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Architectural Adaptation and Decorative Art of Baijia Courtyard in Baotou, Inner Mongolia*

ZHANG Si-si
Shaanxi University of Science and Technology, Xi'an, China
WU Li-yue
Shaanxi University of Science and Technology, Xi'an, China
Xi'an Zhongda Shiye Co., Ltd., Xi'an, China
LI Yan-jun
Shaanxi University of Science and Technology, Xi'an, China

Taking the Zou Xikou migration as its historical and cultural background, this study examines the architectural and artistic characteristics of traditional roofed dwellings represented by Baijia Courtyard in Baotou, Inner Mongolia. Through an analysis of roof form, spatial layout, structural system, material selection, and decorative art, the paper explores how Shanxi-Shaanxi courtyard-house traditions were transplanted, adapted, and reinterpreted in the environmental and cultural context of western Inner Mongolia. The study argues that Baijia Courtyard is not a traditional Mongolian dwelling, but a representative Han-style merchant residence shaped by migration, regional adaptation, and cultural interaction. Its double-pitched hard-gable roofs, locally sourced tiles and stone slabs, enclosed courtyard layout, chuihua gate, screen wall, and brick, wood, and stone carvings together reveal a process in which immigrant building traditions responded to Baotou's cold, dry, and windy climate, as well as to the mixed livelihood patterns of farming, commerce, and settlement. As a material carrier of cultural negotiation between agrarian and nomadic regions, Baijia Courtyard provides a valuable case for understanding the localization of traditional roofed dwellings in northern China and the architectural legacy of immigrant settlements in Inner Mongolia.

Keywords: Zou Xikou migration, traditional roofed dwellings, Baijia Courtyard, architectural adaptation, decorative art

Introduction

Baotou is located in the western part of the Inner Mongolia Autonomous Region. The name "Baotou" is generally understood as a transliteration of the Mongolian word "Baoketu", and the city is also known as "Deer

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ZHANG Si-si, Graduate Student, School of Art & Design, Shaanxi University of Science and Technology, Xi'an, China.
WU Li-yue, Ph.D. Candidate, School of Art & Design, Shaanxi University of Science and Technology; designer, Xi'an Zhongda Shiye Co., Ltd., Xi'an, China.
LI Yan-jun, Professor, School of Art & Design, Shaanxi University of Science and Technology, Xi'an, China.

City". Historically referred to as Jiuyuan, Baotou covers an area of 27,768 square kilometers. It borders Mongolia to the north, with a boundary line of 88.6 kilometers, faces the Yellow River to the south, and is traversed by the Yinshan Mountains in its central area (Figure 1). This topography forms a distinctive pattern of a raised central zone and relatively lower terrain to the north and south. To the east and west, Baotou is connected with the Tumochuan Plain and the Hetao Plain, respectively, giving the city a characteristic geographical structure.

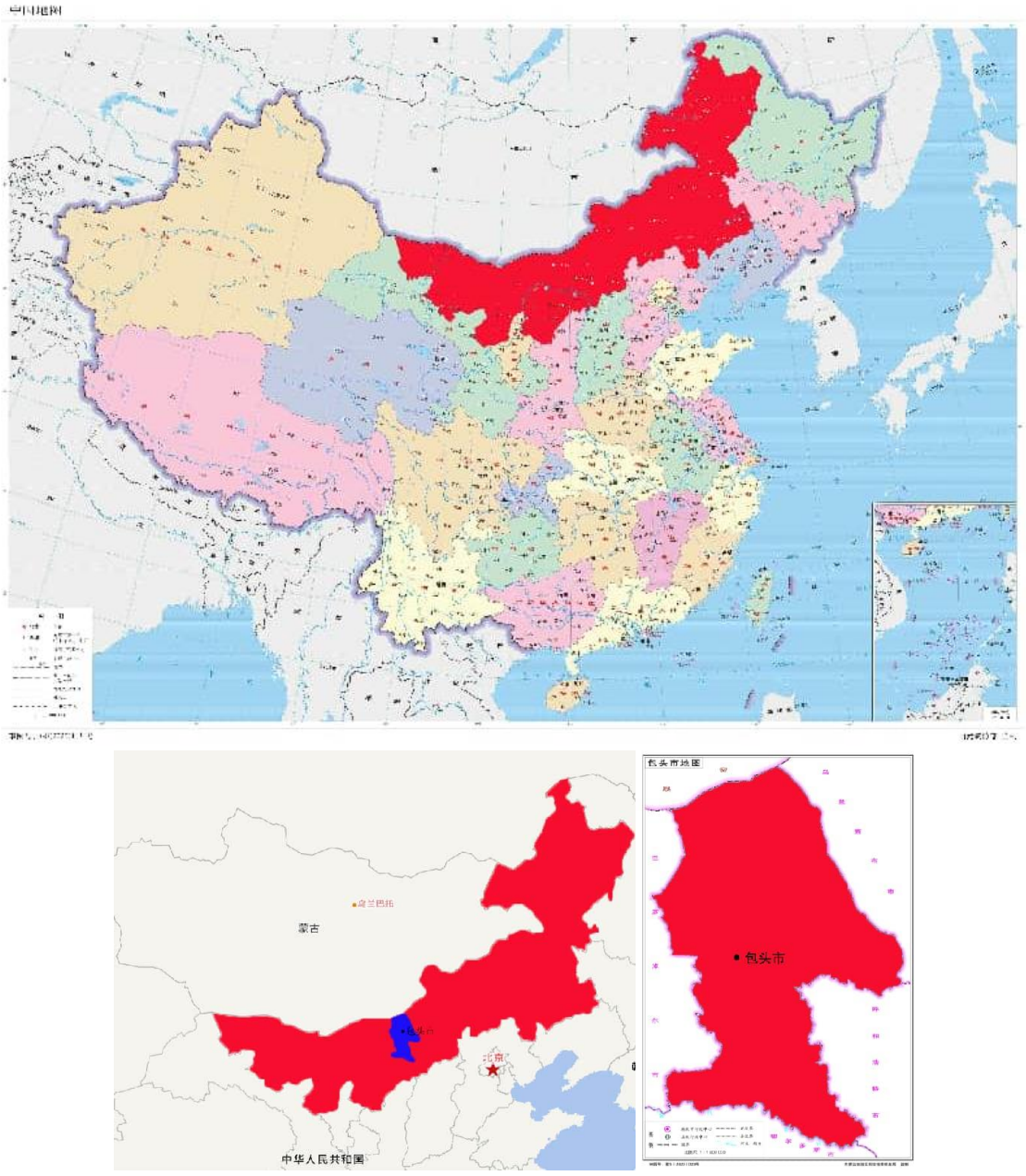


Figure 1. Location of Baotou, Inner Mongolia, China.

As a city with a long historical and cultural background, Baotou had already been established as Jiuyuan County during the Warring States period and later became Jiuyuan Commandery in the Qin Dynasty. Owing to its location at the intersection of grassland nomadic civilization and Central Plains agrarian civilization, Baotou

accumulated a rich and layered cultural heritage. It is known not only as the hometown of Lü Bu, a famous general of the Three Kingdoms period, but also as a place where traditional crafts such as paper-cutting have been preserved and included in the national intangible cultural heritage system. In contemporary development, Baotou is widely known as the "Steel City of the Grasslands" and the "Rare Earth Capital", with the Bayan Obo rare-earth deposit as one of its most important industrial resources.

At the same time, as a major transportation hub linking North China and Northwest China, Baotou has also made notable progress in ecological development. The city has established the national-level Yellow River Wetland Park and has received honors such as the UN-Habitat Scroll of Honour Award and the title of National Forest City. These developments present Baotou as a modern city in which industrial civilization and ecological livability coexist.

The Zou Xikou migration was a large-scale population movement that lasted for more than four centuries. From the Ming Dynasty to the Republican period, large numbers of people from Shanxi and northern Shaanxi crossed Shahukou and other frontier passes and moved toward western Inner Mongolia. The folk tune known as "Zou Xikou" was not merely a familiar regional song, but also a cultural record of this collective migration experience. This long-term movement reshaped the demographic structure of Inner Mongolia and gradually transformed its economic organization and cultural landscape. Agricultural-pastoral production, Mongolian-Han urban life, and artistic forms generated through cultural exchange all became visible outcomes of this migration. Even in everyday practices, such as foodways and local dialects, the historical interaction between Shanxi-Shaanxi migrants and Inner Mongolian society remains evident.

Regional Culture of Inner Mongolia

The culture of Inner Mongolia has been shaped by the interaction between grassland ecology, nomadic traditions, and multi-ethnic coexistence. Its regional identity is not formed by a single cultural source, but by the long-term encounter between pastoral mobility, settled agriculture, frontier trade, religious belief, and modern industrial development.

Nomadic culture has long constituted the spiritual foundation of Inner Mongolia. Although patterns of production have gradually shifted from seasonal mobility to more settled forms of herding and farming, traditional activities such as horse racing, wrestling, and archery at the Nadam Fair continue to preserve the skills and values of grassland life. The reverence for nature associated with the belief in Eternal Heaven, together with Tibetan Buddhism and shamanic traditions, has contributed to the formation of religious and cultural landmarks such as Wudangzhao Monastery and Dazhao Temple. Long song, khoomei, and the morin khuur also remain important cultural expressions of the grassland world.

Migration movements such as Zou Xikou and Chuang Guandong further enriched the cultural structure of Inner Mongolia. In food culture, Mongolian dietary traditions such as hand-grabbed mutton and milk tea interacted with Shanxi-Shaanxi foodways such as oat noodles and baked wheaten cakes. In residential architecture, the double-pitched hard-gable roofs along Xikou Ancient Street can be understood as the result of a dialogue between Shanxi-Shaanxi building traditions and the climatic conditions of Baotou. In language and festival practices, Chinese and Mongolian elements coexist and overlap; customs such as presenting khata during the Spring Festival and celebrating the Nadam Fair together have become part of everyday regional life. Since the modern period, Baotou's industrial development, Hulunbuir's dairy industry, and Ordos's cashmere production have further added modern economic dimensions to regional identity.

The east-west span of approximately 2,400 kilometers has produced marked cultural differences within Inner Mongolia. In the eastern areas, including Hulunbuir and Hinggan League, language and foodways show strong influence from Northeast China. In the central region, including Hohhot, Baotou, and Ordos, Mongolian and Han cultures intersect most intensively, producing a plural and inclusive cultural landscape in which ritual traditions, represented by the Mausoleum of Genghis Khan, coexist with modern industries. In the western areas, including Alxa and Wuhai, proximity to Gansu and Ningxia has shaped dietary preferences and regional customs, while the desert ecosystem has encouraged cultural activities such as off-road exploration and Populus euphratica festivals.

Figure 2. A local dwelling type on Xikou Ancient Street derived from the residential forms of Shanxi and Shaanxi.

From historical sites such as the Mausoleum of Genghis Khan and the Site of Xanadu, to intangible cultural heritage including long song and embroidery, and to cultural symbols such as the Mongolian yurt and horse-based traditions, Inner Mongolian culture has continuously developed through the interaction between historical inheritance and modern transformation. This regional cultural background provides an important context for understanding the architectural adaptation of traditional roofed dwellings in Baotou.

Architectural Layout and Cultural Characteristics of Baijia Courtyard

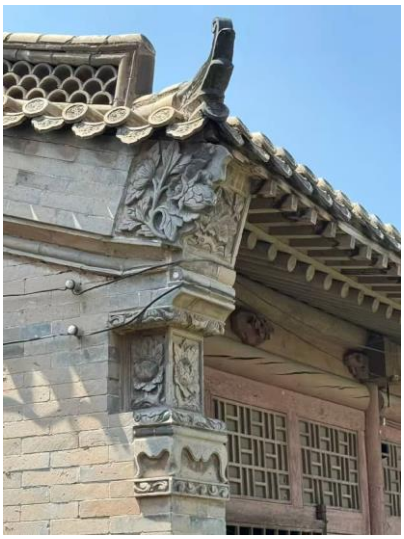
Regional Characteristics of the Courtyard

In terms of architectural origin, Baijia Courtyard does not belong to the tradition of Mongolian vernacular dwellings. Rather, it is a representative Han-style residence built in the Baotou region by wealthy Shanxi merchants during the late Qing Dynasty and the early Republican period under the cultural background of the Zou Xikou migration. While inheriting the artistic traditions of Jin-style architecture, this residential form also underwent adaptive transformation in response to local environmental conditions. It vividly reflects the social status, economic strength, and aesthetic aspirations of the affluent merchant class of the time, and may be regarded as a “living specimen” of the development of modern vernacular residential architecture in the Baotou region (Figure 3).

As the principal migrant group, people from Shanxi effectively transplanted the residential forms of their native region to Baotou, while also incorporating local ways of life and regional cultural practices. They introduced building types characteristic of Shanxi and Shaanxi, most notably the double-pitched hard-gable roof

with a relatively steep pitch of 25°-35°, which was better suited to Baotou's winter snow accumulation and summer rainstorms than the earlier flat-roofed structures or felt tents used locally. In decorative treatment, elaboration was reduced in favor of greater simplicity. Although the "scorpion-tail" ornaments at both ends of the main ridge were less elaborate than those of courtyards in Shanxi, they still preserved visible symbolic traces of the migrants' architectural homeland. At the same time, the courtyard layout expressed through the "one bright, two dark" spatial arrangement and the siheyuan form conveyed, through the staggered heights of the eaves and the hierarchical ordering of space, the migrants' continued adherence to family hierarchy and domestic order (Figure 4).

Figures 3. Front view of brick carvings on the gable-end piers of Baijia Courtyard.



Figures 4. Side view of brick carvings on the gable-end piers of Baijia Courtyard.

The craftsmen not only brought advanced building techniques with them, but also demonstrated a sophisticated understanding of local material use. They replaced the grey tiles commonly used in Shanxi with coarse earthenware gangwa tiles made from local clay and slate tiles from the Yinshan Mountains. These materials were laid with "one-over-two" and "one-over-three" overlapping methods to improve the waterproofing performance of the roof. To withstand the severe winter cold, craftsmen added a furnace-slag insulation layer to the traditional construction of roof boards and mud backing. They also used hemp-fiber lime mortar to repair and seal the joints between tiles. These techniques have continued to be transmitted and used locally.

Many details of the roof design also responded directly to the "half-farming, half-commercial" livelihood of local residents. The walkable roof, built with flat stone slabs or a thickened mud-backing layer, became a multifunctional space for drying grain and storing firewood. The chimney was placed on one side of the gable wall and fitted with a rain cap, which prevented rainwater from flowing back into the flue and reduced damage to the roof tiles. To cope with seasonal wind and sand, heavy edge-covering tiles were laid along the roof margins, while the eaves projection was limited to no more than 60 cm, reducing the risk of wind uplift. To further clarify the typological differences and regional adaptations between traditional roofed dwellings on Xikou Ancient Street in Baotou and those in Shanxi-Shaanxi, this study compares them in terms of roof form, roofing materials, decorative style, insulation technique, functional design, and chimney and wind-protection treatment, as shown in Table 1.

Table 1

Comparison Between Traditional Roofed Dwellings in Shanxi-Shaanxi and Those on Xikou Ancient Street in Baotou

Dimension of comparison	Traditional roofed dwellings in Shanxi-Shaanxi	Traditional roofed dwellings on Xikou Ancient Street in Baotou after the influence of the Zou Xikou migration	Main reasons for difference: Adaptation brought by the Zou Xikou migration
Roof form	Mainly double-pitched hard-gable roofs; some wealthy households adopted xieshan roofs. The roof pitch is relatively gentle, approximately 20°-28°.	Mainly double-pitched hard-gable roofs, with no xieshan roofs. The roof pitch is steeper, approximately 25°-35°.	The steeper pitch was adapted to Baotou's heavy winter snow, allowing snow to slide off quickly and reducing the risk of roof collapse.
Roofing materials	Mainly grey tiles, combined with grey ridges.	Mainly *gangwa* tiles and slate tiles.	This responded to the local shortage of grey-tile materials and reduced construction costs through the use of locally available resources.
Decorative style	Decoration is relatively elaborate. The main ridge and descending ridges often feature clay sculptures known as "five ridges and six beasts", while the eave corners are decorated with brick carvings.	Decoration is simplified. Only simple ornaments such as "scorpion tails" and ridge beasts are placed at both ends of the main ridge, with no brick carvings at the eave corners.	In the early settlement stage, livelihood was the priority, so unnecessary decorative costs were reduced. Simplification also avoided excessive roof loads caused by heavy ornamentation.
Insulation technique	A basic structure of roof boards and mud backing, without additional insulation.	A structure of roof boards, mud backing, and an interlayer of furnace slag or dry soil; in some cases, dry grass was added.	This responded to the severe winter cold in Baotou, where temperatures could fall below -20 °C. The additional insulation layer helped improve indoor thermal performance.
Functional design	The roof primarily served waterproofing and rain-sheltering functions and was rarely accessed by residents.	Many roofs were designed as walkable roofs for drying grain and storing firewood.	This adapted to the "half-farming, half-commercial" livelihood of Zou Xikou migrants, making full use of vertical space for storage and drying.
Chimney and wind protection	Chimneys were often placed near the center of the roof; the eaves had relatively long projections, approximately 80-100 cm.	Chimneys were placed on one side of the gable wall and fitted with rain caps; the eaves had shorter projections, approximately 40-60 cm.	Side-positioned chimneys helped prevent rainwater backflow, while shorter eaves resisted Baotou's strong spring winds and sandstorms and reduced the risk of eaves being lifted by wind.

Spatial Characteristics and Layout of the Courtyard

The two-entry siheyuan-type traditional roofed dwellings on Xikou Ancient Street can be understood as architectural products of the interaction between Shanxi-Shaanxi courtyard regulations brought by Zou Xikou migrants and the local conditions of Baotou. Among them, Baijia Courtyard is the most representative in terms of spatial layout. Its spatial organization is structured around four principles: progressive depth, functional zoning, reinforced enclosure, and regional adaptation. While continuing the family-based ethical order of the Central Plains, the courtyard layout also responds to the severe environmental conditions of the northern frontier (Figures 5-6).

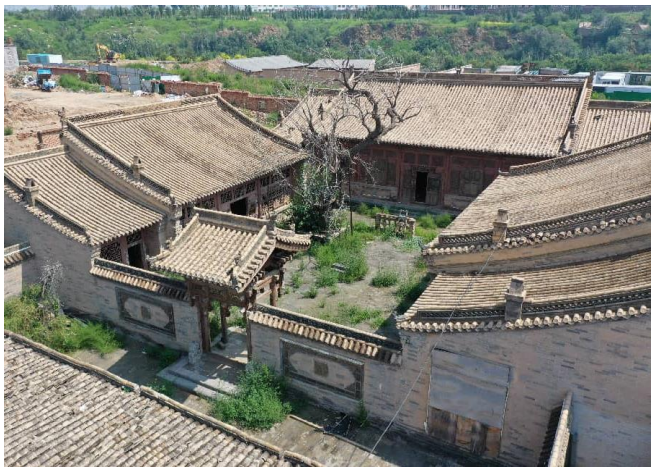


Figure 5. Aerial view of Baijia Courtyard.

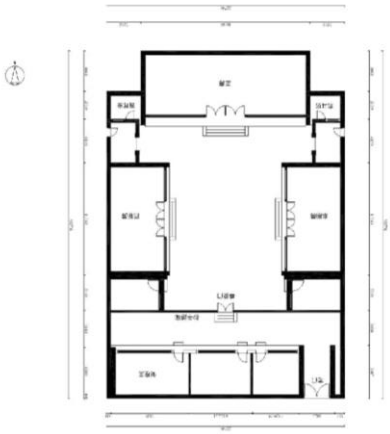


Figure 6. Plan of Baijia Courtyard.

Traditional Chinese courtyard architecture takes jin (the entry sequence) as its basic spatial unit. Through longitudinal extension, it produces a layered sequence of spaces arranged in progressive depth. As one of the representative layout types, the two-entry courtyard is organized through the gradual combination of gates, courts, courtyards, and rooms, constructing a dual order of ritual and domestic life, namely "outer ritual and inner residence". On the basis of this traditional spatial paradigm, the two-entry layout of Baijia Courtyard also makes specific adjustments to local natural conditions and human environments, forming an architectural entity that is both typologically general and regionally specific.

In terms of spatial organization, Baijia Courtyard adopts the typical courtyard layout of Shanxi and Shaanxi and strictly follows the axial symmetry of traditional Chinese architecture. The principal hall is located at the core of the central axis, while the secondary buildings, namely the wing rooms, are arranged on both sides. Through this carefully ordered spatial hierarchy, the courtyard expresses the ethical concepts of seniority, hierarchy, and differentiated status embedded in the traditional patriarchal system. The courtyard is enclosed by high solid walls, with very few windows or only small openings, forming an inward-looking and enclosed spatial pattern. This layout not only meets practical needs for security and defense, but also corresponds to the fengshui concept of "concealing wind and gathering qi" in traditional Chinese dwellings. At the same time, it performs a practical environmental function by resisting the strong winds and sandstorms of Inner Mongolia. Within the courtyard, architectural elements such as the chuihua gate divide different spatial zones and establish the functional sequence of "front hall and rear residence", allowing the interior space to shift gradually from public to private domains and creating a layered, enclosed, and tranquil residential experience.

Throughout the overall layout of Baijia Courtyard, the principles of "closed defense" and "regional adaptation" are consistently evident. The thick external walls, approximately 3-4 m high, protect the courtyard against strong wind, sand, and severe cold. The reversely-set rooms in the front courtyard have small outward-facing windows, balancing security with thermal performance. In the rear courtyard, doors and windows face south or open toward the skywell, maximizing access to sunlight. The roofs are uniformly covered with local gangwa tiles or slate tiles and laid with a "one-over-two" overlapping method to improve waterproofing. This integrated layout strategy combines the ethical order of Shanxi-Shaanxi dwellings with the environmental characteristics of Baotou. It separates production from domestic life, organizes public and private zones in a clear

hierarchy, and balances defense with residential comfort. In this sense, Baijia Courtyard can be understood as a material expression of Zou Xikou culture in architectural space.

The middle gate defines the boundary between the front and rear courtyards, transforming the Shanxi-Shaanxi concept of "front hall and rear residence" into a localized spatial arrangement. The front courtyard, used for external business and production activities, presents an open and orderly layout. The reversely-set rooms on the south side function both as gatehouse spaces and storage rooms. Their single-pitched roofs avoid blocking sunlight from the rear courtyard while also reducing material consumption. The open space at the center of the front courtyard allows for loading and unloading goods and drying agricultural products, and also functions as a buffer zone against wind and sand. The use of compacted loess or stone-slab paving, together with the setting of seepage wells, reflects a precise response to the dry climate of northern China (Figure 7).

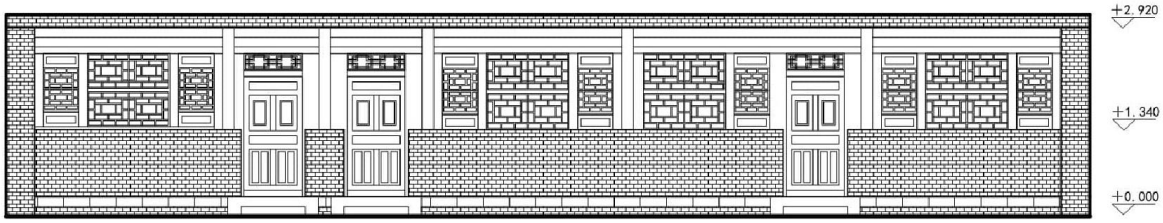


Figure 7. Reversely-set rooms of Baijia Courtyard.

The middle gate connecting the two courtyard sequences, also known as the chuihua gate, serves as a key node of spatial transition. Decorated with wood carvings, the chuihua gate is paired with a screen wall on the inner side. This arrangement prevents wind and sand from entering directly, while also corresponding to the folk concept of "concealing wind and gathering qi". Its double-pitched roof echoes the form of the principal hall in the rear courtyard, thereby strengthening the rhythmic order of the overall layout.

As the private domain of the household, the rear courtyard is more rigorously organized and clearly hierarchical. The principal hall, located on the north side and facing south, adopts a steep roof pitch of 25°-35° and is marked by "scorpion-tail" ridge ornaments, emphasizing the status of the senior family members. The east and west wing rooms have gentler roof pitches and are slightly lower than the principal hall, creating a clear visual hierarchy between primary and secondary spaces. The surrounding eave corridors connect the rooms, allowing residents to move through the courtyard conveniently even in rain or snow. The central skywell of the rear courtyard serves not only as the main space for family activities, but also as a means of ensuring ventilation and daylighting. With the addition of greenery, it introduces a modest sense of nature into everyday domestic life (Figures 8-9).

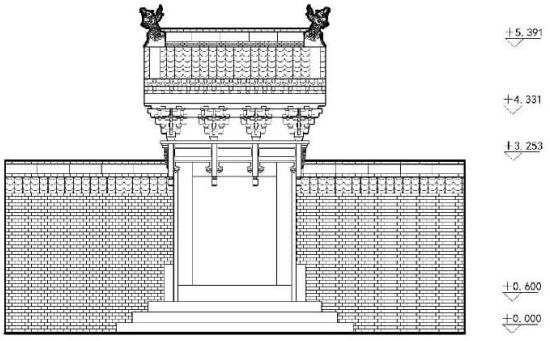


Figure 8. Chuihua gate of Baijia Courtyard.

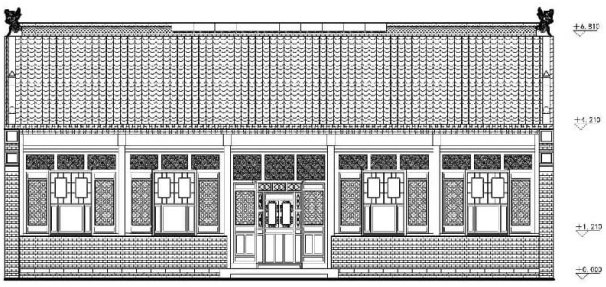


Figure 9. Principal hall of Baijia Courtyard.

Structural and Material Characteristics of the Courtyard

The structural system of Baijia Courtyard clearly demonstrates the building wisdom embodied in traditional residential construction in Inner Mongolia. The courtyard adopts a timber frame composed of wooden columns and beams as its principal load-bearing system, while brick walls serve as enclosure elements. The roof employs a composite construction consisting of a wheat-straw-and-mud bedding layer covered with tiles. This structural system has three notable characteristics. First, components such as columns and beams could be prefabricated in advance, which facilitated on-site assembly and greatly improved construction efficiency. Second, the self-weight of the roof helped enhance the overall stability of the structure. Third, the system formed an enclosure that provided both thermal insulation and heat protection.

In terms of specific construction treatment, different parts of the courtyard buildings display different technical responses. In the principal hall, the front eaves are extended through the hard-gable roof form to enlarge the usable space. The wing rooms adopt a half-beam framing system to form a single-pitched roof. Their front eaves are supported by wooden columns, while the rear ends of the beams rest on the rear eave wall. The wall rises to the highest point of the roof and forms a brick ridge, the outer side of which is finished with a small overhanging eave built in a corbelled manner as an edge treatment. The transitional hall mostly adopts a juanpeng-type beam frame, with wooden columns supporting both the front and rear eaves. Where the eaves project more deeply, additional eave columns are erected specifically to support the eave purlins (Figure 10).

The main load-bearing part of the doorway adopts a mixed brick-and-timber structure. The arch is built in brick, most commonly in either a semicircular or a flat-arch form, and the face of the arch is often decorated with simple molded linear ornament. Of particular interest is the local practice whereby craftsmen inserted a concealed continuous timber member across the top of the brick arch, forming a composite structure in which “timber is concealed within the brick arch”. This method takes advantage of the durability and weather resistance of brick, while also using the flexibility of timber to relieve structural loading. The gate-pier stones were carved from local sandstone, most of them in drum-shaped forms, and were tightly connected to the timber door frame above through mortise-and-tenon joints (Figure 11).

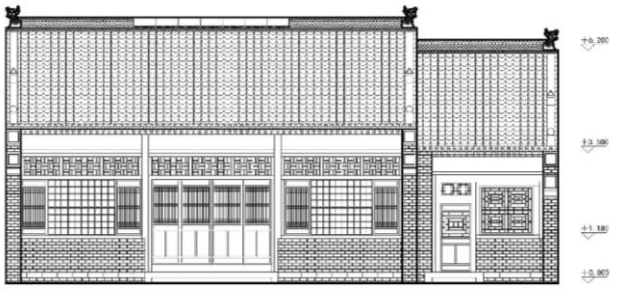


Figure 10. East wing rooms of Baijia Courtyard.

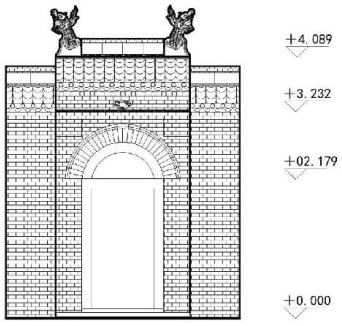


Figure 11. Doorway of Baijia Courtyard.

The roof structure is arranged in a layered sequence from bottom to top: rafters, reed matting, a wheat-straw-and-mud bedding layer, and, at the uppermost level, pan tiles. The pan tiles are laid in an upward-facing position and arranged in regular rows. Along both sides of the roof slope, two to three rows of combined covering tiles are usually used as edge treatment. The main ridge may be built in a simple form with grey bricks, or constructed in a more complex manner by alternating upward-facing and downward-facing pan tiles. These different ridge-building methods demonstrate both the refined craftsmanship of local builders and the diversity of construction techniques (Figure 12).

Wall masonry also reflects the principle of construction according to local conditions. The walls are usually built entirely with brick, although a combined method of brick masonry in the lower section and adobe blocks in the upper section is also found. The interior walls are approximately 30 cm thick, the exterior walls approximately 35 cm thick, and the gable walls are thickened to about 50 cm for structural reasons. The brickwork at the wall base is strictly controlled at a height of 1-1.1 m and follows the traditional rule of "building in odd numbers rather than even numbers". The interior wall surface is first leveled with wheat-straw mud and then finished with white lime plaster mixed with hemp fibers, producing a smooth and even surface.

In terms of material selection, the buildings make extensive use of locally available natural materials, including earth, stone, and timber. The grey bricks may have been transported from Shanxi or produced in local kilns, reflecting a rational use of resources from different regions as well as practical construction wisdom. As a key element of the architectural image, the main gate is particularly carefully built, often adopting the form of a manzi gate or ruyi gate with finely carved chitou brick decoration. The lintel, gate-pier stones, and other parts are decorated with stone carvings based on auspicious motifs and historical allusions, directly expressing the owner's aesthetic taste and cultural refinement.

Figure 12. Roof construction of Baijia Courtyard.

Decorative Characteristics of the Courtyard

In terms of decorative art, the brick carving, stone carving, and wood carving employed in Baijia Courtyard jointly constitute important carriers of the aesthetic value and cultural meaning of the residence.

As one of the most common forms of exterior decoration in vernacular dwellings, brick carving is widely used in key locations such as roof ridges, chitou, screen walls, and chimneys. The selected motifs are also rich in cultural symbolism. At the chitou, the "Four Gentlemen"—plum blossom, orchid, bamboo, and chrysanthemum—are frequently represented. These motifs employ natural imagery to symbolize virtue and reflect the moral qualities esteemed by literati in traditional Chinese culture. Peony motifs symbolize honor, prosperity, and wealth, expressing the homeowner's wish for family flourishing and prosperity. Continuous scroll patterns, by contrast, convey blessings of fertility, longevity, and enduring good fortune. As the visual focus of the courtyard, the screen wall features especially elaborate and carefully conceived brick-carved compositions. Its central motif is often a phoenix. In traditional Chinese culture, the phoenix is an auspicious bird associated with peace, dignity, and noble virtue. Around it are blooming peonies, various floral motifs, and swirling cloud patterns, together forming such auspicious visual themes as "peonies attracting the phoenix" and "gathering of auspicious clouds", and creating an overall image of abundance, prosperity, and enduring blessings (Figures 13-14).

Figure 13. Brick carvings of Baijia Courtyard.

Figure 14. Brick-carved screen wall of Baijia Courtyard.

Wood carving is mainly concentrated under the eaves and in interior spaces, including beams, architraves, queti brackets (carved bracket-like elements placed beneath beams or eaves), the chuihua gate, doors, windows, and latticework. The window-lattice patterns are particularly rich and varied, including traditional motifs such as bubujin patterns, lantern-brocade patterns, swastika patterns, diamond patterns, and longevity-character patterns. These motifs not only create visual refinement, but also carry auspicious meanings such as good fortune, prosperity, family reunion, and domestic harmony. In addition to their structural role, these wood-carved elements display a high level of craftsmanship. Their compositions are clearly layered, and their lines are fluid and lively, demonstrating the technical refinement of Jin-style craftsmen in the Qing Dynasty (Figure 15).

Stone carving, by contrast, combines practical function with symbolic meaning. It is mainly applied to load-bearing and transitional elements such as gate-pier stones, column bases, and steps. Among these, the gate-pier stones are most typically represented by the baogu stone, or drum-shaped gate stone. Both their form and carving technique are highly refined. Such stones have long served as material symbols of family status and household wealth, and they therefore carry strong social and cultural significance (Figure 16).

Figure 15. Wood carvings on the chuihua gate of Baijia Courtyard.

Figure 16. Carved gate-pier stones of the chuihua gate of Baijia Courtyard.

Conclusion

The traditional roofed dwellings on Xikou Ancient Street are not merely architectural shelters against wind and rain; they are also spatial evidence of the migration history embodied in the Zou Xikou movement. Their architectural forms preserve the memory of Shanxi-Shaanxi dwelling traditions, while construction strategies such as the use of gangwa tiles and slate roofing, insulation interlayers, and walkable roofs responded to the wind, sand, and cold climate of western Inner Mongolia. In their form, materials, functions, and decorative details, these dwellings reveal the resilience and creativity of migrant communities as they sought survival, development, and cultural continuity in a new environment.

These dwellings also bear witness to the interaction and mutual penetration of agrarian and nomadic cultures. They demonstrate the agency of human communities in adapting to natural environments and reshaping collective identity through architectural practice. Further research on these characteristics can provide a useful basis for the conservation of traditional roofed dwellings in northern China, while also offering an architectural perspective for understanding population migration and cultural integration in Chinese history.

References

Chen, J. J. (2011). Analysis of the spatial form of courtyard dwellings in northern Shanxi. *Shanxi Architecture, 37*(35), 6-8.

Li, J. Q., & Dai, X. (2018). Research on the construction of tourism characteristic towns in Inner Mongolia from the perspective of cultural field: A case study of Tuoketuo Green Expo Town. *Urbanism and Architecture, 25*(9), 37-40.

Li, L., & Xia, X. Y. (2022). Research on decorative forms and cultural structures of traditional dwellings in Inner Mongolia. *Huazhong Architecture, 40*(9), 103-107.

Li, P. T., Feng, P., & Geng, Z. Y. (2023). Research on conservation strategies for traditional dwellings in the Hohhot-Baotou region under the rural revitalization strategy. *Theoretical Research in Urban Construction, 13*(7), 50-52.

Lu, Y. D. (2003). *Chinese vernacular architecture, Volume I*. Guangzhou: South China University of Technology Press.

Lv, S. Y., & Li, P. T. (2025). Quantitative research on the morphological characteristics of traditional dwellings in Baotou, Inner Mongolia. *Huazhong Architecture, 43*(12), 10-14.

Qi, Z. Y., Cheng, S. N., & Wang, Z. Q. (2021). Research on the formal characteristics and differentiation of traditional dwellings in the Jin-Dialect Dabaopian Area of Inner Mongolia under the background of migration: A case study of the Hohhot Region. *Heritage Architecture, 6*(3), 15-24.

Song, J. Y., & Kong, J. (2020). Research on construction techniques of traditional adobe dwellings along the Yellow River in Inner Mongolia. *Huazhong Architecture, 38*(7), 91-94.

Tian, Y. T., Ding, Y., & Hao, Z. G. (2022). A review of research on construction wisdom and renewal of traditional dwellings in northwest China. *Architecture & Culture, 19*(9), 141-143.

Wang, J. P., & Tang, L. R. (2021). Jin-style local conditions and vernacular architecture. *Heritage Architecture, 6*(2), 1-11.

Wang, M. Q., Li, P. T., & Feng, P. (2024). Research on the construction of traditional earthen dwellings in the Hohhot-Baotou Region of Inner Mongolia. *Traditional Chinese Architecture and Gardens, 42*(3), 34-38.

Wang, W., & Yang, Y. X. (2020). Constituent elements and spatial regeneration strategies of earthen dwellings: A case study of traditional dwellings in Meidaiqiao Village. *Urbanism and Architecture, 17*(35), 139-141.

Zhang, P. X., Wang, Z. N., & Gao, C. (2021). Research on the architectural features and conservation development strategies of traditional village dwellings: A case study of Longshengzhuang. *Urbanism and Architecture, 28*(3), 66-68.

Zhang, X., & Sun, L. P. (2020). A comparative study of traditional Han merchant houses in Shanxi and Inner Mongolia under the influence of Zou Xikou: A case study of northern Shanxi and central Inner Mongolia. *Create Living, 38*(9), 57-59.

Zhang, X., & Sun, L. P. (2021). Homogeneous but heterogeneous: A comparative study of traditional Han farmhouses in northern Shanxi and central Inner Mongolia. *Architecture & Culture, 18*(2), 269-271.