751. USE OF GRASSES FOR STREAMBANK STABILIZATION

1. SCOPE

Where a good seedbed can be prepared and on smaller streams where flow velocities are less than 5 feet per second, it may be feasible to stabilize eroding streambanks by seeding grasses above or in combination with dormant woody plantings. This work shall consist of furnishing and installing the necessary materials as specified in Section 7 of this specification.

2. SEEDBED PREPARATION

The seedbed shall be roughened with a rake or similar tool and fertilized with 1000 lbs. per acre of 12-12-12- (23 lbs./1000 square feet) or bulk equivalent.

For projects where seeding will be done as construction progresses during seeding periods, apply any required fertilizer and seed within 24 hours after final shaping of the streambanks is completed.

3. SEED

Seed will be clean and relatively free of weed seed and other contaminants. Wet, moldy or otherwise damaged seed will not be acceptable. Seed, except warm season grasses, with less than 80% pure live seed will not be acceptable.

$$\% \text{ pure live seed (PLS)} = \frac{\% \text{ germination} \times \% \text{ purity}}{100}$$

Percent hard seed will be added to percent germination to determine total percent germination for warm season grasses and legumes.

All legumes not preinoculated will be inoculated with a pure culture of nitrogen-fixing bacteria, specifically formulated for the species, within 12 hours of seeding.

4. PLANT SELECTION AND ESTABLISHMENT

The grass or grass mixture to be seeded will be selected from Table 1 of this construction specification based on the soil/site conditions present at the planting site and the objectives of the project. A companion crop of spring oats, rye or wheat will be included in all permanent seeding mixtures per Table 1 seeding mixture rates.

A temporary seeding or mulching will be completed on those sites where a permanent seeding will not be established within 30 days following installation of a project. Temporary seeding will consist of a species or mixture of species as listed in Table 1 of this construction specification. Temporary mulching will be completed in conformance with guidelines provided in PRACTICE STANDARD 875-MULCHING and any applicable construction or material specifications and standard drawings.

Seeding of the selected grass or grass mixture will be completed using one of the following methods:

a. Conventional Method - Prepare a seedbed as instructed in the section "Seedbed Preparation" and uniformly apply the seed or seeding mixture at the required rate(s). Cover the seed with a rake or similar tool to a depth of 1/4 to 1/2 inch.

b. Dormant Seeding - Prepare a seedbed as instructed in the section "Seedbed Preparation". Apply and anchor mulch in conformance with PRACTICE STANDARD 875 - MULCHING. Broadcast seed or hydroseed over the top of mulch during dormant seeding periods.

c. Hydroseeding - Seed, fertilizer and lime may be applied together using no more than 125 pounds of solids per 100 gallons of water. If legume seed is hydroseeded, triple the recommended rate of inoculant. Hydrated lime will not be used in a slurry mix.

5. SEEDING PERIODS

All seedings will be completed within the seeding period shown on the plans for the appropriate seeding mixture and location in the state in which the project site is located.

6. MAINTENANCE

Sites will be protected from damage by vehicular and human traffic for a length of time necessary to get the vegetative cover well established but no less than one full growing season.

To improve the establishment of vegetative grass cover, topdress late summer seeding the spring following seeding and spring seeding in late August or early September with 2.5 pounds of actual nitrogen per 1000 square feet of surface area.

Weeds will be controlled by mowing where bank slopes make this feasible. Otherwise, weeds will be controlled by other mechanical means or through the use of environmentally safe and acceptable herbicides which are labeled for this purpose and site situation.

Damaged areas or those sites where additional cover is needed following the establishment period, will be reseeded during the next recommended seeding period as shown in Table 1.

TABLE 1

VEGETATIVE STREAMBANK STABILIZATION

Seeding Mixture	Rate (lb.) PLS/Acre	Rate (lb.) PLS/1000 Sq. Ft.	Suitable pH	Site Suitability			Plant Suitability Zone	Seeding Period		
				Droughty	Well Drained	Wet		Spring 1/	Summer	Dormant
1. Smooth Bromegrass	24	0.55		X	X		I	Early spring-June 1	Aug 1-Sept 1	Nov 1-Mar 15
and							II	Early spring-May 15	Aug 1-Sept 10	Nov 15-Mar 1
Alfalfa	8	0.2	6.0-7.5				III	Early spring-May 15	Aug 1-Sept 20	Nov 15-Mar 1
2. Tall Fescue or	12	0.3			X	X	I	Early spring-June 1	Aug 1-Sept. 1	Nov 1-Mar 15
Redtop	2.5	0.06					II	Early spring-May 15	Aug 1-Sept 10	Nov 15-Mar 1
							III	Early spring-May 15	Aug 1-Sept 15	Nov 15-Mar 1
3. Redtop	2.5	0.06		X	X	X	I	Early spring-June 1	Aug 1-Sept 1	Nov 1-Mar 15
and							II	Early spring-May 15	Aug 1-Sept 10	Nov 15-Mar 1
Ladino Clover	2.5	0.06					III	Early spring-May 15	Aug 1-Sept 20	Nov 15-Mar 1
4. Creeping Red	15	0.34		X	X	X	I	Early spring-June 1	Aug 1-Sept 1	Nov 1-Mar 15
Fescue							II	Early spring-May 15	Aug 1-Sept 10	Nov 15-Mar 1
							III	Early spring-May 15	Aug 1-Sept 20	Nov 15-Mar 1
5. Switchgrass	8	0.2	5.5-7.0	X	X	X	I	Early spring-June 10		Nov 1-Mar 15
							II, III	Early spring-June 1		Nov 1-Mar 1
6. Temporary Seedings										
a. Cereal Rye or	90	2.5		X	X	X	I	Early spring-Sept 30		
Wheat							II	Early spring-Oct 5		
							III	Early spring-Oct 10		
b. Oats	90	2.5					All	Early spring-July 1		
c. Perennial Ryegrass	24	0.55	5.5-7.5	X	X	X	I	Early spring-Sept 30		
							II	Early spring-Oct 5		
							III	Early spring-Oct 10		
7. Companion Crops	1 bu.									
a. Spring Oats				X	X	X	I	Early spring-Sept 1		
							II	Early spring-Sept 8		
							III	Early spring-Sept 15		
b. Cereal Rye or	161						I	Early spring-Sept 30		
Wheat							II	Early spring-Oct 5		
							III	Early spring-Oct 10		

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