

A Study of Traditional Villages and Red-Brick Residential Dwellings in Xiamen

—Take the Case of Yuanqian Village in Haicang District, Xiamen

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Abstract: Southern Fujian is located in the southeast coast of China, after the Central Plains culture, farming culture and marine culture collide and blend with each other, forming the world-famous Southern Fujian culture. As an important carrier and representative of Southern Fujian culture, Xiamen traditional villages and red-brick residential dwellings has a unique language. This paper takes Yuanqian Village as an example, and through field investigation, observation and recording, studies the origin of the village, the form of the village and the spatial layout of traditional dwellings, then analyzes the building elements and humanistic constitutive elements of traditional red-brick residential dwellings in terms of building pattern, roof, structure, decoration and color.

1. Research Background

Located in the southeast part of Fujian Province, Xiamen is the central city, important sea port and tourist city in Southern Fujian Province, as well as one of the birthplaces of Southern Fujian culture. Chinese diverse culture has given birth to diverse types of dwellings, and the culture of Southern Fujian has produced unique traditional red-brick residential dwellings. According to the excavations at the Zeng Shan site in Xiang'an, red-brick residential dwellings in Xiamen already appeared in the Southern Song Dynasty at the latest, developed during the Yuan and Ming Dynasties, and reached its peak during the Qing Dynasty and the early Republic of China ^[1]. Because of its central geographical location in Southern Fujian, Xiamen dwellings has become an important representative of traditional red-brick residential dwellings in Southern Fujian, based on the local culture and integrating many features of the dwellings in Quanzhou and Zhangzhou.

However, as one of the special economic zones in China, Xiamen has a rapid urbanization development process. Economic development, industrial transformation, land development and other needs lead to the destruction of the traditional village. At present, five villages in Xiamen are rated as Fujian Provincial Traditional Villages, which have high internal values and profound cultural heritage. The study of this paper is about one of the provincial traditional villages, and it is extremely important and urgent to study and protect it.

2. Overview of The Village

2.1. Location and Profile

Yuanqian Village is located at the junction of Xiamen and Zhangzhou, and is a natural village under Qingjiao Village, belongs to Haicang Street of Haicang District(Figure 1). The village was once classified as a demolished village in 2012 and was fortunate enough to change its fate through the beautiful countryside construction project. At the end of 2015, it was listed in the first batch of provincial traditional villages in Fujian Province and became one of the five provincial traditional villages in Xiamen.

2.2. History

In the Song, Yuan and Ming dynasties (before 1566), the Yuanqian Village belonged to Haicheng County, Zhangzhou Province, until August 1958, when it was incorporated into Xiamen and belonged to Qingjiao village.

Yuanqian Village is the settlement of the Yan's family, which has flourished since the period of Renzong in Northern Song Dynasty (1060 AD), and recorded 《The Qingjiao Yan's Genealogy》. Since ancient times, the Yan's family has inherited the Yan's Family Motto, and has passed down the family tradition of cultivation. Yan Zuo set up a school in the village and concentrated on teaching, training many outstanding talents. In Song Dynasty, there were eighteen nominees such as Yan Wenzhe, Yan Silu, Yan Tangchen, Yan Dayou who passed the highest-level imperial examinations. In Yuan and Ming Dynasty, there were Yan Xikong, Yan Yifang, the "King of Kaitai" Yan Siqi and many other famous people, who became a prestigious family ^[2].

2.3. Village Pattern

Yuanqian Village is located on the southeast side of Qi Mountain and the north side of Jiulong River, forming a natural pattern of "backing mountains and facing water", with excellent feng shui. Due to the urban development and construction, the village becomes an urban village and is surrounded by three urban roads, so its appearance has both urban and rural landscape forms. The southeast side of the village is dominated by the modern port city style, while the north side is dominated by the mountainous and idyllic style. The village is a single-core centripetal structure centered on the pond, and the buildings are distributed in three groups around the pond, presenting the layout of the triangle shape (Figure 2). In terms of internal space, the street space is created mainly from the alleyways within the village, plus the adjacent buildings as the façade of the alleyways ^[3].



Figure 1 Village location.



Figure 2 Village patterns.

3. Characteristics of Traditional Dwellings

3.1. Distribution and Classification of Dwellings

The traditional dwellings in Yuanqian Village are typical Southern Fujian traditional red-brick residential dwellings, mostly built in the late Qing Dynasty. The traditional dwellings in the village include 7 immovable cultural heritage and 19 traditional dwellings (Figure 3), including 2 ancestral hall, 1 old-style private school, 2 temples, 6 large traditional dwellings and several ordinary dwellings (Table 1).



Figure 3 Distribution of traditional buildings in Yuanqian village.

Table 1 Basic information on the main traditional dwellings of Yuanqian village.

No.	Name	Construction years	Type	Situation
1	Dafudi Mansion	Tongzhi period	Residential dwelling	Once revitalized, now unused
2	Gulong Temple	Unknown	Temple	For dedication to Ma Siye
3	Old-style Private School	Xianfeng period	Public building	Unused
4	Yan Zhenwei's Dwelling	Xianfeng period	Residential dwelling	Unused
5	Yan's Small Ancestral Hall	Xianfeng period	Public building	Unused
6	Yan Minchun's Dwelling	Guangxu period	Residential dwelling	Unused
7	Yan's Ancestral Hall	Late Qing Dynasty	Public building	In use
8	Red Brick Dwelling	Guangxu period	Residential dwelling	Xiamen Intangible Cultural Heritage "Miaoxiang" production experience hall
9	Yan Jiangshou's Dwelling	Guangxu period	Residential dwelling	Unused
10	Yan Heluan's Dwelling	Unknown	Residential dwelling	Unused
11	Yunxi Temple	Unknown	Temple	For dedication to Lu Dongbin

3.2. Building Plan Form

Before the construction of traditional residential dwellings in Xiamen are required to look at feng shui to choose the direction, and try to use reasonable orientation to strive for natural lighting and

ventilation, while avoiding excessive sunlight of orientation ^[4]. The orientation of the traditional residential dwellings in Yuanqian village is mostly northwest facing southeast, and a few are northeast facing southwest.

In terms of layout, Xiamen traditional red-brick residential dwelling is a type of courtyard in the traditional Chinese courtyard dwelling ^[5]. The whole dwellings are composed of two parts: the primary building is called "Da-cuo-shen", and the subsidiary elements include the subsidiary buildings and the outdoor courtyard. Among them, the subsidiary buildings include the wing building, gun building and more, and the outdoor courtyard includes the courtyard and side courtyard, etc (Table 2) ^[6]. The dwellings are strictly symmetrical, with a series of primary buildings on a longitudinal axis, other buildings and courtyards symmetrically arranged to the left and right.

Table 2 Xiamen traditional red-brick residential dwellings elements ^[6].

Type		Name
Primary building	Da-cuo-shen	Front yard, Back yard, ect.
Subsidiary elements	Subsidiary buildings	Wing building, Gun building, ect.
	Outdoor courtyards	Courtyard, Side courtyard, ect.

In terms of form, there are one yard dwelling, triplex, quadrangle, as well as two yards with a wing, three yards with a wing or three yards with multiple columns of wings and other forms. One yard dwelling is a common dwelling with a hall in the middle and rooms on both sides, it is not well lit and ventilated, there is no such dwelling in this village. Triplex is the most numerous basic types, which is a vertical addition of two slightly shorter buildings in front of the main hall to be used as a miscellaneous room or kitchen, while building a wall in the two houses to form a patio. Quadrangle is a typical large mansion, which is the front courtyard wall of a triple courtyard converted into a single building ^[7]. If the clan becomes more numerous, subsidiary buildings will be added on both sides of the main building, forming a voluminous building pattern. For example, a lower longitudinal building, called wing building, was added on the left and right sides of the courtyard to form a central courtyard and four smaller courtyards with symmetrical surroundings, known as the "two yards and wing buildings". In the village, the plan form of the Red Brick Dwelling is "two yards and two wing buildings" and Dafudi Mansion is "three yards and two wing buildings".








3.3. Analysis of elements of traditional residential dwellings

3.3.1. Building Materials

The red-brick residential dwellings in the village continue the traditional Chinese brick and wood structure, using locally produced materials as building materials, and main materials include brick, stone, wood and tile (Table 3). First of all, the appearance of the red brick dwellings is due to the large number of red bricks used on the walls of the buildings, plus the red tile roofs, red barrel tiles, red brick roof ridges and red square floor tiles laid inside the dwellings, making the whole building visually red, forming the building feature of "Southern Fujian Red". It also corresponds to the warm and open-minded nature of the Xiamen people, which prefers auspiciousness and peace. In addition, the walls, load-bearing structures and other more out will also be a large number of various stone and wood, stone mostly granite ^[8], wood mostly fir and camphor ^[9], together to build a strong, practical dwelling.

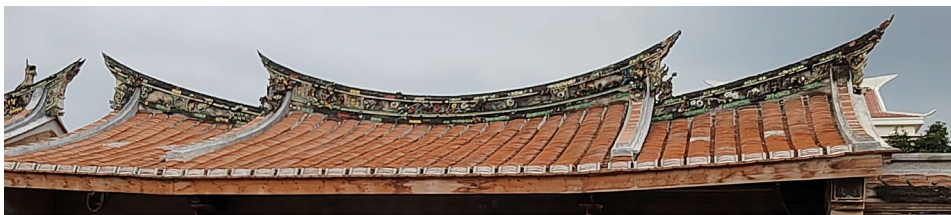
Moreover, the construction techniques of red brick structures in the village are also extremely diverse, using different shapes of red slate bricks, combined into auspicious patterns such as ten thousand characters, longevity, ancient money and more to symbolize wealth and prosperity.

Table 3 Xiamen traditional red-brick residential dwellings materials in Yuanqian village.

Material	Type	Usage	Photo
Brick	Rouge brick and red brick	Wall	
	Red brick	Structure	
Wood	Fir wood and camphor wood	Structure	
		Door and wall	
Tile	Red barrel tiles	Roof	
Stone	Granite (From Quanzhou)	Wall base and wainscoting	
	Green Grass Stone	Window decoration	

3.3.2. Building Roof

In addition to the traditional saddle roof, gabled roof and suspension roof, there are also some local types of roofs in Xiamen red-brick residential dwellings, such as the sanchuan roof (Figure 4). The sanchuan roof is the main ridge of the suspension or gabled roof, which is divided into three sections and raised in the middle with a hanging ridge ^[10]. Moreover, wind protection is the main conflict of residential dwellings in the typhoon area, so the roofs of residential dwellings all adopt gentle slope ^[11]. In the Yuanqian village, the roofs of the main hall of the large residential dwellings are the gabled roof mostly, while the front hall is mostly of the sanchuan roof, and the roofs of the wing buildings are lower, usually with suspension roofs or gable roofs. The ridge of the main building of the large red-brick residential dwellings in the village is mostly swallowtail-shaped, named because the two legs of the main ridge diverge like the open tail of a swallow, and are often decorated with stucco relief or openwork patterns, while the wings and some small red-brick houses are mostly saddle-shaped.



(a) Sanchuan roof and swallow-tailed ridge



(b) Roof detailing

Figure 4 Roof and ridge in Yuanqian village.







3.3.3. Building Structure

Because of the strong sea breeze, so it is not possible to make a post and lintel construction in the coastal areas. On its basis, the two ends of the load-bearing beams are inserted into the column body, so that its stability and span are improved, and this structure is called the inserted-beam construction ^[12]. Most of the large mansion and ancestral halls adopt this structure. In the village, the exterior walls of the buildings are mostly made of upper brick and lower stone with rich layers. The interior walls are also mostly made of masonry, with a few using wood, which does not have a load-bearing function. Residential dwellings also use masonry interior walls instead of columns, which serve the dual purpose of load-bearing and partitioning.

3.3.4. Building Decoration

Building decoration needs to be perfectly presented according to the local climatic conditions, culture and materials together ^[13]. The exquisite brick carvings, lifelike wood carvings, rich connotations of painting and colorful cross-toe pottery in Xiamen traditional red-brick residential dwellings have a high aesthetic value. In the village, dwellings are decorated in a wide variety of styles, including stone carving, wood carving, painting, cross-toed pottery and color porcelain tile cut (Table 4), mostly on the roofs, under the eaves, doors and windows, etc. The content of the decoration is also extremely rich, flowers, animals, characters, poems and words, etc., for the family and generations to send good wishes, praying for peace in the world ^[14], and the carvings are exquisite and skillful. In particular, a lot of sea-related content can be found in the decorative content, such as various types of sailboats, reflecting the colorful daily life of fishing at sea in the Xiamen area.

Table 4 Xiamen traditional red-brick residential dwellings decorations in Yuanqian village.

Decoration type	Position	Photo
Stone carving	Wall	
	Column base	
Wood carving	Structure	
	Under the eaves	
Painting	Wall	
Color porcelain tile cut and glued and glazed	Wall and gable	

3.3.5. Building Colors

The colors of Chinese traditional dwellings follow the theory of yin-yang and five elements, and Xiamen are no exception, forming the main five colors of green, red, yellow, white and black ^[15] (Table 5). In Yuanqian village, in addition to the extensive use of red brick dwellings, window decorations often use light green grass stone, wainscoting stone commonly used off-white granite,

the beams and large wooden structure to black, the bottom side painted red, side painted black, plus all kinds of stucco reliefs, colored bricks and glazed components, so that the dwelling looks magnificent and colorful.

Table 5 Xiamen traditional red-brick residential dwellings decorations in Yuanqian village.

			
Black, red and yellow	Red and grey	Red and white	Green

3.4. Analysis of typical traditional dwellings

3.4.1. Dafudi Mansion

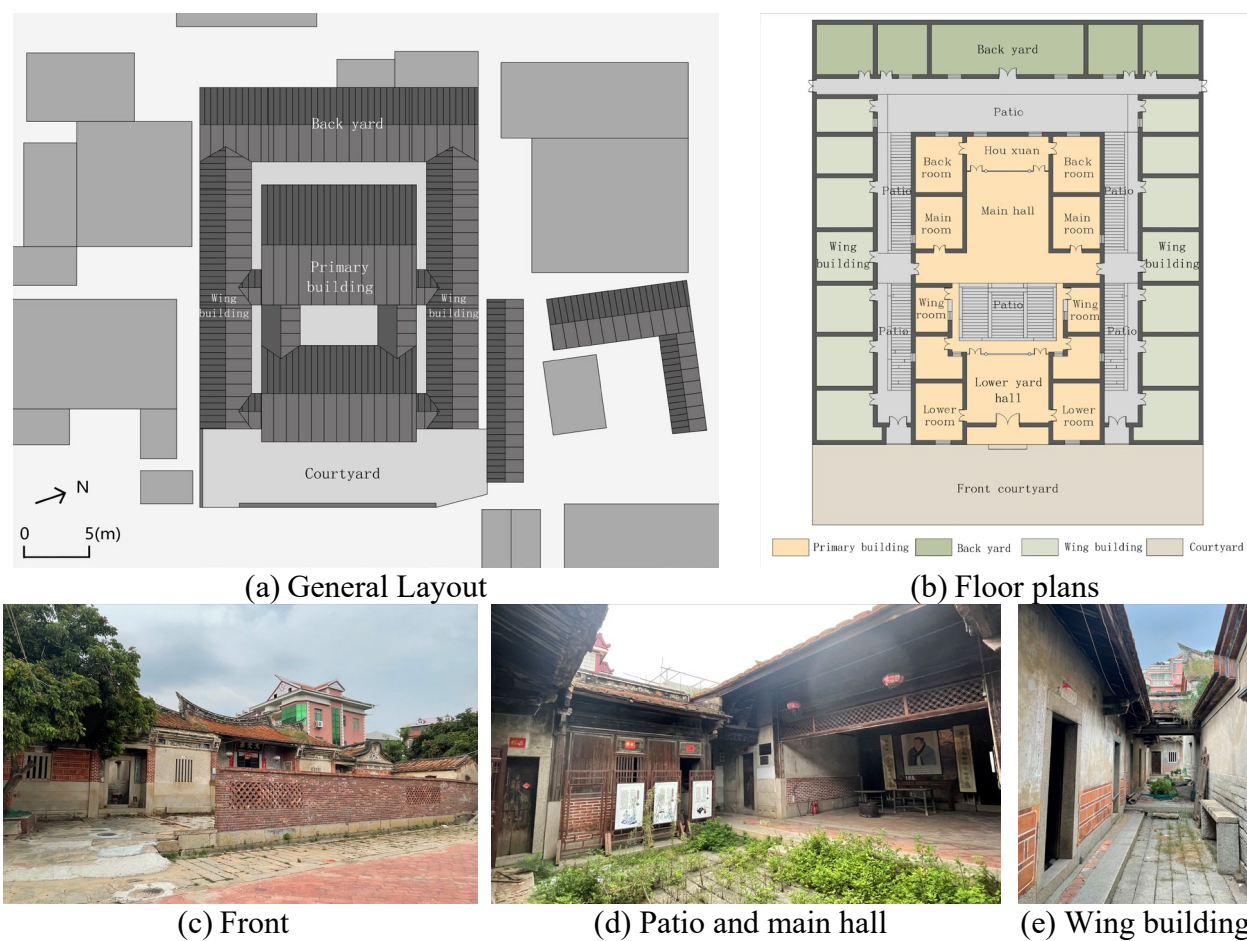


Figure 5 Dafudi Mansion.

The mansion is located in the north of the village(Figure 5-(a)). According to local villagers, the mansion was built in the late Qing Dynasty during the Tongzhi period. It is said to have been built by Yan Zhenwei and later given to his eldest son, who was renamed "Dafudi" after his eldest son was awarded the title of scholar-official by the emperor. The mansion is composed of three yards, featuring one courtyard and two wing buildings, each yard consisting of three rooms, with a depth of 32 meters and a width of 24 meters (Figure 5-(b)). The structure is a mixed brick, wood and stone structure with a red tile roof, double-curved swallowtail ridge, carved with beautiful flower decorations. The front hall is the sanchuan roof, with three doors, the central door is decorated with

stone carvings and wood carvings, and the plaque on the door reads "Dafudi". The exterior wall is made of stone and the sides are made of red bricks (Figure 5-(c)).

Entering the door for the lower yard hall space, through the door for the patio, the wing rooms on both sides (Figure 5-(d)). Further into the main hall, flanked by main rooms, the main hall places the niche and on both sides of the door leading to the back room. The wing buildings were originally used as residences, but now some of the rooms are currently used to house pagodas and some are vacant (Figure 5-(e)). The interior of the dwelling is beautifully decorated with wood carvings of lions, dragons, flowers and birds, as well as floral cuttings. Both sides of the central door are painted with scrolls, nautical charts and landscape paintings, reflecting the traditional art of southern Fujian dwellings.

3.4.2. Yan's Building Group

This Yan's building group is located in the middle of the village, facing the pool, and was built during the Xianfeng period of the Qing Dynasty, which is a trinity of ancient red-brick dwelling with great artistic value.

On the left side is Old-style private school (Figure 6-(a)), and the primary building is made of two yards, each yard consisting of three rooms (Figure 6-(b)). The front hall is three-stage, the space with three doors, and the central door has been replaced with new wood. The wall material is brick above and stone below, and red brick at the corners of both walls. The roof of the building is sanchuan roof, with a double-curved swallowtail ridge (Figure 6-(c)). Entering the door for the lower yard hall space, the hall is flanked by wing rooms, with a fan-shaped window on each side of the wall facing the patio (Figure 6(d)), and the window bars are in the shape of bamboos. The patio is fully open with two doors. Across the patio is the main room, and the doors on both sides of the main room lead to the back room. There is a door in the middle of the back room that leads to the courtyard (Figure 6-(e)), a pavilion was built in the backyard, which should have been built by later generations.

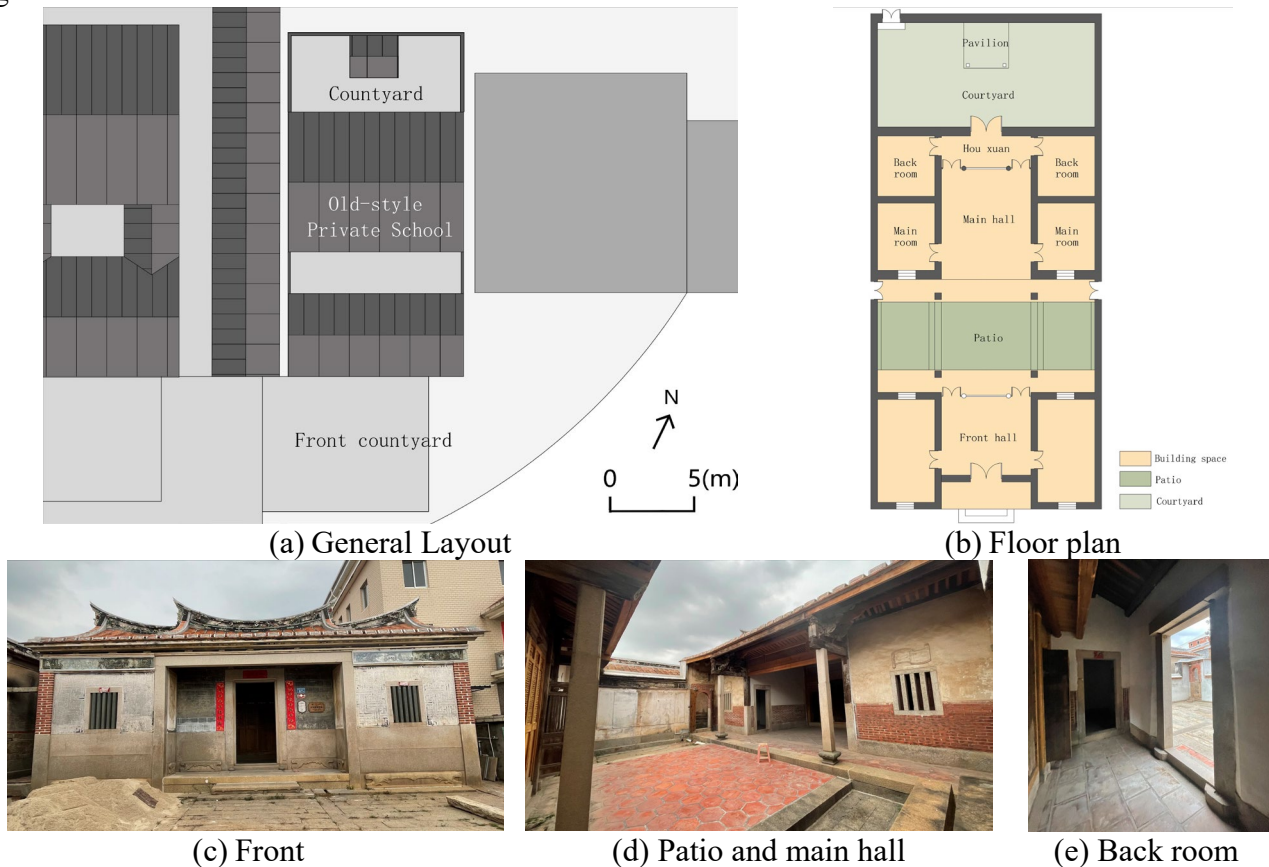
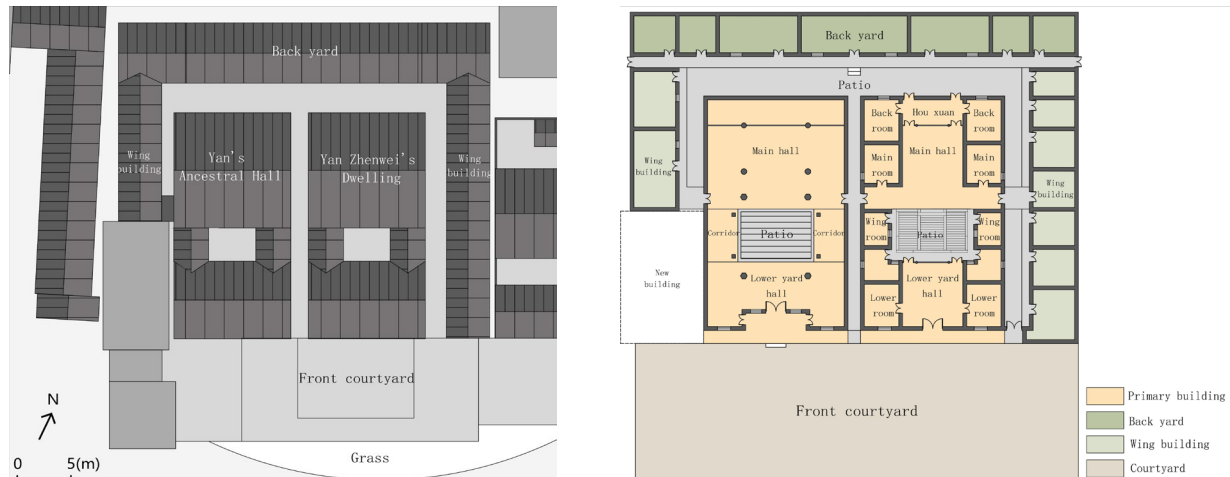


Figure 6 Old-style Private School.

Yan Zhenwei's dwelling, Yan's ancestral hall, two wing buildings and a back yard constitute a building group (Figure 7-(a) (b)). The left part of Yan Zhenwei's dwelling is made of two yards, each yard consisting of three bays. The walls are made of mixed brick and stone, with the brick above and stone below, and two windows on both sides. The roof is sanchuan roof, with a double-curved swallowtail ridge and red tiles (Figure 7-(c)). Entering the door for the lower yard hall space, the right door has been replaced with a new wooden door, while the rest of the original exquisitely carved wooden doors are preserved. Two doors on both sides of the hall lead to the side rooms. After the lower yard hall space, there is a patio with wing rooms on both sides, and the walls are made of lower brick and upper wood (Figure 7-(d)). The main hall is located across the patio, and the main hall has a niche with two doors on both sides leading to the back room. Two doors are opened in the front of the back room, leading to the back side of the wing buildings.

The right part of Yan's ancestral hall is one of the two ancestral halls in the village. The primary building is made of two yards, each yard consisting of three rooms, mixed brick, wood and stone structure. The roof is sanchuan roof, with red tiles and a double-warped swallowtail ridge. The front side is made of stone with three doors and four windows, and the windows are decorated with green grass stone carvings. There are stone and wood carvings on both sides of the central door, and "Filial piety" and "Fraternity " are engraved on the side doors on both sides respectively. Entering the central door and passing through the space is a patio, with corridors on both sides of the patio leading to the main hall. The main hall was used for worship and now is currently vacant (Figure 7-(e)). The dwelling is beautifully decorated, and some of the wood carvings can still be seen as traces of the original coloring. Most of them is wooden frame, but due to the decay of the wood, it was partially replaced with new wood and the columns were partially replaced with stone during the renovation. The left side of the wing building was partially demolished to build a new building, while the rest was left vacant.



(a) General Layout

(b) Floor plan



(c) Front



(d) Dwelling interior



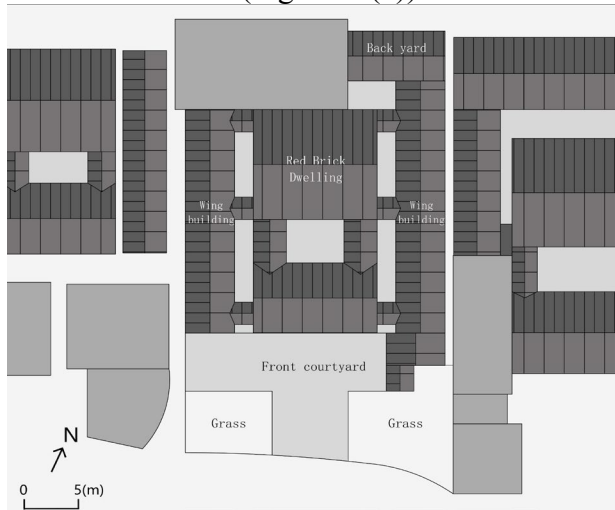
(e) Ancestral hall interior

Figure 7 Yan Zhenwei's Dwelling and Yan's Ancestral Hall.

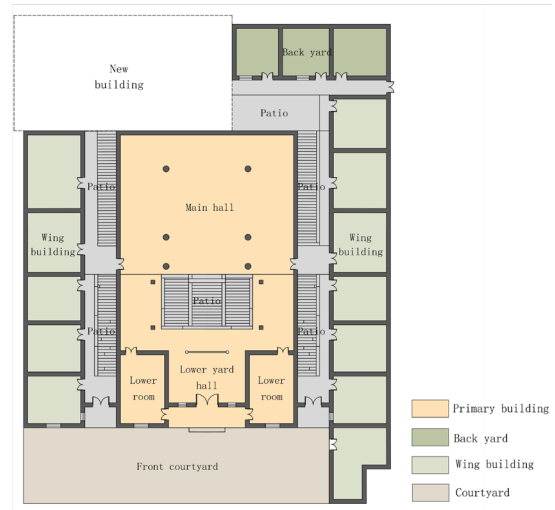
3.4.3. Red Brick Mansion

The mansion is located in the middle of the village, west of Yan's building group (Figure 8-(a)). The mansion was built by Yan Lin during the Guangxu period of the Qing Dynasty, which is composed of a large primary building, a spacious courtyard, a back yard and two wings (Figure 8-

(b)). The primary building is made of two yards, each yard consisting of three bays. The front has three doors, and the walls are made of mixed brick and stone, with brick being green brick and stone being Quanzhou white granite strips. The roof is the sanchuan roof with a swallow tail ridge (Figure 8-(c)). The central door is decorated with two bearing stones and the walls on both sides are carved with exquisite stone patterns. The exterior walls of the two wing buildings are made of red brick and stone, with beautiful stone carving and wood carving, reflecting the traditional decorative art of southern Fujian dwellings. The mansion has been revitalized and utilized as the Xiamen National Intangible Cultural Heritage "Miaoxiang" (Fujian incense) production experience hall, which is now closed (Figure 8-(d)).



(a) General Layout



(b) Floor plan



(c) Front



(d) "Miaoxiang" production experience hall

Figure 8 Red Brick Mansion.

4. Conclusion

Traditional villages are living cultural heritages, and traditional villages within the urban construction area are very characteristic spaces in modern cities. Thanks to the construction of the "Beautiful Countryside" project, the Yuanqian village has been revitalized, and the traditional pattern and traditional dwellings have been preserved, making it a "model community" in Xiamen today. However, due to the lax management of the local village committee and the restriction of tourism caused by the epidemic, many of the revitalized traditional dwellings are now idle again, full of weeds and unattended, which is regrettable. There is still a long way to go for research on the protection and inheritance of traditional villages and dwellings in Xiamen.

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