

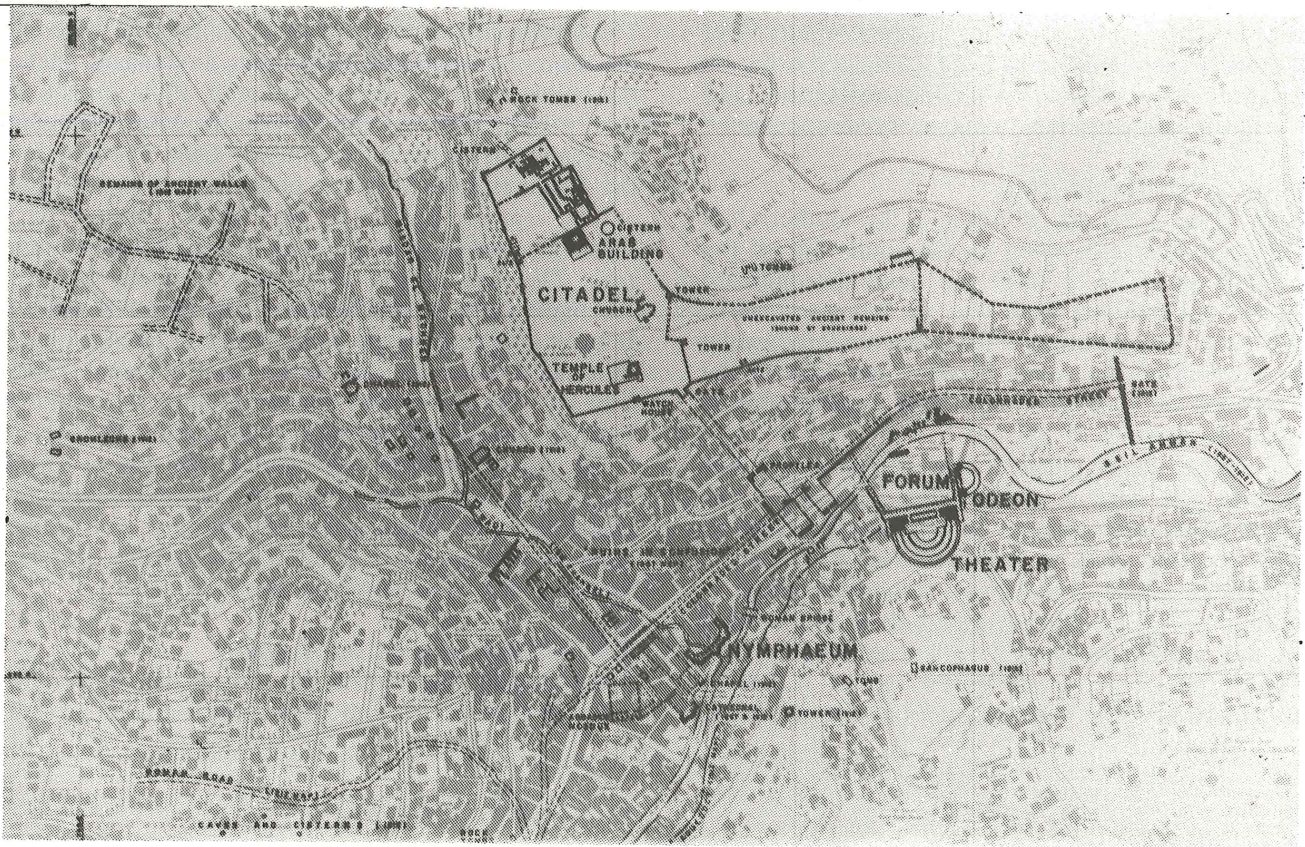
Amman-Philadelphia: Aspects of Roman Urbanism

Introduction

Ancient Amman was built in and around Wadi 'Amman, through which a stream flows from west to east—locally known as the Seil 'Amman—a tributary of the Zarqa River (the Yabbok of the Bible). The topography consists of a hilly plateau cut by steep sided narrow valleys and basins. It is adjacent to fertile fields suited to the cultivation of crops and has a plentiful and steady supply of water. Indeed, the springs that still give Amman its water supply have made this place a site of human habitation for more than 12000 years, as shown by Palaeolithic remains in the area.

The Roman city of Amman consisted of a lower and an

upper section. The latter was built on a prominent hill and constituted the *acropolis* of the city. This hill is a strategic natural L-shaped oblong plateau overlooking the *forum* area in the lower section to the south (FIG. 1). It consists of two rectangles of unequal dimensions. The first, which is oriented east-west, is about 900m long and about 60m wide and the second, which is oriented north-south, is about 400m long and about 80m wide and contains a temple and other important buildings. Steep wadis surround the hill on all sides except for the north where it is separated from the main hill of Jabal al-Husein by an artificial depression. The *acropolis* area itself rises from east to west in three terraces.



Plan of Roman Amman-Philadelphia.

From very early times this hill had been a fortress of great importance. Recognizing its value for the area of Amman, the Romans rebuilt the ancient Ammonite fortress and surrounded it with massive walls which rank among the finest of ancient fortifications. These walls consist of lower courses which incline inwards in steps of heavy, well joined, rusticated stone-work with drafted edges overlaid by a wall of smooth *opus quadratum* of excellent quality.

The wadi bed down below the acropolis to the south is divided by Seil 'Amman into two long narrow strips of land on which were built streets, public buildings and a *forum*. Along the north bank of the Seil ran the colonnaded street and across it on the east end was a *propylaeum* which must have led up to the temple on the hill (FIG. 1).¹ South of the Seil were situated the *forum*, the *odeum*, the theatre and the *nymphaeum*. The hills on both sides of the *forum* area slope deeply from an elevation of 850m asl at the summit to about 743m asl down in the wadi bed. This sharp slope causes a considerable amount of wash to be carried down the hills to the *forum* each winter. Moreover, during winter time heavy rains cause the Seil's waters to rise so much that the *forum* gets flooded and thus silt accumulates in considerable quantities. In Roman times these problems were solved by covering the stream with a series of arches and vaults as well as installing a network of underground channels and conduits. Many of these public buildings and water-works have long been landmarks on the archaeological maps of early explorers during the last century. But most of these remains have sadly been damaged either by natural causes or as a result of modern expansion, and indeed some monuments have completely disappeared.

Description of the *Forum* Area

The *forum* occupies the middle *insula* of the southern half of the lower ancient city, lying on the south side of the stream which separates it from the main thoroughfare between the east and west gates (FIG. 1). Being so placed, the *forum* takes full advantage of the space rendered by the natural widening of the valley between the foot of the Citadel hill and the theatre; an important consideration in the rugged topography of the city.

Stratigraphic evidence indicates that the *forum* area was in its greater part filled in and levelled artificially.² The preparation of the site seems to have involved a deep fill sometimes reaching close to bedrock. This was done in order to raise the level of the *forum* above the stream so that the *forum* could be kept dry especially in winter time. Further, the area was provided with a drainage system which consisted of terracotta pipes, about 0.25m in diameter, that ran along the inner sides of the stylobates

below pavement level and terminated in the northwest corner of the *forum* where the water flowed into the stream.³ The *forum* and the city quarter south of the stream were connected with the main thoroughfare (*decumanus maximus*) to the north by stair systems, ramps and bridges.⁴ A retaining wall and a series of arches built of small voussoir blocks laid dry, sealed off the two sides of the stream. The retaining wall is perpendicular and each side flanking an arch is 1m wide and 2m high with a 0.40m set-off from which the arch springs. The arches are of two different sizes; the span of each of the larger arches is 2.5m and that of the smaller arches is 1.7m. Each small arch is set between two large arches. The original level of the ancient city was made by a filling as high as the crown of the larger arches. Evidently, great effort and expense were made to keep the street well up the slope of the wadi and maintain it on one level from end to end. Further, the evidence indicated that originally both sides of the stream were kept at a level surface extending from the *decumanus maximus* to the steep hill on the south side of the stream.⁵ The stream itself was paved and covered with a series of barrel vaults from the east to the west end of the ancient city.

The Layout of the *Forum*

Oriented northwest/southeast, the *forum* is bordered by porticos on three sides and closed on the north by the semicircle of the stream and the colonnaded street beyond. The *forum* and porticos constitute an irregular ensemble in the form of a trapezium rather than a rectangle. Including the colonnades, the *forum* measures 100m on the south side, 48m on the west and 50m on the east. The radius of the semicircle on the north is nearly 130m. The total area of the *forum* as defined by the outer lines of the colonnades and the semicircle, is nearly 7620 square metres. Thus, the *forum* at Amman ranks among the largest Roman imperial fora. The area of the *forum* was originally paved with rectangular and square blocks of greyish-white limestone. In front of the colonnade, a broad step or landing projected covering a gutter for rain water. The rain water found its way into the gutter and eventually into terracotta pipes through semicircular openings in the outer edge of the step.

Corinthian columns surrounded the *forum* on three sides. The colonnades are not, however, uniform in character at the three sides. On the east and south, the columns are larger and display a better quality of stone and workmanship than those on the west side.

The Buildings around the *Forum*

The principal buildings in the area of the *forum* are all, more or less, oriented in conformity with the axes of the

¹B. Schulz, 'Bogenfriese und Giebelreihe in der römischen Baukunst', *Jahrbuch des Deutschen Archäologischen Instituts* 21 (1906), pp. 221-230, Pls. 3-4.

²A. Hadidi, 'The Excavation of the Roman Forum at Amman (Philadelphia), 1964-1967', *Annual of the Department of Antiquities of Jordan* 19 (1974), pp. 71-91.

³A. Hadidi, 'The Roman Town-plan of Amman', *Archaeology in the Levant*, eds R. Moorey and P. Parr (Warminster, 1978), p. 213.

⁴Charles M. Doughty, *Arabia Deserta*, (London, 1888), p. 18; H.C. Butler, *Ancient Architecture in Syria*, Princeton University Archaeological Expedition to Syria, Div. II, A (Leyden, 1907), p. 60.

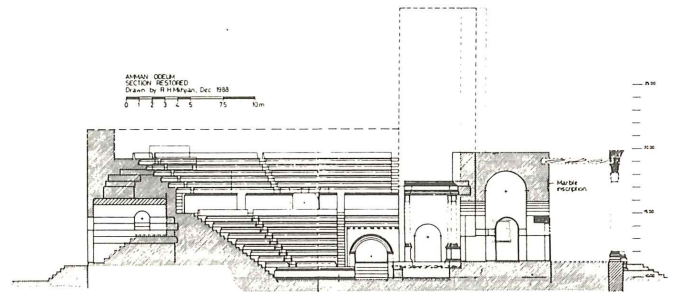
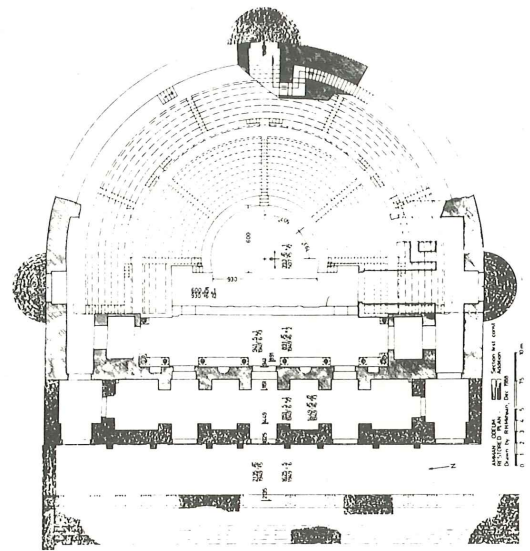
⁵A. Hadidi, *The Roman Forum at Amman*, Ph. D. Dissertation, University of Missouri (1970), pp. 46,80.

two colonnaded streets. In the vicinity of the *forum*, the *odeum* is oriented toward the west and its axis is almost perpendicular to the axis of the *decumanus maximus* and to that of the theatre. The orientation of the theatre is such that its axis runs 9° west of north, thus providing for a minimum of sunlight in the eyes of the spectators. The axes of the theatre and the south colonnade of the *forum* run nearly parallel to the semicircle of the main street on the north. The architectural complex is very sensibly conceived. The theatre utilizes the hill on the south for part of its auditorium, and the location of the *odeum* in close proximity to the theatre offer a striking example of coordinating two recreational centres within almost immediate reach from the main thoroughfare of the city. The peripheral character of the *forum* on the north side is accentuated by the natural semicircular course of the stream which separates the plaza from the *decumanus maximus*. This accentuation is further enhanced by the curve of the street at this point to make it run parallel to the curve of the stream.⁶ The semicircle on the north side of the *forum* is balanced by the semicircle of the *cavea* of the theatre on the opposite south side and thus—in its original shape—the area would appear to be symmetrical.⁷

The theatre is located against a hill to the south of the *forum*. The *cavea* was apparently at least partially hollowed from the hill-side and the artificial portions were built upon masses of stonework and barrel-vaults. The theatre is semicircular in plan with three horizontal divisions of seats.⁸ The stage-building or *scaenae* consists of a wall with a central opening, on either side of which there is a pilaster. On either end of the *scaenae frons* is a semicircular niche and two half niches in the middle flanking the central opening. The spacious *proscenium* in front has a low wall decorated with alternating small square and round niches. Rain water was led out of the *orchestra* through terracotta pipes which ran under the *scaenae* to the *forum* where they joined the main drainage pipe.

The *odeum* is also semicircular in plan with a stage building that is connected with an outer wall by a barrel vaulted passage with a corner tower at each end (FIG. 2). The *cavea* is oriented to the west and is built up entirely from ground level of well-dressed blocks of limestone, sometimes bossed and drafted especially in the interior sections. Semicircular stairways provided approach to the *odeum* on the south, east and north entrances.

The *nymphaeum* which lies further west, is very close to the point where the *cardo* intersects with the main thoroughfare. The building is oriented toward the north-west and its longitudinal axis is parallel to the axis of the *cardo*. The building originally stood upon the edge of the main stream. A small branch of this stream flowing from



2. Plan of the Amman *odeum* and restored section.

north to south, especially in winter time, passes underneath the middle of the *nymphaeum* where it empties into the main stream.

The overall scheme for the urban development of Roman Amman was determined, not only by the configuration of the terrain in the lower part of the city, but more decisively by the position of the *acropolis* hill and the lines of its walls. The *decumanus maximus* follows a straight line which was broken at several points in order to make it conform to the irregular shape of the east-west rectangle of the hill and the axes of the *acropolis* walls on the south. This orientation of the street is also dictated by the course of the stream. The sensible conception of this layout brings the lines of the hill, the main thoroughfare and the stream into an admirable symmetry.

The temple of Hercules is built close to the south wall of the *acropolis*. Facing east, its longitudinal axis is parallel to the south wall. The plan of the temple is *tetrastyle in antis*

⁶A similar arrangement is found at Qanawat (Canatha) in Syria, dating from the same period; R.E. Brünnow and A. von Domaszewski, *Die Provincia Arabia*, vol. III (Strassburg, 1909), p. 107, Fig. 1000.

⁷The combination of rectangles and semicircles seems to have had a special attraction for Roman architects since early imperial times, as may be seen in the Forum of Augustus and later the Forum

of Trajan; W.J. Anderson et al., *The Architecture of Ancient Rome*. (London, 1927), pp. 52-53.
⁸*Annual of the Department of Antiquities of Jordan* 19 (1974), p. 88, Fig. 8; A. Almagro, 'The Survey of the Roman Monuments of Amman by the Italian Mission in 1930', *Annual of the Department of Antiquities* 27 (1983), pp. 607-639.

with one column on either side. The *antae*, which were made of half columns, terminate in rectangular pilasters set at the angles of the *cella* wall. The *podium* on which the temple was erected is a rectangle measuring 8m by 19m. A fragmentary inscription discovered in the debris around the temple indicates that it was built during the reign of Marcus Aurelius (A.D. 169-180).

Conclusion

The following statements may be made on the basis of the above description of aspects of Roman urbanism of Amman. First, the altering of natural contours, filling valleys and cutting back hills were common practices in

Roman building methods especially from Flavian times onward. Second, the Roman *forum* at Amman, being trapezoidal in plan, constitutes one of a few exceptions to the Vitruvian rule. Third, the principle of axial symmetry is adhered to by the Roman town planner inspite of the rugged configuration of the city of Amman.

Roman Amman is, of course, only one of the hundreds of cities of the Roman Empire. Among these centres of ancient life it ranks comparatively low, and one which is even today not extensively known. Yet it has its importance, its well-preserved buildings and the striking features of its Roman town plan show the various aspects of Roman engineering and urbanism.