

HISTORY OF ARCHITECTURE I
ARC 2313 - SPRING 2022

LECTURE-13
21 FEBRUARY 2022

For Wednesday, 23 February

Ingersoll: 183-190, 251-263

Imperial Rome

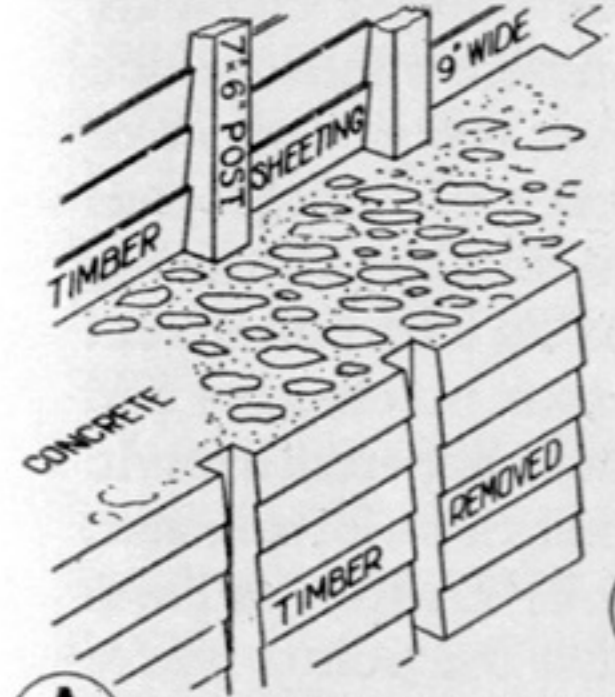
Roman building technology:

TRABEATED SYSTEM OF THE GREEKS
+
ARCHED SYSTEM FROM THE ETRUSCANS

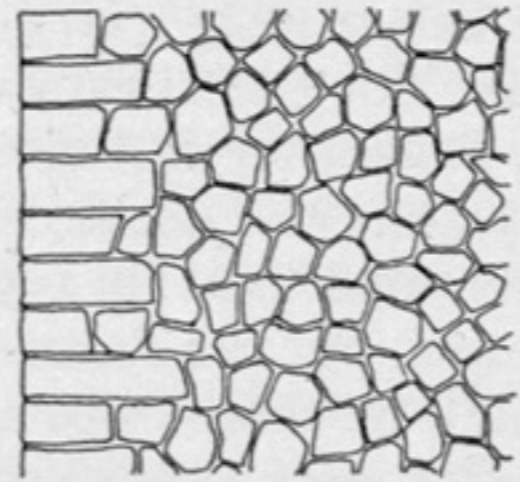
CONCRETE DEVELOPED BASED ON
GROUND VOLCANIC ASH CALLED
POZZOLANA

ROMAN BRICKWORK

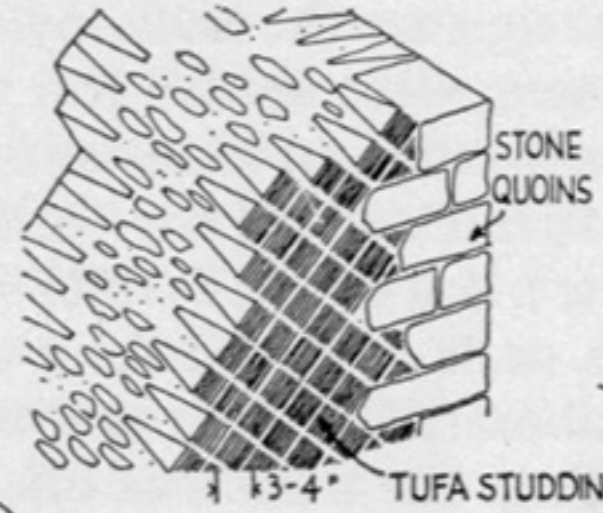
CONSTRUCTION OF WALLS AND ARCHES



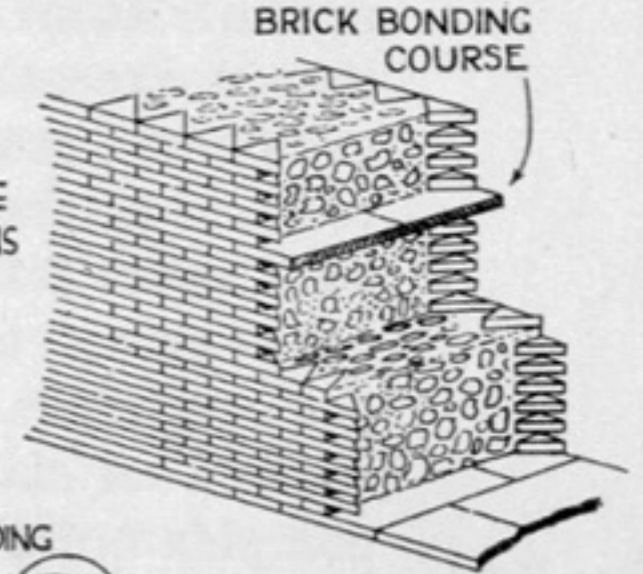
A CONCRETE FOUNDATIONS



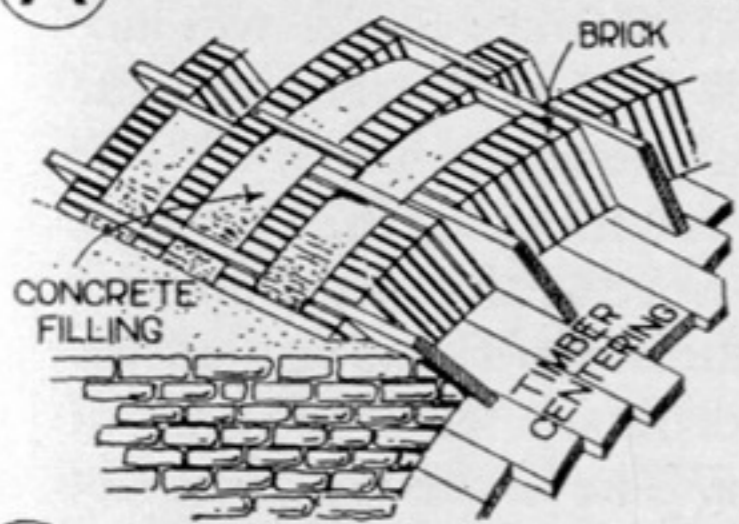
B OPUS INCERTUM



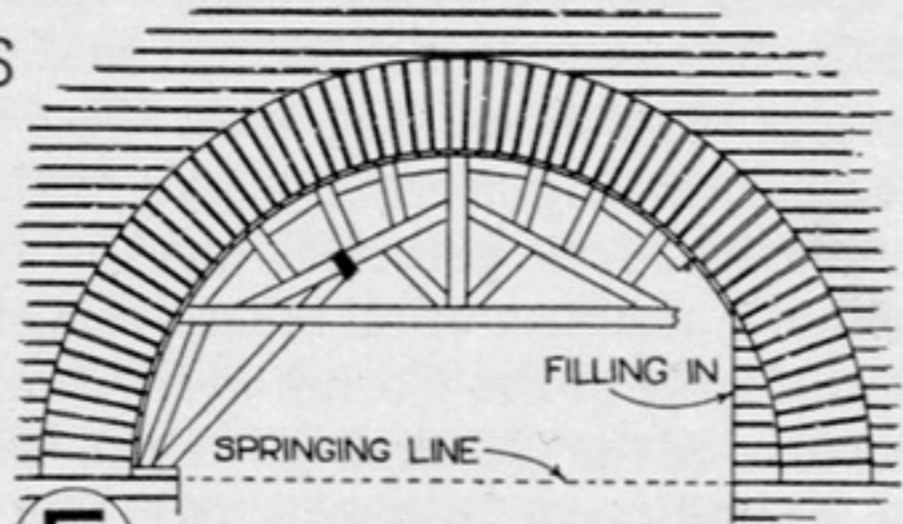
C OPUS RETICULATUM



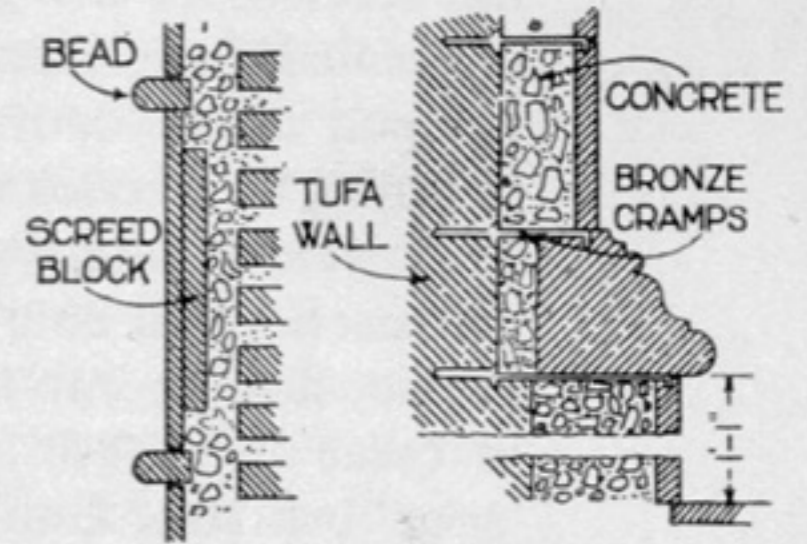
D OPUS TESTACEUM



E VAULT CONSTRUCTION

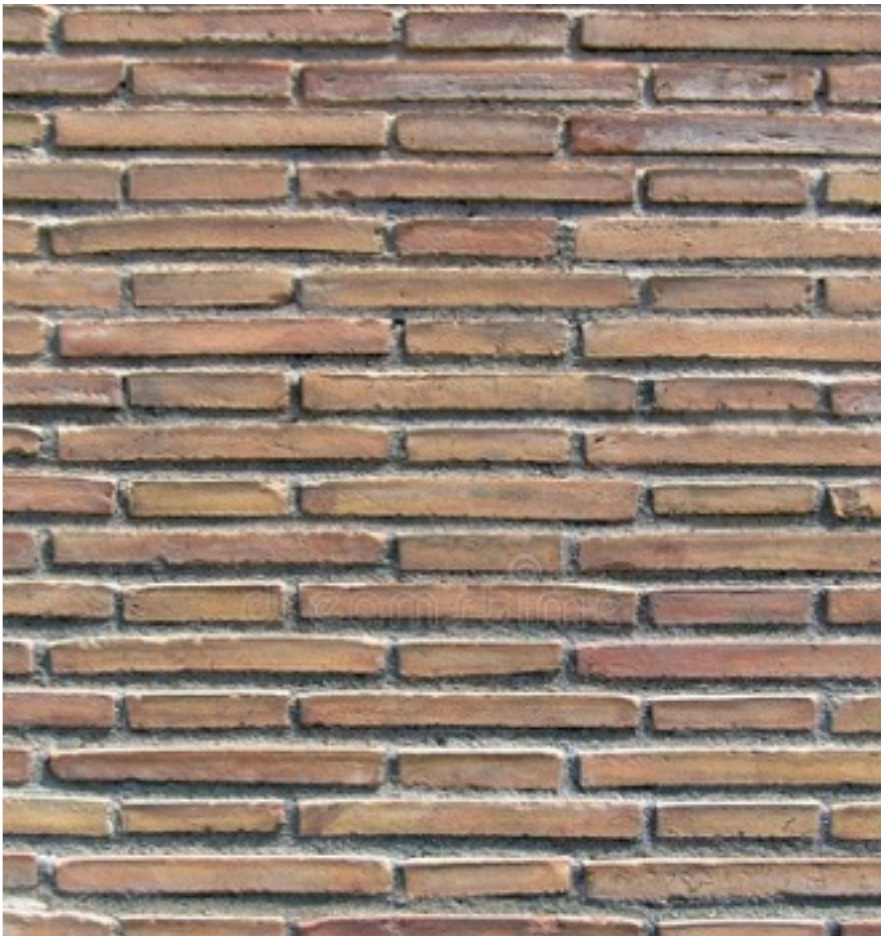


F ARCH CENTRE SUPPORTED AT SPRINGING

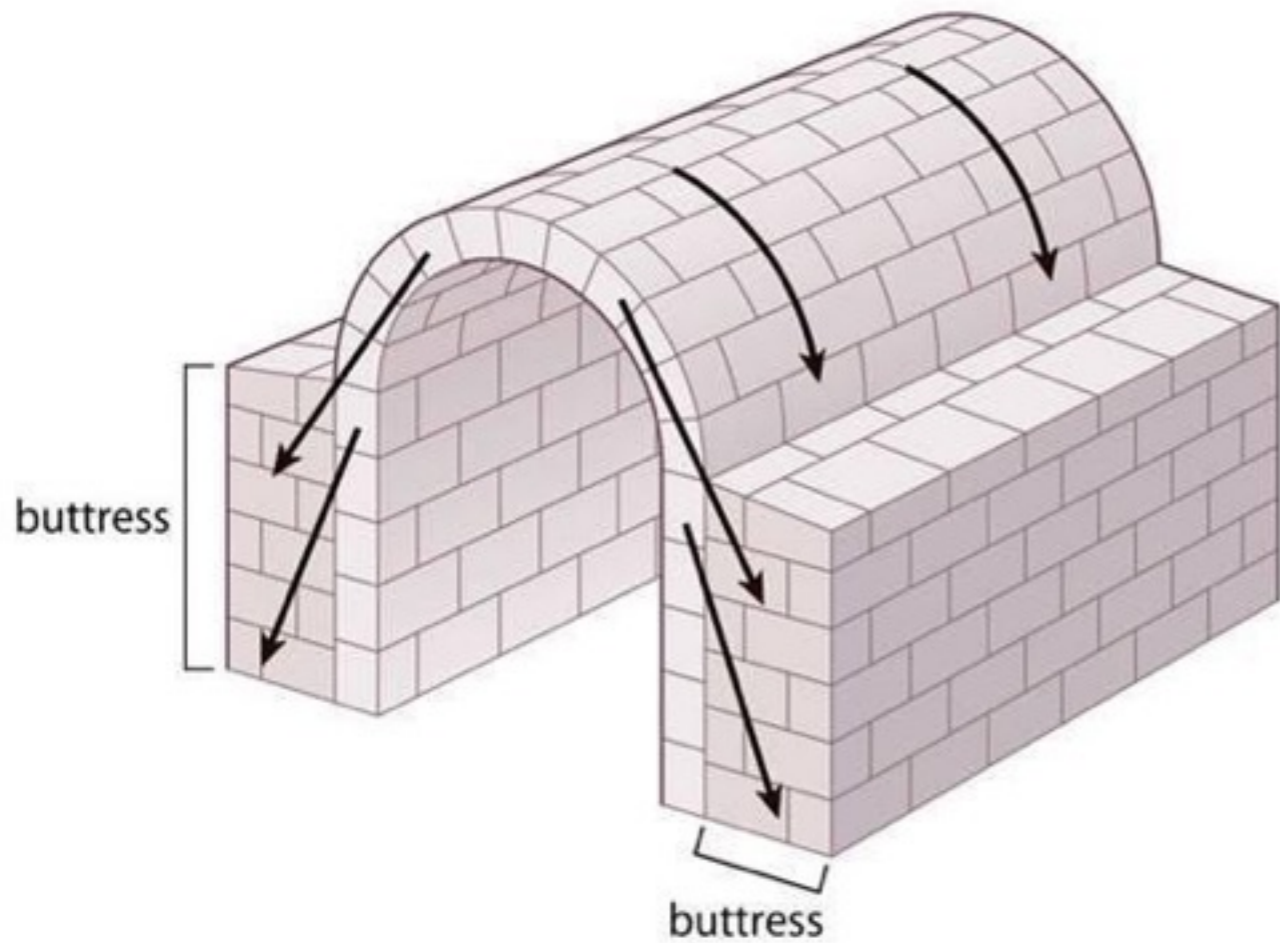


G METHODS OF FIXING MARBLE FACINGS

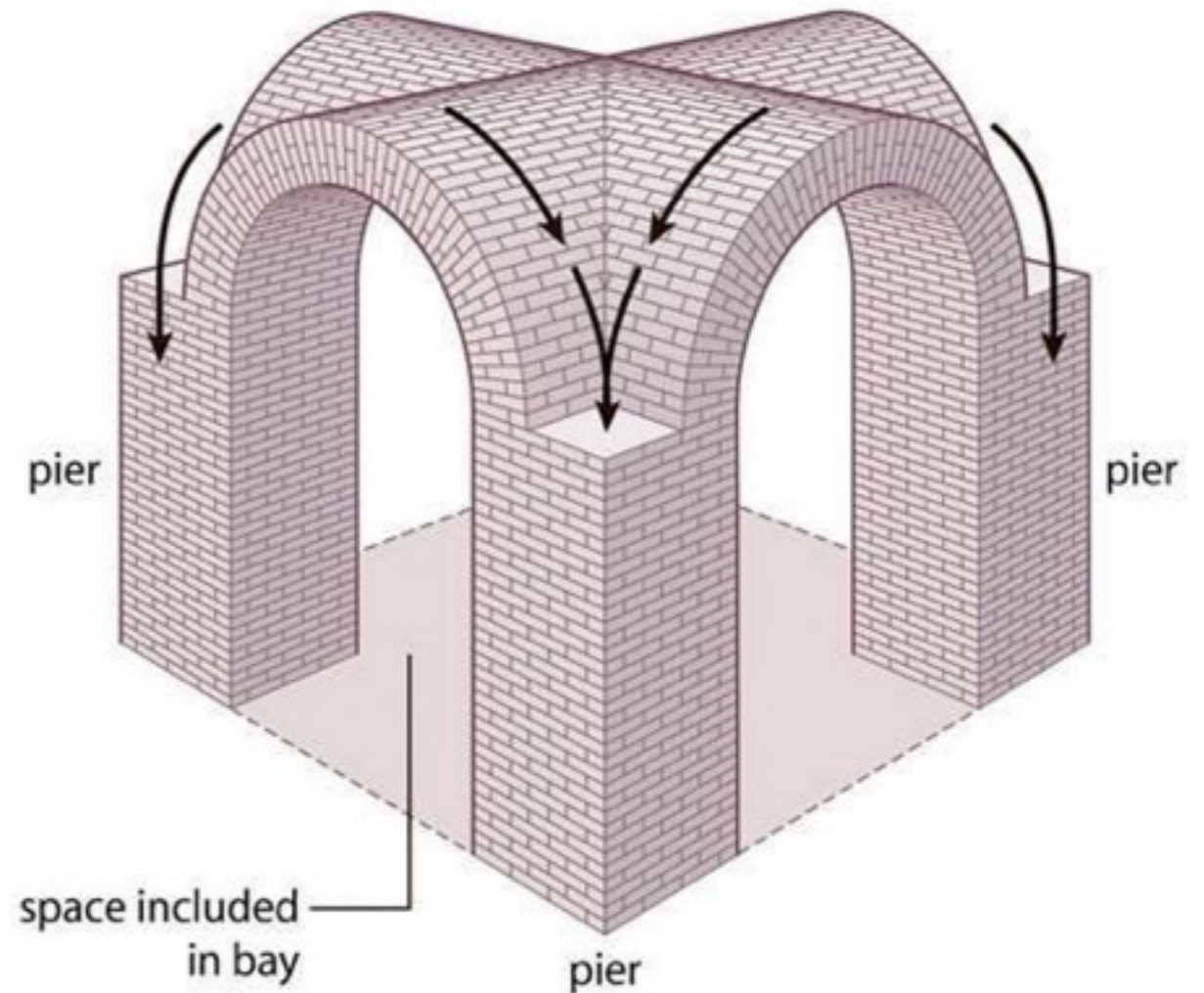
Build the *centering* first - then build arch on top of that
Roman brick (D) called *opus testaceum*
Reticulated (C) called *opus reticulatum*



Frank Lloyd Wright used it in the 20th C



barrel vault



groin vault

Straight vault over two parallel supporting walls is a ***barrel vault***

Two intersecting barrel vaults makes a ***groin vault***

DOMUS

The Roman House / domestic / domicile

Domus on a large block surrounded by ground-floor retail...

The retail stores were simple barrel-vaulted chambers called ***taberna*** (tabernae plural)

taberna is another ancient building type (add this to the ***theater*** and the ***tholos***)

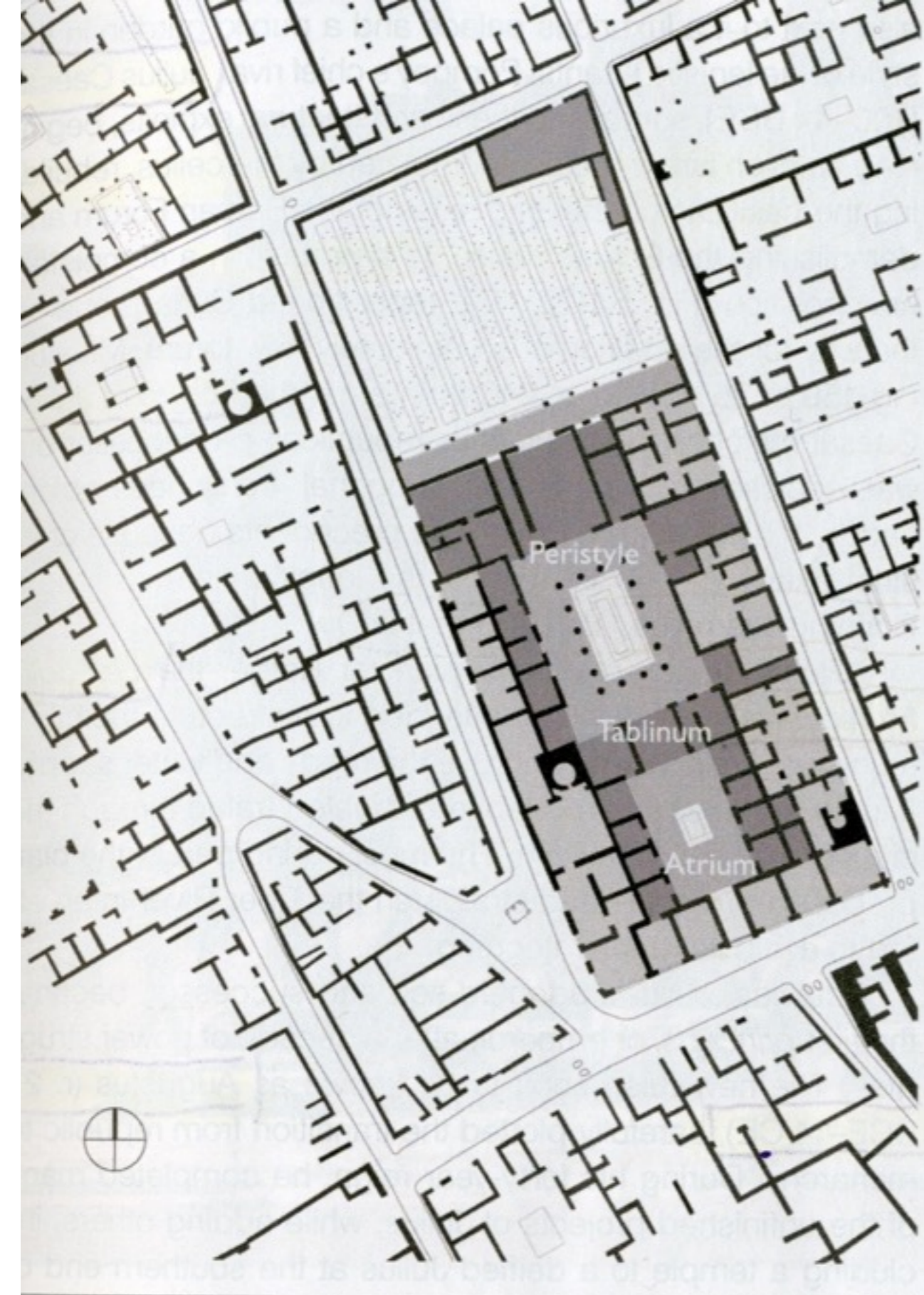


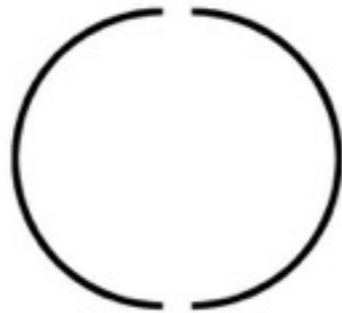
Figure 5.1-18 Pompeii. Detail of neighborhood showing the *domus*. House of Pansa occupying an entire block. Shops and rental units in the light gray areas on the perimeter.

Our list of *Ancient Building Types* now includes the ***taberna***

THEATER



Diagram of a ***theater***



Two enclosed theaters make an ***amphitheater***
("amphi" means "both")

THOLOS

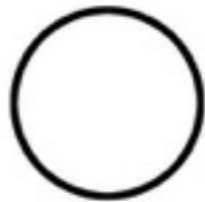


Diagram of a ***tholos***

TABERNA

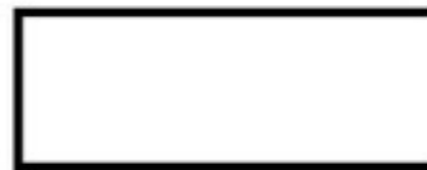
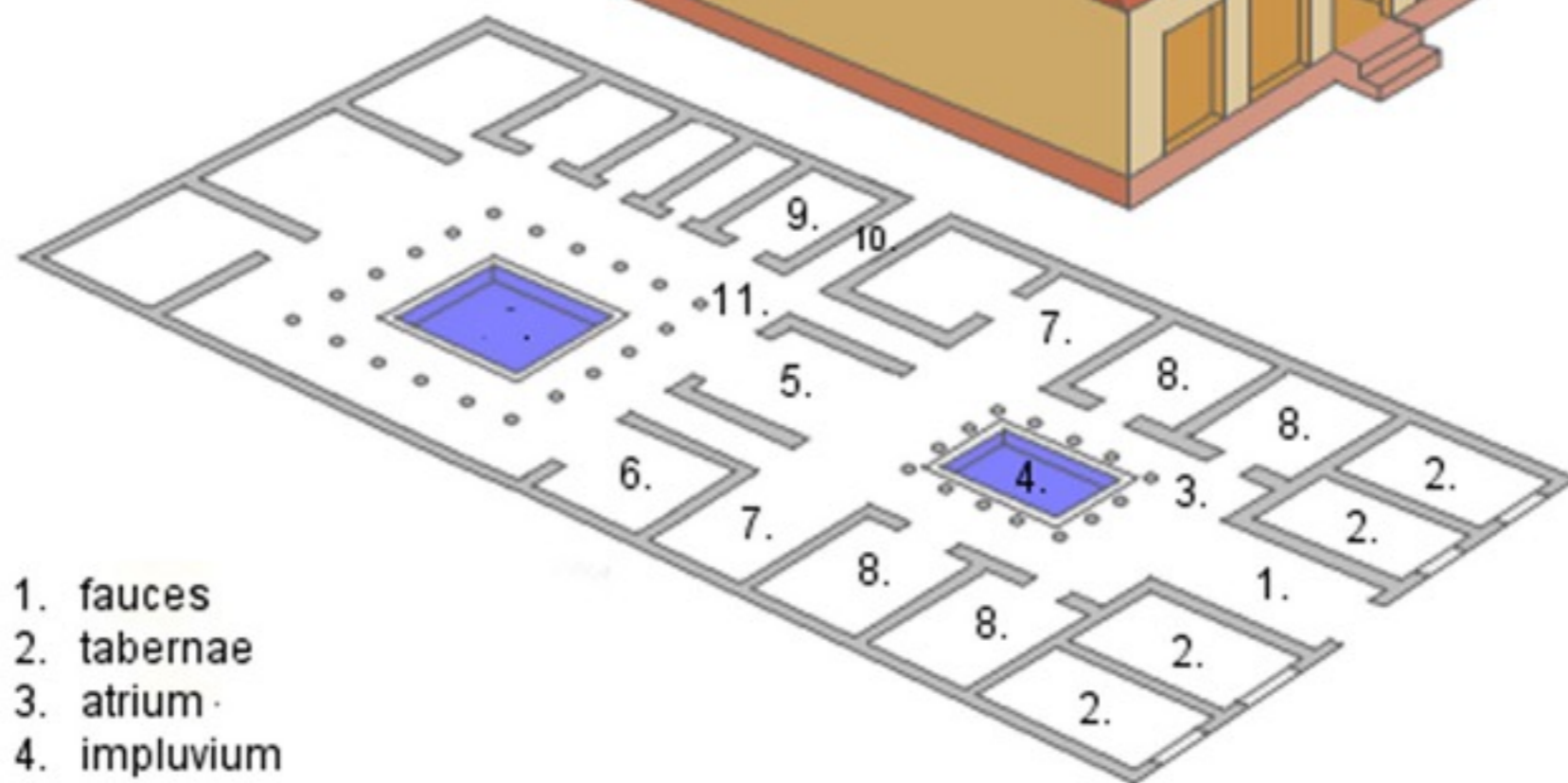
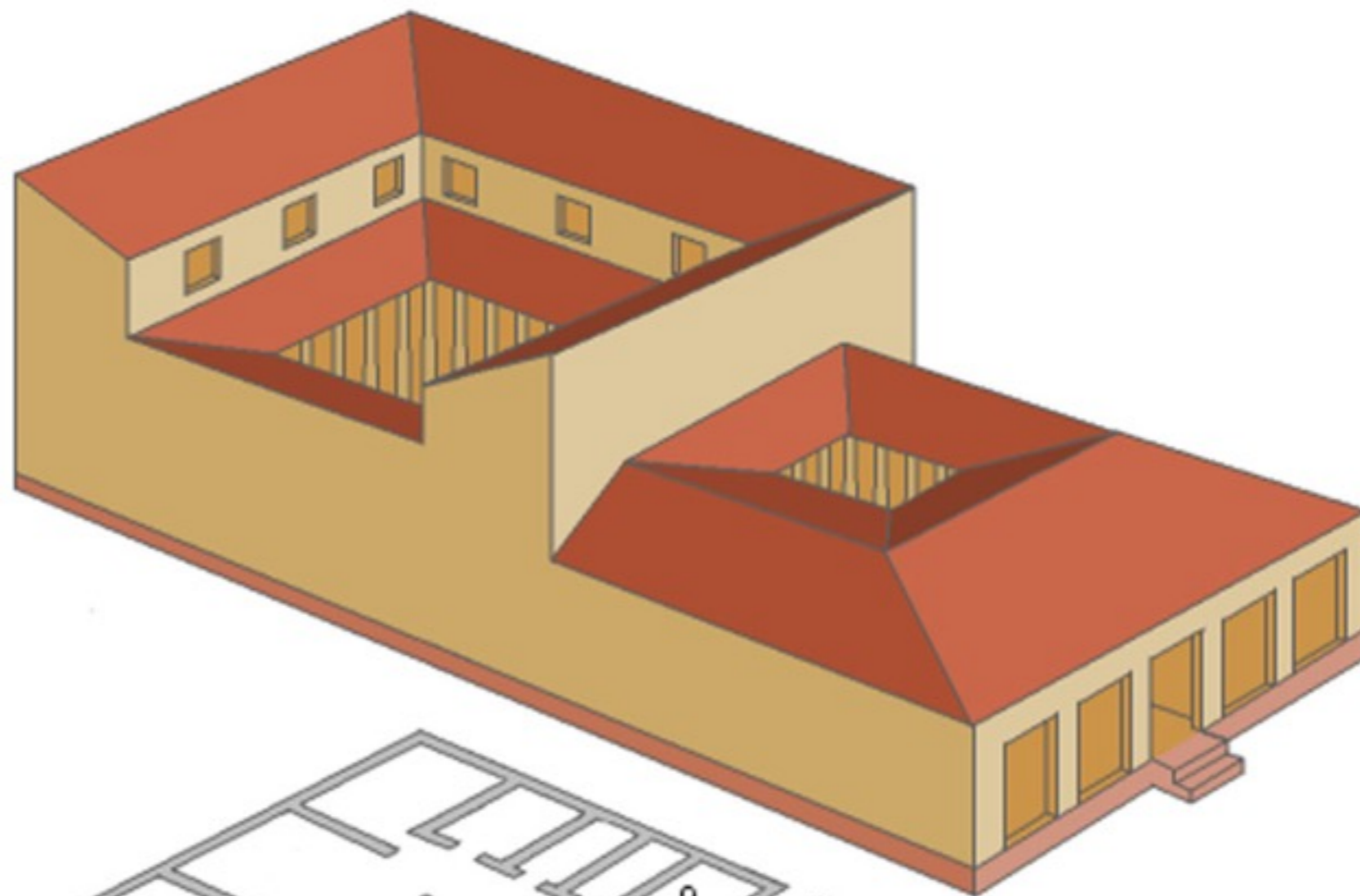


Diagram of a ***taberna***



- 1. fauces
- 2. tabernae
- 3. atrium
- 4. impluvium
- 5. tablinum
- 6. triclinium
- 7. alae
- 8. cubiculum
- 9. culina

- 10. posticum
- 11. peristylium



peristylum

triclinium

tablinum

compluvium

impluvium

atrium

ostium



ostium (vestibule)



cave canem
(beware of dog)



atrium (without columns)



atrium (with columns)

atrium = open central space of the *Roman domus* for light and ventilation

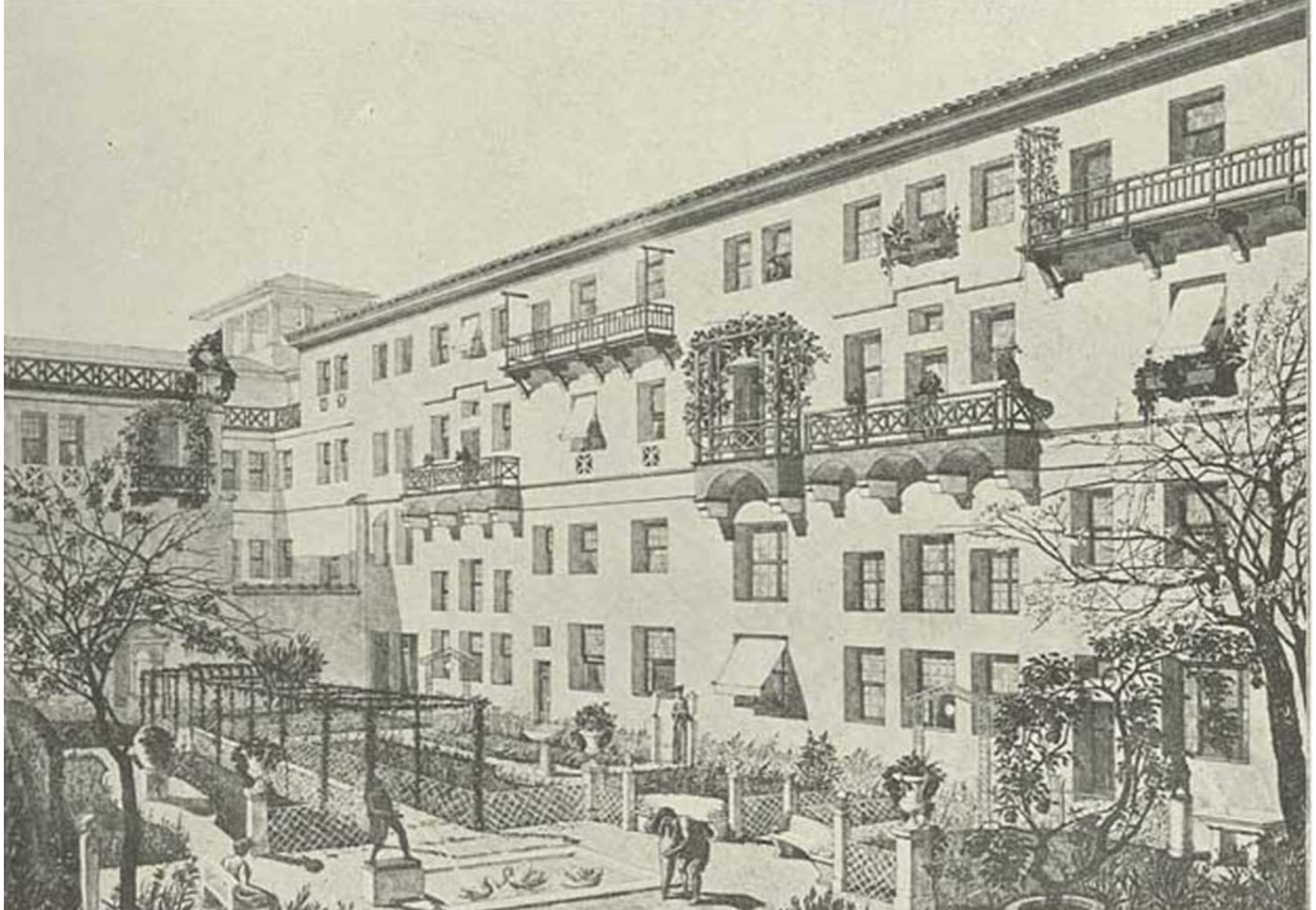
impluvium = pool that collects water in the atrium



atrium in Pompeii showing the
impluvium directly below the
hole in the roof called the *compluvium*
- *peristyle garden* beyond

PERISTYLIUM PERISTYLE GARDEN





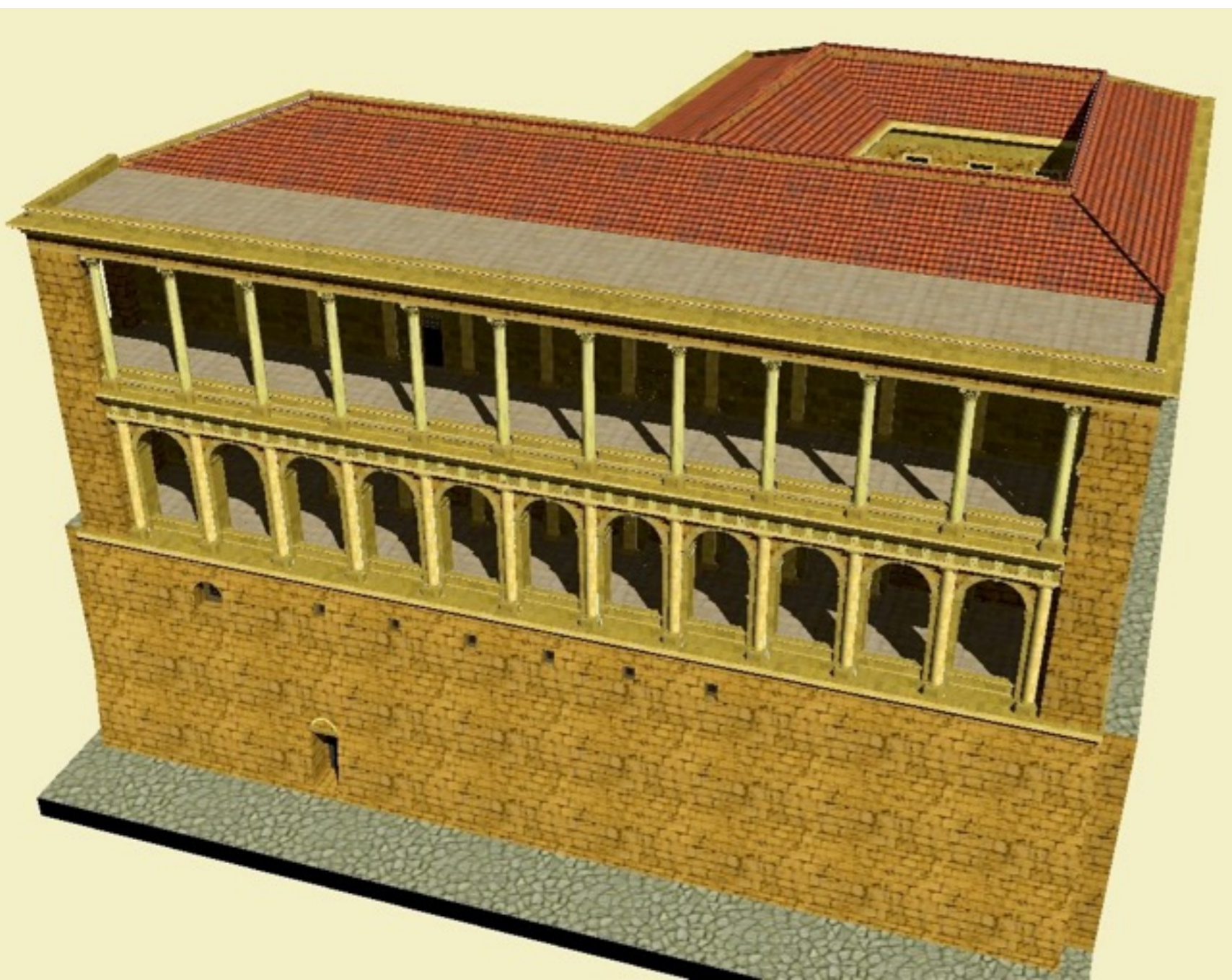
insula - multilevel apartment block



Here's an *insula* in Ostia (Rome's port city)
(note the use of Roman brick and arches)

FORUM

Two important buildings on the
Roman Forum prior to Julius Caesar



TABULARIUM - for the maintenance of public records

Tablularium



TEMPLE OF VESTA



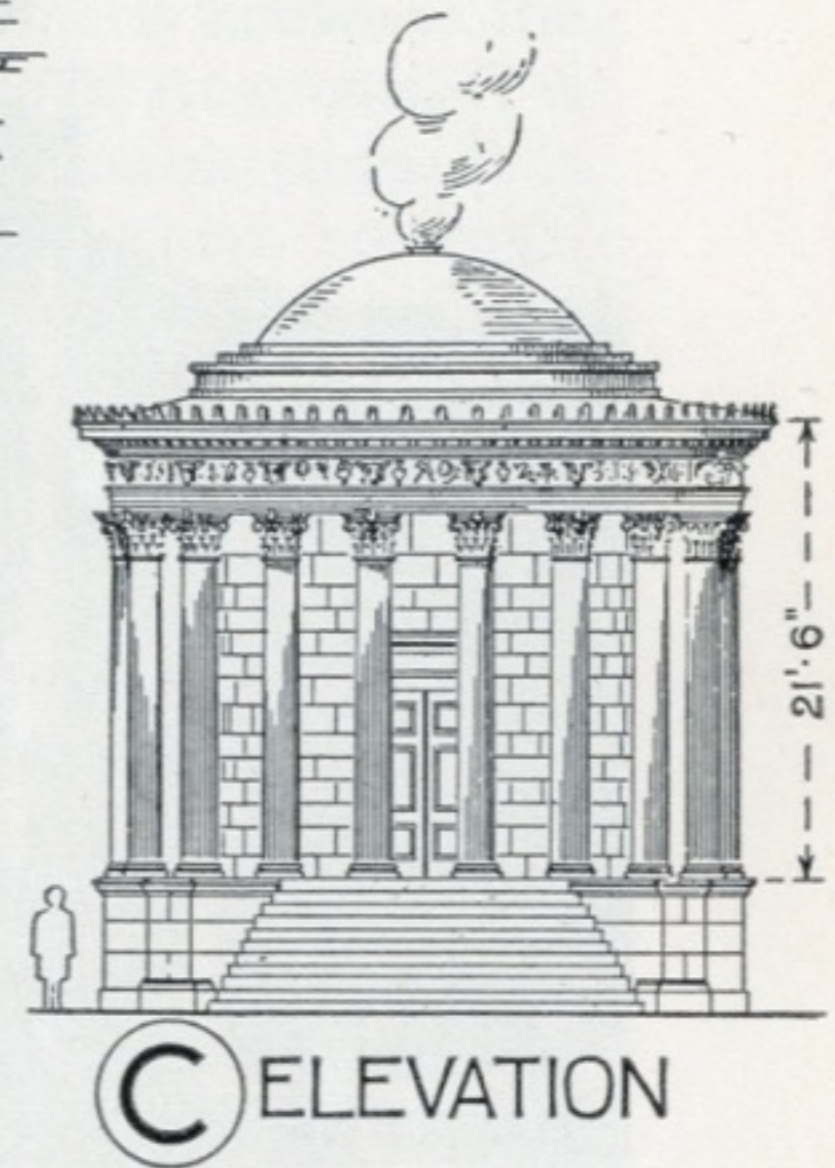
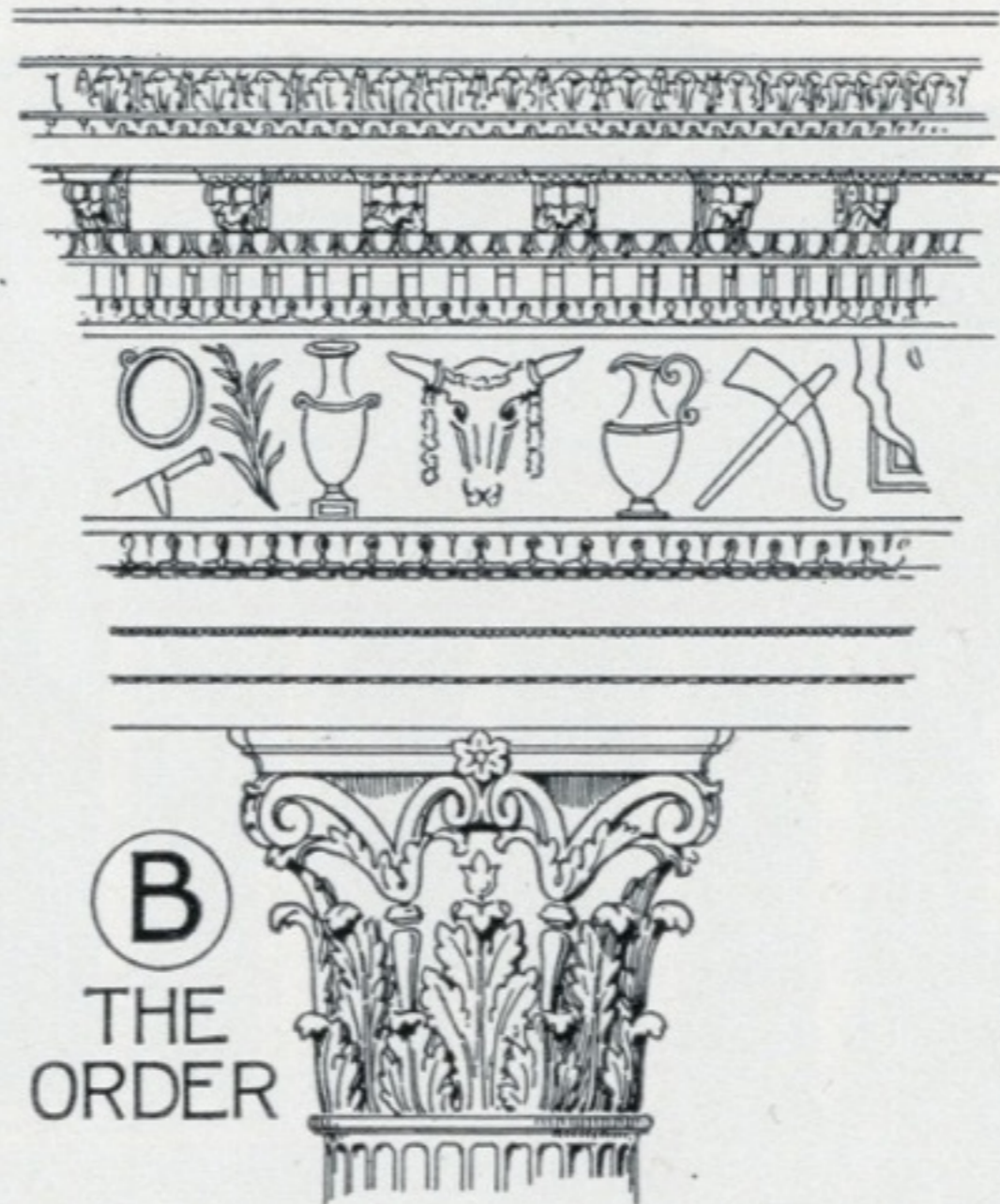
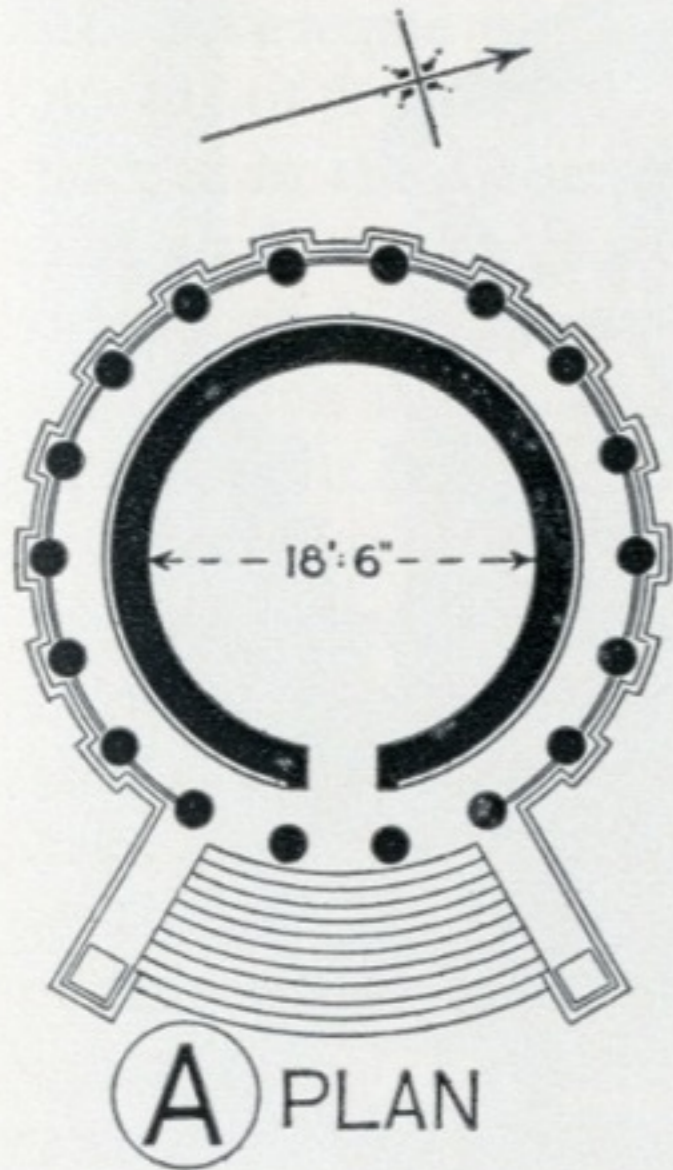
Curia Julia



Possibly the most important building on the Forum



TEMPLE OF VESTA: ROME (RESTORED)



TEMPLE OF VESTA (*it's a tholos*)

*Virgin goddess home, hearth, and family in Roman theology
Existed on the Forum since 700 BCE in various forms*

MAJOR WORKS BY JULIUS & AUGUSTUS

JULIUS CAESAR (*end of the Republic*) died 44 BCE

Forum of Julius

Temple to Venus Genetrix - inside his Forum

Curia Julia - Senate House

AUGUSTUS (*first Emperor*) ruled 27 BCE - 14 CE

*Forum of Augustus - inside the **Temple to Mars***

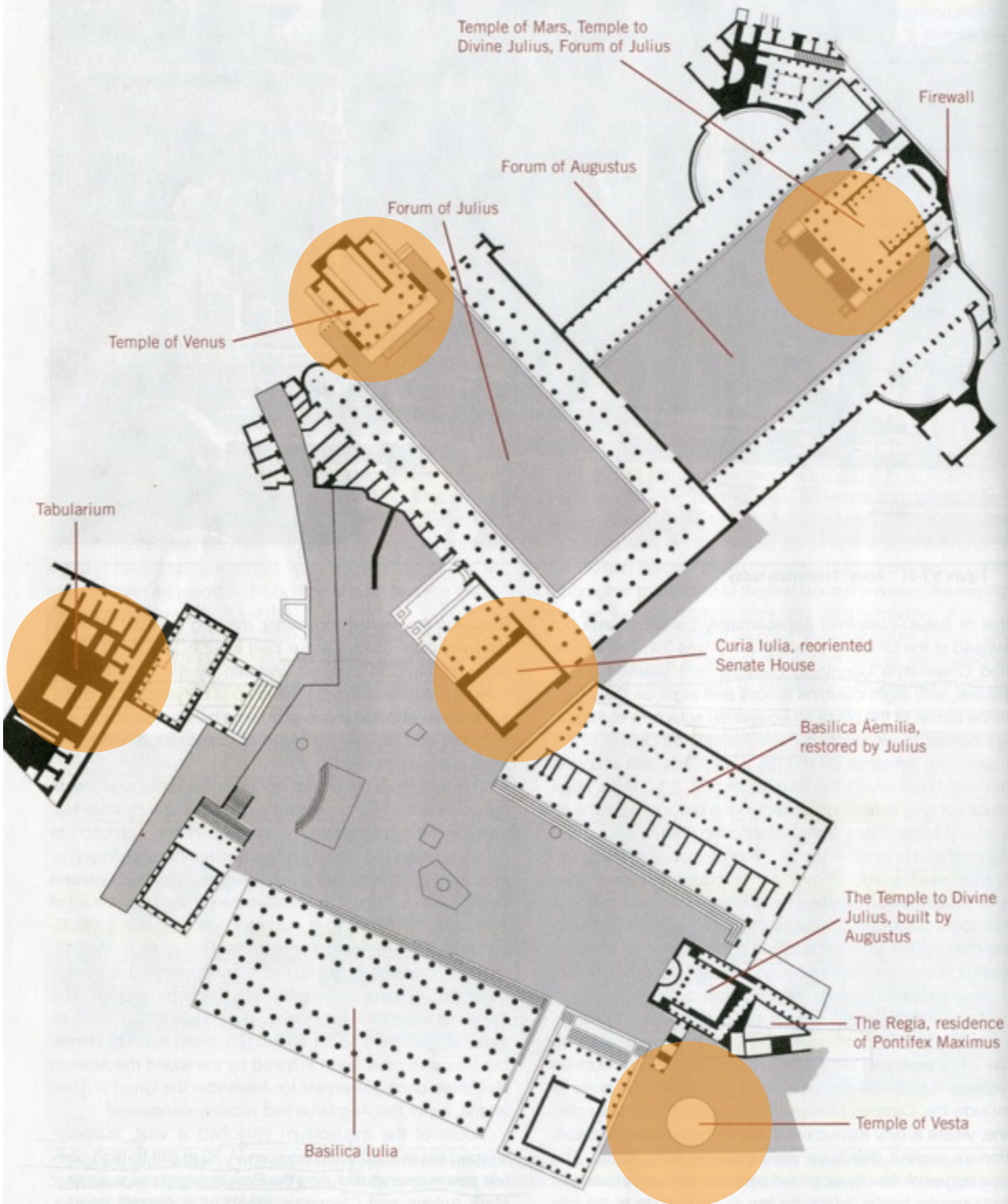
Maison Carrée - in Nimes France (Cubic House)

Tomb of Augustus - outside the walls in Rome

*Ara Pacis - next to his tomb. Altar to **Pax Romana***

*Vitruvius - publishes **Ten Books** in 25 BCE*

Figure 5.1-22 Rome. Transformation of the Republican Forum under Julius Caesar and Augustus.



Forum of Julius

*Inside Julius's forum is the **Temple to Venus***



Julius Caesar rebuilt the Senate House here.
It's called the *Curia Julia*

Augustus is considered the *first emperor*



Inside Augustus's Forum the principal axis focused on the *Temple to Mars*



***The best preserved Roman Temple of all
Maison Carrée in Nimes (South of France) - 002 CE
Dedicated to Augustus and two grandsons***





Thomas Jefferson had it copied for the Virginia Capitol

MAJOR WORKS BY TRAJAN & HADRIAN

TOMBS OF AUGUSTUS & HADRIAN

TRAJAN 98 - 117 CE

Forum of Trajan

Trajan's Column

*Trajan's Market (composed of stories of **tabernae**)*

HADRIAN 117 - 138 CE

Hadrian's Wall - separating Britain from Scotland

Hadrian's Villa - in Tivoli near Rome

Pantheon - best Roman temple in Rome

Hadrian's Tomb - now the Castle Sant'Angelo

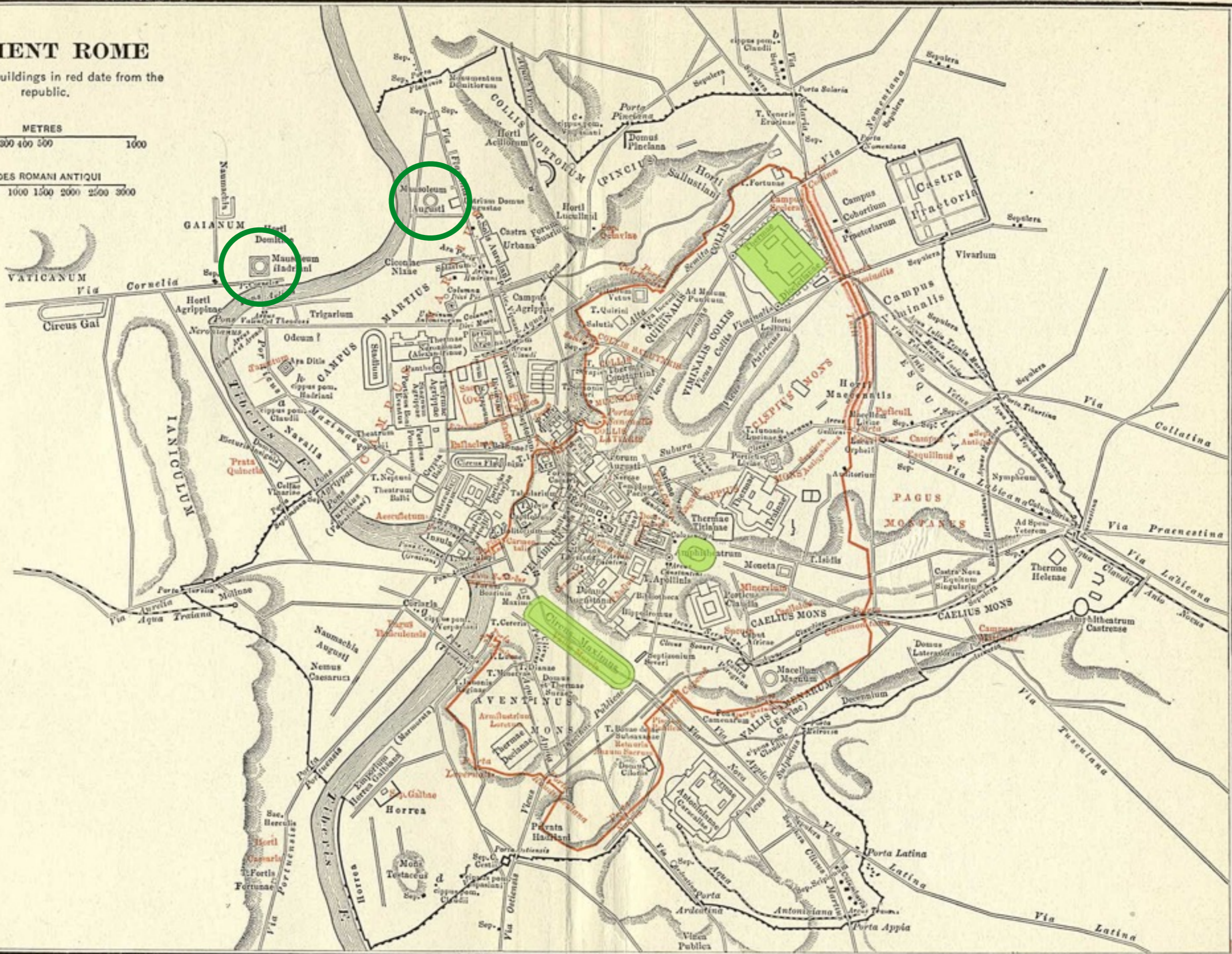
Temple of Venus & Rome

ANCIENT ROME

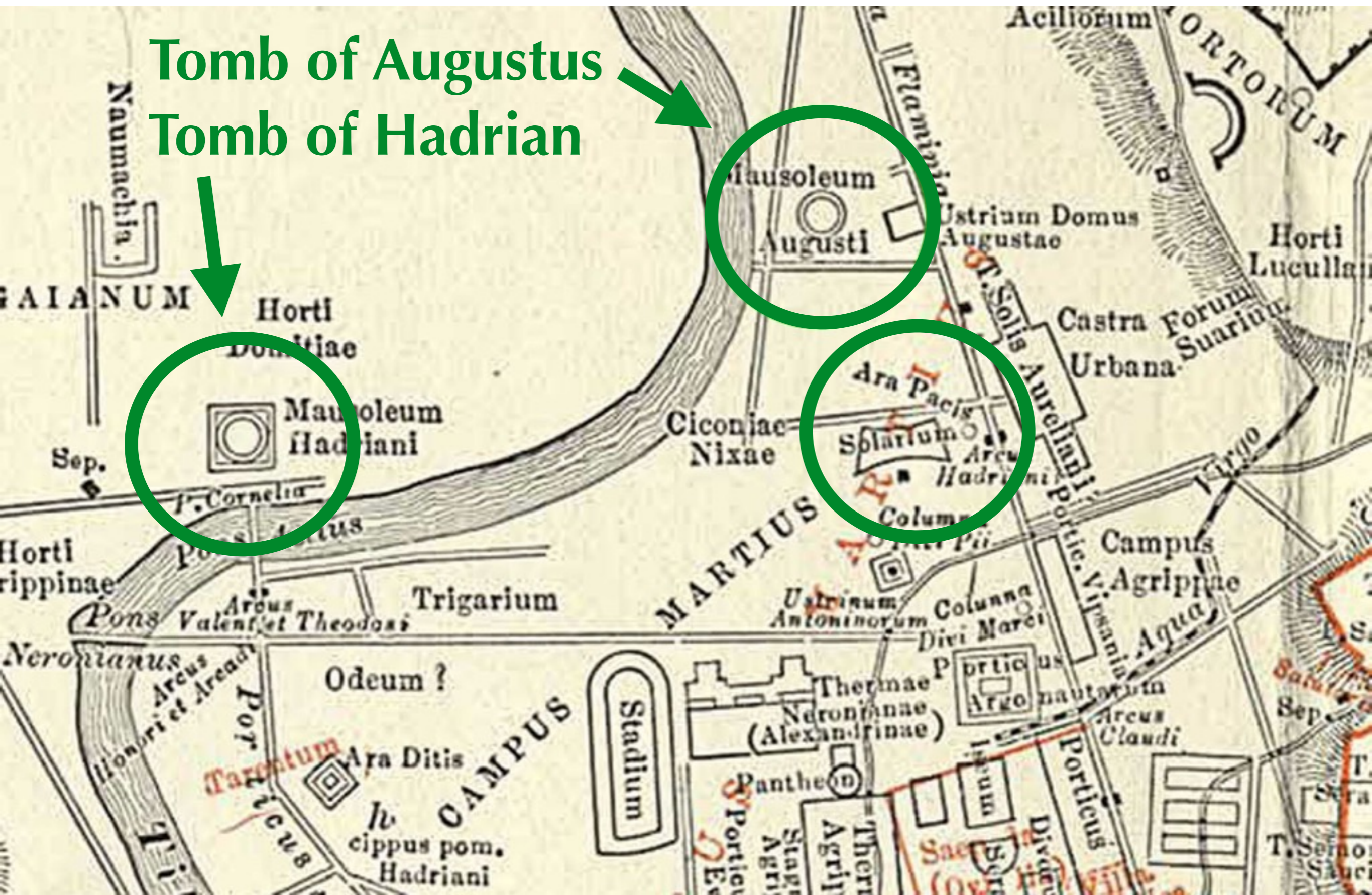
Places and buildings in red date from the republic.

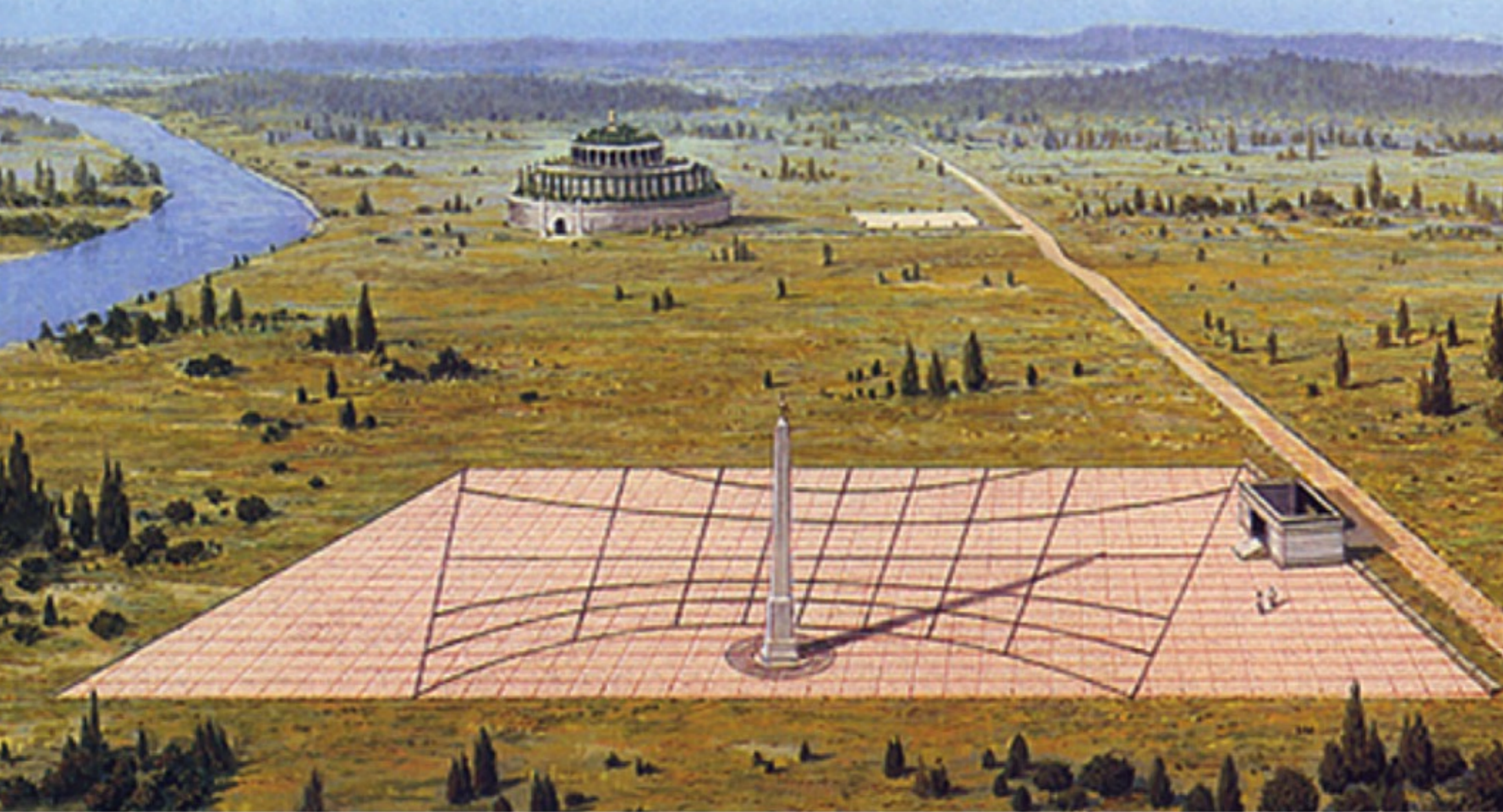
METRES
0 100 200 300 400 500 1000

PEDES ROMANI ANTIQUI
0 500 1000 1500 2000 2500 3000



Tomb of Augustus
Tomb of Hadrian





Tomb of Augustus

Solarium and the ***Ara Pacis*** (Pax Romana) in foreground

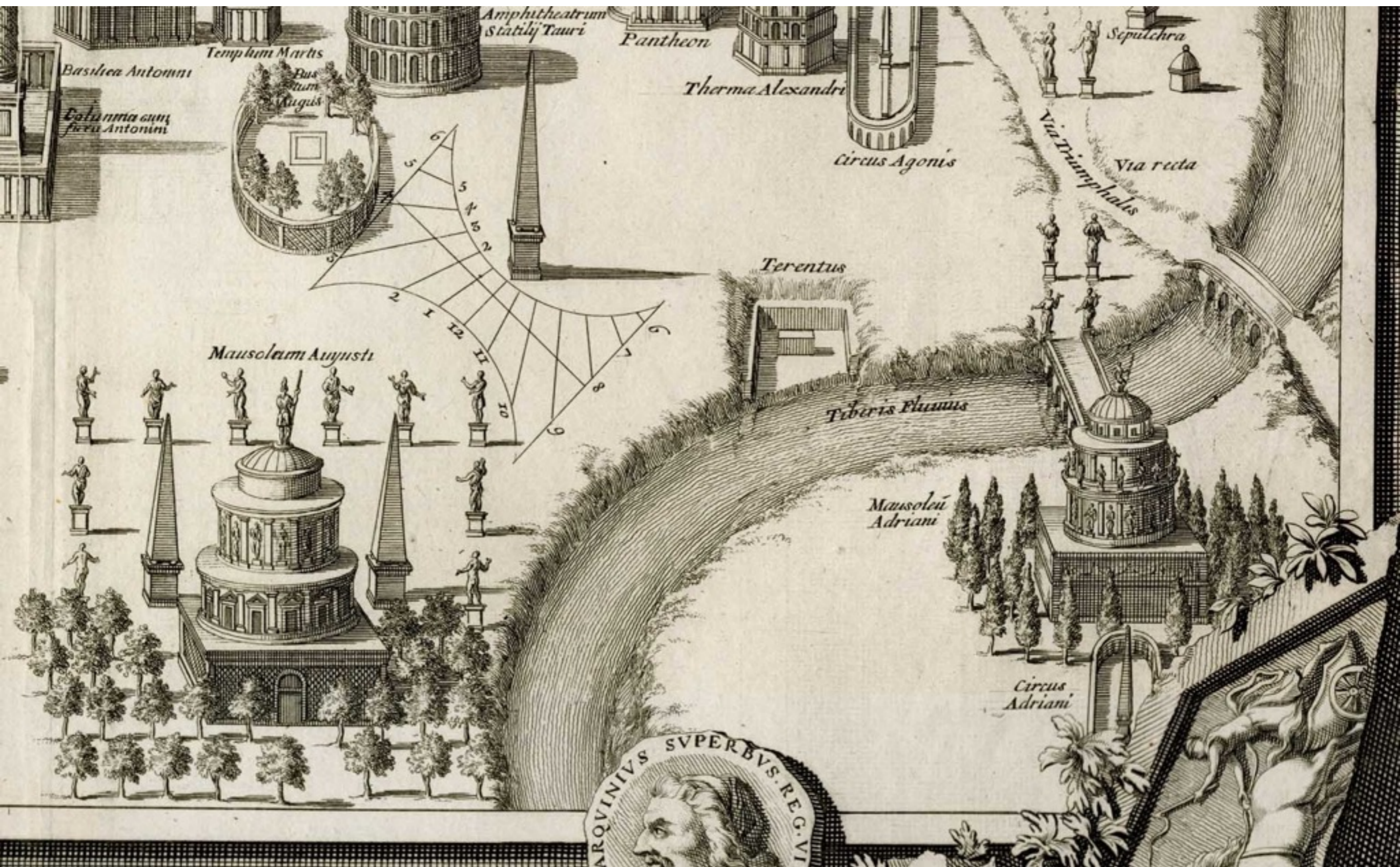


TOMB OF AUGUSTUS



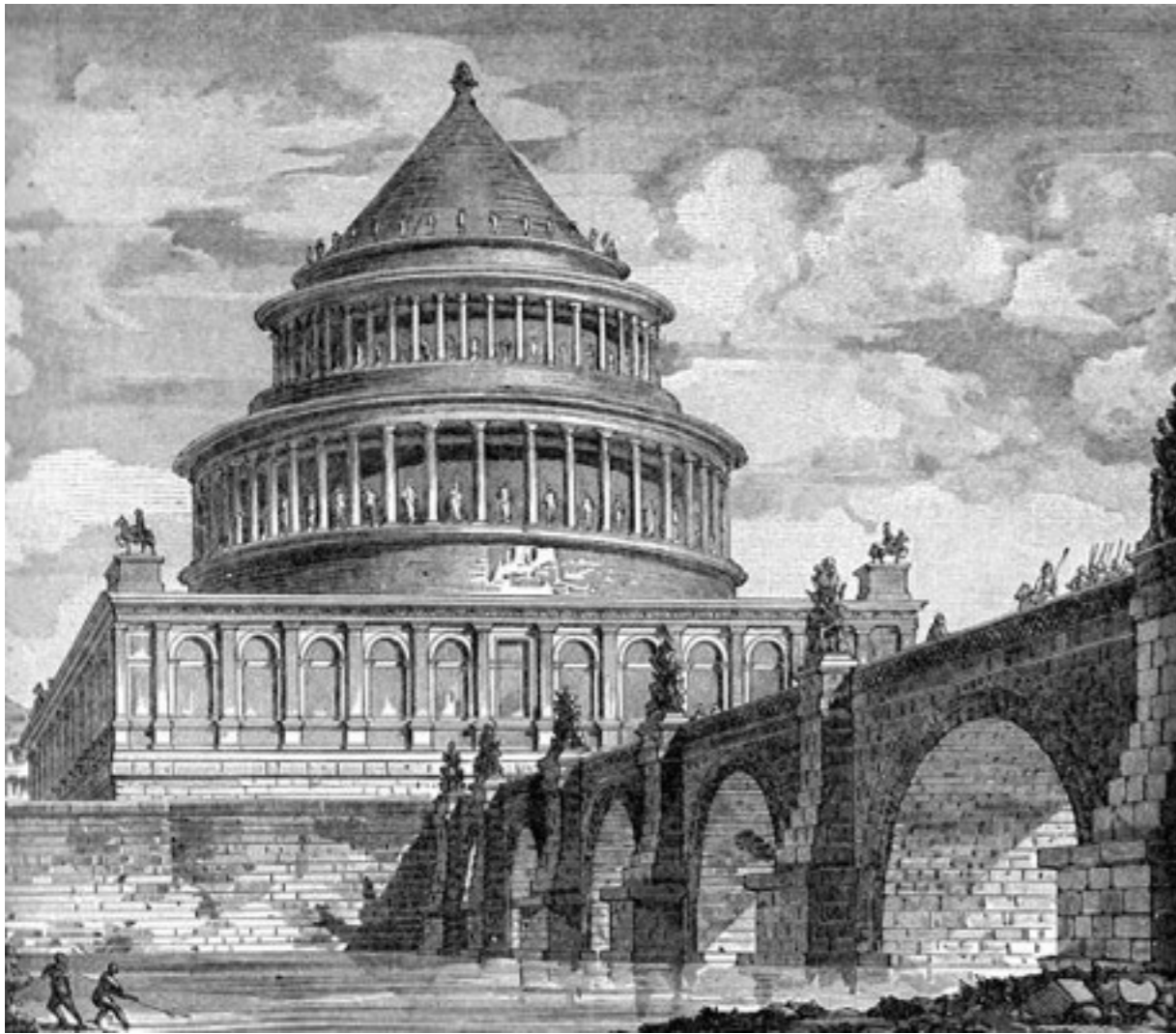
ARA PACIS

Augustus's monument to The Roman Peace or Pax Romana



Tombs of Augustus and Hadrian (looking south - opposite of map)

Hadrian's Tomb is now
the Castel Sant'Angelo

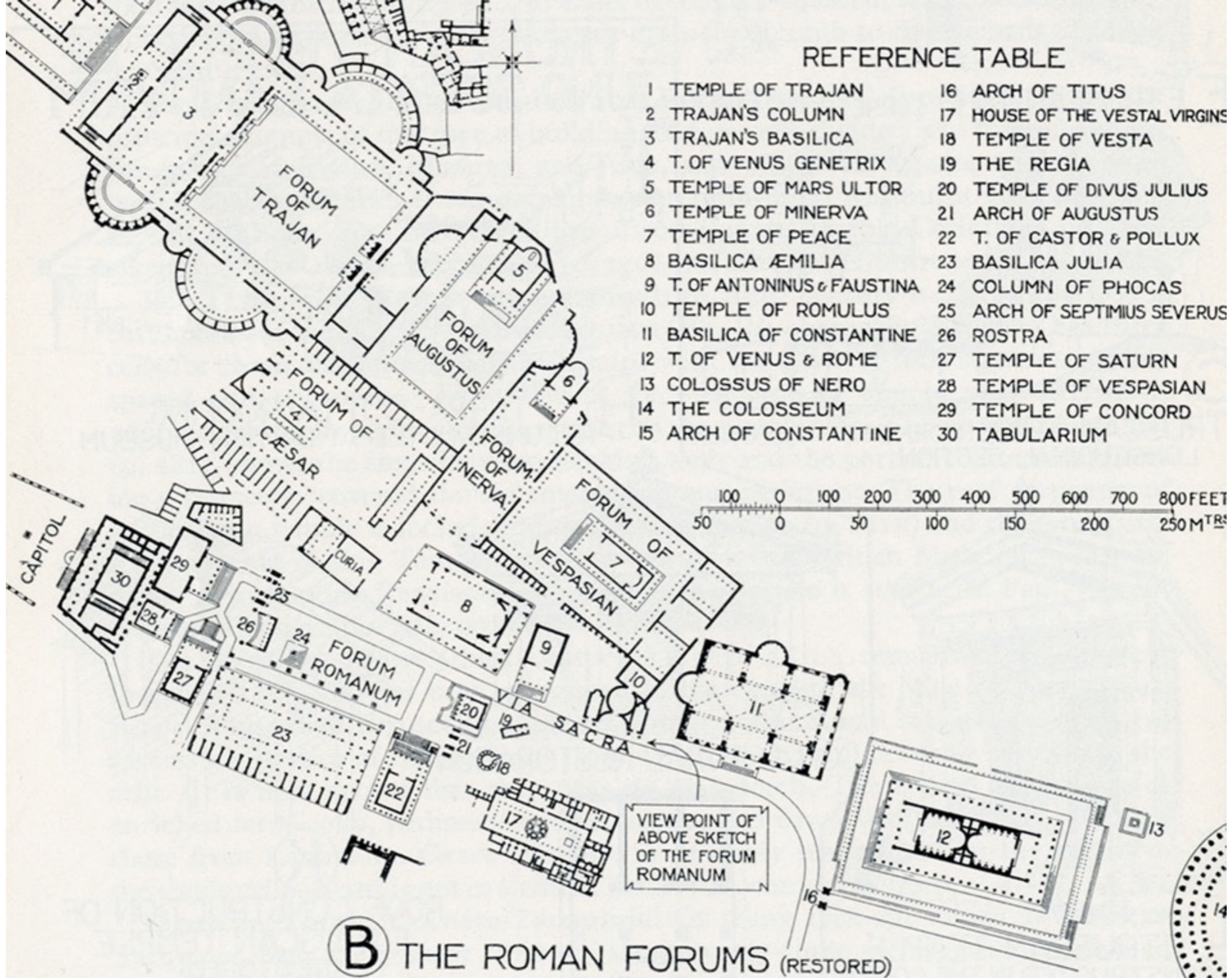




Vitruvius's Ten Books of Architecture - 25 BCE

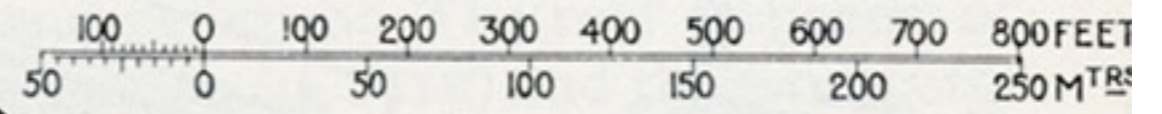
~ The first architectural treatise ~

Vitruvius dedicated the book to Augustus



REFERENCE TABLE

1	TEMPLE OF TRAJAN	16	ARCH OF TITUS
2	TRAJAN'S COLUMN	17	HOUSE OF THE VESTAL VIRGINS
3	TRAJAN'S BASILICA	18	TEMPLE OF VESTA
4	T. OF VENUS GENETRIX	19	THE REGIA
5	TEMPLE OF MARS ULTOR	20	TEMPLE OF DIVUS JULIUS
6	TEMPLE OF MINERVA	21	ARCH OF AUGUSTUS
7	TEMPLE OF PEACE	22	T. OF CASTOR & POLLUX
8	BASILICA ÆMILIA	23	BASILICA JULIA
9	T. OF ANTONINUS & FAUSTINA	24	COLUMN OF PHOCAS
10	TEMPLE OF ROMULUS	25	ARCH OF SEPTIMIUS SEVERUS
11	BASILICA OF CONSTANTINE	26	ROSTRA
12	T. OF VENUS & ROME	27	TEMPLE OF SATURN
13	COLOSSUS OF NERO	28	TEMPLE OF VESPASIAN
14	THE COLOSSEUM	29	TEMPLE OF CONCORD
15	ARCH OF CONSTANTINE	30	TABULARIUM

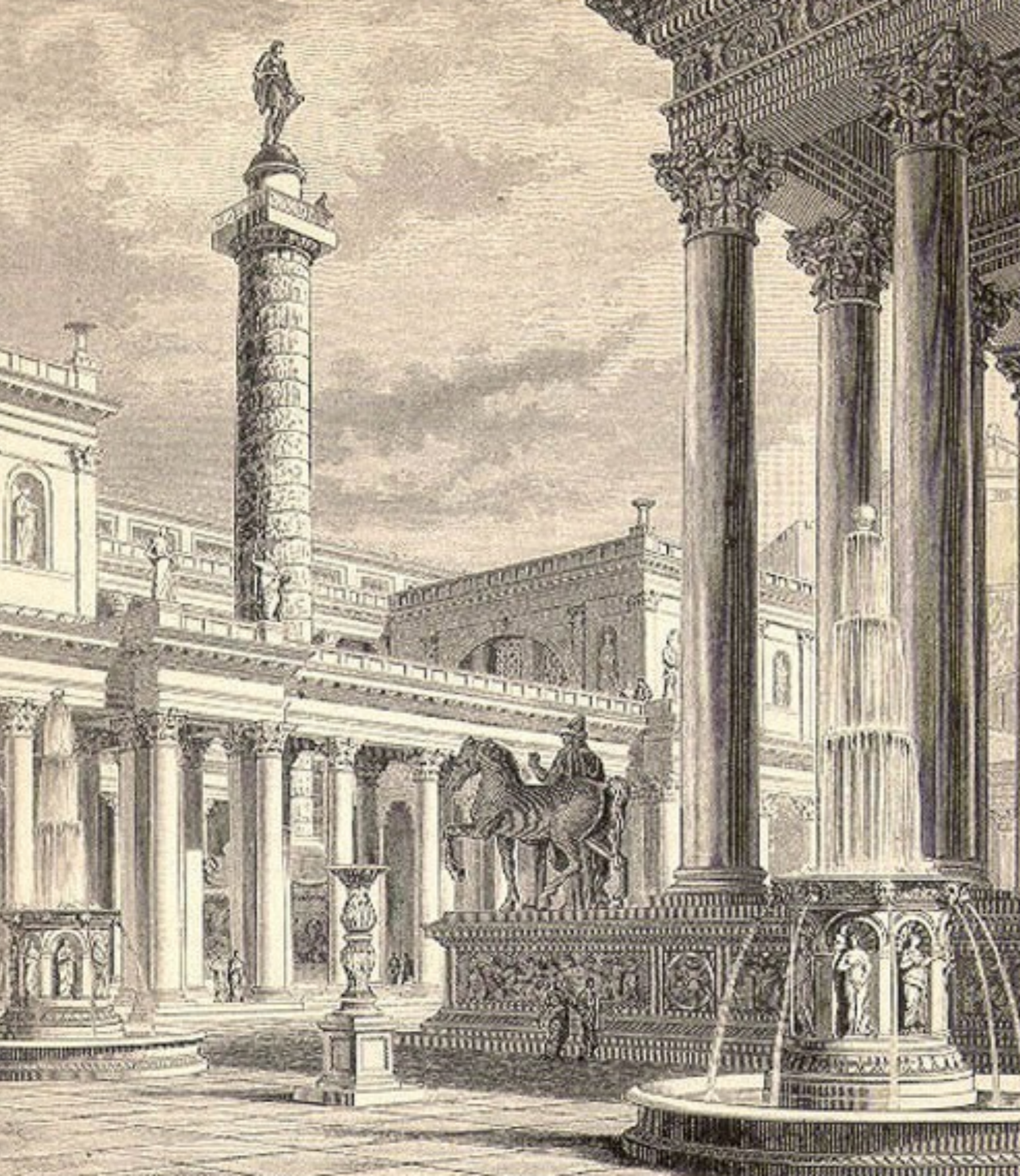


major angle
of Roman Forum

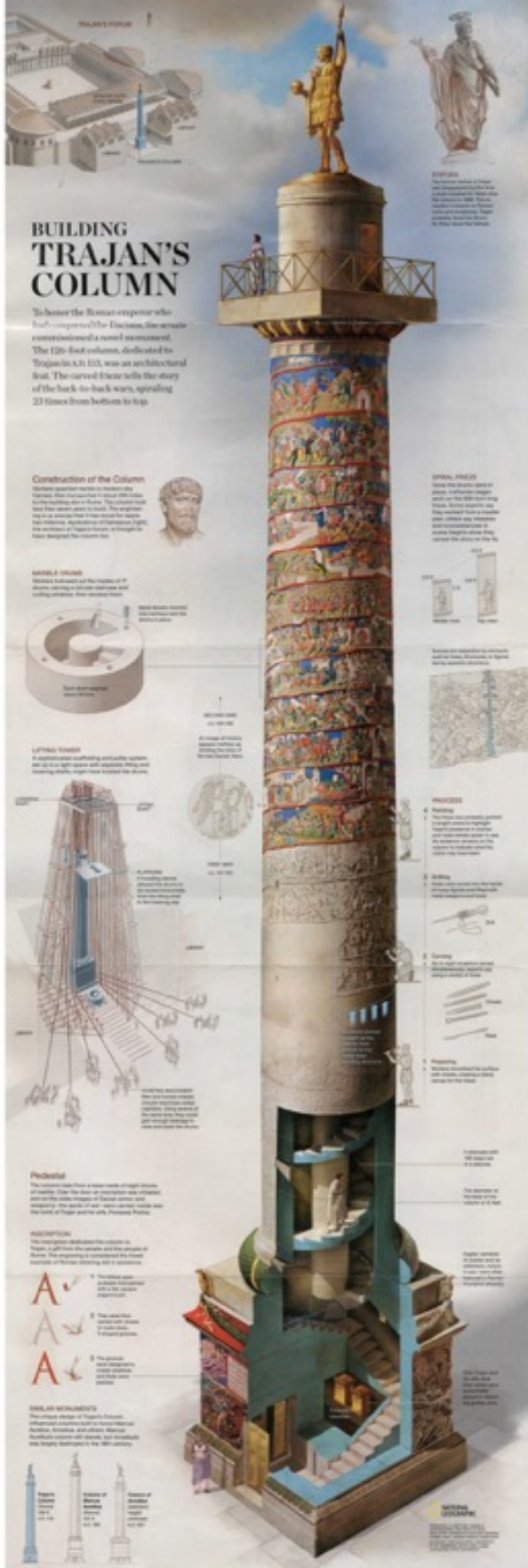
B THE ROMAN FORUMS (RESTORED)



Trajan's basilica inside Trajan's forum



TRAJAN'S COLUMN



TRAJAN'S COLUMN

History carved all the way up





Only remains of Trajan's Forum is ***Trajan's Column*** and ***Trajan's Market*** (for the lower classes)

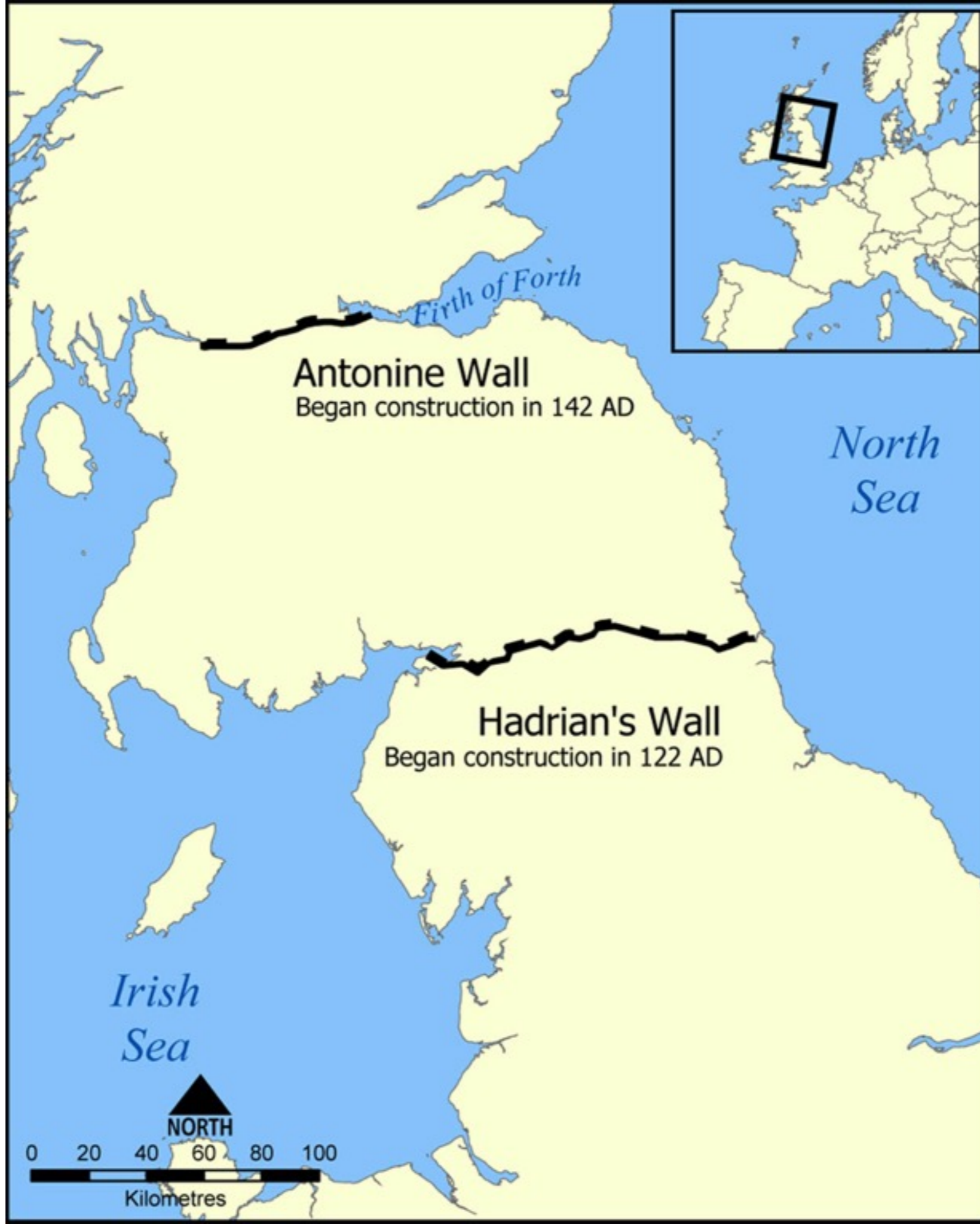
Trajan's Market

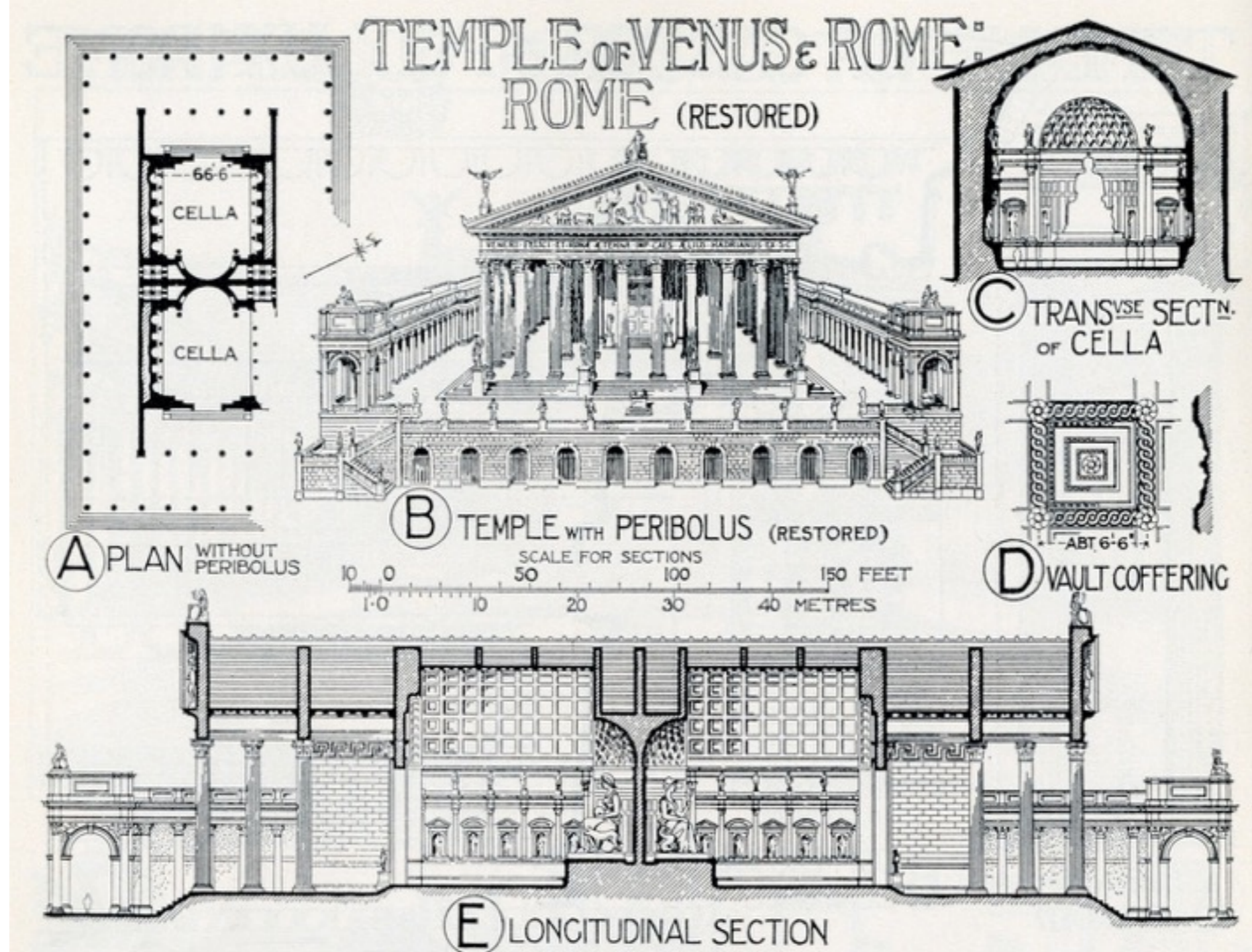
(lots of tabernae)





*Hadrian's Wall - separating
Britain from Scotland*





ROMA < > AMOR

Hadrian 135 CE

(it's a pun and palindrome)

Goddess Roma (Roma Aeterna) sits back-to-back with Goddess Venus (Love)



La Dolce Vita (1961)

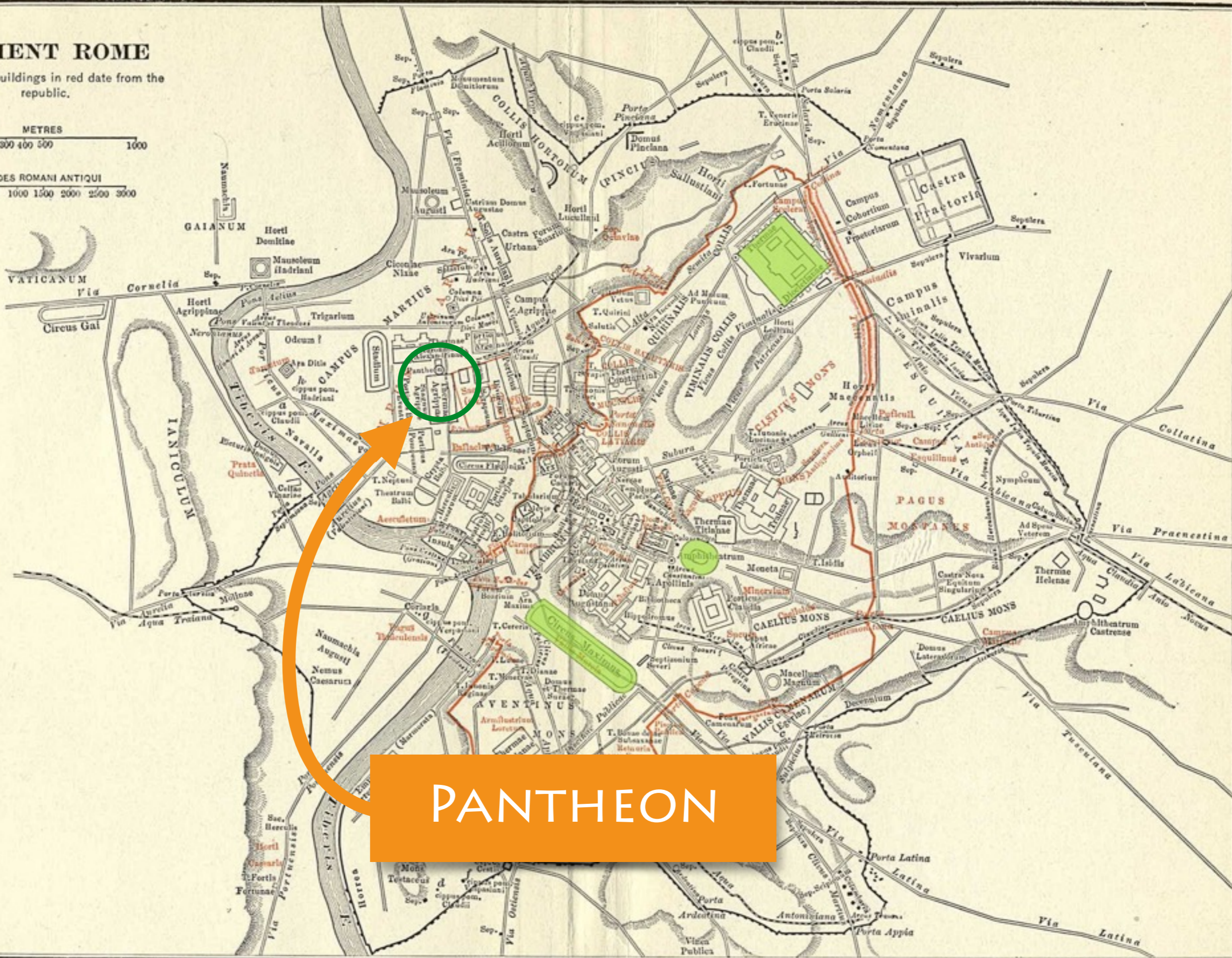
City of Love? Paris and Rome will have to mud-wrestle over this title

ANCIENT ROME

Places and buildings in red date from the republic.

METRES
0 100 200 300 400 500 1000

PEDES ROMANI ANTIQUI
0 500 1000 1500 2000 2500 3000



PANTHEON



PANTHEON

Built by Hadrian about 126 CE



Begun by Marcus Agrippa 27 BCE - 14 CE. Hadrian reused the porch elements from the burned Agrippa temple. Columns of single blocks of Egyptian granite.

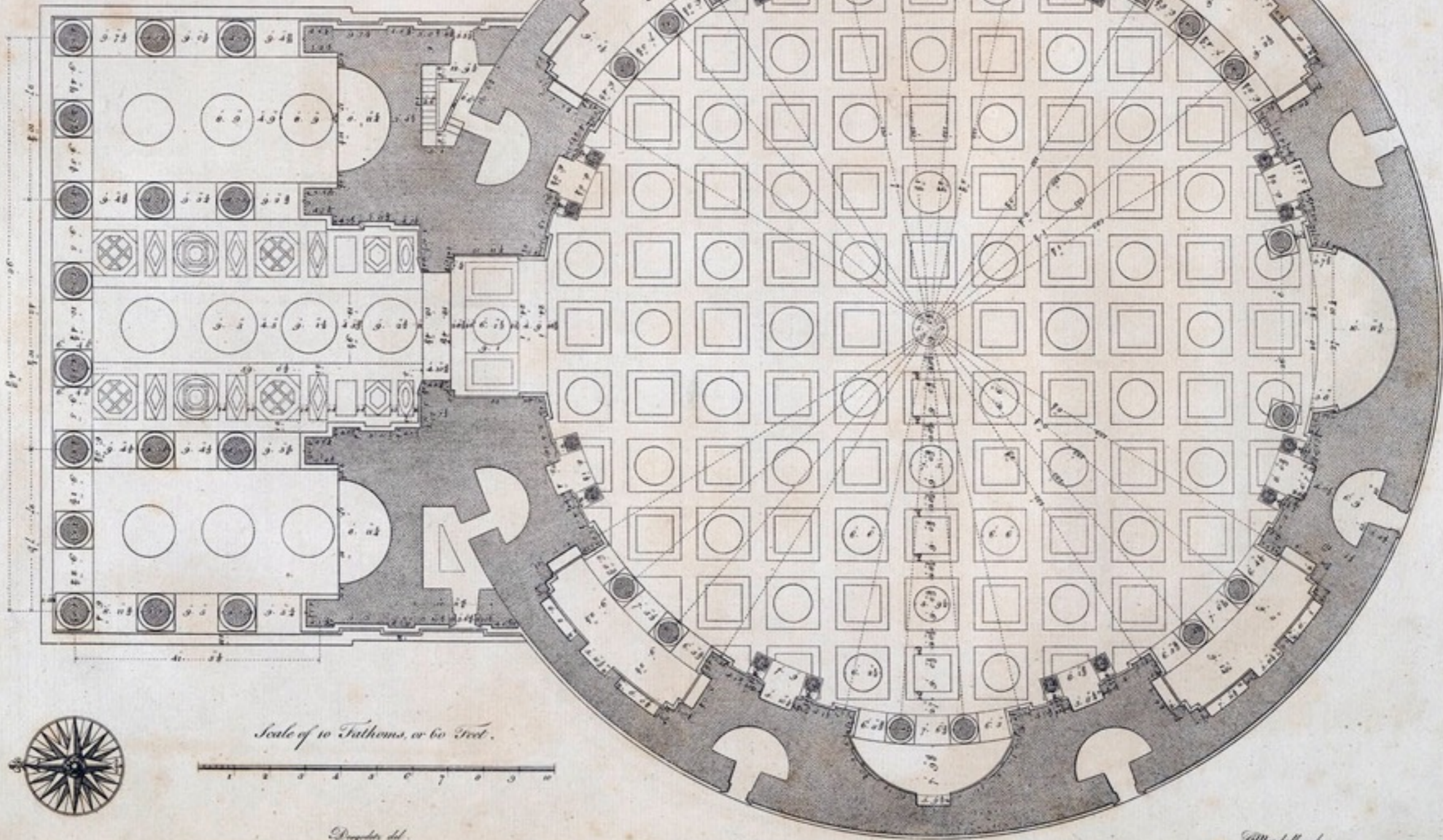
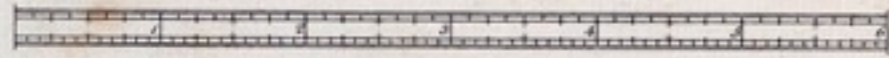


*A veritable dictionary
of Roman construction*

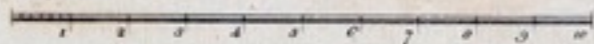
Trabeated // columnar
Corinthian octastyle
Arched
Vaulted
Concrete
Coffers
Aedicules (tabernacles)
Roman brick construct.
Oculus

THE GROUND-PLAN OF THE PANTHEON AT ROME.

Half the Paris Foot or Foot Royal.

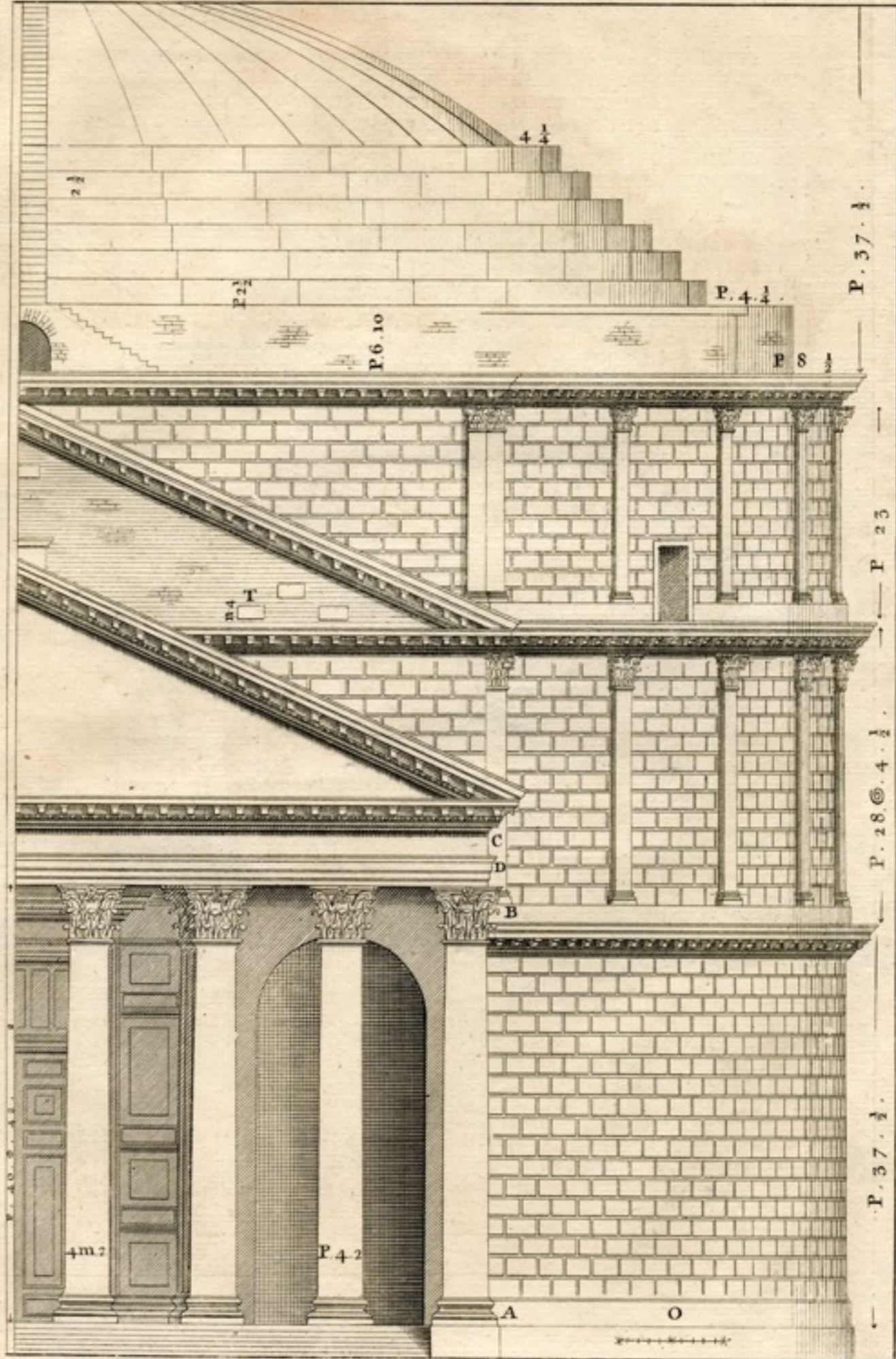
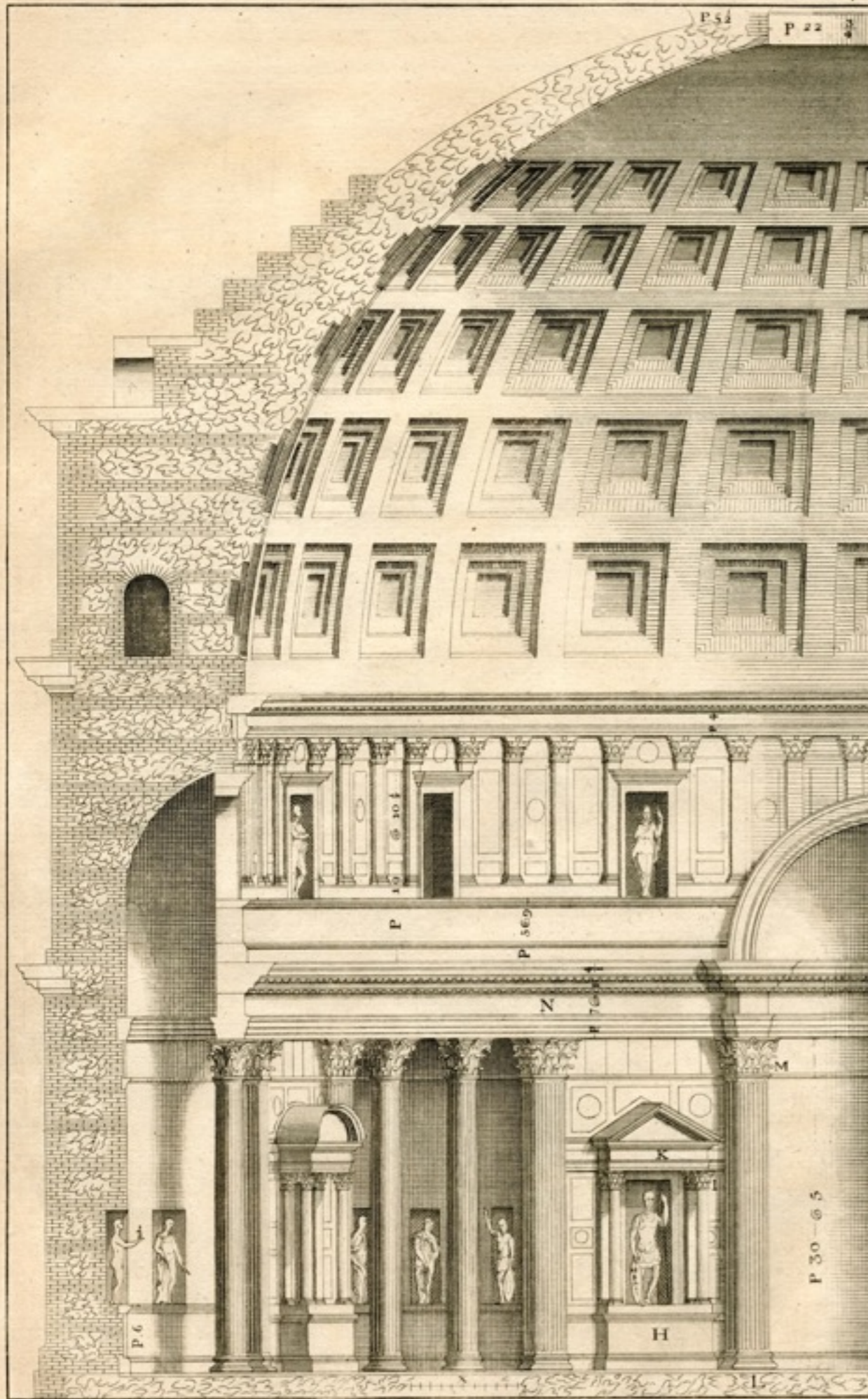


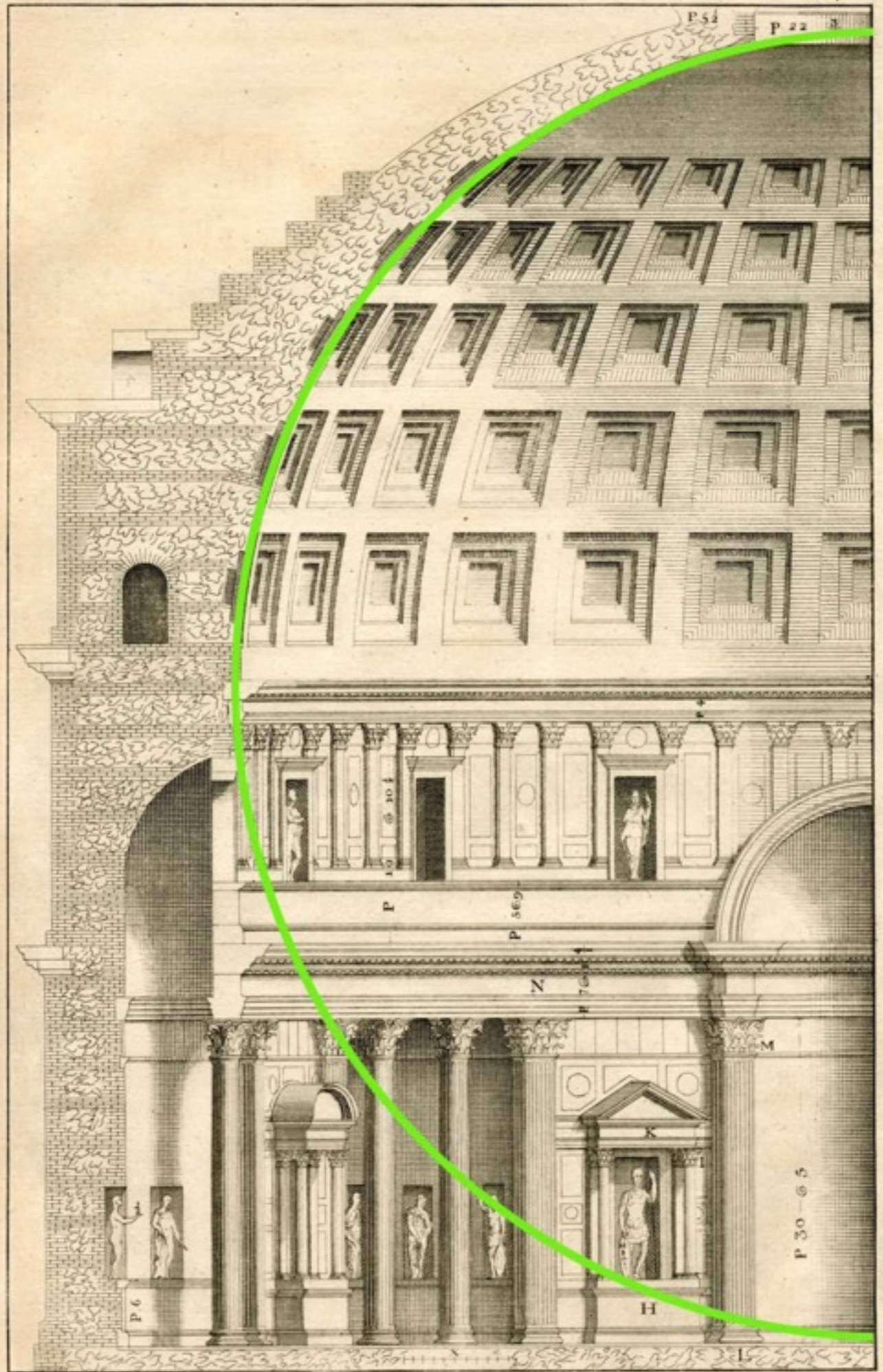
Scale of 10 Fathoms, or 60 Feet.



Drapier del.

J. Marshall sculp.



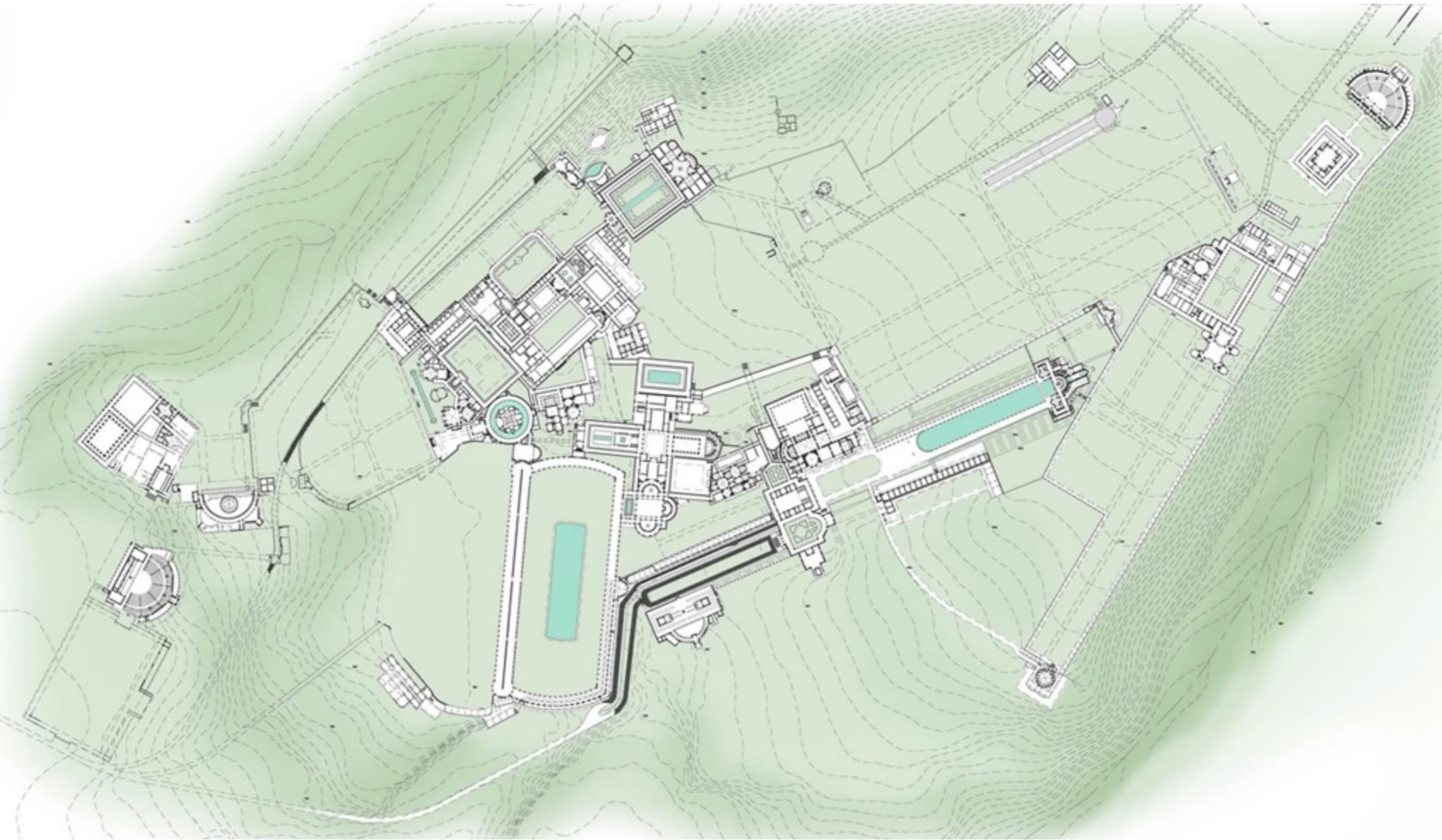




ROTUNDA AT UNIVERSITY OF VIRGINIA, 1826

One-half scale version of Pantheon built at UVa by Thomas Jefferson
hexastyle instead of ***octastyle*** / ***windows added***

end



Hadrian's Villa in Tivoli 120 CE



Nautical Theater at *Hadrian's Villa*



The *canopus* - one end



The *canopus* - the other end