

ASTM D6462

Designation: D6462 - 03

Standard Practice for  
Silt Fence Installation

This standard is issued under the fixed designation D 6462; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last approval. A superscript epsilon indicates an editorial change since the last revision or approval.

1. Scope\*

1.1 This practice covers common installation requirements for temporary silt fence applications. This practice is based on ASHTO M228.

1.2 This practice is applicable to the use of silt fence as a vertical permeable interceptor designed to remove suspended soil from overland, nonconcentrated water flow. The function of a temporary silt fence is to trap and allow settlement of soil particles from sediment laden water. The purpose is to greatly limit the transport of eroded soil from a construction site by water runoff.

1.3 The practices presented herein are intended to ensure good workmanship and quality and are not necessarily adequate for all purposes in view of the wide variety of possible sediments and performance objectives.

1.4 The values stated in SI units are to be regarded as the standard. The values in inch-pound units are provided for information only.

1.5 This practice offers an organized collection of information or a series of options and does not recommend a specific course of action. This document cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this guide may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the competency of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word "Standard" in the title of this document means only that the document has been approved through the ASTM consensus process.

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8.1.5 Wire or polymer support fence shall be at least 750 mm (2.5 ft) high and strong enough to support applied loads. Polymer support fences shall meet the same ultraviolet degradation requirements as the geotextile.

NOTE 2 - Wire support fence having at least 6 horizontal wires, and being at least 14-gage wire have performed satisfactorily. Vertical wires should be a maximum of 150 mm (0.5 ft) apart.

8.2 Construction

8.2.1 Trench Construction - The bottom of the silt fence geotextile shall be buried in a "U" configuration to a minimum depth of 150 mm (6 in.) in a trench so that no flow can pass under the silt fence. Backfill soil and compact the soil over the geotextile so that the compacted soil completely fills the trench.

8.2.2 Soil Slicing Construction - Insert the geotextile in a slit in the soil 0.2 to 0.3 m (8 to 12 in.) deep so that no flow can pass under the silt fence. Create the slit such that a horizontal chisel point (approx. 78 mm/3 in. wide) at the base of a soil slicing blade (approx. 18 mm/0.75 in. wide) slightly disrupts soil upward on the slope through the soil. This upward disruption minimizes horizontal compaction and creates an optimal soil condition for mechanical compaction applied to the geotextile. Mechanically insert the geotextile directly behind the soil slicing blade in a simultaneous operation, achieving constant penetration.

8.2.3 Slice the geotextile together only at support posts. Two sections of geotextile may be overlapped or alternately applied as long as there are no gaps, voids, or other loss of integrity of the barrier.

8.2.4 Place the posts at spacing as shown on the project plans. Drive posts at least a minimum of 500 mm (1.65 ft) into the ground. Increase depth to 600 mm (2 ft) if fence is placed on a slope of 3H:1V or greater.

NOTE 3 - Where 500 mm (1.65 ft) depth is impossible to obtain, the posts should be adequately secured to prevent overturning of the fence due to sediment loading.

8.2.5 Fasten the support fence securely to the upslope side of the fence post. The support fence shall extend from the ground surface to the top of the geotextile.

8.2.6 When self-supporting fence is used, securely fasten the geotextile to the fence posts.

8.2.7 Silt fence should be continuous and transverse to the flow. The silt fence should follow the contours of the site as closely as possible. Place the fence such that the water cannot runoff around the end of the fence.

NOTE 4 - Commonly, silt fence is limited to handle an area equivalent to 90 m<sup>2</sup>/3 m (1000 ft<sup>2</sup>/10 ft) of fence. Caution is used where the site slope is greater than 1H:1V, and water flow rates exceed 3 L/s/3 m (50 gal/min/10 ft) of fence.

8.2.8 Compaction - When assembling silt fence on-site, compaction prior to installing posts is recommended. Compact the backfill soil immediately next to the silt fence geotextile. Compact the upstream side first, and then the downstream side. When installing pre-assembled silt fence, care shall be taken to sufficiently compact soil adjacent to the installed geotextile and posts. The soil adjacent to the buried silt fence geotextile shall be compacted to achieve no less than 50 % of the original in-situ strength when measured using a suitably calibrated hand-tamped penetrometer or shear vane, unless a more appropriate compaction measurement technique and associated compaction criteria is directed by the engineer.

NOTE 5 - Installed posts may interfere with compaction by large equipment adjacent to the silt fence. Compaction is commonly accomplished with the front wheel of a tractor, skid steer, roller or other device, as well as with manual tamping or other manual means.

8.3 Maintenance

8.3.1 The contractor shall inspect all fences immediately after each rainfall, and at least daily during prolonged rainfall. Any deficiencies shall be immediately corrected by the contractor.

8.3.2 The contractor shall also make a daily review of the location of all fences in areas where construction activities have altered the natural contour and drainage runoff to ensure that the silt fence is properly functioning. Where deficiencies exist as determined by the engineer, additional silt fence shall be installed as directed by the engineer.

8.3.3 Repair damaged or otherwise ineffective silt fences or replace promptly.

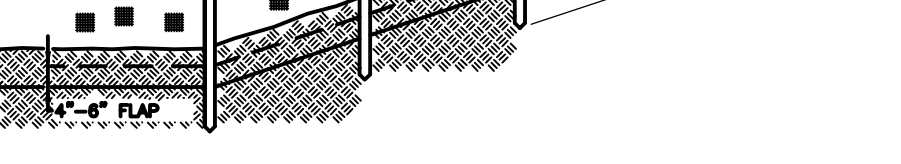
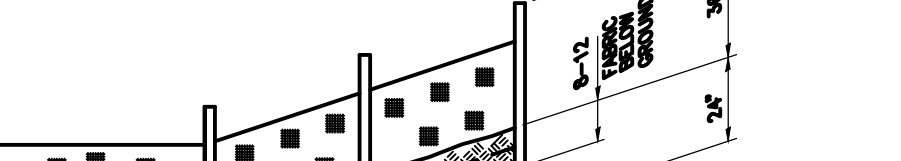
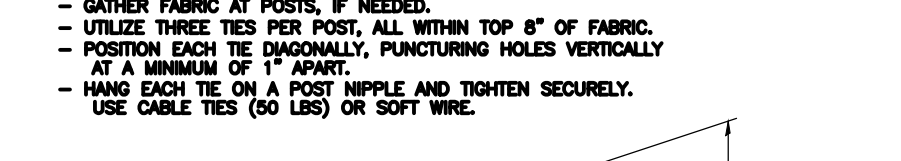
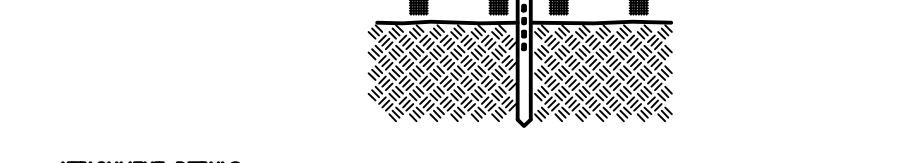
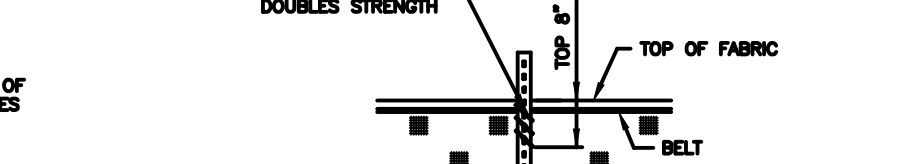
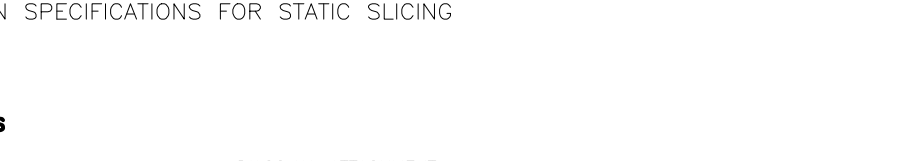
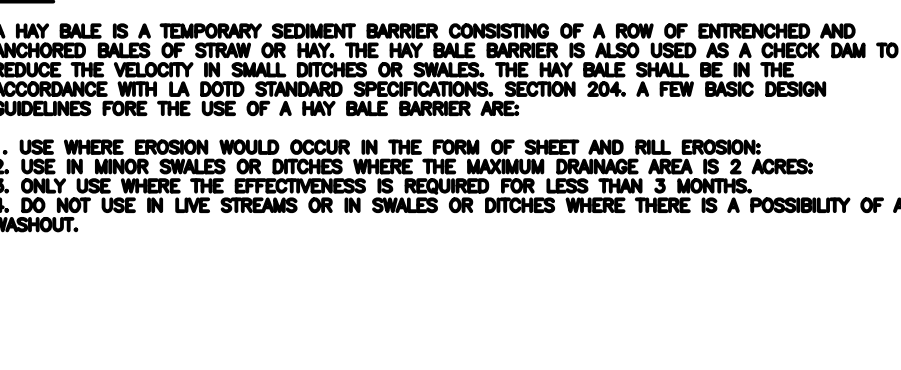
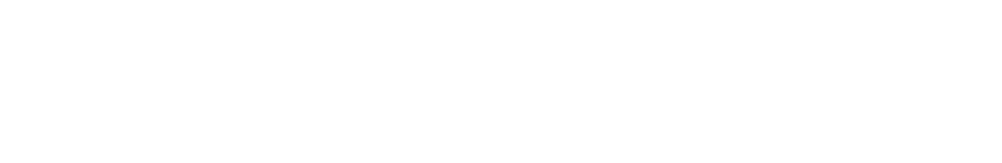
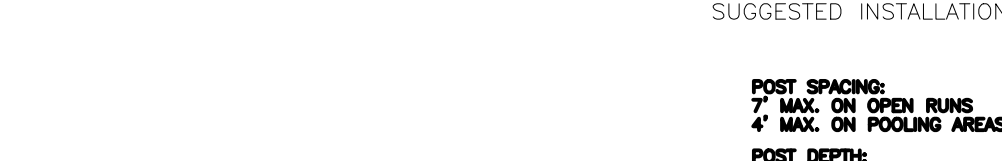
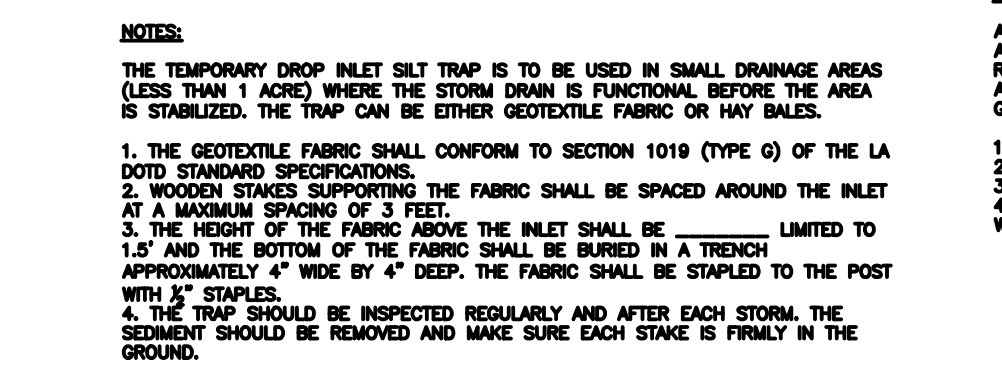
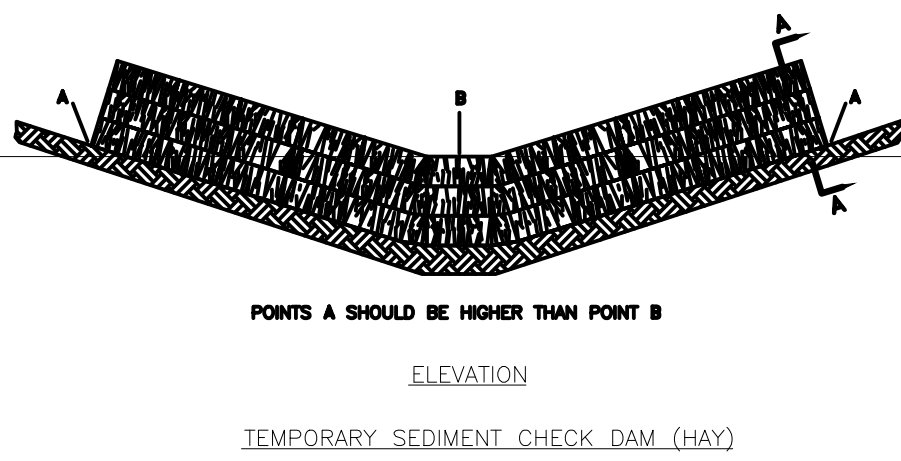
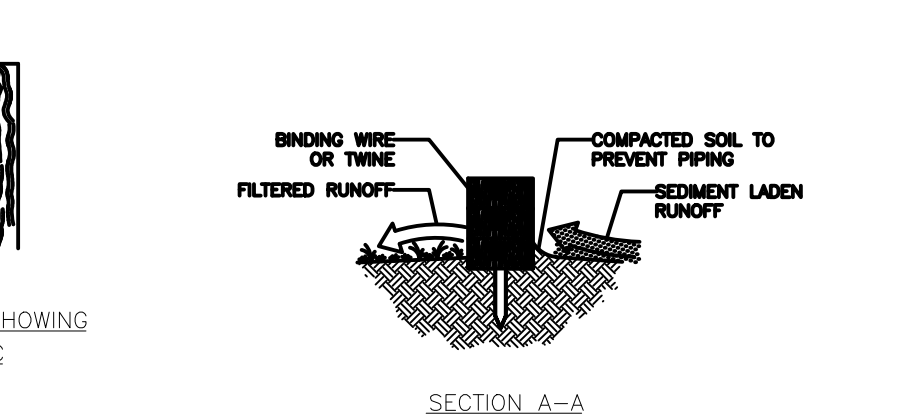
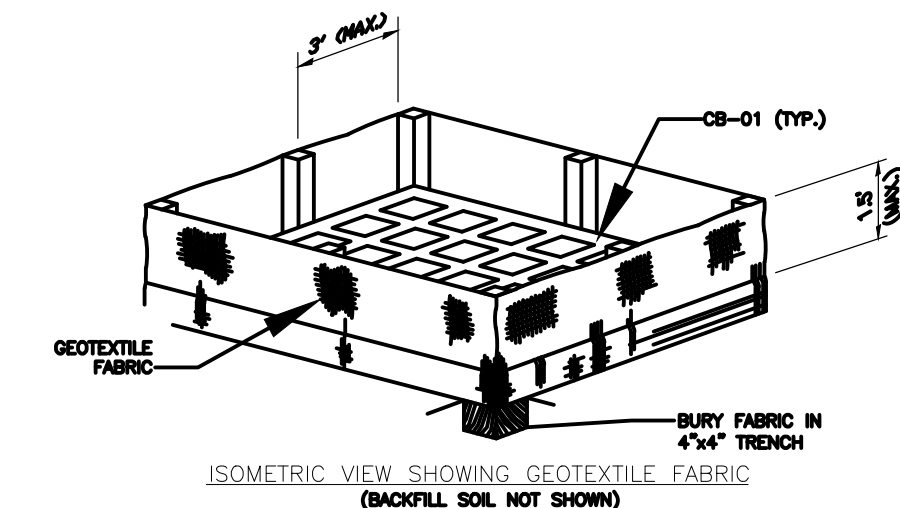
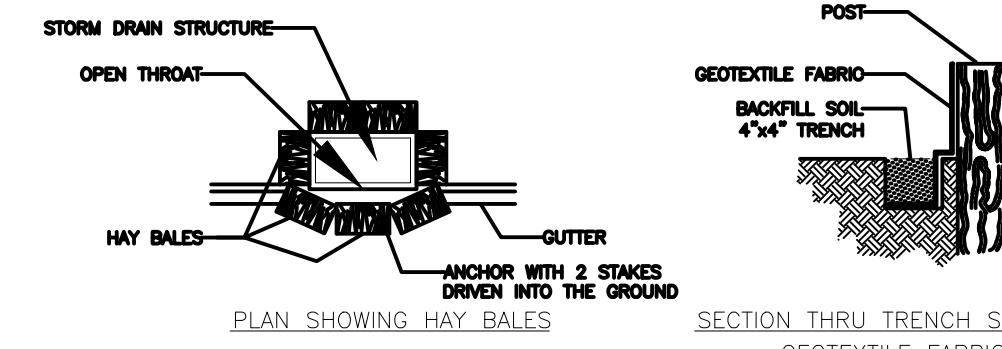
8.3.4 Either remove sediment deposits when the deposit reaches half the height of the fence, or install a second silt fence as directed by the engineer.

8.3.5 The silt fence shall remain in place until the engineer directs it to be removed. Upon removal the contractor shall remove and dispose of any excess sediment accumulations, dress the area to give it a pleasing appearance, and vegetate all bare areas in accordance with contract requirements.

8.3.6 Removed silt fence may be used at other locations provided the geotextile and other material requirements continue to be met to the satisfaction of the engineer.

9. Keywords

9.1 geotextile; silt fence; sediment control



SIDEWALKS

- ALL SIDEWALKS SHALL BE CONSTRUCTED OF PORTLAND CEMENT CONCRETE WITH A COMPRESSIVE STRENGTH OF 2,500 P.S.I. IN TWENTY-EIGHT DAYS AND A MIN. THICKNESS OF FIVE INCHES.
- ALL SIDEWALKS TO HAVE A WIDTH OF EIGHT FEET AND AND SHALL BE CONSTRUCTED AS PER THE LOCATION SHOWN ON THIS PLAN.
- ALL SIDEWALKS SHALL BE SCORED TO A DEPTH OF 3/4" AT FOUR FOOT INTERVALS WITH EXPANSION JOINTS PLACED AT TWENTY FOOT INTERVALS.
- EXPANSION JOINTS SHALL BE CONSTRUCTED OF 1/2" THICK PRE-MOLDED EXPANSION MATERIAL WITH ALL CORNERS TO BE FORMED BY EXPANSION JOINTS.
- ANY SIDEWALK OR ACCESSIBLE ROUTE THAT IS NOT AT A LEVEL ELEVATION AT IT'S INTERSECTION WITH A DRIVEWAY OR STREET WILL BE REQUIRED TO INSTALL A CURB RAMP AT A MAX. SLOPE OF 1:12 WITH A MAX. RISE OF 30" AND A MIN. LEVEL STRAIGHT CURB SEGMENT OF 48".
- THE TEXTURE OF THE DRIVEWAY AND INTERSECTION HANDICAP RAMPS SHALL BE CONSTRUCTED OF A NON-SLIP SURFACE. ACCOMPLISHED BY "BROOMING" THE RAMP SURFACE AND GROOVING ONE INCH SPACING AT RIGHT ANGLE DIRECTIONS. GROOVES TO BE APPROXIMATELY 1/4" x 1/8" INCH WIDE.
- SIDEWALK SHALL BE SLOPED 1" TOWARDS THE STREET.
- CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING PRIOR TO ANY WORK DONE WITHIN THE PARISH OR CITY RIGHT OF WAY OR SERVITUDE.