

Research paper

MULTI-FAMILY HOUSING IN SKOPJE DURING THE PERIOD OF MODERNISM FROM 1945 – 1980.

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Abstract

In the post-war period, Skopje became a modern and functional city, divided into zones for basic functions, with a large number of built multi-family residential buildings under the influence of the world Modern movement. However, this period of construction was interrupted by the catastrophic floods in 1962, followed by an earthquake in 1963. The city was rebuilt in the spirit of Modernism and the world's architectural avant-garde of the time. The focus of this research is on the functional and design characteristics of multi-family residential buildings built in the later period of Skopje Modernism. These events created two periods of intensified construction of Skopje – first one could be marked as development between two wars, from 1945 to 1963, and the second one is reconstruction of the city after earthquake – which created first detailed modernization of Skopje. The primary goal of this research is the analysis of the physical and functional aspects of these facilities and the assessment of how well they fit into the established criteria model. The results of this assessment can then be used to inform future design decisions and better understand the relationship between typology and design.

Key words: Multi-family housing, Modern architecture, Analysis, Function, Typology

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1. INTRODUCTION

The architectural transformation of Skopje in the decades following the Second World War represents a pivotal chapter in the city's urban and cultural development. The immediate post-war period marked the beginning of intensive construction efforts aimed at rebuilding and modernizing the urban fabric. However, it was the devastating floods in 1962, followed by earthquake of 1963 that catalyzed a more comprehensive and large-scale reconstruction, positioning Skopje as a focal point of architectural and urban experimentation within the broader context of socialist Yugoslavia. This period of renewal not only shaped the city's physical landscape but also reflected the ideological, social, and cultural currents of its time.

This dissertation aims to explore and critically assess the architectural legacy of multi-family residential buildings constructed in Skopje during the post-war modernist era, with particular emphasis on the period between 1945 and 1980. Special attention is given to developments following the 1963 earthquake, which introduced a new scale and urgency to residential construction. The study will identify and valorize characteristic residential typologies, offering a detailed classification and typological analysis. Furthermore, it will investigate the architectural form, structural systems, and spatial organization of selected buildings, situating them within the broader theoretical discourse on late modernism and urban planning in socialist contexts [1]. The architectural phenomena under study will be examined not only as physical structures but as cultural and historical artifacts that embody the socio-political narratives of their time. Through a combination of archival research, field analysis, and case study methodology, representative examples will be critically evaluated to uncover the values and intentions embedded in their design and construction.

A notable illustration of Skopje's authentic architectural identity across two key historical phases can be observed within the central urban area through two distinct examples of collective residential housing. The first, commonly referred to as the "Aegean Buildings," was constructed in the early 1950s, while the second, the "City Wall" residential and commercial complex, emerged decade later during the post-earthquake reconstruction era. These two architectural entities will serve as case studies, each representing a typological model corresponding to their respective periods of development. In addition to the in-depth examination of these selected buildings, a detailed systematization of their architectural components and elements will be conducted, contributing to the objective and comprehensive analysis of the research subject.

2. MULTI-FAMILY RESIDENTIAL BUILDINGS IN THE FRAMEWORK OF THE CENTRAL CITY CORE

Integral to the reshaping of the city center was the introduction of multi-family residential complexes that embodied these modernist ideals. Notable among these were the City Wall and the Aegean Buildings, two large-scale residential interventions strategically located within the heart of Skopje (Figure 1). These complexes were not conceived as isolated housing units, but were integrated into a broader urban composition, framing major boulevards and defining the spatial character of the new city core. The City Wall complex formed a modern reinterpretation of a traditional defensive perimeter, while the Aegean Buildings articulated dense residential corridors along the reconstructed grid, both contributing to the consolidation of the urban structure.

By combining residential functions with public spaces, commercial uses, and pedestrian connectivity, these projects exemplified a holistic approach to urban living. Multi-family residential architecture thus played a pivotal role in both the physical reconstruction and the symbolic modernization of Skopje, establishing a resilient, functional, and socially cohesive urban core.

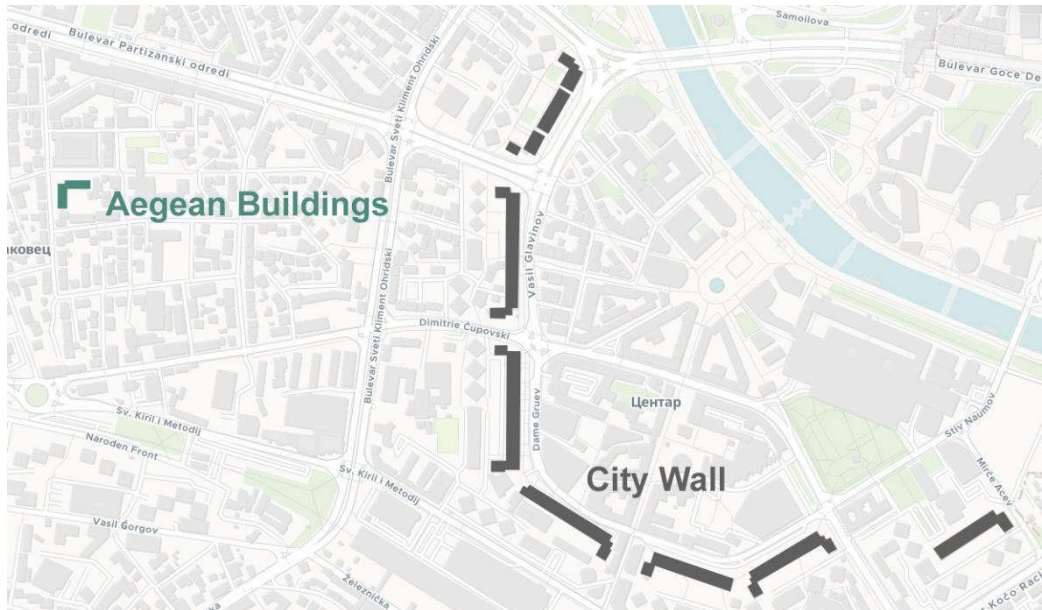


Figure 1. Schematic representation of the selected buildings in the city center
(Source: author)

3. CASE STUDIES

3.1. Case study 1 – „Aegean Buildings“, a collective housing on the Borka Taleski street in Skopje

In the period immediately following the conclusion of the Second World War, Skopje—as well as the broader region of Macedonia—witnessed a significant surge in the construction of collective residential housing. Characteristic of this early post-war phase was the emergence of grouped low-rise buildings, typically limited to a maximum of four stories, marking the initial steps in the organized development of multi-family housing. The new collective housing projects were largely influenced by functionalist and rationalist approaches, prioritizing economy of space, structural efficiency, and standardized forms. These developments were frequently situated within newly planned urban neighborhoods, where attention was given to communal green spaces and proximity to essential infrastructure, in accordance with the principles of the Athens Charter.

During the 1950s, architectural design began to shift from purely utilitarian forms toward a more refined expression of modernist aesthetics. Architects in Skopje, while still operating under centralized planning frameworks, gradually introduced localized elements into their designs, contributing to a nascent architectural identity that combined international modernism with regional specificity.

3.1.1. Architectural-Urban Structure

The Aegean Buildings, completed in 1951, represent a significant example of post-war residential architecture in Skopje. According to resident accounts, the complex was initially intended to house refugees displaced by the Greek Civil War (1946–1949). Despite their architectural significance, architect responsible for designing the Aegean Buildings remains unidentified in available records. The architectural composition consists of two elongated volumes arranged orthogonally, with a slight misalignment at their intersection, resulting in a softened transition rather than a rigid angular junction.

The buildings are set back approximately six meters from the property boundary, establishing a spatial buffer that enhances the sense of privacy and separation from the surrounding urban environment. This semi-public zone, further enriched with planted greenery, contributes to the creation of a calm and secluded atmosphere (Figure 2). Each volume measures approximately 10 meters in width and 35 meters in length, and contains two separate access points, each serving four residential units. In total, the complex comprises 16 units. Despite its central location within the urban fabric of Skopje, the overall low density and strategic orientation of the buildings foster a distinct sense of domestic tranquility and spatial intimacy.

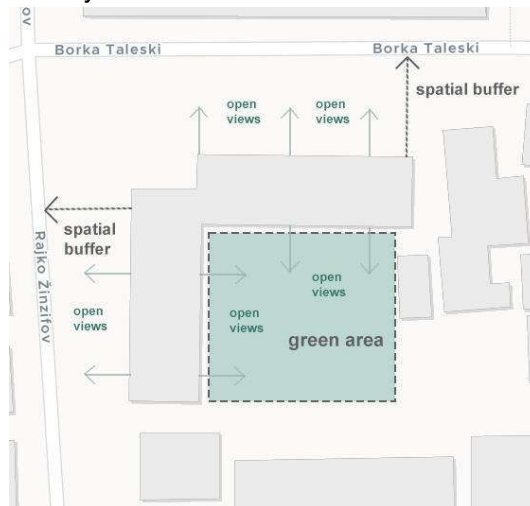


Figure 2. Schematic representation of architectural - urban structure (Source: author)

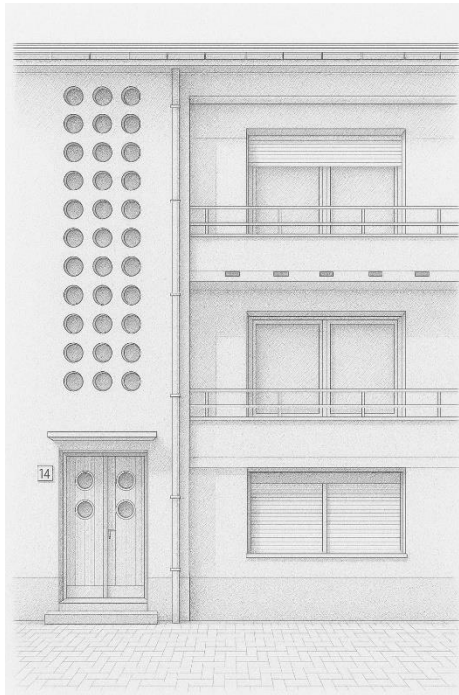
3.1.2. Detail

Architectural detailing in the Aegean Buildings reflects the principles of mid-20th-century modernism, with a strong emphasis on clarity of function and material honesty. A defining visual and functional feature is the treatment of the entrances and stairwells, which are punctuated by prefabricated circular openings—an element that recurs in the design of the original wooden entrance doors (Figure 3). This motif not only offers aesthetic value but also contributes to the modulation of light and ventilation within the common areas.

The preservation of these original architectural elements throughout the building is particularly noteworthy, given the passage of time and ongoing use. The front façade is distinguished by continuous terraces and prominent stairwells, which span the length of the residential units, aligning with the location of principal living spaces [2]. The exterior is finished with a natural cement plaster, providing a neutral and robust surface, while the recessed

sections of the façade are rendered in a light yellow tone, introducing visual contrast and enhancing the overall lightness of the elevation.

The roof is constructed using a traditional pitched solution, enabling the integration of attic spaces for each unit. These are typically used for additional storage, further optimizing the functionality of the spatial layout.



*Figure 3. Part of north façade of residential building - facing the Borka Taleski street
(Source: author)*

3.1.3. Functional organization

The design approach of the Aegean Buildings is grounded in the principles of functionalism, characteristic of the architectural trends of the 1950s. Rooted in the belief that architectural form should be primarily guided by practical utility, functionalism emerged as a critical response to both pre-war eclecticism and the decorative excesses of earlier styles. During this era, functionality was not only a technical concern but also a moral imperative, aligning closely with the Modernist ethos of rationality, simplicity, and honesty in material expression. This means that every component of the building serves a clearly defined purpose, reflecting a commitment to utility and spatial efficiency. The internal configuration of the residential units follows a rational and efficient layout [3].

Each apartment includes a semi-subterranean basement, which is elevated slightly above ground level to accommodate windows that allow for natural light penetration. This design strategy facilitates a raised ground floor, enhancing the living conditions in terms of light and air quality.

Residential units are functionally organized, with service spaces—such as bathrooms, separate toilets, and kitchens (including pantries)—located towards the rear of the units. This zoning strategy delineates private and utility areas from the primary living zones situated at the front, which benefit from direct access to the terraces. The inclusion of attic spaces further

contributes to the practical functionality of the units, offering supplementary storage without disrupting the spatial logic of the living areas (Figure 4).

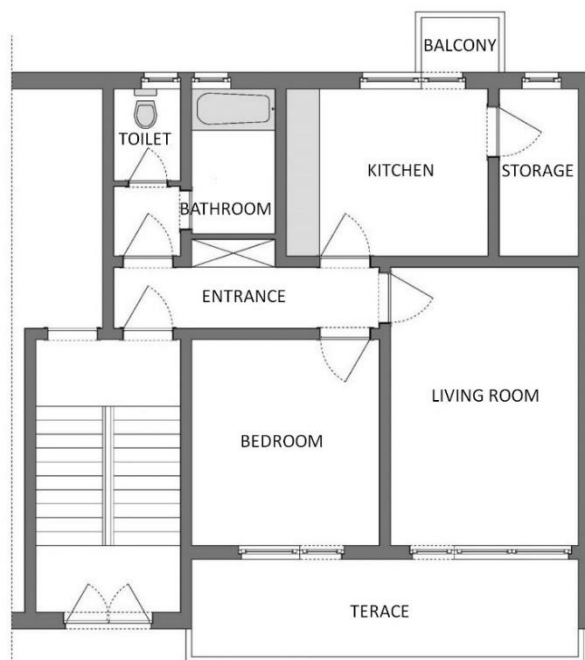


Figure 4. Characteristic layout of living space (Source: author)

Owing to the relatively shallow depth of the building tract, the apartments benefit from dual orientation, extending along both the north–south and east–west axes. A notable architectural feature is the deliberate minimization of corridor spaces, with circulation areas limited primarily to the entrance zone. This design approach reflects an emphasis on spatial efficiency and a commitment to maximizing the usable floor area.

3.2. Case study 2 – “City Wall”, residential and building complex that encircles the city center in Skopje

The reconstruction efforts gained a new dimension following the 1963 earthquake, which devastated large parts of the city. This event not only accelerated urban renewal but also provided opportunities for international collaboration, most notably through the United Nations-supported master plan led by the Japanese architect Kenzo Tange. In the wake of this disaster, Skopje became a testing ground for advanced architectural experimentation and urban planning, further solidifying its role in shaping late modernist architecture in the region. One of best examples for that is residential complex called City Wall, built in the 1966-1968 period by group of authors. Authors of horizontal blocks are Nikola Bogachev, Slavko Đurić, Ljubinka Malenkova, Aleksandar Serafimovski, Simeon Simoski and Vera Kosevska, author of type B tower blocks is Aleksandar Smilevski and authors of type M tower blocks are Aleksandar Serafimovski, Vasilka Ladinska, Dimitar Dimitrov, Rosanda Minčeva and Slavko Đurić.

3.2.1. Architectural-Urban Structure

As a fundamental component of the city center, the proposed composition strategically emphasizes and encircles the urban core, with the positioning of buildings situated on the eastern bank of the Vardar River. The urban perimeter is delineated by a modern reinterpretation of a ring-wall system, composed of interconnected block structures (P+6, height 24 meters) and vertical tower elements (P+12, height 45 meters) (Figures 5 and 6).

The intervention within the City Wall area aimed to reconfigure the fragmented urban fabric by integrating the temporal layers of the city center and enhancing the visual and physical qualities of the zone where two distinct urban matrices intersect [4]. The spatial strategy involved the careful placement of towers and blocks, which introduced formal diversity while simultaneously reinforcing the cohesion of the urban structure (Figure 5). The towers were systematically organized into clusters of two or three and positioned along streets intersecting the linear formation of blocks adjacent to the inner ring-road, creating a rhythmic and dynamic urban edge.

The dual-structured arrangement predominantly faces the inner ring-road, with the principal entrances of residential and commercial spaces oriented accordingly. The inner portion of the composition remains largely pedestrianized, ensuring a contrast between the vehicular outer boundary and the tranquil, community-focused inner spaces.

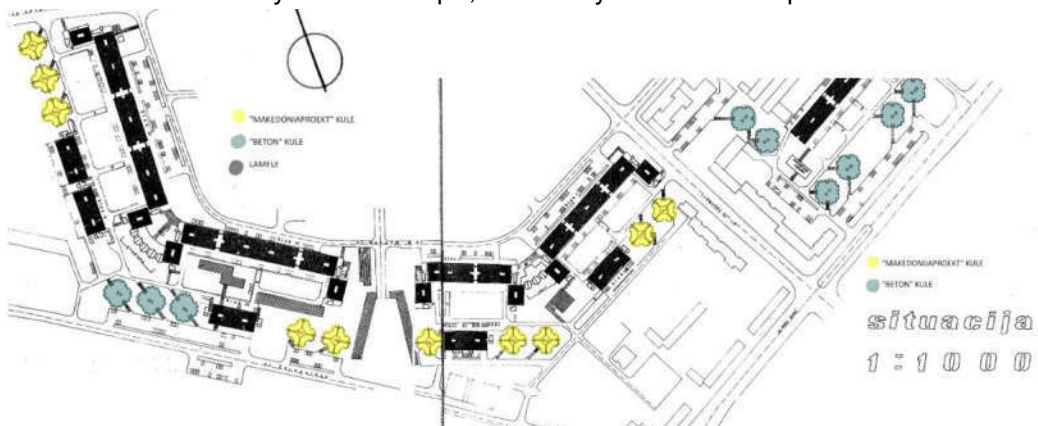


Figure 5. Ground floor situation and position of the complex with context
(Source: Master plan for Skopje, 1965, edited by author)

A network of pedestrian passages connects these zones, often tracing the alignments of the historic street grid and facilitating a smooth transition from public to semi-public spaces within the residential ensemble.

While the use of two distinct building types introduced architectural variety, the primary rationale for the inclusion of towers was to improve cross-ventilation within the dense urban environment. By breaking the massing of the blocks and facilitating airflow, the towers significantly contributed to the environmental comfort of the area [5].

3.2.2. Detail

The architectural expression of the City Wall residential complex is characterized by a restrained yet dynamic treatment of the façade, which reflects the modernist principles underlying the overall urban concept. The use of modular elements and rhythmic fenestration

patterns reinforces the compositional clarity of the building volumes while introducing a sense of human scale across the expansive urban perimeter [6].

The façade articulation is deliberately minimalistic, employing horizontal and vertical divisions that accentuate the linearity of the blocks and the verticality of the towers. Balconies, window groupings, and subtle reliefs in the surface treatment contribute to a carefully modulated play of light and shadow, enhancing the visual depth of the elevations without resorting to excessive ornamentation (Figure 6).



Figure 6. 3D model of City wall tower (Source: collective MEELEM, made in Revit)

Materiality plays a crucial role in defining the architectural character of the complex. Prefabricated concrete panels, exposed aggregate surfaces, and smooth plaster finishes were utilized to ensure both durability and a consistent aesthetic language across the ensemble. The materials were selected not only for their functional robustness but also for their ability to age gracefully within the urban environment.

Architectural detailing emphasizes functionality and clarity, with particular attention given to the integration of entrances, stairwells, and communal terraces into the overall façade composition. These elements are often expressed through slight volumetric shifts or subtle textural changes, allowing the differentiation of public and private zones within the architectural whole.

Overall, the façade treatment of the City Wall complex encapsulates the ideals of modernist urbanism, seeking to balance aesthetic restraint, environmental responsiveness, and social functionality within a cohesive architectural language.

3.2.3. Functional organization

The architectural articulation of the residential buildings incorporates a variety of apartment types, designed to address diverse user needs.

Each residential block and tower is provisioned with a set of auxiliary spaces intended to enhance community life. These include a multipurpose room for house council meetings and children's activities, a two-room apartment designated for the housemaster, a workshop equipped with storage facilities, rooms dedicated to the storage of bicycles and strollers, and shared drying rooms located at intermediate floor levels (mezzanines).

The typical floor plan of the City Wall Tower demonstrates a highly rationalized and efficient functional organization, characteristic of the late modernist approach to residential architecture. The plan is organized around a central vertical circulation core, consisting of stairwells and elevators, ensuring clear and equitable access to all apartment units. This central core serves as a communal node, minimizing corridor lengths and thereby optimizing usable residential space.

Each typical floor accommodates four residential units, systematically arranged around the core to ensure maximum efficiency in layout and ease of orientation. The apartments are designed with a clear division between the day and night zones. Upon entry, residents are welcomed into an anteroom (1), which serves as a transitional buffer between public circulation and private living spaces. This is followed by access to the living room (2), typically adjacent to a kitchen (3) and dining area (5), promoting functional adjacency and facilitating domestic routines.

Private areas are carefully sequestered from public zones. The apartments contain both a children's bedroom (7) and a parental bedroom (8), always located along the periphery of the floor plan to maximize natural lighting and ventilation. Supporting spaces such as the bathroom (9), WC (10), and storage rooms (4) are strategically positioned close to bedrooms and circulation paths, reinforcing spatial logic and convenience.

Generous balconies (12) are incorporated into each unit, enhancing the living quality by providing private outdoor spaces while also contributing to the climatic performance of the apartments through shading and ventilation. The presence of integrated storage solutions such as wardrobes (11) further enhances the functional utility of the apartments, minimizing clutter and promoting efficient use of space (Figure 7) [7].

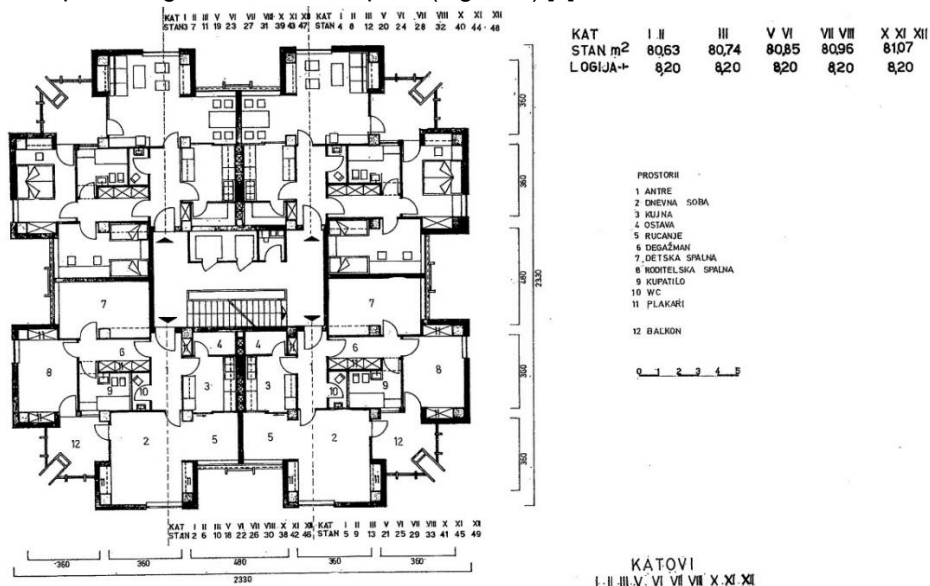


Figure 7. Typical floor plan of City Wall Tower (Source: Master plan for Skopje, 1965)

A notable feature of the organization is the symmetrical layout, which ensures that all units have similar levels of access to natural light and views. The structural grid of 360 cm modular spans further supports a rational and adaptable interior division, enabling flexibility in apartment typologies and future adaptability.

In summary, the typical floor plan of the City Wall Tower reflects a disciplined and human-centered functional organization. It effectively balances efficiency, comfort, and flexibility, aligning with the broader urbanistic and architectural goals of the City Wall complex, which sought to create modern, healthy living environments within a dense urban context [8].

3.3. Comparative analysis of two case studies

The following comparative analysis explores the similarities and differences between these two approaches, highlighting their architectural, functional, and urbanistic implications within the evolving context of Skopje's development.

Category	Aegean Buildings (1951)	City Wall Complex (1966–1968)
Historical Context	Post-WWII housing for Greek Civil War refugees; early socialist Yugoslavia	Post-1963 earthquake reconstruction; UN-led modernist urban renewal
Architectural Style	Early Modernism with functionalist and rationalist influences; human-scale design	Mature Modernism; large-scale, experimental urban planning with modular and prefabricated construction
Urban Structure	Two low-rise buildings (P+2), orthogonally arranged; soft transition zones; domestic scale	Complex of mid-rise blocks and high-rise towers forming a “city wall” ring around the center; dynamic rhythm, monumental scale
Density & Scale	Low-density, small-scale, 16 residential units; community intimacy	High-density, mixed-use; designed for thousands of residents with commercial and public amenities
Site Integration	Set back from street, greenery buffers; blends into neighborhood; semi-private outdoor space	Urban intervention forming a visual and physical boundary around city center; pedestrian networks and visual corridors integrated
Detailing	Simple, modest details (circular openings, natural cement finish); pitched roofs; attic storage	Façade modulation through balconies, fenestration, and reliefs; flat roofs; use of prefabricated panels; vertical and horizontal articulation
Material Expression	Honest use of materials; plaster, wood, cement; minimalistic but warm	Brutalist tones with modular concrete, exposed aggregate; more industrial and durable finishes for high-traffic urban living
Functional Layout	Efficient small units; dual orientation; raised ground floors; zoned day/night areas; minimized circulation space	Centralized cores in towers; symmetrical plans; generous balconies; clear zoning; integrated storage and communal spaces
Community Aspects	Informal community formed through spatial intimacy; no formal shared amenities	Designed with explicit communal infrastructure (meeting rooms, playrooms, shared storage, drying rooms, etc.)
Ventilation & Light	Dual-orientation apartments; shallow building depth for natural light and ventilation	Strategic massing of towers for cross-ventilation; light-optimized layouts with broad balconies and open views
Adaptability	Some flexibility with attic storage and minimal corridors	Modular structural grid (360 cm spans) allows flexibility in apartment typologies

4. CONCLUSION

The transformation of Skopje's urban and architectural landscape in the post-war period represents a profound narrative of resilience, modernization, and identity formation. Through the study of multi-family residential buildings, notably the Aegean Buildings and the City Wall complex, this paper has demonstrated how architecture served both functional and symbolic roles in Skopje's reconstruction and growth. The early post-war developments embodied a pragmatic adaptation of modernist principles, emphasizing efficiency, simplicity, and community, while the post-earthquake interventions introduced more ambitious urbanistic and architectural innovations, shaped by international collaboration and avant-garde thinking [9]. The detailed analysis of their urban structures, material articulation, and functional organization reveals not only the evolving aesthetic and technical aspirations of their time but also the broader socio-political imperatives driving Skopje's modernization. Ultimately, the residential architecture of Skopje's modernist era stands not merely as a functional response to post-war and post-disaster reconstruction but as a vital cultural and historical legacy that encapsulates the city's ideological, social, and spatial transformations during a period of profound upheaval [10]. These architectural interventions—ranging from the restrained functionalism of the Aegean Buildings to the ambitious, systematized urbanism of the City Wall complex—embody the shifting priorities of a society navigating between pragmatism and utopian ambition. As such, they offer critical lessons for contemporary architectural discourse, particularly in the realms of urban resilience, sustainable housing, and context-sensitive design. The capacity of these projects to respond simultaneously to emergency housing needs, collective identity formation, and long-term urban coherence highlights their relevance in addressing today's complex challenges of climate adaptation, densification, and social equity. In this regard, Skopje's modernist housing legacy provides not only a historical reference but a methodological and ethical framework for reimagining future modes of inhabitation in cities undergoing rapid transformation.

REFERENCES

- [1] Petrović Marjan: **Design and functional characteristics of the multi-family housing architecture in the period of mature and late modern architecture of Niš – case studies.** *Facta Universitatis, Series: Architecture and Civil Engineering*, Vol. 18, No 2, pp. 177-193. 2020, <https://doi.org/10.2298/FUACE200927013P>.
- [2] Keković Aleksandar, Petrović Marjan: Formative characteristics of Moderne Style in Niš. *Facta Universitatis, Series: Architecture and Civil Engineering*, Vol. 6, No 1, pp. 55-64. 2008.
- [3] Keković Aleksandar: **Stambena arhitektura Niša u pokretu Moderna između dva svetska rata.** *Građevinsko-arhitektonski fakultet, Univerzitet u Nišu*, Niš, 2009.
- [4] Marina Ognjen, Penčić Divna: **Urban transformation of Skopje, Fragmented city – Legacy of history.** Skopje, 2004.
- [5] Korobar Vlatko, Siljanoska Jasmina: **The Skopje City Wall Housing Complex.** *Docomomo Journal* No 68, pp. 90–97. 2023, <https://doi.org/10.52200/docomomo.68.09>.
- [6] Backović Vera: **Grad, arhitektura, društvo.** Čigoja štampa, Beograd, 2020.
- [7] https://marh.mk/wp-content/uploads/2017/05/1_Gradski-zid-Skopje.pdf (25.04.2025)

- [8] Alfirević Đorđe, Simonović Alfirević Sanja: **The “Socialist Apartment” in Yugoslavia: Paradigm or Tendency?**. *Spatium*, No. 40, pp.8-17, 2018, DOI: <https://doi.org/10.2298/SPAT1840008A>.
- [9] Kenneth Frampton: **Modern Architecture: A critical history**. *Thames & Hudson*, 1992.
- [10] Senior Derek, United Nations Development Programme: **Skopje Resurgent: The Story of a United Nations Special Fund Town Planning Project**. *United Nations*, New York, 1970.