

同济大学
建筑设计研究院作品选

2001—2003

Architectural Design and Research Institute
of Tongji University Selected Works 2001-2003

中国建筑工业出版社
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序

——兼为纪念同济大学建筑设计研究院成立45周年而作

继《同济大学建筑设计研究院作品选1998-2000》出版以后，2001年至2003年的又一册作品选问世了。这标志着同济大学建筑设计研究院又迎来了一个硕果累累的丰收季节。设计研究院要我为作品选写个序言，我想到今年适逢设计研究院建院45周年，是喜上加喜，当即应诺，欣然命笔。

同济大学建筑设计研究院自1958年建立以来，从一个主要作为学生的生产实习场所，发展成为一个具有综合性和前瞻性的设计研究院，充满着创业的艰辛，也洋溢着丰收的喜悦，更期待着未来的发展，因此值得我们回顾和总结。我想，设计研究院今天的成功至少有四个方面的要素：

第一、国运昌盛，大兴土木，为工程设计提供了发展的市场机遇。自改革开放以来，特别是1998至2003年的近5年来，国家在水利、铁路、港口、公路包括桥梁方面的基础设施建设投资就不下160000亿元。教育建筑的建设规模也有大的发展，仅新建和改建学生公寓一项就达4800万 m^2 。文化设施建设投入加大，新建和改扩建了一批图书馆、博物馆、科技馆、档案馆、文化馆等。让绝大多数人感受最为直接的是居住条件的改善，5年来城镇居民人均居住面积由22.5 m^2 增加到26.5 m^2 。仅这几例，足可说明土木工程建设市场规模之大是空前的。这一市场为工程设计提供了任务的来源。

第二、学科综合，设备先进，为工程设计提供了有力的技术支撑。同济大学已经恢复成为一所综合性的大学，学科拥有理、工、医、法、经济、管理、哲学、教育等9大门类。工学中的土木工程、建筑学、水利工程、地质资源与地质工程、交通运输工程、环境科学与工程都是优势学科。这些学科拥有3个国家重点实验室，装备了具世界先进水准的风洞实验室和模拟振动台设备。此外还有同建筑相关的声学实验室、环境实验室等。这些优势学科和先进设备为设计院提供了有力的技术支撑。我校设计院成为拥有三个建筑设计综合设计所、以及住宅设计所、浦东分院、市政工程分院、桥梁工程分院、轨道交通与地下工程分院、钢结构分院、岩土勘察分院、环境工程分院、交通运输工程设计所，是一家综合性设计院。学校各种学科的专项技术，成为互相借助和支撑的力量。

第三、中西交流，人才荟萃，为工程设计提供了先进的文化理念。我校的设计院最早是隶属于建筑系的。建筑系成立之初，集中了华东地区的建筑学科精英，他们大都有扎实的中国文化根基，多数曾留学欧美，被戏称为“八国联军”，其实以学术的视角去分析，这正是一种优势。同济大学又处在上海这个中西文化交汇的“万国建筑博览会”大都市，这一背景使建筑设计思想一直处在中西对话之中，互相交融并推动着建筑文化的进步。建筑学科长期以来还形成一种“海纳百川”的胸怀，在选留师资上没有“门户之见”，只要是优秀的人才，不论师出何门、人出何校，都加以重用。这种传统避免了“近亲繁殖”所带来的沉闷，能永葆学术的青春活力。

第四、勤奋学习，精心琢磨，为工程设计提供了优秀的精品方案。设计研究院有勤奋学习的传统，因为早期设计院的建筑师的职务是由教师兼任的双重角色。为了更好地向学生授业，当先生的就得自己先用功学习，就像俗话说：“给人一杯水，得储一桶水”，这就是“博观约取，厚积薄发”的治学精神。这种精神反过来影响作为建筑师的角色，使他们养成了良好的善于琢磨和精益求精的工作态度。改革开放以后，设计院的专职建筑师才逐渐增多起来，因为背靠学校他们仍有在职进修学习的机会，校园里经常邀请国内外专家举行学术讲座，这是一种熏陶，也是一种学习，这种氛围逐渐使青年一代迅速成长起来。据不完全统计，自1986年以来，我校设计院有129个设计获奖。这正应朱熹诗所表达的“问渠哪得清如许，为有源头活水来。”

令人高兴的是这册新的作品选，涉及了文化建筑、办公建筑、教育建筑、宾馆建筑、体育建筑、居住建筑、城市设计与景观、保护与改造等广泛的范围，众多的作品确实有鲜明个性，这是难能可贵的。建筑的创新在特定意义上说就是塑造个性，具有鲜明个性的建筑才有生命力和影响力。因此，我认为在建筑设计创作中必须提倡创新精神。要创新就必须倡导学习和研究，拒绝抄袭与模仿。学习中外一切优秀建筑遗产和建筑理论，研究建筑内在的文化意义和美学涵义。要做到这一点，建筑师切忌急功近利，要有一颗虚静平和之心，去追求创作的更高境界，让更多的创新作品问世。最后，我借用陶渊明诗献给我们的建筑师，作为我们共同追求的境界：“清气澄余滓，杳然天界高”。

党委书记

周家伦

2003年7月18日

Preface

— The 45th Anniversary of the Founding of the Architectural Design and Research Institute of Tongji University

Following publication of the Architectural Design and Research Institute of Tongji University Selected Works 1998-2000 this volume covering the years 2001 to 2003 has now been published. This symbolizes a fruitful season for the Design Institute. The Institute asked me to write a preface for this volume, and it came to me that this year is the 45th anniversary of the Institute, so because of this "double happiness" I agreed immediately and picked up my pen.

Since its foundation 1958 it has turned from a place for students to practice their skills into a comprehensive professional Design Institute. This process has seen both hardship and happiness and now looks towards the future, so it seems worthwhile for us to look back and summarize the past. I believe the success of the Institute today is based on the following four elements:

1. The large-scale construction work of the country provides market opportunity for architectural design. Since the opening of China, especially the period from 1998 to 2003, the government has invested 160,000 billion RMB in construction projects including water conservation, railway works, highways, bridges and harbors. The construction volume of educational architecture has also greatly developed, for example, the volume of newly built and renovated student apartments has reached 48 million square meters. Also, many libraries, museums, science and technology centers, archive centers, and cultural centers have been newly built or renovated. For most people their most direct experience is the improvement in living conditions, for instance, the average per-capita living area for city and town dwellers has increased from 22.5 to 26.5 square meters. These examples sufficiently explain the large-scale construction market, and this market provides the opportunity for architectural design.

2. Comprehensive disciplines and advanced equipment provided powerful support for advance architectural design. Tongji University is now once again a multi-discipline university, with nine disciplines including science, engineering, medicine, law, economics, management, philosophy and education. The fields of civil engineering, architecture, hydrology, geological resources and engineering, transportation engineering, and environmental science and engineering are all dominant. There are three National Key Laboratories including a world-class wind tunnel laboratory and a vibration simulation laboratory. In addition there are also acoustic and environmental laboratories. These dominant disciplines and advanced facilities provide powerful technical support for the Design Institute. The multi-disciplined institute now has three architectural design divisions, a residential building design division, and branches specializing in municipal engineering, bridge engineering, rail transit and underground engineering, steel structures, geo-technical investigations, environmental engineering and transportation engineering and a branch in Pudong. These different technologies and disciplines offer mutual support and a sharing of ideas.

3. The cultural exchanges between China and the West and the gathering together of distinguished people provide advanced cultural ideas in architectural design. The design institute originally belonged to the Department of Architecture. At the foundation of the Department of Architecture it gathered together all of the distinguished people in the field of architecture in the East of China. Most of them had a firm foundation in Chinese culture, and in addition, many had also studied in Europe or the USA. They were known as the "Eight Nations." Actually if we analyze this phenomenon from an academic viewpoint this was a great advantage. Tongji University is located in Shanghai, a metropolis with a vibrant architecture mixing both Chinese and Western styles. This background gives an architectural design philosophy formed by the dialog between Chinese and Western architecture, promoting an advanced architectural culture. In addition the Department of Architecture had a policy of attracting outstanding people, no matter from which university or supervisor. This tradition avoided in-breeding of ideas and maintained academic vitality.

4. Hard work and research provides outstanding architectural design proposals. Hard work has always been a tradition of the Design Institute as the early designers were also teachers, so to teach students better the teachers had to first study hard. This is like a traditional Chinese saying; "to give people a glass of water you have to save a bucket of water." This spirit still influences today's architects, encouraging them to always develop and improve. It is only since the opening up of China that the Design Institute has obtained more full-time architects. With the close relationship with the university they have many opportunities for professional development, and there are many on-campus academic lectures given by domestic and overseas experts. This atmosphere helped the young generation to rapidly mature. According to incomplete statistics the Design Institute has won 129 Design Awards since 1986. This recollects a poem written by Zhu Xi "The clear water in the stream comes from the spring"

I am glad to see this new volume includes cultural, office, education, hotel sports, residential, urban design and landscaping, and preservation and renovation projects. Many of the works have a fresh and bright character. Innovative architecture has a special purpose: to create a clear new vision full of life, vitality and longevity. So I believe the spirit of constantly bringing forth new ideas should be promoted in architectural design, and study and research should be promoted, and imitation must be avoided. To reach this point is not wise for architects to seek solutions quickly, but to have a calm spirit to seek lofty ideals and bring more innovative designs to the world. Finally, I would like to borrow a poem written by Tao Yuanming both for our architects, and for the lofty realms of us all "Fresh air purifies the land and gains the clear heavens"

General Party Secretary of Tongji University

Zhou JiaLun

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文化建筑

Cultural Architecture

- | | |
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| 10 | 温州市会议中心 |
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| 2 | Dongguan International Expo Center |
| 10 | Wenzhou Municipal Conference Center |
| 14 | Dongguan Municipal Library |
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| 32 | Nanhui Cultural and Arts Center |
| 36 | Dongguan Municipal Exhibition Center |
| 40 | Dongguan Science and Technology Hall |
| 42 | Jingdezhen Ceramics Museum |
| 44 | Shanghai Puan Christian Church |

东莞国际会展中心

Dongguan International Expo Center

设计之背景——2000年底东莞市市政府决定投资兴建“东莞国际会展中心”，以迎接2001年10月举行的“第三届中国东莞国际电脑资讯产品博览会”。东莞国际会展中心有三大功能，包括一座主体展览建筑及外部展览空间，一座国际会议中心，一个四星级酒店及货物装卸区、室外停车场。

问题之一：时间因素——要在10个月的时间里，从设计到施工全部完成，时间因素便成了首要限制条件。一切设计思想的形成、设计工作的展开、设计体系的选择都将以此为先决条件。

问题之二：交通组织设计——众所周知，主体展览建筑的成功关键在于妥善安排人流、物流。

问题之三：高大空间的消防设计——常规状态下的消防手段在这里已无法适用，如何疏散人流、如何灭火、如何排烟无疑是一大难题。

设计之策略——针对设计问题展开设计的理性设计方法，是东莞国际会展中心工程设计的基本策略——运用简洁、直接，同时在技术上、时间上可行的方法求解。建造技术与材料的选择很大程度上决定了最终的建筑形态——一种能生动反映出内部功能、结构形式与材料特质的形态。因此，根据展厅的规模而高低错落有致，形体连贯一气的建筑轮廓成为必然。呈腾飞之势的三重飘檐，彰显南方建筑的轻盈飘逸却是显而易见的。地方性乎？民族性乎？也许兼而有之。

Design background

At the end of 2000 the municipal government decided to invest and build an International Expo Center in preparation for the Third China Dongguan International Computer Products Exhibition to be held in October 2001. The expo center has three main areas: a main exhibition building with external exhibition space, an international conference center and a four star hotel, plus a freight handling area and outdoor parking.

Problem One: Time factor

The time factor became the principle limitation in completing the project from design to finished building in just ten months. The forming of design ideas, the development of the design and the choice of design system were all based on this time priority.

Problem Two: Organization of traffic flow

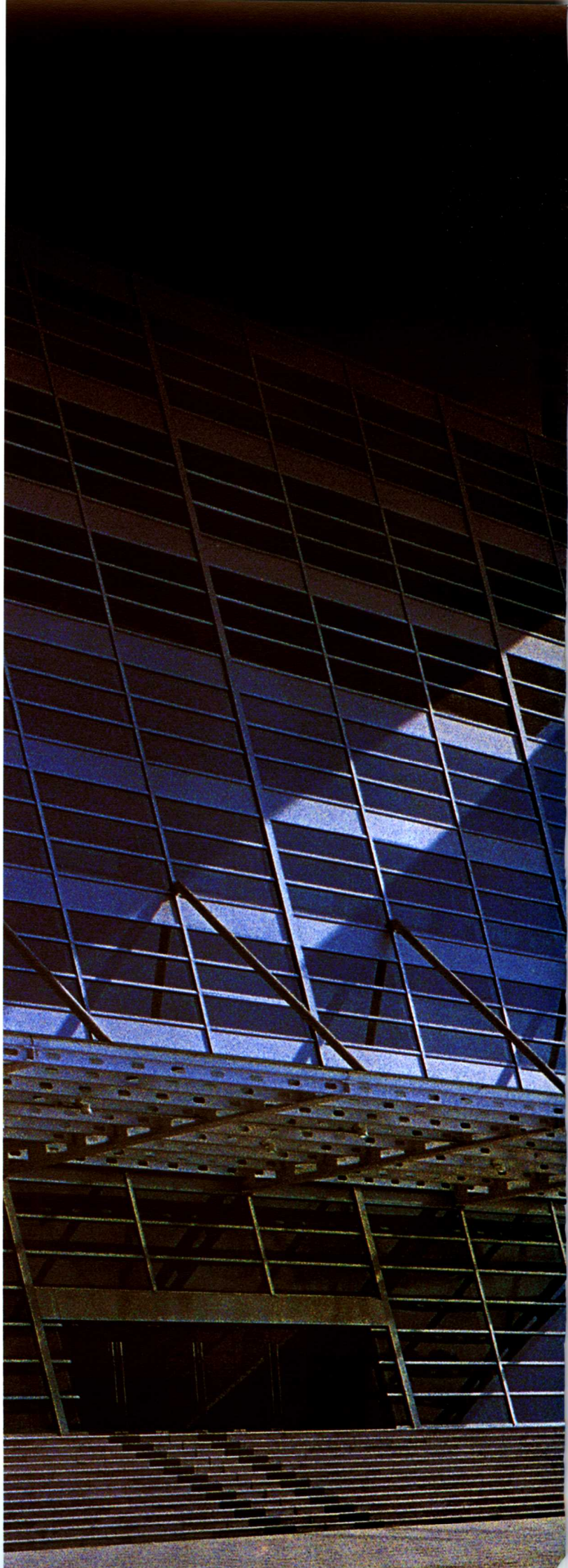
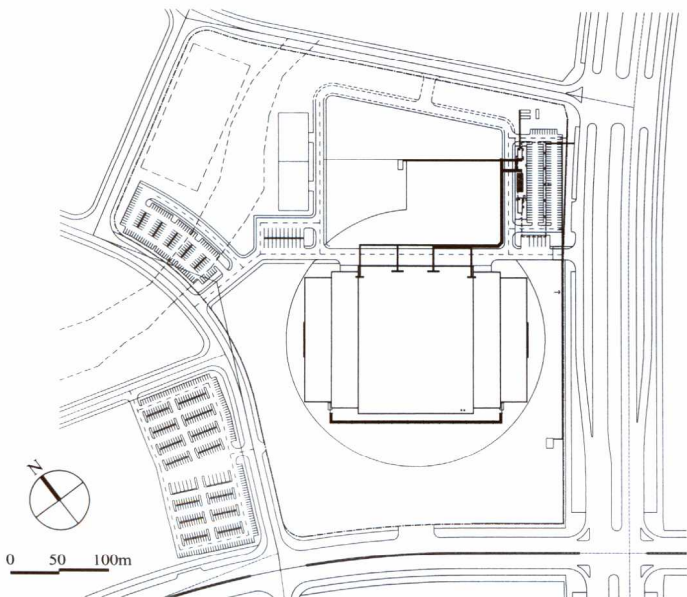
The key point, as was commonly known, for the successful design of the main exhibition building was how to arrange the flow of people and materials.

Problem Three: Fire protection design for very high and large spaces

The normal means of fire protection could not be used, so how to evacuate people, detect fires and extract smoke was a major design problem.

Design strategy

The basic strategy for the design was to use a logical process to address these problems. Simple and direct methods, practical in their use of technology and time were developed. The choice of construction technology and materials decided the final architectural image to a large extent - an image that vigorously reflects the internal functions, structural methods and nature of the materials. These made an architectural outline with varying heights depending on the scale of the halls, become a design necessity. The three cantilevered planes also reflect the light and airy influence of local architectural style.





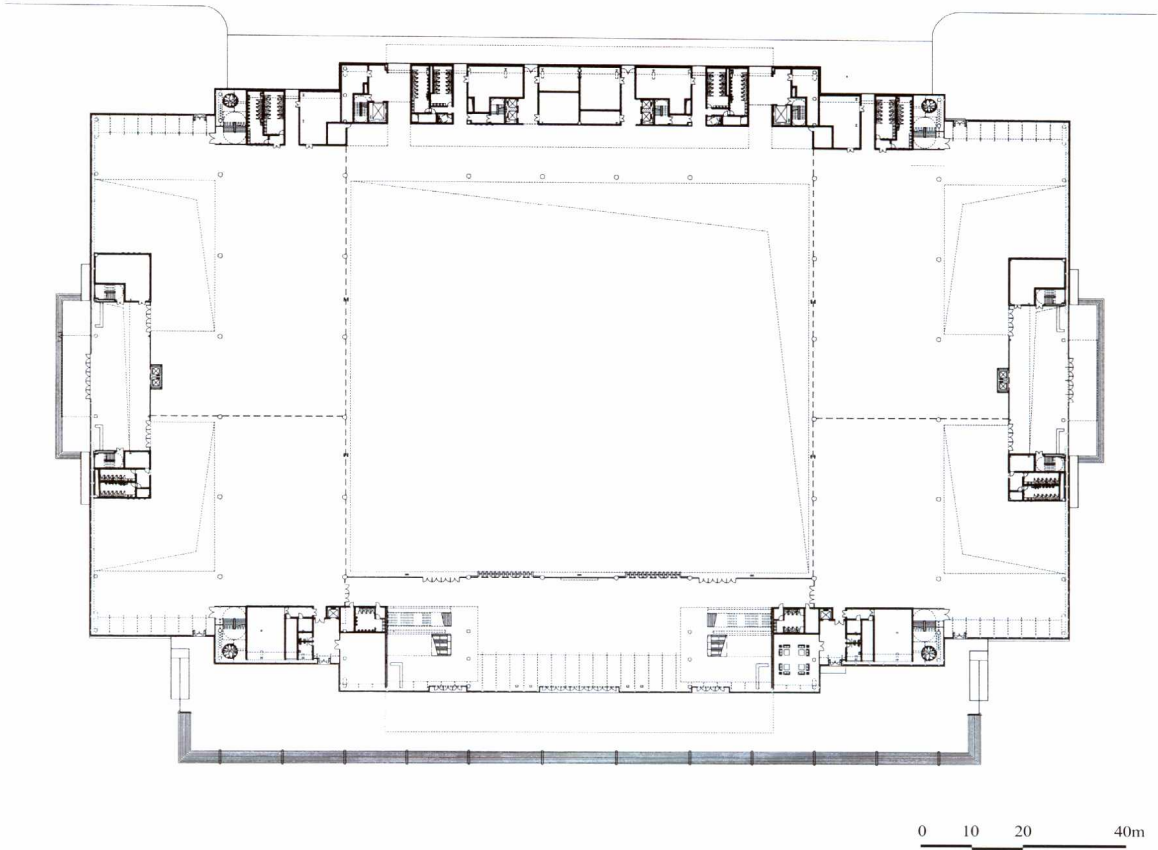




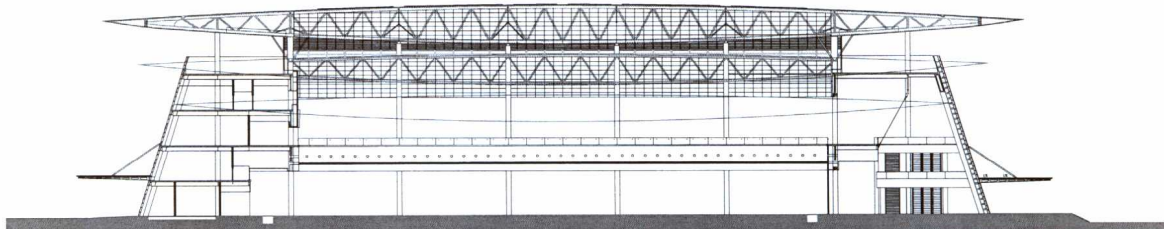




一层平面图



剖面图





温州市会议中心

Wenzhou Municipal Conference Center

温州市会议中心是市行政管理中心的主要会务用房,其功能是满足举行各类规模会议的需要,特别是满足能同时召开温州市人民代表大会和市政协委员会的需要。总建筑面积 25952.5m²。地上四层,局部五层,地下一层。

温州市会议中心采用了圆柱体和带弧形的长方体相结合的建筑造型,寓方中带圆,圆中见方,端庄又不失轻松活泼,比较充分地体现出建筑的性格和温州市在改革开放的进程中,向着现代化迈进的步伐。

设计中,我们把二层平台作为基座来处理,使会议中心坐落在一个坚实的基础之上。整个立面采用强烈的虚实对比手法,南立面以虚为主,使室内空间与室外城市空间融为一体,同时使阳光能充分进入门厅和休息厅。东西立面和北立面基本上以实为主。

The Wenzhou Municipal Conference Center is the main conference facility for the Municipal Administration Center. Its purpose is to satisfy the need for all sizes of meetings, especially the Wenzhou Municipal Peoples Congress and the Wenzhou Municipal Political Consultative Committee Congress. Its total floor area is 25,952m² with four floors above ground, rising to five floors in places, and one floor underground.

An architectural imagery of cylinders and rectangles with arcs is used in the design of Wenzhou Municipal Conference Center, embracing both round with square, and square with round forms. It is dignified but dynamic, fully expressing the character of the building and the progress made by the modern Wenzhou Municipal Government.

The platform on the second floor is used as a base for the design, making the Conference Center sit on a solid foundation. The contrast between void and solid is used for the whole facade. The south elevation is mainly void, making the inside space merge with the outdoor city space as well as allowing sunlight to enter the lobby and seating areas. The east, west and north elevations are mainly solid.

