

The Architectural and Constructional Characteristics of Damascus Ancient Wall

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Abstract

Wall around the cities are viewed as one of the most highly valued architectural, civilizational and constructional features that characterize them, embodying their importance and indicating their geographic location. They have undergone great transformations in terms of their construction and components, which is a reflection of the civilizational longstanding heritage of those cities back in history.

This paper presents a study of the historic Wall of Damascus, dating back to the Aramaic era, then the history of the Wall in the Classical Ages, going through the Byzantine era. But the major development that was introduced to the Wall was at the beginning of the Islamic era (Ayubite period), when the city flourished, prospered and enhanced its fortifications, with the Wall acquiring important constructional, architectural and civilizational attributes, which had an influence on certain Arab and Islamic cities such as Al-Qods, Aleppo and others. The study shall provide some knowledge on the main components of the Wall, in terms of walls, towers, gates, construction materials and methods, throughout successive historical eras. Besides this, the study shall tackle the distinctive architectural features such as adornments, inscriptions and embellishments that have been substantially damaged and degraded as a result of wars and earthquakes, which prompted competent authorities to start setting up a preservation and restoration plan, part of which shall equally be handed down.

The study shall draw a number of conclusions, findings and recommendations that can enable setting up strategies to preserve and develop the Wall in its civilizational, architectural and constructional aspects, especially that there are international networks concerned with establishing technical links between Wall cities.

1. Introduction

The city of Damascus occurs on the borders of the desert at the upstream of the hollow plains of Syria, the Galilee valleys and the Mediterranean coast, in the middle of a fertile oasis, (Ghouta), that surrounds it from three sides. It is bordered to the west by the 1150 meter high Kasuon Mountain, whereas the city itself is 700 meters above the sea level. It benefits from the inflow of seven effluents of Barada River. People contemporaneous to Saint John of Damascus surnamed him after the river for his abundant knowledge and sublime virtues.

2. The evolution of Damascus Wall throughout history

Damascus is positioned among the most outstanding historic cities, in view of its monuments that survived to date. Its strategic location, from commercial and geographic perspectives, attracted to the city waves of invaders, which was at the origin of its military fortifications that are associated to its cultural monuments. Its marvelous fortress and fortified Wall are a mirror of the kings and princes that consecutively governed the city and the transformations they introduced, in terms of restorations and construction of new towers and parts of the Wall.

2.1 The city during the Canaanite and Amorite periods

The existence of Damascus prior to the Aramaean era is a proven fact based on the pharaonic documents that were discovered in Amarna, and the archeological excavations that were conducted in the Umayyad Mosque courtyard in 1965. The city Wall in that period was built of large stones measuring between 80*60 to 100*60 cm, two meters thick, and from 5-6 meters high, supported by bars, with an average of one cylindrical bar per 4 meters length, with bars built in stones[3].

2.2 Aramaean period (1100 BC -732 BC)

The city was first conceived as an urban center on a hill at the heart of the ancient city. But Aramaeans never went beyond this limit, which has been established from the excavations that were conducted near the Roman sites. In layers, no trace was found of any settlement previous to the Romans, which suggests that the Aramaean city did not extend beyond that, and that its wall remained unchanged during subsequent periods,fig.1.

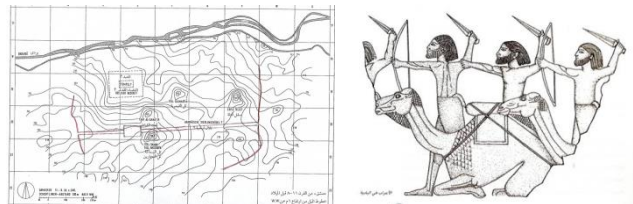


Figure 1: The Wall during Aramaic period (1100 BC -732 BC)

2.3 The Greek period

After the conquest of the East by Alexander the Great and his invasion of Persian territories, Damascus fell under Greek rule. Greeks even inhabited their distinct parts areas, constituting thus a new city, juxtaposed to the Aramaean one, following the model of Greek cities in urbanization and structure, with the typical straight streets and perpendicular streets on the eastern part of the ancient city. As they are accustomed to, Greeks settled in the eastern side of the Wall, with streets running in chess board style, and consequently, the Wall was extended to circumscribe those new areas. [4]

2.4 The Roman period

This period starts from 64 BC, and the city was part of the Decapolis, where the Romans inhabited the fourth Damascus hill, and built a gated Wall around the city. In terms of urbanization, Damascus embodied the Greco-Roman rectangular shape (1550x850 m), all along Barada River and on its south bank. The Wall and the gates surrounded the architectural components, the streets, the temple, the buildings that have a general vocation, and the residential areas. It was during this period that the Wall started to take its shape, fig.2

2.5 The Byzantine period

The year 395 A.D. came, and no urban features were added to the city but the construction of some churches. And as a result of the city's decadence on the military, financial and demographic levels due to a multitude of factors, the transformations that were introduced to Damascus rampart and its components only concerned some architectural aspects that entered in the constitution of gates, besides some changes in the bulk of the wall itself.

2.6 The Umayyad period

In the year 41 of Hegira/661 AD., Muawiya wanted to establish the capital city of the Umayyad Caliphate, so he made of Damascus the capital of the State.. As a matter of fact, one of the marvelous novelties that ancient Damascus witnessed during that era was the construction of the Umayyad Mosque under Al-Waleed Ibn Abdelmalik, which shifted the center from the street called straight to the area surrounding the Umayyad Mosque, and all improvement and construction works focused on this zone. But neither the wall nor its gates were the subjects of any substantial works.

2.7 The Seljuq-Ayyubid period

Nur ad-Dine Zengi of Aleppo was able to dominate Damascus in 549 H/1154 A.D...(31). Nur ad-Dine's rule inaugurated a new era of prosperity and power

for the city, which imparted her a momentum of extensive progress and economic development, due to the security and stability it enjoyed. During this era, a new Wall was built with smaller gates, which was normal, given the expertise Nur ad Dine had acquired in Aleppo.

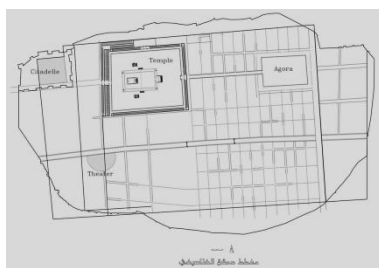
New minarets were added on top of gates, and even the second Tower called 'AL-NURE' was discovered in the excavations to the south of Damascus, at the airport node, which led to the identification and delimitation of the wall that was built in this era. In the Ayyubid period, fortifications of the Wall were resumed, focusing on building towers and restoration of Damascus citadel. The Ayyubid period in general, and Nur ad Dine's rule in particular, were characterized by a special defensive and architectural pattern, besides a reuse of old and previously carved out stones, to meet the requirements of fast execution of works, fig.3. [5]

2.8 The Mamluk period

In 1260, Damascus became one of the most important Mamlukite Wilayats of the Levant, and gained back its prosperity, especially under Baibars. Due to wars waged in that era, much damage was inflicted upon it, mainly on the southern rampart. Since then, the importance of the Damascus rampart started to witness a regression from the military and civilian aspects.

2.9 The Ottoman Period 1516 A.D.

During the Ottoman period, the Wall became abandoned, since it lost its role as an efficient defensive wall of the city. Consequently, it suffered from neglect and deterioration. Starting from 1830, Ibrahim Pasha took on the demolition of huge parts of the wall, and rebuilt them in other areas. This demolition process was maintained for quite a period of time. It is noticed also that Damascus witnessed an expansion of mainly its local market places, which by the end of the Ottoman period required the filling up of long segments of the trench around the wall and the citadel, fig.4. [3]



(1)



(2)

Figure 3: The Wall during Roman period(1) The Seljuq-Ayyubid period (2) .

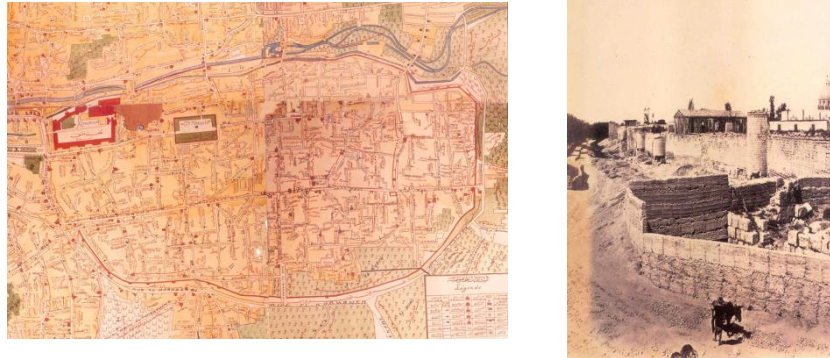


Figure 3: The Wall during Ottoman Period 1516 A.D.

3. The urban and architectural characteristics of Damascus wall: gates-towers- Curtain walls

3.1 Introduction: definition of the city wall

Originally, the wall of the city is a defensive construction that enhanced the capability of the city to repel exterior threats, to maintain security and stability of its inhabitants and functions (politically, socially and economically). The gates are always associated with the city Wall, which is justified by the fact that since the genesis of the city, there has always been a rampart to protect it, and well-guarded gates to secure its relations and linkage with its political, social and economic environment. In most of its development phases, the Wall was scarcely described in historical references, except for some paintings by Orientalists that visited the city and imagined the Wall upon their return to their homelands. The first maps that were established from the end of the Ottoman period till the French Mandate constitutes the most important cadastral documents that indicate the limits of the Wall. Some other archeological excavations enabled to define the contours of the Wall during the different eras. The wall has three main components: the gates, the towers and the Wall itself (Curtain walls), with its architectural, constructional and defensive characteristics. [1,5]

3.2 Damascus Gates

The ancient city of Damascus has seven gates, according to the Greco-Roman maps, devoted by the Romans to the Sun and the planets that revolve around it, making up the Solar World. The Sun and its planets occupied a central position in the Pagan theology of the Romans, who used to hew out an embossed shape on top of all their doors, representing that Deity. The distribution of the city's gates was as follows fig.4:

To the north: Bab Tuma – Bab al-Salam – Bab al-Faradis

To the West: Bab al-Jabiya
 To the south: Bab al-Saghir
 To the east: Bab Sharqi – Bab Kisan
 Besides two new gates that date back to the Islamic Period: Bab al-Faraj and Bab al-Nasser.

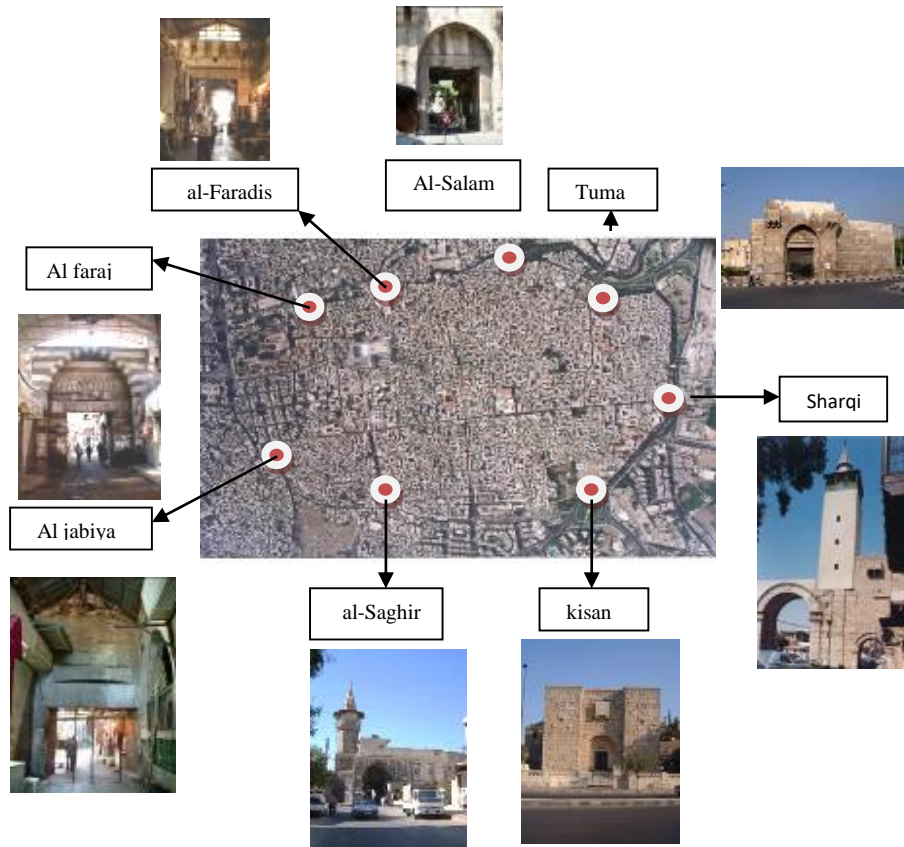


Figure 4: The locations of the Damascus Gat

3.2.1 Bab Tuma

It occurs at the north-eastern part of ancient Damascus along the Barada River, and was devoted to the Deity Venus. Its owes its name to St Thomas' (the Apostle) Chapel, and was reconstructed by an-Nassir Dawud in 625 H/1227 A.D., then restored by Tinkiz in 734 H/1323 A.D.

3.2.2. Bab Sharqi

It bears this name due to its location to the east of Damascus, standing over the street called straight. The gate was built either under the Roman Emperor Septimius Severus or the Emperor Caracalla, by the end of the 2nd century A.D.

and the beginning of the 3rd century. The gate, which symbolized the Sun, was blocked with the advent of the Islamic period, when only the small northern opening was left, and a bent entrance added, arched by voussoirs of small stones, as mentioned in the inscription made at the western side of the gate. In 623H, during the Ayyubid period, a minaret was erected at the gate, based on the southern tower, from where we can access to the tower. In 1961, the Directorate conducted some restoration and excavation works in the site.

3.2.3. Bab Kissan (Saint Paul's Gate)

It occurs at the southeastern part of Damascus. Originally, it was a Roman Gate, and owes its name to Kissan, a slave of Muawya Ibn Abi Soufiane, whom he set free. It is equally called Saint Paul's Gate, and had previously been meant to symbolize Saturn. It was blocked by Sultan Nur ad-Dine during his consolidation of the Wall, but was reopened by the King Ashraf Naser al-Dine Shaâbane 2nd in 1363 A.D., then renovated during the Mamluk period by Sayf al-Dine Men Geli Bagha, the Governor (Naib) of the Levant, in 765 H. In 1939, the gate was restored, and a chapel was built at the entrance under the name of the Chapel of Saint Paul.

3.2.4. Bab al-Saghir

It occurs at the southern part of the ancient Damascus, and was named al-Saghir 'the Small', because it is Damascus' smallest gate; it bears also the name of Bab al-Hadid 'the Iron Gate'. It dates back to the Roman period as can be seen from the type of its archade and its architectural style, and used to be a symbol of Mars. During his conquest of Damascus, Yazid Ibn Abi Sufian entered through this gate in the year of 14 H; through it also entered Timūr Leng (or Timur the Lame) in 803 H/1400 AD, following which he sacked the city of Damascus. In front of the gate, Nur al-Dine built a Bachoura, a mosque and a minaret in 551 H/1165 AD. It was renovated by the King Aïssa, son of Al-Malik al Adil in 623 H/1226 AD.

3.2.5 Bab al-Jabiya

It occurs in the western part of Damascus to the extremity of the Street Called Straight, and was a symbol of Jupiter. According to the historian Ibn Assakir, it was named after the Al-Jabyia village. He described it in these words "out of the three openings of the gate extend three walks, stretching to Bab Sharqi's walk. By its side a Bachoura was built by Nur ad-Dine, as shown in the inscriptions on the lintel of the gate. The gate was rebuilt by the King Nur ad-Dine in 1164 AD, and restored by the King Naser Salahuddine.

3.2.6 Bab al-Faraj

It occurs at the northwestern side of Damascus, close to Damascus citadel. Its name came from the aperture made in the gate by Nur ad-Dine Zengi, and was restored in 606 H. It is a twine gate, with the outer side adjacent to the Wall and close to Barada River, and in front of it lies a bridge that was called the bridge of Bab Al-Faraj, whose construction works were completed during the Mamluk

period in 736H. The Inside part of the gate was renovated in 639 AD, and Malik al-Saleh Abu Ayyub ordered it to be restored. Between the inner and outer sides lies the Bachoura, a mosque and a mill, which are among the characteristics of gates in the Islamic period.

3.2.7. Bab al-Faradis

It occurs at the northern side of ancient Damascus, owing its name to a district that was outside Damascus under the same name. It is also called Bab al-Imara after the area where it is built. It lies close to Barada River, in front of a Roman bridge that is still present, and used to be the symbol of the planet Mercury. The original Roman foundations of the gate are also still maintained. It was restored and rebuilt by Malik as-Salih Imaduddine Ismael in 639 H/1241 AD. It is to be noticed that the characterizing features of gates under Nur ad-Dine also apply to this gate, with a small mosque and a Bachoura. It was restored by the General Directorate of Monuments and Museums in 1951.

3.2.8 Bab al-Salam

(Safety - Aljenniq) The Aljenniq gate was close to Bab al-Salam at the northern Wall of Damascus (between St Thomas gate and Bab al-Faradis). It used to be the symbol of the moon. With time, the Aljenniq gate was progressively deteriorated under the effects of successive demolitions and restorations. It was replaced by Bab al-Salam, named to be a good omen in wars, which proved to be arduous among rivers and trees. It was built under the Sultan Nur al-Dine in 559 H/1164 AD., and restored by the Sultan Malik Ayyub, son of Malik al-Kamil in 641 H/1243 AD.

3.2.9 Extinct gate

This includes Bab al-Nasr that was built by Malik Salahuddine Dawud Ibn Aïssa Al Ayyubi in 625 H, and was demolished under the Ottoman Sultan Abdelhamid 2nd upon the construction of Al Humaydyia Souk in 1281 H/1863. This gate existed since the Romans, as it is situated at the entrance of Al-Humaydyia Souk, along the axis of which lies the western gate of Jupiter Temple. Formerly, it used to bear the names of Bab al-Saraya, Bab al-Jinane, or Bab al-Saâda. The Victory Street (an-Nasr) was called, and still bears the name, Jamal Pasha Street.

3.3 Towers

Regarding the composition of Damascus Wall, we notice a concentration of the towers to the south, east and west, since the northern part is naturally protected by Barada River. The strong circular towers from the Nurid period and the rectangular towers from the Ayyubid period are interposed by a large number of minor circular towers based on a squared socle. According to al-Munjid, there are 40 such towers approximately. From a constructional perspective, these towers are characterized by the sturdiness of their foundations, where huge blocks were used to a deep level of groundwork. The towers were built from

solid limestone, the edges of which were rusticated, but the middle was left smooth. The embossment out of the frame varies between 8 and 10 cm. Some of the blocks are 1.54 meter long, 0.88 meter wide and 0.90 meter thick. This architectural style is known in the construction of Damascus citadel and other castles from the Ayyubid period. The tower was composed of a solid base, above which were constructed several rooms, designed to accommodate the troops, roofed by crisscrossed arches. We can notice some old pieces or blocks of stone that were used in construction. This style is noticeable in Assalih Ayyub tower and in the towers discovered in the vicinity of Bab Sharqi.

3.3 Curtain walls

The city is circumscribed by a fortified rampart composed of huge blocks of stone. It is straight from southern, eastern and western sides, and winding from the northern side along Barada River. Starting from the Nurid period, the shape of the rampart began to change following the urban expansion of the ancient city of Damascus. Consequently, the shape of the rampart became oval. The transformations introduced to the rampart can be summarized as follows.

3.3.1 The Roman and Byzantine period

At the beginning, the Romans erected at each gate of the city, and at the appropriate location between towers, lighthouses on top of which they hung bells they used to toll on special occasions (religious days, upon looming threat or special alarms). By the second half of the 4th century, the pagan temples standing near each gate were converted into Christian Chapels.

3.3.2 The Islamic period During

The Islamic period and after the conquest, Muslim Arabs built at the gates a minaret, a small mosque and a souk. But natural effects, such as earthquakes, led to the deterioration and ruin of many of these minarets. Sultan Nur ad-Dine the Martyr rebuilt the Wall, which now surrounded the city after its expansion, and became oval instead of its old rectangular shape. Another wall was added to the Wall from Bab Faradiss to Bab al-Salam, and the area lying between the two walls was then called 'between the walls'.

The survey of documents that we conducted, tracing back the evolution of Damascus Wall revealed the presence of some major changes that the wall underwent, be it at the level of the contours of the Wall or the methods of its construction and consolidation. We notice that, based on observation of the constructional structure, the wall passed through clear historic periods (Roman, Nurid, Ayyubid, Mamluk and Ottoman). These can be well specified based on foundations, construction stone units, linking mortar, openings and styles of fortification and consolidation. [2]

4. The current situation of Damascus Wall and its major problems

Given the importance of the Wall with all its components among the Syrian monuments, being the subject of the Decision n°138-A, dated on 11/08/1983, an urban expansion along Damascus Wall occurred since the Byzantine period. Saint Paul's story and how the Apostle fled Damascus through the window of a habitation on Damascus Wall, is still present in minds, fig.5.

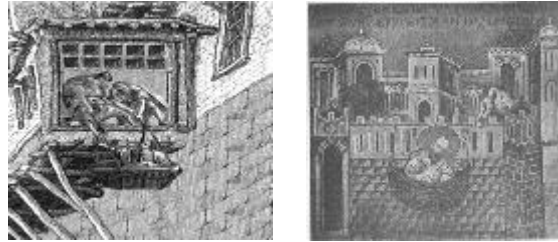


Figure5: Saint Paul's story- Damascus Wall

However, these waves of expansion increased during the Islamic eras, mainly the Ottoman period, when the defensive function of the Wall regressed considerably. The wall was equally subject to several incidents that affected its structure, mainly:

- (1) The growth of residential areas outside and adjacent to the Wall.
- (2) Degradation and demolition of large parts of the Wall due to the wars waged by or on Damascus.fig.6.
- (3) Demolition of large parts of the Wall during the French Mandate (Sidi Amoud), bombardment of Sidi Amoud (Al Hariqa)
- (4) Ruin of large parts of the Wall on the southern side (from Bab Kissan to Al Amine area) due to neglect and organizational matters, at the beginning and middle of last century.
- (5) Demolition of parts of the Wall to address traffic issues (between Bab Tuma and Bab al-Salam) at Bab Tuma Square around the middle of last century ,fig.7.
- (6) Realization of infrastructure works at the Wall site, parts of which were wiped away as a result of a sewer pipes installation immediately adjacent to it in 2003.
- (7) Demolition or filling up of the trench at successive episodes of history, upon the opening of the Revolution Avenue, of Bab Sharqi tunnel, the recent Darwishyia tunnel in 2002, and Douar Bitara trench in 2006; consequently one of the major components of the defensive wall perished away.
- (8) Issues pertaining to the ownership of buildings situated at the site or in its vicinity, the maintenance or demolition of those buildings, and the effects that this situation may induce in terms of funding, legal aspects and the time factor.
- (9) Approved urban plans that were fulfilled in the late 60's, applying a policy that uncovers the Wall (A policy framed by the French urban planner Ecochard) ,fig.7.
- (10) Absence of any lucid vision in handling the Wall and its immediate urban environment in compliance with the recommendations of world heritage organizations and centers.



Figure 6: The current situation of Damascus Wall and its major problems

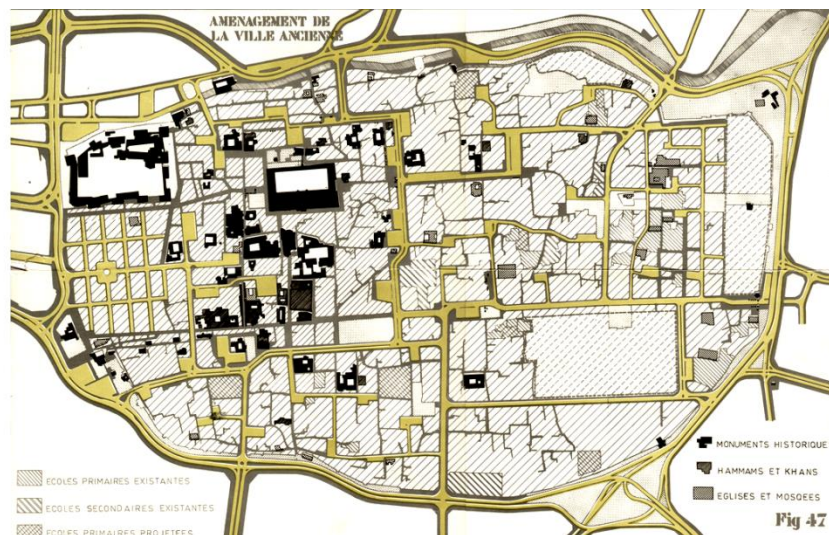


Figure 7: Approved urban plans that were fulfilled in the late 60's, Applying a policy that uncovers the Wall. (planner Ecochard).

5. Restoration projects delivered on the components of Damascus Wall

The history of the Wall restoration goes back to far distant times, the defensive factor having always been crucial in restorations and renovations, which were sometimes consistent with the political and military conditions that predominated the environment of Damascus. In general, restoration works made use of the legacy of skills in terms of construction style and materials and their application methods. Documentary study of the history of some parts of the Wall clearly unravels the past transformations to which its components were subjected.

At the beginning of last century, and although the Wall and its components lost their defensive functions (Arrowslit, merlons, fighting platform), the authorities in charge of monuments realized their utmost importance, mainly components dating back to the Classical Age, such as gates, curtain walls and towers. These parts were then subject to restoration and reconstruction works, which inferred accurate inquiries into historical periods, and construction styles and materials.

- (1) The projects of gates restoration: restoration of Damascus gates
- (2) The projects of towers restoration: restoration of Nur ad-Dine Tower and Salih Ayyub Tower.
- (3) The projects of curtain walls restoration: restoration of the parts of the rampart lying between Bab al-Salam and Bab Tuma, and from Bab Kissan towards Al Amine area.
- (4) Excavation projects: excavation for towers (southeastern tower, Nur Tower west of Bab Kissan)

6. Strategies of preserving the wall of ancient cities- outcomes and recommendations

6.1. Restoration and rehabilitation strategies of Damascus Wall urban components

- (1) Extensive analytical study of historical data: at the start of the Wall rehabilitation, historical surveys should be conducted to determine the construction style specific to each phase of the Wall evolution, and to consolidate those findings in detailed blueprints that showcase the architectural and constructional characteristics and features of each phase.
- (2) Careful documentary surveys including photogrammetric maps as essential documents for rehabilitation and improvement.
- (3) Assessment of the damage that was and is inflicted upon the Wall components via any required tools of technical and constructional testing.
- (4) Analysis of the characteristics of construction materials and linking mortar
- (5) Elaboration of standardized, scientifically driven and permanent restoration policies touching upon all parts of the Wall.
- (6) Interest in imparting visibility to the historical evolutionary phases of the Wall.

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