## 城市建设英语

主编: 汤良斌 副主编: 周志杰



URBAN CONSTRUCTION

# 城市建设英语 URBAN CONSTRUCTION

汤良斌 周志杰 周公宁 编

中国地质大学出版社

・(鄂)新登字第 12 号・

### 城市建设英语 汤良斌 主编

出版发行 中国地质大学出版社(武汉市・喻家山・邮政编码 430074)

责任编辑 赵福堂

版面设计 赵福堂

印 刷 中南财大印刷厂

经 销 湖北省新华书店

开本 850×1168 1/32 印张 8.9 字数 250.6 千字 1993 年 4 月第 1 版 1993 年 4 月第 1 次印刷 印数 1-4000 册

#### 前言

本书是为城市建设(城市规划与设计、建筑学、工业与民甲建筑)有关专业的学生和专业人员选编的专业英语教材。

本书共 15 单元,每单元包括课文、阅读材料(A)和阅读材料(B)。课文及阅读材料(A)均附参考译文,课文中每个练习都有答案。阅读材料(B)未附参考译文,仅作为教师为学生布置翻译练习的内容,也可作为自学材料。

本书文章均选自英美原著,文字地道流畅,通俗易懂。

本书亦可作为有关城市建设的广播电视大学、函大、夜大、职大、业大及中等专业学校的学生为进修英语的课本,还可供从事此类专业的管理干部、工程技术人员作为自学科技英语的读本。各类学校的学生可依照自己的水平和需要选学本书中的有关材料。

本书在编写中曾得到武汉建筑高等专科学校建工系胡兴国老师、杨伯明副教授、袁齐家教授的指导,湖北大学外语系邹浩副教授审阅了部分书稿,在此表示感谢。由于编者水平有限,书中不当之处在所难免,衷心欢迎读者批评指正。

编 者 1992年12月

#### **Contents**

Unit 1	(1)
Text:Brief History of Urban Planning(城市规划简史)	
Reading Material (A): The City and Region(城市与 地区)	
Reading Material (B): Planning(规划)	
Unit 2	(14)
Text: Factors Determining Urban Growth Patterns	
(确定城市发展模式的诸因素)	
Reading Material (A):Urban Functions(城市功能)	
Reading Material (B):The Urban Image(城市设想)	
Unit 3	(27)
Text:The Zoning Plan (1)(城市分区规划)	
Reading Material (A): The Zoning Plan (2)(城市分	
区规划)	
Reading Material (B):Zoning(分区制)	
Unit 4	(40)
Text:Zoning Codes(分区法规)	
Reading Material (A):Regional Planning(区域规划)	
Reading Material (B): The Planning Process (规划	
步骤)	
Unit 5	(53)
Text:The Land Use Plan(城市用地规划) ·	
Reading Material (A):The Availability of Land(城	
市用地)	

·		
Reading Material (B): Population Pressures and Deve	elop-	
ment(城市人口拥挤与发展)		
Unit 6	·· (65)	
Text:Opportunities in City Landscape(城市景观之机遇	()	
Reading Material (A): Ecology and Urban Landscape	е	
(生态学与城市景观)		•
Reading Material (B): Green Spaces(绿色空间)		
Unit 7	(77)	4
Text:Urban Design (1)(城市设计)		
Reading Material (A): Urban Design (2)(城市设计)		
Reading Material (B): The Elements of Urban		
Design(城市设计原理)		
Unit 8 ·····	•• (90)	
Text:Research for Urban Design (1)(城市设计研究)		
Reading Material (A): Research for Urban Design		
(2)(城市设计研究)		c
Reading Material (B): Freedoms of Choice in Urban		
Design(城市设计中的自由选择)		
Unit 9	(102)	₩.
Text:Water Supply and Drainage(给水与排水)		
Reading Material (A): Municipal Engineering		
(市政工程)		
Reading Material (B): City Traffic(城市交通)		
Unit 10	(114)	
Text:Architectural Drawing(建筑制图)		
Reading Material (A): Project Drawings		
(建筑工程图纸)		
Reading Material (B): Drawings(图纸)		
Unit 11	(129)	
•		

	Text:Building Types and Design(建筑类型与设计)	
	Reading Material (A): The Design of Manufacturing	
	Buildings(工业厂房设计)	
	Reading Material (B): An Introduction to Design	
	Process(设计过程简介)	
Uni	it 12	(141
	Text: High Density Housing in Shanghai	
	(上海高密度住宅)	
	Reading Material (A): High-Rise Buildings(高层建筑)	
	Reading Material (B): The Development of High-Rise	;
	Buildings(高层建筑的发展)	
Uni	it 13 ·····	(156
	Text: Building Additions Design	
	Aesthetic Aspects (1)(房屋增建设计中的美学)	
	Reading Material (A): Building Additions Design	
	Aesthetic Aspects (2)(房屋增建设计中的美学)	
	Reading Material (B): Internal Finishes and Decor-	
	ations(内部装修与装饰)	
Un	it 14 ······	(173
	Text:Structural Analysis and Design(结构分析与设计)	
	Reading Material (A): Framed Buildings(框架建筑)	
	Reading Material (B): Reinforced Concrete	
	(钢筋混凝土)	
Un	it 15	(186
	Text:Subsoils and Foundations(地基与基础)	
	Reading Material (A): Control of the Construction	
	Process(施工过程中的管理)	
	Reading Material (B): Construction(薩工技术)	
Ap	pendix I: Key to Exercises	(199

Appendix	I :Translation for Reference	(202)
Appendix	III: Vocabulary	(255)
Appendix	IV : Phrases and Expressions	(272)

•

#### Text

#### Brief History of Urban Planning

Present archaeological evidence indicates that man has been living in urban communities for more than 10,000 years<sup>®</sup>, and the earliest cities—dating to the eighth millennium B. C.—bear witness to a more or less conscious attempt to define or plan the physical pattern of their habitat. The earliest cities presently known to archaeologists are the Neolithic cities of Jericho and Catal Huyuk<sup>®</sup>.

Only a part of its estimated 0. 13 km<sup>2</sup> (32 acres) of developed area has been uncovered, but it has been estimated that Catal Huyuk contained as many as 6,000 persons, and that its physical plan followed rather definite "preestablished rules of function, ritual and aesthetics", as evidenced by the prominence of certain geometrical forms, such as straight lines and right angles, and the separations of function in space and other forms of zoning.

Excavations at Jericho have established that occupation began at the site in the Mesolithic period, around 8000 B. C., and continued with several lacunae until the end of the Middle Bronze Age, around 1600 B. C. What should be noted is that as early as 7000 B. C. with the building of permanent houses<sup>®</sup>, security was a major design factor. The town was surrounded by a wall of stone about 6m (20 ft) high, with a moat 8.22m(27 ft) wide and 2.75m (9 ft) deep outside. In addition, there was a stone tower

at least 9m(30 ft) high, also for defense purposes. The walls of Jericho were a monumental public work which is probably the first clear indication of a rather established division of labor. They showed, even at this early stage<sup>®</sup>, the need for cities to provide protection against possible marauders or wandering nomads. Catal Huyuk, on the other hand, seems not to have needed defensive walls.

The Huyuk culture died out around 6000 B. C. and seems not to have had any influence on subsequent developments in the Near East. Jericho, however, (though abandoned at several periods of its long history) provides a continuous record of urban development, through two main Prepottery Neolithic eras, and two Pottery Neolithic periods, and a Proto-Urban period, dated around 3300 B. C., until the Early Bronze Age. Urban development of this period can, however, be best studied in the urban cultures which developed in the middle of the fourth millennium B. C. in the Tigris-Euphrates valley.

In addition to favorable soil conditions and dependable water supply, the region constituted a natural crossroad for trade for the entire surrounding area. Conditions were propitious for advances in many fields and served to increase the development and growth of cities not only in this important region, but also along the valleys of the Nile, Indus, and Yellow River. The mechanization of agriculture and the resulting increase in food production released large numbers of the population to other occupations, and the development of wheeled vehicles facilitated the transport of agricultural and other products from one region to another, giving rise to the emergence of a merchant-trader class<sup>®</sup>. Artisans became highly skilled, a system of weights and

measures was devised, and the first written language was developed, based on virtually thousands of pictorial symbols.

Complexes of monumental building began to appear, with concern for symmetry in the individual buildings, but not in the over-all urban layout. Nonetheless, it is evident that even at this early stage in the evolution of urban centers, many of the important urban elements, such as the circulation system, residential, religious, employment, and administrative areas, were already being fairly well defined as part of the urban layout.

As cities grew larger, the variety of activities in the central core increased, and the scale of the corresponding structures became more impressive. Innovative construction techniques were first developed in connection with these central structures, as was the introduction of streets, boulevards, and open plazas or elevated malls, built to accommodate pedestrian circulation. In relation to them, each technological innovation seemed to pave the way for added changes, and it appears that the mere agglomeration of population with specialized trades was to form the most important basis for the evolution of technology and, perhaps even more important, the refinement of social organization.

#### New Words

urban ['əːbən]a. 城市的,都市的
archaeological[ˌɑːkiə'lədʒikəl]
a. 考古学的
millennium [mi'leniəm]n. 一千
年,千年期
witness['witnis]n. 证据,证明
archaeologist [ˌɑːkiə'lədʒist]n.

考古学家
neolithic [ˌni:əu'liθik] a. [常作
N-]新石器时代的
ritual['ritjuəl]n. 仪式,宗教仪式
aesthetics[i:s'θetiks]n. 美学
geometrical[dʒiə'metrikəl]a. 几
何图形的

zoning['zəunin]n. 分区,分区制, 一分区规划 Mesolithic [mesə'litik]a. (关 于)中石器时代的 lacunae [lə'kju:ni:](pl)n. 空隙; 空白 moat[mout]n. 护城河,壕,深沟 marauder [mə'ro;də]n. 掠夺者, 枪劫者 nomad['noməd]n. 游牧民中的一 品,流浪者 pottery['potəri]n. 陶器 proto-(构词成分)第一,首要,原始 crossroad ['krosraud] n. 十字路 口,聚会中心地点 propitious [prə'pi]əs]a. 有利的, 适合的 facilitate [fə'siliteit]vt. 使便利, 使容易 artisan[jo:ti'zæn]n. 手工业工人, 手艺人,工匠 virtually['və:tjuəli]adv. 实质上, 实际上,事实上 symmetry['simitri]n. 对称, 匀称 layout['leiaut]n. 布置,安排,设计

evolution[ˌiːvə'lju:ʃən]n. 发展, 演变 circulation [isə:kju'leifən]n. 循 环,环流量 boulevard['bu:liva:d]n. 大马路, 干道 plaza['pla:zə]n. (城市中的)广场, 集市场所 mall[mo:l]n. (供散步的)林荫路 agglomeration [ə,glomə'reifən] n. 成团,凝聚 refinement[ri'fainmənt]n. 细致 的改进,精心的安排 Jericho['dʒerikəu]耶利哥(西亚 死海以北的古城) Catal Huyuk['ka:tl'hju:k]卡塔· 休尤克(城) Tigris[,taigris](the~)底格里斯 河(亚洲) Euphrates [ju:'freiti:z]幼发拉底 河(亚洲) Nile[nail]尼罗河(非洲) Indus ['indəs](the ~)印度河(亚

#### Phrases and Expressions

洲)

Yellow River 黄河

urban planning 城市规划 bear witness (to) 证明,作证 right angles 直角 the Middle Bronze Age 青铜时 代中期 be propitious for 有利的,适合的 give rise to 引起,使发生 over-all urban layout 城市整体 设计

in connection with 关于
in relation to 与…有关,关于
pave the way for (to) 为…铺平
道路

#### Notes

- 1. …that man has been living in urban communities for more than 10,000 years,…:该句为现在完成进行时,表示从过去某一时刻 开始并延续到现在一直进行的动作。
- 2. Catal Huyuk: the city located in present day— Turkey was only discovered in 1960, and still is in process of excavation.
- 3. What should be noted is that…:代词 what 引起主语从句,在从句中作主语。可译为"我们应该要注意的是…"。
- 4. ···, even at this early stage, ····; 该部分前后用逗号分开,表示补充说明。
- 5. to have had any influence on :to have had 是动词不定式 to have 的完成时,其动作发生在谓语动词的动作之前。
- 6. ···giving rise to the emergence of a merchant trader class:现在分词短语,作状语,表示结果。

#### Exercises

- I . Indicate whether the following statements are true or false according to the text.
- 1. The earlist cities—dating to the eight millennium B. C—bear witness to an existence of human being.
- In building permanent houses people at Jericho thought of comfort and aesthetics as a major design factor instead of security.
- 3. Although the Huyuk culture died out around 6000 B. C., it

- seems to have had a big effect on subsequent developments in the Near East.
- 4. The development of wheeled vehicles made it easy to transport agricultural and other products from one region to another.
- 5. Complexes of monumental building paid great attention to symmetry in the individual buildings instead of symmetry in the over-all urban layout.
- 6. It appears that the mere agglomeration of population with specialized trades was to lay a solid foundation not only for the evolution of technology but for the refinement of social organization.
- I. Choose the word which is the nearest in meaning to the one in italics.
- 1. liang Han University is a municipal university.

A. rural B. coutry C. urban

2. These bad conditions have given rise to a lot of crime.

A. caused B. produced C. made

3. Please come around eight

A. for B. about C. over

4. Seven days constitute a week.

A. consist B. combine C. compose

5. He earns \$1,500 in addition to his salary.

A. as well as B. except for C. besides to

6. As cities grew larger, the scale of the corresponding structures became more impressive.

A. fitting B. matching C. adjacent

#### Reading Material (A)

#### The City and Region

A city is a large and densely populated center of economic, social, and political activity, having a relatively fixed geographic position and specific governmental powers granted to it in charter form by the state<sup>®</sup>. It is the center of an urban culture.

Our cities can be only as good as enlightened public opinion permits or demands them to be. This education and persuasion toward civic action and progress is an often neglected phase in contemporary urban planning.

The form of a city will be, at best, the studied expression of its varied functions organized harmoniously in time, in nature, and in space. A good city plan must express our times, our technology, and our ideals. It must be an adaptable organic entity, with its roots in the past and its orientation to the future.

The urban nodes should be as compact as possible and should function as the nerve ganglia of the city and its region. Here are to be found the major governmental and business centers, offices, department stores, theaters, the opera, the symphony, the museums, and cathedrals. Many large areas of high population density cannot in the fullest sense be called cities because they lack many of the essential urban characteristics.

The city must be a growing, functioning organism, requiring and capable of providing light, air, water, food, circulation, elimination of waste, and regeneration, or else it will decay and die. It must have workable social, economic, and political struc-

ture, expressed in three-dimensional form. Desirable environmental features of the city include:

- The most of those high qualities that civilization has attributed to urbanity; the least of those evils that the ages have condemned;
- 2. Order, efficiency, beauty, and a milieu conducive to the development of full human powers<sup>®</sup>;
- Significant art forms—architecture, bridges, sculpture, murals, and fountains;
- 4. An expression of the city dweller's gregarious nature—congregating places where people can meet to exchange goods, services, and ideas and such communal spaces as the market place, the shopping mall, the park, the square, and the plaza;
- 5. Separation, by alignment and level, of vehicular accessways and transportation routes;
- 6. Traffic and parking accommodated but made incidental to the higher aspects of city life;
- 7. Coordinated systems of traffic, transit, transportation, parks, and open space;
- 8. An order of movement and nonmovement; planned sequences;
- 9. Provision for pleasurable response to urban stimuli without undue friction or hazard:
- 10. Clean and healthful surroundings;
- 11. Opportunities for privacy;
- 12. Individual freedom within cohesive social organization;
- 13. Human scale, so that city dwellers, workers, and visitors feel themselves in agreeable proportion to what they

see and hear and so that they share a sense of being pleasantly related to the city and thus to the ambient world:

- 14. A highly developed and lucid rapport with the natural landscape forms and features;
- 15. A cohesive and comprehensible metropolitan diagram;
- 16. A Free-flowing and easy transition between urban, suburban, and rural areas.

A region is a large and generally unified, but loosely defined, geographical area that provides the supporting base for one or more centers of population concentration. To simplify the complex problems of regional planning almost to the point of naiveté, it might be proposed that each region should be analyzed and planned for its highest and best use in relation to its projected population and inherent resources.

Planning on a regional basis, whether in terms of geographic, political, social, or economic regions, provides a more comprehensive and effective frame of reference than the consideration of any community, town, city, or county alone.

Regional planning agencies are at best nonpolitical and service-oriented. They provide planning coordination, regional information, and technical assistance to the member jurisdictions. Their primary functions are:

- 1. Data gathering, analysis, storage, and distribution;
- The preparation and updating of a comprehensive regional plan;
- 3. The conduct of studies for various planning elements such as housing, transportation, and open space;
- 4. The provision of liaison with state, federal, and local ju-