

PRIMARY USE: Minimize bank erosion.

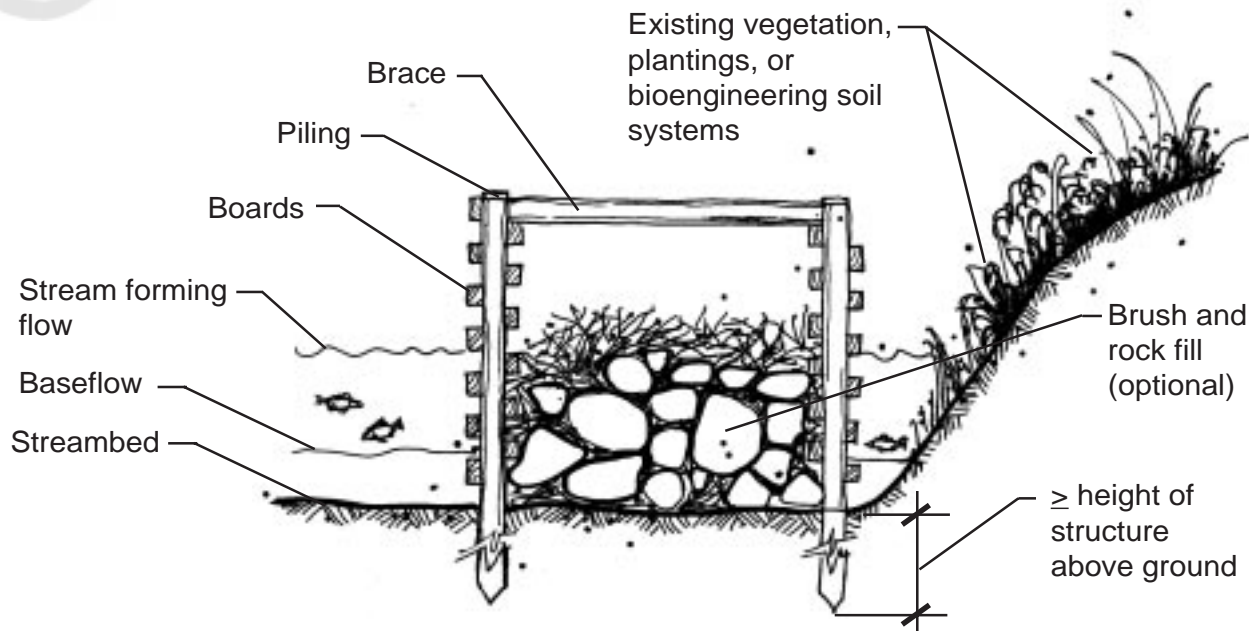
ADDITIONAL USES:

PILING REVETMENT & SLOTTED BOARD FENCE

What is it? This is a revetment technique which uses a slotted board fence, installed in either a single or a double row, to withstand a relatively high velocity water flows.

Purpose

It is effective in deeper stream channels which have large flow depths, sharp curves, and which carry a heavy sediment load of sand and silt.



**Piling Revetment with Double Slotted Board Fence
Section View**

Limitations

The debris which collects in the fencing may diminish the aesthetics of the structure. Habitat may be destroyed during installation, and recreational opportunities may be eliminated because of the dangers posed.

Materials

Boards for the horizontal and cross members, wooden pilings for the vertical members, and woven wire. Sizes of materials will be specific to each project depending on the desired height of the fence and dimensions of the stream channel.

Installation

Drive pilings 6 to 8 ft (1.8 to 2.4 m) apart at the base of the streambank, near the stream forming flow stage, to a depth approximately half their length and below the point of maximum scour. Additional rows of pilings may be installed at higher elevations on the streambank if required to protect the bank and if using vegetation or other methods is not practical. In place of timber boards, fasten a heavy gauge of woven wire or geotextile material to the stream side of the pilings to form a fence. The purpose of this material is to collect debris while serving as a permeable wall to reduce velocities on the streambank.

Source: Torrent Control & Streambed Stabilization, FAO.

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Installation guidelines continued:

A geomorphic analysis of the site by qualified personnel should be required prior to design and installation. Double row piling revetment is typically constructed with 5 ft (1.5 m) between the rows. Fill the row space with rock and brush. If the streambed is subject to scour, extend the woven wire or geotextile material horizontally toward the center of the streambed for a distance at least equal to the anticipated depth of scour. Attach concrete blocks or other suitable weights at regular intervals to cause the fence to settle in a vertical position along the face of the pilings after scouring occurs. Place brush behind the piling to increase the system's effectiveness. Take great care during layout to tie in the upstream end adequately to prevent flanking and unraveling.