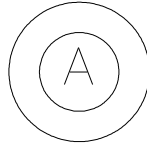


Type A – Sediment Tube Inlet Protection

Plan Symbol



Materials

Sediment tubes for Type A Inlet Structure Filters exhibit the following properties:

- Produced by a Manufacturer experienced in sediment tube manufacturing.
- Composed of compacted geotextiles, curled excelsior wood, natural coconut fibers, hardwood mulch or a mix of these materials enclosed by a flexible netting material.
- Straw, straw fiber, straw bales, pine needles, and leaf mulch are not allowed under this specification.
- Utilizes outer netting that consists of seamless, high-density polyethylene photodegradable materials treated with ultraviolet stabilizers or a seamless, high-density polyethylene non-degradable materials.
- Diameter ranging from 18-inches to 24-inches.
- Curled excelsior wood, or natural coconut rolled erosion control products (RECPs) that are rolled up to create a sediment tube are **not** allowed under this specification.
- Select applicable Sediment Tubes from the SCDOT approved products list.

Use 48-inch long wood posts that meet the following requirements.

- 2-inch by 2-inch size.
- Heavy-duty wire staples at least 1½-inch long, spaced a maximum of 6-inches apart to attach the filter fabric to wooden stakes.

Use 48-inch long steel posts that meet the following minimum physical requirements:

- Be composed of high strength steel with minimum yield strength of 50,000 psi.
- Have a standard “T” section with a nominal face width of 1.38-inches and nominal “T” length of 1.48-inches.
- Weigh 1.25 pounds per foot (± 8%).
- Be painted with a water based baked enamel paint.

Installation:

Remove all rocks, clods, vegetation or other obstructions so installed sediment tubes have direct contact with the underlying soil or surface.

Install sediment tubes by laying them flat on the ground. Construct a small trench to a depth that is 20% of the sediment tube diameter. Lay the sediment tube in the trench and compact the upstream sediment tube soil interface. Do not completely bury sediment tubes during installation. Lap the ends of adjacent sediment tubes a minimum of 6-inches to prevent flow and sediment from passing through the field joint. Never stack sediment tubes on top of one another.

Install sediment tubes using wooden stakes (2-inch x 2-inch) or steel posts (standard “U” or “T” sections with a minimum weight of 1.25 pounds per foot) a minimum of 48-inches in length placed on 2-foot centers. Intertwine the stakes with the outer mesh on the downstream side, and drive the stakes in the ground to a minimum depth of 24-inches leaving less than 12-inches of stake above the exposed sediment tube.

Inspection and Maintenance:

- Inspect every 7 calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation.
- Inspect sediment tubes after installation for gaps under the tubes and for gaps between joints of adjacent ends of sediment tubes. Repair rills, gullies, and all undercutting near sediment tubes.
- Remove and/or replace installed sediment tubes as required to adapt to changing construction site conditions.
- Remove all sediment tubes from the site when the functional longevity is exceeded as determined by the Engineer, Inspector or Manufacturer’s Representative.
- Dispose of sediment tubes in regular means as non-hazardous, inert material.



Sediment Tube Inlet Protection

Preventive Measures and Troubleshooting Guide

Field Condition	Common Solutions
Too much sediment has accumulated.	Remove accumulated sediment to recover holding capacity. Remove accumulated sediment from the upstream side of the sediment tube when the sediment has reached a height of approximately one-third the original height of the tube (measured at the center).
Sediment tube washes away.	Use larger sediment tubes. Decrease post spacing, and add more posts. Install posts on both the upstream and downstream sides of the sediment tube.
Other application used instead of sediment tubes	Do not use straw bales as sediment tube alternatives.
Wrong type of materials or wrong type of sediment tube utilized.	Straw, pine needle and leaf mulch-filled sediment tubes are not permitted. Curled excelsior wood, or natural coconut rolled erosion control products (RECPs) that are rolled up to create a sediment tube are not permitted. Do not use straw bales.