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# EROSION & SEDIMENT CONTROL (ESC)

Erosion and Sediment Control devices (ESC) must be installed to protect water resources, storm sewer systems, and adjacent properties. ESC devices may have to be staged to provide appropriate protection as the project progresses or site conditions change. ESC shall be installed and inspected **BEFORE** land disturbing activities begin. Listed below are some examples of ESC.

## SILT FENCE

Silt fence is generally used as perimeter control to deep sediment on-site. It can also be used to keep sediment-laden run-off from entering an area you want to protect, such as a newly created wetland surrounded by on-going construction. The most common types used are Machine-sliced and Heavy duty.

Each roll of geotextile should have the manufacturer's name and product number. This should be cross-checked with the approved materials list. Geotextile is made by weaving two monofilament strands in opposite directions and is generally 3' wide.

### 1. Installation of Machine sliced silt fence:

- Use proper equipment such that the soil is sliced, not turned over.
- Geotextile fabric embedded 8" to 12" in a soil slit; leave about 2' of fabric above the ground.
- Compact the soil immediately next to the geotextile.
- Steel T-post or wood post a minimum of 5' in length placed on downstream side of water flow embedded at least 2' into the ground. The maximum spacing is 6' on center.
- Use 3 plastic zip ties at least 1" apart to secure the geotextile to each post within the top 8", or other approved fasteners.

### Installation of Heavy Duty

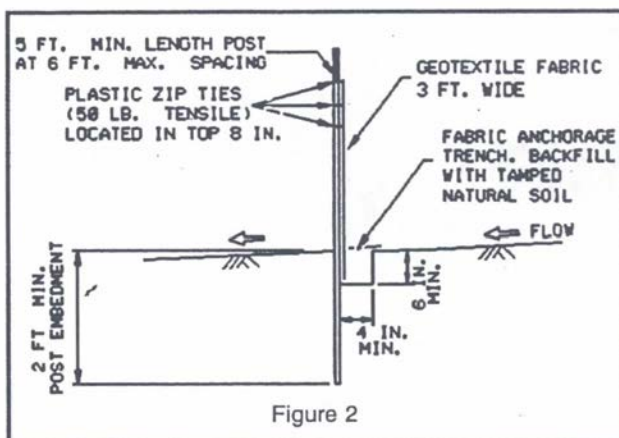


Figure 2

### Installation of Machine Sliced

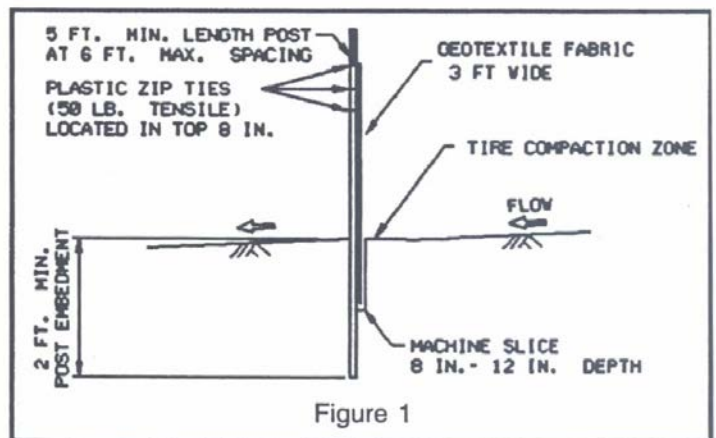


Figure 1

## **2. Installation of Heavy Duty silt fence:**

--Geotextile fabric embedded on a 6" deep by 4" wide trench with the bottom edge of the geotextile wrapping back up to the soil surface. The trench is backfilled and tamped to compaction.

--Post and ties are the same as machine sliced silt fence.

## **3. Installation of Bale Barriers:**

--Hay bales may be used in wet marshy areas or shallow standing water where silt fence cannot be installed. If bales are to be used, they must be reinforced by staking two 2" x 2" wood stakes or steel posts through each bale, driven into the ground a minimum of 10".

--Each bale must be a minimum of 14" x 18" x 36" in shape.

--Bales must be trenched into the ground a minimum of 4".

## **ROCK CONSTRUCTION ENTRANCE**

A temporary construction entrance is a stone pad located where vehicles leave a construction site. The purpose of the stone pad is to provide an area where mud can be removed from tires before a vehicle leaves the site. The stone pad consists of clean rock designed in such a way that vehicle tires will sink in slightly. This helps remove mud from the tires as the vehicle passes over the pad and provides an area where vehicle tires can be washed.

### **1. Installation of a rock construction entrance:**

-- The rock used for gravel pads should be a minimum 1- to 3-inch size, The aggregate should be placed in a layer at least 6 inches thick. Generally, the larger the aggregate, the better.

--The rock entrance should be at least 50 ft long.

-- Geotextile fabric may be needed under the rock to prevent migration of mud from the underlying soil into the stone.

-- If tires are cleaned with water, the wash water should be directed to a suitable settling area.

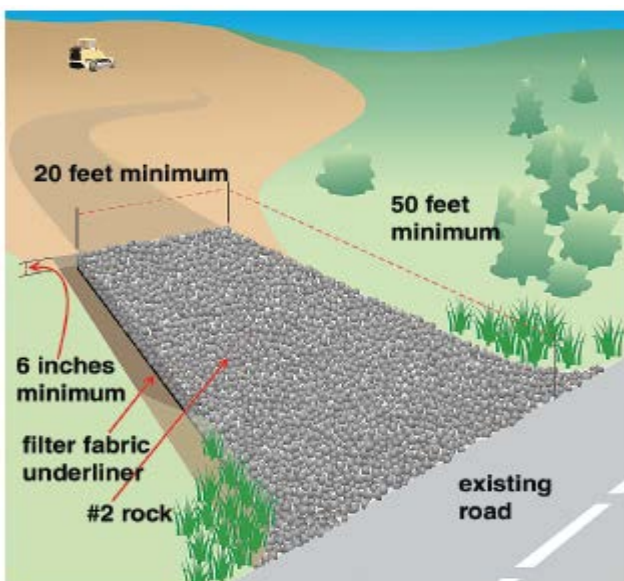


Illustration provided by Minnesota Pollution Control Agency.