

4.4 TEMPORARY STREAM CROSSING



Figure 4.4. Temporary stream crossing (Source: F. X. Browne, Inc.)

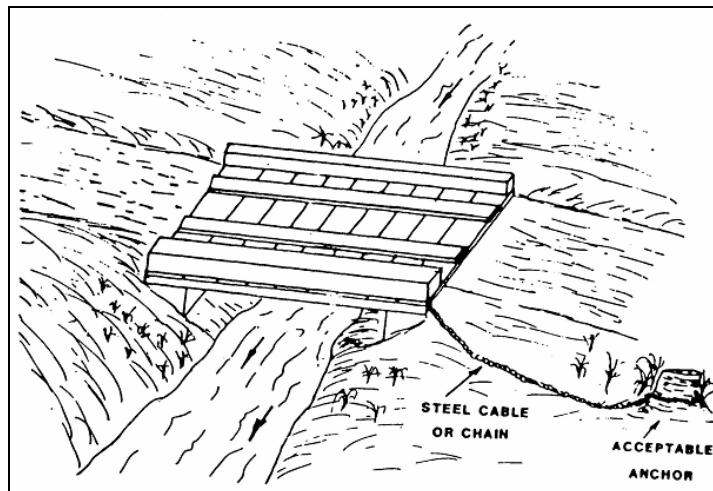


Figure 4.5. Temporary bridge for construction equipment access (Source: Department of Civil, Construction, and Environmental Engineering, Iowa State University)

Overview

Description: A temporary structure, such as a bridge or pipe, installed across a flowing stream or waterway for use by construction equipment.

Problem identification: A crossing method is needed to prevent streambank damage and to control sediment where existing waterways must be crossed during construction.

Design purpose: To provide a structure large enough to carry a full bank flow without appreciably altering the stream flow characteristics.

Associated practices: Required when construction is necessary across a small stream with flowing water.

Installation: A bridge is considered more practical than pipes. If pipes are used, they should adequately carry the flow of water. The drainage area should be less than one sq mi. For larger drainage areas, a professional engineer should prepare the design.

Only rock can be used for backfill within the channel limits of the stream. The minimum width of roadway surface shall be 12 ft. The structure shall be removed within 14 days after the structure is no longer needed.

A permit may be required from the Department of Natural Resources to cover installation and removal of the crossing.

Maintenance/inspection: Inspect daily to prevent damage to the stream. After high-water events, the crossing should be carefully reviewed for any damage. All damage to the crossing shall be repaired at once.

Design life: Temporary; to be removed 14 days after it is no longer needed.

Estimated cost: Costs vary with materials used in the crossing construction.