

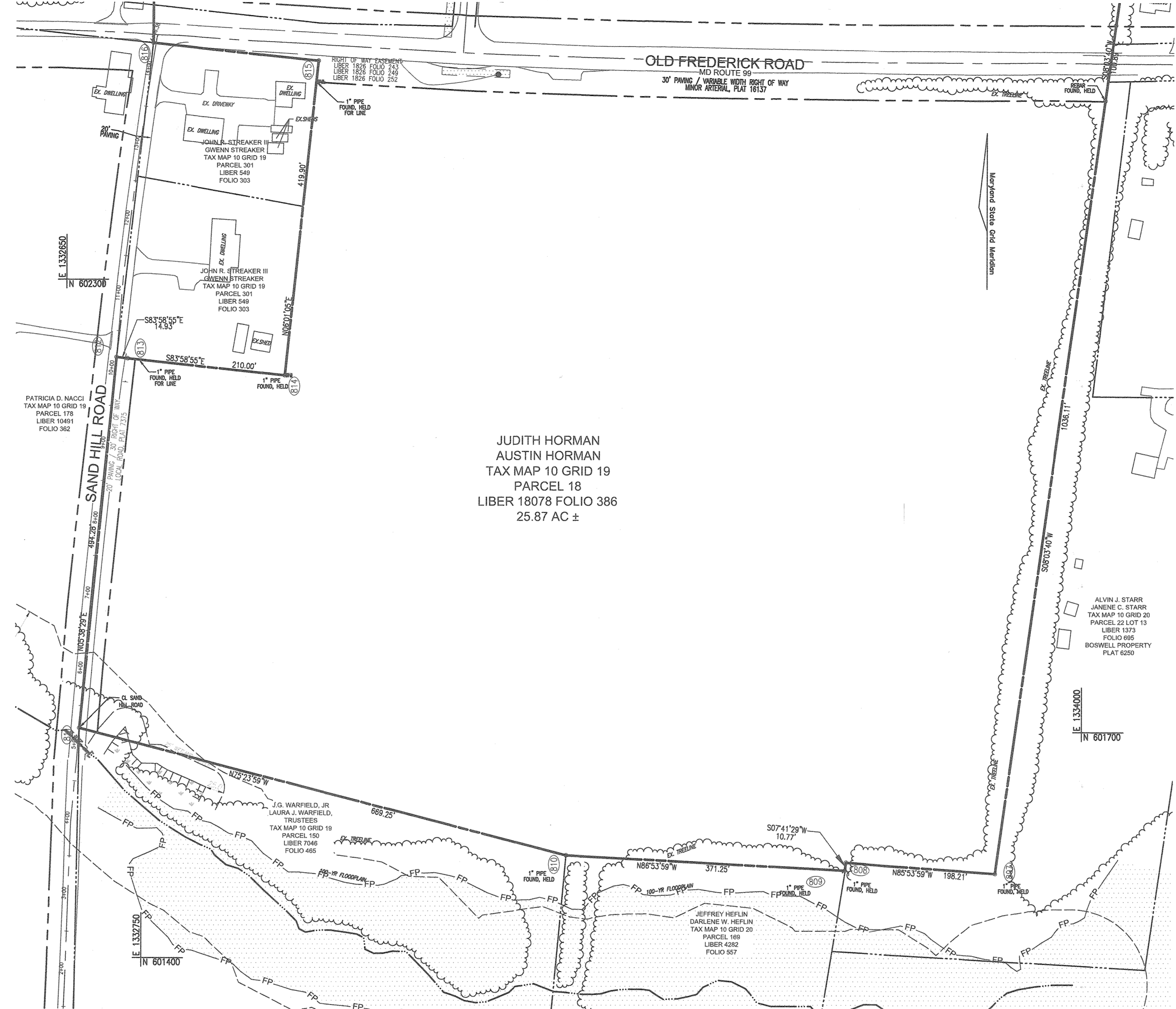
GENERAL NOTES

- 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 D.S.J.A. STANDARDS.
- THE CONTRACTOR SHALL NOTIFY "MIS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING:
 - AT&T 1-800-257-1133
 - BGE (CONSTRUCTION SERVICES) 410-637-8713
 - BGE (EMERGENCY) 410-685-0123
 - BUREAU OF UTILITIES 410-313-6000
 - COLUMBIAN PIPELINE CO 410-795-1900
 - MIS UTILITY 1-800-257-7777
 - STATE HIGHWAY ADMINISTRATION 410-531-5333
 - VERIZON 1-800-743-0033
- SITE ANALYSIS:
 - TOTAL PARCEL AREA: 25.87 AC.
 - PRESENT ZONING: RR-DEO
 - USE OF STRUCTURE: SOLAR PANEL FARM
 - TOTAL COVERAGE: 762 SF (0.02 AC. OR 0.07% OF GROSS AREA)
 - PAVED PARKING LOT/AREA ON SITE: 0 SF (0 AC. OR 0.00% OF GROSS AREA)
 - AREA OF LANDSCAPE PLANT: 0 SF (0 AC. OR 0.00% OF GROSS AREA)
 - AREA OF WETLAND AND BUFFERS: 6,741 SF OR 0.15 AC.
 - AREA OF STREAM AND BUFFERS: 6,820 SF OR 0.16 AC.
 - AREA OF EXISTING FOREST: 1.04 AC.
 - AREA OF NRCS/NRCS STEEP SLOPES (20% OR GREATER): 0.00 AC.
 - AREA OF STEEP SLOPES (20% OR GREATER): 0.00 AC.
 - AREA OF PROBABLE SOILS: 1,000,144 OR 23.64 AC.
 - AREA OF FLOODPLAIN: 0.00 AC.
 - LIMIT OF DISTURBED AREA: 19.45 AC.
 - CUT: 1,922 CY FILL: 2,506 CY
- PROJECT BACKGROUND:
 - LOCATION: WEST FRIENDSHIP, MD; TAX MAP 10, BLOCK 19, PARCEL 18
 - ZONING: RR-DEO
 - SUBDIVISION: N/A
 - SECTION/AREA: N/A
 - SITE AREA: 25.87 AC.
- DPX REFERENCES: L25/F3, L37/F232, L18078/F386, BA CASE NO. 18-013C, ECP-19-050
- 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 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 ROBERT H. VOGEL ENGINEERING, INC. ON NOVEMBER, 2018.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., DATED NOVEMBER 2018. 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. 10GB AND 10GC WERE USED FOR THIS PROJECT.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF STRUCTURAL, NON-STRUCTURAL PRACTICES AND MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. STRUCTURAL PRACTICES INCLUDE BIORETENTION (F-6) NON-STRUCTURAL PRACTICES INCLUDE NON-ROOFTOP DISCONNECTION (N-2), MICRO-SCALE PRACTICES INCLUDE MICRO-BIORETENTION (M-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 EXPENSE.
- THERE ARE NO EXISTING DWELLINGS/STRUCTURES LOCATED ON THIS SITE.
- 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:
 - A) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
 - B) SURFACE - 4" OF COMPACTED CRUSHER RUN BASE W/ TAR AND CHIP COATING (1-1/2" MIN.)
 - C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE, AND MINIMUM 45 FOOT TURNING RADIUS
 - D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (425,000 LBS)
 - E) 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.
- ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6-06.
- SAND HILL ROAD IS CLASSIFIED AS A MINOR ARTERIAL. OLD FREDERICK ROAD IS CLASSIFIED AS A MINOR ARTERIAL.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAMS OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN.
- THIS PROPERTY IS NOT WITHIN THE METROPOLITAN DISTRICT.
- WATER FOR THIS PROJECT IS PROVIDED BY 44-3480 AND 44-3478.
- SEWER FOR THIS PROJECT IS PRIVATE. THE HEALTH DEPARTMENT HAS NOT APPROVED THIS PROPERTY FOR WASTEWATER DISCHARGE.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETERIES LOCATED ON THIS PROPERTY OR THE COUNTY'S CEMETERY SITE MAP.
- WETLANDS AND STREAMS SHOWN ON-SITE ARE BASED ON ENVIRONMENTAL REPORT BY ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CAWLES, DATED JANUARY 10, 2019.
- THE REQUIRED FOREST CONSERVATION OBLIGATION OF 3.885 ACRES SHALL MEET THE INTENT OF SECTION 16.117 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. FOREST CONSERVATION REQUIREMENTS ARE BASED ON COUNCIL BILL C882-2019. THE REQUIRED 3.885 ACRE FOREST CONSERVATION OBLIGATION WILL BE PROVIDED BY PURCHASES IN OFFSITE FOREST BANKS.
 - TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED BY:
 - 1) THE PURCHASE OF 0.08 ACRES OF REFORESTATION CREDIT IN THE REGAN PROPERTY FOREST BANK; SDP-16-015
 - 2) THE PURCHASE OF 2.80 ACRES OF RETENTION CREDIT IN THE DATAL MEADOWS FOREST BANK; SDP-16-027
 - 3) THE PURCHASE OF 4.74 ACRES OF RETENTION CREDIT IN THE LAWSON PROPERTY FOREST BANK; SDP-19-031
- A TRAFFIC STUDY IS NOT REQUIRED.
- A NOISE STUDY IS NOT REQUIRED.
- REFERENCE GEOTECHNICAL REPORT PREPARED BY EGS MID-ATLANTIC, LLC DATED NOVEMBER 19, 2018 FOR SUBSURFACE EXPLORATION TESTING AT BORINGS B-1 TO B-17.
- THE PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON OCTOBER 11, 2017 AT THE WEST FRIENDSHIP VOLUNTEER FIRE DEPARTMENT.
- THE ENVIRONMENTAL CONCEPT PLAN (ECP-19-050) WAS APPROVED PER LETTER DATED JULY 23, 2019.
- 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 \$66,000 SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT:
 - PERMETER PLANTINGS IN THE AMOUNT OF \$17,400 FOR THE REQUIRED 58 SHADE TREES, AND \$51,600 FOR THE REQUIRED 344 EVERGREEN TREES.
- THE PROPOSED SUBDIVISION AND RELATED CONSTRUCTION WILL NOT IMPACT ENVIRONMENTAL FEATURES OR BUFFERS.
- SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE USDA NRCS WEB SOIL SURVEY.
- FLOODPLAINS ARE NOT LOCATED ON-SITE.
 - THE FLOODPLAIN SHOWN ON THE ADJACENT PROPERTY (LITTLE PATIENT RIVER) IS PER HOWARD COUNTY DIRM.
- STEEP SLOPES OVER 20,000 SF CONTIGUOUS ARE SHOWN HEREON.
- THIS PROJECT IS SUBJECT TO ZONING AND LAND USE BOARD OF APPEALS CASE BA-19-013C. ON OCTOBER 16, 2019; THE ZONING AND LAND USE BOARD OF APPEALS GRANTED THE PETITION OF POSSESSORY EASEMENT SOLUTIONS, LLC PROVIDED THAT THE PETITIONER MEET CERTAIN CONDITIONS. THE PETITIONER IS GRANTED PROVIDED THAT THE PETITIONER MEET THE FOLLOWING CONDITIONS:
 1. THE COMMERCIAL SOLAR FACILITY CONDITIONAL USE SHALL BE CONDUCTED IN CONFORMANCE WITH, AND SHALL APPLY ONLY TO THE PETITION AS SUBMITTED AND AS SHOWN ON THE FINAL CONDITIONAL USE PLAN DATED SEPTEMBER 4, 2018, AND NOT ANY OTHER ACTIVITIES, USES, OR STRUCTURES ON THE PROPERTY.
 2. PETITIONER SHALL COMPLY WITH ALL CONDITIONAL USE STANDARDS.
 3. THE SITE DEVELOPMENT PLAN, OR ITS EQUIVALENT, SHALL INCLUDE A NOTE CONTAINING ALL CONDITIONS OF APPROVAL.
 4. PETITIONER SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
- A KNOCK LOCK SHALL BE LOCATED AT THE MAIN ENTRANCE.
- ALL GATES SHALL NOT BE LOCATED CLOSER THAN 30 FT FROM AN INTERSECTION AND SHALL OPEN IN THE DIRECTION OF EMERGENCY VEHICLE TRAVEL.
- PRIMARY ELECTRICAL DISCONNECT ARE THE SWITCHBOARDS. SECONDARY DISCONNECT ARE THE TRANSFORMERS.
- AN ELECTRICAL HAZARD SIGN, AND EMERGENCY CONTACT INFORMATION FOR SITE REPRESENTATIVES SHALL BE LOCATED AT THE ENTRANCE.
- PANEL LISTINGS AND FLAME SPREAD RATINGS SHALL BE LISTED AT THE ENTRANCE.
- THE DEVELOPER SHALL PROVIDE TRAINING TO THE FIRE DEPARTMENT FOR EVERY SOLAR SITE.

SITE DEVELOPMENT PLAN

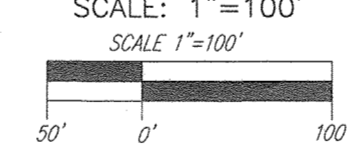
HENRYTON SOLAR

1825 SAND HILL ROAD
LIBER 18078 FOLIO 386
HOWARD COUNTY, MARYLAND



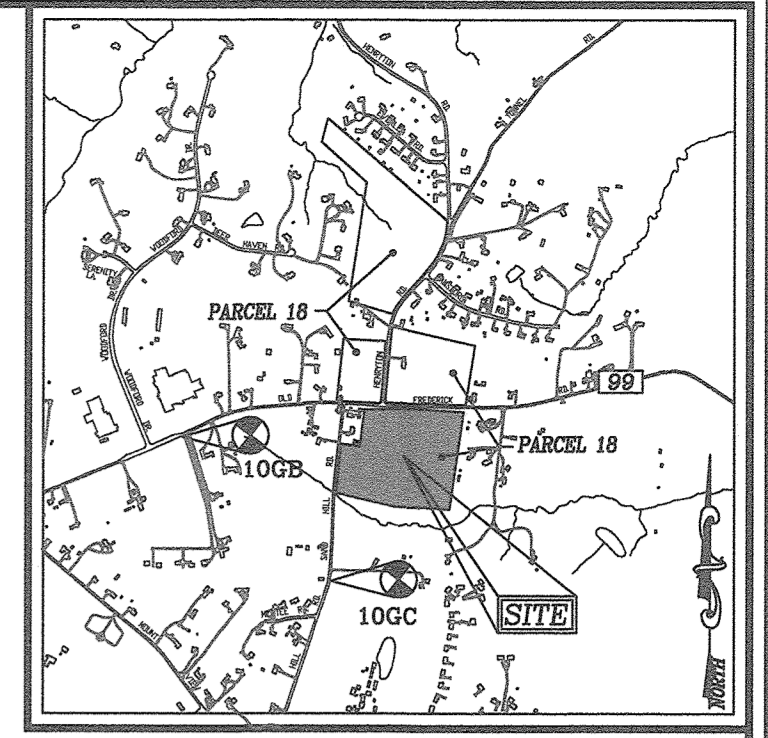
JUDITH HORMAN
AUSTIN HORMAN
TAX MAP 10 GRID 19
PARCEL 18
LIBER 18078 FOLIO 386
25.87 AC ±

LOCATION MAP



BENCHMARKS

HOWARD COUNTY BENCHMARK 10GC
N 600,761.020 E 1,332,632.438 ELEV. 579.202
CONCRETE MONUMENT WITH DISC -
EAST SIDE OF SAND HILL ROAD
44.3' NORTH OF FIRE HYDRANT
HOWARD COUNTY BENCHMARK 10GB
N 602,275.955 E 1,331,069.409 ELEV. 597.346
CONCRETE MONUMENT WITH DISC -
59.1' EAST OF POLE C&P G-27
100' WEST OF FIRE HYDRANT



VICINITY MAP

SCALE: 1"=2000'
ADC MAP COORDINATES: PAGE: 11 BLOCK: F8

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING PAVING
- CENTERLINE OF EXISTING STREAM
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- EX. PUBLIC 100-YEAR FLOOD PLAN

SHEET INDEX

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DEVELOPER

P52ES 1755 HENRYTON RD PHASE 1 LLC
P52ES 1755 HENRYTON RD PHASE 2 LLC
ATTN: SEAN REANEY
C/O NAUTILUS SOLAR ENERGY
396 SPRING FIELD AVE.,
SUITE 2 SUMMIT, NJ 07901
AUSTIN K. HORMAN
1730 HENRYTON ROAD
MARRIOTTVILLE MD 21104
PHONE: 410-442-1831



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.

P.E. NAME: 16193 P.E. # 8-6-21 DATE

NO AS-BUILT INFORMATION ON THIS SHEET

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 8-20-20

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 8/15/20

 DIRECTOR DATE: 10-5-20

PARKING TABULATION

REQUIRED:	SPACES:
2 SPACES PER BA CASE NO. 18-013C	2 SPACES
TOTAL PARKING SPACES REQUIRED:	2 SPACES
TOTAL PARKING SPACES PROVIDED:	2 SPACES

STORMWATER MANAGEMENT PRACTICES

PARCEL NO.	STREET ADDRESS	FACILITY TYPE & MDE NO.	PUBLIC	PRIVATE	MAINTENANCE BY
18	1755 HENRYTON ROAD	NON-ROOFTOP DISCONNECT (N-2), MICRO-BIORETENTION (M-6) BIORETENTION (F-6)		X	OWNER

ADDRESS CHART

BUILDING NO.	STREET ADDRESS
1825	SAND HILL ROAD

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL NUMBER
HENRYTON SOLAR		18

PLAT OR L/F

PLAT OR L/F	GRID NO.	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TR.
L18078/F386	19	RR-DEO	10	3RD	603001

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

DESIGN BY: RHV
 DRAWN BY: RVTS
 CHECKED BY: RHV
 DATE: AUGUST 2020
 SCALE: AS SHOWN
 W.O. NO.: 40493

PROFESSIONAL CERTIFICATE
 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: 08-27-2022

1 SHEET OF 14

AS-BUILT JUNE 2021 SDP-20-023



- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING PAVING
 - CENTERLINE OF EXISTING STREAM
 - EXISTING UTILITY POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANDIRT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING TREELINE
 - EXISTING FENCE
 - PROPOSED WOOD FENCE
 - PROPOSED CHAIN LINK FENCE
 - PROPOSED TREELINE
 - EXISTING SPECIMEN TREE
 - PROPOSED MICRO-BIORETENTION
 - EXISTING WETLANDS
 - EXISTING WETLAND BUFFER
 - EX. PUBLIC 100-YEAR FLOOD PLAN

LAYOUT PLAN
 SCALE: 1"=50'
 SCALE 1"=50'

DEVELOPER
 P25ES 1755 HENRYTON RD PHASE 1 LLC
 P25ES 1755 HENRYTON RD PHASE 2 LLC
 ATTN: SEAN REANEY
 C/O NAUTILUS SOLAR ENERGY
 396 SPRING FIELD AVE., SUITE 2 SUMMIT, NJ 07901

OWNER
 ALVIN J. HORMAN
 AUSTIN K. HORMAN
 1730 HENRYTON ROAD
 MARRIOTTVILLE MD 21104
 PHONE: 410-442-1831

<p>REVISE PLANS TO RELOCATE THE MICRO-BIORETENTION FACILITIES AND TO REVISE THE DRIVEWAY CULVERT. C-10-21</p>		
NO.	REVISION	DATE
<p>SITE DEVELOPMENT PLAN LAYOUT PLAN HENRYTON SOLAR 1825 SAND HILL ROAD LIBER 18078 FOLIO 386</p>		
<p>TAX MAP: 10 BLOCK: 19 3RD ELECTION DISTRICT</p>		<p>ZONED: RR-DEO PARCEL 18 HOWARD COUNTY, MARYLAND</p>
<p>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</p>		
<p>DESIGN BY: RHV DRAWN BY: RVTG CHECKED BY: RHV DATE: AUGUST 2020 SCALE: AS SHOWN W.O. NO.: 40483</p>		<p>PROFESSIONAL CERTIFICATE 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 08-27-2022</p> <p>2 SHEET OF 14</p>

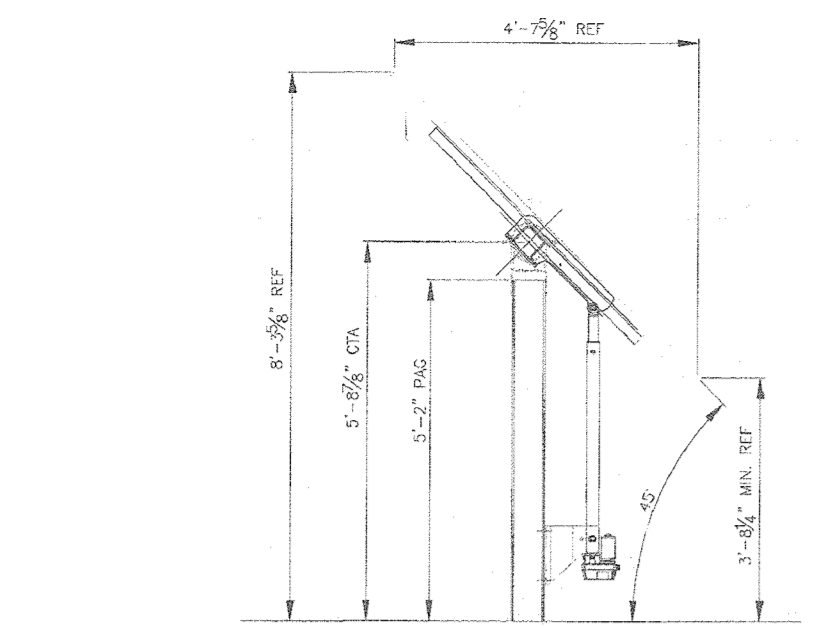
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] **8/20/20**
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

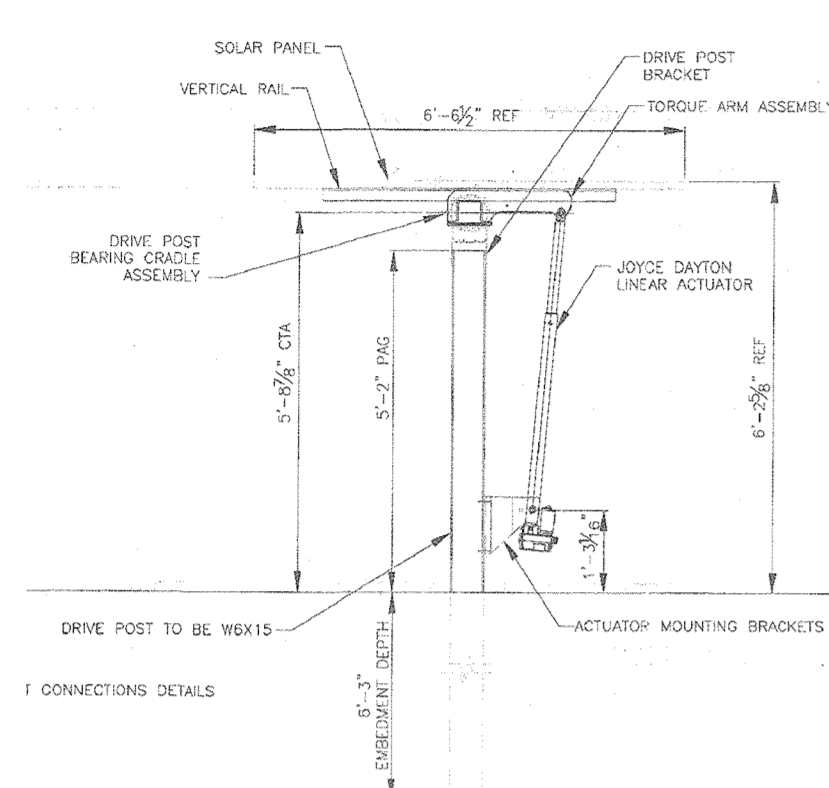
[Signature] **8/15/20**
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] **10-5-20**
 DIRECTOR DATE

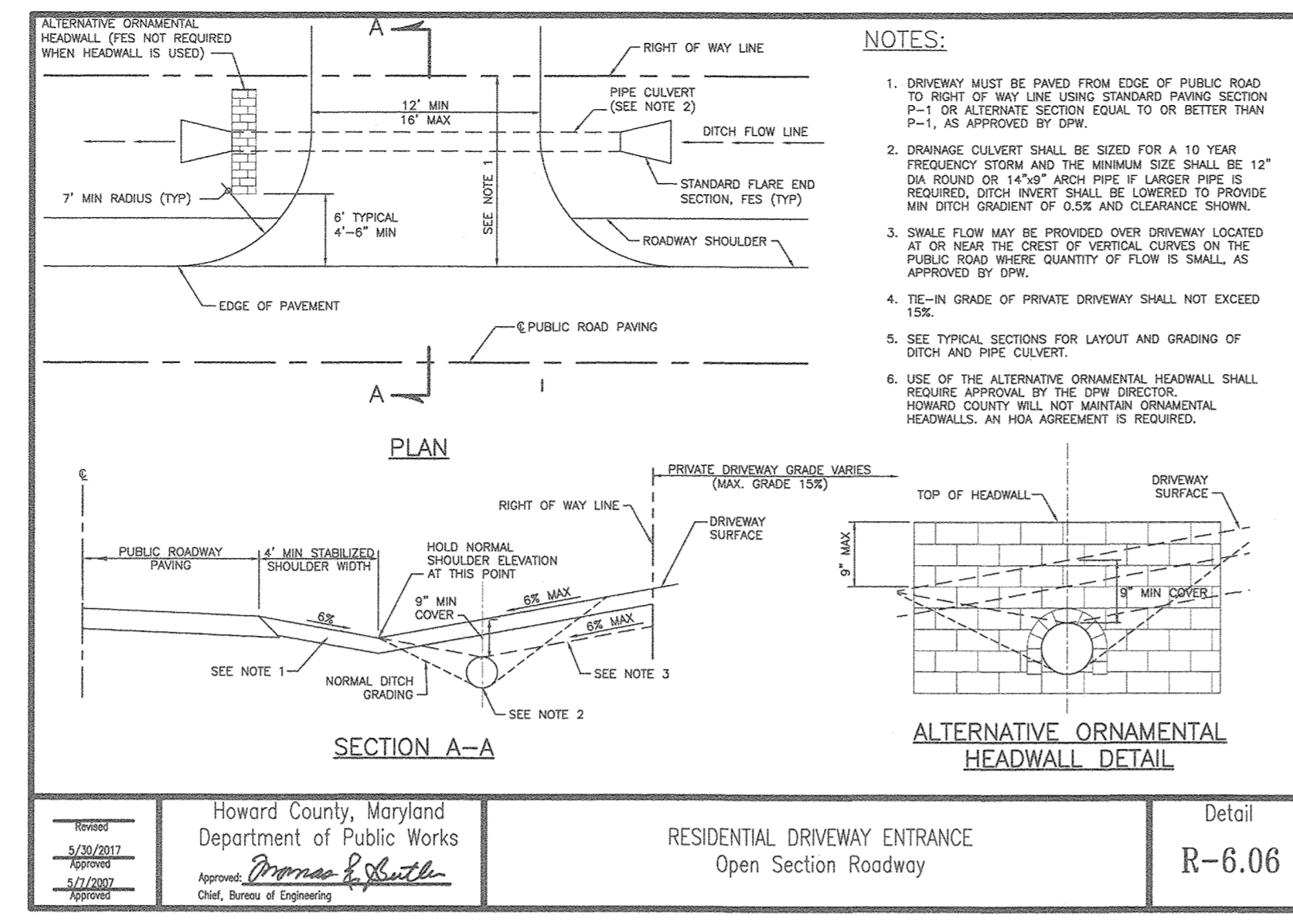
J.G. WOODRUFF, JR.
 LAURA J. WARFIELD,
 TRUSTEES
 TAX MAP 10 GRID 19
 PARCEL 150
 LIBER 17449
 FOLIO 465



DRIVE POST 45°
NOT TO SCALE



DRIVE POST 0°
NOT TO SCALE



20000 4/20/2017 10/10/20 4/17/2000 4/10/00	Howard County, Maryland Department of Public Works Approved: <i>[Signature]</i> O&M, Bureau of Engineering	RESIDENTIAL DRIVEWAY ENTRANCE Open Section Roadway	Detail R-6.06
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DESIGN CRITERIA FOR BASIC ACCESS ROADS UG 501-17

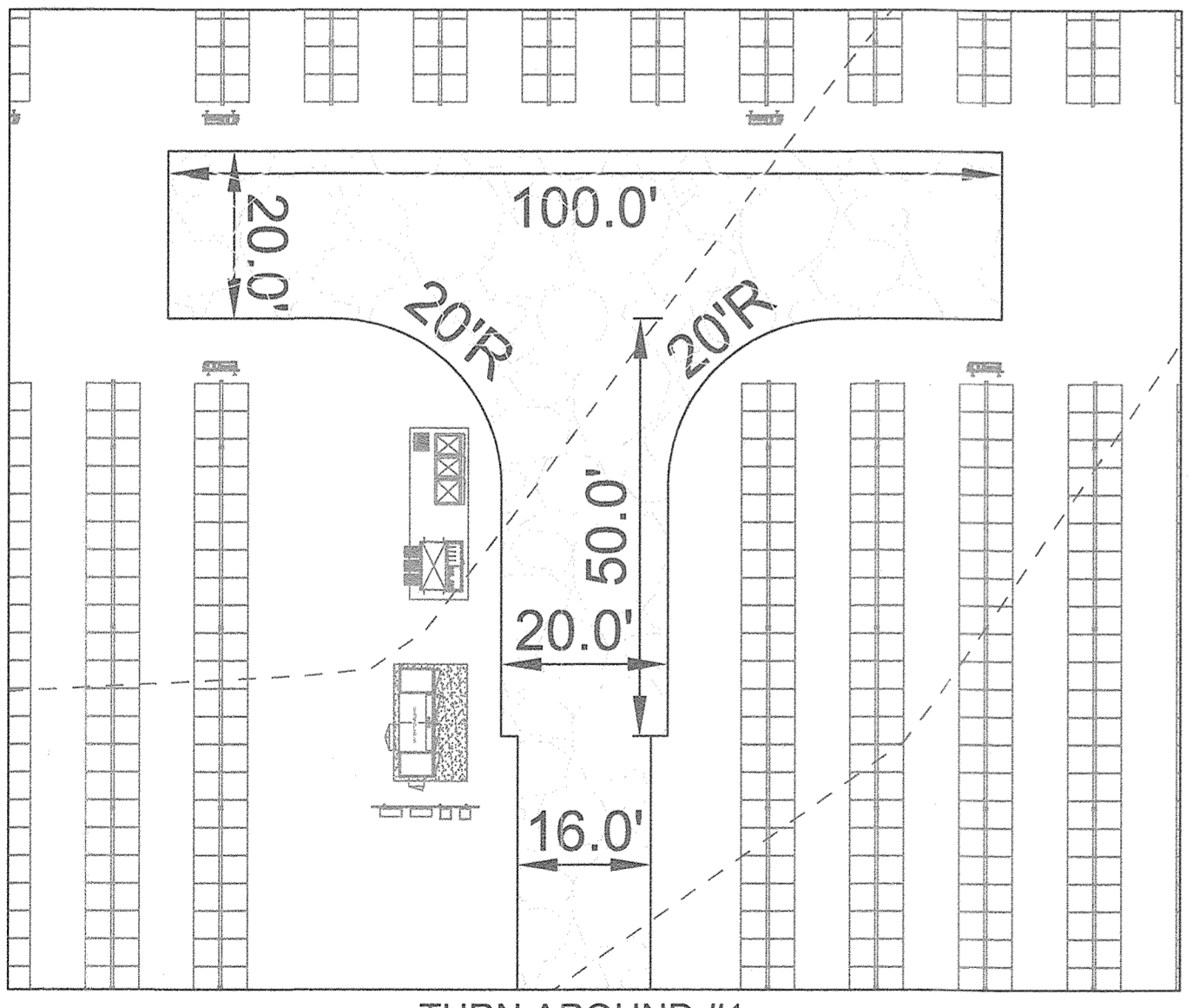
An access road is defined to be a stone-base road with entry off of a paved street or highway. It is used to permit construction and maintenance vehicles access to an isolated location of pad-mounted equipment.

The following guidelines should be used to design such a road.

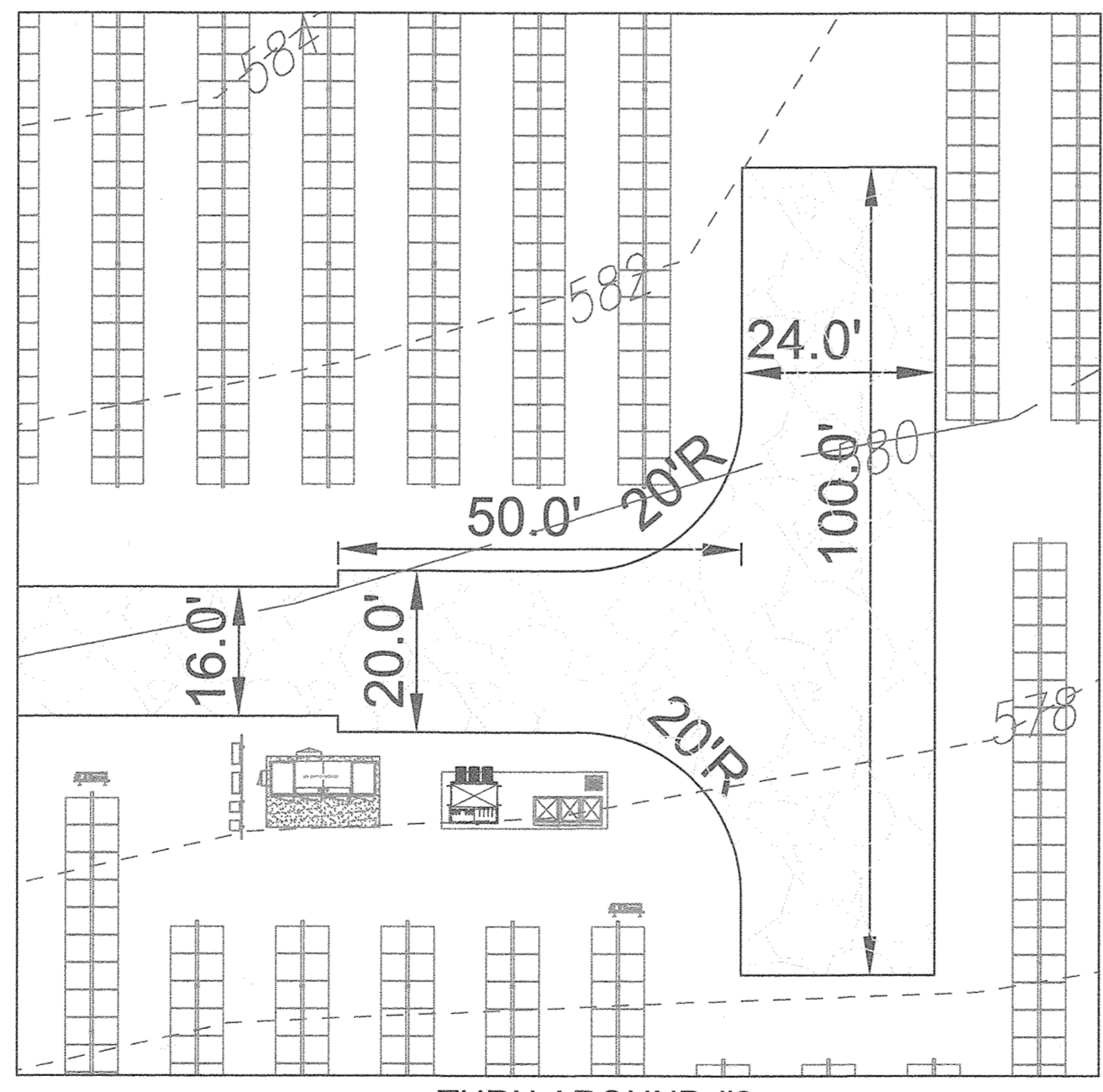
1. An access road shall be constructed to H-20 highway loading with a maximum of 8% grade. Wherever possible, the access road should be straight without curves, and be a minimum of 12' wide. The location and plans for the access road must be approved by BGE prior to construction.
2. The access road shall extend a minimum of 20' from the public highway to the pad-mounted equipment, unless separated by guardrails or Jersey walls. This distance allows sufficient length for the vehicle operator to park away from the flow of traffic off the public highway.
3. At the location of the pad-mounted equipment, the roadway shall widen to allow construction and maintenance trucks an area to turn around when exiting the site. This widened area shall be a minimum of 20' x 20'.
4. The roadway shall be excavated to a minimum depth of 12" and constructed of two layers of stone. Before the first layer is installed, the bottom and sides of the excavated roadway shall be lined with non-woven filter cloth.
5. The base layer shall be a minimum of 8" of #2 stone. The top layer shall be a minimum of 4" of CR6 stone. These minimum depths may have to be increased depending on the existing soil conditions to obtain the H-20 highway loading.
6. Curbs and gutters are not required.
7. Guard rails should be installed when the slope of the road is steeper than a 3:1 ratio.
8. If the access road is gated, BGE must have independent 24-hour admittance, i.e. double locks.

Typical Cross-Section

BGE	UNDERGROUND CONSTRUCTION STANDARDS	LATEST REVISION:	NEW STANDARD
		APP. DATE: 12/21/10	APPROVAL: <i>[Signature]</i>



TURN AROUND #1
SCALE: 1" = 20'



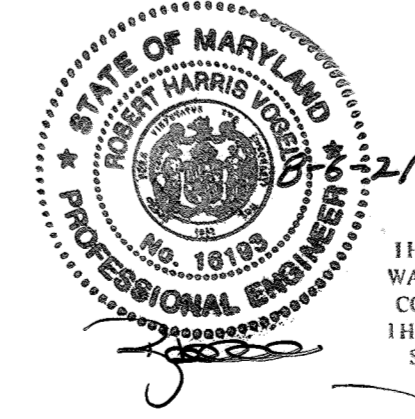
TURN AROUND #2
SCALE: 1" = 20'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 8/28/20
CHIEF, DEVELOPMENT ENGINEERING DIVISION 4w DATE

[Signature] 10/15/20
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 10-5-20
DIRECTOR DATE



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.

[Signature] 10/19/21 8-6-21
P.E. NAME P.E.# DATE

NO AS-BUILT INFORMATION ON THIS SHEET

DEVELOPER
P52ES 1755 HENRYTON RD PHASE 1 LLC
P52ES 1755 HENRYTON RD PHASE 2 LLC
ATTN: SEAN REANEY

OWNER
AUSTIN K. HORMAN
1730 HENRYTON ROAD
MARRIOTTSVILLE MD 21104
PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
396 SPRING FIELD AVE.,
SUITE 2 SUMMIT, NJ 07901

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
SITE DETAILS

HENRYTON SOLAR
1825 SAND HILL ROAD
LIBER 18078 FOLIO 386

TAX MAP: 10 BLOCK: 19
3RD ELECTION DISTRICT

ZONED: RR-DEO
PARCEL: 18
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

DESIGN BY:	RHV	PROFESSIONAL CERTIFICATE
DRAWN BY:	RVTG	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: 09-27-2022
CHECKED BY:	RHV	
DATE:	AUGUST 2020	
SCALE:	AS SHOWN	
W.O. NO.:	40493	

3 SHEET OF 14

MATCHLINE - SEE SHEET 5

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING PAVING
- EXISTING CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- CENTERLINE OF EXISTING STREAM
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING FENCE
- PROPOSED WOOD FENCE
- PROPOSED CHAIN LINK FENCE
- PROPOSED TREELINE
- SOILS BOUNDARY
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- SUPER SILT FENCE
- EARTH DIKE
- EARTH DIKE WITH PROPOSED DRAINAGE DIVIDE
- EXISTING SPECIMEN TREE
- PROPOSED MICRO-BIOREMEDIATION
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- EX. PUBLIC 100-YEAR FLOOD PLAIN
- HIGHLY ERODIBLE SOILS
- TEMPORARY SOIL STABILIZATION MATTING



SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"=50'
SCALE 1"=50'

DEVELOPER

P52ES 1755 HENRYTON RD PHASE 1 LLC
P52ES 1755 HENRYTON RD PHASE 2 LLC
ATTN: SEAN READY
C/O NAUTILUS SOLAR ENERGY
396 SPRING FIELD AVE.
SUITE 2 SUMMIT, NJ 07901

OWNER
AUSTIN K. HORMAN
1730 HENRYTON ROAD
MARTINSDALE, MD 21104
PHONE: 410-442-1831

NO.	REVISION	DATE
1	REVISE PLAN TO RELocate THE MICRO-BIOREMEDIATION FACILITIES AND TO RAISE THE DRAINWAY CULVERT	6-10-21

SITE DEVELOPMENT PLAN
SOILS MAP, GRADING, EROSION AND
SEDIMENT CONTROL PLAN

HENRYTON SOLAR
1825 SAND HILL ROAD
LIBER 18078 FOLIO 386

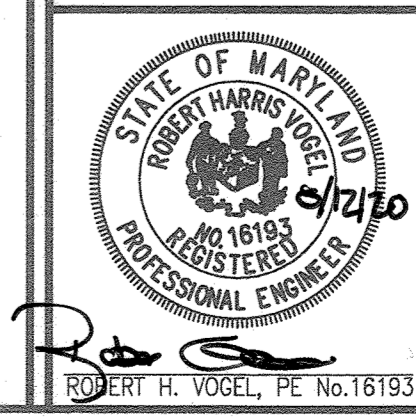
TAX MAP: 10 GRID 19
3RD ELECTION DISTRICT

ZONED: RR-DE
PARCEL 18
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



DESIGN BY: RHV
DRAWN BY: RVG
CHECKED BY: RHV
DATE: AUGUST 2020
SCALE: AS SHOWN
W.O. NO.: 40493

PROFESSIONAL CERTIFICATE
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: 08-27-2022

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL. NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTES:
1. ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
2. FOR SOILS ON SITE THAT WOULD BE CONSIDERED HIGHLY ERODIBLE BY THE HOWARD SOIL CONSERVATION DISTRICT, MORE STRINGENT SEEDING AND STABILIZATION METHODS MAY BE EXPECTED AT SITE DEVELOPMENT STAGE.
3. STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS, WHICHEVER IS MORE RESTRICTIVE.
4. SEDIMENT CONTROLS INTERRUPTED BY INSTALLATION OF UTILITY LINES ARE TO BE REPAIRED IMMEDIATELY.

NOTE:
THE LIMIT OF DISTURBANCE SHOWN ON THIS PLAN INCLUDES THE CONSTRUCTION OF THE SOLAR ARRAYS. THIS PROCESS INVOLVES PILE DRIVING, THE SEDIMENT CONTROLS ADDRESS AREAS OF GRADING ONLY.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8/2/20

OWNER/DEVELOPER CERTIFICATION:
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

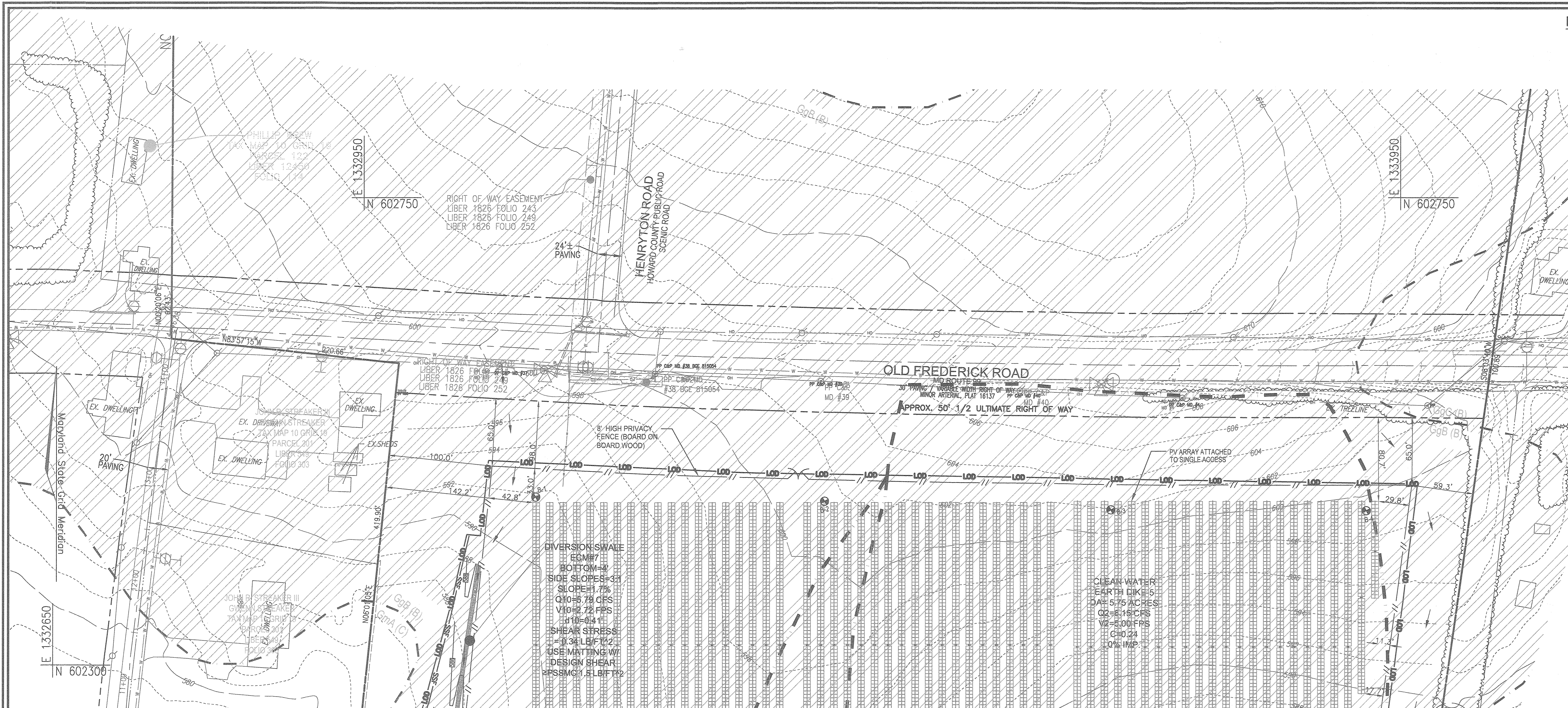
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

SOILS LEGEND
HOWARD COUNTY SOILS MAP #24

SYMBOL	NAME / DESCRIPTION	HYDRIC GROUP	Kc FACTOR	CLAY SLOPE PERCENT
GgB	GLENDLE LOAM, 3 TO 8 PERCENT SLOPES	NO	B	0.37
GgC	GLENDLE LOAM, 8 TO 15 PERCENT SLOPES	NO	B	0.43
BaA	BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C/D	0.49
GmA	GLENDLE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C	0.49

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
K-FACTOR = $K_w \times 0.4 \times \text{DEPTH}$

NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SLOPE GRADUITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT



LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING PAVING
	EXISTING CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	CENTERLINE OF EXISTING STREAM
	EXISTING UTILITY POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE
	EXISTING FENCE
	PROPOSED WOOD FENCE
	PROPOSED CHAIN LINK FENCE
	PROPOSED TREE LINE
	SOILS BOUNDARY
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	LIMIT OF DISTURBANCE
	STABILIZED CONSTRUCTION ENTRANCE
	SUPER SILT FENCE
	EARTH DIKE
	EXISTING SPECIMEN TREE
	PROPOSED MICRO-BIORETENTION
	EXISTING WETLANDS
	EXISTING WETLAND BUFFER
	EX. PUBLIC 100-YEAR FLOOD PLAIN
	HIGHLY ERODIBLE SOILS

MATCHLINE - SEE SHEET 4

DEVELOPER
 P52ES 1755 HENRYTON RD PHASE 1 LLC
 P52ES 1755 HENRYTON RD PHASE 2 LLC
 ATTN: SEAN REANEY

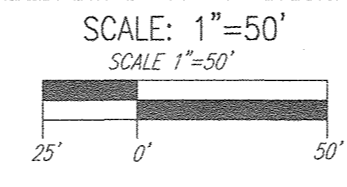
OWNER
 AUSTIN K. HORMAN
 1750 HENRYTON ROAD
 MARRIOTTSVILLE, MD 21104
 PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
 396 SPRING FLOOR AVE.,
 SUITE 2 SUMMIT, NJ 07901

NOTE:
 THE LIMIT OF DISTURBANCE SHOWN ON THIS PLAN INCLUDES THE CONSTRUCTION OF THE SOLAR ARRAYS. THIS PROCESS INVOLVES PILE DRIVING. THE SEDIMENT CONTROLS ADDRESS AREAS OF GRADING ONLY.

NOTE:
 - SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN



SOILS LEGEND
 HOWARD COUNTY SOILS MAP #24

SYMBOL	NAME / DESCRIPTION	HYDROIC GROUP	K FACTOR	CIVE SLOPE BY DRAINAGE PORTION
GcB	GLENEC LOAM, 3 TO 8 PERCENT SLOPES	NO	B 0.57	YES
GcC	GLENEC LOAM, 8 TO 15 PERCENT SLOPES	NO	B 0.43	YES
BaA	BALE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C/D 0.49	NO
GmA	GLENNVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES	C 0.49	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 K-FACTOR = Kw @ 0-4" DEPTH
 NOTE:
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL CROSSLINK FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT



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.
 P.E. NAME: *Robert H. Vogel* P.E.# 16193 DATE: 8-6-21

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
 SOILS MAP, GRADING, EROSION AND SEDIMENT CONTROL PLAN

HENRYTON SOLAR
 1825 SAND HILL ROAD
 LIBER 18076 FOLIO 386

TAX MAP: 10 BLOCK: 19 3RD ELECTION DISTRICT ZONED: RR-DEO 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

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
 DRAWN BY: RVTG
 CHECKED BY: RHV
 DATE: AUGUST 2020
 SCALE: AS SHOWN
 W.O. NO.: 40493

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE 06-27-2022

5 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cheryl P. ...
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 8-25-20

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 10-5-20

OWNER/DEVELOPER CERTIFICATION:
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

OWNER/DEVELOPER SIGNATURE: *Sean Reaney* DATE: 8-12-20
 PRINTED NAME & TITLE: SEAN REANEY

DESIGN CERTIFICATION:
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

DESIGNER'S SIGNATURE: *Robert H. Vogel* DATE: 8/12/20
 PRINTED NAME: ROBERT H. VOGEL MD REGISTRATION NO. 16193 (E) R.L.S., OR R.L.A. (circle one)

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. ... 8/12/20
 HOWARD S.C.D.

NO AS-BUILT INFORMATION ON THIS SHEET

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- 1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (C410-313-1888) AFTER THE FUTURE ROAD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD...
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL...
3. FOLLOWS INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERMETER CONTROLS, DIKES, SWALES, DITCHES, PERMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING...

TABLE 2.1: HARDNESS ZONE (FROM FIGURE B.3), ZONE 6b FERTILIZER RATES (10-20-20)

ITEM 11, REGARDING PROJECT DISTURBANCE IS NO LONGER A REQUIREMENT OF THE STATE OF MARYLAND, HOWEVER REMAINS A REQUIREMENT OF HOWARD COUNTY.

NOTE: EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

TABLE 2.2: PERMANENT SEEDING SUMMARY

FOR ALTERNATES, REFER TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL - PAGES B.26 - B.32

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 8/27/20
Director: Steve Gordon
Date: 10-5-20

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CRITERIA: A. SEED MIXTURES: 1. GENERAL USE: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOLLOWING TABLE B.3 ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY...

TABLE 2.3: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT...

TABLE 2.4: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES...

TABLE 2.5: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES...

TABLE 2.6: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES...

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 8/27/20
Director: Steve Gordon
Date: 10-5-20

R-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT...

TABLE 2.7: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES...

TABLE 2.8: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES...

TABLE 2.9: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES...

TABLE 2.10: PERMANENT SEEDING SUMMARY

DEFINITION: THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.
PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
CRITERIA: A. SOIL PREPARATION: 1. TEMPORARY STABILIZATION: A. SEEDING PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES...

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 8/27/20
Director: Steve Gordon
Date: 10-5-20

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: A. SEEDING: 1. SPECIFICATIONS: A. SOIL MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW ALL SEED MUST BE SUBJECT TO TESTING...

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: A. SEEDING: 1. SPECIFICATIONS: A. SOIL MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW ALL SEED MUST BE SUBJECT TO TESTING...

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: A. SEEDING: 1. SPECIFICATIONS: A. SOIL MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW ALL SEED MUST BE SUBJECT TO TESTING...

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: A. SEEDING: 1. SPECIFICATIONS: A. SOIL MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW ALL SEED MUST BE SUBJECT TO TESTING...

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: A. SEEDING: 1. SPECIFICATIONS: A. SOIL MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW ALL SEED MUST BE SUBJECT TO TESTING...

DEFINITION: THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.
PURPOSE: TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.
CRITERIA: A. SEEDING: 1. SPECIFICATIONS: A. SOIL MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW ALL SEED MUST BE SUBJECT TO TESTING...

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 8/27/20
Director: Steve Gordon
Date: 10-5-20

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CRITERIA: A. SEED MIXTURES: 1. GENERAL USE: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CRITERIA: A. SEED MIXTURES: 1. GENERAL USE: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CRITERIA: A. SEED MIXTURES: 1. GENERAL USE: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CRITERIA: A. SEED MIXTURES: 1. GENERAL USE: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CRITERIA: A. SEED MIXTURES: 1. GENERAL USE: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

DEFINITION: TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.
PURPOSE: TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.
CRITERIA: A. SEED MIXTURES: 1. GENERAL USE: A. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDNESS ZONE...

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 8/27/20
Director: Steve Gordon
Date: 10-5-20

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION: A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.
PURPOSE: TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.
CRITERIA: 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY IDENTIFIED ON THE EROSION AND SEDIMENT CONTROL PLAN...
2. 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...

DEFINITION: A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.
PURPOSE: TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.
CRITERIA: 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY IDENTIFIED ON THE EROSION AND SEDIMENT CONTROL PLAN...
2. 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...

DEFINITION: A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.
PURPOSE: TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.
CRITERIA: 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY IDENTIFIED ON THE EROSION AND SEDIMENT CONTROL PLAN...
2. 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...

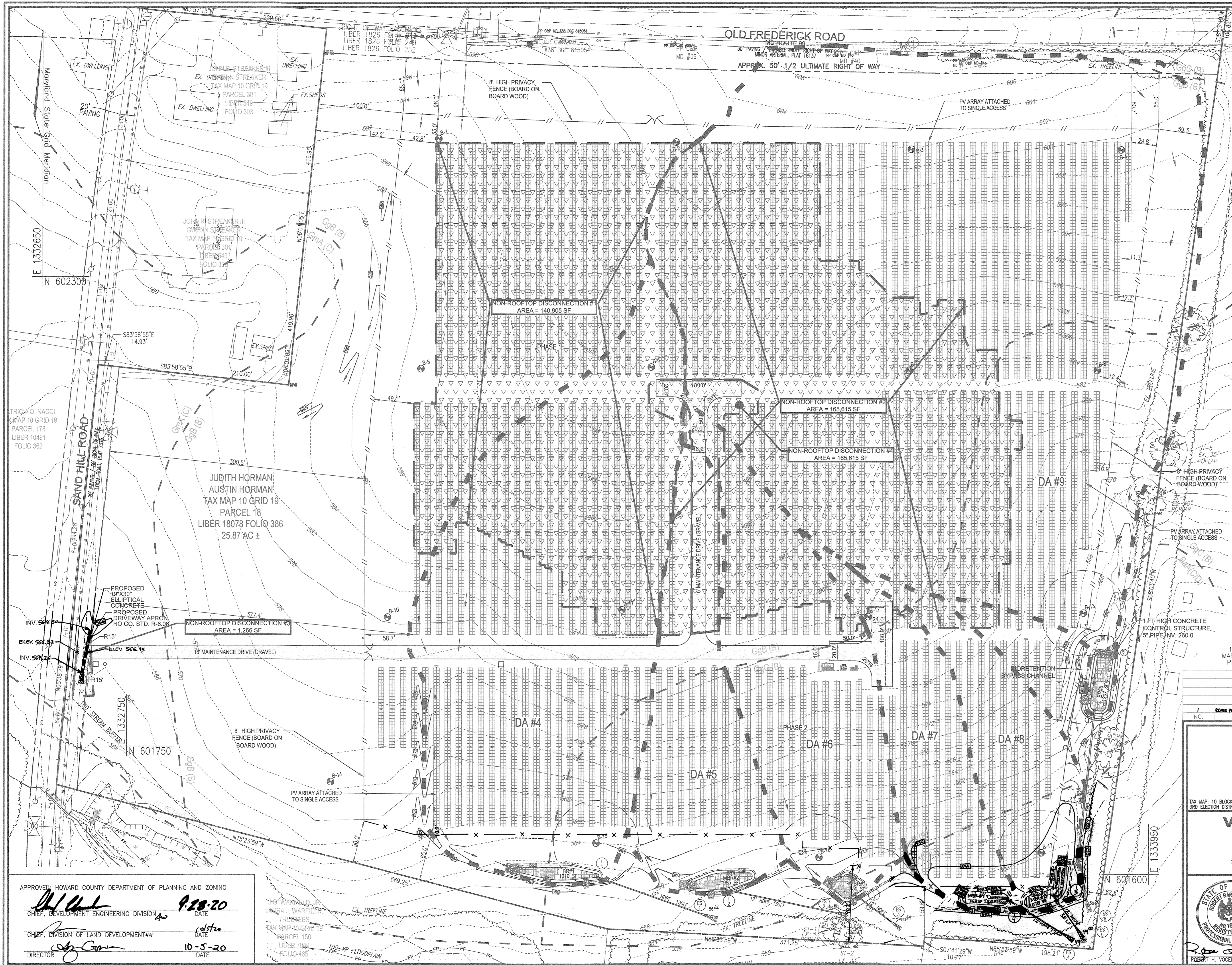
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date: 8/27/20
Director: Steve Gordon
Date: 10-5-20

AS-BUILT CERTIFICATION FOR PSWM. I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND DRAINAGE SYSTEM.



LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING PAVING
- EXISTING CONTOUR
- EXISTING SPOT ELEVATION
- EXISTING SPOT ELEVATION
- CENTERLINE OF EXISTING STREAM
- EXISTING UTILITY POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREE LINE
- EXISTING FENCE
- PROPOSED WOOD FENCE
- PROPOSED CHAIN LINK FENCE
- PROPOSED TREE LINE
- SOLS BOUNDARY
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING SPECIMEN TREE
- DRAINAGE DIVIDE
- PROPOSED MICRO-BIORETENTION
- NON-ROOFTOP DISCONNECTION DRAINAGE DIVIDE
- EXISTING WETLANDS
- EXISTING WETLAND BUFFER
- EX. PUBLIC 100-YEAR FLOOD PLAIN
- RR-RAP
- SOIL BORING

STORMWATER MANAGEMENT DRAINAGE AREA MAP
 SCALE: 1"=50'
 SCALE 1"=50'

DEVELOPER
 P52ES 1755 HENRYTON RD PHASE 1 LLC
 P52ES 1755 HENRYTON RD PHASE 2 LLC
 ATTN: SEAN REANEY

OWNER
 AUSTIN K. HORMAN
 1730 HENRYTON ROAD
 MARRIOTTVILLE MD 21104
 PHONE: 410-442-1831

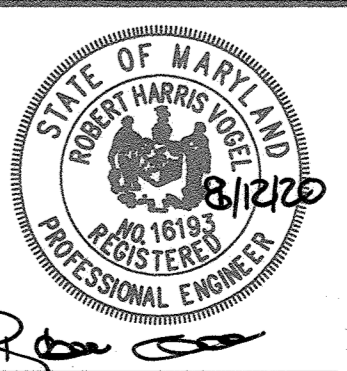
C/O NAUTILUS SOLAR ENERGY
 396 SPRING FIELD AVE.,
 SUITE 2 SUMMIT, NJ 07901

NO.	REVISION	DATE
1	ROAD PLANS TO RELocate THE MICRO-BIORETENTION FACILITIES AND TO RAISE THE DRAINAGE COLLECTOR	6-10-21

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT DRAINAGE AREA MAP
HENRYTON SOLAR
 1825 SAND HILL ROAD
 LIBER 18078 FOLIO 386

TAX MAP: 10 BLOCK: 19
 3RD ELECTION DISTRICT

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



PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 08-27-2022

DESIGN BY: RHY
 DRAWN BY: RVTG
 CHECKED BY: RHY
 DATE: AUGUST 2020
 SCALE: AS SHOWN
 W.O. NO.: 46493

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9-28-20
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10-5-20
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature]
 DIRECTOR

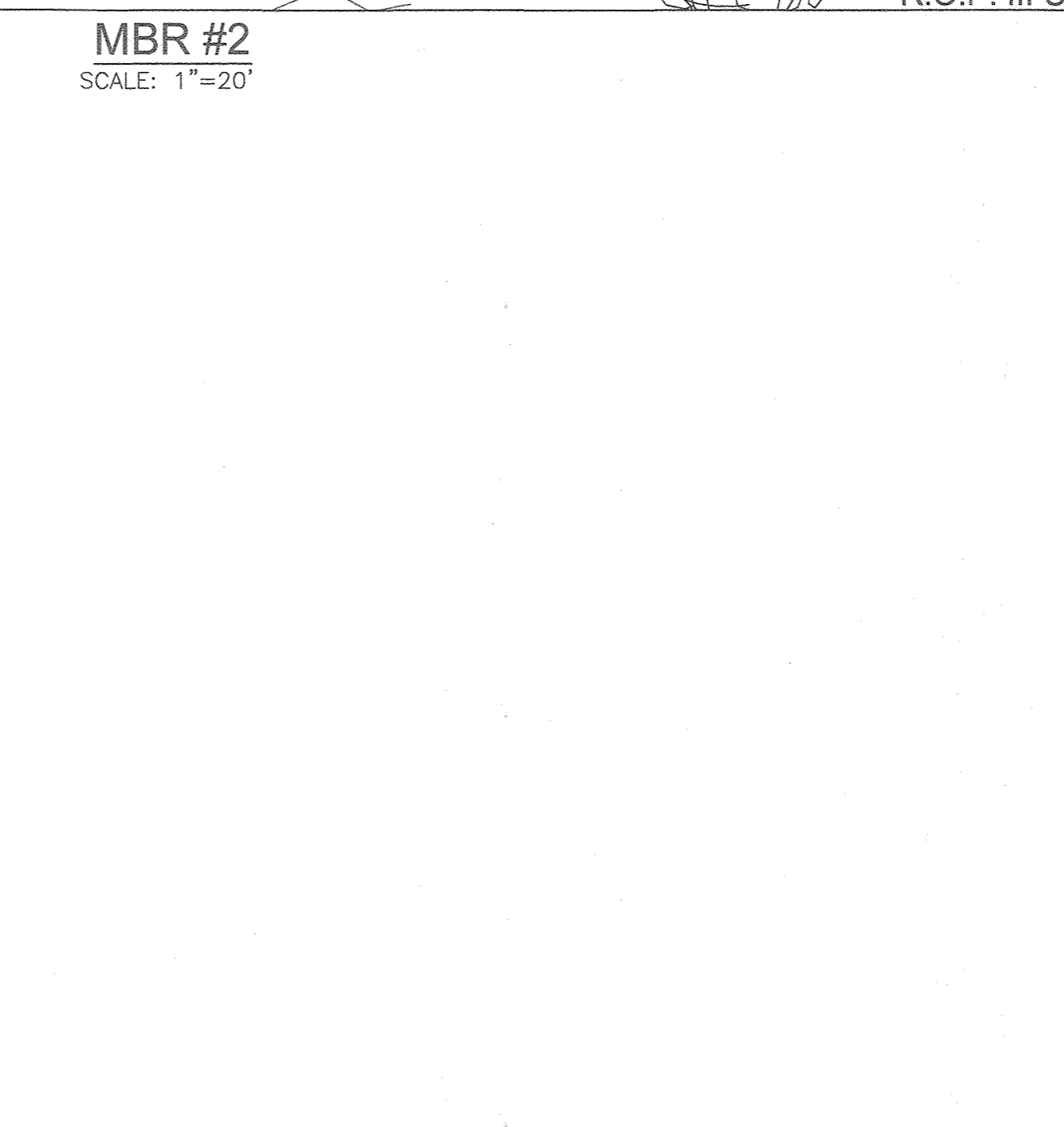
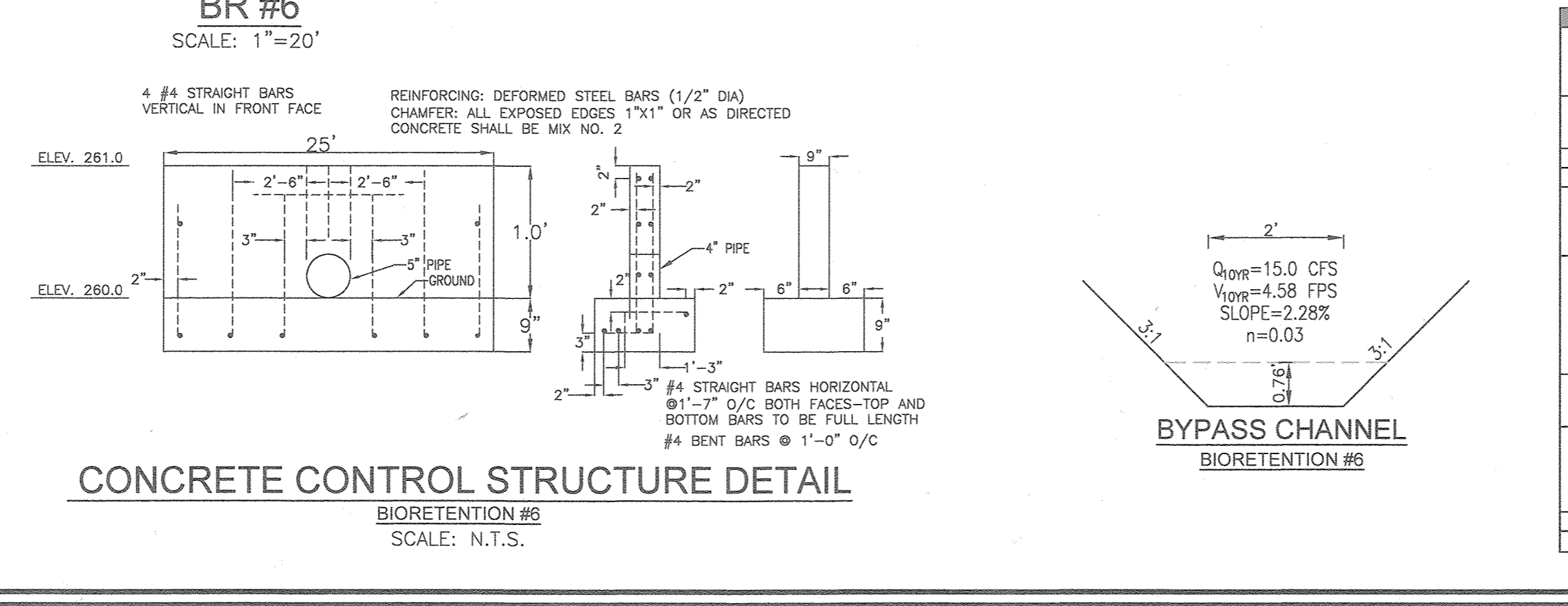
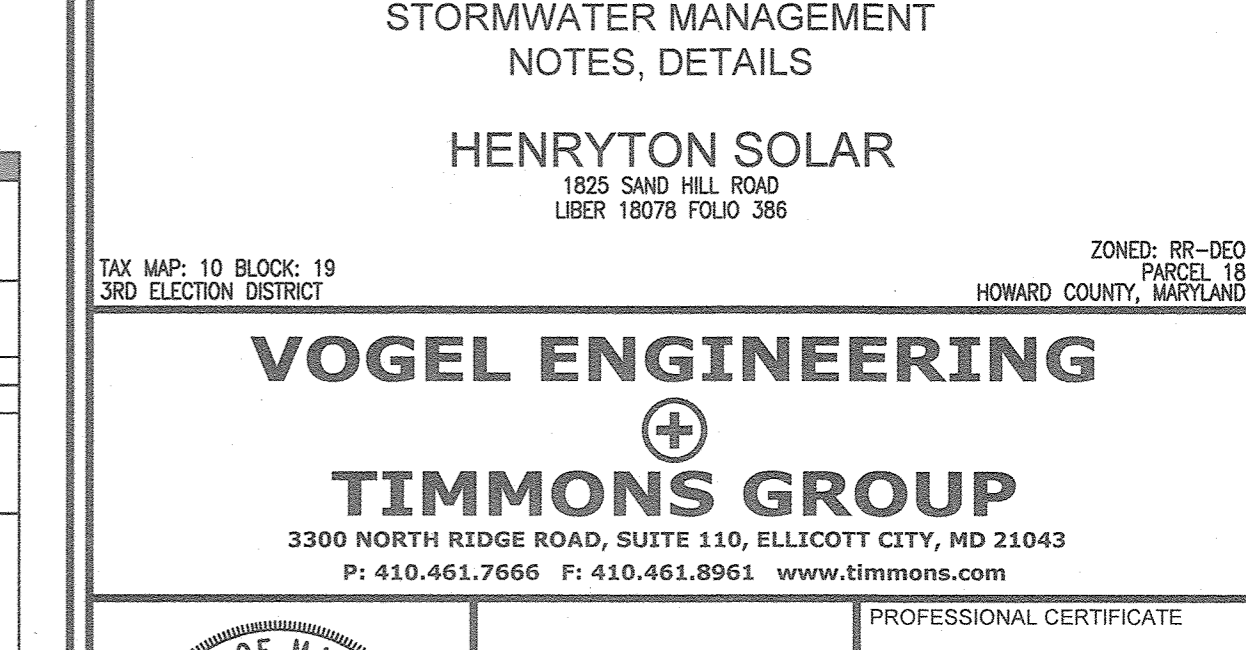
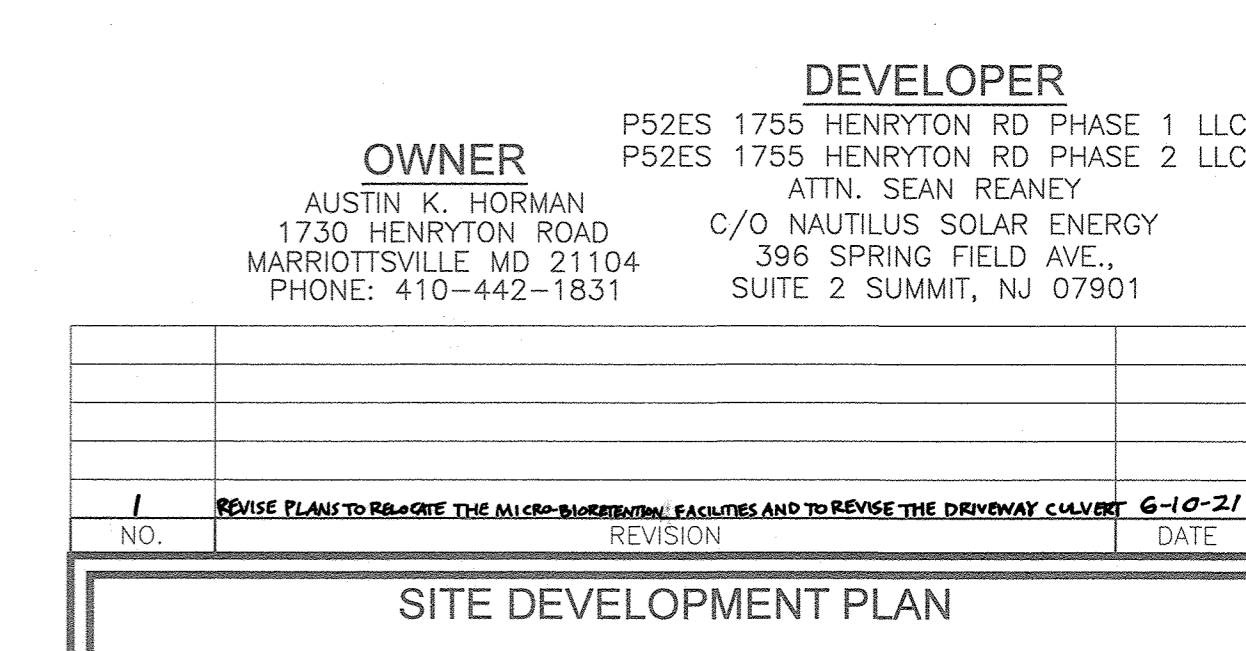
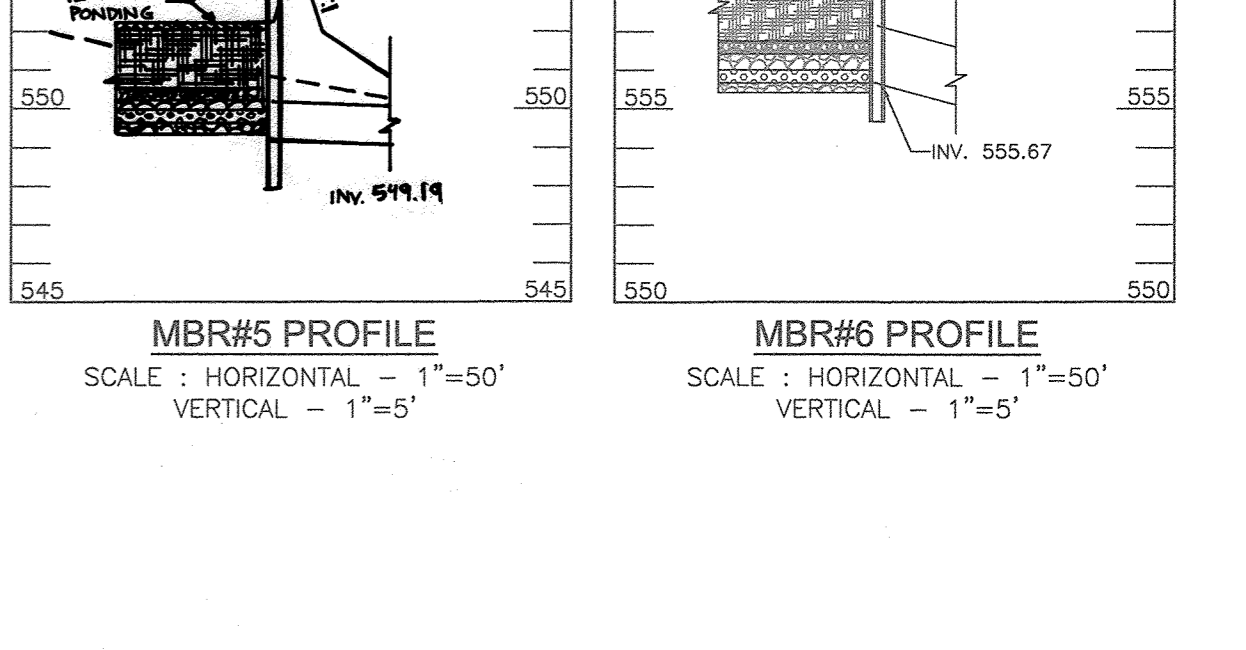
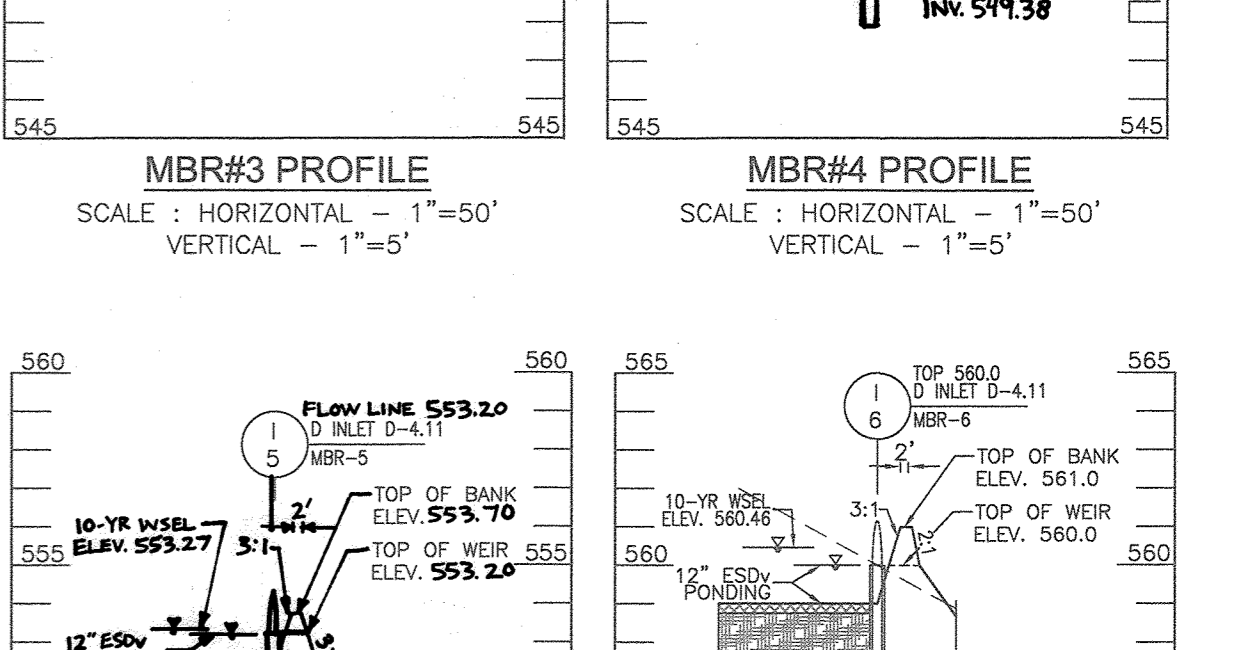
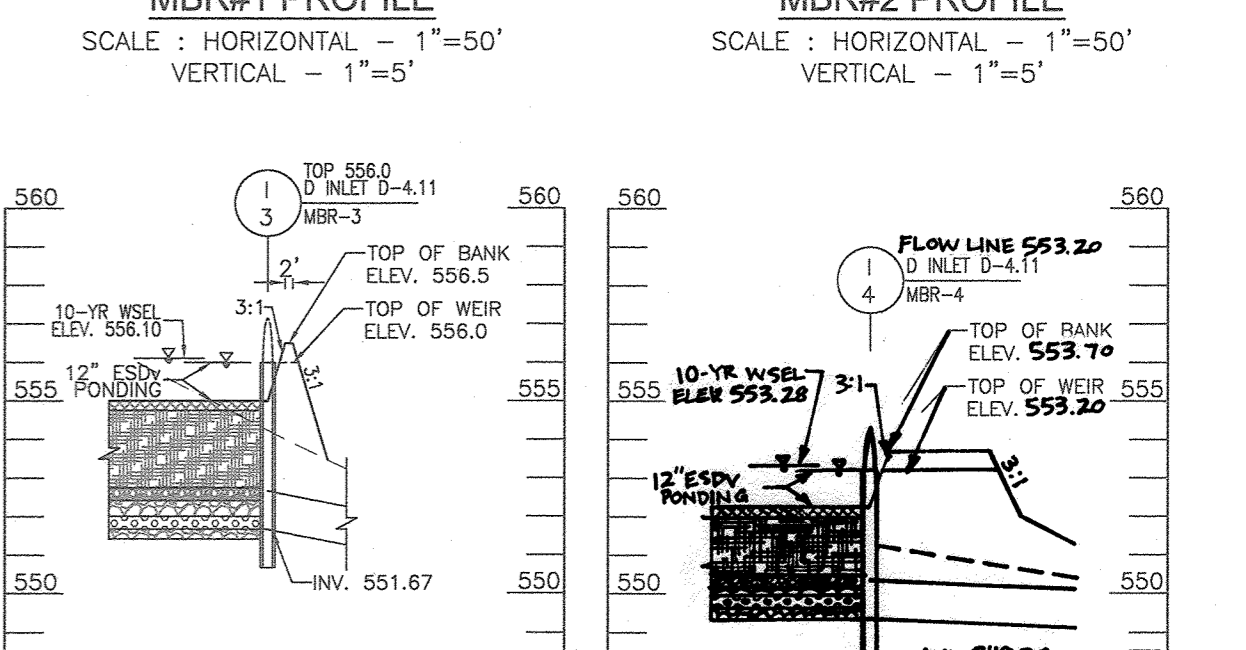
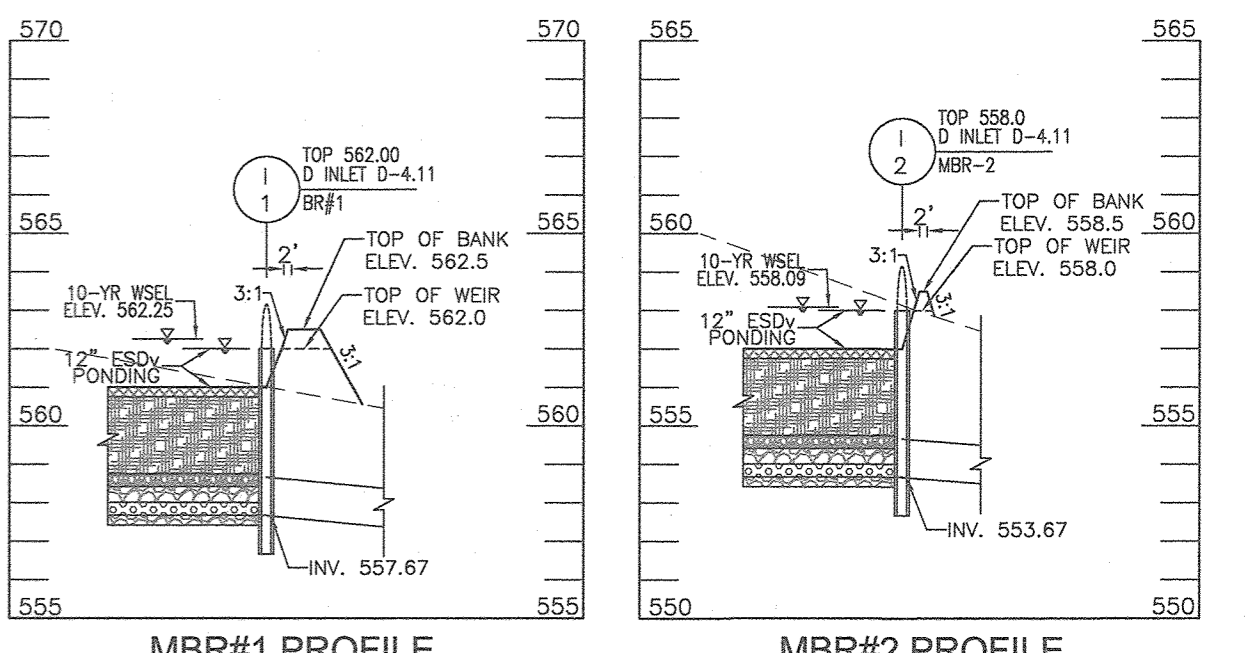
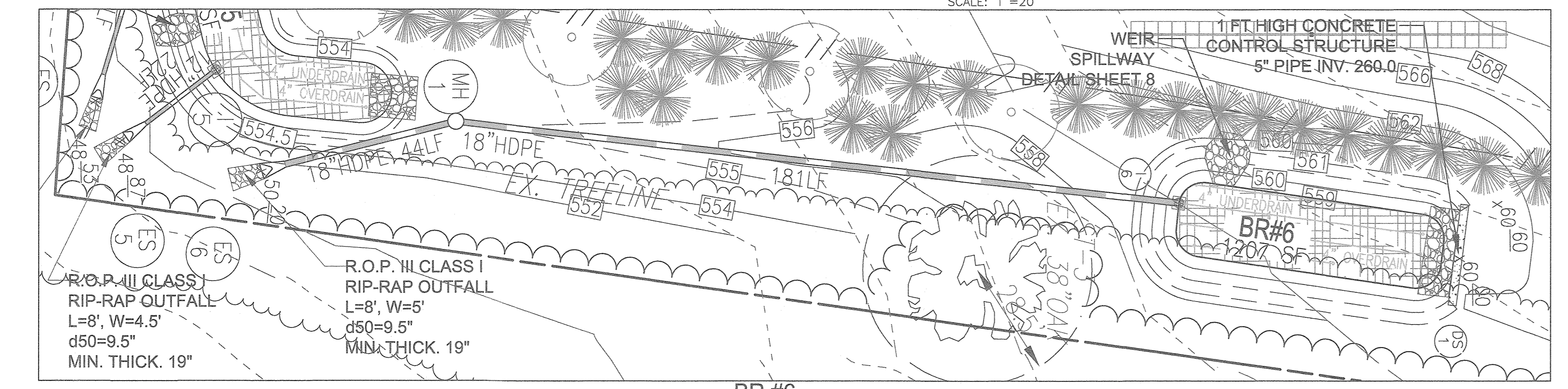
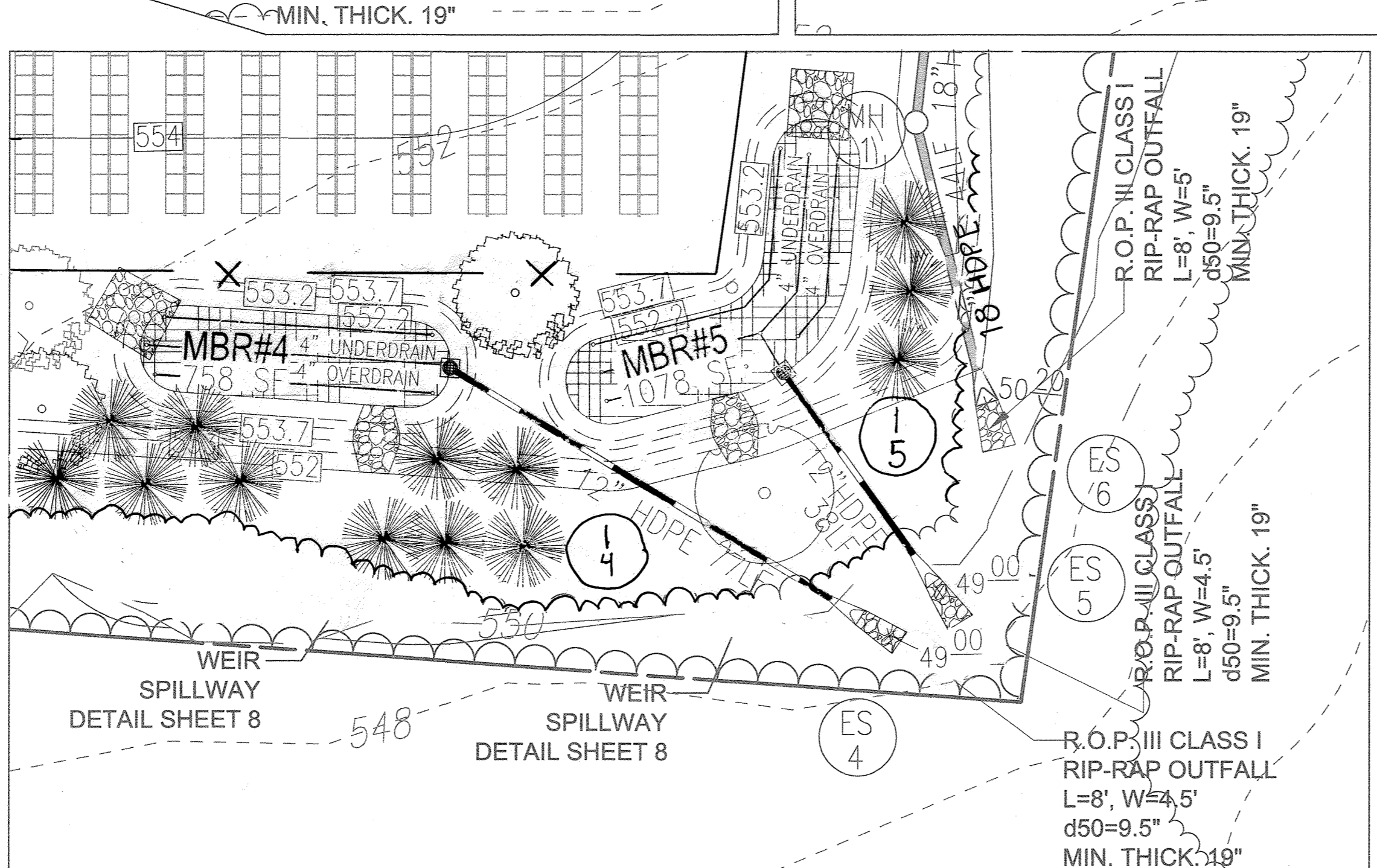
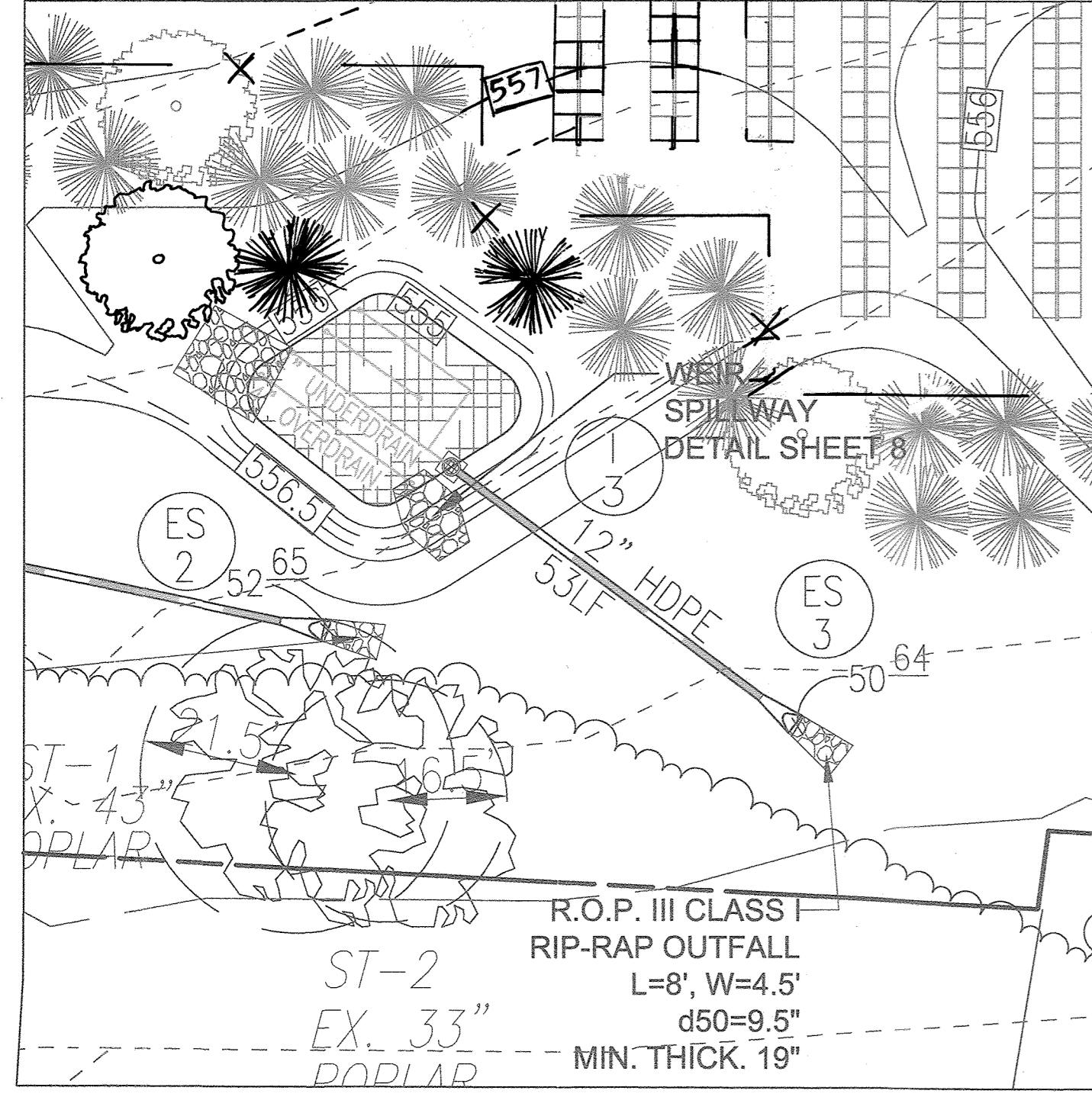
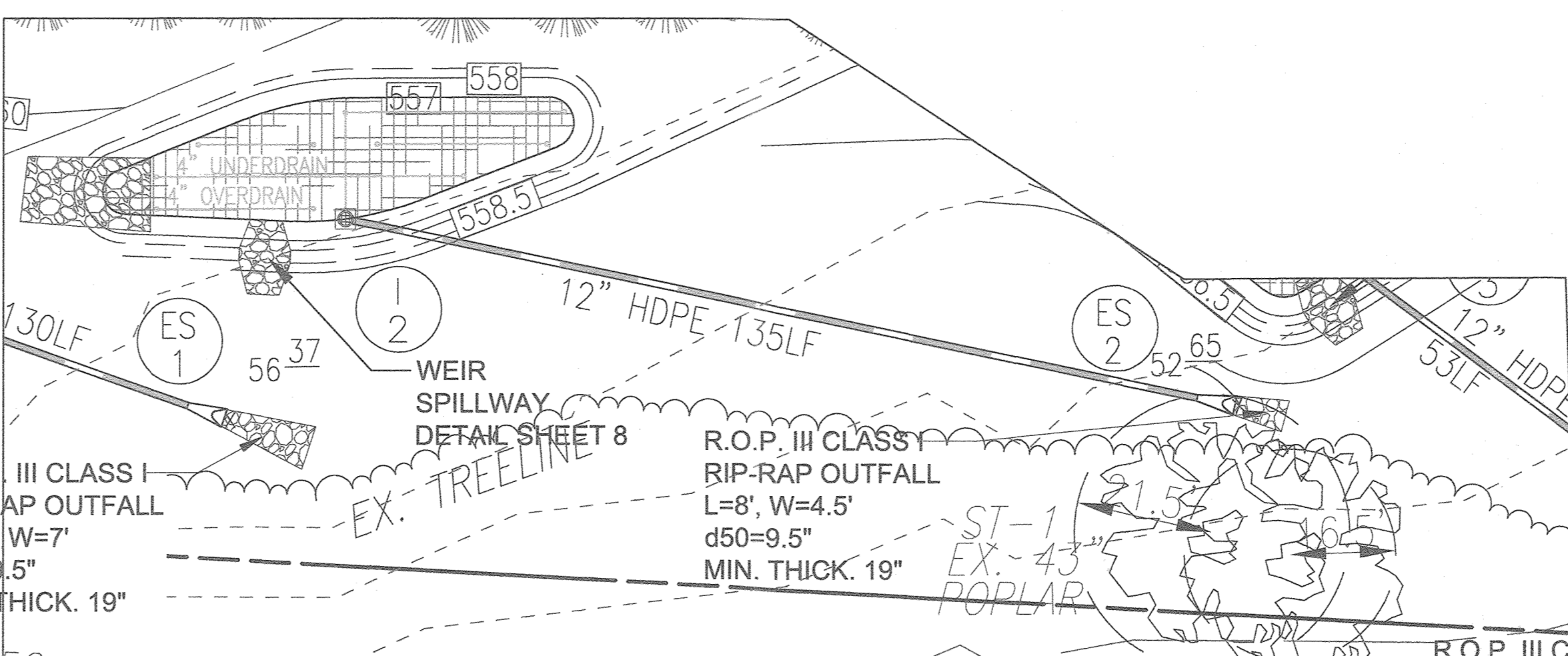
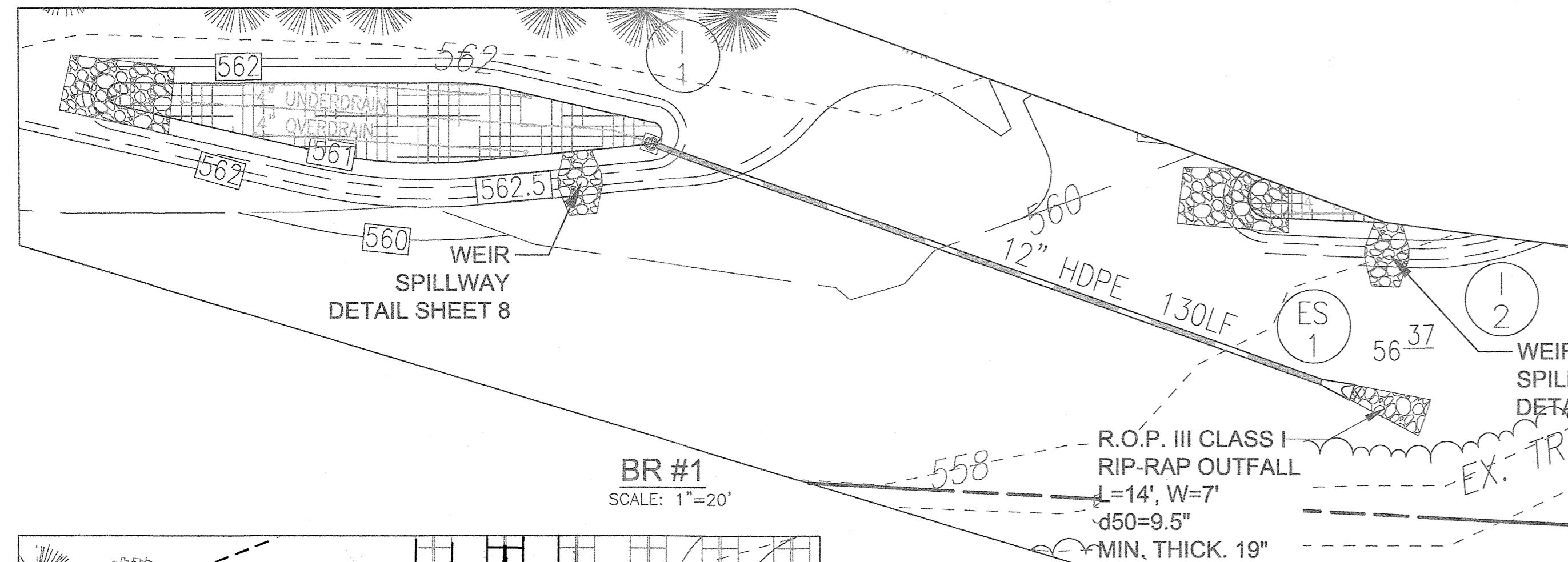


Table B.3.1 Material Specifications for Sand Filters

Material	Specification (Test Method)	Size	Notes
sand	clean AASHTO-M-6 or ASTM-C-33 concrete sand	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.
peat	ash content: < 15% pH range: 5.2 to 4.9 loose bulk density 0.12 to 0.15 g/cc	n/a	The material must be reed-sedge hemic peat, shredded, uncompacted, uniform, and clean.
leaf compost		n/a	
underdrain gravel	AASHTO-M-43 ASTM-D-4833 (puncture strength - 125 lb.) ASTM-D-4632 (Tensile Strength - 300 lb.)	0.375" to 0.75"	Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" gravel layer may be substituted for geotextiles meant to "separate" sand filter layers.
geotextile fabric (if required)	ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb., elongation 200%) ASTM-D-624 (Tear resistance - 150 lb./in) ASTM-D-471 (water absorption: < 8 to < 25 mins)	0.08" thick equivalent opening size of #80 sieve	
impermeable liner (if required)		30 mil thickness	Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture.
underdrain piping	F-758, Type PS 28 or AASHTO-M-278	4" - 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
concrete (cast-in-place)	MSHA Standards and Specs. Section 902, Mix No. 3, f _c = 3500 psi, normal weight, air-entrained; re-inforcing to meet ASTM-A-615-40	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
concrete (pre-cast)	per pre-cast manufacturer	n/a	SEE ABOVE NOTE
non-rebar steel	ASTM A-36	n/a	structural steel to be hot-dipped galvanized ASTM-A-123

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 1-28-20
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 10-5-20
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature]
DIRECTOR

DEVELOPER
P52ES 1755 HENRYTON RD PHASE 1 LLC
P52ES 1755 HENRYTON RD PHASE 2 LLC
ATTN: SEAN REANEY

OWNER
AUSTIN K. HORMAN
1730 HENRYTON ROAD
MARRIOTTVILLE MD 21104
PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
396 SPRING FIELD AVE.,
SUITE 2 SUMMIT, NJ 07901

NO. 1 REVISION DATE

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT
NOTES, DETAILS

HENRYTON SOLAR
1825 SAND HILL ROAD
LIBER 18076 FOLIO 386

TAX MAP: 10 BLOCK: 19
3RD ELECTION DISTRICT

ZONED: RR-DEO
PARCEL 18
HOWARD COUNTY, MARYLAND

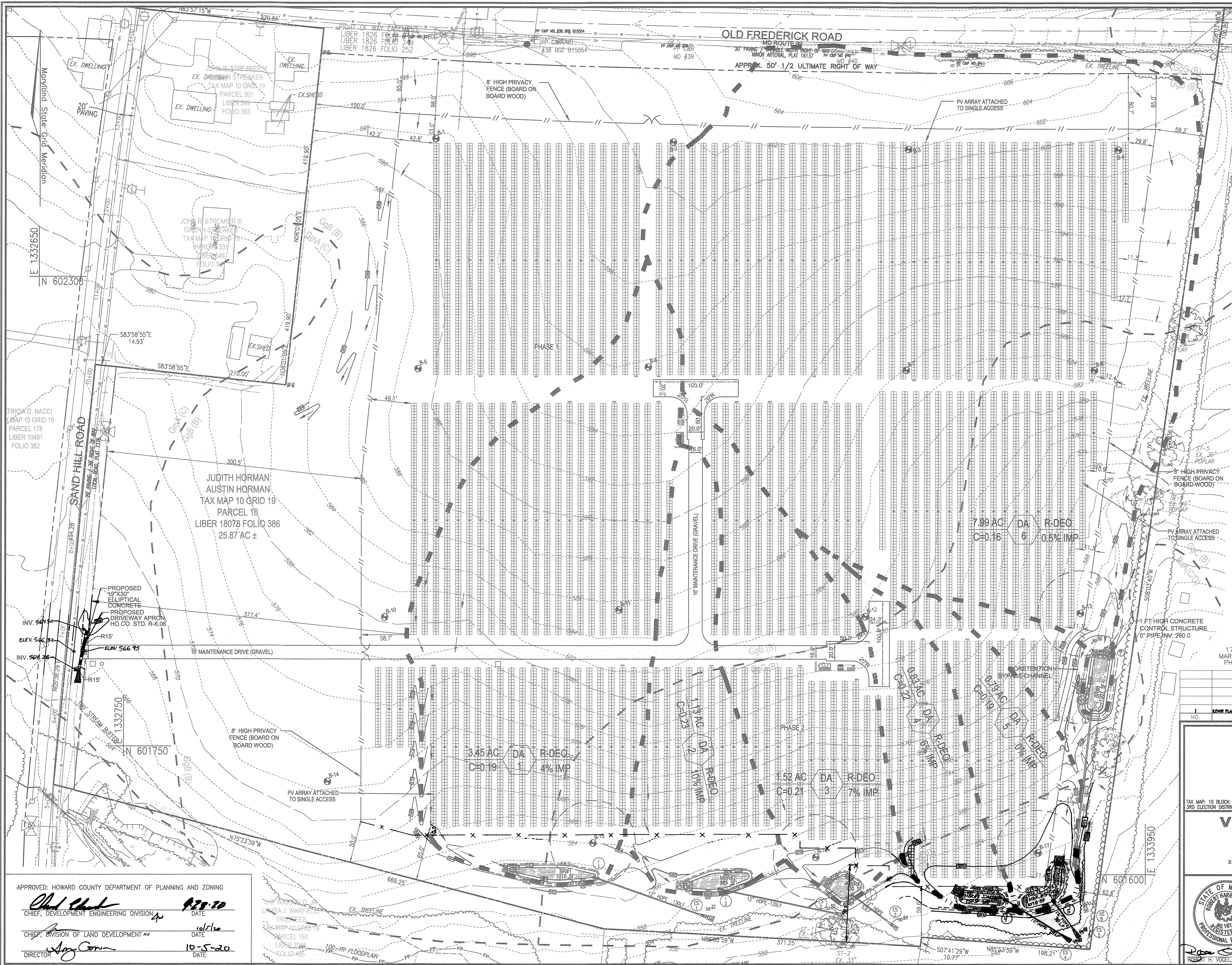
VOGEL ENGINEERING
+
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P: 410.461.6961 F: 410.461.8961 www.timmons.com

DESIGN BY: RHY
DRAWN BY: RVTG
CHECKED BY: RHY
DATE: AUGUST 2020
SCALE: AS SHOWN
W.D. NO.: 40493

PROFESSIONAL CERTIFICATE
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. 18163 EXPIRATION DATE 08-27-2022

9 SHEET OF 14

ROBERT H. VOGEL, PE No. 18193



LEGEND:

- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING PAVING
 - EXISTING CONTOUR
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 - PROPOSED 2' CONTOUR
 - EXISTING SPECIMEN TREE
 - DRAINAGE DIVIDE
- DRAINAGE AREA**
- ZONING**
- C FACTOR** **#** **% IMPERVIOUS**
- PROPOSED MICRO-BIOTRETION
 - EXISTING WETLANDS
 - EXISTING WETLAND BUFFER
 - EX. PUBLIC 100-YEAR FLOOD PLAN
 - RP-RAP

STORM DRAIN DRAINAGE AREA MAP

SCALE: 1"=50'
SCALE: 1"=50'

DEVELOPER
P52ES 1755 HENRYTON RD PHASE 1 LLC
P52ES 1755 HENRYTON RD PHASE 2 LLC
ATTN: SEAN REANEY

OWNER
AUSTIN K. HORMAN
1730 HENRYTON ROAD
MARRIOTTSVILLE MD 21104
PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
396 SPRING FIELD AVE.,
SUITE 2 SUMMIT, NJ 07901

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN

STORM DRAIN DRAINAGE AREA MAP

HENRYTON SOLAR

1825 SAND HILL ROAD
LIBER 18078 FOLIO 386

ZONED: RR-DEO
PARCEL 18
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

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: RVTG
CHECKED BY: RHV
DATE: AUGUST 2020
SCALE: AS SHOWN
W.O. NO.: 40483

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. 16183, EXPIRATION DATE 09-27-2022.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chad Clark 8/28/20
CHIEF, DEVELOPMENT ENGINEERING DIVISION 40 DATE

John Conroy 10-5-20
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

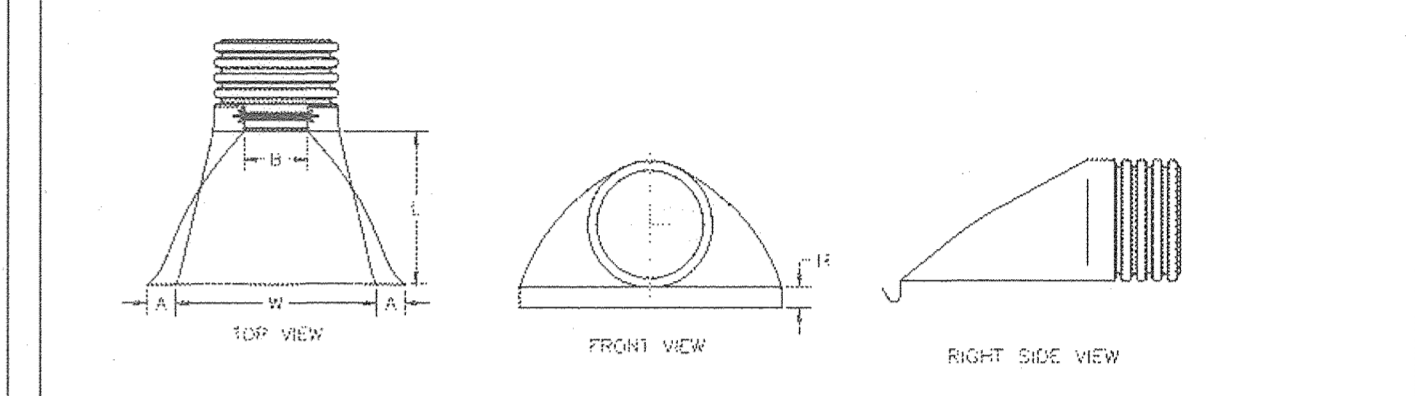
DIRECTOR DATE

THE WOODLAND TRUSTEES
LARA J. WARFIELD
TRUSTEES
TAX MAP 10 GRID 19
PARCEL 150
LIBER 18078
FOLIO 465

ADS FLARED END SECTION SPECIFICATION
 Scope
 This specification describes 12- through 36-inch (300 to 900mm) ADS Flared End Sections for use in culvert and drainage outlet applications.
 Requirements
 The ADS Flared End Section shall be high density polyethylene meeting ASTM D3350 minimum cell classification 213320C; contact manufacturer for additional cell classification information. When provided, the metal threaded fastener rod shall be stainless steel.
 Installation
 Installation shall be in accordance with ADS installation instructions and with those issued by state or local authorities. Contact your local ADS representative or visit www.ads-pipe.com for the latest installation instructions.

Diameter in (mm)	PIPE DIAMETER, in (mm)					
	12 (300)	15 (375)	18 (450)	24 (600)	30 (750)	36 (900)
A	6.5	6.5	7.5	7.5	7.5	7.5
B	16.5	16.5	16.5	16.5	16.5	16.5
H	6.5	6.5	6.5	6.5	6.5	6.5
L	25.0	25.0	32.0	32.0	32.0	32.0
W	25.0	25.0	32.0	32.0	32.0	32.0
in (mm)	(635)	(635)	(813)	(813)	(813)	(813)
W	25.0	25.0	32.0	32.0	32.0	32.0
in (mm)	(635)	(635)	(813)	(813)	(813)	(813)

*Product detail may differ slightly from actual product appearance



DETAIL D-4-1-C ROCK OUTLET PROTECTION III

STANDARD SYMBOL
 ROP III

DISCHARGE TO AN UNCONFINED CHANNEL OR FLAT AREA

PLAN VIEW

SECTION A-A

SECTION B-B

CONSTRUCTION SPECIFICATIONS

1. RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
2. USE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY FLAGGING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
3. PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (1/4 TO 1/2 INCH MINIMUM STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
5. CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPILLS FILLING THE Voids BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
7. CONSTRUCT APRON WITH ONE SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
8. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND RIPRAP DISLOADED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

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
 D.22

PIPE SCHEDULE

SIZE	PUBLIC/PRIVATE	CLASS	LENGTH
12"	PRIMATE	HDPE	433
18"	PRIMATE	HDPE	225
18"X30"	PRIMATE	R.C.P. V	47

STRUCTURE SCHEDULE

STR #	TYPE	INV. IN	INV. OUT	TOP ELEV	DETAIL	LOCATION	REMARKS
I-1	D INLET	---	557.67	562.00	D-4.11	N 601596.95 E 1333302.54	PRIVATE
I-2	D INLET	---	553.67	558.00	D-4.11	N 601582.99 E 1333449.34	PRIVATE
I-3	D INLET	---	551.67	556.00	D-4.11	N 601578.21 E 1333605.72	PRIVATE
I-4	D INLET	---	555.67	560.00	D-4.11	N 601572.28 E 1333895.81	PRIVATE
I-5	D INLET	---	550.72	554.70	G-5.11	N 601612.37 E 1333868.68	PRIVATE

STRUCTURE SCHEDULE

STR #	TYPE	INV. IN	INV. OUT	TOP OR UPPER/LOWER	DETAIL	LOCATION	REMARKS
ES-1	12" HDPE	---	556.37	557.37	HDPE	N 601551.25 E 1333432.17	(2) PRIVATE
ES-2	12" HDPE	---	552.65	553.65	HDPE	N 601550.77 E 1333603.94	(2) PRIVATE
ES-3	12" HDPE	---	550.64	551.64	HDPE	N 601537.84 E 1333657.41	(2) PRIVATE
ES-4	12" HDPE	---	549.00	550.00	HDPE	N 601530.29 E 1333850.98	(2) PRIVATE
ES-5	12" HDPE	---	549.19	550.19	HDPE	N 601537.92 E 1333865.17	(2) PRIVATE

(1) Coordinate for Proposed Structure = Centerline of Structure
 (2) Coordinate for End Section = Centerline of Pipe @ Downstream Face

DEVELOPER
 P52ES 1755 HENRYTON RD PHASE 1 LLC
 P52ES 1755 HENRYTON RD PHASE 2 LLC
 ATTN: SEAN REANEY

OWNER
 AUSTIN K. HORMAN
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 MARRIOTTVILLE MD 21104
 PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
 396 SPRING FIELD AVE.,
 SUITE 2 SUMMIT, NJ 07901

NO.	REVISION	DATE
1	REVISE PLAN TO RELOCATE THE MANHOLE-BORERHOLE FACILITIES AND TO REVISE THE DRAINAGE CULVERT C-10-21	

SITE DEVELOPMENT PLAN
STORM DRAIN PROFILES

HENRYTON SOLAR
 1825 SAND HILL ROAD
 LIBER 18078 FOLIO 386

TAX MAP: 10 BLOCK: 19
 3RD ELECTION DISTRICT

ZONED: RR-DEO
 PARCEL: 18
 HOWARD COUNTY, MARYLAND

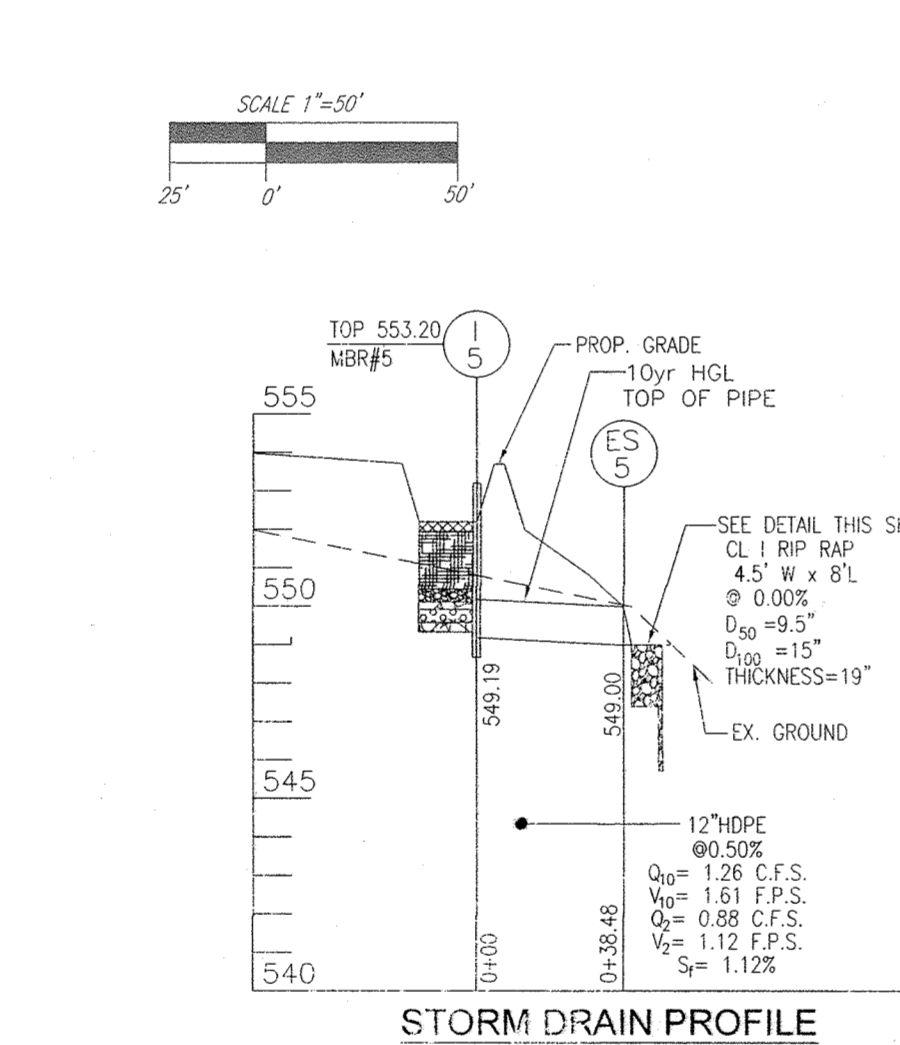
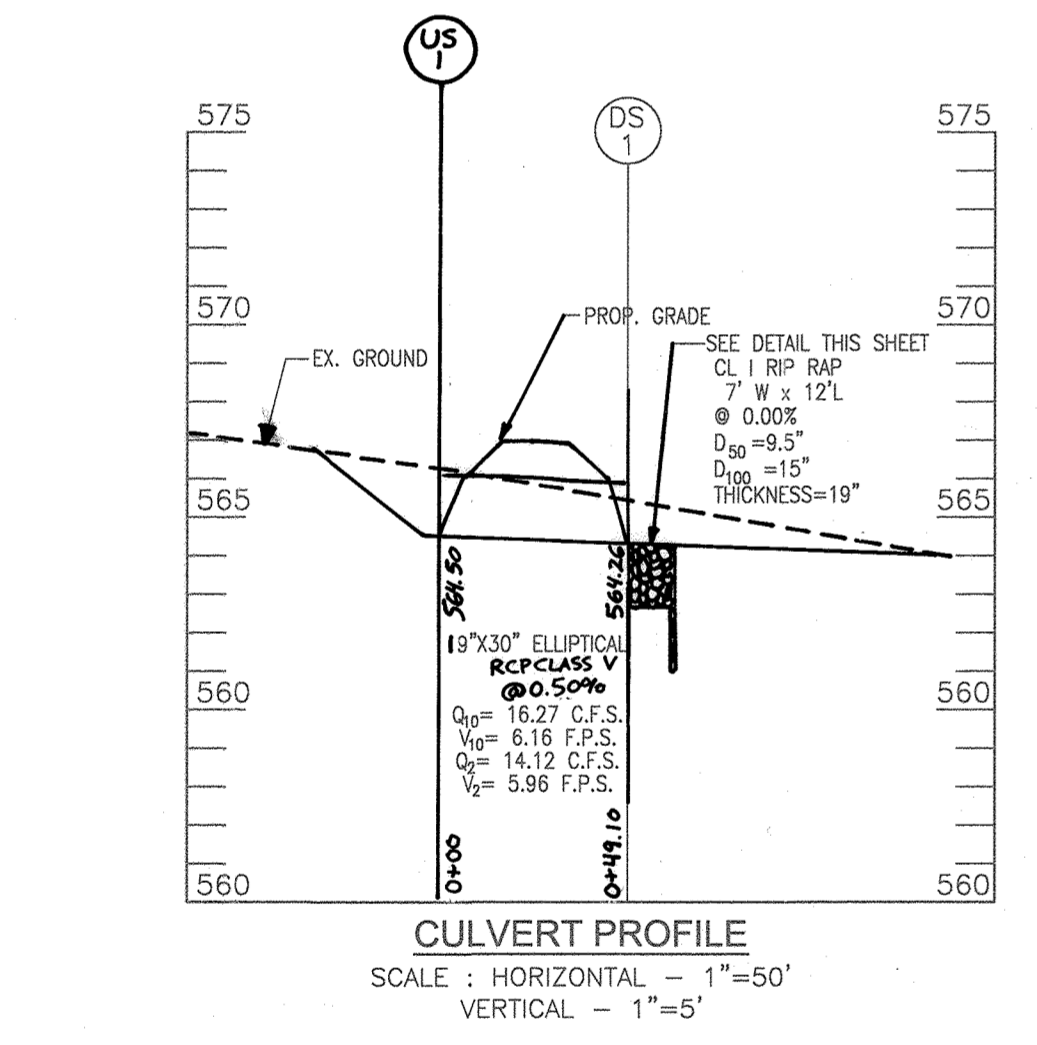
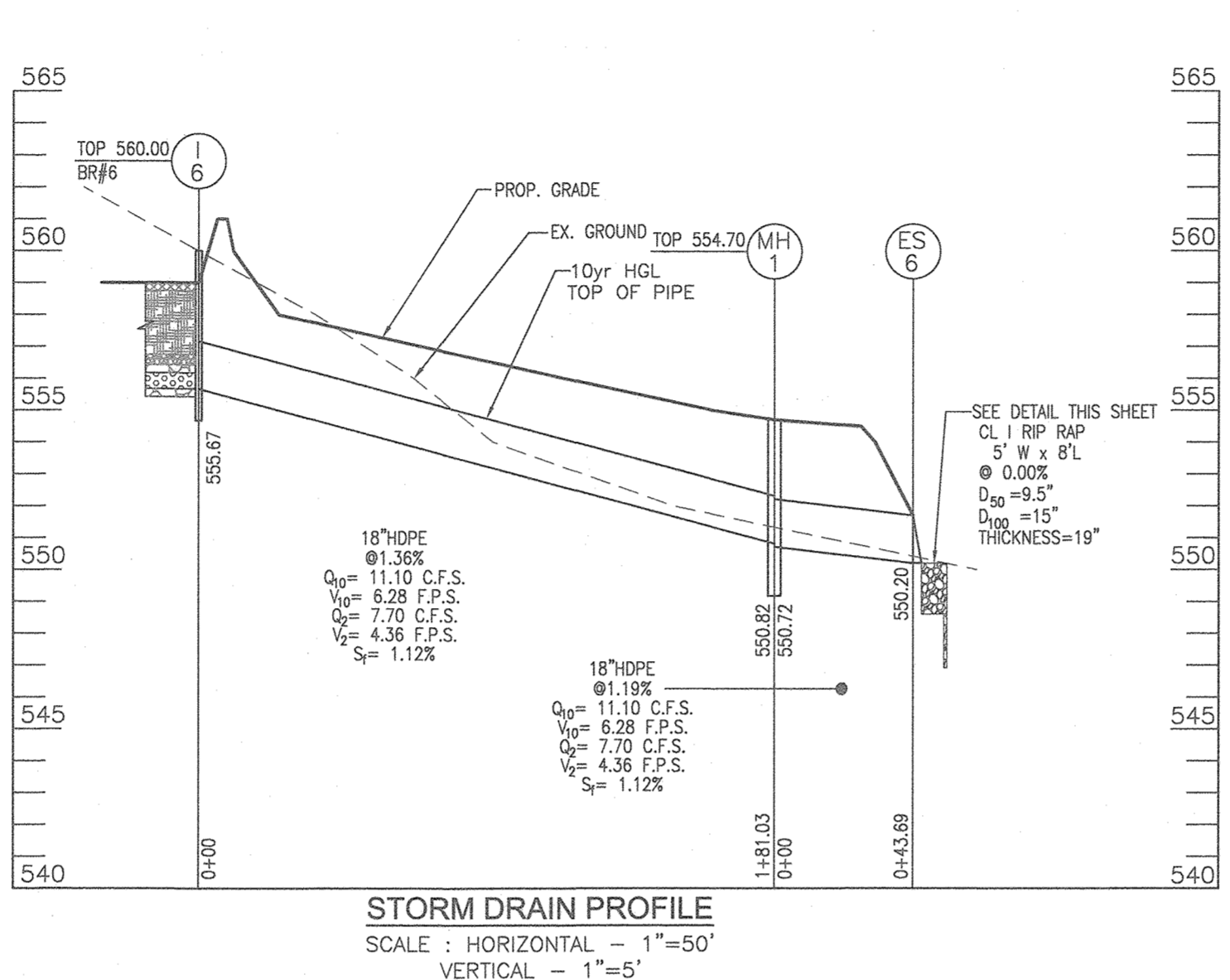
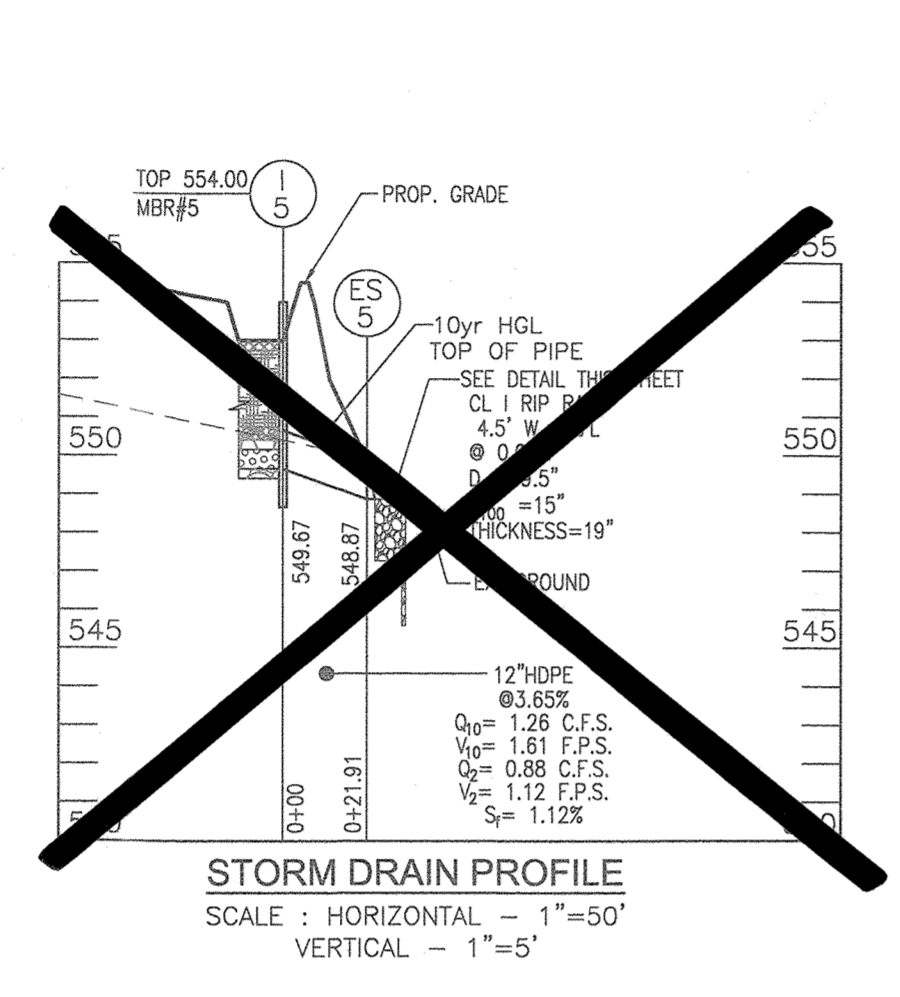
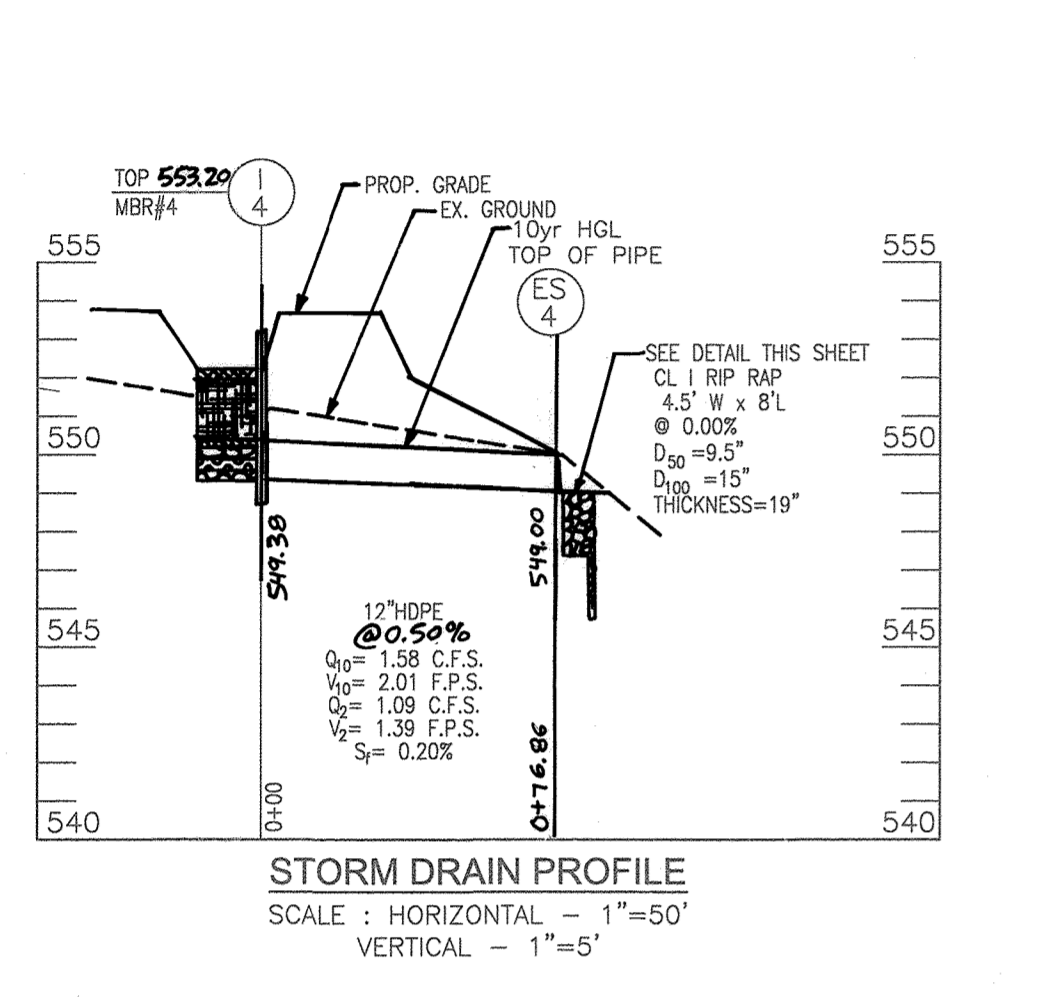
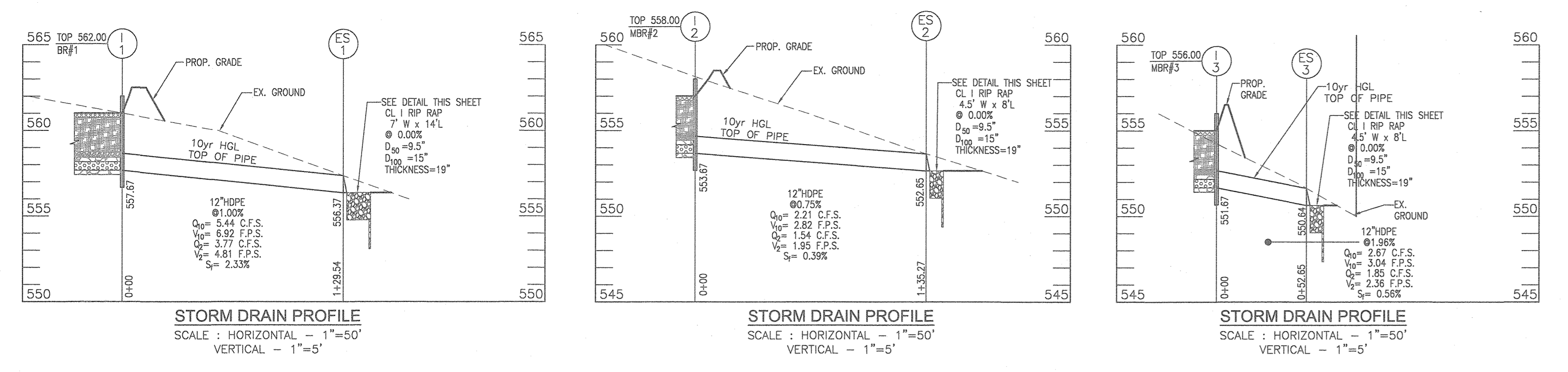
VOGEL ENGINEERING
 +
TIMMONS GROUP
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DESIGN BY: RHY
 DRAWN BY: RVTG
 CHECKED BY: RHY
 DATE: AUGUST 2020
 SCALE: AS SHOWN
 W.O. NO.: 49493

PROFESSIONAL CERTIFICATE
 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 09-27-2022

ROBERT H. VOGEL, PE No. 16193

11 SHEET OF 14



STRUCTURE SCHEDULE

STR #	TYPE	INV. IN	INV. OUT	TOP ELEV	DETAIL	LOCATION	REMARKS
I-4	D INLET	---	549.38	553.20	D-4.11	N 601570.29 E 1333765.34	(1) PRIVATE
I-5	D INLET	---	549.19	553.20	D-4.11	N 601569.31 E 1333847.90	(1) PRIVATE

STRUCTURE SCHEDULE

STR #	TYPE	INV. IN	INV. OUT	TOP OR UPPER/LOWER	DETAIL	LOCATION	REMARKS
ES-4	12" HDPE	---	549.00	550.00	HDPE	N 601530.29 E 1333850.98	(2) PRIVATE
ES-5	12" HDPE	---	549.00	550.00	HDPE	N 601537.92 E 1333865.17	(2) PRIVATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
 DATE: 8/20/20

Chief, Division of Land Development
 DATE: 8/13/20

Director
 DATE: 10-5-20

GENERAL NOTES

WATERSHED NAME: LITTLE PATUXENT RIVER
WATERSHED NUMBER: 02131105

- A. GROSS SITE AREA: 25.9 AC.
- NET SITE AREA: 25.9 AC.
- B. AREA OF 100-YEAR FLOODPLAIN: 0.00 AC. DFIRM
- C. AREA OF WETLANDS AND BUFFERS(ONSITE): 0.15 AC.
- AREA OF STREAM AND BUFFERS(ONSITE): 0.16 AC.
- D. AREA OF > 25% STEEP SLOPES: 0.00 AC.
- E. EXISTING FOREST: 0.00 AC.
- F. ZONED: RR-DEO
- G. EXISTING USE: AGRICULTURE
- H. PROPOSED USE: SOLAR PANEL FARM

1. NO BARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITAT WERE OBSERVED ON THE PROPERTY
2. SURROUNDING LAND USE PRIMARILY FARMLAND, RURAL RESIDENTIAL DEVELOPMENT, AND FOREST.
3. NO AREAS ON-SITE ARE LARGE ENOUGH TO BE CONSIDERED FOREST.
4. THE STREAM CHANNEL THAT FLOWS TO THE SOUTH OF THE PROJECT SITE IS THE LITTLE PATUXENT RIVER WHICH IS CLASSIFIED AS A USE IV-P STREAM, WATERSHED NUMBER 02-13-111. THE WETLANDS WILL REQUIRE A 25 FOOT BUFFER. THE STREAM CHANNEL REQUIRES A 100 FOOT BUFFER.
5. NO 100 YEAR FLOODPLAIN IS PRESENT ON THE PROPERTY.
6. NO STEEP SLOPES (15%-24.99%) ON THE SUBJECT PROPERTY.
7. THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES ON THIS PROPERTY.
8. THERE ARE SPECIMEN TREES ON THE PROPERTY.

****FOREST CONSERVATION WORKSHEET BASED ON COUNCIL BILL CB62-2019****

FOREST CONSERVATION WORKSHEET FOR HENRYTON SOLAR

Net Tract Area	A = 25.90
A. Total (Gross) Tract Area	A = 25.90
B. Area within 100-year Floodplain	B = 0.00
C. Other Deductions (Identify)	C = 0.00
D. Net Tract Area	D = 25.90

Land Use Category
Insert the number "1" under the appropriate land use (limit to only one entry)

Resid Rural LD	Resid Rural MD	Resid Suburban	Inst/Linear	Retail/Office	Mixed Use/PUD
0	0	0	0	1	0

E. Afforestation Threshold (Net Tract Area x 15%)	E = 3.90
F. Reforestation Threshold (Net Tract Area x 15%)	F = 3.90

Existing Forest Cover

G. Existing Forest Cover within the Net Tract Area	G = 0.00
H. Area of Forest above Afforestation Threshold	H = 0.00
I. Area of Forest above Reforestation Threshold	I = 0.00

Break Even Point

J. Break Even Point	J = 0.00
K. Forest Clearing Permitted without Mitigation	K = 0.00

Proposed Forest Clearing

L. Total Area of Forest to be Cleared	L = 0.00
M. Total Area of Forest to be Retained	M = 0.00

Planting Requirements Inside Watershed

N. Reforestation for Clearing above the Reforestation Threshold	N = 0.00
P. Reforestation for Clearing below the Reforestation Threshold	P = 0.00
Q. Credit for Retention above the Reforestation Threshold	Q = 0.00
R. Total Reforestation Required	R = 0.00
S. Total Afforestation Required	S = 3.90
T. Total Reforestation and Afforestation Requirement	T = 3.90
U. 75% of Total Obligation (Retention + Planting)	U = 2.90
V. Planting Required Onsite to meet 75% Obligation	V = 2.90

Planting Requirements Outside Watershed

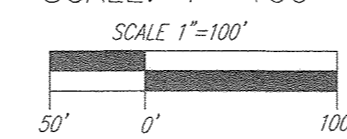
W. Total Planting within Development Site Watershed	W = 0.00
X. Total Afforestation Required	X = 3.90
Y. Remaining Planting within Watershed for Reforestation Credit	Y = 0.00
Z. Reforestation for Clearing above the Reforestation Threshold	Z = 0.00
AA. Reforestation for Clearing below the Reforestation Threshold	AA = 0.00
BB. Credit for Retention above the Reforestation Threshold	BB = 0.00
CC. Total Reforestation Required	CC = 0.00
DD. Total Afforestation and Reforestation Requirement	DD = 3.90

THE FOREST CONSERVATION OBLIGATION FOR THIS PROJECT IS 3.9 ACRES OF AFFORESTATION, WHICH SHALL BE SATISFIED BY THE PURCHASE OF FOREST PLANTING IN AN OFF-SITE FOREST MITIGATION BANK: REGAN (HIGHLAND RESERVE) FOREST BANK; SDP-16-015.

***NOTE: FOR LIMIT OF DISTURBANCE, SEE SHEET 4**



FOREST CONSERVATION PLAN
SCALE: 1"=100'



SPECIMEN TREE CHART

KEY	DESCRIPTION	CONDITION	COMMENTS
ST-1	43" POPLAR	GOOD	TO REMAIN
ST-2	33" POPLAR	POOR MAJOR TRUNK ROT	TO REMAIN
ST-3	38" OAK	GOOD	TO REMAIN
ST-4	40" POPLAR	FAIR LIMB DIEBACK	TO REMAIN
ST-5	35" POPLAR	GOOD	TO REMAIN
ST-6	29" POPLAR	GOOD	TO REMAIN

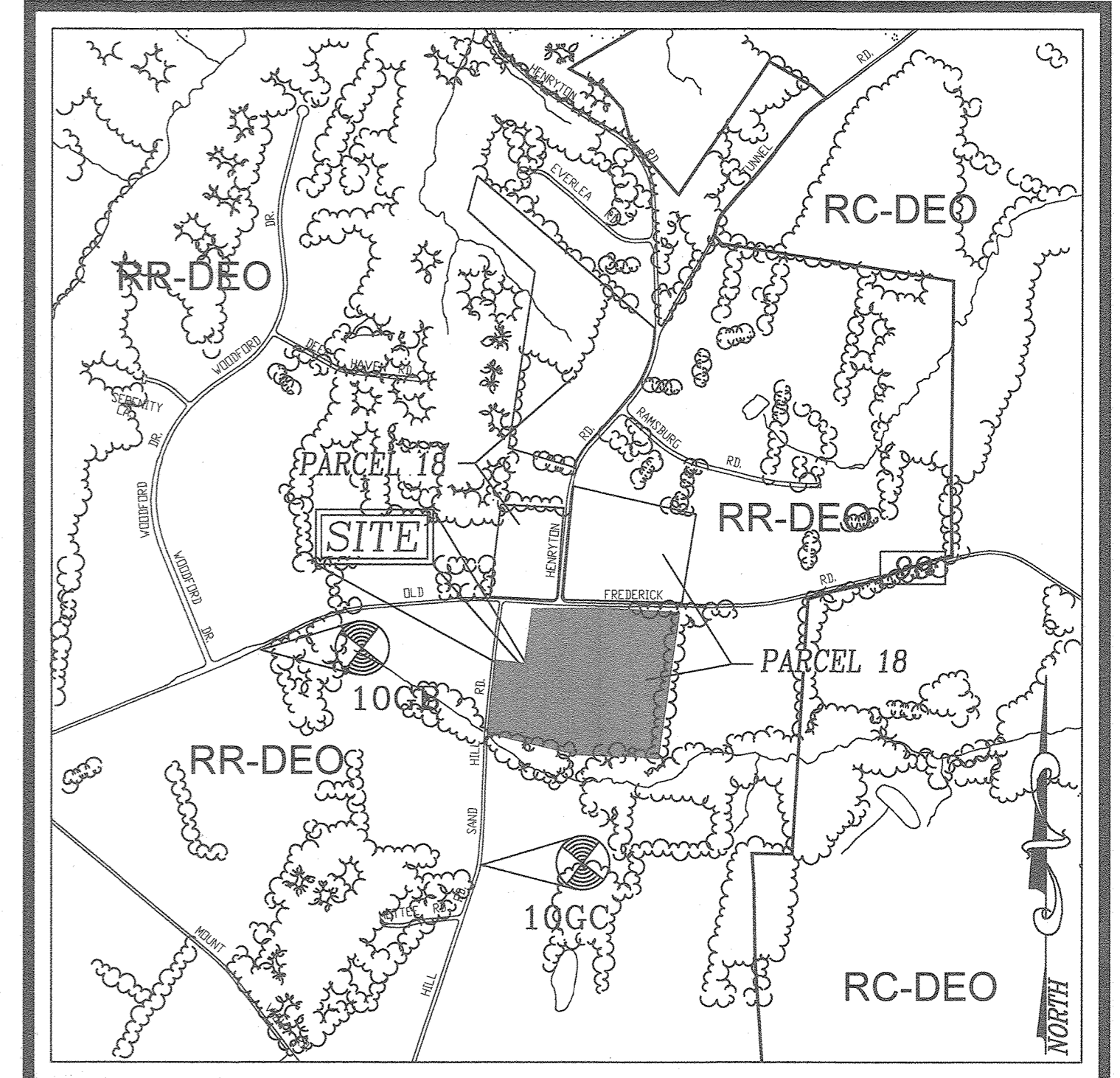
SOILS LEGEND
HOWARD COUNTY SOILS MAP #24

SYMBOL	NAME / DESCRIPTION	HYDRO GROUP	K FACTOR	<15% SLOPE W. EROSION POTENTIAL
GcG	GLENLEIG LOAM, 8 TO 15 PERCENT SLOPES	NO B	0.37	YES
GcC	GLENLEIG LOAM, 8 TO 15 PERCENT SLOPES	NO B	0.43	YES
BaA	BAILE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES C/D	0.49	NO
GmA	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES	YES C	0.49	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
K-FACTOR = Kw @ 0-4" DEPTH
NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR > GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
DATE: 8-20-20
Chief, Division of Land Development
DATE: 10-5-20
Director



VICINITY MAP
SCALE: 1"=1,000'

ADC MAP COORDINATE: MAP 28, GRID 5C

BENCHMARKS

HOWARD COUNTY BENCHMARK 31AB (CONC. MON.)
N 573984.52 E 1369949.46 ELEV. 499.905
LOCATION: TRANSMISSION LINE 0.2 MILES EAST OF NEW CUT ROAD
HOWARD COUNTY BENCHMARK 31DA (CONC. MON.)
N 571982.70 E 1372145.06 ELEV. 481.604
LOCATION: ROLLING TOP ROAD 0.1 MILES NORTH OF ORCHARD ROAD

LEGEND:

- EXISTING CONTOUR
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- FCE SIGN LOCATION
- MICRO BIORETENTION
- 100 YEAR FLOODPLAIN
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING OVER HEAD LINE
- EXISTING TREELINE
- EXISTING FENCE
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- LIMIT OF DISTURBANCE

DEVELOPER
P52ES 1755 HENRYTON RD PHASE 1 LLC
P52ES 1755 HENRYTON RD PHASE 2 LLC
ATTN: SEAN REANDY

OWNER
AUSTIN K. HORMAN
1730 HENRYTON ROAD
MARRIOTTVILLE, MD 21104
PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
396 SPRING FIVE AVE.
SUITE 2 SUMMIT, NJ 07901

NO.	REVISION	DATE
1	ISSUE PLANS TO RELocate THE MICRO-BIORETENTION FACILITIES AND TO REVEAL THE DEMONSTRATION	6-10-21

SITE DEVELOPMENT PLAN
FOREST CONSERVATION PLAN

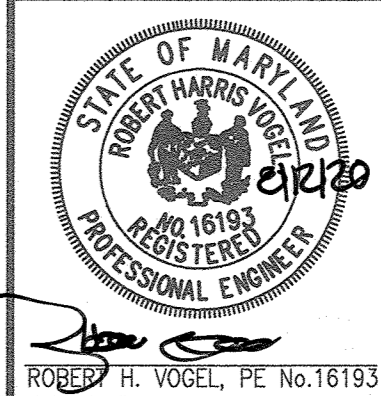
HENRYTON SOLAR
1825 SAND HILL ROAD
LIBER 18078 FOLIO 386

TAX MAP: 10 BLOCK, 19
3RD ELECTION DISTRICT
ZONED: RR-DEO
PARCEL 18
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

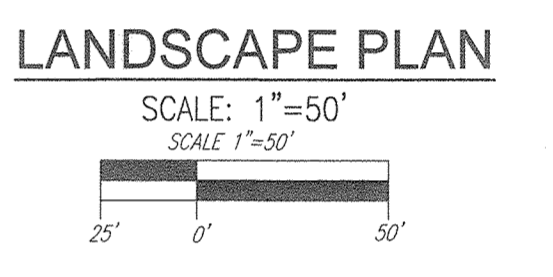


DESIGN BY: RHY
DRAWN BY: RVTG
CHECKED BY: RHY
DATE: AUGUST 2020
SCALE: AS SHOWN
W.O. NO.: 40493

PROFESSIONAL CERTIFICATE
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: 08-31-2022



- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING PAVING
 - CENTRELINE OF EXISTING STREAM
 - EXISTING UTILITY POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - EXISTING TRENCH
 - EXISTING FENCE
 - PROPOSED WOOD FENCE
 - PROPOSED CHAIN LINK FENCE
 - PROPOSED TREELINE
 - EXISTING SPECIMEN TREE
 - PROPOSED MICRO-BIORETENTION
 - EXISTING WETLANDS
 - EXISTING WETLAND BUFFER
 - EX. PUBLIC 100-YEAR FLOOD PLAN
 - PERIMETER OR STREET TREE - PLANTING OBLIGATION



SPECIMEN TREE CHART

KEY	DESCRIPTION	CONDITION	COMMENTS
ST-1	43" POPLAR	GOOD	TO REMAIN
ST-2	33" POPLAR	POOR MAJOR TRUNK ROT	TO REMAIN
ST-3	38" OAK	GOOD	TO REMAIN
ST-4	40" POPLAR	FAR LIMB DIEBACK	TO REMAIN
ST-5	35" POPLAR	GOOD	TO REMAIN
ST-6	29" POPLAR	GOOD	TO REMAIN

DEVELOPER
 P52ES 1755 HENRYTON RD PHASE 1 LLC
 P52ES 1755 HENRYTON RD PHASE 2 LLC
 ATTN: SEAN REANEY

OWNER
 AUSTIN K. HORMAN
 1730 HENRYTON ROAD
 MARRIOTTSVILLE MD 21104
 PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
 396 SPRING FIELD AVE.,
 SUITE 2 SUMMIT, NJ 07901

NO.	REVISION	DATE
1	REVISE PLAN TO RELOCATE THE MICRO-BIORETENTION PACKAGES AND TO REVISE THE DRAINAGE CURBS	6-10-21

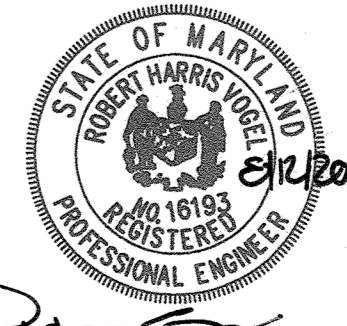
SITE DEVELOPMENT PLAN
LANDSCAPE PLAN

HENRYTON SOLAR
 1825 SAID HILL ROAD
 LIBER 18078 FOLIO 386

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



DESIGN BY: RHV
 DRAWN BY: RYTC
 CHECKED BY: RHV
 DATE: AUGUST 2020
 SCALE: AS SHOWN
 W.O. NO.: 40493

PROFESSIONAL CERTIFICATE
 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: 09-27-2022

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

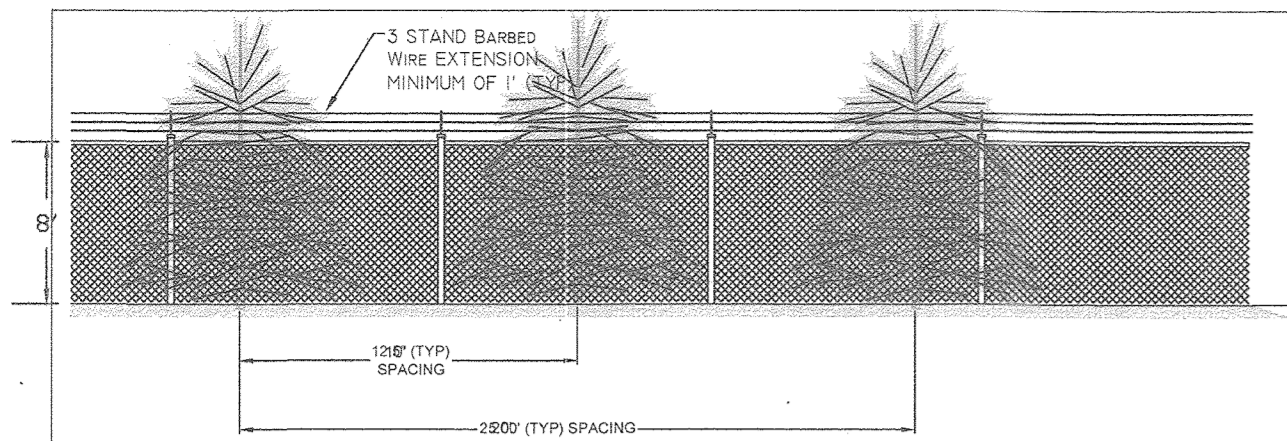
Chad Clark 8-28-20
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

John Conroy 10-5-20
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR

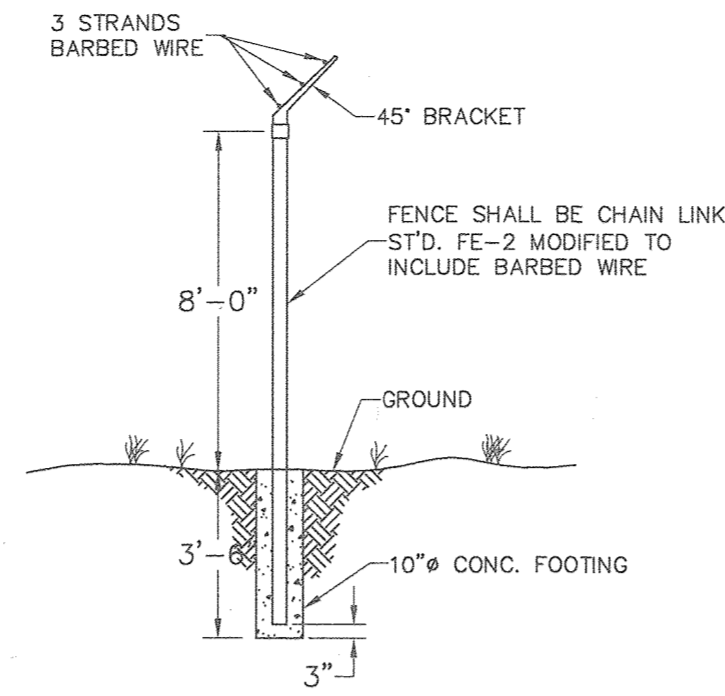
DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A 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.

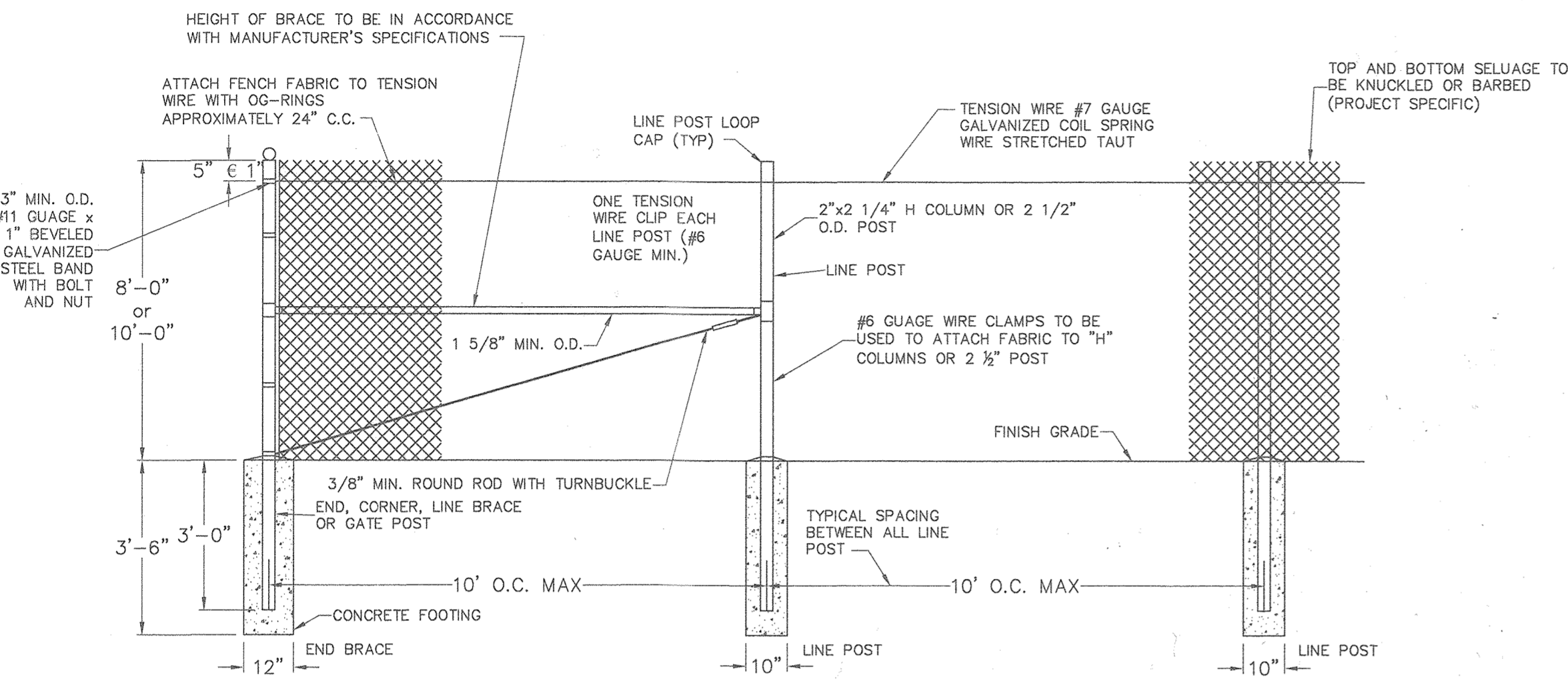
Robert H. Vogel 8-12-20
 SIGNATURE OF DEVELOPER DATE



CHAINLINK FENCE DETAIL
N.T.S.

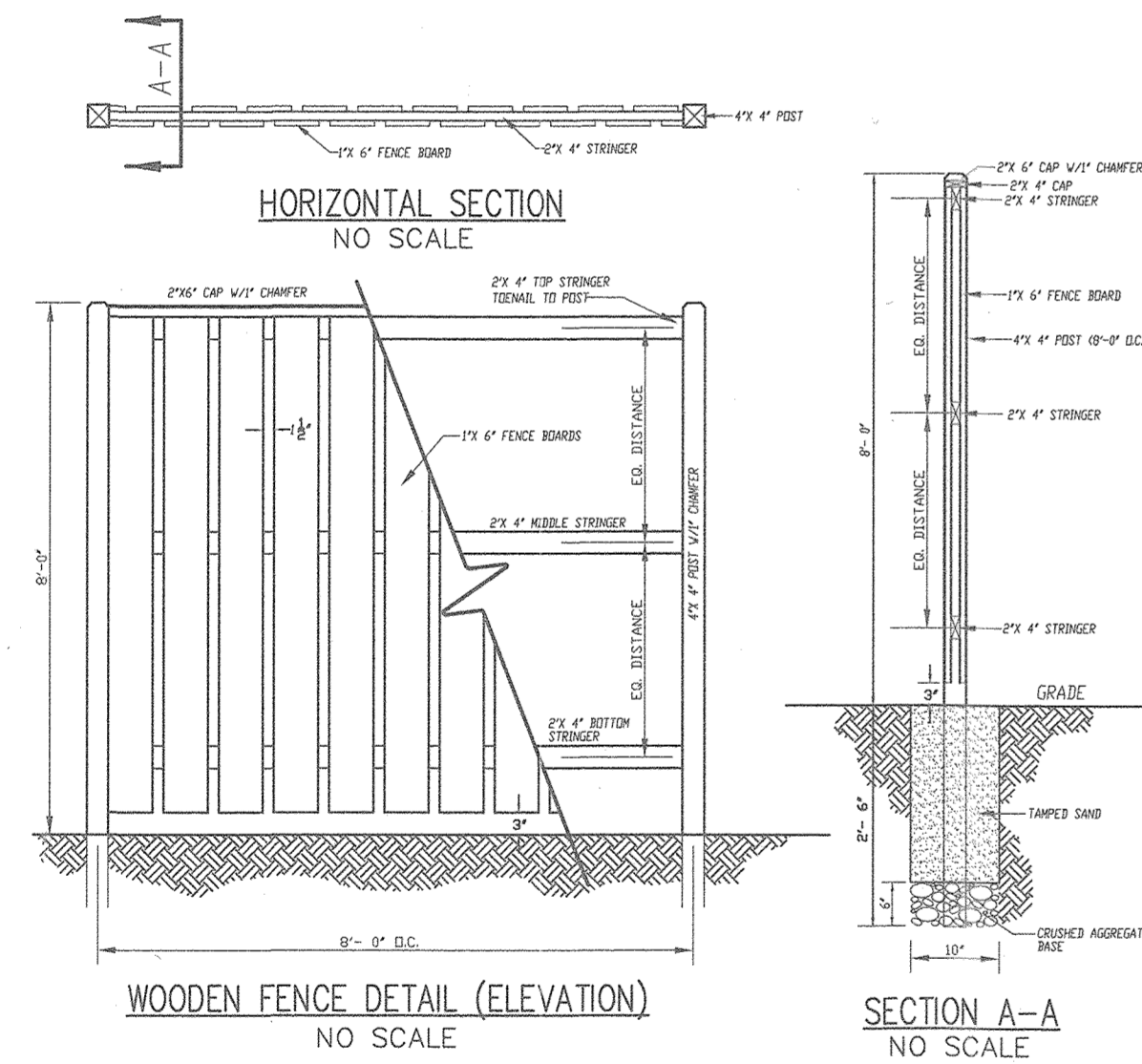


STD FENCE DETAIL FE-2A MOD.
NO SCALE



STANDARD 8' CHAIN LINK FENCE
NO SCALE

- NOTE:
1. OWNER SPECIFIES EITHER BOTTOM TENSION WIRE, BOTTOM RAIL OR NEITHER
2. CHAIN LINK EITHER PVC VINYL CLAD OR GALVANIZED (PER PROJECT)



WOODEN FENCE DETAIL (ELEVATION)
NO SCALE

SECTION A-A
NO SCALE

NOTES:

- SOUTHERN FENCE SHALL BE CHAIN LINK INSTALLED AT A MINIMUM OF 8' IN HEIGHT, WITH A MINIMUM OF 1" TOPER UTILIZING AT LEAST 3 STRANDS OF BARBED WIRE.
- REMAINING FENCE SHALL BE BOARD ON BOARD WOOD PRIVACY FENCE ALONG THE REMAINING CONDITIONAL USE BOUNDARY INSTALLED AT A MINIMUM OF 8' IN HEIGHT, WITH A MINIMUM OF 1" TOPER UTILIZING AT LEAST 3 STRANDS OF BARBED WIRE.
- TYPE 'D' BUFFER TREES SHALL CONSIST OF A DOUBLE ROW OF OFFSET EVERGREEN TREES PLANTED AT INTERVALS OF 10' ON CENTER, ROWS OFFSET 15'; AND DECIDUOUS TREES PLANTED AT 60' ON CENTER.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 9-28-20

Director
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10-5-20

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A 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.

Signature
SIGNATURE OF DEVELOPER
DATE: 8-12-20

GENERAL NOTES

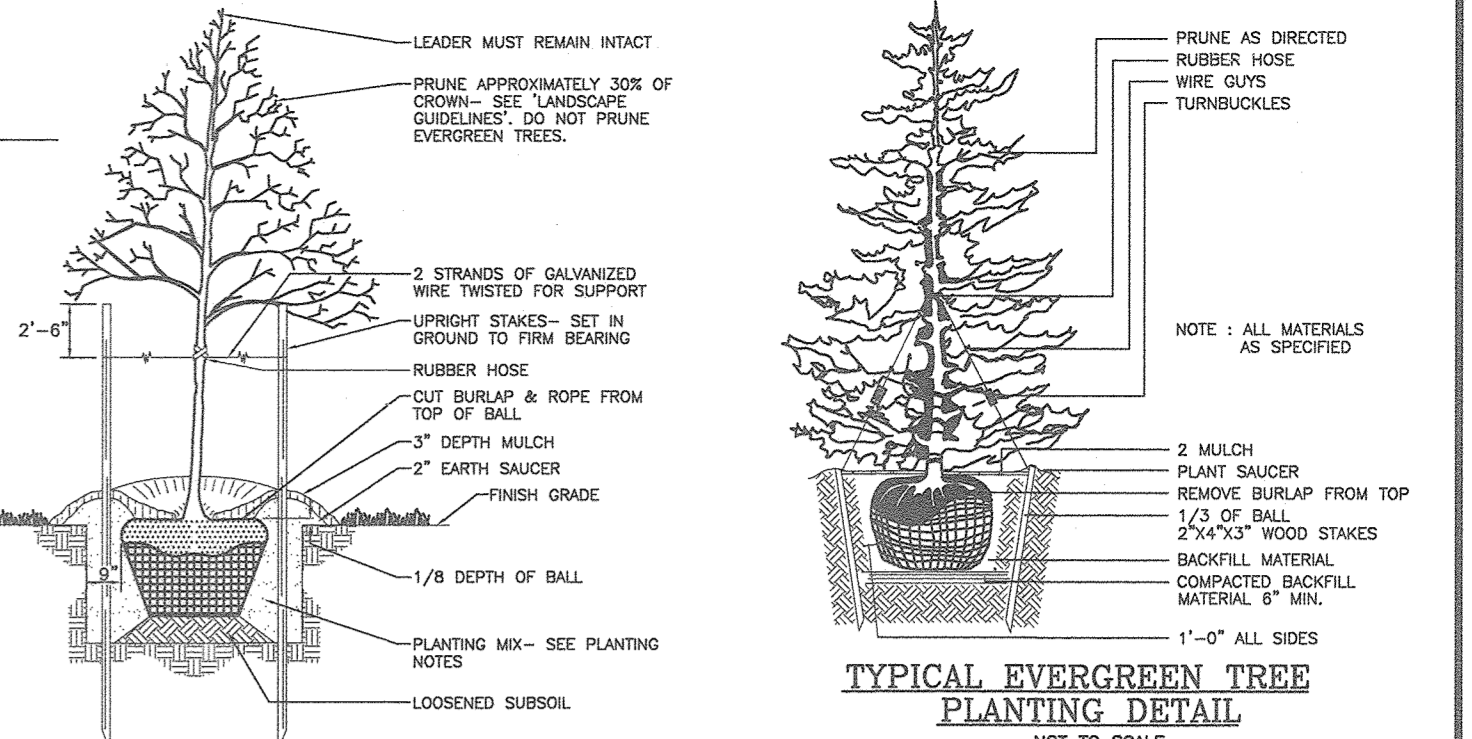
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
A FINANCIAL SURETY IN THE AMOUNT OF \$89,000 FOR THE REQUIRED LANDSCAPING (REQUIRED 58 SHADE TREES \$17,400, AND 344 EVERGREEN TREES \$51,600) SHALL BE POSTED WITH THE FINAL DEVELOPER'S AGREEMENT.
- IN A LETTER AND PLAN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED JANUARY 10, 2019 AND JANUARY 1, 2019 MR. JOHN CANOLES IDENTIFIED THE ONSITE FOREST, WETLANDS AND STREAMS.
- MR. CANOLES IDENTIFIED SIX (6) SPECIMEN TREES. NO SPECIMEN TREES SHALL BE DISTURBED.
- 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

- 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.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- 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.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.
- SURETY FOR THE PROPOSED LANDSCAPING SHALL BE BASED ON THE NUMBER OF PLANTINGS REQUIRED.

NOTES

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE MICHIGAN METROPOLITAN AREAS" FOR ALL MATERIAL PRODUCT AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO MULCH & BURLAP.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWERAGE EASEMENT.



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER
NOT TO SCALE

TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

SCHEDULE A PERIMETER LANDSCAPE EDGE					
CATEGORY	ADJACENT TO ROADWAYS AND PERIMETER PROPERTIES				TOTAL
	1	2	3	4	
PERIMETER/FRONTAGE DESIGNATION	D	D	D	D	
LANDSCAPE TYPE					
FRONTAGE/PERIMETER	838	885	988	810	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED					
SHADE TREES	160 = 14	180 = 15	180 = 15	180 = 14	58
EVERGREEN TREES	110 = 84	110 = 89	110 = 90	110 = 81	344
SHRUBS	-	-	-	-	-
NUMBER OF PLANTS PROVIDED					
SHADE TREES	14	15	15	14	58
EVERGREEN TREES	84	89	90	81	344
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-
EX. SPECIMEN TREES TO REMAIN	-	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED					

LANDSCAPE SCHEDULE NOTES:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HED PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- 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 FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

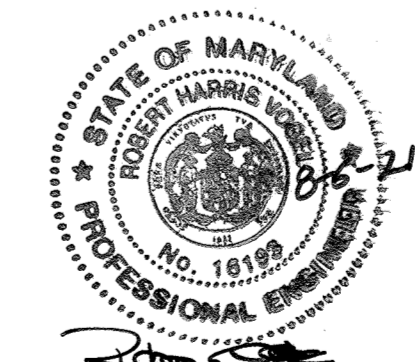
PERIMETER LANDSCAPE EDGE LANDSCAPE SCHEDULE				
KEY	QUAN	BOTANICAL NAME	SIZE	REM.
SHADE				
AR	29	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL.	B & B
BN	14	BETULA NIGRA HERITAGE HERITAGE CLUMP BIRCH	2 1/2" -3" 1/2 CAL.	B & B
AG	15	ACER GINNALA AMUR MAPLE	2 1/2" -3" 1/2 CAL.	B & B
EVERGREEN				
PS	344	PINUS STROBUS EASTERN WHITE PINE	6'-8" HGT.	B & B

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.

DEVELOPER
P52ES 1755 HENRYTON RD PHASE 1 LLC
P52ES 1755 HENRYTON RD PHASE 2 LLC
ATTN: SEAN REANEY

OWNER
AUSTIN K. HORMAN
1730 HENRYTON ROAD
MARRIOTTVILLE MD 21104
PHONE: 410-442-1831

C/O NAUTILUS SOLAR ENERGY
396 SPRING FIELD AVE.,
SUITE 2 SUMMIT, NJ 07901



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.

Signature
P.E. NAME
DATE: 8-6-21

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
LANDSCAPE
NOTES AND DETAILS

HENRYTON SOLAR
1825 SAND HILL ROAD
LIBER 18078 FOLIO 386

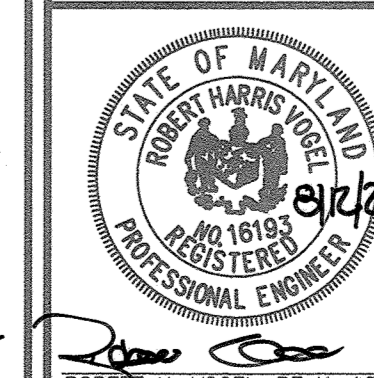
TAX MAP: 10 BLOCK: 19
3RD ELECTION DISTRICT

ZONED: RR-DEO
PHASE 1B
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP

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PROFESSIONAL CERTIFICATE
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: 09-27-2022

DESIGN BY: RHV
DRAWN BY: RVTG
CHECKED BY: RHV
DATE: AUGUST 2020
SCALE: AS SHOWN
W.O. NO.: 40493

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NO AS-BUILT INFORMATION ON THIS SHEET