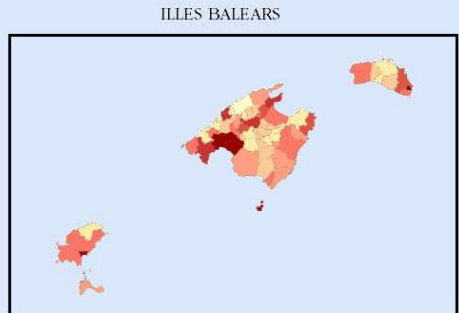
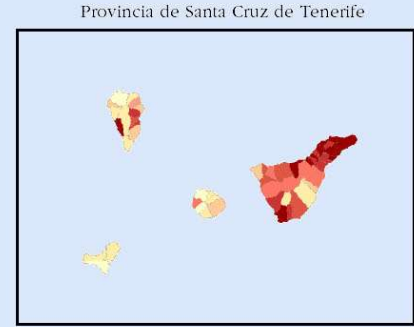
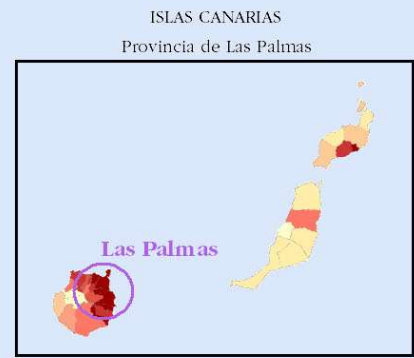
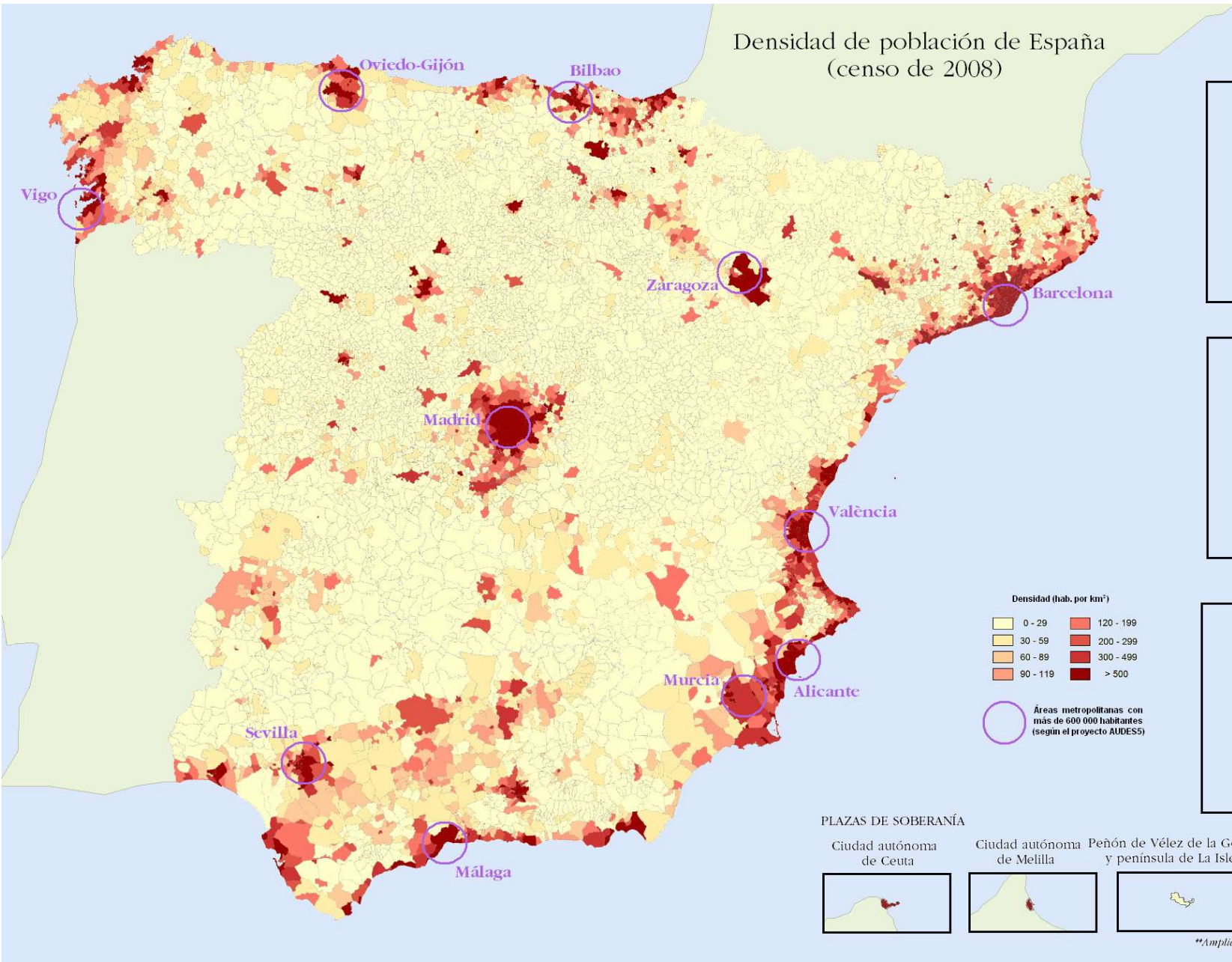


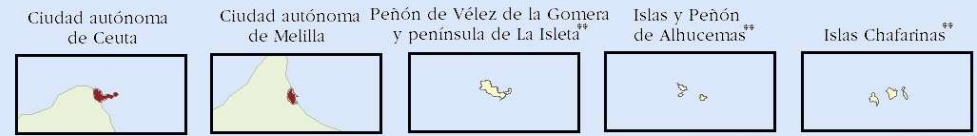
# **URBAN LANDSCAPES**



# Densidad de población de España (censo de 2008)



## PLAZAS DE SOBERANÍA



\*\*Ampliado

# WHY BARCELONA?

1. Continuous urban evolution since its foundation in Roman times until today.
  - Population increase due to immigration from other parts of Spain.
  - Celebration of diverse economic, cultural and sporting events: Universal Exhibition of 1888, ..., Olympic Games of 1992.
2. Model for the development of other Spanish cities (Urban Plans, eg.) → precursor of most of the urban evolution...
  - Plan de Ensanche.
  - Plan de Enlaces (1903) to absorb municipios limítrofes.
  - Today, a "Barcelona Model" of urbanism → one of the most cutting-edge European cities and a guide for many cities (worldwide)
    - Design and innovation, linking urbanism with ecological values and sustainability.
    - Recognized with numerous awards and distinctions.
    - Prince of Wales Award for Urban Planning from Harvard University (1990)
    - Gold Medal of the Royal Institute of British Architects (RIBA) en 1999.

**THE BEGINNINGS:  
THE PRERROMAN CITY**



# **The colonial “cities”**

# COLONIAL CITIES



# COLONIAL CITIES



## EMPORION (Ampurias)





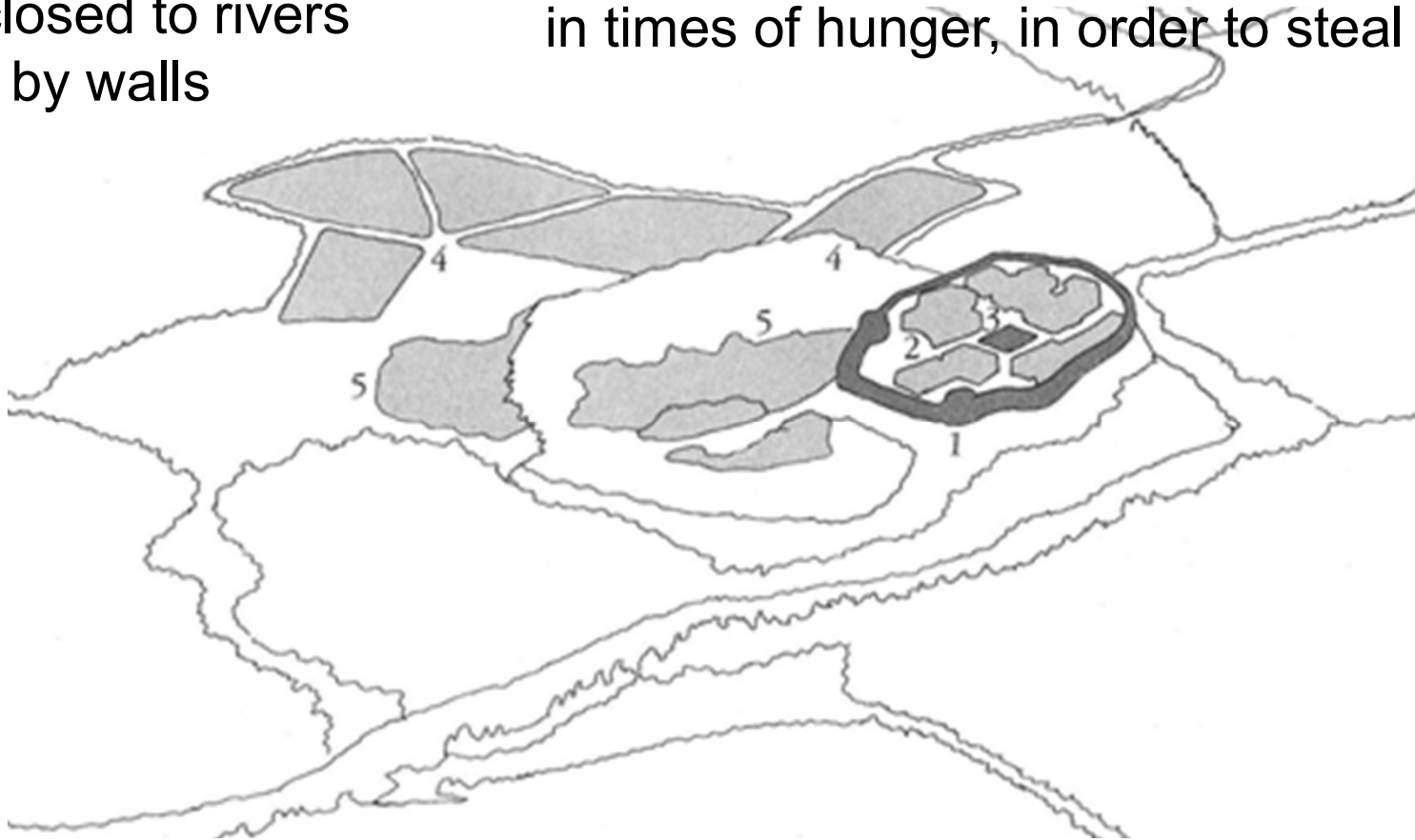
# **The indigenous “cities”**

# DEFENSIVE LOCATIONS (oppidum)

- Small settlements
- On hills, closed to rivers
- Protected by walls

Why fortifications?→

- Warrior and war-lords society (iron swords and armors).
- frequent wars against other oppida, mainly in times of hunger, in order to steal crops and livestock.

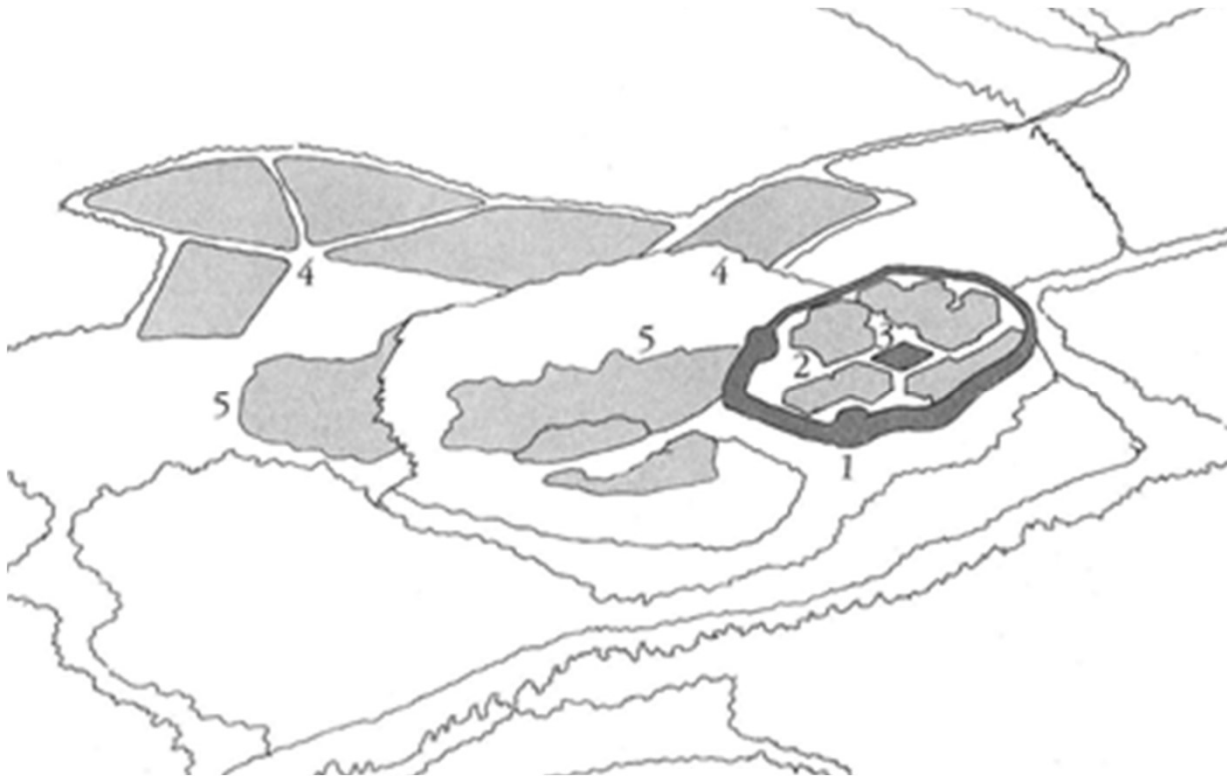


Living under these conditions was uncomfortable.

- Carry water and firewood
- Every night it was necessary to contain the livestock after the wall.
- Permanent surveillance of the surroundings, specially during conflicts (alarm if necessary).

**ECONOMY** → Inhabitants devoted themselves to

- Agriculture (growing cereals) + raising livestock.
- Worked bronze and iron, manufactured ceramic vases and wove wool and flax.
- Keeping up an active trade in those products.



**Agriculture** → Crop fields (4).

Olive groves and vineyards (5) → by influence of Mediterranean colonial powers (Greeks and Phoenicians) → periodical commercial contacts → first importing vine and the olive tree for wine and oil.

## **SUBSISTENCE**

Continous cleaning of forest to obtain new land (not payments nor rotation)

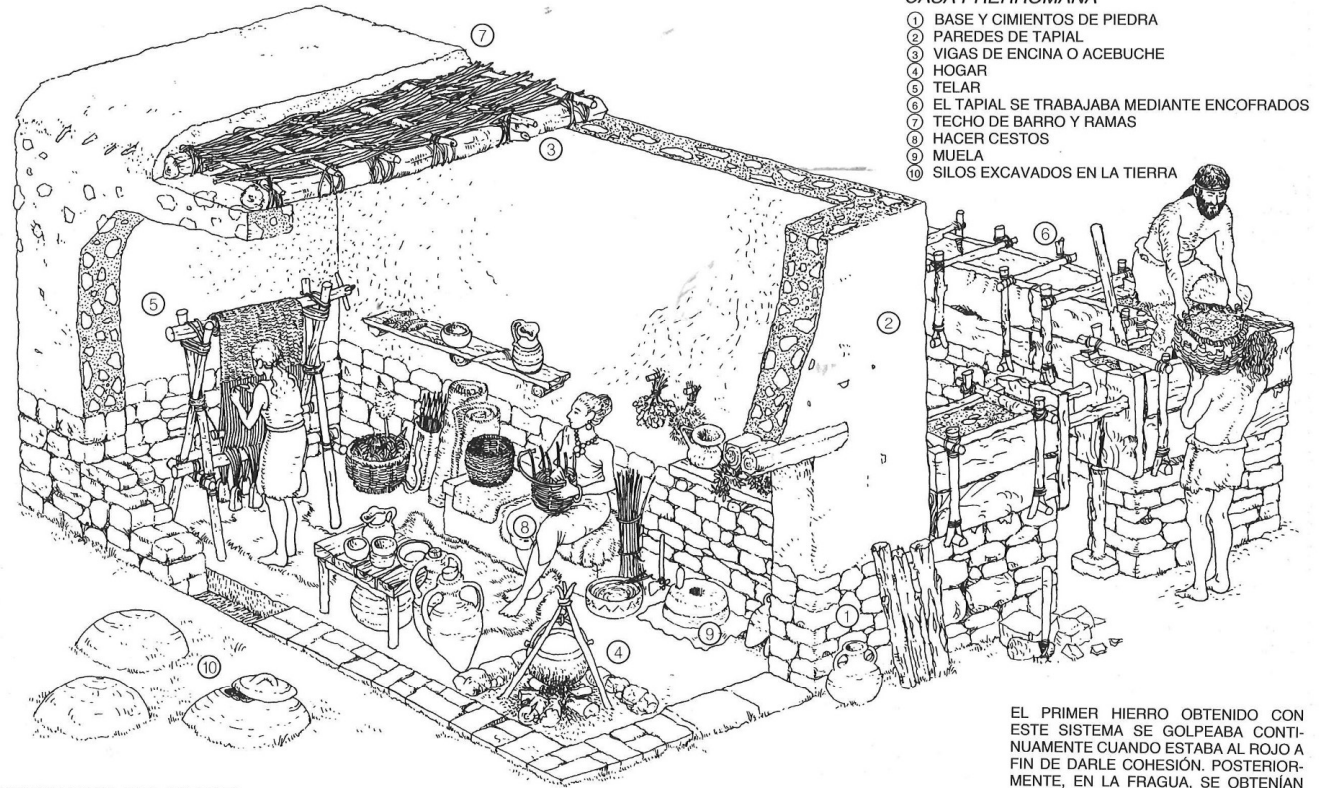
To obtain new fields forest is set on fire, then the roots were pulled up and successive plow works

Abandoning lands after several crops and searching for new land, progressively far away from the town → new settlements

**Shepherding** →  
Goats and sheep.  
Oxen (working land).  
Horses for warriors.

# HOUSING

- **Material:** stone and masonry.
- **Model:**  
3 m width  
oak beams,  
roof made of clay with straw or  
bush lattices, with an opening  
to facilitate smoke extraction.  
Usually one floor, sometimes  
two floors.



## CASA PRERROMANA

- ① BASE Y CIMIENTOS DE PIEDRA
- ② PAREDES DE TAPIAL
- ③ VIGAS DE ENCINA O ACEBUCHE
- ④ HOGAR
- ⑤ TELAR
- ⑥ EL TAPIAL SE TRABAJABA MEDIANTE ENCOFRADOS
- ⑦ TECHO DE BARRO Y RAMAS
- ⑧ HACER CESTOS
- ⑨ MUELA
- ⑩ SILOS EXCAVADOS EN LA TIERRA

## Silos

- Conservation of crop (cereal)
- Dug into the earth, covered by clay → as grain was needed they opened it up.

## Cisterns

- to preserve water.

## METALURGIA DEL HIERRO

EL MINERAL DE HIERRO SE MEZCLABA CON CARBÓN VEGETAL Y SE CUBRÍA CON ARCILLA, CONSTRUYÉNDOSE UN HORNO. LA COMBUSTIÓN DEL CARBÓN A GRAN TEMPERATURA, GRACIAS AL AIRE QUE SE INSUFLABA CON FUELLES, PERMITÍA LA REDUCCIÓN DEL MINERAL DE HIERRO.



EL PRIMER HIERRO OBTENIDO CON ESTE SISTEMA SE GOLPEABA CONTINUAMENTE CUANDO ESTABA AL ROJO A FIN DE DARLE COHESIÓN. POSTERIORMENTE, EN LA FRAGUA, SE OBTENÍAN LAS HERRAMIENTAS E INSTRUMENTOS DESEADOS MODELANDO EL HIERRO A GOLPES. PARA DARLE TEMPLE SE SUMERGÍA LA PIEZA CANDENTE EN AGUA FRÍA.

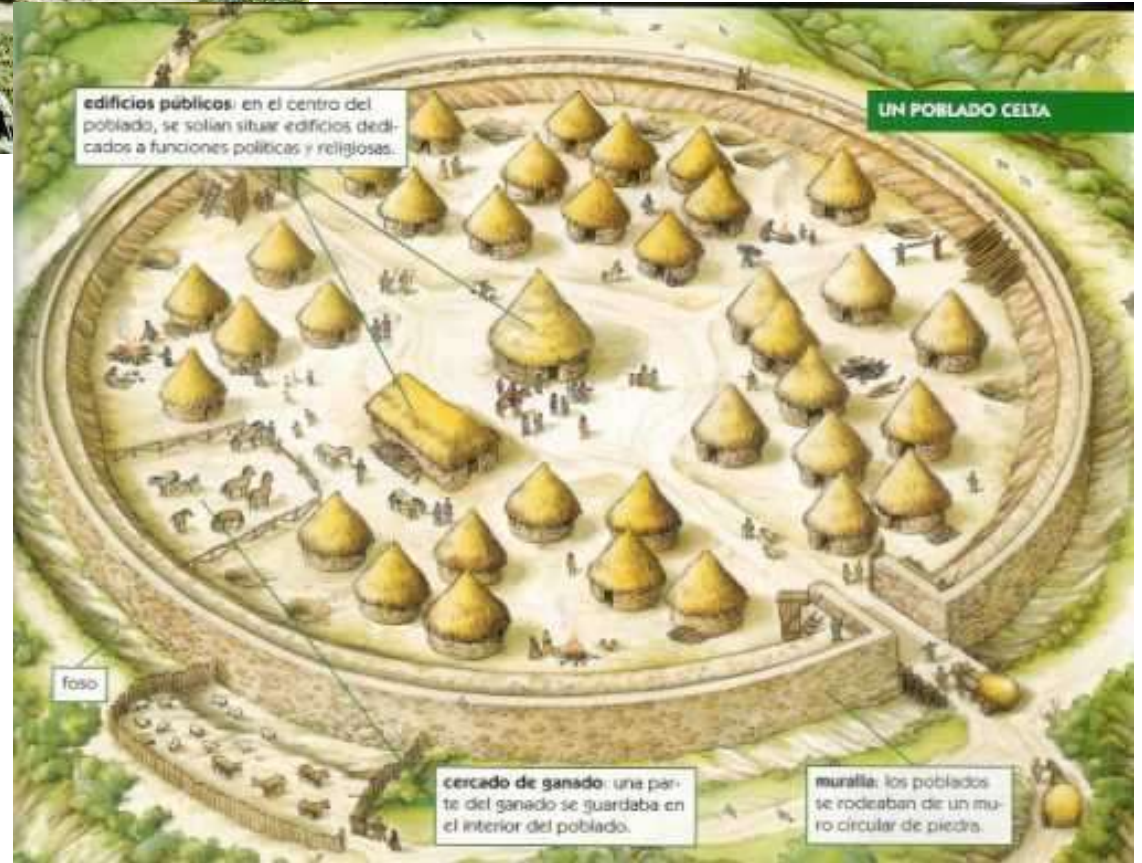




**LOS MILLARES (2500 - 1800 a. d. C.):**



# CASTROS



# PRIMITIVE SETTLERS OF BARCELONA

1. Neolithic settlements (mines at Gavà) supporting a relatively dense population (18 settlements).
2. Speculation about an **Iberian settlement** close to Montjuïc called Laie (hence the name Laietani):
  - **Strabo's vol III** → "...Laietani lived at Barcelona's plain, the Maresme as far as the mouth of the Tordera River and a part of the Vallès.
  - **Who were the Iberians?** → **Indigenous people** → not a homogeneous group, but rather several *¿ethnic?* groups sharing a common culture and language.
3. Archeological hypothesis: a **twin city** → one Iberian and another Roman for some time, the first falling into decay, the latter prospering.

# PRIMITIVE SETTLERS OF BARCELONA

The plain of Barcelona:

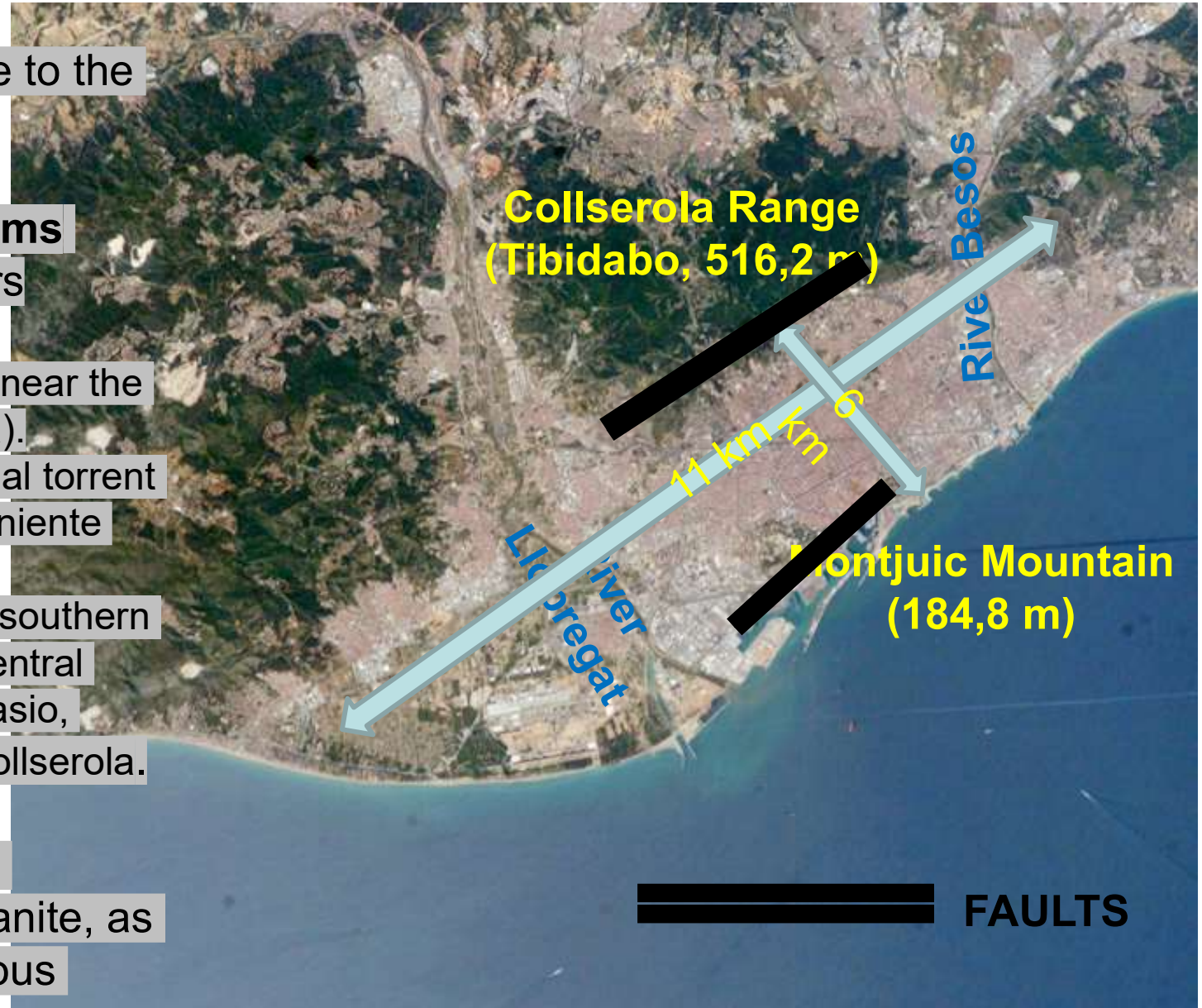
**Not uniform topography** →

a ramp sloping from the Collserola mountain range to the sea (11 x 6 km).

Undulated by **small streams** grouped into three sectors

- riera de Horta in the area near the river Besós (Levante area).
- riera Blanca and the Gornal torrent in the Llobregat area (Poniente area);
- a set of streams from the southern slope of Tibidabo in the central area: Rieras of San Gervasio, Vallcarca, Magòria and Collserola.

The terrain is formed by a **substrate** of slate and granite, as well as clays and calcareous rocks.





# PRIMITIVE SETTLERS OF BARCELONA

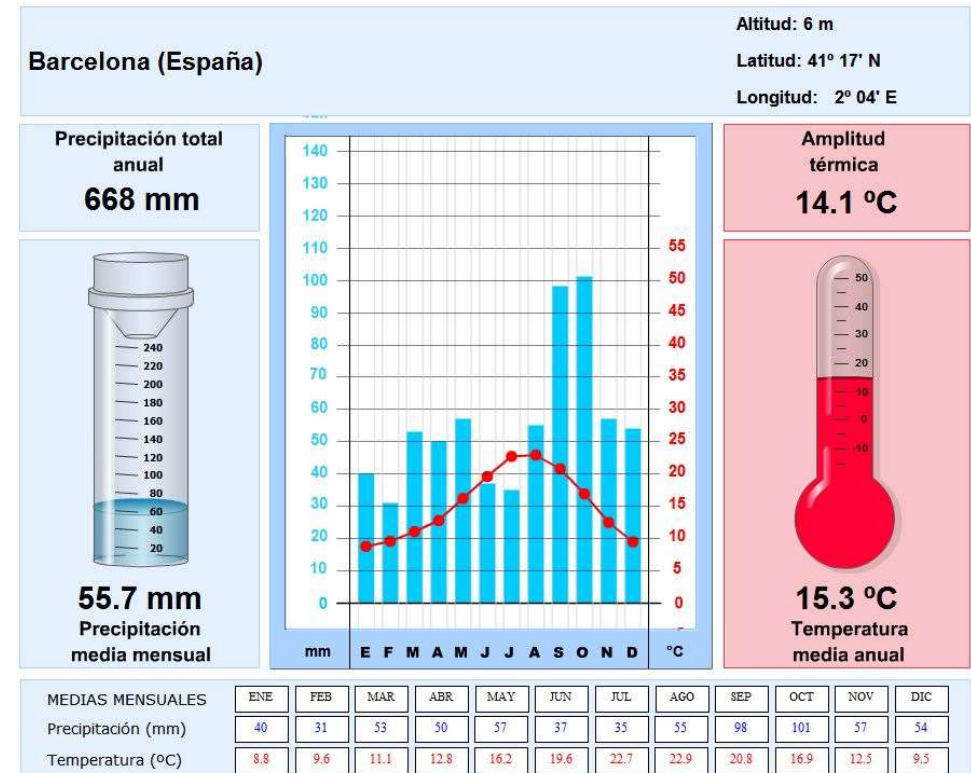
1. The coast was formerly occupied by **marshes and lagoons**.
2. Disappeared as the coastline advanced thanks to the sediments contributed by the rivers and torrents that flowed into the sea.
3. It is estimated that from the sixth century BC. C. the coastline has been able to advance about 5 km.



# PRIMITIVE SETTLERS OF BARCELONA

## CLIMATE

- **Mediterranean (Csa).**
- **Temperature:**
  - ✓ Ranges between 9.5°C and 24.3°C, on average.
  - ✓ Mild winters (sheltered from the north winds –mistral- by the mountains).
  - ✓ Hot and sultry summers.
- **Precipitation:**
  - ✓ Moderate (600 mm anuales) but irregular from year to year.
  - ✓ Maximum in early autumn (“torrential precipitation → gota fría).
  - ✓ Effective precipitation less than actual precipitation → water shortages → in the past, numerous works had to be done to supply water to the city, including wells, canals and ditches.



**THE BEGINNINGS:  
THE ROMAN CITY**

# ROMAN SETTLEMENTS

Usually, on **previous indigenous settlements**

- As strategic points, to **control** the territory.
- Lately, to guarantee the **progressive colonization and exploitation** of the territory.



# A ROMAN SETTLEMENT (colony)

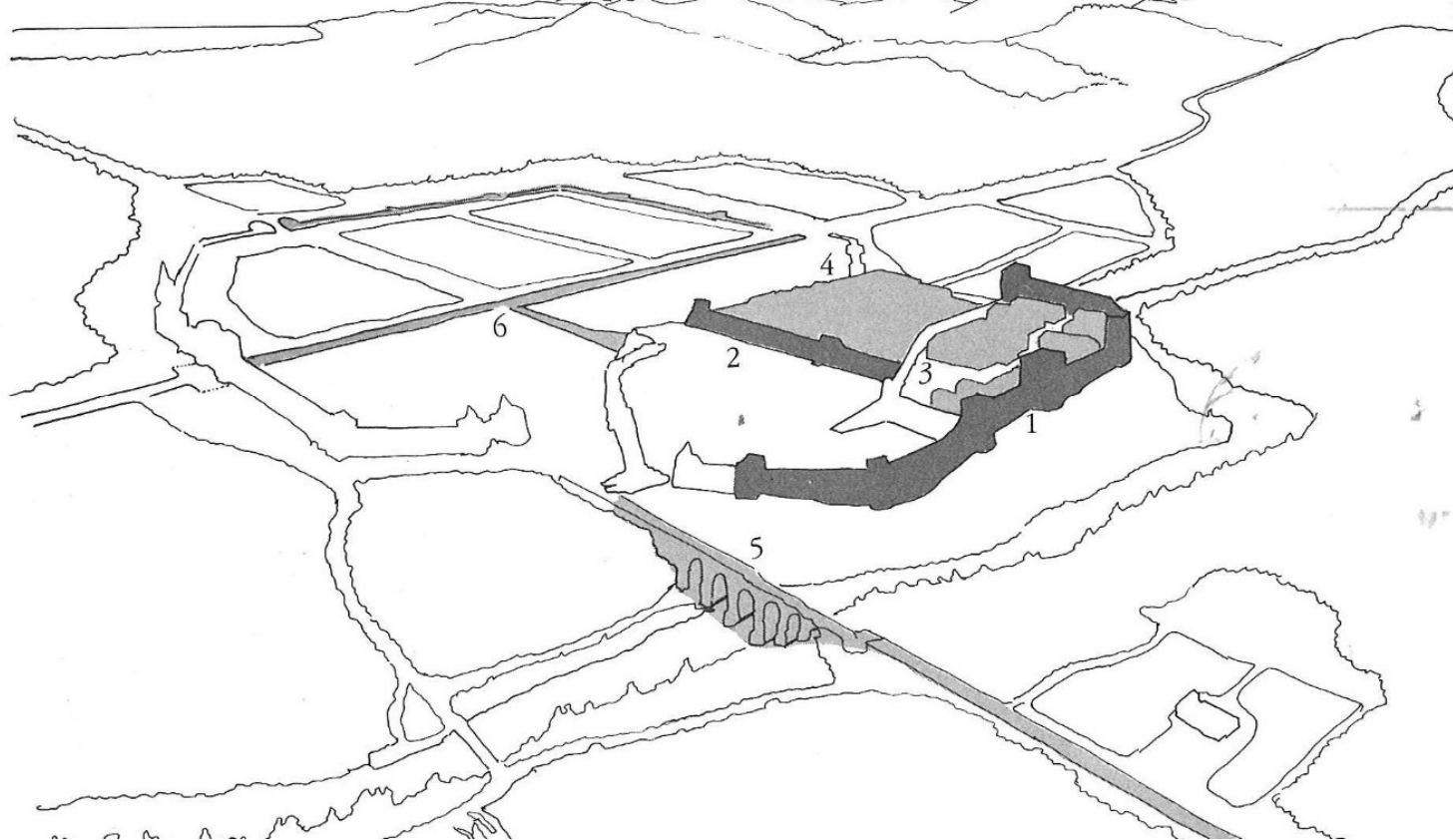
Careful planning → construction according to a previous study of needs and possibilities of the territory.

## Process:

- Legionaries and slaves cut forests, building bridges and roadways.
- Surveyors and engineers:
  - ❖ Traced the perimeter of the city and the urban layout (main streets)
  - ❖ Highlighted and solved the main urbanistic problems (food and water evacuation).

# A ROMAN SETTLEMENT (initial phase)

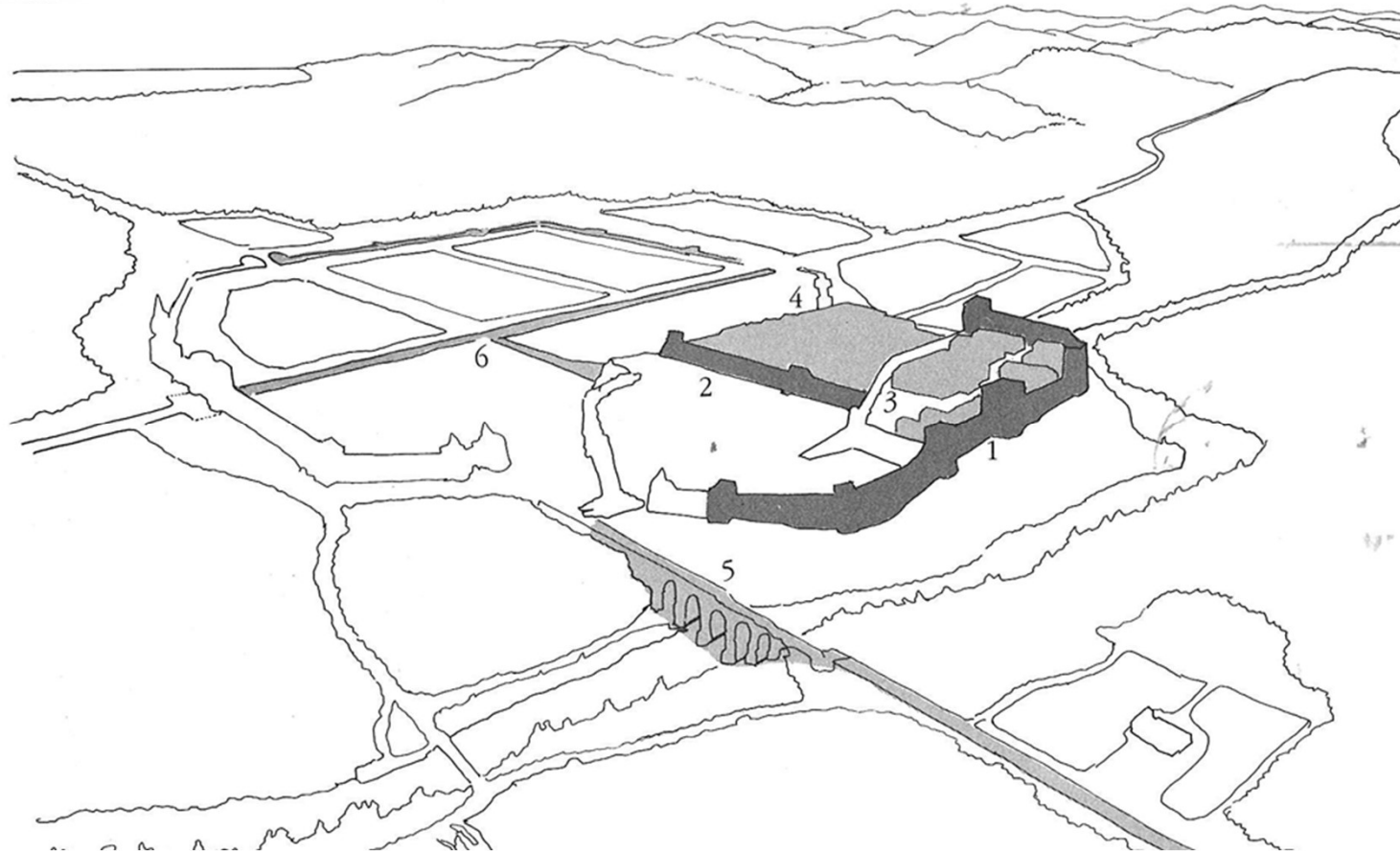
- A legionary camp (León = Legio VII Gémina)
  - ✓ Initially surrounded by a wooden barrier and a protection gutter **(2)**.
  - ✓ Campaign stores
- Bunkhouses and sheds (soldiers, war machines, horses and livestock, **3**).



Improving of the walls **(1)** →

- Base: large enormous stone blocks, sustained by their own weight.
- Upper: arrays of little stones mixed by cement (mixture of lime, sand and it dilutes).

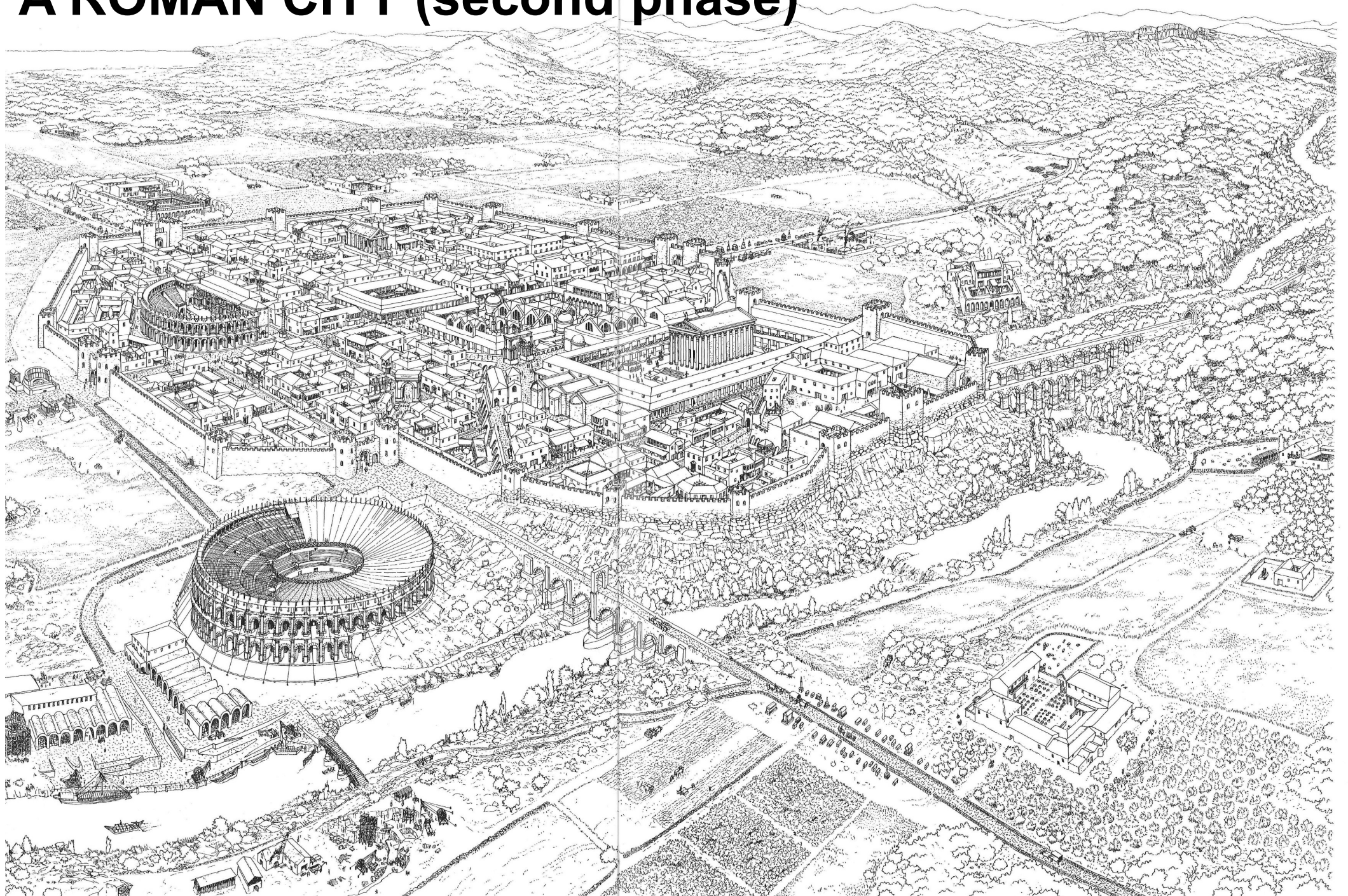
# A ROMAN SETTLEMENT (initial phase)



## Vicus:

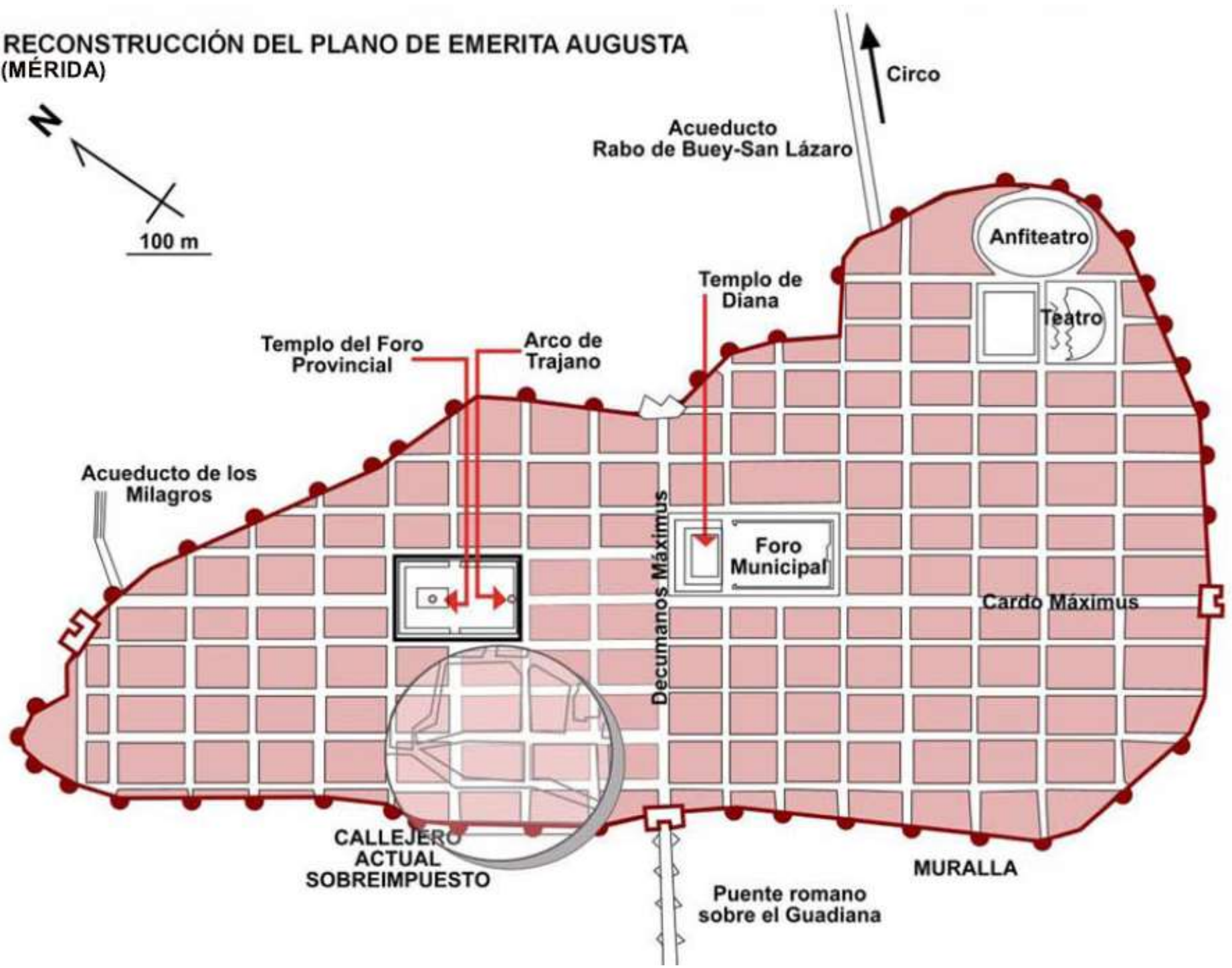
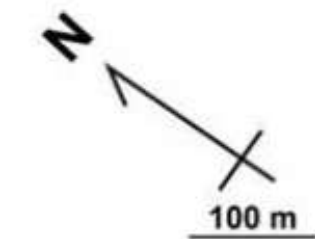
- Vicinity of the permanent camps.
- Small towns where some soldier's families resided as well as merchants and business men (bathrooms and taverns for the soldiers' leisure) **6**

# A ROMAN CITY (second phase)



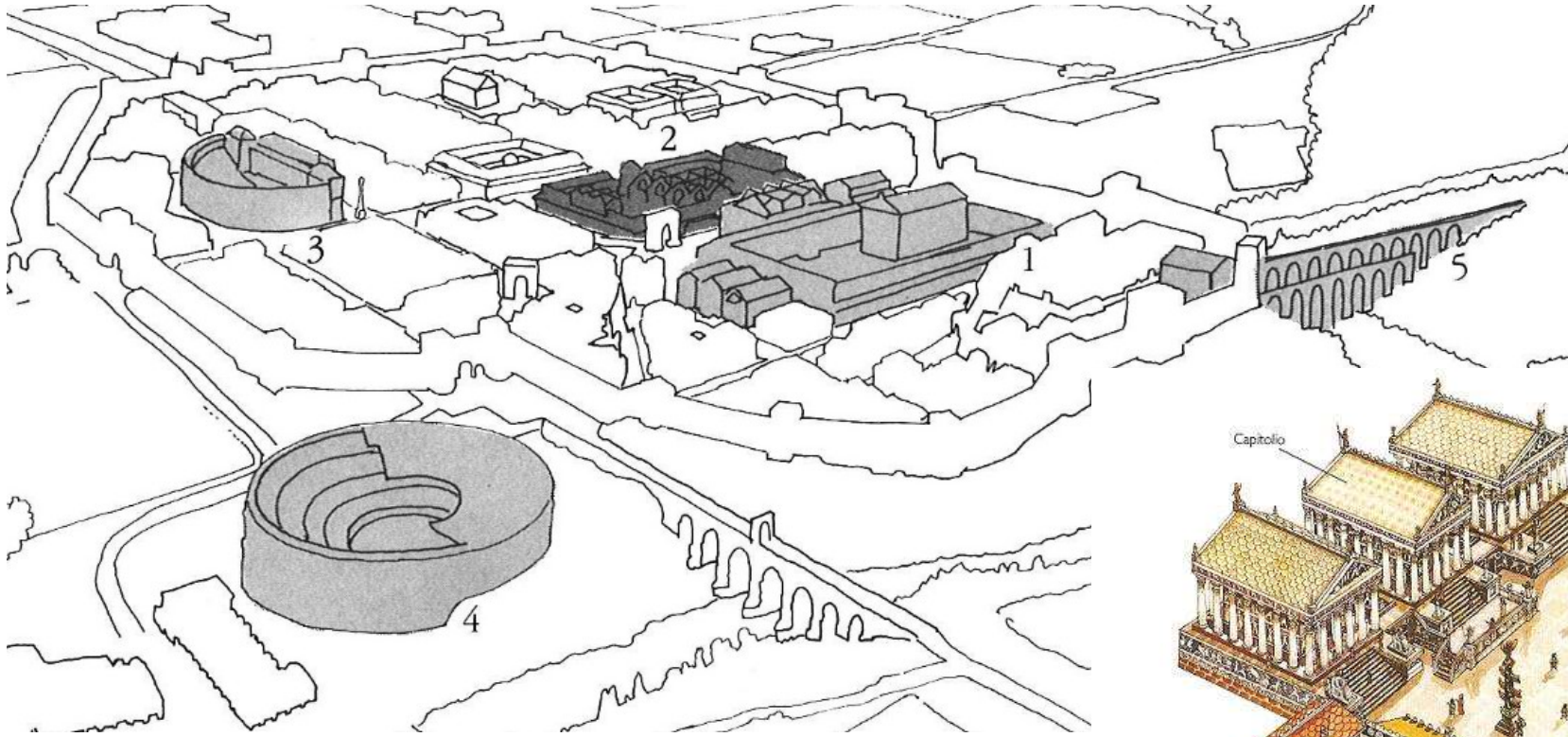


# RECONSTRUCCIÓN DEL PLANO DE EMERITA AUGUSTA (MÉRIDA)





**Military power:** Prefecto del Pretorio (military governor) and officials related with the imperial services (1).



**Forum:** civil power (2) a squared which become a roman city

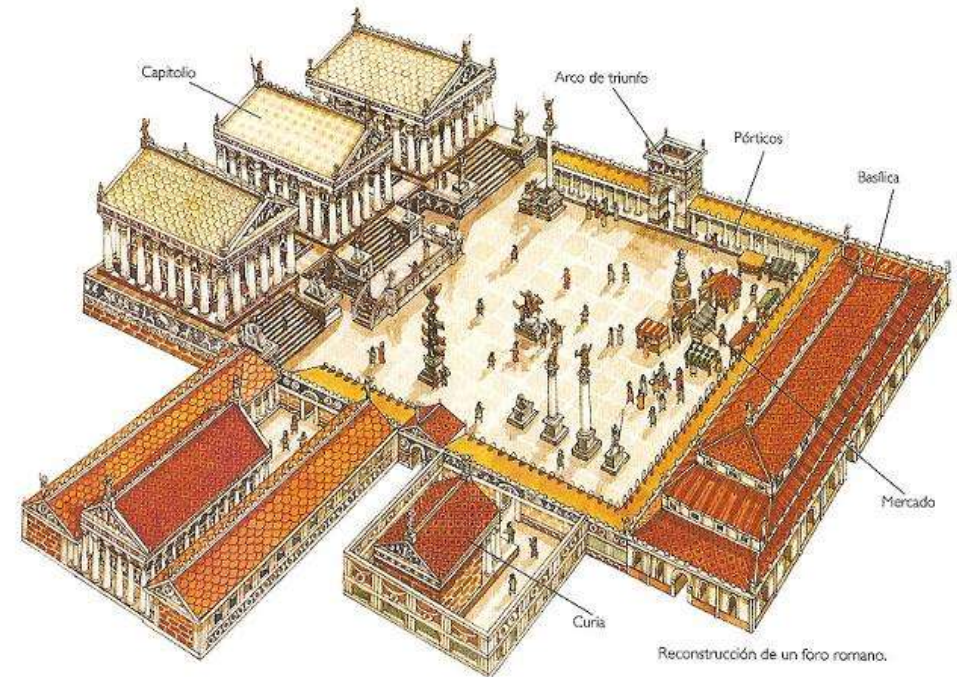
*Temple* → dedicated to the emperor or roman god (sincretism).

*Basilica* → Justice

*Curia* → Local political power

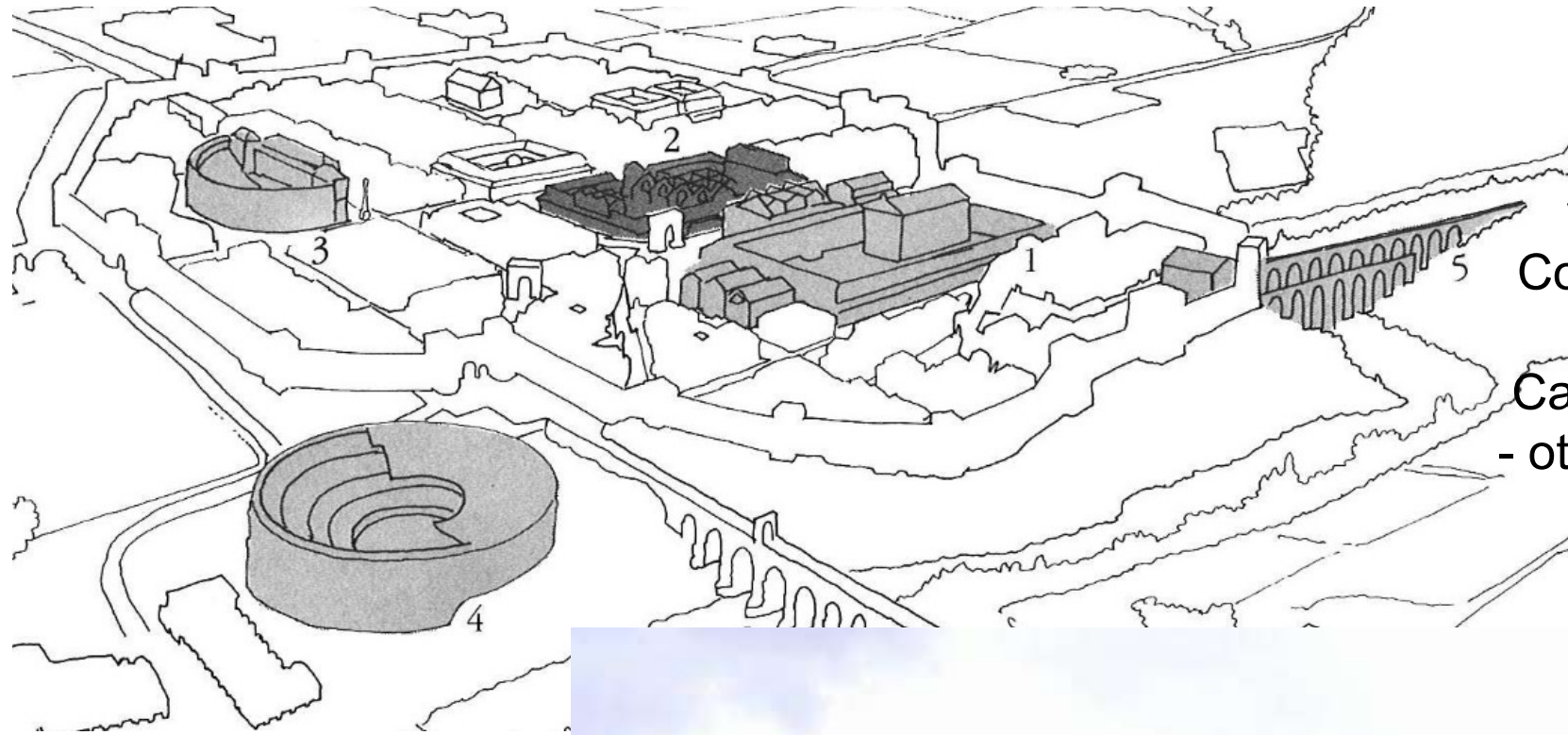
Offices for local administration.

Luxurious mansions (“potentates”)



**Important  
buildings and  
public spaces**

# Important buildings and public spaces



entered the city  
where Plaça  
Nova now  
stands:  
- one brought  
water from the  
Collserola mines  
(running along  
Carrer dels Arcs)  
- other from River  
Besòs, near  
Montcada  
(running along  
Carrer dels  
Capellans)

## The aqueduct (5)

For urban water supply.  
Capture of water from springs  
or rivers at higher height.  
Channeling the water using  
gravity up to a water castle.  
Distribution within the city by  
means of canalizations or  
pipes.



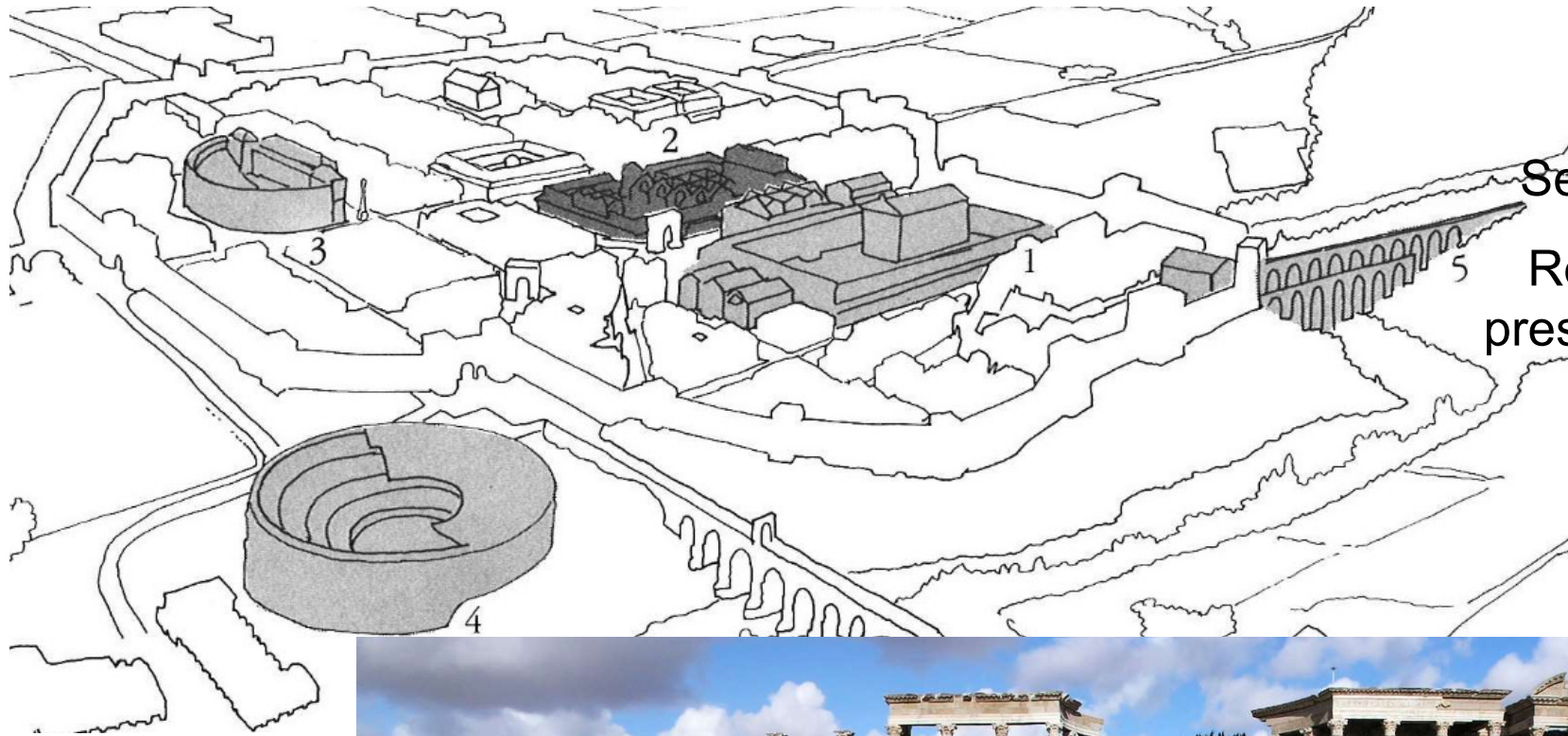
# Important buildings and public spaces:

## Baths

1. Importance of the corporal hygiene: hot (caldarium), cold (frigidarium) and temperate (tepidarium) bathrooms.
2. A place for socializing: chatting, gymnastics, massage services or even library.



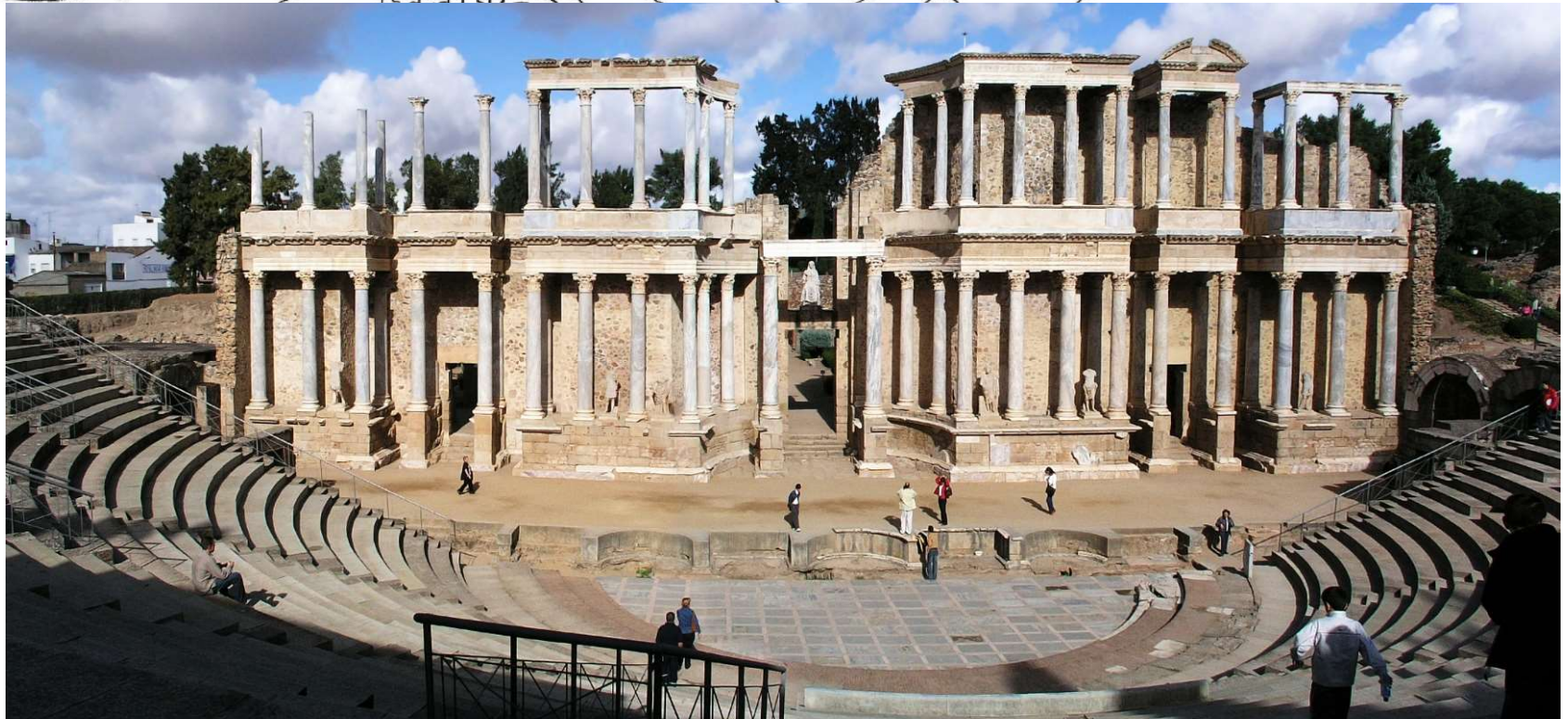
# Important buildings and public spaces



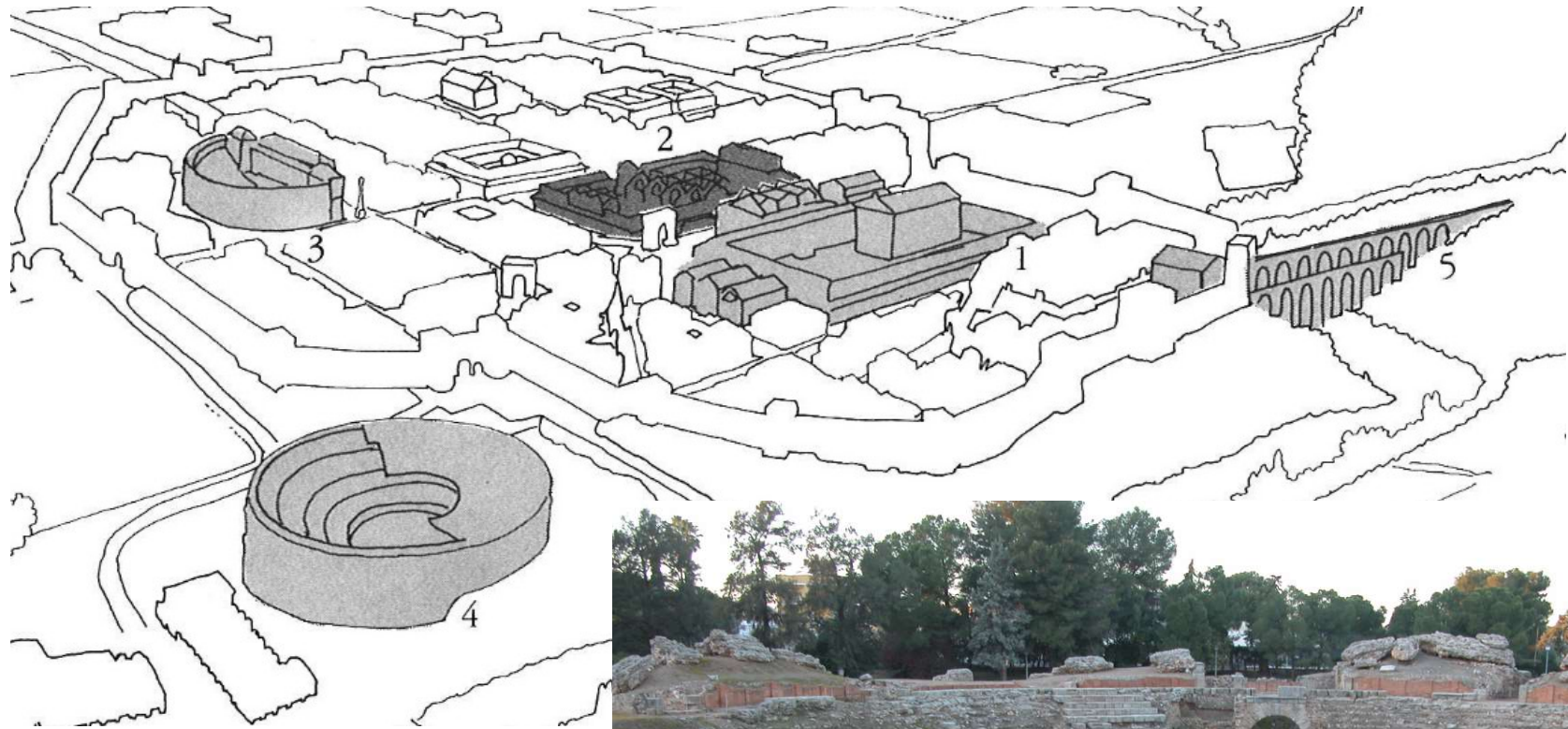
## Theater (3)

Semicircular form.

Representation of present time /Greek classics



# Important buildings and public spaces



## Amphitheater (4)

The place of the *ludi circensis* (games) → most common: hunting of wild animals, combats among gladiators, naumaquias.

Sometimes dug in the rock to take advantage of the terrain slope.

Covered by the *velarium* during summer afternoons (shading).



# Important buildings and public spaces



## Sewer system

Evacuation of dirty waters and residuals

Blue: roman sewers currently in use

Black: roman city

Grey: modern city





# Important buildings and public spaces

## Ports

Needed for trading (Mediterranean) → wine, oil, ceramic and manufactured products.

Garum → Mons Testucci (Rome)

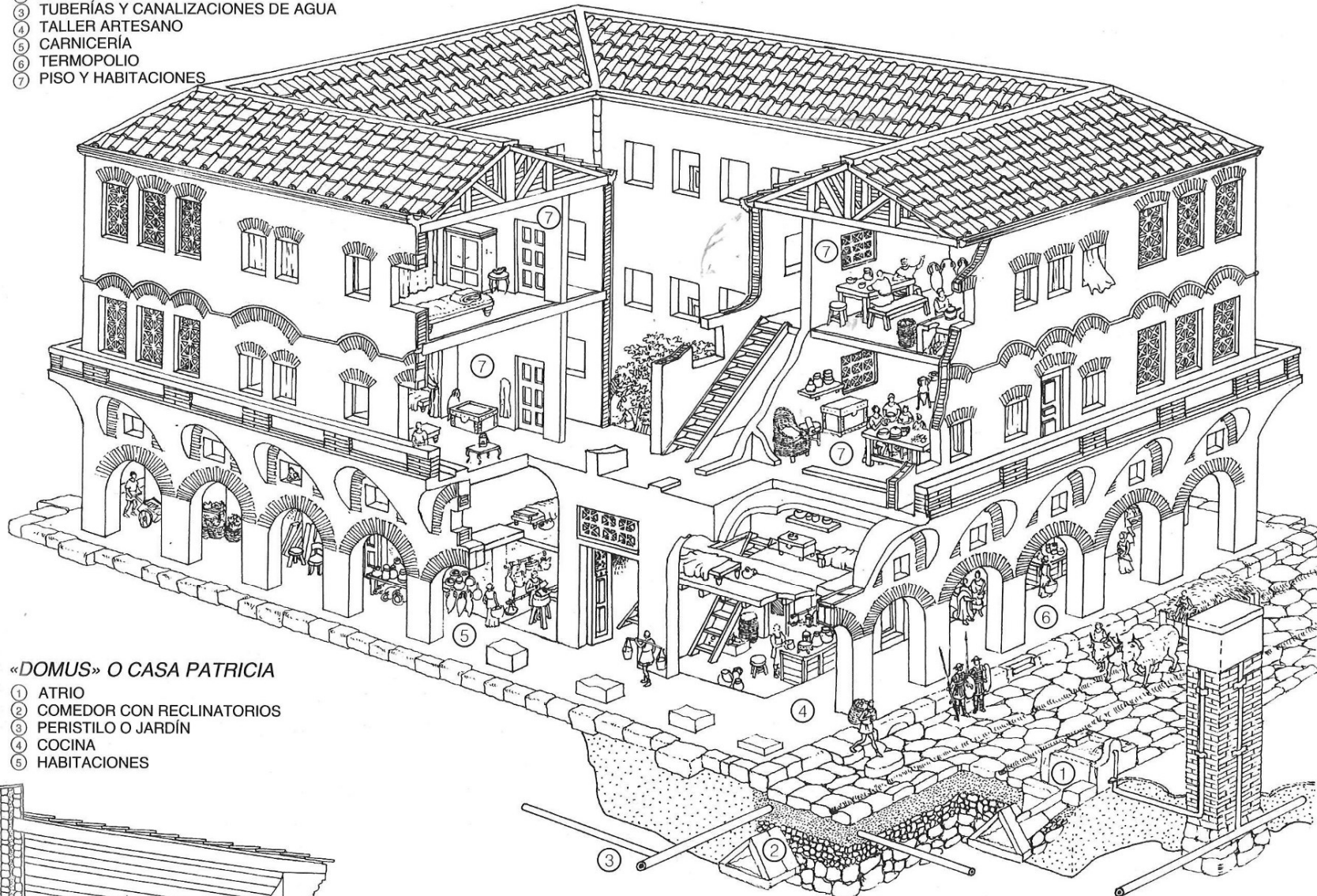


# Important buildings and public spaces

**Insulae:** popular residential buildings, with several floors

«INSULA» O CASA DE PISOS EN UN BARRIO POPULAR

- ① FUENTE
- ② ALCANTARILLAS
- ③ TUBERÍAS Y CANALIZACIONES DE AGUA
- ④ TALLER ARTESANO
- ⑤ CARNICERÍA
- ⑥ TERMOPOLIO
- ⑦ PISO Y HABITACIONES



«DOMUS» O CASA PATRICIA

- ① ATRIO
- ② COMEDOR CON RECLINATORIOS
- ③ PERISTILO O JARDÍN
- ④ COCINA
- ⑤ HABITACIONES

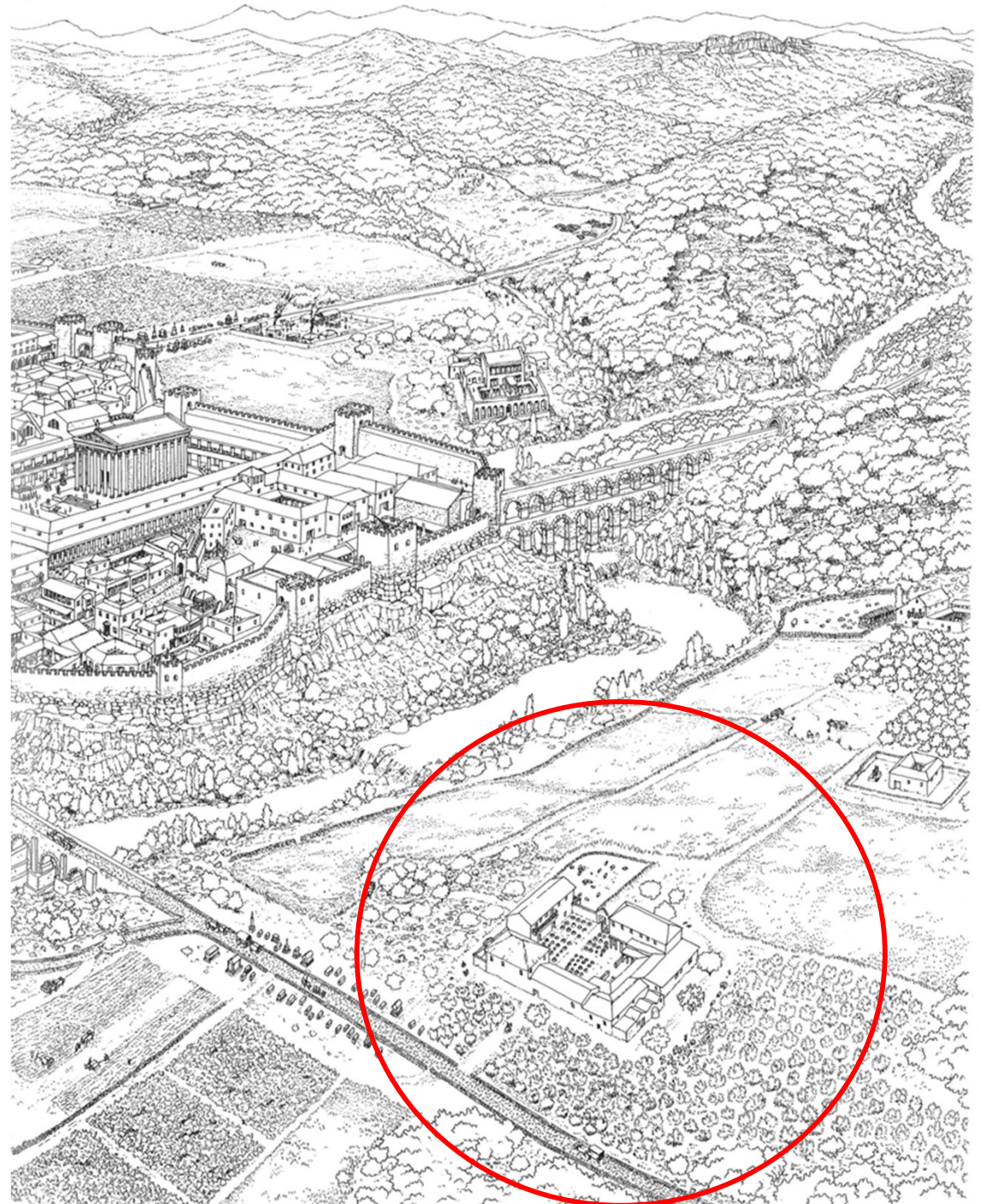
# Important buildings and public spaces

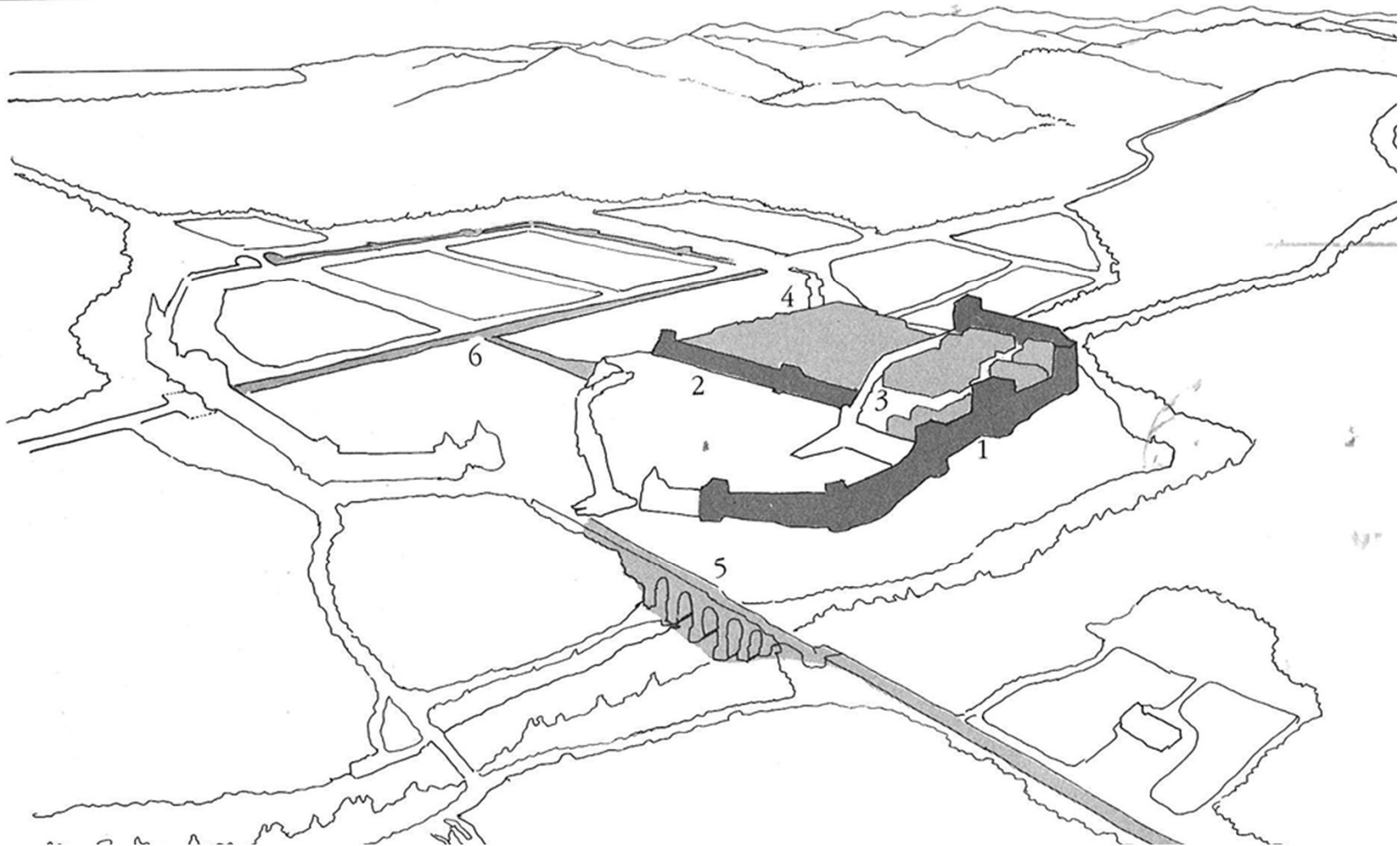
## Villae

In the proximities of the city

Dedicated to agricultural production

Parcelation by means of centuriaciones → large square field lots

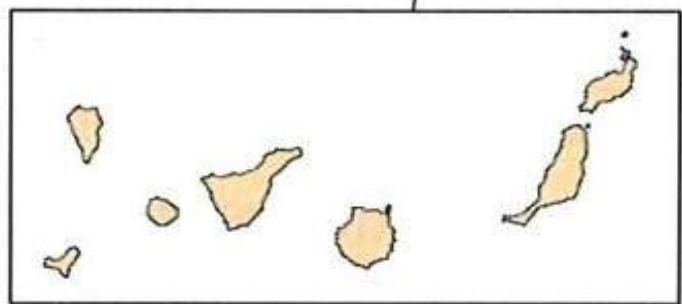




## Bridges and roads

Purposes:

1. Link the neuralgic centers of the empire: faster displacement of the legions, trading, natural resources exploitation.
2. Propagandistic effect: force and power of Rome (5).

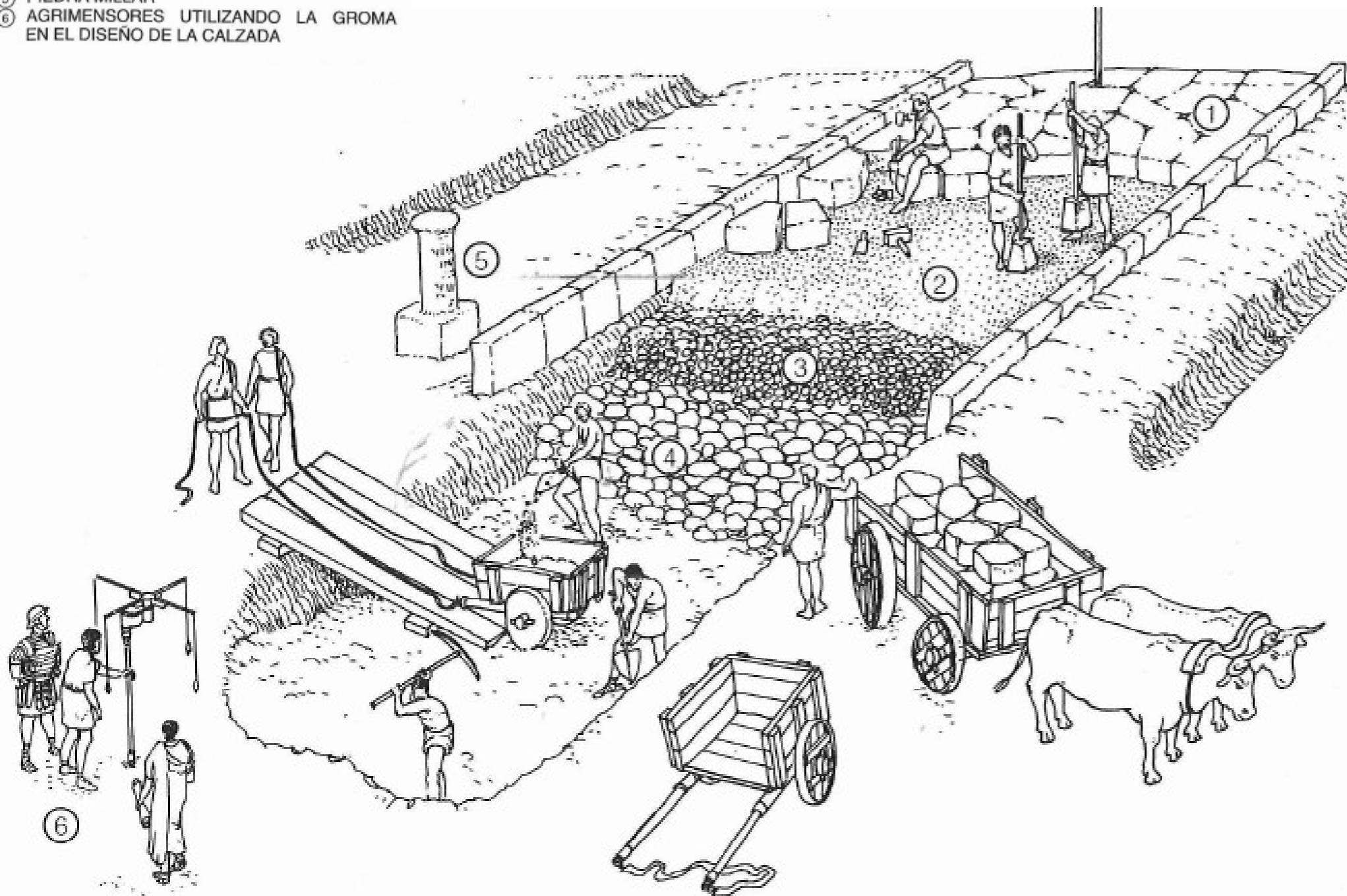


### CALZADAS Y CIUDADES ROMANAS

- Vía Augusta
- Emerita Caesaraugusta
- Asturica Tarraconem
- Emerita Asturicam
- Otras vías

## CONSTRUCCIÓN DE UNA CALZADA

- ① PAVIMENTUM
- ② NUCLEUS
- ③ RUDUS
- ④ STATUMEN
- ⑤ PIEDRA MILLAR
- ⑥ AGRIMENSORES UTILIZANDO LA GROMA EN EL DISEÑO DE LA CALZADA





## **Roman Roadway Puerto de El Pico**

**Not a main road, but possibly the best conserved in Spain.**

**3 km**

**Average slope of 15%: from 848 m to 1.352 m**

**Built to carry up iron from Arenas of S.Pedro to Ávila**







## **Miliario**

(from Latin miliarium)

Cylindrical or oval column

Between 2 and 4 m height

Diameter 50- 80 cm.

Placed in the border of Roman  
roadways

To point out distances each a  
thousand “passus” or each  
roman mile (1.481 meters).



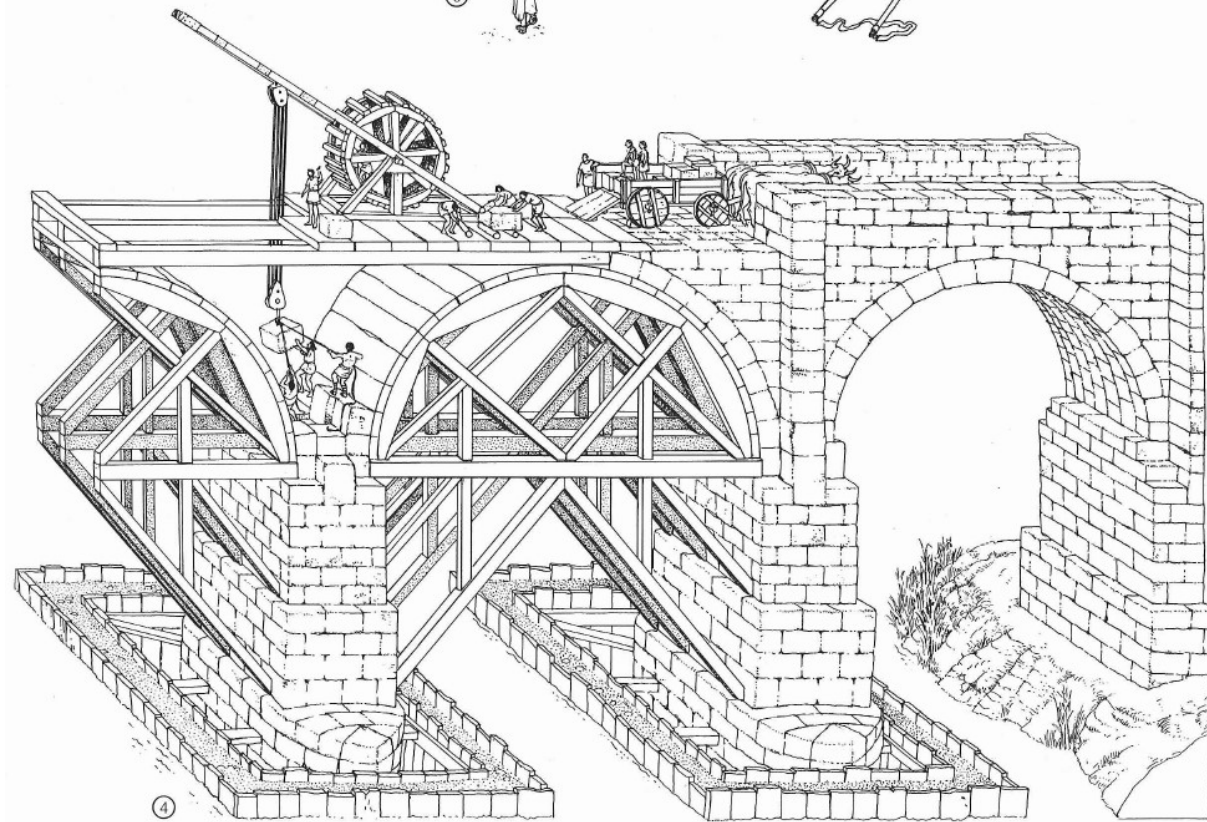
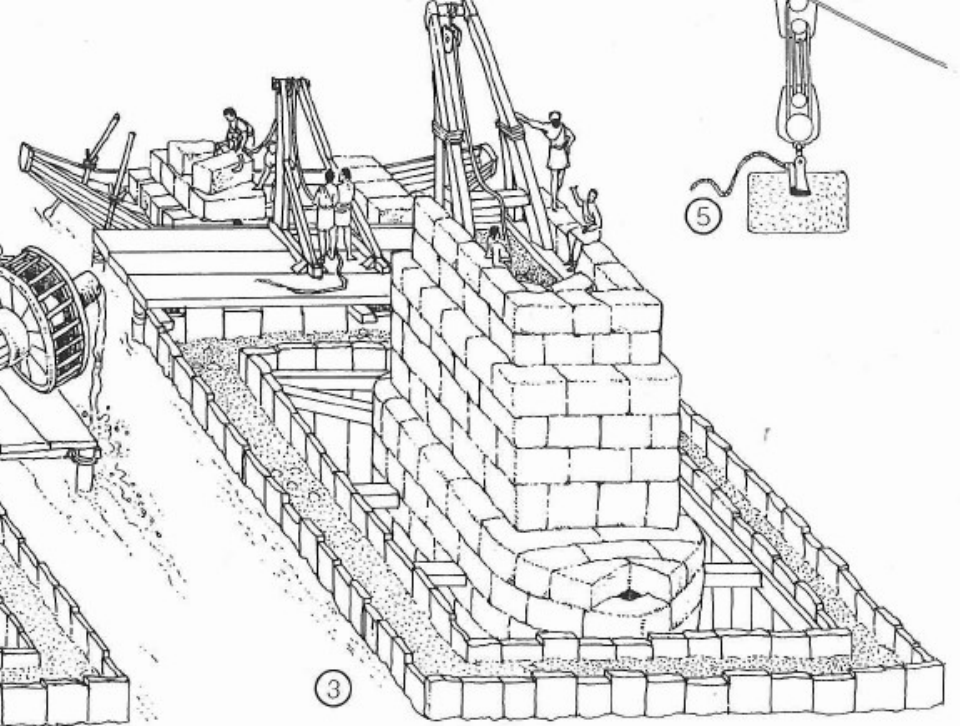
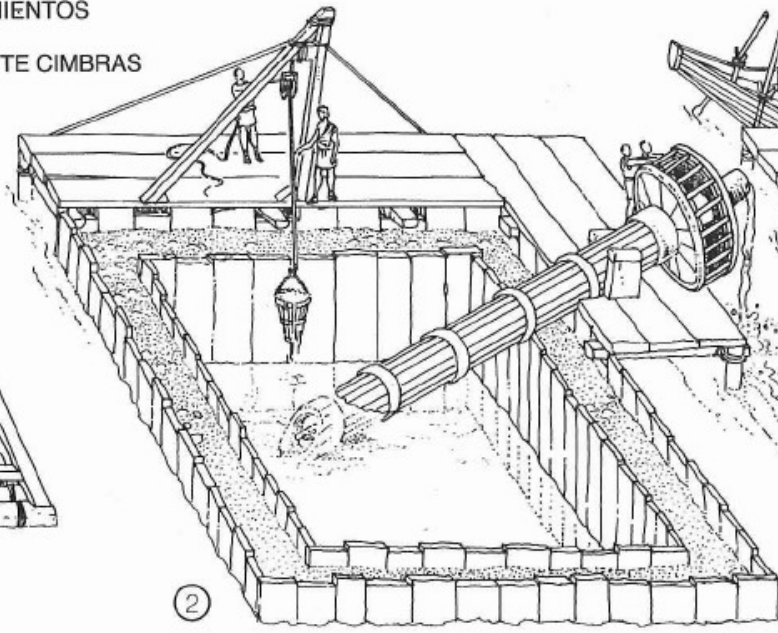
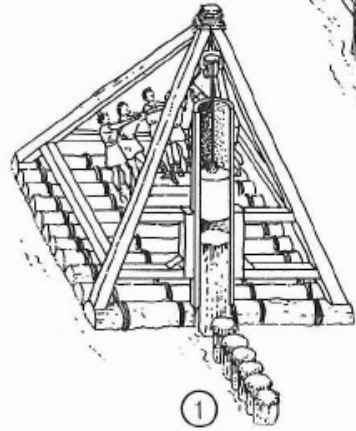
## **Puente de Alcántara**

Built in honor to emperor Trajano (born in Hispania) using the taxes of seven lusitanian villages

Roadway (Vía de la Plata) from Norba Caesarina (Cáceres, Spain) to Conimbriga (Condeixa-to-Velha, Portugal)+

# CONSTRUCCIÓN DE UN PUENTE

- ① FIJACIÓN DE PILONES DE MADERA
- ② DESECACIÓN PARA CONSTRUIR CIMIENTOS
- ③ CONSTRUCCIÓN DE PILARES
- ④ CONSTRUCCIÓN DE ARCOS MEDIANTE CIMBRAS DE MADERA
- ⑤ DETALLE DEL SISTEMA DE POLEAS



# Colonia Julia Augusta Faventia Paterna Barcino

- Founded by emperor Augustus around 10 BC as part of a restructuring plan for the north-eastern part of the peninsula, designed by Agrippa after the Cantabrian Wars (19 BC).
- Status of colony in the Hispania Citerior → by *deductio*, Roman citizens and veterans of the Cantabrian Wars settled.
- Important presence of freemen (*libertos*).
- Reasons:
  - ✓ Political control → Strategic area → good communications with the interior, coastal trade between two major cities (Empúries and Tarraco).
  - ✓ Defensive lookout → 12 m promontory, later known in the Middle Ages as Mons Taber
  - ✓ Very productive area: coastal fertile strip, mineral resources and abundant sea food.

# Mons Taber

The shape of the hill and its height decided the characteristic regular layout of Roman Barcelona.

A hill surrounded by streams running down from the Collserola mountains

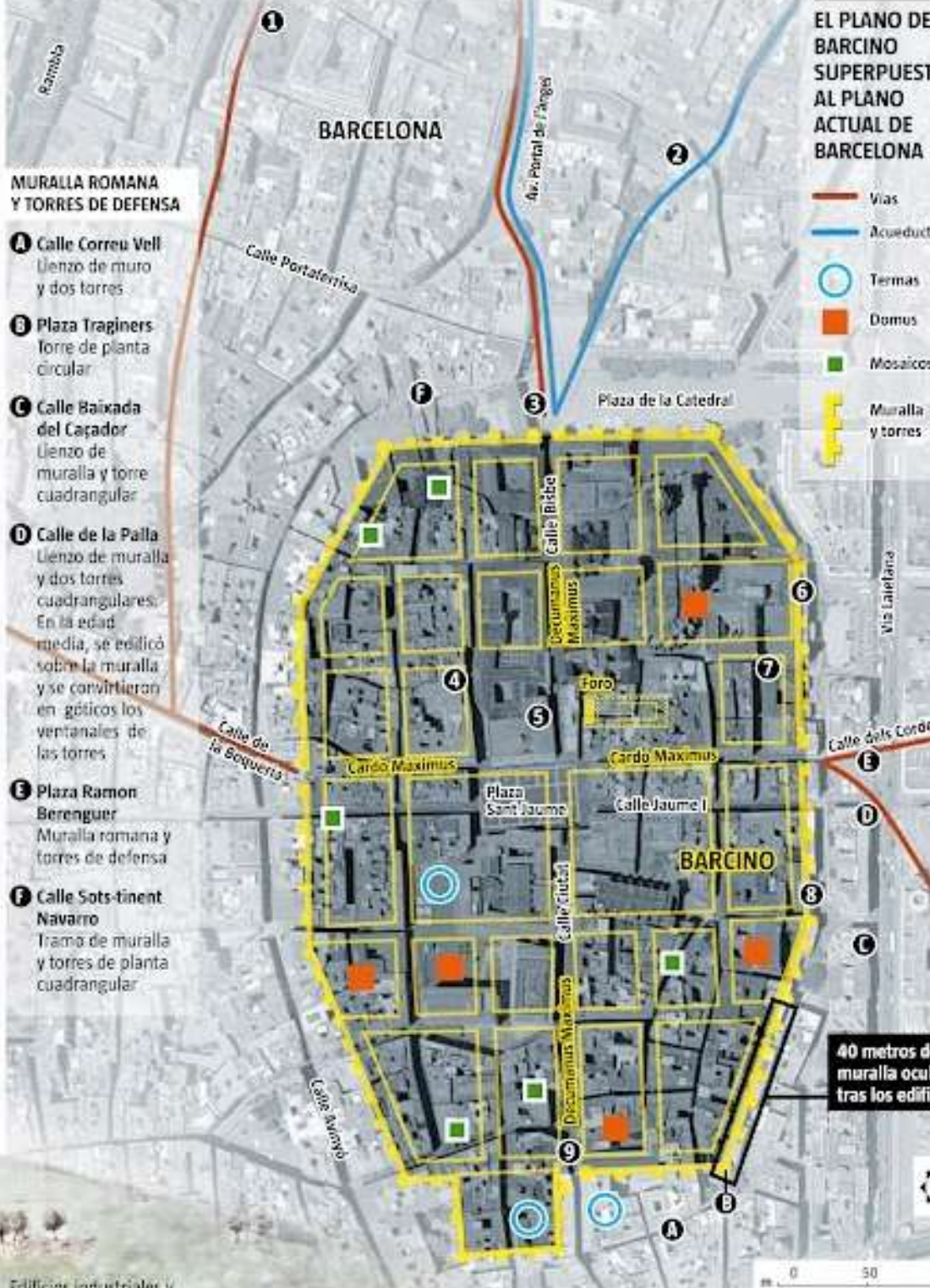


### MURALLA ROMANA Y TORRES DE DEFENSA

- 1** Calle Correu Vell  
Lienzo de muro y dos torres
- 2** Plaza Traguiners  
Torre de planta circular
- 3** Calle Baixada del Caçador  
Lienzo de muralla y torre cuadrangular
- 4** Calle de la Palla  
Lienzo de muralla y dos torres cuadrangulares. En la edad media, se edificó sobre la muralla y se convirtieron en góticos los ventanales de las torres
- 5** Plaza Ramon Berenguer  
Muralla romana y torres de defensa
- 6** Calle Sots-tinent Navairo  
Tramo de muralla y torres de planta cuadrangular

Edificios industriales y comerciales rodeaban

## BARCELONA



### EL PLANO DE BARCINO SUPERPUESTO AL PLANO ACTUAL DE BARCELONA

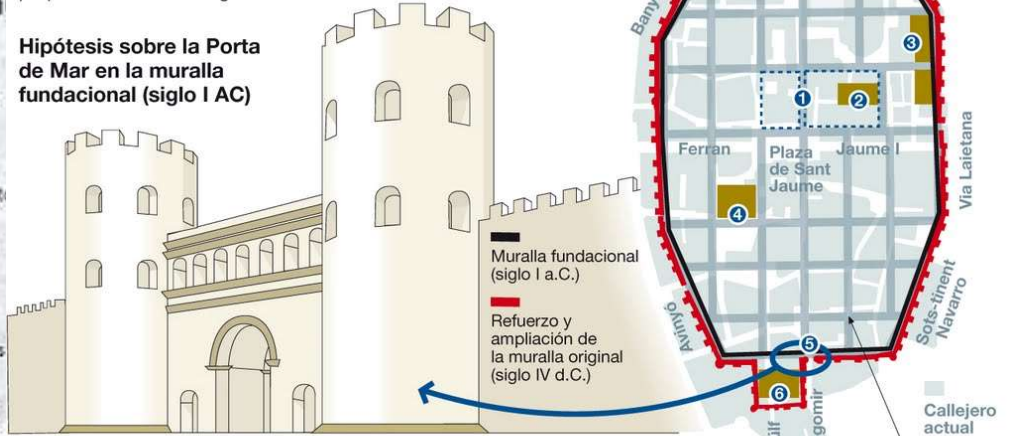
- Vías
- Acueducto
- Termas
- Domus
- Mosaicos
- Muralla y torres

40 metros de muralla oculta tras los edificios

## LOS ORÍGENES DE BARCELONA

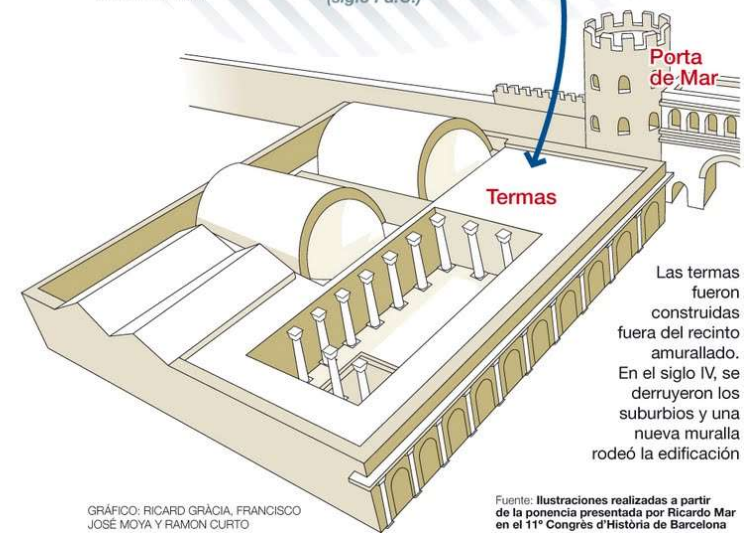
Un estudio del Seminari de Topografia Antiga de Tarragona propone una nueva imagen de Barcino

### Hipótesis sobre la Porta de Mar en la muralla fundacional (siglo I AC)



**Basilica**  
Nuevas teorías replantean su ubicación en el foro, que sería menor a lo que se creía

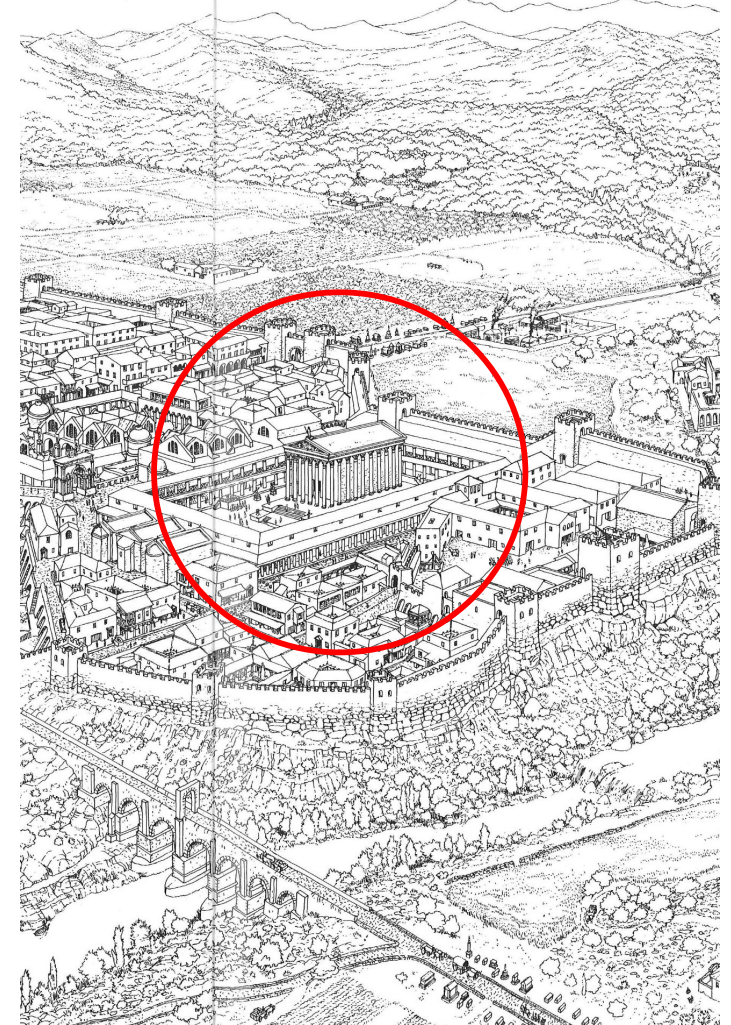
GRÁFICO: RICARD GRÀCIA, FRANCISCO JOSÉ MOYA Y RAMON CURTO

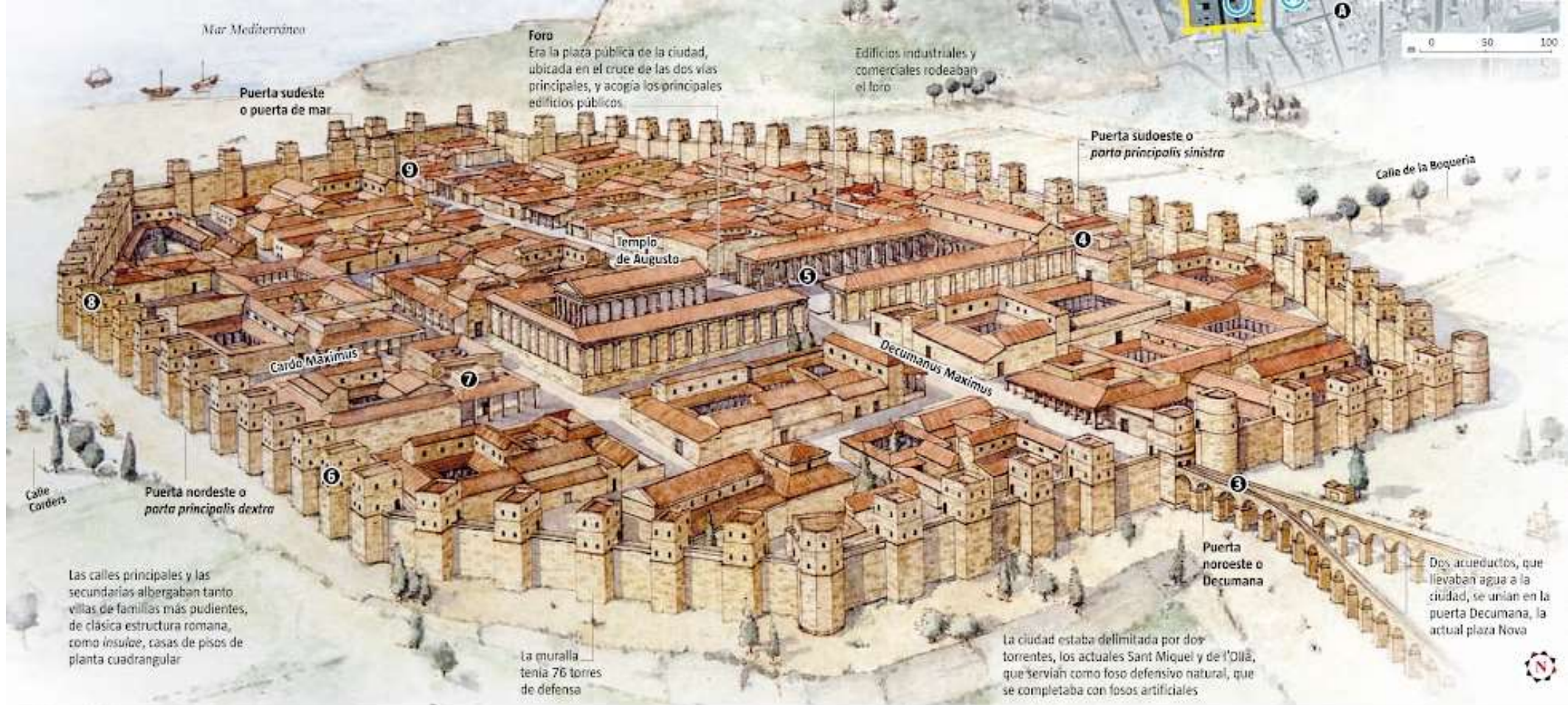


Las termas fueron construidas fuera del recinto amurallado. En el siglo IV, se destruyeron los suburbios y una nueva muralla rodeó la edificación

Fuente: Ilustraciones realizadas a partir de la ponencia presentada por Ricardo Mar en el 11º Congrés d'Història de Barcelona

Granted its own administrative and government structure modelled on Rome → Small initially fortified (44 AD Pomponius Mela) administrative and religious center (street layout, presence of a state religious temple and the proportion of public to private space).





**The forum** → cardus and decumanus maximi, today under Carrer Llibreteria-Call and Carrer Bisbe-Regomir).

Other important buildings there, but nothing remains.

Not a big city (around 13 hectares and 2000 inhabitants), including those in the suburban **villas** near the walls (found on Avinguda/Avenida de Francesc Cambó).



# Roman walls

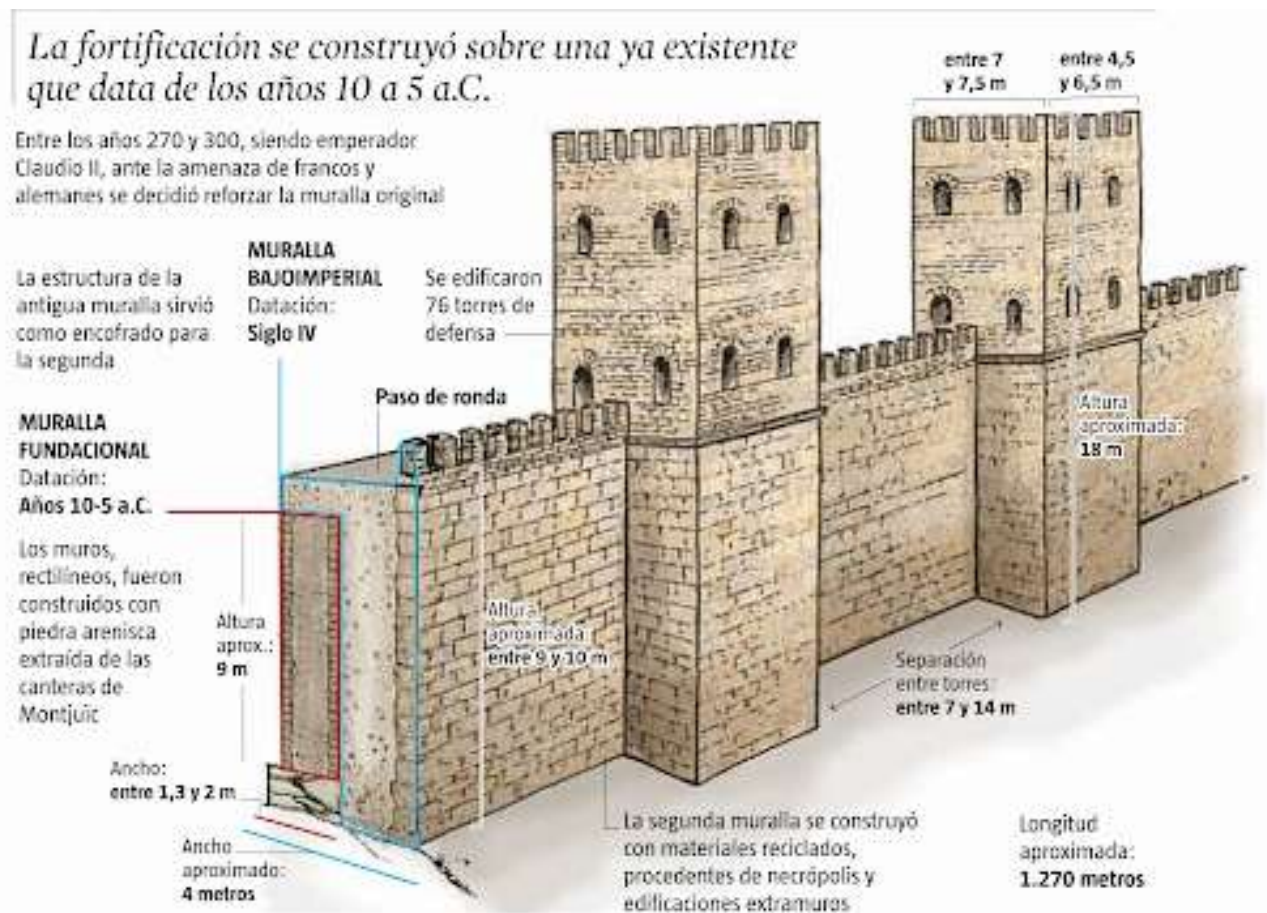
Barcino was walled.

## 1. A first city wall:

- Built in the first century BC.
- Very simple: towers only at the angles and at the gates.

## 2. A second wall:

- Built on the foundations of the first wall, later extended in the IV century.
- Why? → instability related to the Great Crisis of the 3<sup>rd</sup> century (incursions of Franks and Alamanni from the 250s).
- More complex:
  - Perimeter of 1.5 km, which protected a space of 10.4 ha
  - Double wall of 2 meters, with space in the middle filled with stone and mortar.
  - 74 towers about 18 meters high, most of them rectangular base.





## Roman walls

Palacio del Obispo, Plaza Nueva



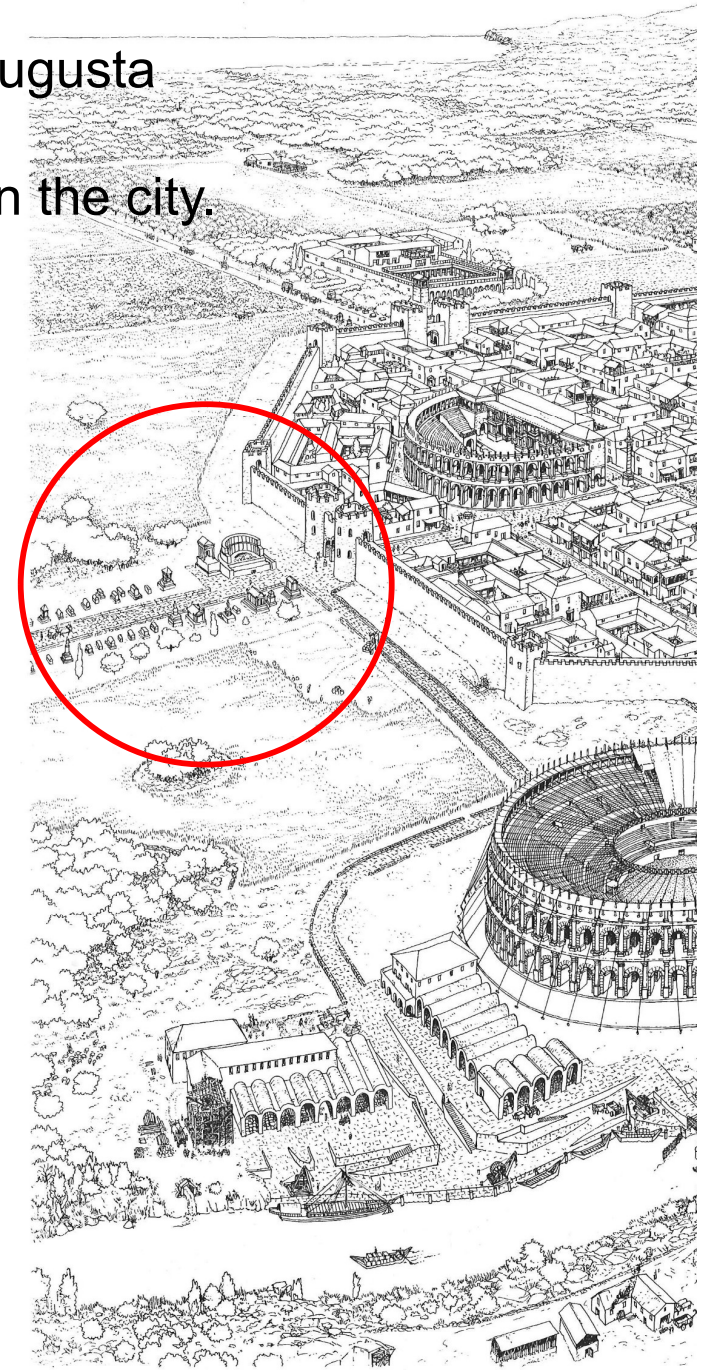


# Roman necropolis (cemetery)

- Outside the walls, close to the city gates → along Via Augusta (Plaça de l'Àngel and Carrer de la Boqueria).
- Why outside the city: roman law prohibited burials within the city.
- Burial site for people of low social standing.



Plaza Villa de Madrid  
(from the end of the 2<sup>nd</sup> century AD to the beginning of  
the 3<sup>rd</sup> century AD),



3. UNA GRAN CIUDAD ROMANA (siglo II d. C.)

# Roman necropolis (cemetery)

85 graves of different types have been identified:

- six monolithic cupae,
- six aras,
- a stele,
- two slabs with inscription,
- thirty-three burial mounds (two of them conical and the rest quadrangular or cupae of work),
- seventeen burials protected with tiles and amphorae
- twenty burials without remains of protections.

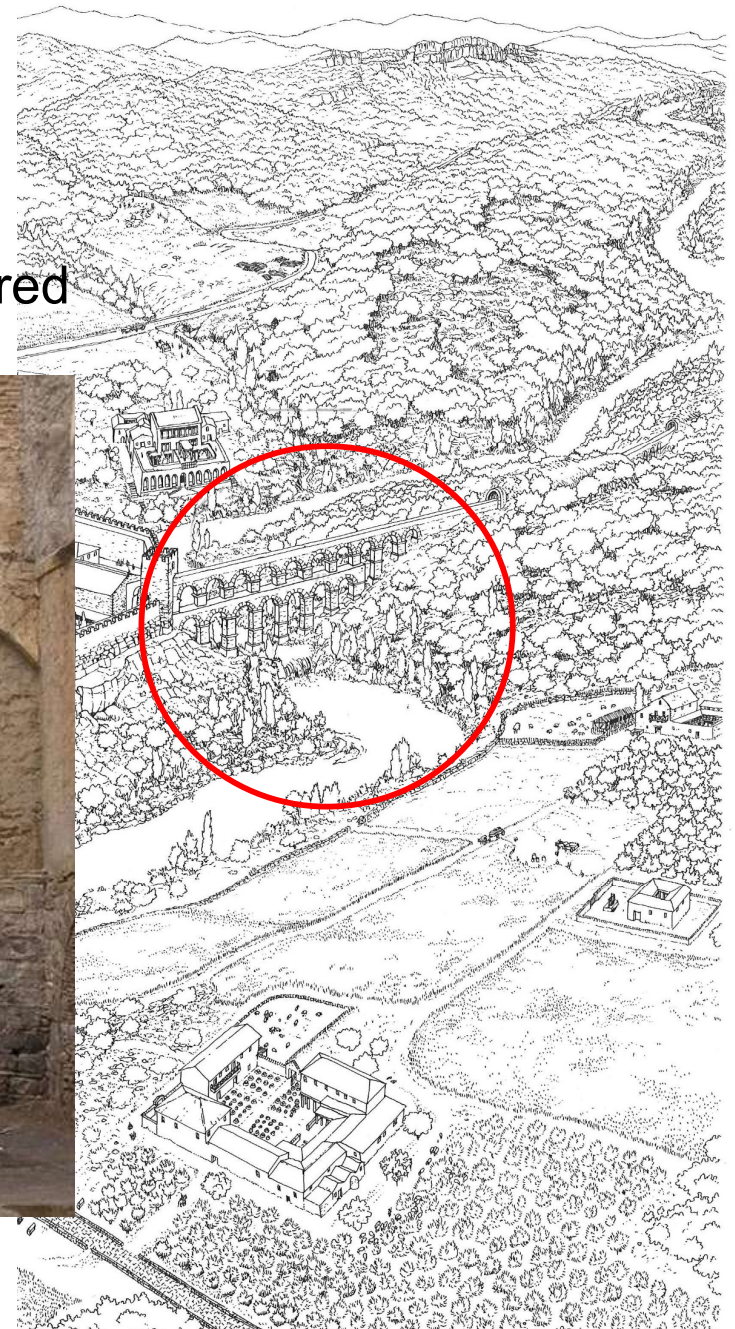
Discovered in 1956, several excavation campaigns after that (the current museum opened in 2008).

Why it's exceptional:

- Very good state of conservation → the tombs were found in their original place (most roman graves are known as fragments reused in other works.
- The reason? → Shortly after the necropolis ceased to be used, it was covered with alluvial deposits from torrents.

# Roman aqueduct (water supply)

- Older than the first wall of Barcelona.
- Would supply water from the Besós River → considered the first public work of Barcino.



1. Rediscovered in 1988, after being hidden behind subsequent buildings.
2. Four arches in the wall of an 18th-century building (Plaça del Vuit de Març)

[http://www.bcn.cat/historia/pag/capitols/cap\\_01/en/capitol\\_01.htm](http://www.bcn.cat/historia/pag/capitols/cap_01/en/capitol_01.htm)