

CONSTRUCTION SPECIFICATIONS All graded or disturbed areas including slopes shall be protected during clearing and construction in accordance with the approved erosion and sediment control plan untill they are adequately stabilized. All erosion and sediment control practices and measures shall be

constructed, applied and maintained in accordance with the approved sediment control plan and the "Standards and Specifications for Soll Erosion and Sediment Control." Topsoil required for the establishment of vegetation shall be stockpilled in amount necessary to complete finished grading of all exposed areas. Areas to be filled shall be cleared, grubbed and stripped of topsoil to remove trees, vegetation, roots or other objectionable materials.

Areas which are to be topsoilded shall be scarified to a minimum depth of three inches prior to placement to topsoil. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence or other related problems. Fill intended to support buildings, structures and conduits, ets., shall be compacted in accordance with the local requirements or codes. All fill shall be placed and compacted in layers not to exceed 8

nches in thickness.

Except for approved landfills or nonstructural fills, fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris and other questionable materials that would interfere with or prevent construction of satisfactory fills. Frozen material or soft, mucky or highly compressible materialbs shall

not be incorporated into fill slopes or structural fills. Fill shall not be placed on a frozen foundation. All benches shall be kept free of sediment during all phases of

Seeps or springs encountered during construction shall be handled n accordance with the Standards and Specifications for Subsurface Drain, or other approved methods. All graded areas shall be permanently stabilized immediately

following finished grading. Stockpiles, borrow areas, adn spoil areas shall be shown on the plans and shall be subject to the provisions of this Standard and

OWNER'S/DEVELOPER'S CERTIFICATION 'I/We hereby certify that I/we have reviewed this erosion and sediment control plan and that all clearing, grading, construction and/or development will be done in pursuant to this plan and that any responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before bealnning the project.

Signature Phone No. Name (Printed):

The developer is responsible for the acquisition of all regulred easements, rights-of-way, and/or rights-of-way pursuant to the discharge from the sediment and erosion control practices, storm water management practices and the discharge of stormwater onto or across and grading or other work performed on adjacent or downstream properties affected by this plan.

Following Initial soil distrubance or redisturbance, permanent or temporary stabilization shall be completed within a) severn calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes and all slopes greater than 3 horizontal to 1 vertical (3:1) and b) fourteen days as to all other disturbed or graded areas on the project site. The in-place sediment control measures will be maintained on a continuing basis untill the site is permanently stabilized and all permit requirements are met.

On all sites with disturbed areas in excess of 3 acers, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sedment control, but before proceeding with any other earth distrubance or grading. Other building or grading inspection approvals may not be authorized intill this initial approval by the inspection agency is made and

Approval shall be requested upon final stabilization of all sites with distrubed areas in excess of 2 acres before removal of controls. DISTURBED SURFACE AREA VOLUME OF SPOL MATERIAL

List predominant soil types and gerneral description ner PGSCD soil survey.

VOLUME OF BORROW MATERIAL!

SectionI - 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.

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

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

B. Soil Amendments (Fertilizer and Line Specifications) Soil test must be performed to determine the exact ratios and application rates for both line 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 be used for chemical analyses.

Fertilizers shall be uniform in composition, free flowing and sultable 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, rade name or trademark and warrantee of the producer

Lime materials shall be ground limestone (hydrated or burnt line may be substituted) which contains attichest 50 oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that will least 50 pass through a #100 mesh sleve and/98witt 100ss through a #20 mesh sleve.

ly. Incorporate lime and fertilizer into the top 3 - 5' of soil by disking or other suitable means.

C. Seedbed Preparation

Temporary Seeding

Seedbed preparation shall consist of loosening soil to a depth of 3' to 5' by means of sultable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on should not be rolled or dragged smooth but left in the roughered condition. Sloped area (greater than 31) should be tracked leaving the surface in an irregular condition with ridges running parallel

o the contour of the slope, b. Apply fertilizer and line as prescribed on the plans.

Incorporate line and fertilizer into the top 3 - 5° of soil by disking or other sultable means.

Minimum soil conditions required for permanent vegetalve establishment

> 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 tixanidis but enough %fishet grished material (>30 clay) to provide the capacity to hold a moderate amount of moisture. An exception

is if lovegrass or serecia lespedeza is to be plantidishithphus slandy soll (30 would be acceptable.
4. Soil shall contain in immum organic matter by weight.
5. Soil must contain sufficient pore space to

permit adequate root penetration.
6. If these conditions cannot be met by soll on site, adding topsoil is required in accordance with Section 21 Standard and Specification for

 Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loostened 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 from sliding down a slope.

Apply soil amendments as per soil test or as

Mix soll ameniments into the top 3 - 5' of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove targe objects like stones and branches, and ready the area for seed application. Where site preparation, cosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Slopes (steeper than 31) 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 ne necessary on newly disturbed areas.

D. 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

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

Temperatures above 75-80° F. can weaken bacterla

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 Add for e used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseedin Note It is very important to keep inoculant as cool as possible until used.

and make the Inociant less effective.

E. Methods of Seeding Hydroseeding Apply seed uniformly with hydroseeder (slurry included seed and fertilizer), broadcast or drop seeder, or a

> a. If fertilizer is being applied at the time of seeding the application rates amounts will not exceed the following: Nirrogen; 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 are 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

II. Dry Seeding This includes use of conventional drop or broadcast spreaders.e Seed spread dry shall be incorporated into the

b. Where practical, seed should be applied in two

subsoil at the rates prescribed on the temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with

a weighted roller to provide good seed to soll

directions perpendicular to each other.
Apply half the seeding rate in each direction. III. <u>Drill or Cultipacker See</u>dingechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as tanphowite at least 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)

Straw shall consist of thoroughly threshed wheat, rye or oat straw, reisonably bright in color, and shall not be musty, moldy, taked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the

Wood Cellulose Fiber Mulch (WCFM) WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical

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

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

21.0 STANDARD AND SPECIFICATIONS

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, lot pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

1. This practice is limited to areas having 2:1 or flatter slopes where: a. The texture of the exposed subsoil/ parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth. d. The soil is so acidic that treatment with limestone is not feasible

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA—SCS in cooperation with Maryland Agricultural Expermental Station.

II. Topoil Specifications — Soil to be used as topsoil must met the following:

Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less tha 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1  $\frac{1}{2}$ " in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or other as specified.

iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placemen of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:

Place topsoil (if required) and apply soil amendments as specified in <u>20.0 Vegetative</u> Stabilization — Section I — Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the follwing:

pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of lass tan 6.0 sufficient lime shall be perscirbed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used

No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to pennit dissipation of phyto-toxid materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientistand approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in <u>20.0 Vegetative</u> <u>Stabilization</u> — Section I — Vegetative Stabilization Methods and Materials.

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slop Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albelt 4" - 8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a maner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent me ormation of depressions or water pockets.

Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, win he subscil is excessively wet or in a condition that may otherwise be detrimental to prop grading and seedbed preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas ova 5

acres shall be tested to prescribe amendments and for sites having disturbed areas under 3 acres shall conform to the following requirements: a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the

Environment under COMST 26.04.06. b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements,

he appropriate consituents must be added to meet the requirements prior to use. c. Composted sludge shall be applied at a rate of 1 ton/ 1,000 square feet. iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000  $\,$ 

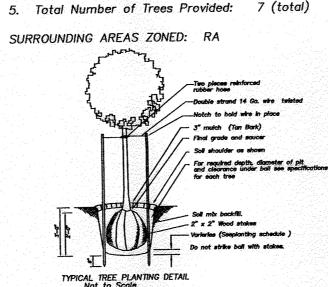
square feet, and 1 the normal lime application rate. References: Guideline Specifications, Soil Preparation and Sodding. MD—VA, Pub. #1 Cooperative Extension Service, University of Maryland and Virginia Polytechnic Insitutes. Revised 1973.

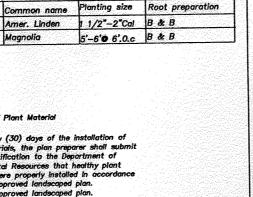
RESIDENTIAL REQUIREMENTS

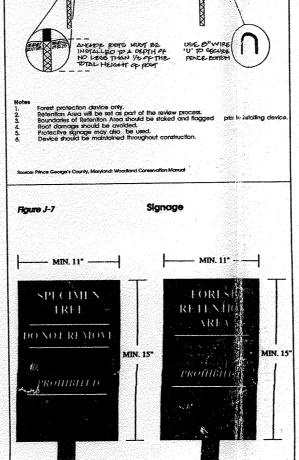
PLANTING SCHEDULE 1. Zone: RA

2. Number of Lots: 3. Number of Ornamental Trees Required: 4. Number of Shade Trees Required: 4

SURROUNDING AREAS ZONED: RA



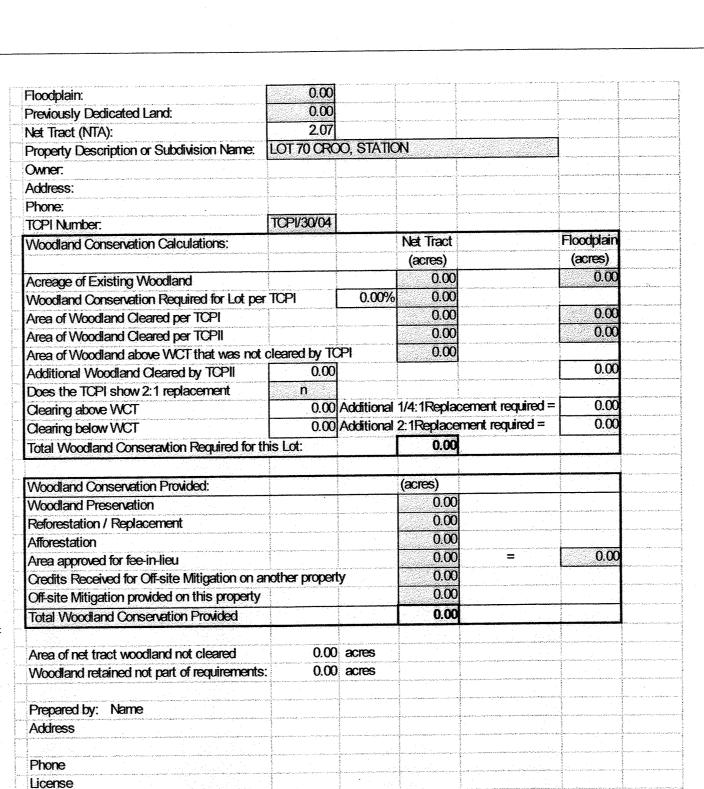




ANCHOR POORS CHOULD BE MINIMUM 2" STEEL "U" CHANNEL OR 2" X2" TIMBER, G' IN LENGTH

HIGHLY VISABLE FLAGGING

MAXIMUM BREET



JULY 16, 2004

EX.GND.=166'

1000 GALLON

PUMP CHAMBER

WITHIN 1' OF FINISH GRADE

1/2 H.P. PUN

TOP SEAM

CHECK VALVE

24' RISERS 30" RISER

EX.GND.=166.5'

2000 gal. TOP SEAM

SEPTIC TANK

JUNCTION

4" SANITARY

INLET INVERT

OUTLET INVERT

TANK BOTTOM (INSIDE)

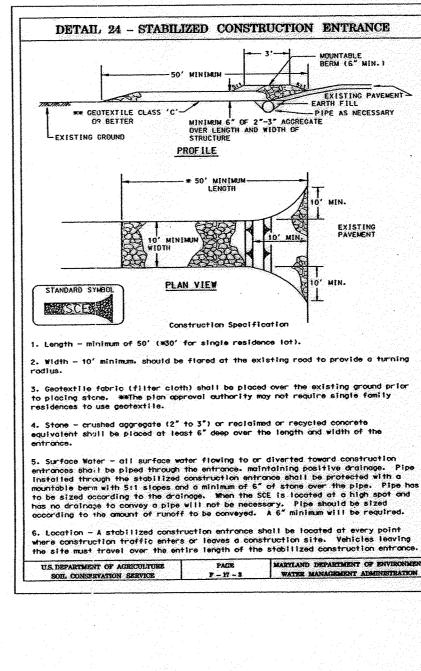
TANK BOTTOM (OUTSIDE) = 160.25'

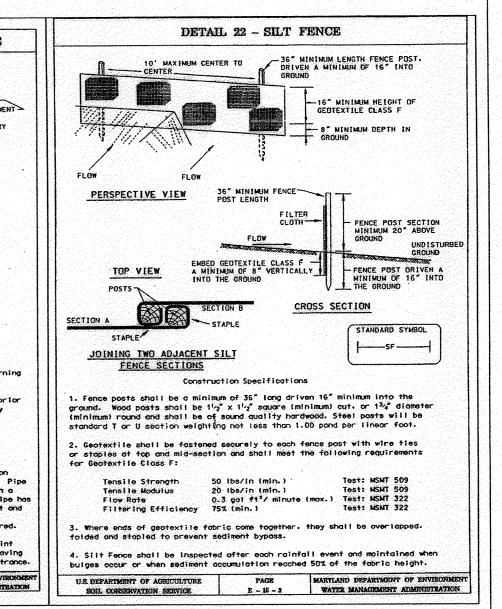
DUAL CHAMBER

PUMP CHAMBER DETAIL

INV= 166.25' 4" P.V.C.

EX.GND.





1. Septic Tank and Distribution Box shall be of adequate structural strength to support imposed loads. 2. P.V.C. will conform to ASTMD - 3033 type P.S.P. or ASTMD - 3034 type P.M.S. all shall be SDR - 35.

>3000 sg-ft ( 4 Rooms) TOTAL HOUSE SQUARE FOOTAGE MINIMUM DRAINFIELD LENGTH = 130' (DEEP PERCOLATION TEST) USE 2000 GALS. SEPTIC TANK (DOUBLE COMPT) DESIGN FLOW 1000 ABSORPTIVE AREA GAL/DAY/SQ FT USE (PT78-1) LOADING RATE L.F. REQUIRED = (1000/6.33/2.5) = 63.2L.F. use min. drainfield length =  $130^{\circ}$ 130' (2 x 65') TRENCH LENGTH:

TRENCH DEPTH: TRENCH WIDTH: GRAVEL DEPTH: 5.5 TRENCH SEPARATION: 12'

Design Data

OBSERVATION PIPES

4"PVC PERFORAT

DIST. BOX = 173'

PRIMARY DISPOSAL

NTS

TRENCHES

WASHED GRAVEL

EX.GND.

Linear feet of Drain field. Volume of 4" Drainpipe in Gallons (0.65xlinear feet) Diameter of Force Main (inches)

Linear Feet of Force Main Pipe

quivalent length of Force Main Pipe (add for elbows, swing check valve, tees and 6" of pipe in tank).

Total pipe length (linear and equivalent) 24.4 Gallons per inch drawdown (tank capacity)/((outlet elev.- inside tank elev.)x12). 84.5 Gallons pumped per cycle (Volume of drain field pipe

or the equivalent to a three inches drawdown, whichever is greater. Inches drawdown per pump cycle

Drawdown (in feet) Gallons Pumped per minute (15-20/lateral/minute) Frictional loss per 100' of pipe.

(minimum velocity of 2 ft per second) Frictional loss for system (total pipe length x frictional loss per 100' of pipe.

Static head loss (highest force main elevation -pump off elevation. Total head loss( frictional loss + static head loss).

465.55 Gallons of reserve capacity. (inlet elev.-alarm elev.x12xgallons/inch drawdown) Required pump (horsepower). Drawdown time:\ 1 min\ 24.5 sec\.....@\60 .gal/min.

Recommended make and model pump......WE07... Recommended make and model control panel...Simplex / w Alarm.

SHEET 2 OF 2

SITE, GRADING, EROSION, SEDIMENT CONTROL PLAN SEPTIC SYSTEM DESIGN

LOT 70

CROOM STATION

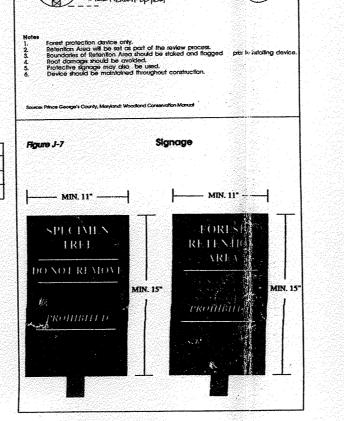
JULY 2004

**JULY 2004** SCALE AS SHOWN DRAWN BY DRAWING # PG310SP59 FILE # PG310 JOB # 03-13166

Fertilizer Rate (10-20-10)Lime (From Table 25) Rate P205 | K20 Application Specles Rate (lb/ac) Tall fescue (75%) 1'-2" 3/1-5/15 Canada Bluegrass (10%) Kentucky Bluegrass (10%) Redtop (5%) 90 lb/ac | 175lb/ac | 175lb/ac | 2 tons/ac Tall fescue (85%) 3/1-5/15 (2.0 lb/ (4.0 lb/ (4.0 lb/ (100 lb/ Perennial Ryegrass (10%) Kentucky Bluegrass (10%) 1000 sf) | 1000 sf) | 1000 sf) | 1000 sf) Tall fescue (85%) or 3/1-5/15 1'-2' Perennial Ryegrass (50) Plus Crownvetch or

Quantity Latin name | Common name | Planting size | Root preparation Tilia Americana Amer. Linden | 1 1/2"-2"Cal | B & B Magnolia SPP Magnolia 5'-6'0 6',0.c B & B 1.5 Certification of Plant Material a. Within thirty (30) days of the installation of

plant materials, the plan preparer shall submit written certification to the Department of Environmental Resources that healthy plant materials were properly installed in accordance with the approved landscaped plan. with the approved landscaped plan. a. All landscoping, buffering and screening shall be maintained in a healthy condition. Failure to matiain or to replaces dead or diseased material shall constitute a zoning violation and shall be subject to the penalty provisions set forth in subtitle 28, Division 1, of the County code.





Date 09-01-04.

1000 GALLONPUMPCHAMBER TOP SEAM TANK (AMERICAST)

ELEVATION DATA

OUTSIDE DIMENSIONS: LENGTH= 112" WIDTH=58" DEPTH=62"

= 164.25'

=164.00'

= 160.58

WILKERSON & ASSOCIATES INC ENGINEERS & SURVEYORS Box 17 Dunkirk, Maryland

TOP OF TANK

ALARM FLOAT

PUMP ON FLOAT = 162.16"

PUMP OFF FLOAT = 161.91

= 165.41

= 162.66

(410)257-3332, (301)855-8272

FIFTEENTH DISTRICT, PRINCE GEORGES CO., MD