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Analytical Study of the Archaeological Buildings in Al-Mīdān neighborhood in Damascus using 3D Photography technologies

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Abstract

Al-Mīdān neighborhood of Damascus constitutes the city's most expansive district in both geographical extent and population density. As the oldest urban settlement to have emerged beyond the fortified walls of the ancient city, Al-Mīdān traces its genesis to the Umayyad period, during which it functioned as an open plain designated for equestrian activities and ceremonial horse racing. This peripheral space gradually transformed into a vibrant urban enclave, shaped significantly by the transient presence of commercial caravans, military commanders, and royal delegations who, lacking accommodation within the spatial confines of the walled city, established temporary encampments in this open terrain. These encampments laid the groundwork for the district's progressive urbanization and architectural stratification.

Strategically situated along key trade and pilgrimage routes, Al-Mīdān evolved into a complex urban fabric characterized by a rich palimpsest of historical layers and a high concentration of architectural and archaeological assets. The neighborhood today comprises an array of culturally and architecturally significant structures, including mosques, churches, shrines, ḥammāms (public baths), and specialized commercial markets. These elements not only testify to Al-Mīdān's continuous urban development but also underscore its exceptional historical authenticity and cultural centrality within the broader topography of Damascus.

Of particular note is Al-Mīdān's pivotal role within the historical infrastructure of the Islamic pilgrimage (Ḥajj). The Damascene Ḥajj caravan (al-Maḥmal al-Shāmī) customarily passed through the neighborhood along its journey to the sacred sites of the Ḥijāz and upon return. The caravan traversed what is now known as Al-Mīdān Street (or Al-Sikka Street), historically referred to as Ṭarīq al-Sulṭān ("The Royal Road"), a name derived from its frequent use by sultans and princely retinues en route to Mecca, Egypt, or Palestine. This strategic function catalyzed the establishment of a wide range of commercial and service-oriented facilities designed to accommodate pilgrims and travelers, thereby stimulating permanent settlement and infrastructural growth.

Furthermore, Al-Mīdān stands as a significant locus of religious pluralism, historically recognized as one of the primary districts in Damascus inhabited by Christian communities. This enduring legacy is evidenced by the continued presence of historic churches that remain both spiritual centers and architectural markers within the urban landscape.

Despite its multifaceted cultural and historical significance, Al-Mīdān has received limited scholarly attention in academic literature. Existing studies are generally confined to narrowly focused urban assessments concerned with building code violations or the introduction of non-traditional construction materials that compromise the district's architectural integrity. Comprehensive, interdisciplinary analyses, especially those employing advanced documentation technologies—remain conspicuously absent.

This dissertation seeks to address this scholarly lacuna through an integrated, multidisciplinary investigation of the Al-Mīdān neighborhood. The study employs a hybrid methodological approach combining traditional architectural survey tools (such as Total Station instruments and optical leveling techniques) with state-of-the-art digital technologies, including photogrammetry, laser scanning, and three-dimensional modeling. By systematically comparing the efficacy and outputs of these methods, the research aims to generate a precise and scientifically robust documentation of Al-Mīdān's built heritage. The resulting data serve as a foundation for both critical theoretical inquiry and the formulation of practical frameworks for conservation, adaptive reuse, and sustainable urban reintegration.

Keywords

1- Al-Mīdān.
2- Al-Hajj.
3- Al-Rifāʿī.
4- Fathī
5- Al-Niyāḥ.
6- Mīdān Sultānī..
7- Mīdān Musallī.
8- Mīdān Ḥaqla.
9- 3D Modeling.

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Notes on Transcription

In the transliteration of Arabic names, terms, and proper nouns into the Latin script, this study adopts a consistent and accessible system that prioritizes clarity and ease of reading for a scholarly audience. To avoid potential confusion, complex or specialized typographic characters have been deliberately excluded. Instead, wherever feasible, Arabic phonemes have been represented using the simplest and most widely recognized Latin-letter equivalents, based on established academic conventions.

This approach facilitates the readability of the text while maintaining an adequate degree of phonetic and linguistic accuracy. Although multiple systems of Arabic transliteration exist—such as DIN 31635, the IJMES system, and the ALA-LC standards, this study employs a simplified transliteration model suitable for non-Arabist readers, while remaining faithful to the phonological structure of the original Arabic.

The correspondences between Arabic letters and their Latin equivalents used in this dissertation are outlined in the tables below. These tables provide a reference guide for interpreting Arabic names and terms as they appear throughout the text.

Arabic Letters

Arabic	Transliteration	Arabic	Transliterati
أ	a	ض	ḍ
ء	’	ط	ṭ
ب	b	ظ	ẓ
ت	t	ع	‘
ث	th	غ	gh
ج	j	ف	f
ح	ḥ	ق	q
خ	kh	ك	k
د	d	ل	l
ذ	dh	م	m
ر	r	ن	n
ز	z	ه	h
س	s	و	w
ش	sh	ي	y
ص	ṣ		

Chapter I: Research Strategy

I .1. Introduction

By the mid-sixteenth century CE, the city of Damascus entered a significant phase of urban transformation, characterized by a gradual expansion beyond the confines of its ancient walls. This process of extramural development unfolded in all directions, but it was particularly pronounced toward the south, where new neighborhoods emerged to accommodate growing demographic, commercial, and logistical pressures. Among these, the Al-Mīdān district, located to the southwest of the walled city, stands out for its spatial extent, socio-economic vitality, and enduring historical significance.

Al-Mīdān is considered one of the earliest and most expansive neighborhoods established outside the historical urban core. Its origins date back to the Umayyad era (661–750 AD), during which the area functioned as an open plain utilized for equestrian sports and public festivities. Historical sources recount that Caliph al-Walīd ibn ʿAbd al-Malik (r. 705–715 AD) frequently attended these events, which were held in the expansive terrain that came to be known as al-Mīdān, a term signifying a field or arena. This recreational function laid the foundation for the area's later urbanization.

Owing to spatial limitations within the walled city, Al-Mīdān gradually evolved into a natural extension of Damascus, particularly for travelers, merchants, and pilgrims who arrived in large numbers and required accommodation and logistical support. Its role as a gathering point for trade caravans and official delegations transformed it into a permanent urban settlement, eventually assuming the characteristics of a self-sustained and vibrant district with its own social and architectural identity.

Strategically positioned as the southern gateway of Damascus, Al-Mīdān assumed a critical role in regional connectivity. It functioned as a key node in the movement of people and goods between Damascus, southern Syria, Jordan, Palestine, the Hijāz, and Egypt. The southern terminus of the district, historically known as al-Bāb[1] ("the Gate"), is widely understood to be a contraction of Bāb Allāh ("Gate of God"), referencing the sacred nature of the destinations beyond namely, Mecca and Jerusalem. Figure (1).

This route was central to the annual Shāmī Ḥajj caravan[2], which departed from Damascus toward Mecca, figure (1). Al-Mīdān served as a pivotal logistical base for this caravan, offering provisions, animal stock, and other necessary supplies. The caravan route passed directly through the district, extending from Suwayqa in the north to al-Bāb in the south, along what came to be known as Ṭarīq al-Sulṭān[3] ("the Sultan's Road"), so named due to the frequent passage of sultans, emirs, and governors.

The annual ḥajj movements not only reinforced Al-Mīdān's economic significance but also catalyzed the emergence of a complex urban fabric that included commercial markets, service facilities, and residential zones. These were supported by an array of public and religious institutions such as mosques, zawāyā[4] (Sufi lodges), public baths (ḥammāmāt) [5], and craft workshops, all of which enriched the architectural and cultural landscape of the neighborhood.

Over time, Al-Mīdān attracted a diverse population, including residents from rural hinterlands, refugees from conflict zones, and merchants from distant regions. This demographic heterogeneity contributed to a unique social environment characterized by religious and cultural pluralism,

[1] **Bāb** – "Gate"; used historically to refer to city gates.
[2] **Shāmī Ḥajj caravan** – The annual pilgrimage caravan from Damascus to Mecca.
[3] **Ṭarīq al-Sulṭān** – "Sultan's Road"; historic pilgrimage route.
[4] **Zawiya / Zawāyā –** Sufi lodges used for religious retreat and education.
[5] **Ḥammām / Ḥammāmāt -** Public bathhouse; integral to Islamic urban life.

economic interdependence, and shared urban traditions. The neighborhood expanded progressively southward, ultimately extending over three kilometers, from Bāb al-Jābiya, the gate linking it to central Damascus, to its southernmost boundary at al-Bāb. As its population and built environment grew, the neighborhood was divided into three distinct sectors for functional and administrative purposes:

- Al-Mīdān al-Taḥtānī (Lower Mīdān), the area closest to the city center;
- Al-Mīdān al-Wasṭānī (Central Mīdān); and
- Al-Mīdān al-Fūqānī (Upper Mīdān), culminating at the district's southern edge.

This doctoral research aims to provide a comprehensive, interdisciplinary investigation into the historical, economic, and urban evolution of Al-Mīdān, with particular emphasis on the forces that shaped its emergence as a major district of Damascus. The study will explore the interplay of religious institutions, trade networks, architectural typologies, and social practices, offering insights into how these factors coalesced to define the neighborhood's distinctive identity.

Special focus is placed on the neighborhood's heritage assets, including both prominent monuments and lesser-known vernacular structures. The research includes the systematic documentation, mapping, and analysis of Al-Mīdān's built environment, supported by advanced technologies such as digital photogrammetry, 3D modeling, and GIS-based spatial analysis. Through these methodologies, the study aims to develop informed strategies for the restoration, conservation, and adaptive reuse of the neighborhood's historical architecture in line with contemporary urban needs.

Figure 2 encapsulates the historical evolution and geographical significance of Damascus by depicting the walled city along with its internal quarters, charting the city's chronological expansion beyond its fortifications, most notably the development of suburban neighborhoods such as Al-Mīdān, and situating the Al-Mīdān district within both the urban fabric of Damascus and the broader territorial context of Syria. The figure further underscores Al-Mīdān's strategic position as a pivotal transitional zone linking the historic core of the city with the southern regions of the Levant and the Arabian Peninsula.

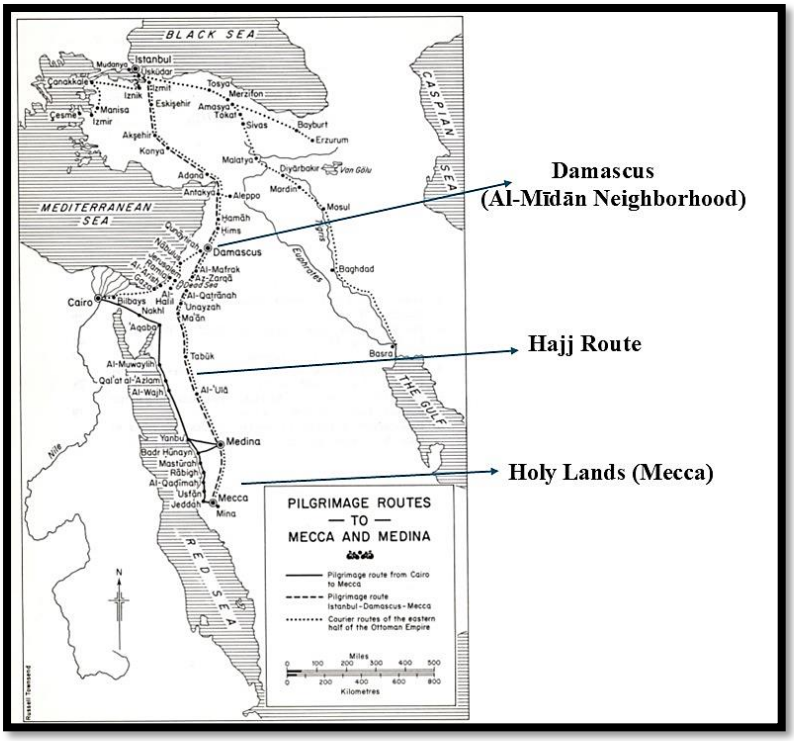

Figure.1. The geographical location of the Al-Mīdān district, serving as a transitional space between the ancient city (Damascus) and the southern regions of the Levant and the Arabian Peninsula (Holy Lands-Mecca) (Source: New York. Faroqhi Suraiya, Pilgrims and Sultans, I.B.Tauris&Co Ltd, London,1994. P1)

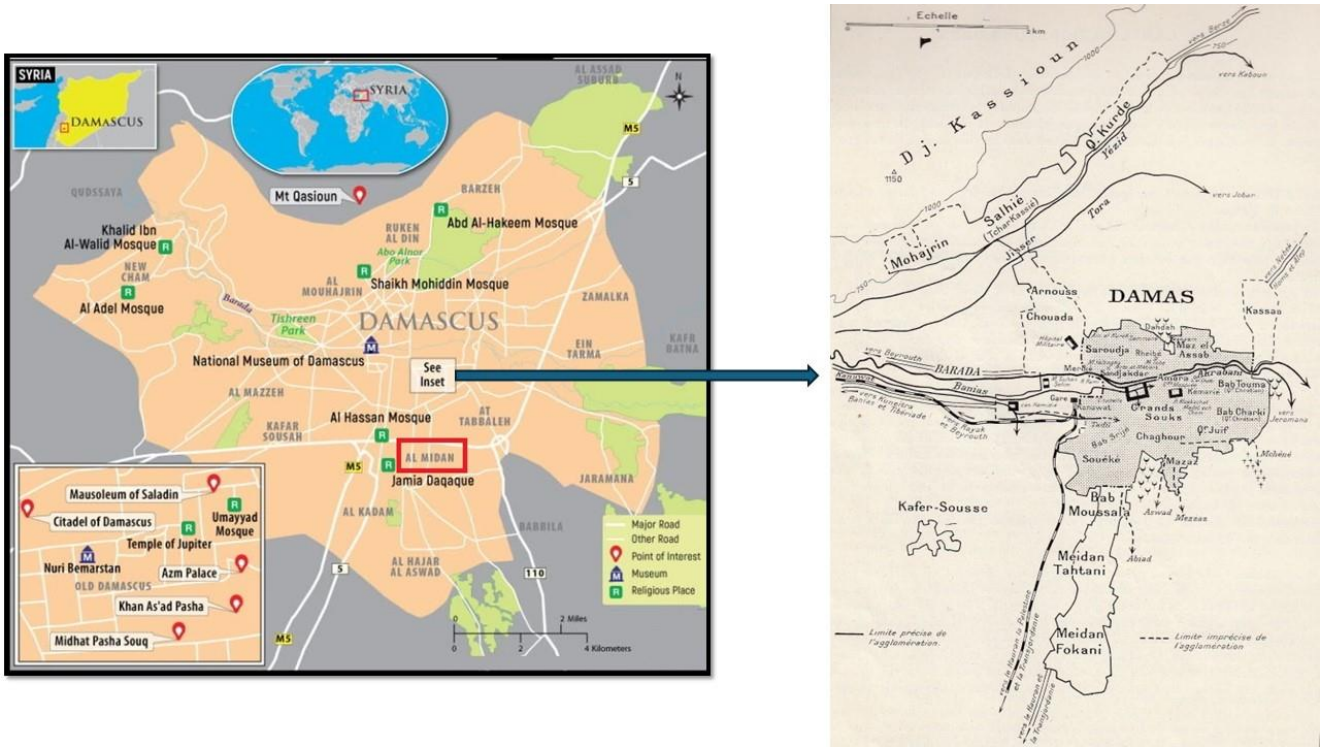

Figure. 2. The historical walled city of Damascus, its internal and external quarters, and the geographical location of the Al-Mīdān district within both the city and the broader Syrian context, highlighting its strategic position among Damascus's urban quarters. (Source: Al-Aṭlas of Damascus, 2009, p. 103)

I.2. The Research Problem:

This research addresses a critical and underexplored issue within the broader field of heritage studies and urban conservation: the neglect, transformation, and partial erasure of historic neighborhoods located outside the walled city of Damascus, with particular focus on the Al-Mīdān district.

While the Old City of Damascus was inscribed as a UNESCO World Heritage Site in 1979 AD, this recognition was limited to the historical core confined within the ancient city walls. In contrast, neighborhoods situated beyond the walls, despite their undeniable historical, architectural, and socio-cultural significance, remain outside the scope of international heritage designation. Among these, Al-Mīdān stands as one of the most historically rich and spatially extensive districts. It played a vital role in the urban, economic, religious, and social development of Damascus, and yet it continues to suffer from systemic neglect, absence of legal protection, and insufficient scholarly attention.

Over recent decades, modern urban development projects have encroached upon these historic suburbs, including Al-Mīdān, posing severe threats to their survival. These interventions not only compromise the integrity of Al-Mīdān's historic fabric but also diminish the broader cultural and historical significance of Damascus as a city of layered heritage. Unregulated construction, the introduction of incongruous architectural forms, and the demolition of significant structures have collectively contributed to the erosion of the neighborhood's urban identity.

In Al-Mīdān specifically, many heritage buildings have been either deliberately destroyed or have deteriorated due to prolonged neglect, obsolescence, and lack of routine maintenance. In numerous cases, they have been replaced by contemporary constructions that bear no architectural, historical, or cultural continuity with the traditional fabric of the district. As illustrated in figure (3), the neighborhood has seen an influx of incompatible new structures (new urban fabric), further compounded by the gradual disappearance of traditional crafts and artisanal trades that once defined the socio-economic life of Damascus's historic quarters.

This state of degradation raises a series of urgent and interconnected research questions that frame the core problem of this study:

- What are the historical origins and urban development trajectory of Al-Mīdān, particularly in relation to the Damascus pilgrimage caravan (al-Mahmal al-Shāmī) [6], the grain trade of Ḥawrān[7], and commercial exchanges with Egypt and northern Jordan?
- Does the current urban condition and administrative treatment of Al-Mīdān reflect the neighborhood's substantial historical and cultural importance?
- Is the archaeological and architectural heritage of Al-Mīdān adequately recognized and preserved, especially in light of its rich contributions to the religious, economic, scientific, and cultural history of Damascus?
- What are the primary threats confronting Al-Mīdān's historic structures today, including those arising from physical deterioration, unsympathetic restoration, urban encroachment, or socio-economic neglect?
- How can advanced documentation technologies, such as 3D laser scanning, photogrammetry, GIS mapping, and digital modelling be employed in the conservation, rehabilitation, and adaptive reuse of heritage buildings in Al-Mīdān?

This research aims to critically engage with these questions through a comprehensive interdisciplinary approach. By investigating the historical foundations, architectural typologies, socio-economic networks, and current state of conservation in Al-Mīdān, the study seeks to contribute both theoretically and practically to the broader field of heritage management, architectural preservation, and sustainable urban planning in historic Islamic cities.

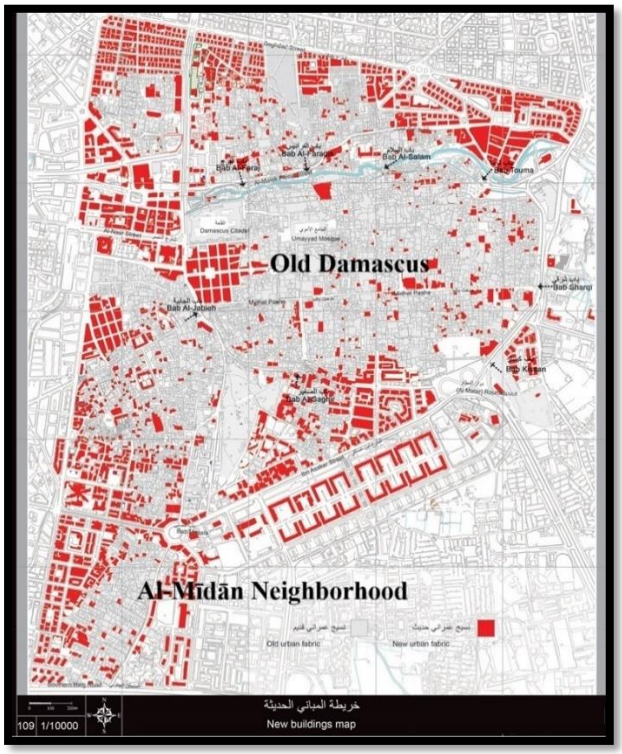

Figure.3. New-Old urban fabric (contemporary) in Damascus and Al-Mīdān Neighborhood (2001-2003)
(Source-: Al-Aṭlas of Damascus, 2009, p. 204)

I.3. The Importance of the Research:

The outbreak of armed conflict in Syria in 2011 has profoundly impacted the nation's architectural, urban, and cultural heritage. Among the most visible consequences has been the widespread destruction of historic buildings, particularly in cities such as Damascus, Aleppo, Homs, and Deir

[6] **Mahmal al-Shāmī** – Ceremonial representation of the Hajj caravan carried from Damascus.
[7] **Ḥawrān** – A fertile region south of Damascus, historically a grain supplier.

ez-Zor. In addition to direct physical damage, the prolonged conflict has led to the displacement of local populations, resulting in the abandonment of residential structures, especially in traditional neighborhoods such as Al-Mīdān. Deprived of routine maintenance and stewardship, many of these heritage buildings have deteriorated rapidly, while others have been illegally altered, looted, or demolished.

The intersection of war, socio-economic decline, uncontrolled urbanization, and the collapse of heritage protection mechanisms poses an existential threat to Syria's historic urban fabric. As has been observed in other conflict-affected contexts, armed conflict accelerates the loss of material culture, disrupts intangible heritage, and often leads to irreversible transformations in historically layered urban environments. In this context, the case of Al-Mīdān—a district with centuries of historical, architectural, and socio-economic relevance—merits urgent scholarly attention and professional intervention.

Given these realities, this research is driven by a deep concern for the preservation, documentation, and rehabilitation of architectural heritage in Al-Mīdān. It seeks to address both the academic gap in the study of Damascus's extramural districts and the practical need for tools and strategies to protect threatened cultural assets.

The significance of the research can be articulated through the following key dimensions:

- Architectural Documentation: The project undertakes the comprehensive documentation of archaeological and historic buildings within Al-Mīdān. This includes both the analog Documentation Methods (such as manual measurement, theodolite surveying, leveling, and Total Station use) and advanced digital techniques, including high-resolution photography, 3D laser scanning, and photogrammetry.
- Architectural Drawings and Ornamentation: The study produces detailed architectural drawings plans, elevations, and sections of key structures. Special attention is given to decorative and ornamental features, which are often the most vulnerable to neglect and destruction, yet crucial for understanding architectural chronology and stylistic evolution.
- Digital Technologies and Software Applications: The research applies cutting-edge software tools such as Agisoft Metashape (formerly PhotoScan), Autodesk ReCap 360, ArcGIS, and other modeling applications. These tools enable the creation of accurate three-dimensional digital models of selected buildings and objects, which serve as conservation archives, educational resources, and foundations for future rehabilitation efforts.
- Heritage Preservation and Adaptive Reuse: The research aims to leverage these documentation outputs to develop well-informed conservation strategies, including restoration, adaptive reuse, and sustainable integration of heritage structures into the contemporary urban fabric. Such proposals emphasize not only architectural preservation but also the revitalization of the neighborhood's identity and functionality.
- Reviving Historical Urban Character: By reconstructing and analyzing the lost or deteriorated elements of Al-Mīdān's historical fabric, the research contributes to reconstituting the district's original urban character, which has been eroded over decades of socio-political change and recent wartime disruption.
- Urban Pressures and Traffic Impacts: The study further investigates the negative impact of vehicular traffic, pollution, and infrastructural stress on vulnerable historic buildings. It proposes technical and planning solutions to mitigate these effects and promote a more heritage-sensitive urban environment.
- Inventory and Typological Study: A significant component of the research is the systematic inventory and classification of Ottoman-period buildings in the neighborhood, including

mosques, ḥammāms, suqs[8], madāris[9], warehouses, and other functional structures that supported the market and communal life in Al-Mīdān.

- Advocating for Technological Integration in Heritage Work: By employing state-of-the-art documentation methods, the research aims to demonstrate their applicability in the Syrian context, encouraging institutions, conservationists, and policymakers to adopt these tools as standard practice.
- Socio-Economic and Environmental Revitalization: Beyond conservation, the study underscores the potential for heritage-led regeneration in Al-Mīdān. By promoting the reuse of historic buildings, the revival of traditional crafts, and the creation of heritage-based economic opportunities, the research offers a model for integrating heritage conservation with local economic development, tourism, and environmental sustainability.

In summary, this research aims to contribute to the preservation of Al-Mīdān's endangered architectural legacy while highlighting its enduring relevance in shaping Damascus's urban history. It offers a replicable methodology for heritage documentation in conflict-affected areas and advocates for the reconnection of architectural heritage with local communities, stakeholders, and future development initiatives.

I.4. Aims of the Research

This research seeks to contribute to the interdisciplinary field of heritage studies, architectural documentation, and urban history through an in-depth case study of Al-Mīdān, one of Damascus's most historically significant extramural neighborhoods. The study responds to urgent heritage preservation challenges brought about by conflict, neglect, and unregulated urbanization. Its overarching aim is to provide both theoretical insight and practical tools for the conservation and revitalization of traditional urban districts in historical cities. The specific aims of the research are as follows:

- To investigate the historical, architectural, and urban significance of the Al-Mīdān neighborhood, with special emphasis on its socio-economic role in the regional context. The study will highlight the district's strategic function as a node in the Shāmī pilgrimage route to Mecca and its involvement in the grain trade of the Ḥawrān region, as well as its economic exchanges with northern Jordan and Egypt.
- To systematically document and analyze the architectural heritage of Al-Mīdān, focusing on Ottoman-era service buildings, including mosques, churches, ḥammāms (public baths), suqs (markets), madāris (religious schools), and khāns[10] (caravanserais). These buildings are examined not only as isolated monuments but as integrated elements within the urban and social fabric of the neighborhood.
- To apply and critically evaluate both analog and advanced documentation techniques. Conventional surveying instruments, such as the Total Station, optical level, and manual surveying tools will be used in tandem with state-of-the-art 3D photogrammetry and laser scanning technologies. The comparative evaluation of these methods aims to assess their accuracy, accessibility, and effectiveness in recording architectural heritage in complex and fragile urban environments.
- To generate metrically accurate and digitally modeled 3D representations of selected historical structures using specialized software platforms (e.g., Agisoft Metashape, Autodesk ReCap, and ArcGIS). These models will serve as permanent digital archives, supporting restoration planning, heritage education, and virtual access for research and public engagement.

[8] **Suq / Suqs** – Traditional market or commercial street.
[9] **Madrasa / Madāris** – Islamic religious school, often endowed.
[10] **Khān –** Caravanserai; an inn for merchants and travelers with storage and lodging.

- To assess the current structural and material condition of heritage buildings in Al-Mīdān, identifying forms of deterioration caused by environmental stressors (e.g., moisture, thermal fluctuations), human-induced damage (e.g., war, neglect, incompatible renovations), and urban pressures (e.g., traffic and infrastructure encroachment).
- To develop context-sensitive strategies for the preservation, restoration, and adaptive reuse of historic buildings, aiming to retain architectural authenticity while proposing viable new functions aligned with contemporary urban needs. These strategies will emphasize sustainable development, cultural tourism, and community-driven regeneration.
- To highlight the heritage value of extramural districts, such as Al-Mīdān, which have been marginalized in heritage discourses and remain underrepresented in national and international conservation efforts, including those led by UNESCO. The research seeks to elevate the profile of such neighborhoods and advocate for their inclusion in future heritage initiatives.

In summary, the research aims to bridge the gap between heritage theory and conservation practice, using Al-Mīdān as a model for safeguarding endangered historic neighborhoods in conflict-affected and rapidly transforming urban contexts. It aspires to contribute new knowledge, tools, and methodologies that are transferable to similar heritage environments throughout the world.

I.5. Research Methodology:

This research employs a descriptive-analytical methodology to investigate the architectural heritage of the Al-Mīdān neighborhood in Damascus, with a particular emphasis on Ottoman-period service buildings. The study integrates Analog architectural survey techniques with contemporary digital documentation tools, in order to achieve a comprehensive and methodologically robust assessment of the district's built environment:

1. Integrated Application of Analog and Digital Documentation Techniques:

The methodology is grounded in a dual approach that brings together:

- Conventional survey methods, including manual measurement, architectural hand-drawing, and the use of Total Station and optical level instruments for accurate data collection.
- Advanced digital technologies, including 3D photogrammetry, terrestrial laser scanning, and Geographic Information Systems (GIS). These technologies enable precise geometric documentation, spatial analysis, and the generation of high-resolution 3D models of selected structures.

This hybrid approach ensures the accuracy, replicability, and long-term preservation of architectural data, while supporting both qualitative and quantitative analyses of historical buildings.

2. Functional Classification and Sampling Strategy:

To organize the scope of documentation and analysis, the historic buildings in Al-Mīdān were categorized by function, including:

- Religious buildings (mosques, zawāyā, and churches),
- Public baths (ḥammāms),
- Water infrastructure (subul or sabīls) [11],
- Commercial buildings (al-bawāyik) [12].
- Other types of buildings (tombs, well houses, market places, schools, etc).

Given the high density of commercial structures, a representative sampling strategy was employed. Selected buildings were studied in detail through direct fieldwork, architectural analysis, and digital reconstruction. The remaining commercial structures were documented through archival

[11] **Sabīl / Subul –** Charitable water fountain or kiosk.

[12] **Al-bawāyik –** Traditional commercial units or storage shops.

classification, tabular inventories, and photographic records. This selective approach allowed for a focused, in-depth examination of typologies without redundancy, while ensuring that the breadth of architectural heritage was adequately captured.

3. Fieldwork and Data Collection Techniques:

The fieldwork phase involved the following procedures:

- On-site architectural surveys, including detailed measurement of façades, spatial layouts, and construction materials;
- Photographic documentation, both for recording architectural features and for photogrammetric processing.
- Condition assessments, identifying structural deterioration, material decay, and signs of inappropriate modification or neglect.
- Digital modeling and mapping, utilizing Agisoft Metashape, Autodesk ReCap, AutoCAD, and ArcGIS, to produce 2D and 3D visualizations and maps.

This process generated a data-rich body of evidence for assessing the architectural condition, cultural value, and restoration potential of each structure.

4. Analytical Objectives

The analytical phase of the research aimed to:

- Diagnose the principal types and causes of structural and material degradation;
- Evaluate the historical, functional, and aesthetic value of architectural elements;
- Formulate conservation strategies tailored to the specific conditions and heritage significance of each building;
- Propose frameworks for the adaptive reuse and sustainable integration of heritage assets into the contemporary urban fabric.

5. Visualization of Methodological Framework:

Figure (4), presents a flowchart summarizing the research problem, significance, objectives, and methodological process. This diagram serves as a visual synthesis of the conceptual and technical structure of the research.

This methodological framework ensures the study's academic rigor while supporting its applied goals in heritage preservation, urban planning, and cultural sustainability.

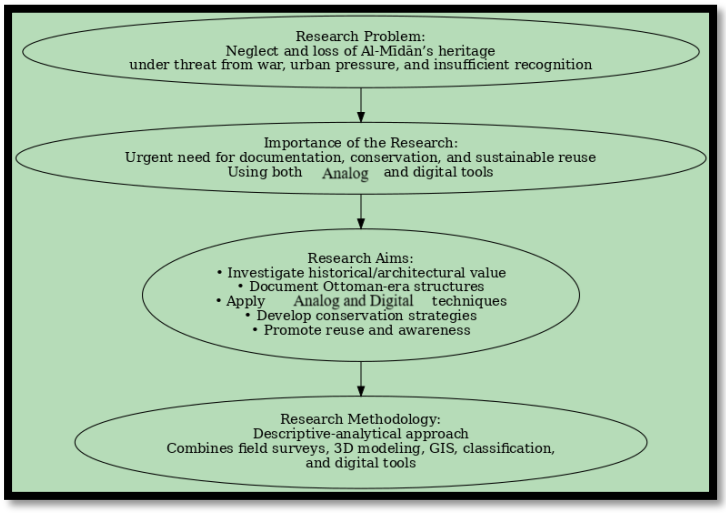

Figure.4. Flowchart summarizing the structure of the research, including the central problem, its significance, primary aims, and the adopted methodology. (Source: Author's own elaboration, based on research framework, 2025).

I.6. Structure and Logic of the Chapters:

The structure of this dissertation has been carefully designed to support a coherent and progressive investigation, beginning with the historical and theoretical foundations of the study and culminating in applied analysis, documentation, and strategic conservation proposals. Each chapter

builds logically upon the preceding one, forming an integrated framework that supports both critical inquiry and practical application. The chapters are organized as follows:

- Chapter I: Research Framework.
  This introductory chapter outlines the research problem, articulates its significance, defines the objectives, and describes the adopted methodological approach. It also includes a review of relevant literature and previous scholarly contributions to contextualize the present study within the broader field of heritage and urban studies.
- Chapter II: Historical, Economic, Social, and Urban Development of Al-Mīdān.
  This chapter provides a comprehensive overview of the historical evolution of Damascus with a particular focus on the emergence and development of the Al-Mīdān neighborhood. It examines the district's economic functions, social composition, urban morphology, and its role in the broader spatial and administrative structure of the city across different historical periods.
- Chapter III: Architectural and Functional Analysis of Service Buildings in Al-Mīdān during the Ottoman Period.
  Focusing on the built heritage of the neighborhood, this chapter presents detailed architectural and historical analyses of key service buildings, including mosques, churches, public baths (ḥammāms), zawāyā, and commercial facilities. It includes measured drawings, morphological typologies, and an assessment of material condition and structural deterioration.
- Chapter IV: Methodological Approaches to Architectural Documentation.
  This chapter provides a critical examination of the comparative significance of analog and digital documentation methodologies, emphasizing their respective roles in the systematic recording and analysis of architectural heritage. Particular attention is given to the integration of advanced technologies, including 3D photogrammetry, laser scanning, and GIS-based platforms. The chapter assesses these techniques in terms of their precision, accessibility, and contextual applicability within the urban fabric of al-Mīdān, and explores their capacity to inform and support evidence-based conservation strategies.
- Chapter V: Current Challenges and Strategic Proposals for Conservation and Reuse.
  This chapter addresses the critical challenges facing the heritage buildings of Al-Mīdān, including physical decay, urban encroachment, environmental pressures, and incompatible modernization. It presents a series of evidence-based proposals for restoration, adaptive reuse, and long-term revitalization of the neighborhood, grounded in the documentation and analysis presented in earlier chapters.
- Chapter VI: Conclusions and Recommendations.
  The final chapter synthesizes the key findings of the research, reflects on their broader implications for heritage conservation in conflict-affected urban contexts, and offers practical recommendations for policymakers, urban planners, heritage professionals, and local communities. It also identifies potential areas for future research and methodological innovation.

Figure(5), Flowchart illustrating the structural logic and methodological framework of the research. The diagram outlines the sequential progression of the chapters, from the articulation of the research problem and aims to the analytical methods and final conservation proposals, ensuring thematic coherence and methodological integration throughout the thesis.

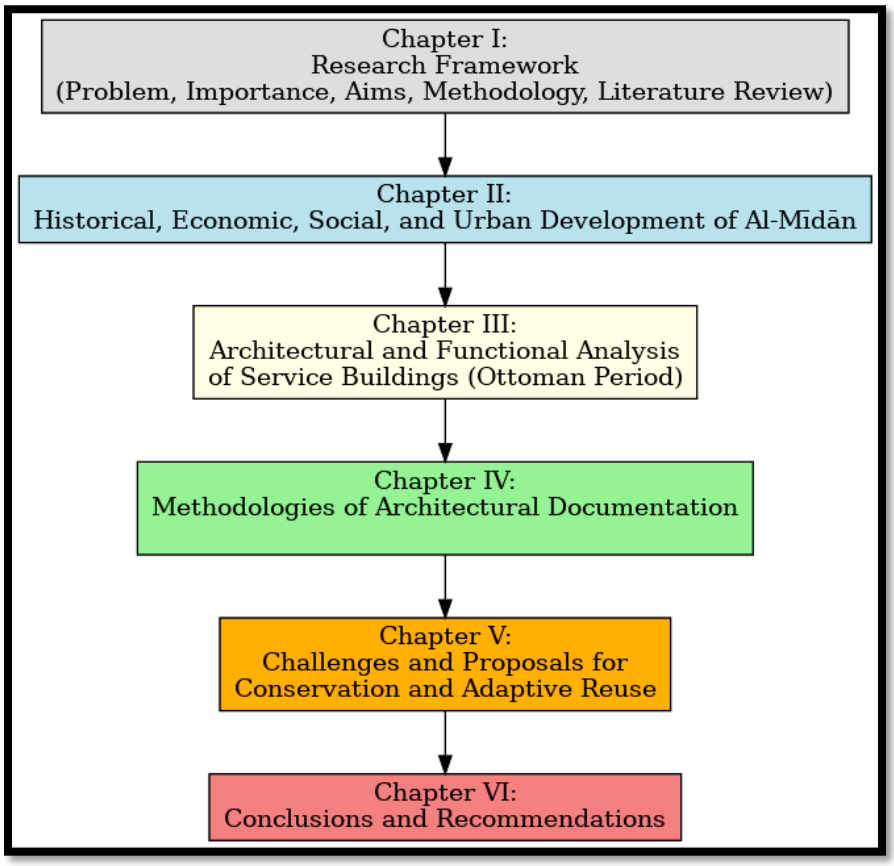

Figure.5. Presents a visual summary of the thesis structure, illustrating the logical progression from contextual analysis to applied conservation strategies. (Source: Author's own elaboration, based on research framework, 2025)

1.7. Review of Previous Studies:

The Al-Mīdān neighborhood has long attracted the attention of historians, travelers, and scholars, both local and foreign, drawn by its rich historical fabric, distinct socio-cultural identity, and its prominent political and religious role in the historical development of Damascus. Numerous writers, whether residing in or visiting the city, have documented various aspects of the neighborhood, contributing valuable, albeit varied, perspectives on its urban evolution, architectural features, and social life.

These previous studies form an important foundation upon which this dissertation builds. However, while many of them offer descriptive accounts or thematic insights, few have undertaken a systematic architectural documentation or integrated advanced documentation technologies within a conservation-focused framework, highlighting the need for the present study.

Table (1), provides a structured review of the most relevant studies on Al-Mīdān, summarizing the scope, methodology, and key conclusions of each. This comparative analysis identifies gaps in the existing literature and situates the current research within a broader scholarly discourse on the heritage of Damascus and its its extramural neighborhoods (Al-Mīdān neighborhood), and urban studies more generally.

Author(s)	Title	Type	Content Summary	Methodology	Conclusions
Brigitte Marino (2000)	Al-Mīdān Neighborhood in the Ottoman Era	Book	Economic life in Al-Mīdān during Ottoman rule	Analysis of Shari'a court records in Damascus	Al-Mīdān was a key economic and cultural hub
Alice Beau (1925)	Damascus Under the Bombs	Book	Impact of French occupation	Historical narratives and	Al-Mīdān represented resistance and resilience

			and bombardment on Al-Mīdān	archival documents	
Abd al-Mon'am Nājī (2022)	Urban Historical Study of Sūk Al-Mīdān	Master's Thesis	Urban evolution of the main market in Al-Mīdān	Urban history and architectural analysis	Market reflects socio-economic changes
Farkad Mahalī (2007)	Study of Grain Warehouses in Al-Mīdān	Master's Thesis	Structure and function of grain warehouses	Architectural documentation and analysis	Warehouses vital to trade and logistics
Amani Khalīl Al-Rahhāl (2009)	Hajj Road and its Service Structures	Master's Thesis	Pilgrimage infrastructure in Ottoman Syria	Comparative historical and architectural study	Al-Mīdān played a role in the Hajj network
Fidā Darwīsh (2011)	Rehabilitation and Tourist Management of Al-Mīdān	Master's Thesis	Tourism and heritage management in Al-Mīdān	Urban planning and tourism development	Calls for sustainable tourism and preservation
Ahmad Bubūs (2014)	Al-Mīdān Neighborhood Al-Dimashqī: History and Development	Book	Historical development of the neighborhood	Narrative synthesis of historical sources and maps	Traces Al-Mīdān's transformation over time
Ibn ʿAsākir (12th c.)	Tarikh Madinat Dimashq	Book	Medieval historical records of Damascus, including early development of neighborhoods like Al-Mīdān	Historical narrative based on biographical records	Al-Mīdān had significance as an open field and gathering place in early Islamic Damascus
Ali al-Dib (1994)	Al-Mīdān wa-Maqāmuhu al-Tarīkhi	Book	Focused historical study of Al-Mīdān's political and cultural role in the modern era	Historical-archival analysis	The neighborhood served as a hub for political resistance and religious networks
Ross Burns (2005)	Damascus: A History	Book	Urban and architectural history of Damascus, including extramural districts	Historical-geographical synthesis using textual sources and maps	Al-Mīdān functioned as a transitional space linking Damascus with southern trade routes

Labib al-Said (1999)	Al-ʿImārah fī Dimashq al-Tarīkhiyyah	Book	Architectural and urban analysis of historic Damascus, including Ottoman-period structures	Architectural survey and typological analysis	Ottoman-era public buildings in Al-Mīdān exhibit distinct typological features
Yasir Suleiman (2011)	Arabic in the City: Issues of Language and Identity	Book	Sociolinguistic study related to urban identity, relevant to neighborhood-based identity in Damascus	Qualitative sociolinguistic interviews and urban ethnography	Neighborhood identity in Damascus is strongly tied to linguistic and cultural memory
Yves Rogon & Luc Vilan (2003)	Neighborhoods of Damascus Outside the Wall	Book	Study of suburbs like Al-Mīdān	Historical geography and cartography	Al-Mīdān is part of Damascus's organic growth
Various	Additional References (Shīhābī, Al-ʿAmbi, Kayyāl, Athanasiou, etc.)	Articles & Books	Epigraphy, mapping, bathhouses, churches, buildings	Topical studies and scholarly articles	Provide micro-level insights into structures and layout

Table.1.Comprehensive analytical review of selected scholarly studies addressing the historical, architectural, and socio-cultural dimensions of the Al-Mīdān neighborhood in Damascus. (Source: Compiled by the researcher, 2025)

Chapter II

A Historical, Socioeconomic, and Urban Analysis of the Al-Mīdān District of Damascus

II.1. Historical Contextualization:

II.1.1. The Urban Evolution of Damascus:

The city of Damascus is widely regarded as one of the most historically significant and continuously inhabited urban centers in the Levant[13], and indeed the world. Its name is intrinsically associated with antiquity, prestige, and enduring urban vitality. Across successive historical epochs, Damascus has played a pivotal role in shaping the political, intellectual, cultural, and artistic landscape of the Near East.

Enclosed by formidable stone defensive walls, the historical core of Damascus was accessible through a series of monumental gates that served as portals between the intra-mural city and the extramural roads leading to surrounding regions. These gates, constructed during various historical periods, formed a critical part of the city's fortification and spatial hierarchy. Figure (6), illustrates the layout of the Old City of Damascus, still largely preserved in form and function.

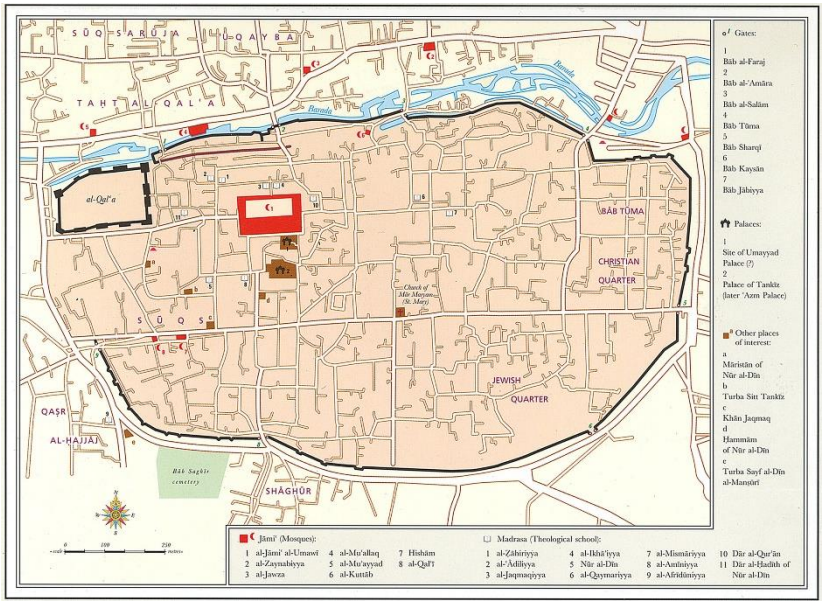

Figure.6. The Old City of Damascus. The city is situated atop a cluster of hills that historically served as early settlement sites. (Source: Directorate General of Antiquities and Museums (DGAM), Protection Zone for the City of Damascus, 2010)

The name Damascus appears in some of the earliest known written records of the ancient Near East. It is mentioned in Pharaonic correspondence discovered at Tell el-'Amarna, dating back to the 15th century BCE, and was referred to as "Damashka" in the context of military campaigns led by Thutmose III[14]. The city is also referenced in Assyrian inscriptions and Eblaite archives,

[13] There are many stories about the history of building the city of Damascus, some of which date back to the era of Al-Nabī Ibrāhīm ('Alayh Al-Salām), or date back to the era of the king (Al-Iskandir Al-Makdunī), the king of Macedonia. Al-Hamawī, *Mu'jam Aa-Buldān,* Vol. 2, 463.

[14] One of the greatest rulers of Egypt (pharaoh), 1481 BC.

underscoring its prominence as an ancient urban capital situated along the Baradā River, with the al-Ghūṭa[15] oasis surrounding it and supporting its agricultural productivity.[16]

Scholars across disciplines have long debated the etymology of the name *Damascus*. Some theories trace its origins to "Damakīnā", the consort of Ea, the Mesopotamian god of water, symbolically linking the city to divine and natural sources. The Arameans are believed to have referred to the city as "Dār[17] Maythak", meaning "the House of Water," while Assyrian inscriptions preserved a phonetic variant of the name that closely resembles the modern form. [18]

During its early phases, Damascus was fortified with defensive walls supported by towers and punctuated by seven principal gates, each of which held strategic and ceremonial significance: Figure (6).

- Bāb al-Jābiya.
- Bāb Tūmā.
- Bāb Sharqī.
- Bāb Ṣaghīr.
- Bāb Kīsān.
- Bāb al-Farādīs.
- Bāb al-Salām.

The area enclosed by these walls amounted to approximately 120 hectares, forming the physical and administrative nucleus of the ancient city.

Historically, Damascus comprised seven major intra-mural quarters, including: Figure (6).

- Ḥayy[19] Bāb Tūmā.
- Ḥayy al-ʿAmārah.
- al-Qaymariyyah.
- Ḥayy al-Yahūd (Jewish Quarter).
- al-Shāghūr.
- Miʾthanat al-Shahm.
- Al-Jūrah.

Although definitive archaeological evidence regarding the precise date of Damascus's founding remains elusive, the city's urban history can be clearly traced to at least the 11th century BCE, when

[15] **Al-Ghūṭa-** The fertile oasis surrounding Damascus.
[16]Abo 'Assāf, *Dimashq 'asima Kan'aniya 'Arāmiya,* 33.
[17] **Dār-** House; residential unit- Used generically to describe family homes in Al-Mīdān.
[18]Abdullāh, *Dimashiq fi Al-Nuṣūṣ Al-Mismāriya,* 43.
[19] "Quarter" or neighborhood; administrative division in Damascus.

it served as the capital of the Aramaean Kingdom of Damascus. During this period, the city was home to the Temple of Hadad[20], the Aramaean god of storms. This sacred structure was situated opposite what would later become the Temple of Jupiter[21], a monumental Roman temple whose remains—comprising massive columns and foundation walls are still visible today at the western entrance of the Umayyad Mosque, as shown in Figure (7).

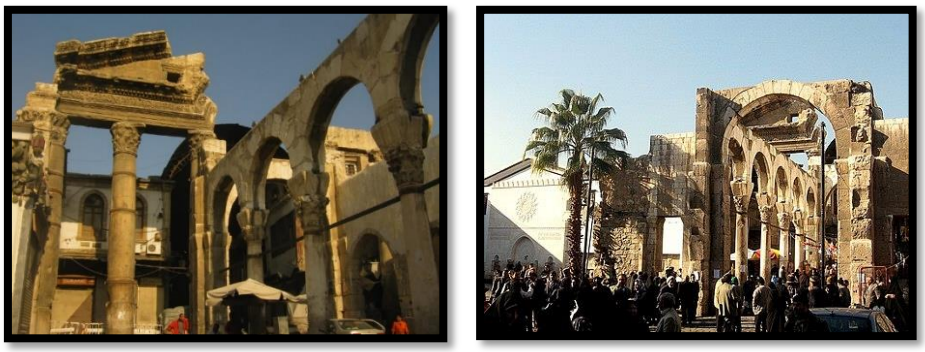

Figure 7. The remains of the Temple of Jupiter in Damascus.(Source: Author's documentation, 2021)

This layered architectural and religious history reflects the city's unique continuity across civilizations, from Aramaean, to Roman, to Islamic, making Damascus a palimpsest of architectural traditions and urban forms. The evolution of its urban development provides essential context for understanding the emergence and growth of extramural districts such as Al-Mīdān, which this study will analyze in detail in subsequent chapters.

II.1.2. The Historical Development of Damascus Across the Ages and the Role of Al-Mīdān in Each Period:

The city of Damascus, as one of the world's oldest continuously inhabited urban centers, has undergone profound transformations across successive historical epochs, each leaving an indelible imprint on its urban fabric, socio-political structure, and architectural landscape. From its earliest Aramaean foundations through Hellenistic, Roman, Byzantine, Islamic, and Ottoman rule, the city has served as a vital cultural, religious, and economic hub in the Eastern Mediterranean. [22]

This section examines the diachronic evolution of Damascus, focusing particularly on how broader regional and imperial dynamics shaped the development of its extramural districts, with special attention to Al-Mīdān. While the core of Damascus was historically confined within its fortified walls, neighborhoods such as Al-Mīdān, located to the south of the Old City, played a pivotal and complementary role during various historical periods.

By tracing the urban, political, and religious significance of Al-Mīdān across key historical phases, this study situates the neighborhood within the broader trajectory of Damascene development. The section outlines how Al-Mīdān transitioned from a peripheral open plain used for equestrian sports in the early Islamic period to a vibrant urban district marked by architectural, commercial, and spiritual vitality in later centuries. It further investigates how its spatial function, demographic

[20] The legendary deity, as his worship spread among the peoples of the region from its north to its coast, passing through Damascus and even Mesopotamia, and Hudud was a god of storms and rains or a god of weather.
[21] He is the god of the sky and thunder and the king of the gods in ancient Roman religion and ancient Roman mythology.
[22] Rīhāwi, *Madinit Dimashiq- Turathiha WA M'ālimiha,* 36.

composition, and architectural character evolved in response to shifts in governance, pilgrimage practices, trade networks, and military infrastructure.

The historical assessment is structured chronologically, detailing the status, function, and urban morphology of Al-Mīdān during the following periods:

II.1.2.1.Damascus during the Assyrian, Babylonian, and Persian Periods (732–333 BC): [23] Figure (8).

From the 8th to the 4th centuries BC, Damascus experienced a sequence of imperial occupations that significantly influenced its political and strategic standing in the Near East, yet resulted in only modest visible architectural changes within the city. Table (2).

Period	Summary
Assyrian Period (732–609 BC)	Damascus fell to Tiglath-Pileser III. Became part of the Assyrian provincial system. Functioned as a military and administrative center.
Babylonian Period (609–538 BC)	Controlled by Nebuchadnezzar II. Strategic but underdeveloped due to Babylon's Mesopotamian focus.
Persian Period (538–333 BC)	Integrated into Achaemenid satrapy. Important stop on Royal Road and trade routes. Served administrative and logistical roles.

Table.2. Damascus during the Assyrian, Babylonian, and Persian Periods. (Source: Compiled by the researcher, 2025)

II.1.2.1.1.Architectural Elements and Urban Changes: [24] Table (3).

Category	Details
Continuity over Innovation	- Preservation of Aramean urban layout. - Temple of Hudud remained active, possibly reused for Assyrian rituals.
Fortifications and Control	- Existing city walls likely reinforced - Early versions of the seven main gates in use.
Residential and Administrative Zones	- Urban expansion limited. - Functioned as an administrative node rather than a cultural center.
Roads and Trade	- Integrated into Persian communications. - Trade routes possibly improved - No major civic or religious structures built.

Table.3. Architectural Elements and Urban Changes in Damascus during the Assyrian, Babylonian, and Persian Periods. (Source: Compiled by the researcher, 2025)

II.1.2.1.2.The Situation of Al-Mīdān Neighborhood in This Period: [25] Figure (8).

During the Assyrian, Babylonian, and Persian periods:

• Al-Mīdān did not yet exist as a defined urban neighborhood.

[23] Ibn ʿAsākir, *Tārīkh Madīnat Dimashq*, 12th century, 79-88.

[24] Burns, Ross. *Damascus: A History*. Routledge, 2005, 107-115.

[25] Labib Al-Said. *Al-ʿImārah fī Dimashq al-Tarīkhiyyah*, 1999, 43-51.

• The area that would later become Al-Mīdān was most likely part of the southern floodplain and open terrain, beyond the urban boundaries of Damascus.

• Archaeological and textual evidence does not indicate any permanent structures or planned development in the Al-Mīdān zone during this era. [26]

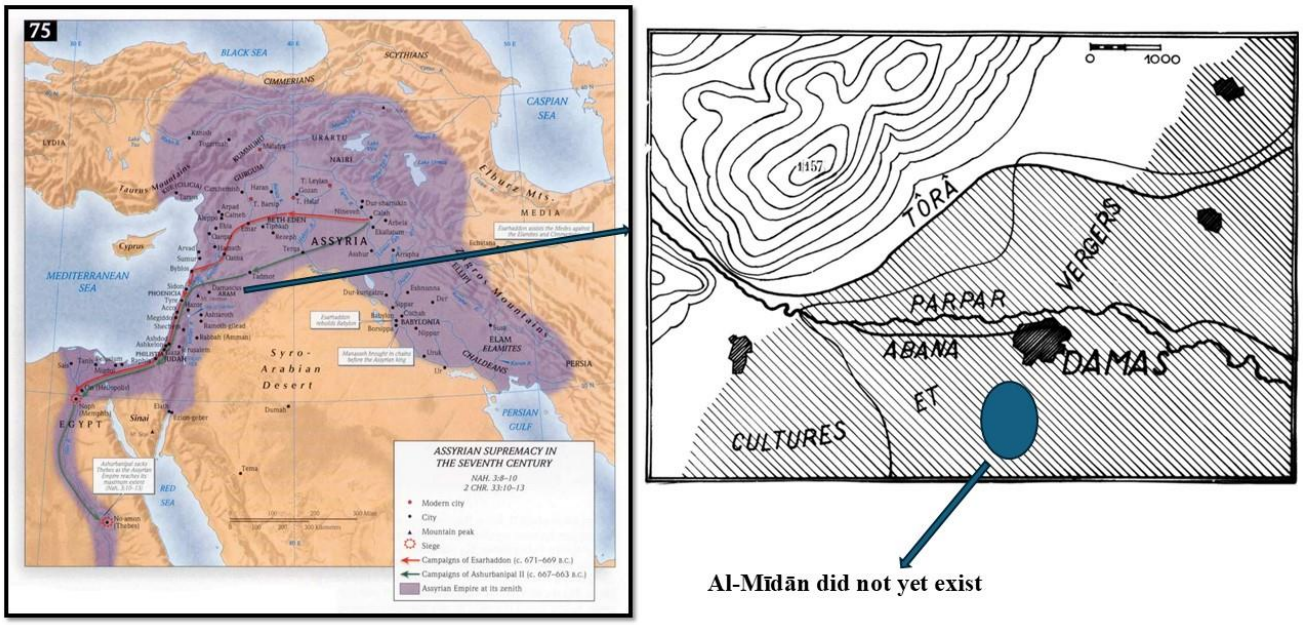

Figure.8. Damascus during the Assyrian, Babylonian, and Persian Periods, and The Situation of Al-Mīdān Neighborhood in this Period. (Source: Watzinger, K., & Wulzinger, C. (1921). *Damaskus: Die antike Stadt*. Leipzig: J.C. Hinrichs)

II.1.2.2.Damascus during the Aramean Period (1100–732 BC): Figure (9).

The Aramean Period marks the foundational phase in the urban and political history of Damascus. Around the 11th century BC, Damascus emerged as the capital of the Aramean kingdom, known in ancient records as "Damashqa" or "Darmeseq". It became one of the most powerful and culturally significant city-states in the southern Levant. [27] Table (4).

Aspect	Summary
Strategic Importance	Located near fertile land and the Baradā River; key trade hub connecting Mesopotamia, Egypt, and Arabia.
Political Status	Independent city-state and capital of the Aramean kingdom until Assyrian conquest in 732 BC.
Cultural Identity	Strong religious and political institutions; use of Aramean language and script.

Table.4. Damascus during the Aramean Period. (Source: Compiled by the researcher, 2025)

II.1.2.2.1.Architectural Elements and Urban Characteristics: [28] Table (5).

Category	Details
Religious and Civic Structures	- Temple of Hudud near present-day Umayyad Mosque site. - Royal Palace in southern. Damascus as political and ceremonial center.

[26] Bubūs. *Al-Mīdān Neighborhood Al-Dimashqī: History and Development*, 2014, 70-75.

[27] Rīhāwi, *Madinit Dimashiq- Turathiha WA M'ālimiha,* 20.

[28] Zwickel, Wolfgang. "Damascus and Its Temples in the Aramaean Period." *Near Eastern Archaeology* 67, no. 3 (2004), 166–172-181.

Residential Fabric	- Organic, unplanned street layout - Neighborhoods adapted to natural terrain and Baradā River
Building Materials	- Clay, sun-dried bricks, stone, and wood. - Single-story courtyard houses with thick walls.
Defensive Features	- Partial fortifications. - Natural features like the Baradā River offered protection.
Urban and Cultural Identity	- Religious processional routes and temples formed urban core. - Aramean language and inscriptions widespread.

Table.5. Architectural Elements and Urban Changes in Damascus during the Aramean Period.

(Source: Compiled by the researcher, 2025)

II.1.2.2.2.The Situation of Al-Mīdān Neighborhood in This Period:[29] Figure (9).

Al-Mīdān, in the Aramean era, did not exist as a residential or urban neighborhood.

The area lay outside the early Aramean urban nucleus, to the south of the core settlement, beyond the main religious and political structures.

It likely consisted of open fields, seasonal grazing land, or uncultivated territory adjacent to the Baradā River's southern flow.

There is no archaeological evidence or historical mention of built structures or organized settlement in the Al-Mīdān area during this time.

However, this southern region, later known as Al-Mīdān—offered topographical advantages (flat terrain, proximity to water).

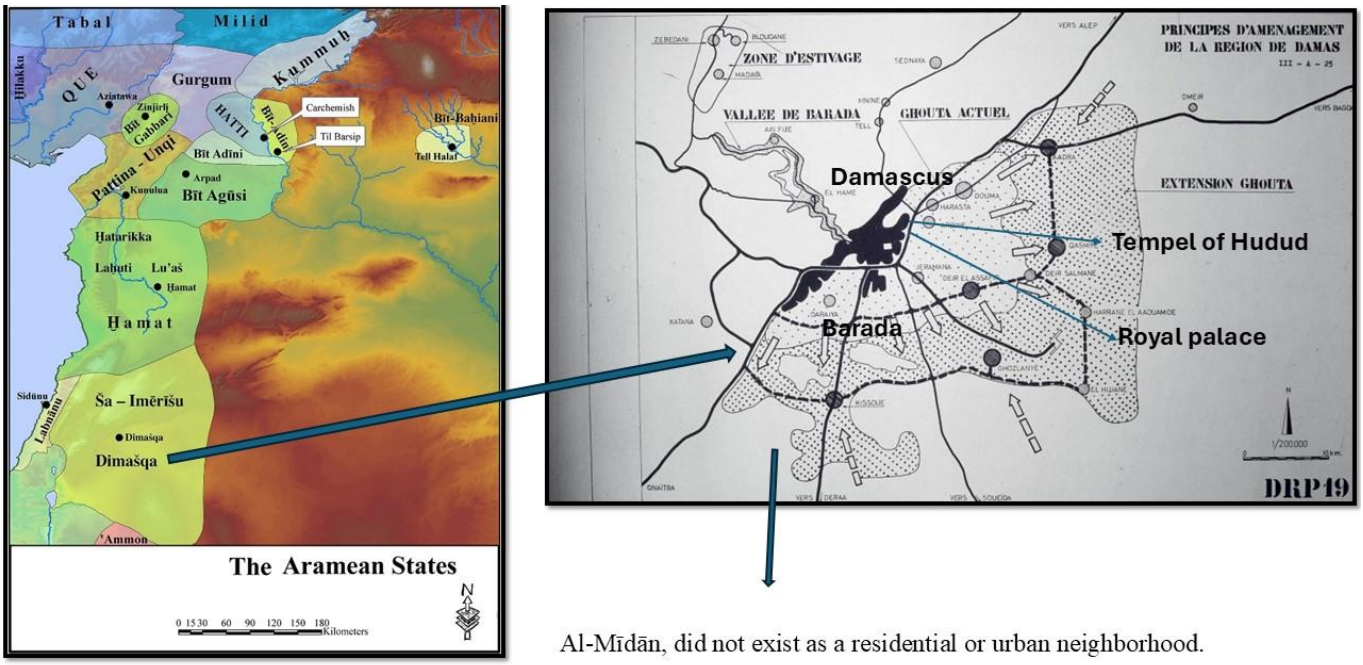

Figure.9. Damascus during the Aramean Period, and The Situation of Al-Mīdān Neighborhood in this Period.

(Source:Edward Lipiński, *The Aramaeans: Their Ancient History, Culture, Religion*, Peeters Publishers, 2000)

[29] Wayne T. *Ancient Damascus: A Historical Study of the Syrian City from the Earliest Times to 332 B.C.E,* 1987, 19-25.

II.1.2.3.Damascus during the Greek (Hellenistic) Period (333–64 BC): [30] Figure (10).

The Greek (Hellenistic) period in Damascus began with Alexander the Great's conquest in 333 BC. Following his death, the city came under Seleucid control, leading to significant cultural and urban transformations. Greek urban planning and architectural principles were introduced, integrating Damascus into the Hellenistic world. Table (6).

Aspect	Summary
Political Shift	Conquest by Alexander the Great, followed by Seleucid rule.
Cultural Transformation	Integration of Greek language, customs, and urban models.
Urban Expansion	Creation of a Greco-Macedonian quarter; Hellenistic district planning introduced.

Table.6. Damascus during the Greek (Hellenistic) Period. (Source: Compiled by the researcher, 2025)

II.1.2.3.1.Architectural Elements and Urban Changes: [31] Table (7).

Category	Details
Hellenistic Urban Planning	- Introduction of orthogonal street grid (Hippodamian plan). - Shift from Aramean organic layout to organized city blocks.
Greco-Macedonian Quarter	- New district for Greek settlers. - Likely in the eastern part of the city with monumental buildings.
Public Buildings and Spaces	- Agora[32] served as central square for commerce and governance. - Greek temples possibly. constructed or repurposed from Semitic shrines.
Residential Development	- Rectangular housing blocks with internal courtyards - Reflects Mediterranean and Greek traditions.
Construction Materials	- Local clay and stone with Greek stylistic influence.
Integration with Landscape	- Baradā River utilized in urban planning for irrigation and infrastructure.

Table.7. Architectural Elements and Urban Changes in Damascus during the Greek (Hellenistic) Period (Source: Compiled by the researcher, 2025)

II.1.2.3.2.The Situation of Al-Mīdān Neighborhood in Damascus during This Period: [33] Figure (10).

During the Greek (Hellenistic) period, the area presently known as Al-Mīdān lay outside the urban core of Damascus.There is no archaeological or textual evidence indicating any organized settlement or construction in Al-Mīdān during this period. The zone likely remained peripheral (it may have been used as a place for military training), characterized by agricultural or undeveloped land, benefiting from its flat topography and proximity to the Baradā River. Urban expansion into this southern sector occurred only in later Islamic periods.

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[30] Burns, *Damascus: A History*, 2005, 33–35.

[31] Robert Morkot, *The Penguin Historical Atlas of Ancient Greece* (London: Penguin Books, 1996), 76.

[32] It is a circular square in which farmers used to meet. Al-'Aghwra constituted an administrative, religious and commercial center in the state, as it was the public place in which basic decisions were taken in society.

[33] Amr Al-Azm, "The City of Damascus in Classical Antiquity," in *Syria: A Historical and Architectural Guide*, Syrian Ministry of Culture, 2007.

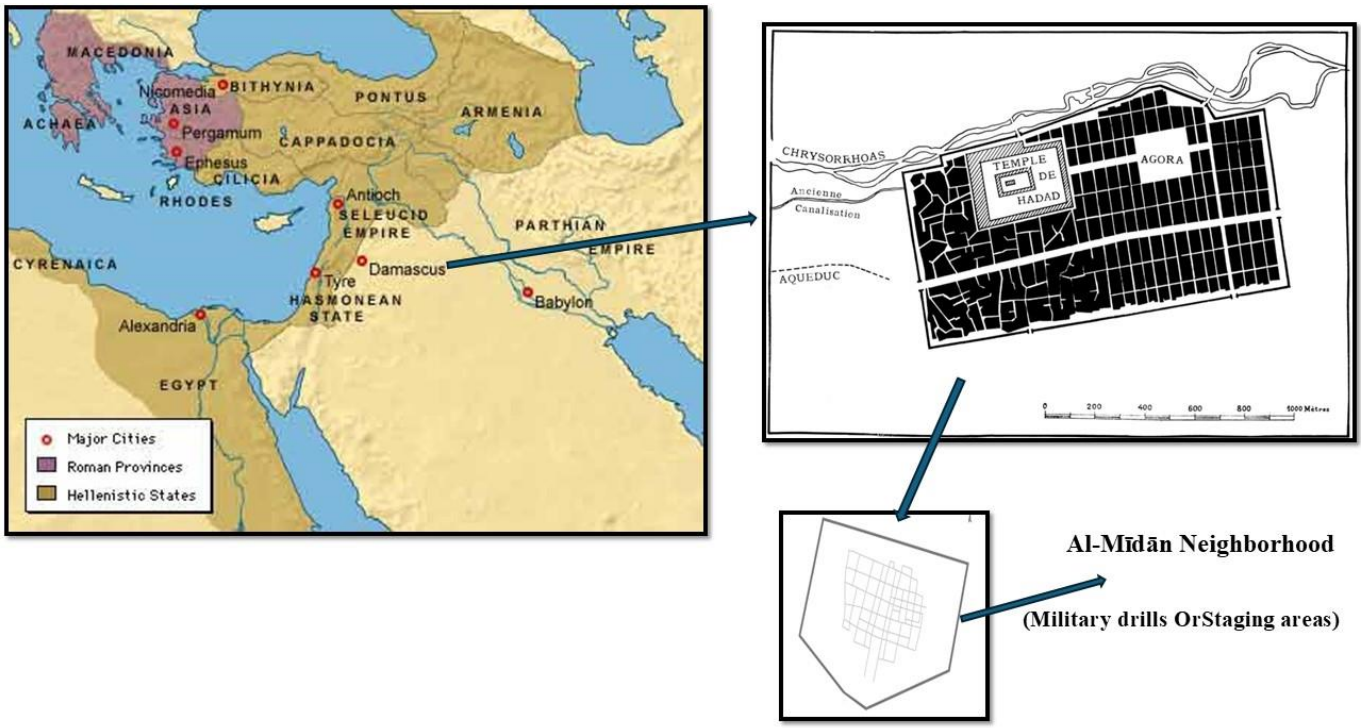

Figure.10. Damascus during the Greek (Hellenistic) Period., and The Situation of Al-Mīdān Neighborhood in this Period.

(Source: *The Penguin Historical Atlas of Ancient Greece*, Robert Morkot, Penguin Books, 1996.)

II.1.2.4.Damascus during the Roman Period (64 BC – 333 AD): [34] Figure (11).

In 64 BC, the Roman general Pompey annexed Damascus into the Roman Republic. It became a key city within the Roman province of Syria, flourishing as a regional administrative, commercial, and military center due to its strategic crossroads location. Table (8).

Aspect	Summary
Annexation and Role	Conquered by Pompey in 64 BC; became part of Roman Syria and a major city in the eastern Roman Empire.
Economic and Strategic Importance	Flourished as a trade and administrative center at the crossroads of Asia, Africa, and the Mediterranean.
Cultural Integration	Romanization of the urban layout and architecture while preserving earlier elements.

Table.8. Damascus during the Roman Period. (Source: Compiled by the researcher, 2025)

II.1.2.4.1.Urban and Architectural Transformation: [35] Table (9).

Category	Details
City Layout: Grid System	- Implementation of Hippodamian grid with Decumanus Maximus (Straight Street) and Cardo Maximus. - Paved streets and colonnades.

[34] Baqīr, *Introduction to the history of the ancient civilizations, Vol. 1,* 121-132.

[35] Al-ʿUlabī. *Dalīl Dimashq al-Tārīkhī.* Dimashq: Dār al-Ahālī, 2009.

City Walls and Gates	- Fortified stone walls. - Bab Sharqi (Eastern Gate) with. triple arch; Bab al-Jabiya (Western Gate) on Decumanus. [36]
Temples and Religious Buildings	- Temple of Jupiter on former Aramean temple site. - Corinthian columns[37], temenos[38], monumental gates.
Theater and Public Buildings	- Roman theater in southwest city (now lost) - Forum, public baths, and aqueduct likely existed.
Infrastructure	- Advanced road networks, water distribution systems, and sewage. - Bridges and road links to other cities.

Table.9. Architectural Elements and Urban Changes in Damascus during the Roman Period.

(Source: Compiled by the researcher, 2025)

II.1.2.4.2.Al-Mīdān Neighborhood During the Roman Period: [39] Figure (11).

The Al-Mīdān neighborhood, located south of the old city, outside the Roman walls, did not yet exist in its later urban form.

During the Roman era, this area was mostly agricultural land, rural settlements, or open space associated with the Ghuta oasis.

The region may have been crisscrossed by Roman roads or aqueducts leading into the city, but there is no evidence of major urbanization in Al-Mīdān at that time.



Figure.11. Damascus during the Roman Period, and The Situation of Al-Mīdān Neighborhood in this Period.
(Source: *Atlas of the Roman World*, by Tim Cornell & John Matthews, 1982)

[36]Ibn ʿAsāker, History *of the City of Dimashq*, 288.
[37]**Corinthian Columns-** Classical Greco-Roman columns with ornate capitals.
[38]**Temenos-** Sacred precinct around a temple.
[39] Sartre, *The Middle East under Rome*, trans, 2005, 201–210.

II.1.2.5.Damascus during the Byzantine Period (333–640 AD): [40] Figure (12).

After the division of the Roman Empire, Damascus became part of the Eastern Roman (Byzantine) Empire under Emperor Constantine the Great. It remained a provincial capital and military center in Phoenice Secunda. The Christianization of the city brought significant religious and architectural transformations. In 635 AD, Damascus was captured by the Muslim Arab forces, ending Byzantine rule. Table (10).

Aspect	Summary
Imperial Integration	Became part of the Byzantine Empire in 333 AD; remained a key city in Phoenice Secunda.
Religious Shift	Christianization of the city; transformation of pagan temples into churches.
End of Period	Conquered by Muslim forces under Khalid ibn al-Walid in 635 AD.

Table.10. Damascus during the Byzantine Period. (Source: Compiled by the researcher, 2025)

II.1.2.5.1.Urban and Architectural Transformation: [41] Table (11).

Category	Details
Religious Architecture	- Roman Temple of Jupiter converted into Cathedral of Saint John the Baptist. - Introduction of Christian basilicas with apses, aisles, and mosaics. - Christian iconography such as crosses and saints featured in churches.
City Walls and Fortifications	- Roman walls reinforced for defense. - Gates like Bab Sharqi and Bab al-Jabiya remained active and possibly modified.
Urban Layout and Continuity	- Roman grid layout preserved but with declining maintenance. - Shift from public spaces to monastic and ecclesiastical buildings.
Artistic and Decorative Elements	- Widespread use of mosaic floors and wall art with Christian themes. - Emphasis on geometric patterns and biblical scenes in church décor.

Table.11. Architectural Elements and Urban Changes in Damascus during the Byzantine Period.
(Source: Compiled by the researcher, 2025)

II.1.2.5.2.The Situation of Al-Mīdān Neighborhood in the Byzantine Period: [42] Figure (12).

During the Byzantine era, the Al-Mīdān area remained outside the city walls and not yet urbanized.

It was likely part of the agricultural hinterland of Damascus:

[40]Ross Burns, *Damascus: A History* (London: Routledge, 2005), 71–75.

[41]Qutayba al-Shihabi, *Āthār Dimashq*,1994, 122–125.

[42] Walter E. Kaegi, *Byzantium and the Early Islamic Conquests*, 1992, 150–151.

Used for farming, gardens, and possibly monastic retreats or villa estates owned by Christian elites

There is no archaeological evidence suggesting the presence of permanent public or religious buildings in Al-Mīdān during this time.

The area remained relatively rural until the later Islamic and Ottoman periods, when it began to take shape as a formal urban district.

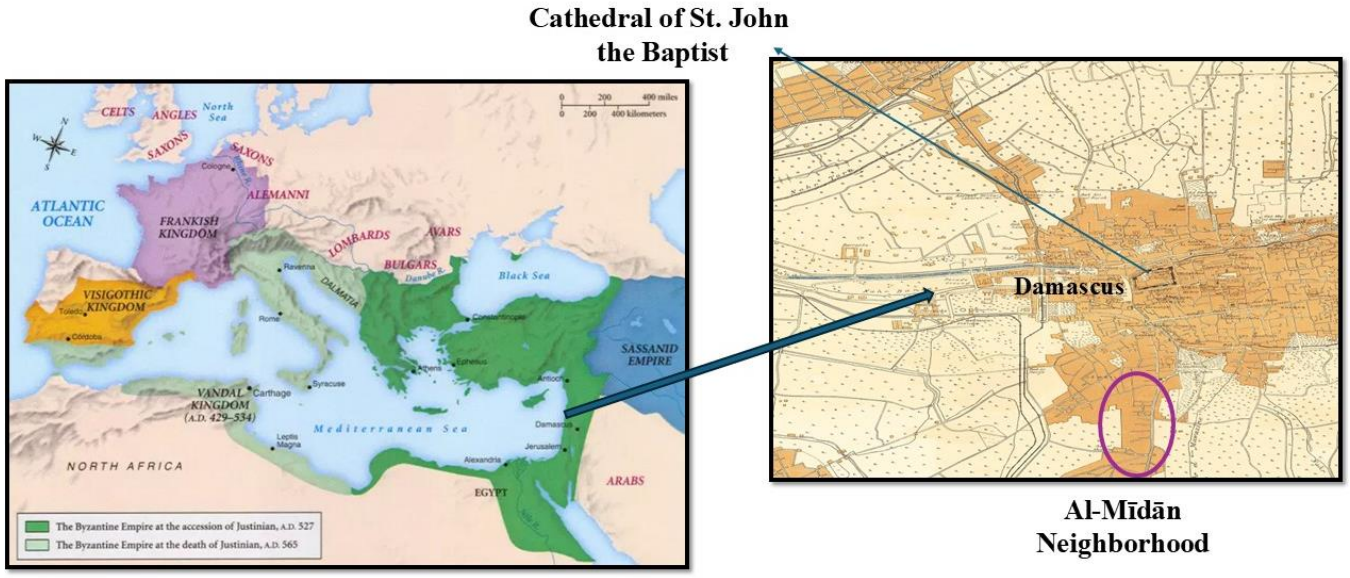

Figure.12. Damascus during Byzantine Period, and The Situation of Al-Mīdān Neighborhood in this Period.

(Source: *Historical Atlas of the Byzantine Empire*, c. 2000)

II.1.2.6.Damascus during the Umayyad Period (661–750 AD): [43] Figure (13).

In 661 AD, Mu'awiya ibn Abi Sufyan founded the Umayyad Caliphate, choosing Damascus as its capital. Under Umayyad rule, Damascus became the political and cultural heart of a vast Islamic empire, stretching from Spain to India. This period marked a golden age for the city, particularly in terms of Islamic architectural innovation and urban transformation. Table (12).

Aspect	Summary
Political Significance	Capital of the Umayyad Caliphate, the first major Islamic empire.
Cultural Influence	Center for administration, culture, and Islamic art and architecture.
Territorial Scope	Empire extended from Spain to India, with Damascus at its heart.

Table.12. Damascus during the Umayyad Period. (Source: Compiled by the researcher, 2025)

II.1.2.6.1.Urban and Architectural Transformations: [44] Table (13).

Category	Details
The Umayyad Mosque	- Built by Caliph al-Walid I on the site of a former Byzantine cathedral.

[43] Lutfī, *Al-Tārīkh Al-ʿamrānī li Dimashiq,* 23-37.

[44] Al-Maʿhad al-Faransī li-l-Sharq al-Adnā (IFPO). *Aṭlas Dimashq al-Tārīkhī.* Dimashq: IFPO wa-al-Mudīriyya al-ʿĀmma lil-Āthār wa-al-Matāḥif, 2009, 18.

	- Hypostyle prayer hall, arcaded aisles, central dome, and mosaics. - Tomb of John the Baptist inside; four minarets added over time.
Urban Planning and Infrastructure	- Roman layout preserved but Islamicized. - Quarters established for religious and ethnic communities. - Development of souks, hammams, caravanserais, and water canals.
Architectural Styles and Innovations	- Horseshoe arches, muqarnas[45], geometric patterns. - Arabic calligraphy and non-figural decorative motifs. - Integration of domes, arcades, gardens, and fountains.

Table.13. Architectural Elements and Urban Changes in Damascus during the Umayyad Period.
(Source: Compiled by the researcher, 2025)

II.1.2.6.2.The Situation of Al-Mīdān Neighborhood in the Umayyad Period: [46] Figure (13).

The Al-Mīdān area, located south of the Roman-Byzantine walled city, began to see early stages of settlement during the Umayyad period.

Although not fully urbanized yet, its proximity to major southern routes (such as the Hajj route to Mecca) and the Barada River's southern canals made it significant.

Likely uses during this period included:

Military training grounds or public gathering spaces (the term "mīdān" in Arabic often refers to an open field or plaza).

Agricultural estates, gardens, and possibly early residential pockets tied to Damascus's expanding population.

Some historians suggest it functioned as a suburban periphery or overflow zone for commercial activities. No major monuments or mosques from the Umayyad era are known to have existed in Al-Mīdān proper, but the foundations for its later development were likely laid during this time.

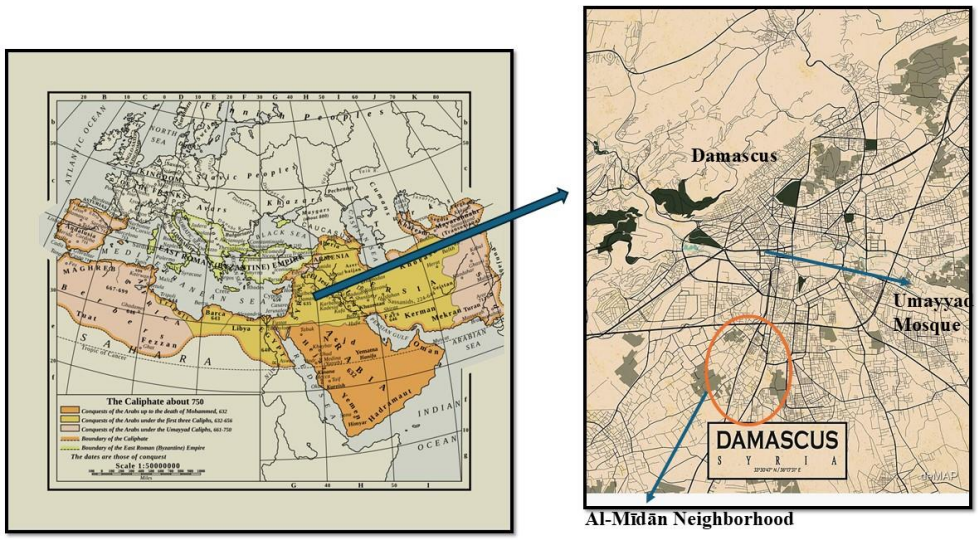

Figure.13. Damascus during the Umayyad Period, and The Situation of Al-Mīdān Neighborhood in this Period.
(Source: *Atlas de Damas* (IFPO & DGAM), 2009)

[45] **Muqarnas-** Stalactite-like decorative element in Islamic architecture.

[46] Qutayba al-Shihabi, *Āthār Dimashq*, 1994, 129.

II.1.2.7.Damascus during the Abbasid–Fatimid Period (750–1075 AD): [47] Figure (14).

In 750 AD, the Abbasids overthrew the Umayyads and shifted the capital to Baghdad, diminishing Damascus's political importance but preserving its regional significance. Under successive rulers including the Tulunids, Ikhshidids, and Fatimids, Damascus remained an active administrative and cultural hub. Table (14).

Aspect	Summary
Political Control	- Abbasid rule with periods of Tulunid, Ikhshidid, and Fatimid influence.
Status of Damascus	- No longer capital, but still a vital administrative and cultural center.
Military and Political Role	- Damascus was contested and strategically significant, particularly under Fatimid influence.

Table.14. Damascus during the Abbasid–Fatimid Period. (Source: Compiled by the researcher, 2025)

II.1.2.7.1.Urban and Architectural Developments: [48] Table (15).

Category	Details
Umayyad Mosque	- Continued religious centrality - Maintained and restored after fires and earthquakes.. - Early signs of muqarnas and decorative stucco.
Public Infrastructure	- Markets, baths, and early madrasas continued or emerged - Canal system of the Barada River maintained
Architectural Features	- Use of stucco with geometric and vegetal motifs. - Courtyard-centered buildings. - Square minarets continued. - Limited monumental construction.

Table.15. Architectural Elements and Urban Changes in Damascus during the Abbasid–Fatimid Period.
(Source: Compiled by the researcher, 2025)

II.1.2.7.2.The Situation of Al-Mīdān Neighborhood (750–1075 AD): [49] Figure (14).

The Al-Mīdān area remained outside the main city walls during this period but began to take on greater peripheral significance.
Likely served as:
Agricultural land irrigated by Barada canal extensions.
A site for military exercises, horse races, or open-air markets (consistent with the term "mīdān" meaning "field" or "open space").

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[47] Al-Rīḥāwī. *al-ʿImāra fī Sūriyā: Min al-ʿAṣr al-Ḥajarī ḥattā al-ʿAṣr al-ʿUthmānī*. 1986, 96–100.
[48] K.A.C. Creswell. *Early Muslim Architecture*, Vol. I. Oxford: Clarendon Press, 1969.
[49] Maʾmūn ʿAbd al-Karīm. "al-Taḥawwulāt al-ʿUmrāniyya fī Dimashq khilāl al-ʿAṣr al-ʿAbbāsī wa-al-Fāṭimī." *Majallat al-Turāth al-Shaʿbī*, no. 86 (2011): 71–84.

Under Fatimid influence, especially due to their military interest in controlling Syria, the southern approaches to Damascus (including Al-Mīdān) may have gained strategic relevance.

While still not urbanized, this era likely saw the early foundations for Al-Mīdān's development in later centuries, particularly due to:

Population pressure inside the city.

Trade activity on the southern roads leading to Hauran, Palestine, and Egypt.

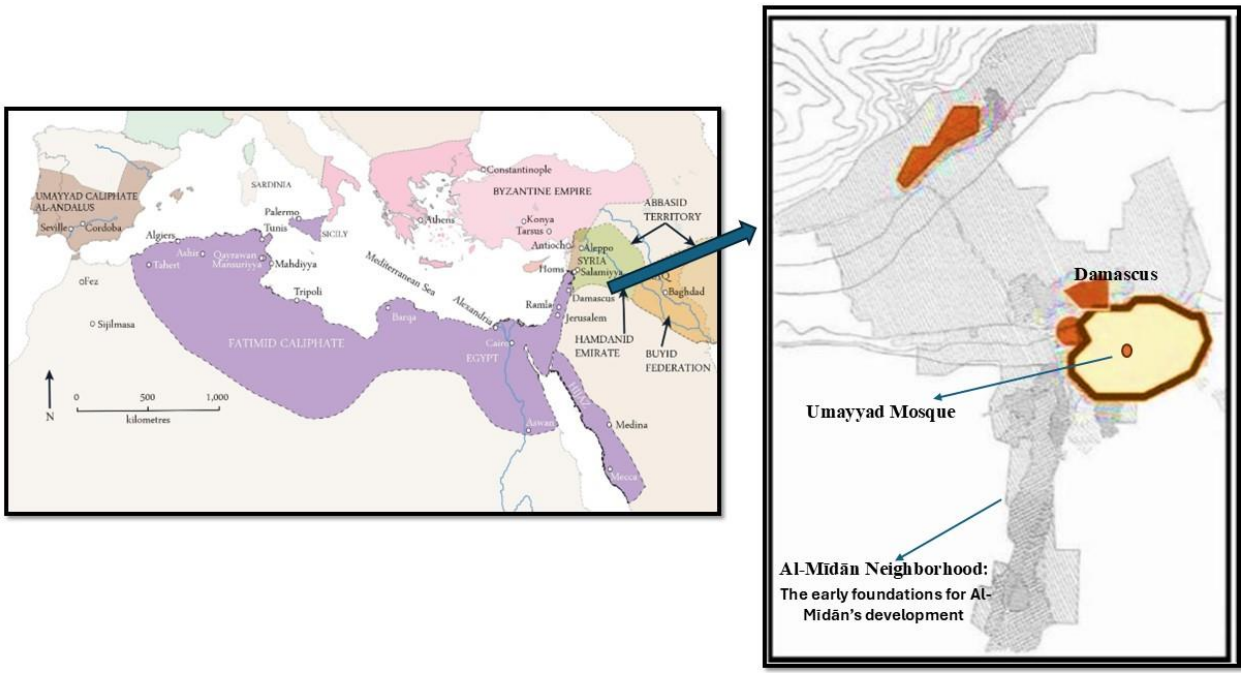

Figure.14. Damascus during the Abbasid–Fatimid Period, and The Situation of Al-Mīdān Neighborhood in this Period.

(Source: *The Atlas of Islamic History* by Peter Sluglett and Marion Sluglett (Routledge, 2015))

II.1.2.8.Damascus during the Seljuk–Ayyubid Period (1075–1259 AD): Figure (15).

II.1.2.8.1.Historical Background: [50] Table (16).

Period	Key Highlights
Seljuk Period (1075–1174 AD)	- Seljuks integrated Damascus into a vast empire. - City became a strategic political and military center. - Governed by atabegs under Seljuk Sultan.
Zengid Rule (1128–1174 AD)	- Nur al-Din made Damascus a Sunni stronghold and jihad center. - Cultural and architectural revival occurred.
Ayyubid Period (1174–1259 AD)	- Saladin established the Ayyubid dynasty - Religious construction, education, and fortification flourished..

Table.16. Damascus during the Seljuk–Ayyubid Period. (Source: Compiled by the researcher, 2025)

II.1.2.8.2.Architectural Characteristics: [51]Table (17).

Element	Details
Key Architectural Elements	- Use of limestone and basalt - Elaborate muqarnas and stone reliefs.

[50] Lutfī, *Al-Tārīkh Al-'amrānī li Dimashiq,* 43.

[51] Ross Burns, *Damascus: A History* (London: Routledge, 2005), 103–104.

	- Geometric portal designs, domes over tombs/mihrabs - Integration of madrasas with mosques and mausoleums
Nur al-Din's Contributions	- Al-Nūrī Hospital (1154) - Madrasa al-Nūriyya al-Kubrā and al-Sughrā - Expanded Umayyad Mosque
Ayyubid Contributions	- Renovated Citadel of Damascus - Tomb of Saladin near Umayyad Mosque - Madrasa al-ʻĀdiliyya and urban waqf [52]developments

Table.17. Architectural Elements in Damascus during the Seljuk–Ayyubid Period.(Source: Compiled by the researcher, 2025)

II.1.2.8.3.Urban Changes in Damascus: [53] Table (18).

Change	Description
City Walls and Gates	Reinforcement of Bab al-Saghīr and Bab al-Jābiya
Suburban Growth	Due to population increase and pilgrimage-related commerce
Market Expansion	Growth of suqs linked to waqf and religious institutions
Infrastructure	New roads and Hajj-route connections to the south

Table.18. Urban Changesin Damascus during the Seljuk–Ayyubid Period. (Source: Compiled by the researcher, 2025)

II.1.2.8.4.The situation of Al-Mīdān Neighborhood in this Period: [54] Figure (15).

Although Al-Mīdān had not yet fully developed into the prominent neighborhood it would become in later Ottoman times, its foundations were laid during the Seljuk–Ayyubid period:

Geographic and Functional Role

- Located south of the old city, Al-Mīdān sat on the Hajj route, which linked Damascus to Mecca.
- It served as a transitory zone between the city proper and the southern rural areas.
- The area began to see agricultural development and the creation of caravan stations, particularly under Ayyubid patronage.

Military and Strategic Importance

- The Ayyubids invested in military logistics, which likely included infrastructure in areas like Al-Mīdān to support troop movements and Hajj caravans.
- It was on the Damascus–Daraa–Hejaz route, important for trade, supply chains, and pilgrimage logistics.

Religious and Civic Structures

- Some early religious structures and waystations (possibly associated with waqf systems) were established to support travelers.

[52] **Waqf** – Endowment of property for religious or charitable purposes, often funding public buildings.

[53] Yasser Tabbaa, *The Transformation of Islamic Art during the Sunni Revival*, 2001, 34.

[54] Al-Rīḥāwī. *al-ʿImāra fī Sūriyā: Min al-ʿAṣr al-Ḥajarī ḥattā al-ʿAṣr al-ʿUthmānī*. 1986, 100–105.

- The urbanization of Al-Mīdān was still in its infancy but set the stage for later growth during the Mamluk and especially Ottoman periods.

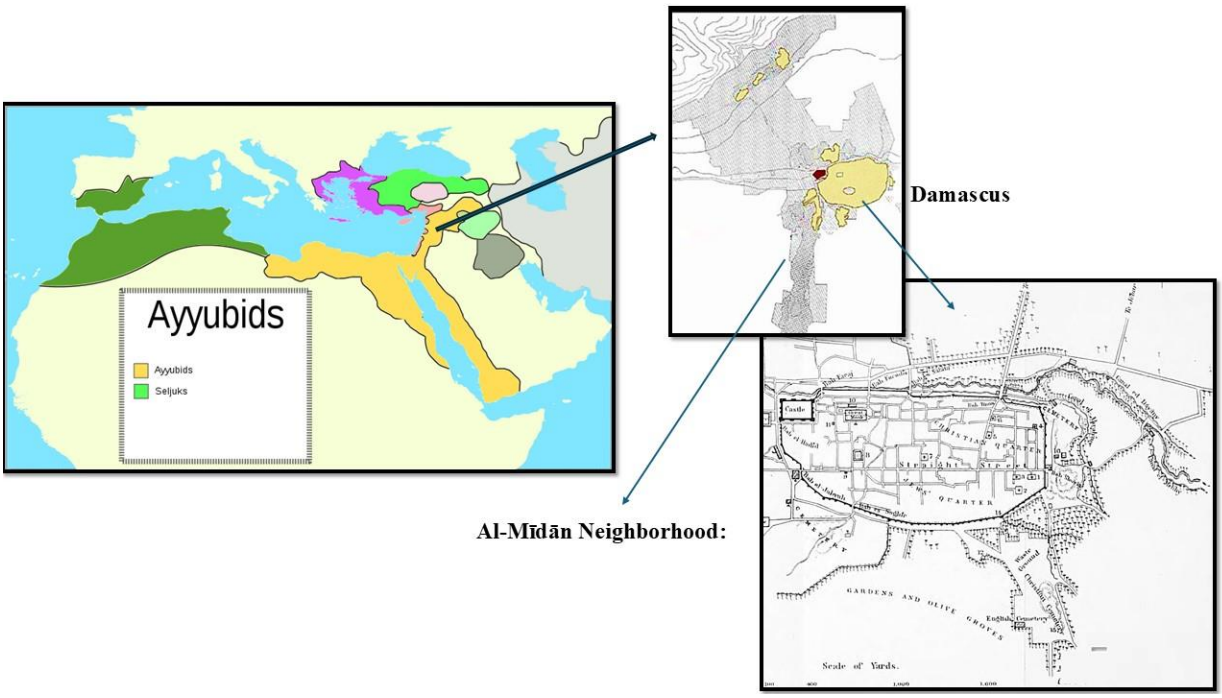

Figure.15. Damascus during the Abbasid–Fatimid Period, and The Situation of Al-Mīdān Neighborhood in this Period. (Source: Atlas de Damas (IFPO & DGAM, 2009))

II.1.2.9.Damascus during the Mamluk Period (1259–1516 AD): Figure (16).

II.1.2.9.1.Historical Context: [55] Table (19).

Aspect	Details
Rise of Mamluk Rule	- Mamluks defeated Mongols at ʿAyn Jālūt (1260). - Damascus became second only to Cairo in importance. - Served as capital of the Syrian province (Bilād al-Shām[56]).
Strategic and Cultural Importance	- Military hub and religious center - Fortified against Mongol invasions (1299–1300, 1400–1401). - Religious and urban architecture flourished.

Table.19. Damascus during the Mamluk Period. (Source: Compiled by the researcher, 2025)

II.1.2.9.2.Architectural Elements and Urban Changes: [57] Table (20).

Element	Description
Architectural Characteristics	- Monumental portals with muqarnas and geometric motifs. - Ablaq[58] masonry, slender octagonal minarets. - Use of domes, calligraphy, mashrabiyyas[59], and stucco.

[55] Zīyad, *Dimashiq fi Al-ʻAsir Al-Mamālik,* 89.
[56] **Al-Shām-** Classical Arabic name for Greater Syria (including Damascus).
[57] Tabbaa. *The Transformation of Islamic Art during the Sunni Revival*, 2001, 48–65.
[58] **Ablaq-**Alternating light and dark masonry
[59] Mashrabiyyas -Latticed wooden screen projecting from windows

Urban Development	- Madrasas, mosques, khanqahs, khans, hammams, sabils. - Restoration of city walls (esp. post-1401). - Enhancements to Umayyad Mosque, roads, markets, gates.

Table.20. Architectural Elements in Damascus during the Mamluk Period.(Source: Compiled by the researcher, 2025).

II.1.2.9.3.Notable Mamluk Buildings in Damascus: [60] Table (21), Figure (16).

Building	Details
Madrasa al-Zāhiriyya	Built by Sultan al-Ẓāhir Baybars; madrasa + mausoleum; one of the earliest Mamluk foundations.
Madrasa al-Jāwliyya	1300s; known for ornate portal and rich decoration.
Madrasa al-Tankiziyya	Built by Tankiz in 1328; combined mosque, madrasa, sabil, and lodging.
Madrasa al-Ashrafiyya, al-Sibāʿiyya	Part of broader Old City educational and religious complexes.
Khan Asʿad Pasha	Ottoman rebuild, but reflects Mamluk-era caravanserai functions.

Table.21. Notable Mamluk Buildings in Damascus during the Mamluk Period.(Source: Compiled by the researcher, 2025)

II.1.2.9.4.The Situation of Al-Mīdān Neighborhood in the Mamluk Period: Figure (16).

- **Emergence as a Key Suburban District:** [61]

- In the Mamluk era, Al-Mīdān, began transitioning from a rural outskirt to a more defined suburb of Damascus.
- It was strategically located on the Hajj route to Mecca (via Daraa and the Hejaz).
- Its position made it crucial for military movements, pilgrimage logistics, and agricultural supply lines to the main city.

- **Functions and Features in this Period:** [62]

- Khan-like facilities and rest stations likely emerged in or near Al-Mīdān to accommodate pilgrims and traders.
- Agricultural estates and waqf lands supported Damascus's grain and food supply, with Al-Mīdān as a transitional zone between city and countryside.
- Religious buildings, possibly small mosques or zawiyas, began to be constructed to serve the growing local population.

- **Impact of Timur's Invasion (1401):** [63]

- When Tamerlane (Timur) attacked Damascus in 1401, widespread destruction occurred, including in surrounding suburbs like Al-Mīdān.
- Recovery was slow, but waqf-based rebuilding efforts and the strategic location of Al-Mīdān ensured its continued development.

[60] Kennedy. *The Prophet and the Age of the Caliphates*, 2004, 183–188.

[61] Al-Shihabi**.** *Āthār Dimashq: Dirāsa Tārīkhiyya wa-Athariyya lil-Madīna al-Qadīma*, 1994, 143–148.

[62] Al-Rīḥāwī. *al-ʿImāra fī Sūriyā: Min al-ʿAṣr al-Ḥajarī ḥattā al-ʿAṣr al-ʿUthmānī*, 1986, 106–111.

[63] Al-Maʿhad al-Faransī li-l-Sharq al-Adnā (IFPO). *Aṭlas Dimashq al-Tārīkhī.* Dimashq, 2009, 21.

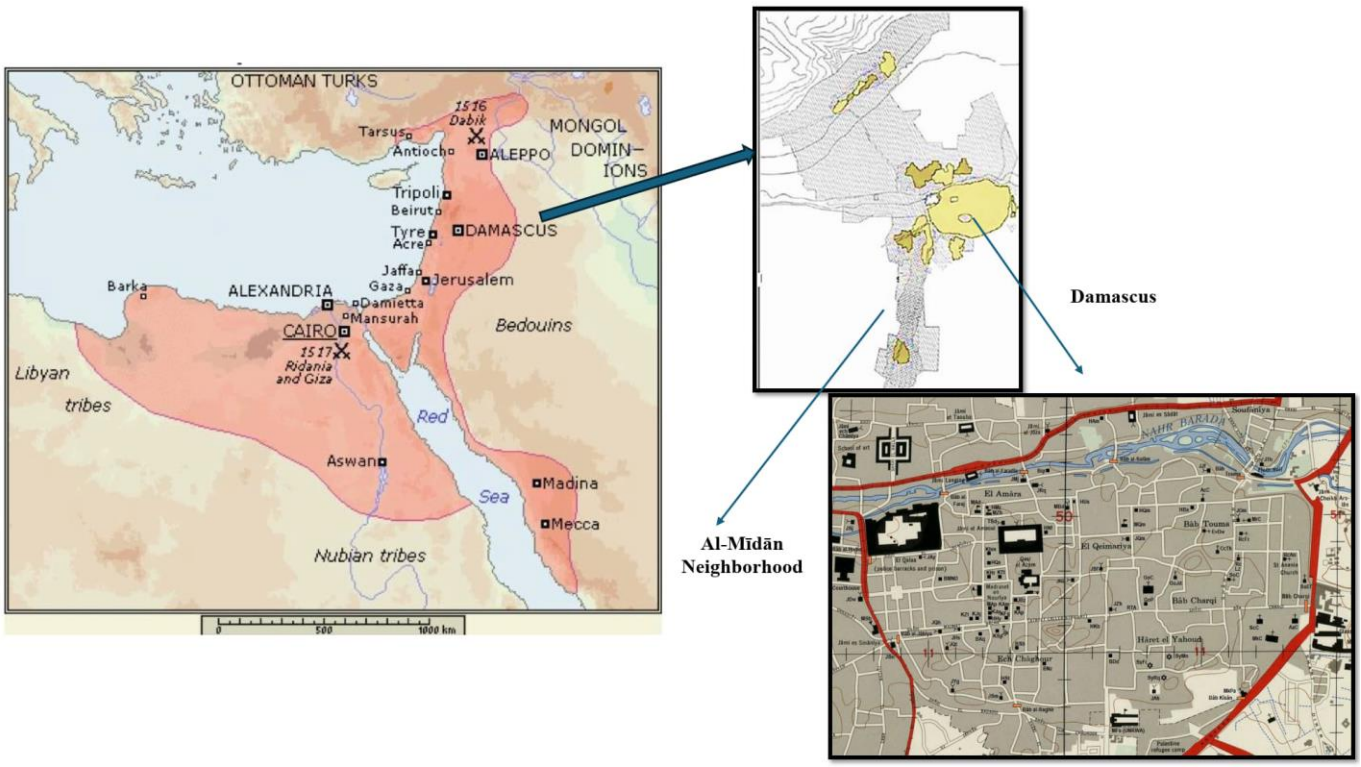

Figure.16. Damascus during the Mamluk Period, and The Situation of Al-Mīdān Neighborhood in this Period.

(Source: Atlas de Damas (IFPO & DGAM, 2009))

II.1.2.10.Damascus during the Ottoman Period (1516–1918 AD): Figure (17).

II.1.2.10.1.Historical Overview: [64] Table (22).

Aspect	Details
The Ottoman Conquest	- Conquered by Sultan Selim I in 1516 at the Battle of Marj Dābiq. [65] - Became provincial capital of Bilād al-Shām. - Key hub on the Hajj route with economic and religious importance.
Strategic and Spiritual Role	- Launch point for annual Hajj caravan. - Amīr al-Ḥajj appointed from elites or Ottoman administration. - Maintained status as religious and educational center.

Table.22. Damascus during the Ottoman Period. (Source: Compiled by the researcher, 2025)

II.1.2.10.2.Architectural Developments and Characteristics: [66] Table (23).

Feature	Description
Ottoman Style in Damascus	- Refined ablaq masonry. - Domed mosques with pencil minarets. - Waqf complexes with mosques, madrasas, hammams, sabils. - Use of Iznik tiles, calligraphy, woodwork.

[64] Zīyad, *Dimashiq fi Al-ʿAsir Al-Mamālik,* 105-109.

[65] The term refers to a significant military engagement that occurred on August 8, 1516 CE, between the Ottoman Empire and the Mamluk Sultanate, near the city of Aleppo in northern Syria.

[66] Zīyad, *Dimashiq fi Al-ʿAsir Al-Mamālik,* 105-109.

Key Architectural Additions	- Takiyyat Sulaymāniyya (1554) by Sinan: mosque + hostel for pilgrims. - Khan Asʿad Pasha (1751–52): grand caravanserai with dome and ablaq. - Azm Palace (1749): residence with courtyards and fountains. - Umayyad Mosque: Ottoman restorations - Numerous sabils and hammams built citywide.

Table.23. Architectural Elements in Damascus during the Ottoman Period. (Source: Compiled by the researcher, 2025).

II.1.2.10.3.Urban and Social Changes: [67] Table (24).

Change	Description
Cosmopolitan Population	Turks, Arabs, Kurds, Circassians, Armenians in distinct quarters.
Urban Organization	City divided into ḥārat based on ethnicity/religion.
Commerce	Expansion of commercial hubs like Suq al-Hamidiya.
Infrastructure	Hejaz Railway (1908), telegraph lines, and postal systems.

Table.24. Urban Changesin Damascus during the Ottoman Period. (Source: Compiled by the researcher, 2025)

II.1.2.10.4.Al-Mīdān Neighborhood in the Ottoman Period: Figure (17).

- **Historical Overview:** [68]
- Al-Mīdān is located southwest of old Damascus, extending into the Ghūṭa region. Figure (17).
- Historically served as a military training field and horse racing venue.
- **Transformation into a Major Suburb (Urban Structure):**
- Comprises two main areas: Al-Mīdān Fawqānī (Upper al-Mīdān), and Al-Mīdān Taḥtānī (Lower al-Mīdān). Figure (18).
- Rich urban fabric with zigzag alleys, closed lanes, and distinct road systems. Figure (18).
- Mixed-use development including markets, religious structures, and residential zones.
- Al-Mīdān evolved from a peripheral suburb into a fully urbanized, economically vital quarter of Damascus.
- Strategically located on the road to the south and the Hejaz, it became: figure (1).
    - A departure point for the Hajj caravans. Figure (18).
    - A commercial center, especially for grain, livestock, and food trade.
- **Economic Activities:** [69]
    - Based on grain trade, rural products, crafts, and services for pilgrims.
    - Key markets: Grain, Sheep, Camel, Coppersmiths, Jazmātya, Qubaybāt, Horses (The specific maps detailing these market locations are scarce). Figure (18).
    - Presence of bakeries, woodshops, cafés, and seasonal trade fairs.

[67] Rīhāwi, *Madinit Dimashiq- Turathiha WA M'ālimiha,* 45-52.
[68] Al-Hajār, *Dimashiq Al-Shām 9000 years of civilization,* 305-311.
[69] Al-Kasāṭilī, *Al-Rawḍa Al-Ghannā' fi Tārīkh Dimashiq Al-Fayhā',* 170-187.

- **Social Composition:** [70]
  - Diverse population: Muslims, Christians (Roman Catholic & Orthodox), Druze, Turkman.
  - Known for interfaith coexistence and community solidarity (e.g., Al-Ṭawsha of 1860).
  - Migration from Hawrān, Wādī al-Taym, and rural Syria contributed to social fabric.
- **Architectural and Social Features:** [71]
- Mosques and zāwiyas (Sufi lodges) were established or expanded in the neighborhood.
- Large courtyard houses were built by wealthy merchants and landowners.
- Sūq al-Mīdān (market of al-Mīdān) became a thriving economic center.
- Home to several notable scholars and religious figures in the 18th and 19th centuries.
- **Transportation & Hajj:** [72]
  - Al-Sultānī Road served as main Hajj route; infrastructure included khans and sabils. Figure (15).
  - Transition from Hajj convoy to Hejaz Railway (1908) and tram lines (1904). Figure (18).
  - Al-Mīdān became a hub for pilgrims and trade convoys to and from the south.
- **Role in Nationalism and Resistance:** [73]
- Al-Mīdān gained prominence in the late Ottoman era for its active role in resisting foreign domination:
  - Many Arab nationalist figures emerged from Al-Mīdān.
  - The neighborhood played a role in opposition to French influence during World War I.

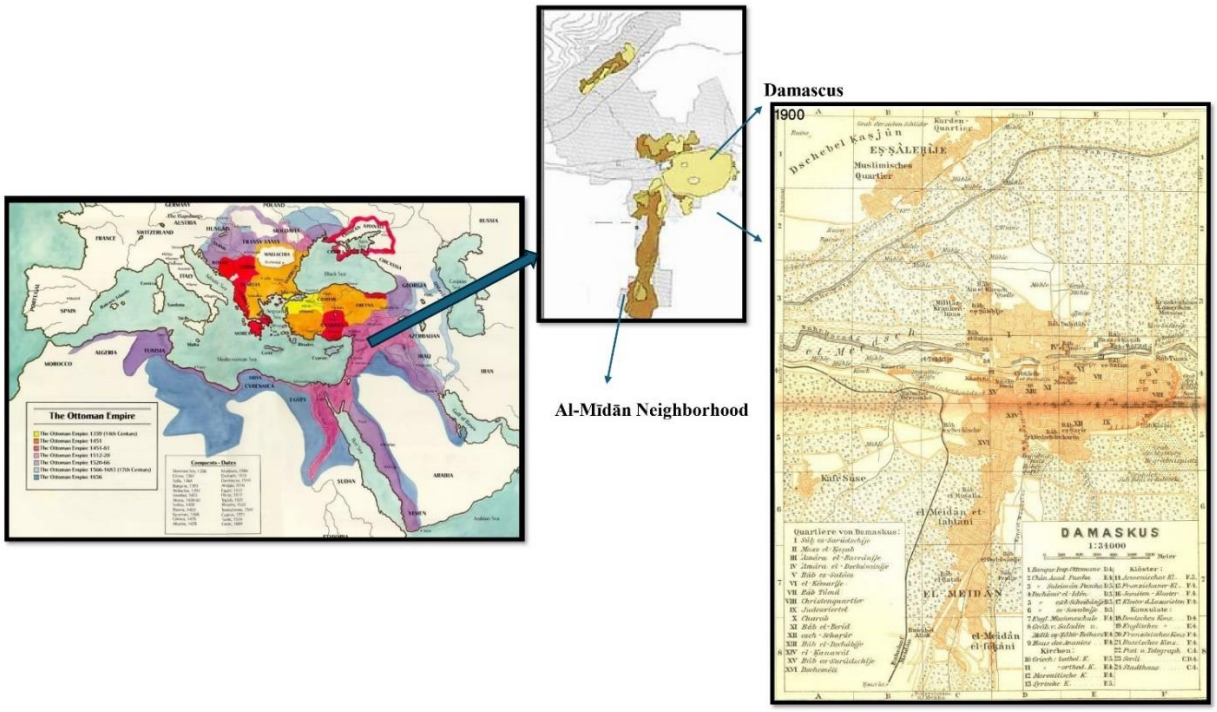

Figure.17. Damascus during the Ottoman Period, and The Situation of Al-Mīdān Neighborhood in this Period.

(Source: Atlas de Damas (IFPO & DGAM, 2009))

[70] Linda, *Dimashiq fi Al-Karnīn Al-Thāmin wa al-Tāsig,* 60-80.
[71] Al-Furus, *Nuzhat Al-'Nām fi Mahāsin Al-Shām,* 153-157.
[72] Ibn jubayr, *a trip of Ibn jubyr,* 175-181.
[73] Ibn al-Qalānsī, *History of Dimashq,* 73-90.

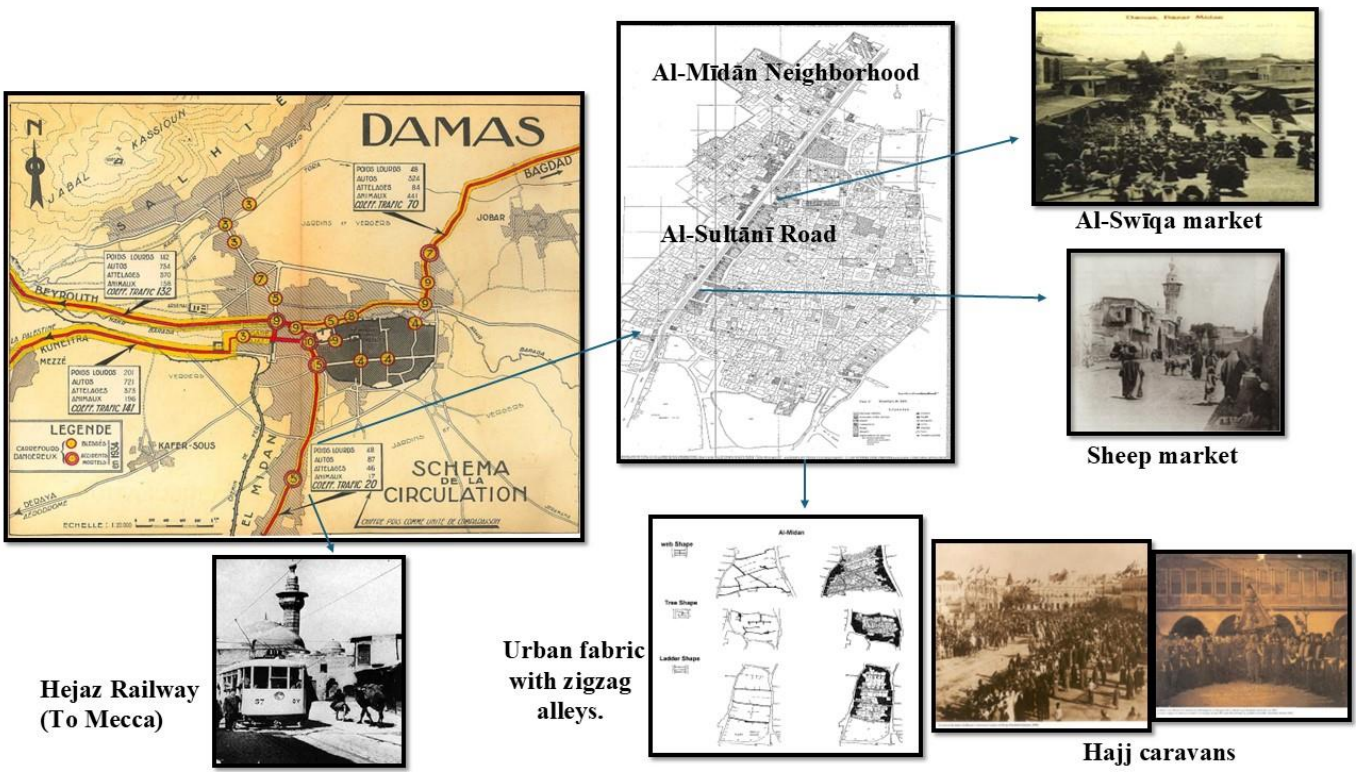

Figure.18. Al-Mīdān Neighborhood in the Ottoman Period. (Source: Atlas de Damas (IFPO & DGAM, 2009))

Chapter III:

An analytical investigation of the service architecture within the Al-Mīdān neighborhood during the Ottoman period, approached through an integrated historical and architectural framework.

III.1. Introduction:

The Al-Mīdān neighborhood experienced significant architectural transformation over time, closely aligned with its urban expansion and demographic growth. This development is manifested in the proliferation of service-oriented structures that both responded to and shaped the spatial and social fabric of the area.[74]

As the neighborhood expanded, numerous service buildings emerged that were carefully integrated into the existing architectural context, often maintaining harmony with the traditional spatial typologies and stylistic language of Al-Mīdān.[75]

The historical growth of Al-Mīdān was intrinsically linked to its strategic position along the land route of the Hajj pilgrimage and the grain trade from the Hawran region, figure (1). These axes of movement and exchange deeply influenced the neighborhood's functional zoning and led to the linear distribution of structures such as grain depots (Al-Bawāyik) along its central spine.[76] Figure (19).



Figure.19. The linear distribution of structures such as (Al-Bawāyik) along the central spine of Al-Mīdān neighborhood.

(Source:Atlas de Damas, IFPO & DGAM (2009), p. 30)

[74] Ṭarakjī, *Al-Subul fi Madinit Dimashiq,* 78.
[75] Al-Dīn, al-'Ansar', *Nukhbit Al-Dahir fi 'Ajā'ab Al-bar wa Al-Bahir,* 531.
[76] Yāghī, *Al-Bāyka,* 128.

- The relationship between heritage buildings and their surroundings in Al-Mīdān, as well as their location within the urban texture, is a fascinating aspect of the neighborhood's historical and cultural fabric. Here are some key points to consider:

- **Relationship Between Heritage Buildings and Their Surroundings:** [77]

1. Integration with the Urban Fabric: Heritage buildings in Al-Mīdān are often seamlessly integrated into the urban fabric. They are typically surrounded by narrow streets and alleys, which create a sense of intimacy and continuity with the surrounding structures.
2. Cultural Significance: These buildings often serve as landmarks and hold cultural and historical significance for the community. They are focal points for social and cultural activities, contributing to the neighborhood's identity.
3. Functional Use: Many heritage buildings continue to serve their original functions, such as mosques, schools, and markets. This ongoing use helps maintain their relevance and connection to the community.
4. Aesthetic Harmony: The architectural style of heritage buildings often harmonizes with the surrounding structures, creating a cohesive and visually appealing streetscape. Traditional design elements, such as courtyards and decorative facades, are common features.

- **Location of Buildings in the Urban Texture:** [78]

1. Central and Accessible Locations: Heritage buildings are often located in central and accessible parts of the neighborhood. This makes them easily reachable for residents and visitors, reinforcing their role as community hubs.
2. Proximity to Public Spaces: Many heritage buildings are situated near public spaces such as markets, squares, and mosques. This proximity enhances their visibility and accessibility, making them integral parts of daily life in Al-Mīdān.
3. Residential Clusters: Residential heritage buildings are typically clustered together, creating distinct neighborhoods within Al-Mīdān. These clusters often feature narrow, winding streets that promote a sense of community and privacy.
4. Adaptive Reuse: Some heritage buildings have been adapted for modern uses. This adaptive reuse helps preserve the buildings while integrating them into the contemporary urban context.

- **Challenges and Opportunities:** [79]

1. Preservation Efforts: Balancing preservation with modernization is a key challenge. Efforts to maintain the historical integrity of heritage buildings must be balanced with the need for modern amenities and infrastructure.

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[77] Al-Ghazī, *Khulasit al-'Athar fi 'Ayān al-karan al-Hadī 'Ashar,* 36.
[78] 'Abd al-Kādir. Al-Naʿīmī, *Al-Daris fi Tārīkh al-Madāris,* 92.
[79] Al-'Anba', *'Asma' Al-Sab'īn Raswlan,* 73.

2. Urban Development: Urban development projects must consider the impact on heritage buildings and their surroundings. Sensitive planning and design can help ensure that new developments complement the historical character of the neighborhood.

3. Community Involvement: Engaging the local community in preservation efforts is crucial. Residents' knowledge and appreciation of their heritage can drive successful preservation and adaptive reuse projects.

The relationship between heritage buildings and their surroundings in Al-Mīdān is a dynamic interplay of history, culture, and urban development. These buildings are not just remnants of the past but active participants in the neighborhood's present and future.

- The identity of the builder and the association with pious foundations (Waqf) are both significant aspects of the heritage buildings in Al-Mīdān. Here's why:

- **Importance of the Builder's Identity:** [80]

1. Architectural Style and Techniques: The identity of the builder often influences the architectural style and construction techniques used in a building. Renowned builders or architects might bring unique design elements and craftsmanship that distinguish their work.

2. Historical Significance: Buildings constructed by notable builders or under the patronage of influential figures can carry historical significance. These structures often reflect the social, political, and cultural context of their time.

3. Cultural Heritage: The reputation and legacy of the builder can contribute to the cultural heritage of the neighborhood. Buildings associated with famous builders are often preserved and celebrated as part of the local history.

- **Association with Pious Foundations (Waqf):** [81]

1. Sustainable Maintenance: Buildings associated with Waqf (pious foundations) benefit from dedicated funds for their maintenance and upkeep. This ensures their preservation over time.

2. Community Services: Waqf buildings often serve important community functions, such as mosques, schools, and hospitals. Their association with pious foundations underscores their role in providing social and religious services.
3. Cultural and Religious Significance: Waqf buildings are imbued with cultural and religious significance. They are often seen as symbols of piety and charity, reflecting the values of the community.
4. Historical Continuity: The association with Waqf provides a sense of historical continuity. Many Waqf buildings have been in use for centuries, maintaining their original purpose and significance.

[80] Abd al-Hakīm, *Al-Mazāhib Al-Sūfiya,* 109.
[81] Al-ʿAdawī, *Ziyārāt Ela Dimashiq,* 145.

- **Examples in Al-Mīdān:** [82]

1. Mosques and Madrasas: Many mosques and madrasas in Al-Mīdān are associated with Waqf. These buildings not only serve religious and educational purposes but also stand as testaments to the charitable intentions of their founders.
2. Public Baths (Hammams): Some public baths in Al-Mīdān were established as Waqf, providing essential services to the community while being maintained through dedicated funds.
3. Residential Buildings: Certain residential buildings might also be part of Waqf, especially those intended to provide housing for the needy or for religious scholars.

The identity of the builder and the association with Waqf both play crucial roles in the historical and cultural significance of buildings in Al-Mīdān. They contribute to the neighborhood's rich heritage and ensure the preservation and continued relevance of these structures.

III.2.Historical Context:

The Al-Mīdān neighborhood was not only a prominent urban extension of Damascus but also a site of considerable religious, economic, and social significance. During the Ottoman period, it witnessed the establishment of numerous religious institutions, including mosques, zawāyā (Sufi lodges), and madrasas, as well as buildings dedicated to commercial and communal functions. These facilities served a diverse demographic comprising pilgrims, itinerant merchants, travelers, and local residents, thereby reinforcing al-Mīdān's role as a key node in the city's southern trade and pilgrimage networks. [83]

The architectural fabric of al-Mīdān was shaped and reshaped by a succession of historical events, most notably natural disasters that prompted large-scale interventions in the built environment. Among these, the earthquake of 1173 AH / 1760 AD stands out as a particularly destructive episode, figure (20). This seismic event inflicted extensive structural damage, including the partial or complete collapse of mosque minarets, the fissuring and destabilization of walls, and the destruction of vaulted ceilings and roofing systems throughout the neighborhood. Contemporary accounts and waqf restoration records suggest that numerous domestic and religious structures were either repaired or entirely rebuilt in the aftermath, marking the earthquake as a pivotal moment in the architectural history of the district. [84]

The reconstruction efforts that followed were often supported by waqf endowments, reflecting the community's resilience and the enduring socio-religious importance of these institutions. This event, therefore, not only altered the physical landscape of al-Mīdān but also contributed to the layering of its architectural heritage, with traces of restoration phases still observable in surviving structures today. Moreover, the Al-Mīdān neighborhood experienced several other devastating events, most notably the Battle of Al-Mīdān, as illustrated in Figure (21).

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[82] Weber 2009, 63.

[83] Jundī, *Tarīkh Al-Thawrāt Al-sūriya fi 'Ahd Al-'Antidāb Al-Faransī,* 392.

[84] Al-ʿUlabī, *Khuṭaṭ Dimashiq,* 130.



Figure 20**.** The earthquake of 1173 AH / 1760 AD and its resulting extensive structural damage to the architectural fabric of the Al-Mīdān. (Source: Adapted from historical photographic archives of Damascus, late Ottoman period).

III.2.1.The Battle of al-Mīdān (May 7, 1926 AD): [85] Figure (21).

On May 7, 1926, French forces launched a concerted military campaign against al-Mīdān to suppress the burgeoning nationalist activities. The operation involved heavy artillery bombardments and ground assaults, leading to intense urban combat. Despite the valiant efforts of local fighters, the superior firepower and organization of the French military resulted in significant casualties and the eventual subjugation of the neighborhood.

The Battle of al-Mīdān on May 7, 1926 AD, represents a significant episode within the broader context of the Great Syrian Revolt (1925–1927), a widespread uprising against French colonial rule. This confrontation not only exemplified the fervent resistance of the Syrian populace but also had profound implications for the al-Mīdān neighborhood in Damascus, affecting it across multiple dimensions.

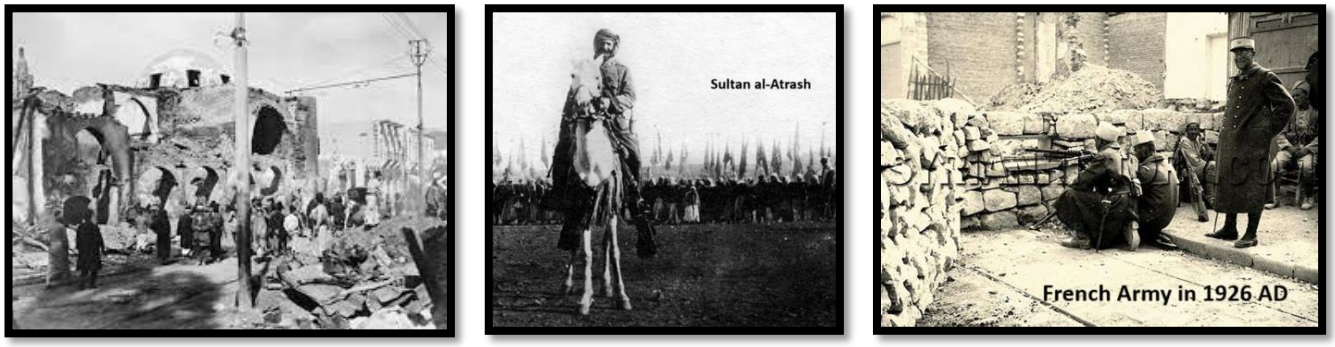

Figure.21. The Battle of al-Mīdān on May 7, 1926 AD. (Source:Institut Français du Proche-Orient (IFPO), 1926)

Al-Mīdān, located just south of Damascus's old city, has historically been recognized for its conservative character and as a bastion of Syrian nationalism. Its residents, primarily from established Sunni trading families, played active roles in Syria's political and social movements, including the Great Syrian Revolt against French colonial rule in the 1920s.

The revolt, initiated in the Druze region under the leadership of Sultan Pasha al-Atrash, figure (21), rapidly expanded to encompass various parts of Syria, including Damascus. Key figures such as Nasib al-Bakri and Hasan al-Kharrat mobilized local populations in neighborhoods like al-Mīdān to resist French authority .

[85] Rojon, L. Villan 2011: 92.

III.2.1.1.Impact on Al-Mīdān Neighborhood:

- **Physical and Infrastructural Damage:**

The battle inflicted substantial destruction on al-Mīdān's infrastructure. Residential buildings, commercial establishments, and historical sites suffered extensive damage due to the bombardments. The traditional architecture, emblematic of the neighborhood's rich cultural heritage, was particularly affected. [86] Figure (21).

- **Social and Demographic Changes:** [87]

The conflict led to significant displacement of residents. Many families fled the violence, seeking refuge in safer areas or leaving the country altogether. This exodus altered the neighborhood's demographic composition and disrupted longstanding community networks.

- **Economic Consequences:** [88]

Al-Mīdān's economy, traditionally centered around commerce and trade, particularly in grain, suffered due to the conflict. The destruction of shops and markets, coupled with the departure of business owners and customers, led to economic stagnation.

- **Psychological and Cultural Effects:**

The trauma of the battle left lasting psychological scars on the remaining residents. The loss of life, property, and a sense of security contributed to a collective sense of grief and disillusionment. Culturally, the interruption of daily life and traditional practices disrupted the neighborhood's social fabric.

While specific photographs of the Battle of al-Mīdān on May 7, 1926 AD, are scarce, historical maps and images of Damascus from the early 20th century (Chapter I),can provide contextual understanding of the neighborhood's layout and significance during that period.

III.3. Service Architecture in Al-Mīdān during the Ottoman Period: A Historical-Architectural Analysis: Figure (22).

The follwing figure (22), provides a synthesized spatial overview of the principal service buildings in al-Mīdān during the Ottoman period. It emphasizes the historical concentration and functional interrelation of mosques, churches, baths, subul, al- zawāyā, and al-bawāyik along the neighborhood’s main commercial artery and within its residential subdistricts.

This subject constitutes one of the core focus of the present research and is examined in greater depth in the subsequent sections.

[86] Al-Shihābī, *M’āzin Dimashiq Tārīkh wa Tīrāz,* 157.

[87] Al-Ghazī, *Khulasit al-’Athar fi ’Ayān al-karan al-Hadī ’Ashar,* 26.

[88] Ibn Kinān, *al-Hawādis al-Yawmiya min tārīkh Dimashq,* 44.

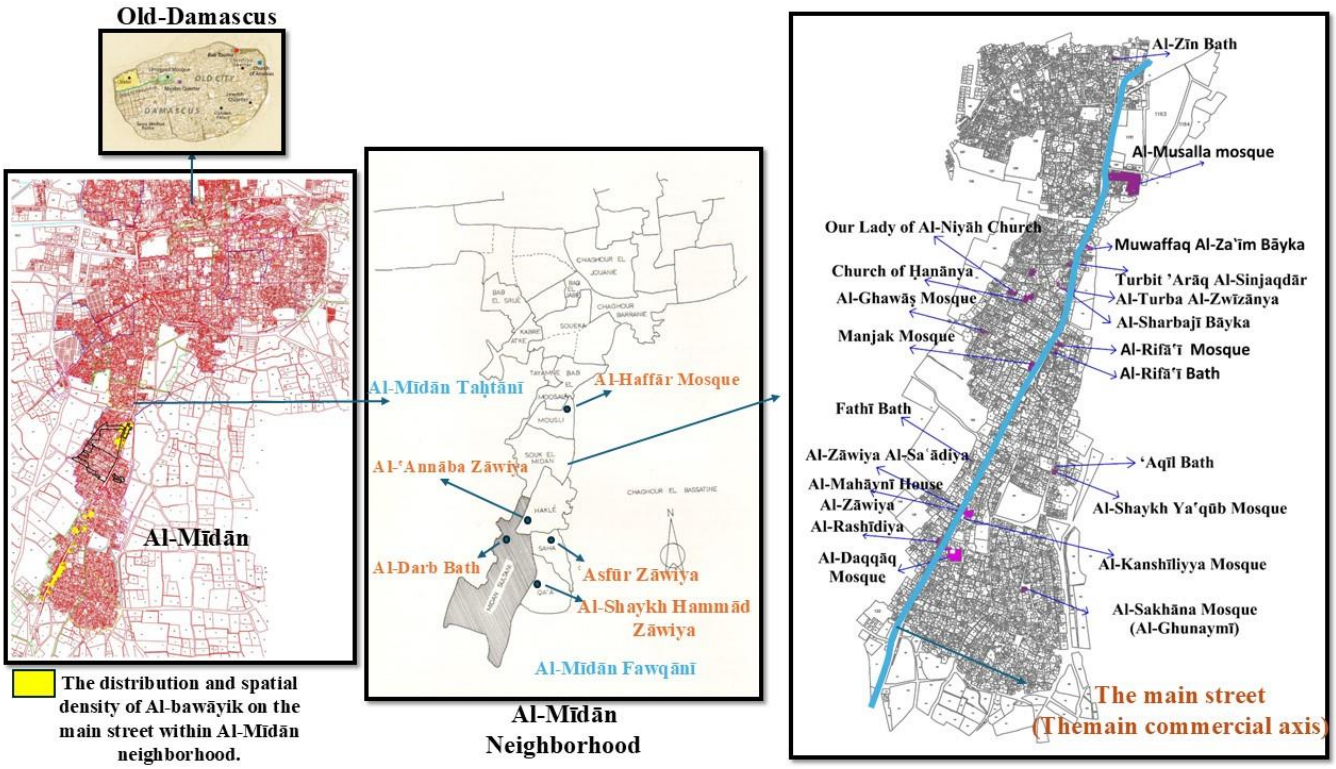

Figure.22.Composite map illustrating the distribution and typology of service-oriented religious and civic architecture in the al-Mīdān neighborhood during the Ottoman period, including mosques, churches, zawāyā, baths, subul and al-bawāyik. The figure highlights their spatial integration along the main commercial axis and within sub-districts such as al-Mīdān al-Fawqānī and al-Taḥtānī. (Source: Map compiled and designed by the researcher based on historical cadastral maps and urban surveys; original fieldwork, 2025.)

III.3.1.The Religious Buildings:

III.3.1.1.The Mosques:

The Role of Mosques in Al-Mīdān: Purpose, Integration, Impact, and Ownership

- **Why Were Mosques Built in Al-Mīdān?**

The establishment of mosques in Al-Mīdān during the Ottoman period stemmed from both religious necessity and urban strategy. As a key node along the Hajj pilgrimage route and the grain trade axis from the Hawran region, figure (1), Al-Mīdān attracted a diverse population of pilgrims, merchants, and residents. The growing demographic density created demand for multiple congregational spaces, especially for Friday prayers, religious instruction, and daily worship. [89]

Moreover, the Ottoman policy of Islamization and urban consolidation encouraged the construction of mosques as instruments of social organization, education, and welfare. Many of these mosques were funded through waqf (charitable endowment) mechanisms, which tied them to other community services such as schools, Sabīls, and ḥammāmāt. [90]

- **Relationship Between Mosques and Their Surroundings:**

Mosques in Al-Mīdān were not isolated monuments; they were spatially and socially integrated into the existing urban fabric:

[89] Jundī, *Tarīkh Al-Thawrāt Al-sūriya fi 'Ahd Al-'Antidāb Al-Faransī,* 299.
[90] Qutayba al-Shihabi, *Āthār Dimashq* (Dimashq: Wizārat al-Thaqāfa, 1994), 156.

1-Embedded Placement:

Mosques like Al-Rifāʿī, Al-Shīkh Yaʿqūb, and Al-Ghawāṣ are embedded within dense residential clusters, figure (22), often with only their entrances visible from narrow alleys. This placement reflects a design intent focused on community intimacy and accessibility rather than monumental expression. [91]

2-Functional Adjacencies:

Mosques were typically situated near souks (markets), khānāt (caravanserais), and ḥammāmāt (baths), allowing them to serve traders, travelers, and local residents simultaneously. In many cases, they acted as spatial anchors around which daily life unfolded. [92]

- **Architectural Dialogue: figure (23).**

Mosques in Al-Mīdān during the Ottoman period were modest in scale, yet rich in spatial articulation.

Their façades often echoed local materials, black basalt, mudbrick, and ablaq stonework, enhanced with Ottoman stylistic touches (domes, pointed arches), harmonizing with surrounding homes and shops. Minarets were proportionally scaled to the neighborhood's low-rise skyline, creating visual continuity rather than dominance.

In the case of the Al-Mīdān neighborhood, the mosques that were reconstructed or restored during the Ottoman period typically followed modest architectural plans, often based on a rectilinear or rectangular layout. Both the structural and decorative components of these buildings were generally characterized by their austerity and functional clarity, employing economical materials and minimal embellishment. However, the designation of such architecture as "simple" must be approached with critical nuance. [93]

Simplicity, in this context, is a relative and culturally contingent concept, varying significantly across historical periods, geographic regions, and socio-economic frameworks. What may be perceived as architecturally restrained or materially limited by modern or elite urban standards may, in its own time and setting, reflect intentional design choices rooted in modesty, accessibility, or adherence to local religious aesthetics. In Ottoman Al-Mīdān, the architectural simplicity of reconstructed mosques likely reflected a convergence of practical constraints—such as limited patronage and local building traditions, and ideological values, such as spiritual humility and community function over monumental display. [94]

Thus, rather than indicating a lack of architectural sophistication, this form of simplicity should be understood as a strategic response to context, demonstrating adaptability to material, spatial, and economic conditions while still fulfilling the religious and communal functions of a mosque. This interpretation aligns with broader Ottoman architectural principles, which often emphasized

[91] Ross Burns, *Damascus: A History* (London: Routledge, 2005), 133–135.
[92] Al-ʿAdawī, *Ziyārāt Ela Dimashiq,* 205.
[93] Abd al-Hakīm, *Al-Mazāhib Al-Sūfiya,* 88.
[94] Ibn Kinān, *al-Hawādis al-Yawmiya min tārīkh Dimashq,* 63.

regional adaptation, urban integration, and economy of means, especially in provincial or secondary urban centers like Al-Mīdān.

Example: Architectural Dialogue in Al-Rifāʿī Mosque: figure (23).

The Al-Rifāʿī Mosque in Al-Mīdān offers a clear case of architectural dialogue between Ottoman stylistic language and local Damascene traditions. Its modest scale and rectangular floor plan reflect a spatial economy typical of neighborhood mosques, yet within these constraints, a careful interplay of architectural elements produces a richly articulated environment.

The façade features ablaq masonry, alternating courses of black basalt and white limestone—typical of the local architectural lexicon, while its central dome, though shallow and relatively small, introduces a recognizably Ottoman element. The minaret, modest in height, is octagonal in form and topped with a conical crown, proportioned to the low-rise skyline of the surrounding residential fabric. The main entrance is framed by a pointed arch with minimal muqarnas, signaling Ottoman influence without overwhelming the vernacular restraint.

Internally, the mihrab and minbar[95] are constructed of simple stone, unadorned but finely carved, and oriented with spatial clarity. The prayer hall is devoid of monumental scale or intricate decoration but achieves a sense of sacred intimacy through controlled proportions, filtered light, and the alignment of structural rhythms.

This mosque demonstrates how Ottoman imperial aesthetics were absorbed and reinterpreted within a provincial context, producing a localized architectural dialogue that respected the functional needs, economic conditions, and material availability of Al-Mīdān while maintaining the symbolic and spiritual integrity of Islamic sacred architecture.

- **Impact on the Urban Fabric of the Neighborhood:**

Mosques shaped both the form and function of Al-Mīdān's urban layout:

1-Urban Rhythm and Wayfinding: figure (22).

Positioned at important street junctions or midway along residential alleys, mosques created nodes of spatial orientation. Their courtyards and thresholds also generated semi-public zones, fostering social interaction and facilitating neighborhood cohesion. [96]

2-Morphological Influence:

The spatial presence of mosques influenced adjacent plot arrangements and building alignments. Residential units were often oriented toward or around the mosque, reinforcing it as a social nucleus of the micro-community. [97]

3-Cultural Continuity and Symbolism:

[95] **Minbar-** Pulpit in a mosque from which the sermon (khuṭba) is delivered.
[96] Al-'Anba', *'Asma' Al-Sab'īn Raswlan,* 22.
[97] Ibn Kinān, *al-Hawādis al-Yawmiya min tārīkh Dimashq,* 44.

Mosques acted as repositories of collective memory. Through cycles of damage, renovation, and adaptation (e.g., after the 1926 AD French bombardment or the 1760 AD earthquake), they evolved with the city while maintaining spiritual and architectural continuity. [98]

- **Who Owns the Mosques in Al-Mīdān?** [99]

Most mosques in Al-Mīdān were and still are owned by public endowments (awqāf) under the jurisdiction of the Ministry of Religious Endowments (Wizārat al-Awqāf). These institutions were originally founded and maintained through charitable donations by wealthy individuals, local dignitaries, or Ottoman administrators.

1-Waqf Ownership:

The waqf system ensured that mosques and associated facilities (schools, tombs, water fountains) were legally protected and financially sustained through revenues generated by endowed properties (e.g., shops, agricultural lands).

2-Continuity of Custodianship: [100]

In many cases, mosque management remained within local families (e.g., descendants of founders or imams), but the legal ownership rested with the state or community waqf. Even today, renovation and use of mosques in Al-Mīdān require authorization by government authorities.

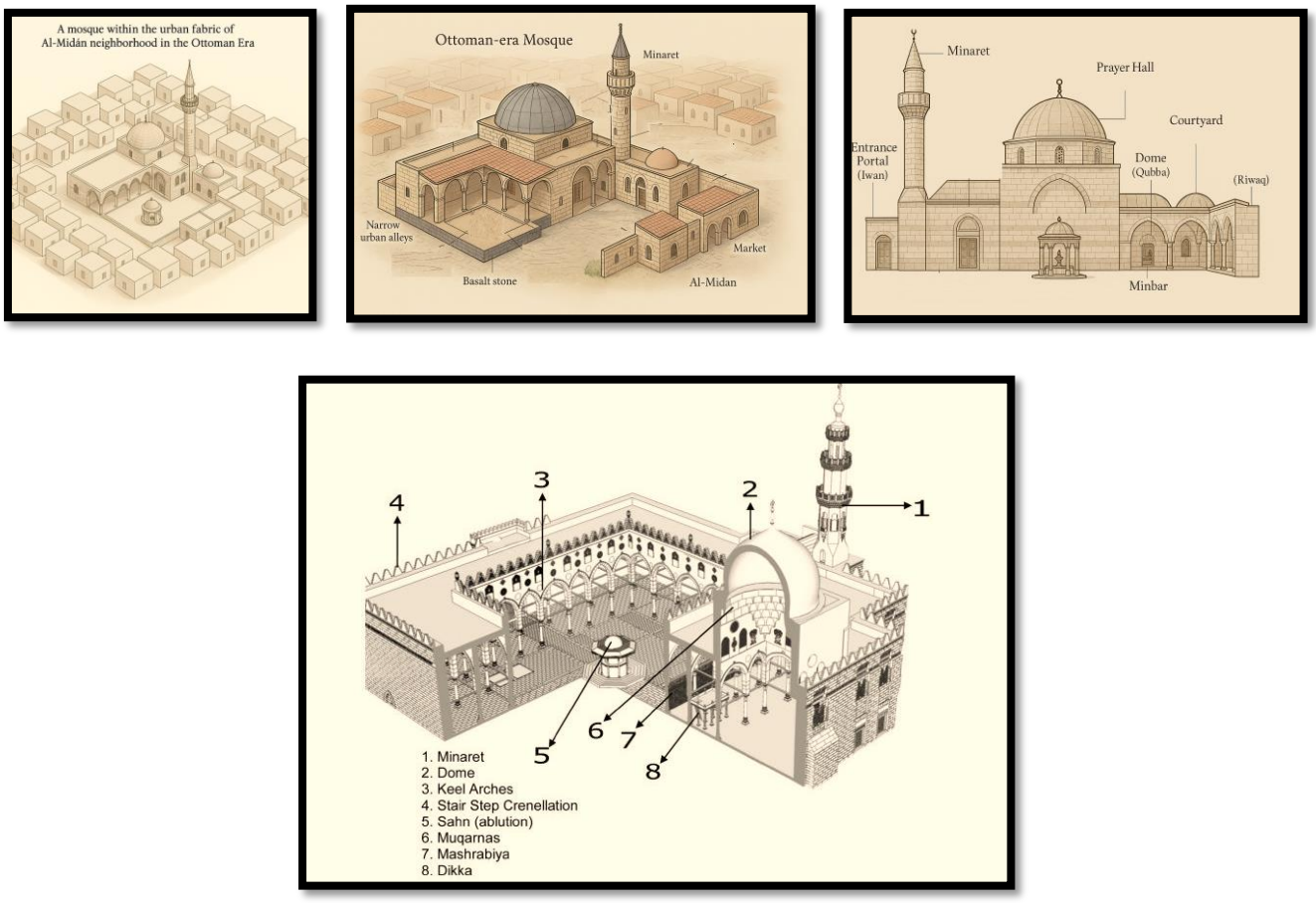

Figure 23: This diagram presents the principal architectural components of a typical Ottoman mosque structure found within the residential context and how it co-exists with the urban fabricas of the Al-Mīdān neighborhood in Damascus during the Ottoman period. (Source: Diagram prepared by the author as part of original research, 2025)

[98] ʾAbd al-Kādir. Al-Naʿīmī, *Al-Daris fi Tārīkh al-Madāris,* 157.

[99] Al-ʿUlabī, *Khuṭaṭ Dimashiq,* 101.

[100] Qutayba al-Shihabi, *Āthār Dimashq* (Dimashq: Wizārat al-Thaqāfa, 1994), 29.

This stage of the thesis presents a focused examination of the principal religious buildings in the Al-Mīdān neighborhood of historic Damascus, with particular emphasis on Ottoman-period mosques. The analysis addresses their historical, social, and urban roles, highlighting architectural typologies and stylistic features that shaped Al-Mīdān's spatial and cultural identity. A selection of key mosques, identified for their historical and architectural significance—was documented through fieldwork conducted by the researcher.

III.3.1.1.1.Al-Rifāʿī Mosque: Figure (22).

According to the cadastral map of the Old City of Damascus (specifically the area located outside the city walls), al-Rifāʿī Mosque is registered under property number 428.[101]

III.3.1.1.1.1.Al-Rifā'Ī Mosque – Spatial Integration and Architectural Identity:

III.3.1.1.1.1.1. Al-Rifā'Ī Mosque: Architectural Form and Urban Context: Figure (24).

Al-Rifā'Ī Mosque is located in the Al-Jazmātiya district, to the east of Al-Mīdān's main commercial axis. It occupies a compact urban parcel, adjacent to Al-Rifā'Ī Bath and near the historic Manjak Mosque, forming part of a micro-cluster of religious and service structures. The mosque's placement within this cluster reflects a deliberate urban logic: positioning religious, social, and hygienic facilities in close spatial proximity to support both resident and transient populations. [102] Figure (22).

Architecturally, the mosque exhibits a rectangular plan of approximately 528 m², subtly adjusted to the irregularities of its surrounding parcels. The building is almost entirely absorbed into the surrounding commercial and residential matrix, with only its western façade and entrance exposed to public view. This urban condition signifies the embeddedness of the mosque within the fabric of daily life in Al-Mīdān, not a detached monument, but a living part of its neighborhood.

The main entrance, marked by a modest wooden door framed by a semi-circular arch and inscriptive plaques, transitions into a rectangular lobby and leads to an internal courtyard. This semi-enclosed space (5 x 4.8 m), paved in marble and sheltered by a southern portico with stone arches and a central column, serves as a spatial buffer between the bustling street and the sacred interior. The portico also visually and symbolically frames the mihrāb wall, which features a finely carved marble niche flanked by three arched windows. [103]

The sanctuary, accessible via the eastern side of the courtyard, takes a trapezoidal form (5 x 7.30 m). Its internal organization responds to functional and spatial constraints, featuring a now-flat concrete ceiling supported by two cylindrical columns crowned with muqarnas capitals. The prayer space is articulated with elements such as a wooden pulpit of geometric design and wall cabinets, along with a secondary mihrāb and a door leading to an attached tomb room, indicating layers of functional, liturgical, and commemorative use.

Materially, the mosque expresses a strong connection to local building traditions. The use of black basalt on lower walls and white limestone in upper courses and interior details reflects the regional palette. Its minaret, reconstructed after the 1925 French bombardment, is crafted in ablaq masonry.

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[101] Al-ʿUlabī, *Khuṭaṭ Dimashiq,* 146-151.
[102] Rojon, L. Villan 2011: 77-83.
[103] Al-Shihābī, *Al-Nukūsh Al-Kitābiya fi 'Awābid Dimashiq*, 83-97.

The octagonal shaft, accented by a mu'adhin's balcony with basalt stone friezes and a ribbed wooden canopy, rises modestly yet symbolically above the mosque's embedded structure. [104]

Importantly, Al-Rifāʿī Mosque was endowed as part of a waqf institution, and its proximity to the similarly named bath suggests a coordinated foundation serving both ritual and civic functions. This alignment of religious and public facilities reflects Ottoman principles of neighborhood planning, where pious foundations formed the infrastructural backbone of urban life.

In spatial terms, Al-Rifāʿī Mosque is not an object building but a relational node within its environment. It conforms to the urban grain rather than challenging it, coexisting harmoniously with the low-rise, mixed-use buildings of Al-Mīdān. Its presence shapes and is shaped by the morphology of its district, exemplifying how religious architecture in Damascus functioned not only as a locus of worship but as a catalyst for spatial and social coherence.

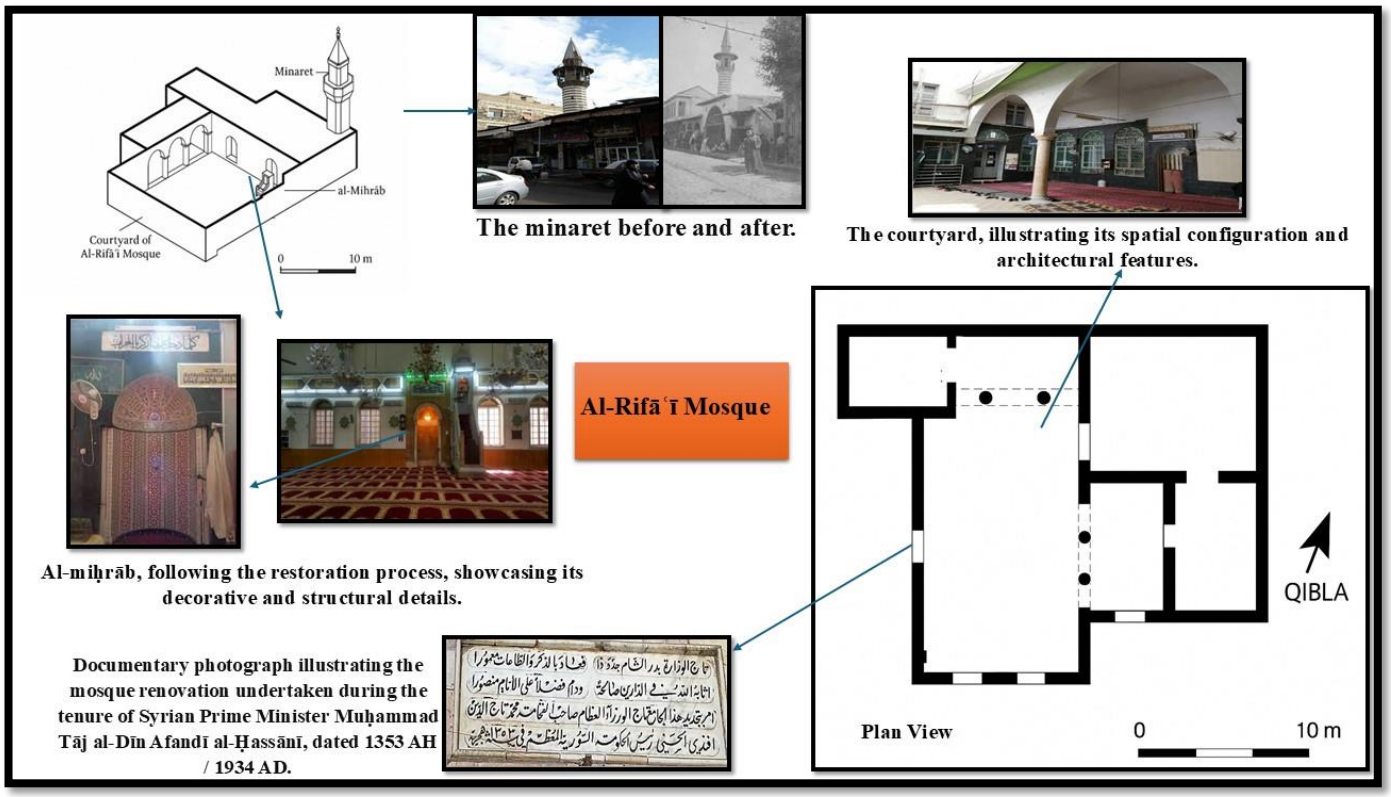

Figure.24. Presents a comprehensive overview of the architectural elements found within al-Rifāʿī Mosque. [105] The majority of the photographic documentation included was captured by the researcher during a series of field surveys conducted in the al-Mīdān neighborhood.(Source: Compiled by the author during fieldwork, 2021)

III.3.1.1.2.Al-Ghawāṣ Mosque: Figure (22): Al-Ghawāṣ Mosque is attributed to Shaykh[106] Muḥammad Ḥasan al-Ghawāṣ, a prominent religious figure who lived for approximately thirty years between 1586 and 1615 AD. The mosque holds official recognition as a site of historical and architectural significance and was registered under Listing No. 67/A in 1989 by the Directorate General of Antiquities and Museums, operating under the Ministry of Culture of the Syrian Arab Republic. [107]

[104] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,* 207.

[105] Tāj al-Dīn al-Ḥasanī (1885–1943) was a French-appointed Syrian politician from a distinguished Damascene family of Muslim scholars. His father, al-Dīn al-Ḥasanī, was a leading Islamic authority in the late 19th century.

[106] **Shaykh-** Spiritual or religious leader.

[107] DGAM, Dimashq: Wizārat al-Thaqāfa 1988.

III.3.1.1.2.1.Al-Ghawāṣ Mosque – Spatial Integration and Urban Relationships:

III.3.1.1.2.1.1.Architectural Embedding and Neighborhood Morphology: Figure (25).

Located at the intersection of the Al-Ghawāṣ and Al-Quwaiq districts in western Al-Mīdān, Al-Ghawāṣ Mosque occupies a subtle yet strategic urban position. Its placement along a secondary street, near the Manjak Mosque and within a largely residential area, suggests its role as a local religious nucleus in a fabric dominated by mixed-use housing, pedestrian paths, and small-scale commerce. This proximity to other religious institutions reinforces a broader Ottoman pattern of distributing mosques within the everyday rhythms of neighborhood life, ensuring walkable access and visual continuity in the urban landscape. [108] Figure (22).

The mosque is traditionally associated with Al-Shīkh Muhammad Ḥasan Al-Ghawāṣ 1586–1615 AD, whose tomb remains integrated into the building. This imbues the site with spiritual memory and contributes to its enduring presence. Renovations in 1878AD and 1974 AD, reflect not only preservation efforts but also community-led investment in maintaining its religious and social function. [109]

The main entrance, located on the eastern façade, is composed in classic Damascene ablaq masonry—alternating white and black stones, framing a simple archway topped by a marble plaque. This restrained yet dignified entry offers a ceremonial transition from the public street into the mosque's interior world, demonstrating how the architecture mediates between exterior modesty and interior sanctity.

The rectangular courtyard, though now roofed with zinc sheeting, retains its spatial role as an intermediary zone, bridging street-level entry and the sanctuary. Its layout, walls, and portals reveal a building negotiating with its urban constraints, adapting to the plot's depth and neighboring structures while preserving ceremonial order.

The sanctuary is marked by a central spherical dome resting on a cylindrical drum with sixteen colored-glass windows. This volumetric emphasis provides a vertical counterpoint to the otherwise horizontal massing of the surrounding residential structures. Internally, the dome is supported by four contiguous arches set on substantial stone piers, allowing for a unified prayer space that maximizes volume within a compact footprint. [110]

The mihrāb wall, positioned along the southern axis, features two elaborately decorated niches topped with scalloped vaults, flanked by twin columns and inscriptive bands from the Qur'an. These elements reflect the Ottoman-era inclination toward intimate ornamentation and a multisensory spiritual experience. On the eastern side of the sanctuary, integrated wooden bookcases and access to the founder's tomb expand the mosque's programmatic richness. [111]
Al-Ghawāṣ Mosque's 1974 AD, expansion introduced a minaret that aligns stylistically with the mosque's existing language while subtly asserting vertical identity within the district's low skyline. Despite the late addition, its scale and materiality respect the modesty of its environment. [112]

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[108] Abo al-Huda al-Sayād, *Tanwīr al-'Absār fi Tabakāt al-Sada al-Rifā'ya al-'Akhbār,* 194-202.
[109] Rizik, *Dictionary of Islamic architecture and arts*, 25-30.
[110] Al-Huwīrī, *Tārīkh Al-Dawla Al-'Authmaniya fi Al-'Asūr Al-Wūsta,* 221-250.
[111] Qutayba al-Shihabi, *Āthār Dimashq*, 1994, 160-167.
[112] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,* 55-61.

Spatially, the mosque coexists harmoniously with its urban surroundings, adopting the forms, materials, and rhythms of the neighborhood rather than dominating it. Its embeddedness affirms a morphological dialogue where architecture is not imposed but evolves in conversation with context. [113]

The mosque's association with Al-Shīkh Al-Ghawāṣ and its sustained maintenance through community and possibly waqf-related efforts highlight the importance of founder identity in shaping both physical form and urban significance. Though distinct in design, the mosque shares spiritual and typological links with nearby religious buildings, suggesting a network of pious foundations that once structured communal life in Al-Mīdān.

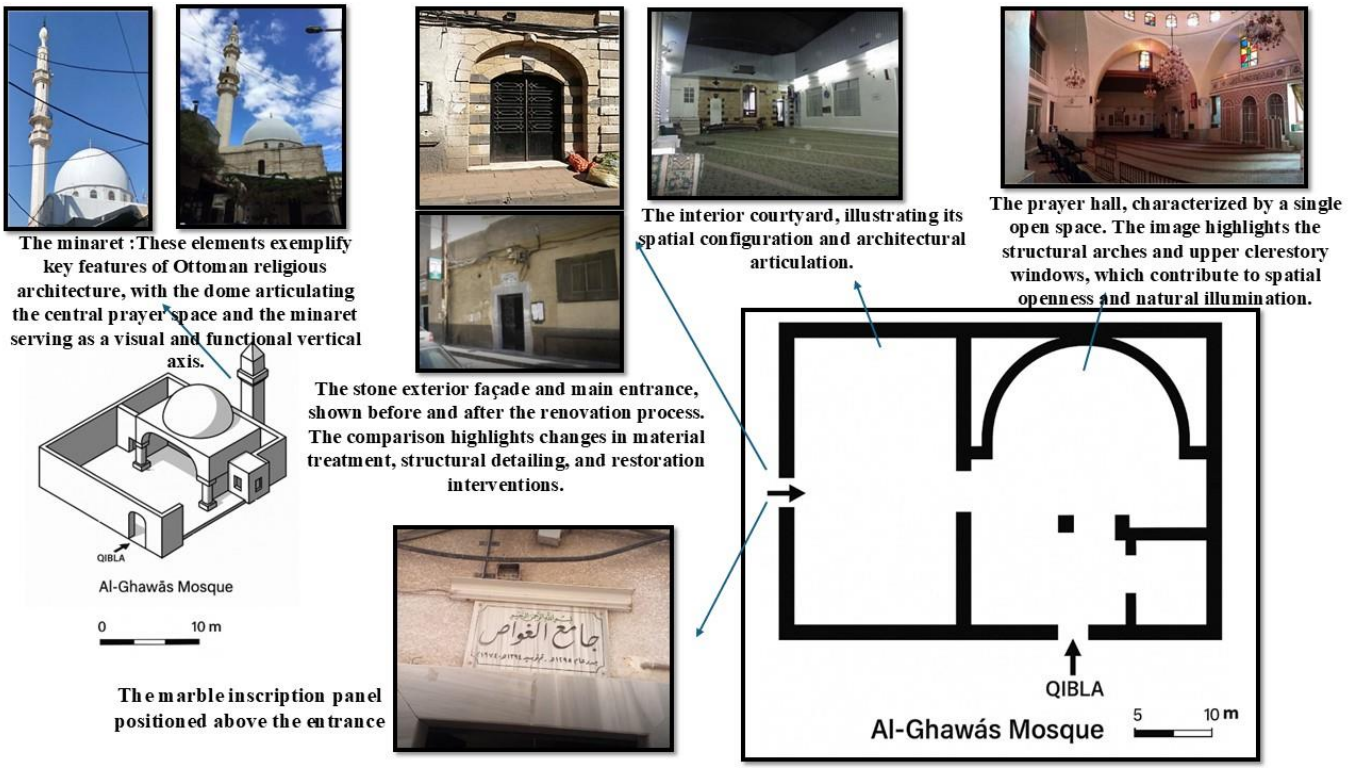

Figure 25. Architectural documentation of al-Ghawāṣ Mosque based on field surveys conducted by the author in 2021, detailing structural and decorative elements to contextualize its spatial and stylistic characteristics within Ottoman-era religious architecture in Damascus. (Source: Compiled by the author during fieldwork, 2021)

III.3.1.1.3.Al-Shaykh Yaʿqūb Mosque: Figure (22), Al-Shaykh Yaʿqūb Mosque was officially registered by the Directorate General of Antiquities and Museums in Damascus as a protected historical and archaeological site under Registration No. 68/A in 1989 AD. The mosque is recorded as property number 542, encompassing a total area of 432 square meters. [114]

III.3.1.1.3.1.Al-Shīkh Yaʿqū b Mosque, Spatial Identity and Urban Integration: Figure (26).

III.3.1.1.3.1.1.Al-Shīkh Yaʿqūb Mosque: Memory, Morphology, and Embeddedness:

Located in the heart of the Al-Ḥaqla district within Al-Mīdān Al-Fawqānī, Al-Shīkh Yaʿqūb Mosque is spatially anchored between significant communal institutions: flanked by Al-Ḥaqla Cemetery to the east, Al-Naṣha School (formerly Yāqūt Al-Ḥamawī School) to the south, and the ʿAqīl Bath to the west. This layered context reflects a deeply interconnected urban zone, where

[113] ʿAbd al-Qādir al-Rīḥāwī. *al-ʿImāra fī Sūriyā: Min al-ʿAṣr al-Ḥajarī ḥattā al-ʿAṣr al-ʿUthmānī*, 1986, 116-122.
[114] DGAM, Dimashq: Wizārat al-Thaqāfa 1990.

religious, educational, commemorative, and hygienic functions coexist. The mosque itself is embedded within a multi-scalar neighborhood structure, demonstrating continuity between architecture and lived experience. [115] Figure (22).

The historian and researcher Brigitte Marino dates the construction of al-Shaykh Yaʿqūb Mosque to the year 1150 AH / 1737 AD, based on its reference in the al-ʿAwniyya Court Register, specifically in Record No. 95, dated 1158–1159 AH / 1745–1746 AD. Her analysis draws on primary archival evidence to establish the mosque's historical presence within the legal and social landscape of Ottoman Damascus. [116]

The mosque is historically tied to Al-Shīkh Yaʿqūb, whose tomb lies within the compound, and to Talib Aqil, a local patron who contributed to its renovation in 1232 AH (1816–1817 AD), and added a water sabīl in 1228 AH (1813 AD). The coexistence of their mausoleums within the mosque complex highlights how identity and piety are architecturally inscribed into the urban landscape, reinforcing spiritual continuity over generations. [117]

The northern façade of the mosque opens directly onto Al-Dijāma Alley, exemplifying its integration into the neighborhood's pedestrian fabric. The entrance, modest and rooted in vernacular tradition, features black basalt framing, an arched stone sill, and a double-leaf wooden door. This low-key articulation reinforces the building's harmony with its surrounding residential scale and materiality, illustrating how Ottoman-era religious architecture often dissolved into the everyday cityscape rather than asserting monumentality.

The courtyard, measuring 8 x 11 meters, is a key transitional space. Paved in white marble and organized around an octagonal basalt ablution basin, it channels both ritual functionality and material continuity. The basin is not merely practical; it anchors the space symbolically, bridging the spiritual and the communal. To the west, a slightly elevated iwān[118] houses the tombs of Al-Shīkh Yaʿqū b and Prince Aqil, creating a layered spatial narrative that merges sacred memory with architectural rhythm. A hallway along the southern side, supported by three stone arches resting on basalt columns, forms the threshold to the sanctuary. The prayer hall itself (5 x 8.70 m) is structured with three continuous arches and a timber-stone composite roofing system—a hybrid solution that balances structural integrity with climatic adaptation. This layering of techniques and expansions, particularly from the south side, demonstrates the building's responsive evolution within an active and adaptive urban setting.

The mihrāb wall features intricate marble inlays and geometric patterns in black, white, and yellow marble, while the minbar employs twelve-sided star motifs in carved wood. These interior elements, while rich in ornamentation, are scaled and crafted to match the building's modest footprint, maintaining cohesion with the mosque's embedded urban status. [119]

The minaret, located above the western sabīl, is a visually modest vertical element. Built in white stone with black stone detailing, its short trunk and disproportionately wide balcony create a slight

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[115] ʿArabī, *Al-Rawḍa Al-Bahiya fi Faḍā'al Dimashiq Al-Mahmiya,* 23-27.

[116] Marion, *Hay Al-Mīdān fi Al-'asir Al-'uthmānī,* 2000: 55-57..

[117] ʿAbd al-Qādir al-Rīḥāwī. *al-ʿImāra fī Sūriyā: Min al-ʿAṣr al-Ḥajarī ḥattā al-ʿAṣr al-ʿUthmānī,* 1986, 70-90.

[118] **Īwān-**Vaulted hall or semi-open space facing the courtyard- Frequently used in reception areas.

[119] Al-Sibinī, Directorate of Endowments of Damascus, Historical documentation consultant for mosques and ancient endowment buildings, 2010, 207.

visual imbalance, a deviation from classical symmetry that reflects both spatial constraint and local building pragmatism. The balcony is capped by an octagonal wooden umbrella supported by slender columns, maintaining material consistency with the rest of the mosque. [120]

Spatially, Al-Shīkh Yaʿqū b Mosque is deeply coexistent with its environment. Its massing conforms to the site rather than challenging it, with architectural gestures that reflect both ritual purpose and urban adaptation. The structure does not dominate its neighborhood; instead, it weaves into it, shaping and shaped by the morphology of Al-Mīdān. [121]

In terms of patronage, the mosque is a product of localized waqf culture, sustained through layered acts of renovation and association with notable figures. Its connection to surrounding institutions (school, bath, cemetery) suggests the possibility of shared foundations or cooperative waqf networks, reinforcing the idea that religious architecture in Ottoman Damascus functioned as both spiritual and civic infrastructure. [122]

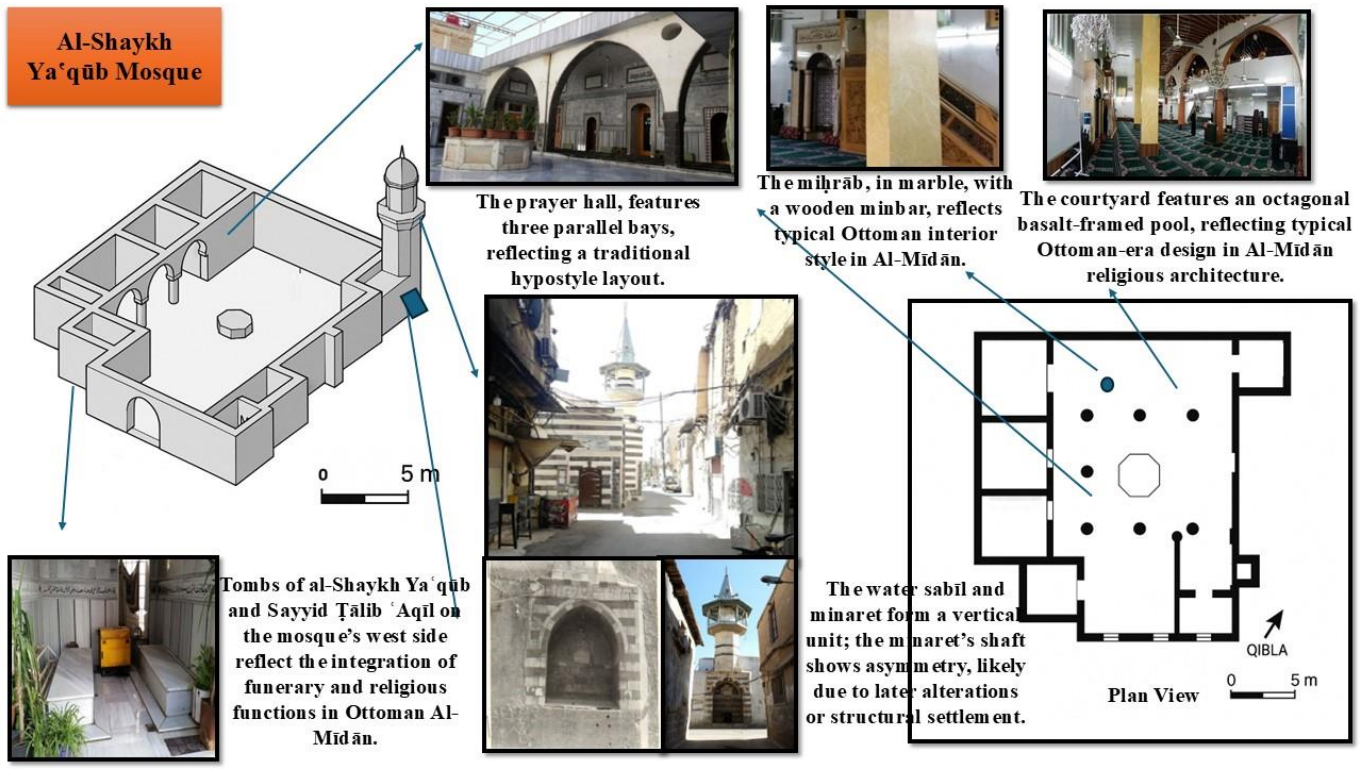

Figure 26. Inventory of architectural elements of al-Shaykh Yaʿqūb Mosque, based on visual analysis and field surveys conducted by the researcher in Al-Mīdān. Photographs from site visits serve as key empirical evidence in the study. (Source: Compiled by the author during fieldwork, 2021)

III.3.1.1.4.Al-Sakhāna Mosque (Al-Ghunaymī), Figure (22):

The Directorate General of Antiquities and Museums in Damascus officially registered the mosque as an archaeological monument under Resolution No. 67/A, issued in 1989 AD. The mosque is designated as a charitable endowment (waqf), recorded under property number 350, with a total area of 455 square meters. [123]

[120] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,*1943, 235-241.
[121] Baqīr, *Introduction to the history of the ancient civilizations,* 350-357.
[122] Marion, *Hay Al-Mīdān fi Al-'asir Al-'uthmānī,* 2000, 105-110.
[123] DGAM library, *Protection Zone for the city of Damascus.*1989.

III.3.1.1.4.1.Al-Sakhāna Mosque (Al-Ghunaymī),Urban Context and Morphological Integration: figure (27).

III.3.1.1.4.1.1Al-Sakhāna Mosque (Al-Ghunaymī): Memory, Morphology, and Community Embeddedness

Located in the Al-Qaaʿah district of Al-Mīdān Al-Fawqānī, Al-Sakhāna Mosque (Al-Ghunaymī) occupies a transitional position between the residential core and the public square of Al-Sakhāna. Its placement between Al-Sakhāna Square to the east and a network of residential alleys to the south and west demonstrates its role as a neighborhood integrator and spiritual anchor. The mosque simultaneously serves as a religious space and a commemorative site of resistance, bearing witness to the French repression of 1926 AD, during which its congregants were executed. [124] Figure (22).

The mosque's dual naming reflects layered identities: "Al-Sakhāna" links it to a historical migration from the village of Sukhna, while "Al-Ghunaymī" associates it with Al-Shīkh Abdul-Ghānī Al-Ghunaymī, its renowned preacher and imam. These associations signal how individual agency and collective heritage converge to define the mosque's identity and its embeddedness in the memory of place. [125]

The structure, officially registered as a charitable endowment (waqf), continues to function as a community-maintained space, shaped by both formal architectural evolution and informal interventions over time. [126]

- **Architectural and Urban Morphology: figure (27).**

The mosque's main façade, facing north, combines black basalt and mudbrick construction, the latter painted in black and white to echo the minaret's ablaq style. The interplay of materials reflects not only vernacular aesthetics but also the palimpsestic layering of Ottoman and modern restorations. A second entrance on the western façade has become the primary point of access due to changes in circulation patterns. [127]

The courtyard (6.60 x 4.80 m), situated at the heart of the mosque, provides a spatial buffer between the street and sanctuary. Originally featuring a black-and-white stone floor and a central marble water basin, it is now partially enclosed and adapted to modern needs, including a women's prayer space and transparent roofing. This adaptation speaks to the mosque's functional plasticity while still preserving key elements of Ottoman courtyard typology.

The courtyard is framed by north and south porticoes, each defined by a trio of arches supported by stone pillars. These raised porticoes add rhythm and vertical layering to an otherwise low-slung structure, reflecting the mosque's dialogue with the human scale of its immediate environment. [128]

The sanctuary (5.50 x 4 m) is a compact rectangular volume characterized by its flat wooden ceiling, resting on a series of arches and supported by masonry walls covered in limestone. The high placement of six square windows along the southern wall brings in natural light while

[124] Qutayba al-Shihabi, *Āthār Dimashq*, 1994, 160.
[125] Jamīl, *Mujtama' Dimashiq,* 75.
[126] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,* 222-225.
[127] Al-Shihābī, *Damascus Historical Reference,* 9-15.
[128] Burns. *Damascus: A History*. London: Routledge, 2005, 132-135.

maintaining privacy. Such features articulate a balance between seclusion and openness, and between sacred orientation and climatic functionality.

Within the sanctuary, the mihrāb appears in two forms: a simple carved niche and a marble-clad niche flanked by a wooden minbar. These layered interventions indicate successive enhancements, possibly reflecting the input of various patrons or community phases. A small library niche and windows overlooking the public street further connect the interior sacred space with the exterior communal world. [129]The minaret, located at the mosque's northwest corner, is a visual counterpoint to the mosque's otherwise horizontal massing. Built in ablaq masonry with a polygonal shaft and a wooden canopy, it maintains a modest vertical presence amidst Al-Mīdān's low-rise skyline, marking the mosque's spiritual and spatial centrality without dominating its surroundings. [130]

- **Spatial Integration and Waqf Legacy:** [131]

Al-Sakhāna Mosque (Al-Ghunaymī) is an example of architectural modesty paired with urban embeddedness. It exists not as an isolated landmark but as an organically integrated part of its neighborhood, negotiating boundaries with adjacent housing, alleys, and public space. Its massing conforms to its plot, its materials echo local traditions, and its internal divisions reflect real-world adaptations.

The mosque's registration as a waqf confirms its position within a larger network of pious foundations that sustained the religious and social infrastructure of Ottoman Damascus. Though unique in name and commemorative status, the mosque shares typological and functional similarities with others in Al-Mīdān, forming part of a collaborative architectural system grounded in both devotion and utility.



Figure 27. Documentation of key architectural elements of al-Sakhāna (al-Ghunaymī) Mosque, based on fieldwork conducted by the author through observation, measurement, and photography. The inventory supports analysis of the mosque's layout, style, and construction within the context of Ottoman religious architecture in Al-Mīdān. (Source: Compiled by the author during fieldwork, 2021)

[129] Al-Maʿhad al-Faransī li-l-Sharq al-Adnā (IFPO). *Aṭlas Dimashq al-Tārīkhī*. Dimashq, 2009, 22-24.

[130] Al-ʿUlabī, *Khuṭaṭ Dimashiq,* 207-210.

[131]Masters, *The Arabs of the Ottoman Empire,* 1516–1918, 121.

III.3.1.2.Al-Zawāya: Figure (28).

III.3.1.2.1.Al-Zawāya in Al-Mīdān: Foundations, Urban Relationships, and Ownership:

- **Why Were Al-Zawāya Built in Al-Mīdān?** [132]

Al-Zawāya (sing. zāwiya) were built in Al-Mīdān as part of a broader Islamic and Ottoman strategy of embedding spiritual, educational, and social institutions within residential quarters. Their establishment served several purposes:

- **Spiritual Retreat and Sufi Practice:**

Zawāya functioned as centers for Sufi brotherhoods (ṭarīqas), providing spaces for dhikr (remembrance rituals), teaching, and spiritual discipline. In Al-Mīdān, an expanding Ottoman suburb, zawāya fulfilled the spiritual needs of communities at the fringes of the old walled city.

- **Educational Role:**

Many zawāya operated as informal madrasas, especially for the poor. They often included rooms for study, temporary lodging, and communal prayer, making them multifunctional hubs of Islamic learning.

- **Socioeconomic Accessibility:**

Compared to grand mosques or official religious complexes, zawāya were modest, locally funded, and served neighborhood residents directly. They symbolized grassroots religiosity and often commemorated a local saint or revered sheikh.

- **Relationship Between Al-Zawāya and Their Surroundings:** [133] **Figure (28).**

Al-Zawāya in Al-Mīdān are physically and functionally embedded in the residential and commercial fabric of the neighborhood. Their spatial characteristics reveal a deliberate attempt to coexist with and complement their surroundings:

- **Embedded Massing:**

Zawāya are typically low-rise, inward-facing structures, nestled within alleyways or small squares. This introverted typology supports spiritual retreat while maintaining access to the surrounding urban community.

- **Proximity to Cemeteries, Mosques, and Baths:**

Many zawāya are adjacent to cemeteries or mausoleums, reflecting their role in commemorating saints. Some lie near public baths or mosques, forming spiritual-social clusters within the neighborhood.

- **Visual Modesty, Symbolic Presence:** [134]

Unlike mosques, most zawāya lack prominent domes or minarets. Their identity is often marked by a small plaque, stone mihrāb, or decorative inscription, signaling sacred function without altering the visual continuity of the streetscape.

- **Adaptation to Urban Grain:**

They are built to conform to irregular plot lines, making them part of the neighborhood's organic evolution rather than disrupting it.

- **Impact on the Urban Fabric of Al-Mīdān:** [135]

Zawāya have had a subtle yet powerful influence on the morphology and memory of Al-Mīdān:

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[132] Stefan Weber, *Damascus: Ottoman Modernity and Urban Transformation*, 2009, 124-130.
[133] Bloom, Blair, *The Grove Encyclopedia of Islamic Art and Architecture*, Volume 3, 2009, 375–378.
[134] Qutayba al-Shihabi, *Āthār Dimashq*, 1994, 167.
[135] Pradines, *Mosques in Sub-Saharan Africa and the Ottoman Provinces*, 2021, 275.

- **Nodes of Community and Continuity:**

Their locations often became spatial anchors in the neighborhood, where residents gathered for prayer, blessings, or education. They helped create micro-neighborhood identities, such as the areas around ʿAsfūr Zāwiya or Al-ʿAnnāba Zāwiya.

- **Spiritual Topography:** [136]

Together with mosques, zawāya contributed to a layered sacred geography of Al-Mīdān. Their distributed presence formed invisible networks of piety across the district, linking daily life with spiritual practice.

- **Architectural Conservation and Transition:** [137]

Although modest, many zawāya became part of registered heritage sites, reflecting growing recognition of their historical and architectural value. Others were adapted over time to suit community needs or incorporated into larger mosque complexes.

- **Ottoman-era zawāya in Al-Mīdān typically featured:** [138]

1- Compact floor plans, often consisting of:
- A prayer hall (sometimes with a small mihrab).
-Living quarters or cells (riyāḍ) for Sufi residents or visitors.
- A courtyard (sahn) with a fountain or well
-Occasionally, an attached tomb (turba) for the founding shaykh or pious figure.

- **Materials Used in Zāwiya Construction:** [139]

Construction materials were locally sourced and consistent with Damascus's traditional architecture. Zawāya shared much in common with contemporary mosques and houses, including:
-Black basalt and white limestone.
- Wood :Timber ceilings.
- Lime Plaster and Stucco.
Simple decorative inscriptions sometimes adorned the mihrab or upper walls.
Many zawāya included a central fountain, constructed from local stone.

- **Ownership and Waqf Affiliation of Zawāya:** [140]

Most zawāya in Al-Mīdān were established and sustained through private waqf endowments, often initiated by a Sufi sheikh, local patron, or community members. Their ownership and administration followed these patterns:

- **Endowed as Waqf Properties:**

Zawāya were legally designated as waqf (charitable trust) properties, with associated land, housing, or shops generating revenue for their upkeep. This ensured long-term continuity and spiritual autonomy.

- **Managed Locally, Supervised Publicly:**

While the Ministry of Religious Endowments (Wizārat al-Awqāf) currently oversees their legal status and restoration, many zawāya still rely on community involvement or descendants of the founders for their day-to-day use.

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[136] ʿAbd al-Qādir al-Rīḥāwī, *al-ʿImāra fī Sūriyā*, 1986, 116.
[137] Ṭāriq al-Zahrānī, *al-Zāwiyāt al-Ṣūfiyya wa-atharuhā al-ʿUmrānī fī Bilād al-Shām*, 2005, 94.
[138] Fawaz, *An Occasion for War: Civil Conflict in Lebanon and Damascus in 1860*, 1994, 44–47.
[139] 'Ihsān, *'Alām min Al-'Afkār,* 265-275.
[140] ʿAbd al-Razzāq al-Muʾayyid, *al-Zawāyā wa-al-Turāth al-Ṣūfī fī Dimashq*, 2002, 66-72.

- **Shared Waqf Networks:** [141]

Some zawāya may share architectural elements, spatial adjacency, or administrative links with nearby mosques or educational institutions, suggesting they were part of larger waqf systems structured around neighborhood needs.

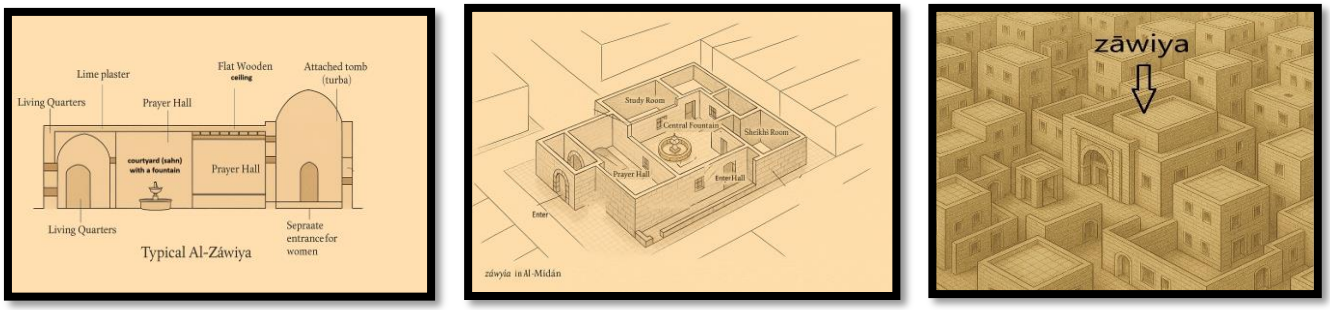

Figure.28. Illustrates the main components of Al-zawāyā in Al-Mīdān, with an emphasis on how these buildings harmoniously coexist with the surrounding urban fabric. (Source: Diagram prepared by the author as part of original research, 2025)

III.3.1.2.2.Al-Zāwiya al-Saʿādiya (Mastabat[142] Saʿd al-Dīn): Figure (22).

Al-Zāwiya al-Saʿādiyya, also known as the Mastabat of Saʿd al-Dīn, is officially registered as a protected archaeological and historical structure by the Directorate General of Antiquities and Museums in Damascus, under Resolution No. 59/A, issued in 1984 AD. This recognition affirms the architectural and cultural significance of the site within the urban heritage of al-Mīdān, highlighting its enduring role in the religious and social life of the neighborhood. [143]

III.3.1.2.2.1.Al-Zāwiya Al-Sa'ādiya (Mastabat of Sa'd Al-Dīn) – Urban Integration and Sufi Topography: Figure (29).

III.3.1.2.2.1.1.Al-Zāwiya Al-Sa'ādiya: Architectural Identity and Urban Resonance:

Al-Zāwiya Al-Sa'ādiya, also known as the Mastabat of Sa'd Al-Dīn, occupies a strategically symbolic location at the threshold of Al-Mīdān Al-Fawqānī, situated in the district of Al-Mastaba and flanked by key civic and religious buildings, including Al-Shīkh Hassān police station and Al-Zāwiya Al-Rashīdīya. The zāwiya's positioning, just west of the main thoroughfare, places it within a transition zone between the denser historic fabric and the modern interventions of the district, embodying both continuity and threshold. [144]

Historically layered, the site was originally associated with Prince Inal al-Jakmī, the deputy of the Levant in the 9th century AH (15th century AD). Later, it was revitalized by Al-Shīkh Sa'd Al-Dīn Al-Jabāwī, a prominent Sufi figure, whose legacy transformed the site into one of Damascus's most influential Sufi zawāya. The name and spatial authority of the zāwiya thus reflect both elite patronage and spiritual revival, rooted in waqf tradition. [145]

The building's eastern façade, facing the street, is composed of ablaq masonry, combining aesthetic distinction with structural continuity. The layering of decorative plaques, Qishānī tiles, and

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[141] Al-Ṣāḥib, *al-ʿImāra al-Dīnīya fī Dimashq khilāl al-ʿAṣr al-ʿUthmānī.*, 1998, 118-123

[142] **Maṣṭaba-** Raised bench or platform, often built into the wall- Found along courtyard perimeters or entrances.

[143] DGAM library, *Protection Zone for the city of Damascus,* 68.

[144] Al-Shihābī, *Mu'jam Dimashiq Al-Tārīkhī,* 97-103.

[145] Al-Ghazī, *Khulasit al-'Athar,*35-47.

restoration interventions reveals a palimpsest of architectural memory. The zāwiya neither imposes nor recedes; it coexists with the rhythm and elevation of its surrounding structures, engaging in a dialogue with the street while marking its spiritual singularity. [146]

The main entrance, centered on the façade and flanked by sabīls, windows, and decorative arches, is slightly recessed below street level, a subtle spatial descent that reinforces the experiential threshold from public life to sacred space. This is followed by a vaulted corridor that links street frontage with the interior mastaba, while also branching toward remnants of the sheikh's original residence. [147]

Internally, the zāwiya is structured around a bipartite mastaba, divided into two domed sections of differing scale and height. The domes rest on transitional necks adorned with colored-glass windows, combining volumetric clarity with filtered illumination. These prayer halls support both individual retreat and communal rituals, in keeping with the zāwiya's Sufi function.

The southern (qibla) wall houses the mihrāb, uniquely angled to accommodate the correct orientation toward Mecca. Surrounding it are richly ornamented Qishānī panels featuring Persian arabesques and floral motifs, though some elements bear traces of over-restoration. The mihrāb ensemble includes a Qur'anic inscription band (al-Kursī verse), dated to 1556 AD (982 AH), which affirms the zāwiya's 16th-century heritage. [148]

The western wall, facing the street, integrates ornamental windows with plaited stone frames and Qishānī archways, signaling the sacred function outward while remaining consistent with the massing of the urban block. The eastern interior wall, used to display Sufi instruments and relics, enhances the didactic and spiritual function of the space. [149]

Spatially, Al-Zāwiya Al-Sa'ādiya blends ritual depth with urban sensitivity. Its massing does not disrupt the fabric; rather, it inserts a sacred void within the dense grain of Al-Mīdān. It reflects how Sufi architecture was both programmatically specific and morphologically adaptive, conforming to plot lines while projecting symbolic centrality. [150]

As part of a wider network of affiliated zawāya (e.g., in Al-Qaymariyah and Al-Shāghūr), Al-Zāwiya Al-Sa'ādiya was likely integrated into an extended waqf system. Its founding and maintenance by Al-Shīkh Sa'd Al-Dīn Al-Jabāwī underscore the enduring role of spiritual lineage and pious patronage in shaping sacred topographies within Damascus. Its ownership today, still registered under the Directorate of Antiquities and likely supervised by the Ministry of Religious Endowments, reflects its continuing relevance as a living monument. [151]

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[146] Muhī Al-Dīn, *Al-Mashhūr min Funūn Al-Zakhrafa,* 120-125.
[147] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,* 230-235.
[148] Waltsinger, *Al-'Athār Al-'Aslāmiya fi Madinit Dimashiq,* 60-68.
[149] Al-Munjid, *Khuṭṭ Dimashiq- Tarīkh Dimashiq Al-Ṭabūghrāfī,* 45-50.
[150] Marion, *AL-Mīdān Area in the Ottoman era,* 85-88.
[151] Al-Budīrī, *Hawādith Dimashq al-Yawmia,* 90-95.

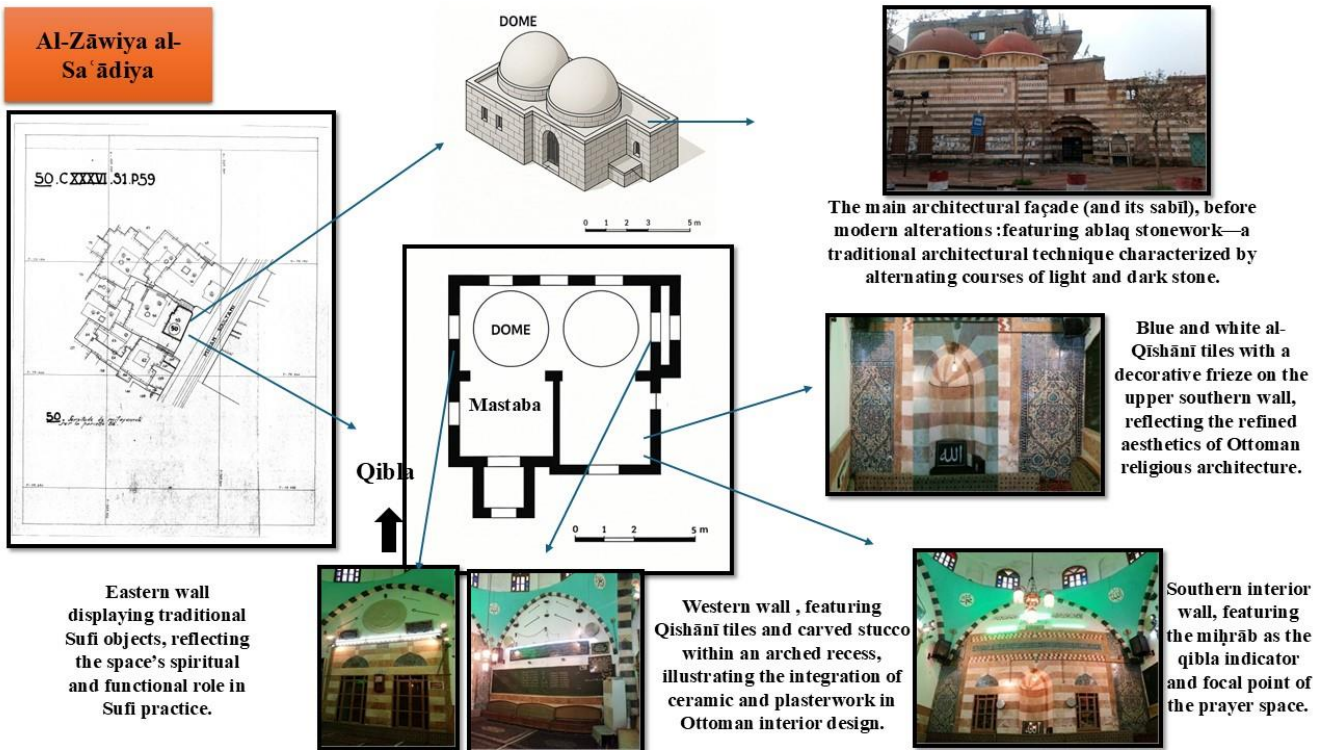

Figure.29. Inventory of architectural elements in al-Zāwiya al-Saʿādiyya, based on visual documentation gathered by the author during field surveys in Al-Mīdān. The empirical approach supports an accurate assessment of the site's condition, spatial composition, and stylistic characteristics. (Source: Compiled by the author during fieldwork, 2021)

III.3.1.2.2.2.Inventory of Minor Zawāyā in the al-Mīdān Area:

Table 5. List of small-scale zawāyā located in the al-Mīdān neighborhood, including their historical context, architectural characteristics, and current condition, based on field documentation conducted by the researcher.

Zawāya	Description	Figures
ʿAsfūr	Located in ʿAsfūr Square in the al-Mīdān Fuqānī district, figure (22), of Damascus, this modest religious structure, commonly referred to as Zāwiyat ʿAsfūr, occupies a central yet intimate position within the neighborhood's historical fabric. The precise date of the mosque's original construction remains unknown; however, various architectural and epigraphic elements offer insight into its stylistic development and subsequent renewal. [152] The main entrance (*see Fig. 30*) consists of a semi-circular stone arch, set above a wooden door[153]. The arch is composed of meticulously arranged voussoirs, capped by a decorative row of interlocking stones, a masonry technique that visually reinforces structural integrity. At the center of this band is a circular inscription medallion bearing a Qur'anic verse:	 **Figure.30.**The facade of ʿAsfūr Mosque.

[152] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,* 240.
[153] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,* 245.

	"And the mosques are for Allah, so do not invoke anyone along with Allah" (Qur'an 72:18). Above the wooden door, a horizontal sill is surmounted by a marble plaque inscribed with a poetic religious dedication, merging devotional text with architectural ornamentation. This arrangement exemplifies a balance between formal simplicity and spiritual symbolism, anchoring the zāwiya harmoniously within the modest domestic scale of its urban context in ʿAsfūr Square. The epigraphic inscription (*see Fig. 31*) reads as follows: *"A house of piety was established and clothed in splendor by the justice of Allah.* *Therefore, Allah rewarded the benefactors for their generosity.* *Indeed, Allah does not waste the reward of those who give.* *Its history has come with joy."* Embedded within the text are numerical elements corresponding to the Hijri date 1361 AH (1942 AD), indicating the renovation date of the mosque. The minaret of ʿAsfūr Zāwiya (*see Fig. 32*) is a short, stone-built structure, notable not for its elevation, but for the intricacy of its decorative detailing. Particularly refined are the sculpted railings and the ornamental balcony (maʾdhana), which are consistent with stylistic tendencies observed in early 20th-century minaret construction in Damascus. [154] Today, the main façade, featuring the entrance and minaret, remains the only preserved element of the original mosque, as the interior space was demolished and reconstructed during a renovation campaign in the early 1930s. The current configuration reflects a hybrid layering of historical and modern architectural interventions, which together mark the evolution of the site as a locus of local religious and social identity. [155]	 **Figure.31.**Documentary engraving.  **Figure.32.**The minaret of ʿAsfūr Zāwya.
Al-ʿAnnāba	Al-ʿAnnāba Zāwiya is a modest religious structure situated in the al-Ḥaqla quarter of al-Mīdān al-Fawqānī figure (22), a predominantly residential area in southern Damascus. Modest in scale and unassuming in form, the zāwiya reflects its function as a neighborhood-oriented site for spiritual retreat and communal prayer[156] *(see Fig. 33).* Oral history plays a central role in preserving the identity of this structure. According to one of the elder residents of the al-Mīdān neighborhood, the name *al-ʿAnnāba* is derived from a jujube tree	

[154] Al-ʿAdawī, *Ziyārāt Ela Dimashiq,* 45-48.
[155] Ṭarakjī, *Al-Subul fi Madinit Dimashi,* 201-203.
[156] Talās, *Ẓayil Thimār Al-Maqāṣid fi ẓikir Al-Masājid,* 230-235.

(ʿ*annāba*) that once stood adjacent to the building. Despite the significance of this anecdote, no formal historical inscription or archival record exists to establish the original construction date of the mosque. [157]

The façade of al-ʿAnnāba Zāwiya is characterized by its functional simplicity, reflecting the domestic architectural vocabulary typical of the surrounding context. The main entrance is surmounted by a moderately proportioned arch, while adjacent to the mosque's entry is a residential doorway serving a two-story dwelling, and beside it, a public water sabīl, a feature that historically served both ritual and social needs of the local community. [158]

Entry through the mosque's main door leads into a narrow corridor, which opens into the prayer sanctuary. The sanctuary itself is composed of two parallel bays, each articulated by a pair of pointed arches resting on massive square stone piers. This rhythm of compact, clearly defined spatial units reflects the architectural language often found in small Sufi zawāyā, where modest scale is balanced by structural clarity and spiritual atmosphere.

Set into the southern qibla[159] wall is a simple miḥrāb[160], accompanied by a wooden minbar, both of which maintain the architectural restraint consistent with the building's overall character. The prayer space is covered by a flat ceiling constructed with exposed wooden beams, a technique closely aligned with traditional Damascene domestic construction, thereby reinforcing the mosque's integration within the local vernacular. [161]

A particularly distinctive element of al-ʿAnnāba Zāwiya is its unconventional minaret (*see Fig. 34*), the date of which remains unknown. Rather than adopting the standard vertically prominent form, the minaret is built as a roof-mounted octagonal balcony, set atop the structure's second story. The balcony is enclosed by a decorative iron balustrade, a practical and stylistic response likely shaped by spatial constraints and material limitations.

Above the balcony is a slightly projecting canopy, clad in zinc plates to protect against climatic wear. The canopy is capped with a conical octagonal hood, completing the ensemble. This atypical solution suggests that the minaret may have been a later addition, reflecting adaptive design responses in the early modern period, and providing valuable insight into how religious structures in dense urban settings



Figure.33. The facade of Al-ʿAnnāba Mosque.



Figure.34. The sanctuary of Al-ʿAnnāba Mosque.

[157] Al-ʿAdawī, *Ziyārāt Ela Dimashiq*, 1665-167.
[158] Al-Budīrī, *Hawādith Dimashq al-Yawmia,* 100-105.
[159] Qibla-Direction facing the Kaʿba in Mecca, determining mosque alignment.
[160] **Miḥrāb-** Niche in a mosque wall indicating the direction of Mecca (qibla).
[161] Qutayba al-Shihabi, *Āthār Dimashq*, 1994, 168.

	evolved to accommodate changing functional and aesthetic demands. [162]	
Al-Shaykh Hammād	Al-Shaykh Ḥammād Zāwiya, discreetly situated within a narrow alley connecting the al-Sakhāna and Al-Qaāh neighborhoods of Al-Mīdān, figure (22), exemplifies the spatial embedding of Sufi institutions within the fine-grained urban fabric of Ottoman Damascus (*see Fig. 35*). This small religious complex not only served as a site for spiritual retreat and communal worship but also houses the tomb of Shaykh Ḥammād, thereby combining devotional architecture with funerary tradition, a hallmark of many zawāyā across the Islamic world. [163] Located in close proximity to the zāwiya is what is traditionally regarded as the residence of Shaykh Ḥammād, further anchoring the saint's memory within the spatial and social landscape of the neighborhood. Shaykh Ḥammād, a revered ascetic originally from Baghdad, settled in this quarter of Damascus and became a prominent figure in the spiritual life of the al-Mīdān community. The zāwiya that bears his name was established adjacent to his home and tomb, forming a localized shrine complex that continues to embody his legacy. [164] The mosque is modest in scale, with an estimated area of approximately 50 square meters, as recorded by the Directorate of Endowments of Damascus. Its main façade consists of a stone surface coated in white lime, a common treatment in Damascene architecture intended to protect and unify masonry while projecting visual simplicity. At the center of the façade is an iron entrance door, which provides access to the prayer sanctuary (*see Fig. 36*). Above the doorway, a small minaret emerges, a compact vertical element that marks the zāwiya's sacred function without dominating the surrounding skyline. [165] One of the most significant architectural elements within the zāwiya is the miḥrāb, which was relocated from the former Sidī Bishāra Mosque in Bāb Musallā, a structure that was demolished during urban redevelopment efforts. The act of reusing this miḥrāb imbues al-Shaykh Ḥammād Mosque with a deeper layer of historical continuity and spiritual resonance. This transplantation of sacred material culture from one demolished mosque to another active zāwiya serves not only as a conservation gesture, but also as a symbolic act of architectural memory, preserving the spiritual aura of the original space through its physical fragment (*see Fig. 37*). Together, the architectural features and layered functions of al-Shaykh Ḥammād Zāwiya reflect the adaptive nature of small-scale religious institutions in Damascus. Their ability to integrate prayer, tomb	 **Figure.35.**Al-Shīkh Hammād Mosque**.**  **Figure.36.**The sanctuary of the mosque.  **Figure.37.**Al-Mihrāb.

[162] Burns, *Damascus: A History* 2005, 134.
[163] Al-Zahrānī, *al-Zāwiyāt al-Ṣūfiyya fī Bilād al-Shām*, 2005, 97.
[164] Al-ʿAdawī, *Ziyārāt Ela Dimashiq*, 230-235.
[165] Al-Muʾayyid, *al-Zawāyā wa-al-Turāth al-Ṣūfī fī Dimashq*, 200), 54–55.

	architecture, vernacular building practices, and inherited sacred elements illustrates the complex interweaving of memory, community, and built environment in the religious history of al-Mīdān. [166]	

Table.25. Representative examples of small-scale zawāyā in the Al-Mīdān neighborhood, identified through field research conducted by the author as part of a broader architectural and urban investigation.
(Source**:** Compiled by the author during fieldwork, 2021)

III.3. 1.3.The Churches:

III.3.1.3.1.Churches in Al-Mīdān: Origins, Urban Relationships, and Architectural Presence: Figure (38).

- **Why Were Churches Built in Al-Mīdān?** [167]

The construction of churches in the Al-Mīdān neighborhood reflects both demographic shifts and the evolving religious pluralism of Damascus during the late Ottoman period. While Al-Mīdān was historically a predominantly Muslim district, by the 19th century, increased migration of Christian families into the southern peripheries of Damascus, especially Orthodox and Eastern Catholic communities, necessitated the establishment of local churches.

- **Religious Necessity and Community Formation:** [168]

As Christian populations expanded beyond the traditional confines of Bab Tuma and Al-Qaymariyah, new churches were built in neighborhoods like Al-Mīdān to serve local liturgical needs, including baptisms, marriages, and Sunday services, eliminating the need to travel long distances.

- **Tanzimat Reforms and Religious Freedom:**

The Tanzimat reforms (1839–1876 AD) granted more rights to non-Muslim communities under the Ottoman Empire, allowing Christians to construct and maintain places of worship more freely. This legal context enabled the establishment of churches such as Our Lady of Al-Niyāh and St. Ḥanānya in Al-Mīdān.

- **Relationship Between Churches and Their Surroundings:** [169] **Figure (38).**

Churches in Al-Mīdān were constructed in a way that reflected both their minority status and their intent to integrate into the surrounding Islamic urban fabric:

- **Discrete Urban Presence:**

Churches were often built behind high walls or within interior courtyards, with little outward visibility. Their entrances were generally modest, sometimes hidden in side alleys, respecting both zoning conventions and social sensitivities in a Muslim-majority environment.

- **Coexistence, Not Contrast:**

Unlike mosques, churches typically lacked tall domes or bell towers. Their architectural expression was intentionally subdued, allowing them to coexist with surrounding housing and shops without visual dominance. Their presence enhanced the religious diversity of Al-Mīdān without disrupting its spatial rhythm.

- **Proximity to Residential Clusters:**

Churches were typically located within or near Christian residential pockets, where community members lived, creating micro-enclaves within the larger Islamic neighborhood. They were often near other religious or civic institutions, reflecting patterns of functional coexistence.

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[166] Weber, *Urban Fabric and Architectural Typology in Ottoman Bilād al-Shām*, Philipp (Stuttgart: Franz Steiner, 2004, 80.
[167] Burns, *Damascus: A History* 2005, 147.
[168] Abū Ghazāla, *al-Kanāʾis fī Dimashq: Tārīkh wa-ʿUmrān*, 1985, 92-97.
[169] Al-Shihabi, *Āthār Dimashq* 1994, 182.

- **Impact on the Urban Fabric of Al-Mīdān:** [170]

Though architecturally modest, churches had a meaningful spatial and social impact on the neighborhood:

- **Cultural Diversity and Spatial Pluralism:**

Churches contributed to Al-Mīdān's multi-confessional character, especially in the late Ottoman and early French Mandate periods. They introduced new architectural typologies, basilican plans, iconostasis screens, and vaulted naves, that enriched the area's building diversity.

- **Educational and Charitable Functions:**

Many churches hosted adjacent schools or charity offices, thereby serving educational and welfare roles. This extended their influence beyond worship and positioned them as centers of communal cohesion for minority groups.

- **Urban Morphology:**

Churches respected the fine-grained morphology of Al-Mīdān, often adopting the building heights, materials (like mudbrick, basalt, wood, plaster, Paint and white limestone), and fenestration patterns of the surrounding domestic architecture. As such, they blended into the urban grain while contributing layers of symbolic and functional meaning.

Basilican layouts were common, especially for larger community churches (e.g., Lady of Al-Niyāh)

- **Interiors featured:** [171] **Figure (38).**

A nave and two side aisles

A sanctuary and apse behind the iconostasis

Galleries (attics) sometimes added for additional seating or to accommodate cloistered groups

Flat or gently vaulted wooden ceilings instead of large domes (to reduce exterior visibility)

Attached courtyards were frequent, sometimes adapted from house plans

- **Who Owns the Churches in Al-Mīdān?** [172]

Churches in Al-Mīdān, like elsewhere in Damascus, are owned and managed by their respective Christian denominations. Ownership and oversight typically follow these structures:

- **Institutional Ownership by Patriarchates:**

Churches such as Our Lady of Al-Niyāh (Eastern Catholic) and St. Ḥanānya (likely Orthodox or Syrian Catholic) are held by the Greek Catholic Patriarchate, Greek Orthodox Church, or Syriac Catholic Church, depending on their denomination. These institutions manage the physical property and spiritual leadership.

- **Community Stewardship:**

While legally owned by religious authorities, churches are often maintained by local congregations, who fund renovations, upkeep, and daily operations through donations and volunteer work.

- **Legal Recognition and Heritage Registration:**

Some churches are recognized as heritage structures and may receive protection from the Directorate General of Antiquities and Museums. However, administrative control remains within the ecclesiastical hierarchy.

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[170] Masters, *Christians and Jews in the Ottoman Arab World*, 2001, 90-91.

[171] Al-Shihabi, *Āthār Dimashq* 1994, 182.

[172] Wizārat al-Awqāf wa-al-Turāth, *al-Turāth al-Masīḥī fī Dimashq*. Dimashq: Mudīriyya al-Āthār, 2002, 45-50.

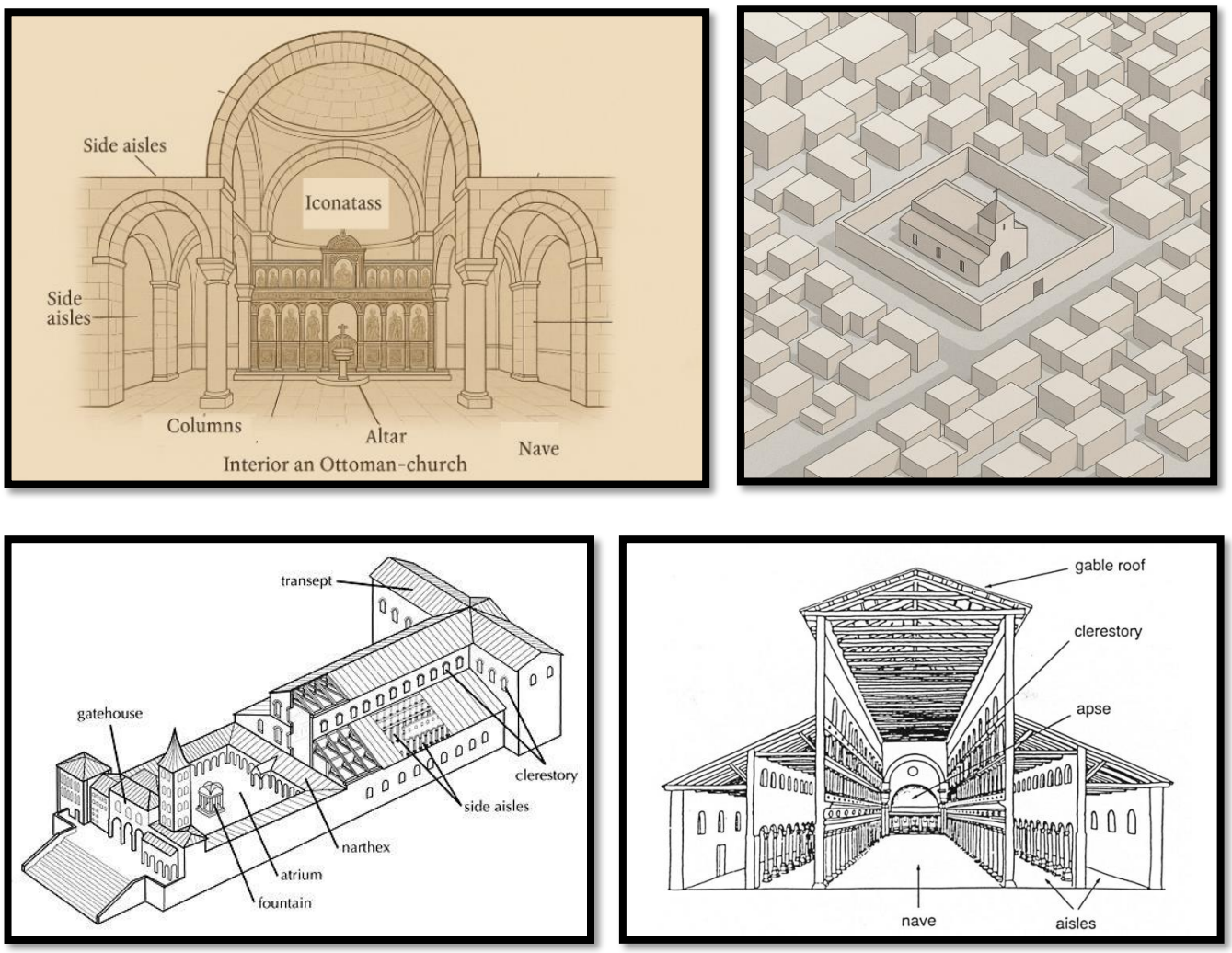

Figure.38. Illustrates the main components of the Churches in the Al-Mīdān neighborhood, with an emphasis on how these buildings harmoniously coexist with the surrounding urban fabric. (Source: the researcher, 2025/ R.Krautheimer, Early Christian and Byzantine Architecture, 1986)

III.3.1.3.2. Major Churches in the al-Mīdān Neighborhood:

III.3.1.3.2.1. Lady of Al-Niyāh Church: Figure (22).

III.3.1.3.2.1.1.Our Lady of Al-Niyāh Church –Urban Modesty and Sacred Integration:

III.3.1.3.2.1.1.1.Our Lady of Al-Niyāh Church: Embedded Sacredness in the Urban Morphology of Al-Mīdān:

Located in Al-Qurashī Alley (specifically within the Al-Mīdān al-Fawqānī (Upper Mīdān) district), west of Ḥanānya Church, figure (22), Our Lady of Al-Niyāh Church represents a subtle yet profound example of Christian sacred architecture inserted into the dense and predominantly Muslim urban fabric of Al-Mīdān. As one of three Roman Catholic churches built in and around Damascus in the early 19th century (Our Lady of Al-Niyāh- St. Hanānya Church- Church of Our Lady of the Dormition), its establishment illustrates a carefully negotiated coexistence within a context of religious constraint and evolving pluralism. [173]

[173] Philippe, Wizārat al-Awqāf wa-al-Turāth, *al-Turāth al-Masīḥī fī Dimashq*, 2002, 45-50.

Originally formed by combining two adjacent residential buildings, the church evolved from a single prayer room in 1820AD, into a fully functional place of worship—its transformation undertaken quietly and with sensitivity to the Ottoman regulations that forbade overt Christian construction until 1834 AD. This phased construction and night-time expansion under Patriarch Maximus Mazloum not only highlights the importance of religious leadership but also emphasizes the role of community initiative in shaping spiritual space. [174]

- **Architectural Form and Urban Context:** [175] **Figure (39).**

The church's façade is intentionally understated, echoing the neighboring houses through its scale, materiality, and fenestration patterns. The wooden main entrance, arched and topped by a modest marble plaque with a cross, blends with the rhythm of the alleyway, avoiding architectural rupture while still signaling sacred presence.

Behind the entrance lies a rectangular courtyard, paved with alternating pink and white tiles—centering around a polygonal fountain. The courtyard is bordered by five rooms on all sides, whose proportions, fenestration, and details resemble local courtyard homes. Wooden windows with iron grilles, carved arches, and understated balconies supported by wooden columns maintain the architectural language of the neighborhood.

On the church's eastern edge, a five-arched portico, supported by two columns and two piers, forms the threshold into the sanctuary. This semi-open gallery preserves the typology of Damascene religious and residential buildings, ensuring both functional transition and architectural coherence with its context.

- **Spatial Composition and Material Continuity:** [176] **Figure (39).**

Internally, the church adopts a three-aisled basilican plan. The central nave is framed by arcades composed of four arches resting on reused columns of varying origin, adjusted with masonry to unify their height. The reuse of architectural fragments and diverse columns expresses both a layered architectural memory and the adaptive ingenuity of the builders.

Above, the flat ceilings of the side aisles are constructed from rows of poplar logs, while the central nave's roof rises slightly higher, pierced with clerestory windows that softly illuminate the space. This restrained vertical articulation mirrors the church's subtle integration into Al-Mīdān's low-rise skyline.

The sanctuary is enclosed by a finely carved marble iconostasis, elevated on three steps, with five doors framed by geometric and vegetal motifs. The central axis is emphasized by the icon of the Last Supper and an altar made of marble mosaic, further reinforcing the spiritual focal point through material richness contained within spatial modesty.

A surrounding attic gallery connects the church with the courtyard via wooden windows, creating visual and acoustic permeability while echoing residential spatial strategies of privacy and layered movement.

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[174]Kamal S. *A House of Many Mansions: The History of Lebanon Reconsidered*, 1988, 53-58.
[175]Al-Būstānī, *Dāʾirat al-Maʿārif al-Bustāniyya*,1880.
[176]Tadmouri, *ʿImārat al-Kanāʾis fī ʿahd al-ʿUthmāniyyīn*, 1995, 67-75.

- **Contribution to the Urban Fabric:** [177] **Figure (39).**

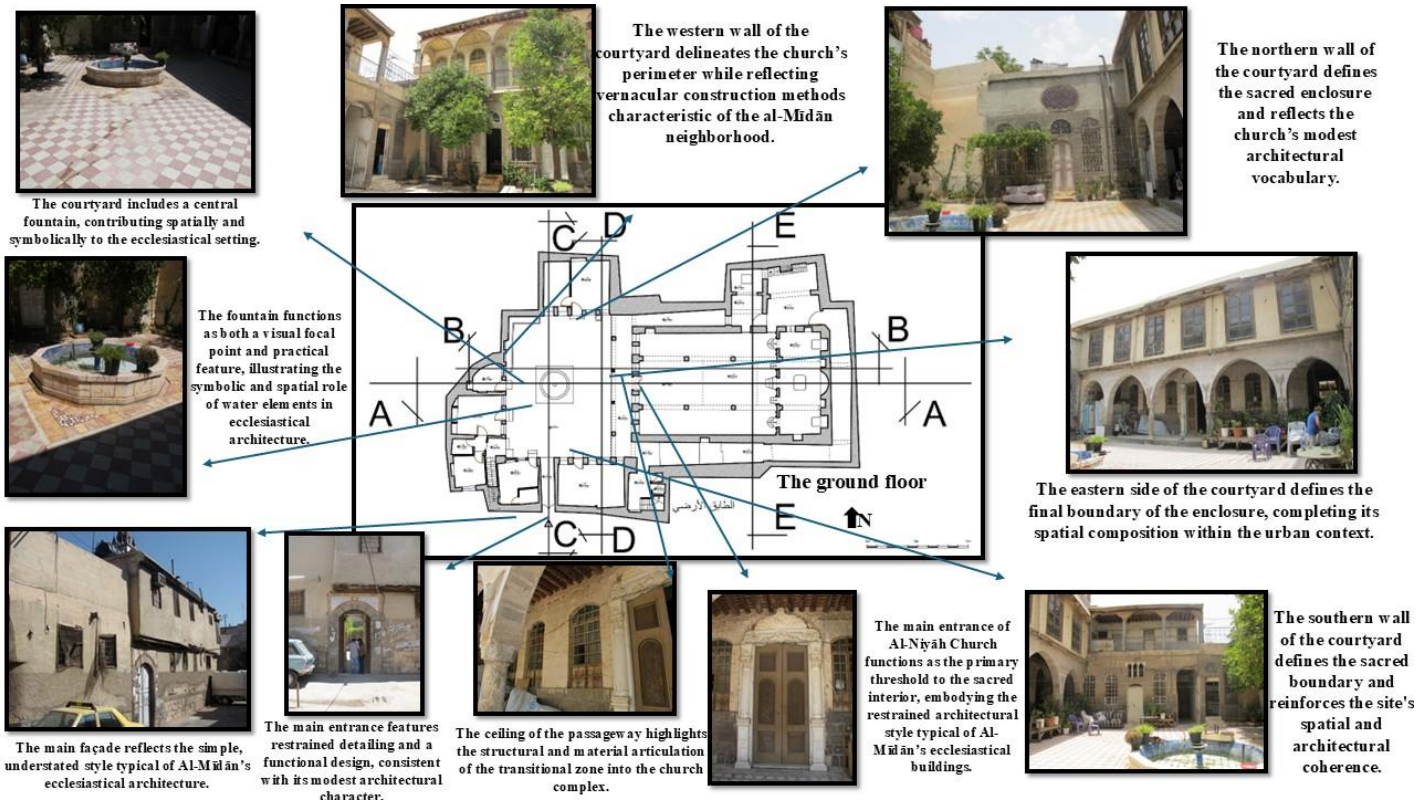
Our Lady of Al-Niyāh Church does not disrupt the neighborhood, it coexists within it. Its scale, materials, and layout adapt to its site without visual proclamation. It reinforces the compact, cellular structure of Al-Mīdān, with its inward-facing spaces and respect for street alignment. By avoiding monumental features like bell towers, the church affirms its presence through lived ritual rather than architectural dominance.

Its contribution to the morphology of Al-Mīdān is therefore both symbolic and spatial: it upholds the neighborhood's architectural continuity while enriching it with cultural and religious plurality. The churchyard and sanctuary reinforce a micro-typology of introverted sacred space, similar in form and rhythm to nearby mosques and zawāya.

- **Patronage, Identity, and Legacy:** [178]

The church owes its existence to the intervention of Patriarch Maximus Mazloum (He was a prominent 19th-century leader of the Melkite Greek Catholic Church, serving as Patriarch of Antioch, Alexandria, and Jerusalem from 1833-1855AD), and the efforts of the local Roman Catholic community, though the names of specific lay patrons remain unrecorded. While not endowed in the Islamic sense of waqf, the project functioned as a de facto religious endowment, with property acquisition, phased construction, and ongoing community support at its core.

Today, the church remains under the ownership of the Greek Catholic Patriarchate, and its endurance through political, demographic, and architectural change testifies to the resilience of minority sacred space within Damascus's layered urban history.



[177]Kurd, *Khūṭaṭ al-Shām*, 1925, 312-318.
[178]Mazloum, *Letters and Correspondence of Patriarch Maximos Mazloum (1833–1855).* Vatican Archives, 1912, 115-117.

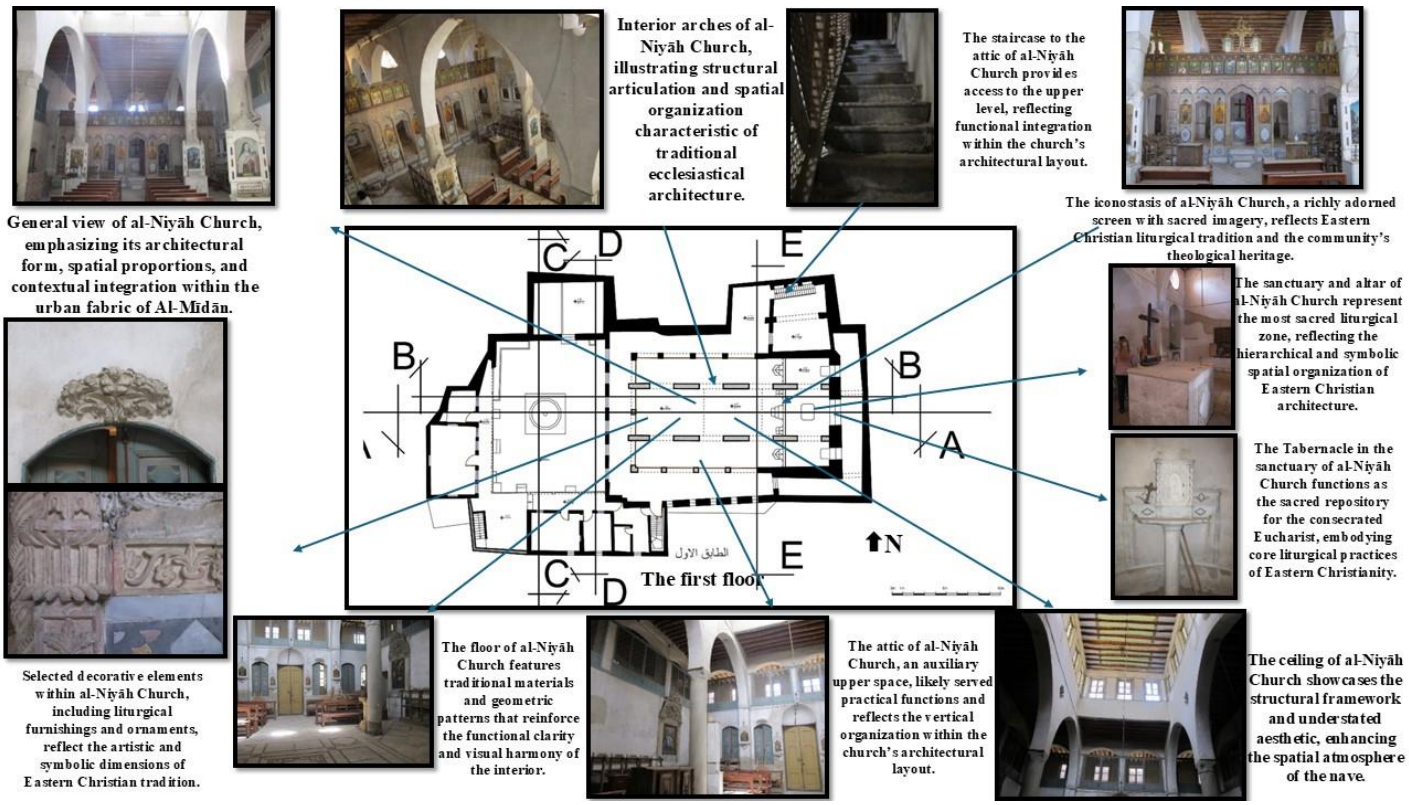


Figure.39. Presents a detailed inventory of architectural elements in al-Niyāh Church, based on photographic documentation collected by the researcher during systematic field surveys in al-Mīdān. This empirical approach ensured contextual accuracy and reflected the site's current architectural condition. (Source: Field documentation by the researcher-2021)

III.3.1.3.2.2.The Church of Ḥanānya: Figure (22).

III.3.1.3.2.2.1.Urban Context and Spatial Relationships: Figure (40).

The Church of Saint Ḥanānya is situated in the Al-Qurashi Alleywithin the Al-Mīdān neighborhood (in Al-Mīdān al-Fawqānī (Upper Mīdān) district, figure (22). The church's external appearance is restrained and vernacular in scale. With a facade length of approximately 17 meters, it aligns with the surrounding building line, utilizing a cement-rendered wall painted in muted tones and pierced by a modest black iron entrance door. This understated elevation, interrupted only by minimal religious ornamentation and modest inscriptions, mirrors the humility and urban restraint typical of early 19th-century Christian architecture beyond the old city walls. [179]

Its location in a tight residential network allows the church to coexist harmoniously within the alleyways of Al-Mīdān, contributing to the rhythm of built mass and circulation without asserting monumental dominance. The building engages the street not as a landmark but as a cohabitant, facilitating community access while maintaining discretion. [180]

- **Internal Layout and Material Expression:** [181] **Figure (40).**

Beyond the main entrance, a small rectangular courtyard (4 x 10 meters) paved in black and white marble opens to the church's porticoes and sanctuary. To the east lies the parish priest's office and a now-defunct elementary school founded in 1889 AD. The layered use of the compound reflects

[179] Al-Ḥaṣan, *Al-Kanā'is wa-al-Adyira fī Dimashq al-Qadīma*, 1995, 88–91.
[180] Masters**,***Christians and Jews in the Ottoman Arab World: The Roots of Sectarianism*, 2001, 150–153.
[181] Van Leeuwen, *Waqfs and Urban Structures in Damascus*, 1999. 174-178.

a multifunctional ecclesiastical typology, combining worship, education, and social service within a single bounded enclosure.

The church itself is organized as a rectangular basilica (13 x 11 meters), surrounded on three sides by porticoes. Each portico functions not only as a processional or transitional space but also as a formal mediator between public and sacred realms. The southern portico, with three arches supported by basalt columns and a timber roof of poplar and willow, opens onto a compact courtyard. The northern portico frames a larger courtyard, while the western portico functions as a vestibule with its own stone stair leading to the bell tower.

The sanctuary is divided into three aisles by arcades supported by square stone piers. A timber roof with clerestory windows rises over the central nave, reinforcing the longitudinal emphasis typical of Orthodox churches. The light-filtering from the high windows and timber ceiling materials maintains climatic harmony with Damascus's building traditions, while connecting the sacred interior to broader regional practices.

- **Iconostasis and Liturgical Heritage:** [182] **Figure (40).**

The iconostasis, made of carved poplar wood, is detached from the lateral walls—a rare configuration suggesting it may have been transferred from another location. Its vertical and iconographic arrangement follows a tripartite structure: lower, middle, and upper registers, populated with icons of saints and scenes from the life of the Virgin Mary. These icons, painted by John Saliba of Jerusalem, reflect regional networks of artistic production and intercommunal exchange.

The integration of salvaged liturgical furniture, such as a patriarchal throne originally from Our Lady of Al-Niyāh Church, further reflects a culture of sacred resource sharing within the Christian community of Al-Mīdān.

- **Architectural Identity and Urban Contribution:** [183] **figure (40).**

The church's massing, with its low-rise volume and inward orientation, mirrors the surrounding domestic architecture. Its wooden ceilings, basalt columns, and modest bell tower signal continuity rather than contrast. As a result, St. Ḥanānya Church contributes to the morphological fabric of the neighborhood without architectural rupture. Its spaces and materials respond to both climatic conditions and communal expectations, reinforcing a shared urban identity.

Although it is not affiliated with a waqf in the Islamic sense, its ongoing maintenance, phased development, and multi-use enclosure suggest a functional equivalence to pious endowments. The builder identity, whether ecclesiastical or communal, is embedded in the physical evolution of the church, a structure built through adaptive accretion and sustained collective memory.

Today, St. Ḥanānya Church remains a modest but enduring landmark in Al-Mīdān, reinforcing the possibility of sacred plurality within a cohesive urban language.

[182] Ṣāyigh, *Dimashq: Kanāʾisuhā wa-Aʿlāmuha.* Beirut,1993, 102–106.
[183] Tadmuri, *Dimashq: Turāthuha al-Miʿmārī wa-Dīnī*, 1998, 88-90.



Figure.40. Presents a detailed inventory of the architectural elements of Ḥanānya Church, based on field documentation conducted by the researcher. (Source: The researcher, 2021)

III.3.2. The Service Buildings in Al-Mīdān Neighborhood:

III.3.2.1.The Baths (Hāmmāms): Figure (41).

III.3.2.1.1.Baths in Al-Mīdān: Function, Urban Relationships, and Ownership Structure:

Why Were Baths Built in Al-Mīdān?

The construction of public baths (ḥammāmāt) in Al-Mīdān was deeply tied to both religious customs and practical urban needs. Their development can be attributed to several interrelated factors:

- **Religious and Cultural Necessity:** [184]

In Islamic tradition, physical cleanliness is a prerequisite for spiritual purity. Baths provided the facilities for ritual ablutions (ghusl), especially important before Friday prayers and during religious festivals. The presence of multiple mosques in Al-Mīdān made baths essential companions to worship.

- **Al-Mīdān as a Trade and Pilgrimage Hub:** [185]

Located along the Hajj route and the grain corridor connecting Damascus with the Hawran region, figure (1), Al-Mīdān attracted merchants, travelers, and pilgrims. Public baths offered spaces for rest and rejuvenation, especially for those lodged in nearby khānāt (caravanserais).

- **Social and Domestic Infrastructure:** [186]

In pre-modern Damascus, private bathing facilities were rare. Public baths functioned as a communal utility, often used by residents for regular hygiene, medical treatments, and social interaction. They were especially vital for the elderly, women, and the urban poor.

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[184] Raymond, *The Great Arab Cities in the 16th–18th Centuries*, 1984, 130-137.
[185] Tadmouri, *Al-ḥammāmāt al-taqlīdiyya fī Dimashq* [Traditional Hammams in Damascus], 1998, 78-94.
[186] Raymond, *The Great Arab Cities in the 16th–18th Centuries*, 1984, 130-137.

- **Relationship Between Baths and Their Urban Context:** [187]**Figure (41).**

The spatial logic of Al-Mīdān's baths reveals deliberate architectural and functional integration:

- **Embedded Within Dense Neighborhood Fabric:**

Baths were typically constructed on side streets or cul-de-sacs, allowing for privacy and efficient use of irregular parcels. Their entrances were often modest, while their interiors extended deep into the urban block.

- **Proximity to Other Key Structures:**

Most baths, such as Al-Darb Bath and Al-Rifāʿī Bath, figure (22), were located adjacent to mosques, zawāya, and residential areas. This functional clustering ensured that sacred, social, and hygienic needs could be met within a walkable radius.

- **Architectural Adaptation to Environment:**

The layout of Al-Mīdān's baths reflected their environmental and urban constraints. With a tripartite plan (cold – warm – hot rooms), their domed roofs, light wells, and hypocaust heating systems were tailored to the climate and water infrastructure of the district. [188]

- **Impact on the Urban Fabric of Al-Mīdān:**

Baths were more than service buildings, they actively shaped the social and spatial life of Al-Mīdān:

- **Centers of Social Cohesion:** [189]

Baths were gender-segregated or offered alternating schedules, providing safe spaces for socialization, celebration (e.g., pre-wedding bathing), and even informal arbitration. They reinforced neighborhood ties and communal routines.

- **Architectural Contribution:**

While largely hidden from street view, their domed roofs, vaulted chambers, and chimneys created distinctive silhouettes within the otherwise flat skyline. Baths added massing variety and functional density to the quarter.

Architecturally, the public baths in Al-Mīdān generally adhered to two primary typological models. The first features a domed central hall with eight or twelve ribs forming a radial symmetry, while the second follows a longitudinal layout with a sequential arrangement of rectangular hall, often aligned along a central axis leading from the changing room to the hot chamber.[190]

Despite variations in layout, the architectural program of the ḥammām (bath) in Al-Mīdān follows the classical Ottoman tripartite layout, comprising the Al-Barānī (Outer section-cold/reception hall), Al-Wusṭānī (Intermediate section- warm intermediate chamber), and Al-Jawwānī (Inner section-hot steam room), each fulfilling distinct functional and thermal roles within the ritual sequence of bathing. [191]

- **Al-Barānī :**

Translation: Outer section.

Description:

The **Al-Barānī** is the outermost and coolest section of the ḥammām. It functions as the **reception, changing, and resting area**, often featuring benches, fountains, and occasionally a domed roof.

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[187] 'Arabī, *Al-Rawḍa Al-Bahiya fi Faḍā'al Dimashiq Al-Mahmiy,* 80-85.
[188] Lutfī, *Al-Tārīkh Al-'amrānī li Dimashiq,* 320-330.
[189] Al-ʿAdawī, *Ziyārāt Ela Dimashiq,* 45-48.
[190] Al-Shihābī, *Mu'jam Dimashiq Al-Tārīkhī,* 197.
[191] Al-Munjid, *Khuṭṭ Dimashiq- Tarīkh Dimashiq Al-Ṭabūghrāfī,* 50-59.

This space allowed visitors to prepare for bathing and served as a social and transitional zone between the public realm and the bathing sequence.

- **Al-Wusṭānī:**

Translation: Intermediate section.

Description:

The **Al-Wusṭānī** is the **warm, intermediate chamber** of the bathhouse. It serves as a transitional space that acclimatizes bathers to higher temperatures before entering the hot section. This space facilitated bodily adjustment between cold and hot environments.

- **Al-Jawwānī:**

Translation: Inner section.

Description :the core functional space of the bath, characterized by high humidity, elevated temperatures, and specialized facilities for bathing and massage. It typically includes stone basins, heated marble platforms, and water outlets. This chamber reflects the culmination of the spatial-thermal progression of the traditional bathhouse.

- **Catalysts for Urban Micro-Economies:** [192]

Baths generated demand for nearby services, towel vendors, barbers, herbalists—further embedding them in the local economy. Their presence often stimulated spatial nodes of commerce and service.

➢ **Ownership of Baths in Al-Mīdān:** [193]

Most baths in Al-Mīdān were historically founded and maintained as waqf properties:

- **Endowed Charitable Institutions:**

Baths were typically established through pious endowments (waqf) by wealthy individuals, local notables, or religious figures. These waqfs ensured long-term maintenance and linked the baths to other structures, like mosques or schools.

- **Administrative Supervision:**

Historically, the Ottoman state oversaw waqf administration, but local custodians (mutawallīs) managed daily operations. In modern times, many baths fall under the supervision of the Ministry of Religious Endowments (Wizārat al-Awqāf) or the Directorate of Antiquities, especially if registered as heritage sites.

- **Continuity and Decline:**

While some baths remain operational or restored (e.g., for tourism or community use), many have been abandoned, reused as storage, or incorporated into private housing. However, their legal status often still reflects their waqf origins.

[192] Salam-Liebich,.*The Architecture of the Mamluk City of Tripoli,* 1983. 115-121.
[193] Crecelius,.The Waqf in Egypt in the Ottoman Period, vol. 16, 1979, 83-85.

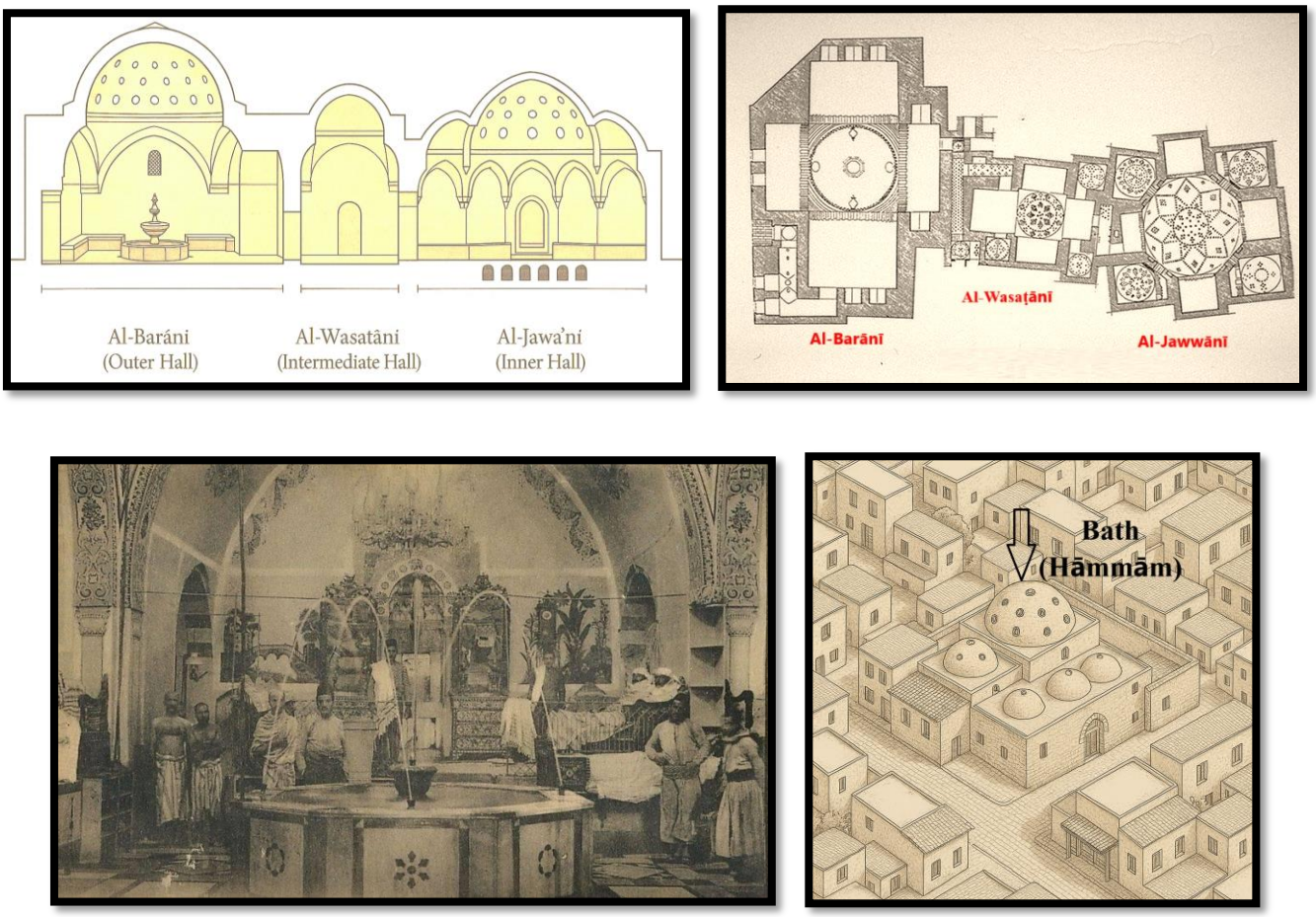

Figure.41.presents the principal architectural components of the public baths (ḥammāmāt) in Al-Mīdān neighborhood, highlighting their spatial integration and harmonious coexistence with the surrounding urban fabric.
(Source: Diagram prepared by the author, original field research, 2025)

III.3.2.1.2.The Principal Public Baths of Al-Mīdān Neighborhood:

As part of the comprehensive research conducted on the *al-Mīdān* neighborhood, the researcher undertook an extensive investigation into its most significant historical public baths (ḥammāmāt). This inquiry combined systematic archival research with repeated field surveys and site visits, enabling direct observation, photographic documentation, and detailed architectural analysis. Through this rigorous methodology, the researcher was able to identify, record, and assess the architectural characteristics and historical significance of the principal baths within the neighborhood. What follows is a detailed description and documentation of the most prominent ḥammāmāt examined in the course of this study.

III.3.2.1.2.1.Al-Darb Bath, Figure (42):

III.3.2.1.2.1.1.Al-Darb Bath – Urban Integration and Social Infrastructure:

III.3.2.1.2.1.1.1.Al-Darb Bath: Morphological Adaptation and Neighborhood Anchoring:

Located in the Dakkāk neighborhood of Mīdān Sultānī, west of the main commercial spine of Al-Mīdān, Al-Darb Bath occupied a strategic position within a densely built, mixed-use urban fabric. Al-Darb Bath formed part of a cluster of public service buildings that combined religious, hygienic, and social functions. Its placement within the neighborhood exemplifies the Ottoman planning

logic of situating baths in proximity to mosques and residential quarters to serve the daily needs of the population. [194]

The bath's physical form responded to the spatial grain of its surroundings: typically low-rise with domed roofs and inward-facing spaces. Like many traditional ḥammāms, its massing was relatively inconspicuous from the street a compact, volumetric entity inserted into the urban block, contributing to the rhythmic skyline of domes and vaults that distinguished Al-Mīdān. It did not contrast with its neighborhood but rather coexisted through formal adaptation and functional necessity.

Historically, Al-Darb Bath functioned as a communal facility where hygiene, ritual purification, and social interaction converged. It played a vital role in the daily life of residents and travelers alike, especially given Al-Mīdān's location along the Hajj route and grain trade corridor, figure (1). The building was severely damaged during the 1925 AD Syrian revolt, when it was shelled by French forces. That it was later restored and reopened by Madam Hasība Al-Nūrī, a respected figure from the neighborhood, speaks to the bath's social value and embeddedness in community identity. [195]

Although now demolished and out of service, figure (42), Al-Darb Bath's spatial legacy endures, the street where it once stood still bears its name. This lingering toponymic reference reinforces the bath's former significance as a spatial anchor within the district. It contributed not only to the neighborhood's infrastructure but also to its collective memory and morphological development.

In terms of ownership, the bath was likely a waqf (charitable endowment), as was common for such facilities in Ottoman Damascus. These endowments ensured continuous maintenance and operation, typically under the supervision of local trustees or affiliated religious institutions. The act of renewal by a local benefactor such as Al-Nūrī suggests that custodianship and patronage were as important as formal ownership in sustaining the function of the bath. [196]

Thus, Al-Darb Bath exemplifies how public architecture in Al-Mīdān did not merely occupy space but shaped it. It responded to the functional rhythms of its urban context, reinforced social cohesion, and contributed to the spatial and cultural continuity of the neighborhood.

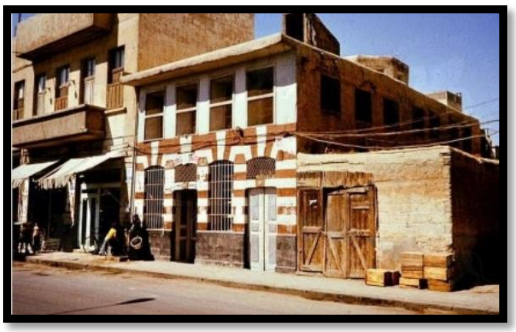

Figure.42. Historical photograph of al-Darb Bath prior to its demolition. The image provides valuable visual evidence of the bath's architectural form and spatial configuration before its disappearance from the urban fabric of al-Mīdān.
(Source: Mahmud Lok, *Ahyāʾ Dimashq Khārij al-Sūr* (Damascus: Wizarat al-Thaqafa, 2011, 222.)

[194] Ghazzāl, *Islamic Law and Modernity: Commercial Structures and Legal Change in Ottoman Syria*, 2000, pp. 93–95.
[195] Al-Mīdānī, *Wathāʾiq al-Mīdān al-Tārīkhiyya wa al-Miʿmāriyya*, 2003, pp. 110–115.
[196] Saʿīd, *al-Waqf wa al-Maʿālim al-ʿUmrāniyya fī Dimashq al-ʿUthmāniyya*, 1998, pp. 201–203.

III.3.2.1.2.2.ʿAqīl Bath: Figure (43).

III.3.2.1.2.2.1.ʻAqīl Bath – Urban Persistence and Architectural Memory:

III.3.2.1.2.2.1.1.ʻAqīl Bath: Historical Continuity and Morphological Presence:

Located in the Ḥaqla district of Al-Mīdān, directly opposite Al-Shīkh Yaʿqū b Mosque, figure (22), ʻAqīl Bath once formed a vital component in a network of religious and communal services that structured the neighborhood's historical development. Constructed in 1220 AH (1805 AD), the bath emerged as part of a broader urban effort to provide essential public hygiene facilities in a rapidly expanding district of Damascus. Its position adjacent to a mosque further reflects the traditional Islamic urban logic of placing baths in proximity to spaces of worship. [197]

Morphologically, the bath conformed to the dense, fine-grained layout of Ḥaqla Mīdān, occupying a modest parcel within a network of alleys and courtyards. Its architectural massing, defined by low, thick stone walls, domed roofing elements, and an inward-facing plan, allowed it to merge with the surrounding built fabric while preserving spatial privacy and thermal efficiency. Rather than imposing itself as an object building, ʻAqīl Bath acted as a spatial condenser, reinforcing the compact and layered morphology of the neighborhood. [198]

During its functional years, the bath was organized according to the tripartite typology of Ottoman ḥammāms: a cold (barānī), warm (wasaṭānī), and hot (jawwānī) section, with domed ceilings punctuated by circular glass apertures for light and ventilation. The facility served men in the mornings and women in the afternoons, integrating itself into the daily rhythms of neighborhood life. Water for the bath was drawn from an internal well for heating and from the Fījah spring for drinking purposes, while rubbish and sawdust were used as traditional fuel sources—a practice reflecting both environmental adaptation and economic pragmatism. [199]

The bath was restored during the 19th century by Salīm Al-Nūrī a prominent local figure in the Al-Mīdān neighborhood of Damascus during the 19th century). This lineage of custodianship underlines the importance of familial and communal patronage in sustaining Al-Mīdān's architectural heritage. While formal records of waqf status are not provided, the Al-Nūrī family's repeated investment in public facilities suggests a system of quasi-endowed, socially embedded ownership, akin to traditional Islamic waqf practice. [200]

Although the bath ceased operation in 1975 AD (1375 AH), the structure still stands, albeit in a state of advanced deterioration. With much of its roofing collapsed and interior spaces exposed, the building now exists as a silent architectural relic, one that continues to shape the spatial memory of the neighborhood even in disuse. Figure (43). [201]

Today, ʻAqīl Bath remains at risk of further demolition. Yet its enduring physical presence and layered associations with nearby religious structures continue to affirm its role in the collective morphology of the district. It stands as a reminder of a time when architecture, community, and

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[197] Al-ʿulabī, *Khuṭaṭ Dimashiq,* 525.
[198] Shaʿbān. *Ḥammāmāt Dimashq al-Tārīkhiyya: Dirāsa Fī al-ʿImāra wa-al-Wāqifīn*, 1996, p. 55–67.
[199] Sauvaget, Jean. *Introduction à l'histoire urbaine de Damas*.1934, p. 91–105.
[200] James. *Damascus: A History*, 2012, 132–140.
[201] Kaiyāl, *Maḥmal Al-Haj Al-Shāmī,* 100-107.

urban life were more intimately intertwined, and when public buildings grew organically from the spatial and social fabric they served.



Figure.43. The surviving remains of ʿAqīl Bath, offering insight into its current state of preservation. The remnants contribute to understanding the original layout and construction techniques of traditional public baths in Al-Mīdān.
(Source: Field documentation by the researcher, 2021).

III.3.2.1.2.3.Fathī Bath: Figure (44)

III.3.2.1.2.3.1.Fathī Bath – Architectural Cohesion and Urban Integration:

III.3.2.1.2.3.1.1.Fathī Bath: Sacred Infrastructure and Morphological Dialogue:

Fathī Bath is located in the Al-Mīdān Al-Wasaṭānī district, to the west of the neighborhood's main axis and south of the shrine of Sīdī Suhayb Al-Rūmī, figure (22). [202] Established in 1743 AD (1156 AH) by Fathī Effandī Al-Daftardār, [203] the bath stands as a distinguished example of Ottoman civic architecture woven into the social and spatial fabric of Al-Mīdān.

Fathī Bath has been officially registered as a protected archaeological structure by the General Directorate of Antiquities and Museums in Damascus, under Document No. 21, it is recognized for its architectural integrity and cultural value. [204]

The bath was strategically situated within a hybrid zone of religious, residential, and service structures, embodying Ottoman ideals of integrated urban planning. Its position near a shrine and embedded along a major street illustrates how religious, commemorative, and hygienic functions were coordinated spatially in Al-Mīdān's evolving morphology. [205]

- **Spatial and Urban Relationships:** [206] **Figure (44).**

Fathī Bath's street-facing facade directly engages the urban environment. It features two large iwāns with three-lobed arches and intricately decorated stonework in black, white, and orange hues. Decorative elements include a central wooden door set in a geometric arch, mosaic panels, and a symmetrical water sabīl, all contributing to a sense of urban vibrancy and civic presence.

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[202] Al-ʿAsalī, *Tārīkh al-Ḥammāmāt fī Dimashq*, 1990, pp. 121–125.
[203] Fathī Effandī Al-Daftardār (d. 1159 AH / 1746 AD) was a prominent Damascene official of textile-working origin (Al-Qalaqānsī family). Rising to the position of treasurer (daftardār) of Damascus, he became a major patron of the arts and architecture, earning the title "Sultān of Damascus" for his influence. His legacy includes the construction of a mosque in Qaymariyah and Fathī Bath in the Al-Mīdān district. Khulusī, 'A'lām Al-Fikir fi Dimashiq, 275.
[204] Rafeq, *The Waqf System in Damascus during the Ottoman Period*, 1991, pp. 211–215.
[205] Burns, *Damascus: A History*, 2005, pp. 185–188.
[206] Ministry of Culture, *Thāwābit wa Mutaghayyirāt fī ʿUmrān Dimashq*, 2003, pp. 133–137.

The bath not only aligns with neighboring plots but also enhances the pedestrian scale of the street through its ornamented yet measured façade. This careful integration reinforces Al-Mīdān's architectural language while distinguishing the bath as a communal anchor within a cohesive streetscape.

- **Internal Spatial Composition:** [207] **Figure (44).**

The plan of Fathī Bath follows the classical tripartite sequence:

- **Al-Barānī (**Outer section**-cold room)**: Accessed via a narrow vestibule, the outer hall is arranged around a domed square courtyard featuring a central octagonal fountain. The dome rests on a high drum pierced with sixteen colored-glass windows, while the floor is paved with decorative orange, black, and limestone elements. Four iwāns open onto the courtyard, two of which are raised terraces with shoe niches beneath—highlighting a balance of function and form within the ceremonial arrival space.
- **Al-Wusṭānī (**The intermediate section **-warm room)**: Divided into two zones, it includes transitional courtyards, toilets, and three vaulted rooms with skylit domes. Surfaces alternate between colored limewash, marble, and basalt, accommodating both ritual purification and climatic adaptation. Water jars, shaped niches, and decorative tiling underscore the ritual and aesthetic experience of the space.
- **Al-Jawwānī (**Inner section**)**: Organized into three parts with a central domed space flanked by symmetrical iwāns and enclosed bathing cabins. Each cabin has its own dome with colored-glass apertures for light and ventilation. The use of black stone, orange and white marble, and careful dome transitions illustrates architectural unity and thermal efficiency. Heating elements like al-Qamīm and water jars are tactically integrated into the floor and wall systems.

- **Ownership, Patronage, and Community Role**[208]

Fathī Bath was built by a high-ranking Ottoman official, Fathī Effandī Al-Daftardār, and its partial revenues were allocated to bathe the poor free of charge. This not only highlights the bath's social function but suggests its founding as a pious endowment (waqf) rooted in Ottoman charitable traditions.

The bath was later restored by prominent figures of the neighborhood, including Mr. Shaffīq and Mr. Muhammad Agha, whose names appear on an inscription from 1361 AH (1942 AD). This continuity of investment illustrates how communal identity and stewardship helped maintain the bath's operation until its closure in 1971, after which it was repurposed as a warehouse.

- **Urban Contribution and Present Status**[209]

Fathī Bath contributes to the morphology of Al-Mīdān by offering a layered architectural narrative: from imperial patronage to local renewal, from active service to adaptive reuse. Its prominent

[207] Al-Budayrī, *Hawādith Dimashq al-Yawmiyyah,* 1962, pp. 45–46.
[208] Ibn Shaddād, *Jughrafīyat Dimashq,* 1930, pp. 77–80.
[209] Al-'Alabī, *Khiṭaṭ Dimashq,*1989, pp. 312–315.

façade and carefully articulated plan allow it to coexist within the surrounding fabric while standing as a visible civic marker.

Though no longer operational, the bath remains a significant urban artifact, reminding us of a time when hygienic, spiritual, and social functions were not separate domains but intertwined spatially and architecturally.

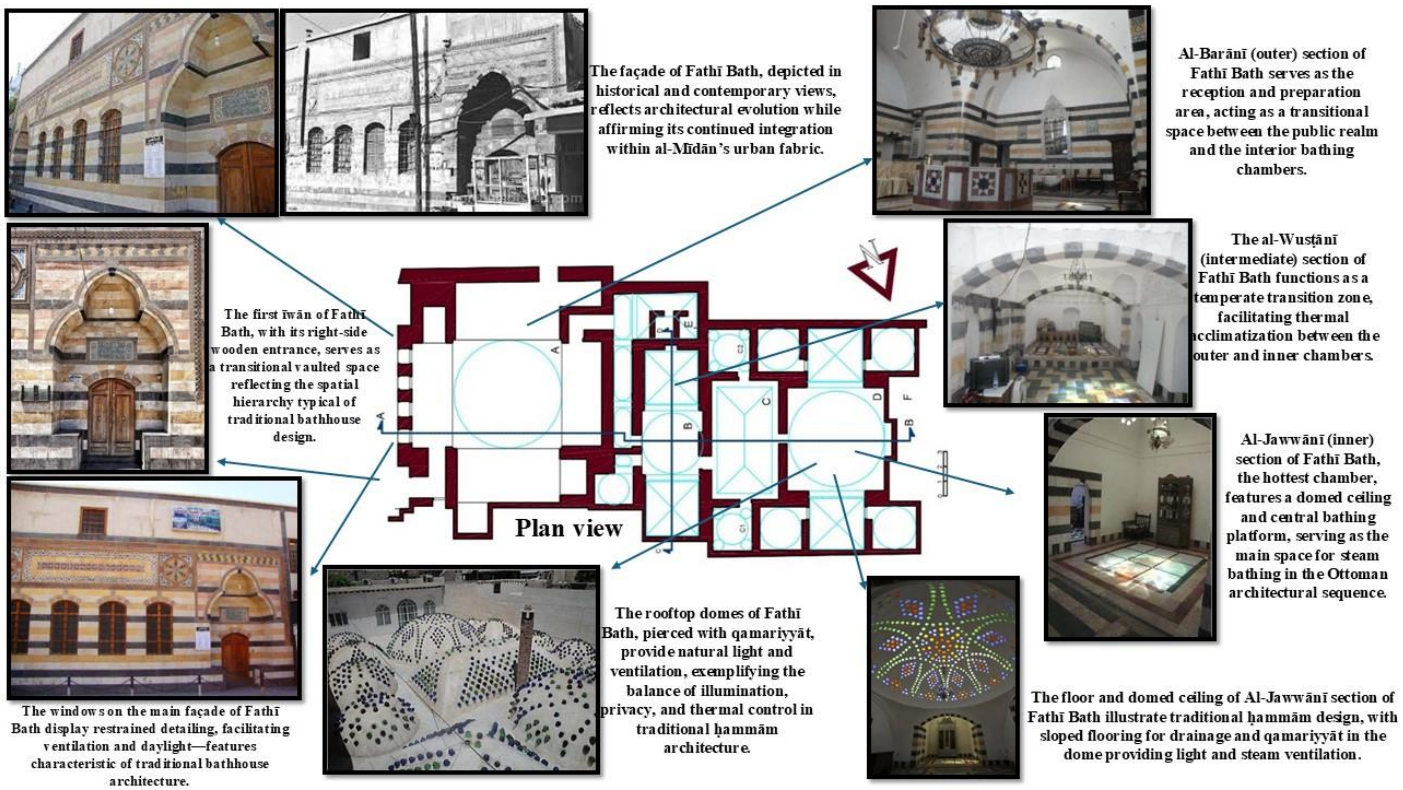

Figure.44. Presents a comprehensive inventory of the architectural elements identified in Fathī Bath. The majority of the photographic documentation was captured by the researcher during systematic field surveys conducted in the al-Mīdān neighborhood. This empirical approach ensures the accuracy, contextual relevance, and up-to-date assessment of the bath's architectural features and current condition. (Source: Compiled by the author during fieldwork, 2021).

III.3.2.1.2.4.Al-Rifāʿī Bath: Figure (45).

Al-Rifāʿī bath has been officially registered by the Directorate General of Antiquities and Museums in Damascus under registration number S-437, recognized as one of the significant archaeological sites in the al-Mīdān neighborhood, located outside the historical walls of the city[210].

III.3.2.1.2.4.1.Al-Rifā'Ī Bath – Morphological Integration and Spatial Continuity:

III.3.2.1.2.4.1.1.Al-Rifā'Ī Bath: Embedded Hygiene in the Urban Core of Al-Mīdān

Al-Rifā'Ī Bath is located in the Jazmātiya district of Al-Mīdān, just south of the Al-Rifā'Ī Mosque and east of the neighborhood's main commercial thoroughfare, figure (22). The proximity between mosque and bath reflects the traditional Ottoman logic of spatial pairing between sacred and hygienic facilities. These were designed to serve not only worshippers preparing for prayer but also the broader community engaging in ritual cleansing and daily social interaction. [211]

[210] DGAM Syria (al-Mudīriyya al-ʿĀmma li-l-Āthār). Wathāʾiq al-Tasjīl al-Āthārī fī Dimashq.
[211] Badrān, *Muʿjam al-Athār al-Islāmiyya fī Dimashq*, 2002, pp.191-192.

Spatially, the bath is discreetly inserted into the urban block, with no prominent façade or distinguishing volume exposed to the street. Its only external marker is a wooden double-leafed door that opens onto a corridor leading directly to the Al-Barānī (Outer section). This modest threshold supports the bath's introverted spatial character, consistent with the surrounding residential grain and courtyard typologies of Al-Mīdān. Figure (45).

The bath's internal sequence unfolds in a typical tripartite configuration, structured around spatial gradation and thermal progression: [212] figure (45).

- **Al-Barānī** (Outer section-cold room): A rectangular hall capped by a dome resting on an octagonal drum supported by four pillars. In the center sits an octagonal fountain, with raised terraces to the north and south. The presence of windows on the southern wall links the bath to the adjacent alley, offering both light and passive ventilation. The walls are detailed with iwāns and terraces that create layered spatial depth.
- **Transitional vestibule and toilet area**: Accessed via a low semi-circular arched entry in the northeastern corner of Al-Barānī. It is characterized by alternating white and black stone paving and colored marble cladding, emphasizing a material continuity with local traditions.
- **Al-Wusṭānī ((Intermediate section-warm room)**: A rectangular chamber covered by a dome with star-shaped glass-filled openings for light diffusion. The walls are limewashed in the upper zone and clad in colored marble below to resist humidity. The presence of multiple ajrān (stone and marble water jars), along with a deep iwān on the eastern wall, reveals how the space catered to individual and group bathing simultaneously.
- **Al-Jawwānī (**Inner section**)**: Accessed through a small lobby, this section consists of a central dome and four symmetrically arranged iwāns, each covered by smaller domes. Each iwān contains a marble water jar or basin set into niches. The use of white and red stone cladding on the lower walls and white lime on the upper parts supports both thermal insulation and visual clarity. The consistent use of domes and transitional arches not only serves climate control but also reinforces the architectural hierarchy of the bath's internal landscape.

The massing of Al-Rifā'Ī Bath is largely hidden, yet internally it delivers a rich volumetric and material experience. Its spatial rhythm and sectional articulation mirror the privacy and gradation valued in domestic and religious architecture throughout Al-Mīdān. [213]

Historically, the bath suffered significant damage during the 1925 French bombardment but was later restored by Al-Shaykh Riḍā Al-'Abd, a notable figure in the neighborhood. This act of reconstruction emphasizes the role of local patronage and familial identity in preserving civic amenities. Although formal waqf registration is not confirmed in the text, the association with the mosque and the involvement of local elites suggest it likely functioned as part of a broader pious foundation. [214]

In the context of the urban morphology of Al-Mīdān, Al-Rifā'Ī Bath contributes not through visual prominence but through functional embeddedness and architectural consistency. Its role as a node

[212] Al-ʿAsalī,.*Tārīkh Dimashq al-Madaniyya* ,Vol. 2, 1983. p.122.
[213] Weber, *Damascus: Ottoman Modernity and Urban Transformation (1808–1918)*, 2009, pp. 410–415.
[214] Al-Rifāʿī Mosque Waqf Archive, Damascus. Manuscript records dated approximately 1880–1940, 2025.

within a constellation of sacred and social infrastructure reflects how Ottoman public buildings were designed to coexist and reinforce neighborhood cohesion. [215]

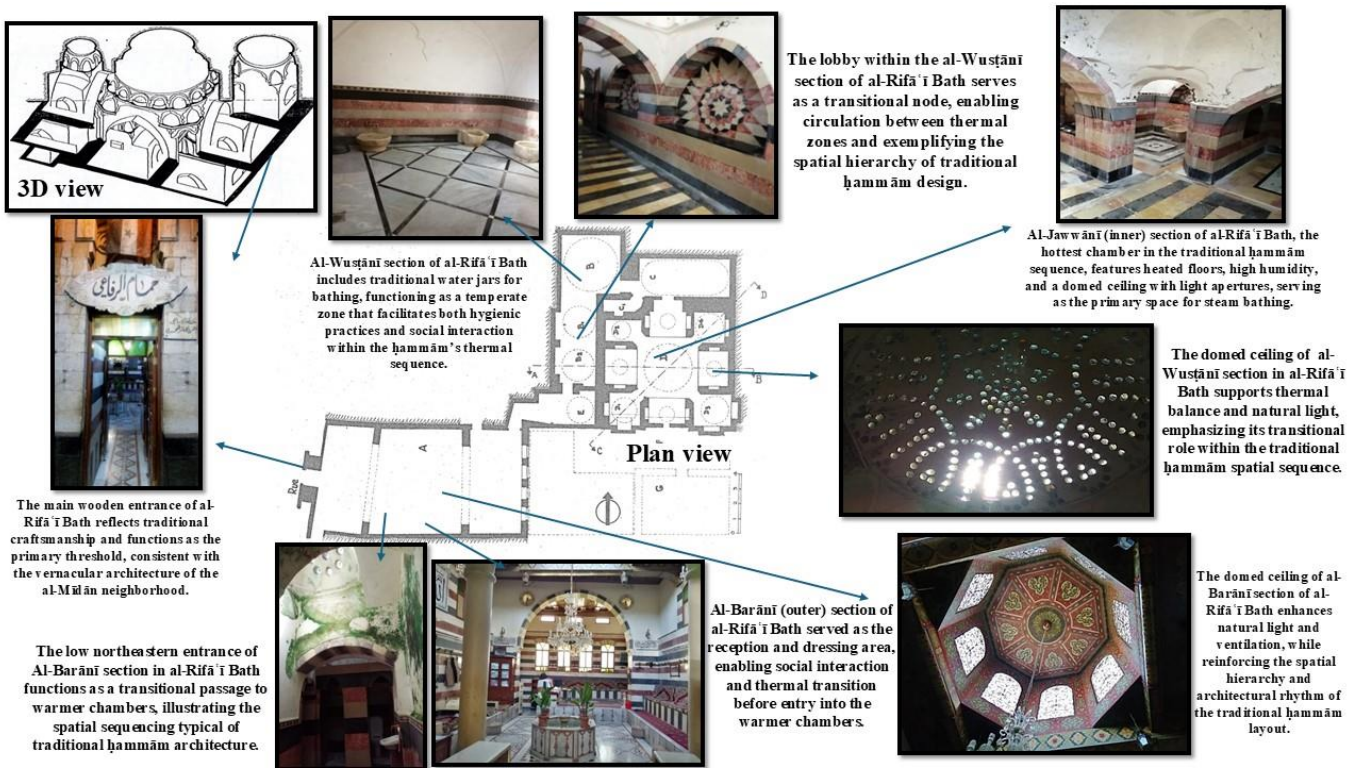

Figure.45. Presents a detailed inventory of the architectural elements of al-Rifāʿī Bath. The documentation is based primarily on fieldwork conducted by the researcher, including extensive photographic surveys undertaken during multiple visits to the al-Mīdān neighborhood. This approach ensures a precise and contextually grounded representation of the bath's architectural features and current state of preservation. (Source: Compiled by the author during fieldwork, 2021).

III.3.2.2.Al-Subul (water paths) in Al-Mīdān neighborhood: Figure (46).

III.3.2.2.1. Sacred Utility, Urban Integration, and Waqf Legacy:

- **Why Were Al-Subul Built in Al-Mīdān?**

Al-Subul (sing. Sabīl), public drinking fountains, were established in Al-Mīdān for both religious merit and practical necessity, reflecting a long-standing Islamic tradition of charitable water distribution (Sabīl al-maʾ). In a semi-arid region like Damascus, water was not just a utility but a symbol of mercy, purity, and hospitality. [216] Figure (46).

The prosperity of the city of Damascus and the fertility of its surrounding agricultural region, known as the Ghūṭa, have historically depended on the efficient use of water resources originating from Rabwat al-Minshār, located northwest of the city. Approximately 20 kilometers upstream from this point, the Barada River divides into seven distinct branches, as illustrated in. [217] Figure(47).

The central urban core of Damascus has traditionally been supplied by the main channel of the Barada River, while the southern parts of the city, particularly the al-Mīdān neighborhood, relied heavily on two of its branches: al-Dīrānī and al-Qanāya Rivers. These two waterways played a

[215] ʿAbd al-Karīm, *Tārīkh al-Miyāh wa'l-Rayy fī Dimashq*, 1999, 45–67.
[216] Ibn Shaddād, *Al-Aʿlām al-Tārīkhiyya fī Madīnat*,1985, 112–119.
[217] Salamé, *The Urban Infrastructure of Damascus during the Ottoman Period*, 2002, 89–93.

crucial role in irrigating the southern districts and sustaining both agricultural and urban life in those areas. [218] Figure (47).

To manage this complex hydrological network, three principal water distribution centers were established in the old city of Damascus. These centers channeled water either from the Barada River and its branches or from the al-Fīja Spring, distributing it to neighborhoods both within and beyond the ancient city walls, including al-Mīdān. The water was delivered through a combination of subul (public fountains or spouts) and underground terracotta or brick conduits that extended to residential buildings, religious institutions (mosques and churches), and public baths.

-Notable historical water distribution centers include: [219] Figure (47).

1. **The courtyard of al-Sanāniyya Mosque** : serving as a major supply point for al-Mīdān and adjacent neighborhoods.
2. **Ṭālʿat al-Fuḍḍa**: one of the oldest neighborhoods within the walled city, serving central districts.
3. **The Bāb Sharqī neighborhood**:located within the eastern gate of old Damascus, playing a vital role in urban water distribution.

These centers reflect the historical sophistication of water management in Damascus and its integration into the city's architectural, social, and ecological systems.

- **Key reasons for their (Subul) construction include:** [220]

- **Religious and Charitable Intent:**

Providing free access to water was considered a form of continuous charity (ṣadaqa jāriya) in Islam. Many subul were commissioned by pious individuals as acts of devotion, often tied to waqf endowments.

- **Support of Pilgrimage and Trade: Figure (1).**

Al-Mīdān's position on the Hajj route and its status as a commercial suburb meant it saw high pedestrian traffic. Subul served travelers, locals, and animals, reinforcing Al-Mīdān's infrastructural readiness for movement and transit

- **Health and Urban Hygiene:**

Subul played an essential role in urban sanitation and hydration, particularly before the widespread availability of piped water systems.

- **Relationship Between Subul and Their Surroundings:** [221] **Figure (46).**

Subul were embedded within the neighborhood's fabric, not isolated structures. Their spatial placement reveals intentional urban thinking:

- **Strategically Positioned at Crossroads and Entrances:**

Subul were often located at junctions, near mosques, or next to public buildings such as baths or zawāya. This allowed them to serve both passersby and congregants, linking acts of physical sustenance with spiritual practice.

- **Architecturally Blended yet Ornamentally Marked:**

Many subul featured ornate façades with ablaq masonry, inscriptive plaques, carved arches, or grilled windows for water dispensing, ensuring their presence was visually legible yet formally harmonious with surrounding buildings.

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[218] Al-Muʾassasa al-ʿĀmma li-Miyāh Fīja, *Dirāsat Takhṭīṭ wa-Tawzīʿ al-Miyāh fī Dimashq wa-Ḥayy al-Mīdān*, 1999, 22–40.
[219] Al-Rifāʿī Mosque Waqf Archive, Damascus. Manuscript records dated approximately 1880–1940, 2025.
[220] Al-ʿAzm, *Mudhakirāt al-ʿAzm*, vol. 1, 1968, 77.
[221] Al-Kayyālī, *Al-ʿImāra wa-l-Turāth fī Dimashq al-Qadīma* , 2004, 83–91

- **Impact on the Urban Fabric of Al-Mīdān:** [222] **Figure (46).**

The presence of subul has had both tangible and symbolic effects on the neighborhood's structure and identity:

- **Micro-Infrastructure within the Urban Grain:**

Subul acted as punctuation points in the urban texture, small yet vital elements that offered respite, orientation, and cohesion. Their inclusion in narrow alleyways or open squares humanized the scale of the city

- **Civic Anchors:**

Much like fountains in European medieval towns, subul functioned as informal gathering points, particularly for the elderly, children, and vendors. They helped stitch the social fabric by fostering daily interaction

- **Continuity of Memory and Place:**

Even when no longer functional, subul remain as toponymic markers or heritage fragments, helping to preserve collective memory and the layered sacred geography of Al-Mīdān

- **Who Owns Al-Subul in Al-Mīdān?** [223]

Ownership and maintenance of subul were historically tied to the waqf system:

- **Part of Waqf Complexes:**

Some subul were integrated into larger waqf structures, attached to mosques, madrasas, or zawāya, sharing walls or courtyards and functioning as part of a multi-use architectural unit. Wealthy individuals would endow a portion of property revenue (shops, land, etc.) to ensure the subil remained operational.

- **Linked to Larger Institutional Waqf:**

In many cases, subul were part of multi-functional religious endowments, overseen by the same administrators who managed associated mosques, schools, or zawāya.

- **Contemporary Oversight:**

Today, many subul fall under the supervision of the Ministry of Religious Endowments (Wizārat al-Awqāf) or the General Directorate of Antiquities, especially if they are protected as historic landmarks. Some, however, have been abandoned or informally maintained by local residents.

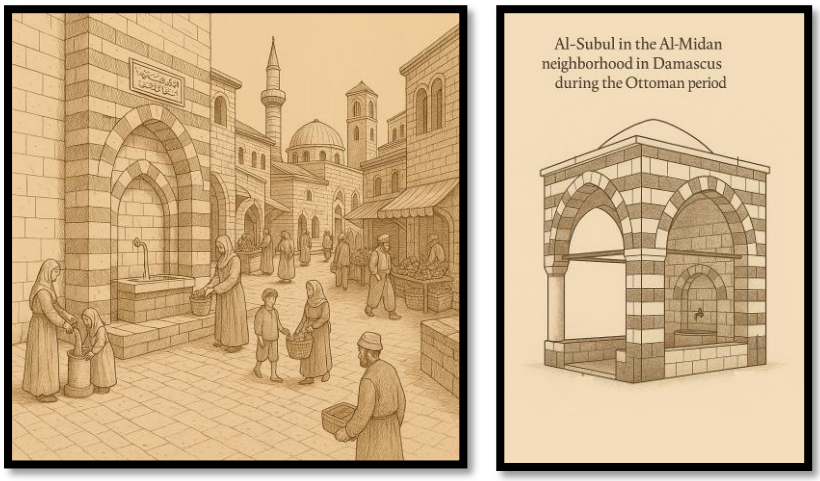

Figure.46.Presents water Sabīl in Al-Mīdān neighborhood, highlighting their spatial integration and harmonious coexistence with the surrounding urban fabric. (Source: Diagram prepared by the author, original field research, 2025)

[222] Al-Kanawātī, *Nizām al-Rayy wa Taqsīm al-Miyāh fī Dimashq al-Qadīma* 1971, 33–36.
[223] Burns, *Damascus: A History*, 2005, 138–142.

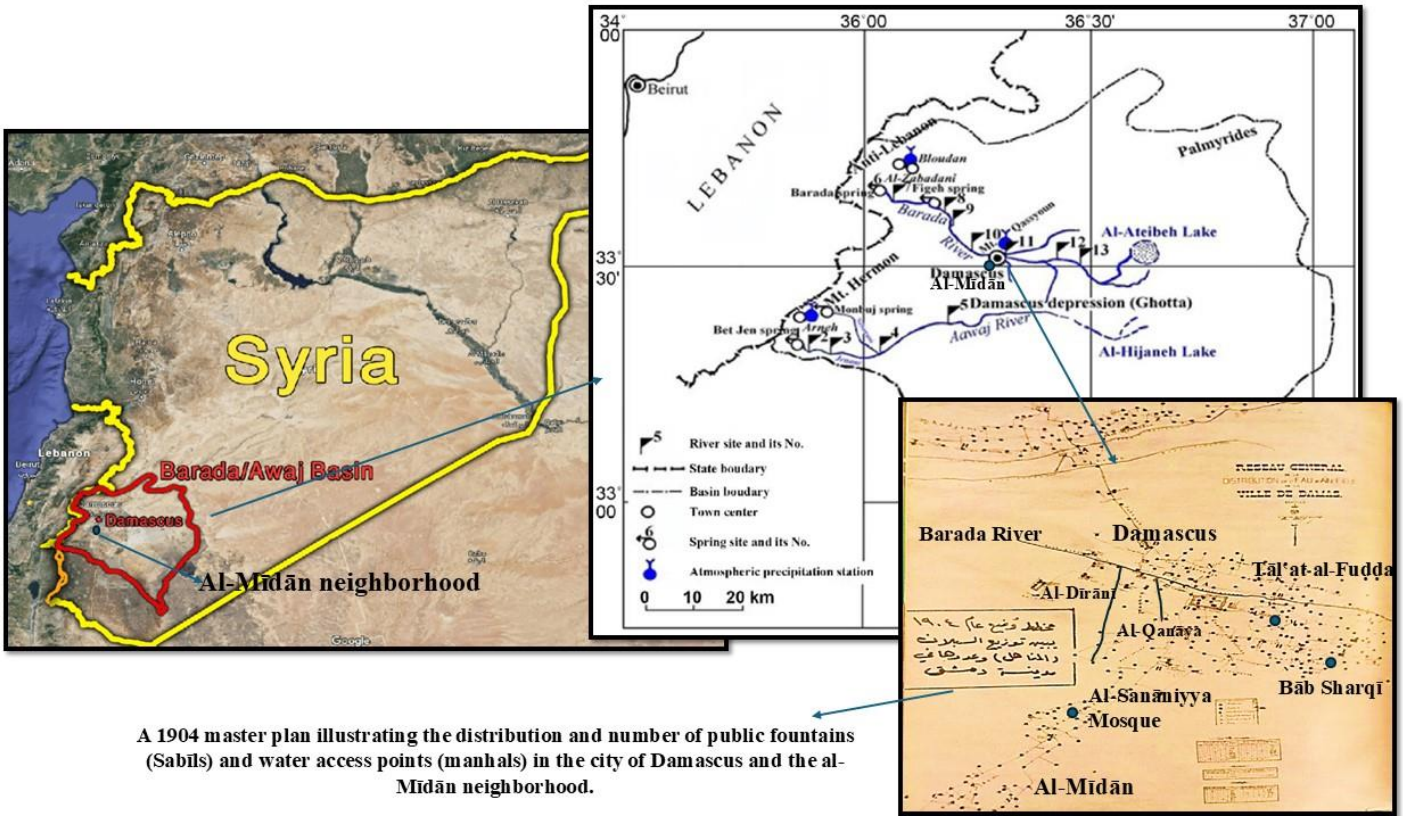

Figure.47. This map delineates the primary water sources supplying the city of Damascus and its surrounding neighborhoods, including the specific distribution points within the Al-Mīdān district (Al-Subul).
The notable concentration of fountains (subul) reflects their integral role within the urban infrastructure, underscoring their historical and functional significance as a defining element of the Damascene, and more broadly, the Levantine (Shāmī) cultural and architectural heritage. (Source: Arraf, 2019)

III.3.2.2.2.The Principal Subul in the al-Mīdān Neighborhood:

III.3.2.2.2.1.The Subul of al-Mīdān – Charitable Architecture and Urban Morphology in Ottoman Damascus:

This research offers a focused and original examination of al-subul (public water fountains) in the al-Mīdān neighborhood of Damascus, an underexplored subject within existing scholarship on Islamic and Ottoman urban architecture. While subul are widespread throughout the Islamic world, their manifestation in Damascus, particularly in al-Mīdān, has received limited academic attention. In response, the study undertook comprehensive fieldwork involving site visits, architectural documentation, photographic analysis, and historical contextualization to investigate these modest yet socially pivotal structures. [224]

Through detailed empirical investigation, the study catalogued the architectural and historical features of the principal subul in the neighborhood (summarized in Table 26). These structures emerged as integral urban artifacts, not isolated elements, but embedded components of religious, civic, and residential complexes. Architecturally, subul in al-Mīdān are typically framed by ablaq masonry (alternating black and white stone), inscriptive marble plaques, and modest outlets for water dispensing, often accompanied by stone benches. Their placement—at mosque entrances, alongside zawāya, or adjacent to public baths, demonstrates intentional spatial integration into the existing urban grain, ensuring visual continuity and civic accessibility. [225] Figure (46).

[224] Burns, *Damascus: A History*, 2005, 138–142.
[225] Al-ʿAsalī, *Wathāʾiq Dimashq al-Tārīkhiyya*, 1983, 141..

Several case studies illustrate the morphological harmony and sacred symbolism of these fountains. The sabīl of al-Shaykh Yaʿqūb Mosqu (table 26), and sabīl of Al-Sakhāna Mosque, figure (27), both from the early 19th century, exemplify a synthesis of ornamental detail and utilitarian design. Others, such as those at Fathī Bath or al-Zāwiya al-Saʿdiyya, incorporate internal hydraulic systems and Quranic inscriptions, reinforcing the spiritual dimension of water charity (ṣadaqa jāriya) and the foundational role of the waqf system in their creation and maintenance. [226] Table (26).

Despite the current dysfunction of many subul, due to the diversion of historic water sources like the Dīrānī and Qanāya rivers, figure (47), their preserved architectural shells remain embedded in the neighborhood as micro-monuments. These enduring structures contribute to the layered visual and morphological identity of al-Mīdān, bearing witness to centuries of charitable practice, communal care, and urban continuity. [227]

Inscriptions carved into the façades of various subul commemorate benefactors, revealing the interplay between personal piety, social status, and urban legacy. Even in the absence of formal waqf documentation for some fountains, their spatial relationships and epigraphic content strongly suggest their endowment-based origins. [228]

Overall, this study positions the subul of al-Mīdān as key elements in the morphological and spiritual architecture of Ottoman Damascus. They exemplify how small-scale infrastructural interventions embodied broader patterns of Islamic urbanism, fusing utility, theology, and spatial order into enduring acts of civic generosity. The research thus contributes to a deeper understanding of how water, architecture, and charity shaped the everyday life and sacred landscape of one of Damascus's most dynamic neighborhoods. [229]

Table.26.presents a detailed inventory of the most significant subul in the al-Mīdān neighborhood. The majority of the photographic documentation was collected firsthand by the researcher during multiple field surveys conducted within the neighborhood, ensuring an accurate and contextually grounded representation of these architectural elements.

The description	The figure
Figure.48. The sabīl of al-Shaykh Yaʿkūb Mosque, figure (22), serving as a public water fountain and an important social and architectural feature that exemplifies the integration of functional utility and aesthetic expression within Ottoman-era religious complexes.	

[226] Ibn Shaddād, *Al-Aʿlāq al-Khaṭīrah*, 1999, 202–204.
[227] Rafeq, *The City in the Islamic World*, vol. 1, 2008, 455.
[228] Al-Harīrī, *Dirāsāt fī Tārīkh Dimashq al-ʿUthmānī*,1995, 85-92
[229] Al-Sayyid, *Mabānī Dimashq al-Tārīkhiyya*,2002 112.

Figure.49. The stone frame (The sabīl of al-Shaykh Yaʿkūb Mosque), exemplifying traditional masonry craftsmanship and serving as a structural and decorative element within the architectural composition.	
Figure.50. Al-Sabīl of al-Zāwiya al-Saʿādiyya Mosque, figure (22), functioning as a public water source and reflecting the traditional architectural and social role of sabīlāt within Ottoman religious complexes.	
Figure.51. Al-Sabīl of Al-Musalla mosque, figure (22), exemplifying the characteristic architectural features and social function of public water fountains within the al-Mīdān neighborhood.	
Figure.52. The marble plaque (Sabīl of Al-Musalla mosque), bearing inscriptions that provide historical and commemorative information, and serving as an important epigraphic element within the architectural context.	
Figure.53. The sabīl of Dakka Mosque, figure (22), illustrating the integration of functional water distribution with decorative architectural elements typical of Ottoman-era religious complexes in al-Mīdān.	

Figure.54. Al-Sabīl of Al-Haffār Mosque, embodying the traditional architectural form and social function of public water fountains within the historic al-Mīdān neighborhood.	
Figure.55. Al-Sabīl of Fathī Bath, figure (22), shown in both historical and contemporary states, illustrating changes in architectural form and preservation over time while highlighting its enduring role in the bathhouse complex.	

Table.26. Inventory of the most important subul in the al-Mīdān neighborhood.
(Source: Field documentation by the researcher, 2021).

III.3.3.Commercial buildings:

III.3.3.1.Al-Bawāyik: Figure (22).

III.3.3.1.1.Al-Bawāyik in Al-Mīdān: Spatial Infrastructure, Social Function, and Morphological Contribution:

- **Why Were Al-Bawāyik Built in Al-Mīdān?** [230]

Al-Bawāyik (sing. bāwīka),long arcaded shelters typically constructed of stone and covered with vaults, were built in Al-Mīdān primarily to serve as public shaded spaces for social exchange, commerce, and temporary rest, figure (56). These structures were particularly relevant in Al-Mīdān's historical context for several reasons:

- **Support for Pilgrimage and Trade Routes: Figure (57).**

Al-Mīdān was situated along the Hajj route and served as a logistical and commercial suburb of Damascus. Bawāyik functioned as shelters for travelers, traders, and pilgrims, especially near khānāt, mosques, and market zones.

A significant concentration of al-Bawāyik, developed in the Al-Mīdān neighborhood, figure (22), primarily due to its strategic location along the historical trade route connecting Damascus with the Hawrān region, figure (57). This geographic advantage rendered Al-Mīdān a pivotal logistical and commercial hub for the importation, storage, and redistribution of agricultural products, particularly wheat and other grains cultivated in Hawrān. [231]

The Hawrān region has been a significant agricultural hub since ancient times, supplying grains to various parts of the Levant. The trade route to Damascus was vital for transporting these goods,

[230] Lok, B., *The Neighborhoods of Damascus Outside the Wall* , 2011, pp. 88–92.
[231] ʿAbd al-Qādir al-Rāfiʿī, *Tārīkh al-ʿImārah al-Dimashqiyyah*, 1994, pp. 112–115.

with Al-Mīdān serving as a key storage and distribution center. This route not only facilitated economic exchange but also contributed to the cultural and social integration between regions.
Al-Bawāyik of Al-Mīdān were purposefully designed to receive large quantities of Hawrān's grain harvests, serving as primary storage depots that ensured a stable and continuous supply to the urban markets of Damascus, both within the city walls and in its surrounding extramural quarters. These facilities were managed by grain merchants who would purchase agricultural produce from Hawrān, transport it to Al-Mīdān, and store it in the Bawāyik. From there, the grain was either distributed to retail markets across Damascus to meet local demand, or sold in bulk to wholesalers and exporters for redistribution to satellite towns and rural markets across the broader Damascus hinterland. [232]

The architectural form and spatial organization of the Bawāyik reflected their functional role in the pre-modern economic infrastructure, providing both protection for perishable goods and a structural typology suited for efficient loading, ventilation, and trade interaction. Their presence in Al-Mīdān underscores the neighborhood's integration into regional trade networks and its importance as a transitory node between rural production zones and the urban consumer economy of Ottoman Damascus. [233] Figure (56).



Figure.56. Presents the principal architectural components Al-Bawāyik in Al-Mīdān neighborhood during the Ottoman Period, highlighting their spatial integration and harmonious coexistence with the surrounding urban fabric.
(Source: Diagram prepared by the author, original field research, 2025)

The following map illustrates the geographic and functional significance of the Al-Mīdān neighborhood in the broader regional context during the Ottoman period. The blue line traces the historical grain trade route linking the agricultural region of Hawrān, renowned for its wheat production, with Al-Mīdān, the primary logistical and storage hub just outside Damascus. [234] This route was essential for ensuring a steady supply of grain to the capital and its surrounding quarters.

The purple line represents the Hajj pilgrimage route to Makkah, highlighting Al-Mīdān's dual role as both a commercial and religious corridor. Its strategic position along both routes reinforced its urban development and architectural investment, particularly in service buildings such as al-Bawāyik, baths, and mosques that supported both trade and pilgrimage infrastructures. [235]

[232] M. Lok, *The Neighborhoods of Damascus Outside the Wall*, 2011, pp. 230–234.
[233] Nājī Jūmʿa, *al-ʿImārah al-Islāmiyyah fī Dimashq*, 2002, pp. 145–147.
[234] Al-Ṣāliḥ, *al-Mabānī al-ʿĀmma fī Dimashq al-ʿUthmāniyya*, , 2005, pp. 80–85..
[235] Al-Bayṭār, *al-Muʿjam al-Mīmārī li-Madīnat Dimashq*, 1999, pp. 302–304.

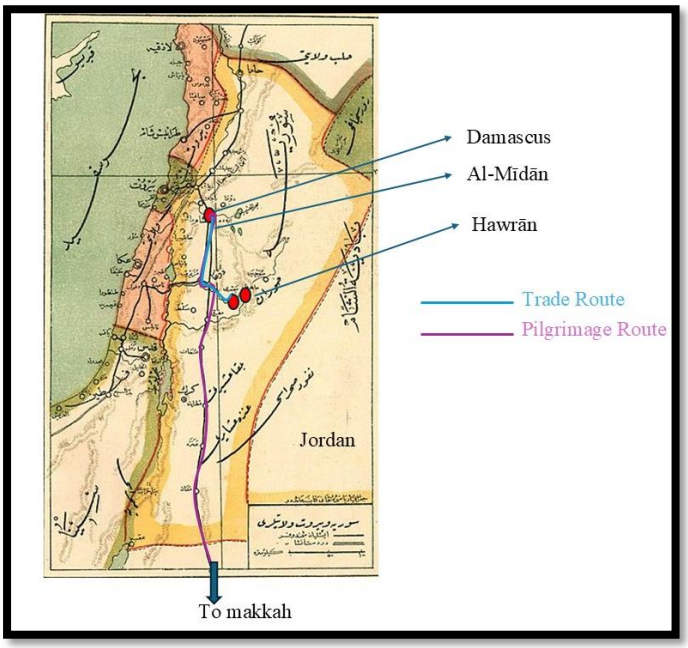

Figure.57. Historical Trade and Pilgrimage Routes Connecting Hawrān to Al-Mīdān and Damascus during the Ottoman Period. (Source: Ottoman administrative and geographic map of the Levant region, published in Istanbul, late 19th century)

- **Climate Adaptation:** [236]

Damascus's hot summers and cold winters demanded shaded, semi-open public structures. Bawāyik provided environmental relief and were often placed at key nodes where residents could pause, meet, or wait. Figure (56).

- **Religious and Social Utility:** [237]

Located near mosques or zawāya, bawāyik allowed worshippers to gather before or after prayer, wait for instruction, or simply rest. They often accompanied religious endowments and were part of broader communal infrastructure. Figure (56)

➢ **Relationship Between Bawāyik and Their Surroundings:** [238]

Bawāyik in Al-Mīdān were not free-standing structures but were carefully embedded within the architectural and spatial logic of the neighborhood:

- **Integrated into Façades: figure (56).**

They often formed part of a mosque or zawiya façade or bordered courtyards and narrow streets. Their arched openings and vaulted roofs mirrored the massing and materials of adjacent buildings, reinforcing morphological continuity.

- **Edge Conditions and Public Thresholds: figure (56).**

Bawāyik were typically located at street edges or thresholds of religious buildings, functioning as transitional zones between public movement and sacred interiority.

- **Architectural Harmony: figure (56-58-59).**

Built with local materials, primarily basalt and limestone, and featuring semi-circular or pointed arches, they maintained visual and tectonic coherence with Al-Mīdān's vernacular architecture. Their proportions aligned with surrounding massing, ensuring urban compatibility rather than contrast.

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[236] D. Fethi,Typological Analysis of the Courtyard Houses and Bayka Structures in Ottoman Damascus, Vol. 8, No. 2 (2006), pp. 44–53.
[237] UNESCO, *Architectural Heritage of Damascus*, 1999, pp. 96–101.
[238] Al-Miṣrī, *Wathāʾiq al-Awqāf fī Dimashq*, 1987, pp. 198–202.

Al-Bawāyik constitute a fundamental structural and architectural system widely employed in the roofing of ancient buildings. This system is characterized by ceilings supported by high arches, which rest on centrally positioned columns or pillars. The interstitial walls between these columns also serve both structural and architectural functions, contributing to the overall stability and spatial articulation of the bawāyik. [239]

Architecturally, the use of bawāyik enabled builders to elevate ceilings to considerable heights, thereby enhancing natural lighting and ventilation within the interior spaces. This construction technique was prevalent across various typologies of Islamic religious and civil architecture,including palaces, residences, caravanserais, and stables, with a particular prominence in the design of animal stabling facilities. [240]

In the al-Mīdān neighborhood, an al-bāyka is typically defined as a property subdivided by walls into multiple longitudinal spaces arranged parallel to the building's entrance. These spaces are interconnected by one or two arches. The ceiling structure of an al-bāyka generally consists of wooden beams, often poplar wood, laid across the dividing walls situated between the arches. The total number of these subdivided spaces and corresponding arches depends on the overall area of the property. Each arch commonly spans a maximum length of approximately nine meters; properties exceeding this length incorporate additional arches in series to support the extended span. [241]

From a structural perspective, the bawāyik in al-Mīdān were constructed using basalt stone quarried from the Hawrān region in southern Syria. These basalt blocks provided a durable foundation for the arches and walls, complemented by brickwork in certain sections. Construction materials also included timber, lime mortar, mud mixed with straw. Together, these materials reflect a vernacular building tradition that balances local resource availability with functional and aesthetic considerations.

The foundations of al-bawāyik predominantly consist of fixed stone bases, with the lower sections, up to approximately 150 cm in height, constructed from black basalt stone. This basalt masonry extends upward to the springing point of the arches, while the upper portions of the walls are built using mud bricks reinforced with horizontal wooden beams. [242]

The wall construction of al-bāyka typically proceeds in two primary stages. The first stage involves erecting a framework of horizontal and vertical poplar logs, which have been carefully peeled and treated to enhance durability. In the subsequent stage, the voids between the timber framework are infilled with small brick fragments, arranged systematically to fulfill structural and functional requirements.

The interior and exterior surfaces of the al-bāyka walls are traditionally coated with a layer of clay mixed with straw or hay, which serves to increase cohesion and structural integrity. Once this layer

[239] Rizq, *al-Muʿāmarāt al-Taqlīdiyya fī al-Shām*, 2010, pp. 122–126.
[240] Al-Rūḥānī, *al-ʿAmārah al-Taqlīdiyyah wa-al-ʿAnāṣir al-Mīmāriyyah fī Dimashq al-Qadīma,*2007, pp. 63–69.
[241] Burns, R. *Damascus: A History*, 2005, pp. 212–215.
[242] Liebich, H. *The Architecture of the Mamluk City of Tripoli*, 1983, pp. 89–91.

dries, it is further protected by an application of white lime plaster, which enhances durability and provides a weather-resistant finish .[243]

Although al-bawāyik in the al-Mīdān neighborhood do not represent monumental architecture nor embody prestigious stylistic expressions, their design is distinguished by its practicality, spatial generosity, and adaptability. These qualities allowed the bawāyik to accommodate a range of uses, including grain storage and stabling of livestock, particularly horses.[244]

Summary of the foregoing: Constructed sequentially in a linear arrangement parallel to the main thoroughfares of the al-Mīdān neighborhood, the bawāyik façades commonly face the street, facilitating their role in supporting the vibrant commercial activity of the local marketplace. The front openings adjacent to the main entrance were often allocated for specialized functions, while the interior spaces served as warehouses or animal shelters. A defining feature of the bāyka buildings is their elevated roofs supported by large arches, which provide ample volume for the efficient stacking and storage of grain sacks within the warehouse. Moreover, this roofing design promotes effective natural ventilation throughout the interior, ensuring a suitable environment for the stored goods and animals.

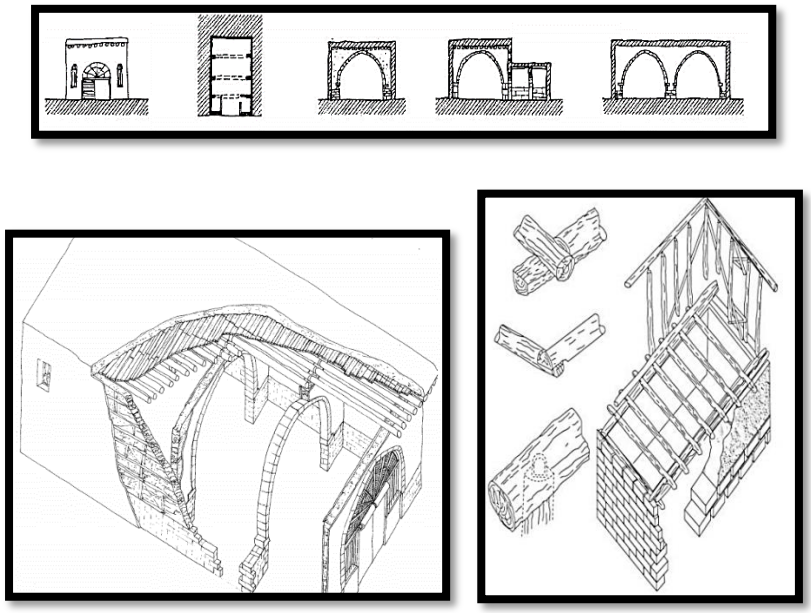

Figure.58. Sectional view and construction detail of al-bawāyik architecture, illustrating façade composition, internal voids, and traditional timber-masonry structural technique. (Source: Lok, The Neighborhoods of Damascus Outside the Wall, 2011).



Figure.59. Timber-framed walls of the al-bāyka building (Bāyka of Al-Sharbaji), exemplifying the traditional wooden structural system characteristic of al-Mīdān. (Source: Field documentation by the researcher, 2021).

[243] Al-Azm, *Bayt al-Dimashqī: Dirāsah fī al-ʿImārah wa-al-Turāth al-Shaʿbī*, 2003, pp. 55–61.
[244] Reilly, J. *The Ottoman Cities of Lebanon and Syria: Urban Development in the Eastern Mediterranean*, 2016, pp. 132–135.

- **Impact on the Urban Fabric of Al-Mīdān:**

Bawāyik played a subtle but meaningful role in shaping the morphology and rhythm of the neighborhood:

- **Enhancing Human Scale and Streetscape Articulation:**

Their open vaults provided visual porosity and pedestrian comfort, particularly in narrow alleys and dense market areas. They animated the street edge and created pockets of semi-public gathering space, fostering social interaction.

Creating Civic Continuity: Through their repetition and formal similarity, bawāyik established a recognizable architectural rhythm across different parts of Al-Mīdān, reinforcing the district's spatial identity and public character. [245]

- **Preserving Urban Memory:**

Even when no longer in use, the remains of bawāyik (e.g., in the ʿAqīl district or near Al-Rifāʿī Mosque), persist as architectural markers, often preserved in situ or referenced in oral histories and toponyms. [246]

- **Ownership and Waqf Affiliation:** [247]

Bawāyik were almost always tied to pious foundations (awqāf), either as part of a larger complex or as individual charitable endowments:

- **Components of Religious Endowments:**

Many bawāyik were physically and legally attached to mosques, zawāya, or baths, funded through waqf to provide shelter and serve community needs. In this way, they were architecturally dependent yet functionally independent.

- **Managed by Local Custodians:**

Their maintenance was often overseen by mutawallīs (trustees) of the parent waqf institution. Repairs or modifications might be recorded in endowment deeds or confirmed by inscriptions.

- **Legacy of Patronage:**

Inscriptions found on some bawāyik reference notable patrons or founders, such as religious sheikhs or Ottoman officials, underscoring the role of elite civic benefactors in shaping the district's infrastructure.

During the final fifty years of the Ottoman period, the functional prominence of al-bawāyik in Damascus experienced a marked decline due to several interrelated factors. The inauguration of the railway line (figure (18), connecting Damascus to the Hawrān region in 1131 AH (1894 AD) significantly altered regional trade dynamics, facilitating the movement of goods via new routes. Concurrently, urban development initiatives in Damascus, including the expansion and modernization of streets, institutional buildings, and commercial markets, transformed the spatial and economic fabric of the city. [248]

Moreover, the traditional role of the khān evolved into that of a commercial agency, which came to dominate the trade sector through its multifaceted functions encompassing multi-purpose warehouses and lodging establishments. This shift resulted in the gradual diversion of the grain trade away from the al-bawāyik of the al-Mīdān neighborhood, redirecting it towards agencies controlled by influential elites within Damascus. [249]

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[245] Tabbaa, *The Transformation of Islamic Art during the Sunni Revival*, 2001, pp. 119–124.

[246] Rabinowitz, Nancy, Urban Memory and Domestic Space in the Arab City,Vol. 14, No. 2 (2003), pp. 25–32.

[247] Al-Khatīb,ʿAlī, *ʿImārat Dimashq fī al-ʿAṣr al-ʿUthmānī,* 1998, pp. 151–156.

[248] Hitti, *History of Syria: Including Lebanon and Palestine*,1957, pp. 643–647.

[249]Jūmʿa, *al-ʿImārah al-Islāmiyyah fī Dimashq, Damascus: al-Majmaʿ al-ʿIlmī,* 2002, pp. 145–147.

This research undertook a rigorous and methodologically structured investigation of the bawāyik concentrated along the primary commercial and circulation axis of al-Mīdān, figure (22), where their architectural density and urban significance are most pronounced. Through a series of systematic field surveys, the researcher prioritized detailed photographic, morphological, and functional documentation of extant examples to assess both their historical integrity and current states of preservation and use.

The architectural evaluation of the bawāyik in Al-Mīdān is grounded in systematic field documentation and comparative analysis of their historical value, construction techniques, material condition, typology, and function.

Tables 27 and 28 present a detailed architectural assessment of Al-Bawāyik structures in Al-Mīdān.

The two tables respectively highlight bawāyik that have retained their original architectural integrity and historical function, underscoring their value as preserved elements of the late Ottoman urban fabric, and those that have undergone significant alterations, reflecting adaptive reuse, functional transformation, or partial loss of heritage features.

Together, these tables offer critical insight into the preservation status, heritage potential, and evolving urban role of these structures within the framework of sustainable conservation strategies.

Table of Architectural Evaluation of Al-Bawāyik from the Outside

Image of the Property	Property Name/ Number/ Location	Property ownership/function	Historical Value			Artistic (Architectural) Value				Facade Elements			Roof Style			Distinctive Features			function	Physical Condition			Final Score
			Late Ottoman	Modern/ contemporary	French Mandate	high	Moderate	low	Lacking Value	Arch Form	Typology of Doors	Window Openings	flat	Flat Roof Supporting an Upper Floor	Gabled Roof	Decorative Window	Wrought Iron	Architectural Additions	Still functions as a grain warehouse, Closed or New Function	Good	Moderate	Bad	Value
	Hāshim Al-Harsh, Sūk Al-Mīdān, 378/8	Coal warehouse (private ownership)	3			3				3	2		1			3	3		1		2		21
	Muwafak Al- Za'īm, Mīdān Musallī 331	Storage facility (private ownership)	3			3				3	3		1			3	3		1		2		23
	'Aisha Al-Hafī, Mīdān Ḥaqla 591	Grocery store (Waqf)	3				2			2		3	1					3	1		2		17
	'Adnān Al-'Ajlwn', Property No. (322), Souk Al-Mīdān	Shop (private ownership)	3				2			3			1				1		0	1			11
	Ahmad 'Ahiristānī, Mīdān Musallī 297	Grain storage facility (Waqf)	3			3				3	3		1			3	3		1		2		22
	Ra'd Sammān Sūk Al- Mīdān, 377	Legume storage facility (private ownership)	3			3				3	1	3	1				3	3	1		2		23
	Abu Wahid Shtiwī, Sūk Al- Mīdān 310	Scrap material storage facility (private)	3			3				3	2		1			3		3	1				21

	Muhammad Karah Ṭahān, Mīdān Sultānī, 370	Timber processing facility (Waqf)	3				2				1		1			2			1		2		12
	Hāshim Al-Hirsh, Mīdān Musallī 303	Grain storage facility (Waqf)	3			3					1		1			3	1	3	1		2		19
	Al-Sahābī Property No. (294), Sūk Al-Mīdān	Al-Sahāba Bookshop (private ownership)	3				2				1		1				1		1		2		11
	Bashār Kokash, Sūk Al-Mīdān, 43	Agricultural crop storage facility (private ownership)	3			3				3	1		1			3		3	1		2		20
	Gadah and Raai AlBalha, Property No. (768), Al- Mīdān Sultānā	Timber processing facility (private)	3			3				3	2		1			3	3		1		2		21
	Muhammad ʿAjāj, Mīdān Sultānī, 906	Grocery store (Waqf)	3			3					2		1			3	2		1		2		18
	Gassān AbdAllah, Mīdān Ḥaqla 202	Grain storage facility (private ownership)	3				2				2		1			1			1		2		12
	Nabīl Sharbajī, Sūk Al- Mīdān 29,	Abandoned	3			3						3	1			1		3	1		2		17
	Abd Hamīd Zibād, Al- Mīdān Musili 378\5	Scrap storage facility (private ownership)	3				2				2	3	2	3		1			1		2		17

	Rashīd Al-Hirish, Property No. (566), Al- Mīdān Sultānā	Al-Hirish Cultural Center and Art Gallery (private)	3			3				3		1		3		1		3	0		2		19
	Ahmad ʿAhiristānī, Mīdān Musallī 297	Grain storage facility (Waqf)	3			3				3	2		1			1		3	1		2		19
	Bobas and Kheer Allah, Property No. (348), Al- Mīdān Sultānā	Al-Hussām Toaster Shop (private)	3			3				3	2		1					3	0		2		17
	Zuhīr Shamūt, Property No. (137), Al- Mīdān Ḥaqla	Clothing retail center (private ownership)			2	3				3	3	3			3		1		0	1			19
	Al-Mahaynī, Mīdān Ḥaqla, 91	Abandoned (private ownership)	3				2			2	3		1					3	1	1			16
	Muhammad Al-Habash, Property No. (12), Al- Mīdān Ḥaqla	Paint storage facility (private)	3			3				3			1		3			1	0	1			15
	Ziyad Qanūs, Property No. (183), Al- Mīdān Ḥaqla	Bags and Shoes Shop (private)	3				2					1	1					3	0	1			10
	Ahmad Nasuh, Property No. (159), Al- Mīdān Ḥaqla	Yassamīn Al-Shām Shopping Mall (private)	3				2						2			1			0	1			9
	Al- Mahaynī, Midan Ḥaqla, 94	Closed (private ownership)	3			3				3		3		3				3	1		2		21

	-	Waqf	3			3				1		3		3				3	1		2		19
	-	Waqf	3			3				3		3	3	3				3	1		2		21
	Nizār Sharbajī, Sūk Al- Mīdān 39	Legume storage facility (private ownership)	3			3				2		1		3			2		1		2		17
	ʿAz Al-dīn Mahaynī, Property No. (181), Al- Mīdān Ḥaqla	Al-Naql Furniture Hall (private)	3			3				2		1		3				3	0	1			16
	Aḥmad Al-Mahāynī, Property No. (196), Al- Mīdān Ḥaqla	Grocery store (private)	3			3				2		1						3	0	1			18
	Abu Al-Khīr Al-Mahaynī, Property No. (124), Al- Mīdān Ḥaqla	Retail shops (private)	3				2			2		1					2		1	1			22
	Muḥammad Bardān, Property No. (172), Al-Mīdān Ḥaqla	Freight forwarding agency (private)	3			3				2		3		3				3	0	1			18
	Rashīd Al-Ḥirish, Property No. (572), Al- Mīdān Sulṭānā	Shāmiya Clothing Shop (private)	3			3				2						1			0	1			10
	Liwān, Mīdān Ḥaqla 703	Liwān Al-Shām Coffeehouse (private ownership)	3			3				3						1			0	1			11

	Aḥmad Al-Zabad, Mīdān Ḥaqla 201	Storage facility for cumin and anise (private ownership)	3			3				3						1		3	1			3	17
	-	Waqf	3			3				3			3			1			1			3	16
	Tarik Al-Harsh, Sūk Al-Mīdān 33	Bird feed storage facility (private ownership)	3			3				1						1			1		2		11
	Ali ʾUrfalī, Property No. (572), Al- Mīdān Sulṭānā	Clothing store (private)	3			3				1						1			1			3	12
	-	Waqf	3			3				1		3						3	1			3	17

Table illustrating the classification method and its underlying criteria

Historical Value			Artistic Value				Façade Elements							Roof Typology			Distinctive Features			Function		Physical Condition			Final Score
Late Ottoman	French Mandate	Modern/ contemporary	high	Moderate	low	Lacking Value	Arch Form			Typology of Doors		Window Openings					Gabled Roof	Decorative Window	Wrought Iron	Architectural Additions	Still functions as a grain warehouse; closed	New Function	Good	Moderate	Bad	Value
							Two or more	Single Arch	No Arch	Wooden	Iron Shutter	More than one window	Old Window	Modern/ Contemporary	Flat	Flat Roof Supporting an Upper Floor		Old and Decorated	Contains operational (electrical) components	Annex						
3	2	1	3	2	1	0	3	2	1	3	2	3	2	1	1	2	3	3	3	3	1	0	3	2	1	
		1				0			1					1	1					3		0			1	8
	2			2			2						2			2				3	1			2		16
3			3				3			3		3					3	3	3	3			3			30

Assessment Methodology

The evaluation of the bayka's historical significance is based on a graded scale, where the final score determines the level of heritage value and the necessity for preservation. The interpretive criteria are as follows:

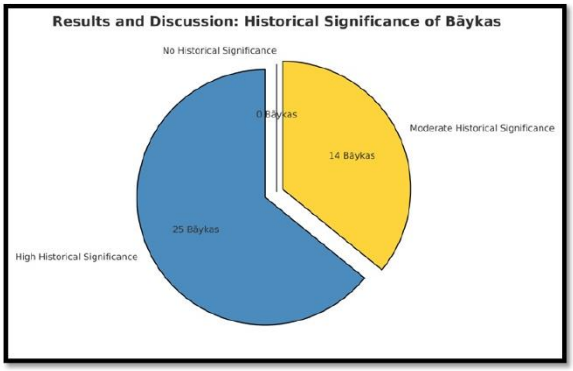
- A score between 0 and 8 indicates that a Bāyka holds no historical value and is not considered significant from a heritage conservation perspective.
- A score between 9 and 16 reflects a Bāyka of moderate historical value, meriting documentation but not necessarily preservation intervention.
- A score between 17 and 30 signifies a Bāyka of high historical significance, warranting prioritized attention, conservation efforts, and potential integration into heritage protection frameworks.

Results and Discussion

1- High Historical and Artistic Significance:
Of the total sample comprising 39 Bāykas, a total of 25 Bāykas were identified as possessing a high degree of historical and artistic value. These structures demonstrate notable architectural characteristics and cultural relevance, thereby justifying their prioritization for conservation efforts and in-depth scholarly analysis.

2- Moderate Historical Significance:
Out of the total sample of 39 Bāykas analyzed in this study, 14 Bāykas were found to exhibit a moderate level of historical significance. While these do not reach the threshold of critical heritage status, they nonetheless retain considerable historical merit and should be considered for future documentation, evaluation, and possible integration into broader preservation strategies.

3- Absence of Negligible Value:
None of the structures assessed were classified as lacking historical value. This outcome underscores the overall cultural and architectural richness of the sample and reaffirms the necessity of continued heritage-focused research within the urban fabric of the Al-Mīdān district.



✓ Accordingly, it can be concluded that all of the Bāykas possess at least a minimum degree of historical value, which necessitates their preservation. These structures should be maintained not only as tangible witnesses to the architectural character of the late Ottoman period but also as enduring evidence of the economic activity associated with the pilgrimage route. Figure (1,57).

Tables.27,28. Present a comprehensive architectural assessment of Al-Bawāyik structures in the Al-Mīdān neighborhood. The first table (27), illustrates the classification method and its underlying criteria, detailing the scoring system based on historical value, architectural features, façade elements, roof types, physical condition, and function.
The second table (28), applies this system to a selected sample of Al-Bawāyik, offering a comparative evaluation of their preservation status, typological diversity, and degree of architectural integrity. (Source: An analytical study conducted by the researcher,2025)

III.3.4.What other types of buildings are there in Al-Mīdān during the Ottoman Period, that deserve to be mentioned in?

III.3.4.1.Typology of Other Building Types in Al-Mīdān : Table (29).

Building Type	Function	Architectural Features	Urban Impact
Tombs and Cemetery (Maqāmāt, Turbaāt) Example: figure (22). -Turbit 'Arāq Al-Sinjaqdār. -Al-Turba Al-Zwīzānya.	Spiritual memory, burial, pilgrimage	Domes, cenotaphs, marble plaques, inscriptions; often integrated into mosque/zāwiya sites	Create sacred nodes, anchor spiritual topography
Well Houses (Biʾr[250])	Water access, ritual purification, community utility	Stone-ringed wells, sometimes roofed; located in courtyards or near subul	Influence building orientation; support baths, mosques, and waqf networks
Marketplaces (Suqs, Dukakīn)	Commerce, trade, social interaction	Arcades, modular shopfronts, overhanging roofs, linear spatial configuration	Define commercial axes; animate street life and pedestrian activity
Schools (Madrasas, Maktabs)	Religious and civic education	Courtyards with classrooms, iwāns, mashrabiyya, inscriptions	Distribute education locally; embedded in residential or religious architecture
Khānāt (Caravanserais)	Lodging, trade storage, merchant gathering	Courtyard plan, stables, stone vaults, two-story elevations, monumental gates	Anchor economic activity; connect Al-Mīdān to regional/international networks
Residential Complexes (House-Bayt[251]) Example: figure (22) Al-Mahāynī House.	Domestic life, sometimes adaptive reuse (churches/zawāya)	Central courtyards, basalt/mudbrick walls, carved wood, privacy devices	Shape alley patterns, plot sizes, neighborhood morphology

Table.29. This table encourages further investigation into additional building typologies present in the al-Mīdān neighborhood during the Ottoman period, highlighting their potential significance within the broader architectural and historical narrative.

(Source: Compiled by the researcher, 2025).

[250]**Biʾr-**Well-Provides water to the household, sometimes located in the courtyard.
[251]**Bayt-** House or dwelling- Commonly used synonym for dār.

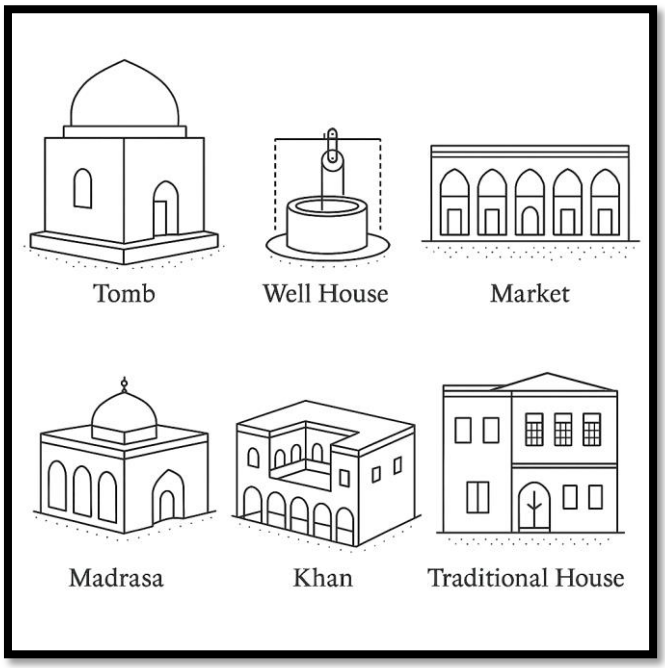


Figure.60. This diagram highlights additional Ottoman-era building types in al-Mīdān that warrant further scholarly investigation.(Source: Diagram by the author, based on original field research, 2025).

Chapter IV

The Role of Archaeological Documentation in the Preservation of Built Heritage in Al-Mīdān Neighborhood

IV.1. Architectural Documentation Methods:

Architectural drawing and archaeological documentation constitute a fundamental component of the broader discipline of archaeological recording, complementing descriptive analysis and photographic evidence. As a key process within scientific research, architectural documentation involves the precise recording of historical facts and physical conditions through descriptive and graphical representation of all architectural elements that compose an archaeological structure or site. [252]

The primary objective of architectural surveying, particularly within archaeological contexts, is to assess the structural and architectural integrity of heritage buildings and to mitigate or halt further deterioration. This is achieved through careful analysis, documentation, and the development of informed conservation strategies aimed at safeguarding the historical and cultural significance of these structures. Such efforts are of particular relevance in areas like the Al-Mīdān neighborhood of Damascus, which contains a rich yet vulnerable architectural heritage. [253]

In the context of the ongoing digital revolution, the field of archaeological documentation has greatly benefited from advanced technologies that enhance the accuracy, efficiency, and comprehensiveness of data collection and analysis. Contemporary tools such as 3D imaging devices, drones, laser scanners, and specialized software applications now play a critical role in documenting architectural and constructional conditions with high precision. These technologies not only facilitate a better understanding of the current state of archaeological structures but also assist in devising viable, evidence-based solutions for their conservation and adaptive reuse. This is particularly critical in the case of Al-Mīdān, a neighborhood experiencing extensive physical deterioration as a result of prolonged socio-political instability, sustained urban neglect, and the compounded effects of both natural and anthropogenic disturbances. [254]

Syria, and Damascus in particular, has endured successive episodes of conflict, natural catastrophes (such as earthquakes), and foreign occupations over the centuries. These events have resulted in the partial or complete destruction of numerous historically significant structures—including mosques, churches, and baths, thus contributing to the erosion of the region's cultural and architectural legacy. In response to this critical situation, scholars and practitioners in the fields of archaeology and architectural conservation have increasingly turned to digital technologies as essential tools for documentation, analysis, and restoration.

Utilizing digital documentation tools, such as digital cameras, drones, and laser scanning systems, researchers are now able to collect and process high-fidelity spatial and architectural data with remarkable speed and precision. This data serves as the basis for producing actionable insights and recommendations for the restoration of damaged heritage buildings. Moreover, these technologies dramatically reduce the time and labor required compared to Analog Documentation Methods,

[252] Al-Azm, T. *Conservation and Rehabilitation of Historical Buildings in Syria*, 2000, pp. 45–46.
[253] Burns, R. *Monuments of Syria*, 2005, pp. 214–216.
[254] Agha, A. *Watha'iq al-ʿImarah al-Islāmiyyah fī Dimashq*, 2017, pp. 78–80.

while producing accurate, scalable, and archival documentation of architectural and decorative features. [255]

Architectural surveying (or architectural documentation) encompasses the comprehensive recording of a structure's spatial configuration and architectural details through a range of Analog and Digital Documentation methodologies. The primary output of this process—detailed architectural drawings and plans, constitutes the foundational basis for all subsequent phases of conservation and restoration. The ultimate aim of architectural documentation is not only to generate an extensive dataset for each studied structure but also to facilitate informed decision-making regarding its preservation, rehabilitation, and sustainable use. [256]

In sum, architectural documentation serves as both a diagnostic and strategic tool for assessing the condition of architectural heritage, identifying structural vulnerabilities, and proposing appropriate interventions. Within the context of Al-Mīdān, this process is essential for preserving the neighborhood's unique historical character and ensuring the long-term survival of its endangered architectural fabric.

Furthermore, architectural documentation techniques are generally classified into two principal categories: conventional (analog) methods and digital, technology-assisted approaches. Each of these methodologies presents unique advantages and can be applied either independently or in an integrated manner, contingent upon the specific contextual and technical requirements of the heritage site under study.

IV.1.1. The Analog Documentation Methods:

IV.1.1.1.The Analog Methods of Architectural Documentation in Al-Midan: Application and Case Study of the Fathī Bathhouse:

- **Introduction**:

Analog Methods of architectural documentation rely on manual tools and the expertise of practitioners. Despite their limitations in precision and efficiency compared to modern digital techniques, these methods remain foundational in the field of heritage documentation. This section explores six **Analog Methods** and demonstrates their practical application using the Fathī Bath in Al-Mīdān, Damascus as a case study. [257]

- **Overview of Analog Documentation Methods:** [258]

- **Manual Documentation Method**: This involves direct on-site sketching and note-taking, often using graph paper and rulers. Architects and researchers manually measure and draw plans, elevations, and sections. This method ensures immediate visual connection with the structure but can be prone to scale inaccuracies.
- **Triangle Method**: This technique uses triangulation principles, employing simple instruments like measuring tapes to record distances between fixed points. It is useful for mapping irregular layouts or spaces where direct measurement is difficult.

[255] Salam, A. *Taqnīyāt al-Wathāʾiq al-ʿImāriyyah al-Turāthiyyah*, 2009, p. 61.
[256] Grabar, O. *The Mediation of Ornament*. Princeton, 1990, p. 118.
[257] Al-Masri, F. *Dirāsāt fī ʿImārat al-Ḥammāmāt al-Dimashqiyya*, 2014, pp. 34–38.
[258] Qassar, S. *Al-Mahāfiz al-Turāthiyya li-Madīnat Dimashq*, 2018, pp. 95–97.

- **Grid Method:** By overlaying a grid on the object or space being studied, researchers can document decorative and structural features in small, consistent units. This method is particularly effective for facades and decorative panels.
- **Photographic Documentation**: Standard photography is used to capture general views and details. This serves as a visual archive and helps support measurements. It is often the first step before manual drawing.
- **Photographic Correction Method**: This involves editing photos to correct perspective distortions, aligning them with actual dimensions. Software may be used, but corrections can also be drawn manually.
- **Electrode Method:** This technique is less common and may involve electrical measurement tools used to verify distances or alignment, particularly for verticality or curvature.
- **There is another type of documentation called:** [259]

The **true-to-form survey method,** figure (61), (sometimes called **true-form surveying** or **architectural true-to-form documentation**) refers to a highly detailed and precise method of documenting architectural structures, where the exact shape, proportions, dimensions, and surface conditions are recorded as they truly exist, including irregularities, deformations, and imperfections.

In academic terms, true-to-form survey can be explained as:

A documentation method that captures the real, current physical state of a historic building or object, without idealizing or correcting irregularities caused by aging, damage, or construction imperfections.

This method is especially important in heritage conservation and archaeological documentation because old buildings often deviate from ideal geometries due to settlement, structural stresses, or historical modifications.

Key Characteristics: [260]

- Focuses on **authenticity**, documents **as-built conditions** rather than "ideal" or "intended" shapes.
- Includes **cracks, tilting walls, worn surfaces, misaligned joints**, and other real-world features.
- Often uses **advanced techniques** like **laser scanning**, **structured-light scanning**, or very **fine manual measurement**.
- Generates **high-fidelity models** (e.g., orthophotos[261], point clouds[262], 3D models) where each irregularity is recorded precisely.

Example of this: When the research documented Al-Mahāynī House using a laser scanner, and recorded the slight asymmetry of the walls or minor sagging in the façades, without digitally correcting them. Table (46,47).

[259] Gülru, N. *The Age of Sinan: Architectural Culture in the Ottoman Empire*, 2005, pp. 310–312.
[260] Hasluck, F.W. *Christianity and Islam under the Sultans*, Vol. 2. 1929, pp. 438–440.
[261] **Orthophoto / Orthoimage**- A geometrically corrected image with uniform scale used in mapping and GIS- Often assumed to be a "photo".
[262] **Point Cloud**-A digital 3D dataset created from scanned points, often from photogrammetry-Crucial in 3D documentation.

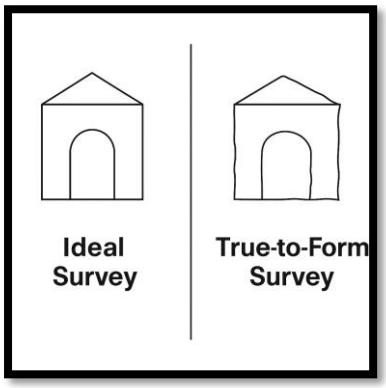


Figure.61. Comparison between idealized and true-to-form surveys. (Source: Researcher, 2025)

- **Tools Used in Analog Documentation Methods:** [263]

- Tape Measure: For direct linear measurements.
- Level: To determine horizontal planes and height differences.
- Theodolite: For measuring angles with precision.
- Total Station: A hybrid of theodolite and electronic distance measurement; provides coordinate data for points in space.

- **Case Study: Fathī Bath in Al-Mīdān: Figures (44-98-99-100-101-102-103-104).**

The documentation of Fathī Bath employed multiple Analog Documentation Methods: Figure (62)

- Manual Measurement and Drawing: Used to draft the floor plan and longitudinal sections, capturing the spatial organization of the Barānī, Wasṭānī, and Jawānī sections.
- Triangle Method: Applied in measuring the dimensions between the domes and the iwans, where direct measurement was obstructed.
- Grid Method: Used on the tiled dome and wall decorations to accurately replicate their layout in elevation drawings.
- Photographic Documentation: Provided visual references for the facade, domes, and interior decorative elements.
- Photo Correction: Applied to dome images to ensure proper curvature rendering in elevation and section views.

[263] Weber, S.The Architecture of Ottoman Damascus. In: *Ottoman Syria: Social and Economic Histories*. 2018, pp.203–206.

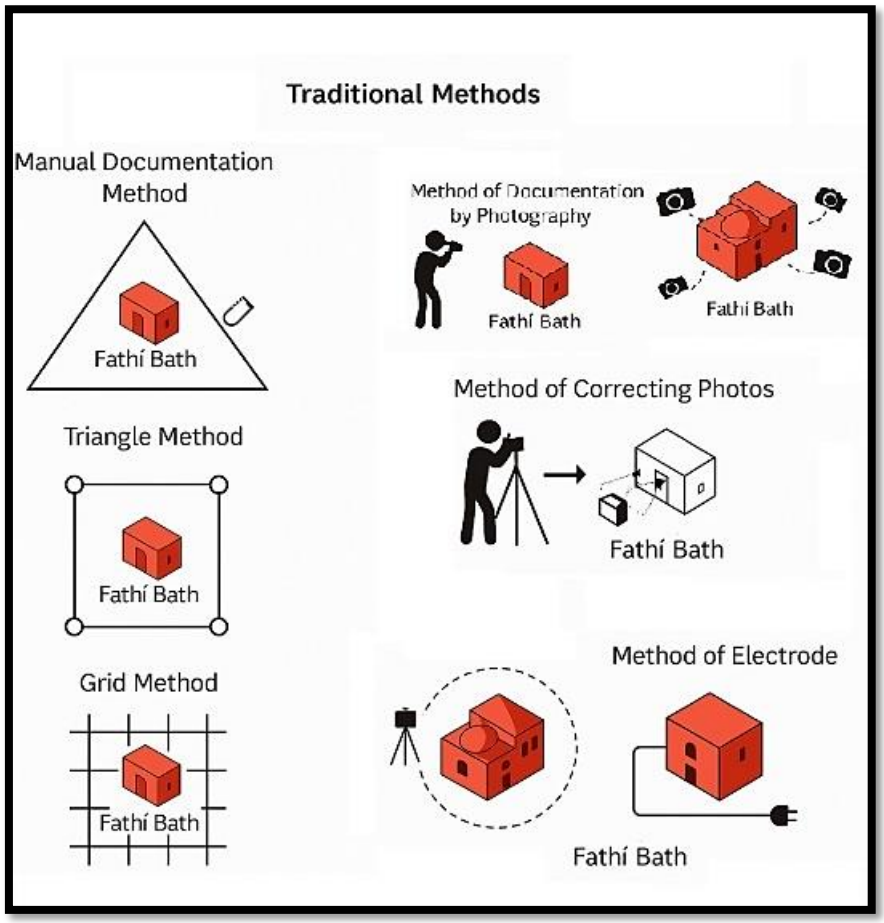


Figure.62. A visual summary of Analog architectural documentation methods applied to Fathī Bath.
(Source: The researcher, 2025)

- **Conclusion:**

Manual Surveying and Recording Techniques are characterized by their ease of use and user-friendly handling, often allowing for relatively swift execution of measurement tasks. In many cases, these devices support the export of collected data to digital platforms, enabling integration with computer-aided design software such as AutoCAD. This facilitates the generation of architectural plans and other analytical outputs relevant to the documentation of the studied structure.

However, Instruments Used in Manual Surveying and Recording Techniques are not without limitations. Manual instruments, such as tape measures, are prone to human error, leading to potential inaccuracies in recorded dimensions. Moreover, certain instruments, including the total station, require the establishment and verification of fixed reference points on-site, which can introduce complexity to the process.

Despite these challenges, the primary advantage of Analog documentation equipments lies in their compatibility with digital processing. When used correctly, they can produce reliable datasets that, once processed through software such as AutoCAD, result in accurate architectural representations suitable for documentation, analysis, and restoration planning.

Figure (63), illustrate various analog documentation instruments employed in analog engineering documentation methodologies. These tools were utilized by the researcher during the documentation of archaeological structures within the al-Mīdān neighborhood.

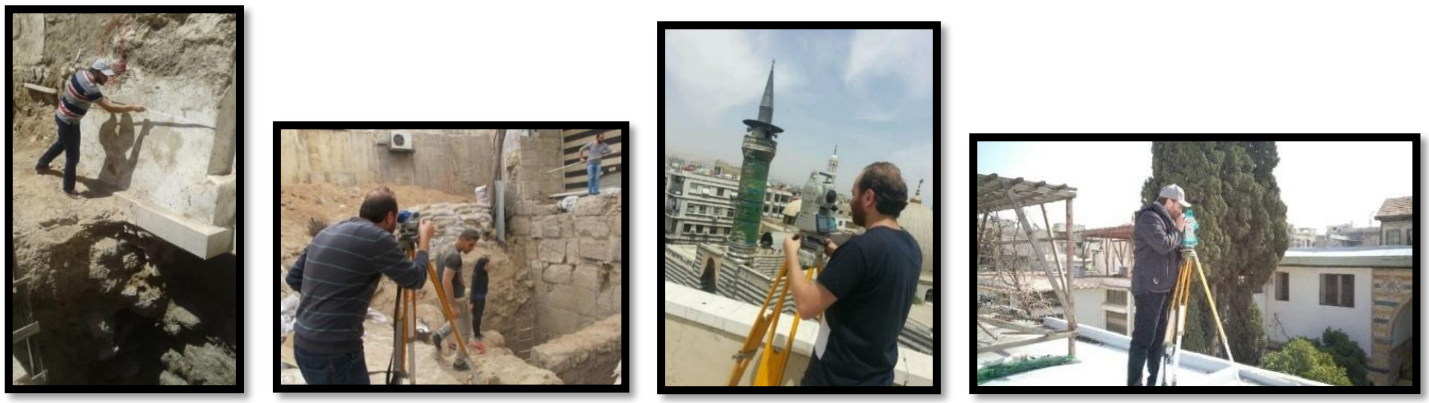


Figure.63. Analog instruments used in traditional documentation methods, employed by the researcher during fieldwork on archaeological structures in al-Mīdān. (Source: The Researcher-2021).

IV.1.1.2. Architectural Documentation and Survey of Ottoman-Era Heritage Buildings in Al-Mīdān, Using Traditional Analog Methods:

This section presents the architectural documentation and detailed graphic analysis conducted by the researcher on selected Ottoman-period service buildings located in Al-Mīdān neighborhood of Damascus. The work focuses on both structural and decorative elements, using conventional field techniques such as direct measurement, manual drafting, observational sketching, and scale-based elevation studies. This methodological approach, Grounded in conventional architectural surveying methodologies, allowed for the accurate recording of spatial configurations, construction systems, ornamental features, and the current physical condition of these heritage structures. The data obtained through this process contributes significantly to establishing a comparative baseline for later digital documentation and facilitates the development of informed restoration strategies that respect the historical and material authenticity of the buildings.

A considerable number of studies examined within this research unequivocally confirm the extensive and systematic use of traditional building materials, particularly mud and adobe, which were abundantly available and commonly employed during the Ottoman period. These materials not only reflected economic practicality but also contributed to the thermal efficiency and environmental integration of the built environment. Moreover, there is a marked consistency in the construction techniques utilized across various service buildings—most notably mosques and public baths, which suggests a shared architectural vocabulary rooted in both function and tradition. These construction methods exhibit a deliberate adaptation to the historical and morphological fabric of the Al-Mīdān neighborhood, reinforcing its continuity with earlier urban forms and its alignment with vernacular architectural principles. This convergence of material culture and construction logic underscores the neighborhood's embeddedness in local building traditions while simultaneously reflecting broader patterns of Ottoman provincial architecture. [264]

These points have been substantiated through multiple means, including tabular data, graphical representations, and schematic diagrams, in the subsequent chapters and sections. In addition, the inclusion of contextual examples adjacent to key statements has proven beneficial in reinforcing the analytical narrative.

- **By way of example:**

- III.3.3.1.Al-Bawāyik : Table (27,28).

[264] Al-Rifai, H. *Al-Masājid al-Turāthiyya fī Ḥayy al-Mīdān*, 2013, pp. 60–63.

- The classifications of Al-Bawāyik (grain warehouses) in the following sections:
  IV.1.1.2.4.1/ IV.1.1.2.4.2/ IV.1.1.2.4.1: Classifications by façades, inner space, and roof shape.
  IV.1.3: Documentation of Al-Sharbajī Bāyka .
- Map overlay (GIS)/ Chapter IV (IV.1.2.3.) : Visualizing Bawāyik-Mosques-Baths spread across the Al-Mīdān commercial core.
- Many summarized academic tables of Ottoman Service Buildings in Al-Mīdān", providing a concise yet detailed overview of key examples, their historical periods, functions, architectural styles, and current conditions. Tables (35,36,37,38,39,40).

IV.1.1.2.1.Mosques in Al-Mīdān Neighborhood:

Through systematic field surveys and architectural documentation conducted in the Al-Mīdān neighborhood, the researcher observed that the prevailing architectural character of its mosques is defined by a marked simplicity in both structural and decorative elements. This architectural restraint reflects a functional approach to religious architecture, wherein emphasis is placed on essential spatial components rather than ornamental excess. The fundamental elements consistently observed across the documented mosques include the courtyard (ṣaḥn[265]), the prayer hall or sanctuary (ḥaram), the portico (riwāq[266]), the pulpit (minbar), and the minaret (manāra).

The mosque architecture of the Al-Mīdān neighborhood reveals a stratified palimpsest of historical layers, shaped by successive political and cultural regimes governing Damascus. Despite these external influences, the architectural language of the area articulates a distinctively localized adaptation, grounded in vernacular construction techniques and the pragmatic use of regionally available materials. This vernacular identity is most clearly expressed through the extensive/widespread ("Extensive": The use of sun-dried clay bricks was common and widely adopted throughout the neighborhood, not limited to isolated buildings but appearing in numerous mosques. This phrase underscores how local builders in Al-Mīdān integrated regional materials and construction techniques into even religious buildings, reflecting broader cultural, environmental, and economic factors in the architectural heritage of Damascus), and enduring use of sun-dried clay bricks in the construction of mosque walls across Al-Mīdān. These brick superstructures are typically erected upon substantial stone foundations, composed of roughly hewn fieldstones bonded with clay-based mortar, a construction technique that reflects both material pragmatism and environmental responsiveness. The implementation of this hybrid masonry system illustrates not only the structural ingenuity of local builders but also the socio-economic and climatic considerations that shaped architectural practice in this peripheral yet historically significant quarter of Damascus. [267] (See Fig. 64).
Roofing methods employed in the mosques of Al-Mīdān also vary in typology, yet a dominant feature is the prevalence of flat wooden roofs. These structures often rely on timber bridging systems, particularly in the roofing of both the sanctuary and portico spaces. Poplar and willow trunks were the primary materials used in these roofing systems, owing to their natural resistance to humidity, as well as their linear form and extended length, which make them ideal for spanning interior spaces with minimal support. [268]

[265] **Ṣaḥn-** Courtyard, especially central courtyard in mosques.
[266] **Riwāq-**An arcade or colonnaded space in Islamic architecture, commonly found surrounding mosque courtyards.
[267] Al-Azm, T.The Role of 3D Documentation in Syrian Heritage, vol. 11, no. 2, 2012, pp. 55–58.
[268] Al-Ḥamawī, Yāqūt. *Muʿjam al-Buldān*, Vol. 2, 1998, p. 224.

In addition to flat roofing, domical roofing systems are also present in a number of key mosques within the neighborhood, including Al-Ghawāṣ Mosque, Al-Rifāʿī Mosque, and Al-Zāwiya al-Saʿādiyya. These structures incorporate standard domes to cover the sanctuary, while other examples employ more complex cross-vaulted domes. These are generated from singular or repeated intersecting arches that rest on perpendicular supporting walls via transitional shoulders. The typology and geometry of these domes vary, depending on the arch profiles from which they are derived. Construction materials typically include clay bricks or finely dressed stones, with the individual stone segments that compose the dome referred to in traditional terminology as al-rīsh (feathers) [269] .(See Fig. 64).



Figure 64. The domes are constructed on circular triangular bases, while the roofing structure employs poplar trunks as primary elements. (Source: The Researcher, 2021)

IV.1.1.2.1.1.Substantiating Analytical Observations in IV.1.1.2.1. Mosques in Al-Mīdān:

To strengthen the analytical depth of Chapter **IV.1.1.2.1.** This section synthesizes and clarifies key observations using comparative typologies, visual references, and systematically classified data. While the chapter provides extensive architectural and historical documentation, several descriptive terms, such as “extensive,” “prevalent,” or “notable”,require quantification and visualization to enhance academic credibility and interpretive clarity:

1. Material Usage: Sun-Dried Clay Bricks and Structural Foundations: table (30).

- The phrase "extensive use of sun-dried clay bricks" in mosque construction is substantiated through field survey data. Among the 14 documented mosques in Al-Mīdān, 11 were found to employ sun-dried clay bricks, often erected atop fieldstone foundations bonded with clay mortar. The following table illustrates the correlation:

Mosque Name	Primary Wall Material	Foundation Type	Roof System
Al-Kanshiliya	Sun-dried clay bricks	Fieldstone + clay mortar	Flat wooden trunks
Al-Rifāʿī	Adobe +Stone (ashlar + ablaq)	Stone masonry	Domical + flat

[269] Lapidus, *Muslim Cities in the Later Middle Ages*, 1984, pp. 142–144.

Al-Ghunaymī	Sun-dried bricks + modern	Fieldstone	Gabled roof (modern)
Al-Zāwiya al-Rashīdiyya	Adobe + lime plaster	Stone base	Flat with timber

Table.30. Extensive use of sun-dried clay bricks" in mosque construction. (Source: Author's fieldwork and analysis-2025)

- **Visual Reference:** - See Fig. 24-27 . Al-Rifāʿī, Al-Ghunaymī mosques.
  -See Fig.66-70.Al-Kanshīliyya mosques.
  -See Fig.71-73.Al-Zāwiya al-Rashīdiyya.

2. Structural Typologies of Roofs and Domes:

- A comparative analysis of roofing typologies reveals a dual system across the neighborhood: flat roofs using poplar and willow trunks, and domical structures varying in complexity. This is substantiated as follows:
  1- Flat Timber Roofs: Found in 9 mosques, typically covering the sanctuary and portico.
  2- Domes: Found in 5 mosques, using intersecting arches and circular drums.
- **Visual Reference:** -See Fig. 25-27-29. Al-Ghawāṣ, Al-Ghunaymī Al-Zāwiya Al-Saʾādiya.
  -See Fig.66-70. Al-Kanshīliyya mosque.
  -See Fig.71-73. Al-Zāwiya al-Rashīdiyya.

3. Documented Plans and Sections: Field Measurements:

Chapter IV, includes architectural plans and sectional drawings (e.g., Figs. 98–101, 110–113) created using Total Station and AutoCAD software.

4. Comparative Minaret Typologies: Table (31).

- The file notes two distinct minaret styles:

- Formal Ottoman minarets: Stone-built, with ablaq and geometric regularity.

- Informal minarets on private homes: Economical, minimally ornamented, integrated with residential functions.

Minaret Type	Location	Construction	Ornamentation
Formal Ottoman	Al-Rifāʿī, Al-Sakhāna	Stone, ablaq, vertical shaft	Minimal
Informal (house-based)	Al-Kanshiliya	Clay brick, added above roof	None

Table.31. Minaret Typologies in Al-Midan Neighborhood. (Source: Author's fieldwork and analysis-2025)

- **Visual Reference:** -See Fig. 24-27. The mosques: Al-Rifāʿī, Al-Sakhāna.
  -See Fig. 66-70 **.** The mosque: Al-Kanshīliyya.

5. Decorative Hierarchy: Ornamentation by Spatial Function: Table (32).

In Al-Zāwiya al-Saʿādiyya, figure (29), the study applied Historische Bauforschung methods to decode the distribution of ornamentation:

Space	Decoration Type	Function
Miḥrāb Zone	Qīshānī tiles, floral arabesques	Liturgical focus; spiritual symbolism
Portals	Stone relief, vegetal motifs	Transition between sacred/public
Domes	Painted vegetal motifs, stucco	Symbolic celestial representation

Corridors	Minimal geometric patterns	Circulation

Table.32.Ornamentation by Spatial Function. (Source: Author's fieldwork and analysis-2025)

IV.1.1.2.1.2. Architectural Features of Mosques in Al-Mīdān Neighborhood:

The architectural arches and thresholds represent a prominent architectural feature frequently employed in the design of halls and corridors within Islamic religious structures. This is evidenced by their use in the corridor leading to the courtyard of Al-Rifāʿī Mosque, figure (24), and the entrance corridor of Al-Zāwiya al-Saʿādiyya, figure (29). Architecturally, structures from the Ottoman period in Syria marked a significant departure from the stylistic conventions of earlier eras, especially in mosque design, introducing a distinct architectural vocabulary that combined functional innovation with aesthetic restraint.[270] Figure (65).

Based on extensive field observations and documentation within the Al-Mīdān neighborhood, the researcher identified several defining characteristics of Ottoman mosque architecture in the area:

1. The adoption of horizontally oriented sanctuary plans, characterized by expansive, unobstructed spaces with minimal or no interior columns. These spaces are typically spanned by large, semi-circular compound domes that cover the prayer hall. These domes often feature internal circular drums supported by peripheral exterior columns, which allow for the elimination of interior load-bearing columns and enable a visually continuous and functionally adaptable prayer space. Figure (25), Al-Ghawāṣ Mosque.

2. The integration of a portico or riwāq in front of the sanctuary, often extending along multiple sides of the mosque courtyard. These roofed corridors serve as transitional and instructional spaces, with notable examples found in Al-Rifāʿī Mosque, Figure (24), Al-Shaykh Yaʿqūb Mosque,f igure (26), and Al-Sakhāna Mosque, figure (27). In several instances, these porticoes also house a *miḥrāb* for the delivery of religious lessons.

3. The use of lead sheeting to cover domes, offering protection against environmental exposure. In addition, zinc panels are often installed to cover mosque courtyards, shielding congregants from sunandrain. Al-Rifāʿī Mosque, figure (24). Al-Sakhāna Mosque (Al-Ghunaymī), figure (27).

4. The mosque façades are characterized by aesthetic simplicity and the use of polychrome masonry techniques, particularly the *ablaq* style, alternating courses of colored stone or marble. This technique is exemplified in the façades of Al-Sakhāna Mosque, figure (27), Al-Zāwiya al-Saʿādiyya, figure (29). These façades are typically constructed using the ashlar method, where blocks are carefully cut and arranged in horizontal courses.

5. Interior decorative schemes often highlight the *miḥrāb* and *minbar*, which are clad in marble or Qīshānī tiles in shades of blue and green. Floral motifs, particularly tulips and carnations, are common, along with geometric designs adorning the sanctuary's upper walls and windows. Stucco ornamentation and painted vegetal patterns are typically applied to ceilings. Al-Rifāʿī Mosque, figure (24). Al-Zāwiya al-Saʿādiyya, figure (29.

[270] Hourani, Albert. *A History of the Arab Peoples,* 1991, p. 167.

6. In several mosques within Al-Mīdān, architectural elements such as built-in bookcases (*kutubiyya*) are also present. These recessed shelving units, which lack doors and are embedded within the sanctuary walls, appear in structures like Al-Sakhāna Mosque. Figure (27).

7. One of the most distinctive features of Ottoman mosque architecture in Al-Mīdān is the minaret, which differs significantly from earlier Ayyubid and Mamluk examples[271]. Ottoman-period minarets frequently employed the *ablaq* technique in their construction, using alternating bands of colored stone. This approach, known locally as the 'Ottoman Shāmī style,' resulted in structurally austere minarets composed of vertically stacked stone courses, typically devoid of decorative embellishment. These minarets house interior staircases and are capped by balconies and canopies. Al-Rifāʿī Mosque, Figure (24), Al-Shaykh Yaʿqūb Mosque,f igure (26), and Al-Sakhāna Mosque, figure (27).
In addition to these formal minarets, a simplified typology also emerged during the Ottoman period: modest, minimally ornamented minarets constructed atop private residences or shops. These structures often served communities unable to finance full mosque construction, with the house itself functioning as the prayer hall and the minaret providing a religious identity. Such minarets, common in the narrow alleys of older and poorer districts, are exemplified by the minaret of Al-ʿAnnāba mosque, figure (33), and Al-Shaykh Hammād, figure (35).

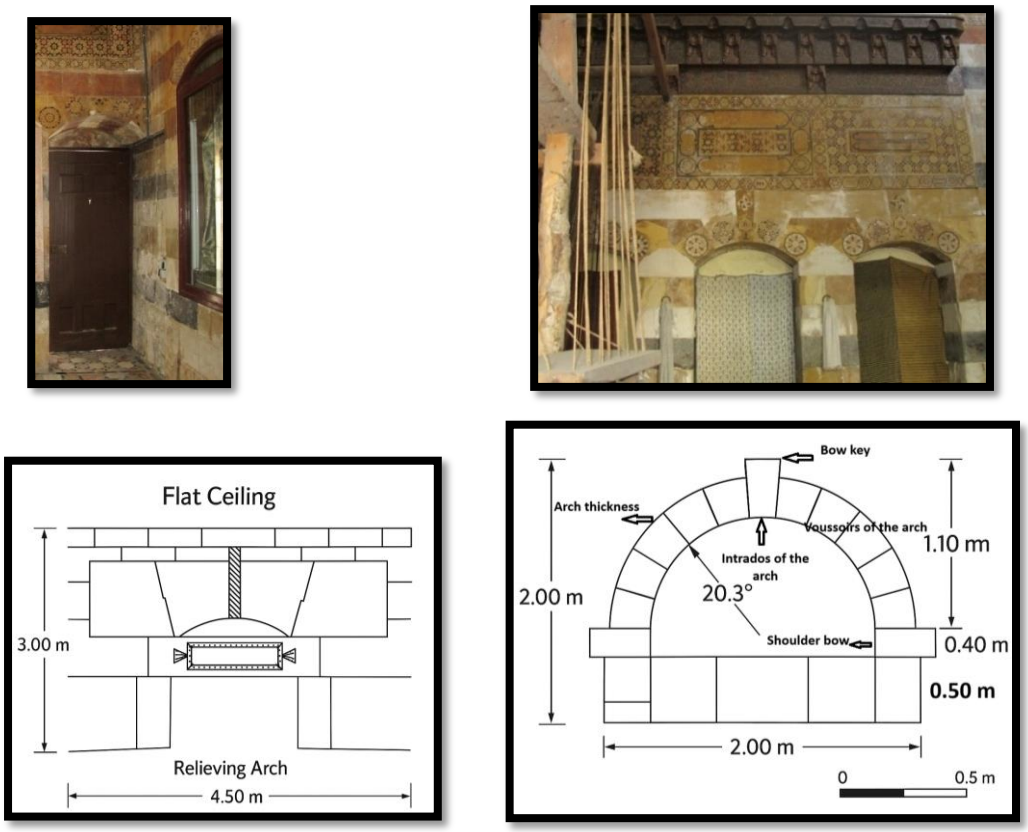


Figure.65.Architectural drawings detailing thresholds of doors and windows, including the arch and doorstep elements, reflecting construction techniques and ornamental articulation. (Source: Author, 2021)

IV.1.1.2.1.3.Documentation of Al-Kanshīliyya Mosque: Figure (22).

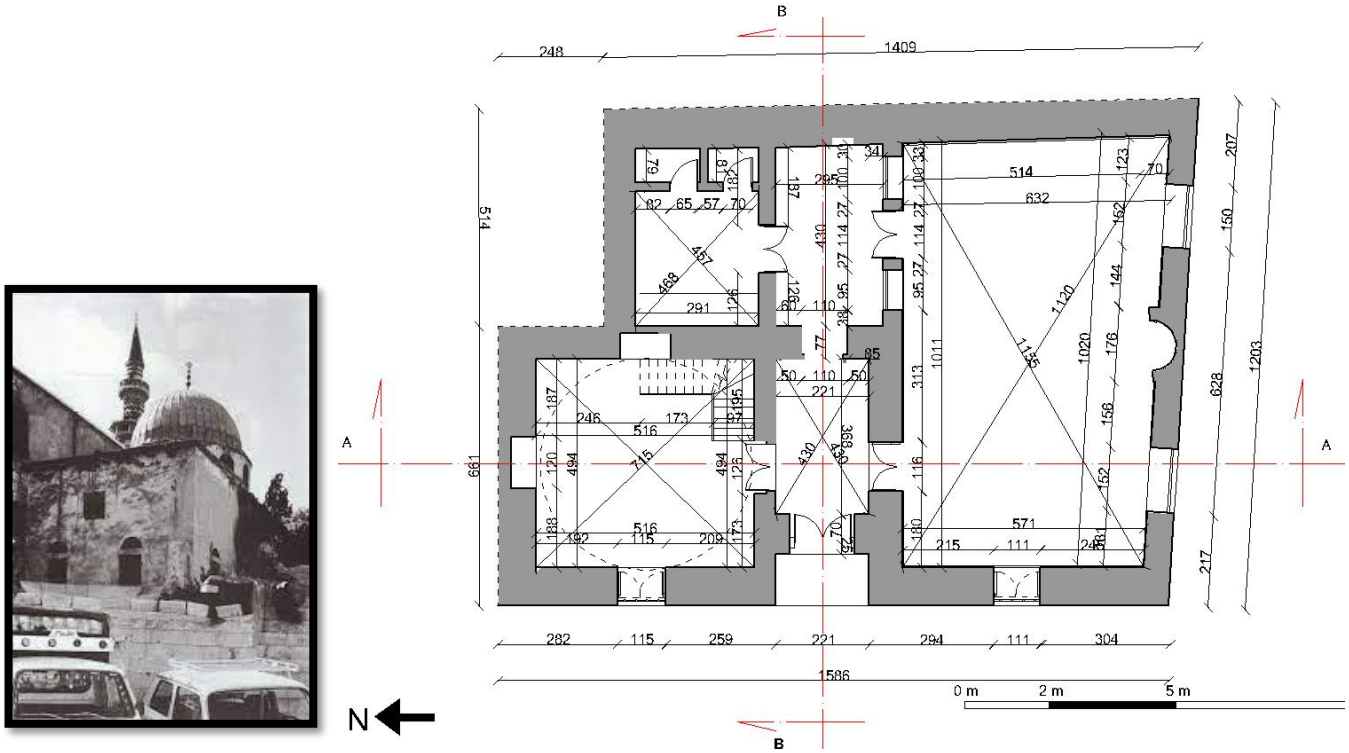
Al-Kanshīliyya Mosque stands as one of the most architecturally significant Ottoman-era mosques within Al-l-Mīdān neighborhood, notable for its distinctive and unique spatial configuration[272],

[271] Boustani, *Reviving Ottoman Mosques in Damascus*, 2011, pp. 158–162.
[272] Ross. *Damascus: A History*. Routledge, 2005, pp. 239–241.

Figure (66). Al-Kanshīliyya Mosque occupies a strategically location in Al-Mīdān Al-Fawqānī[273], figure (22). Despite its historical and cultural importance, extant archival records held by the General Directorate of Antiquities and Museums are scarce and largely insufficient to provide a comprehensive understanding of the mosque's architectural features.

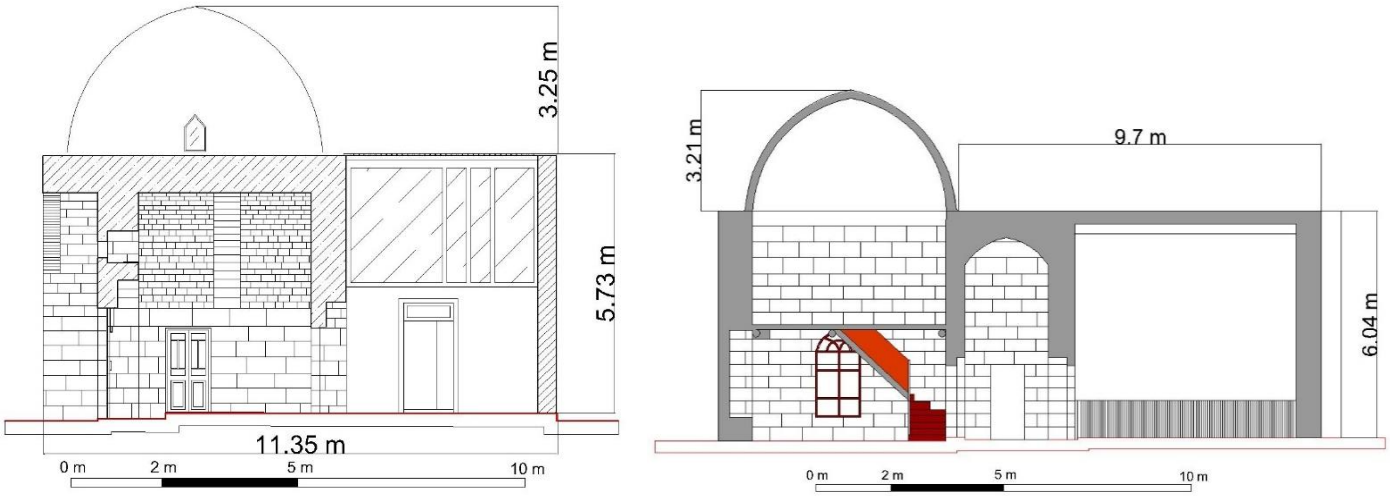
In light of this paucity of documentation, the present study prioritizes an in-depth empirical investigation of Al-Kanshīliyya Mosque. The researcher conducted extensive fieldwork, systematically measuring the mosque's structural voids and façade dimensions using a combination of precision instruments, including tape measures and a Total Station. Complementing these traditional tools, the electrode method was employed to enhance measurement accuracy.

The collected data were subsequently digitized and processed using AutoCAD software, enabling precise geometric modeling and architectural analysis. The outcomes of this comprehensive documentation process are presented in the following sections, providing a detailed and accurate architectural record of the mosque. Figures (67-68-69-70).



Figures.66-67. Historical photograph and architectural plan of Al-Kanshīliyya,illustrating both its original form and spatial organization. (Sources: Mansūr, Dhākirat al-Wujūh wa-l-Taḥawwulāt, 2014; field documentation by the researcher, 2021).

[273] Yasser. *The Transformation of Islamic Art during the Sunni Revival*, 2001, pp. 121–125



Figures. 68–69. Longitudinal (Section A–A) and transverse (Section B–B) sectional drawings of al-Kanshīliyya Mosque, illustrating its spatial organization and structural composition. (Source: Field documentation by the researcher, 2021)

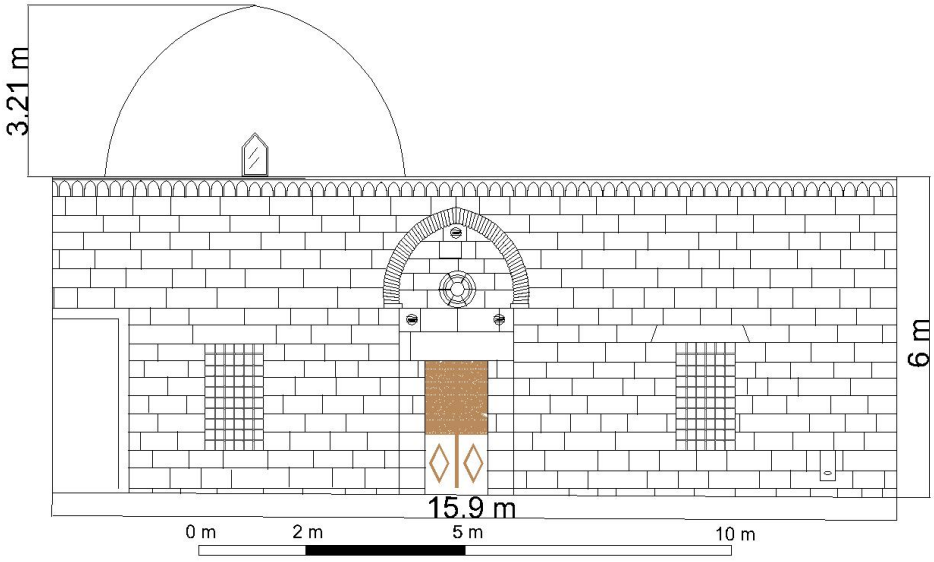


Figure 70. The main façade of al-Kanshīliyya Mosque, highlighting its architectural articulation and ornamental detailing. (Source: Field documentation by the researcher, 2021).

IV.1.1.2.1.4.Documentation of Al-Zāwya al-Rashīdiya: Figure (22).

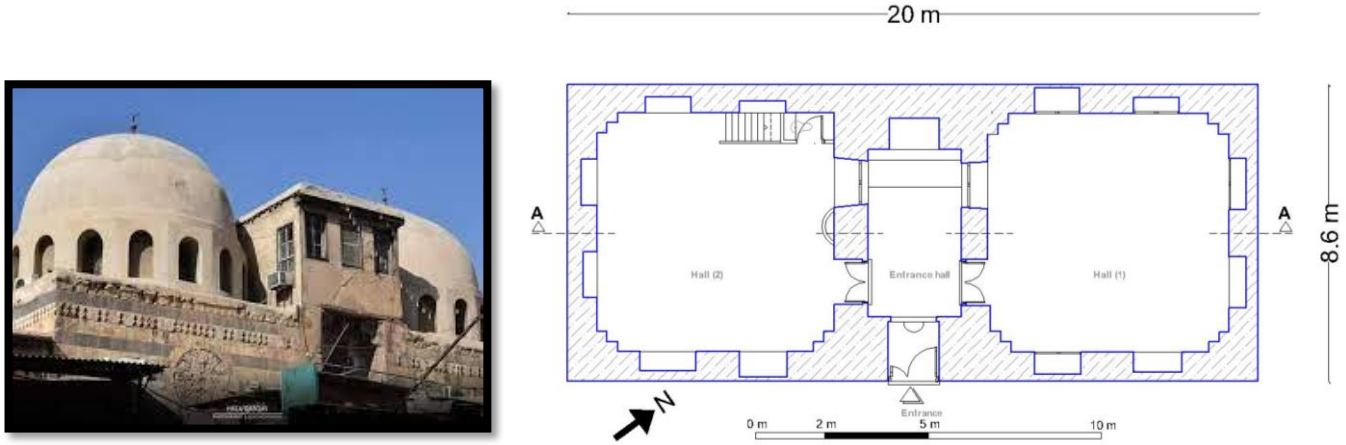
Al-Zāwya al-Rashīdiya, figure (71), represents one of the most architecturally and culturally significant zawāya within the al-Mīdān neighborhood (Al-Mīdān Al-Fawqānī[274], figure (22)).

Al-Zāwya al-Rashīdiyya, located in the southern sector of the al-Mīdān neighborhood in Damascus, is a historically significant Ottoman-era religious complex. Functioning as both a mosque and Sufi lodge, it exemplifies the integrated spiritual and social infrastructure typical of the period. Architecturally modest and embedded within the urban fabric, the zāwiya reflects the waqf-based traditions of religious education, prayer, and public service within al-Mīdān's dense morphological context. [275]

Through a series of systematic field visits, the researcher conducted precise measurements of the mosque's spatial configuration and architectural elements. These data facilitated the production of

[274] André. *Greater Damascus: A History of the City and Its People*, 2007, pp. 318–321.
[275] Rihawi, A. *al-ʿImārah al-Islāmiyyah fī Bilād al-Shām*, 1990. pp. 211–213.

detailed architectural drawings, including the floor plan and façade elevations, executed using AutoCAD software. Figures (72-73).



Figures.71–72. Historical photograph and horizontal plan of Al-Zāwya Al-Rashīdiya Mosque, documenting its architectural evolution and spatial configuration. (Sources: Mansūr, 2014; Field documentation by the researcher, 2021)

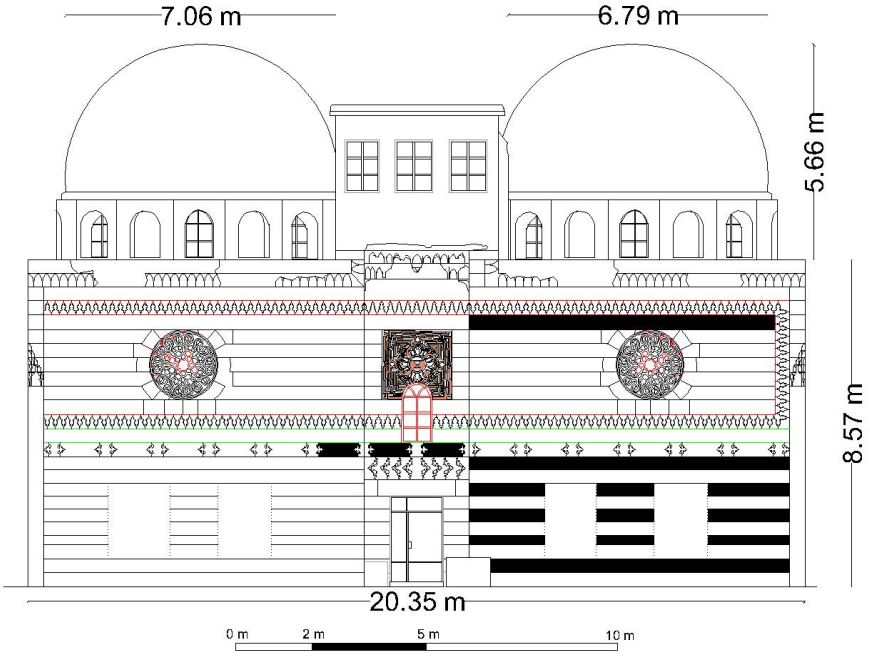


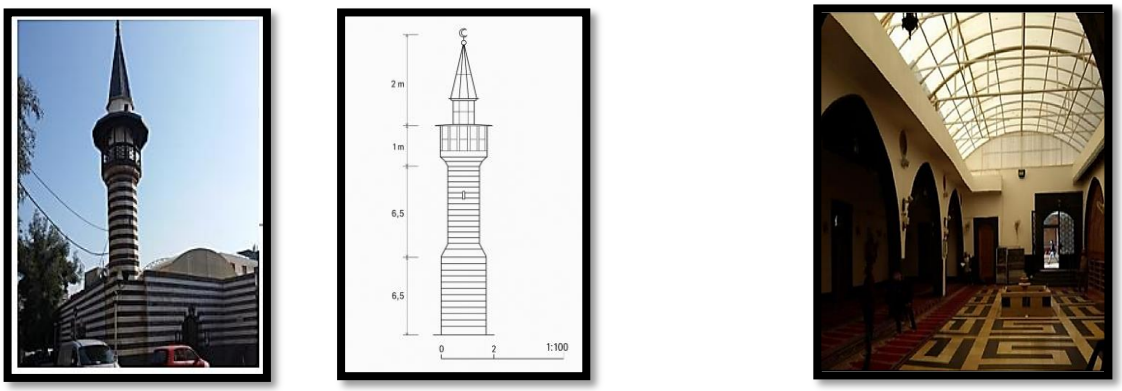
Figure 73. The main façade of Al-Zāwya al-Rashīdiya Mosque, illustrating its architectural articulation and ornamental detailing.(Source: Field documentation by the researcher, 2021)

IV.1.1.2.1.5.Documentation of Al-Ghunaymī (Al-Sakhāna) mosque: Figure (22).

Al-Ghunaymī (Al-Sakhāna) Mosque, figure (74), is regarded as one of the most architecturally significant religious structures within the Al-Mīdān neighborhood, occupying a relatively expansive plot of land[276]. Despite its historical and architectural value, the mosque has suffered from insufficient documentation by relevant authorities. Moreover, the extant architectural plans fail to reflect subsequent modifications to the building, particularly the restoration of the mosque's courtyard and the addition of a modern gabled roof[277] (see Fig. 75). In response to this gap, the present research undertook a comprehensive study of the mosque, employing systematic fieldwork to measure the spatial dimensions and facades, including the sabīl structure. Data collection was

[276]Tabbaa, *The Transformation of Islamic Art during the Sunni Revival*, 2001, pp. 112–117.
[277]General Directorate of Antiquities and Museums (GDAM), Damascus Archive, 2003, pp. 10–12.

conducted using various tools, such as a tape measure and total station, and applied the triangle method for geometric accuracy. The collected data were then processed and digitally reconstructed using AutoCAD software. Additionally, the researcher proposed a series of restoration strategies for the mosque's southern façade, culminating in the following set of documented findings: Figures (76-77-78).



Figures.74-75. present the restored ceiling of the mosque's courtyard and the architectural drawing produced during field documentation respectively (Source: The Researcher, 2021).

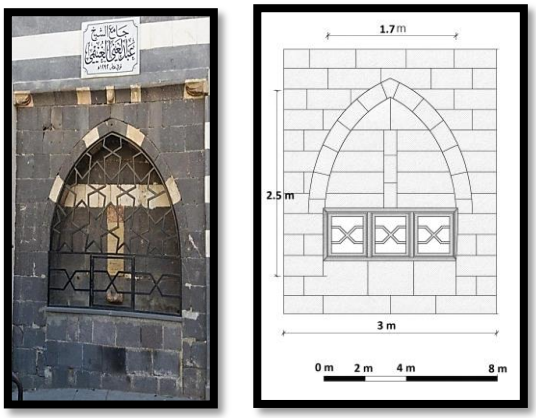
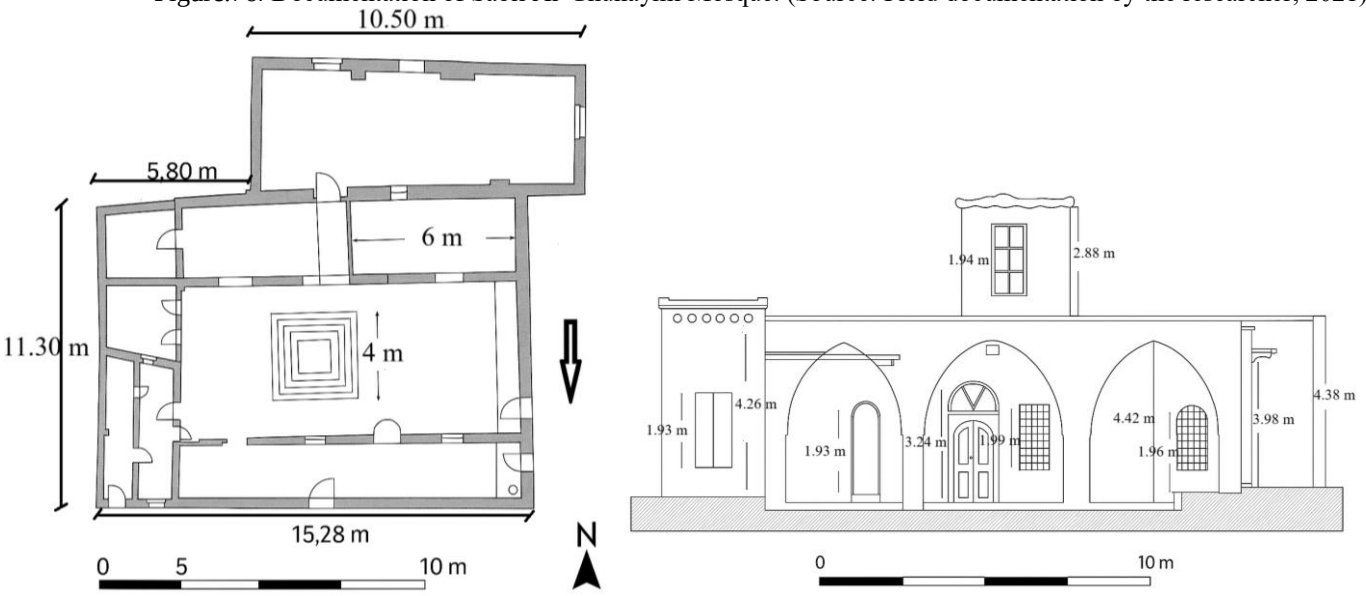


Figure.76. Documentation of Sabīl Al-Ghunaymī Mosque. (Source: Field documentation by the researcher, 2021).



Figures.77-78. Respectively depict the horizontal section (floor plan) of Al-Ghunaymī Mosque and the present state of its southern corridor. (Source: field documentation carried out by the researcher in 2021).

IV.1.1.2.1.5.1.Restoration Proposals for the Southern Façade of Al-Ghunaymī Mosque: Analytical Evaluation:

The restoration of the southern façade of Al-Ghunaymī Mosque was approached through two distinct proposals, each reflecting a different theoretical stance in architectural conservation. These proposals were informed by comprehensive field documentation, including architectural measurement, visual surveys, and AutoCAD-based reconstructions.

First Proposal: Contextual Reintegration : See Fig. (80).

This proposal sought to restore the southern façade by reintegrating traditional elements consistent with the mosque's original Ottoman stylistic language[278]. It emphasized the revival of historical architectural proportions, the reintroduction of traditional roofing materials, and the preservation of decorative features such as the arch profiles and window moldings.

Rationale:

- Aimed at restoring architectural authenticity by re-establishing visual and structural coherence with the mosque's original form.
- Responded to the loss of ornamental and proportional integrity caused by contemporary alterations (e.g., the added gabled roof).
- Aligned with principles of the restoration in kind approach, where missing elements are reconstructed based on historical evidence. [279]

Merits:

- Enhances the mosque's heritage value and integrity.
- Reinforces historical identity and improves compatibility with surrounding Ottoman-era structures.
- Based on historically grounded architectural evidence. [280]

➢ **Second Proposal:** Adaptive Interpretation: (See Fig. 81)

This alternative proposed a more modern adaptation of the façade, incorporating simplified lines and materials while maintaining the general volumetric rhythm of the historic elevation. While it retained the arch openings, it introduced a contemporary roofline and structural treatments.

Rationale:

- Designed to acknowledge the historical layers while offering a modern architectural response.
- Responded to current functional demands, such as improved rain protection and spatial flexibility.
- Follows the philosophy of minimal intervention and reversible restoration[281], allowing future re-restoration if necessary.

Merits:

- Technically practical and cost-efficient.
- Clearly distinguishes between old and new elements.
- Maintains a respectful yet legible contrast between contemporary additions and the original structure.

[278]Bernard M. *Conservation of Historic Buildings*, 2003, pp. 86–91, 122–129.
[279]Jukka. *A History of Architectural Conservation*, 1999, pp. 230–238.
[280]Al-Hariri, Heritage Management and Mosque Restoration Strategies in Damascus. vol. 8, no. 2, 2020, pp. 53–60.
[281]Stubbs, Robert G. Thomson. *Architectural Conservation in Asia: National Experiences and Practice*, 2017, pp. 114–117.

- **Conclusion and Recommendation:**

Both proposals present valid strategies depending on the overarching conservation philosophy adopted[282]. If the priority is authentic heritage recovery, the first proposal is preferable. However, if the emphasis lies in adaptive reuse, material pragmatism, and architectural honesty, the second solution offers a viable, reversible intervention. The research acknowledges the value of both approaches and recommends a hybrid strategy, where key heritage elements are restored with high fidelity, while secondary components are treated with modern solutions to balance authenticity with sustainability.

Here is the comparative evaluation table (33), showing the differences between the two restoration proposals for the southern façade of Al-Ghunaymī Mosque.

Criterion	Proposal 1: Contextual Reintegration	Proposal 2: Adaptive Interpretation
Historical Accuracy	High – based on archival and stylistic evidence	Moderate – general alignment but abstracted
Visual Continuity	Strong – reinforces original appearance	Moderate – introduces contemporary contrast
Functional Adaptability	Moderate – maintains original layout	High – accommodates modern needs
Reversibility	Low – permanent reconstruction	High – easily distinguishable and reversible
Cost and Technical Complexity	Higher – uses traditional materials	Lower – uses modern construction techniques

Table 33 presents a comparative evaluation of the two restoration proposals for the southern façade of Al-Ghunaymī Mosque, highlighting their respective approaches, rationales, and expected outcomes. (Source: Compiled by the researcher, 2025)

Here is the visual chart, figure (79), comparing the two restoration proposals across key evaluation criteria.

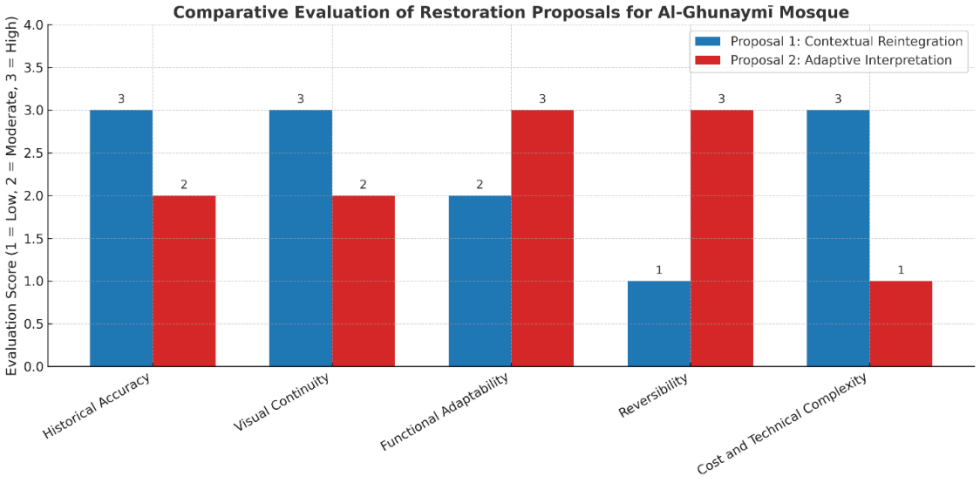


Figure .79. Provides a visual comparison of the two restoration proposals for the southern façade of Al-Ghunaymī Mosque, organized according to key evaluation criteria. (Source: Compiled by the researcher, 2025)

[282]Ross. *Damascus: A History*, 2005, pp. 242–245.

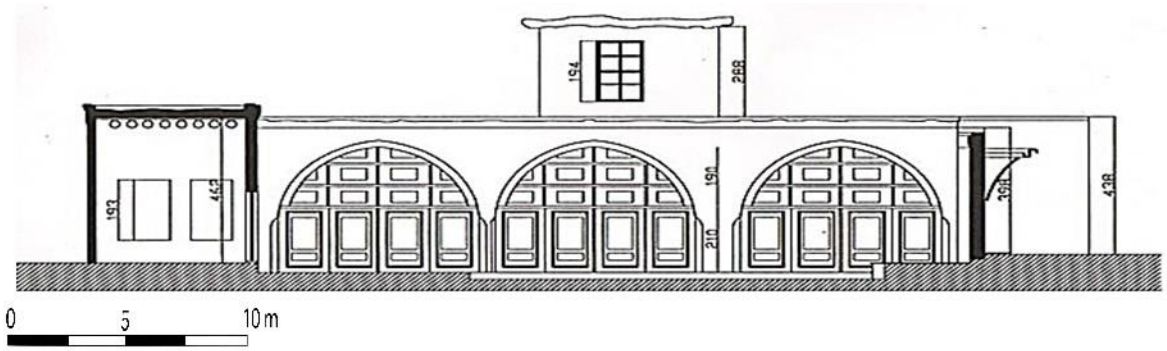


Figure.80. First restoration proposal for the southern façade of Al-Ghunaymī Mosque.
. (Source: Compiled by the researcher, 2021)

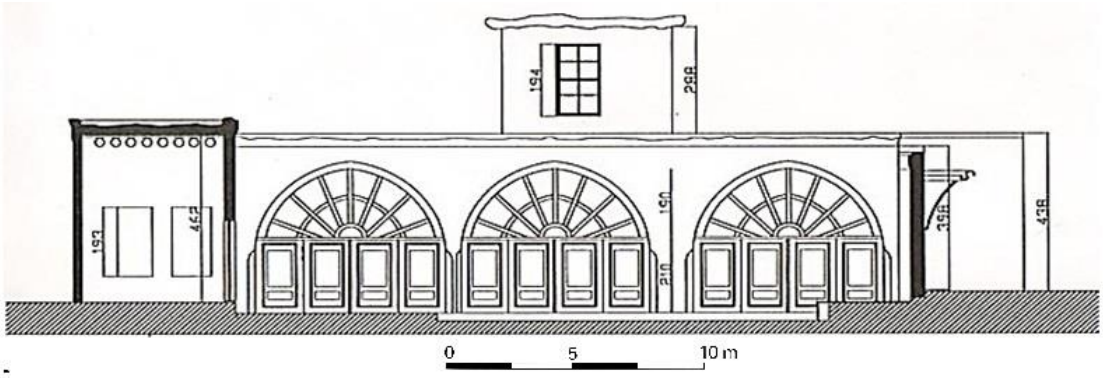


Figure.81. Second restoration proposal for the façade of the southern portico of Al-Ghunaymī Mosque.
(Source: Compiled by the researcher, 2021)

IV.1.1.2.1.6.Documentation of Al-Zāwiya Al-Saʿadiya: Figure (22).

Al-Zāwiya al-Saʿādiyya is notable for its rich and diverse decorative features, exemplifying the refined ornamental art characteristic of the Ottoman period[283]. This study systematically documented several of the zawiya's most distinctive architectural and decorative elements through a combination of digital photography and precise field measurements, utilizing tools such as a digital camera, tape measure, and total station. The resulting data were processed and illustrated using AutoCAD software. Based on this comprehensive approach, the researcher arrived at the following key findings:

IV.1.1.2.1.6.1.Analysis of the Distribution and Context of Decorative Elements in Al-Zāwiya al-Saʿādiyya: Figure (82).

The decorative elements documented in Al-Zāwiya al-Saʿādiyya exhibit a rich stylistic diversity emblematic of the Ottoman period's ornamental traditions[284]. A critical comparison within the same building reveals that similar motifs, such as al-Qīshānī tilework, floral patterns, and geometric arabesques, are not isolated to a single location but are systematically repeated across various architectural components, including the entrance portal, the mihrab zone, and decorative spandrels. Figure (82).

This repetition suggests a deliberate ornamental program, where the distribution and typology of decoration correlate closely with the architectural function and hierarchical importance of the respective spaces. For example, entranceways and prayer niches (mihrabs) tend to feature more elaborate and symbolically charged motifs compared to circulation spaces such as corridors. Floral and geometric motifs often appear in transitional architectural elements like arches and domes,

[283]Ross. *Damascus: A History*, 2005, pp. 242–245.
[284]Mansur, T. *Dhākirat al-Wujūh wa-l-Taḥawwulāt*, 2014, p. 128.

where their dynamism complements the structural movement and the passage from one spatial experience to another. Figure (82).

To investigate these correlations more rigorously, the methodology of Historische Bauforschung (Historical Building Archaeology) has been applied. This interdisciplinary approach combines precise architectural documentation (plans, sections, elevations, orthophotos) with a stratigraphic reading of the building's construction phases and decorative layers[285]. Using Historische Bauforschung, it has been possible to:

- Analyze the original versus secondary phases of ornamentation.
- Understand whether the decorative schemes are integral to the building's original conception or result from later interventions.
- Study the relationship between ornamentation, architectural function, and structural articulation.
- Identify patterns of material use, construction techniques, and aesthetic preferences across different spaces within the zawiya.

Through such a detailed and layered study, a more nuanced understanding has been achieved about how ornamentation was employed not merely for embellishment but as an active architectural language tied to the religious, cultural, and spatial hierarchy within Al-Zāwiya al-Saʿādiyya.

Conclusion:

The decorative program of Al-Zāwiya al-Saˇadiyya reflects a highly structured and hierarchically sensitive approach, where ornamentation density and complexity directly relate to architectural and functional significance. Applying the methodology of Historische Bauforschung would provide deeper insights into the chronology, symbolism, and craftsmanship practices embedded within the zawiya's fabric.

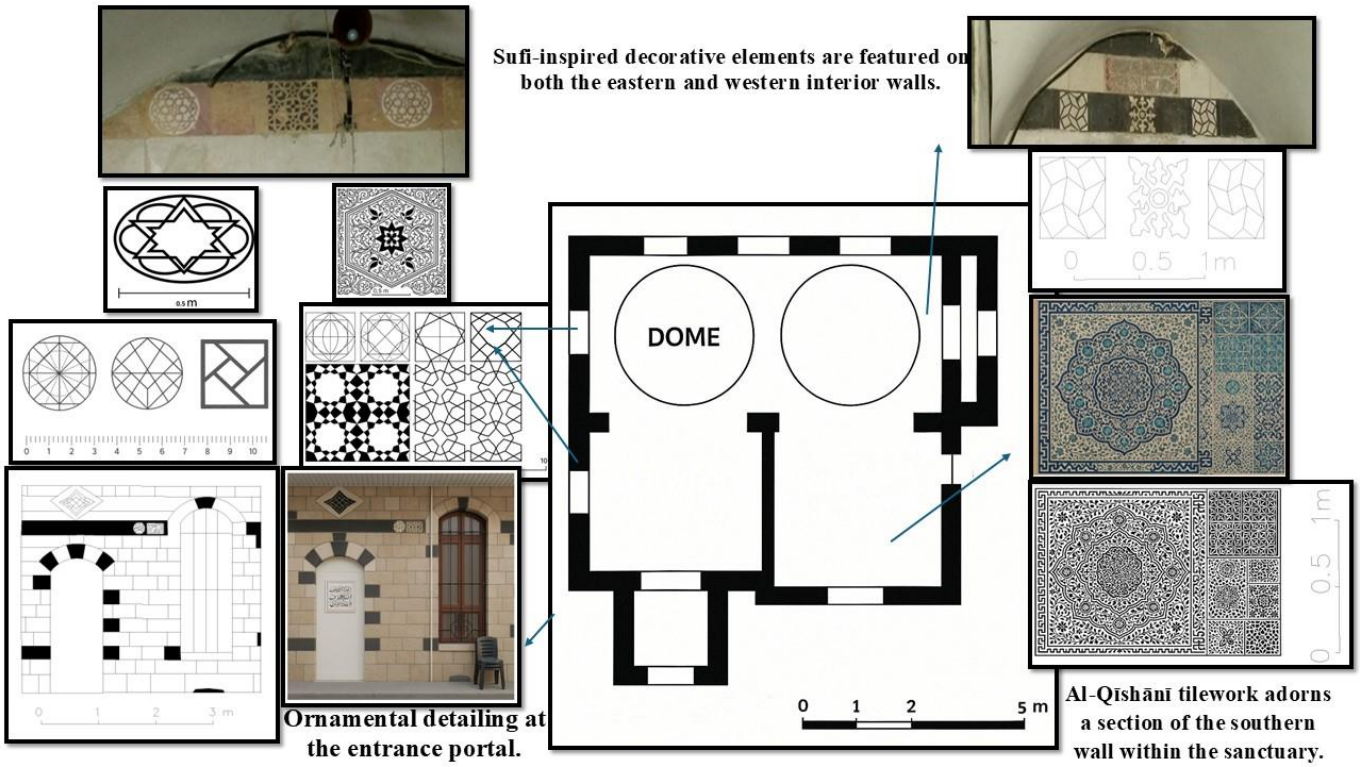


Figure.82. Documentation of the decorative elements in the al-Sa'diyya Zāwiya. (Source: Field documentation by the researcher, 2021)

[285]Drexler, P. *Einführung in die Historische Bauforschung*, 2006, pp. 14–29.

Here's a structured chart, figure (83), summarizing the relationship between spaces, decoration types, and their architectural role in Al-Zāwiya al-Saʿādiyya.

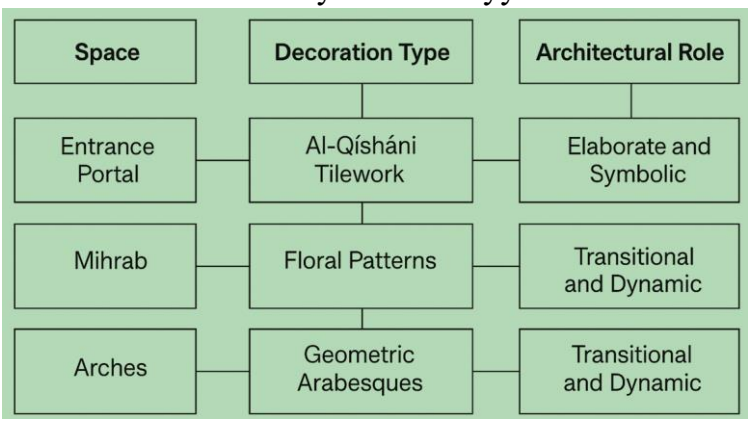


Figure (83) presents a structured diagram outlining the spatial organization, decorative typologies, and their respective architectural functions within Al-Zāwiya al-Saʿādiyya. (Source: Compiled by the researcher, 2021).

IV.1.1.2.2.Churches in Al-Mīdān Neighborhood:

IV.1.1.2.2.1.Architectural Features of Churches in Al-Mīdān Neighborhood:

The churches within the al-Mīdān neighborhood predominantly exhibit architectural characteristics derived from the Baroque style (Al-Bārūki), a design movement that originated in 17th-century Italy. Throughout the 19th century, this foundational style was augmented by the introduction of diverse architectural methods and unfamiliar construction materials, many of which were imported from Europe. These influences culminated in the emergence of richly ornate decorations and intricate ornamentation within the churches of al-Mīdān[286].

The churches of al-Mīdān were primarily constructed using local basalt and limestone, with wood for structural and decorative elements. From the 19th century, imported materials such as marble, iron, and stained glass were introduced, reflecting European influence in both structure and ornamentation[287].

The Baroque decorative vocabulary is notably evident in key ecclesiastical elements such as the iconostasis, with prominent examples found in Our Lady of Al-Niyāḥ Church, figure (39), and Ḥanānya Church, figure (40). During the Ottoman era, European aesthetic influences intensified, leading to significant stylistic transformations within church ornamentation[288]. For instance, the traditional curved muqarnas, a quintessential motif in Islamic architectural decoration, was supplanted by a pronounced frieze of acanthus leaves, as observed above the outer door of Ḥanānya Church, figure (40). Additionally, Baroque-influenced capitals adorned pillars and columns, further emphasizing this stylistic shift.

Regarding the main façades of these churches, the principle of symmetry predominates[289]. Architectural elements such as windows became larger and more numerous, incorporating subtle Baroque features, either through their outer wooden frames or their systematic distribution across the façade. Careful attention was also given to the main entrance, which is strategically positioned along the central axis of the façade, reinforcing the symmetrical composition.

---

[286] Weber, Stefan. *Damascus: Ottoman Modernity and Urban Transformation (1808–1918)*, 2009, pp. 195–197.
[287] Khūrī, *al-Turāth al-ʿImārī li-Kanāʾis Dimashq*, 1998, pp. 88–94.
[288] Dodd, Erica Cruikshank. *Christian Arab Churches: Architecture and Heritage in the Levant*, 2001, pp. 72–74.
[289] ʿAlwan, *Fan al-ʿImāra al-Kanīsiyya fī Bilād al-Shām khilāl al-ʿAṣr al-ʿUthmānī*, 2012, pp. 130–132.

IV.1.1.2.2.2.Documentation of Al-Niyāḥ Church: Figure (22).

The coexistence of multiple religious sects stands as a defining characteristic of the al-Mīdān neighborhood in Damascus, a feature distinctly reflected in the service buildings erected during the Ottoman period. Among these, the churches, most notably Al-Niyāḥ Church and Ḥanānya Church, hold particular significance. This study focuses on a comprehensive examination of Our Lady of Al-Niyāḥ Church, historically serving as the cathedral of the Catholic community in the area.

Through a series of systematic field surveys, the researcher conducted extensive measurements and photographic documentation of the church's architectural fabric. Employing AutoCAD software, detailed architectural drawings, including plans and sectional views—were produced to accurately represent the church's spatial organization and structural nuances. Furthermore, distinctive decorative features both within the interior and on the exterior façades were meticulously recorded.

The following section presents the synthesized outcomes of this detailed architectural and decorative documentation process. Table (34-35).

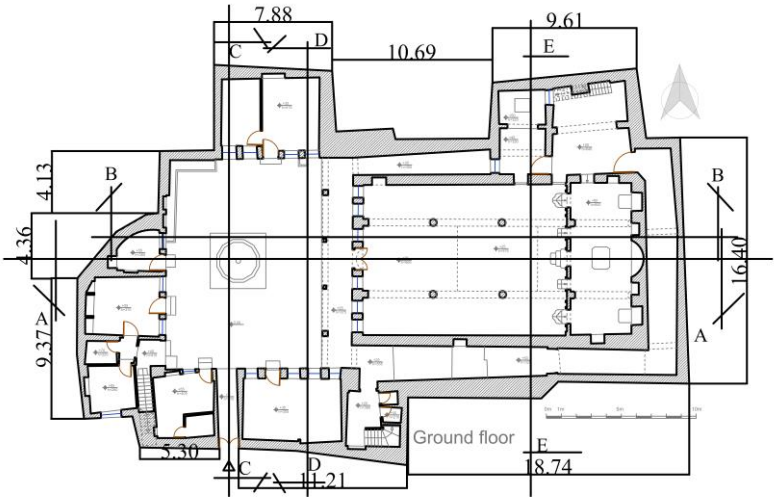
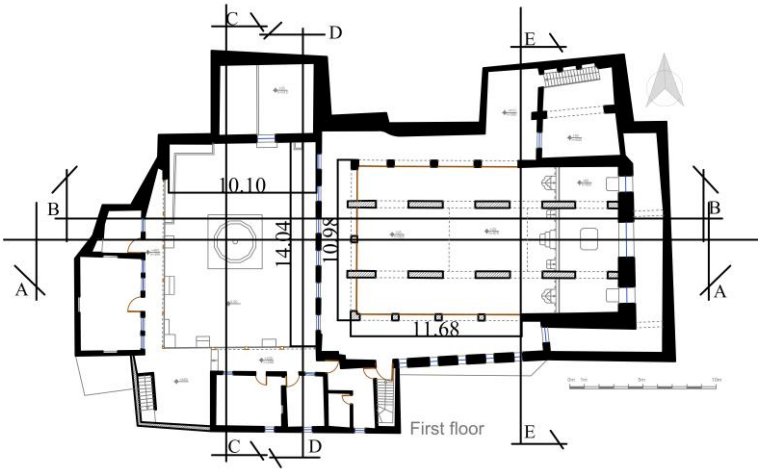
Figure.84.Ground Floor Plan of Our Lady of Al-Niyāḥ Church. The plan shows the spatial arrangement of the church, including the nave, aisles, sanctuary, and service areas, with sectional lines indicating key architectural divisions.	
Figure.85. First Floor Plan of Our Lady of Al-Niyāḥ Church. This plan illustrates the upper-level layout, showing the gallery above the nave, structural divisions, and circulation paths. Section lines indicate key vertical references.	

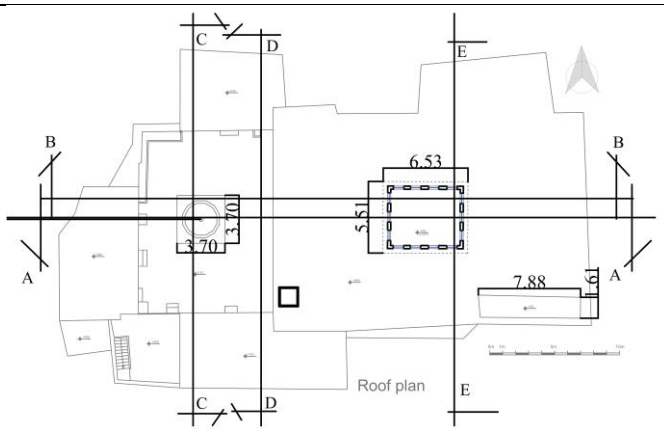
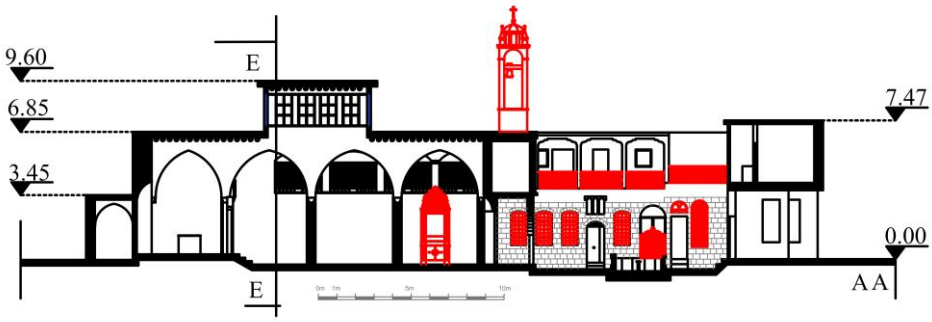
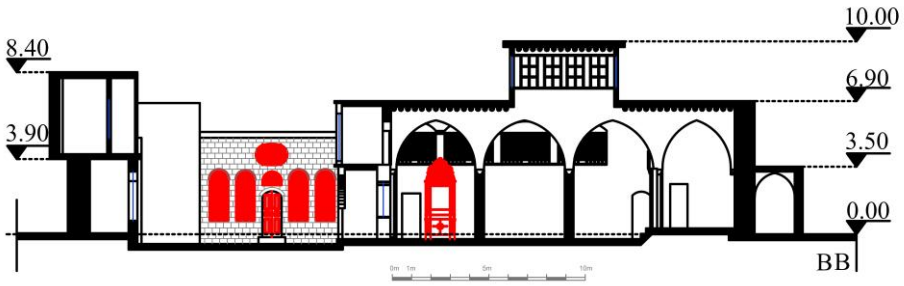
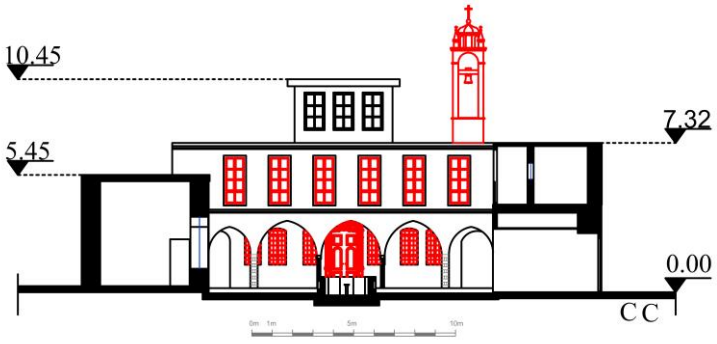
Figure.86. Roof Plan of Our Lady of Al-Niyāḥ Church. The drawing presents the roof layout, showing the dome position, stair access, and sectional references used in the architectural analysis.	
Figure.87. Section A–A of Our Lady of Al-Niyāḥ Church. This sectional drawing highlights key architectural features of the northern façade, including spatial proportions and structural elements.	
Figure.88. Section B–B of Our Lady of Al-Niyāḥ Church This section illustrates the spatial configuration of the upper floor, emphasizing ceiling height, vertical circulation, and structural relationships.	
Figure.89. Section C–C of Our Lady of Al-Niyāḥ Church. This sectional view cuts through the central courtyard, showing the fountain, eastern façade with adjacent corridor, upper floor, roof structure, and the bell tower.	

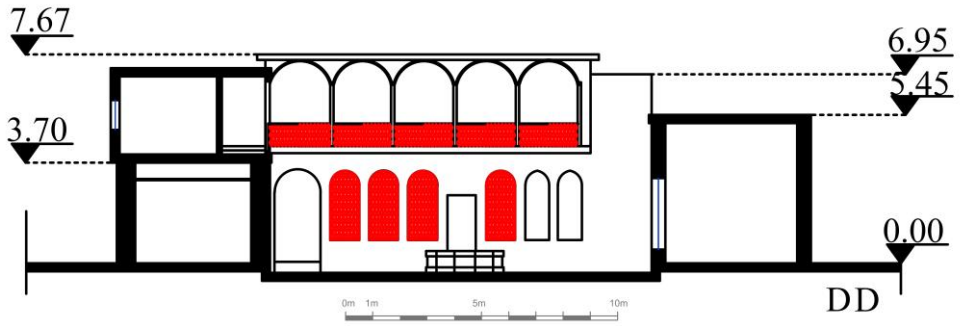
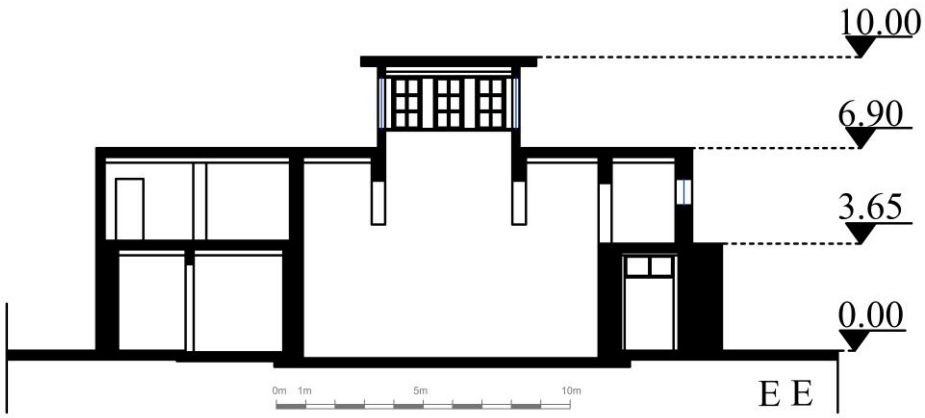
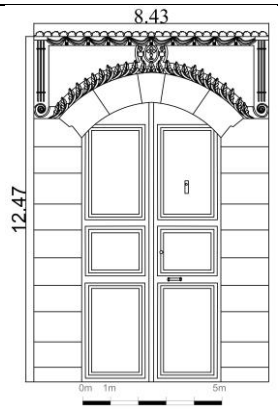
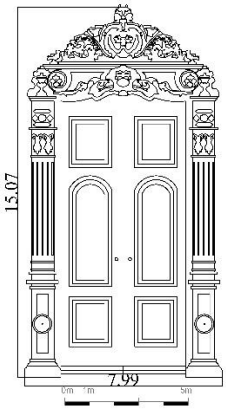
Figure.90. Section D–D of Our Lady of Al-Niyāḥ Church. This section presents the architectural features of the western façade of the courtyard, highlighting structural elements and spatial relationships.	
Figure.91. Section E–E of Our Lady of al-Niyāḥ Church. Interior sectional view showing the basalt masonry structure, the tripartite division of the nave, two lateral rooms, and the upper roof composition.	

Table.34.Representative documentation outputs of the architectural plans of Our Lady of al-Niyāḥ Church, produced through digital drafting and analytical processing using AutoCAD software. (Source: Field documentation by the researcher, 2021).

	
Figure.92. The outside entrance of Al-Niyāḥ church.	
	
Figure.93. Architectural detailing of the main door of Al-Niyāḥ church.	



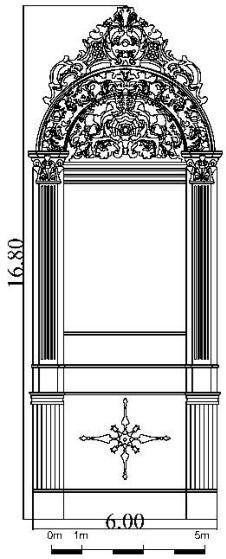


Figure.94. Decorative detailing on an ancient icon inside Al-Niyāḥ church.



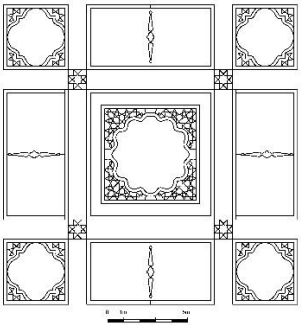


Figure.95. Architectural detailing of the floor of Al-Niyāḥ church.



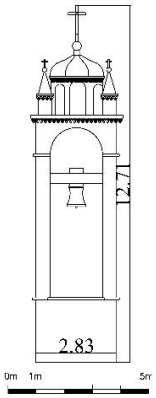
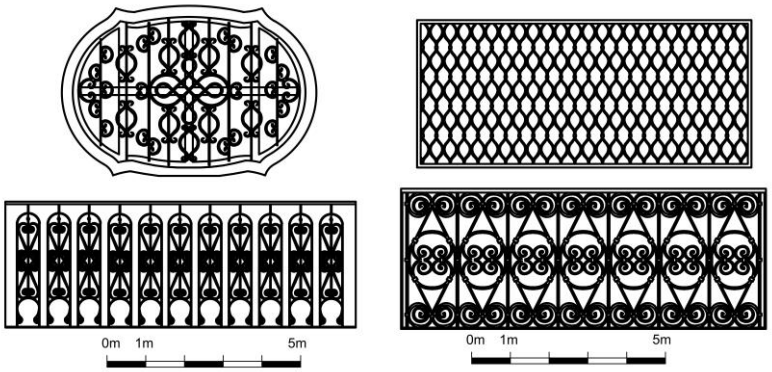


Figure.96. Architectural documentation drawing of the church's bell.



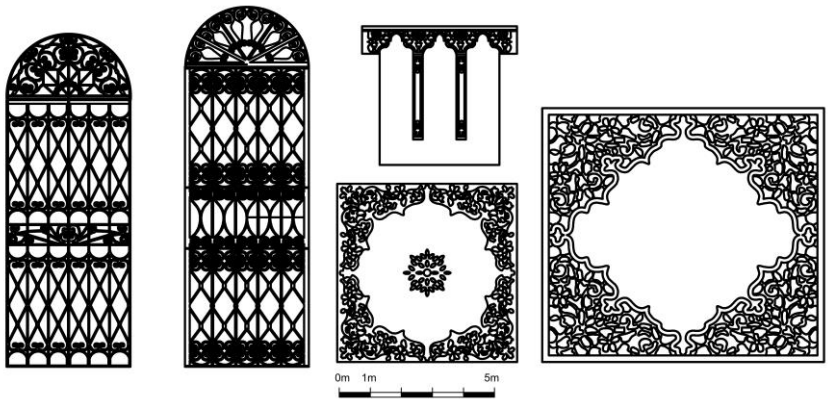


Figure.97. Documentation of selected architectural details, based on field survey and digital analysis.

Table.35. Documentation of architectural details including windows, doors, and various decorative elements located both inside and outside Al-Niyāḥ Church, based on field measurements and digital processing. (Source: Field documentation by the researcher, 2021).

IV.1.1.2.3. Baths in Al-Mīdān Neighborhood:

IV.1.1.2.3.1.Architectural Features of Baths in Al-Mīdān Neighborhood:

The baths (ḥammāmāt) of al-Mīdān represent a refined example of traditional Ottoman public architecture adapted to the material and social conditions of Damascus. These structures follow a standardized spatial layout common across the Islamic world, consisting of three main sections: the cold room (**Al-Barānī** -Outer section), serving as an entrance and changing area; the warm room (**Al-Wsṭānī -** The intermediate section), acting as a transitional space; and the hot room (**Al-Jawwānī-** inner section), where the bathing ritual takes place. This sequential spatial organization ensured thermal gradation and controlled humidity. [290] The architecture employs thick basalt masonry walls for thermal insulation, complemented by limestone detailing in arches and doorways. Domed roofs punctuated with glass skylights (qundūl) provide diffused natural light and aid in steam circulation. Interior surfaces are typically covered with lime plaster or marble panels, and floors are paved with stone or tiles to withstand moisture. [291]

Structurally, the baths are composed of cross-vaulted and domed chambers, often centered around marble basins (bi'rkas) and equipped with floor and wall heating systems using the hypocaust method. Decorative elements are generally modest, with emphasis on functional elegance, featuring geometric stonework, wooden lattice screens, and carved stone panels. [292]

In the urban context, these baths functioned as vital communal spaces, especially for social gatherings, religious preparation, and public hygiene. Their proximity to mosques, markets, and residential quarters within al-Mīdān illustrates their integration into daily civic life and the neighborhood's socio-spatial hierarchy. [293]

IV.1.1.2.3.2. Fathī Bath: Figure (22)-Figure (44).

The construction of Fathī Bath utilized locally available building materials characteristic of Damascus. Stone served as the primary material for the walls, while bricks were employed in the construction of the domes. Both stone and brick possess high thermal mass, providing effective

[290] Raymond, *La Ville Arabe: Alep, Le Caire, Damas*, CNRS Éditions, 1995, pp. 284–288.
[291] Weber, *Ottoman Modernity and Urban Transformation (1808–1918)*, 2009, pp. 200–205.
[292] Hakim, *Arabic-Islamic Cities: Building and Planning Principles*, 1986, pp. 106–109.
[293] Al-ʿAsalī, *Ḥammāmāt Dimashq*, 1980, pp. 45–52.

insulation between the bath's interior and exterior environments, thereby minimizing heat loss and maintaining the thermal comfort essential for the bath's function. [294]

Notably, the bath features a spacious and monumental al-Barānī hall (outer section), which is considerably larger than those found in contemporaneous baths. This architectural prominence underscores the bath's significance within the urban fabric and suggests a high volume of visitors frequenting the facility. Typically, the al-Jawwānī (inner section) of Ottoman baths is characterized by a square chamber surmounted by an oval dome. [295] However, Fathī Bath deviates from this norm; its inner section comprises square spaces covered by a massive dome nearly equal in scale to the dome above the al-Barānī hall. This dome eventually collapsed and was replaced by a flat ceiling. Figure (98).

The service rooms' ceilings are constructed with wooden beams spanning between arches, which transfer the structural loads to the supporting walls. Figure (100,101).

Arches constitute a significant architectural element throughout Fathī Bath. Semi-circular arches, characterized by openings smaller than a half-circle, are predominantly employed in doors and windows. In addition, the bath features a distinctive type of arch introduced during the Ottoman period: the broken arch. [296] This form consists of two segments, with the upper portion slightly concave outward and the lower portion curved inward, reflecting an evolution in architectural vocabulary and construction techniques of the era. Figure (100,101).

The Al-Barānī section (outer section) of Fathī Bath features several distinctive architectural elements, including wall cupboards and small bookcases. These cupboards vary in size but consistently maintain a square form topped with an arch. Notably, the wall cupboards in this section possess considerable depth, serving practical functions such as storage for patrons' clothing and bathing accessories. Beyond their utilitarian role, these cupboards contribute significantly to the aesthetic enrichment of the Al-Barānī walls. Figure (44).
From a decorative standpoint, the interior of Fathī Bath exhibits luxurious embellishment, characterized by a profusion of ornamental details emblematic of Ottoman-era artistic expression[297], thereby underscoring the bath's social prominence during its period of operation.
Decoration is especially prominent on the floors of the bath's various halls, which are paved with marble and stones of diverse colors arranged in intricate geometric patterns, sometimes exhibiting considerable complexity. Stucco decoration is also present, notably beneath the al-masātib (stone benches) in the Al-Barānī section and above the entrance door in the Al-Wusṭānī (intermediate) section. These stucco motifs predominantly feature floral designs, including the lotus flower and surrounding stems, which are hallmark motifs within Islamic decorative art. Figures (102,103).

Among the most notable decorative elements are the muqarnas, which appear in a variety of forms throughout the bath. These stalactite-like structures are employed architecturally at the corners of domes, serving as transitional elements between the square base of the chamber and the circular dome above, fulfilling both structural and ornamental functions. Figures (102,103).

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[294] Weber**,** *Ottoman Modernity and Urban Transformation (1808–1918),* 2009, pp. 200–202.
[295] Al-ʿAsalī, *Ḥammāmāt Dimashq*, 1980, pp. 49–52.
[296] Hakim, *Arabic-Islamic Cities: Building and Planning Principles*, 1986, pp. 109–110.
[297] Weber, *Ottoman Modernity and Urban Transformation (1808–1918),* 2009, pp. 206–207.

Additionally, the bath incorporates a series of decorative perforations within the domes, known as al-qamariyyāt. These openings, crafted in various geometric shapes, facilitate the diffusion of natural light, enhancing the interior ambiance. Figures (104)

The Fathī Bath also contains a fountain located within the Al-Wusṭānī section. This octagonal fountain is clad in alternating white and black marble, adorned with square geometric inscriptions. Serving both aesthetic and functional purposes, the fountain enhances the resting area by contributing to the visual appeal and regulating the microclimate through humidity dispersion. Figures (44,103)

IV.1.1.2.3.2.1.Documentation of Fathī Bath: Table (36,37).

Fathī Bath is renowned for its distinguished architectural features and exquisite decorative elements, which collectively exemplify the aesthetic and constructional qualities characteristic of its era, figure (99). Despite its significance, this historic bath has suffered neglect by responsible heritage authorities. Consequently, this research emphasizes the imperative of comprehensive documentation, encompassing photographic records, precise engineering surveys, and the generation of detailed architectural drawings utilizing advanced digital tools such as AutoCAD.

Extensive fieldwork was conducted across multiple visits to the al-Mīdān neighborhood, during which the researcher systematically measured the spatial voids, façades, and structural components of Fathī Bath. Measurement techniques employed included the use of traditional tape measures, Total Station equipment, and the triangulation method to ensure accuracy. The collected data were subsequently digitized and processed through AutoCAD software to produce accurate architectural plans.

These efforts yielded critical results that not only contribute to a rigorous understanding of the bath's existing condition but also provide a foundational basis for developing informed restoration strategies aimed at safeguarding Fathī Bath from progressive deterioration and potential structural failure over time.

Figure.98. Horizontal Plan of Fathī Bath.
The architectural plan illustrates the spatial organization of Fathī Bath, including the sequential layout of functional zones, al-Barānī, al-Wasṭānī, and al-Jawwānī, along with domed chambers, service rooms, and circulation paths.

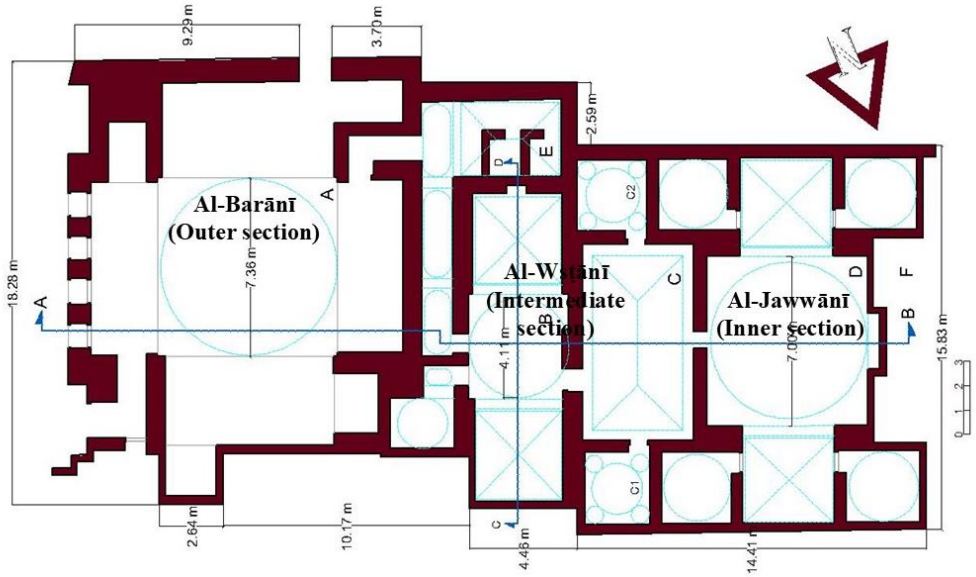


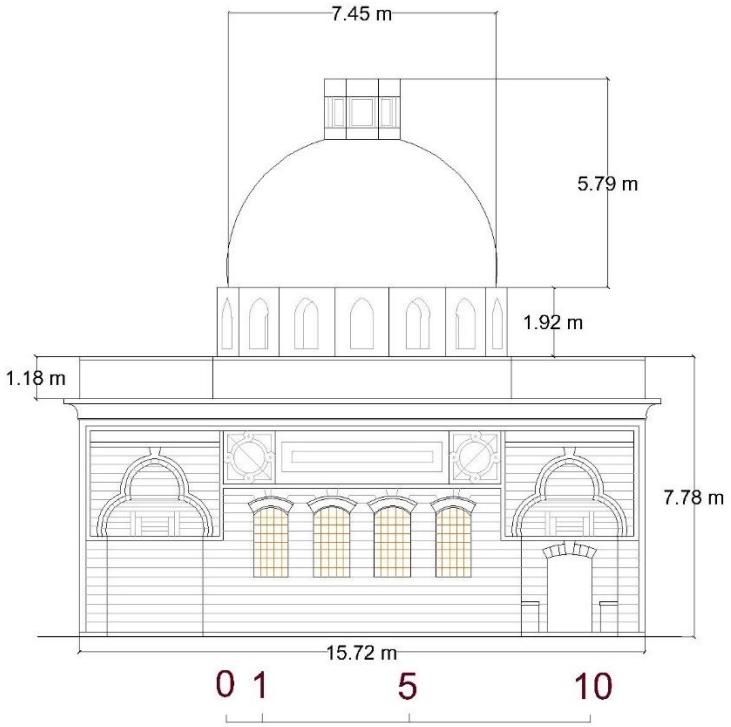
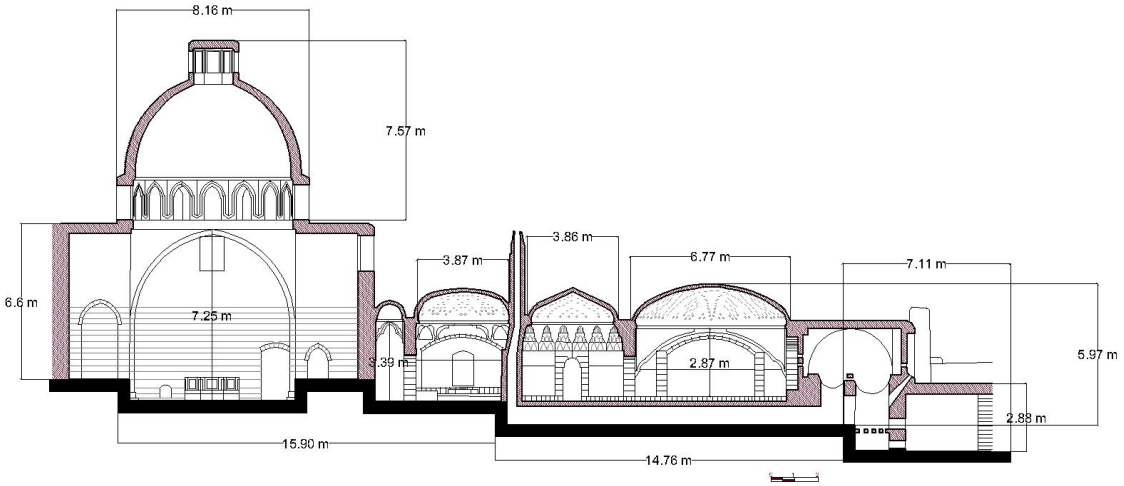
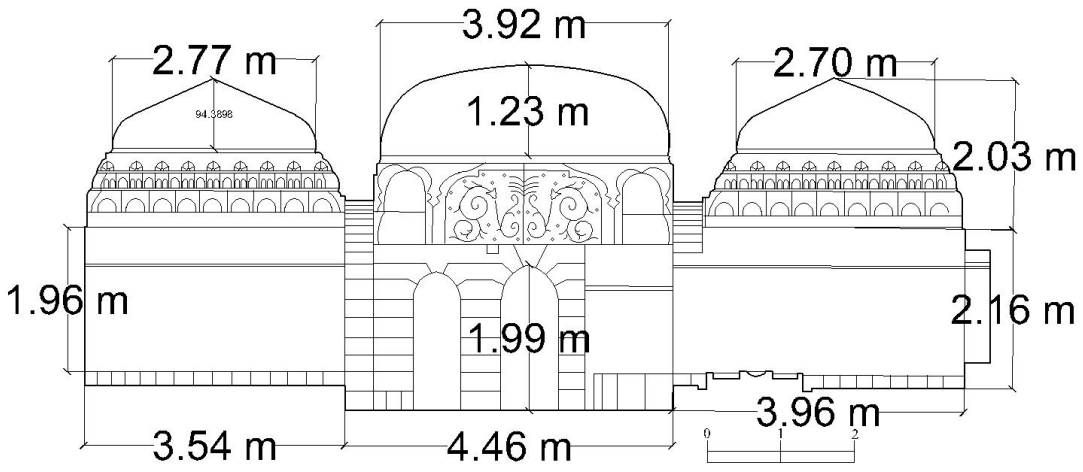
Figure.99. Main Façade of Fathī Bath. The elevation drawing highlights the symmetrical composition of the main façade, featuring arched windows, decorative panels, and the prominent central dome rising above the structure.	
Figure.100. Section B–B of Fathī Bath. This longitudinal section reveals the spatial sequence and volumetric hierarchy of the bath, emphasizing the structural dimensions of domes, vaults, and transitional spaces.	
Figure.101.Section A–A of Fathī Bath. This transverse section highlights key architectural elements, including domes, arches, and decorative detailing, revealing the structural proportions and stylistic features of the bath's interior.	

Table.36.Representative documentation outputs of the architectural plans of Fathi bath, produced through digital drafting and analytical processing using AutoCAD software.
(Source: Field documentation and digital reconstruction by the researcher, 2021)

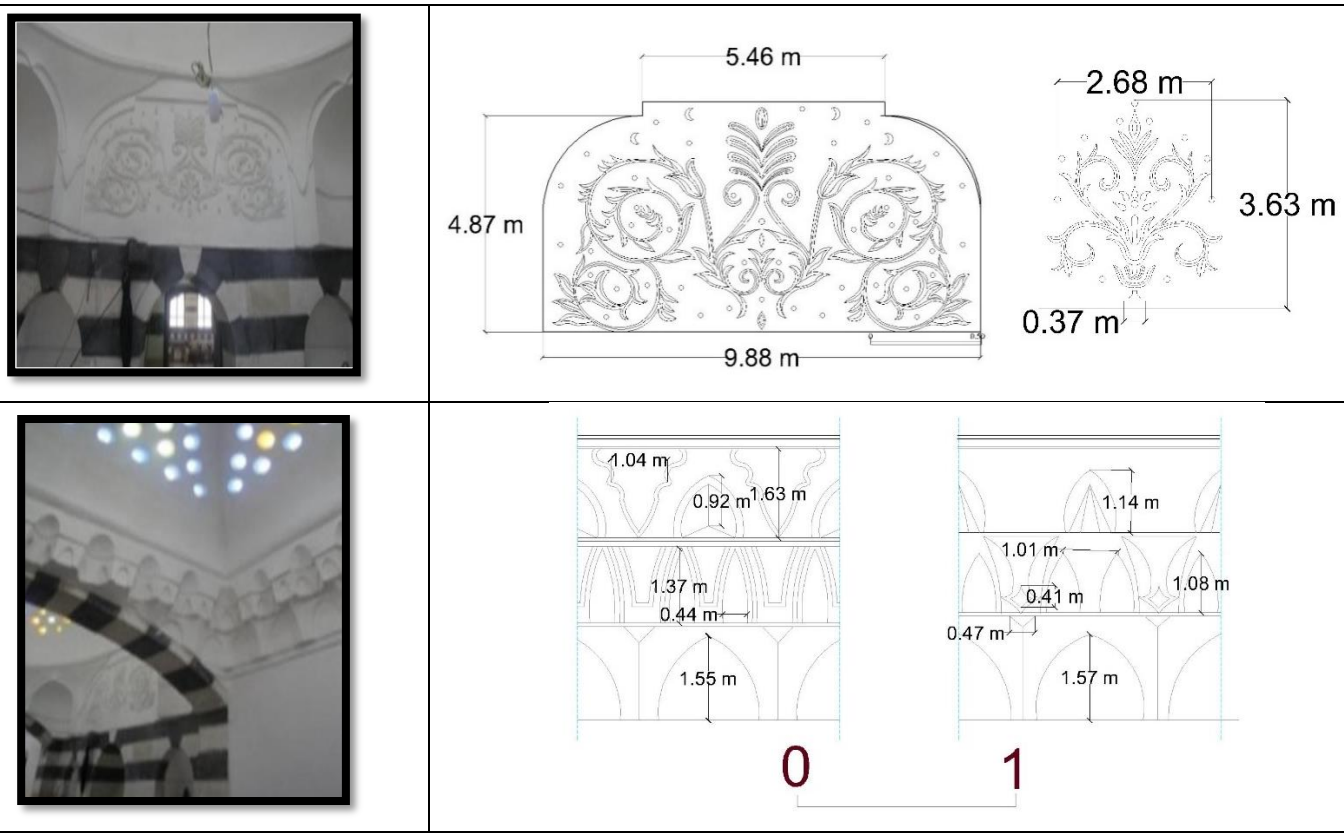


Figure.102. Documentation of decorative elements in Fathī Bath, based on field measurements and visual analysis.

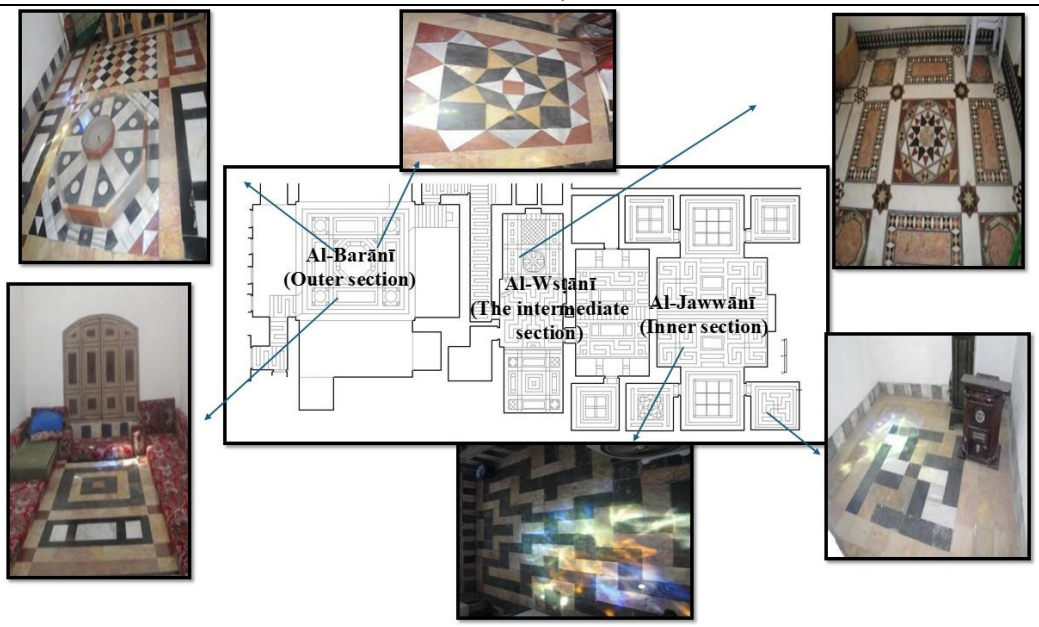
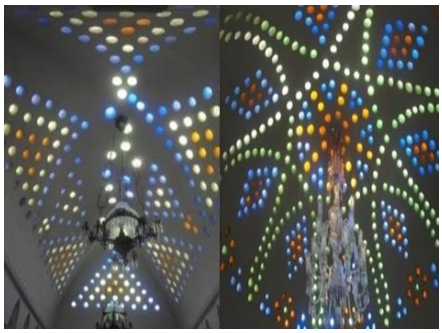


Figure.103. Detailed floor plan of Fathī Bath, highlighting the distribution and variety of decorative motifs integrated within the architectural layout.



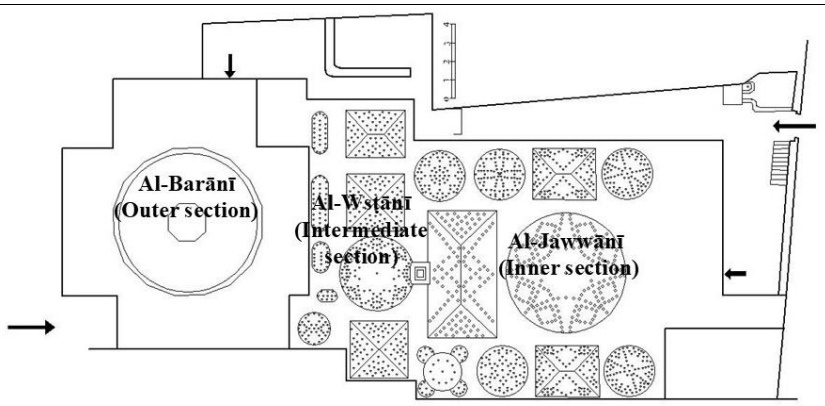


Figure.104. Documentation of the lighting openings (al-qamariyyāt) in Fathī Bath, illustrating their form, distribution, and role in natural illumination (Al-Wsṭānī (intermediate) -Al-Jawwānī (Inner) Sections).

Table.37. Summary of documentation outputs in Fathī Bath. (Source: Field documentation and digital reconstruction by the researcher, 2021)

IV.1.1.2.3.3. Al-Refāʿī Bath: Figure (22)- Figure (45).

The architectural plan of Al-Refāʿī Bath, figure (105), markedly differs from that of Fathī Bath, figure (98). While Fathī Bath features a linear-longitudinal layout, the plan of Al-Refāʿī Bath is more expansive with a non-linear spatial organization, characterized by a distinct distribution of its functional sections. Notably, the Al-Barānī section (outer section) connects indirectly to the service areas via a long, zigzagging corridor. This design serves dual purposes: mitigating the effects of climatic conditions such as extreme temperatures and air currents, and providing privacy by obstructing direct lines of sight from the exterior into the bath's interior spaces. Figure (105).

Architecturally, Al-Refāʿī Bath distinguishes itself from typical Ottoman-era baths through several structural features. The floor level of the Al-Barānī section is elevated relative to the other sections, facilitating functional segregation within the bath complex. This elevation also supports technical functions related to water pumping, enabling water to flow effectively from the supply source to the lower-lying sections. Furthermore, the floors within the Al-Jawwānī (inner) section are designed with a subtle incline toward designated sewage drainage points, thereby optimizing water removal. Figure (106,107).

A hallmark of Al-Refāʿī Bath is its meticulously engineered water distribution system, designed to prevent leakage throughout the complex. This system shares fundamental principles with the water drainage strategies employed in Fathī Bath and other historic baths in Damascus[298]. Given the continuous and voluminous water flow associated with bathing activities, careful planning and execution of drainage infrastructure are critical to avoid structural and hygiene issues resulting from water infiltration.

All tiled surfaces within Al-Refāʿī Bath are slightly inclined to facilitate the efficient channeling of water toward drainage points. Water removal in the bath complex is achieved through two primary mechanisms:

- Surface drainage via the sloped tile floors.
- Subsurface drainage through underground water canals.

[298] Tabbaa, *Constructions of Power and Piety in Medieval Aleppo*, 1997, pp. 48–50.

Al-Refāʿī Bath bears notable similarities to Fathī Bath, particularly in its use of analogous construction materials. The walls of Al-Refāʿī Bath are prominently clad with marble and black stone, a strategic choice aimed at mitigating the effects of the high humidity prevalent within the bathing sections, where water usage is substantial. The construction technique employed throughout the bath is characterized by simplicity, utilizing a palette of varied colored stones and marble, a practice deeply rooted in traditional Islamic architectural art. Figure (45).

From an artistic and decorative perspective (see Figures(108) and (109)), Al-Refāʿī Bath is distinguished by its restrained ornamental approach. The decoration is modest yet diverse, predominantly manifesting on the floors of all the bath halls through the use of marble in black and white, alongside black and pink stones, arranged in intricate geometric patterns. Complementing these features are key architectural elements such as the fountain, al-qamariyyāt (lunar openings) within the domes, muqarnas (stalactite-like vaulting), and al-ʿajamī ceilings, which collectively confer aesthetic distinction and grandeur upon the bath. Figure (45).

Among the bath's noteworthy features are the al-ʿajrān, large vessels used to receive and store bathing water from supply points within specialized bathing halls. Each bathing hall contains several of these al-ʿajrān, providing water for bathers. Al-Refāʿī Bath houses a substantial collection of al-ʿajrān, crafted from both stone and marble in a variety of colors. These vessels are often embellished with geometric motifs, inscriptions, and floral designs, underscoring their dual functional and decorative roles within the bath complex. Figure (45).

IV.1.1.2.3.3.1. Documentation of Al-Rifāʿī Bath: Tables (38,39).

Al-Rifāʿī Bath continues to function actively today, attracting visitors from various locations, particularly the al-Mīdān neighborhood. As one of the few historic baths in Damascus that remain operational, Al-Rifāʿī Bath holds significant cultural and social importance. This ongoing use underscores the critical need for comprehensive documentation, including the production of precise architectural plans using advanced digital technologies.

In response to this necessity, the researcher conducted detailed measurements and generated architectural drawings employing the latest computer-aided design applications. The outcomes of this documentation process are presented herein, providing essential data to support conservation and informed management of the bath's heritage.

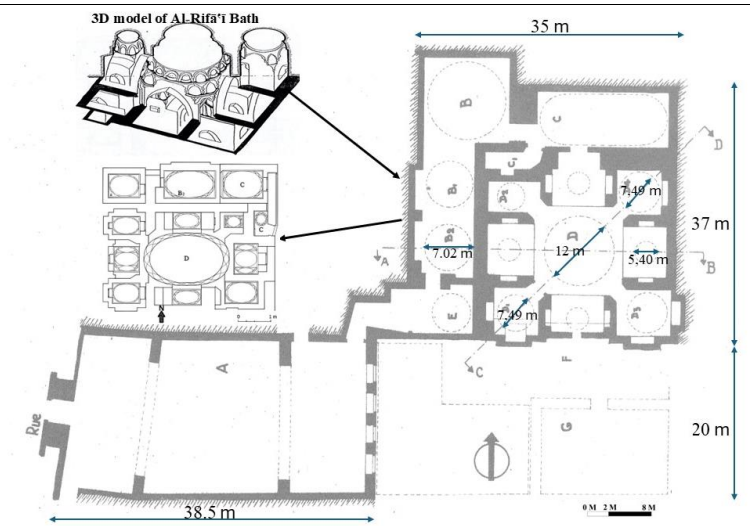
Figure.105. Floor plan of al-Rifāʿī Bath (and 3D model), showing the spatial organization of the bathing sequence from the entrance and service areas to the cold, warm, and hot sections.	

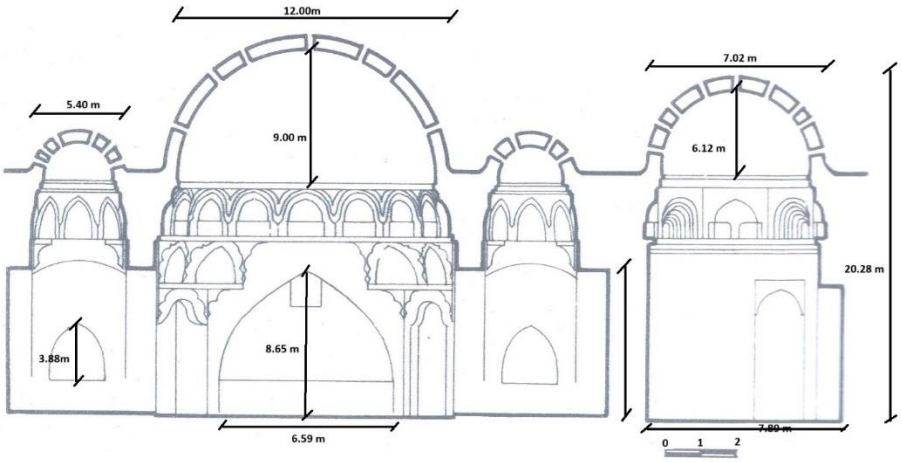
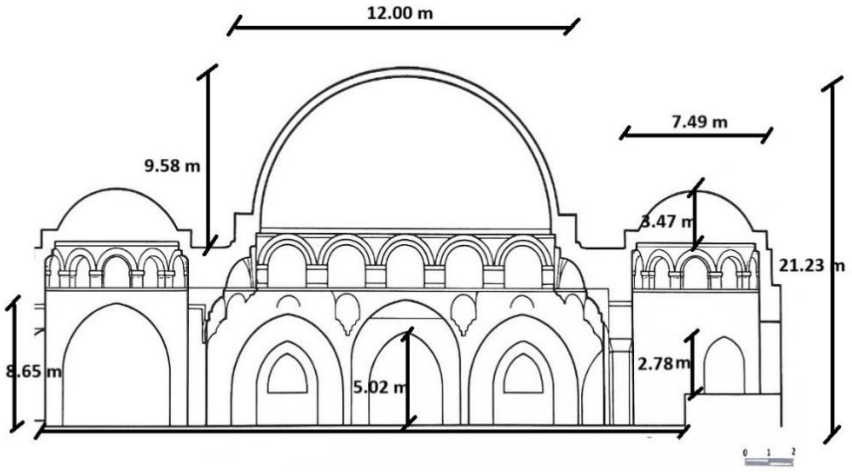
Figure.106. Section A–B of al-Rifāʿī Bath, illustrating a detailed architectural cross-section through the al-Jawwānī (inner) and al-Wasaṭānī (central) spaces, highlighting structural proportions, dome heights, and spatial articulation.	
Figure.107. Cross-section C–D illustrating the spatial hierarchy and varying floor and dome elevations within the Al-Jawwānī (inner section) of the bathhouse, highlighting the architectural articulation of domed and vaulted spaces.	

Table.38. Representative architectural documentation outputs of Al-Rifāʿī Bath, developed through digital drafting and analytical processing using AutoCAD software. (Source: Field documentation and digital reconstruction by the researcher, 2021)



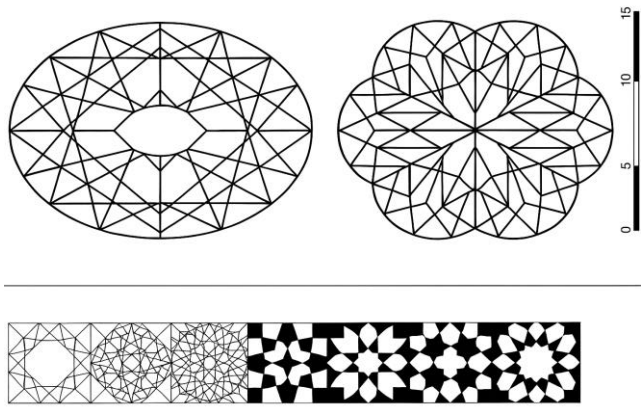


Figure.108. Star-shaped geometric motifs in the lobby of the Al-Wusṭānī (intermediate) section of Al-Rifāʿī Bath.



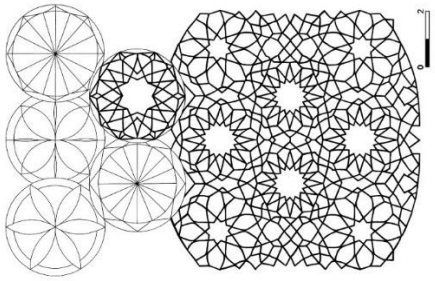


Figure.109. Geometric hexagonal motifs featuring a central star within the *Al-Jawwānī* (inner) section of Al-Rifāʿī Bath.

Table.39. Overview of the documentation results for Al-Rifāʿī Bath. (Source: Researcher's fieldwork and digital modeling, 2021).

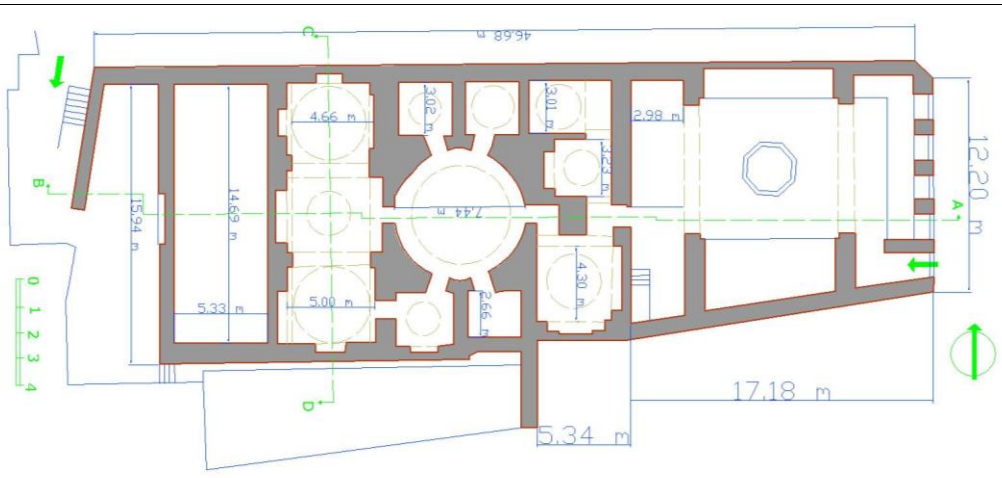
IV.1.1.2.3.4.Documentation of Al-Zīn Bath: Figure (22). Table (40).

Al-Zīn Bath is recognized as the largest bathhouse in al-Mīdān neighborhood (al-Mīdān al-Taḥtānī (Lower Mīdān)), and Damascus in terms of overall area[299]. Historical records attribute its construction to Muhammad bin Abdullah bin Shams al-Dīn bin al-Samsār[300],who served as the overseer of the city's grain stores prior to his death. Despite its considerable age and significance, detailed architectural documentation of Al-Zīn Bath is lacking within the archives of the General Directorate of Antiquities and Museums. [301]

This deficiency underscores the critical role of the present research in systematically documenting such an important heritage asset. Through numerous field visits, the researcher undertook extensive measurements employing both traditional tape measures and modern Total Station equipment, complemented by other analog documentation tools. The collected data were subsequently digitized and processed using software applications including AutoCAD, yielding precise architectural representations.

The outcomes of this comprehensive documentation effort are presented herein, forming a foundation for the development of informed restoration strategies aimed at preserving Al-Zīn Bath and facilitating its sustainable utilization.

Figure.110. Architectural plan of al-Zīn Bath, illustrating the spatial organization and functional zones typical of traditional Damascene ḥammāms, including the barrānī (outer section), wusṭānī (intermediate section), and jawwānī (hot section).



[299] Ragette, *Traditional Domestic Architecture of the Arab Region*, 2003, pp. 198–210.
[300] Tabbaa, *Constructions of Power and Piety in Medieval Aleppo*,1997, pp. 48–59.
[301] Al-Asad, *The Old City of Damascus: A Conservation Manual*, 2007, pp. 125–130.

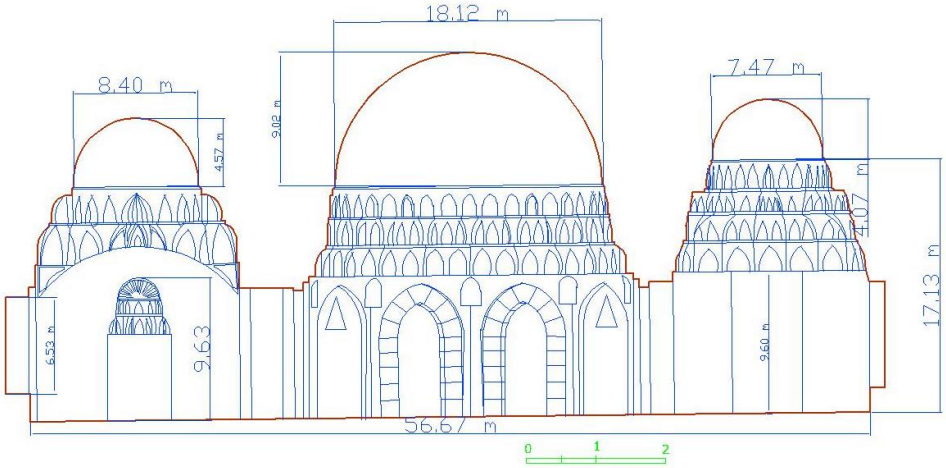
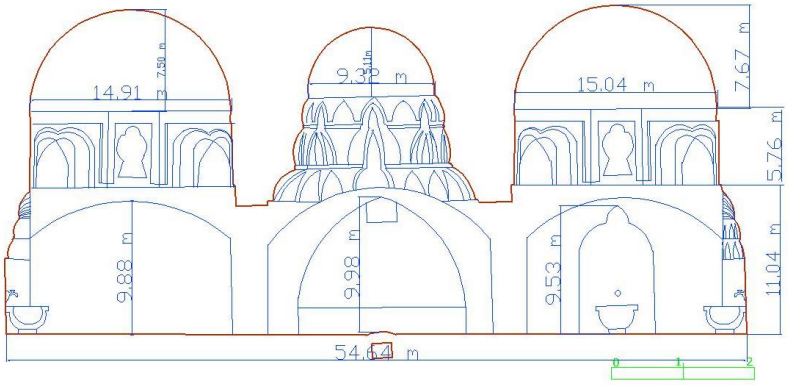
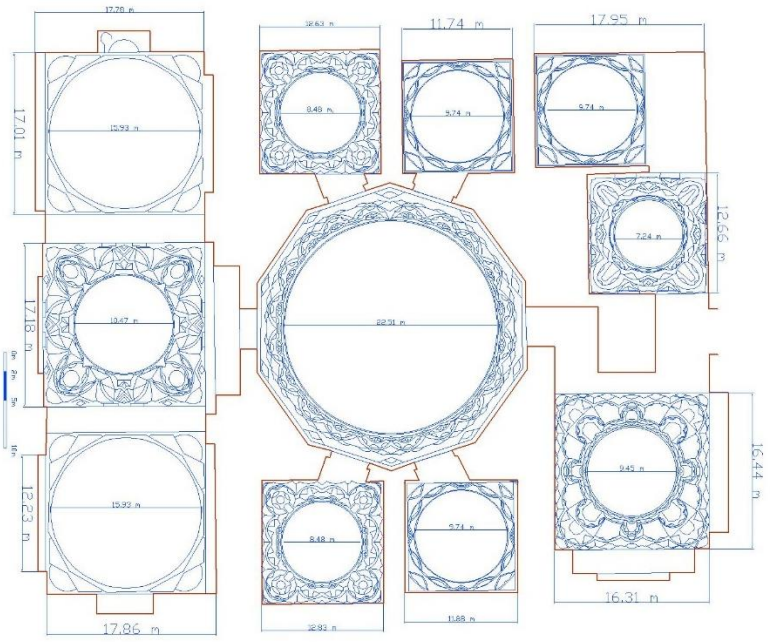
Figure.111. Section A–B of al-Zīn Bath, showing the vertical composition and structural articulation of the main domed spaces, including the central hall and flanking chambers. The drawing highlights the use of varying dome sizes and decorative elements characteristic of traditional Damascene ḥammāms.	
Figure.112. Section C–D of al-Zīn Bath, depicting the structural configuration and interior spatial elements, including domes, arches, and wall niches.	
Figure.113. Detailed plan illustrating the floor patterns and spatial arrangement within al-Zīn Bath, emphasizing the geometric layout of domed spaces and transitional zones.	

Table 40. Selected architectural documentation outputs of al-Zīn Bath, produced through digital drafting and analytical interpretation using AutoCAD. (Source: Researcher's fieldwork and digital reconstruction, 2021).

IV.1.1.2.4. Al-Bawāyik in Al-Mīdān Neighborhood: Figure (22).

Through an extensive descriptive and analytical study conducted by the researcher on the al-bawāyik scattered throughout the al-Mīdān area, as well as a comprehensive survey of these

structures, it has been determined that approximately forty-five bawāyik exist within the neighborhood.

The investigation revealed notable variations among these bawāyik, particularly with regard to their façades, roofing systems, and configurations of the interior spaces. In response to this diversity, the present research undertakes a detailed classification of the al-bawāyik within al-Mīdān, predicated on the distinct architectural characteristics exhibited by each structure. The classification is organized according to the following criteria:

IV.1.1.2.4.1. Classification of the Façades of Al-Bawāyik: Table (41).

The façades of al-bawāyik in al-Mīdān can be systematically classified based on the shape and number of arches present on each façade. This classification is summarized in Table (41).

- Al-bawāyik with a single arch (either round or pointed) constitute the majority, totaling nineteen properties. These are identified by their property numbers: 40, 294, 200, 322, 203, 122, 572, 573, 768, 378, 43, 310, 331, 201, 906, 29, 297, 303, 12, and 202.
- Al-bawāyik featuring a single arch accompanied by additional windows—either positioned above or to the side—or a main door number twelve. Their property numbers include: 703, 91, 377, 26, 181, 172, 159, 49, 137, 183, 566, and 588.
- There exists a unique bāyka within the al-Mīdān neighborhood characterized by a single arch, a window, and a balcony, identified by property number 94.
- Three al-bawāyik display façades with two arches; these correspond to property numbers 348, 370, and 591.
- Lastly, eight bāyik possess façades with a door but no arch, associated with property numbers 33, 39, 96, 559, 511, 196, 124, and 378.

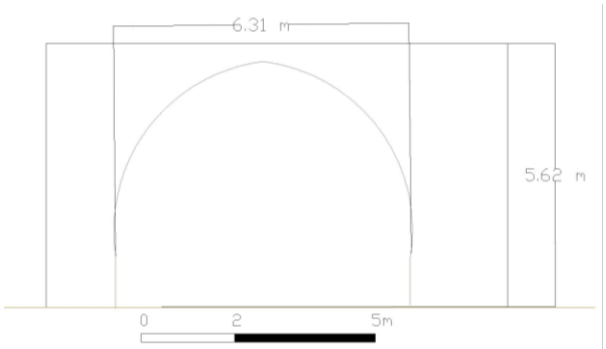
Al-Bāyka	The architectural model
 **Figure.114.** Architectural model of al-bawāyik façade featuring a single arch.	



Figure.115. Architectural model of al-bawāyik façade featuring two small upper windows symmetrically positioned on either side.

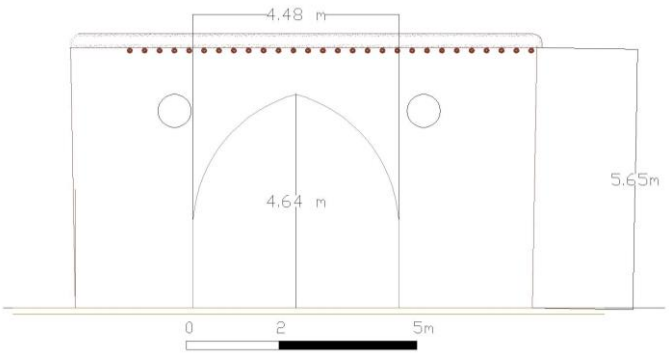




Figure.116. Architectural model of al-bawāyik façade featuring two large windows flanking either side.

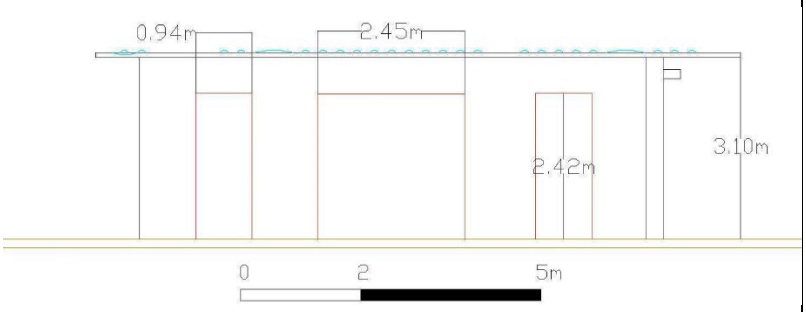




Figure.117. Architectural model of al-bawāyik façade featuring a door positioned on the left side.

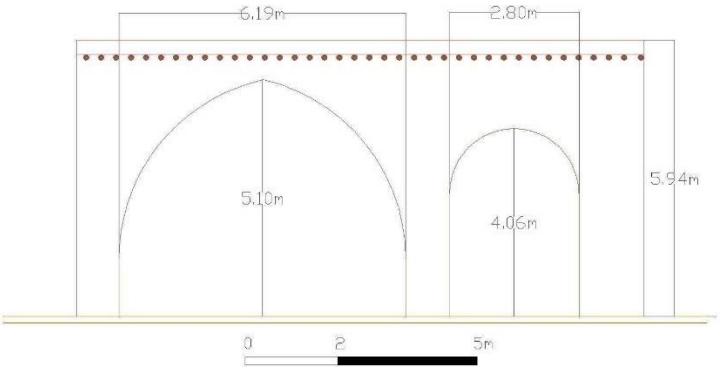




Figure.118. Architectural model showcasing ornamental wooden ceiling panels and traditional wooden doors.

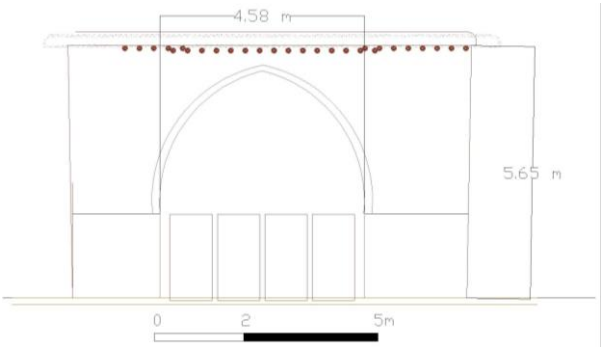


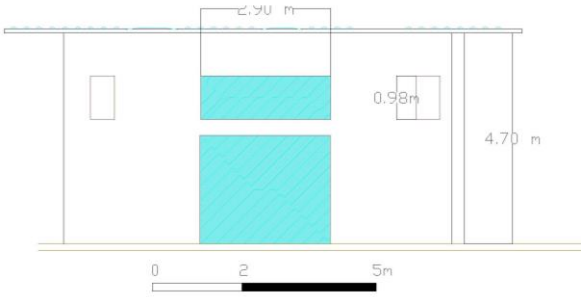
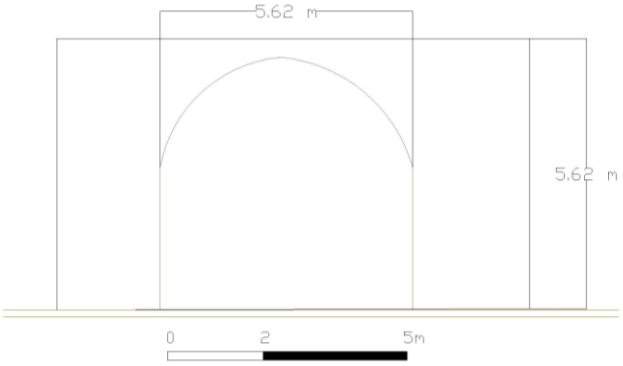
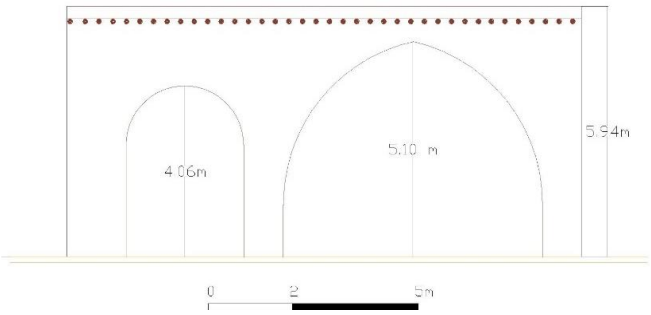
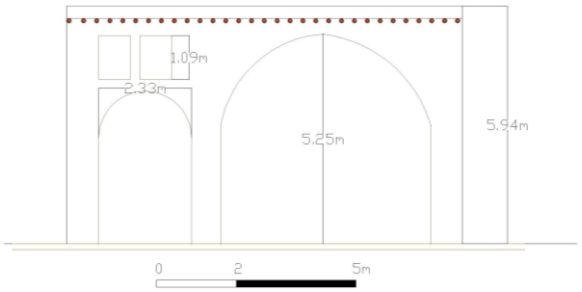
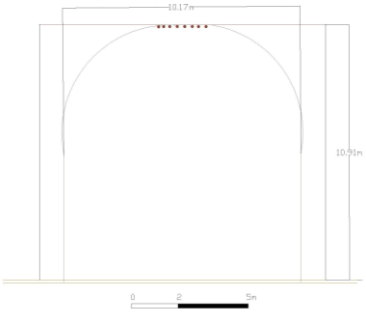
 **Figure.119.** Architectural model featuring upper-level windows and a metal door.	
 **Figure.120.** Architectural model exhibiting a minimal design characterized by a single, open space.	
 **Figure.121.** Architectural model featuring two doors and ornamental wooden ceiling panels.	
 **Figure.122.** Architectural model depicting one large door, one smaller door, and two windows positioned above the smaller door**.**	
 **Figure.123.** Architectural model illustrating a simple design characterized by a single space and wooden ceiling panels.	

Table.41. The detailed classification of al-bawāyik façades, based on the researcher's comprehensive survey within al-Mīdān neighborhood. (Source: Field documentation by the researcher, 2021).

IV.1.1.2.4.2.Classification of Al-Bawāyik According to Interior Spatial Configuration: Figure (124).

The interior spatial organization of the Bāyka is primarily determined by its floor area, which in turn influences both the depth and volumetric quality of the internal void as well as the number and arrangement of arches within the architectural plan. Typically, Bāyikāt are composed of a series of regular, successive single arches, reflecting a coherent structural rhythm. However, in cases where the length of the interior space increases disproportionately to its width, the system of arches is often doubled longitudinally to preserve the structural stability of the load-bearing system, particularly given the crucial role that arches play in transferring the weight of domes to the perimeter walls[302]. Figure (124).

Conversely, when the spatial footprint of the Bāyka is relatively constrained, the resulting interior void often assumes an irregular configuration, leading to a fragmented internal space composed of multiple sub-units or non-uniform spans[303]. Figure (124).

Based on the researcher's field survey of Al-Bawāyik in the Al-Mīdān district, the interior spatial typologies may be classified into three principal categories: Figure (124).

1. Bāyikāt composed of successive single arches arranged in a linear configuration.
2. Bāyikāt composed of double arches, employed to accommodate greater spatial depth while maintaining structural coherence.
3. Bāyikāt characterized by single arches or irregular doubling, typically found in limited or constrained spatial conditions, resulting in non-standard interior volumes.

This classification reflects not only architectural variability but also the adaptive strategies employed in the structural articulation of Al-Bawāyik in response to spatial, functional, and contextual demands.

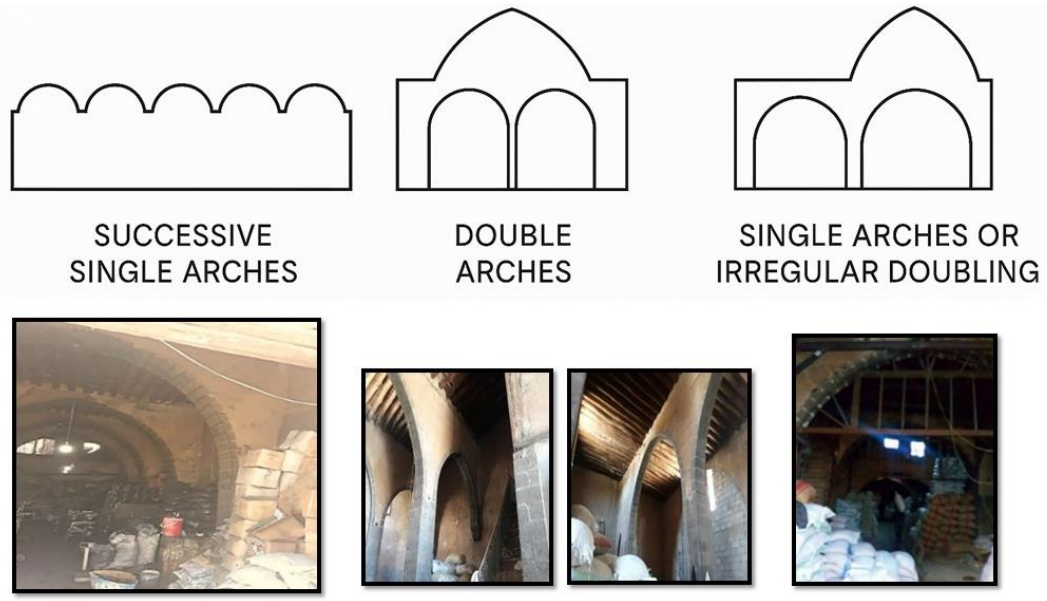


Figure 124. Typological classification of Al-Bawāyik based on interior spatial configuration. (Source: Researcher's field survey and documentation, 2021).

[302] Ragette, *Traditional Domestic Architecture of the Arab Region*, 2003, pp. 172–180.
[303] Allen, *Islamic Architecture: Form, Function, and Meaning*, 1995, pp. 144–150.

IV.1.1.2.4.3. Classification of Al-Bawāyik According to Roof Form: Figure (125).

Based on the field survey conducted by the researcher in the Al-Mīdān district, three distinct typological models of Al-Bawāyik can be identified, classified according to their roof structure:

1. The most prevalent type features a flat roof supported by wooden beams, with a total of 42 documented examples.
2. A rarer variation consists of a flat roof surmounted by a residential superstructure; only two such Bawāyik were identified, corresponding to property numbers 260 and 378/5.
3. The third type is characterized by a gabled roof, of which only a single surviving example remains, located on property number 137.

Thess typologies reflects not only constructional diversity but also variations in functional adaptation and urban integration within the architectural fabric of Al-Mīdān.

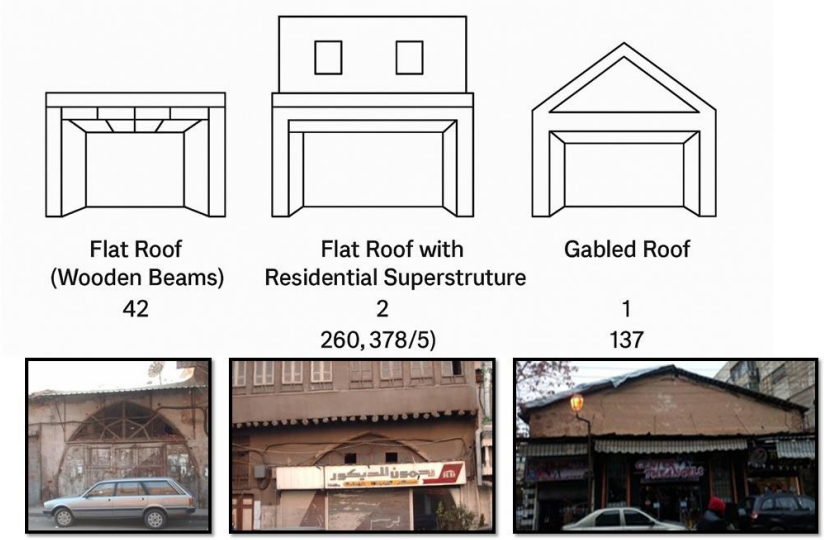


Figure.125. Roof typologies of Al-Bawāyik in al-Mīdān. These variations reflect the architectural diversity of traditional Damascene structures. (Source: Researcher's field survey and documentation, 2021).

IV.1.2. Digital Methods in Architectural and Archaeological Documentation:

Digital documentation methods, also referred to as electronic documentation techniques, have become essential tools in contemporary architectural and archaeological studies. The principal digital methods include: [304]

- Remote sensing.
- Global Positioning System (GPS).
- Geographic Information System (GIS).
- Three-dimensional (3D) documentation employing laser scanners and advanced digital equipment.

These technologies enable precise, efficient, and comprehensive recording of heritage sites, facilitating analysis, conservation planning, and virtual reconstruction.

IV.1.2.1. Remote Sensing: [305]

Remote sensing is the scientific discipline and methodology of acquiring information about objects or phenomena from a distance, utilizing diverse and precise sensors. These sensors are typically

[304] Bryan, *Metric Survey Specifications for Cultural Heritage*, 2009, pp. 10–25.
[305] Rayne, Remote Sensing and Archaeology in the Middle East, no. 1, 2016, 4–11.

mounted on aerial platforms such as airplanes, satellites, or spacecraft, and in some instances, are deployed via terrestrial vehicles equipped for specialized data collection.
The application of remote sensing extends beyond environmental monitoring to encompass the protection of humans, animals, and property. Notably, remote sensing has become instrumental in safeguarding archaeological sites, revolutionizing archaeological research by enabling the identification, analysis, and preservation of cultural heritage areas.

Syria, with its abundant archaeological sites spanning multiple historical epochs dating back over a million years, remains largely unexplored, with only an estimated five percent of sites having been discovered to date. This underscores the critical importance of remote sensing technologies in detecting previously unknown archaeological locations. Furthermore, remote sensing plays a vital role in monitoring and documenting extant sites, which often suffer from vandalism and progressive neglect, as exemplified by the situation in the al-Mīdān neighborhood.

- **Remote sensing techniques are primarily categorized into two domains:** [306]

- Aerial photography
- Satellite imagery

These methods provide complementary perspectives essential for comprehensive archaeological site analysis and heritage management.

IV.1.2.1.1.Aerial Photography:

Prior to 1903 AD, aerial photographs were primarily captured using balloons and dirigibles; thereafter, airplanes became the predominant platform for aerial imaging. While aerial photography itself does not inherently determine precise locations, spatial positioning is controlled through geographic coordinate systems, utilizing latitude and longitude to identify areas of interest. Geometric corrections are subsequently applied to rectify distortions and discrepancies between the photographic data and actual ground conditions. The corrected digital data are then converted into manually interpreted maps or datasets. [307]

Aerial photographs are instrumental in discerning whether an archaeological site is situated near residential developments or in remote, less accessible locations. Moreover, they facilitate the identification of archaeological remains concealed beneath dense vegetation, such as forests, trees, or cultivated fields. These images also assist in situating archaeological sites relative to prominent landmarks (e.g., on the right bank of a river, east of a lake, or behind a hill). [308]

The accuracy and efficacy of aerial photography depend on several factors, which can positively or negatively influence the quality of the information obtained. These factors include: [309]

- Variations in color gradation.
- Changes in soil coloration due to the presence of organic acids associated with archaeological deposits.

[306] Lasaponara,. Masini, *Satellite Remote Sensing: A New Tool for Archaeology*, 2012, pp. 5–10.
[307] Kennedy, Looking at the Past from the Sky: Aerial Archaeology in the Middle East." *Antiquity* 79, no. 305, 2005, 272–285.
[308] De Laet, Bahn. *History of Humanity: Prehistoric and Ancient Societies*, 2007, pp. 91–95.
[309] Palmer, *Aerial Archaeology*, 2003, pp. 17–26.

- Types and distribution of vegetation over archaeological sites.
- Morphological changes in the terrain.

Syria's rich archaeological heritage, exemplified by sites such as those within the al-Mīdān neighborhood,accentuates the importance of aerial photography for archaeological investigations. The pioneering use of aerial photography in Syria is attributed to French Air Force officer Podbar. Figure (126) , captured by Podbar, constitutes a seminal document that significantly contributed to the discovery of numerous archaeological sites. These historic images have since served as critical comparative benchmarks for assessing temporal changes within studied locales. [310]

In the context of al-Mīdān, aerial photographs taken by the Ottoman Air Force during World War I (ca. 1916–1918 AD) and by the French Air Force during the Mandate period (ca. 1925–1932 AD) have proven invaluable.[311], figure (126). These images provide a window into the neighborhood's historical urban fabric, revealing the substantial transformations it has undergone over time. Analysis of these photographs highlights the extensive urban development that has resulted in the loss of much of al-Mīdān's historic and cultural identity.



Figure.126. Aerial photograph of Damascus city, captured by French and Ottoman forces.

(Service Géographique de l'Armée (SGA), Paris- 1925-1935 AD).

IV.1.2.1.2.Satellite Photography:

Satellite imaging technology represents one of the most advanced and vital tools in contemporary remote sensing, enabling the acquisition of high-resolution spatial data with exceptional precision. This technology facilitates comprehensive analysis and monitoring of geographical and archaeological sites, offering critical insights that support conservation, urban planning, and environmental management. The high spatial, spectral, and temporal resolution of satellite images allows for detailed observation and documentation, making satellite photography indispensable in the study of heritage sites, including urban neighborhoods such as al-Mīdān. [312] Figure (127).

[310] Jundiyeh, *Architectural Documentation Using Modern Technologies*., 2015, pp. 101–105.
[311] Al-Hafez,*Urban Transformations in the al-Mīdān Neighborhood Through Historical Aerial Images*. , 2018, pp. 45–52.
[312] Parcak, *Satellite Remote Sensing for Archaeology*, 2009, pp. 1–16.

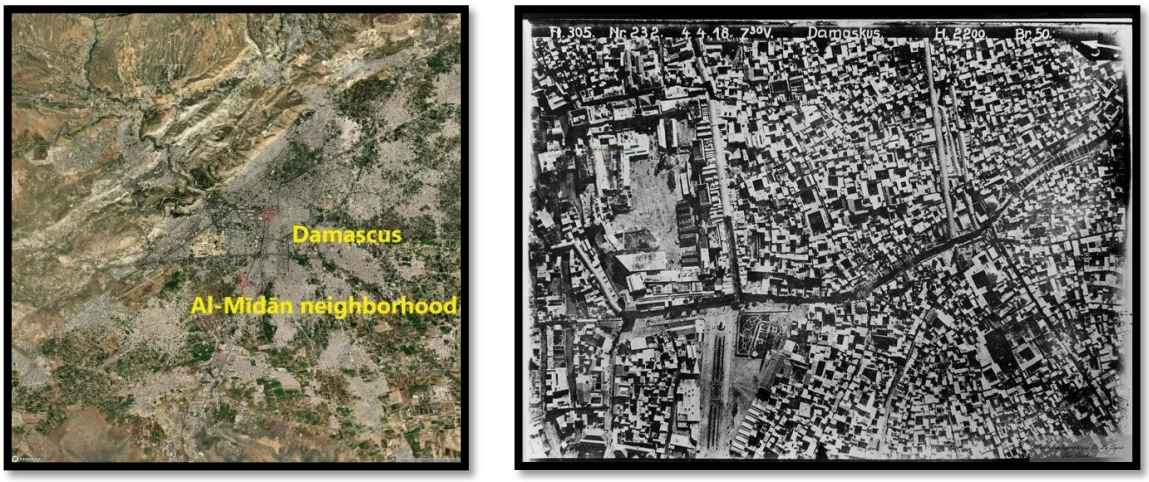


Figure.127. Satellite view of the Al-Mīdān neighborhood in Damascus.
(Source: Google Earth, 2025) / Online Museum of Syrian History. *Midan, Damascus,* 1929)

IV.1.2.1.3.Application of Remote Sensing Technology in the Al-Mīdān Neighborhood:

A series of historical aerial photographs capturing the al-Mīdān neighborhood were acquired during various periods, notably throughout the French Mandate in Syria (1920-1946 AD) [313]. These images serve as invaluable primary data sources for delineating the morphological evolution of the neighborhood, enabling a comparative analysis of its spatial configuration and architectural transformations over time. Quantifying the extent of urban and architectural change within al-Mīdān is feasible only through systematic comparison of temporally disparate aerial photographs. The earliest available images function as baseline references against which recent photographic data can be juxtaposed, thereby facilitating the identification and characterization of alterations within the built environment. [314]

Analysis of satellite imagery of the al-Mīdān neighborhood further elucidates the spatial relationships among extant archaeological structures, including their relative dimensions and proximities to one another, as well as their contextual integration within the fabric of historic Damascus (particularly inside the city'swalls). Moreover, such imagery contributes significantly to the study of historically significant thoroughfares, commercial, religious, and the important routes alike, including the pilgrimage road, the route to Egypt, and the Hawrān road, each of which played a pivotal role in the socio-economic life of the neighborhood. Figure (1, 57).

Beyond architectural and urban analyses, aerial and satellite remote sensing data permit the examination of the topographical characteristics of al-Mīdān and its environs. This includes the identification of geomorphological features relevant to hydrology, such as ancient irrigation canals, river basins, valleys, and wells. These hydrological features are critical for understanding historical water management systems that supported the neighborhood's agricultural and domestic needs.

The following figures (128-129-130-131), present selected historical aerial photographs of the al-Mīdān neighborhood, exemplifying the potential of remote sensing methodologies to document and analyze urban and archaeological transformations.

[313] Jundiyeh, *Architectural Documentation Using Modern Technologies*., 2015, pp. 95–112.
[314] Al-Hafez, *Urban Transformations in the al-Mīdān Neighborhood Through Historical Aerial Images*, 2018, pp. 45–58.





Figures.128–129. Historical aerial photographs of Damascus and the *Al-Mīdān* neighborhood (highlighted within the yellow circle), captured in 1918 AD by the Ottoman Air Force. *Online Museum of Syrian History. Midan, Damascus,* 1929)



Fig.130.Al-Mīdān (1962 AD) - Al-Qadam train station



Figure 131. Historical photograph of Al-Mīdān showing green area. (Source: *Online Museum of Syrian History. Midan, Damascus,* 1929)

Figure (132), sourced from Google Earth, depicts a contemporary satellite view of the Al-Mīdān neighborhood. A comparative analysis between these recent images and historical aerial photographs reveals a pronounced urban expansion in all directions, accompanied by a significant reduction in green spaces, which have nearly vanished over time.

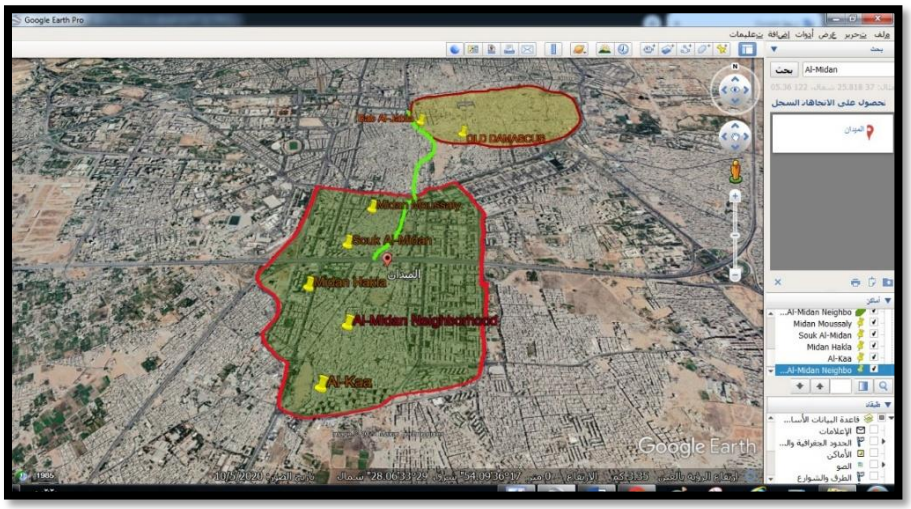


Figure.132. Aerial photograph of the *Al-Mīdān* neighborhood illustrating its spatial relationship to the old city of Damascus.(Source: Google Earth, 2019).

IV.1.2.2. Global Positioning System (GPS): [315]

The Global Positioning System (GPS) serves as a fundamental technology for navigation, widely employed in both civil and military aviation. Beyond its navigational applications, GPS has become an indispensable tool in the field of geospatial surveying and data acquisition.

[315] Conyers, *Ground-Penetrating Radar for Archaeology*, 2013, pp. 45–48.

GPS operates by transmitting signals from ground-based receivers to a constellation of satellites. By calculating the time delay of these signals and their spatial coordinates, the system accurately determines the receiver's location on the Earth's surface. This capability allows for precise geolocation without the necessity of physical reference points.
Owing to its high positional accuracy and operational independence, GPS is one of the most effective methods for collecting geospatial data. These data points can subsequently be integrated with ground control or scaling stations and processed via computer-aided design (CAD) software, facilitating detailed spatial analysis and architectural documentation.

IV.1.2.2.1.Application of GPS Technology in Al-Mīdān Neighborhood:

Syria, and specifically the Al-Mīdān neighborhood within Damascus, currently suffers from a paucity of precisely established local geodetic coordinate reference points. Within Damascus, only a limited number of such geospatial control points exist, notably including the minaret of the Umayyad Mosque (located inside the old city walls) and Al-Takya Al-Sulaymania (situated outside the city walls). [316]
For any spatially referenced project, the determination of accurate coordinates is imperative. Achieving high positional accuracy necessitates the integration of these coordinates with the broader Syrian local coordinate system, anchored at the Syrian Badia near Palmyra. This integration process involves a hierarchical geodetic linkage: coordinates are first tied to local benchmarks such as the Umayyad Mosque minaret, then connected to the Palmyra reference frame, subsequently aligned with the regional Mediterranean geodetic network, and ultimately referenced to global international coordinate systems. [317]
In this research, several critical coordinate points within the Al-Mīdān neighborhood were measured using Global Positioning System (GPS) technology, with all vertical measurements referenced to mean sea level in the Mediterranean. Notable examples include:

Location:	Latitude (N)	Longitude (E)	Elevation (m)
Al-Zāwiya al-Saʿadiya:	33.4850°	36.3000°	689
Al-Rifāʿī Mosque:	33.4895°	36.2955°	695

These geospatial data points provide essential spatial control for architectural documentation, archaeological analysis, and urban planning within the Al-Mīdān neighborhood.

IV.1.2.3.Geographic Information Systems (GIS) in the Documentation and Analysis of Al-Mīdān's Architectural Heritage:

Geographic Information Systems (GIS) have become essential tools in the field of heritage documentation, spatial analysis, and urban conservation[318]. In the context of Al-Mīdān, a historically significant neighborhood in Damascus, GIS serves as a dynamic platform for recording, analyzing, and interpreting complex architectural and urban datasets. Through the integration of spatial data, cartographic layers, and descriptive attributes, GIS allows for a multi-scalar understanding of the historical fabric and current conditions of Al-Mīdān's built heritage.

- **The Role of GIS in Heritage Documentation:**

GIS enables researchers to build spatially referenced databases for archaeological structures, facilitating data organization, analysis, and visualization[319]. For the Al-Mīdān neighborhood, GIS

[316] Kasser, Egels. *Digital Photogrammetry*., 2002, pp. 93–100.
[317] Sabbagh, Geodetic Networks and Coordinate Reference Systems in Syria, vol. 8, no. 1, 2010, pp. 22–35.
[318] Wheatley. Gillings, *Spatial Technology and Archaeology: The Archaeological Applications of GIS*, 2002, pp. 1–35.
[319] De Roo, B. & Bourgeois, J, GIS and Archaeological Heritage Management, vol. 11, no. 3, 2010, pp. 350–356.

was used to digitally document religious, commercial, and service buildings by geo-referencing cadastral maps and overlaying them with field-collected data. This spatial framework helps in assessing the architectural integrity, historical evolution, and conservation needs of these buildings.

- **Spatial Analysis and Visualization Capabilities:**

Through spatial analysis tools in GIS[320], it was possible to identify clusters of deteriorated buildings, assess historical distribution patterns, and prioritize conservation interventions. Temporal overlays helped visualize urban growth phases across Fatimid, Ayyubid, Mamluk, and Ottoman periods. The system also facilitated functional zoning analysis, distinguishing between residential and service buildings, and highlighted imbalances that may inform urban policy.

- **Advantages of GIS for Preservation Strategies:**

The GIS model supports heritage planning by generating accurate maps for documentation, conservation proposals, and public awareness. It enhances the efficiency of restoration by highlighting urgent interventions based on building condition and historical significance. Furthermore, GIS fosters multidisciplinary collaboration by integrating archaeological, architectural, and urban data within a unified analytical framework. [321]

IV.1.2.3.1.Application of Geographic Information Systems (GIS) in Al-Mīdān Area: Al-Mīdān Musallī Segment as a Case Study:Figure (22,133).

The Al-Mīdān Musallī segment was chosen as a pilot case for applying GIS technology, marking the first such initiative in this district. The methodology included the digitization of cadastral maps, the classification of heritage assets, and the creation of a comprehensive spatial database. Religious, commercial and service buildings were surveyed, documented, and categorized by function, condition, and historical period. The GIS environment allowed for real-time querying and visualization of building attributes including area, construction material, damage status, and associated imagery.

The following section outlines the methodological stages employed by the researcher in the application of Geographic Information Systems (GIS) for the documentation and spatial analysis of the Al-Mīdān Musallī segment, serving as a pilot case within the broader Al-Mīdān neighborhood. Notably, this marks the first recorded implementation of GIS technology in Al-Mīdān, rendering the outcomes both innovative and of considerable academic value. The process was conducted in four principal phases:

1. **Data Collection Phase: Table (42,43).**

This initial stage involved the systematic aggregation of spatial, architectural, and historical data pertaining to the Al-Mīdān Musallī segment. Sources included cadastral maps, historical records, and in-situ surveys. The purpose was to establish a comprehensive dataset to serve as the foundation for GIS integration.

2. **Data Processing Phase:**

In this stage, the collected data underwent classification, structuring, and formatting to ensure compatibility with GIS software. The procedure was initiated by importing a geo-referenced base map of the study area, Figure (133), into the GIS environment. This foundational step was essential for the creation of a structured geodatabase aimed at systematically documenting all archaeological structures within the segment. Subsequent steps involved attributing metadata to each building,

[320] Sampaio, A.Z. & Mateus, J, GIS for Cultural Heritage Conservation, *J. Cultural Heritage Management*, 2018, pp.2–15.
[321] Campana, S. & Piro, S., *Seeing the Unseen*, 2009, pp. 229–235.

enabling spatial queries, historical classification, and further analytical operations within the GIS framework.

3. **Data Management and Control Phase: Figures (134,135).**

This phase is dedicated to the configuration, structuring, and operational management of the geospatial database, encompassing processes such as data retrieval, updating, deletion, and restoration. It is carried out in two key steps:

- First, the archaeological buildings documented within the Al-Mīdān Musallī segment are digitally represented on an electronic GIS map. This enables the construction of a relational spatial database wherein each structure is linked to a comprehensive set of attributes, including: building name, precise floor area, height, architectural function, structural condition, property number, and historical period. This digital environment allows for interactive querying and visualization of architectural data.
- Second, individual buildings, whether religious or commercial, can be selected for detailed examination. To enhance the informational depth of the database, additional documentation is integrated into the GIS platform, including photographic records, aerial imagery, horizontal architectural plans, structural damage reports, and comprehensive historical analyses. This multi-source input strategy ensures a holistic understanding of each site's current condition and historical significance.

4. **Data Organization and Analytical Processing Phase: Figures (136,137,138).**

In this stage, the previously entered data undergoes systematic organization and analytical processing using the tools embedded within the GIS platform. The objective is to derive new, actionable insights from the existing dataset. Analytical procedures include condition assessment mapping, spatial pattern recognition, and comparative historical analysis, all of which contribute to the formulation of preservation strategies and intervention priorities. By identifying buildings at high risk of degradation, this phase directly supports evidence-based decision-making in the conservation and sustainable management of Al-Mīdān's architectural heritage.

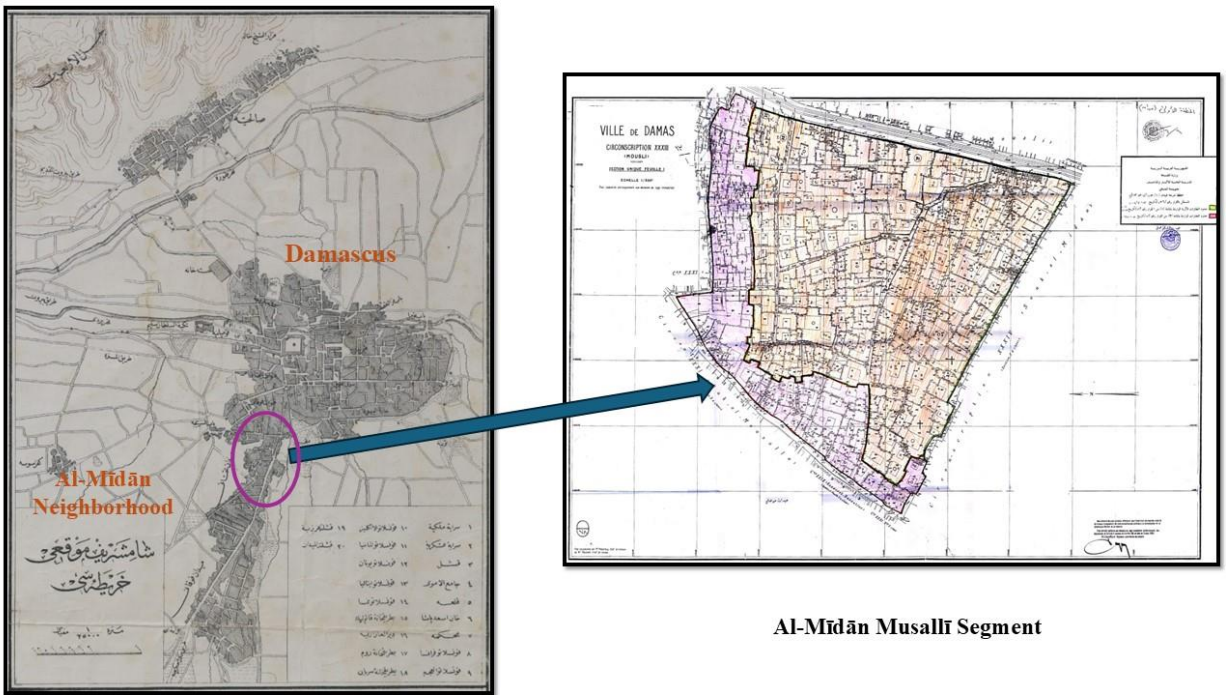


Figure.133. Location of the Al-Mīdān neighborhood within Damascus (left) and detailed cadastral map of the Al-Mīdān Musallī segment (right). The map supports spatial analysis and heritage documentation through GIS by illustrating the neighborhood's urban structure and parcel distribution. (Source: Al-Azm,1994).

IV.1.2.3.1.1.Field Data Acquisition for Archaeological Structures within the Al-Mīdān Musallī Segment: Table (42,43).

As part of the fieldwork undertaken in the Al-Mīdān Musallī segment, a comprehensive architectural and historical survey was conducted to document the area's existing archaeological heritage, with a particular focus on religious and commercial buildings. This phase of data acquisition was critical in establishing a reliable foundation for subsequent spatial analysis within the GIS environment. The collected data included a wide array of parameters such as property number, building name, historical period of construction, architectural typology, number of floors, physical condition, total surface area (in square meters), and functional classification. Each building was georeferenced and its attributes were encoded into the GIS database, facilitating comparative studies and thematic mapping. The results of this survey are systematically tabulated in Tables 42 and 43, which collectively present the structural and functional diversity of the built environment within this historically significant segment of Al-Mīdān.

Property No. (Religious Use)	Building name	Historical Period	Height M	Physical Condition	Area M^2
24	Al-Qurashī mosque	Mamluk	One floor	good	102.492
101	Abu Al-Wafā Al-Musallī mosque	Mamluk	One floor	good	89.354
175	Lady of Al-Niyāḥ church	Ottoman	two floors	good	767.65
187	Men Cemetery	Mamluk	One floor	good	134.355
196	Ḥanānya church	Ottoman	Two floors	good	896.475
240	Al-Musallī mosque	Mamluk	One floor	good	79.457
322	Manjik mosque	Mamluk	One floor	good	214.3
414	Sīdī Ṣuhīb mosque	Ayyubid	One floor	good	172.285
415	ʾAraq Al-Shadar mosque	Mamluk	One floor	good	118.381
234	Al-Qawwās mosque	Ottoman	One floor	good	897.539
302	ʿAql Al-Musalli Cemetery	Ottoman	One floor	good	108.852
298	Al-Harmalī Tomb	Mamluk	One floor	good	414.022
308	Abu Al-fulus osque	Fatimid	One floor	good	142.217
21	Abu Al-Nūr Tomb and Cemetery	Mamluk	One floor	good	97.799

Table 42. Catalog of religious buildings in the Al-Mīdān Musallī sector.

This table presents a classification of Religious structures identified within the Musallī subdistrict of Al-Mīdān neighborhood. The documentation is based on field surveys and site analyses conducted by the researcher in 2021.

Commercial Property Number	Building name	Historical Period	Height M	Physical Condition	Area M^2
29	Nabīl Sharbajī Bauyka	Ottoman	One floor level	Bad	500.074
33	Al-Harash for feed Bāyka	Ottoman	One floor level	Fair	155
281	Zabad Bāyka	Ottoman	Two floor level	Fair	318

297	Al-Haristānī Bāyka	Ottoman	One floor level	Bad	383
303	Al-Harash Bāyka	Ottoman	One floor level	Fair	417
310	Abu Wāhid Shtāwī Bāyka	Ottoman	One floor level	Bad	95.99
323	Shām Al-Khayr Bauyka (Al-Dikmak before)	Ottoman	One floor level	Good	99.32
322	Hilat Al-Sahāba Bāyka (Adnān ʿAjlwnī)	Ottoman	One floor level	Good	194
331	Muwafaq Al-Zaʿīm	Ottoman	One floor level	Bad	435
377	Riyād Sammān	Ottoman	One floor level	Fair	228
378	Hashim Al-Hirish	Ottoman	One floor level	Fair	811

Table 43. Inventory of archaeological buildings in the Al-Mīdān Musallī sector.
This table documents historically significant structures (Commercial buildings) located in the Musallī subdistrict of the Al-Mīdān neighborhoodThe data were compiled through on-site fieldwork conducted by the researcher in 2021.

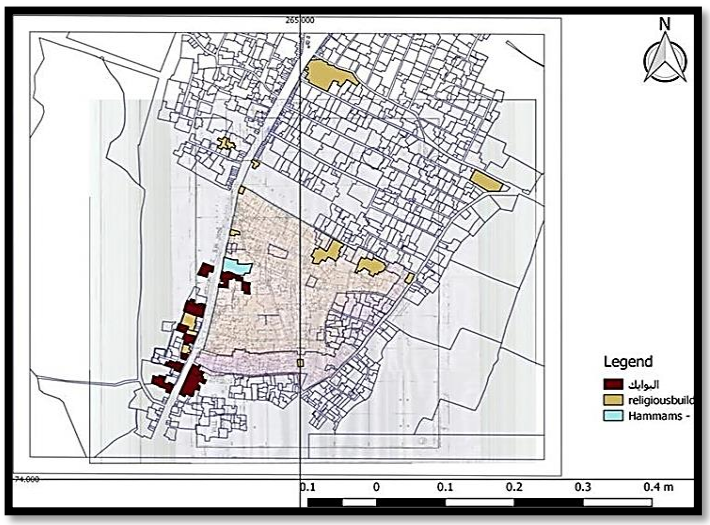
IV.1.2.3.1.2.Analysis of Results and Cartographic Outputs Derived from GIS Application in the Al-Mīdān Musallī Segment: Table (44).

The following section presents a series of cartographic visualizations and analytical outputs generated through the application of GIS within the Al-Mīdān Musallī segment. These maps, developed by the researcher, serve as a critical tool in interpreting spatial data, revealing patterns in architectural typology, historical distribution, and physical condition of the built heritage. Moreover, the results illustrate the multifaceted potential of GIS in supporting heritage management strategies, particularly in the planning, prioritization, and implementation of conservation efforts within the Al-Mīdān area. The visual outputs not only enhance the understanding of the site's structural and historical dynamics but also provide an evidence-based framework to inform sustainable preservation policies.

- The quality and analytical depth of GIS outputs are directly proportional to the quantity and richness of the input data. The more comprehensive the entered information, the more nuanced and reliable the resulting spatial analyses and comparative cartographic outputs become. Upon completion of data processing within the GIS environment, the system generates precise calculations of property area, along with corresponding cadastral maps and georeferenced plans, thereby facilitating rigorous spatial evaluation[322]. Figures (134,135).
- GIS also facilitates the systematic assessment of the structural condition of heritage buildings.
  By integrating detailed construction-related data into the geospatial database, GIS enables the identification and classification of buildings based on their physical state. This capability is instrumental in establishing a hierarchy of restoration priorities and in planning targeted emergency interventions for structures exhibiting critical levels of deterioration. Such analysis enhances the strategic allocation of conservation resources and supports proactive heritage management. (Refer to Figure 136).

[322] Wheatley, D. & Gillings, M., *Spatial Technology and Archaeology*, 2002, pp. 22–29.

- GIS also enables comparative analysis across distinct historical periods of architectural development.
  By integrating temporal data layers into the geospatial framework, the system facilitates the visualization and comparison of buildings based on their respective historical epochs. This temporal-spatial analysis provides critical insights into the chronological distribution, evolution of architectural typologies, and urban growth patterns within the studied area. Such capabilities are essential for understanding heritage stratification and informing context-sensitive conservation strategies. (Refer to Figure 137).
- GIS further facilitates the analysis of functional land use distribution, particularly the ratio between service-oriented and residential buildings within the studied area. By classifying structures according to their primary function and overlaying this data spatially, GIS enables the calculation of averages and proportional relationships between different building types. This form of analysis is instrumental in understanding the functional zoning dynamics of the urban fabric and can support urban planning, heritage management, and socio-spatial assessments. (Refer to Figure 138).



Religious Buildings **Al-Bawāyik** **Baths**

Figure.134. GIS-based Spatial Distribution of Religious, Bathhouse, and Commercial Structures. Selecting a building within the GIS interface provides access to detailed records, including floor plans, historical context, photographs, and 3D reconstructions where available, enhancing both analysis and interpretation.

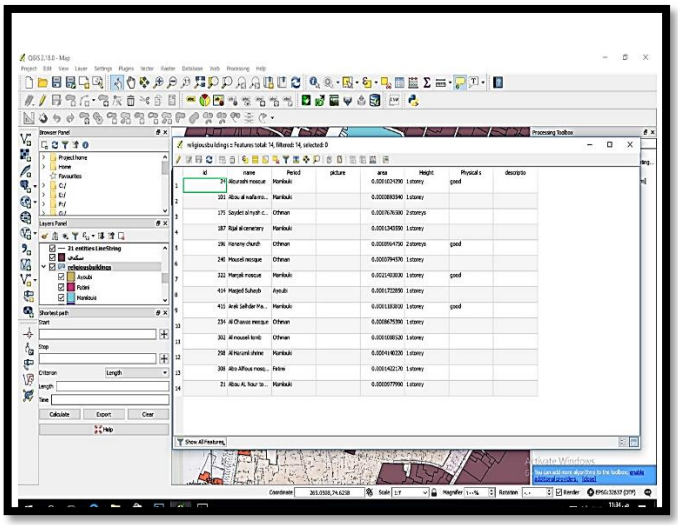


Figure.135. Tabulated data of documented buildings: ID, period, height, and condition.
Based on 2021 fieldwork, this dataset supports analysis and conservation of Al-Mīdān Musallī structures.

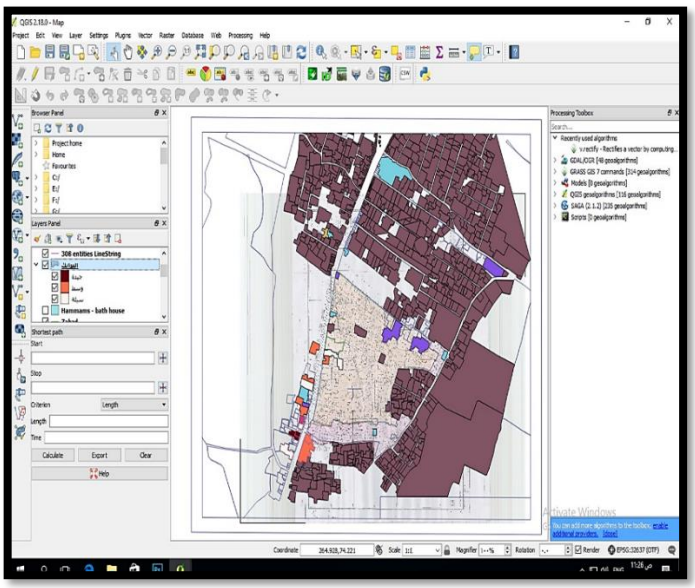
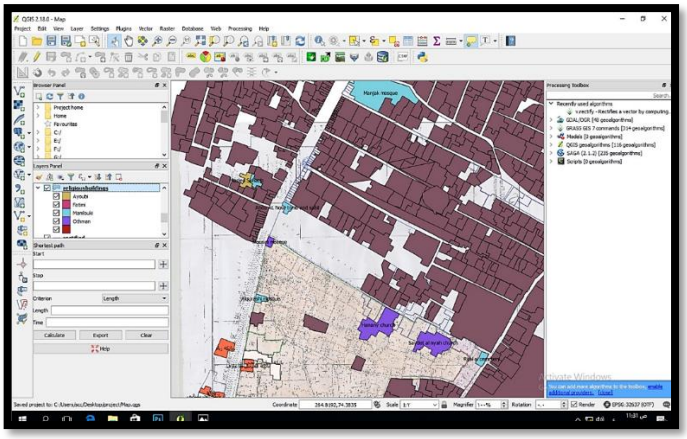
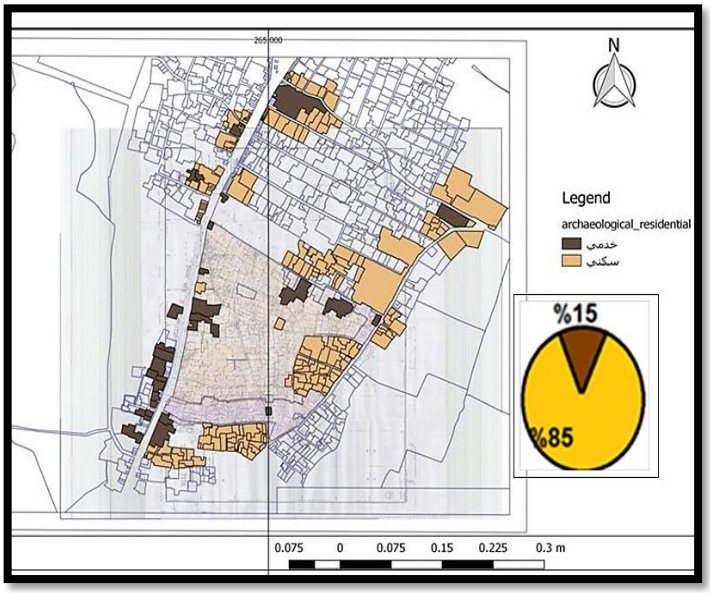
Figure.136. Construction conditions of buildings within the Al-Mīdān Musallī area. This GIS-based visualization classifies the surveyed buildings according to their current physical condition, ranging from stable to deteriorated, based on field research conducted in 2021. The map supports conservation planning by identifying structures requiring urgent intervention.	 **Bad** **Fair** **Good**
Figure.137. Spatial distribution of buildings by historical period in the Al-Mīdān Musallī area. This GIS-based map categorizes documented structures into four distinct historical phases based on architectural analysis and field data. The classification aids in understanding the chronological layering of the urban fabric.	 **Ottoman** **Mamluk** **Fatimid** **Ayyubid**
Figure.138. Functional Distribution of Buildings within the Studied Area: 15% Service-Oriented Structures vs. 85% Residential Buildings The data presented in this figure reveals a significant predominance of residential buildings (85%) over service-oriented structures (15%) within the Al-Mīdān study area. This imbalance underscores the urgent need to establish regulatory frameworks aimed at controlling unplanned urban expansion and ensuring a more sustainable and functionally integrated urban fabric.	

Table.44. Analytical results and cartographic outputs generated through GIS application in the Al-Mīdān Musallī sector. The table presents synthesized data and spatial interpretations derived from GIS-based documentation, supporting the assessment of historical layers, functional typologies, and preservation priorities within Al-Mīdān neighborhood. (Source: Author's field survey and analysis, 2021)

IV.1.2.3.1.3.Workflow of GIS application in Al-Mīdān Neighborhood:

Through the application of GIS to the Al-Mīdān Musallī Segment, the methodological workflow can be systematically refined and restructured into the following sequential stages. This restructuring facilitates the development of a standardized methodology that can be effectively scaled and applied to the broader context of the entire Al-Mīdān neighborhood.

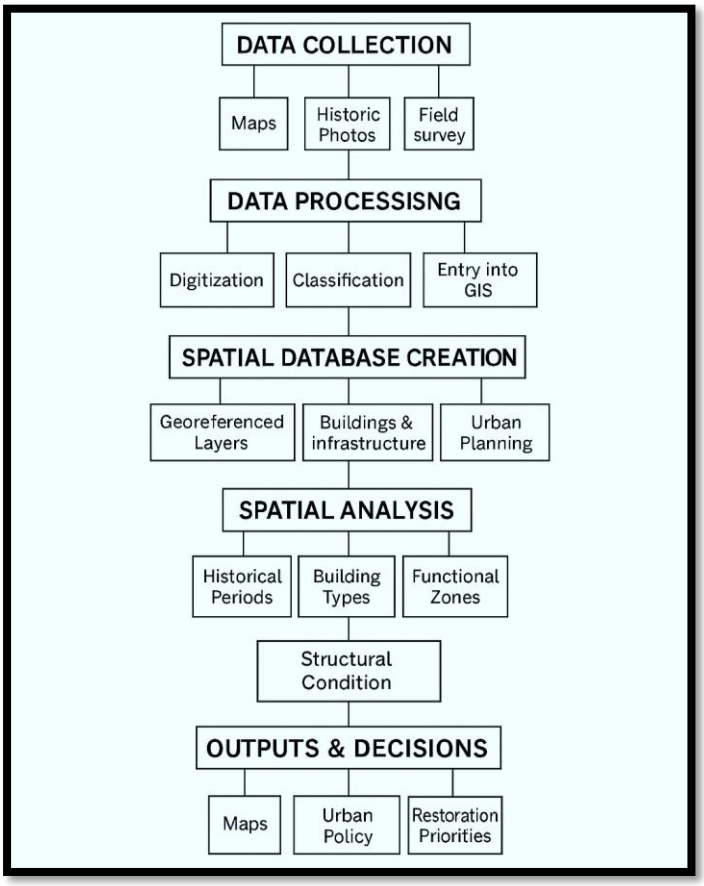


Figure.139.Workflow of GIS application in Al-Mīdān Neighborhood
(Source: The Researcher-2025)

IV.1.2.3.2.Conduct a comprehensive study of the entire Al-Mīdān neighborhood by applying Geographic Information Systems (GIS) according to the previously established methodological framework, figure (139).

IV.1.2.3.2.1.Analysis of Results and Cartographic Outputs Derived from GIS Application in the Al-Mīdān heighborhood:

This section presents GIS-based maps and analyses of the Al-Mīdān neighborhood, highlighting patterns in building function, historical phases, and physical condition. These visual outputs support informed heritage management and offer a data-driven basis for conservation planning:

IV.1.2.3.2.1.1.GIS Analysis of Architectural Chronology: Distribution of Old and New Buildings in Al-Mīdān Neighborhood: Table (45).

This thematic map, figure (140), produced through Geographic Information Systems (GIS), provides a spatial analysis of the chronological stratification of buildings within the Al-Mīdān neighborhood. The area enclosed by the heritage boundary (blue line) demarcates the historical urban core, while buildings are classified into two distinct categories:

- Old Buildings (light brown).

- Contemporary Urban Fabric (red).

1. Chronological and Morphological Layering: figure (140).

The GIS classification reveals a concentrated presence of old buildings within the heritage boundary, affirming the area's status as a historical preservation zone. These structures date back to the Ottoman, Mamluk, or earlier Islamic periods, characterized by traditional construction materials, inward-oriented courtyards, and adaptive reuse over centuries.

In contrast, Non-historic buildings buildings, marked in red, are dispersed both within and around the heritage perimeter. While some appear to coexist within the historic core, possibly due to reconstruction or urban infill, others form a ring around the boundary, indicating contemporary urban expansion and post-traditional planning interventions.

2. GIS Insights and Spatial Interpretation: figure (140)

Through GIS, several analytical insights can be derived from this map:

- Heritage vulnerability zones: Clusters of red (new) buildings within the heritage boundary may signal pressures of urban modernization on heritage integrity.
- Encroachment detection: GIS enables monitoring of architectural encroachment and potential disruption of historical fabric due to non-contextual developments.
- Urban layering analysis: By overlaying this layer with historical cadastral maps, a temporal-spatial narrative of urban change can be reconstructed.

3. Conservation and Urban Planning Applications:

This map, figure (140), serves as a foundational tool for:

- Defining conservation priorities, especially where old buildings are at risk due to surrounding development.
- Guiding heritage-sensitive urban regulations, ensuring architectural continuity and limiting inappropriate interventions.
- Supporting restoration policies, by identifying architectural clusters suitable for collective rehabilitation strategies.

IV.1.2.3.2.1.2. GIS-Based Analysis of Functional Land Use in Al-Mīdān Neighborhood: Table (45).

The map, figure (141), represents a thematic GIS output illustrating the functional land use classification within the historic core of the Al-Mīdān neighborhood in Damascus, delineated by the clearly defined heritage boundary (blue line). This spatial representation integrates attribute data collected through field surveys and cadastral documentation into a structured GIS environment, enabling both visualization and comparative analysis of building functions, urban density, and conservation status.

1. Functional Zoning and Urban Distribution: figure (141).

Buildings are color-coded according to their primary function, including:

- Residential (yellow): Predominantly concentrated in the core zones, forming the bulk of the historical urban fabric.
- Religious (dark brown): Strategically dispersed, reinforcing their traditional integration within neighborhood clusters.

- Services (dark blue) and Commercial (red): Aligned along major streets and intersections, suggesting spatial adaptation to commercial mobility and accessibility.
- Schools (pink) and Government Departments (aqua): Clustered near major circulation nodes, likely reflecting urban planning priorities in the post-Ottoman and French Mandate periods.
- Hotels and Restaurants (magenta): Situated adjacent to commercial and mixed-use zones, possibly catering to external visitors or serving pilgrimage/trade routes, figure (1,57).

2. Heritage Integrity and Building Condition: figure (141).

The GIS layer includes building condition data, such as:

- Ruined or Collapsed structures (white and gray): Highlighting areas of structural degradation that may require immediate conservation.
- Mixed-use and Handicraft Workshops (light pink): Representing socio-economic hybridity within the built environment.

3. Conservation and Planning Implications:

According to the spatial data illustrated in Figure (141), the GIS visualization enables planners and heritage specialists to:

- Quantify spatial distribution of each building type.
- Assess clustering and proximity of sensitive heritage buildings to high-impact commercial or governmental functions.
- Prioritize restoration in zones with a high density of collapsed or endangered structures.
- Overlay zoning maps with cadastral plans and historical maps to track transformation across time.

IV.1.2.3.2.1.3.GIS-Based Analysis of Vertical Urban Morphology in Al-Mīdān Neighborhood: Table (45).

This map, figure (142), employs GIS to spatially visualize the distribution of building heights within and around the heritage boundary of Al-Mīdān (marked in blue). The categorization is classified into several vertical typologies:

- 1–2 stories (beige).
- 3 stories (light purple).
- 4–5 stories (light blue).
- 6–8 stories (Dark blue).
- Towers (gray).

1. Spatial Interpretation of Building Height: figure (142).

The GIS analysis reveals a distinct contrast between the historical core and the surrounding modern development:

- Within the heritage boundary, low-rise buildings (1–2 stories) dominate, corresponding with traditional urban typologies such as courtyard houses, mosques, and souks. These are typically associated with the Ottoman and Mamluk periods.
- Higher buildings (4–8 stories and towers) are largely concentrated outside the heritage zone, indicating modern urban expansion, vertical densification, and the influence of post-traditional planning policies.

This vertical stratification visually reinforces the historical authenticity of Al-Mīdān's inner fabric and exposes zones of potential visual and contextual conflict.

2. GIS Application and Analytical Value:

Using GIS to map building heights, figure (142), enables the researcher to:

- Assess skyline integrity and visual harmony, particularly where high-rise developments threaten the aesthetic or structural continuity of historic environments.
- Detect zoning violations or discrepancies in urban regulations related to building height restrictions in proximity to heritage zones.
- Support heritage management policies by prioritizing protection of low-rise typologies and controlling the intrusion of towers and modern developments.

3. Urban Planning and Conservation Implications:

The insights provided by this GIS-based height analysis , figure (142), can inform:

- Urban design guidelines that maintain contextual coherence between old and new construction.
- Buffer zone strategies where building heights are regulated in concentric layers around heritage cores.
- Strategic identification of areas vulnerable to heritage skyline erosion, aiding regulatory and restoration frameworks.

IV.1.2.3.2.1.4.GIS Analysis of Building Conditions in Al-Mīdān Neighborhood: Table (45).

This map,figure (143), produced through a Geographic Information Systems (GIS) environment, illustrates the spatial distribution of structural conditions for buildings within the Al-Mīdān neighborhood, with a focus on the heritage zone delineated by the blue boundary line. The buildings are categorized according to their physical integrity, using a three-tier classification system:

- Red: Poor physical condition.
- Yellow: Moderate/Intermediate physical condition.
- Orange: Good physical condition.

1. Condition-Based Classification and Spatial Distribution:

The GIS visualization reveals that: figure (143).

- A significant proportion of the buildings within the heritage boundary fall into the moderate (yellow) and poor (red) categories.
- Buildings in good condition (orange) are less frequent and are generally dispersed rather than clustered, indicating limited and uneven preservation efforts.
- The northern and southern peripheries of the heritage zone show concentrations of deteriorated structures, likely reflecting neglected maintenance or development pressures.

2. GIS Application for Heritage Risk Assessment:

Using GIS, figure (143), for this type of analysis offers powerful capabilities:

- Condition mapping allows researchers and conservation planners to identify zones of structural vulnerability and target them for intervention.
- By linking condition data with building typologies and historical value (e.g., religious, commercial, residential), the GIS system can prioritize structures for restoration based on both their degradation level and cultural significance.
- GIS enables the integration of time-series condition data, which can help track the progress or decline of heritage preservation efforts over time.

3. Conservation and Policy Implications:

The findings from this GIS layer, figure (143), are critical for:

- Urban heritage management, by providing a baseline for emergency intervention strategies.
- Allocating conservation resources efficiently by distinguishing between high-risk areas and those requiring only routine maintenance.
- Developing regulatory frameworks to mitigate deterioration, especially in zones under pressure from urban growth or infrastructural neglect.

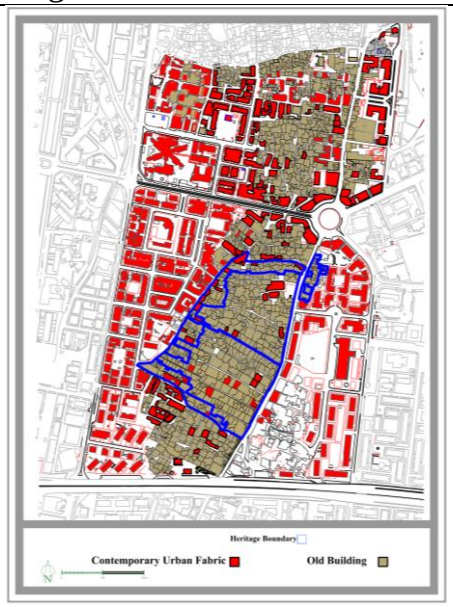
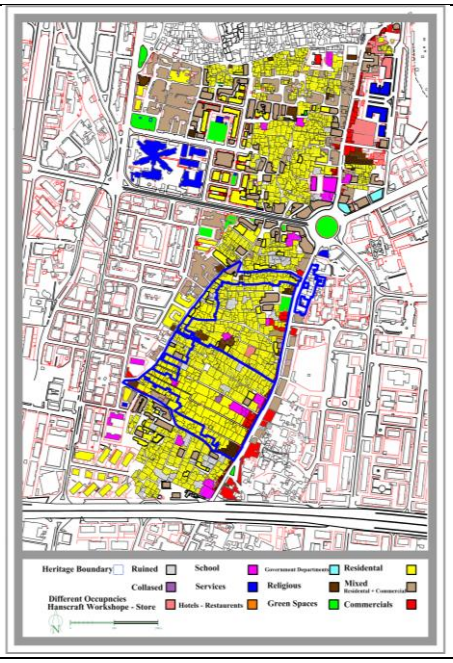
Figure.140. Comprehensive survey of all buildings, both historical (including mosques, public baths, and bawāyik) and contemporary, within the Al-Mīdān neighborhood, conducted with the support of Geographic Information Systems (GIS).	
Figure.141. GIS-Based Functional Land Use Analysis of the Al-Mīdān Neighborhood. This map visualizes the spatial distribution of land uses within Al-Mīdān, including residential, religious, commercial, educational, and service functions. The GIS platform enables clear differentiation between heritage zones and contemporary developments, supporting urban planning and conservation efforts.	

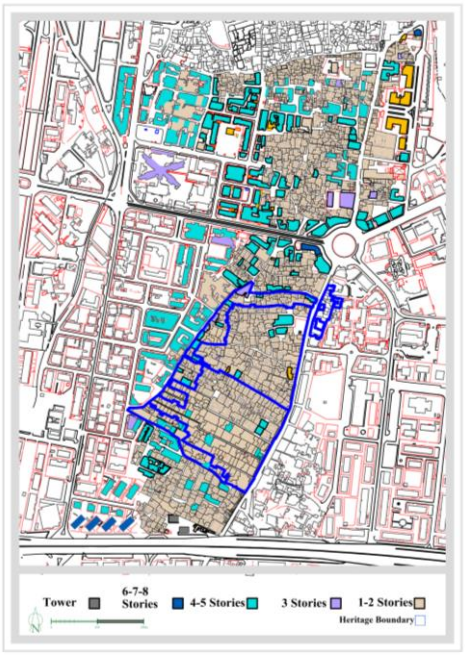
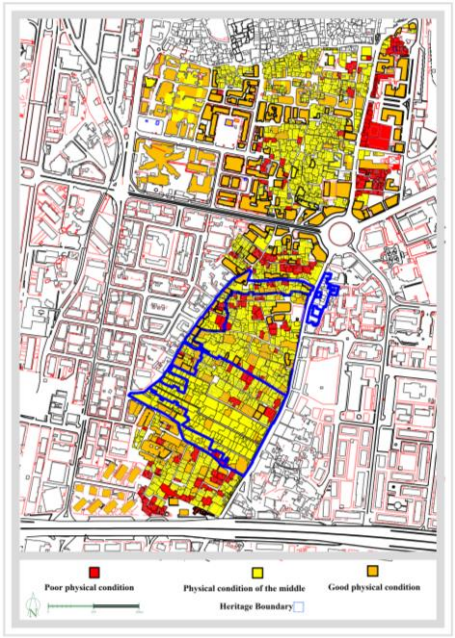
Figure.142. GIS-Based Analysis of Vertical Urban Morphology in the Al-Mīdān Neighborhood. This map illustrates the distribution of building heights across Al-Mīdān, categorized into towers, mid-rise, and low-rise structures. The visualization helps to assess the contrast between the historical core, characterized by predominantly 1–2 story buildings, and surrounding modern developments. Such analysis supports the evaluation of vertical growth patterns and their impact on heritage zones.	
Figure.143. GIS-Based Assessment of Building Conditions in the Al-Mīdān Neighborhood. This map categorizes the physical state of buildings within the neighborhood into three classes: good, moderate, and poor condition. The spatial distribution highlights concentrations of deterioration, particularly within the heritage core, supporting prioritization for conservation interventions and structural rehabilitation planning.	

Table.45. GIS-based analysis and cartographic outputs from the comprehensive spatial study of the Al-Mīdān neighborhood. The table summarizes the results of a neighborhood-wide assessment conducted using Geographic Information Systems (GIS), following the previously defined methodological framework. It reflects spatial data interpretation relevant to building function, condition, and historical significance. (Source: Author's GIS-based field survey and documentation, 2025).

IV.1.2.3.3.Conclusion:

GIS proves to be a transformative tool in the documentation and protection of Al-Mīdān's architectural heritage. Its implementation offers a replicable model for other historical neighborhoods in Damascus and the broader region. By bridging digital technology and cultural heritage, GIS enables not only the preservation of memory but also the informed planning of sustainable futures. The maps, tables (44,45), exemplifies the essential role of GIS in evidence-based heritage conservation, where visualized data not only enhances situational awareness but also informs data-driven decision-making in the protection of historically significant urban fabrics like Al-Mīdān.

The historic neighborhood of Al-Mīdān merits greater attention from governmental institutions as well as from scholars and heritage specialists, with the aim of safeguarding its longstanding cultural and civilizational role. Its rich history, vibrant commercial and artisanal life, and historical significance call for a carefully considered development strategy, one that secures the neighborhood's distinguished status and respects its urban fabric, which has long served as a vessel for both history and daily life.

Accordingly, and based on the comprehensive analysis of Al-Mīdān conducted through Geographic Information Systems (GIS), particularly as illustrated in Tables (44, 45), it is possible to develop a GIS-based map that consolidates all critical information concerning the neighborhood's various sectors, including those of significant historical value. Such a map would serve as a strategic and effective tool for initiating a well-informed and sustainable development plan for the historic district of Al-Mīdān, one that ensures the preservation of its integrity, continuity, and deeply rooted cultural identity. Figure (144).

Figure.144. A GIS-generated map integrating key data on Al-Mīdān's sectors, including historically significant areas, to support informed, sustainable development while preserving the district's cultural and urban integrity.

(Source: Author's GIS-based field survey and documentation, 2025)

IV.1.2.4. Three-Dimensional (3D) Documentation:

Three-dimensional (3D) imaging technology represents a critical advancement for the documentation of archaeological structures and deteriorated ancient artifacts. The application of 3D imaging techniques, coupled with sophisticated software tools, offers substantial efficiencies in both labor and time, allowing for rapid acquisition of highly precise and detailed spatial data. This high level of accuracy facilitates comprehensive recording of architectural and sculptural details, which are often inaccessible or challenging to capture through traditional methods. [323]

Syria, renowned globally for its wealth of archaeological sites, has suffered extensive damage and looting, resulting in significant losses to its cultural heritage[324]. This situation underscores a profound obligation to safeguard the surviving elements of its archaeological fabric. Concurrently, the restoration of damaged monuments and facilities to their original states increasingly relies on 3D modeling and related digital applications. [325]

Digital 3D documentation and reconstruction play an essential role in the preservation of humanity's shared heritage. They enable the virtual rebuilding of archaeological monuments compromised by conflict or neglect, as exemplified by the conditions in the *Al-Mīdān* neighborhood. Such efforts not only protect cultural assets but also foster the conservation of global cultural identity. [326]

IV.1.2.4.1. Key Features of the 3D Photogrammetry Technology:

Photogrammetry offers high data accuracy, practical applicability, and access to difficult sites. It produces diverse outputs suitable for complex structures and supports efficient digital archiving. Crucially, it enables comparison between original and restored elements, aiding accurate

[323] Remondino & Campana, *3D Recording and Modelling in Archaeology*, 2014, pp. 15–28.
[324] Al-Khalil, O. 3D Documentation of Cultural Heritage, 2020, pp. 15–28.
[325] DGAM Team. *Digital Documentation in Old Damascus*, Discover Syria, 2016.
[326] Guidi et al., "Digital Reconstruction in Syria", *ISPRS Annals*, 2013, pp. 133–138.

conservation. Additionally, it facilitates integration with other data sources for comprehensive documentation. [327]

IV.1.2.4.2. Challenges in 3D Photogrammetry Technology:

Key challenges include difficulty capturing hidden elements obscured by other objects, issues with lighting and shadows, potential photo failures, and scanning objects with minimal details, which is harder than scanning richly detailed sites. Limited site space also complicates photography, necessitating increased photo coverage to mitigate these issues. [328]

IV.1.2.4.3. Three-Dimensional Techniques in Built Cultural Heritage Documentation:

Figure (145), illustrates selected hardware and software tools utilized in 3D documentation. The researcher employed these technologies to record heritage buildings within Al-Mīdān neighborhood.

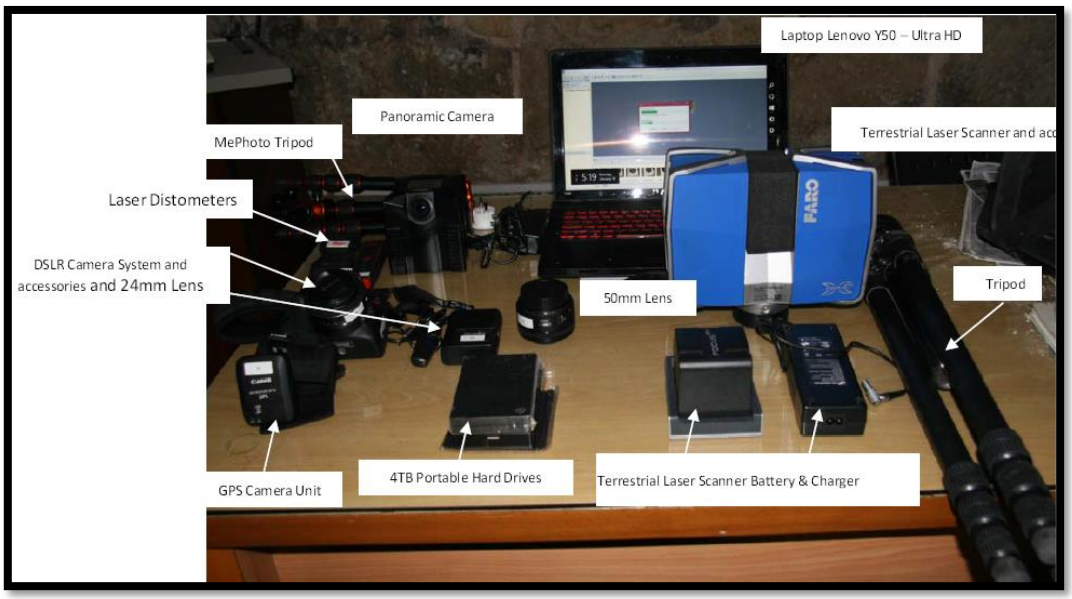


Figure 145. Hardware and software components utilized in 3D documentation. (Source: CyArk, 2017)

The following provides a concise explanation of the operational principles of select 3D imaging devices, derived from the researcher's practical experience and specialized training conducted under the supervision of the American company CyArk during 2016–2017. These insights offer valuable guidance for effectively applying these technologies in the documentation of archaeological buildings.

IV.1.2.4.3.1.The FARO Focus 3D Laser Scanner: [329] Figure (146)

The FARO Focus 3D X 330 is an advanced terrestrial laser scanning device ideally suited for three-dimensional documentation. This instrument is capable of scanning objects at distances up to 330 meters, making it highly effective for capturing large-scale architectural structures, archaeological excavations, and extensive site areas. Its capability to complete scans with a minimal number of scan positions enhances operational efficiency and expedites project completion.

The FARO Focus 3D integrates GPS technology, allowing precise georeferencing of scan positions. It is designed to perform highly accurate scans even under challenging outdoor lighting conditions, including direct sunlight, ensuring minimal data distortion. The scanner supports wireless networking, enabling remote operation and real-time control.

The high-resolution point cloud data generated by the FARO scanner are applicable across multiple disciplines, including architectural engineering, civil engineering, building conservation, land surveying, industrial manufacturing, and precise distance measurements.

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[327] Historic England, *Photogrammetry for Heritage*, 2017, pp. 10–21.
[328] Remondino & El-Hakim, *Image-Based 3D Modelling*, 2006, pp. 275–278.
[329] FARO Technologies. *FARO Focus3D X 330 Data Sheet*, 2014.

Figure (146), illustrates the deployment of the FARO Focus 3D laser scanner during various field projects conducted by the researcher in historic Damascus.



Figure 146. Application of FARO laser scanning technology in various research projects conducted by the author. (Source: Field documentation by the researcher, 2017–2022)

IV.1.2.4.3.2. The Panoramic Camera (iSTAR 360): [330] Figure (147)

The iSTAR 360 panoramic camera is engineered to capture high-accuracy, full 360° photographic coverage efficiently. It is equipped with four lenses, each covering a 120° field of view, with a 30° overlap between adjacent lenses to ensure seamless image stitching. Figure 147.

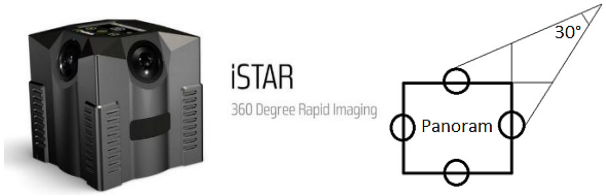


Figure.147. The iSTAR panoramic camera. Lens overlap and interference in the panoramic camera. (Source: CyArk-2017)

The device's lightweight and portable design facilitates ease of transport and rapid deployment. Its operation requires minimal expertise in digital photography, making it accessible for both indoor and outdoor use. The iSTAR camera is employed across multiple disciplines, including engineering and media production.

It should be noted, however, that the iSTAR camera captures three-dimensional panoramic images but does not provide metric spatial dimensions of documented objects.

Figure(148), illustrates the deployment of the iSTAR panoramic camera by the researcher during various heritage documentation projects in Old Damascus.



Figure.148. Implementation of panoramic camera technology in multiple research projects undertaken by the author. (Source: Author's field documentation, 2017–2022)

IV.1.2.4.3.3. Digital Cameras (Canon EF-S 24mm f/2.8 STM Lens): [331] figure (149).

The Canon EF-S 24mm f/2.8 STM digital camera is a lightweight and user-friendly device, ideal for 3D documentation tasks. It offers rapid response times and produces high-quality images, even under low-light conditions ,figure (149). The fixed focal length lens facilitates maintaining a

[330] NCTech. *iSTAR 360 Camera Technical Specifications*, NCTech Imaging Ltd., 2016.
[331] Canon Inc. *Canon EF-S 24mm f/2.8 STM Lens – Product Manual*, Canon USA, 2015.

consistent distance from the object, which is advantageous for capturing accurate photographic data.
Figure (149), illustrates the use of this digital camera by the researcher during various documentation projects in Old Damascus.



Figure 149. Utilization of digital camera technology across various research projects conducted by the author.
(Source: Field documentation by the author, 2017–2022)

IV.1.2.4.3.4. Remotely Piloted Aircraft Systems (UAVs): [332] **Figure (150).**

Among the innovative techniques employed in digital documentation, Remotely Piloted Aircraft Systems (commonly known as drones) have gained prominence. These devices, equipped with high-resolution digital cameras, facilitate comprehensive surveying and photographic documentation of heritage sites or structures from multiple perspectives, including aerial views , figure (150). UAVs are particularly effective for small-scale sites or individual buildings, as well as clusters of structures.
Figure (150), depicts the DJI Phantom 4 drone utilized by the researcher during various documentation projects within Old Damascus.



Figure.150. Application of (UAVs) technology in various research projects conducted by the author.
(Source: Field documentation by the author, 2017–2022)

IV.1.2.4.4. Selected Applications of 3D Modeling Technology in the Al-Mīdān Neighborhood Conducted by the Researcher:

IV.1.2.4.4.1. Terrestrial Laser Scanning (FARO) and Recap 360 Software

IV.1.2.4.4.1.1. Documentation of Al-Mahāynī House: Figure (22).

Al-Mahāynī House (located in Mīdān Foqānī (Upper Mīdān)), was selected as a case study due to its architectural and cultural significance within the Al-Mīdān neighborhood.
The purpose of documenting Al-Mahāynī House in this doctoral research is to produce the first comprehensive architectural and geodetic record of the building using an integrated methodology that combines analog and digital documentation techniques. Specifically, the documentation aimed to:Preserve the architectural and cultural significance of the house as a representative example within the Al-Mīdān neighborhood.
The documentation of the house was conducted through the following procedures:

- **The Analog Documentation:** Following multiple field visits, comprehensive measurements were recorded using both tape measures and Total Station instruments. These

[332] DJI. *DJI Phantom 4 – Product Specifications and User Manual*, DJI Technology Co., Ltd., 2016.

data were subsequently processed to generate detailed architectural plans using AutoCAD software. Table (46).

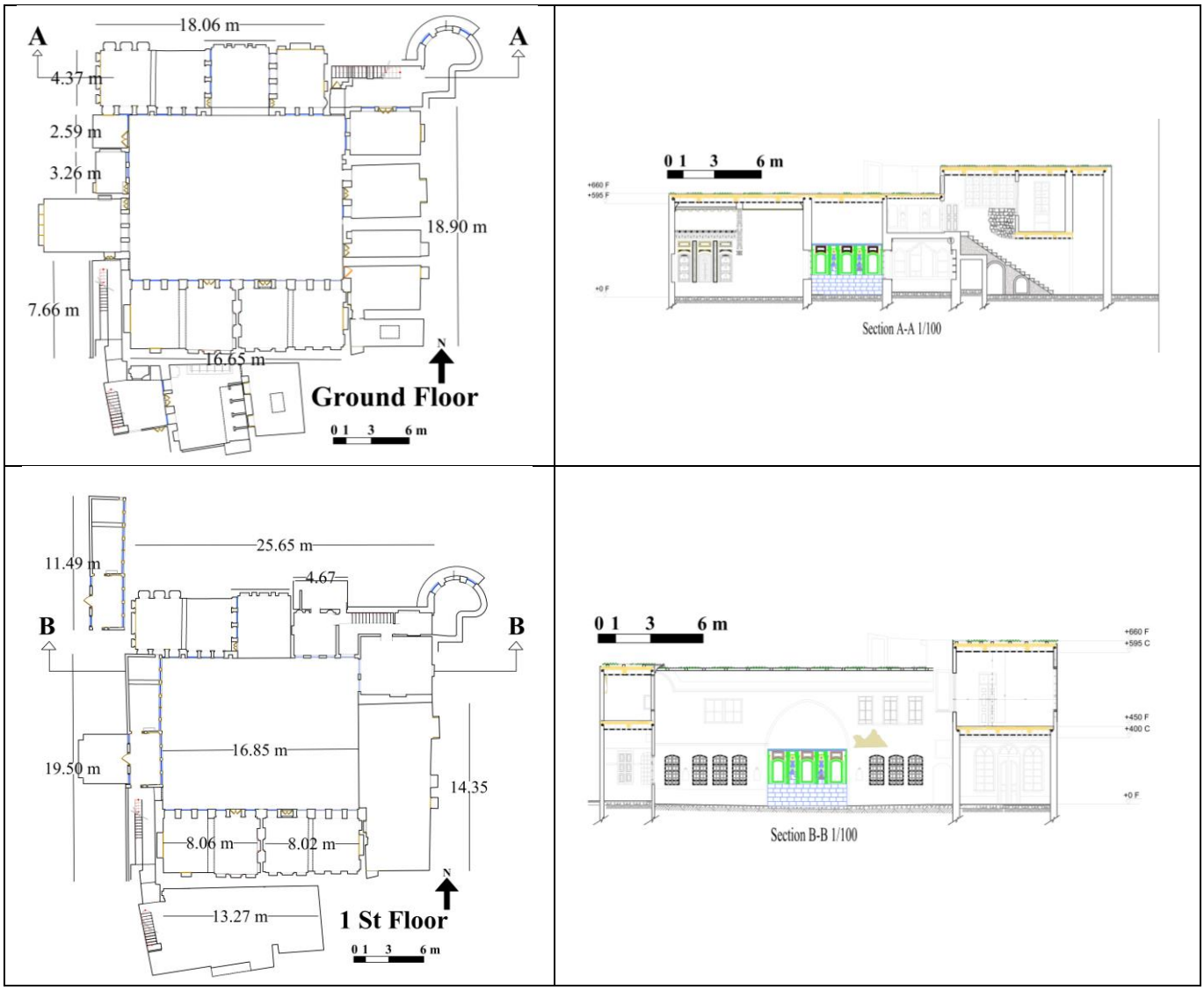


Table.46. The Architectural Plans of Al-Mahāynī House Using Analog Documentation Methods. (Source: The Researcher, 2025)

- **The Digital Documentation:** The documentation process was conducted as demonstrated in Table (47).

This doctoral thesis represents the first research initiative in Syria to integrate analog surveying instruments, specifically the Total Station, with advanced digital laser scanning technology. The integration procedure included: Table (47).

5. Establishing the Total Station at an optimal location, with precise calculation of its geodetic coordinates.
6. Surveying a network of control points within the Al-Mahāynī House using the Total Station.
7. Linking the Total Station coordinates to a recognized international geodetic reference point, specifically the Minaret of the Umayyad Mosque.
8. Inputting the calibrated coordinates into the processing software, thereby georeferencing the 3D model within the global coordinate system.

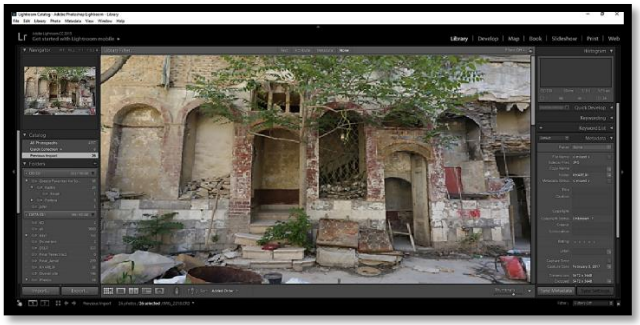
Photographic Documentation and Image Processing	
Figure (151). High-resolution photographic documentation of the Al-Mahāynī House was conducted using a Canon EF-S 24mm f/2.8 STM digital camera to capture detailed and accurate images of the structure.	
Figure.152. The captured images were processed using Adobe Lightroom software to enhance their resolution and quality, ensuring optimal clarity for documentation purposes.	
Documentation Using Laser Scanning and Its Digital Applications	
Figure.153. A comprehensive 3D laser scan of the building was performed from multiple vantage points to ensure complete spatial coverage.	 
Figure154. The collected scan data were uploaded to a computer and processed using the Recap 360 software application.	
Figure.155. The resulting point cloud representing the Al-Mahāynī House was generated for detailed analysis.	
Figure.156. A precise three-dimensional model of the building was produced, with dimensional accuracy guaranteed by the Recap 360 software.	 
Integrate analog surveying instruments (the Total Station), with advanced digital laser scanning technology.	



Figure.157. Marked control points were distributed across the property to establish a geodetic framework, integrating Total Station data with the Minaret of the Umayyad Mosque as a reference.

Table.47. The Procedural Framework for Documenting Al-Mahāynī House Using Digital Documentation Techniques . (Source: Field Survey and Digital Documentation by the researcher, 2021)

IV.1.2.4.4.2. Digital Camera and Agisoft PhotoScan

Agisoft PhotoScan software is utilized for the detailed documentation of building façades, significant architectural elements, and decorative features requiring restoration. The process begins with the acquisition of a series of high-resolution photographs captured using a digital camera,specifically, a Canon model in this study.

These images are then imported into Agisoft PhotoScan, where advanced photogrammetric algorithms are employed to generate accurate three-dimensional models. (Figure 158).



Figure.158. Three-dimensional model of the façade of Fathī Bath and One of the artifacts, created to document them current condition and support future restoration efforts. (Source: Digital documentation by the researcher, 2022).

IV.1.2.4.4.3. Documentation Efforts Utilizing Panoramic Camera:

The iSTAR 360 panoramic camera provides efficient, high-resolution 360° photographic coverage through four overlapping lenses, serving as a non-metric tool for visual heritage documentation. These combined methodologies enhance the accuracy and comprehensiveness of heritage recording.Figure (159).



Figure.159. Three-dimensional model of the site generated using a panoramic camera and NCTech Immersive Studio software. (Source: Digital documentation by the researcher, 2021).

IV.1.2.4.4.4. 3ds Max:

The 3ds Max application requires the acquisition of numerous high-resolution photographs capturing various architectural elements of the building under study, such as façades, decorations,

arches, and doors. These images are subsequently imported into 3ds Max, where they undergo processing to generate an accurate three-dimensional model of the structure. Table (48).

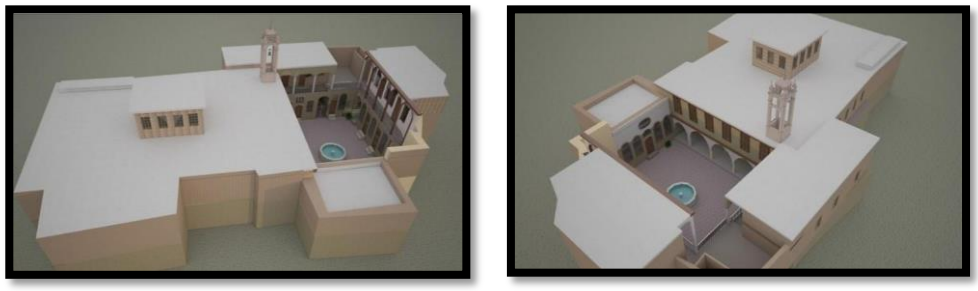
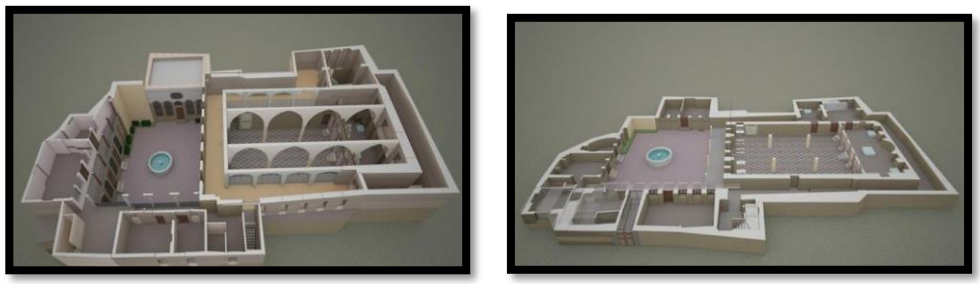
Figure.160. Three-dimensional documentation illustrating the external form of Al-Niyāḥ Church.	
Figure.161. Three-dimensional documentation of the ground floor and first floor of Al-Niyāḥ Church.	
Figure.162. Longitudinal section, and documentation of the internal corridors of Al-Niyāḥ Church and the iconostasis.	

Table.48. Documentation of the Church Our Lady of Al-Niyāḥ Church Using 3ds Max Software, to Support heritage conservation and academic analysis by providing a digitally precise representation of the structure. (Source: Digital Documentation, 2021)

- **Conclusion:**

The preceding documentation efforts, encompassing both analog and digital methods, represent a significant advancement in the study of the Al-Mīdān neighborhood. Previously undocumented structures are now recorded with precise architectural plans and high-resolution 3D models, enabling more informed analysis and preservation strategies. Moreover, this comprehensive documentation provides a critical foundation for developing appropriate restoration and adaptive reuse solutions tailored to the needs of these archaeological buildings. Notably, this research constitutes the first application of advanced, high-accuracy 3D imaging technologies in the Al-Mīdān neighborhood, marking a pioneering contribution to the field.

IV.1.3.Documentation and Analysis of the Current Condition of the Studied Section Al-Sharbajī Bāyka, Property No. 29, Al-Mīdān Al-Mūsallī: figure (22).

Al-Sharbajī Bāyka was selected for its architectural rarity and cultural significance as a vernacular Ottoman-era grain warehouse in Al-Mīdān, exemplifying adaptive construction techniques such as the Al-Trūshī method and basalt masonry. The study aims to develop a replicable, integrated documentation model (for future heritage studies in Damascus and beyond), combining analog and digital methods, to inform conservation strategies and propose its adaptive reuse as a heritage museum, thereby preserving both material authenticity and collective urban memory.

- **The steps of the process for Al-Sharbajī Bāyka were carried out as outlined below:**

IV.1.3.1.The Analog Documentation Methods (were applied to the study of Al-Sharbaji Bāyka): Al-Sharbajī Bāyka is considered one of the important heritage buildings in Al-Mīdān

neighborhood, so the research gave it special attention and documented it in the following way, noting that the following tables were developed by the researcher in order to easily and quickly conduct detailed documentation of any architectural element, as this method of documentation (using tables) is considered a new and distinctive method in terms of documenting architectural elements:

1-Property Identification Details:

<table>
<tr><td>Historical Development of the property</td><td colspan="5">Al-Sharbajī Bāyka, a mid-scale Ottoman-era grain warehouse in the Al-Mīdān district of Damascus, stands as a rare vernacular example of adaptive architecture rooted in regional materials and the construction techniques. Its structural system, comprising basalt masonry, timber frameworks (al-Tūrūshī method), adobe infill, and clay, straw composites, reflects the sustainable and context-sensitive building practices of its time. [333] Figure (164).</td></tr>
<tr><td>Property No.</td><td colspan="3">29</td><td colspan="2" rowspan="5">Location on Cadastral plan
Figure (22)</td></tr>
<tr><td>Property area</td><td colspan="3">Mīdān Musallī</td></tr>
<tr><td rowspan="2">Property type</td><td colspan="2">General</td><td>Private</td></tr>
<tr><td colspan="2"></td><td>*</td></tr>
<tr><td rowspan="2">Property user character</td><td>Owner</td><td>Renter</td><td>Other</td></tr>
<tr><td>*</td><td></td><td></td></tr>
</table>

2-Geographical Location of the Property:

Street name	Street type		Property area	Nearby famous landmarks
	Main	Sub		
Sūk of Al-Mīdān	*		500 m^2	Al-Rifāʿī mosque to the south of Al-Bāyka

3-Chronological Attribution and Functional Designation of the Property:

The person using the property	Property date source			Original function	Current function
	From documents	Carved on the property's facade	Estimated Date		
Nabīl Sharbajī			Ottoman	Grain warehouse	Sweets Shop

4-Architectural Characterization of the Property:

Architectural Description and Formal Analysis	The most architecturally significant feature of Al-Sharbajī Bāyka is its entrance façade, characterized by a singular pointed arch of two centers, surmounted by a flat ceiling situated at a height of six meters. The apex of the arch reaches 5.50 meters above ground level, emphasizing its monumental scale, figure (164). Within the initial section of the structure, four load-bearing basalt arches were documented, adjacent to which lies a transitional void currently enclosed by a lightweight contemporary metal covering. This passage provides access to the second segment of the building, which comprises a stone-framed doorway topped by four square apertures, followed by three additional basalt

[333] Tabbaa,*The Transformation of Islamic Art during the Sunni Revival*, 2001, pp. 122–134.

	arches. A noteworthy recent modification has been identified in the eastern sector of the structure, where the roof level was lowered to permit the installation of several auxiliary windows, particularly evident within the northern void. Figure (163,164).
Structural Analysis of the property	Al-Sharbajī Bāyka exhibits a diverse array of analog construction techniques, underpinned by a continuous basalt foundation and basalt masonry walls rising to 150 cm, which support a system of load-bearing basalt arches. Two principal construction methods are identified: the Al-Trūshī technique[334], characterized by timber frameworks with infill, and rammed earth construction, wherein compacted mud is formed atop a Medmaque basalt base. Additional techniques include adobe brickwork, Baghdād-style reed frameworks, and hybrid timber–stone systems. Figures (163,164). **Foundations:** Though not definitively documented, the foundation is presumed to consist of a continuous basalt stone layer. Figure (164). **Structural Walls:** Basalt walls support the arches, with upper sections formed of lime-treated masonry or adobe infill within timber frames. Figure (164). **Load-Bearing Arches:** Five basalt arches serve as the primary structural elements. **Façade:** The entrance features a monumental basalt arch flanked by two modern doors and windows, with iron elements added for ventilation. Figure (164). **Roof Structure:** The roofing system comprises three layers: (1) structural timber beams, (2) timber panel support, and (3) a traditional finishing layer of lime plaster, dichrome, tar, earth-clay mix, and slaked lime. Figure (164).
Analysis of the Construction Materials and Techniques of the Property	Al-Sharbajī Bāyka features a diverse palette of construction materials and roofing systems. The load-bearing arches are primarily constructed from dense, water- and salt-resistant basalt sourced from the Hauran quarries of southern Syria[335]. Supplementary materials include adobe bricks, timber, and hybrid systems such as the Baghdād reed technique, lime plaster, and clay, straw composites, while recent modifications employ reinforced concrete. Figure (164).
Causes of Deterioration Affecting the Property	The deterioration of Al-Sharbajī Bāyka arises from a combination of environmental, biological, and anthropogenic factors: Figure (164). **Subterranean Water Infiltration:** High moisture levels in the subsoil—exacerbated by the continued underground flow of an ancient stream once connected to the nearby Fathī bathhouse—pose persistent threats to structural integrity. **Drainage Deficiencies:** Inadequate surface drainage adjacent to the façade induces mechanical and chemical stress on vulnerable materials such as limestone and earthen masonry, though basalt and granite remain largely unaffected. **Humidity and Insulation Failures:** The absence of effective waterproofing, combined with limited natural ventilation, subjects the semi-enclosed structure to sustained humidity and condensation. **Rainwater and Thermal Fluctuations:** Water infiltration into limestone or timber infill weakens binding agents, causing progressive cracking in walls and ceilings. **Biological Decay:** Moisture facilitates microbial activity within porous materials, degrading timber elasticity and compromising the structural cohesion of adobe and stone. **Solar and Climatic Stress:** Inadequate roof maintenance and insufficient protective coatings accelerate thermal cycling damage and hydraulic decay. **Avian Activity:** Pigeon nesting within façade cavities contributes to the degradation of straw and timber components.

[334] Al-Asad, *Conservation of Traditional Damascene Houses,* 1997, pp40–55.
[335] As‘ad, Khalid & al-Bunni, Adnan. *Al-‘Imāra al-Taqalīdiyya fī Sūriyā* 1985, pp. 102–115.

	Anthropogenic Impact: Neglect, poor maintenance, and inappropriate interventions further exacerbate material and structural degradation. **Cumulative Effects:** These pathologies collectively result in foundational instability, timber framework failure, stone erosion, roof collapse, and the deterioration of earthen construction layers.
Architectural Alterations and Modifications to the Property	Al-Bāyka's spatial configuration has undergone significant modifications, including the insertion of an office in the central zone and the addition of external fenestrations oriented toward the surrounding district. The formerly open-air section was enclosed with timber-framed wooden panels. These alterations indicate a functional shift from its original use as animal shelter to a grain storage facility, marking a broader transformation in the site's utilitarian purpose over time. Figure (164).

Architectural Sketches Representation of the Property



Figure.163. Architectural Sketches of Al-Sharbajī Al-Bāyka. To assist in comprehending the structural condition of the building and obtaining aclear and accurate understanding of the property. (The Source: The Researcher-2022)

5-Interior Sections of the Property: Materials and Cladding:

The object	Location	Building materials	color	Traditional\ Modern
Tiles	All over the property	Stone tiles	White	Traditional
Materials of Construction	The lower sections of the walls of Al-Bāyka, up to a height of 150 cm, as well as the arches, are constructed from basalt.	Basalt stone	Black	Traditional
Materials of Construction	Rest of the walls of the property	Stone or clay fixes with wooden trunk	White	Traditional construction using the Al-Tūrūshī method involves placing wooden logs side by side and filling the interstitial spaces with binding materials such as clay.
Decorations	Geometric decorations in the form of triangles	Stucco Muqarnas	White	Traditional

6-Roof construction model:

Roof model	Materials	Changes in the property
Horizontal	Wooden trunks	None
Dome	None	None

7-The Façade and External Elements:

The object	Location and place	Shape	Building materials	woodwork
The external facade	Oriented toward and overlooking the neighborhood's main thoroughfare.	Pointed arch of height 5,50 m	Black basalt stone	A wooden arched window is set within the entrance arch, surmounted by a rectangular window fitted with a metal grille.
The entrance door	Positioned within the span of the entrance arch.	Metal door	Metal	none

8-The Structural and Architectural State of the Property:

	Current Condition of the Property						
Floor or level	**Good**	**Bad**	**Requires Minor Reconstruction Work**	**Certain sections of the property have been destroyed**	**The property is at imminent risk of collapse**	**Only limited remnants of the property remain**	**Total rebuild**
Ground		*		*			
Room	*						

9-Recommended construction works:

Proposed Construction Interventions
The recommended construction activities at Al-Bāyka may be outlined as follows: • Preservation of the existing architectural elements within the property, ensuring their protection against vandalism, neglect, or demolition. • Reconstruction of the collapsed roofing structures throughout Al-Bāyka. • Restoration and structural consolidation of deteriorated wall and roof sections. • Removal of the non-original, temporary roof currently covering the central courtyard of Al-Bāyka.

10-Photographic Documentation of the Property:



Figure 164. Al-Sharbajī Bāyka. (Source: Field documentation by the researcher, 2022).

11-Restoration and Adaptive Reuse Strategy:

Conceptualization and Functional Reuse:
Al-Mīdān Neighborhood Museum

IV.1.3.1.1. Comprehensive Re-documentation and Architectural Analysis of Al-Sharbajī Bāyka:

Table (49):

This study is distinguished by its comprehensive re-documentation of the Bāyka and the production of detailed architectural drawings, previously unavailable for this structure, achieved through multiple field surveys, extensive measurements (Tape and Total Station Measurement), and the application of advanced drafting techniques using AutoCAD (Vectorization of field data and photogrammetry results to generate accurate plans, elevations, and sections). These architectural plans constitute a foundational resource for the systematic analysis of the Bāyka and the development of appropriate architectural and functional interventions.

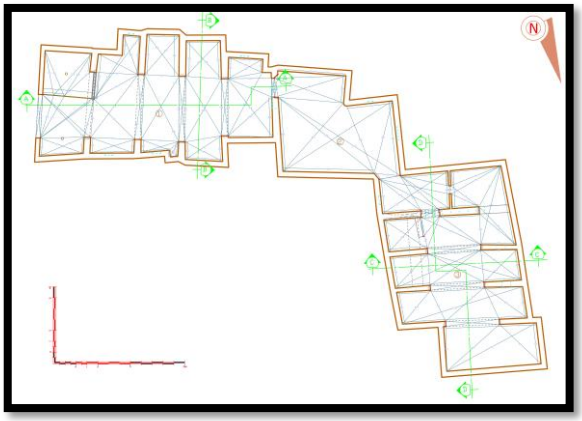
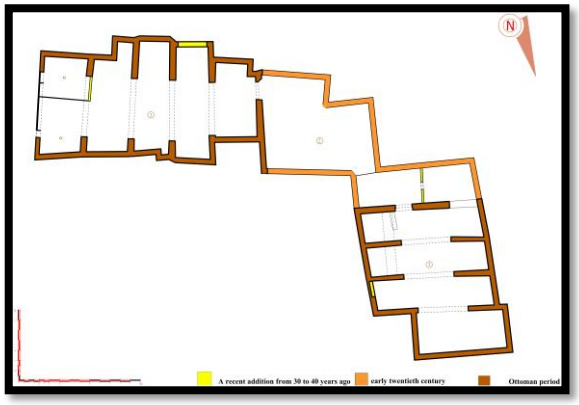
Fig.165. Architectural floor plan generated from the measured survey of Al-Sharbajī Bāyka.	
Fig.166. The architectural and functional modifications undergone by Al-Bāyka since the onset of the Ottoman period.	
Fig.167. The structural condition of the wooden beams.	

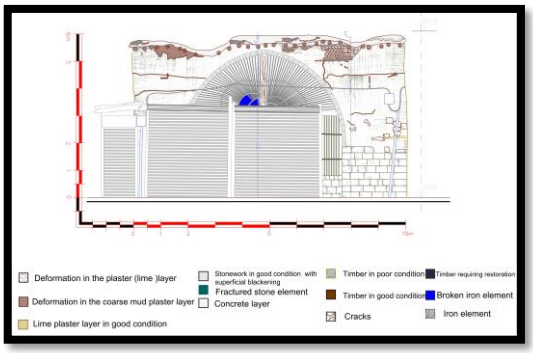
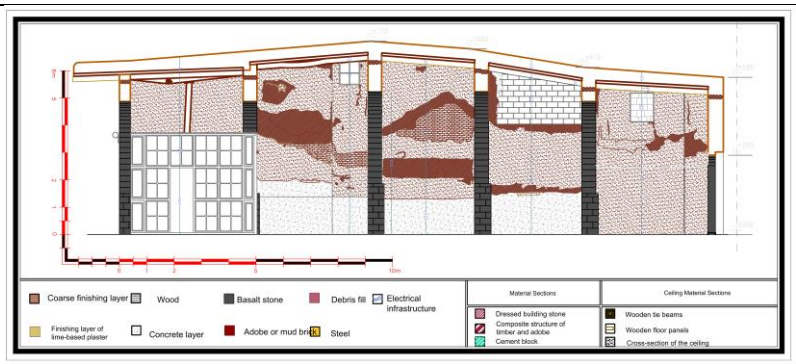
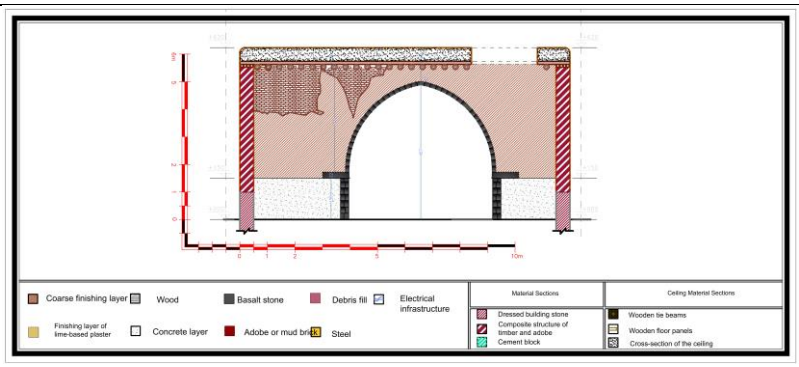
Fig.168. The various construction materials used in the building of Al- Bāyka.	
Fig.169. The current condition of Al-Bāyka façade, including a detailed representation of all construction materials and their structural condition..	
Fig.170. Architectural Section A–A through Al-Bāyka, showing the complete composition of construction materials.	
Fig.171. Architectural Section B-B through Al-Bāyka, showing the complete composition of construction materials	

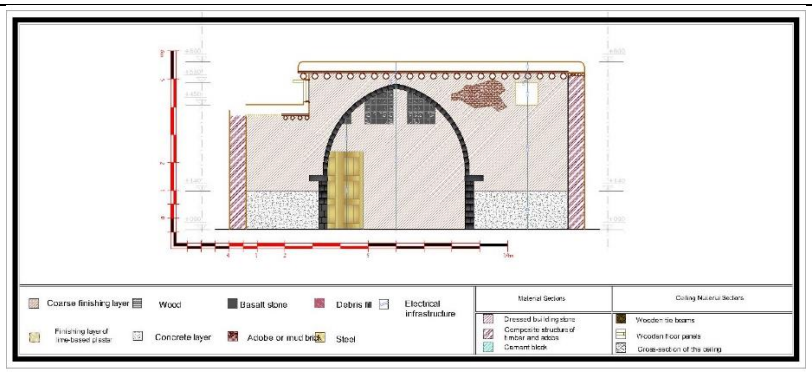
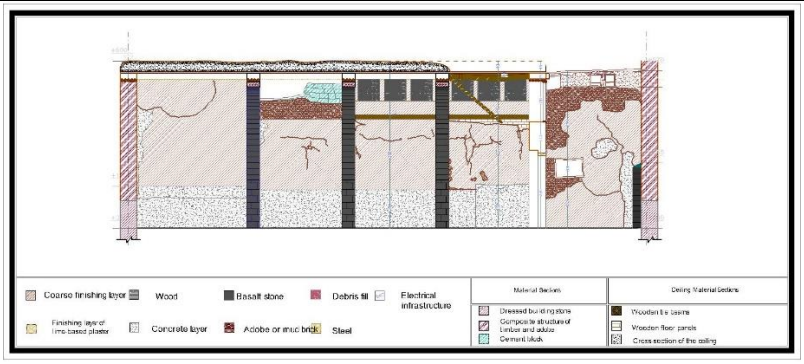
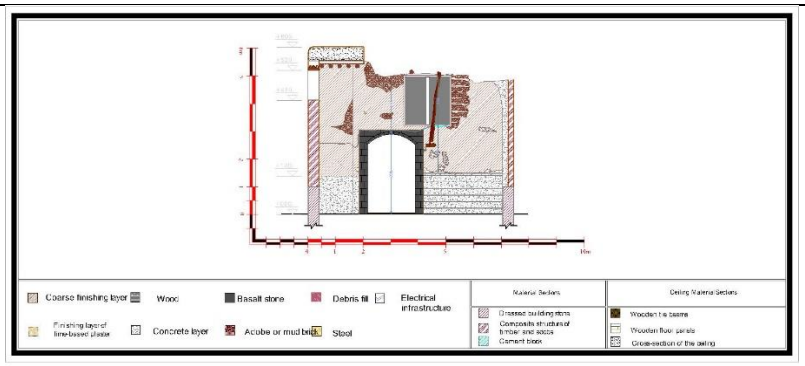
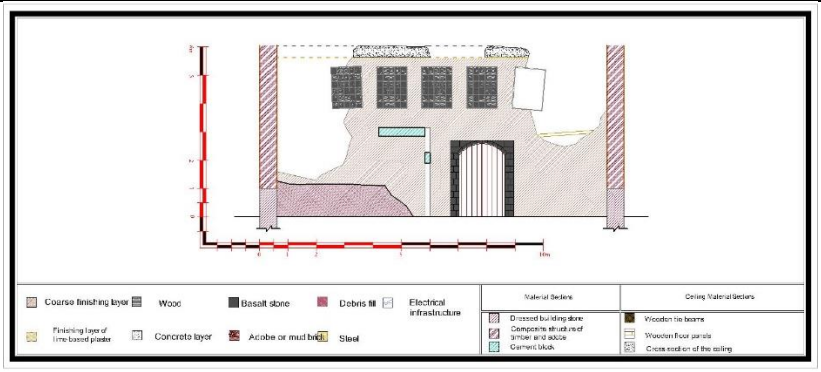
Fig.172. Architectural Section C-C through Al-Bāyka, showing the complete composition of construction materials.	
Fig.173. Architectural Section D-D through Al-Bāyka, showing the complete composition of construction materials.	
Fig.174. Architectural Section Wall NO.1 through Al-Bāyka, showing the complete composition of construction materials.	
Fig.175. Architectural Section Wall NO.2 through Al-Bāyka, showing the complete composition of construction materials.	

Table.49. Documentation of the current condition of Al-Sharbajī Bāyka, along with the architectural modifications it has undergone. (Source: Field survey and digital documentation conducted by the researcher, 2024-2025).

IV.1.3.1.2. Utilization of Analog Documentation Equipment for Measuring Cracks and Deformations in the Stone Arch and Eastern Wall of Al-Sharbajī Bāyka (Property No. 29): This section details the methodology employed to assess structural damage, specifically cracks and bulging,in the stone arch and eastern wall of the Al-Sharbajī Bāyka, figure (176), using analog documentation tools. The approach involves precise measurement techniques to quantify the extent of deterioration, thereby informing conservation strategies.



Figure.176. Measurement of selected points on the façade of Al-Sharbajī Bāyka using a Total Station. (Source: Field research by the researcher, 2025).

The researcher conducted crack measurement on the eastern wall using a specialized crack gauge (Biacles) [336], a precision instrument capable of delivering measurements with millimeter accuracy.

Following multiple measurement sessions of the crack at various time intervals, the average crack width was calculated and is presented in table (50). This average value falls outside the established permissible limits for structural safety. [337]

Monitoring points	Crack width (mm)
1	5
2	5.1
3	5.3
4	5.6
5	6.2
Average (mm)	5.44

Table.50. Crack width measurements recorded during the monitoring period. (Source: Field research by the researcher, 2025).

In assessing the bulging deformation of the main façade of the *Al-Bāyka*, it was observed that inadequate water drainage is a significant contributing factor. Specifically, rainwater accumulation forms localized pockets on the façade surface due to inefficient runoff. This issue primarily originates from rainwater collecting on the roof, compounded by irregular roof slopes and the deteriorated condition of drainage channels. These factors have collectively resulted in pronounced bulging and deformation of the façade's decorative elements.

To quantify the extent of this deformation, the researcher employed a Total Station instrument , conducting systematic measurements at multiple points across the Al-Bāyka façade (refer to Figure 176).

Table (51). presents the set of coordinates collected using the Total Station, which facilitated the precise calculation of the wall's bulge. Measurements were conducted at six distinct heights, arranged sequentially from highest to lowest, to ensure an accurate assessment of the bulge magnitude.

[336] Baarssen et al., *A Method to Measure Fatigue Crack Growth*, 2024, pp. 305–312
[337] ACI Committee 224, *Control of Cracking in Concrete Structures (ACI 224R-01)*, 2001, pp. 1–46.

Observation point	X(m)	Y(m)	Z(m)
1	2.3	5.4	7.6
2	2.3	5.22	6.5
3	2.3	5.20	6.2
4	2.1	5.15	5.7
5	1.8	5.11	5.1
6	1.5	5.4	4.9

Table.51. Coordinates and measurements of monitoring points obtained via Total Station survey. (Source: Field research by the researcher, 2024-2025).

Analysis of the monitoring data reveals that points 5 and 6 exhibit a constant *y*-coordinate value, suggesting that the bulging of the wall initiates gradually above point 4. Conversely, as measurements ascend toward the highest monitoring points, there is a progressive increase in the bulge magnitude. When considered alongside the observed cracking measurements, these values collectively indicate significant structural deterioration of the façade and wall. This deterioration underscores the critical necessity for targeted restoration or reconstruction of the affected portions of the property.

IV.1.3.2.The Digital Documentation Methods (were applied to the study of Al-Sharbaji Bāyka):

IV.1.3.2.1.Documentation of the current Condition: Table (52).

The documentation of Al-Sharbajī Bāyka was undertaken through a comprehensive architectural survey employing an integrative methodology that combined high-precision laser measurement technologies with supplementary manual techniques. This dual approach was necessitated by the presence of infill material and structural irregularities within the building's interior spatial configurations, which impeded full accessibility. Consequently, laser scanning was prioritized as the principal method of data acquisition. It is imperative, however, that all such non-original infill elements be removed prior to the commencement of any structural reinforcement or conservation interventions, in order to ensure the accuracy and integrity of subsequent restoration processes.
The photographic survey was equally thorough. Each void within Al-Bāyka, across all four walls, ceiling, and floor surfaces, was meticulously documented. All photographs were archived in an indexed system, ordered chronologically and spatially, and mapped onto an architectural plans plan to indicate their exact locations. The findings are valuable for future interpretive and conservation studies. Figures (177,178,179).

Figure.177. Three-dimensional Architectural documentation of the building façade.



Figure.178. Three-Dimensional Architectural Documentation of Section A–A.	
Figure.179. Three-Dimensional Architectural Documentation of Section D–D.	

Table.52. Three-dimensional Architectural documentation of Al-Sharbajī Bāyka .

The high-precision digital recording was undertaken as part of a broader effort to facilitate the preservation, analysis, and future conservation of the structure's historical and morphological characteristics. (Source: Author's digital documentation, 2024-2025)

IV.1.3.3. Architectural Rehabilitation Strategy (Developed by the Author, 2025):

IV.1.3.3.1.Proposed solution for Al-Sharbajī Bāyka: Museum. Table (53).

Property No. 29, located in Al-Mūsallī, exhibits a distinctive architectural style, historical depth, and cultural significance. Its restoration is symbolic of the preservation of Al-Mīdān's collective memory. The proposed intervention transforms the Bāyka into a heritage museum narrating the history of the neighborhood.

- **Proposed Plan: Table (53).**

- Archival documentation of Al-Mīdān's historic houses, notable families, and architectural heritage.
- Interpretive materials on the role and evolution of the Bāyka typology, including historic tools and rare photographs.
- A section dedicated to the pilgrimage route and tramway history, with interactive displays and cultural artifacts.
- A multifunctional hall for public lectures, traditional music, and theatre, with a removable wooden stage.
- Roof Reconstruction for the Central Courtyard:
  Plans include rebuilding the roof structure above the central void using Analog Documentation Methods with digital reinforcement.
- Introduction of Skylights and Ventilation Windows:
  Design studies propose the integration of clerestory openings to enhance natural lighting and cross-ventilation.
- Flooring Reconstruction Plan:

Recommendations include the removal of inappropriate concrete slabs and the restoration of historically accurate floor finishes.

IV.1.3.3.2. Rationale for Converting Al-Sharbajī Bāyka into a Heritage Museum and the Use of Traditional Materials and Design Principles: Table (53).

The transformation of Al-Sharbajī Bāyka into a museum is strategically rooted in its architectural significance, historical value, and symbolic relevance within the urban fabric of Al-Mīdān. As a

representative example of Ottoman-period vernacular architecture, the Bāyka embodies unique construction techniques, such as the Al-Trūshī method, basalt masonry, and clay-straw composite walls [338], that warrant preservation and interpretation for both scholarly and public audiences.

Functionally, the property has transitioned from its original utilitarian role as a grain warehouse and animal shelter to a state of neglect. Its restoration as a museum allows for an adaptive reuse strategy that reactivates the building while maintaining its integrity. By narrating the social and architectural history of the Al-Mīdān district, through exhibitions on local families, historic dwellings, the pilgrimage route, and the tramway, the museum becomes a vessel for collective memory and identity preservation.

The selection of traditional structural and cladding materials in the rehabilitation plan, such as basalt stone, wooden beams, lime plaster, and historical roofing compositions, is both a conservation imperative and a didactic tool. These materials were chosen not only to preserve the authenticity of the structure but also to communicate the architectural logic and craftsmanship of the period to future generations.

The proposed architectural modifications, including roof reconstruction using Analog Methods with digital reinforcement, the addition of skylights for passive lighting and ventilation, and the restoration of historically accurate flooring, are designed to enhance the building's usability while preserving its historical character.

The use of specific decorative elements and cladding features, such as lighting, trees, and furniture, in the adaptive reuse of Al-Sharbajī Bāyka as a museum reflects both aesthetic sensibility and functional strategy rooted in heritage conservation principles.

Together, these interventions foster a harmonious balance between historic authenticity and modern usability, enhancing the site's didactic value while preserving its material and spatial identity. The design prioritizes reversibility, readability, and respect for the original architectural language, consistent with internationally recognized conservation charters [339].
In sum, the museum project reflects a sensitive integration of heritage conservation and adaptive reuse, using both traditional materials and contemporary heritage interpretation frameworks to ensure the building's cultural continuity and educational relevance.

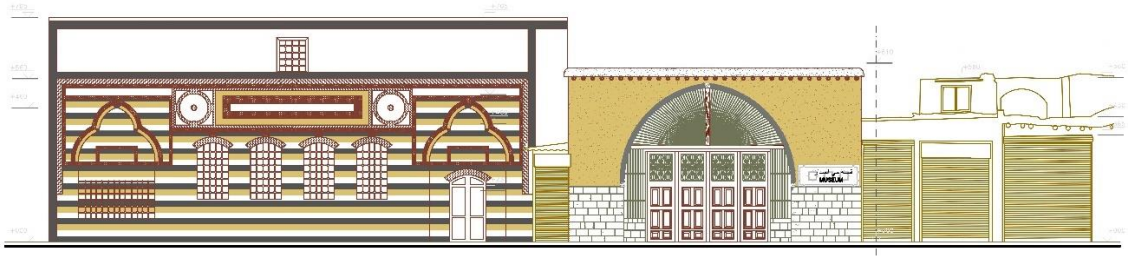


Figure.180. Strategic rehabilitation framework for the architectural façade of the building.

[338] Ameen. *Al-Ta'thirat al-Bizantiyya 'ala al-'Imara al-'Uthmaniyya al-Mubakkira fi al-Yunan.* 2005, pp. 45-67.
[339] Jokilehto, J. *A History of Architectural Conservation,* 1999. pp. 1-352.

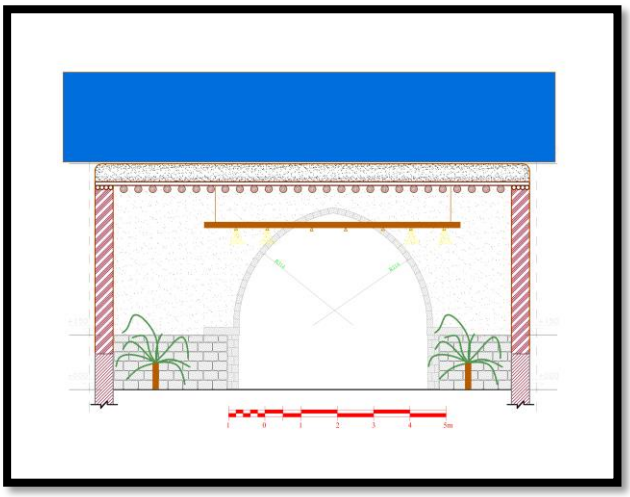
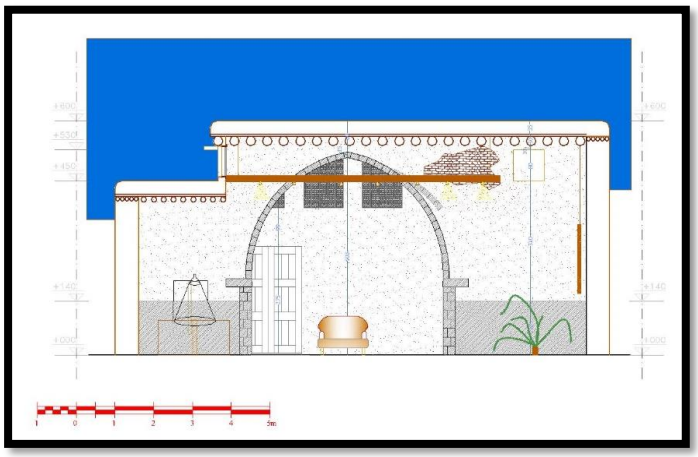
Figure.181 Suggested architectural floor plan produced based on the detailed measured survey of Al-Sharbajī Bāyka.	
Figure.182 Architectural Rehabilitation Plan: Section A–A through ALBāyka.	
Figure.183. Architectural Rehabilitation Plan: Section B-B through ALBāyka.	
Figure.184. Architectural Rehabilitation Plan: Section C-C through ALBāyka.	

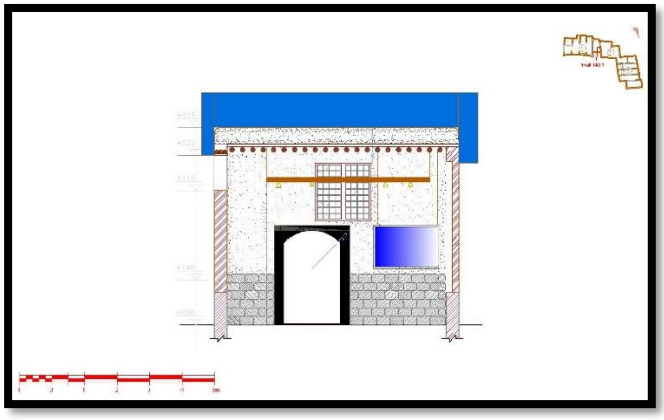
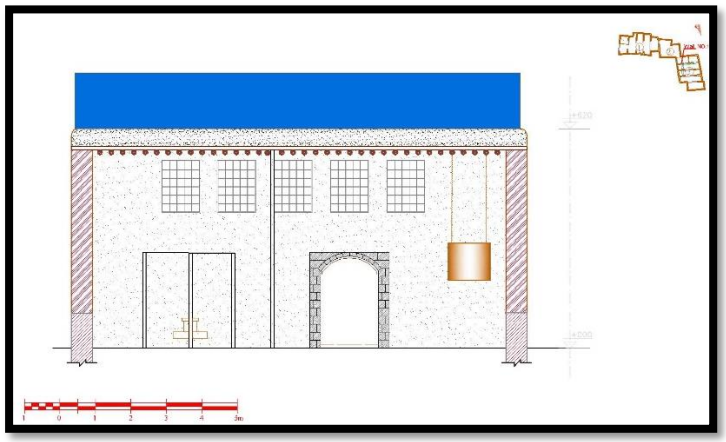
Figure.185. Architectural Rehabilitation Plan: Section D-D through ALBāyka.	
Figure.186. Architectural Rehabilitation Plan: Section Wall NO.1 through ALBāyka.	
Figure.187. Architectural Rehabilitation Plan: Section Wall NO.2 through ALBāyka.	

Table.53. This table presents all the proposed architectural plans and sections that underpin the Architectural Rehabilitation Strategy for Al-Sharbajī Bāyka. (Source: Prepared by the researcher, 2024-2025)

The following figure (188), shows a conceptual visualization rendered using 3ds Max, illustrating the proposed Al-Mīdān Museum. The design harmoniously integrates the historical character of Al-Sharbajī Bāyka with its contemporary adaptive reuse as a cultural institution.





Figure.188. 3D-modeling view showing Al-Sharbajī Bāyka integrated into its historical neighborhood context. (Source: Prepared by the researcher, 2024-2025)

IV.1.3.4.Conclusion:

The integration of Analog and Digital documentation methodologies is not merely a matter of technique but a critical epistemological and methodological convergence that enhances the depth, accuracy, and cultural sensitivity of architectural heritage studies.

IV.1.3.4.1.The Significance of Integrating Analog and Digital Methods in the Study of any old property:

The fusion of Analog architectural documentation techniques with advanced digital tools constitutes a pivotal methodological advancement in the study of the property. Analog Methods, such as tabulated element-by-element surveys, material classification, and historical interpretation rooted in local architectural lexicons, preserve the authenticity and cultural specificity of the building's heritage. These approaches are essential for capturing the intangible values embedded in construction techniques, spatial practices, and material usage unique to the architectural culture of Al-Mīdān.

Simultaneously, digital methods such as high-precision laser scanning, 3D photogrammetry, and georeferenced photographic surveys offer unparalleled accuracy and comprehensiveness. These tools enable the production of precise digital models, sectional analyses, and condition assessments that are indispensable for conservation planning and future interventions.

The synergy of these two paradigms allows for a multi-layered reading of the site: one that respects historical continuity while enabling analytical rigor and replicability. In the case of Al-Sharbajī Bāyka, this integrated approach not only supports the development of a detailed conservation and adaptive reuse strategy but also serves as a replicable model for the documentation of vernacular architecture in Damascus and comparable heritage contexts.

The following is a flowchart illustrating the proposed steps for documenting and suggesting appropriate solutions for any historical building. Figure (189).

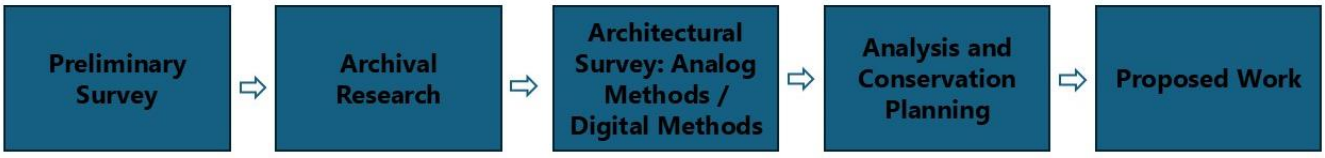


Figure.189. Documentation and Analysis Workflow. (Source: The Researcher, 2025)

Chapter V

Analytical and Investment Study of Historic Structures: Proposals for Reconstruction, Restoration, and Sustainable Adaptive Reuse

V.1.Assessing the Current Condition of the Al-Mīdān Neighborhood and the Challenges Facing Its Architectural Heritage:

The preservation of urban heritage constitutes one of the most critical frameworks for safeguarding local culture and reinforcing urban identity in ways that are contextually aligned with the characteristics of the historic built environment[340]. In the context of ancient cities and neighborhoods, such as Al-Mīdān in Damascus, heritage preservation is not merely a conservation task but a cultural imperative that mediates between historical continuity and contemporary urban development.

Urban heritage is increasingly recognized as a strategic counterbalance to the homogenizing forces of globalization. For societies endowed with rich architectural and urban legacies, built heritage serves as a foundational asset, both materially and symbolically, in defining collective memory, spatial identity, and cultural sustainability[341].

This study undertakes a critical examination of the present condition of the Al-Mīdān neighborhood, with particular emphasis on the problems affecting its archaeological structures. The research further proposes a conceptual framework for the reconstruction, restoration, and adaptive reuse of these historic buildings, aiming to reposition heritage not as a static relic of the past but as a generative force for future architectural production and urban innovation. In doing so, heritage is reframed as an active cultural resource, capable of shaping the visions, practices, and values of future generations of architects and urban designers[342].

Preserving the urban and architectural fabric of historic cities presents some of the most complex challenges in contemporary conservation practice. In recognition of these challenges, numerous international bodies, governmental institutions, and civil society organizations have convened global symposia, conferences, and workshops to investigate the multifaceted threats confronting archaeological and historical buildings. These efforts have been accompanied by the formulation of international charters and legal instruments that serve as normative frameworks for heritage management and protection.

In Syria, and especially in the historic core of Damascus, numerous national and international charters have underscored the importance of safeguarding cultural heritage. These include the Athens Charter (1931 AD), the Venice Charter (1964 AD), the Syrian Antiquities Law, the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (1972 AD), and the ICOMOS General Assembly in Washington (1986 AD). Together, these frameworks have provided the legal and ethical foundations for the protection of heritage assets and serve as critical references in addressing the threats of neglect, alteration, and demolition that continue to endanger archaeological sites such as Al-Mīdān[343].

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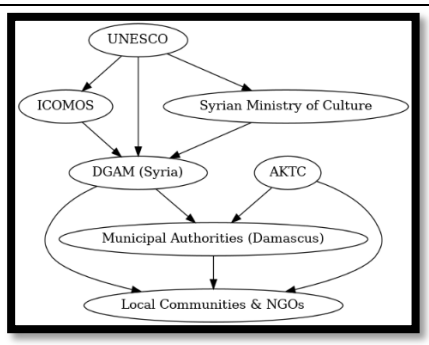
[340]Al-Mudiriyya al-ʿĀmma li-l-Āthār wa-l-Matāḥif, *Khiṭa Ḥimāyat Dimashq al-Qadīma*, 2010, pp. 12–45.
[341]Ḥatḥāt, ʿA., *Al-Turāth al-ʿImrānī fī Sūriyā*, 2015, pp. 91–130.
[342]Al-Ḥalabī, M., "Mushkilāt al-Ḥifāẓ ʿalā al-Nasīj al-Miʿmārī," *Majallat al-Āthār al-Sūriyya*, no. 48, 2018, pp. 45–68.
[343]UNESCO, *Operational Guidelines for the World Heritage Convention*, 2019, pp. 12–55.

Here are several key governmental and intergovernmental institutions involved in the preservation of urban and architectural heritage in historic cities, including examples relevant to Syria and globally[344]:

1. Directorate-General of Antiquities and Museums (DGAM) – Syria:
    - The primary national authority for heritage preservation in Syria.
    - Responsible for the protection, documentation, restoration, and promotion of historical buildings, archaeological sites, and cultural landscapes across the country.
    - Plays a central role in the maintenance and safeguarding of the Old City of Damascus, including neighborhoods like Al-Mīdān.
2. United Nations Educational, Scientific and Cultural Organization (UNESCO):
    - Oversees the World Heritage Convention (1972 AD), which facilitates international cooperation for the conservation of sites with outstanding universal value.
    - Historic Damascus was inscribed as a UNESCO World Heritage Site in 1979 AD, under the support of national and municipal authorities.
    - UNESCO provides technical expertise, emergency support in conflict zones, and legislative frameworks for heritage safeguarding.
3. International Council on Monuments and Sites (ICOMOS):
    - An international non-governmental organization working closely with UNESCO.
    - Develops international charters (e.g., Venice Charter 1964 AD) and provides guidance for the restoration and adaptive reuse of historic urban fabric.
    - Participated in evaluations and monitoring efforts in Syria, including the Al-Mīdān district.
4. The Aga Khan Trust for Culture (AKTC):
    - While not a government entity, AKTC collaborates with local authorities on urban conservation projects in Muslim heritage cities.
    - Projects often involve community-driven rehabilitation of traditional neighborhoods, integrating conservation with socio-economic revitalization.
5. Syrian Ministry of Culture:
    - Through its heritage departments and coordination with DGAM, it oversees broader cultural policy and supports heritage education, museology, and awareness campaigns.
6. Municipal and Local Urban Planning Authorities:
    - In cities like Damascus, municipal councils are increasingly involved in heritage zoning, building permit regulations, and implementation of conservation master plans for historical districts.

Here is the chart, figure (190), illustrating the interaction between institutions involved in the preservation of urban and architectural heritage in historic cities:

Figure.190. The interaction between institutions involved in the preservation of urban and architectural heritage in historic cities. (Source: (Source: Author's own elaboration, based on research framework, 2025)	

[344]Al-Asad, M, Preserving the Cultural Heritage of Historic Cities in the Arab World, 2020, pp. 123–138.

V.2. Challenges Facing Architectural Heritage in Al-Mīdān and Historic Damascus:

Cities such as Damascus possess an extraordinary concentration of cultural and architectural heritage. However, this wealth is increasingly threatened by rapid and often unregulated transformations that undermine its historical continuity and cultural significance. These changes give rise to complex, interrelated challenges within archaeological zones, many of which are rooted in broader socioeconomic and institutional constraints[345].

A key issue lies in the precarious economic conditions facing many residents and local authorities, which significantly limits the capacity to maintain, reconstruct, or restore historic structures. Inadequate funding mechanisms and the absence of long-term strategic planning have led to widespread deterioration across traditional neighborhoods[346].

Compounding this is the misuse and neglect of heritage properties. Improper functional adaptations, abandonment, and the failure of property owners to undertake necessary maintenance have resulted in the accelerated degradation of numerous historical buildings. The lack of incentives or enforcement mechanisms has further exacerbated this neglect[347].

Sociocultural pressures also play a critical role in the deterioration of heritage areas. Rapid population growth, coupled with insufficient public awareness regarding the cultural value of architectural heritage, has contributed to indiscriminate alterations, informal development, and the loss of traditional urban fabric[348].

From an environmental and infrastructural perspective, the expansion of vehicular networks, increased traffic congestion, air and noise pollution, and ground vibrations have had deleterious effects on the structural stability of heritage buildings. These developments are seldom harmonized with the spatial sensitivities of historical contexts, resulting in material erosion, façade cracking, and functional incompatibility[349].

Political instability introduces further risks, including the potential for deliberate vandalism, neglect during periods of conflict, and the illicit trafficking of cultural artifacts. These acts diminish the cultural, historical, and symbolic capital of the urban landscape, eroding its role as a site of shared memory and identity[350].

Historically, the transformation of Damascus accelerated in the early 20th century with the decline of Ottoman rule and the onset of non-traditional (non-heritage-based) urban planning initiatives. Following the Syrian Revolution of 1925 AD and the destructive impact of the French Mandate's military response, a series of cadastral planning efforts were initiated. These included the establishment of the Construction Organization Department in 1929 AD, and later, the introduction of a comprehensive urban master plan in 1936 AD, developed by French architects René Danger and Michel Écochard. These interventions marked a decisive break from the city's traditional spatial logic, imposing new street networks, building typologies, and zoning patterns[351].

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[345]Shalhūb, S., *Ishkāliyāt ʿImārat Dimashq al-Tārīkhiyya*, 2012, pp. 65–99.
[346]Al-Ḥalabī, M., "Taḥawwulāt al-Bunyān al-ʿUmmānī fī al-Qarn al-ʿIshrīn," *Majallat al-Turāth*, no. 35, 2016, pp. 28–54.
[347]Al-ʿAqqād, N., *al-Mawārith al-Miʿmārī fī Dimashq*, 2014, pp. 103–129.
[348]Burns, R., *Damascus: A History*, 2005, pp. 278–305.
[349]Salam, A., *The Reconstruction of Old Damascus*, 1995, pp. 42–76.
[350]Al-Asad, M., *Preserving Cultural Heritage*, 2020, pp. 123–138.
[351]Wizārat al-Thaqāfa, al-Khurā'iṭ al-Takhṭīṭiyya li-Madīnat Dimashq, 2010, fig. 191, fig. 314.

By 1972 AD, a landmark decision was issued prohibiting the demolition and reconstruction of heritage buildings within the walled city (Damascus). Concurrently, numerous historic properties, both within and beyond the ancient city walls, were formally registered as protected heritage assets. This was accompanied by a broader policy to preserve the historic urban fabric outside the walls, particularly through the delineation of archaeological zones and transitional buffer areas. These transitional zones serve to mediate between historic and contemporary development while accommodating services, green spaces, and infrastructural upgrades intended to safeguard the surrounding heritage[352].

To reinforce this protection, the Directorate General of Antiquities and Museums enacted Resolution No. 37, establishing regulatory controls over heritage zones. According to the Ministerial Decree No. 528/A (2009 AD), a comprehensive map of protected areas in Old Damascus, figure (191), was produced, highlighting the legally safeguarded zones in green. Figure (192), illustrates the designated sectors of Al-Mīdān Al-Musallī and Sūq Al-Mīdān, situating them within the broader urban morphology of historic Damascus. The red-shaded areas indicate archaeologically registered buildings, including those within the Al-Mīdān neighborhood, that fall under enhanced protective measures[353].

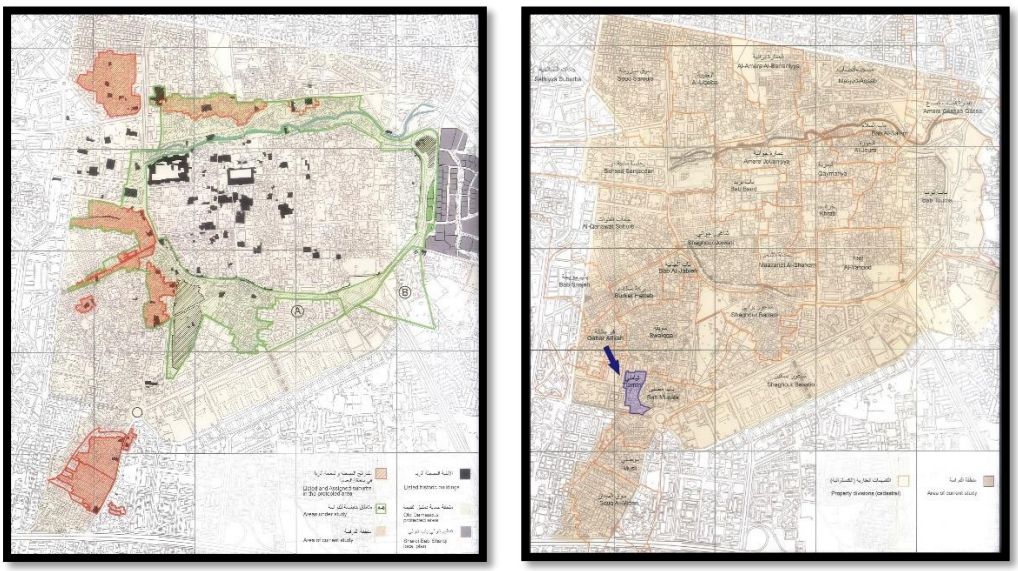


Fig. 191. Protection zones of Old Damascus (in green).

Fig. 192. Plan of Al-Musallī and Sūk Al-Mīdān segments and their location relative to Old Damascus.
(Source: Wizārat al-Thaqāfa wa-l-Mudīriyya al-ʿĀmma li-l-Āthār wa-l-Matāḥif , 2009)

V.3. Analysis of the Current Condition of Archaeological Structures in the Al-Mīdān Neighborhood:

Despite the presence of legal frameworks and regulatory mechanisms aimed at safeguarding the architectural heritage of Damascus, particularly within the historically rich Al-Mīdān neighborhood, many of its archaeological structures have been subjected to sustained and multifaceted threats. These risks, both direct and indirect, have critically undermined the physical integrity, cultural value, and long-term continuity of the built heritage in this area. In the absence

[352]DGAM, *Taqrīr Ḥimāyat al-Turāth al-ʿUmmānī fī Dimashq*, 2009, pp. 18–46.
[353]ICOMOS-Syria, *Wathīqat al-Ḥimāya wa-l-Taḥdīdāt al-Bi'iyya*, 2013, pp. 11–26.

of adequate preservation interventions, such challenges invariably lead to the gradual loss, deterioration, or irreversible destruction of historically significant sites. [354]

The present study undertook a systematic investigation into the current realities confronting Al-Mīdān's archaeological buildings. Through an extensive process of fieldwork, architectural surveying, data collection, and spatial documentation, supported by repeated site visits and contextual analysis, the researcher identified a wide range of structural, material, and environmental problems affecting the integrity of heritage assets in the neighborhood.

These problems have been analytically classified and evaluated according to four overarching deterioration factors: natural, architectural, human, and environmental. This typology serves not only to organize the findings but also to illuminate the interconnected dynamics of degradation affecting historic structures in Al-Mīdān. The classification further establishes a critical foundation for targeted conservation strategies and prioritization of future rehabilitation efforts.

V.3.1. Natural Factors: Analysis of Environmental Impacts on the Architectural Integrity of Al-Mīdān's Heritage Structures:

Among the most prevalent causes of deterioration affecting the historic buildings of the Al-Mīdān neighborhood are natural environmental factors. These include weathering, moisture infiltration, and water-related structural erosion, each of which contributes significantly to the degradation of both the material fabric and structural coherence of archaeological buildings[355]. Based on extensive field observations and survey analysis conducted by the researcher, these phenomena are categorized as follows:

1. Climatic Conditions (Rain and Wind):

Weather-induced deterioration, particularly from rain and wind, has a direct and severe impact on the structural layers of heritage buildings. Rainwater infiltration affects critical construction materials such as mortar, limestone, and timber, compromising the cohesion of bonding agents and resulting in progressive cracking, spalling, and structural destabilization[356]. Figure (193).

Periodic maintenance provided by the Ministry of Endowments has helped preserve the structural condition of mosques in Al-Mīdān. However, churches have shown more visible signs of degradation due to natural factors. For example, in the Church of Our Lady of Al-Niyāḥ, the wall adjacent to the iconostasis has suffered considerable damage over time, necessitating partial reconstruction. The deterioration extends to the erosion of original doors and window frames, further evidencing the vulnerability of unmaintained sites. Figure (194).

Similarly, several Al-Bawāyik in Al-Mīdān, constructed from traditional materials such as lime plaster, adobe bricks, and timber, have sustained extensive damage due to environmental exposure. Notable examples include:

- Bāyka Nabīl Sharbajī (P.N. 29).
- Bāyka of Muwafaq Al-Zaʿīm (P.N. 331).
- Bāyka Al-Mahāynī (P.N. 91).

[354]ICOMOS, *Heritage at Risk: Syria Report*, 2014, pp. 15–32.
[355]Burns, R., *Monuments of Syria: A Guide*, 2009, pp. 91–112.
[356]DGAM, *Taqrīr al-Taqaddum al-Taḥqīqī li-Taʾthīrāt al-Munākh ʿalā al-Mabānī al-Tārīkhiyya*, 2011, pp. 20–38.

These structures suffer from collapsed ceilings, deteriorated walls, and fractured wooden beams. Water penetration leads to the swelling and subsequent cracking of clay-covered walls and shrinkage of timber elements. To mitigate such effects, it is recommended that roofs and ceilings be waterproofed using traditional isolation methods, and that drainage infrastructure be improved by installing sloped water pipes designed to redirect runoff away from structural components[357]. (Figures 195, 196).

2. Rising Moisture and Capillary Water Action:

Another significant issue in Al-Mīdān arises from ground moisture and capillary water movement from subterranean sources (Figure 195). The neighborhood's infrastructure includes historical watercourses formerly linked to public baths, ancient water extensions, and numerous **al-subul** (public fountains), particularly concentrated near mosques, bathhouses, building corners, and cemeteries. These sources contribute to chronic moisture exposure in foundation walls, which in turn causes clay mortars to fragment and lose cohesion. The degradation is especially pronounced in limestone masonry, compared to more durable materials such as basalt or granite.

Affected properties include:

- Ḥāshī Al-Ḥarash Bāyka (P.N. 378/8).
- Raʿad Al-Samn Bāyka (P.N. 377).
- Abu Wāḥid Shtīwī Property (P.N. 310).
- Imād Al-Zabad Bāyka (P.N. 201).

Excessive humidity has led to biological growth on interior and exterior walls, including algae, fungi, and mold, especially in the Al-Wusṭānī (Intermediate section), and Al-Jawwānī (Inner section), of Al-Rifāʿī Bath, figure (195). This further accelerates material decay and poses health risks to occupants. Effective remediation includes the application of breathable insulating plasters and the use of hydrophobic materials that prevent moisture infiltration without compromising the wall’s vapor permeability.

3. Sewerage and Salinity Intrusion:

A further concern is the infiltration of wastewater from broken or aging sewer systems into the foundations of historic structures. The continuous exposure to saline water leads to chemical reactions within the soil and construction materials, causing differential settlement, degradation of the binding agents between stones, and loss of foundational integrity[358]. Case studies demonstrating this include:

- Al-Hashīm Bāyka (P.N. 378/8)
- Al-Ḥarash Property (P.N. 303).
- Aḥmad Al-Ḥaristānī Bāyka (P.N. 297).

Restorative measures must prioritize the replacement and proper sealing of sewerage pipelines and the installation of subfloor isolation layers to prevent groundwater interaction with structural foundations (Figures 197-198).

Table (54), presents a photographic and descriptive summary of the key structural issues documented across select heritage buildings in Al-Mīdān. All photographs were taken by the researcher during multiple field surveys conducted between 2021 and 2023.

[357] Al-ʿAqqād, N., *al-Mawārith al-Miʿmārī fī Dimashq*, 2014, pp. 179–192.
[358] Watt, D. S., *Building Pathology: Principles and Practice*, 2007, pp. 158–172.

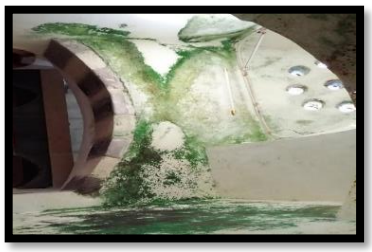
The architectural description	Figure
Figure.193. Various surface deformations and structural cracks in the wall caused by prolonged water infiltration and inadequate waterproofing.	
Figure.194. Structural failure of the upper portion of the wall in the side room of Our Lady of Al-Niyāḥ Church, showing the collapse of the mud plaster layer and the emergence of deep structural cracks.	
Figure.195. Biological colonization on the interior walls of Al-Rifāʿī Bath, evidenced by the proliferation of algae due to prolonged exposure to moisture and inadequate ventilation.	
Figure.196. Manifestations of weathering and material erosion, primarily resulting from sustained exposure to rainfall and related climatic conditions.	
Figure.197. Structural deterioration of the walls, including peeling of the clay finishing layer, caused by water infiltration from outdated plumbing and sewage systems.	
Figure.198. The combined effects of weathering and traffic-induced vibrations on Al-Bāyka, resulting in significant structural degradation and poor overall construction condition.	

Table.54. Structural deterioration issues observed in selected heritage buildings within the Al-Mīdān neighborhood. (Source: Fieldwork conducted by the researcher, 2021).

V.3.2. Architectural Factors: Impact of Contemporary Construction on the Urban Fabric of Al-Mīdān Neighborhood:

One of the most critical threats to the architectural heritage of Al-Mīdān lies in the introduction of incongruent contemporary structures within its historically cohesive urban fabric. In recent decades, official permits granted by Syrian archaeological authorities have allowed the construction of new buildings using modern materials such as reinforced concrete and cement blocks, materials fundamentally incompatible with the traditional character of the neighborhood[359], figure (203). These interventions have significantly altered the visual and spatial coherence of Al-Mīdān, disrupting its inherited architectural identity.

The newly contemporary erected buildings diverge sharply from the traditional architectural typology in terms of scale, height, construction materials, and design language. Unlike the traditional structures, typically consisting of one to two stories and constructed from local materials such as limestone, basalt, and timber, contemporary buildings often range from three to eight stories in height and are composed predominantly of cement-based materials[360]. This incongruity has led to a striking visual dissonance within the neighborhood, undermining both its historical continuity and aesthetic integrity (Figure 200).

Based on an analysis of administrative planning documents[361] and extensive field observations conducted by the researcher, it was determined that approximately 85% of existing structures in Al-Mīdān retain their traditional architectural form. However, the remaining 15% consists of contemporary constructions whose heights and materiality are misaligned with the surrounding heritage environment. The juxtaposition of these building typologies within the same urban space has generated significant visual pollution, weakening the legibility of the neighborhood's historical layers and contributing to the fragmentation of its urban identity. Figure (200).

A notable architectural conflict arises from the disproportionate vertical expansion of new buildings. While traditional structures in Al-Mīdān do not exceed 9 meters in height and typically front onto narrow streets ranging from 3 to 5 meters wide (Figure 199), recent constructions often surpass 14 meters, figure (200). This vertical disparity not only disrupts the established scale and rhythm of the urban landscape but also obscures important architectural landmarks.

Particularly affected are traditional minarets, which historically served as prominent vertical markers within the otherwise horizontal skyline of the neighborhood. The proliferation of taller contemporary buildings has visually overwhelmed these historic elements, significantly diminishing their symbolic and spatial significance within the urban composition. The diminished visibility and prominence of minarets, once central to the neighborhood's identity, reflect a broader erosion of Al-Mīdān's architectural heritage and cultural memory (Figure 200).

[359]Salam, A., *The Reconstruction of Old Damascus*, 1995, pp. 111–126.
[360]Wizārat al-Thaqāfa, *al-Khurā'iṭ al-Takhṭīṭiyya li-Madīnat Dimashq*, 2010, fig. 191, fig. 314.
[361]DGAM, *Taqrīr al-Masḥ al-Maydānī li-Ḥayy al-Mīdān*, 2011, pp. 19–37.



Figure.199. The traditional architectural form of Al-Mīdān neighborhood as it appeared in 1870 AD, prior to the onset of construction irregularities and the introduction of concrete structures. (Source: Mansūr, The Memory of Faces and Transformations, 2014)

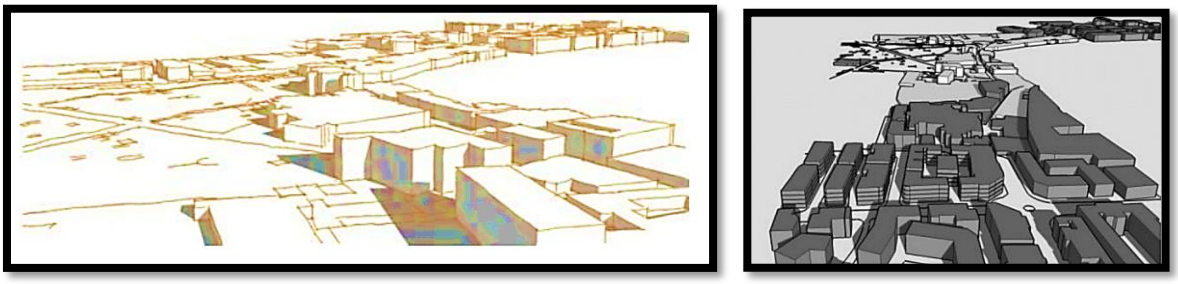


Figure.200. The proliferation of concrete buildings in Al-Mīdān neighborhood, resulting in significant visual distortion and disruption of the traditional urban fabric. (Source: Field documentation by the researcher, 2021)

Using **3ds Max software**, the researcher developed a digital 3D model of the Al-Mīdān neighborhood to visualize the spatial relationship between its historic architectural fabric and more recent contemporary interventions. The simulation results, illustrated in Figure (201, 202), clearly reveal the extent of spatial and visual overlap between traditional archaeological structures and contemporary constructions.

Figures (204,205), demonstrate how the proliferation of incongruent contemporary buildings has significantly disrupted the neighborhood's cohesive urban fabric. The visual dominance of these new structures, which are often inconsistent in scale, material, and design with the traditional context, figure (203), has contributed to the gradual erosion of Al-Mīdān's historical identity and symbolic character.

The findings underscore an urgent need for regulatory intervention. Relevant authorities must implement stricter planning and heritage protection measures to mitigate the unchecked expansion of contemporary construction. Such measures are essential to safeguard the neighborhood's architectural legacy and ensure the preservation of its historic urban landscape for future generations.



Comparative 3D visualizations of Al-Mīdān neighborhood: **Figure.201** (Right side). illustrates the historic urban fabric, while **Figure.202** (Left side). depicts the contemporary urban fabric, highlighting the contrast between traditional and contemporary constructions. (Source: 3D modeling by the researcher using 3ds Max, 2021)



Figure.203. Visualization of the historic urban fabric of Al-Mīdān neighborhood, featuring the prominent presence of the minaret and dome, distinctive vertical elements that punctuate the predominantly horizontal architectural landscape. (Source: 3D modeling by the researcher, 2021)

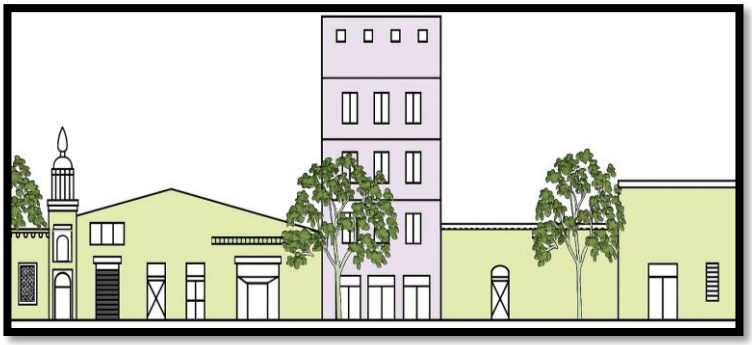


Figure.204. A contemporary building constructed in front of the minaret of Al-Rifāʿī Mosque, diminishing the visual prominence and symbolic significance of the minaret as a traditional vertical landmark within the Al-Mīdān neighborhood. (Source: 3D modeling by the researcher, 2021)



Figure.205. An architectural drawings depicting portions of the façades along Sultānī Street in Al-Mīdān, highlighting the spatial overlap between historic and contemporary buildings, with marked discrepancies in height and architectural character. (Source: Field analysis and documentation by the researcher, 2021)

V.3.3. Human Factors: The Impact of Conflict and Urban Development on the Heritage of Al-Mīdān:

Among the most consequential anthropogenic factors contributing to the deterioration of the architectural heritage in Al-Mīdān are those arising from conflict and uncoordinated urban development. Historically, one of the earliest and most destructive episodes occurred during the Syrian Great Revolt in the early 1930s, when French military forces bombarded the Al-Mīdān neighborhood, (III.2.1.The Battle of al-Mīdān). This assault led to the destruction of numerous heritage buildings and inflicted significant damage on others, permanently altering portions of the historical urban fabric, figure (21).

A second major intervention occurred in the 1980s, with the implementation of a large-scale infrastructure project aimed at constructing the Southern Highway Bridge. This development project physically bisected the Al-Mīdān neighborhood, disrupting its spatial cohesion and severing historic circulation routes. In the process, a substantial number of traditional houses and Al-Bawāyik were demolished. The construction of the highway not only introduced a modern infrastructural axis into the historical district but also became a catalyst for further transformation, undermining the integrity of the traditional urban morphology that had defined Al-Mīdān for centuries[362] (Figure 206).

These examples underscore the profound and often irreversible impact of human decisions, whether rooted in political conflict or urban modernization, on the survival of historic environments. They highlight the urgent need for heritage-sensitive planning strategies that account for both the cultural value and spatial coherence of archaeological districts.

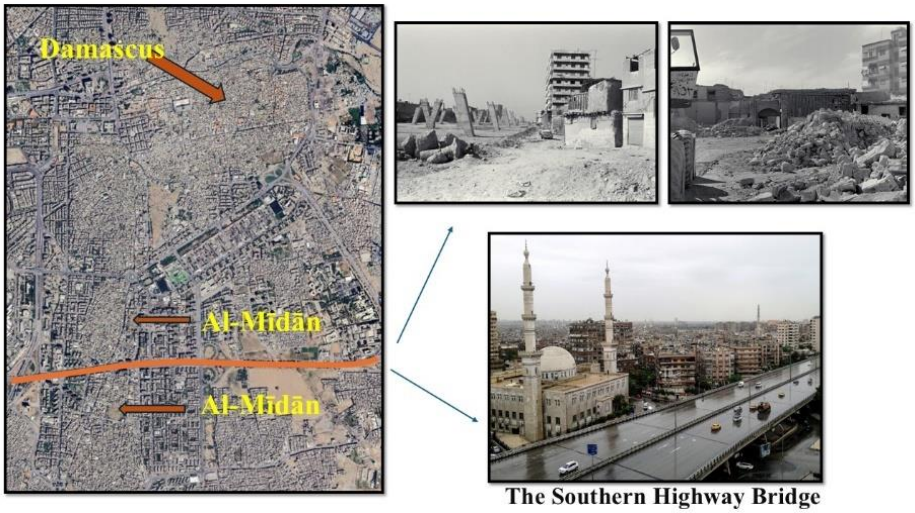


Figure.206. Demolition of historic buildings in Al-Mīdān neighborhood during the construction of the Southern Highway Bridge, illustrating the large-scale disruption of the traditional urban fabric.
(Source: DGAM Archives, Demolition and construction activities in the Al-Mīdān neighborhood, ca. 1980s–1990s)

In addition to the aforementioned factors, the archaeological structures of the Al-Mīdān neighborhood face escalating threats due to increasing real estate pressures and land value speculation. Al-Mīdān is situated within a highly sought-after urban zone where land values have risen sharply, rendering the area attractive to private investors and commercial developers[363]. In many cases, this has led to the intentional demolition or neglect of heritage buildings in favor of

[362]Al-ʿAqqād, N., *al-Mawārith al-Miʿmārī fī Dimashq*, 2014, pp. 239–247.
[363]Al-Asad, M., *Preserving Cultural Heritage*, 2020, pp. 134–139.

high-yield economic projects, with little to no regard for the historical or cultural significance of the sites involved.

This process often manifests in the reassignment of historically significant parcels to incongruous or utilitarian functions, undermining their symbolic and spatial roles within the traditional urban context. In some cases, heritage structures are preserved physically, but their uses are altered in ways that conflict with their original intent, thereby diminishing their cultural integrity. Over time, such interventions collectively contribute to the progressive erasure of Al-Mīdān's archaeological identity and historical continuity (Figure 207).

Furthermore, social transformation within the neighborhood has exacerbated the erosion of its heritage values. The gradual outmigration of the original residents, many of whom held strong historical and emotional ties to the area, has been replaced by the influx of new populations lacking the same sense of cultural affiliation with the neighborhood[364]. This demographic shift has negatively impacted community stewardship of the built environment, contributing to neglect, inappropriate renovations, and the loss of collective memory associated with Al-Mīdān's architectural heritage (Figure 208-209)

These human-induced pressures, both economic and social, pose some of the most insidious challenges to sustainable heritage preservation. Without deliberate intervention through regulatory, community-based, and educational measures, the deterioration of Al-Mīdān's urban and cultural fabric is likely to continue unabated.



Figure.207. Example of restoration carried out using materials incompatible with the traditional architectural character of the Al-Mīdān neighborhood.(Source: Field documentation by the researcher, 2022)



Figure. 208 (left side) illustrates the use of a metal ceiling, which resulted in construction-related issues in the façade wall due to material incompatibility and the introduction of structural stress.
Figure.209 (Right side). Shows the application of contemporary cladding materials that are inconsistent with the historic architectural context of the Al-Mīdān neighborhood. (Source: Field documentation by the researcher, 2022)

[364]Ashworth, G. J., and Tunbridge, J. E., *The Tourist-Historic City*, 2000, pp. 111–124.

V.3.4. Environmental Factors: The Impact of Urban and Ecological Pressures on the Architectural Heritage of Al-Mīdān Neighborhood: Table (55).

Environmental conditions represent one of the most pressing and multifaceted challenges to the preservation of Al-Mīdān's historic urban fabric. These factors encompass a wide range of physical and visual disruptions, including air and noise pollution, vehicular congestion, waste accumulation, and unregulated utility installations, all of which contribute significantly to the progressive deterioration of archaeological buildings within the area[365]. The following section synthesizes the major environmental threats identified through repeated field visits conducted by the researcher. Each factor is accompanied by a proposed mitigation strategy, based on on-site observations by the researcher and comparative heritage management practices[366]:

1. Vehicular Traffic and Its Structural Impact: Figure (211-212).

One of the principal environmental threats in Al-Mīdān stems from high volumes of vehicular traffic, particularly along the main commercial streets. Heavy transport vehicles, combined with dense pedestrian and retail activity, exert considerable pressure on the urban infrastructure and pose significant risks to heritage buildings. A field survey revealed that historic structures—including mosques, public baths, and Al-Bawāyik, situated adjacent to primary traffic arteries exhibit cracks in their exterior façades, surface erosion, and structural vibrations transmitted through the subsoil.

These mechanical stresses weaken the clay, lime plaster, and traditional stone masonry that constitute the buildings, while vehicular emissions further contribute to the soiling, staining, and chemical degradation of the façade materials. Over time, these effects accelerate material fatigue and compromise the buildings' structural integrity[367].

- **Recommended Solution:**

It is essential to enforce regulatory restrictions on the circulation of heavy vehicles within proximity of protected heritage structures. Access should be limited to essential services, such as emergency and municipal vehicles, while preserving pedestrian and light vehicle circulation in a controlled manner. Additionally, traffic rerouting and environmental zoning should be incorporated into urban planning strategies to reduce mechanical and atmospheric stress on heritage sites.

2. Overcrowding and Commercial Encroachment: Figure (2011).

The unregulated expansion of commercial activity along Al-Mīdān's central corridors has intensified pressure on public space, further compounding environmental degradation. Shopkeepers frequently extend merchandise displays onto sidewalks and roadways, contributing to congestion and obstructing pedestrian flow. Informal street vending exacerbates this condition, diminishing both urban functionality and aesthetic coherence.

- **Recommended Solution:**

Municipal authorities must enforce zoning regulations to restrict commercial encroachments and preserve the spatial balance of the historic urban fabric. Clear demarcations for storefront

[365]Shalhūb, S., *Ishkāliyāt al-ʿImāra al-Tārīkhiyya*, 2012, pp. 263–278.
[366]ICOMOS-Syria, *Dalīl li-Taqyīm al-Mumārāsāt al-Muqārina fī Ḥimāyat al-Mabānī al-Qadīma*, 2014, pp. 10–27.
[367]Feilden, B. M., *Conservation of Historic Buildings*, 2003, pp. 146–163.

boundaries and designated vending zones, coupled with periodic inspections, are necessary to maintain the integrity of public space and ensure unobstructed circulation.

3. Visual Pollution and Infrastructure Irregularities:

Visual degradation is a salient manifestation of environmental neglect in Al-Mīdān. The random extension of electrical, telephone, and water lines, often affixed externally to building façades, has severely marred the visual coherence of the streetscape. This infrastructural disarray is attributed to both poor management practices and a lack of environmental awareness among property occupants (Figures 213-2014).

-Additional contributors to visual pollution include: Figure (215).

- The widespread use of plastic awnings above storefronts, which trap debris and create unsightly conditions.
- The indiscriminate installation of air-conditioning and heating units, which lead to thermal stress on building materials. Temperature fluctuations cause the expansion and contraction of lime mortar, stone, and timber, resulting in cracking, material separation, and progressive weakening of structural elements[368].

-Recommended Solution:

A coordinated infrastructure strategy should be implemented to consolidate service lines within concealed conduits or architecturally integrated ducts. Property owners should be incentivized or mandated to relocate external mechanical systems to less visible locations. Public campaigns and capacity-building efforts must also raise local awareness about the importance of preserving the aesthetic and structural integrity of heritage façades.

4. Waste Management and Urban Decay:

Inadequate waste disposal infrastructure in Al-Mīdān, has led to the widespread use of abandoned or deteriorated heritage buildings as informal garbage dumps, particularly in areas lacking designated containers. This practice contributes not only to visual and environmental pollution but also accelerates the physical deterioration of buildings by introducing organic and chemical decay agents (Figures 210).

- **Recommended Solution:**

All sectors of the neighborhood must be equipped with adequate waste collection facilities, and uninhabited heritage buildings should be secured to prevent their misuse as dumping grounds. Furthermore, community engagement initiatives are essential to foster a collective sense of responsibility toward the preservation of Al-Mīdān's historical and archaeological significance.

Table (55), presents a categorized overview of the environmental degradation issues observed in selected heritage structures throughout Al-Mīdān, based on direct field assessments conducted by the researcher.

[368]Al-Ḥalabī, Taʾthīr al-Taqallubāt al-Ḥarāriyya ʿalā al-Mabānī al-Qadīma, *al-Āthār al-Sūriyya*, no. 47, 2021, pp. 71– 84.

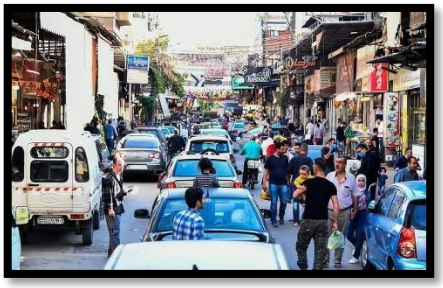
The architectural description	The Figure
Figure.210. Neglected heritage properties repurposed as informal waste disposal sites, reflecting both a lack of maintenance and insufficient public awareness regarding the value of cultural heritage.	
Figure.211. Traffic congestion in the Al-Mīdān neighborhood, contributing to environmental stress, noise pollution, and structural degradation of adjacent heritage buildings.	
Figure.212. Visible inclination in the mosque minaret caused by prolonged exposure to mechanical vibrations transmitted through the subsoil as a result of heavy vehicular traffic.	
Figure.213. Random electrical installations affixed to building façades, contributing to visual pollution and structural vulnerability in the Al-Mīdān neighborhood.	
Figures.214. The concentration of commercial activity in front of Al-Gawwāṣ Mosque, accompanied by the inappropriate application of paint on the external façade, both of which detract from the historical character and visual integrity of the structure.	 
Figures.215. Visual distortion caused by the proliferation of unregulated signs and notice boards affixed to the external façades of buildings, compromising the architectural coherence of the historic streetscape.	 

Table.55. Documented environmental deterioration affecting selected heritage buildings in the Al-Mīdān neighborhood, highlighting issues such as pollution, structural damage from vehicular traffic, waste accumulation, and visual degradation. (Source: Field documentation by the researcher, 2021)

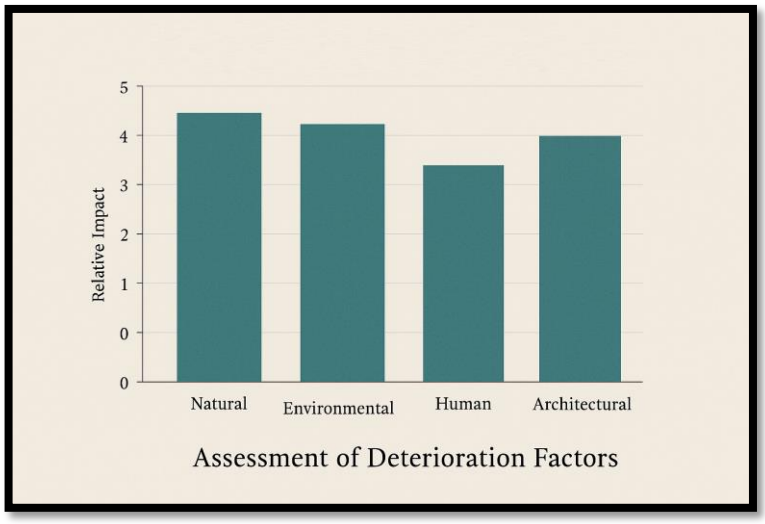
V.3.5.Weighted Assessment of Deterioration Factors in Al-Mīdān Neighborhood:

(The Researcher-2025). Table (56-57).

To enhance the analytical clarity of the assessment, a comprehensive summarizing chart has been developed in which the various factors contributing to the deterioration of the Al-Mīdān neighborhood are comparatively weighted. This chart visually demonstrates the relative strength and weakness of each factor, illustrating their proportional significance and interrelationships. Such a representation offers a transparent framework for evaluating the extent of urban degradation and prioritizing conservation strategies accordingly. Figure (216).

Factor	Description	Relative Impact (1–5)
Natural	Rain, humidity, rising moisture, and water infiltration causing decay and erosion.	**4.5 (Very High)**
Environmental	Pollution, overcrowding, traffic-induced vibrations, garbage accumulation.	**4.2 (Very High)**
Architectural	Incompatible contemporary construction materials, excessive height, visual pollution.	**4.0 (High)**
Human	Wars, neglect, real estate pressure, misuse, loss of traditional ownership.	**3.5 (Moderate-High)**

Table.56. Assessment of Deterioration Factors in Al-Mīdān Neighborhood. (Source: Compiled by the researcher,2025)



Figur.216. Assessment of the relative impact of deterioration factors affecting architectural heritage in Al-Mīdān. The chart is based on field observations and qualitative evaluations, indicating that natural and environmental factors exhibit the highest impact, followed by architectural and human-induced causes. (Prepared by the researcher,2025)

Deterioration Factor	Impact Level (1–5)	Color Code
Subterranean Water Infiltration	4.5	Red
Drainage Deficiencies	3.5	Yellow
Humidity & Insulation	4.5	Red

Rainwater & Thermal Fluctuations	4.5	Red
Excessive height	4	Orange
Biological Decay	4.5	Red
Non-traditional construction materials	4	Orange
Avian Activity	4.5	Red
Human Activity	3.5	Yellow
• 5 = Very High Impact (Red) • 4 -5= High Impact (Orange) • 3 -4= Moderate Impact (Yellow)		

Table.57. Classification of deterioration factors affecting the architectural heritage of Al-Mīdān,based on field observations and material assessments. Each factor is evaluated according to its relative impact level on a 1–5 scale, with corresponding color codes indicating severity: red for very high impact, orange for high impact, and yellow for moderate impact. (Source: Prepared by the researcher, 2025)

V.4. Proposed Strategies for the Revitalization and Rehabilitation of the Al-Mīdān Neighborhood: (By the researcher – 2025).

The Al-Mīdān district has witnessed a progressive erosion of its urban identity, largely due to the alteration, degradation, and, in some cases, the outright destruction of its historic built fabric. A significant number of heritage structures have either deteriorated due to prolonged neglect and lack of maintenance or have been deliberately demolished and replaced with contemporary constructions that are stylistically and materially incongruent with the area's architectural legacy. This intrusion of contemporary buildings, coupled with the disappearance of traditional crafts and practices, has contributed to a substantial loss of Al-Mīdān's historical and cultural distinctiveness.

Given the gravity of this deterioration, it is imperative to develop a comprehensive, context-sensitive framework for the preservation and sustainable development of the neighborhood's cultural and urban heritage. This requires the formulation and implementation of targeted legislation, policy mechanisms, and urban conservation strategies that prioritize the protection, restoration, and adaptive reuse of the historic environment.

One of the most fundamental and urgent steps in this process is the systematic documentation and official registration of heritage buildings. Accurate architectural documentation serves as a critical foundation for all subsequent conservation and rehabilitation efforts[369]. While this thesis has focused in detail on several Ottoman-era structures in Chapters III and IV, it is important to note that Al-Mīdān is also home to a rich array of monuments from earlier historical periods, including the Fatimid, Ayyubid, and Mamluk eras[370]. These sites represent an invaluable layer of the city's architectural palimpsest and must be incorporated into any comprehensive heritage management plan.

The following Table (58), provides a preliminary listing of significant historical establishments in Al-Mīdān from these earlier periods, based on archival sources and field observations[371].

[369]Jokilehto, J., *A History of Architectural Conservation*, 1999, pp. 253–270

[370]ʿAzzām, M., *Turāth Dimashq bayna al-Tawthīq wa-l-Tajaddud*, 2015, pp. 109–124.

[371]Wizārat al-Thaqāfa, *al-Jurdhān al-Rasmiyya li-l-Mabānī al-Athariyya*, 2010, pp. 42–55

The archaeological buildings in Al-Mīdān neighborhood	Its era
Musallī Mosque	Ayyubid
ʾAskalān Tomb (Cemetery of the prince ʿAzz Eldiya)	Ayyubid
Khaniqiya Mosque	Mamluk
Mihrāb Abu Al-Flūs Mosque	Fatimid
Jinid Al-ʿAskarī	Mamluk
Zāwyat Men Tombs	Mamluk
Abu Al-Wafā Al-Musallī Tomb	Mamluk
Al-Kurd Mosque	Mamluk
Family of Burghul Cemetery	Mamluk
Abu Harb Cemetery	Mamluk
Al-Qurashī Mosque	Mamluk
Al-Shīkh Hasan Cemetery and Bath	Mamluk
Al-Harmalā Cemetery	Mamluk
Al-Zuayzaniya Cemetery	Mamluk
ʾArak Al-Silhadār Cemetery Ṣuhayb Al-Rūmī Mosque	Mamluk
Manjak Mosque	Mamluk
Abu Al-Ṣafā Mosque	Mamluk
Al-Khānkiya Mosque	Mamluk
Al-Tīniya Cemetery	Mamluk
Al-Kanshaliya School	Mamluk
Al-Daqāq (Al-Karīmī) Mosque	Mamluk
Zāwyat Al-Rashiīdiya	Mamluk
Banī Al-Musallī Cemetery	Mamluk
Abu Al-Nūr Tomb and Sabīl	Mamluk
Bashīr Basha House, ʿUmar Basha House, Mīchaīl Aflak House, Al-Bīṭār House, Al-Mahāynī House , ʿAdil Al-Kasīr House , Al-Nūr House	Ottoman

Table.58. Historical establishments in the Al-Mīdān neighborhood dating to various periods.
(Source: Historical analysis conducted by the researcher, 2022)

The importance of documenting archaeological structures extends beyond the mere protection of monuments from loss or extinction; it also serves as a critical foundation for informed decision-making concerning the conservation, restoration, and sustainable management of historic buildings. Accurate documentation enables the diagnosis of structural and material conditions, facilitates prioritization in restoration planning, and ensures interventions are both contextually appropriate and historically authentic[372].

To initiate the effective rehabilitation of the Al-Mīdān neighborhood with the broader objective of revitalizing its cultural and touristic function, it is imperative to address the area's complex challenges through a coordinated, multi-institutional approach. This includes active collaboration with governmental bodies, both in terms of service provision and financial support—as well as the enactment of protective legislation. Regulatory frameworks must be adapted to safeguard the neighborhood's remaining heritage assets and prevent further erosion of its architectural and cultural identity.

The following section outlines a set of strategic recommendations proposed by the researcher to enhance the protection and preservation of Al-Mīdān's cultural heritage. These measures are

[372]ICOMOS-Syria, *Dalīl al-Tawthīq wa-Iʿdād al-Malafāt al-Fanniyya*, 2014, pp. 11–26.

designed to foster an integrated model of urban and heritage management that aligns with both local needs and international conservation standards[373]:

1- Establish a regulatory framework to manage and control unregulated urban development within the Al-Mīdān neighborhood.

This includes the delineation of transitional zones, designated areas where new construction may be permitted under strict regulatory oversight and in accordance with guidelines issued by relevant governmental and archaeological authorities. Within these zones, any proposed development must adhere to architectural standards that respect the historical context. Additionally, a moratorium should be enforced on the demolition or alteration of any registered or historically significant structure, unless the building poses an immediate threat to public safety due to structural instability. In such cases, interventions must be preceded by comprehensive documentation and approved conservation protocols to ensure the preservation of the site's cultural value.

2- Formulate a comprehensive infrastructure development plan for Al-Mīdān to support the restoration and long-term preservation of its archaeologicalheritage:

This plan should prioritize the rehabilitation of outdated utility networks, such as water, sewage, and drainage systems, which directly impact the structural stability of heritage buildings. Upgrading infrastructure will mitigate the risks associated with water infiltration, humidity, and soil erosion, thereby halting ongoing deterioration and creating a more stable foundation for conservation efforts. The infrastructure plan must be coordinated with heritage authorities to ensure that interventions are sensitive to the archaeological context and do not compromise the integrity of protected sites.

3- Address the lack of public and professional awareness regarding the cultural and architectural significance of Al-Mīdān's heritage through targeted educational and outreach initiatives:

This includes the development of community-based programs, school curricula, and public campaigns aimed at promoting awareness of the value of inherited architectural heritage. Special attention should be given to engaging local residents, architects, urban planners, and decision-makers. Additionally, organizing conferences, lectures, and heritage-focused forums will foster a broader understanding of the importance of archaeological preservation. These efforts should emphasize that architectural heritage is not only a historical asset but also a defining element of national identity, cultural continuity, and urban distinctiveness.

4- Install interpretive signage for historic and archaeological buildings to enhance public understanding and site recognition:

These signs should clearly identify each structure's historical significance, architectural typology, and period of origin, while also contextualizing its function within the broader heritage landscape of Al-Mīdān. Informational panels, plaques, or digital QR-code-enabled signs can serve as educational tools for residents, visitors, and researchers alike, reinforcing the cultural narrative and promoting respectful engagement with the built environment.

[373]UNESCO, *Operational Guidelines for the Implementation of the World Heritage Convention*, 2021, pp. 80–98.

5- Implement regulatory and design controls for commercial establishments along the main thoroughfare of Al-Mīdān, aimed at organizing market activity, enhancing pedestrian accessibility, and restoring the visual coherence of the streetscape:

This includes formalizing the layout of shopfronts and footpaths, rehabilitating road surfaces, and restoring building façades in accordance with heritage-sensitive design principles[374]. A key recommendation is to replace non-traditional metal storefronts with historically accurate wooden doors and façades, particularly for al-Bawāyik and other commercial units. These interventions should be based on documented examples of original woodwork from the neighborhood, and adopted as a standardized model for façade treatment. Such measures will significantly contribute to the reestablishment of Al-Mīdān's historic character and architectural unity.

6- Establish designated stalls for the display and sale of traditional handicrafts, cultural souvenirs, and interpretive materials related to the historical Hajj route and its associated service structures:

These stalls should be strategically integrated within the Al-Mīdān neighborhood to support both cultural tourism and local economic development. In addition to promoting traditional crafts, the stalls can offer illustrated maps, brochures, and educational content highlighting the evolution of the Hajj route, its architectural landmarks, and the role of Al-Mīdān as a historic node in this pilgrimage network. This initiative would reinforce the neighborhood's cultural identity while fostering sustainable heritage-based commerce.

7- Enhance the landscape design of Al-Mīdān by maintaining and strategically organizing the placement of trees in public spaces and along roadways:

Proper care, pruning, and placement of trees contribute not only to environmental sustainability but also to the aesthetic coherence and visual identity of the neighborhood. A well-planned urban greening strategy enhances the spatial quality of streets and open areas, offers shade and comfort, and reinforces the historical character of Al-Mīdān. Integrating greenery into the urban fabric supports both ecological resilience and cultural ambiance.

8- Eliminate key sources of environmental pollution that contribute to the deterioration of heritage buildings, and reduce vehicular density along the main street of Al-Mīdān:

Pollutants such as vehicle emissions, noise, and mechanical vibrations accelerate the erosion of traditional building materials and compromise the structural stability of historic architecture[375]. Implementing traffic-calming measures, restricting the movement of heavy vehicles, and promoting pedestrian zones will significantly reduce environmental stressors. These actions are essential to safeguarding the physical integrity and longevity of the neighborhood's architectural heritage.

9- Improve the surrounding environmental conditions of the Al-Mīdān neighborhood through coordinated efforts with the Directorate of Environmental Protection to address the adverse impacts associated with the high concentration of restaurants:

[374]UNESCO, *Urban Rehabilitation of Historic Centers in the Arab World*, 2005, pp. 61–78.
[375]DGAM, *Taqrīr ʿan Taʾthīr al-Talawwuth wa-l-Ihtizāzāt ʿalā al-Mabānī al-Tārīkhiyya fī Dimashq*, 2012, pp. 23–38.

This includes the regulation of waste disposal, control of cooking emissions, and mitigation of noise and odor pollution generated by food establishments. Implementing environmental management strategies, such as improved ventilation systems, designated waste collection zones, and compliance monitoring, will help preserve the historical ambiance of the neighborhood while supporting its commercial vitality in a sustainable and heritage-sensitive manner.

10- Establish strict regulatory controls to mitigate visual pollution caused by inappropriate advertising, signage, lighting, and utility installations throughout the Al-Mīdān neighborhood:

The aesthetic integrity of historical structures has been severely compromised by the unregulated placement of commercial advertisements, illuminated signage, and exposed electrical and telephone cables. To preserve the visual coherence and heritage value of the area, it is essential to implement clear design guidelines governing the size, placement, and lighting of signs, as well as to mandate the concealment or organized routing of utility infrastructure. These measures will restore the architectural legibility of Al-Mīdān's historic environment and enhance its cultural atmosphere.

11- Reintegrate Al-Bawāyik into the cultural and economic fabric of Al-Mīdān by assigning them heritage-based functions that contribute to tourism activation and community engagement:

Given their architectural significance and current state of neglect and misuse, Al-Bawāyik require urgent structural maintenance, sensitive restoration, and adaptive reuse. It is recommended that these spaces be incorporated into a broader cultural and tourism management strategy, offering functions aligned with the historical and artistic identity of the neighborhood. Proposed uses include:

- ✓ Exhibition spaces for traditional crafts and fine arts.
- ✓ A museum of popular traditions and local heritage.
- ✓ An exhibition of photographic archives featuring notable figures from Al-Mīdān.s
- ✓ Institutions for Arabic music, calligraphy, and classical languages.
- ✓ Training centers for traditional decorative arts such as Al-ʿAjamī painting.
- ✓ Educational workshops for manual heritage-based professions.

Such initiatives would not only preserve the architectural authenticity of Al-Bawāyik but also establish them as dynamic cultural nodes, contributing to the sustainable revitalization of Al-Mīdān neighborhood.

12- Integrate Al-Mīdān neighborhood into Syria's national network of cultural and heritage tourism routes, recognizing its historical significance as a religious, cultural, commercial, and recreational hub:

Al-Mīdān holds strategic value due to its location along the historic pilgrimage route, its role in the grain trade, figure (1,57), and its reputation for traditional cuisine and sweets. These multifaceted identities make it a prime candidate for inclusion in themed tourist circuits that highlight Syria's rich urban and intangible heritage. Incorporating Al-Mīdān into such routes would not only enhance

its visibility as a heritage destination but also support local economic revitalization through culturally rooted tourism.

13- Propose the integration of Geographic Information Systems (GIS) as a strategic tool for tourism planning and heritage management in Al-Mīdān:

GIS technology offers significant potential in mapping, analyzing, and visualizing the spatial distribution of cultural assets, tourist infrastructure, and urban dynamics. Its application would facilitate the development of data-driven tourism strategies, the identification of priority zones for intervention, and the creation of interactive heritage maps. By employing GIS, planners and stakeholders can more effectively design sustainable tourism development plans that align with the historical, cultural, and spatial realities of Al-Mīdān neighborhood.

- The Role of Geographic Information Systems (GIS) in Supporting Tourism and Heritage Planning in Al-Mīdān (as Identified by the Researcher-2025): Table (59).

GIS Functionality	Description	Strategic Benefits
1. Digital Database Development	Compilation of spatial and non-spatial data (urban layout, infrastructure, population, economy).	Provides a comprehensive foundation for targeted tourism and heritage interventions.
2. Spatial & Statistical Analysis	Analysis of spatial patterns, vulnerabilities, and potentials using quantitative tools.	Supports evidence-based planning and prioritization of preservation and tourism initiatives.
3. Advanced Tourism Mapping	Mapping tourist flows, infrastructure, and future investment zones. Includes dynamic and updatable digital maps.	Facilitates efficient tourism planning, infrastructure allocation, and investment forecasting.
4. Risk Assessment & Disaster Preparedness	Real-time spatial monitoring and hazard analysis.	Enhances resilience of heritage sites through early warning systems and rapid response planning.
5. Multi-Scalar Tourism Planning	Development of tourism strategies at local and regional levels.	Ensures integration across planning scales and stakeholder levels for coherent tourism development.
6. Public Accessibility & Online Platforms	Dissemination of interactive maps and data via digital platforms.	Promotes engagement, awareness, and virtual access for tourists, researchers, and planners.

Table.59. The Role of GIS in Supporting Heritage Tourism and Urban Planning in Al-Mīdān. (Source: Analytical study conducted by the researcher, 2025).

In sum, GIS represents a critical technological infrastructure for the integrated planning, conservation, and promotion of Al-Mīdān as a culturally significant heritage destination.

14- Suggested Recommendations:

- Table (60), presents a selection of historical artifacts that hold significant archaeological value, offering material evidence of the deep-rooted history of the Al-Mīdān neighborhood. These items are suitable for preservation and exhibition in museum (Chapter IV (IV.1.3.3.2. **):** Al-Midan Museum-Al-Sharbajī Bāyka) collections as tangible representations of the area's cultural and historical legacy.

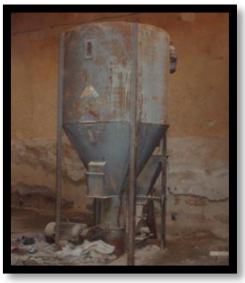
Description	Figure
Figs.217. depict a traditional grain-weighing scale, an example of historical utilitarian artifacts associated with the daily life and commercial activities of the Al-Mīdān neighborhood. Given its cultural and functional significance, this object represents a valuable candidate for preservation and display within a museum context.	
Fig.218. Traditional grain mill used in Al-Mīdān, illustrating historical methods of food processing and local craftsmanship. As a representative example of daily life in the neighborhood's past, it holds potential value for museum preservation and exhibition.	
Fig.219. Traditional grain sieve used in Al-Mīdān for separating and refining grains. This artifact exemplifies the tools of historical agricultural practices and is of museological interest due to its ethnographic and functional significance.	

Table.60. Selected Historical Artifacts Suitable for Preservation and Exhibition in Proposed Museum Settings (Source: Field documentation by the Researcher, 2021)

- Table (61), presents proposed strategies for displaying traditional possessions belonging to Al-Mīdān families, alongside recommendations for interior decorative elements and lighting features intended for integration into the envisioned heritage museum (Chapter IV (IV.1.3.3.2. **):** Al-Midan Museum-Al-Sharbajī Bāyka). These suggestions aim to enhance the authenticity and experiential quality of the museum environment.

Description	Figure
Fig.220. Antique wooden cupboard originating from a traditional household in Al-Mīdān. This piece reflects the domestic material culture of the neighborhood and is a valuable candidate for exhibition within the proposed heritage museum.	

Fig.221. Antique candlestick representative of traditional lighting practices in Al-Mīdān households. This artifact exemplifies the aesthetic and functional aspects of domestic life and holds curatorial value for museum display.	
Fig.222. Proposed display concept for photographs of notable figures from Al-Mīdān. This initiative aims to honor the neighborhood's historical personalities and to contextualize its social and cultural heritage within the museum narrative.	
Fig.223. Suggested architectural design for an arch element to be featured in the proposed museum. This design draws inspiration from traditional forms found in Al-Mīdān, contributing to the spatial and aesthetic authenticity of the exhibition environment.	

Table.61. Proposed Display Strategies for Traditional Possessions of Al-Mīdān Families in The Proposed Heritage Museum (Source: Field documentation by the Researcher, 2021)

- Fig.224. illustrates a proposed rerouting of vehicular traffic to areas outside the boundaries of the Al-Mīdān neighborhood. This intervention is intended to reduce mechanical vibrations caused by traffic movement, which pose a significant threat to the structural integrity of the area's archaeological buildings and may contribute to their gradual deterioration and partial collapse.

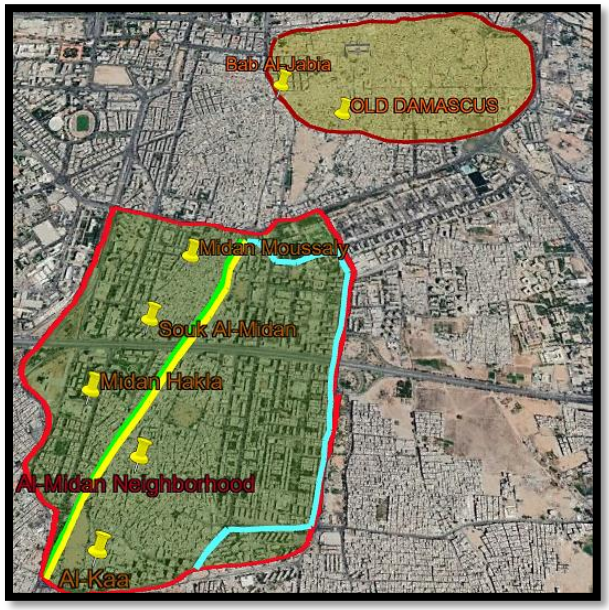


Figure.224. Proposed transportation reconfiguration in Al-Mīdān: rerouting vehicular traffic (blue line) outside the neighborhood's historic core, reintroducing the tram system (yellow line), and designating pedestrian pathways (green line). This intervention aims to protect archaeological structures from vibration-induced damage. (Source: Researcher, 2021)

V.4. Visual Synthesis of the Strategic Action Plan for the Urban Rehabilitation of Al-Mīdān Neighborhood: Figure (225).

- Here is a visual summary of the "Structured Action Plan for the Urban Rehabilitation of Al-Mīdān Neighborhood." Each bar represents a key component of the plan, annotated with its corresponding objective. Figure (225).

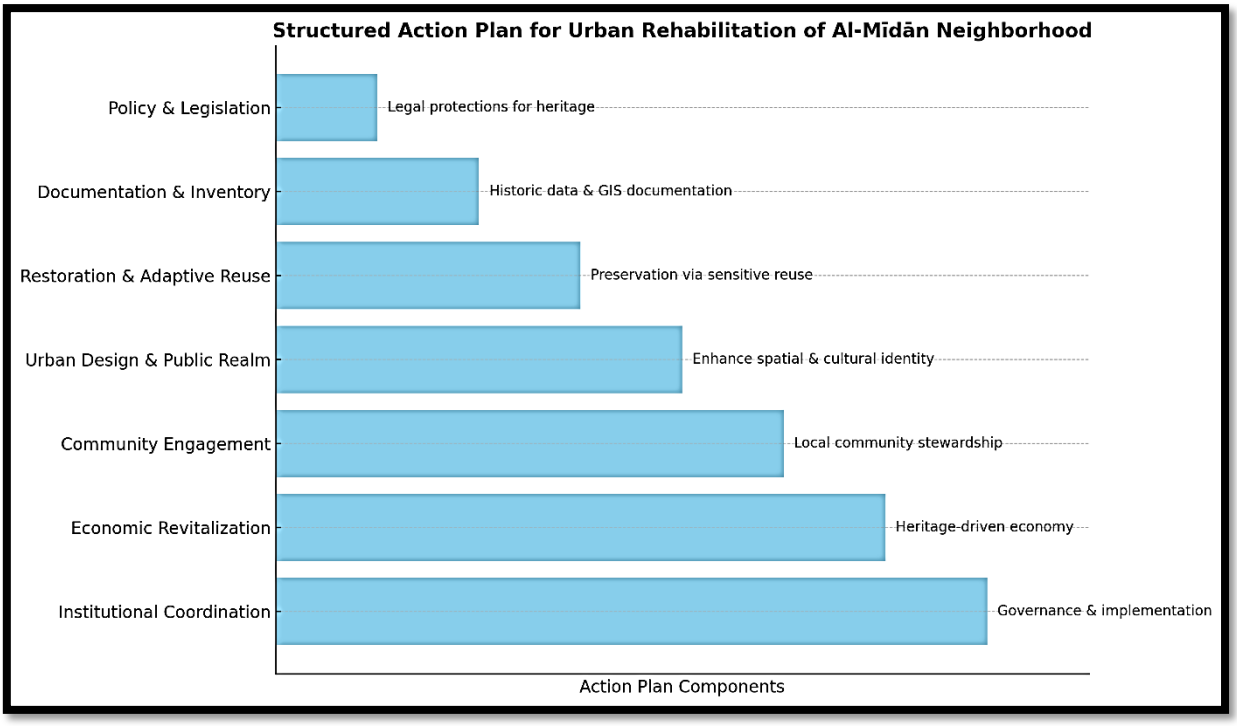


Figure.225.Structured Action Plan for the Urban Rehabilitation of Al-Mīdān Neighborhood. (Source: Analytical study conducted by the researcher, 2025)

- Here is the flowchart diagram titled “From Documentation to Sustainable Rehabilitation in Al-Mīdān,” visualizing the step-by-step transition from data collection to policy implementation. It's structured to align with the methodology of the thesis and international conservation practices. Figure (226).

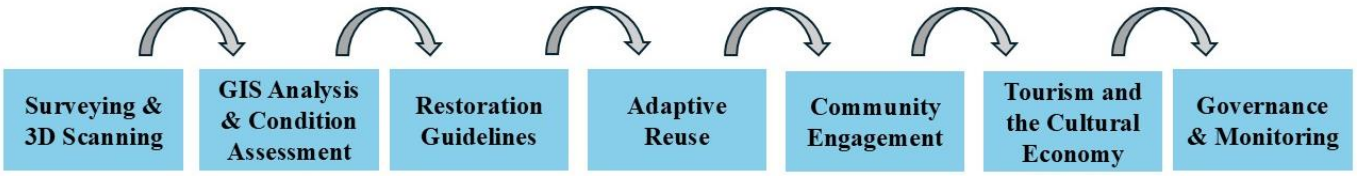


Figure.226.From Documentation to Sustainable Rehabilitation in Al-Mīdān. (Source: Analytical study conducted by the researcher, 2025)

Chapter VI

Findings and Conclusion

VI.1. Results and Recommendations:

The Al-Mīdān quarter stands as one of the most historically and architecturally significant neighborhoods situated outside the ancient walls of Damascus. Despite its rich cultural and urban heritage, the area has unfortunately experienced prolonged periods of neglect and deterioration. This neglect is evidenced by the scarcity of recent scholarly studies, as most available references and historical sources on Al-Mīdān are outdated and fail to reflect the current state of the neighborhood.

The situation has been further exacerbated by the conflict that began in Syria in 2010 and continues to the present day. During this period, heritage preservation initiatives have largely overlooked Al-Mīdān, and the neighborhood has suffered from increasing urban encroachments, unauthorized constructions, and systematic violations of heritage buildings. These developments have accelerated the erosion of its historical identity and physical fabric.

In response to this critical gap in the literature and conservation efforts, the present research undertakes a comprehensive, multidisciplinary documentation of the Al-Mīdān neighborhood during the Ottoman period. This study distinguishes itself by adopting a novel methodological framework, integrating advanced digital techniques, including three-dimensional photography and architectural mapping, alongside traditional historical analysis. It also introduces a series of newly developed analytical models and data tables designed specifically for this research, offering unprecedented detail in the examination of Al-Mīdān’s architectural typologies, spatial organization, and heritage value.

Through this approach, the study not only revives scholarly attention to Al-Mīdān as a vital component of the urban and cultural landscape of Damascus, but also establishes a foundational reference for future preservation strategies and academic inquiries. The findings underscore the neighborhood's significance as a representative model of Damascene urbanism outside the historical city walls and advocate for its urgent protection and integration into broader heritage conservation frameworks.

VI.1.1. Original Contributions of the Research:

This research offers several pioneering contributions to the documentation and analysis of the ancient Damascene neighborhood of Al-Mīdān. These achievements represent significant advancements in the fields of heritage preservation, digital documentation, and urban historical studies. The key contributions are summarized as follows:

VI.1.1.1. Pioneering Use of Three-Dimensional Documentation Technologies:

For the first time, this research applied advanced three-dimensional (3D) documentation techniques to several significant historic buildings within Al-Mīdān, including the Al-Mahāynī House, Fathī Bath, and Al-Niyāḥ Church (Chapter IV). This methodology enabled the creation of highly accurate 3D digital models, from which architectural plans, previously unavailable, were derived. The resulting documentation provides not only a precise understanding of the buildings' current architectural and structural conditions but also a basis for proposing tailored restoration strategies.

The 3D imaging also facilitated damage assessment and informed the development of structural intervention solutions aimed at both preservation and adaptive reuse.

VI.1.1.2. Accurate Architectural Surveys and Plan Generation Using Analog Technologies

Through a series of field visits and detailed site measurements of neglected heritage structures, including Fathī Bath, Al-Rifāʿī Bath, Al-Zāwiya Al-Rashīdiyya, and the Al-Gunaymī Mosque, this study produced, for the first time, comprehensive and precise architectural drawings (Chapter IV). The documentation process employed advanced instruments such as the Total Station and specialized software like AutoCAD. These architectural records are critical for future conservation and rehabilitation efforts, serving as foundational references for heritage professionals and restoration planners.

VI.1.1.3. Application of Geographic Information Systems (GIS) for Heritage Mapping and Analysis

Another novel contribution of this study is the employment of GIS technology to build an integrated spatial database of Al-Mīdān's key religious, commercial, and civic structures (Chapter IV). This digital mapping system not only enables real-time spatial analysis and visualization but also facilitates simulation modeling for heritage site management. The database contributes to strategic planning by proposing optimal reuse scenarios for existing historical buildings based on their location, function, and architectural integrity.

VI.1.1.4. Typological and Morphological Study of Al-Bawāyik Structures:

Following a series of systematic field visits, the research identified, classified, and digitally modeled the architectural typologies of Al-Bawāyik,arched recesses or gateways lining the main thoroughfares of Al-Mīdān. Each structure, including notable examples such as Al-Sharbajī Bāyka, was analyzed with respect to its historical, architectural, and functional attributes (Chapter III-Chapter IV). This classification, supported by newly developed analytical tables, introduces an effective tool for future documentation and comparative studies of similar urban features across Ottoman cities.

VI.1.1.5. Documentation of Threatened and Abandoned Heritage Sites:

The research dedicated special attention to endangered heritage buildings, such as Al-Bawāyik, mosques, and public baths, which had been abandoned, severely neglected, or rendered inaccessible due to conflict in Syria (Chapter III). Through coordination with local authorities and repeated field inspections, the study succeeded in gaining access to several of these at-risk monuments. It then documented their current condition and architectural details for the first time, filling a substantial void in the existing heritage literature. These buildings, many of which lack any prior documentation, are now formally recorded and available for future academic or conservation use.

VI.1.1.6. 3D Max Modeling to Assess Visual Distortion and Urban Encroachment:

The study employed advanced 3D modeling techniques using 3D Max software to visualize and analyze the architectural interferences between historic and modern structures within Al-Mīdān (Chapter V). These visual simulations illustrate the extent of urban visual pollution and structural incongruity resulting from unsupervised modern interventions. Based on this analysis, the research

proposes a series of context-sensitive urban design solutions aimed at restoring the historical character of Al-Mīdān and mitigating further architectural degradation.

VI.1.1.7. In-depth Study and Documentation of Water Sources and Religious Zawāyā
Unlike previous studies that mentioned these features only superficially, this research conducted a comprehensive architectural and archaeological analysis of Al-Mīdān's historic water fountains (al-Subul) and religious institutions (al-Zawāyā) (Chapter III). Detailed architectural plans were produced for the first time, complemented by in-situ descriptions, typological analysis, and contextual interpretation. These efforts elevate the scholarly understanding of the spiritual and civic infrastructure that underpinned life in Al-Mīdān during the Ottoman period.

VI.1.1.8. Visual Documentation and Heritage Awareness Initiatives:

A considerable corpus of original photographs was compiled during the course of the research, many of which are of rare heritage assets that had been previously inaccessible due to safety, logistical, or administrative constraints. These images significantly enhance the visual record of Al-Mīdān and offer a vital tool for both scholarly analysis and public dissemination. Furthermore, the research concludes with forward-looking recommendations for the neighborhood's revitalization, including the proposal to reopen traditional crafts workshops and establish a local heritage museum. Such initiatives are envisioned to foster public awareness, promote cultural tourism, and reinforce community stewardship of the area's endangered heritage assets (Chapter V).

In sum, this research sets a new standard for multidisciplinary heritage documentation in urban Damascus. By integrating digital technologies with rigorous fieldwork and historical analysis, it not only preserves valuable information about a threatened cultural landscape but also opens new avenues for sustainable heritage management and scholarly inquiry.

VI.1.2. Historical and Urban Significance of the Al-Mīdān Neighborhood: Figure (227).

The Al-Mīdān neighborhood constitutes one of the most historically significant urban extensions to the city of Damascus beyond its ancient walls, figure (227). Its development represents a critical phase in the city's extramural expansion, marking a deliberate urban response to demographic, economic, and geopolitical dynamics from the late medieval to the Ottoman period. To fully comprehend the architectural and socio-cultural character of Al-Mīdān, it is essential to analyze the environmental, topographical, and historical contexts in which the neighborhood emerged. This study thus provides a comprehensive examination of the neighborhood's genesis and evolution, positioning it within the broader framework of Damascus's spatial development. (Chapter II).
The research traces the early morphological features of Al-Mīdān and explores the mechanisms by which it expanded beyond the fortified perimeter of Old Damascus. The findings also contextualize Al-Mīdān's development alongside the emergence of other prominent extramural neighborhoods such as Al-Muhājirīn, Al-Sāliḥiyya, and Al-ʿAkrād, illustrating a wider pattern of urban diffusion that characterized the city's transformation during the Ottoman era and beyond. (Chapter II).
From a historical perspective, Al-Mīdān holds the distinction of being the first major neighborhood established to the south of Damascus, strategically situated along the Baradā and Qanawāt river branches. Its spatial alignment and structural orientation were informed by the availability of water

sources and agricultural hinterlands, as well as its proximity to pre-Islamic and Islamic-era transportation corridors. Drawing on documented historical sources, waqf records, and extant architectural heritage, this study reconstructs the phases of Al-Mīdān's urban growth and its gradual consolidation as a key socio-economic zone.

Economically, Al-Mīdān developed in conjunction with a network of vibrant local markets, reflecting the central role of commerce in shaping its urban identity. These markets were not peripheral adjuncts but rather foundational elements that catalyzed the neighborhood's formation. The neighborhood's commercial vitality was further reinforced by its location at a critical juncture on the southern axis of Damascus, serving as a gateway to southern Syria, Jordan, the Ḥijāz, Palestine, and Egypt. The principal thoroughfare of Al-Mīdān became a ceremonial and functional route, traversed historically by kings, sultans, princes, Hajj caravans, and major trade expeditions, particularly those involved in the grain trade with the Ḥawrān region.

As detailed in Chapter II, Al-Mīdān's emergence must therefore be understood not only as a spatial expansion of Damascus but as a historically conditioned urban phenomenon shaped by trade, pilgrimage, environmental factors, and administrative planning. This research contributes to a nuanced understanding of how peripheral zones evolved into integral urban quarters with distinct architectural and socio-economic profiles.

Historical cartographic resources offer invaluable insights into the morphological evolution of Damascus and its extramural neighborhoods, including Al-Mīdān. For instance, the French Mandate period maps from the early 20th century depict the expansion of Damascus beyond its ancient walls, highlighting the emergence of neighborhoods like Al-Mīdān. These maps illustrate the integration of Al-Mīdān into the city's urban framework, emphasizing its role as a southern gateway and commercial hub. (Chapter II- Chapter IV).

Schematic representations of Al-Mīdān's urban morphology can elucidate the neighborhood's structural characteristics, such as street patterns, building typologies, and public spaces. These diagrams often reveal the organic growth patterns typical of traditional Arab-Islamic cities, characterized by narrow winding streets and a hierarchy of spaces from public to private. Such visualizations aid in understanding the socio-cultural dynamics that influenced Al-Mīdān's development. (Chapter II).

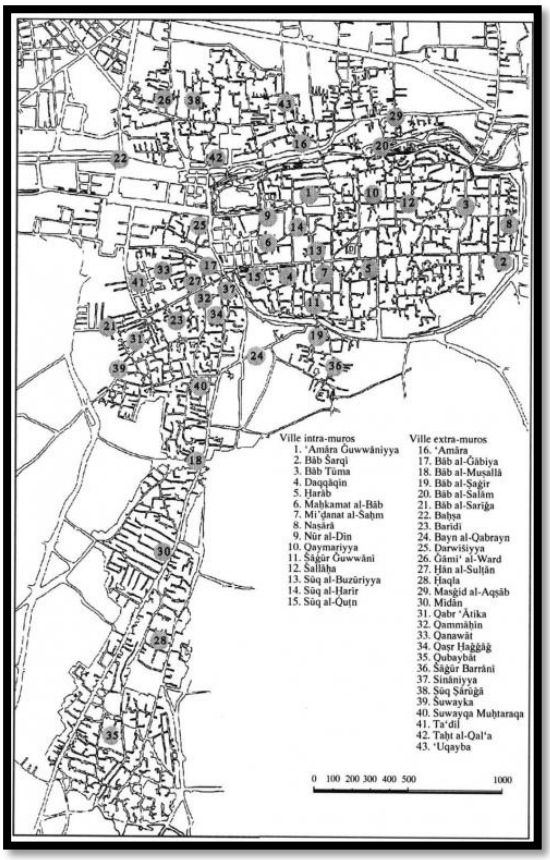


Figure.227. Schematic Diagram of Urban Morphology, shows Al-Mīdān's development within the broader urban fabric of Damascus. (Source : Brigitte Marino's, 1997)

VI.1.3. Historical and Urban Evolution of Al-Mīdān: Chronological Analysis and Determinants of Growth:

A chronological examination of the historical and urban development of the Al-Mīdān neighborhood reveals that its foundational urban character began to emerge during the Mamluk period. One of the principal factors that facilitated the neighborhood's formation and sustained development was the presence of multiple branches of the Baradā River. These watercourses played a critical role in supporting permanent settlement, as they provided essential resources for domestic use, agriculture, and the operation of public and religious institutions. The availability of flowing water notably enabled the construction and maintenance of numerous religious edifices, including mosques and zawāyā, which were strategically located to benefit from this resource (see Chapter II).

The Ottoman period marked a significant phase in Al-Mīdān's urban expansion and architectural development. The neighborhood extended along two principal urban axes: Sūq al-Mīdān and al-Ḥaqla. This expansion was characterized by the establishment of a number of significant religious and communal facilities. Key among them were the al-Rifāʿī Mosque and Fathī Bath, the latter constructed during the eighteenth century. In the early nineteenth century, further architectural growth occurred with the construction of additional public baths, such as the ʿAqīl Bath, located near the al-Ḥaqla sector (see Chapter II- Chapter III).

Religious structures during this period were not only constructed but also functionally integrated into the urban water infrastructure. Several mosques, including Yaʿqūb Mosque, al-Qāʿa[376]

[376]**Qāʿa-** Hall or reception room, often formal and richly decorated- Found in elite houses of Al-Mīdān.

Mosque, ʿAbd al-Raḥmān Mosque, and al-Sakhāna Mosque, were connected to al-Subul, public water dispensaries, ensuring a continuous supply of water and underscoring the interdependence between religious life and hydraulic systems in Ottoman Damascus (see Chapter II- Chapter III).
Importantly, the spatial and chronological growth of Al-Mīdān did not follow a linear or uniform trajectory, neither progressing systematically from north to south nor adhering to a fixed urban planning logic. Instead, its expansion occurred incrementally through the organic extension of pre-existing urban clusters. This pattern of development was shaped by a combination of geographical, economic, and infrastructural factors, which can be summarized as follows: (Chapter II).

- **Strategic Geographical Position:** Situated at the southern edge of Damascus, Al-Mīdān functioned as a critical gateway linking the city to southern Syria and the wider regions of the Ḥijāz, Jordan, and Palestine.
- **Proximity to the Shām Hajj Road:** The neighborhood's location along the historic pilgrimage route to Mecca elevated its significance and encouraged urban investment and construction.
- **Commercial Vitality:** Al-Mīdān was a principal node in regional trade networks, particularly in the grain trade with the Ḥawrān region, which spurred economic activity and population growth.
- **Abundant Water Resources:** The neighborhood's access to multiple branches of the Baradā River was essential to its sustainability, influencing both settlement patterns and the spatial distribution of religious and civic institutions.

As elaborated in Chapter II, these converging factors produced a complex and layered urban fabric, wherein architectural, religious, and commercial functions were deeply intertwined. The historical evolution of Al-Mīdān thus exemplifies the dynamic processes through which extramural neighborhoods in Damascus transitioned from peripheral zones to integral components of the city's urban and socio-economic landscape.

VI.1.4. Social Composition and Demographic Dynamics of the Al-Mīdān Neighborhood: (Chapter II- Chapter III).

The demographic profile of Al-Mīdān during the Ottoman period reflects a complex and heterogeneous composition shaped by successive waves of migration, religious diversity, and military settlement. Notably, the neighborhood became a focal point for various non-local and minority groups, contributing to its distinct socio-cultural character within the broader fabric of extramural Damascus.
One of the most prominent demographic elements in Al-Mīdān was the presence of Christian communities, particularly those originating from the Ḥawrān region. These migrants, often arriving in precarious economic conditions, initially settled in peripheral sectors of Al-Mīdān. The construction of two churches within the neighborhood, Our Lady of al-Niyāḥ and Ḥanānya Church, stands as tangible evidence of this Christian presence and its spatial permanence during the early phases of settlement. As many of these residents gradually improved their socio-economic status, they relocated to more established quarters within the walled city, especially the al-Naṣāra district, which historically served as a principal locus for Christian communities in central Damascus.
In addition to the Christians, the neighborhood was home to other minority groups. Druze and Moroccan migrants, the latter often arriving through pilgrimage routes or military service, formed localized clusters, particularly in the al-Musallī and al-Ḥaqla sectors of Al-Mīdān. These micro-

communities contributed to the neighborhood's cultural plurality, often maintaining distinct religious and social practices. Furthermore, smaller groups of Kurds and Egyptians also resided throughout the neighborhood, their presence indicative of the wider patterns of labor migration and interregional movement within the Ottoman Empire.

A particularly significant demographic development occurred following the incorporation of the Levant into Ottoman control in the early 16th century. During this period, Janissary troops, a prominent military class within the Ottoman administrative and defense system, were stationed in various parts of Damascus, including Al-Mīdān. Their settlement introduced a new socio-political element to the area, as Janissaries often played dual roles as enforcers of imperial authority and semi-autonomous actors embedded in the local economy and urban governance. Their presence in Al-Mīdān may have influenced patterns of land ownership, architectural patronage, and social hierarchy within the neighborhood.

As discussed in Chapter II, this demographic diversity played a crucial role in shaping Al-Mīdān's urban identity. The coexistence of multiple ethnic, religious, and occupational groups contributed to a dynamic yet sometimes fragmented social structure. Understanding this complex demographic mosaic is essential for interpreting the neighborhood's architectural forms, urban morphology, and the development of its religious and civic institutions.

As elaborated in Chapter II, these converging factors produced a complex and layered urban fabric, wherein architectural, religious, and commercial functions were deeply intertwined. The historical evolution of Al-Mīdān thus exemplifies the dynamic processes through which extramural neighborhoods in Damascus transitioned from peripheral zones to integral components of the city's urban and socio-economic landscape.

VI.1.5. Architectural and Urban Morphology of the Al-Mīdān Neighborhood: (Chapters II and III).

This thesis has provided a detailed analysis of the architectural typologies and the urban fabric characteristic of the Al-Mīdān neighborhood, highlighting how variations in architectural style across historical periods serve as critical indicators for understanding the stages of the area's development. Through comparative analysis, the research demonstrates that shifts in building form, spatial organization, and construction typologies are directly reflective of the socio-political and economic transformations experienced by the neighborhood from the Mamluk through the Ottoman periods.

The thesis incorporates a series of maps and graphical representations to illustrate the morphological structure of Al-Mīdān. Particular attention has been paid to the configuration of alleys (ḥārāt), lanes (azqiya), and pedestrian paths, documenting their characteristic meandering trajectories and spatial constrictions. These irregular urban patterns were not the result of random growth but served intentional purposes, primarily related to security, privacy, and social cohesion, reflecting traditional Islamic urban planning principles that emphasized enclosure, hierarchy of access, and the segregation of public and private spaces.

Furthermore, cadastral analysis has been employed to locate and contextualize individual historic buildings within the broader neighborhood layout. This mapping exercise revealed that most significant structures, including religious, commercial, and residential buildings—were

strategically positioned either along the main thoroughfare of Sūq al-Mīdān or at key intersections where the commercial axis intersected with secondary alleys. These junctions often functioned as spatial anchors within the neighborhood, contributing to the formation of micro-centers of activity and reinforcing the interconnectedness between domestic life and public commerce.

This spatial logic, where the primary market street acts as the structural spine, and the branching alleys serve both as physical and social connectors, is a defining feature of the historical neighborhoods of Old Damascus. Al-Mīdān exemplifies this pattern with remarkable clarity, and its architectural and urban characteristics thus provide a valuable case study for the analysis of extramural urbanism in pre-modern Islamic cities.

As elaborated in Chapters II and III, the integration of architectural documentation, urban mapping, and cadastral referencing offers a comprehensive methodological framework for understanding the morphological evolution of Al-Mīdān. This framework can be extended to the study of similar historical neighborhoods in Damascus and the wider Levantine region.

VI.1.6. Architectural Compatibility and Aesthetic Synthesis in Al-Mīdān's Historic Structures: (Chapter III and Chapter IV).

Through an extensive field study of key historic structures in the Al-Mīdān neighborhood—detailed in Chapters III and IV, these researches have demonstrated a clear correspondence between the architectural design of the buildings and their intended functions. The analysis reveals that the buildings exhibit a high degree of functional and aesthetic coherence, with their materiality, construction techniques, and ornamental schemes reflecting both utilitarian requirements and broader artistic traditions characteristic of Islamic architecture.

At a fundamental level, the selection of building materials, primarily clay, limestone, and basalt, was determined by local availability, structural purpose, and climatic suitability. These materials were employed differently depending on the function of the building: religious, commercial, or service-oriented.

In terms of construction methodology, the main architectural components, including load-bearing walls, fenestration systems, and entryways, were designed according to standardized typological norms while also allowing for localized variations. The religious buildings, such as mosques and zawāyā, were characterized by canonical spatial elements: the sanctuary (ḥaram), open courtyard (ṣaḥn), miḥrāb, minbar, and minaret, all executed with an awareness of sacred orientation and ritual function.

Service-oriented buildings, such as public baths (ḥammāmāt), were organized into the traditional tripartite sequence of Al-Barānī (Outer section-cold section), Al-Wusṭānī (Intermediate section-warm section), and Al-Jawwānī (Inner section-hot section), conforming to established principles of Ottoman bath architecture. These spaces were designed not only for hygiene but also for social interaction and community cohesion.

Commercial structures, notably the al-bawāyik (arcaded market niches), served as key transitional elements between public streets and semi-private commercial activities. Their placement and modular repetition underscore the integration of commerce into the broader urban morphology of Al-Mīdān.

Beyond function and form, the buildings are distinguished by their rich ornamental language, particularly their use of geometric decoration. These motifs were often constructed on a rigorous mathematical grid, where interlocking units, typically squares, hexagons, or stars, were arranged in continuous, repetitive sequences. Each unit (the basic module) was symmetrically connected to adjacent units, creating a cohesive visual field that emphasized the principles of unity and infinite continuity, hallmarks of Islamic geometric art.

In addition to geometric patterns, decorative programs incorporated vegetal motifs and floral bands, such as interlaced vine scrolls, leaf tendrils, and stylized lotus blossoms. These elements reveal the influence of multiple cultural sources, including Chinese, Persian, and Pharaonic Egyptian artistic traditions. The incorporation of such motifs testifies to the cosmopolitan character of Islamic visual culture, which functioned as a syncretic system absorbing and harmonizing diverse artistic expressions across the vast geography of the Islamic world.

This confluence of structural pragmatism and artistic sophistication found in Al-Mīdān's historic architecture not only reflects local building traditions but also situates the neighborhood within a wider civilizational and artistic continuum. The integration of geometric precision with organic ornamentation exemplifies the aesthetic ethos of Islamic art: the unification of mathematical order and spiritual transcendence.

VI.1.7. The Imperative of Documentation for the Preservation and Management of Al-Mīdān's Urban Heritage:

The Al-Mīdān neighborhood contains a substantial number of historically significant buildings and sites that remain undocumented, unregistered, and consequently vulnerable to neglect, alteration, or loss. The systematic documentation and registration of heritage structures, through field surveys, architectural analysis, and archival research, constitute a foundational process for heritage conservation. These activities are critical not only for scholarly purposes but also for the practical objectives of identification, interpretation, education, protection, planning, rehabilitation, and sustainable management of urban heritage.

As articulated in Chapters III and IV of this study, the documentation process must extend beyond the identification of individual monuments to encompass the broader urban and socio-cultural context in which these heritage assets exist. This includes recording the physical fabric, typological attributes, historical narratives, and intangible values associated with each site. Only through such comprehensive and multidisciplinary documentation can heritage areas be properly classified, evaluated, and legally protected as components of national or global heritage inventories.

The integration of this documentation into urban planning frameworks is essential for ensuring that heritage preservation does not occur in isolation, but rather in harmony with the urban morphology, functional requirements, and social dynamics of contemporary communities. Strategic approaches must therefore be developed for the adaptive reuse, context-sensitive development, and community-based stewardship of these heritage sites.

Crucially, fostering public awareness and cultivating a deep understanding of the historical, cultural, and economic value of urban heritage are indispensable for successful preservation outcomes. Community engagement, educational initiatives, and participatory planning mechanisms play a vital role in enhancing local responsibility and support for the conservation

process. When communities are well-informed about the tangible and intangible benefits of their cultural heritage, including its potential for identity reinforcement, tourism development, and economic revitalization, they become active partners in its protection.

In the case of Al-Mīdān, where multiple historical layers coexist within a living urban environment, documentation serves as both a diagnostic tool and a strategic instrument. It enables stakeholders to craft informed conservation policies that respect the past while addressing present and future urban needs. Thus, the act of documentation is not merely a technical task but a critical cultural investment, a prerequisite for preserving the historical integrity and urban continuity of one of Damascus's most architecturally and socially significant quarters.

VI.1.8. Towards a Sustainable and Technologically-Informed Framework for the Documentation of Damascus' Heritage Environments:

The urgent need to establish a precise and sustainable methodology for the documentation of heritage environments in Damascus stems from the growing recognition that architectural ruins and historical structures serve as tangible links between contemporary society and its ancient civilizations. These heritage assets are not merely remnants of the past, but active carriers of collective memory and identity. Consequently, their documentation constitutes a fundamental prerequisite for effective preservation, interpretation, and planning.

This research underscores the necessity of anchoring the documentation process within a systematic and scientifically grounded framework. It advances a series of practical methodologies for recording archaeological sites, proposing a model documentation form tailored specifically to heritage buildings. This form integrates data on historical, architectural, structural, and decorative elements, thus enabling a holistic understanding of each monument's value. If applied systematically and adapted to technological platforms, these methods can greatly enhance the efficiency of collecting, organizing, importing, and exporting data related to heritage environments. (Chapter IV).

In response to the global shift towards technologically integrated heritage management, this study advocates for the adoption of advanced digital tools in the field of architectural and urban heritage preservation. Among the most transformative of these tools is digital photography, particularly in its three-dimensional (3D) applications. 3D digital imaging enables the capture of high-resolution, volumetric data of archaeological structures, many of which are at risk due to armed conflict, urban encroachment, or environmental degradation. Through the creation of precise digital replicas, this technology plays a critical role in preserving the shared cultural heritage of humanity—especially in regions such as the Middle East, and Syria in particular, which possess unparalleled archaeological wealth. (Chapter IV).

The thesis also explores how the integration of 3D laser scanning, satellite imagery, and Global Positioning Systems (GPS) has revolutionized heritage documentation. Whereas previous documentation processes were constrained by technical limitations, these innovations now allow for highly accurate, scalable, and rapid data collection. The resulting spatial data can be synthesized into detailed architectural maps and urban models, facilitating the development of restoration plans and informing evidence-based conservation strategies. Such precision

significantly enhances the understanding of architectural typologies and urban configurations, contributing to both heritage science and sustainable urban development. (Chapter IV).

Furthermore, the research emphasizes the indispensable role of Geographic Information Systems (GIS) in the field of urban heritage management. GIS technology provides a powerful platform for monitoring, recording, and analyzing the physical and spatial characteristics of archaeological sites. By integrating various data layers, including aerial imagery, satellite scans, and topographic information, GIS enables the creation of spatially referenced databases and thematic maps. These tools allow heritage professionals and decision-makers to visualize the distribution and condition of built heritage in real time, thereby facilitating swift, well-informed interventions and long-term planning. (Chapter IV).

Another cutting-edge technique highlighted in this research is photogrammetry, which enables the creation of accurate digital reconstructions based on photographic inputs. Photogrammetry is especially effective in producing metrically precise 3D models of architectural elements and entire monuments. It also supports the systematic registration of associated metadata, including construction materials, stylistic features, and levels of structural degradation. In doing so, it contributes significantly to diagnostic assessments and supports the design of targeted conservation measures. As a non-invasive and cost-effective method, photogrammetry has become an indispensable tool for documentation, monitoring, and the execution of restoration operations. (Chapter IV).

In conclusion, the research presented in Chapters IV and V positions digital documentation not merely as a technical solution but as a strategic imperative for the preservation and sustainable management of Damascus's urban heritage. By combining methodological rigor with technological innovation, this thesis contributes to the evolving discourse on cultural heritage protection in post-conflict and rapidly transforming urban environments.

VI.1.9. Urban Irregularities and the Impact of Incompatible Development in the Al-Mīdān Neighborhood:

Extensive field investigations and repeated on-site observations within the Al-Mīdān neighborhood have revealed a substantial degree of urban and architectural degradation, primarily caused by unregulated development and visual pollution. One of the most critical findings concerns the proliferation of non-traditional, contemporary structures, often constructed without adherence to architectural or historical context, which have increasingly replaced traditional Damascene houses. These modern constructions, characterized by inconsistent heights, materials, and forms, have been distributed arbitrarily across the neighborhood. The result is a disjointed and fragmented urban landscape that significantly disrupts the cohesiveness of the historical urban fabric. (Chapter V).

The incompatibility between these newer structures and the original built environment is most pronounced in terms of scale, massing, and typology. Traditional Al-Mīdān architecture is predominantly composed of low-rise, inward-oriented courtyard houses constructed from local stone, adobe, and lime-based mortars, materials that are climatically and contextually appropriate. In contrast, the contemporary intrusions employ reinforced concrete and glass, lacking both the

environmental sensitivity and the cultural resonance of the historic forms. This architectural discordance has led to the erosion of the neighborhood's visual identity and authenticity.

One of the underlying regulatory contributors to this disruption is the permissiveness of current zoning and building codes, which allow for the allocation of ground-floor spaces for commercial activities. While economically beneficial, this shift has inadvertently increased service-related vehicular traffic within Al-Mīdān's narrow alleys and organically developed street networks, which were never designed to accommodate such heavy and frequent circulation. This has further intensified pressures on the fragile infrastructure and exacerbated the physical deterioration of the historic setting. (Chapter V).

Moreover, the restoration efforts applied to heritage buildings within the neighborhood have frequently failed to meet appropriate conservation standards. A significant number of structures have been rehabilitated using incompatible contemporary materials, such as Portland cement, aluminum cladding, and synthetic paints. These interventions not only compromise the material integrity and longevity of the original structures, but also obscure their historic character.

Unauthorized structural additions and façade alterations have become increasingly common, with many historic buildings exhibiting invasive encroachments that disrupt their architectural legibility and spatial coherence. (Chapter V).

Particularly alarming is the transformation of al-bawāyik, into light industrial workshops and storage units. This functional shift has accelerated the degradation of their structural elements and aesthetic detailing, especially in key examples such as Al-Sharbajī Bāyka, where inappropriate use and physical modifications have led to significant structural damage and loss of heritage value.

Another notable deficiency in the neighborhood is the absence of integrated green spaces or landscaped areas, which further diminishes the environmental and visual quality of Al-Mīdān. The lack of vegetation not only affects microclimatic regulation and urban ecology but also deprives the community of much-needed public spaces for social interaction and respite, features historically embedded within the Islamic urban tradition. (Chapters III- IV).

As discussed in Chapters III, IV, and V, the cumulative effects of these factors underscore the urgency of implementing context-sensitive urban management policies, enforcement of heritage protection regulations, and design guidelines that prioritize architectural compatibility, material appropriateness, and spatial continuity. Without such interventions, the unique historical identity of Al-Mīdān risks being irreversibly compromised.

VI.1.10. Integrated Approaches to the Rehabilitation and Adaptive Reuse of Historical Areas: The Case of Al-Mīdān

The rehabilitation of historically significant urban areas represents a multifaceted and interdisciplinary endeavor that necessitates the coordinated efforts of specialists across architecture, urban planning, heritage conservation, tourism management, and socio-economic development. This complexity arises from the need to balance preservation imperatives with contemporary functional requirements, ensuring that interventions are both contextually sensitive and sustainable over the long term.

In the specific context of the Al-Mīdān neighborhood, the rehabilitation process must be approached through a strategically phased framework, wherein each stage—from assessment and

documentation to design, implementation, and post-intervention management—is underpinned by rigorous analysis and technical precision. A critical dimension of this process involves tourism-oriented urban management, which demands the careful selection and allocation of appropriate functions to historic buildings based on their spatial characteristics, architectural typologies, and contextual relationships with surrounding structures.

The success of such interventions is contingent upon the development of well-structured urban plans that articulate the intended role of each heritage asset and its functional interdependencies with adjacent facilities. These plans must be rooted in comprehensive site analysis, user behavior studies, and stakeholder engagement to ensure that the adaptive reuse of buildings aligns with both conservation goals and community needs.

When executed thoughtfully, this integrative rehabilitation approach not only mitigates threats of neglect, vandalism, or functional obsolescence, but also reinforces the cultural continuity and socio-economic vitality of the historic environment. In the case of Al-Mīdān, maintaining the active use and occupation of its architectural heritage is essential for preventing decay and for preserving its intangible values, including collective memory, traditional practices, and urban identity.

As demonstrated in Chapter V, such a model facilitates the transformation of Al-Mīdān into a living heritage landscape, where historical buildings are not isolated relics but integral components of a dynamic urban ecosystem. Ensuring the continuity of use through contextually appropriate functions strengthens the neighborhood's resilience and contributes to the broader objectives of cultural sustainability, heritage tourism, and inclusive urban regeneration.

VI.1.11. Adaptive Reuse and the Contemporary Imperative for Sustainable Restoration of Historic Buildings

In the context of contemporary urban development, there is an increasingly pronounced trend toward the restoration and adaptive reuse of historic buildings, driven by both the rapid pace of urban transformation and the pressing demand for functional space. However, the conventional notion of restoring a building strictly to its original condition has, in many instances, become impractical or even counterproductive. This is particularly evident in cases where historic structures have lost their original function, have been abandoned, or no longer align with the socio-economic realities of present-day society.

Such circumstances have necessitated a paradigm shift from pure conservation to context-sensitive adaptation, a process wherein architectural interventions are guided by principles of compatibility, reversibility, and respect for the building's historical and cultural significance. The goal is to enable these buildings to accommodate new uses that are economically viable and socially relevant, thereby ensuring their physical preservation and functional sustainability.

As outlined in Chapter IV-V (Al-Midan Museum-Al-Sharbajī Bāyka), this research argues for the strategic reactivation of heritage buildings in the Al-Mīdān neighborhood through thoughtful reemployment that balances conservation with innovation. Effective adaptive reuse not only safeguards the architectural integrity of the historic structure but also revitalizes it by integrating it into the contemporary urban fabric. When executed judiciously, such reemployment breathes new life into the building, rendering it both legible to the public and economically self-sustaining.

The continued viability of heritage buildings in Al-Mīdān depends on assigning new functions that either complement or, when appropriate, reinterpret their original roles. This includes converting disused or derelict structures into spaces for cultural, educational, artisanal, or small-scale commercial activity, functions that are consistent with the spatial logic and aesthetic character of the building. These transformations should be underpinned by a maintenance strategy that includes periodic inspections, condition assessments, and responsive repairs to ensure the long-term durability of the structure.

Furthermore, this approach promotes a cyclical model of restoration and use, wherein heritage assets are not simply preserved as static monuments, but are dynamically reintegrated into the socio-economic life of the city. By doing so, these buildings continue to serve their communities, foster heritage appreciation, and contribute to sustainable urban regeneration.

In conclusion, adaptive reuse is not merely a pragmatic response to contemporary demands, it is an ethical and intellectual commitment to ensuring that historic buildings remain active participants in the life of the city, rather than relics of a past detached from present and future generations.

VI.1.12.Cultural Heritage, Urban Management, and the Role of Tourism in the Preservation of Al-Mīdān:

Tourism has emerged as one of the most significant economic sectors of the 21st century, serving as a major source of revenue for both developed and developing nations. Within this context, cultural and heritage tourism holds a particularly strategic position, as it offers a platform not only for economic development but also for the promotion, protection, and sustainable utilization of historical urban environments. This dual role renders tourism an essential mechanism for the integrated development of heritage-rich areas such as Al-Mīdān.

Given the increasing pressures of urban expansion, modernization, and speculative construction in historic cities, it is imperative to establish a coordinated governance framework involving relevant governmental bodies, planning institutions, heritage authorities, academic centers, and key stakeholders. Such coordination must aim to formulate and enforce a comprehensive set of legal, regulatory, and planning instruments that govern construction activities and urban growth in and around historic neighborhoods. In the specific context of Al-Mīdān, this entails the formal classification and protection of archaeological sites, historical buildings, and urban ensembles, supported by legal mechanisms that ensure their sustained integrity and conservation.

As elaborated in Chapter V, the safeguarding of cultural heritage within living urban environments requires a shift from passive preservation toward active revitalization and adaptive reuse, underpinned by principles of sustainability, cultural continuity, and social inclusion. This necessitates the establishment of scientifically grounded criteria for the protection, restoration, rehabilitation, and reactivation of historic cities and monuments. These criteria must prioritize the appropriate functional reintegration of heritage assets, whether by retaining their original use or through carefully selected contemporary functions, in ways that are both economically viable and culturally sensitive.

Simultaneously, effective heritage management must ensure the retention of the architectural, urban, and aesthetic identity of historic areas. Al-Mīdān, with its distinct architectural vernacular and rich urban fabric, offers a critical case study where the valorization of cultural assets must be

accompanied by deliberate efforts to raise public and institutional awareness regarding the importance of architectural heritage as a non-renewable cultural resource.

Public engagement, education, and capacity-building among decision-makers and local communities are essential components of this process. Promoting heritage awareness fosters a collective sense of responsibility and facilitates the integration of cultural heritage preservation into broader development agendas. Ultimately, the intersection of tourism, urban planning, and heritage conservation, if managed holistically, can serve as a catalyst for the sustainable development of Al-Mīdān, enhancing its socio-economic resilience while safeguarding its historical identity for future generations.

VI.2. Conclusion:

This research has successfully achieved its primary objectives in providing a comprehensive and multidisciplinary study of one of the most historically significant extramural neighborhoods of Damascus: Al-Mīdān. Through detailed historical, archaeological, architectural, and urban analysis, the study has illuminated the neighborhood's spatial evolution, social dynamics, and architectural typologies, particularly during the Ottoman period. Al-Mīdān emerges not merely as an extension of the historic city, but as a cultural palimpsest, reflecting the convergence of religious coexistence, economic vitality, and vernacular urbanism.

For the first time, the ancient buildings of Al-Mīdān were investigated in a fully integrated manner, historically, archaeologically, and architecturally, supplemented by analysis of the community's socio-spatial development over time. Particular attention was given to the transformations that took place under Ottoman rule, and the research offered critical insights into the mechanisms of urban growth, class coexistence, and cultural exchange that shaped the neighborhood.

A core innovation of this dissertation is its interdisciplinary methodology, combining the disciplines of historical archaeology and architectural engineering. Advanced technological tools, including 3D digital imaging, Geographic Information Systems (GIS), and photogrammetry, were employed to document, analyze, and reconstruct key heritage structures. These tools enabled the creation of a robust and dynamic digital database, including updated architectural plans and spatial documentation of several significant heritage assets in Al-Mīdān.

Based on this empirical and technical foundation, the research proposed context-sensitive strategies for the revitalization and adaptive reuse of Al-Mīdān's heritage architecture. These proposals are grounded in sustainability, authenticity, and community integration, aiming to restore the neighborhood's cultural significance and urban function. The study emphasized the urgent need to address the effects of long-standing neglect, unauthorized alterations, and inappropriate contemporary infill, all of which have severely disrupted the visual coherence and historical identity of the neighborhood.

Moreover, Al-Mīdān's strategic location along the Shām Hajj route and its historical role in the grain trade with Ḥawrān were highlighted as pivotal in its urban and economic formation. These trade and pilgrimage networks not only influenced the spatial organization of the neighborhood but also attracted a socially diverse population, including merchants, artisans, displaced villagers, and religious minorities, contributing to the unique character of Al-Mīdān.

Chapters III through V introduced and examined a variety of Ottoman-era service buildings, including mosques, zawāyā, public baths, and fountains, offering detailed architectural

documentation and proposing their reactivation for contemporary use. These interventions aim not merely to preserve the built heritage but to restore the neighborhood's function as a living cultural landscape.

In an era of increasing threats to heritage sites, due to conflict, urban pressure, and institutional neglect, this research calls for a more integrated and collaborative approach to urban heritage management in Damascus. Historic neighborhoods outside the city wall must be recognized as extensions of the old city's historical continuum and protected through comprehensive planning frameworks that prioritize heritage conservation alongside socio-economic development.

The study also recommends stronger inter-agency collaboration among governmental institutions such as the Ministry of Culture, Ministry of Tourism, Ministry of Housing, and the Damascus Governorate, in partnership with universities, cultural organizations, and local civil society. These collaborations are essential to formulate and enforce restoration guidelines, land-use regulations, and public awareness campaigns that foster a conservation-oriented urban culture.

At the center of these conservation efforts lies the role of documentation, which this research defines not simply as a technical practice but as a critical act of cultural continuity. Documentation ensures that the tangible and intangible dimensions of heritage, architecture, social practices, construction techniques, and collective memory, are preserved for future generations. Emerging technologies such as 3D scanning, GIS mapping, and digital photogrammetry offer new possibilities for precision, accessibility, and interpretation. Photogrammetry, in particular, enables detailed reconstruction of damaged or lost elements and supports advanced diagnostics for maintenance and conservation planning.

As the Arab region continues to face grave threats to its cultural heritage, ranging from illicit trafficking and war-related destruction to climate-related challenges, this research underscores the strategic importance of digital tools in safeguarding historical assets. By capturing detailed data on color, texture, material condition, and structural integrity, digital documentation allows for virtual reconstruction, comparative analysis, and data-driven restoration of vulnerable monuments.

Finally, this dissertation positions itself as both a scholarly contribution and a practical framework for future research. It aspires to be a foundational study for deeper investigations into the urban heritage of Damascus's extramural quarters. By demonstrating how advanced documentation and conservation strategies can be integrated with historical analysis, this research offers a model for holistic heritage management, one that is academically rigorous, technologically informed, and socially responsive.

The key results and recommendations of this research are synthesized and presented in the following chart: Figure (228).

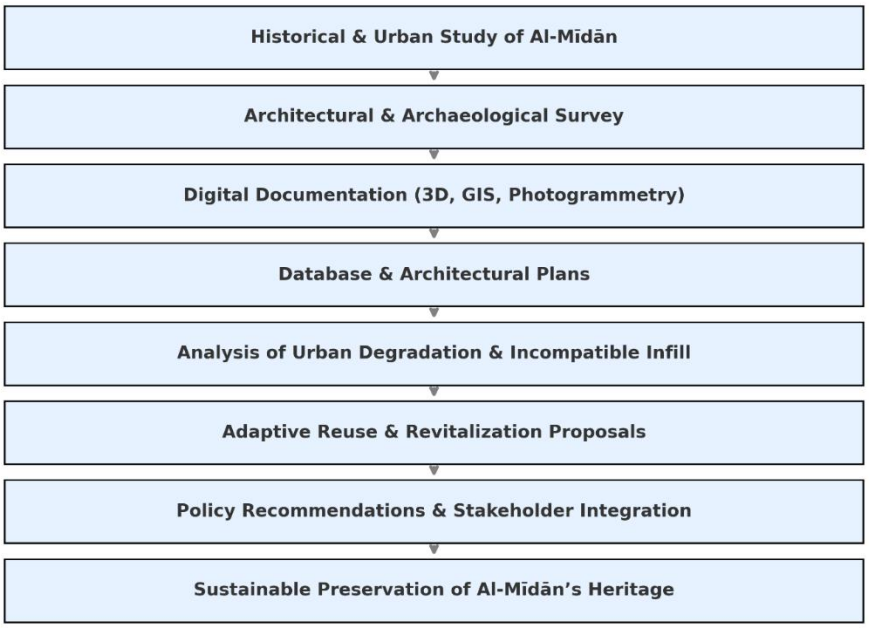


Figure.228. Integrated Research Framework for the Conservation of Al-Mīdān neighborhood

(Source: Author's own work-2025).

VI.3. The Applied methodology and Outcomes in Al-Mīdān neighborhood: Figure (229).

The incorporation of graphics and flowcharts to illustrate the research methodology and outcomes is both appropriate and effective. These visual tools enhance the clarity of the thesis by succinctly representing the multi-phased process employed in documenting the heritage of Al-Mīdān through advanced technologies. Moreover, they contribute to the broader applicability of the research, offering a transferable model for similar heritage conservation initiatives in other urban context

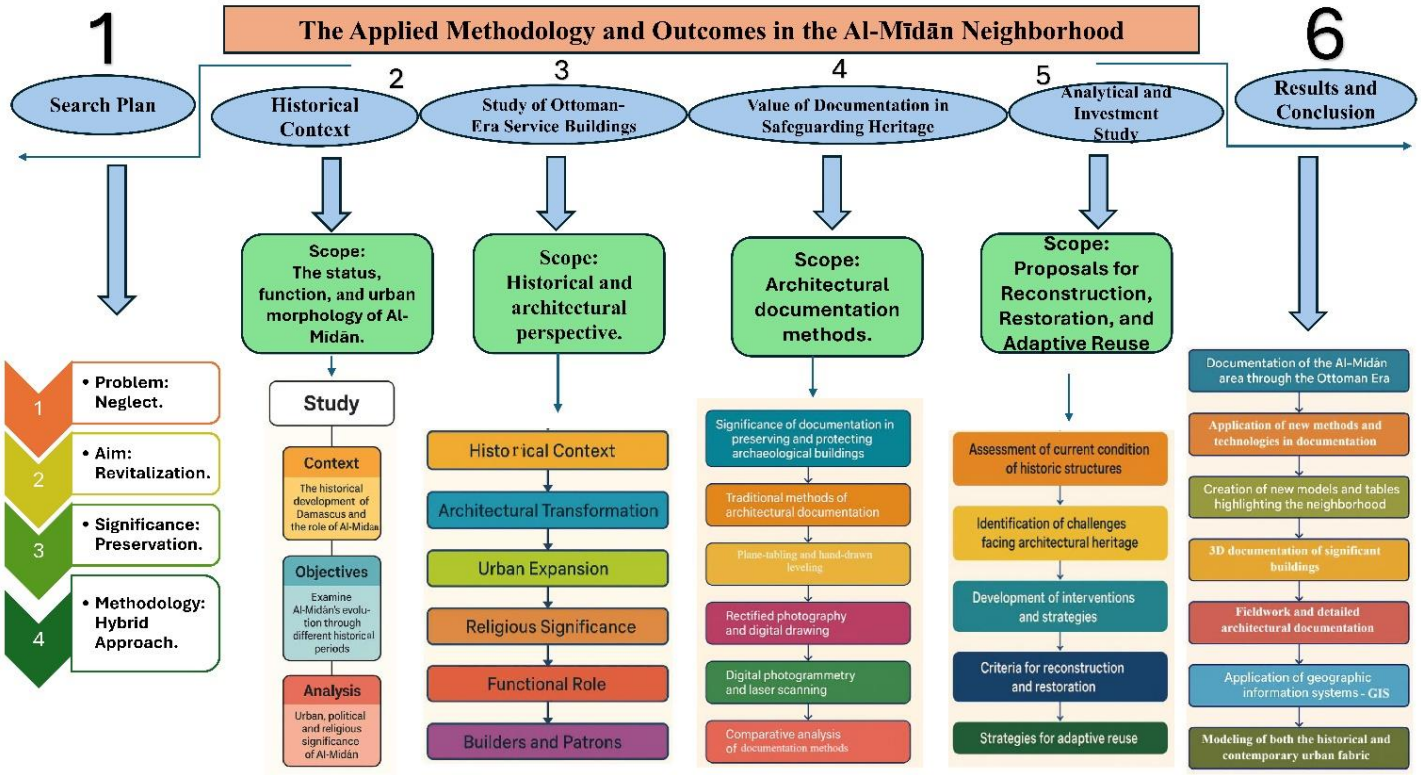


Figure.229.The applied methodology and toutcomes in Al-Mīdān neighborhood. (Source: compiled by the researcher-2025)

The preceding flowchart, figure (229), delineates a scalable methodological framework, rendering it applicable to future investigative studies and broader scholarly inquiries.

This enables the formulation of a generalized methodological framework, adaptable to diverse contexts, as outlined below: figure (230).

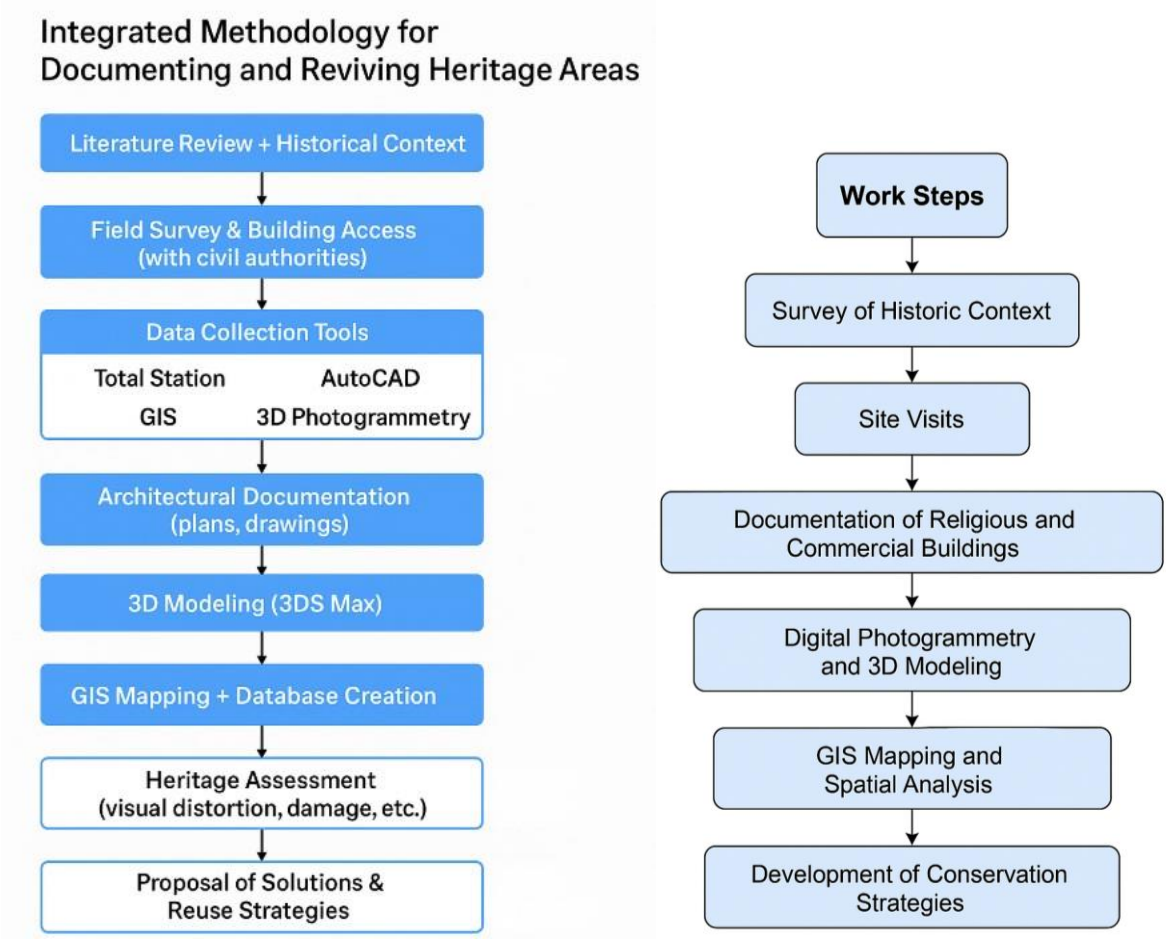


Figure.230.The flowchart outlines a scalable framework applicable to future research . (Source: The Researcher, 2025)

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