

5.12 ROCK CHECK DAMS

1. DESCRIPTION - A small temporary dam made of stone or re-cycled concrete constructed across a swale, ditch, or channel.

2. PURPOSE - Reduces the velocity of flow and thus the erosion potential of the flowing water. Also provides minimal sediment storage behind the dam.

3. APPLICATIONS - Rock check dams are used primarily in small to moderately sized open channels that have erosive velocities for design flow conditions. They are typically used in long linear roadway type projects or on short steep sections of drainage channel. These devices are a smaller version of stone outlet sediment traps which are used for larger drainage areas.

4. LIMITATIONS - Rock check dams shall not be used in a live stream. The installation of check dams reduces the hydraulic capacity of the channel and localized flooding may result. If not properly installed as detailed or not properly maintained the use of this method can lead to more serious channel erosion problems and channel instability. Method should not be used as a primary erosion control device, but in conjunction with other devices.

5. DESIGN CRITERIA -

A. Drainage Area - 2.0 acres or less.

B. Linear Spacing - Top of the downstream dam is at the same elevation as the bottom of the upstream dam.

C. Maximum Height - 2 feet at the center of the dam.

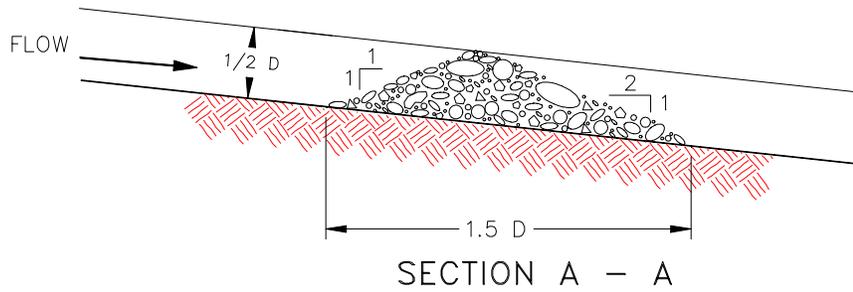
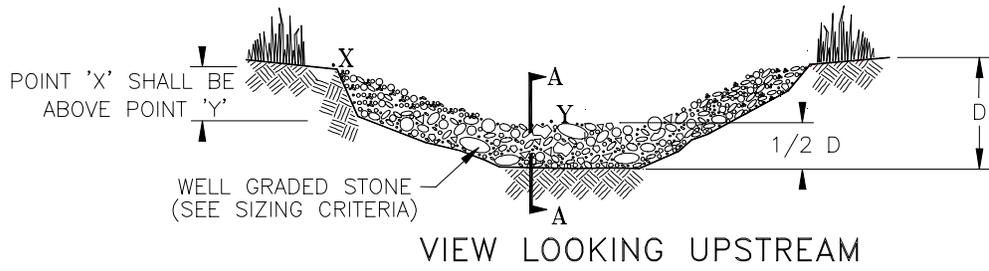
D. Stone Size - Well graded from 1-1/2" diameter through the maximum stone diameter.
Max. Stone Diameter (inches) = (3 inches/ft.) x (Base Width in feet)

E. Stone Slope - 1.5H:1V or flatter.

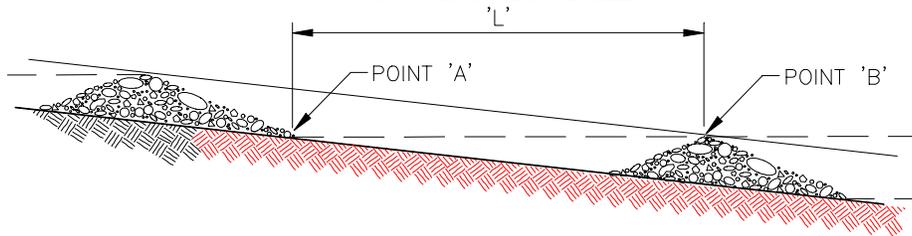
6. MATERIAL SPECIFICATIONS -

A. Aggregate - Natural stone or re-cycled concrete meeting the gradation requirements for NCTCOG Specification 2.1.6.(b)(2) and 2.1.8.(d) mixed in a 1:1 ratio.

7. MAINTENANCE REQUIREMENTS - Rock check dams should be inspected weekly and after all rain events to ensure that the device is functioning properly. Remove sediment from the storage area upstream of the dam when the depth of sediment has built up to one-half of the dam height. Repair damage to the channel in the vicinity of the check dams immediately to prevent additional damage. Replace missing or dislodged rock as needed to maintain the design height and cross section of the check dam.



'L' = THE DISTANCE SUCH THAT POINTS 'A' AND 'B' ARE OF EQUAL ELEVATION.



ROCK CHECK DAM

N.T.S.

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