

Research on the Landscape Space Design of Urban Street Gardens

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Abstract: Today's rapid development of urbanization has made cities present new faces and characteristics. As a part of urban public open space, urban road public green space has become an indispensable leisure activity space for people's daily life and work. The design of street garden green space is the core content of urban public open space design. Good design is easy to form a simple, natural and open landscape. This paper analyzes the current situation and existing problems of the urban street garden green space, summarizes the principles that should be followed in the landscape design, and discusses the design of the street garden green space.

1. Introduction

With the continuous development of China's urbanization process, there are also large-scale undesirable developments in urban construction, resulting in large-density buildings in urban construction, and further deterioration of the environment. In recent years, due to the continuous improvement of people's living standards, this has also caused great changes in people's lifestyles and concepts of life [1]. At the same time, people are becoming more and more aware of urban construction. Development is not only a centre of economic activity, but also an important place for people to live together. Therefore, it is necessary to provide people with a good and complete living and leisure space, and it should also provide a good space for sustainable development for social construction. Nowadays, the society is constantly progressing and developing. With the changes in social customs, needs and people's lifestyles, urban construction has brought certain changes, which also has a certain impact on the landscape style of street green spaces [1]. At the same time, people have put forward a higher and newer concept for the design requirements of gardens and gardens. Just taking greening as the main garden green space design can no longer meet people's ideological needs [2]. Therefore, in the process of designing urban street garden green spaces among them, research has shown that it is necessary to take people as the main design policy, get rid of the flatness of design, build a more humane space, and design based on people's activity needs and feelings as a starting point, so as to create a more satisfactory urban landscape.

2. Urban Street Garden Green Space Concept

Street amusement park green space refers to a small open public green space arranged along urban roads outside the red line of the road. Turntables, gardens, squares, and small street parks are all in the category of street parks. Their main functions are to decorate the streetscape, beautify the city, improve the quality of the urban environment, and provide recreational and entertainment places (political landscape) for tourists and nearby residents [2]. Variety and adapting measures to local conditions are their main characteristics. Convenience, openness and wide distribution are its basic characteristics (traditional landscape).

3. Problems Existing in Urban Street Garden Green Space

3.1 Ignore Landscape Functions and Imperfect Recreational Facilities

The design of urban street park green space can mainly satisfy residents' daily life, rest, study, and communication, but in some street park green space, the rest facilities are not perfect. According to the survey, generally speaking, 58% of the most attractive elements for residents are adequate leisure

seats, 42% of abundant plant species, 40% of communication space, 31% of adequate leisure and fitness equipment, 30% of leisure activities, and 7% of others [2]. From this point of view, the functional design of landscape appears to be particularly important in the design of urban street gardens. Appropriate design of recreational facilities is the first issue to be considered in the design of street park green space.

3.2 Monotonous Plant Configuration and Insufficient Greening

There are few color tree species in the green plant community of urban street gardens, and only a small number of colorful leaf species and a very small number of evergreen species are used. In some places, even all evergreen species are planted, and the planting of ground cover plants and shrubs is disorderly [2]. This will result in insignificant seasonal changes in the plant landscape and the landscape is monotonous. The design generally emphasizes the landscape effect of all seasons. Create a landscape effect with scattered heights, reasonable arrangement of trees and shrubs, and strong levels of hierarchy, creating a brocade-like blossom in spring and a picturesque color-leaved plant landscape in autumn, which will give people a visual impact through large-scale use [3].

3.3 Insufficient Attention to Local Culture and Lack of Regional Cultural Characteristics

Each region has its own history and culture. A certain regional culture has become a unique symbol of the city. Designers should dig out and find elements that can express the characteristics of the city from the various historical cultures of the city and incorporate them into the planning and design of street gardens [4]. Modern urban open green spaces always hope to create a variety of landscape effects during landscape design, such as European-style feng-shui ball landscapes, roman columns, large fountains, etc., only emphasizing the style and elegance of the landscape, but not considering the suitability of the landscape it completely ignores the viewer's feelings and cannot leave any memory to the viewer [4]. Over time, the regional culture will be watered down, and the design without local characteristics will become a work without a spiritual soul.

4. Planning and Design Basis of Green Space in Street Garden

In order to ensure the full play of the role of street garden green space, the site selection and design of the garden is very important.

1) Street park green space should be chosen as far as possible in the centre of the street, close to commercial gathering areas and residential areas. From the design point of view, the planning of street gardens must be in line with the urban planning direction. If this is not done, the role of green spaces in gardens will be greatly reduced, and it will even have a counterproductive effect [3].

2) The design of street gardens should take into account the government's capital investment, and should not blindly pursue tall design effects and greatly increase the design cost [4]. The overall planning and design of the amusement park must reasonably control the funds, make the best use of the material, and ensure that every link in the amusement park design can play a practical role.

3) Reasonable design should be based on the use function of the amusement park. The functions of the street garden green space mainly include greening function, viewing function, resting function, etc. [3]. Therefore, when planning the theme, first ensure that the above three functions are available, and on this basis, optimize and perfect the overall design.

5. Design Principles of Urban Street Garden Green Space

5.1 Emphasize Functionality and Adapt Measures to Local Conditions

As a component of urban public space, street parks and green spaces play an irreplaceable role in improving the use efficiency of urban space, improving the quality of life of the public and reflecting the humanistic care of modern society. Because of its strong openness and concentrated land use, the street garden green space is easy to form an open space for activities [1]. The urban street garden green space is an important place for activities. It can attract people to outdoor activities and promote communication between people and nature [4]. A good environment and recreational facilities are

good places for people to relax and exercise. Therefore, proper consideration should be given to the use of seats, fitness equipment, pavilions and some decorative landscape sketches in the design.

5.2 Ecological

Street park green space is an important place for people to rest and entertain. Providing a certain amount of green space is a problem that must be considered in the design of street park green space. In the design, the relationship between the whole and the part should be grasped. Each small street park green space is an inseparable part of the entire urban green space system. The design should be adapted to local conditions and fully consider the impact of the surrounding environment and the expected effects. So as to determine the special functions of green space and the selection of plant configuration. Follow the “niche” principle and do a good job in plant configuration [2]. In addition, attention should be paid to the use of materials and daily maintenance. Try to use natural materials or degradable and recyclable materials, and give priority to local materials. It is not suitable to use chemical materials that are difficult to degrade and recycle. In short, the ecological principle should emphasize the natural priority principle [5].

5.3 Combination of Diversity and Unity

Appropriate use of design themes is crucial to a design. A good design theme can add a lot of colour to the work. The so-called diversity of design themes refers to the design of a theme for each street garden green area or several street garden green areas in the city, and the design of attractions should try to reflect the design style and design concept of the theme. The design of the scenic spot interprets the connotation of the theme [6]. A successful design case will inevitably combine ecological functions with citizen use, social culture, and artistic style. Each landscape unit of the street garden green space constitutes a whole. The whole design theme should be unified. The unity is mainly reflected in the design that should be able to convey the characteristics of the regional culture and the historical context of the design area, and create a space that can satisfy people's comfort, intimacy, relaxation, pleasure, safety, freedom, and vitality [5].

6. Landscape Space Design of Street Garden Green Space

6.1 Green Terrain Design

As the skeleton of the park, the terrain is fully utilized to make the park a place for people to relax and entertain. When gardening, the original topography and landforms should be properly retained, and measures should be taken according to local conditions to maximize the landscape benefits of the original topography and landforms. The topography of the park is very important to the display of the landscape and the viewing of visitors. Based on the needs of mass cultural and sports activities, the design of urban parks should consider the combination of flat land and sloped land. In order to properly adjust the user's steps and relieve fatigue, the terrain can be properly undulated, or some trails and steps can be set to cushion the perceived fatigue caused by the flat road. At the same time, the topography on both sides of the park road not only satisfies drainage, but also strengthens the road's mobility and sense of direction [6]. Natural sloping ground can be a good place for people to rest and sit still; trapezoidal ground can be set up with ergonomic steps; vertically, comfortable seats can be arranged.

6.2 Amusement Park Water Landscape Design

The water is vivid and dynamic, and it should be dynamic and static, giving people a different experience. The water body can not only form a pleasant climate environment, adjust the humidity and temperature of the air, but also purify the air in the city park. Hydrophilicity is an intuitive manifestation of people's yearning for the natural environment. Appropriate setting of water bodies is an important manifestation of people-oriented urban parks. Safety is the primary consideration in the setting of humanized waterscape [7]. Treat the pool bank and water body into shallow water or deep water with protective measures to ensure the safety of visitors and achieve depth control of the water body and pool bank.

6.3 Design of Green Roads in Amusement Parks

In order to realize the rich spatial experience of visitors in the city park, the design of the park road can also be changed accordingly with the ups and downs of the terrain [7]. The park road can use different materials and different patterns when paving the ground to enrich the landscape colour and match the landscape. Change to achieve the effect of “step-by-step different scenes”. First of all, Roads generally account for 2% to 12% of the total area. In zoos, botanical gardens or small amusement parks, the density of the road network can be slightly larger, but it should not exceed 25%; finally, the garden roads are arranged according to the landscape, so that there are scenery in the process of walking [7]. It is impressive, with a view. The tortuous park road undulates with the topography and scenery, and it is looming, which can enrich the landscape, enhance the level of the landscape, activate the space atmosphere, and enhance the tour route.

7. Summary

Street green space is the product of the development of urban park green space. It has a relatively high distribution density and utilization rate in the city. The integration of design features is the voice of the citizens and the pursuit of landscape design. We should follow the principles of adapting measures to local conditions, ecology, and diversity, and realize the unity of landscape, ecology, and humanity through the expression of specific landscape elements such as topography, water bodies, and roads, so that street green spaces can become attractive urban public spaces.

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