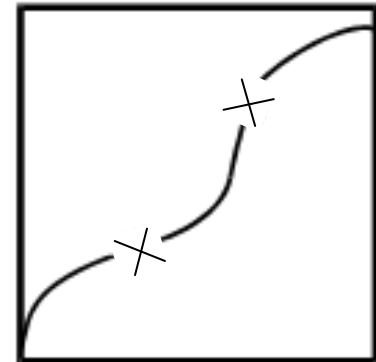


SC-7 SILT FENCE

Refer to: ITD Standard Specifications, Sections 212 and 718

ITD Standard Drawing P-1-B

QPL Category: 212 Silt Fence



Standard Symbol

Definition and Purpose

Silt fences consists of permeable geotextile material stretched and attached to supporting posts that assists in sediment containment by capturing/intercepting most of the eroded soil particles (sediment) and slowing the runoff velocity to allow particle settling. Welded wire backing may be necessary for added strength.

Appropriate Applications

- Downslope perimeter of a disturbed area, including stockpiles.
- Below the toe of exposed and erodible slopes, allowing water to pass through.
- At natural drainage areas.
- At grade breaks on cut or fill slopes and above interceptor dikes, berms, channels, or ditches.

Limitations

- Shall not be used at the top of a slope.
- Shall not be used in a live stream, ditch, channel, or drainage way or where soil conditions prevent proper installation.
- Are not effective unless trenched and keyed in.
- Are not intended for use as mid-slope protection on slopes steeper than 4H:1V.

BMP Objectives

- | | |
|-------------------------------------|-----------------------|
| <input checked="" type="checkbox"/> | Perimeter Control |
| <input type="checkbox"/> | Slope Protection |
| <input checked="" type="checkbox"/> | Borrow and Stockpiles |
| <input checked="" type="checkbox"/> | Drainage Areas |
| <input checked="" type="checkbox"/> | Sediment Trapping |
| <input checked="" type="checkbox"/> | Stream Protection |
| <input type="checkbox"/> | Temporary Stabilizing |
| <input type="checkbox"/> | Permanent Stabilizing |

- Must be maintained regularly to ensure effectiveness.
- Must be removed and disposed of upon project completion.
- Shall not be used below slopes subject to creep, slumping, or landslides.
- Shall not be used to divert flow.
- For slopes steeper than 2H :1V and that contain a high number of rocks or large dirt clods that tend to dislodge, it may be necessary to install additional protection immediately adjacent to the bottom of the slope, prior to installing silt fence. Additional protection may be a chain link fence or a cable fence.
- For slopes adjacent to water bodies or environmentally sensitive areas, additional temporary soil stabilization BMPs shall be used.

Material Considerations

- Wood stakes shall be commercial quality lumber of the size and shape shown on the plans. Each stake shall be free from decay, splits or cracks longer than the thickness of the stake, or other defects that would weaken the stakes.
- Fabric shall meet the specifications found in section 718 of the spec book.
- Staples used to fasten the fence fabric to the stakes shall be not less than 1.75 inches long and shall be fabricated from 0.06-inch or heavier wire. The wire used to fasten the tops of the stakes together when joining two sections of fence shall be 0.12-inch or heavier wire. Galvanizing of the fastening wire is not required.

Installation Considerations

In most instances, silt fences should be used on the toe of a slope or disturbed areas where surface water will run off the construction site. Install silt fence perpendicular to the flow of water, along the contours of the slope. Install perimeter protection before clearing and grubbing, excavating haul roads, benches, or any soil-disturbing construction activity.

- Follow all manufacturers' recommendations for proper installation.
- Generally, silt fences shall be used in conjunction with soil stabilization controls up slope to provide effective sediment control.
- Trenches shall not be excavated wider and deeper than necessary for proper installation of the temporary linear sediment barriers.
- Excavation of the trenches shall be performed immediately before installation of the temporary linear sediment barriers.
- Silt fences should be constructed with a set-back of at least 3 feet from the toe of a slope. If this is not practical due to specific site conditions, the silt fence may be constructed at the toe of the slope.
- Geotextile shall not be attached to trees.

- When welded wire is used, the wire shall be fastened to the upslope side of the posts using heavy-duty wire staples, tie wires, or hog rings. The wire support shall be extended to the bottom of the trench.
- Designated vegetated buffer areas shall not be disturbed.
- Field adjustments shall be made as necessary to ensure proper performance.
- The fences should remain in place until the disturbed area is permanently revegetated and/or stabilized with non-vegetative controls.

Maintenance and Inspection

- Conduct inspections as required by the NPDES permit or contract specifications.
- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric. Holes, depressions, or other ground disturbance activities caused by the removal of the temporary silt fences shall be backfilled and repaired in conformance with the Standard Specifications.
- Silt fences that are damaged and become unsuitable for the intended purpose, as determined by the Engineer, shall be removed, disposed of outside the highway right-of-way in conformance with the Standard Specifications, and replaced.
- If concentrated surface flow occurs after installation place rock berms or other controls in the areas of concentrated flow to direct and spread the flow.
- When the silt fence is removed, cut the geotextile at ground level, remove the wire and post, fill and compact post holes and anchorage trench, spread the sediment, prepare for seeding, and grade fence alignment to blend with adjacent ground.