

# Beijing 2008

北京奥运



## 北京奥林匹克公园森林公园 及中心区景观规划设计方案征集 International Competition for Landscaping of Forest Park and Central Zone in Olympic Green

北京市规划委员会  
奥运森林公园建设管理委员会  
北京市园林局  
中国建筑工业出版社

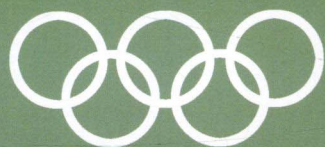
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Olympic Forest Park Construction and Administrative Commission  
Edit: Beijing Landscape Bureau  
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# 前言

北京奥林匹克公园位于北京城市市区北部、城市中轴线的北端，是举办2008年奥运会的核心区域，集中了奥运项目的大部分主要比赛场馆及奥运村、国际广播电视中心等重要设施。奥林匹克公园北部为森林公园，南部为建设区。自2001年北京成功申办奥运会以来，经过国际竞赛及后续的规划设计工作，已陆续确定了奥林匹克公园总体规划及国家主体育场、国家游泳中心等项目的设计方案。

北京城市传统的中轴线贯穿整个奥林匹克公园，在其中形成景观丰富的新城市轴线；在森林公园中，中轴线与山形水系相结合，融入自然。

森林公园将规划建设成为一个以自然山水、植被为主的，可持续发展的生态地带，将作为北京市中心地区与外围边缘集团之间的绿色屏障部分，利于进一步改善城市的环境和气候。在奥运会举办期间，森林公园将成为奥运比赛活动的休息区。

中心区位于城市中轴线上，规划建设成为满足体育、文化、会议、商业等多功能需求的、充满活力的公共活动空间。

北京奥林匹克公园的建成，将完善北部城市功能，提升城市品质，形成新的城市形象，并加快北京向国际化大都市迈进的步伐。

受北京市人民政府的委托，北京市规划委员会、北京市朝阳区人民政府和北京市园林局于2003年7月共同组织了北京奥林匹克公园森林公园及中心区景观规划设计方案征集活动。此次征集活动面向全球范围，公开邀请优秀的、具有丰富的城市规划、景观园林规划和环保工程设计经验的设计公司、设计师事务所或设计联合体参加资格审核。申请参加资格审核的设计申请人或联合体申请人共计51个（包括了91个独立的法人实体），共涉及中国、新加坡、澳大利亚、美国、法国、德国、英国、加拿大、日本、韩国、荷兰、瑞士等12个国家和地区。在公证机构的监督下，通过专家投票选举选出了8个独立的应征人/联合体应征人。

根据征集文件的规定，主办单位邀请了30余名各专业的专家组成方案技术初审工作小组，从总体构想、景观规划、交通规划、市政规划、土方工程、造价运营等方面对所有方案进行了专业技术初审，对征集方案进行了客观的技术统计和分析，为专家评审委员会提供了技术依据。

专家评审工作历时2天，评审委员会由来自4个国家的13名委员组成。其中，国外5名，国内8名，包括规划师、风景园林师、建筑师、经济师、其他设计专家、北京市奥林匹克运动会组织委员会代表、北京市政府代表。评委最终以无记名投票的方式选出A01（易道公司、中国建筑设计研究院）、A02（Sasaki Associates, Inc.、北京清华城市规划设计研究院）、A04（北京土人景观规划设计研究所）3个方案为优秀方案。在方案评审活动结束后，主办单位组织了公开展览，同时也得到了各社会团体、广大市民和国内外友人的强烈反映，收到了许多有益的建议和意见。公众投票结果是A01、A02、A06（北京风景园林协会设计联合体）为优秀方案。

为了保留这一历史记录，对奥林匹克公园森林公园及中心区景观规划设计征集工作有一个全面、详细的介绍。本书节选了一些主要征集文件内容及所有征集方案的优秀设计，呈现给读者。

由于编者水平有限，可能其中有取舍不当之处，敬请谅解，并欢迎提出宝贵意见。

编者  
2003年12月29日

# reface

The Olympic Green located in the north part of Beijing, at the north end of the city's central axis, is the core area for hosting the 2008 Olympic Games. It includes most of the venues for the Olympic Games, and also the Olympic Village and the International Broadcast/TV Center. The north part is the Forest Park, while the south part holds constructions. Since the success of bidding for the Olympic Games in 2001, international competitions and follow-up engineering efforts have resulted in the final master planning of the Olympic Green and the architectural design of such projects as the National Stadium and the National Swimming Center.

The traditional central axis passes through the Olympic Green, where a new axis with colorful landscapes is established and integrated with hills and waters.

The Forest Park is to be developed into a natural landscape and vegetation-based ecological zone for sustainable development, as part of the green defense between the downtown area and the city fringe, to improve the local environment and climate. During the Olympic Games, it will act as the background of sports events.

The Central Zone, which is located along the central axis, is intended to be developed into a multifunctional and robust public space for sports, cultural, convention and commercial activities.

The establishment of the Olympic Green will perfect the function of the north part of Beijing, improve the city quality, create a new city image, and accelerate the pace of turning Beijing into an international metropolis.

To ensure a green landscape with biological, ecological, environmental, architectural, engineering, social and artistic elements during the 2008 Olympic Games, landscape planning of the Forest Park and the arena area in the Olympic Green was implemented as the first priority of our work in 2003. The focus of our soliciting landscape schemes was placed on how to reflect the concept of "Green Olympics, High-tech Olympics, and People's Olympics", create natural hills along the city's traditional central axis, improve the local environmental quality, and provide urban public spaces meeting the citizens' demands for recreation and leisure.

As entrusted by Beijing Municipal Government, soliciting landscape design schemes of the Forest Park and the Central Zone in the Olympic Green was jointly organized by Beijing Municipal Planning Commission, Chaoyang District Government, and Beijing Landscape Bureau, in July 2003, to invite worldwide excellent design companies, firms or joint ventures fully experienced in urban planning, landscape planning, and environmental protection engineering to prequalify for submitting landscape design schemes. Altogether 51 Participants (including 91 independent legal entities) applied for prequalification, involving 12 countries and regions, including China, Singapore, Australia, America, France, Germany, England, Canada, Japan, Korea, Netherlands, and Switzerland. As supervised by the notary public office, 8 Participants were selected by the Jury on the basis of voting.

A Technical Panel of more than 30 experts was established by the Organizer, as required in the Soliciting Documents, to perform preliminary review of the design schemes in respect of the general concept, landscape planning, traffic planning, municipal planning, soil works, construction cost, and operation. The Panel's objective statistics and analysis provided a technical basis for the Jury.

The Jury's assessment lasted for a period of 2 days. The Jury consisted of 13 members from 4 countries, 8 from China and 5 from other countries, including planners, horticulturists, architects, economists, designers, BOCOG representatives, and Beijing Municipal Government representatives. On the basis of assessment, the Jury selected 3 excellent schemes: A01 (EDAW Inc. and China Architecture Design & Research Group), A02 (Sasaki Associates, Inc. and Beijing Tsinghua Planning Corporation), A04 (Turen Design Institute). Upon completion of the Jury's assessment, the Organizer exhibited the schemes, which have received strong response from all walks of life both at home and abroad. Also, the Organizer has received valuable recommendations and advice. Public voting resulted in 3 schemes: A01, A02 and A06 (Beijing Park Society, Beijing China Research Center of Landscape Architectural Design and Planning, Beijing Topsense Landscape & Design Co., Ltd., Tianxia Original Color Design Ltd., The Landscape Architecture School of Beijing Forestry University, Mark VanZeumeren, P.Eng.).

To maintain this historical record and to provide an all-round introduction of the soliciting, some main parts of the Soliciting Documents and all of the excellent design schemes are herein respectfully presented to our readers.

There is probably wrong choice due to our limited horizon. Your kind excuse and valuable advice would be greatly appreciated.

Editor  
December 29, 2003



# CONTENTS

目

录

## CONTENTS

### 前言

Preface

### 奥林匹克公园总体规划方案简介

Introduction of General Planning/Design Schemes of the Olympic Green ..... 6

### 奥林匹克公园森林公园及中心区景观规划设计条件

Conditions for Landscaping of Forest Park and Central Zone in Olympic Green ..... 22

### 奥林匹克公园森林公园及中心区景观规划设计方案征集项目情况介绍会质疑 / 澄清

Soliciting for Landscaping of Forest Park and Central Zone in Olympic Green Inquiry/Clarification about Project Presentation ..... 28

### 奥林匹克公园森林公园及中心区景观规划设计方案

Design Schemes for Landscaping of Forest Park and Central Zone in Olympic Green

(按评审编号排序 Arranged by the Number of Assessment) ..... 36

# CONTENTS



■ A01	易道公司 EDAW Inc. 中国建筑建筑设计研究院 China Architecture Design & Research Group . . . . .	36
■ A02	Sasaki Associates, Inc. 北京清华城市规划设计研究院 Beijing Tsinghua Planning Corporation . . . . .	68
■ A03	北京市城市规划设计研究院 Beijing Municipal Institute of City Planning & Design 美国欧林景观建筑及城市设计股份有限公司 Olin Partnership Ltd. . . . .	100
■ A04	北京土人景观规划设计研究所 Turen Design Institute . . . . .	126
■ A05	瑞驰·汉格及合作者公司 Rich Haag & Associates 艾斯弧(杭州)建筑规划设计咨询公司 XWHO (Hangzhou) Inc. . . . .	158
■ A06	北京风景园林协会 Beijing Park Society 北京中国风景园林规划设计研究中心 Beijing China Research Center of Landscape Architectural Design and Planning 北京创新景观园林设计有限责任公司 Beijing Topsense Landscape & Design Co., Ltd. 北京天下原色艺术设计有限责任公司 Tianxia Original Color Design Ltd. 北京林业大学园林学院 The Landscape Architecture School of Beijing Forestry University 加拿大马克·凡泽梅伦公司 Mark VanZeumeren, P.Eng. . . . .	188
■ A07	北京市园林古建筑设计研究院 Beijing Institute of Landscape and Traditional Architectural Design and Research URS 澳大利亚有限责任公司 URS Australia Pty Ltd. . . . .	218
■ 后记	Postscript . . . . .	244

# CONTENTS



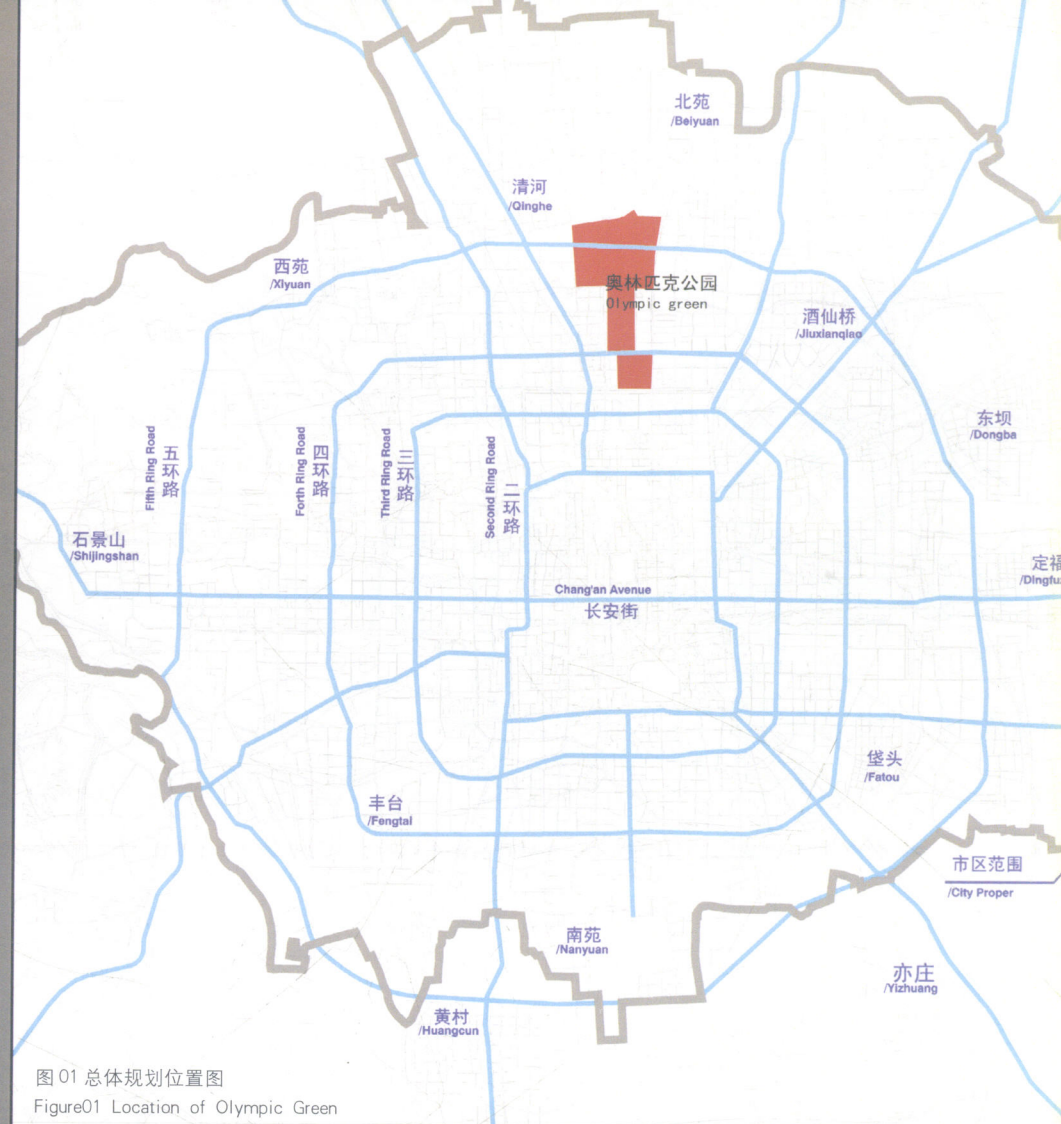


图 01 总体规划位置图  
Figure 01 Location of Olympic Green

# 奥林匹克公园总体规划方案简介

## 奥林匹克公园总体规划方案介绍

### ■ 1. 奥林匹克公园总体规划方案介绍

#### 1.1 功能定位

北京奥林匹克公园位于城市中轴线的北端,是一个充满活力的、市民喜爱的、集体育、文化、展览、休闲、旅游观光为一体的多功能公共活动区域。奥林匹克公园的建成将完善北部城市功能、提升城市品质、形成新的城市形象并加快北京向国际化大都市迈进的步伐。

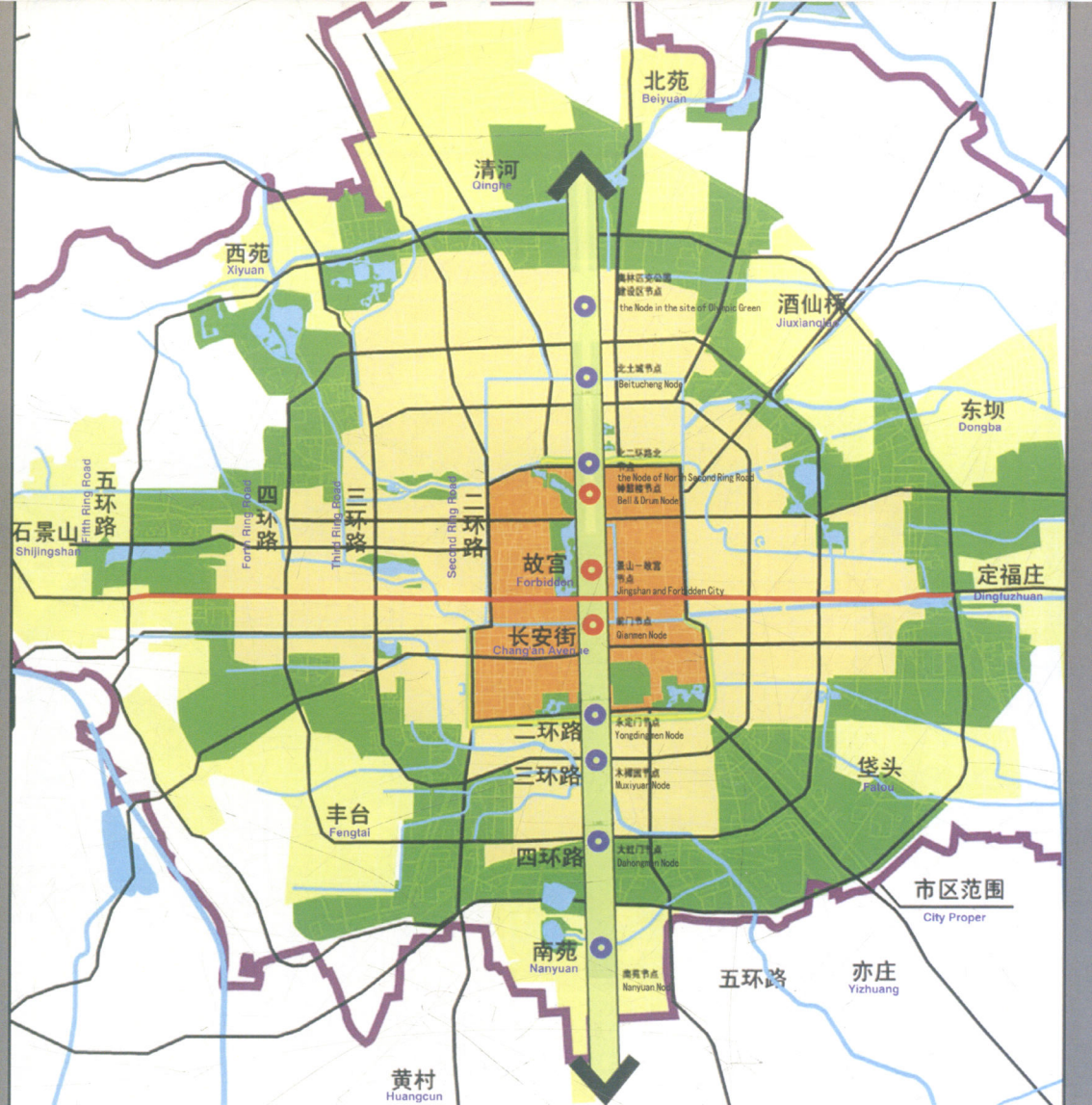
奥林匹克公园是举办 2008 年奥运会的核心区域,集中了 11 项比赛和 10 个场馆,并包括奥运村、国际广播电视中心、主新闻中心等重要设施。奥林匹克公园具有十分鲜明的纪念性,并成为奥运会遗产的标志。

奥林匹克公园的建设将充分利用环保的科技新成果,树立人性化设计的、可持续发展的典范。

#### 1.2 规划指导思想

- 1.2.1 奥运会的建设和城市长远发展相结合。
- 1.2.2 延续北京城市轴线,体现文化内涵和城市建设成就。
- 1.2.3 体现“绿色奥运、科技奥运、人文奥运”的宗旨。
- 1.2.4 考虑远、近期建设结合,预留发展空间。
- 1.2.5 考虑融资和开发运营的可行性。





图例 LEGEND

- 中轴线保护控制范围 Controlled Protection Area of the Central Axis
- 旧城范围 Area of the Old City of Beijing
- 现状节点 Node of the Existing
- 规划节点 Plan Node

图02 中轴线规划示意图

Figure02 Sketch Map of Central Axis Planning

## INTRODUCTION OF GENERAL PLANNING/DESIGN SCHEMES OF THE OLYMPIC GREEN

### INTRODUCTION OF GENERAL PLANNING/DESIGN SCHEMES

#### 1. Introduction of General Planning Schemes 1.1 Functional Demands

Beijing Olympic Green (referred to as "Olympic Green" hereinafter), located at the north end of the city's central axis, is a robust and popular multifunctional public place for sports, cultural, exhibition, recreational, and sightseeing activities. Its establishment will improve the functions of the north part of the city, increase the qualities of the city, create a new city image, and speed up the pace toward an international metropolis.

The Olympic Green, as the core area for hosting the 2008 Olympic Games, will serve 11 competition events, provide 10 fields of play, and include such important facilities as the Olympic Village, International Broadcast/TV Center, and Main Press Center. It will represent an outstanding sense of souvenir and a legacy of the Olympic Games.

The Olympic Green will be constructed by making full use of up-to-date scientific and technological achievements in the field of environmental protection, to set an example of humanized design and sustainable development.

#### 1.2 Strategies

1.2.1 Combine Olympic-oriented construction with long-term urbanization.

1.2.2 Extend the city central axis, and reflect cultural implications and urban construction achievements.

1.2.3 Reflect the aim of "Green Olympics, High-Tech Olympics, and People's Olympics".

1.2.4 Integrate long-run development with short-run construction, and with space reserved for future development.

1.2.5 Consider the achievability of financing, development, and operation.



# OLYMPIC

## 1.3 总体规划布局 (见图 03 奥林匹克公园总体规划及设计范围图)

### 1.3.1 奥林匹克公园概况

奥林匹克公园总用地约 1135hm<sup>2</sup>, 其中森林公园 680hm<sup>2</sup>、中心区 (北四环以北) 291hm<sup>2</sup>, 现状国家奥林匹克体育中心用地及南部预留地 114hm<sup>2</sup>, 中华民族园及部分北中轴用地 50hm<sup>2</sup>。

### 1.3.2 森林公园

森林公园位于奥运中心区北部, 目前已形成较大面积的绿化。规划将尽量保留现有绿化和水面, 利用工程建设的土方, 堆山理水, 创造景观。公园内将以自然山形水系为骨架, 以常绿、落叶乔木组成的林地为基础, 植被丰富, 环境优美, 生态良好, 构成奥林匹克公园的绿色背景, 充分体现“绿色奥运”的宗旨。

以水体为主要元素的龙形景观, 丰富了公园景色, 调节周边气候。通过湿地的设置, 保证水面具备一定程度的自洁能力, 为多种生物提供适宜的生存条件。水系逶迤向南, 将森林公园美景引入奥运中心区。

### 1.3.3 中心区主要建筑布局如下 (见图 04 中心区主要建筑功能布局图)

中心区主要包括体育设施、文化设施、会议设施和商业服务设施。

1.3.3.1 体育设施包括国家体育场 (26 万 m<sup>2</sup>)、国家游泳中心 (7.95 万 m<sup>2</sup>)、国家体育馆 (约 10.3 万 m<sup>2</sup>), 体育设施靠近北四环、分居于中轴线两侧, 形成向南开敞的空间和较有气势的城市形象, 并与南部现有奥体中心呼应。

1.3.3.2 文化设施总建筑面积 (约 37.64 万 m<sup>2</sup>), 位于北辰东路的西侧, 毗邻环境优美的水面和绿化, 将形成北京重要的文化区域。

1.3.3.3 会议设施的定位是国家级大型国际会议中心 (约 33 万 m<sup>2</sup>), 包括多个会议厅、展览厅以及附属办公、酒店等设施, 位于中轴线西侧、国家体育馆北侧。展览厅在奥运会期间将作为比赛场馆, 会议厅赛时用作国际广播电视中心 (IBC) 和主新闻中心 (MPC)。

1.3.3.4 商业服务设施 (约 103.07 万 m<sup>2</sup>), 位于北辰东路的西侧和北辰西路的东侧, 包括商业、酒店、写字楼、娱乐、服务性公寓等内容。

1.3.3.5 奥运村 (约 40 万 m<sup>2</sup>) 位于北辰西路西侧, 北部为森林公园, 赛后将成为一个有可持续发展示范作用的居住社区。赛时奥运村的居住区及国际区所需的临时性设施布置在其北侧的森林公园内。

### 1.3.4 中心区的建筑高度控制 (见图 05 中心区主要建筑高度控制图)

除国家体育场外, 奥林匹克公园建筑高度基本控制在 60m 以下, 中轴线两侧高度为 30m 左右, 延续北京平缓开阔的空间形态, 创造优美的城市环境。

### 1.3.5 中心区地下空间规划 (见图 06、07 中心区公共部分地下空间规划图)

地下空间的综合开发利用将统一考虑, 将停车场及部分商业服务设施放



图 03 奥林匹克公园总体规划及设计范围图

Figure 03 General Layout Olympic Green and Scope of Design



### 1.3 General Layout (refer to Figure 03)

#### 1.3.1 Olympic Green

The Olympic Green has a total plot area of about 1 135hm<sup>2</sup>, including 680hm<sup>2</sup> for the Forest Park, 291hm<sup>2</sup> for the Central Zone, 114hm<sup>2</sup> for the existing Olympic Sports Center and the land reserved in the south, and 50hm<sup>2</sup> for the Chinese Ethnic Cultural Park and Beizhongzhou Road.

#### 1.3.2 Forest Park

The Forest Park is located in the north part of the Central Zone, with a surface area of 680hm<sup>2</sup>, including a major part of established green. It is planned to maintain the existing green and water surface wherever possible, and also create artificial landscapes by making use of soil materials resulting from project construction. Based on natural hills and water systems, a green background of colorful vegetation and beautiful environment will be created by taking forestlands of evergreen and deciduous arbors as the keynote, to fully reflect the aim of "Green Olympics".

ter (79 500 m<sup>2</sup>), and National Gymnasium (about 103 000 m<sup>2</sup>), which are close to the North Fourth Ring Road and on both sides of the central axis. These facilities, while forming an open space toward the south and a majestic urban image, also echo with the existing Olympic Sports Center in the south.

1.3.3.2 Cultural facilities have a total floor area of 376 400 m<sup>2</sup>. These facilities, on the west side of Beichendong Road immediately adjacent waters and green areas in beautiful surroundings, will be an important cultural region of the city.

1.3.3.3 The convention complex is oriented to a nationwide large-scale international convention center (about 330 000 m<sup>2</sup>), including convention halls, exhibition halls, and associated office and hotel facilities on the west side of the central axis and north side of the National Stadium. Exhibition halls will be operated as competition venues during the Olympic Games, while convention halls are used as International Broadcast Center and Main Press Center.

1.3.3.4 Commercial facilities (about 1 030 700 m<sup>2</sup>) are on the west side of Beichendong Road and on the east side of Beichenxi Road, including shopping facilities, hotels, office buildings,

## 奥林匹克公园总体规划方案简介

The dragon-shape landscape in which water is used as the main element will enrich the scenery of the Forest Park and regulate the microclimate. Wetland identified here will ensure water systems of considerable self-purifying capability, thus providing habitats for many species. Water systems winding toward the south will introduce the beauty of the Forest Park into the Central Zone.

1.3.3 Main buildings in Central Zone (refer to Figure 04)

The Central Zone will mainly include sports, cultural, convention, and commercial service facilities.

1.3.3.1 Sports facilities include the National Stadium (260 000 m<sup>2</sup>), National Swimming Cen-

recreation facilities, and commercial apartments.

1.3.3.5 Olympic Village (about 400 000 m<sup>2</sup>) is on the west side of Beichenxi Road, adjacent to the Forest Park in the north. It will turn out to be a residential area as an example of sustainable development after the Olympic Games. Residential areas in the Olympic Village and temporary facilities necessary for the international zone during the Olympic Games are all provided in the Forest Park on the north side.

1.3.4 Limitation of building height in Central Zone (refer to Figure 05)

Except for the National Stadium, buildings in the Olympic Green will be essentially controlled to a height below 60 m, while those on both sides



图 04 中心区主要建筑功能布局图

Figure 04 Function Diagram of Main Buildings in Central Zone

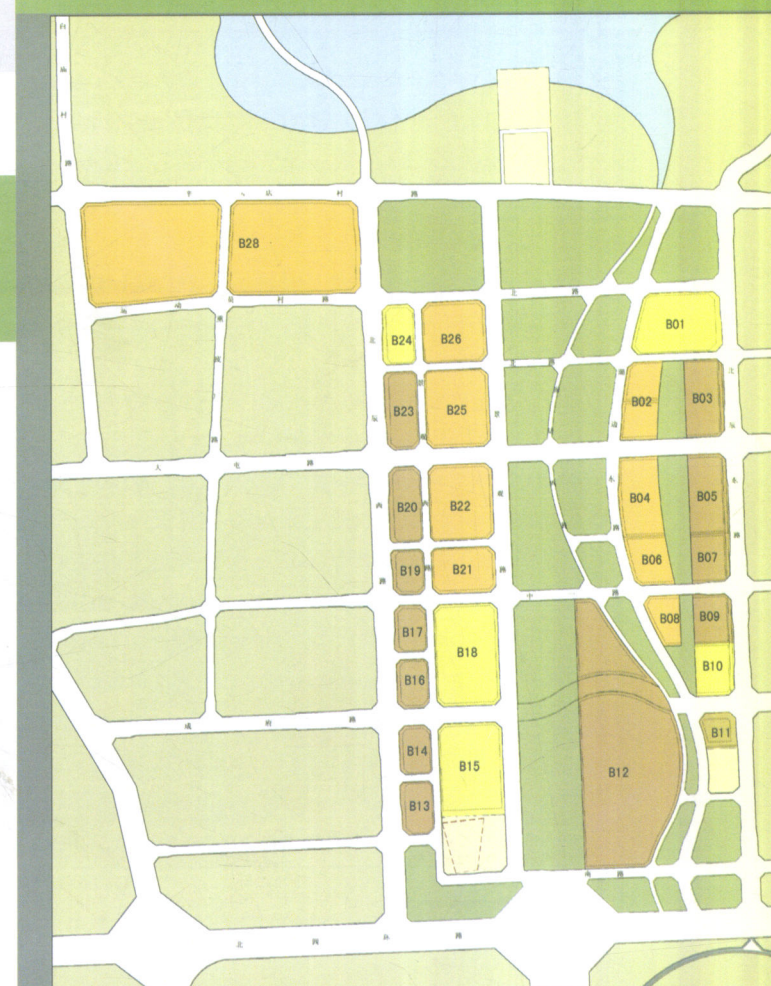


图 05 中心区主要建筑高度控制图

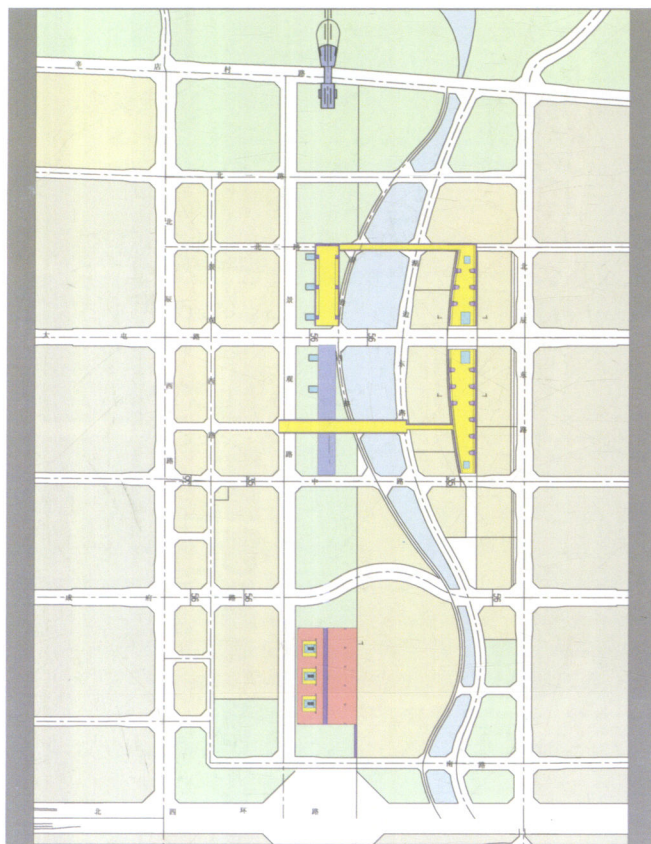
Figure 05 Diagram of Main Building Height Limitations in Central Zone



# OLYMPIC

图06 中心区公共部分地下空间规划图(标高-7.8m)

Figure06 Planning Chart of Underground Public Spaces in Central Zone(Elevation -7.8m)



入地下,以节约有限的地面空间。其中地下停车场采用集中与分散相结合的原则,车库间既相对独立设置,又设有专用公共车道将其相连,使停车设施资源共享。

将地铁站、地下商业设施连通,提高地下空间使用率,增加地下空间赢利的可能性。

奥林匹克公园中心区公共地下空间由四部分组成:

● 地铁商业部分:中轴线广场下中一路与大屯路之间结合地下一层的地铁车站布置,合理利用开挖后的地铁上部空间用作商业空间,此空间以步行商业街开发为主。

● 东侧部分:奥林匹克公园东侧,在商业开发用地与文化设施用地之间步行广场下,规划建设二层地下空间南至中一路,北至北二路,并包括与地铁车站的联系空间,此空间以步行商业街开发为主。以上两部分为中心区地下主要商业空间,总建筑面积约37.73万m<sup>2</sup>。

● 西侧隧道部分:奥林匹克公园西侧景观西路下在地下-13.000m(相对标高),设置联系隧道将景观西路两侧建设用地的地下车库联接成整体,通过信息指示系统,达到资源共享的目的,总建筑面积约3.50万m<sup>2</sup>。

● 国家体育场公共停车库部分:国家体育场西侧,景观路以东,成府路以南,在底下-7.800m(相对标高)设置地下停车库,作为国家体育场的停车场所。约1500辆停车位,总建筑面积约7.08万m<sup>2</sup>。

#### 1.3.6 中心区地下空间及出入口控制

中轴线广场地下出入口:

中轴线广场地下出入口为解决地上与地下的方便联系及地下空间的安全疏散。地下出入口主要位于国家体育场和国家游泳馆之间公共地下车库范围内的三个下沉式广场;会议中心东侧地铁奥林匹克公园站及与其相连的部分商业空间人员进出的三个下沉式广场;发展用地东侧商业空间人员进出的三个下沉式广场。

#### 1.3.7 中心区场地竖向规划条件

中心区竖向高程设计原则:

符合本地区基本地形走势;依据雨水、污水重力流管线控制;依据周边环境控制;中心区的竖向高程成西高东低,南高北低,且坡度平缓(0.1%~0.2%)。

#### 1.4 奥林匹克公园景观规划的总体设想

##### 1.4.1 借鉴旧北京城景观设计理念,与城市整体景

观融合

北京作为世界著名的历史文化名城,其旧城(明清北京城)的规划建设堪称世界都市设计的杰作。旧城以中轴线为中心、东西两侧均衡布局,在中轴线严整序列的两侧穿插了自由活泼的水系,特别是轴线西侧的三海和后海使旧城规整的布局显出生机。城市水系的相互连通和流动,实现了功能与景观的完美结合。

奥林匹克公园的景观设计借鉴了旧城传统的规划手法,由一气呵成的水系贯穿整个公园,在中轴线的东侧和北部形成湖泊,与旧城水系相呼应,使整个城市中轴线成为一个有机的整体。

##### 1.4.2 中轴线独特的空间形态和景观

中轴线是北京旧城最重要的特色,初步形成于元大都时期,经明清两代的发展保留至今。旧城中轴线南起永定门,北至钟鼓楼,长约7.8km,以紫禁城为中心,以景山为制高点,两侧文物建筑众多,空间收放自如,景观变化万千。

奥林匹克公园的规划注重中轴线的历史和文化的延续性,强调了公众性和景观主导性,并预留再创造余地。在北部森林公园内造湖堆山,成为轴线的背景,使中轴线融入自然山水中。

中轴线在中心区内空间形态独特,在建筑完整明确的边界之间,形成三种完全不同的空间和景观:西侧是厚实整齐的林阴道,东侧是自由舒展的水系绿化,中间是独特的中轴线空间序列。

##### 1.4.3 创造公园独特的自然、人文环境

充分考虑北京的水源条件、气候特点以及四季景观的需求,充分利用目前已经形成的绿化及水面,引入水系,形成贯穿整个公园的景观湖面,在扩大水面的同时考虑了营造人工湿地,使未来奥林匹克公园成为生态、环保设计的典范。

保留、保护公园内的历史遗存,包括庙、墓、碑、华表等,将其与公园的景观设计整体考虑,充分发挥文物的历史价值和景观价值,并使其与公园内的景观环境融为一体。

森林公园构成了整个奥运中心区的绿色背景,为市民提供融入自然的休憩场所,增强市民的参与性。



of the central axis are controlled to a height of about 30 m, to continue the gentle and open spatial pattern of Beijing City.

### 1.3.5 Underground spaces in Central Zone (refer to Figures 06 and 07)

Overall consideration will be given to the comprehensive development and utilization of underground spaces, with parking areas and some business service facilities arranged underground to save the limited ground space. Underground parking areas will be arranged on the principle of combining centralization with decentralization, with garages arranged independently and also linked by special public driving lanes, so as to share parking facilities.

Subway stations will be connected with underground business service facilities, to have a higher underground space utilization factor and a higher possibility of making profits.

The underground public space in the Central Zone is composed of 4 components:

\* Subway business component: This component under the central axis square between Zhongyi Road and Datun Road will be arranged in combination with subway stations on basement 1, to make full use of the upper space of excavated subway, mainly for the development of malls.

\* East component: Under the pedestrian plazas between the land for commercial development and that for cultural facilities on the east side of the Olympic Green, two-storied underground spaces will be developed up to Zhongyi Road in the south and Bei'er Road in the north, including the access space for purposes as de-

scribed in Sub-section 1.2.1 above. Such spaces will be mainly used for pedestrian malls. These are the main commercial spaces in the Central Zone, with a total floor area of about 377 300 m<sup>2</sup>.

\* West tunnel component: On the west side of the Olympic Green, an access tunnel will be provided -13 m (relative elevation) underground of Jingguanxi Road, for the underground garages within the plot area on both sides of the road to be linked with each other, so as to share the resources by means of information indication systems. The total floor area here is about 35 000 m<sup>2</sup>.

\* National Stadium parking component: On the west side of the National Stadium, east side of Jingguan Road, and south of Chengfu Road, garages for 1 500 vehicles will be provided -7.8 m (relative elevation) to serve the National Stadium.

### 1.3.6 Control of underground spaces and exits/entries in Central Zone

Underground exits/entries at central axis square:

Underground exits/entries are provided here for easy communication between ground and underground spaces and for safety evacuation from underground spaces. They mainly include 3 sunk plazas in the range of underground public parking areas between the National Stadium and National Gymnasium, 3 sunk plazas at the Olympic Green Station and associated commercial spaces on the east side of the Convention Center, and 3 sunk plazas in the commercial spaces on the east side of land areas reserved for future development.

### 1.3.7 Site engineering conditions in Central Zone

Principle of vertical elevation planning:

To accord with basic topographic trends, control in accordance with gravity-current rain and sewage pipelines, control in light of surrounding circumstances, and make vertical elevations decline from west to east and from south to north at gentle slopes (0.1%~0.2%).

### 1.4 General Concept of Landscape Planning

1.4.1 Reference to the landscape design concept of old Beijing and integrity with the overall landscape

Beijing is a world famous historic and cultural city. Planning and construction of the old city

(Beijing City of the Ming and Qing Dynasties) may be rated as a masterpiece of urban design in the world. The old city is equally distributed on both east and west sides of the central axis spiced with free and vibrant water systems on both sides, especially Sanhai and Houhai on the west side make the neat layout of the old city vivid and vital. Interconnecting and flowing water systems achieve a perfect integrity of function with landscape.

Landscape design of the Olympic Green is developed by referencing to the traditional planning techniques of the old city, with a coherent whole of water systems running through the entirety of the Olympic Green, to form lakes on the east and north sides of the central axis in response to the water systems in the old city, and make the whole central axis an organic integrity.

### 1.4.2 Unique spatial pattern and landscape along central axis

The central axis is the most important characteristic of the old city. Initially formed in the Yuan Dynasty, the central axis developed in the Ming and Qing Dynasties and is still preserved today. With the Forbidden City as its center and Prospect Hill as its commanding point, the central axes extends from Yongding Gate in the south and Bell and Drum Tower in the north, covering a length of about 7.8 km. A lot of buildings with cultural features stand on both sides, offering a variety of spacious and colorful views.

The Olympic Green planning lays stress on the historical and cultural continuity of the central axis and highlights the popularity and landscape predominance, with some margin reserved for further creation. Artificial lakes and hills will be created in the Forest Park in the north, to serve as the background of the central axis and integrate the axis into the natural landscape.

The central axis is of a unique spatial pattern in the Central Zone, with the following 3 totally different spaces and landscapes formed between the complete and definite boundaries of buildings: solid and neat boulevards on the west side, freely-extending water systems and green belts on the east side, and unique space series in the midst.

### 1.4.3 Unique physical and humane environment



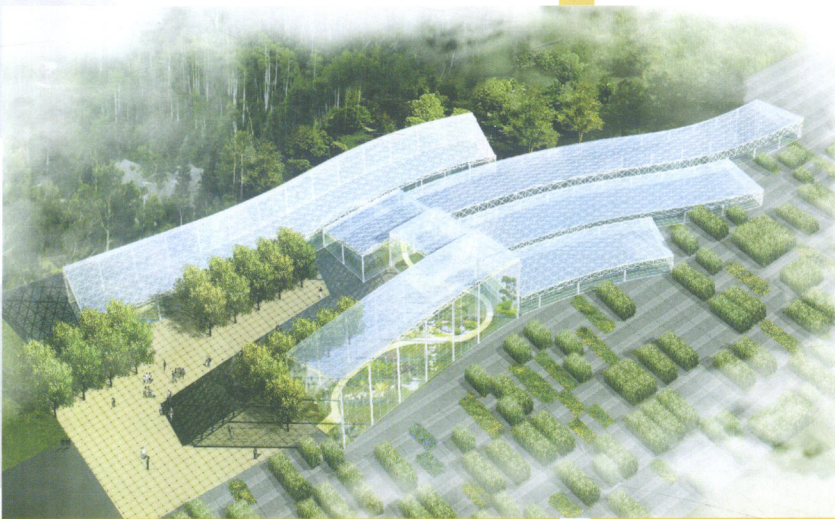


图 07 中心区公共部分地下空间规划图 (标高-13.000m)  
Figure07 Planning Chart of Underground Public Spaces in Central Zone(Elevation-13.000m)

## 2. 周边地区情况

### 2.1 周边地区情况

1990年第11届亚洲运动会的召开,带动了周边地区的建设,主要的公共设施现状有国家奥林匹克体育中心、国际会议中心、酒店、博物馆等,另外相关的交通设施和市政设施也比较完善。亚运会后,经过近十几年的发展,该地区已经成为北京最具吸引力的区域之一。

奥林匹克公园周围土地开发强度较高,东部有亚运村、慧忠里、安慧里和安慧北里、小关北里等居住区,西部有华严里和安翔里等居住区,总建筑量超过 1000 万 m<sup>2</sup>。

城市土地使用情况见下表:

用地性质	用地面积(hm <sup>2</sup> )	所占比例(%)	建筑面积(万 m <sup>2</sup> )	所占比例(%)
行政办公用地	170.52	11.09	131.58	5.98
商业金融用地	199.74	13.00	327.74	14.91
文化娱乐用地	26.72	1.74	31.37	1.43
医疗卫生用地	13.60	0.89	23.60	1.07
教育科研设计用地	156.26	10.17	200.80	9.13
宗教社会福利用地	1.45	0.09	1.95	0.09
水域	33.92	2.21	57.47	2.61
公共绿地	91.15	5.93	138.82	6.31
生产防护绿地	101.16	6.59	132.12	6.01
城市工业用地	14.70	0.96	17.62	0.80
乡镇企业	3.92	0.26	4.73	0.22
一类居住用地	0.49	0.03	0.63	0.03
二类居住用地	425.64	27.71	674.00	30.65
中学、小学、托幼用地	171.09	11.14	272.52	12.39
停车场库用地	9.31	0.61	5.21	0.24
市政公用设施用地	108.80	7.08	157.35	7.16
仓储用地	7.94	0.52	21.16	0.96
总计	1 536.41	100	2 198.77	100

上述用地均位于规划城市建设区内,另外,用地东北方向邻近的绿化隔离地区绿化用地约 715hm<sup>2</sup>。

### 2.2 地质条件

从宏观地质条件分析,奥林匹克公园内的城市建设用地位于地形平坦的河洪冲积沉积区,地质构造条件中等,地质环境条件属简单类型,适于奥运场馆及其他各项设施的建设。

### 2.3 交通条件 (见图 08 奥林匹克公园道路路网规划图)

北京城市中心区骨干路网主要由环路加放射路构成,二环路以内为旧城,四环路以内为主要的城市建设区,四环路与五环路之间规划有绿化隔离地区,奥林匹克公园即位于北四环路以北五环路之间。

目前,奥林匹克公园周边尚无轨道交通线路可达。根据城市总体规划,未来将有五条规划轨道交通线路在奥林匹克公园周边通过,分别为 4 号线、5 号线、8 号线、10 号线和 13 号线(北京市城市铁路),其中 13 号线 2002 年底已竣工,5 号线正在进行试验段建设。规划设想主要利用 8 号线和 10 号线部分线位修建奥运支线到达奥林匹克公园中心区,奥运支线沿地铁 8 号线从奥林匹克公园向南修建到 10 号线,再沿 10 号线向东与 5 号线和 13 号线构成 2 个交叉换乘站。

奥林匹克公园周边有多条高速公路和城市快速路、主次干道等,与其他地区交通联系方便。

从奥林匹克公园所处位置和交通流向来看,主导交通流向为市中心方向,主要的集散道路为八达岭高速路、四环路、五环路、中轴路、安立路等,大屯路、成府路和北土城路为贯穿城市北部地区的东西向城市主次干道,也将承担部分集散交通量。

### 2.4 市政条件

奥林匹克公园四环路以南部分现状市政条件较好,土城北路、北四环路、安立路、中轴路等道路上敷设有各种市政管线。规划新建项目的外部市政条件基本可由上述现状市政管线提供。

奥林匹克公园四环路以北部分,供水、雨水、污水、燃气等具备一定基础条件,有若干现状管线。但需要根据规划新增的建设项目,在供水、供电、供热、供气、排水、信息网络等方面还需规划建设大量新的设施和管线。如新建 220kV 变电站一座和 110kV 变电站两座;敷设综合信息管道;新建独立电信局等。



Adequate consideration is given to the local water sources, climatic characteristics, and landscape demands in all seasons in Beijing, and full use is made of established green belts and water surfaces, with water systems introduced to form waterscape through the whole Olympic Green. The development of artificial wetlands is taken into account while water surfaces are expanded, with high-tech approaches used to set the Olympic Green an example of ecological and environmental design.

Historical heritages such as temples, tombs, tablets, and ornamental columns in the Olympic Green are preserved and protected, and considered together with the landscape design as a whole, to make full use of the historical and landscape value of cultural relics and achieve an integrity with the landscape in the Olympic Green.

The Forest Park constitutes a green background of the whole Central Zone, to provide a

resort for the citizens to integrate themselves into nature, and to provide them with more opportunities of participation.

2. Surroundings

2.1 General

The 11th Asian Games in 1990 aroused development in the surroundings. Major public facilities include the existing Olympic Sports Center, International Convention Center, hotels, and museums. In addition, there exist fairly perfect traffic facilities and public utilities. Since then, this region has become one of the most attractive parts of Beijing over the past decade or so.

There is a high rate of land development around the Olympic Green, including the Asian Sports Village, Huizhongli, Anhuili, Anhuibeili and Xiaoguanbeili residential sites in the east, and Huayanli and Anxiangli residential sites in the west, with a total floor area over 10 million m².

These land uses are all within the range of planned urban construction. In addition, the adjacent green isolation region in the northeast includes some 715 hm² green space.

2.2 Geology

From a macro-geological point of view, the land for urban construction here is located in a fluvial sedimentary region with a flat topography, moderate geological structure, and simple geological environment suitable for the construction of facilities for the Olympic Games and other purposes.

2.3 Traffic (refer to Figure 08 for details)

The backbone road system in the city proper is mainly composed of ring roads and radial ones. The old city is within the Second Ring Road, and the main urbanization area is within the Fourth Ring Road, with green isolation areas between the Fourth Ring Road and the Fifth Ring Road, where the Olympic Green is located.

At present, there is not yet any track traffic line available to the vicinity of the Olympic Green. According to the general planning of Beijing City, however, there will be 5 track traffic lines through the perimeter of the Olympic Green, namely, line Nos. 4, 5, 8, 10, and 13 (urban railways). Among these, line No. 13 was completed in late 2002, and a test section of line No. 5 is under construction. As envisaged in the planning, an Olympic branch accessible to the Central Zone will be built mainly by taking advantage of some sections of line No. 8 and 10. This branch will be extended southward, along subway No. 8, from the Olympic Green to line No. 10, and then eastward to line No. 5 and 13, to form 2 interchange stations (see Figure).

In view of the geographic location and the traffic flow direction of the Olympic Green, the predominant flow direction is the downtown area. Major distributing roads include Badaling Expressway, Fourth Ring Road, Fifth Ring Road, Zhongzhou Road, and Anli Road. Datun Road, Chengfu Road, and Beitucheng Road, as urban main and secondary trunk roads passing through the north part of the city from east to west, will also share the traffic flow.

Land use is tabulated below:

Use	Land Arera(hm²)	%	Floor Area(m²)	%
Administration & office	170.52	11.09	131.58	5.98
Business & banking	199.74	13.00	327.74	14.91
Culture & recreation	26.72	1.74	31.37	1.43
Medical service	13.60	0.89	23.60	1.07
Education ,scientific research & design	156.26	10.17	200.80	9.13
Religion&public services	1.45	0.09	1.95	0.09
Waters	33.92	2.21	57.47	2.61
Public green space	91.15	5.93	138.82	6.31
Protective green space	101.16	6.59	132.12	6.01
Urban industry	14.70	0.96	17.62	0.80
Township enterprise	3.92	0.26	4.73	0.22
Category A residential area	0.49	0.03	0.63	0.03
Category B residential area	425.64	27.71	674.00	30.65
School & kindergarten	171.09	11.14	272.52	12.39
Parking	9.31	0.61	5.21	0.24
Public utility	108.80	7.08	157.35	7.16
Srorehouse	7.94	0.52	21.16	0.96
Total	1 536.41	100	2 198.77	100



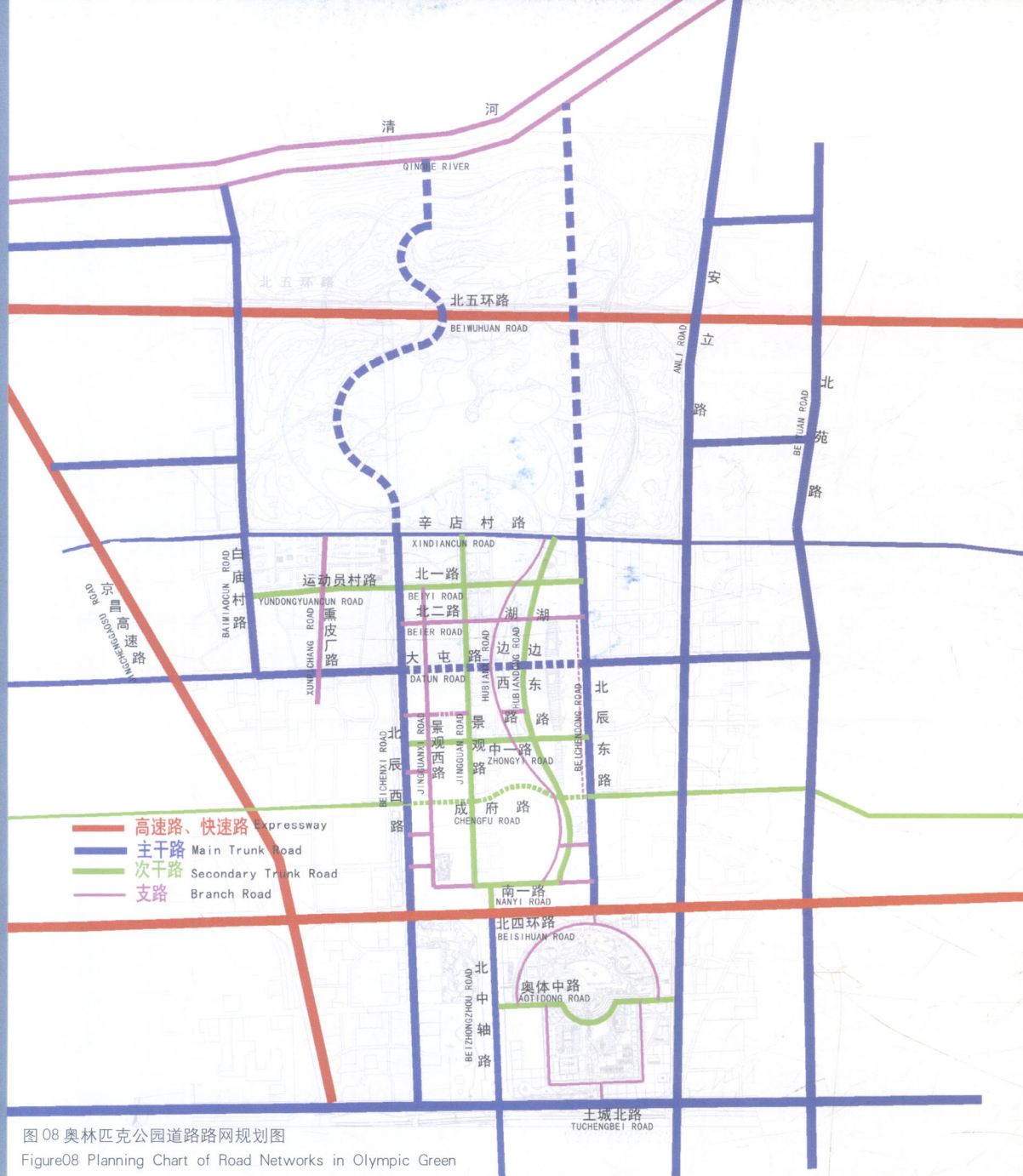


图 08 奥林匹克公园道路路网规划图  
Figure08 Planning Chart of Road Networks in Olympic Green

### ■ 3. 规划设计建筑方案介绍

#### 3.1 国家体育场简介

##### 3.1.1 概况

国家体育场是奥林匹克公园的标志性建筑物之一，是 2008 年北京奥运会的主体育场，将承担开闭幕式和田径比赛，赛后可用于各种国际水平的田径、足球及其他表演活动。它位于中心区中轴线东侧、龙形景观水系的西侧。同国家游泳中心、国家体育馆分列于中轴线两侧。

在奥林匹克公园总体规划方案确定后，2002 年底，北京市政府启动了国家体育场（2008 年奥运会主体育场）建筑概念设计竞赛工作。瑞士 Herzog & De Meuron 建筑设计公司和中国建筑设计研究院合作的方案被选定为实施方案。国家体育场基地占地面积：约 300m × 260m，并附带

一个 400m 跑道的永久性热身场地，总建筑面积约 26 万 m<sup>2</sup>，永久坐席 8 万人，临时坐席 2 万人，屋面部分可开启，建筑高度约 68m。该方案的设计深化工作正在进行。工程项目计划于 2003 年年底开工。

##### 3.1.2 设计特点

体育场好像一个巨大的容器，建筑形体单纯完整，结构构件组成建筑外观。国家体育场主要结构由巨大的门式钢桁架沿椭圆辐射状旋转形成主受力体系，中间沿传力路径填充次级构造钢架，将看似无序的框架纳入严谨的受力体系中，结构功能与建筑外观统一，秩序蕴涵着变化。

屋面和部分构架单元之间以 ETFE 充气膜填充。进入体育场的界面为开敞式设计，不设立封闭的实墙，空间开

## 奥林匹克公园总体规划方案简介



# INTRODUCTION OF GENERAL PLANNING/DESIGN SCHEMES OF THE OLYMPIC GREEN

## 2.4 Public Utilities

There are favorable public utilities south of the Fourth Ring Road in Olympic Green, with various types of municipal pipelines laid along Tuchengbei Road, North Fourth Ring Road, Anli Road, and Zhongzhou Road. Proposed external public utilities can be satisfied essentially by these existing pipelines.

There exist some water supply, rain, sewage, and gas infrastructures in the north of the Fourth Ring Road, with sewer pipelines available there. However, large numbers of water supply, power supply, heat supply, gas supply, drainage, and information service facilities and pipelines will be provided according to the demands of proposed new projects, e.g., a 220kV substation and two 110kV substations, integrated information pipes, and an independent telecommunication office, etc.

## ■ 3. Introduction of Architectural Schemes

### 3.1 National Stadium

#### 3.1.1 General

The National Stadium is one of the landmarks in the Olympic Green. As the main stadium for the 2008 Olympic Games, it will witness the opening and closing ceremonies, track and field events, as well as various international track and field events, football matches, and other entertainments after the Olympic Games. It is on the

east side of the central axis through the Central Zone and both sides of the dragon-shape water system. The National Stadium, National Swimming Center, and National Gymnasium are distributed on both sides of the central axis.

With the general planning of the Olympic Green determined, competition for the architectural concept design of the National Stadium was initiated by the Beijing Municipal Government in late 2002. The scheme jointly developed by Herzog & De Meuron (Swiss) and the China Architectural Design Institute is determined as the implementation scheme. The National Stadium has a plot area of about 300m x 260 m, and additionally a permanent warm-up field with 400 m lanes, with a total floor area of some 260 000 m<sup>2</sup>, a total capacity of 80 000 permanent seats plus 20 000 temporary ones, a partly retractable roof, and a building height of about 68 m. In-depth design is being carried out. The project is scheduled to be started by the end of 2003.

#### 3.1.2 Design characteristics

The National Stadium looks like a huge container. The architectural shape is pure and complete, with architectural appearance constituted by structural components. The main structure is composed of huge gate-type steel frames rotating around an oval in the radial direction, to form the main bearing system. Sec-



# 奥林匹克公园总体规划方案简介

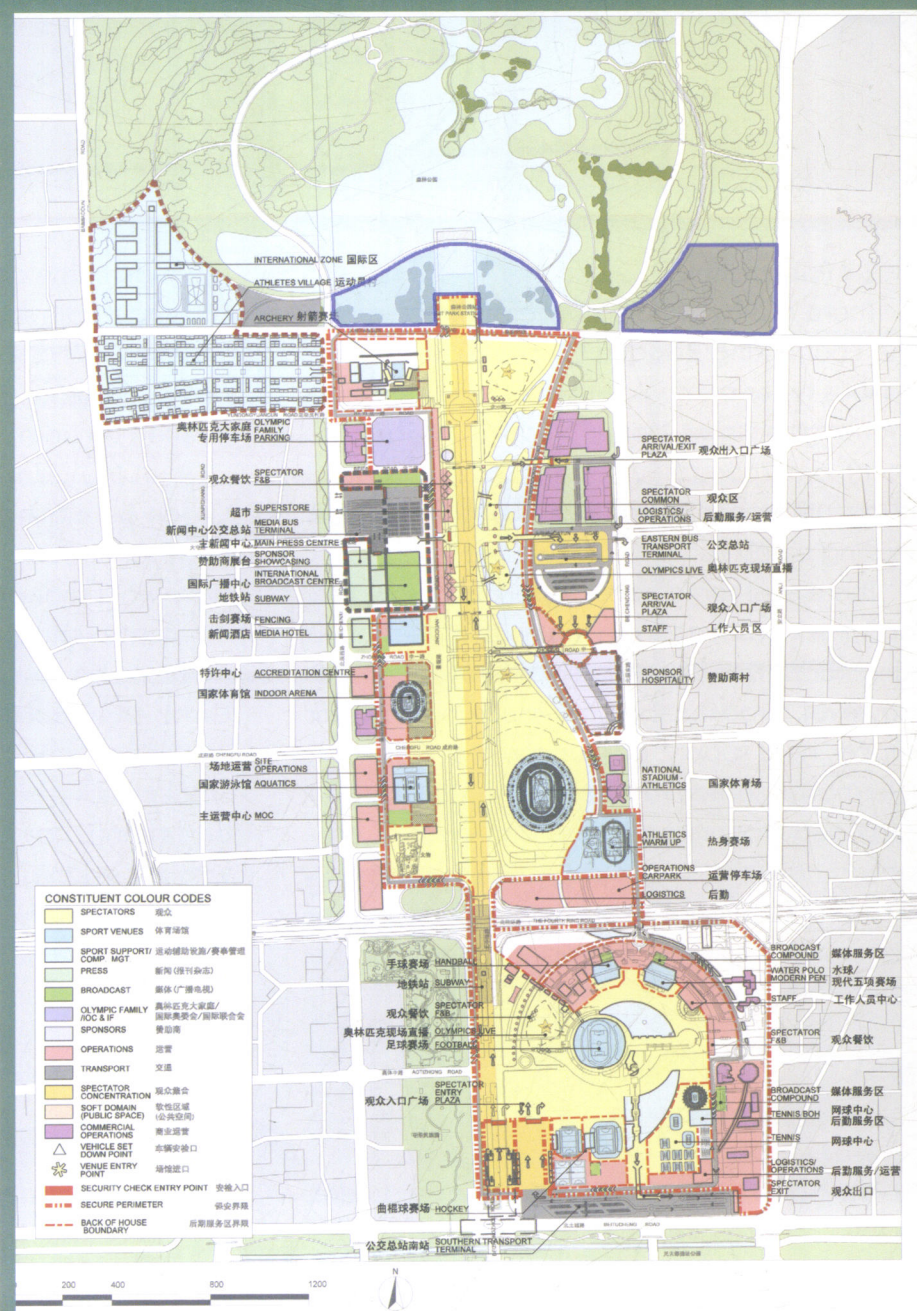


图9 奥林匹克公园赛时组织示意图  
Figure09 Conceptual Operational Plan of Olympic Green during the Olympic Games

放,并确保最大限度的自然通风。

设计者将体育场外部地面缓缓隆起约4m,形成体育场地的基座,基座下方的空间可根据运营的需要灵活安排各种体育比赛需要的设施或商业运营空间。观众可直接进入体育场中部看台。室外地面刻有十二生肖图案,划分出体育场的不同入口区域。

## 3.1.3 功能分区

地下二层为停车库、竞赛用房、体育场附属设施。竞赛场地在此层。

地下一层安排有部分地下商业设施。主体育场通过地下通道或地面天桥,和热身场地相连。

地上一层为入口大厅,高于中心区地平4m。观众由此进入中部看台。

上部各层均位于看台下。各种用房主要满足比赛需要,并可用于赛后经营。

## 3.1.4 奥运会期间的使用要求

奥运会期间,需要在场馆周边部分提供临时性赛事组织和管理的临时用地,包括官员、贵宾、记者的专用车辆停车场及其他临时设施。这些设施和用地在国家体育场用地范围内解决。

## 3.2 国家游泳馆简介

### 3.2.1 概况

国家游泳中心位于北京奥林匹克公园中心区的南部,是为举办2008年奥运会新建的三大场馆之一,规划建设用地约6.295hm<sup>2</sup>,主体建筑紧邻北京城市中轴线,并与拟建的国家体育场相对于中轴线均衡布置。

国家游泳中心将设计建设成国际先进水平的大型水上运动中心。2008年奥运会期间将作为游泳、跳水、花样游泳、水球等比赛场馆;奥运会赛前及赛后将作为一个多功能的大型水上运动中心,为公众提供大型的多功能水上娱乐、运动、休闲、健身场所,还可举办国际、国内游泳、跳水体育赛事。

通过方案竞赛,中建、PTW、ARUP联合体设计的“水立方”方案被选中作为实施方案。该方案总建筑面积约80000m<sup>2</sup>(地上约50000m<sup>2</sup>,地下约30000m<sup>2</sup>)。奥运会期间坐席总数共计17000个,包括永久坐席6000个,临时坐席11000个建筑高度:约35m,基地占地面积:约34000m<sup>2</sup>。工程项目计划于2003年年底开工。

### 3.2.2 设计特点

建筑师从“水”与“方”这两个概念入手。通过模仿和抽象水泡结构形式,形成国家游泳中心独特的结构体系,并利用ETFE气囊作为建筑外立面材料,形成水泡的肌理,体现体现国家游泳中心作为水上项目的功能特点。设计者利用完整的“方”型同国家体育场“椭圆”外观的呼应关系,形成水与火、放射与内敛的不同性格,同时,

# OLYMPIC