Research on Rural Space Reconstruction in the Cold Area Based on the Background of “Beautiful Countryside”—A Case Study of Wang Hongzhen Village in Baicheng City, Jilin Province

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ABSTRACT

Based on the construction of “Beautiful Countryside” in China, this paper takes the rural reconstruction of Wang Hongzhen village of Baicheng city of Jilin province as an example. From the current situation of Wang Hongzhen village, the article summarizes the current situation of rural planning and the existing problems in the process of sustainable development, and the principles of reconstruction are also put forward from the heritage of history and regional application of modern construction technology and other aspects. Finally, the technology and method of rural space reconstruction in the cold area were discussed from the aspects of the function layout, reconstruction of road network, landscape construction, building reconstruction and so on.¹

INTRODUCTION

In November 2012, the 18th CPC National Congress report put forward the ambitious goal of building a well-off society in an all-round way and provided new and higher requirements for building a new socialist countryside: to increase the intensity of urban and rural development, enhance the vitality of rural development, narrow the gap between urban and rural areas gradually, promote the common prosperity of urban and rural areas, focus on urban and rural planning, infrastructure, public services, etc to promote urban and rural integration, and put forward the "Beautiful China" concept[1]. Xi Jinping, general secretary also made it clear: the rural construction to obey "retain the

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rural style, stay green mountains and rivers, remember to live nostalgia" requirements [2]. Reconstruction of rural space is an important part of the construction of "beautiful countryside". Rural space reconstruction has a positive effect on rural living environment, farmer production conditions and rural management. In this paper, the combination of the beautiful rural planning and design of the Wang Hongzhen village to study the reconstruction of rural space texture, in order to achieve the integration of village space resources to maximize.

The reconstruction of rural settlement space is the explicit form of settlement space in rural reconstruction, which means that the village has been affected by various internal and external factors, causing the spatial pattern of rural settlements to change stage by stage, under the background of urbanization development [3]. In this paper, the road layout, landscape characteristics and architectural space of the three elements of rural space in the cold area Wang Hongzhen Village are discussed, in the comprehensive social and economic, cultural and environmental factors, through the analysis of the present situation of Wang Hongzhen village’s space, to seek a rational Wang Hongzhen village’s space reconstruction planning ideas.

THE GENERAL SITUATION OF WANG HONGZHEN VILLAGE

Wang Hongzhen village is located in Baicheng City, Jilin Province, Dongsheng Township, which is a representative village in the cold area, an area of about 58,368 m², until September 2016, there are totally 32 families, the total population of about 160. Because most of the youth are outside, and there are only the old, weak, disabled and children in this village, which causes the phenomenon of serious fault in rural population structure. As the soil of Wang Hongzhen village are mainly yellow and alkaline, villager grow more corn for a living, leading to a single economic and industrial village. Wang Hongzhen village is very poor, the lack of unified management and rectification, inadequate service facilities, and the village is dirty, chaotic and so on, and the village style lost vitality. Therefore, it is of great significance to study the space reconstruction of Wang Hongzhen village under the background of “Beautiful Village”.

WANG HONGZHEN VILLAGE’S RURAL PLANNING STATUS

The Road Layout of the Present Village Status

As a result of long-term historical reasons, Jilin Province Wang Hongzhen village road texture has been the formation of a clear "ten"-shaped road layout. The main of horizontal road connects the west of the Tianxi village and the east of the Grand Canal. The main of vertical roads across the South and North of the two directions of a large area of farmland, mainly for driving agricultural vehicles. The road is complex because there is no unified planning. Wang Hongzhen village is divided into four large space blocks by "ten" type of road
layout, which is occupied farmland and farm houses. The phenomenon that some ancillary facilities space is too scattered or lack. For example, small and scattered farms, lack of entertainment and medical facilities, lack of “commercial” space combined with agriculture, and so on. As shown in Figure 2-1.

Wang Hongzhen village original main road about 7 meters in width, there are also the formation of the road between the house and the road ahead the house, most of which roads are mostly muddy road. The road has not been smoothed and hardened, and the drainage system of road is poor: village road will be gathered water when it rains or snows. As there are not a unified planning on both sides of the road green landscape, villages is lack of vitality. As the road does not separate pedestrians and vehicles, the car traffic is chaotic, as shown in figure 2-2. Compared with the city space, the village construction lagged seriously and did not form a complete system of road network.

![Figure 2-1. Wang Hongzhen village satellite status.](image1)  ![Figure 2-2. Current road map.](image2)

**The Status of Village Landscape**

Wang Hongzhen village people mainly live by agriculture, so the village has a rough agricultural landscape. Village agricultural landscape contains the size of the area, the formation of different crops mosaic blocks or corridors, some forest belts and other agricultural landscapes, forming the original local art atmosphere. Due to the villagers live by agriculture, and the public space and landscape environment of the human landscape for village residents is lack, there is a large area of idle land in the village is not planning to put into use; Both sides of the road covered with weeds, and there is garbage in everywhere, thus losing the village street landscape, as shown in figure 2-3. Each household is an independent courtyard-style layout in Wang Hongzhen village, the forecourt is used as a storage space for debris or a parking space for agricultural vehicles, the backyard is used as a garden, the whole yard is disorganized and lacking in vitality because of the absence of a good courtyard landscape, as shown in figure 2-4.
Building Status

Due to the economic development of the Wang Zhenhong village in Jilin has been lagging behind, most of the housing in the village is a layer of independent courtyard adobe house, which is collapsing, which is new houses but few. There are flat-roof house and slope roof-style, as shown in Figure 2-5. The housing area is not large, the area of which is about 60-80m2. In the middle of the house is the space of activities, both sides of which are stoves, and on both sides of house is the bedroom. The walls of the courtyard are mostly made of red brick solid wall, and they are mostly hollow block or mound, whose height is about 2-2.5 meters. Due to the lack of awareness of protecting environment, the walls can be seen everywhere with some advertising stickers and graffiti, thus undermining the village style, as shown in Figure 2-6. The lack of public toilets, public building of medic, culture and entertainment, etc in village, hindering the development of the village.

According to the analysis of the current situation of the rural space of Wang Hongzhen village in the cold area, it is not difficult to show that Wang Hongzhen village rural space texture has some problem such as dirty, chaotic, poor and inadequate facilities, etc. The original style of the village lost vitality, and the resources of village are too scattered to release the maximum value, which has negative impact on the development of village’s economy and the improvement of village resident’s quality of life. Wang Hongzhen village has been in a very low reconstruction stage, and its potential of development is enormous. Therefore, it is urgent to establish a set of system of rural space reconstruction planning system in the context of building a “Beautiful Countryside”.
PRINCIPLES OF RECONSTRUCTION OF RURAL SPACE
RECONSTRUCTION IN COLD AREAS

Rural space reconstruction refers to under the "urban and rural integration" background, the village influent by the city, government and other factors driven and control the impact, in order to achieve the process of rural transformation and development. The transformation of urban-rural relationship is the process of rural space reconstruction thinking and urban space reconstruction thinking game. Rural space reconstruction is the process of gradual weakening of regional village, and under the influence of comprehensive internal and external factors, which resulted in periodic changes in rural development, caused the rural settlement space multi-level, multi-angle transformation.

In response to the call of national construction "beautiful countryside", in the process of reconstruction of rural space texture, we should consider the actual situation of the village fully, and confirm Wang Hongzhen village beautiful countryside planning scheme scientifically and reasonably. Changes in the reconstruction of urban space thinking to do the reconstruction of rural space, this paper analyzes and studies the three elements of space layout, landscape features and architectural space, innovate the concept and strategy of the rural spatial reconstruction.

THE PRACTICE OF RESTRUCTING THE RURAL RESTRUCTION SPACE IN WANG HONGZHEN VILLAGE

The “Two Axis and One Core” of the Rural Road Reconstruction

The original rural spatial layout is formed in the process of rural villagers, the choice of the villagers agreed with. Such as a river a road, all the way along the road along the layout of the space has its historical inheritance, is also a reflection of the villagers to adapt to the natural environment. Therefore, in the process of transformation, under the principle of layout of road texture, we retained the original style of villages and continuation of villages, put forward the "two axis and one core" road texture space layout. As shown in figure 4-1.
Two axis: An economic axis and a political economic and cultural axis. Economy is a connecting shaft Tian Xi village and east of the grand canal west road. The design which is the combination of farmhouse and demonstration field as the beginning of the axis, located in the entrance of village, not only promote the village's economic development, but also shows the new face in the whole countryside. At the end of the economic axis, is the village collective farms at end of the village, considering the dominant wind direction for Tao North is the northwest wind, waste treatment and sewage equipment combined with farm settings, not only improve the whole village streets air quality, and more conducive to scientific farming. Other facilities conducive to the economic development of the village are arranged on this economic axis, such as commodity supply area, crop field and wholesale collection. This head and tail echoes the economic axis not only to maximize the concentration of the village industrial resources, make the manage better and promote the economic development of villages, but also can effectively improve the income of residents in villages, the village surplus labor force to keep the village population structure tends to try to make normal. A political culture axis for the village through the south, north to a large area of farmland that is the main road, Spatial layout just cross the cross with the economic axis, the political culture axis focused on the layout of medical, sports, entertainment and other facilities, so as to meet the village residents of the service needs, improve the quality of life of village residents.

One core: Two-axis intersection is the "one core" of the two axis, which is the center of the village, but also the village economy axis and the political and cultural axis of the intersection, "one core" through the green landscape node processing approach, to provide a good buffer space for people and vehicles; At the same time around the "one core" in turn arranged the supply area of goods, village landscape square, village medical center, village committee office and other facilities, which make the economic axis and political culture axis of the intersection is more prominent and enhance the two-axis vitality, but also for the village residents to provide a convenient; Which makes in the heritage of the
village culture and at the same time also continue the village of Road space texture vitality

Figure 4-2. Road cross-sectional analysis.

In order to preserve the original road space texture and improve the village road network system, Village original main road width unchanged, according to the principle of road grade division and the corresponding standard standards, Wang Hongzhen village Road planning for 4.5 meters, with 1% -2% of the drainage slope and drainage ditch, 1 meter walkway and with green landscape, as in Figure 4-2; Village main road and house before the road are cement and asphalt hardening project laying, village road and house road laying tile and accompanied by green landscape characteristics of the formation of rural road.

“One Line and Two Pieces” Landscape Space Reconstruction

Through the continuation of the historical context and the reconstruction of the landscape emphasizes the local nature of space and landscape, characteristics, ecological; to enhance the village landscape, street landscape, courtyard landscape and agricultural landscape of the organic combination with the combination of line and surface.

One line: One line is the street landscape design of the street facade, The use of the main road of the Road Tree and the residential residential voluntary landscape of the organic combination of the same time the use of the Northeast map elements rich Wang Hongzhen village independent courtyard entrance fence, thus forming the village along the street along the main green landscape, in order to achieve the landscape of the native and characteristics; Secondly, Wang Zhenhong village west of Tian Xi village, the use of Wang Hongzhen village street landscape to enhance the "one line" design to attract foreign tourists at the same time, but also and adjacent Tian Xi village characteristics of street landscape play echo effect , And promote the development of village, to improve the quality of life of village residents.

Two pieces: "a piece" for the village center landscape square design, in order to obtain a good landscape sight and convenient transportation, using the idle land in the center of the village planning into a village square landscape, the square with the "stage" and other entertainment facilities, form the public space
for villagers communication and rest. At the same time, a dialogue with the
private courtyard space, the other "one piece" for "small heart" of the landscape
design; a charge to put the two pieces of landscape space not only enrich the
space of interest, and at the same time in the agricultural landscape mutually and
reach the highest point in the landscape echoes. As shown in figure 4-3.

![Figure 4-3. "One line and two pieces" landscape analysis.](image)

**Reconstruction of the Building Space by “Transformation and Promotion”**

According to Xi Jinping general secretary of the "village planning work to
avoid large demolition building” guiding principles, for the reconstruction of the
physical space of Wang Hongzhen village in the severe cold area, the concept of
"upgrading" is adopted. In order to consider the economic capacity of the village
residents, the special elements of the village house, such as white wall tiles,
courtyard space, slope roof, vestibular backyard etc. The original village house
to take more renovation of dilapidated buildings, strengthening the old house
strategy for reconstruction of the construction of physical space.

In order to achieve the maximum release process of village resources, with
local materials, cost-saving guidelines, in Wang Hongzhen village's spatial
texture reconstruction to add some public building physical space, such as the
convenience of public toilets, to the farm together with the experimental field
formed to eat, live, play the integration of public space services, combined with
the digester pool of scientific focus on the farm base. These public building style
to add the unique elements of the village farm house, such as white wall tiles,
courtyard-style space, slope roof, vestibular backyard, making the new building
and village original farmhouse style integration, to achieve the integrity of the
village building space Nature and unity, so as to improve the geographical
characteristics of Wang Hongzhen village, the continuation of the traditional
rural space texture, heritage village history and culture.

**CONCLUSIONS**

Based on the construction of “Beautiful Countryside” in the context of
scientific and reasonable rural spatial texture reconstruction, which is conducive
to rural spatial resource release maximization, so as to improve the economic
environment of villages. In the area of "beautiful countryside construction
standards at the same time, in the continuation of the original texture, historical and cultural heritage villages is a reflection on rural spatial texture reconstruction, based on the cold area Wang Hongzhen village case put forward village spatial texture reconstruction strategy guide, hope to lead people to think of rural spatial texture reconstruction the proposed high perspicacity for the development of China's “Beautiful Village”.

REFERENCES