palatine: a chapel build into the palace, reserved for the royal court

Note: no temples!

- Note locations of city walls, hippodrome, Hagia Sophia; Asian side not shown
- Constantinople emerged as the last city founded with imperial Roman criteria and the first to have an expressly Christian identity, (begun 324, dedicated 330).

Constantine put his imprimatur on the city through his palace, hippodrome, palatine church, triumphal plazas, and imperial mausoleum. Unlike those in Rome, his churches occupied nodal points of the new city. The palace church of Hagia Sophia, or the Holy Wisdom of Christ, took the northern flank of the Augusteon Forum, directly adjacent to the palace complex.

- Constantine’s city succeeded beyond all expectations as the new Rome. The change in architectural attitudes from the extroverted colonnaded spaces of imperial Rome to the mysterious, inwardly oriented church halls of the early Christians took root during Constantine’s reign. (OUP)
Title: Constantinople

Date: ca. 1420


Size: see scale

Note: Hagia Sophia (circled); the defenses
• The oldest known map of Constantinople (!!!) by Cristoforo Buondelmonti
• Here we see the beginning of the Golden Horn and the Asian side of the Bosporus (Oriens)
• The Golden Horn has several advantages for commerce: it is four miles long, unaffected by tides and deep. (Fletcher)
Note: outer wall and the wall of the moat are visible, with a tower of the Inner Wall in the background.

• In 413 Constantinople, vulnerable to attack through the Balkans from the north, was provided with new defenses. It was at this point that the city acquired its famous landwalls...powerful enough to keep the city safe for a millennium. (Heather, P., The Fall of the Roman Empire: A New History of Rome and the Barbarians, Oxford, 2006)
Title: Constantinople

Architect: built by Constantine-I  Date: 4th cent.+-/

Source:
http://medditerrahistory.blogspot.com/2015/06/constantinople-evolution-of-imperial.html

Note: locations of Mese, hippodrome, Hagia Sophia, city walls at water side

- Constantine founded his new city not so much as a Christian one, but rather as a place where Christianity and paganism could co-exist. This was not possible in Rome where Christians demanded complete allegiance from their sovereign.
- Of Constantine's considerable buildings in Constantinople, little remains.
- Hagia Sophia is just north of the terminus of the main avenue. (Wiley)

**hippodrome:** fr. French hippodrome, fr. Latin hippodromos, fr. Ancient Greek ἵπποδρόμος (hippodromos), from ἵππος (hippos, "horse") + δρόμος (drómos, "course"); a horse racing course (wiktionary)
Title: Constantinople

Architect: built by Constantine-I  
Date: 4th cent.+/-

Source: http://medditerrahistory.blogspot.com/2015/06/constantinople-evolution-of-imperial.html

Size: n/a  
Note: n/a

Title: Chalke gate to the palace, Constantinople

Architect/ Date: The first structure in that location was erected by the architect Aetherius during the reign of Anastasius I (r. 491–518) to celebrate the victory in the Isaurian War (492–497); burned down in the Nika riots of 532; subsequently rebuilt by Justinian I (r. 527–565)

Source: http://www.antoine-helbert.com/fr/portfolio/annexe-work/byzance-architecture.html?fbclid=IwAR0PCy6jRCelibk3Fh7OCeoSmLeRe6Obc5JlwZeXuGs4SD1gM8I5mXEDjE

Medium: reconstruction drawing

Note: unclear how accurate the drawing is.
Title: Constantinople
Architect: built by Constantine-I
Date: 1898
Source: https://depts.washington.edu/silkroad/cities/turkey/istanbul/istmap1.jpg
Note: churches we'll look at

CONSTANTINOPLE

Church of St. Irene
Hagia Sophia/Church of St. Sophia
Church of Sts. Sergius and Bacchus
Church of the Holy Apostles
Two influential works preceded the reconstruction of the Hagia Sophia: The church of SS. Sergius and Bacchus established the concept of a domed central space nested inside a larger orthogonal figure, and the church of Hagia Polyeuktos, which no longer exists. (OUP)

Sergius and Bacchus were soldiers in the Roman army who were martyrs in the 4th century. This was originally part of a complex (which is gone) including Justinian's palace and residence. Connected to another church on the opposite side. (Wiley)
Crank of the axis due to the priest's entrance.

Barrel vault.

Church of SS Peter and Paul this side

**Title:** SS Sergius and Bacchus, Constantinople

**Architect:** built by Justinian  
**Date:** begun 526

**Source:**  

**Medium:** plan interior, dome has melon-like form.

**Size:** dome is 69’-6” high. The inner octagon is 52’-0”

**Note:** narrow conches alternate with wedge shaped piers.

- Has four exedrae, to San Vitale's eight. (Fletcher)
- Essentially a domed octagon surrounded by aisles and galleries, enclosed in a square. The piers alternate with two columns. Has lost most of its original mosaics. (Moffett)

- The populace came in from the many entrances. The south wall is thicker where it attached to another church, and the narthex was used for both. The emperor's spot was in the northeast gallery. (Wiley)
SS SERGIUS AND BACCHUS

Title: SS Sergius and Bacchus, Constantinople

Architect: built by Justinian

Date: begun 526, photo 1914

Source: wikipedia

Medium: photo of interior

Size: n/a

Note: with later Islamic additions. The church set a precedent for the form of Hagia Sophia.
Title: Church Of The Holy Apostles, Constantinople

Architect/ Date: Erected by Constantine as his mausoleum, rebuilt by Justinian 536-550, by architects Anthemius of Tralles and Isidorus of Miletus, torn down 1469


Title: The return of the relics of St. John Chrysostom to the Church of the Holy Apostles

Date: 10th century

Source: https://istanbulclues.com/church-of-the-holy-apostles-istanbul/

Medium: exterior view

Size: see scale

Medium: icon

Note:
- This church serves as the model for San Marco in Venice. A central dome with a dome over each of the four arms. (Moffett)
- During the rule of Justinian (482-565) a host of astonishing buildings appeared. (Wiley)
HAGIA EIRENE, CONSTANTINOPLE

Title: Hagia Eirene, Constantinople

Architect: built by Justinian  Date: 532-64, rebuilt in 740, photo 1888-1910

Note: The outlines of the aisle vaults articulate the exterior side walls. (Moffett)

Source: wikipedia

Medium: exterior view  Size: n/a
HAGIA EIRENE, CONSTANTINOPLE

Note:

- the combination of the central and axial plans, and synthronon: the rows of concentric benches in the apse, like the cavea (seats) of a theater (OUP)
- Largely rebuilt after 740 earthquake. The outlines of the aisle vaults articulate the exterior side walls where tiers of arched windows admit light to the aisles and galleries. More windows are at the base of the dome and the apse. (Moffett)
HAGIA EIRENE, CONSTANTINOPLE

Title: Hagia Eirene, Constantinople
Architect: built by Justinian
Date: 532-64, rebuilt in 740  Source: wikipedia
Medium: plan  Size: see scale

Note: I've trimmed off the atrium and side buildings off of the plan to use to compare with the section.

- Two domes cover the nave and their thrust is countered by massive rectangular piers pierced by openings and effectively strengthened by barrel-vaulted galleries over the aisles. (Moffett)
Title: Hagia Eirene, Constantinople

Architect: built by Justinian

Date: 532-64, rebuilt in 740

Source: wikipedia

Medium: interior view into apse and dome

Size: see scale

**pendentive:** a curving triangular surface or spandrel that makes the transition from the corners of a square or polygonal room to a circular dome or its drum, fr. Latin, pendere, to hang

(Gardner)

**spandrel:** the area between two adjacent arches

Note:

- the **pendentives** transition the dome to square piers. (OUP)
- the thrust of the domes is countered by massive rectangular piers, pierced by openings, and effectively strengthened by barrel vaulted galleries over the aisles. St. Eirene represents a new interpretation of the basilica, combining the liturgical logic of the longitudinal plan with the centralizing qualities of domed construction. (Moffett)
- The placement of a dome over a square is one of the characteristic features of Byzantine architecture. (Gardner)
- The mosaics in the apse semi-dome a blue cross on a plain gold ground, typify religious art of the Iconoclast period when such designs were set up in place of figural compositions which were banned. (Fletcher)
Title: Hagia Sophia, Constantinople

Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7, 1857 lithograph

Source: wikipedia

Medium: brick (not concrete) and stone, lead roofs

Size: dome: 33 m./107’ dia.

Note:

- begun by Constantine, c. 335, and Theodosius, 415. Rioters destroyed Hagia Sophia twice, in 404 and in the Nika Riots of 532 under Justinian and entirely rebuilt by him.

- This view includes minarets, which were added later. This and all following images are of Justinian's version of Hagia Sophia, along with some later decorations and alterations.

- Justinian’s reconstruction of Hagia Sophia responded to a tense political situation where he and his wife forged a path to legitimacy that included reforming the Roman legal code and constructing forty-eight churches. (OUP)

- The reconstruction of Hagia Sophia served as both a token of expiation for the Nika riot and an expression of personal ambition. Some of its design came from the ordinary need for fire safety: The rebuilt church contained a minimum of flammable materials. The scientist-designers’ highly theoretical approach to structure fostered a colossal experiment. Hagia Sophia’s complex succession of concave hollows, suspended above the nave with no apparent mass for their support, created an atmosphere of unparalleled drama. While the space of the nave of Hagia Sophia appeared unitary, its details showed great discrepancies. The proportions are mismatched. Hagia Sophia’s profile cannot be reduced to a simple figure made of proportional elements. (OUP)
Hagia Sophia overlooking the Bosphorus, situated in Turkey’s largest city, Istanbul.

Note: embodied imperial power and Christian glory (Stokstad)  
source: https://www.slideshare.net/JerryDaperro/hagia-sophia-istanbulturkey
Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7

Medium: floor plan

Size: dome: 33 m./107’ dia.; inner narthex: 30’ x 200’

**naos:** The principal room in a temple or church. In ancient architecture, the cella. In a Byzantine church, the nave and sanctuary. (Stokstad)

**skeuophylakion:** in a Byzantine church, a room that held sacred vessels and from which sacred food was transported. (Wiley)

**Note:** the ground floor

- the central plan is still axial, and the axis terminates at an apse.
- aisles with galleries above range on either side; groin vaulted double narthex precede the church proper. The dome is of brick which accounts for its relative thinness. The structural supports do not intrude on the internal space creating the feeling that the dome floats effortlessly. (Moffett)
- dominated by the hovering form of its gigantic dome, but flanking conches extend the space into a longitudinal nave to connect with the narthex at one end and the sanctuary apse at the other. The processional core, the naos, is flanked by side aisles with galleries above. (Stokstad)
- In the structural scheme a 30 m. square forms the center, with piers as its corners to support four arches which have pendentives between them. The pendentives hold the dome. (Wiley)
HAGIA SOPHIA,
CONSTANTINOPLE

Title: Hagia Sophia, Constantinople

Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7

Source: https://isis2.cc.oberlin.edu/images/Art310/67707.JPG

Medium: floor plan

Size: dome is 33 m./107' in dia.

Floor plan: diagram, usually to scale, showing the layout of a building. (wiktionary)

Gallery: an upper story open on one side either to an interior space or to the exterior. In a church, the gallery runs above the side aisles and opens to the nave.

Note: galleries layouts

- The mix of basilica and rotunda precludes a ring of masonry underneath the dome to provide support, such as in the Pantheon. The main dome here rests on pendentives, whose supporting piers do not intrude into the central space. (Stokstad)

- On the gallery level the upper floor of the narthex is part of the gallery space. East and of the central area are hemicycles with semi-domes, forming a great oval nave. The oval nave is flanked by exedrae, also with semi-domes. (Fletcher)

- Buttresses were later added because of earthquake damage. The first dome collapsed in 558 and was replaced with one of a higher pitch. Half of the rebuilt dome fell in 989; later the other half fell in 1346. The clergy occupied the area before the apse; the imperial retinue the area by the narthex. Ordinary people were in the side aisles and galleries. (Moffett)
HAGIA SOPHIA, CONSTANTINOPLE

Title: Hagia Sophia, Constantinople

Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7


Medium: section; floor plan

Size: dome is 33 m./107' in dia.

Note: Compare the column layout on the fist and gallery levels. They don’t line up and are probably not structural.

- The 40 windows at the base of the dome are set between buttresses that stabilize the junction of dome and pendentive. From this point the load is transferred to four great stone piers, which are further buttressed. Brick is light, and the vaults are amazingly thin. (Moffett)

- Anthemius was a mathematician and Isidorus a physicist. (Gardner)
Title: Hagia Sophia, Constantinople  
Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7  

Medium: interior view, right; view looking up, below  
Size: dome is 33 m./107' in dia.

squinch: small arch or gradually wider projecting concentric arches across the interior corners of a square or polygonal room, forming a transition from the room shape to a circular dome or drum.

Note:
- Islamic inscriptions added later, after 1453; the flanking half domes are called “conches”; the triangular spandrels are pendentives (rather than the squinches which become more common in Islamic architecture).
- note the multiple levels of windows that illuminate the interior. (Moffett)
Historiated capital, featuring flattened acanthus leaves and monograms of emperors and empresses

**Title:** Hagia Sophia, Constantinople  
**Architect:** Isidore of Melitus and Anthemius of Tralles  
**Date:** 532-7  
**Note:** the historiated capitals  
**Source:** https://www.needpix.com/photo/download/125482/hagia-sophia-istanbul-architecture-religious-architecture-interior-tukey-constantinople-free-pictures-free-photos  
**Medium:** stone, spolia, interior view
Title: Hagia Sophia, Constantinople

Architects: Isidore of Melitus, Anthemius of Tralles

Date: 532-7; mosaics dedicated 867

Source: https://www.slideshare.net/JerryDaperro/hagia-sophia-istanbulturkey

Medium: interior view

Size: n/a

Note: the Virgin and Child appear at the top of the central lower apse floating above the middle of the five windows at the bottom of the halfdome. Floating on gold mosaic with neither natural nor architectural setting, like a monumental icon presented for the perpetual veneration of the faithful. (Stokstad)
Title: Hagia Sophia, Constantinople

Architect: Isidore of Melitus and Anthemius of Tralles

Date: mosaic 10th-11th cent.

Medium: interior mosaic

Size: n/a

Source: wikipedia

Theotokos: Koine Greek [3rd or 4th c.] Ἐοτόκος (Theotókos), fr. Ancient Greek Θεός Theós, “God”, and τόκος tókos, “parturition, childbirth”; (chiefly Eastern Christianity) the Virgin Mary. (wiktionary)

Note: this and following mosaics are all post iconoclasm.

- flanking Theotokos are Constantine-I at right offering the city, and Justinian at left, offering the church (though they look like the same person)
Title: Hagia Sophia, Constantinople

Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7, mosaic added in 11th century

Source: wikipedia

Medium: interior mosaic

Size: n/a

Pantocrator: The ruler of everything, especially as an epithet for Jesus Christ; an artistic depiction of Jesus in this aspect. (wiktionary)

Note: flanking Christ Pantocrator are Constantine-IX Monomachos at left and empress Zoe at right. He’s her third husband, (and she’s his third wife)
Title: Hagia Sophia, Constantinople

Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7, mosaic added in 12th century

Note: flanking Theotokos are emperor John-II Komnenos at left and empress Eirene at right.


Medium: interior mosaic

Size: n/a
**Title**: Hagia Sophia, Constantinople, Deësis mosaic

**Architect**: Isidore of Melitus and Anthemius of Tralles

**Date**: 532-7, mosaic added in 13th century

**Source**: Wikipedia

**Medium**: interior mosaic  
**Size**: n/a

**Note**: Deësis “prayer” or “supplication” is a traditional iconic representation of Christ in Majesty or Christ Pantocrator; enthroned, carrying a book, flanked by the Virgin Mary and St. John the Baptist who are both shown with their hands raised in supplication on behalf of humanity. (Wikipedia)
**Title:** Hagia Sophia, Constantinople

**Architects:** Isidore of Melitus and Anthemius of Tralles

**Date:** 532-7

**Source:** [https://www.pallasweb.com/deesis/drawings-hagia-sophia-loos-grelot.html](https://www.pallasweb.com/deesis/drawings-hagia-sophia-loos-grelot.html)

**Medium:** drawing by Guillaume-Joseph Grelot, 1680, Bibliothèque nationale de France

**Size:** n/a

**Note:** mosaics on the squinches
HAGIA SOPHIA, CONSTANTINOPLE

Title: Hagia Sophia, Constantinople

Architect: Isidore of Melitus and Anthemius of Tralles

Date: 532-7, photo ~1900


Medium: interior view of nave or naos towards the apse, dome is pierced by 40 windows on its supporting drum, which in turn is supported by pendentives over broad arches, while massive buttresses counteracted outward thrust, originally the glass was tinted

Size: dome is 33 m./107' in dia.

thrust: outward or lateral stress on a structure

Note: the gallery spaces; the column free central space; the suspended lights

• The halo of mystical light distinguishes Hagia Sophia from the Pantheon. The columns here are mainly decorative. (Gardner)

• from Procopius: The dome “seems not to rest upon solid masonry, but to cover the space with its golden dome suspended from Heaven. All these details, fitted together with incredible skill in mid-air and floating off from each other and resting only on the parts next to them, produce a single and most extraordinary harmony in the work, and yet do not permit the spectator to linger much over the study of any one of them, but each detail attracts the eye and draws it on irresistibly to itself.” (Moffett)
end of Chapter 6, Part 2