

2. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT

ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLANS WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT STATE SOIL EROSION AND SEDIMENT CONTROL STANDARDS.

4. N.J.S.A. 4: 24—39 ET. SEQ. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE DISTRICT DETERMINES THAT A PROJECT OR PORTION THEREOF IS IN FULL COMPLIANCE WITH THE CERTIFIED PLAN AND STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY AND A REPORT OF COMPLIANCE HAS BEEN ISSUED. UPON WRITTEN REQUEST FROM THE APPLICANT, THE DISTRICT MAY ISSUE A REPORT OF COMPLIANCE WITH CONDITIONS ON A LOT-BY-LOT OR SECTION-BY-SECTION BASIS, PROVIDED THAT THE PROJECT OR PORTION THEREOF IS IN SATISFACTORY COMPLIANCE WITH THE SEQUENCE OF DEVELOPMENT AND TEMPORARY MEASURES FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN IMPLEMENTED, INCLUDING PROVISIONS FOR STABILIZATION AND SITE WORK.

ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED FOR MORE THAN SIXTY (60) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF 2 TO 2½ TONS PER ACRE, ACCORDING TO STATE STANDARD FOR STABILIZATION WITH MULCH ONLY

IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E. STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AND A MULCH ANCHOR, IN ACCORDANCE WITH STATE STANDARDS.

7. A SUB-BASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS TO STABILIZE STREETS, ROADS, DRIVEWAYS, AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT, THE SUB-BASE SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS OF PRELIMINARY GRADING.

THE STANDARD FOR STABILIZED CONSTRUCTION ACCESS REQUIRES THE INSTALLATION OF A PAD OF CLEAN CRUSHED STONE AT POINTS WHERE TRAFFIC WILL BE ACCESSING THE CONSTRUCTION AFTER INTERIOR ROADWAYS ARE PAVED, INDIVIDUAL LOTS REQUIRE A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF ONE INCH TO TWO INCH (1" - 2") STONE FOR A MINIMUM LENGTH OF TEN FEET (10') EQUAL TO THE LOT ENTRANCE WIDTH. ALL OTHER ACCESS POINTS SHALL BE BLOCKED OFF

9. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO THE PUBLIC RIGHT-OF-WAYS WILL BE REMOVED IMMEDIATELY.

10. PERMANENT VEGETATION IS TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING.

11. AT THE TIME THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT IT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE

12. IN ACCORDANCE WITH THE STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS. ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDES SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS/ACRE, (OR 450 LBS/SQ FT OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12" OF SETTLED SOIL WITH A PH OF 5 OR MORE, OR 24" WHERE TREES OR SHRUBS ARE TO BE PLANTED.

13. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.

14. UNFILTERED DEWATERING IS NOT PERMITTED. NECESSARY PRECAUTIONS MUST BE TAKEN DURING ALL DEWATERING OPERATIONS TO MINIMIZE SEDIMENT TRANSFER. ANY DEWATERING METHODS USED MUST BE IN ACCORDANCE WITH THE STANDARD FOR DEWATERING.

15. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE WILL BE SPRINKLED UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED OR MULCH SHALL BE APPLIED AS REQUIRED BY THE STANDARD FOR DUST CONTROL.

16. STOCKPILE AND STAGING LOCATIONS ESTABLISHED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF DISTURBANCE ACCORDING TO THE CERTIFIED PLAN. STAGING AND STOCKPILES NOT LOCATED WITHIN THE LIMIT OF DISTURBANCE WILL REQUIRE CERTIFICATION OF A REVISED SOIL EROSION AND SEDIMENT CONTROL PLAN. CERTIFICATION OF A NEW SOIL EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED FOR THESE ACTIVITIES IF AN AREA GREATER THAN 5,000 SQUARE

17. ALL SOIL STOCKPILES ARE TO BE TEMPORARILY STABILIZED IN ACCORDANCE WITH SOIL EROSION AND SEDIMENT CONTROL NOTE #6. 18. THE PROPERTY OWNER SHALL BE RESPOSIBLE FOR ANY EROSION OR SEDIMENTATION THAT MAY OCCUR BELOW STORMWATER OUTFALLS OR OFFSITE AS A RESULT OF CONSTRUCTION OF THE PROJECT.

### SEEDING SCHEDULE - ZONE 6B

SITE AND SEEDBED PREPARATION: TO BE PERFORMED IN ACCORDANCE WITH CHAPTERS 4-1, 7-1 AND 8-1 OF THE 2014 STANDARDS FOR SOIL EROSION & SEDIMENT CONTROL IN NEW JERSEY.

TEMPORARY GRASS SEEDING SHALL CONSIST OF SPRING OATS APPLIED AT A RATE OF 2.0 LBS. PER 1,000 S.F. OPTIMUM SEEDING DATES ARE BETWEEN AUGUST 15 AND OCTOBER 15. AN ALTERNATIVE TEMPORARY GRASS SEEDING SHALL CONSIST OF WINTER CEREAL RYE APPLIED AT A RATE OF 2.8 LBS. PER 1,000 S.F. OPTIMUM SEEDING DATES ARE BETWEEN AUGUST 1 AND DECEMBER

TEMPORARY SEEDING SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED WITH PERMANENT SEEDING. IF ANY SERIOUS EROSION PROBLEM OCCURS, THE ERODED AREAS SHALL BE REPAIRED AND STABILIZED WITH A MULCH AS INDICATED IN NOTE 6.

PERMANENT SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE AS APPROVED BY THE FREEHOLD SOIL CONSERVATION DISTRICT:

USDA PLANT HARDINESS ZONE 6b, TABLE 4-3

MIX NUMBER 15 ACCEPTABLE SEEDING DATES ARE BETWEEN MARCH 1 AND APRIL 30 ACCEPTABLE SEEDING DATES ARE BETWEEN MAY 1 AND AUGUST 14 (IF IRRIGATION PRESENT) OPTIMUM SEEDING DATES ARE BETWEEN AUGUST 15 AND OCTOBER 15

MIX DETAILS 58% HARD FESCUE (135 LBS/ACRE) 19% CHEWINGS FESCUE (45 LBS/ACRE) 19% STRONG CREEPING RED FESCUE (45 LBS/ACRE) 4% PERENNIAL RYE GRASS (10 LBS/ACRE)

\*APPLY AT A SEEDING RATE OF 230 LBS/ACRE OR 5.25 LBS/1000 S.F.

PERMANENT SEEDING TO BE APPLIED BY HYDROSEEDING AT A RATE OF 160 LBS. PER ACRE, SLOPED AREAS TO BE COVERED WITH MULCH AS INDICATED IN NOTE 6.

FERTILIZER FOR THE ESTABLISHMENT OF TEMPORARY AND PERMANENT VEGETATIVE COVER SHALL BE 10-10-10 (OR EQUIVALENT) APPLIED AT A RATE OF 500 LBS. PER ACRE OR 11 LBS. PER 1,000 S.F. WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES.

IF THE TIME OF YEAR PREVENTS THE ESTABLISHMENT OF TEMPORARY OR PERMANENT SEEDING, EXPOSED AREA TO BE STABILIZED WITH MULCH AS INDICATED IN NOTE 6.

MULCH TO CONSIST OF SMALL GRAIN STRAW OR SALT HAY ANCHORED WITH A WOOD AND FIBER MULCH BINDER OR AN APPROVED EQUAL.

ALL SEEDED AREAS SHALL BE MULCHED IN ACCORDANCE WITH THE MULCH AND MULCH ANCHORING

SPECIFICATIONS ON THIS SHEET.

WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC. SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.

REMOVE FROM THE SURFACE ALL STONES TWO INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER

10. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.

Standards for Soil Erosion and Sediment Control in New Jersey

### STANDARD FOR TOPSOILING

<u>Definition</u>

Topsoiling entails the distribution of suitable quality soil on areas to be vegetated.

To improve the soil medium for plant establishment and maintenance.

# Water Quality Enhancement

Growth and establishment of a vigorous vegetative cover is facilitated by topsoil, preventing soil loss by wind and rain offsite and into streams and other stormwater conveyances.

### Where Applicable

Topsoil shall be used where soils are to be disturbed and will be revegetated.

## Methods and Materials

Materials

- Topsoil should be friable<sup>1</sup>, loamy<sup>2</sup>, free of debris, objectionable weeds and stones, and contain no toxic substance or adverse chemical or physical condition that may be harmful to plant growth. Soluble salts should not be excessive (conductivity less than 0.5 millimhos per centimeter. More than 0.5 millimhos may desiccate seedlings and adversely impact growth). Imported topsoil shall have a minimum organic matter content of 2.75 percent. Organic matter content may be raised by additives.
- Topsoil substitute is a soil material which may have been amended with sand, silt, clay, organic matter, fertilizer or lime and has the appearance of topsoil. Topsoil substitutes may be utilized on sites with insufficient topsoil for establishing permanent vegetation. All topsoil substitute materials shall meet the requirements of topsoil noted above. Soil tests shall be performed to determine the components of sand, silt, clay, organic matter, soluble salts and pH level.
- Stripping and Stockpiling
  - A. Field exploration should be made to determine whether quantity and or quality of surface soil justifies
- B. Stripping shall be confined to the immediate construction area.
- Where feasible, lime may be applied before stripping at a rate determined by soil tests to bring the soil pH to approximately 6.5.

<sup>1</sup>Friable means easily crumbles in the fingers, as defined in most soils texts. <sup>2</sup>Loamy means texture groups consisting of coarse loamy sands, sandy loam, fine and very fine sandy loam, loam, silt loam, clay loam, sandy clay loam and silty clay loam textures and having less than 35% coarse fragments (particles less than 2mm in size ) as defined in the Glossary of Soil Science Terms, 1996, Soil Science Society of America.

Return to TOC

# MULCH AND MULCH ANCHORING SPECIFICATIONS

Stabilizing exposed soils with non-vegetative materials exposed for periods longer than 14 days.

Methods and Materials 1. Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading.

B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.

2. Protective Materials

A. Unrotted small-grain straw, at 2.0 to 2.5 tons per acre, is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting tie down. Other suitable materials may be used if approved by the Soil Conservation District. The approved rates above have been met when the mulch covers the ground completely upon visual inspection, i.e. the soil cannot be seen

B. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.

C. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.

Mulch netting, such as paper jute, excelsior, cotton, or plastic, may

Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be used on areas where flowing water could wash them into an inlet and plug it.

Standards for Soil Erosion and Sediment Control in New Jersey

A 4-6 inch stripping depth is common, but may vary depending on the particular soil.

Stockpiles should be vegetated in accordance with standards previously described herein; see standards for Permanent (pg. 4-1) or Temporary (pg.7-1) Vegetative Cover for Soil Stabilization. Weeds should not be allowed to grow on stockpiles.

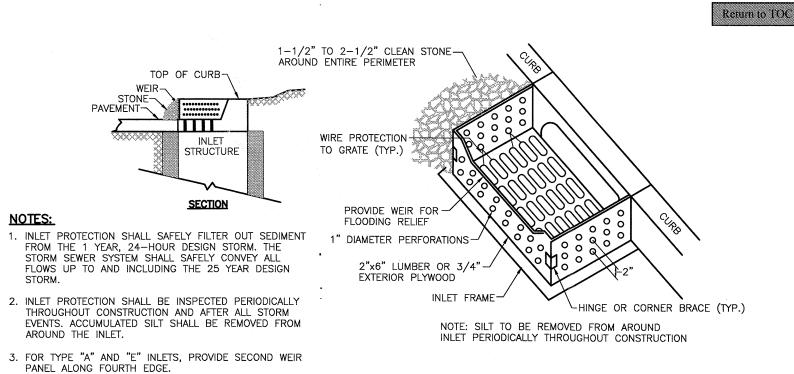
Stockpiles of topsoil should be situated so as not to obstruct natural drainage or cause off-site

### 3. Site Preparation

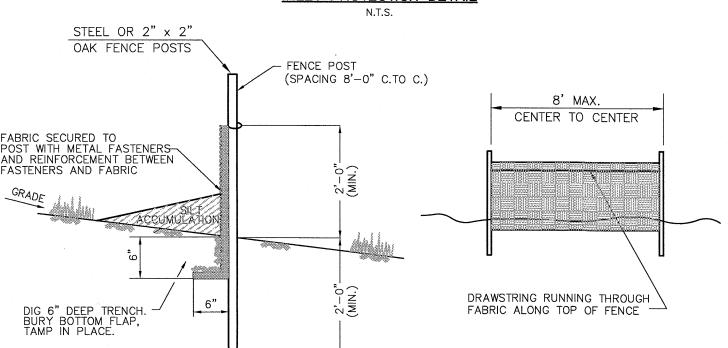
- Grade at the onset of the optimal seeding period so as to minimize the duration and area of exposure of disturbed soil to erosion. Immediately proceed to establish vegetative cover in accordance with the specified seed mixture. Time is of the essence
- Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application and anchoring, and maintenance. See the Standard for Land Grading, pg. 19-1.
- As guidance for ideal conditions, subsoil should be tested for lime requirement. Limestone, if needed, should be applied to bring soil to a pH of approximately 6.5 and incorporated into the soil as nearly as practical to a depth of 4 inches. Lime shall be applied at a rate to be established via soils testing.
- Prior to topsoiling, the subsoil shall be in compliance with the Standard for Land Grading, pg. 19-1.
- Employ needed erosion control practices such as diversions, grade stabilization structures, channel stabilization measures, sedimentation basins, and waterways. See Standards 11 through 42.

- Topsoil should be handled only when it is dry enough to work without damaging soil structure; i.e., less than field capacity (see glossary).
- A uniform application to an average depth of 5.0 inches, minimum of 4 inches, firmed in place is required. Alternative depths may be considered where special regulatory and/or industry design standards are appropriate such as on golf courses, sports fields, landfill capping, etc.. Soils with a pH of 4.0 or less or containing iron sulfide shall be covered with a minimum depth of 12 inches of soil having a pH of 5.0 or more, in accordance with the Standard for Management of High Acid Producing
- Pursuant to the requirements in Section 7 of the Standard for Permanent Vegetative Stabilization, the contractor is responsible to ensure that permanent vegetative cover becomes established on at least 80% of the soils to be stabilized with vegetation. Failure to achieve the minimum coverage may require additional work to be performed by the contractor to include some or all of the following: supplemental seeding, re-application of lime and fertilizers, and/or the addition of organic matter (i.e. compost) as a top dressing. Such additional measures shall be based on soil tests such as those offered by Rutgers Cooperative Extension Service or other approved laboratory facilities qualified to test soil samples for agronomic properties.

8-2



### **INLET PROTECTION DETAIL**



NOTE: SYNTHETIC FILTER FABRIC SHALL BE FIRMLY ATTACHED TO UPHILL SIDE OF FENCE POSTS. OPEN AREA SHALL BE GREATER THAN 4% BUT LESS THAN 10% MEETING U.S. ARMY CORPS. OF ENGINEERS SPECIFICATION NO. CW02215 FOR STRENGTH.

### SILT FENCE DETAIL

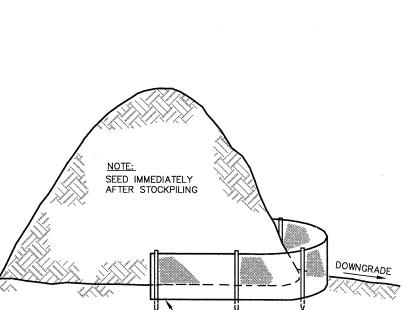
N.T.S.

MAINTENANCE NOTES:

Sediment shall be removed from the upstream face of the barrier when it has reached a depth of  $\frac{1}{2}$  the barrier height.

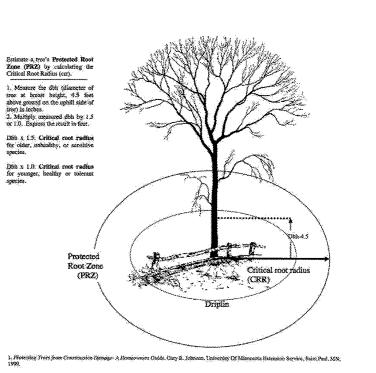
2. Repair or replace barrier (fabric, posts, bales etc.) when damaged.

3. Barriers shall be inspected daily for signs of deterioration and sediment

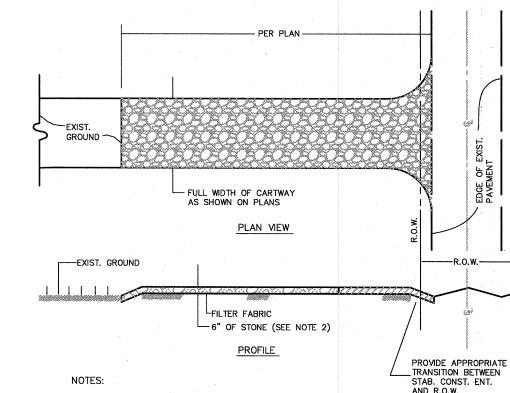


-SILT FENCE (SEE DETAIL)

DETAIL TYPICAL TOPSOIL STOCKPILE



TREE PROTECTION DETAIL



1. PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION(S) AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN. 2. STONE SIZE SHALL BE ASTM C-33, SIZE NO.2 OR 3, CRUSHED

3. THE THICKNESS OF THE STAB. CONST. ENT. SHALL NOT BE LESS

4. THE WIDTH AT THE EXIST. PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINTS OF INGRESS AND EGRESS. 5. THE STAB. CONST. ENT. SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W. /PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED

TO TRAP SEDIMENT. 6. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.

Table 29-1: Lengths of Construction Exits on Sloping Roadbeds

Percent Slope of Roadway	Length of Stone Required				
	Coarse Grained Soils	Fine Grained Soils			
0 to 2%	50 π	100 ft			
2 to 5%	100 ft	200 R			
>5%	Entire surface stabilized with FABC base course				

# STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

### CONSTRUCTION SCHEDULE AND PROCEDURE FOR IMPLEMENTATION OF SOIL EROSION AND SEDIMENT CONTROL MEASURES

1. INSTALL SILT FENCE.	1 DAY
2. REMOVE TREE(S).	1 WEEK
3. REMOVE AND STOCKPILE TOPSOIL.	1 WEEK
4. CLEAR AND ESTABLISH ROUGH GRADES AS NECESSARY TO CONSTRUCT DWELLING FOUNDATION.	2 DAYS
5. CONSTRUCT DWELLING.	6-9 MONTH
6. CONSTRUCT DRIVEWAY AND UTILITIES.	1 WEEK
7. CONSTRUCT FINE GRADING TO FINISHED GRADES AND ESTABLISH PERMANENT VEGETATIVE COVER ON LOT.	1 DAY
8. REMOVE SILT FENCE AFTER ALL DISTURBED AREAS HAVE BEEN ADEQUATELY STABILIZED.	1 DAY

## DUST CONTROL NOTES

TO PREVENT BLOWING AND THE MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, CONSTRUCTION ACTIVITIES, AND TO REDUCE ON-SITE AND OFF-SITE DAMAGE AND HEALTH HAZARDS, DUST CONTROL MEASURES SHALL BE ENACTED ON THE PROJECT SITE.

DURING CONSTUCTION, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE REMEDIATION TO CONTROL PARTICLES AND DUST THAT WILL ENTER INTO THE AIR DURING THE REMOVAL OFF THE ON-SITE STRUCTURES. THESE PROCEDURES MAY INVOLVE COATING THE DEBRIS WITH WATER OR ANOTHER SPRAY-ON ADHESIVE.

NOTE: IN THAT N.J.S.A. 4:24-39 et seg. REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR PERMANENT MEASURES, ALL SITE WORK WILL HAVE TO BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY

NO. DATE MINOR SUBDIVISION - 16 CHARLOTTE STREET SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS BLOCK 125, LOTS 6, 6.01, 7, 7.01, 8 & 9

TAX MAP SHEET NO. 44 BOROUGH OF SAYREVILLE MIDDLESEX COUNTY, NEW JERSEY

NEW JERSEY CERTIFICATE OF

11 South Main Street Marlboro, NJ 07746 ENGINEERING, LLC

AUTHORIZATION NO. 24GA28169800 10-10-24 MARC S. LEBER DATE N.J. PROFESSIONAL ENGINEER, LIGENSE NO. 24GE04452400 N.J. PROFESSIONAL PLANNER, LIGENSE NO. 33LIDD5898DD

Tel: 732.577.0180 24-167

HECKED BY RNP SHEET NO. 5 OF 6

Standards for Soil Erosion and Sediment Control in New Jersey

TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

Establishment of temporary vegetative cover on soils exposed for periods of two to 6 months which are not being graded, not under active construction or not scheduled for permanent seeding within 60 days.

To temporarily stabilize the soil and reduce damage from wind and water erosion until permanent stabilization is

Water Quality Enhancement

Provides temporary protection against the impacts of wind and rain, slows the over land movement of stormwater runoff, increases infiltration and retains soil and nutrients on site, protecting streams or other stormwater conveyances

Where Applicable

On exposed soils that have the potential for causing off-site environmental damage. Methods and Materials

Site Preparation

Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading, pg. 19-1.

Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11

C. Immediately prior to seeding, the surface should be scarified 6" to 12" where there has been soil compaction. This practice is permissible only where there is no danger to underground utilities (cables, irrigation systems, etc.).

A. Apply ground limestone and fertilizer according to soil test recommendations such as offered by Rutgers Co-operative Extension. Soil sample mailers are available from the local Rutgers Cooperative Extension offices. Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-20-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise. Apply limestone at a rate to be established via soils testing. Calcium carbonate is the equivalent and standard for measuring the ability of liming materials to neutralize soil acidity and supply calcium and magnesium to grasses and legumes.

B. Work lime and fertilizer into the soil as nearly as practical to a depth of 4 inches with a disc. springtooth harrow, or other suitable equipment. The final harrowing or disking operation should

Standards for Soil Erosion and Sediment Control in New Jersey

be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

C. Inspect seedbed just before seeding. If traffic has left the soil compacted, the area must be retilled in accordance with the above

D. Soils high in sulfides or having a pH of 4 or less refer to Standard for Management of High Acid Producing Soils, pg. 1-1.

Select seed from recommendations in Table 7-2.

**TABLE 7-2**  $\underline{\text{TEMPORARY VEGETATIVE STABILIZATION GRASSES}}, \, \underline{\text{SEEDING RATES}}, \, \underline{\text{DATES AND DEPTH}}.$ 

SEED SELECTIONS		SEEDING RATE (pounds)		OPTIMUM SEEDING DATE  2 Based on Plant Hardiness Zone 3		OPTIMUM SEED DEPTH <sup>4</sup> (inches)				
	Per Acre	Per 1000 Sq. Ft.	ZONE 5b, 6s	ZONE 6b	ZONE 7a, b					
COOL SEASON GRASSES										
1. Perennial ryegrass	100	1.0	3/15- 6/1 8/1- 9/15	3/1- 5/15 8/15- 10/1	2/15- 5/1 8/15- 10/15	0.5				
2. Spring oats	86	2.0	3/15- 6/1 8/1- 9/15	3/1- 5/15 8/15- 10/1	2/15- 5/1 8/15- 10/15	1.0				
3. Winter Barley	96	2.2	8/1- 9/15	8/15- 10/1	8/15- 10/15	1.0				
4. Annual ryegrass	100	1.0	3/15- 6/1 8/1- 9/15	3/15- 6/1 8/1- 9/15	2/15- 5/1 8/15- 10/15	0.5				
5. Winter Cereal Rye	112	2.8	8/1 - 11/1	8/1 - 11/15	8/1 - 12/15	1.0				
WARM SEASON GRASSES										
6. Pearl millet	20	0.5	6/1-8/1	5/15- 8/15	5/1-9/1	1.0				

Standards for Soil Erosion and Sediment Control in New Jersey

Twice the depth for sandy soils

Plant Hardiness Zone (see figure 7-1, pg. 7-4.)

Millet (German or Hungarian) 0.7 6/1-8/1 5/15-1.0 Seeding rate for warm season grass, selections 5 - 7 shall be adjusted to reflect the amount of Pure Line Seed (PLS) as determined by a germination test result. No adjustment is required for cool season grasses. May be planted throughout summer if soil moisture is adequate or seeded area can be irrigated.

Conventional Seeding. Apply seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil, to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on

Hydroseeding is a broadcast seeding method usually involving a truck or trailer mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Short fibered mulch may be applied with a hydroseeder following seeding. (also see Section IV Mulching) Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. Poor seed to soil contact occurs reducing seed germination and growth. Hydroseeding may be used for areas too steep for conventional equipment to traverse or too obstructed with rocks, stumps, etc.

After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be maximized.

4. Mulching

Mulching is required on all seeding. Mulch will insure against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall be feemed compliance with this mulching requirement.

A. Straw or Hay. Unprotted small grain straw, hay free of seeds, applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed

Application. Spread mulch uniformly by hand or mechanically so that approximately 95% of the soil surface will be covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness of slopes, and costs.

Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a cris-cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings. Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

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Standards for Soil Erosion and Sediment Control in New Jersey

3. Crimper (mulch anchoring tool). A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate must be 3 tons per acre. No tackifying or adhesive

4. Liquid Mulch-Binders. – May be used to anchor hay or straw mulch.

b. Use one of the following:

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

(1) Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turfgrass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass

Note: All names give above are registered trade names. This does not constitute a commendation of these products to the exclusion of other products

B. Wood-fiber or paper-fiber mulch. Shall be made from wood, plant fibers or paper containing no growth or germination inhibiting materials, used at the rate of 1.500 ponds per acre (or as recommended by the project manufacturer) and may be applied by a hydroseeder. This mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding periods in spring and fall.

Pelletized mulch. Compressed and extruded paper and/or wood fiber product, which may contain co-polymers tackifiers, fertilizers and coloring agents. The dry pellets, when applied to a seeded area and watered, forma mulch mat. Pelletized mulch shall be applies in accordance with the manufacturers recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs./1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has bee found to be beneficial for use on small lawn or renovation areas, seeded areas where weed-seed free mulch is desired or on sites where straw mulch and tackifier agent are not practical or desirable.

Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil coverage.

### STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION (rev. 2017)

Standards for Soil Erosion and Sediment Control in New Jersey PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

Establishment of permanent vegetative cover on exposed soils where perennial vegetation is needed for long-term

To permanently stabilize the soil, ensuring conservation of soil and water, and to enhance the environment.

Water Quality Enhancement Slows the over-land movement of stormwater runoff, increases infiltration and retains soil and nutrients on site, protecting streams or other stormwater conveyance

Methods and Materials

Where Applicable On exposed soils that have a potential for causing off-site environmental damage.

Site Preparation

A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standard for Land Grading.

B. Immediately prior to seeding and topsoil application, the subsoil shall be evaluated for compaction in accordance with the Standard for Land Grading C. Topsoil should be handled only when it is dry enough to work without damaging the soil structure. A uniform application to a depth of 5 inches (unsettled) is required on all sites. Topsoil

shall be amended with organic matter, as needed, in accordance with the Standard for Topsoiling. D. Install needed erosion control practices or facilities such as diversions, grade-stabilization structures, channel stabilization measures, sediment basins, and waterways.

Seedbed Preparation

Uniformly apply ground limestone and fertilizer to topsoil which has been spread and firmed, according to soil test recommendations such as offered by Rutgers Co-operative Extension Soil sample mailers are available from the local Rutgers Cooperative Extension offices (http://njaes.rutgers.edu/county/). Fertilizer shall be applied at the rate of 500 pounds per acre or 11 pounds per 1,000 square feet of 10-10-10 or equivalent with 50% water insoluble nitrogen unless a soil test indicates otherwise and incorporated into the surface 4 inches. If fertilizer is not incorporated, apply one-half the rate described above during seedbed preparation and repeat another one-half rate application of the same fertilizer within 3 to 5 weeks after seeding.

B. Work lime and fertilizer into the topsoil as nearly as practical to a depth of 4 inches with

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a disc, spring-tooth harrow, or other suitable equipment. The final harrowing or disking operation should be on the general contour. Continue tillage until a reasonable uniform seedbed is prepared.

High acid producing soil. Soils having a pH of 4 or less or containing iron sulfide shall be covered with a minimum of 12 inches of soil having a pH of 5 or more before initiating seedbed reparation. See Standard for Management of High Acid-Producing Soils for specific requirements.

Select a mixture from Table 4-3 or use a mixture recommended by Rutgers Cooperative Extension or Natural Resources Conservation Service which is approved by the Soil Conservation District. Seed germination shall have been tested within 12 months of the planting date. No seed shall be accepted with a germination test date more than 12 months old unless retested.

> Seeding rates specified are required when a report of compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in rates may be used when permanent vegetation is established prior to a report of compliance inspection. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative coverage with the specified seed mixture for the seeded area and mowed once.

2. Warm-season mixtures are grasses and legumes which maximize growth at high temperatures, generally 85° F and above. See Table 4-3 mixtures 1 to 7. Planting rates for warm-season grasses shall be the amount of Pure Live Seed (PLS) as etermined by germination testing results.

3. Cool-season mixtures are grasses and legumes which maximize growth at temperatures below 85°F. Many grasses become active at 65°F. See Table 4-3, mixtures 8-20. Adjustment of planting rates to compensate for the amount of PLS is not required for cool season grasses.

Conventional Seeding is performed by applying seed uniformly by hand, cyclone (centrifugal) seeder, drop seeder, drill or cultipacker seeder. Except for drilled, hydroseeded or cultipacked seedings, seed shall be incorporated into the soil within 24 hours of seedbed preparation to a depth of 1/4 to 1/2 inch, by raking or dragging. Depth of seed placement may be 1/4 inch deeper on

After seeding, firming the soil with a corrugated roller will assure good seed-to-soil contact, restore capillarity, and improve seedling emergence. This is the preferred method. When performed on the contour, sheet erosion will be minimized and water conservation on site will be

Hydroseeding is a broadcast seeding method usually involving a truck, or trailer-mounted tank, with an agitation system and hydraulic pump for mixing seed, water and fertilizer and spraying the mix onto the prepared seedbed. Mulch shall not be included in the tank with seed. Shortfibered mulch may be applied with a hydroseeder following seeding, (also see Section 4-Mulching below). Hydroseeding is not a preferred seeding method because seed and fertilizer are applied to the surface and not incorporated into the soil. When poor seed to soil contact occurs, there is a reduced seed germination and growth.

Mulching is required on all seeding. Mulch will protect against erosion before grass is established and will promote faster and earlier establishment. The existence of vegetation sufficient to control soil erosion shall

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Standards for Soil Erosion and Sediment Control in New Jersey be deemed compliance with this mulching requirement.

Straw or Hay. Unrotted small grain straw, hay free of seeds, to be applied at the rate of 1-1/2 to 2 tons per acre (70 to 90 pounds per 1,000 square feet), except that where a crimper is used instead of a liquid mulch-binder (tackifying or adhesive agent), the rate of application is 3 tons per acre. Mulch chopper-blowers must not grind the mulch. Hay mulch is not recommended for establishing fine turf or lawns due to the presence of weed seed.

Application - Spread mulch uniformly by hand or mechanically so that at least 85% of the soil surface is covered. For uniform distribution of hand-spread mulch, divide area into approximately 1,000 square feet sections and distribute 70 to 90 pounds within each section.

Anchoring shall be accomplished immediately after placement to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area, steepness

1. Peg and Twine. Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.

2. Mulch Nettings - Staple paper, jute, cotton, or plastic nettings to the soil surface. Use a degradable netting in areas to be mowed.

3. Crimper (mulch anchoring coulter tool) - A tractor-drawn implement, somewhat like a disc harrow, especially designed to push or cut some of the broadcast long fiber mulch 3 to 4 inches into the soil so as to anchor it and leave part standing upright. This technique is limited to areas traversable by a tractor, which must operate on the contour of slopes. Straw mulch rate

4. Liquid Mulch-Binders - May be used to anchor salt hay, hay or straw mulch.

must be 3 tons per acre. No tackifying or adhesive agent is required.

a. Applications should be heavier at edges where wind may catch the mulch, in valleys, and at crests of banks. The remainder of the area should be uniform in appearance.

Use one of the following:

(1) Organic and Vegetable Based Binders - Naturally occurring, powder-based, hydrophilic materials when mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membraned networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phytotoxic effect or impede growth of turf grass. Use at rates and weather conditions as recommended by the manufacturer to anchor mulch materials. Many new products are available, some of which may need further evaluation for use in this state.

(2) Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and, following application of mulch, drying and curing, shall no longer be soluble or dispersible in water. Binder shall be applied at rates recommended by the manufacturer and remain tacky until germination of grass.

Note: All names given above are registered trade names. This does not constitute a ecommendation of these products to the exclusion of other products.

B. Wood-fiber or paper-fiber mulch - shall be made from wood, plant fibers or paper containing no

Standards for Soil Erosion and Sediment Control in New Jersey

growth or germination inhibiting materials, used at the rate of 1,500 pounds per acre (or as recommended by the product manufacturer) and may be applied by a hydroseeder. Mulch shall not be mixed in the tank with seed. Use is limited to flatter slopes and during optimum seeding

C. Pelletized mulch - compressed and extruded paper and/or wood fiber product, which may contain co-polymers, tackifiers, fertilizers, and coloring agents. The dry pellets, when applied to a seeded area and watered, form a mulch mat. Pelletized mulch shall be applied in accordance with the manufacturer's recommendations. Mulch may be applied by hand or mechanical spreader at the rate of 60-75 lbs/1,000 square feet and activated with 0.2 to 0.4 inches of water. This material has been found to be beneficial for use on small lawn or renovation areas, seeded areas where weedseed free mulch is desired, or on sites where straw mulch and tackifier agent are not practical or desirable. Applying the full 0.2 to 0.4 inches of water after spreading pelletized mulch on the seed bed is extremely important for sufficient activation and expansion of the mulch to provide soil

Irrigation (where feasible)

If soil moisture is deficient supply new seeding with adequate water (a minimum of 1/4 inch applied up to twice a day until vegetation is well established). This is especially true when seedings are made in abnormally dry or hot weather or on droughty sites.

Since soil organic matter content and slow release nitrogen fertilizer (water insoluble) are prescribed in Section 2A - Seedbed Preparation in this Standard, no follow-up of topdressing is mandatory. An exception may be made where gross nitrogen deficiency exists in the soil to the extent that turf failure may develop. In that instance, topdress with 10-10-10 or equivalent at 300 pounds per acre or 7 pounds per 1,000 square feet every 3 to 5 weeks until the gross nitrogen deficiency in the turf is ameliorated.

Establishing Permanent Vegetative Stabilization

The quality of permanent vegetation rests with the contractor. The timing of seeding, preparing the seedbed, applying nutrients, mulch and other management are essential. The seed application rates in Table 4-3 are required when a Report of Compliance is requested prior to actual establishment of permanent vegetation. Up to 50% reduction in application rates may be used when permanent vegetation is established prior to requesting a Report of Compliance from the district. These rates apply to all methods of seeding. Establishing permanent vegetation means 80% vegetative cover (of the seeded species) and moved once. Note this designation of moved once does not guarantee the permanency of the turf should other maintenance factors be neglected or otherwise mismanaged.

NO. DATE MINOR SUBDIVISION - 16 CHARLOTTE STREET SOIL EROSION & SEDIMENT CONTROL

> BLOCK 125, LOTS 6, 6.01, 7, 7.01, 8 & 9 TAX MAP SHEET NO. 44

NOTES & DETAILS

BOROUGH OF SAYREVILLE MIDDLESEX COUNTY, NEW JERSEY

Marlboro, NJ 07746 Tel: 732.577.0180 NEW JERSEY CERTIFICATE OF AUTHORIZATION NO. 24GA28169800

10-10-24 MARGS. LEBER N.J. FROFESSIONAL ENGINEER, LICENSE NO. 24GE04452400 N.J. PROFESSIONAL PLANNER, LICENSE NO. 33L100589800

ROJECT NUMBER: 24-167 HECKED BY

11 South Main Street

SHEET NO. 6 OF 6