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Early Roman Architecture

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Early Roman Architecture

The Romans were exceptional constructors and skilled civic engineers. Their flourishing civilization produced advancements in culture, technology and architecture that remained unique for centuries. The Roman architecture implemented the external dialectal of the traditional Greek style for the early Romans. However, it was different from the Greek structures introducing a new architectural approach.

Before Rome discovered concrete, Romans used tufa a volcanic stone native to Italy in construction. Later on, they began using travertine in the late 2nd Century BCE because of its durability and off-white color property compared to marble. Consequently, “Opus caementicium,” the Roman concrete, was established early in the 2nd BCE. Yegül & Favro (2019) narrates that Ashlar masonry used mortar as a bonding agent combined with lime, sand and water in suitable amounts. Later on, the Romans introduced Italian volcanic sand, also called “pozzolana,” to mortar recipe. The Roman constructors using pozzolana instead of ordinary sand realized that their mortar was firm and robust. Hence, this invention of Roman concrete yielded architectural revolution permitting constructors express their creativity and designs.

Besides, Romans exploited prospects given to architects for inventing proper arch design instead of a corbeled arch design. The proper arch design comprised of wedge-shaped blocks made from durable stones known as voussoirs with a keystone placed in the center holding them into place. Additionally, the arch and vault innovation enabled Rome to construct early majestic spectacles and the late republican structures, such as Pompeius, Colosseum and the theaters of Marcellus (Yegül & Favro, 2019). Notably, using concrete domes beneath the cavea and ashlar facade with arches made immense building stable and relatively low weight possible.

Lastly, the Roman aqueduct allowed them to enjoy robust aquatic innovations such as underground sewerage systems, ornate public baths and public toilets, among others. These engineering geniuses came in around 312 BC (Flohr, 2016), using gravity for water transportation along with stones to the city centers. Although the Romans did not create the aqueduct, they employed their civil engineering skills to perfect the primitive water transport and irrigation canals that earlier existed in Assyria, Babylon and Egypt.

References

Flohr, M. (2016). Innovation and society in the Roman World.

Yegül, F., & Favro, D. (2019). *Roman Architecture and Urbanism: from the Origins to Late Antiquity*. Cambridge University Press.

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