#### GENERAL NOTES

1.) THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE

2.) THE SUBJECT PROPERTY IS ZONED PGCC PER THE 10-6-2013 COMPREHENSIVE ZONING PLAN.

3.) BOUNDARY IS BASED ON RECORD PLAT NO. 24298-24300.

4.) THE EXISTING TOPOGRAPHY SHOWN ON THESE LOTS IS BASED ON MASS GRADING AS SHOWN ON APPROVED F-07-158 AND F-10-084 ROAD CONSTRUCTION PLANS.

5.) THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 16IB AND 17AB WERE USED FOR THIS PROJECT.

6.) WATER IS PUBLIC. THE CONTRACT NUMBER IS 24-4671-D AND 24-4672-D.

7.) SEWER IS PUBLIC. THE CONTRACT NUMBER IS 24-4671-D AND 24-4672-D.

8.) THIS PROJECT IS LOCATED WITHIN THE METROPOLITAN DISTRICT. THE DRAINAGE AREA IS THE LITTLE

9.) EXISTING UTILITIES SHOWN ARE BASED ON CONTRACT DRAWINGS, AERIAL, AND SOME FIELD SURVEYED

10.) THERE ARE NO WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, 100-YEAR FLOODPLAIN OR 25% OR GREATER STEEP SLOPES THAT ARE AT LEAST 20,000 S.F. OF CONTIGUOUS AREA LOCATED ON THESE LOTS.

11.) TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES OR HISTORIC STRUCTURES LOCATED ON THESE LOTS.

12.) STORMWATER MANAGEMENT FOR THESE LOTS WAS PREVIOUSLY PROVIDED UNDER F-10-084. THEY ARE TRÉATED VIA THE REGIONAL SWM POND CONSTRUCTED UNDER SDP-95-121. THIS PROJECT IS NOT SUBJECT TO

13.) DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWINGMINIMUM REQUIREMENTS:

A) WIDTH - 12' (16' SERVING MORE THAN ONE RESIDENCE).

B) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.). C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE & MIN. 45' TURNING RADIUS.

D) STRUCTURES(CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOAD) E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN FOOT DEPTH OVER DRIVEWAY G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.

14.) FOR DRIVEWAY ENTRANCE DETAILS REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV. STANDARD DETAIL R-6.03 AND R-6.05.

15.) STREET TREE LANDSCAPING WAS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL UNDER F-07-158 AND F-10-084. FINANCIAL SURETY WAS POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT. THE STREET TREES ARE TO BE PLANTED UNDER THIS SDP.

INTERNAL LANDSCAPING FOR THESE SINGLE FAMILY ATTACHED LOTS AND PERIMETER LANDSCAPING (SIDE YARDS TO ROADS) IS PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL AND SHOWN ON THE CERTIFIED LANDSCAPE PLAN WITHIN THIS SITE DEVELOPMENT PLAN SET FINANCIAL SURETY IN THE AMOUNT OF \$17,250.00 SHALL BE POSTED AS PART OF THE GRADING PERMIT. 16.) THE REQUIREMENT OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION FOR THÉSE LOTS WAS PROVIDED UNDER F-10-084.

17.) THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND/OR SEWER SERVICE HAS BEEN GRANTED UNDER THE TERMS AND PROVISIONS, THEREOF, EFFECTIVE SEPTEMBER 1, 2016, ON WHICH DATE DEVELOPER AGREEMENT #F07158/24-4671-D WAS FILED AND ACCEPTED

18.) THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THE ZONING REGULATIONS EFFECTIVE OCTOBER 6, 2013, AND THE TURF VALLEY RESIDENTIAL SUBDISTRICT FDP, SECOND AMENDMENT. PER SECTION 126.0.H.1 OF THE ZONING REGULATIONS, PLANNING BOARD APPROVAL OF THIS SITE DEVELOPMENT PLAN IS REQUIRED.

19.) PRIOR TO GRADING PERMIT APPLICATION, THE PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 16.129 THE HOWARD COUNTY CODE.

20.) ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDER'S EXPENSE

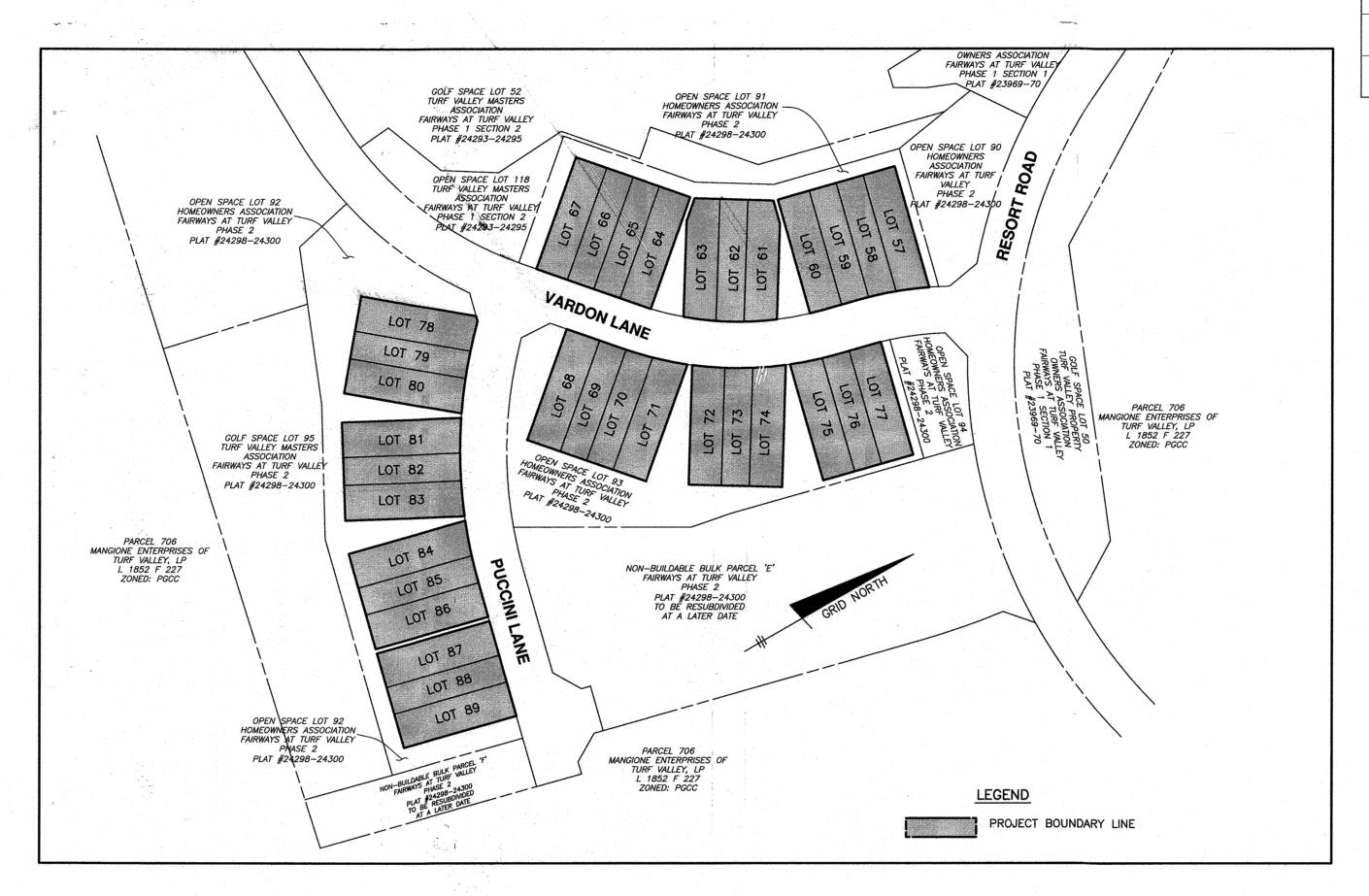
21.) IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, WINDOW WELLS, ORIELS, VESTIBULES, BALCONIES AND CHIMNEYS MAY ENCROACH 4 FEET INTO ANY SETBACK OR REQUIRED DISTANCE BETWEEN BUILDINGS PROVIDED THE FEATURE HAS A MAXIMUM WIDTH OF 16 FEET. EXTERIOR STAIRWAYS OR RAMPS, ABOVE OR BELOW GROUND LEVEL (EXCLUDING THOSE ATTACHED TO A PORCH OR DECK) MAY ENCROACH 10 FEET INTO A FRONT SETBACK OR A SETBACK FROM A PROJECT BOUNDARY, 16 FEET INTO A REAR SETBACK, 4 FEET INTO A SIDE SETBACK OR REQUIRED DISTANCE BETWEEN BUILDINGS. OPEN OR ENCLOSED PORCHES OR DECKS AND THE STAIRWAYS OR RAMPS ATTACHED THERETO MAY ENCROACH 10 FEET INTO A FRONT OR REAR SETBACK, SETBACK FROM A PROJECT BOUNDARY OR A REQUIRED DISTANCE BETWEEN BUILDINGS.

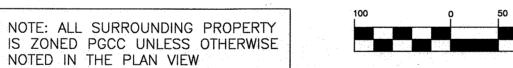
22.) THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR

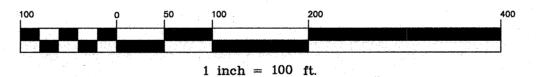
23.) THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

# RESIDENTIAL SITE DEVELOPMENT PLAN FAIRWAYS AT TURF VALLEY

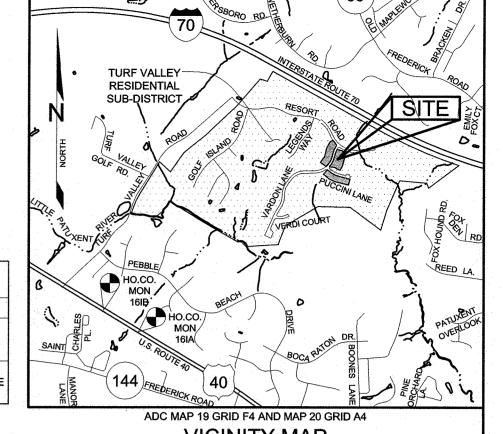
PHASE 2 LOTS 57 thru 89







	BENCHMARKS						
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION			
16IB	590,475.2538	1,344,753.9350	469.892	11.5' SOUTHWEST OF WBL RT. 40, 20.8' WEST OF PK NAIL IN SHOULDER, 66.4' SOUTH OF LAST POST IN GUARDRAIL			
17AB	598,435.249	1,348,615.2482	508.469	SE OF INTERSECTION OF RTE. 99 AND WETHERBURN ROAD, 14.8' WEST OF FENCE POST, 35' NE OF MANHOLE			



VICINITY MAP

	SHEET INDEX	
SHEET	TITLE	-
1	TITLE SHEET	
2	SITE DEVELOPMENT AND GRADING PLAN	
3	LANDSCAPE PLAN	
4	SEDIMENT & EROSION CONTROL PLAN	
5	SEDIMENT & EROSION CONTROL NOTES	
6	SEDIMENT & EROSION CONTROL DETAILS	

PGCC (RESIDENTIAL SUBDISTRICT)

\_\_\_\_RESIDENTIAL (SINGLE FAMILY ATTACHED)

	64	2622	VARDON	LANE
	65	2624	VARDON	LANE
	66	2626	VARDON	LANE
	67	2628	VARDON	LANE
	68	2629	VARDON	LANE
	69	2627	VARDON	LANE
	70	2625	VARDON	LANE
1	71	2623	VARDON	LANE
	72	2619	VARDON	LANE
	73	2617	VARDON	LANE
	74	2615	VARDON	LANE
	75	2611	VARDON	LANE
	76	2609	VARDON	LANE
	77	2607	VARDON	LANE
	78	10302	PUCCINI	LANE
	79	10304	PUCCINI	LANE

10306 PUCCINI LANE

10310 PUCCINI LANE

10312 PUCCINI LANE

10314 PUCCINI LANE

10318 PUCCINI LANE

10320 PUCCINI LANE

10322 PUCCINI LANE

10326 PUCCINI LANE

10328 PUCCINI LANE

10330 PUCCINI LANE

ADDRESS CHART

STREET ADDRESS

VARDON LANE

2604 VARDON LANE

2606 VARDON LANE

2608 VARDON LANE

2614 VARDON LANE

2616 VARDON LANE

2618 VARDON LANE

F.) FLOOR SPACE ON EACH LEVEL OF BLDG PER USE \_\_\_ N/A G.) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S)\_ H.) TOTAL NUMBER OF UNITS PROPOSED\_\_\_\_\_

A.) TOTAL PROJECT AREA \_\_\_\_\_

C.) LIMIT OF DISTURBED AREA

D.) PRESENT ZONING:

E.) PROPOSED USE OF SITE:

B.) AREA OF PLAN SUBMISSION \_\_\_\_\_

1.) MAXIMUM NUMBER OF EMPLOYEES. TENANTS ON SITE PER USE \_\_\_\_\_ J.) NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING REGS AND/OR FDP CRITERIA \_\_\_\_\_ 83 (33 UNITS x 2.5)

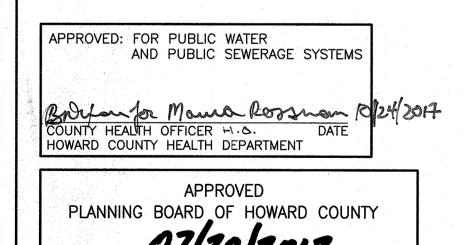
K.) NUMBER OF PARKING SPACES PROVIDED ONSITE (INCLUDES HANDICAPPED SPACES) PROVIDED UNDER F-10-084 AND SOF-17-057.

SITE ANALYSIS DATA CHART

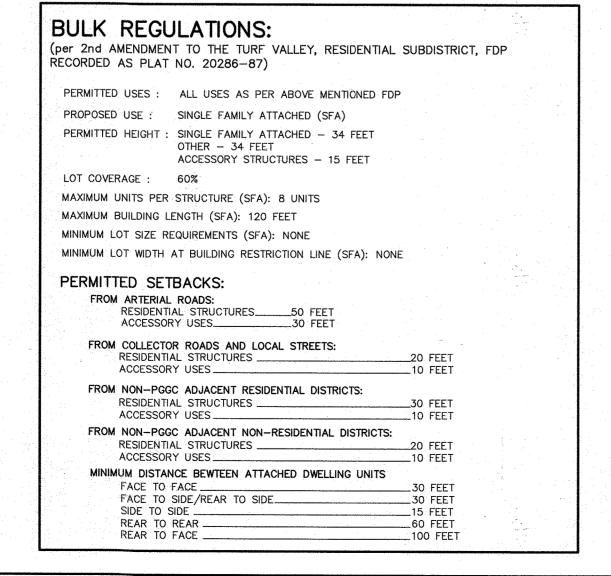
L.) OPEN SPACE ON-SITE \_\_\_\_\_\_N/A M.) AREA OF RECREATIONAL OPEN SPACE REQUIRED\_\_\_\_ N/A

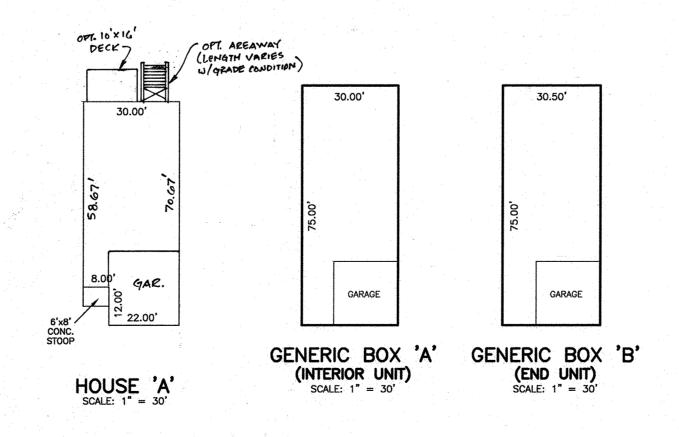
AREA OF RECREATIONAL OPEN SPACE PROVIDED\_\_\_\_ N/A \_\_\_\_1.70 AC. BASED ON GENERIC BOX N.) BUILDING COVERAGE OF SITE \_\_\_\_ PERCENTAGE OF GROSS AREA\_

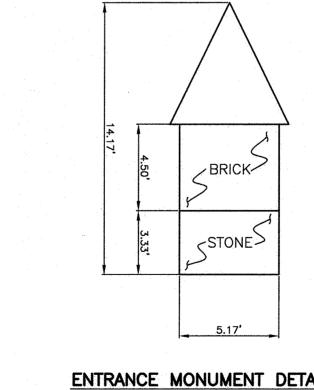
O.) APPLICABLE DPZ FILE REFERENCES: \_\_\_\_\_ \_\_\_\_ F-07-158, F-10-084



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 10-12-17 CHIEF, DEVELOPMENT ENGINEERING DIVISION







24298-24300

5.17'	ENGINEERS LAND SURVEYOR	RS PIANNERS
MONITORIAL	ENGINEER	ING, INC.
MONUMENT DETAIL CALE: 1" = 5'	8480 BALTIMORE NATIONAL PIKE ▲ SUITE 31 (P) 410-465-6105 (F	5 ▲ ELLICOTT CITY, MARYLAND 2 F) 410-465-6644
	WWW.BEI-CIVILENGIN	NEERING.COM
	OWNER:	RESIDE
	MANGIONE ENTERPRISES OF	FAIR

602201

TURF VALLEY, LIMITED PARTNERSHIP

1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400 PERMIT INFORMATION CHART SUBDIVISION NAME: SECTION / AREA: LOT/PARCEL # FAIRWAYS AT TURF VALLEY JAMES KEELTY AND COMPANY, INC. 706 AND p/o 8 61 EAST PADONIA ROAD TIMONIUM, MARYLAND 21093 CENSUS TRACT 410-252-8600 GRID-No. ZONE TAX MAP NO ELECTION DISTRICT

16

7		
6 1-	13-2020	REVISE STREET ADDRESSES FOR LOTS 78-89 IN ADDRESS CHART
1 10	-26-2018	ADD AREAWAY TO HOUSE FOOTPRINT. COERECT HOUSE DIMENSIONS. SHOW GARAGE.
NO.	DATE	REVISION

professional engineer under the laws of the State of Maryland, **RENCHMARK** 21043

SCALE:

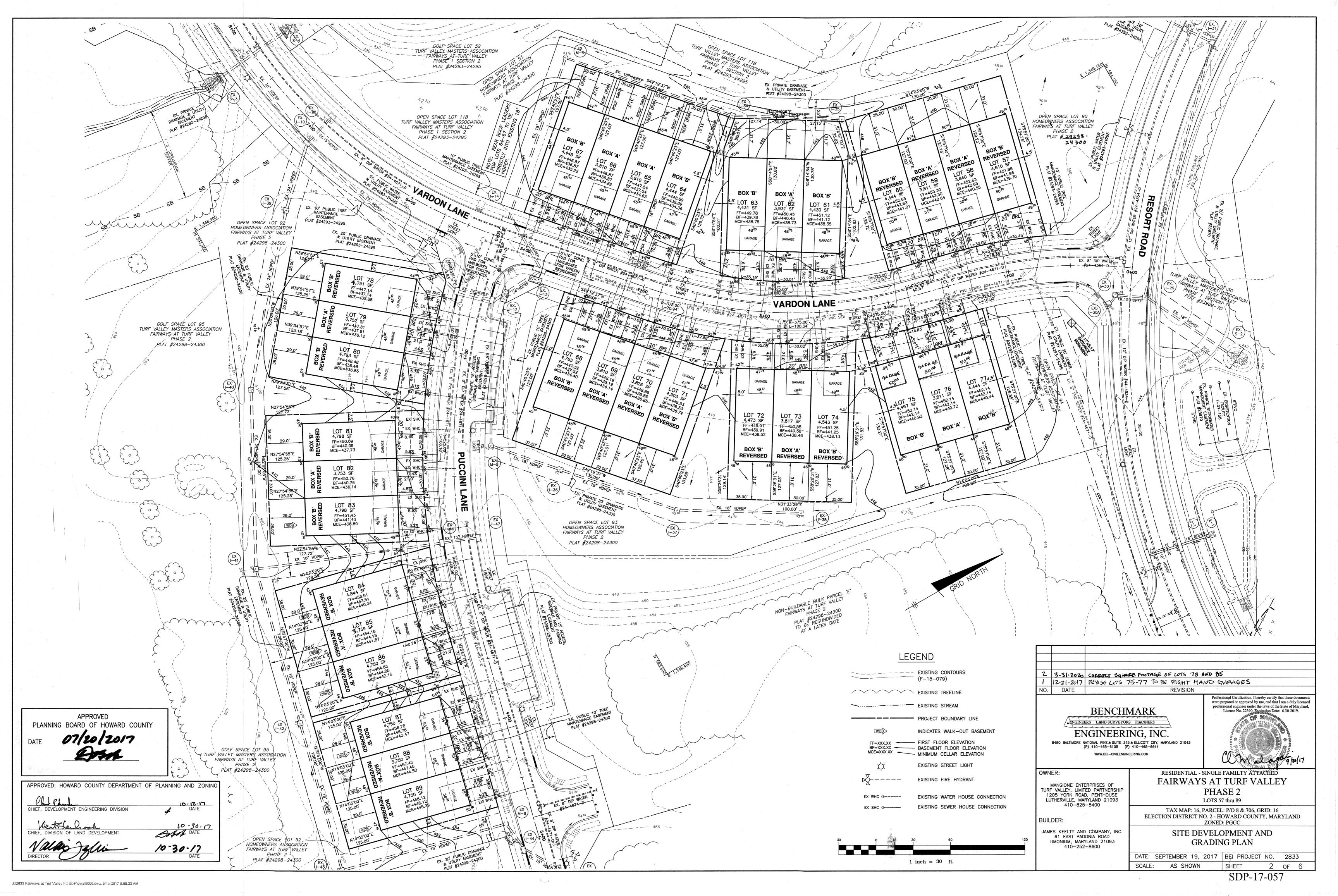
DENTIAL - SINGLE FAMILTY ATTACHED

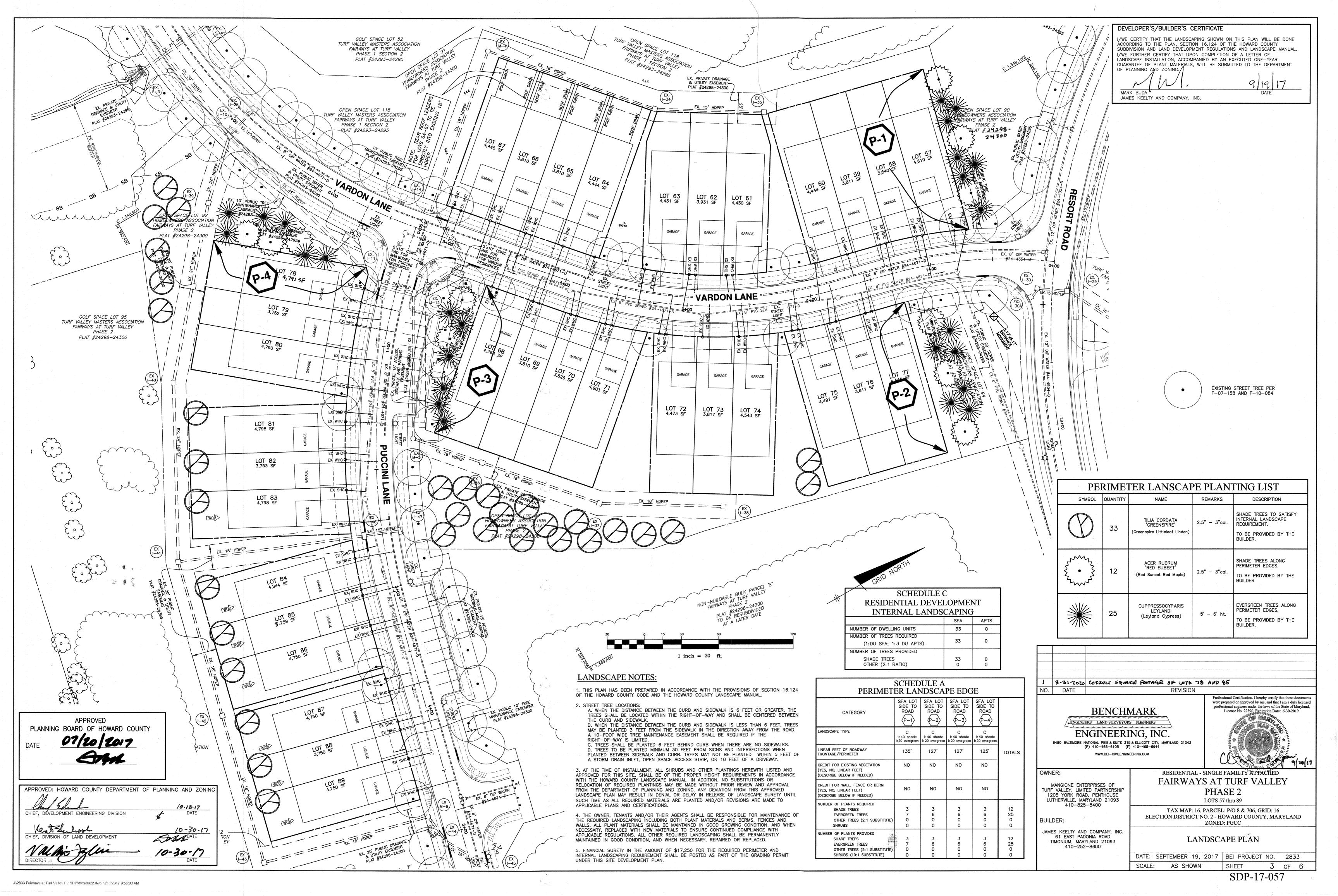
FAIRWAYS AT TURF VALLEY PHASE 2 LOTS 57 thru 89 TAX MAP: 16, PARCEL: P/O 8 & 706, GRID: 16

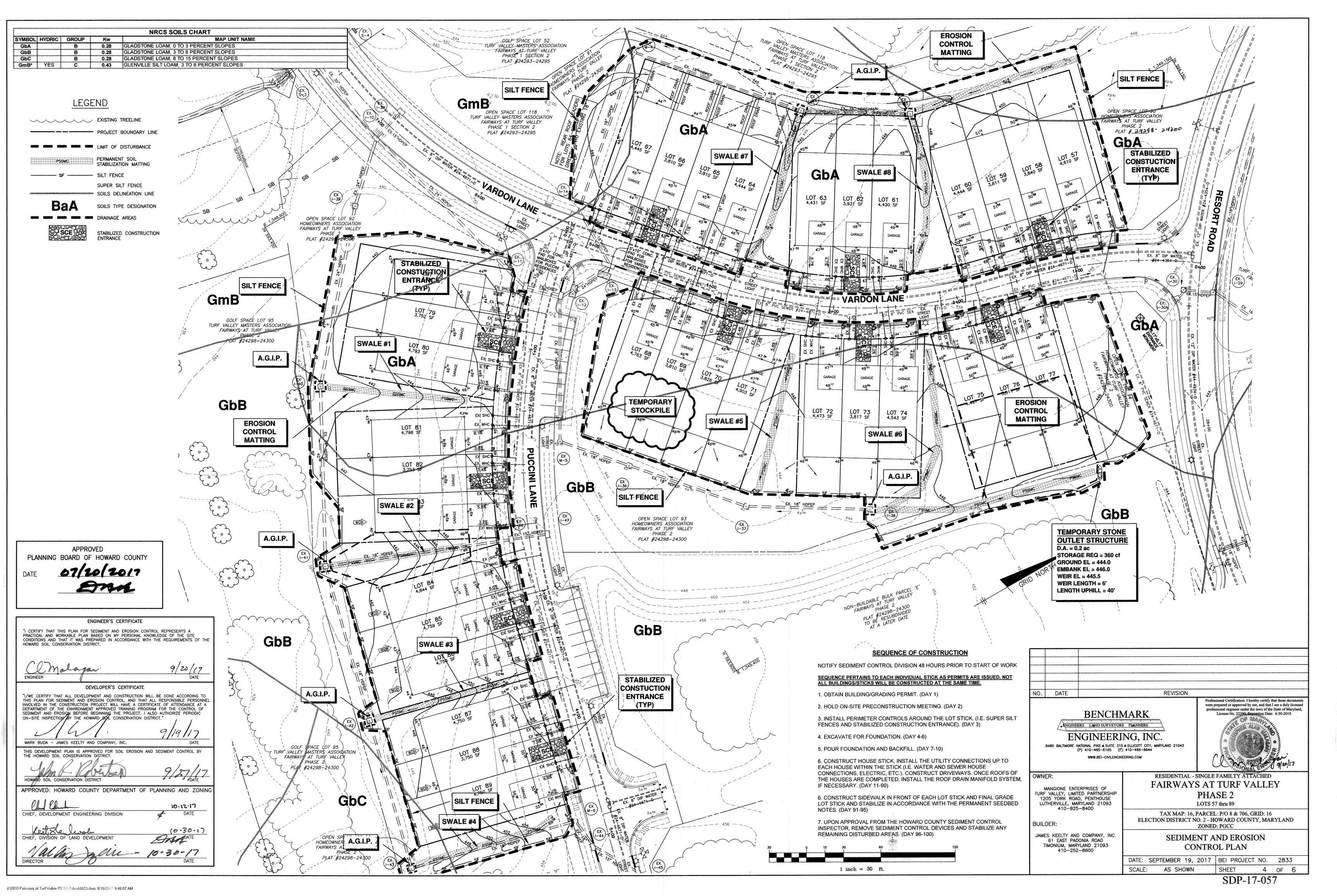
ELECTION DISTRICT NO. 2 - HOWARD COUNTY, MARYLAND **ZONED: PGCC** 

SITE DEVELOPMENT PLAN **COVER SHEET** DATE: SEPTEMBER 19, 2017 | BEI PROJECT NO. 2833 AS SHOWN 1 of 6

SDP-17-057







**B-4 STANDARDS AND SPECIFICATIONS VEGETATIVE STABILIZATION** 

Using vegetation as cover to protect exposed soil from erosion.

To promote the establishment of vegetation on exposed soil Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization and permanent stabilization.

Effects on Water Quality and Quantity Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall,

reducing sediment loads and runoff to downstream areas. Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation

increase organic matter content and improve the water holding capacity of the soil and subsequent plant 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

within the root zone Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the

planting season. 1. Adequate vegetative stabilization requires 95 percent groundcover.

2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding. 3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates

originally specified. 4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

> B-4-1 STANDARDS AND SPECIFICATIONS INCREMENTAL STABILIZATION

Establishment of vegetative cover on cut and fill slopes.

To provide timely vegetative cover on cut and fill slopes as work progresses Conditions Where Practice Applies Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

A. Incremental Stabilization - Cut Slopes 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed

and apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence example (Refer to Figure B.1):

a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation. b. Perform Phase 1 excavation, prepare seedbed, and stabilize.

c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

B. Incremental Stabilization - Fill Slopes 1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresse 2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading

operation ceases as prescribed in the plans. 3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner. 4. Construction sequence example (Refer to Figure B.2):

a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.

b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.

c. Place Phase 1 fill, prepare seedbed, and stabilize. d. Place Phase 2 fill, prepare seedbed, and stabilize.

e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any application of temporary stabilization. Figure B.

APPROVED PLANNING BOARD OF HOWARD COUNTY

## ENGINEER'S CERTIFICATE CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 OWARD SOIL CONSERVATION DISTRICT DEVELOPER'S CERTIFICATE I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEI INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT. MARK BUDA JAMES KEELTY AND COMPANY, INC. DATE THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY HE HOWARD SOIL CONSERVATION DISTRICT APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 10-12-17 CHIEF, DEVELOPMENT ENGINEERING DIVISION

#### **B-4-2 STANDARDS AND SPECIFICATIONS** SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

The process of preparing the soils to sustain adequate vegetative stabilization.

To provide a suitable soil medium for vegetative growth. Conditions Where Practice Applies Where vegetative stabilization is to be established.

A. Soil Preparation Temporary Stabilization

 Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches 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 must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges 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 suitable means. Permanent Stabilization a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil

conditions required for permanent vegetative establishment are:

ly. Soil contains 1.5 percent minimum organic matter by weight.

i. Soil pH between 6.0 and 7.0. ii. Soluble salts less than 500 parts per million (ppm). iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.

v. 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 above

Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

Apply soil amendments as specified on the approved plan or as indicated by the results

Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment

leaving the soil in an irregular condition with ridges running parallel to the contour of the

slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be

unnecessary on newly disturbed areas. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is 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

Topsoil salvaged from an existing site may be used provided 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-NRCS.

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

 The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. 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.

The original soil to be vegetated contains material toxic to plant growth, The soil is so acidic that treatment with limestone is not feasible 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: a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than

1½ inches in diameter. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified. 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.

Topsoil Application Erosion and sediment control practices must be maintained when applying topsoil. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to 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 topsoiling or other operations must be

corrected in order to prevent the formation of depressions or water pockets. Topsoil must not be placed if 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.

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 of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer

Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh 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 inches of soil by disking or other suitable means. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of

#### **B-4-3 STANDARDS AND SPECIFICATIONS** SEEDING AND MULCHING

The application of seed and mulch to establish vegetative cover. To protect disturbed soils from erosion during and at the end of construction Conditions Where Practice Applies To the surface of all perimeter controls, slopes, and any disturbed area not under active grading

1. Specifications

a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate. b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is

frozen. The appropriate seeding mixture must be applied when the ground thaws. c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the 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 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less

d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to

permit dissipation of phyto-toxic materials. a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries. ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.

b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil, i. 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

ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.

 Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre

ii. 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 iii. Mix seed and fertilizer on site and seed immediately and without interruption.

B. Mulching 1. Mulch Materials (in order of preference)

a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.

iv. When hydroseeding do not incorporate seed into the soil.

I. WCFM is to 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. ii. WCFM, including dye, must contain no germination or growth inhibiting

iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic. v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum

2. Application a. Apply mulch to all seeded areas immediately after seeding.

b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth o that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.

c. 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.

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

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 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 follow the contour. ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net

dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water. iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the ednes where wind catches mulch, such as in valleys and on crests of banks,

Use of asphalt binders is strictly prohibited. iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

#### **B-4-5 STANDARDS AND SPECIFICATIONS** PERMANENT STABILIZATION

To stabilize disturbed soils with permanent vegetation.

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils. Conditions Where Practice Applies Exposed soils where ground cover is needed for 6 months or more.

A. Seed Mixtures 1. General Use

a Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan. b Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or

for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guild, Section 342 - Critical Area Planting. c For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil

testing agency. d For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

2. Turfgrass Mixtures a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. b. Select one or more of the species or mixtures listed below based on the site conditions or purpose

Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan. i. Kentucky Bluegrass: Full sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total

mixture by weight. ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging 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 blended. 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: 1 1/2 to 3 pounds per 1000 square feet. Notes: 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. c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)

Central MD:March 1 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) d. 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 1 ½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose

no difficulty. e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is not especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

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

a. Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector. b. Sod must be machine cut at a uniform soil thickness of % inch, plus or minus % inch, at the time of

cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and 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. :. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joint 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. b. 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 1/3 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-4-4 STANDARDS AND SPECIFICATIONS**

TEMPORARY STABLIZATION To stabilize disturbed soils with vegetation for up to 6 months

To use fast growing vegetation that provides cover on disturbed soils. Conditions Where Practice Applies Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), 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 plan and

completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency Soil tests are not required for Temporary Seeding. . When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

### **B-4-8 STANDARDS AND SPECIFICATIONS**

STOCKPILE AREA

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.

Conditions 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. 2. The footprint of the stockpile must be sized to accommodate the anticipated volume of materia 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.

4. Access the stockpile area from the upgrade side. 5. 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.

7. 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 Grading.

# H-5 STANDARDS AND SPECIFICATIONS

**DUST CONTROL** Controlling the suspension of dust particles from construction activities

not be irrigated to the point that runoff occurs.

To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing. Vegetative Cover: See Section B-4-4 Temporary Stabilization.

illage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must

Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. <u>Chemical Treatment</u>: Use of chemical treatment requires approval by the appropriate plan

# HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-3133-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hours notice to CID must be given at the following stages:

a. Prior to the start of earth disturbance, b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading, c. Prior to the start of another phase of construction or opening of another grading

this plan and are to be in conformance with the <u>2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL</u>, and revisions thereto.

d. Prior to the removal or modification of sediment control practices. 2. All vegetative and structural practices are to be installed according to the provisions of

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1) and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 feet must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization

5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID

6. Site Analysis:

matting (Sec. B-4-6).

3.26 Acres Total Area of Site 4.74 Area Disturbed: 2.15 \*CUT/FILL NUMBERS Area to be roofed or payed: Acres ARE FOR SEDIMENT 2.59 CONTROL PURPOSES Area to be vegetatively stabilized: Acres

ONLY, CONTRACTOR 12,466 \* Cu Yds TO VERIFY. 4,117 \* \_ Cu Yds SITE WITH AN ACTIVE GRADING PERMIT

7. Any sediment control practice which is disturbed by grading activity for placement of

utilities must be repaired on the same day of disturbance. B. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly, and the next day after each

rain event. A written report by the contractor, made available upon request, is part of every

inspection and should include Inspection date

Off-site waste/borrow area location

Identification of plan deficienci

Construction Activities (NPDES, MDE).

•Inspection type (routine, pre-storm event, during rain event) Name and title of inspector • Weather information (current conditions as well as time and an=mount of last recorded • Brief description of project's status (e.g. percent complete) and/or current activities Evidence of sediment discharges

• Identification of sediment controls that require maintenance • Identification of missing or improperly installed sediment controls • Compliance status regarding the sequence of construction and stabilization requirements Photographs Monitoring/sampling • Maintenance and/or corrective action performed

9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back filled and stabilized by the end of each work day, whichever is shorter. 10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions

may be allowed by the CID per the list of HSCD-approved field changes.

11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) a a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the CID, no more than 30 acres cumulatively may

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be

• Other inspection items as required by the General Permit for Stormwater Associated with

treated in a sediment basin or other approved washout structure. 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

14. All silt fence and super silt fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curied uphill by 2' in elevation. 15. Stream channels must not be disturbed during the following restricted time periods

• Use I and IP March 1 - June 15 • Use III and IIIP October 1 - April 30 • Use IV March 1 - May 31

16. A copy of this plan, the <u>2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL</u>, and associated permits shall be on-site and available when

Hardiness Zone (from Figure B.3): Seed Misture (from Table B.3):		6b Tall Fescue/Kentucky Bluegrass		Fertilizer Rate (10-20-20)			Lime Rate	
No,	Species	Application Rate (lb/ac.)	Seeding Dates	Seeding Depths	N	P2O5		
	Fescue, Tall	60	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in	45 pounds			
9	Bluegrass, Kentucky	40	Mar 1 to May 15 Aug 1 to Oct 15	1/4 - 1/2 in	per acre (1.01b/	90 lb/ac (2 lb/	90 lb/ac 2 lb/	2 tons/ (90lb)
				1/4 - 1/2 in	100 sf)	1000 sf)	1000 sf)	1000

**Permanent Seeding Summary** 

#### Table B.1: Temporary Seeding for Site Stabilization

Plant Species	Seeding Rate 1/		Seeding	Recommended Seeding Dates by Plant Hardiness Zone 3/		
Plant Species	lb/ac	lb/1000 ft2	Depth 2/ (inches)	5b and 6a	6b	7a and 7b
Cool-Season Grasses	•					
Annual Ryegrass (Lolium perenne ssp. Multiflorum	40	1.0	0.5		Mar 1 to May 15; Aug 1 to Oct 31	
Barley (Hordeum vulgare)	96	2.2	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Oats (Avena sativa)	72	1.7	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Wheat (Triticum aestivum)	120	2.8	1.0		Mar 1 to May 15; Aug 1 to Oct 31	
Cereal Rye (Secale cereale)	112	2.8	1.0		Mar 1 to May 15; Aug 1 to Nov 15	
Warm-Season Grasses	-					
Foxtail Millet (Serataria italica)	- 30	0.7	0.5		May 16 to Jul 31	
		<del> ,</del>			T	

Pearl Millet (Pennisetum glaucum

Seeding rates for the warm season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as tested. Adjustments are usually not needed for the cool-season grasses.

May 16 to Jul 31

0.5

0.5

Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above.

Oats are the recommended nurse crop for warm-season grasses

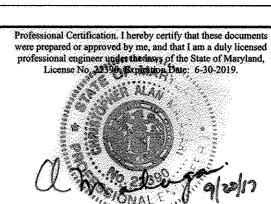
For sandy soils, plant seeds at twice the depth listed above

#### NO. DATE

BENCHMARK INEERS LAND SURVEYORS PLANNERS ENGINEERING, INC 8480 BALTIMORE NATIONAL PIKE A SUITE 315 A ELLICOTT CITY, MARYLAND 21043

(P) 410-465-6105 (F) 410-465-6644

WWW.BEI-CIVILENGINEERING.COM



OWNER: MANGIONE ENTERPRISES OF TURF VALLEY, LIMITED PARTNERSHIP 1205 YORK ROAD, PENTHOUSE LUTHERVILLE, MARYLAND 21093 410-825-8400

**BUILDER:** JAMES KEELTY AND COMPANY, INC 61 EAST PADONIA ROAD TIMONIUM. MARYLAND 21093

410-252-8600

**RESIDENTIAL - SINGLE FAMILTY ATTACHED FAIRWAYS AT TURF VALLEY** PHASE 2 LOTS 57 thru 89

TAX MAP: 16, PARCEL: P/O 8 & 706, GRID: 16 ELECTION DISTRICT NO. 2 - HOWARD COUNTY, MARYLAND

ZONED: PGCC

REVISION

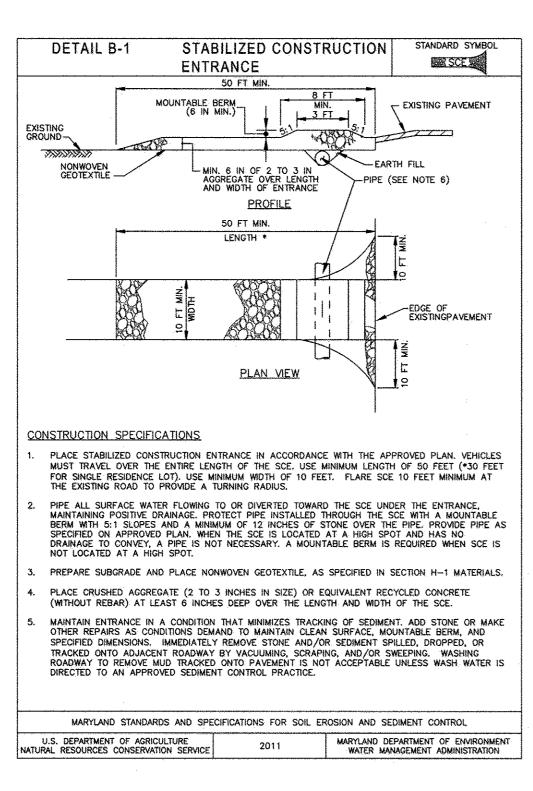
SEDIMENT AND EROSION CONTROL NOTES

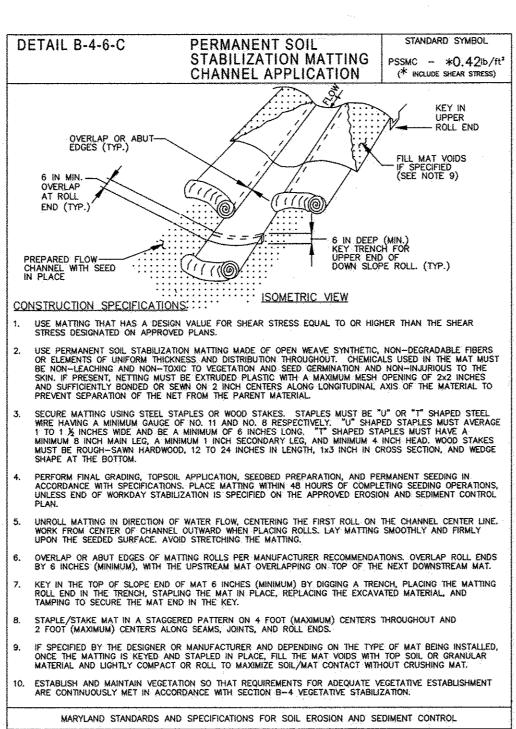
DATE: SEPTEMBER 19, 2017 BEI PROJECT NO. 2833 SCALE: SHEET AS SHOWN 5 of 6

SDP-17-057

J:\2833 Fairways at Turf Valley P2 SDP\dwo\8023.dwg, 9/18/2017 9:51:50 AM

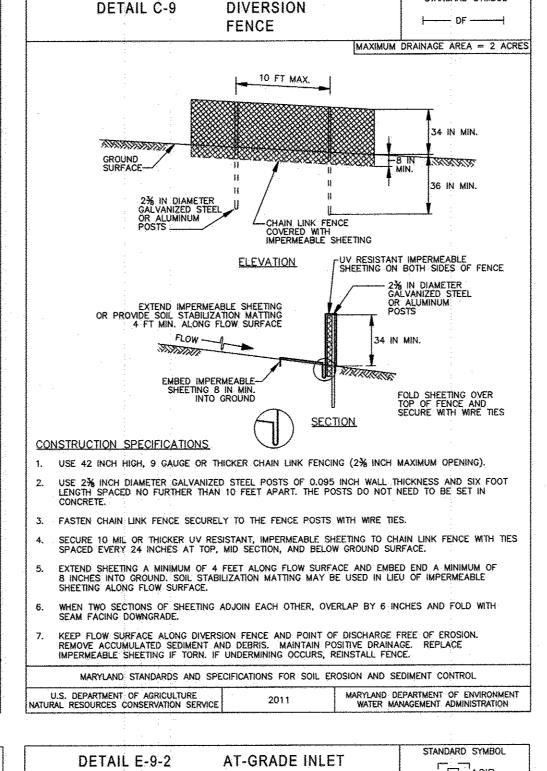
The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.



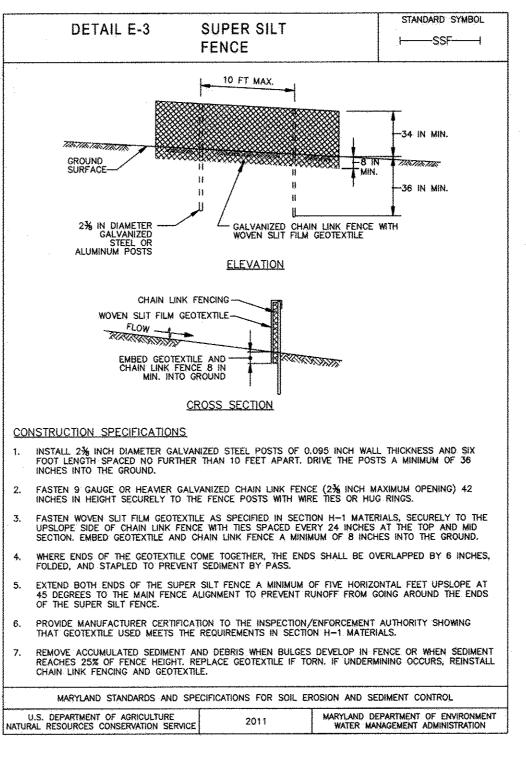


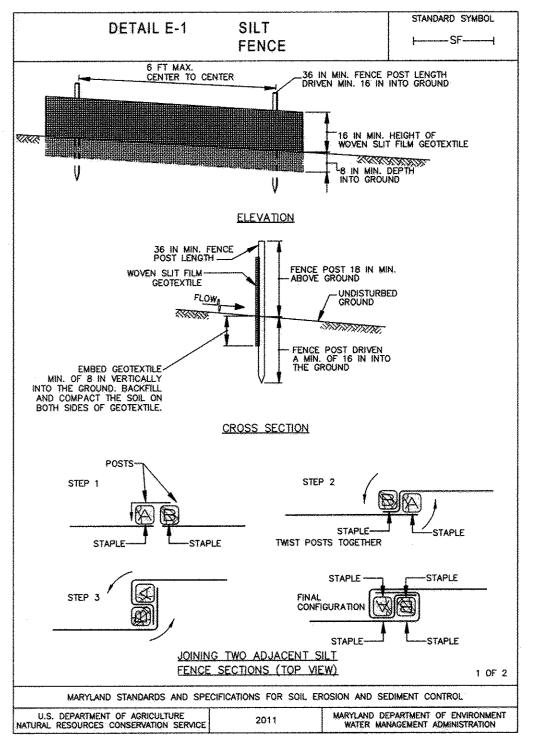
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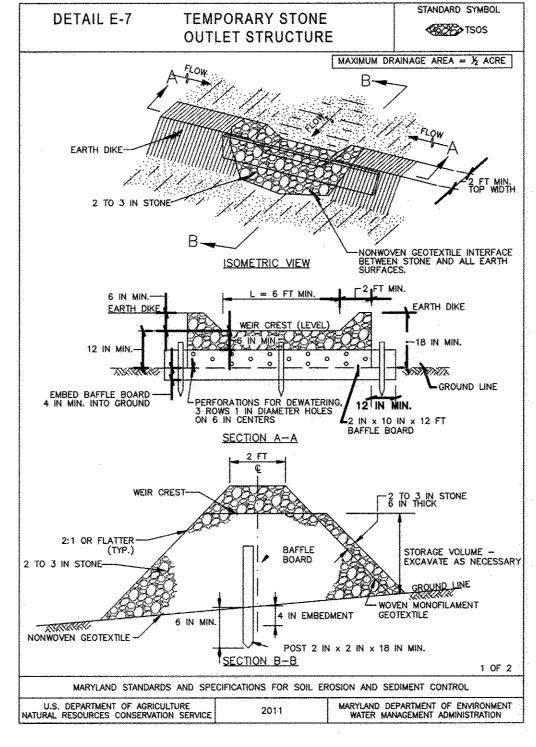
U.S. DEPARTMENT OF AGRICULTURE
IATURAL RESOURCES CONSERVATION SERVICE

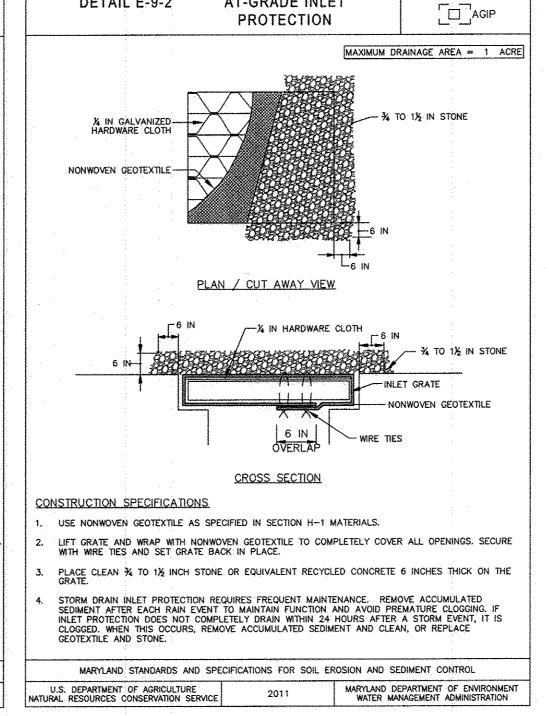


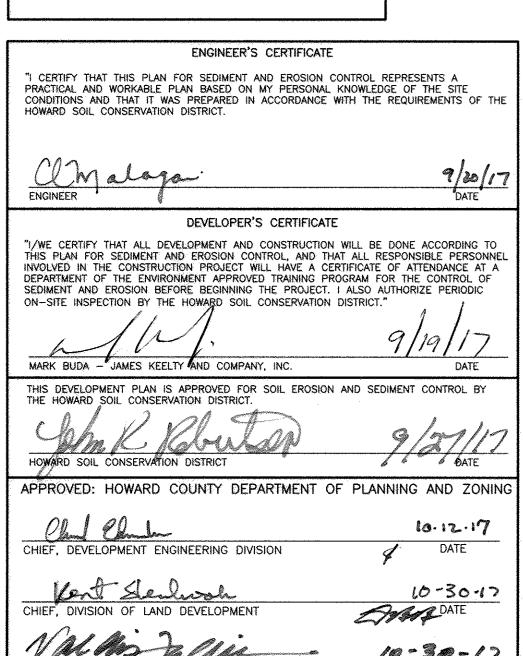
STANDARD SYMBOL











PLANNING BOARD OF HOWARD COUNTY

