

NOTE: CONTRACTOR TO REGRADE, SOD OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF THEIR WORK. SPRAY WITH WILT-PROOF ACCORDING TO MANUFACTURERS STANDARDS PRUNE 1/3 LEAF AREA BUT RETAIN NATURAL 2 PIECES OF REINFORCED RUBBER HOSE DOUBLE \*12 GALVANIZED WIRE GUYS TWISTED 3-2"X 2" OAK STAKES, -NOTCH STAKES TO HOLD WIRE WRAP TRUNK TO SECOND TIER -OF BRANCHES WITH WATERPROOF TREE WRAP, THE AT 24" INTERVALS (EXCEPT EVERGREENS) REMOVE ANY COVERING FROM TOP OF ROOT CROWN 3" MULCH -MAINTAIN GROUND LINE WITH TOP OF ROOT CROWN CONSTRUCT 3" SAUCER RIM-FLOOD -WITH WATER TWICE WITHIN 24 HOURS TOP SOIL MIXTURE CONVEX BOTTOM 6" MIN. HT.

## TREE PLANTING DETAIL

## PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to 'Landscape Specification Cuidelines for Baltimore-Washington Metropolitan Areas', (hereinafter 'Landscape Guidelines') approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and 'Miss Utility' a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope). Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per

cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines. Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check

the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded. This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc

## STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

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 run-off 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 Oup 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 erosion and sediment control structures (either temporary or 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) 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.

ii. Fertilizers shall be uniform in composition, tree 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 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. v. Incorporate lime and fertilizer into the top 3-5° of soil by disking or other suitable means.

Seedbed Preparation
i. Temporary Seeding
a. Seedbed 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
a. Minimum soil conditions required for permanent vegetative establishment:
1. Soil pH shall be between 6.0 and 7.0.
2. Soluble salts shall be less than 500 parts per million (ppm).
3. The soil shall contain less than 40% clay but enough time grained

material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass serecia lespedezas is to be planted, then a sandy soil (<30% sill

plus clay? would be acceptable.

Soil shall contain 1.5% minimum organic matter by weight. Soil must contain sufficient pore space to permit adequate root penetration. 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 surface area and to create horizontal erosion check slots to prevent topsoil to 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

D. Seed Specifications

i. 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.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used. ii. 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

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.

P205 (phosphorous): 200 issact R20 (parassium): 200 issact.

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

c. Seed and terfilizer shall be mixed on size 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: Mechânized 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.

b. 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.

ii. Wood Cellulose Fiber Mulch (WCFM)

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

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

i. 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. . 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 I and 2. Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch 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.

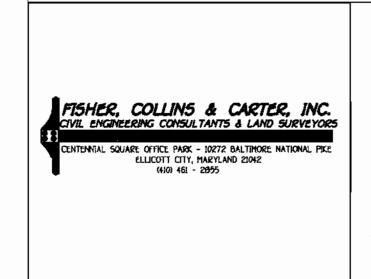
Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:

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 safely. It 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.

iii. Application of liquid binders should be heavier at the edges where wind catches much, 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 Tax . Terra Tack AR or other approved equal may be used at rates recommended by the nanufacturer to anchor mulch.

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



SEEDBED PREPARATION:
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING

SOIL AMENDMENTS:

APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER

FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST

(1.4 LBS./1,000 5Q.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 5Q.FT.) OF WEEPING

MULCHING:
APPLY 1 TO 2 TONS PER ACRE (IO TO 90 LB5./1,000 SQ.FT.)

MAINTENANCE:
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS,

REPLACEMENTS AND RESEEDINGS.

MIXTURE IS MARCH ! TO APRIL 30.

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

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

INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER 9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./

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

LBS./1,000 50.FTJ 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 (I) - TWO TONS PER

OSSIBLE IN THE SPRING; OPTION (2) - USE 500: OPTION (3) -SEED WITH 100 LB5./ACRE KENTUCKY 31 TALL FESCUE AND MULCH

OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. 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

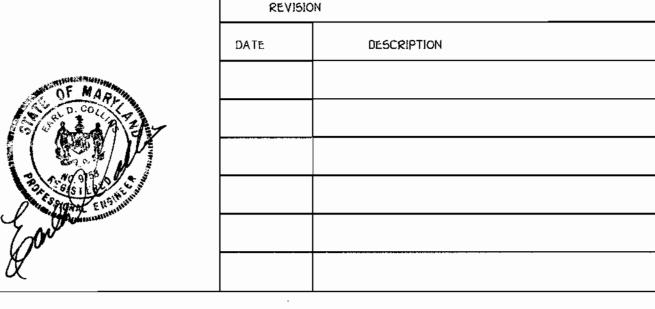
\* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNVETCH AT 15 LB5./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LB5/ACRE AS THE SEEDING REQUIRMENT. OPTIMUM SEEDING DATE FOR THIS

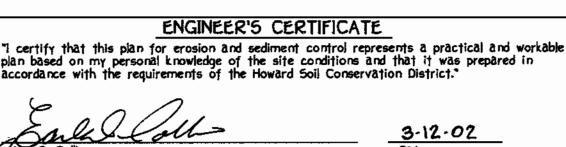
ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS

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

OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

1,000 5Q.FT.) OF 10-20-20 FERTILIZER.





SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY

FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.

3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7

CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES,

LL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN

DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).

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.

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 CONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER

TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT

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

3) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE

AREA TO BE ROOFED OR PAVED 0.09 ACRES
AREA TO BE VEGETATIVELY STABILIZED 0.02 ACRES

B) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING

NECESSARY BY THE HOWARD COUNTY SETMENT 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

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.

9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED

ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE

ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD

GERMINATION AND ESTABLISHMENT OF GRASSES.

CONTROL INSPECTOR.

7) SITE ANALYSIS: TOTAL AREA OF SITE 0.32 ACRES

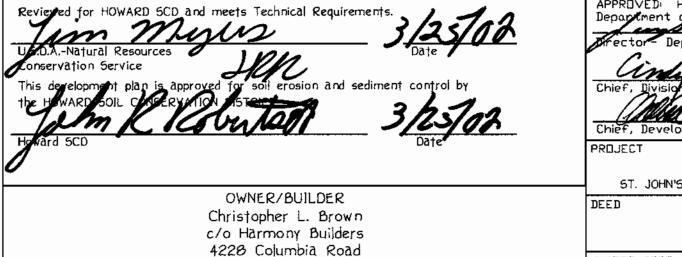
SAME DAY OF DISTURBANCE.

BY THE INSPECTION AGENCY IS MADE.

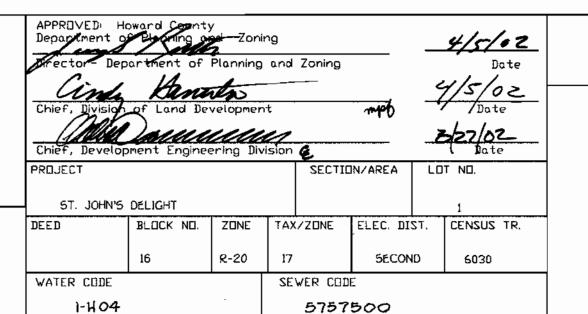
AREA DISTURBED 0.11 ACRES

CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS

DEVELOPER'S CERTIFICATE "I/We certify that all development and construction will be done according to this plan, 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 beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."



Ellicott City, MD. 21042 410-461-0833



## SITE DEVELOPMENT PLAN NOTES AND DETAILS

ST. JOHN'S DELIGHT LOT

TAX MAP 17 SECOND ELECTION DISTRICT

SCALE AS SHOWN

PARCEL NO. 69 HOWARD CO. MD. DATE: AUGUST, 2001 SHEET 2 OF 2