

THE WALLS OF MEGALOPOLIS: AN ANALYSIS OF
THE CIRCUIT COURSE PROPOSED BY
THE BRITISH EXCAVATION OF 1890-1893

by

Stephanie Lynn Savage

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As members of the Master's Committee, we certify that we have read the thesis prepared by Stephanie Savage, titled *The Walls of Megalopolis: An Analysis of the Circuit Course Proposed by the British Excavation of 1890-1893* and recommend that it be accepted as fulfilling the thesis requirement for the Master's Degree.

David Gilman Romano

Dr. David Gilman Romano

Date: May 10, 2019

Philip Waddell

Dr. Philip Waddell

Date: 5/10/19

Robert Groves

Dr. Robert Groves

Date: 5/10/19

Final approval and acceptance of this thesis is contingent upon the candidate's submission of the final copies of the thesis to the Graduate College.

I hereby certify that I have read this thesis prepared under my direction and recommend that it be accepted as fulfilling the Master's requirement.

David Gilman Romano

Dr. David Gilman Romano
Master's Thesis Committee Chair
Religious Studies and Classics

Date: May 10, 2019



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Abstract

In the late 19th century, the British excavation of Megalopolis produced a site plan and map of the ancient city. This plan included a theorized projection of the course of the city walls with a perimeter almost 9 kilometers long. The projected course of the circuit was based on twelve segments of wall found and excavated. Even though a minute portion of the entire circuit of the walls (less than 3%) have been identified and studied by the British, a wealth of information has been derived from them. What cannot be determined from the archaeological remains of the walls of Megalopolis might be surmised from the characteristics of the walls of other *poleis* either founded or refounded around the same time: Messene and Mantinea. For this reason, the wall circuits of these two cities will also be discussed in detail. My thesis re-examines this projected track of the city walls at Megalopolis and evaluates whether or not they make sense. With the help of the program AutoCAD, I recreated the plan of Megalopolis drawn by Loring in 1892 as well as the plan of the twelve individual wall segments. My data indicated areas of the projection where there is little evidence to support the theorized path of the circuit wall. One such area is the northwest section of the site plan of Megalopolis. The place between walls A and M accounts for almost 30% of the total purposed perimeter. The British excavators support their argument by calling attention to the natural topography of the Megalopolis basin. I explain also why this evidence is not enough to support the British excavators' theorized plan. As well as the track of the city wall, my thesis explores other questions surrounding the walls of Megalopolis, such as why they are not as well preserved as those from other contemporary *poleis*. The goal of my thesis is to discuss this evidence in depth and to call attention to why the Loring plan of Megalopolis and the path of the circuit wall should not be accepted so readily.

CHAPTER 1: INTRODUCTION

In the late 19th century, the British excavation of Megalopolis produced a site plan and map of the ancient city. This plan included a theorized projection of the course of the city walls based on twelve segments of wall found and excavated. My thesis evaluates whether this projection drawn by Loring, one of the British excavators, in 1892 makes sense. The walls found and excavated by the British seemed to be mostly foundations no taller than 3 feet 4 inches.¹ They are constructed either by a combination of limestone and conglomerate or entirely of fieldstones. The circuit is comprised of parallel walls filled with earth and rubble secured with perpendicular bonds at regular intervals.² This is the standard method of wall construction seen at many other *poleis* in the Peloponnese such as Mantinea and Messene.³ To re-evaluate the walls of Megalopolis, I created two AutoCAD maps.

These AutoCAD maps (represented as Figures 2 and 3) allowed me to produce my own data from the plans provided by Loring. Figure 2 is my AutoCAD rendering of the Loring plan of ancient Megalopolis (Figure 1) while Figure 3 is my AutoCAD drawing based on Loring's plan of the twelve principal portions of the town wall labeled as "Fig. 1" in the British excavation reports.⁴ Through my AutoCAD maps I was able to closely examine this circuit wall trajectory purposed by Loring. The other evidence I considered during my evaluation was the natural topography of the Megalopolis basin and the ancient textual evidence.

¹ Loring in Gardner 1893: 115.

² Loring in Gardner 1893: 107-109.

³ Ioannidis and Chlepa 1999: 204.

⁴ Loring in Gardner 1893: 108.

Historical Background

Following the Peloponnesian War (431-404 BCE) were nine years of Spartan hegemony in the Peloponnese. Around the year 395 BCE disputes and hostilities arose between Sparta and the other members of the Peloponnesian League. Eventually the Corinthian War broke out between Sparta and the new anti-Sparta coalition comprised of Thebes, Corinth, Argos, Athens, Locris, cities in Euboea and Thessaly, as well as Persia. Spartan king Agesilaus II brokered a deal with Persia and instituted what became known as the King's peace which stated that every city-state is to be independent of each other. In 371 BCE King Agesilaus II attempted to reinstate the terms of the King's Peace that then became known as the Common Peace. During these negotiations, he purposefully excluded Thebes as they attempted to speak for the entire territory of Boeotia, instead of just their individual *polis* according to the original terms. King Cleombrotus of Sparta invaded Boeotia in an effort to chastise Thebes and which resulted in the Battle of Leuktra and in July of the same year the Spartan defeat by the Theban general Epaminondas and the Sacred Band.⁵ This battle and the events following ended Sparta's position as a superpower in the Greek world. To contain Sparta to her native territory of Laconia, three *poleis* were created to limit her access to the north – Messene, Mantinea and Megalopolis.⁶

Earlier Scholarship

There are many scholars of Greek military fortifications and architecture whose work I have consulted. Winter mentions Megalopolis largely as *comparandum* for other fortified Arcadian cities including Messene. He includes a map of Megalopolis that is heavily adapted

⁵ Brice 2012: 93.

⁶ Adam 1982: 171.

from the 1892 Loring plan.⁷ Mayer also follows the arguments of Loring, Gardner, Richards and Woodhouse. He compares Megalopolis to other Arcadian city states and notes that Megalopolis was a well-planned city. Mayer states that the natural topography of the Megalopolis basin serves as natural fortification for the city. The walls constructed should naturally follow this topography. Therefore, he writes that the Loring plan is most likely accurate.⁸ Karlsson's 1992 dissertation on the masonry techniques at Syracuse writes that the *emplekton* technique originated in Syracuse and made its way to the Greek mainland. *Emplekton* is a construction technique in which the walls' courses alternate between headers and stretchers at alternating joints. He states that *emplekton* can be seen at Messene, Mantinea, and Megalopolis.⁹ This led other scholars, like Cooper, to believe that perhaps Epaminondas is to be credited as *oikist* of all three cities as *emplekton* was utilized often by the Boeotians.¹⁰ While Roy does not write exclusively on Greek military fortifications as do the previous scholars, his work on the history of Megalopolis is referenced several times throughout this thesis. My theories on the history of Megalopolis owe a great debt to his earlier scholarship.

It is with this evidence from the sources outlined above that I argue that the Loring Projection of the Walls of Megalopolis may need to be reconsidered and perhaps are not as accurate as the British purported in the late 19th century. There are several areas of the projection line of the city walls that may need to be re-evaluated based on likely military strategy and the topography of the city. This thesis explains my reasoning as well explores the possible reasons as to why the remains of the walls have not survived into the modern period.

⁷ Winter 1971: 58

⁸ Maher 2017: 240.

⁹ Karlsson 1992: 73-76.

¹⁰ Cooper 2000: 163.

CHAPTER 2: THE SITE OF MEGALOPOLIS AND THE CITY WALLS

History of Excavations and Research

The British excavator Loring writes that the site of ancient Megalopolis was never lost over the course of time in part to its impressively large theater.¹¹ For this reason, the site of Megalopolis has a long history of research and excavation. Many ancient Greek sites were recorded by the French members of *Expedition Scientifique de Morée* in 1828-1831.¹² They created a map of the area that Gardner and the British team consulted while conducting their own research, noting however that some parts of the map were inaccurate, but still important for their excavation. The first excavation at Megalopolis was conducted by Ludwig Ross in 1834; it was a small excavation and the location of which remains unknown.¹³ Loring comments that while Megalopolis was explored and documented by these accomplished scholars(such as the French members of the *Expedition Scientifique de Morée* and Ross), none of them realized the expansive extent of land that was Megalopolis – until the excavation of the British.

Following the work of the British, the next excavator of the site was a man named Peter Knoblock in 1939-1940. Knoblock was an independent excavator whose work was lost until the 1980s. He excavated mainly around the theater and the Sanctuary of Zeus Soter and his reports were found by the next group of excavators led by Hans Lauter in 1988.¹⁴ The German-Greek team started excavations in 1991 and mainly focused on the political buildings of Megalopolis. Heide Lauter-Buff, the wife of the late Hans Lauter, has published extensively on both the Thersilion and the Sanctuary of Zeus Soter.¹⁵ The only excavation team to produce a

¹¹ Loring in Gardner 1893: 106.

¹² Loring in Gardner 1893: 106.

¹³ Loring in Gardner 1893: 106.

¹⁴ Lauter-Buff 2009: 10.

¹⁵ Lauter-Buff 2009: 10.

comprehensible report of the walls of Megalopolis was the British team from the 1890s and we must rely on this older but thorough scholarship.

Description of the Location and Topography of Megalopolis

Before the remains of the Megalopolitan walls can be discussed in detail, the topography of Megalopolis and its location must be reviewed. The siting of the city of Megalopolis location has been credited as both a work of military genius and also criticized for its strategically nonsensical site plan. The Megalopolis basin is situated near the point where the Alpheois River and the Eurotas River Valley come closest together. The river valleys served as the major highways used for transportation. Sparta utilized the Eurotas River Valley as their major route northwest out of Laconia. While there are alternate routes to the south and east of Megalopolis that traveled towards Tegea, Megalopolis' location places the policing of one of these major routes under the jurisdiction of a single *polis*.¹⁶

However, for all its genius in general location, the site of Megalopolis has been called into question by scholars like Roy as the city seems to have some strategic weaknesses because of the natural topography of the site. Loring explains that other explorers and travelers of Megalopolis expected to see a great plain but rather found rolling hills and valleys.¹⁷ This is why they erroneously thought that the ancient city of Megalopolis could only be confined to the flat area along the banks of the Helisson river. In reality, the Megalopolis basin is a collection of relatively lower hills and valleys in comparison to the greater hills that bound it on every side. The topography is outlined in Loring's site map and replicated on my own AutoCAD drawing.¹⁸

¹⁶ Roy 2007: 289.

¹⁷ Loring in Gardner 1893: 107.

¹⁸ Figures 1 and 2.

It is because of this topography that Loring confidently claims the route of the circuit around the ancient city.¹⁹ The ancient city is completely bisected by the Helisson River, which Roy states seems like a defensive weakness. While this might be the case, in all the ancient source material about the sieges of Megalopolis, no one mentions the Helisson River, or any weaknesses associated with it. Clearly there were security measures in place that defended from possible invaders at these areas where the Helisson River enters and exits Megalopolis. Roy suggests that there might have been metal grilles that would effectively block the places at which the river entered and exited Megalopolis. Watchtowers would also be an efficient means of defense near the river. Wall F near the northeastern most intersection of the Helisson and Megalopolitan land may hold traces of a tower.²⁰ Further examination of the individual wall segments might provide more insight to the defensive strategies of the citizens of Megalopolis.

The Remains of the Wall

The British team found the remains of twelve segments of walls. They used them to draw a map of the excavated wall segments and the possible location of the wall circuit encompassing the ancient *polis*. The twelve excavated wall fragments have a total linear length of approximately 219 meters.²¹ This is only a small percentage of the original perimeter of the

¹⁹ This will be explained in further detail in the section titled, “The Accuracy of Loring’s Plan of the Megalopolitan Walls” in Chapter 3.

²⁰ Five of the twelve excavated wall segments found by the British possess what the British have interpreted as possible remains of towers. This will be further explained in the section titled, “The Remains of the Wall”.

²¹ This number was obtained from the added lengths of the wall segments drawn in Figure 3. Unfortunately, the wall segments are not drawn to scale in the Loring Map redrawn in AutoCAD represented in Figure 2. However, I added the lengths of these wall segments in Figure 2 as well, and they are recorded in the chart labeled as Figure 4. This difference in scale can be best seen when comparing the lengths of Walls D and E in Figure 2 and Figure 3. On the AutoCAD representation of the Loring Map, these walls appear to be similar sizes with D measuring 25.9531 m and E 25.2665 m. Their lengths are presented to scale in the drawing of the individual wall segments represented in Figure 3 display a large difference in length with D measuring just 8.4836 m and E 19.2002 m. Figure 3 has a scale measured in feet as the original figure in the excavation reports did. Most of the metrical lengths provided in this thesis are a result of conversions from the original lengths from the British Imperial system to the metric system.

circuit wall, less than 3%, to attempt to reconstruct the entirety of the Megalopolitan circuit that originally would have measured roughly 8.95 kilometers by my calculations. Even though this is a small portion of the circuit wall excavated, a plethora of information can be learned from the analysis of their remains.

Within the twelve sections of excavated wall, Loring distinguishes between a chronologically earlier grouping of wall and a later grouping.²² The walls are denoted on the map as letters A - M.²³ Walls A - G are “older” while walls H - M are “younger.” The later walls seem to be localized to the north east corner of Megalopolis.²⁴ Loring fails to provide explicit reasoning as to why these two groups differ in age and how he distinguished earlier from later. He divided the walls based on construction material and stylistics and whereas walls A - G are constructed with a combination of limestone and conglomerate, walls H - M are built of field stones from the surrounding area.²⁵ Both general construction and shape of both of the categories of walls are similar in design. He does not provide any sort of archaeological context such as relative dating from pottery or stratigraphy, but this is could be explained by the early nature of archaeological excavation practices in the late 19th century. As Loring did, I will begin to discuss the grouping of wall segments that he labeled as “earlier”.

Based on the Loring drawing of the twelve individual wall segments, Walls A - G (Fig. 3) seem to mostly consist of parallel walls with earth and gravel filled lining and a perpendicular bond at regular intervals. Whether the entire circuit possessed the same general construction is

²² There are also seven “minor or unexcavated traces of town-wall” noted on the Loring plan of Megalopolis. These are noted in the text of the excavation report on page 107 and are also marked at the bottom of the key of the map. Because there is little known of these other segments of the circuit wall besides their general location and because they are either too fragmentary to be labeled as town wall segments and include portions of the wall that are unexcavated, I do not think that their presence should contribute to the discussion of the course of the town wall.

²³ This list excluded the letter “I” for which reasons I can only assume would be formatting and clarity issues.

²⁴ Loring in Gardner 1893: 108.

²⁵ Loring in Gardner 1893: 111.

unclear. There are a few exceptions in this group that deviate from this model. The walls were fashioned of not quite rectangular stones but Loring notes that they were definitely hewn into a polygonal shape. Loring states that the wall surfaces on the inside are much rougher and less finished than those on the outside. Most of the individual wall segments of this earlier period were measured by the British team at 2 feet, 2 inches in thickness.²⁶ The parallel walls are approximately 3 feet apart. Wall A is the most complete of the segments from this group. Wall C which is an anomaly of the segments excavated in that it does not have a second parallel wall but just a singular one that is thicker than the usual width. Wall C measures at 4 feet in thickness. Loring interprets this as a compensation for the lack of a second wall. He notes that the topography of the area would make it difficult for a second wall parallel to the first and no archaeological evidence has been found of one. Wall F possesses an elongated, perpendicular additional wall that Gardner has speculated could be part of a watchtower. As mentioned before, with wall F situated at the point where the wall circuit would meet the Helisson, this is a very attractive theory.²⁷

The later group's wall segments are similar in basic design but not construction; they are parallel double walls connected with a perpendicular bond of stone at regular intervals. The thickness of these walls, however, is greater than of the earlier group. The thickness of a wall in this later grouping is between 3 feet and 3 feet, 6 inches. Because the walls are so similar in design in this later grouping, Loring did not feel the need to describe them in individual detail as he did the earlier group. Instead he chose to expand on the characteristic of the few wall segments that displayed unique features. Wall K possesses a small entrance only large enough

²⁶ In the text of the excavation report, the British used the British Imperial System of measure. Loring does include meters on his site map represented in Figure 1. In Figure 2 these measurements are converted into metric. Figure 3 has a scale that is also measured using feet.

²⁷ Loring in Gardner 1893: 107-109.

for a single man to enter. Loring does not specify what the width of the entrance is. From my AutoCAD drawing of the wall diagrams, I have determined that based on Loring's draft, this entrance would have been approximately 2.3 feet (0.71 m) in width. Wall K is located at the northeastern most corner of the circuit wall. Wall J seems to possess the remains of semi-circular tower while Walls L and M contain remains of what has been interpreted as angular towers. These walls are located just west of K in the northeast corner. As stated previously, all of the segments from this later grouping are localized in the northeast corner of the site.

Loring states that the tallest of the wall segments excavated was Wall K measuring at 3 feet 4 inches (approximately 1 meter). He says that it may be the case that only a singular course has been preserved but that it is difficult to discern courses when the stones were not hewn into an even shape.²⁸ Mayer in his analysis of the British excavation report labels Megalopolis' walls as an uneven type.²⁹ This uneven type is based on the topography of the area. As the Megalopolis basin is not regular and contains many hills and valleys, the walls are built upon uneven terrain. He agrees with Loring's argument that the walls are polygonal and whether they were coursed or uncoursed is uncertain.³⁰

As stated, even if most much of the walls were found and excavated (less than 3%), a significant amount of information can be derived from them. Another source of evidence that could provide insight regarding the Megalopolitan walls are the two cities that were founded and refounded around the time of Megalopolis: Messene and Mantinea. Many scholars, like Mayer, often compare the Megalopolitan walls excavated by the British to the ancient walls of other

²⁸ Loring in Gardner 1893: 115.

²⁹ Mayer 2017: 235. This uneven type is based on the topography of the area. As the Megalopolis basin is not regular and contains many hills and valleys, the walls are built upon uneven terrain.

³⁰ Mayer 2017: 237.

prominent Peloponnesian *poleis* such as Messene and Mantinea. The next chapter explores these cities as *comparanda* to the characteristics of the Megalopolitan walls outlined above.

CHAPTER 3: THEORIES ON THE CONSTRUCTION OF THE WALLS OF MEGALOPOLIS

The Walls of Megalopolis in Comparison to the Walls of Messene and Mantinea

Messene and Mantinea are often used as *comparanda* when evaluating the walls of Megalopolis because they were the other *poleis* founded and refounded following the Battle of Leuktra in 371 BCE. In Chapter 2 the walls of Megalopolis were described based on the research conducted by the British excavation in the late 19th century. This section is dedicated to the description of both Messene and Mantinea to provide insight and patterns found between all three *poleis*. First Mantinea will be discussed.

Mantinea was deoikized by Sparta in 385 BCE and re-synoikized following the Battle of Leuktra in 370 BCE according to Xenophon (*Hell.* 6.5.3-5). Xenophon lived contemporaneously with the events of the Corinthian War and the resulting events following the Battle of Leuktra. Reading his history of this time period is challenging as he leaves out many details (evidenced by his short description of the Battle of Leuktra) or has omitted entire pieces of history (such as the founding of Megalopolis and Messene) from his historical accounts.³¹ These omissions could be because of his pro-Spartan biases and the founding of these two *poleis* could be considered painful events for him.³² His shortcomings as a historian caused by these biases have been pointed out by many scholars such as Hanson (1988) and Dillery (1995). As Xenophon is the only historian writing about these events concurrently, the minimal evidence he provides must be reviewed, although carefully when considering his obvious biases. After Mantinea was re-synoikized in 370 BCE, its new walls consisted of coursed limestone that measured about 4.20-

³¹ Hornblower 1990: 71.

³² Hornblower 1990: 71.

4.70 meters thick throughout the entire circuit.³³ Minor parts of the wall were said to have been polygonal in style. Mantinea's walls were also composed of an inner and an outer line of walls, with fill in between and a perpendicular bond at regular intervals, like Megalopolis.³⁴ Both Winter (1971) and Mayer (2017) comment that Mantinea is another Arcadian city besides Megalopolis that is without an acropolis. Mantinea like Megalopolis also has an internal river. The circumference of Mantinea's rebuilt walls in 370 BCE is 3.9 kilometers³⁵ having both angular and round towers.³⁶ It is clear that Mantinea shares many characteristics in common with Megalopolis and a full analysis of these similarities will be discussed after the city of Messene is evaluated.

Messene was founded after the Theban general, Epaminondas, freed the Messenian helots in an effort to provide Greece freedom from Spartan tyranny. This is recorded by Pausanias (9.15.6). Pausanias was a Greek geographer living in the second century CE during the Roman Empire writing long after the founding of Messene and Megalopolis. He often details stories that he hears while traveling around the different parts of Greece as he was writing a form of guidebook to Greece. I do not think that Pausanias holds similar biases like that of other ancient authors such as Xenophon. For this reason, I am not questioning Pausanias' trustworthiness when it comes to details of events. The national biases contained within these descriptions, however, ought to be noted. This passage detailing the freeing of the Messenians is from book 9 on Boeotia, not Book 4 on Messenia. Perhaps there is patriotic, propagandistic elements within this report on the founding of Messene by the Thebans. The freeing of the Messenian helots from

³³ Maher 2017: 221.

³⁴ Maher 2017: 221.

³⁵ Maher 2017: 220.

³⁶ Loring in Gardner 1893: 112.

their Spartan captors crippled Sparta's economy. This was one of the events that contributed to Sparta's decline, making the founding of Messene a paramount episode in Peloponnesian history.

Messene had two main gates (the Megalopolis Gate and the Lakonian Gate) and 17 towers.³⁷ These towers were both angular and round like those at Mantinea and Megalopolis³⁸ and these walls contain the same style and construction as those in both Mantinea and Megalopolis with parallel walls filled with rubble and earth between them bonded at regular intervals. The wall widths are "irregularly regular" varying between a width of 2.45 meters and 2.80 meters³⁹ constructed of limestone and their circumference is about 9 kilometers in length.⁴⁰ The walls of Messene possess physical features alike to both Mantinea and Megalopolis.

My purpose in calling attention to the physical characteristics of the walls of both Mantinea and Messene is to demonstrate their similarities to those of Megalopolis. All three *poleis* contain the same basic structure of walls that are parallel, filled with earth in between and bound at regular intervals. The three cities also all have towers (or traces of towers) that are both round and angular in nature. Messene and Megalopolis are comparable in length (both roughly 9 kilometers long) while Mantinea is only 3.9 kilometers. All three cities' circuit walls seem to be constructed of different widths. All three cities' walls were constructed, at least in part by limestone. During the Battle of Mantinea in 385 BCE, Sparta redirected the river and flooded the sun-dried brick that substantiated Mantinea's circuit wall.⁴¹ With Mantinea's walls compromised Sparta easily sacked the city. The citizens of Mantinea, learning from their past mistakes, rebuilt their walls of stone. They are well-preserved and visible today. As Megalopolis'

³⁷ Ioannidis and Chlepa 1999: 204.

³⁸ Loring in Gardner 1893: 112.

³⁹ Ioannidis and Chlepa 1999: 204.

⁴⁰ Ioannidis and Chlepa 1999: 204.

⁴¹ This episode is recorded by Diodorus Siculus (15.5), Polybius (4.27), Pausanias (8.8.7) and Xenophon (5.2.6-7).

walls are not well-preserved or visible today, Loring speculates if some of the Megalopolitan walls were built in part with sun-dried brick, like the original walls of Mantinea, perhaps they did not survive.⁴² Based on the evidence present at both Mantinea and Messene, Megalopolis most likely also had large gates facing towards prominent routes of travel. With Megalopolis' location in a crossroads this would make sense. As of now, there is no archaeological evidence found in the twelve segments of wall that possess possible features of a gate. With Mantinea and Messene as *comparanda*, other features of Megalopolis not obvious in the archaeological record might be surmised.

Some scholars have stated that another similarity that all three cities share is *emplekton* masonry. Tomlinson wrote an article attempting to define *emplekton* as there is scholarly debate regarding its exact definition. Tomlinson follows the writings of Vitruvius and states that the outer portion of the wall should have a woven surface pattern.⁴³ Vitruvius was a military architect writing during the start of the Principate in Rome. His *de Architectura* became the standard work on architecture until around the 18th century.⁴⁴ Tomlinson explains that with *emplekton* masonry the walls' courses alternate between headers and stretchers at perpendicular joints.⁴⁵ This technique is important to note because many scholars use it as evidence for the possibility that the construction of all three cities' walls could be the work of Theban engineers.

Karlsson is one such scholar. In his 1992 dissertation on the masonry techniques of Syracuse, Karlsson states *emplekton* masonry can be seen in all three of these *poleis*.⁴⁶ Cooper's scholarship follows the argument of Karlsson. He asserts the idea that monumental ashlar

⁴² Loring in Gardner 1893: 115. A full exploration on the possibilities as to why the Megalopolitan walls did not survive is outlined in the section titled, "Where are the Walls of Megalopolis Today?"

⁴³ Vitr. 2.8.7.

⁴⁴ McEwen 2003: 1.

⁴⁵ Tomlinson 1961: 135.

⁴⁶ Karlsson 1992: 73-76.

masonry was adapted by the Boeotians on mainland Greece. Cooper states that since *emplekton* can be seen at Messene, Mantinea, and Megalopolis, it is possible to interpret all three cities as a singular plan of the Thebans.⁴⁷ Cooper provides no analysis, however, of Megalopolis' walls to support the idea that their construction could possibly display this advanced technique. As Loring said, there is not enough of the walls left to even discern if they had courses, therefore I doubt the judgement then can be made that they were utilizing the *emplekton* masonry. Roy states that while *emplekton* can be seen at Mantinea, it is unclear where Karlsson "understands Theban engineers to have played in constructing the new walls of Mantinea."⁴⁸ Roy doubts the presence of Theban engineering at Mantinea as well as Megalopolis. Demand agrees with Roy. She states there is only solid evidence for Theban influence on Messene.⁴⁹ Of course, if more remains of the Megalopolitan walls were discovered and excavated, there might be evidence of Theban stone masons. As of now, this cannot be determined based on the descriptions of the walls provided by Loring. Based on this evidence, it seems more likely that the Arcadians were responsible for the construction for the walls of Megalopolis.⁵⁰

The Accuracy of Loring's Plan of the Megalopolitan Walls

If only a very small portion of these possible extensive walls were excavated and identified, how could the British team be so confident about the course of the city walls? Loring states that the answer lies in the topography of the Megalopolis Basin. The Megalopolis basin is a collection of relatively lower hills and valleys in comparison to the greater hills that bound it

⁴⁷ Cooper 2000: 163.

⁴⁸ Roy 2014: 125.

⁴⁹ Demand 1990: 116.

⁵⁰ Further discussion on the party responsible for the founding of Megalopolis will be in the section titled, "Where are the Walls of Megalopolis Today?"

on every side, as stated previously. Based on this topography, Loring claims that the route of the circuit around the city that he drew is most likely accurate – even if the only concrete evidence of the circuit wall is the twelve wall segments representing less than 3% of the theorized perimeter (Figure 4). The only instances where he speculates about an alternate route are the areas where he interprets the topography as ambiguous. For this reason, not only does Loring trust his drawn plan, but he is certain that the segments (both early and late) all align to be “one and the same circuit”.⁵¹ It is precisely this reliance on topography that causes me to doubt the purported course of the city walls drawn by Loring.

Upon close examination of the map, there are many places (the largest measuring 2,679 meters between wall segments A and M – roughly 30% of the total perimeter) of the projected circuit where no archaeological evidence has been found. Consequently, it is this north and north west sector of Megalopolis where I most doubt the validity of the projected path of the wall. While Loring placed the course along the top of a plateau overlooking a decline that in places has a “fall of as much as 120 feet”, there are sections of the outlying topography that would be strategically advantageous if they were included within the circuit of the city walls. For example, there are numerous tall hills rising to a height of approximately 180 feet that could potentially serve as defensible *acropoleis*. Some of these hills, like the ones to the north east have remains of ancient blocks on them (77a and 77b labeled on the map).⁵² It would make more sense for these walls to be extended north to encompass some of these hills and ridges to grant Megalopolis more localized high points. Current scholarly consensus is that ancient Megalopolis did not have an acropolis.⁵³ This would not be considered odd for Megalopolis to lack an

⁵¹ Loring in Gardner 1893: 112.

⁵² Figures 1 and 2.

⁵³ Maher 2017: 235. According to Maher, Mantinea also did not have a formal acropolis as he writes, “the site of Mantinea lies nearly in the centre of a flat, open plain largely devoid of natural defenses” (pg. 219). Tegea, on the

acropolis as Mantinea lacked one as well.⁵⁴ However, including these localized high points within the city walls could provide the citizens of Megalopolis possible places of refuge in case of a siege. The northern walls could also be further south along the northern plateau as the land according to Loring's map seems to be more level (Figures 1 and 2). The argument Loring provides is not effectively supported in certain areas of his plan as his main evidence in these places is the topography of the basin. The point of this analysis is to indicate that there are areas of the Loring projection where his evidence is insufficient, and that this projection should not be accepted so readily by scholars.

Along with the natural topography of the basin, Loring often turns to ancient literary evidence to support his theorized circuit wall projection. While discussing the length of the theorized circuit wall perimeter, he quotes Polybius. Polybius was a Greek historian who was not only born in Megalopolis (c. 200 BCE), but also died there (c. 118 BCE).⁵⁵ Bias in Polybius' writings can be detected in his writings on Megalopolis. Polybius at 9.26a states:

οἱ δὲ πλεῖστοι τῶν ἀνθρώπων ἐξ αὐτῆς τῆς περιμέτρου τεκμαίρονται τὰ μεγέθη τῶν προειρημένων. λοιπὸν ὅταν εἴπῃ τις τὴν μὲν τῶν Μεγαλοπολιτῶν πόλιν πεντήκοντα σταδίων ἔχειν τὸν περίβολον, τὴν δὲ τῶν Λακεδαιμονίων ὀκτὼ καὶ τετταράκοντα, τῷ δὲ μεγέθει διπλῆν εἶναι τὴν Λακεδαίμονα τῆς Μεγάλῃς πόλεως, ἄπιστον αὐτοῖς εἶναι δοκεῖ τὸ λεγόμενον.⁵⁶

The τῷ δὲ μεγέθει discussed here by Polybius is referring to the area enclosed within the city walls of Sparta. In this passage, Polybius is explaining how a city is able to have a longer

other hand did have a formal acropolis (Malmer 2011). Messene also had an acropolis at Mt. Ithome (Ioannidis, Chlepa 1999).

⁵⁴ Maher 2017: 235.

⁵⁵ Aside from the controversy surrounding Polybius' dates outlined by Eckstein (1992) it is clear that Polybius was writing during the time of the Roman Republic and occupation of the Peloponnese.

⁵⁶ Plb 9.26a. "But most people estimate the greatness of the foresaid things from the perimeter itself. Whenever someone says that the city of the Megalopolitans has 50 stades in circumference, but that the city of the Lacedaemonians has 48, but that Lacedaemon is double that of Megalopolis in greatness, this is a statement that seems unbelievable to them."

perimeter than another city and yet a smaller area enclosed within the city walls. An irregular shape, such as an elongated one, could account for this surprising fact. The examples Polybius chooses to demonstrate this phenomenon are Megalopolis and Sparta. From this, scholars can determine that in the time that Polybius is writing the perimeter of Megalopolis measures 50 stades. Loring states that the projection of the circuit walls of Megalopolis measures at 46 stades or 47.5 if they are to include “twice the present breadth of the river bed.”⁵⁷ Loring does not specify the measurement of the stade used here nor can we tell which stade Polybius was using at the time he was writing as stade measurement and length of the Greek foot vary regionally. Based on the stade Loring provided in the scale of the map of the site, the stade that they used is equivalent to approximately 161.5 meters. This number was derived from my AutoCAD version rendition of this map (Figure 2). Loring was convinced that the proximity of his measurements to Polybius was sufficient enough to trust Polybius’ figure.⁵⁸ It is clear that the course of the circuit walls was quite extensive based on both archaeological evidence and the ancient literary accounts. I do not have any doubts that these walls were comparable to the length of those at Messene (9 km) nor do I doubt that they most likely were an irregular shape (longer than it is wide) based on the surrounding topography. It is the track of the circuit wall that Loring provides of which I am skeptical. More excavations in areas where no wall segments have been recovered must take place to securely ascertain the course of the circuit wall, such as at the northwest section. In addition, ground based or aerial remote sensing techniques could be helpful in discovering further evidence of the walls of Megalopolis.

⁵⁷ Loring in Gardner 1893: 114.

⁵⁸ Loring in Gardner 1893: 116.

Notes on the AutoCAD Drawings

The AutoCAD drawings of the Plan of Megalopolis (Figure 3) allowed me to obtain my own data of distances, lengths and widths of the items depicted in the original Loring plan of Megalopolis (Figure 2). The use of bright, stark colors made the sparse nature of the wall segments apparent as well as aided in focalizing the main regions within which the two distinctive groups of walls are situated. Where error might have occurred is in the nature of the original drawing itself. As this is a hand-drawn plan from 1892, there is a good chance that some of these topographical features and ancient remains are not accurately placed on the map. There have been topographical surveys done more recently than the British excavation. Argyrios Petronotis in 1973 produced a topographical map of Megalopolis that has been referenced by Roy in his 2007 article.⁵⁹ Μέριμηγκα in 2005 produced an ekistic study of Megalopolis that included topographical maps of the ancient city represented in Figures 6, 7, and 8.⁶⁰ The data I collected from these drawings (both Figure 3 and Figure 4) are heavily reliant upon the measurements taken by the British team in the late 19th century and their best approximations. The wall segments in Figure 4 are highly regular and even. As referenced in their excavation reports, this is far from the appearances of the town walls excavated in the field.⁶¹

Errors could have appeared in the irregularity of units of measures between Loring's Plan of Megalopolis and the Plan of the twelve principal portions of the town wall. As it was the early 19th century, the excavators were using the Imperial British System for their units of measure. This is why in the plan of the principal portions of the town wall (Figure 4) the scale is in feet.

⁵⁹ Roy 2007: 290. Roy references the work done by Petronotis (1973) and includes a map labelled as Figure 6 in Petronotis.

⁶⁰ Μέριμηγκα 2005: 120-122.

⁶¹ Loring in Gardner 1893: 109. On page 109 and 111 Loring provides plan views of both groups of walls. These plans demonstrate how uneven and irregular the stones used for the walls were in actuality. This is not represented in their Figure 1 on page 108 that I replicated in AutoCAD (Figure 3).

However, in the Loring plan (Figures 2 and 3), there are multiple different scales including feet, meters, and stades. My AutoCAD drawing is in meters.

Where are the Walls of Megalopolis Today?

It is strange, however, how little of the walls survive. The remains of the walls of Megalopolis excavated by the British cannot be seen today.⁶² If Megalopolis was as important (if not more so) as Mantinea and Messene in blocking Spartan movement north, then why are the Megalopolitan walls not as grand or as well preserved as those from the other two *poleis*? The next section details several theories that could possibly explain the minimal remains of the Megalopolitan walls. The first theory questions the materials used for the construction of the city walls.

As mentioned previously, Loring postulated whether the upper courses of the city walls could have been constructed of sun-dried brick as this would account for the lack of stone remains.⁶³ He argues that because of the vast length of the circuit, providing materials for both the circumference and a tall height would have been challenging. But, if this were the case, then this would also have to be true of Messene and Mantinea. While the circumference of Mantinea's rebuilt walls in 370 BCE are smaller (3.9 km)⁶⁴ than Megalopolis' projected circumference, the remains of Messene's circuit walls measure 9 kilometers in length.⁶⁵ Megalopolis' projected circuit wall track measures at 8.5 kilometers in length.⁶⁶ Messene's walls

⁶² Maher 2017: 236.

⁶³ Loring in Gardner 1893: 115.

⁶⁴ Maher 2017: 220.

⁶⁵ Ioannidis and Chlepa 1999: 204.

⁶⁶ Maher 2017: 236. This is the length that Maher provided as well as the length Loring provides on page 114 of the excavation reports converted from 5.5 miles. My AutoCAD map gives the exact length 8.9515 km. Using my data or the data provided by Maher does not impact the argument that Messene's comparable circumference and preserved, stone, multi-course circuit wall.

are multi-coursed in stone and are well preserved.⁶⁷ If this argument were applicable, it would have also affected the construction of Messene which seemingly did not have to supplement cut stone with sun-dried brick. Two quarries have been found, however, on the slope of Mt. Ithome near the sanctuary of Artemis Limnatos in Messenia.⁶⁸ Those constructing Messenia would have access to limestone unavailable to those around Megalopolis. Limestone would be available from the surrounding mountains around the Megalopolis basin but at a greater cost than the situation in Messene. If it is only the superstructure that is comprised of sun-dried brick, then why were so few stone foundations recovered? The limestone blocks might also have been re-appropriated by later citizens of Megalopolis, including the Roman occupants. There were some ancient blocks found in modern buildings as indicated in the Loring site map. However, this would be a massive amount of stone repurposed. The materials used for the construction of the city walls of Megalopolis is the first of three theories about why the walls do not survive to the modern period.

The next theory is concerned with the speed of construction. If these walls were built hastily, perhaps then they were not durable enough to survive roughly 1,500 years. It is possible that there was a need for expediency when constructing the walls of Megalopolis. This expediency might be explained with regard to when the city was founded. Scholars do not agree on the exact date of Megalopolis' founding. This is because two ancient historians provide differing dates. Pausanias (8.27.8) places the founding of Megalopolis directly after the Battle of Leuktra in 371/370 BCE, while Diodorus Siculus (15.72.3.) states that the founding of Megalopolis happened after the Tearless Battle in 368 BCE. Diodorus Siculus was a historian from Sicily writing in the first century BCE during the Roman Republic. Sacks notes that

⁶⁷ Cooper 2000: 159.

⁶⁸ Koursoumis 2014: 211.

Diodorus relied heavily on the written accounts for his information.⁶⁹ Perhaps he is using written sources for the date of Megalopolis' founding unavailable to modern scholars and unknown to Pausanias.⁷⁰ A founding date of 370 or 368 BCE does not seem like it would make a significant difference in the examination of Megalopolis.

This possible expediency, however, in which the Arcadians needed to build the walls might be explained by the Tearless Battle. This was a battle recorded by both Xenophon (*Hell.* 7.1.28) and Diodorus Siculus (15.72.3). The Spartans were victorious in this battle against the Arcadians shortly after the Battle of Leuktra. It is recorded that not a singular Spartan soldier fell in this battle, which is why it is called "Tearless" (πόλεμος οὔτος Λακεδαιμονίους ἄδακρυς). If Diodorus is correct that the construction of Megalopolis was spurred by this Arcadian defeat, then this might have led to hasty construction of walls around the new Arcadian city of Megalopolis out of fear of another Spartan attack. These walls, built rapidly, might not have survived to the modern period. This could also account for the use of sun-dried brick as this material is a cheaper, quicker method for creating fortifications. In this theory, the Arcadians are the active party in the construction of the Megalopolitan walls. As referenced earlier in this thesis, there is also scholarly discussion about those responsible both for founding the city and for constructing the walls. The next theory considers the possible options.

In addition to the construction materials and the speed at which the walls were built, the finances of this building project could also account for their durability. There is a question surrounding the political entity responsible for the construction of Megalopolis. As stated before, there is no archaeological evidence to support the idea of a prominent Theban influence in the

⁶⁹ Sacks 1990: 3.

⁷⁰ Hornblower 1990: 73. For full discussion on the date of the founding of Megalopolis, consult Hornblower.

walls' construction. However, there are passages in the ancient literary tradition that mention the Theban general Epaminondas as a possible *oikist* for Megalopolis. Pausanias in 8.27.2 states:

γνώμη μὲν τοιαύτη συνωκίζοντο οἱ Ἀρκάδες, τῆς πόλεως δὲ οἰκιστῆς
Ἐπαμινώνδας ὁ Θηβαῖος σὺν τῷ δικαίῳ καλοῖτο ἄν: τοὺς τε γὰρ Ἀρκάδας οὗτος
ἦν ὁ ἐπεγείρας ἐς τὸν συνοικισμὸν Θηβαίων τε χιλίους λογάδας καὶ Παμμένην
ἀπέστειλεν ἡγεμόνα ἀμύνειν τοῖς Ἀρκάσιν, εἰ κωλύειν πειρῶνται οἱ
Λακεδαιμόνιοι τὸν οἰκισμόν.⁷¹

This is the passage most often cited as evidence for both Epaminondas being the mastermind behind Megalopolis and also as proof that he was not. Demand sites this passage of Pausanias and interprets this section to mean that Pausanias is suggesting that Epaminondas might be called *oikist* of Megalopolis.⁷² I agree with Demand's interpretation of this passage. Pausanias' use of the potential optative in καλοῖτο ἄν gives evidence of the possibility of this being false. Had this been stated in the indicative mood, I think the argument for Pausanias' opinion of Epaminondas' role as *oikist* would become more concrete. Pausanias' interjection of σὺν τῷ δικαίῳ (which I have translated as "with fairness") also leads me to believe that this is Pausanias' own speculation of this fact. Pausanias substantiates his claim to Epaminondas' role of *oikist* by citing Epaminondas' involvement in the Arcadian League as well as the Theban expedition into the Peloponnese to defend the Arcadians against the Lacedaemonians should they need it. Demand states that it is because Epaminondas sent the 1,000 soldiers to Megalopolis that he might be called *oikist*. I call attention to this passage because it is one of two from Pausanias in which he implies that the title of *oikist* should be given to Epaminondas.

Pausanias at 9.15.16 records seeing a statue of Epaminondas in Thebes:

⁷¹ Paus. 8.27.2: "The Arcadians synoikized with this very idea. The founder (*oikist*) of the city might be called, with fairness, Epaminondas, the Theban; for it was he [Epaminondas] would excite the Arcadians to the *synoikismos* and sent off 1,000 picked men of the Thebans and sent Pammenes as leader to defend the Arcadians, if the Lacedaemonians attempted to prevent the *synoikismos*."

⁷² Demand 1990: 112.

τῷ δὲ ἀνδριάντι τοῦ Ἐπαμινώνδου καὶ ἐλεγεία ἔπεστιν ἄλλα τε ἐς αὐτὸν λέγοντα
καὶ ὅτι Μεσσήνης γένοιτο οἰκιστὴς καὶ τοῖς Ἑλλησιν ὑπάρξειεν ἐλευθερία δι'
αὐτοῦ. καὶ οὕτως ἔχει τὰ ἐλεγεία:

“ἡμετέρας βουλαῖς Σπάρτη μὲν ἐκείρατο δόξαν,
Μεσσήνη δ' ἱερὴ τέκνα χρόνῳ δέχεται:
Θήβης δ' ὀπλοισιν Μεγάλη πόλις ἐστεφάνωται,
αὐτόνομος δ' Ἑλλάς πᾶσ' ἐν ἐλευθερίῃ.”⁷³

This inscription claims that Megalopolis was encircled by the *hopla* of Thebes (Θήβης δ' ὀπλοισιν Μεγάλη πόλις ἐστεφάνωται). I interpret the *hopla* to refer to the 1,000 soldiers Thebes sent to Megalopolis recorded in 8.27.2, not that the Thebans built the city walls of Megalopolis. This is a complex passage as this inscription which only survives in Pausanias is also poetry; the *hopla* of Thebes could be a metaphor. It is also impossible to tell when this inscription was dedicated, if it existed at all. This could possibly be a piece of Theban patriotic propaganda celebrating one of their proud moments in history. Regardless, it is a piece of evidence that must be addressed.

There is also evidence that Megalopolis served as the capital of the Arcadian League founded after 371 BCE. Inscriptions were recovered from Megalopolis that contained information of a political nature such as inscription IG v 2, 1. This inscription is an Arcadian federal decree honoring the Athenian Phylarchus. This would make sense as this was about the time that Megalopolis began to court Athens as their new military patron, evidenced by Demosthenes' speech, *ὑπὲρ Μεγαλοπολιτῶν*.⁷⁴ Roy dates the inscription to after the year 366 BCE.⁷⁵ It lists the 50 confederate *damiorgoi* and from which *poleis* they originate. Megalopolis has ten, Minalia has three, Lepreon has two, and the remaining members, Mantinea, Tegea, Kynuria,

⁷³ Paus. 9.15.16: “And on the statue of Epaminondas is an elegiac inscription on it saying both other things and that he was the founder of Messene and that freedom was initiated for the Greeks on account of him. And the elegiac verses are like this: “By my counsels was Sparta on one hand clipped from glory, and holy Messene received her children eventually, and Megalopolis was encircled by the *hopla* of Thebes, and all of Greece was autonomous in freedom.” As far as I can tell, only in Pausanias does this inscription survive.

⁷⁴ Dem. 16.1.

⁷⁵ Roy 2005: 262.

Orchomenos, Kleitor, Heraia, and Thelpusa have five. This inscription reveals important aspects surrounding the political nature of the Arcadian League. They are democratic, most likely in direct opposition to oligarchical Sparta.

Megalopolis gained control of the Sanctuary of Zeus Lykaios at Mt. Lykaion.⁷⁶ This is further evidence that Megalopolis was also the Arcadian League capital as Mt. Lykaion was the religious center of the Arcadian League.⁷⁷ This speaks to the possibility that the Arcadian League headquarters would most likely be located in Megalopolis. If we are to follow Jost's scholarship that Mt. Lykaion undoubtedly became the religious center of the Arcadian League, then it speaks to the possibility that the Arcadian League headquarters would be located in Megalopolis.

Pausanias also explicitly states this fact in his histories.⁷⁸ Analyzing who might be responsible for the founding of Megalopolis is vital as it might illuminate who was responsible for funding this building project. It is possible that the construction of the walls of Megalopolis was entirely financed by the Arcadians while they were guarded by Theban soldiers. This could account also for the walls of Megalopolis' ruder construction than that of Messene as there is more evidence of the wealthy Thebans aiding in Messene's construction.⁷⁹

⁷⁶ Romano and Voyatzis 2015: 216.

⁷⁷ Jost 1994: 226.

⁷⁸ Paus. 8.32.1.

⁷⁹ Loring in Gardner 1893: 109.

CHAPTER 4: CONCLUSION

Outstanding Questions and Problems

After this research, there are still some outstanding questions and problems that must be addressed. The first concerns the singular course Loring reported within which all twelve segments belong.⁸⁰ Is it possible that the fragments found of the circuit wall belong to the same circuit? It is possible that Megalopolis had during its history multiple circuits because of rebuilding. There are times of rebuilding recorded in ancient authors, such as Polybius (5.93.1-6). This passage of Polybius records the only successful attempt by the Spartans to sack Megalopolis. This might be an instance in which Polybius' bias can be detected as he seems to stress in his account that it was only by means of treachery that Spartan King Cleomenes III successfully besieged the city in 222 BCE. There was a following discussion recorded in Polybius among the citizens of Megalopolis to rebuild the walls to a smaller size. They thought that the length of the circuit contributed to their downfall. There was disagreement among the citizens, and it seems that the wealthy land owners who fought to rebuild the walls to their original size won the debate. Loring uses this passage as evidence that even if there are different dates for certain wall segments, they all belong to the same circuit. It is unclear exactly what this passage of Polybius means. Could it be that the population of Megalopolis was too low to supply soldiers to every required station along the wall? How many men would that be? How would the original, large area enclosed in the walls benefit the wealthy landowners? I direct attention to this passage not to attempt to answer these questions but to provide evidence for the possibility of multiple tracks of the circuit walls of Megalopolis.

⁸⁰ Loring in Gardner 1893: 112.

Another pending question concerns the gates of Megalopolis. The city must have had multiple gates along the circuit of the city walls. From these twelve fragments, no evidence of a gate has been recovered. Based on the plans of both Messene and Mantinea it is likely that Megalopolis had multiple gates oriented towards prominent routes of travel. As of now, the remains of these gates are not reflected in the archaeological record. More research much be conducted to find their, most likely, stone remains.

There are is also the outstanding problem of the lack of circuit wall of Megalopolis surviving into the modern period. Both Messene and Mantinea's circuit wall remains are impressive and well-preserved. How it is that the Megalopolitan walls only survive in twelve fragments and are unable to be seen today? As outlined above, there are multiple theories that could contribute to the poor preservation of these walls. The walls of Megalopolis might have been constructed with material other than stone, such as sun-dried brick. This could explain why not many stone foundations of the walls were recovered from Megalopolis and yet those of Messene are still grand even today.⁸¹ Their construction might have been rushed fearing an attack from Sparta following the Tearless Battle.⁸² There is also a question as to who financed the construction of the Megalopolitan walls. It might be the case that the Arcadian League was entirely responsible which could account for a lower quality of construction compared to the work of the wealthy Thebans in Messene.

Another possibility for a lack of walls found by the British may be due to their own practices. The British excavation reports are lax when discussing the method of their excavation. It is possible that perhaps the British did not dig to a deep enough level, or completely enough to

⁸¹ Cooper 2000: 159.

⁸² Diod. 15.72.3.

find the extent of the Megalopolitan walls. Until modern excavations are done, scholars are reliant on the reports of the British from the late 19th century.

The Walls as Competent Military Structures

Even though scholars cannot inspect the walls and evaluate their military strength, they seem to have worked in antiquity according to the ancient literary record. The exceptions are during the siege of the Spartan King Cleomenes III in 222 BCE and the siege of Polypercheron in 318 BCE as recorded in Diodorus Siculus (18.70). The sacking of Polypercheron was ultimately unsuccessful even though the walls were breached. These walls were primarily anti-Spartan. The Spartan state following the Battle of Leuktra and the founding of the three cities (Messene, Mantinea, and Megalopolis) was greatly weakened. It is possible that the success of Megalopolis' walls was due in part to the weakened state of their enemies.

Conclusions on the Placement of the Walls in the Loring plan

As stated, I do not doubt that the length of the circuit walls is comparable to the length of those at Messene (9 km). The shape of Megalopolis is also most likely an irregular shape (longer than it is wider) based on the topography of the basin. There are certain areas, however, such as the northwestern section, that need to be re-evaluated on account of scant evidence and a re-evaluation of the local topography. With the aid of my AutoCAD map the evidence provided by the British excavation could be re-examined and their questionable conclusions highlighted.



Figure 1: William Loring's 1892 plan of Megalopolis.

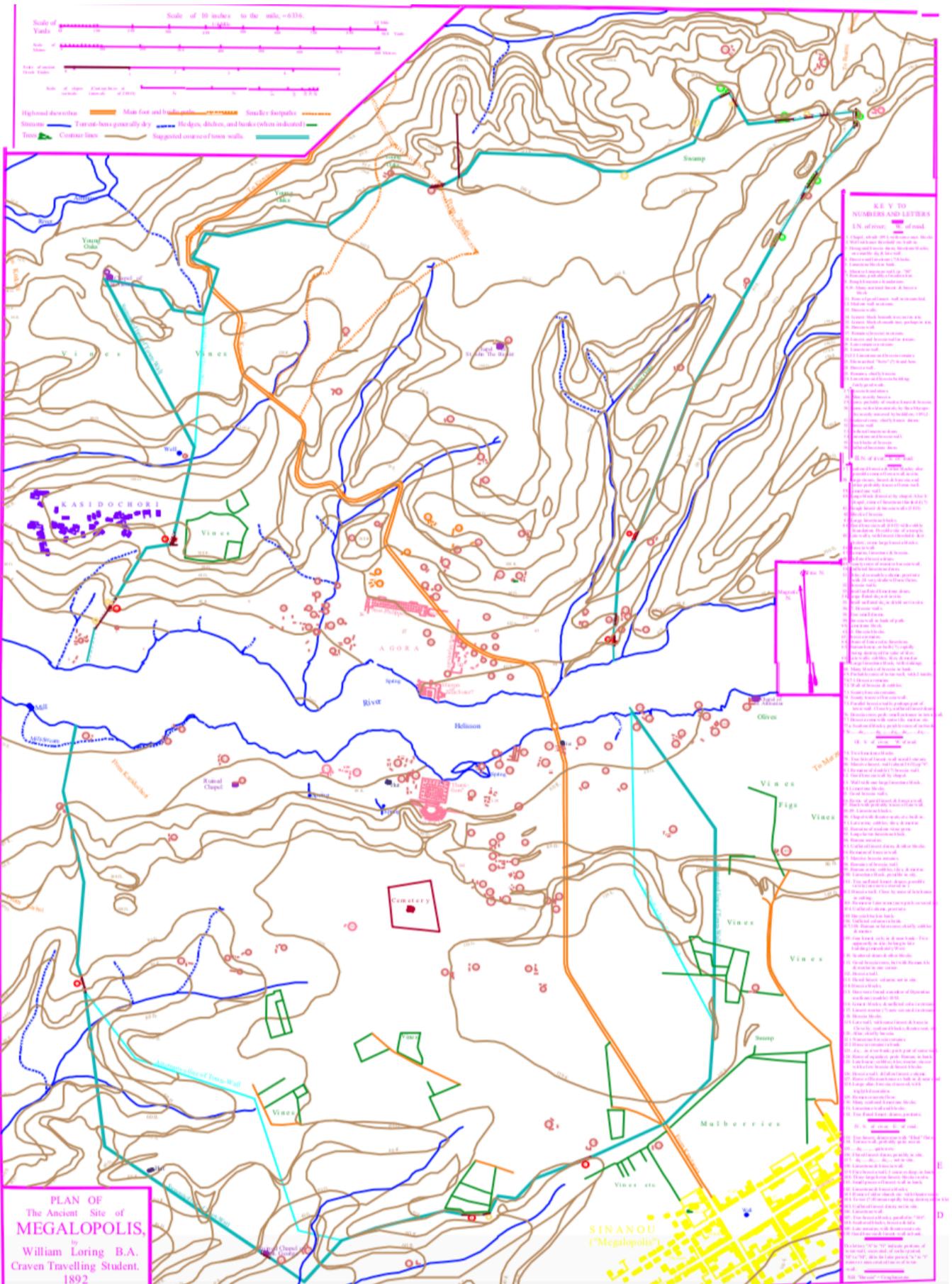


Figure 2: AutoCAD drawing of William Loring's 1892 plan of Megalopolis.

Key to AutoCAD Plan of Megalopolis (Figure 2)

<u>Color</u>	<u>AutoCAD Layer</u>
	Alternate Line of Circuit Wall
	Ancient Buildings
	Cemetery (Modern)
	Chapels
	Circuit Wall Course
	Earlier Wall Segments
	Fragments of Ancient Materials
	Huts
	Kasidochori
	Later Wall Segments
	Measurement Lines
	Minor or Unexcavated Traces of Town-Wall
	Outline, Key, and Scale
	Roads
	Sinanou
	Topographical Features
	Trees
	Water Features

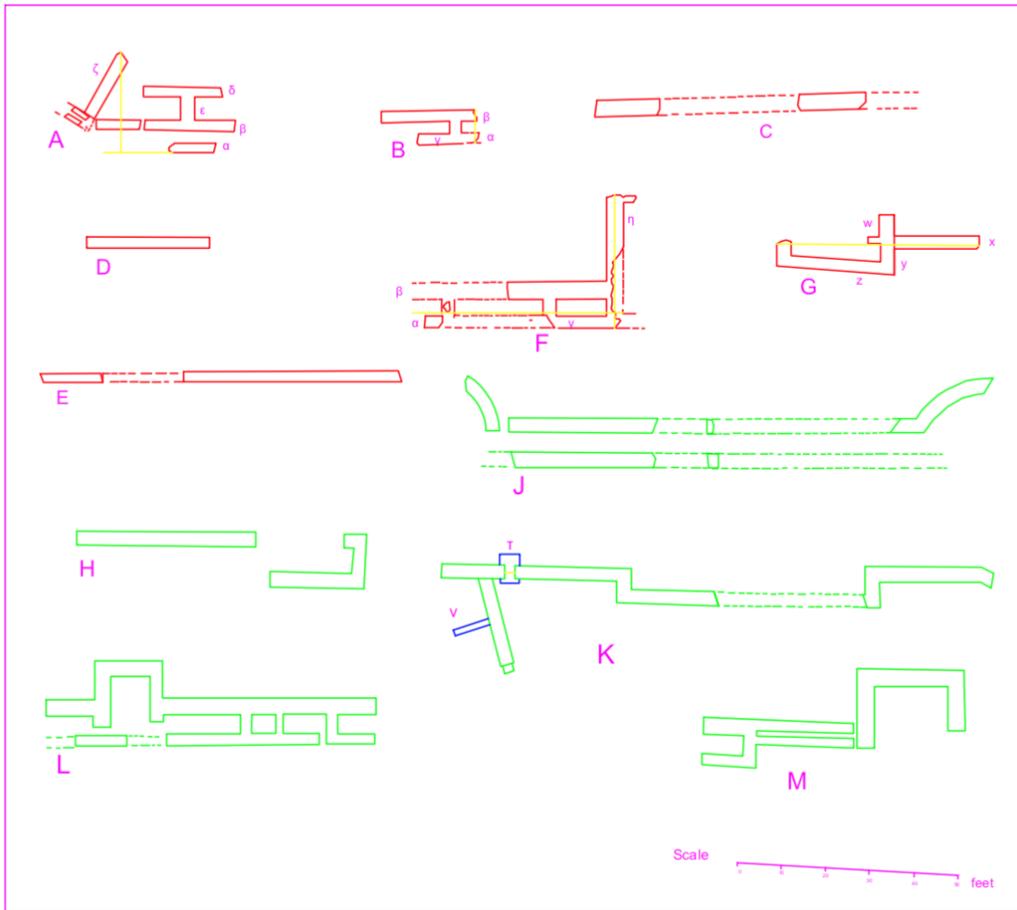


Figure 3: AutoCAD drawing of William Loring's Figure 1: Plans of the twelve principal portions of the town wall.

Color	AutoCAD Layer
Red	Earlier Wall Segments
Green	Later Wall Segments
Yellow	Measurement Lines
Blue	Otherwise Denoted Extensions
Magenta	Outline, Key, and Scale

Wall Letter	Length (Figure 3)	Length (Figure 4)	Width (Figure 4)
A	18.8003 m	40.7356 ft (12.4162 m)	22.6786 ft (6.9124 m)
B	10.3358 m	22.4677 ft (6.8482 m)	7.3006 ft (2.2252 m)
C	20.3358 m	29.2671 ft (8.9206 m)	3.7600 ft (1.1460 m)
D	25.3384 m	27.8332 ft (8.4836 m)	2.4509 ft (0.7470 m)
E	25.2665 m	62.9928 ft (19.2002 m)	2.2820 ft (0.6956 m)
F	13.4506 m	47.5225 ft (14.4849 m)	30.1537 ft (9.1908 m)
G	16.8979 m	45.8474 ft (13.9743 m)	13.6284 ft (4.1539 m)
H	20.9053 m	65.6834 ft (20.0203 m)	12.4591 ft (3.7975 m)
J	37.6645 m	118.9303 ft (36.2500 m)	20.4170 ft (6.2231 m)
K	34.2677 m	124.8783 ft (38.0630 m)	23.7691 ft (7.2448 m)
L	26.2476 m	74.7084 ft (22.7711 m)	19.2544 ft (5.8687 m)
M	19.1935 m	59.1306 ft (18.0230 m)	22.5371 ft (6.8693 m)
Totals	268.7039 m	719.9973 ft (219.4445 m)	180.6909 ft (55.0743 m)
Total Length of Circuit Wall	8951.45 m	xx	xx
Percentage of Circuit Found and Excavated	3.0018%	2.4514%	xx

Figure 4: Table displaying lengths and widths of wall segments taken from both the AutoCAD drawing of the Plan of Megalopolis (Figure 2) and the figure of Twelve Principal Portions of the Town Wall (Figure 3).

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