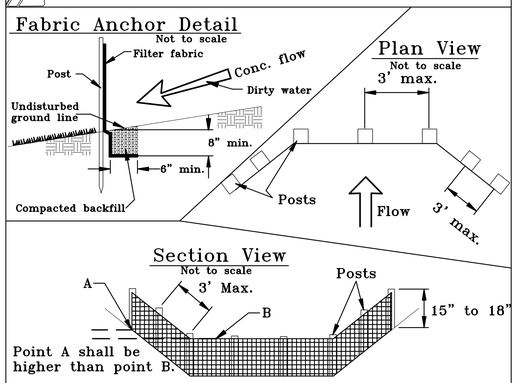
Concentrated Flow Silt Fence



Notes:
1. Silt fences shall be installed prior to the clearing of existing vegetation or site grading in areas with concentrated flow runoff.
2. Filter fabric shall meet the requirements of Illinois Urban Manual Material Specification 592--Geotextile, Table 1 or 2, Class I.
3. Top and bottom wires of the wire support shall be a minimum of 9 gauge; intermediate wires shall be a minimum of 11 gauge. The maximum wire opening shall be six inches.
4. Fence posts shall be standard (T or U) steel posts or wood with a minimum cross sectional area of 3.0 square inches. Posts shall be a minimum of 60 inches long.
5. The posts shall be driven a minimum of 24 inches into the ground. Post spacing shall be a maximum of every 3 feet for concentrated flow silt fence.
6. The wire support is required for concentrated flow silt fence.
7. The height of a concentrated flow silt fence shall be a minimum of 15 inches and a maximum of 18 inches above the original ground surface.
8. The silt fence shall be entrenched to a minimum depth of 8 inches, with an additional 6 inches extending along the bottom of the trench in the up-slope direction. The trench shall be backfilled and the soil compacted over the fabric.
9. The filter fabric and wire support must be securely fastened to the posts using one inch long heavy duty wire staples, tie wires, or hog rings. The fabric shall not be stapled to trees.
10. The fence shall be installed perpendicular to the concentrated flow, with the ends higher than the middle.

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Concentrated Flow Silt Fence

Applicability
A concentrated flow silt fence is a modified version of the standard sheet flow silt fence. It is to be used in areas of concentrated flow, and is designed to withstand overtopping. It is a temporary barrier of entrenched filter fabric stretched across and attached to supporting posts It is used to catch dirty runoff in drainage ways or swales with small contributing drainage areas. The purpose of this practice is to cause dirt to drop out of the water and prevent it from leaving the area.
1. The maximum allowable slope lengths contributing to a concentrated flow silt fence are:
   % Slope.....Maximum Spacing (ft.)
   0 – 1.5%.....100
   1.5 – 3%.....75
   >3%.....50
2. When the disturbed slope is longer than the maximum spacing, install additional parallel rows of silt fence to the slope so that the distance is in the allowable range.
3. Silt fence may be used where long-term effectiveness is required.

Operation and Maintenance
1. Silt fences shall be inspected immediately after each rainfall and at least once a day during prolonged rainfall.
2. Dirt should be removed after each rainfall; it MUST be removed when it reaches one-half the fence height.
3. Erosion resulting from end-runs or under-cuts shall be repaired immediately.
4. All loose fence material or failing posts shall be repaired immediately.
5. Silt fences shall remain in place and be fully functional until the area being protected is permanently stabilized.
6. Any dirt deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, a seedbed prepared, and the site vegetated.

Inspection Checklist
1. Verify that the silt fence is installed in the appropriate location -- in areas of concentrated flow. Check to see if all necessary areas (where runoff leaves the site) are protected.
2. Verify that the center of the concentrated flow silt fence is lower than the ends, so that the water will overtop the fence before it runs around the ends.
3. Check to see if the concentrated flow silt fences were installed using the proper spacing.
4. Check to see that post spacing is correct: 3 ft. maximum.
5. Check to see that the height of the fence is correct: 15 inches minimum, 18 inches maximum.
6. Check to see that the fabric is entrenched a minimum of eight inches, with an additional six inches of fabric extending uphill (buried).
7. Check to see if maintenance is needed.

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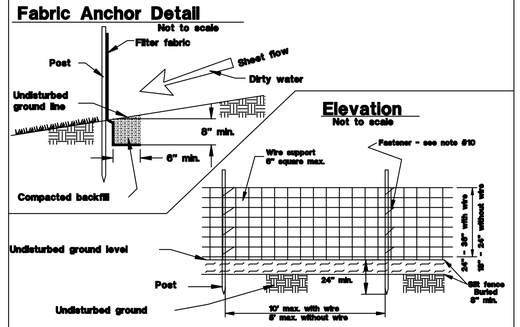
Sheet Flow Silt Fence



Notes:
1. Silt fences shall be installed prior to the clearing of existing vegetation or site grading.
2. Filter fabric shall meet the requirements of Illinois Urban Manual Material Specification 592--Geotextile, Table 1 or 2, Class I.
3. Top and bottom wires of the wire support shall be a minimum of 9 gauge; intermediate wires shall be a minimum of 11 gauge. The maximum wire opening shall be six inches.
4. Fence posts shall be standard (T or U) steel posts or wood with a minimum cross sectional area of 3.0 square inches. Posts shall be a minimum of 60 inches long.
5. The posts shall be driven a minimum of 24 inches into the ground. Post spacing shall be a maximum of every 10 feet for standard silt fence.
6. The height of a standard silt fence shall be a minimum of 24 inches and a maximum of 36 inches above the original ground surface.
7. The wire support may be omitted for standard silt fence if a maximum post spacing of five feet and a minimum height of 18 inches and a maximum height of 24 inches is used.
8. When splices are necessary, the fabric shall be spliced between support posts, with a minimum overlap equal to the distance between posts.
9. The silt fence shall be entrenched to a minimum depth of 8 inches, with an additional 6 inches extending along the bottom of the trench in the up-slope direction. The trench shall be backfilled and the soil compacted over the fabric.
10. The filter fabric and wire support, if used, must be securely fastened to the posts using one inch long heavy duty wire staples, tie wires, or hog rings. The fabric shall not be stapled to trees.
11. The fence shall be installed as close to the contour as possible, with the ends extending up-slope. The area below the silt fence must be undisturbed or stabilized.

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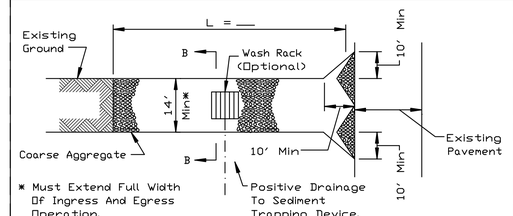
STABILIZED CONSTRUCTION ENTRANCE PLAN



NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

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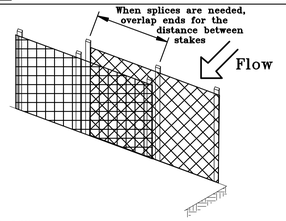
NRCS
Natural Resources Conservation Service

STANDARD DWG. NO. IL-630
SHEET 1 OF 2
DATE 8-18-94

Sheet Flow Silt Fence



Applicability
A standard sheet flow silt fence is a temporary barrier of entrenched filter fabric stretched across and attached to supporting posts. It is used to catch dirty runoff from small drainage areas of disturbed soil. This practice shall only be installed in areas where runoff is in the form of sheet flow. The purpose of this practice is to cause dirt to drop out of the water and prevent it from leaving disturbed areas.
1. The maximum allowable slope lengths contributing to a standard sheet flow silt fence are:
   % Slope.....Maximum Spacing (ft.)
   25.....50
   20.....75
   15.....125
   10.....175
   <10.....200
2. When the disturbed slope is longer than the maximum spacing, add additional parallel rows of silt fence to the slope so that the distance is in the allowable range.
3. Silt fence may be used where long-term effectiveness is required.

Operation and Maintenance
1. Silt fences shall be inspected immediately after each rainfall and at least once a day during prolonged rainfall.
2. Dirt should be removed after each rainfall; it MUST be removed when it reaches one-half the fence height.
3. Erosion resulting from end-runs or under-cuts shall be repaired immediately.
4. All loose fence material or failing posts shall be repaired immediately.
5. Silt fences shall remain in place and be fully functional until the area being protected is permanently stabilized.
6. Any dirt deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, a seedbed prepared, and the site vegetated.

Inspection Checklist
1. Verify that the silt fence is installed in the appropriate location -- down-slope of the disturbed area. Check to see if all necessary areas (where runoff leaves the site) are protected.
2. Verify that the silt fence is installed as close to the contour as practical.
3. Check to see if the splices (when needed) overlap a minimum of one post length and are secured tightly.
4. Check post spacing: Fabric only -- 5 ft. maximum: Fabric with wire support -- 10 ft. maximum.
5. Check the height of the fence:
   With wire.....Without wire
   24 inches min.....18 inches min.
   36 inches max.....24 inches max.
6. Check to see that the fabric is entrenched a minimum of eight inches, with an additional six inches of fabric extending uphill (buried).
7. Check to see if maintenance is needed.

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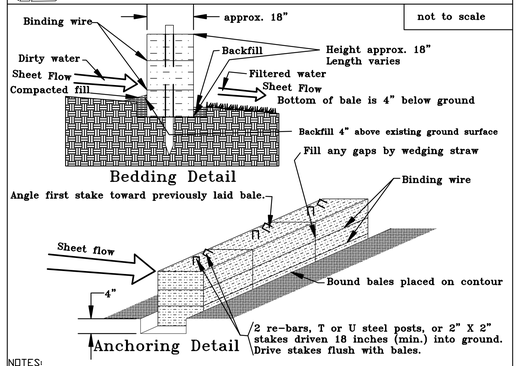
Straw Bale Barrier



NOTES:
1. Straw bale barriers shall be installed prior to the clearing of existing vegetation or any site grading.
2. Bales shall be either wire-bound or string tied. Bindings shall be parallel to the ground to prevent the bindings from rotting. Hay or other baled material may be used instead of straw.
3. Each bale shall be embedded in the soil a minimum of 4 inches.
4. Bales shall be placed in a single row, running along the contour. The end bales should extend up-slope so that the trapped dirty water cannot flow around the ends of the barrier.
5. Bales shall be securely anchored in place by either two stakes or re-bars driven through the bale. Stakes shall be driven flush with the bale. The first stake in each bale shall be driven toward the previously laid bale at an angle to force the bales together tightly. The angled stake may penetrate the next bale to increase strength.
6. The holes between bales shall be filled by wedging with straw (chinking) to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from the barrier tends to increase efficiency.
7. After the bales are staked and chinked, the excavated soil shall be backfilled and compacted against the barrier. Backfill soil shall conform to the ground level on the downhill side and shall be built up to 4 inches against the uphill side of the barrier.

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Straw Bale Barrier

Applicability:
1. The maximum allowable slope lengths contributing runoff to a straw bale barrier are as follows:
   Slope (%).....Maximum Spacing (ft.)
   25.....25
   20.....50
   15.....75
   10.....100
   < 10.....125
2. The maximum drainage area for sheet flow to a straw bale barrier shall not exceed 1/4 acre per 100 feet of barrier
3. There is no concentrated flow to the barrier
4. Effectiveness is needed for less than three months

Operation and Maintenance:
1. Straw bale barriers shall be inspected immediately after each runoff event and at least daily during prolonged rainfall.
2. Close attention shall be paid to the repair of damaged bales, end runs, and undercutting beneath bales.
3. Necessary repairs to the barrier or replacement of bales shall be performed promptly.
4. Dirt deposits should be removed after each rainfall. They must be removed when approximately 1/2 the height of the barrier is filled with dirt.
5. Any dirt deposits remaining in place after the straw bale barrier is no longer required shall be dressed to conform to the existing grade, prepared, and seeded.
6. Straw bale barriers shall be removed when they have served their usefulness, but not before the upslope areas have been permanently stabilized.

Inspection Checklist:
1. Verify that the straw bale barrier is installed in the appropriate location - down slope of the disturbed area. Check to see if all necessary areas (wherever runoff leaves the site) are protected.
2. Verify that the bales are installed as close to the contour as practical.
3. Check the ends of the bale barrier. Ends should extend uphill slightly so that dirty water cannot flow around the ends of the barrier.
4. Check to see if bales are tightly connected and any gaps are filled with straw (chinked).
5. Verify that the bales are bound around the sides and staked (2 stakes) firmly into the ground.
6. Verify that the bales are entrenched a minimum of 4". Compacted backfill should be placed along the uphill side of the bales.
7. Check to see if maintenance is needed:
   a. Dirt should be cleaned out after every rainfall; it must be cleaned out when it reaches half the bale height.
   b. All damaged bales should be replaced immediately.
   c. All undercuts or end runs should be repaired immediately.
   d. Bale barriers should remain in place and fully functioning until the area it protects is permanently stabilized.

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Reviewed: LMT
Book No.: -

SHEET TITLE:
EROSION CONTROL DETAILS

SHEET NUMBER:
C4.2
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