
**Field Guide
For
Erosion and Sediment Control
On Construction Sites
In
Alabama**

**Alabama Soil and Water
Conservation Committee
and
Partners**

First Edition, August 2004

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Preface

This Field Guide was prepared to provide a quick handy guide for persons involved in land disturbing activities. This includes homebuilders, general contractors, road builders, installers of best management practices, erosion and sediment control planners and designers, plan reviewers and inspectors.

The basis for the Field Guide is Volume II of the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas, June 2003.

The Field Guide covers 26 of the most commonly used erosion and sediment control practices contained in the Alabama Handbook. Some details and most pictures of the practices were omitted to maintain a small format.

Consult the Alabama Handbook Volumes I and II for details on planning, design, construction and inspections. It may be viewed at the Alabama Soil and Water Conservation homepage (<http://www.swcc.state.al.us>) and it may be purchased from the Alabama Chapter of the Soil and Water Conservation Society (order form available at <http://www.swcc.state.al.us>).

This Field Guide may be obtained from the various project partners (see Acknowledgements section).

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Acknowledgements

This Field Guide is a product of a partnership coordinated by the Alabama Soil and Water Conservation Committee. The partnering organizations are listed below.

Alabama Soil and Water Conservation Committee
Alabama Association of Conservation Districts
Alabama Department of Environmental Management
Alabama Department of Transportation
Associated General Contractors of Alabama
Home Builders Association of Alabama
Natural Resources Conservation Service
Soil and Water Conservation Society - Alabama Chapter

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Chapter 1

Introduction

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Introduction

Use of the Field Guide

This Field Guide provides general guidance (descriptions and illustrations) for installing and maintaining many of the erosion and sediment control practices that are referred to as Best Management Practices (BMPs).

Detailed design plans/drawings are the basis for meeting requirements on most sites and the **plan design requirements take precedence over details in the Field Guide.**

Also, the Field Guide is **not intended to be used for specifications in instances where a design is not available. A professional should always be consulted.**

Benefits of Erosion and Sediment Control

The benefits of effective erosion and sediment control are important to the environment, to contractors and the general public. Keeping sediment out of small conveyances channels, stream, lakes and rivers contributes to clean water, protection of wetlands and reduced maintenance costs associated with culverts, road ditches and drainage channels. Fish and biological integrity of streams and lakes are protected with effective erosion and sediment control. Finally, and very importantly, contractor construction costs should be minimized with a well executed erosion and sediment control program. Obviously, the general public benefits as the environment is protected and construction costs are minimized. These benefits are

accomplished most effectively with proper installation and maintenance of BMPs.

Principles of Erosion and Sediment Control

- Emphasize erosion control to minimize soil detachment and sediment production.
- Minimize the area disturbed - leave existing vegetation that does not have to be removed.
- Shorten construction periods to minimize bare ground exposure time.
- Sequence installation to shorten construction periods.
- Schedule construction to favor the use of temporary and permanent seedings so the practices can be most effective.
- Make erosion control plantings at every opportunity.
- Use sediment control measures that minimize sediment leaving the disturbed site.
- Prevent sediment from leaving construction site at entrance/exits during muddy periods.
- Use practices that prevent clean water from mixing with turbid water.
- Give special attention to cut and fill slopes because they are difficult to stabilize.
- Give special attention to sites that are transected by streams or are in close proximity to streams.

- Maintain practices to ensure their effectiveness. This includes regular and thorough inspections.

Alabama One Call (call before you dig)

Determine exact location of underground utilities before beginning earthmoving or excavations. If you don't call and lines are cut, you may be billed for the repair. The number to call in Alabama is 1-800-292-8525.

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Chapter 2

Site Preparation

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Construction Exit Pad (CEP)

Description

A stone base pad that removes mud and caked soil from the tires of construction vehicles. It is located where traffic will be leaving a construction site and moving directly onto a public road or street.

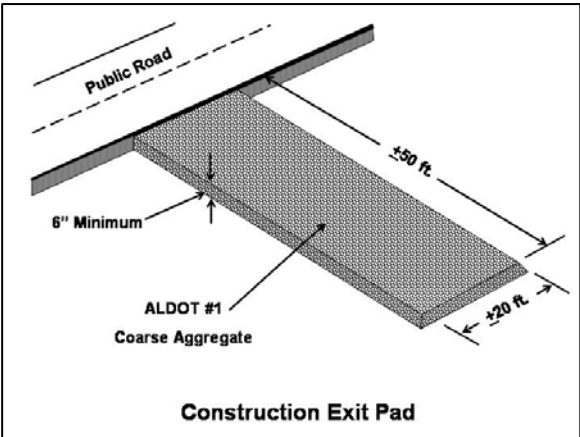
Installation

- Begin by removing all vegetation and other unsuitable material from the foundation area.
- Grade and crown the area for positive drainage.
- Utilize a diversion to direct any surface flow away from the construction exit pad.
- Install pipe under the pad if needed to maintain drainage ditches along public roads.
- Divert all construction exit pad runoff and drainage to a sediment trap or basin.
- If wet conditions or soft soils are anticipated, place geotextile filter fabric on the graded foundation before placing the aggregate.
- Place specified stone size to lines and grade shown on plans. Leave smooth and sloped for drainage. If stone size is not specified, use ALDOT Coarse Aggregate No. 1.
- If dimensions are not specified, pads are generally 50' x 20'. Adjustments in size should be made to accommodate site conditions.

Maintenance

- Remove large chunks of mud or caked soil from construction exit pad daily.

- Inspect stone pad and sediment disposal area weekly and after storm events or heavy use.
- Reshape pad as needed for drainage and runoff control.
- Top-dress with clean specified stone as needed to maintain effectiveness.
- Immediately remove mud or sediment tracked or washed onto public road.
- Remove unneeded exit pad materials from areas where permanent vegetation will be established.



Topsoiling (TSG)

Description

Salvaging and storing surface soil on construction sites and reusing the soil later on areas to be vegetated.

Installation

- Begin by identifying on the design plan the area to be stripped, the depth of soil to be removed, the storage area and the areas to utilize topsoil. If a plan is not available, obtain the aid of a qualified professional.
- Schedule stripping to precede or be done concurrently with land grading.
- Install silt fence or other perimeter barrier where necessary to minimize sediment movement from stockpile site.
- Remove and dispose of stumps, roots, trash, noxious weeds, and soils containing toxic chemicals according to locally accepted procedures and regulations.
- Stockpile topsoil at the site(s) identified in the plan or by the design professional.
- In the absence of plan details, locate the stockpile so that natural drainage is not obstructed and avoid stockpiling on steep slopes.
- Side slopes of the stockpile should not exceed 2:1.
- Protect stockpile as specified in the design plan. In the absence of details in the plan, use temporary seeding as soon as possible and not

more than 10 working days after formation of stockpile (see Temporary Seeding practice).

- Mulching may be substituted for temporary seeding on stockpiles that will be used within 2 months (see Mulching practice).
- If stockpiles will not be used within 12 months, they should be stabilized by permanent vegetation to control erosion and weed growth (see Permanent Seeding practice).
- Immediately prior to spreading topsoil for reuse, correct pH of the subsoil with lime if needed and loosen the subgrade of the site to receive the topsoil by disking or scarifying to a depth of at least 2" to ensure bonding of the topsoil and subsoil.
- Uniformly spread topsoil to the depth specified in the design plan, as specified by a qualified professional or to a minimum of 4". For long-term growth of vegetation without irrigation, minimum soil depth (subsoil and topsoil) should be 8" to 12" over loose sand or rock fragments. Soil depth of 24" is needed over bedrock.
- Maintain grades shown in the construction plan.

Maintenance

- Inspect areas that received topsoil after rainstorms until vegetation is established.
- Repair eroded or damaged areas and revegetate.
- Repair sloughing on steep slopes by removing the topsoil, roughening the subgrade and respreading topsoil.
- Consult with a qualified design professional if drainage (wetness caused by seepage) or

shallowness to bedrock (less than 24”) is involved.



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Chapter 3

Surface Stabilization

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Chemical Stabilization (CHS)

Description

Applying a water-soluble anionic polyacrylamide (PAM) to control erosion caused by water and wind.

Cationic forms of PAM are not allowed for use under this guideline due to their high levels of toxicity to aquatic organisms.

Installation

- Prepare application site according to plans and specifications.
- Obtain toxicity reports and OSHA Material Safety Data Sheets from the supplier before using PAM on site.
- Conduct site testing for PAM to verify performance with site soils before use.
- PAM may be applied by injection into irrigation systems, by hydroseeders, or in dry form by hand or mechanical spreaders.
- Rinse equipment used to apply liquid PAM thoroughly after each application to prevent PAM buildup.
- When applying by hydroseeder, PAM should be the last additive in the mix.
- Check for compliance with all manufacturer's recommendations and safety requirements during application.

Maintenance

- Reapply PAM if treated areas are disturbed or tilled.
- Maintain application equipment to ensure uniform applications.
- Remove downgradient sediment deposits resulting from the use of PAM, as needed.



Photo courtesy of Sunshine Supplies, Inc.

Dust Control

Description

Controlling dust during land disturbing activities to minimize on-site and off-site damages and hazards.

Installation

- Sequence construction to minimize the amount of disturbed area at any one time.
- Leave undisturbed vegetative buffers between disturbed areas, if possible.
- Install planned surface stabilization measures immediately after completing grading.
- Vegetative Cover – Apply according to plans and specifications.
- Mulch – Apply according to plans and specifications.
- Sprinkling – Sprinkle disturbed areas with water until surface is moist. Repeat as often as needed to maintain moisture.
- Barriers – Install fences perpendicular to prevailing wind at intervals of 15 times the fence height.
- Calcium Chloride – Apply according to plans and specifications using a mechanical spreader.
- Spray-on Adhesives – Apply according to plans and specifications or the following table if not specified.
- Stone – Place proper gradation to the specified width and thickness.

Table DC-1 Application Rates for Spray-on Adhesives Used in Dust Control

Adhesive	Water Dilution (water: adhesive)	Type of Nozzle	Application Rate (gallons/acre)
Anionic Asphalt Emulsion	7:1	Coarse	1200
Latex Emulsion	12.5:1	Fine	235
Resin in Water	4:1	Fine	300
Acrylic Emulsion (Non-traffic)	7:1	Coarse	450
Non-Acrylic Emulsion (Traffic)	3.5:1	Coarse	350

Source: Virginia Erosion and Sediment Control Handbook, 1993

Consult with a qualified design professional if spray-on adhesives are specified. A permit may be needed.

Maintenance

- Check site during windy conditions to monitor measure effectiveness.
- Reapply dust control measures as needed to maintain level of control required.

Erosion Control Blanket (ECB)

Description

Protective cover made of straw, jute, wood or other plant fibers; plastic, nylon, paper or cotton. Erosion control blanket is used on areas with high erosion potential such as steep slopes and channels to protect soil from raindrop impact and erosive velocities while facilitating vegetative growth.

Installation

- Grade the site to a smooth uniform surface, free of debris.
- Incorporate soil amendments and seed according to plans and specifications.
- Install erosion control blankets according to manufacturer's recommendations, especially concerning check slots and stapling patterns.
- Anchor blanket so that continuous, firm contact is maintained with the soil surface.
- Check materials used for compliance with specifications and suitability for application.
- Check finished grade and dimensions for compliance with specifications.
- Check staple installation for compliance with recommendations.

Maintenance

- After storm events, check for erosion and undermining beneath blankets. Repair as needed, by filling eroded area with soil, seeding, and replacing damaged blanket.



Photo courtesy of Environmental Plans and Review Section,
Development Department, DeKalb County, GA

Mulching (MU)

Description

Applying straw or other suitable materials to cover the soil surface to protect against erosion. Mulching with seeding helps establish plant cover. It can be used on unseeded areas to protect against erosion until final grading and shaping can be accomplished.

Installation

- Remove stumps, roots and other debris from the site before seeding and/or mulching.
- Grade area, if needed, to permit the use of equipment for seeding, mulching and maintenance.
- Shape area so that it is relatively smooth.
- If seeding, follow seeding specifications and apply mulch immediately after seeding.
- Spread straw uniformly over the area with a power blower, hydroseeder or by hand at rates recommended for either seeded areas or without seeding. When mulching with seeding, 25% to 35 % of the ground surface should be visible after mulching is applied. When mulching without seeding, 100% of the soil surface should be covered.
- Apply at the rates shown in the plan or in Table MU-1 if there is not a plan.

Table MU-1 Mulching Materials and Application Rates

Material	Rate Per Acre and (Per 1000 ft.²)	Notes
Straw (with Seed)	1 ½ - 2 tons (70 lbs – 90 lbs)	Spread by hand or machine; anchor when subject to blowing.
Straw Alone (no seed)	2 ½ - 3 tons (115 lbs - 140 lbs)	Spread by hand or machine; anchor when subject to blowing.
Wood Chips	5-6 tons (230 lbs - 275 lbs)	Treat with 12 lbs. nitrogen/ton.
Bark	35 cubic yards (0.8 cubic yard)	Can apply with mulch blower.
Pine Straw	1-2 tons (45 lbs – 90 lbs)	Spread by hand or machine; will not blow like straw.
Peanut Hulls	10-20 tons (450 lbs - 900 lbs)	Will wash off slopes. Treat with 12 lbs. nitrogen/ton.

Anchor straw or wood cellulose mulch by one of the following methods:

- Crimp with a weighted, straight, notched disc or a mulch anchoring tool (crimper) to punch the straw into the soil.
- Tack with a liquid tackifier designed to hold mulch in place. Use suitable spray equipment and follow manufacturer's recommendations.

- In more erosive areas, cover mulch with netting, using a degradable natural or synthetic mesh and anchor according to manufacturer's specifications (see Erosion Control Blanket practice).
- On steep slopes and other areas needing a higher degree of protection, use heavy natural nets without additional mulch, synthetic netting with additional mulch or erosion control blanket. These areas include grassed waterways, swales and diversion channels.
- Install netting and blankets according to manufacturer's specifications making sure materials are properly anchored (see Erosion Control Blankets).

Maintenance

- Inspect all mulched areas periodically and after rainstorms for erosion and damage to the mulch.
- Make repairs promptly and restore to original condition.
- Continue inspections of seeded areas until vegetation is well established.
- Keep mower height high if plastic netting is used to prevent netting from wrapping around mower blades or shaft.



Permanent Seeding (PS)

Description

Establishing a permanent vegetative cover for soil stabilization and long-term erosion control by seeding disturbed areas.

Installation

- Make plantings during the specified planting period if possible.
- Spread topsoil if required (see Topsoiling practice).
- Apply lime and fertilizer according to the plans or soil test recommendations. If a design plan or soil test is not available, use 2 tons/acre of ground agricultural lime on clayey soils (about 90 lbs/1000 ft²) and 1 ton/acre on sandy soils (about 45 lbs/1000 ft²).
- For grass or grass-legume mixture apply 8-24-24 or equivalent – 400 lbs/acre (about 9 lbs/1000 ft²) before planting and 30 to 40 lbs/acre of nitrogen fertilizer (about 0.8 lbs/1000 ft²) when vegetation has emerged to a stand. For legume alone, apply 0-20-20 or equivalent – 500 lbs/acre (about 11.5 bs/1000 ft²) before planting.
- On gentle slopes (3:1 and flatter) and immediately after spreading lime and fertilizer, prepare the seedbed by loosening soil surfaces to a depth of 6” to 8” with appropriate tillage equipment and incorporate lime and fertilizer.
- Leave a smooth seedbed except for no-till drilling and hydroseeding.

- Avoid preparing the seedbed under excessively wet conditions.
- On slopes steeper than 3:1, lime and fertilizer may be applied to the surface without incorporation.
- Lime and fertilizer may be applied through hydroseeding equipment (usually on steep slopes). Lime may be applied with seed, but fertilizer should not be added to the seed mixture during hydroseeding because fertilizer salts may damage the seed.
- Plant the species specified. In the absence of plans and specifications, plant species and seeding rates may be selected from Figure PS-1 and Table PS-1 by qualified persons.



Figure PS-1 Geographical Areas for Species Adaptation

Table PS-1 Commonly used Plants for Permanent Cover with Seeding

Species	Seeding Rates/Ac	Seeding Dates		
		North AL	Central AL	South AL
Bahiagrass, Pensacola	40 lbs	--	Mar 1- July 1	Feb 1- Nov 1*
Bermudagrass, Common	10 lbs	Apr 1- July 1	Mar 15- July 15	Mar 1- July 15
Bahiagrass, Pensacola Bermudagrass, Common	30 lbs 5 lbs	--	Mar 1- July 1	Mar 1- July 15
Bermudagrass, Hybrid (Lawn Types)	Solid Sod	Anytime	Anytime	Anytime
Bermudagrass, Hybrid (Lawn Types)	Sprigs 1/sq ft	Mar 1- Aug 1	Mar 1- Aug 1	Feb 15 – Sep 1
Fescue, Tall	40-50 lbs	Sep 1- Nov 1	Sep 1- Nov 1	--
Sericea	40-60 lbs	Mar 15- July 15	Mar 1- July 15	Feb 15 – July 15
Sericea & Common Bermudagrass	40-60 lbs 10 lbs	Mar 15 –July 15	Mar 1- July 15	Feb 15- July 15

*Fall planting of Bahia should contain 45 lbs. of small grain to provide cover during winter months (see Temporary Seeding practice).

- Plant grasses and legume seed ¼” to ½” deep and small grains about 1” deep.
- When planting by methods other than a drill seeder or hydroseeder, cover the seed and then firm the soil lightly with a roller.
- If planting a legume, use the correct inoculant and follow recommendations on the label. For hydroseeding, increase the inoculant used to

4 times the recommended rate on the label for other seeding methods.

- Cover 65% to 75% of the surface with the specified mulch materials. (See Mulching practice for more details).

Maintenance

- Inspect seedings weekly until a stand has germinated and, thereafter, at least monthly for stand survival and vigor.
- Bare and eroded areas should be repaired by filling and/or smoothing, and reapplication of lime, fertilizer, seed and mulch. A qualified design professional should be consulted to advise on remedial actions.
- If vegetation fails to grow, a qualified design professional should be consulted for recommendations.
- Mow vegetation on structural practices such as embankments and grass-lined channels to prevent woody plants from invading.
- Other areas should be mowed to compliment the use of the site.
- Fescue should not be mowed close during the summer; sericea should not be mowed close in late summer.
- Bermudagrass and bahiagrass can be mowed often and close, if so desired, during their growing season.

Sodding (SOD)

Description

Establishing vegetative cover with sod to provide immediate erosion control on bare soil.

Installation

- Begin by clearing the area of clods, rocks, etc.
- Grade and loosen the soil to a smooth surface.
- Loosen compacted, hard or crusted soil surfaces to 6" to 8" with appropriate tillage equipment and incorporate the lime and fertilizer.
- Where topsoiling is specified or needed, follow steps in the design plan or, if not available, apply according to the Topsoiling practice. Lime subsoil first if lime is needed.
- Apply lime and fertilizer according to the plan or by soil test recommendations. In the absence of a plan or soil test recommendations apply agricultural limestone at the rate of 2 tons per acre (100 lbs. per 1000 sq. ft.) if the pH is under 6.0 and apply 10-10-10 fertilizer at the rate of 1000 lbs. per acre (25 lbs per 1000 sq. ft.). Incorporate amendments to depth of 4" to 6".
- Rake or harrow to achieve a smooth, loose, debris-free final grade on which to lay the sod.
- Avoid preparing the seedbed under excessively wet conditions.
- Use plants specified in the plan. If not specified, select a variety using Figure SOD-1 and Tables SOD-1 and SOD-2.



Figure SOD-1 Geographical Areas for Species Adaptation in Alabama

Table SOD-1 Grasses Adapted for Sodding in Alabama

Warm Season Species	Variety	Area Adapted
Bermudagrass	Tifway, Tifgreen, Tiflawn, Common	North, Central, South
Bahiagrass	Pensacola	Central, South
Centipede	No Improved Varieties	Central, South
St. Augustine	Bitterblue, Raleigh, Common	South
Zoysia	Emerald, Meyer	Central, South
Cool Season Species		
Tall Fescue	Kentucky 31	North

Table SOD-2 Adaptation and Maintenance of Grasses Used for Sodding

Species	Tolerance Ratings					Maintenance	
	Shade	Heat	Cold	Drought	Wear	Mowing Hght.	Mowing Frequency
Bermuda-grass	P	G	P	E	E	1"	H
Bahiagrass	F	G	P	E	G	2-3"	H
Centipede	F	G	P	G	P	1½"	L
Tall Fescue	G	F	G	G	G	3"	H
St. Augustine	G	G	P	P	P	2-3"	M
Zoysia	F	G	F	E	G	1"	H

E=Excellent, G=Good, F=Fair, P=Poor, H=High, M=Medium, L=Low

- During high temperatures, moisten the soil immediately prior to laying sod.
- Lay the first row of sod in a straight line with subsequent rows placed parallel to and butting tightly against each other. Stagger joints to create a brick-like pattern.
- Ensure that sod is not stretched or overlapped and that all joints are butted tight.
- Wherever concentrated flow may be a problem, install sod with the length perpendicular to the water flow (see Figure SOD-2) and secure by stapling firmly at the corners and middle of each strip. Jute or synthetic netting may be pegged over the sod for further protection during establishment.
- Immediately after laying the sod, roll or tamp it to provide firm contact between roots and soil.

- Irrigate sod deeply so that the underside of the sod pad and the soil 6” below the sod is wet.
- Until a good root system develops, water sod during dry periods as often as necessary to maintain moist soil to a depth of at least 4”.

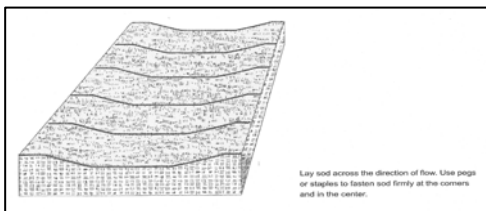


Figure SOD-2 Installation of Sod in Waterways

Maintenance

- Mow to a height of 2” to 3” after sod is well rooted. Do not remove more than $\frac{1}{3}$ of the leaf blade in any mowing.
- Permanent, fine turf areas require yearly fertilization. Fertilize warm-season grass in late spring to early summer; cool-season grass in early fall and late winter.

Temporary Seeding (TS)

Description

Establishing a temporary fast-growing annual grass or legume on disturbed areas where vegetation can be established before final grading or at a time not suitable for planting the desired permanent species. Temporary seeding reduces erosion and the amount of sediment moving off the site.

Installation

- Make plantings during the specified planting period if possible.
- Loosen compacted, hard or crusted soil surfaces to a depth of 6" to 8" with appropriate tillage equipment for all methods of seeding except hydroseeding on slopes steeper than 3:1.
- Leave a smooth seedbed except for no-till drilling and hydroseeding.
- Avoid preparing the seedbed under excessively wet conditions.
- Incorporate lime during seedbed preparation. If a design plan or soil test is not available, use 2 tons/acre of ground agricultural lime on clayey soils (approximately 90 lbs/1000 ft²) and 1 ton/acre on sandy soils (approximately 45 lbs/1000 ft²).
- Apply fertilizer during seedbed preparation. If a design plan or soil test is not available, apply 8-24-24 or equivalent – 400 lbs/acre (approximately 9 lbs/1000 ft²) at planting.

- Apply topdressing of 30 to 40 lbs/acre of nitrogen fertilizer (approx. 0.8 lbs/1000 ft²) when vegetation has emerged to a stand.
- Incorporate lime and fertilizer to a depth of 6” with a disk or rotary tiller on slopes of up to 3:1.
- On steeper slopes, lime and fertilizer may be applied to the surface without incorporation.
- Lime and fertilizer may be applied through hydroseeding equipment. Lime may be applied with the seed mixture, but fertilizer should not be added to the seed mixture during hydroseeding because fertilizer salts may damage the seed.
- Plant the species specified. In the absence of plans and specifications, plant species and seeding rates may be selected by qualified persons from Table TS-1 and Figure TS-1.



Figure TS-1 Geographical Areas for Species Adaptation in Alabama

Table TS-1 Plants for Temporary Cover

Species	Seeding Rate/Ac	North	Central	South
		AL	AL	AL
Seeding Dates				
Millet, Browntop or German	40 lbs	May 1- Aug 1	Apr 1- Aug 15	Apr 1- Aug 15
Rye	3 bu	Sept 1- Nov 15	Sept 15- Nov 15	Sept 15- Nov 15
Ryegrass	30 lbs	Aug 1- Sept 15	Sept 1- Oct 15	Sept 1 - Oct 15
Sorghum-Sudan Hybrids	40 lbs	May 1- Aug 1	Apr 15- Aug 1	Apr 1- Aug 15
Sudangrass	40 lbs	May 1- Aug 1	Apr 15- Aug 1	Apr 1- Aug 15
Wheat Common	3 bu	Sept 1- Nov 1	Sept 15- Nov 15	Sept 15- Nov 15
Common Bermudagrass	10 lbs	Apr 1- July 1	Mar 15- July 15	Mar 1- July 15
Crimson Clover	10 lbs	Sept 1- Nov 1	Sept 1- Nov 1	Sept 1- Nov 1

- Ryegrass is highly competitive and should not be used when a temporary cover is added to the Permanent Seeding mixture.
- Plant small grains about 1” deep and grasses and legume seed ¼” to ½” deep.
- When planting by methods other than a drill seeder or hydroseeder, cover the seed and then firm the soil lightly with a roller.
- If planting a legume, use the correct inoculant and follow use recommendations on the label. For hydroseeding, increase the inoculant used to 4 times the recommended rate for other seeding methods.

- Cover 65% to 75% of the surface with the specified mulch materials. (See Mulching practice for more details).

Maintenance

- Inspect seedings weekly until a stand is established and thereafter at least monthly for stand survival and vigor.
- Bare and eroded areas should be addressed appropriately by filling and/or smoothing, and reapplication of lime, fertilizer, seed and mulch. A qualified design professional should be consulted to advise on remedial actions.
- If vegetation fails to grow, a qualified design professional should be consulted for recommendations.
- Millet, sorghum-sudan hybrids, sudangrass, rye and wheat may be mowed, but no lower than 6" (closer mowing may damage the stand).
- Ryegrass is tolerant of most mowing regimes and may be mowed often and as close as 4" to 6" if this regime is started before it attains tall growth (over 8").

Tree Planting On Disturbed Areas (TP)

Description

Planting desirable trees on construction sites or other disturbed areas to stabilize the soil.

Installation

- Planting should be done in accordance with the design plan. If a detailed plan is not available, obtain the assistance of a qualified professional to select trees that are suitable for growing on the disturbed site.
- Prepare the site for seedling type to permit adequate root development and proper tree growth.
- Bare-root seedlings should be planted between December 1 and March 15 when the soil is neither too dry nor too wet. Freezing weather should be avoided.
- Seedlings from a nursery should be kept moist and cool at all times. Do not expose seedlings to sun, wind, artificial heat, drying or freezing before they are planted.
- Balled seedlings may be kept up to 3 weeks if they are properly stacked, watered, and kept in a cool place.
- When planting is delayed longer than 3 weeks, roots should be covered with moist soil (heeled-in) or the seedlings should be put in cold storage.
- During planting, keep roots of seedlings moist.

- At the end of each day, loose seedlings should be either repacked in wet moss or heeled-in.
- If planting is being done on sloping land by equipment, the planting should be made on the contour.
- Most bare-root seedlings should be planted deeper than they grew in the nursery: small stock 1" deeper and medium to large stock ½" deeper.
- Longleaf pine seedlings should be planted at the same depth that they grew in the nursery (never any deeper!).
- Plant roots straight down and not twisted, balled, or U-shaped.
- Soil should be packed firmly around the planted seedlings.
- Mulching may be necessary on sloping land to reduce erosion. Mulch with wood chips, bark, pine needles, peanut hulls etc. to a depth of no more than 3". Mulch should not be placed against the trunk of the tree.
- Seedlings that are balled and burlapped or container grown may be planted anytime of the year if watering is available during dry periods.
- Prepare hole to allow proper placement of the root ball. (See Figure TP-1).
- Depth of planting must be close to the original depth. Do not set the tree lower than it grew before.

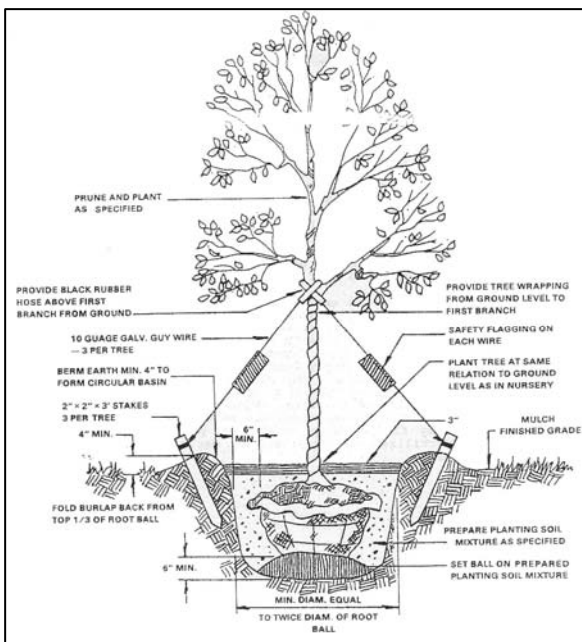


Figure TP-1 Tree Planting Diagram

- Set the tree in the hole and if the tree is balled and burlapped, loosen the burlap and remove completely if practical without breaking the soil of the root ball.
- Fill the hole with soil halfway and add water to settle the soil and eliminate air pockets.
- When the water has drained off, fill the hole the remainder of the way.
- Use extra soil to form a shallow basin around the tree to help retain water.
- If needed, provide support with stakes and guy wires (see Figure TP-1). Guy wires should be

loose enough to allow some movement of the tree.

- Mulch with wood chips, bark, pine needles, peanut hulls etc. to a depth of no more than 3". Mulch should not be placed against the trunk of the tree.

Maintenance

- Periodic fertilization may be beneficial on poor sites to maintain good tree growth.
- Transplanted trees should be fertilized 1 year or more after planting in the late fall or early spring before leaves emerge.
- Determine what nutrients are needed with a soil test or 10-8-6 or 10-6-4 can be used in the absence of a soil test.
- About 2 lbs. of fertilizer should be used for each inch of tree diameter measured at 4.5 feet above the ground – simply broadcast it within the drip line of the tree.
- Replant dead trees where needed to maintain adequate cover for erosion control.
- Remove guy wires from a tree after the tree has developed a root system that will support the tree.

Chapter 4

Runoff Conveyance

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Check Dam (CD)

Description

A small temporary dam constructed across an area of concentrated flow to slow the water and reduce channel erosion. Check dams trap only small amounts of sediment and are not sediment control devices. Most check dams are constructed of rock. Other materials can be used but are not covered in this handbook.

Check dams are for drainage areas of 10 acres or less and should not be used in “live” streams.

Installation

- Space the check dams so that the center of each dam is the same elevation or slightly lower than the back toe of the upstream dam.
- Remove debris and other unsuitable material from the check dam location.
- Excavate a shallow keyway (12”-24” deep and at least 12” wide) into the channel bottom and the abutments.
- If specified, install a non-woven geotextile fabric in the keyway.
- Ensure the proper gradation of riprap is used.
- Construct the dam with side slopes of 2:1 or flatter.
- Construct the dam with a parabolic top with the center portion 6 to 12”, depending on drainage area, lower in elevation than the outer edges so that the flow goes over the structure and not around the structure.

- Maximum dam height should be 2' for drainage areas of 5 acres or less and 3' for drainage areas of 5 to 10 acres.
- Check finished size, grade and shape for compliance with standard drawings and materials list or with specifications, if included in contract specifications.
- Stabilize the disturbed area with vegetation.

Maintenance

- After rainfall events check the dam and channel for rock displacement and erosion and make repairs as needed.
- Remove sediment when it reaches a depth of $\frac{1}{2}$ the original dam height.
- Remove check dams when their useful life has been completed. Stabilize the area where check dams are removed with vegetation.

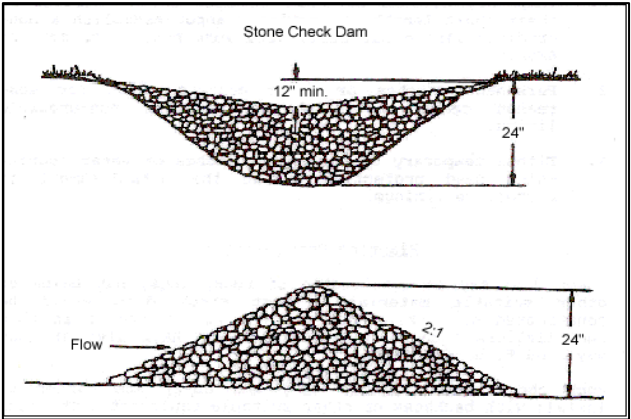


Figure CD-1 Profile of Typical Rock Check Dams

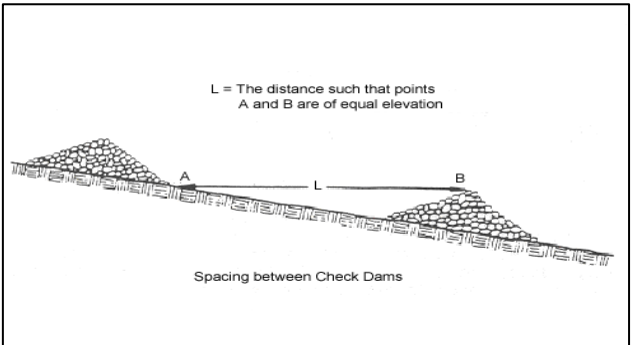


Figure CD-2 Cross Section of Typical Rock Check Dam



Diversion (DV)

Description

A temporary or permanent ridge and channel constructed on a stable grade and stabilized with vegetation. The practice is used to protect an area down slope by intercepting and carrying excess water to a stable outlet

Installation

- Begin by ensuring that the diversion outlet is stable.
- Layout the diversion from the outlet according to the design grade and planned location.
- Construct the diversion ridge by compacting earthfill in 6” to 8” lifts, overbuilding 10% for settlement.
- Check to ensure design dimensions are obtained.
- Stabilize the diversion with vegetation.

Maintenance

- Inspect after runoff events.
- Remove sediment buildups in the diversion channel and repair erosion in the channel bottom.
- Check outlet for damage and repair if needed.
- Mow and fertilize vegetation.
- Remove temporary diversions after service and stabilize the area with permanent vegetation.

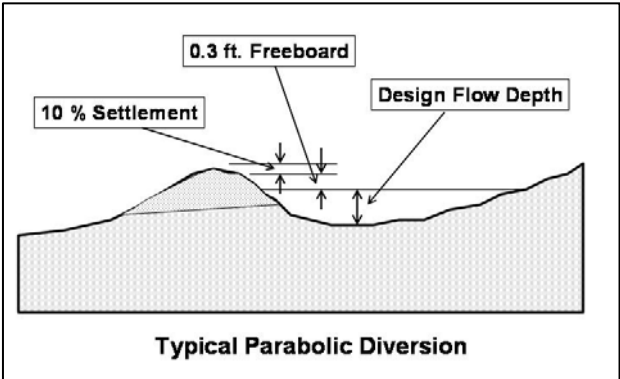


Figure DV-1 Typical Parabolic Diversion



Grass Swale (GS)

Description

An earthen channel constructed on a stable grade and stabilized with vegetation. The practice is used to provide an area for non-erosive concentrated flow after runoff events while carrying the water to a stable outlet.

Installation

- Ensure that the grass swale outlet is stable.
- Layout the grass swale from the outlet according to the planned location and the design grade limitations.
- Ensure that lateral surface drainage into the grass swale is not blocked.
- Ensure design dimensions are obtained. Most grass swales have a parabolic cross-section but may be designed to be triangular or trapezoidal.
- Stabilize the grass swale with prescribed vegetation prior to large runoff events.

Maintenance

- Permanent water in a grass swale will destroy the vegetation and other conveyance measures may be required.
- Inspect after runoff events.
- Remove sediment buildups in the swale and repair erosion.
- Check outlet for damage and repair if needed.
- Mow and fertilize vegetation.

Grass Swale



Lined Swale (LS)

Description

A constructed channel with a permanent lining designed to carry concentrated runoff to a stable outlet. A lined swale is used when vegetation cannot control erosion and riprap is undesirable. The lining may consist of concrete, specialized types of erosion control blanket or manufactured concrete products.

Installation

(Concrete lined swale is only covered here. Refer to plans and specifications or manufacturer's requirements for installation of other linings)

- Layout the lined swale according to plans and as close to a linear alignment as possible.
- Prepare the location for the concrete lined swale by removing debris and obstructions.
- Remove soft sections or unsuitable materials from foundation and replace with suitable material.
- Compact foundation soil and excavate cutoff walls to the required subgrade dimensions.
- Construct concrete forms for swale, inlet, and outlet according to plans.
- Utilize construction joints every 10 ft and expansion joints at least every 20 ft.
- Moisten subgrade prior to concrete placement.
- Refer to plans and specifications or ACI standards for concrete placement procedures during weather extremes.

- Place concrete (minimum 3,000 psi) to thickness required on plans (minimum 4 inches) utilizing surface vibration.
- As soon as finishing work is complete, cover surface of concrete with curing compound.
- Remove forms when specified.
- Stabilize areas adjacent to lined swale with permanent vegetation.

Maintenance

- Inspect at regular intervals and after storm events.
- Check for erosion adjacent to the channel, at inlets and outlets and underneath the lined channel.
- Remove sediment buildups in the swale and repair erosion.

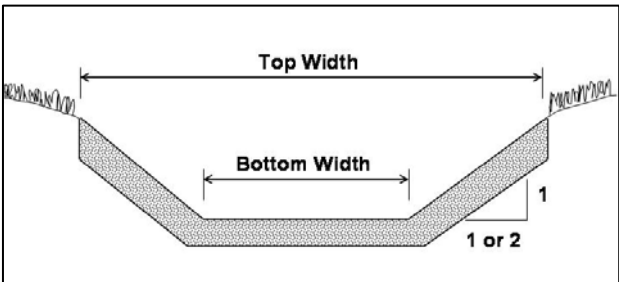


Figure LS-1 Concrete Lined Swale

Outlet Protection (OP)

Description

Measures installed to prevent erosion at the outlet of a channel or conduit by reducing the velocity and dissipating the energy. Outlet protection measures can be a riprap-lined apron, a reinforced concrete flume with concrete baffles or a reinforced concrete box with chambers or baffles.

Installation

- Prepare subgrade for structure by removing organic material and debris from work area.
- Fill low spots with clean non-organic fill, compact to density equal to surrounding material, and grade to lines and grades in plans.
- Maintain a straight alignment, if possible, or construct any curve needed in the upstream section of the structure.
- For riprap structures, install filter cloth meeting specifications over the completed subgrade.
- Avoid damage to the filter cloth when placing riprap with equipment.
- Construct the riprap apron on zero grade, with no overfall at the outlet end.
- For concrete structures install steel reinforcement at the position shown in the plans.
- Place concrete in sturdy wood or metal forms, properly supported to prevent deformation.

- Consolidate concrete using mechanical vibrating equipment supplemented by hand-spading, rodding or tamping.
- Avoid concrete placement in inclement weather and temperature extremes. If extremes can not be avoided follow ACI guidelines for concrete placement in extreme temperatures.
- Cure concrete according to specifications.
- Do not remove forms prior to specified time.
- Immediately after construction, stabilize disturbed area adjacent to the structure with vegetation.
- Check finished structures for conformance with designed lines, grades, and quality.

Maintenance

- After storm events, check riprap structures for erosion around and beneath the riprap and for rock displacement.
- Check concrete structures for structural cracks and movement.

Riprap-lined Swale (RS)

Description

A natural or constructed channel with an erosion-resistant rock lining designed to carry concentrated runoff to a stable outlet.

Installation

- Remove brush, trees and other debris from the channel area.
- Excavate the subgrade for the riprap lining to the designed lines and grades.
- Install geotextile fabric or gravel for a filter between the subgrade and riprap. Fabric or gravel should conform to specifications.
- Place riprap to the thickness, depth and elevations shown in the design.
- Use only stone meeting the gradation and quality specified in the plan.
- Blend the finished rock surface with the surrounding ground to prevent overfalls, channel constrictions or obstructions to flow.
- Stabilize channel inlet and outlets.
- Stabilize surrounding disturbed areas using vegetation after construction is completed.
- Check finished grades and cross sections throughout channel length, verifying dimensions to avoid flow constrictions.

Maintenance

- Check channels after storm events for rock displacement, sediment accumulations, and erosion beneath the rock.
- Check for erosion at the inlet and outlet of channel.
- Check side inlets for erosion.



Temporary Slope Drains (TSD)

Description

A pipe used to carry runoff water down a slope without causing erosion. The pipes are used when runoff water from an upper site needs to be temporarily conveyed down a slope before the permanent drainage structures can be installed

Installation

- Remember that pipes are sized according to the drainage area. If not included in the plans, use the following table for pipe sizes:

Maximum Drainage Area (Acres)	Pipe Diameter (D) (Inches)
0.5	12
1.5	18
2.5	21
3.5	24
5.0	30

- It is best to install the pipe before runoff water is conveyed to the pipe.
- Install the pipe with the specified watertight joints with a flared inlet section.
- Make sure the inlet section is low enough in elevation to ensure surface water can be directed to the inlet.
- Ensure the pipe is securely anchored to the slope according to plans.

- Install rock outlet protection.
- Construct the diversion at the top of the slope according to plans so surface runoff can be directed into the pipe.
- Good compaction of the diversion around the pipe is essential to avoid piping failure and blowouts.
- Establish temporary vegetation.

Maintenance

- Inspect the pipes after runoff events. Remove debris, repair erosion, and repair pipe as needed.
- Remove slope drains when they are no longer needed and stabilize the area with vegetation.

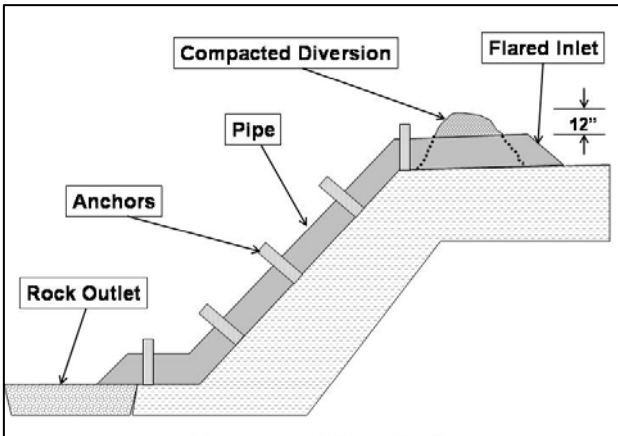


Figure TSD-1 Temporary Slope Drain

Chapter 5

Sediment Control

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Inlet Protection

Block and Gravel Inlet Protection (BIP)

Excavation Drop Inlet Protection (EIP)

Fabric Drop Inlet Protection (FIP)

Description

A small basin formed around a storm drain inlet to temporarily pond runoff water allowing suspended soil particles to settle out; thereby minimizing sediment entering storm drains during construction. Inlet protection is used with the following practices:

- Block and Gravel Inlet Protection
- Excavated Drop Inlet Protection
- Fabric Drop Inlet Protection

Installation

- Ensure that each inlet protection practice has no more than 1 acre of drainage area and the approaches to the inlet are 1% or flatter.
- Install the inlet protection according to the plans.
- Shape or construct the storage area as necessary to obtain the volume of storage required in the plans.
- Ensure that excess runoff water will go over the inlet protection practice and into the storm drain and does not bypass.

Maintenance

- Inspect each inlet protection practice after rainfall events and make repairs as needed.

- Remove sediment from the pool area when the capacity is reduced 50%.
- When the contributing drainage area has been adequately stabilized, remove all materials and sediment and dispose of properly. Fill the disturbed area to the grade of the drop inlet. Stabilize disturbed areas in accordance with the plans.

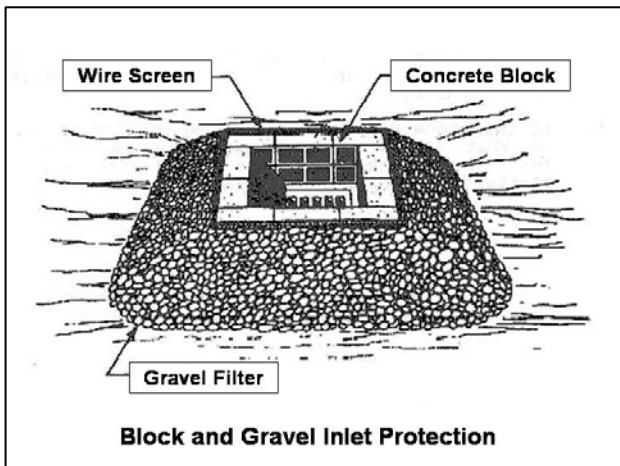


Figure BIP-1 Typical Details of Block and Gravel Inlet Protection

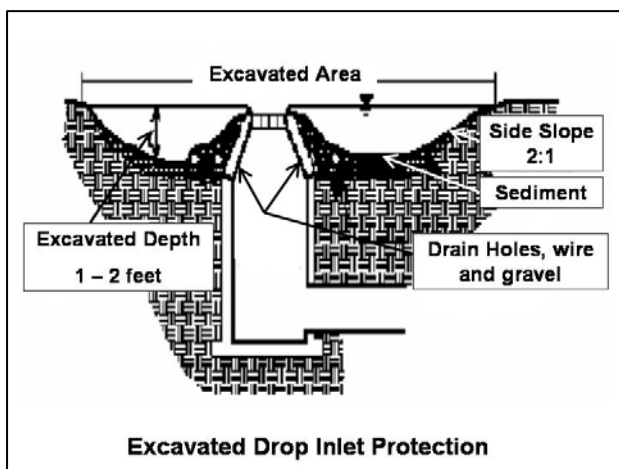


Figure EIP-1 Section of Excavated Drop Inlet Protection

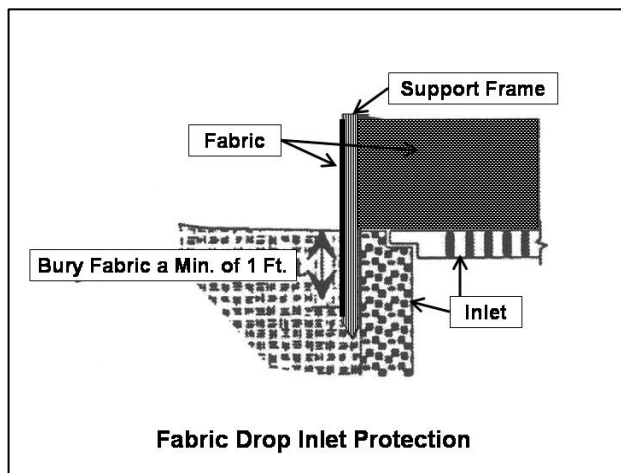


Figure FIP-1 Fabric Drop Inlet Framing Details

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Brush / Fabric Barrier (BFB)

Description

A brush/fabric barrier is a dam-like structure constructed from woody residue and faced with a non-woven geotextile fabric to provide a temporary sediment basin. This practice is applicable on sites with a small drainage area of 2 acres or less.

Installation

- Ensure the detention area for the structure is adequate.
- Smooth the foundation area for the brush/fabric barrier.
- Use woody debris from on-site to construct the barrier on a constant elevation with each end upturned to ensure flow goes over the barrier and not around.
- Tightly pack the woody debris to form a dam that is 3 to 6 feet tall and at least 5 feet wide at the base.
- Trim limbs from the front side of the barrier.
- Face the front of the barrier with geotextile fabric utilizing the minimum pieces of fabric (one single piece is best to avoid splicing). The minimum vertical splice overlap should be 3 foot and secured to avoid flows through the splice.
- Anchor the bottom of the fabric with stakes every 3 ft. in an excavated trench and tie the top of the fabric securely with twine to stakes behind the dam.

Maintenance

- Inspect the brush/fabric dam after rainfall events for flows around or under the structure and repair as needed.
- Remove and properly dispose of sediment when it reaches $\frac{1}{2}$ the fabric height.
- Check for gully erosion behind the dam after large rainfall events and repair as needed.
- Remove the brush/fabric dam when the structure is no longer needed, properly disposing of geotextile, woody debris and sediment.
- Stabilize the area with vegetation.

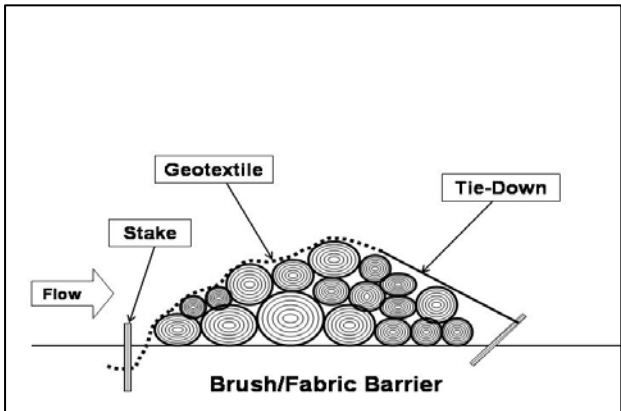


Figure BFB-1 Brush/Fabric Barrier

Rock Filter Dam (RD)

Description

A stone embankment constructed across natural drainageways, with drainage areas of 10 acres or less, to capture sediment from disturbed areas

Installation

- Clear and grub the area under the dam, removing roots, brush and other debris.
- Divert runoff from undisturbed areas away from the rock dam and basin.
- Smooth the dam foundation.
- If specified, cover the foundation with filter fabric, overlapping the downstream strips 1 foot with the upstream strip. Trench the upstream edge of the fabric 1 foot deep into the foundation.
- Construct the dam to the planned dimensions using rock of the specified size and quality.
- Line the face of the dam with gravel of the specified size and thickness.
- After the dam is constructed, clear the basin area.
- Set a marker at the elevation equivalent to 50% of the sediment volume to indicate the clean out level.
- Stabilize disturbed areas with vegetation when construction is complete.
- Check finished grades and dimensions for compliance with specifications.

- Check materials for compliance with specifications.

Maintenance

- Check the dam after each storm event for rock displacement and erosion at the abutments and the toe of the dam.
- Remove sediment from the basin when it accumulates to the marked clean out elevation.
- Replace gravel filter on the dam face if it becomes clogged with sediment.
- After construction site upstream of the dam is stabilized, remove the dam and sediment in the basin, smooth the area and stabilize using vegetation.

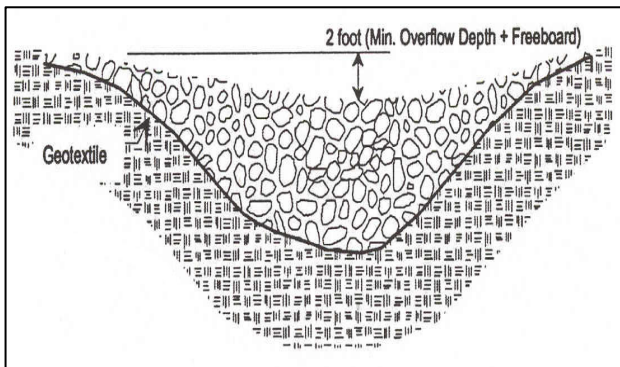


Figure RD-1 Typical Front View of Rock Filter Dam

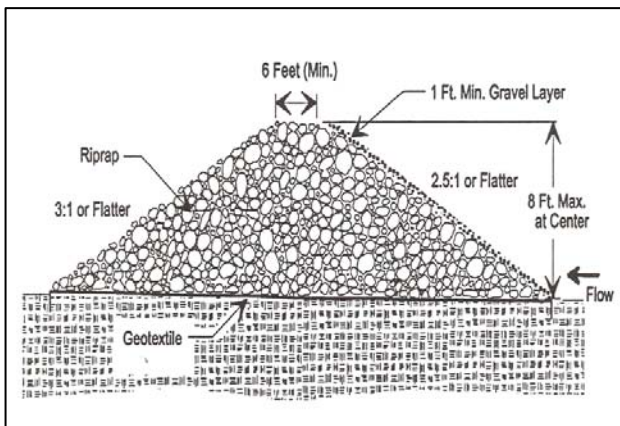


Figure RD-2 Typical Section of Rock Filter Dam



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Sediment Barrier (SB)

Description

A temporary structure across a disturbed landscape that reduces the quantity of sediment moving downslope. Sediment barriers include silt fence, hay bales, sand bags, brush piles and various man-made materials. Sediment barriers are used where sheet flow can be ponded to allow sediment to settle out of the water and stay on the construction site.

Installation

Silt fence is the only barrier installation covered in this edition of the Field Guide.

- Begin by determining the exact location of underground utilities so that locations for placement of stakes can be selected where utilities will not be damaged.
- Locate the fence so that sheet flow from disturbed areas must pass through the fence and the ends are turned uphill to provide temporary storage of runoff and sediment.
- Fence should not be placed across concentrated flow areas such as channels or waterways.
- Smooth the construction zone to provide a broad, nearly level area wide enough to provide storage of runoff and sediment behind the fence.
- If placed near the toe of a slope, the fence should be installed far enough from the slope

toe to provide a broad flat area for adequate storage capacity for runoff and sediment.

- Dig trench along the fence alignment as shown in Figure SB-1. Trench depth for Type A & B fences should be at least 6" deep and at least 4" deep for Type C fences.
- Drive posts at least 18" into the ground on the downslope side of the trench. Space posts a maximum of 10 feet if fence is supported by woven wire, or 6 feet if high strength fabric and no woven wire support fence is used.
- Fasten support wire fence for Types A & B fences to upslope side of posts and 6" into the trench (see Figure SB-1).

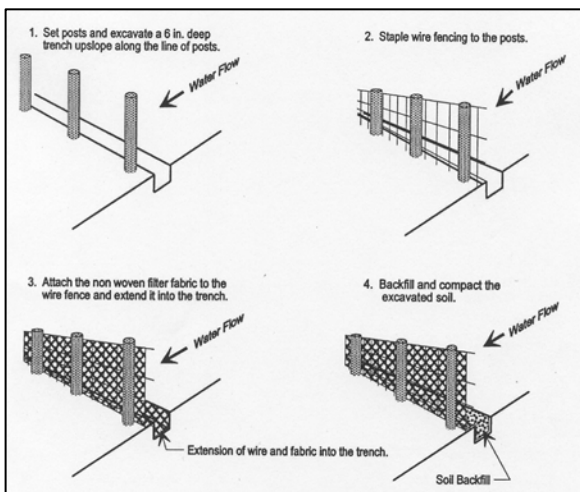


Figure SB-1 Installation of Silt Fence

- Attach continuous length of fabric to upslope side of fence posts. Minimize the number of

joints. If joints are necessary, fasten fence securely to support posts and overlap to the next post. Avoid joints at low points along the line.

- For Types A & B silt fence, place the bottom 8" of fabric in the 6" deep (minimum) trench, lapping toward the upslope side.
- For Type C fabric place the bottom 6" in the 4" deep (minimum) trench lapping toward the upslope side.
- Backfill the trench with compacted earth (see Figure SB-2).

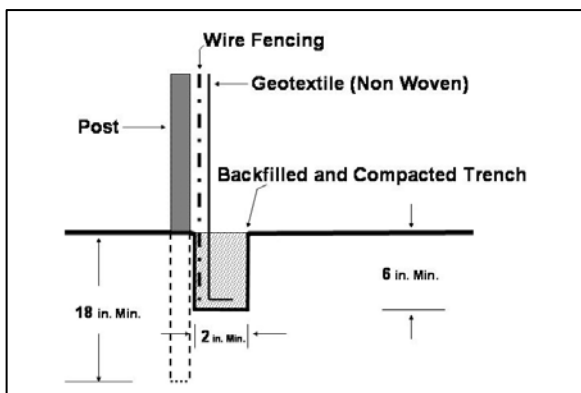


Figure SB-2 Detail of Type A & B Silt Fence Installation

- Provide good access in areas of predicted heavy sedimentation for clean out and maintenance.
- Stabilize disturbed areas with temporary or permanent vegetation. If no vegetation plan exists, select planting and mulching

information from either the Permanent Seeding or Temporary Seeding and the Mulching practice.

Maintenance

- Inspect sediment fences at least weekly and after each significant rain event and make required repairs immediately.
- Remove sediment deposits when they reach a depth of $\frac{1}{2}$ the height of the fence.
- After the contributing drainage area has been stabilized, remove all barrier materials and unstable sediment deposits, bring the area to grade and stabilize it with vegetation.



Straw Bale Sediment Trap (SST)

Description

A temporary catch basin consisting of a row or more of entrenched and anchored straw bales used to intercept and detain small amounts of sediment from disturbed areas with small drainage basins.

Installation

- Smooth the construction area to provide a broad level area for bale installation.
- Excavate a trench to the dimensions shown on the drawings. Make the trench long enough to ensure end bales are upslope of the sediment pool so that excess flows do not bypass the trap.
- Place bales end to end in the trench with the bindings around the sides not top to bottom.
- Anchor the bales by driving 2 – 36 inch long 2” x 2” stakes through each bale and 18” into the ground.
- Wedge loose straw into any gaps to slow water movement through the bales.
- Backfill with compacted soil to ground level on the downstream side and 4” above ground level on the upstream side of the bales.
- Stabilize disturbed areas with vegetation.
- Check finished grade and dimensions of straw bale trap.

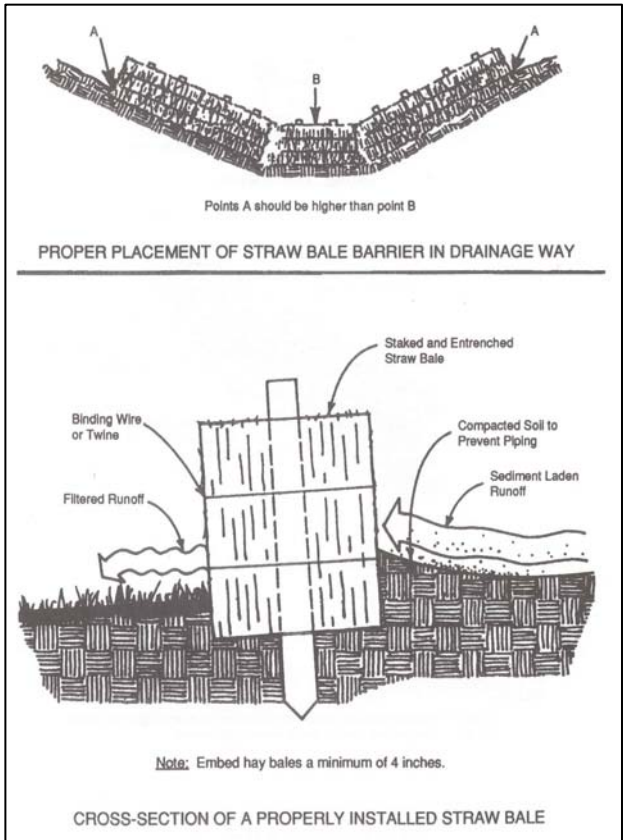


Figure SST-1 Placement of Straw Bale

Maintenance

- Inspect straw bale barriers after each storm event and remove sediment deposits promptly after it has accumulated to $\frac{1}{2}$ of the original capacity.
- Replace deteriorated and damaged bales promptly.
- After contributing area is stabilized, remove straw bales and sediment and stabilize the area using vegetation.



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Chapter 6

Stream Protection

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Temporary Stream Crossing (TSC)

Description

A pipe, low water crossing (ford), or bridge constructed over a stream on a construction site to prevent turbidity and streambed disturbance caused by construction traffic.

Installation

- Keep the number of stream crossings to a minimum and try to install the stream crossing during periods of low flow.
- To minimize environmental damage, the order of preference for crossings is:
 - (1) bridge
 - (2) culvert
 - (3) ford
- Ensure that equipment used near the stream is leak free.

Low Water (Ford) Crossing

- Select a location so the crossing is perpendicular to the stream flow.
- Excavate foundation according to plans to ensure the final surface is “at grade” with the stream bed (no waterfall).
- Ensure the entrance and exit slopes are gentle (5:1 or flatter).
- Place geotextile, riprap, and wearing surface as specified.

Culvert Crossing

- Ensure the culvert has a firm foundation perpendicular to the stream flow.

- Use pipe or pipes of the size and materials specified in the plans.
- The pipe should be long enough to extend at least 2 ft. past side slopes (3:1) of the earth fill.
- Manually compact the soil around the pipe in 4" – 6" lifts.
- Extend the fill to at least 2 ft. over the pipe.
- Grade the road so that flood flows go around the crossing and not over the pipe.
- Place ALDOT No. 1 stone on the road surface over the pipe.
- Place outlet protection riprap as specified or needed.

Bridge Crossing

- Bridges are specialized engineered structures.
- Install the bridge according to plans and specifications.
- Anchor or cable the bridge so it won't be moved by a flood.

Maintenance

- Always store construction materials away from the stream.
- Inspect the crossing after rainfall events and repair erosion or damage as necessary.
- Crossings are temporary structures and generally removed after no longer needed. After removal, restore the stream to its original conditions and establish permanent vegetation.

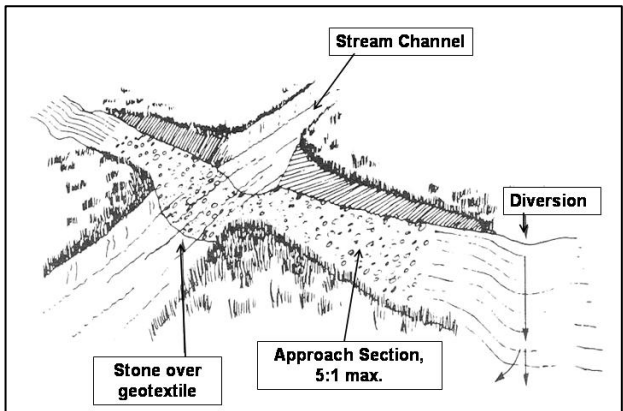


Figure TSC-1 Ford Stream Crossing

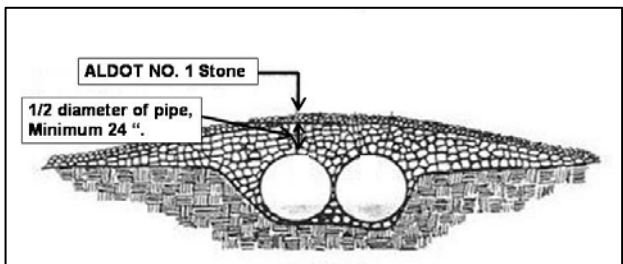


Figure TSC-2 Culvert Stream Crossing

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Chapter 7

Earthen Dam Structures

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Earth Dam Structures

Drop Structure (DS)

Sediment Basin (SBN)

Temporary Sediment Trap (TST)

Stormwater Detention Basin (SDB)

Description

An earthen barrier across a drainage way usually constructed with a pipe system through the embankment and/or an emergency spillway bypass. Earth Dam Structures are used with the following practices:

- Drop Structure
- Sediment Basin
- Temporary Sediment Trap
- Stormwater Detention Basin

Basins created by the earth dam can be used to convey runoff water without causing erosion, trap sediment, and reduce stormwater peak flows.

Installation

- Divert runoff from undisturbed areas away from the earth dam practice if allowable.
- Clear and prepare the foundation for the dam removing all objectionable material.
- Stockpile surface soil for use in top soiling and vegetation establishment.
- Excavate a keyway trench with 8 ft. bottom and 1.5:1 side slopes across the dam foundation according to the plans, at least 2 feet deep, and to an adequate foundation.

- Compact earth fill in the keyway trench with good clay material in thin lifts (6" – 9" uncompacted) back up to ground elevation.
- Install pipe system according to plans and elevations with anti-seep collars, anti-flotation block, trash rack, and outlet protection.
- Manually compact moist clayey earth fill around pipe (4"- 6" uncompacted lifts) and anti-seep collars within 2 ft. of pipe and to an elevation 2 ft. over the pipe.
- Construct earth dam in 6" – 9" uncompacted lifts (compacted to 4" - 6") to form the embankment to the planned elevation with a top width of at least 8 ft. and side slopes of 3:1 or flatter. Use most clayey material in the core of the dam with more permeable materials in the shell of the dam. Overbuild the dam at least 10% for settlement. Maintain moisture and compaction requirements according to the plans and specifications.
- Construct emergency spillway according to plans and elevation installing geotextile and riprap if specified.
- Make sure stormwater enters the far end of the pool to maximize trap efficiency.
- Spread stockpiled top soil and establish vegetation.

Maintenance

- Inspect the earth dam and basin after each storm event.
- Remove and properly dispose of sediment that has accumulated to ½ the design volume.

- Remove trash from pipe system or emergency spillway.
- Check for any erosion, settlement, seepage, or slumping and make repairs as needed.
- If the basin is temporary, properly remove the structure and stabilize the area.

Sediment Basin



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Contacts

1. *For information regarding registration for construction sites* contact the nearest Alabama Department of Environmental Management (ADEM) Field Operations Division Office.

Montgomery, Mining & Nonpoint Source Section

(334) 394-4311; Fax (334) 394-4326

Birmingham Branch

(205) 942-6168; Fax (205) 941-1603

Decatur Branch

(256) 353-1713; Fax (256) 340-9359

Mobile Branch

(251) 450-3400; Fax (251) 479-2593

Mobile Branch - Coastal Program

(251) 432-6533; Fax (251) 432-6598

ADEM webpage: www.adem.state.al.us.

2. *If your project is within the coastal zone of Alabama* contact the ADEM Mobile Branch - Coastal Program for certification requirements.

3. *For information about wetland regulations or if your project could cause fill to be placed in federal waters or could interfere with navigation* contact the U. S. Army Corps of Engineers.

Mobile District

(251) 690-3776; Fax (251) 690-2660

Nashville District (TVA service area)

(615) 369-7500; Fax (615) 369-7501

4. *For information about the proper disposal of solid waste from a construction site contact the ADEM Solid Waste Branch at (334) 271-7700.*

5. *For information on requirements for above-ground petroleum tanks and spill prevention contact ADEM Field Operations Office listed under item #1.*

6. *To report oil or chemical spills with the potential to impact groundwater or surface waters of the State, or after becoming aware of a visible oil sheen on waters of the State, immediately call the National Response Center at 1-800-424-8802 and the Alabama Emergency Management Agency at 1-800-843-0699. The caller should be prepared to report the name, address and telephone number of person reporting spill, the exact location of the spill, the company name and location, the material spilled, the estimated quantity, the source of the spill, the cause of the spill, the nearest downstream water with the potential to receive the spill, and the actions taken for containment and cleanup.*

7. *To make a complaint about pollution by sediment and other pollutants from a construction site contact an ADEM Field Operations Division Office listed under item #1.*

8. *For information about historical or culturally significant sites contact the Alabama Historical Commission (334) 242-3184.*

9. *If conducting onsite or offsite non-coal mining or borrow operations (dirt, clay, chert, sand & gravel, etc.)* Alabama Department of Industrial Relations (ADIR) permit coverage may be needed. Contact ADIR at (334) 242-8265.

10. *If your project has the potential to impact potential threatened/endangered species* contact the US Fish & Wildlife Service (USFW) at (251) 441-5181 and/or the Alabama Department of Conservation and Natural Resources (ADCNR) at (334) 242-3465.

11. *For basic information about soils* contact the local soil and water conservation district office (usually listed under county, i.e. ____ County Soil and Water Conservation District).

12. *For additional information on seedings* contact the local Natural Resources Conservation Service or Alabama Cooperative Extension System office.

13. *For additional copies of this Field Guide* contact the local soil and water conservation district office.

14. *To view the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* visit the Alabama Soil and Water Conservation Committee webpage: www.swcc.state.al.us.

15. *To purchase the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas* obtain an order form from the Alabama Soil and Water Conservation Committee webpage:
www.swcc.state.al.us.

Notes

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**AL Association of Conservation Districts
AL Department of Environmental Management
AL Department of Transportation
Associated General Contractors of AL
Home Builders Association of AL
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