WRITING ON THE WALL:

LATE-THIRD CENTURY URBAN DEFENSES IN SOUTH LANGUEDOC

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by

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The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

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presented by Douglas Underwood, a candidate for the degree of master of arts, and hereby certify that, in their opinion, it is worthy of acceptance.

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I would like to thank Aimee for the love and support to finish this project (and aid in salvaging my dismal forays into photoshop), my family for the years of support making it possible for me to have gotten this far and friends, past and present, for all the fond memories.

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TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

viii

INTRODUCTION

The movement from the Roman to the medieval world is one of the most

significant transitional moments of Western history. It has attracted serious scholarly

attention since at least the Renaissance. One of the most visible aspects of that great

transition concerns the cities, the places where people live, which shift from an open,

organized, grid-patterned Roman model to the claustrophobic, jumbled medieval

paradigm. Within the urban landscape, a notable change is the installation of boundaries

in the form of circuit walls. Enceintes were built and rebuilt many times in both the

Roman and medieval periods, but there is a noticeable increase in urban fortification

across the empire in the late third and early fourth century, as an ostensible result of the

turmoil of the mid-third century. These walls are especially well-preserved and well-

documented in the Gallic provinces.

These urban defenses provide important information regarding late Roman

urbanism and the state of Gaul in the late third century. Earlier scholarship argues that

walls in Gaul built after the early third century were small and hastily constructed.[1] This

is argued from the reduced area enclosed by the walls and the use of re-worked spolia in

the construction. Modern scholarship is moving toward a more nuanced view of these

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1   Wheeler 1926, 191

fortifications, away from such pejorative thinking. It is now understood that the rapid

investment of resources, after a period of economic and political turmoil in the third

century, attests a measure of economic viability. [2] In this context, the urban defenses of

the late third century are indicative of the complex reality of the period.

Historical Background

South France has been inhabited since at least the last ice age, around 35,000

B.C.E., as attested by Paleolithic cave-paintings at Peche-Merle and Lascaux. During the

Copper, Bronze and Iron ages, spanning approximately 3,000-600 B.C.E., there was a

great increase in local population and a coalescence of peoples into tribes that then

established scores of *oppida* settlements. A Greek trading post at Marseilles (ancient

Massalia), which the Phocaeans founded around 600 BCE, quickly developed into a full

colony.[3] Other colonies soon grew up around the Rhône delta at Antibes, Nice and Arles.

After the Second Punic War, Rome began to exert more influence along the costal

route between Italy and the Iberian Peninsula. The first Roman colonia, Aix-en-Provence

(Aquae Sextiae) was established near the native *oppidum* of Entremont in 123 B.C.E. and

was named the capital of a new province, Gallia Transalpina.[4] The colony of Narbonne

(Narbo Martius) was founded around 118 B.C.E. and Toulouse (Tolosa) a few years later,

both near earlier settlements. While remaining marginally under Roman control, there

were a number of serious tribal uprisings and rebellions in Gaul in the early first century

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2   For a discussion of previously held views on third century economics, see Galliou 1981, 259-61.
3   King 1990, 11.
4   Ibid., 37

B.C.E.[5] Starting in 58 B.C.E, Julius Caesar's campaigns brought a stronger Roman

military and administrative presence to the region. South Gaul benefited from greater

stability and the development of more trade routes. Augustus reorganized Gaul soon after

27 B.C.E., creating the province of Narbonensis with its capital at Narbonne, and five

years later changed the province from imperial to senatorial status.[6] The Roman imperial

political structure remained in place for nearly 300 years until Diocletian established the

diocese of Gaul and split southern Gaul into three provinces: Narbonensis Prima,

Viennensis and Narbonensis Secunda.

During the first two centuries C.E. Gaul grew economically as many more Roman

coloniae were established. An ever-expanding road system led to increasing wealth and

impressive public works projects, which for some cities included fortifications. The

greatest movement towards Romanization occurred during these centuries, when many

older settlements shifted to a Roman grid plan and the Gauls adopted a more Romanized

lifestyle.[7]

The first disruption of Roman authority in the region was during the mid-third

century C.E., when Gaul suffered Germanic invasions in 254-256, 259-260 and 269-271.[8]

According to literary and numismatic evidence, the tribes of the Alamani and Franks

crossed over the Rhine and caused some disturbance throughout Gaul. This activity was

largely centered in the northern regions of Belgica, Germania Superior and Germania

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5   Rivet 1988, 55-6.
6   Drinkwater 1983, 20-23.
7   Cleere 2001, 5-9. For a more critical discussion of Gallic urbanization see Woolf 2000.
8   Demougeot 1979, 463. The dates of these invasions are quite debated (See Wightman 1985, 198).
       Johnson (1983, 74), for instance, see the largest rain in 275-276. The exact chronology is not
       critically important here. It will suffice to recognize these invasions in the third quarter of the
       third century.

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Inferior, where a destruction layer dating to around 275 has been found in a number of widespread settlements.[9] While south Gaul was mostly untroubled by these early invasions, many important cities were fortified in the late third century, by either constructing a circuit wall around a previously undefended town or reworking existing fortifications. Many of these, like Toulouse and Narbonne, continued to thrive until the fifth century or later within these walls. The conquest of the Visigoths in fifth century brought an already weakened Roman rule to a close. The Visigoths and their successors apparently built few new fortifications and instead simply repaired the third-century walls.[10] As a result, these fortifications remained an essential part of the urban fabric and definition of Gallic cities well into the Middle Ages.

Previous Research

The first major study of the fortifications of Roman Gaul was A. Blanchet's 1907 *Les enceintes romaines de la Gaule*. This work presents a region-by-region description of the known wall circuits in Gaul and their physical characteristics. J. Dechelette in 1931 and F. Lot in 1953 both approached the walls in largely the same way, supplementing this foundational work with more background information. I. J. Manley was the first to focus on the walls of Gaul in their larger historical context, the Germanic invasions of the late third century. R. M. Butler published his "Late Roman Town Walls in Gaul" in 1961, which focuses on several cities and attempted to lay out definite characteristics of late Roman walls.

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9   Wightman 1981, 236.
10   Ward-Perkins 1984, 198-9.

Little significant for the study of these enceintes occurred until the 1980s when the field of late Roman walls was reconsidered. The first step was *Roman Urban Defences in the West,* a collection of conference papers from 1981, which deals briefly with many aspects of walls throughout the western empire.[11] In the same year, a collection called *The Roman West in the Third Century* was published, which looks at the period of the third century from a number of different viewpoints.[12] Most significant in this period was S. Johnson's *Late Roman Fortifications* from 1983. This book looks at Augustan and late Roman fortifications in Gaul, but also throughout the empire, on a site by site basis and attempts to work out common characteristics and group cities together based on their construction style. In 1987 *Les enceintes augustéennes dans l'occident romain* focused, for the first time, on Augustan walls, primarily in Gaul, but also in North Italy and Africa.[13]

The most recent large-scale work on late Roman fortifications has come from P. Garmy and L. Maurin, who published *Enceintes romaines d'Aquitaine* in 1996. This book takes the tradition started by Blanchet to an even more thorough level, examining three cities in considerable depth and comparing them with each other. Much work has also been done in recent years on reevaluating the city and urbanism in the late antique period.[14]

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11   Maloney and Hobley 1983.
12   King and Henig 1981.
13   Congrès archéologique de Gaule méridionale 1987.
14   E.g. Rich 1992; Christie and Loseby 1996; Lavan 2001; Liebeschuetz 2001.

<u>Scope and Methodology</u>

The south portion of the Languedoc region encompasses the area between the Massif Central and the Pyrenees following roughly the Aude River (Figure 1). One of the most important Roman roads in south Gaul, the Via Aquitania, traversed the Aude valley. It ran from Beziers to Bordeaux, providing a key route for the transport of goods from the Atlantic to the Mediterranean. Along this road were three fortified Roman cities: Narbonne, Carcassonne and Toulouse. These cities, lying in the modern departments of Aude and Haute-Garonne, are a prime group to explore in greater depth, both because of their geographical unity and relative abundance of evidence. Previous reports on the defenses at Narbonne, Carcassonne and Toulouse have largely been somewhat limited in nature and scholars who have attempted wider regional surveys have skipped over these cities completely, focusing more on north Gaul. These cities have never been considered together as a regional group.

This study examines urban fortifications of south Languedoc, focusing primarily on the critical period from the last quarter of the third century to roughly the middle of the fourth. It adopts the model that P. Garmy and L. Maurin developed in *Enceintes romaines d'Aquitaine*. Their study of a different region reconstructs the courses of the early imperial and late-Roman wall circuits, discusses the presence and the location of gates and towers, analyses select aspects of the masonry and construction, and evaluates the evidence for dating each. Garmy and Maurin are able through such a minute examination to reconstruct these defenses comprehensively and precisely. With such rigorous information, they are able to compare these fortifications with each other and

with other sites accurately.

This study looks at the history and geography of each site and closely examines the evidence, both past accounts and what is currently visible, about the urban fortifications of these three cities in order to closely reconstruct their features, construction method and dating. It continues with a comparison of these sites, both with each other and with other similarly dated fortifications in south and north Gaul. Looking at the walls of Narbonne, Carcassonne and Toulouse together provides the opportunity to address Johnson's regional groupings and consider the applicability of this concept to south Languedoc or even to south Gaul.[15] Comparing these three centers to other late Roman walls shows the problems of defining overarching characteristics of late third and early fourth century urban defenses. Finally, examining these three urban enceintes in light of their historical context clarifies how the changes in urban fortifications in the second half of the third century reflect the changing economic and urban realities of the time.

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15   Johnson 1983, 115.

CHAPTER 1

Narbonne

Pre-Roman History

The land around the terminus of the Aude river, the ancient Atax, in south Gaul has been inhabited since at least the end of the Bronze Age. Several miles before it enters the Gulf of Lion, the river splits into two branches (Figure 2). The southern branch has been canalized in the modern period and is now as known the Canal de Robine. The north branch was dammed from the Roman period until the mid-fourteenth century, making the Robine the de facto river. A number of prehistoric settlements have been identified along the course of the south branch between the fork and its outlet, the Etang de Bages et de Sigean. One of the earliest sources for this area is Herodotus (7.165) who calls the native people the Elisyci. Three centuries later, Polybius gives the Narbôn as the principle city of the Celts in the area (*3.37.7-9)*. This *oppidum*, or pre-Roman settlement, has now been identified with the site of Montlaurès, about 4 km northeast of the modern city of Narbonne.

Previous Research

The Roman remains of Narbonne were gradually covered over or destroyed after the fourth or fifth century. The Roman walls at Narbonne survived in many places until the sixteenth century, when Louis XII ordered new fortifications built as protection against Spanish aggression. These new walls, which repaired the gaps in the Roman wall and encircled the city on the south bank of the Robine, were built using many reemployed Roman stones.[16] Many of the stones were already carved or inscribed, meaning that they had already been reused in the late Roman wall.

The *Commission archéologique et littéraire de Narbonne*, a group of local historians and antiquarians, was established in 1833. Members quickly opened the Archaeological Museum of Narbonne to house the new artifacts they were discovering during the expansion of the city. This commission was instrumental in the early years of archaeology in the Narbonnais. Not long after, phylloxera began to spread across much of the viticultural regions of France, decimating the wine industry. Fortunately, the region around Narbonne was not struck until much later in the nineteenth century. For nearly two decades, Narbonne was one of the only wine producing regions in France, which brought substantial wealth to the city. The city prospered and expanded, but soon found the Roman and medieval walls in the way of progress. They were torn down, often using explosives, from 1868 to 1884. Many of the inscribed or carved pieces, the primary interests of nineteenth-century antiquarians, were stored in a converted church that would later become the Lamourguier Museum.

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16   Albert, 2002, 58-9.

As a more scientific approach to archaeology took hold in Narbonne in the early part of the twentieth century, excavations were carried out with increasing rigor. While the greatest part of the walls had already been destroyed, archaeologists found some remains during the first half of the century. Many of these new discoveries, along with much previous research, was collected in Grenier's Aude volume of the *Carte archéologique de la Gaule romaine*, published in 1959, which dealt with the Roman remains, including the city wall.[17] A more comprehensive volume was Gayraud's *Narbonne antique*, published over a decade later.[18] While these two works were all-encompassing in their day, they were made obsolete by the discoveries and ideas of the following three decades. The most recent volume on Narbonne, *Narbonne et le Narbonnais* from 2002, seeks to reevaluate the evidence and fill in the gaps of previous work with the most modern research and findings.[19]

Roman History

Around 121 B.C.E., Q. Fabius Maximus and Cn. Domitius Ahenobarbus defeated the Arverni, a Gallic tribe inhabiting the region, effectively bringing Roman rule to south Gaul.[20] Ahenobarbus was soon named proconsul of the new province Gallia Transalpina.[21] He began construction around this time of the major road connecting Spain and Italy, the Via Domitia. The presence of the new road and the troops that

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17   Grenier 1959.
18   Gayraud 1981.
19   Dellong et al. 2002.
20   This date is not securely fixed. Dates range from 123 to 121.
21   There is some debate whether the creation of the province pre- or post-dates the foundation of the colony, which is of no particular matter here. For a summary of the argument, see Rivet 1988, 47-8.

traveled it encouraged the business-minded *equites* to clamor for the establishment of a colony.[22] This outcry for a colony was met with some uproar among the *patres*. The memory of the Gracchi was still very fresh, and much of the Senate still strongly opposed their popular program of colonial expansion. Cicero in his *Brutus* (160) points out a young L. Licinius Crassus' strong support of the popular party and their position in favor of the colony. Eventually the *equites* gained enough support and in 118 B.C.E. the Senate decreed the foundation of a new colony, entrusted to Licinius Crassus and Ahenobarbus, in the area around the Atax. The *Colonia Narbo Martius* was the first colony founded in the newly pacified Gallia Transalpina, at the intersection of the Via Domitia and the pre-Roman road connecting the Mediterranean to the Atlantic, the future Via Aquitania. The colony was planted on the left bank of the Aude river, about a dozen miles from the sea, on a small projection of land which dominates the surrounding low plains. In this way, the Narbonne was strategically placed with easy overland access to both the Roman province of Hispania as well as river access to the interior of Gaul and the Gulf of Lion.

Very little is known about the early colony with any certainty. The modern city of Narbonne lies atop this first settlement, in some places 6 m above the earliest levels.[23] Limited excavations in the city center suggest Roman Narbonne was relatively small.[24] The nearby *oppidum* of Montlaurès remained occupied until the middle of the first century B.C.E., suggesting that Narbonne was a small citizen-colony rather than a large urban center for both Roman and native Gauls. The typical number of settlers recruited for a citizen-colony in Italy was three-hundred, but enrollment numbers at similar sites

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22   Benedict 1941, 3.
23   Sabriė 2002, 89.
24   Ibid, 90.

suggest that there might have been "two or three thousand" for the foundation of the Roman colony.[25] Fourteen years after its foundation, in 104 B.C.E., the city was bypassed by the Cimbri on their migration out of Spain, which may suggest either a very small size or strong fortifications.[26] Either way, the early years of Narbonne remain a mystery.

The Roman population in Gallia Transalpina expanded during the first century B.C.E. The construction of the Via Domitia and the relative peace of the region allowed the Romans to found several more towns and garrison others. Narbonne, as the earliest colony, was the administrative center, but also played an important military role as a starting point and supply base for generals. During the Civil Wars, the areas surrounding Narbonne favored Pompey, but the city itself was loyal to Caesar. As a reward after the war, Caesar resettled the Tenth Legion in Narbonne around 45 B.C.E., granting the city the longer name *Colonia Julia Paterna Narbo Martius*. This resettlement served as a second foundation and revitalized the city. During this period, the inhabited area expanded outside the original core and Italian-style houses, decorated in the second mural style, began to appear.[27] Augustus reorganized Gaul soon after and changed the province from imperial to senatorial status. In 12 B.C.E., the imperial administration established a cult at Narbonne for the worship of Rome and Augustus. This religious organization, one of only two in all the Gauls, underscored the city's political importance. All these changes at the beginning of the empire corresponded with another building boom, seen

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25   Benedict 1941, 34.
26   Benedict (1941, 12-13) argues for a fortified city.
27   Several of these murals, mostly from the Clos de la Lombarde, are remarkably well preserved in the Narbonne Archaeological Museum.

both in the expansion of the city to its greatest size and the construction of the marble-clad Capitoline Temple.[28]

Under Claudius, Narbonne gained another name and was known officially as *Colonia Julia Paterna Claudia Narbo Martius,* showing that the city was significant enough to bear the name of the emperor. In 145 C.E., during the reign of Antonius Pius, the city was badly damaged by fire. The emperor himself restored many of the city's public buildings.[29] The second century saw a marked decline of Narbonne as the city lost its civil and religious offices. The reason for deterioration seems to have been largely the shift in focus and activity to the northern reaches of the Roman empire, favoring cities along the Rhône like Lyon and Nîmes.[30] The city entered a period of slow economic and social decline starting in the second century. It still held some political power as it remained the capital of the province of Narbonensis Prima under Diocletian's reorganization of the empire. The final blow to Narbonne came in the fifth century when it was almost completely destroyed during the conflicts with the Visigoths, who took control of the city in 461.[31] The city has remained occupied since that time, but the fifth century marks the end of Roman Narbonne.

Early Roman Walls

Very little is known of the first walls of Narbonne. The evidence for an early set of walls encircling the colony comes from excavations carried out in 1945 in the vicinity

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28   Sabriė 2002, 91.
29   Benedict 1941, 20.
30   Ibid, 21.
31   Gayraud 1981, 561.

of the boulevard de 1848, on the northern edge of the city (Figure 3). Two local

archaeologists excavated several trenches in an area cleared for German artillery during

World War II. They found traces of an ancient *vallum* that was 12-15 m wide.[32] A *vallum*

most often refers to a palisade of earth and often wood, but may be reinforced with stone.

Sitting on top of the virgin soil all around the wall were several coins from ancient

Emporion (modern Ampurias), Taraco (Taragone) and Neren (the pre-Roman term for the

area around Narbonne). The excavators also claim to have found some of the same coins

placed within the wall itself. They dated all the coins to the end of the second century

B.C.E., around the same time the Roman colony was established.[33] While coins can have

a long life in circulation, such a quantity of similarly dated coins suggests a date not far

from the end of the second century.

There are also other indications that Narbonne was fortified during the late second

or early first century B.C.E. Narbonne was an important administrative and military

center and the largest city in west Gaul. It was a supply base for the military during many

expeditions including Pompey's march into Spain. It was the only colony founded at the

time put under the direct protection of Mars, as indicated in the name *Colonia Narbo*

Martius.[34] In this way it was Rome's front guard, its light in the wilderness of Gaul

during the early years of the province. It would not be surprising if such a city were

fortified in some fashion.

Cicero, in his speech *Pro Fonteius* (5.13), written around 70 B.C.E., calls

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32   The excavators published only a very general overview of their findings as an oral report in the
        proceedings of the local archaeological society. This lack of thorough publication makes re-
        evaluation of their evidence difficult.
33   Reported in Gernier 1959, 67.
34   Moulis 2002, 140.

Narbonne the "watchtower and battlement of the Roman people." The word Cicero uses, *propugnaculum,* is also used by Virgil some eighty years later in the *Aeneid*. The word occurs in Book 4 as Dido walks with Aeneas around Carthage taking in the sights of the new city. Virgil lists the *propugnacula* along with the *portus* as the "*opera interrupta*" by the queen's affair (*4.85-7)*. Clearly the word refers to the defensive works of the city, which along with the port, were two particularly essential civic structures. Cicero then calls to mind city walls when he calls Narbonne "the battlement of the Roman people."

Some scholars, arguing from historical context, have suggested pushing the date of construction to sometime in the first century, either when Fonteius fortified the region in 75 B.C.E. or when Caesar was in the province around 52 B.C.E.[35] Yet because there is no evidence of any other Gallic city having walls before the late first century B.C.E., some have argued that Narbonne was fortified for the first time under Augustus. Many colonies founded by Augustus were given walls as a mark of their status.[36] However, at Narbonne, the evidence, both literary and archaeological, suggests a wall built around the beginning of the first century B.C.E. Additionally, the cities in Gaul that received Augustan walls were colonies of Augustus or Caesar. While Narbonne did take their family name and was greatly reshaped by both men, it was not founded by either Caesar. The walls seem to be largely the sign of an Augustan colony, which Narbonne was not. Accordingly, the first fortifications of the city were probably earlier than Caesar or Augustus.

Scholars have suggested that this earliest *vallum* at Narbonne was a simple

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35   Grenier 1959, 67.
36   Johnson 1983, 14-16.

wooden palisade, much like those described by Caesar in *De Bello Gallico* (7.23). Another possibility is that the walls were originally a wood and earth structure that was replaced in stone by either Caesar or Augustus.[37] In this view, the masonry fortifications were concurrent with the adoption of the name Julius, which occurred sometime in the second half of the first century. This explanation seems plausible, but is not backed up by archaeological or literary evidence. No evidence of any Augustan stone walls has been found anywhere in the city.

Besides the excavations in the boulevard de 1848, there has been no conclusive physical evidence for the early city walls.[38] There is nothing that might suggest its overall size or shape, although it probably would have enclosed, at a minimum, the area down to the forum near the modern Place Bistan. It is possible to imagine a *vallum* that stretched all the way from the boulevard de 1848 to the north bank of the Aude, and from the east bank of the Aude to somewhere near the Roman amphitheater. Such a city, if perfectly square, would have been about 1000 m^2, meaning that the actual city probably enclosed a total area of a little less than 100 ha. Further, the *vallum* discovered near the boulevard de 1848 is not far from a necropolis that was in use by at least the first century C.E., suggesting that this wall may have been near or actually marked the *pomerium* and furthest extent of the colony.[39] The subsequent history of the early fortification is completely unknown. If the structure were made predominately of wood and earth, then it would have left little evidence for modern excavators, especially those before the

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37   Moulis 2002, 140.
38   There have been several discoveries that people have connected to the early wall. The consensus stands today that these finds were wrongly interpreted, and actually date from the late antique wall. See Cairou 1976, 12-14.
39   For the necropolis, see Gayraud 1981, 306-313.

twentieth century.

Late Roman Walls

The later Roman fortifications at Narbonne are better known. These walls have been the subject of study since the late nineteenth century. J.P Thiers, a late-nineteenth century amateur Narbonnais archaeologist, first put forth the idea that a late circuit wall enclosed the ancient city. He calculated that it covered an area of approximately 19 ha, largely the monumental center of the city, known commonly as the Cité.[40]   He gave the date for the construction, without any reason, simply as "pré-wisigothique."[41] A. Grenier and M. Gayraud both supported this idea in 1958 and 1980 respectively.[42] Later scholars have narrowed down the date to the last quarter of the third century.[43] The research of all these scholars has been based on detailed visual examinations of the walls in the few places where they are visible or where construction work has exposed them. There has been no systematic excavation at any of the sites of the ancient wall.

There are currently only two sections of Roman wall readily visible in modern Narbonne. There are another seven sites where wall has been recovered in the past.   D. Moulis, stringing these nine points together, has put forth a reconstruction of the course of the wall (Figure 4).[44] This wall was approximately 1600 m in length and encircled an

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40   Theirs 1890, 158-69.
41   Ibid, 158.
42   Grenier 1958, 85-91; Gayraud 1980, 281-90.
43   Moulis 2002, 147. For more dating issues see infra, pp. 30-1.
44   Grenier and Gayraud both reconstructed the course of the wall in their volumes. All three
        reconstructions are very similar, but Moulis' (2002:140-7) is based most strongly on physical
        examination of the sites and has the most current information. The slight differences center on the
        Capitoline temple.

area of 17 ha. These nine locations are: the Archbishop's Palace, the Cathedral, the

avenue Foch, the Peribolos of the Capitoline, the Royal Gate, the cul-de-sac of the

Refuge, the rues Marcero, Roux, Amardet, Pelouze, and du Jeu de Paume, the rue Littre,

and the Ancienne Vicomte.

   One of the currently visible sites is the Archbishop's Palace, in the center of the

modern city, approximately 20 m north of the bank of the Robine. The wall starts with 7

courses of reconstructed ancient blocks on the eastern wall of the Donjon Gilles Aycelin

(Figure 5, number 1). From here, the ancient wall stretches 35 m between the Donjon

and the Tour du Grand Escalier along the rue Jean Jaurès (Figure 5, number 2). The

ancient wall, which runs at 300º, is incorporated into the seventeenth- and eighteenth-

century exterior wall of the Archbishop's palace. The ancient blocks, marked by their

large size and rusticated bossages, are visible in 14 more-or-less continuous courses

which stand to a height of about 7 m (Figure 6).[45] Several of the stones even have clear

reliefs on them, suggesting that they were spolia carved down to size from other

monuments. Each stone is between 0.55 and 0.57 m in height and 1.15 to 1.17 m in

length. These stones are joined together with 0.02-0.03 cm of mortar, in which ceramic

tiles are visible in places. Scholars argue that the original wall would have stood without

mortar, but that this whole stretch was badly damaged in a reconstruction at the

beginning of the twentieth century.[46] In an interior subterranean room of the

Archbishop's Palace, a section of the internal facing of the wall has been preserved 1.8 to

2.0 m below the level of the modern street. These stones are identical in size and shape

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45   The medieval blocks here are noticeably smaller. The largest are only 0.77 by 0.46 m. For a more
         complete listing of dimensions, see Appendix 1.
46   Moulis 2002, 141.

18

to the exterior blocks. Based on the position of the lower interior and the higher exterior facing stones, the wall was approximately 2.5 m thick.

This south sector of the wall is connected to the wall that runs between the Tour du Grand Escalier and the Tour des Archives (Figure 5, number 4). This section is about 30 m. long, runs at an angle of 345º and consists of eight levels of stones indistinguishable from those of the south wall (Figure 7). This section has been significantly altered when it was incorporated into the Archbishop's Palace. Still, the size, position and orientation of the lower courses in this section are clearly part of the ancient wall.

From the Archbishop's Palace, the wall continues to run north. The next section is considerably more difficult to reconstruct. The existence of a large defensive wall, presumably late Roman in date, is known historically from documents concerning the construction of the Cathedral Saint-Just between 1345 and 1361. Through some error, the church leaders did not have room to extend the nave as far as they had planned. A 3.68 m thick stretch of the Roman wall was in the way. The consuls of the city were not pleased about the church destroying an entire section of the city wall, especially considering the troubles of the times. From ensuing arguments, it is clear that in the fourteenth century, the wall was still standing at some noticeable height, but it was not in the best state.[47] Eventually, in 1354, a compromise was reached where a small portion of the wall would be pierced to allow a small part of the church.

The remains, if any, of this piercing are debated. Some scholars point out a few blocks overflowing from the exterior wall of the north arm of the transept at Saint-Just (Figure 5, number 6). These stones clearly do not fit into the surrounding masonry,

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47   Gayraud 1981, 287.

which dates from the fourteenth century (Figure 8). Instead of large, squared blocks, this outcropping features irregularly shaped blocks and smaller rubble, which some have argued dates to the end of the third century.[48]

These blocks, however, do not fit in with the trace of the ancient wall. Based on the line of the fortifications leading up from the Tower of the Archives, the stones on the transept are approximately 10 m from where the ancient wall ran. Some have argued that the outcropping must be part of a fortified postern.[49] While possible, the presence of an unusual group of stones should not suggest too much. There is a very similar outcropping on where the cloister meets the south wall of the cathedral. At the entrance to the unfinished nave, now called the Saint-Eutrope Court, the north and south piers have overflowing stones (Figure 9). These stones, which would be much closer in line with the ancient wall, are similarly sized as the large stones from the Archbishop's Palace. They look different than the medieval stones above them and are not fitted together with mortar. While not generally recognized as such, these two groups might mark the place where the cathedral pierced the ancient wall.

Further evidence for the wall comes from the Place Salengro, about 90 m north-west of the Cathedral (Figure 5, number 7). Foundation work there in 1966 revealed a large group of ceramics that dated from the sixteenth century at a depth of 3-5 m below the street. This cache of pottery was found at a lower level than the surrounding Gallo-Roman soil. These ceramics probably indicate a large ditch, which was filled quickly in

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48   Moulis 2002, 144.
49   Ibid.

the sixteenth century when François I rebuilt the walls of Narbonne.[50] This ditch would

have stood in front of the Roman wall as an added measure of defense.

From the Cathedral and the Place Salengro, the proposed course of the wall

continues north. Road work in the 1960s at the intersection of rue Porte-Neuve and

avenue Foch revealed a large, irregular grouping of sandstone, marble and limestone.

This group, which included much spolia, has been dated to even later than the late Roman

wall, between 399 and 408, possibly indicating a hasty repair to the wall.[51] Only 1.8 m

away from this grouping was a platform formed from ten 0.5-m thick blocks. These are

believed to be the pavement of a road, but how they relate to the wall is not fully

understood.[52] Near this intersection in the wedge between the rues Porte-Neuve and du

Capitol, a number of regular, square-cut blocks were also found.[53] These blocks, whose

0.5-m height is roughly the same as the stones in the southern section of the wall, sat at a

depth of 1.8 m. Also like the south wall, these stones were closely fitted ashlars without

mortar. Both this wall of cut stone and the spolia grouping sat in the same orientation,

82° from north.

From this area the wall continues in a northeast direction until it reaches the

Capitoline temple. The temple was probably built between 145 and 149 C.E., after a

terrible fire destroyed a good portion of the city.[54] It was one of the largest temples in

Gaul, measuring 48 m in length by 36 m in width. Scholars are certain that the late

Roman wall ran somewhere in the vicinity of this monument. Gregory of Tours mentions

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50   Ibid.
51   Moulis 2002, 144; Gayraud 1981, 287-8.
52   Joucla 1946, 225.
53   Cairou 1979, 25.
54   Grenier 1959, 95-6.

that by the end of the fifth century, this region, on the edge of the Moulinasses hill, was

home to the Visigothic kings, particularly Alaric II.[55] It seems unlikely that these kings

would establish their palace in an unfortified part of the city, and the Capitoline, nestled

in the corner between two walls of the Roman fortifications would have fit their needs

nicely. Still, the exact course of the ramparts is contested. Some scholars have imagined

the walls running along the east and west arms of the peribolos, where others have seen

them along the north edge or even some distance from the sanctuary.[56] The only

evidence for the ancient walls is from the north aisle of the peribolos where the concrete

used was significantly different from that used throughout the rest of the building.[57]

While relatively insignificant, this change may indicate that some later reconstruction

was done along the north edge, possibly in connection with the fortifications. The later

walls may have run along the north edge of the temple, but that remains uncertain.

From the Capitoline, the wall ran southeast toward the Royal Gate, which stood

near the modern square of Thérèse et Léon Blum. The Royal Gate was a monumental

gate in the sixteenth-century fortifications, which used much spolia.[58] More tangible

remains of the Roman wall were found in the surrounding neighborhood during

construction projects around 1888. The first, located during work on a sewer line,

uncovered a thick wall of stones joined without mortar and decorated with rosettes,

bucranes and inscriptions, indicating they may have been reemployed in this

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55   Gregory of Tours. *Glor. Mart*, 1.91.
56   Cairou 1979, 31; Perret 1956, 4-5 for the two respective views.
57   Moulis 2002, 145.
58   Grenier (1959, 81) reports that the medieval construction was said to have been built on two levels
         of large stones, each 0.60 m. tall, taken from tombs or other monuments, many of which were
         inscribed.

construction.[59] Another project around the same period uncovered a mass of foundation and wall stones, each measuring about 0.60 m in height. The substructure stood approximately 6 m high with another 3 m of wall on top.[60] Nothing was recorded thoroughly, and the site was totally dismantled, making any later re-evaluation impossible.[61]

The wall followed a path roughly parallel to boulevard du Général de Gaulle (Figure 3). Not far from the Royal Gate, at the Impasse du Refuge, Abbot Sigal discovered a square foundation of stones in 1933. This group, which had as a facing five courses of large rectangular stones, measured 6 m wide and deep and 2.7 m thick.[62] Sigal thought that he had found the lowest layers of a projecting tower. He argued that the tower was connected to a Republican or early Imperial wall because square towers had gone out of use before the late Roman period. While his observation is largely correct, there are known examples of late antique walls with square towers.[63] But as there is no other evidence of an early stone wall, or any other square towers at Narbonne, and this section was out of orientation with the surrounding wall, it seems that this square foundation was part of a monumental gate.[64]

Continuing south, the wall has been attested on a very small scale in a number of places. The ancient wall has been noted in the facade of 7 rue Garibaldi, 5 rue Marcero, and 4 rue Dr. Roux (Figure 10, numbers 1-3 respectively). These locations form a line

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59   Gayraud 1981, 288.
60   Ibid.
61   Further complicating these findings is a lack of precise location on either. They are both only roughly attributed to the area around the square of Thérèse et Léon Blum.
62   Grenier 1958, 131
63   Barcelona is the most well-known of this type. See Johnson 1983, 39-40.
64   Moulis 2002, 145.

connecting the find spots at the Royal Gate and the north edge of the Capitoline. Near

the rue du Dr Roux, the wall shifts southward. Evidence for this change is seen in two

sites, number 10 along the rue Pelouze and the rue du Jeu de Paume (Figure 10, numbers

4-5).[65]

Evidence of Roman fortifications has been found south of the rue du Jeu de

Paume, under the Minimes convent, which was destroyed in the 1940s.[66] The

excavation report is not detailed, but claims the presence of part of the antique wall 0.80

m under the modern level. Also during construction of the convent in the sixteenth

century, several large inscribed Roman stones were found, which possibly had been used

in the wall.[67] South of the rue Littré, in a courtyard connected to the Post Office building,

a poorly-researched outcropping of stones which is currently visible has been tentatively

identified with the late Roman wall (Figure 11).[68] On the other side of this courtyard,

along the rue Laffont, a crack in the facade of the building at number 3 may indicate

evidence of the ramparts (Figure 10, number 6).[69]

Near this point, the wall heads west towards the Archbishop's palace along the

Robine. Some evidence for its course comes from the Crédit Lyonnais building along the

cours de la République (Figure 10, number 7). Excavation has revealed that the building

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65   There is nothing visible in any of these facades which would indicate the passage of a wall, yet
      most scholars accept these locations. While it seems wrong to quarrel with such a consensus,
      either these experts are working with information they fail to mention, or their method here is
      suspect. Nevertheless, considering all the evidence together, it does appear that the ancient wall
      ran in roughly this orientation, in approximately these locations.
66   Ibid.
67   Dellong 2002, 417.
68   Moulis 2002, 146.
69   Cairou 1979, 32. Like many of the surface observations, this evidence is particularly
      questionable. Not only does Cairou fail to adequately describe the fissure, he also neglects to
      explain why a crack in a wall indicates the presence of an ancient wall. Still, the facade of this
      house has a large crack and bulges noticeably towards the street.

rested upon an ancient Roman quay, indicating a southern limit for the walls. In a neighboring building, in 1908, several carved Roman blocks were found in the context of the "rempart wisigothique," the period from which the late Roman wall was believed to date.[70] The spolia suggests the course of the wall, which was clearly within meters of the quays. Both the quays and the wall sit approximately 40 m from the modern canal as a result of the changing course of the river and the process of canalization.

Further evidence for the wall along the river comes from the ancient Viscount's Palace. The palace, which sat just east of the Donjon Gilles Aycelin, across the place de l'Hôtel-de-Ville, was faced with several towers. One of these, the Moresque or Mauresque tower, was reported to have been built atop the ancient wall from the eleventh century.[71] The destruction of this tower between 1633 and 1639 turned up a significant number of Roman bas-reliefs. While these stones do not indicate a Roman wall directly, it does suggest some major building project in the vicinity, possibly connected to the walls.

The evidence from these nine points is varied. The wall is visible at only two sites, one of which is not well known. The rest of the evidence comes from scattered outcroppings of stones around the city reported and studied by local archaeologists. The available evidence suggests an irregular-pentagon shaped Roman stone fortification of about 1600 m in total length, covering an area of about 17 ha.

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70   Moulis 2002, 146.
71   Ibid.

Towers and Gates

Towers were an essential feature of Roman walls.[72] At Narbonne only five towers are attested, although there were certainly more. The first two towers are in the Archbishop's Palace. Starting in the south, at the Tour du Grand Escalier, there are a dozen levels of large blocks that differ from those above it (Figure 12). These blocks, which are the same size and shape as the other ancient stones, date from the third-century wall and were used as a foundation for the later tower.[73] Approximately 30 m north of the first tower is the Tour des Archives. At this tower, which has been heavily repaired, there is 3-4 m of exposed squared masonry, which is similar in height, size and shape to that in the wall between the two towers (Figure 13). Both towers are semi-circular projections 9 m in diameter.

Directly above the Roman level on the Tour des Archives there is a small squared opening topped by a rounded lintel stone believed to be an original artillery window (Figure 14).[74] However, this type of window, which appears to be less than 0.5 m thick and 1 m tall, is thought to be exclusive to Augustan wall fortifications.[75] In the late Roman period, wider windows were necessary to accommodate newer artillery weapons, which needed a wider line of sight.[76] This window suggests either that the "later" Roman wall is actually Augustan, or that narrow windows did not fall out of use. Since this tower otherwise resembles the rest of the late-third or early-fourth century wall, there

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72   For Augustan towers, see Johnson 1983, 13; for later, Johnson 1983, 38-43; Lander 1984, 198-252.
73   Moulis 2002, 142.
74   Ibid, 143.
75   Johnson 1983, 40.
76   Ibid.

is no reason to imagine any Augustan construction. The exact nature of this opening is unclear.

The last evidence for towers comes from the section of the wall that bordered the river. A tower connected to the Viscount's palace, called the Moresque or Mauresque tower and destroyed between 1633 and 1639, was built upon a foundation of the Roman wall. No trace of this foundation wall has been found. Two towers along the river are mentioned in fourteenth-century sources. One was adjacent to a gate that opened to an area for boats, and another was connected to a consul's house along this stretch. Little is known about the physical characteristics of these walls, but there is at least evidence that towers ran along the river as well as the rest of the city walls.

In sum, there is some evidence for a system of towers in the fortifications of Narbonne. The two standing examples are semi-circular projections 9 m in diameter and 32 m apart. These surviving towers indicate that they extended through the wall, but did not project behind it and were flat-backed (Figure 15). Parallels from Bordeaux and Carcassonne, both probably constructed in the same half-century, are similar and projected externally only.[77] Such towers would have run around the entire circuit at 30-35 m intervals, even along the riverfront wall. These towers may have had narrow slit windows, although evidence for such is problematic.

Evidence for gates is more lacking. There is no archaeological proof for any gate structures, although the city must have had several. There were at least two gates, one at each end of the Via Domitia on the north and south end of the city. It seems likely that there would have been at least two more, one in the east and west sections of the walls at

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77   Lander 1984, 235.

the ends of the decumanus maximus. The southern gate is the easiest to reconstruct,

although nothing of it survives. Since the Archbishop's and Viscount's palaces both

incorporated Roman fortifications, on either sides of the place de l'Hôtel-de-Ville, the

gate was probably situated more or less in this modern square. This location is directly

north of the ancient bridge over the Aude that brought the Via Domitia into the city.[78]

From the gate the cardo, oriented at 30º from north, ran towards the Capitoline, following

roughly the path of the modern rue Droit, where evidence has been found of an ancient

artery.[79] Exactly how the road veered around the temple is uncertain. It most likely

shifted slightly to the west and exited the city near the sixteenth century Royal Gate.

There is some evidence, in the form of reused bas-relief panels, to suggest that the Royal

Gate was built atop an ancient foundation, possibly the late Roman gate.[80] To the west,

excavations near the avenue Foch revealed road paving stones very near to the wall.

Nothing was found to indicate a gate, but this area is not well researched. There were

certainly gates and posterns in the walls at Narbonne, but very little is known.

There was also a defensive ditch in front of the wall, according to evidence from

the Place Salengro. Ditches are common with ramparts, particularly at military forts.[81]

Whether ditches were used regularly in conjunction with city walls is less clear.

Masonry and Construction Method

The visible walls at Narbonne are built in the *opus quadratum*, the French *grand*

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78 Grenier 1959, 88.
79 Ibid, 89.
80 Moulis 2002, 144.
81 Lander 1984, 261.

appareil, style and employ much spolia. This use of large, squared stones as facing was

common in late Roman wall construction, especially in regions where good local stone is

available.[82] The sections of the wall at the Archbishop's Palace feature rectangular

stones, which average 0.53 m in height and 1.12 m in length, laid in regular courses

closely joined without mortar. Those excavations which have found parts of the wall

elsewhere have reported similar sized and shaped stones (Figure 16).[83] While the interior

has mostly not survived, there would have been a mortar and rubble filling, faced on the

opposite side with similar stones as the exterior. The entirety of the wall, based on later

reports, was 1.0-3.68 m thick.[84]

The only evidence that exists for the interior of the wall is a group of six courses

of large stones which were seen on the interior of a chimney of the Tour des Archives.

They appeared randomly assembled about 3 or 4 m below the ground.[85] This grouping

has suggested to some that the towers were originally empty below the rampart walk. To

others, it shows that these stones were part of the original rubble and mortar filling, and

that over time the rubble and mortar have disappeared. Most city wall towers in the west

were solid up to the walkway, so these stones were probably from the filling.[86]

There is no evidence at Narbonne for any tile or leveling course in the surviving

wall. While urban defenses, especially in Gaul, often have such courses, their use is not

standardized. The height of the rampart is unknown, but based on the standing section

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82   Johnson 1983, 35.
83   Many of these stones with inscriptions of carvings taken from the demolition of the Roman and
        Medieval walls are now housed in the Lapidaire Museum. These blocks are remarkable for their
        consistency in size, which matches the stones *in situ*.
84   Gayraud 1981, 287. These measurements, from literary sources, do not indicate wheather this was
        the original thickness or if the wall had been damaged in any way.
85   Cairou 1979, 28.
86   Johnson 1983, 40.

and literary evidence from the construction of the Cathedral, it was something over 4 m. Beneath the superstructure of the wall, it is likely that there was a footing course made largely, or exclusively, of spolia blocks.[87] The foundations of this wall are completely unknown, but are estimated to be 4-6 m deep.[88]

Dating

Evidence for the date of the fortifications at Narbonne is not abundant. The wall was originally thought to have been constructed in the years before the Visigothic settlement in south Gaul in the early fifth century.[89] Recently scholars have narrowed down the date to the last quarter of the third century, based largely on two discoveries.[90]

The first is two coins, a small bronze of Gallienus and a slightly larger bronze of Maximian, found in the context of the wall. The discovery was reported to the Archaeological Commission of Narbonne, but the report does not provide any information about the find spot. Accepting these coins as tentative evidence, as most scholars have done, gives a *terminus post quem* of 260 for the Gallienus coin and 288 for that of Maximian.[91] More conclusions are impossible without the details about the location of the discovery.

The second discovery is an inscription on a block found in the context of the wall.

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87 This is based off of evidence from other cities (see Blagg 1983, 130-2). While the walls at Narbonne employed much spolia, it is not known if it was used throughout or confined to lower courses as would be more standard.
88 Grenier 1959, 86.
89 Thiers 1891, 168.
90 Moulis 2002, 147.
91 Grenier 1959, 87; Moulis 2002, 147.

The inscription is dedicated to Marcus Iulius Philippus from the residents of Beziers.[92]

Philippus, more commonly known as Philip the Arab, was emperor from 244 to 249.

Again, no information is recorded regarding the find-spot or context of the block. Still,

this inscription reinforces the dating of the coins and suggests that the wall was built after

the middle of the third century.

The intrinsic evidence of coins and inscriptions and the extrinsic evidence of the

construction methods and historical circumstances suggest a late-third century date for

the walls of Narbonne. Based on the current evidence, an approximate date is the best

that can be attained.

Literary sources can augment that body of evidence. The only written mention of

the walls of Narbonne comes from Sidonius Apollinaris. He mentions them in one of his

Epistulae addressed to Consentius (23.37-47). He mentions the walls in a list of features

of Narbonne along with its porticoes, forum, theater, capitol and baths. These walls were

a source of civic pride for the Narbonnais, as much as any other public building.

Sidonius continues with a lofty description of the half-ruined defenses damaged in the

"old war." He mentions that the walls were not adorned with marble, ivory or gold and

that the gates were not decorated with mosaics. He intimates that by the time the walls

were ruined, they were already old, which is important for dating. Sidonius' letter

provides a *terminus ante quem* of 465.[93] This, taken together with the coin and

inscription evidence, gives a fairly certain construction date between 288 and 465.

However, based on historical circumstances and parallels around Gaul, the date is

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92   C.I.L. XII 4227
93   Grenier 1959, 87.

probably in the early years of that range, in the late third or early fourth centuries.

Size of Roman Narbonne

Some scholars have argued that the populated areas of Narbonne of the High Empire stretched nearly to the necropolis, based in part on the known position of the possibly Flavian-era amphitheater, 500 m east of the late Roman wall.[94] According to this view, the large city shrunk sometime during the third century, leaving the "Cité reduité," which was subsequently fortified.

At its peak in the late first century C.E. Narbonne was comprised of three concentric rings: necropolises beyond the city proper, a sparsely inhabited ring of villas, and the urban core. North along the Via Domitia, approximately 1 km from the northern edge of the late wall, is a necropolis that was used from the first until at least the fourth century.[95] The necropolis helps fix a definite boundary to the ancient city, as it was located outside of the Roman city. About 600 m south of the necropolis, excavations throughout the nineteenth and twentieth centuries turned up evidence of large Roman-style villas in a ring around the late Roman wall. Within the ring of villas, there is extremely little evidence of other habitation from any time, suggesting it was more country than city.[96] These villas are largely dated to the first and second centuries C.E.[97] Most were destroyed, often by fire, in the third century.[98] The likely presence of a ditch

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94   Grenier 1959, 85-86; For the amphitheater, Gayraud 1981, 275-6.
95   Indicated by several Christian sarcophagi found there. See Gayraud 1981, 308.
96   Sabrie and Sabrie 1995, 162-3.
97   Gayraud 1981, 293-306.
      In general, see Gayraud 1981, 305-306. For a well-dated, more-recent example, see Sabré and Sabré 1997, 267.

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outside the walls also suggests that there was no habitation near this area when the wall was built. Finally, inside the area encircled by the wall, there is, despite the paucity of evidence, pottery that suggests largely continuous habitation from the first century B.C.E to the sixth century C.E.[99] The wall would have surrounded the area that was the core of habitation from the founding of the city onward.

The Cité marks the farthest that the core of the settlement on the north bank of the Aude ever reached.[100] The sacred boundary of the city lay farther past villas, somewhere near the early wall at the boulevard de 1848 and the cemetery, but the practical and later mural boundary was along the boulevard du Général de Gaulle.   The entire city covered an area of nearly 100 ha, stretching almost 1 km on each side, but the inhabited core throughout the city's history was at most about 17 ha. The farthest evidence of habitation, the villas, may have been destroyed in the third century and not reoccupied, and in this sense, the city did shrink. The idea of a large area of habitation that was razed during the catastrophic third century leaving significantly reduced small towns is simply wrong.

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99   Sabré and Sabré 1989, 203.
100   There is some evidence of a settlement on the south bank, called the "Bourg." That area was definitively not walled until the Middle Ages and is not important for this discussion.

CHAPTER 2

Carcassonne

Pre-Roman History

The early history of Carcassonne is unclear. Few literary sources mention the city before the fourth century C.E. and there is very little archaeological evidence. The narrow pass along the Aude, between the Black Mountain and the Corbieres, was probably inhabited by the end of the Bronze Age. The first evidence of significant permanent activity in the area was a late-eighth or early-seventh century B.C.E. settlement, today called Carsac (Figure 17). This early settlement, about two kilometers south of the modern city, covered an area of about 20 ha and was bordered on the east by a large ditch of probable defensive purpose.[101] Towards the middle of the sixth century the settlement was abandoned and re-established on the east bank of the Aude at the modern city of Carcassonne.[102] The site lies near the eastbound bend in the Aude, in a broad valley that serves as the natural route between Narbonne and Toulouse.

The pre-Roman *oppidum* was situated atop a 150-m tall mountain spur that runs

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101   Guilaine and Fabre 1984, 12.
102   Details about the abandonment and reestablishment of Carsac are much disputed. The archaeological record for the original settlement ends in the mid-6th century, and starts at the modern city soon thereafter (Guilaine 1972, 83-161).

into the city from the south.[103] A protective ditch, similar to Carsac, may have surrounded

this site. Excavations west of the Tour du Moulin de Midi identified a fosse 6 m across

and 2.5 m deep, which is dated before the second century by the presence of several pre-

Roman ovens. The development of the settlement in the following six centuries is largely

unknown. It seems to have functioned as a trading post, facilitating the movement of

goods to and from the coast.[104] The quantity of imported pottery and other marketable

goods found at Carcassonne gradually increases over the last five centuries B.C.E,

suggesting a slow rise in commercial activity in the city.[105]

Roman History

The conquest of south Gaul by the Romans in the last quarter of the second

century B.C.E. does not appear in the limited archaeological record at Carcassonne.[106]

The establishment of Roman colonies at other major *oppida* in the Narbonnaise could

suggest some interaction with the city. This could be a garrison of troops or the

foundation of the colony, but the historical and archaeological record is unclear. There is

no sign of any destruction caused by the Cimbres and Teuton tribes in their migrations.

Excavations have shown that by the end of the second century the pre-Roman road that

became the Via Aquitania ran directly through Carcassonne, just north of the hillock.[107]

Cicero may be the first to mention Carcassonne in the *Pro Fonteio* (9). He uses

the name *Vulcalo* in the context of wine tariffs taken from the cities of south Gaul.

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103   Guilaine and Fabre 1984, 21-5.
104   Ibid, 27-8.
105   Ibid, 36.
106   Ibid, 31-3.
107   Poux 1923, 46.

According to some scholars, this name is a contraction of the two words *Volcae Carcaso*, which refer to the tribe living in the area and the city name.[108] Even if Cicero refers to Carcassonne, he provides no information about the city's size or status in the mid-first century B.C.E., only that it was nominally under Roman authority and had some involvement in wine transport or trade. Of the places mentioned in this passage, including Toulouse and several smaller cities, the smallest amount was taken as tax from Vulcalo, two *victoriati*. Although subject to Roman taxes, Carcassonne had the smallest wine tax burden, possibly indicating its relatively small size.

Julius Caesar may have mentioned Carcassonne in the *De Bello Gallico*. He lists the city among Narbonne and Toulouse as a place where P. Crassus had levied "multis viris fortibus" (3.18).[109] This indicates that Carcassonne was perhaps as important as the two large Roman colonies of the region, and that it had an active, subject relationship with Roman authorities.

Excavations since 1805 have revealed quantities of pottery that suggest the city gradually expanded in size over the course of the first century B.C.E. The first expansion from the hilltop site was a group of "commercial" buildings, so-called because of sigillata pottery found there.[110] These buildings were on the northern and northeastern edges of the spur, close to the Via Aquitania. The exact nature and extent of the lower settlement are unclear, although the upper town seems to have remained nearly the same

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108   Guilaine and Fabre 1984, 28. This explanation, however, is not fully accepted. Some scholars think that Cicero refers to another settlement in south Gaul.

109   The inclusion of Carcassonne along with the two largest cities in Narbonensis only appears one of the two known copies of this work.

110   Labarre (1971, 137) describes the quantity of pottery found at a rescue excavation on the Rue Trivalle. Labarre found, scattered throughout the site, an unspecified quantity of Campanian pottery dated to the first century B.C.E.

as it had in the second and third centuries.[111]

It is unclear when the city became a Roman colony and adopted the name *Colonia Julia Carcaso*. Some scholars have suggested that the colony was established under the Triumvirs, between 43 and 30 B.C.E.[112] Others have argued that the colony was officially created out of several smaller cities when Augustus reorganized the province sometime soon after 27 B.C.E. Whatever the case, Roman building techniques appeared in Carcassonne soon after its official foundation. The earliest Roman-style houses in the upper town date from the last decades B.C.E. and are well-founded, constructed in stone and featured painted walls and mosaic floors.[113] All were oriented on the same cardinal-point axes, suggesting the upper town had a grid plan. The adoption of a Roman building style and grid probably indicates the presence of Roman colonists in the city.

Pliny lists *Carcaso Volcarum Tectosagum* in his collection of towns of Gallia Narbonnensis (*HN 3.36*). This name, which was not the official title of the city, reveals the city's origins among the Volces Tectosages people. Based largely on Pliny's list, Ptolemy also identifies the city with the Roman settlements of the region. Carcassonne appears in a number of travel itineraries and maps of the late Roman period, notably the Hyerosolimitain (also called Bordeaux-Jerusalem) itinerary and the Peutinger Table.[114] Beyond this, the city is rarely named in authors or official notices of the Roman era.[115]

During the troubles of the third century, the surrounding low town seems to have

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111   Ibid 30.
112   Desjardins 1958, 78-9.
113   Guilaine and Fabre 1984, 33.
114   Interestingly, Carcassonne is not depicted with towers on the Peutinger Table, while Toulouse and Narbonne are.
115   Poux 1923, 14.

been largely abandoned in favor of the upper town. The surrounding area was reoccupied and restored during the fourth century, indicating that some peace and security had returned to the region.[116] The fourth century seems to have been a period of economic vitality, seen through an increase in the local and regional goods imported to Carcassonne.[117] The city lost its political status probably at the end of the third century, when Diocletian re-organized the provinces.[118] It no longer held the title of *civitas*, like Narbonne and Toulouse. The Romans and the Visigoths occupied the military stronghold of the upper town periodically during the first half of the fifth century. While there is no direct evidence, the city was probably occupied for the last time by Visigoths around 462, when a treaty was signed between the Romans and Theoderic II.[119] The Visigoths controlled Carcassonne for nearly two centuries before Saracens and then the Franks conquered the city.

The fortifications of the upper town were maintained and occasionally reconstructed in the five centuries after the conquest by the Franks. In the early thirteenth century, the city was a stronghold for the Cathar heresy. The subsequent crusade to stamp it out and the resulting political turmoil in the region left the city in ruinous condition.[120] After taking control of the Languedoc in 1229, Louis IX undertook to rebuild the defenses in Carcassonne. He restored the late Roman wall to its full height, rebuilt

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116   Guilaine and Fabre 1984, 39.
117   Ibid.
118   Seen in listing the city as a *castellum* in the Hyerosolimitain itinerary. This manuscript makes the distinction between official *civitates* and other kinds of cities. The latest evidence of Carcassonne's political rights comes from a milestone from Barbarira from 274 C.E., which reads XICIK. This possibly stands for XI (mp/a) Colonia Iulia Karkasone, a version of the name. For more information see Rivet 1988, 137-8.
119   Poux 1923, 16.
120   Panouillé 1984, 28-35.

damaged sections and added new towers. He lowered the ground outside the walls by

several meters, creating a no man's land called the *lices* (Figure 18). This work undercut

the antique foundations, which had to be bolstered with new foundations. Beyond this he

constructed a new sandstone wall that runs about 1500 m and has 17 towers.[121] This

project, probably finished by 1260, gave the city its distinct double curtain.[122]

Previous Research

The upper town of Carcassonne, while relatively important during the medieval

period, was in a ruinous state by the early nineteenth century with simple lean-to houses

standing in the *lices* between the walls. A royal order from 1820 declared the city among

the second-class fortresses in France, effectively removing earlier protections on the

walls and allowing the citizens to plunder them freely.[123] A royal decree in 1850 called

for the complete destruction of the ramparts. However, a preservation movement, headed

by J.P. Cros-Mayrevieille, the Inspector of Historic Monuments, quickly gained ground

and had the decree recalled. In 1852, Eugène Emmanuel Viollet-le-Duc, who had worked

in Carcassonne since 1844 restoring the church of Saint-Nazaire, began reconstruction

work on the medieval and late Roman wall circuits. The reconstruction work continued

after Viollet-le-Duc's death in 1879 until 1910.

Viollet-le-Duc's efforts largely focused on the preservation and reconstruction of

both wall circuits. However, his idea of restoration was not defined by historical

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121   For a more detailed look at Louis' works and some first-hand accounts, see Viollet-le-Duc 1866,
           14-20.
122   Morel 1951, 12.
123   Poux 1923, 31.

accuracy. He said that, "to restore a building is not just to preserve it, to repair it, and to remodel it, it is to reinstate it in a complete state such as it may never have been at any given moment."[124] The work at Carcassonne is a clear example of this method. Viollet-le-Duc based his work for the entire circuit on the surviving medieval towers and walls. He reconstructed the inner circuit of walls to the twelfth-century height using masonry resembling a medieval style. He developed a new type of arched opening on the towers, for which there is no direct evidence, and topped them with a slate roof, a feature of northern French architecture.[125] While Viollet-le-Duc's reconstruction may lack historical accuracy, it did preserve the remaining Roman wall more or less as it stood in the late nineteenth century. Viollet-le-Duc's 1866 publication, *La Cité de Carcassonne*, focuses on the history of the medieval fortifications, leaving out much on his restoration method or which sections of walls he reconstructed.[126]

The city of Carcassonne has received comparatively little scholarly attention since Viollet-le-Duc's time. Joseph Poux, a resident of Carcassonne and the archivist for the Aude Department, produced a five-volume tome on the history of the city in the 1920s and 1930s.[127] Poux did not cover the Roman era in any great detail, but systematically explored the walls, the most important historical remains. Beyond this, the city has not received any major study. No scholar has studied the Roman period directly, and very little excavation has occurred within the upper town. A lack of both excavated data and synthesized study means little is known about Roman Carcassonne.

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124   Viollet-le-Duc 1990, 195.
125   Poux 1923, 43-44.
126   For a thorough examination of the restoration at Carcassonne, see Poisson 1994.
127   Poux 1923; Poux 1931; Poux 1938.

Early Roman Walls

It is unknown if the early Roman colony at Carcassonne was fortified. Many Augustan-era colonies were given enceintes as a sign of prestige.[128] Excavations have revealed an embankment on the south edge of the upper town mound that may have been part of a defensive ditch.[129] This late first-century B.C.E. fosse may have stood alone, in front of a primitive wooden palisade or even a stone wall. In the absence of more evidence, nothing conclusive can be established about the early fortifications.

Early nineteenth-century excavations in the lower town revealed domestic pottery, suggesting that the area around the Via Aquitania was inhabited in the first century BCE.[130] The lower town expanded greatly in the following three centuries, eventually spilling over to the right bank of the Aude. In 1805 a local surveyor, J. Marianne, discovered by chance a cache of 32 funerary urns about 520 m west of the Porte d'Aude. The urns were set flat between two walls, indicating a hypogeum, or underground tomb.[131] While no secure date has been assigned to these pots, they are clearly Roman, based on similar examples in two other Gallo-Roman cemeteries.[132] This grouping of funerary pots suggests the eastern boundary of the Roman city was half a kilometer to the east. No evidence of fortifications was found in this or any other part of the lower town. It seems that the Roman colony was largely unprotected for the first centuries of its existence. Perhaps the upper town had some defensive system at the end of the first

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128   Johnson 1983, 11.
129   Guilaine and Fabre 1984, 36.
130   Ibid. 29.
131   Poux 1923, 35.
132   de Caumont 1830, 269-70.

century B.C.E., but the city as a whole had none.

Late Roman Walls

As repaired and reconstructed in the thirteenth century, the inner wall of Carcassonne runs a kidney-shaped course of 1070 m, encloses an area of just over 7 ha, and has 26 gates. There are 21 distinct sections of *petit appareil* masonry, a good indication of the late Roman wall, mixed with various other styles of stonework. The heaviest concentration of ancient work is in the northeast, but all the walls except a small section in the southwest have *petit appareil,* indicating that the original late Roman wall followed roughly the current course. There is evidence that the original wall deviated from the restored line in a short section in the northeast. Clearly visible remains of an older tower connected to the rear of the Tour du Moulin du Connétable prompted excavations in the 1970s, which revealed a 0.25-m tall stretch of the curtain wall nearby.[133] This wall, like other late Roman sections, probably ran between the Tour du Trésau and the Tour du Moulin du Connétable, several meters behind the thirteenth-century wall. Some scholars believe that the antique line also deviated from the restored line in the southwest corner of the Cité, because the wall between the Tour Saint-Nazaire and the Tour de l'Inquistion shows no visible sections of late Roman masonry.[134] They postulate that the older wall between these towers probably curved in close to the Church of Saint-Nazaire, and that in the thirteenth century the original wall was heavily damaged and was rebuilt further to the southwest. Construction in 1973 of an outdoor theater

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133   Braund 1982, 32.
134   Poux, 1923, 124.

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between the Cathedral and the thirteenth-century wall has precluded archaeological research in the area, leaving this possibility open. However, Y. Braund discovered the remains of a toppled tower and a circular tower foundation along the southwest curtain near the Tour Mipadre and the Tour Cahuzac respectively. Both are contiguous with the medieval wall, suggesting that the late Roman wall followed roughly the same course as the medieval wall.[135]

Of the 21 sections that preserve identifiable late Roman masonry, the curtain between the Tour de Saint-Sernin and the Tour Narbonnaise is the most diagnostic (Figure 19, number 1). The first 2 m above the modern ground level of the *lices* is composed of large, rectangular stones set with thick mortar (Figure 20). Above this there is a 1 m section of rubble and concrete, a portion of which juts out from the wall about 0.6 m. Set directly on this concrete mass is one course of large ashlar stones, or *grand appareil*, about 0.5 m in height and 1 m wide. Above these blocks are between 0.5 and 2 m of small *petit appareil* masonry, which is topped by a large area of irregular facing. The small section of concrete, ashlars and *petit appareil* includes the remains of the original Roman wall, which is about 3 m thick. The rectangular stones beneath are the underpinnings put in during the thirteenth century creation of the *lices* and the upper portion is a mixture of twelfth and thirteenth century repairs and construction.[136]

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135   Braund 1982, 32-3. Braund dates the toppled tower, a few meters south of the Tour Mipadre, on the basis of *petit appareil* masonry, similar to other late antique sections. However, the toppled tower is in such poor preservation that it is nearly impossible to confirm Braund's conclusions. The tower foundation, very close to the Tour Cahuzac, is indicated by a semi-circular stone band below ground level. Braund argues that the stones, which date from after 1226, are the only proof of the tower without adequately explaining his rationale. These two towers are suggestive, but by no means conclusive, indicators of the path of the wall in the south.

136   Morel 1951, 96-97.

There are currently 25 towers straddling the inner circuit wall of Carcassonne, 23 along the wall itself and two flanking the medieval castle. While none of these towers is entirely original, those in the north section, from the Tour du Moulin du Connétable to the Tour de la Charpentière (Figure 19, numbers 3-8), contain the most antique material, and provide the most information about the ancient tower system.

Tour du Moulin du Connétable (Figure 19, number 3)

This tower, which after the late thirteenth century served as a windmill, includes sections of all the major work at Carcassonne. The lowest section, almost 2 m tall, is a rectangular foundation composed of well-cut large square stones set with mortar (Figure 21). Above that is another rectangular section, but composed of smaller stones of a variety of sizes set in visible concrete.[137] Resting on top of this square base is the semicircular tower with 7-8 m of *petit appareil* at the bottom (Figure 22). The square blocks are mixed irregularly with seven tile courses, 4 of which are double bands. This is topped by approximately 56 courses of larger, more rectangular, and less regular masonry. At the very top is a 2 m section of very precisely cut stones that make up the crenelation. Of these four distinct sections, the upper foundation and the *petit appareil* and tile are antique. The lowest foundation and the section above the antique are medieval, showing the undercutting and topping of the antique tower.[138] The final cleanly-cut stones are the nineteenth century restorations, which restored the towers to

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137   For more dimensions of the masonry here and elsewhere, see Appendix 2.
138   Poux 1923, 62.

their supposed original height.

Tour du Vieulas (Figure 19, number 4)

The Tour du Vieulas also shows all the successive work on the walls at Carcassonne. The bottommost nine levels are large, roughly squared stones set with mortar in regular courses (Figure 23). These are identical to the lowest courses of the rest of the curtain wall that runs between this tower and the Tour du Moulin du Connétable. The tower and part of the neighboring curtain wall collapsed forward when the ground was lowered in the thirteenth century and the antique foundations were exposed. The leaning wall was repaired and new square blocks were added under the foundations as underpinning. The lower, original portion of the tower leans outwards at about a five-degree angle. The antique section, above the medieval underpinning, has one level of large, rectangular, roughly finished stones that had been the foundation course of the tower before the thirteenth-century addition. Above these stones is a large stretch of *petit appareil* masonry, the stones of which measure 0.12 m tall and 0.2 m wide, interrupted irregularly by six tile courses, two of which are double. The upper portion, which was built after the collapse, stands straight set back about 0.5 m from the lower section. It has several incomplete levels of medieval stones, intermixed with Viollet-le-Duc's large, finely finished masonry set with mortar. The whole tower is topped with a modern reconstruction of an elliptical tiled Roman roof.

Tour de la Marquière (Figure 19, number 5)

The Tour de la Marquière, where the curtain shifts from northwest to west, is similar to the lower section of the Tour du Vieulas. The square foundation of the tower is a jumble of large and small stones in irregular courses held together with mortar. Above that the semicircular tower features about 6 m of *petit appareil* masonry with nine interspersed tile courses (Figure 24). The small stones measure 0.11 m in height and 0.2 m in width, and the tiles measure 0.03-0.04 m in height and 0.23-0.28 m in width. This opus mixtum section has both triple and double bands of tiles. In one particular section, about half way up, there are three levels of tiles, separated by one and two levels of stonework (Figure 25). The middle tile course features three small blind arches spaced regularly along the semicircular exterior. A tile band connects the three arches. The small arches serve no architectural function. They provide no opening to the interior, and are simply decorative. There is a portion of another arch on the small section of original curtain to the east of the tower, indicating that this decorative motif continued along the walls. Farther up the tower, there are three windows, two on the side, which were somewhat altered during the Middle Ages, and a central window, which was not changed (Figure 26). The three windows, originally identical and set evenly spaced along the tower, measure 0.45 m. across. The central opening is 0.72 m. tall. The windows are topped with tile arches, which, like the lower decorative arches, are connected by a tile course. The nineteenth-century roof sits on another two sections of modern masonry above the windows.

Tour du Moulin d'Avar (Figure 19, number 6)

This tower, used as a mill from at least 1636, is more jumbled than the others (Figure 27).[139] It has been heavily damaged and restored, but not in clearly defined sections. One probable section of antique wall is seen in large ashlars on the east and west edges of the tower (Figure 28). There is also a wedge of *petit appareil* on the eastern side of the tower that is bounded by larger stones (Figure 29). There are no tile courses visible in these 25 courses of blocks. The rest of the tower is a hybrid of medieval and modern constructions.

Disappeared Tower (Figure 19, number 7)

Midway between the Tour du Moulin d'Avar and the Tour de la Charpentière, approximately 30 m from each, is evidence of a completely dismantled Roman tower. There are large sections of late Roman masonry in the curtain walls, approximately 4 m apart, on either side of where the tower would have been (Figure 30). This includes foundation blocks in *grand appareil*, which measure 0.4 m tall and 1.045 m wide, and *petit appareil*, which measures 0.10-0.11 m tall and 0.15-0.16 m wide. This tower originally sat in at the bottom of a hollow that was leveled during the construction of the *lices*.[140] For whatever reason, the medieval builders chose to destroy the tower rather than fit it to the new ground level.

Tour de la Charpentière (Figure 19, number 8)

This tower has four distinct sections of external facing (Figure 31). The lowest

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139   Poux 1923, 74.
140   Poux 1923, 81.

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includes 12 courses of large rectangular stones that stand 3 m tall. This semicircular

projection is the foundation. Above this there is one partially preserved course of larger

grand appareil topped by 4-5 m of *petit appareil*. There are some tiles intermixed with

the blocks, but not in any obvious course. Above this is a triple band of tiles and then

nineteenth century antique-imitation masonry.[141] Much like the other towers, the lowest

stones are the medieval underpinnings, topped by Roman foundations and facings.

Porte Narbonnaise (Figure 19, number 2)

 Standing along the eastern flank of the Cité is one of the major entryways to the

upper town. The current Porte Narbonnaise and flanking towers were built in the

thirteenth century, replacing the original Roman gate on the same spot.[142] The area

around and beneath the massive medieval gate has never been fully studied, so nothing is

known of the Roman gate underneath.

Porte du Bourg (Figure 19, number 5)

 Several meters to the west of the Tour de la Marquière is a small doorway (Figure

32). It is called both the Porte du Bourg, as it led to the town situated on the north edge

of the mound, and the Porte Rodez, because the path from it historically led to the nearby

town of the same name. The current arch and doorway, which measure 2.3 m and 1.69 m

respectively, were constructed in the twelfth century and repaired in the thirteenth, but

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141 This is distinguishable from the actual Roman masonry by the precisely cut faces, lack of
    weathering, and slightly smaller mortar joints.
142 Guilaine and Fabre 1984, 38.

stand over an original opening.[143] The medieval construction has altered the curtain

around the doorway, obscuring evidence for the exact size of the early door. There is

evidence for a forepart that would have protected the passageway into the fortified town.

According to scholars, this outward fortification was composed of three exposed walls

connected to a fourth retaining wall that ran north into the Bourg (Figure 33).[144] Very

little remains of this structure after the heavy twelfth-century wall reconstruction and the

excavation of the *lices*. Poux claims to have seen a rise in the ground at the base of the

Tour de la Marquière, which he connects with the edge of the forepart.[145] The only

evidence *in situ* for this structure is a supposed roughly cut stair 3.2 m west of the Tour de

Samson. There the wall bulges significantly outward near its base (Figure 34). This

mass, scholars argue, is the remains of a staircase that led up to a path at the foot of the

curtain. It seems like this bulge could just as easily indicate where the retaining wall met

the curtain. In any case, this structure suggests that there was some protective structure

in front of this doorway.

Posterne d'Avar (Figure 19, number 6)

　　　This postern is typical of the small Roman gate in the fortifications.[146] It is

composed of a lintel atop jambs made of large stone blocks (Figure 35). Above the lintel

is a relieving arch of tiles filled in with the typical *petit appareil*. The opening is 0.96 m

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143　　Viollet-le-Duc 1866, 40.
144　　Poux 1923, 211-12.
145　　Ibid, 211. The rise is not visible in Poux's pictures, nor is it visible on the ground today.
　　　　However, there are, scattered in the area in front of the door, partially exposed stones. There is no
　　　　way to verify if these were part of any fore-gate without further excavation.
146　　Bromwich 1993, 67.

across and 3 m deep. The entirety of the passageway is constructed in a similar jamb and lintel system as the exterior. This gate would have been covered with a wooden door. Sockets for the post are still visible on the western edge of the doorway.

Overall, there are 21 late Roman towers still standing along the walls. There would have been, based on the most recent calculations, between 34 and 38 towers on the original circuit, depending on how the major gates were flanked.[147] The standing towers are spaced between 18 and 35 m apart. They are all very similar in size and construction Figure 36). They are composed of *petit appareil* and tile-faced concrete, the opus mixtum style. The thickness at the base of the towers measures between 2.2 and 3.8 m.[148] They have three identical windows spaced evenly along the front. In general terms, the towers are U-shaped, semicircular in front of the curtain wall, continuing straight back and ending in a rectangular projection behind the wall. The towers measure 5-6 m front-to-back, and 3.5-5 m across.[149] The overall height of the towers is uncertain. The standing late Roman towers measure between 5 and 9 m in height, depending on the natural elevation of the site. Some scholars imagine that the towers may have stood between 13 and 14 m tall with another story and roof.[150] The foundation stands currently 1-2 m in height. However, the undercutting and pinning during the construction of the *lices* in the thirteenth-century significantly altered the remains.

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147   Guilaine and Fabre 1984, 37.
148   The thickness is proportional to the height of the towers, which is variable.
149   Poux 1923, 41.
150   Guilaine and Fabre 1984, 37.

The inner circuit wall at Carcassonne, curtain and towers, is an impressive melange of nearly seventeen centuries of construction, reconstruction and repair. Through this jumble, three distinct styles of masonry are present. The first is the use of large, rectangular stone blocks that are occasionally bossed. These stones are generally more irregular in their sizes and their rows and are fitted with mortar, which is a dark gray color. It is most often seen on the lowest parts of the walls and towers and the second highest. This style is very similar to the masonry of the entire outer circuit, built in the thirteenth century, and dates from the same time.[151]

The next masonry style is the use of very large blocks, cut extremely well, and fitted together without any visible mortar. This is undisputedly the work of Viollet-le-Duc and other nineteenth-century restorers. It is confined, except in places that were completely reconstructed, to the tops of the wall and towers, often composing the parapet and crenellation. The other two styles are more interspersed, although generally in sizable chunks.

The *petit appareil* features small, squared stones which average 0.126 m in height and 0.165 m wide, set in straight rows with visible mortar joints. The mortar is a light grey color and contains small pebble inclusions. This masonry also features tiles, measuring 0.037 m in average height and 0.28 m in average width, laid in courses. These courses vary widely in number and frequency on different sections of the wall. There is also reconstruction *petit appareil* masonry, which is readily distinguishable from the

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151   Viollet-le-Duc 1866, 19.

earlier facing by the nearly white mortar without inclusions and the precisely-cut, unweathered stone.

There is no direct evidence, archaeological, numismatic or epigraphic, for the date of the earliest walls. The few excavations around the Cité revealed inverted or otherwise severely disturbed stratigraphy, probably the result of medieval repairs and construction. Scholars have generally agreed that these sections date from late antiquity.[152] The dates proposed for its construction have varied from the late third century to the eighth. The earliest scholars to write about the upper town were medievalists who thought the walls dated from the Visigothic period, although they gave little evidence for this conclusion. Viollet-le-Duc claimed that the Visigoths built their fortifications directly over the ruins of a Roman wall, and even re-employed the earlier foundations.[153] This idea soon fell out of favor as there is no indication that the foundations were of a different construction than the walls above them. Viollet-le-Duc's conclusions about the date of the fortifications had a more lasting influence. Many scholars believe that the earliest inner wall sections date from the Visigothic period, more specifically under Euric I (466-484).[154]

Y. Braund, the most recent scholar to deal with the chronology of the inner circuit, argues also for a Visigothic construction, most likely near the end of the sixth century.[155] He argues for a late date from very little evidence. Bruand claims, like all who support the idea of post-Roman construction, that the Visigoths, who had no distinct architecture

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152 A problematic term, to be sure. While not trying to advance any new paradigms, I mean late antiquity as the period from Diocletian to Charlemagne. For a more nuanced explanation for the term 'late antiquity' and its consequences, see B. Ward-Perkins 2007.
153 Viollet-le-Duc 1866, 2.
154 Poux 1923, 57; Morel 1951, 5.
155 Braund 1982, 30.

of their own, were remarkably skilled at imitating Roman construction methods. He also

argues that the considerable irregularity of the tile-work throughout the walls, being an

indication of a lesser quality, shows less-skilled, post-Roman builders. Braund's

arguments, on both accounts, are not totally convincing. He recognizes that the walls

look typically Roman. Although the Visigoths were able to adapt and incorporate Roman

building techniques, their architecture is noticeably distinct.[156] It seems unlikely that the

walls at Carcassonne were a fairly precise imitation of a three-hundred year-old Roman

style. On the issue of the irregular masonry, few continuous, unaltered stretches of the

wall remain to judge the overall quality. Without a better reconstruction, it is impossible

to understand how or if the irregular tile courses worked together. Those sections that do

remain are not of poor quality. The inclusion of non-structural decorative features, like

the blind arches on the Tour de la Marquière, suggests a fairly sophisticated level of

construction. There is nothing about the facing or mortar of the *petit appareil* that seems

of low or substandard quality. The stones are nearly identical in size and shape, and set in

very straight courses.

Braund's arguments for Visigothic construction are not convincing, and evidence

beyond this indicates a late-Roman date. The Visigoths, in general, established

themselves in cities that were already fortified.[157] This would suggest that Carcassonne

was already fortified by 462. More importantly the Hyerosolimitain itinerary describes

the city as a *castellum*. This account of the journey between Bordeaux and the Holy Land

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156 Dodds (1990, 11) discusses a synthesis of Hispano-Roman and Visigothic styles, which is distinct
    from the earlier Roman. This blended style is seen exclusively in Spain as there are no
    conclusively Visigothic remains in France (Rouche 1991, 143).

157 Braund 1982, 30; Cairou 1976,21.

was written in 333, indicated by consular dating.[158] The term *castellum* connotes a

walled fortress of some kind. And the ring of walls circling the platform of the Cité

would have easily resembled a fortress. It seems likely that the *petit appareil* circuit

around Carcassonne was built before 333.

There is no direct evidence to indicate how long before the fourth century the

walls were built. Cities in Gaul were fortified during the Augustan (and occasionally

Tiberian) era, when a circuit was a mark of prestige for a colony. These early walls

generally covered a large expanse of mostly empty land, some up to 200 ha.[159] The walls

at Carcassonne, covering just 7 ha, do not seem to fit with the early Imperial

fortifications. During the following three centuries, very few new defenses were

constructed in Gaul, except close to the *limes*. In south Gaul, there is no evidence for

new construction during the *haut empire* because there was no need for individual

walls.[160] Toward the end of the third-century new walls, generally much smaller than

Augustan walls and covering only the center of the city or the citadel, were built.[161] The

walls of Carcassonne seem closer to these defenses, covering a relatively small, easily

defensible portion of the entire city.

Further, the fortifications at Carcassonne bear very close resemblance to several

others from the late-third century. The walls at Beauvais in Gallia Belgica are

constructed with a *petit appareil* and tile-course facing. The wall is approximately 2.5 m

thick and the towers astride the wall are U-shaped. The fortifications at Beauvais have a

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158   Chevallier 1976, 37.
159   Johnson 1983, 13.
160   Blanchet 1907, 4-5.
161   Tassaux 2002, 33.

terminus post quem of 286 based on coins found in the foundation.[162] The walls at Sens,

also in Belgica, are faced with *petit appareil,* and feature U-shaped projecting towers.

These walls have a *terminus post quem* of 268, also based on numismatic evidence.[163]

The walls of Bordeaux in Aquitania were constructed of the same masonry, with a large-

block foundation and small-block elevation.[164] These are dated after 268 by coin finds.[165]

While there are differences between all these examples, they are similar enough in size,

construction, features and date to group together. Carcassonne, with clear similarities to

the other cities, can be considered with them.

In sum, the walls at Carcassonne probably date to the end of the third century or

the beginning of the fourth. They almost certainly date before 333. It is possible that

they date before the late-third century, but this is unlikely, based on similar circuits in

Gaul. An approximate date is all that is possible for Carcassonne, until further

excavations or scientific analyses can refine this rough guess.

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162   Johnson 1983, 267.
163   Ibid, 266.
164   Garmy and Maurin 1996, 67.
165   Ibid, 75.

CHAPTER 3

Toulouse

Pre-Roman History

The area around Toulouse (ancient Tolosa) has been inhabited for many

thousands of years, as indicated by the numerous archaeological sites dating from the

Lower and Middle Paleolithic eras. The region, ideally located for trade midway between

the Atlantic and Mediterranean, is served by the Garonne river which runs to the Bay of

Biscay. It is about 40 km from the Naurouze gap, the low pass between the Massif

Central and the Pyrenees, which allows relatively easy overland access to the Aude river

and the Gulf of Lion. This gap is at present bridged by the Canal du Midi, which was

installed in the seventeenth century and which connects the Garonne to the

Mediterranean. Before this monumental construction, traffic from Narbonne to Toulouse

was hauled overland over the continental divide. The pass was a major point of

commercial traffic from at least the Iron Age.[166] Strabo mentions that "Narbo traffic goes

inland for a short distance by the Atax (Aude) River, and then a greater distance by land

to the Garumna (Garonne) River" (4.14).

     The earliest evidence for habitation in the modern city of Toulouse is funerary

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166   Roman 1990, 41-2.

remains on the east bank of the Garonne that date from the tenth century B.C.E.[167] Most

of the evidence for habitation comes from the sites of Le Cluzel and Vieille-Toulouse,

rocky outcroppings on the east bank of the river 6 and 7 km from Toulouse, respectively

(Figure 37). An agricultural society inhabited these sites from about 800 to 425 B.C.E., a

period called by scholars of Toulouse the "first Iron Age."[168] Some sort of significant

disruption occurred in the area sometime towards the fifth century B.C.E. Imported goods

disappear at these sites, possibly indicating complete abandonment until the middle of the

fourth century.[169] The resumption of trade in the region at the beginning of what was

known as the "second Iron Age" brought in numerous luxury objects associated with the

La Tène culture which had been previously absent.[170]

Sometime in the second century B.C.E. a tribe called the Tectosages began to

settle in the Vieille-Toulouse region. Their exact origins are not clearly known, but they

seem to be a sept of the Volcae, a Celtic tribal group.[171] The origins and prehistory of the

Volcae have been strongly disputed. The earliest authors to mention the group, Caesar

and Strabo, report that the Volcae were a group of Celtic people who originated in the

Languedoc region of Gaul and which were displaced to the Hercynienne forest

somewhere near the headwaters of the Danube.[172] When the Tectosages, the people later

living around Toulouse, split off from the Volcae is not clearly established by either

author.

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167   Labrousse 1968, 63-4.
168   Milcent 2006, 39.
169   Ibid, 40.
170   Whether the appearance of these objects indicates a new cultural or ethnic presence in the region, or as Milcent (50, 2006) argues, a simple *"laténisation"* of material culture is quite open to debate.
171   Ibid, 53-54.
172   Caesar *B.G.* 6.24, Strabo *Geog. 4*.13

From the eighteenth to mid-twentieth centuries, scholars argued the Volcae originated around the Danube and split into two distinct groups in the third century, one moving west towards south France and the other south to Asia Minor.[173] Modern linguistic research suggests that a group known as the Tolosates, a subset of the Volcae Tectosages, a wider ethnic group that inhabited a large part of south France, founded Toulouse.[174]

A marked increase in population in Vieille-Toulouse took place around the beginning of the second century B.C.E., possibly due to the arrival of these Tolosates.[175] By the time the Romans began to establish themselves along the southern coast of Gaul after the conquest of Spain in 134, Vieille-Toulouse was a large *oppidum*. The foundation of Narbonne in 118 B.C.E. provided an outpost for access to the Toulousain via the Aude and a pre-Roman road.[176] During the war with the Cimbri and Teutons in the late first century B.C.E, Vieille-Toulouse allied itself with the tribes over the Romans. After Marius annihilated the two tribes around 102, Toulouse lost its independent status, became stipendiary to Rome and hosted a Roman garrison.[177]

The earliest Latin reference to Toulouse is in Cicero's *Pro Fonteio* (9). There the defendant was able to extract fourteen denarii as a transit duty on each amphora of wine. That is considerably more than the single denarius Fonteius was able to get from Vulchalo, possibly identified with Carcassonne. This suggests the relative wealth, and

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173   M. Labrousse, a leading authority on ancient Toulouse, was a prominent promoter of this theory (Labrousse 1968, 87-89).
174   Milcent 2006, 55.
175   Based on the expansion of the Saint-Roch necropolis and the number and variety of housing types compared to nearby Cluzel. See Labrousse 1968, 89.
176   Chevallier 1976, 14.
177   Ebel 1976, 93. Although it is of little difference here, King (1990, 39-40) and others, argue that the garrison was established before the Germanic invasion.

possibly size, of Toulouse was greater. Interestingly, several of these Republican wine

amphora have been recovered from the site of Vieille-Toulouse.[178] Caesar also mentions

Toulouse in the *Gallic Wars* (3.20), noting that Publius Crassus collected "many brave

men in Tolosa and Narbo." Toulouse, despite remaining an independent city, supported

Roman interests in the region.

 Near the end of the reign of Augustus, Toulouse was re-founded as a Roman

colony 7 km downstream of the *oppidum* of Vieille-Toulouse.[179] The impetus for moving

the city is unknown, but the re-establishment correlates with the urbanization of Gaul

during the first centuries B.C.E and C.E. Caesar, Augustus, and to a somewhat lesser

degree Tiberius founded a considerable number of colonies in Gaul and Germany, many

near previously occupied cities.[180] Since the establishment of the colony is not

mentioned in surviving written sources, the date can only be determined through

archaeological examination of the earliest constructions on the site. Little has been

recovered from Toulouse itself before the construction of the Roman city which suggests

that the colony was founded *ex nihilo*.[181]

 Among the earliest datable monuments in the new colony is the early city wall.

Before 1993, the early wall had been dated around the reign of Domitian, leaving the

foundation and early history of the colony unknown.[182] Recent research concludes that

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178   Labrousse 1968, 144.
179   Colonies during this period were granted either Roman or Latin rights.   Tolosa's legal standing at
         her re-establishment is unknown. Rivet (1988, 117) mentions that the title *colonia* is only used to
         describe Toulouse in Ptolemy and there is no epigraphic evidence to back it up.
180   King (1990, 69) mentions at least ten new fully Roman colonies and more than double as many
         Latin colonies established in Gaul under Caesar and Augustus.
181   Domergue et al. (2002, 78) report only a few shafts have been found at one site (Saint-Roch) in the
         first-century B.C.E.
182   e.g. Wolff 1961, 32.

the walls were constructed near the end of the reign of Augustus, which means that they were among the first monuments built in the newly established colony.[183] Further collaboration for this chronology comes from several pits at Vieille-Toulouse where the latest objects recovered date from the early decades of the first century C.E.[184] The cardo maximus and a portico in the forum, both dated to the same period as the wall, have also been discovered.[185] This evidence has led scholars to see a unified urban program for Toulouse, not long after its establishment, which included a grid-planned street system, a primitive forum, and a city wall.

Previous Research

The dismantling and demolition of the Roman circuit walls, as with many ancient fortifications, are not clearly dated, but seem to have proceeded quickly. Records indicate that Raymond VI ordered the complete destruction of Toulouse's fortifications in 1229, which probably meant the Roman walls that had been standing for over a thousand years.[186] In 1345, threatened by English chevauchées, the French throne encouraged Toulouse to rebuild its wall. These walls, built in some places directly upon the Roman foundations, stood until Napoléon ordered them dismantled.[187] Although all visible traces were destroyed, two Roman portals were discovered in the late eighteenth century and a section of curtain in the early nineteenth, providing the first documentary evidence

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183   De Filippo 1993, 200. For more discussion about the date of the early wall, see infra pp 70-1.
184   The best datable objects found are imported ceramics. For a detailed analysis of the pottery finds from Vieille-Toulouse, see Benquet et al. 2002.
185   de Filippo 2002, 207-8
186   Labrousse 1968, 239.
187   Ibid.

about the size and construction of the wall.[188] The earliest scholarly papers written about

the defenses, by local antiquarians and published in local archaeological journals, appear

at the end of the nineteenth century. During the first half of the twentieth century, small-

scale reports were written as numerous excavations turned up new discoveries.

The first major work on classical Toulouse, *Toulouse antique*, was published by

M. Labrousse in 1968. This major study of the pre-Roman and Roman cities is still the

basis and standard for much Toulousain archaeology, even though it is now forty years

old. In this work, Labrousse thoroughly reconstructed the early and late Roman city

walls, compiling the great majority of excavations and chance discoveries over the

previous hundred years.

Scholars continued to make new discoveries about both Roman Toulouse and its

fortifications over the next decades. A number of these excavations, carried out during

the years 1988-1995, were collected in a volume called *Archéologie Toulousaine*.[189] R.

de Filippo undertook one of the most important excavations at the site of the Ancien

Hôpital Larrey in 1988 and 1989. This rescue project provided stratigraphic evidence for

a 60-m section of the early wall, which established a precise chronology of construction.

A large recent volume called *Paladia Tolosa* presents, as its subtitle notes, "new research

on Toulouse." This work updated Labrousse's *Toulouse antique* and took it in new

directions.[190]

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188   Blanchet 1907, 201.
189   Musée Saint-Raymond 1995.
190   Pailler 2002.

<u>Early Roman Walls</u>

The early Roman wall at Toulouse is fairly well known and researched. Its

course is known from at least 35 different fragments scattered around the city. Some of

these pieces were only a pile of stones in a basement and some were thoroughly-

excavated remains. There are at present seven externally visible sections around

Toulouse, three sections of curtain and four remnants of towers.[191] These seven

fragments together provide a good picture of the course and construction of the early

Roman wall.[192]

The first visible section is located in the Square du Général Charles de Gaulle,

about 575 m east of the Garonne (Figure 38, number 1). There are two small stretches of

wall, a lower to the west and an upper to the east. These are presumably connected, but

currently separated by a pathway that measures approximately 6 m wide. The lower of

the two sections sits at an elevation of 139 m and runs northeast for 5.22 m at an angle of

60º.[193] On the exposed north face of this wall, there are three courses of squared

limestone *petit appareil* blocks, which measure 0.09-0.11 m in height and 0.12-0.14 m in

width, at the very bottom, then a band of three tiles (Figure 39).[194] Above this are another

three courses of squared blocks. At its highest point, the wall stands 0.74 m tall. The

wall extends back 0.45 m before it is covered by dirt except for a mass of concrete that

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191   There are an additional six points throughout the city, roughly in line with the presumed course of
         the early wall, that contain groups of tiles about the same size and shape of the early city wall.
         However, because so much of Toulouse, the "ville en rose," is constructed in brick, it is nearly
         impossible to verify the antiquity of these points without signficant further testing.
192   For a more exhaustive reconstruction, even if now a bit dated, see Labrousse 1963, 238-273.
193   Elevation reading taken by author on 18:03 02-JUL-09 at LATITUDE:43.604652 N
         LONGITUDE:1.444748 E, using a Holux M241 GPS Logger.
194   For dimensions of these elements, see Appendix 3.

extends back 1.53 m near the eastern edge.[195]

The upper section is very similar to the lower. It runs for approximately 13 m at the same orientation as the lower section at an elevation of 142 m.[196] The tiles and blocks on the visible north face are exactly the same size as the lower section. Seven courses of limestone blocks in this wall are topped by two or three levels of tiles and all together measure 0.91 m in height (Figure 40). The top tile course is exposed and shows that tiles, laid end to end, extend all the way through the wall. This indicates that the tiles serve as leveling or bonding courses, rather than as decorative facing. The far eastern edge of this stretch has been broken off and shows that the *petit appareil* blocks extended about 0.25 m deep on average, behind which is a concrete and rough stone mass. This upper wall is currently 0.5 m thick, but has been cut very cleanly off in the back, as if by a machine. There is no indication on how thick the unaltered wall may have been.

The next clearly visible section of early wall at Toulouse is just north of the Place Saint-Jacques (Figure 38, number 2). This section of wall runs approximately 15 m directly north and sits at an elevation of 141 m.[197] Several centimeters of foundation concrete and small stone rubble, extending beyond the edge of the wall, are visible through most of this part of the curtain (Figure 41). Above this foundation, six courses of limestone blocks, which measure 0.09 m tall and 0.12-0.18 m wide, are topped by three levels of tiles, which measure 0.035-0.04 m tall and 0.23 m wide. Above that there are four more block courses and then a large section of 14-16 courses of tiles. In the middle

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195   It is unclear from visual observation if this concrete is original or comes from some time later.
196   Elevation reading taken by author on 17:36 02-JUL-09 at LATITUDE: 43.604736 N LONGITUDE: 1.444696 E, using a Holux M241 GPS Logger.
197   Elevation reading taken by author on 19:50 02-JUL-09 at LATITUDE: 43.597973 N LONGITUDE:1.451299 E, using a Holux M241 GPS Logger.

of the wall, there are only two block courses and then tiles above. It is impossible to say if this was an intentional design (or error) of the original builders or a repair. The materials used here are all of similar size to those at the Square du Général Charles de Gaulle.[198] The wall here stands about 2.25 m tall at its highest point of preservation. It is 2.35 m thick at the base, narrowing to 1.5 m at the top where there has been significant damage. The northernmost 10 m of the top show four individual tiles laid end to end across the width to form a leveling course. It is impossible to tell whether all the tiles extend the whole width or if this is limited to just the top course. It is clear that one tile on either edge has now disappeared, which means that there would have originally been 6 tiles to make up the full width of the wall.

There is a noticeable concrete mass above the tile level in the southernmost 5 m section. It is unclear, because of heavy damage and debris, how this mass relates to the other part of the wall. It may be a later addition or it may be the exposed rubble core of the wall that was above the leveling course of tiles.

The last visible section of the early wall in Toulouse is a small fragment sandwiched between the two buildings at numbers 5 and 7 of the Rue des Renforts, just over 100 m east of the ancient river bank (Figure 38, number 3).[199] Only a cross-section of the wall is visible along the north-south street, as the wall ran almost directly east-west (Figure 42). This cut, bordered on one side by tiles that match the other early tiles in both

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198   For dimensions of these elements, see Appendix 3.
199   Chalande (1913a, 81) mentions that in his day "la vieille muraille sert encore de mur mitoyen la *masin de l'Inquisition*....et les maisons voisines au sud." He does not mention the section visible on the Rue des Renforts.

size and appearance, is 0.88 m wide.[200] Behind these tiles there is a small stone and concrete core. This section is visible for a height of about 5 m before it disappears behind a modern wall.

Towers and Gates

The first visible tower for the early wall at Toulouse is in the Square du Général Charles de Gaulle, very close to the two stretches of wall (Figure 38, number 4). Only the outline and a few stones from the core are visible at ground level, which lies at 140 m in elevation (Figure 43). It runs in an arc for about 15 m before disappearing under the soil on both ends. Based on the extant curve, this tower would have been around 12 m in east-west diameter. It would not have been perfectly round because the north-south diameter, the distance from the wall to the furthest edge of the tower, is about 9 m. As a result, this tower was either more ovoidal than circular or had three quarters of its form ahead of the curtain. Either possibility is problematic given the shape and position of the other known towers. There is no clear indication along the curtain sections of a possible joint between the tower and wall. The concrete mass behind the lower section may indicate a possible joint, but the facing blocks at this spot do not bear any unusual marks.

The next visible tower of the early Roman wall is connected to the curtain at the Place Saint-Jacques (Figure 38, number 5). This tower is well preserved, standing as high as the rest of the wall. The southern edge of the tower is cut off by the street, and near this cut off edge the tower has been damaged and stands 0.5 m in height. The

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200   They also appear to be well incorporated into the rest of the wall, but scholars have neglected to mention if these are authentic.

interior diameter of the tower is 6.8 m, and the thickness of the wall is 1.1 m, making the

outside diameter 9 m. The tower is fully round, and sits mostly in front of the curtain.

The exterior facing is very similar to the curtain next to it (Figure 44).[201] There is a

visible foundation topped by five levels of blocks. On top of that are three courses of tile

and then five more of blocks. In one section of the tower, the level of blocks has been

replaced by tiles. Like the similar section of the curtain wall, it is not clear if this is

intentional, a mistake in construction, or a repair. Above this first 1.25 m, there is at

present a meter of tiles. The interior of the tower is faced in the same way as the exterior.

The next portion of a visible tower is not far from the Place Saint-Jacques at 7

Rue Jules de Resseguer (Figure 38, number 6). Set just back from the facades of the

houses is a tower built of two distinct types of tile (Figure 45). The more weathered kind

of tile appears to be about the same size and color as the Roman tiles in other sections of

the wall.[202] The base of a tower has been recovered in the basement of this building and

the "partie ancienne" of this building measures 13.8 m in height.[203] While no scholars

describe the exterior tower at all, it seems likely that it is part of the Roman

fortifications.[204] The tower, at its base in the basement of number 7, has a 7.7-m internal

diameter and a 1.2-m thickness.[205] The visible portion, measured from aerial photos, is

about 10 m in diameter.

The next remnant, the Hauts-Murats tower, is the best preserved of all the towers

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201   The dimensions of these materials are identical to the wall portion at St.-Jacques. For those
        measurements, see Appendix 3.
202   Based on visual analysis made from ground level. Unfortunately, there are no records or studies
        about the upper portion of the tower.
203   Baccrabère 1973, 213.
204   Labrousse 1968, 244.
205   Baccrabère 1973, 213.

in Toulouse (Figure 38, number 7). The exterior has been covered over in constructions from the medieval period (Figure 46), but the footprint and interior of the tower are largely original.[206] The interior diameter of the tower measures 7.75 m, and the walls are 1.36 m thick, making an exterior diameter of 10.47 m. The original Roman tiles are visible on the interior from the floor to a height of 3 m. There is no indication of the limestone facing blocks at this tower, only tiles. The ceiling, which appears to be original, is a dome constructed of tiles and mortar.[207]

The last visible portion of a tower is a quarter portion of the Sénéchausée tower that is connected to the Église de Jésus (Figure 38, number 8). It stands 13 m high, 4 m below the modern street level and 9 m above (Figure 47). Its interior diameter, if the tower were full, is approximately 7 m and the wall here appears to be 1.24 m thick, making the exterior diameter about 9.5 m.[208] The tiles are similar in size, between 0.035-0.04 m high and 0.24-0.25 m wide, to those at the other sites.[209] They are also similar in appearance, with a bright red color and fine fabric with a few small, white inclusions.

Overall, these seven sites provide a good picture of the early Roman wall at Toulouse. Their generally excellent state of preservation provides considerable information about the ramparts. In general, they show a lunate wall that encloses the Roman city, starting and ending on the Garonne at points 790 m apart (Figure 48). Adding other known points gives a more accurate trace, showing that the wall stretched

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206 Labrousse 1968, 244.
207 Soutou 1969, 146-8.
208 The wall here appears to be 1.24 m thick based on the one visible edge. This edge joins with a similar-looking wall, making an exact measurement of its thickness difficult. There is, however, a large crack running the height of the wall, which appears to be the dividing line between the tower and wall.
209 For measurements, see Appendix 3.

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about 3 km in length and covered an area of 90 ha.[210]

Excavations have revealed that foundations average 1 m deep.[211] The foundations consist of large stones laid in regular levels surrounded by rubble and concrete. Above the ground, the early wall is constructed in the opus vittatum mixtum style in the lower sections and crowned by opus testaceum. At the Place Saint-Jacques, the height of the lower sections, from the foundations to the tiles, measures just over a meter. This is collaborated by discoveries elsewhere in the city, particularly the site of the Hôpital Larrey, where the "soubassement" measured 1.4 m.[212] The situation is unclear at the Square du Général Charles de Gaulle because of the different elevations of the two sections. All three elements, the two sections of wall and the tower, lie at different elevations. The upper wall is the only one with visible tiles, which are 0.73 m above the ground level. Reconciling this with the other section of the wall, which sits about 3 m lower, would suggest that there is at least 4.47 m of *petit appareil* under the tiles. This reconstruction is problematic since there is no similar evidence anywhere in Toulouse. While no source provides a good description of the discovery and preservation of this site, it seems that something has been significantly altered from its original state.[213] The upper section of the walls, where they have survived, is constructed of tile faced concrete separated into regularly sized caissons or blocks, framed by vertical leveling courses and horizontal transversal tile walls (Figure 49).[214] The concrete sitting

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210   Cazes 1988, 61.
211   de Filippo 1993, 189.
212   de Filippo 1993, 193.
213   Labrousse (1963, 251) and Malafosse (1893, 26) make no mention of any alterations at this site. The straight-cut back of the upper wall suggests further that modern changes have been made.
214   de Filippo 1993, 194.

on the leveling course at the Place Saint-Jacques curtain might be such a caisson. The overall height of the wall is unknown. The tallest section at the Hôpital Larrey stands 6.45 m in height, which was probably close to the maximum elevation.[215] The thickness of the base of the wall on average is 2.38 m.

The towers at these four sites show that the average interior diameter is about 7.36 m and the average exterior diameter is around 9.82 m. The thickness of the tower walls is 1.23 m. They are fully round and project about two-thirds in front of the line of the walls (Figure 49, A). Similar round towers known from elsewhere in the city.[216] The tower at the Square du Général Charles de Gaulle is problematic since it appears to have a flat back. This means it is either ovoidal, being about 12 m across and 9 m deep, or projects ahead of the line, like the other towers, but with a flat back. Either way, this tower is a meter or two larger than the other round towers.

Another type known at Toulouse is the so-called "square-heeled" tower. Three other examples of this kind have been tentatively identified, but are not well studied.[217] They project 11-12 m from the wall, but are only 7-10 m across. One example of this type, from the Rue Bida, ends in a hemicycle, but the other, on the Rue du Rempart-Saint-Etienne, is polygonal on the front (Figure 49, B-C). Their rear wall is set back about 1 m behind the curtain. These three examples stand out from the rest, which are completely round. The number and spacing of the towers along the early walls are not fully known. Labrousse estimates an average of 42 m between each tower, based on known measurements between 35 and 48 m, and an average diameter of 10 m for each to

215   de Filippo 1993, 194.
216   Ibid; de Filippo 1993, 196.
217   Labrousse 1963, 266.

give a total of 60 towers along the wall.[218] Bacccrabère instead argues for 49 towers, 38

round towers in groups of three separated by one polygonal tower.[219]

None of the original gates is visible in modern Toulouse. Only two are known

with any certainty. They sit at the north and south ends of the cardo maximus, the main

road running roughly through the middle of the city. The northern gate is situated in the

middle of the modern Place du Capitole and was excavated in the early 1970s. This gate

is flanked by two towers that resemble the "square-heeled" type, with a straight

projection topped by a hemicycle. They are 11.5 m long and 9.2 m wide.[220] The towers

are constructed in the same way as the other curtains and walls, with almost identical

facings of *petit appareil* and tile. Between the two towers is a main building with two 2.4

by 18.73 m vaulted passageways on the edges and a main entrance 3.9 m wide. The main

entrance leads to a 12.1 m circular court before continuing into the city.[221] At the south

end of the cardo, the Porte Narbonnaise stood near the modern Place du Parlement.

While it was destroyed in the sixteenth century, medieval writings mention its square

stones and concrete, suggesting a Roman monument of some kind.[222] There should have

been a gate at the east end of the decumanus maximus as well as smaller postern

openings, but no trace of these has ever been found.

Dating

The materials used in the construction of the wall are remarkably consistent. The

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218   Ibid, 262-266.
219   Baccrabère 1977, 43-44.
220   Labrousse 1974, 255.
221   Ibid.
222   Labrousse 1963, 269.

limestone blocks, imported from about 70 km away, measure on average 0.1 m tall and 0.176 m wide.[223] The tiles are also of the same size, about 0.231 m wide by 0.038 m high and 0.339 m deep. The similarity of building materials and method suggests the whole enceinte was built at the same time. Suggested dates for this early wall range from the beginning of the second century to the late third century.[224] De Filippo's recent excavation at the Hôpital Larrey furnishes more precise information. The well-documented stratigraphy which is collaborated by numismatic evidence includes sigillata pottery from Montans and La Graufesenque in the foundation layers which provide a date of 30 to 60 C.E.[225] Two samples of tiles, moreover, were subjected to archaeomagnetic testing. The first sample was taken from one of the transversal tile walls and the other from the leveling course between *petit appareil* sections. The first sample returned a date from 0-40 C.E. and the second from 0-30 C.E.[226] Taking all the evidence together, it seems very likely that the early wall at Toulouse was constructed around 30-40 C.E. No available evidence indicates the construction period, but it has been suggested that it probably did not exceed ten years.[227]

Late Roman Walls

The late Roman walls at Toulouse are only known at six locations not far from the ancient Garonnette branch of the river (Figure 50). Four of them, numbers 13 and 49

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223   Labrousse 1963, 259. de Filippo (1993, 193-4), notes that the blocks are actually pyramidal in shape, tapering to a point in the back.
224   Labrousse 1963, 273-276; Baccrabère 1977, 106.
225   de Filippo 1993, 189-90.
226   de Filippo (1993, 191) uses year 0 in these ranges. He does not explain his numbering, but perhaps this is the result of the archaeomagnetic dating scheme.
227   Ibid, 200.

Rue des Couteliers and numbers 5 and 11 Rue de l'Homme-Armé, were only minor finds

of trenches or isolated foundation blocks.[228] Two sites, the Monastery of the Visitation at

13 Rue de la Dalbade and the Catholic Institute of Toulouse (ICT) at 31 Rue de la

Fonderie, have significant sections of the late wall *in situ*. The 7 m length of wall at the

Monastery has been excavated and analyzed well.[229] The 71 m-long wall at the Catholic

Institute is in remarkable preservation and has been extensively studied.[230]

All the known sections of the late wall at Toulouse lie in a straight line. The

farthest north of these, 49 Rue Couteliers, is only mid-way between the north and south

edges of the early Roman wall. Presumably, the wall would have covered the entire

stretch along the river, which was left open by the early Roman wall, but no traces have

been found further north. The furthest south point, along the Rue de l'Homme-Armé, is

about 25 m north of the path of the early wall.[231]

Towers and Gates

No towers have been found in connection with the late wall at Toulouse, but 13

contreforts have been discovered. These square contreforts, found only on the inside of

the late wall, were put in place to fortify the wall against external attackers. They are

situated every 3 m along the inside of the wall and measure approximately 0.9 m per side

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228   Labrousse 1963, 280; Baccrabère and Badie 1996, 125.
229   Baccrabère 1977, 58-61.
230   Baccrabère 1974.
231   The early wall path here, according to the widely accepted view, comes up the Rue du Chateau up
       to number 5 Rue de l'Homme-Armé, then takes a sharp turn back towards the river, making an
       elbow. This path is argued (Chalande 1913a, 78-80), based on some evidence, although what was
       found and where is never made clear. It seems unusual for a wall, built *ex nihilo*, to take such a
       path.

(Figure 51).[232] Additionally, one postern has been discovered in the section of wall at the ICT. This important opening was 6.86 m wide *extra muros*, sloping back to 2.88 m *intra muros*. The interior was framed on either side by contreforts. The postern rests on the same foundation as the rest of the wall, a concrete and rubble mass topped by three courses of tiles. At the edge of the postern, 1 m above the foundation, are two re-employed stones, which were used to close of the passageway.[233] These stones sit at the ancient ground level, which leaves 1 m below for the substructure and paving parts of a road.[234]

Masonry and Construction Method

The construction of the late Roman wall differs from that of the early wall. The foundations of the later wall are 1 m deep on the northern section of the ICT and 2 m deep at the southern. They are 1.26 m deep at the monastery. The foundation consists of concrete mixed with a few large stones, some tiles, and a large amount of spolia (Figure 52) except for one small section at the ICT. At the ICT alone, 190 fragments of funerary monuments, figural statues and column capitals were found in the foundation, and 97 of those remain at present *in situ*.[235] The exception is a section in the southern part of the wall where the substructure is made of tile set together with mortar. There is no concrete and rubble beneath or within the tiles.[236] Above the concrete, there are three courses of

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232   Baccrabère and Badie 1996, 128; Baccrabère 1974, 9.
233   Baccrabère and Badie 1996, 127.
234   Baccrabère 1974, 17.
235   Baccrabère and Badie 1996, 127.
236   Baccrabère (1974, 14) attributes this disparity to different teams of workers handling different
          sections of the wall and that this spot may have been particularly wet with seepage from the river

tiles that serve as a leveling course atop the foundation. Above this, the exposed rampart

consists of two parallel facing walls, measuring 0.58 and 0.59 m, cut through with

transversal walls to form caissons, much like the early wall. The transverse walls are no

more than 0.22m wide, and frame rubble-and-concrete-filled caissons, which are no more

than 2 m wide. At the base, the wall is between 2.36 and 2.38 m thick.[237] The original

height of the wall is unknown. The tallest section is 3.9 m high.

Dating

The sculptures reused in the foundation give a rough idea of the date of this

section of the wall. The latest sculptures, some corbels carved with figures and

decoration, are dated to the beginning of the second century on the basis of style.[238] This

vegetal style, known through originating in Narbonne and Nîmes, spread through Gaul

around the beginning of the second century.[239] The earliest pieces found in the context of

the wall, which seem to be from a group of similar funerary monuments that were located

just outside the Porte Narbonnaise, date from the middle of the first century, showing a

remarkable homogeneity in the sources of these pieces.[240] The spolia suggest a *terminus*

pro quem of sometime in the late second or early third century, but an archaeomagnetic

investigation of a large sample of tiles returned two dates: 190 and 275.[241] Scholars have

thrown out the early date because it does not fit with the historical circumstances of the

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which would require working with tiles.
237   One section of the wall is only 1.75 m thick, but Labrousse and Badie (1996, 127) suggest that this
        was altered when this wall was incorporated into a foundry during the French Revolution.
238   Baccrabère 1974, 19.
239   Hatt 1951, 134.
240   Baccrabère 1974, 19.
241   Ibid, 20.

late second century. While both dates are at present certainly possible, the later date seems better in light of evidence of new fortifications from other Gallic cities at this time.[242]

There is only one literary reference to the walls of Toulouse from any period. Ausonius, who writes so well about his homeland, mentions Tolosa and "coctilibus muris" (*Ordo nob. Urb* 19.99), or burned walls, referring to the baked tile surrounding the city. This reference suggests an approximate *terminus ante quem* for the construction of either set of walls at Toulouse in the middle of the fourth century. While more scientific testing has provided better knowledge of the walls and their dates, Ausonius' poem and the "coctilibus muris" still make for a beautiful image.

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242   See supra, pp. 82-7.

CHAPTER 4

Gallic Fortifications in Context

Early Roman Walls in South Languedoc

There is some evidence, both direct and indirect, for republican walls in south

Languedoc. Of the three largest cities of this region, only Toulouse has definitive proof

for a circuit constructed in the first century C.E. Archaeological and literary evidence at

Narbonne suggests the existence of a wall from the late second or early first century

B.C.E., but no significant portions have been discovered. At Carcassonne, there are

traces of a pre-third-century *vallum*, but the lack of collaborating evidence makes any

conclusion doubtful. Comparison of the walls at Toulouse and Narbonne, the most likely

candidates for early fortification in this region, suggests several trends.

The early walls at both cities enclose a very large area. The walls at Toulouse

encircle an area of 90 ha, nearly 1 km square, and run about 3 km in length overall. The

area enclosed by the probable extent of the walls at Narbonne is between 80 and 100 ha

and their length would have run between 2.4 and 3.5 km.[243] Different methods were used

in construction of both circuits.   It is hard to determine if this structure found at the

boulevard de 1848 in Narbonne was earth and wood or stone. It is clearer that this

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[243]   The considerable variation here comes from the Robine, which may have bound one side of the
city. It is not known if the riverbank would have been fortified, although the early walls at
Toulouse did not run along the water.

fortification is 12-15 m in width. However, it is unclear if this width is one single *vallum*,

or a protective ditch or both. The early walls at Toulouse are better-known. They were a

homogeneous construction in opus vittatum mixtum and opus testaceum styles, resting on

a foundation of approximately 1 m deep. The walls are, on average, 2.4 m thick. The

entire circuit is arrayed with 50-60 circular towers, which stand 35-45 m apart. Toulouse

has at least one monumental gateway at the Place du Capitole, which is a square

gatehouse flanked with two U-shaped towers.

Early Roman Walls in Gallia Narbonensis

There are a number of other Caesarean or Augustan colonies that are said to have

been fortified at or near the time of their establishment: Aix-en-Provence, Arles, Fréjus,

Nîmes, Orange and Vienne.[244] Each of these enceintes is different, but all show some

general similarities characteristic of early Roman walls.[245]

At Nîmes, approximately 150 km northwest of Narbonne, the walls are dated to

the Augustan period largely on the basis of an inscription on the Porte d'Auguste.[246] The

walls run nearly 6 km and enclose a large, irregular area of 220 ha.[247] They are

constructed using *petit appareil* facing on a rubble and mortar core and average 2.5 m

thick. The number of towers is debated but the most recent estimate is 43, excluding gate

244   Johnson 1983, 14-6; Cleary 2003, 74-5.
245   Dating these early walls to the Augustan period is often problematic without solid evidence.
       Many of these fortifications are dated only on comparison and historical context, which is often
       less than certain. While they do make for good comparative Augustan sites, they will not be
       considered here. Instead, I will focus on those with a more solid chronology, Nîmes and Orange.
246   Varène 1992, 110. The inscription has been dated from 16-15 B.C.E.
247   Blanchet (1907, 208) estimates 320 ha. The most recent work by Varène and Bigot (1992, 108-9)
       argues for the smaller 220 ha.

towers.[248] These towers are circular and project almost completely in front of the curtain front. The Porte d'Auguste, the main gateway into Nîmes, is a gate with no inner court behind the façade that was constructed of *grand appareil* and covered with cornices, moldings, architraves and pilasters.[249] The main building is flanked on either side by two projecting U-shaped towers constructed in the standard *petit appareil*.

Farther north, the walls at Orange are dated to the Augustan period on stratigraphic evidence.[250] Comparatively little is known about these fortifications. The best reconstructions indicate that the walls run about 3 km and encircle an area of nearly 70 ha. They are composed of *moyen appareil* faced rubble and mortar, of which *in situ* sections are is 2.07 m thick.[251] Five towers spaced from 50-80 m apart are presently known at Orange. While scholars have not speculated on the number of towers along the circuit, the length of the walls and the known spacing suggest that there were 40-45. One large gateway is also known. It has an inner court and is flanked by two circular towers projecting two-thirds in front of the line. [252]

These two well-dated examples of Augustan walls in Gaul have much in common with Toulouse and Narbonne. They are very large circuits. Nîmes is among the largest and Orange the smallest, but both still cover a significant area, especially compared to later Roman walls in Gaul. The towers are similar, both in number and how they were positioned. These examples are between 2-2.5 m thick. They all have at least one monumental gateway flanked by towers. There are a few differences among them, like

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248   Varène 1992,176.
249   Johnson 1983, 15. For a good plan of the gate, see Varène 1992, Fig. 12.
250   Magdinier and Thollard 1987, 90.
251   Ibid., 82.
252   Ibid., 79.

the facing work of the concrete core, but this can be attributed to preference or local material supplies.

The building of urban fortifications was imperially controlled, requiring at least the consent of the emperor.[253] These walls, dated to the period under Augustus, were a part of his urbanization and Romanization of Gaul. They would have been a hallmark of imperial patronage given to an esteemed city. The similarities of these fortifications may even indicate a unified construction program. This could suggest a roving band of engineers and/or workmen constructing walls across Gaul, or engineers similarly educated and dispatched to each city as necessary.

Late Roman Walls in South Languedoc

The later Roman walls in south Languedoc are much better attested and studied than these early examples. The walls at Narbonne, known through one *in situ* section and many excavations throughout the Cité, are dated to between 288 and 465, although the presence of a coin from before 260 suggests an earlier rather than later date.[254] At Carcassonne, there is no direct indication for the date of the walls. The Visigothic invasion would suggest a date before 462. A literary reference to Carcassonne as a *castellum* points to a date in the early fourth century, before 333. Archaeomagnetic investigation at Toulouse has returned dates of 190 and 275. Neither date can be

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253   Johnson 1983, 11; 114.
254   The issue of a coin's circulation lifetime is problematic, for certain. Many scholars point out the pitfalls of assigning date based on coins (e.g. Greene 1986, 54). However, small bronzes of Gallienus have been shown to circulate, in general, only into the mid-fourth century (Estiot 1996, 41; Geneviève 2000, 49). Bourne argues that the latest hoards containing this type of coin date from 310, futher indicating that this coin did not last long past the coinage reforms of 274 and 294. More likely than not this coin indicates a construction date no later than the mid-fourth century.

conclusively excluded, although similar fortifications throughout Gaul would suggest the later date. It seems most likely that all these walls were constructed sometime between the late third and mid-fourth centuries.

The late Roman walls at Ttese three cities show some similarities in the size of the circuits (Figure 53). At Narbonne, the late city walls ran a course of 1.7 km and enclosed 17 ha. At Carcassonne, they run 1.07 km and enclose 7 ha. At Toulouse, in contrast, the late walls did not change the overall course of the defenses, but continued the early walls. It did increase the size of the walls, which would have then run nearly 3.8 km, assuming the late fortifications covered the entire riverfront.

Construction methods in these three cities differ considerably. All employ a concrete core with some regular facing and range in thickness from 1 m to 3.68 m, with an average of about 2.5 m. All three have some mixed stone and concrete foundations, which vary from an estimated depth of 4-6 m at Narbonne to 1 and 2 m deep at Carcassonne and 1-2 m deep at Toulouse. The foundations at Carcassonne and Toulouse are composed largely of spolia. The walls at Narbonne are constructed with large *grand appareil* spolia blocks for facing. Carcassonne, not far from large limestone deposits, features small *petit appareil* blocks for part of the facing, which are between 0.1-0.2 m tall and 0.1-0.23 m wide, almost exactly the same size as the small blocks from the early walls at Toulouse. Carcassonne also features irregular tile courses. The tiles at Carcassonne are the same height as the tiles from the Augustan walls at Toulouse, 0.038 m, but are wider, 0.28 m versus 0.231 m. At Toulouse, with large clay beds near the Garonne, the wall above the foundations is an entirely tile-faced construction. The first

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variety of these tiles is nearly the same height and width as the tiles from the Augustan walls. The second variety is larger in height and width than the other.

The tiles at both these cities are regular enough to suggest some standard sizes. The tiles from Carcassonne and the smaller variety of tiles from the late wall at Toulouse are 1 Roman foot (0.28 m) wide with a few small variations. The tiles from the early wall at Toulouse and the other variety from the late wall are 0.05-0.06 m, almost 1 hand (1/4 foot), narrower than a standard foot. The depth of the tiles from the early wall and the smaller tiles from the late wall is 0.01 m short of a *pentadoron*, or five-hands (0.35 m).[255] The depth of the tiles from the late wall is 1 cubit, or 1.5 Roman feet.

These three cities are different also in terms of towers. Narbonne features semi-circular towers that are 9 m in diameter. Carcassonne has U-shaped towers which are 5-6 m thick. Toulouse, in contrast, has a number of contreforts, but no known towers in the late wall section.

Apart from their chronology, which is likely but not certain , there are few similarities among these three urban fortifications. Features they share include the relatively small size of Carcassonne and Narbonne, the average thickness of all three, and the foundation depth at Carcassonne and Toulouse. They also exhibit a surprising number of dissimilarities. This heterogeneity indicates, in contrast to Augustan walls, no overarching region- or province-wide construction program. It argues against the idea of a roaming band of imperial architects or army engineers. Rather, it seems that each city organized its own construction, using local resources and adapting as necessary.

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255   Adam 1994, 62.

Late Roman Walls in South Gaul

The number of late Roman walled cities in south Gaul is quite large.[256] In

general, many cities of southwest Gaul around the Rhône were already fortified in the

early Roman period, and did not construct new circuits in the late third century.[257] One

exception is Grenoble, whose walls are solidly dated to 286-305 by an inscription

dedicated to Diocletian and Maximian.[258] The walls run a roughly circular course of 1

km and cover an area of just under 9 ha.[259] They have a concrete core with rubble

(including much spolia) that is faced with large pebbles. They measure 4.5 m thick at the

base and 2.5 m thick towers the top.[260] There are about 30 semicircular towers along the

curtain, set about 25 m apart.[261]

The late Roman walls at Bordeaux, the capital of Aquitania, have been extensively

researched.[262] The walls are dated to the late third or first half the fourth century on

several types of evidence. Stratigraphically, the presence of two readily identifiable

sigillata pieces suggests a date in the later part of the third century.[263] Numismatically,

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256   Johnson (1983, 83) identifies 25 fortified cities in the two Aquitaniae, Novempopulana, the two
       Narbonesnses and Viennesios.
257   This is an oversimplification to be sure. There are many differing opinions regarding the re-
       fortification of the cities of Narbonensis during the late third century. Heijmans and Guyon (2006,
       60-70), who most recently re-examined the evidence for new or reconstructed fortifications for
       many cities in south Gaul, concluded that few, if any, were subject to any large-scale projects.
       There may have been some minor repairs, but the archaeological record does not show any major
       works. Accordingly, I will focus here on the best-dated examples of late third-century walls.
258   Butler 1961, 37.
259   Blanchet 1907, 150.
260   Ibid., 148.
261   Ibid., 149.
262   Blancht 1907, 166-171; Butler 1961, 28; Garmy and Maurin, 1996, 16-80.
263   Garmy and Maurin (1996, 75) identify these as a Hayes from 50 A and a intermediate form
       between Hayes 48 A and 48 B.

four coins of Claudius II provide a *terminus post quem* of 269.[264] Epigraphically, the

latest inscription from spolia incorporated into the walls dates from 258.[265] This

evidence, together with Ausonius's well-known celebration of the city from about 375,

suggests a date not later than the first half of the fourth century. The walls form a regular

rectangle, run 2.35 km and enclose about 32.5 ha.[266] The walls at Bordeaux are built on a

variable foundation and consist of a 6 m soubassement of *grand appareil* masonry, often

reused from various monuments. Above this ashlar masonry is *petit appareil* with

intermixed tile courses.[267] These tile courses are part of the facing and do not penetrate

the concrete core of the wall. The walls are, on average, 5 m thick.[268]

There were approximately 40 circular towers, 12 on the long sides and 8 on the short,

which were 9 m in diameter astride the walls and four larger corner towers.[269]

There are many other examples of identified third-century or late Roman walls in

Aquitania and Novempopulana, but none is well dated.[270] While it may be easy to group

these walls together with better-known examples of late third-century fortifications based

on a few similarities, it is misleading.[271] Such was the case with the walls of Saint-

Bertrand-de-Commings, which were considered contemporaneous with the other third- or

fourth-century walls of south Gaul.[272] Recent excavations have dated the walls to the

early years of the fifth century, still late Roman, but in a whole different group than the

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264   Butler 1961, 28.
265   Garmy and Maurin 1996, 75-6.
266   Maruin 1992, 366.
267   Garmy and Maurin, 64-69.
268   Ibid., 66.
269   Ibid., 69.
270   See Johnson 1983, Appendix 1.
271   Maurin 1992; Souilhac 1996.
272   Lot 1953, 161; Johnson 1983, 111.

late third-century fortifications.[273] Many of the late Roman walls in south Gaul may be

closely related chronologically, but without a more through examination of each city and

the available evidence for each date, it is not possible to group these cities together.[274]

The few well-dated examples of walls from the last part of the third century

suggest several trends about fortifications in this period. First, they enclose a smaller

area than Augustan walls, which enclose at least three times more area. Second, these

later walls employ spolia, sometimes in only the foundation and sometimes in the lower

courses of the wall. Third, they are on average almost twice as thick as Augustan walls in

Gaul, 5 m compared to 2.5 m.[275] Fourth, they are generally (with the exception of

Bordeaux) irregularly shaped, often conforming to some geographic feature.[276] Lastly,

they all have projecting towers that are regularly spaced along the circuit. The urban

fortifications in south Languedoc show some variations in these five aspects as well.

With the obvious exception of Toulouse, these three cities enclose a relatively reduced

area. All employ spolia in their late Roman walls and all are irregularly shaped.

However, the walls in south Languedoc are relatively thin compared to other third

century walls, the thickest point measuring only 3.68 m. While Narbonne and

Carcassonne have projecting towers, semi-circular and U-shaped, respectively, the late

Roman section at Toulouse does not. Overall there is much variation in the urban

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273   Wood 2002, 297.
274   Johnson (1983, Fig. 42) has attempted such a grouping on a provincial scale, grouping cities based
       on construction similarities. Johnson (1977, 222) then uses these similarities to extrapolate the
       dates from a well-dated site to an unknown site.   This approach is problematic because there is no
       indication that walls built in the same style, even if in the same region, are contemporaneous
       (noted by Cleary et al. 1998, 353), but also because of the significant number of differences
       between "like" fortifications.
275   Butler 1961, 44.
276   Johnson 1983, 111-2.

fortifications built in south Gaul at the end of the third century. Even those features

which are generally present do not always apply at each city.

Late Roman Fortifications in North Gaul

A number of enceintes were built in the northern provinces of Gaul and the

Rhineland in the late third or early fourth centuries, but fortification of this region was

much different from that of south Gaul.[277] While there were a number of civilian towns,

many settlements, like Cologne or Strasbourg, are better understood as forts.[278] While

these fortress defenses are not completely dissimilar from urban defenses in other parts of

Gaul, they are distinct enough to warrant their own extensive study.[279]

One civilian city in the province of Lugdunensis Prima, in central-east Gaul, that

presents an interesting comparison is Autun. It is surrounded by an early wall, one that is

contemporaneous with its foundation under Augustus.[280] This lozenge-shaped early

enceinte runs nearly 6 km and encloses an area of just under 200 ha.[281] It is 2.5 m thick

and composed of large stones in the bottom levels topped with *petit appareil*.[282] There

are 54 towers along the wall and two monumental gateways flanked by double towers.[283]

In many ways, this early wall resembles other Augustan walls in south Gaul. At the end

of the third century, a wall was built across one corner of the lozenge, creating a new,

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277   Johnson 1983, 82-104. Again, the chronology of these sites is very much questionable and based off surprisingly little evidence.
278   Butler 1961, 34-35.
279   See Lander 1984, Von Petroikovits 1971.
280   Johnson 1983, 84.
281   Blanchet 1907, 15.
282   Déchelette 1931, 339.
283   Blanchet 1907, 15.

roughly triangular circuit.[284] This mix of old and new fortifications runs just 1.3 km and

encloses an area of 10 ha.[285] While little is known about this new wall section, published

reports mention that it contained much reused material.

Another example of northern civilian defenses is Trier. The walls of Trier are not

clearly dated. The *terminus post quem* is provided by a portion of the wall that is built

over a cemetery that was used through the second century. The *terminus ante quem*

comes in 353 when the city's gates were shut to Decentius, the brother of the usurper

Magnentius.[286] The walls run over 6 km and enclose 285 ha. The walls are faced with

newly carved *moyen appareil* and are slightly less than 3 m thick.[287] An unknown

number of towers, 8.5-10.5 m in diameter, stood along the wall.[288] There are at least four

gates, two of which are monumental, similar to the surviving Porta Nigra.

No clearer picture of late Roman defenses in Gaul emerges. Autun very clearly

features a reduced enceinte constructed in part from spolia at the end of the third century,

which fits with the general opinion about late Roman fortifications.[289] The walls at Trier,

which might be somewhat earlier than late third-century, do not. They do not consist of

any reused material and enclose an extremely large area. Autun is more in line with the

late Roman fortifications of south Languedoc, but Trier, like Bordeaux, indicates that

there is more to late Roman fortifications than just smaller circuits. The extensive

circuits at Autun and Bordeaux, both provincial capitals, may suggest that only important

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284   Johnson 1983, 84.
285   Blanchet 1907, 283-4.
286   Wightman 1970, 93.
287   Ibid.
288   Butler 1961, 38.
289   The so-called Wheeler's axiom: "that Roman town walls built of new material and enclosing a large area are early […], whereas walls built of re-used material enclosing a relatively small area are late." (Wheeler 1926, 191)

cities received large walls in the late Roman period. However, too few well-documented Roman walls have survived from other capitals like Lyon or Rouen, to be certain. Narbonne, the capital of Narbonensis, did not have a large late third-century enceinte.

Overall, this evidence shows that a large number of different urban defenses were built in the late third and early fourth centuries throughout Gaul. While this overall number might be smaller than many scholars have assumed because of problems of chronology, it is still significant.[290] Pliny and Strabo together list 90 *civitas*-capitals for all of Roman Gaul in the first century. The *Notitia Galliarum*, probably from the late fourth century, lists 113.[291] These do not constitute an exhaustive list of cities in Gaul— Carcassonne, for example, does not appear in the *Notitia*—but they give an idea of the largest or most important. Increased fortification building after 276 must have affected a large percentage of those cities, especially those previously undefended.

The wave of construction was not limited to Gaul. The well-known Aurelianic walls were built around Rome from the 270s onward.[292] Many cities in north Italy are thought to have been walled for the first time around this period.[293] Only Susa has any solid evidence of defenses, which comes from an historical event in which the gates were stormed, but not taken, in 320.[294] There are many walled cities in Spain, especially in the north, and several have been conclusively dated to the late third or early fourth

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290   Besides the seven covered here, Johnson (1983, Appendix 1) lists another 9 enceintes with relatively strong chronologies. While this 16 is a relatively low percentage of all Gallic cities, these are the only ones with good dating.

291   Bekker-Nielsen 1989, 99-107.

292   Todd 1978, 21-3.

293   Christie 2001, 112-114; Johnson 1983, 121.

294   Johnson 1983, 121.

centuries.[295] These walls are quite similar to those in south Gaul, all being 3-5 m thick

and employing many towers. They also show the same regional differences as the walls

in south Gaul: different construction methods, types of towers and area enclosed.

Additionally, a number of cities of the eastern empire were fortified or re-fortified in the

late third or early fourth centuries.[296] But the trend is not universal. In Britain only a few

cities have late third-century fortifications. Many more were built later in the fourth

century, although dating is not completely clear.[297] Roman Africa also seems to be

lacking a major building of enceintes at this time.[298]

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295 Fernánez-Ochoa and Morillo 2005, 316-27.
296 Nicea's walls were completed under Claudius Gothicus (Crow 2001, 90) and Philippi's were
     reworked (Provost 2001, 133.)
297 Hobley 79-80.
298 Sears 2007, 84; Daniels 1983, 13.

CONCLUSIONS

This overview of the extensive defensive project further shows the difficulties in defining a late-third century fortification. These examples from outside Gaul, while having points of similarity, differ somewhat from the fortifications already examined. Overall there is considerable variation on a regional or provincial level as well as across the empire.[299] Accordingly, discussions of the typical "late Roman wall" are bound to fall short.[300] There are too many variations and particulars to conclude anything but the most general overall definition of a reduced area, thicker walls, projecting towers and the use of spolia. Further, as constructional and regional groupings are problematic without good dating materials, the best approach for studying late third- and early fourth- century walls is a site-by-site analysis, where a thorough description and solid chronology can be established. And even with close examination, literary or archaeological, the date of construction can sometimes be narrowed only to a broad range.

Despite these methodological problems, late Roman walls still provide information about the state of defenses, the imperial administration and the economic vitality of the late third and early fourth centuries. They do this buy raising a number of

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[299]   This may be an indication of the lack of executive power throughout the empire in the traumatic days of the third century. But more reasonably, this variety probably indicates local preference or design. Augustan walls, which one would expect, as a part of his urbanization and Romanization of Gaul, to bear some imperial mark, show considerable variety also.

[300]   Butler 1961, 38-42; Butler 1983.

major questions about how they functioned in an urban setting, who built them and how they were built.

The first major question is how these fortifications functioned, or what rôle they played in the third-century city. It seems that they must have played a double part, both as a pragmatic defense for deterring enemies, but also as a symbolic structure. These walls would have been a defining mark of any city, especially considering the great amount of variety among them. Walls were imposing features in a landscape. They were the first thing a person approaching and the last things someone leaving would see. In fact, in depictions of towns in late Roman manuscripts and coins, the most dominant feature is the walls.[301] The walls and towers take up the majority of detail in these birds-eye views, with only a few occasional roofs peaking out, like Aquileia and Ravenna in the Peutinger Table.[302] In these illustrations, a city was its walls.

The walls also served as a very real and fixed boundary of the city. The walls may, like Toulouse, or may not, like the late walls at Narbonne, have corresponded with the sacred boundary of the city, but they were still an impediment to the free movement of people. There are numerous examples of extra-mural settlements in Gaul from this period, but life outside the walls, separated from the city, must have been different than life inside. Further, these walls, like the earlier Augustan examples, would have served as some marker of prestige, or at least strength. Despite the fact that they were widespread in this period, not every settlement had them. Only those who could afford the resources and could secure permission from the Emperor undertook such a monumental project,

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301   Johnson 1983, Fig. 16-7.
302   Narbonne and Toulouse both appear in this document represented by a simple symbol for an
          enceinte, two towers linked by a central block. See Chevallier 1976, 32-3.

which must have reflected upon their importance as a city. Urban fortifications served a symbolic function on several levels.

As practical defensive structures, these enceintes seem to have worked well. The wall at Narbonne, while damaged in the conflicts with the Visigoths, stood in many places until the sixeenth century. At Toulouse, the walls stood until 1229 when they were ordered to be dismantled. The situation is similar at Carcassonne where the standing Roman walls were repaired in the thirteenth century. These walls survived the vicissitudes of the early medieval period in a damaged, but standing state. Their construction method and design allowed this remarkable preservation. In south Languedoc the concrete and rubble walls were on average 2.5 m thick and further abroad some walls were nearly 5 m thick. All these walls feature externally projecting towers with wide windows for artillery, spaced relatively close together. Late Roman artillery, a type of *ballista*, is thought to have a range of 400 m, so these towers, spaced no more than 50 m apart, would have been very effective in repelling an advance. While the full elevation of these walls has not survived, they were probably at least 5 m tall. It is clear that they were strongly constructed to withstand some major attack.

The issue of whom they were intended to repel is problematic. These walls, built in the second half of the third century or the early fourth in the wake of the breakdown of the German *limes*, were constructed ostensibly as protection against future invasions. But these well-built walls seem excessive in countering German tribes, who were not interested in the long siege of a city.[303] The builders may have had this enemy in mind

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303   It is not clear that they could even besiege a city. The evidence connecting Germanic tribes and
        siege machines is not particularly clear. See Johnson 1983, 78-9.

when laying out the defenses, but their design hints at a more substantial threat. Had the walls all been built before 273, when the Gallic Empire was reunited with the central empire, the walls could be read as a political statement. Since the chronology is not that precise, such a view is not tenable. The question of whom these walls were intended to repel remains unanswered.

Another issue closely related to the attackers is who would defend the city during a siege. The first time the walls were used for defense was probably the fifth century during the invasion of the Visigoths, but some plan must have been in place for staffing the walls when they were built in the third. In Spain, the *Notitia Dignitatum* indicates the garrison of military units in or nearby two walled cities.[304] These units, presumably, would be responsible for the defense of the city. The *Notitia* lists no such military base anywhere in Narbonensis. The *Notiita Galliarum* lists one *castrum* in the province of Narbonensis, Uzes (*castrum Ucetiens*). However, this was probably more of a smaller town than a military installation.[305] There is no archaeological indication of any camps or forts in south Languedoc.[306] This largely is because Narbonensis was a senatorial province, meaning that it held no permanent army.[307] Without proper military support, provincial governors would have raised a local militia to man the fortifications in an emergency.[308]

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304   Fernánez-Ochoa and Morillo 2005, 332.
305   Harries 1978, 11-2.
306   There may have been a small hill-fort at Les Cluses near the Spanish border, but it seems that it was only used as a customs tax collection station (Cleere 2001, 93). Some evidence has been found of a military camp, the *castrum Bigorra,* at Saint-Lézer in Aquitania (Wood 2009). There has been unfortunately little research done on small settlments like these in south Gaul.
307   I do not exclude the possibility of a temporary army installation in the province. But without any evidence, it seems unreasonable to see any sort of military involvement with these fortifications.
308   Drinkwater (1983, 96) cites an instance where a local militia was raised to quell an insurrection.

The apparent lack of any military station in south Languedoc leads to the question of who built these walls. Some scholars working on a regional level in Spain and Gaul see evidence of army construction.[309] The lack of a military station in Narbonensis makes this idea improbable, unless there were a group of traveling army engineers. But there seems to be too much variety in the late walls in south Languedoc to suggest this type of military involvement. Other scholars have suggested a central imperial impetus behind this construction.[310] These arguments rest on presumed similarities between groups of walls, the fact that a wall construction required imperial approval and inscriptions at Trier and Grenoble that can be connected to the emperor. None of these possibilities is particularly convincing. The similarities between walls are mostly superficial and there are more differences than similarities. Imperial approval, especially in the confused days before the tetrarchy, was probably a mere formality and did not necessarily indicate imperial patronage. The inscriptions, while significant, are two examples (one at an imperial capital even) in a sea of walls and gates that are beckon for epigraphy. Instead of a military or imperial construction, these walls were built with local construction. The few similarities that exist on a wider scale can be understood as general building and fortification technology, which was then adapted to suit local topography and resources.

The use of spolia in reduced late-third century Roman walls has been used to show either the aftermath of the ruinous Germanic invasions or the political and

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309   Fernánez-Ochoa and Morillo 2005, 331; Maurin 1992, 383.
310   Butler 1961, 47; Johnson 1983, 114.

economic crisis of the third century, or some combination of the two.[311] It has been

commonly supposed that in response to threats of more invasions, cities, "ruinées par les

invasions barbares et par les exactions gouvernementales," built fortifications in haste,

using whatever material was lying around and closing in only the small area still

inhabited after the terrible third century.[312] However, this is simply not the case in south

Languedoc.[313] The walls in Narbonne, Carcassonne and Toulouse show no sign of being

thrown up in any haste. At Narbonne, the small remaining section shows reused blocks,

but ones that have been carved down to fit the regular courses of the wall. A hastily

thrown up wall would not have bothered with such niceties as regular, squared-off facing

stones.

Further, at Carcassonne there is decorative tile work, not only in the varied tile

courses, which may or may not be architecturally functional, but also in the blind tiled-

arches on the towers. The stones in the *petit appareil* facing are all new. The walls at

Toulouse are soundly made, with precise caisson construction and meticulous facings.

For these last two cities, spolia are relegated to the foundations, out of view. These

features do not provide any information on the exact duration of the construction, but

indicate careful, finished craftsmanship.[314]

As for the area enclosed by the late walls, the presumption that they only circled

the nucleus of the city is wrong, at least for south Languedoc.[315] The inhabited area of

Narbonne was probably never much bigger, with the exception of some villas, than the

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311   For the former, see Johnson 1983, 222; for the later, Manley 1942, 76.
312   Février 1980, 400. See also Drinkwater 1987, 212.
313   Not for elsewhere in Gaul; see Wightman 1981.
314   Wheeler 1926, 192.
315   I will not deny that is may be the case elsewhere, e.g. Autun.

area enclosed by its late walls. At Toulouse, for whatever reason, there was no need to build a reduced enceinte. This might indicate that the inhabited area of the city remained fairly constant through its first three centuries.[316] Carcassonne is less clear than these others. The upper town was always the center of the city, but without excavation it is unclear how far the lower city ever extended. In general, the picture from south Languedoc is not one of crippled cities huddling together behind "grimly-held redoubts."[317]

The construction of these fortifications did not alter the urban landscape of south Languedoc by much.[318] Toulouse had existed behind a wall for its entire Roman existence. Narbonne was probably never much larger than the Cité, meaning the layout of the town did not change significantly. At Carcassonne, the upper town, because of the geography, was always separate from the surrounding area. The walls solidified that separation, but did not change the urban fabric of the city.

While urban fortifications are just one small sliver of a much larger economic reality, they may indicate that the crisis of the third century was not as disastrous as has been proposed.[319] Some scholars already accept a more nuanced interpretation of the crisis, noting that despite the political turmoil at the end of the Gallic Empire, "all life was [not] eradicated in western Gaul" during these years.[320] Others go further to say that "la Gaule arrive au faîte de sa prospérité économique, commerciale et industrielle durant

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316   Further evidence for this view comes from de Filippo (1993, 191), who found that the space abutting the wall remained vacant through three centuries until a potter's workshop was set up in the fourth. This might suggest that the city actually expanded during the fourth century, pushing workshops all the way to the walls. See also Duby 1980, 400.
317   Drinkwater 1987, 212.
318   Christie (2001, 118-119) outlines some effects enceintes can have on urban development in a city.
319   For a darker picture of the third century, see Fiches 1996.
320   Galliou 1981, 273. See also Witschel 2004.

la second moitié du IIIè siècle."[321] Prosperity might be a strong word, considering the

relative lack of any other major public building, yet cities in south Languedoc were not

crippled during the third century. When a reasonable threat arose, the cities were able to

build solid, attractive walls out of both new and used materials, enclosing the area where

people had and would continue to live. These urban fortifications indicate, for south

Languedoc, no major crisis.

The late third-century walls of Narbonne, Carcassonne and Toulouse provide a

closer look at late Roman urban fortification in Gaul. This study, based on past

scholarship and the invaluable resource of first-hand investigation, reconstructs the

defenses and clarifies the poorly understood chronology of these sites. While each has

been previously researched, they have never before been considered as a regional group.

This synthetic approach provides a detailed and comprehensive look at the urban

defenses in south Languedoc and dissimilarities among them.

Overall, the enceintes offer a good picture of the wide variety in city walls,

especially in the late third century, and the problems with grouping them stylistically or

chronologically. There are a few general trends that apply to many, but not all urban

defenses. Still, they can shed light on the external hazards faced by the provinces after the

breakdown of the *limes*, their responses and the economic and political turmoil that swept

Gaul in the third century. At the same time, these fortifications show that south

Languedoc was largely passed over by these crises. The investment of considerable

resources to build these walls at the end of the third century attests a measure of viability

and resolution in the face of exterior troubles. In this context, the urban defenses of the

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321   de Laet 1944, 213.

late third century both indicate the complex reality of the period and help illuminate late

Roman economic development.

APPENDIX 1: Narbonne

A list of measurements and their averages from the surviving *grand appareil* stones around the city, listed south to north. Source: Personal Observation.

Location	Width (m)	Height (m)
South section of Archbishop's Palace (Ancient Blocks)	1.15-1.17	0.55-0.57
South section of Archbishop's Palace (medieval blocks)	0.4-0.77	0.25-0.35
Tour du Grand Escalier	1.04	0.54-0.58
North Section of Archbishop's Palace (Ancient Blocks)	1.15-1.17	0.55-0.57
Tour des Archives	1.10	0.5
South Pier of St. Eutrope	1.17	0.47
North Transept of St. Just Cathedral (probably medieval)	0.5-0.57	0.39-0.48
Lapidaire Museum (Inv. Num. 989, 964, 1474, 1474, 1503	1.01-1.13	0.51- 0.58
Average (excluding medieval)	1.12	0.53

APPENDIX 2: Carcassonne

A list of measurements and their averages from the northern section of the interior walls of Carcassonne. Source: Personal Observation.

Location	Materials	Height (m)	Width (m)
Tour de Saint-Sernin	Square Foundation Blocks (Late Roman)	0.5	1
Tour du Moulin du Connétable	Lowest Square Foundation Blocks (medieval)	0.47	0.23
Tour du Vieulas	*Petit appareil*	0.12	0.2
	Tiles	0.03-0.5	0.25-0.36
	Square Foundation Blocks (Late Roman)	0.33	0.32
Tour de la Marquière	*Petit appareil*	0.11	0.2
	Tiles	0.03-0.04	0.23-0.28
Tour du Moulin d'Avar	*Petit appareil*	0.14-0.20	0.10-0.11
Curtain Near Disappeared Tower	*Petit appareil*	0.1-0.11	0.15-0.16
	Square Foundation Blocks (Late Roman)	0.4	1.09
Averages	Square Foundation Blocks (Late Roman)	0.45	1.045
	Petit appareil	0.126	0.165
	Tiles	0.0375	0.28

APPENDIX 3: Toulouse

A list of measurements of materials and overall dimensions divided by location, from the *in situ* portions of the Augustan and Late Roman walls at Toulouse. Source: Personal Observation, Soutou 1969 and de Filippo 1993.

Square du Général Charles de Gaulle (Upper and Lower Sections)

Materials	Height (m)	Width (m)	Depth (m)
Limestone Blocks	0.085-0.105	0.115-0.14	0.24-0.25
Tiles	0.04	0.24	0.365 m (upper only)
Mortar		0.018	

Place St. Jacques (Curtain and Tower)

Materials	Height (m)	Width (m)	Depth (m)
Limestone Blocks	0.09-0.105	0.12-0.18	
Tiles	0.035-0.04	0.23	0.38
Mortar		0.02	

Curtain Wall	2.35 m
Tower Wall	1.1 m
Tower Interior Diameter	6.8 m
Tower Exterior Diameter	9 m

Sénéchausée Tower

Materials	Height (m)	Width (m)	Depth (m)
Limestone Blocks			
Tiles	0.035-0.04	0.24-0.25	0.23-0.25
Mortar		.02	

Tower Wall	1.24 m

Tower Interior Diameter	7 m
Tower Exterior Diameter	9.5 m

Hauts-Murats Tower (from Soutou 1969)

Tower Wall	1.36 m
Tower Interior Diameter	7.75 m
Tower Exterior Diameter	10.47 m

Rue des Renforts

Materials	Height (m)	Width (m)	Depth (m)
Tiles	0.035	0.215	
Mortar	0.015-0.02		

Rue des Fleurs

Materials	Height (m)	Width (m)	Depth (m)
Tiles	0.035-0.045	0.17-0.285	
Mortar	0.02		

Hôpital Larrey (from DeFilippo 1993)

Materials	Height (m)	Width (m)	Depth (m)
Limestone Blocks	0.11	0.2-0.3	
Tiles	0.04	0.22-0.24	0.36-0.38
Mortar	0.01		

Curtain Wall	2.4 m
Tower Wall	1.2 m
Tower Interior Diameter	7.9 m
Tower Exterior Diameter	10.3 m

Early Wall Average

Materials	Height (m)	Width (m)	Depth (m)
Limestone Blocks	0.1	0.176	0.245
Tiles	0.038	0.231	0.339
Mortar	0.019		

Curtain Wall	2.38 m
Tower Wall	1.23 m
Tower Interior Diameter	7.36 m
Tower Exterior Diameter	9.82 m

Late Wall from the ICT

Materials	Height (m)	Width (m)	Depth (m)
Tiles (type 1)	0.035	0.22	0.346
Tiles (type 2)	0.045-0.048	0.28	0.425-0.455
Mortar	0.02		
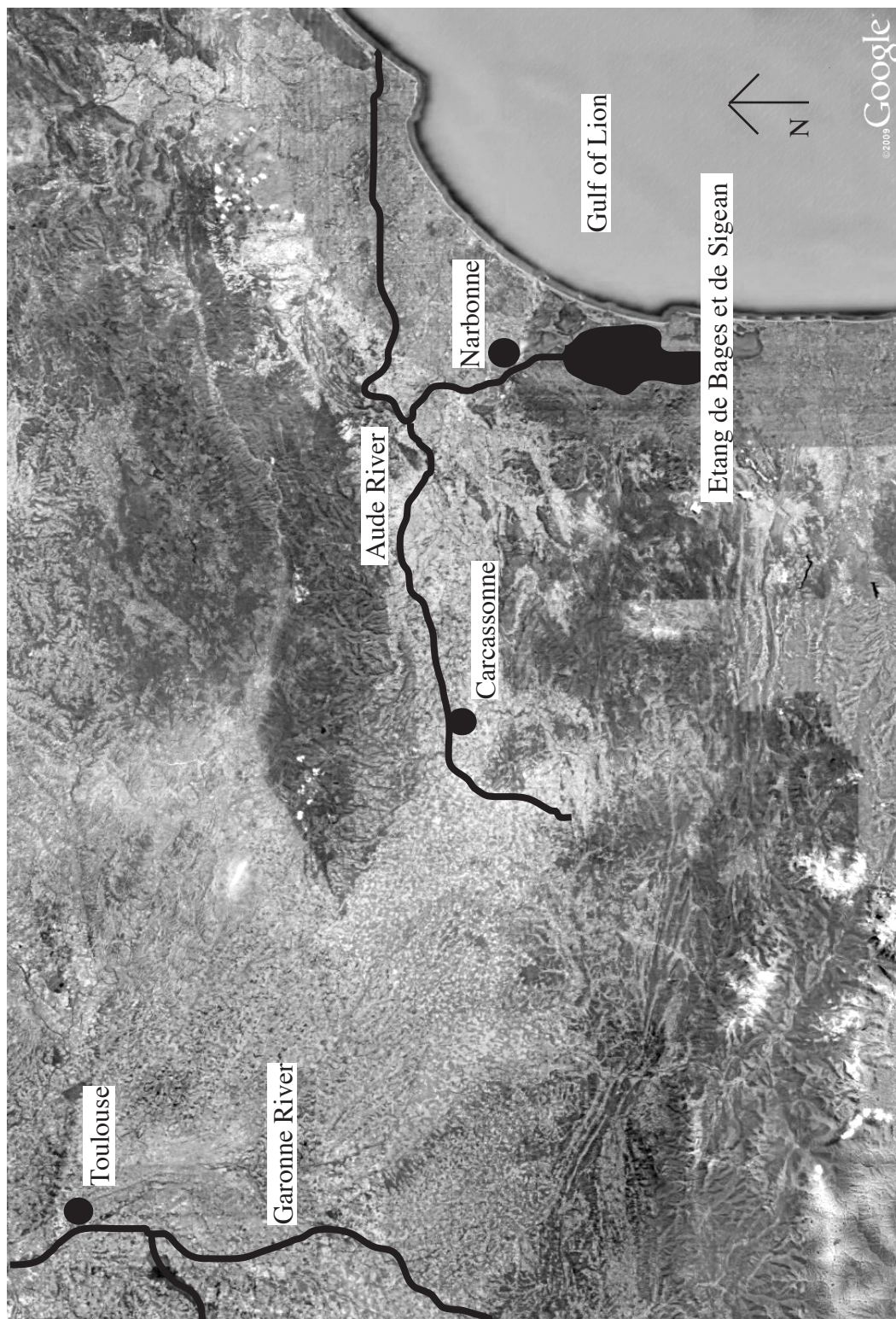
Figure 1
South Languedoc Region (Map by Google, Illustration by author)
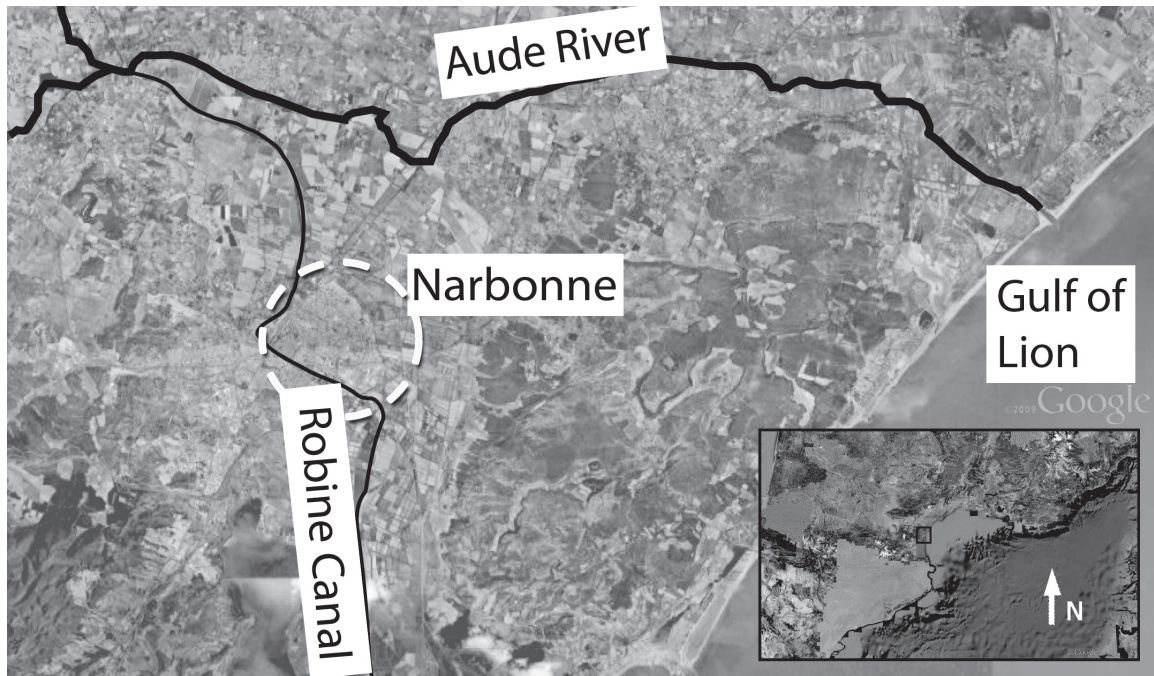
Figure 2
Narbonne Region (Map by Google, Illustrations by author)
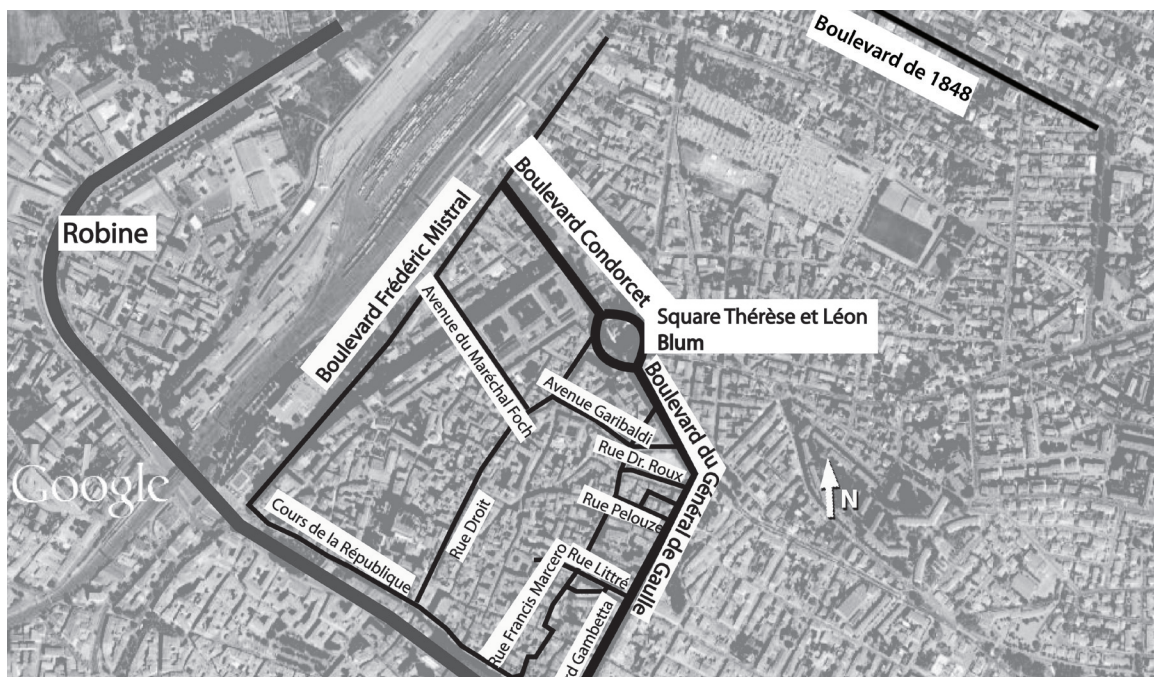
Figure 3
Modern Narbonne (Map by Google, Illustrations by author)

KEY

Survivng Wall Sections

Probable Wall Course

Uncertain Course

Capitoline Temple

N
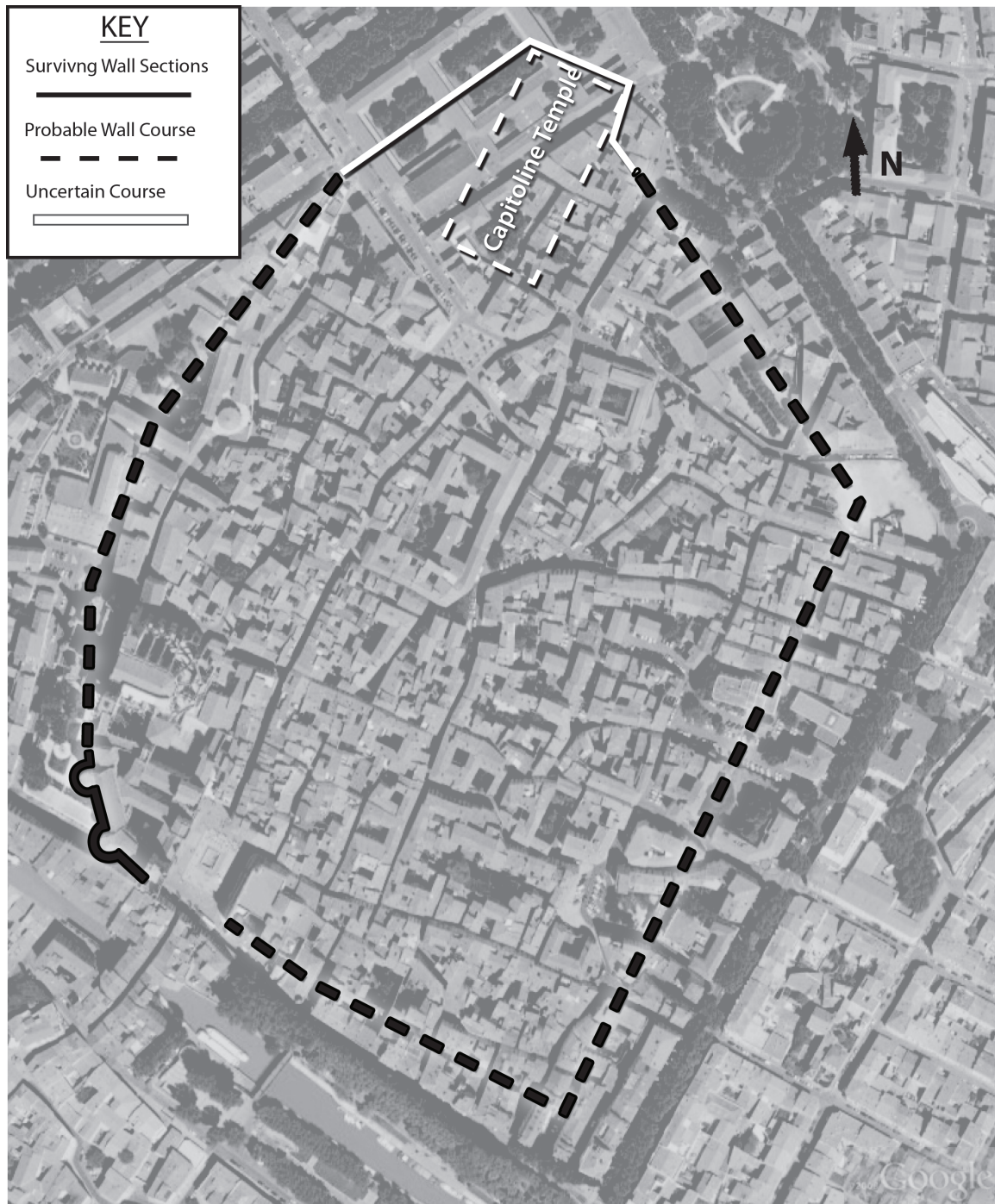
Figure 4
Late Roman Wall Trace (Map by Google, Illustrations by author)

105
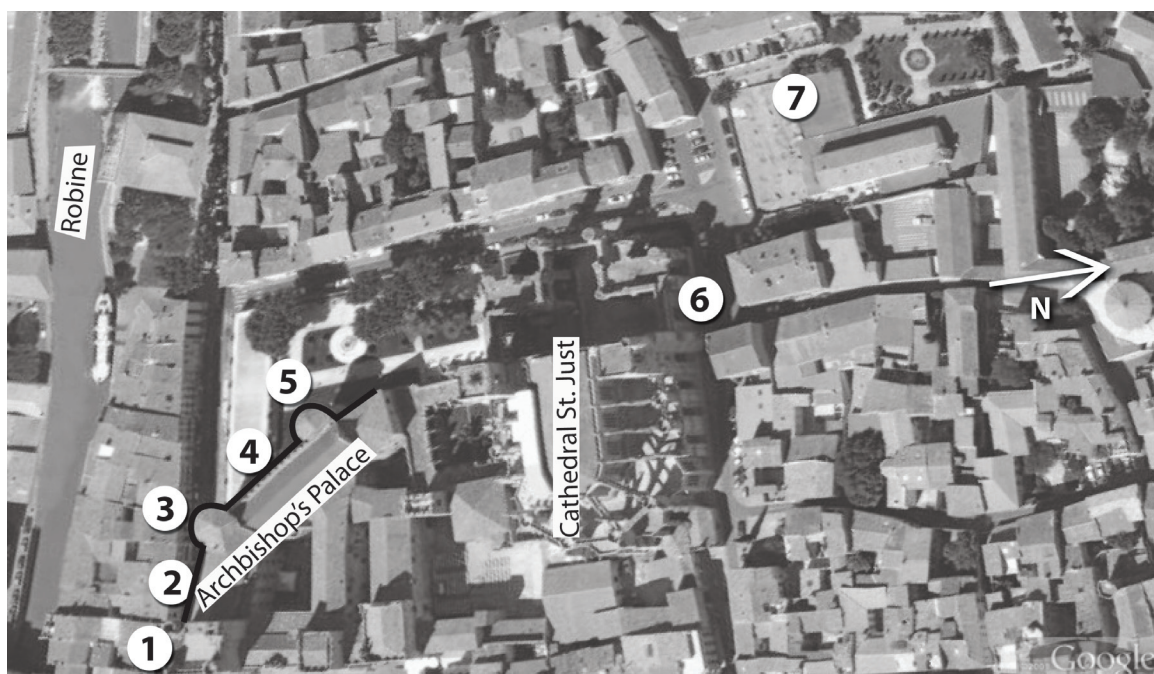
Figure 5
South Wall Section (Map by Google, Illustrations by author)

Figure 6
Exterior View towards North, Archbishop's Palace (Photo by author)

Figure 7
Archbishop's Palace North Section (Photo by author)

Figure 8
North Transept of St. Just Cathedral (Photo by author)

Figure 9
South Pier of Saint-Eutrope Court, View Towards West (photo by author)

Figure 10
East Side Find Spots (Map by Google, Illustration by author)

Figure 11
Outcropping of Wall in Post Office Courtyard (Photo by author)

Figure 12
Tour du Grand Escalier-East Side (Photo by author)

Figure 13
Tour des Archives (Photo by author)
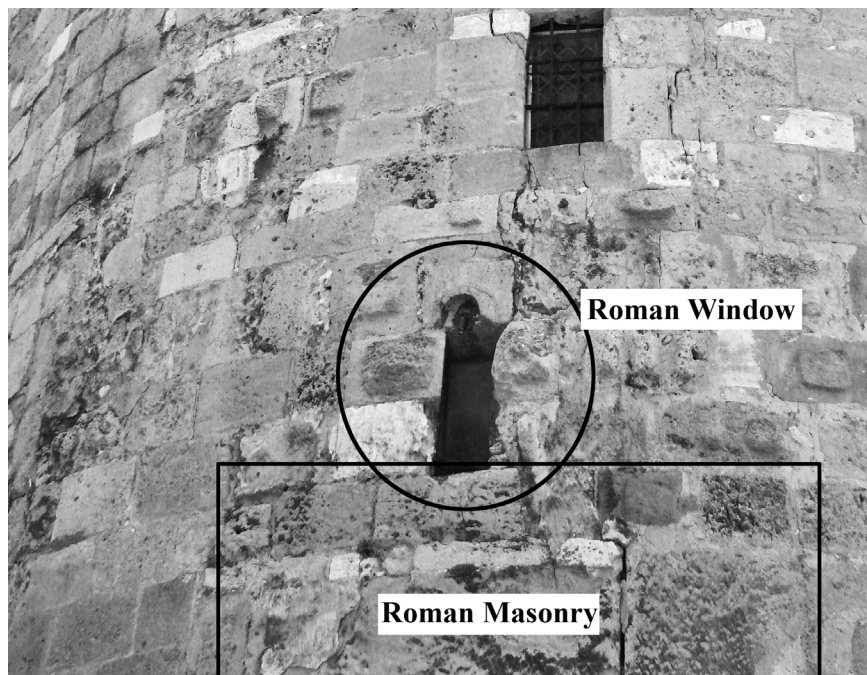
Figure 14
Tour des Archives-Window (Photo and Illustration by author)

Figure 15
Tour des Archives-Rear (Photo by author)

Figure 16
Spolia in the Lapidaire Museum (Photo by author)
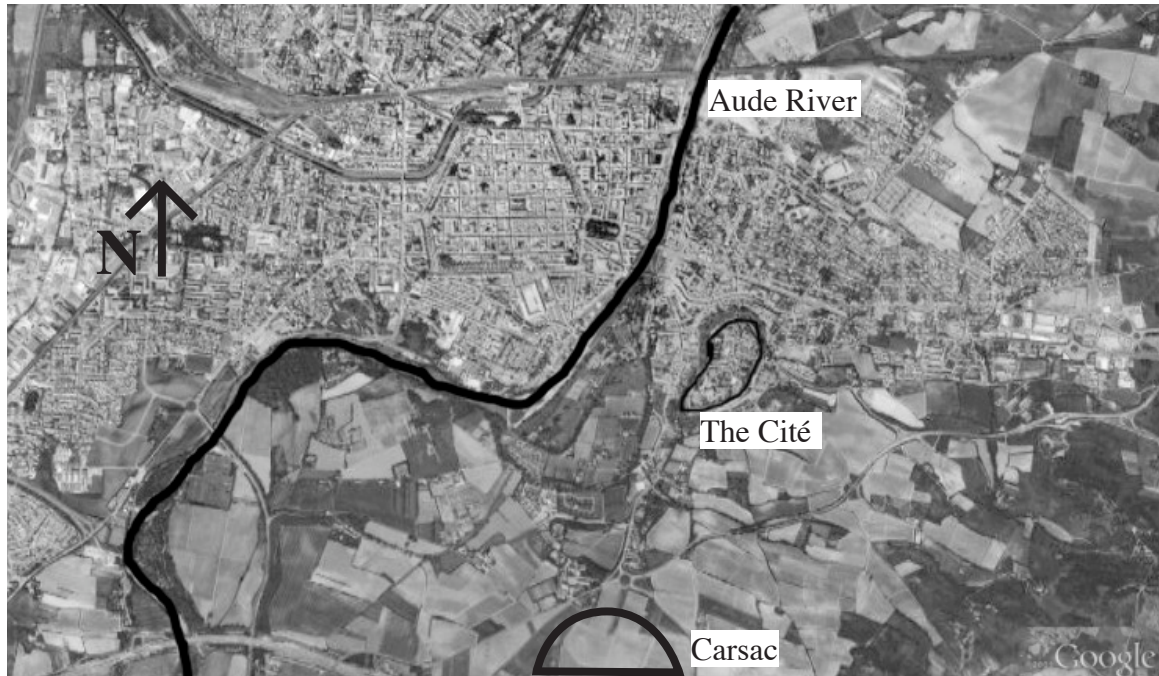
Figure 17
Carcassonne Region (Map by Google, Illustration by author)
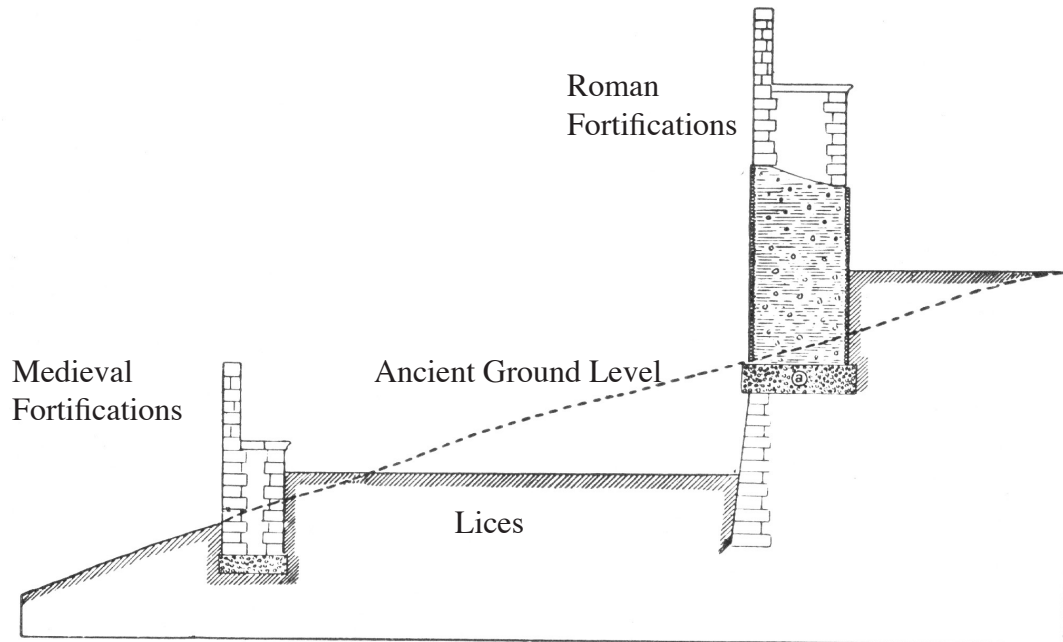
Figure 18
Construction of the Lices (Illustration from Poux 1923, Fig. 3; Labels
by author)

1.Near the Tour de Saint-
Sernin
2.Porte Narbonnaise
3.Tour du Moulin du
Connétable
4.Tour du Vieulas
5.Tour de la Marquière
6.Tour du Moulin d'Avar
7.Disappeared Tower
8.Tour de la Charpentière
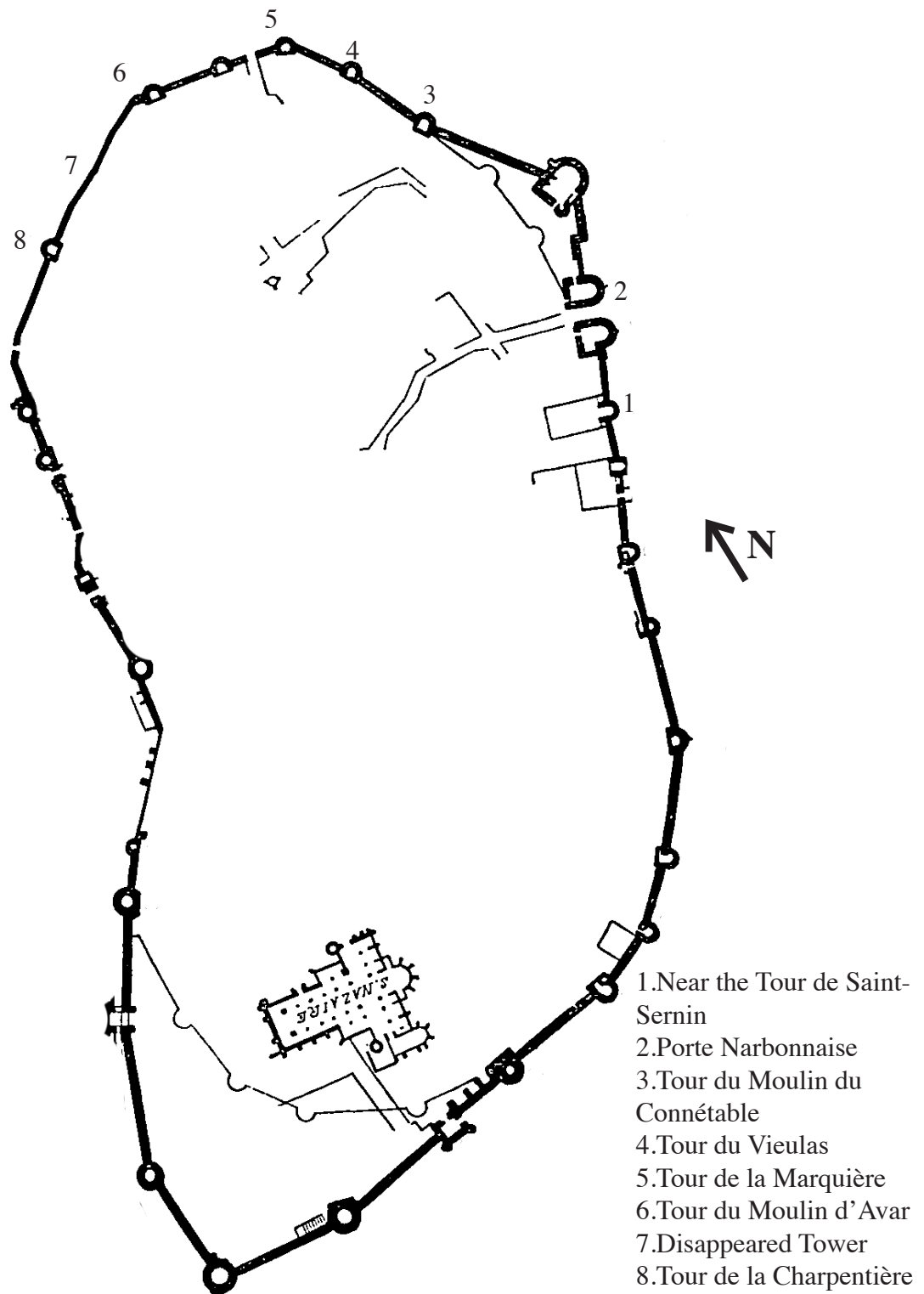
Figure 19
Map of the Inner Circuit Wall (from Viollet-le-Duc, 1866, Figure 16; Labels by author)

Figure 20
Curtain Wall near Tour de Saint-Sernin (Photo by author)

Figure 21
Tour du Moulin du Connétable (Photo by author)
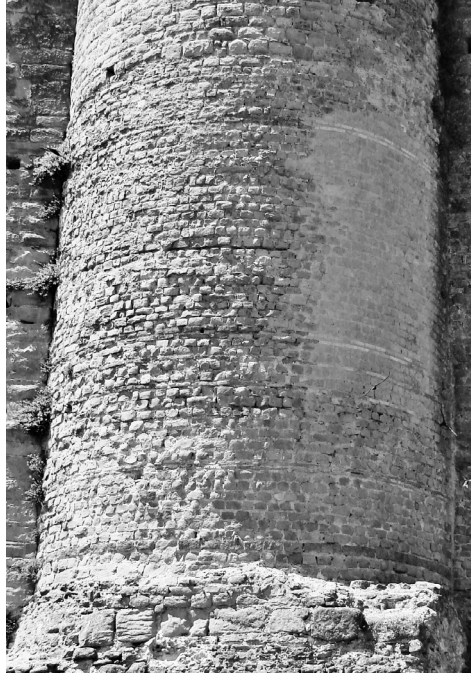
Figure 22
Petit Appareil at the Tour du Moulin du Connétable (Photo by author)

Figure 23
Tour du Vieulas (Photo by author)

Figure 24
Tour de la Marquière (Photo by author)

Figure 25
Tour de la Marquière-Detail (Photo by author)

Figure 26
Tour de la Marquière-Windows (Photo by author)

Figure 27
Tour du Moulin d'Avar (Photo by author)

Figure 28
Ashlar at the Tour du Moulin d'Avar (Photo by author)

Antique Section
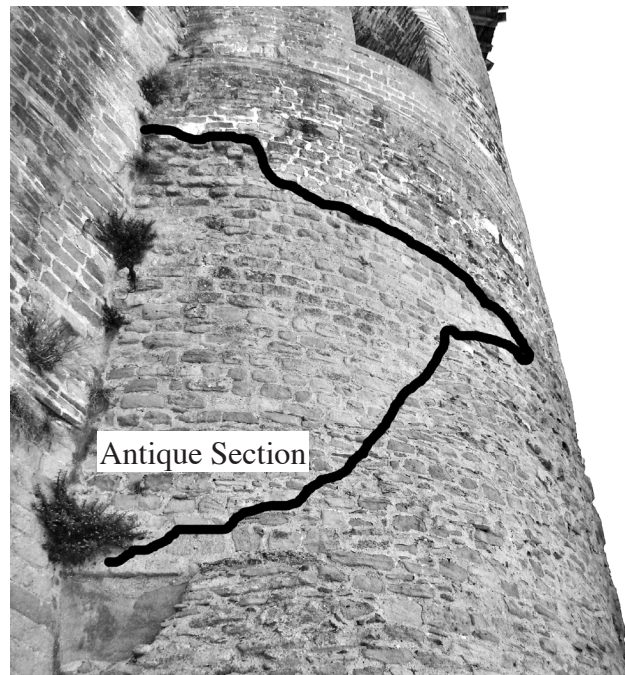
Figure 29
Petit Appareil at the Tour du Moulin d'Avar (Photo by author)
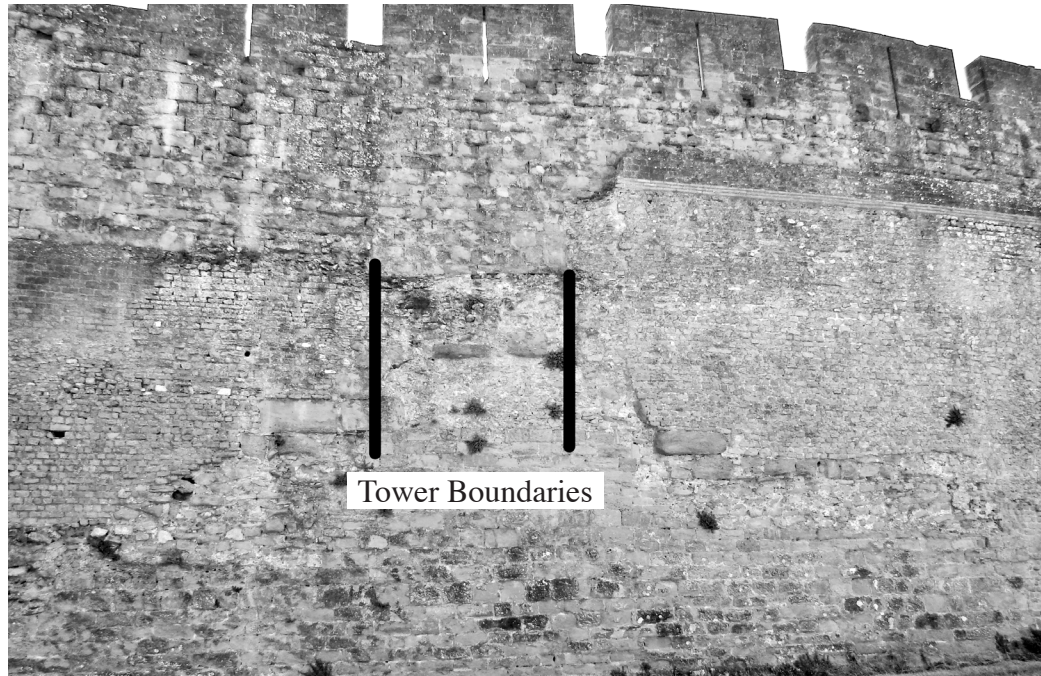
Figure 30
Disappeared Tower (Photo by author)

Figure 31
Tour de la Charpentière (Photo by author)

Figure 32
Porte du Bourg (Photo by author)
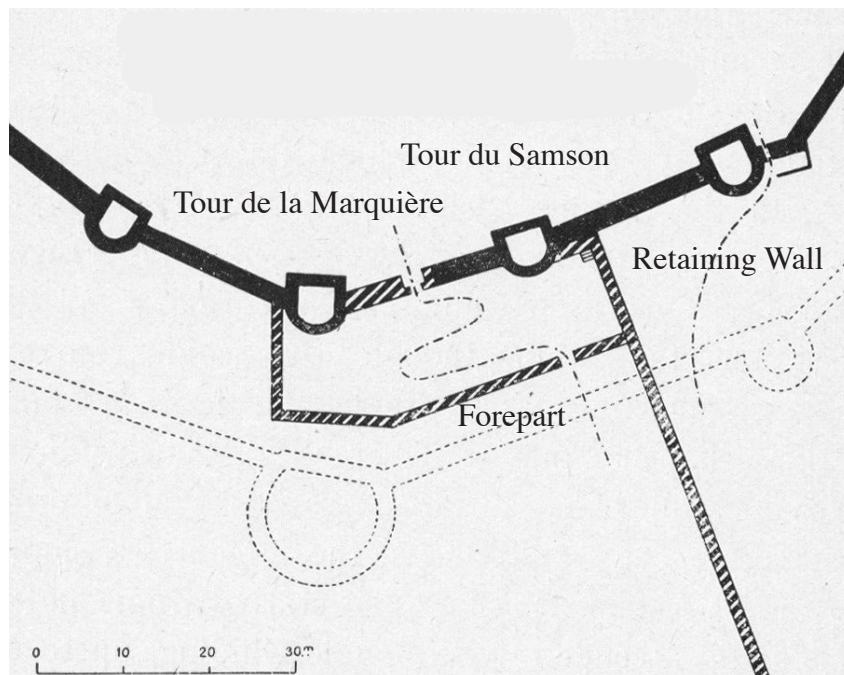
Figure 33
Reconstruction Drawing of Forepart of the Porte du Bourg (From Poux
1923, Fig. 35)

Figure 34
Bulge near Tour de Samson (Photo by author)
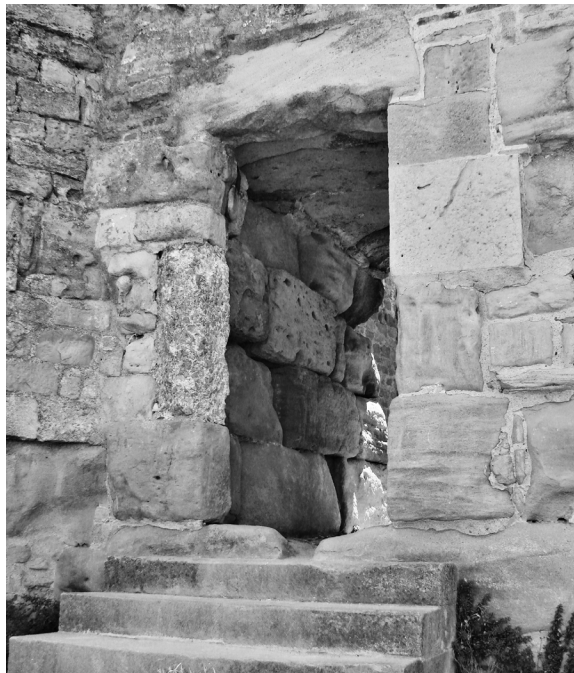
Figure 35
Posterne d'Avar (Photo by author)
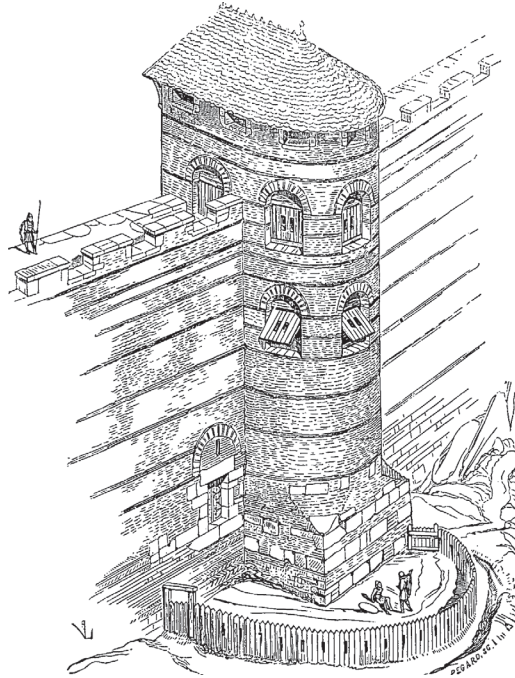
Figure 36
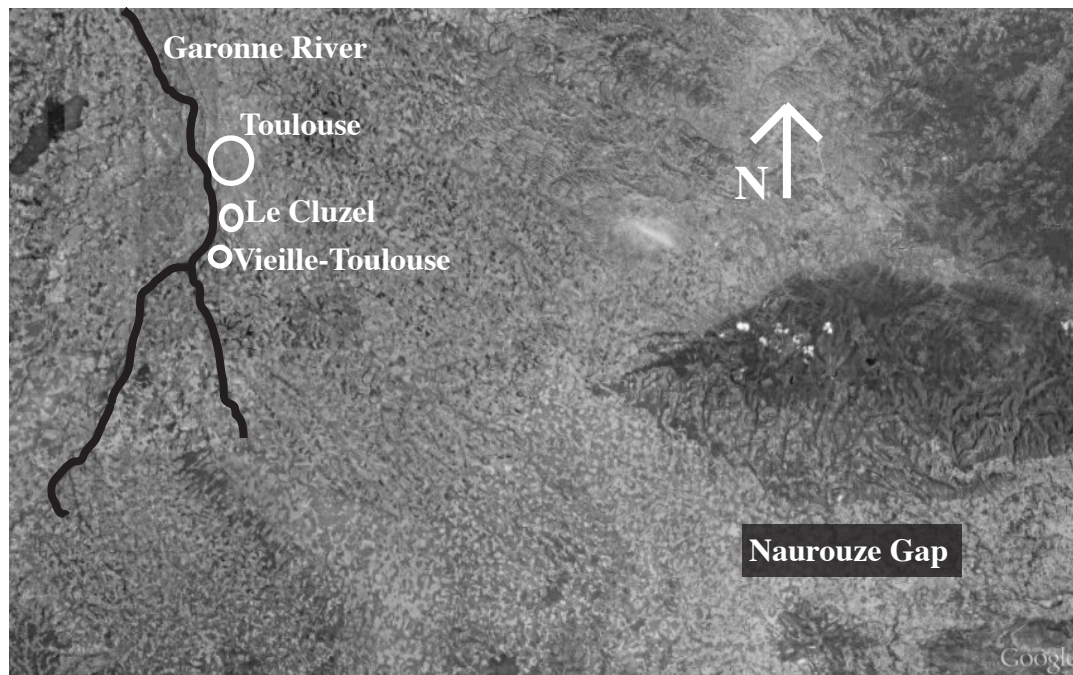Typical Antique Tower (From Viollet-le-Duc 1866, Fig. 1)

Figure 37
Toulouse Region (Map from Google, Illustration by author)
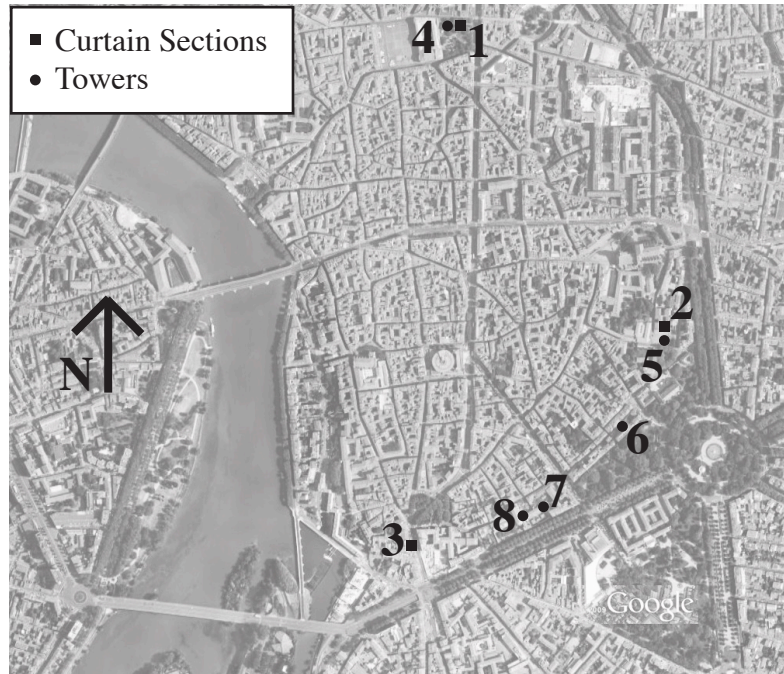
Figure 38
Toulouse Wall Fragments (Map from Google, Illustration by author)

Figure 39
Square du Général Charles de Gaulle-Lower Wall, View Towards
South (Photo by author)

Figure 40
Square du Général Charles de Gaulle-Upper Wall, View Towards
Southwest (Photo by author)

Figure 41
Place Saint-Jacques Curtain, View Towards West (Photo by author)

Figure 42
Curtain Cross-Section at Rue des Renforts, View Towards West (Photo
by author)

Figure 43
Square du Général Charles de Gaulle-Tower (Photo by author)

Figure 44
Place Saint-Jacques Tower (Photo by author)

Figure 45
Rue Jules de Resseguer Tower (Photo by author)

Figure 46
Exterior View of Hauts-Murats Tower (Photo by author)

Figure 47
Sénéchausée Tower (Photo by author)

———————————— Wall known through excavation or ancient maps

— — — — — — Unknown or supposed wall sections

Figure 48
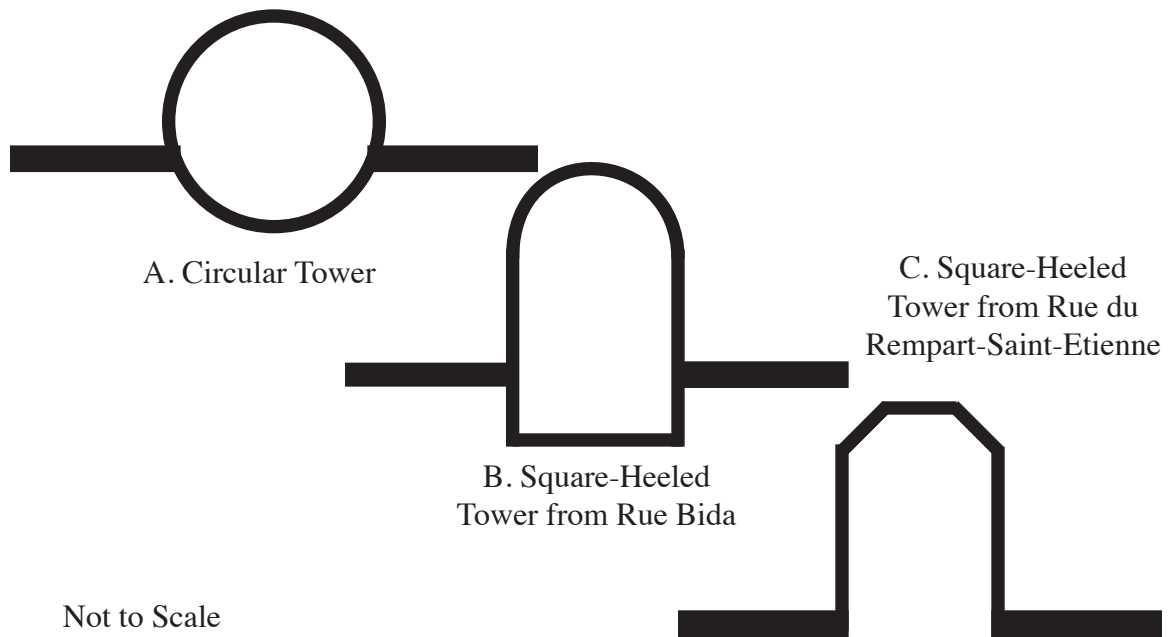Early Wall Course (Map from Google, Illustration by author)

A. Circular Tower

B. Square-Heeled
Tower from Rue Bida

C. Square-Heeled
Tower from Rue du
Rempart-Saint-Etienne

Not to Scale

Figure 49
Tower Types from Toulouse (Illustration by author after Labrousse
1968, Fig. 32)

11 Rue de l'Homme-Armé

ICT

5 Rue de
l'Homme-
Armé

13 Rue des Couteliers
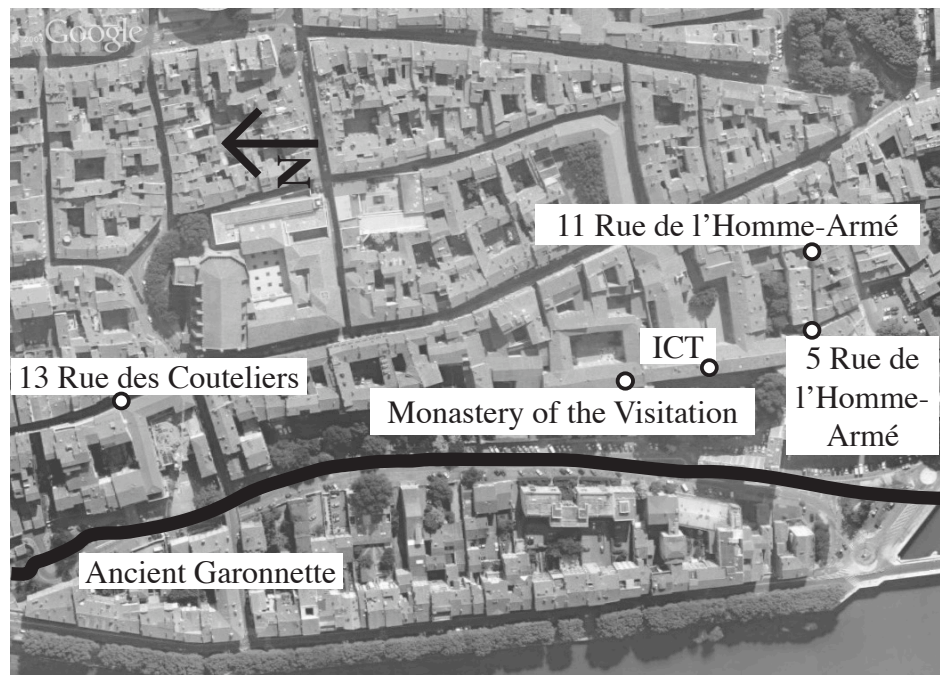
Monastery of the Visitation

Ancient Garonnette

Figure 50
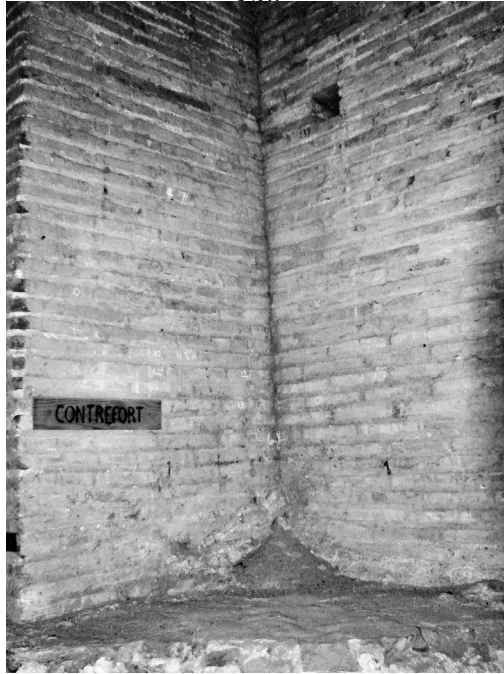Late Wall Sites (Map from Google, Illustration by author)

Figure 51
Late Wall Contrefort (left) and Curtain (right) at the ICT, View To-
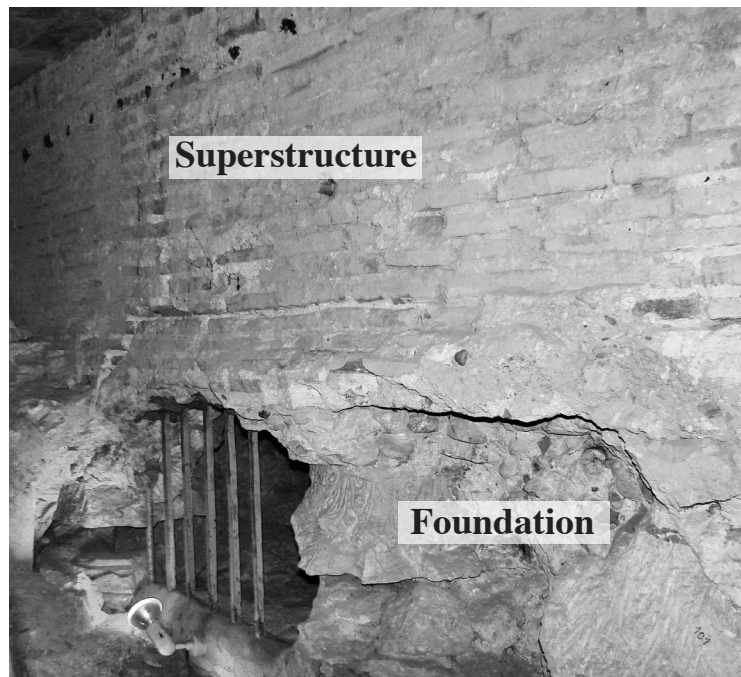wards Southwest (Photo by author)

Figure 52
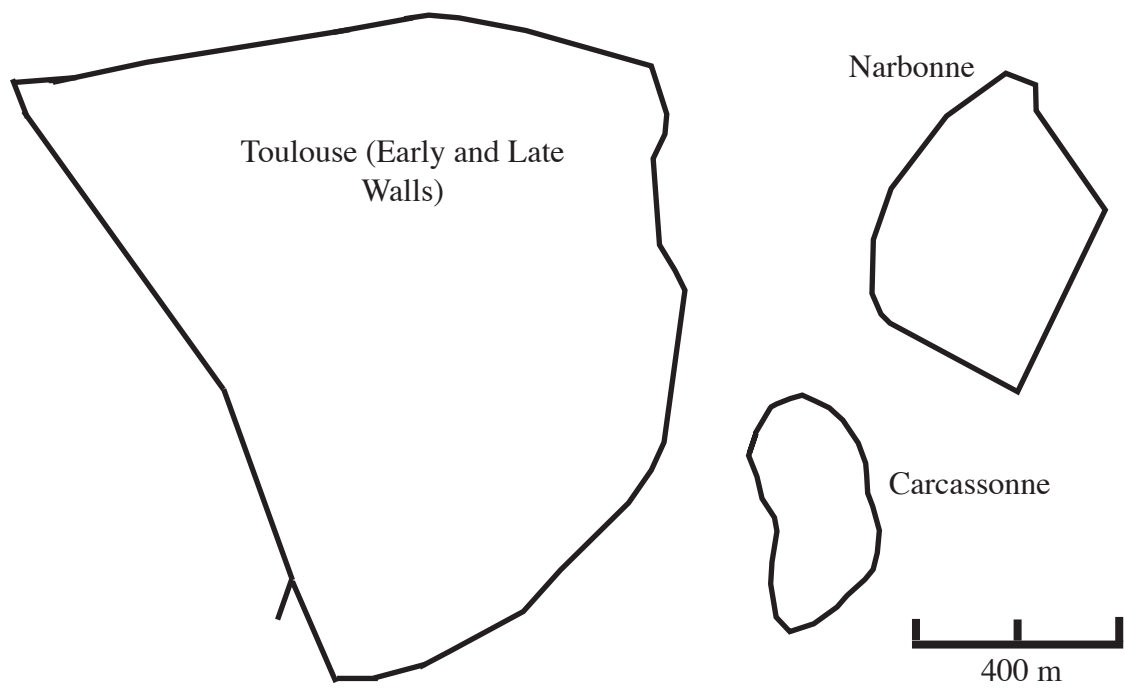Foundation and Superstructure of Late Wall at ICT (Photo by author)

Toulouse (Early and Late
Walls)

Narbonne

Carcassonne

400 m

Figure 53
Urban Defenses of South Languedoc (Illustration by author)

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