Hwaseong fortress, regarded by UNESCO as the epitome of military architecture, was built by Chong Yak-yong in 1796. Consisting of 48 structures, the castle complex was designed with the utmost care. As well as being beautiful to look at, the castle contains many ingenious defensive features such as the osongji and chi fortifications. Its low walls reflect the shift to artillery-based warfare, and provide overlapping fire coverage all around the perimeter. Hwaseong is also a site of great historical significance – King Chongjo planned the site of the new Suwon city there, and its construction was significant as the first national project undertaken with performance-based pay instead of compulsory labor. Details of the castle’s design and the building process are recorded in minute detail in the Uigwe records, enabling the castle to be rebuilt perfectly after its destruction in the Korean War.
Entering Suwon city, the capital of Kyonggi Province, one is immediately met with the spectacle of the high Changan Gate and long fortress wall that extends in both directions. The Fortress of Hwaseong (“Shining Fortress”) was designated as a World Heritage site in 1997 by UNESCO for its historical significance and unique architectural style.

The Epitome of East Asian Military Architecture

Suwon Hwaseong Fortress was completed in 1796 during the reign of King Chongjo of the Choson Dynasty. The chief architect was Chong Yak-yong, a renowned scholar official and leader of the “practical learning” (silhak) movement. In building the fortress, he made use of both Western and Eastern construction tools and materials, such as cranes, bricks and pulleys, and so made the fortress distinctive among the other fortresses of the East.

*The Silhak movement opposed the strict formalism of traditional Confucianism, and the increasingly metaphysical preoccupations of its defenders, placing more emphasis the “practical” studies of science and technology.

Hwaseong Fortress consists of 48 buildings and structures in total, including four gates that were once entrances to the old Suwon city. The fortress wall is 5.7 kilometers long and up to seven meters tall in places. The wall looks very low in comparison to the walls of other fortresses and castles, which are generally 15-20 meters tall. Why did the architects of Hwaseong keep the walls at such a low height?

In ancient times, the scaling of enemy castle walls was a common part of warfare. The height of the wall therefore was very important, and could determine the outcome of a battle. However, the introduction of artillery fundamentally changed this. As cannons gained importance in the battlefield, high walls became disadvantageous, for when the lower parts were damaged by artillery fire, the risk of collapse was greater. To compensate for its low height, the architects of Hwaseong used large stones in order to make the wall stronger and thicker. Moreover, stone rivets measuring 1.5m in length were inserted at various places, causing the existing stones to interlock fully and so enhance the wall's structural integrity.

The Fortress was also built using an appropriate
combination of stone and brick. Although stone is harder than brick, when one stone is damaged by artillery fire, the adjoining stones are also dislodged, whereas in a brick wall, the damage is limited to immediate area. The basic framework of the castle was therefore made of stone, while brick was used for the areas of greatest strategic importance, such as corners and the sections of the wall directly adjoining the castle gates.

**Hwaseong's Cultural and Historical Significance**

Besides its distinction as a work of architecture, Hwaseong also has a profound historical significance. The king who commissioned it, Choson Dynasty's 22nd monarch Chongjo (1752~1800) was deeply devoted to his father, Sado Seja, who had been installed as Crown Prince only a year after his birth.

Devoted to literature during his youth, Sado Seja showed great intellectual promise, and would often share his compositions in poetry and prose with court ministers. However, due to a deep-rooted fear of his father King Yongjo, he would at times exhibit eccentric behavior, bordering on insanity, and thus incurred his father's anger. Tragically, he died at the young age of 28, the victim of a court intrigue. The young Chongjo, only eleven at the time, experienced grief and longing for his father until his old age.

Succeeding his grandfather Yongjo at the age of 25 in 1776, Chongjo regularly paid visits to his father's tomb. In 1789 he had the tomb moved to the mountain district behind the village of Suwon, then known as one of the most auspicious burial grounds in Korea. He asked the villagers to move to the new Suwon district, providing them with money for transport and ready accommodation. New Suwon was the first planned city in the history of Korea. Royal villas, government offices and travel inns came to be built in the area, and as settlers moved in, the new castle town of Suwon was born.

*Source: Excerpt from “Fifty Wonders of Korea” Vol. 2 Science and Technology, Korean Spirit & Culture Promotion Project, ISBN: 978-0-9797263-4-7*