

GREATER THAN 40 MPH

(A-3)

PERMEABLE REINFORCED DISCONNECTION OF

MD 104.02-01

STORMWATER MANAGEMENT PRACTICES CHART

(M-I)

SOILS LEGEND

(N-3)

Legore-Montalto-Urban land complex, 0 to 8 percent slopes

UcB Urban land-Chillum-Beltsville complex, 0 to 5 percent slopes

Russett and Beltsville, 5 to 10 percent slopes

GRAVEL WETLANDS INFILTRATION

SOIL GROUP K' FACTO

(M-3)

(M-2)

ROOFTOP RUNOFF NON-ROOFTOP RUNOFF CONSERVATION AREAS HARVESTING

(N-2)

STANDARD NO.

(A-2)

GREEN ROOFS

(A-I)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

LAND DEVELOPMENT

OL COLLEGE DIVISION TO THE PROPERTY OF THE PRO

ADDRESS

7440 Oakland Mills Road 7438 Oakland Mills Road

7436 Oakland Mills Road

7434 Oakland Mills Road

7432 Oakland Mills Road

7430 Oakland Mills Road

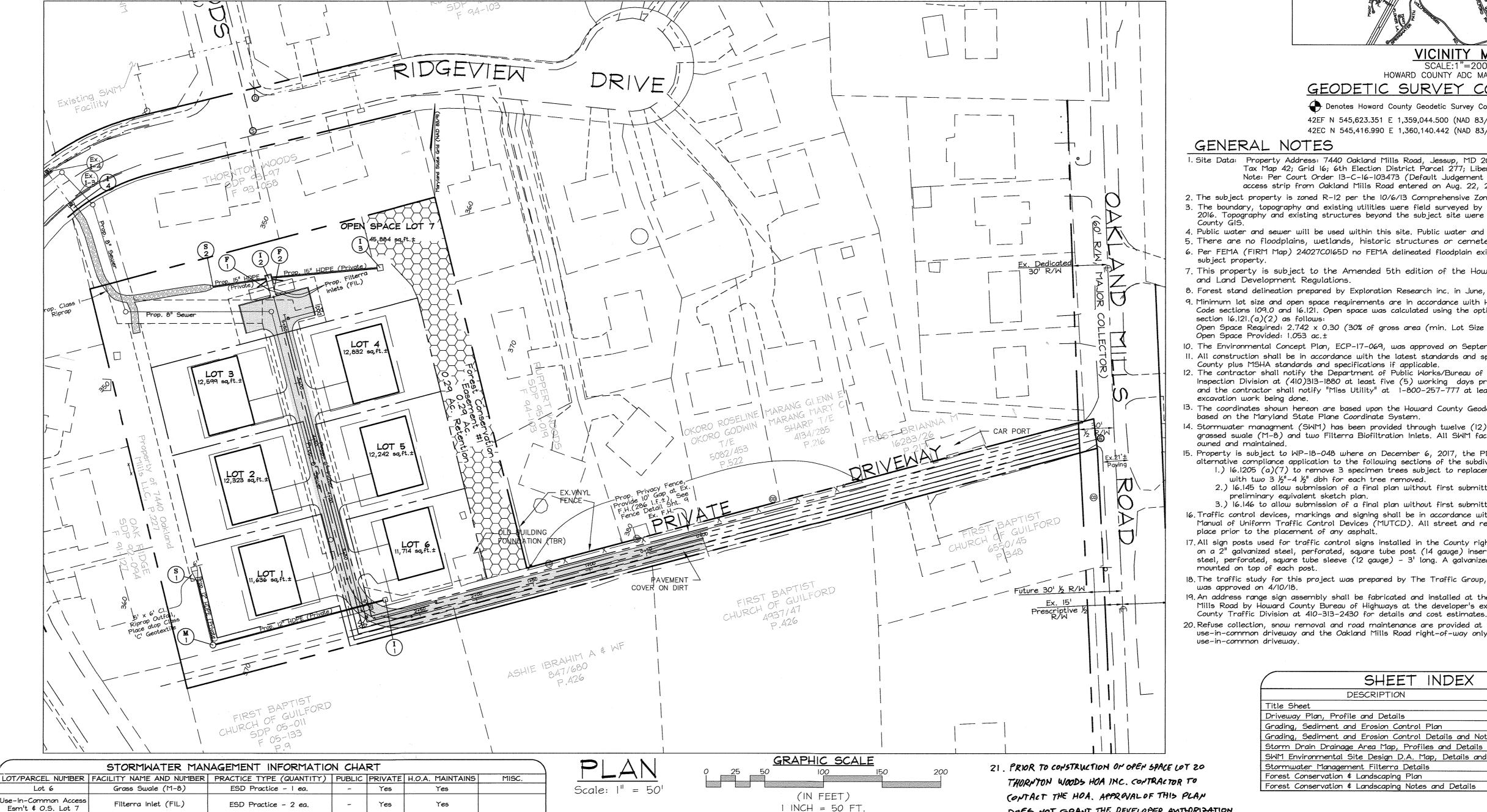
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NUMBER

FINAL CONSTRUCTION PLANS

BRICKLEY MILLS

LOTS 1 THRU 6 AND OPEN SPACE LOT 7 HOWARD COUNTY, MARYLAND



BIORETENTION GARGENS SWALES

MINIMUM LOT SIZE CHART

AREA (SF)

12,323

12.599

12,832

(M-7)

2,727

3,363

2,920

(M-8)

AREA (SF) LOT SIZE (SF

9,469

9,322

(M-5)

 $\sqrt{(2 \text{ ea.})}$

(M-4)

1 INCH = 50 FT.DOES NOT GRANT THE DEVELOPER ANTHORIZATION TO DISTURB OFFSITE PROPERTY.

SITE ANALYSIS DATA

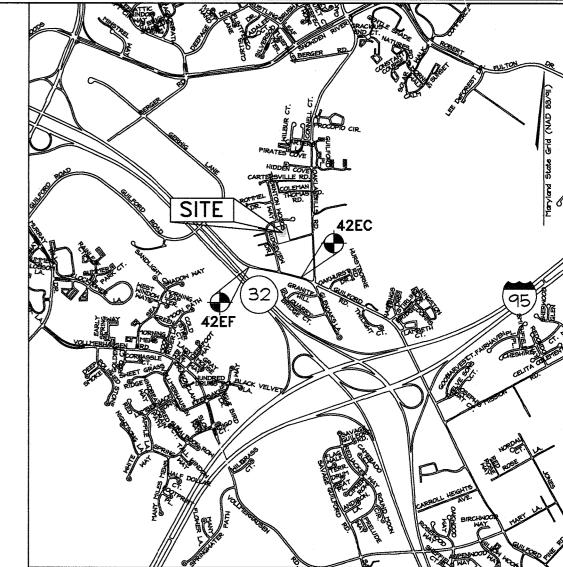
- Total area of site = 2.745 ac. No wetlands, wetland buffers or streams
- No 100-year floodplain exists on site. Existing forest area on site = 2.46 ac. No areas of 15-24.9% slopes exist on site No 25% slopes or greater exist on site. Limits of disturbance = 1.86 ac.± Proposed impervious area = 0.67 ac.±

Erodible soils $(K \ge 0.35) = 0.47$ ac.±

Proposed site use: Residential

OWNER/DEVELOPER 7440 Oakland Mills Road, LLC c/o Mr. Joe Encarnacao 19901 Belle Chase Drive Laytonsville, Maryland 20882 Phone No. 301-252-2870

PROFESSIONAL CERTIFICATION 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. #34689, Expiration Date: 7/08/2021.



SCALE:1"=2000' HOWARD COUNTY ADC MAP 5053-G4

GEODETIC SURVEY CONTROL

Denotes Howard County Geodetic Survey Control

42EF N 545,623.351 E 1,359,044.500 (NAD 83/91) Elev. 347.010 (NGVD 88) 42EC N 545,416.990 E 1,360,140.442 (NAD 83/91) Elev. 365.383 (NGVD 88)

GENERAL NOTES

1. Site Data: Property Address: 7440 Oakland Mills Road, Jessup, MD 20794. Tax Map 42; Grid 16; 6th Election District Parcel 277; Liber 16269 Folio 246 Note: Per Court Order 13-C-16-103473 (Default Judgement Granted for 25' access strip from Oakland Mills Road entered on Aug. 22, 2016)

2. The subject property is zoned R-12 per the 10/6/13 Comprehensive Zoning Plan.

3. The boundary, topography and existing utilities were field surveyed by FSH Associates in October, 2016. Topography and existing structures beyond the subject site were taken from Howard

4. Public water and sewer will be used within this site. Public water and sewer contract #24-5058-D.

5. There are no floodplains, wetlands, historic structures or cemeteries on-site. 6. Per FEMA (FIRM Map) 24027C0165D no FEMA delineated floodplain exists on or surrounding the

7. This property is subject to the Amended 5th edition of the Howard County Subdivision and Land Development Regulations.

8. Forest stand delineation prepared by Exploration Research inc. in June, 2017

9. Minimum lot size and open space requirements are in accordance with Howard County Code sections 109.0 and 16.121. Open space was calculated using the optional minimum lot size per

Open Space Required: 2.742 x 0.30 (30% of gross area (min. Lot Size 8,794 s.f.)) = 0.822 ac. ±

10. The Environmental Concept Plan, ECP-17-069, was approved on September 11, 2017.

II. All construction shall be in accordance with the latest standards and specifications of Howard

County plus MSHA standards and specifications if applicable. 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 to the start of work and the contractor shall notify "Miss Utility" at 1-800-257-777 at least 48 hours prior to any

excavation work being done. The coordinates shown hereon are based upon the Howard County Geodetic Control which is

based on the Maryland State Plane Coordinate System. 14. Stormwater managment (SWM) has been provided through twelve (12) dry wells (M-5), one

grassed swale (M-8) and two Filterra Biofiltration Inlets. All SWM facilities will be privately 15. Property is subject to WP-18-048 where on December 6, 2017, the Planning Director approved an

alternative compliance application to the following sections of the subdivision regulations. 1.) 16.1205 (a)(7) to remove 3 specimen trees subject to replacement of each specimen tree with two 3 ½"-4 ½" dbh for each tree removed.

2.) 16.145 to allow submission of a final plan without first submitting a sketch plan or preliminary equivalent sketch plan.

3.) 16.146 to allow submission of a final plan without first submitting a preliminary plan. 6. Traffic control devices, markings and signing shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in

place prior to the placement of any asphalt. 17. All sign posts used for traffic control signs installed in the County right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (12 gauge) - 31 long. A galvanized steel pole cap shall be

18. The traffic study for this project was prepared by The Traffic Group, dated March 20, 2018, and

was approved on 4/10/18. 19. An address range sign assembly shall be fabricated and installed at the main entrance off Oakland Mills Road by Howard County Bureau of Highways at the developer's expense. Contact Howard

20. Refuse collection, snow removal and road maintenance are provided at the junction of the use-in-common driveway and the Oakland Mills Road right-of-way only and not onto the use-in-common driveway.

SHEET INDEX	
DESCRIPTION	SHEET No.
Title Sheet	1 of 9
Driveway Plan, Profile and Details	2 of 9
Grading, Sediment and Erosion Control Plan	3 of 9
Grading, Sediment and Erosion Control Details and Notes	4 of 9
Storm Drain Drainage Area Map, Profiles and Details	5 of 9
SWM Environmental Site Design D.A. Map, Details and Notes	6 of 9
Stormwater Management Filterra Details	7 of 9
Forest Conservation \$ Landscaping Plan	8 of 9
Forest Conservation & Landscaping Notes and Details	9 of 9

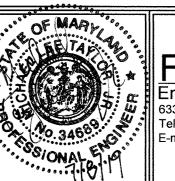
TITLE SHEET

BRICKLEY MILLS

F-18-083

TAX MAP 42 GRID 16 6TH ELECTION DISTRICT ZONED R-12

PARCEL 277 HOWARD COUNTY, MARYLAND

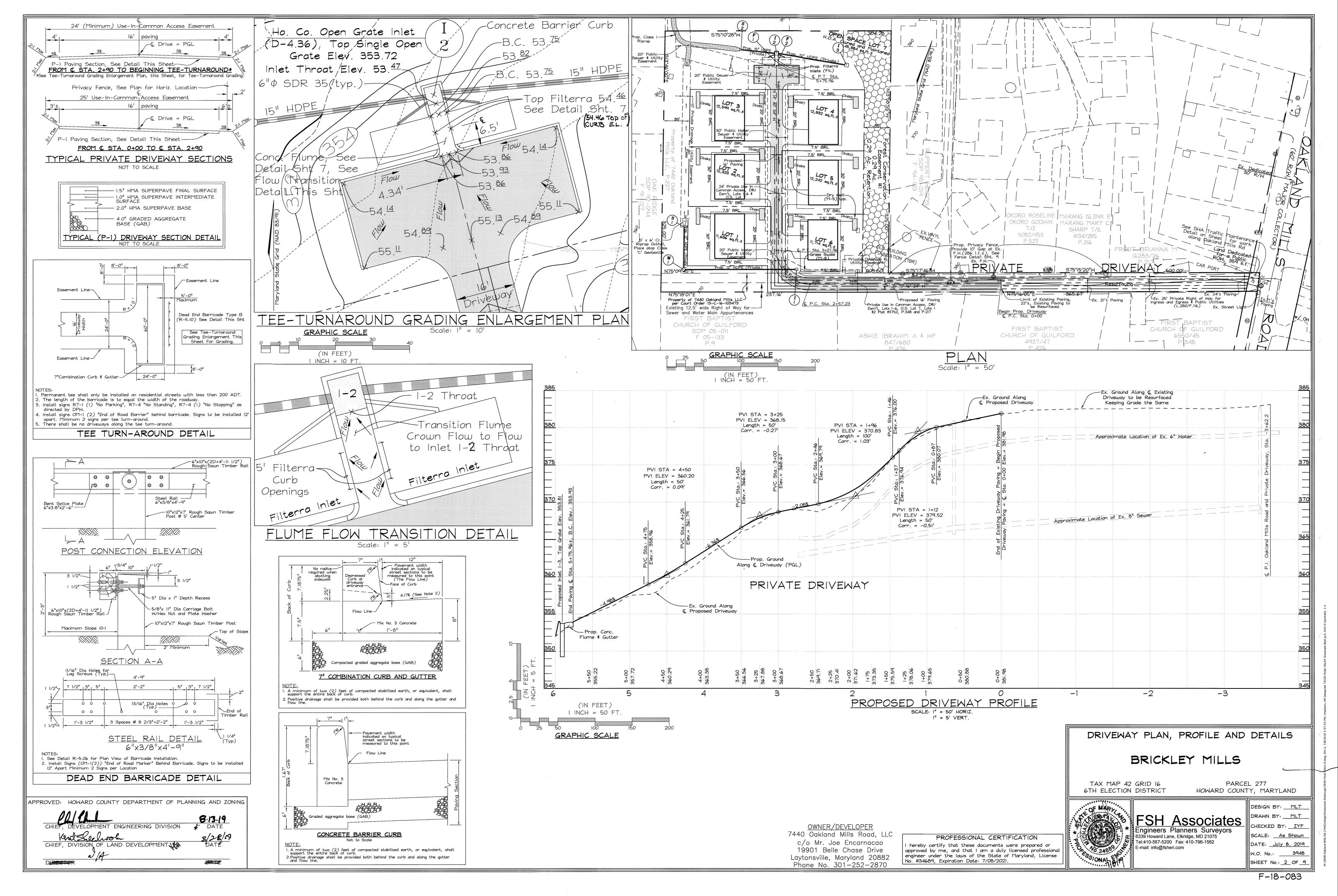


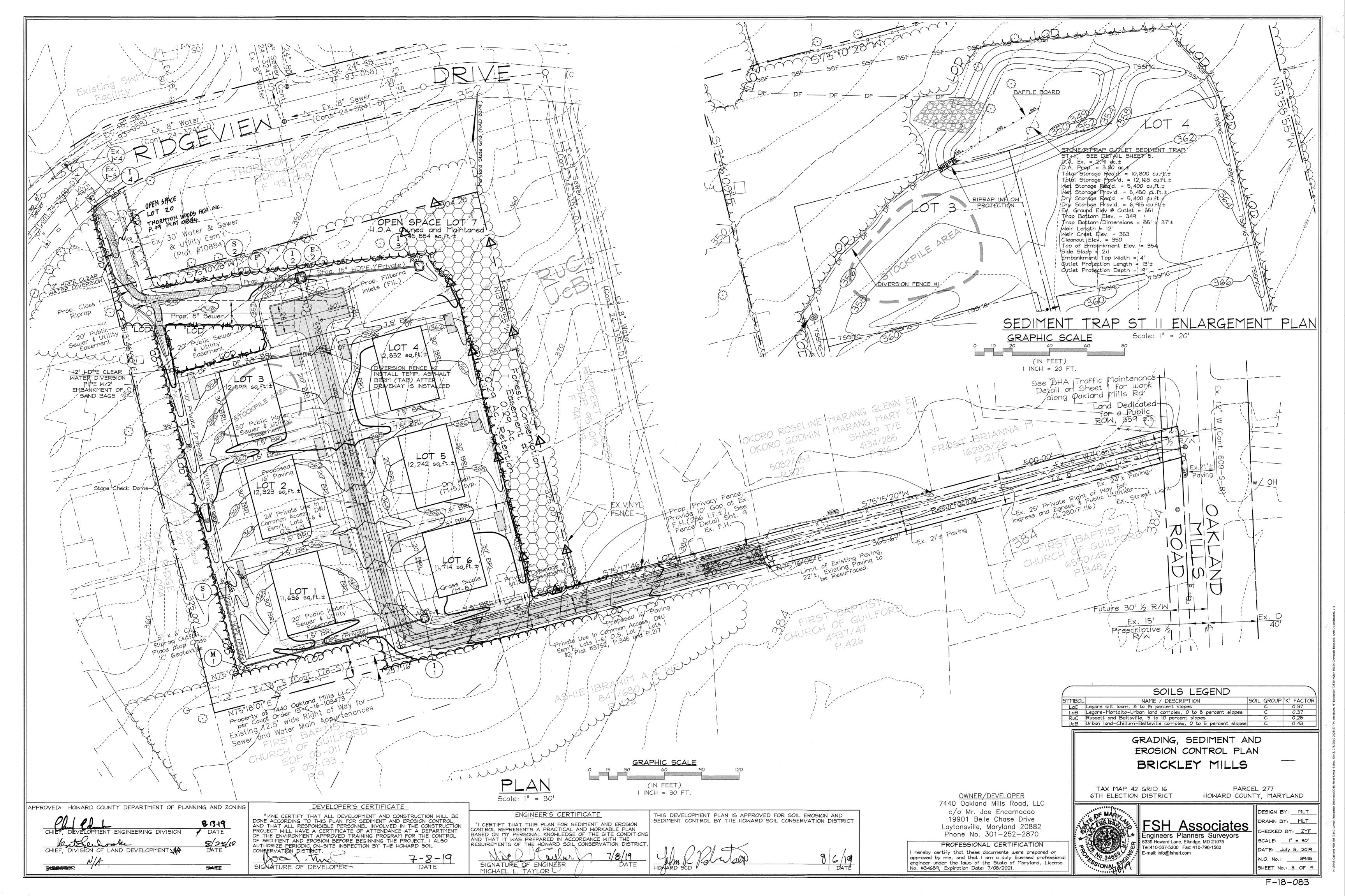
Engineers Planners Surveyors 6339 Howard Lane, Elkridge, MD 21075 Tel:410-567-5200 Fax: 410-796-1562 E-mail: info@fsheri.com

DRAWN BY: MLT CHECKED BY: ZYF SCALE: As Shown DATE: <u>July 8, 2019</u> 3948 W.O. No.: SHEET No.: 1 OF G

DESIGN BY: MLT

F-18-083





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 incremental 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, thereby 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 rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth

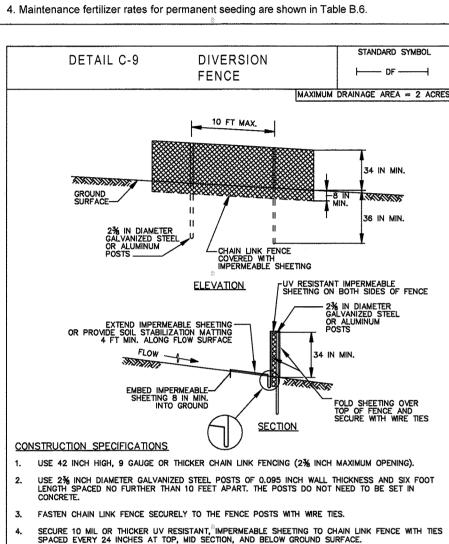
Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control 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.

- . 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.

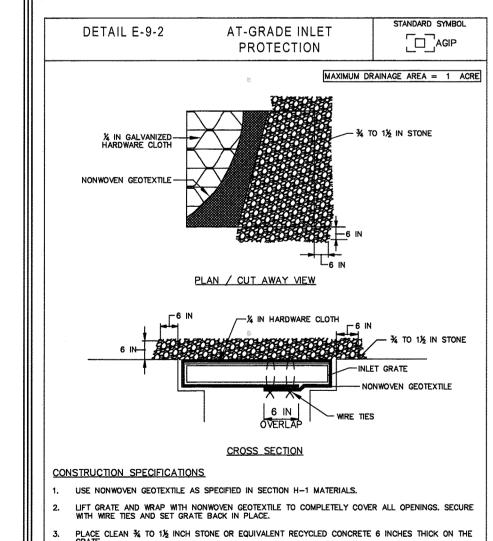


EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.

WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.

KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTROL



STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING ÅND ZONING

B-4-2 STANDARDS AND SPECIFICATIONS

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS The process of preparing the soils to sustain adequate vegetative stabilization

Conditions Where Practice Applies Where vegetative stabilization is to be established

Soil pH between 6.0 and 7.0.

To provide a suitable soil medium for vegetative growth

Soil Preparation

1. Temporary Stabilization a. 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.

b. Apply fertilizer and lime as prescribed on the plans. c. 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

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

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

v. Soil contains sufficient pore space to permit adequate root penetration. b. Application of amendments or topsoil is required if on-site soils do not

c. 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

d. Apply soil amendments as specified on the approved plan or as indicated

by the results of a soil test. 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

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

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

1. Topsoil is placed over prepared subsoil prior to establishment of permanen 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 gradation.

loosening may be unnecessary on newly disturbed areas.

2. 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: a. The texture of the exposed subsoil/parent material is not adequate to

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

c. The original soil to be vegetated contains material toxic to plant growth.

 d. The soil is so acidic that treatment with limestone is not feasible. Areas having slopes steeper than 2:1 require special consideration and

5. Topsoil Specifications: Soil to be used as topsoil must meet the following

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy cla 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 11/2 inches in diameter.

b. 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

c. 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 a. Erosion and sediment control practices must be maintained when applying

b. 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.

c. 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.

C. Soil Amendments (Fertilizer and Lime Specifications) 1. 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

2. 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

3. 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.

4. 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. 5. 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

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

CONSERVATION DISTRICT

square feet) prior to the placement of topsoil.

DEVELOPER'S CERTIFICATE

DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL

AND THAT ALL 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 INSPECTION BY THE HOWARD SOIL

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE

SEEDING AND MULCHING

The application of seed and mulch to establish vegetative cover

applied when the ground thaws.

and make the inoculant less effective.

must be firm after planting

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

B-4-3 STANDARDS AND SPECIFICATIONS

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

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

only if the ground is frozen. The appropriate seeding mixture must be

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

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

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

fashion as to provide at least 1/4 inch of soil covering. Seedbed

c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer) 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 hydroseeding

iii. Mix seed and fertilizer on site and seed immediately and

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

B. Mulching

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. 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

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

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 so 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 a the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited .

v. 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

o stabilize disturbed soils with permanent vegetation

o 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

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

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 Guide, Section 342 - Critical Area

c. For sites having disturbed area 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 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

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

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 ful 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: 11/2 to 3 pounds per 1000 square feet.

University of Maryland Publication, Agronomy Memo #77, "Turfgrass **Cultivar Recommendations for Maryland'** Choose certified material. Certified material is the best guarantee o cultivar purity. The certification program of the Maryland Department

of Agriculture, Turf and Seed Section, provides a reliable means of

Select turfgrass varieties from those listed in the most current

 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)

consumer protection and assures a pure genetic line

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 11/2 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 especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse

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

b. Sod must be machine cut at a uniform soil thickness of \(^4\) inch, plus or minus \(^4\) 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.

a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be

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.

not transplanted within this period must be approved by an agronomist or soil a. During periods of excessively high temperature or in areas having dry subsoil,

e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod

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

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.

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 STABILIZATION

o use fast growing vegetation that provides cover on disturbed soils.

o stabilize disturbed soils with vegetation for up to 6 months

ENGINEER'S CERTIFICATE

CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION

BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS

REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT

CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN

AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE

SIGNATURE/OF ENGINEER

MICHAEL L. TAYLOR

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

1. 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.

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section

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 Summary Application Seeding Dates Seeding Fertilizer Rate Rate (lb/ac) (10-20-20)2/15-4/30 ½ in. 8/15-11/30 Lolium perenne 436 lb/ac 2 tons/ac (10.0 lb/1000sf) (90 lb/1000sf) Foxtail Millet 30

HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES

A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour 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 c. Prior to the start of another phase of construction or opening of another aradina unit,

d. Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan. All vegetative and structural practices are to be installed according to the

provisions of this plan and are to be in conformance with the 2011

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto. 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

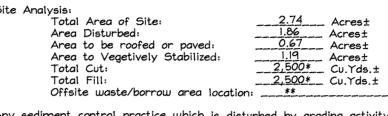
days as to all other disturbed areas on the project site except for those

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 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil

stabilization matting (Sec. B-4-6).

workday, whichever is shorter.

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



Any sediment control practice which is disturbed by grading activity fo placement of utilities must be repaired on the same day of disturbance

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 type (routine, pre-storm event, during rain event) Name and title of inspector · Weather information (current conditions as well as time and

amount of last recorded precipitation) · Brief description of project's status (e.g., percent complete) and/or current activities Evidence of sediment discharges · Identification of plan deficiencies Identification of sediment controls that require maintenance

· Compliance status regarding the sequence of construction and stabilization requirements Photographs Monitorina/samplina Maintenance and/or corrective action performed

• Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES,

Identification of missing or improperly installed sediment

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

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 allowed by the CID per the list of HSCD-approved field changes. 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) at a time. Work may proceed to a subsequent aradina unit when at least 50 percent of the disturbed area in preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time. Wash water from any equipment, vehicles, wheels, pavement, and other

sources must be treated in a sediment basin or other approved washout 3. Topsoil shall be stockpiled and preserved on-site for redistribution onto

All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25 minimum intervals, with lower ends curled uphill by 2'

time periods (inclusive): · Use I and IP March I - June 15 5. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and

associated permits shall be on-site and available when the site is active.

15. Stream channels must not be disturbed during the following restricted

* Earthwork quantities are solely for the purpose of calculating fees. Contractor to verify all quantities prior to the start of construction. ** To be determined by contractor, with pre-approval of the Sediment

Control Inspector with an approved and active grading permit.

All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto (see Standard Sediment Control Note #2)

OWNER/DEVELOPER

7440 Oakland Mills Road, LLC

c/o Mr. Joe Encarnacao

19901 Belle Chase Drive

Laytonsville, Maryland 20882

Phone No. 301-252-2870

DETAIL D-3-1 RIPRAP INFLOW RRP PROTECTION ISOMETRIC VIEW WINNING JET NOW CROSS SECTION PROFILE ALONG CENTERLINE

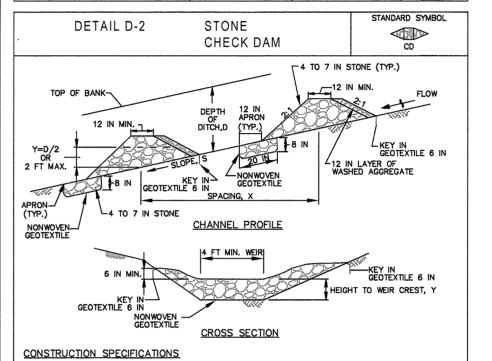
CONSTRUCTION SPECIFICATIONS

PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP. CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 \times D_{50}) AND A 1 FOOT DEEP FLOW CHANNEL, INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.

INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE

BLEND RIPRAP INTO EXISTING GROUND

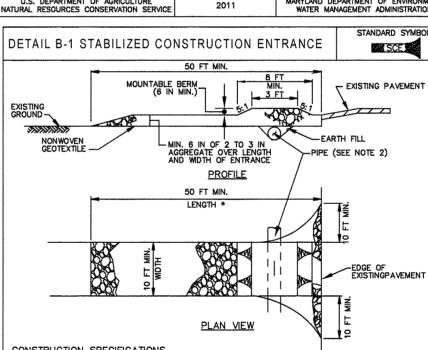
MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.



PREPARE SWALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION C-2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE, OR AS SPECIFIED ON PLAN.

TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (MITHOUT REBAR) WITH SIDE SLOPES OF 2:
OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY
COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR SO THAT TOP OF THE
OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE UPSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (3/4 TO 1/5 INCH

REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CREST. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL



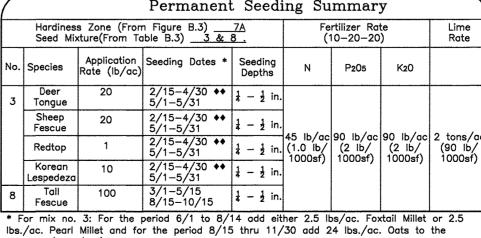
CONSTRUCTION SPECIFICATIONS PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGI TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT

PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND

SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE IATURAL RESOURCES CONSERVATION SERVICE MARYLAND DEPARTMENT OF ENVIRONMEN
WATER MANAGEMENT ADMINISTRATION 2011

> 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. #34689, Expiration Date: 7/08/2021.



permanent seed mix. For mix no. 8: For the period 6/1 to 8/14 add either 5.0 lbs/ac. Foxtail Millet or 5.0 lbs./ac Pearl Millet and for the period 10/16 thru 11/30 add 24 lbs./ac. Oats to the permanent seed mix (mix no. 3).

♦♦ Warm—season grasses need a soil temperature of at least 50 degrees F in order to

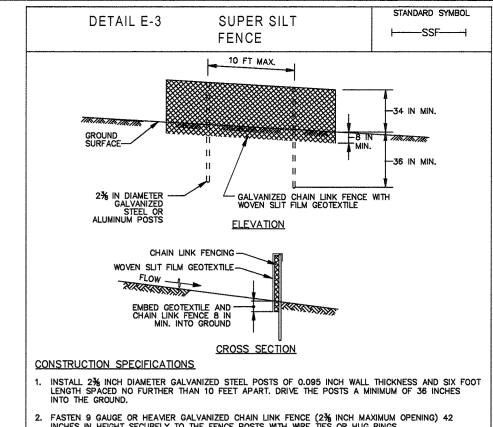
sufficient moisture for later plantings, especially on droughty sites.

germinate. If soil temperatures are colder than 50 degrees, or moisture is not adequate, the

seeds will remain dormant until conditions are favorable. In general, planting during the latter

When selecting a planting date, consider the need for weed control vs. the likelihood of having

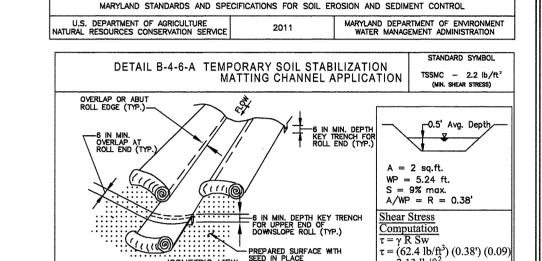
portion of this period allows more time for weed emergence and weed control prior to plantin



3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE. . PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H $^-$ 1 MATERIALS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.



CONSTRUCTION SPECIFICATIONS USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS. 2. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE

3. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" (
"T" SHAPED STEEL WRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES
MUST AVERAGE 1 TO 1½ INCHES MDE AND BE A MINIMUM OF
6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY
LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH—SAWN HARDWOOD, 12 TO 24 INCHES IN
LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.

OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.

. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS. . ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

Obtain grading and access permits. Read entire sequence of construction. 2. Notify Howard County Department of Inspections, License and Permits at (410) 313-1880 at least 24 hours before starting any work 3. Install Stabilized Construction Entrance (SCE). Install Inlet 1-4. Upon completion of installation install SSF immediately south of Inlet 1-4 to prevent sediment draining onto Ridgeview Drive. Stabilize all disturbances w/ permanent seeding. (2 days). 4. Install Super Silt Fence (SSF), Stone/Riprap Outlet Sediment Trap ST-11, Riprap Inflow

SEQUENCE OF CONSTRUCTION

Trap ST-11 Enlargement Plan, Sheet 3 for DF #1, RRP, BB and Sediment Trap location and grading respectively. (2 weeks) 5. After receiving permission from the sediment control inspector, clear \$ rough grade site, install utilities, At Grade Inlet Protection (AGIP) at I-I and grade proposed driveway to the maximum extent practicable for all areas south of Diversion Fence #1. Stabilize all disturbed areas with permanent seeding and Install TSSMC within all proposed grading swales. (1 month)

Protection (RRP), Baffle Boards (BB), and Diversion Fence (DF) #1. See Sediment

6. With permission from the sediment control inspector remove Diversion Fence #1, install Diversion Fence #2, Clear Water Diversion Pipe w/ Sand Bags (lay clear water diversion pipe on ground \$ outfall atop of Inlet I-4 grate \$ secure w sand bags) Remove the Sediment Trap, Riprap Inflow Protection and Baffle Boards. Clear \$ rough grade remaining site area, install riprap, install remaining utilities, driveway and resurface existing driveway, install Traffic Control Devices per detail sheet I when resurfacing along Oakland Mills Rd. Contractor shall notify existing users along the existing driveway prior to resurfacing work. The Filterra® inlets will be protected with manufacture installed throat board and internal silt fabric to protect from construction sediment, contractor shall insure no sediment enters Filterra inlets until activated. Install TSSMC to all proposed grading swales. (1 month)

7. Upon stabilization of all disturbed areas and with the permission of the Sediment Control Inspector, remove all sediment control measures and stabilize any remaining disturbed areas. Contractor shall complete the Filterra "Contractor Activation Checklist" supplied by Contech Engineered Solutions. This checklist must be signed, dated and submitted with the activation request to Contech representative. Once approved by Contech the activation procedure to remove Filterra throat board/internal silt fabric, etc. and installation of trees and growing media can begin. (1 week)

1.) During grading and after each rainfall, contractor will inspect and provide necessary maintenance to all sediment control measures on this plan. 2.) Temporary or permanent seeding and stabilization are to be provided at the reauest of the CID inspector or within the time frames required by the 2011 MD Standards and Specifications for Soil Erosion and Sediment Control whichever is more stringent See "Howard Soil Conservation District (HSCD) Standard Sediment Control Notes",

3.) The dry wells will be installed after lot dwellings are built and stabilized or runoff

from lot disturbed areas are diverted. See dry well construction criteria sheet 6.

GRADING, SEDIMENT AND EROSION CONTROL DETAILS AND NOTES

BRICKLEY MILLS

TAX MAP 42 GRID 16 6TH ELECTION DISTRICT

OF MARL

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SS/ONAL

PARCEL 277

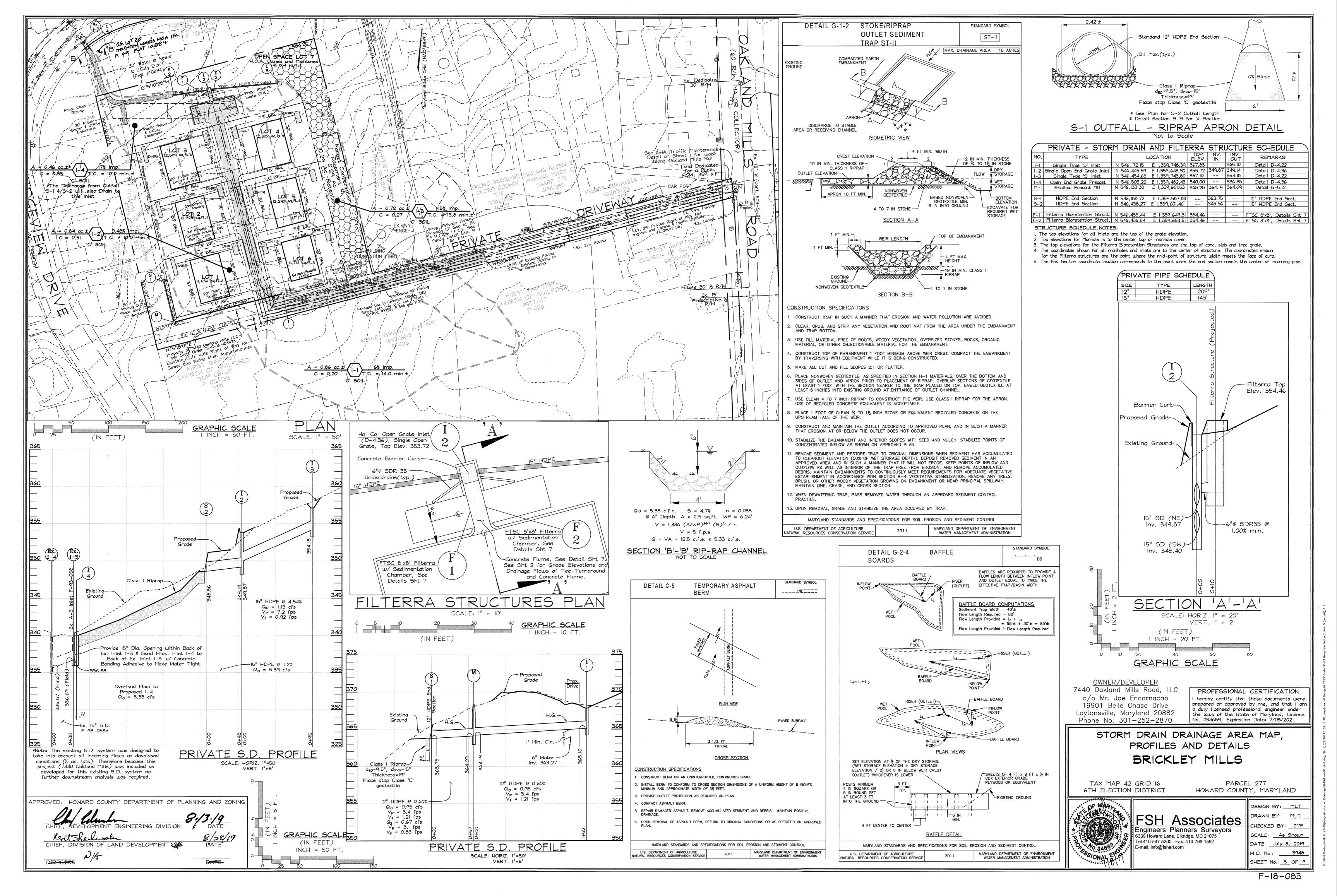
HOWARD COUNTY, MARYLAND

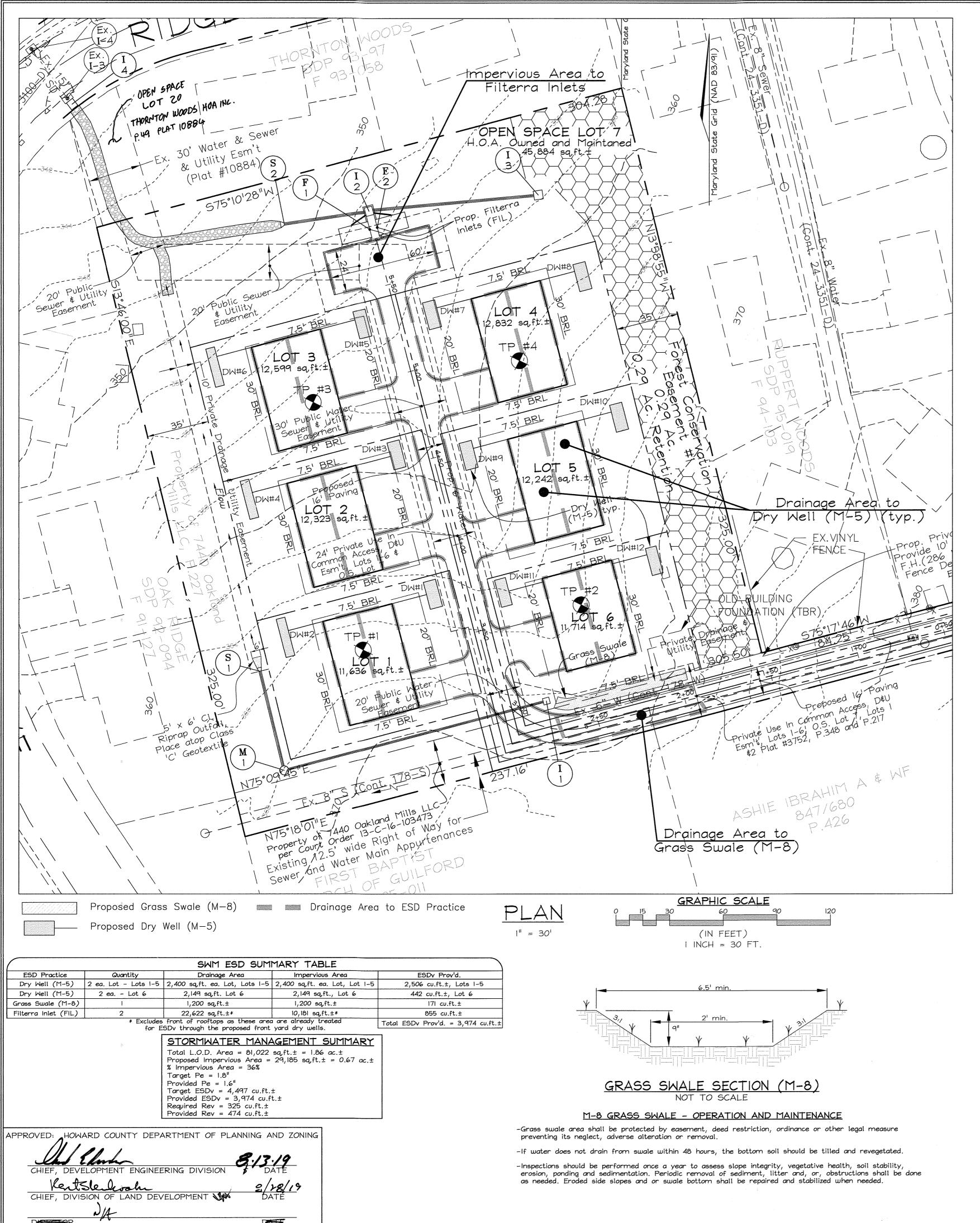
FSH Associates Engineers Planners Surveyors 6339 Howard Lane, Elkridge, MD 21075 引 Tel:410-567-5200 Fax: 410-796-1562 E-mail: info@fsheri.com

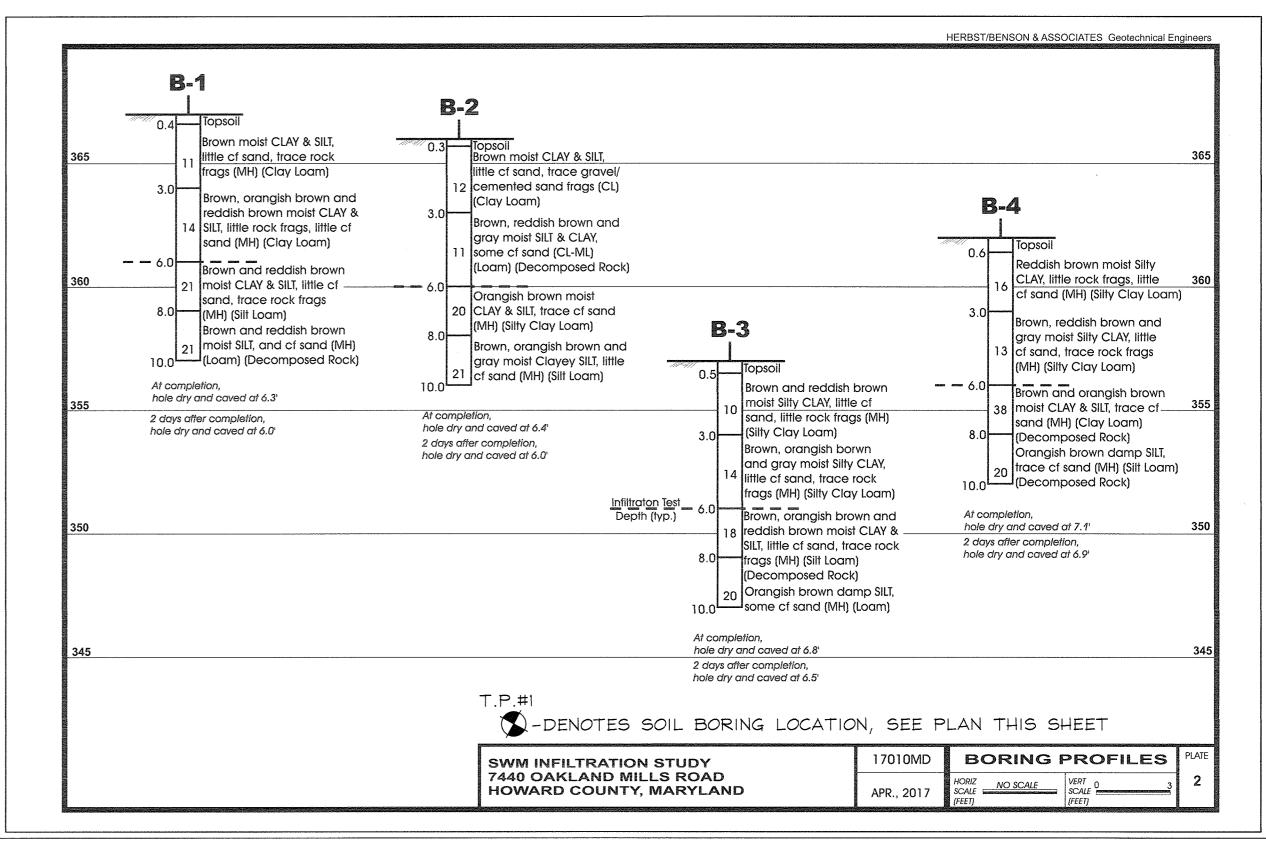
DRAWN BY: MLT CHECKED BY: ZYF SCALE: N/A DATE: <u>July 8, 2019</u> W.O. No.: ____3948 SHEET No .: 4 OF 0

DESIGN BY: MLT

F-18-083







The following items shall be addressed during construction of dry wells:

-Underground Chamber: A subsurface prefabricated chamber may be used.

other legal measures preventing its neglect, adverse alteration and removal.

outlet (surcharge) and easily removed so the homeowners can clean the filter.

gravel and the 12" topsoil layer to provide separation.

porosity (e.g., ASTM D448 4,5 or 6 stone or equal).

together to provide waterproof connection.

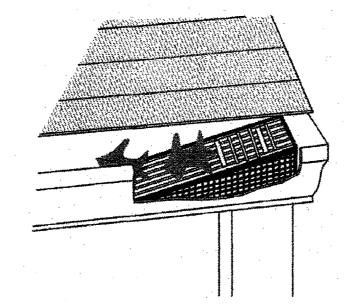
should be excavated and replaced.

infiltration and longevity.

See Plan for Dry -SPLASHBLOCK See Dry Well Chart for dimensions. -CAP WITH SCREW TOP LID TOP & SIDES BUILDING FOUNDATION DRY WELL INVERTIGINA 4 FTABOVE GROUNDWATER

TABLE OR BETROCK (2 FT. ON EASTERN SHORE) M-5 DRY WELL DETAIL

NOT TO SCALE



GUTTER DRAIN FILTER (TYP.

	DRY	WELL AREA	CHART
LOT NO.	<u>ADDRESS</u>	DRYWELL #*	<u>AREA</u>
1	7440 Oakland Mills Rd	D.W. #1	15.5' x 7'
1	7440 Oakland Mills Rd	D.W. #2	22' x 5'
2	7438 Oakland Mills Rd	D.W. #3	15.5' x 7'
2	7438 Oakland Mills Rd	D.W. #4	22' x 5'
3	7436 Oakland Mills Rd	D.W. #5	15.5' x 7'
3	7436 Oakland Mills Rd	D.W. #6	22' x 5'
4	7434 Oakland Mills Rd	D.W. #7	15.5' x 7'
4	7434 Oakland Mills Rd	D.W. #8	15.5' x 7'
5	7432 Oakland Mills Rd	D.W. #9	15.5' x 7'
5	7432 Oakland Mills Rd	D.W. #10	15.5' x 7'
6	7430 Oakland Mills Rd	D.W. #11	15.5' x 6.2'
6	7430 Oakland Mills Rd	D.W. #12	15.5' x 6.2'

* See Plan This Sheet for D.W. Location

DRY WELL (M-5) - CONSTRUCTION CRITERIA

-Erosion and Sediment Control: Final grading for the proposed dry wells should not take place until the surrounding site is

bottom and sidewall compaction. Construction of a dry well shall be perfprmed with lightweight, wide-tracked equipment to

-Dry Well Bottom: The bottom shall be as level as possible to minimize pooled water in small areas that may reduce overall

-Filter Cloth: Filter clothshall not be installed on the bottom of the dry well. Non-woven filter cloth shall be placed between the

-PVC Geomembrane: A waterproof PVC geomembrane, 30 Mil (min), shall line all sides of the dry wells. Weld geomembrane

-Gravel Media: The aggregate shall be composed of an 18 to 48-inch layer of clean washed, open graded material with 40%

DRY WELL (M-5) - OPERATION AND MAINTENANCE

-Ponding, standing water or algae growth on the top of a dry well may indicate failure due to sedimentation in the gravel

-If water ponds for more than 48 hours after a major storm or more than 6" of sediment has accumulated, the gravel media

-Privately owned practices shall have a maintenance plan and shall be protected by easement, deed restriction, ordinance or

-Pretreatment to filter out leaves or other debris shall be done by gutter screens and a removable filter screen installed within the downspout pipe, or other locally approved method. The removable filter screen should be installed below the overflow

-Dry wells shall be inspected and cleaned annually. This includes pipes, gutters, downspouts, and all filters.

-Soil Compaction: Excavation should be conducted in dry conditions with equipment located outside of the practice to minimize

completely stabilized. If this cannot be accomplished, runoff from disturbed areas shall be diverted

minimize disturbance and compaction. Excavated materials shall be placed in a contained area.

SWM - DRY WELLS AND GRASS SWALE INSPECTION SCHEDULES

SWM PRACTICE	INSPECTION SCHEDULE
Grass Swale	Regular Inspections and documentation (photos and notes) shall be made during the following stages of construction:
	 During grading of the swale. Upon completion of final grading and establishment of permanent stabilization.
Dry Wells	Regular Inspections and documentation (photos and notes) shall be made during the following stages of construction:
	 During excavation to subgrade and placement and backfill of observation wells. During placement of filter media. Upon completion of final grading and establishment of permanent stabilization.

OWNER/DEVELOPER

7440 Oakland Mills Road, LLC c/o Mr. Joe Encarnacao 19901 Belle Chase Drive Laytonsville, Maryland 20882 Phone No. 301-252-2870

PROFESSIONAL CERTIFICATION 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. #34689, Expiration Date: 7/08/2021.

STORMWATER MANAGEMENT ENVIRONMENTAL SITE DESIGN DRAINAGE AREA MAP DETAILS AND NOTES BRICKLEY MILLS

TAX MAP 42 GRID 16 6TH ELECTION DISTRICT

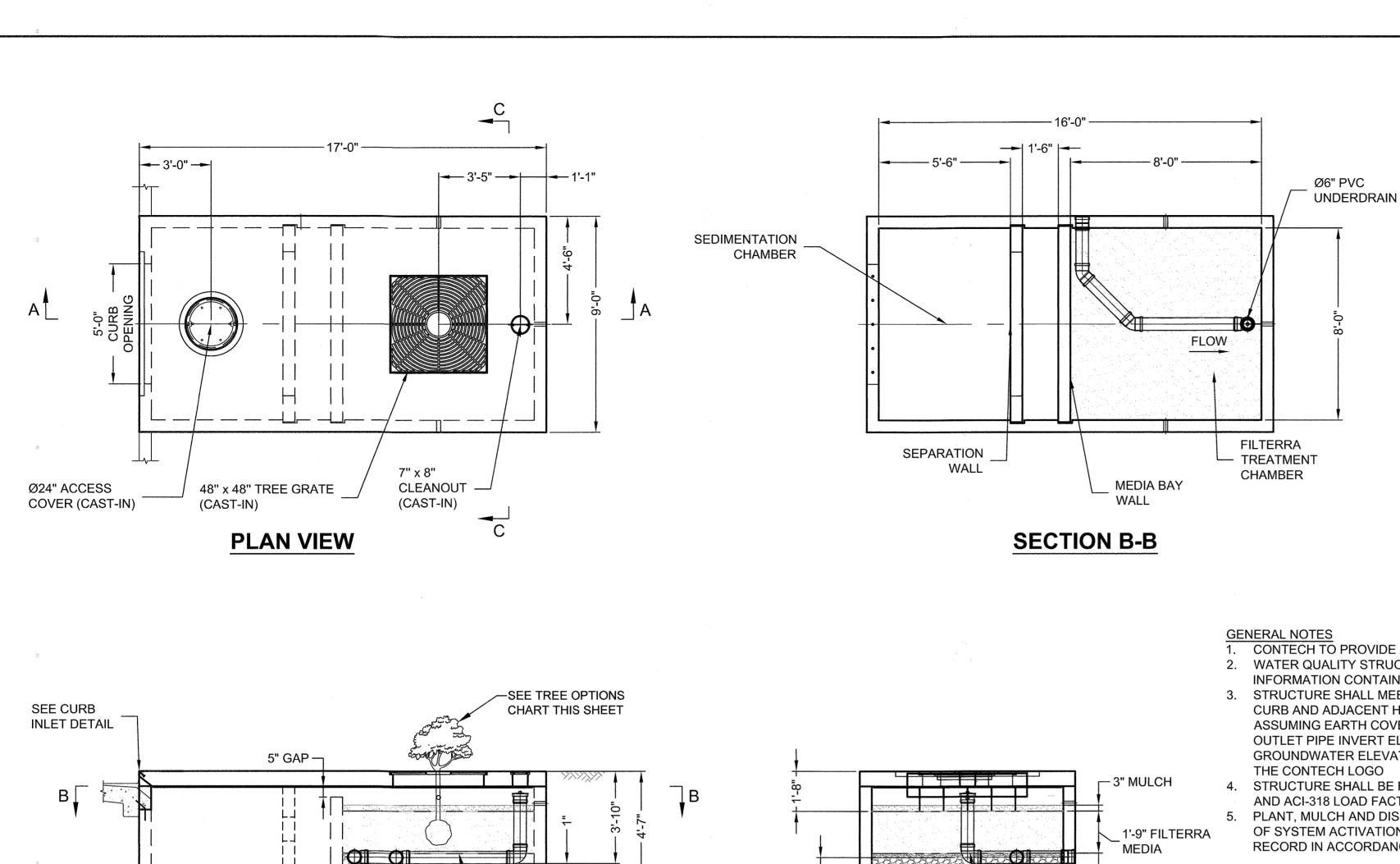
PARCEL 277 HOWARD COUNTY, MARYLAND



6339 Howard Lane, Elkridge, MD 21075 Tel:410-567-5200 Fax: 410-796-1562 E-mail: info@fsheri.com

DRAWN BY: MLT CHECKED BY: ZYF SCALE: As Shown DATE: <u>July 8, 2019</u> W.O. No.: 3948 SHEET No.: 6 OF

DESIGN BY: MLT



TOP SLAB

THICKNESS

THROAT PROTECTION

DEVICE

Ø6" PVC

TO IZ

SECTION A-A

90° NOSE PLATE

FRONT FACE

OF CURB

CAST INTO TOP SLAB

CAST IN PLACE CONCRETE

BY CONTRACTOR

#4 REBAR DOWELS

12" (O.C.)

CURB INLET DETAIL

BENT AS NECESSARY

UNDERDRAIN

MATERIALS LIST COUNT **DESCRIPTION INSTALLED BY** PLANT. SEE INSTALLATION CONTECH NOTE F MULCH. SEE INSTALLATION 0.59 CY CONTECH NOTE F ENERGY DISSIPATION CONTECH ROCK LAYER CONTECH 4.14 CY ENGINEERED MEDIA 1/2" #4 ROUND AGGREGATE CONTECH JNDERDRAIN STONE CONTECH **FLOWKIT** 48" x 48" TREE GRATE CONTECH FRAME (CAST-IN), GALV. 48" x 48" TREE GRATE WITH CONTECH 12" OPENING (F) Ø7" x 8" CLEANOUT (F) CONTECH (CAST-IN) Ø24" x 4" ACCESS FRAME & CONTECH COVER EJIW #41600389 Ø2" PVC IRRIGATION CONTECH **CONDUIT** SEALANT FOR JOINTS CONTRACTOR 2-1/2" x 2-1/2" x 1/4" CURB CONTECH NOSING (CAST-IN)

10/020 ROAD MD --2 **Z** S Ò 593 ND 8x8

6/12/18 JWB/BAS BAS CHECKED: EQUENCE No.: 593270 010/020

OF 1

CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE

2. WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.

STRUCTURE SHALL MEET PEDESTRIAN LIVE LOAD WITH HS-5 WHEEL LOAD MOUNTING THE CURB AND ADJACENT HS-20 LIVE LOAD SURCHARGE ON THE WALLS OF THE STRUCTURE, ASSUMING EARTH COVER OF 0' AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH

STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918 AND ACI-318 LOAD FACTOR DESIGN METHOD

5. PLANT, MULCH AND DISSIPATION ROCKS SUPPLIED BY CONTECH AND DELIVERED AT TIME OF SYSTEM ACTIVATION. PLANT SELECTION SHALL BE DONE BY THE ENGINEER OF RECORD IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

6" UNDERDRAIN

Ø6" UNDERDRAIN PIPE

ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF **RECORD**

B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE FILTERRA STRUCTURE (LIFTING CLUTCHES PROVIDED). SPREADER BAR WITH SUFFICIENT CABLE IS REQUIRED FOR SAFETY AND REDUCTION OF DAMAGE TO

C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND

ASSEMBLE STRUCTURE D. CONTRACTOR TO SUPPLY AND INSTALL INLET PROTECTION BAR IF REQUIRED BY LOCAL JURISDICTION

E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT MEDIA BAY FROM

CONSTRUCTION-RELATED EROSION RUNOFF

F. CONTECH IS RESPONSIBLE FOR ACTIVATION OF THE SYSTEM WHICH INCLUDES PLANTING OF THE SPECIFIED PLANT, MULCH INSTALLATION, AND PLACING OF DISSIPATION ROCK. ACTIVATION ONLY OCCURS WHEN THE SITE IS FULLY STABILIZED WITH FINAL PAVEMENT INSTALLED AND SWEPT CLEAN OF CONSTRUCTION SEDIMENT

G. ALL UNITS MUST BE WATERED BY IRRIGATION LINES OR SPRINKLER SYSTEMS ON A REGULAR BASIS. FILTERRA UNITS MAY BE EQUIPPED WITH IRRIGATION HOLES FOR NEW OR EXISTING IRRIGATION LINES UPON REQUEST

STRUCTURE WEIGHT APPROXIMATE HEAVIEST PICK = TBD LBS. STRUCTURE IS DELIVERED IN TBD PIECES

MAX FOOTPRINT = 9' x 21'

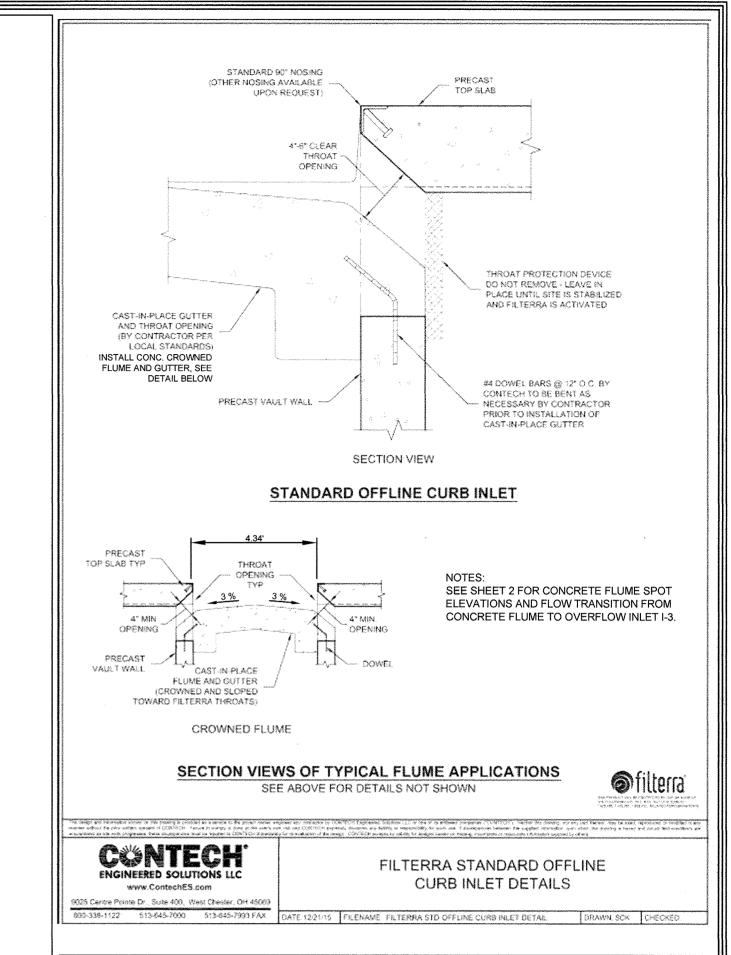
CONTECH **PROPOSAL** DRAWING

CPPGC LAYOUT 6 FTSC1008V8X20 VAULT 24x6

SWM - FILTERRA INSPECTION SCHEDULES			
SWM PRACTICE	INSPECTION SCHEDULE		
Filterra Structure	Regular Inspections and documentation (photos and notes) shall be made during the following stages of construction:		
	 During placement Filterra structures. During placement of underdrain pipes. During installation of planting media, plant and mulch. During protection of Filterra inlet from sedimentation, if needed 		

OWNER/DEVELOPER 7440 Oakland Mills Road, LLC c/o Mr. Joe Encarnacao 19901 Belle Chase Drive Laytonsville, Maryland 20882 Phone No. 301-252-2870

PROFESSIONAL CERTIFICATION 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. #34689, Expiration Date: 7/08/2021.



Filterra® Standard Plan Notes Construction & Installation

A. Each unit shall be constructed at the locations and elevations according to the sizes shown on the approved drawings. Any modifications to the elevation or location shall be at the direction of and

approved by the Engineer. B. If the Filterra® is stored before installation, the top slab must be placed on the box using the 2x4 wood provided, to prevent any contamination from the site. All internal fittings supplied (if any), must be left in place as per the delivery

C. The unit shall be placed on a compacted sub-grade with a minimum 6-inch gravel base matching the final grade of the curb line in the area of the unit. The unit is to be placed such that the unit and top slab match the grade of the curb in the area of the unit. Compact undisturbed sub-grade materials to 95% of maximum density at +1- 2% of optimum moisture. Unsuitable material below sub-grade shall be replaced to the site engineer's approval.

D. Outlet connections shall be aligned and sealed to meet the approved drawings with modifications

necessary to meet site conditions and local regulations. E. Once the unit is set, the internal wooden forms and protective mesh cover must be left intact. Remove only the temporary wooden shipping blocks between the box and top slab. The top lid should be sealed onto the box section before backfilling, using a nonshrink grout, butyl rubber or similar waterproof seal. The boards on top of the lid and boards sealed in the unit's throat must NOT be removed. The Supplier will remove these sections at the time of activation. Backfilling should be performed in a careful manner, bringing the appropriate fill material up in 6" lifts on all sides. Precast sections shall be set in a manner that will result in a watertight joint. In all instances, installation of

Underground Precast Utility Structures", unless directed otherwise in contract documents. F. Curb and gutter construction (where present) shall ensure that the flow-line of the Filterra® units is at a greater elevation than the flow-line of the bypass structure or relief (drop inlet, curb cut or similar). Failure to comply with this guideline may cause failure

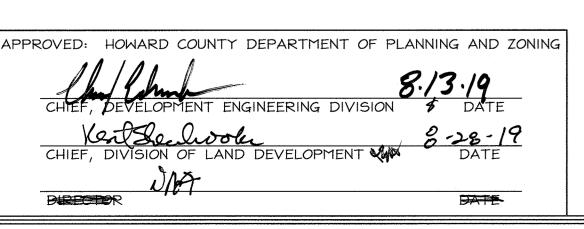
and/or damage to the Filterra® environmental device.

Filterra® unit shall conform to ASTM specification C891 "Standard Practice for Installation of

G. Each Filterra® unit must receive adequate irrigation to ensure survival of the living system during periods of drier weather. This may be achieved through a piped system, gutter flow or through the tree

SWM - FILTERRA STREET TREE RECOMMENDED OPTIONS* **COMMON NAME (LATIN NAME)** HARDY RANGE HEIGHT SPREAD Maple, Amur (Acer ginnala) Full Shade to Full Sun 3A - 8A 15' - 25' | 15' - 25' Serviceberry (Amelanchier x grandiflora) | Partial Shade to Full Sun 15' - 25' 15' - 25' 4A - 7A Partial Shade to Full Sun 4B - 9A 30' - 50' | 25' - 35' Tupelo, Black (Nyssa sylvatica)

* Note: These three Filterra street tree options in order of preference are species recommended by our in house Landscape Architect based on salt tolerance and toughness. A complete list of available tree species can be obtained thru Contech Engineering Solutions. Project is located in Hardy Zone 7a.



FILTERRA® - OPERATION AND MAINTENANCE

Note: Contech has created a network of Cerified Maintenance Providers (CCMP's) to provide maintenance on Filterra systems. To find a CCMP and maintenance information on Filterra systems visit www.contechs.com/maintenance.

-Filterra structures are privately owned by the Homeowners Association and shall be protected by easement, deed restriction, ordinance or other legal measure preventing their neglect, adverse alteration or removal.

-The Filterra inlets shall be kept free of all trash and debris.

mulch as a minimum (ensure no bark nugget mulch is used).

4'-6"

SECTION C-C

-The mulch cover area below the tree grate shall be kept free of trash and debris.

-Ponding of water on mulch cover could be indicative of excessive fine sediment accumulation or spill of petroleum oils. H.O.A. should contact manufacter and replace

-Plants within the Filterra structures shall be healthy and pest free. If plants are not growing or in poor condition the H.O.A. shall contact manufacture for advice.

-Plants shall be trimmed/pruned in accordance with typical landscaping and safety needs.

-The Filterra structure shall be inspected for cracks. The Filterra structure shall be repaired if cracks are wider than ½ inch or if there is evidence of soil particles entering the structure through the cracks.

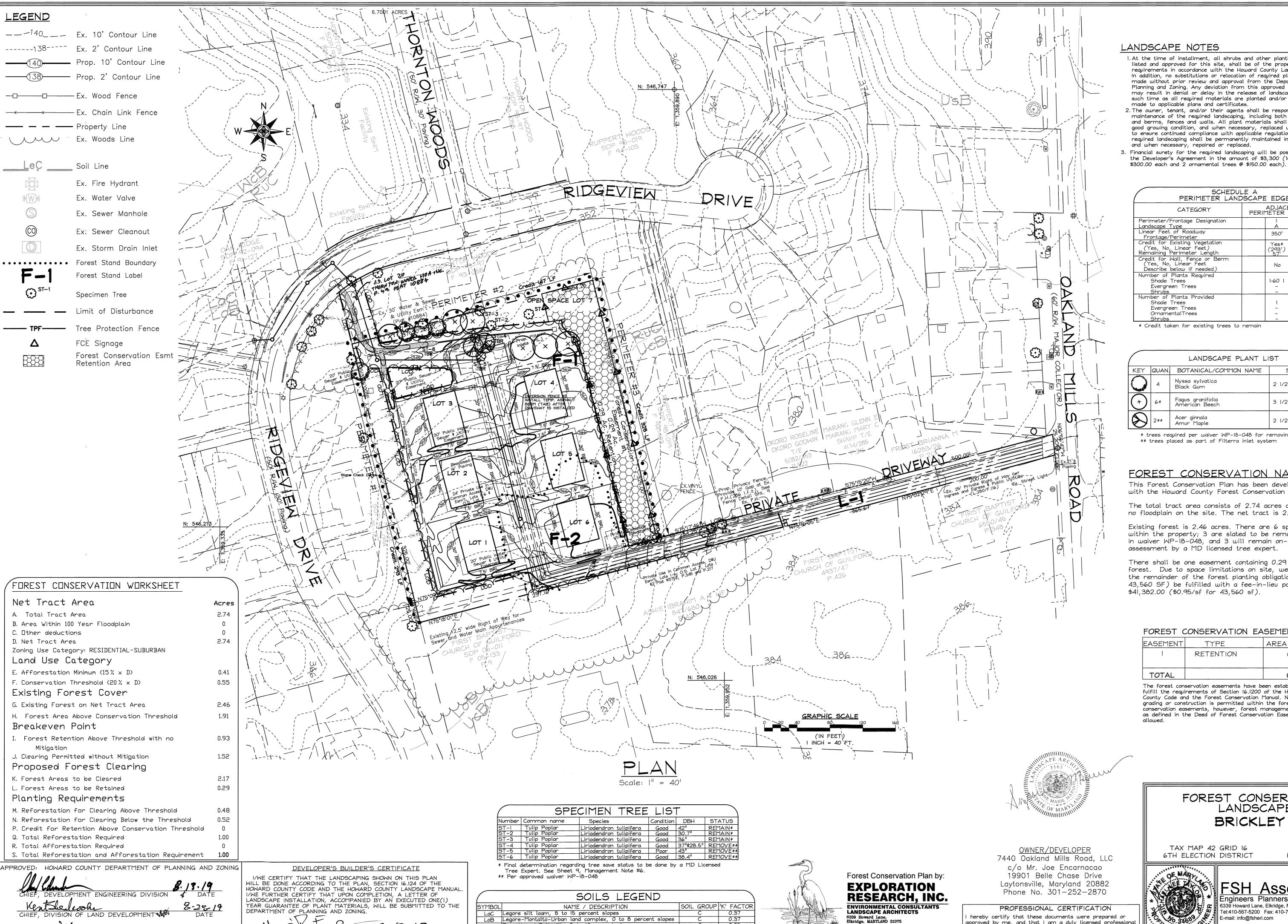
STORMWATER MANAGEMENT FILTERRA DETAILS BRICKLEY MILLS

TAX MAP 42 GRID 16 6TH ELECTION DISTRICT

PARCEL 277 HOWARD COUNTY, MARYLAND



DESIGN BY: MLT DRAWN BY: MLT CHECKED BY: ZYF SCALE: Not to Scale DATE: <u>July 8, 2019</u> W.O. No.: 3948 SHEET No.: 7 OF 9



RuC Russett and Beltsville, 5 to 10 percent slopes
UcB Urban land-Chillum-Beltsville complex, 0 to 5 percent slopes

LANDSCAPE NOTES

1. At the time of installment, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscaping Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are

made to applicable plans and certificates. 2. The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other

required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced. 3. Financial surety for the required landscaping will be posted as part of the Developer's Agreement in the amount of \$3,300 (10 shade trees @

SCHEDULE A PERIMETER LANDSCAPE EDGE				
CATEGORY	PERII	ADJACENT TO PERIMETER PROPERTIES		
Perimeter/Frontage Designation Landscape Type		I A	2 A	3 A
Linear Feet of Roadway Frontage/Perimeter		3501	3041	325'
Credit for Existing Vegetation (Yes, No, Linear Feet) Remaining Perimeter Length	:	Yes* (293¹) 57¹	Yes* (147') 157'	Yes* (325')
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)		No	No	No
Number of Plants Required Shade Trees Evergreen Trees Shrubs		1:60 1 - -	1:60 3	1:60 0
Number of Plants Provided Shade Trees Evergreen Trees		1	3 -	0 -
OrnamentalTrees Shruhs		-	_	-

* Credit taken for existing trees to remain

LANDSCAPE PLANT LIST

KEY	QUAN.	BOTANICAL/COMMON NAME	SIZE	NOTE
	4	Nyssa sylvatica Black Gum	2 1/2"-3" Cal.	B # B
+	6*	Fagus granifolia American Beech	3 1/2"-4" Cal.	В∉В
8	2**	Acer ginnala Amur Maple	2 1/2"-3" Cal.	В∉В

* trees required per waiver WP-18-048 for removing 3 specimen trees ** trees placed as part of Filterra inlet system

FOREST CONSERVATION NARRATIVE

This Forest Conservation Plan has been developed in accordance with the Howard County Forest Conservation Act of 1991.

The total tract area consists of 2.74 acres of land. There is no floodplain on the site. The net tract is 2.74 acres.

Existing forest is 2.46 acres. There are 6 specimen trees within the property; 3 are slated to be removed as approved in waiver WP-18-048, and 3 will remain on-site pending assessment by a MD licensed tree expert.

There shall be one easement containing 0.29 acres of retained forest. Due to space limitations on site, we will request that the remainder of the forest planting obligations (1.00 acres, or 43,560 SF) be fulfilled with a fee-in-lieu payment of \$41,382.00 (\$0.95/sf for 43,560 sf).

FOREST CONSERVATION EASEMENT TABLE

EASEMENT	TYPE	AREA (ACRES)
1	RETENTION	0.29
TOTAL		0.29

The forest conservation easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code and the Forest Conservation Manual. No clearing, grading or construction is permitted within the forest conservation easements, however, forest management practices as defined in the Deed of Forest Conservation Easement are

FOREST CONSERVATION AND LANDSCAPE PLAN

TAX MAP 42 GRID 16

PARCEL 277



DESIGN BY: SMM DRAWN BY: <u>SMM</u> CHECKED BY: SLH SCALE: 1"=40' DATE: <u>July 8, 2019</u> W.O. No.: 3948 SHEET No.: 8 OF 9

F-18-083

BRICKLEY MILLS

6TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND



hereby certify that these documents were prepared or

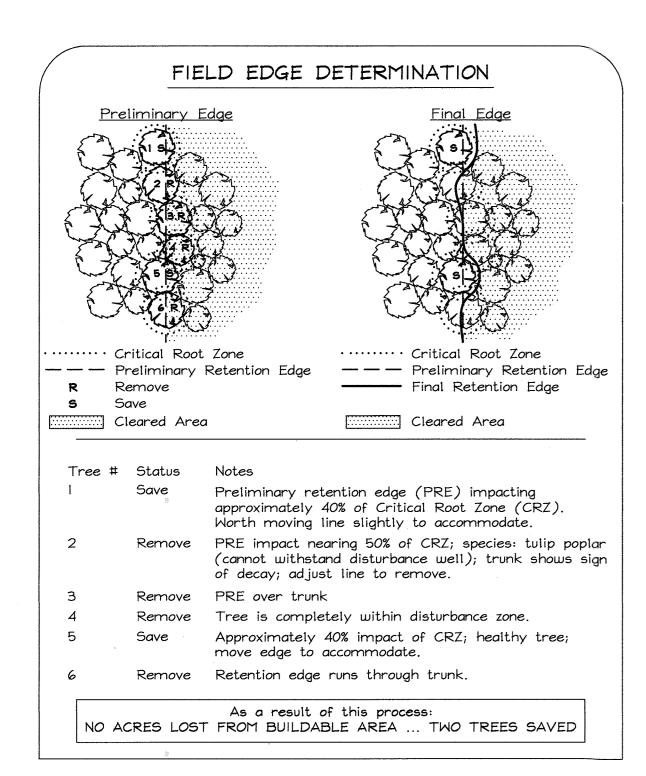
No. #34689, Expiration Date: 7/08/2021.

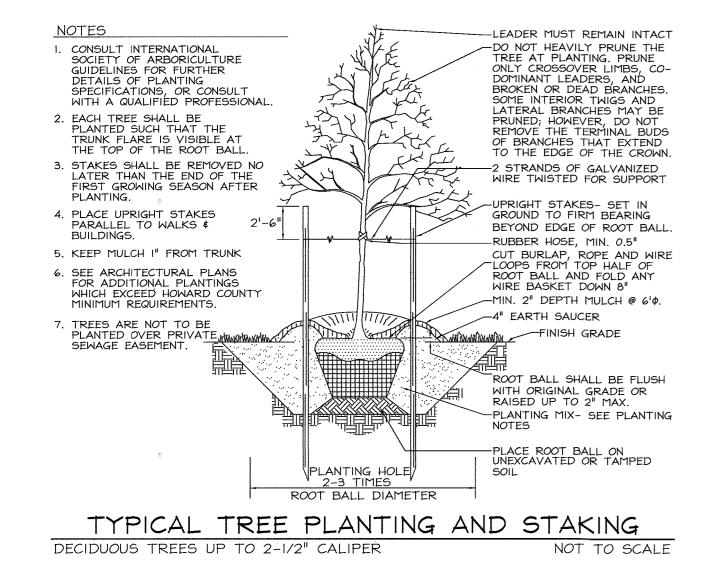
approved by me, and that I am a duly licensed professional

engineer under the laws of the State of Maryland, License

6339 Howard Lane, Elkridge, MARYLAND 21075 Tel: 410-567-5200 Fax: 410-796-1562 E-mail: info@fsheri.com

FSH Associates Engineers Planners Surveyors 6339 Howard Lane, Elkridge, MD 21075 Tel:410-567-5200 Fax: 410-796-1562 E-mail: info@fsheri.com

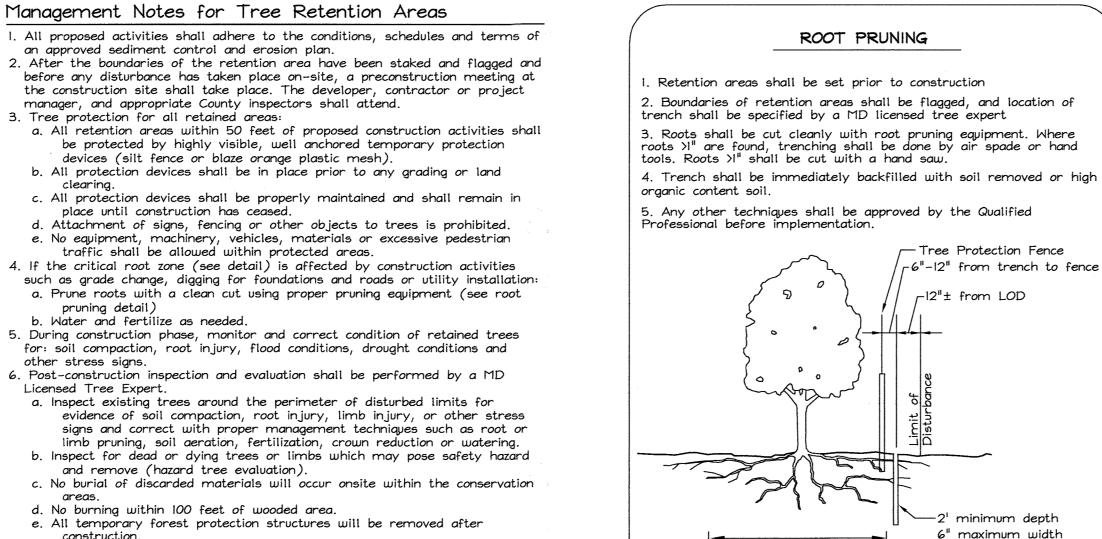




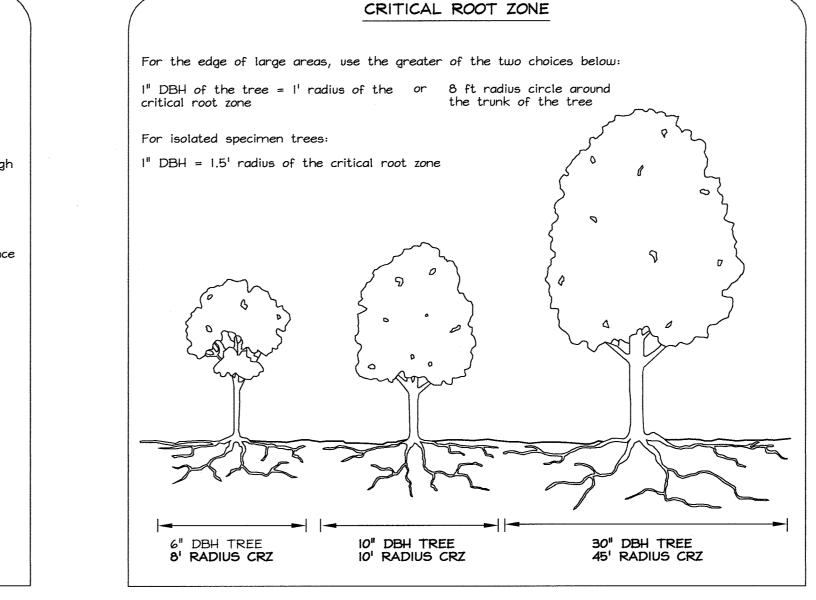
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

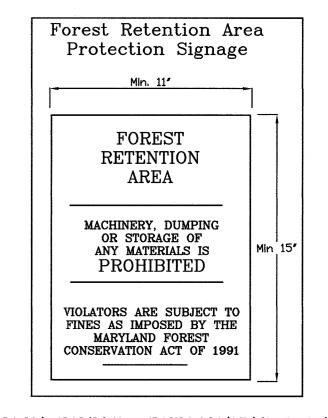
DEVELOPMENT ENGINEERING DIVISION

HIEF, DIVISION OF LAND DEVELOPMENT AND

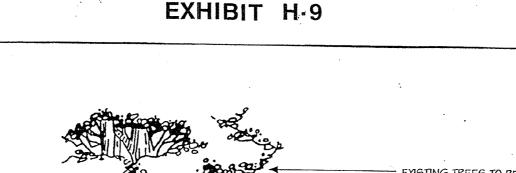


CRITICAL ROOT ZONE





SIGN DETAIL: PERMANENT SIGN SIGNAGE NOTE: ALL TREE PROTECTION SIGNS SHALL BE PLACED ON METAL 'T' POSTS OR PRESSURE TREATED WOOD POLES. NO ATTACHMENT OF SIGNS TO TREES IS PERMITTED.



COMBINATION TREE PROTECTION FENCE/SSF DETAIL

an approved sediment control and erosion plan.

place until construction has ceased

and remove (hazard tree evaluation).

d. No burning within 100 feet of wooded area.

shall inspect the entire area.

f. Following completion of construction, prior to use, the County inspector

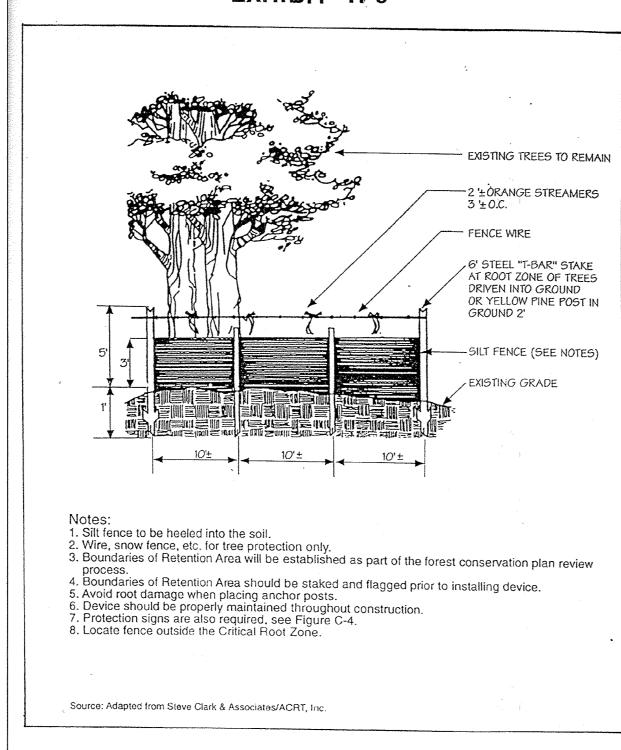
3. Tree protection for all retained areas:

pruning detail)

other stress signs.

Licensed Tree Expert.

b. Water and fertilize as needed.



ANCHOR POST SHOULD BE MINIMUM 2" STEEL "U" CHANNEL MAXIMUM 20 FEET BLAZE ORANGE FLAGGING STREAMERS MIN. 2" MIDE, 12" LONG TIED TO SMOOTH WIRE SMOOTH WIRE ANCHOR POST MUST BE INSTALLED TO A DEPTH OF NO LESS THAN 1/3 OF THE TOTAL HEIGHT OF POST FOREST PROTECTION DEVICE ONLY.

RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.

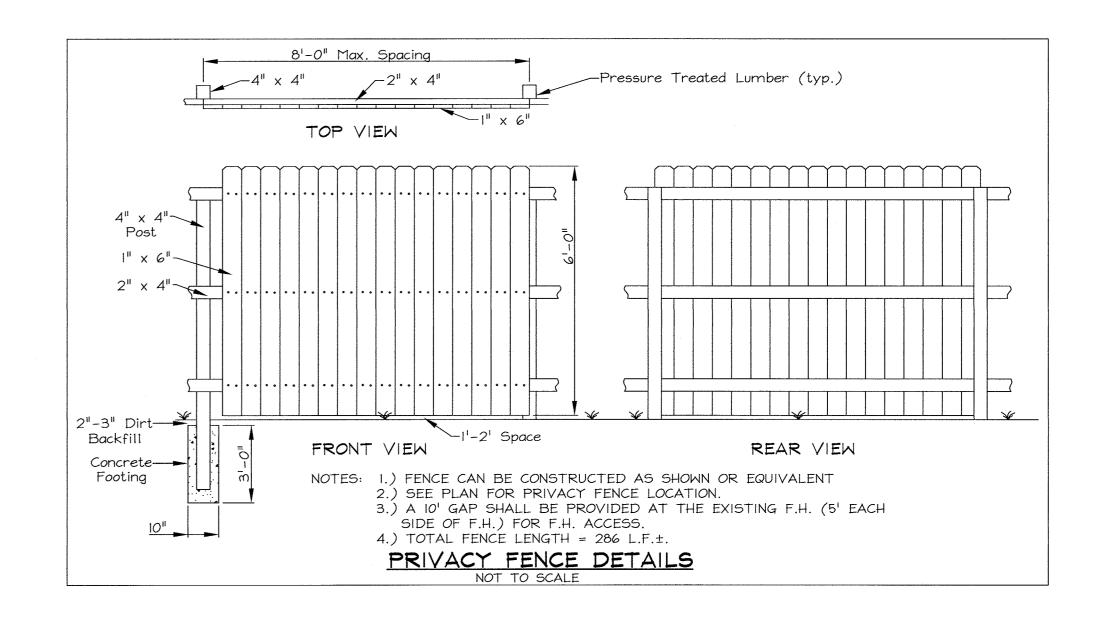
BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.

ROOT DAMAGE SHOULD BE AVOIDED.

PROTECTIVE SIGNAGE MAY ALSO BE USED.

DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION. TREE PROTECTION DETAIL

TWO STRAND SMOOTH WIRE





Forest Conservation Plan by: **EXPLORATION** RESEARCH, INC. ENVIRONMENTAL CONSULTANTS LANDSCAPE ARCHITECTS 6339 Howard Lane, Elkridge, MARYLAND 21075 Tel: 410-567-5200 Fax: 410-796-1562 E-mail: info@fsheri.com

PARCEL 277

HOWARD COUNTY, MARYLAND

FOREST CONSERVATION AND LANDSCAPING NOTES AND DETAILS BRICKLEY MILLS

TAX MAP 42 GRID 16 6TH ELECTION DISTRICT 7440 Oakland Mills Road, LLC Laytonsville, Maryland 20882



FSH Associates Engineers Planners Surveyors 6339 Howard Lane, Elkridge, MD 21075 Tel:410-567-5200 Fax: 410-796-1562

DESIGN BY: SMM DRAWN BY: SMM CHECKED BY: SLH SCALE: AS SHOWN DATE: <u>July 8, 2019</u> W.O. No.: 3948 SHEET No.: 9 OF 9

DEVELOPER'S BUILDER'S CERTIFICATE I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE

PROFESSIONAL CERTIFICATION 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. #34689, Expiration Date: 7/08/2021.

OWNER/DEVELOPER

c/o Mr. Joe Encarnacao

19901 Belle Chase Drive

Phone No. 301-252-2870