

## **Issues of Preserving National Traditions and Adapting Them to Modern Requirements in the Architecture of Mid-Rise Residential Buildings**

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**Abstract:** This article analyzes the issues of preserving national traditions in the architecture of mid-rise residential buildings and developing them in accordance with modern requirements. During the research, the integration of traditional architectural elements such as courtyard systems, the harmony between interior and exterior spaces, national ornaments, and compositional solutions with modern construction technologies is examined.

Additionally, new typological solutions for mid-rise residential buildings are proposed based on energy efficiency, environmental sustainability, functional planning, and urban planning requirements. The article identifies key principles for creating modern architecture while preserving national identity and explores their practical application.

The research results demonstrate that by integrating traditional architectural values into modern design processes, it is possible to create residential environments that are not only aesthetically rich but also socially and environmentally sustainable.

**Keywords:** Mid-rise residential buildings, national identity, national traditions, modern architecture, urbanization, climate adaptation, facade, planning, energy efficiency, architectural identity, urban planning.

### **Introduction**

Today, due to the rapid development of urbanization processes, the demand for housing in cities is sharply increasing. In particular, mid-rise residential buildings are widely used as an economically, environmentally, and socially efficient solution [1].

At the same time, the strengthening of global architectural trends has led to the risk of losing national architectural identity. Mid-rise residential buildings are considered one of the most optimal housing types in modern cities. Such buildings ensure relatively high population density, allow efficient use of land, and play an important role in shaping the architectural integrity of the urban environment [2].

At the same time, in designing such residential buildings, not only functional and technical requirements are important, but also the preservation of national architectural traditions plays a significant role. Architecture serves as a crucial medium that reflects the history, culture, lifestyle, and aesthetic values of a nation.

Preserving national traditions primarily involves continuing the historical construction experience of the people, traditional housing organization methods, decorative arts, courtyard and interior spatial structures, climate-responsive architectural solutions, and the use of local materials [3]. In Uzbek national residential architecture, elements such as inner courtyards, ayvans (verandas), shaded transitional spaces, natural ventilation, rational use of sunlight, and traditional ornaments and patterns occupy an essential place.

## Methodology

The research methodology is based on a qualitative and comparative architectural analysis aimed at identifying effective ways to integrate national traditions into modern mid rise residential design. Initially, a comprehensive review of historical and contemporary architectural literature was conducted to understand the core principles of traditional Uzbek residential architecture, including courtyard organization, climate responsive design, material use, and decorative elements [4]. This was followed by a comparative analysis of selected case studies of modern mid rise residential buildings that incorporate national elements, focusing on planning structure, façade composition, environmental performance, and social functionality. Visual materials and design examples were also examined to evaluate how traditional motifs are reinterpreted using modern construction technologies. In addition, the study applied a synthesis approach to combine traditional architectural principles with current requirements such as energy efficiency, urban density, and contemporary lifestyles [5]. The findings were then systematized to formulate practical design recommendations that ensure both cultural continuity and architectural innovation.

## Result and Discussion

Modern mid-rise residential buildings, on the other hand, are characterized by features such as elevators, parking facilities, energy-efficient systems, compliance with sanitary and hygienic standards, safety requirements, convenient planning, and modern infrastructure. Therefore, the main challenge lies in creating buildings that meet contemporary living standards while preserving the spirit of traditional architecture [6].

In this context, the first important direction is planning solutions. In traditional Uzbek houses, family life was organized around an inner courtyard. In modern multi-apartment buildings, this principle can be reinterpreted in the form of shared internal green courtyards, semi-enclosed recreational areas, children's play zones, and open spaces for social interaction among residents. In other words, the historical concept of the courtyard is transformed into a collective internal space under contemporary conditions [7]. This approach not only preserves the national spirit but also enhances social activity and comfort for residents.

The second important aspect is façade design. Modern residential buildings often tend to have simplified and uniform façades, which results in the loss of national identity. To preserve national traditions, façade design can incorporate local ornamental motifs, compositional elements inspired by ganch (stucco) and wood carving, arch forms, lattice techniques, veranda-like structures, and harmonious color palettes. However, it is important not to directly replicate these elements, but rather reinterpret them using modern materials and technologies [8]. In this way, the building does not become a historical replica, but instead represents a contemporary structure enriched with a national architectural spirit.



*Figure 1. Integration of national ornaments and modern architectural design in a mid-rise residential building.*

*Source: Author's work / image generated with the assistance of artificial intelligence.*

The presented image illustrates a mid-rise residential building facade where national architectural elements such as oriental arches, geometric ornaments, and decorative lattice screens are harmoniously integrated with modern construction approaches [9]. The building's composition clearly expresses symmetry, rhythm, and vertical accents, which together serve as a design solution that meets contemporary architectural requirements while preserving national

traditions (Figure 1).



Figure 2. ArchDaily. Integration of national traditions and modern architecture in a mid-rise residential building.

The presented image reflects the architecture of a mid-rise residential building, where national traditional elements are harmoniously combined with modern design solutions. The façade incorporates oriental patterns, carved lattice screens, and arched forms, which give the building a distinct national character. At the same time, contemporary requirements such as comfort, environmental sustainability, and aesthetic harmony are ensured through the use of balconies, green areas, and modern structural systems [10]. This

project represents an effective example of integrating modern architecture while preserving national heritage (Figure 2).



Figure 3. ArchDaily. An example of adapting national traditions to modern requirements in the architecture of mid-rise residential buildings.

The third important issue is climate-responsive architectural solutions. In traditional Uzbek architecture, methods such as thick walls, shaded verandas (*ayvans*), natural ventilation, and the use of inner courtyards were applied to create a comfortable microclimate in hot conditions. In modern mid-rise residential buildings, this experience can be utilized from an energy-efficiency perspective [11], [12]. Solar panels, loggias and balconies, internal green spaces, planning solutions that allow cross-ventilation, thermal insulation

materials, and shaded façade systems all contribute to harmonizing traditional architectural knowledge with modern ecological requirements.

He presented image illustrates an example of a mid-rise (4–5 storey) residential building designed in accordance with modern requirements while being based on national architectural traditions. In the structural solution of the building, local construction material fired brick plays a key role, ensuring durability and adaptation to climatic conditions.

The fourth direction is the use of local construction materials and decorative techniques. National traditions are expressed not only in form but also in material selection. Materials such as brick, wood, ceramics, and natural stone were widely used in historical architecture [13]. In contemporary construction, alongside modern structural systems, the texture and aesthetic qualities of local materials can be effectively applied. This approach connects the building's appearance with its regional context, reduces construction costs, and strengthens local architectural identity.

In facade decoration, traditional ceramic tiles (*koshin*), colored mosaics, and geometric ornaments are widely used. In particular, the arched composition at the central entrance and the balconies on the upper

floors clearly reflect oriental architectural traditions. Wooden carving elements are applied in balcony railings and columns, while stucco (*ganch*) decorations are used on wall surfaces. These features not only enhance the building's aesthetic appeal but also convey a strong sense of national identity. The rhythmic repetition between floors and the symmetrical structure ensure the compositional balance of the architecture (Figure 3).

The fifth aspect is the consideration of modern lifestyles and family needs. While traditional housing was mainly designed for large families, today there is a demand for diverse housing types suitable for small families, young households, elderly residents, and various social groups [14]. Therefore, preserving national traditions should not be limited to external appearance but must also be reflected in internal functional solutions. For example, aspects such as hospitality culture, family gatherings, gender-related spatial customs, and the relationship between kitchen and living spaces should be reconsidered and adapted to modern planning requirements.

From an urban planning perspective, this issue is also highly significant. Mid-rise residential buildings must fit harmoniously into the historical urban environment and should not disrupt the existing street scale and silhouette. Particularly in the case of Samarkand, new residential developments should align with historical context in terms of building height, roof form, color schemes, street integration, and open space systems. Otherwise, new constructions may appear as foreign elements within the urban fabric.

However, several challenges exist in this direction. Firstly, in many projects, national identity is reduced to superficial decoration, where attempts are made to create a “national look” merely by adding ornaments. In reality, true national identity should be reflected in spatial organization, structural logic, climate responsiveness, and the creation of a human-centered environment. Secondly, in some cases, modern construction standards and economic efficiency requirements limit the application of traditional elements [15]. Thirdly, the insufficient level of in-depth knowledge of traditional architectural heritage among designers also poses a significant challenge.

To address these challenges, several recommendations can be proposed. First, architects and urban planners should conduct in-depth studies of national architectural heritage. Second, it is necessary to develop guidelines and regulatory frameworks for the scientifically grounded application of national traditions in modern residential design. Third, it is advisable to create model projects that take into account local climate, culture, and lifestyle. Fourth, the preservation of historical and regional identity in the development of new residential areas should be supported at the level of state policy.

## Conclusion

Preserving national traditions and adapting them to modern requirements in the architecture of mid-rise residential buildings is one of the pressing issues in contemporary architecture. In this process, it is important not to replicate the past heritage exactly, but to creatively reinterpret its essence within modern conditions. Only in this way is it possible to create residential environments that embody national spirit while being comfortable, modern, environmentally sustainable, and aesthetically refined.

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