

Analysis of Sustainable Development in Residential Landscape Design

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Abstract:

Construction engineering is a fundamental project for the development of modern economy and society in China. At present, under the background of urbanization, it objectively promotes the development of construction engineering in China, especially driving the methods of residential construction. In the construction of modern residential areas, on the one hand, it is necessary to ensure the quality and safety of residential buildings; On the other hand, it is also necessary to pay attention to the environment of residential areas and do a good job in their environmental design. In practice, it is necessary to analyze and consider the actual situation of residential areas, grasp various factors, and adhere to the basic principle of adapting to local conditions. On this basis, ensuring the sustainable development of residential landscape design is necessary to achieve more ideal residential construction and usage effects, and create a more comfortable living environment for people.

Keywords:

Residential Area, Landscape Design, Sustainable Development, Correlation Analysis

1. Introduction

Landscape design is a very important aspect in the construction of modern residential areas. Through high-quality landscape design, on the one hand, it can create a more high-quality and comfortable living environment. On the other hand, it can also improve the ecology of residential areas and bring people a better living experience. In practice, when carrying out landscape design work in residential areas, it is necessary to always adhere to the basic concept of sustainable development, grasp the actual situation of the residential area, adhere to the principle of adapting to local conditions, coordinate various aspects, and develop targeted landscape design plans for the residential area. Under the guidance of sustainable development concepts, achieving more ideal design effects can also achieve the goal of benign development. [1]

2. Problems in Landscape Design of Residential Areas

2.1. Artificial traces are obvious

Landscape design is a fundamental aspect of residential area construction. By carrying out high-quality landscape design work, it is more conducive to improving the living environment of residential areas, enhancing people's comfort and satisfaction. In recent years, with the continuous development of residential landscape design in China, a more standardized and orderly landscape of residential areas has basically been formed. However, in the process of landscape standardization and mechanized design in residential areas, there have also been too many artificial traces that cannot be integrated with nature, local customs, and other aspects. In this way, on the one hand, it creates monotony in the landscape of residential areas; On the other hand, it is also not conducive to achieving sustainable development goals.

2.2. Neglecting humanistic culture

The development of environmental concepts in residential landscape design in China has been relatively slow. At the same time, from the perspective of some developers, there is also a problem of profit driven development. In order to reduce labor costs in residential landscape design and construction, they often choose designers with low professional qualifications, which leads to many problems in the actual process of residential landscape design. For example, in the actual implementation of residential landscape design, it is often susceptible to the influence of Western landscape architectural design factors, deviating from China's aesthetic standards and neglecting humanistic culture.

2.3. Lack of regional culture

In recent years, with the sustained development of China's economy and society, urbanization has also been promoted, objectively expanding the scale of urban development. However, from the perspective of urban construction, there have also been some problems, such as the development of small cities and urbanization, and the development of large cities towards Europe and America. Under the influence of such a conceptual model, it is easy to cause a lack of regional culture.

2.4. Plants lack seasonal variability

Plants are a very important element in residential landscape design. Through the reasonable application of plant elements, on the one hand, it can improve the richness of residential landscape design; On the other hand, plants can also be used to improve the ecological environment. However, in reality, designers often fail to grasp the seasonal variability of plants when designing them, resulting in plants often growing in one season. Therefore, it is still necessary to grasp its seasonality in plant design and achieve good ornamental effects throughout the year.

3. The Significance of Sustainable Development in Residential Landscape Design

Guided by the principles of sustainable development, carrying out landscape design work in residential areas can improve the convenience of people's daily lives and achieve a more harmonious and coordinated relationship between people and the landscape. On the other hand, it can also improve the comfort of landscape design. The application of sustainable development concept in residential landscape design is also a higher level of humanized design, which is more conducive to reflecting the principle of people-oriented. It can simultaneously coordinate the needs of social development and natural development, carry out dynamic design, and achieve

harmonious development between humans and nature. Therefore, it is necessary to effectively integrate the concept of sustainable development into the landscape design of residential areas, specifically analyze the environment in residential area landscape design, grasp the needs of the public, integrate site conditions, and analyze and consider various objective factors. In the landscape design of residential areas, it is not only necessary to reflect the material value, but also to ensure its humanistic value.

Secondly, guided by the concept of sustainable development, carrying out landscape design work in residential areas also requires caring for the natural environment in the design. It is necessary to not only meet people's psychological needs but also protect the natural ecological environment, minimize ecological pollution, and minimize resource waste to the greatest extent.

Finally, to carry out landscape design work in residential areas, it is necessary to organize the historical and cultural elements, inherit traditional culture, and truly achieve harmonious development between humans and nature on the basis of coordinating the natural ecological environment.

4. Strategic Analysis of Sustainable Development in Residential Landscape Design

4.1. Adhere to the principle of putting people first

Guided by the principles of sustainable development, the landscape design of residential areas needs to adhere to the basic principle of people-oriented. The service object in residential landscape design is people. Therefore, it is necessary to prioritize human needs and ensure the convenience of people's living in the design; On the other hand, it is also necessary to grasp people's psychological feelings and facilitate communication and interaction between people and the natural ecological environment. In practice, it is required to conduct market research and analysis before landscape design in residential areas, in order to truly grasp the actual needs of residents and the needs of special groups. Finally, carrying out landscape design work in residential areas also requires avoiding excessive imitation and improving the signage of landscape design to showcase regional characteristics.

4.2. Adhere to ecological, economic, and social principles

Firstly, in the landscape design of residential areas based on sustainable development, ecology is a fundamental requirement. Designers need to effectively analyze and consider ecological elements in landscape design, and improve people's living environment by establishing a good ecosystem. At the same time, in the process of ecosystem construction, it is also necessary to adhere to the basic principle of adapting to local conditions, do a good job in greening construction, and select and arrange suitable tree species. In addition, it is also necessary to scientifically select building materials to ensure their ecological and environmental friendliness. Afterwards, we will also recycle and utilize water resources to improve their utilization efficiency.

Secondly, in the landscape design of residential areas based on sustainable development, it is necessary to analyze and consider their economic viability. Designers carry out landscape design work, requiring a good grasp of people's basic living conditions, improving the quality of people's living environment, and ensuring its good comfort level.

Thirdly, in the landscape design of residential areas, it is necessary to create a good living atmosphere and establish more harmonious neighborhood relationships. Therefore, this requires designers to consider the interaction between good people and the natural environment in the process of landscape design in residential areas.

4.3. Effectively controlling pollution issues

In the landscape design of residential areas based on the concept of sustainable development, designers need to control pollution issues effectively. Specifically, lighting design is a key aspect of residential landscape design. Designers need to analyze and consider factors such as sunlight and lighting to ensure the scientific and rational nature of lighting design. They should make more reasonable use of high light efficiency light sources, efficient energy-saving lamps, and synchronously control lighting to ensure people's health by fully utilizing natural light. At the same time, it is also necessary to pay attention to the issue of light pollution and effectively prevent it. Therefore, when selecting building materials, designers need to pay attention to their energy efficiency and environmental friendliness, reduce pollution, and especially convert excessive light pollution into usable energy. In addition, attention should also be paid to the issue of noise pollution in the landscape design of residential areas. In the landscape construction of residential areas, it often involves the operation of a large number of mechanical equipment, and the operation of mechanical equipment can easily generate noise pollution problems, bringing negative impacts on people's normal lives. In this regard, it is necessary to do a good job in controlling noise pollution. Specifically, on the one hand, it is necessary to make reasonable choices for mechanical equipment and apply noise reduction equipment as much as possible. On the other hand, it is necessary to arrange the construction time reasonably, avoid night construction as much as possible, and prevent it from affecting people's normal lives. Finally, it is also necessary to control water resource pollution, properly treat sewage in residential landscape design, and establish a rainwater collection system to recycle treated sewage, rainwater, etc., reducing water resource pollution while also improving water resource utilization efficiency.

4.4. Advocate for the use of green building materials

In the landscape design of residential areas based on sustainable development, it is necessary to make reasonable use of green building materials. As a fundamental element of residential landscape design, whether materials can ensure their environmental friendliness directly affects the overall sustainable development of the project. Therefore, it is necessary to apply green construction materials reasonably. Among them, in the procurement process, it is necessary to analyze the environmental performance of materials and eliminate toxic and harmful materials. Materials containing formaldehyde, halide solvents, nitrogen oxides, etc. can reduce the damage to the environment and human body caused by unreasonable material use.

5. Conclusions

In summary, landscape design is a very important aspect in the construction of modern residential areas. Through good landscape design, it is more conducive to providing people with an artistic and comfortable living environment, improving their mood, and better serving the public and society. At the same time, with the continuous development of China's modern construction industry, the competition in the construction market is also intensifying, bringing many new challenges to enterprise

development, and also reflecting people's higher requirements for residential buildings. In residential construction, it is not only necessary to ensure its good quality and safety, but also to do a good job in landscape design, create a beautiful landscape environment, and improve the local ecology. On this basis, adhering to the concept of sustainable development, we aim to create a healthier and greener living environment for people.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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