SHEET INDEX TITLE SHEET ICE CRYSTAL DRIVE PLAN AND PROFILE STREET TREE, GRADING AND SEDIMENT CONTROL PLAN STORM DRAIN DRAINAGE AREA MAP & LANDSCAPE PLAN SEDIMENT AND EROSION CONTROL NOTES & DETAILS

# FINAL ROAD CONSTRUCTION, GRADING, STORM DRAINS AND SEDIMENT CONTROL PLANS

# APPROVED: DEPARTMENT OF PLANNING AND ZONING

7/23/04

# CHERYTREE PARK

# BULK PARCEL 'G-1' AND OPEN SPACE LOTS 13 & 14 (PHASES 1 AND 3)

(A RESUBDIVISION OF BULK PARCEL 'G', PLAT NO. 16102-16103)

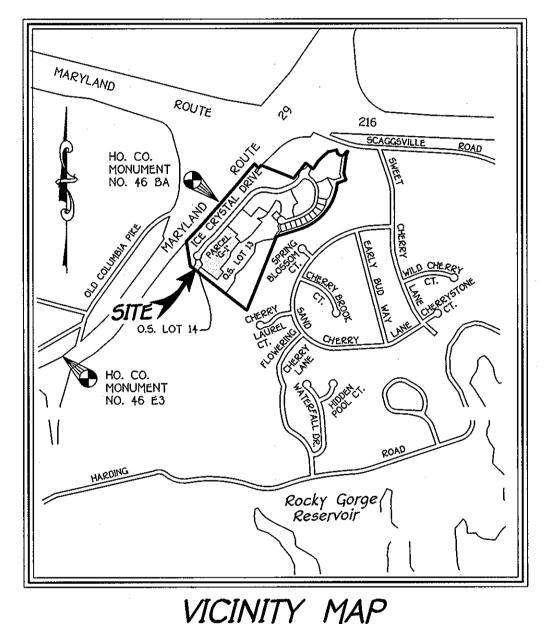
ZONED MXD-6

TAX MAP No. 46 PARCEL No. 156 GRID NO. 4

ROAD C	LASSIFICATION	CHART
ROAD NAME	CLASSIFICATION	R/W WIDTH
ICE CRYSTAL DRIVE	PUBLIC LOCAL STREET	60'

	STREET	LIGHT	CHART CHART
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
ICE CRYSTAL DRIVE	C.L. STA. 15+47	25'L	150-WATT H.P.S. VAPOR PREMIER POST-TOP MOUNTED AT 30" ON A BRONZE FIBERGLAGG POLE UGING A 12" ARM ON A A-FOOT BLACK FIBERGLASS POIR.
ICE CRYSTAL DRIVE	C.L. STA. 16+70	25'L	150-WATT H.P.S. VAPOR PREMIER POST-TOP MOUNTED AT-30' ON A BRONZE FIBERGLAGG POLE USING A 12' ARM ON A 14 - FOOT BLACK FIBERGLASS POLE.
ICE CRYSTAL DRIVE	C.L. STA. 17+94	28'L	150-WATT H.P.S. VAPOR PREMIER POST-TOP MOUNTED AT 30' ON A BRONZE FIBERGLASS POLE USING A 12' ARM ON A 14 - FOOT BLACK FIBERGLASS POLE.
ICE CRYSTAL DRIVE	C.L. STA. 19+04	40'L	150-WATT H.P.S. VAPOR PREMIER POST-TOP MOUNTED AT-30' ON A BRONZE FIBERGLASS POLE-USING A 12' ARM ON A 14. FOOT BLACK FIBERGLASS POLE.

	STREET SIGN CHART				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE	
ICE CRYSTAL DRIVE	C.L. STA. 15+11	35'L	5TOP	√ R1-1	
ICE CRYSTAL DRIVE	C.L. 5TA. 16+21	35'L	STOP	R1-1	
ICE CRYSTAL DRIVE	C.L. 5TA. 18+05	35'L	STOP	R1-1	
ICE CRYSTAL DRIVE	C.L. 5TA. 10+76	52'L	STOP	R1-1	
ICE CRYSTAL DRIVE	C.L. 5TA. 14+37	21°L	SPEED LIMIT 25	R2-1	



SCALE: 1"= 1200'

# SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

AT&T EASEMENT NOTE:

NO CONSTRUCTION ACTIVITIES ARE ALLOWED WITHIN THE AT&T CABLE EASEMENT WITHOUT DIRECT SUPERVISION BY AT&T PERSONNEL. NOTICE TO ENTER, CROSS & INSTALL THE PROPOSED STORM DRAINS WITHIN THE AT&T EASEMENT MUST BE GIVEN TO AT&T A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY.

# GENERAL NOTES:

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION
- 3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY
- EXCAVATION WORK BEING DONE. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE
- 5. 2 FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON FIELD RUN SURVEY
- BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 46 BA AND NO. 46 E3

- 7. PUBLIC WATER AND SEWER WILL BE USED WITHIN THE PROJECT, CONTRACT NO. 24-4089-D & 24-4000-D LOCATED IN THE PATUXENT RIVER DRAINAGE AREA. WATERSHED CODE 02-13-11.
- 8. EXISTING UTILITIES SHOWN HEREON ARE TAKEN FROM CURRENT PUBLIC WATER AND SEWER HOWARD COUNTY CONTRACT DRAWINGS. B. EXISTING SEWER CONTRACT Nos. 24-4000-D.
- 9. THE TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP, INC. DATED JULY, 2000.
- 10. BACKGROUND INFORMATION:
- A. SUBDIVISION NAME: CHERRYTREE PARK B. TAX MAP NO.: 46
- . PARCEL NO.: 156 D. ZONING: MXD-6
- E. ELECTION DISTRICT: SIXTH TOTAL TRACT AREA: 41.078 AC:
- G. TOTAL AREA OF PHASE 3 : 5.179 AC+
- H. NO. OF BUILDABLE LOTS: 0 I. NO. OF BULK PARCELS: 1
- J. NO. OF OPEN SPACE LOTS: K. PRELIMINARY EQUIVALENT SKETCH PLAN APPROVAL DATE: 12-20-00 (SP 00-08)
- L. PREVIOUS FILE Nos. : ZB 973M, SP 00-08
- 11. NO CEMETERIES EXIST ON THE PROPERTY.
- 12. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.
- 13. THE FOREST DELINEATION AND WETLAND ANALYSIS WERE DELINEATED BY MCCARTHY AND ASSOCIATES, INC.
- 14. THE FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED UNDER F-01-114 TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. THE FOREST CONSERVATION OBLIGATION FOR THIS PROJECT IS 10.18 ACRES WITH 4.625 ACRES OF ON-SITE RETENTION AND 5.89 ACRES OF AFFORESTATION PLANTING OFF-SITE AT THE ASHLEIGH KNOLLS SUBDIVISION PER F-01-114 AND F-02-108.
- 15. STORMWATER MANAGEMENT FOR THIS PROJECT IS PROVIDED BY TWO EXISTING REGIONAL FACILITIES DESIGNED AND CONSTRUCTED UNDER F-01-114: TYPE - EXISTING POND No 1 IS A WET POOL DESIGN AND EXISTING POND No. 2 IS A EXTENDED DETENTION FACILITY. OWNER - HOMEOWNERS ASSOCIATION
- MAINTENANCE PRIVATELY MAINTAINED. "THESE TWO FACILITIES PROVIDE BOTH WATER QUALITY AND QUANTITY MANAGEMENT FOR THIS PHASE OF THE CHERRYTREE PARK PROJECT. ULTIMATELY S.W.M. FOR THE ENTIRE CHERRYTREE PARK PROJECT WILL BE CONTROLLED BY A TOTAL OF FOUR S.W.M. FACILITIES. REFER TO THE S.W.M. AND HYDROLOGY REPORT PREPARED UNDER SP-00-08 FOR FURTHER SUMMARY
- 16. STREET LIGHTS WILL BE REQUIRED IN THE DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- 17. THE NOISE STUDY WAS PREPARED BY STAIANO ENGINEERING, INC. DATED JULY, 2000. AND APPROVED UNDER SP-00-09.
- 18. THE PROPOSED 4' WIDE MACADAM PATHWAY SYSTEM UNDER SP-00-08 IS TO BE CONSTRUCTED WITH THE FUTURE SITE



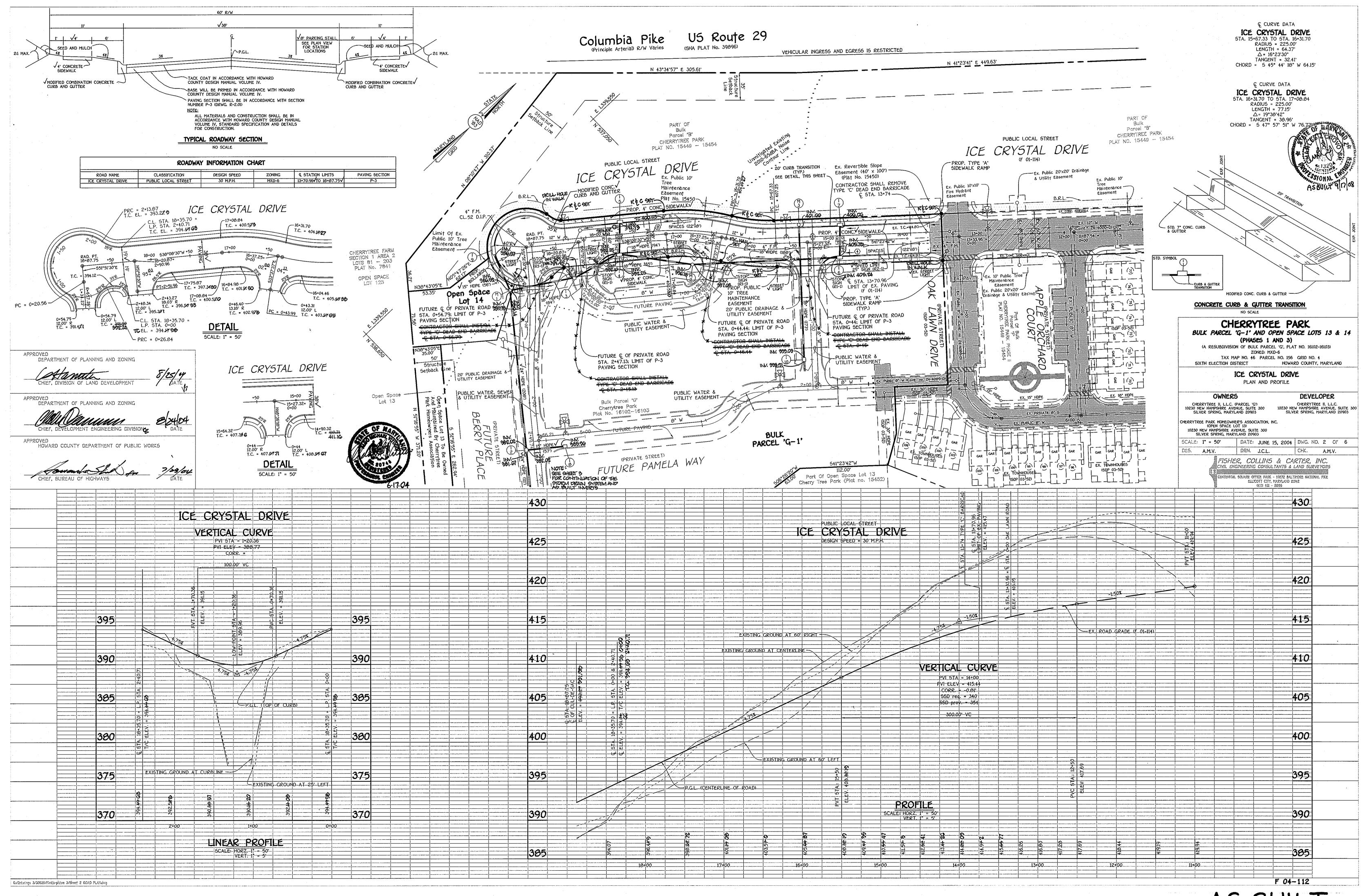
CHERRYTREE PARK BULK PARCEL 'G-1' AND OPEN SPACE LOTS 13 & 14 (PHASES 1 AND 3) (A RESUBDIVISION OF BULK PARCEL 'G', PLAT NO. 16102-16103)

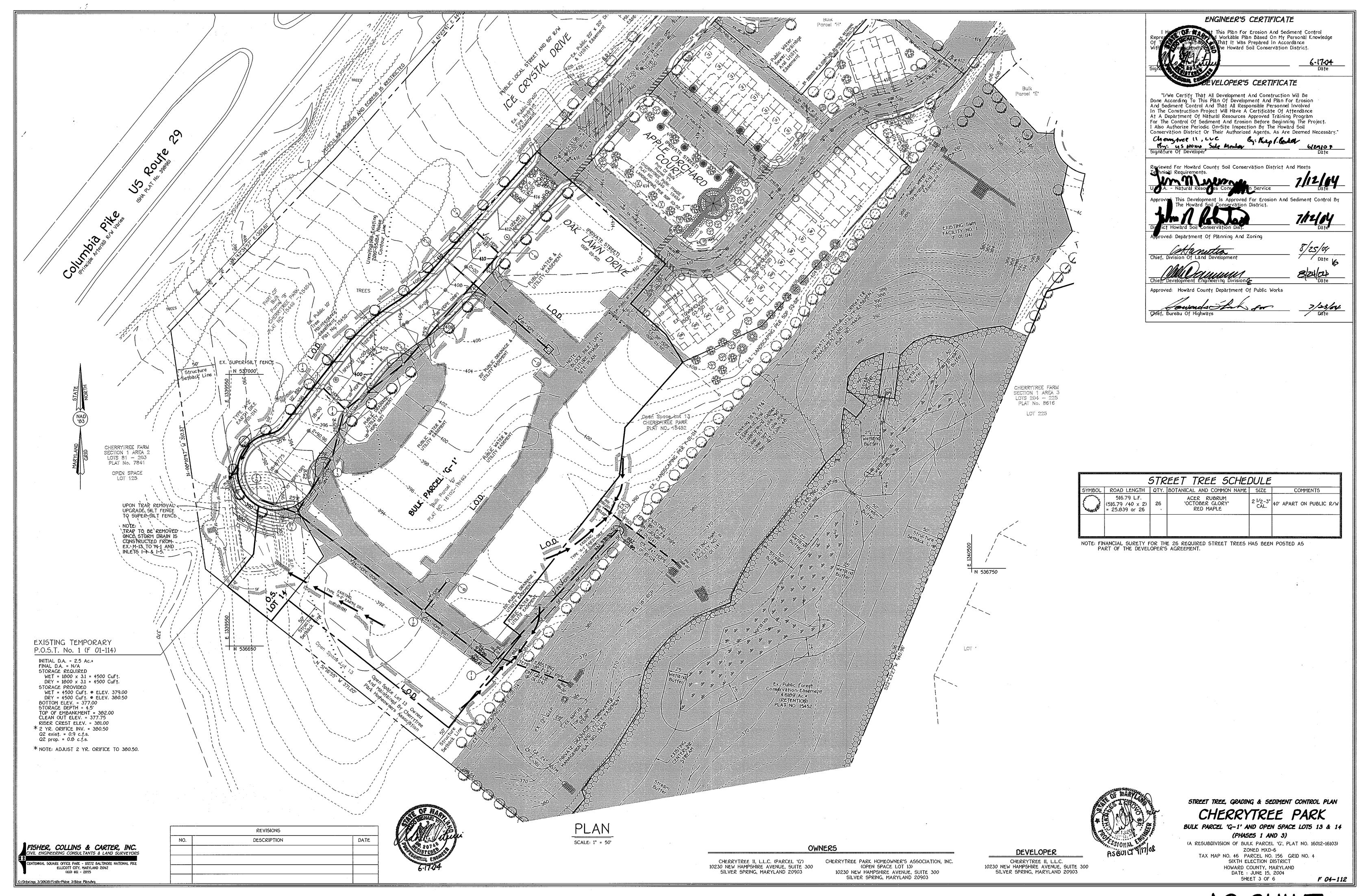
TAX MAP NO. 46 PARCEL NO. 156 GRID NO. 4 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE : JUNE 15, 2004

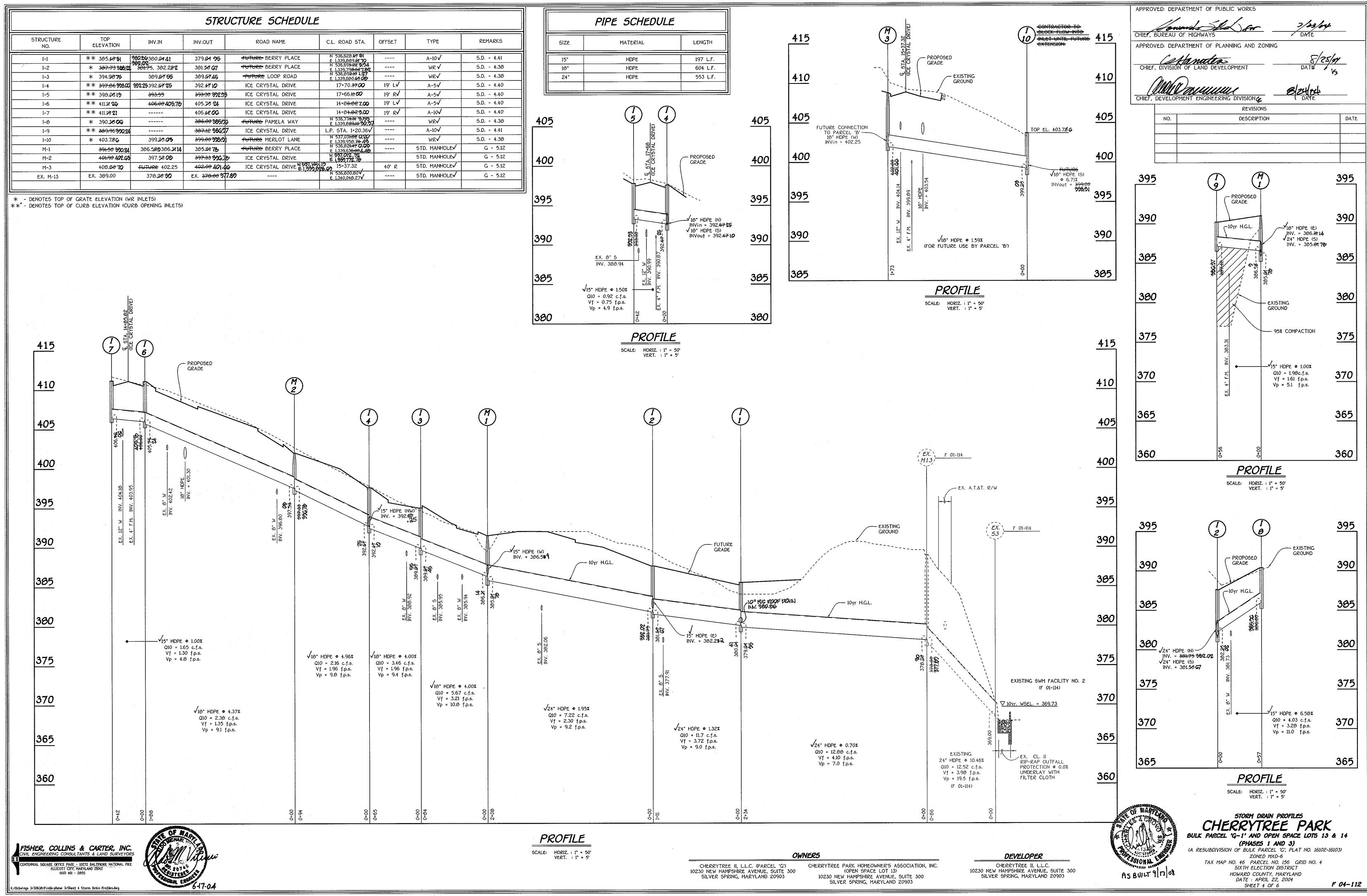
RAWINGS3/30630/FINALS-PHASE 3/SHEET 1 TITLE SHEET.DWG

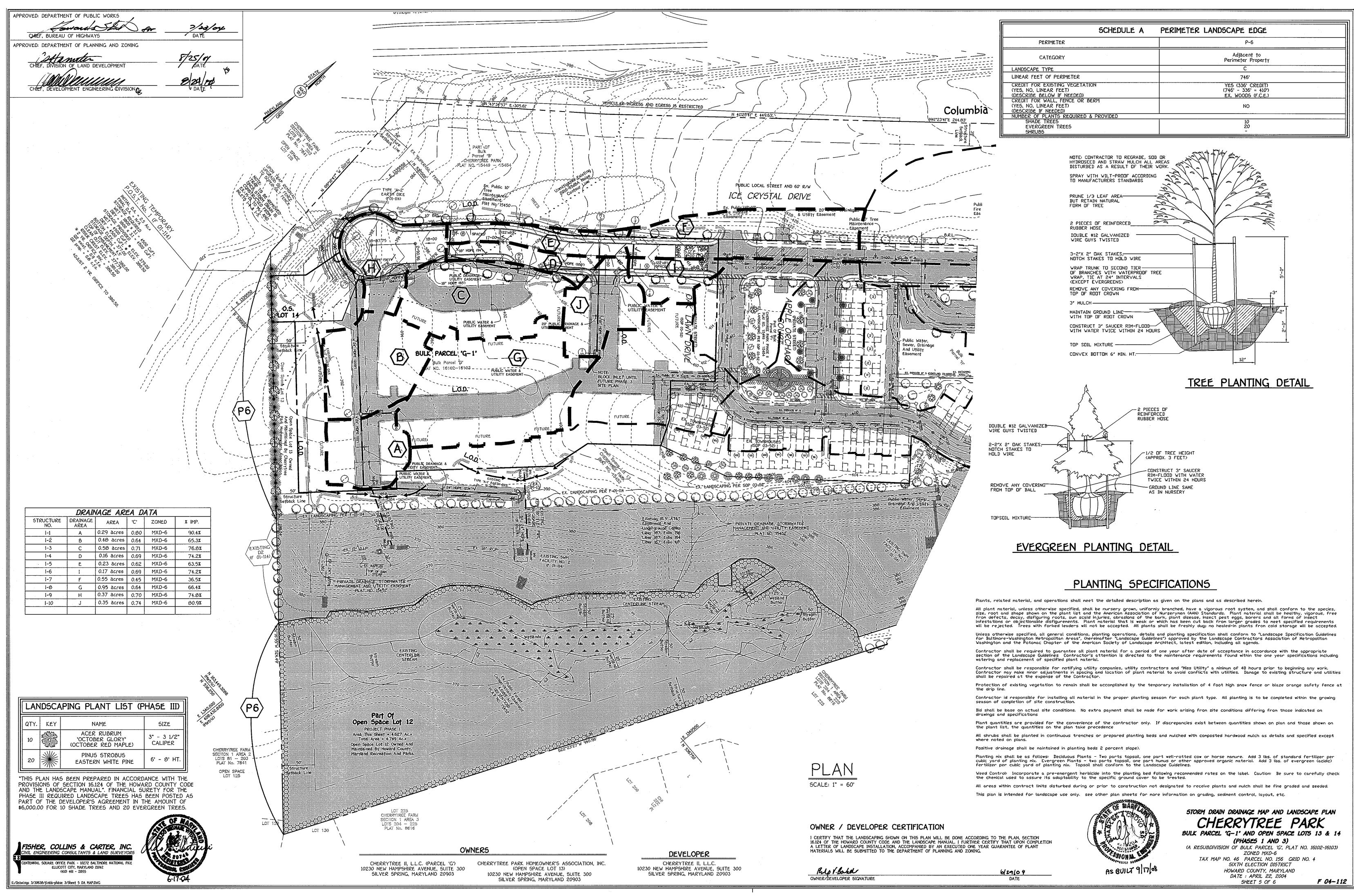
OWNERS

F 04-112









#### STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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, low pH, materials toxic to plants, and/or unacceptable soil gradation. Conditions Where Practice Applies

This practice is limited to areas having 2:1 or flatter slopes where:

d. The soil is so acidic that treatment with limestone is not feasible.

- 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 c. The original soil to be vegetated contains material toxic to plant growth.
- 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 Experimental Station.
- Topsoil Specifications Soil to be used as topsoil must meet the following
- i. Topsoil shall be a loam, sandy loam, clay loam, sitt 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 than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 11/2" in diameter.
- ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass. Johnson grass,
- 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 placement 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. For sites having, disturbed areas under 5 acres:
- i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization Section 1 Vegetative Stabilization Methods and Materials. 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 following:
- a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed 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. d. 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 permit dissipation of phyto-toxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization — Section I — Vegetative Stabilization Methods and Materials.

- i. When top soiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins. ii. Grādes on the āreās to be top soiled, which have been previously established, shall be maintained, albeit 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 manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from top soiling or other operations shall be corrected in order to prevent the

formation of depressions or water pockets.

- iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
- Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below: i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 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
- ronment under COMAR 26.04.06. b. Composted sludge shall contain at least I percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. It compost does not meet these requirements, ne appropriate constituents must be added to meet the requirements prior to use.
- c. Composted sludge shall be applied at a rate of I 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 1/3 the normal lime application rate References: Guideline Specifications, Soil Preparation and Sodding,. MD-VA, Pub. #I, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

## SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- 2) 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.

  3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT
  OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7
  CALENDAR ONCE FOR ALL PROMETS 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.
- 4) 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. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS
- AND SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARTCAND 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 GERMINATION AND ESTABLISHMENT OF GRASSES.
- 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
- 7) SITE ANALYSIS: ACRES ACRES ACRES TOTAL AREA OF SITE AREA DISTURBED
  AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED OFFSITE WASTE/BORROW AREA LOCATION N/A

  B) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING
- 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 POVALS 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 LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN

## FISHER, COLLINS & CARTER, INC. VIL ENGINEERING CONSULTANTS & LAND SURVEYOR SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL ! ELLICOTT CITY, MARYLAND 21042

### 20.0 STANDARDS AND SPECIFICATIONS VEGETATIVE STABILIZATION DEFINITION PURPOSE

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 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. will also help protect groundwater supplies of assimilating those substitutes present which in the took 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
- Site Preparation Install erosion 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. 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, 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
- of the producer.

  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.

  Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means. C. Seedbed Preparation
  i. Temporary Seeding
  a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of
  a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of
  a seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of
  a seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of
  a seedbed preparation.
- 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.

  Permanent Seeding
  a. Minimum soil conditions required for permanent vegetative establishment:
  1. Soil pH 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 (>30% 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 (30% silt 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 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
- To the surface area and to create nonzonial evolution check slots to prevent topout the 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
- 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.
- 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 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°-20° F. can weaken bacteria and make the inoculant less effective.

  E. 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 P205 (phosphorous); 200 lbs/ac; K20 (potassium); 200 lbs/ac.

  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 line when hydroseeding.

  Seed and fertilizer shall be mixed on site and seeding shall be done immediately and
- 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)
- 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 sceds as specified in the Maryland Seed Law.
- ii. Wood Cellulose Fiber Mulch (WCFM)

  a. 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.
- will be phytoi-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 0.5, 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.
- 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. 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. If a mulch anchoring tool is
- iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 of wood cellulose fiber per 100 gallons of water.
- H. 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:
- 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.

  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
- 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 Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
- Lightweight plastic netting may be stapled over the mulch according to manufacturer's recom-mendations. 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'.
- 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
- Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization. Incremental Stabilization of Embarkments - 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.

  16. 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 transfer device.
- à sediment trapping device.

  iv. Construction sequence: Refer to Figure 4 (below).
- Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area. Place Phase 1 embarkment, dress and stabilize. Place Phase 2 embarkment, dress and stabilize. Place final phase embarkment, dress and stabilize.
- areas as necessary.

  Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) 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

#### SECTION 2 - TEMPORARY SEEDING

- Vegetation annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required. A. Seed mixtures - Temporary Seeding
- i. Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 26 must be put on the plans.
- ii. For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in Soil tests are not required for Temporary Seeding.

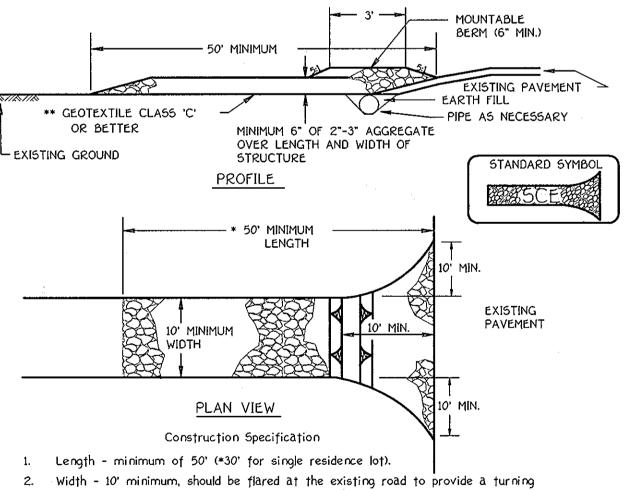
Seed Mixture (Hardiness Zone6b) From Table 26			Fertilizer Rate	Lime Rate		
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	(10-10-10)	
1	BARLEY OATS RYE	122 96 140	3/1 - 5/15, 8/15 - 10/15	1" - 2" 1" - 2" 1" - 2"	600 lb/ac (15 lb/1000sf)	2 tons/ac (100 lb/1000sf)

#### SECTION 3 - PERMANENT SEEDING

- Seeding grass and legumes to establish groung cover for a minimum of one year on disturbed areas generally receiving low maintenance.
- A. Seed mixtures Permanent Seeding
- i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 322. Critical Area Planting For special Juan maintenance a read sections 10 Seed and V. Turbeage.
- ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in
- iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

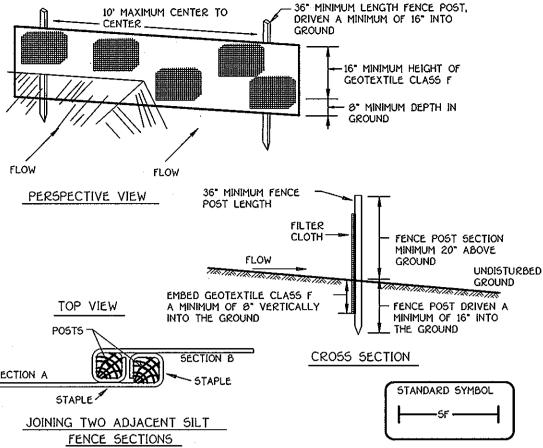
	Seed Mixture (Hardiness Z From Table					Feṛtilizer f (10-20-20)		Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
3	TALL FESCUE (05%) PERENNIAL RYE GRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	3/1 - 5/15, 8/15 - 10/15	1* - 2*	90 lb/ac (2.0 <b>b</b> /	175 lb/ac	175 lb/ac	2 tons/ac
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3/1 - 5/15, 8/15 - 10/15	1 2-	1000sf)	1000sf)	1000sf)	1000sf)

## STABILIZED CONSTRUCTION ENTRANCE



- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*\*The plan approval authority may not require single family residences to use geotextile.
- 4. 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 entrance.
- 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 mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has 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
- 6. Location A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

SILT FENCE



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:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.)2	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: M5MT 322

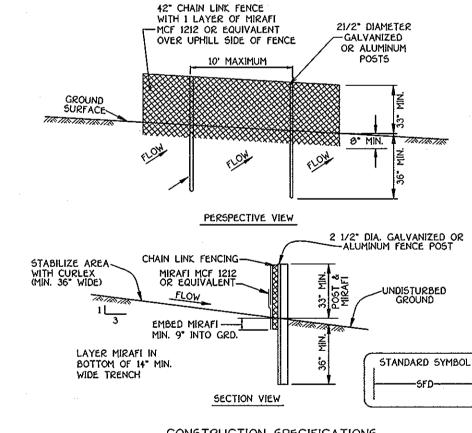
folded and stapled to prevent sediment bypass 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

3. Where ends of geotextile fabric come together, they shall be overlapped,

## Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2x slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control



CONSTRUCTION SPECIFICATIONS 1. FENCING SHALL BE 42" HIGH CHAIN CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS 690.01 AND 690.02 FOR CHAIN U FENCING. THE SPECIFICATIONS FOR A 6'-0" FENCE SHALL BE USED,

- SUBSTITUTING 42" FABRIC AND 8' POSTS. POSTS SHALL BE PLACED WITHOUT CONCRETE EMBEDMENT. 2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
- 3. FILTER CLOTH TO BE FASTENED SECURELY TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. 4. FILTER CLOTH SHALL BE IMBEDDED A MINIMUM OF 9" INTO THE GROUND. 5. WHEN TWO SECTIONS OF DIVERSION CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.

. Fabric Properties	Value	Test Method
Grab Tensile Strength (lbs.)	90	ASTM D1682
Elongation at Failure (x)	50	ASTM 01682
Mullen Burst Strength (PSI)	190	A5TM D3786
Puncture Strength (lbs.)	40	ASTM 0751
Slurry Flow Rate (gal/min/sf)	0.3	Virginia DOT VTM-51
Equivalent Opening Size	40-80	US Std Sieve CW-02215
Utraviolet Radiation Stability (*)	90	ASTM G-26

Slope Length Silt Fence Length Steepness (maximum (maximum) 10 - 20x 10:1 - 5:1 20 - 33x 5:1 - 3:1 1.500 feet 300 feet 1.000 feet 33 - 50% 3:1 - 2:1 500 feet 200 feet 50% + 2:1 + 100 feet 250 feet

SUPER SILT FENCE

6-17-04 DEVELOPER'S CERTIFICATE "I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All 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 Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.

Changtres II we

By! US Home, Sole Monley

NGINEER'S CERTIFICATE

is Plan For Erosion And Sediment Control

ward Soil Conservation District

By: thept: Gales

A Control Plan Based On My Personal Knowledge

A Control Was Prepared In Accordance

A Control Was Prepared In Accordance

Reviewed For Howard County Soil Conservation District And Meets Technipal Requirements. my menon or Erosion And Sediment Control By broved: Department Of Planning And Zoning 8/25/09

Approved: Howard County Department Of Public Works 2/23/04

#### SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMITS. (2 WEEKS) 2. NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-000-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24 HOURS BEFORE STARTING ANY WORK. IN ADDITION, NOTIFY AT&T PRIOR TO ANY ACTIVITY WITHIN

3. INSTALL PERIMETER SEDIMENT CONTROL MEASURES WHICH INCLUDE STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE AND EARTH DIKES. (2 WEEKS) 4. AFTER PERMISSION IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR, FILL SEDIMENT TRAP: UPGRADE SILT FENCE TO SUPER-SILT FENCE AS NOTED ON PLAN, GRADE SITE TO SUBGRADE

MAINS WITHIN THE LIMITS OF EACH PHASE OF THIS PHASE. 5. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL EXISTING AND NEW SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL TRAPS WHEN CLEANOUT ELEVATIONS ARE REACHED. ALL SEDIMENTS

AND STABILIZE USING TEMPORARY SEEDING NOTES. INSTALL STORM DRAINS, WATER MAINS AND SEWER

#### MUST BE PLACED UPSTREAM OF AN APPROVED TRAP DEVICE. 6. INSTALL ROADWAY BASE COURSE PAVING. (I WEEK)

7. STABILIZE ALL DISTURBED AREAS PHASE I ROAD CONSTRUCTION AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED TO PHASE 2 OF THE SITE WORK. (1 WEEK) 8. APPLY TACK COAT TO BASE COURSE PAVING AND LAY SURFACE COURSE. (1 WEEK)

9. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES (SILT FENCE, BASIN \*2, DIKES & P.O.S.T. \*1) HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE DEVICE MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. (4 WEEKS) SWM/BASIN NOS. 1 AND 2 CAN REMAIN IN PLACE AS BASINS FOR A PERIOD OF 3 YEARS SO THEY CAN BE UTILIZED FOR FUTURE PHASES OF THIS DEVELOPMENT.

10. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE

COMPLETED PROJECT OR COMPLETION OF EACH PHASE OF THE SITE GRADING.

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

CHERRYTREE PARK BULK PARCEL 'G-1' AND OPEN SPACE LOTS 13 & 14 (PHASES 1 AND 3)

(A RESUBDIVISION OF BULK PARCEL 'G', PLAT NO. 16102-16103) ZONED MXD-6 TAX MAP NO. 46 PARCEL NO. 156 GRID NO. 4 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE : APRIL 22, 2004

K:/Drawings 3/30630/Finals-phase 3/Sheet 6 sed con details.dwg

SILVER SPRING, MARYLAND 20903

OWNERS

CHERRYTREE II, L.L.C. (PARCEL 'G')

10230 NEW HAMPSHIRE AVENUE, SUITE 300

CHERRYTREE PARK HOMEOWNER'S ASSOCIATION, INC (OPEN SPACE LOT 13) 10230 NEW HAMPSHIRE AVENUE, SUITE 300 SILVER SPRING, MARYLAND 20903

DEVELOPER CHERRYTREE II, L.L.C. 10230 NEW HAMPSHIRE AVENUE, SUITE 300 SILVER SPRING, MARYLAND 20903

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