## Dragana Rogić, Bojan Popović, Ivana Popović, Miroslav Jesretić

## Wall Painting of Sirmium

1-Public and residential structures next * to the northern city rampart (site 21)


## Institute of Archaeology, Belgrade

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## Wall Painting of Sirmium

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## Arheološki institut, Beograd

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## Zidno slikarstvo Sirmijuma

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Dragana Rogić, Bojan Popović, Ivana Popović, Miroslav Jesretić

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## Chapter I




## Bojan POPOVIC

## Architectural composition, analysis of the construction phases and possible location of frescoes

Archaeological site 21 is located in the peripheral part of the Roman city, in the immediate vicinity of the northern city rampart, 45 meters of air distance away from it. (plan 1) It was discovered in 1959, during the trench excavations the aim of which was to find the northern city rampart and determine the boundaries of the city's territory. The survey of the site was carried out, to a larger or a lesser extent, from 1959 to 1964. During the first three years, the Provincial Institute for the Protection of Cultural Monuments in Novi Sad was in charge of the works, and after 1962, the management of the project was taken over by the Institute of Archaeology in Belgrade, namely, by archaeologist Natalija Simovljević. During this period, a relatively large area was surveyed. The fact that the area of site 21 used to be arable land (farmland) and could be researched without major difficulties, and also wasn't destroyed and devastated by the construction of foundations for modern buildings, largely influenced the scope and quality of the obtained results. However, the surrounding objects influenced the boundaries within which the research was carried out, and these boundaries did not allow for the complete reconstruction of the architectural complex. Apart from a few short reports in magazine Arheološki pregled ${ }^{1}$, which did not include any maps, there are no significant published works about this site. By taking into account the documents, which are not complete and whose parts are not unified, ${ }^{2}$ as well as by the analysis and consideration of the unpublished MA thesis of Jelena Milojević ${ }^{3}$, and the PhD thesis of Miroslav Jeremić ${ }^{4}$, a more complete image of this site, its importance and splendor can be obtained.

During the archaeological survey, on the area of about $2600 \mathrm{~m}^{2}$, remains of four structures- A, B, C and D, were discovered, characterized by V. Popović ${ }^{5}$ as residential and trading in character. Structures A and B have been discovered in their entirety, whereas structure C is considered to extend further to the west, and structure D further to the north.

Viewing the site plan (plan 2), the east and west area of the site can be clearly distinguished. These two areas are divided by a wide street which used to lead to the

[^0]
square. The entire east area is occupied by structure B with its peristyle and an open square on the north. The west area is occupied by structures A, C and D, among which structure A occupies the largest area in the southwest part of the site. This structure A is connected with structure C by a narrow alley (a passage) which opens to the street. Structure D, located in the north part of the site, is adjacent to structure C, and with its smaller part it enters the north profile. Within this placement and arrangement of objects, in bibliography, structure A is named „The house with the apse" because of the exedra ${ }^{6}$ which existed in one of the phases of construction. Structure $C$ is referred to as „The house of Asclepios" because of the find of a small, damaged marble statue of Asclepios ${ }^{7}$. Structure D was not named during the research, while structure B was named „The house of Dalmatius", after the name of a certain Dalmatius, a freedman, whose name was found on the inscription on the sacrificial altar found inside the object ${ }^{8}$. This inscription was later interpreted differently by M. Mirković, so the previous interpretation was abandoned. Namely, M. Mirković interpreted this inscription in the following way: [---] | [+-4]tius [et] | [...]ontius Da[1]matius fil(ius) | vot(um) lib(entes) mer(ito) | posuer(unt). ${ }^{9}$

Structures A, B, C and D were in use for a long period of time, during which they underwent numerous changes, which is indicated by the expansions and corrections in construction, that can be divided into several construction phases. These phases were determined according to the way of wall construction and floor works, as well as according to their mutual relations and height differences. According to N. Simovljević, three construction phases can be distinguished ${ }^{10}$, which was also accepted by M. Jeremić ${ }^{11}$, while J. Milojević recognizes five phases of construction ${ }^{12}$. We will introduce a classification into four construction phases, which are important for the understanding of the function of this complex, by joining the fourth and the fifth phase according to J. Milojević into one because of the close dating and minimum architectural changes.

## The first construction phase

The first construction phase (plan 3) represents the earliest phase of construction, specifically- the older remains of the previous architecture. These are, at the same time, the remains of the buildings that cannot be grouped into a specific unit and were only later, in the next phase, incorporated into structures A, B, C and D. They are room 4

[^1]of the future structure A in which a floor made of lime mortar and crushed brick was discovered, room 6a of the future structure B where pilae stacks of the hypocaust were found, as well as walls XXI and XXII found in the foundation zone ${ }^{13}$. In room 4, on the south side, two bases of pillars which probably used to flank the entrance were discovered, so this could suggest the position of the entrance. The foundations and walls of the above mentioned rooms were made of brick and stone, bound by grey lime mortar, and their width ranges from 30 to 44 cm . What all these architectural elements have in common are floor levels, constructed on a lower level in comparison with the floors of the later phases, which define these remains as belonging to the first construction phase.

## The second construction phase

During this period all four structures were constructed, together with the street, street alley (passage) between structures A and C, the square to the north of structure B and a small peristyle courtyard behind structure C (plan 4).

Structure A (plan 5) has an almost square base with the dimensions of 17 x 16.5 m , and consists of 8 rooms and a hallway that divides the building into two parts. This object could be characterized as a villa with a corridor. The corridor is T-shaped and north-south aligned, with an expansion towards room 4 . On the north side of this corridor, there are three rooms $(2,3,4)$, an annexed exedra (1), a smaller square prefurnium (6) and the area of the open courtyard (7). J. Milojević maintains that this area used to be an enclosed space ${ }^{14}$ while our opinion is that it was, nevertheless, an open courtyard because only this area did not have any floor or its remains (the remains of a substruction or a mortar coat) (fig. 1). Also, no fragments of tegulae or imbrices, i.e. the remains of a collapsed roof covering, were found. On the east side, four rooms $(8,9,10$ and 11) were constructed and lined up next to one another in a row. Room 1 (exedra) was attached to the west side of room $2,2.4 \mathrm{~m}$ in radius (fig. 2). Inside the exedra, the floor made of lime mortar and crushed brick was preserved; it served as a base for the pilae stacks of the hypocaust. The substruction of this floor consists of crushed stone and brick fragments. On the floor, there are preserved pilae stacks of the hypocaust, built of bricks the dimensions of which are $29 \times 29 \times 6 \mathrm{~cm}$, placed at the distance of 25 cm from one another. Room 2 is square shaped, and its dimensions are $5 \times 5 \mathrm{~m}$. The floor in this room, made of lime mortar with a high content of crushed brick of intense red color, is preserved almost in the entire west half. It, too, served as a base for the pilae stacks of the hypocaust. The pilae stacks were made of brick the dimensions of which were $29 \times 29$ cm , which is indicated by the imprinted traces of the bricks in the floor mortar. The base of this floor, like the one in the apse, is made of crushed stone and brick fragments. Room 3 extends to the east from room 2 and completes the row (1,2 and 3). It is rectangular in

[^2]s,
shape, its dimensions being $2.5 \times 5 \mathrm{~m}$. The floor, which used to cover the whole west area of the room, had a slope to the east. It was made of lime mortar with crushed brick, on a base of crushed stone. Above this floor, no pilae stacks of the hypocaust were found, but the possibility of their existence is, however, not excluded. In wall VIII, there is an opening for the canal D-D. The width of the opening, bordered by brick columns, is 39 cm . This expansion was towards the inside of the room, and probably served for heating. Room 4 represents the incorporated part of an older building on the site. This room underwent certain changes. The bases of pillars (pilastars?) were eliminated from the interior and the room gets the hypocaust heating system whose pilae stacks were made of brick of dimensions $30 \times 30 \times 6 \mathrm{~cm}$. Also, the room gets two new openings, i.e. two doors, leading to room 2 and corridor 5, so it becomes the entrance room into this northwest part of the building from the outside. Because of the difference in levels between rooms 4 and 2, a step was added. Room 5 (the corridor) represents a north-south aligned communication 17.6 m long, and 2.3 m wide in the north part, while in the south part its width increases to 4.7 m . Its width in the area towards room 4 is $7 \mathrm{~m}^{15}$. The south part of this corridor is questionable from both functional and organizational standpoint. It is completely illogical that a corridor should have such width (twice wider than at the entrance) and besides, wall XXI runs across the middle of that space. This is another fact in support of the assumption that room 7 is actually not a room, but an open courtyard. In that scheme, the corridor would have the same width from north to south (with the widening towards room 4), and the space between walls XXI and XVII would assume the function of a covered porch with an accent on wall XVII, probably erected up to the height of the parapet, and used to carry wooden pillars on which the roof construction of the portico was laid. The floor in the corridor was preserved in several places. In the south part of the building, it was preserved along wall XVII in the height of the socle. The same floor level was preserved in the north part of the corridor, too, as well as at the place of the passage of canal D-D. It was made as a lime mortar coat with crushed brick on the substruction of larger fragments of crushed brick. Room 6 (prefurnium) was annexed to the west wall of room $4^{16}$. The dimensions of prefurnium $1.9 \times 1.9 \mathrm{~m}$ lead to the conclusion that it had a function of heating a large area. Its position next to rooms 1, 2, 3 and 4 implies that they used to be the warmest rooms, and probably served as a private bath of this villa. Room 7, which was already mentioned, probably represents a garden with a porch. Room 8 occupies the southeast part of the building. This square room, with the dimensions of $5 \times 5 \mathrm{~m}$, has a preserved floor made of lime mortar with crushed brick made on a base of pieces of crushed brick. Room 9 has the same dimensions as room 8. On the north side of wall XXIV, in this room, a part of the floor on the level of the wall socle was preserved, identical to the floor in room 8 . Room 10 has a shape of an indoor corridor with dimensions of $5 \times 0.7 \mathrm{~m}^{17}$. Here, too, an illogical occurence can be noticed-

[^3]namely, the width of 70 cm is not enough for normal communication and passage of people; also, the functional lack of necessity for a corridor is obvious, since rooms 10 and 11 have undisturbed exit to corridor 5 . Our opinion is that room 10 is actually an integral part of room 9 , i.e. that rooms 9 and 10 represent one unit and wall XXVI belongs to the period of a later phase of partition. Thus, two square rooms - 11 and 8 in the corners, and one central, rectangular, larger and more spacious room, can be clearly distinguished in the base, which gives a certain sense and harmony to the east sector and to the whole building in the functional and organizational sense. The assumption and speculation remain that rooms 9 and 8 could have been connected with a door, but a small height of the preserved walls does not give us any confirmation of the existence of a threshold or a level on which there used to be a door.

In the east part of rooms 9 and 11, along wall XXIII, there is canal J-J. In the south extension this canal was not preserved, but it probably passed through room 8 as well. Canal D-D, connected to room 3, was linked to canal J-J in room 11.

The wall foundations of structure A were predominantly made of green sediment, and sporadically of yellowish stone. In the lower zone, the foundations are made of rough hewn stone in irregular courses, while in the upper zone they are made of cut rubble in regular courses. Between these two zones there is a foundation extension of an average width of $6-8 \mathrm{~cm}$. Grey lime mortar, with river sand aggregate, was applied as a binding material. The average thickness of load bearing walls is $45-53 \mathrm{~cm}$, and of partition walls $40-45 \mathrm{~cm}$. The thickness of walls XIV and XV is somewhat different. Wall XIV is of changeable thickness, which is, in the west part, 50 cm , and in the east part 64 cm , while wall XV is 30 cm thick along its entire length. The upper parts of the walls, which were made of brick, are not preserved. They are represented only by the traces of brick imprints in the mortar on the upper surface of the foundation part. The thickness of the grout is $3-5 \mathrm{~cm}$. This layer of mortar does not cover the foundation part along the whole surface, so there remains a socle extension of about $8-12 \mathrm{~cm}$. The exedra wall (wall 1) differs in the manner of consrtuction. The foundation footing, about 30 cm high, is made of two rows of bricks in herringbone pattern bond. Over this part, a foundation, about 50 cm high, was erected. It was made of crushed stone and brick fragments bound with grey lime mortar and of six rows of brick bound with the same mortar. The central part of the exedra had a 76 cm wide opening which was later walled up with bricks. The opening probably used to be connected to the prefurnium, which was not preserved. The thickness of the foundation wall of the exedra varies from 57 to 67 cm . ${ }^{18}$

The street runs in noth-south alignment, and in the north part it opens to the square located in the northeast part of the site. It also connects buildings $\mathrm{A}, \mathrm{C}$ and B . The width is consistent and it measures 6.3 m . In the north part of the street, a sewage canal L-L was discovered, 11 m long and at 1 m distance from structure $C$ (fig. 3). The canal was made of brick and lime mortar, and its width is $60 \mathrm{~cm} .{ }^{19}$ Taking its thickness into account,

[^4]s,
it probably used to be covered with a double-pitch brick roof or larger stone panels.
Structure B (plan 6) has an irregular trapeze base whose dimensions are 22.5 x 19 m . It consists of rooms 1,2,3 and 4. Room 1 occupies the west half of the object, and is separated from rooms 3 and 4 , which are on the east side, by a long and spacious north-south aligned corridor. Room 1 has a slightly oblique rectangular base whose dimensions are $22 \times 8 \mathrm{~m}$. It used to be separated from the corridor by a row of columns, out of which four are preserved. The distance between the columns varies from 1.2 to 1.7 m . From this row of columns, a double east-west aligned row of columns diverges, forming an arcade entrance into the room. The floor in room 1, made of lime mortar and crushed brick, was not preserved. Only its fragments with a polished surface are discovered in the rubble below a later floor. ${ }^{20}$ Above the socle of wall VII fragments of painted wall plaster were found, which indicates a rich decoration of this room. Room 2 is a long, 3 m wide corridor with the entrance on the east side towards the peristyle square (fig. 4). The floor of the corridor was tiled with bricks of larger dimensions. Room 3 is located in the southeast part of the object. This is, at the same time, the smallest room whose floors were decorated with mosaics. Beside walls XV and XVI, smaller parts of the mosaics were preserved, like a border with an ornament of rectangular cogs made of blue tiles on a white background. Room 4 occupies the whole southwest part of the building. The floor in this room used to be covered with a mosaic from which a smaller surface of about $3.2 \times 1.5 \mathrm{~m}$ was preserved, while in the north part it was preserved on a larger surface of $6.2 \times 2.8 \mathrm{~m}$. The composition of ornaments was in the form of square segments in which there were various ornamental motifs. In one segment, the motif of Solomon's knot is preserved. The square segments are separated by a double braid or a meander. The mosaic was made of red, yellow and black tiles on a whitish background, which was placed on the base of reddish lime mortar. Under the floor covered with the mosaic, remains of a hypocaust were discovered. ${ }^{21}$

The square is located on the north side of structure B with a peristyle. The bases of peristyle columns were discovered not only in front of structure B, but also on the east side of the square, and they belonged to another object. The square, in its central part, used to be tiled with brick fragments and stone which were laid on the base of lime mortar with gravel. ${ }^{22}$

The foundations of structure B were constructed in the same fashion as in structure A. The foundation zone was constructed of grey or yellowish crushed stone bound by grey lime mortar. The upper zone of the walls is not preserved, but the traces of brick imprints in the mortar are visible. According to these traces, we can conclude that the walls were 50 cm thick.

Structure C (plan 7) occupies the smallest area of all the surveyed objects, its dimensions being $10.5 \times 7.5 \mathrm{~m}$. It was built north of structure A and consists of rooms

[^5]1,2 and 3 and a courtyard with a peristyle on its west side. The entrance to structure $C$ was from the alley ( passage) between structures A and C , and from the same passage, structure A was entered, too. Room 1 represents the entrance lobby from which room 2 or the courtyard with a porch could be entered. This space, in which the floor was not preserved, could have theoretically contained a staircase leading to an upper floor and which would, in that case, have a steeper inclination. The small surface area of the base of the object can be indicative of the existence of an upper floor construction, which would complete its functionality. Room 2 is rectangular and from it, room 3 was entered, and it probably had communication with the courtyard through the porch. In the middle of the room, a surface of a regular shape was discovered, with dimensions of $1.5 \times 1 \mathrm{~m}$, tiled with bricks, whose purpose has not been determined, and the floor of the room was not preserved. Room 3 is somewhat smaller than room 2. It probably used to be connected with room 2 and the courtyard on the west side. Along the west side of wall V, the remains of the floor on the socle level, which was made of bricks whose dimensions were $42 \times 28 \times 5 \mathrm{~cm},{ }^{23}$ were discovered. According to J. Milojević, this room was an integral part of structure D . The same author quotes that structure D was entered through it, all according to one party wall from the earlier phase and one pilaster on wall VI which was located next to the assumed entrance. In our opinion, this was a separate object with a courtyard that had a peristyle, and communication between objects C and D did not exist (at least not in this construction phase). The above mentioned pilaster is actually a part of a foundation extension at the place in which walls VI and XI meet. A pilaster would not have appeared on its own, neither in terms of construction nor in terms of aesthetics, but there would exist a counterpart on the other side of the entrance instead, which in this case has not been discovered on the wall. M. Jeremić also mentions in his thesis that it could be expected to find the other part of the object on the west side of the structure, in the indoor area, but in that case the courtyard would be three times bigger than these three rooms, which was not the case, especially not in the urban surroundings. That other object could possibly be another row of objects oriented towards another, parallel street in the urban system of blocks. The foundations of structure $C$ were built in the opus spicatum technique and made of horizontally laid bricks in the upper part. The walls are preserved in the height of several rows of bricks.

Structure D (plan 8) is located in the northwest part of the site, and to the north of structure C with which it shares wall XIV. It consists of rooms 4, 5, 6 and the room with the exedra 7. Rooms 4 and 5 occupy the south part of the building. Their dimensions are $3.6 \times 4 \mathrm{~m}$ and $3.6 \times 3.5 \mathrm{~m}$. Inside these rooms, there is a preserved floor made of a thick coat of lime mortar with crushed brick on a base of brick fragments. In room 5, by wall XIV, pilae stacks of the hypocaust construction were discovered, so it is assumed that prefurnium was in the west side of the room and of the object itself. Since floor level is the same in rooms 4 and 5 , the assumption is that room 4 also had a hypocaust, although no pilae stacks were found. Room 6 is the biggest room in structure D. It occupied the
${ }^{23}$ Ibid. 13.

whole north part of the structure, and, theoretically, it could have had the function of a courtyard. Room 7 (exedra) was annexed to the east side of wall XIII and it goes across wall XI of the earliest construction phase. The northeast part of the room has not been surveyed, and in the part that has been surveyed a floor made of lime mortar and crushed brick was discovered. The foundations of structure D are constructed in the same manner as the ones of structure C. ${ }^{24}$ The potential position of the entrance to the object, which has not be determined, is rather peculiar. In terms of functionality, it could have been located in the east wall of room 4, or the north wall of room 6, i.e. in some sort of annex which followed the expanding of the exedra object, and has not been discovered. Also, entrances to these rooms have not been discovered, so it is assumed that rooms 4, 5 and 7 were connected to room 6 with doors, and also that rooms 4 and 5 were connected with each other.

This is the cleanest and clearest construction phase that precedes the later corrections and expansions, so it will be taken as the one most appropriate for further analyses and possible reconstructions.

## The third construction phase

This construction phase is characterized by the changes in the inner arrangement of rooms and addition of new individual rooms. All the structures are still in use, as well as the street and the square, while the passage between structures A and C is incorporated into structure A (plan 9).

In structure $\mathbf{A}$, certain adaptations occur- in rooms 1 and 2 the hypocaust is no longer in use and canals A-A, B-B and C-C are installed, lying on the floors of the original rooms 1 and 2. Walls II and Xa expand the building towards the north by about 3 m at the expense of the passage along its whole length. The end of wall Xa on one, and wall II on the other side form the entrance, i.e. the pilasters that frame the entrance. This way, structures A and C are connected and the passage between them is eliminated. In the east part, big new rooms, 12 and 13, are formed, enclosed by walls XVI, XVIa, XXI and XXV, and they include rooms $8,9,11$, and corridor 5 of the second construction phase. The floors are the same as in the second construction phase - made of lime mortar with crushed brick, on the base of brick fragments. The difference in height between the levels of the older and younger floors is about 30 cm . In the newly formed room 12, below the younger floor, east-west oriented canal E-E, which in its west extension connects to the opening in wall XXI, and canal F-F, of the same orientation, along wall XXV, which at the same time constitutes the south wall of canal F-F, were discovered. Wall XXVIII was built above the south wall of canal D-D, leading to the conclusion that canal D-D was also in use in the younger construction phase. ${ }^{25}$

[^6]The thickness of the foundations of the newly built walls is 44 to 60 cm , and they were built in different manners. Walls XXI, XXV and XVIII were built in the same manner as the walls of the second phase, wall XVI was built in irregular oblique brick courses, and wall $X$ in the opus mixtum technique.

Structure B did not undergo significant construction changes like structure A did. The main change is in terms of the purpose of this structure- namely, it assumes residential character. Its area remained the same, and the peristyle on the north side, towards the square, was retained, too. Changes were made only in former room 1, which was partitioned into two segments by wall XI into rooms 5 (on the south) and 6 (on the north side). Also, walls VII and IX between the previous room 1 and corridor 2 are formed, so the arcade row of columns was lost. In rooms 5 and 6, new floors made of lime mortar and crushed brick are laid. In the rubble with which the old floor was levelled, and on which the younger floor was laid, a large quantity of fragments of wall painting was found, which indicates that room 1 of the older constructoin phase was richly decorated. In the documentation, large quantities of red, black, green and yellow fragments are mentioned. ${ }^{26}$ In the north part of room 6 canal N-N was formed, east-west oriented, with a turning to the southwest. The east part of the structure with the entrance on the north side of the corridor retained its original form. The entrances from the corridor into the rooms, as well as the passages between the rooms, have not been discovered. The new walls - VIII, IX and XI are preserved only in the zone of the foundation, and they were built in the same manner as the walls of the second construction phase, while only wall IX was built with bricks in regular courses across its entire discovered height. The average thickness of the walls of this construction phase is 55 to 77 cm , except for walls XII and XII, which are 30 cm thick. ${ }^{27}$

Structure C retained the same area, the only difference being that it was connected to structure A by walls Xa and II, i.e. structure A was expanded towards structure C at the expense of the passage, which has already been described earlier. The only change that occured was the forming of room 3a within room 3 (bordered by walls VII and VIII) which was annexed to object D , and on that occasion the area of structure C was reduced. Walls VII and VIII were built in random rubble of bricks bound by lime mortar. They are preserved only in the zone of the foundation, whose thickness is 47 cm (wall VII) and 60 cm (wall VIII). ${ }^{28}$

Structure D underwent certain changes. On the west side, rooms 8 and 9, that follow the row of rooms 4 and 5, were added. In room 8, a floor made of hexagonal bricks (fig. 5), set on lime mortar which was laid on a layer of rubble made of brick fragments, was discovered. In the rubble, fragments of painted wall mortar were discovered, which are presumed to have been brought together with the rubble used for the levelling. The

[^7]s,
area on which room 8 was formed used to be outside of the structure in the previous construction phase, and there are no indications that it was painted, so the fragments of painted wall plaster were most likely brought together with the rubble from some other building. Room 9 enqueues on room 8 on the north side. Only wall XIII from this room was preserved. The west part of the room was not discovered. The walls of this construction phase of structure D were built like the walls of the previous construction phase, in opus spicatum technique. ${ }^{29}$

## The fourth and final construction phase

This construction phase differs from the previous ones by the manner of wall construction, but also by the stratigraphic relation of the walls and floors which are 50 to 70 cm above the foundations and floors of the earlier phases. In this phase, the street loses its function, and the peristyle of structure B gets side walls (plan 10).

Structure A expands to the west in this phase. Walls III, IX and XXX were formed, which, together with wall Xa , form a larger room, 14, which includes rooms 1 and 2 of the second construction phase. On some places in this room, a floor made of bricks on the surface of lime mortar was preserved. Walls III, IX and XXX are made of cut rubble in oblique courses bound by whitish lime mortar. ${ }^{30}$

On the west side of Structure B, room 7 with a hypocaust was annexed. At the same time, it closes the street which was located between structure B and the other 3 structures on the west side. In room 7, a floor made of lime mortar and crushed brick was discovered, and on it, several preserved pilae stacks of the hypocaust, made of brick whose dimensions are $25 \times 25 \times 5 \mathrm{~cm}$. Room 7 is connected to structure B with its wall II, which extends to the east, across walls IV and V. These walls, II, IV, V and VII, which form a small and not very functional space are preserved only in the foundation zone. They were built in the same manner as the walls of the older construction phase and the average thickness of walls is $30-44 \mathrm{~cm}$. Here, the only exception is wall V whose thickness is 96 cm . The interior of rooms 5 and 6 is very poorly preserved. Floors are made of lime mortar and crushed brick which are laid over the floors of the older phase of construction, on a rubble layer of about 70 cm . In the west part of the room, canal K-K was discovered, which is U-shaped and has the pilae stacks of the hypocaust construction by wall VII. These pilae stacks probably had a constructive role of supporting the floor bricks above the canal by the walls because there was no socle here. In the west part of room 6 , north-south oriented canal H-H was discovered, while room 6a in the northwest part was completely eliminated. Both rooms were probably connected to the main street, which is indicated by the remains of the floors made in the same way and at the same elevation, i.e. the same ground level. To the east of structure B, outside of the capacity
${ }^{29}$ Taken from the field diaries.
${ }^{30}$ Milojević 1974, 18.
of the original structure, 3 rooms were annexed in this phase- rooms 8, 9, 10, 11 and 12, separated from one another by partition walls. All these rooms remained uncovered on the east side, and partially uncovered on the south side. In room 8, a hypocaust with a well preserved lower floor (which served as a base for pilae stacks of the hypocaust construction) and the upper floor (used for walking) was discovered. The floors were made of lime mortar with the addition of crushed brick. The difference between floor levels is about 70 cm . In the rest of the rooms, no floors were found. The walls of this phase were built of stone and brick in irregular courses and bound by lime mortar in the foundation zone. The upper part was built of bricks in regular courses. Sporadically, remains of wall painting appear. The thickness of the walls is about 45 cm . Walls XVII and XVIII differ, since their thickness is somewhat smaller- $30 \mathrm{~cm} .{ }^{31}$

Structure D changes its appearance on the west side. Rooms 8 and 9 are pulled down, and a row of columns (VIII a, b, c, d) is erected, north-south oriented and 2.5 m far from the structure. The columns are built of bricks and lime mortar at the distance of about 3.5 m from one another (fig. 6). According to J. Milojević, in this phase, after the erection of the columns, these same columns were pulled down and room 10 was formed. We are of the opinion that in this phase, construction of room 10 occured first, and shortly afterwards, it was pulled down, after which a row of columns was erected and a porch tiled with bricks constructed (fig. 7). The walls of room 10 are built in the same manner as the older walls of structure D which used to belong to rooms 8 and 9 , so they can be connected to the close construction phase, and they probably appeared immediately one after another. We came to the conclusion that the row of columns is the last phase of corrections made on structure D. The assumption is that in this last phase, an object was formed, with an inner courtyard, on the west side of the site that includes objects A, C and D.

By analyzing the documentation, we come to the conclusion that the mosaics were found only in rooms 3 and 4 of the second construction phase of structure B. In both rooms, they are preserved only on small areas, so it was impossible to determine the motifs and ornaments. The photo-documentation was produced in black-and-white technique, so from it, it cannot be determined which colors were used, and the motifs are also undiscernible (fig. 8). The field diaries mention that segments of a border in the form of rectangular cogs were observed, made of blue stone tiles on a white base. This description is not enough for the reconstruction, since there are no drawings or dimensions of the borders. It is also mentioned that in room 4, a larger area covered with mosaic was found. In the northeast part, a surface of $3.2 \times 1.15 \mathrm{~m}$ was discovered, and in the north part, a surface of $6.2 \times 2.8 \mathrm{~m}$. Various ornamental motifs were placed inside square fields. In one field, there was a motif of Solomon's knot. The square fields were separated from one another by a double braid or a meander. The mosaic was made of stone tiles of poor quality in red, yellow and black color, on a whitish base, which is set on the surface of lime mortar with crushed brick. For this mosaic, too, there is
${ }^{31}$ Milojević 1974, 19.

no drawing or a photograph according to which it could be reconstructed. Everything remains in the domain of speculation. The rest of the floors in structures A, B, C and D were simple, made of a coat of lime mortar with crushed brick, or just tiled with entire bricks.

Wall painting was an integral part of wall coating of objects A and B in the second phase of construction, but nothing was preserved in situ. It is assumed, according to the motifs and locations of the finds, that only walls were painted, and ceilings were without decoration. The fragments of wall painting were mostly found in the rubble that was used as a levelling layer of the younger floors formed over the earlier floors. On certain places, fragments were found by the walls, but since there is no specification, it is unknown which motifs they were and by which walls they were found. It is known that a small portion of fragments was found in object A by the wall that separates rooms 2 and 3. It is recorded that on the fragments, motifs of the imitation of marble plates (probably from the lower zone of the wall) are observed, then the vegetative and geometric motifs painted in blue, yellow, orange, red, green and black color on a light yellow or whitish base. On some fragments, there are traces of additional painting. The rest of the discovered wall paintings are connected to the rooms of structure B. Here, there is a larger quantity of fragments, especially in room 1, while in rooms 3 and 4 the number of finds is significantly smaller. The discovered fragments of wall painting are adorned by an exceptional spectrum of colors and motifs. The motifs of marble imitation stand out, which probably used to belong to the lower zone of the walls, as well as various figural, vegetative and animal representations of other colors. The socles with representations of swampland birds and plants, as well as the figural representations of Muses above them stand out by their exceptional decoration. The characteristic of these compositions is that they are made with great precision and attention to detail, and it is assumed that they occupied the central part of the room. The rest of the wall surfaces were covered by various vegetative and animal motifs like, for example, floral candelabra, representations of trees, etc. inside the fields of other colors. Also, the report mentions the fragments of borders that were located around the doors and windows, but unfortunately were not found in the depot of the Museum of Srem (plan 11). The next chapter will provide further analysis of the wall paintings themselves.

On site 21, only one small, damaged marble sculpture of Asclepius was found, as well as a part of the decorative architectural ornaments. This includes bases, parts of columns, capitals, parts of garlands and also smaller, whitish or greenish marble panels for overlaying (mostly the integral components of architectural plastic which constituted the decoration of the object) which are very poorly documented. According to the finds, structure A had ample decoration. In the inner courtyard 7, on the west side, a couple of limestone columns were discovered, of 27 cm diameter and smooth surface without borders. There was also a smaller base, a part of a marble capital with acanthus leaves and stylyzed animal heads at the corners, unfortunately without a drawing. To the south of this room, parts of stone garlands in the south profile were registered. In room 4, parts
of garlands were found in the rubble between the two floors. Four fragments of a stucco garland, decorated with ionic raking cyma, astragals, ovoid ornament and darts were also found here. In the south part of the room, a part of a limestone garland with ionic cymas, acanthus leaves and astragals was found. This clearly leads to the conclusion that the roof of the porch of courtyard 7 was supported by limestone columns which had their bases set on a low parapet wall XVII, which represented a platform. The rest of the decorative architectural plastic probably used to be located inside structure A, where it adorned the walls. The only exception is a marble capital with acanthus leaves, for which we cannot determine the primary location and place of origin. Fragments of decorations, found on the area of structure B, are concentrated mainly in the north part, more specifically in front of the structure where there used to be a peristyle. Here, two white marble capitals were found, with volute and heart-shaped ornaments and the ornament of acanthus leaves, as well as the base discovered in situ. On the same area, the fragments of a smaller column made of white marble were found ( $\mathrm{R}=25 \mathrm{~cm}$ ), of smooth surface, as well as several marble panels of whitish and green color, which probably used to belong to the socle zone. A couple of fragmens of these panels was also found inside structure B itself.

The more detailed analyses of the architecture and ideal reconstructions refer to the second construction phase which is, at the same time, the most important one in terms of construction, function and decoration at this site.

Considering the time of appearance, functioning, existence and expansion of this complex, it is clear that it is a group of structures of public- residential character which came to existence in the period of the expansion of Sirmium to the north and erection of the northern city rampart by the end of 1 st - beginning of 2 nd century. The main references for determining its positioning and forming were, primarily, the northern city rampart, a smaller town square, near the rampart, and the street which later loses its original function. Judging by the orientation of the square and the street (the northsouth direction is observed), the orientations of the objects towards the communications, which in turn determined the position and spatial orientation of the very objects, as well as by the relationships among the constructed structures, it is clear that this complex was completely urbanized. Also, the differences in the lavishness of ornaments and indoor decoration demonstrate the importance of the objects, their use or perhaps the economic power of their owners.

Structure A, according to its form, dimensions and spatial organization, represented a ground level residential object which also contained the luxurious private thermae. The entrance was laterally positioned, i.e. it was on the north side. The building was entered through lobby 5 (vestibulum) from which the other residential rooms and thermae were accessed. Thermae are generally comprised of warm rooms heated by the hypocaust system whose remains were found inside the structure (prefurnium and pilae stacks which supported the construction of the upper floor surface). By the existence of the remains of the hypocaust, we conclude that the object could have been used throughout
s,
the year. The thermae run longitudinally, four rooms comprise them-1,2,3 and 4, and prefurnium 6, and they occupy the northwest part of the structure. The entrance was through room 4, which probably used to be a changing room (apoditerium), from which room 2 was entered. Room 2 (tepidarium) was the central room of the thermae, decorated with wall paintings (its east wall), and from it, room 1 with the exedra (laconicum) and room 3 (caldarium) were entered. In the rooms which we suppose had served as thermae there are no discovered remains of a pool, ${ }^{32}$ i.e. a built-in hot tub, so it is supposed that wooden tubs were used for bathing. Room 3 was most likely used for this purpose. It can also be assumed, though it is less likely, that these rooms were residential, and not used as a bath, as mentioned above.

The east part of structure A occupies a row of rooms 8, 9 and 10, which were residential, and probably heated by the canals in the floor through which hot air circulated. Taking the Pompeian houses as analogies, we conclude that most of these rooms had no windows and that light only entered them through the doors of the rooms facing the inner courtyard or a corridor.

The southwest part of the building, as mentioned above, served the purpose of an inner courtyard with a covered porch. The wooden roof construction of the porch was supported by the carved limestone columns with smooth surfaces and ornamented bases and capitals which were placed on a low parapet wall. The garden was most likely not tiled, i.e. nothing that could be characterized as a floor or floor substruction was found. According to the construction layout, spatial organization and dimensions, certain units can be distinguished. These units also determine the construction units of the roof. The roofs and roof constructions are, according to Vitruvius, predominantly made of wood, i.e. wooden beams of a larger cross section ( $\sim 15 \times 15 \mathrm{~cm}$ and larger) in the system of tie-beam truss, and they could bridge larger distances ${ }^{33}$. Since the area of the Sava river basin has excellent conditions for the growth of pedunculate oak (cuerqus robur), which is exceptionally firm and durable, lumber was abundant. The roof covering consisted of tegulae and imbrices, whose fragmens are found in large quantities. According to these characteristics and tenets, it is possible to make an ideal reconstruction of the structure (figure 9).

Structure B, located in the east part of the site by the square, represents the largest structure of this complex. It consists of three parts- the first, entrance part with a lobby through which two lateral spaces were entered. The east lateral part consists of rooms 3 and 4 , while room 1 and a smaller room 6a comprise the west part. The purpose of room 1, which was divided from the lobby by columns, is problematic in itself. It probably served as a space for public meetings, while rooms 3 and 4 were meant for the administration (officium), but they could have also had another purpose. Taking into account its size, position in relation to the square and the street, spatial organization,

[^8]the size of rooms, rich wall decoration and the mosaic floors, we come to the conclusion that the structure had a public character. The object was oriented towards the square, and on that side, there was a 3 m deep peristyle through which the object was entered. Such orientation of the entrance (from the narrower side of the structure), the porch and the layout of the indoor spaces suggest that it might have been a civilian basilica that was used for public events. If we compare the ratios of the dimensions of Basilica of Constantine in Rome and structure B, we will notice that they are strikingly similar, and come to 1.4 i 1.34. Vitruvius here suggests that the ratios of the longer and shorter side of the base range from $1 / 2$ to $1 / 3^{34}$, which in this case matches completely, and in the case of our structure comes to $1 / 2.5$. This is, of course, in the domain of speculation, and represents one of the possible interpretations, since it is a peripheral position in the urban structure. The construction layout of the walls determines the constructional solution of the roof structure which was wooden in this case, probably double-pitched with the ridge along the longer axis of the building. The roof construction, trusses and supports in the system of tie-beam truss were wooden and had a larger cross section because of the great distance between the supporting walls. On certain places, the total distance can only be bridged by extending the roof trusses (by the system of overlapping) on the points of support. Judging by the large number of fragments, the roof was covered by tegulae and imbrices. The porch had, on the north side of the structure towards the square, marble columns with smooth surfaces with the belonging capitals with volutes and bases, of which one was found in situ. The roof construction of the porch was wooden, made of trusses and supports in the system of tie-beam truss and it was supported by marble columns. It was covered, like the other objects, with roof tiles - tegulae and imbrices. On the basis of these tenets and proportions we can develop an ideal reconstruction of this building (fig. 9a).

Structures C and D are modest residential units that were not richly decorated and whose residential function had not been changed throughout the existence of the structures. There is an assumption, as it was already mentioned, that structure C used to have an upper storey construction (the upper part with a „,bondruck" system). Its simple base of central orientation and the position in relation to the neighboring objects lead to the conclusion that the roof was double-pitched with the ridge across the longer axis of the object. The wooden roof construction of the porch on the west side was supported by the built columns (fig. 9b). Structure D has a somewhat uneven base. The exedra on the northeast and the room that would follow it in terms of function and construction, and which has not been discovered, represent a divergence from the standard rectangular base. Also, room 6, by its size and the distance between the walls, makes us doubt that this space was covered. That is to say, this distance requires wooden beams of large cross section and length, but also the more massive walls. In room 6, on the left side, there is a construction that resembles an impluvium? so the assumption that this was a courtyard is sustainable to a certain degree. In that case, a covered porch supported by wooden

pillars would have to exist on the east side of room 6, which would connect rooms 4, 5 and 7. If we take this assumption as true, then the roof would have to be extremely elaborate, especially in the segment of the connection of the roof of the apse. Therefore, we will assume that room 6 was covered nevertheless, so that the roof of the structure was formed as double-pitched, with the north-south oriented ridge, and the roof of the apse was formed as a semi-cone or as an extension of the main roof surface (fig. 9c).

The urbanistic aspect of the whole complex suggests that the square was formed as the main determinant which dictated the position and orientation of structure D and also structure B, and the street determined the position and orientation of structures C, D and A, and to a certain degree the shape and form of structure B. The street, north-south aligned, is of impressive width $(6.30 \mathrm{~m})$. It used to be paved with a layer of mortar that was destroyed over the course of time. In the later phases, the street loses its importance and is partitioned, so the question arises as to its importance in the phase of the emergence of these structures. The square is tiled with brick and stone fragments, the approximate dimensions of this tiled area being $10 \times 12 \mathrm{~m}$, while the area of the whole square is far larger, about $35 \times 32 \mathrm{~m}$, which shows that this was a larger area of public importance. On the east side of the square, the existence of a structure with a porch (whose bases were discovered) can be assumed, while there is a possibility that on the north side the area was open towards the rampart or that there was also an object located there, although we do not have any substantial proof of that. Also, for understanding of the bigger picture, we should take into account the position of the northern rampart, the route of the aquaduct and the position of the north Sirmium gate and thus the route of the main cuty roads.

Structures A, B and C represent a very common type of buildings that is encountered in almost all provinces of the Empire over a longer period of time. There are numerous analogies in Pannonia and Germania. ${ }^{35}$ These structures, although they underwent numerous changes and partitions in the course of time, represent a reflection of the art of ancient Sirmium. In the period of their emergence (2nd century), they certainly had a splendid appearance, and therefore, a certain importance, too. The rich wall painting, mosaic floors, marble columns, capitals, marble panels, bases and garlands, as well as the position of the very objects around the city square, indicate that this was an upscale quarter, although it is located on the very verge of the city (fig. 9d).
${ }^{35}$ Thomas 1980.


Plan 1 - Site 21 in relation to the northern rampart and entire Sirmium with the position of site 21 (in the upper left corner)


Plan 2 - Site 21 with overlapping phases


Plan 3 - The first construction phase


Plan 4 - The second construction phase


Plan 5 - Schematic plan of structure A



Plan 7 - Schematic plan of structure C


Plan 8 - Schematic plan of structure D


Plan 9 - The third construction phase


Plan 10 - The fourth construction phase


Plan 11 - The position of walls decorated with frescoes


Fig. 1 - A photograph from the documentation - the courtyard


Fig. 3 - A photograph from the documentation - canal L-L


Fig. 2 - A photograph from the documentation the apse


Fig. 4 - A photograph from the documentation - the corridor of structure B

Fig. 5 - A photograph from the documentation - hexagonal bricks on the floor of room 8 of object D


Fig. 6 - A photograph from the documentation - columns of the porch of structure D


Fig. 7 - A photograph from the
documentation-the tilework on the porch of structure D

Fig. 8 - A photograph from the documentation - the mosaics



Fig. 9 - 3D image of structure A


Fig. $9 \mathrm{a}-3 \mathrm{D}$ image of structure $B$


Fig. $9 \mathrm{~b}-3 \mathrm{D}$ image of structure C


Fig. $9 \mathrm{c}-3 \mathrm{D}$ image of structure D


Fig. $9 \mathrm{~d}-3 \mathrm{D}$ image of the entire complex

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1. Rogić, Dragana, 1978- [аутор] [фотограф]
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[^0]:    ${ }^{1}$ The texts can be found in the magazine Arheološki pregled, from issue 3 to issue 6.
    ${ }^{2}$ On this occasion, parts of documentation from the archaeological survey on site 21 which nowadays exist in the Institute of Archaeology, the Provincial Institute for the Protection of Cultural Monuments in Novi Sad and the Museum of Srem in Sremska Mitrovica were collected and analyzed.
    ${ }^{3}$ Unpublished MA Thesis ,,Stambena četvrt u severnom delu antičkog Sirmijuma", Faculty of Philosophy, Belgrade 1975.
    ${ }^{4}$ Unpublished PhD Thessis „Razvoj arhitekture i urbanizma Sirmijuma I-IV veka". Phaculty of Architecture, Belgrade Universuty, 1998.
    ${ }^{5}$ Popović 1963, 77.

[^1]:    ${ }^{6}$ The term apse is related to the sacral objects in professional literature, chiefly to the altar area of Christian churches, while the term exedra is related to the profane objects in the Roman period but also later on.
    ${ }^{7}$ Popović 1963, 70.
    ${ }^{8}$ Ibid. 70.
    ${ }^{9}$ Mirković 1974, 75.
    ${ }^{10}$ Jeremić 1998, 223.
    ${ }^{11}$ Simovljević 1964, 80.
    ${ }^{12}$ Milojević 1974, 4.

[^2]:    ${ }^{13}$ The data from the documentation.
    ${ }^{14}$ Milojević 1974, 6.

[^3]:    ${ }^{15}$ Milojević 1974, 8.
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[^4]:    ${ }^{18}$ Milojević 1974, 10.
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[^5]:    ${ }^{20}$ Ibid. 11.
    ${ }^{21}$ Milojević 1974, 11.
    ${ }^{22}$ Ibid. 12.

[^6]:    ${ }^{24}$ Milojević 1974, 13.
    ${ }^{25}$ Milojević 1974, 15.

[^7]:    ${ }^{26}$ Later on, a whole palette of colors and shades on the fragments of frescoes was determined by reviewing the material from the museum depot of the Museum of Srem.
    ${ }^{27}$ Milojević, 1974, 16.
    ${ }^{28}$ Ibid. 17.

[^8]:    ${ }^{32}$ The pipelines for water supply were also not found, but the immediate vicinity of the aqueduct allowed for the unimpeded functioning of the baths, i.e. the water supply
    ${ }^{33}$ Vitruvije 1951.

