

Research on Situational Design of Transformation and Regeneration of Historical and Cultural Blocks

MOFEI WU

ABSTRACT

Historical and cultural blocks are living cultural heritage. As an important carrier to show human civilization, they are the main form for a city to show its characteristics and connotations. Therefore, the transformation and regeneration of historical and cultural blocks is an urgent need for urban modernization. Guided by the idea of situational design, this paper takes historical and cultural blocks as the research object, and creates a historical and cultural block with strong cultural atmosphere and situational artistic atmosphere through the integration and planning of commercial and cultural space, green space and landscape system, public service facilities and transportation system; thereby enriching the cultural attributes and emotional experience of historical and cultural blocks and improving their sense of place value and external attraction. It is of great significance to the continuation of urban context, and also provides experience and reference for the transformation and regeneration of other historical and cultural blocks.

INTRODUCTION

Under the background of urban modernization, historical and cultural blocks are an important part of a city and an important content of urban modernization. With the rapid development of society and economy, people's material living standards have been gradually improved, and more attention has been paid to the cultural and spiritual needs of the tourist environment. The concept of situational design is applied in the transformation and regeneration of historical and cultural blocks with "human experience" at its core and has become an important means to promote the transformation and upgrading of historical and cultural blocks as well as urban economic and cultural development. Integrating situational design into the transformation and regeneration of historical and cultural blocks can make them reach the realm of situational blending, which plays an important role in preserving urban memory. Meanwhile, it also stimulates the vitality of historical and cultural blocks, which can attract more tourists, promote the economic and cultural development of the city, make

Mofei Wu^{1,2}

¹Institute of Problem Solving, Guangdong Ocean University, Zhanjiang, Guangdong, China

²Department of Landscape Architecture, Guangdong Ocean University, Zhanjiang, Guangdong, China

historical and cultural blocks rebirth in the transformation and realize sustainable development in the new era.

THE CONCEPT OF SITUATIONAL DESIGN

Modern Chinese Dictionary defines “situation” as scenes and circumstances. Situation refers to the integration of people and the material environment, and an atmosphere produced by considering people's emotions and current behaviors together with their environmental space. Situational design is based on the unified consideration of people's emotional behavior and the physical environment of historical and cultural blocks. Through the design and construction of space scenes, it endows historical and cultural blocks with themes and injects spirit, giving historical and cultural blocks more sense of place and experience, and improving their attraction and value.

Psychological Level

"Emotion" refers to the psychological environment, which guides people's emotional sublimation with feelings, makes people's feelings reach the spiritual level, and gives people room for imagination. The subject of emotion is people. The interaction between people and environmental space will produce a specific atmosphere that triggers people's emotional fluctuations, and thus produce resonance.

Material Level

"Environment" refers to the material environment, including multi-dimensional space shaping and human communication activities, the creation of real scenes, and its meets a series of functional needs. The main body to construct the environment is the material. The function and composition of environmental space are suggestive and binding to people's emotions, behaviors and activities.

The Theoretical Method of Situational Construction

Paying attention to social feedback, putting humanistic spirit in an important position, and creating new knowledge and perception on the basis of people's current requirements and needs cannot only meet people's demands, but also make appropriate and reasonable adjustments through people's impact on the environment, making it rise to a new atmosphere and new experience. Situational creation requires the interaction between people and places, which can further promote emotional communication. Using the method of situational design, this research starts from four aspects: commercial and cultural space, green space and landscape system, public service facilities and transportation system, and integrates people's experiences and needs in the transformation of historical and cultural blocks, attaches importance to the design of

place sense in blocks, pays attention to humanistic spirit, and realizes the regeneration of historical and cultural blocks.

ANALYSIS OF THE CURRENT SITUATION OF HISTORICAL AND CULTURAL BLOCKS

Project Overview and Historical and Cultural Background

Chikan Historical and Cultural Blocks are located in Chikan District, Zhanjiang City, Guangdong Province. They are located in the center of the city, with superior geographical location. They bear the historical imprint and cultural symbols of Zhanjiang City, with a long history and rich cultural heritage. They have formed a strong regional culture and unique folk customs for a long time, and still retain many historical and cultural architectural heritages and ancient street patterns. They are the most complete and largest historical and cultural blocks that can best reflect Zhanjiang's historical and cultural characteristics.

SWOT Analysis of the Blocks

(1) Advantages and opportunities of the blocks

The rich historical and cultural resources, such as traditional streets and alleys, traditional houses, arcade streets and French-style buildings, arcade buildings and Lingnan houses together constitute a very distinctive “Nanyang-style architectural complex”. With a clear blend of Chinese and Western styles, they create a natural historical and cultural symbol for the blocks, and traditional handicraft industries continue to this day.

Zhanjiang enjoys a superior geographical position and is accelerating the construction of a modern three-dimensional traffic oriented to the future, which provides an excellent foundation for the future development of tourism in Zhanjiang.

(2) Shortcomings and challenges of the blocks

There are few repair and maintenance measures to historic buildings, nearly half of them are in a state of passive development and utilization, and the situation of privatization prevails. Therefore, it is difficult to carry out large-scale and batch renovation, and there are certain safety risks.

The roads in the streets and lanes are too narrow, and traffic and parking are mixed. Traffic jams often occur during rush hours and traffic accidents are prone to happen, so the safety of residents or tourists is low. The number of trash cans in each lane of the block is small and scattered, which makes it inconvenient for residents or tourists to throw garbage.

The living people in the blocks are basically the elderly, and young people generally choose to go out to work, so residents' economic income cannot be guaranteed, which is not conducive to the long-term economic development of the blocks.

Existing Problems in Blocks

(1) The commercial and cultural space is thin, lacking in theme creation

There are many common industries of the same type in local areas, so it is difficult to form resource complementarity among multiple industries. The industrial types are relatively low-end, mainly wholesale and retail, with low added value and little room for sustainable development and upgrading.

(2) Green space and rest space are scarce, and the landscape is fragmented

The green space rate of the site is seriously insufficient. The open sharing ratio of historical recreation spots is low, and the public rest space is insufficient. The production and living space and landscape recreation space in the blocks are completely separated.

(3) The public service facilities are not perfect and the basic guarantee is not in place

There is a lack of infrastructure for the elderly to relax and exercise. The overall sanitation system in the blocks is simple, the environmental sanitation conditions are poor. The water pipe network in residential areas is complicated and neglected, which has serious safety risks.

(4) The traffic system is not perfect, and the road network layout needs to be optimized

Residential buildings seize the land for roads, resulting in narrow roads and no clear separation of people and vehicles. The phenomenon of illegal parking is serious, which has caused serious traffic congestion and hidden dangers of pedestrian traffic safety, there is not enough ground parking space. There are disadvantages in road network layout, complicated roadway and poor connectivity with the outside world.

The Business Distribution and Historical and Cultural Needs of the Blocks

Through on-the-spot investigation and analysis of the current situation of street formats, it is found that most of the industries carried by street blocks are industries with low added value. The retail and wholesale of daily necessities are the main ones, and the format is characterized by "small gathering in the street", retaining the original commercial and residential mode of "the upper floor is the home and the lower floor is the shop ", which is distributed in major driveways, sidewalks and general lanes. The existing format is messy, lacking the carrier that can show the historical features and cultural characteristics of the blocks in order to attract tourists.

Follow-up questionnaire survey was conducted to the in-business merchants in the blocks, and the basic business conditions, customers, consumption levels, block positioning, business ratio and satisfaction of commercial facilities in the blocks were deeply learnt. The survey results show that most merchants pay more attention to the external image, the overall environment and the parking facilities for the target customers after the project transformation, hoping to maintain the original architectural features to attract consumers, and the wholesale and retail formats are still the focus of commercial development.

SITUATIONAL DESIGN METHODS AND STRATEGIES

Situational design is a transformation process that acts on the material environment, and it is also a progressive design process, which follows the logical relationship from big to small and from whole to partial. This paper mainly studies the purpose and motivation of people coming to Chikan Old Street and studies the evaluation and satisfaction of Chikan Old Street. Also, this paper pays attention to the overall development trend of the transformation and regeneration of historical and cultural blocks and the mode that people and the environment get along and arouses the historical and cultural memories that have declined in the urban boom. Furthermore, it focuses on the commercial and cultural space, green space and landscape system, public service facilities and transportation system within the block by means of situational creation, and finally establishes historical and cultural blocks with integrated situations.

Focus on Situational Blending

After absorbing the advantages and essences of historic buildings and street space in Chikan Old Street, the past lives of Chikan Old Street are deduced by using the characteristics of block space identification and historical and cultural memento. In the traditional commercial and cultural space, tourists' consumption purpose is prominent, and they pay little attention to the landscape space. However, the blocks built under the situational design pay attention to the situational blending of commercial culture and landscape space, so that tourists can stroll in the block environment and feel the overall landscape style and historical and cultural atmosphere of the blocks. Through local three-dimensional relief, vertical greening, oyster shells and other decorative cultural landscape walls, historical memorial walls, etc., historical details are reflected in carefully configured landscape elements, so that people can better find memories of old streets in the blocks.

Stimulate Interactive Participation

In order to realize the integration of people and the environment, optimize the site reasonably and stimulate people's interactive participation. Green landscape space provides people with a space to get close to nature and retrieve the scenes of ancient commercial ports. Through local land use adjustment, green space will be increased to form landscape green belts and pocket parks for people's sightseeing and recreation. Furthermore, jogging trails and leisure venues will be added, and the interaction between people and the environment will be strengthened. The implantation of commercial brands is encouraged, with historical context of the blocks combined together to create a green landscape related to the historical and cultural situation of the blocks.

Strengthen the Plot Experience

Combined with the elements of business format, space and experience theme, images or activities with story and place sense are used to enhance tourists' experience, so that tourists can be immersed in the scene, enjoy immersive experience and enhance their experience emotion. Through the use of theme sketches, ground paving, characteristic landscape walls and other elements, the entire landscape is created by means of scene-to-scene and obstacle-to-scene, so as to enhance the viewing degree of landscape nodes, meet the needs of tourists for rest, viewing and playing, taking photos and punching in, guide tourists into the next tour space sequence through the landscape, and integrate into the experience scene to form a rich plot experience. Through modern technology such as 5G, VR, AR, new audio-visual and artificial intelligence, tourists can be attracted quickly, and the original historical features of the blocks can be better set off under appropriate planning and design, and the time-travel experience of old and new collisions can be realized.

Serial Spatial Sequence

Different from the traditional tour of historical and cultural blocks, the traffic tour of blocks under the situational design can increase the sense of tourists' experience and make the tour sequence have the characteristics of integrity, vividness and hierarchy. A complete tour can not only meet the basic traffic needs of the blocks, but also respond positively to people's emotional experience needs. The blocks use the "ancient commercial port culture" to connect various spatial sequences in series, so that tourists can get a complete set of scene experience during the tour, emphasizing the demand for human emotional experience.

APPLICATION OF SPATIAL PLANNING AND DESIGN OF HISTORICAL AND CULTURAL BLOCKS

By using cultural integration and emotional resonance as the core selling points of block development, the theme brand of "Chikan's Ancient Commercial Port" can be created, and its planning and design can reflect the distinctive characteristics of the blocks, which will be fully publicized and popularized in the later period, making it a new business card to show Zhanjiang's urban culture and an important cultural output window for foreign exchange and win-win situation. "Ancient commercial port" is used to recall the vivid past years, show the profound cultural heritage of the block, stimulate the emotional resonance of tourists, and indicate that the blocks will be revived in the near future.

Create a Commercial and Cultural Space

The format of the block is readjusted and aims at building commercial street for leisure tourism. Chikan ancient commercial port cultural products, Chikan local specialty goods, cultural heritage industries, handicraft industries, etc. are promoted and exhibited, so that tourists can feel the heavy historical and cultural accumulation and foundation of Zhanjiang while shopping in the block.

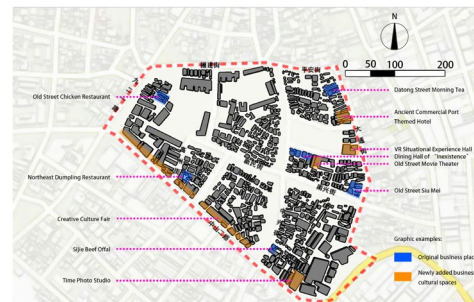


Figure 1. Commercial space plan.

(1) Grasp the historical clues and reshape the street features

Taking the ancient commercial port culture and intangible cultural heritage as the core, after the renovation of historical buildings, a characteristic block style integrating business, life and landscape is restored to fully explore the spatial logo and cultural memory of the blocks and create a landscape of the shopping blocks related to the historical situation.

(2) Rely on historical stories to promote commercial prosperity and development

Combine the functional layout of the blocks with the environmental characteristics of each block, introduce a format that conforms to the corresponding temperament, and form a complete experience with unique characteristics, association of activity and inertia, as well as a start and an end. Create a special dining area, a situational experience area, a theme exhibition area and a creative development area. Chikan Old Street bears the deep nostalgia for the "Chikan Ancient Commercial Port", evokes infinite memories of the history of the old street with the taste buds on the tip of the tongue, and strengthens the importance of the catering industry in the development of the blocks.

Integration and Shaping of Green Landscape

By adding pocket parks and forming several green belts with new trees and vegetation, the greening rate of the site will be improved, and on this basis, a core landscape belt will be formed for people to visit along the road. A landscape node at the junction of every two landscape belts is created, forming a landscape layout structure in

which two main landscape nodes drive four secondary landscape nodes, thus improving the recreation quality of tourists.



Figure 2. Landscape planning of green space.

Taking the pocket park added in the block as an example, by creating a situational green landscape based on the perception needs, people's perception needs are fully considered. The above elements are arranged, combined and superimposed to preset the picture scenes that meet the perception needs, and then these scenes are integrated and shaped by corresponding professional design means, so as to turn them into reality.



Figure 3. Pocket park landscape renderings.

(1) The pursuit of green landscape comfort

In the planning and layout stage, the basic use needs of people who can walk, rest and play are delineated, and suitable special areas are matched for the general use needs of the elderly people who account for a large proportion in the block, such as exercise, playing cards, singing opera and dancing. An evaluation system focusing on comfort is established and pursue the comfort of green landscape.

(2) Reflect the intimacy of green landscape

In the preliminary design stage, soft geometric composition is used to give people a friendly spatial interface, a proper proportion of gray space, and warmer and more affinity materials of antiseptic wood, gravel, sand and plants to form a green landscape with high intimacy.

(3) Enhance the sense of interest in green landscape

In the key design stage, rich landscape nodes are set up, small, interesting spaces are divided, and the range of people's imagination is expanded. It is close to people's lives, and people integrate themselves into the space. Creative landscape sketches, attractive landscape structures and colorful site appearance are applied to enhance the sense of interest of green space landscape.

Improve Public Service Facilities

The process of perfecting public service facilities starts from the atmosphere of the block. For one thing, it meets the needs of its own functions and landscape effects. For another, it considers the changes of people's behavior and crowd mobility. The design of public service facilities highlights the regional characteristics and the unique cultural connotation of the blocks.

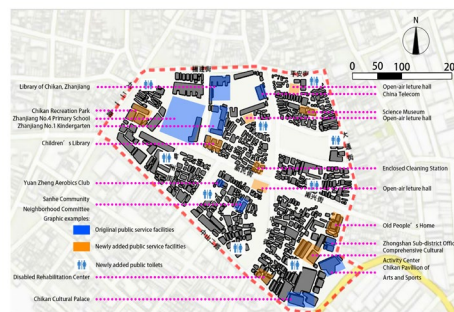


Figure 4. Plan of public service facilities.

(1) Enrich cultural leisure and entertainment facilities

On the basis of gradually improving the teaching level and quality of the schools, open-air lecture halls, libraries, comprehensive cultural activity centers, popular science venues, etc. are set up at appropriate locations in the blocks, emphasizing public participation and spiritual places. At the same time, public seats are set up on both sides of the street, pocket parks and recreation parks are added, and rest pavilions, park benches, fitness equipment and square stages are placed to meet people's leisure and entertainment needs.

(2) Integrating medical and health facilities

On the basis of not affecting the display of historical building sites and the control of landscape features, the number of public toilets and garbage bins in the blocks will be increased, and enclosed cleaning stations will be set up separately in each block. The life-cycle services such as health promotion, prevention, treatment, rehabilitation nursing and hospice care in the blocks will be integrated and supplemented, for example, establishing nursing homes and rehabilitation centers for the disabled, and form a complete and efficient medical and health service system to ensure people's life safety and health in all directions.



Figure 5. Effect picture of public service facilities.

Taking Chikan Recreation Park added in the blocks as an example, in order to meet the leisure activities needs of the elderly as much as possible in the limited site area, the effects of optimizing the environment and creating a park landscape with high greening rate are achieved by planting various types of plants and laying artificial lawns in a large area. Considering that the elderly is suitable for playing facilities with low difficulty coefficient and high safety coefficient, different fitness equipment is placed for the elderly to exercise. A rest pavilion for the elderly to gather friends and chat is placed, and park benches along the park for people to rest at any time are set. A square in the open space for the elderly to dance the square dance and play Tai Chi is built.

Planning Traffic Layout System

Through the organization of tour routes, the design of tour routes has good guidance, which makes tourists form the logic of perceptual space, fully considers the physiological and psychological needs of tourists, and provides more tour choices and rhythmic scenic spots. The reasonable layout planning of the traffic system that shapes the network of streets and lanes combined with the ring network and permeates in an all-round way highlights its sightseeing, and the streets and lanes echo the landscape of the blocks, so that people can deeply experience the overall atmosphere of the blocks.

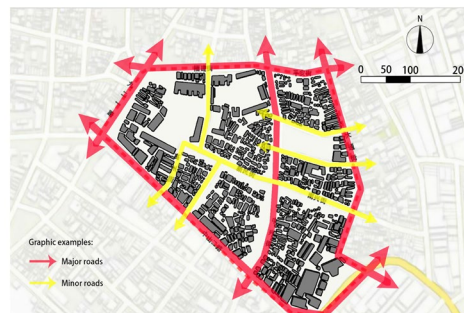


Figure 6. Traffic layout plan.

(1) Build a sound road network and enhance the accessibility of the blocks

By demolishing some abandoned houses, roads will be widened, secondary roads will be appropriately increased, the driving pressure of main roads will be relieved, the traffic network in the area will be dredged, and a perfect, smooth and orderly traffic operation environment will be built. The bus route is adjusted to enhance the accessibility of the block. A shared parking mode is actively built, intelligent operation management is implemented, and the traffic situation of the blocks is displayed in real time. Underground parking lots are built to solve the problem of insufficient ground parking spaces.

(2) Establish a block slow-moving system to enrich the travel experience

Create a 15-minute slow-moving life circle supported by “walking + cycling”, guide people to travel green and healthily, improve people's satisfaction with travel experience and space feeling, and establish a safe, convenient and characteristic block slow-moving traffic system, thus improving people's quality of life.

(3) Rational planning of the garden road to improve the quality of the blocks

In the context of creating an overall atmosphere, the garden road plays a role in the landscape. The landscape of the park is divided by the garden road, and different forms are combined to present a more holistic landscape structure. At the same time, through the garden road, its sightseeing is highlighted, and the secondary garden road and the garden path are tortuous, echoing the park landscape, so that people can deeply experience the atmosphere of the environmental space. The demonstrative streets and blocks are promoted, which give play to the leading role of demonstrative streets and blocks and promote the overall improvement of the quality of large-scale blocks by stages and areas.

CONCLUSION

In order to revitalize the historical and cultural blocks in the past, thus continuing the historical civilization and cultural heritage of a city, promoting the economic and cultural development of the city and contributing to the process of urban modernization, for the reconstruction and regeneration of historical and cultural blocks, the situational design method and strategy of “paying attention to situational blending, stimulating interactive participation, strengthening plot experience and connecting spatial sequences” are adopted in this paper, which reshapes the characteristic features of blocks, creates a green landscape with comfort, fun and intimacy. This enriches cultural, leisure and entertainment facilities, and rationally plans garden roads, thus promoting the quality improvement of blocks. It has solved important problems such as the lack of commercial culture and incomplete layout in historical and cultural blocks, makes historical and cultural blocks more suitable for the rapid development of society and create a better and happier living space for people immersed in it. This paper plays an important role in the sustainable development of the city in the future and provides strategies and experiences for the follow-up study of historical and cultural blocks.

REFERENCES

1. Zhang Xi. Analysis of the Situational Design for the Protection and Renewal of Historical and Cultural Blocks-Taking the Reconstruction of Chinese Baroque Historical and Cultural Blocks in Harbin as an Example [J]. Urban Architectural Space, 2022, 29(08):6-9.
2. Hou Zixuan. Analysis of canal landscape design strategy in Jining section from the perspective of contextualization [J]. Popular Literature and Art, 2020, (06):69-70.
3. Ren Jingyuan; Zhangyan; Liang Shumin. Research on the Existing Problems of Conservation Based on Chikan Historic Block in Zhanjiang [J]. Urban Architecture, 2021, 18(22):16-19.
4. Li Xingju. Texture Presentation-Study on the Planning and Design of Leyu Old Street Area in Zhangjiagang [J]. Chinese and Foreign Architecture, 2017, (01):82-85.
5. Tang Wentao; Zhang Lei; Guo Liyuan; Meng Lixiang. Situational design of urban park landscape [J]. Popular literature and art, 2020, (06):100-101.