GENERAL NOTES

SITE DEVELOPMENT PLAN ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.H.A. STANDARDS. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK. TEN OAKS SOLAR THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING AT&T 1-800-252-1133 BGE (CONSTRUCTION SERVICES) 410-637-8713 BGE (EMERGENCY) 410-685-0123 BUREAU OF UTILITIES 410-313-4900 12751 BRIGHTON DAM ROAD 410-795-1390 COLONIAL PIPELINE CO STATE HIGHWAY ADMINISTRATION 410-531-5533 VERIZON CLARKSVILLE, MD 21029 SITE ANALYSIS: TOTAL PARCEL AREA: 114.63 AC. USE OF STRUCTURE: SOLAR FACILITY, COMMERCIAL TOTAL PROPOSED COVERAGE (IMPERVIOUS AREA): 0.29 AC. OR (2.86% OF LOD) AREA OF WETLAND AND BUFFÈRS: AREA OF STREAM AND BUFFERS AREA OF EXISTING FOREST: 769,446 SF± OR 17.66 AC.± 17.00 AC.± ALEXANDER & BETTY ADAMS AREA OF MODERATE SLOPES (15%-24 99%) 0.00 SF± OR 0.00 AC.± TM. 34 P. 180 L. 14369 F. 470 USE:RESIDENTIAL ZONE:RR-DEO AREA OF STEEP SLOPES (25% OR GREATER): 0.00 SF± OR 0.00 AC.± L.14052 F. 368 USE:RESIDENTIAL ZONE:RR-DEO AREA OF ERODIBLE SOILS 0.00 SF± OR 0.00 AC.± 544.931± SF OR 12.51 AC.± AREA OF FLOODPLAIN: 9.91 AC. (9.74 AC. FENCE AREA + 0.04 AC. NEW ACCESS ROAD CONDITIONAL USE AREA: + 0.13 AC. INTERCONNECT AREA) LIMIT OF DISTURBED AREA: CUT: 1,916 CY FILL: 190 CY PROJECT BACKGROUND: LOCATION: CLARKSVILLE, MD.; TAX MAP 34, BLOCK 211 PARCEL 43 N: 560200 E: 1326300 SUBDIVISION : N/A TM. 34 P. 399 LOT 38 L 2800 F. 397 USE:RESIDENTIAL DPZ REFERENCES : L. 14369 F. 464, BA-21-013C, ECP-22-029 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 START OF WORK. ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE SUBJECT PROPERTY IS ZONED "RR-DEO" IN ACCORDANCE WITH THE 10/6/13 ZONING REGULATIONS, AND IS SUBJECT TO THE -50'_SOLAR_SETBACK_ SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003. THE PROJECT BOUNDARY SHOWN HEREON IS BASED ON THE SURVEY PERFORMED BY VOGEL ENGINEERING+TIMMONS GROUP ON 75' BRL HE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY VOGEL ENGINEERING+TIMMONS GROUP, DATED AUGUST AND NOVEMBER, 2021. OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS. 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. 34FD AND 34E5 WERE USED FOR THIS PROJECT. 2. STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF NON-STRUCTURAL AND STRUCTURAL PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. NON-STRUCTURAL PRACTICES INCLUDE NON-ROOFTOP DISCONNECTION (N-2). STRUCTURAL PRACTICES INCLUDE ONE (1) BIORETENTION (F-6). THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED. EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. . ANY DAMAGE TO THE COUNTY'S RIGHTS-OF-WAY, PAVING, OR EXISTING UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSI 15. EXISTING STRUCTURES LOCATED ONSITE ARE TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLINGS ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATION REQUIREMENTS. 16. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS: WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE) PATEL ALKESH D. & SHARMILA 100 YEAR FLOODPLAIN, SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN.) UTILITY & DRAINAGE GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING) ASEMENT (PLAT 6890) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD EVENTS WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE F) MAINTENANCE — SUFFICIENT TO ENSURE ALL WEATHER USE 17. ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R—6.06. 18. BRIGHTON DAM ROAD IS CLASSIFIED AS A MAJOR COLLECTOR. TEN OAKS ROAD IS CLASSIFIED AS A MAJOR COLLECTOR. 19. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN. THIS PROPERTY IS NOT WITHIN THE METROPOLITAN DISTRICT. 2. SEWER FOR THIS PROJECT IS PRIVATE. THE HEALTH DEPARTMENT HAS NOT APPROVED THIS PROPERTY FOR WASTEWATER DISCHARGE THE PRESERVE AT CLARKSVILLE HOMEOWNERS ASSOCIATION INC 3. TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETERIES LOCATED ON THIS PROPERTY OR THE COUNTY'S 24. WETLANDS, STREAMS AND THEIR BUFFERS SHOWN ONSITE ARE BASED ON ENVIRONMENTAL PLAN BY ECO—SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, DATED MARCH 17, 2022. THE WETLANDS ARE OUTSIDE OF THE LIMIT OF DISTURBANCE AND SHALL NOT BE DISTURBED. 25. THE REQUIRED FOREST CONSERVATION SHALL MEET THE INTENT OF SECTION 16.117 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. FOREST CONSERVATION REQUIREMENTS ARE BASED ON COUNCIL BILL CB62—2019. FOREST RETENTION IS NOT PERMITTED ON HOWARD COUNTY ALPP EASEMENT PROPERTIES. THE REQUIRED FOREST CONSERVATION SHALL BE SATISFIED BY THE PURCHASE OF FOREST PLANTING IN AN OFF—SITE MITIGATION BANK: CRAIG BRIAN TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED BY; 1) THE PURCHASE OF 3.00 ACRES OF RETENTION CREDIT (3.00 / 2 = 1.50 ACRES) IN THE HIMEL PROPERTY FOREST BANK; SDP-05-132. 26. A TRAFFIC STUDY IS NOT REQUIRED. THE PROPOSED SOLAR FACILITY WILL GENERATE ONE TO TWO TRIPS PER MONTH FOR MAINTENANCE 27. A NOISE STUDY IS NOT REQUIRED. 28. REFERENCE SOIL BORING CHART PREPARED BY HILLIS - CARNES ENGINEERING ASSOCIATES, INC. DATED MARCH 8, 2022 FOR SUBSURFACE EXPLORATION TESTING AT BORINGS B-17. 29. THE PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON NOVEMBER 19, 2020 VIA THE ZOOM VIDEO CONFERENCING PLATFORM. 30. THE ENVIRONMENTAL CONCEPT PLAN (ECP-22-029) WAS APPROVED PER LETTER DATED JANUARY 31, 2022. 31. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. RANDALL MARK & EVALYN VICTO THE SUBJECT PROPERTY IS ENCUMBERED BY A HOWARD COUNTY AGRICULTURAL LAND PRESERVATION A FINANCIAL SURETY IN THE AMOUNT OF \$20,700 SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT: -PERIMETER PLANTINGS IN THE AMOUNT OF \$1,200 FOR THE REQUIRED 4 SHADE TREES, AND \$19,500 FOR THE REQUIRED 130 EVERGREEN TREES. PROGRAM EASEMENT, 2. SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE USDA NRCS WEB SOIL SURVEY. FILE NUMBER HO-91-04-E 3. A 100-YR FLOODPLAIN IS LOCATED ON-SITE BUT NOT WITHIN THE PROJECT AREA. 4. STEEP SLOPES ARE NOT LOCATED ON-SITE. (FOREST RETENTION IS NOT PERMITTED ON HOWARD THIS PROJECT IS SUBJECT TO ZONING AND LAND USE BOARD OF APPEALS CASE BA-21-013C. ON JULY 14, 2021; THE ZONING AND LAND USE BOARD OF APPEALS GRANTED THE PETITION OF SOLHARVEST ENERGY, LLC PROVIDED THAT THE PETITIONER MEET CERTAIN COUNTY ALPP EASEMENT PROPERTIES) CONDITIONS. THE PETITION IS GRANTED PROVIDED THAT THE PETITIONER MEET THE FOLLOWING CONDITIONS: A. THE COMMERCIAL GROUND MOUNT SOLAR COLLECTOR FACILITY CONDITIONAL USE SHALL BE CONDUCTED IN CONFORMANCE WITH THE PETITION AS SUBMITTED AND AS SHOWN ON THE CONDITIONAL USE PLAN DATED JULY, 2021, AND NOT TO ANY OTHER ACTIVITIES, USES, OR STRUCTURES ON THE PROPERTY. PETITIONER SHALL COMPLY WITH ALL CONDITIONAL USE STANDARDS. TM. 34 P. 261 LOT 18 PLAT# 7671 THE SITE DEVELOPMENT PLAN, OR ITS EQUIVALENT, SHALL INCLUDE A NOTE CONTAINING ALL CONDITIONS OF APPROVAL. PETITIONER SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS. USE:RESIDENTIAL ZONE:RR-DEO THE SYSTEMS SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND PROVISIONS. ANY COMMERCIAL SOLAR FACILITY THAT IS NO LONGER USED SHALL BE REMOVED BY THE PROPERTY OWNER FROM THE SITE WITHIN SIX MONTHS OF THE DATE THAT THE USE CEASES AND SHALL PROVIDE A BOND OR OTHER SURETY AS DETERMINED BY THE HOWARD COUNTY DIRECTOR OF FINANCE TO COVER THE PREMISES SHALL BE MAINTAINED AT ALL TIMES IN A CLEAN AND ORDERLY CONDITION, INCLUDING THE CARE OR REPLACEMENT OF PLANT MATERIALS REQUIRED IN THE LANDSCAPING PLAN. THE RESPONSIBILITY FOR COMPLIANCE WITH THIS PROVISION SHALL BE WITH ALL PARTIES HAVING A LEASE OR OWNERSHIP INTEREST IN THE COMMERCIAL SOLAR FACILITY. THE PETITIONER SHALL REGISTER ALL SOLAR COLLECTORS WITH THE DEPARTMENT OF FIRE AND RESCUE SERVICES. THE REGISTRATION SHALL INCLUDE A MAP OF THE SOLAR FACILITY NOTING THE RESCUE SERVICES. THE REGISTRATION SHALL INCLUDE A MAP OF THE SOLAR FACILITY NOTING THE LOCATION OF THE SOLAR COLLECTORS AND THE PANEL DISCONNECT. GREGORY J. & RONDA J CARPENTER T. TM. 34P. 261 LOT 17 PLAT# 7671 USE:RESIDENTIAL ZONE:RR-DEO TREE REMOVAL SHALL BE MINIMIZED, AND REFORESTATION SHALL BE DONE IN ACCORDANCE WITH SECTION 16.1026 OF THE HOWARD COUNTY CODE. ALL REQUIRED LANDSCAPING SHALL BE PROVIDED WITHIN 6 MONTHS OF INSTALLATION OF THE SOLAR PANELS 6. A KNOX LOCK SHALL BE LOCATED AT THE MAIN ENTRANCE. 37. ALL GATES SHALL NOT BE LOCATED CLOSER THAN 30 FT FROM AN INTERSECTION AND SHALL OPEN IN THE DIRECTION OF EMERGENCY VEHICLE TRAVEL E: 1326300 38. PRIMARY ELECTRICAL DISCONNECT ARE THE SWITCHGEARS. THE SECONDARY DISCONNECT ARE THE TRANSFORMERS 39. AN ELECTRICAL HAZARD SIGN, AND EMERGENCY CONTACT INFORMATION FOR SITE REPRESENTATIVES SHALL BE LOCATED AT THE ENTRANCE. THE ESTATES AT RIVER HILL 40. PANEL LISTINGS AND FLAME SPREAD RATINGS SHALL BE LISTED AT THE ENTRANCE TM. 34 P. 389 PLAT# 19216 USE:RESIDENTIA ZONE:RR-DEO 41. THE DEVELOPER SHALL PROVIDE TRAININGS TO THE FIRE DEPARTMENT FOR EVERY SOLAR SITE. 42. UPON DECOMMISSIONING OF THE SOLAR FACILITY THE PETITIONER/OPERATOR WILL REMOVE STORMWATER MANAGEMENT PRACTICES AND RESTORE ACCORDINGLY (AT THE REQUEST OF THE PROPERTY OWNER). 43. ALL ACCESS DRIVES FROM THE PUBLIC ROAD TO THE EQUIPMENT PAD TO BE 20' MINIMUM WIDTH AND CAPABLE OF SUPPORTING FIRE TEODYPLAIN & UTIETY BASEMENT 44. ISOLATED, SURFACE SMOOTHING AND/OR FINE GRADING MAY BE REQUIRED TO SUPPORT SOLAR EQUIPMENT INSTALLATION. HOWEVER, NO THE AREAS BENEATH AND AROUND THE SOLAR PANELS WILL BE PLANTED WITH A NATIVE GRASS/CLOVER (MEADOW POLLINATORS) MIX, IT IS UNDERSTOOD THAT IT TAKE ONSERVATION EASEMEN 3-5 YEARS FOR THE CLOVER TO ESTABLISH AND MAY NOT BE PRESENT AT THE TIME OF CONSTRUCTION. THE GRASSES AND POLLINATORS PROVIDE ECOLOGICAL BENEFITS, CONSERVATION INCLUDING POLLINATOR HABITAT AND FOOD 6. THIS PROPERTY HAS A HISTORIC STRUCTURE LISTED AS HO-479, THE PERSIMMON BOTTOM FARM. 47. TRAFFIC CONTROL DEVICES: A) THE R1-1(STOP SIGN) AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED. USE:RESIDENTIA ZONE:RR-DEO B) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES. RETENTION C) ALL TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT. D) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED QUICK PUNCH, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED. THÉ SUBJECT PROPERTY IS ENCUMBERED BY A HOWARD COUNTY AGRICULTURAL LAND PRESERVATION PROGRAM EASEMENT, FILE NUMBER HO-91-04-E. 49. THE HOWARD COUNTY AGRICULTURAL PRESERVATION BOARD REVIEWED THE PROPOSED PROJECT ON SEPTEMBER 21, 2020 AND PROVIDED ADVISORY COMMENTS TO THE HEARING EXAMINER. **LOCATION MAP** O. THE HISTORIC PRESERVATION COMMISSION REVIEWED THE PROPOSED PROJECT ON JULY 7, 2022 VIA VIRTUAL WEB MEETING/CONFERENCE CALL. THE HISTORIC STRUCTURE IS TO REMAIN. ALL WORK WITHIN THE BRIGHTON DAM ROAD PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE STANDARD MARYLAND STATE HIGHWAY ADMINISTRATION DETAILS: MD 104.02-02 AND MD 104.02-10 OR AS DIRECTED BY THE HOWARD COUNTY - TRAFFIC ENGINEERING DIVISION. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CATEGORY 1 OF THE MARYLAND STATE HIGHWAY ADMINISTRATION BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES, THE 2009 EDITION OF THE MUTCD, THE MOMUTCD, AND THIS PLAN. NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, DRUMS ARE IN PLACE AND OPERATIONAL. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL MEET WITH THE CONSTRUCTION INSPECTION DIVISION (C.I.D.) INSPECTOR AND HOWARD COUNTY TRAFFIC TO REVIEW THE CONSTRUCTION SEQUENCE, AND ANY MDSHA M.O.T. DETAILS NOT SPECIFIED FOR THIS PROJECT. 2. A PAYMENT OF A FEE-IN-LIEU OF CONSTRUCTION OF THE ROAD SECTION REQUIRED WAS REQUESTED AND APPROVED. THE APPROVED FEE-IN-LIEU AMOUNT IS \$27,824.00. APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING BUILDING NO. | STREET ADDRESS (Hal) Edmondson 12751 | BRIGHTON DAM ROAD CHIEF. DEVELOPMENT_ENGINEERING DIVISION 3/29/2023 SUBDIVISION NAME STORMWATER MANAGEMENT PRACTICES CHIEF, DIVISION OF LAND DEVELOPMENT PUBLIC | PRIVATE | MAINTENANCE BY PLAT OR L/F | GRID NO. | ZONING TAX MAP NO. | ELECT. DIST. 3/29/2023 12751 BRIGHTON DAM ROAD | NON-ROOFTOP DISCONNECT (N-2), _14369/F.464 OWNER

BENCHMARKS

HOWARD COUNTY BENCHMARK 34FD N 560,162.580 E 1,325,180.368 ELEV. 437.493 HOWARD COUNTY BENCHMARK 34E5

N 559,538.074 E 1,322,535.882 ELEV. 460.449

LEGENDS:

 \sim

PLAT# 19646

TM. 34 P. 77 LOT PAR 'E PLAT# 19646

USE:RESIDENTIAL ZONE:RR-DEO

AYANKOYA KUNLE A

PLAT# 19216 USE:RESIDENTIA

PERMIT INFORMATION CHART

RR-DEO

SECTION/AREA

LOT/PARCEL NUMBER

CENSUS TI

605103

PARCEL BOUNDARY ADJACENT BOUNDARY PRESCRIPTIVE RIGHT-OF-WAY RIGHT-OF-WAY RESERVATION ---- 50' SOLAR SETBACK BUILDING RESTRICTION LINE EXISTING TREELINE

> STREAM BUFFER EXISTING FOREST CONSERVATION AREA 100-YEAR FLOODPLAIN

SECURITY FENCE

PROPOSED PAVING

VICINITY MAP SCALE: 1"=2000 ADC MAP COORDINATES: PAGE 31 / GRID B-C 2

SHEET INDEX SHEET NO. DESCRIPTION COVER SHEET 1 OF 12 LAYOUT PLAN 2 OF 12 SITE DETAILS 3 OF 12 SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN 4 OF 12 GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS 5 OF 12 6 OF 12 STORMWATER MANAGEMENT DRAINAGE AREA MAP 7 OF 12 STORMWATER MANAGEMENT & STORM DRAIN NOTES, DETAILS AND PROFILE STORM DRAIN DRAINAGE AREA MAP 8 OF 12 FOREST CONSERVATION PLAN 9-10 OF 1 LANDSCAPE PLAN 11 OF 12 12 OF 12 FOREST CONSERVATION & LANDSCAPE NOTES AND DETAILS

NO.

AS-BUILT CERTIFICATION FOR PSWM

HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE

UNDERGROUND SWM FACILITY.

OWNER

E. ALEXANDER AND BETTY SMITH ADAMS TRUSTEES OF THE RICHARD WARFIELD TRUST, 6096 KEYSER ROAD, HUME VA 22639 410-531-9655

TEN OAKS SOLAR LLC C/O NAUTILUS SOLAR ENERGY. 396 SPRINGFIELD AVENUE SUITE 200 SUMMIT, NJ 07901 ATTN: JEFFREY CHENG 650-302-9315 JEFF@NAUTILUSSOLAR.COM

DEVELOPER

SITE DEVELOPMENT PLAN

TEN OAKS SOLAR

12751 BRIGHTON DAM ROAD, CLARKSVILLE, MD 21029

REVISION

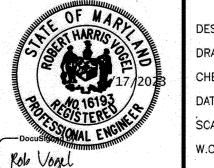
COVER SHEET

DEED L.14369 F.464 AX MAP 34 BLOCK 11 STH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP P: 410.461.7666 F: 410.461.8961 www.timmons.com



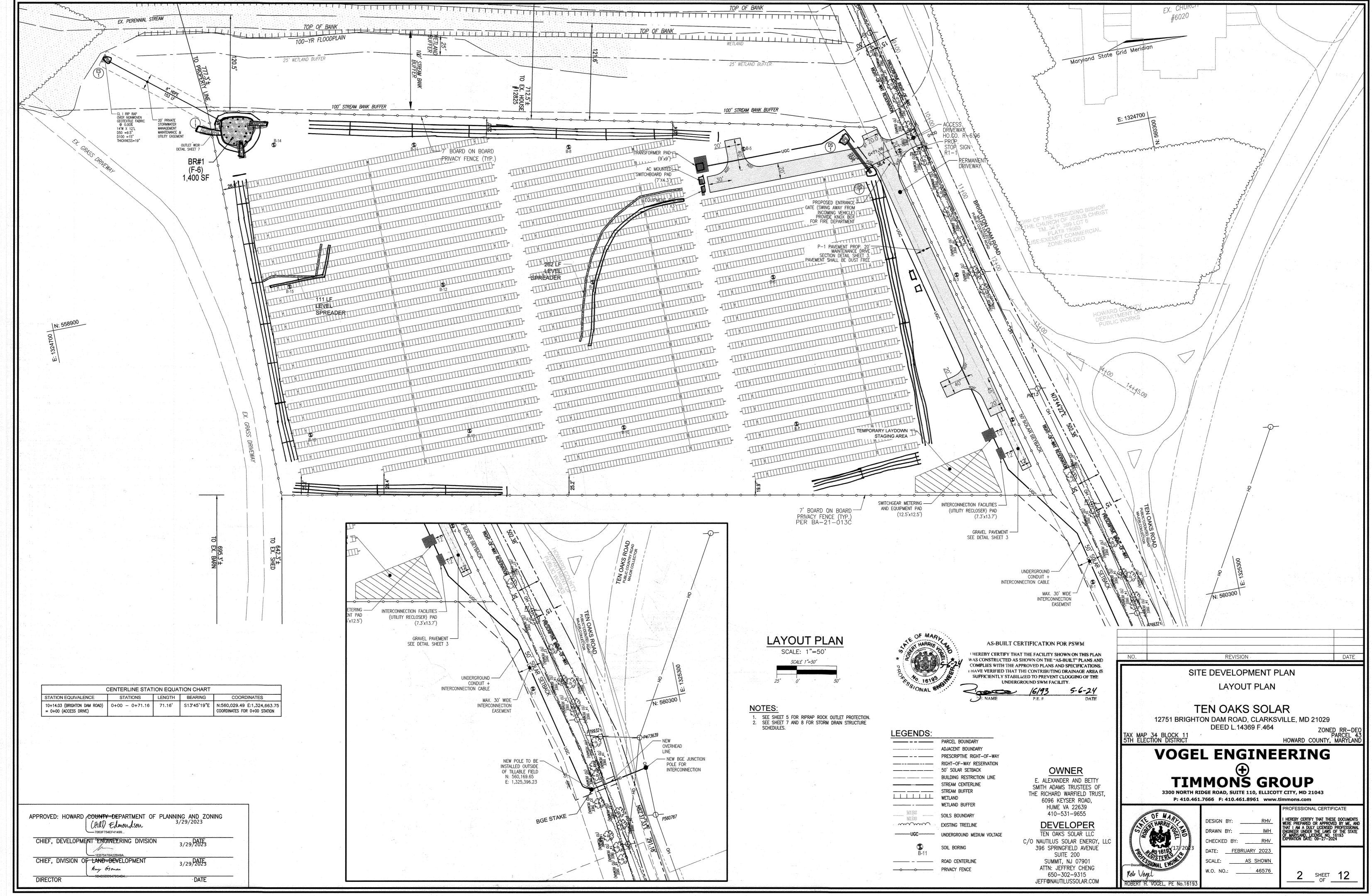
PAR	DESIGN BY:
台至	DRAWN BY:
/17/2028	CHECKED BY:
8/0/	DATE: FEBRUAR
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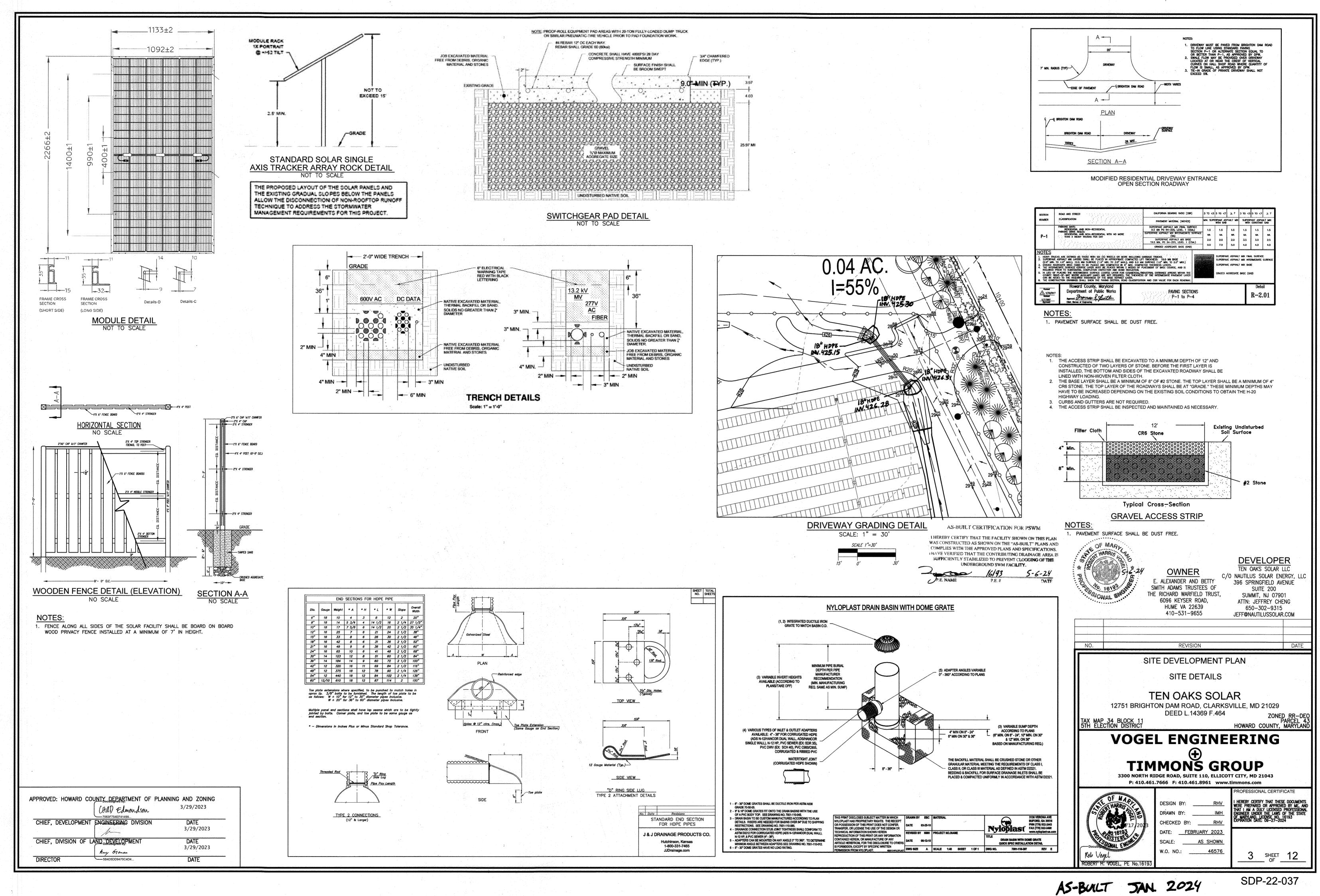
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2024 Y 2023

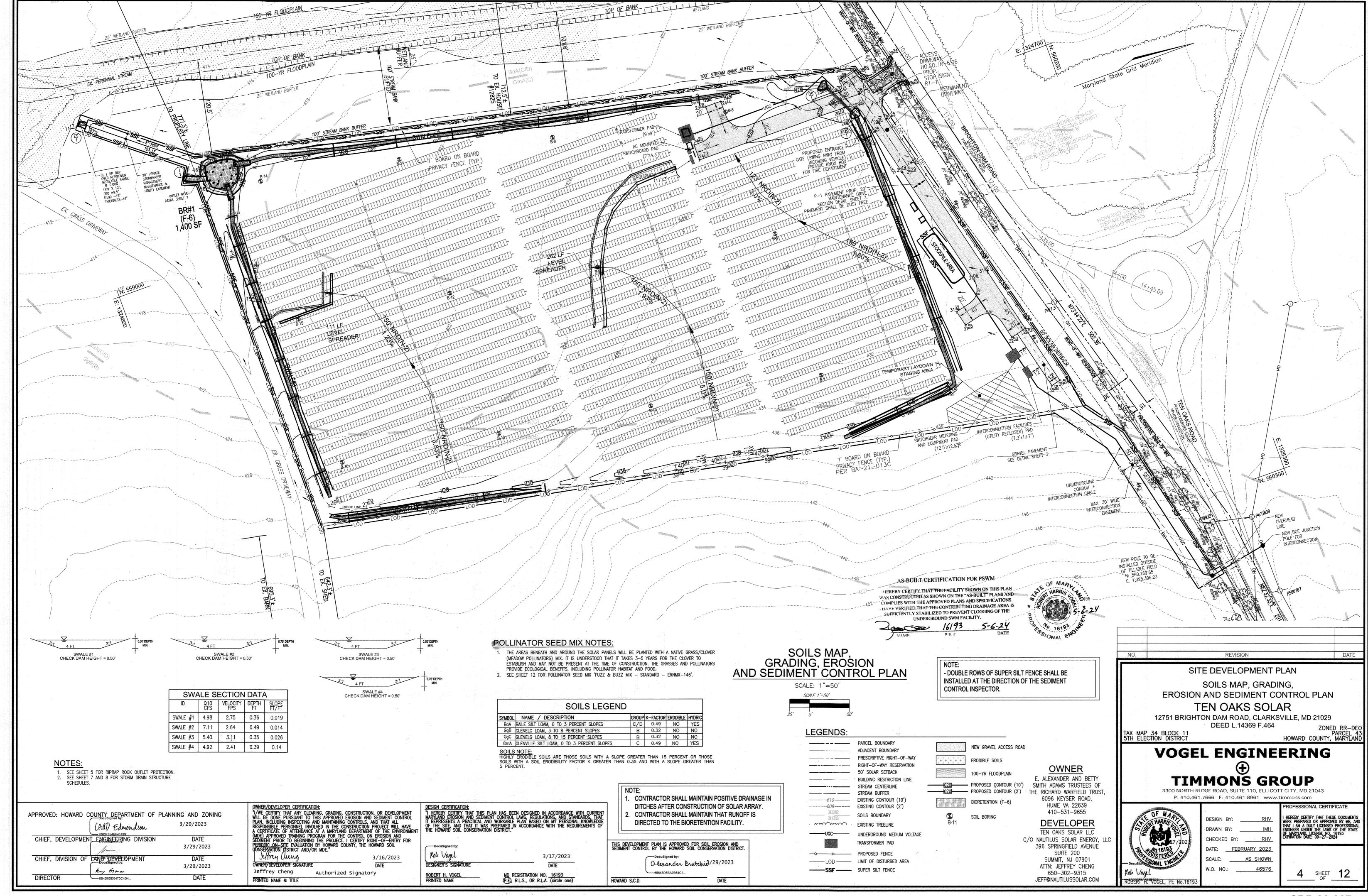
SDP-22-037

SHEET 12

ROBERTOFFAF VOGEL. PE No.16193







HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES PRACTICES. AREA DISTURBED: TOTAL FILL: (1) REFER TO ITEM 11 BELOW HOWARD S.C.D.

OF ANOTHER GRADING UNIT CONTROL AND REVISIONS THERETO AREAS UNDER ACTIVE GRADING. TOTAL AREA OF SITE: ACRES ACRES AREA TO BE ROOFED OR PAVED. ACRES AREA TO BE VEGETATIVELY STABILIZED: NAME AND TITLE OF INSPECTOR AMOUNT OF LAST RECORDED PRECIPITATION) AND/OR CURRENT ACTIVITIES EVIDENCE OF SEDIMENT DISCHARGES STABILIZATION REQUIREMENTS PHOTOGRAPHS MONITORING/SAMPLING MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED EACH WORKDAY, WHICHEVER IS SHORTER. HSCD-APPROVED FIELD CHANGES. 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. TIME PERIODS (INCLUSIVE) USE III AND IIIP OCTOBER 1 - APRIL 30 USF IV MARCH 1 - MAY 31 ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE. OF MARYLAND, HOWEVER REMAINS A REQUIREMENT OF HOWARD COUNTY. HIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND EDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT Olexander Bratakie 2023 OWNER/DEVELOPER CERTIFICATION: CLUDING INSPECTING AND MAINTAINING CONTROLS. AND THAT A MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND RIODIC ON SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL NEEKYATION DISTRICT AND/OR MDE." Jeffrey Ching 3/16/2023 Jeffrey Cheng Authorized Signatory PRINTED NAME & TITLE DESIGN CERTIFICATION: HE HOWARD SOIL CONSERVATION DISTRICT --- DocuSigned by Rob Vogel 3/17/2023 DESIGNER BAFSIGNATURE MD REGISTRATION NO. 16193 P.E), R.L.S., OR R.L.A. (circle one)

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: PRIOR TO THE START OF EARTH DISTURBANCE UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL 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 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 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 FRODIRLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. 8-4-6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN CU YDS. TOTAL OFFSITE WASTE/BORROW AREA LOCATION: TO BE DETERMINED ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR 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) WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE) 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 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 DISTURBANCE SHALL NOT OCCUR OUTSIDE THE LOD 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 SUBSPOUENT 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 WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO 14. 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 STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED 16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ITEM 11. REGARDING PROJECT DISTURBANCE IS NO LONGER A REQUIREMENT OF THE STATE I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL SPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAV CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMEN DIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURREN ARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THA REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDG F. THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF FOR ALTERNATES, REFER TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL - PAGES B.26 - B.32 APPROVED: HOWARD COUNTYSIDEBARTMENT OF PLANNING AND ZONING 3/29/2023 (Hal) Edmondson ---- 7063F754EF41499... CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT DIRECTOR DATE

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

I. GENERAL USE A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 8.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 8.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE 8.2. ENTER SELECTED MIXTURE(S) APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN. . 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 PLANTING 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 3-1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT

TUREGRASS 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 BLUFGRASS SEFDING RATE: 2 POUNDS MIXTURE PER 1000 SOUARE 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: 1½ TO 3 POUNDS PER 1000 SQUARE FEET.

SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. HE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC

C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

WESTEM MD: MARCH 15 TO JUNE 1, AUGUST ITO 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 11/4 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY. . 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 SITES.

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

A. CLASS OF TURFGRASS SOD 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 3/4 INCH. PLUS OR MINUS 1/4 INCH. AT THE TIME OF CUTTING, MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH, BROKEN PADS AND TOM OR UNEVEN ENDS WILL NOT BE 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. . 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 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

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. PERMANENT SEEDING SUMMARY

APPLICATION SEEDING SEEDING

DATES

HARDINESS ZONE (FROM FIGURE B.3): ZONE 6b

COOL SEASON TALL FESCUE & KENTUCKY BLUEGRASS K.B. 40 LB / AC AUG 15 TO AUG 15 TO

P.R. 20 LB / AC

WARM/COOL DT 15 LB / AC MAR 1 TO MAY 15 <><

SEASON CRF 20 LB / AC MAY 16 TO MAY 16 TO

CREEPING RED FESCUE & CWR. 5 LB / AC

K.B. 40 LB / AC AUG 15 TO OCT 15

SEED MIXTURE (FROM TABLE B.3):

SPECIES RATE (LB/AC)

FERTILIZEE

(10-20-20)

N P₂ O₅ K₂ O

EITHER PERMANENT OR TEMPORARY 45 LB/AC 90 LB/AC 90 LB/AC 2 TONS/AC STABILIZATION IS TO BE APPLIED AT THE /4-1/2 IN. (1 LB PER (2 LB PER (2 LB PER (90 LB PER DIRECTION OF THE SEDIMENT CONTROL 1000 SF) 1000 SF) 1000 SF) 1000 SF) | INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD

R-4-2 STANDARDS AND SPECIFICATIONS

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE 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 FOLIPMENT

IN THE ROUGHENED CONDITION, SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH

. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING

MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:

III. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL

A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE

V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

HE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO

SUITABLE MEANS, RAKE LAWN AREAS TO SMOOTH THE SURFACE REMOVE LARGE OBJECTS

SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN

LIKE STONES AND BRANCHES. AND READY THE AREA FOR SEED APPLICATION, LOOSEN

PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE

SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR

F THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE.

I. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT

H. MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE

TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:

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

REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-

A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO

TO SUPPORT PLANTS OR FLIRNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT

D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND

5. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH

THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

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

BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF

VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS,

B. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA

A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING

. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPAC

MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL

O A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A

SOIL PREPARATION AND TILLAGE, ANY IRREGULARITIES IN THE SURFACE RESULTING FROM

TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE

C. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OF

MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT

I 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

COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO

. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR

FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE

ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR

MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

OR MORE SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR

FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY

APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND

3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BI

SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT

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.

TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL:

TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND

4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE

SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS

GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR OTHERS

CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY

C. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED

AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL

TRASH, OR OTHER MATERIALS LARGER THAN 1½ INCHES IN DIAMETER.

AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

FORMATION OF DEPRESSIONS OR WATER POCKETS.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

BE USED FOR CHEMICAL ANALYSES.

WARRANTY OF THE PRODUCER.

VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE

GROWTH. SOILS OF CONCEM HAVE LOW MOISTURE CONTENT. LOW NUTRIENT LEVELS. LOW

SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET

. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON

D. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY

E. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER

HE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED

(GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD

PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD

A. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE

RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.

II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

B. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.

AFTER THE SOIL IS LOOSENED. IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

CONDITIONS WHERE PRACTICE APPLIES

OR OTHER SUITABLE MEANS.

RE ACCEPTABLE

THE RESULTS OF A SOIL TEST.

PRODUCE VEGETATIVE GROWTH.

SOIL SCIENTIST AND APPROVED

AS SPECIFIED.

6. TOPSOIL APPLICATION

I. SOIL PH BETWEEN 6.0 AND 7.0.

PERMANENT STABILIZATION

DEFINITION

CRITERIA

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS. B-4-4 STANDARDS AND SPECIFICATIONS TEMPORARY STABILIZATION

<u>DEFINITION</u>
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS. <u>PURPOSE</u>
TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. <u>CONDITIONS WHERE PRACTICE APPLIES</u>
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.

1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE 8.1 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 8.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT 2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY, SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED

MAINTAIN UNTIL THE NEXT SEEDING SEASON.

AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND

FOXTAIL MILLET OR EQUAL FOR ALTERNATES, REFER TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PAGE B.20, TABLE B.1

DETAIL B-1 STABILIZED CONSTRUCTION SCE **ENTRANC** _ 3.FT__ -EARTH FIL PROFILE 50 FT MIN. PLAN VIEW

CONSTRUCTION NOTES 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 BERN 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 DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.

PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS

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
NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

B-4-3 STANDARDS AND SPECIFICATIONS

SEEDING AND MULCHING THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

O PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE

A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE 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

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 FEFECTIVE 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. 2 APPLICATION . 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 8.1, PERMANENT SEEDING TABLE 8.3, 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. 1. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING, SEEDBED MUST BE FIRM AFTER PLANTING. II. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING

RATE IN EACH DIRECTION. C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AN 1. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NO EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN;

P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (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 WITHOUT INTERRUPTION.

IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

I. MULCH MATERIALS (IN ORDER OF PREFERENCE) A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, LYE, 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. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN PPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS II. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOL 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 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 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 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 S 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 POLINDS 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, PETROSE TERRA TAX II, TERRA TACK AR OR OTHER APPRÒVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES

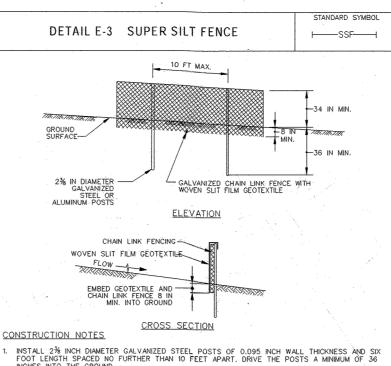
WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS

RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET

IV. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER

IS STRICTLY PROHIBITED

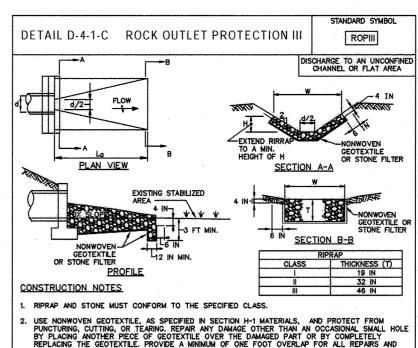
TEMPORARY SEEDING SUMMARY HARDINESS ZONE (FROM FIGURE B.3): ZONE 6b FERTILIZER SEED MIXTURE (FROM TABLE B.1): LIME RATE SEEDING SEEDING (10-20-20)
DATES DEPTHS APPLICATION NO SPECIES RATE (LB/AC) COOL SEASON 436 LB/AC 2 TONS/AC MAY 15 ANNUAL RYEGRASS OR EQUAL 1/2 IN. 40 LB / AC (10 LB PER (90 LB PER 1000 SF) | 1000 SF WARM SEASON MAY 16 TO | 1/2 IN. 30 LB / AC



FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH THE SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE CEPUIND.

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS. 5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE 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.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE
RAL RESOURCES CONSERVATION SERVICE 2011



EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP. TRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A ER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP ET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SM. ES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A ER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE NUT NECESSARY.

WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLE BY A MINUM. OF 18 INCHES. CONSTRUCT APRON WITH OX SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

2011

WARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

CHECK DAMS ARE FOR TEMPORARY USE

CROSS SECTION

PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AN SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WASHED 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINAUM 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 (% TO 1½ INCH).

SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR DITCH. TO AVOID SCOUR THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET

REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

DETAIL D-2 STONE CHECK DAM

NONWOVEN-GEOTEXTILE

CONSTRUCTION SPECIFICATIONS

CHECK DAM HEIGHT= 0.50°

SWALE #2 CHECK DAM HEIGHT= 0.75'

CHECK DAM HEIGHT= 0.50

DETAIL B-4-6-A TEMPURARY SUIT STABILIZATION MATTING CHANNEL APPLICATION CONSTRUCTION SPECIFICATIONS ISOMETRIC VIEW USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) OSE TEMPORARY SOLE STABILIZATION MATTING MADE OF DEGRALABLE (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-INJURICU
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 PARENT MATERIAL. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1/2 INCHES WIDE 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 CHANNE CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING. KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF THE MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END. 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. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION 8-4 VEGETATIVE STABLIZATION.

U.S. DEPARTMENT OF AGRICULTURE 2011 MARYLAND DEPARTMENT OF ENVIRONMEI

SEQUENCE OF CONSTRUCTION

B-4-8 STANDARDS AND SPECIFICATIONS

FOR

STOCKPILE AREA

A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND

TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT

CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE

CONDITIONS WHERE PRACTICE APPLIES STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL

THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES

THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE

ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO

STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH

CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE

WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN

RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT

OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR

APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO

STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL

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

HE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE

DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING

STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 D

STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.

VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE

STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:

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

RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL

ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.

CONCENTRATED FLOW IN A NON-EROSIVE MANNER

SECTION B-3 LAND GRADING

INTERCEPT THE DISCHARGE

ACCORDANCE WITH SECTION B-3 LAND GRADING

CONTROL PRACTICE.

MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.

OBTAIN GRADING PERMIT, (1 DAY) NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK. (1 DAY)

STAKEOUT LIMITS OF DISTURBANCE. (1 DAY) *DISTURBANCE SHALL BE HELD TO THE SURROUNDING AREA OF GRADING SHOWN ON PLAN. CLEAR AND GRUB AND INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)

INSTALL PERIMETER CONTROLS INCLUDING SUPER SILT FENCE, TEMPORARY STONE CHECK DAMS TEMPORARY SOIL STABILIZATION MATTING AS SHOWN IN PLAN VIEW IN ACCORDANCE WITH DETAILS HEREON. STOCKPILING SHALL BE LIMITED TO PROJECT SITE AS SHOWN HEREON. STOCKPILES SHALL BE STABILIZED AS DETAILED HEREON. (1 DAY)

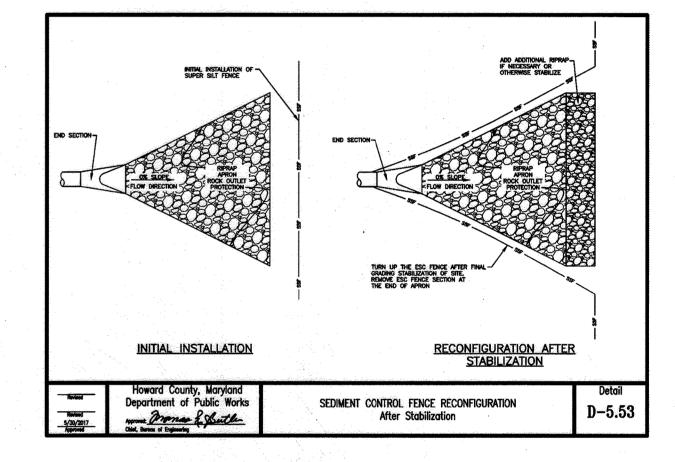
UPON APPROVAL OF PERIMETER CONTROL INSTALLATION BY COUNTY INSPECTOR, BEGIN DRIVEWAY CONSTRUCTION. (2 WEEKS)

BEGIN CONSTRUCTION OF SOLAR ARRAYS, LEVEL SPREADERS, INSTALL UNDERGROUND ELECTRIC AND PERFORM FINE GRADING AS SHOWN ON PLAN INCLUDING SWALES. CONSTRUCT BIORETENTION FACILITY AFTER CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED. (6 MONTHS)

STABILIZE AREA WITHIN SOLAR FENCE WITH PERMANENT SEEDING MIXTURE (MEADOW FOR POLLINATORS) AND STRAW MULCH OR EQUAL STABILIZATION. AREA OUTSIDE OF THE SOLAR FENCE WILL BE STABILIZED WITH GRASS SEED. (2 WEEKS) INSTALL LANDSCAPING PER PLAN AND DETAILS. (3 WEEKS)

AFTER PERMISSION HAS BEEN GIVEN BY SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING EROSION AND SEDIMENT CONTROLS INCLUDING, SUPER SILT FENCE, TEMPORARY STONE CHECK DAMS AND STABILIZE THE DISTURBED AREAS FROM THE DISTURBANCES WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH. (1 DAY)

NOTE: ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION





-4 TO 7 IN STONE (TYP.)

AS-BUILT CERTIFICATION FOR PSWM I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

OWNER . ALEXANDER AND BETTY SMITH ADAMS TRUSTEES OF THE RICHARD WARFIELD TRUST, 6096 KEYSER ROAD, HUME VA 22639 410-531-9655

DEVELOPER TEN OAKS SOLAR LL C/O NAUTILUS SOLAR ENERGY, 396 SPRINGFIELD AVENUE SUITE 200 SUMMIT, NJ 07901 ATTN: JEFFREY CHENG 650-302-9315

JEFF@NAUTILUSSOLAR.COM

GRADING, EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

TEN OAKS SOLAR 12751 BRIGHTON DAM ROAD, CLARKSVILLE, MD 21029

REVISION

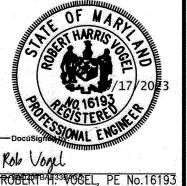
SITE DEVELOPMENT PLAN

DEED L.14369 F.464

AX MAP 34 BLOCK 11 TH ELECTION DISTRICT

VOGEL ENGINEERING TIMMONS GROUP

3300 NORTH RIDGE ROAD, SHITE 110, ELLICOTT CITY, MD 21043 P: 410.461.7666 F: 410.461.8961 www.timmons.com ROFESSIONAL CERTIFICATE

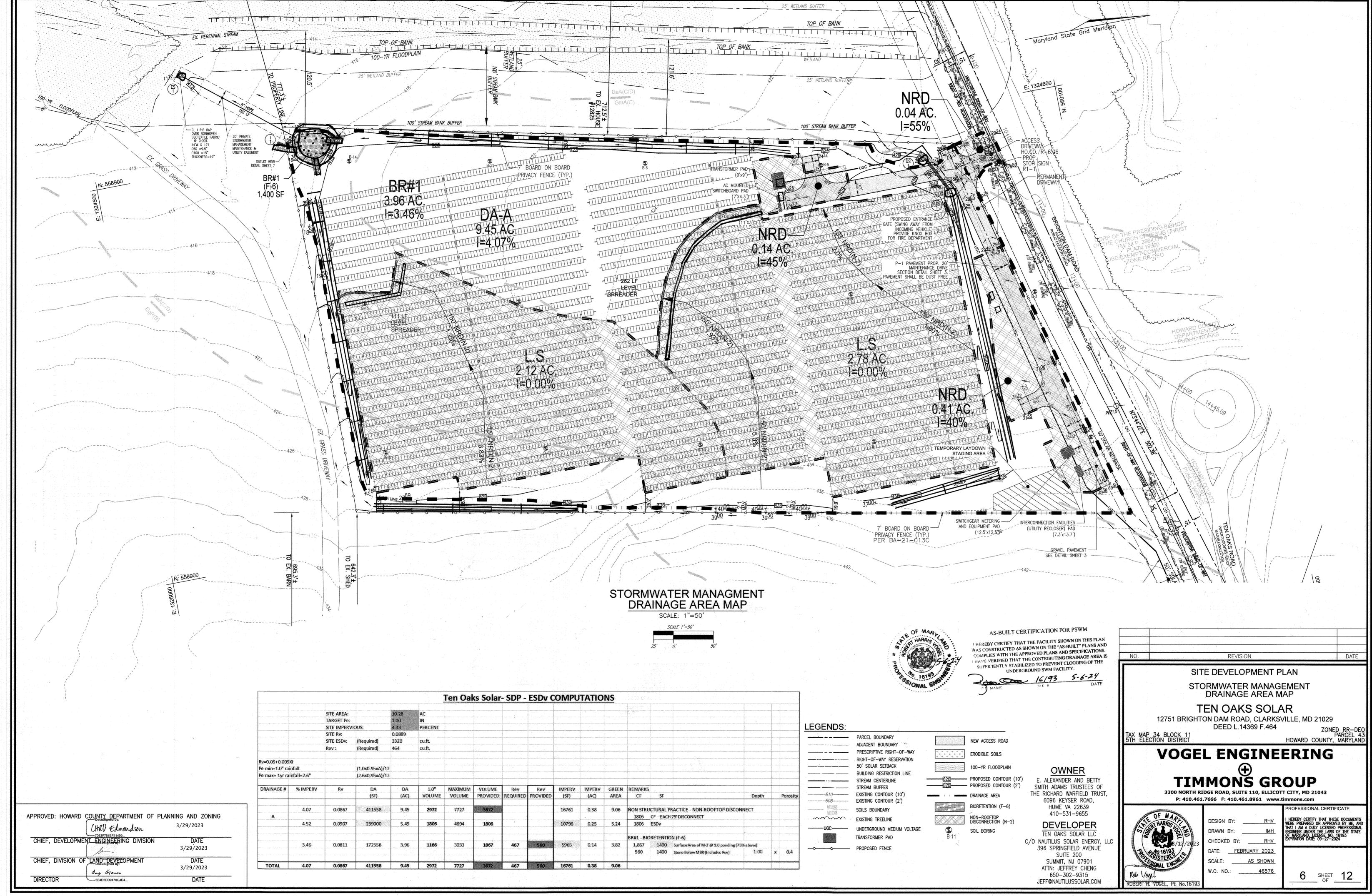


DESIGN BY: DRAWN BY: CHECKED BY: DATE: FEBRUARY 2023 AS SHOWN SCALE: 46576 W.O. NO.:

__SHEET___12

HOWARD COUNTY, MARYLAN

SDP-22-037



DISCONNECTION OF NON ROOFTOP RUNOFF

CONSTRUCTION CRITERIA: THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH

PLANNED ROOFTOP DISCONNECTIONS: -EROSION AND SEDIMENT CONTROL: EROSION AND SEDIMENT CONTROL PRACTICES (E.G., SEDIMENT TRAPS) SHALL NOT BE LOCATED IN VEGETATED AREAS RECEIVING DISCONNECTED RUNOFF -SITE DISTURBANCE: CONSTRUCTION VEHICLES AND EQUIPMENT SHOULD AVOID AREAS RECEIVING DISCONNECTED RUNOFF TO MINIMIZE DISTURBANCE AND COMPACTION. SHOULD AREAS RECEIVING DISCONNECTED RUNOFF BECOME COMPACTED, SCARIFYING THE SURFACE OR ROTOTILLING THE SOIL TO A DEPTH OF FOUR TO SIX INCHES SHALL BE PERFORMED TO ENSURE PERMEABILITY. ADDITIONALLY, AMENDMENTS MAY BE NEEDED FOR TIGHT, CLAYEY SOILS.

A FINAL INSPECTION SHALL BE CONDUCTED BEFORE USE AND OCCUPANCY APPROVAL TO ENSURE THAT SIZING FOR TREATMENT AREAS HAVE BEEN MET AND PERMANENT STABILIZATION HAS BEEN

MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION (E.G., BY PLANTING TREES OR SHRUBS ALONG THE PERIMETER). IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

HOWARD COUNTY - OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF NON ROOFTOP RUNOFF (N-2)

MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE OWNER SHALL ENSURE THE AREAS RECEIVINGRUNOFF ARE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

SPECIFICATIONS FOR MICRO-BIORETENTION. RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL 2. FILLERING MEDIA OF PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO
OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL
TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE
OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05. THE
PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

- * SOIL COMPONENT LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION).
 * ORGANIC CONTEN MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%). * CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- * PH RANGE SHOULD BE BETWEEN 5.5 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.

 THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL.
WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADER, THE CONTRACTOR
SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH
NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE
COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR

NDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS, MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL

SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT

LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE

PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2"

STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE

OF THE TREE PLANT OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFEATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

- * PIPE SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OF HDPE).

 * PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A
- GRAVEL THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

 * THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE. * A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- * A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".
 THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER. MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

PLACEMENT — AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT. WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN \$\pmu2\% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION ALL. COMPACTION IS TO BE DETERMINED BY ASSHTO METHOD T—99 (STANDARD PROCTOR).

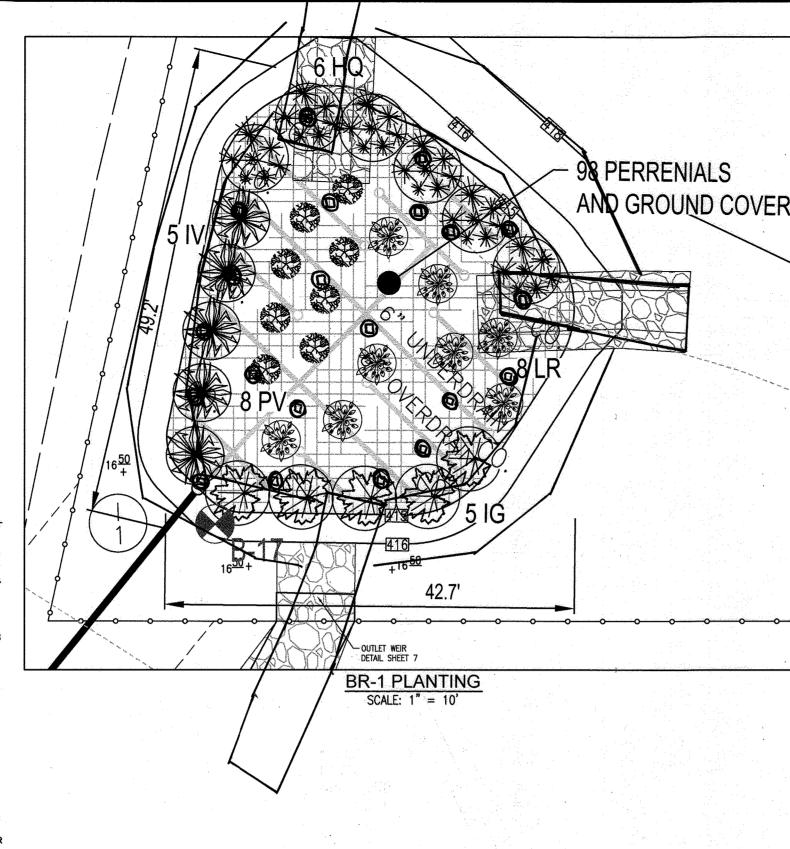
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

OPERATION AND MAINTENANCE SCHEDULE FOR

MICRO-BIORETENTION (M-6), AND BIORETENTION (F-6) THE OPERATOR SHALL MAINTAIN THE PLANT MATERIAL, MULTCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.

- THE OPERATOR SHALL PERFORM A PLANT INSPECTION IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OPERATOR SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OPERATOR SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OPERATOR SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

APPROVED: HOWARD COUNTY IN DEPARTMENT OF PLAN	NNING AND ZONING
CHAD Edmondson	3/29/2023
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 3/29/2023
CHIEF, DIVISION OF LANDUSE VELOPMENT	DATE 3/29/2023
- Company of the Comp	



			BIORETEN	ITION FACIL	ITY - DESIGN	ELEVATION	CHART	· · · · · · · · · · · · · · · · · · ·			
,											
/BR/BR	ESD	TOP	TOP	воттом	воттом	INV	INV	SURFACE	OUTFALL	APPROX	
ACILITY	WSEL	MULCH	PLANT SOIL	PLANT SOIL	PEA GRAVEL	PIPE (1)	STONE	AREA SF	ELEV.	DIM:	
.#	Α	B414.	95 c	D	Ε	F	G	н	Marillana		
1	416.00	415.00	414.75	413.25	412.92	412.17	411.02	1400	411.15	SEE PLAN	,

ВІОГ	RETENTIC	N PLANTIN	ng requiren	IENTS	PLANTINGS PROVIDED PERRENIALS/G COVER PRO				A			
BR#	LF	AREA	STEMS REQUIRED (0.0227)	STEMS PROVIDED	IG	1V	НО	LR	PV	BA	AG	TOTAL
BR#1	49	1400	32	32	5	5	6	8	8	49	49	98
TOTALS :	49	1400	32	32	5	5	6	8	8	49	49	98

	a sports and second	ISDAN SERVICE			Project Name		Ten Oaks Solar - Ge	
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific		Location	, Tue	Ten Oaks Solar - Geote	echnic
planting soil [2.5' to 4' deep]	sand 35 - 60% silt 30 - 55% clay 10 - 25%	n/a	USDA soil types loamy sand, sandy loam or loam		Datum Surf. Elev	416.733 03/08/	ft Hemmer Drop 30	ibs. in. in.
mulch	shredded hardwood		aged 6 months, minimum			Marien and A	1 40020 (0.04)	
pea gravel diaphragm and curtain drain	pea gravel: ASTM-D-448 ornamental stone: washed	pea gravel: No. 6 stone: 2" to 5"			Elevation/ Depth (ft)	SOIL SYMBOLS/ SAMPLE CONDITIONS	Description	Borir
	cobbles				Γ.	V///	Greenish brown, moist, medium	1
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D- 4632), puncture resistance (ASTM-D-4833)	n/a	for use as necessary beneath underdrains only		419-		stiff, sandy CLAY, trace gravel. [CL]: Brown to orange brown, moist, medium dense, clayey SAND, some gravel. (SC). Brown, moist, stiff, sandy CLAY, some gravel. (CL)	-
underdrain gravel	AASHTO M-43	0.375" to 0.75"			410-		Brown to dark brown, moist, loose clayey GRAVEL, trace sand. (GC)	1
underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes				Boring terminated at 8'	Boring
poured in place concrete (if required)	MSHA Mix No. 3; f'e = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking		SAMPLER TYPE DRIVEN SPLIT S PT - PRESSED S CA - CONTINUO RC - ROCK CORI	HELBY TUBE IS FLIGHT AUG E	I-INTACT	AT CO APTE AFTE
sand [i' deep]	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.	Append	lix A. Lands	caping Gu	idance for Stormwater BMP	's

"MICRO-BIORETENTION/BIORETENTION" PLANTING SCHEDULE NOTES:

- CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS
- MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF

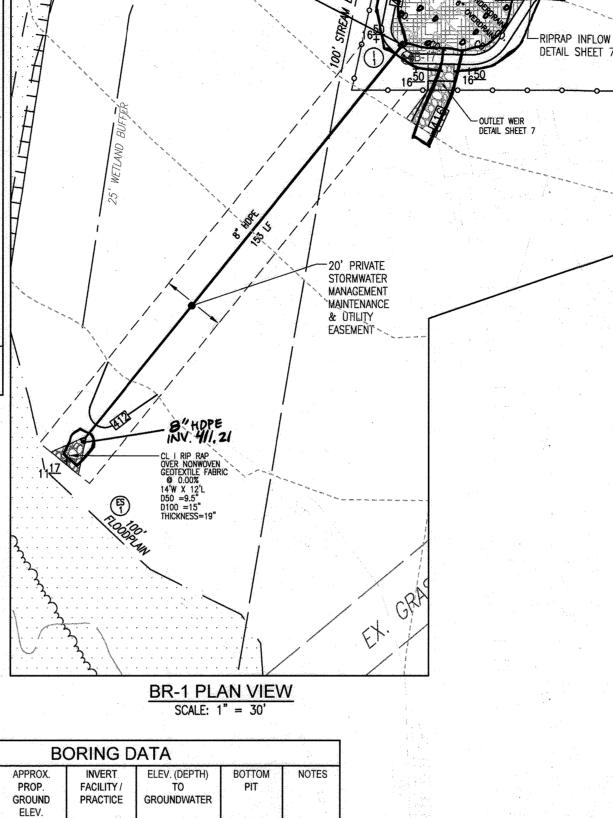
FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH

BIOKETE	NHON	PLANTING SCHEDULE (SHRUB	/ORI	MINI	ENTAL	GRASSES)
LEGEND/KEY	QTY	BOTANICAL NAME/COMMON NAME		\$	SIZE	REMARKS
₩ IG	5	ILEX GLABRA 'SHAMROCK' INKBERRY HOLLEY		1 (SALLON	_
₩ IV	5	ITEA VIRGINICA 'HENRY'S GARNETT' VIRGINIA SWEETSPIRE		1 (SALLON	— — — — — — — — — — — — — — — — — — —
HQ	6	HYDRANGEA QUERCIFOLIA OAKLEAF HYDRANGEA	-	1 (SALLON	_
LR	8	LEUCOTHEO RACEMOSA FETTERBUSH		1	GAL.	· ·
PV	8	PANICUM VIRGATUM SWITCHGRASS		1	GAL.	_
BIORE	TENTI	ON PERENNIALS/GROUNDCOVE	R PL	AN7	ING SC	HEDULE
LEGEND	QTY	BOTANICAL NAME/COMMON NAME	SIZ	ZΕ	RE	MARKS
grathernamic classes are constructed by the second	49	BAPTISIA AUSTRALIS FALSE INDIGO	4"	РОТ	AND BO	" O.C. FOR SIDES OTTOM OF MBR, VARIETIES IN A LIZED RANDOM

GOLDEN VARIEGATED SWEET FLAG

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL,
- ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN. 1000 STEMS PER PLANTED ACRE (.0227 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESDV SUMMARY.

						en de la companya de
BIORETE	OITM	PLANTING SCHEDULE (SHRUB	/OR	NIME	ENTAL	GRASSES)
LEGEND/KEY	QTY	BOTANICAL NAME/COMMON NAME		8	SIZE	REMARKS
₩ IG	5	ILEX GLABRA 'SHAMROCK' INKBERRY HOLLEY		1 0	SALLON	
IV.	5	ITEA VIRGINICA 'HENRY'S GARNETT' VIRGINIA SWEETSPIRE	7	1 0	SALLON	-
НО	6	HYDRANGEA QUERCIFOLIA OAKLEAF HYDRANGEA	-	1 (SALLON	_
LR	8	LEUCOTHEO RACEMOSA FETTERBUSH	- "	1	GAL.	- . ·
PV	8	PANICUM VIRGATUM SWITCHGRASS		1	GAL.	
BIORE	TENTI	ON PERENNIALS/GROUNDCOVE	R Pl	_AN1	ING SC	HEDULE
LEGEND	QTY	BOTANICAL NAME/COMMON NAME	SIZ	ZE	RE	MARKS
	49	BAPTISIA AUSTRALIS FALSE INDIGO	4"	РОТ	AND BO	" O.C. FOR SIDES OTTOM OF MBR, VARIETIES IN A LIZED RANDOM
Section Succession	49	ACORUS GRAMINEUS 'OGON'	1	QT.	PLANT I	N THROUGHOUT, N GROUPS OF S THAN 9 PLANTS



PITS	GROUND ELEV.	GROUND ELEV.	PRACTICE	GROUNDWA	ATER		
B-17	416.73	415	411.07	-		408.73	DRY
				•			
Project Nan	10	Ten Oaks Sola	r - Geotechnical		_ Boring No	7 5 7 3	17
Location	<u>. phy</u>	Ten Oaks Solar	Geotechnical		Job#	22055	Α
		•	SAMPLER				
Datum		Hammer Wt.		Diameter 3.25	in.	Foreman M	. Васегта
Surf. Elev.	416.733	ft Hammer Drop	30 in. Rock	Core Diameter	N/A	Inspector	
Date Starte	d 03/08/22	Pipe Size (O.D.)	2.0 In. Boring	Method H	SA	Date Completed	03/08/22
	a dilakon di hai					. Sir e et anno income	Automorphism .
400.000	SOIL		1				N (blows/ft)
Elevation Depth (fi	V SYMBOLS/	Description	Boring and San Notes	npling Sample Re No. (in		PT Blows N	10 30 50

TEST EXISTING

SOIL SYMBOLS/			, ,	Boring and Sampling	Sample	Rec.	NM			SPT N	(blows	m)
epth (ft)	SYMBOLS/ SAMPLE CONDITIONS		Description	Notes Notes	No. (in)		(%)	SPT Blows	N	10 30 50		
₽,			rown, moist, medium CLAY, trace gravel.	Topeoil - 6*	1	12		2-2-3-5	5	\downarrow	H	Ш
115			range brown, moist,		2	14		7-10-7-8	17	H		Ħ
1.		Brown, mo some grave	ist, stiff, sandy CLAY,		3	12		6-6-7-8	13	7		Ħ
120		Brown to d	ark brown, moist, loose AVEL, trace sand. (GC)		4	6		3-3-2-3	5	1	H	H
Boring termin		ninated at 8'	Boring was backfilled at completion					 				
LER TYPE	i Listanin ne e		SAMPLE CONDITIONS		GROUND WATER	Ī	AVE IN			THOD	1 1.	
1.5 Dec. 41.5	POON UNLESS (HELBY TUBE	OTHERWISE	D - DISINTEGRATED I - INTACT	AFTER 24 HRS.	Dry t	<u> </u>	6.0				EM AUGI B FLIGH	ERS TAUGERS
JOUNTING	IS FLIGHT AUGI	ER .	U - UNDISTURBED	AFTER HRS	A	-	·	ft. DC-I	DRIVIN	IG CASH	NG .	

Appendix A. Landscaping Guidance for Stormwater BMPs Specific Landscaping Criteria

rees	Shrubs	Herbaceous Species
er rubrum et Maple	Aesculus pariviflora Bottlebrush Buckeye	Andropogon virginicus Broomsedge
enka nigra iven Birch	Cephalanthus occidentalis Buttonbush	Eupatorium perpurea Joe Pye Weed
unipens virginiana astern sed Cedar	Hamemelis virginiana Witch Hazel	Scirpus pungens Three Square Bulrush
hionanthus virginaus ringe-wee	Vaccinium corymbosum Highbush Blueberry	Iris versicolor Bine Flag
yssa sylvatta lack Gum	Ilex glabra Inkberry	Lobelia cardinalis Cardinal Flower
riospyros vii tiliama ersimmon	Ilex verticillata Winterberry	Panicum virgatum Switchgrass
latanus eccidentos ycamon	Viburnum dentatum Arrowwood	Dichanthelium scoparium Broom Panic Grass
nuercu palustris in Ok	Lindera benzoin Spicebush	Rudbeckia laciniata Tall Coneflower
rue cus phellos 7 low Oak	Myrica pennsylvanica Bayberry	Scirpus cyperinus Woolgrass
lix nigra lack willow		Vernonia noveboracensis New York Ironweed

- 1. TABLE A.4 IS TAKEN FROM THE "2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II - APPENDIX A. 2. CONTRACTOR SHALL BE FAMILIAR WITH APPENDIX B.4.C. CONSTRUCTION
- SPECIFICATIONS AND TABLE B.4.1 MATERIAL SPECFICAITIONS. IN ADDITION THE "2000 MARYLAND STORMWATER DESIGN MANUAL - VOLUME II - APPENDIX A OFFERS ADDITIONAL HELPFUL INFORMATION. 3. NO TREES SHALL BE PLANTED WITHIN A MICRO-BIORETENTION FACILITY. USE
- CONTRACTOR SHALL INSTALL PLANTINGS SPECIFIED OR USE APPROVED EQUAL SPECIES WHICH ARE TOLERANT TO FLUCTUATING WATER LEVELS. 5. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THIS FINAL PLAN.

4. ABOVE TABLE A.4. IS FOR INFORMATIONAL PURPOSES ONLY. LANDSCAPE

ONLY SHRUB OR HERBACEOUS SPECIES.

PIPE SCHEDULE PUBLIC/ MATERIAL PRIVATE PRIVATE HDPE

		S	TRUCTUF	RE SCHE	DULE		
STR#	TYPE	INV. IN	INV. OUT	TOP ELEV.	DETAIL	LOCATION	REMARKS
I-1	8" NYLOPLAST DRAIN BASIN		412.00	416.00	DETAIL SHEET 3	N: 559,156.48 E: 1,324,482.58	(1) PRIVATE
ES-1	8" HDPE		411.45.21	411.82	DETAIL SHEET 3	N: 559,034.13 E: 1,324,383.64	(2) PRIVATE

(2) COORDINATE FOR END SECTION = CENTERLINE OF PIPE @ DOWNSTREAM FACE

CROSS SECTION

TO BOTTOM OF

FIFV R

PLANTING SOIL

(SEE PLANTING SOIL

4" PEA GRAVEL-

(1/8"-3/8" STONE)

12" #57 WASHED STONE

CHARACTERISTICS

SPILLWAY SECTION

OUTLET WEIR BIORETENTION DETAIL

WEIR 1'

0.5

" MULCH-

PROVIDE FILTER FABRIC (SIDE ONLY)

BIORETENTION (UNDERDRAIN)

-EX. GROUND

-6" SOLID PVC

		S	TRUCTUF	RE SCHE	DULE		
TR#	TYPE	INV. IN	INV. OUT	TOP ELEV.	DETAIL	LOCATION	REMARKS
-1	8" NYLOPLAST DRAIN BASIN		412.00	416.00	DETAIL SHEET 3	N: 559,156.48 E: 1,324,482.58	(1) PRIVATE
S-1	8" HDPE		411.4521	411.82	DETAIL SHEET 3	N: 559,034.13 E: 1,324,383.64	(2) PRIVATE

EX. GROUND-

d50=9.5" d100=15"

-RIPRAP INFLOW

DETAIL SHEET 7

PROFILE ALONG CENTERLINE

4: BLEND RIPRAP INTO EXISTING GROUND.

3. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.

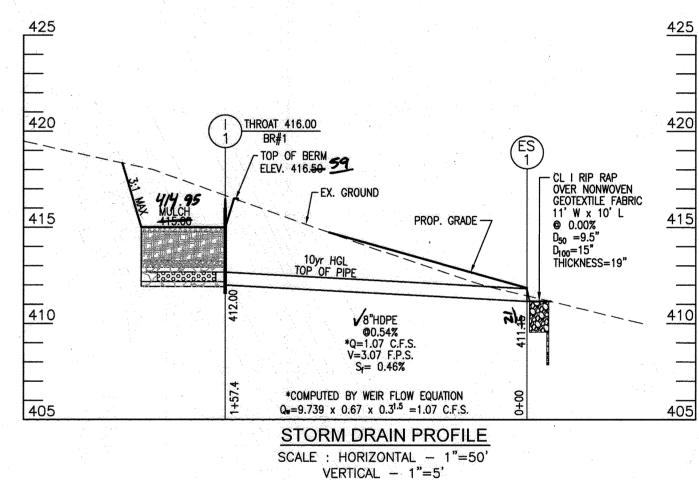
USE CLASS I RIPRAP

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_{80}) 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.

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

RIPRAP INFLOW DETAIL



AS-BUILT CERTIFICATION FOR PSWM HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND W COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY. 5-6-24

OWNER E. ALEXANDER AND BETTY SMITH ADAMS TRUSTEES OF THE RICHARD WARFIELD TRUST, 6096 KEYSER ROAD, HUME VA 22639 410-531-9655

DEVELOPER TEN OAKS SOLAR LLC C/O NAUTILUS SOLAR ENERGY, LLC 396 SPRINGFIELD AVENUE SUITE 200 SUMMIT, NJ 07901 ATTN: JEFFREY CHENG 650-302-9315 JEFF@NAUTILUSSOLAR.COM

ROTOTILL IN BOTTOM
TO PREVENT COMPACTION

PROVIDE FILTER

4"-6" OVERFLOW DISTRIBUTION PIPE

LEVEL SPREADER

3" MULCH—\

BIORETENTION (OVERFLOW)

PLANTING SOIL

(SEE PLANTING SOIL

4" PEA GRAVEL-

(1/8"-3/8" STONE)

CHARACTERISTICS

STORMWATER MANAGEMENT & STORM DRAIN NOTES.

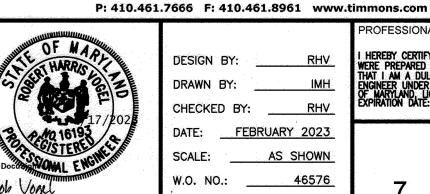
NO.

TEN OAKS SOLAR 12751 BRIGHTON DAM ROAD, CLARKSVILLE, MD 21029 DEED L.14369 F.464 ZONED RR-DEC PARCEL 4: HOWARD COUNTY, MARYLAND FAX MAP 34 BLOCK 11 5TH ELECTION DISTRICT **VOGEL ENGINEERING** TIMMONS GROUP

REVISION

SITE DEVELOPMENT PLAN

DETAILS AND PROFILE



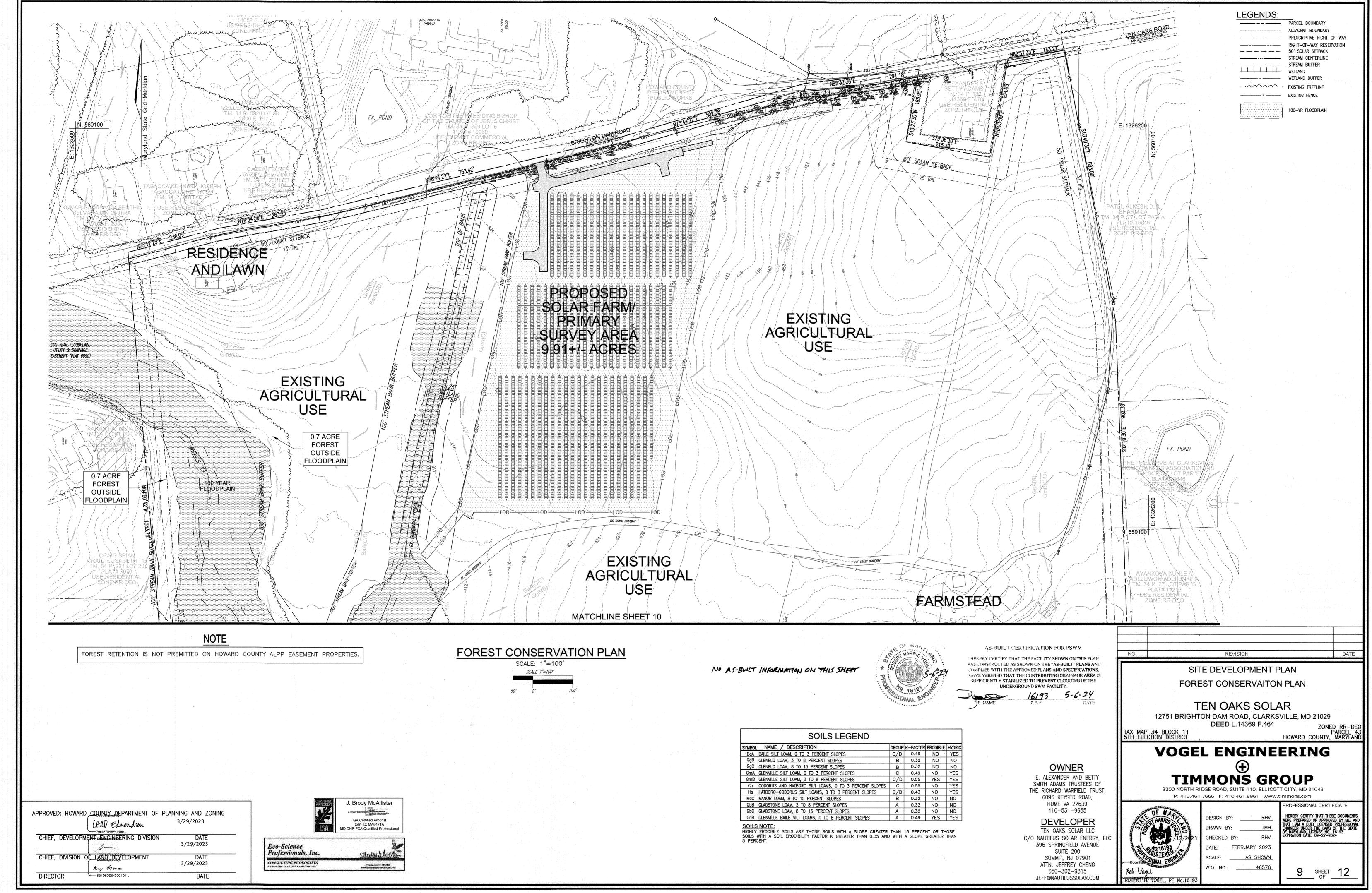
OBERT H. VOGEL, PE No.16193

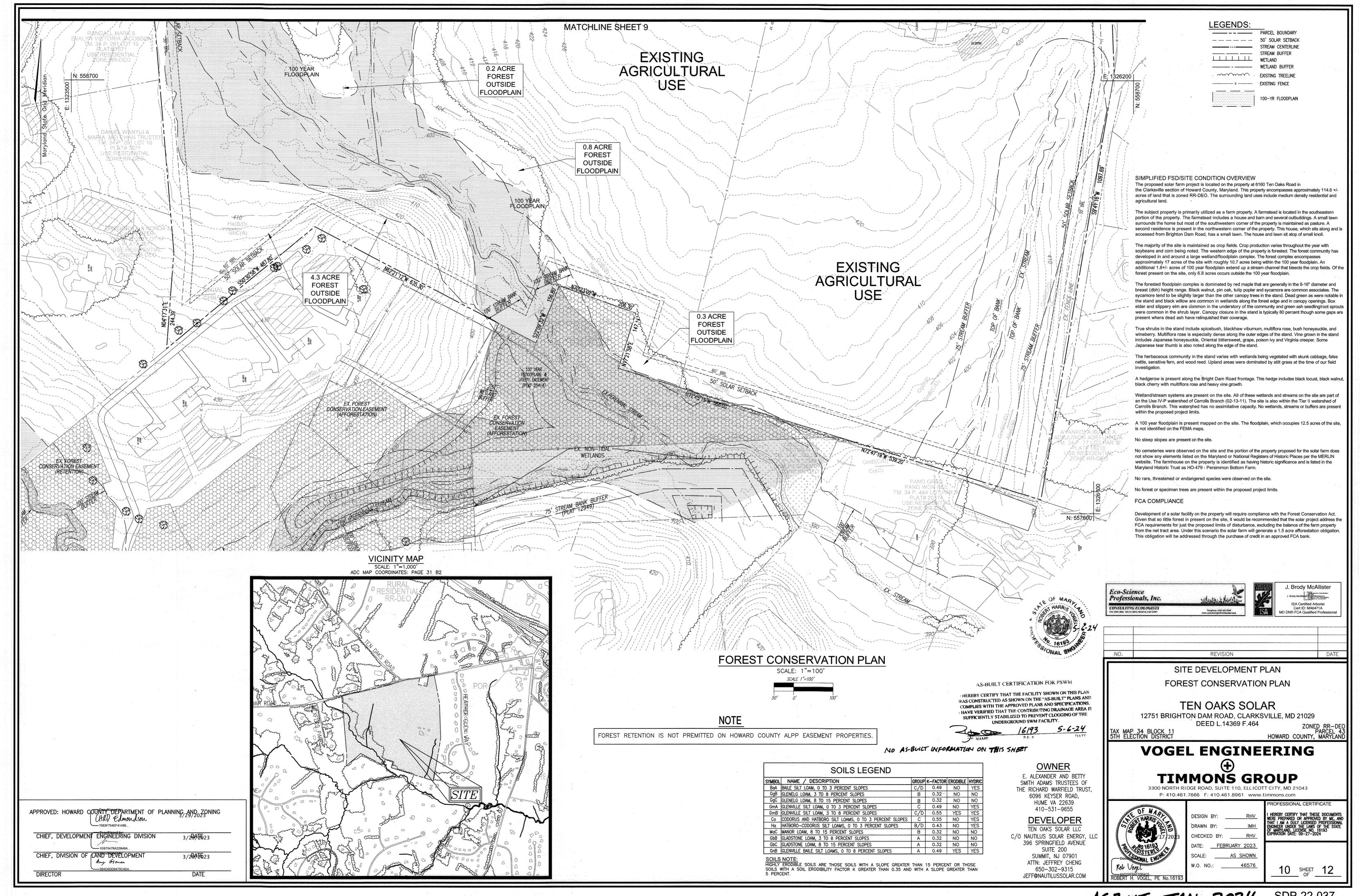
DESIGN BY: DRAWN BY: CHECKED BY: DATE: FEBRUARY 2023 SCALE: ____ AS SHOWN W.O. NO.: 46576

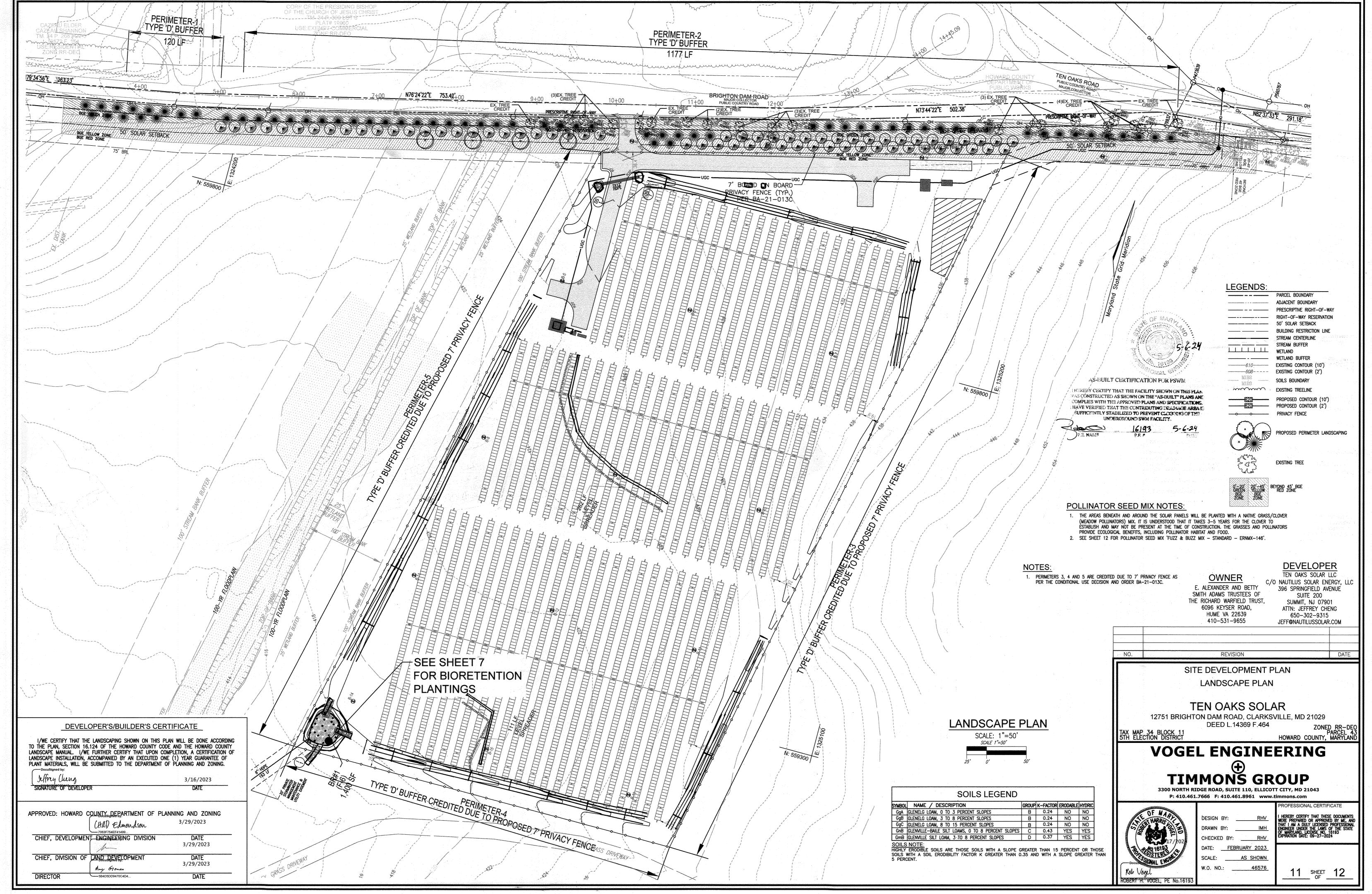
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043

__ SHEET ___ 12









APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

(HD) Edmondson

CHIEF. DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND OF LAN

3/29/2023

3/29/2023

3/29/2023

GENERAL NOTES WATERSHED NAME: SOUTH BRANCH PATAPSCO RIVER WATERSHED NUMBER: 02130908 A. GROSS SITE AREA: 10.28 AC. (LIMIT OF DISTURBANCE) 10.28 AC. (LIMIT OF DISTURBANCE) NET SITE AREA: B. *AREA OF 100-YEAR FLOODPLAIN: 12.51 AC. 1.80 AC. C. *AREA OF WETLANDS AND BUFFERS: 22.72 AC. *AREA OF STREAM AND BUFFERS: D. *AREA OF > 25% STEEP SLOPES: 0.00 AC. E. *EXISTING FOREST: 13.50 AC. F. ZONED: RR-DEO AGRICULTURE G. EXISTING USE: H. PROPOSED USE: SOLAR PANEL FARM *AREAS NOT WITHIN PROJECT AREA. NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITAT WERE OBSERVED ON THE PROPERTY SURROUNDING LAND USE PRIMARILY FARMLAND, RURAL RESIDENTIAL DEVELOPMENT, AND FOREST. NO AREAS ONSITE ARE LARGE ENOUGH TO BE CONSIDERED FOREST. THE STREAM CHANNEL THAT FLOWS THROUGH THE PROPERTY IS AN UNNAMED TRIBUTARY OF THE CARROLLS BRANCH WATERSHED WHICH IS CLASSIFIED AS A USE IV-P STREAM, WATERSHED NUMBER 02-13-11. THE WETLANDS WILL REQUIRE A 25 FOOT BUFFER. THE STREAM CHANNEL REQUIRES A 100 FOOT BUFFER. NO 100 YEAR FLOODPLAIN IS PRESENT ON THE SITE. NO STEEP SLOPES (15%-24.99%) ON THE SUBJECT PROPERTY THERE ARE NO HISTÒRIC STRUCTURES OR CEMETERIES ON THIS PROPERTY. 3. THERE ARE NO SPECIMEN TREES WITHIN THE SITE AREA. **FOREST CONSERVATION WORKSHEET BASED ON COUNCIL BILL CB62-2019** FOREST CONSERVATION WORKSHEET FOR TEN OAKS SOLAR Net Tract Area 10.28 0.00 0.00 A. Total (Gross) Tract Area B. Area within 100-year Floodplain Other Deductions (Identify: D. Net Tract Area Land Use Category Insert the number "1" under the appropriate land use (limit to only one entry) Resid. Resid. Inst./ Retail/Ind./ Mixed Use/ Rural LD Rural MD Suburban Linear Office PUD Afforestation Threshold (Net Tract Area x 15%) E = 15%) F = 1.50 Reforestation Threshold (Net Tract Area x **Existing Forest Cover** G. Existing Forest Cover within the Net Tract Area H. Area of Forest above Afforestation Threshold Area of Forest above Reforestation Threshold **Break Even Point** Break Even Point K. Forest Clearing Permitted without Mitigation **Proposed Forest Clearing** L = 0.00 M = 0.00Total Area of Forest to be Cleared M. Total Area of Forest to be Retained Planting Requirements Inside Watershed N. Reforestation for Clearing above the Reforestation Threshold P Reforestation for Clearing below the Reforestation Threshold P = 0.00 $Q = \frac{0.00}{0.00}$ Q. Credit for Retention above the Reforestation Threshold R = 0.00R. Total Reforestation Required S = 1.50 T = 1.50 U = 1.10 Total Afforestation Required Total Reforestation and Afforestation Requirement U 75% of Total Obligation (Retention + Planting) V= 1.10 V Planting Required Onsite to meet 75% Obligation **Planting Requirements Outside Watershed** W= 0.00 X= 1.50 W. Total Planting within Development Site Watershed X. Total Afforestation Required Y= 0.00 Remaining Planting within Watershed for Reforestation Credit 0.00 Reforestation for Clearing above the Reforestation Threshold AA= 0.00 BB= 0.00 AA. Reforestation for Clearing below the Reforestation Threshold BB. Credit for Retention above the Reforestation Threshold CC= 0.00 DD= 1.50 CC. Total Reforestation Required DD. Total Afforestation and Reforestation Requirement * PER POLICY 3.2.5, COMMERCIAL USE ON AN AGRICULTURAL PROPERTY, OF THE FOREST CONSERVATION MANUAL ADOPTED BY CR12-2021, THE NET TRACT AREA IS DEFINED AS THE AREA UNDERGOING THE LAND USE CHANGE. THE FOREST CONSERVATION OBLIGATION FOR THIS PROJECT IS 1.50 ACRES OF AFFORESTATION, WHICH SHALL BE SATISFIED BY THE PURCHASE OF FOREST PLANTING IN AN OFF-SITE MITIGATION BANK: THE FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED BY: 1) THE PURCHASE OF 3.00 ACRES OF RETENTION CREDIT (3.0 / 2 = 1.50 ACRES) IN THE HIMEL PROPERTY FOREST BANK; SDP-05-132. J. Brody McAllister DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING

3/16/2023

TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY

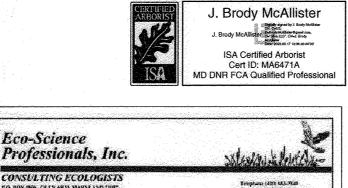
LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF

LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF

PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Jeffrey Ching

SIGNATURE OF DEVELOPER



GENERAL NOTES

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$20,700 FOR THE REQUIRED LANDSCAPING

(REQUIRED 4 SHADE TREES \$1,200, AND 130 EVERGREEN TREES \$19,500) SHALL BE POSTED WITH THE FINAL DEVELOPERS AGREEMENT. 2. IN A PLAN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY, 2020 AND MR. JOHN CANOLES IDENTIFIED THE ONSITE FOREST, WETLANDS AND STREAMS. - NO SPECIMEN TREES OR FOREST ARE WITHIN THE PROJECT SITE.

3. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.

LANDSCAPE NOTES

1. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING, ANY DEVIATION FROM THE 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 THE APPLICABLE PLANS.

2. THE FACILITY OPERATOR 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. SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE

HOWARD COUNTY LANDSCAPE MANUAL. 4. PLANTINGS SHOWN HEREON ARE THE RESPONSIBLITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE

5. SURETY FOR THE PROPOSED LANDSCAPING SHALL BE BASED ON THE NUMBER OF PLANTINGS REQUIRED.

1. TYPE 'D' BUFFER TREES SHALL CONSIST OF A DOUBLE ROW

b. PINUS STROBUS / EASTERN WHITE PINE (6'-8' HGT.)

a. ACER GINNALA / AMUR MAPLE (1-1/2" - 2" CAL.)

a. ILEX OPECA / AMERICAN HOLLY (5'-6' HGT.)

2. EVERGREEN TREE SPECIES MAY INCLUDE:

3. DECIDUOUS TREE SPECIES MAY INCLUDE:

AND SPECIES GUIDELINES.

26.40 % Lolium perenne, 'Crave', Tetraploid

4.80 % Trifolium pratense, Medium, Variety Not Stated

20.80 % Dactylis glomerata, Pennlati

18.90 % Poa pratensis, 'Ginger'

2.00 % Lotus comiculatus, Leo* 1.30 % Cichorium intybus

0.90 % Coreopsis lanceolata

1.00 % Chrysanthemum leucanthemum

0.80 % Chamaecrista fasciculata, PA Ecotype

17.00 % Festuca eletion

OF EVERGREEN TREES PLANTED AT INTERVALS OF 10' ON CENTER;

ROWS OFFSET 15'; AND DECIDUOUS TREES PLANTED AT 60' ON CENTER.

. CYPRESS OCYPARIS LEYLAND / LEYLAND CYPRESS (5'-6' HGT.)

b. ACER RUBRUM / OCTOBER GLORY RED MAPLE (2-1/2" - 3" CAL.)

c. BETULA NIGRA 'HERITAGE' / HERITAGE CLUMP BIRCH (10'-12' HGT.)

O/C; STAGGERED ROWS)

5. OTHER LANDSCAPE SPECIES MAY BE APPROVED WITH APPROVAL OF HOWARD COUNTY

6. TYPE 'D' BUFFER ALONG TEN OAKS ROAD AND BRIGHTON DAM ROAD TO MEET BGE LOCATION

7' BOARD ON BOARD WOOD PRIVACY FENCE

Perennial Ryegrass, 'Crave', Tetraploid

Red Clover, Medium, Variety Not Stated

Bird's Foot Trefoil, 'Leo'

Partridge Pea, PA Ecotype

Lanceleaf Coreopsis

Bkie Chicory

Kentucky Bluegrass, 'Ginger' (pasture type)

TYPE 'D' BUFFER PLANTING PATTERN DETAIL

POLLINATOR SEED MIX

'FUZZ & BUZZ MIX - STANDARD - ERNMX-146'

NOTES:

			PERIMETER LANDSO LANDSCAPE SCI			
KEY	QUAN.		BOTANICAL NAME		SIZE	REM.
SHAD	E=4					
AR	4	(×)	ACER GINNÂLA AMUR MAPLE		2 1/2"-3" CAL.	В&В
EVER	GREEN=	130		. 1842		
LC	65	*	ILEX 'NELLIE R. STEVENS NELLIE R. STEVENS HOL		5'-6' HGT.	В&В
¹ IO	65		ILEX OPECA AMERICÁN HOLLY		5'-6' HGT.	B & B
EXIST	ING DEC	T SUOUDIS	REE≜18			
ст	18	S. C.			12" DBH OR GREATER	

NOTE: WITH PERMISSION FROM HOWARD COUNTY, PLANTINGS SPECIFIED HEREON MAY BE SUBSTITUTED WITH APPROVED SPECIES LISTED IN APPENDIX B & C OF THE HOWARD COUNTY LANDSCAPE MANUAL.

-LEADER MUST REMAIN INTACT SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER. 2 STRANDS OF GALVANIZED WIRE TWISTED FOR SUPPOR PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS. RUBBER HOSE CUT BURLAP & ROPE FROM TOP OF BALL KEEP MULCH 1" FROM TRUNK ___ 3" DEPTH MULCH SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS ___ 2" EARTH SAUCER FINISH GRADE -1/8 DEPTH OF BALL PLANTING MIX- SEE PLANTING NOTES TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER NOTE: PLANTING SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD FROM THE LANDSCAPE CONTRACTORS
ASSOCIATION OF MD. DC. AND. VA.

CATEGORY	ADJACENT TO ROAD!	TOTAL	
PERIMETER/FRONTAGE DESIGNATION LANDSCAPE TYPE	1 D	2 D	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	120	1177	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	*YES	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	1:60 = 2 1:10 = 12	1:60 = 20 1:10 = 118	22 130
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	2 12 - -	*20 118 -	22 130 -
EX. SPECIMEN TREES TO REMAIN DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED			<u>-</u>

* INCLUDES 18 EXISTING DECIDUOUS TREES 12" DBH OR GREATER.

LANDSCAPE SCHEDULE NOTES

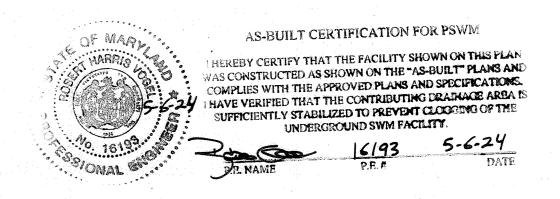
1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCRDANCE

WITH HRD PLANTING SPECIFICATIONS. 2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.

3. FINAL LOVATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAIANGE SWALES. 4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM

LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

NO AS-BUILT INFORMATION ON THIS SHEET



OWNER E. ALEXANDER AND BETTY SMITH ADAMS TRUSTEES OF THE RICHARD WARFIELD TRUST, 6096 KEYSER ROAD, HUME VA 22639

TEN OAKS SOLAR LLC C/O NAUTILUS SOLAR ENERGY, 396 SPRINGFIELD AVENUE SUITE 200 SUMMIT, NJ 07901 ATTN: JEFFREY CHENG 650-302-9315 JEFF@NAUTILUSSOLAR.COM

DEVELOPER

- PRUNE AS DIRECTED ---- RUBBER HOSE

- WIRE GUYS

TURNBUCKLES

- PLANT SAUCER

- BACKFILL MATERIAL

---- 1'-0" ALL SIDES

TYPICAL EVERGREEN TREE

PLANTING DETAIL

NOT TO SCALE

- COMPACTED BACKFILL MATERIAL 6" MIN.

- REMOVE BURLAP FROM TOP - 1/3 OF BALL 2"X4"X3" WOOD STAKES

DATE SITE DEVELOPMENT PLAN

FOREST CONSERVATION &

LANDSCAPE NOTES AND DETAILS TEN OAKS SOLAR

410-531-9655

12751 BRIGHTON DAM ROAD, CLARKSVILLE, MD 21029

DEED L.14369 F.464 FAX MAP 34 BLOCK 11 5TH ELECTION DISTRICT PARCEL 43 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING TIMMONS GROUP 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043

P: 410.461.7666 F: 410.461.8961 www.timmons.com



CHECKED BY: DATE: FEBRUARY 2023 ____AS SHOWN SCALE: W.O. NO.: 46576

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. 16193 EXPIRATION DATE: 09-27-2024 12 SHEET OF

AS-BUILT JAN. 2024 SDP-22-037