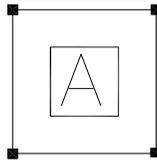


Type A – Filter Fabric Inlet Protection

Plan Symbol



Design filter fabric inlet protection to have an 80 percent design removal efficiency goal of the total suspended solids (TSS) in the inflow. The Design Aids located in the Silt Fence section of this Handbook may be used to properly design filter fabric inlet protection.

Materials

Use filter fabric that conforms to SCDOT standard specifications for highway construction (latest edition). Refer to the silt fence geotextile fabrics SCDOT Approval Sheet #34.

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 ($\pm 8\%$).
- Be painted with a water based baked enamel paint.

Installation

Excavate a trench 6-inches wide and 6-inches deep around the outside perimeter of the inlet.

Extend the filter fabric a minimum of 12-inches into the trench. Backfill the trench with soil or crushed stone and compact over the filter fabric unless the fabric is pneumatically installed.

Install the filter fabric to a minimum height of 18-inches and maximum height of 24-inches above grade. Space the posts around the perimeter of the inlet a maximum of 3-feet apart and drive them into the ground a minimum of 24-inches.

Cut the filter fabric from a continuous roll to the length of the protected area to avoid the use of joints. When joints are necessary, wrap filter fabric together only at a support post with both ends securely fastened to the post, with a minimum 6-inch overlap.

Attach fabric to wood posts using heavy-duty wire staples at least 1½-inch long, spaced a maximum of 6-inches apart.

Attach fabric to steel posts with heavy-duty plastic ties. Attach at least four (4) evenly spaced ties in a manner to prevent sagging or tearing of the fabric. In all cases, affix ties in no less than four (4) places.

Inspection and Maintenance

- Inspect every 7 calendar days and within 24-hours after each rainfall event that produces ½-inches or more of precipitation. Replace the fabric if it becomes clogged.
- Remove the sediment when it reaches 1/3 the height of the fabric. Take care not to damage or undercut fabric when removing sediment.
- If a sump is used, remove sediment when it fills 1/3 the depth of the hole.
- Maintain the pool area, always providing adequate sediment storage volume for the next storm.
- Remove storm drain inlet protection only after the disturbed areas are permanently stabilized.
- Remove all construction material and sediment, and dispose of them properly.
- Grade the disturbed area to the elevation of the drop inlet structure crest. Use appropriate permanent stabilization methods to stabilize bare areas around the inlet.



Filter Fabric Inlet Protection

Preventive Measures and Troubleshooting Guide

| Field Condition | Common Solutions |
|--|--|
| Excessive sediment entering inlet. | Ensure that soil stabilization and sediment control devices are installed upstream of inlets. Ensure that the barriers around the inlet are installed correctly. Filter fence needs to be keyed in so that water goes through filter fabric and not under it. Use a different type of inlet protection if concentrated flows are observed. |
| Filter fabric clogged by sediment or other debris. | Replace filter fabric. |
| Sediment reaches 1/3 the height of fabric. | Remove sediment. |
| Ponded water causes a traffic concern. | Use alternate BMPs upstream. Remove inlet protection if necessary. |