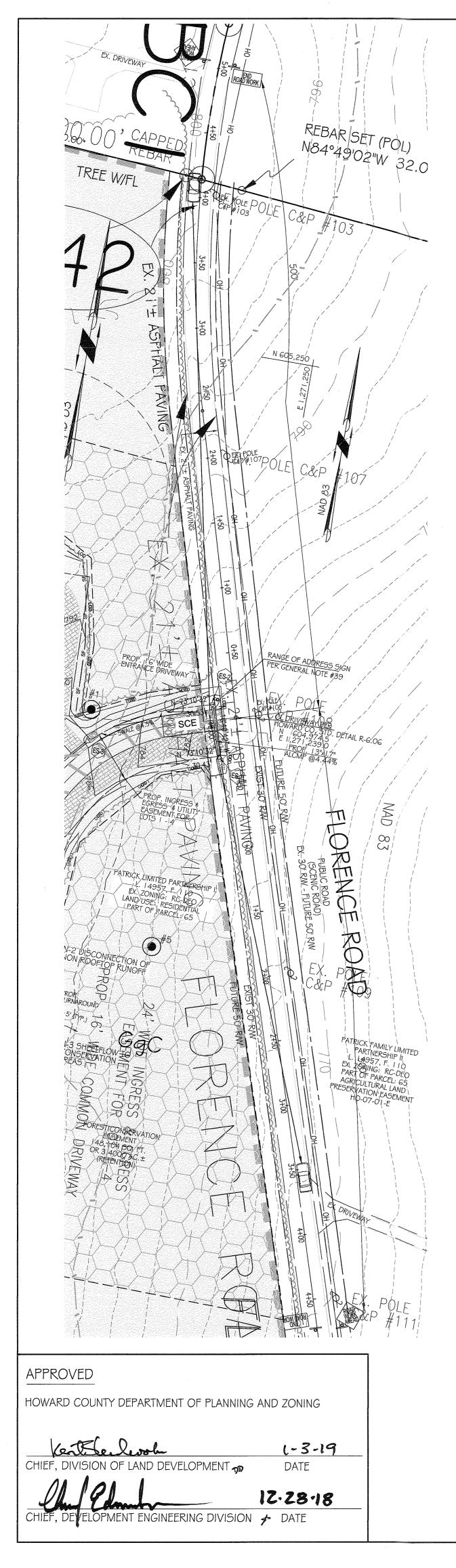
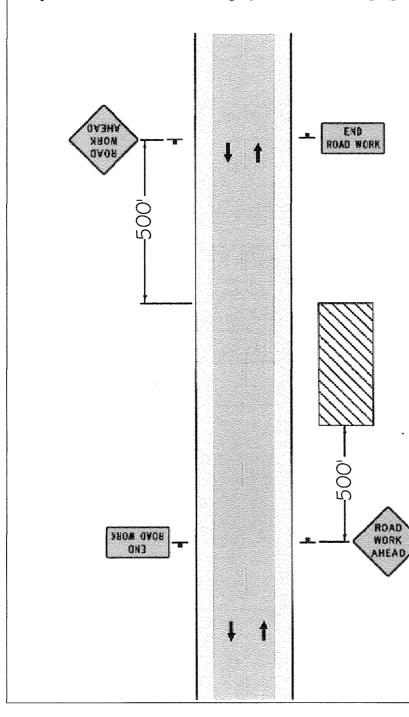


2	-		SOIL	LEGEND			
ED	TOTAL PROVIDED	MAP SYMBOL	MAPPING UNIT	HYDROLOGIC SOIL GROUP	HYDRIC? COMPONENTS	Kw	SLOF
0		GgB	GLENELG LOAM	В	* NO	0.20	3-8
7	1,930	GgC	GLENELG LOAM	В	NO	0.20	8-15
	520	OcC	OCCOQUAN LOAM	В	NO	0.20	8-15

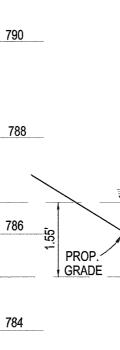


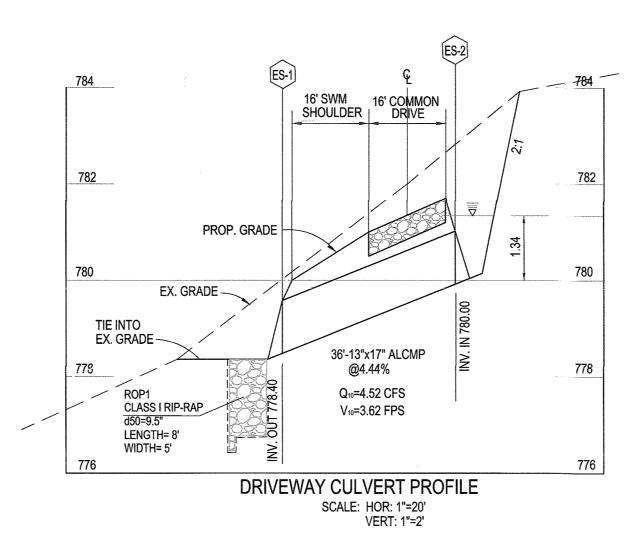
**1. WORK BEYOND THE SHOULDER/BEHIND THE CURB** For workers and equipment operating more than 12 to 15 feet from the edge of the traveled way during daylight hours, such as mowing, litter pickup, and utility repair. The work area should be established on one side of the road only. No work or parking on the opposite side within 500 feet. The ROAD WORK AHEAD (W20-1) signs may be replaced with other appropriate signing such as SHOULDER WORK AHEAD (W21-5) or worker symbol signs. For a single daylight period or less, all signs and channelizing devices may be omitted, if a vehicle displays vehicle warning light(s).

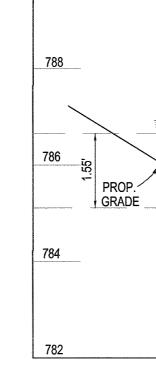


## **Temporary Traffic Control Notes**

- 1. Contractor shall maintain traffic along Florence Road in a safe manner. 2. Contractor shall submit means and methods for maintenance of traffic to Howard County Department of Public Works, Bureau of Engineering, Traffic Engineering Division for approval.
- 3. The contractor shall follow the Temporary Traffic Control General Notes in addition to directives by the Howard County Department of Public Works, Bureau of Engineering, Traffic Engineering Division.
- 4. Traffic channelizing devices shall contain flashers on the devices. Contractor
- shall maintain working condition of flashers. 5. During non-construction periods, the contractor shall install traffic
- channelization / protection devices at the Use-In-Common Driveway and maintain two-way traffic operation on Florence Road.
- 6. Upon completion of the Use-In-Common Driveway construction, contractor will remove all Temporary Traffic Control Devices.







STORM DRAIN STRUCTURE SCHEDULE							
No.	TYPE	TOP ELEVATION	INVERT IN / OUT	COODINATES	OWNERSHIP		
ES-1	13" x 17" ALCMP END SECTION		778.40	N 604944.2241 E 1271231.2918	PRIVATE		
ES-2	13" x 17" ALCMP END SECTION		780.00	N 604978.8923 E 1271219.8971	PRIVATE		
ES-3	I 2" HDPE END SECTION		784.40	N 604935.1274 E 1271128.1808	PRIVATE		
ES-4	I 2" HDPE END SECTION		785.00	N 604915.4111 E1271110.8235	PRIVATE		

STORM DRAIN PIPE SCHEDULE					
TYPE	LENGTH	OWNERSHIP			
13" x 17" ALCMP	36 LF	PRIVATE			
I 2" HDPE AASHTO M294 TYPE S	30 LF	PRIVATE			

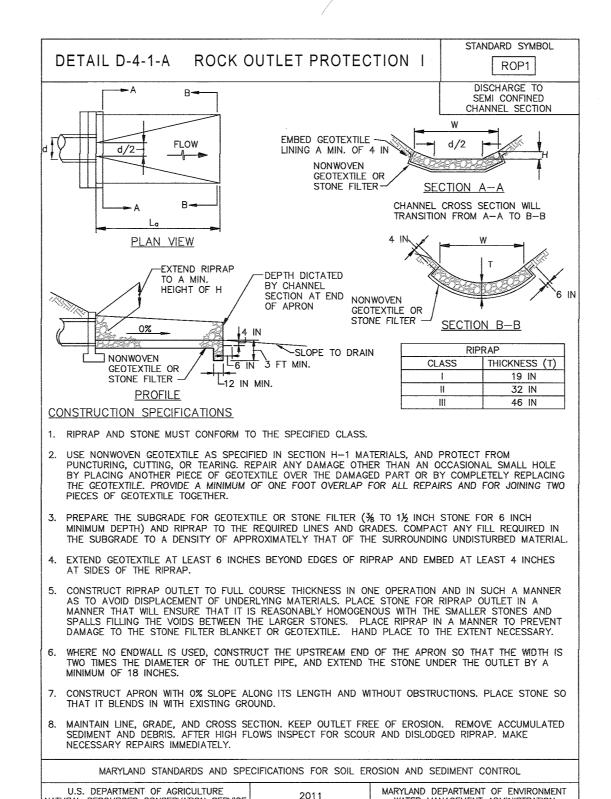
### OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N-1),

Maintenance of areas receiving disconnected runoff is generally no different than that required for other lawn or landscaped areas. The Owner shall ensure the areas receiving runoff are protected from future compaction or development of

### OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED

Conservation areas shall remain undisturbed and unmanaged other than routine debris removal and repairing areas of concentrated flow. Invasive and noxious plant removal and bi-annual mowing for meadow areas may be needed. Signs delineating the limits of the conservation area should be maintained and

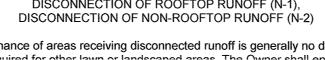
WATER MANAGEMENT ADMINISTRATION



NATURAL RESOURCES CONSERVATION SERVICE

OWNER / DEVELOPER PATRICK FAMILY LIMITED PARTNERSHIP II c/o TIM FEAGA P.O. BOX 482 LISBON, MARYLAND 21765 (410) 489-7900

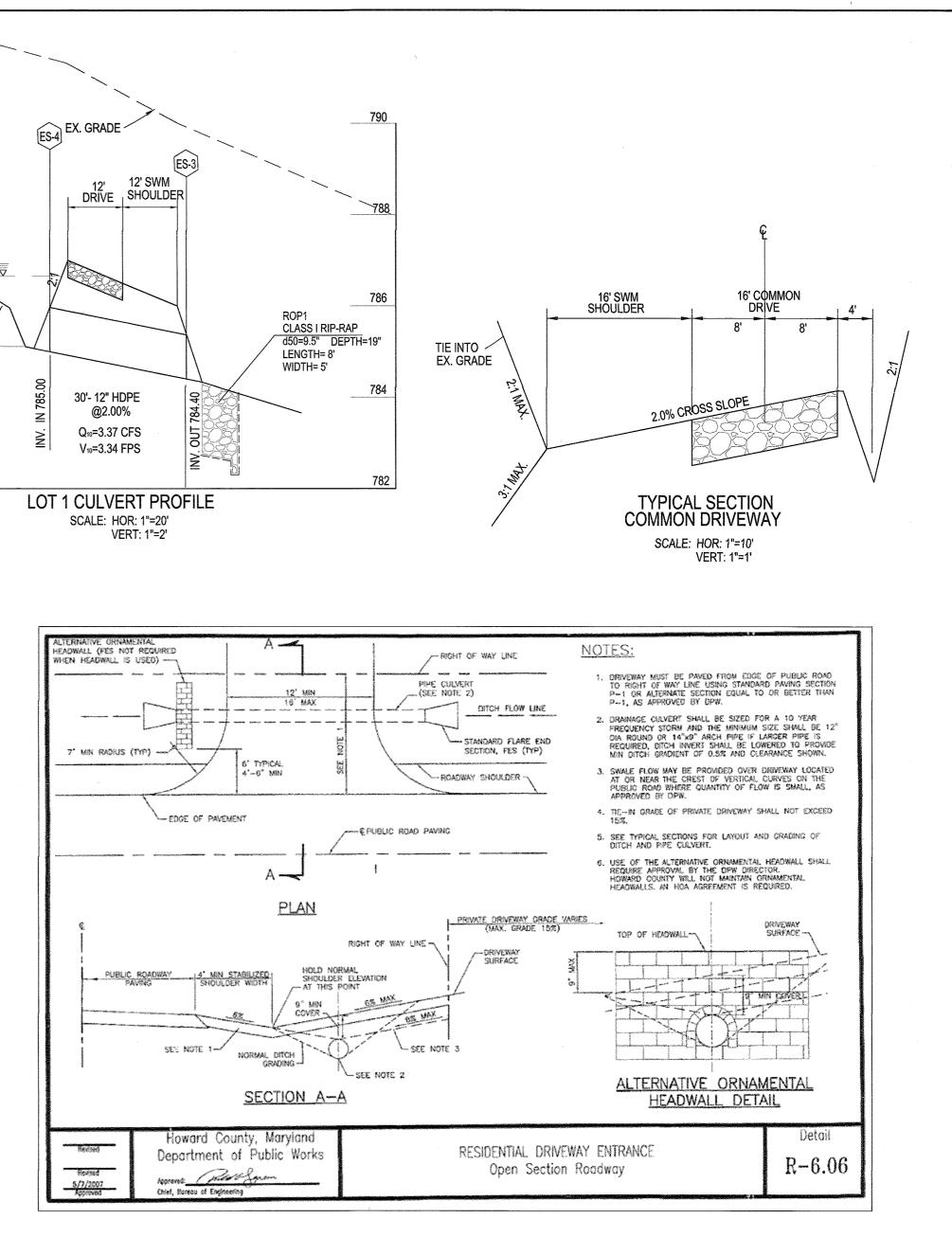
PROFESSIONAL CERTIFICATION I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18417, Expiration Date: 9/18/19.



impervious area. In commercial areas, foot traffic should be discouraged as well.

# SHEETFLOW TO CONSEERVAION AREA (N-3)

supplemental plantings performed as needed.



Lot	ADDRESS	DISCONNECTION	DISCONNECTION	SHEETFLOW TO
Number		OF ROOFTOP	OF NON-	CONSERVATION
1		RUNOFF	ROOFTOP	AREA
			RUNOFF	
		N-1	N-2	N-3
		(Y/N)	(Y/N)	(Y/N)
1	1600 Florence Road	Y	Y	Y
2	1604 Florence Road	Y	Υ 🕤	Y
3	1608 Florence Road	Y	Y	Y
4	1612 Florence Road	Y	Y	Y

1							
DATE	REVISIONS		SUPPLEMENTAL PLAN				
07/21/18 OAM NOTES & SWAATABLE			MANAGEMENT / CONSTRUCTION	NOTES & DETAILS			
		LOTS   THRU 4					
PATRICK FAMILY LIMITED PARTNERSHI							
	LIBER 14957 AT FOLIO 110						
		TAX MAP: 6	ELECTION DISTRICT: No. 4	NO SCALE			
		GRID NO: 17	HOWARD COUNTY, MARYLAND	MARCH, 2018			
in	NUMILIAN A A A A A A A A A A A A A A A A A A	PARCEL NO: 65	EX. ZONING: RC-DEO	SHEET 2 OF 4			
AT AT	OF MARDY & WILL	PREVIOUS FILE N RELATED FILE NU	UMBERS: ECP-18-008, HO-07-01-E, WP-07-( MBERS: F-19-029, F-19-030 \$ WP-19-008.	026, WP-19-007			
CR-2 S - D - D - D - D - D - D - D - D - D -			IMAR OCIATES, INC. neers Surveyors Planners				
310 South Main Street Mount Airy, Maryland 21771 (301) 829–2890 (301) 831–5015 (410) 549–2751 Fax (301) 831–5603 ©Copyright, Latest Date Shown				vn F-18-085			

A6-5034

<u>B-4-</u> 2	STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SC	DIL AME	ENDMENTS	<u>B-4</u>	-3 STANDARDS AN	ND SPECIFICATIONS F	OR SEEDING AND M	IULCHING	
Definition: The process of preparing the soils to sustain adequate vegetative stabilization.			Definition: The application of seed and mulch to establish vegetative cover.						
Purpose: To provide a suitable soil medium for vegetative growth.					Purpose: To protect disturbed soils from erosion during and at the end of construction.				
	tions Where Practice Applies: 2 vegetative stabilization is to be established.			Con To t Crit		tice Applies: erimeter controls, slop	es, and any disturbe	ed area not under act	tive grading.
A. Sc I. Ter a. b. c. 2. a.	Il Preparation aporary Stabilization Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by mear suitable agricultural or construction equipment, such as disc harrows or chisel plows mounted on construction equipment. After the soil is loosened, it must not be rolled dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be with indges running parallel to the contour of the slope. Apply fertilizer and lime as prescribed on the plans. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other s Permanent Stabilization A soil test is required for any earth disturbance of 5 acres or more. The minimum soir required for permanent vegetative establishment are:	or ripp I or e tracke suitable	ed means.	A. 5 I. a. b. c.	re-testing by a months immedia regarding the q type of seed an Mulch alone may The appropriate Inoculants: The nitrogen fixing b	teet the requirements of recognized seed labor tely preceding the dat uality of seed. Seed ta of seeding rate. of be applied between t is seeding mixture must inoculant for treating le pacteria prepared spec- ted on the container. A	atory. All seed used e of sowing such ma ags must be available he fall and spring se be applied when the egume seed in the so ifically for the specie	I must have been test terial on any project to upon request to the eding dates only if the ground thaws. eed mixtures must be test. Inoculants must n	ted within the G . Refer to Table B.4 e inspector to verify ne ground is frozen. e a pure culture of ot be used later than
1. 18. 181.	Soil pH between 6.0 and 7.0. Soluble salts less than 500 parts per million (ppm). Soil contains less than 40 percent clay but enough fine grained material (greater tha plus clay) to provide the capacity to hold a moderate amount of moisture. An except will be planted, then a sandy soil (less than 30 percent silt plus clay) would be accept	tion: if le	ercent silt ovegrass	d.	times the recon cool as possible and make the in Sod or seed mu	nmended rate when hyd e until used. Temperatu oculant less effective. ust not be placed on s	droseeding. Note: It ires above 75 to 80 oil which has been tr	: 15 very important to ) degrees Fahrenheit reated with soil steril	keep inoculant as can weaken bacteria ants or chemicals
IV. V. Ь. С.	Soil contains 1.5 percent minimum organic matter by weight. Soil contains sufficient pore space to permit adequate root penetration. Application of amendments or topsoil is required if on-site soils do not meet the abc Graded areas must be maintained in a true and even grade as specified on the appro	ove con	iditions. an, then	2. а.	phyto-toxic mat Application Dry Seeding: Th	control until sufficient t enals. nis includes use of conv d into the subsoil at th	ventional drop or bro	oadcast spreaders.	·
d. e.	scanified or otherwise loosened to a depth of 3 to 5 inches. B.13 Apply soil amendments as specified on the approved plan or as indicated by the result Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable mareas to smooth the surface, remove large objects like stones and branches, and re- seed application. Loosen surface soil by dragging with a heavy chain or other equipment the surface where site conditions will not permit normal seedbed preparation. Track flatter with tracked equipment leaving the soil in an irregular condition with ridges run the contour of the slope. Leave the top 1 to 3 inches of soil loose and fnable. Seed may be unnecessary on newly disturbed areas.	ults of a neans. F ady the nent to slopes nning pa	a soil test. Rake lawn e area for roughen 3:1 or arallel to	н. b. ı. н. с.	Permanent Seed Apply seed in tu direction, Roll t Drill or Cultipack Cultipacking see of soil covering. Apply seed in tu direction.	ding Table B.3, or site wo directions, perpend he seeded area with a ker Seeding: Mechaniz eders are required to b . Seedbed must be firr wo directions, perpend Apply seed uniformly w	-specific seeding sur dicular to each other weighted roller to p ed seeders that app pury the seed in such n after planting. dicular to each other	nmaries. Apply half the seed provide good seed to by and cover seed wi n a fashion as to prov Apply half the seed	ing rate in each 5 soil contact. B.16 ith soil. vide at least 1/4 inch ing rate in each
В. 1.	Topsolling Topsoll is placed over prepared subsoll prior to establishment of permanent vegetat is to provide a suitable soil medium for vegetative growth. Soils of concern have low content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable so	v moistu oil grad	ire lation.	ı. 11.	If fertilizer is bei following: nitroa 200 pounds pe Lime: Use only a	ing applied at the time ien, 100 pounds per a r acre; K20 (potassiur ground agricultural lime	of seeding, the app icre total of soluble n), 200 pounds per stone (up to 3 tons	nication rates should nitrogen; P2O5 (pho acre. per acre may be app	not exceed the hsphorous), plied by
2. 3.	Topsoil salvaged from an existing site may be used provided it meets the standards these specifications. Typically, the depth of topsoil to be salvaged for a given soil to in the representative soil profile section in the Soil Survey published by USDA-NRCS Topsoiling is limited to areas having 2:1 or flatter slopes where:	ype can 5.	1 be found	Ш. IV. В	use burnt or hyd Mix seed and fe When hydroseed	Normally, not more tha drated lime when hydro rtilizer on site and see ding do not incorporat	seeding. d immediately and w	ithout interruption.	any one time. Do not
a. b. c. d.	The texture of the exposed subsoil/parent material is not adequate to produce veget The soil material is so shallow that the rooting zone is not deep enough to support p continuing supplies of moisture and plant nutrients. The original soil to be vegetated contains material toxic to plant growth. The soil is so acidic that treatment with limestone is not feasible.			В. І. а.	Straw consisting Straw is to be f	(In order of preference g of thoroughly thresho ree of noxious weed so lecayed, or excessively	ed wheat, rye, oat, o eeds as specified in	the Maryland Seed I	law and not musty,
4. 5. a.	Areas having slopes steeper than 2:1 require special consideration and design. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria: Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy si may be used if recommended by an agronomist or soil scientist and approved by the	approp	priate	Ь. I.	species of grass Wood Cellulose a uniform fibrous WCFM is to be	s is desired. Fiber Mulch (WCFM) c physical state. dyed green or contain	onsisting of specially	y prepared wood cel package that will pro	lulose processed into
Ь.	approval authority. Topsoil must not be a mixture of contrasting textured subsoils and less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, st or other materials larger than 11/2 inches in diameter. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack of grass, nut sedge, poison ivy, thistle, or others as specified.	iicks, rc	oots, trash,	11. 111.	WCFM, including WCFM materials mulch will remain	i in uniform suspension	germination or grov ad and processed in in water under agita	vth inhibiting factors. such a manner that t tion and will blend wi	the wood cellulose fiber th seed, fertilizer and
с. 6. а.	Topsoil substitutes or amendments, as recommended by a qualified agronomist or so approved by the appropriate approval authority, may be used in lieu of natural topsoil Topsoil Application Erosion and sediment control practices must be maintained when applying topsoil.	oıl scier ıl.	ntist and	iv.	cover, on applic grass seed in co	to form a homogeneou ation, having moisture ontact with the soil wit must not contain eleme	absorption and perc hout inhibiting the g	colation properties ai rowth of the grass s	nd must cover and hold eedlings.
۴Ь.	Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum th inches. Spreading is to be performed in such a manner that sodding or seeding can minimum of additional soil preparation and tillage. Any irregularities in the surface resistopsoiling or other operations must be corrected in order to prevent the formation of	procee ulting fr	d with a rom	v. 2.	WCFM must cor millimeters, dian maximum and wa Application	ter holding capacity of	millimeter, pH range 90 percent minimur	of 4.0 to 8.5, ash c n. B.17	proximately 10 content of 1.6 percent
с. С.	water pockets. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition is excessively wet or in a condition that may otherwise be detrimental to proper grad seedbed preparation. Soil Amendments (Fertilizer and Lime Specifications)			а. b.	When straw muld loose depth of	I to 2 inches. Apply m	ver all seeded areas iulch to achieve a un	at the rate of 2 ton form distribution and	s per acre to a uniform I depth so that the soil ation rate to 2.5 tons
I. <sup></sup>	Soil tests must be performed to determine the exact ratios and application rates for fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be per recognized private or commercial laboratory. Soil samples taken for engineering purp used for chemical analyses.	rformed	d by a	с.	<ul> <li>Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.</li> <li>Anchoring</li> </ul>				
2. 3.	Fertilizers must be uniform in composition, free flowing and suitable for accurate appli appropriate equipment. Manure may be substituted for fertilizer with prior approval fr appropriate approval authority. Fertilizers must all be delivered to the site fully labele the applicable laws and must bear the name, trade name or trademark and warranty of Lime materials must be ground limestone (hydrated or burnt lime may be substituted hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus ma	rom the ed accc of the p except	e ording to producer. when	a.	Perform mulch a This may be dor the area and ere A mulch anchorir surface a minimu	osion hazard:	ing methods (listed l iwn implement design actice is most effect	by preference), dependent ned to punch and and nve on large areas, b	ending upon the size of chor mulch into the soil ut is limited to flatter
4. 5.	Limestone must be ground to such fineness that at least 50 percent will pass throug sieve and 98 to 100 percent will pass through a #20 mesh sieve. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 disking or other suitable means. Where the subsoil is either highly acidic or composed of heavy clays, spread ground rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the place	gh a #1( inches limesto	00 mesh of soil by one at the	11. 111. 1V.	contour. Wood cellulose 750 pounds pe cellulose fiber p Synthetic binder other approved Application of lid valleys and on c Lightweight plas recommendation	fiber may be used for a r acre. Mix the wood o er 100 gallons of wate rs such as Acrylic DLR equal may be used. Fo quid binders needs to rests of banks. Use of tic netting may be stap is. Netting is usually av	anchoring straw. App cellulose fiber with w er. (Agro-Tack), DCA-7 Illow application rate be heavier at the ed asphalt binders is s oled over the mulch vailable in rolls 4 to	oly the fiber binder a ater at a maximum of 0, Petroset, Terra Ta is as specified by the ges where wind cato trictly prohibited. according to manufac 15 feet wide and 30	t a net dry weight of 50 pounds of wood ax II, Terra Tack AR or e manufacturer. hes mulch, such as in
<u>SE</u> 1.	QUENCE OF CONSTRUCTION OBTAIN ALL REQUIRED GRADING, MDE PERMITS, APPROVALS AND LICENSES FR	OM		De	finition:	AND SPECIFICATIONS		IABILIZATION	
2. 3. 4.	APPROPRIATE AGENCIES. (1 WEEK) NOTIFY SEDIMENT CONTROL INSPECTOR AT LEAST THREE (3) WORKING DAYS P TO STARTING WORK. (1 WEEK) INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, WITH LIMITED DIST ONCE THE SEDIMENT CONTROL DEVICES ARE INSTALLED, THE PERMITTEE MUST	TURBAN	NCE. (I WEE	To K)	rpose: use fast growing v nditions Where Pra	vegetation that provide	es cover on disturbe	d soils.	
5. 6.	OBTAIN APPROVAL FROM THE INSPECTOR BEFORE PROCEEDING WITH ADDITION CLEARING, GRUBBING OR GRADING. (1 WEEK) ROUGH GRADE THE SITE. (2 WEEKS) INSTALL UTILITIES AND GRADE SITE. (8 WEEKS)			Ex <sub>I</sub> Pe	posed soils where a rmanent stabilizatio teria:	ground cover is neede in practices are require	ed.		onger duration of time,
7. 8. 9.	CONSTRUCT BUILDING AND PAVEMENTS. (16 WEEKS) FINAL GRADING OF SITE. STABILIZE DISTURBED AREAS PER PERMANENT SEEDIN NOTES. (3 WEEKS) UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR; REMOVE ALL TEMPORAR SEDIMENT CONTROL DEVICES. (1 WEEK) NOTIFY INSPECTOR FOR FINAL INSPECTION. (1 WEEK)			۱. 2. 3 <i>.</i>	Hardiness Zond with application completed, the For sites havin Soil tests are When stabilizat	en Table B. I plus fertil	d enter them in the and seeding depths izer and lime rates n , use and show the prary Seeding. e of a seeding seaso	Temporary Seeding S 5. If this Summary is hust be put on the pl. recommended rates in, apply seed and mi	Dummary below along not put on the plan and an. by the testing agency. ulch or straw mulch
			Ha	ardiness Z	'one (from Figure B re (from Table B. I )	9.3): <u>66</u>			
		No.	Species		ation Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
			ANNUAL RYEGRASS FOXTAIL		40	MAR. I - MAY 15 AUG. I - OCT. 15 JUNE I - JULY 31	0.5 INCHES	- 436 lb/ac	2 tons/ac
			MILLET					(10 lb/1000 sf)	(90 lb/l 000 sf)
		II	1	L		AND SPECIFICATIONS			11
A	PPROVED			T De	finition:	d soils with permanent	·	TADILIZATION	
TH	IIS DEVELOPMENT PLAN IS APPROVED FOR SOIL ERON	SION		Pu	rpose:	ennial grasses and leg	·	ermanent ground cov	er on disturbed soils.
	5TRICT	TUN	N	Ex		actice Applies: ground cover is neede	ed for 6 months or n	iore.	
				A.	iteria: Seed Mixtures General Use Select one or	more of the species o	r mixtures listed in T	able B.3 for the app	ropriate Plant
	DWARD SCS DAT	TE		Ь.	Enter selected The Summary I Additional plar	s to be placed on the	n rates, and seeding plan. exceptional sites su	dates in the Perman ch as shorelines, str	ent Seeding Summary. eam banks, or dunes or
—	PPROVED DWARD COUNTY DEPARTMENT OF PLANNING AND ZOI	NING	,	c. d.	Field Office Gu For sites havin testing agency For areas rece	ide, Section 342 - Cr ig disturbed area over y. eiving low maintenance,	itical Area Planting. 5 acres, use and sh apply urea form fert	low the rates recommunication (46-0-0) at 3	nended by the soil
, ת	REGTOR NA	/ FE		2. a. b.	in the Permane Turfgrass Mixt Areas where to will receive a n	ent Seeding Summary . ures	d include lawns, par maintenance.	ks, playgrounds, and	commercial sites which
	Kent Serlish 1-	03	-19	р. I.	purpose. Enter Summary. The Kentucky Blues required in the	r selected mixture(s), a summary is to be place grass: Full Sun Mixture areas of central Mary	application rates, and ed on the plan. : For use in areas th land and Eastern Shi	d seeding dates in th at receive intensive r ore. Recommended (	ne Permanent Seeding nanagement. Irrigation Certified Kentucky
C	HIEF, DIVISION OF LAND DEVELOPMENT of DAT			11.	Bluegrass Cult three Kentucky weight, Kentucky Blued	avars Seeding Rate: 1 y bluegrass cultivars wi grass/Perennial Rye: Fu	.5 to 2.0 pounds pe th each ranging from Il Sun Mixture: For u	er 1000 square feet 110 to 35 percent ise in full sun areas w	. Choose a minimum of of the total mixture by here B.22 rapid
	Charl Eelamber 12.	28.	18		Perennial Ryeo	is necessary and when grass Cultivars/Certified pare feet. Choose a mir	Kentucky Bluegrase	5 Seeding Rate: 2 pc	ounds mixture

CHIEF, DEVELOPMENT ENGINEERING DIVISION \$ DATE

Purpose

from 10 to 35 percent of the total mixture by weight.

III. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be

IV. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 11/2 to 3 pounds per 1000 square feet.

Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

a. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October | (Hardiness Zones: 5b, 6a) Central MD: March | to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b) b. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 11/2 inches in

diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty. c. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to linch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true

# when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse

	Hardiness Zone (from Seed Mixture (from T				Fertilizer Rai (10-20-20		Lime Rate
pecies	Application Rate (Ib/ac)	Seeding Dates	Seeding Depths	N	P2O5	K20	Line Rate
NTUCKY JEGRASS		20 MAR. 1 - MAY 15 AUG. 1 - OCT. 15 1/4-		45 pounds	90 lb/ac (2	90 lb/ac (90	2 tons/ac
			1/4-1/2 m	per acre (1.0 lb/	lb/1000 sf)	lb/1000 sf)	(90 lb/ 1000 sf)
			1/4-1/2 in	(te 0001			

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

### General Specifications

Notes:

sites.

a. Class of turfarass sod must be Maryland State Certified. Sod labels must be made available to the iob foreman and inspector b. Sod must be machine cut at a uniform soil thickness of 34 inch, plus or minus 14 inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or

uneven ends will not be acceptable. c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section. d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival. e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted

within this period must be approved by an agronomist or soil scientist prior to its installation. 2. Sod Installation a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.

b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots. c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering

joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface. d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.

3. Sod Maintenance a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.

After the first week, sod watering is required as necessary to maintain adequate moisture content. c. Do not mow until the sod is firmly rooted. No more than 1/2 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-8 STANDARDS AND SPECIFICATIONS

### STOCKPILE AREA

Definition: A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Condition Where Practice Applies: Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

1. The stockpile location and all related sediment control practices must be clearly

indicated on the erosion and sediment control plan. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be

provided in accordance with Section B-3 Land Grading. Runoff from the stockpile area must drain to a suitable sediment control practice. Access the stockpile area from the upgrade side.

Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.

Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as

well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization

8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land

	0,00010 00 0	
2.	Limit duration	n of exposure of bare earth from grading operation to 7 days by the establishment of
	temporary v	egetation (or mulching if appropriate) or by completing permanent seeding within 14 days.
3.	Establish pe	rmanent vegetative cover immediately after final grading is completed. (This includes all
	grading on	or off this site that is affected by this construction.) If final grading is completed at a time
		he seeding season, a temporary ground cover such as mulching will be used to stabilize
	the bare so	
4.	Recommend	ed temporary seed mixture:
	Seed:	Balboa Rye at 150 lbs. per acre
	Lime:	2 tons ground limestone per acre
	Fertilizer:	10-10-10 at 1,000 lbs. per acre
	Mulch:	Straw at 1.5 tons per acre
	Asphalt:	SS-1 or equivalent at 200 gal. per acre
5	Recommend	ed permanent seed mixture.

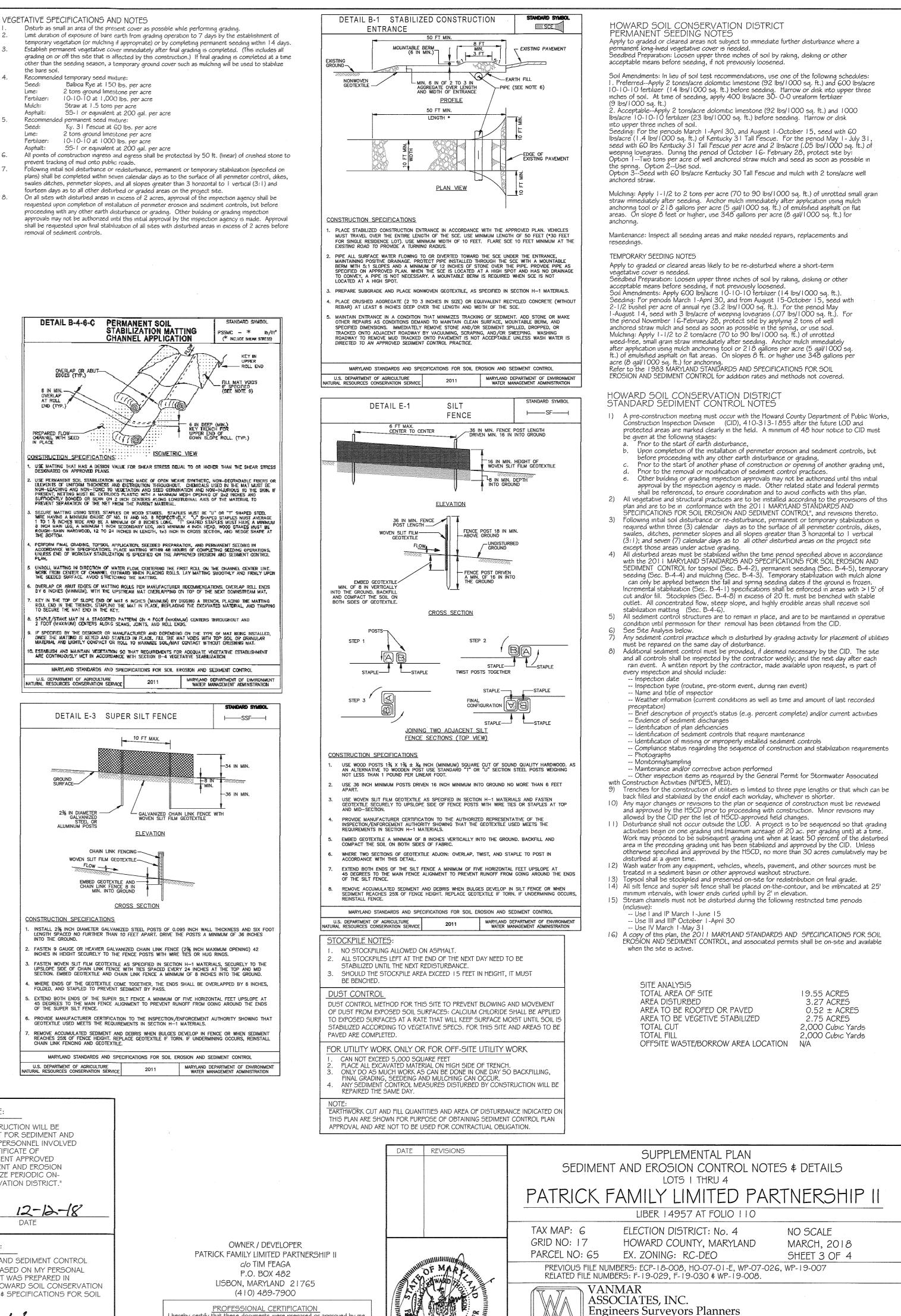
Seed:

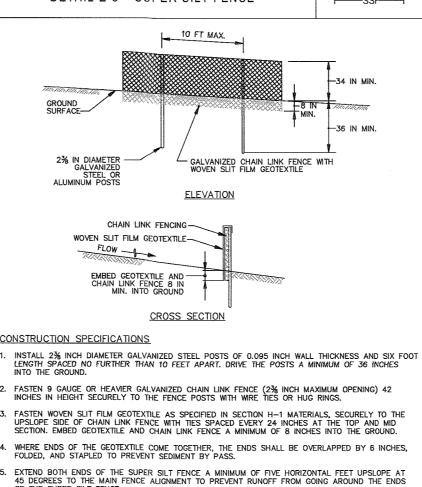
Fertilizer 10-10-10 at 1000 lbs. per acre

prevent tracking of mud onto public roads.

plans) shall be completed within seven calendar days as to the surface of all perimeter control, dikes, swales ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and fourteen days as to all other disturbed or graded areas on the project site. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be

proceeding with any other earth disturbance or grading. Other building or grading inspection removal of sediment controls.





### DEVELOPER'S CERTIFICATE: "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED

IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

12-12-18

12/5/2018

ENGINEER'S CERTIFICATE:

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT AND THE 2011 MARYLAND STANDARDS & SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

	CALL	"MISS	UTIL	ITY'	' AT
		1-800-	-257-7	777	
48	HOURS	BEFORE	START	OF	CONSTRUCTION

hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 18417, Expiration Date: 9/18/19.

1 Mm RON THOMPSON, P.E.

310 South Main Street Mount Airy, Maryland 21771

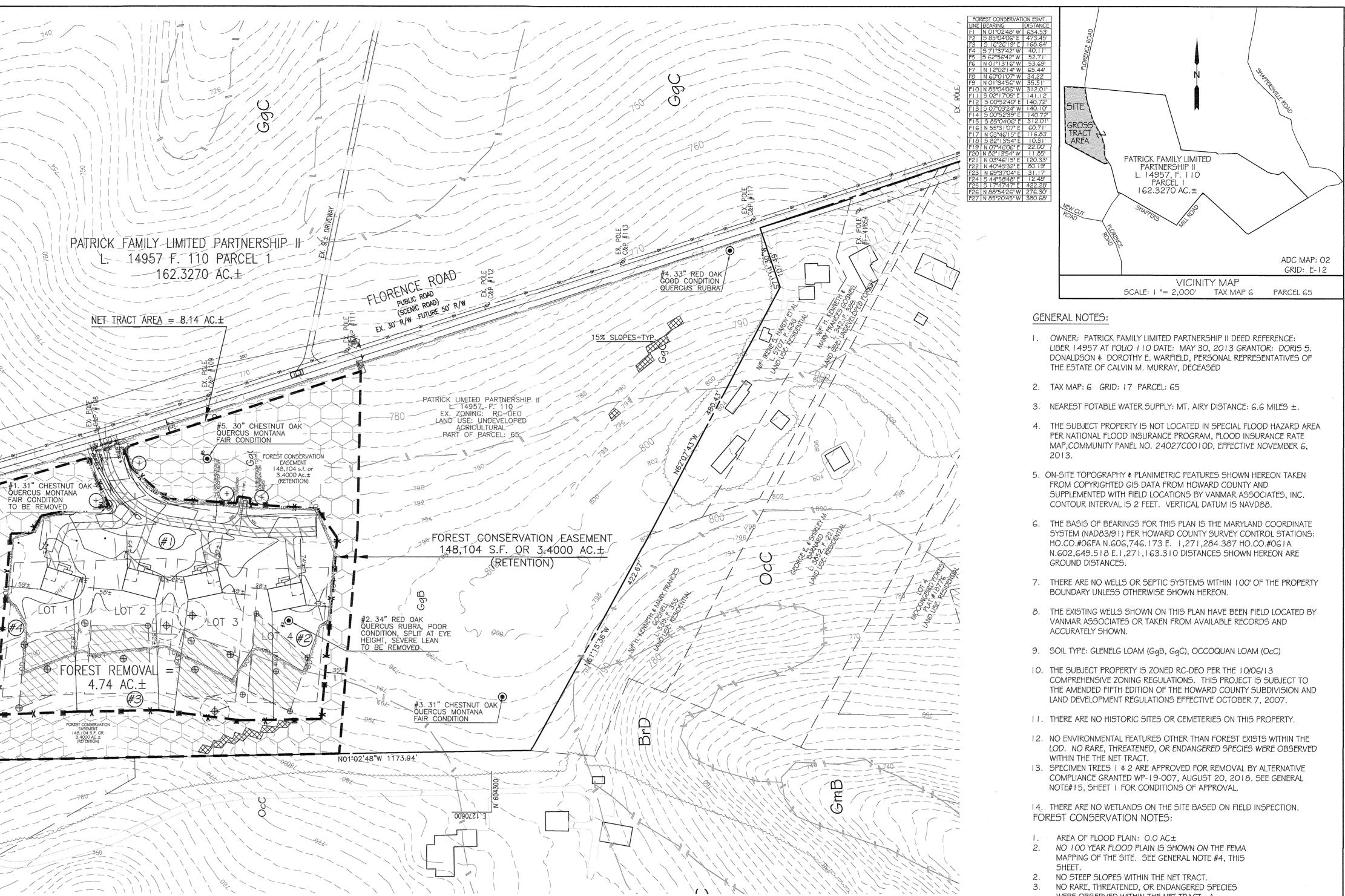
∠ (301) 829-2890 (301) 831-5015 (410) 549-2751

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0, 1841

F-18-085

×	FOREST STAND DELIN	DN PROPERTY EATION NARRATIVE REPORT ber 2, 2018		
1. 2.	FOREST STRUCTURE STAND CO FIVE SPECIMEN TREES HAVE B 2.1. SPECIMEN #1. RED OA 2.2. SPECIMEN #2. WHITE 2.3. SPECIMEN #3. WHITE 2.4. SPECIMEN #4. WHITE	ONDITION. GOOD EEN LOCATED ON THE SITE. K, 34" DBH, FAIR CONDITION. OAK, 35" DBH, FAIR CONDITION. OAK, 38" DBH, FAIR CONDITION. OAK, 34" DBH, FAIR CONDITION.		140
3.	RELATIONSHIP TO OTHER ENV	GREATER: 1.7 AC+. MINOR 15% SLOPES ON	PARCEL 2 14957, FG 1400-10-04	
	3.2. NO CRITICAL HABITATS SPECIES WERE OBSERV	, RARE, THREATENED, OR ENDANGERED		
		VED. THE PROJECT SITE IS NOT LOCATED WITHIN A SENSITIVE SPECIES PROJECT	P. 64 & P. 70 RNS-BAS, LLC	
	3.5. NO ERODIBLE OR HYDR	RIC SOILS EXIST ON THE SITE. NO SOILS IR THAN 0.35 ON SLOPES OF 15% OR MORE.	760	
4.	<ul><li>3.7. NO BUILDINGS, STRUC</li><li>3.8. NO HISTORIC STRUCTU</li></ul>	TURES, WALLS, OR FENCES EXIST ON SITE. RES, TREES, OR KNOWN CEMETERIES. UMBER: BRIGHTON DAM, 02131108	764	
5. 6.	DEVELOP ALLOWED RESIDENTIA ON-SITE FOREST RETENTION CRI	TERIA:	E 1511200	
	6.2. NO WETLAND NOR WE 6.3. NO RARE OR THREATER	STREAM BUFFER WILL BE DISTURBED. TLAND BUFFER WILL BE DISTURBED. NED AND ENDANGERED SPECIES NOR CRITICAL FOREST CORRIDORS		
	FOR WILD LIFE MOVEMENT W 6.4. NO 25% STEEP SLOPES	ILL BE DISTURBED.	780	00 B
	CONTIGUOUS TO SENS 6.6. IN SITING THE ACCESS			#10t
	WHICH IS A SCENIC RO 6.7. THREE OF FIVE SPECIM	EN TREES WILL BE SAVED.	E1.2	POLE Carp
-		LARGE. NOT PART OF ANY OF THE ABOVE.	BOLE XX	
7. 8.	OFF-SITE FOREST RETENTION: POTENTIAL PROBLEMS: NO PO THE PROPOSED DEVELOPMENT	TENTIAL PROBLEMS TO THAVE BEEN IDENTIFIED.		
9.	RELATIONSHIP TO OFF-SITE FOI FROM THE PROPOSED DEVELO FORESTS IS FORESEEN.	REST: NO ADVERSE IMPACT PMENT TO THE SURROUNDING	BRUCE W. COTTLE ANNA M. COTTLE (L. 14203, F. 250)	
<u>CLAS</u>	SSIFICATION OF FOREST STANDS A	16	EX. ZONING: RC-DEO LAND USE: RESIDENTIAL RARCEL: 133	
1	L. THE TYPICAL COVER OF ON CANOPY CLOSURE IS 90-95 CHESTNUT OAK, 18-24" DE			
		ISTS, WHAT APPEARS TO BE L. NO CURRENT GYPSY MOTH UND FLOOR THICK WITH		
FOR	24" CHESTNUT OAK SEEDL	INGS. LESS THAN 5% INVASIVES.		
1. <u>WOO</u>	THE SITE IS FULLY FORESTED V	VITH ONE UNIFORM OAK STAND.	BUILDABLE PRESERVATION PARCEL 'B' DIPAULA PROPERTY	790 35'
1. 2.	SOIL EROSION HAZARD: SLIGH EQUIPMENT LIMITATION: SLIG		PLAT NO. 16887 EX. ZONING:: RC-DEO LAND USE: RESIDENTIAL PART OF PARCEL: 60	780
3. 4. 5.	SEEDLING MORTALITY: SLIGH WIND THROW HAZARD: SLIGH TREES TO PLANT: HARDWOOD	HT - MODERATE DS, POPLAR, PINES.		
6.	RELATION TO OFF-SITE FOREST FOREST TO THE WEST AND SO THE NORTH AND SOUTH. AGR	UTH. RESIDENTIAL USES TO		TO
RETE	PUBLIC STREET AND AGRICULT CONCLUSION: SITE SUITABLE ENTION AND FOREST MANAGEME	FOR CONTINUED FOREST	E 1570600	COCC OCC
LEGE	END		DOL 2 DIPAULA PROPERTY 09/ PLAT NO. T4446 EX. ZONING: RC-DEO LAND USE: RESIDENTIAL	
		EDGE OF EXISTING FOREST PER HOWARD COUNTY MAPPING	LAND USE: RESIDENTIAL PART OF PARCEL: 60	
#4. GOO	33" RED OAK		FOREST CONSERVATION WORKSHEET  Project Name: Patrick Family Ltd. Partnership Date: 9.19.18	
	RCUS_RUBRA/	SPECIMEN	NET TRACT AREA:	MAP SYMBOL N
		EXISTING FOREST WITHIN THE NET TRACT	A. Total tract area=8.14B. Area within 100 year floodplain=0.00C. Area to remain in agricultural production=0.00D. Net tract area=8.14	
		EXISTING PERC TEST FAILED EXISTING PERC TEST PASSED	LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)	0cC 00
3.92		LANDSCAPE PERIMETER SPECIMEN MITIGATION PLANTING	Input the number "1" under the appropriate land use zoning, and limit to only one entry.	KEY NAME
	_ / /	SOIL BOUNDARY	ARA MDR IDA HDR MPD CIA 0   1   0   0   0 E. Afforestation Threshold	#I CHESTNU
	OcC	SOIL SYMBOL	F. Conservation Threshold 25% x D = 2.00	
		FOREST PROTECTION FENCING	EXISTING FOREST COVER: G. Existing forest cover (excluding floodplain)= 8.14 H. Area of forest above afforestaion threshold= 6.50	#5 CHESTNU
5613		FOREST PROTECTION SIGNAGE	I. Area of forest above conservation threshold = 6.10 BREAK EVEN POINT (BEP):	
APF	°ROVED		BREAK EVEN POINT (BEP):         J. Forest retention above threshold with no mitigation (BEP)         K. Clearing permitted without mitigation=	
		INT OF PLANNING AND ZONING	PROPOSED FOREST CLEARING:	CREDIT FOR EXISTING (YES, NO, LINEAR FE (DESCRIBE BELOW IF CREDIT FOR OTHER L
	1/0 - f < f 0. D 0	1-03-19	L. Total area of forest to be cleared= 4.74 M. Total area of forest to be retained= 3.40	SWM BUFFER SHADE TREES EVERGREEN TREES NUMBER OF PLANTS
CHIE	F, DIVISION OF LAND DE		PLANTING REQUIREMENTS:	SHADE TREES EVERGREEN TREES SHRUBS NUMBER OF PLANTS



SOIL LEGEND							
MAPPING UNIT	HYDROLOGIC SOIL GROUP	HYDRIC? COMPONENTS	Kw	SLOPE			
GLENELG LOAM	В	NO	0.20	3-8%			
GLENELG LOAM	В	NO	0.20	8-15%			
OCCOQUAN LOAM	В	NO	0.20	8-15%			

# SPECIMEN TREE TABLE SIZE CONDITION

BELOW IF NEEDED)

1.20

N. Reforestation for clearing above conservation threshold...=

P. Reforestation for clearing below conservation threshold...=

Q. Credit for retention above conservation threshold......=

T. Total reforestation and afforestation required......=

R. Total reforestation required...

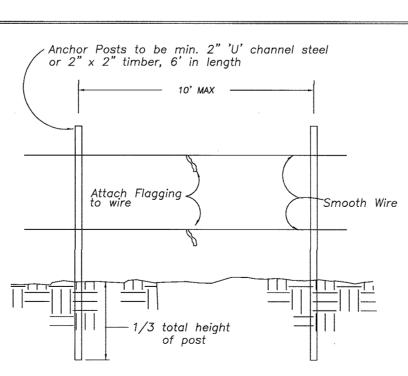
S. Total afforestation required.....

12.28.18

DEVELOPMENT ENGINEERING DIVISION & DATE

CHESTNUT OAK; Quercus Montana	31"	FAIR-TO BE REMOVED
RED OAK, Quercus rubra	34"	POOR-TO BE REMOVED
CHESTNUT OAK; Quercus Montana	31"	FAIR
RED OAK; Quercus Rubra	33"	GOOD
CHESTNUT OAK; Quercus Montana	30"	FAIR

SCHEDULE "A" PERIMETER LANDSCAPE EDGE										
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES								
LANDSCAPE TYPE	(#1)=A	(#2)=A	#3=A	# <b>4</b> =A						
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	560'	360'	570'	350'						
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	EX. FOREST TO REMAIN 560'	EX. FOREST TO REMAIN 360'	EX. FOREST TO REMAIN 570'	EX. FOREST TO REMAIN 350'						
CREDIT FOR OTHER LANDSCAPING SWM BUFFER SHADE TREES EVERGREEN TREES	N/A	N/A	N/A	N/A						
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	0 0 0	0 0 0	0 0 0	0 0 0						
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SHRUB OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0						
(DESCRIBE PLANT SUBSTITUTION CREDITS RELOW IF NEEDED)										



INSTALL ALONG PERIMETER OF FOREST CONSERVATION EASEMENTS. FENCING TO REMAIN IN PLACE AND IN GOOD REPAIR FOR THE LONGER OF TWO YEARS, THROUGH THE COMPLETION OF CONSTRUCTION, OR UNTIL THE END USER OCCUPIES THE SITE.

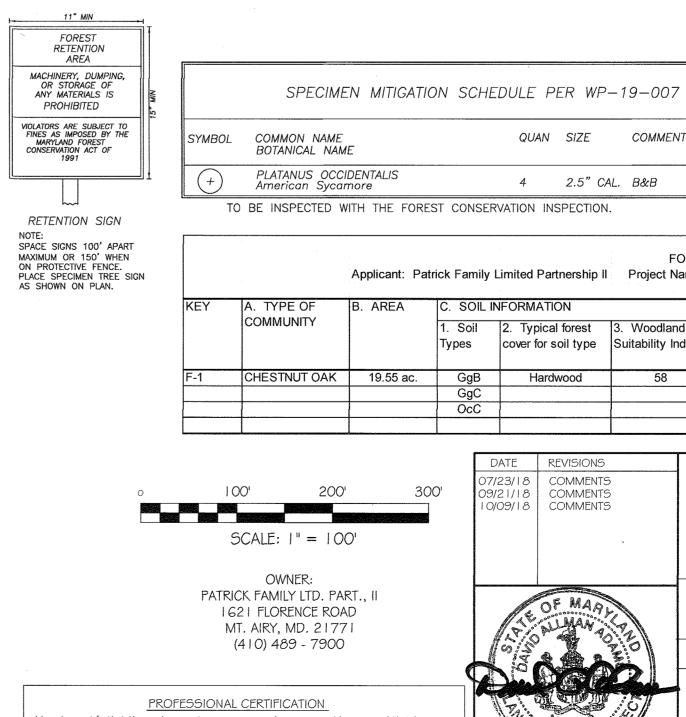


ON-SITE FOREST CONSERVATION EASEMENT NOTE. THE FOREST CONSERVATION EASEMENTS SHOWN HEREON HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS. ANY UNAUTHORIZED ACTIVITIES THAT RESULT IN ADDITIONAL OF CHILD ON THAT AFTER TO PROPOSED BUT ANTINIC (DETAILOR) ADDITIONAL CLEARING, OR THAT AFFECT PROPOSED PLANTING/RETENTION AREAS SHOWN ON THE FOREST CONSERVATION PLAN MAY RESULT IN A REQUEST FOR RECALCULATION OF FOREST CONSERVATION REQUIREMENTS AND DESIGNATION OF ADDITIONAL PLANTING/RETENTION AREAS IF NEEDED TO MEET THE OBLIGATION OF THE FOREST CONSERVATION PROGRAM. ANY FUTURE RESUBDIVISION, DEVELOPMENT, OR CHANGE IN LAND USE MAY BE SUBJECT TO ADDITIONAL REQUIREMENTS OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

# LANDSCAPE NOTES

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

NO PREIMETER PLANTINGS ARE REQUIRED.



I hereby certify that these documents were prepared or approved b duly licensed professional landscape architect under the laws of the License No. 569, Expiration Date: 08-16-2019.

- WERE OBSERVED WITHIN THE NET TRACT. A CONFIRMATORY LETTER HAS BEEN REQUESTED FROM MARYLAND DEPARTMENT OF NATURAL RESOURCES.
- WATERSHED: BRIGHTON DAM, #02131108. THE OBLIGATION OF 3.40 ACRES TO BE MET BY ON-SITE RETENTION OF 3.40 ACRES IN A FOREST CONSERVATION EASEMENT PER SECTION 16.1205(6)(5) OF THE SUBDIVISION REGULATIONS.

					FC	EXHIBIT 3 DREST STAND ANA					
	Applicant: Patrick Family Limited Partnership II Project Name: Patrick Family Limited Partnership II Submission No.										
	B. AREA C. SOIL INFORMATION				D. EXISTING		E. STAND CHARACTERISTICS		F. FORESTAREA IN	G. HABITAT VALUE	
		1. Soil Types		oical forest or soil type	3. Woodland Suitability Ind	1/Deminent Core	ecies (Diam)	2. Age	3. General Conditions	SENSITIVE ENVIRONMENTS (Acres)	
(	19.55 ac.	GgB	<b>_</b>		58	Oak 95%	. 18-24	" 10-15 yrs	Good	0%	Good
		GgC OcC		<u></u>					_		
									· · · · · · · · · · · · · · · · · · ·		
00' 0( 2AR 2A	RT., II D	07 05	DATE 7/23/18 9/21/18 0/09/18	REVISIONS COMMENTS COMMENTS	5		CK FA	EST CONSE LOTS MILY L	MITEL 57 AT FOLIO TRICT: No. 4 JNTY, MARY	/ LANDSCAPE PL D PARTNER 110 4 SCALES LAND MARCH	
0			10							2-07-026, WP-19-007 008.	4014
l by	y me, and that I am State of Maryland,	a	CONTRACTOR OF	No. 569	5/18	vanmar.com	VANM ASSOC Engine 310 South (301) 829-		rs Planner nt Airy, Marylan –5015 (410) 5	<b>'S</b> d 21771 49-2751	F-18-085

QUAN SIZE

4 2.5" CAL. B&B

COMMENTS SPACING

AS SHOWN