

A Study of Military Defense in the Ancient Chinese City of Chang'an During the Han Dynasty

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Abstract

The Western Han Dynasty's two hundred years were a critical stage in developing the capital of ancient China's unified dynasty. Since the 1950s, with the continuous archaeological excavation work in Chang'an City during the Western Han Dynasty, over half a century has passed and many material and cultural relics have been unearthed, greatly enriching people's understanding of the civilization of the Han Dynasty in China. Although scholarship was fruitful in the Han dynasty capital, the discussion of military aspects was weak. Therefore, the paper aims to explain the military defense of the capital of the Western Han Dynasty in the historical period and, to some extent, supplement the current academic community's shortcomings in the military field of capital research. Based on the above considerations, the methods used in this paper are bottom-up reconstruction of archaeological materials, top-down reconstruction of documentary materials, and a large-scale spatial review of historical geography. It will take Chang'an, the central city of China's Western Han Empire, as an example to analyze the development process of military defense and try to explore the success or failure of this city's military management. This study found that Chang'an City during this period became the focus of centralized defense with its complete political system and ritual system.

Keywords: Ancient China; Han dynasty capital; Chang'an City; Western Han Dynasty; military defense

Introduction

China established its first long-term stable regime during the Han Dynasty (Western Han Dynasty, 202 BCE to 8 CE; Eastern Han 东汉 Dynasty, 25 CE to 220 CE). The regime was run by a bureaucracy, including the emperor, with its capital in Chang'an. The Chang'an City of the Western Han Dynasty in China is located in the middle of the Guanzhong (关中) Plain, on the Longshou (龙首) Plain on the south bank of the Wei (渭) River, which is now the northwest area of Xi'an (西安) City, Shaanxi (陕西) Province. Before the Western Han Dynasty established its capital here, it was the site of Fengjing (丰京) and Haojing (镐京) of the Western Zhou (西周) Dynasty, located in the southwest of Chang'an City. After the Qin (秦) Dynasty established its capital in Xianyang (咸阳), Weinan (渭南) became its palace and garden area, where many gardens, palaces and temples were built. Many buildings in Chang'an City were built on this basis. During the

200-year development of the Western Han Dynasty, Chang'an City has always been the political, economic, cultural and military center of the time, and it was also a famous international metropolis in the world at that time. It has an important position and influence in Chinese history.

Since 1956, the Institute of Archaeology of the Chinese Academy of Social Sciences (中国社会科学院考古研究所) has been conducting archaeological excavations here for more than half a century, basically exploring the shape and layout of Chang'an City, and determining the city defense facilities such as moats, city walls, city gates, palaces, and arsenals (武库). During the exploration in the surrounding and outer areas, archaeological units at all levels also discovered the existence of bridges, cities, pass cities, beacon towers, warehouses, etc., which are important material and cultural relics reflecting the construction of the capital defense system of the Western Han Dynasty at that time.

This article analyzes the urban military defense of Chang'an City to better understand the changes in the capital and military defense of the Western Han Dynasty. By studying the military defense purposes of Chang'an City. Taking the capital's military defense as an entry point, historical and archaeological research can be deepened, and to a certain extent, it can make up for the current weaknesses in the military field of capital research in academia. Thus, fully understanding the role of military defense in the development process of Chinese history will help to better promote the academic community to grasp the connotation and characteristics of imperial civilization.

Components of the Capital Defense

In general, the Chang'an City defense during the Han Dynasty was thorough and complex, aimed at defending the city and its citizens against potential dangers and attacks. Under the Western Han Dynasty, Chang'an's city wall was practically square, with a perimeter of 25.7 kilometers and a surface area of around 34 square kilometers (Institute of Archaeology Chinese Academy of Social Sciences 2010,179). The southern, western, and northern parts of the wall were zigzagged, whereas the eastern wall was straight. The wall, made of plate-built rammed earth, was wide at the base and narrow at the top, with ditches dug around their exteriors. In addition, there were turrets in the southeast, southwest, northwest, and northeast parts of the city wall (Liu 1993,16).

Military garrisons were placed in the city to offer more security and military assistance. Two armies—the Northern Army and the Southern Army—were stationed in and around Chang'an during the Western Han Dynasty. The Southern Army's camp was situated outside the city at the southern city wall, while the Northern Army's camp was close to the northern royal entrance of Weiyang (未央) Palace (Institute of Archaeology Chinese Academy of Social Sciences 1996,636). Compacted-earth walls encircled the Southern Army's camp. It had multiple enclosed courtyards and a road leading to the Xi'an Gate, which was the gate closest to Weiyang Palace, on its north side. Troops were posted outside Xuanping (宣平)'s gate and at Shanglin Court (上林苑).

In addition, the Western Han Dynasty's main arsenal was stored in Chang'an City. A Xiliuying (细柳营) and an armory could also be found on the north bank of the Weihe (渭河) River and between Changle (长乐) Palace in the city's center and Weiyang Palace in the south (Liang 2015,27–34). A partition wall separated the armory's rectangular perimeter into eastern and western portions (Institute of Archaeology Chinese Academy of Social Sciences 2005,184), which were then further divided into several rooms. Based on several archaeological discoveries of weapons, each warehouse contained weapons that were classified into various categories. Beside the doorway, there was also a guard room.

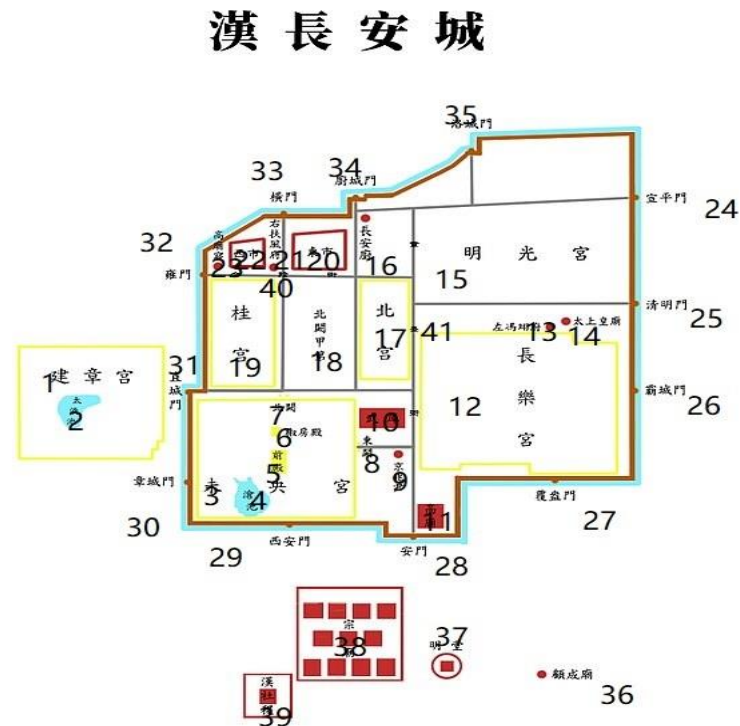


Figure 1: Plan of Chang'an City in the Western Han Dynasty and Xin Mang (新莽, 9 CE-23 CE).

(1.建章宮 Jianzhang Palace; 2.太液池 Taiye Lake; 3.未央宮 Weiyang Palace; 4.滄池 Cangchi; 5.前殿 Front Hall; 6.椒房殿 Jiaofang Hall; 7.北闕 Beique; 8.東闕 Dongque; 9.京兆尹府 Jingzhao Yin Mansion; 10.武庫 Arsenal; 11.高廟 Gao Temple; 12.長樂宮 Changle Palace; 13.左馮翊府 Zuo Pingyi Mansion; 14.太上皇廟 Temple of the Supreme Emperor; 15.明光宮 Mingguang Palace; 16.長安厨令府 Chang'an Order Mansion; 17.北宮 Northern Palace; 18.北闕甲第 Beique Mansion; 19.桂宮 Gui Palace; 20.東市 The East Market; 21.右扶風府 Youfufeng Mansion; 22.西市 The West Market; 23.高寢 Gao Shrine; 24.宣平門 Xuanping Gate; 25.清明門 Qingming Gate; 26.霸城門 Bacheng Gate; 27.覆盎門 Fuang Gate; 28.安門 An Gate; 29.西安門 Xian Gate; 30.章城門 Zhangcheng Gate; 31.直城門 Zhicheng Gate; 32.雍門 Yong Gate; 33.橫門 Heng Gate; 34.厨城門 Chucheng Gate; 35.洛城門 Luocheng Gate; 36.顧成廟 Gucheng Temple; 37.明堂 Mingtang; 38.宗廟 Jongmyo; 39.漢社稷壇 Altar of the Land and Grain; 40.夕陰街 Xiyin Street; 41.章台街 Zhangtai Street)

Source: Institute of Archaeology, Chinese Academy of Social Sciences. *Chinese Archaeology Qin Han Volume*. Beijing: China Social Sciences Press 2010, 177

During the Western Han Dynasty, the cities in the middle and lower sections of the Yellow River had particular military relevance due to their advantageous locations and control over important trade routes. Thus, these cities helped to defend Chang'an City during conflicts. The presence of these cities within the constrained boundaries of the Guanzhong region provided Chang'an with a geographic buffer against outside attacks and helped to weaken incoming enemy forces.

The military also took advantage of imperial tombs in these cities. Because of their utility in fending off the Xiongnu (匈奴)'s raid on Guanzhong and their protection of Chang'an during the early to mid-Han period, these tombs had some military and political defensive value. The Western Han Dynasty also included seven imperial tombs.

Controlling a city's bridges is essential for ensuring free movement during a conflict. Thus, bridges near important highways have considerable military value. Three bridges crossed the Wei River north of Chang'an during the Han Dynasty: the Zhongwei (中渭), East Wei (东渭), and West Wei (西渭) Bridges. Outside the Heng Gate (横门) was the Middle Wei Bridge, also referred to as the Cross Bridge. The Wangjiabao (王家堡) Ancient Bridge, which was part of the tomb project, was mostly protected by the construction of the East Wei Bridge. Although the West Wei Bridge was situated over the Wei River in Majiazhai (马家寨), it served a similar military function as the East Wei Bridge.

Canals can be used before or during a war to quickly deliver supplies to the battlefield. Transporting supplies via canals allows armies to maintain combat power because it supports a higher transport capacity than land transportation, is less expensive, is suitable for long-distance transport, and is suitable for long-distance travel. Hence, canals cannot be disregarded as a component of Chang'an's defense. On both banks of the Ba (灞) River, including the eastern side, which was connected to the Lintong (临潼) and Baqiao (灞桥) Districts and the Wei Canal (Li 2012, 5-14), there were remnants of canals. The Jing Shi Cang (京师仓) (Shaanxi Provincial Institute of Archaeology 1990,2), which originally served as a pier for the canal that connected to the Yellow River waterway during the Western Han Dynasty, was also close to a canal. A canal that connected the capital to the Zheng (徵) granary and ran from Xitou Village (西头乡) down the river was also still visible between the Wei and Luo (洛) rivers.

Warehouses can significantly increase an army's combat strength and function as a logistical support facility in times of conflict. During the foundation of the Western Han Dynasty, storage practices from earlier eras were still in use. It was emphasized that "storage is the grand destiny of the globe" and that the nation saw increasing its grain reserve as a fundamental obligation. Why not if there is more corn and money available? (夫积贮者，天下之大命也。苟粟多而财有余，何为而不成?) (Ban 1962,1130).

In preparation for emergencies, warehouses were constructed all around the nation during the Western Han Dynasty. Warehouses also served as military reserve centers to reinforce Chang'an's military defense and increase the army's combat power. While constructing Weiyang Palace, Xiao He (萧何? - 193 BCE) founded Taicang (太仓), the first national warehouse of the Western Han Dynasty. The Jing Shi, Yan Dong (盐东), and Shaanxi River Wharf Warehouses are only a few of the storage locations that have been discovered. Taicang served as the Western Han Dynasty's national storehouse. The imperial court also established sizable national warehouses like the capital warehouse and the Ganquan (甘泉) warehouse in the Sanfu (三辅) area for distribution (Liang 2015, 67-75), as well as additional warehouses like the Jia (嘉) warehouse, the Xiliu, the Ji Tian (籍田), the Yong (雍) (Institute of Archaeology Chinese Academy of Social Sciences 1996, 121-133), and the Zheng (徵) warehouses, to address the issue of food waste as a result of excessive accumulation. In this sense, warehouses had a social role but also served a military purpose. The construction of national warehouses helped supply the troops stationed at various points within Chang'an's defensive perimeter and supported the army's advance toward the Xiongnu.

In summary, outside the Chang'an City of the Western Han Dynasty, there was a moat that was a combination of artificial excavation and natural rivers, which surrounded the city. The moat was wide and deep. The rammed earth walls were tall and solid, and cleverly utilized the micro-topography and micro-geomorphology of the city. They were adapted to local conditions and fully considered military defense factors. The auxiliary facilities of the

city wall included corner towers, horse roads, barracks, and ring roads.

There were twelve gates in the city. Some of the gates had building auxiliary facilities near them, and some gate towers were built on the top of the gates. In addition to the gate soldiers, the city garrison troops also included the Northern Army and the Eight Colonel (八校尉) Battalions. They were powerful and were the main force of the Western Han Dynasty. The palace city represented by the Weiyang Palace was also heavily guarded. Not only were the defense facilities complete, but it was also guarded by the Southern Army, providing a reliable guarantee for the emperor's safety. The arsenal, Taicang and other facilities in the city were large in scale, storing considerable supplies, and played an important role in logistics support in the entire capital defense system. Their significance to the military defense of the capital cannot be ignored.

The Construction of the Capital's Military Defense

The Western Han Dynasty court began by focusing on two key areas: first, they invested a significant amount of labor, materials, and money into the construction of expansive, intricate urban defense facilities; second, they established a capital garrison with the urban and suburban areas of the capital city serving as the primary force of the national army in an emergency. The urban defense in Chang'an was more developed, and the city possessed a moat made of a combination of natural rivers and artificial trenches that closely paralleled the city wall. This moat could serve as the city's initial line of defense against an enemy attack. Archaeological evidence indicates that the moat south of Chang'an's city wall was not constructed near the city wall. However, keeping some distance between the two was important from a military standpoint. The large moat and gap between it and the city wall would considerably hamper the lethality of a projectile weapon during a siege campaign. The Chang'an city walls were also asymmetrical, with the exception of the east wall, which was comparatively straight. The south and north walls were particularly tortuous to construct, but all four walls contained turns and curves. In this sense, the structure of the walls was partly determined by the terrain and partly by considerations of military defense. The walls also had several defensive features, including turrets, horse paths, military barracks, and other structures that remain visible after more than 2,000 years (Xu 2013,37). Thus, Chang'an's wall could effectively defend the city.

The initial point of intense attack for an opponent is the city gate, making it the most important aspect of a city's defense (Xu 2010,360). Chang'an City had twelve gates, with gate towers outside and on the gates that helped protect the city from outside attackers during times of war. Gate management was stringent because gates were crucial to urban safety. To bolster military defense along the city walls, Emperor Wu 武帝(Liu Che刘彻, 156 BCE–87 BCE; ruled 141 BCE–87 BCE) of the Han Dynasty started stationing troops at the city's gates. The garrison in the capital, which was commanded by a lieutenant, served as the primary garrison in the cities. It was referred to as the "Northern Army" because it was positioned to the north of the Weiyang and Changle palaces. The Northern Army was the Western Han Dynasty's elite army and the core of the regular army. The city was able to manage the emperor's affairs and preserve imperial power thanks to this army, which provided security for the imperial court.

The Weiyang Palace, where the emperor resided, was central to Chang'an's defense strategy. Outside the Weiyang Palace, there were palace walls with towers at each of the four corners to secure the palace and heavy guards at the palace gates to deter intruders. Several tall structures inside the palace were militarily helpful because they provided a height advantage to defenses. The palace also had several below-ground levels that could be used for covert political planning or for hiding soldiers during emergencies. A portion of Weiyang

Palace was heavily defended based on its layout, design, and the different weapons discovered there. From the reign of Emperor Hui 惠帝 (Liu Ying 刘盈, 211 BCE–188 BCE; ruled 195 BCE–188 BCE) during the Western Han Dynasty, succeeding emperors used Weiyang Palace as their main hall, making it the most highly guarded military facility in Chang'an (Ban 1962,182).

The army of the guard was stationed in the southern part of Han Chang'an City; it was, therefore, also known as the “Southern Army” to distinguish it from the army stationed in the northern part of Chang'an. The Chang'an military treasury was large, protected by high walls and gates outside and guarded by special guards inside, and stored the country's fine weapons. It played a role in guaranteeing the security of the capital and the whole country. The Palace of Weiyang was tested in actual battles at the end of Wang Mang (王莽, 45 BCE–23 CE; ruled 9 CE–23 CE)'s reign and showed a relatively strong defense capability. In the early morning of October 1, the fourth year of Dihuang (地皇 23 CE) (the first day of the ninth month of the first year of Geng Shi 更始), the vanguard of the Green Forest (绿林) Army captured Xuanping Gate in the northeast of Chang'an City and engaged in a street battle with Wang Mang's army (Ban 1962,4190), which soon reached the vicinity of Weiyang Palace.

The defenders of Chang'an, led by ministers Wang Yi (王邑? -23 CE) and Wang Lin (王林? -23 CE), retreated to the Beique (北阙) to establish a defensive line. By evening, all the official residences in the city were occupied, except Weiyang Palace, which had not been captured. However, the next day, two teenagers living in the city—Zhu Di (朱弟, Date of birth and death unknown) and Zhang Yu (张鱼, Date of birth and death unknown)—gathered the people in the city to set fire in front of the door of the composition room (作室) and used a big axe to split the small door of the Jingfa (敬法殿) Hall. Wang Mang avoided the fire in the front hall of the Xuan Room (宣室), and the external forces were able to enter. It was not until the third day that Wang Mang died fighting with his ministers and palace guards at Jiantai (渐台) that the Weiyang Palace was completely conquered (Ban 1962,4190).

The favorable geographic setting surrounding Chang'an City during the Han Dynasty included several rivers, which acted as a natural defense against invaders. The Guanzhong Plain's cities prospered throughout the Western Han Dynasty, and strategically and militarily “important” cities were able to build a protective arch around Chang'an by occupying key transportation hubs and sites. The significance of the royal graves and cottages within this arch could not be overlooked. Moreover, Chang'an was militarily protected by important neighboring important locations, including Bashang (霸上), Ji Gate (棘门), Xiliu, and the Weishui Bridge. The emperor's mausoleum was mostly situated on the Xianyang plain, north of Chang'an, where the terrain was high, and there were built-in defenses. A new traffic pattern to Chang'an was eventually formed because of the tomb town's establishment on level land, which drew tourists to the city (Ban 1962,1642).

Several key places surrounding Chang'an were critical to its protection. Ji Gate, Xiliu, and Bashang were three key places in the vicinity of Chang'an City that controlled traffic into and out of the city. The Western Han Dynasty's Emperor Wen 文帝 (Liu Heng 刘恒, 203 BCE–157 BCE, ruled 180 BCE–157 BCE) oversaw a number of significant Xiongnu invasions that all posed a threat to Chang'an. To block the attacks, defenses were erected in the northern section of Chang'an City, Xianyang Yuan, and eastern Ba Shang due to the high elevation in these areas.

Due to the conflict at the end of the Qin Dynasty, the country was weak at the start of the Western Han Dynasty. The nation's strength and passive defense, especially during the reign of Emperor Wen, limited the country's policy of concession to the Xiongnu. During the

Western Han Dynasty, this encouraged the Xiongnu to commit border crimes nearly every year. The emperor and court of the Western Han Dynasty utilized the military installations in the northern periphery of Chang'an's defense, left over from the Qin Dynasty, and improved these installations in accordance with their needs to stop the Xiongnu from moving south and posing a threat to the capital city. These contain the castles of Yunyang (云阳), Zheng County (徵县), and Xiaoguan (萧关), as well as the Diaoling Pass (调令关) and Shimen Pass (石门关) (Qin 2006,75-78). These forts and passes served as military defense points and were well-placed along major north-south thoroughfares.

The Han Dynasty also had several passes that surrounded Chang'an City. The Han emperor established the Xin'an Hangu Pass(函谷关) by moving the Qin Hangu Pass 300 kilometers eastward to Xin'an (新安) in the third year of the Yuan Ding (元鼎114 BCE) (Luoyang Cultural Relics and Archaeology Research Institute & Xin'an County Cultural Relics Management Bureau 2014,3-28+2; Ban 1962,183). The Salt East Warehouse (盐东仓储) in the north and the ruins of the San Guan Pass (散关关城) in the south created a 60-kilometer-long military defense line (Luoyang Second Cultural Relics Work Team 2000,12-25+1). After that, the pass was moved even further east, creating a new defense line that was centered on the Han Hangu Pass. To the north of this line were the three passes of Tianjin (天井), Hukou (壶口), and Wujuan (五阮), and to the south were Yiyang (宜阳), Luhun Pass (陆浑关), and Xun Pass (勋关). As a result, the Western Han Dynasty's Chang'an enlarged its peripheral defense zone to the northeast, including what is now the province of Shanxi (山西). Hedong County (河东郡)'s influence over the defense of the modern-day Shanxi region was increased by the relocation of pass.

Xunyi County (栒邑县) and Qi County (漆县), two other cities on the northern outskirts of Chang'an's defense, were also of moderate importance. A military fortification called Qi County was built on the banks of Jing Shui (泾水) to prevent enemy incursions. Moreover, cities located on the western and northwestern edges of Chang'an's borders played a defensive role in guarding the capital. The old roadways were congested by Sanguan and Chencang (陈仓), who also guarded Hanzhong (汉中) and Xishu (西蜀). During the Qin Dynasty, the defensive line that ran from Lantian (蓝田) through the Yao Pass (峽关) and lastly to Shang County (商县), southeast of Chang'an City, was helpful in securing the Wuguan (武关) Road. This defensive line remained in place during the Western Han Dynasty and served a military purpose in stopping attacks from the Wu Pass from rebel forces that were based in the eastern half of Guan Dong (关东).

The Western Han Dynasty was the second unified dynasty in Chinese history after the Qin Dynasty. However, since its founding, the internal and external situations it faced were very severe. Internally, the court had to handle the relationship with the forces east of Hangu Pass and prevent them from rebellion. Externally, the Xiongnu in the north were more powerful than during the Qin Dynasty and occupied the Hetao (河套) area. They were eyeing the Western Han Dynasty and were likely to attack Guanzhong from the south at any time. Since the Western Han Dynasty established its capital in Guanzhong, it actually divided the eastern defense line according to the direction of the mountains and rivers, which increased the depth of military defense to a certain extent.

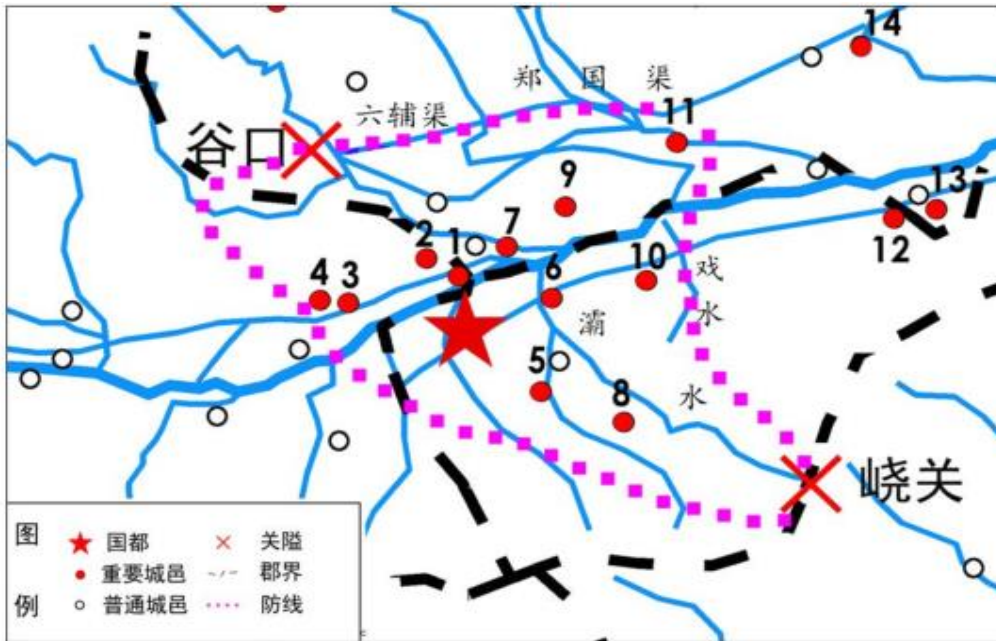


Figure 2: Schematic diagram of the defense around Chang'an City in the Western Han Dynasty.

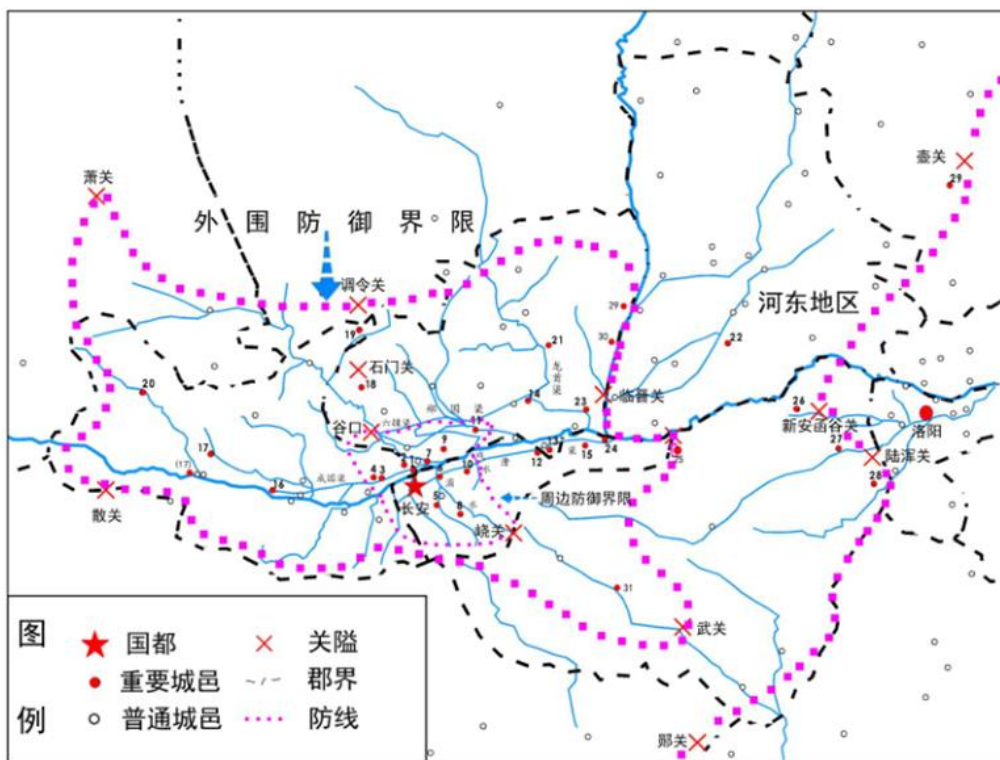


Figure 3: Schematic diagram of the defensive space of Chang'an City in the Western Han Dynasty.

(1.渭城Weicheng; 2.安陵邑Anling Town; 3.平陵邑Pingling Town; 4.茂陵邑Maoling Town; 5.杜陵邑Duling Town; 6.霸陵邑Baling Town; 7.长陵邑、阳陵邑Changling Town, Yangling Town; 8.蓝田Lantian; 9.高陵(左辅都尉) Gaoling (left auxiliary commander); 10.新丰Xinfeng; 11.栎阳Yueyang; 12.郑县Zheng County; 13.武城Wucheng; 14.重泉Chongquan; 15.华阴Huayin; 16.郿县(右辅都尉) Mei County (right auxiliary commander); 17.雍县、陈仓Yong County, Chencang; 18.云阳Yunyang; 19.栒邑县Xunyi County; 20.汧县Qian County; 21.郿县Zheng County; 22.安邑县Anyi County; 23.临晋Linjin; 24.司船空Sichuankong; 25.弘农Hongnong; 26.新安Xin'an; 27.宜阳Yiyang; 28.陆浑Luhun; 29.夏阳Xiayang; 30.郃阳Heyang; 31.商县Shang County)

Figure 2 & Figure 3 Source: Author's own drawing

Conclusion

Chang'an had an extremely complex military defense, which was crucial to maintaining the security of the empire. Because the palace and the surrounding area of the capital were the residence of the ruler, military defense factors were taken into consideration during planning, construction and internal organization to prevent coups and invasions from foreign enemies. A large arsenal in the capital served as the national emergency weapons reserve center. In addition, food and supplies were stored in warehouses in Chang'an City, which helped with wartime logistics. Moreover, the capital city was protected by elite troops and was the seat of the Western Han Dynasty's court.

First, the region had geographical features that supported military defense in times of conflict, such as rivers and mountains. Thus, the success or failure of these natural barriers could directly affect the success or failure of military efforts to defend the capital. Second, other towns nearby could serve as military defenses for the capital and as important transit centers for the rest of the country. Under normal circumstances, the cities around the capital could play a role in evacuating the population and supplying resources; during war, these nearby cities became barriers to enemy attacks, weakening the enemy's forces and preventing them from directly attacking the capital. Finally, controlling the main routes around the capital's fortifications was crucial because they were easily accessible from the outside world.

Peripheral defense is crucial to thwarting enemy attacks on the capital. If the peripheral defense line were breached, the capital would be directly and fatally threatened by the enemy. Thus, holding the suburban positions around the capital was crucial. Some areas surrounding Chang'an had terrain that was difficult to cross, while others were in locations that were hard to reach; some had prosperous economies, while others were rich in resources. These outer areas, as part of the city defense, surrounded Chang'an like stars.

Understanding the military defense of Chang'an City reveals the complex technological prowess and tactical reasoning of ancient civilizations. The defense of Chang'an had several advantages. First, it provided capital security and a favorable environment; second, it allowed for paying close attention to capital issues closely related to the ruling group; third, it helped the authorities set up corresponding institutions and personnel for specific national defense issues and make necessary adjustments based on actual conditions. As a result, despite facing many defensive challenges, the capital maintained long-term stability.

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