

Earthen Walls (*Tsuchi-kabe*) and Stone Walls (*Ishi-gaki*)

The surviving samurai residential areas in Kanazawa are striking to behold. Long stretches of wall made from earth and stone front the narrow streets.

Within the samurai class, rank determined the type of walls that could enclose a household's grounds. The *ashigaru* or foot soldiers, for example, were not permitted walls at all, and instead used hedges. Samurai of middle rank (*beishi*) or above, however, surrounded their residences with earthen walls (*tsuchi-kabe*).

Tsuchi-kabe were constructed with a "rammed earth" technique that resulted in a heavy, solid wall. Earth, limestone, gravel, river sand, and bittern (a surplus liquid produced when extracting salt from seawater) were mixed together for a tough, earthen material that was then poured and packed tightly into standing wooden frames. This was then repeated any number of times until the residence had a lengthy and massive defensive wall.

Tsuchi-kabe were constructed atop a low stone wall (*ishi-gaki*). Here, again, rank determined what style of *ishi-gaki* a household could create. The style seen here, distinguished by its uncut, irregular stones, is called *nozura-zumi* ("field-stone bedding style"). These stones, in their natural and unaltered state, were laid upon one another. The wall's corners, however, do make use of high-quality cut stone taken from Kanazawa's Mt. Tomuro. Taken as a whole, the stones are stacked to resemble the base of a mountain.

At the top of the *tsuchi-kabe* is set a small, sloping roof of cedar, which protects the wall from the rain. In the winter months, freezing temperatures threaten to crack and damage the walls. Consequently, residents prevent the walls from freezing by covering them with woven straw mats. This sight forms a distinctive feature of the Kanazawa winter townscape.