The historical topography of a provincial Byzantine city in Thrace:

Vize (Bizye)

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To my family

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ABBREVIATIONS

GE **:** Google Earth
GM **:** Google Maps
IGBulg : Inscriptiones graecae in Bulgaria repertae
NE **:** Northeast
NW **:** Northwest
SE **:** Southeast
SEG : Supplementum Epigraphicum Graecum
SW **:** Southwest

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THE HISTORICAL TOPOGRAPHY OF A PROVINCIAL BYZANTINE CITY IN THRACE WITH SPECIAL ATTENTION TO THE FORTIFICATIONS: VIZE (BIZYE)

SUMMARY

This is a topographical study of an ancient settlement in southern Thrace. Located in the provincial district of the city Kırklareli in Turkey today, Vize (Bizye) was the residential capital of the Thracian kings from the 3rd century BC on, a prosperous Roman city under Trajan and Hadrian and a Late Antique and early Christian city with fortifications repaired and modified throughout the following centuries of the Byzantine period. Becoming a garrison regarding the Bulgarian threat especially from the 9th century on, the city survived, as proved by the 9th century church of Hagia Sophia. The city held strong in the years of intensive attacks in the 13th –14th centuries, until it was taken by the Ottomans in 1453. The Ottoman settlement lay mainly on the old Byzantine topography and extended with residential quarters on a small scale. After the Russian-Ottoman and Balkan Wars of the 19th and the early 20th centuries, the modern settlement of the Turkish Republic started developing towards the south on the plain, leaving the old acropolis to the small local houses and the ghosts of the Roman and Byzantine monuments.

Although the archaeological significance of the site was known already at the beginning of the 20th century, neither a well-documented systematic excavation nor a comprehensive topographical study of the acropolis was made. Hitting the road with this motivation, we have undertaken a topographical survey throughout two summer campaigns in 2011 and 2012 on the Acropolis of Vize, which is the core of the settlement from the Roman until the end of the Ottoman period. The main purpose of the survey was primarily to document the fortifications in detail in order to produce a digital topographical plan. Other monuments on site have also been measured and inserted into this plan.

This thesis discusses the results gained through the comprehensive analysis of the fortifications — their material, masonry and typology of the structural elements comparing with parallel examples from particularly the same administrative territory of Thrace. The presumable circuit of the walls half of which is missing and the extension and the changes of the urban structure are discussed while considering the construction periods of the walls together with the other remaining monuments and archaeological rests on site.

DIE HISTORISCHE TOPOGRAPHIE EINER BYZANTINISCHEN PROVINZSTADT IN THRAKIEN VIZE (BIZYE)

ZUSAMMENFASSUNG

Die vorliegende topographische Studie befasst sich mit einer antiken Siedlung im südlichen Thrakien. Vize (Bizye), das heute in der türkischen Provinz Kırklareli liegt, diente seit dem 3. Jahrhundert v. Chr. den Thrakerkönigen als Residenz. In römischer Zeit erlebte die Stadt unter den Kaisern Trajan und Hadrian eine Blüte. In der Spätantike wurde die Stadt ummauert. Diese Stadtbefestigung wurde in den darauffolgenden Jahrhunderten mehrfach repariert und verändert. Angesichts der bulgarischen Bedrohung, sprich besonders seit dem 9. Jahrhundert n. Chr. war in Vize eine byzantinische Garnison stationiert. Dieser Umstand sicherte auch das Fortbestehen der Siedlung, was wiederum durch die Errichtung der Sophienkirche im 9. Jahrhundert bestätigt wird. Die Siedlung überstand auch die Zeiten schwerer Angriffe im 13. und 14. Jahrhundert bis sie schließlich 1453 durch die Osmanen eingenommen wurde. Die osmanische Siedlung überlagert weitgehend den byzantinischen Siedlungsbereich und erweiterte diesen um Viertel, die von einfacher Wohnbebauung gekennzeichnet waren. Nach dem Krieg zwischen Russland und osmanischen Reich im 19. bzw. dem Balkankrieg im frühen 20. Jahrhundert entwickelte sich eine moderne türkische Siedlung in der Ebene südlich des historischen Siedlungshügels. Die Akropolis von Vize mit ihren römischen und byzantinischen Baudenkmälern überließ man dabei der lokalen Bevölkerung, die dort einfache Häuser errichteten.

Obwohl die archäologische Bedeutung der Stätte bereits zu Beginn des 20. Jahrhunderts erkannt worden war, wurde sie weder systematisch ergraben und dokumentiert noch war der Bereich der Akropolis bislang Gegenstand einer umfassenden topographischen Studie. Um diese Forschungslücke zu schließen, wurde in den Jahren 2011 und 2012 auf dem Burgberg von Vize, der mit dem Siedlungskern von römischer bis osmanischer Zeit nahezu identisch ist, ein topographischer Survey durchgeführt. Hauptziel des Surveys war eine detaillierte Dokumentation der Befestigungsanlage um darauf aufbauend einen digitalen topographischen Plan erstellen zu können. Dabei wurden auch weitere Bauten im Surveybereich vermessen und in den Plan eingefügt.

Die vorliegende Dissertation legt die Ergebnisse der umfassenden bauhistorischen Untersuchung der Befestigungsanlagen vor, wobei ein besonderes Augenmerk auf das verwendete Baumaterial, die Beschaffenheit des Mauerwerks und die typologische Analyse der Bauelemente gelegt wird. Hierfür werden die Baudenkmäler mit weiteren Verteidigungsanlagen verglichen, die hauptsächlich im selben Verwaltungsbezirk, also in Thrakien, liegen. Der mutmaßliche Verlauf der nur ungefähr zur Hälfte erhaltenen Akropolismauer werden ebenso diskutiert, wie die Erweiterung und die Veränderung der Siedlungsstruktur. Dabei werden die einzelnen Bauabschnitte der Befestigungsmauer in Bezug zu den übrigen Bauwerken und archäologischen Zeugnissen vor Ort gesetzt.

1. INTRODUCTION

"…beneath the stones we find the secret of the springs...

Our life is brief: We are always referring to centuries, which precede or follow our own as if they were totally alien to us, but I have come close to them in my play with stone. These walls which I reinforce are still warm from contact with vanished bodies; hands yet unborn will caress the shafts of these columns. The more I have meditated upon my death, and especially upon that of another, the more I have tried to add our lives these virtually indestructible extensions …"

Marguerite Yourcenar — Memoirs of Hadrian

A collaboration with the earth, the modification of landscapes, and the rebuilding and resettling of cities, as Hadrian, the protagonist of M. Yourcenar's novel, expresses honestly about his reconstructions, are obvious efforts to penetrate "the spirit of the time gone by" and to carry it a long way into the future. Human beings leave marks on a space, and although peoples stop by for a while and then leave, a city holds the traces, one above the other, of those fleeting lives.

Cities, which have been housing inhabitants since prehistoric times and have been rebuilt again and again by different civilisations, represent a complicated phenomenon of urban studies which necessitates a multilayered field of interdisciplinary research. Some geographies, owing to either natural (e.g., the location on a fruitful land with water sources, naturally defended topography, etc.) or artificial conditions (e.g., the already-existing infrastructure of older cities, militarily or commercially strategic spots, sacred topographies, etc.), bear the privilege of continuous urban settlement.

This phenomenon applies to the ancient city of Bizye, modern Vize, which lies in eastern Thrace, in today's Turkey. Having taken the inspiration from this continuity, the work presented here is a humble but optimistic attempt to ask questions about the urban topography of Vize and search for the possible answers through the investigation of the historical monuments at the site. This investigation focuses on the fortifications, which are the major elements of a historical urban structure and

development. Although they are not completely preserved, after a thorough documentation, the fortifications of Vize reveal different phases, which refer to changes in different periods and provide significant information about the Roman, Late Antique and Byzantine boundaries of the city. Since the other few monuments are only fragmentarily preserved and their topographical context cannot be established without excavation, the military architecture of Vize stands as a stable base from which to discuss the historical topography.

Thrace, the vast territory of the Thracian tribes, was unknown until the Greek colonisation started expanding along the Thracian coast in the second half of the 7th century. The settlements in Thrace went through a long period of changes to become urban entities. Thanks to recent archaeological investigations, some Hellenistic Thracian settlements, most of which are located in modern Bulgaria, were discovered. Belonging neither completely to the Greeks nor the Romans, the eccentric Thracian kingdoms are not believed to have established an urban structure almost until the formation of the Roman Province Thracia in 46 AD. On the other hand, it is essential to assume a certain urban character in the places where the Roman emperors started their rebuilding.

Research in Vize must be viewed in the broader chronological and geographical dynamics since Vize was a very important part of Thracian history and played a significant role during the last Thracian Kingdom of Astai, when the territory had already started to overlap with Roman administrative system and experienced urban development. The geographical framework of the former Roman province of Thracia, and later of Europa, within the administrative system of the Diocese of Thrace will be considered. The chronological frame based on the archaeological data for the fortifications and urbanisation in Vize is known from the Roman period until the Ottoman period.

In the following pages of the first chapter, after a short introduction about its location, a short research history of Vize is given in historical, epigraphic and archaeological frames. The second chapter deals with the history of Vize in five subsections, which refer to the periods with significant administrative, military and socio-cultural changes that had direct influences on the urban topography. In the third chapter, the monumental evidence of the site is introduced; after a

topographical overview and the description of the surveys undertaken in the years 2011 and 2012, the detailed documentation of the walls is given according to the construction phases. In the same chapter, the results of the mortar analysis from the walls and some buildings are given as a method of dating. The fourth chapter is devoted to the discussion of the urban topographical similarities between Vize and the other cities in the Balkans in three significant periods: Thracian, Roman and Byzantine.

1.1 The location and the geography of Vize

The biggest plain in the Balkan Peninsula, the Thracian plain, is surrounded by the lower hills of the Balkan Mountains on the north and the Rhodope Mountains on the south. The Maritza River flows along the plain in a NE–SW direction, parallel to the most important Roman military road, the Via Traiana or via militaris, which led from Singidunum to Constantinople through Naissius, Serdica, Philippopolis, Adrianople, Arcadiopolis and Heraclea. Vize lay ca. 45 km north of this road, on a secondary ancient road connecting Quaranta Chiese to Constantinople (Külzer, 2011, p. 181–184). Surrounded by the fruitful fields of Ergene Plain and water sources, it is located on the southern skirts of the Strandzha Mountains, which are the last closest range of Thracian mountains in the hinterland of Constantinople. Today Vize is a provincial district of the city Kırklareli in Turkey. Its distance to Istanbul is 120 km and to Black Sea is ca. 28 km (Figure 1.1).

Figure 1.1 : The location of Vize and the Balkan Peninsula, after Venedikov (1977).

1.2 Research History

Although we find historical information about Vize beginning from the ancient sources, the acropolis of Vize has never been the subject of extensive scientific archaeological research. Its Thracian background and Roman legacy were already introduced to the scholars of the 19th century with epigraphic evidence discovered by travellers and researchers. Despite the large number of spolia, which were dispersed on the field or built in the historical or modern buildings, no interest was given to the Early Christian and Middle Age topography. The first excavations by Turkish archaeologists in the first half of the 20th century focused on the Thracian tumuli. Although they also carried out some excavations on the acropolis of Vize, they were not published in detail.

The later excavations carried out by Turkish researchers in the Roman Theatre and Hagia Sophia in the 1990s[1] did not draw any attention, particularly because nothing significant has been published from those studies. Furthermore, large amount of archaeological evidence were lost due to the poor documentation. The most important monument of the middle ages in Vize, the church of Hagia Sophia, suffered from inappropriate and incomplete restorations starting in the 1980s. The extensive survey of Munich University and Cleveland Museum of Art in the years 2003 and 2004 produced accurate plans and elevations of the church (Bauer and Klein, 2004, pp. 409–439). Unfortunately, no further campaign could be undertaken due to bureaucratic obstacles and the restoration of the building by Regional Directorates of Foundations of Edirne.

1.2.1 Early travellers' accounts and local historians

The first modern accounts about Vize belong mostly to the Greeks who were travellers, state officers or locals from the region. These works, published in Greek, date to the second half of 19th century, and are epigraphical and archaeological documentations from the site, historical accounts of the region and descriptive texts about the topography. Although these texts are far from being accurate scientific documents, they still provide important evidence about the topography and the monuments of the city. The earliest travellers in the region who left us an album of

[1] See Chp. 1.2.3, p. 21.

drawings from Vize and environs were French. The very first images from Vize appear in the album of Sayger and Desarnod (1834), who made a trip to the lands of Ottomans by the order of the Russian emperor Nicolas I (1825–1855) and documented different places by drawings. In these drawings, we find a view of the citadel showing the gate, the round tower and the collapsed wall parts as exactly how it is today (Figure 1.2).

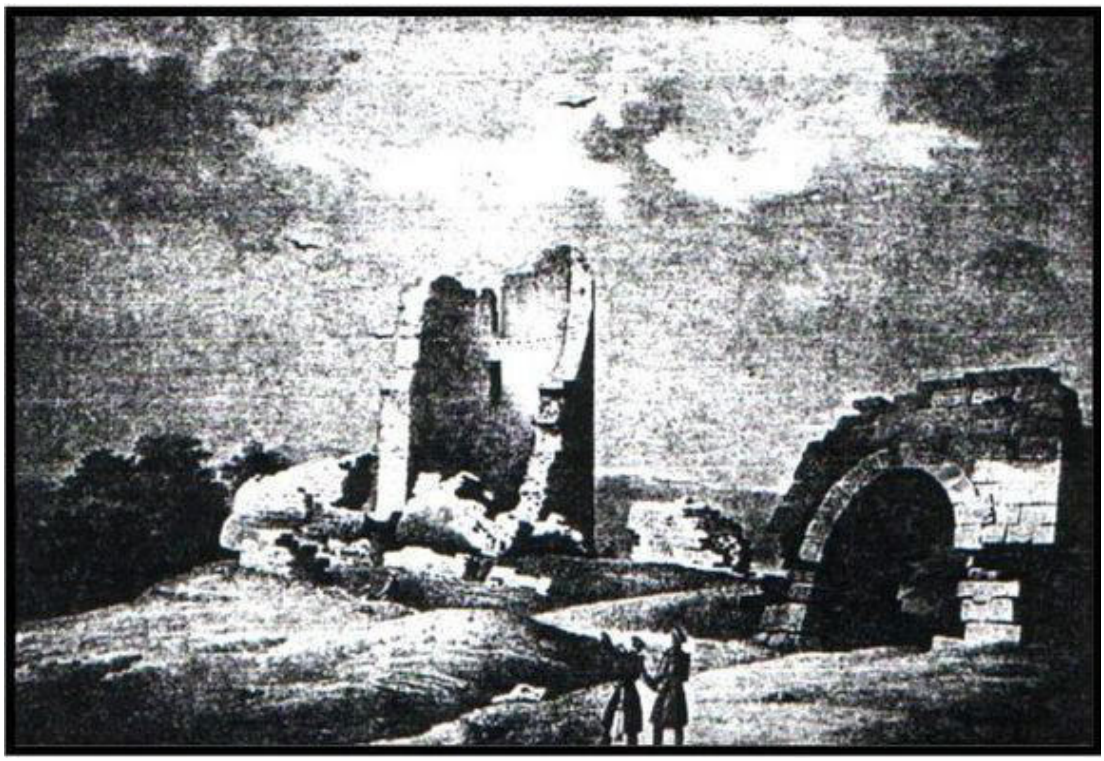


Figure 1.2 : Citadel of Vize, after C.Sayger and A. Desarnod (1834)

With epigraphical documentation attempts in the 19th century, the interest in Vize increased. The first material evidence of Thracian legacy of the city was revealed by an inscription published in 1855 in a book by Alexandros Rizos Rankabēs, who was the consultant of the Internal Affairs Ministry and the secretary of the Society of Archaeology in Athens. According to his account, the inscription, which was found built in the wall of a tower in Vize, was about the Thracian King Cotys (1st century BC), the Sapaean/Roman client king, who was commemorating his parents (Rankabēs, 1855, p. 784).

The first extensive work, including historical, epigraphical and archaeological information about Vize, was written by Melissinos Hristodólos (1881, pp. 35–42), who was not a researcher but, as an inhabitant of Thrace, shared his own experiences

and made amateur research about the history, demography, education, economy and geography of Kırklareli and the environs. This book is important in the sense that it introduced new epigraphical material after Rankabēs. The work includes the short history of Vize, the inscriptions he saw, and the descriptions of some statues and the churches at the site. He is also the first modern writer who mentioned the church of Hagia Sophia in a book (1881, p. 40). The other four churches, which are unknown to us today are Church of the Mother of God, Hagias Paraskhevis (Παρασχευης), a church on Çömlekçitepe and another one between the square called Platza[2] and Kastron[3] (1881, p. 40). He gives no details about the buildings in the text, so it is not clearly indicated if he saw the churches/remains of the churches or if he narrates the older information (Figure 1.3).

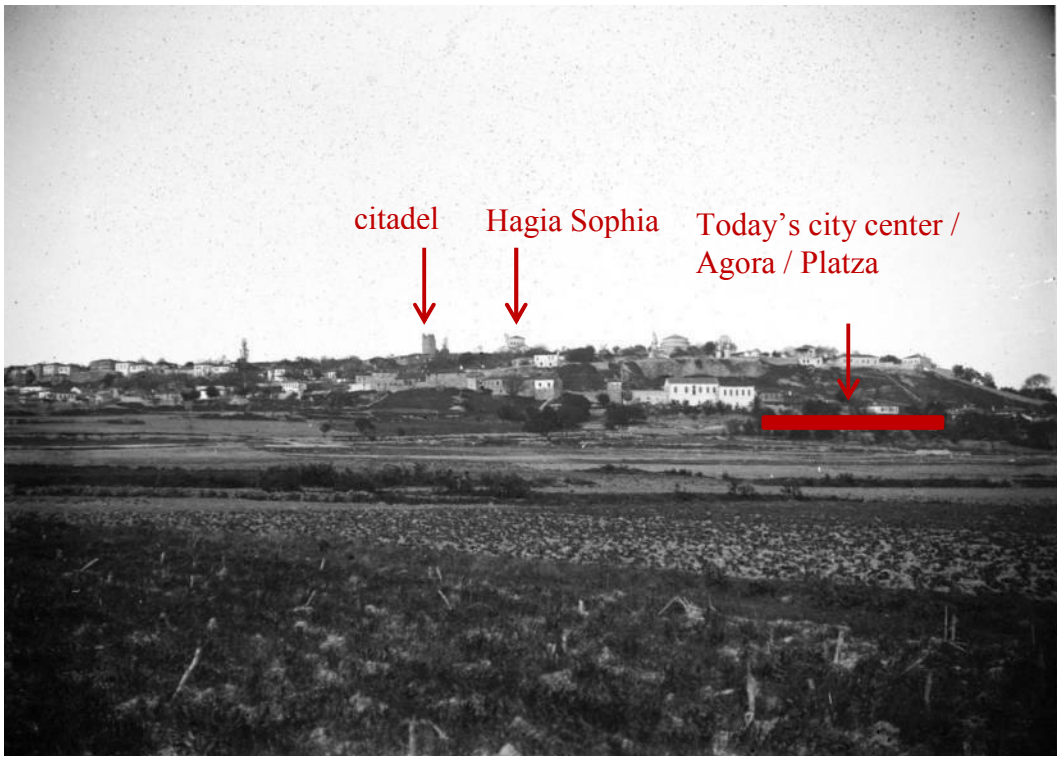


Figure 1.3 : View of Vize from west, Gipson archive, Sofia, (1912–13).

The school teacher Savvas Ioannidis[4] (1954, pp. 5–19), gave a detailed historical and geographical information about Vize in his article that was written in 1895 but was not published until 1954. He was the first to document the Rhoimetalkes inscription

[2] He indicates that the ancient Agora was in Platza, where Metropolis is.
[3] Kastron refers to the acropolis.
[4] For his biography:
http://constantinople.ehw.gr/Forms/fLemmaBodyExtended.aspx?lemmaid=11736&boithimata_State=&kefalaia_State=#chapter_1

(1954, pp. 10–11), a significant evidence for the Thracian Kingdom and the King Rhoimetalkes, which was first published by Dawkins and Hasluck in 1906,[5] since his publication only showed up in 1954.

His article bears scientific importance because it consists of very valuable archaeological descriptions that were not considered by any of the visitors of Vize before and after him. In his own observations about the topography of the city from the year 1895, he mentioned that the previous settlement of Vize had the ancient name of Damaton, which the locals called Kastron as well. This name is not known to us from any previous sources (1954, p. 7, 9). He described three important sites in Vize: the acropolis, the agora and Çömlekçitepe. He mentions many monuments of acropolis in the text. Although the text is not very clear regarding the locations of the monuments, like the other Greek texts from the same period, some places match with Hristodólos's text. Agora and Platza refer to the same place — where the roads cross at the centre of the settlement. It is worth considering an ancient use of that area. According to the information he gives, in the place where four streets cross in the Agora stood a temple, which was later converted into a church (1954, p. 8). In the same square, he observed many fragments of male and female statues, some of which he identified as Hera, Hermes and Artemis. He also mentions a sphinx statue, which was observed by some other researchers. Many fragments of statues were reused in the school and Metropolis building. He saw a relief icon of Hagios Georgios, which he dated to pre-iconoclastic period. Among the other spolia that he found on the site were rider reliefs, Corinthian capitals, friezes and many other architectural elements, which led him to consider the sacral and secular buildings. He described Çömlekçitepe as an archaeological site with plenty of ceramic fragments and a furnace (1954, pp. 15–16).

Ioannidis observes that the north walls of the acropolis were already demolished and the stones were reused in Lüleburgaz. He also mentioned that the acropolis gate and some towers are preserved. On the west side of the city, outside the line of the walls, he could observe two or three towers, which were used to protect the water source (1954, p. 14).

[5] See Chp. 1.2.2.

Figure 1.4 : View of Vize from west, outside of the walls, Gipson archive, Sofia (1912–13).

According to Ioannidis, the old city had three gates and many antique monuments, which had all been destroyed during the catastrophe in 1878.[6] He dates the Hagia Sophia Church to the 10th–11th centuries and assumes that the ruins on the west side of Hagia Sophia belonged to a Christ Church. It is not possible to recognise the exact location of the third church he mentions, a Hagios Ioannis. The fourth one he mentions is Hagios Nicolaos Church, located close to the Agora Gate.[7] If this church still survived at his time or if he used older information from other sources is unclear. The last church, which he described as on the east side of the walls, was already in ruins and the stone blocks were reused in some other buildings (1954, p. 14).

Ioannidis describes the Roman Theatre near the Greek cemetery, the location of which is not known today. He mentions a small excavation that was run in the theatre and that revealed the seats.[8] Beside the well-preserved statue fragments on the east side under the modern houses, underground corridors and some architectural elements were found. In his time, the Turks lived within the walls on the acropolis, whereas the Greeks lived outside (Figure 1.4) (1954, pp. 14–17).

Ioannidis introduces us briefly to the rock church and the monastery complex in Asmakaya, including a Byzantine tomb and some antique statues and reliefs that were used as spolia in some buildings (1954, p. 8). The modern buildings where

[6] It is unclear what kind of catastrophe he refers to, although the Ottoman-Russian war of 1877–78 is worth considering.
[7] It is not clear which gate he mentions.
[8] Unpublished.

they found spolia were the municipality building, the Metropolis of Vize and the school (1954, p. 15).[9]

Some of these accounts focus more on the history than the topography. The historian Savvas Lakidis (1899, pp. 101–107) gives a detailed history of Bizye and Medeia in his book. He also mentions churches, tombs, relief and statue fragments, which lay dispersed in the gardens or squares (Figure 1.5, Figure 1.6).

Figure 1.5 : A door lentil in Vize, Gipson archive, Sofia (1912–13).

Figure 1.6 : An inscription on a marmor panel in Vize, Gipson archive, Sofia (1912–13).

Georgios Lampousiades is another significant figure among the Greek researchers and travellers, especially as his records hold archaeological value. Having been the superintendent of antiquities,[10] he visited the site between the years 1920 and 1922, and his observations were published in a periodical about Thrace in 1938. Although he is the first visitor who described the walls of Vize in detail (after the Czech-Bulgarian archaeologist Karel Skorpil), he did not publish photos or sketches from the topography and the walls. Thus, it seems quite difficult to interpret his unclear and scattered descriptions with many topographical references that do not exist anymore, making it impossible to figure out the exact locations of the monuments. But he is still the first person to give a rough date for almost all of the parts of the walls and to describe most of the other important ruins with the dimensions of some structures as well. During his documentation of Hagia Sophia Church, he found an inscription, which is considered as the main epigraphic evidence for the dating of the church by researchers of Hagia Sophia thus far (Bauer and Klein, 2004, p. 415).[11]

[9] Among these monuments, only the Metropolis building can be located in the modern city centre, where the central mosque is.
[10] See Bauer and Klein, 2004, p.415.
[11] This inscription is lost today.

Lampousiades describes the walls and the acropolis as the main hill and the Byzantine kastron (1938, pp. 55, 59). He thought that the previous antique city lay on this hill and that during the Byzantine period the city spread to the west with new walls. He gave short descriptions from different phases of the walls and considered the construction technique. According to his observations, the walls that surround the acropolis date from different periods. He claims that a part of the walls was constructed of big rectangular blocks either from the Macedonian or Roman periods (1938, p. 56). He dates another section, which is built up from alternating brick courses and stone, to either the Late Antique or early Byzantine periods (1938, p. 56). He also mentions the rectangular, pentagonal and round towers, some possible gate remains, some huge Byzantine foundation walls of possible buildings and the theatre (1938, pp. 56, 58). Lampousiades dates the two round towers to the Turkish period together with another structure, which he describes to be a tower-like structure on the main part of the castle (citadel), where the mint of the Kings of Vize is located and built partially of marble spolia (1938, p. 57).[12] Among some of the other ruins and locations that are no longer present today are an aqueduct on the eastern side, which leads to a fountain used by the Turkish community, and the Greek cemetery. He also describes a cistern which is located close to the St. Nicholaos Church, which is previously mentioned by Ioannides in 1895 (1954, p. 14). The antique baths Lampousiades mentioned were also not present in his time. Unfortunately, his descriptions of locations, such as "the late Byzantine walls on the both side of the valley, on the way to Çömlektepe" are too vague to be able to figure out the structures and the locations (1938, p. 58). Finally, he describes the cave churches in Asmakaya, which is a valley on the north side of Vize (1938, p. 59).

One of the most interesting and rare archaeologic finds is an archaic kore documented by Pelekidou, who was also a superintendent of antiquities, like Lampousiades, in Thessaloniki. In his article published in 1928 (pp. 5–12), he describes this female torso, which was found in Vize and dates it to 6th century BC. This torso is the oldest preserved marble piece from Vize belonging to the Thracian period and is kept in the Archaeology Museum of Thessaloniki (Figure 1.7).

[12] Today what we find on that spot are a tower, a gate and some unidentified fragments.

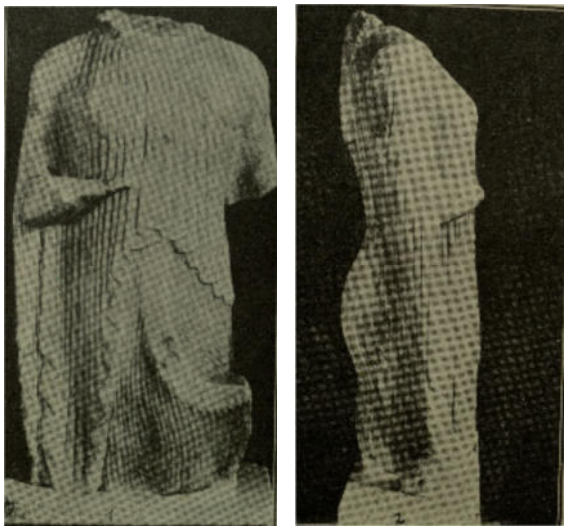


Figure 1.7 : The female torso from Vize, Archaeological Museum of Thessaloniki, after Pelekidou (1928).

Vize was the main scene of the tragicomic stories of the Greek author Georgios Vizyenos (Figure 1.8, Figure 1.9). With vivid descriptions, Vizyenos mentioned his birth city Vize in his books. In the stories 'My Mother's Sin' (1883) and 'Moscow Selim' (1895), we find the description of the landscape and places in Vize. The stories took place towards the end of the 19th century, when Vize was already a very small place without even a train station — the nearest station Lüleburgaz was obviously a bigger settlement than Vize. The relationship of Greek and Turkish communities was described to be tense. Although they lived close to each other, they did not prefer to be in close contact. The walls of Vize also appear in two of the stories. In 'The Only Journey of His Life', "the acropolis of Vizyi" is described as having 'Pelasgic walls,'[13] the south side of which was occupied by the Turkish government house and some houses of eminent Ottomans. The mounds of Thracians in the surroundings of Vize are also dominant elements of his landscape. In the story 'Moscow Selim,' the dark masses of the fallen Byzantine towers were the prominent silhouette of acropolis.

[13] Probably Thracian.

Figure 1.8 : The statue of Vizyinos, Thessaloniki, 2012.

Figure 1.9 : Vizyinos, Georgios (Vize 1849–Athens 1896).

1.2.2 First scientific approaches: the beginnings of historical, epigraphical and archaeological research

From second half of the 19th century on, together with the awakening European interest in the archaeology of antiquities, epigraphic documentations were the first attempts of archaeological and historical research in Vize. Dumont, a member of the higher education institute in Paris, and his colleague Homolle published a report about their archaeological excursion in Thrace in 1892. In this report, they give a list of inscriptions and archaeological finds from the region. Except for Rankabēs's inscription, they published another inscription, which was carved on the rock in the entrance of a Byzantine tomb. The third inscription they documented mentioned an emperor Constantine, whom they assumed to be Constantine VIII (1025–1028). Two other finds they published are a female torso and a bas-relief with a banquet depiction (Dumont and Homolle, 1892, pp. 365–366).

The British archaeologists Dawkins and Hasluck, gathered some inscriptions during a visit to Vize in 1906. They published a Thracian inscription, which they found on a marble block built in one of the local houses, with the names Rhoemetalces II and Cotys from the Thracian royal house (Dawkins and Hasluck, 1906, pp. 175–177). Another inscription, which they found on a limestone block built into a gate-post at Kastro,[14] reveals the name Cotys Rhescuporeos, which according to the writers could be identified with the Thracian King Cotys I (1st century BC) (Dawkins and Hasluck, 1906, pp. 177–178). Among the other inscriptions they found, two are

[14] Kastro is described as a hamlet above Vize. It is not clear what they mean with that; it may refer to the acropolis.

particularly interesting. One mentioned a person named Thecla, who might have been St. Thecla, who was martyred in the reign of Maximianus and who was born in

Vize (Dawkins and Hasluck, 1906, pp. 179). The other one is a Jewish epitaph with a menorah depiction (Dawkins and Hasluck, 1906, pp. 179–180).

The Austrian philologist Kalinka, who was inspired by the assumption of Dumont and Homolle about the Thracian and the Roman heritage of the site, documented some unknown inscriptions and statue fragments, as well as the old ones in the years 1896–98. He found in a local house a Nemesis relief, which depicted a female figure dressed in chiton and holding a scale (Kalinka, 1926, p. 122). The inscription below it mentioned Julius Ingeniuus, which in Roman prosopography was given as a young commander of the Third Italian Legion (Kalinka, 1926, p. 122). One of the rare identifiable Christian finds was in the main church. It was a half broken relief with a mounted figure dressed in chiton and armour. The figure, whose head was surrounded by a nimbus, seemed to be Hagios Georgios, based on the readable part of the inscription (Kalinka, 1926, p. 127). In addition to the other poorly preserved inscription fragments from the main church, Kalinka also found pieces like a limestone herm, a marble sphinx, female statue pieces, a marble bearded head and a marble male hand (Kalinka, 1926, p. 127). These pieces were neither drawn nor photographed.

Thanks to these works, interest in Vize increased and the research led the way to more professional historical works. The history of Vize appeared in many works, but mainly in regional context of Thracian heritage. In 1897, the German geographer Oberhummer (p. 552) gave a short history of Vize, first as a Thracian city in the region of Astai and then the residence of the Odrysian kings, referring to preliminary sources from early historians. He gives the main sources for the epigraphic and numismatic evidence of Roman rule in the city, as part of the Thracian Province Europa. Finally, Vize is mentioned as the seat of a bishopric in the Byzantine era.

The archaeological importance of the site was first emphasised in 1902 by geologist Schaffer (1903, pp. 63–66), who mentioned the small fragments of Christian buildings and the crowning castle (citadel), most of which was reused as construction material in the houses of the city.

In 1912, the Czech-Bulgarian archaeologist Skorpil (pp. 235–262) visited the ruins of the old city. He was the first researcher who gave the description of the fortification walls of Vize. Although he did not date the walls, the first photographs from northern and western parts of the walls and the citadel are published in his article. This work shows the earliest photographs of the walls in Vize (Figure 1.10, Figure 1.11, Figure 1.12). Skorpil also introduced Hagia Sophia and gave its dimensions and some architectural details of the building (Figure 1.13).

Figure 1.10 : The citadel in Vize, after Skorpil (1912).

Finally, Vize was mentioned in the dictionary of historical ecclesiastical geography written by the French Byzantinist Janin (1937, pp. 44–45), who gives a detailed ecclesiastical history of the city from 431 AD on, including a list of the names of the bishops.

Figure 1.11 : The walls of Vize, after Skorpil (1912).

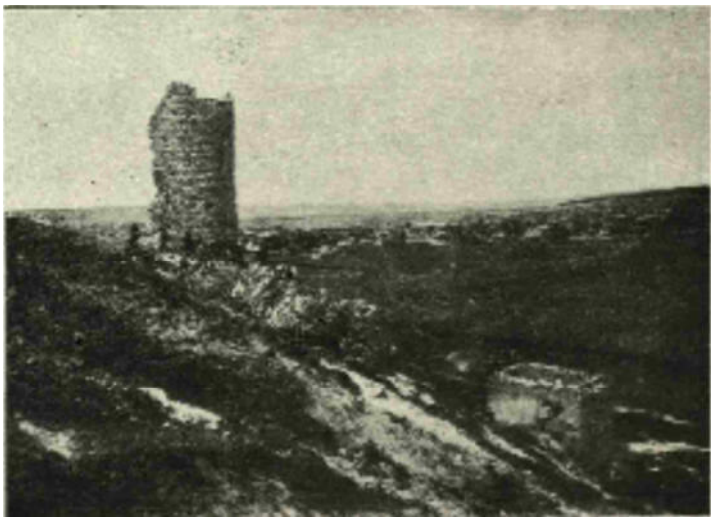


Figure 1.12 : The circular tower and the water tower in Vize, after Skorpil (1912).

Figure 1.13 : Hagia Sophia Church Vize, after Skorpil (1912).

1.2.3 Modern archaeological research, investigations and Turkish excavations

The first official archaeological excavations in Thrace conducted by the Turkish state started at the request of Mustafa Kemal Atatürk. In 1936, the Türk Tarih Kurumu[15] assigned Arif Müfid Mansel, who was the assistant director of Archaeological Museums, to the excavation. The excavations in Vize started in 1938, first on the plain on the south and southwest side of the settlement, where many grave-mounds were found. These were the first archaeological evidence of the Thracian settlement and the kings from the 1st century AD. In the following years, the excavations shifted

[15] Turkish History Foundation.

to the acropolis of Vize. According to the reports published, the foundations of a huge building, the west side of which was circular and colonnaded, given the traces of stylobate that were uncovered in Çömlekçitepe. As a result of this preliminary study, it was considered to be a palace structure from roughly the 2nd–3rd centuries AD (2009, Başgelen, p. 25).[16] In the same report, they also mention the fragments of an arch belonging to a colonnaded building on the skirts of the citadel ("Kale dibi", "Kale eteği"). The area around these remains revealed several big marble elements, like friezes and architraves. According to the research team, it was presumably a temple from the 2nd–3rd centuries AD (2009, Başgelen, p. 14). Unfortunately, neither the exact location nor any photos of the both finds were given in the report. Although the excavations were planned to continue the following year, no updated information showed up in the publications.

It is possible to find some photos of the walls of Vize in the book of Arif Müfid Mansel,[17] which gives a history of the region from the prehistoric periods until the 6th century AD. The book is the most detailed Turkish publication about Thracian civilisation and covers many topics, such as the historical routes, culture, demography, history and, to a limited extent, archaeology. Although Vize is not a separate chapter in the book, it is discussed in a historical context in different chapters. From the first images published by Sayger and Desarnod (1834) until Mansel's photos (1938), the state of the walls of Vize has not changed.

A high school teacher, Kadri Öztürk, who was an inhabitant of Vize, published the first Turkish book solely on Vize in 1959 (Figure 1.14, Figure 1.15). Although it is not an academic work, different aspects, such as geography, landscape, climate, history, administrative structure, demography and economy, were covered in detail in the book. This text is also useful to search for the traces of archaeological remains of Vize that are not present anymore.

[16] From the interview with the architect M. Savni in 1938.
[17] Mansel, 1938, Figures 37–40.

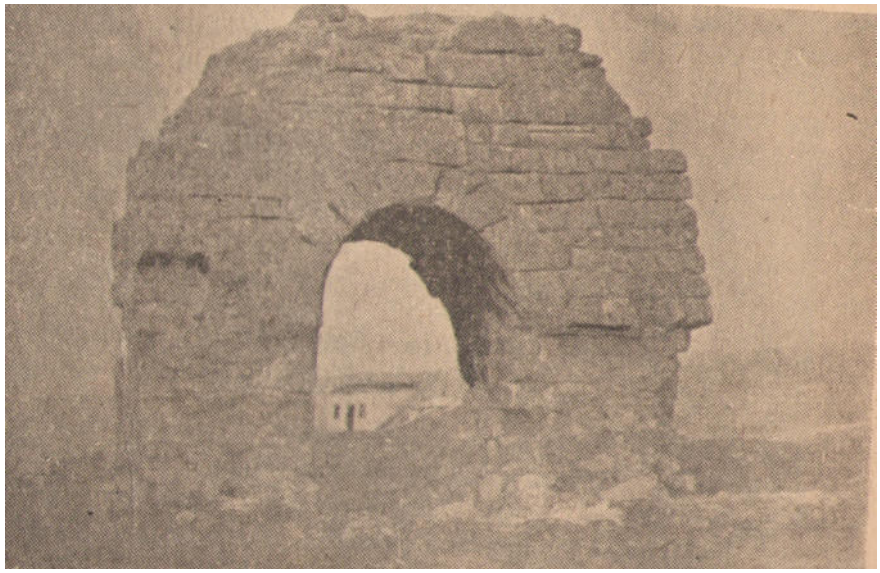


Figure 1.14 : The gate in the citadel in Vize, after Öztürk (1959).

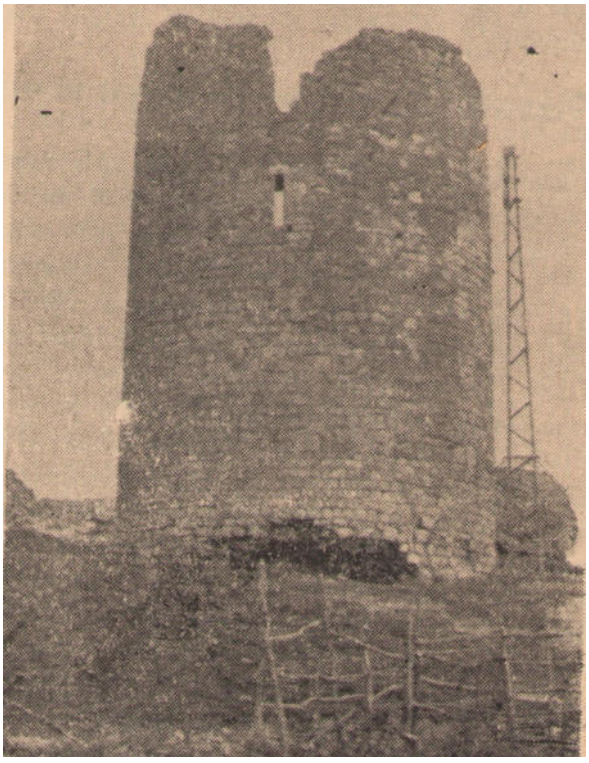


Figure 1.15 : Circular tower in the citadel in Vize, after Öztürk (1959).

Until now, the most important research about the topography and the walls of Vize was undertaken by Dirimtekin. He published articles about the Hagia Sophia Church (1961) and the topography and the walls of Vize (1963) after he became the director of Hagia Sophia Museum in Istanbul.

Dirimtekin's observations bear academic significance, considering that he was the first researcher who introduced the notion of the prehistoric cult site at Karakoçaktepe at the east side of Vize. He described and dated the site, comparing it with other similar sites in Asia Minor. Although the history of Vize is very briefly written in the article, the descriptions of the walls are detailed. The exact locations, dimensions, construction techniques and dating assumptions make this work significant for the further research on the walls (1963, pp. 15–25). He also gave photographs and a topographical plan with the walls (Figure 1.16). Jurukova (1981, p. 4) mentioned some excavations in 1958 on site, but she did not give the source.

Figure 1.16 : The first plan of the walls of Vize (Dirimtekin, 1963).

The Turkish art historian Eyice published a comprehensive article about some important monuments of Vize after his trip to the region in 1961. Besides a building description of Hagia Sophia, he covers the rock monastery complex in Asmakaya in detail. He mentioned the ruins of a tetraconch on the SW side of Hagia Sophia and a cistern within the fortifications. These monuments were published for the first time in Eyice's article. He also described a tower that lay at the foot of the north hill in a valley outside the fortification line. Eyice identified the building as a water tower

connected to the fortifications. This tower was previously mentioned by Dirimtekin as a significant element of the fortification system.

According to Jurukova (1981, p. 4), the archaeological excavations in Vize started again in 1968 and revealed an interesting tomb structure, composed of a dromos and a rectangular plan. But neither the full excavation team nor any reports are known.

As the publications revealed more monuments and archaeological remains from the site, the archaeological heritage of Vize became more interesting. Among the inscriptions discovered so far, the one published by Mango and Ševčenco in 1972 is particularly significant. This inscription was documented by the researchers in the inner courtyard of the Old Museum of Edirne in 1971. This was a reused altar or a marble pedestal of the Imperial Period, the front side of which was written in Latin, whereas the left-hand side was in Greek. This inscription is the only Byzantine imperial inscription that could be dated and integrated into the historical context of the site. It concerns the repair of a bridge under "the eternal Augusti" Constantine and Leo, the fortunate Caesars Christophorus and Nicephorus. Mango and Ševčenco made a detailed epigraphic and historical analysis of the inscription, suggesting that it might date to 773/774 BC, when Constantine V set out on his last campaign against the Bulgarians. The exact location of the bridge is unknown, but it was assumed to be located on a military road leading towards Bulgaria, north of the Kırklareli-Vize line (Mango and Ševčenco, 1972, pp. 384–393). This inscription is now lost. Velizar Velkov (1978, pp. 174–81) is one of the few researchers who gave a very detailed history of Vize from antiquity until the middle ages in his article, in which all the literal, epigraphic and numismatic sources about the city are compiled. This short article by Velkov is one of the few scientifically significant works about Vize, since he considers the history of the city together with the topographical features and the fortifications, which he also dated. A very important piece archaeological evidence — an inscription that points out to Vize's urban status in the Roman times — was first introduced in this article.[18] He also mentions the Strategie Astike, one of the ancient Thracian administrative territories where Vize played an important role and which was only mentioned by antique writers.

[18] See Chp.2.

One of the very few works that focuses on Vize was published in 1981 by Jurukova. This is a comprehensive work about the Thracian and Roman coins issued in Vize. She covered the history of Vize in the beginning chapter of her book and then gave a detailed catalogue of coins from Vize. What is interesting about this study is that she analysed the architecture, which was depicted on the coins and medallions, and she interpreted the urban structure of the city.

It was long time until research on the fortifications of Turkish Thrace started. French researcher Pralong (1988, pp. 179–200), wrote about some eastern Thracian settlements with fortifications in Turkey, including the city Vize. In this short report, the fortifications were introduced, but the fortifications of Vize were not thoroughly described. She mainly used the information and the arguments from Dirimtekin's work (1963, pp. 20–23)

The most recent and comprehensive publication of inscriptions were the publications by French researcher C. Asdracha (1996, 1998, 2000 and 2003), in which she compiled proto-Byzantine and Byzantine inscriptions of eastern Thrace. In addition to giving a complete bibliography of all the inscriptions published so far, her work includes commentaries on important publications, like the article of Mango and Ševčenco about the bridge repair inscription of Constantine V (Asdracha, 1996, pp. 246–248) and Lampousiades' article about the inscription found in Hagia Sophia and related to St. Mary the Younger (Asdracha, 1996, pp. 287–289).[19] She also discusses the historical background in relation to some inscriptions and gives information about the probable demolition and reconstruction periods of the city (Asdracha, 1996, pp. 252–253, 256–257).

In 2005, a national culture and history symposium was organised in Vize. The talks covered the Thracian, Roman, late antique, medieval and Ottoman history, Ottoman archival documents, the antique theatre excavations and some other monuments on the site; the talks were then published in full in the symposium proceedings.

In the *Eastern Thrace Band of Tabula Imperi Byzantini* (2008, pp. 288–294), Külzer gives a detailed military and ecclesiastical history of Vize between the 3th–15th centuries, focusing mostly on the medieval period as well as the cult of Saint Mary the Younger and its connection to Vize. He mentions the historical monuments on

[19] See Chp. 2.

site, either preserved or vanished with short descriptions. It is still the most recent comprehensive source for Vize, given that it includes history, inscriptions and archaeological remains and a rich bibliography.

Külzer published a more detailed and recent history of Vize in 2011 in *Bulgaria Mediaevalis* (pp. 195–207); this work covers history from the Thracian Kingdom until the end of the Byzantine period, and to my knowledge it is the most recent and most comprehensive history which considers all the historical and modern sources about Vize.

In addition to the works mentioned above, an unpublished bachelor thesis from Istanbul University by Yavuzoğlu (1975), the city annuals of Kırklareli from different years and military publications (1973, 1999, 2000), an article published in the Yapı Periodical in June 2003 by the archaeologist Yücel, another article which appeared in a popular history magazine NTV Tarih in December 2011 and finally a book by Demiraco from the year 2011 give introductory information about the history and the historical monuments of the site. Finally, an article which was written by the academic Ceylan and published in Marmara Coğrafya Dergisi in 2011 can be mentioned as an interesting example because it deals with the development of the settlement from the earlier periods until the modern times.

The final Turkish excavations in Vize were carried out by Kırklareli Museum and Trakya University between the years 1995–1999. The excavations focused on the theatre in Çömlektepe. This theatre had remained buried for years and was revealed by these excavations. The whole theatre building, except the skenea, is visible today. It could have been partially excavated and then recovered again because it remains under the modern street and some modern buildings. Even though these were confiscated to enable the excavations, these buildings are still in a ruined state and remain empty, which causes potential danger for the public and the environment, and no further projects were undertaken since then.

The results of the excavations in the years 1995 and 1996 were published very briefly in Turkish.[20] The only publication about the theatre, other than the obligatory reports for the Ministry, appeared in the popular cultural magazine *Mozaik* in

[20] In the proceedings of the annual Archaeological Excavation Results Meeting organised by the Cultural Ministry of Turkey.

Turkish. Since no plans of the theatre have been produced and there were only a few photos in the reports, we do not know the methodology of the excavation, the layers or stratigraphy they found, or the, exact locations of the trenches and the significant finds. Some very important finds, like the relief panels and a female statue, are now kept in Kırklareli Museum. The Hagia Sophia Church, one of the most important monuments of Vize, was "investigated and cleaned" by the same university in 1997. This campaign was not documented by any scientific or archaeological report, so as in the example mentioned above, we do not have any idea about the methodology or the boundaries of this work. Any of the significant archaeological evidence, which was found in and outside of the building, has not been documented. The story was published in the same popular cultural magazine and included some drawings and photos from the church. The Kırklareli Museum houses some of the finds from this "cleaning campaign" in 1997, but the museum records do not provide much information.

In 2003, a cleaning campaign was undertaken with the collaboration of Kırklareli Museum and Çanakkale's 18 Mart University in the theatre because after the excavation of 95–97, the area could not be protected against the external elements so it was filled with earth and landfill (Yılmaz and Sipahioğlu, 2004, pp. 260–261). In the 2003 cleaning campaign, the earth and the dump were removed and the theatre was surrounded by a fence to prevent uncontrolled access. The current iron gate, which is mostly left unlocked, was first installed also in 2003. The team also levelled the orchestra ground with limestone gravel. They found a male Roman portrait, which is now kept in Kırklareli Museum and which helped the team to date the theatre.

1.2.4 Recent Surveys

Before our topographical work, the most recent building survey in Vize was carried out in the years 2003 and 2004 by a collaborative team from German Archaeological Institute Istanbul Department and Columbia University in New York. The aim of the project was an investigation of the Hagia Sophia Church and the preparation of a restoration project. In the 2003 campaign, the team completed the plans and sections of the building together with the drawings and photographic documentation of the architectural fragments and spolia in and around the building. In the 2004 campaign,

a photogrammetric evaluation of the four facades was made in order to determine and record various phases of construction, reconstruction and restoration. The results of the two campaigns were published in 2003 and 2004 in international periodicals in German and English. These publications provide information about what was done during these two surveys in a transparent and scientific language, and they also include recently produced plans, sections and facades of the building. They published some very significant photos of the church in both its new and old states. There were some plans for further excavations, but they could not be finalised due to bureaucratic drawbacks. Finally, the building underwent an inappropriate restoration project by Edirne Vakıflar Bölge Müdürlüğü in 2006, which resulted in the loss of historical and archaeological evidence (Bauer, Klein, 2006, pp. 267–270).

2. HISTORY OF VIZE

As considerable work on the history of Vize has already been published recently, this chapter will be a summarised version of this topic.[21] It will primarily deal with the periods that can be traced in the changes of the urban topography.

2.1 Thracian settlement

Although the sources are scarce and the archaeological evidence is insufficient to establish a clear historical timeline, an urban settlement started developing in Bizye in the second half of the 3rd century BC, when it became the residential city of the Odrysian/Sapaean kings after the destruction of Seuthopolis (Külzer, 2011, p. 196). Strabon mentioned Bizye as *τῶν Ἀστῶν βασίλειον*, the royal residence of the Astae,[22,23] Plinius as *arx regum Thraciae*, the capital of the Thracian Kings,[24] Ptolemaios as a *πόλις* in Thrace and part of *αστική στρατηγία*, Strategia Astike.[25] An inscription from the first decades of the 1st century AD proclaims the royal capital status of Bizye. With this inscription, Kotys, who was the Sapaean Roman client king of Thrace, commemorated his parents (Jurukova, 1981, p. 3). The Roman Emperor Claudius (41–54 AD) terminated the cliental Thracian Kingdom in 46 AD and transformed the region into the official Roman province Thracia (Külzer, 2011, p. 196).

[21] A detailed Thracian and Roman history was given in the first chapter of Jurukova (1981, pp. 1–8), in which she compiled the Roman coins of Vize. Bauer and Klein (2004, pp. 409–414), gave a detailed history in their article on Hagia Sophia Church. Külzer has given the Christian history and monuments with a pretty long list of sources in the TIB Series (B.12, 2008, pp. 288–294). His recent article deals with the topic rather comprehensively (2011, pp. 195–207).
[22] Strabon VII fr.20,12.
[23] Polybios mentions the Astae in context of the historical events between 204 and 202 BC. They might have settled in the region between Perinthos, Selymbria, Byzantion and Salmydessos between the 3rd and 1st centuries BC (Bošnakov, 2003, p. 190).
[24] Plinius, nat.hist. 4, 47.
[25] Ptolemaios 3,11,10f.

2.2 Roman Period: Transformation into *Polis*

The borders of the new Roman province Thracia reached to Pontus Euxenos on the east, Propontis (Marmara) coast, the Chersonese (Gallipoli) peninsula and a part of the North Aegean Sea on the south. On the SW, Thracia adjoined the Province Macedonia. On the west and NW lay Province Moesia Superior. Haemus Mountains drew the natural border between Thracia and Moesia Inferior on the north (Ivanov and Bülow, 2008, pp. 16–17). In the first years of the establishment of the province, it was administered through a centralised system, which was taken over from the Thracian Kingdom. According to that, the province was divided into Strategiae, which were identical with the old tribal areas. The fifty Strategiae, given by Plinius, were suppressed and modified during the city foundations of Trajan (98–117 AD) and Hadrian (117–138 AD) (Jones, 1937, p. 6–7). In the beginning of the 2nd century AD, Perinthos (Heracleia) became the new capital of the province (Külzer, 2011, p. 196). Nevertheless, in a military register from Rome, the name of the city appears as *Ulpia Bize,* which shows that Vize gained the city status under Trajan (98–117 AD) (Jurukova, 1981, p. 3). The only inscription referring to the building activities, mentions the fortifications of Bizye in the 2nd century AD.[26]

From the time of Hadrian (117–138 AD) on, the old Strategia system was abolished and the province was divided into urban territories. Bizye superseded Strategie Astike and became the centre of this urban territory (Ivanov and Bülow, 2008, p. 22). The coins and medallions issued in the period between Hadrian (117–138 AD) and Philip II (244–249 AD) show the walls, monumental gates and other monuments of Bizye and provide a good visual evidence of the Roman urbanisation undertaken in the city.[27] In these coins and medallions, we find Apollon and Dionysos as the most venerated gods in Bizye (Jurukova, 1981, p. 6).

One piece of evidence concerning the political status of Bizye from 212/217 AD is an inscription which mentions the construction of a Dionysus altar venerating the emperor, the city council and the assembly.[28] Bizye was a Greek Politeia, like the other important cities of Philippopolis, Augusta Traina, Serdica and Pautalia (Velkov, 1978, pp. 178–180).

[26] For details see Chp. 3.3.1.1.1, pp. 65–67.
[27] For details see Chp. 3.1.2, pp. 37–39.
[28] SEG 28 560.

Within the new administrative structure by the tetrarchic emperors Diocletian (284–305 AD) and Constantine (306–337 AD), the old provinces Thracia and Lower Moesia were divided into six provinces (Velkov, 1977, p. 61). Bizye became a part of the province Europa, which covered an area from the Pontus Euxinus (Black Sea) to the Thracian Chersonese (Gallipoli) with the Propontis (Marmara) coast drawing the south border (Ivanov and Bülow, 2008, p. 64).

2.3 Late Antiquity

The Christian martyrs Memnon and Seueros died in Bizye after the persecution of 303. During the time of Valens (364–378 AD), Bizye was a place of exile, and it is where Bishop Eustathios was exiled and died. The city became the seat of bishopric in 431 AD (Külzer, 2008, p. 289). Stephanus Byzantinus and Hierocles, both from the 6th century, mentioned Bizye as a *πόλις* in Thrace in their works (Külzer, 2011, p. 199).

The water supply system of Constantinople, which was already built in the 4th century, was not sufficient enough to sustain the growing population, so it had to be extended to reach other sources of water in the region around Bizye in the first half of the 5th century (Crow, 2014, p. 227). In the same century, the Hunnic and Gothic invasions devastated the cities of Thrace. Against the growing threat of the Bulgars, in the reign of Anastasius (491–518 AD), new walls were built, stretching from Black Sea coast across the peninsula to the coast of Marmara Sea. The long walls of Thrace lay 65 km west of Constantinople, leaving Bizye outside the protected area.

The massive Slavic invasions in Justinian's reign, during which they reach to, but not inside, Constantinople, took place in the years 540, 550 and 559 AD (Obolensky, 1971, p. 45). Although Procopius did not mention Bizye in *De Aedeficii*, Bizye was possibly included in the large-scale fortification plan in the Balkans during the reigns of Anastasius (491–518 AD) and Justinian (527–565 AD) (Sarantis, 2013, pp. 777–797).

2.4 Byzantine City: Kastron, Tourma, Garrison

When the Holy Maximus was in exile in Bizye in 655, the city was described as *κάστρον τῆς Θράκης* in the book,[29] which contained the discussion with Theodosius, the bishop of Caesarea Bithynia.

The capital confronted a very significant threat with the Avar siege in 626. In the same century, Slavic people settled in eastern Thrace, in the environs of Bizye. Within new military organisation constituted by Constantine IV (668–685 AD), the city became a part of the Thema Thrakê (Külzer, 2011, p. 199).

With the peace treaty of 681, the Bulgars' permanent settlement in the Balkans, in the province of Lower Moesia with a capital at Pliska, was legitimised. Around 813/814 Bizye was conquered by the Bulgar King Khan Krum (802–814 AD). The city had probably recovered during the reconstruction period of the devastated cities of Thrace, undertaken by the emperor Leo V (813–820 AD) (Obolensky, 1971, p. 64, 68).

The fortified town of Bizye was a site of refuge for Anastasios,[30] the stepson of Thomas the Slave, who rebelled in 823 against the Bulgar ruler Omurtag (814–831 AD) and the Emperor Michael II (820–829 AD). From the 9th and 10th centuries on, the city gained a further military character when it became the seat of a tourmarches, who commanded a tourma and held fiscal and judicial authority over the population in his region (Külzer, 2010, p. 200).[31]

With respect to cults of saints, churches and the military structure of the 10th century in Vize, the *Vita of St. Mary the Younger* provides an interesting image of the city of Vizye. The story is about the life of a pious woman whose husband was a tourmarches in Vizye[32] (the populous city[33]) in the first years of the 10th century. She was accused of adultery and died after being beaten by her husband. Soon after she was buried in the Episcopal Church,[34] which was probably Hagia Sophia, miracles occurred at her tomb. Her relics were transferred to another church,[35] which was built

[29] Disputatio Bizyae (eds. Allen and Neil, p. 76)
[30] John Skylitzes, Byz.Hist. (ed. Wortley, p.42)
[31] Kazhdan, A., Tourmarches, The Oxford Dictionary of Byzantium 3, 1991, 2100 f.
[32] Laiou, 1996, p. 268.
[33] Ibid., p. 260.
[34] Ibid., p. 267.
[35] Ibid., p. 271.

by her husband. Vizye was besieged by the Bulgarians under Tsar Symeon (893–927 AD) in 924–25. The inhabitants of Vizye had already left for Medeia when Symeon ordered the walls[36] to be knocked down, and the churches to be turned into granaries, houses and stables.[37] The story also mentions the garrison installed in Vizye by Symeon.[38] The children of St. Mary the Younger turned her church into a monasteryafter the peace with the Bulgarians.[39]

The chronology established from this vita helped to identify and date the Hagia Sophia Church, which according to recent research, and supported by archaeological finds and a graffito, is dated to ca. 903 AD (Bauer and Klein, 2004, p. 416).

The area has been invaded by Bulgarians, Hungarians, Pechenegs and Cumans in the 10th and 11th centuries, but we hear about Bizye again only in the 12th century, in the accounts of the Arab traveller al-Idrisi, who mentioned Bizye as a big and well-fortified city located in a fruitful valley and where trade and industry were the means of living (Bauer and Klein, 2004, p. 416). In 1199, Byzantine troops started the campaign from Bizye against the allied forces of the Cumans and the Bulgars (Külzer, 2010, p. 202).

According to the *Partitio Imperii Romaniae*, the treaty drawn up by the Crusaders in 1204 for dividing the Byzantine Empire, Bizye was put under the rule of the Latin emperor — until 1247, when it was taken back by Johannes III. Dukas Vatatzes (1222–1254) (Bartusis, 1989, p. 191). Around 1205, the Crusader historian Villehardouin described Vize as a strongly fortified city.[40]

[36] Ibid., p. 277.
[37] Ibid., p. 277.
[38] Ibid., p. 277.
[39] Ibid., p. 281.
[40] Villehardouin, La Conquête de Constantinople, (ed. Faral, pp. 198–201).

2.5 *Vizyêteikon Mega Allagion* and The Final Conquest

Bizye was the highest-ranking archbishopric of the Patriarchate and an important military, as well as administrative, centre from the 13th century onwards (Preiser-Kapeller and Mitsiou, 2010, p. 262).

The *Megala allagia* is a provincial military unit attested for the first time during the reign of Andronikos II (1282–1328). One of these military units was *Vizyêteikon mega allagion,* which was probably active until the 1360s in the region, and soldiers were stationed in Bizye, which served as the administrative centre (Bartusis, 1989, p. 190–191).[41]

Although the city and its environs suffered from Bulgarian attacks in 1307, Catalanian and Turkish attacks in 1313, and the Byzantine civil war of 1322, Bizye was promoted to the rank metropolitan after 1341 (Preiser-Kapeller and Mitsiou, 2010, p. 262).

The city was involved in the struggle between Johannes V. Palaiologos (1341–1391) and Johannes VI. Kantakuzenos (1347–1354). The growing Turkish threat from 1358 onwards led to the conquest of the city in 1368. In 1403, it was taken back by the Byzantines. In 1410, it changed hands twice again between Ottomans and Byzantines, until Bizye was finally conquered by the Ottomans around 1453 (Külzer, 2010, p. 205–206).

[41] The area of Vizyêteikon mega allagion: eastern Thrace, the suburbs of Constantinople, Arkadioupolis, and the Black Sea coast north to Mesembria and west inland in the direction of Sliven (Bartusis, 1989, p.194).

3. MONUMENTAL EVIDENCE

3.1 Topographical introduction

The city of Roman, Late Antique, Byzantine, Ottoman and Republican Turkish Vize has been a continuous settlement on the ancient site of the Thracian Kingdom, which ruled the area starting in the 3rd century BC. The physical topography of the site defines the urban principles of the settlement. Vize is located on the gradually dissolving wooded hills of Strandja Mountains, which end up in the huge Ergene Plain (Figure 3.1). It is a natural hill, north of which is a steep slope and surrounded by a stream. Four hills, namely Göztepe, Karakoçaktepe, Hisartepe and Çömlektepe, each of which once housed an historical settlement, occupy the territory of today's town. The elevations of these hills were first given by Kadri Öztürk in his book published in 1959, and later on it was taken and used by other researchers and websites about Vize as a correct information without questioning if he himself made any measurements at the site or took this information from somewhere else instead. The elevations given by Öztürk are 457 m for Göztepe, 392 m for Karakoçaktepe, 242 m for Hisartepe and 214 m for Çömlektepe. But during our survey, after we measured the elevation of Hisartepe with GPS and also the other structures with a total station, we found that the elevation of Hisartepe is 287 m, which is 45 m different from Öztürk's figures. With the same respect, it would not be so wrong to assume that the elevations of Göztepe, Karakoçaktepe and Çömlektepe are also not accurate. When we compared the maps of Vize municipality with our measurements, we also found out a difference of 69.90 m. Therefore, the elevation taken by our time is the actual and geographically correct one. Working off our elevation figures, Hisartepe is 287 m high and Çömlektepe is ~255 m high.

The modern settlement of Vize lies on and around the hills Hisartepe and Çömlektepe (Figure 3.2). The main topography seems to be separated by a small valley between Hisartepe and Çömlektepe and also with a big valley between the Hisartepe-Çömlektepe and Göztepe-Karakoçaktepe hill groups (Figure 3.3).

The main water source of the city, namely the Anadere stream, begins on the north of the Göztepe hill, flows in the NE–SW direction of Vize and enables a natural defensive boundary for the site. Bulacadere, which is another small stream flowing on the west of Vize, joins Anadere on the plain.

Figure 3.1 : Ergene Plain on the southern side of Vize (Vize municipality archive, 2011)

Karakoçaktepe has only been investigated by Feridun Dirimtekin in 1963, and, according to his report, he found a temple, an altar and a monolith made out of stone on this hill, which he calls Tamata (Figure 3.4, Figure 3.5). Although he assumes that this cult place belonged to Traco-Phyrique tribes and could have been used between the 2nd millennium BC and 6th century BC, a more accurate dating and function of this complex remains debatable (Dirimtekin, pp. 16–19, 1963). Engin Beksaç (2005, p. 19) claims that Karakoçaktepe was a Thracian settlement, but the archaeological evidence to prove this argument has not yet been discovered.

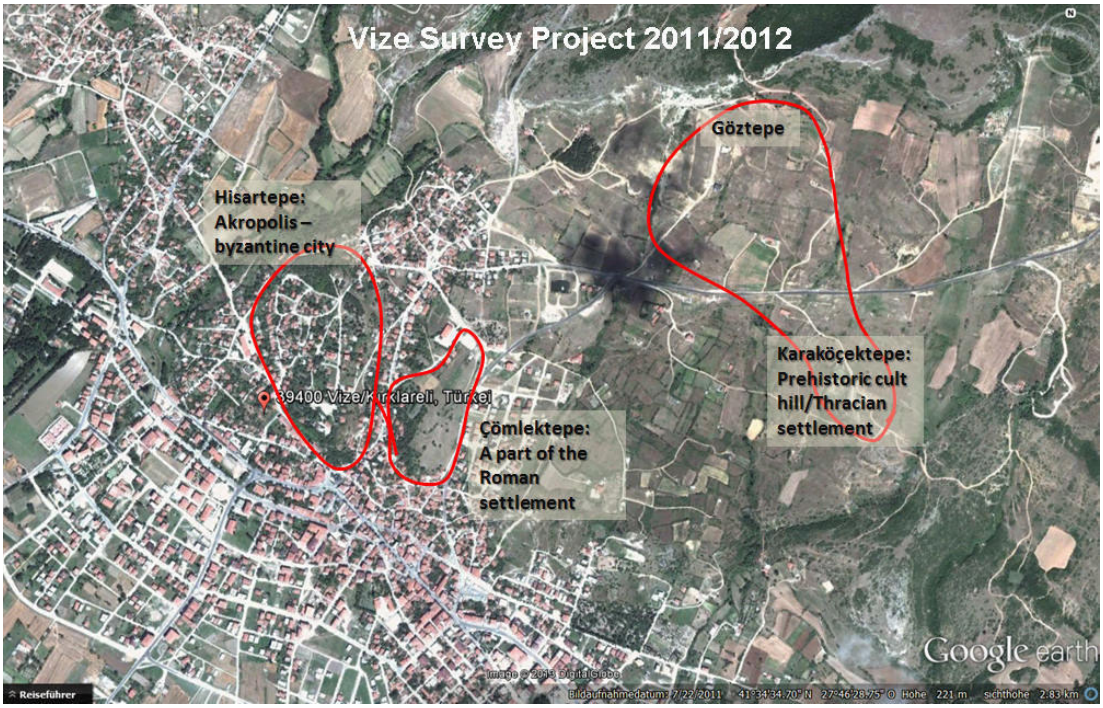


Figure 3.2 : General aerial view from Vize, image by author (2012).

Figure 3.3 : View of the three hills (Göztepe, Karakoçaktepe and Çömlektepe), image by author (2012).

Figure 3.4 : The rock structures of Karakoçaktepe, Vize Municipality archive.

Figure 3.5 : The rock structures of Karakoçaktepe. Vize Municipality archive.

We do not know how big the Thracian settlement in Vize was. The most important spot showing the existence of the Thracian kings lays 4 km south of the city. The results of the excavations, in the years 1937–38 and by Mansel, revealed the architecture and archaeological finds of four Thracian grave-mounds in this area (Figure 3.6, Figure 3.7, Figure 3.8). Some researchers claim that the first settlement of Thracian Kingdom was on the acropolis hill of Vize, but no archaeological evidence supporting this argument has been found so far.

Figure 3.6 : Grave mound A, Vize, after Mansel (1938).

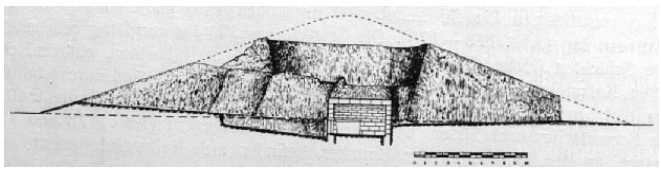


Figure 3.7 : Grave mound A, section, Vize, after Mansel (1938).

Figure 3.8 : Grave mound A from east, Vize, after Mansel (1938).

3.1.1 Çömlektepe

The evidence of the Roman settlement of Vize was found on the lowest hill (214 m), which is almost an unexcavated site between the two other hills. This significant hill, which lays among the buildings of the modern settlement but is currently a largely unsettled area of almost 5,6 ha due to its status as an archaeological conservation site (Çömlektepe), constitutes an important part of the Roman settlement; archaeological evidence of the Roman period can be observed there (Figure 3.9, Figure 3.10, Figure 3.11). The first excavations on the site were made in 1938 by Arif Münfid Mansel in the framework of the same campaign mentioned above. In the article where he introduces the results of the excavation, he mentions the remains of a Roman

structure with a peristyle, which he identifies as a palace structure and dates it to 2nd–3rd centuries AD (Mansel, 1940, p. 92). These remains have obviously disappeared in the following 70 years, and we did not observe these finds in our survey. The second excavation was run by the collaborative team of Kırklareli Museum and Trakya University in the years 1995–1997, and it focused on the southwest skirt of Çömlektepe, where they unearthed a Roman theatre. It is the most significant find of the Roman settlement, but, unfortunately, the results of the excavation have not appeared in any international publications. The documentation of the evidence cannot easily be understood from the text and the photos, which were published in the years 1997 and 1998 in the *Kazı Sonuçları Toplantısı* [Excavation Results] proceedings of the Cultural Ministry of Turkey (more detailed information will be given below under Chapter 4.2). This theatre could have been located within the Roman walls on the southern limits of the city.

Figure 3.9 : Çömlektepe, Vize, Aerial view from 2003, Google Earth image modified by author (2012).

The spolia from different building elements like capitals, columns, pedestals, fragmented marble and ceramic pieces can be seen scattered on the surface upon the hill. At the east side of Çömlektepe, on a steep slope which looks at Sultan Çeşme Caddesi (Street), the remains of the substructure or the rubble infill of a wall run along the slope of the hill (Figure 3.12). According to the locals, it was a vaulted structure, which they used to enter years ago, before it was covered by plants. Although the steep terrain is an obstacle in conducting a clear survey, the orientation of the remains on the edge of the slope resembles fortification remains. However,

there is not sufficient evidence to prove this argument. In the summer of 2012, at the eastern side of Çömlektepe, opposite of the street, a simple sarcophagus was found in the construction site, which possibly gives a clue as to the location of the necropolis and the limits of the Roman city (Figure 3.9, Figure 3.13, Figure 3.14).

Figure 3.10 : View of Çömlektepe and Hisartepe from Karakoçaktepe from east, Vize, Yakup Özer (2011).

Figure 3.11 : Çömlektepe, Vize, image by author (2012).

Figure 3.12 : Substructure or the rubble infill of a wall on the slope of Çömlektepe, Vize, image by author (2012).

Figure 3.13 : Sarcophagus with the lid, Vize, image by author (2012).

Figure 3.14 : Sarcophagus from the construction site, Vize, image by author (2012).

3.1.2 Modern City Centre — Roman Forum?

After the foundation of the Turkish Republic in 1923, Vize underwent modern urban development changes, like the rest of the towns and cities around the new country. The new buildings in Vize were constructed around Atatürk Caddesi, the main road, which lies along the direction between Istanbul and Kırklareli. The two state buildings built on the south of the street were the village institute (1930s, after 1950, a town hall) and the municipality (1957). Another typical early Republican building built on the north of the street was the girls' vocational school, which is today also an education centre. The main mosque of Vize was also built in this area, north of the street, between the years 1949–1955. With the new development plan in 1947, the new urban development of Vize was intended to be applied on the south and south-east of Atatürk Caddesi (Ceylan, 2010, p. 73).

Cumhuriyet Square today is the modern city centre, where the social, commercial and administrative facilities cluster and the main roads to the nearby settlements intersect (Figure 3.15, Figure 3.16, Figure 3.17). Nevertheless, it is probable that this square may not be that young and that it might have had a predecessor. Despite the

scarcity of the archaeological finds, a small amount of evidence and some sources, which mention this area, provide some information to discuss the origins of this area and its location in the urban structure.

Figure 3.15 : Vize today, Istanbul-Kırklareli road and the city centre, GE image modified by author (2013).

Figure 3.16 : Buildings around Cumhuriyet Meydanı, built after the foundation of the Republic in 1923, GE image modified by author (2013).

Figure 3.17 : Cumhuriyet Meydanı from NW to SE, image by author (2010).

During the Palas Hotel construction in 1938, at today's Cumhuriyet Square (Figure 3.17, Figure 3.18, Figure 3.19), a mosaic floor with a geometric pattern and different types of bird figures was found underneath the street level (Figure 3.20) (Eyice, 1969, p. 327; Öztürk, 1959, p.28).[42] According to Eyice (1969, p. 327), this mosaic floor could not be preserved, and it vanished shortly after it has been uncovered. The only evidence was published in the Turkish newspaper Akşam in 1938. Two framed depictions can be seen in the photos, side to side where the rectangular and the circular frame bands twine. Each of the two frames has a bird figure in the central position.

The only preserved floor mosaic sample from Vize is on display in the Tekirdağ Museum (Figure 3.21), which unfortunately has not information or files on the mosaics.[43] It is a half-circular piece with a smaller rectangular frame inside, surrounded by peacocks and other types of birds. The similarity of the pattern of this preserved mosaic and the lost one is remarkable, and it highlights the possibility that

[42] A part of this mosaic floor is kept in the Tekirdağ Museum.
[43] According to the information gained from the museum director Önder Öztürk, this mosaic was discovered during a building construction in the years 1972–73. At that time, Vize remained in the field of activity of Tekirdağ Museum so the mosaic was transported to the Tekirdağ Museum by the restorators Revza Özil and Samim Şişmanoğlu. The mosaic has been on display since 1995, just after it was cleaned and repaired by Samim Şişmanoğlu.

they are different parts of the same floor mosaic. The Roman or Late Antique mosaics of a significant building outside the Byzantine walls are a remarkable sign of the extent of the city in the earlier periods.

Figure 3.18 : Cumhuriyet meydanı in the first years of the republic, Vize (Municipality archive).

Figure 3.19 : Cumhuriyet Meydanı, Vize, 2008 (Municipality archive).

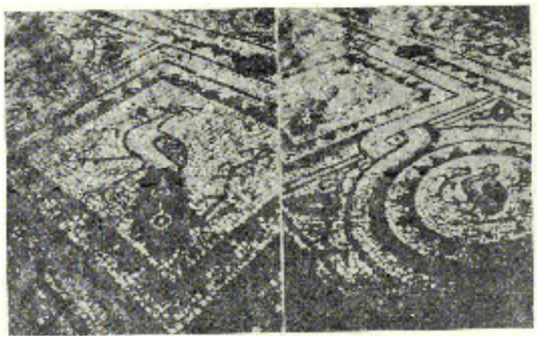


Figure 3.20 : Mosaic floor, which was found in the Hükümet Meydanı during the construction works, after Eyice (1969).

Figure 3.21 : The mosaic piece from Vize, Tekirdağ Museum (2013).

Besides, what we read from the Greek sources mentioned in Chapter 1.2.1, the only indication of the remains of a possible Roman forum is supposedly located exactly where Cumhuriyet Square is today.

The early Roman cities of Thrace urbanised quickly during the 2nd and 3rd centuries, and they gained typical urban amenities, such as colonnaded streets, baths, aqueducts and other monumental buildings, as we can observe in Philippopolis, Augusta Traina and Serdicam etc. (Rizos, 2010, p. 20). The urban structure of Roman Bizye is not possible to reconstruct with the material at hand without archaeological excavations, but the rare evidence found or observed at different spots of Vize give clues to the possible limits of the Roman city.

Figure 3.22 : Hypothetical limits of the Roman settlement in Vize, GM, modified by author (2013).

The circuit of the Romans walls cannot be determined, but the archaeological evidence proves that the Roman city was probably much bigger than the Byzantine city. If the theatre marks southern limits and the north end of Çömlektepe where there is a modern cemetery today marks the northern limits, the size of the Roman

city becomes much clearer. If the location of the sarcophagus is accepted as the eastern limits and the Byzantine acropolis as the western end, tracking the natural elevation of the topography and the river bed and adjoining the presumable Roman forum on the south, the area of the (hypothetical) Roman city can be measured to approximately 30–35 ha (Figure 3.22).

3.1.2.1 Roman Fortifications on the coins

Except for the the debatable remains on the edge of Çömlektepe, there is no other preserved archaeological evidence on site from the circuit of Roman fortifications, which presumably covered a much larger area.[44] Jordanka Jurukova gives a detailed documentation of all the coins of Bizye in her comprehensive work from 1981. She analyses the coins of Bizye, which were issued between the periods 117–119 AD and 244–249 AD. She considers the architectural topography related to the figures on the coins, which provide some clues about the walls, the gates and the topography of the Roman city of Bizye.

The oldest (and the only) depictions of the gates on the walls of Bizye are found on the first coins, which were issued in the time of Hadrian (117–138 AD) (Figure 3.23, Figure 3.24, Figure 3.25, Figure 3.26, Figure 3.27, Figure 3.28).

Figure 3.23 : Hadrian, 117–138 AD, city gates of Bizya (Thrace) with emperor in quadriga above, governor Maec. Nepos, (117–119 AD), (1) Moushmov 3451, (2) BMC 88.3, after Jurukova (1981).

[44] Ertuğrul (1995, p.22) assumes that the traces of the outer line of the walls were visible during the road construction around the local administrative office in the modern centre of Vize; also see the remains of a stone construction on Çömlektepe documented by our team in Chap. 3.1.2, p. 29.

Figure 3.24 : Hadrian, 117–138 AD, city gates of Bizye (Thrace) with emperor in quadriga above, governor Quintus Tineius Rufus (124–128?AD), Moushmov 3450.[45]

Figure 3.25 : Hadrian, 117–138 AD, city gates of Bizye (Thrace) with emperor in quadriga above, governor Quintus Tineius Rufus (124–128?AD).[46]

Figure 3.26 : Hadrian, 117–138 AD, city gates of Bizya (Thrace) with emperor in quadriga above, bronze medal. French Cabinet, nr. 83, after Donaldson (1859).

Figure 3.27 : Hadrian, 117–138 AD, city gates of Bizya (Thrace) with emperor in quadriga above, bronze medal. French Cabinet, nr. 83, after Donaldson (1859).

[45] http://citygate.ancients.info/gates12.htm
[46] http://citygate.ancients.info/gates12.htm

In all of the examples from that period, it is possible to differentiate the high and possibly round twin towers that flank the main gate. We find a quadriga over the gate in all of the examples. Likewise, both on the coins or in the drawings from the book of Donaldson (1859, p. 314), it is possible to recognise the twin columns on both sides of the arched gate and the niches on top. On the drawings, the construction material is emphasised as big stone blocks (Figure 3.26, Figure 3.27, Figure 3.28, Figure 3.29). Jurukova assumed that the gate depictions on these first emissions from the time of Hadrian showed the walls of the Thracian city, given that the Thracian capital must have already had a fortification system. She also took some similar fortifications in Moesia and Thrace from the pre-Roman period as a reference. Although, through extensive work, she developed many aspects about the history and topography of Vize, some points still need to clarified. As a Thracian capital until the first half of the 1st century AD, Bizye had most probably a fortification system, but Hadrian's coins with the city gate depictions do not prove anything about the earlier fortifications. We must not forget that Bizye had already acquired the status of city during the rule of Trajan (98–117 AD), and, presumably with this privilege, many building activities were undertaken in the settlement. The city gates shown on the coins of Hadrian might have been the new Roman productions, which were built over the older fortifications.

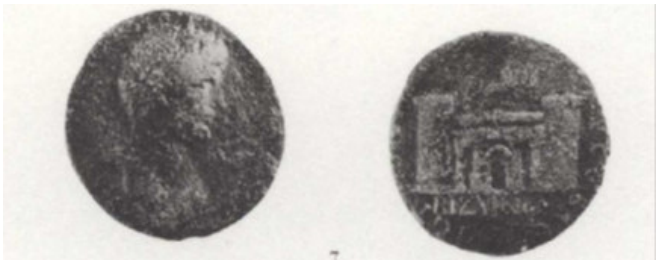


Figure 3.28 : Hadrian, 117–138 AD, city gates of Bizya (Thrace) with emperor (?) in quadriga above, governor Quintus Tineius Rufus (124–128? AD) Moushmov 3450, after Jurukova (1981).

The coins, which were issued in the time of Septimius Severus (193–211 AD), depict the city gate very similarly (Figure 3.29). On the coins of the emperor Philip II (244–249 AD), despite the slight differences where the form of the arch, the columns and the number of the niches change, the principal elements remain the same: two round towers, an arched gate with either columns or niches flanking the door, an upper part that is separated horizontally where statues were placed into the niches and a quadriga at the top (Figure 3.30, Figure 3.31).

Figure 3.29 : Septimius Severus, 193–211 AD, city gates of Bizya (Thrace) with emperor (?) in quadriga above, governor Titus Statilius Barbarus (196–198 AD) Sofia 6732, after Jurukova (1981).

Figure 3.30 : Philip II, 244–249 AD, city gates of Bizya (Thrace) with emperor(?) in quadriga above, governor Titus Statilius Barbarus (196–198 AD) Moushmov 3502, after Jurukova (1981).

Figure 3.31 : Philip II, 244–249 AD, city gates of Bizya (Thrace) with emperor (?) in quadriga above, governor Titus Statilius Barbarus (196–198 AD). Bukarest, Akademi, after Jurukova, 95/4 (1981).

On the medallions from the same period, we find the entire city surrounded by the walls in a perspective view (Figure 3.32). In these images, together with the walls, important public buildings on the forum are also depicted. The gate is shown in a similar manner to the gates on the previous coins. One row of walls consists of nine round towers two of which flank the gate. A second gate with a similar structure seems to be located on the opposite end of the city. Within the walls, four buildings can be recognised from the urban space of Bizye. Either two different longitudinal basilica-like structures or two floors of the same structure with a colonnaded façade, probably a prostyle temple, the pronaos of which is clearly seen, and a building with three parallel hipped roofs, three arched openings and a portico.[47] The last elements of forum, which can hardly be recognised, are three columns with three statues on top in the public space.

Figure 3.32 : Philip II, 244–249 AD, city of Bizya (Thrace), the walls and the forum, medallion. Berlin, Slg. Löbbecke, after Jurukova, 137 (1981).

As a result, what we get from these coin images is first an idea of the appearance for the main gate on the walls of Bizye from different periods between the emperors Hadrian (117–119 AD) and Philip II (244–249 AD) and second an image of the urban space, which was represented by the forum surrounded by the walls from the time of Philip II.

[47] For the similar examples for a comparison, look in J. Liegle, Architekturbilder auf antiken Münzen, in Die Antike, 1936, pp. 202–228; T.L. Donaldson, Architectural Medals of Classical Antiquity, 1859; http://citygate.ancients.info/gates12.htm

Although in the other examples from Thrace or closer provinces from the same period the city gates, towers and walls were similarly depicted with many architectural features in common, which implies a rather symbolic representation of the settlements in general (Figure 3.33, Figure 3.34, Figure 3.35, Figure 3.36, Figure 3.37), it is still possible to figure out some repeating particular features that are common in almost all examples of Bizye and therefore can serve as rough markers of identification for the city.

Figure 3.33 : Gate examples from the coins in Balkan provinces in the late Imperial era: Nicopolis, Traianapolis (British Museum Collection) Markianapolis (Moushmov 792), after Liegle (17 a,b,c) (1936).

Figure 3.34 : Gordian III, 238–244 AD & Serapis AE 27 of Markianopolis, City gate with walls and towers that surround the city. Moushmov 805.[48]

Figure 3.35 : Gallienus, 253–268 AD, AE 24 of Nicaea, City walls. RecGen 848.[49]

Figure 3.36 : Macrianus, 260–261 AD, AE 26 of Nicaea, Bithynia, City walls. SNG von Aulock 733.[50]

Figure 3.37 : Quietus, 260–261 AD, AE 22 of Nicaea, Bithynia, City walls. BMC 160.[51]

[48] http://citygate.ancients.info/gates12.htm
[49] http://www.wildwinds.com/coins/greece/bithynia/nicaea/i.html
[50] http://www.wildwinds.com/coins/greece/bithynia/nicaea/i.html
[51] http://www.wildwinds.com/coins/greece/bithynia/nicaea/i.html

3.1.3 Hisartepe – The acropolis of Vize

Hisartepe, which is the symbol and the dominating hill of Vize, is the core of our study (Figure 3.38). Although it was continuously occupied by different civilisations from the Thracians on,[52] this area has only been excavated once in 1938 by the Turkish archaeologist Arif Müfid Mansel, under the supervision of Türk Tarih Kurumu. According to the architect Mazhar Altan, who worked in the team of Mansel, they found out a substructure with huge arches around the citadel on a steep site ("Kale dibi"). They also observed fragments of big marble architectural elements. He mentions that this archaeological evidence points to a significant building from 2nd –3rd centuries AD, but he does not give a more certain assumption (Mansel, 1940, p. 92).

Figure 3.38 : Hisartepe on the acropolis of Vize, Aerial view, GE modified by author, (2003).

There is one more detail that is worth mentioning about Hisartepe. This information has been given by our workers in Vize, who spent their childhood on this site. They remember that it was possible to go under the hill through an opening, and they called it the grotto. They also pointed out that when a water channel under the street exploded years ago, all of the water disappeared instead of overflowing onto the street, so it probably drained through this substructure. It is possible that the

[52] Some Turkish researchers, like Mansel and Eyice, claim that the Thracians settled on Hisartepe but this argument is not based on any sources or archaeological evidence, so it is open to discussion. Regarding the topographically convenient location of Hisartepe, which has been settled by the following civilisations, we find this assumption acceptable.

substructure with huge arches revealed by Mansel in 1938 could be the same structure the workers remember. The existence of a huge substructure under the hill/citadel strengthens the idea of a significant continuous settlement. In our survey, the only remains we found on Hisartepe were remains that presumably belong to the citadel, and they will be considered in detail in Chapter 3.3.3 (Figure 3.39).

Different types of spolia were found scattered across a wide area in the public spaces, used in private gardens as decorative elements or used as the building material in the walls and Byzantine and Ottoman buildings; the spolia refers to different periods and building types. There was a wide range, varying from Ionic, Corinthian and Ionic impost capitals to column shafts, pedestals, frieze and architrave pieces, inscription panels, doorjambs and liturgical furniture pieces. Although their location on the topography does not matter because none of them are in situ, a detailed study of the spolia can still help us understand types of the buildings and the periods they date to. Also, the reutilisation of the material is an important reference point, especially for dating walls where several phases are built up over each other.

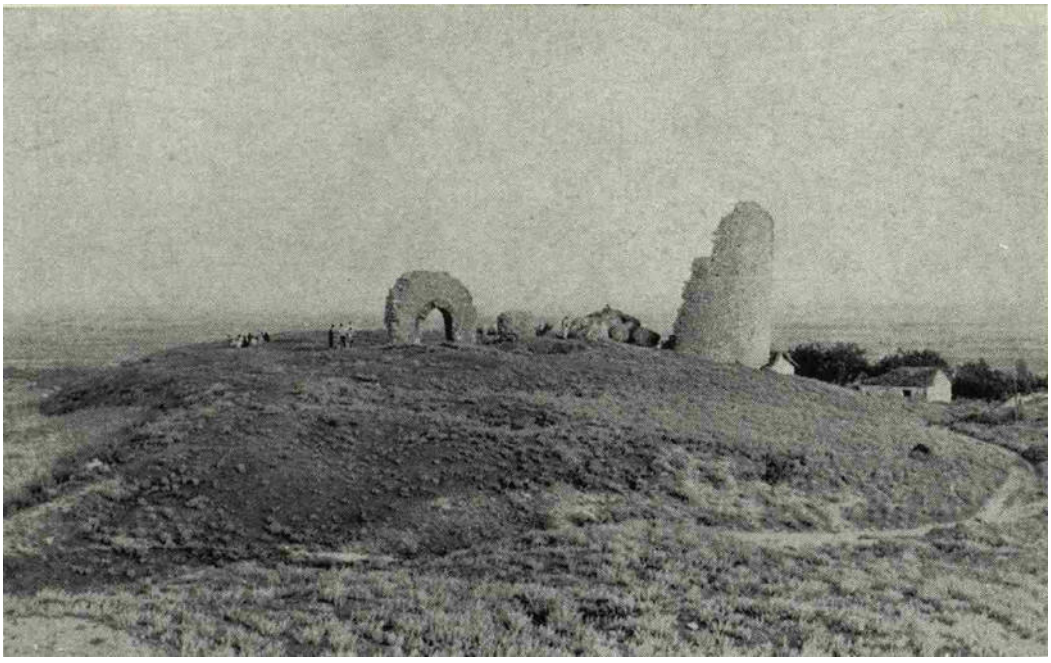


Figure 3.39 : An old photo of Hisartepe from NW in around the 1960s, after Eyice (1969).

3.2 The topographical plan of the city

During 2011 and 2012, two summer surveys were organised in Vize with the collaboration of Istanbul Technical University and Ludwig-Maximilians University.[53] The main aim of this field study was an extensive documentation of the walls and other archaeological remains on the acropolis of Vize and to produce a digital topographical plan. Groups of students of geomatics engineering, architecture and archaeology from Istanbul Technical University worked together in each survey. Before the work began, a team from Istanbul Technical University Geomatics Engineering Department set the main polygonal points on the acropolis with GPRS, which allowed for measurements to be taken with a total station (Figure 3.40, Figure 3.41).[54] The data was digitised simultaneously with the fieldwork during the second survey season and then continued in 2012 and 2013. Eventually, all the hand drawings, the terrain model of acropolis and some particular areas were reproduced with AutoCAD 2012. Many mortar samples from different parts of the walls and some monuments were collected for analysis at the material laboratory of Istanbul Technical University's Architecture Faculty. Also, the spolia found scattered in the public spaces or built in the walls of the historical buildings were documented in detail.

Figure 3.40 : Total station polygonal points, T. Özlüdemir (2011).

[53] This survey was financially supported by Gerda Henkel Stiftung Germany.
[54] The TC 805 Leica Total Station and GPS 1200 CORS System was used in the measurements. The coordination system is itrf. For the terrain model a second measurement was undertaken in September 2011.

Nokta No	Y	X
1	563769.002	4604912.991
2	563755.266	4604955.622
3	563820.197	4605070.116
5	563870.951	4605125.382
24	564042.103	4604738.568
25	564098.159	4604832.154
1201	563855.238	4604713.187
1202	563843.725	4604769.732
1203	563915.410	4604740.550
1204	563934.556	4604766.507
1205	564000.402	4604715.711
1206	564016.816	4604825.453
1207	563968.766	4604864.179
1208	564002.583	4605015.911
1209	564027.955	4605205.301
1210	564007.815	4605081.950
1211	564026.023	4605208.787
1212	564118.429	4605262.188
1213	564096.113	4605258.929
1214	564181.241	4605267.137
1215	564163.588	4605278.621
1216	563840.028	4605194.916
1217	563840.875	4605221.660
1218	563642.505	4604908.807
1219	563649.797	4604893.949
1220	563806.890	4604923.775

Figure 3.41 : Total station polygonal points, E. Aygün (2012).

The data gained in the surveys of 2011 and 2012 was unified into a single general topographical plan of the acropolis of Vize. The digital topographical 3-dimensional plan presents the entire preserved parts of the city walls and other Byzantine and Ottoman architectural remains in Vize. It becomes possible to read this complete picture of the topography when the walls, the secular and ecclesiastical buildings and the remains come together with the physical features of the landscape. The entire concept of the fortification system in particular can be better interpreted when considered together with the structure of the topography (Figure 3.42).

A letter coding system was utilised in order to differentiate the building types in this work. According to this system, W stands for walls, T stands for towers in the walls, WP stands for the remains which presumably belong to the walls or which lay on the walls, WT stands for the water supply system, B stands for buildings the function of which is clear and U stands for unidentified buildings. These letters have also been numbered since there are many remains from each type (Figure 3.43).

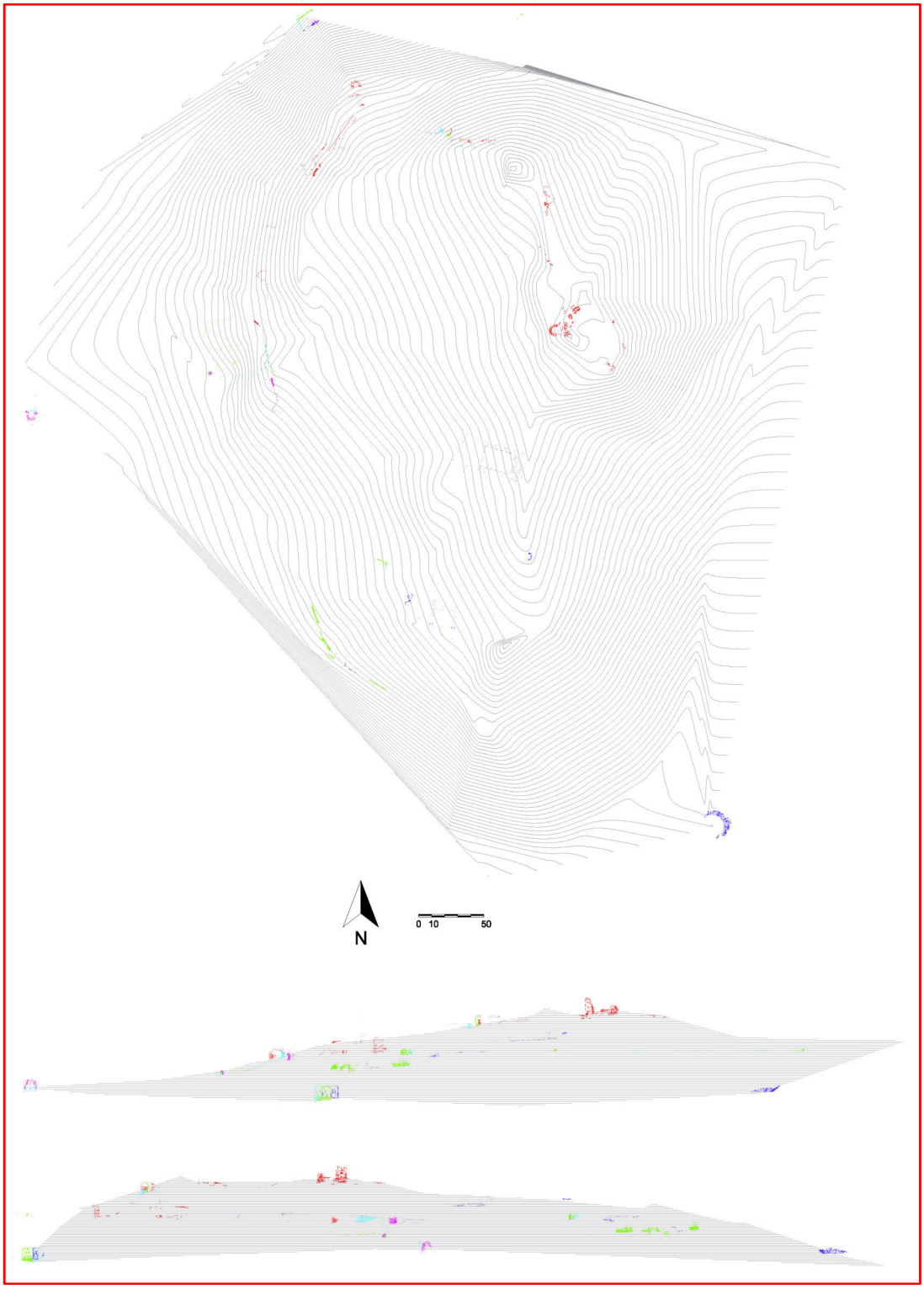


Figure 3.42 : 3D terrain of Vize with the total station points of the buildings, plan, and views from S and from E, image by author (2012).

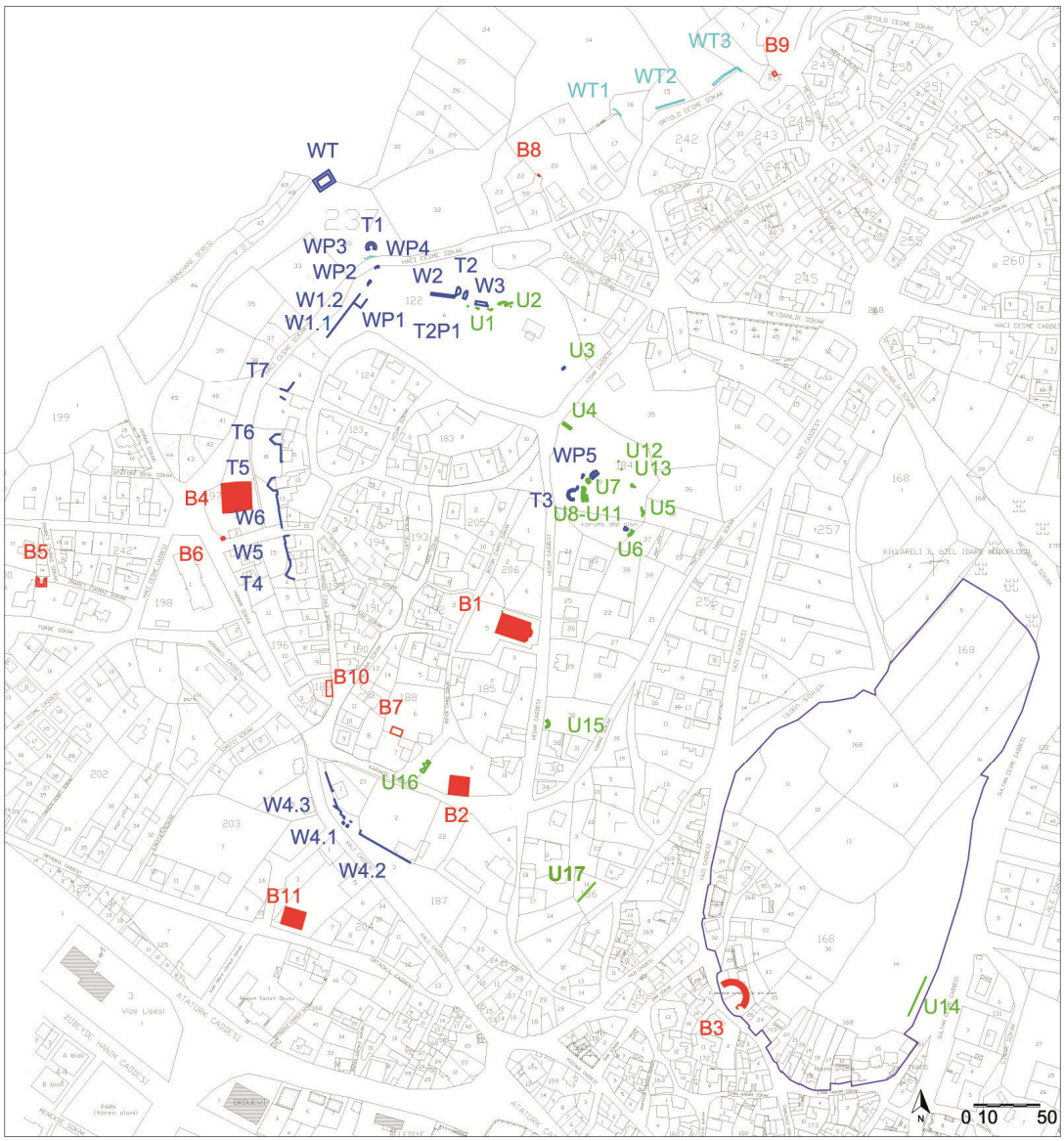


Figure 3.43 : The coding system of Vize Survey, drawing by author (2012).

The so-called acropolis of Vize defines a larger area, which covers Hisartepe on the north (Figure 3.44). The acropolis has an elliptical area of ca. 10 ha, which is surrounded by a presumably 1.2 km long fortification system. The main aspects of an early Byzantine city do exist in Vize. Within the walls, the topography consists of a citadel on the highest point at the east side, with remains of a gate, a round tower and some fragments of unidentified buildings — probably the military headquarters of the stronghold. Hagia Sophia, the middle Byzantine cathedral of Vize, the predecessor of which was a 6th-century basilica, dominates the topography with its central location, on the second highest spot after the citadel. It was converted into a mosque in the 15th century and currently functions as a mosque after long years of

disuse and an inadequate restoration in 2005. The remains of some early Christian buildings, a Byzantine cistern that is currently inaccessible, an Ottoman fountain, an Ottoman bath and a square-planned, domed building, which was converted into a mosque in the early Ottoman period, are the rest of the buildings that are located nearby. Outside of the walls a few Ottoman buildings are located such as the so-called *imaret* (a Ottoman soup kitchen), a building which resembles a tomb, a bath, a fountain and an unidentified rectangular vaulted building which could not be documented because it was in private possession and access was not granted (B11). On the northern edge of the acropolis, a round tower, which was probably previously connected to the fortification system, sits on the main rock at the edge of the hill and just beside the modern street as an independent structure. What is remarkable about this building is that although it looks like an independent tower outside the fortification line, most probably it had connections with some other structures nearby. A small branch of the antique water supply system, which used to transport water to the city from Kınalı Vadi on the north-eastern outskirts of Vize, runs along the curve of the slope and can be observed on the north side of the modern street today. The last spot where it becomes visible in the city is the spot in front of the round tower, where it makes a turn and disappears under the modern street. Another significant structure, which may have a connection to the round tower, is a huge and solid rectangular building at the foot of the hill in a valley below the round tower. The function and the dating of this fortified building in a streambed (Tabakhane Deresi), can be considered together with the round tower above.

In addition to the above-mentioned monuments, we know about some other Byzantine and Ottoman buildings from historical sources. The sources from the 19th century mention the remains of other churches around the Hagia Sophia, but today there are no traces from these buildings in situ, except for one apse with a synthronon. Some Ottoman buildings, like a caravansaray, a *zaviye* and a *medrese*, which are mentioned in the archival documents of the pious foundation institutions from the 16th century and the notes of the Ottoman traveller Evliya Celebi in the 17th century, seem to have disappeared from the topography of Vize. With the material evidence of the topography, it can be assumed that the Byzantine city and the Ottoman city partly overlap. Some parts of the fortification system were either repaired or built in the Ottoman period. The two biggest ecclesiastical buildings were

converted into mosques and were used until the third mosque was built outside walls and replaced a church in the 20th century. Fountains and a bath were built within the walls. According to the city plan of Dirimtekin, a large caravansaray also existed within the walls, today the site of an abandoned military police (*jandarma*) station. But, according to some researchers, this structure was possibly a Byzantine cistern previously. Although we could not reach that Byzantine cistern, we know that there is a vaulted brick structure in the garden of the old *jandarma* building and probably partly under a private property. The rectangular building in the streambed (WT) might have been built in the late Byzantine period but probably was reused in the Ottoman times and had defensive functions. Ferhat Bey Hamamı (a bathhouse) and a fountain are located in the public space of the later Ottoman period, where a small mosque and a coffeehouse also used to stand. These buildings survived until the 1970s.[55] The so-called *imaret* is also located outside the walls, together with the above-mentioned unidentified vaulted structure. Although the *imaret* building is known as the soup kitchen among the residents of Vize, the architecture of the building strongly resembles a tomb.

[55] The information was told to us by the local residents.

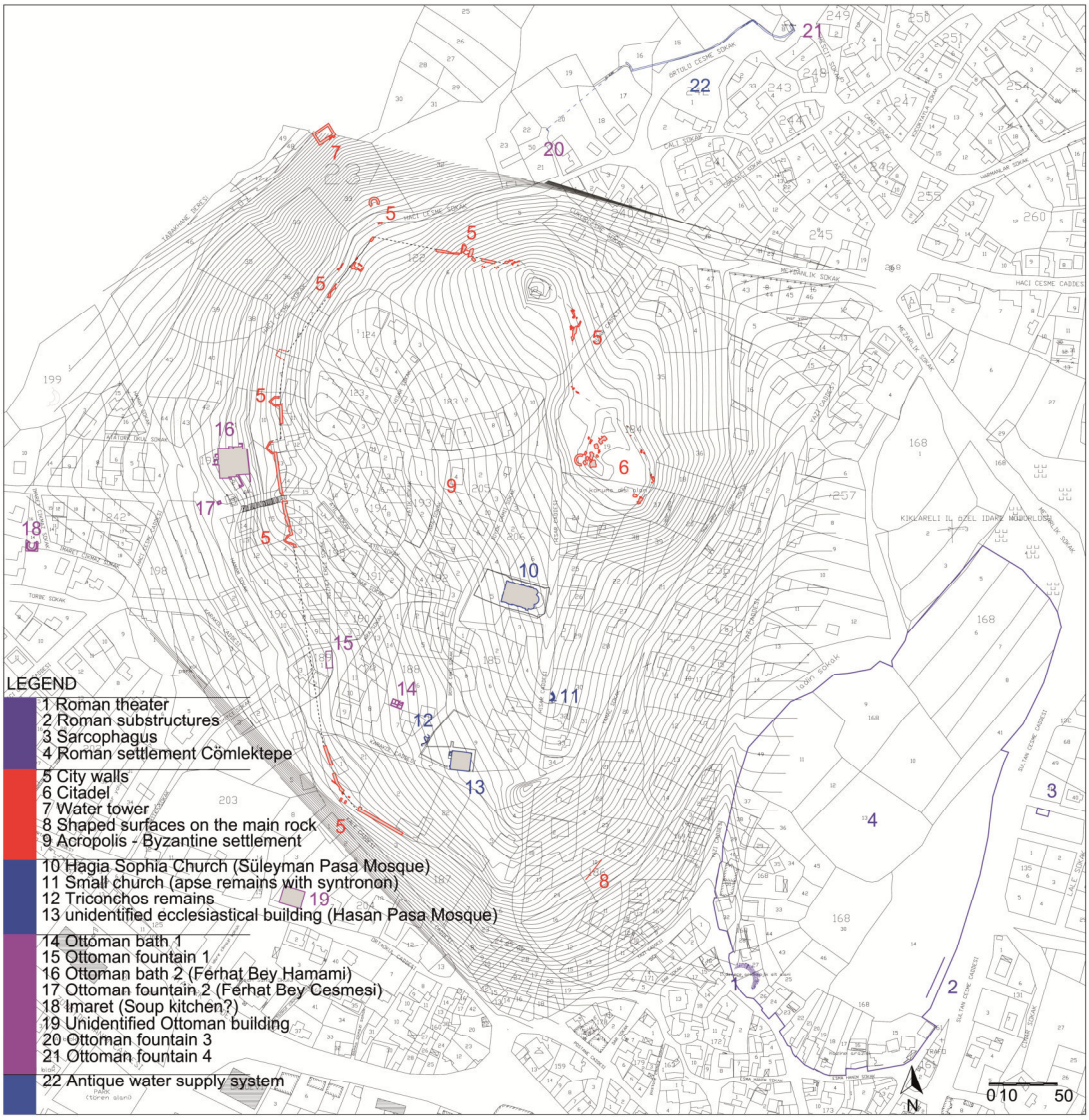


Figure 3.44 : The topographical plan of Vize, showing Roman, Byzantine and Ottoman remains and monuments, drawing by author (2013).

3.3 Documentation of the walls

The Byzantine fortification system of Vize consists of the walls, which enclose an elliptical area around the acropolis. From the walls, only the western and northwestern parts, which are approximately 300 m long, can be observed today. The western curve from north to the south, which was presumably about 900 m long, is missing.

It is not known when and why this part collapsed. During our survey, we discovered rectangular-shaped surfaces on the main rock (U17), at the eastern side on the edge of a steep slope, on an empty field between the houses on the upper part of Dik Sokak, which continued about 20 m (Figure 3.45, Figure 3.46, Figure 3.47).

Although we cannot be sure if they are the foundation remains of the walls, it is a concrete evidence for a construction at a spot, which is quite convenient for the walls. Thus, it is not very difficult to read the topography and assume the possible track of the eastern walls when we consider the altitude of the closest remains, follow the contour lines and notice at the other signs, like the streets on the landscape.

Neither the outer walls nor evidence of a ditch have been found so far. Three pentagonal towers and a U-shaped tower cling to the walls on the west. On the highest spot of the acropolis stands a citadel with a half-preserved circular tower. A second similar, half-preserved circular tower is found on the outside of the wall line on the north edge of the acropolis.

The documentations of the researchers from the 19th and the beginning of the 20th century do not give a clue as to the percentage of the walls still intact at the time.[56] The citadel is the only that offers archaeological evidence of an architectural layout from the eastern side of the walls, but its connection to the rest of the walls is unclear and will be discussed in the following chapters. The oldest image of the citadel, from the Russian occupation, shows the situation in the year 1829, which is almost exactly same as today.

The preserved part of the walls of Vize consists of curtain walls and towers with different forms at frequent intervals on the west. The material, the construction technique and the function differ at different sections of the wall, so it was vital to accurately document the features in order to interpret the results.

[56] Considering that Vize expanded and spread from the acropolis towards the Ergene Plain only after the Balkan War in 1912, the 19th-century city must have been located on the acropolis only, Th. Lakidis, Historia Byzyes kai Mideias, Istanbul 1892; according to the description of the walls of Ioannidis in 1886, the acropolis was surrounded by walls all over except the northern part, the stones of which have been taken away for reuse in the construction of a bridge on the way to Arcadiopolis (Lüleburgaz), S. Ioannidis, Ἱστορία της Βιζύης ανατολιχής Θράχης, Εταιρεία Θραχιχων Μελετων 33, Athens 1954, 1–19.

Figure 3.45 : The shaped surfaces on the main rock at the eastern side of the acropolis, photo by author (2011).

Figure 3.46 : The shaped surfaces on the main rock at the eastern side of the acropolis, photo by author (2011).

Figure 3.47 : The shaped surfaces on the main rock at the eastern side of the acropolis, same spot from a different direction, photo by author (2011).

On the basis of this survey, and according to the epigraphic and the numismatic evidence, the historical records and the mortar analysis, the remains of the fortifications of acropolis of Vize can be attributed to several construction phases; however, this aspect is still debatable. Here I will present the data gained from the survey and describe the walls fragment by fragment in order to open this discussion.

3.3.1 Curtain walls

The curtain walls around the acropolis of Vize can be categorised into two types: terrace walls and free-standing walls.

On the west and north-west sides of acropolis, all the remaining walls that run along a distance of 220 m support the terrain beneath. Thus, they reveal only one façade, facing to the Ergene Plain, and function as terrace walls. This seems to be the original situation, which is caused by the steep slope of the topography. These terrace walls were used as substructures for the small-scaled residential buildings that were constructed during the Ottoman period, but we do not have any information about the exact date of construction. Today, the terrace walls still support these mostly rebuilt or renovated houses, the oldest of which remain from Balkan Wars (1912–13) (Figure 3.48, Figure 3.49). On some of the spots, it is possible to walk on top of the wall, but the depth of the wall is not apparent except for one partial section, which emerged after a collapse. The ground level at the back side of the walls is almost the same with the preserved height of the façade since a new levelling must have been done during the construction of the houses. Three pentagonal towers, which project from the terrace walls, are mostly intact and they will be considered in the Towers Chapter (3.3.2) below.

Figure 3.48 : The terrace walls of Vize and the houses, Gipson archive, Sofia, (1912–13).

On the north of the terrain, at a higher point than the terrace walls, are free-standing walls on a linear east-west direction in two discontinuous sectors (Figure 3.50). After the last corner of the terrace walls on the north, the free-standing walls appear on a higher elevation and at a different direction depending on the topographical curves. The connection between the terrace walls and the free-standing walls — if ever existed — is today lost.

Figure 3.49 : The terrace walls of Vize and the houses today, image by author (2013).

Figure 3.50 : The free-standing walls of Vize, image by author (2012).

3.3.1.1 Construction phases (W1-W6)

No inscriptions and reliefs from the walls exist in situ. No other distinctive architectural features of fortifications like wall walks, stairs, passages, upper floors or battlements are preserved, except a few unclear parts. We do not even know the exact track of the walls on the east because no excavation was carried out within this project. These circumstances make it harder to discuss the dating of the walls, but, still, what was gathered through two summer campaigns provides sufficient material to consider the construction phases of the walls of Vize (Figure 3.51).

The preserved part of the walls of Vize display different materials, masonry and typological features, which are to be considered in differentiating the phases. Masonry is one of the most important criteria in dating the walls, but it should be observed very carefully since it can be very deceiving. Normally different types of masonry indicates different periods, but it must always be remembered that the sections on a line of walls, even if they have strikingly different appearances, may not necessarily belong to different periods. Likewise, very similar masonry styles, which might be assumed to be contemporaneous, may belong to different construction phases. In the same period, it was possible to find brick walls, stone walls and alternating bands of brick and stone walls in different parts of the empire, depending on which material is easy to provide in that region. Therefore, masonry does not always point to a linear chronological development.

It must also be emphasised that the construction materials are mostly deteriorated and require special treatment and analysis for dating. Furthermore, since more than half of the walls are missing, and the preserved parts have lost their original shapes, a typological approach cannot answer all of our questions.

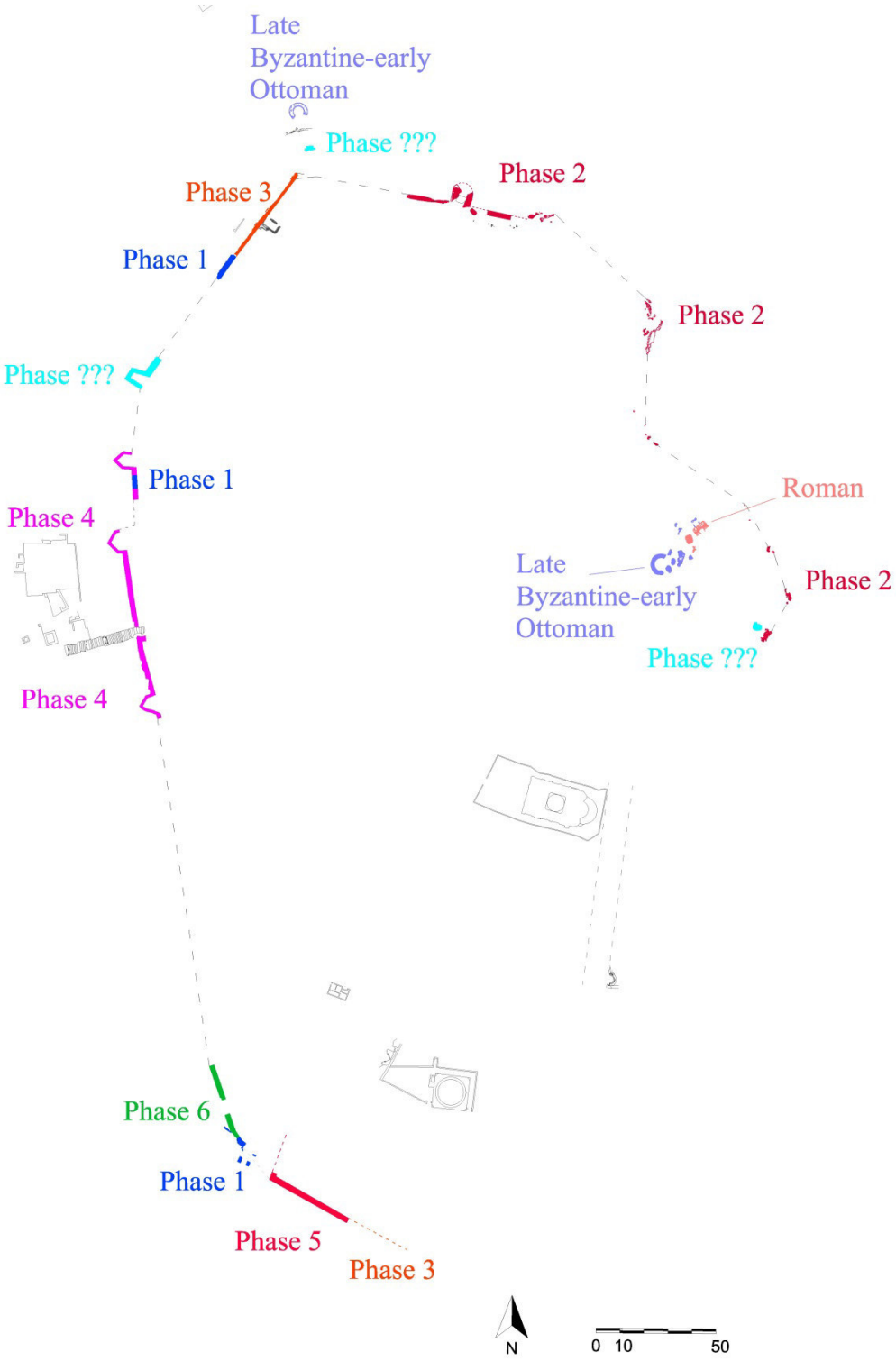


Figure 3.51 : The construction phases of the walls of Vize, plan, drawing by author (2014).

3.3.1.1.1 Phase 1

Description: The longest sector of Phase 1 is found on NW of the acropolis. W1.1 is a 26-m-long terrace wall line that runs parallel to Hacı Çeşme Caddesi on the slope of the hill (Figure 3.52, Figure 3.53). In this opus quadratum masonry style, the brittle rubble core with big bricks and stone pieces is faced with large limestone blocks, which were bound without mortar in a dry stone technique. The rubble core does not integrate in the facing, and they behave like two different structures, which reminds us of early Roman masonry (Figure 3.58, Figure 3.59).

The surfaces of the stones at the façade were deeply eroded due to the climatic conditions. The socket level can be taken from the projecting course of the stones at the base, which looks like a plinth (Figure 3.54). From that level until the latest stone at the top, the height is measured 6 m the highest, with nine courses of stones. After about the fifth course, smaller sized stones were used on the façade; this is most probably a later repair (Figure 3.56). The battlement level is unclear since the top must have collapsed and it is mostly covered by earth, which does not allow for clear observation. It is not even possible to presume the width of the wall, although it is the only spot where people are able to walk on the top and at the very edge of the walls (Figure 3.55). The visible width of the stones at the top are longest we found, around 2.40 m. W1.1 seems to connect with W1.2 to the east, but it is not possible to follow the traces from the top. At the eastern end of this wall stands a column-like part of the wall, with two rows of stones indicating a connection to W1.2 (Figure 3.52).

The exact height of the walls cannot be easily presumed since, without a proper excavation, the pile of earth and rubble on the ground prevent an accurate analysis of the socket level. From the last stone on the top, it would be reasonable to assume a battlement height of at least a man's height, which would raise the height of W1.1 up to roughly 7.5–8 m.

Another small sector of the terrace walls on the west bears similar features to Phase 1. On this spot, this phase (W4.1) seems to have remained between other walls, and it is difficult to differentiate them due to later repairs and additions (Figure 3.63). The basic style observed in all of the walls of Vize — of the mortared rubble faced with stone blocks — is also here observed. Unfortunately, very little survives from these

part of the walls (H: ca. 5.5 m, L: 5.5 m). What can certainly be observed is that the stones are relatively well-shaped limestone blocks bound without mortar. From the fourth course on, the pattern of this phase is degraded with repairs of a mortared rubble and courses of bricks. A different line of the wall intersects and projects the walls at an angle of ca. 58° on the southern end (Figure 3.65).

Highlights: On the western end of W1.1, the upper stones from the fifth course on project from the wall (Figure 3.54, Figure 3.55, Figure 3.56). They look like corbels that would have supported an upper element, like a machicoulis, which used on some critical parts of the walls. Dirimtekin observed this projecting upper part of the stones and claimed that it was a watchtower-like structure on the top of the walls (Dirimtekin, 1963, p. 22). At this end, the walls finish with a right angle with clear-cut stones. The fourth stone from the ground is cut in a way that looks like the spring line of an arch, and the fifth stone over it continues as a part of the doorjamb (Figure 3.58, Figure 3.59). The other elements, which complete the frame of the door, are missing, so it is not easy to recognise this opening, which could have been a secondary door for equipment, etc., rather than a main gate. The depth of the opening is roughly 2.40 m, and the presumable minimum height is 2.20 m (Figure 3.58).

However, in one of the old photos of Vize from the beginning of the 20th century, for an unknown reason, some rows of stones on the right seem to be projecting from the façade onto the lower courses (Figure 3.60). It might have been related to the gate on the right. We can be absolutely sure, however, that there is at least three different phases of this wall. The first six courses of big stones probably belong to the oldest phase, whereas the upper four smaller courses of blocks are newer. A third phase is obviously seen on the left side, above the smallest blocks on the top. Probably together with this last phase, some structures (presumably houses from the modern times) were built up on the top of the walls. Today, no remains of these structures are left.

Further to the south-west, in the garden which lies just after W1.1 (plot nr. 77), the remains of the wall line and a probable rectangular tower were found under the ground level. [57] Unfortunately, not enough evidence could be documented to discuss the masonry and other features.

[57] The owner of the house was very kind to invite us inside and show the remains in his garden. We were able to measure some corner points, but, unfortunately, we don't have any images.

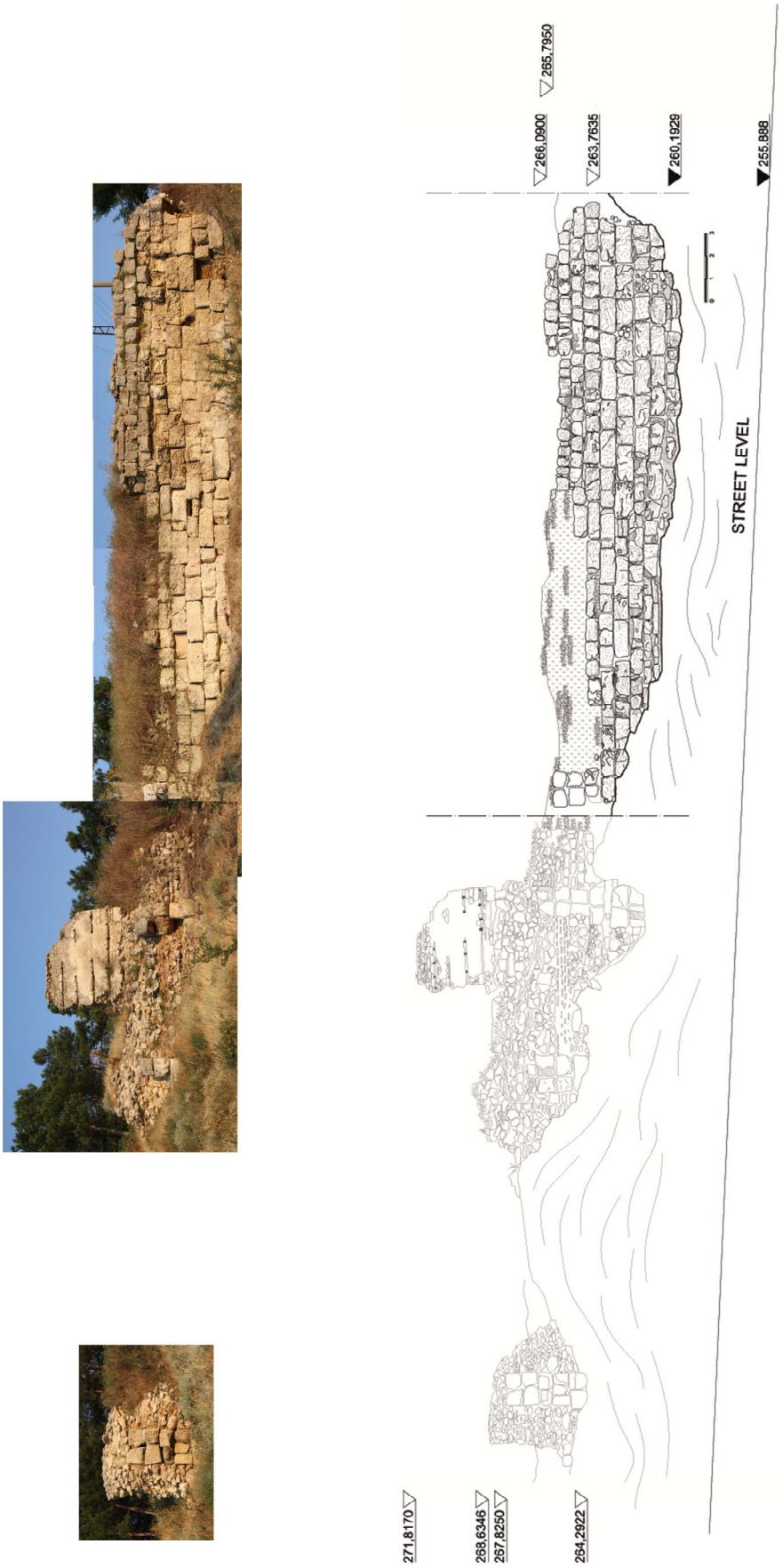


Figure 3.52 : Terrace walls, W1.1, W1.2, WP1, WP2, photo by author (2013).

Figure 3.53 : Terrace walls, W1.1, W1.2, WP1, WP2, photo by author (2013).

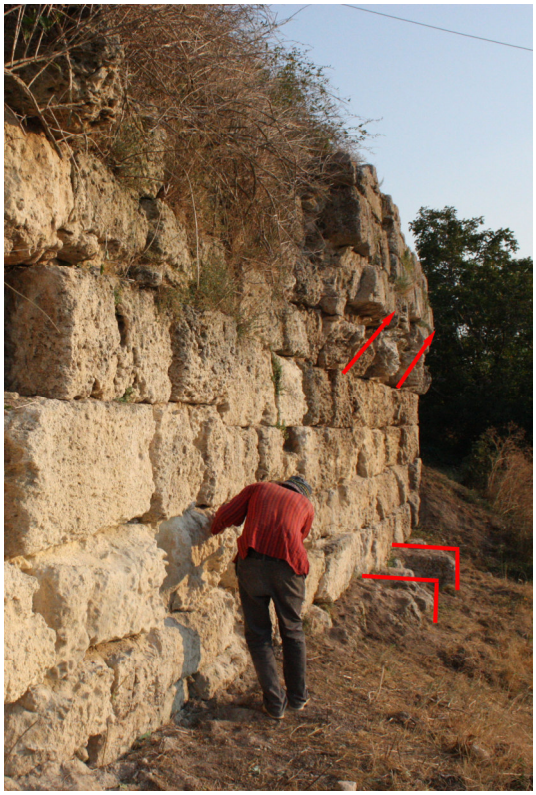


Figure 3.54 : W1.1, street façade showing the projecting upper stones and the plinth, photo by author (2011).

Figure 3.55 : W1.1, upper part of the walls, top of the terrace, photo by author (2011).

Figure 3.56 : W1.1, street façade, the projecting upper stones, photo by author (2011).

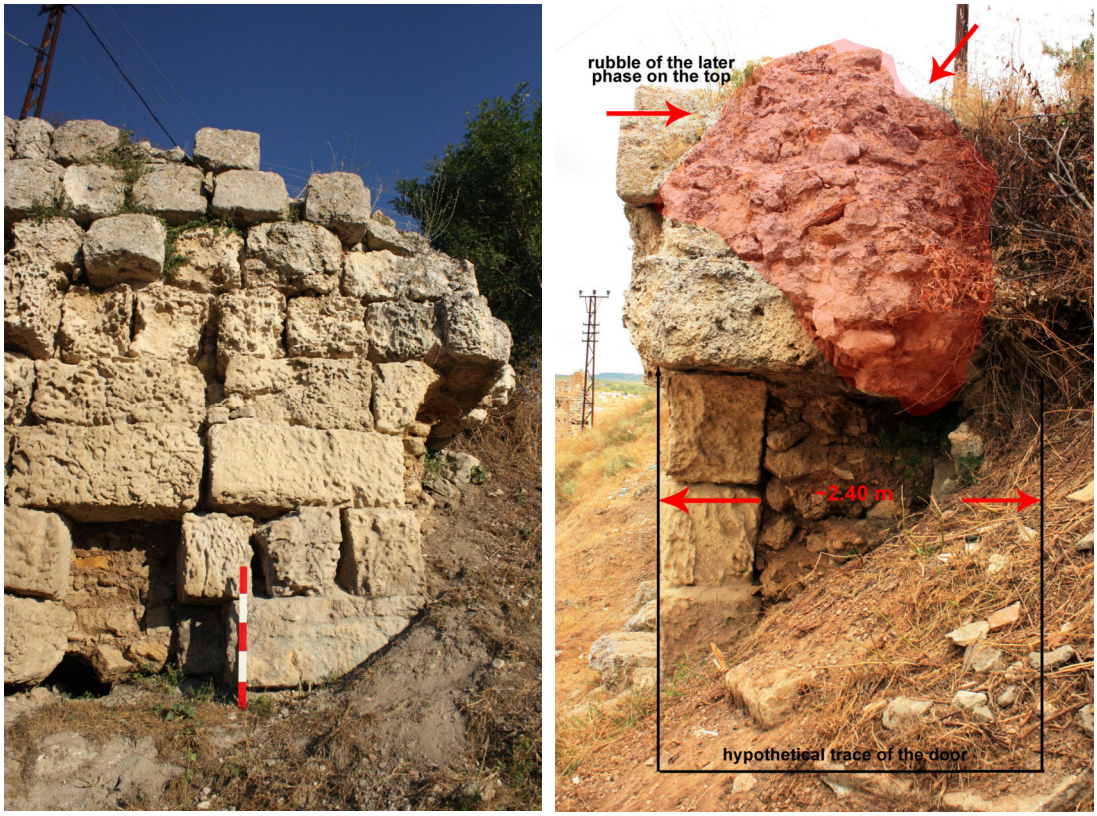


Figure 3.57 : W1.1, the opening on the street façade on the right, image by author (2013).

Figure 3.58 : W1.1, cross-section of the opening on the street façade, photo by author, (2013).

Figure 3.59 : W1.1, the opening on the street façade, after Dirimtekin (1963).

Figure 3.60 : W1.1, façade and projecting stone courses, Gipson archive, Sofia (1912–13).

In the sector W4.1, at the south end, stand two independent wall pieces parallel to each other, which most probably belonged to a rectangular tower (Figure 3.64, Figure 3.65, Figure 3.66). Less than half of the height of the walls is preserved, so it is impossible to presume the height, but the approximate length and width of this structure are, respectively, 6 m and 5 m. It is only possible to observe the stone rubble core of the walls. The stone construction of a probable division of spaces or the support against the steep terrain between the walls are still to be seen. A small wall piece continues from behind the tower to the south direction.

Another piece of wall, which is preserved only on the foundation level, lies towards the north and probably belongs to W4.1 (Figure 3.63, Figure 3.65). Together with this part, the orientation of the tower, the main wall piece on the north and the small wall piece on the south are the same; this orientation differs from the rest of the W4 walls, and it might indicate that they belong to the same construction phase.

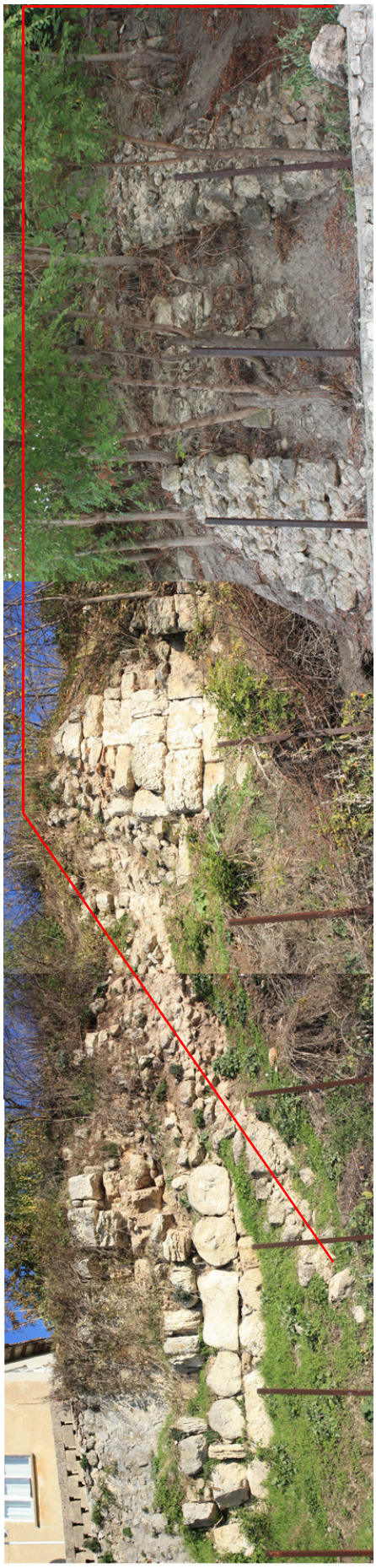
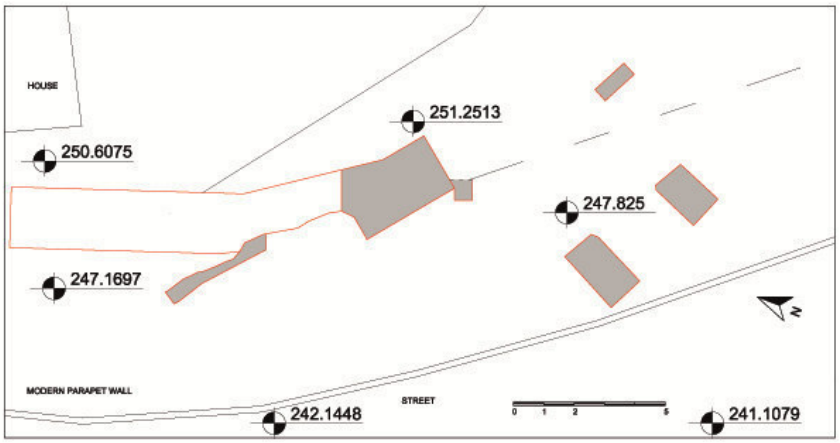


Figure 3.61 : W4.1, façade, removing the plants, photo by author (2011).

Figure 3.62 : W4.1, façade, removing the plants, photo by author (2011).

Figure 3.63 : W4.1, façade, photo by author (2012).

Figure 3.64 : W4.1, possible remains of a tower, photo by author (2011).



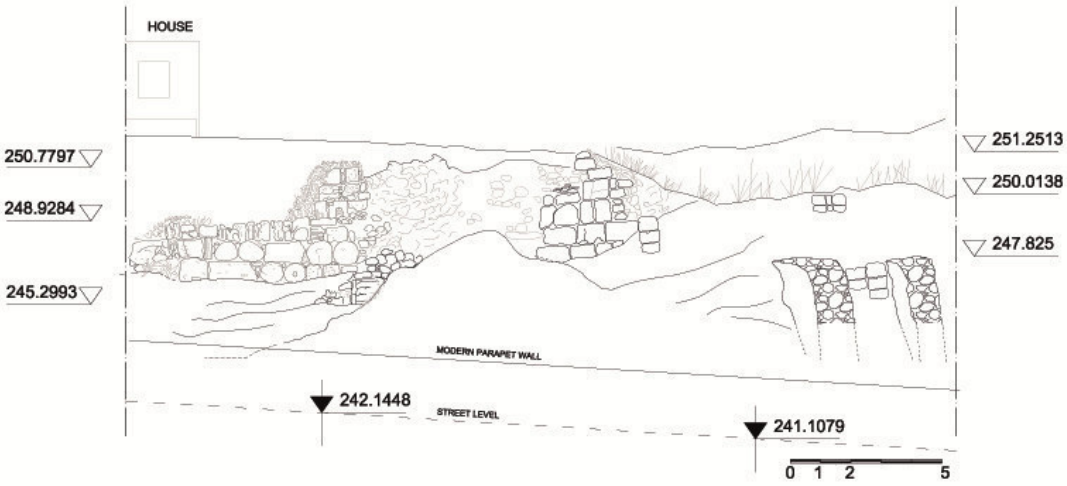


Figure 3.65 : W4.1 (Phase 1), plan, by author (2014).

Figure 3.66 : W4.1 (Phase 1), elevation, by author (2014).

Discussion: In the 2nd century AD, the expansion policies of the Roman Empire were embodied by the urbanisation and building activities of Emperor Trajan (53–117 AD). The Roman camps on the Danubian frontiers were changing with the expansion, and civilian settlements were flourishing around them. Within the new organisation of the new Roman provinces after 46 AD, the first Roman colonies in the province of Thracia were located around former Thracian settlements. Thus, the first civilian towns were founded either on the old settlements, like Pautalia, Philippopolis, Serdica, Hadrianopolis and Bizye, or entirely new settlements, like Augusta Traiana, Marcianapolis Nicopolis ad Istrum, etc. Some of these cities, including Bizye, gained the privilege of protection of the emperor with the title *Ulpia*. Hadrian (117–138 AD), Antonius Pius (138–161 AD) and Marcus Aurelius (161–180 AD) continued the building activities initiated by Trajan. Under these emperors, starting from the Haemus until the Istranca Mountains, the important urban centres, which were located in the Thracian plain and along the main roads leading to Byzantium were fortified (Biernacka-Lubańska, 1982, p. 234). That was when the very first Roman walls of Bizye were built.

The sources pertaining to the construction of the Roman walls of Bizye are scarce. Except for the wall itself, no other archaeological evidence exists on site to support the study of the walls. The first city wall depictions of Bizye can be found on the coins of Hadrian (117–119 AD),[58] which give us the first clue about the walls. We do not really know if fortifications were built under Hadrian in Bizye or not; we have no evidence to discuss if the already-existing walls were renovated with new gates or maybe they were only planned but not realised. The coins of Septimius Severus (193–211 AD) and Philip II (244–249 AD) are the final Roman coins showing the fortified city of Bizye in the first half of the third century.

As Rizos (2010, pp. 20–21) claims, after the Trajanic reorganisation of cities and in the calm atmosphere of the 2nd century, the systematic constructions of fortifications started first in the 170s in the province of Thrace. Epigraphic proof from Serdica, Philippopolis and Callatis indicates that the fortifications were built under Marcus Aurelius (161–180 AD). However, an inscription from Bizye proves that it must have been one of the first fortified cities in the Thrace in the 2nd century AD,

[58] See above, Chp.3.1.2.1.

probably before the ones given above. This inscription regarding the walls of Bizye, which was found in Çorlu and now kept in the Edirne Museum (Inv. Nr. 1787/31), informs us about the two emperors, the governor in charge and the civilian supporters of the job (Taşlıklıoğlu, 1961, pp. 67–68) (Figure 3.67, Figure 3.68).

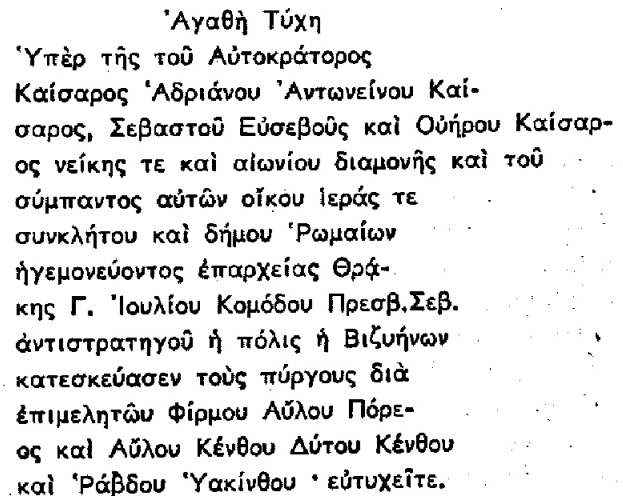

Ἀγαθὴ Τύχη
Ὑπὲρ τῆς τοῦ Αὐτοκράτορος
Καίσαρος Ἀδριάνου Ἀντωνείνου Καί-
σαρος, Σεβαστοῦ Εὐσεβοῦς καὶ Οὐήρου Καίσαρ-
ος νείκης τε καὶ αἰωνίου διαμονῆς καὶ τοῦ
σύμπαντος αὐτῶν οἴκου ἱεράς τε
συνκλήτου καὶ δήμου Ῥωμαίων
ἡγεμονεύοντος ἐπαρχείας Θρά-
κης Γ. Ἰουλίου Κομόδου Πρεσβ.Σεβ.
ἀντιστρατηγοῦ ἡ πόλις ἡ Βιζυήνων
κατεσκεύασεν τοὺς πύργους διὰ
ἐπιμελητῶν Φίρμου Αὔλου Πόρε-
ος καὶ Αὔλου Κένθου Δύτου Κένθου
καὶ Ῥάβδου Ὑακίνθου · εὐτυχεῖτε.

Figure 3.67 : Inscription of Bizye walls, after Taşlıklıoğlu (1971).

According to that, during the reigns of the emperors Hadrianus Antoninus (Antoninus Pius, 138–161 AD) and Verus (Lucius Aurelius Verus, 161–169 AD), when Gaius Julius Commodus (*Orfitianus*) was the Thracian governor (*legatus Augusti pro praetore Thraciae*), he has either built up or repaired the towers of the walls of the city of Bizye with the support of Firmus the son of Aulus Pores, Aulos the son of Kenthos, Dutos the son of Kenthos and Rabdos the son of Hyakinthos (Taşlıklıoğlu, 1961, pp. 67–68). Although the governor in charge is mentioned in the inscription, it is not possible to interpret if this project was completed through a state initiative, civic funding or private contributions. Gaius Julius Commodus was the governor of Thrace under Antoninus Pius, but the prosopography does not give a certain date about his assignment (Stein and Peterson, 1952–1966, pp. 200–201). What we know is that he was in charge in the last years of Antoninus Pius (Stein, 1920, p. 22–23).

Another inscription found in Burgas can be securely dated to 154/155 AD because it gives the exact period of the tasks of the emperor. According to the text, the emperor Antoninus Pius, who was in his eighteenth year of tribunician power and in his fourth consulship (154–155 AD), ordered the governor G. J. Commodus to construct defence buildings in Thrace (Soustal, 1991, p. 234). Thus, the building activity in

Vize must have been included in that task as well, having started probably around 154/155 AD under Antoninus Pius, with the supervision of Commodus, and could have continued under the emperor Verus until 161 AD.

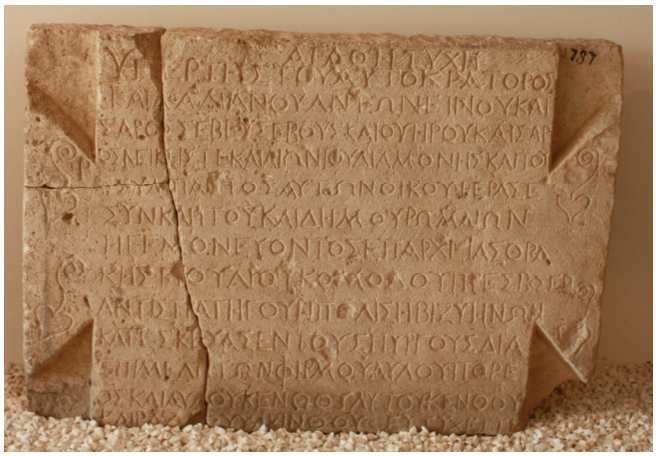


Figure 3.68 : Inscription of Bizye walls, tabula ansata, marble, Inv.Nr. 1787/31, Edirne Museum, photo by M. Çavdar (2012).

3.3.1.1.2 Phase 2

Description: The entirety of the free-standing walls (W2-W3) reveals the second construction phase. These two wall sectors are found on the northern end of the wall circuit, on a hill called Çamlık. The first sector of the free-standing walls (W2) spans a distance of 18 m, and at its highest point has a height of 5.5 m. Before the second sector (W3) of the walls is a half collapsed U-shaped tower, and W3 stands even further out because the connection to the tower is missing. The length of W3 is 10 m and the preserved height is 4.5 m, maximum. These walls are relatively thin walls: W2 is 1.50 m deep without the inner façade coating, which was probably dismantled for secondary use. W3 measures 1.80 m deep, including the coating (Figure 3.69, Figure 3.70, Figure 3.71).

The typical masonry of Vize — the mortared rubble coated with a facing of stone blocks — is found also in this part of the walls. The stones are limestone blocks, which may not have been necessarily produced for the coating of this wall. These probably second-hand stones were not shaped perfectly, yet the masonry work was clearly done in a careful manner. The structure sits on the main rock. The lower stones are bigger than the upper courses, and although a regular headers and stretchers system is not the case here, in the first course from below in W2, alternating headers and stretchers blocks are used (Figure 3.72). In the upper courses,

irregular alternating broad and narrow courses are applied. In W3, narrow courses on the upper parts are used for levelling of irregular stones, which proves that these stones are secondary material (Figure 3.72). The inner façade coating of W2 is not present anymore (Figure 3.73). The preserved inner coating of W3 shows that the inner facades are made up of much smaller stones (Figure 3.74). Although the walls seem to have been built with very thin joints, in some parts of the façade of W2 irregularly arranged joint mortars are observed. W3 does not have any mortar joints. The rubble core is made up of big gravel pieces and a beige homogeneous mortar. Except for the joint mortars, no brick is used in this phase.

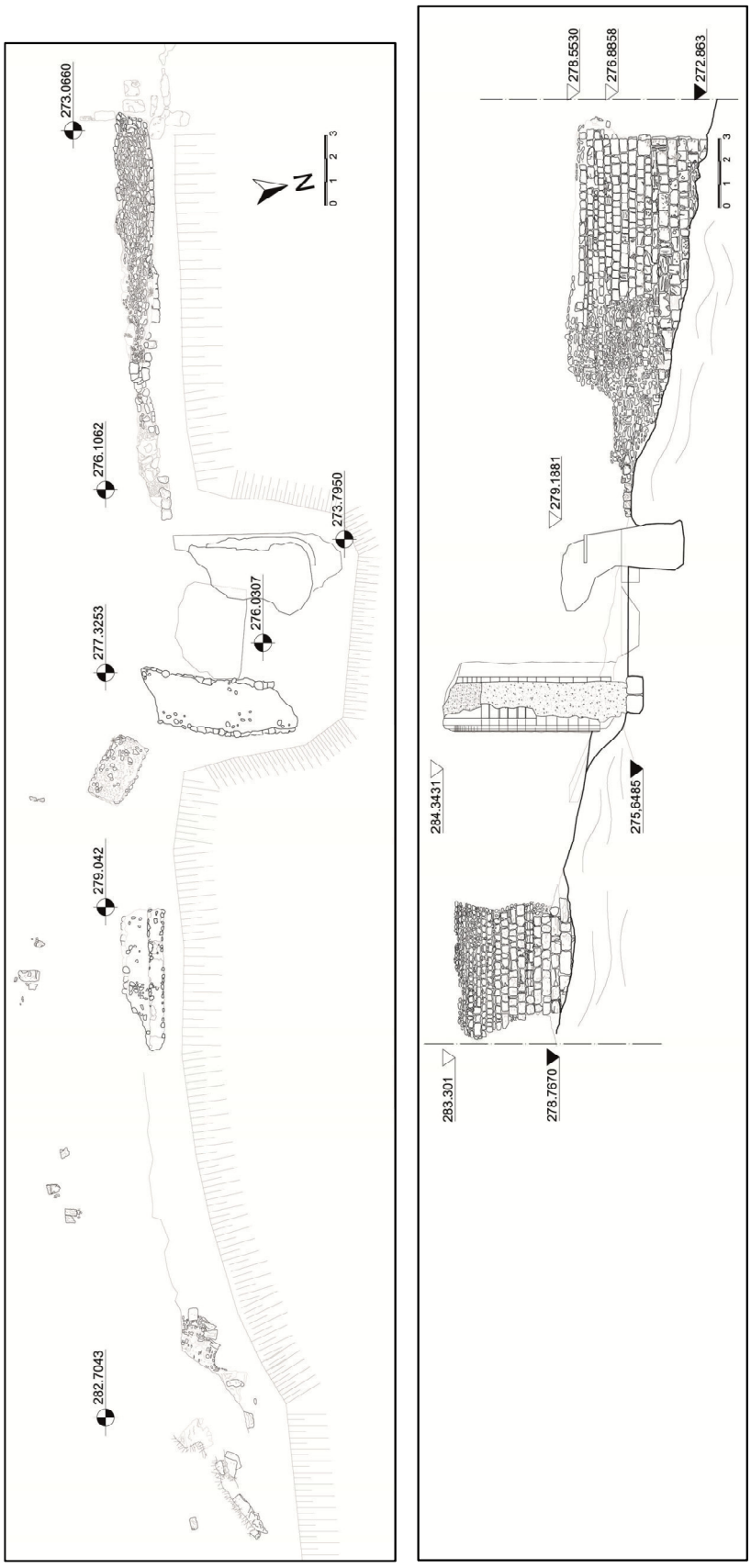


Figure 3.69 : Independent walls, W2, T2, W3, plan, drawing by author (2014).

Figure 3.70 : Independent walls, W2, T2, W3, elevation from north, drawing by author (2014).

Figure 3.71 : W2 north (outer) façade, photo by author (2012).

Highlights: These walls stand on a higher elevation than the terrace walls (W1) nearby, and no evidence of a connection between the two levels has been observed so far.

At the western end of W2, the possible remains of a gate were found (Figure 3.75, Figure 3.76). The corner stones, which may belong to the jamb, have an L-profile, and the main stone with a big hole in the middle, to which the wooden mechanism may have attached, is still in situ. The retracted linear stones of the threshold can still be observed on the ground.

It is possible to observe the wall walk and the parapet on the top of W3. This is the only preserved wall walk in the curtain walls of Vize.

Figure 3.72 : W3 north (outer) façade, image by author (2012).

Figure 3.73 : W2 south (inner) façade, image by author (2012).

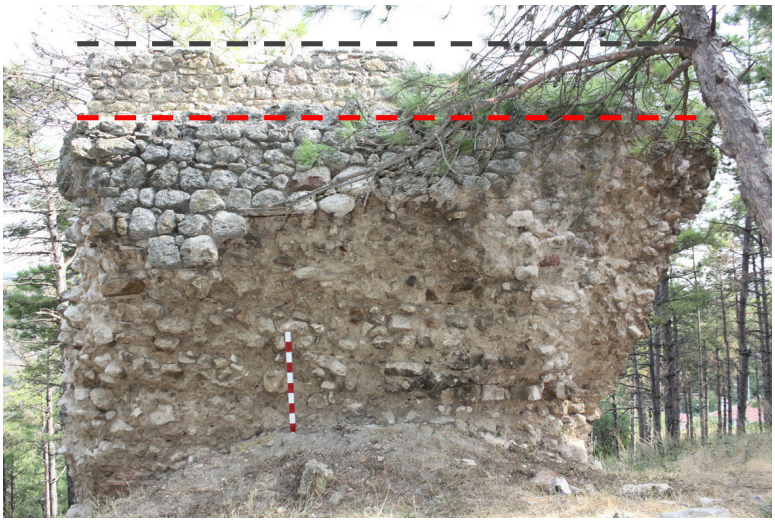


Figure 3.74 : W3, wall walk and the parapet on the south (inner) façade, image by author (2012).

The construction technique of W2 and W3 is stone-faced rubble core which is sometimes arranged in alternating broad and narrow courses on the façade. Uses of levelling courses with small fieldstones are also observed in both walls (Figure 3.72). No joint mortar is applied in this relatively careful masonry, except for some areas of W2, which may indicate a repair phase. These walls were built with secondary material, which seem to have been taken from older ruined walls or insignificant buildings, but obviously not from monuments such as temples, etc. No bricks were used in the masonry.

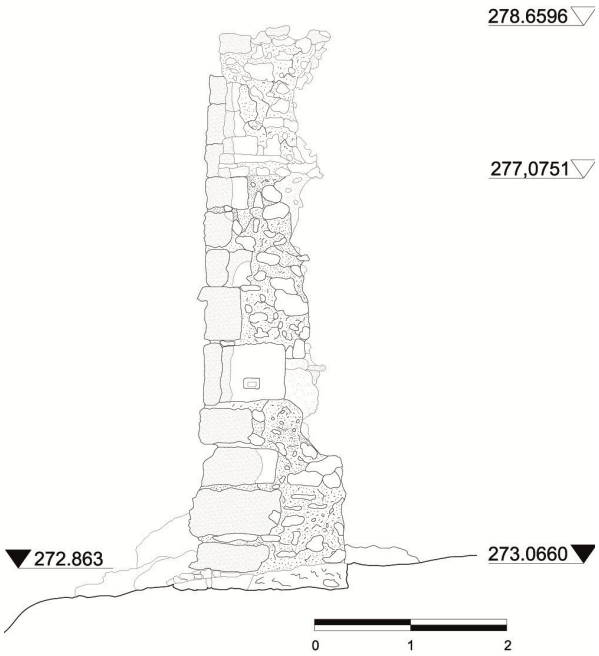


Figure 3.75 : W2 west side, traces of a probable gate, image by author (2012).

Figure 3.76 : W2 west side, traces of a probable gate, drawing by Z. Ataseven (2012).

Discussion: These walls are all relatively thin, with cross-sections of 1.50 to 2 m, and not so high so that they seem to have represented the borders of a city rather than a manipulative defensive system. Some similar widths of the Roman walls from the provinces of Moesia and Northern Thrace were uncovered at many cities, among which Novae (1.50 m) and Shumen (1.95 m) can be given (Biernacka-Lubańska, 1982, p. 129). Unfortunately, very few examples can be given from the eastern Balkans regarding the fortifications until the start of the Tetrarchy, among which Tropaeum Traiani, Istrus and Philippopolis are all examples (Rizos, 2010, p. 37).

These walls stand on a higher elevation than the terrace walls, are free-standing structures and probably were constructed as a part of a different wall circuit of a different period. They might even have surrounded a smaller area on the hill. The artificial rise on the terrain, which seems like a platform just behind these walls on the south side, is worth considering when studying this structure. The remains of the gate point to a simple structure rather than a monumental one.

Regarding the above-mentioned observations, W2 and W3 also have much in common with the 3rd–4th century walls of Asia Minor, built around the time of the Gothic invasions, 253 AD. The Gothic invasions were not seen as a sophisticated enemy threat, so these walls were evidently intended as parts of an ancient city and do not represent any fundamental transformation in size or nature. They were built at a time when ancient monuments of the city were still respected. The structures did not have a strong defensive character, which can be seen from the modest size, few or no towers and simple, unprotected gates. They sometimes used brick in the stone-coated rubble core structure, but in many examples we found no use of brick. The walls of cities like Pergamum and Sardis,[59] represent good examples of local solutions for unsophisticated walls built in haste (Foss, 1986, pp. 127–129) (Figure 3.77, Figure 3.78). Excluding the imperial initiatives of the 3rd century, such as in Nicaea and Nicomedia, these walls in Vize, like others, may have been constructed by local and less well-off authorities, which was common in these centuries.

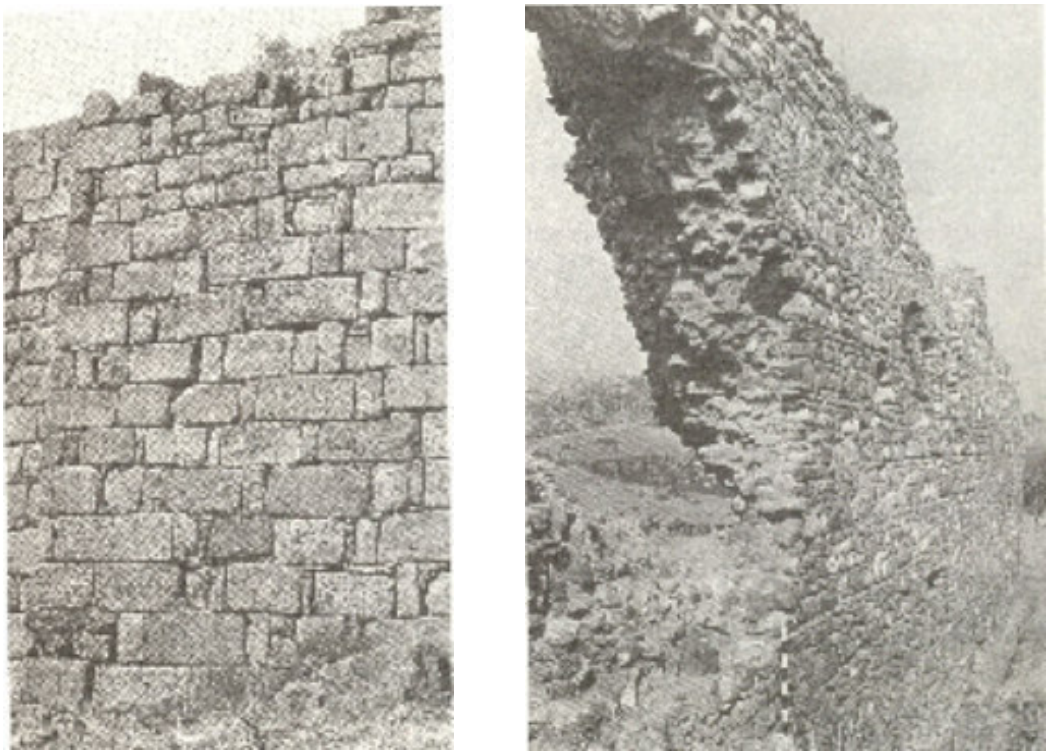


Figure 3.77 : Pergamum, 3rd century walls, after Foss (1986).

Figure 3.78 : Sardis, 3rd or 4th century, after Foss (1986).

[59] From the 3rd century on, the municipal authorities were encouraged by the state to build fortifications which might have resulted a change in the typology of the walls. Although the dating of the Late Antique walls of Sardis remain yet unsettled, military threats point out to two periods: either mid-3rd or late 4th century (Rautman, 2011, p.10).

3.3.1.1.3 Phase 3

Description: The terrace walls belonging to Phase 3 lie on the natural slope of the hill along Hacı Çeşme Caddesi on the north of the acropolis. This phase of walls, namely W1.2, spans a distance of 34 m in the NE–SW direction. On the SW end, they join another phase of the walls (W1.1). On the NE side, they end with the remains of a corner, where the walls possibly changed the direction in order to fit the topography (Figure 3.80, Figure 3.81, Figure 3.82). Although the walls seem to have collapsed or lost most of their surface material, it is possible to figure out a systematised construction technique on W1.1. Starting from the corner on the NE, every 7.5 m is a kind of pier with a row of two big stones, which is 3.30–3.50 m high at the most visible point. However, it is not possible to reach the original ground level to measure the real height because of the earth piles and crushed stones around the walls (Figure 3.82). The battlement level is also not clear. These stone blocks might be secondary material, which could have been reused for the construction of this wall. Between these pier-like structures is a wall of alternating four rows of bricks and stone rubble mixture. The approximate height of the four courses of bricks is 0.5 m. The dimensions of the bricks are approximately L:H=32:4 cm. The mortar between the brick courses and the rubble core is reddish, soft and brittle with plenty of brick pieces inside. The alternating brick and rubble façade seems to have lost the surface coating stones. Therefore, the surfaces of the vertical stone blocks were eroded so deep, and because some blocks are missing, that it is difficult to guess the original surface level. In some spots on the rubble façade, a few stones seem to have remained from the regularly shaped coating stones (Figure 3.83).

Highlights: Except for the above-mentioned construction technique, these walls display another type of masonry on the back façade of the NE end (Figure 3.84). Here we find only a small portion of this second phase visible because it is almost completely under the actual ground level but, and it also is blocked by a rubble heap that was added in a later phase (Figure 3.85). On the small visible wall, we find an elaborate façade of four courses of bricks alternating with at least three courses of small, well-shaped stones (Figure 3.84, Figure 3.86). It is possible to observe the section of the wall on the east, where the brick course runs entirely through its width, which is 2.5 m, and continues on the front façade. This detail proves that both facades belong to the same phase; in other words, it is two facades of the same wall.

The dimensions of the bricks in this part are approximately L:W:H=34/35:34/35:4.5 cm. The mortar between the brick courses is reddish, soft and brittle, with plenty of brick pieces inside, which looks similar to the mortar sample on the back façade. No big difference between the dimensions of the bricks and the height of the joints on the two facades were found. The socket level is not reachable due to the earth heap around.

On top of the hill above these walls, is a rectangular structure with dimensions of 3.00 m x 2.30 m (Figure 3.91). This structure stands on the edge of the slope, almost at the same surface level with the wall façade (Figure 3.87, Figure 3.88). Its entrance was most probably on the NE side, where today we can see the brick remains of an arched opening (Figure 3.88) The masonry of the structure consists of reused stones with irregular sizes and shapes that were bonded together with a very hard beige/grey cement mortar. The stability of the facades was reinforced by four rows of horizontal wooden beams, which were recessed into the stones on both the inside and outer facades. Today, only few of them are kept on the NW (street) façade. The remains of the façade plaster are still preserved on some surfaces. The bricks of the springing line inside the NE corner prove that the structure was barrel vaulted. The height up to the springing of the vault is 2.20 m. The SW corner of the structure projects to the outside, where the brick construction is revealed. It was possible to observe the hydraulic plaster of the inner surface of this barrel-vaulted structure through the holes on the façade (Figure 3.90). The function of this section of the structure was most probably a small water basin. It has two openings to the interior; the one above is arched and the one below is rectangular (Figure 3.89). The structure does not have any other windows on the preserved facades.

The arguments of some earlier researchers (like Dirimtekin), which suggest that this building may have been a bath for soldiers, remains rather debatable. It looks like an Ottoman structure which has been hastily built with rubble stones, with the exception of the brick water basin, and which was repaired recently, probably in the 19th century. It could have been used as a watch tower in earlier centuries, especially given its strategic position, and could have been converted into a kind of small house in the last years of the Ottoman period, other examples of which can be seen on top of W1 or W4 in the old photos.

On the NE end of the line, at a lower elevation, which is almost the same level with the Hacı Çeşme Caddesi, a big block of the corner was discovered (Figure 3.92, Figure 3.93). It could have been the remains of a tower. It may also be showing that the orientation of the walls changes after the last corner above and that the walls go down the hill, or it may belong to an earlier period of the walls, irrelevant of W1.1 above.

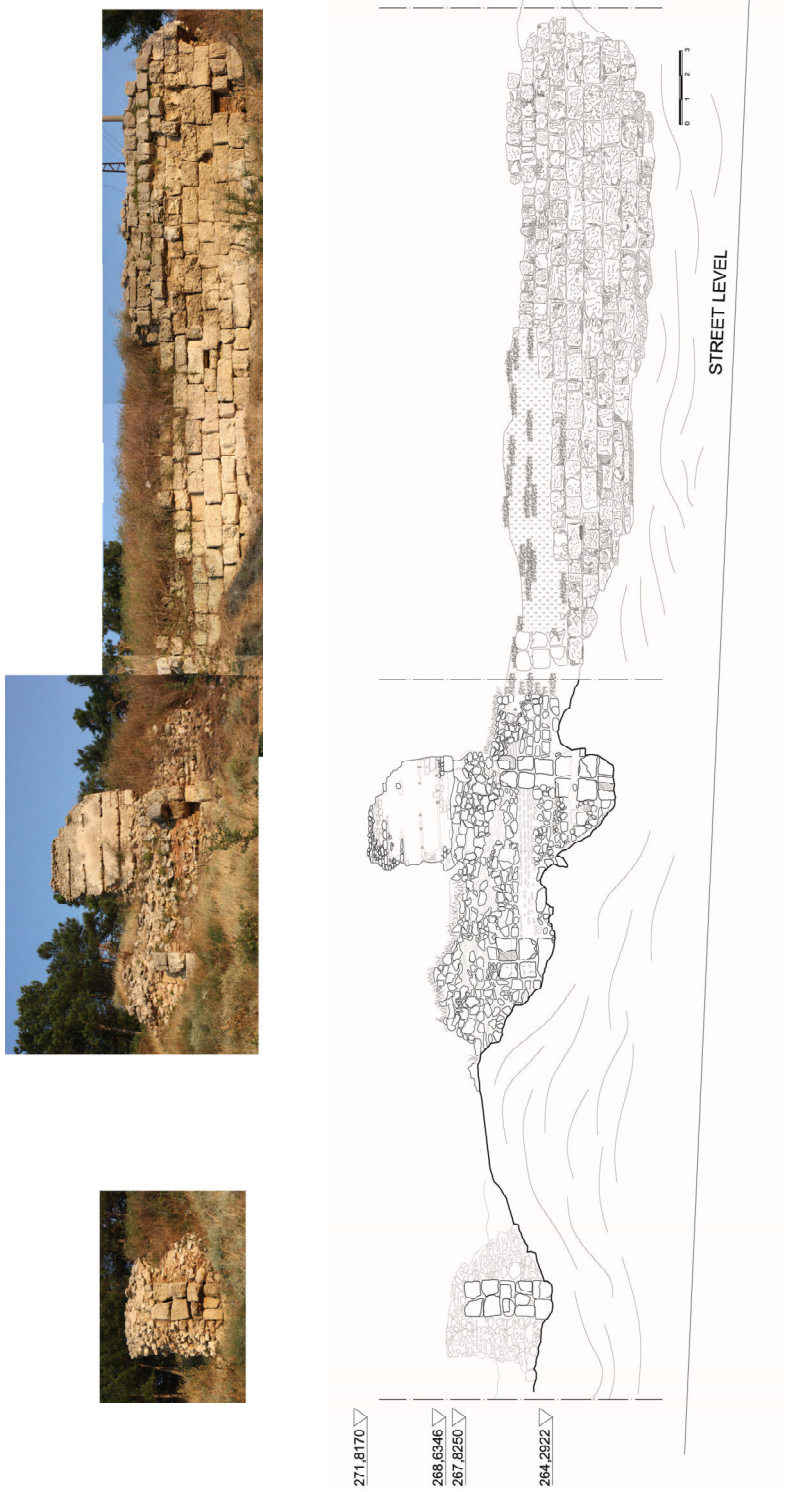


Figure 3.79 : Terrace walls, W1.2, W1.1, WP1, WP2, image by author (2013).

Figure 3.80 : Terrace walls, W1.2, W1.1, WP1, WP2, drawing by author (2013).

Figure 3.81 : Terrace walls, W1.2, masonry, image by author (2013).

Figure 3.82 : The base level of the stones cannot be reached, W1.2, image by author (2013).

Figure 3.83 : A few preserved blocks of the façade of W1.2, image by author (2013).

Figure 3.84 : Banded masonry of the back façade of W1.2 and the rubble heap of the later phase (red), image by author (2013).

Figure 3.85 : W1.2 cross-section, the street and the back facades, image by author (2013).

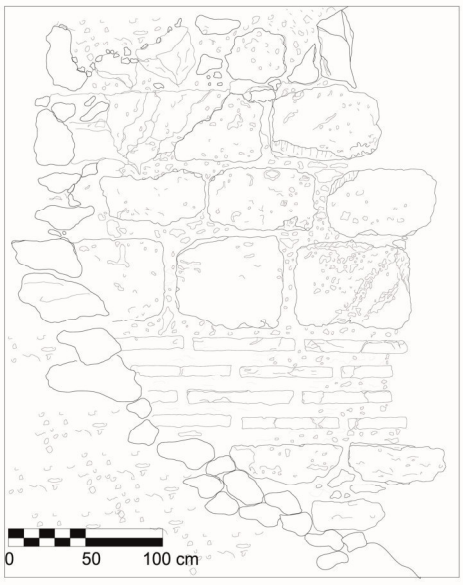


Figure 3.86 : W1.2, masonry, drawing by H. Kepez (2013).

Figure 3.87 : WP1, SW façade, image by author (2011).

Figure 3.88 : WP1, view from NE, image by author (2011).

Figure 3.89 : WP1, opening on the wall inside, image by author (2011).

Figure 3.90 : WP1, hydraulic mortar on the surface of the water basin, image by author (2012).

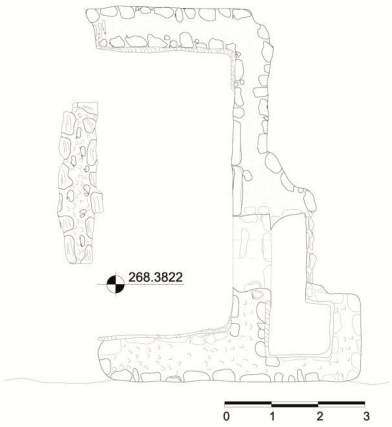


Figure 3.91 : WP1, plan, drawing by H. Kepez (2013).

Figure 3.92 : WP4, the corner on the street level, image by author (2011).

Figure 3.93 : WP4, the corner on the street level, image by author (2011).

Discussion: Although the pier-like structures on a rubble brick façade is similar to the casemate system of the Hellenistic walls, and this constructions is rarely seen in Byzantine walls, it would be reasonable to consider them as the supporting foundations of a terrace wall system, which could have also been used for the upper structures on the walls. We observe ashlar headers for vertical bonding that were built in the rubble core in order to stabilise the structure in the 9th-century fortifications of Preslav (Bulgaria) (Figure 3.94) and the Justinianic fortifications of Dara (Turkey) (Figure 3.95). Still, none of the blocks from these examples are exact analogies to the pier-like strong blocks in Vize.

Figure 3.94 : The fortifications of Preslav in Bulgaria, photo by author (2013).

Figure 3.95 : The fortifications of Dara in Turkey, south water gate and west turret from the north, after Croke and Crow (1983), image by J.G. Crow.

The street façade of W1.2, as discussed above, seems to have lost its regular stone facing in time; today only the stone rubble core remains. Another option could be that it was built up without the regular cut ashlar facing. Considering that the façade surface of the stone blocks and the rubble core are almost levelled or have little difference, no big stone blocks could have been used on the rubble core. The façade probably would have been coated with small, irregularly shaped stones, a few rows of which are still visible on the lower parts of the façade (Figure 3.83). Alternating bricks with rubble/irregular coating stones on the façade are familiar to us through well-preserved examples, the earliest of which is known from the imperial fortifications of Nicaea (Iznik) (3rd century) and Nicomedia (3rd century) in Asia Minor. The same masonry is found in Thrace, with different periods, military contexts and locations: (1) in the early 4th century with the Tetrarchic work in Diocletianopolis/Hissar in Thrace/Bulgaria; (2) in the 4th century with the Theodosian work-fort of Komotini in Thrace/Greece, the walls of Bergule (Lüleburgaz) in Thrace/Turkey, the walls of Selymbria (Silivri) in Thrace/Turkey; (3) in the 5th century in Tzouroulos (Çorlu) in Thrace/Turkey; and (4) in the 6th century with Justinianic work in Didymotheichon Thrace /Greece. Regarding the wide time span of this masonry, one should be very cautious with dating this part of the walls. However, the inner façade seems a little more promising.

What we find on the inner façade of this wall, an elaborate façade of four courses of bricks alternating with an at least three courses of small, well-shaped stones, is a typical wall construction technique of late antiquity, particularly of the 5th century. However, the dating span of this type of masonry is also wide and spread across a period between the 4th and 6th centuries and is likewise found in different parts of the empire — not only in the capital or in Thessaloniki but also in Ankara, Amasya, Nicopolis, Mesembria, Serdica, etc. The edict of Theodosius II in the year 396 AD, which ordered the governors either to repair the old defences or construct new ones with the collaboration of the municipality senates and inhabitants of each city, must have accelerated the process in the following century.[60] Consequently, in the reigns of Theodosius II and Marcian, for the security of the Danubian provinces and Thrace, many of the major Balkan cities received new fortifications throughout a building programme (Crow, 1993, p. 120).

[60] Codex Theodosianus, Book XV, 15.1.34, (ed.) Pharr (1952), p.427.

Anastasius (491–518 AD) or Justinian (527–565 AD) are also strong candidates for the construction of this phase of walls in Vize due to the intensive defensive construction activity in the Balkans; but the mere fact that Justinian had a historian to record his building activities does not necessarily prove that all fortifications belonged to him. Justinian has either built, repaired or completed the walls in Medea (Kıyıköy), Heracleia (Marmara Ereğlisi), Selymbria (Silivri), Rhaedestus (Tekirdağ), Didymoteichon, etc., all settlements that are located around and nearby Vize. However, the absence of Vize in the literary testimony of Procopius suggests that perhaps Justinian did not work on the Vize walls. On the other hand, it is important to consider that Procopius is not necessarily a very reliable source, since a great number of places in his record are difficult to match to existing known places and remain unidentifiable. Furthermore, some works that we are certain Justinian initiated are not included in the accounts by Procopius (Croke and Crow, 1983, pp. 147–148).

The different masonry of the two facades of W1.1 brings the questions of the care and the aesthetic sense of the arrangement of outer and inner facades in Byzantine architecture. Although it was a common approach to employ careful workmanship on the outer façade of the fortifications, the changing warfare conditions due to the increasing threat both from the east and from the north-west from 6th century on negated any emphasis on an elegant appearance for the outer façade of fortifications. It was acceptable to face the facades with any available stones where no essential difference between the core and the facing could be observed (Foss, 1986, p. 53). But the situation in Vize displays, in contrast, a careful masonry on the inner façade, while having a careless one applied on the outer façade. This part of the walls, therefore, is rather up for debate; why such an odd difference between two facades appears here is not clarified. Assuming that the outer façade had once the same masonry but then blocks were taken for reuse elsewhere is a possible explanation, but unfortunately it cannot be supported by surviving evidence.

3.3.1.1.4 Phase 4

Description: The west line of the terrace walls presumably belong to Phase 4. It includes W5 and W6, which start after the modern crossroads of Karakol Caddesi and Kale Caddesi, which interrupt the wall line. After this interruption, W5 emerges

with a deformed pentagonal tower, which is today used as a terrace of the house above. The rest of the walls leading to the crossroads have disappeared in gardens or under modern houses.

W5 and W6 span a distance of 110 m and function as terrace walls of modern houses. They are today separated by modern stairs, which could have been preceded by an ancient ramp, or stairs.

Along the walls, three pentagonal towers stand, respectively, 24 m and 60 m away from each other. It is highly probable that a fourth tower stood between the last two towers, where today stairs exist and lead to a passageway 4.5 m wide. It is also worth considering the possibility of the existence of a gate at this point. The material and the masonry of both sides are quite similar. The typical construction technique of Vize is repeated here with some differences in the material used. The outstanding features of W5, which lie on the south side of the stairs, is the use of secondary materials, including decorative elements from the older buildings, and a carefree workmanship, in which very thick beds of brick-rich brittle mortar were applied. The surfaces of the limestones are extremely deformed, and the stone surface levels differ. It seems that an extensive repair was carried out here. The pattern of the wall can only be observed in the first 7-m-long sector, just after the stairs, because the rest is very late repairs made from small stones. The height of W5 is at its highest 5 m.

The second part of this phase, namely W6, is located on the north of the stairs. Although the stones are most probably secondary material, they are generally rectangular-shaped blocks, which could have come from the earlier walls. Some are newer and some are older, or taken from different buildings, and the façade displays this variety of limestones. Despite the bigger stones on the first rows above the ground, the upper rows do not reveal any systematised masonry. Still, when compared to W5, the masonry of W6 looks more careful and intact, except for the part between T6 and T7, where most of the wall was rebuilt, probably in the late Ottoman period. A thick, red, brittle, brick-rich joint mortar was applied to the entire façade. The total length of W6 is 73 m, and the height is approximately 5.5 m from the socket level.

Highlights: In the sector between the stairs and T6, the walls seem to end up with a battlement, but this presumption cannot be proved since a crenel-merlon pattern is

hard to follow at this level — the openings were filled up with smaller stones in the modern times. W5 and W6 are the first phase in the walls of Vize, where we meet some architectural fragments built in the walls as "spoils" (Figure 3.96, Figure 3.97). Another important unique feature of this phase of the walls is the thick mortar joints, filled with red, brittle, brick-rich mortar. The only pentagonal towers of Vize are found in this phase of the walls.[61] In front of the façade of the walls, there is another terrace-like area of almost 12 m wide (Figure 3.99, Figure 3.100). As far as we could observe, it continued along the facades of W5 and W6. The difference between this platform and the lower level is measured as 8 m. We do not know how old that platform is or if it is a planned area which belongs to the walls or not. However, it is worth considering the possibility of a proteichisma, the presumable trace of which can be tracked from an aerial photo of Vize from 2003.[62] As mentioned above, under Phase 1, it is possible to observe the first phase in the first three to four rows of this wall (W6), 8 m long from the north between T5 and T6 (Figure 3.101).

Discussion:

Using cut stone without bricks is not common for the Thrace region in the 5th–6th centuries. The most famous use of it can be observed in a part of the Anastasian walls 65 km west of Constantinople. Another example of cut stone construction can be found in the 5th century walls of Isthmus in Greece. However, it was commonly employed in the Anastasian and Justinianic fortifications of Mesopotamia and Syria, as we know from Resafa and Dara (Crow-Ricci, 1997, p. 252). Compared to these walls of the 5th and 6th centuries, W5 and W6 in Vize in particular display a less elegant masonry. The spolia they include would not be so helpful in differentiating between Justinianic and later centuries since Justinian must have benefited from the material at hand, as seen in the example of Didymoteichon.[63] The abundant amount of mortar of the roughly repaired façade of W5 prevents a better comparison. W6, which is better preserved compared to W5, reveals a relative systematic approach on the façade, where longer and shorter blocks were used, alternating with notable thick joints. The stones seem to be taken from different structures because they differ in shape and quality.

[61] See the towers in detail in Chapter 3.3.2.
[62] Google Earth image.
[63] I am grateful to Prof. Touris for his comments on Didymoteichon.

Figure 3.96 : W5: (right to left) pentagonal tower (T4), terrace walls and the corner before the stairs, image by author (2011).

Figure 3.97 : W6: (right to left), corner after the stairs, terrace walls and the pentagonal tower (T5), image by author (2011).

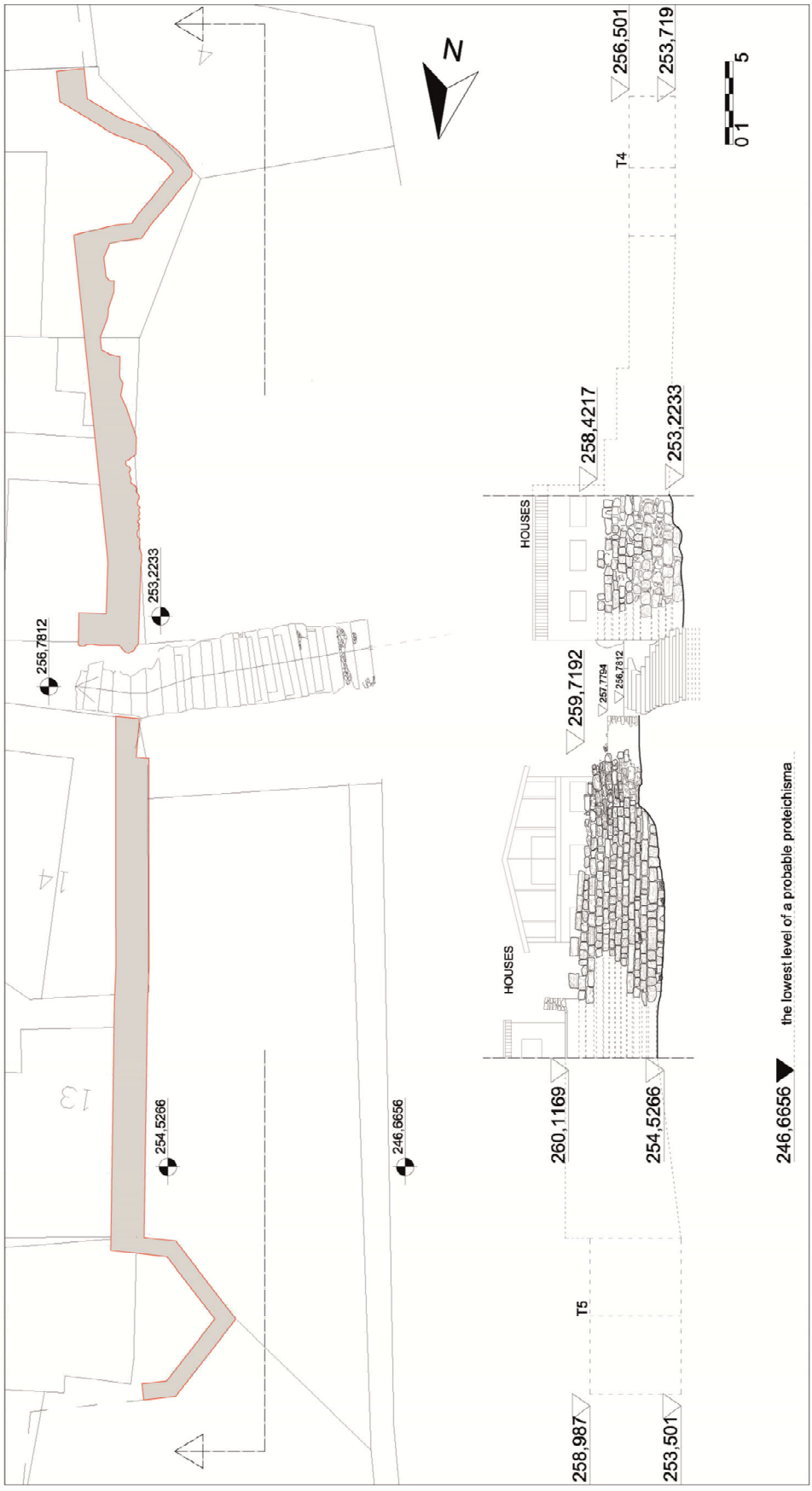


Figure 3.98 : W5 and W6, plan and the elevation, drawing by author (2014).

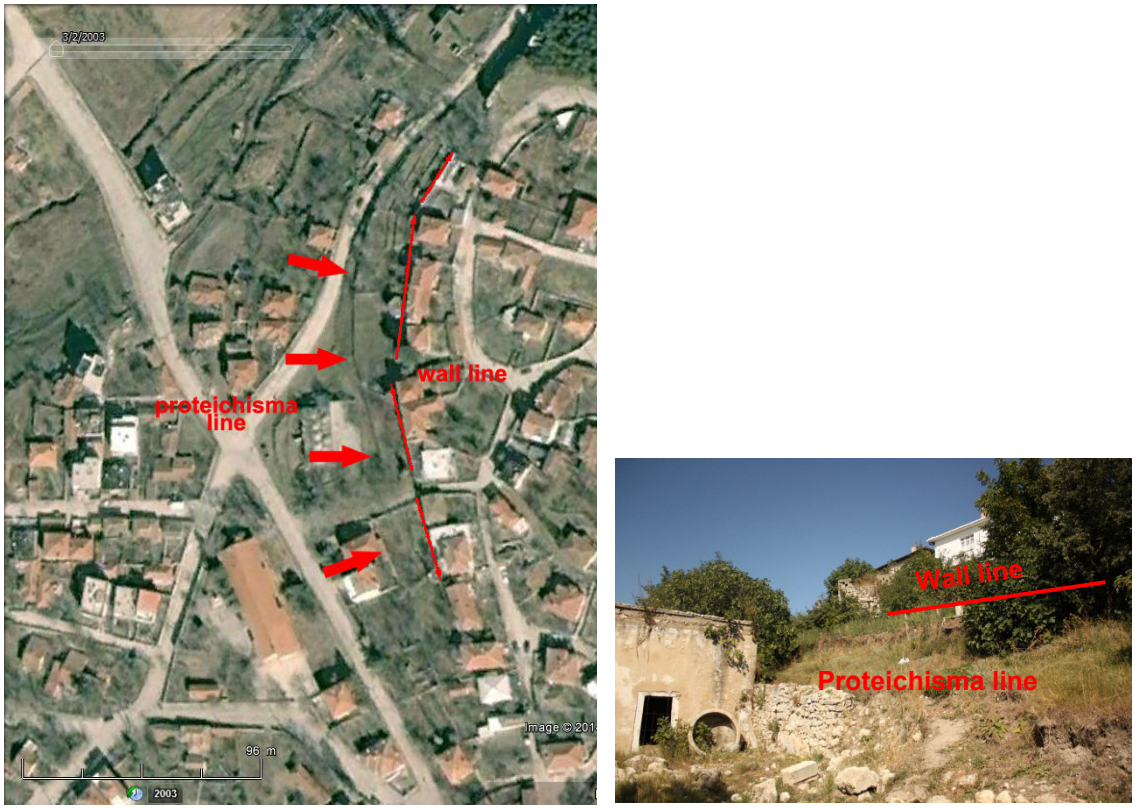


Figure 3.99 : W5 and W6, the hypothetical line of proteichisma, GM image modified by the author (2014).

Figure 3.100 : W6, the hypothetical line of proteichisma, view from the forecourt of the bath, image by author (2012).

The pentagonal towers are good pieces of evidence for dating since we know that they started to be used in the 5th century[64] and became widespread in the 6th century (Crow, p. 98, 2001). Unfortunately, it is impossible not to notice the deformations on the connection corners of the towers and the curtain wall (Figure 3.138) which prevent us from observing these critical spots. Furthermore, the careless masonry of big reused blocks of the towers with heavy repairs all over the facades makes it difficult to discuss the original construction technique or even the architectural form of the towers. In this case, it is problematic to relate the date of the curtain wall to the towers. When considered typologically, the towers bear similarities to Anastasian towers, with their shorter parallel facades (Karaiskaj, 1998, p. 868).[65] I still prefer to be cautious when relying the pentagonal towers for dating and suggest considering the other possibilities: for instance, what if they were later additions to the wall in the following centuries?

[64] Rizos (2010, p. 126) mentions one tower in the walls of Constantinople as the earliest pentagonal tower, whereas Crow gives the end of the 5th century as the earliest date of use.
[65] Towers are further discussed in Chapter 3.3.2.

When compared to long walls of Thrace (ca. 500 AD), the construction technique looks similar, except that the Anastasian walls were constructed of free stone blocks without or with very little joint mortar. But the rubble core, which was bonded with a pink, granular mortar with brick fragments, is very similar to the core used in Vize (Crow-Ricci, 1997, p. 245)

The historical data does not draw a peaceful picture of the empire in the Thrace region in the 5th and 6th centuries. The Hunnic invasions in the first half of the 5th century devastated the cities of the eastern Balkans (Rizos, 2010, p. 120). The Gothic campaign of Theodoric Strabo against Zeno (476–491 AD) in 487 was one of the first real threats to the capital city because he succeeded in cutting the water of the city. The assault of Bulgarians in 540, which turned out to be a serious threat to the Anastasian walls, was followed by the attacks of Avars and Slavs, who devastated the Thracian provinces beyond the wall in the second half of the 6th century (Crow-Ricci, 1997, p. 239). Under these conditions, the fortifications built under Anastasius and Justinian have acquired a strongly defensive character in scale and in the common use of some building elements like pentagonal towers and proteichisma (Smith and Crow, 1998, p. 70). Located eastwards of the Anastasian walls and not so far away from the capital city, Bizye must have also been under threat and must have required (re)fortifications. Nevertheless, being more specific about the dating would be speculative and unnecessary at this level.

Figure 3.101 : Blocks belonging to Phase 1 between T5 and T6, W5, image by author (2011).

3.3.1.1.5 Phase 5

Description: W4.2, the endmost part of the fortifications on the SW of acropolis, lies on a steep slope along a distance of 45 m discontinuously (on the N end ca. 6 m, S end c. 13 m). This NW–SE oriented wall is located higher than the street level of Kale Caddesi. On the north end, the height reaches almost to 9 m, which is the highest of the curtain walls in Vize (Figure.3.102, Figure 3.106, Figure 3.107). The battlement level no longer survives today due to the repairs and to the concrete parapet constructed at the beginning of 20th century to create a flat surface for the terrace of the house above. On the north end, the walls turn to the NE, making a corner, go up the slope and continues ca. 5–6 m, but this section looks like a later addition, possibly built up with secondary stone blocks (Figure 3.103, Figure 3.104). The stone blocks used here are very well-cut rectangular limestone blocks, which were added in without mortar. The wooden beam used horizontally on the façade after the third course from the top can be taken as evidence of Ottoman masonry. Two narrow openings could have been used as arrow slits. On the south end, the stone blocks of the façade disappear as well, but the inner core of rubble can still be observed continuing to the south (Figure 3.105).

The material used in the façade of W4.2 has different features; they are secondary stone blocks of a big and similar size. Bu it is still possible to find different types of stones among them. Although it is not a completely homogenous wall, there is a system of careful masonry. For every two–three courses of smaller blocks, a course of bigger and longer stone blocks were applied. There is a large number of rectangular stones with neatly cut smooth surfaces. The surfaces of the blocks are far less eroded compared to the other phases in Vize. Also, the colour is lighter than the rest of the walls, and the mortar used is a type of beige and hard Khorasan mortar, which contains very little crushed brick particles. This type of mortar is observed in a few other buildings in Vize but is not a common feature of the rest of the walls. Some joints on the NW sector of the façade seem to have been repaired by cement mortar.[66]

[66] See Chapter 3.4 for the detailed mortar analysis.

Figure 3.102 : W4.2, visible façade, image by author (2012).

Figure 3.103 : W4.2, NW end, image by author (2011).

Figure 3.104 : W4.2, later addition up to NE direction, image by author (2010).

Figure 3.105 : W4.2, SE end and the rubble core, image by author (2011).

Figure 3.106 : W4.2, façade, drawing by author (2013).

Figure 3.107 : W4.2, the façade behind the plants, image by author (2011).

Highlights: The stone blocks of W4.2 are mostly architectural spolia, and it is the strongest curtain wall in Vize. There is no architectural evidence for the rest of the walls on the north end, where it probably collapsed and was repaired with an addition that turns up to the slope. However, on an old photo from the beginning of the 20th century, during Balkan Wars, it is possible to see the north end of the wall with a later phase, which reveals a different masonry (Figure 3.108). This obvious line of differentiation on the façade could not be documented due to the difficulty of the topography and the trees in our survey. But it still exists today. This different phase of ca. 8–9 m long walls is not contemporary with the side façade, which goes up the hill to the NW. However, the topmost level at the corner was also repaired with the same wooden beams as the ones used on the side façade (Figure 3.109). On the southern side, where the walls end, the rubble core of the walls contains some courses of bricks, which may point out to the older phases (Figure 3.110). It would make sense to consider that the older foundations and core were used in the later phases. The collapsed north and the south ends of this wall could have been the weakest points, where presumably a gate, a turn or a connection to the towers stood.

Figure 3.108 : W4.2, repair phase on the left, Gipson archive, Sofia (1912–13).

Figure 3.109 : W4.2, upper part on the NW corner, the wooden beam, image by author (2011).

Figure 3.110 : W4.2, SE end, the brick courses in the rubble core, image by author (2011).

The structures, which stand on top of the walls in the photo, were replaced by buildings in 20th century and are not known to us today. On the SE side of the present house, there is an abandoned building of the *Jandarma* (gendarme; military police), which was presumably active until the 2000s. This terrace, which is framed by W4.2, features a strategic location in the city; it looks over the road from Istanbul to Edirne. Its natural height, together with the strong wall, brings a particular defensive character to the terrace (Figure 3.114, Figure 3.115). Another interesting structure, which emphasises the unique position of this terrace, is probably a Roman or Byzantine cistern, which could be identified through old photos but could not be reached during our survey (Figure 3.111, Figure 3.112). It is a longitudinal underground structure in the garden of the house (or in the *Jandarma* area), and the entrance is not easily reachable (Figure 3.113). [67]

[67] Since the exact location is not known to us, its place in the map is estimated. This structure was first shown in the map of Dirimtekin as a "kervansaray," probably because it was used in the Ottoman period. Eyice (1969, p. 337–338) gives a short description of the structure: …"a cistern with three barrel vaulted naves divided by two tows of piers, niches on the walls…" He thinks that it is debatable if it is a Byzantine building or not. Ertuğrul (1995, p. 23) must be the last researcher who has seen it in 1995, just before it was covered up. He describes it as a Roman cistern with three naves divided by two rows of piers. He claims that the structure could be a part of a palace complex. The inhabitants of Vize could also describe the location of this structure, although access was not possible. Figure 3.113 shows the location as described by the researchers above: between the Hasan Paşa Cami and the house (plot nr.2–22), a part of it could also be in the *Jandarma* garden.

Figure 3.111 : Roman or Byzantine cistern, 1970s, Machiel Kiel archive.

Figure 3.112 : The location of the Roman or Byzantine cistern, 1970s, Machiel Kiel archive.

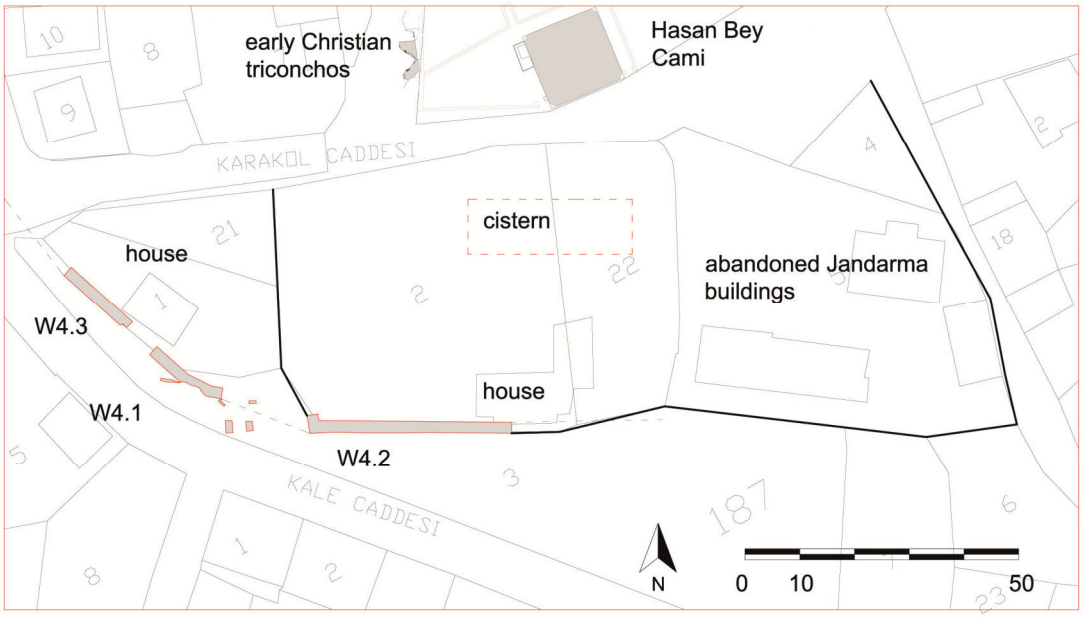


Figure 3.113 : Terrace over W4.2, drawing by author (2014).

Figure 3.114 : View towards south from the terrace over W4.2, image by author (2010).

Figure 3.115 : View towards south from the terrace over W4.2, image by author (2010).

Regarding the above-mentioned features of the area, the choice of the place by the *Jandarma* could not be coincidental. This terrace is located at the south side of the site, with a very good views that overlook the plain (Figure 3.114, Figure 3.115). Likewise, considering the Byzantine walls, the cistern and relatively large, flat and empty area, this area could have had defensive significance and been utilised as a stronghold when Bizye became a garrison town towards the 9th century.

Although W4.3, which is the part of these walls that continues on the NW direction, consists of a high amount of spolia, the physical features of these two parts are entirely different, rendering it very plausible that they belong to different phases. However, since both parts can be dated to a particular (and difficult) period of Byzantine history, a common discussion has been written for both at the end of W4.3.

3.3.1.1.6 Phase 6

Description: On the SW of acropolis, the north end of the W4 terrace walls, namely W4.3, spans a distance of 29 m, with a short gap of 6.5 m in between (Figure 3.119). This wall is slightly oriented in a NW–SE direction. The north end of the wall has disappeared, probably during street construction in the 20th century (Figure 3.116, Figure 3.117). The height of the walls at the best-preserved spot is 4.66 m. Like the rest of the terrace walls, modern houses were built upon them at the beginning of the 20th century. These walls unite with W4.1 on the southern end without any obvious gaps. The construction technique is the same as the rest of Vize — mortared rubble, rich with brick pieces, is faced with big limestone blocks. At some points, it is possible to see the thick layer of the joint mortar, which also contains large amounts of brick pieces (Figure 3.118). Most of the blocks are big-scaled spolia, which seem to have been built in the wall according to an order, particularly in the second course from the ground, where column drums and capitals can be seen (Figure 3.119). Still, the workmanship seems to have been destroyed by repairs on different parts of this wall, which is poorly preserved.

Highlights: It is difficult to separate this part of the walls from W5, since both show many similarities in the masonry. However, assigning W4.3 to a different phase due to the great amount of architectural spolia incorporated in the façade seems more reasonable. No other parts of the walls in Vize display so many architectural

elements as in the façade of W4.3. As seen in figure 3.119, the stones highlighted in red are architectural elements that are very easily noticed. These spolia include column shafts, capitals and other building pieces that cannot be specifically identified. The rest of the blocks were also most probably sourced from dissembled buildings. Unfortunately, most of the wall was demolished, so the real amount of these spolia remains up for debate.

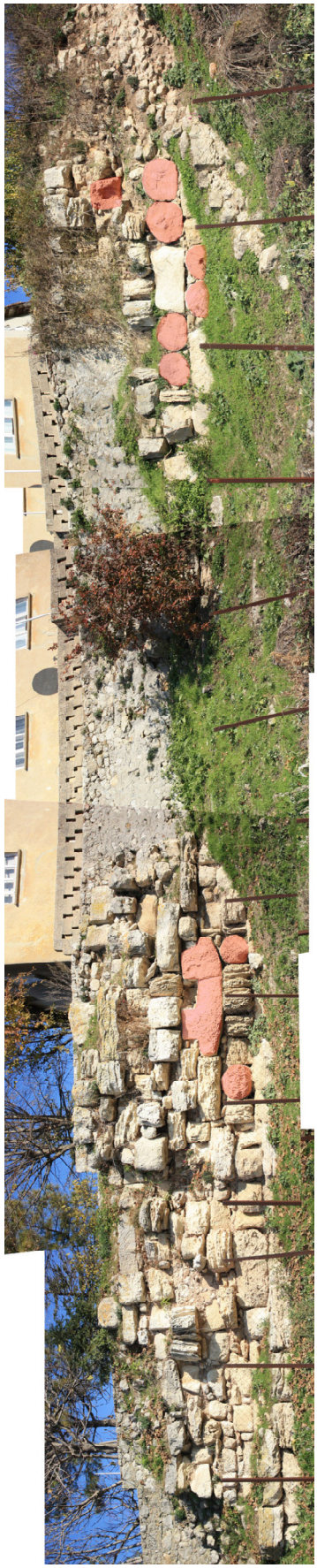


Figure 3.116 : W4.3, the corner where the walls end before the street, image by author (2010).

Figure 3.117 : Crossroads of Kale Caddesi and Karakol Caddesi, image by author (2010).

Figure 3.118 : Terrace walls, W4.3, the joint mortar, image by author (2012).

Figure 3.119 : Terrace walls, W4.3, the architectural spolia highlighted, image by author (2011).

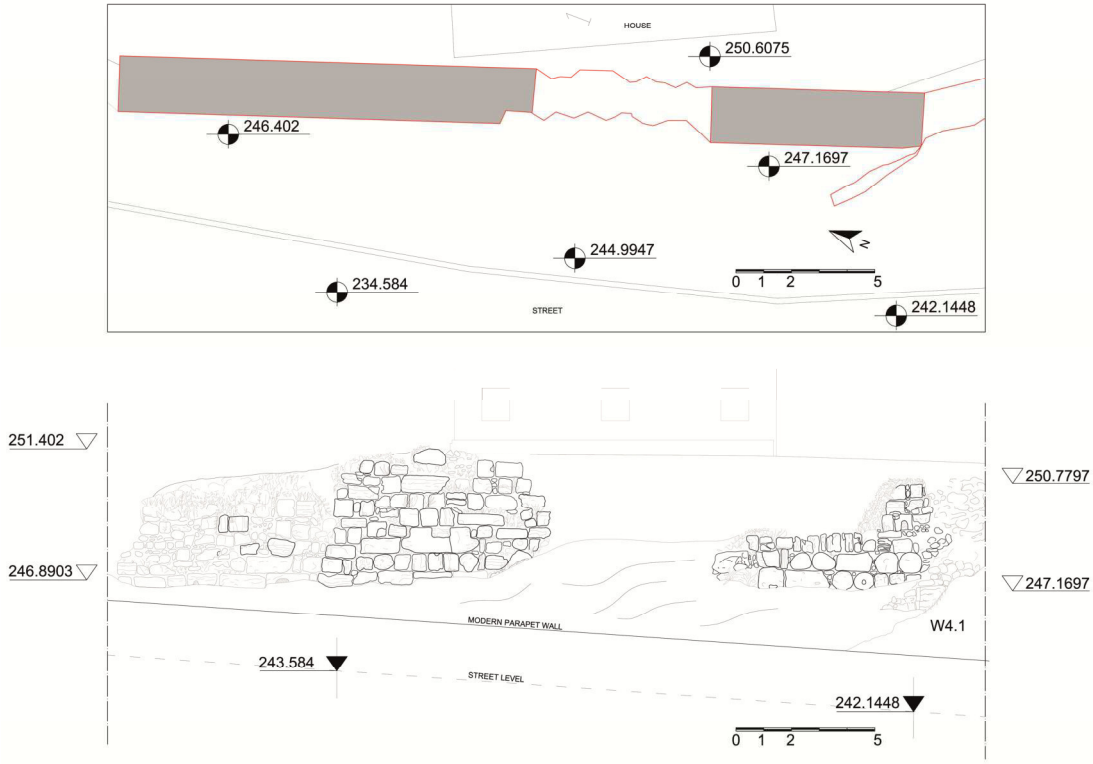


Figure 3.120 : Terrace walls, W4.3, plan, image by author (2013).

Figure 3.121 : Terrace walls, W4.3, elevation from west, image by author (2013).

Spolia as a construction material: On the south façade, five capitals and a column base were built in the first two courses of the wall (Figure 3.122, 1–7). These capitals are the only few identifiable architectural spolia built in the walls of Vize. These capitals were positioned in a way that the top of the abacus, which is almost lost, stays on the façade. The pattern on the bell of the capitals are difficult to observe due to the surface loss and their positions. However, what is left from the ornament looks quite simple; a wine leaf can be distinguished between thick scrolls, which extend to the abacus. No analogies can be established with the other capitals found scattered in the public spaces in Vize. On the north part of the walls, what appear to be two entirely eroded capitals and an unidentifiable building component, probably taken from presumably a large building, monument or other urban infrastructure, were built into the façade (Figure 3.122, 8).

Figure 3.122 : Spolia in fortifications, W4.3, capitals (1–7) and a big building component (8), image by author (2013).

Discussion:

The walls of Phase 5 differ in many aspects from the other phases in Vize. These walls have a stronger look as a result of the almost entirely preserved height, which none of the other parts of the walls reach. The façade is abundant with spolia, which are mostly big, regular, rectangular blocks. In this case, the masons must have had the time and the means to source these materials from a building or buildings that fell out of use in the city. At this point, we have a reason to look at the nearest probable antique building that might have served as a quarry for these walls: the Roman Theatre, with its neatly cut marble and ashlar blocks, could have been utilised in the façade of W4.2. This argument is certainly open to discussion until an excavation reveals how much of the theatre's blocks are preserved.

Using secondary material in the fortifications is the most practical way of overcoming the problems of providing stones, and this solution was always utilised to some extent in Late Antiquity from the 3rd century on either for aesthetic or functional reasons. Until the edict of Arcadius and Honorius allowing the reuse of the material from the temples in 397 AD,[68] the spolia was only sourced from insignificant buildings. From the 5th century on, dismantling the old buildings that had fallen out of use became a common aspect. According to Foss (1985, p. 82), who investigated a great deal of fortifications from the dark centuries in Asia Minor, the walls in the 7th and 8th centuries are easily distinguished by their refined good quality of spoils, which was due to the availability; this situation cannot be applied to the later centuries, when the spoils were more deteriorated and a great variety of styles emerged.

The typology of Foss from different cities in Asia Minor bears consistent features (Figure 3.123). They have strongly built, high walls made up of regular cut stones and massive temple pieces, inscription panels, theatre seats, etc.[69] Some of these

[68] Codex Theodosianus, Book XV, 15.1.40, (ed.) Pharr (1985), pp.427–428).

[69] Foss, C. (1996), Nicaea, p. 90; Foss, C. (1996), Survey of Medieval Castles of Anatolia: Nicomedia, p. 40; Foss, C. (1979), Ephesus after Antiquity, pp. 107, 113–114; Conze, A. et al. (1913), Altertümer von Pergamon, Band I, Text II, p. 306; Foss, C. (1996), The Cities of Pamphylia in Cities, Fortresses and Villages of Asia Minor, p. 43; van Zanten, D. et al. (1975), The City Walls in Archaeological Exploration of Sardis, p. 36; Crow, J., Hill, S. (1995), The Byzantine Fortifications of Amastris in Paphlagonia, pp. 256–257; Foss, C. (1977), Late Antique and Byzantine Ankara, p. 74; Ivison, E.A. (2007), Amorium in the Byzantine Dark Ages in Post Roman Towns, Trade and Settlement in Europe and Byzantium, p. 41; Foss, C. (1996), Byzantine Malagina and the Lower Sangarius in Cities, Fortresses and Villages of Asia Minor, p. 171.

cities are Nicaea (7th century), Nicomedia (?? Dark ages), Ephesos-Ayasuluk (7th century), Pergamon (8th century), Side (7th century), Sardis (7th century), Amastris (7th–8th centuries), Ankara (7th century), Amorium (7th–8th centuries), and Malagina (7th century).

Whenever brick is incorporated, like in the case of Kütahya and Nicaea, it is dated to 9th century by Foss. It is rather difficult to compare Vize with these examples, however, because Vize does not fit in this stereotype completely. Although the masonry in W4.2 reflects a careful construction with the spolia, no aesthetic articulation of the pieces was intended. Not all stone blocks have the same quality, which gives a heterogeneous look to the façade. Besides, it is not possible to differentiate the type of the architectural pieces, such as in the examples of Asia Minor.

Putting aside the expertise of Foss, his comments represent a local approach applicable to Asia Minor, but what about Thrace and Balkans, which faced different circumstances in the same centuries? Rizos (2010, p. 130) indicates that the intense, ongoing invasions of the late 6th and 7th centuries are poorly recorded by the sources, which prevents further investigation for any epigraphic, textual or distinctive architectural evidence for fortifications and other public building from the post-Justinianic period.

The significant historical facts in Thrace, which could have caused probable changes in the fortifications and the topography of Bizye in the post-Justinianic period, start in the early decades of the 7th century with the occupation of the Balkan Peninsula by the Avars and the Slavs (Obolensky, 1971, pp. 52–54). The Avar siege of the capital in 626 AD, during when they cut the water of the city (Crow-Ricci, 1997, p. 239), must have been particularly destructive for Bizye. As it became a part of the Thema Thrakê within the new military organisation by Constantine IV (668–685) (Külzer, 2011, p. 199), work in its fortifications must have been undertaken at some point.

The Bulgar threat that started in the 7th century was never completely wiped out, despite the successful campaigns of Constantine V (741–775 AD) after the Bulgars invaded Thrace and started expanding into the plain in 712 (Obolensky, 1971, p. 66). The reign of Constantine V brought relative stability to the Balkans, which led to restoration activities, the key foci which were Serdica, Philippopolis, Adrianople and

Develtus. The activities of Constantine V in the areas surrounding Vize are attested in the archaeological record by a bridge repair inscription from the year 773/774.[70] After the above-mentioned cities, Mesembria and Bizye were also ruined and conquered by the Bulgar King Khan Krum (802–814 AD) twice, in 812 and 813–814. Bizye could have recovered during the reconstruction period of the devastated cities of Thrace by the emperor Leon V (813–820 AD) (Obolensky, 1971, p. 68).The fortifications of Bizye were once more destroyed in 925 by the troops of Symeon I (893–927 AD), when the city was the seat of a tourmarches (Külzer, 2010, p. 201).

Figure 3.123 : Spolia in fortifications, 7th–8th centuries in Asia Minor: 1-Nicaea (Foss, C.,1996), 2-Pergamon (Klinkott, M., 2001), 3-Sardis (http://ifacc.wordpress.com/2013/09/29/eves-summer-at-sardis/photo-3-3/), 4-Ankara (https://www.flickr.com/photos/galpay/4536822351/in/photostream/), 5-Amastris (Foss, C. and Hill, S., 1990), 6-Metabole (Foss, C., 1996).

[70] See Chapter 1.2.3.

The period between the 7th and 9th centuries witnessed a series of attacks, and therefore continuous renovations could have been undertaken in the fortifications of Bizye. Most likely, W4.2, and probably W4.3, belong to this period. The comparable examples from Thrace are few and complicated since the Bulgars settled in the Balkans from 680s on in the above-mentioned cities and renewed the fortifications in Pliska, Preslav, Mesembria, and others, and their building style was certainly inspired by Roman fortification traditions (Biernacka-Lubańska,1982,.p. 229). Here, examples are given from Didymoteichon and Mesembria, which could be dated and attributed to Byzantine masonry (Figure 3.124, Figure 3.125, Figure 3.126).[71]

Figure 3.124 : Didymoteichon, (presumably) 7th century phase, image by author (2013).

Figure 3.125 : Didymoteichon, (presumably) 7th century phase, image by author (2013).

Figure 3.126 : Mesembria (Nessebăr), rectangular tower on the coast, 7th–8th centuries, image by author (2013).

[71] Mesembria: The rectangular tower on the SW side in Mesembria, attributed to the 7th–8th centuries. No bricks are used, spolia, bonded with red mortar (Zontschew, 1959, pp.32–33). According to the views of Prof. Konstantinos Tsouris, the tower on the SE corner of fortifications can be dated to 7th century.

3.3.2 The towers on the curtain wall

Today, we have found what we believe to be six towers attached to the curtain walls of Vize. Four of them are apparent enough for us to investigate the form, dimensions and some features, whereas the other two remain hypothetical. One out of the four preserved towers is a U-shaped (or rounded) tower and the other three are pentagonal (or prow-shaped) towers. In the next two chapters, the features of these two types will be discussed.

3.3.2.1 U-shaped tower (T2)

The only U-shaped tower (T2) of Vize is found on the north of acropolis, between W2 and W3. What is uncommon here is that it consists of two separate pieces; the eastern piece (T2.1) is probably the remains of a U-shaped tower, and a part of its rounded edge is preserved (Figure 3.127, Figure 3.132). The western piece (T2.2) is a lower wall that makes an almost 90 degree corner with a ledge (Figure 3.128). The connection of these two pieces is difficult to reconstruct. Although the stone blocks used look similar in both parts, there are obvious differences between the masonry and the mortar. The careless masonry of T2.1 on the outer façade consists of secondary material (also architectural spolia) without joint mortar (Figure 3.129, Figure 3.130). Nevertheless, the façade must have had some repair phases. On the upper courses, the stones become rather small and the joints, which look quite hollow, were rarely filled with stones and bricks. On the southern side, the section of the tower reveals two obvious phases, which can be distinguished from each other with different core features (Figure 3.131). In the outer part of the section (Nr.1), we found a brittle, Khorasan mortar type with big, crushed, brick particles and brick powder, which gives it a dark pink colour; in the inner part (Nr.2) we found a lime mortar type, which has a lighter colour. This second layer must have been added to the inner façade in a later period to repair and to strengthen the tower, which perhaps had already collapsed. The masonry employed on the inside is made up of different type of smaller stones (Figure 3.133). Furthermore, in another sample taken from the inner façade, cement is found as the binder material, which suggests very late Ottoman repairs in certain areas of the structure. The independent rectangular piece which lies on the ground just behind T2.1, seems to have detached from the inner, façade.

Figure 3.127 : T2.1, eastern part of the U-shaped tower, image by author (2011).

Figure 3.128 : T2.2, western part of the U-shaped tower, image by author (2011).

Figure 3.129 : T2.1, architectural spolia on the outer façade, image by author (2011).

Figure 3.130 : T2.1, architectural spolia on the outer façade, image by author (2011).

There is not so much to see from the western piece (T2.2) — just a few stones on the outer façade (Figure 3.128, Figure 3.134). This façade is battered and has a vertical angle corner with a ledge towards T2.1. This piece reveals very careful masonry. However, the upper part and the inner façade have no coating and are in a poor condition. We also found here two types of mortars; a Khorasan-type mortar, rich with crushed brick pieces, which consists of puzzolan in the core on the inner side, and a lime mortar type, also with puzzolan in the core on the outer façade.[72] It may represent a repair or reconstruction on the inner side and may correspond to the first phase of T2.1.

[72] See Chp. 3.4 for the detailed analysis of mortar samples.

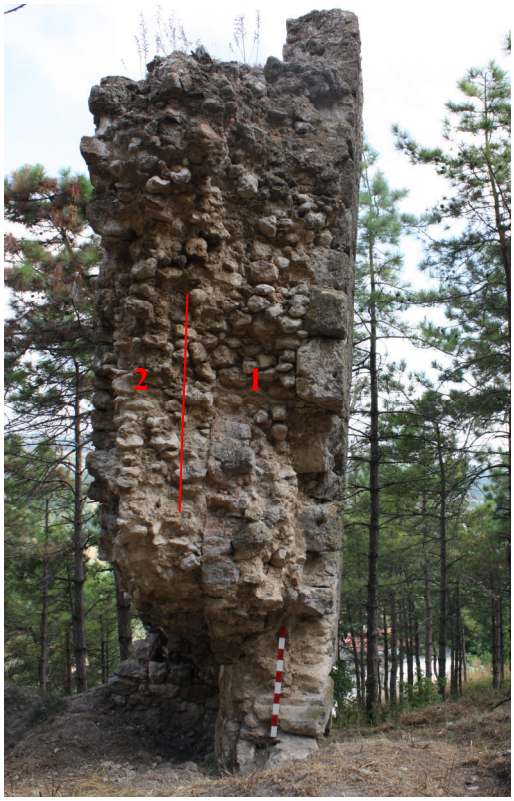


Figure 3.131 : T2.1, section, two different distinguishable phases, image by author (2011).

Figure 3.132 : T2.1, view from north, the curve, image by author (2011).

Figure 3.133 : T2.1, different masonry of the inner façade, image by author (2011).

Figure 3.134 : T2.2, view from south, image by author (2011).

Figure 3.135 : T2.2, inner façade and the foundation stones of the earlier phase, image by author (2011)

Figure 3.136 : T2, the trace of the foundation of the earlier phase, image by author (2011).

In the area between T2.1 and T2.2, the probable remains of the very first tower can be viewed as the rectangular frame of foundation. The clean-cut, white limestone blocks can be best observed below the inner part of T2.2 (Figure 3.135, Figure 3.136).

Regarding the observations above, we can give at least four construction phases of T2: (1) The rectangular foundation of a presumable rectangular tower with clear-cut stones, (2) the battered corner on the east (T2.2), (3) the outer layer of the U-shaped tower (T2.1A) and the inner layer of the U-shaped tower (T2.1 B).

U-shaped towers first emerged during the reign of Marcus Aurelius (161–180 AD) and Lucius Verus (161–169 AD) in the Roman forts of North Africa, Arabia, Syria and Palestina. These examples are considered to be the forerunners of the U-shaped towers that were often used under the Tetrarchy and Constantine in the military forts of the frontiers, as can be seen in the famous examples of Iatrus, Novae, Abritus, Tropaeum and Amida in the 4th century (Figure 3.137). We also find examples of fortresses and town fortifications with U-shaped towers built under Gordian III (238–244 AD) and Philip II (244–249 AD) from the Danube frontier and Dacia. The solid, forward-projecting U-shaped towers of Nicaea, which were built in the years 258–

269 AD, are one of the earliest examples of their use in city fortifications (Ivanov, 1980, pp. 241–243). From the 4th century on, they started to be used in the fortifications of the new cities like Elbasan/Scampa and Diocletianopolis of Thessalia in the inner provinces of the Balkans. Two important coastal cities of the European province from the 5th century — namely Heracleia and Selymbria — also had U-shaped towers. Justinian's work in Sergiopolis (Resafa) in Syria is a rare example of U-shaped towers from the 6th century; in the 5th and 6th centuries, the use of this tower type was rare due to the new defensive techniques, such as the commonly used pentagonal towers (Rizos, 2010, pp. 53, 71, 117, 125).

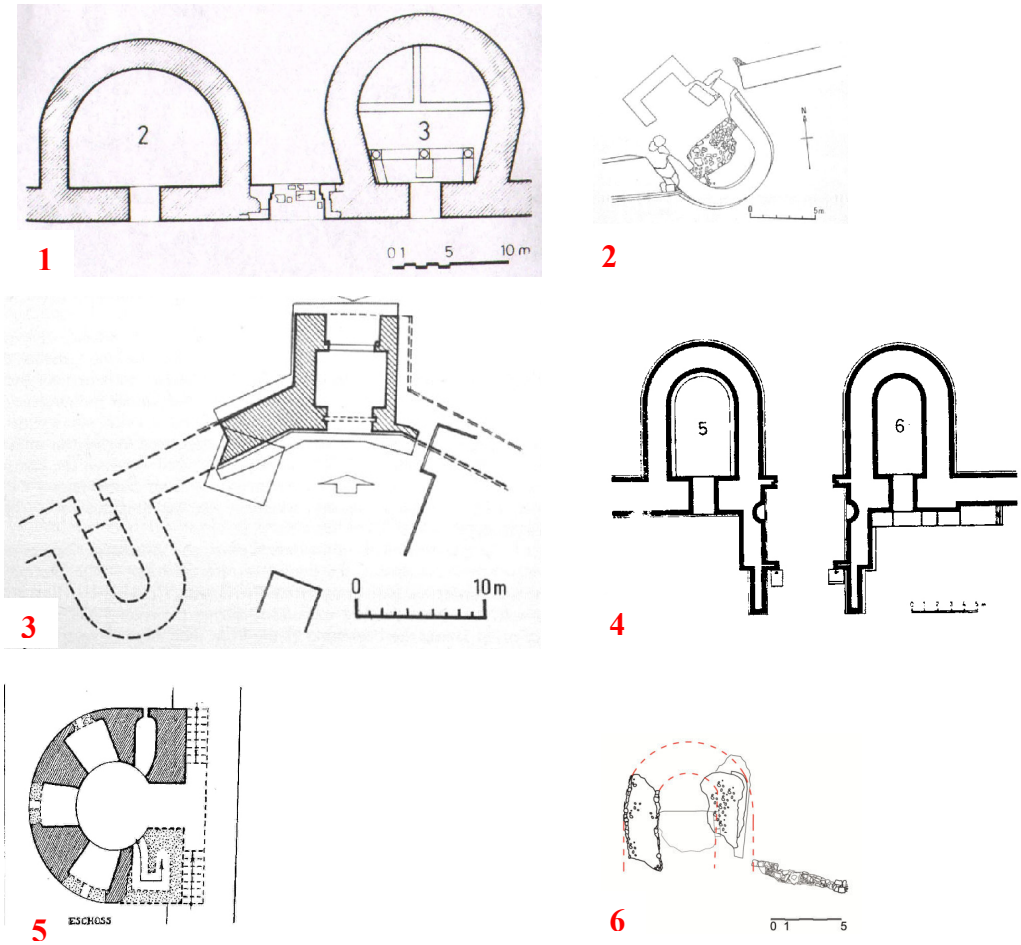


Figure 3.137 : U-shaped towers of 3rd–4th centuries: 1-Oescus II, north gateway, after Ivanov (1998); 2-Novae, after Hoddinott (1975); 3-Iatrus, gate, after Hoddinott (1975); 4-Abritus, northern gate, after Ivanov (2012); 5-Nicaea, after Schneider and Karnapp (1938); 6-Vize, T2, image by author (2013).

3.3.2.2 Pentagonal (prow-shaped) towers (T4-T6)

The three pentagonal towers of Vize are attached to terrace walls W5 and W6. Only two of them, namely T5 and T6, will be considered here, since the third one lost all of its characteristics due to the reconstructions. Furthermore, the northern part and the top of T5 is not reachable (Figure 3.138). Both towers are almost as high as the curtain wall, and the battlement level seems to have collapsed. The roof is not preserved. A concrete floor must have been added in order to convert them into terraces for the modern houses (Figure 3.141, Figure 3.142). That is why the upper parts of the towers have completely changed. A slit-like opening is found on the northern façade of T6 (Figure 3.139). T5 is not entirely reachable, so we cannot check the facades. We also do not know the inner articulation of the towers. The connection corners to the curtain walls reveal repairs with much smaller stones. The construction material of the main parts is secondary limestone with big dimensions and a similar joint mortar was used in W5 and W6 (Figure 3.138, Figure 3.139, Figure 3.140). Because of deformation, the façade of T5 could not be thoroughly examined. Thus, it is not easy to decide if the towers are contemporary with the curtain walls. The two parallel sides connecting to the curtain wall are shorter than the sides of the prow.

Figure 3.138 : T5, view from SE, image by author (2012).

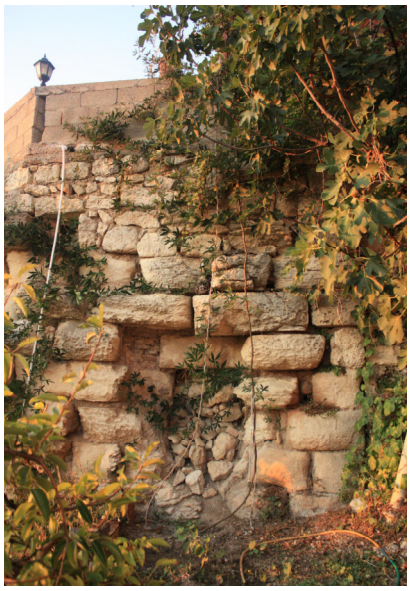


Figure 3.139 : T6, view from NW, image by author (2012).

Figure 3.140 : T6, view from south, image by author (2012).

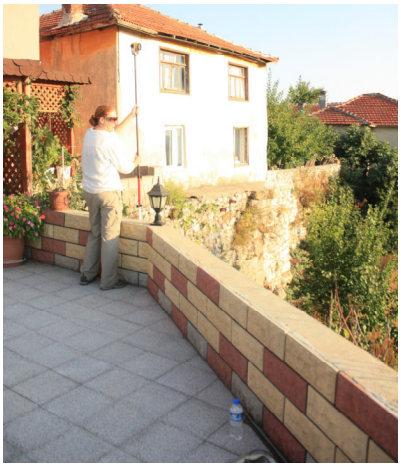


Figure 3.141 : T6, view from SW, image by author (2012).

Figure 3.142 : T6, terrace on the top, M. Çavdar (2012).

The *Paraskeuastika*, the only treatise on fortification to have survived from Antiquity, was written by Philo Mechanicus, who was a Greek writer and engineer from Byzantium towards the end of the 3rd century BC (Rance, 2013, P.1). In this work, Philo suggests pentagonal towers, but he notes that they are inferior to U-shaped towers for defensive features (Nossov, 2009, p. 13).

The Hellenistic period witnessed the common use of rectangular, round and half-circular towers. However, pentagonal towers did exist, maybe thanks to Philo, in a

few places; some of the latest are from around 180 BC (e.g., Labraunda/Hisarkale, Dura Europos and Oenoanda) (McNicoll, A.W., 1997, p. 10). After the Hellenistic period, pentagonal towers disappeared from defensive works until when they reappeared as a distinctive (re)invention of early Byzantine fortifications.

Because their enemies had more experience in siege warfare, major innovations had to be developed in the urban fortifications of the 5th century. The scale of the fortifications changed, and new elements, like proteichisma and the pentagonal tower, were introduced to the defensive systems. The advantage of the pentagonal towers against frontal attacks and their possibility of covering the angled front by enfilading fire from the curtains attests to the highly defensive character of this tower type, which resulted in an increase in popularity of the pentagonal towers in many of the major fortifications of the 5th and 6th centuries (Crow, 2011, p. 98).[73]

The *terminus post quem* given by Crow (2001, p. 102) for the use of the pentagonal towers is the decade after 500 AD; he is basing this off the examples in the Anastasian Long Walls. However, we find a pentagonal tower on the outer circuit of the Theodosian walls of Constantinople, built in the first decades of the 5th century. Also, the remains of the western tower gate of the Haemus Gates complex, which was undertaken in the early years of Theodosius II (408–450 AD) reveals a pentagonal tower as well (Dintchev, 2012, pp. 502, 515). Another example of a pentagonal tower from the first half of the 5th century is given by Poulter from Nicopolis ad Istrum (1995, pp. 219–225). Nevertheless, these towers were mainly built by the emperors Anastasius (491–518 AD) and Justinian (527–565 AD), and the two periods are distinguished by Karaiskaj (1998, p. 868) as having some differences in design. According to his observations, during the time of Anastasius, the two parallel sides of the towers were built short so that it appeared triangular in form. In contrast, Justinian's towers were more defensive, projected as much as possible from the wall, and they avoided big openings in the walls. Accordingly, Dintchev (2012, p. 506) also claims that the securely dated early Byzantine towers have a ratio of width to height in their design that favoured height. Thus, the deviations may be a distinctive criterion for dating.

[73] Pentagonal towers cover a time span of the 5th–10th centuries and a large area; in addition to the Balkan peninsula, they are also found in Italy, Syria and with a dominant number in Asia Minor (Foss, 1986, pp. 30–31).

Another distinctive characteristic attributed to the pentagonal towers is the angle of the prow. According to the Byzantine military treatise of Anonymous Byzantinus from the 9th century, the recommended ravelin angle should be 120°.[74] However, most of the 5th and 6th century examples do not seem to apply this rule. Bobčhev (1961, p. 143), claims that the angle of the pointed towers varies from a narrow angle to 108°, which is the regular angle of a pentagonal tower. He indicates that this angle enables easier attack and also protection against frontal assault. Likewise, Dintchev (2012, p. 506) indicates that the angle of the prow of the securely dated towers is always less than 108° and usually below.

As testified to by epigraphic and written sources, the long walls of Thrace and the fortifications of Dyrrachium (Durres) do certainly belong to Anastasius's time, and the design of the towers (mostly Dyrrachium) seem to fit to these arguments. The crowded list of Justinian's fortifications, thanks to Procopius, contains many important cities from the Balkan Peninsula that are attributed to Justinian but may belong to his predecessor as well. Among these cities are not only most of the important cities of southern Thrace, Thracian plain and coastal cities, like Heracleia, Ainos, Salmydessos/Medea, Philippopolis, Didymotheichon, Serdica, Mesembria, Odessos, Dionysopolis, etc., but also the cities from north of the Haemus, like Nicopolis ad Istrum, Madara, Shumen, etc. (Rizos, 2010, pp. 125–128) and fortresses like Trajanova Vrata (Băjenaru, 2010, p. 144) (Figure 3.143).

The two pentagonal towers of Vize have different dimensions. Both towers have shorter sides than the sides of the prow. The sides of the pentagonal tower on the south (T5) are measured as ~1.90 m and the prow sides are measured as ~5.90 m. The angle of the prow is 105°. The sides of the T6 are measured as 3.5–4 m, and the prow sides are measured as 5.10–5.60 m. The angle of the prow is 85°. Accordingly, these towers remain in the angle range of typical pentagonal towers, whereas the side dimensions point to the Anastasian type as discussed by Karaiskaj (1998, p. 868).

[74] Ananymous Byzantine, Strategy, 12. (ed.) Dennis, G.T: (1985), p. 35.

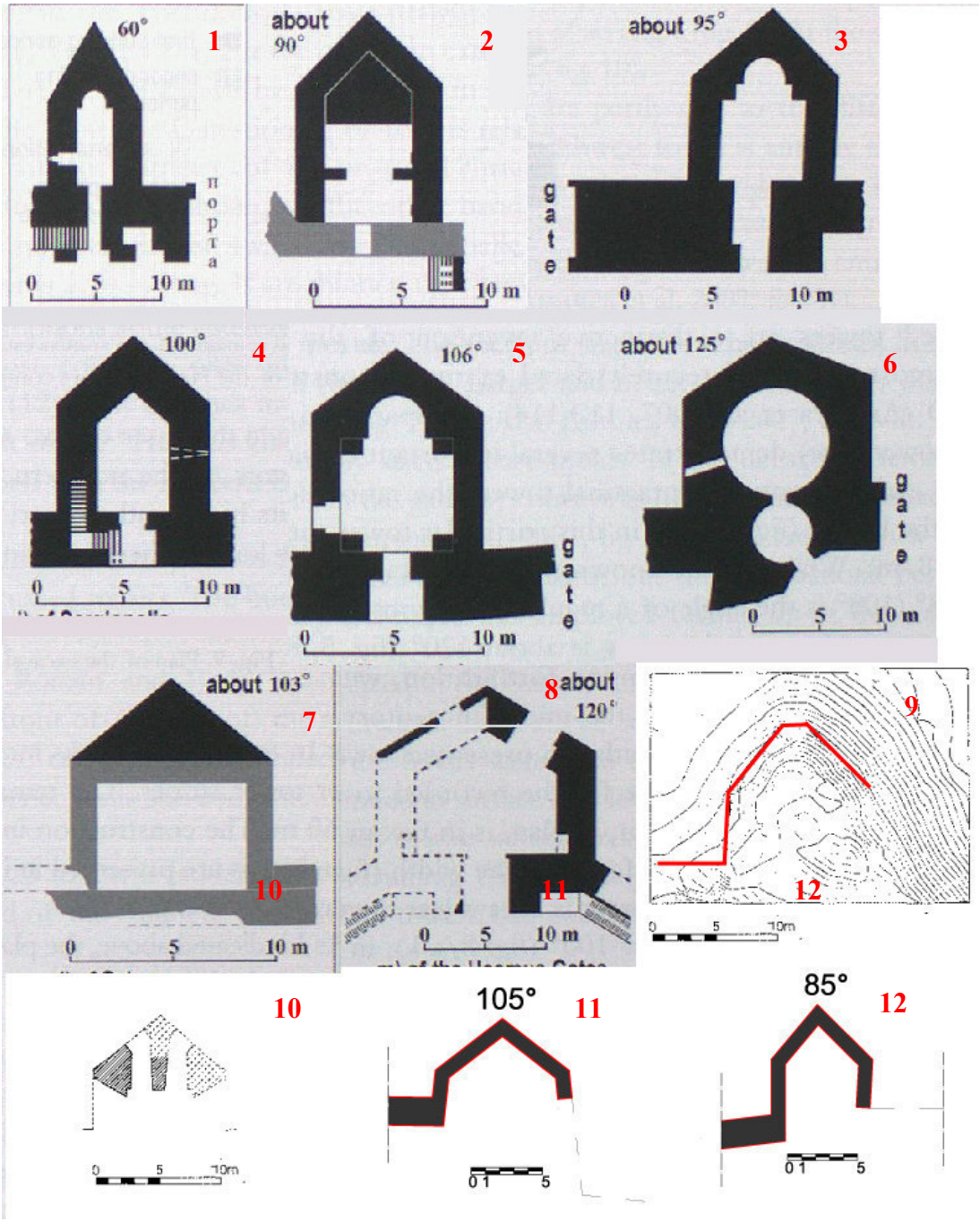


Figure 3.143 : Plans of early Byzantine pentagonal towers: 1-Trajanova Vrata, 2- Tocra, 3-Dionysopolis, 4-Sergiopolis, 5-Mesembria, 6-Theodosian wall of Constantinople, 7-Salona, 8-Haemus Gates, 9-Long walls of Thrace, 10-Perinthos, 11-12-Vize. 1–8 after Dintchev (2012), 9–10 after Crow and Ricci (1999), 11–12 author (2014).

3.3.3 Citadel

The so-called citadel of Vize sits on the highest zone and on the NE of the acropolis. This relatively flat platform is between 284.8 m and 285.9 m high (Figure 3.144). The surface covers an area of ca. 0.4 ha. On the west and north, it is surrounded by a street (Hisar Caddesi), from which it rises almost 5 m high. A steep slope, on the skirt of which the natural rock terrain can be seen, borders its west side. On the south side, where a gentle slope lies, the modest local houses of Vize are found.

Today, it is not possible to observe the building complex of the citadel. Among several fragmentary remains on the site, two are here primarily identified and considered: a vaulted gate and a circular tower. The other collapsed remains spread irregularly around and between these two structures and cannot be identified easily.

3.3.3.1 Gate (WP5)

Description: The gate today is a free-standing structure because the rest of the connecting buildings are not present (Figure 3.145). This NW–SE oriented gate is a 6.20-m-wide structure with a barrel-vaulted opening that is 3.80 m high from the SE side and 4.10 m high from the SW side (Figure 3.145, Figure 3.146, Figure 3.147, Figure 3.148). The width of the opening differs between 2 m and 2.25 m due to the inclined lateral surfaces. The SE façade of the gate is battered, which makes the depth of the gate 3.15 cm at the bottom and 1.60 cm at the top.

The gate is built up of secondary stone blocks with a careful workmanship with very little or no joint mortars on the SE and SW façade (Figure 3.146, Figure 3.150). The rubble core consists of a beige and hard mortar with crushed stone particles, lime and sand. The lower parts of the SE façade and the entire NW façade were robbed of their coating stones. A marble spolia is built in on the upper part of the SE façade (Figure 3.146). The NE (lateral) façade of the gate belongs possibly to a later phase, which features a different masonry and material (Figure 3.149). The dimensions of the stones are smaller than the stones of the opposite lateral façade. They have thick joints, which are either filled with bricks or thin stones or left hollow. Two parapet walls of 70–75 cm high extend 1.5 m to the NW direction starting from that façade. The west parapet wall ends with a significant piece of spolia. Beside this spolia, two marble slab blocks limit the entrance on the ground (Figure 3.147).

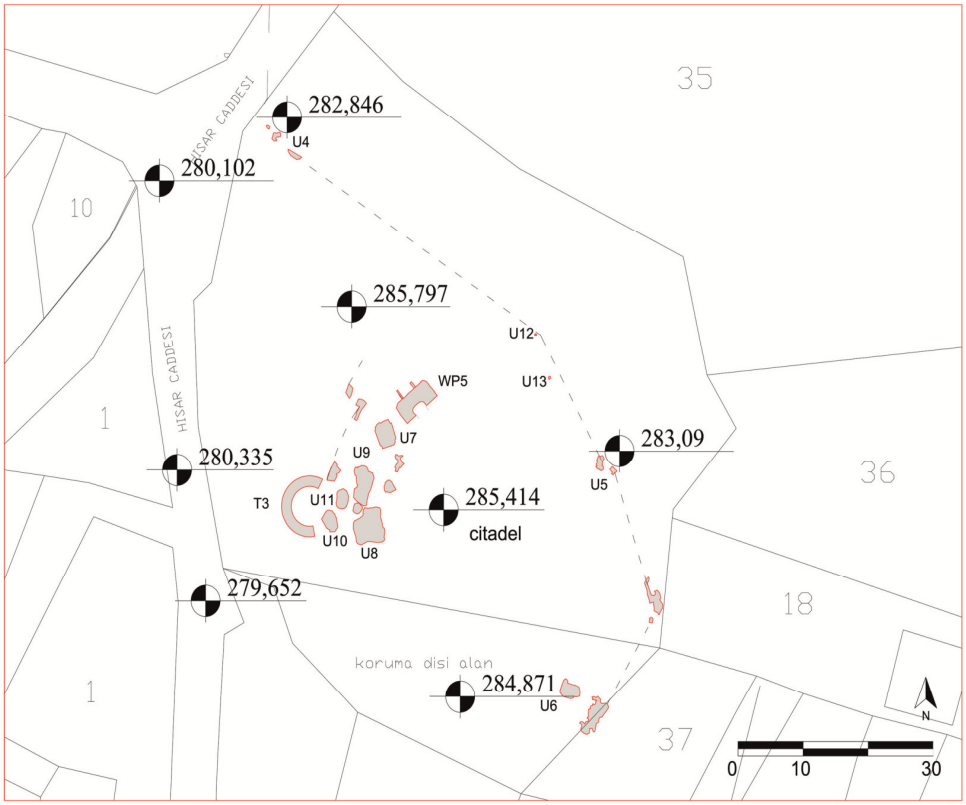


Figure 3.144 : The citadel of Vize, drawing by author (2013).

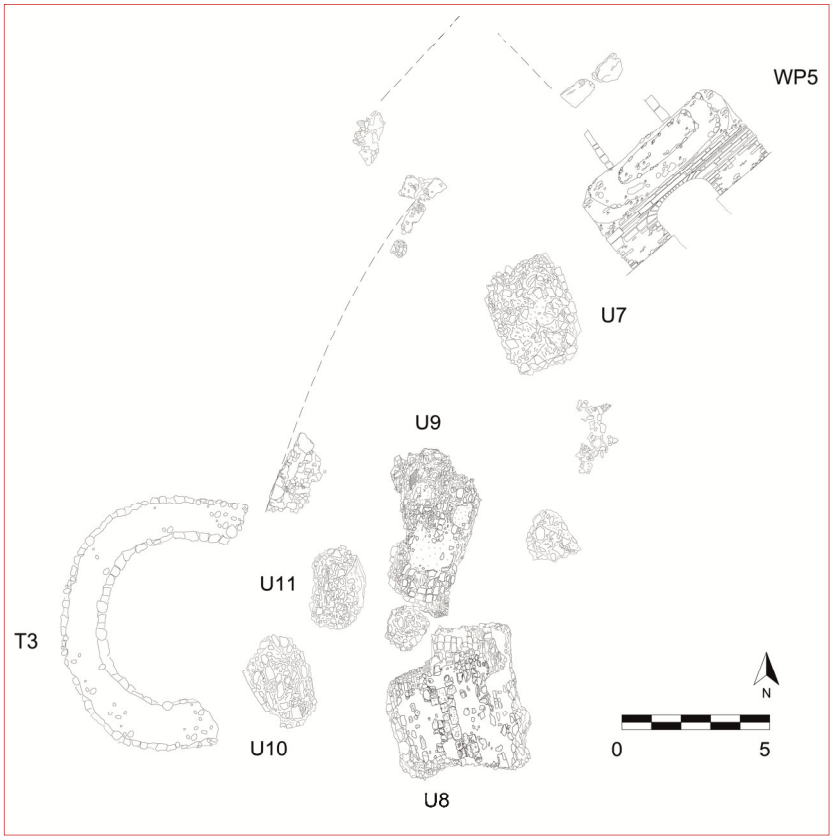


Figure 3.145 : The citadel of Vize, building remains, drawing by author (2013).

Figure 3.146 : The citadel of Vize, the gate (WP5), SE façade, photo by author (2012).

Figure 3.147 : The citadel of Vize, the gate (WP5), NW façade, photo by author (2012).

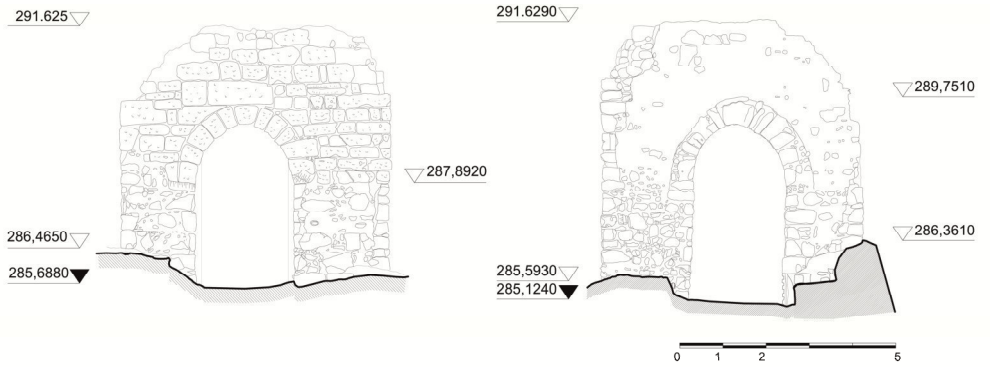


Figure 3.148 : Citadel of Bizye, the gate (WP5), facades, drawing by author (2013).

Figure 3.149 : The citadel of Vize, the gate (WP5), NE façade, image by author (2012).

Figure 3.150 : The citadel of Vize, the gate (WP5), SW façade, image by author (2012).

Spolia: In front of the NW façade, at the end of the SW parapet wall, a secondary piece was used as a finishing element of the wall (Figure 3.151, Figure 3.152). This is a Corinthian marble cornice fragment, with dimensions of H: 85 cm, W: 45 cm and L: 175 cm. After the dentil band at the lowest part, the astragal moulding and the wide tripartite acanthus leaves were carved on the cyma.

Figure 3.151 : Cornice fragment, citadel, Vize, lower part, image by M. Çavdar (2012).
Figure 3.152 : Cornice fragment, citadel, Vize, frontal view, image by M. Çavdar (2012).

This is not the only cornice segment with a similar ornamentation from Vize. Another piece, found in the garden of the Vize Library on Cumhuriyet Caddesi, is a 133-cm-long marble frieze with a very similar acanthus form (Figure 3.153). Since it is found out of context and it is an undocumented piece, it is difficult to advance further.

Figure 3.153 : Frieze fragment, garden of the Vize Library, image by M. Çavdar (2011).

The dentil band and the astragal cannot be considered as the main features for dating a decoration detail here because they occur in both the Ionic and Corinthian epochs and have common design principles in both periods (Dimitrov, 2007, p. 325). Therefore, the only element that could be used for dating was the acanthus leaves, which were applied in different styles depending on the region and the period.

The acanthus design on the cyma in Vize has a wide stem with large folios that are not carved very deep. Thanks to the published examples of architectural decoration elements between the 1st and 3rd centuries in the Lower Moesia Province, it is possible to track the development of the acanthus leaves on Corinthian capitals. From the Severan period on, together with a general reduction of the ornament in the order, the acanthus leaves are transformed into a more simplified form (Dimitrov, 2007, p. 324). Some capital examples from Ulpia Oescus, which are dated to the end of the 2nd or beginning of the 3rd century, are worth considering in comparison to Vize (Dimitrov, 2007, p. 615) (Figure 3.154).

Figure 3.154 : Corinthian capitals from Ulpia Oeascus (end of 2nd/ beg. of 3rd century), after Dimitrov.

Among plenty of examples from Lower Moesia, a similar cornice segment (with similar ornamentation course and acanthus style) has not yet been documented in other recent studies. Among the spolia pieces found in the garden of Topkapı Palace in Istanbul, four marble cornice pieces with a very similar astragal mould and acanthus leaves can be given as a comparison (Figure 3.155). In these two examples, the acanthus leaves are triedental instead of two-pronged, and they are carved deep inside. They were found in the vaulted ruins of a building that presumably was a temple. The pieces are dated to the 4th century, but there is no extra information (Tezcan, 1989, p. 383).

Some of the well-documented frieze pieces from Oxyrhynchus (Egypt) that date to 4th–5th centuries (Krumeich, p. 39, 2003) resemble the acanthus pattern in Vize (Figure 3.156).

Figure 3.155 : Cornice examples found in the garden of Topkapı sarayı, 4th century, after Tezcan (1989).

Figure 3.156 : Frieze fragments with acanthus pattern from Oxyrhynchus, after Kirsten and Krumeich (2003).

Among the other architectural spolia found in Vize, this cornice segment and the frieze piece are the only examples of their kind. So, we have no possibility for comparison with other examples. Thus, given a paucity of similar examples, only a vague date of the 3rd or 4th century could be given for these two spolia fragments.

Related structures: On the NW side of the gate, the remains of the big blocks can be seen (Figure 3.157). These blocks are almost entirely covered by earth, but at least two steps of a stair-like structure can be followed on a slightly round line of ca. 13 m in length until the circular tower (Figure 3.158). This structure was probably connected to another corner on the NW side, a part of which could be seen on the ground. This looks rather like a corner, which could have connected with the gate (Figure 3.159).

Figure 3.157 : Remains related to the gate and the tower, image by author (2012).

Figure 3.158 : Remains on the NW of the gate (A), image by author (2012).

Figure 3.159 : Remains extending to the tower (B), image by author (2012).

3.3.3.2 Tower (T3)

Description: The most dominant element of the citadel is the semi-circular tower on the west side, only half of which is preserved today (Figure 3.160, Figure 3.161, Figure 3.162). The vertical half of the tower has collapsed, but the west half is intact until the embrasure level, which is ca. 12.50 m high. The walls, 1.30–1.40 m wide, reveal the rubble core, which contains hard lime mortar and little amount of brick pieces. The facades are coated with small, reused stones surrounded by bricks and/or thinner stones. On the inner façade, except for some repairs with pink mortars on the upper parts, no joint mortar was applied. On the contrary, the outer façade is entirely plastered with cement mortar, which indicates 19th-century (or later) repairs (Figure 3.161). Two loopholes are found on top of each other at the upper part of the façade (Figure 3.160, Figure 3.161, Figure 3.163, Figure 3.165). The holes of wooden beams, presumably supporting wooden platforms, are visible on the inner façade at two levels (Figure 3.161, Figure 3.163).

The way the tower has collapsed can give some clues about its connection to the rest of the system. The walls are most fragile at the connecting points. Presumably, this

was a corner semi-circular tower, on both sides of which were linear walls. On the south end, we found flat surfaces on the collapsed side, which points to either loopholes or surfaces remaining from the wall walk (Figure 3.162, Figure 3.163).

The circular line of the base stones running from the gate to the tower does not seem coincidental, which shows that the tower and the gate were connected in an enclosed complex.

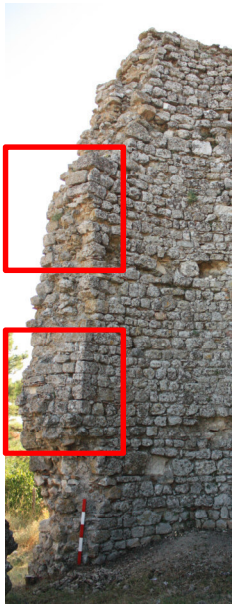


Figure 3.160 : T3, the semi-circular tower, outer façade, image by author (2011).

Figure 3.161 : T3, the semi-circular tower, inner façade, image by author (2011).

Figure 3.162 : T3, flat surfaces on the southern section of the wall, image by author (2011).

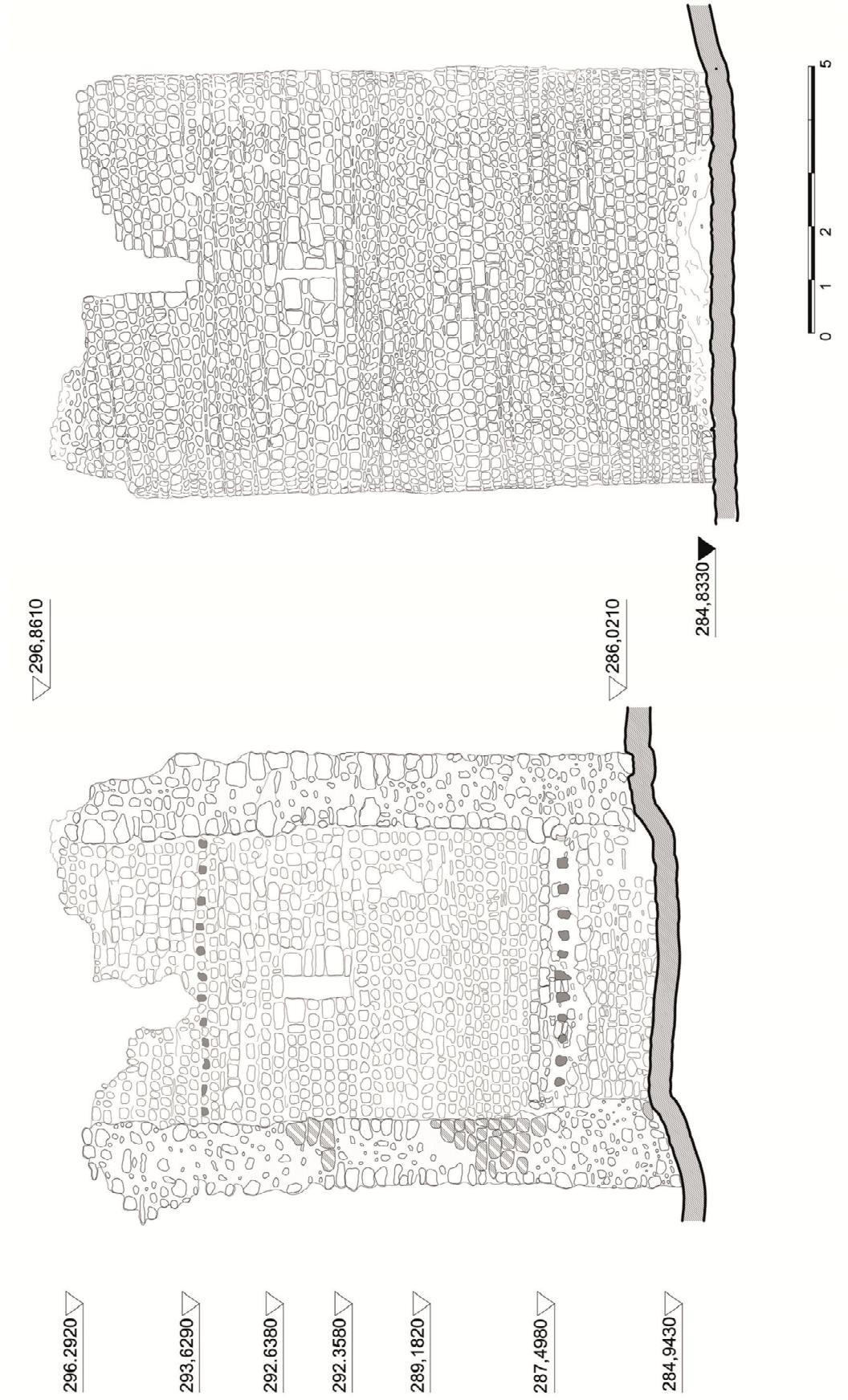
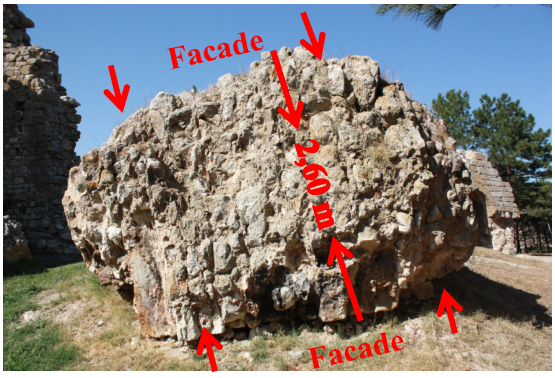


Figure 3.163 : The citadel, semi-circular tower (T3), drawing by M. Çavdar (2012).

Figure 3.164 : The citadel, semi-circular tower (T3) from north, image by author (2011).

Figure 3.165 : The citadel, semi-circular tower (T3) from west, image by author (2011).

Related structures: On the western part of T3, six pieces of unidentified building remains were found on the ground. Of the six pieces, two are remarkably large (Figure 3.166, Figure 3.167). The biggest one, namely U8, lays on one of its two facades; it is possible to see the other façade by climbing on the top of the piece. Like T3, it is also made of small but secondary stone blocks (Figure 3.170). The wall width was measured to 2.60 m (Figure 3.166). The interesting detail on one side of this fragment is a corner with an obtuse angle (Figure 3.168). It is possible to differentiate both of the surfaces, one of which is curved (Figure 3.169). The second biggest fragment (U9) lies with an angle on the ground so that the small, stone block-coated façade with bricks in the joints is visible (Figure 3.167). A similar masonry technique is also seen on another piece closer to the tower (U11) (Figure 3.171). The rest of the remains are more fragmented, which makes it difficult to analyse.



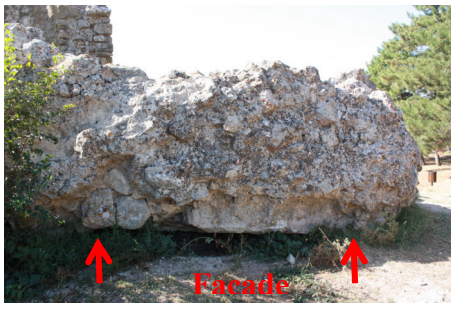
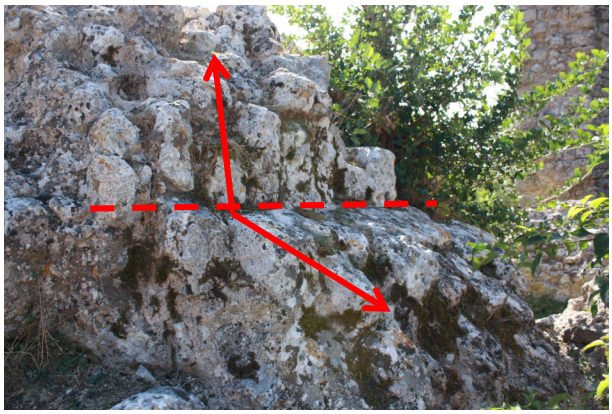


Figure 3.166 : The citadel, collapsed fragments (U8), wall width, author (2012).

Figure 3.167 : The citadel, collapsed fragments (U9), author (2012).



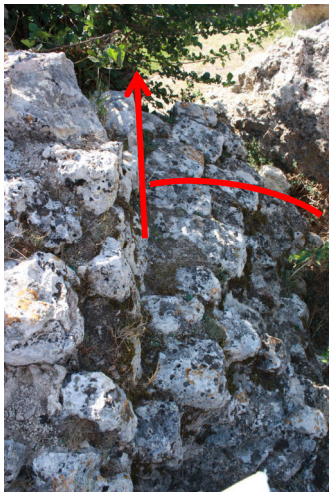


Figure 3.168 : The citadel, collapsed fragments (U8), the corner, image by author (2012).

Figure 3.169 : The citadel, collapsed fragments (U8), curve on the corner, image by author (2012).

Figure 3.170 : The citadel, collapsed fragments (U8), façade, image by author (2012).

Figure 3.171 : The citadel, collapsed fragments (U11), façade towards the ground, image by author (2012).

On the south-west of the gate (WP5), a free-standing building fragment is found (U7) (Figure 3.172). This fragment has a masonry of small secondary stones with a joint mortar of a hard lime mortar type, consisting of gravel, lime, puzzolan and sand (Figure 3.73, Figure 3.174). The joints were at some points filled with bricks. The masonry and mortar type of U7 matches circular tower T3. Although U7 seems to be standing in situ, presumably it is a broken piece that has collapsed, rolled and stood on its normal position. A part of its lower surface might have been buried in the ground. At around 15 cm above the ground, we found holes running horizontal throughout the structure, which probably were occupied by wooden beams.

Besides two parallel facades, which are perpendicular to the ground, the significant feature of this structure is the vault beginning on its south façade (Figure 3.173, Figure 3.174, Figure 3.175). Regarding that it is just the beginning of the vault, we may consider this fragment on a higher part of a building (Figure 3.176).

Figure 3.172 : The citadel, U7, image by author (2012).

Figure 3.173 : The citadel, U7, east façade, image by author (2012).

Figure 3.174 : The citadel, U7, south façade and the vault, image by author (2012).

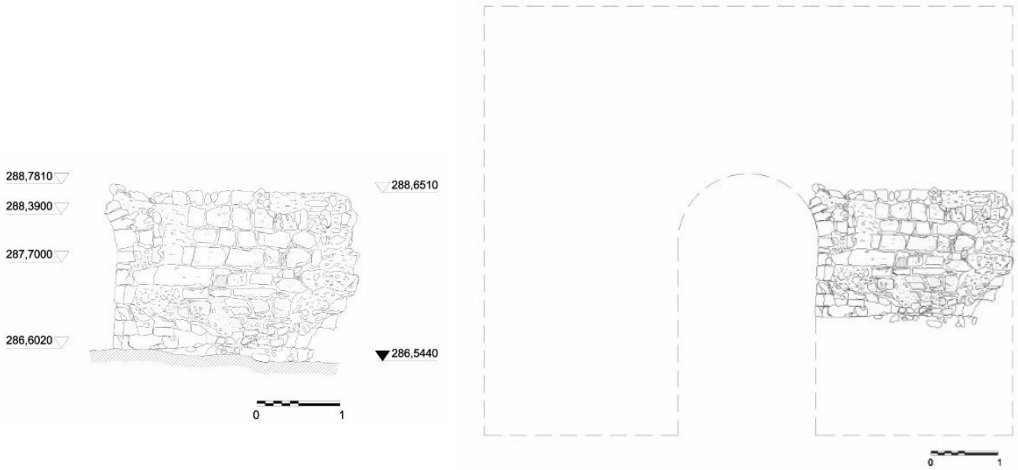


Figure 3.175 : The citadel, U7, east façade, vault, drawing by author (2013).

Figure 3.176 : Hypothetical drawing of the possible location of U7, drawing by author (2014).

3.3.3.3 Other remains on the citadel

At different areas closer to the borders of the citadel, miscellaneous remains of stone blocks and substructures can be observed. However, at the NW end and SE end of the citadel, the remains are subterranean and only the surface of the structures is visible (Figure 3.177). Thus, it is almost impossible to hypothesise the forms and functions of these structures without excavating the area. The remains on the NW side (U4) resemble a straight wall on the ground. A type of hard lime mortar can be observed in the rubble core structure, which extends towards the NW to the street and the other hill (Çamlık). It could have been connected to the remains opposite on the skirts of the hill before they were destroyed by the construction of the street.

The remains on the SE end of citadel (U6) are more difficult to put in a context since it looks more like the substructure of a building and only rubble core is left. On the west edge, some step-like stone blocks were built against the slope, which may point to an early period access to the citadel (U5). The geologic structure of the citadel is bedrock, which is visible on the west edge, and provides both a natural defence and the option for a construction. Towards the north, under the trees and among the bushes, some marble stone blocks are visible (U12-U13). These traces may point to a line of walls that can be followed from the skirts of the opposite hill, and even probably from W2 and W3.

Figure 3.177 : Citadel of Vize, unidentified remains (U4,U6 and U5), images by author (2011).

3.3.3.4 Discussion

A citadel has been defined by Foss (1986, p. 10) as the strongest and most carefully fortified part of the defences and as the focal point of a town, and it is particularly for use in time of siege. Besides necessary space and buildings, it usually had a well and would have been originally built in line with the outer defences.

The idea of a citadel as the last place of resistance and/or refugee in a city was common to ancient civilisations. Most of the 8th-century Greek cities on the mainland were unfortified. Nevertheless, cities built on top of Bronze Age predecessors, like Mycenae, often had walls on the upper part of the city. However, the population did not live within the walls unless there was a danger (Lloyd, 1983, p. 13).

Likewise, the non-Greek cities in Asia Minor with ancient predecessors had citadels. In Troy, although the residential area stretched down to the lower city, the former citadel of the pre-Roman period was consistently occupied (Aslan and Rose, 2013, p. 27). Sardis, the capital of the ancient kingdom of Lydia, emerged as a fortified castle, rising over an unfortified area of the population (van Zanten, 1975, p. 35).

In Thrace, we find ancient settlements located on hills, which in the following periods extended downwards. Plotinopolis is a dominant hill of Didymoteichon, with Thracian and Hellenistic antecedents. A similar settlement pattern applies to the ancient city of Philipopolis (Plovdiv), which was founded on a hilltop. The Thracian settlement of Eumolpia lay on one of the three hills of the Bulgarian city of Nebettepe. In the 4th century BC, it was extended, refortified and turned into a municipal centre and a garrison by Philip II of Macedon (359–336 BC). Before becoming a Roman province, the strongly fortified hill housed the residence of the Thracian King Rhoimetalkes (18–38 AD) (Ivanov, 2006, p. 19).

In the 1st and 2nd centuries AD, the Roman army used the existing infrastructure in the towns and cities in the east (Gregory, 1995, p. 82). In the old cities with ancient fortified hilltops/citadels, where continuous settlement had occurred, the Roman city spread to the unprotected areas. The reuse of the citadels was carried out through (re)constructing the religious cult with temples, as in plenty of examples from eastern provinces (both in coastal Hellenistic cities and inland in Asia Minor, the Levant, the

Greek Mainland, Thrace, etc.).[75] Still, the concept of retreating into a citadel was not a part of Roman military thinking, and, therefore, "the citadel as a significant element of a defence system" re-emerged in Late Antiquity (Foss, 1986, p. 8).

In the Tetrarchic period, we find newly founded cities in the Balkans, some of which benefited from the natural topography by building citadels or forts on hilltops and settling around them. Due to the Gothic attacks, the Roman military system in the Balkans failed and was replaced by the new strategy of a local defence system of forts and fortified settlements in Thrace and northern Illyricum from 400 AD on (Rizos, 2010, pp. 65, 70, 116). These settlements occupied highly defensive positions, either on former military fortifications or on new sites. They were built for strength and applied new defensive elements, like pentagonal towers and proteichisma(tos). They were mostly small settlements, occupying an area smaller than 1 ha, and had praetoria (administrative and residential structures), barracks, baths, a cistern and sometimes a church (Dinchev, 2007, pp. 498–499, 526–527). Two well-known 5th-century examples of these early citadels from Balkans are at Kjustendil (Bulgaria) and at Markovi Kuli (FYROM) (Figure 3.178, Figure 3.179).

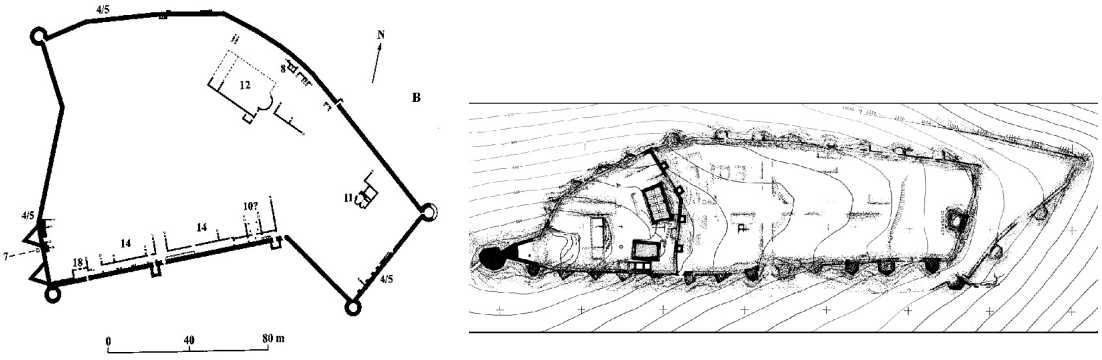


Figure 3.178 : Hisarlık near Kyustendil, the military fortress at Pautalia, after Dinchev (2007).

Figure 3.179 : Markovi Kuli, after Băjenaru (2010).

75 For specific examples see: Raja, R., Urban development and regional identity in the Eastern Roman provinces, 50 BC–AD 250, Aphrodisias, Ephesos, Athens, Gerasa (2012); Ousterhout, R., and Wescoat, B.D., (eds.) Architecture of the Sacred. Space, Ritual and Experience from Classical Greece to Byzantium (2012), the first five chapters; Ivanov, R., (ed.) Tabula Imperii Romani, K-35/2-Philippopolis (2012), pp. 294–297; Ivison, E., Amorium in the Byzantine Dark Ages (seventh to ninth centuries) in Post Roman Towns, Trade and Settlement in Europe and Byzantium (2007); Gregory, S., Roman Military Architecture on the Eastern Frontier, pp. 60–78 (1995).

Likewise, the age of Anastasius (491–518 AD) and Justinian (527–565 AD) witnessed the foundation or reconstruction of the new hilltop settlements on isolated and secure sites like Tsaravets Hill/Veliko Tarnavo (Rizos, 2010, p. 146), which resembles both the size and location of Vize.

In the following centuries the tendency of settling on higher, more strongly fortified and smaller areas of land for the cities increased. Thus, the citadel retained its significant function, either serving as a last place of refuge or accommodating the local authorities as a bastion, which also happened in the Ottoman period, such as in Thessaloniki (Bakirtzis, pp. 356, 358).

Vize, as the centre of the Astai Thracian Kingdom, had a long pre-Roman history as an ancient hilltop settlement. Although we do not have archaeological evidence to prove the exact location of the Thracians in Vize, the fact that the so-called acropolis of Vize has been settled by the Romans can be considered as a reference point for the Thracian settlement. The citadel could have always been used either for safety or for other purposes.

Making a reconstruction of the citadel of Vize is not only a challenging idea but impossible without excavating the site. What is given here is simply an idea to schematise the phases in order to enable a discussion. It starts with the latest phase, which is easier considering the tower and the related remains spread around the site.

(A) In the late Ottoman period, some repairs were made on the inner and outer façade of the round tower (T3). It is mortar with cement, which proves that the *terminus post quem* of these repairs is the 19th century. From 1828 until 1920, Vize experienced three wars — with the Russians, with the Bulgarians and with the Greeks (Ceylan, 2011, p. 68). Phase A represents this last period, but we cannot speculate how it connected to the outer circuit, how many towers existed or how it changed throughout the Ottoman period. The earlier gate (WP5) was integrated to a closed system of an inner circuit together with the tower. The slightly circular line of the plinth between the tower and the gate probably belonged to an earlier period. We cannot know if there was a forecourt like an enclosed entrance or if the gate was flanked by two towers (Figure 3.180).

The round tower, T3, is most probably a late Byzantine work, given the masonry. The only researcher who dated this tower to the period between Comnenian and Palaeologan periods was Dirimtekin (1963, p. 25). The wall displays an irregular cloisonné masonry, in which each course of stones is separated by a lacing brick or a very thin stone, and sometimes vertical bricks filled the joints. It looks similar to the works of Manuel Comnenos (1118–1143) (Foss, 1986, pp. 145–147), and during his reign, Vize was taken back from the Bulgars and was strengthened with new fortifications. However, it would be risky to assign specific dates to this late Byzantine tower, which could have stood on this citadel from 12th century on.

The repair of the NE side of the gate (WP5) could have been carried out during one of the late repairs of the inner façade of T3. The repair might have happened when the gate was no longer needed to connect to the outer circuit.

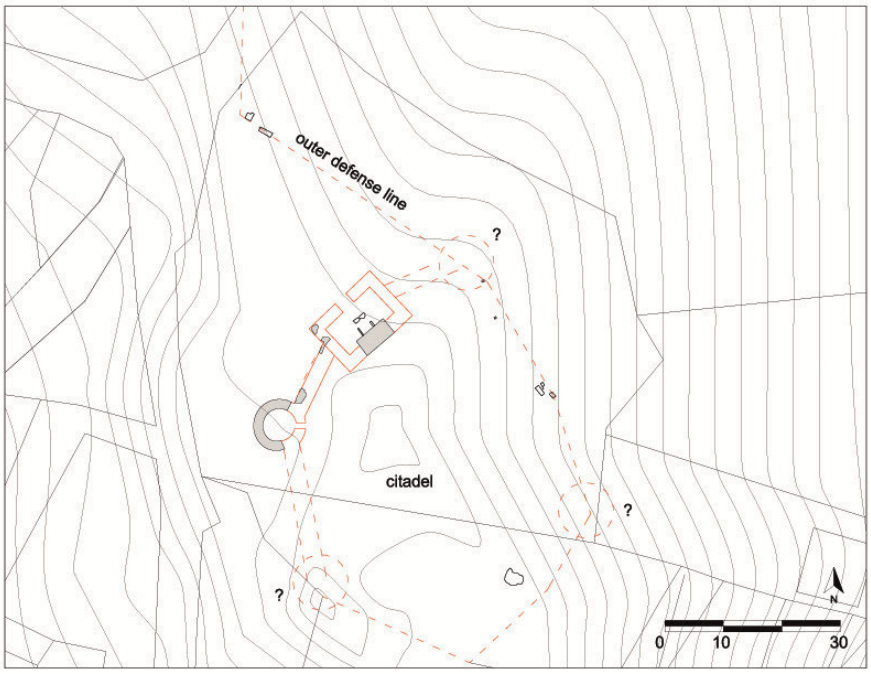


Figure 3.180 : Citadel of Vize, Phase A, drawing by author (2014).

(B) In this phase, there must have been another tower instead of the late Byzantine one. This was probably when the outer façade of the Roman gate became the inner façade. The new design of the parapet walls, which integrated the Corinthian cornice on the NW side and the circular plinth headed towards a possible tower, could have been carried out in this period.

We do not have sufficient archaeological evidence to discuss how it connected to the outer circuit, how many towers existed or how it evolved throughout the middle Byzantine period. This phase could have been constructed earliest in the early Byzantine period, in the 5th or 6th century, when Vize was also experiencing the city-wide changes; the urban space was made smaller by the dismantling the antique buildings, the construction of strong defences and the shift in the urban focal points by Christianization. Presumably, any radical changes did not take place in the concept of the citadel in the Dark Centuries. Given that the area of the citadel is only 0.2 ha, in a time when the city gained a military character and needed more space for garrison buildings from 9th century on, another high spot on the acropolis could have been utilised for the requirements.

(C) In the earliest phase of the citadel, the site presumably had a very different character (Figure 3.181). The gate (WP5), which displays an elegant masonry on the preserved upper parts of the SE façade, might have been built in the Roman period. Its SE façade is battered, showing that originally this was the outer façade. In this case, this gate led to an area, which lay further NW towards Çamlıktepe. When we look at the layout plan, it is intriguing to see that the gate is oriented to the Roman settlement of Çömlektepe. The stone steps (U5) on the rim of the citadel hill lay on the same line between WP5 and Çömlektepe. Questioning a possible connection between these two hills brings a different approach about the use of the hills and their possible relations in the Roman period. Instead of the small Byzantine citadel, the Roman citadel might have covered a larger area. We should dislocate the current citadel hill towards NW, integrating the modern street (Kale Caddesi) and the whole Çamlıktepe into the citadel layout. Then the upper level positions of W2 and W3, which seem awkward compared to the rest of the main curtain walls, make sense. However, we do not have the archaeological evidence to improve this hypothetic connection of the citadel hill and Çamlıktepe (Figure 3.182).

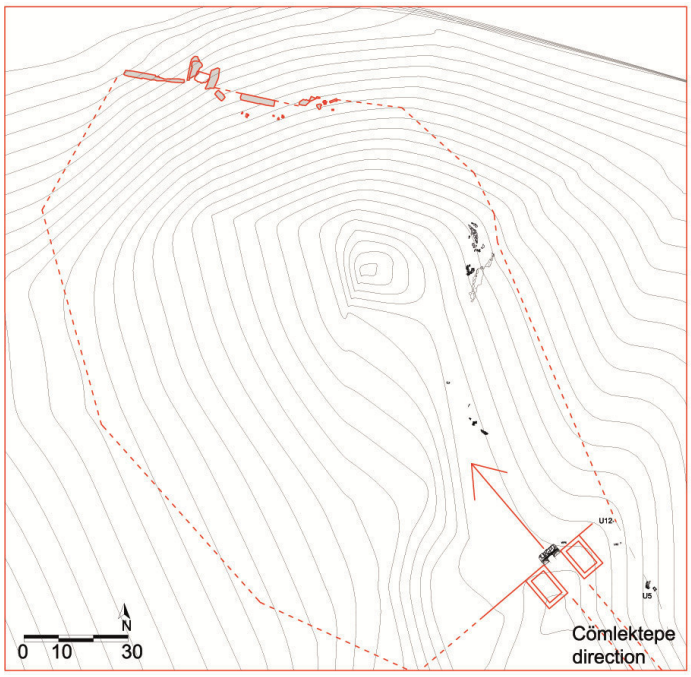


Figure 3.181 : Citadel of Vize, Phase C, drawing by author (2014).

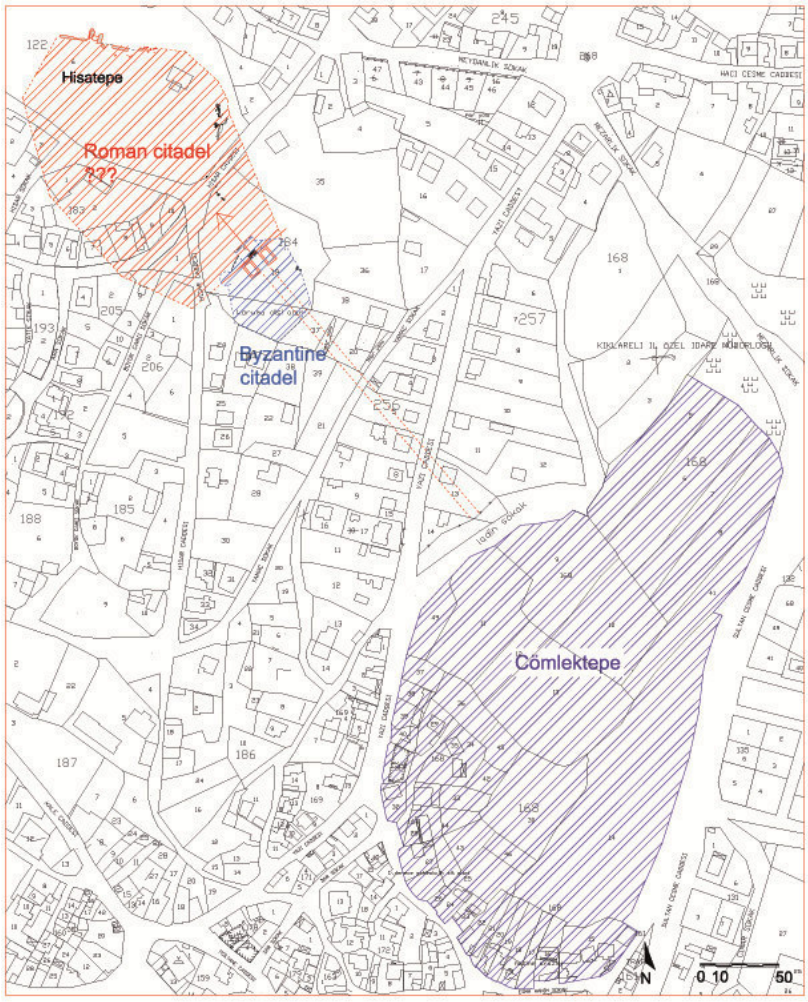


Figure 3.182 : Three hills of settlements in Vize, drawing by author (2014).

3.3.4 Independent towers and water supply system

In addition to the towers attached to the walls or citadel, there are two other towers which remain outside of the main wall circuit (Figure 3.183). The first of these two is a circular tower (T1) on the north edge of the Hacı Çeşme Caddesi, where the steep slope starts. Its connection to the curtain walls is lost today. The other tower, which is a rectangular one and known as water tower (WT), stands down the hill, in a stream. Probably these two towers are connected to each other, but it cannot be documented without excavation.

3.3.4.1 Circular tower (T1)

The circular tower (T1) sits directly on the natural rock on the slope of the hill. T1 has lost about half of its vertical structure, like the other circular tower (T3) on the citadel, so that it reveals half of the inner façade (Figure 3.184, Figure 3.187). It looks very similar to T3, but there are differences in the dimensions. In the plan, T1 has a 0.5 m smaller circle than T3, whereas its walls are thicker (1,7 m). The height of T1 can be measured as 10.70 m from the lowest basement level to the top, but T3 reaches to 12.50 m. The masonry technique is the same, except that slim stones were used in the façade of T1 for levelling instead of bricks (Figure 3.186). Very few bricks can be observed — and only on the lower courses. The mortar is the same kind of lime mortar (without brick particles), and it includes cement in the inner façade and in the rubble core like in T3, as a proof of 19th-century repairs. The inner façade seems to have two sections, which are separated horizontally at the lower level, maybe with a wooden floor (Figure 3.187). However, the inner façade of T1 looks more homogenous than the inner façade of T3. A part of the embrasure level could be preserved where the remains of merlons and crenels can be observed, together with the wall walk on the top (Figure 3.187). T1 does not have any loop holes on its façade but has a door-like opening, 1.40 m wide on the NW side, looking down, to the gate of the WT (Figure 3.188). The upper part of the door has collapsed, so the opening appears bigger than it really was. Horizontal wooden beams can be observed in the inner façade as the supporting elements of the masonry (Figure 3.189).

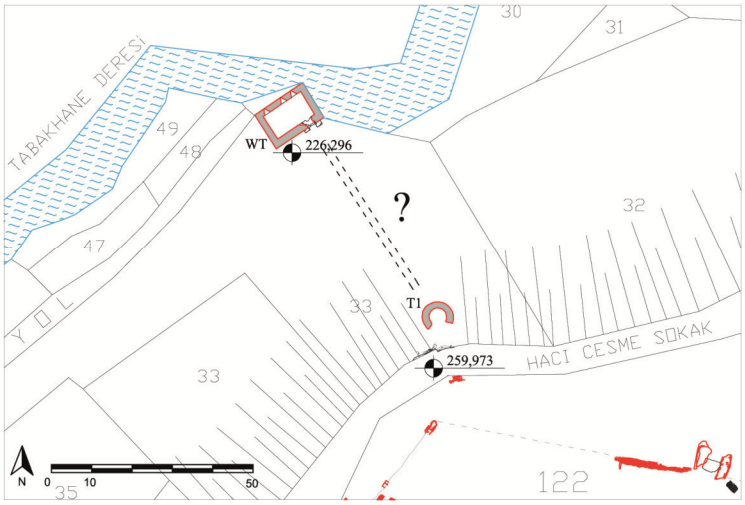


Figure 3.183 : Two free-standing towers in Vize, drawing by author (2014).

Figure 3.184 : T1, view from the NE of Hacı Çeşme Caddesi, image by author (2010).

Figure 3.185 : T1, view from south, image by author (2011).

Figure 3.186 : T1, masonry, image by author (2010).

Figure 3.187 : T1, inner façade, image by author (2010).

Figure 3.188 : T1, inner façade, image by author (2010).

Figure 3.189 : Wooden beams in the inner façade, image by author (2011).

3.3.4.2 Water tower (WT)

The so-called water tower (WT) is a slightly twisted rectangular structure, the NE side of which sits in the stream (Figure 3.183, Figure 3.190, Figure 3.191, Figure 3.192). The walls are 12 m high on the NW side and 9 m high on the SE side. Its outer dimensions are 14.50 m x 10 m. This strong building has quite thick walls (1.90 m–1.50 m) and looks highly defensive. The access was on the SE side through a 2-m-wide gate, which is oriented to the gate of the circular tower (T1) up on the hill (Figure 3.193). The gate was destroyed, so today there is a big hole with another opening on the upper part. The wall remains on one side of the gate point to an external enclosure for security. There are loopholes on the NW and SW facades. The

facades reveal three different types of masonry outside (Figure 3.192, Figure 3.193, Figure 3.194, Figure 3.195). On the NW façade, the lower courses consist of big-scaled secondary stones, levelled and surrounded by bricks laid in a thick and pink mortar bed. The stones of the upper courses are much smaller and seem to be arranged irregularly with a lighter pink mortar. The SW façade has the similar characteristics with the former one. The NE façade does not seem to have joint mortars at all, but the masonry is similar with the others. The most deteriorated façade is the one on the SE, given the unique abundant beige mortar with random small stones and no bricks. The inner facades reveal rubble masonry.

Figure 3.190 : WT, NE façade, image by author (2012).

Figure 3.191 : WT, NW façade, image by author (2012).

Figure 3.192 : WT, NW façade and the stream, image by author (2012).

Figure 3.193 : WT, SE façade showing the entrance, image by author (2012).

The tower must have had originally four floors, including a basement. The traces of the wooden beams supporting the floors can still be seen on the inner façade (Figure 3.198, Figure 3.199). The entrance floor is a 3-m-high space with three loopholes. The second floor is 2.5 m high and has two loopholes. Although the roof structure collapsed and the original material, shape and height is not known, given the arched opening on the top of the wall, the existence of a third floor seems very probable. The basement was a double barrel-vaulted space, where only the traces of the brick arches can be seen (Figure 3.200). Eyice (1969, p. 337) mentions a well inside the building, but, since it is not possible to reach the original floor level, it remains debatable (Figure 3.202). No traces of stairs can be found, but probably the big pile of earth in the middle of the tower would reveal a significant amount evidence about both the roof and the floor structures.

Figure 3.194 : WT, SW façade, image by author (2012).

Figure 3.195 : WT, masonry on the NW façade, image by author (2012).

Although the residential spaces, such as the latrine or fireplace niches, cannot be observed here, the dimensions, the multi-storied articulation and the window-like openings suggest that this tower was also residential as well as defensive. Its location in the stream and just below the circular tower up on the hill cannot be coincidental. Given the comment of Eyice (1969, p. 337) about a tunnel reaching to the upper tower with stairs from the water tower, a connection through the rocky skirts of the hill is highly probable, and this spot deserves a detailed study supported by an excavation (Figure 3.201).

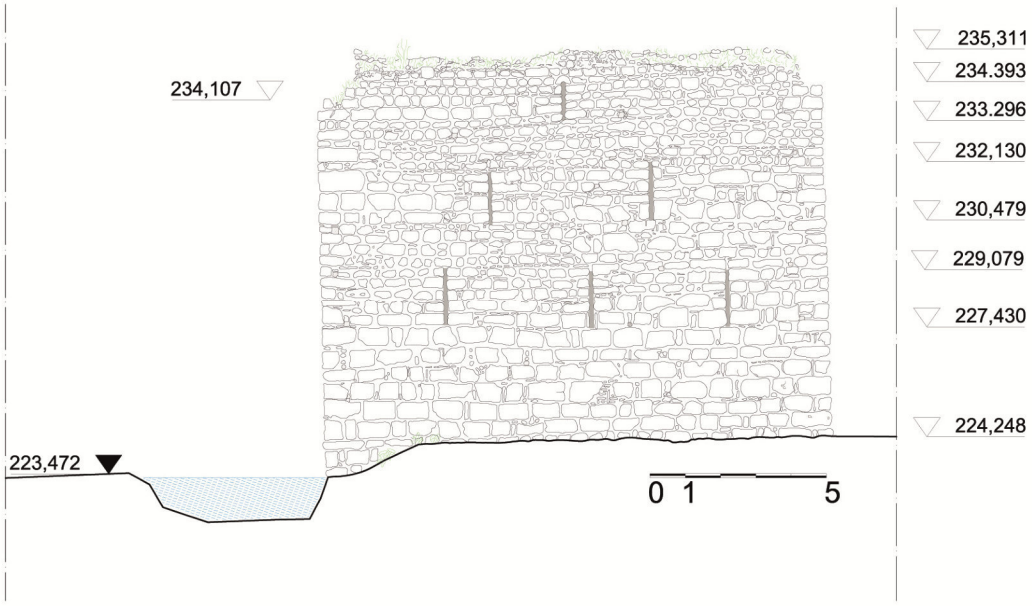


Figure 3.196 : WT, NW façade, drawing by M. Çavdar and author (2013).

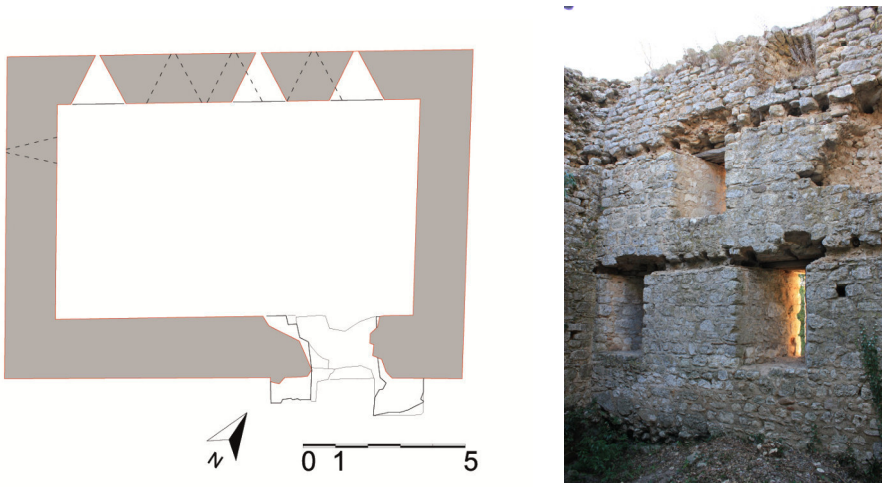
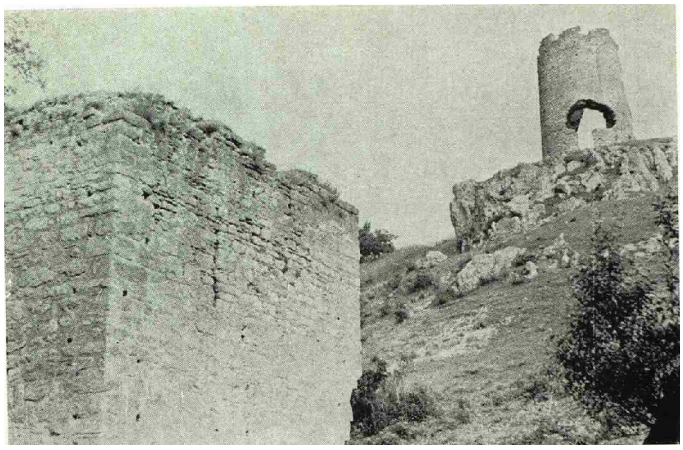


Figure 3.197 : WT, plan, drawing by author (2013).

Figure 3.198 : WT, inner NW façade, image by author (2012).

Figure 3.199 : WT, inner SW façade, image by F. Yağcı (2012).

Figure 3.200 : WT, inner SW façade, the traces of the vault, image by F. Yağcı (2012).



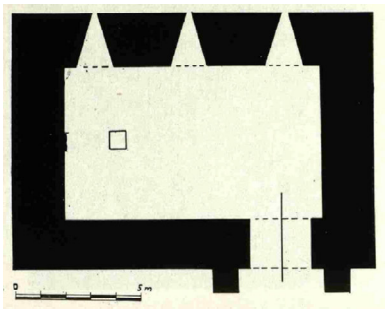


Figure 3.201 : WT and T1 above, after Eyice (1969).

Figure 3.202 : WT, plan by Eyice (1969).

3.3.4.3 The water-supply system

The water channel, which runs over almost 1.5 km from Kınalıvadi until Vize, is a 1-m-wide channel covered by stone lids (Figure 3.203, Figure 3.204). It runs on the edge of the hill as a stone rubble construction, and the last spot where it can be observed today is the south side of T1, almost under the modern street (Figure 3.205, Figure 3.206). Here, the channel makes a curve and turns towards the south and disappears under the street (Figure 3.207, Figure 3.208). This antique water system was probably constructed to supply water to the city. Although it remains quite low compared to some of the terraces on the walls and the citadel, it is still interesting to see in the elevation of the topography how many buildings it can feed (Figure 3.209). One of the fountains fed by this line is still active (Fountain Nr. 1). The cemented mortar repairs of the channel show that the system was in use in the 19th century. There are at least nine public buildings that could be supplied by this channel, and they are still present today. Relying on the cisterns for the water might not have been very applicable in a city. Thus, while the upper parts, like citadel and some terraces, utilised cisterns, the lower parts of the city may have enjoyed fresh water from the valley.


Figure 3.203 : Water supply line from Kınalıvadi to Vize, drawing on Google maps image by author (2013).

Figure 3.204 : Water channel with stone lids, image by author (2012).


Figure 3.205 : Stone construction of the channel, image by author (2012).

Figure 3.206 : Stone construction of the channel, image by author (2012).


Figure 3.207 : Water channel turning in front of T1, image by author (2012).

Figure 3.208 : Water channel disappearing under the street, image by author (2012).

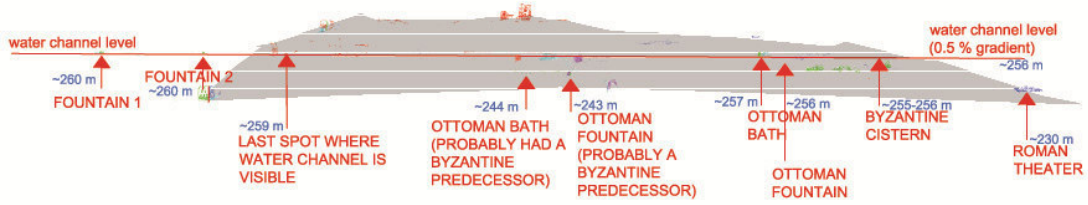
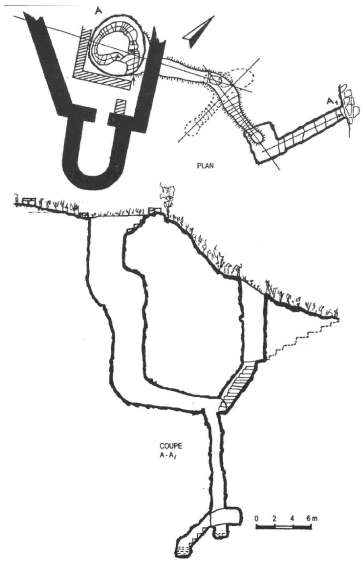


Figure 3.209 : Elevation of some buildings, which could have been supplied by the water channel, drawing by author (2012).

3.3.4.4 Discussion

Proximity to water sources was one of the important criteria for choosing a location to settle, but access to water was not easy since defensive hilltops were preferred due to security needs. When access was enabled, then it was also crucial to protect and maintain this structure, especially during the siege periods. The Hellenistic cities had already utilised drainage systems, subterranean cisterns and pressure lines. Water tunnels reaching to the Hellenistic castles on rocky hills are found in Asia Minor (Foss, 1986, p. 18). These systems were taken over, modified and reused in the settlements of the early Byzantine period on.

In the densely occupied early Byzantine settlements on hilltops in Thrace and Dacia, similar techniques were used to access water. In many examples, we find passages and staircases cut into the rock in the fortified settlements, which led to extramural buildings or nearby springs or wells, like in the example of Golech (Figure 3.210). Also, masonry tunnels connected the fortresses with the river are known from Hisarya near Karnobat and Dolno Gradishte near Opila. When the fortified sites were away from natural streams or rivers, cisterns, which were filled with rainwater, were used. Sometimes, these cisterns were constructed in towers, which were supplied by an aqueduct or filled by wells. Suicidava, near Celei, had a secret well, connected to an aqueduct outside the fortifications but which could be reached through an underground tunnel from under the fortification wall (Figure 3.211, Figure 3.212) (Dinchev, 2007, pp. 494–498).



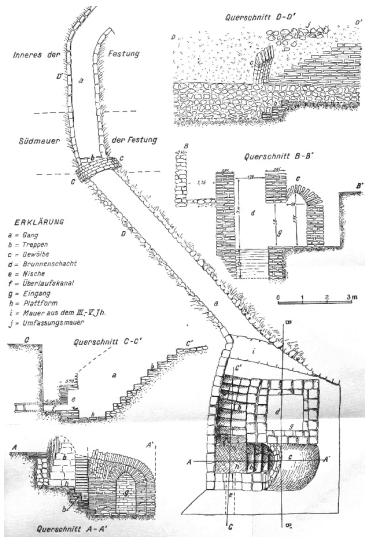
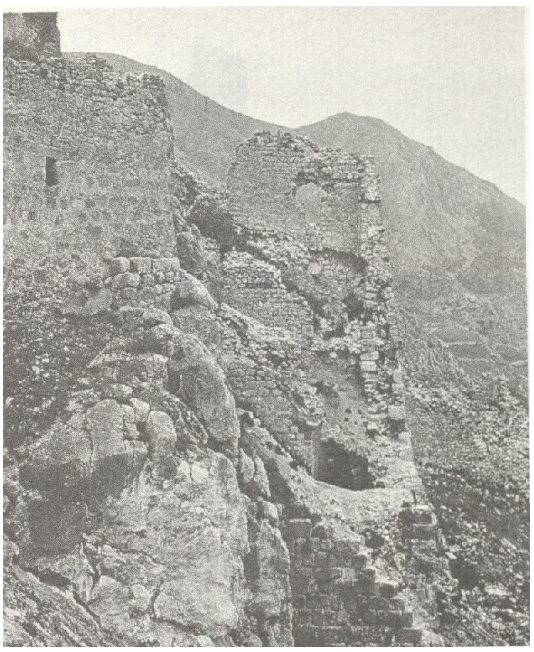


Figure 3.210 : Staircase leading to the well in Golech, after Atanasov (1997).

Figure 3.211 : The secret well and the tunnel in Suicidava, after Tudor (1965).

Figure 3.212 : The tunnel of the secret well in Suicidava, after Tudor (1965).

At Amasya (Turkey), a water tower of fine ashlar masonry, which is dated to pre-Byzantine period, continued to be used in the middle Byzantine period. The water was transported from the river to the tower through a tunnel, which was cut down into the solid rock and attributed to the middle Byzantine period because of the pitched brick work in the vault (Figure 3.213, Figure 3.214) (Foss, 1986, p. 18).



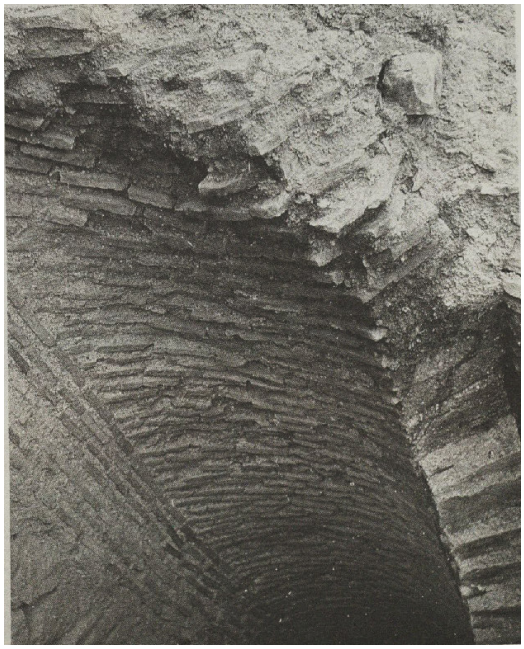


Figure 3.213 : Amasya, the outer eastern wall of the citadel with the Byzantine tower, after Foss (1986).

Figure 3.214 : Amasya, cistern tower: Byzantine pitched brickwork vaulting of the water tunnel, after Foss (1986).

When the middle Byzantine settlement moved back up to the hill where the old Mithridatic castle of Tokat lay, a water tunnel supply, similar to that of Amasya, and cistern tower were constructed in the 9th century (Figure 3.215) (Foss, 1986, p. 19). The tower was built over a probable well or a spring, from which the water was carried upwards.

Figure 3.215 : Tokat, water tower down the fortifications, after Foss (1986).

There are a handful of examples of water towers which stand on the streams in the valleys and outside the main circuit of fortifications from the late Byzantine period. These are either rectangular or circular in form and are built of fieldstone masonry with mortar, sometimes with courses of brick and wooden beams in the rubble core. They usually have very thick walls and no loopholes (or few on the upper parts) and are connected to the fortifications with a kind of stair or tunnel construction. This is the way to draw water up to the town without being exposed to attack during a siege and was common in the medieval Balkans in the late Byzantine period (Tsouris, 2012, pp. 338–339).

The fortress of Livadeia in central Greece is built on a steep, rocky hill that is surrounded by the Erkyna River (Figure 3.216). Presumably dated to the 13th–14th centuries, the water tower was attached to the outer circuit of walls and stood at the foot of the hill on the river. The entrance was from the upper floor with stairs climbing down (Figure 3.217). (Mamaloukos, 2012, pp. 8–10). The late Byzantine water tower of Didymotheichon stands likewise on the Evros River, down the hill upon top of which the city lays. It is a blind and strong tower and was connected to the fortifications via a tunnel (Figure 3.218, Figure 3.219). Adrianople (Edirne) used to have a similar water tower on the Tundscha River that stood outside the main circuit but connected to one of the towers of the main circuit (Figure 3.220) (Tsouris, 2012, pp. 301–313). The feudal period settlement on the Tsaravetz hill of Veliko Tarnavo, presumably benefited from such a secret passage system of stairs, which reached down to a rectangular strong tower in the Yantra River (Figure 3.221, Figure 3.222) (Vălov, 1977, pp. 16–18).

No detailed recent publications can be found for the other water towers, like Cherven (Bulgaria) (Vălov, 1977, p. 30) (Figure 3.223, Figure 3.224), Ainos (Enez, Turkey) (Eyice, 1969, p. 351) (Figure 3.225, Figure 3.226) or Sefiler (Sangarius valley, near Adapazarı, Turkey) (Foss, 1990, pp. 161–183) (Figure 3.227, Figure 3.228). In his search of the late Byzantine forts on the Sangarius River in Asia Minor, Foss (1990, p. 176) discovered forts with possible connections to the river. The fort on Çark Su (a branch of the stream) consists of two towers with a masonry of rubble core strengthened by a system of wooden beams and coated with fieldstones with mortar. One of the towers is a solid structure with no openings on the façade and strongly resembles the water tower of Didymotheichon (Figure 3.227, Figure 3.228).

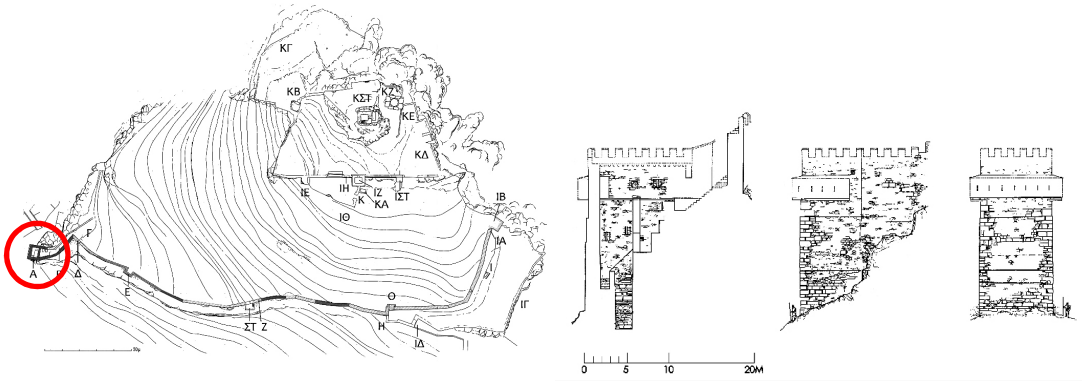


Figure 3.216 : Livadeia, water tower (A) down the hill, after Mamaloukos (2012).

Figure 3.217 : Livadeia, water tower, section and views, after Mamaloukos (2012).

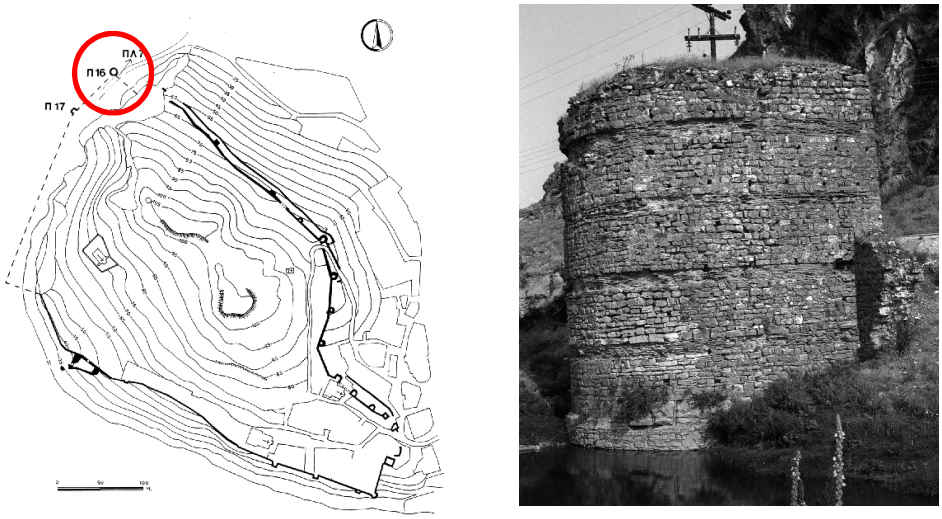


Figure 3.218 : Didymotheichon, water tower down the hill, after Tsouris (2012).

Figure 3.219 : Didymotheichon, water tower and the river, after Tsouris (2012).

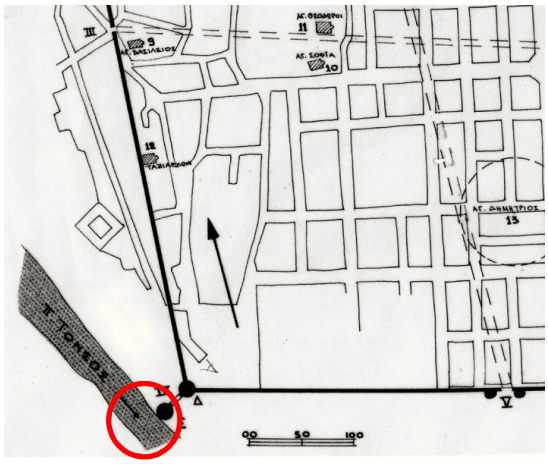


Figure 3.220 : Adrianople (Edirne), water tower on the river, not present, after Tsouris (2012).

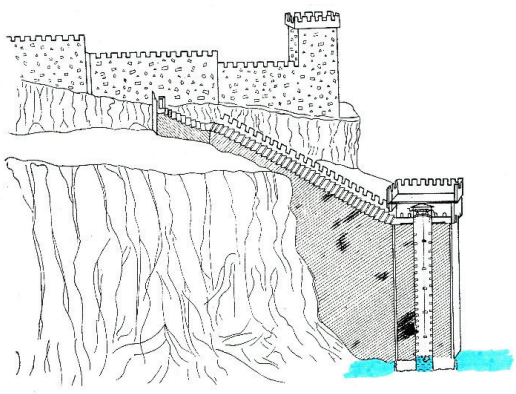
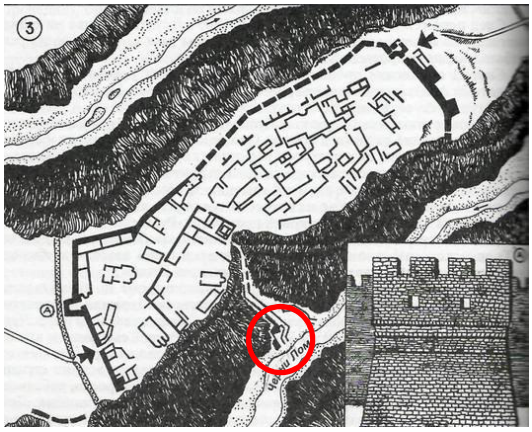


Figure 3.221 : Veliko Tarnavo, water tower on the river and the secret passage, after Vălov (1977).

Figure 3.222 : Veliko Tarnavo, the secret passage, after Moutsopoulos (1985).



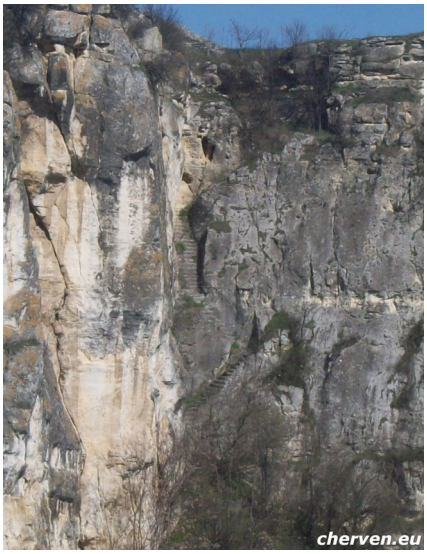
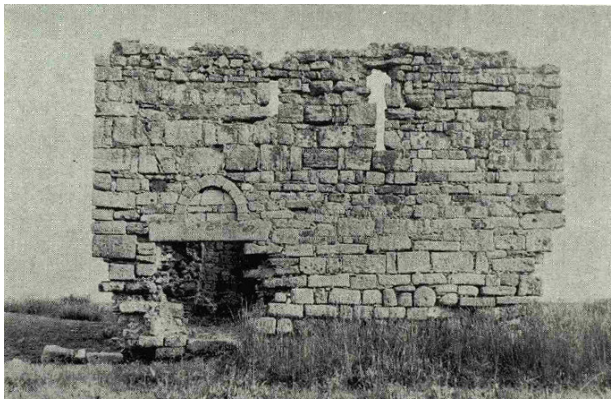


Figure 3.223 : Cherven, water tower on the river (source is unknown, see the webpage)

Figure 3.224 : Cherven, the stairs carved into the rock (http://www.allempires.com/forum/forum_posts.asp?TID=33917).



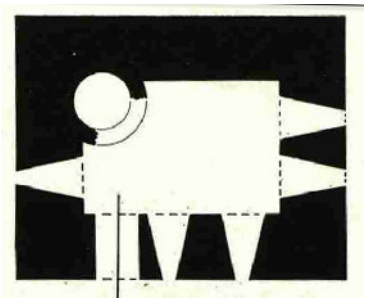
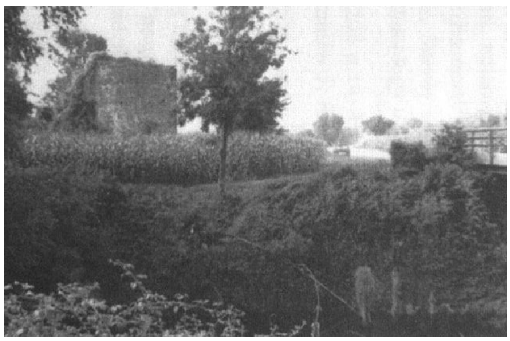


Figure 3.225 : Ainos (Enez), water tower (?) beside the lake, after Eyice (1969).

Figure 3.226 : Ainos (Enez), water tower (?), plan, after Eyice (1969).



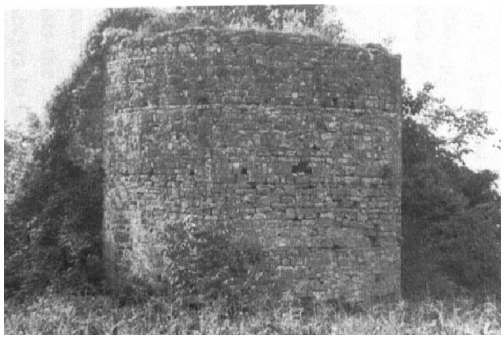


Figure 3.227 : Sefiler, the tower of the fortress, after Foss (1986).

Figure 3.228 : Sefiler, the tower of the fortress, masonry, after Foss (1986).

The above-mentioned examples bear similarities with the so-called water tower of Vize, especially given some base characteristics, such as topographical features of the location, a correspondence with the main fortification circuit and the masonry style. Although talking about the dimensions is not easy since some of these towers are not present anymore and some others were not thoroughly studied (except Didymotheichon), all of the examples have very thick and tall walls, which is exactly the case in Vize. In addition to these features, the water tower of Vize reveals some features which may point to residential functions.

The free-standing towers of northern Greece and the central Balkans stand as a widespread significant phenomenon of medieval fortification and residential architecture (Bogdanovic, 2012, p. 187). As dependencies of larger entities, they fuctions as a variety of roles, including guard posts, landmarks and storage units (Bakirtzis, 2010, p. 354). Because of these varying functions, they were not necessarily located at the foot of the hills (or on the streams) but on top of the hills. These towers range from two to seven stories, often reaching a height of 20 m. They are rectangular in plan, with external dimensions ranging from 7 m to 12 m. The thick walls were mostly 2 m at the ground level. Loopholes were placed at the far sides of the facades to provide ventilation and illumination, as well as for defence. Exterior walls were built of stone with occasional use of brick and mortar. The use of the wooden beams within the walls was also very common. Interiors consisted of either single space or were partitioned into two. For defensive reasons, the entrances were located at high levels. The floors were wooden while the lowest floors were voluminous vaulted spaces that were used as water cisterns or storage spaces

(Bogdanovic, 2012, pp. 188, 190, 193) (Figure 3.229, Figure 3.230, Figure 3.231, Figure 3.232, Figure 3.233, Figure 3.234).

Textual evidence existing from Greece and other places in the Balkans indicates that both church and civic officials held the privilege of founding towers by the 1330s. Monks, high ecclesiastical and administrative officials, soldiers and members of the military aristocracy founded towers in the late Byzantine period and possibly resided in them as well. From the late 14th century on, the towers became more associated with prosperous individuals, local authorities and merchants rather than military aristocracy. By the 15th century, towers in the northern Balkans were residential quarters, even occasionally bearing the names of their female owners (Bogdanovic, 2012, pp. 197–198).

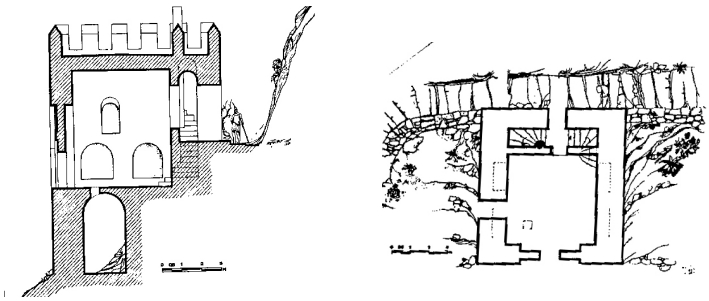


Figure 3.229 : Tower of Karytaina, Greece, section showing a cistern in the basement and plan, after Moutsopoulos (1997).

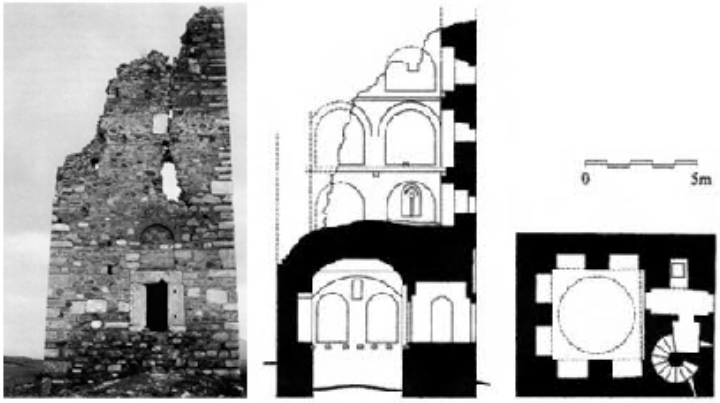


Figure 3.230 : Tower of Mariana, Greece, 1373s. Exterior view, section and plan. On monastic property, originally had six floors, after Bogdanovic (2012).

The water tower of Vize bears similarities to the examples of residential towers of the 14th and 15th centuries as well. The cloisonné masonry, residential features and the well-preserved walls point to the late Byzantine period. Consequently, regarding the above-mentioned examples of water and residential towers, it would not be wrong to identify the tower of Vize as a water tower with residential functions.

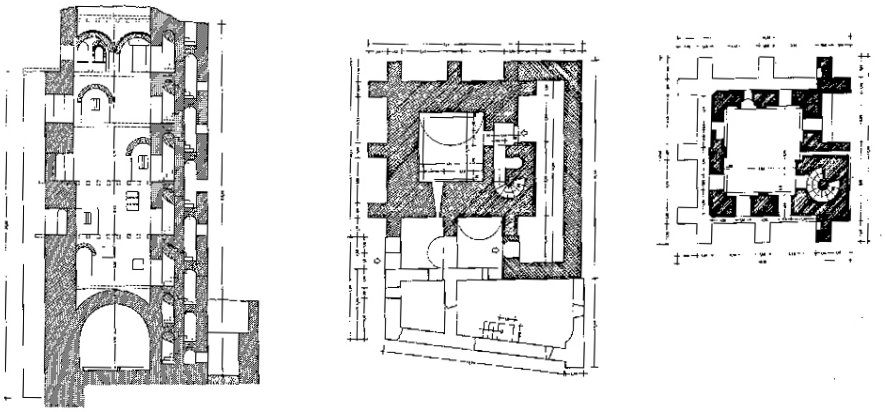


Figure 3.231 : Tower of King Mulitin, Mount Athos, Greece, 1300s. Section and plans. Associated with the defences of Chelandri Monastery, originally had seven floors with a chapel at the top floor, was covered with a pyramidal wooden roof, after Curčic (1997).

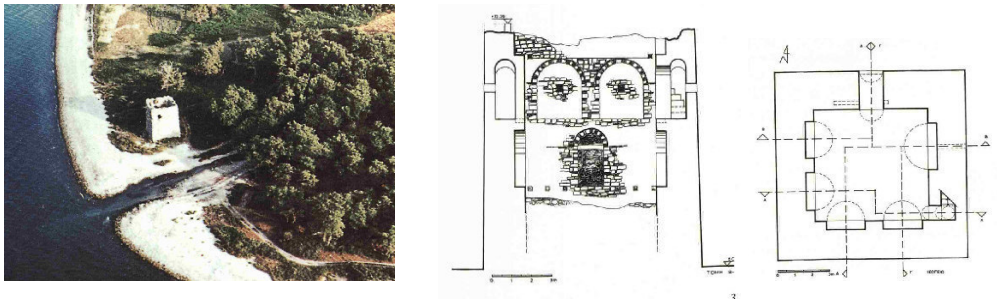


Figure 3.232 : Tower of Phonias, Samothrace, Greece, after 1431. Location, section and plans. Located at the mouth of the river Phonias to control the shipping movements, after Mazarakis (1997).

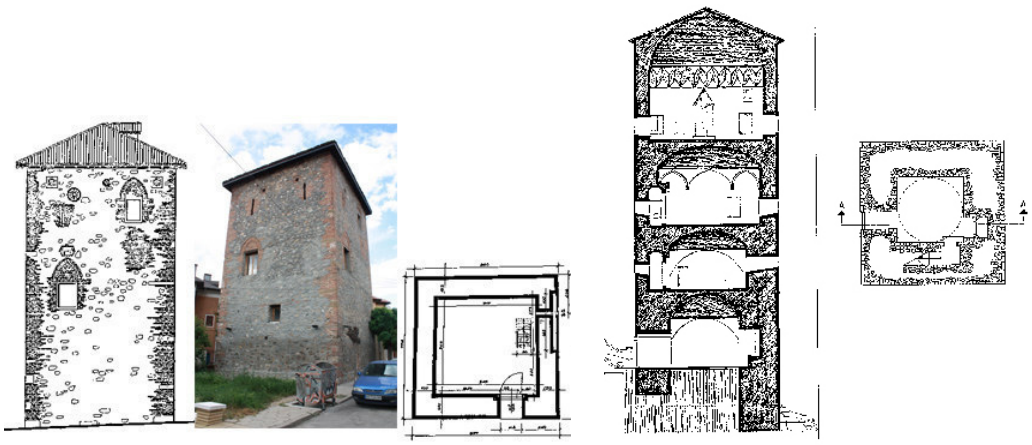


Figure 3.233 : Pirkova Kula, Kiustendil, Bulgaria, 16th century. Residence of the local feudal lord with defensive functions. Section, plans and view, after Kurkov (1997). Photo by author (2013).

Figure 3.234 : Simnic's tower in Kratovo, FYROM, probably an early Ottoman residential defensive tower. Section, plans and view, after Hadžipecova (1997).

3.4 Mortar analysis

3.4.1 Sampling

One of the methods used in this study is taking mortar as a criterion in the dating of Vize walls and some other structures. Thus, this sampling has been carried out on mortars from masonry surfaces with mortar joints and from the mortar rubble core of historical structures from both the interior and exterior of the buildings.[76] Forty-six mortar samples were analysed in the ITU Architecture Faculty Material Laboratory and the tests were conducted by Assoc. Prof. Seden Acun Özgünler. According to the chemical and physical characterisation of the mortar, the classified results of the samples have been considered in context of the building typology and the masonry in order to place them in a more consistent structure of dating. Table 3.1 gives the list of the part of the walls and buildings from which the samples were taken. Tables A, B and C, which can be found in Appendix A at the end, give the acid loss and ignition loss values, the sieve values and the determination of the physical properties. Finally, Table 3.2 shows the grouping of the samples under six different mortar types. This table helps to determine if these mortar types correspond to specific historical periods of construction.

There are some disadvantages of working with mortar. First, although historical mortars have specific features which help to group them in different types, one type of historical mortar can exist in different periods and over a large time span. In addition, it could have been composed of older building materials that present at the time. A well-hidden later repair would certainly create a deviation in results. Furthermore, the mortar samples in Vize were highly deteriorated due to environmental and human factors, and this state of deterioration can compromise the ability to conduct an accurate experiment. Therefore, further advanced experiments should be applied for a more detailed analysis. Mortar analysis should also always be employed as an element in conjunction with the type of masonry and in context of the typology of the architecture.

[76] The historical mortar samples taken from Vize have been collected (in smallest amounts possible) from the most fragile spots where the mortar pieces were not bound to the wall and about to fall down.

Table 3.1: The sample numbers and the codes of the buildings

1	U7	Citadel, the big fallen piece beside the gate
2	T3 inner f.	Circular tower on the citadel
3	WT NW outer f.	Water tower, north-west outer façade
4	WT SW outer f.	Water tower, south-west outer façade
5	WT SE outer f.	Water tower, south-west outer façade
6	WT gate section	Water tower, gate section
7	W6 façade	Terrace walls, in the north-west after the stairs
8	T5	Pentagonal tower on W6
9	W5 façade	Terrace walls, in the north-west before the stairs
10	U16	Triconch
11	B7	Ottoman bath
12	W4.3 f.	Terrace walls, in the west north section
13	W4.2 f1	Terrace walls, in the west south section 1
14	W4.2 f2	Terrace walls, in the west south section 2
15	T2.2 inner f.1	U-shaped tower, smaller sector in the west inner façade 1
16	W1.1 f.	Terrace walls, in the north-west, first sector façade
17	W1.2 f1	Terrace walls, in the north-west, second sector façade 1
18	W1.2 f2	Terrace walls, in the north-west, second sector façade 2
19	W1.2 f3	Terrace walls, in the north-west, second sector façade 3
20	W1.2 f4	Terrace walls, in the north-west, second sector façade 4
21	WP1 W f. section	Unidentified structure over W1, west section (the soldier bath)
22	WP1 E f.	Unidentified structure over W1, east façade section (the soldier b.)
23	WP1 N inner f.	Unidentified structure over W1, north inner façade (the soldier b.)
24	WP2.1	The last corner section of W1, repair phase
25	WP2.2 inner f.	The last corner section of W1, original inner façade
26	W2 section	Independent walls 1 section
27	T2.2 outer f.	U-shaped tower, smaller sector in the west outer façade
28	T2.2 inner f.2	U-shaped tower, smaller sector in the west inner façade 2
29	T2.1 outer sector, section	U-shaped tower, main sector, section (outer part)
30	T2.2 inner f.3	U-shaped tower, smaller sector in the west inner façade 3
31	T2.1 inner sector, section	U-shaped tower, main sector, section (inner part)
32	T2.1 Foundation	U-shaped tower, main sector, foundation
33	T2.1 P1	U-shaped tower, main sector, broken piece on the floor
34	W3 section	Independent walls 2 section
35	W3 inner f. lower p.	Independent walls 2 inner façade lower part
36	T1 inner f.	Circular tower, in the north inner façade
37	T1 outer f.	Circular tower, in the north outer façade
38	T1 section	Circular tower, in the north section
39	U4	Substructure remains on the citadel, north
40	WP5 NW inner f.	Citadel gate, northwest inner façade
41	WP5 NW outer f.	Citadel gate, northwest outer façade
42	U8	Citadel, the biggest fallen piece close to the tower
43	U6	Substructure remains on the citadel, south

Table 3.1 (continued): The sample numbers and the codes of the buildings

44	**W2 outer f.**	**Independent walls 1 outer façade**
45	**T3 section**	**Circular tower, on the citadel section**
46	**T3 outer f.**	**Circular tower, on the citadel outer façade**

3.4.2 Detailed conclusions of mortar analysis

The forty-six mortar samples taken from twenty-five different wall and building parts in Vize are grouped under two main historical mortar types: Khorasan mortar and lime mortar (Table 3.5).

The Romans largely developed the extensive use of mortars and concrete in buildings. Although, according to Vitruvius, it was known in pre-Roman periods, concrete (*opus caementitium*) is commonly accepted as a Roman invention. It is based on lime mortar and mainly composed of natural or artificial aggregates, a binder and a natural or artificial pozzolanic material, which is added to obtain a long-lasting hydraulic mortar. The aggregates are river gravel, sand, crushed limestone, ceramic tile, brick rubble and sometimes pumice; the binder is either gypsum or lime and the natural pozzolanic material is primarily of volcanic origin, which is especially added to make it harder and resistant to water (Moropoulou et al., 2005, pp. 295–296). Whenever natural pozzolanic materials were not available, crushed brick, brick powder or ceramic shreds could also be used as an artificial pozzolanic additive, as the brick powder reacted with calcium hydroxide $Ca(OH)_2$ (Ersen et al., 2011, p. 245). The use of the most typical traditional Roman natural pozzolana mortars — with volcanic ash and volcanic sands — disappeared after the sixth century (Hobbs and Siddall, 2011, p. 55).

On the other hand, the use of crushed brick in lime mortars was spread throughout the empire by Romans, and it was employed for several purposes. Dust bricks were used for rendering and in the upper layers of floors, whereas crushed bricks with large-size grains were commonly used for masonry walls, arches and foundations with high humidity levels (Moropoulou et al., 2005, p. 296). This technology continued in the Mediterranean region following the decline of the Western Roman Empire and became well known in the Byzantine and Ottoman architecture; this material became known as Khorasan-style mortar (Hobbs and Siddall, 2011, p. 53).

In the Late Antique period, the thickness of the horizontal joints gradually increased from 10–15 mm up to 60–70 mm with the frequent use of crushed bricks in the joints of load-bearing walls. The use of wider joints and the crushed brick continued in the Byzantine period with decreasing frequency from the middle ages on (Moropoulou et al., 2005, p. 296).

Khorasan mortar is as strong as concrete and is made by binding lime together with varying proportions of river sand and brick pieces/powder as aggregates. It was also common to use hay, horse hair and goat hair as fibres together with the main aggregates. In Turkey, Khorasan mortar is commonly found with varying mixture ratios in buildings from Byzantine, Seljuk and especially Ottoman periods from 15th century on (Arıoğlu, Acun, 2006, p. 1224).

Cement was only discovered in the 19th century and at that point started to be used together with the traditional materials (Moropoulou et al., 2005, p. 296).

3.4.2.1 Chemical experiment-acid loss: determination of the mixture ratios of mortar

According to the results of the acid loss and ignition loss test, the binding to aggregate ratio figures in the mortars are found between 1:1.5 and 1:5, whereas 1:4 is found in more than half of the samples. The earliest phases of the walls W1.1 (16), Late Antique Phases W1.2 (17, 18, 19) and early Byzantine Phase W6 (7) reveal a proportion of 1:4, whereas the free-standing Late Antique walls (26, 35, 44) reveal a proportion of 1:1.5–1:2.5. The big difference in the proportions of the two different phases of 7th–9th century walls W4.2 (13,14) and W4.3 (12), 1:2.5 and 1:5, respectively, is expected and points to two different periods.

In the Late Antique palace structures of Constantinople, this ratio was discovered to be 1:3 and 1:4 (Güldal, et al., 2012, p. 45). This figure is observed as 1:3 in the land and sea walls of Constantinople in the early Byzantine period (Altaş et al., 2013, p. 86). According to an extensive research performed at a large number of historical buildings with a wide range of building types from the ancient Greek to the post-Byzantine periods in the Mediterranean Basin, the binder to aggregate ratios of normal and hydraulic lime mortars range between 1:4 and 1:1. This ratio in natural pozzolanic mortars is 1:4–1:5 and in artificial pozzolanic mortars (Khorasan mortar:Byzantine concrete) is 1:3 (Moropoulou et al., 2005, pp. 297–8).

However, the samples cannot be categorised according to binder/aggregate ratios in the historic timeline, since ratios were randomly detected in all ages (Acun et al., 2005, p. 303). It is known that the proportion of binder to aggregate was adjusted to the aggregate, especially with sand quality (Moropoulou et al., 2005, p. 297). Thus, these results can be used to compare specific examples, and it may also be helpful to differentiate the different phases of the same building. (e.g., W3 section and façade, two different inner core phases of T2, WP1 section and façade or two different facades of WT, etc.)

3.4.2.2 Chemical experiment-ignition loss: determination of hydraulic property of mortar

In the Khorasan mortar, temperatures between 200°C and 600°C cause a chemical water loss in the decomposition of the hydraulic components on the surfaces of lime and brick. With temperatures higher than 900°C, weight loss occurs due to the carbon dioxide (CO_2) loss caused by the calcination of the carbonated lime. Thus, when CO_2 to chemical water ratio is 1:10, it indicates a hydraulic mortar, and when this ratio is bigger than 10, it indicates a non-hydraulic mortar (Özkaya et al., 2006).

Accordingly, all the mortar samples in Vize have a hydraulic character. The main binder is scaled lime (calcium hydroxide, $Ca(OH)_2$) but presumably they also consist of organic additives. Some of the samples are Khorasan mortar, the main aggregate of which is brick pieces and powder. The other samples contain gravel and sand as aggregate instead of brick.

3.4.2.3 Chemical experiment-sieve analysis: determination of aggregate granulometry and type

According to the results of the sieve test, in Vize, twenty-six samples contain brick particles and powder, twenty samples contain gravel and sand, and eleven of these samples contain puzzolana, which is mostly brick powder and particles. The size of aggregates must have been selected according to the application purpose or according to some special conditions of the period.

The results show that some samples contain bigger aggregate grains, most of which remained on the 4-mm sieve. On the other hand, we also found samples with small-aggregate grains with entirely different values, the particles of which could be sieved

with 0.25 mm. One of the interesting results is that the mortar samples with big particles, most of which could not be sieved through 4 mm (e.g., 7, 8, 9, 12, 30, 32), represent either careless and fast repair phases of the walls, or they represent the foundations of original Byzantine structures or Byzantine repairs on older structures. On the other hand, the samples represented by mortars with small particles, a big proportion of which could be sieved through 4 mm (e.g., 10, 11 ,21, 22, 33, 37, 42) do not belong to curtain walls but rather to towers or to some other independent buildings or additions, especially of the Ottoman period. According to the mortar literature, the aggregate grain dimensions of the early periods (e.g., Roman) are observed to be bigger compared to the later periods (e.g., Ottoman). The results of the granulometry test of the above-mentioned examples comply with this result as well.

The results for samples 15, 23, 27, 28, 36, 39 and 44 could not be given due to the deficiency of the material.

3.4.2.4 Physical experiment: determination of density, specific gravity, porosity and water absorption ratios

According to the results of the physical tests, the density figures of the mortar samples in Vize are 1.08–1.98 g/cm^3, the specific gravity figures of the few samples are 2.52–2.57 g/cm^3, the porosity figures of the same few samples are 30–45% and the water absorption ratios by weight are 4.4–38 %.

For the mortar types which were produced with cement as additive, the density values are over 1.80 g/cm^3. Therefore, samples 31, 36, 37, 45 and 46 may contain cement as an additive. Interestingly, all these samples belong to the towers, which were either built or repaired in the late Byzantine/Ottoman periods.

The results for most of the samples, especially for specific gravity and porosity values, could not be given due to the deficiency of material.

The presence of cement or other organic additives in the mortar could not be found out easily just with the spot tests. Advanced technical analyses, like XRD or SEM-EDX, are needed for further analysis of these components. It must be remembered that the tests conducted for the mortar samples from Vize give general

characterisation results, and they should be considered together with interdisciplinary work and research.

The physical properties of the early Byzantine Khorasan mortars of the fortifications can be given as comparative examples from Constantinople. The density figures are 1.14–1.90 g/cm^3, the specific gravity figures are 2.27–2.81 g/cm^3, porosity figures are 28%–52% and water absorption figures are 13–50% (Altaş et al., 2013, p. 85).

3.4.2.5 Conclusions of Table 3.2

The two main mortar types of the monuments of Vize, Khorasan mortar and lime mortar, can be classified in three sub-groups each, according to the chemical and physical properties of the samples (Table 3.2). Although it is not possible to give a specific dating for most of the structures, the mortar experiments enable us to group the samples. Accordingly, we observe that all the terrace walls and pentagonal towers are constructed of Khorasan mortar and mostly Type 1 in particular (Table 3.3). The only U-shaped tower of the fortifications (T2), which is physically not connected to the terrace walls and represents a different period, has most probably repair phases, which resulted in two different mortar types on both of its facades (Khorasan Type 1 and Lime Type 1). The Khorasan mortar type 1 group indicates a large time span, starting from Roman until the Dark Centuries of the Byzantine period in Vize. Furthermore, the presumed original facades of the Late Byzantine water tower have Khorasan mortar type 1 in the joints.

In contrast to terrace walls, in the free-standing walls of the Late Antique period, the citadel gate of the Roman period, the substructure on the citadel and the early Christian triconchos, lime mortars were used (Tables 3.6–3.8). Although the periods in both types of mortar intersect, the typological differences are clearly proved by the results of the mortar analysis. Free-standing walls differ from the terrace walls; the connection of the citadel's older structures to the terrace walls is still not known and the triconchos is not a part of the walls but an independent building and unique in Vize. The triconchos contains pumice stone in its mortar, which can be explained as an effort to produce a lighter mortar for a vaulted structure. Late Byzantine (or early Ottoman) round towers also reveal types of lime mortar both on the façade and in the core. Together with these towers, the U-shaped tower's (T2) repaired inner façade consists of a cement binder in mortar and is proof of 19th-century (or later) repairs.

Finally, free-standing walls W2 and W3, where we did not see any repair traces, have lime mortar in their sections, whereas on the facades Khorasan mortar was found. This may point to different types of mortar being used according to the function in the structure.

Lime mortar is a type of mortar that does not contain brick but rather natural pozzolanic material, like stone powder, instead (Tables 3.6–3.8). The difference between the lime mortar types 1 and 2 is not very big, and that is based only on the amount of pozzolanic material. The distinctive feature of lime mortar type 3 is very small particles and the hardness of the mortar. The so-called soldier bath (WP1) on top of W1 is the only structure which belongs to that group, and probably has a later Ottoman date.

Khorsan Mortar Type 2 and 3, display a mixture with less brick particles and very little or no brick powder, and it can be differentiated by its light pink or cream colour (Tables 3.4–3.5). The small amount of brick may point to the use of other pozzolanic materials instead of brick powder. These two groups contain samples that belong to different periods: facades of the Late Antique free-standing walls (which probably point to the functional use of different types of mortar in the different parts of the structure), the early phase of Dark Centuries Byzantine walls, water tower repairs and some Ottoman structures.

As indicated above, both types of mortar were used in a wide timespan, from the Roman to Ottoman periods, and it is necessary to consider these structures by other means of mortar analysis and research methods.

Table 3.2: The classification of mortar samples

Sample/kind	Extra features	Name of the building / Location	Historic period of reconstruction
Khorasan Mortar Type 1		W1.2A façade W1.2B façade W1.2C façade W1.2D façade W1.1 façade	Roman and Late Antique
Rich brick powder, big crushed brick particles, lime - dark pink / Easy to crumble	joint mortar	WP2.2 inner façade W4.3 façade	7th–9th centuries
	joint mortar	W5 façade W6 curtain wall T5 façade W3 inner façade lower part	Late Antique and early Byzantine
	puzzolan puzzolan puzzolan joint mortar joint mortar joint mortar	T2.2 inner façade 1 T2.2 inner façade 2 T2.2 inner façade 3 T2.1 outer façade T2.1 foundation WT NW outer f. WT SW outer f.	Mid.Byzantine ➡ early Ottoman
Khorasan Mortar Type 2 little brick powder, less crushed brick particles, lime, sand - light pink		WP2.1	Late Antique
Khorasan Mortar Type 3 very little crushed brick particles, crushed stone particles, lime, sand–crème / hard	joint mortar joint mortar joint mortar	W2 outer façade W4.2 façade 1 W4.2 façade 2 WT SE outer façade WT gate section B7 U6	Late antique 7th–9th centuries 7th–9th centuries Late Byzantine.➡ Early Ottoman (repair) Ottoman ??????
Lime Mortar Type 1 Crushed stone particles, lime, sand–beige	Cement as binder Cement as binder Cement as binder joint mortar Cement as binder Cement (joint mortar)	W3 section T2.1 inner façade T2.1 P1 T1 inner façade T1 section T1 outer façade T3 section T3 outer façade	Late Antique Late Byzantine, Early Ottoman and Ottoman repairs (19th century)
	gravel size is bigger Pumice stone	WP5 NW outer f. WP5 NW inner f. U8 (repair??) U16	Roman Roman L. Bzy.–Early Ottoman Late Ant.–early Byz.
Lime Mortar Type 2 Gravel, lime, puzzolan, sand	joint mortar	T3 inner façade T2.2 outer façade W2 section U4 U7	L. Bzy.–Early Ottoman Late Antique Late Antique ??????? ???????
Lime M.T 3 Gravel, lime, puz, sand–very small p.	joint mortar	WP1 E façade WP1 W façade WP1 N inner façade	Ottoman

Table 3.3: Khorasan Mortar Type 1 samples

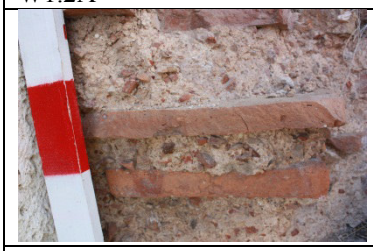
		
W1.2A	W1.2B	W1.2C
		
W1.2D	W1.1	WP2.2
		
W4.3A	W4.3B	W4.3C
		
W5	W6	T5
		
W3	T2.2 A	T2.2 B
		
T2.2 C	T2.1 A	T2.1B

Table 3.3 (continued): Khorasan Mortar Type 1 samples

		
WT NW outer f.	WT SW outer f.	

Table 3.4: Khorasan Mortar Type 2 samples

		
WP2.1		

Table 3.5: Khorasan Mortar Type 3 samples

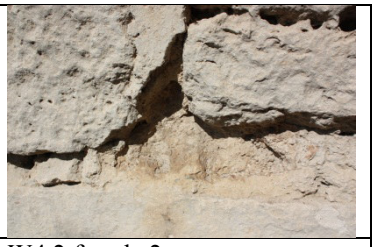
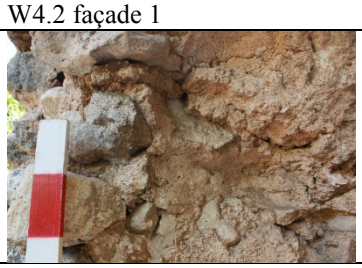
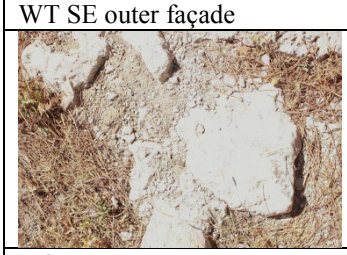
		
WP2.1	W4.2 façade 1	W4.2 façade 2
		
WT SE outer façade	WT gate section	U17
		
U6		

Table 3.6: Lime Mortar Type 1 samples

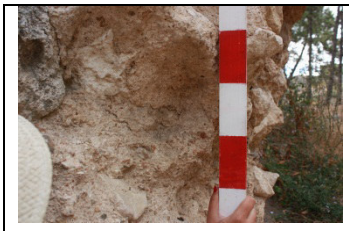
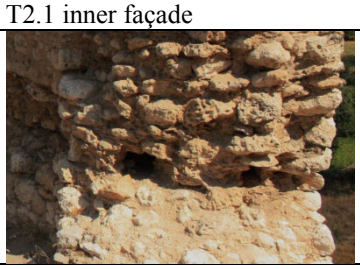
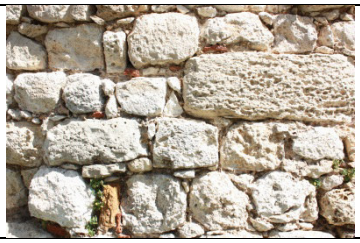
		
W3 section	T2.1 inner façade	T2.1 P1
		
T1 inner façade 1	T1 section	T1 outer façade
		
T3 section	T3 outer façade	WP5 NW outer façade
		
WP5 NW inner façade	U7	U16

Table 3.7: Lime Mortar Type 2 samples

		
T3 inner façade	T2.2 outer façade	W2 section
		
U4	U8	

Table 3.8: Lime Mortar Type 3 samples

		
WP1 E façade	WP1 W façade section	WP1 inner façade

4. COMPARATIVE EXAMPLES FROM THE BALKANS

Some cities in today's Bulgaria have similar geographical features and historical backgrounds with Vize, which may reflect parallel aspects due to settlement patterns. One of these common characteristics is the Thracian background, which is easily observed in the topographical features of the settlement. The survival of the cities throughout the Roman period and the acquisition of the Roman urban infrastructure within the same administrative province would have understandably resulted in similarities in the urban fabric. The significant phenomenon of the transformation of the cities in the Late Antique and then early Byzantine periods under new administrative and military circumstances, together with the stabilisation of Christianity, led to strong fortifications and basilical churches, which in these cities can still be seen. The foundation of the first Bulgarian Kingdom in 680 AD caused the reconstruction and change in the urban character of many cities in the Diocese of Thrace.

4.1 Topography and Thracian settlements

The boundaries of modern Bulgaria, NE Turkey, NW Greece, southern Romania and eastern Macedonia coincide with those of ancient Thrace. The dominating mountain range, the Haemos (known as Balkan or Stara Planina), draws a natural east-west border in the middle of Bulgaria, south of which is the broad Thracian plain, surrounded by rivers and valleys on the east, west and south. The area between the Maritsa and Tundja Rivers on the south comprises dense forests, fertile valleys and the peaks of Rhodope ranges, which towards the east become the lower hills of Strandja (Hoddinott, 1975, p. 24). In these mountains around the Thracian plain, several hundred Thracian forts were discovered from the end of the early Iron Age, some of which survived in the Roman period.[77] The Thracian settlements were commonly located on high, inaccessible hills close to rivers, and they had fortified acropolises where sanctuaries were located (Velkov, 1980, pp. 6, 8).

[77] For photos of Chertigrad fort see Fol, A. (1978), Figures 1–4.

The first urban forms started to develop at the beginning of 4th century BC, together with the development of the agriculture and livestock breeding, trade relations with Hellenistic cities and the influence of the Odrysian kingdom in the valleys of Maritsa and Tundja. The fortified residences of Thracian rulers also had an important place in the development of the Thracian city, an excavated example of which lay 4 km west of Kazanlık (Velkov, 1980, p. 8). Seuthopolis[78] was founded by the Thracian King Seuthes III at the end of the 4th or beginning of the 3rd century on the Tundja River. The pentagonal shaped area of 5 ha was surrounded by walls, and the lower city had a Hellenistic grid plan (Figure 4.1). On the north corner, a citadel was found; a fortified residence or a temple complex was probably located there (Hoddinott, 1975, pp. 93–97).

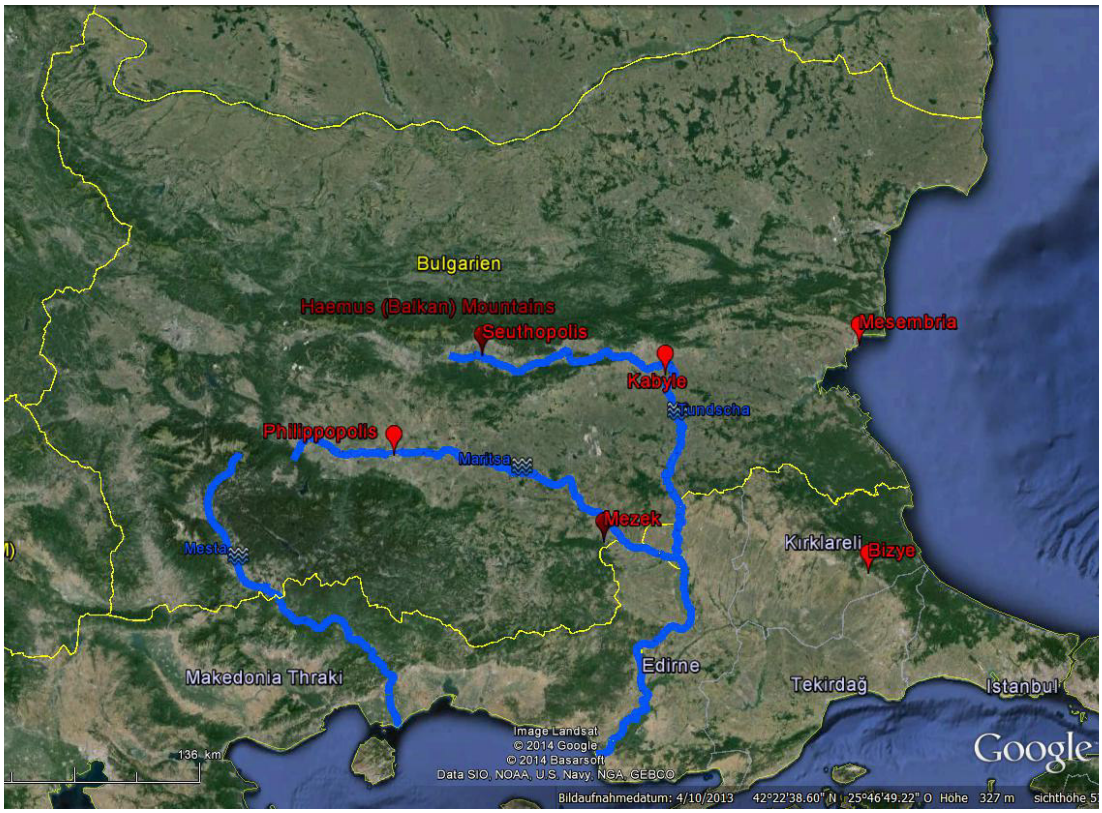


Figure 4.1: Thracian settlements in south Bulgaria and Turkey, Google map image modified by the author (2014).

The sources use the term *polis* for many places in Thrace from the 4th century BC on — these places include Philippopolis, Kabyle and Krakra Hill near Pernik (Velkov, 1980, p. 9). This information was also supported by archaeological evidence of grave-mounds from Mezek, Kazanlık and Seuthopolis. The domed tombs found in

[78] The city is today under Georgi-Dimitrow Damm. http://sevtopolis.suhranibulgarskoto.org/

these areas were decorated with paintings, housed many valuable finds and are dated to the 4th century BC (Ivanov and von Bülow, 2008, pp. 8–9).

Philippopolis was found on Nebettepe hill, one of the three hills on the south bank of the Maritsa River (Figure 4.1, Figure 4.2). It is placed on a naturally defensible crossroads and occupies a dominant position on the Thracian plain. In the Bronze and Late Iron Ages, it was an important settlement, probably initially as a fortified urban residence that was then urbanised and fortified under Philipp II in 342/341 BC (Topalilov, 2012, p. 4). The three hills, for much of Antiquity, remained the city's core and citadel. It is claimed by the researchers that Philippopolis was still a small Thracian settlement and did not evolve quickly into a Hellenistic city in the 4th century. The remains of the Hellenistic walls, which are preserved only on the steep slopes, are not sufficient enough to discuss the scale of the construction (Hoddinott, 1975, pp. 81, 83).

Kabyle was probably one of the Thracian centres where, like Philippopolis, Philip (359–336 BC) settled a Macedonian colony. It is located near Yambol, some 100 kilometres east of Seuthopolis, on an earlier course of the Tundja River (Hoddinott, 1975, p. 103) (Figure 4.1, Figure 4.3). This city is different from the others because from the Middle Ages on it was not occupied. It lies on a terrace, on the skirt of a hill that was the acropolis of the city. On the fortified hill, the remains of a rectangular building were discovered. The fortification revealed Cyclopean masonry. On the rocky area of the hill, a Thracian cult centre that wass related to the King's residence from 1st millenium BC was found. In the context of Hellenistic urban patterns, there is an agora with temples that dates from the end of the 4th to the beginning of the 3rd century BC. The city flourished due to commercial facilities related to its location close to the coastal colonies. In the Roman period, it became a garrison town, where troops were located (Velkov, 1980, p. 9)

The town-building process was initiated by the rise of the independent Odrysian kingdom from the 5th to the mid-4th century BC and then again in the period from the 4th to the 3rd century BC, when Thrace fell under Hellenistic rule. The above-mentioned cities grew out of the development of older settlements, which became city centres in the 4th century BC (Chichikova, 1983, pp. 289, 300). Given the similar historical background and the identical topographical setting, Vize is a good

candidate to be one of these important Thracian *poleis* (Figure 4.4). According to the historical sources, Vize (Bizye) was the citadel of the Thracian Kings and a polis in Thrace.[79] But unfortunately, the archaeological evidence is scarce and points to the city flourishing in a later period. Mansel (1941, pp. 186–187) dated the tombs and other valuable finds to the 1st century AD. Supposedly, a tomb with a dromos was found during the excavations of Fıratlı in 1968 and was dated to the 4th century BC, but it was never published (Jurukova, 1981, pp. 4–5). The oldest evidence from Vize (Bizye) appears on an inscription of the Thracian King Kotys from the 1st century BC (Kalinka, 1926, p. 119). The multi-hill settlement on the fruitful Thracian plain with a river nearby, the sanctuaries carved in the rock on one of the hills, the grave-mounds with valuable burials in the surrounding and the resettlement of the hills in the following periods are characteristics Vize shares with other Thracian settlements. Although we do not know much about the Hellenistic process of the settlement and we cannot yet prove the pre-Roman Thracian/Hellenistic urban heritage of Vize archaeologically, the site is very promising for further excavations and research.

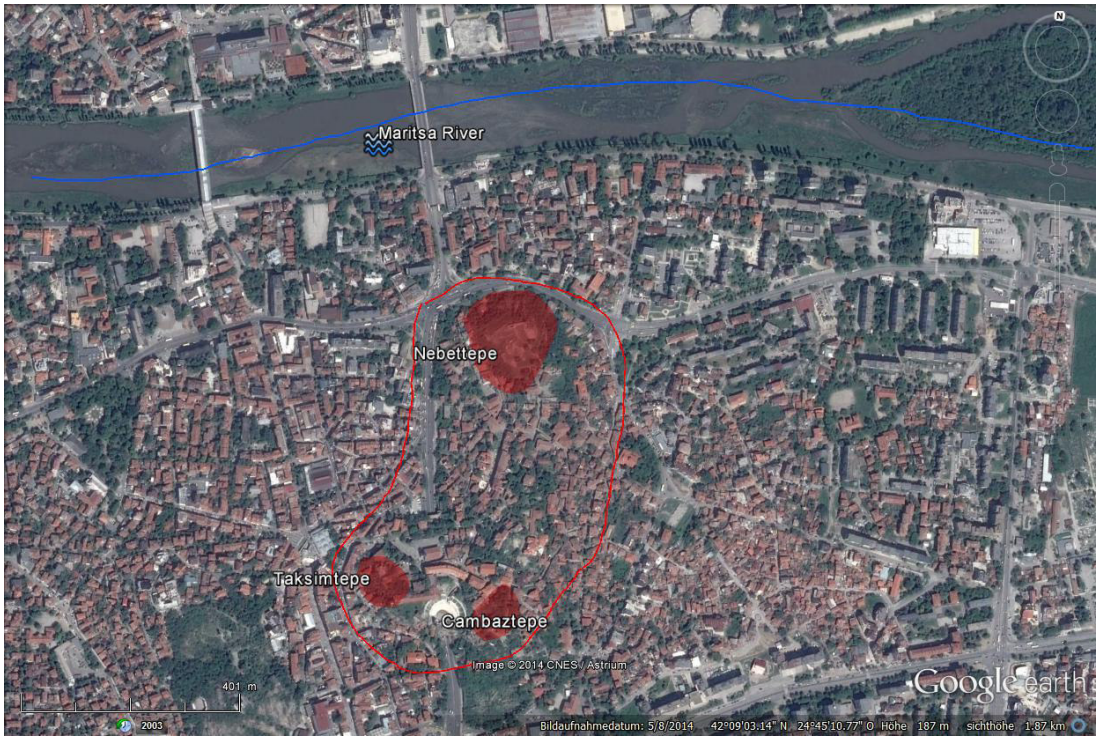


Figure 4.2: Thracian settlements in Philippopolis, Google Earth image modified by author (2014).

[79] See Chp. 2 for details.

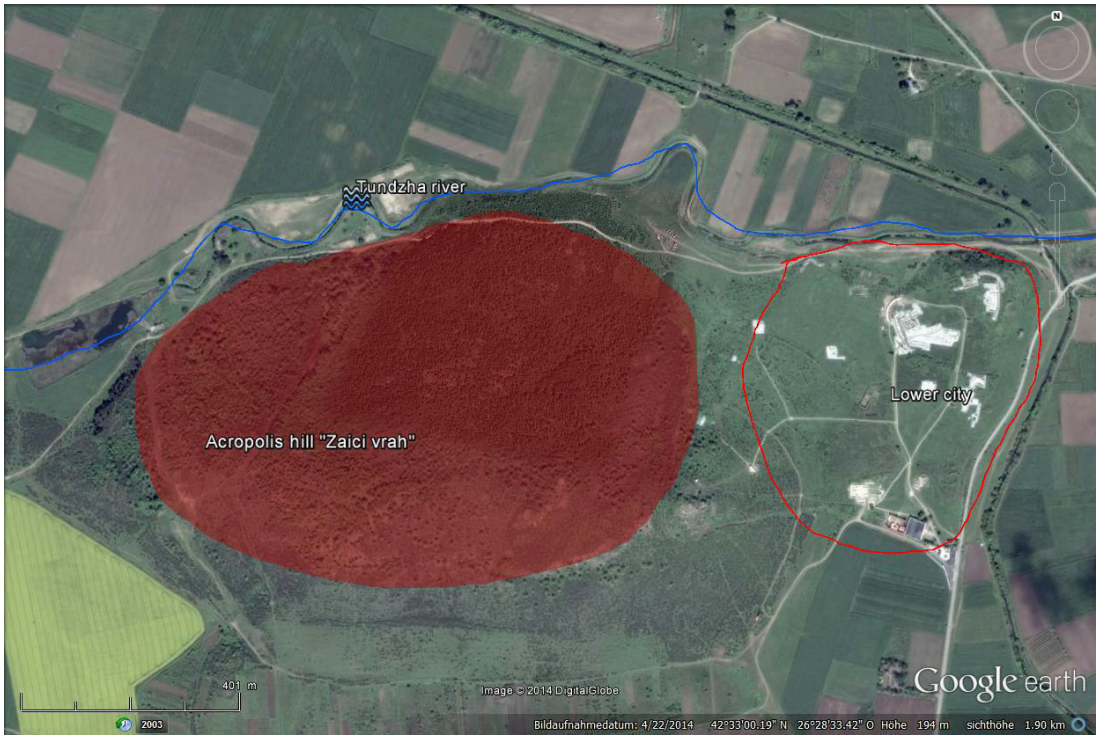


Figure 4.3: Thracian settlement in Kabyle, Google Earth image modified by author (2014).

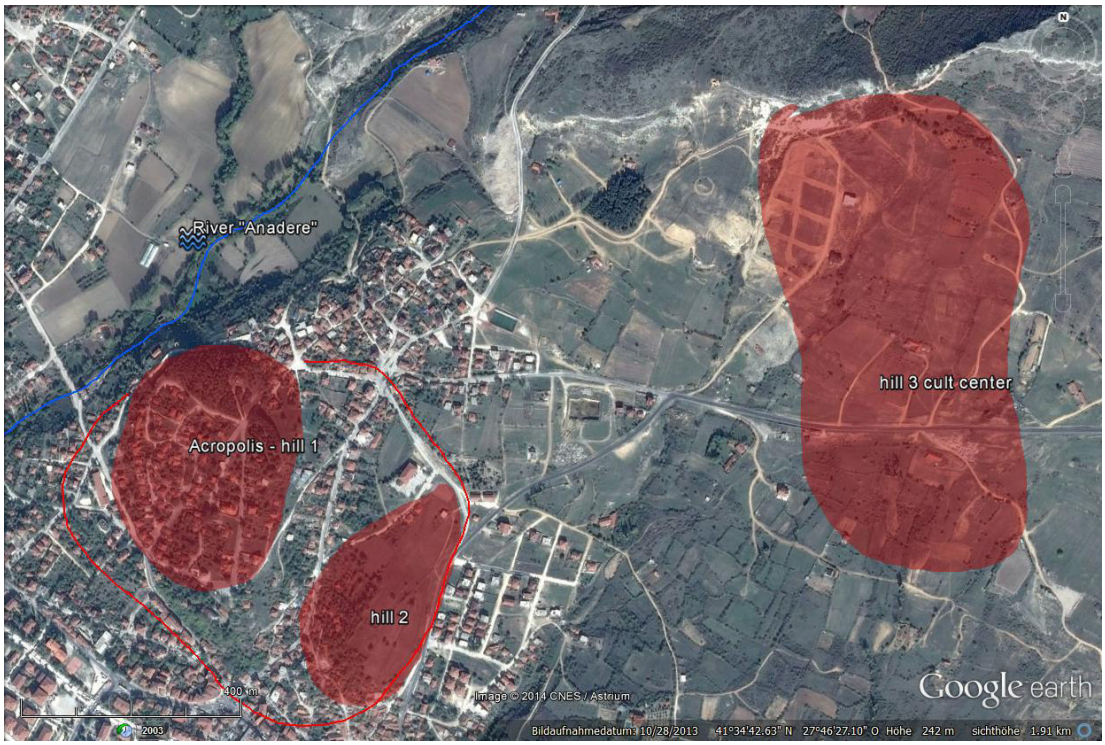


Figure 4.4: Thracian settlement in Bizye, Google Earth image modified by author (2014).

4.2 Roman urbanism

The tense and oscillating relationship between the Thracian tribes and the Romans ended with the foundation of the Roman province of Thracia under Emperor Claudius (41–54 AD) (Ivanov and Bülow, 2008, p. 15). Besides founding new cities, the Romans took over the cities that had a long Thracian history and romanised them with new a urban infrastructure that fell under a particular administrative and military system (Haynes, 2011, p. 10) (Figure 4.5).

Although the office of the provincial governor was located in Perinthos, which was an old Greek colony on Propontis, the administrative importance of some other cities of the province was proved by epigraphic and numismatic evidence. Philoppopolis, Pautalia, Hadrianopolis and Serdica were such cities, and they had state offices and performed administrative functions (Ivanov and Bülow, 2008, p. 19).

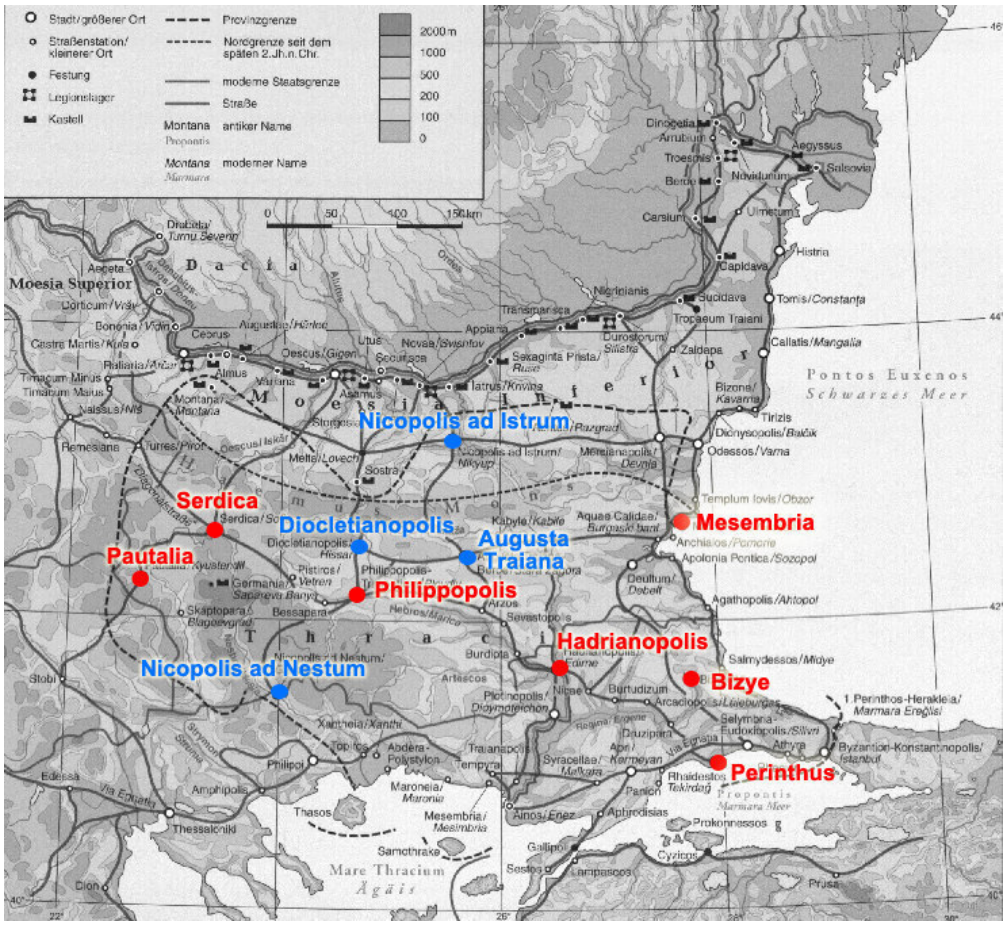


Figure 4.5: Province Thracia until and after 2nd century AD (old settlements in red, new founded cities in blue), after Ivanov and Bülow (2008). Modified by author (2014).

The Trajanic period witnessed new foundations of cities and the transformation of the ancient Thracian and Greek coastal settlements into Roman cities. At the beginning of the 2nd century AD, the old settlements of Pautalia, Serdica, Plotinopolis, Hadrianopolis, Mesembria and Vize were granted the status of "city" by Trajan (98–117 AD) and his successors, as were the newly founded cities, like Augusta Traiana, Nicopolis ad Istrum and Nicopolis ad Nestum (Ivanov and Bülow, 2008, p. 20). Thus, these cities gained the right to issue their own coins, some of which show the oldest depictions of the city walls, as in the example of Vize (Bizye) from the time of Hadrian (117–138 AD) (Jurukova, 1981, Tafel 1).

From Hadrian on, the pre-Roman structures (*strategoi*) — the regional governments, which served the last Thracian kings — were dismantled and city-based administrative territories were established (Haynes, 2011, p. 10). Within this reconstruction, Vize (Bizye) became an urban territory, substituting the Strategie Astike. Likewise, Strategie Bessike became the territory of Philippopolis and Strategie Sardike became the territory of Serdica (Ivanov and Bülow, 2008, p. 22).

From the time of the emperor Antoninus Pius (138–161 AD), not including Vize (Bizye), four more inscriptions were found that refer to the construction of fortifications. These were written in Latin and referred to Serdica (151 AD), Marcianopolis (152 AD), the territory of Augusta Traiana (152 AD) and the territory of Deultum (155 AD) (Ivanov and Bülow, 2008, p. 30). The rule of Marcus Aurelius (161–180 AD) coincided with numerous attacks by many northern tribes on the Roman borders and made it necessary to restore the old fortresses and to build new walls. Augusta Traiana was fortified under Marcus Aurelius and Lucius Verus in 169 AD, Philippopolis under Marcus Aurelius in 172 AD, Serdica under Marcus Aurelius and Commodus between 176–180 AD and Pautalia and Diocletianopolis in the same period (Ivanov, 1980, p. 245). Among all of the inscriptions from Thracia, only two were written in Greek: Vize (Bizye) and Philippopolis (bilingual) (IGBulg, III, 1, No. 878).[80]

When we look at the size of the settled urban areas, Philippopolis was the largest, with 70 ha (together with the unfortified area). Augusta Traiana covered an area of 48.5 ha, Bizye covered 30–35 ha (very roughly), Pautalia covered 28.3 ha, Serdica

[80] Martinova-Kyutova et al., 2011, pp. 211, 213.

covered 16–17 ha and Nicopolis ad Istrum (belonged to the province of Thracia up to 193 AD) covered 22 ha (Ivanov and Bülow, 2008, p. 32) (Figure 4.6).

Figure 4.6: Comparative urban areas of cities in the Province Thracia, 2nd century AD, drawing by author (2014).

Although the remaining structures are not sufficient enough to attest to the presence of a coherent urban grid in Vize, other cities of the Roman period in Thrace, like Pautalia, Serdica and particularly Philippopolis, with its similar topographical features, may offer clues about the urban layout in Vize.

Looking at the other urban aspects of these cities, we do find sufficient archaeological evidence about the infrastructure (Figure 4.7). The excavated cities reveal the typical Roman planning: orthogonally crossing streets and a central agora where two main arteries, the *cardo maximus* and the *decumanus maximus*, cross. All excavated examples reveal various public buildings, theatres, amphitheatres, stadia, gymnasia, baths and temples.

In Perinthos, Philippopolis, Augusta Traina, Nicopolis ad Istrum, Marcianapolis, Serdica, Pautalia and Vize (Bizye), water supply systems were constructed to bring water from a distance either by aqueducts or by underground channels (Ivanov and Bülow, 2008, p. 32).

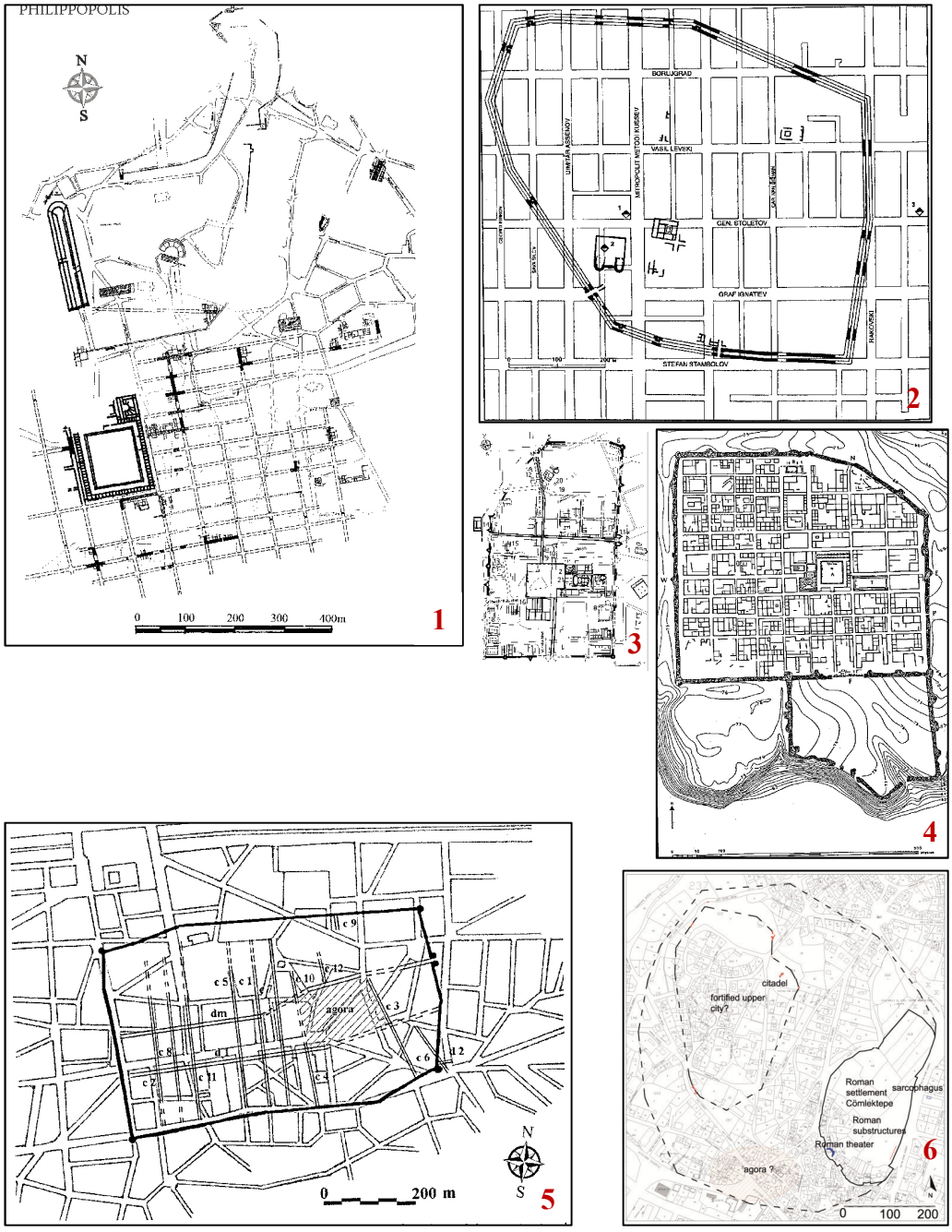


Figure 4.7: Roman cities in Thrace (same scale): 1- Philippopolis, after Topalilov, (2012), 2- Augusta Traiana, after Ivanov, (2012), 3- Serdica, after Kirova (2012), 4- Nicopolis ad Istrum, after Ivanov (2012), 5- Pautalia, after Katsarova (2012), 6-Vize, drawing by author (2014).

From the Roman urban structure of Vize (Bizye), except for small section of the walls and the gate on the citadel, nothing is left but an elaborately built theatre. Cities with a pre-Roman background in Thrace, like Philippi, Perinthus, Byzantium, etc., already had Hellenistic theatres, which were used until the late Roman period. Some other cities, like Philippopolis, Serdica and Bizye, built theatres in the 2nd and 3rd centuries as well. It is known that the theatre plays continued later than the 5th century (Rizos, 2010, pp. 231, 235). However, we cannot pinpoint the exact date when the theatre buildings fell out of use. The excavated and documented theatres from the Balkans are not abundant, and there are few that we can compare to Vize's theatre.

The best-preserved theatre of the Province Thracia is found in Philippopolis (Figure 4.8). This marble theatre has fourteen rows of seats on two zones and has a total capacity of 3500 people. The cavea is divided into six sectors with staircases. The uppermost of the seats in the lower some have backrests. The diameter of the orchestra is 28 m. It has a huge skenea that is 3-storeys tall. It is dated to the period between 108–114 AD (Vagalinski, 2002, p. 282). We also find smaller types of spectacle and show spaces from Thrace. The odeon in Nicopolis ad Istrum was designed for a smaller audience, with a capacity of 350–400 people (Figure 4.9). Although still debatable, the construction date from the 2nd or 3rd century AD. This site was no longer inhabited after the Hun attacks of the 450s (Ivanov, 2012, pp. 134–137)

The theatre in Vize was built on the natural south slope of Çömlektepe, where the existence of the Roman settlement was proven archaeologically by the excavations of Mansel in 1938. Until the excavations of 1995–1997, the theatre was buried underground, and its existence was not known. What the excavation revealed is an entirely marble cavea, which is divided into six sectors with staircases (Figure 4.10, Figure 4.11). The cavea is preserved up until the level where the seats have backrests, with nine rows and a podium wall of 1.30 m at the lowest level. According to the observations of the excavation team, the remains of a probable diazoma was found on the upper part, which suggests a second zone of the cavea. The audience capacity was calculated by the excavation team is to be about 3000 people (Yılmaz and Sipahioğlu, 2005, p. 33). The diameter of the orchestra is 19 m.

When compared to the above-mentioned examples, the dimensions of the Vize Theatre suggest a rather large theatre. The date of construction of the theatre is not clear due to the incomplete excavations and research.[81]

During the excavation seasons of 1995–1997, on the SW side of the theatre, a Byzantine structure was revealed that was built with big blocks from the city walls. In this structure, they discovered four relief panels that had been used as spolia (Figure 4.12). According to the excavators, two of these panels, which they identified as Dionysos scenes, belonged to the skenea of the theatre (Ertuğrul, 1996, p. 434). The other two panels show a standing female figure with wings and a mounted figure. All of the panels are kept today in the Kırklareli Museum. The other significant pieces found in the excavations — a female statue (1995) and a male head fragment (2003, during the cleaning campaign) — are today in the Kırklareli Museum.

After it fell out of use, probably in the 4th–5th centuries, the stones of the upper seats and skenea could have been taken away to be used in the construction of other buildings. However, unfortunately, the modern street and the buildings that were built within the area and on top of the theatre aided the deterioration of the structure. When compared to Philippi, it shows how little is left from the cavea and the rest of the theatre. Still, it is the only material evidence left of a Roman theatre in the Thracian territory of Turkey.

[81] A certain date for the construction cannot be given. It might have been a product of the urbanisation activities towards the end of the 1st or the beginning of the 2nd century. Further research is required for a safe dating.

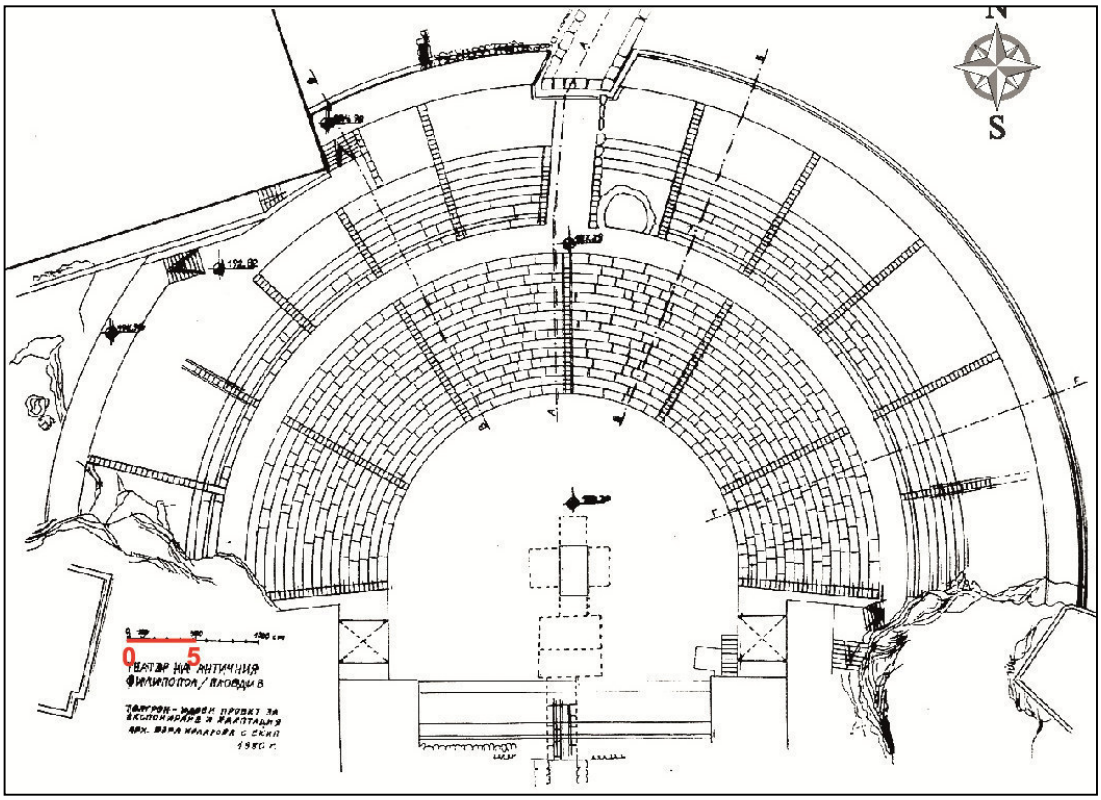
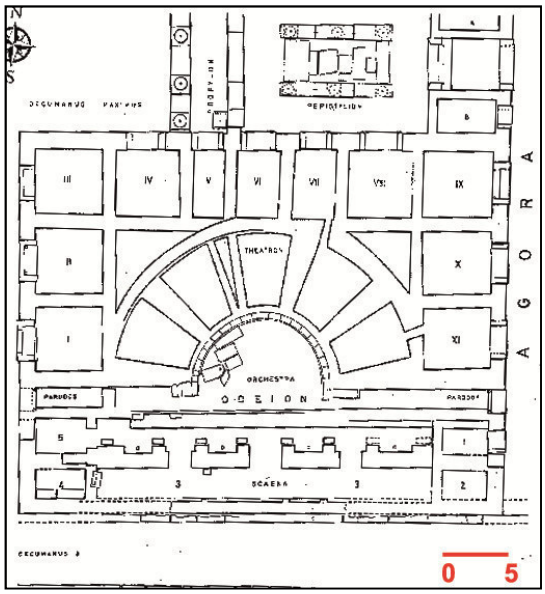


Figure 4.8: Plan of the theatre in Philippopolis, after Topalilov (2012).



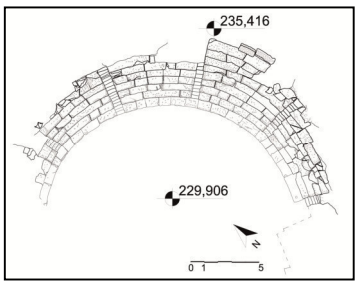


Figure 4.9: Plan of the odeon in Nicopolis ad Istrum, after Ivanov (2012).

Figure 4.10: Plan of the theatre in Vize, drawing by author (2014).

Figure 4.11: Vize theatre, 1, 2- cavea, 3- skenea foundations under the street, 4- an upper row seat, images by author (2011).

Figure 4.12: Relief panels found on the Byzantine wall behind the skenea, images by author (2011).

4.3 Thrace in Late Antiquity

The new administrative modifications of Diocletian (284–305 AD), which was then taken over by Constantine (306–337 AD), led a hierarchic territorial organisation. It was composed of four prefectures, twelve diocese and almost one hundred provinces. Within this segmentation of provinces, the old Roman province of Thracia was divided into four provinces: Thracia, Rhodopa, Haemimontus and Europa, the capital of which was Selymbria. Bizye became a part of Europa within this structure (Bülow and Ivanow, 2008, p. 64).

The beginning of the Late Antique period witnessed the militarisation of the settlements. During the 3rd and 4th centuries, new defence systems were built, old ones were repaired, and new extensions were added. The cities, from the 3rd century on, started to shelter troops as well. Archaeological evidence from the Thracian province cities of Diocletianopolis, Serdica and Philippopolis reveal military structures attached to defences (Bülow and Ivanow, 2008, p. 69). From the 4th century on, significant changes took place in the urban plan of the cities.

After the Gothic invasion of 251 AD, the destroyed walls of Philippopolis were repaired in the following decades. However, the main and new fortification activities were undertaken during the time of Licinius (308–324 AD), Constantine (306–337 AD) and Julian (361–363 AD). The construction followed the circuit of Marcus Aurelius's wall (172 AD) and included the Three Hills, along with the larger part of the city in the plain (Topalilov, 2012, p. 13).

A similar pattern applies to the walls of Serdica, as well. After the Roman walls built under Marcus Aurelius (161–180 AD) and Commodus (180–192 AD) suffered from the Gothic invasions, new walls were built on the old circuit of walls at the end of the 3rd or beginning of the 4th century. The circular towers of this phase have been revealed by excavations. Different from Philippopolis, in Serdica a fortified extension was added towards the north and northwest side of the city, perhaps under Constantine (306–337 AD) (Kirova, 2012, pp. 204–205).

From the Late Antique urban fabric of Philippopolis, the agora, the streets, the water supply system and some other unidentified buildings on the lower parts of the city were revealed. The restoration of the Roman agora in the 3rd century was followed by the construction of a new, large-scale agora under Constantine (306–337 AD). The

agora complex of Constantine ceased to be used in the 5th century. The Roman theatre had already fallen out of use by the end of the 4th century. The Christianization of the population caused a transfer of the focus of urban life to another site, which could also be followed by the new porticoed street connecting two important structures of the Christian topography, the episcopal basilica and the martyrium (Topalilov, 2012, pp. 14, 30, 36).

The changes in the urban topography of Serdica in Late Antiquity were considerable. The layout of the regular orthogonal street system was deformed by the new constructions. In this period, the territory of the fortified city was divided into particular functions: the northern part had the residential functions, whereas the SE part was allotted for public buildings and the SW for the military buildings (Kirova, 2012, pp. 225, 233).

Many public buildings with basilical plans were either reconstructed or rebuilt in this period. In the SE part of the city, a building complex, which is attributed to Constantine (306–337 AD), underwent changes relating to the new, Christian requirements shortly after it was built. The baths from the 4th century and an amphitheatre from the end of the 3rd or beginning of the 4th century were also revealed by excavations. The Roman theatre of Serdica was no longer in use after the mid-3rd century. Christianity had a big impact on the urban fabric. In the 4th and 5th centuries, many basilicas were built either by destroying or reconstructing the older buildings within the walls (Kirova, 2012, pp. 225–232, 236, 239).

During the 5th century, Christianity spread all throughout Thrace. Early Christian basilicas were built everywhere, not only in big provincial capitals like Philippopolis, Serdica and Hadrianopolis but also in other cities like Augusta Traiana, Pautalia and Diocletianopolis and also coastal cities like Mesembria and Perinthos (Figure 4.13). They were built in the Agora, on the main streets and other squares, on former ecclesiastical buildings and also outside of the walls (Bülow and Ivanov, 2008, p. 88).

Figure 4.13: The old Metropolitan Church, second half of the 5th century, Mesembria, photo by author (2013).

From the 5th century on, the fortification systems were considered to be very important, which precipitated the construction of stronger and more defensive features (Smith and Crow, 1998, p. 70). Under Anastasius (491–518 AD) and Justinian (527–565 AD), many cities were fortified, and, as a characteristic of the period, defended hilltop settlements were created close to or as a part of the former urban settlement, like in the examples of Hisarlık Hill in Pautalia, the three hills of Philippopolis, Shumen and Tsaravets, etc (Figure 4.14, Figure 4.15, Figure 4.16, Figure 4.17).[82]

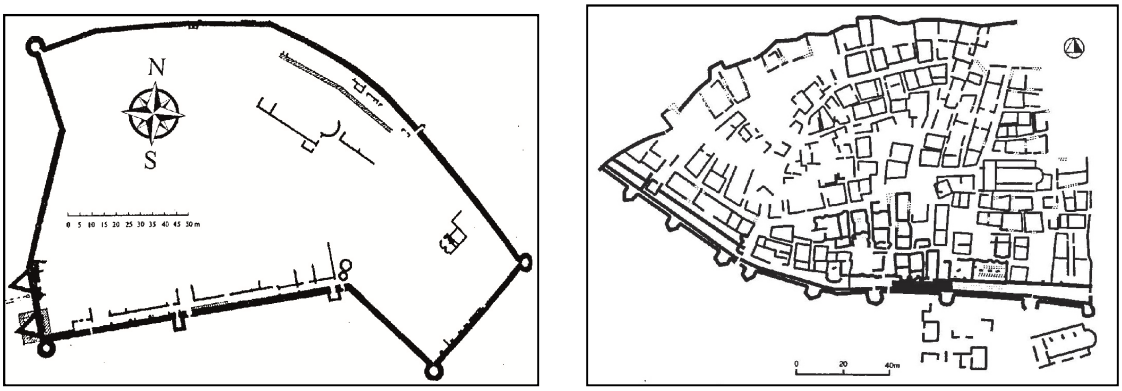


Figure 4.14: Hisarlık near Kiustendil, the military fortress at Pautalia during the 5th–6th centuries, after Katsarova (2012).

Figure 4.15: Hisarlık near Shumen, the fortress during the 6th century, after Dinchev (2007).

[82] See Dinchev, 2007, pp. 479–545.

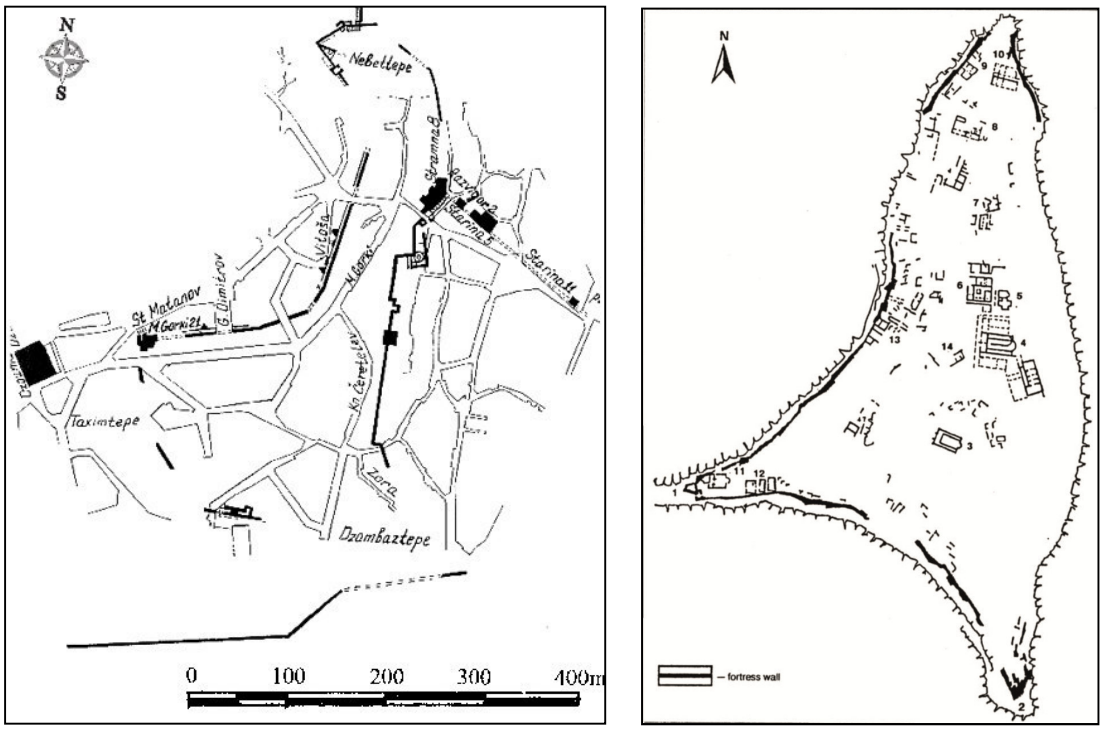


Figure 4.16: Philippopolis, Justinianic curtain wall of the Three Hills and late 6th–early 7th wall below, after Topalilov (2012).

Figure 4.17: Tsaravets hill, early Byzantine town, after Dinchev (1997).

There are not many buildings that can be seen today from the Late Antique and early Christian topography of Bizye. The presumably Late Antique phase of the walls was built around the acropolis, where the old circuit existed. No traces of the street system are observed on the site. Similar to the catchments of Philippopolis, one branch of the catchments, which supplied water from the valley north of city, might date to either the Roman or the Late Antique period. The three surviving monuments are all found within the walls, on a high and central spot of the acropolis and in close proximity to each other.

The building of the Süleyman Paşa Cami [Mosque], before it was converted into a mosque in the 15th century, was a church, and it probably dates to the 9th century. This structure stands on the foundations of a larger basilical structure, which was revealed during the Vakıflar excavations of 1980s. It was documented first by Ousterhout and Ötüken (1989, p. 139) and then during the survey of Bauer and Klein in 2004 (Figure 4.18).

The second building lies on the SE side of Hagia Sophia, only 60 m away. Here we find the remains of an apse with a three-step synthronon, which is constructed from

the main rock (Figure 4.19). The height of the remaining part is ca. 1 m. The diameter of the apse can be measured as ca. 3 m, and the depth as 1.5 m. The rest of the church was demolished, and the modern street now runs just in front of the apse. The beginning of the curve of the north lateral apse can be observed, but it remains under the ground. A modern house was built on top of the south lateral apse (Figure 4.20). These remains must belong to an early Christian church, given the synthronon, which is a distinguishing feature of the early churches.

The third building is located on the SW of Hagia Sophia, closer to the Hasan Paşa Cami. What is left from this structure is an apse-like space. At both ends of this fragment, the beginning of the symmetrical curves can be seen (Figure 4.21). The triconch shape did not survive entirely. The width of the conch is ca. 3 m, and the depth is ca. 1.5 m. Its original ground level is below today's ground. On the east side, it was run over by the garden wall of Hasan Paşa Cami and probably by another Ottoman wall. The street to Hagia Sophia is also on the east side . It is constructed of brick and lime mortar. On the southern wall, an arched niche was found. On the north side, a barrel-vaulted adjacent space is attached to this structure (Figure 4.22). However, the rubble on these remains prevents a further discussion for now. The architectural typology of the structure points out to the early Christian martyria, baptisteria or bath complexes. Since it is not possible to dig more, it remains debatable if it was a part of a complex or an independent structure.

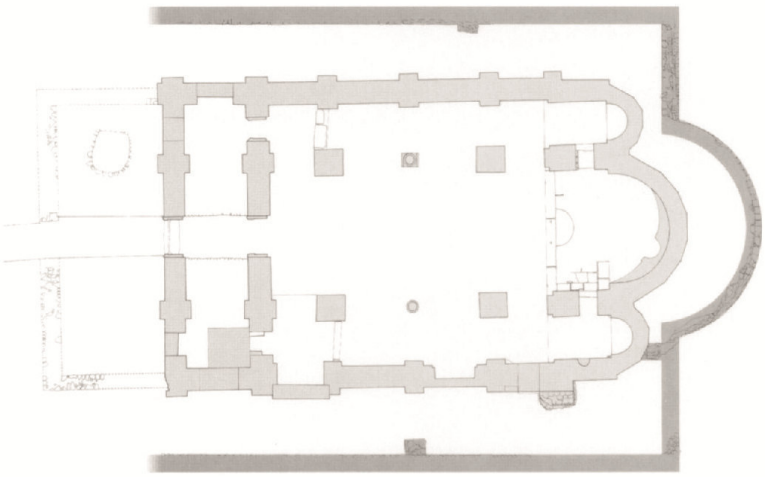


Figure 4.18: Vize, the remains of the previous structure under Hagia Sopia Church, after Bauer and Klein (2006).

Figure 4.19: Vize, the remains of the apse with synthronon, photo by author (2013).

Figure 4.20: Vize, the remains of the apse with synthronon, plan drawing by M. Çavdar and H. Kepez (2013).

Figure 4.21: Vize, the remains of the triconch, photo by author (2012).

Figure 4.22: Vize, the remains of the barrel-vaulted space adjoined to triconch, photo by author (2012).

The acropolis of Vize, surrounded by the walls, survived from the Late Antique period through the Byzantine period, probably with the same boundaries (Figure 4.23). Except for the fortifications and the 9th-century church of Hagia Sophia, no clues of the urban structure exist from the acropolis in this period. The late Byzantine towers are the last marks of the Byzantine topography, which was taken over, reused and rebuilt by the Ottomans from the 15th century on.

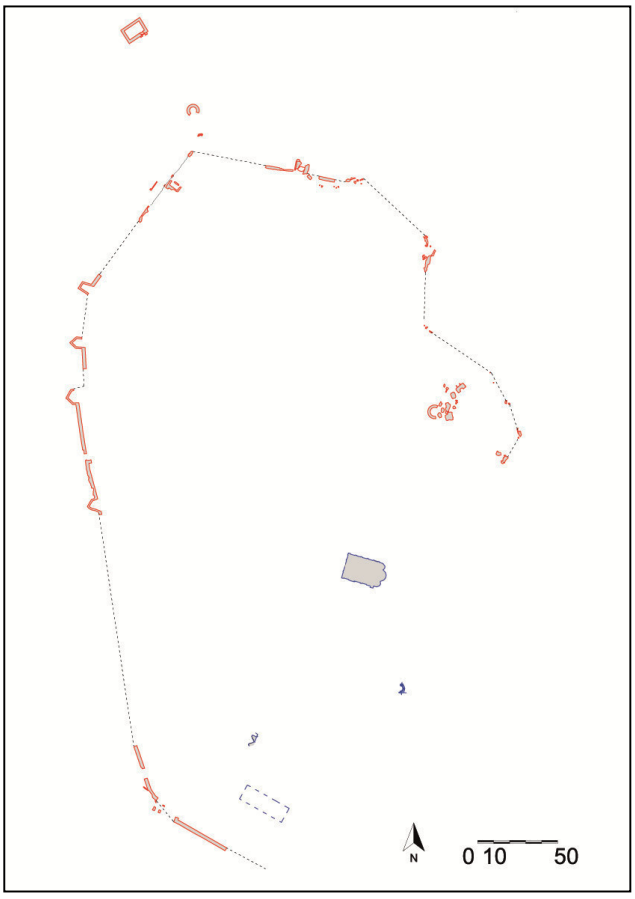


Figure 4.23: Vize, the limits of the acropolis from the Late Antique period until the 15th century and the documented monuments, drawing by author (2014).

5. CONCLUSIONS

To be able to discuss the historical urban structure in Vize, it is essential to investigate the fortifications. Although only their western half has survived until today, they still provide the necessary data about the topographical aspects of the settlement. Within this survey project, in the years 2011 and 2012, the fortifications of Vize, which were built from the Roman until the Late Byzantine period, as well as the rest of the monuments, were documented; they were measured, drawn, photographed and brought together in a digital topographical plan. The survey focused on the fortifications since the rest of the monuments are poorly preserved. The site requires further archaeological research with excavations in order to better understand the rest of the monuments and remains in context of urban topography.

The acropolis of Vize has been a settled area since the pre-Roman period, and today it still has a settlement of 80–100 houses; the continuous cycle of deconstruction and construction that has been ongoing for centuries, as well as the dynamics of the military history of the area, have certainly had a negative impact on the monuments of the former periods. The last pieces of the significant Roman, Byzantine and even Ottoman monuments, which could have helped to reconstruct an urban topography, must have disappeared in the late 19th and 20th centuries, with intensive sieges and conquests during the Russian-Ottoman wars in 1828–1829, then again in 1877–1878, and finally during the Balkan War (1912–1913). Immediately after this period, the settlement started moving towards the plain areas around the acropolis. In the first years of the new Turkish Republic, Atatürk Caddesi and Cumhuriyet Meydanı were the south and south-western limits of Vize. After the first development plan of 1947, Hisartepe and Çömlektepe were no longer settled (Ceylan, 2011, pp. 71, 77). Despite the awareness of the historical monuments on site, the old photos with unknown monuments reveal that some were unfortunately destroyed even after 1970s, probably during the infrastructure works.

Today. old and 1- and 2-storey houses lie in large gardens and form a loose settlement on the acropolis, which became a conservation area in the 2000s. It is easy

to realise that the stones taken from historical monuments were often used to build these houses and the garden walls. A few archaeological remains are still found in a neglected state, scattered everywhere on the site, in the gardens and by the streets. Two very important pre-Ottoman monuments, namely the Hagia Sophia Church and the Hasan Paşa Cami, underwent sloppy restoration processes and lost their unique and historical architectural characteristics.

It because of the current situation that the inscriptions documented mostly in the 19th and the beginning of the 20th centuries (which prompted archaeologists to dig for the Thracian, Roman and Christian heritage of the site), the accounts of the Greek travellers and researchers from the same period and the investigations of Skorpil (1912/13), Mansel (1938), Dirimtekin (1963) and Eyice (1968) provide priceless information about the lost urban topography of the area from the Roman and Byzantine periods. The latter four researchers investigated the walls of Vize. The very first sketch of a topographical plan, made by Dirimtekin in 1963, shows the circuit of the walls with a few other monuments. The work of Dirimtekin, which gives a short description of the walls and towers, together with a discussion about the dating, was the primary source for researchers of Vize for years. No further research had been conducted on the walls since then.

Our knowledge about the Thracian period of Vize is still very insufficient. The presence of the Thracian kings in the 1st century BC was proved by epigraphical evidence. Moreover, the excavations by Mansel in 1938 revealed the treasures and arms in an elaborately designed vaulted royal tomb located under the one of the mounds surrounding Vize. The preliminary observations of Dirimtekin (1963) on the ancient cult centre of Karakoçektepe have not been studied further. No other elements of the Thracian settlement in Vize, such as walls or houses, are known. But the common view of the researchers on the exact location of the Thracian settlement points out to Hisartepe, particularly due to its advantageous topographical features, which are suitable for a settlement.

Likewise, the Roman urban structure is not present, and the borders of the Roman city are unknown. Since there has been no systematic excavations, the only way to put forth a rough hypothetical outline of the Roman settlement is to consider what we have at hand: single monuments (like the theatre), in situ finds (like the sarcophagi or

the floor mosaics) and the spolia either built in the other structures or scattered around. The information provided by the accounts of Greek travellers and researchers from the 19th and 20th centuries that mention many elements of the urban structure are very useful in reconstructing the Roman and Byzantine topography. Jurukova's (1981) compilation of Vize coins from the reigns of Hadrian (117–138 AD) to Philip II (244–249 AD) provides the only visual evidence for the fortifications and some other monuments. These images, supported by historical data, could enable a discussion and a comparison for particular periods, during which Vize was depicted as a strongly fortified city with at least ten towers (either circular or rectangular), two gates and a forum with temples, public buildings and statues. When put altogether, the above-mentioned sources and remains point to a Roman city of at least 30–35 ha, which puts Vize among the middle-sized cities of the period. The area covers the entire acropolis with Hisartepe on the top, Çömlektepe on the east amd Atatürk Caddesi and Cumhuriyet Meydanı on the south. Nevertheless, the southern limits of the city cannot be securely drawn since the lower Roman settlement could have spread further south onto the plain.

In such a topography of ambiguities, the study of fortifications must be evaluated seriously as the primary step to understand the changes in the urban structure throughout the periods. The results of this survey presented in this thesis point to at least six phases of construction in the fortifications of Vize. The walls are grouped as terrace and free-standing walls. Although the phases represent different aspects of fortifications, they have similarities as well. The common feature of all phases is that only secondary material was used for the constructions. A striking difference between the terrace and the free-standing walls is the mortar. In all the phases of the terrace walls, Khorasan mortar types were used, either in the rubble core or in the joints. However, the free-standing walls consist of lime mortar in the rubble core.

The earliest Roman phase is attested by an inscription referring to the construction (or repairs) of the walls of Vize, presumably during the years 154–161 AD (Taşlıklıoğlu, 1961, pp. 67–68). This Roman phase is observed on the west and NW side of the acropolis, where the wall is differentiated by large stone blocks that face a rubble core without a mortar bed (W1). This phase stands on the same line with the rest of the walls and is used as the lower courses of later periods. Another monument of the Roman topography is an arched gate, which is oriented towards Çömlektepe

and stands on the highest point of the site — probably where the Roman citadel was located.

Until a proper excavation reveals any contradictory evidence, we can describe Roman Vize as an upper and a lower city, where the lower city extended widely into the plain and was not necessarily fortified. Since the remains of the walls indicating the boundaries of the acropolis show the upper city, namely the acropolis, it appears to have been laid out already in the Roman period.

The second phase may be dated to the 3rd–4th centuries of Late Antique period (W2–W3). These walls stand at the north and, unlike the rest of the walls, are free-standing structures. They stand at a higher elevation, and their connection to the rest of the walls is not present today. These walls are thinner than the others. A different type of limestone was used with a rubble core, which consists of lime mortar. At several parts of the facades, thin levelling stones were used. The artificial bumpy ground on the southern side of these walls outlines an area which stretches towards the citadel and might have connected with a different articulation, which in the later centuries collapsed. This hypothetical suggestion may help to understand the isolated free-standing walls in this area. The only U-shaped tower of the whole circuit was found here, between W2 and W3, and reveals a similar masonry style but different repair phases.

Phase 3 reveals the Late Antique masonry as well, but with an uncommon feature. W1.2 lies to the north as a part of the common circuit of the walls at the western end of W1. It is a wall of alternating rows of brick and mortared rubble. The uncommon features are the piers, built of two rows of stones, which divide the wall vertically at certain distances. These terrace walls could have been supporting some structures above and also enclosing some spaces on the inner side. Strikingly, the inner facades are built of a careful stone and brick masonry. The eastern end of these walls makes a corner on the steep slope, which indicates a turn on the circuit and/or a tower, but it is mostly collapsed.

The Late Antique period is one of the least-understood periods for the urban topography of Vize due to the scarcity of archaeological evidence. The engagement of W2 and W3 to the rest of the fortification system remains debatable without

further research, but the limits of the acropolis, which already existed in the Roman period, might have remained same.

Phase 4 is found on the NW part of the circuit. These walls are used as terraces of the modern houses built above. They differ from the late antique phase in their masonry and mortar type. The secondary limestone blocks face a brittle rubble core, rich with brick dust and pieces. The thick mortar joints between the stones is a striking difference of this phase from the earlier periods. The masonry reveals more spolia than the earlier phases. However, these spolia pieces do no reveal architectural features, which is the differentiating characteristic of W5 and W6 from the later phases (although W5 must have undergone a hasty repair). Another aspect for dating this phase is the pentagonal towers, which were very popular in the fortifications of the 5th and 6th centuries, and there are examples from all corners of the empire. The levelling of the terrain in front of the walls may indicate another defensive feature of the 5th- to 6th-century fortifications, namely a proteichisma. However, this argument should be considered carefully, since no archaeological evidence of this element was found.

The walls of the last two phases have unique properties, which separate them from the earlier periods. Phase 5, which lies at the west end of the circuit, reveals the strongest part of the walls of Vize, given their height (W4.2). Except for the dimensions of this wall, the stones used in the façade are different from the rest of the walls. Very well-cut, smooth surfaced spolia is used and mixed with limestone blocks in an irregular pattern of headers and stretchers. The Khorasan mortar type used in this phase is also uncommon when compared to the rest of the walls. The neatly cut spolia blocks must have been taken from a close Roman building that fell out of use. Considering the proximity to the theatre, and similar instances of use, like in Amastris and Miletus, the stones could have been reused in the walls, which would help explain the missing parts of the theatre as well. Further to the south, where this wall ends, the remains of an earlier phase, with brick courses and rubble core, are found.

Phase 6 is found a few metres north on the same circuit. It was built on the earliest phase of the walls (W1), which can still be recognised on the lower courses. This wall was hastily built with many architectural spolia pieces; these pieces of spolia

look older than the ones used in W4.2. The rest of the stones are also secondary limestone, built with very thick Khorasan mortar and rich with brick pieces in the joints. At many spots, repair phases can be recognised. Between Phase 5 and Phase 6, the remains of a probable tower are found.

The dating of the last two phases can be discussed, but with some arguments. First of all, the archaeological evidence of the pre-existing walls provides a safe ground. The use of brick courses in the rubble is found only in the Late Antique period in Vize. The Late Antique phase behind W4.2 gives a *terminus post quem* for Phase 5. Second, we know that the significant public buildings of the Roman or Late Antique period started to be used as potential stone quarries with official permission of the state from the 5th century on. This historical data is supported by the mass of architectural spolia used in the 7th- and 8th-century walls of Asia Minor. The strategic location, the strength of this wall and the cistern mentioned above are worth considering, together with the military actions and organisation against increasing threats from the 7th century on. The features of Phase 6, the abundant use of a different type of architectural spolia, the careless masonry and thick mortar beds differ significantly from the features of Phase 5 and point out to a later period.

What is left from the Late Antique topography are not whole buildings but just a few remaining parts of buildings, which are located close to each other on the acropolis, and probably the water supply channel. Underneath the key monument of the Christian topography, the Hagia Sophia Church (9th or 10th century), the foundations of a probable early Christian basilica were discovered. Another structure, on the SE side of the Hagia Sophia, could be identified as an early Christian church, considering of the synthronon, the remains of the main apse and two lateral apses. The brick triconch remains on the SW of Hagia Sophia also probably belong to this period. Already in the 4th century, the environs of Vize, the Pazarlı sources, became the main water supply source of Constantinople. Thus, Vize must have had an already-existing water supply system in the Late Antique period, like the other close cities in Thrace; it was then either built anew during the construction for Constantinople or an earlier system was repaired. The water channel discovered and documented by our team looks like a local branch which brought water from Kınalıvadi, which lays only 1.5 km north of Vize. Although the elevation of this water channel is not high enough to feed most of the Byzantine city on the acropolis,

it could feed the buildings at lower elevations, including the Roman theatre, a Byzantine cistern and many Ottoman fountains and bath buildings.

In addition to the above-mentioned buildings, Ioannides (1954) mentiones three other churches, one of which is close to Hagia Sophia, on the west side. Neither the locations nor the date of these churches are known, but the area around Hagia Sophia might have housed a cluster of churches in the early Christian period, especially given the closeness to the cathedral and the central location of acropolis on the higher terrace. From the 5th–6th centuries on, the whole settlement could have shrunk back to the acropolis and within the walls. The walls, as seen from the fourth phase in W5–W6, must have been repaired and modified with new features, like pentagonal towers (and maybe proteichisma) on the same circuit of the earlier period.

The circuit of the walls surrounding the acropolis and the settlement within must have remained the same in the 7th–9th centuries. Some strategic spots on the acropolis with a good view of the plain and roads could have been reconstructed for military reasons. No archaeological evidence related to this period was found from the citadel. The only building activity, except for the walls, was undertaken in Hagia Sophia Church. This structure is dated to a period before 902/903, according to a pilgrim graffito documented by Mango (1968, pp. 9–13), the *Vita of St. Mary the Younger* and the survey of Bauer and Klein (2004, p. 416).

The Comnenian and/or the Late Byzantine Period is observed in the circular tower (T3) and the related remains on the citadel, in the circular tower (T1) at the north edge outside the circuit of the walls and in the water tower (WT) down the hill. This period is distinguished by the masonry and by the mortar type. Also, the locations of these structures refer to modifications in the circuit and the citadel. T3 became the main tower of an enclosure on the citadel, into which the Roman gate was also integrated. T1 was laid outside of the circuit, maybe to protect and connect the access to water. Its connection to the circuit is lost. The water tower down the hill was most probably built primarily for access to water during times of siege but could have had residential functions, based on the architectural features.

After the final Ottoman conquest around 1453, Hagia Sophia Church was converted into a mosque by a Süleyman Paşa before 1500 and named after him (Bauer and Klein, 2006, p. 252). The square-planned structure on the SE side of Hagia Sophia

was most probably not a mosque (considering the awkward replacement of the mihrab inside) and is still not an identified building. According to its inscription, it was converted into a mosque in 1444 by Mir-i Ekber Hasan Bey (Özer, 2006, p. 26). In addition to these monuments, we found bath buildings and fountains on the acropolis. However, the settlement gradually spread outside the wall circuit of acropolis in the Ottoman period. The Ottoman monuments located outside the walls that have survived until today are the unidentified but the so-called *imaret* (soup kitchen?), the Ferhat Bey Hamamı (bath) and the Ferhat Bey Çeşmesi (fountain). The 19th-century Ottoman repairs in towers T1, T2, T3 and WP1 (the rectangular structure on W1.2) point to the use of the walls either for defensive reasons (the Russian and Balkan Wars) or for some other functions. The Ottoman documents indicate that the Ottoman state buildings of Vize were located within the walls before the Republican period (Ceylan, 2011, p. 67).

Although, as a result of the very first topographical survey of 2011 and 2012, the digital topographical plan of the historical settlement has been produced and the walls have been dated, there is still a lot of work to be done on site. The existing monuments and above-ground remains in Vize are under danger due to weather conditions, which have caused visible damage and a serious deterioration in the materials. They are also losing their structural features and their architectural authenticity because the lack of an appropriate conservation policy has led to unscientific and illegal interventions on the site. Vize requires both an immediate archaeological excavation to reveal the urban structure of the Roman, Byzantine and Ottoman periods and a heritage management plan to establish a strategic conservation policy that can create better conditions for the inhabitants connected to this heritage while still protecting the site.

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APPENDICES

APPENDIX A: The chemical and physical experiments on mortar samples. (Table a) Acid loss and ignition loss test values, (Table b) sieve test values, (Table c) physical property test values.

APPENDIX A:

(1) Chemical Experiment: Acid loss and ignition loss values

An acid loss test was been performed by using a 10–20 % diluted HCI type. The components which did not dissolve in acid were filtered through filter paper in order to obtain the aggregate part and to calculate the binding medium amount (Güldal et al., 2012, p. 45).

With the ignition test, the binding compositions, the amount of humidity and carbonate in the mortar and the hydraulic property were discovered (Güldal et al., 2012, p. 45). An ignition loss test was performed by heating the samples, which were converted into powder in the ash oven under 550^{o}C and 1050^{o}C. After the heating, the samples were cooled in a desiccator and weighed. From the weight differences, percentage moisture absorption, ignition loss at 550 ^{o}C and calcium carbonate content of the samples were calculated. The results of the experiment are shown in Table A.1.

Table A.1 : The results of the acid loss and ignition loss values test

Sample Nr.	Building code	Description	Thin content left (%)	Aggregate left in beaker (%)	Acid loss (%)	$CaCO_3$ amount (%)	CO_2/H_2O proportion * (%)	Lime / Agregate Proportion(weight) (%)
1	**U7**	Mortar infill	12	74	14	11	1.8	1/4
2	**T3 inner f.**	Joint mortar	13	66	21	20	1.5	1/4
3	**WT NW outer f.**	Joint mortar	18	60	22	32	2.1	1/4
4	**WT SW outer f.**	Joint mortar	15	67	18	26	1.5	1/4
5	**WT SE outer f.**	Joint mortar	18	53	29	22	3.5	1/2.5
6	**WT gate section**	Mortar infill	30	49	21	20	1.7	1/2.5
7	**W6 façade**	Joint mortar	12	72	16	25	1.6	1/4
8	**T5**	Joint mortar	25	44	31	30	3.6	1/2.5
9	**W5 façade**	Joint mortar	17	55	28	30	1.1	1/2.5
10	**U16**	Mortar infill	14	66	20	22	3.0	1/4
11	**B7**	Mortar infill	15	56	29	20	3.7	1/2.5
12	**W4.3 f.**	Mortar infill	18	27	54	21	1.7	1/1.5

Table A 1 (continued): The results of the acid loss and ignition loss values test

13	**W4.2 f1**	Mortar infill	13	59	28	35	5.1	1/2.5
14	**W4.2 f2**	Joint mortar	22	50	28	40	5.8	1/2.5
15	**T2.2 inner f.1**	Mortar infill	29	45	26	30	4.5	1/3
16	**W1.1 f.**	Mortar infill	23	63	14	25	1.4	1/4
17	**W1.2 f1**	Mortar infill	15	74	11	33	2.3	1/4
18	**W1.2 f2**	Mortar infill	22	59	19	37	2.7	1/4
19	**W1.2 f3**	Mortar infill	14	70	16	22	4.3	1/4
20	**W1.2 f4**	Mortar infill	20	61	19	38	6.9	1/4
21	**WP1 W f. section**	Mortar infill	17	63	20	20	2.7	1/4
22	**WP1 E f.**	Mortar infill	19	61	20	21	3.9	1/4
23	**WP1 N inner f.**	Mortar infill	27	35	38	33	4.6	1/2
24	**WP2.1**	Mortar infill	14	63	23	26	2.7	1/4
25	**WP2.2 inner f.**	Joint mortar	12	68	20	22	2.1	1/4
26	**W2 section**	Mortar infill	23	36	41	45	7.1	1/1,5
27	**T2.2 outer f.**	Mortar infill	22	60	18	26	2.6	1/4
28	**T2.2 inner f.2**	Mortar infill	19	61	20	28	4.7	1/4
29	**T2.1 outer sector, section**	Mortar infill	20	60	20	28	5.2	1/4
30	**T2.2 inner f.3**	Mortar infill	26	53	21	44	5.4	1/4
31	**T2.1 inner sector, section**	Mortar infill	14	71	15	10	1.5	1/5
32	**T2.1 Foundation**	Joint mortar	19	60	21	23	3.2	1/4
33	**T2.1 P1**	Mortar infill	16	63	20	21	3.8	1/4
34	**W3 section**	Mortar infill	36	43	21	26	6.1	1/4
35	**W3 inner f. lower p.**	Mortar infill	18	50	32	25	2.1	1/2,5
36	**T1 inner f.**	Mortar infill	21	59	20	13	1.6	1/4
37	**T1 outer f.**	Joint mortar	21	54	25	31	3.7	1/3

Table A 1 (continued): The results of the acid loss and ignition loss values test

38	**T1 section**	Mortar infill	16	57	27	31	3.8	1/3
39	**U4**	Mortar infill	19	60	21	31	4.0	1/4
40	**WP5 NW inner f.**	Mortar infill	19	58	23	21	3.0	1/4
41	**WP5 NW outer f.**	Mortar infill	18	68	14	20	1.9	1/5
42	**U8**	Mortar infill	21	65	14	12	2.4	1/5
43	**U6**	Mortar infill	11	68	21	23	5.0	1/4
44	**W2 outer f.**	Joint mortar	15	51	34	70	9.8	1/2,5
45	**T3 section**	Mortar infill	17	65	18	22	3.8	1/4
46	**T3 outer f.**	Joint mortar	16	65	19	26	6.7	1/4

(2) Sieve test values

Sieve analysis was performed in order to obtain the grain size and type of the leftover aggregates after the acid loss experiment. The percentage of the sieved material has was found by using ISO 565 series of sieves with different sizes from 8mm to 0.25 mm. The results of the experiment are shown in Table A.2.

Table A.2: The results of the sieved aggregate amount test (%)

Sample nr.	**Building code**	**Description**	**8 mm**	**4mm**	**2mm**	**1mm**	**0.5mm**	**0.25mm**
1	**U7**	Mortar infill	100	64	44	25	12	2
2	**T3 inner f.**	Joint mortar	100	57	39	22	8	1
3	**WT NW outer f.**	Joint mortar	100	29	19	11	5	1
4	**WT SW outer f.**	Joint mortar	100	34	20	13	7	1
5	**WT SE outer f.**	Joint mortar	100	73	47	25	10	1
6	**WT Gate section**	Mortar infill	100	60	41	24	12	3
7	**W6 façade**	Joint mortar	100	31	17	10	4	1
8	**T5**	Joint mortar	100	36	21	8	2	0.5
9	**W5 façade**	Joint mortar	100	33	19	11	5	1
10	**U16**	Mortar infill	100	73	52	31	19	8
11	**B7**	Mortar infill	100	81	65	48	31	7

Table A.2 (continued): The results of the sieved aggregate amount test (%)

12	**W4.3 f.**	Mortar infill	100	25	15	7	0.5	0.2
13	**W4.2 f1**	Mortar infill	100	52	31	17	8	1.5
14	**W4.2 f2**	Joint mortar	100	63	39	24	11	2
15	**T2.2 inner f.1**	Mortar infill	-	-	-	-	-	-
16	**W1.1 f.**	Mortar infill	100	45	29	18	11	5
17	**W1.2 f1**	Mortar infill	100	29	19	13	8	4
18	**W1.2 f2**	Mortar infill	100	35	19	11	6	3
19	**W1.2 f3**	Mortar infill	100	49	32	23	16	7
20	**W1.2 f4**	Mortar infill	100	37	28	18	11	5
21	**WP1 W f. section**	Mortar infill	100	92	68	45	27	9
22	**WP1 E f.**	Mortar infill	100	94	74	49	29	9
23	**WP1 N inner f.**	Mortar infill	-	-	-	-	-	-
24	**WP2.1**	Mortar infill	100	47	36	29	20	10
25	**WP2.2 inner f.**	Mortar infill	100	36	27	19	13	4
26	**W2 section**	Mortar infill	100	64	49	31	18	6
27	**T2.2 outer f.**	Mortar infill	-	-	-	-	-	-
28	**T2.2 inner f.2**	Mortar infill	-	-	-	-	-	-
29	**T2.1 outer sector, section**	Mortar infill	100	76	39	23	14	5
30	**T2.2 inner f.3**	Mortar infill	100	31	26	20	12	1
31	**T2.1 inner sector, section**	Mortar infill	100	57	42	27	15	4
32	**T2.1 Foundation**	Joint mortar	100	27	15	8	4	1
33	**T2.1 P1**	Mortar infill	100	81	60	38	21	5
34	**W3 section**	Mortar infill	100	72	55	41	28	5
35	**W3 inner f. lower p.**	Mortar infill	100	65	55	37	20	7
36	**T1 inner f.**	Mortar infill	-	-	-	-	-	-
37	**T1 outer f.**	Joint mortar	100	83	55	35	20	6
38	**T1 section**	Mortar infill	100	77	52	32	19	5

Table A.2 (continued): The results of the sieved aggregate amount test (%)

39	**U4**	Mortar infill	-	-	-	-	-	-
40	**WP5 NW inner f.**	Mortar infill	100	48	31	18	10	3
41	**WP5 NW outer f.**	Mortar infill	100	37	22	13	6	1
42	**U8**	Mortar infill	100	85	59	35	18	5
43	**U6**	Mortar infill	100	38	23	12	4	1
44	**W2 outer f.**	Joint mortar	-	-	-	-	-	-
45	**T3 section**	Mortar infill	100	55	40	23	10	2
46	**T3 outer f.**	Joint mortar	100	45	30	16	7	1

(3) Physical Experiment

In order to discover the physical properties of the mortar samples and water absorption under the atmospheric conditions, density and specific gravity tests were conducted according to TS 699 standard. The results of the experiment are shown in Table A.3.

Table A.3: The results of the physical property tests of mortar samples

Sample Nr.	Building code	Desc.	Water absorption ratio (by weight) (%)	Water absorption (by volume) (%)	Density (g/cm^3)	Specific gravity (g/cm^3)	Porosity (%)
1	**U7**	Mortar infill	18.5	28	1.50	2.54	41
2	**T3 inner f.**	Joint mortar	13	21	1.62	2.54	36
3	**WT NW outer f.**	Joint mortar	29	28	1.38	-	-
4	**WT SW outer f.**	Joint mortar	21	30	1.48	2.52	41
5	**WT SE outer f.**	Joint mortar	19	25	1.33	-	-
6	**WT Gate section**	Mortar infill	14	20	1.47	-	-
7	**W6 façade**	Joint mortar	21	33	1.57	2.54	38
8	**T5**	Joint mortar	24	33	1.40	2.52	45
9	**W5 façade**	Joint mortar	25	33	1.31	-	-
10	**U16**	Mortar infill	16	25	1.55	-	-
11	**B7**	Mortar infill	17	23	1.32	-	-

Table A.3 (continued): The results of the physical property tests of mortar samples

12	**W4.3 f.**	Mortar infill	12	22	1.79	2.57	30
13	**W4.2 f1**	Mortar infill	13	17	1.32	-	-
14	**W4.2 f2**	Joint mortar	11	16	1.49	-	-
15	**T2.2 inner f.1**	Mortar infill	-	-	-	-	-
16	**W1.1 f.**	Mortar infill	-	-	-	-	-
17	**W1.2 f1**	Mortar infill	16	24	1.51	-	-
18	**W1.2 f2**	Mortar infill	26	36	1.35	-	-
19	**W1.2 f3**	Mortar infill	14	25	1.78	-	-
20	**W1.2 f4**	Mortar infill	24	31	1.29	-	-
21	**WP1 W f. section**	Mortar infill	22	32	1.46	-	-
22	**WP1 E f.**	Mortar infill	17	27	1.59	-	-
23	**WP1 N inner f.**	Mortar infill	37	44	1.18	-	-
24	**WP2.1**	Mortar infill	38	41	1.08	-	-
25	**WP2.2 inner f.**	Mortar infill	-	-	-	-	-
26	**W2 section**	Mortar infill	-	-	-	-	-
27	**T2.2 outer f.**	Mortar infill	17	26	1.53	-	-
28	**T2.2 inner f.2**	Mortar infill	-	-	-	-	-
29	**T2.1 outer sector, section**	Mortar infill	30	39	1.31	-	-
30	**T2.2 inner f.3**	Mortar infill	8.4	15	1.73	-	-
31	**T2.1 inner sector, section**	Mortar infill	4.4	8,7	1.98	-	-
32	**T2.1 Foundation**	Joint mortar	-	-	-	-	-
33	**T2.1 P1**	Mortar infill	12	21	1.77	-	-
34	**W3 section**	Mortar infill	16	27	1.66	-	-
35	**W3 inner f. lower p.**	Mortar infill	21	30	1.44	-	-
36	**T1 inner f.**	Mortar infill	12	21	1.80	-	-
37	**T1 outer f.**	Joint mortar	8.2	15	1.84	-	-
38	**T1 section**	Mortar infill	14	24	1.73	-	-

Table A.3 (continued): The results of the physical property tests of mortar samples

39	**U4**	Mortar infill	-	-	-	-	-
40	**WP5 NW inner f.**	Mortar infill	-	-	-	-	-
41	**WP5 NW outer f.**	Mortar infill	6.1	11	1.77	-	-
42	**U8**	Mortar infill	-	-	-	-	-
43	**U6**	Mortar infill	14	22	1.60	-	-
44	**W2 outer f.**	Joint mortar	-	-	-	-	-
45	**T3 section**	Mortar infill	9.0	18	1.95	-	-
46	**T3 outer f.**	Joint mortar	7.0	14	1.96	-	-