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NOTES:

1. Excavate to finished grade of required section and slope.

2. Dig trenches on upstream end and downstream toe.

3. Hand rake grade to prepare seedbed. If seedbed is difficult to rake, topsoil may be added. DO NOT use herbicide contaminated topsoil. Remove all rocks, clods and clumps larger than 1/2 inch diameter. Spread fertilizer and lime and rake into seedbed. Fertilize according to soil tests or at a minimum rate of 2 lbs. of 12–12–12 fertilizer (or its equivalent) per 100 sq. ft.

4. Place geotextile on prepared grade. Extend geotextile into trenches for anchorage at upstream and downstream ends as shown on sheet 1. Staple geotextile at one to two foot intervals across the entrance apron and along overlap of geotextile pieces.

5. Seed onto geotextile at the following rates: (the geotextile may be wetted prior to seeding to reduce seed movement during ECB placement and stapling.

SEED	RATE (lbs./100 sq. ft.)
Perennial Rye	0.25
Tall Fescue	0.5
Smooth Brome	0.5
Creeping Red Fescue	0.5

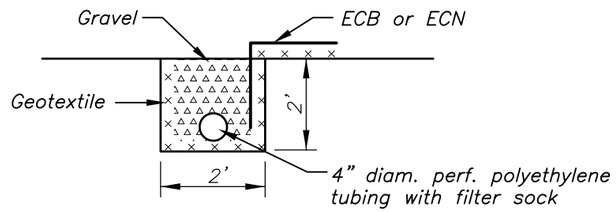
6. Place Erosion Control Blanket (ECB) over seed. Straw mulch and Erosion Control Netting (ECN) may be used in lieu of ECB. Soil Erosion Matting (SEM) may also be used. The ECB, ECN or SEM shall extend into both trenches as shown on sheet 1. As approved, a combination of SEM may be used on bottom of chute with ECB or ECN on sides. All joints shall consist of a 12" lap securely pinned.

7. Staple netting and geotextile at 2 ft. intervals starting at the centerline of the channel and working out toward each side. Additional staples shall be placed where the geotextile does not contact the soil.

8. The top edge of fabric, ECB or ECN on slopes shall be securely pinned or keyed 6" into earth.

9. Fill upstream trench with earth. Fill downstream trench with riprap. Geotextile shall have consistent soil contact. Stretch the geotextile as little as possible. On wet sites the upstream trench may be filled with clean gravel or clean crushed stone. 4 inch diameter perforated polyethylene tubing with filter sock shall be installed as shown by sketch. A solid pipe outlet shall be installed outside the chute area. An animal guard shall be installed on outlet section.

10. For additional details see Missouri Construction Specification 410–A, Grade Stabiliztion Structure.



UPSTREAM TRENCH ON WET SITES

MATERIAL REQUIREMENTS

Geotextile
The geotextile shall meet the requirements of Missouri Construction Specification 753, Geotextile.

Erosion Control Netting (ECN) and Straw Mulch
The netting shall be extruded oriented polypropylene netting. The mesh openings shall be 1/2 inch to 1.0 inch in each direction. The weight shall be approximately 3 lbs. per 1,000 sq. ft. Straw mulch shall be spread 1 inch to 2 inches thick before the netting is placed.

Soil Erosion Matting
A flexible non–woven, geotextile fabric made from randomly oriented polymer monofilaments thermally welded together into a three–dimensional matrix or porous web and specifically designed for erosion control and earth reinforcement applications. Acceptable materials include, but are not limited to, "ENKAMAT" as manufactured by Akzo Industrial Systems Company, "TENSAR MAT" as manufactured by the Tensar Corporation, "EROLIAN 2010" as distributed by Hydro–Turf & Associates, and "GREENSTREAK PEC–MAT" as manufactured by Greenstreak Plastic Products Company, Inc.

Erosion Control Blanket
A flexible non–structural, interwoven layer of biodegradable material (straw, excelsior, etc.) or photo degradable material (such as nylon fibers) sewn to or between photo degradable netting, designed to reduce rainfall impact, reduce soil loss, increase moisture retention and enhance grass plant growth. Acceptable materials include, but are not limited to, "EROSION CONTROL BLANKETS" as manufactured by North American Green, "CURLEX BLANKETS" as manufactured by American Excelsior Company, and "ERO–MAT" as distributed by Contech Construction Products, Inc. The specific style or type must be selected to the site conditions.

RIPRAP GRADATION
(D_{50} = 6 inches)

SIZE (Inches)	SIZE (Pounds)	% SMALLER By weight
12	125	100
9	50	60–100
6	16	30–50
1.5	0.2	5–25

Adapted from Michigan Standard Drawing SO–A–0740 and Indiana Standard Drawing 56

Revised 4/01

Date
Designed
Drawn
Checked
Approved

GEOTEXTILE REINFORCED VEGETATED CHUTE WITHOUT TAILWATER

United States Department of Agriculture
Natural Resources Conservation Service
NRCS

DRAFT
NOT FOR CONSTRUCTION

File Name

Drawing Name
29–N–318

Sheet of

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