

## A Study on the Landscape Design of Public Rental Housing --A Case Study of Jiayuan Residential District

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### Abstract

Taking the public rental of jiaguan airport in chongqing airport city as an example, the paper explored the characteristics of public rental community landscape in many aspects, which consisted of the space design, humanistic design, overall design function, landscape structure, sports facilities, pavement and plant design.

### Keywords

Public rental district, Landscape design, Airport jiayuan district.

### 1. Introduction

Public rental project was the chongqing municipal government in order to implement the low-end security. There was a market, which was high-end containment housing regulation shape the situation. During the whole process of building public rental, it was also accompanied by a lot of opportunities and challenges. The public rental should contain the preservation of regional culture and humanistic area and the integration of cultural landscape and natural landscape. The landscape ensured that the ultimate point was how to achieve the functional needs and the balance between economic costs.

The planning area of jiayuan public rental project was located in airport new city of yubei district in the chongqing city. The whole area of the base was green. The planned road around the base was not yet formed. Only the dirt road north of the base can reached the base. The entire planning area was about 800 acres. The design of the project G covered an area of about 79431.45 squwere meters, the terrain was relatively flat, no significant height difference.

### 2. Use population psychoanalysis

The Construction of external space was with the development of social economy. The low-income groups of university graduates becomed the fourth most vulnerable group after migrant workers and laid-off workers. And the dwelling was in a small space in big cities. Therefore, the low-income group of college graduates in recent years had become a major public rental housing system in the chongqing city. The design of the group of psychological needed the behavior of the law. Landscape design from the scale of the collection of space and detailed landscape design needed to proceed. So that the use of the crowd required at the maximum degree to satisfied with the living environment and the real public Rent space. Everyone was provided a sense of belonging with life atmosphere.

### 3. The Design of Different Open Space

(1) Personal and semi-private spaces: Personal and semi-private spaces needed to meet the needs of users for privacy and semi-privacy. The spaces should be quiet, confined, safe and well-proportioned, and the spaces also allowed the user to control the environment effectively.

(2) Semi-open space: semi-open space in the external living environment included public green space, and green house, where was near the courtyard green space and green roofs and so on. These spaces were designed to become attractive places of activity, wich made the environment as the correct perception of group members. Semi-open space needed to meet the diverse needs of the use of groups. Such as more talk with people, fitness, chess and other recreational activities were meteed.

(3) Open space: open space angle for the open, less closed and space-limited elements, it mainly was for the majority of people, which was an important place for people to communicate. Open space in the residential environment outside embodied the central square and the open space lawn and improved neighborhood communication and communication. It was also more relaxed and open.

#### 4. Humanistic area Design

In view of the special nature of public rental people, landscape design was no longer just to meet the functionality, and it gave the design of the connotation to allow users to feel the psychological satisfaction. The ownership was particularly important. In the design including the community park road, road steps, sketches and green design considered accessibility, identification, reachability and communication. In order to reflect the design was people-oriented, the humanistic needed to be reflected and expressed.

(1) Park Road: non-slip road, no significant height difference, no bumps. Road width should ensure that road users and pedestrians can be wrong through: the importance of the use of Braille floor tiles and guide the identity of the setting, it placed the guardrail and the text. At the same time the park was quiet for the design of the district road. It provided a more private and quiet self-relaxation space.

(2) Road and floor tiles: ramped to the slippery and gentle slope, the appropriate set of wheel chair rest platform; step tread moderate, tread material anti-skid; ramp and the start point, the end and turn the appropriate level of rest.

(3) Sketch

The general population appropriate was used. For the corridor of additional node sketch facilities; deterioration of ergonomics and psychological scale; the specific circumstances was set up for handrails and night lighting.

(4) Green: plant selection should be suitable for planting so as to form line of sight obstacles to the native plants. The plant configuration accorded to local conditions, people-oriented and color.

#### 5. Overall design

(1) Feature design

The humanistic design paid attention to the life atmosphere. The functional emphasis was on ornamental environment design. The principle of the first function was followed: the start was from the function to meet the community social interaction. Physical activity, playing, walking fitness and other needs, supported the construction of living facilities and outdoor environment. Children's playground was equipped with swing, seesaw, slides and other facilities according to the actual needs. There were rest facilities in the vicinity to facilitate children's supervision. At the same time, the outdoor environment of public rental housing was the most convenient place for residents to carry out sports activities. The sports functions should be one of the functions of residential green space, which can not be ignored. Architectural sketches were combined with practical features to design. Such as seats, tables and chairs were set up very in common. And sometimes it was filled with the flower pond, which was piled edge of the puzzle to 40 ~ 50cm in line with the sitting height. The pool can take the edge of a row of people efficiency. Neighborhood in the area between the building should have a good landscape quality, not to neglect the overall residential environment, health, neighborhood exchanges good principles. Therefore, in the outdoor landscape design, it was needed to create a morphological changes rich, multi-level, near-scale and pleasant external public space. These outdoor environment should have a good sense of security, both for neighborhoods, leisure and exercise and children to play nearby. but also even each had a good visual landscape.

(2) Landscape structure design

The main entrance of the district was the extension to the center of the neighborhood lawn office for a major landscape line of sight. The whole formation of three-point two-axis was the landscape structure. Neighborhood lawn was as one of the important landscape nodes. View flower beds and

Tongxin Yuan also were as the main landscape node. The residential area was also designed quiet park road and quiet space, which provided a quieter self-relaxation or reading space.

### (3) Sports facility design

According to the Canadian National Residential Community Design Specifications for Public Environmental Sports Facilities Design Specifications, group design of the basketball court 2, badminton court and table tennis-court took respectively 5 and 8. It was also one of the important measures of humanistic area as the needs of the place. It was provided a place and good living habitat for people's amateur life.

### (4) Pavement design

In this design, the selection of pavement was also special consideration. Due to public rental housing for government affordable housing, investment in construction costs will be controlled. Therefore, the extravagant pavement in the park, the use of permeable brick paving, rather than the use of stone. In the area such as the entrance and plaza area, the future to ensure a certain landscape effect, Europe strong stone laying, but stone and more to the local stone-based, to reduce transportation costs. Children's play area, in order to ensure the safety of the region using EPDM plastic, it did not belong to the standard plastic runway type. By the polyurethane adhesive according to the proportion of mixing special plastic particles, the thickness of laying was controlled by professional construction machinery. The PU stadium alternative was adaptable to the basic ability. Greenspan epdm weather resistance could resist ultraviolet, ozone, wind and rain and sulfurous acid and avoid gas pollution. From its aesthetic point of view, the appearance of gorgeous saved management costs. Sports field area was used with plastic laying for the comfort of the playground.

### (5) Specially designed

Because of the project for the public rental landscape of the special nature of the investigation and data collection, public rental area within the use of cars only took account about 18%, while the majority of motorcycles or electric car was to get off work on the trip. In order to appear a motorcycle Non-motorized chaos to stop the phenomenon of chaos, this situation would disrupt the order of the district. It appeared that residential environment messy, serious people was to plug a flow channel, which affected the normal people living in residential areas. Therefore, in this design, each floor of the building would be set up a motorcycle park in order to regulate the behavior of residents of chaos stop.

### (6) Plant Design

In the design, most of the plant landscape payed special attention to control costs. More native tree needed planting. The elderly on the green house in front of the house and garden was much stronger than most people. Green plants can release a large number of negative oxygen ions, which can purify the air, regulate air temperature, dust and noise, as well as be conducive to the elderly heart disease, hypertension, neurasthenic health recovery. Therefore, the greening design of barrier-free residential areas should first adhere to the green-based. The rest of the green cover was not too dense because of the sense of space compression. And it made full use of vertical greening to expand the green space, improve the ecological environment and enrich the residential landscape. At the same time, planting should be avoided to expose to the ground and obstacles to the elderly and children. The manage should accompany with the characteristics of the local fine varieties. The residential landscape backbone species should avoid the use of toxic and harmful.

## 6. Conclusion

Through the case study, on which was the public rental of Jiayuan Airport in the Airport City of Chongqing Airport, explored the uniqueness of the public rental community landscape in the aspects, of which consisted of space design, humanistic design, overall design function, landscape structure, sports facilities, pavement and plant design. With a view to Chongqing public rental community, landscape design was provided a new design ideas.

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