

CHAPTER 4. SPECIAL CONDITION EROSION CONTROL MEASURES

4.1 INFILTRATION BASIN AND TRENCH

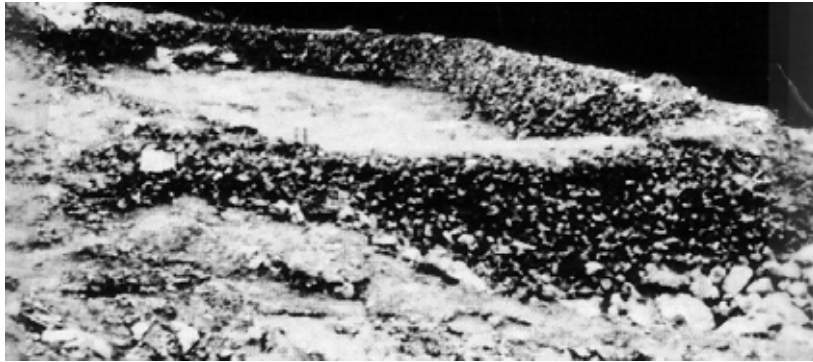


Figure 4.1. Infiltration basin and trench (Source: Department of Civil, Construction, and Environmental Engineering, Iowa State University)

Overview

Description: A depressed area formed by the removal of overburden to expose a porous or sandy soil that allows the flow of runoff water to be absorbed.

Problem identification: Storm water runoff needs to be disposed of. An infiltration basin or trench is used when the quantity of runoff water is small, the drainage area is less than one acre, and there is an area within the construction site in which the subsoil is sand.

Design purpose: A practical way of disposing of small quantities of storm runoff when the runoff is free of pollutants.

Associated practices: The infiltration basin or trench serves as the outlet of a waterway and is used for disposal of runoff water.

Installation: The overburden is removed to form a basin or a trench and to expose the porous soil. Care must be taken when the overburden is removed so that it is not disposed of in an area on the site where it will be eroded into the infiltration structure. The basin or trench should provide an estimated 35 cu yd of storage space per acre.

Maintenance/inspection: Inspect after each precipitation event. Remove weeds and debris, keep the basin or trench free of vegetative growth, and keep sediment out of the area.

Design life: Two to five years.

Estimated cost: Basin or trench costs \$210.00 for each option.