	SHEET INDEX
HEET No.	DESCRIPTION
1	TITLE SHEET
2	PRIVATE ACCESS PLAN AND PROFILE
- 3	GRADING AND SEDIMENT CONTROL PLAN
4	STORM DRAIN PROFILES & SOIL BORINGS
5	STORM DRAIN DRAINAGE AREA MAP & LANDSCAPING PLAN
. 6	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
7	STORMWATER MANAGEMENT NOTES AND DETAILS
8	FOREST CONSERVATION PLAN
9	ROADWAY DETAILS

FINAL ROAD CONSTRUCTION, GRADING AND SEDIMENT CONTROL PLANS

GLYNCHESTER MANOR

BUILDABLE LOTS 1-8 & OPEN SPACE LOT 9

ZONED: R-20

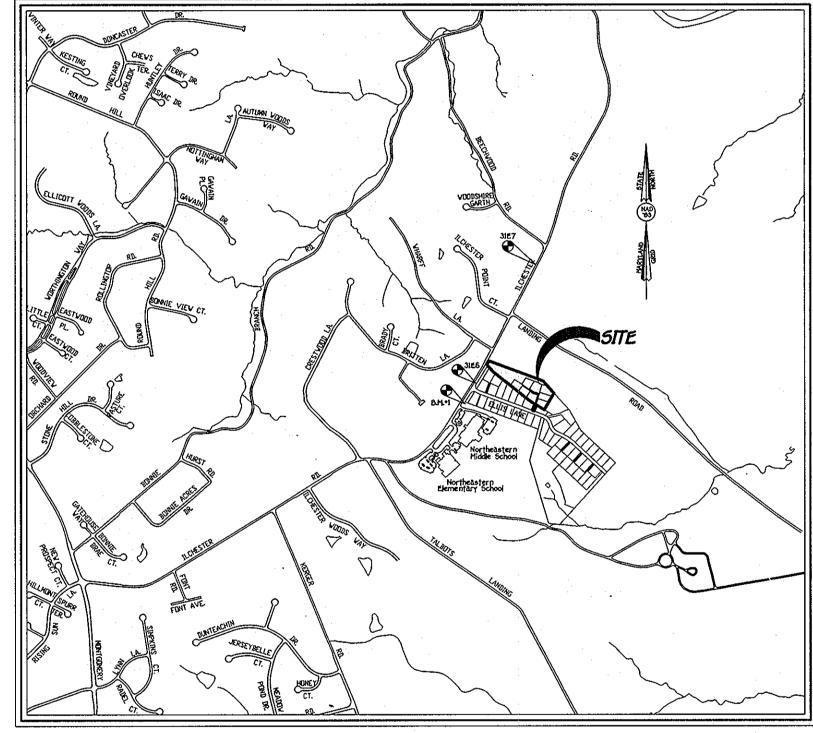
TAX MAP No. 31 PARCEL NOs. 633 & 240 GRID No. 16

ROA	D CLASSIFICATION CH	ART
ROAD	CLASSIFICATION	R/W WIDTH
MINTZ LANE	PRIVATE ACCESS PLACE	30' EASEMENT

STREET LIGHT CHART							
DWG. No.	STREET NAME	STATION	OFF-SET	FIXTURE/POLE TYPE			
2	MINTZ LANE	0+26	22° RT.	100 WATT "PREMIER H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14 FOOT BLACK FIBERGLASS POLE. (<i>PUBLIC</i>)			
2	MINTZ LANE	3+50	32' LEFT	100 WATT "PREMIER H.P.S. VAPOR FIXTURE POST TOP FIXTURE MOUNTED ON A 14 FOOT BLACK FIBERGLASS POLE. (<i>PRIVATE</i>)			

THE STREET LIGHTS FOR THIS PROJECT SHOWN PRIVATE TO BE INSTALLED BY OTHERS AND WILL NOT BE THE RESPONSIBILITY OF HOWARD COUNTY.

TRAFFIC CONTROL SIGNS									
STREET NAME	C.L. STATION	OFFSET	POSTED SIGN	SIGN CODE					
MINTZ LANE	0+15	15' L	STOP	R1-1					



Vicinity Map

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES (CONTINUED)

- 29. A LANDSCAPE SURETY FOR 32 SHADE TREES AND 16 EVERGREEN TREES IN THE AMOUNT OF \$12,000.00 IS PROVIDED IN A DEVELOPER'S AGREEMENT.
- 30. THE DEVELOPER IS RESPONSIBLE FOR THE REMOVAL OF THE PORTION OF THE EXISTING DRIVEWAY (WITHIN THE BOUNDARY OF GLYNCHESTER MANOR ONLY) ALONG LOTS 1, 2, 3 & Ø AND AT THE FRONT OF THE SITE ADJACENT TO THE NEW MAINTENANCE ACCESS SERVING THE PROPOSED SWM POND.
- 31. "SIGN POSTS: ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST."

GENERAL NOTES

- SUBJECT PROPERTY ZONED R-20 Per 4/13/04 COMPREHENSIVE ZONING PLAN.
 ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS
- UNLESS WAIVERS ARE APPROVED.

 3. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, DIVISION
- OF CONSTRUCTION INSPECTION AT 410-313-1880 AT LEAST (5) WORKING DAYS.
 PRIOR TO THE START OF CONSTRUCTION.
- 4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- 5. LOCATION: ILCHESTER ROAD, SOUTH OF LANDING ROAD, TAX MAP NO. 31, PARCEL NOs. 633 & 240, GRID NO. 16

Willia I. Mulula /

1-28-05

- 6. TOPOGRAPHIC INFORMATION ESTABLISHED AT TWO FOOT INTERVALS BASED ON AERIAL TOPOGRAPHY PREPARED BY HARFORD AERIAL SURVEYS DATED MARCH, 1999.
 7. PROPERTY IS LOCATED WITHIN METROPOLITAN DISTRICT.
- 8. EXISTING UTILITIES SHOWN HEREON ARE TAKEN FROM CURRENT HOWARD COUNT
- a. EXISTING WATER CONTRACT NO. 208-W
- b. EXISTING SEWER CONTRACT NOs. 10-1214 AND 10-3696

 9. This Plan Is In Compliance With The Fifth Edition Of The Subdivision And Land Development Regulations.
- This Plan is in Compilative with the right Edition of the Subdivision Aid Land Development Regulations.

 This Project is Grandfathered To The Fifth Edition Of The Subdivision Regulations Because The Sketch
 Plan 5-02-16 Was In Progress And Approved On November 12, 2002, Which Is Prior To May 22, 2003,
 The Effective Date Of The Amended Fifth Edition. The Plan Is Subject To The 1935 Zoning Regulations
 As Amended By CB 50-2001, Effective 1-8-02, Because 5-02-16 Was Technically Complete On 10-02-02,
 After The 1-8-02 Effective Date Of CB-50-2001.
- 10. THIS HORIZONTAL AND VERTICAL DATUM SHOWN ARE BASED ON THE FOLLOWING NAD '83 HOWARD COUNTY CONTROL STATIONS:

5ta. 31E6 N 173996.1506 E 419619.2145 (meter) ELEV. N/A
5ta. 31E7 N 174448.1549 E 419064.0345 (meter) ELEV. 470.65
B.M. No. 1

11. AREA TABULATION:

GROSS AREA OF TRACT:
AREA OF FLOODPLAIN:
NET AREA OF TRACT:
AREA OF PUBLIC ROAD R/W:
AREA OF BUILDABLE LOTS:

0.00 AC.
4.30 AC. +/4.30 AC. +/-

12. LOT TABULATION:

TOTAL NO. OF PROPOSED LOTS/PARCELS:

NO. OF BUILDABLE LOTS:

NO. OF OPEN SPACE LOTS:

AREA OF OPEN SPACE LOTS:

- 13. OPEN SPACE TABULATION:

 REQUIRED OPEN SPACE: 1.72 AC. +/(40% OF GROSS AREA)

 OPEN SPACE PROVIDED: 1.76 AC. +/RECREATIONAL OPEN SPACE REQUIRED: N/A
- 14. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE IS TO BE PROVIDED AT THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY AND NOT ONTO THE FLAG OR PIPESTEM DRIVEWAY.
- 15. DRIVEWAY (5) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR
- FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:

 A) WIDTH 12 FEET (14 FEET SERVING MORE THAN ONE RESIDENCE)
- B) SURFACE SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING
- C) GEOMETRY MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 FOOT TURNING RADIUS
- D) STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
- E) DRAINAGE ELEMENTS CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
- F) STRUCTURE CLEARANCES MINIMUM 12 FEET
 G) MAINTENANCE SUFFICIENT TO INSURE ALL WEATHER USE
- 16. WETLAND AND FOREST STAND DELINEATION INFORMATION SHOWN WAS TAKEN FROM REPORTS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY, 2002.
- 17. TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP DATED MARCH, 2002 AND APPROVED UNDER 5-02-16.
- 18. SOILS INFORMATION TAKEN FROM SOIL MAP NOs. 20 AND 21, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY 1960 ISSUE AND SUPPLEMENTED WITH A GEOTECHNICAL REPORT
- PREPARED BY HILLIS-CARNES DATED AUGUST, 2003.

 19. THE EXISTING SWIMMING POOL LOCATED ON THE MINTZ PROPERTY IS TO BE BACKFILLED WITH ADEQUATELY
- COMPACTED SOIL TO PROVIDE A STABLE SUB-BASE FOR THE PROPOSED PRIVATE ACCESS PLACE.

 20. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE
- AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY PROVIDING 1.08 ACRES +/- OF ON-SITE RETENTION. THE REMAINING REQUIREMENT OF 0.36 ACRES +/- OF REFORESTATION
- WILL BE PROVIDED BY A FEE-IN-LIEU PAYMENT.

 21. ILCHESTER ROAD IS A SCENIC ROAD. AS PART OF THE SKETCH PLAN (5 02-16) PROCESS THE IMPACT OF THIS
- PROPOSED DEVELOPMENT TO ILCHESTER ROAD WAS DETERMINED TO BE ADEQUATE AND THE SCENIC ROAD STUDY WAS APPROVED.
- 22. THERE IS NO PUBLIC 100 YEAR FLOODPLAIN WITHIN THIS SUBMISSION.
- 23. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND 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 SPACING OF 20' SHALL BE MAINTAINED BETWEEN AND STREET LIGHT AND ANY TREE.
- 24. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD
 COUNTY AND MARYLAND 370 SPECIFICATIONS. WATER QUALITY WILL BE PROVIDED BY
 A BIO-RETENTION FACILITY LOCATED ON H.O.A. OPEN SPACE LOT 9. THIS FACILITY WILL BE PRIVATELY
 OWNED AND MAINTAINED BY THE H.O.A. IN ADDITION TO THIS FACILITY, THE REMAINING WOV WILL BE PROVIDED VIA
 THE DISCONNECTION OF RUN-OFF AND GRASS CHANNEL CREDITS. THE GROUNDWATER RECHARGE REV IS PROVIDED
 WITHIN GRASS CHANNELS AND CPV IS NOT REQUIRED FOR THIS SITE SINCE THE 1 YEAR PEAK DISCHARGE IS < 2 c.f.s.
- 27. PREVIOUS DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS ARE 5-02-16, P-04-08 & F-02-05.
- 28. THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT FOR THIS SUBDIVISION WILL BE FULFILLED BY PROVIDING 1.08 Ac. OF ON-SITE RETENTION, THE REMAINING REQUIREMENT OF 0.36 Ac. * OF REFORESTATION WILL BE PROVIDED BY A FEE-IN-LIEU PAYMENT. RETENTION: (1.08 Ac. x \$0.20/5.F. = \$7,840.80) AND FEE-IN-LIEU PAYMENT: (0.36 Ac. x \$0.50/5.F. = \$7,840.80) TOTAL FOREST CONSERVATION SURETY = \$17,249.76.
 - "No Clearing, Grading Or Construction Is Permitted Within The Forest Conservation Easement: However, Forest Management Practices As Defined In The Deed Of Forest Conservation Easement Are Allowed."

FISHER, COLLINS & CARTER, INC.

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

ELLICOTT CITY, MARYLAND 21042

:/5D5KPROJ/30767/Dwg/FINAL5/5HEET 1 TITLE SHEET.DWG.

OWNER

ANDREW C. MINTZ & PAUL F. MINTZ

4975 ILCHESTER ROAD

ELLICOTT CITY, MARYLAND 21043

ILCHESTER, LLC
c/o J. THOMAS SCRIVENER, CORP.
8808 CENTRE PARK DRIVE
SUITE 209
COLUMBIA, MARYLAND 21044

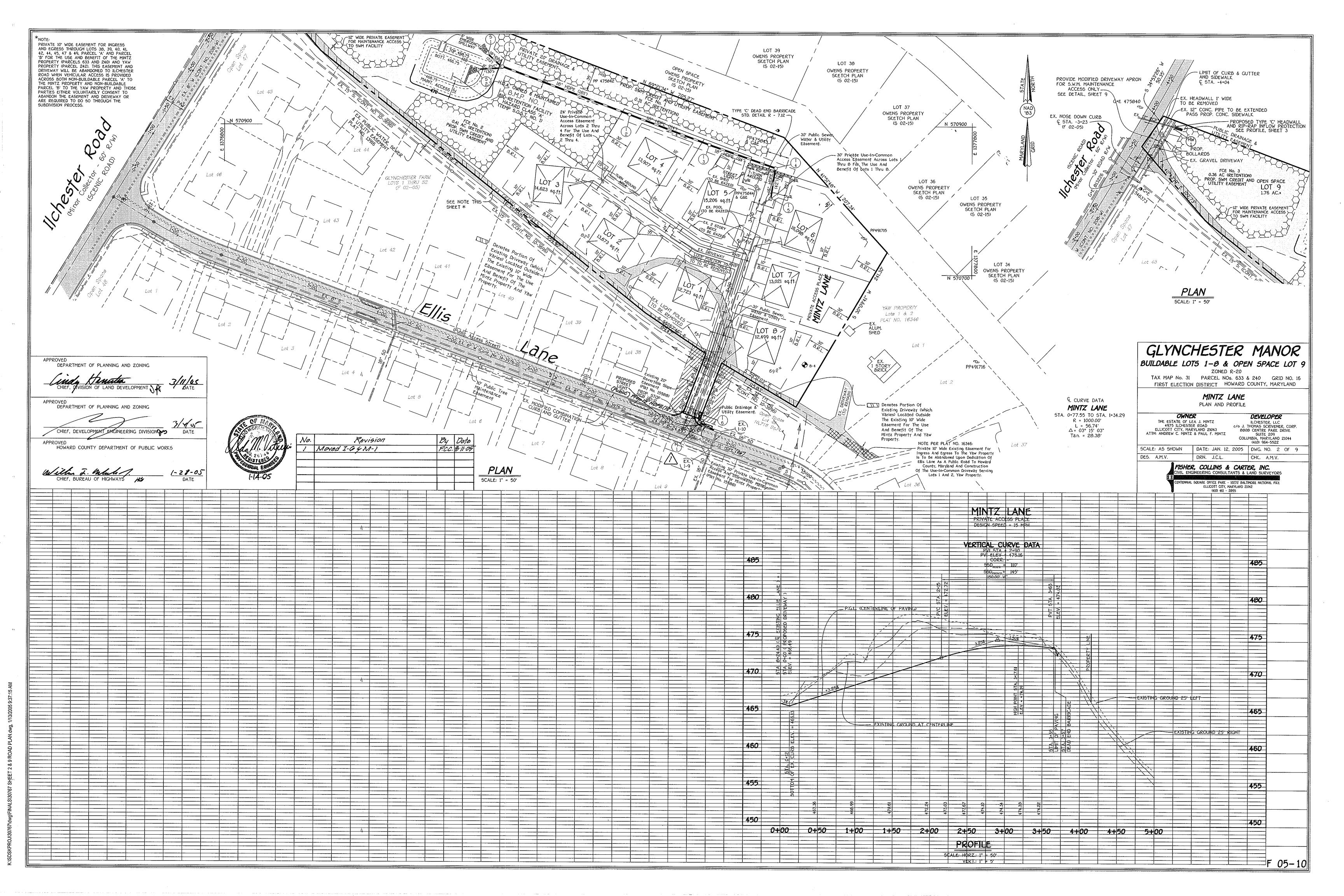


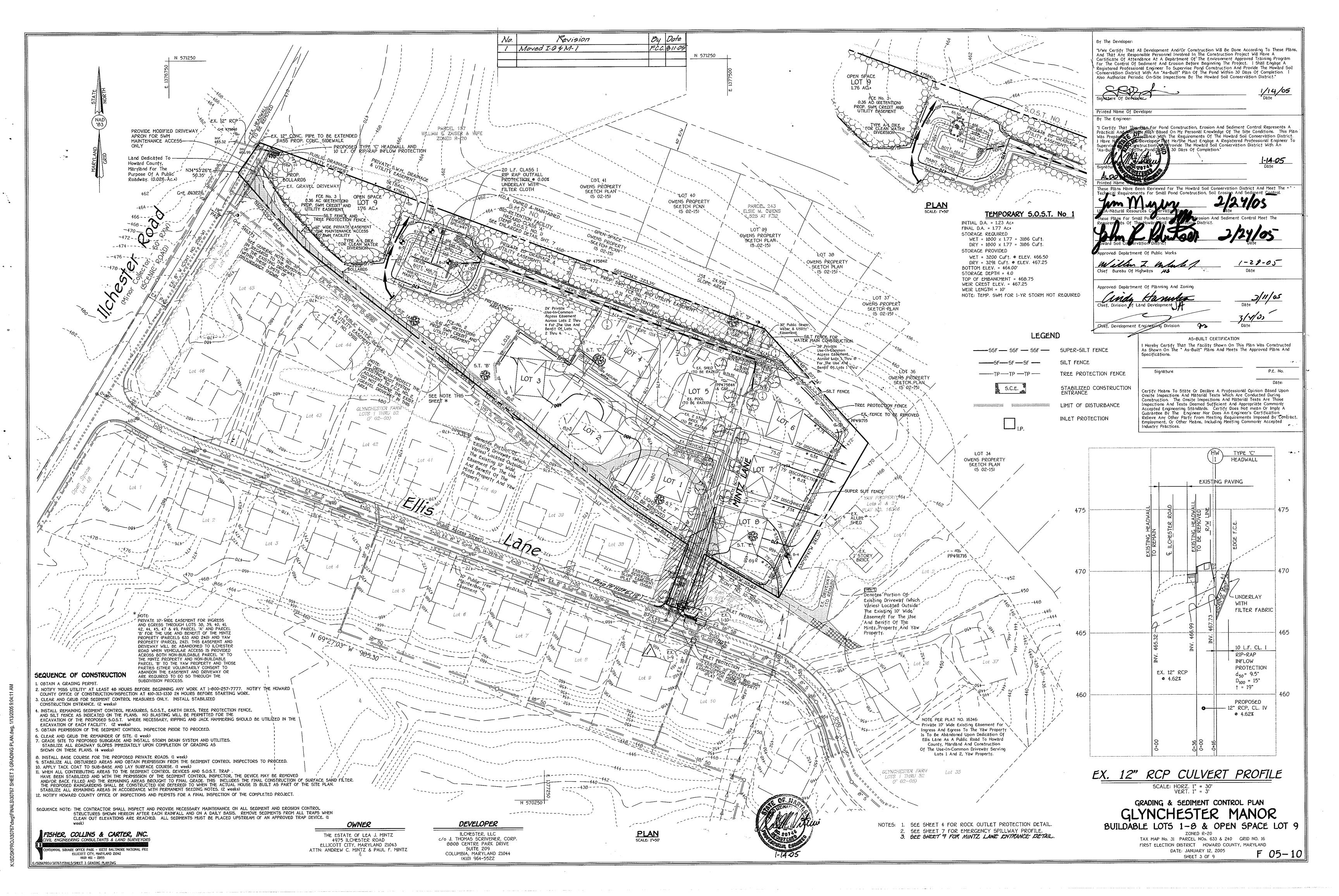
GLYNCHESTER MANOR
BUILDABLE LOTS 1-8 & OPEN SPACE LOT 9

TAX MAP No. 31 PARCEL NOs. 633 & 240 GRID NO. 16
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JANUARY 12, 2005

SHEET 1 OF 9

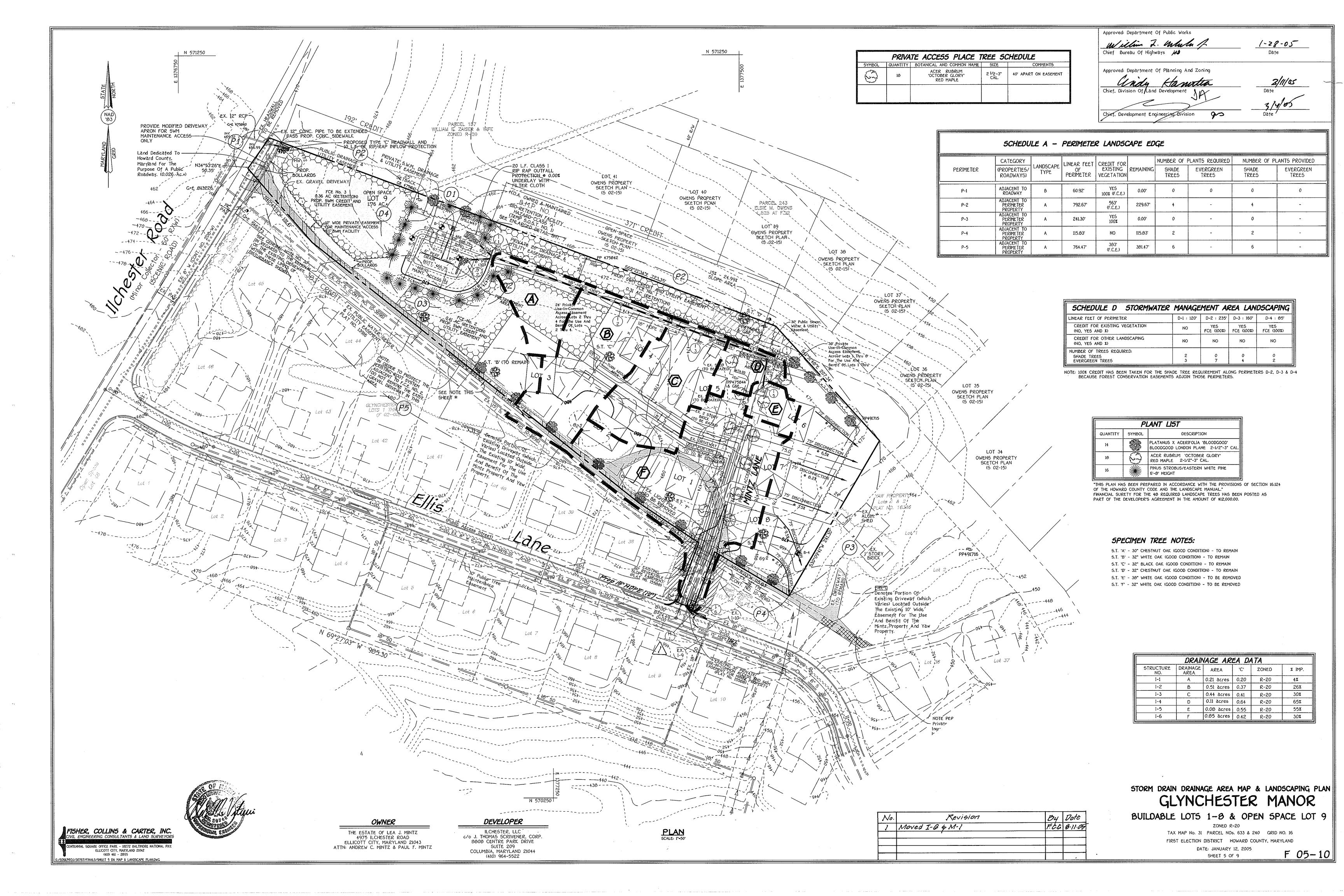
F 05-10

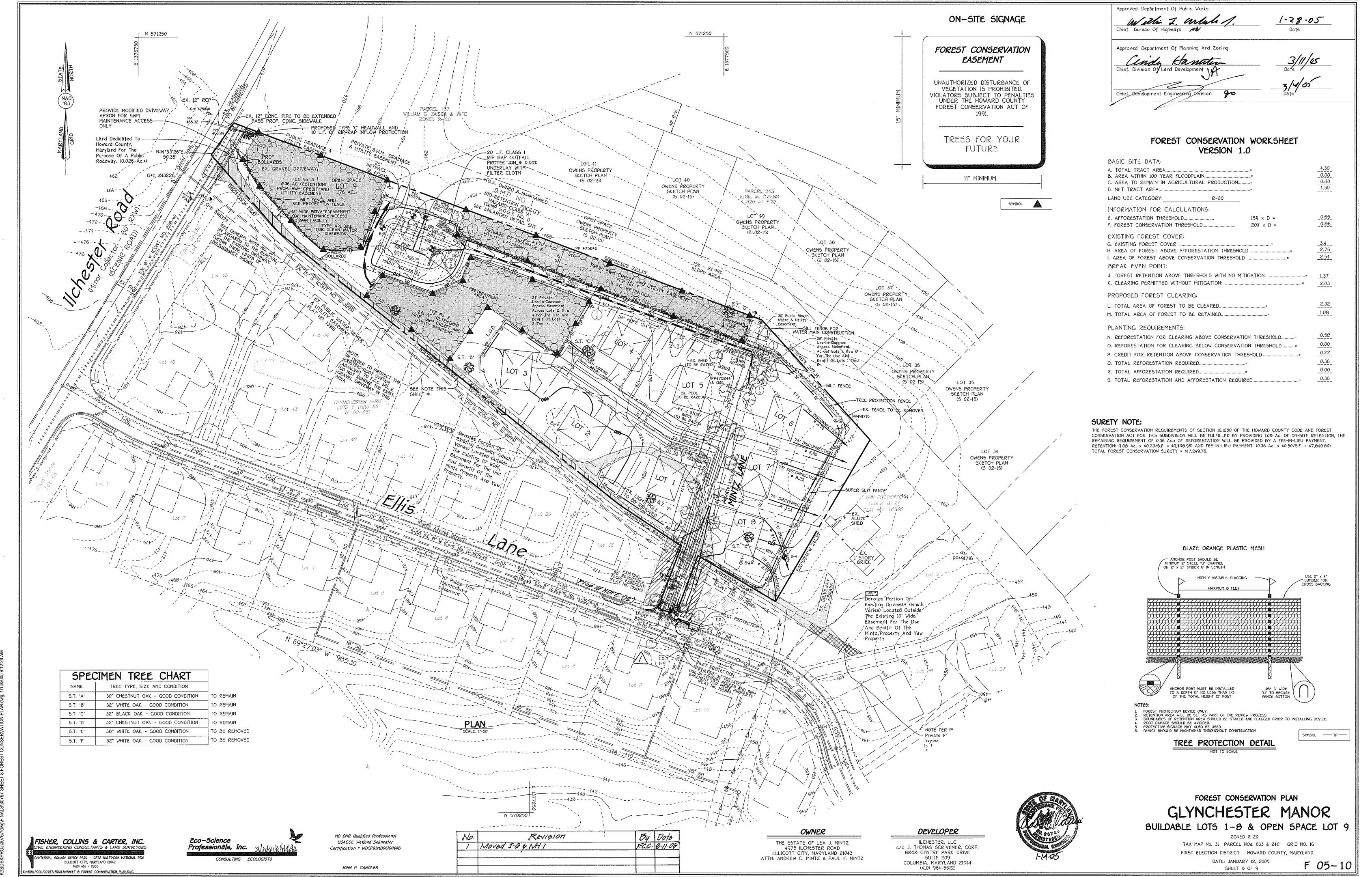


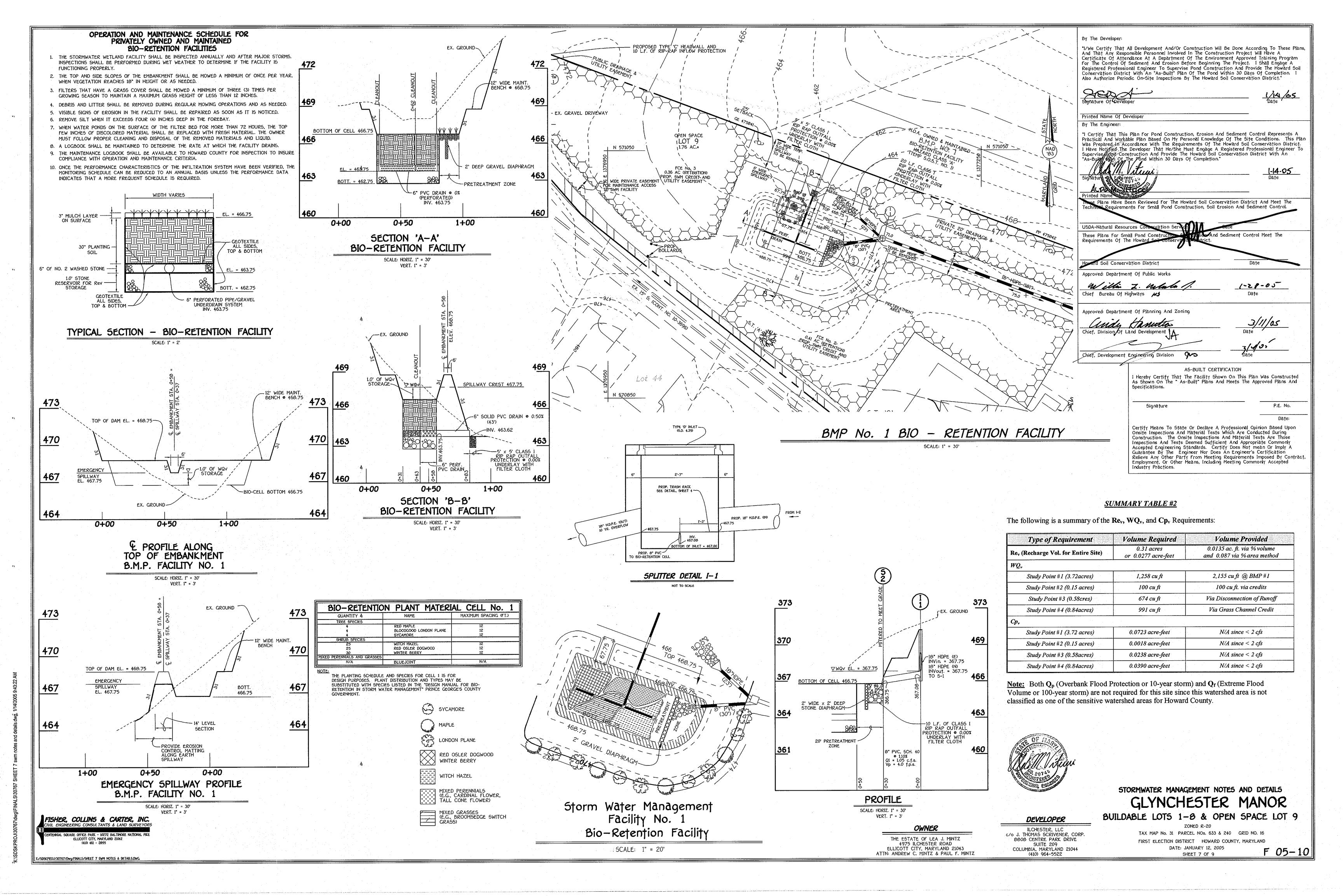


STRUCTURE SCHEDULE				APPROVED: DEPARTMENT OF PUBLIC WORKS William Z. Mululi 1. 4-28-05
STRUCTURE TOP INV.IN INV.OUT ROAD NAME & ROAD STA. OFFSET TYPE W REMARKS	18" HDPE	EXISTING STABILIZED C	ORIGINAL Z	CHIEF, BUREAU OF HIGHWAYS APPROVED: DEPARTMENT OF PLANNING AND ZONING
I-1 470.75 467.75 467.75, 467.09 N 570978.50 E 1377170.88 'D' INLET * 2'-7" 5.D 4.39 I-2 473.50 469.03 468.93 N 570914.78 E 1377341.37 'D' INLET * 2'-7" 5.D 4.39	T _{d/2}	SON SLOPE TO WALL F	FILTER CLOTH LINING	CHIEF, DIVISION OF LAND DEVELOPMENT A DATE
I-3	La = 20°	FILTER CLOTH DEPTH LINING 1' MINIMUM	• SECTION A-A NOTE: FILTER CLOTH SHALL BE	CHIEF, DEVELOPMENT ENGINEERING DIVISION 900 DATE
I-6 465.50 458.00 MINTZ LANE 0+27 14' R 'D' INLET * 2'-7" 5.D 4.39 EX. I-10 465.75 458.24 457.90 ELLIS LANE 8+68.82 **12.43' R A-5 2'-6" 5.D 4.40	PLAN VIEW	ELEVATION	GEOTEXTILE CLASS C	REVISIONS NO. DESCRIPTION DATE 1 Moved I-0 4 M-1 0.11.09
M-1 466.∞ 458.77 458.52 MINTZ LANE 0+10 10' R STD. MANHOLE G - 5.11 5-1 467.00 465.50 N 570994.25 £ 1377153.30 HDPE END SECTION A.D.S. FLARED FIND SECTION 5-2 467.25 466.75 N 570974.76 £ 1377139.54 MITERED PIPE END	R	OCK OUTLET PROTECTION III	A FELLING	1 NOVER 1-0 9 NI-1 9.11.07
HW-1 469.50 467.73 N 571127.07 E 1376989.13 TYPE 'C' HEADWALL 5.D 5.21	STRUCTURE AREA WETTED R R 2/3	CHANNEL DESIGN DATA S S 1/2 W d N V Q RIP-RAP SIZE BLANKET	(Ex. (I-10)	
** - DENOTES DISTANCE FROM & OF ROAD TO FACE OF INLET * ALL 'D' INLETS TO BE OPEN ON TWO (2) SIDES 1-800-733-9554	5-1 2.00 5.24 0.3917 0.5260	5 S 1/2 W d N V Q RIP-RAP SIZE BLANKET D 50 D _{MAX} THICKNESS C 1/2 C	470 (F 02-05)	470
		CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS	5EXISTING GROUND	₹**
roject Name Mintz Property SWM Boring Number B-1 Location Howard County, Maryland Job # 03366A roject Name Mintz Property SWM	Boring Number B-2	1. The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the	465	465
SAMPLER atum Hammer Wt. 140 Lbs. Hole Diameter Foreman Jerry Hersl Surf. Elev. Hammer Drop 30 Inches Rock Core Dia. Inspector Hammer Wt. 140 Lbs. SAMPLER Foreman Jerry Hersl Inspector Hammer Wt. 140 Lbs. Completed 07-10-03	Hole Diameter Foreman Jerry Hersl	surrounding undisturbed material. 2. The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.	460 10 yr. HGL	460
Date Started 07-10-03 Pipe Size 2.0 Inches OD Boring Method HSA Completed 07-10-03 Suff. Elev. Hammer Drop 30 Inches OD Date Started 07-10-03 Pipe Size 2.0 Inches OD ELEV. SOIL DESCRIPTION STRA. DEPTH SAMPLE BORING & SAMPLING Color, Moisture, Density, Size, Proportion DEPTH SCALE CON BLOWS 6" NO. REC. NOTES ELEV. SOIL DESCRIPTION STRA. DEPTH DEPTH SCALE CON BLOWS 6" NO. REC. NOTES ELEV. SOIL DESCRIPTION STRA. DEPTH D	Boring Method HSA Completed 07-10-03 SAMPLE BORING & SAMPLING	 Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional shall hole shall be repaired by 	├───	NOTE: PROVIDE ALUMINUM TRASH
SURFACE 0.0 Cotor, Moist, soft, slit, trace sand (ML) Brown, moist, soft, slit, trace sand (ML) 1 1-2-2 1 12" No groundwater encountered white drilling Cotor, moist, very loose sandy silt, trace roots (ML) Cotor, Molsture, Density, Size, Proportion DEPTH SCALE COUNTY SURFACE 0.00 Brown, moist, very loose sandy silt, trace roots (ML)	D 1-2-2 1 7" No groundwater encountered while drilling	placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot. 4. Stone for the riprap or gabion outlets may be placed by	455	455 GRATE IN TWO RECTANGULAR SECTIONS
Orange-brown, moist, medium dense sandy silt, trace gravel Orange-brown, moist, medium dense sandy silt, trace gravel	white driving	equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	450 18" HDPE OUT 18" HDPE IN
(ML) 5.5 5.0 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5	D 7-13-15 2 12"	insure that it is reasonably homogenous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent	450 15" HDPE	450
Orange-brown and tan, moist, medium dense to loose fine sandy silt, trace to no clay (ML) Orange-brown and tan, moist, medium dense to loose fine sandy silt, trace to no clay (ML) Caved in at 6.0' at Completion	Caved in at 6.5' at Completion	necessary to prevent damage to the permanent works.	@1.00% Q=2.20 cfs 445 Vr = 1.20 fpe	445
Orange-brown and tan, moist, medium dense silty sand, trace gravel (SM)	D 9-9-10 4 18*		Vp = 4.76 Pp8	
10.0 30:03 10.0 10.0 30:03 10.0 10.		PIPE SCHEDULE	## 10.17% Q = 4.34 c.f.s. Vf = 2.45 f.p.s. Vp = 12.1 f.p.s. (F 02-05)	18" HDPE (NW) INV. = 441.03 18" HDPE (SE) INV. = 440.78 TRASH GRATING DETAIL AT I-1 NO SCALE
		SIZE CLASS LENGTH 15" HDPE 54 L.F.	15" HDPE @1.00% Q=12.31 cfs Existing 18" HDPE @2.00%	(F 02-05)
15.0	Backfilled after 24 hours	18" HDPE 438 L.F. 12" RCP, CL. IV 16 L.F.	435 Vp=4.02 fps Q = 2.29 c.f.s. Vf = 1.30 f.p.s. Vp = 4.76 f.p.s. (F= 02-05)	435
		8" PVC, 5CH. 40 30 L.F.	PROFILE TO SEE	o. 420
			430 10 10 10 10 10 10 10	§ 430
20.0	Paulan Number D. 4	480	TEXISTING GROUND OVER (3)	1 4 5 480
troject Name Mintz Property SWM Cocation Howard County, Maryland SAMPLER Horing Number B-3 roject Name Mintz Property SWM O3366A ocation Howard County, Maryland SAMPLER SAMPLER			PROPOSED GRADE OVER Q PIPE	
	Hole Diameter Foreman Jerry Hersl Rock Core Dia. Inspector Boring Method HSA Completed 07-10-03	475		475
SURFACE 0.0 6" Topsoil SURFACE 0.0 Brown, moist, soft, silt, trace roots Brown, moist, loose sandy silt	SAMPLE BORING & SAMPLING N BLOWS 6" NO. REC. NOTES 6" Topsoil	20 L.F. © EL. 465.50 OF CL. I RIP-RAP OUTFALL PROTECTION © 0.00% UNDERLAY WITH FILTER CLOTH (SEE RIP-RAP CHANNEL DETAIL THIS SHEET) NOTE: B	10 yr. HGL	<u>470</u>
(ML) 2-2-3 1 7" No groundwater encountered	3-3-4 1 9" No groundwater encountered _ while drilling	FILTER CLOTH (SEE RIP-RAP CHANNEL DETAIL THIS SHEET) NOTE: 1	PROVIDE ALUMINUM TRASH	0.27
Orange-brown and tan, moist, medium dense silty sand, some to little gravel (SM) D 7-11-8 2 10" Orange-brown and tan, moist, medium dense sandy silt - silty sand trace gravel (ML-SM)	12-11-12 2 16"	9" PVC (W)	PROVIDE ALUMINUM TRASH GRATING ABOVE 6" HDPE PER 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	465
Caved in at 6.0' at Completion	Caved in at 6.0' at Completion	465.50		15" HDPE @ 0.50% 0 = 0.28 c f s
D 12-13-12 3 12"	9-10-11 3 12"	- 460	10" HDPE ② 0.50% Q = 0.73 c.f.s. Vf = 0.41 f.p.s. Vp = 2.67 f.p.s.	@ 0.50% Q = 0.20 c.f.s. Vf = 0.23 f.p.s. Vp = 2.06 f.p.s.
Bottom of Test Hole at 10.0' 10.0 10.06 x 7 D 9-10-10 4 14"	6-7-6 4 18"		10" HDPE ② 0.65% Q = 2.67 c.f.s. Vf = 1.51 f.p.s. Vp = 10.9 f.p.s. 10" HDPE ② 0.50% Q = 1.71 c.f.s. Vf = 0.97 f.p.s. Vp = 3.41 f.p.s.	455
				2074
		450 - 10" HDPE @ 6.73%	PROFILE_	450
	Backfilled after 24 hours	Q = 2.77 c.f. Vf = 1.57 f.p Vp = 10.2 f.p	.s. ———————————————————————————————————	46.00 47.20 48.20
		- 445 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	± ₹	\$ \$ \$ \$ 445
		- - - - OWNER	DEVELOPER	STORM DRAIN PROFILES & SOIL BORINGS GLYNCHESTER MANOR
FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS	·	• · · · · · · · · · · · · · · · · · · ·	ILCHESTER, LLC J. THOMAS SCRIVENER, CORP. 8808 CENTRE PARK DRIVE SUITE 209 COLUMBIA, MARYLAND 21044	BUILDABLE LOTS 1-8 & OPEN SPACE LOT 9 ZONED R-20 TAX MAP No. 31 PARCEL NOS. 633 & 240 GRID NO. 16
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855		ATTN: ANDREW C. MINTZ & PAUL F. MINTZ	SUITE 209 COLUMBIA, MARYLAND 21044 (410) 964-5522	FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: JANUARY 12, 2005 SHEET 4 OF 9 F $05-10$

O NOOZEZIALIANEINAN SIOOZEZ SLIEET 4 STOBMIDDANN DDOEN ES Aling 11/3/2006 0:05:20 AM







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 venetation, 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 O(up 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 A. Site Preparation . 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) 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 b 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. v. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means. Seedbed Preparation
i. Temporary Seeding

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. Apply fertilizer and lime as prescribed on the plans.

ii. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

5. Apply fermine and inner as prescribed on the plans.

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

7. Permanent Seeding

8. 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 o serecia lespedezas is to be planted, then a sandy soil (<30% sil 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. top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on

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 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°-80° F. can weaken bacteria and make the inoculant less effective. 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.

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

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. 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.

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, 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)

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

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 he 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. 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 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 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:

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. If 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 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 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

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.

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 19 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

d. 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 int he 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.

SECTION 2 - TEMPORARY SEEDING

SECTION 3 - PERMANENT SEEDING

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 embakment to intercept surface runoff and convey it down the slope in a non-crosive manner to

a sediment trapping device.

iv. Construction sequence: Refer to Figure 4 (below). nstruction 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 embankment, dress and stabilize.

Place Phase 2 embankment, dress and stabilize.

d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Once the placement of fill has begun the operation should be continuous 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.

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.

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)

Seeding grass and legumes to establish groung cover for a minimum of one year on disturbed areas

A. Seed mixtures - Permanent Seeding

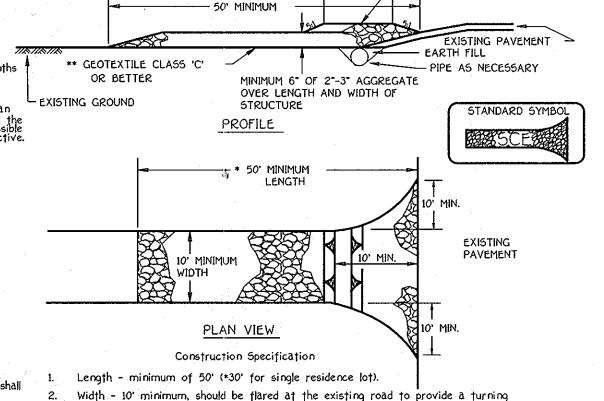
i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put 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 Techinical Field Office Guide. Section 42 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass. 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), inhaddition to the above soil amendments shown in the table below, to be performed at

Seed Mixture (Hardiness Zone <u>6b</u>) From Table 25					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/a	Seeding Dates	Seeding Depths	N	P205	K20	, Kaje
3	TALL FESCUE (05%) PERENNIAL RYE GRASS (10) KENTUCKY BLUEGRASS (5%)		3/1 - 5/15, 8/15 - 10/15	i" - 2"	90 lb/ac (2.0 lb/ 1000sf)		175 lb/ac (4 lb/ 1000sf)	2 tons/ac (100 lb/ 1000sf)
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3/1 - 5/15, 8/15 - 10/15	1" - 2"				

- MOUNTABLE

BERM (6" MIN.)



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 acotextile. 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

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.

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.

STABILIZED CONSTRUCTION ENTRANCE

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

Purpose

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

STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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 furnish continuing supplies of moisture and plant nutrients. 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 21 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, sit 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 ragments, 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, nutsedge, poison ivy, thistle, or others 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 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

dissipation of phyto-toxic materials.

 i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - 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

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.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials

Topsoil Application

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. Grades on the areas 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 Environment under CDMAR 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. If compost does not meet these requirements, the 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.

1) A MINIMUM OF 40 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 (313-1855 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 OR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO 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 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 HAPTER 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 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

SEDIMENT CONTROL NOTES

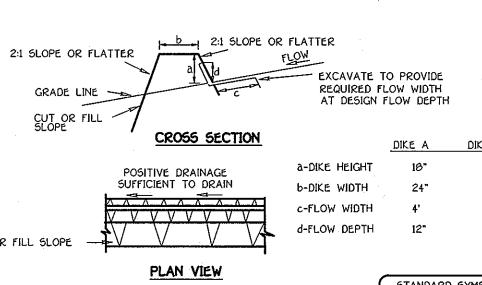
TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT

7) SITE ANALYSIS: TOTAL AREA OF SITE. AREA DISTURBED AREA TO BE ROOFED OR PAVED 0.82 AREA TO BE VEGETATIVELY STABILIZED 1.50 OFFSITE WASTE/BORROW AREA LOCATION: N/A 6) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING

ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE. 9) 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

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.



Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%

an undisturbed, stabilized area at a non-erosive velocity.

with the proper functioning of the dike. 5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede

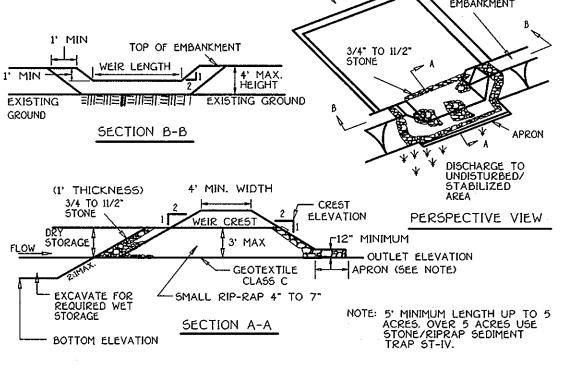
6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

> EARTH DIKE NOT TO SCALE



COMPACTED EARTH



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

6. The structure shall be inspected periodically and after each rain and repairs made as needed. 7. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one

8. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

time) with seed and much upon trap completion and monitored and maintained erosion free

9. Refer to Section D for specifications concerning trap dewatering.

during the life of the trap.

10. Minimum trap depth shall be measured from the weir elevation.

12. Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6° into existing ground

11. The elevation of the top of any dike directing water into the trap must equal or exceed the

at the entrance of the outlet channel. 13. Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

42° Chain Link Fence With 1 Layer of Mirafi --MCF 1212 or equivalent Over uphill side of Fence

10° MAXIMUM

PERSPECTIVE VIEW

SECTION VIEW

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,

CONCRETE EMBEDMENT. 2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES

40-80

Design Criteria

Slope Length (maximum)

Unlimited 400 feet 300 feet 200 feet 100 feet

SUPER SILT FENCE

NOT TO SCALE

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.

BE OVERLAPPED BY SIX INCHES AND FOLDED.

6. MAINTENANCE SHALL BE PERFORMED AS NEEDEI

Fabric Properties

Elongation at Failure (X) Mullen Burst Strength (PSI)

Equivalent Opening Size

Slurry Flow Rate (gal/min/sf)

Slope Slope Steepness

33 - 50% 3:1 - 2:1

0 - 10:1 10:1 - 5:1 5:1 - 3:1

Grab Tensile Strength (bs.)

5. WHEN TWO SECTIONS OF DIVERSION CLOTH ADJOIN EACH OTHER THEY SHALL

STANDARD SYMBO

ASTM DI682 ASTM DI682

ASTM 03786

ASTM D751

Virginia DOT VTM-51

US Std Sieve CW-02215

Unimited 1,500 feet 1,000 feet 500 feet 250 feet

CHAIN LINK FENCING

FLOW

MIRAFI MCF 1212 OR EQUIVALENT—

embed mirafi — 1 Min. 9° into grd.

3/4/05 Chief, Development Engineering Division Approved: Howard County Department Of Public Works 1-21-05 36" MINIMUM LENGTH FENCE POST, 10' MAXIMUM CENTER TO DRIVEN A MINIMUM OF 16" INTO ____ CENTER _ -16" MINIMUM HEIGHT OF GEOTEXTILE CLASS F - 8" MINIMUM DEPTH IN GROUND PERSPECTIVE VIEW 36" MINIMUM FENCE POST LENGTH CLOTH-FENCE POST SECTION MINIMUM 20" ABOVE FLOW GROUND GROUND EMBED GEOTEXTILE CLASS TOP VIEW A MINIMUM OF 8" VERTICALLY - FENCE POST DRIVEN A MINIMUM OF 16" INTO INTO THE GROUND . THE GROUND CROSS SECTION SECTION A

ENGINEER'S CERTIFICATE

And the It Was Prepared In Accordance District.

LOPER'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

I Also Authorize Periodic On-Site Inspection By The Howard Soil

roved: Department Of Planning And Zoning

For The Control Of Sediment And Erosion Before Beginning The Project.

Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

For Howard County Soil Conservation District And Med

Plan For Erosion And Sediment Control orkable Plan Based On My Personal Knowledge

1/14/05 Date

ion And Sediment Control By

STANDARD SYMBOL

-----SF -----

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:

STAPLE

JOINING TWO ADJACENT SILT

FENCE SECTIONS

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

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

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

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

GLYNCHESTER MANOR BUILDABLE LOTS 1-8 & OPEN SPACE LOT 9

> ZONED R-20 TAX MAP No. 31 PARCEL NOs. 633 & 240 GRID NO. 16 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FISHER, COLLINS & CARTER, INC. ENGINEERING CONSULTANTS & LAND SURVEYO ENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855 :/SDSKPROJ/30700/FINALS/SHEET 6 SEDCON DETAILS.DW

OWNER 4975 ILCHESTER ROAD

ILCHESTER, LLC 8808 CENTRE PARK DRIVE SUITE 209 COLUMBIA, MARYLAND 21044

DEVELOPER

c/o J. THOMAS SCRIVENER, CORP.

4.30 ACRES . 2.32 ACRES

ACRES ACRES 8500 CU.YDS.

APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE

DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION

DIKE B 24" STANDARD SYMBOL FLOW CHANNEL STABILIZATION A-2 B-3 GRADE 0.5% MIN. 10% MAX.

. Seed and cover with straw mulch. 2. Seed and cover with Erosion Control Matting or line with sod. 3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

2. Runoff diverted from a disturbed area shall be conveyed to a

3. Runoff diverted from an undisturbed area shall outlet directly into

THE ESTATE OF LEA J. MINTZ ELLICOTT CITY, MARYLAND 21043 ATTN: ANDREW C. MINTZ & PAUL F. MINTZ

(410) 964-5522

sediment trappina device.

4. All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere

8. Inspection and maintenance must be provided periodically and after

DATE: JANUARY 12, 2005 SHEET 6 OF 9

F 05-10

