

Planning and Implementation of Small Towns: A Case Study of Longsha Town, Wanzhou District

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Abstract

In the process of rural revitalization, the construction of small and medium-sized towns is going on vigorously. On the basis of the traditional urban master plan, it is the control planning and then the construction planning. There is a lack of an effective connection between the planning and construction. Therefore, all regions begin to realize this connection through a series of guidelines. On the one hand, it summarizes the contents of planning, on the other hand, it guides the construction of small towns to play an important role in leading the ecological, healthy and characteristic small towns.

Keywords

Architectural style; Infrastructure; Open space; Guide.

1. Introduction

With the completion of the overall planning of small towns and town control planning, the construction of small towns has made some achievements. In order to further strengthen the guiding role of planning for urban construction and enhance the practical operation of planning, the planning control content is combined with the recent urban construction projects to make the urban construction conform to the planning requirements. Wanzhou Township began to guide the orderly progress of urban construction through the preparation of planning.

2. Town Overview

Wanzhou District, located in the upper reaches of the Yangtze River and the northeast of Chongqing, is located in the heart of the Three Gorges Reservoir area, and is a regional center city in the upper reaches of the Yangtze River. Longsha town is located in the southwest of Wanzhou District, on the North Bank of the Yangtze River, at the intersection of the main line of Wanzhou Zhongzhong (county) highway and Fenlin (DU) highway. It is 40km away from Wanzhou urban area, 28km away from Shuanghekou, Wanzhou and 60km away from Zhongxian County. At the same time, it is also the central economic zone of Wanzhou's urban economic layout and the main axis of economic development along the Yangtze River, and it is the central small town of traffic and commerce type. In 2003, Longsha town was listed in the central town planning of Wanzhou, mainly developing agricultural and sideline products processing and commerce. Longsha Town, as a strong economic town at the municipal level, plays an important role in the layout of "one center, three belts and eight points".

3. Current Situation of Urban Construction

3.1. Scope of Construction

The current built-up area of Longsha town is about 110hm², mainly concentrated in Longsha area in the east of the town, with a scale of about 60hm². Towns have taken shape, and the pattern of small towns has taken shape.

3.2. Public Service Facilities

The types of public service facilities are relatively complete, and the public service capacity is strong, which basically meets the living needs of urban residents. However, the service capacity of land for sports science and technology needs to be improved. Administrative facilities such as government, police station and neighborhood committee have been built; commercial facilities such as agricultural trade market, Bank of China and a large number of shops along the street have been built; cultural and sports facilities such as cultural activity station and government square have been built; schools such as primary and secondary schools, kindergartens and central hospitals have been built.

3.3. Infrastructure

The town road forms a free road network based on Wanzhong road and Yuquan Road. The cross-border traffic and the internal traffic of the town interfere with each other greatly; the internal roads of the town are in the form of tree like layout, there are many roads at the end, and the network connectivity is poor. The road surface is concrete pavement, but part of the road surface is damaged. The current parking in the town is mainly roadside parking. The electric power and telecommunication lines use the electric poles on both sides of the street or are arranged along the street buildings, which has a certain impact on the city style. Part of the sewage is directly discharged into the river. The roadside advertisements are set randomly, disorderly and lack of maintenance. There is a lack of garbage collection and transfer facilities, garbage is piled up in disorder, and the environmental sanitation is poor.

4. Planning Review

4.1. Planning Overview

The general planning of Longsha town defines one of the industrial agglomeration areas in wanyunkai town group of Longsha Town, the central town in the southwest of Wanzhou District, a small town dominated by the development of Commerce, processing industry and tourism service industry.

In 2020, the urban population will be 35000, and the urban construction land will reach 3.22km². Form the urban spatial structure of "one ring, two axes, three centers and five areas". The overall plot ratio control of the town is high in the north and low in the south, high in the middle and low around, and the highest area is located in the center of Longsha current town. The plot ratio is 0.6-3.0. The whole building in the town is high in the north and low in the south, high in the middle and low around. The highest area is located in the center of Longsha current town. The building height shall be controlled as 9-60m.

4.2. Planning and Implementation

According to the evaluation of the implementation of the plan, the construction land scale of Longsha town lags behind the plan in general, but the construction of the built-up area is in good condition. The construction of public service facilities is good, the infrastructure is not perfect, and the features have not yet formed.

(1) In some areas, the public service capacity has been improved to basically meet the living needs of urban residents at this stage. However, the service capacity of land for sports science and technology needs to be improved.

(2) Through the construction of infrastructure, the road condition of Longsha town has been greatly improved, and sewage collection has been partially solved. There is no waste transfer station, but the waste treatment capacity can basically meet the current demand.

(3) Features are not obvious. Through the renovation of local streets and the guidance of new communities, the town has achieved some results, but the overall style of the town has not been greatly improved.

(4) The effect of height control is good.

4.3. Existing Problems and Causes of Planning Implementation

During the urban construction, some new buildings encroach on the red line of the planned road, and the secondary main road of Yuquan Road is planned to be built as the main road; the half space of the new residential quarter buildings is insufficient; the primary sewage pipe network of the town is exposed in the thin River, and the sewage leakage is easy to pollute the river; the effect of landscape improvement is not prominent, and the characteristics are not obvious.

The above problems are mainly caused by the lack of effective connection between planning and construction, and the lack of planning guidance for construction. Economic development level, capital and land and management level constraints and management system is not perfect and other reasons.

5. Implementation Guidelines

5.1. Objectives and Strategies

From the aspect of functional restoration and ecological restoration, through the renovation of the built-up area and the arrival of the planning area, we can realize the orderly and efficient urban construction, and build a harmonious, livable, dynamic and unique modern small town. Build Longsha town into a first-class national demonstration town in Chongqing. Specifically, it includes four strategies and eight specific measures, with the strategy of improving functions, enhancing features, developing in sequence, and focusing on both construction and management. Through the eight character policy of "demolition, supplement, consolidation, reform, filling, retention, control and management", the urban construction is known from two aspects of current situation renovation and planning guidance, see Figure 1.



Figure 1: Eight governance rules

5.2. Renovation of Built-up Area

The built-up area is mainly based on four measures of "demolition, repair, consolidation and reform", and six action plans. It aims to build a comfortable, pleasant and unique small town from three aspects: the improvement of facilities, the shaping of urban style and the rectification of public space.

First, improve the construction of secondary and tertiary sewage pipes in the town and improve the urban infrastructure; second, determine the renovation building style of Longsha town as the new Chinese style through research, which is not only in line with the positioning of modern small towns in Longsha, but also more suitable for the actual situation of the current building;

rely on the construction of characteristic business street and style street through comprehensive renovation of facade, sidewalk and sidewalk. The specific measures for the reconstruction of its auxiliary facilities are to renovate the urban landscape, roads and sketches, to improve the vitality and quality of the urban public space with the characteristics of the renovation of thin riverside, the reconstruction of squares and the construction of riverside landscape belt, see Figure 2.

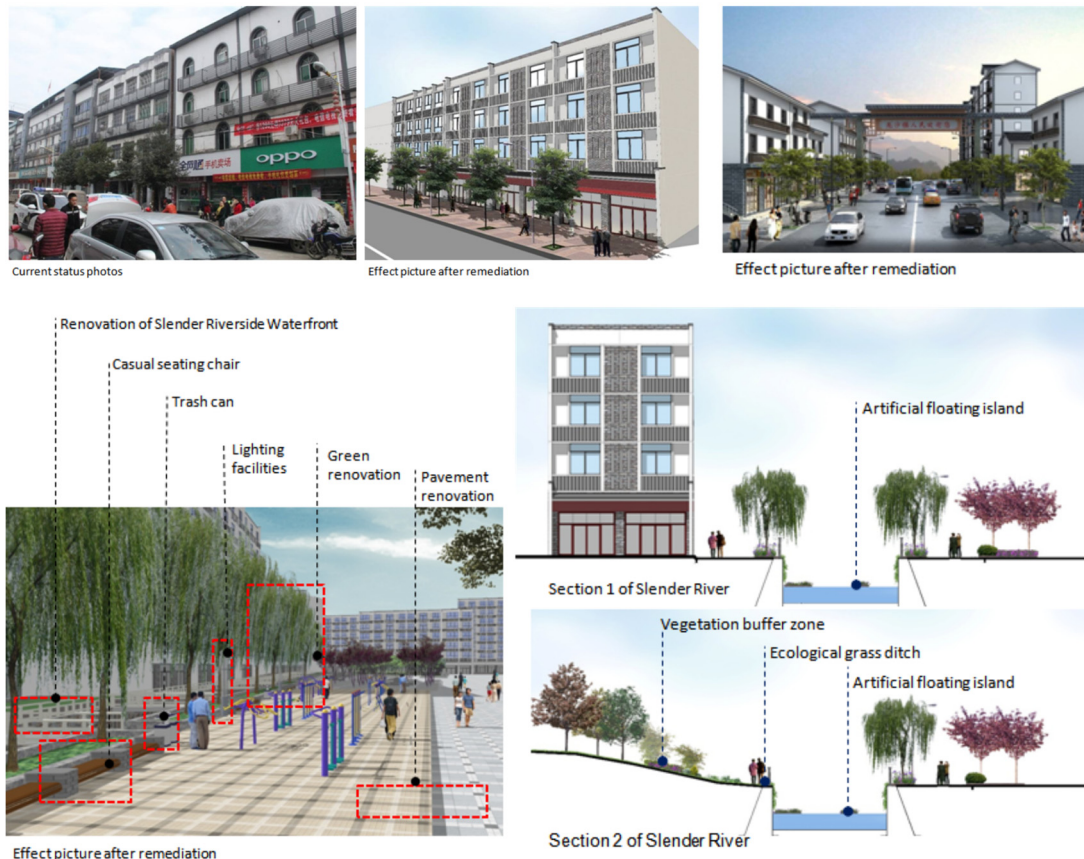


Figure 2: Improved town style

5.3. Control and Guidance of Planning Area

The main built-up area of the planning area is based on four measures of "filling, retaining, managing and controlling", and eleven action plans. Relying on the recent construction projects, it aims to build a small town with complete facilities, perfect facilities, shape the urban style and improve the public space from three aspects: supporting facilities, improvement of facilities, and upgrading of files. For other construction projects not involved in the near future, guidance control is mainly carried out through guidance of planning public facilities construction, building guidance, infrastructure guidance and open space to ensure the consistency of planning and construction.

(1) In the aspect of public facilities, it is mainly controlled by complementing and improving the current types of public facilities and guiding the building color, number of floors, floor area ratio, building density, green space ratio and backward distance of the facilities. Such as farmers' market, football field, pension service center, long-distance passenger station, funeral service center, etc.

(2) Architecture is mainly guided by style, color, material, facade, roof, scale and street facade. On the whole, the building is mainly of modern style; the building color is mainly gray and white; the facade of residential buildings located on both sides of the main road and around the important squares and parks should not be unduly concave and convex; attention should be

paid to the treatment of the building roof, and the top of multi-storey buildings can adopt slope roof, flat roof and other forms.

The architectural scale should be coordinated with the overall urban space. The concave and convex changes of the street interface form an open space. The building height should not exceed 27m, and the building height h along the street is 1-1.2 of the street width D . The maximum continuous face width projection of the building shall not be greater than 80m. If it exceeds the projection, it is necessary to back off $1/3$ - $1/2$ of the depth of the building along the street. The back off building interface shall not be greater than 20-30m. The back off distance of the road intersection is 0.5-0.8 of the height along the street, see Figure 3.



Figure 3: Architectural scale and urban overall space coordination

(3) Infrastructure: Bicycle lanes are encouraged for urban main roads. If the length of buildings along the street is more than 80m, pedestrian passage shall be set (it can be set at the bottom of the building). If the length of buildings along the street is more than 150m, 4 * 4m fire fighting passage shall be set as pedestrian passage. Camphor shall be used for roadside trees, and low flowered shrubs with proper pruning shall be planted in the row planting isolation zone with an interval of 6-8m. The greening at the road intersection shall keep the line of sight unobstructed, see Figure 4.



Figure 4: Pedestrian access can be set at the bottom of the building

Permeable brick shall be selected as the pavement material, and the pavement texture shall be simple and atmospheric to avoid complex texture.

(4) Open space: The public space in the waterfront area should be kept as much as possible. It is forbidden to build new non-public buildings and try to demolish or reconstruct existing buildings. Commercial pedestrian street can be built around the waterfront area; the proportion of hard pavement should not be too much; the memorial square should pay attention to the creation of atmosphere; the proportion of green space in the park should be more than 65%, taking natural greening as the main choice of pavement according to the dynamic and static zones, and taking different forms of seepage ground pavement according to the different environment, so as to realize the low impact construction and development of the town, see Figure 5.



Figure 5: Open space design drawing

6. Conclusion

Generally speaking, planning review and planning guidance for small towns can, on the one hand, find out the problems of planning implementation and planning and construction, and provide some reference for the next planning adjustment; on the other hand, the main control content and general control content in the guidelines between planning and construction, and the control method of combining theory with intention pictures Better guide the construction of small towns and enhance the guidance and facticity of planning.

References

- [1] B. Mattoni,L. Pompei,J.C. Losilla,F. Bisegna. Planning Smart cities: comparison of two quantitative multicriteria methods applied to real case studies[J]. Sustainable Cities and Society,2020.
- [2] Kenneth Lynch,Etienne Nel,Tony Binns. ‘Transforming Freetown’: Dilemmas of planning and development in a West African City[J]. Cities,2020,101.
- [3] Dian Afriyanie,Miga M. Julian,Akhmad Riqqi,Roos Akbar,Djoko S.A. Suroso,Iwan Kustiwan. Re-framing urban green spaces planning for flood protection through socio-ecological resilience in Bandung City, Indonesia[J]. Cities,2020,101.
- [4] Urban Research - Urban Planning; Investigators at University of Warmia and Mazury Describe Findings in Urban Planning (Evaluation of Public Spaces in Historical Centers of Small Towns: Case Study)[J]. Politics & Government Week,2020.
- [5] WANG Lin,WANG Jinxiang,WANG Li.Spatial Planning of the Water Ecosystem with Resilience in the Small Town[J].Journal of Landscape Research,2019,11(03):118-122.