Sediment Barrier Sd1

DEFINITION
Sediment Barriers are temporary structures made up of a porous material typically supported by steel or wood posts. Types of sediment barriers may include silt fence, brush piles, mulch berms, compost filter socks or other filtering material.

PURPOSE
To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barriers retain the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

CONDITIONS
Barriers should be installed where runoff can be stored behind the barrier without damaging the submerged area behind the barrier or the structure itself. Sediment barriers shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

DESIGN CRITERIA
Sediment barriers are designed to retain sediment transported by sheet flow from disturbed areas. It is important for the design professional to take into account the profile of the product for use on the site.

Sediment Barriers should also provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1 foot and that the support spacing does not exceed 4 feet.

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage area shall not exceed ¼ acre for every 100 feet of sediment barrier.

Table 6-27.1 Criteria for Sediment Barrier

Land Slope	Maximum Slope Length Above Fence
Percent	Feet
< 2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20*	15

*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of slope to the barrier should be provided.

Placement
The type of sediment barrier depends on whether the area is sensitive or nonsensitive. Sensitive areas can be defined as any area that needs additional protection; these areas include but are not limited to, state waters, wetlands, or any area the design professional designates as sensitive.

When using multiple types of sediment barriers on a site in a single run, the barriers must be overlapped 5 feet unless otherwise specified by design professional. See Figure 6-27.5

CONSTRUCTION SPECIFICATIONS

Non-sensitive Areas * Sd1-NS

Sediment barriers being used as Type NS shall have a support spacing of no greater than 6 feet on center, with each being driven into the ground a minimum of 18 inches.

A brush barrier is a good tool to use in developing pasture in an agricultural situation to prevent sediment from leaving the site until the pasture is stabilized.

If greater filtering capacity is required, a commercially available sediment barrier may be placed on the side of the brush barrier receiving the sediment-laden runoff. The lower edge of the fabric must be buried in a 6-inch deep trench immediately uphill from the barrier. The upper edge must be stapled, tied or otherwise fastened to the brush barrier. Edges of adjacent fabric pieces must overlap each other. See Figure 6-27.5.

Installation
Sediment barriers should be installed along the contour.

Temporary sediment barriers shall be installed according to the following specifications as shown on the plans or as directed by the design professional.

For installation of the barriers, See Figures 6-27.1, 6-27.2, 6-27.3 and 6-27.4, respectively. It is important to remember that not all sediment barriers need to be trenched into the ground but most taller sediment barriers do.

Post installation shall start at the center of a low point (if applicable) with the remaining posts spaced no greater than 6 feet apart for Type NS sediment barriers and no greater than 4 feet apart for Type C sediment barriers. For post size requirements, see Table 6-27.2. Fasteners for wood posts are listed in Table 6-27.3.

Static Slicing Method
The static slicing machine pulls a narrow blade through the ground to create a slit 12" deep, and simultaneously inserts the silt fence fabric into this slit behind the blade. The blade soil. This vertical compaction reduces the air spaces between soil particles, which minimizes infiltration. Without this compaction infiltration can saturate the soil, and water may find a pathway under the fence. When a silt fence is holding back several tons of accumulated water and sediment, it needs to be supported by posts that are driven 18 inches into the soil. Driving in the posts and attaching the fabric to them completes the installation.

Trenching Method
Trenching machines have been used for over twenty-five years to dig a trench for burying part of the filter fabric underground. Usually the trench is about 2-"6" wide with a 6" excavation. Post setting and fabric installation often precede compaction, which make effective compaction more difficult to achieve. EPA supported an independent technology evaluation (ASCE 2001), which compared three progressively better variations of the trenching method with static slicing method. The static slicing method performed better than two lower performance levels of the trenching method, and was as good as or better than the trenching method's highest performance level. The best trenching method typically required nearly triple the time and effort to achieve results comparable to the static slicing method.

Along all state waters and other sensitive areas, two rows of Type S sediment barriers shall be used. The two rows of Type S should be placed a minimum of 36 inches apart.

MAINTENANCE
Sediment shall be removed once it has accumulated to one-half the original height of the barrier.

Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed height.

Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

Sensitive Areas* Sd1-S

Sediment barriers being used as Type S shall have a support spacing of no greater than 4 feet on center, with each being driven into the ground a minimum of 18 inches.

*As of January 1 2016, in the existing Georgia Department of Transportation Qualified Products list #36 (QPL- 36), Type A, B, or C will fall under sensitive and non-sensitive applications. **Type C will be classified as sensitive and Type A and B as non-sensitive.** Refer to Appendix A-2 and the Equivalent BMP List.

PRACTICE CLASSIFICATIONS

For silt fence Type A, B, or C, refer to Table 6-27.4.

Type A Silt Fence
This 36-inch wide filter fabric shall be used on developments where the life of the project is great than or equal to six months. **Type A is classified as non-sensitive application.**

Type B Silt Fence
Though only 22-inches wide, this filter fabric allows the same flow rate as Type A silt fence. Type B silt fence shall be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than six months. **Type B is classified as non-sensitive application.**

Type C Silt Fence
Type C fence is 36-inches wide with wire reinforcement or equivalent. The wire reinforcement is necessary because this fabric allows almost three times the flow rate as Type A silt fence. Type C silt fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet. **Type C is classified as sensitive application.**

Filter Media Sock Specifications
Compost filter media used for sediment barrier filter material shall be weed free and derived from a well-decomposed source of organic matter. **Filter Media Sock is classified as a Type B, non-sensitive application.** The compost shall be produced using an aerobic composting process meeting CFR 503 regulations including time and temperature data. The compost shall be free of any refuse, contaminants or other materials toxic to plant growth. Non-composted products will not be accepted without applicable water quality test results. Test methods for the items below should follow US Compositing Council Test Methods for the Examination of Composting and Compost guidelines for laboratory procedures:

A. pH – 5.0-8.0 in accordance with TMECC 04.11-A, "Electrometric pH Determinations for Compost"

B. Particle size – 99% passing a 2 inch (50mm) sieve and a maximum of 40% passing a 3/8 inche (9.5mm) sieve, in accordance with TMECC 02.02-B, "Sample Sieving for Aggregate Size Classification". (Note: In the field, product commonly is between ½ in./12.5mm and 2 in./50 mm in particle size.)

C. Moisture content of less than 60% in accordance with standardized test methods for moisture determination.

D. Material shall be relatively free (<1% by dry weight) of inert or foreign manmade materials.

E. Sock containment system for compost filter media shall be a photodegradable or biodegradable knitted mesh material and should have 1/8 in. to 3/8 in., openings.

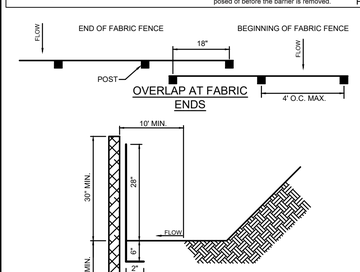
Brush Barrier Sd1-BB

(Only during timber clearing operations)

Brush obtained from clearing and grubbing operations may be piled in a row along the perimeter of disturbance at the time of clearing and grubbing. Brush barriers should not be used in developed areas or locations where aesthetics are a concern.

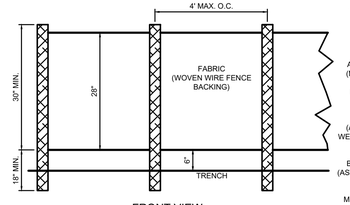
Brush should be wind-rowed on the contour as nearly as possible and may require compaction. Construction equipment may be utilized to satisfy this requirement.

The minimum base width of the brush barrier shall be 5 feet and should be no wider 10 feet. The height of the brush barrier should be between 3 and 5 feet tall.



OVERLAP AT FABRIC ENDS

SIDE VIEW



FRONT VIEW

TYPE FENCE	S
TENSILE STRENGTH (lbs. MIN.) (ASTM D-4632)	WARP-260 FILL-180
ELONGATION (% MAX.) (ASTM D-4632)	40
AOS (APPARENT OPENING SIZE) (MAX. SIEVE SIZE) (ASTM D 4751)	#30
FLOW RATE (GAL./MIN./SQ.FT) (GDT-87)	70
ULTRAVIOLET STABILITY (ASTM D-4632 AFTER 300 HOURS WEATHERING IN ACCORDANCE WITH ASTM D-4355)	80
BURSTING STRENGTH (PSI MIN.) (ASTM D-3786 DIAPHRAGM BURSTING STRENGTH TESTER)	175
MINIMUM FABRIC WIDTH (INCHES)	36

NOTES:
1. USE ONLY 36" FABRIC ON GEORGIA D.O.T. QUALIFIED PRODUCTS LIST #36
2. USE STEEL POSTS ONLY, 1.3 lbs/FT MIN., U, T, OR C SHAPED POST SECTION, 5' LENGTH MINIMUM.
3. ADD REBAR CAPS TO ALL POSTS.
4. ALONG STREAMS AND OTHER SENSITIVE AREAS, TWO ROWS OF TYPE C SILT FENCE OR ONE ROW OF TYPE S SILT FENCE BACKED WITH HAYBALES SHALL BE USED.
5. ALL SILT FENCE SHALL MEET THE MINIMUM STANDARD SET FORTH IN SECTION 171-TEMPORARY SILT FENCE OF THE GEORGIA D.O.T., STANDARD SPECIFICATIONS, CURRENT EDITION.
6. ALL SILT FENCE SHALL BE TYPE S, 36" WITH WOVEN WIRE REINFORCEMENT.
7. ATTACH FABRIC TO POSTS USING WIRE TIES. ALSO, ATTACH FABRIC TO WIRE BACKING MIDWAY BETWEEN POSTS AT THE TOP AND BOTTOM.

MAINTENANCE REQUIREMENTS:
SEDIMENT SHALL BE REMOVED ONCE IT HAS ACCUMULATED TO ONE-THIRD THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS). TEMPORARY SEDIMENT BARRIERS SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED. ALL SEDIMENT ACCUMULATED AT THE BARRIER SHALL BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE BARRIER IS REMOVED.

SILT FENCE - TYPE S
N.T.S.

Disturbed Area Stabilization (With Mulching Only) Ds1

DEFINITION
Applying plant residues or other suitable materials, produced on the site if possible, to the soil surface.

PURPOSE
•To reduce runoff and erosion

•To conserve moisture

•To prevent surface compaction or crusting

•To control undesirable vegetation

•To modify soil temperature

•To increase biological activity in the soil

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Mulch can be used as a singular erosion control device for up to six months, but it shall be applied at the appropriate depth, depending on the material used, anchored and have a continuous 90% cover or greater of the soil surface.

Maintenance shall be required to maintain appropriate depth and 90% cover. Temporary vegetation may be employed instead of mulch if the area will remain undisturbed for less than six months.

If any area will remain undisturbed for greater than six months, permanent vegetative techniques shall be employed. Refer to **Ds2 -Disturbed Area Stabilization (With Temporary Seeding), Ds3 - Disturbed Area Stabilization (With Permanent Seeding), and Ds4 - Disturbed Area Stabilization (With Sodding)**.

SPECIFICATIONS
Mulching Without Seeding
This standard applies to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover, but can be stabilized with a mulch cover.

Site Preparation

1. Grade to permit the use of equipment for applying and anchoring mulch.
2. Install needed erosion control measures as required such as dikes, diversions, berms, terraces and sediment barriers.
3. Loosen compact soil to a minimum depth of 3 inches.

Mulching Materials
Select one of the following materials and apply at the depth indicated:

1. Dry straw or hay shall be applied at a depth of 2 to 4 inches providing complete soil coverage. One advantage of this material is easy application.
2. Wood waste (chips, sawdust or bark) shall be applied at a depth of 2 to 3 inches. Organic material from the clearing stage of development should remain on site, be chipped, and applied as mulch. This method of mulching can greatly reduce erosion control costs.
3. Polyethylene film shall be secured over banks or stockpiled soil material for temporary protection. This material can be salvaged and re-used.

Applying Mulch
When mulch is used without seeding, mulch shall be applied to provide full coverage of the exposed area.

1. Dry straw or hay mulch and wood chips shall be applied uniformly by hand or by mechanical equipment.
2. If the area will eventually be covered with perennial vegetation, 20-30 pounds of nitrogen per acre in addition to the normal amount shall be applied to offset the uptake of nitrogen caused by the decomposition of the organic mulches.
3. Apply polyethylene film on exposed areas.

Anchoring Mulch
1. Straw or hay mulch can be pressed into the soil with a disk harrow with the disk set straight or with a special "packer disk." Disks may be smooth or serrated and should be 20 inches or more in diameter and 8 to 12 inches apart. The edges of the disk should be dull enough not to cut the mulch but to press it into the soil leaving much of it in an erect position. Straw or hay mulch shall be anchored immediately after application.

   Straw or hay mulch spread with special blower-type equipment may be anchored. Tackifers, binders and hydraulic mulch with tackifier specifically designed for tacking straw can be substituted for emulsified asphalt. Please refer to specification **Tac-Tackifers.** Plastic mesh or netting with mesh no larger than one inch by one inch shall be installed according to manufacturer's specifications.
2. Netting of the appropriate size shall be used to anchor wood waste. Openings of the netting shall not be larger than the average size of the wood waste chips.
3. Polyethylene film shall be anchor trenched at the top as well as incrementally as necessary.

FOR TEMPORARY PROTECTION OF CRITICAL AREAS WITHOUT SEEDING. THIS STANDARD APPLIES TO GRADES OR CLEARED AREAS WHICH MAY BE SUBJECTED TO EROSION FOR 6 MONTHS OR LESS, WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT WHICH CAN BE STABILIZED WITH A MULCH COVER.

MATERIALS	RATE	APPLICATION
DRY STRAW OR HAY	2"-4" DEEP	APPLY UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT. ANCHOR HAY DISK HARROW OR PACKER DISK OR WITH EMULSIFIED ASPHALT (GRADE AE-S OR SS-1)AT A RATE OF 100 GAL. PER 100 GAL. OF WATER FOR EACH TON OF MULCH
WOOD WASTE, CHIPS, SAWDUST OR BARK	2" TO 3" THICK	ANCHOR WITH NETTING OF THE APPROPRIATE SIZE. OPENINGS IN THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS
EROSION CONTROL MATTING OR NETTING	APPLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS	APPLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
CUTBACK ASPHALT (SLOW CURING)	1200 GALLONS PER ACRE, OR ⅓ GALLON PER SQUARE YARD	APPLY UNIFORMLY
POLYETHYLENE FILM	SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL	ANCHOR TRENCH AT THE TOP OF SLOPE AS WELL AS INCREMENTALLY AS NECESSARY

MAINTENANCE REQUIREMENTS:
INSPECT ALL MULCHED AREAS ON A DAILY BASIS AND AFTER EACH RAINFALL EVENT, REGRADE ERODED AREAS AND REMULCH AREAS IN WHICH THE COVER IS NO LONGER GREATER THAN 90% CONTINUOUS.

Ds1 TEMPORARY MULCHING

REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR FURTHER DETAILS AND SPECIFICATIONS.

PLANTS, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER OR COMPANION CROPS 1/

SPECIES	BROADCAST RATES 2/ - PLS 3/ PER ACRE		RESOURCE AREA 4/	PLANTING DATES J F M A M J J A S O N D	REMARKS
BARLEY (Hordeum vulgare)			M-L P C		14,000 SEED PER POUND WINTERHARDY. USE ON PRODUCTIVE SOILS.
ALONE	144 LBS.	3.3 LBS.			
IN MIXTURES	24 LBS.	0.6 LBS.			
LESPEDEZA, ANNUAL (Lespedeza striata)			M-L P C		200,000 SEED PER POUND. MAY VOLUNTEER FOR SEVERAL YEARS. USE INOCULANT EL
ALONE	40 LBS.	0.9 LBS.			
IN MIXTURES	10 LBS.	0.2 LBS.			
LOVEGRASS, WEEPING (Eragrostis curvula)			M-L P C		1,500,000 SEED PER POUND. MAY LAST FOR SEVERAL YEARS. MIX WITH SERICEA LESPEDEZA
ALONE	4 LBS.	0.1 LBS.			
IN MIXTURES	2 LBS.	0.05 LBS.			
MILLET, BROWNTOP (Panicum fasciculatum)			M-L P C		137,000 SEED PER POUND. QUICK, DENSE COVER. WILL PROVIDE TOO MUCH COMPETITION IN MIXTURES IF SEEDED AT HIGH RATES.
ALONE	40 LBS.	0.9 LBS.			
IN MIXTURES	10 LBS.	0.2 LBS.			
MILLET, PEARL (Pennesetum glaucum)			M-L P C		88,000 SEED PER POUND. QUICK, DENSE COVER. MAY REACH 5 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.
ALONE	50 LBS.	1.1 LBS.			
OATS (Avena sativa)			M-L P C		13,000 SEED PER POUND. USE ON PRODUCTIVE SOILS. NOT AS WINTERHARDY AS RYE OR BARLEY.
ALONE	128 LBS.	2.9 LBS.			
IN MIXTURES	32 LBS.	0.7 LBS.			
RYE (Secale cereale)			M-L P C		18,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT AND WINTERHARDY.
ALONE	168 LBS.	3.9 LBS.			
IN MIXTURES	28 LBS.	0.6 LBS.			
RYEGRASS, ANNUAL (Lolium temulentum)			M-L P C		227,000 SEED PER POUND. DENSE COVER. VERY COMPETITIVE AND IS NOT TO BE USED IN MIXTURES.
ALONE	40 LBS.	0.9 LBS.			
SUDANGRASS (Sorghum sudanese)			M-L P C		55,000 SEED PER POUND. GOOD ON DROUGHTY SITES. NOT RECOMMENDED FOR MIXTURES.
ALONE	60 LBS.	1.4 LBS.			
TRITICALE (X-Triticosecale)			C		USE ON LOWER PART OF SOUTHERN COASTAL PLAIN AND IN ATLANTIC COASTAL FLATWOODS ONLY.
ALONE	144 LBS.	3.3 LBS.			
IN MIXTURES	24 LBS.	0.6 LBS.			
WHEAT (Triticum aestivum)			M-L P C		15,000 SEED PER POUND. WINTERHARDY.
ALONE	180 LBS.	4.1 LBS.			
IN MIXTURES	30 LBS.	0.7 LBS.			

1/ TEMPORARY COVER CROPS ARE VERY COMPETITIVE AND WILL CROWN OUT PERENNIALS IF SEEDED TOO HEAVILY.
2/ REDUCE SEEDING RATES BY 50% WHEN DRILLED.
3/ PLS IS AN ABBREVIATION FOR PURE LIVE SEED.
4/ M-L REPRESENTS THE MOUNTAIN; BLUE RIDGE; AND RIDGES AND VALLEYS MLRA'S
P REPRESENTS THE SOUTHERN PIEDMONT MLRA
C REPRESENTS THE SOUTHERN COASTAL PLAIN; SAND HILLS; BLACK LANDS; AND ATLANTIC COAST FLATWOODS MLRAs

NOTES:
1. APPLY TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE.
2. IF DISTURBED AREAS ARE TO BE LEFT UNDISTURBED FOR LESS THAN 6 MONTHS USE TEMPORARY GRASSING, OTHERWISE USE PERMANENT
3. GRASSING.

   SOIL TO RECEIVE GRASSING IS TO BE SCARIFIED TO PROVIDE A PLACE FOR THE SEED TO
4. LODGE AND GERMINATE.

   APPLY AGRICULTURAL LIME AT
5. A RATE OF ONE TON PER ACRE.

   FOR LOW FERTILITY SOILS, APPLY 500-700 LBS. OF 10-10-10 FERTILIZER PER ACRE. APPLY BEFORE LAND PREPARATION AND INCORPORATE WITH A
6. DISK, RIPPER OR CHISEL.

   APPLY SEED BY HAND, CYCLONE SEEDER, DRILL CULTIPACKER-SEEDER OR HYDRAULIC SEEDER. RAKE SOIL LIGHTLY TO COVER SEED WHEN
7. APPLIED BY HAND.

   PROVIDE WATER AS REQUIRED TO GERMINATE AND MAINTAIN A HEALTHY, THICK COVER OF GRASS.

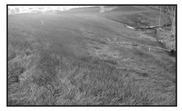
MAINTENANCE REQUIREMENTS:

INSPECT ALL AREAS WHERE TEMPORARY GRASSING HAS BEEN APPLIED. WHERE COVER IS SPARSE, SCARIFY THE AREA, TEST SOIL FERTILITY, APPLY FERTILIZER AS NECESSARY AND RESEED. WHERE EROSION HAS OCCURRED, REGRADE PRIOR TO ABOVE STEPS.

Ds2 TEMPORARY GRASSING

REFER TO THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR FURTHER DETAILS AND SPECIFICATIONS.

Disturbed Area Stabilization (With Temporary Seeding) Ds2



DEFINITION
The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

PURPOSE
•To reduce runoff and sediment damage of down stream resources

•To protect the soil surface from erosion

• To improve wildlife habitat

• To improve aesthetics

•To improve tilth, infiltration and aeration as well as organic matter for permanent plantings

REQUIREMENT FOR REGULATORY COMPLIANCE
Mulch or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at the appropriate depth, anchored, and have a continuous 90% cover or greater of the soil surface. Refer to specification **Ds1-Disturbed Area Stabilization (With Temporary Seeding).**

CONDITIONS
Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. Most types of temporary vegetation are ideal to use as companion crops until the permanent vegetation is established. Note: Some species of temporary vegetation are not appropriate for companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRCS or the local SWCD for more information.

SPECIFICATIONS
Grading and Shaping
Excessive water run-off shall be reduced by properly designed and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shaping or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

Seedbed Preparation
When a hydraulic seeder is used, seedbed preparation is not required. When using conventional or hand-seeding, seedbed preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been sealed by rainfall or consists of smooth cut slopes, the soil shall be pitted, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

Lime and Fertilizer
Agricultural lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate determined by soil test for pH. Quick acting lime should be incorporated to modify pH during the germination period. Bio stimulants should also be considered when there is less than 3% organic matter in the soil. Graded areas require lime application. Soils must be tested to determine required amounts of fertilizer and amendments. Fertilizer should be applied before land preparation and incorporated with a disk, ripper, or chisel. On slopes too steep for, or inaccessible to equipment, fertilizer shall be hydraulically applied, preferably in the first pass with seed and some hydraulic mulch, then topped with the remaining required application rate.

Seeding
Select a grass or grass-legume mixture suitable to the area and season of the year. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker-seeder, or hydraulic seeder (slurry including seed and fertilizer). Drill or cultipacker seeders should normally place seed one-quarter to one-half inch deep. Appropriate depth of planting is ten times the seed diameter. Soil should be "raked" lightly to cover seed with soil if seeded by hand. See Table 6-4.1

Mulching
Temporary vegetation can, in most cases, be established without the use of mulch, provided there is little to no erosion potential. However, the use of mulch can often accelerate and enhance germination and vegetation establishment. Mulch without seeding should be considered for short term protection. Refer to **Ds1 - Disturbed Area Stabilization (With Mulching Only)**.

Irrigation
During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequent applications should be made when needed.

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT		(label)	A crushed stone pad located at the construction exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, sub- division roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE		(label)	A flexible conduit of heavy-duty fabric or other ma- terial designed to safely conduct surface runoff down a slope. Temporary, and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE		(label)	A paved chute, sectional conduit, pipe or similar material designed to designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE		(label)	Permanent structures installed to protect natural or artificial channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of waters into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or waterways.
Re	RETAINING WALL		(label)	A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETROFITTING		(label)	A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER		type (indicate type)	A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, gravel or a sediment fence.
Sd2	SEDIMENT TRAP, TEMPORARY			An impounding area created by excavating around a storm drain inlet. The excavated area will be filled and stabilized on completion of the construction activities.
Sd3	SEDIMENT BASIN, TEMPORARY			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	SEDIMENT TRAP, TEMPORARY			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER		(label)	A buoyant device that releases/ drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.

GEORGIA UNIFORM CODING SYSTEM FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Spb	STEP BERM		(label)	A linear control device constructed as a diversion perpendicular to the direction of the runoff to enhance dissipation and infiltration of runoff, while creating multiple sedimentation chambers with the employment of intermediate dikes.
Sr	TEMPORARY STREAM CROSSING		(label)	A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMDRAIN INLET/OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING		(show stripping & storage areas)	The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION		(denote tree centers)	To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes, or similar structures.

VEGETATIVE MEASURES

Bf	BUFFER ZONE		Bf	An undisturbed natural "green belt" separating the land-disturbing site from surrounding property and bordering streams. It serves to reduce water velocity and remove sediment. It is also at times a noise or vision pollution barrier.
Cs	COASTAL DUNE STABILIZATION		Cs	Planting vegetation on dunes that are denuded, artificially constructed, or re-nourished. retarding cover.
Ds1	DISTURBED AREA STABILIZATION (w/MULCHING ONLY)		Ds1	Establishing temporary protection for disturbed areas where seedings may not have a suitable growing season to produce an erosion.
Ds2	DISTURBED AREA STABILIZATION (w/TEMPORARY SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing seedings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (w/PERMANENT SEEDING)		Ds3	Establishing permanent vegetative cover such as trees, shrubs, vines, sod, grasses or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)		Ds4	A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fl-Co	FLOCCULANTS AND COAGULANTS		Fl-Co	Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (WITH PERMANENT VEGETATION)		Sb	The use of readily available native plant materials to maintain and rehabilitate streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION		Ss	A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS		Tac	Substance used to anchor straw or hay mulch by causing the organic material to bind together.

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ATLANTA, GA 30328

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THIS DRAWING IS NOT VALID FOR CONSTRUCTION PURPOSES UNLESS IT BEARS THE SEAL AND SIGNATURE OF A DULY REGISTERED PROFESSIONAL

PRELIMINARY DESIGN

NCWSA NEWTON COUNTY WATER & SEWERAGE AUTHORITY

ADMINISTRATION BUILDING EXPANSION PROJECT

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: P.DAVIS
DRAWN: P.DAVIS
CHECKED: K.DEVENDORF
CHECKED:
APPROVED:

FILENAME
203000-C-214.dwg
BC PROJECT NUMBER
203000
CLIENT PROJECT NUMBER

CIVIL

SEDIMENT AND EROSION CONTROL DETAILS 1

DRAWING NUMBER
C-214

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