

JETTY SYSTEM

A jetty system is a dike-like structure extending from the streambank out into the streambed. The dike or jetty protects the bank from erosion.



Figure 22. Stream jetty placement for bridge protection

Advantages and Disadvantages

- A jetty system can be used on various sizes of streams.
- A jetty system is an effective method of controlling erosion on bends.
- Jetties should be used with soil bioengineering upstream of the jetties, where sediment will be deposited.
- Professional design of the configuration and placement of each jetty is required.
- Materials and design can cause the jetty to be complex and expensive.

Materials

- Rock (see the Riprap section on page 9 and the previous section).

Preparation

- The rock size should be selected so that it will not be washed away when bank-full flow occurs.
- Before placing the jetties, the layout of the jetties should be determined.

- The length of each jetty should not exceed 25% of the width of the stream. Exceeding 25% of the stream width will encourage erosion of the opposite bank.
- The jetty should be spaced equal to 2 to 5 times the length of the jetty.

Installation

- Each jetty should be securely anchored into the bank and the bed to prevent washout or the stream from cutting around the jetty.
- The height of the jetty should be the height of the bank.
- The width of each jetty should be 8 to 12 feet.
- The sides of the jetty should have a 2-foot-horizontal to 1-foot-vertical (2H:1V) slope.

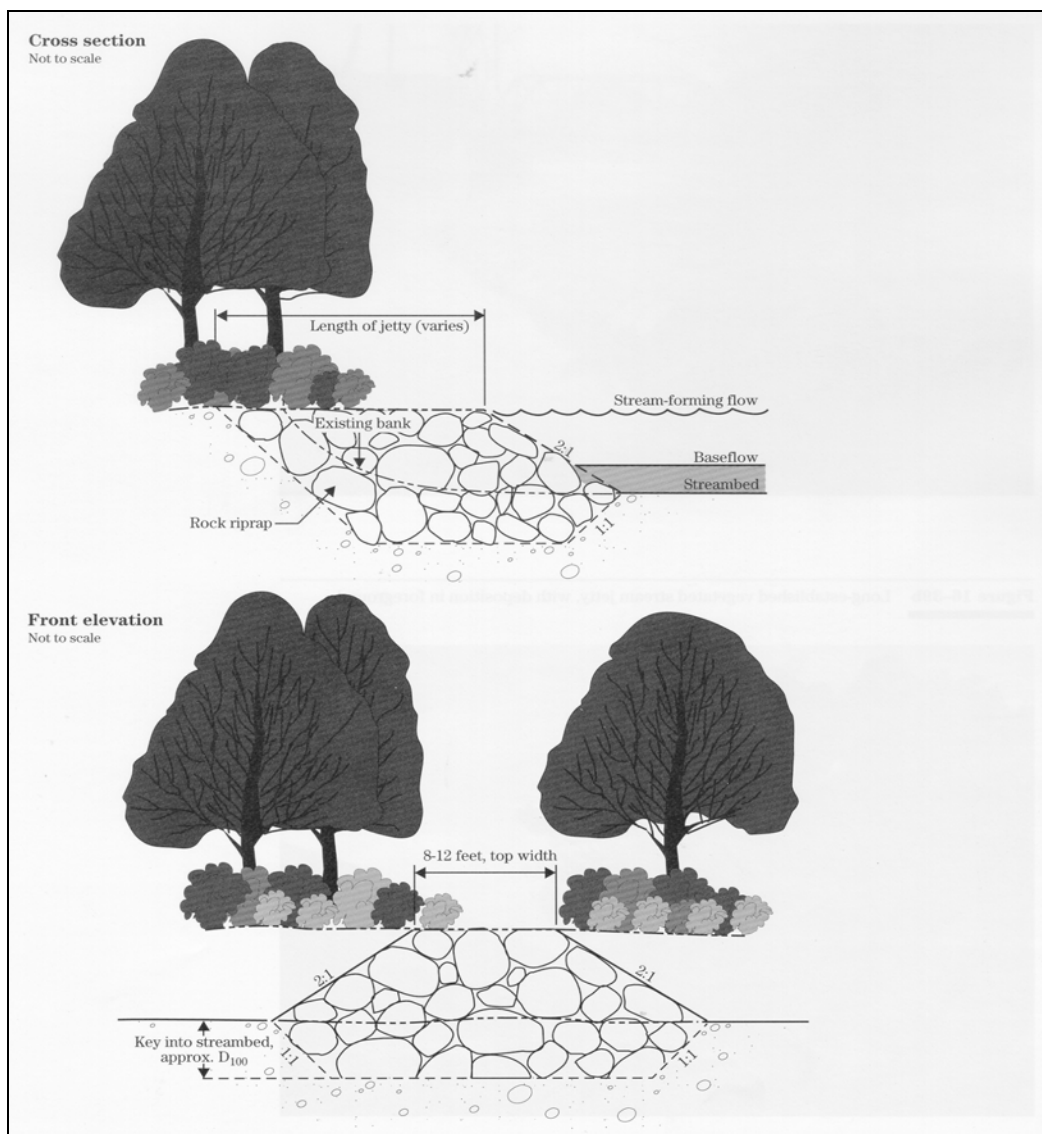


Figure 23. Stream jetty details