

PLANNING FRAMEWORKS

规划框架

The aim of the midterm exercise was to explore alternative planning scenarios, to investigate possible design scenarios, and to present potential options to Gaoming planners. Students worked in teams of three to develop master site plans for the Gaoming waterfront and the surrounding area. During the group's second trip to China in March, the class presented the five plans to Gaoming planning officials to solicit feedback and identify concrete next steps.

In their midterm work, students presented:

- 1) A planning context and a series of preferred scenarios, including an overall annotated plan at the regional and city scale;
- 2) An overall master plan for the site, including land uses; blocks and streets; general concepts for landscape open space and hydrology; and a phasing or development schedule diagram.
- 3) An illustrative neighborhood plan, including details and recommendations for a specific area.
- 4) A series of vignettes that describe architectural and other design concepts such as waterfront, streets, open space, and housing.

Gaoming planners and officials provided feedback on the group's ideas at a meeting and presentation in March; overall, they found many of the ideas stimulating, and welcomed the student input, especially on case studies and other best practices. Because Foshan had already begun to evaluate the proposed Gaoming land use plan, city officials requested that the next stage of research center on specific recommendations for Gaoming in each of the focus areas.

期中考察的目的是探寻各种规划情景，研究可能的设计情景，以及给高明的规划师汇报可行的方案。在此阶段，每三个学生组成一组，对高明滨水和周边地区制定了总体规划。在小组3月份第二次访问中国的时候，学生们向高明规划官员提出了5套总体规划方案，并且征求反馈和确定下一步研究方向。

在他们的期中工作中，学生们的汇报包括了：

- 1) 规划背景和一系列设计推荐，包括了总体区域和城市规划图表。这些规划设计和图表描述了总体模式概念和解释了设计方案。
- 2) 区域的总体规划包括：土地利用、街区和街道、开放空间和水文的总体概念、分布实施和发展步骤的示意图
- 3) 小区规划注解，包括对特定规划区域的细节和建议。
- 4) 一系列的插图用于描述建设和其他设计概念，包括滨水地区、街道、开放空间和住房。

高明规划师以及官员对每个小组的设计规划都提出了宝贵的意见。总体来说，他们觉得不少设计很有新意，并表示欢迎学生的建议，特别是那些案例研究和最优实践例子。因为佛山已经开始评估高明提出的土地利用规划方案，官员们提出下一步的研究重心应放在高明每一个重点区域的具体建议上。

在高明规划



RE-BUILDING THE URBAN CANAL

重建都市秀丽河

Project Team: Marlon Aranda, Ariel Bierbaum, and Ifeoma Ebo

Gaoming has a bright future ahead. With expanding industry spurring economic development, Gaoming will become an important city in the Pearl River Delta. This new central city will provide comfortable, interesting, diverse, and vibrant life for residents and visitors.

This plan seeks to lay out fundamental frameworks and systems to help guide Gaoming's future growth. The foundations of the plan emanate from the natural shape and systems of the site. Gaoming has benefited from centuries of human manipulation, from the original levies of centuries ago to the advancement in manufacturing industrial technology. This next phase of development serves as the next stage in the evolution of this beautiful and valuable landscape. The plan provides a unique, attractive design with diverse and vibrant programming to ensure increased access to all citizens of Gaoming.

高明有着广阔的发展前景。伴随着产业扩展对经济的激励,高明未来将成长为珠江三角洲的一个重要城市。新的中心城区将为居民和游客提供舒适、有趣、多元化和充满活力的生活。

本规划着眼于为高明的未来发展提供基本的框架和系统性的指导。本规划的基础是建立于当地现有的自然形态和规划区的地理条件。高明历经当地居民的世代开发,从原始的耕作时代跨越到当前先进的工业时代。高明下一阶段的发展将重点着眼于生态景观的规划和建设。本规划一系列特征鲜明、风格各异、充满活力的设计为为高明市民共同构造和分享美好的未来提供参考。

figure 1: Hydrology diagram
图1: 水文状况示意图



河流水系

自然河流所构成的水系为暴雨的排水和防涝管理提供了基础。此规划设计采取由北向南排水的方案。暴雨水首先排到附近现有的溪流和绿色洼地里。洼地能够首先过滤排入的浊水，并最终将水排入秀丽河。这个排水体系将有助于维护西江的良好水质。

秀丽河的东段通过一系列的绿色带和活动场地贯穿整个规划的主线。城市的开发也将扩展到秀丽河的西侧，创造更多的沿河景观和活动机会。秀丽河通过一系列的绿色走廊连接西江，而这些绿色带也起到了暴雨排水的功能。绿色带也同时提供休闲娱乐的效用，为现有城区向新区提供了非常好的自然过渡。规划的地段依河流的走向，自然呈现出棋盘格的布局。这种棋盘格的布局为功能分区提供了灵活的便利：新区的中心即可南北向沿主路布局，也可更加自由的规划。这种棋盘格的形态有助于统合和兼容各种多元化的设计方案。

WATER FLOW

The natural flow of the canal and river provide the foundation for the stormwater management system. The plan capitalizes on the north-south flow. Stormwater drains within each neighborhood into the green swales, built on the site of the existing streams. These streams flow through the swales, cleaning the gray water, and depositing it back into the canal. This hierarchy of waterways helps facilitate the maintenance of the West River's good water quality.

The eastern canal is the organizing feature of the plan. Development expands on the other side of the canal, creating opportunities for additional waterfront views and activity. The canal connects to the West River via a series of "green fingers." These green fingers are functional as a main element in the stormwater management system. They provide recreational benefits and serve as a design element, easing the transition between the existing city and the new development. The grid pattern provides order to the site, while following the organic shape and flows of the land and water. The grid also allows flexibility in phasing: the new city center may evolve from the south to the north, by node, or more randomly, but the grid provides a consistent and replicable framework to unify these varied development patterns.



figure 2: Neighborhood Node diagram
图2: 社区节点示意图

NEIGHBORHOOD NODES

Neighborhood nodes develop along the natural topography and features of the landscape. All neighborhoods will have a mix of vibrant activity, including retail, residential, and recreational amenities. A focus activity will be centered in each neighborhood, be it governmental, educational, or cultural. The system of nodes allow for adaptation as the city grows and needs of residents change. Educational and cultural assets are a key facet to keep younger people in Gaoming. Development in downtown areas also must be flexible to allow for growth of other sectors of the economy and changing market needs.



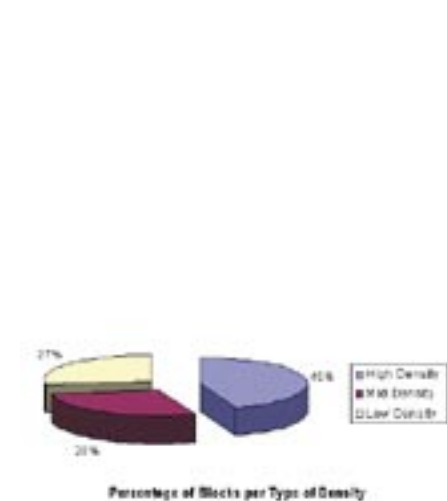
社区组团

社区组团的规划是依据当地的地形和自然形态的特征。所有的社区都将开发为具有综合功能的社区: 包括居住、零售和娱乐功能。政府、教育和文化活动的中心将规划在各个社区的中心。组团式的布局考虑到适应将来城市发展和人口增加的需要。教育和文化设施是吸引青年人定居高明的关键因素。新区中心的规划具有相当的灵活性, 以适应未来各种经济部门的发展和市场需要。

figure 3 : Streetlife
图3: 街道生活

在高明规划

figure 4 : Figure/Ground diagram
图4: 地面轮廓示意图



轮廓布局

现有的河流体系特点显示了新的轮廓和组团节点布局。除秀丽河和西江外,由溪流和小河组成的河网体系显示了社区特有的格局。现有溪流体系的规划是以绿色带管理暴雨排水系统为基础。

与总体轮廓布局一起,自然地形是决定基础设施建设的关键因素。南北向的新区主干道连接了新区中心的各个街区和组团。在秀丽河以西,也规划了南北向的大道。不同等级的道路构成的道路系统,有助于发展高品质社区。建议在秀丽河的多个点建设步行和车辆桥梁以连接河两岸的社区。

URBAN FIGURE

The existing network of water features informs the new figure and nodal patterns. In addition to the canal and the river, a system of streams and canals inform the orientation and placement of the neighborhood grids. Existing streams are the foundation of the stormwater management system along the green fingers.

As with the basic figure of the site, natural topography informs key infrastructure development. The main arterial road provides north-south orientation for the blocks in the central part of the site. Other major north-south avenues develop to the west of the canal as well. A hierarchy of streets facilitates quality neighborhood development. Pedestrian and vehicular bridges are located at multiple points along the canal, building connections between nodes.

LAND USE 土地利用

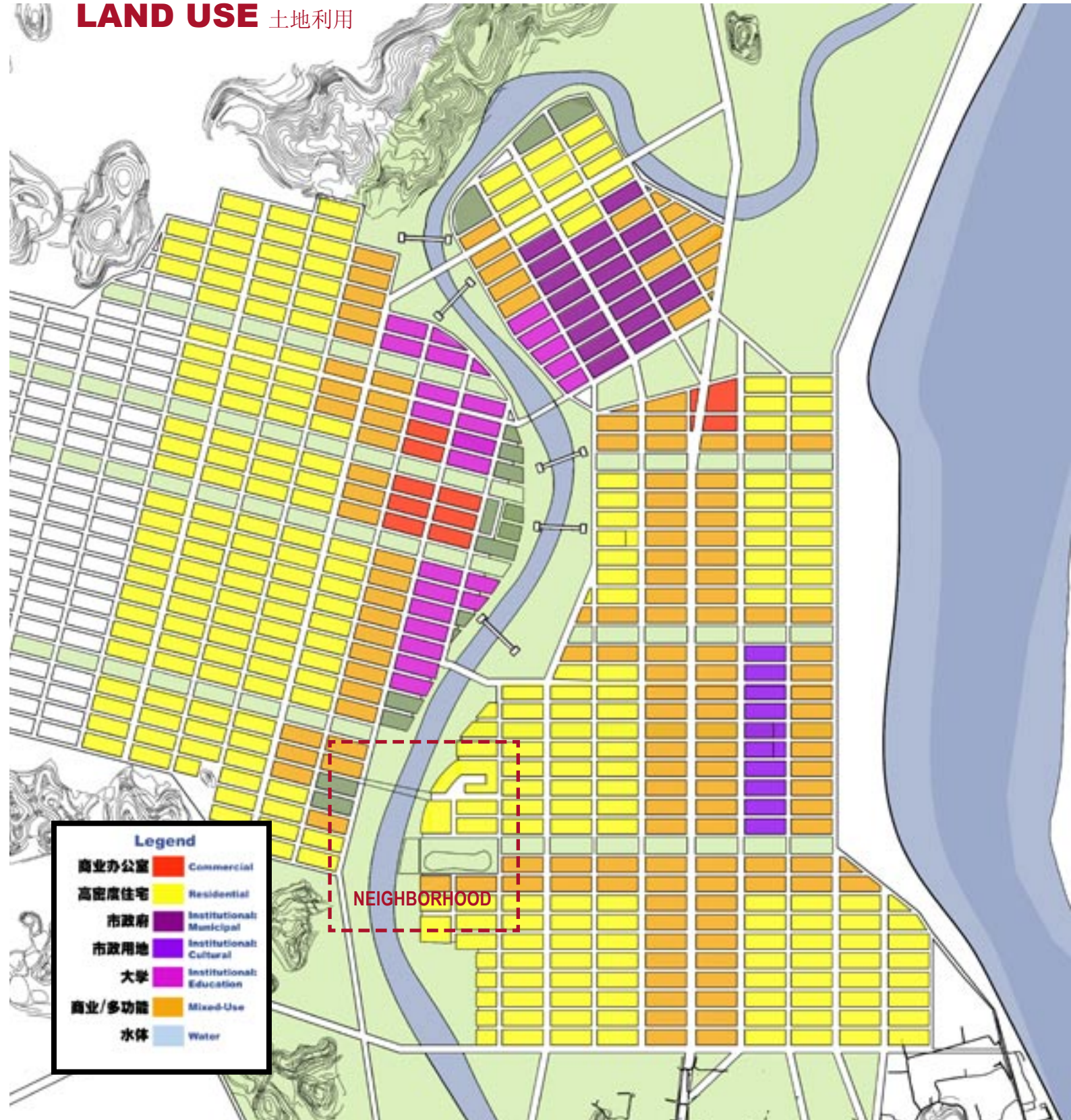


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ARTICULATED EDGE

Public access along the river's edge can bring the city's urban vitality to a linear park. By providing benches, tables, and manicured landscape, the river becomes a destination for leisure walks and morning exercises.

耳目一新的河岸

大众可以很容易地去到秀丽河，将日常生活中的活力带到沿江的公园中去。江边的长椅、桌子和修剪过的植物把江边改造成一个休闲的地点。

XIU LI RIVER

The development along the Xiu Li River can provide a strong point of departure for the new Gaoming. By programming various recreational and cultural elements along its edge, the river establishes an opportunity to unify various neighborhoods. A mixture of open green space and mixed use development enhances the city's identity as a Modern Water City.

秀丽河

秀丽河沿岸的发展可以为新高明的成长提供一个高的起点。不同的社区通过沿岸的娱乐和文化元素而组合。绿色空间和多功能发展模式的混合为现代水城提供了一个鲜明的概念。



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WATER PLAZA

Theaters along the water provide a unique urban experience. They can be the setting for various cultural festivals and concerts.

河滨广场

河沿岸的露天剧院提供了都市的感受，可以成为不同文化和节日活动的场所。

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OPEN GREEN SPACE

Open space along the water can provide cooling effects in the humid summers, and accommodate various recreational activities

开放绿色空间

河边的开放空间可以在闷热潮湿的夏季提供一个清凉的活动空间。

CENTRAL INDIANAPOLIS WATERFRONT CAPITAL CITY LANDING Indianapolis, Indiana USA

Located in midwestern United States, this waterfront park links the downtown civic and commercial core of Indianapolis, Indiana with the river. Designed by Sasaki Associates, the park incorporates the fundamental topographic connections between land and water. One of the principal organizing elements is the extension of the Central Canal through the park. A main plaza serves as the centerpiece of the park. It is oriented to the river via a grass and stone amphitheatre that breaks through the existing floodwall. This new landscape supports civic and cultural developments on sites adjacent to and in the park.
<http://www.sasaki.com>

SAN ANTONIO RIVER WALK San Antonio, Texas USA

The River Walk serves as a source for civic pride and the defining physical feature by which the city is identified. It is a key element of the city's character, a vital driver of the tourist industry, and a significant contributor to the city's economy. Stretching for 2.5 miles and located 20 feet below street level, cobblestone and flagstone paths border both sides of the San Antonio River as it winds its way through the middle of the city's business district. The River Walk is programmed in a diversity of ways, including quiet, park-like spaces, more active commercial zones, and higher density entertainment areas. The San Antonio River has a history of flooding; the canal's natural course has been channelized and reengineered for flood control, so as to facilitate permanent development. Local government created landscape elements and extended the canal to link it with other water features in the area. A non-profit business association promotes and supports economic development along the River Walk. Currently, numerous entertainment venues, hotels, restaurants and businesses operate along the River Walk, in buildings with entrances that open to the river.
<http://www.thesanantonioriverwalk.com>

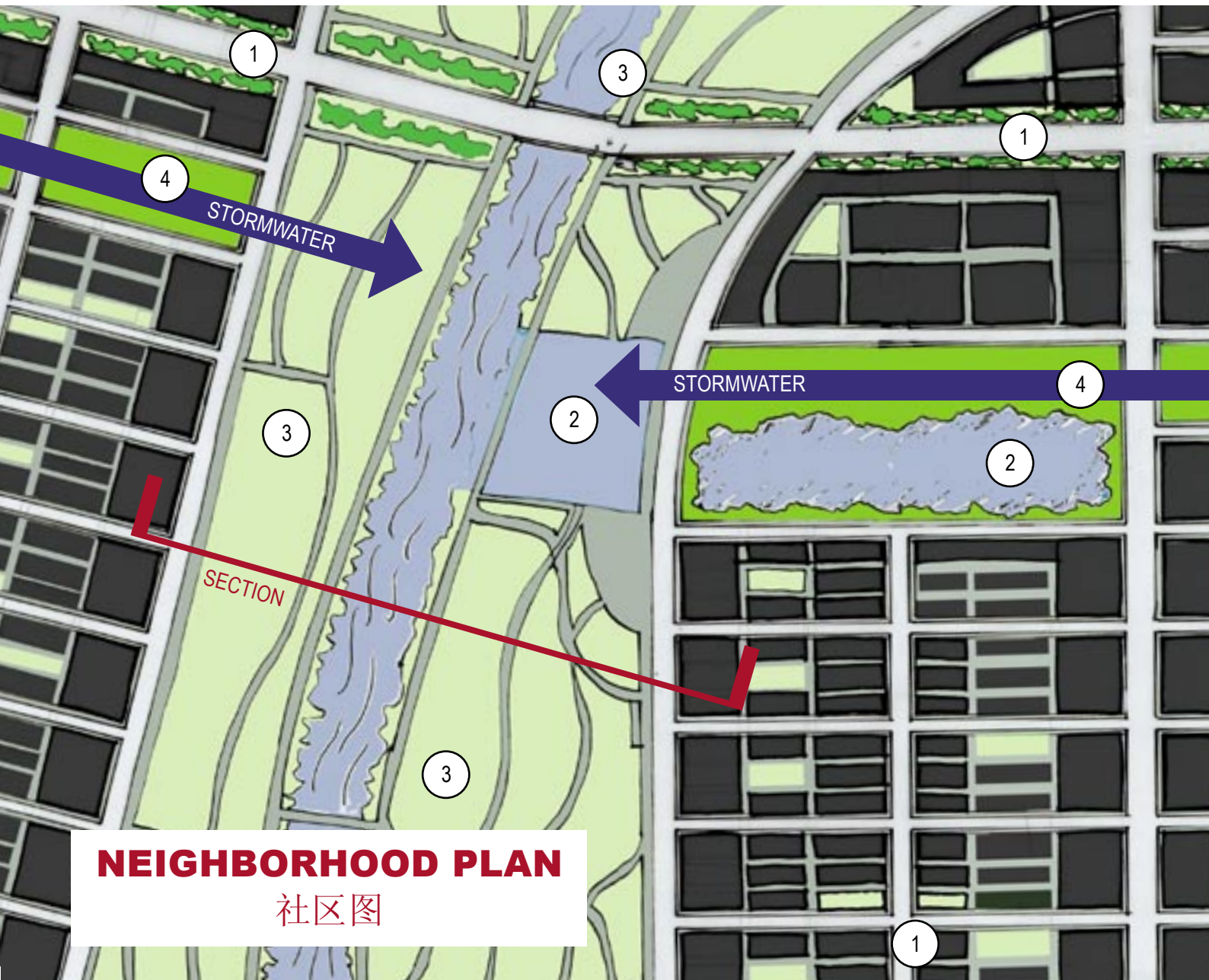
RIVERWALK AND WATERPLACE PARK Providence, Rhode Island USA

Riverwalk and Waterplace Park is the focal point of the revitalization plan of downtown Providence, Rhode Island. The City of Providence rerouted the Providence River, removed a bridge covering it, and created a lively vibrant public space. The new space includes a series of bridges inspired by Venice, each with their own character. The welcoming and thoughtful design is well-utilized; the space is used for festivals, public art installations, and recreational activities all times of year, day and night. Located at the foot of State Capitol Hill, this riverfront is accessible to all citizens and fosters diverse and vibrant activity.

位于美国中西部, 印第安纳州的印第安纳波利斯的滨江公园将市中心的商业核心地段和河流有机地联系在一起。由Sasaki Associates设计, 公园完美地结合了当地河流和地形的特征。设计的一个主体理念就是通过滨江公园延伸和扩充河道, 使之与城市更加紧密的联系在一起。公园中心有个中央广场, 它的设计打破了现有的防洪堤的形式而用草和石头修饰成阶梯状。这个新景点为公园附近当地居民提供了新的休闲娱乐的场所。

河畔小径是圣安东尼奥市引以为豪的城市标志。作为城市的一个重要景点, 河畔小径吸引着大量的游客, 是城市经济重要组成部分的旅游支柱。延绵2.5英里, 低于街道水平面20英尺, 鹅卵石和石板路连接的河畔小径毗邻圣安东尼奥河的两岸, 蜿蜒穿越城市的商业中心。河畔小径融会了各式的设计, 包括安静的公园式空间、活跃的商业区和更高密度娱乐区。圣安东尼奥河有过遭遇洪水的历史。河的主航道为防洪被重新建造和渠化, 以保障周边地区的发展。当地政府创建了各种景观元素并将这条河延伸与其他的水体连为一体。一个非盈利性的组织管理、支持和推动沿河地区的经济发展。当前, 众多的娱乐场所、酒店、餐馆和商厦的门都沿街对河打开。

江滩公园是罗德岛州的普罗维登斯市中心旧城改造的重点项目。普罗维登斯市搬移了一座桥梁并改变了普罗维登斯河的流经线路, 创建了一个充满活力的公共活动空间。新的空间布置包括了一系列受威尼斯启发而架的桥梁, 每个都有其独自的特征, 设计中显示出好客与周到。新的空间作为城市全年节日艺术展览和娱乐活动的场所。位于州议会山脚下的这个江滩公园对所有居民和多样活动都开放。



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DIVERSE STREETScape 多元化的街景

Boulevard streets with ample landscaping include various building typologies, land uses, and housing densities. Viewsheds to the canalfront are preserved and emphasized by the linear corridor.

林荫大道旁伴有多元化的城市景观：建筑高低错落、不同功能的土地使用相互结合、不同密度的布局。沿河的规划布局强调了对河畔和视觉效果的保护。

INLETS 河流的入口

Inlets bring the beauty and activity of the canal into the city. The additional waterfront space allows for additional recreational activities and enhanced viewsheds. [Photograph of Central Indianapolis Waterfront Capital City Landing in Indianapolis, Indiana USA courtesy of Sasaki Associates]

河流的入口给城市带来了美景和活力。扩充了的江边空间提供更多的娱乐空间，增强了视觉效果。（美国印第安纳州印第安纳波利斯中央滨江公园的照片）

TIERED LEVY 阶梯平地

A stepped levy provides an interesting design element in a public park, while maintaining its flood-protection purpose. These sites are able to withstand flooding, but during drier seasons provide ample space for passive recreational activities. [Photograph of Central Indianapolis Waterfront Capital City Landing in Indianapolis, Indiana USA courtesy of Sasaki Associates]

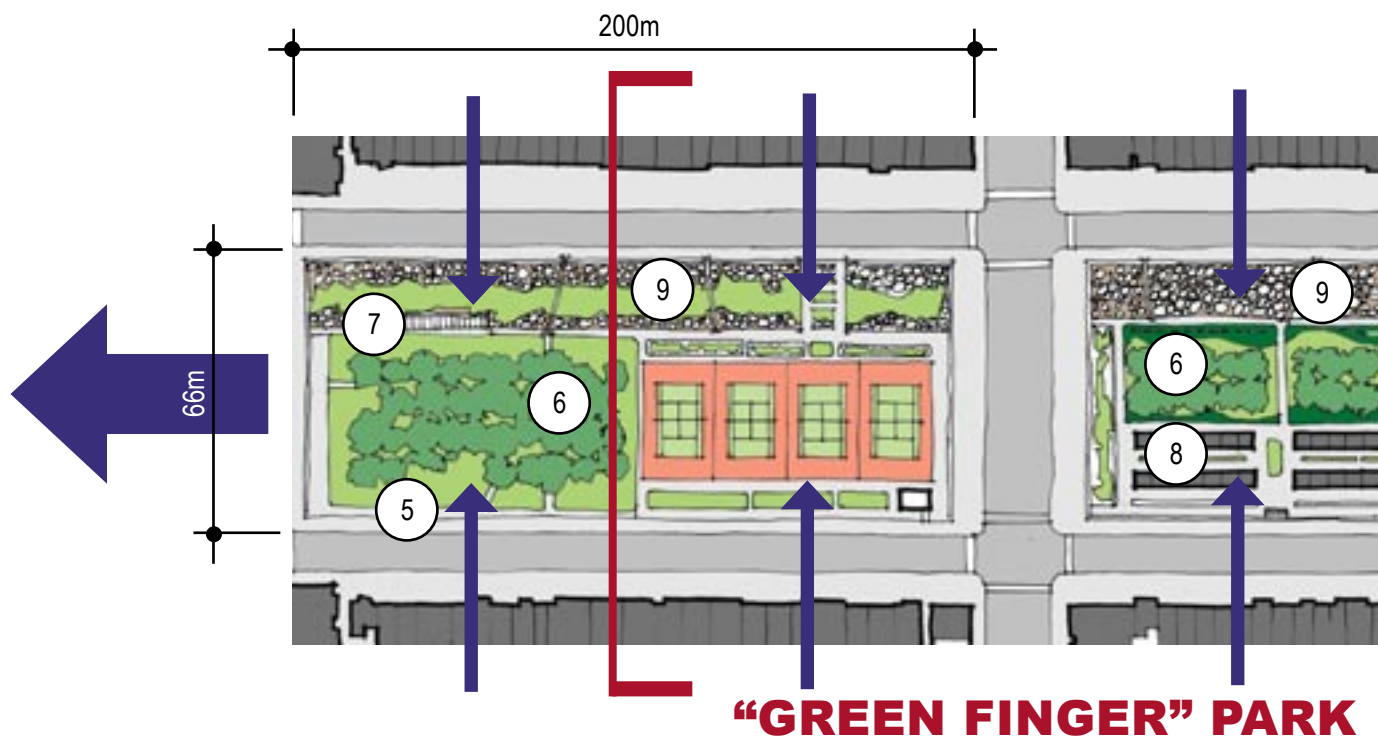
阶梯台阶为公园提供一个有趣的设计元素，同时也保持了防洪的作用。这些地点都能防御洪水，并在旱季期间为娱乐活动提供了宽裕的空间。（美国印第安纳州印第安纳波利斯中央滨江公园的照片）

CONNECTIONS 连接

Other types of parks and open space provide the links between the east and west sides of the canal. These spaces include multi-modal transportation access and areas for passive and active recreation.

其它类型的公园和露天场连接了河流的东西两岸。这些地域包括多种形式的运输通道和娱乐活动空间。

在高明规划



“绿指”公园



CULTURAL ACTIVITY 文化活动

Festivals and other temporary cultural activities may take place in a swale. This activity helps maintain a diverse and lively street life, honors local culture, and allows the swale to perform its environmental function.

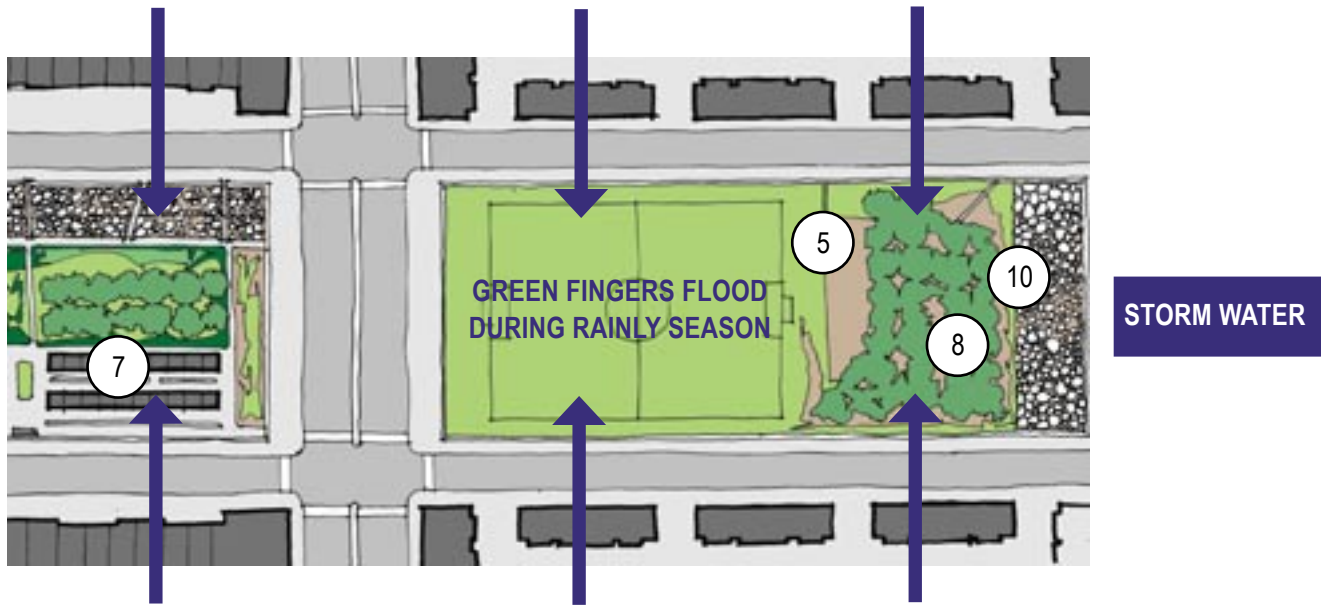
节日和其它大型文化活动可以在洼地举行。这些活动帮助维护多样的街道生活，弘扬地方文化，同时也不影响洼地的环境功能。



AGRICULTURE 农业

Areas of the swale may be used for small scale agricultural development. This practice enhances the aesthetics of the landscape, preserves local culture, and allows the swale to perform its environmental function.

洼地区域也可以被用来进行小规模的农业发展。这种实践美化了风景，保存了地方文化，同时也不影响洼地其环境功能。



PROGRAMMABLE OPEN SPACE

可容纳不同功能的开放空间



COMMUNITY RECREATION 公共休闲
Areas of the swales provide space for recreational activities, such as community gatherings, tennis, and other sports. This activity helps maintain a diverse and lively street life, enhances local culture, and allows the swale to perform its environmental function.

洼地区域也为休闲娱乐提供了空间，譬如社区聚会，网球和其它体育活动。这些活动帮助维护多样的生动的街区生活，提高社区文化，同时也不影响洼地的环境功能。



MARKETS 市场
Swales offer space for temporary commercial activity. Vendors can set up food, dry goods, and other retail stalls along the road. This activity helps maintain a diverse and lively street life, promotes local economic development, and allows the swale to perform its environmental function.

洼地也可提供临时商业空间。贩卖者可沿路摆设零售摊位。这些商业活动有助于维护生动多样的街道生活，促进地方经济发展，同时也不影响洼地的环境功能。

在精明规划



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Wet Swales focus on groundwater through a shallow pool and wetland vegetation. They produce standing water and are thus not well-suited for residential use.

湿洼地通过浅水洼和湿地植被汇聚地下水。由于湿洼地汇聚不流动的水，它们不适合在住宅区使用。

Grass Channels are the least expensive options. They are best for pretreatment for stormwater in a larger treatment system.

长满草的洼地是最经济的选择。它们也是大型预处理暴雨水的最佳方式。

Dry Swales include a soil bed and underdrain system at the bottom of a channel.

干洼地包括土壤床和渠道底部的排水系统。

VEGETATED SWALES

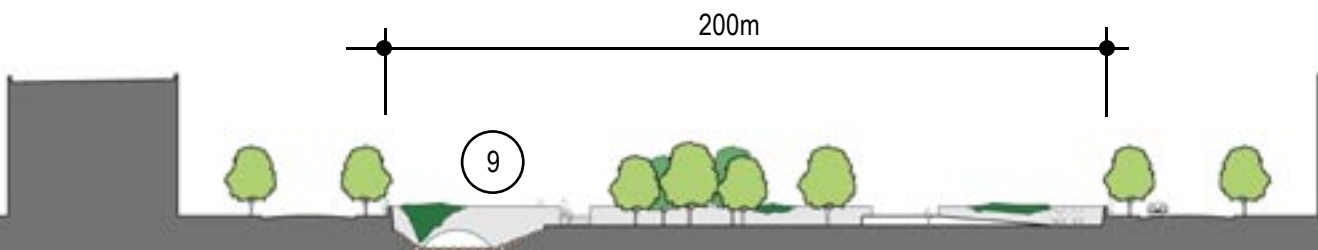
Swales are a series of vegetated, open channels designed specifically to treat stormwater runoff for a specified water quality volume. Stormwater flows through the channels, and various vegetation treats the water by filtering it through underlying soils and gravel. Design may vary depending on the context, grade of land, and volume of water. Swales are a versatile linear application that can treat highway and residential road runoff well.

Swales are designed with flat side slopes. Flat channels are between two and eight feet wide. A small bay at the beginning of the channel should be incorporated to pretreat the water by catching sediment. Dense vegetation in the channel slows the velocity of the water, thus mitigating erosion and acts as a filter. Vegetation also creates aesthetically pleasing open space.

洼地是特别针对排除有特定容量的暴雨水而设计的一系列被植被覆盖的开放性渠道。暴雨水流经渠道时，被各样的植被吸收过滤沉淀下土壤和石渣。设计也可根据环境，土地等级和水的容量变化而改变。洼地也可有效地利用于高速公路和一般道路排水。

洼地应该设计成平缓的斜坡。平面渠道的宽度在二至八英尺之间，在渠道开始的小湾应预先对雨水进行过滤沉积处理。密集的植被在渠道中减慢流水的速度，起到了过滤和减少流水侵蚀的作用。植被也给公共空间带来了审美的视觉效果。

200m



BALANCING URBAN GROWTH

平衡城市增长

Project Team: Il Joong Kim, Karuna Murdaya, and Caitlin O'Connor



figure 1: Concept collage 图1：概念组合

Gaoming is connected to the Pearl River Delta (PRD) by both waterways and industry. It is a city in transition and an integral part of the PRD economic engine. It is a city of rich, varied landscapes from gridiron of urban blocks to a patchwork of fish ponds to organic clusters of villages. In the coming decade, the city will experience much change and must have a vision to guide that transformation. We envision the city's future development to be flexible, adaptable, functional, and most of all sustainable in the long run as illustrated in our plan.

Our overall scheme reads as a system of neighborhoods connected by five North South (N-S) and three East West (E-W) arterial roads. We imagine the existing central artery of the city will be the main axis point along which the neighborhood, circulation, and open space system will be oriented. At three points along the main axis at the nexus of open space system are large, dense commercial centers. These will become main economic engines and places accessible to all neighborhoods. View corridors to the riverfront are emphasized and open space will be strategically preserved.

高明在水运和工业方面与珠江三角洲保持着密切联系。它是一座处于转型中的城市，同时也是珠江三角洲经济开发区的一部分。高明具有丰富、多样的景观：整齐的网格型城区、鱼塘和自然村落分布其间。在未来的十年间，这座城市还将发生很大的变化。因此，与发展变化相适应的规划策略将显得极为重要。在我们的规划中，我们从长远的角度出发，将高明的未来发展路线定为灵活的、适应力强的、功能齐全的可持续型发展。

我们整体的规划将居住区域用五条南北走向、三条东西走向的干道连结成为一个完整综合的体系。由此可以想像，已经存在的城市中央主干道将成为住宅区、交通和公共空地系统沿其分布的轴线。在这条主要轴线上分布有三个比较大的公共场所区域，它们都是密度比较高的商业中心。这些地区将成为服务于所有居民的主要经济活动区。河边的景观通道将可以得到强调，公共空地也将得到战略性的保护。

figure 2: example of urbanized canal as central aspect of open space

图2：都市河道作为开放空间的主要元素。



在高明规划

The neighborhoods, four in total, will share the public open space network. Each will have distinctive characters depending on the locations. Within each neighborhood, we envision a central commercial node that will serve up to 1km diameter from any point in the neighborhood strengthening pedestrian oriented environment. An grid of blocks is envisioned in each of the four areas, measuring 150m x 200m maximizing south facing. The large block sizes around the nexus define a larger system and are intended to be flexible and adaptable as the economy matures. Each neighborhood and districts will have a distinct character and the block system will be oriented to best suit the existing topography. The development phases of each neighborhood will correspond to regional economic demands, so a neighborhood which meets current demands will be developed first.

Five N-S and three E-W arterial roads integrate central Gaoming with the Pearl River Delta region and the waterfront. These roads will be regularly intersected by smaller secondary roads that will both increase circulation and also slow traffic on these main arteries. Our vision for the street network is continuation of the green open space network as it will link large open parks with boulevards. The street network also reflects the topography of the site and designed to maximize the park space with easy accesses.

In phase one of the development scheme, much of the open space will be preserved. This serves several purposes. One, it acts as a natural environmental filter for "gray" water purification and storm water drain control, two, it is an amenity for all four neighborhoods, three, it invites citizens for cultural and social activities, four, it enhances natural ventilation for the entire city, and finally, it offers flexibility for future development as these sites are integrated into the grid network.

总共四个居民区将共享公共场所系统。每一个区域根据它们地理位置的不同而具有不同的特征。在每一个居民区内，都将建有商业中心区，以此为圆心的一公里半径范围内的居民都可以享用步行到商业中心的便利。每一个居民区都被规划成拥有网格型的、面朝南、最大面积约为150米宽，200米长的街区。随着经济的不断发展，这些街道的形状、大小还将变得更灵活更有适应性。每一个居民区和街道都将拥有各自的最适应其地形的特征。各个居民区的发展都将与整体区域经济需求相适应。这就是说，最符合当前经济需求的居民区将被优先发展。

五条南北走向的和三条东西走向的干道将把高明中心区和珠江三角洲地区以及水域集成连接起来。这些干道将有规则地和次级道路连结，从而提高这些道路的流通能力，缓解交通压力。我们对道路系统的规划实质上是绿地系统与公园系统连接起来的一个延续。道路系统的规划还将和地形特征相结合，从而使公园绿地最大程度地被利用。

在发展规划的第一阶段中，很多公共场所将得到保护。它们将起到多种作用。第一，它将在“灰水”净化和雨水排水控制中起到自然过滤的作用。第二，它是所有四个居民区内环境最为宜人的休闲场地。第三，它可以吸引市民参与社区文化活动。第四，它将提高整个城市的自然通风扩散能力。最后，因为这些区域被整合在了整个城市网格系统中，它为未来的城市发展提供了灵活性。

figure 3: suburban area of Chicago
图3：芝加哥近郊

The waterfront and canal system will be treated differently in a way that creates distinctive images and maximizes cultural and social activities depending on the neighborhood character. For example, along the waterfront, we imagine an entertainment and cultural node, supported by commercial activities and residential uses, and along the canal, we imagine playgrounds for citizens, some urban agricultural lands, and places for diverse leisure activities.

The city will have a system of green and urban networks. The surrounding green network functions as an amenity to the future developed areas as it will provide views and recreation, as well as grey water filtration and storm water management. The highly developed and densest areas will be concentrated along the arterial roads where the green network and urban network intersect..

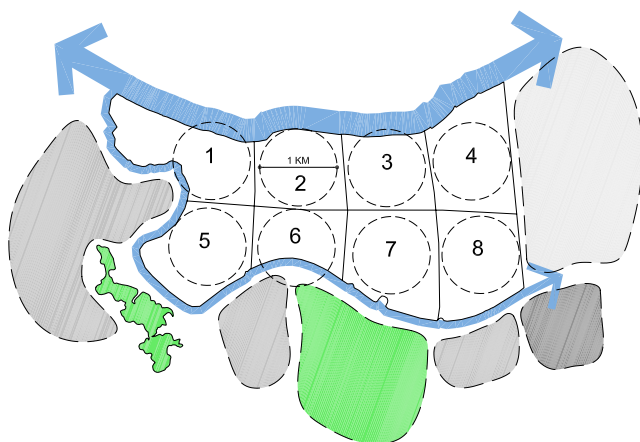


figure 4: Concept Diagram
图 4：概念图

DESIGN CONCEPT : NEIGHBORHOOD

Surrounded by West River, canal, the vibrant existing city, expanding light Industry, and hills, the site has great potentials to be attractive for many types of households, and will become a hub of western pearl delta region. The site will be divided into eight neighborhoods one kilometer in diameter from each node located at the centre of each neighborhood to foster pedestrian oriented civic life.

水域和运河系统将以不同的方式得到处理，这样可以根据各个居民区的特点来设计各有特色的景观，并最大程度地发展文化和社会活动。举例来说，我们可以想像在水滨的周围，发展支持商业活动，为居民的娱乐和文化建立设施；在运河沿线，我们可以规划一些为居民设计的活动空地、市镇农业用地和一些多样化的休闲活动用地。

整个城市将拥有系统的绿地和街区。周边的绿地网络，除了提供“灰水”净化和雨水管理之外，还将提供景观和休闲功能，并成为未来城市继续发展的理想选择。高速发展和密度最大的区域，将集中分布在绿地网络和城镇网络交叉的主干道沿线。

figure 5: Central Park New York
图 5：纽约中央公园

设计理念：居民区

风景优美的西江和秀丽河所围绕，加上充满活力的现有城区、扩展中的轻工业区和小山，这个区域具有吸引多种类型的家庭来此居住的巨大潜力，并将成为珠江三角洲西部的核心。这个区域将被分成八个各自以居民区为圆心，以一公里为半径的步行城区。

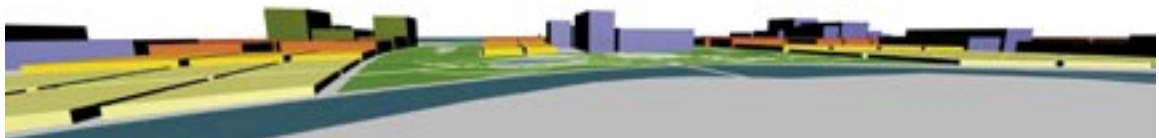
在高明规划



figure 6: Land Use / Masterplan aerial view from East 主要 / 土地使用规划 由东向西的鸟瞰效果

Master Plan Calculations

	gross area	% of residential	average density	population
High density area	128	33%	800	102400
Mid density area	133	34%	500	66500
Low density area	127	33%	300	38100
Total residential	388		534	207000
Government/ Institutional	20			
Commercial	105			
Cultural	47			
Industrial	14			
Open space	250			
Total	824			
Total residential (existing city plan)	435		575	250000

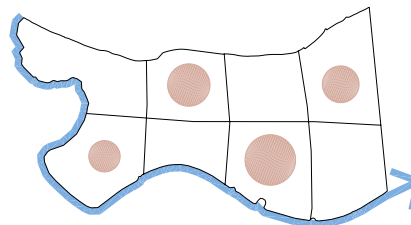


Nodal Development:

分点发展

Four neighborhoods each with distinctive node will be developed with respect to the overall population projection given from the city of Gaoming. Nodes are staggered in order to maximize open space accessibility and distinctive character.

四个不同的居民区将根据高明人口发展的需要而建。区域将被设计成交错形式，这样可以最大程度地提高公共空地的使用率。

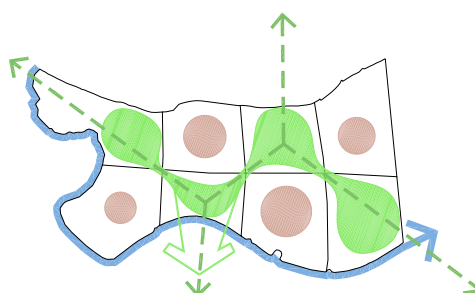


Open Space Network:

公共场所网络系统

Each open space will be linked as a systematic network of parks to expand as well as consolidate city fabric.

每一个公共场所都将被连接成为公园系统网络的一部分，并起到延伸、整合城市结构的作用。

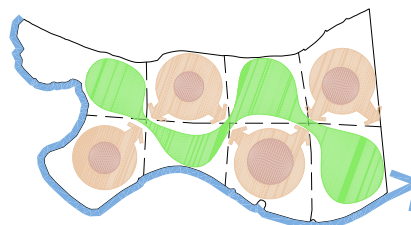


Urban Growth:

城市增长

Each neighborhood will be gravitated toward adjacent neighborhoods as the each node start to expand, generating a neighborhood network.

每一个居民区都将向邻近的区域拉伸，从每一个节点开始向外延伸，发展成为一个居民区网络系统。

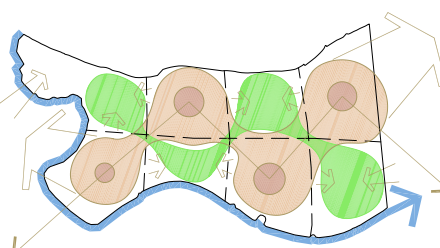


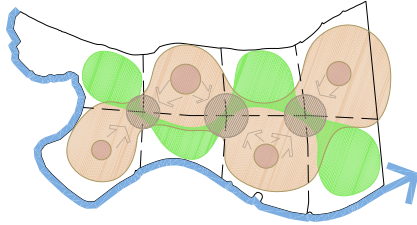
Urban Growth Management:

城市增长管理

The neighborhoods and the open space will weave into a compact expansive urban network. The open space network will not only cushion urban sprawl, consolidating urban growth pattern, but also allow flexible and adaptable urban land use.

居民区和公共场所将相互交错，成为紧密开阔的城市系统。公共场所系统不仅可以成为城市延伸的缓冲之地、巩固城市发展模式，还可以使城市用地更具有灵活性和可行性。

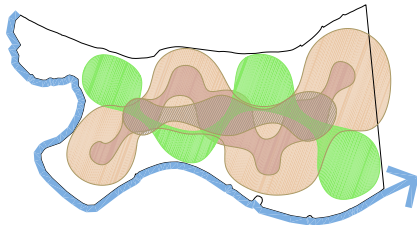




Urban consolidation - Nexus: 城市统一联接

The overlaps between the open space and the neighborhood networks will generate nexuses which will become city centers strengthening local economy.

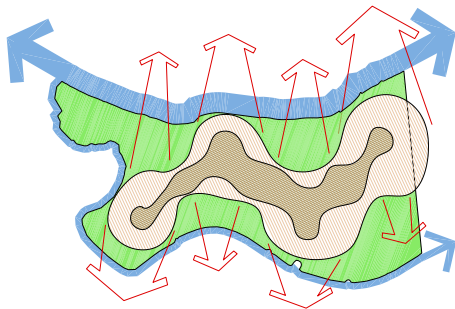
公共场所与居民区交错的部分将成为联接区域，并成为城市中的重点经济区域中心。



Urban Cluster Network: 城市组团网络

City nexuses will expand in linear fashion along the main arterial road. Four networks, open space, distinct nodes (mid density), periphery (low density), and nexuses (high density), will form an interwoven urban cluster.

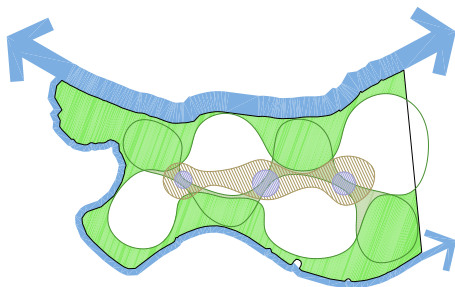
城市中的节点将沿着主干道作线性方式延伸。四个居民区、公共场所、特殊的节点（中密度）、边缘区域（低密度）和节点（高密度）将形成一个相互交错的城市组团网络。



Higher Land Value: 更高土地价值

Each neighborhood will take advantage of unobstructed views toward waters with easy accesses to parks. The waterfront views and large park (leisure space) will increase land value as they attract private real estate markets.

充分利用西江和其他河流的水岸景观，建筑高度向水岸线梯次下降。建设大型开放公园提供更多的休闲设施。水岸和休闲设施都可以吸引房地产的发展，从而提高土地价值。



Sustainable water treatment - Gray: 可持续的水处理 - 灰水处理

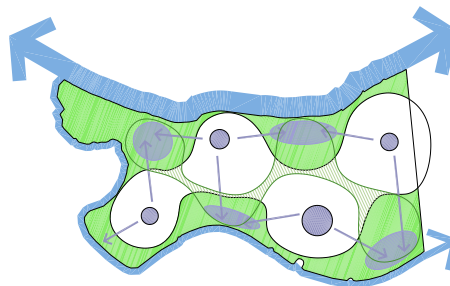
Gray water from the high density areas will be treated separately through a special ground treatment system integrated to the open space park minimizing water treatment costs.

高度密集区的“灰水”处理将通过一个被整合在公园公共场所中的特殊地面处理系统分开处理，从而有效地降低水处理成本。

Water Treatment - Storm: 可持续水处理

Storm water run-off will be collected to the large open space parks which will be able to retain water capacity over the 100 year flood level. The storm water treatment is separated from the gray water treatment in order to engender low tech natural water purification systems.

雨水径流将被收集到公园公共场所区域，这样可以保持容量水位在百年洪水警戒范围内。雨水处理将和“灰水”处理分开进行，这样可以鼓励使用不需要大量技术的自然水质净化系统。



Flood Control: 洪水防治

Some part of existing dike will be converted into the integrated open space parks which can hold 100 year flood away from the living areas of the city. Variation in water level becomes integral part of the open space park design.

现有堤坝中的一部分将被转化成为公园开放空间的一部分，这样可以在防止洪水威胁城市居民区。水位等级的变化将成为公园公共场所设计中完整的一部分。



Transportation: 交通

Two longitudinal and five transversal arterial roads along with public transit will be laid out. Those roads will intersect each node so that residents at each neighborhood will have convenient access to public transportation, improving air quality as well as reducing energy consumption. The arterial roads will be boulevards linking open space systematically within formalized urban fabric.

公共交通系统中的两条纵向和五条横截的干道将被规划穿过每一个节点。这样在每一个居民区内的居民都可以很方便地利用公交系统。公交系统使用率的增加可以提高城市空气质量并降低能源消耗。在正式的城市结构范围之内，主干道将被系统地建成连接公共场所的林荫大道。

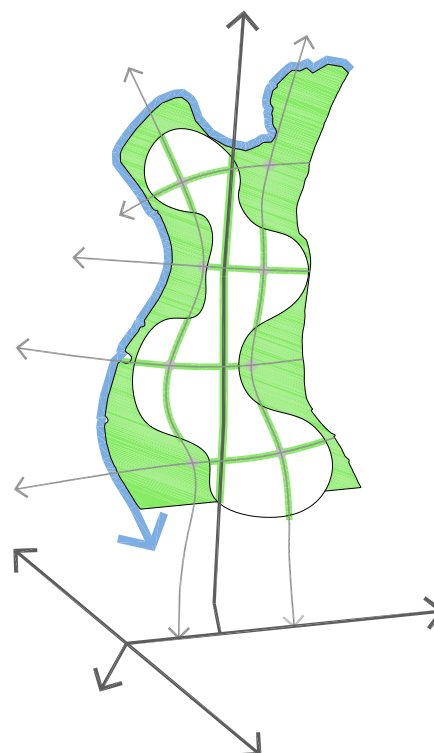




figure 7: Land Use / Masterplan
总体规划图 / 土地使用规划



在高明规划

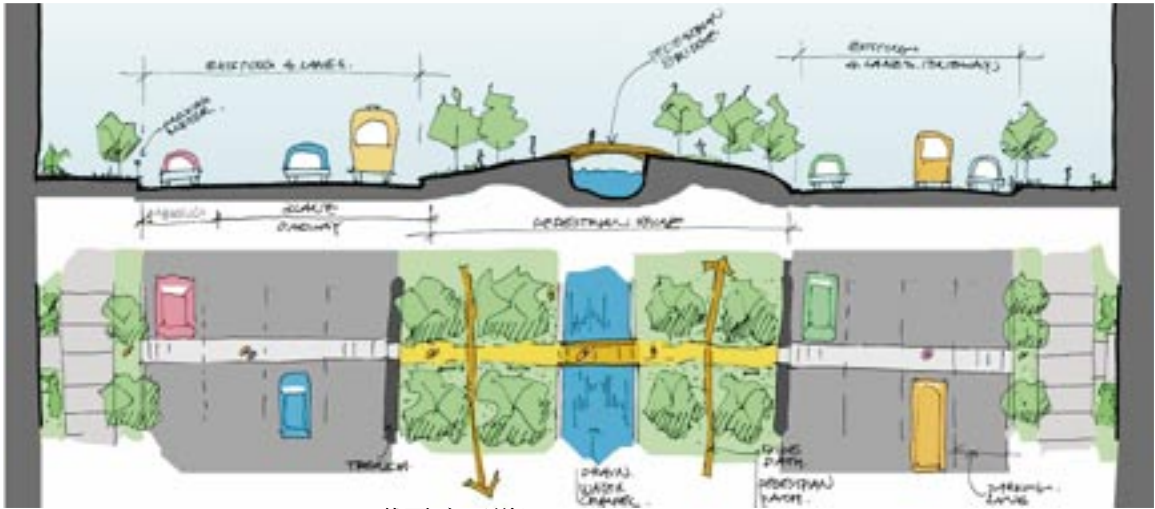


figure 8: Section H - Main Artery (H 截面-主干道)

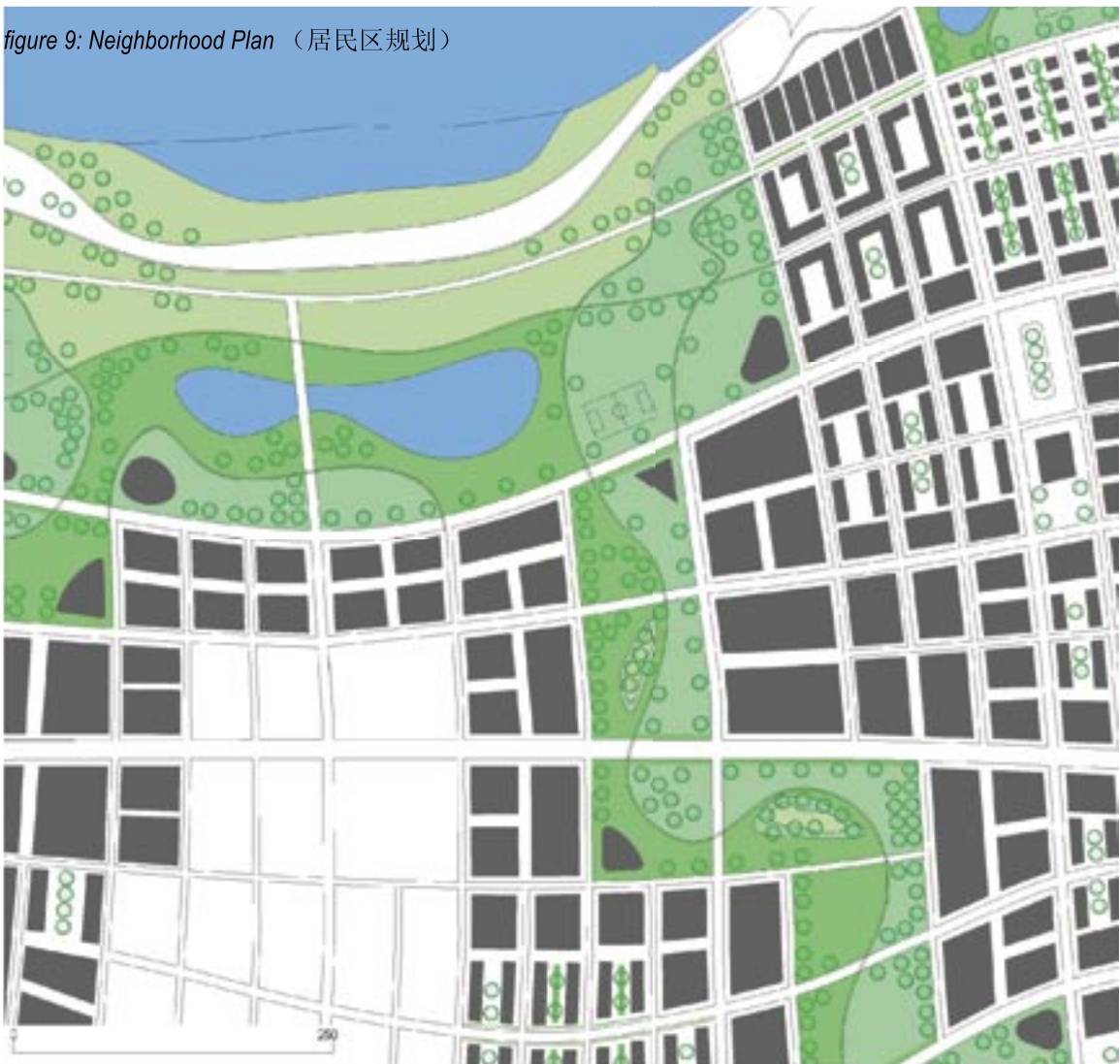


figure 9: Neighborhood Plan (居民区规划)

figure 10: Section A - West River Edge 1 (A截面- 西江河岸1)



figure 11: Section B - West River Edge 2 (B截面- 西江河岸2)



figure 12: Section E - Xiuli River Edge 1 (E截面- 秀丽河滨1)



figure 13: Section D - Xiuli River Edge 2 (D截面- 秀丽河滨2)



figure 14: Section G - Xiuli River Edge 3 (G截面- 秀丽河滨3)



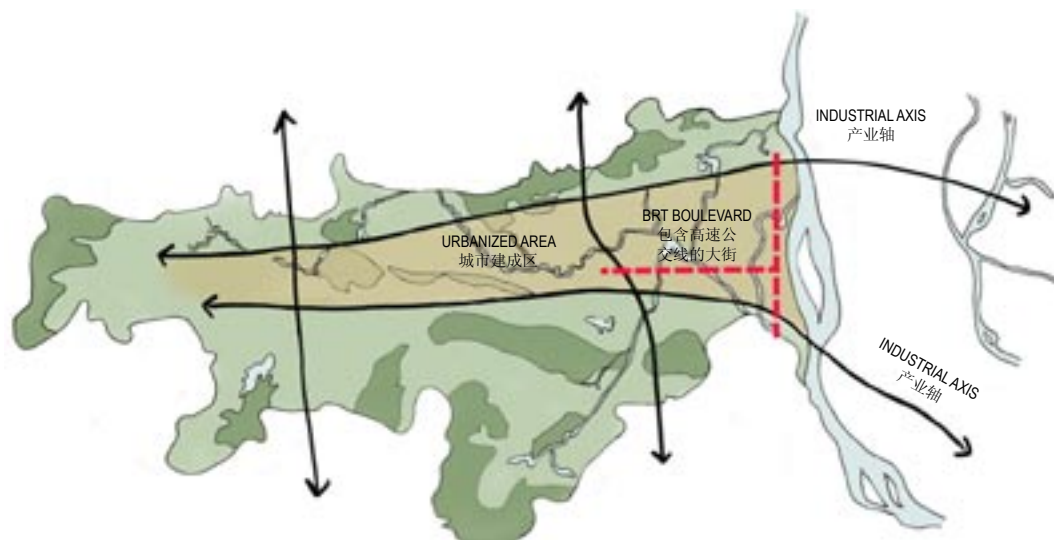


figure 1: Regional context with anticipated connections
图 1：区域概况及所规划的连接

GAOMING: A MATURING CITY

高明：一个成熟中的城市

Project Team: Christine Caine, Diana Sherman, and Leonardo Shieh

CONNECTIONS

The key features of this proposal—the boulevards, civic nodes, amenities and attractions, and green space network—provide visual and physical connections between the waterfront and the western half of the city, as well as between the two industrial corridors to the north and south. Moreover, the canal system integrated into the boulevard design provides connections between water bodies and establishes a sense of continuity for the city.

AXES THROUGH THE CITY

A central feature of this proposal are the two primary axes that run through the city: a north-south corridor along the existing arterial road through Gaoming, and a new east-west corridor that will connect residents to the waterfront. Transit lines will also follow these axes, which will be visually demarcated by broad, tree-lined boulevards along dense commercial stretches.

INDUSTRIAL CORRIDORS

In order to enhance the quality of life for the residents of Gaoming, industrial uses will be contained in two broad corridors, one to the north and one to the south of the city. This will allow the city to better address industrial waste, and will concentrate commuting activity to support mass transit development. In addition, buffers between industrial uses and residential-commercial uses will ensure that Gaoming's identity is not focused solely on its industrial existence.

联系

本规划提议的关键组成部分大街、城市节点、便利设施与吸引物、绿色空间网络都为城市的邻水区与城市西部之间, 和城市北部和南部的两个产业走廊之间提供了视觉上和物质上的联系。此外, 与大街的设计结合的运河系统为不同的水体之间提供了联系, 并为城市建立了连续性。

穿越城市的主轴

本规划提议的一个中心组成部分是两个穿越城市的主轴: 一个是沿现有城市主干道南北向的走廊, 另一个是连接居民区与邻水区的新东西向走廊。根据这两条走廊, 我们还设计了运输线。在运输线穿越密集的商业区部分使用宽阔的、有树木边界的大街作为运输线的边界。

产业走廊

为了增强高明市居民的生活质量, 工业用地将被限制在分别位于城市南部和北部的两个宽阔的走廊中。这可以使城市更好地处理工业废物, 可以使通勤活动更加集中从而支持大规模公共交通的发展。另外, 工业用地和居住、商业用地之间的缓冲带可以保证高明的城市特点不会只集中在工业上。

在高明规划

MODULAR STREET GRID

The crux of this plan for Gaoming is a system of modular blocks—a grid that can be adapted and divided in new ways as the city grows. Each block is 300 meters by 300 meters; in the densely-populated city center, these large blocks may be sliced into nine smaller blocks by smaller streets to create pedestrian-friendly neighborhoods with a residential or commercial character, as appropriate. In less dense areas, however, this block may be divided into only four smaller blocks, as there may be more open space and larger lot sizes. In industrial areas, the block may not be broken up at all—but as the city grows and development moves westward, the established grid can be subdivided and smaller blocks created without the need for new access roads or other infrastructure changes.



COMMERCIAL AND RESIDENTIAL DEVELOPMENT

High-density commercial and residential buildings will be clustered around the main transit corridors, with density decreasing as development moves away from the central axes. Typologies will allow for the concentration of commercial and retail uses at street-level along the major roads, with housing or office above. In the interior of each block, buildings will be at a more human scale, with attached town homes and public green spaces woven between towers. Low density areas will be at the city edges and in the areas immediately adjacent to regional open spaces.



Figure 2: Existing arterial road as boulevard with BRT

图 2：现有的主干道作为大街（包括快速公共汽车运输线）

组合式的街道网格

本计划的一个关键点是一个组合式的板块，也就是一种可以随着城市发展不断调整和分化的结构。每个板块有300米×300米见方。在人口密集的城市中心，这些大的板块被较小的街道分隔为九个小块，从而创造一种适合步行的居住小区或者商业小区。在低人口密度的地区，大板块可以被分为四个小板块，这样可以保证更多的开放空间和更大的地块面积。在工业区，这些大板块不会被分割，但是随着城市向西扩张和发展，这些板块会被进一步分割，新的板块将会产生，但不需新的道路和其他基础设施。

商业区和居住区的发展

高密度的商业建筑和住房将会集聚在城市主要运输走廊的四周，随着发展逐渐远离中心轴线，建筑密度会随之下降。所规划的布局将会在建筑的底层集中商业和零售业，住房和办公使用在建筑集中在上层。在每个街区的内部，建筑会有更加人性化的规模，别墅和公共绿色空间将会穿插在高楼之间。城市边缘和接近区域性开放空间的区域将会有较低的建筑密度。

TRANSPORTATION

Central Boulevards

Two central boulevards run through Gaoming in this proposal, creating shared space for drivers, transit users, and pedestrians. The street edge will be landscaped to create a pedestrian realm where residents and shoppers will feel buffered from the six lanes of traffic. Designated, well-marked crossings will allow pedestrians to cross the boulevard and to reach bus rapid transit stops. Canals along the boulevards' medians will enhance the aesthetics of the boulevards while providing for storm runoff and occasional flooding.

Bus Rapid Transit (BRT)

Two bus rapid transit lines will form axes across the city, connecting the waterfront to the canal and the western end of Gaoming and linking the two industrial edges of the city. One line will follow the existing arterial road that runs north-south through the city, capitalizing on the existing infrastructure to create a wide boulevard with six lanes of traffic, two dedicated BRT lanes, and ample space for pedestrians and landscaping. The use of Compressed Natural Gas buses will ensure that the system has as little impact as possible on the city's environment.

City Bus System

A local bus system will feed out of the BRT system to connect residents to the major transportation axes, and to link the BRT to the industrial corridors. Because less infrastructure is required for the bus system than for the BRT system, it can easily respond to the changing needs of the city as population grows.

Regional Connections

Two bridges—one existing, one currently planned—link Gaoming to Foshan across the West River. These ties are critical for the area's industries, which will benefit in accessibility to other parts of the province. These proposed axes can be extended westward to connect the eastern portion of Gaoming to its western clusters as these areas grow into a single metropolitan area.

交通

中央大街

在本提案中，两条中央大街穿越整个高明市，为司机、运输线使用者和行人提供共享的空间。街道边缘将会美化成为一个步行区域，将居民/购物者和六车道的繁忙交通隔绝起来。仔细规划和清晰标定的交叉路口使得行人可以穿越大街到达快速公共汽车站点。大街中央的运河增加了街道的美感，同时也可以用作雨水和洪水排放。

快速公共汽车运输线（BRT）

两条快速公共汽车线将会形成穿越城市的轴线，连接邻水区与运河以及城市的最西端，同时连接城市边缘的两个工业区。其中一条线将会沿着现有的南北主干道贯穿城市，利用现有的基础设施来建立一个包括六条机动车道、两条BRT专用道和充足步行空间和绿化空间的大街。压缩天然气(CNG)汽车的使用将会保证本系统对城市环境的影响达到最小。

城市公共汽车系统

一个独立于快速公共汽车运输系统之外的本地公共汽车系统将会连接居民区和主要的交通轴线，并同时连接BRT与工业走廊。由于本地公共汽车系统比快速公共汽车运输系统需要较少的基础设施，本地公共汽车系统可以灵活地响应由于人口增长带来的需求变化。

区域联系

一条现有的大桥和一条规划中的大桥穿越西江的西部并连接高明市和佛山市。这两条纽带对本地区的工业极为重要，因为本地工业依赖于与省内其他部分的连通。这些规划中的轴线可以向西部延伸，从而连接高明市的东部与西部，使得这些区域形成一个整体性的城市区。

GREEN SPACE AND CIVIC SPACE

REGIONAL OPEN SPACE

Several significant green spaces take advantage of the existing topography and open space to create large regional parks. These spaces encircle the city, providing access to nature for the many residents and creating a comprehensive parks system that will formalize the preservation of open space while allowing the city to continue to grow.

区域性开放空间

几个主要的绿色空间利用了现存布局和开放空间，构造成为大型区域性公园。这些空间环绕城市，为居民提供接近大自然的机会，并建立了一个综合的公园系统，在允许城市持续扩张的同时，有效地保护了开放空间。



figure 3: Diagram with open space and neighborhood node systems
图 3：公共开放空间和小区节点系统图示

NEIGHBORHOOD PARKS

Gaoming's local parks will be woven throughout the urban fabric; every resident will be within a short walk to a nearby green space. Amenities in and design of these spaces will vary, however; some parks may provide recreational space for sports, while others will offer serene passive uses. Still others may include water features or nature trails, and some parks will function as cultural or artistic spaces.

小区公园

高明市本地的公园将会被编织进整个城市结构中；每个居民都可以步行到临近的绿色空间。但是各个空间的便利设施和设计将会不同；有的公园会为运动提供休闲空间，而有的则会提供安静休息的功能。其他的可能会以流水或自然小路为特征，有些公园则会成为文化和艺术的空间。

PUBLIC PLAZAS

In addition to the parks throughout the city, public gathering spaces will provide areas for practicing tai chi, exercising, or other outdoor activities. Some plazas are sited near industrial or commercial centers to encourage workers to use these areas during breaks or in the mornings or evenings.

公共广场

除了遍布城市各处的公园，公共聚集的空间将会为居民提供打太极拳、锻炼或者其他室外活动的场所。有些广场位于工业中心或者商业中心，可以鼓励工人们在午休时间或早晚使用这些场所。

EXISTING VILLAGES

Several existing villages dot the urban grid in this proposal. In some cases, the village will be preserved; residents can continue living there as the city grows around them, and the architectural scale of the village will be maintained. In other cases, adaptive re-use of the village architecture will create shopping and entertainment districts that will also retain the original scale and character of the region, but will integrate the space into the new urban context

现存的村庄

在本提议中，几个现存的村庄在城市网格之中呈点状分布。在有些情况下，村庄将会被保留；居民可以继续在那里生活，而城市则会绕过村庄扩张，村庄的建筑规模将会被维持下来。在另一些情况下，村庄的建筑将会进行功能上的调整，成为商业和娱乐区，原有的规模和村庄的特点将会保持下来，但是会被整合到城市背景之中。

WATERFRONT DEVELOPMENT

Although this proposal centers on the westward development and growth of Gaoming, the waterfront is also a defining aspect of the city. Connecting the space to the city center is essential, as is providing access to the river for residents. Strategies for addressing these concerns will vary along the river's edge, however; in some areas, the waterfront will be preserved as untouched natural space, while in other areas, more active uses will be encouraged.

邻水区的发展

尽管本提案是以高明市西部的发展为中心，但是邻水区是高明市城市特点的重要方面。连接邻水区和城市中心是十分必要的，因为这为城市居民提供了接近河水的机会。连接邻水区的方案会根据沿河的不同位置而有所不同。在某些区域，邻水区会被保持为未开发的自然空间，在另外的区域，将会鼓励更积极的用地方式。

CENTRAL ACTIVITY / NEIGHBORHOOD NODES

Scattered across the city are central nodes of activity: event places, commercial districts, transit confluences, iconic structures, city-scale open spaces, and more. These sites provide destinations for both Gaoming's residents and the city's regional tourists, and create a strong identity along the densely-populated corridors of the city.

中心活动/小区节点

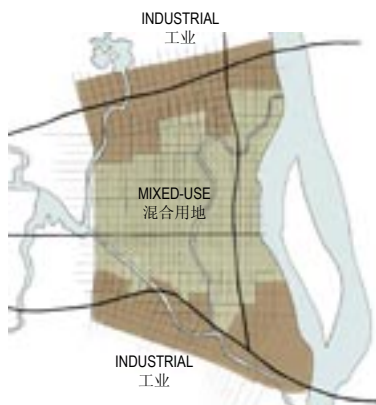
各种活动的中心节点将会散布在城市的各个区域：包括大型活动场地、商业区、运输线交接点、标志性建筑、城市范围的开放空间等等。这些场地为高明的市民和外来旅游者提供了目的地，并沿城市中人口密集的走廊地区确立了城市的强烈特色。

TRANSFORMING BLOCK PATTERNS AS THE CITY MATURES

Key to Gaoming's future is a strategy for long-term sustainable development in the city. This proposal seeks to balance ecological concerns with economic stability and growth, as well as with equity issues associated with the rapid development of the region. Industrial uses will be concentrated in two corridors on the periphery of the city, creating a residential and commercial zone in the center of the city to improve residents' quality of life. As the city grows, blocks can be adapted to accommodate new economic sectors and populations.

Young

This diagram shows the initial state of the primary sector city. Dense industrial land use is located adjacent to the industrial corridors, framing the central housing zone. The industrial blocks are a full 300- by-300 meters, planned to allow for future division and integration.

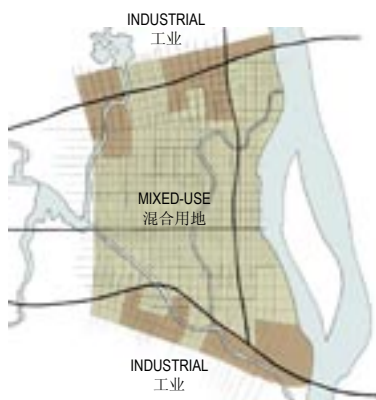


发展初期

本图显示了单一工业城市的最初形态。密集的工业用地临近工业走廊，构成中心居住区的边界。这些工业区呈300米×300米见方，便于未来的划分和整合。

Transforming

The next development stage of the city shows the beginnings of block divisions within the industrial zone. As the city moves away from economic reliance on industry, the blocks will begin to break down and allow for infiltration of housing and office spaces.

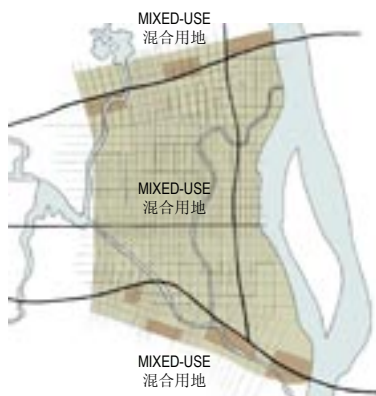


转型期

在城市的下一个发展阶段，工业区中开始了街区的划分。随着城市对工业经济依赖的降低，工业区会逐渐分化，居住和办公用地将会穿插进来。

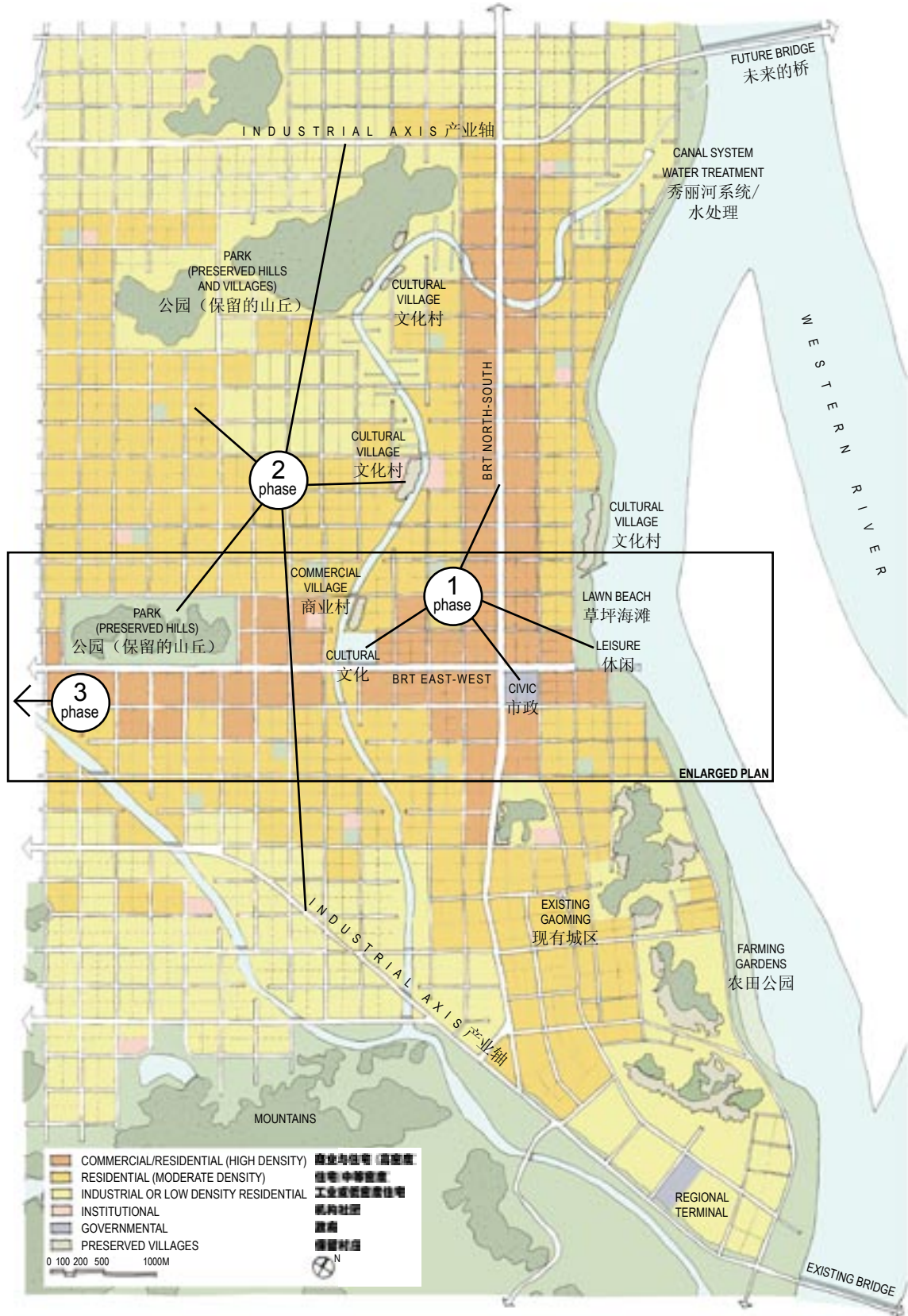
Mature

The final state of the city presents a mature city, having transformed economically into a tertiary sector city. The majority of the initial 300- by-300-meter industrial blocks have been broken down, creating a more integrated city fabric.

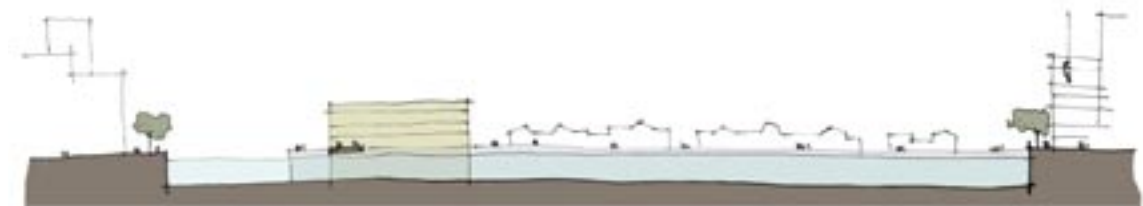


成熟期

城市的最后阶段是成熟期，城市已经转化成为一个第三产业城市。大多数300米×300米见方的工业区会被分化，成为一体化的城市统一体。



在高明规划



(A)

CULTURAL: WATER PLAZA

Taken through the main cultural region, this section emphasizes the placement of the performance auditorium atop the grand water plaza. Illuminating a soft glow, this auditorium creates a dynamic attraction for retail, dining, and places of social leisure.



(B)

CIVIC: BRT SUNKEN STATION AND CITY PLANNING BUREAU

This section is taken at the site of the city planning bureau. Sitting at the intersection of the busiest boulevards, the Gaoming resident will be reminded upon each passing of the constant growth and maturity of the city.



③ **LEISURE: WATER MONUMENT AND LAWN BEACH**

This section is taken through the lawn beach area along the West River. The subtle slope of the green lawn allows for leisure space at the waterfront, while also allowing flooding to occur naturally along the coastline. From the lawn beach one can see the water monument floating beyond the coastline, marking the end of the boulevard axis.

① **文化：水滨广场**
此切面图为主要文化区，强调介绍在大型水滨广场上表演大厅的位置。这一礼堂散发柔和的光亮，对零售、餐饮和社会休闲活动产生动态的吸引作用。

② **市政：下沉式快速公交车站和城市规划局**
此切面图为城市规划局。居民们在最繁华的大街的十字路口，仿佛可以感受到城市的持续发展和成熟。

③ **休闲：水滨纪念碑和草坪海滩**
此切面图为西江岸边的草坪海滩。这一略微倾斜的绿色草坪为市民提供了邻水的休闲空间，同时又允许防洪作用自然形成。从草坪海滩上人们可以看到水滨纪念碑仿佛漂浮在河岸之上，界定了大街一轴的终端点。

HIGH DENSITY COMMERCIAL AND MIXED-USE AREAS

The proposed high density areas feature a mix of building typologies: office towers co-exist with mixed commercial and residential towers, and human-scale low-rise homes in the interior blocks. High density zones are concentrated along the new bus rapid transit (BRT) lines to make transit most effective and provide residents, office workers, and shoppers with easy access to the area's business, government, and commercial districts.

Population density:
250–500 persons per hectare

MODERATE DENSITY MIXED-USE AND RESIDENTIAL AREAS

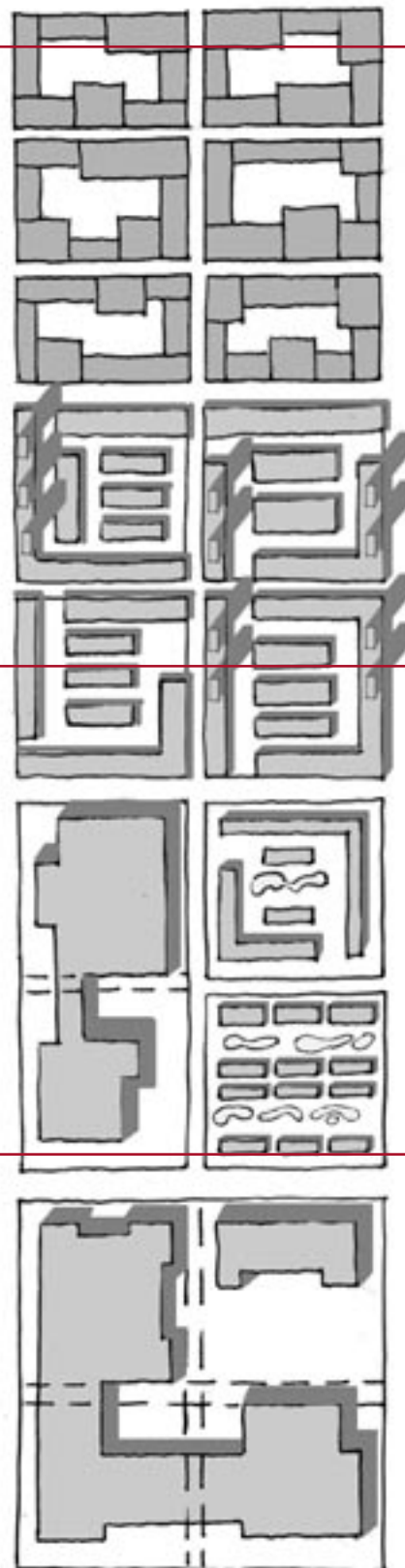
Moderate density areas offer a mix of commercial and residential space in both high- and low-rise buildings; however, the overall scale of these neighborhoods is lower, with streets oriented to the resident, rather than the visitor. Stepped buildings and pockets of open space also enhance the quality of life for residents in these districts.

Population density:
100–350 persons per hectare

LOW DENSITY RESIDENTIAL AREAS

The low density regions of the city are characterized by small attached homes, often with gardens or other outdoor space. Town houses, rowhouses, or, occasionally, detached single-family homes might be typical in these areas. Low density areas are concentrated near large open spaces to mitigate the impact of nearby development and in areas beyond the reach of the mass transit system where it would be necessary to own an automobile.

Population density:
0–100 persons per hectare





高密度商业和混合用地区域

本提案中的高密度区域具有混合的建筑布局特点：高层办公楼和商业/居住混合高层建筑共存，规模较为人性化的低层住宅用地位于街区的内部。高密度区域主要集中在新的高速公交线周围，使得交通最为高效，并为居民、办公室工作人员和购物者提供了公司、政府部门和商业区之间便捷的联系。

人口密度：250-500人/公顷



一般建筑密度和混合使用住宅用地区域

一般建筑密度区域和商业住宅混合空间区域，既有高层建筑也有低层建筑；但是，总体来说，这些小区的规模较小，街道主要为居民而非游客服务。有层次感的建筑和散布其中的开放空间增强了居民的生活质量。

人口密度：100-350人/公顷

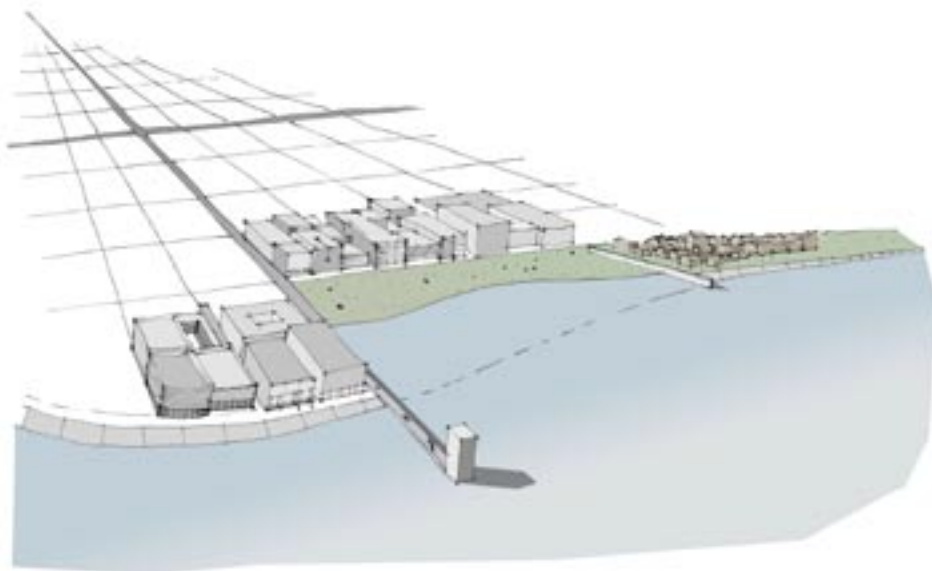


低建筑密度的住宅区

城市的低密度区的特点是小而分散的居民住房，通常住房有花园或其他室外活动空间。别墅、联立住房、或者单一家庭的住宅是这些区域的典型景观。低密度区主要集中在大型开放空间附近和城市公交系统之外的区域，居住在这些区域的居民通常需要私家车。

人口密度：0-100人/公顷

在高明规划

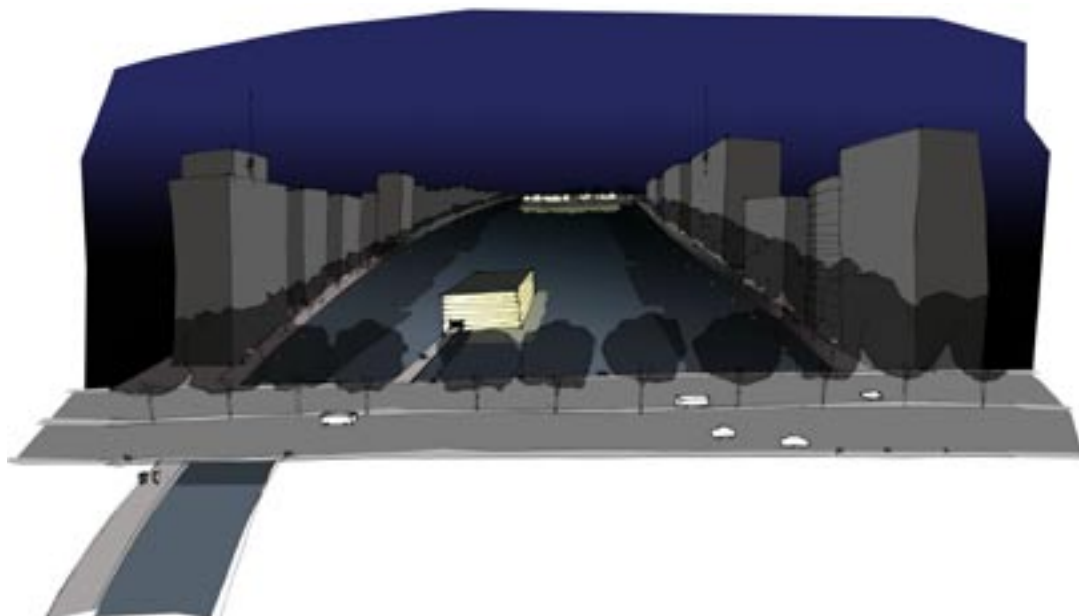


LAWN BEACH WITH WATER MONUMENT

As a symbolic counterpoint to the cultural water plaza, the water monument represents the City of Gaoming rejoicing in the waters of the West River.

草坪海滩和水滨纪念碑

作为文化水滨广场的对照物，水滨纪念碑代表了高明市拥有西江之水。

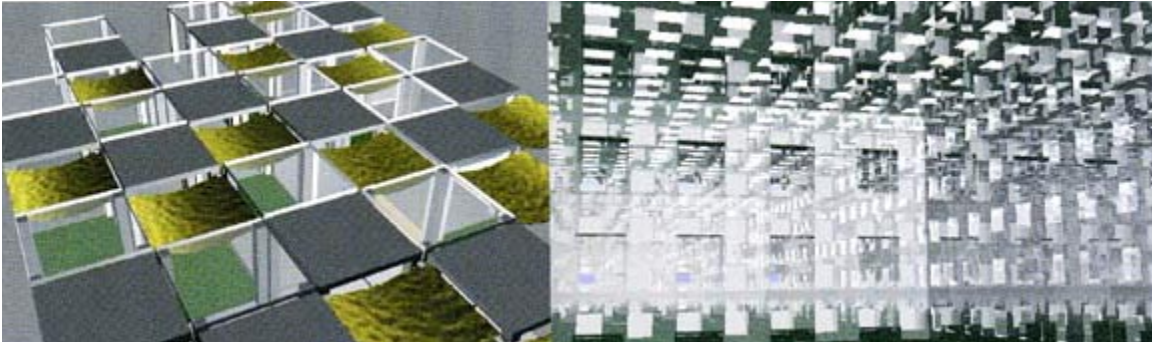


CULTURAL WATER PLAZA

At the intersection of the east-west boulevard and the main canal, a water plaza features a performance auditorium and a preserved village converted for commercial activities to attract tourists.

文化水滨广场

在东西向大街和主运河的交界处，将会建立一个水滨广场。这个广场以表演大厅和一个被完整保存但转化为商业活动的村庄来吸引游客。



GREENING GAOMING

绿化高明

Project Team: Michael Brown, Anne Dodge, and Ajit Singh

DESIGN CONCEPT

Located on the West River, Gaoming has a unique opportunity to become a green and prosperous city.

设计概念

坐落于西江畔，高明有着独特的机遇成为一座绿色和繁荣的城市。

CITYPLANNING OBJECTIVES

- Improve existing conditions while minimizing impact of future development
- Emphasize three vertical axes along the river, central road, and canal, with a mix of uses that encourages pedestrian activity and public transit
- Bring river into the city through a horizontal, green boulevard and canal, connecting people to the river
- Create a “Jade Necklace” of interlinked green parkways and view corridors for pedestrian and bicycle use
- Develop around nodes of activity, drawing people toward central areas and allowing for phasing of development

规划目标

- 改善现状的同时减少城市发展的压力
- 突出西江，主干道，秀丽河这三条垂直走廊，鼓励多功能混合用地，从而鼓励步行和公共交通
- 通过横向的绿色林荫道和运河把西江引入城市，连接居民活动和西江
- 为行人和骑自行车者创造一条由相连的绿色公园道和视觉走廊组成的“翡翠项链”
- 围绕活动节点发展，把市民引向中心区，考虑阶段性发展

在高明规划



figure 1: Urban Context and Street Networking- Gaoming
图 1：高明都市连接和街道网络

IMAGINE PROVIDING

- A new destination - a residential and commercial hub of activity for locals and tourists alike.
- The excitement of a new recreational and entertainment opportunities along the waterfront.
- A new and healthy way for residents to enjoy the outdoors and get around town (the "Jade Necklace").

设想提出

- 新的目的地—为当地居民和游客创造居住和商业的中心
- 在水滨营造集娱乐休闲为一体的场所
- 让市民以一种全新和健康的方式享受户外活动以及环城休闲（“翡翠项链”）



figure 2 : Green Gaoming Necklace
图 2 : 高明的绿色“翡翠项链”



figure 3: Urban water ways and road networks
图 3 : 都市水系统和道路网络



figure 4: Green Boulevard and Ecological corridors
图 4 : 绿色大道和生态干道

IMAGINE CONNECTING

- Gaoming to an exciting riverfront, made more accessible by a new waterfront park and a network of green corridors and pedestrian and bicycle paths, the “Jade Necklace”
- Gaoming to the river by integrating new and existing public transportation networks
- Gaoming to river, hill and mountain features through a combination of pedestrian and view corridors
- Workers in the residential areas to their jobs through pedestrian and bicycle paths

设想连接

- 高明成为令人激动的滨水城市：构建全新的水滨公园和绿道、人行道和自行车道（“翡翠项链”）
- 高明跟江河连接在一起：通过整合新建和现有的公共交通系统
- 高明跟江河、丘陵及山脉连接在一起：人行道和视觉走廊
- 住在居民区的职工可以通过步行径和自行车径上班。



figure 5: Site Plan- Gaoming 图 5：高明总体规划



figure 5: Site Plan- Gaoming 图 5：高明总体规划

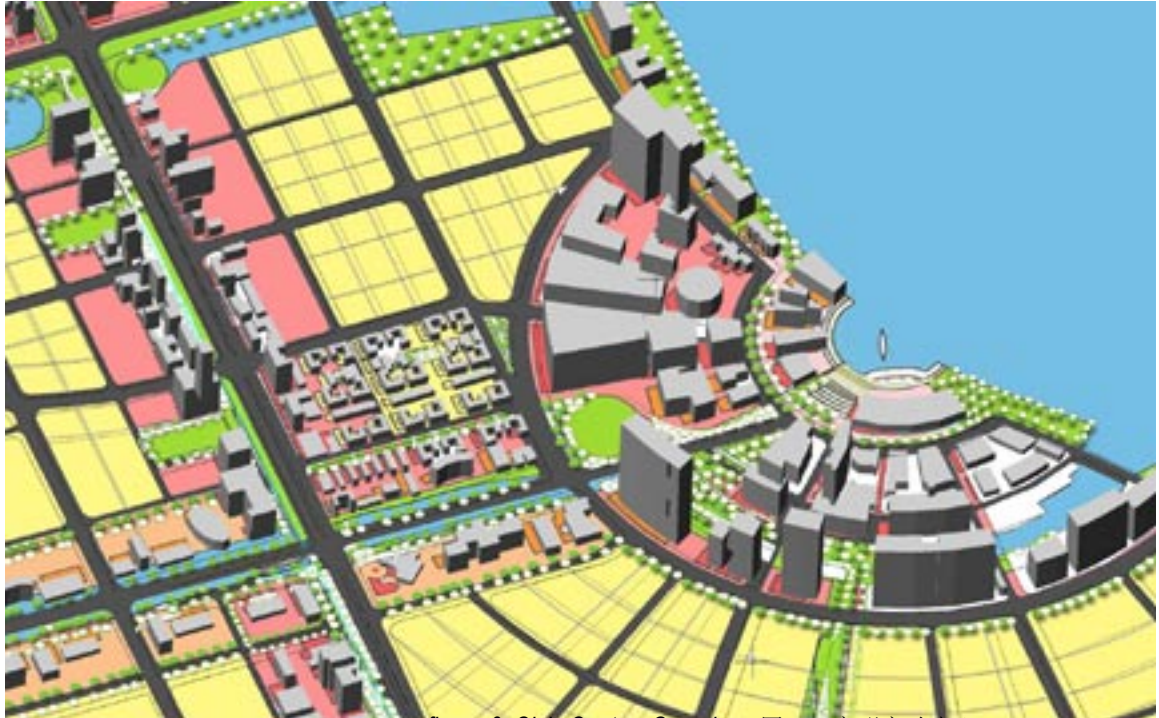


figure 6: Civic Center- Gaoming 图 6 : 高明市政中心

figure 7: View Eco-Corridors 图 7 : 生态景观轴

Commercial uses clustered along main road, with a mixing of uses at intersections in residential neighborhoods
Green fingers running from river to canal, bringing water into the city
New Civic Center neighborhood acts as a gateway to the city from the river
Building heights are stepped to maximize river views

figure 8: Urban Boulevards and Scenic beauty

图 8 : 都市干道风景

figure 9: Urban Waterways 图 9 : 都市水道

figure 10: Linear parks 图 1 0 : 直线公园

NETWORK CITY GAOMING

高明:网络之城

Project Team: Kai-yan Lee, Jeremy Shaw, and Rongtao Xu

We envision a Gaoming that reconnects with its past as it re-invents the future. In this vision, Gaoming draws on a history based on water in a diverse natural landscape of forests, rivers and hills. It also takes advantage of an economic opportunity in the present, while protecting the health and wealth of the future generations.

我们设想中的高明，是在重新建造将来的同时，连接着过去。在这个设想中，高明的历史源自于水，而水又源自于由森林、河流、山丘所组成的丰富多样的自然地貌。在保护下一代的健康和财富的同时，高明也在充分利用它现在的经济优势。



figure 1:
Levies have defined the lowland landscape in Gaoming for centuries. Above, the succession of levy-building around the Gaoming Central Area (red circle). (Source: Marks 1997).

图1：水提在过去的几个世纪中不断地改造着高明的低洼地。上图为高明中心地带（红点）附近逐渐兴建的水提。



figure 2:
Network City Gaoming uses this history of levies and canals as its conceptual starting point. This figure shows a representation of the present-day water and urban network.

图2：网络之城以高明本地的水提和河道为设计概念起点。上图抽象显示了现有水系和道路网络。

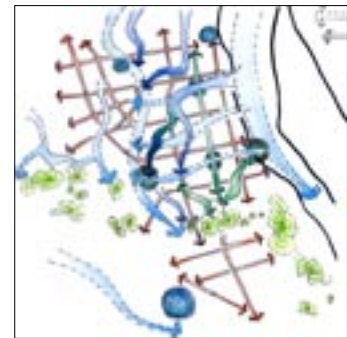


figure 3:
Diagram of the same concepts applied to blue, green and urban networks.

图3：类似的概念草图描绘了蓝色，绿色和都市网络。

在高明规划

MASTER PLAN

The majority of central Gaoming is situated between the West River and Xiu Li River - both branches of the Pearl River. After centuries of wash and sediment, the Pearl River bestows a unique and rich water network upon the region - the prominent "Blue Network." In addition, low hills scattered throughout Gaoming compose another defining natural system, the "Green Network." Since their settlement hundreds years ago, features created by people became prominent, shaping today's "Urban Network." These independent networks are currently fragmented. If planned as complementary networks, each system can be enhanced in its own right, while making Gaoming stronger, more sustainable and a unique place in the world. This plan envisions just that: a Gaoming where blue, green and urban systems are cohesive, coordinated and planned sustainably for its people.

总体规划:

高明的中心区位于西江和秀丽河之间，它们都是珠江的支流。历经千百年的冲刷和沉淀，珠江流域孕育出其独特而丰富的水域网络。现有明显的“蓝色网络”。此外，散落于高明的小山丘形成了另一个显著的自然系统：“绿色网络”。数百年前高明就有人居住，因而由人类活动而形成的明显特征组成了今天的“都市网络”。这些相互独立的网络现在都还是支离破碎的。如果能够作为互补的网络来统筹规划，每个网络都能充分发挥自己的长处，同时也使高明成为世界上一个独具特色的城市，更加强大，发展更具可持续性。这个方案的设想是：把高明的蓝色网络、绿色网络、和都市网络融为一体，相互协调，为市民做出可持续的发展规划。



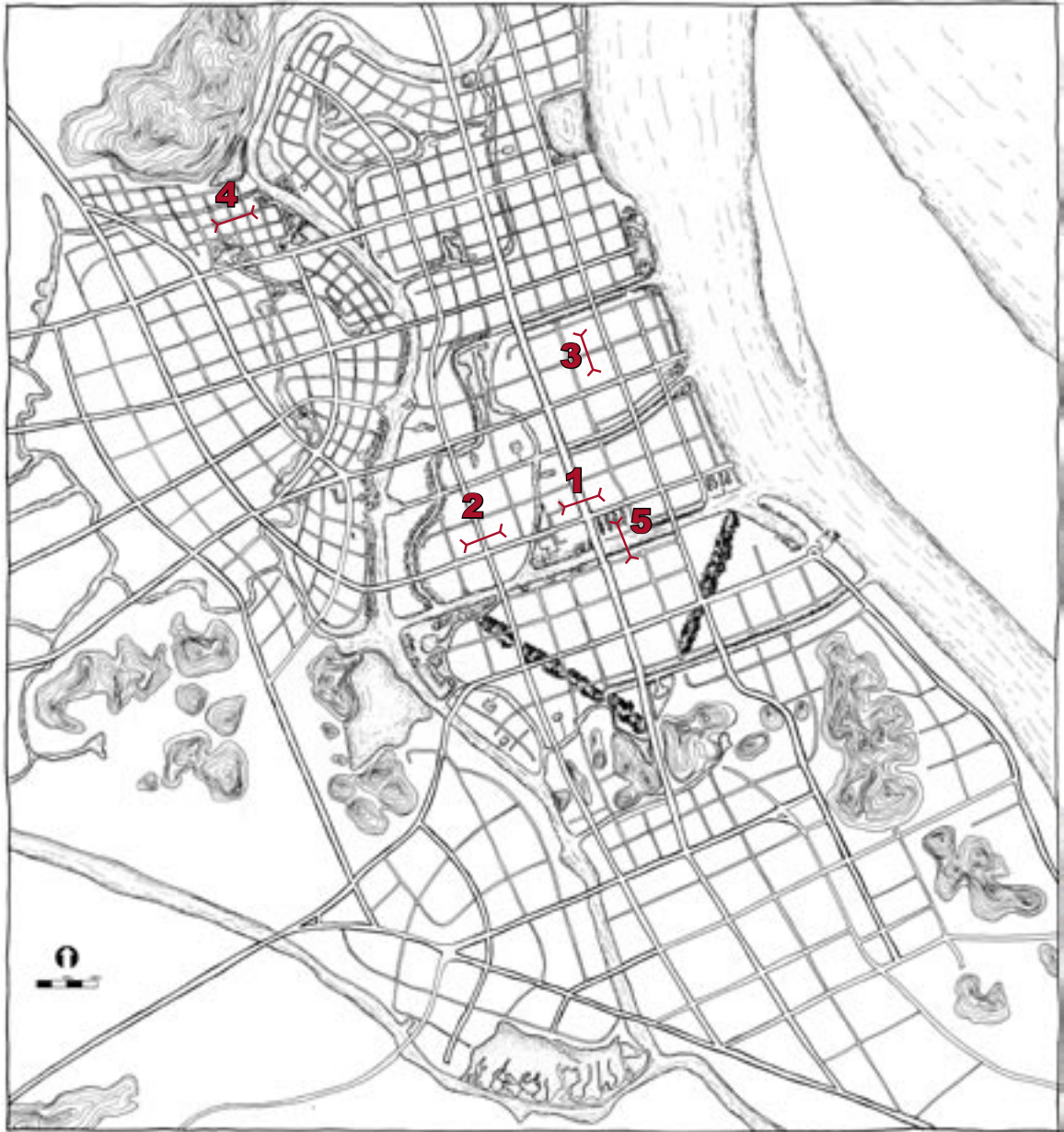
CENTRAL NODE, SECOND ALTERNATIVE 中心节点：第二方案

商业/多功能	Mixed-Use Commercial
商业办公室	Commercial/Office
高密度住宅	High Density Residential
低密度住宅	Low Density Residential
开放空间	Open Space
市政用地	Civic
工业	Industrial
湿地	Wetland
水体	Water
大学	College
市政府	City Hall
船码头	Ferry Terminal



Urban Network

都市网络

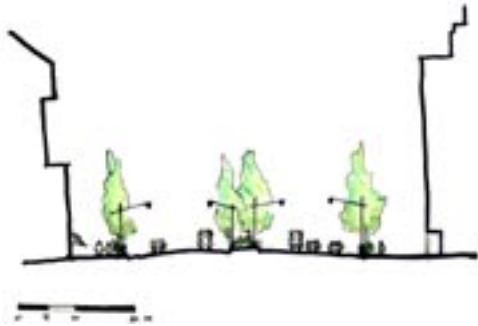


The urban network weaves into the natural Green and Blue networks, connecting both green and blue nodes, cultural spaces and corridors. Building heights and block sizes reinforce the natural nodes, such as decreased building heights along the green visual corridors. Diverse block sizes and neighborhoods provide choice and identity in the ways communities interact with their natural and urban landscape

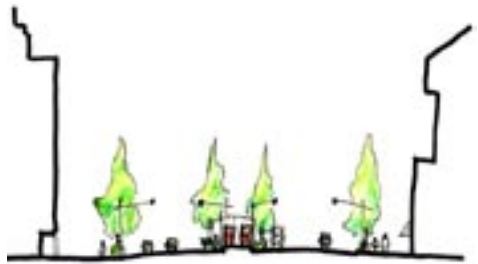
城市网络迂回穿行于自然的绿色和蓝色网络之中，连接绿色和蓝色的节点以及文化空间和走廊。建筑高度和小区强化了自然节点，比如降低绿色视觉走廊边的建筑高度。多样化的街道规模和社区结构为其居民和自然及城市景观之间的互动提供了不同的选择及个性。

Urban Network

都市网络



- 1 -
REGIONAL BOULEVARD
区域性大道



REGIONAL BOULEVARD
(2ND ALTERNATIVE)
区域性大道 (变化设计)



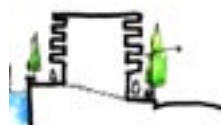
- 2 -
LOCAL BOULEVARD
本地街道



- 3 -
MIXED-USE STREET
混合使用街道



- 4 -
RESIDENTIAL STREET
居民区街道

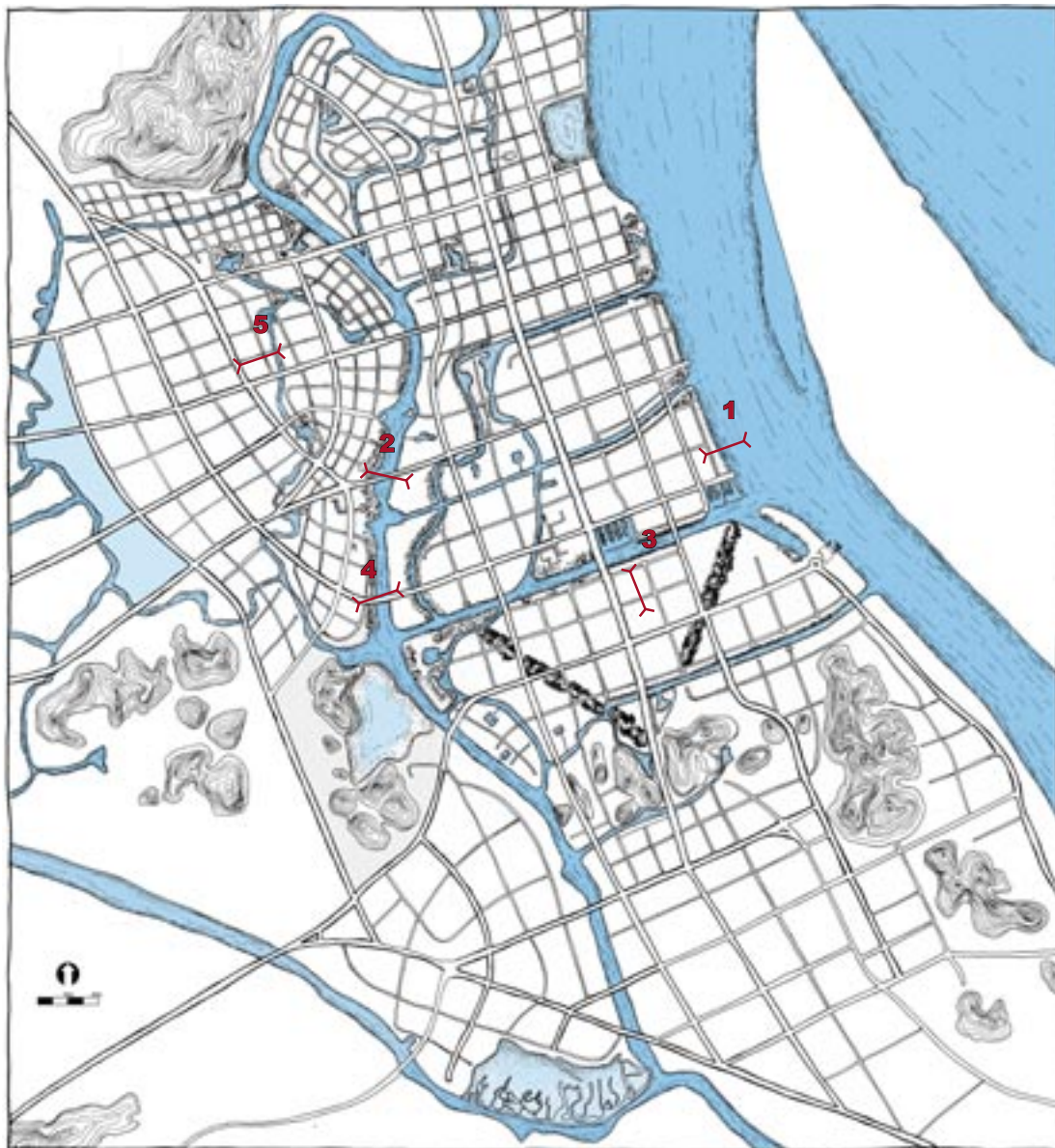


- 5 -
CANAL COMMERCIAL
河道商业

figure 5: Street Types 图 5 : 街道类型

Blue Network

蓝色网络

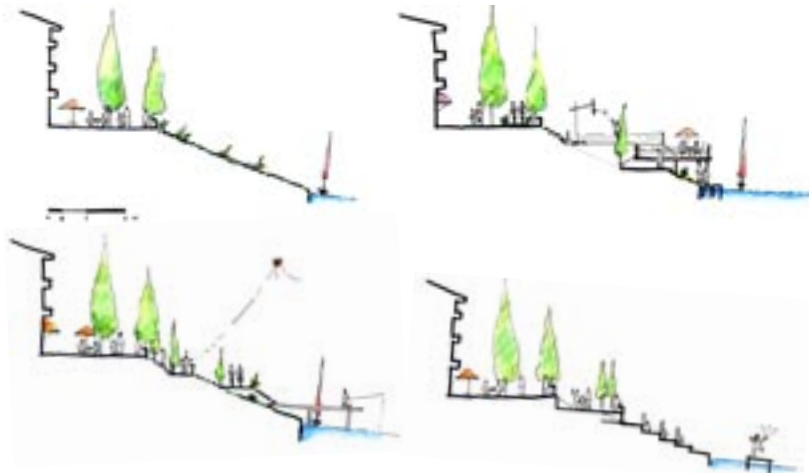


Reintroducing water to the site is critical to making Gaoming a Model Water City. This vision imagines Gaoming's history of water inspiring a naturally beautiful, efficiently-planned, cultural landscape. Along the east-west canal and "cultural axis," locals and visitors can stroll, paddle or take a water taxi. Fish ponds are preserved for the Ji-tang eco-education center, stormwater remediation and neighborhood ponds. Water locks at the river edge control the water flow and help manage the stormwater and recreational amenities.

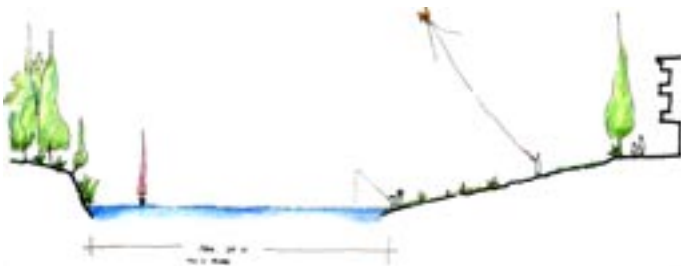
重新引水入城对打造高明现代水城至关重要。这个设想利用高明的水历史创造一个自然美丽布局得当的文化风景区。沿着东西向的运河以及“文化轴线”，市民和游人可以漫步，泛舟或乘水上巴士游览高明的风光。鱼塘被保护用作基塘生态教育中心，雨水调控社区池塘。河流入口的水闸控制着水流，有助于控制洪水和管理娱乐休闲设施。

Blue Network

蓝色网络



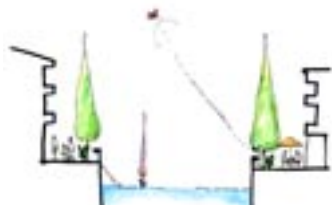
- 1 -
RIVERFRONT ALTERNATIVES
江滨不同设计



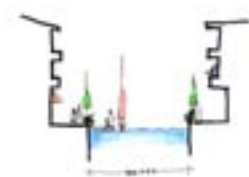
- 2 -
XIU LI RIVER RESIDENTIAL
秀丽河住宅区



- 3 -
CENTRAL CANAL
中央运河区



- 4 -
XIU LI RIVER COMMERCIAL
秀丽河商业区

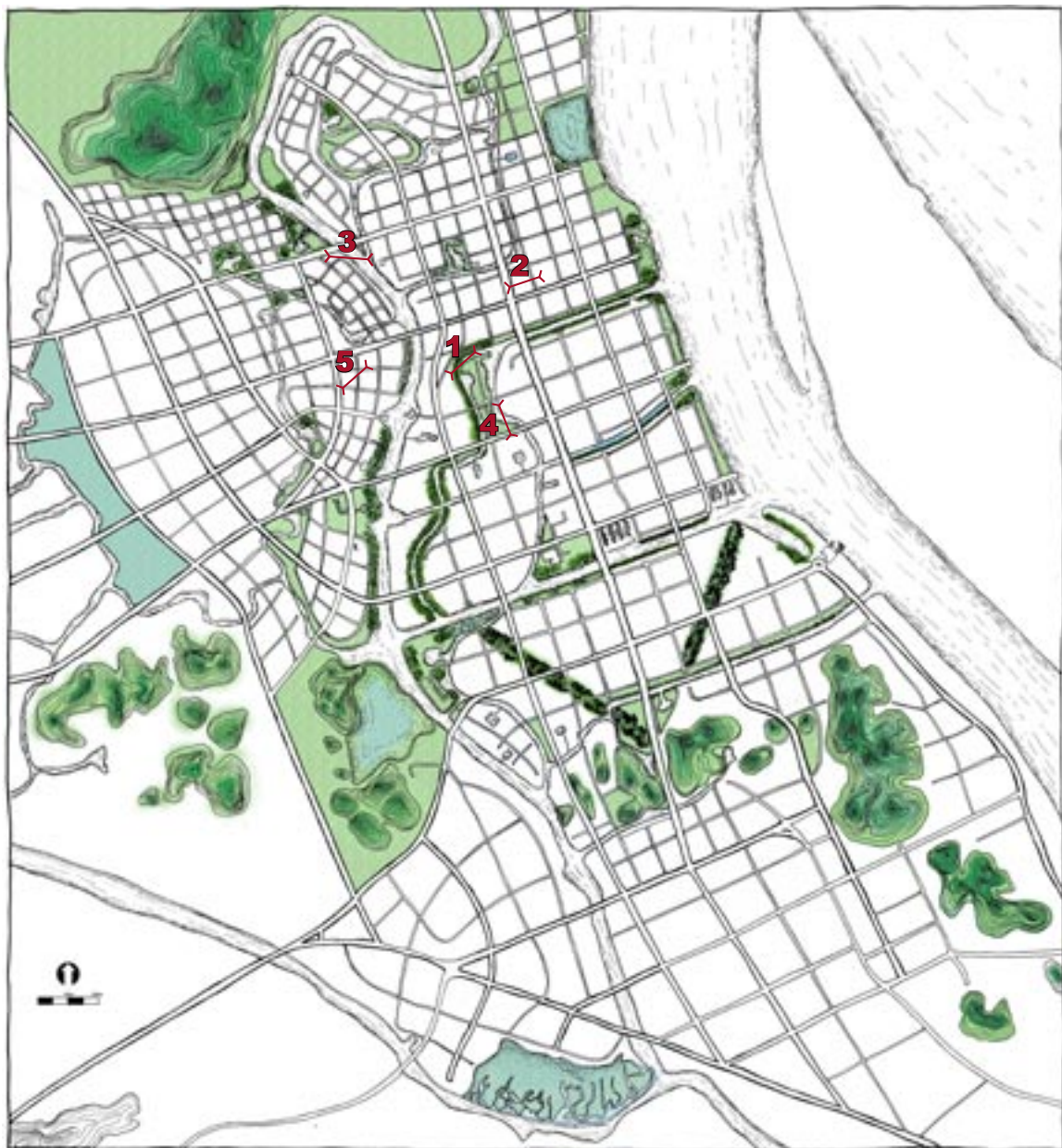


- 5 -
WESTERN CANAL NEIGHBORHOOD
西运河社区

figure 6: Canal Types 图 6 : 河道类型

Green Network

绿色网络



The Green System emphasizes green space along existing canals as well as new green corridors linking major nodes. It connects Gaoming's existing hills into a coordinated network of parks and amenities. Neighborhood wetland ponds, parks and corridors also serve as nodes in the Green System.

绿色网络在强调运河两岸现有的绿地同时，也关注连接主要景点的新绿色通道。它把高明现有的山丘连入衔接到公园和休闲设施网络中。社区湿地池塘、公园和绿色通道也构成绿色网络中的节点。

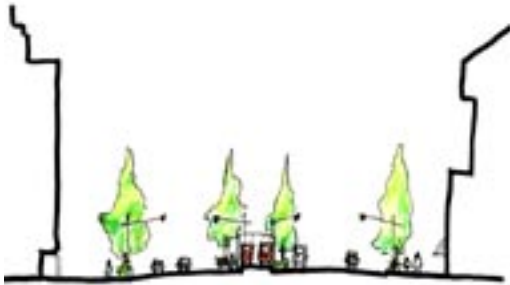
Green Network

绿色网络



- 1 -

GREEN VISUAL CORRIDOR
绿色视觉走廊



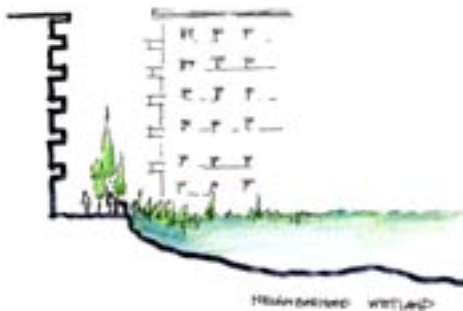
- 2 -

CENTRAL AXIS GREEN
中央绿色轴线



- 3 -

URBAN GREENWAY
都市绿色径



- 4 -

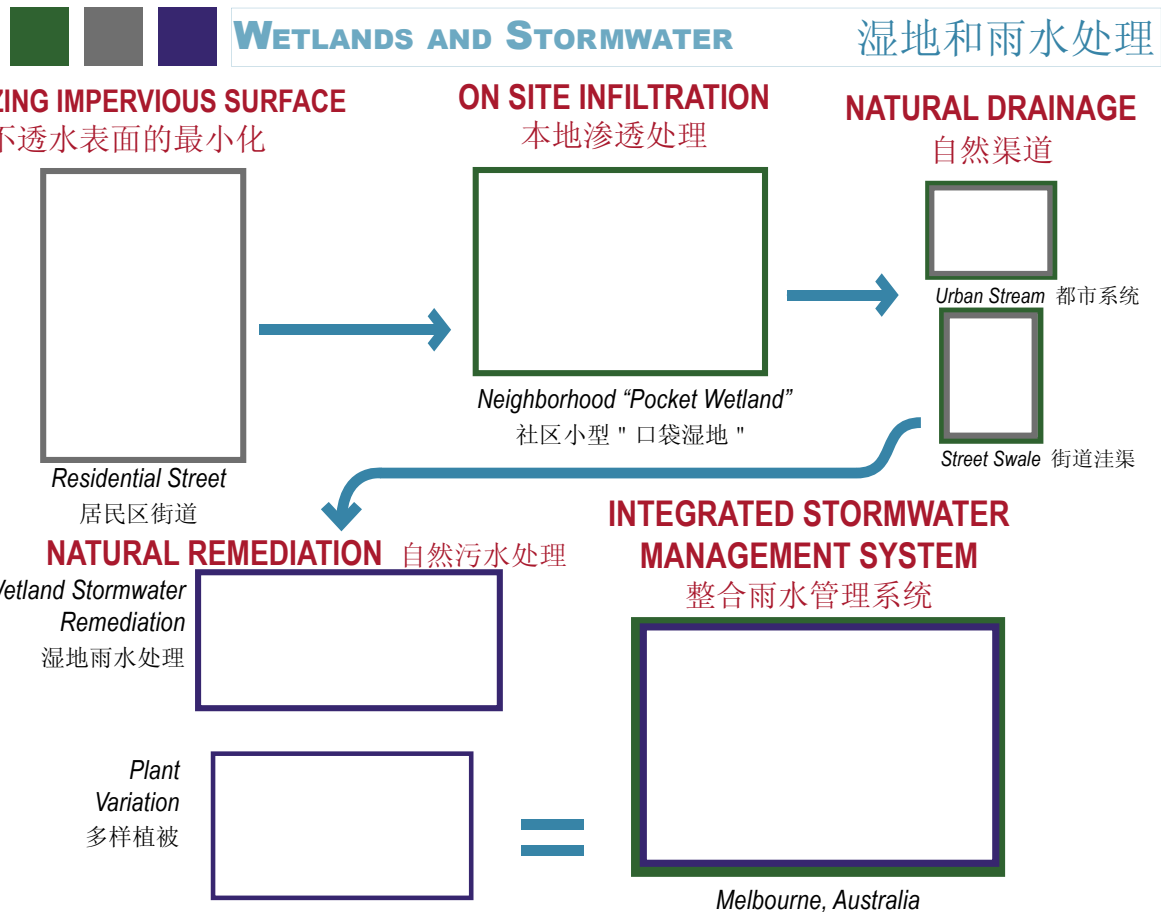
NEIGHBORHOOD CANAL WAY
社区水道



- 5 -

CENTRAL GREEN NODE
中央绿色节点

figure 7: Green Space Types 绿色空间类型



The West River, its clean water, and an extensive canal network make Gaoming a unique place. But with increasing urbanization, stormwater runoff is a potential threat to the water system. Pesticides, automobile-related chemicals and garbage often flow through urban stormsewers, are expensive to clean and can pollute in irreversible ways.

Gaoming now has the very rare and special opportunity to prevent this pollution, to reduce infrastructure costs and to create multiple recreation amenities. In this vision, stormwater management naturally integrates into the Blue, Green and Urban Systems all the way from a rain drop to the river. Management of such a system should include:

1. Minimizing Impervious Surfaces
2. On-site pre-treatment, infiltration and reuse systems
3. Natural drainage and conveyance (swales, stream)
4. Natural Remediation (wetlands)

西江的清水、广阔分布的运河网络是高明的特色。但是随着城市化的扩张，洪水泛滥成为对高明水域的潜在威胁。杀虫剂、汽车释放的化学物质和垃圾经常会随着城市雨水流出，清理这些污染需要很高的费用，并且这些污染物会造成无可挽回的污染。高明现在有很好的机会来防止这种污染，那就是减少基础设施建设费用，建造多功能的休闲场所。这样，洪水处理从降雨到河水就自然而然的融入到蓝色、绿色和城市网络中。对这一网络的处理包括：

1. 不透水表面的最小化
2. 本地要有预先处理、渗透和再利用系统
3. 自然的排水和水流（沼泽地，小溪）
4. 自然的处理措施（湿地）

WATER CULTURE

水文化

Adding onto the wealth of the three physical systems is the historical dimension of the local people. As the local people have inhabited Gaoming for hundreds of years, many aspects of their lives are dearly related to the Gaoming environment and water. Gaoming people use or have used water for food, drink, trade, commuting, entertainment and ceremonial purposes. However, modernization and urbanization have re-shaped their relationship with the water in unprecedented ways. The vision reintroduces this centuries-old relationship with water while continuing to modernize and develop Gaoming yet again in new, unprecedented ways.

除了以上三个硬件网络，当地的民风习俗也是重要的资源财富。高明建城已经有几百年的历史，当地居民生活的方方面面已经和高明的环境和水紧密的联系在一起。高明人利用水，或不得不利用水做耕种粮食、煮食饮用、开展贸易、通勤、娱乐以及举办仪式。然而，现代化和城市化以不可预见的方式重塑了人们与水的关系。这个设想在以崭新的、不可预测的方式继续高明的现代化和发展的同时，重新塑造了几百年来人们与水的古老关系。

PHASING

分阶段发展



Phase I
80,000 People
第一阶段：8 万人



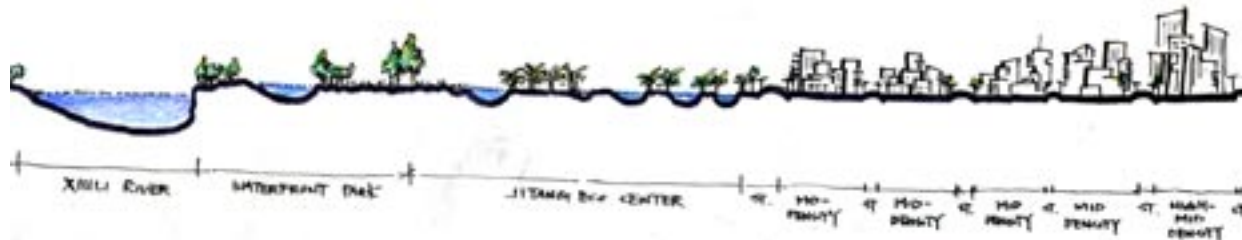
Phase II
150,000 People
第二阶段：15 万人



Phase III
215,000 People
第三阶段：21.5 万人

Axes and Nodes

主轴和节点



CANAL AXIS

It is the cultural axis, highlighting the local people's connection with water. Upon entering the axis from the West River, modern water amenities and a signature statue become the symbols of the modern era of local water culture. A landmark bridge and public walk overlay a waterlock, which protects the canal from the West River. Further along the canal, the boat market reintroduces an historic and cultural event that has ceased to exist. The cultural passage reaches its climax at the Jitang eco center, a small bay, and a constructed wetland congregate. The Gaoming City Hall sits prominently at the head blue and green nexus, at the end of a green visual corridor and in the center of the new city. Building heights step down as they approach the canal to maximize views of the water and surrounding public spaces.

运河主轴

这是一条文化主轴，强调了居民与水的联系。一旦从西江进入轴线，现代的亲水休闲场所和著名雕塑成为当地水文化现代化的标志。标志性的大桥和步行道与水闸交错。水闸保护了运河不受西江的影响。另外，运河沿岸的船市场重现了这个已经消失的历史文化活动。文化通道在基塘生态中心达到高潮。基塘中心是一个小港湾，聚集了很多人工湿地。高明市政府就位于绿色和蓝色网络的交接处，也是一条绿色景观道的尽头和新城的中心。在靠近运河处，建筑的高度有所降低，以便最好展示水景和周围的公共场所。

URBAN AXIS

The urban axis is the main urban center for Gaoming at the confluence of the high-rise commercial strip, civic buildings and the central canal. Economic, civic and cultural role of this area.

都市主轴

都市主轴是高明作为迅速崛起的经济带、市政建设和中心运河交汇处的城市中心，承担着这一地区的经济、市政和文化中心的角色。



Axes and Nodes

主轴和节点

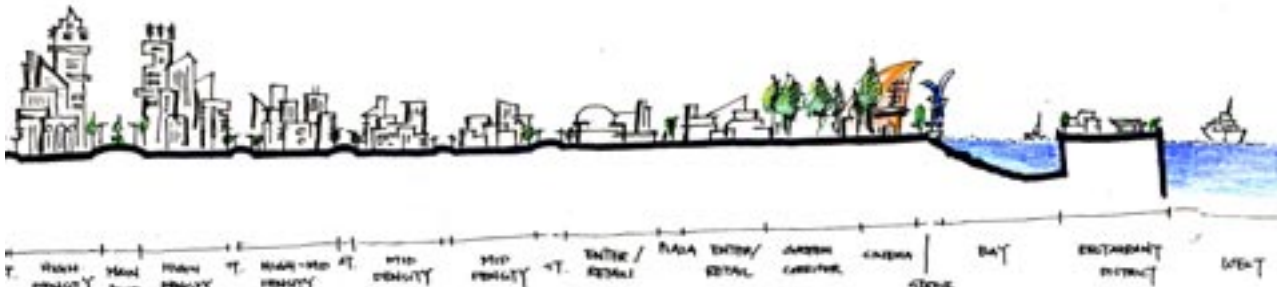


figure 9: Cultural Section 图 9：文化截面



WEST RIVER NODE

The dramatic gateway and conclusion of the cultural axis, this node opens Gaoming to the Pearl River Delta and beyond. An entertainment and cultural center, ferry service and distinctive public art and infrastructure create a strong destination for the people of Gaoming and the entire Delta.

西江节点: 西江是高明重要的门户和文化主轴的端点，这个节点把高明引入珠江三角洲及其他地区。西江作为娱乐、文化中心，拥有渡船服务，独特的民间艺术和良好的基础设施，使得其成为高明市民甚至是整个珠江三角洲人民的向往之地。

在高明规划