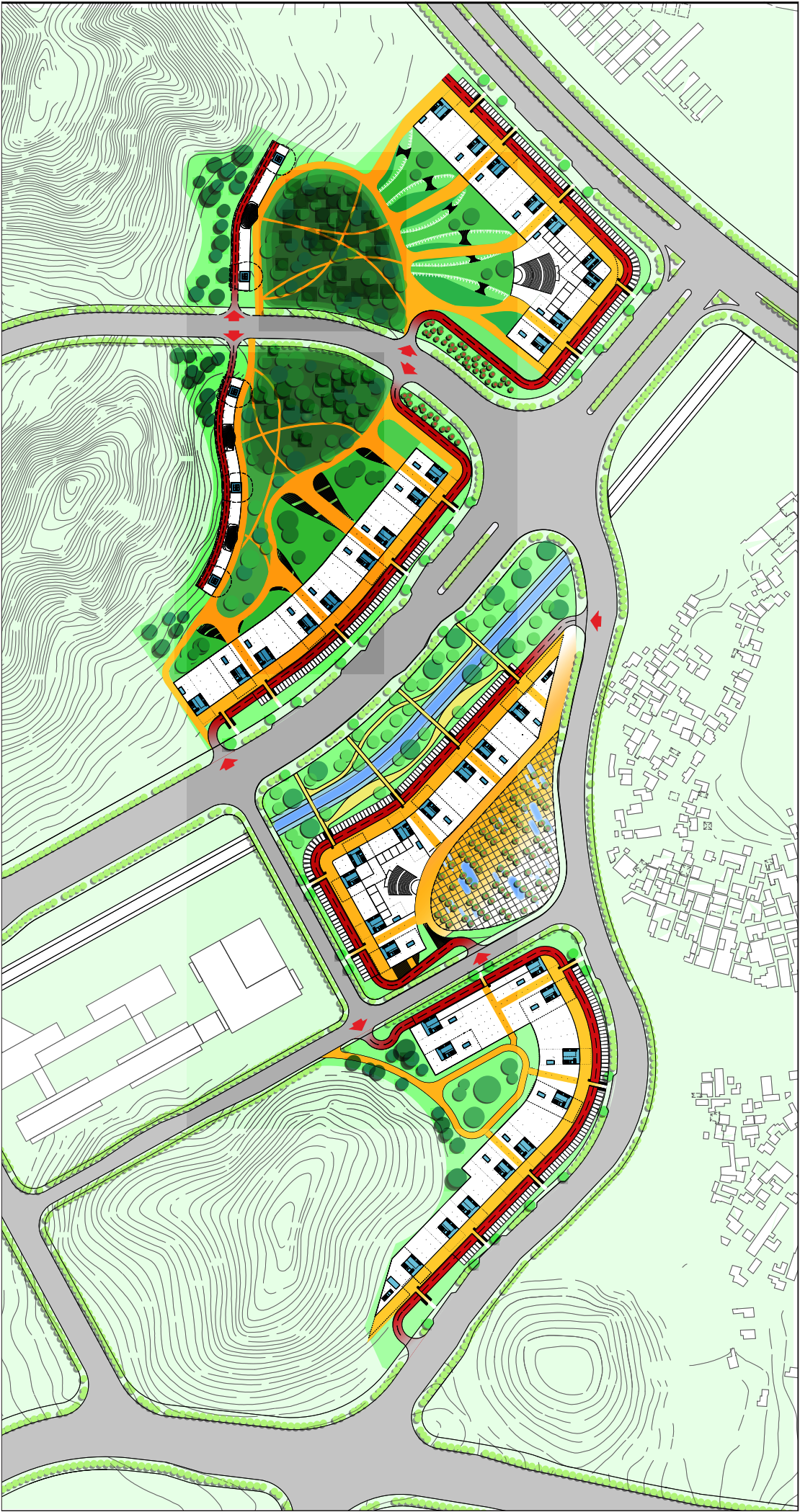


首层 LEVEL 1



二层 LEVEL 2





交通流线图
THE TRAFFIC ANALYSIS DRAWING

5. 交通流线 CIRCULATION

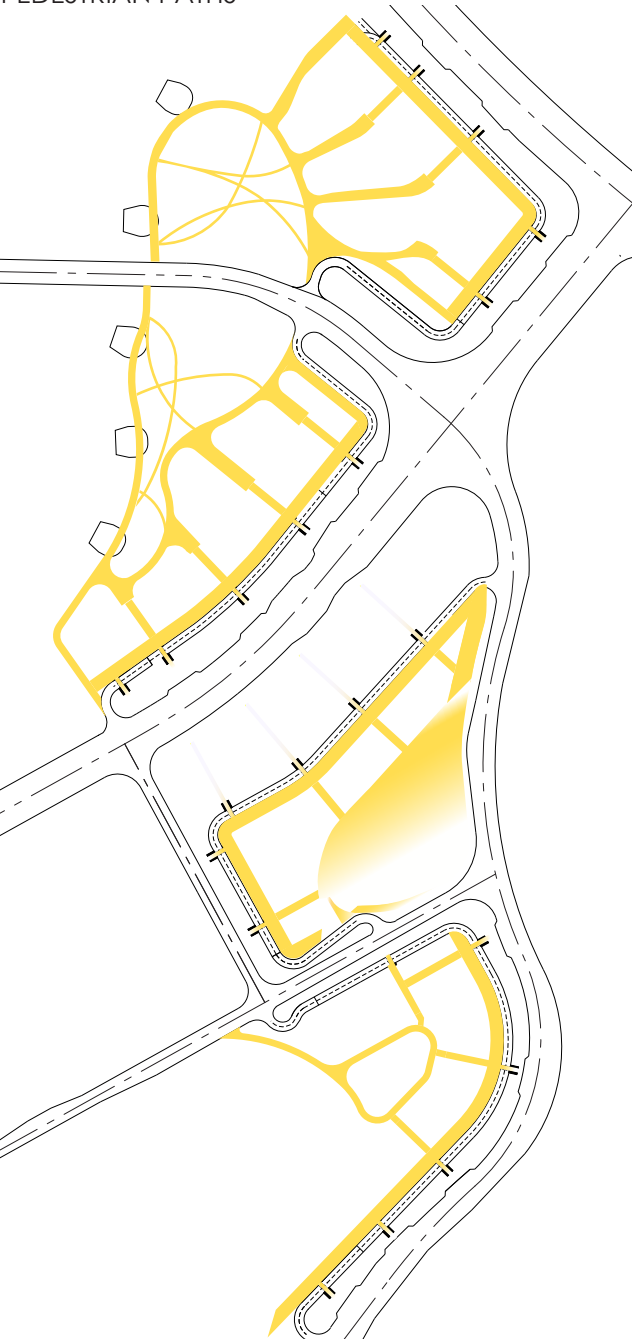
5.1 道路系统是以现有道路为基础。
主要的商业、居住和办公楼及其停车场都可从公共街道直达，不需要进行较大规模的新基础设施投资。舒适的慢速交通人行道与繁忙的汽车道分开。装、卸货通道及紧急疏散通道与其它机械通道分开。
绿坡也是进入办公楼之间防火操作平台（在水平面+6.50米处）的道路。
在城市公园内的一条辅助服务和紧急用道路，同时也是进入公园和城市广场内娱乐建筑物的主要道路。
因为有限的道路面积和从更好、更灵活利用空间的这两方面综合考虑，在停车需求较大的时候，停车场同时兼顾人行道的作用。

5.1 The circulation system is based on the existing roads. The main commercial, residential and office buildings and their parking areas are accessible directly from the public street without large investments for new infrastructures.
The slow, pedestrian circulation is separated from the fast, car circulation.
The loading and unloading circulation and the emergency circulation are independent from the other mechanical circulation circuits. The green slopes are also the ramps for the accessibility of operational platforms for fire prevention between the office buildings on level +6.50m. There is a secondary service and emergency path in the urban park area. This is the accessibility spine for the recreation buildings allocated in the park and in the urban square.
Since the circulation for the recreation is limited the park area keeps a pedestrian character.

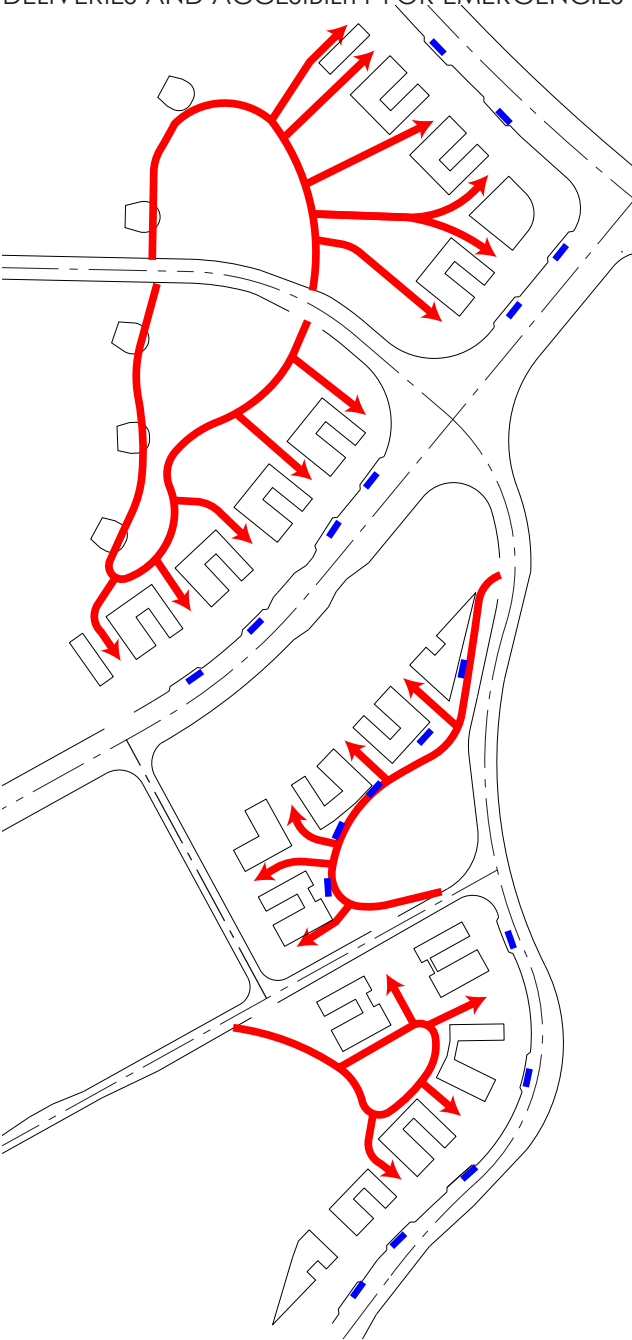
道路和停车
ROADS AND PARKING



步行道路
PEDESTRIAN PATHS



卸货和紧急通道
DELIVERIES AND ACCESIBILITY FOR EMERGENCIES



卸货通道
紧急通道
DROP-OFF/LOAD-ZONE
EMERGENCY ROAD

在生态方面，我们利用地下停车场的泥土来建造人工斜坡和屋顶公园。
这是一个重要的生态观点。我们因此在山和新中心之间创造了一种绿色的延续性的联系，从而自然地加强和发展了建筑和现有的植物环境共生。广泛而连续的绿色覆土表面创造了一种舒适的小气候。
从地方意义上来说，水的存在和现有森林的开发（栽花种树）将更好的控制温度。

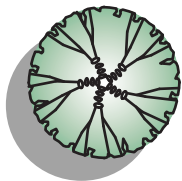
We ecologically re-use the earth of the excavation of the underground parking making artificial slopes and roof garden.
This is a very important ecological issue.
So doing we create a green continuity from the hill to the new center reinforcing and developing the existing vegetation in a natural way.
An extensive use of green surface creates a favorable micro-climate.
The presence of water and the development of the existing forest with new trees and flowers will locally improve the temperature control.

植物配植分析图
AFFORESTATION PLAN



5.2 植物配置
5.2 SELECTION OF TREES

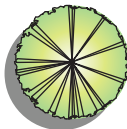
PARK TREE ROADSIDE TREE



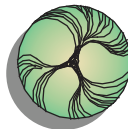
榕树
Ficus microcarpa
Banyan tree



竹柏
Podocarpus nagi
Kuntze



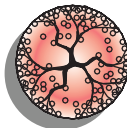
小叶榄仁
Madagascar
almond



凤凰木
Delonix regia
(Bojero) Rafin



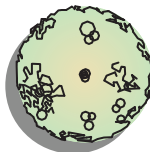
CITY FLOWER TREE FRUIT TREE



木棉
*Bombax ceiba*Linn.
(*B. malabaricum* nDC.)



红花羊蹄甲
Bauhinia blakeana
dunn



洋蒲桃
Syzygium
samarangense (Bl.)



荔枝树
Litchi chinensis
Sonn. cv.



7.1 办公建筑设计

a) 平面
办公楼是带有中心庭院的模块化单元。庭院将建筑物分成2个子单元：一个是12m宽，另一个是18m宽。子单元楼层平均面积分别为506m2（12m长）和760m2（18m长）根据城市规划要求（建筑间距、方向……），最多可以建造40间子单元。平均高度是9层，楼层平均总面积是5500m2。在底层上面的最大高度是11层（45m高）。将高度从5层改变到10层，就可能实现将子单元的总面积从3000m2变为8000m2。采用桥接方式连接2个子单元。如果单元总面积超过8000m2，就可以采用桥接方式（如必要）。

b) 建筑
办公楼主要设计意念为在与自然环境对话的生态建筑。办公楼的形状设计为一种从公园开始向上逐渐爬升的连续绿色景观流。沿着主干道的两侧建筑的弧线倾角立面，强调一种“清新自然”，“无所不动”的动感形象，使之富有生命力。我们建议根据形象和公司的经营哲学（广告牌建筑概念）进行正立面的设计。通过这种方式，在营销阶段就能进行有效的的对话和加强客户的参与。与正立面设计相区别的是其它立面设计采用高效的标准化、模式化设计。

c) 消防安全疏散
本工程为二类高层建筑，耐火等级为一级，地下车库为一类车库，耐火等级为一级。执行《高层民用建筑设计防火规范》。
本工程各个建筑单体防火间距均大于13米，符合高层民用建筑防火间距要求。
本工程每个组团均沿建筑物的两个长边设置消防车道，并与园区内道路环通，围合形成了消防环通车道，保证消防车的畅通运行。每栋建筑单体消防登高面长度均大于建筑的一个长边。消防登高面道路边线距建筑外墙边 > 8M,道路宽度 > 4M,纵坡 < 1%，消防登高面上有直通向室外的疏散楼梯和消防电梯。
本工程每栋小高层均按《高层民用建筑设计防火规范》设定防火分区，二层以上楼层按<2000平方米划分防火分区（设置自动灭火系统），首层作商业用按<4000平方米划分防火分区（设置自动灭火系统），地下车库按<4000平方米划分（设置自动灭火系统）。每个防火分区首层均有两个直通室外的疏散口。防火分区之间设置防火墙，特种防火卷帘或甲级防火门。
本工程疏散口的位置、数量、宽度、疏散距离和设施均符合规范要求。每个防火分区的安全出口均不少于两个。疏散距离走廊均小于20米，两个疏散口之间的房门至疏散口的距离均小于40米，疏散通道宽度按1米/100人计算，均满足要求。该建筑内的公共疏散门均向疏散方向开启，且直通室外的安全出口上方均设有宽度大于1米的防火挑檐。楼梯均采用防烟楼梯间，其防排烟型式：不具备自然排烟条件的楼梯间及合用前室均采用机械加压送风。
每栋高层建筑均设有一部消防电梯，在消防通道处设有直接对外出口。消防电梯前室的门为乙级防火门，并向疏散方向开启，从首层到顶层运行时间不超过60s，消防电梯机房单独设置，并用耐火极限大于2.0h的墙与其它部位隔开，消防电梯前室门口设有挡水设施。

d) 结构
本方案建筑体型较为简单，考虑到广州本地结构施工的能力及成本控制的因素，主体结构采用钢筋混凝土框架剪力墙结构，局部大跨度结构采用钢结构。楼面采用钢筋混凝土肋俩楼盖。
根据该地区过往项目的经验，本方案基础采用预制管桩基础或是天然基础。

e) 能源
在这个亚热带潮湿和炎热气候下，对于追求高效的能源利用的建筑设计来说，建筑外壳的绝热性和如何更好的利用太阳能是建筑师最必须考虑的重要的要素。玻璃幕墙的总面积控制外表面的面积的40~45%之间。它同时也要求符合下列条件：
- 使用具有良好k和g值的LE双层玻璃
- 使用约12cm泡沫玻璃的热绝缘层
- 外部为不透水层。
当阳光射入办公室和外壳的热交换性能降低，我们建议采用下列积极的措施：
● 用专业的户外空气处理装置供应新鲜空气（分离新鲜户外空气潜热和可感知的空间热负荷）
● 如可能，采用凉爽的天花板
● 使用电枢进行冷回收。
● 考虑使用SOAHU（如Klingenburg）干燥剂电枢
● 考虑使用地下水/水热泵
● 控制通风
● 全年可利用的太阳能
而且我们建议使用太阳能装置之类的可再生能源系统产生热水，在寒冷季节采用自然通风，及采用广泛的日光概念。
在办公室里：
- 带有绿色墙壁的通风井应采用烟囱通风系统，以便晚上获得自然通风。
- 我们在工作场所广泛使用日光，办公室的长度从不大于6m。
在住宅和娱乐建筑物内：
- 使用太阳能装置进行热水生产
- 采用较大的悬臂阳台进行外壳日光防护和通风。
- 在直立中心支柱内采用自然通风

7.1 Office typology

a) Surfaces
The office buildings are modular units with a central courtyard. The central courtyard divides the building in 2 sub-units: one with 12m depth, the other with 18m depth. The average floor area of the sub-units is respectively xxxm2 (12m depth) and xxxm2 (18m depth). According to the urban planning requirements (building interval, orientation...) it is possible to realize a maximum of 40 sub-units. The average height is 9 floors; the average total floor area is 5500m2. The maximum height is 11 floors above the groundfloor (45m building height) Changing the height from 5 to 10 floors it is possible to realize sub-units from 3000 to 8000m2 total area. Bridging elements connect the 2 sub-units. The bridging elements make possible to carry out - if necessary - units of more than 8000m2.

b) Architecture
The office building is conceived as an ecological building The shape of the office building is designed as a continuous green movement climbing up from the park. The front façade inclination accentuates a dynamic image along the public road. We propose the customization of the front facades according the image and the philosophy of the company (bill board building concept).In this way efficient dialog and participation with the clients could be developed during the marketing phase. The other facades should be standardized.

d) This project is a Type II highrise building with Class I fire resistance rating. The underground garage is Type I garage with Class I fire resistance rating. The Highrise Civil Building Design Fireproof Regulations is carried out. Each building unit of this project has a fire fighting interval of 13m and meets the requirements of the fire fighting interval of highrise civil building. Each group of this project is provided with fire fighting lanes along two long sides of buildings. These lanes are connected to the roads in the zone in a circular manner, thus forming a circular fire fighting lane and guaranteeing fire engines to go smooth. The length of fireheight-ascending surface of each separate building is more than one of long sides of this building. The distance between the bounding property line of fireheight-ascending surface and the outer wall of building is not less than 8m, and the road wideness 4m. The longitudinal slope is not more than 1 percent. The fireheight-ascending surface has evacuation stairs and fire fighting elevators leading to the outdoor. Floors of each small highrise building of this project are divided into fireproof subareas in accordance with Highrise Civil Building Design Fireproof Regulations. Floors more than 2 are divided into fireproof subareas in accordance with not more than 2000m2(with automatic fire fighting system), and the first floors and the underground garage 4000m2(with automatic fire fighting system). The first floor of each fireproof subarea has two emergency exits leading to the outdoor. Fireproof walls, special fireproof roller shutters or Class A fireproof doors are set up between fireproof subareas. The location, quantity, wideness, evacuation distance and facilities of emergency exit of this project comply with the regulations. Fire exits of each fireproof subarea are not less than 2. The distance of evacuation corridor is less than 20m. The distance from the door between two emergency exits to either of the emergency exits is less than 40m. The wideness of each evacuation exit is calculated on the basis of 1m per 100 people and meets the requirements. Each public emergency door of this project is open in the direction of evacuation, and there is a fireproof corbel table more than 1m wide above fire exits. Stairs use smokeproof staircases and the exhaust type is so that the staircases without the conditions of natural exhaust and the shared front room are ventilated by means of mechanical pressurization. Each highrise building is provided with fire fighting elevator. There is an exit leading to the outdoor at the fire fighting access. The door of front room of fire fighting elevator is Class B fireproof one and open in the direction of evacuation. The operational time from the first floor to the top floor is not more than 60 seconds. The machine of fire fighting elevator is set up separately and separated from other parts with a wall with 2.0h fire endurance. There is water blocking facilities at the doorway of front room of fire

fighting elevator.

d) Structure
The programme of construction type simpler.Taking into account the structure of the local construction Guangzhou capacity and cost control factors.The main structure using reinforced concrete structural framework shear-wall-frame.Partial large span structures using structural steelwork. Given both houses using reinforced concrete floor. According to the project experience in the region, The programme based on the use of precast pile or natural base.

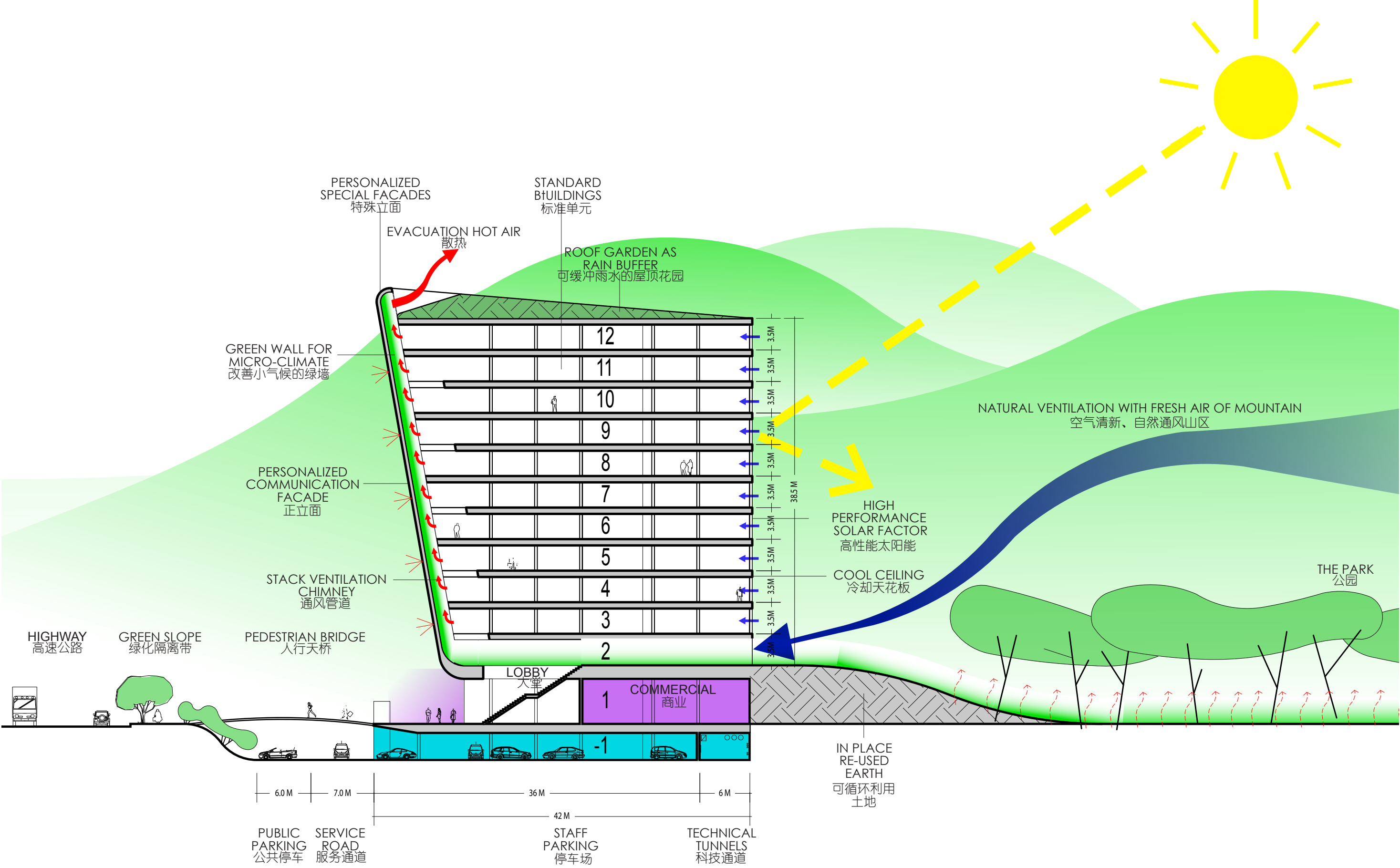
e) Energy
The façade's thermal quality and solar factor are the most important elements for an updated energy strategy in the subtropical humid and hot climate.,The main passive measures are limiting the glazed surface of the curtain wall in about the 40-45% of the total façade surface. It is also required:
- the utilization of LE double glazing with a good k- and g-factor
- the utilization of a thermal insulation layer of about 12cm foam glass
- An external watertight layer.
Once the solar gains in the office space and the thermal exchanges of the envelope are reduced we propose to adopt the active measures below:
• Specialized outdoor air handling unit for fresh air supply (to decouple latent heat load in fresh outdoor air and sensible space heat load)
• Cool ceilings when possible
• Cold recovery using rotors
• Consider desiccant rotor for SOAHU (e.g. Klingenburg)
• Consider groundwater/water heat pumps
• Consider demand-controlled ventilation
• Year-round availability of solar energy

Moreover we propose to use renewal energy systems as solar panels for hot water production, natural ventilation strategies during the “cold” season and extensive day lighting concept. In the offices:
-A ventilation shaft equipped with a green wall should carry out the stack ventilation system for the activation of natural night ventilation. -We make extensive use of daylight in the workspaces, the depths of the office spaces are never more than 6 m. In the residential and recreation buildings:
- Solar panels for hot water production
- Large cantilevered terraces for solar protection of the envelope and ventilation
- Natural ventilation in the vertical central cores

7) Commercial typology

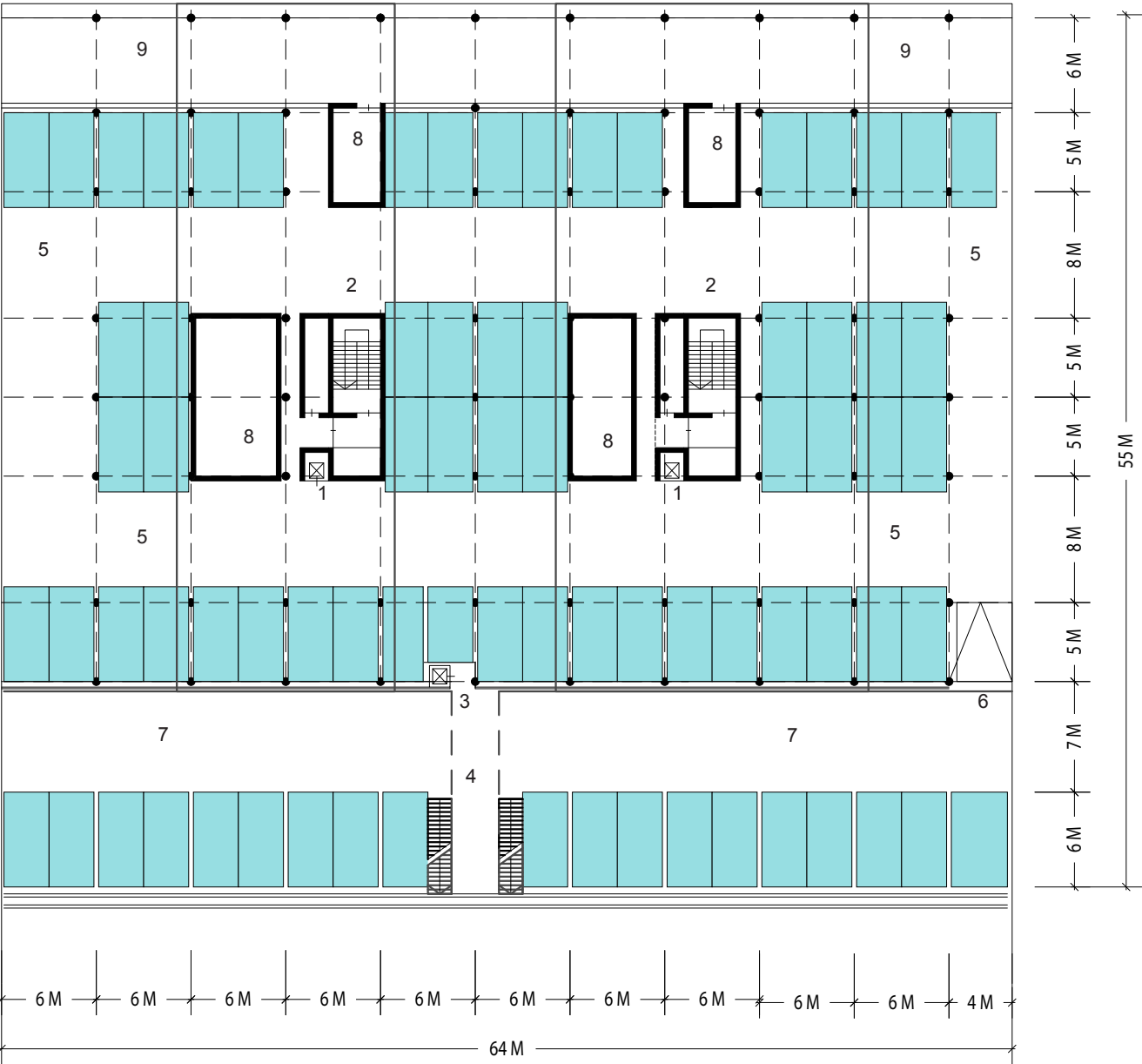
The commercial functions are organised on the ground level in a linear and continuous plinth under the garden roof climbing up from the park. They have a total height of 6.5m and a depth of xxm. The structure is in concrete. On the same level there are the entrance halls of the offices. Between the entrance halls of the office buildings there are connections with the park. The commercial spaces are homogenous and multipurpose infrastructures able to change of function according the evolution of the local market.

7.2 理念1:生态办公建筑
7.2 PRINCIPLE 1: ECOLOGICAL OFFICE BUILDING



7.5 办公建筑典型平面 OFFICE FLOORPLANS

负1层平面：停车场和科技用房
LEVEL -1: PARKING AND TECHNICAL ROOMS



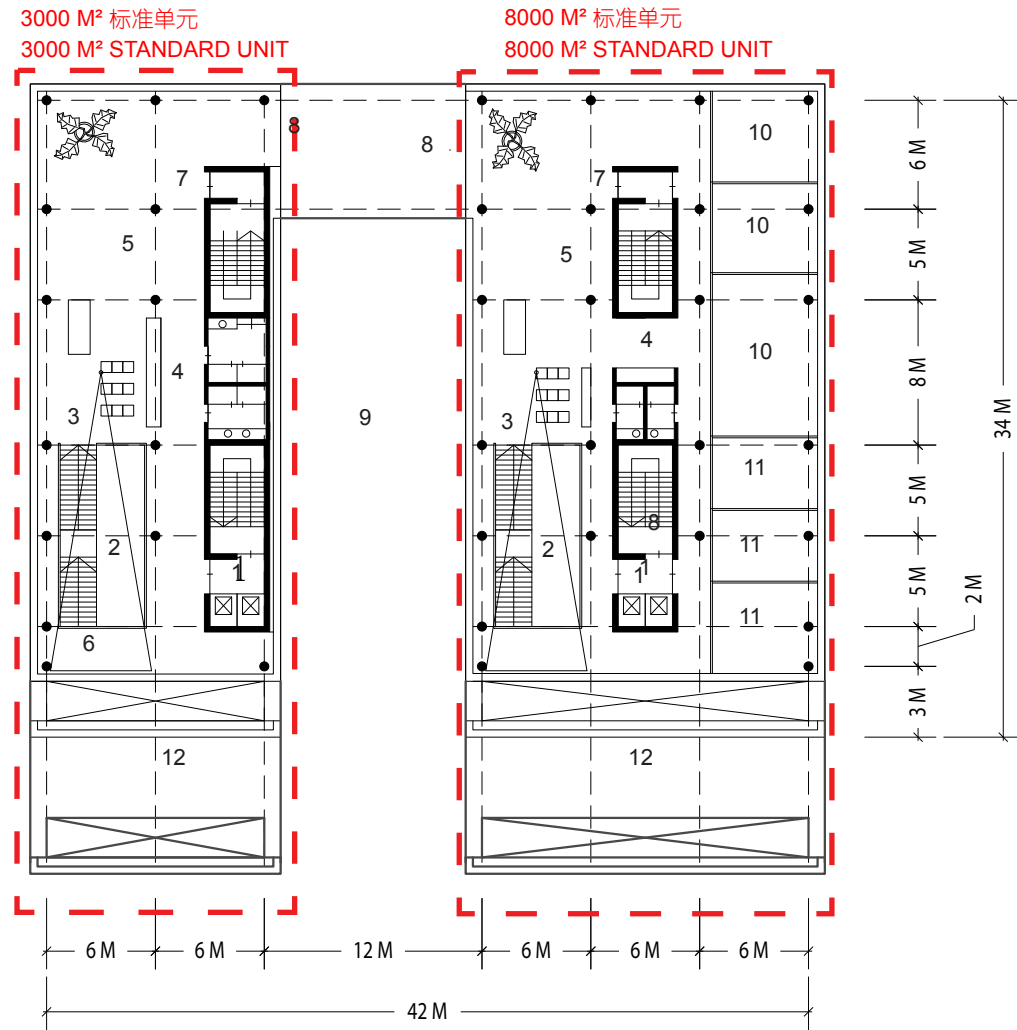
- 1) 电梯 lift to the offices
- 2) 楼梯 stair to the offices
- 3) 电梯 lift to the commercial area
- 4) 楼梯 stairs to the commercial area
- 5) 办公停车区 parking offices
- 6) 车库入口 car entrance parkings
- 7) 商业停车区 parking commercial area
- 8) 技术用房 technical rooms
- 9) 技术通道 technical tunnel

首层平面：商业和办公入口
LEVEL 1: COMMERCE AND OFFICE ENTRANCES



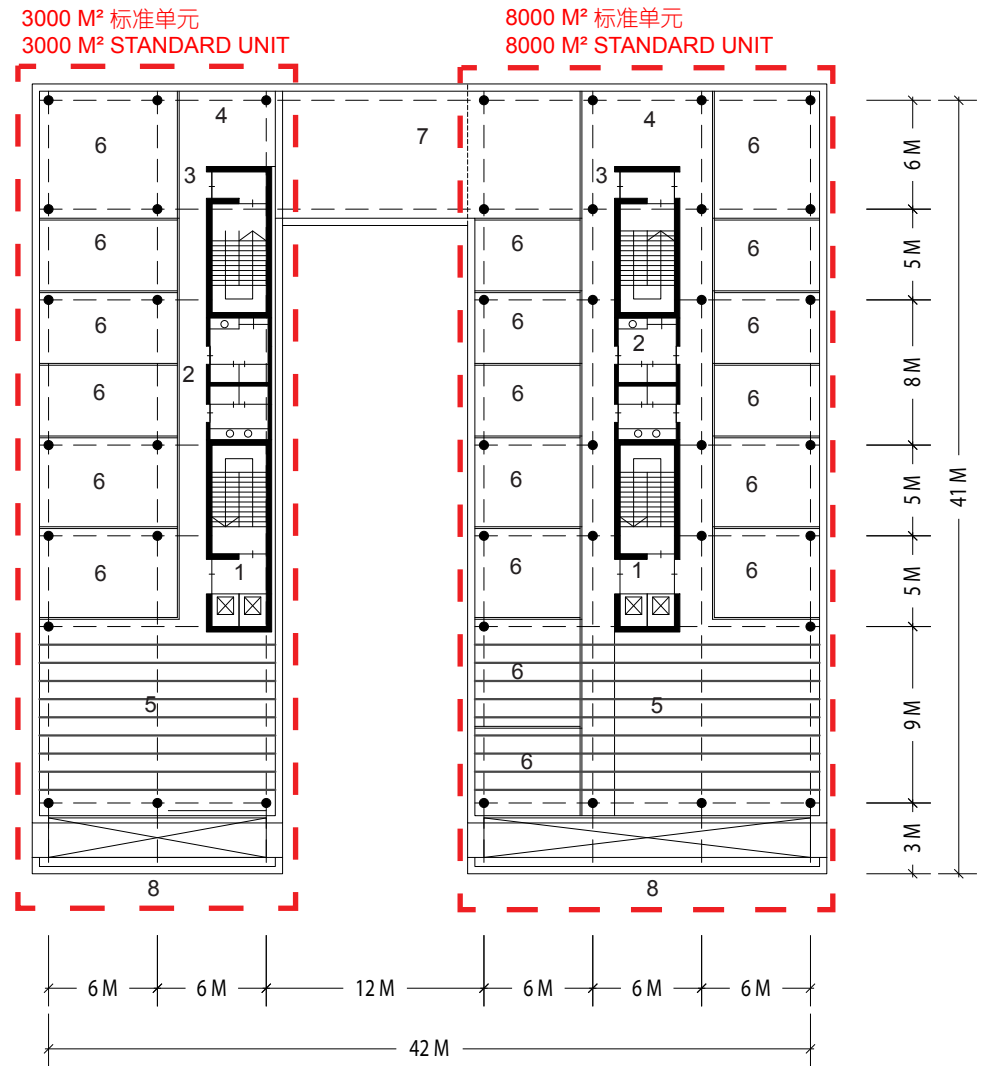
- 1) 电梯 lift from parking
- 2) 电梯和楼梯 lift and stair to the offices
- 3) 停车场楼梯 stair from the parking
- 4) 控制室 control
- 5) 主楼梯 main stair to the lobby
- 6) 办公室主入口 entrance offices
- 7) 厕所 toilets visitors
- 8) 办公区厕所 toilets commercial area
- 9) 停车场电梯 lift from the parking
- 10) 停车场入口 entrance from the parking
- 11) 商业技术用房 technical room commercial area
- 12) 公园通道 connection to the urban park
- 13) 商业区域 commercial area

2层平面：办公大厅
LEVEL 2: OFFICE LOBBY



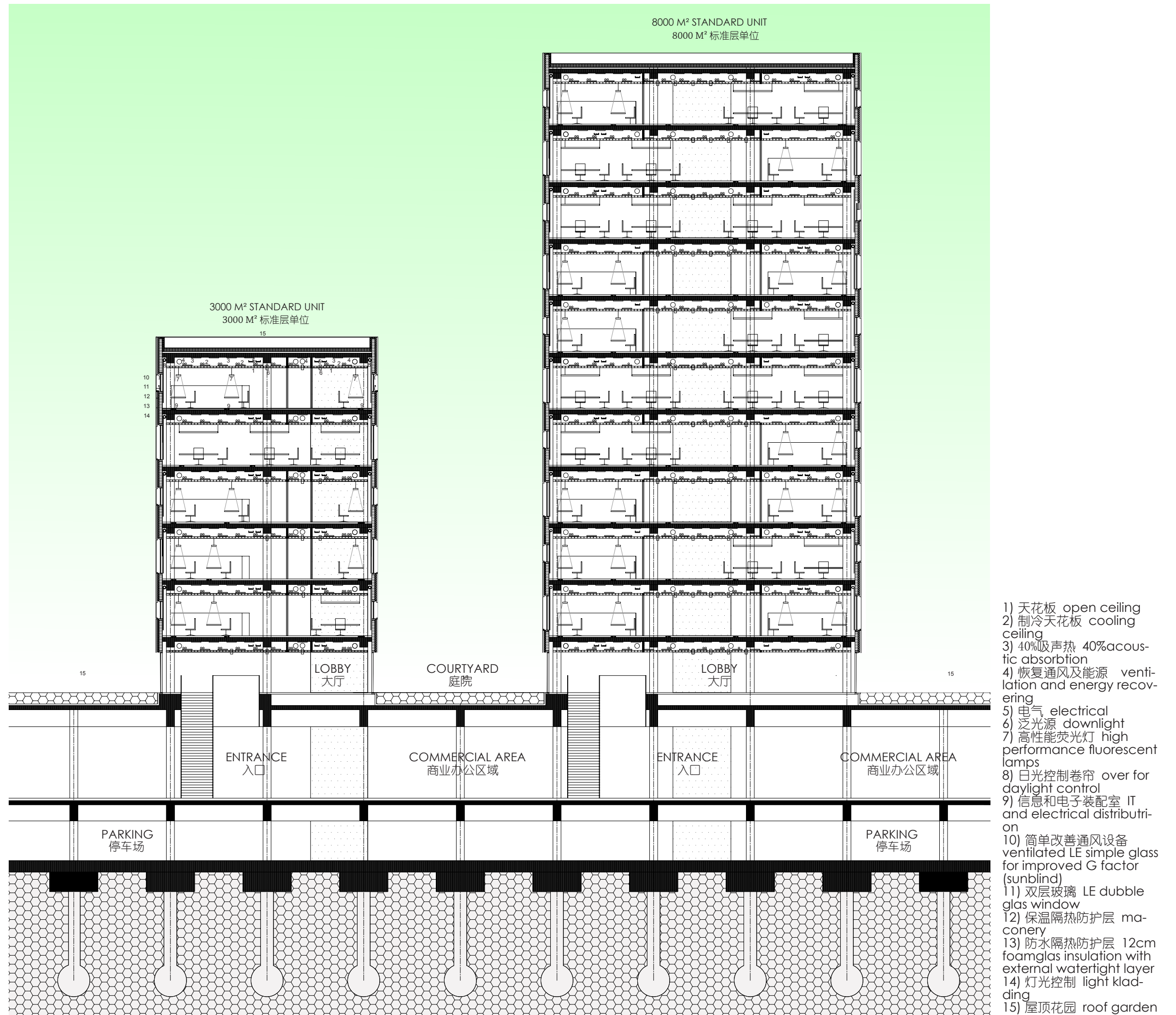
- 1) 电梯和楼梯lift and stair
- 2) 排泄口void on the entrance
- 3) 主楼梯main stair from the entrance
- 4) 厕所cloaks and toilets
- 5) 展示室showroom
- 6) 投影室projections
- 7) 外挑楼梯exit stair offices
- 8) 停车场保安室secondary entrance from the park
- 9) 庭院courtyard
- 10) 会议室meeting rooms
- 11) 生产车间marketing department
- 12) 绿色通风井ventilation green shaft

3-11层平面: 标准层
LEVEL 3-11: STANDARD OFFICE FLOORS



- 1) 电梯和楼梯lift and stair
- 2) 厕所toilets
- 3) 外挑楼梯exit stair
- 4) 咖啡厅informal meeting/cafeteria
- 5) 风景办公室landscape office
- 6) 单元办公室modular offices
- 7) 桥bridging element for meeting room
- 8) 绿色通风□ventilation green shaft

7.6 剖面细部 DETAILED SECTION



8.1城市公园的居住、娱乐类型学

从山到公园，自然景观连续性地流动。
住宅是位于城市花园最高处的小塔。这些建筑物的形状与自然相互融合在一起。
住宅中所有大的悬臂阳台有同一个核心功能，可让人享受远处的美景。
公寓尺寸根据实际情况而做出相应的调整。我们建议出租用的小的住宅单元设在低层的楼层，用于销售的豪华的公寓设在高层的楼层。
公园因具有娱乐功能而显得生机勃勃，公园将是一个生动而快乐的“体验场所”。
在中心景色区的一侧，我们设有（人工假山之类的）绿色建筑物，可用作会议设施和餐馆。在另一侧我们在住宅塔下面设有娱乐空间。通过这种方式，公园不仅仅是一个“装饰物”，而是一个具有各种地方娱乐功能的绿色缓冲区。

8.1 RESIDENTIAL AND RECREATIONAL TYPOLOGY OF THE URBAN PARK

The nature flows with continuity from the hill to the park.
The residential buildings are thin towers allocated on the top level of the urban park.
These buildings have a shape which underlines the continuity with the nature.
All around a central functional core the large cantilevered terraces enjoy of long distance views to the landscape.
Different sizes of apartments are possible.
We propose small residence units for rent on the low floors, and more prestigious flats for sell on the high levels.

The park is animated by recreation functions.
On one side in the central landscaped zone we allocate green buildings (kind of artificial hills) which could be used for meeting and restaurant facilities.
On the other side we create recreation spaces under the residential towers.
In this way the park area is not a void, but a functional green buffer equipped for all kind of local entertainments.