

THE HOWARD RESEARCH & DEVELOPMENT CORP.

10275 LITTLE PATUXENT PARKWAY

COLUMBIA, MARYLAND 21044

410-992-6000

Steve appear

Signature of Developer Steve Appler

5CALE: 1"= 30'

6068.02

3,8 & 9 R-ED

SEWER CODE

160000

15001

WATER CODE

GOODIER BUILDERS

10705 CHARTER DRIVE

SUITE 320

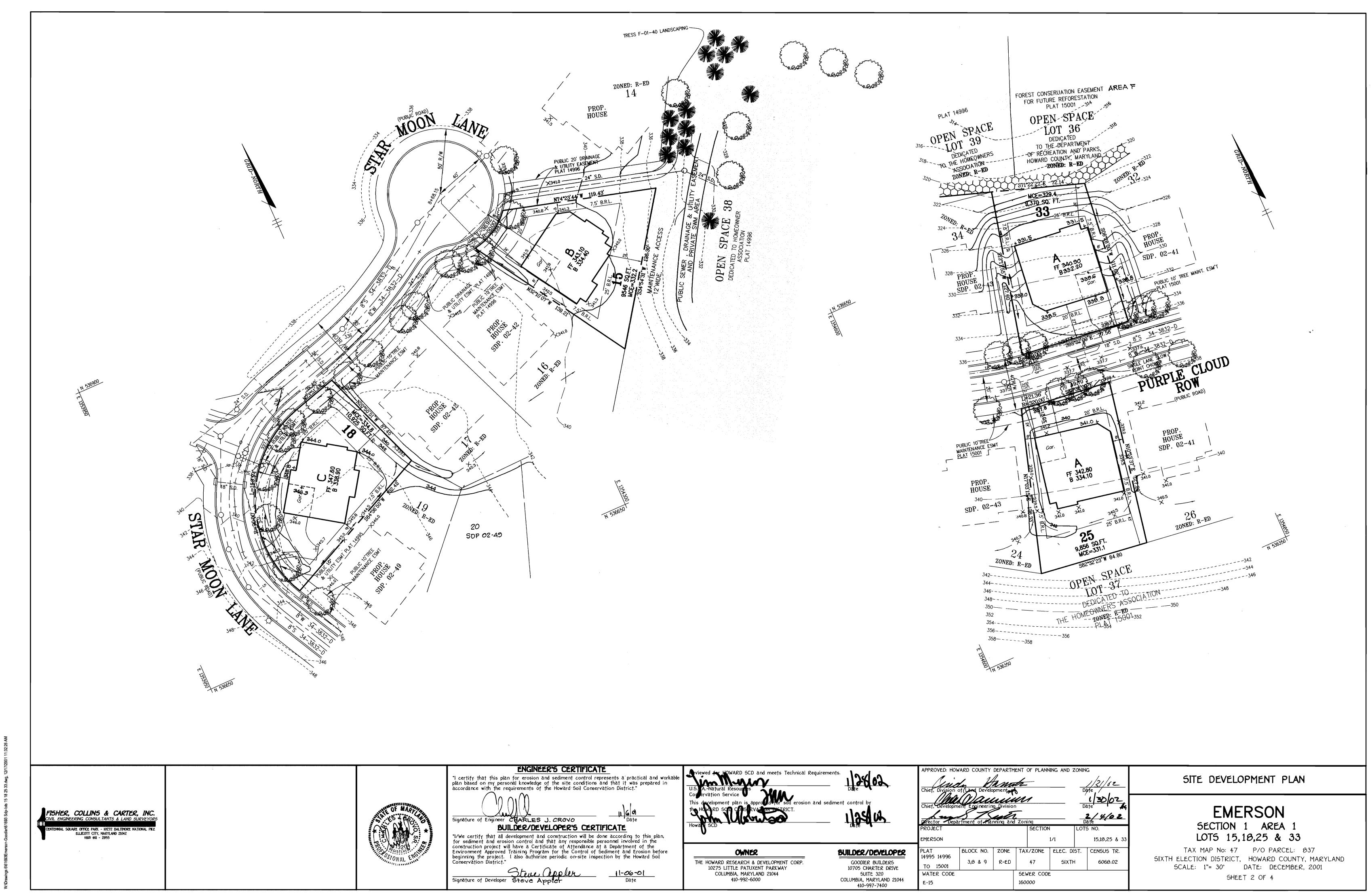
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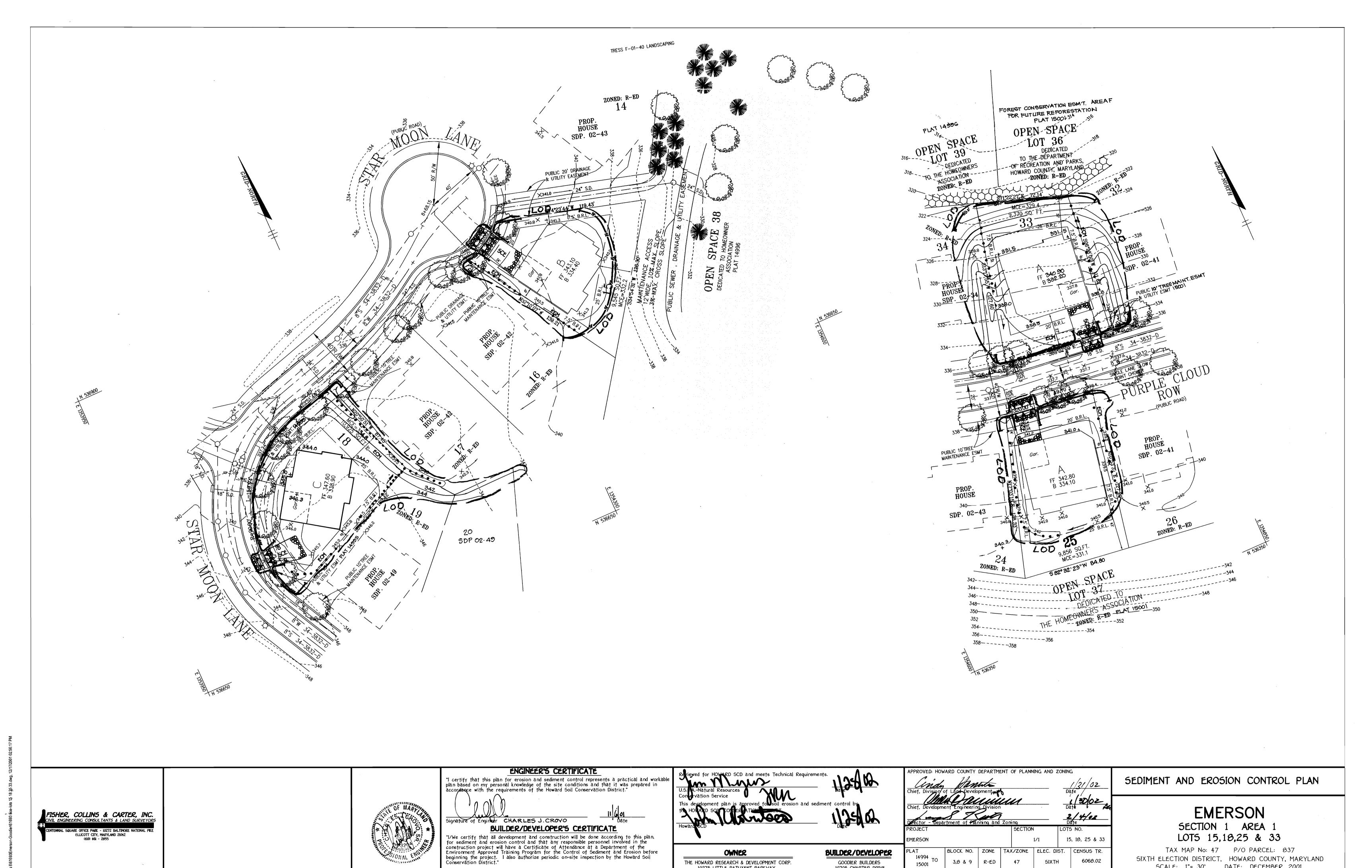
SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SHEET 1 OF 4

DATE: OCTOBER, 2001



SDP 02-45



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SIXTH

SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SHEET 3 OF 4

SCALE: 1"= 30' DATE: DECEMBER, 2001

20.0 STANDARDS AND SPECIFICATIONS **VEGETATIVE STABILIZATION**

DEFINITION Using vegetation as cover for barren soil to protect it from forces that cause erosion **PURPOSE**

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and to downstream areas, and improving wildlife habitat and visual resources. CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration Olup to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc. **EFFECTS ON WATER QUALITY AND QUANTITY**

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff. infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

Install crosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.

ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually

necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

 Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee

iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a *100 mesh sieve and 90-100% will pass through a *20

mesh sieve, iv. Incorporate lime and fertilizer into the top 3-5° of soil by disking or other suitable means. Seedbed Preparation

Seedbed Preparation

Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of 3° to 5° by means of Seedbed preparation shall consist of loosening soil to a depth of 3° to 5° by means of Address the soil is loosened it should not be soil in loosened it should not be soil in loosened it should not be

a. Seeded preparation shall consist of loosening soil to a depth of 3 to 5 by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. In corporate lime and fertilizer into the top 3-5° of soil by disking or other suitable means.

ii. Permanent Seeding.

inent seeding
Minimum soil conditions required for permanent vegetative establishment:
1. Soil pH shall be between 6.0 and 7.0.

Soil pri shall be between 6.0 and 7.0.

Soluble salts shall be less than 500 parts per million (ppm).

The soil shall contain less than 40% clay, but enough fine grained material (330% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedezas is to be planted, then a sandy soil (330% silt plus clay) mould be acceptable. plus clay) would be acceptable. Soil shall contain 1.5% minimum organic matter by weight.

5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5 to permit bonding of the topsoil to the curface area and to create horizontal greeins check to be revent top. the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil o the surface area and to create horizontal erosion check slots to prevent topsoil from

sliding down a slope.

Apply soil amendments as per soil test or as included on the plans.

Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on

Seed Specifications All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.

lote: Seed tags shall be made available to the inspector to verify type and rate of seed used Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective

Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder. a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs/ac; K20 (potassium): 200 lbs/ac.
 b. Lime - use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one

time. Do not use burnt or hydrated lime when hydroseeding. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and

without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

Where practical, seed should be applied in two directions perpendicular to each other Apply half the seeding rate in each direction. Mulch Specifications (In order of preference)

i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

Tibrous physical state.

WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

WCFM, including dye, shall contain no germination or growth inhibiting factors.

WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having

moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

SEQUENCE OF CONSTRUCTION

	OBTAIN GRADING PERMIT	7 DAYS
	INSTALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON PLAN	7 DAYS
i.	CLEAR AND GRUB TO LIMITS OF DISTURBANCE	4 DAYS
	INSTALL TEMPORARY SEEDING	2 DAYS
j.	CONSTRUCT BUILDINGS	60 DAYS
i.	FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPE	14 DAYS
′ .	REMOVE SEDIMENT CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED	
	AND PERMISSION IS GRANTED BY E/S CONTROL INSPECTOR.	7 DAYS

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

 If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. It a mulch anchoring tool is

uniform distribution and depth so that the soil surface is not exposed. If a much anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by performed).

preference, depending upon size of area and erosion hazard:

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safety. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

of water.

iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Ta

II. Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recomendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long. Incremental Stabilization - Cut Slopes

All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'. ii. Construction sequence (Refer to Figure 3 below):

 a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 b. Perform Phase 1 excavation, dress, and stabilize. Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.

Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil lift required) and permanent seed and mulch. Any interruptions inthe operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.

Incremental Stabilization of Embankments - Fill Slopes Embankments shall be constructed in lifts as prescribed on the plans.

ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches
 15°, or when the grading operation ceases as prescribed in the plans.
 iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-crosive manner to a sediment transition device.

of the embankment to intercept surface runoff and convey it down the slope in a non-erosive a sediment trapping device.

Construction sequence: Refer to Figure 4 (below).

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the till. Construct slope silt fence on low side of till as shown in Figure 5, unless other methods shown on the plans address this area.

b. Place Phase 1 embankment, dress and stabilize.

c. Place Phase 2 embankment, dress and stabilize.

d. Place final phase embankment, dress and stabilize.

d. Place final phase embankment, dress and stabilize.

NOTE: FENCE POST SPACING

SHALL NOT EXCEED 10'
—— CENTER TO CENTER

TIRTIRTIR TIRTIR

21/2" DIAMETER

GALVANIZED OR ALUMINUM

FILTER CLOTH

EMBED FILTER CLOTH 8"

MINIMUM INTO GROUND

* IF MULTIPLE LAYERS ARE REQUIRED TO ATTAIN 42

required except on the ends of the fence.

every 24" at the top and mid section.

Tensile Strength

Filtering Efficiency

0 - 10:1

3:1 - 2:1

by 6" and folded.

Geotextile Class F:

GROUND

d. Made Tinal phase empairment, wess and stabilized oversea provided from grubbing through the completion of and placement of topsoil (if required) grading and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

10' MAXIMUM

WITH I LAYER OF

Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification

2. Chain link fence shall be fastened securely to the fence posts with wire ties.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced

5. When two sections of filter cloth adjoin each other, they shall be overlapped

7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for

6. Maintenance shall be performed as needed and silt buildups removed when "bulges"

20 lbs/in (min.)

Design Criteria

5lope Lengt

Unlimite

The lower tension wire, brace and truss rods, drive anchors and post caps are not

for a 6' fence shall be used, substituting 42" fabric and 6' length

4. Filter cloth shall be embedded a minimum of 8" into the ground.

develop in the silt fence, or when silt reaches 50% of fence heigh

6" MINIMU

FLOW

--- 16" MIN. 15T | AYER O

Test: MSMT 509

Silt Fence Length

(maximum)

Unlimited

1,500 feet

500 fee

0.3 gal/ft /minute (max.) Test: MSMT 322

FILTER CLOTH

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1055).

ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED
ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN
CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANEN

OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7
CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52), TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER

6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT

0.702 ACRES

0.274 ACRES

ONTROL INSPECTOR. SITE ANALYSIS: TOTAL AREA OF SITE AREA DISTURBED AREA TO BE ROOFED OR PAVED
AREA TO BE VEGETATIVELY STABILIZED 0.428 ACRES TOTAL CUT
TOTAL FILL
OFFSITE WASTE/BORROW AREA LOCATION

ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING
ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE
SAME DAY OF DISTURBANCE

SAME DAY OF DISTURBANCE.

ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

STABILIZED CONSTRUCTION ENTRANCE

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION:

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./ 1,000 SQ.FT.)

SEEDING:

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 17 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./ACRE OF WEEPING LOVEGRASS (.07 LBS./ 1,000 SQ.FT. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL.1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES & FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1988 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

LEGEND		
Symbol	Description	
	Existing Contour 2' Interval	
	Existing Contour 10' Interval	
	Proposed Contour 2' Interval	
	Proposed Contour 10' Interval	
+ 624	Spot Elevation	
-5f5f-	5ilt Fence	
FF	First Floor Elevation	
₽Ĕ	Basement Elevation	
	Proposed Walkout	
	Earth Dike	
-xx -	Tree Protection	
\sim	Existing Tree Line	
L.O.D.	Limit Of Disturbance	
(1)	Existing Street Tree	

- MOLINTARLE TYPICAL STAPLES NO. 11 EXISTING PAVEMENT EARTH FILL ** GEOTEXTILE CLASS 'C' - PIPE AS NECESSARY OR BETTER MINIMUM 6" OF 2"-3" AGGREGATE OVER LENGTH AND WIDTH OF STRUCTURE EXISTING GROUND PROFILE - * 50' MINIMUM IO, WINIWAM PLAN VIEW Construction Specification Length - minimum of 50' (*30' for single residence lot). CROSS-SECTION

Width - 10' minimum, should be flared at the existing road to provide a turning Geotextile fabric (filter cloth) shall be placed over the existing ground prior

15001

ATER CODE

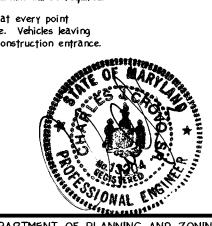
to placing stone. **The plan approval authority may not require single family Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the

5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a

to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required. Location - A stabilized construction entrance shall be located at every point

mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe ha

where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



STANDARD SYMBO

##SCE

6° MINIMUM LENGTH FENCE POST PRIVEN A MINIMUM OF 16° INTO 8" MINIMUM DEPTH IN GROUND TISTISTISTISTISTISTISTISTIS S18118118118118118 EMBED GEOTEXTILE CLASS F — A MINIMUM OF 8" VERTICALLY _ INTO THE GROUND TOP VIEW

PERMANENT SEEDING NOTES

1,000 SQ.FT.) OF 10-20-20 FERTILIZER.

SEEDBED PREPARATION:

BE HYDROSEEDED.

MAINTENANCE:

SOIL AMENDMENTS:

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING

APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/

1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER

INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING,

APPLY 400 LBS. PER ACRE 38-0-0 UREAFORM FERTILIZER

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST

1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3

LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE, FOR THE

PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS/ACRE

LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH

FEBRUARY 28. PROJECT SITE BY: OPTION (1) - TWO TONS PER

POSSIBLE IN THE SPRING; OPTION (2) - USE 500; OPTION (3) -

APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1.000 SQ.FT.)

ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200

ASPHALT ON FLAT ACRES. ON SLOPES & FEET OR HIGHER USE

348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.

* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNVETCH AT 15

LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS

THE SEEDING REQUIRMENT. OPTIMUM SEEDING DATE FOR THIS

GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED

INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS.

REPLACEMENTS AND RESEEDINGS.

MIXTURE IS MARCH I TO APRIL 30.

ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS

SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH

OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING.

WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD

(1.4 LBS./1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND

2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEPING

(9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./

(14 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC.

P05T5 CROSS SECTION STANDARD SYMBOL STAPLE . JOINING TWO ADJACENT SILT FENCE SECTIONS

Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

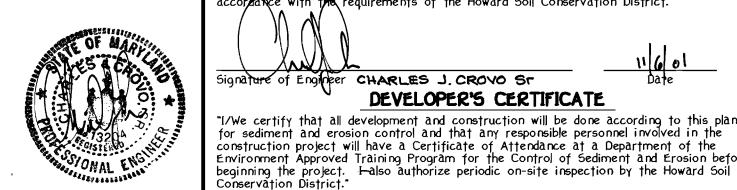
Test: MSMT 509 Tensile Strength Tensile Modulús Test: MSMT 509 20 lbs/in (min.) Flow Rate 0.3 gal ft 1/ minute (max.) Test: M5MT 322 Filtering Efficiency 75% (min.)

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

> SILT FENCE NOT TO SCALE

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 21042





ignature of Engineer CHARLES J. CROVO ST DEVELOPER'S CERTIFICATE 'I/We certify that all development and construction will be done according to this plan, for sediment and erosion control and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before

Conservation District. Steve appler 11-06-01 Signature of Developer Steve Applet

Construction Specifications

narrow trench, 6" in depth. Backfill the trench and tamp firmly to

conform to the channel cross-section. Secure with a row of staples

about 4" down slope from the trench. Spacing between staples is 6".

Key-in the matting by placing the top ends of the matting in a

Staple the 4" overlap in the channel center using an 18" spacing

3. Before stapling the outer edges of the matting, make sure the

matting is smooth and in firm contact with the soil.

outer rows, and 2 alternating rows down the center.

5. Where one roll of matting ends and another begins, the end o

spaced 6" apart in a staggered pattern on either side.

EROSION CONTROL MATTING

NOT TO SCALE

The discharge end of the matting liner should be similarly

secured with 2 double rows of staples

effected by the flow must be keyed-in.

Staples shall be placed 2' apart with 4 rows for each strip, 2

the top strip shall overlap the upper end of the lower strip by 4" shiplap fashion. Reinforce the overlap with a double row of staple

Note: If flow will enter from the edge of the matting then the area

OWNER/DEVELOPER THE HOWARD RESEARCH & DEVELOPMENT CORP. 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044 410-992-6000

BUILDER GOODIER BUILDERS 10705 CHARTER DRIVE SUITE 320 COLUMBIA, MARYLAND 21044 410-730-3940

PPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 1/30/02. 2/4/02 ROJECT LOTS NO. MERSON 15,18,25 & 33 BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR. SIXTH 3,8 & 9 R-ED 6068.02

SEWER CODE

160000

SEDIMENT, EROSION CONTROL NOTES & DETAILS

EMERSON SECTION 1 AREA 1 LOTS 15,18,25 & 33

TAX MAP No: 47 P/O PARCEL: 837 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND DATE: DECEMBER, 2001 5CALE: 1"= 30'

SHEET 4 OF 4

SDP 02-45