Howard County Department Of Planning And Zoning
3430 Courthouse Drive ■ Ellicott City, Maryland 21043 ■ 410-313-2350

Marsha S. McLaughlin, Director

www.howardcountymd.gov
FAX 410-313-3467
TDD 410-313-2323

October 11, 2012

Mr. Warren Woo-Project Manager
BITHENERGY, Inc.
113 West Monument Street
Baltimore, MD. 21201

PHRA
ATTN: Mr. P. Stone
8818 Centre Park Drive
Columbia, MD. 21045

RE: WP-13-018 (Nixon Farms Solar-Phase I)

Dear Interested Parties:

The Department of Planning and Zoning hereby grants **approval** of the Supplemental Plan for WP-13-018 (Nixon Farms Solar-Phase I)for a 9.46-acre solar array farm located on Nixon's Farm Lane in the Third Election District of Howard County, Maryland. Signature of original drawings is complete.

Per the conditions of approval for WP-13-018, the following applies:

1. Within 1 year of waiver approval **(on or before August 28, 2013),** Forest Conservation of Phase 1 of the project will be addressed with the submission of the Site Development Plan for Phase 2 of the project which will address forest conservation requirements for both Phase 1 and 2; OR within 1 year of waiver approval **(on or before August 28, 2013)** a fee-in-lieu payment of $78,212.00(payable to the *Director of Finance of Howard County)* must be made to address the forest conservation obligation for Phase I of development consisting of a Limit of Disturbance of 9.46 acres (if a Site Development Plan for Phase 2 is not submitted within 1 year.)
Not yet completed

2. The LOD for Phase I of the project may Not exceed 9.46 acres as indicated on the waiver exhibit.
Reminder

3. A minimum landscape buffer (**Type 'C'**) shall be provided along the **entire** eastern portion of the solar array, along S00º31'59"W. This would equate to a buffer 953' in length (taking into account proposed credit areas) for a total of 24 shade trees and 48 evergreens for a total surety of $14,400.00.
Not yet completed

4. A landscape surety of $14,400.00 will be posted as part of the developer's agreement for this project.
Completed

5. A corrected waiver exhibit, (including an amended and signed (by the developer/builder) landscape plan which reflects changes to buffer type ('C' buffer-entire length of perimeter), plant lists, surety notes) and addressing all attached comments from the Division of Land Development shall be submitted to Planning and Zoning within 2 weeks of waiver approval (**on or before September 11, 2012).**
Completed

6. In accordance with the attached comments from the Development Engineering Division dated August 23, 2012, the developer agreements for the construction and maintenance of the stormwater management facility shall be executed by the developer and returned to the County (Real Estate Services Division-DPW) to be executed simultaneously with the signing of the Supplemental Plan for the Waiver Petition, within 45 days of waiver approval (**on or before October 12, 2012).**
Completed

7. The signature approved Supplemental Plan (Waiver Plan Exhibit) shall serve as the substitution for a Site Development Plan for development of Phase 1 for this project. All improvements shown on the signed plan exhibit must be constructed per the signature approved Supplemental Plan exhibit.
Reminder

8. The waiver petition shall apply only to the uses and structures described and as shown on the signature approved Supplemental Plan exhibit and not to any other activities, uses, structures or additions to this property.
Reminder

9. Compliance with all applicable County and State Regulations including all necessary permits from the Department of Inspections, Licenses and Permits (DILP) prior to initiating any on-site development is required. The signature approved Supplemental Plan exhibit shall be submitted for any permits required from DILP.
Reminder

If you have any questions, please contact me at (410) 313-2350 or email at tmaenhardt@howardcountymd.gov.

Sincerely,

Kent Sheubrooks, Chief
Division of Land Development

KS/tkm/waivers 2012/Nixon Farms Solar supp plan WP-13-018 signed 10-11-12

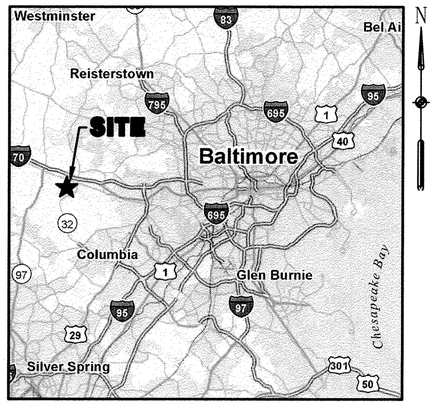
cc: Research
DED
Zoning-C. Hamilton
RES-T. Hackett
DILP-B. Francis
M. McLaughlin

NIXON FARMS SOLAR PHASE 1

SITE DEVELOPMENT PLAN

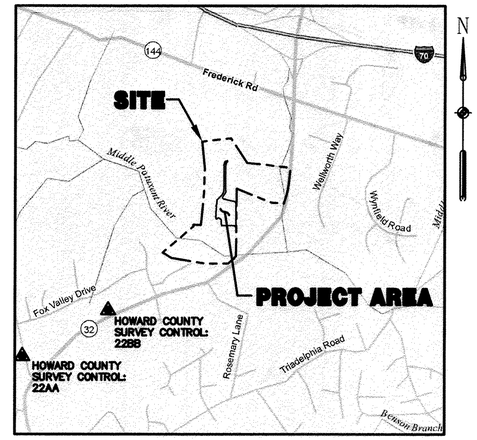
2800 NIXON'S FARM LANE

WEST FRIENDSHIP, MD 21792



VICINITY MAP

10 5 0 10 20
GRAPHIC SCALE IN MILES



ADC MAP COORDINATES: MAP 10 – GRID C4 – N 535,000, E 810,000

LOCATION MAP

2000 1000 0 2000 4000
GRAPHIC SCALE IN FEET

DESIGN NARRATIVE

NATURAL RESOURCE PROTECTION AND ENHANCEMENT
THE PROJECT DOES NOT IMPACT ADJACENT NATURAL RESOURCES. NEARBY TREES WILL NOT BE REMOVED AND A NEARBY NON-TIDAL WETLAND AND ITS BUFFER WILL NOT BE IMPACTED. ADDITIONAL PLANTINGS WILL BE PROVIDED BETWEEN THE SITE AND ADJACENT SUBDIVISION TO CREATE A LANDSCAPE BUFFER.

MAINTENANCE OF NATURAL FLOW PATTERNS
THE PROJECT DOES NOT ALTER NATURAL DRAINAGE PATTERNS.

REDUCTION OF IMPERVIOUS AREAS
THE NEW IMPERVIOUS AREA ASSOCIATED WITH THE PROJECT IS MINIMAL. THE PROPOSED ACCESS ROADS ARE AS NARROW AS POSSIBLE TO REDUCE IMPERVIOUSNESS AND THE SUPPORT SYSTEM FOR THE SOLAR PANELS CONSISTS OF ONLY AUGERED 8 INCH TUBES. THERE ARE NO ADDITIONAL FOUNDATION ELEMENTS ON THE SURFACE.

INTEGRATION OF EROSION AND SEDIMENT CONTROL IN THE SWM STRATEGY
THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES ARE COMPATIBLE WITH THE PROPOSED ESD PRACTICES.

IMPLEMENTATION OF ESD PLANNING TECHNIQUES AND PRACTICES
THE PROPOSED PROJECT WILL UTILIZE NON-ROOFTOP DISCONNECTION CREDITS FOR A PORTION OF THE REQUIRED ESD VOLUME. FOR ANY REMAINING VOLUME WHERE DISCONNECTION CANNOT BE UTILIZED DUE TO STEEP SLOPES, EXISTING IMPERVIOUS AREAS ON SITE WILL BE REMOVED TO OFFSET THE NEW IMPERVIOUS BEING ADDED.

Table 5.1 Natural Resources and the Corresponding Regulatory Authorities

FEDERAL		STATE		LOCAL	
Wetlands	Shown	Tidal and Non-Tidal Wetlands	Shown	Steep Slopes	Shown
Major Waterways	Not Present	Wetlands of Special State Concern	Not Present	Highly Erodible Soils	Shown
Floodplains	Not Present	Wetland Buffers	Shown	Enhanced Stream Buffers	Not Present
		Stream Buffers	Not Present	Topography/Slopes	Shown
		Perennial Streams	Not Present	Springs	Not Present
		Floodplains	Not Present	Seeps	Not Present
		Forests	Shown	Intermittent Streams	Not Present
		Forest Buffers	Not Present	Vegetative Cover	Shown
		Critical Areas	Not Present	Soils	Shown
				Bedrock/Geology	Noted
				Existing Drainage Areas	Shown

HYDROLOGIC SOIL GROUP – HOWARD COUNTY, MARYLAND*

MAP UNIT SYMBOL	MAP UNIT NAME	HSG RATING	k RATING
GgA	Glenig loam, 0–3% Slopes	B	0.20
GgB	Glenig loam, 3–8% Slopes	B	0.20
GgC	Glenig loam, 8–15% Slopes	B	0.20
GmB	Glenville silt loam, 3–8% Slopes	C	0.37
GoB	Glenville–Codorus silt loams, 0–8% Slopes	C	0.37
MaC	Manor loam, 8–15% Slopes	B	0.24

*Soils information provided from USDA NRCS Web Soil Survey

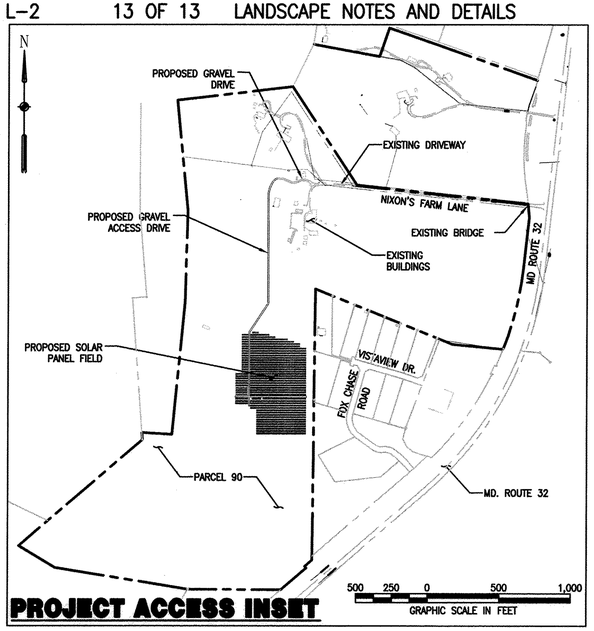
NOTE:

1. 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.
2. THE SYSTEM OF COORDINATES USED BY HOWARD COUNTY IS BASED IN THE FOLLOWING DATUMS AND PROJECTIONS:
   - HORIZONTAL: MARYLAND NAD83
   - VERTICAL: NAVD88

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATION IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) – 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM AN AERIAL SURVEY WITH CONTOUR INTERVALS PREPARED BY VIRGINIA RESOURCE MAPPING, INC. DATED JANUARY 2005 AND SUPPLEMENTED BY FIELD SURVEY PREPARED BY PHR&A DATED JANUARY 2005.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 22AA AND 22BB WERE USED FOR THIS PROJECT.
8. WATER IS PRIVATE.
9. SEWER IS PRIVATE.
10. STORMWATER MANAGEMENT IS PROVIDED VIA A COMBINATION OF A PRIVATE MICRO-BIORETENTION FACILITY AND PRIVATE NON-ROOFTOP DISCONNECTIONS AND WILL BE OWNED AND MAINTAINED BY 2800 NIXONS FARM LANE. LLC.
11. EXISTING UTILITIES ARE BASED ON THE SURVEY PREPARED BY VIRGINIA RESOURCE MAPPING, INC. DATED JANUARY 2005 AND AND BY FIELD SURVEY PREPARED BY PHR&A DATED JANUARY 2005.
12. THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY PHR&A, DATED MAY 2005 AND WAS APPROVED IN NOVEMBER 2005.
13. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY McCARTHY & ASSOCIATES, INC., DATED MARCH 2005, AND WAS APPROVED IN MARCH 2005.
14. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.

DRAWING NUMBER	SHEET NUMBER	DRAWING TITLE
T-1	1 OF 13	TITLE SHEET
C-1	2 OF 13	EXISTING CONDITIONS I
C-2	3 OF 13	EXISTING CONDITIONS II
C-3	4 OF 13	STORMWATER MANAGMENT PLAN I
C-4	5 OF 13	STORMWATER MANAGMENT PLAN II
C-4A	6 OF 13	STORMWATER MANAGMENT PLAN III
C-5	7 OF 13	STORMWATER MANAGEMENT DETAILS AND SPECIFICATIONS
C-6	8 OF 13	EROSION AND SEDIMENT CONTROL PLAN I
C-7	9 OF 13	EROSION AND SEDIMENT CONTROL PLAN II
C-8	10 OF 13	EROSION AND SEDIMENT CONTROL DETAILS
C-9	11 OF 13	EROSION AND SEDIMENT CONTROL NOTES AND SPECIFICATIONS
L-1	12 OF 13	LANDSCAPE PLAN
L-2	13 OF 13	LANDSCAPE NOTES AND DETAILS



PROJECT ACCESS INSET

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

SITE ANALYSIS

SITE AREA:	96.920 AC
WETLAND AREA:	18.17 AC
WETLAND BUFFER AREA:	2.90 AC
FLOODPLAIN AREA:	N/A
FLOODPLAIN BUFFER AREA:	N/A
FORESTED AREA:	34.43 AC
SLOPES > 15% AREA:	21.99 AC
LIMIT OF DISTURBANCE AREA:	9.46 AC
PROPOSED SITE USE:	SOLAR PANEL ARRAY
GREEN OPEN AREA:	122.10 AC
PROPOSED IMPERVIOUS AREA:	0.50 AC

LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- 49 EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- WET WET EX. WETLAND
- EX. BUILDING
- W EX. WELL
- EX. UTILITY POLE
- EX. IRON PIN
- SLOPE 15% TO 25%
- SLOPE GREATER THAN 25%
- GgC / GgB SOIL TYPE BOUNDARY
- EX. TREE
- PROP. FENCE (TO BE INSTALLED IN FUTURE PHASE)
- PROP. CONTOURS
- LOD PROP. LIMIT OF DISTURBANCE
- DF PROP. DIVERSION FENCE
- SSF PROP. SUPER SILT FENCE
- UE PROP. UNDERGROUND ELECTRIC
- SD PROP. DIVERSION PIPE
- PROP. SOLAR PANEL
- SWM DISCONNECTION AREA
- SWM NON-DISCONNECTION AREA
- MOUNTABLE BERM
- EROSION AND SEDIMENT CONTROL DRAINAGE AREA LIMIT
- PROP. EARTH DIKE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/3/12
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12
DIRECTOR — DATE 10/9/12

ADDRESS CHART	
LOT/PARCEL #	STREET ADDRESS
P.90	2800 NIXON'S FARM LANE

PERMIT INFORMATION CHART					
Subdivision Name			Section/Area N/A		Lot/Parcel No. 90
Plat # or L/F N/A	Grid # 16/17	Zoning RC	Tax Map No. 15	Elect District 3	Census Tract
Water Code N/A			Sewer Code N/A		

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453 EXPIRATION DATE: JULY 02, 2013

SEAL

BLOCK: N/A PARCEL: 0080 ELECTION DISTRICT: 3
GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015

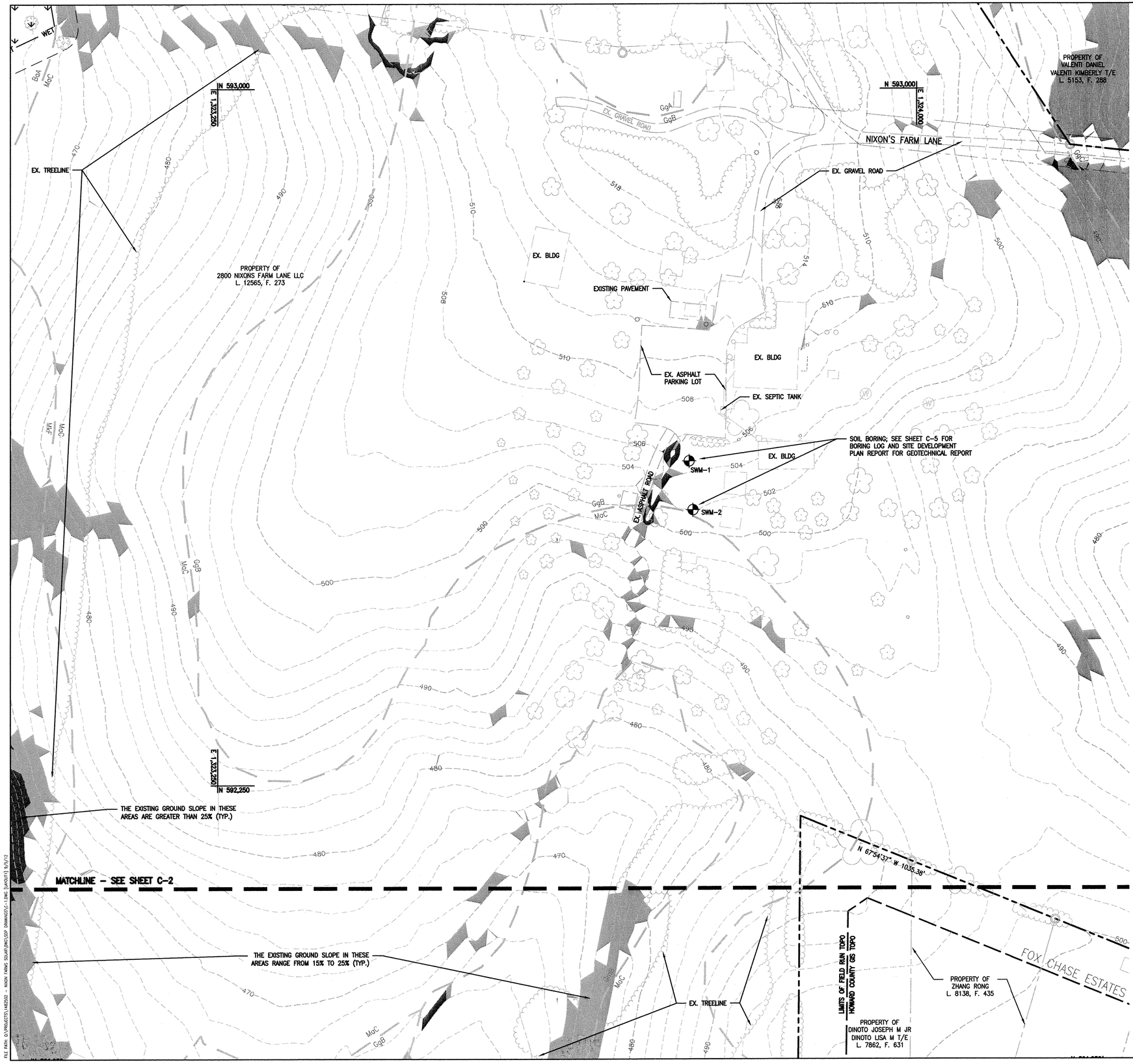
NIXON FARMS SOLAR PHASE 1
2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

TITLE SHEET

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JAP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	T-1
SHEET NUMBER	1 OF 13

WP-13-018



LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- 490 EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- WET WET EX. WETLAND
- EX. BUILDING
- W EX. WELL
- EX. UTILITY POLE
- EX. IRON PIN
- SLOPE 15% TO 25%
- SLOPE GREATER THAN 25%
- GgC / GgB SOIL TYPE BOUNDARY
- EX. TREE
- SWM-1 SOIL BORING LOCATION

SITE KEY (NOT TO SCALE)

BENCHMARK INFORMATION

1. HOWARD COUNTY SURVEY CONTROL: 22BB
   ELEVATION 538.976
   N 588,502.739 E 1,317,897.957
   LOCATION IS 24 FT. FROM FACE OF CURB AT THE INTERSECTION OF MD RT.32 AND RIVER VALLEY CHASE.
2. HOWARD COUNTY SURVEY CONTROL: 22AA
   ELEVATION 569.713
   N 587, 502.739 E 1,317,897.957
   LOCATION IS 4 FT. FROM EDGE OF MD RT. 32 PAVING, 0.45 MILES EAST OF PFEFFERKORN ROAD AND 0.25 MILES WEST OF IVORY ROAD.
3. THE SYSTEM OF COORDINATES USED BY HOWARD COUNTY IS BASED ON THE FOLLOWING DATUMS AND PROJECTIONS:
   - HORIZONTAL: MARYLAND NAD83
   - VERTICAL: NAVD88

DATA SOURCES

1. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH CONTOUR INTERVALS PREPARED BY VIRGINIA RESOURCE MAPPING, INC. DATED JANUARY 2005.
2. ALL INFORMATION LOCATED OUTSIDE OF THE LIMIT OF FIELD RUN TOPO LINE HAS BEEN TAKEN FROM THE HOWARD COUNTY GIS DATABASE.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/3/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/9/12

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

50 25 0 50 100
GRAPHIC SCALE IN FEET

NO.	DATE	BY	DESCRIPTION
REVISIONS			

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15452, EXPIRATION DATE: JULY 02, 2013.

SEAL

BLOCK: N/A
PARCEL: 0090
ELECTION DISTRICT: 3

GRID: 16, 17, 22
ZONING: RC-DEO
TAX MAP: 0015

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

EXISTING CONDITIONS I

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-1
SHEET NUMBER	2 OF 13

WP-13-018

MATCHLINE - SEE SHEET C-1

N 591,950
E 1,323,050

EX. TREELINE

LIMITS OF FIELD RUN TOPO
HOWARD COUNTY GIS TOPO

PROPERTY OF
ZHANG RONG
L. 8138, F. 435

PROPERTY OF
DINOTO JOSEPH M JR
DINOTO LISA M T/E
L. 7862, F. 631

EX. BLDG

N 591,950
E 1,324,200

PROPERTY OF
RECCE ANTHONY J JR.
RECCE AMY E T/E
L. 8238, F. 31

PROPERTY OF
SANDHU GURMEL SINGH
KAUR JASVIR
L. 13147, F. 128

PROPERTY OF
ROSHAN MOHAMMAD Y
ROSHAN NAFISA
L. 8255, F. 672

THE EXISTING GROUND SLOPE IN THESE AREAS RANGE FROM 15% TO 25% (TYP.)

THE EXISTING GROUND SLOPE IN THESE AREAS ARE GREATER THAN 25% (TYP.)

S 00°31'59" W 1900.88'

25' WETLAND BUFFER

EX. TREELINE

EX. TREELINE

EX. TREELINE

EX. TREELINE

LIMITS OF FIELD RUN TOPO
HOWARD COUNTY GIS TOPO

PROPERTY OF
HOWARD COUNTY
L. 6872, F. 441

PROPERTY OF
HOWARD COUNTY
L. 6872, F. 284

PROPERTY OF
FOX CHASE ESTATES HOA
L. 6572, F. 441

E 1,324,200
N 591,050

FOX CHASE ESTATES

CEDARVIEW COURT

FOX CHASE ROAD

N

LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- EX. WETLAND
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- EX. WELL
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- SLOPE 15% TO 25%
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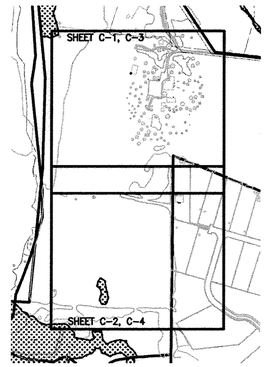
SITE KEY (NOT TO SCALE)



BENCHMARK INFORMATION

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   N 588,502.739 E 1,317,897.957
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DATA SOURCES

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APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/3/12

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
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SEAL

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3

GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015

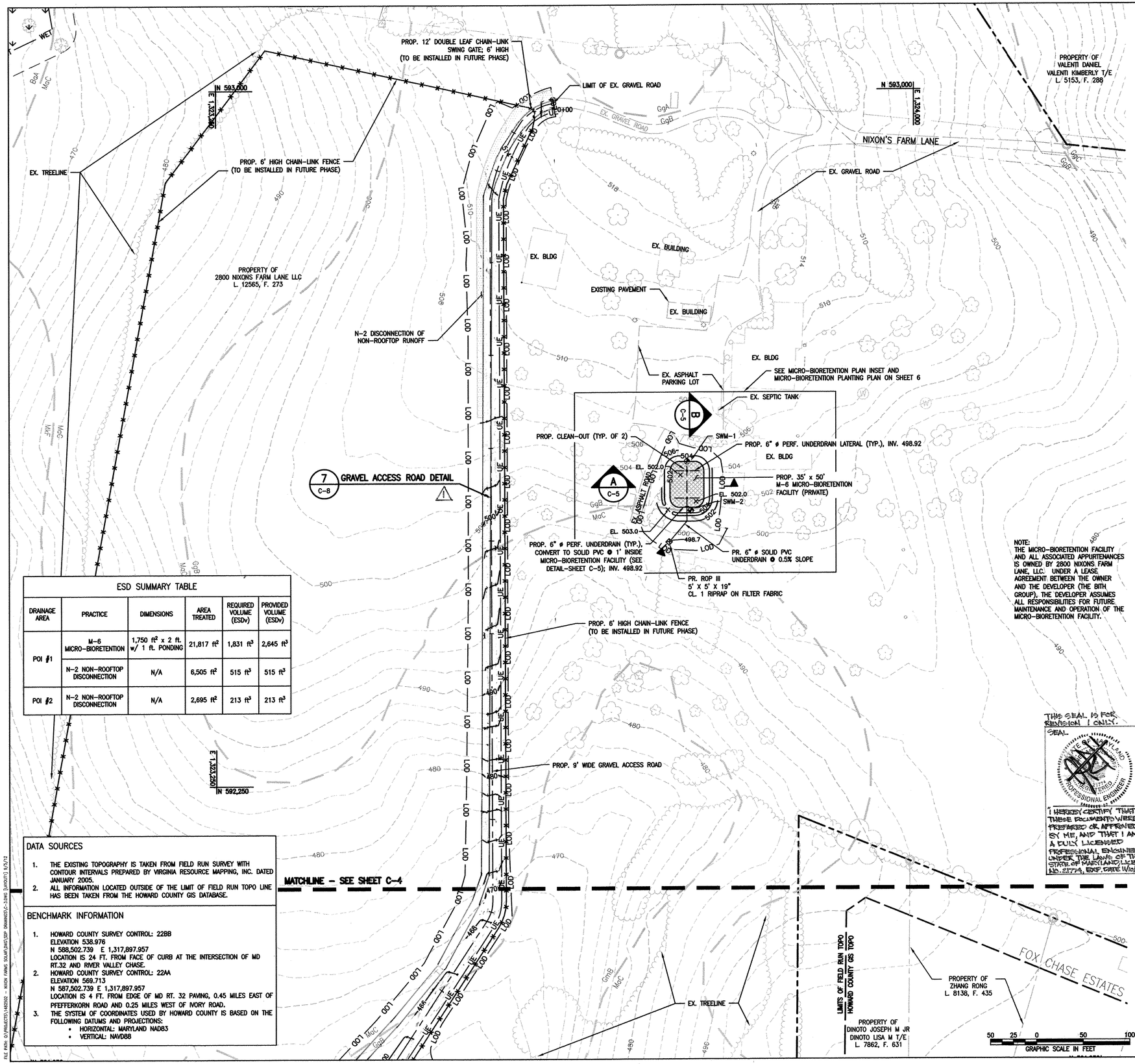
EXISTING CONDITIONS II

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JAP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-2
SHEET NUMBER	3 OF 13

WP-13-018



ESD SUMMARY TABLE

DRAINAGE AREA	PRACTICE	DIMENSIONS	AREA TREATED	REQUIRED VOLUME (ESDv)	PROVIDED VOLUME (ESDv)
POI #1	M-6 MICRO-BIORETENTION	1,750 ft² x 2 ft. w/ 1 ft. PONDING	21,817 ft²	1,831 ft³	2,645 ft³
	N-2 NON-ROOFTOP DISCONNECTION	N/A	6,505 ft²	515 ft³	515 ft³
POI #2	N-2 NON-ROOFTOP DISCONNECTION	N/A	2,695 ft²	213 ft³	213 ft³

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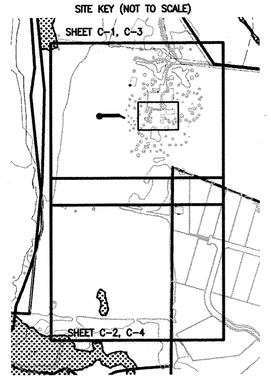
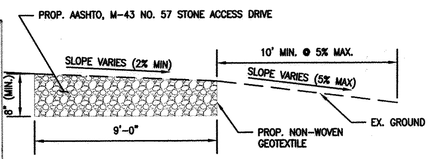
   - VERTICAL: NAVD88

LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- 490 EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- WET EX. WETLAND
- EX. BUILDING
- W EX. WELL
- EX. UTILITY POLE
- EX. IRON PIN
- SLOPE 15% TO 25%
- SLOPE GREATER THAN 25%
- GgC / GgB SOIL TYPE BOUNDARY
- EX. TREE
- PROP. FENCE (TO BE INSTALLED IN FUTURE PHASE)
- PROP. CONTOURS
- LOD PROP. LIMIT OF DISTURBANCE
- DF PROP. DIVERSION FENCE
- SSF PROP. SUPER SILT FENCE
- UE PROP. UNDERGROUND ELECTRIC
- SD PROP. DIVERSION PIPE
- PROP. SOLAR PANEL
- SWM DISCONNECTION AREA
- SWM NON-DISCONNECTION AREA
- MOUNTABLE BERM
- EROSION AND SEDIMENT CONTROL DRAINAGE AREA LIMIT
- PROP. EARTH DIKE
- SWM-1 SOIL BORING LOCATION

SITE KEY (NOT TO SCALE)





GRAVEL DRIVE DISCONNECTION DETAIL
NOT TO SCALE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/9/12

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

NO.	DATE	BY	DESCRIPTION
1	9.11.13	JSH	REVISE ACCESS ROAD LOCATION

REVISIONS

SEAL

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453, EXPIRATION DATE: JULY 02, 2013.

GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015 BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

STORMWATER MANAGMENT PLAN I

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-3
SHEET NUMBER	4 OF 13

WP-13-018

FILE PATH: Q:\PROJECTS\14825\02 - NIXON FARMS SOLAR\DWG\SDP DRAWINGS\C-3.DWG [LAYOUT1] 9/5/12

MATCHLINE – SEE SHEET C-3

7 C-8 GRAVEL ACCESS ROAD DETAIL

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

N 591,950
E 1,323,050

EX. TREELINE

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

EX. BLDG

PROP. SOLAR PANELS (TYP.)

N-2 DISCONNECTION OF NON-ROOFTOP RUNOFF

PROP. 9' WIDE GRAVEL ACCESS ROAD

PROP. INVERTER

7 C-8 GRAVEL ACCESS ROAD DETAIL

25' WETLAND BUFFER

EX. TREELINE

EX. TREELINE

N-2 DISCONNECTION OF NON-ROOFTOP RUNOFF

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

EX. TREELINE

EX. TREELINE

PROP. LANDSCAPE AREA (SEE LANDSCAPE PLANS)

EX. TREELINE TO REMAIN AT PROP. LANDSCAPED AREA (TYP.)

LIMIT OF DISTURBANCE IS LOCATED ALONG THE TREELINE. DISTURBANCE TO EXISTING TREES IN THIS AREA SHALL BE AVOIDED.

LIMITS OF FIELD RUN TOPO HOWARD COUNTY GIS TOPO

S 00°31'59" W 1900.88'

LIMITS OF FIELD RUN TOPO HOWARD COUNTY GIS TOPO

PROPERTY OF ZHANG RONG L. 8138, F. 435

PROPERTY OF DINOTO JOSEPH M JR DINOTO LISA M T/E L. 7862, F. 631

N 591,950 E 1,324,200

PROPERTY OF REGGE ANTHONY J JR. REGGE AMY E T/E L. 8238, F. 31

PROPERTY OF SANDHU GURMEL SINGH KAUR JASVIR L. 13147, F. 128

PROPERTY OF ROSHAN MOHAMMAD Y ROSHAN NAFISA L. 8255, F. 672

PROPERTY OF HOWARD COUNTY L. 6872, F. 441

PROPERTY OF HOWARD COUNTY L. 6872, F. 284

PROPERTY OF FOX CHASE ESTATES HOA L. 6572, F. 441

N 591,050 E 1,324,200

FOX CHASE ESTATES

CEDARVIEW COURT

FOX CHASE ROAD

GRAPHIC SCALE IN FEET
50 25 0 50 100

N

LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- EX. WETLAND
- EX. BUILDING
- EX. WELL
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- SLOPE 15% TO 25%
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- EX. TREE
- PROP. FENCE (TO BE INSTALLED IN FUTURE PHASE)
- PROP. CONTOURS
- LOD — PROP. LIMIT OF DISTURBANCE
- DF — PROP. DIVERSION FENCE
- SSF — PROP. SUPER SILT FENCE
- UE — PROP. UNDERGROUND ELECTRIC
- SD — PROP. DIVERSION PIPE
- PROP. SOLAR PANEL
- SWM DISCONNECTION AREA

SITE KEY (NOT TO SCALE)

THIS SEAL IS FOR REVISION 1 ONLY.

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. 21714, EXP. DATE 8/10/13.

BENCHMARK INFORMATION

1. HOWARD COUNTY SURVEY CONTROL: 22BB
   ELEVATION 538.976
   N 588,502.739 E 1,317,897.957
   LOCATION IS 24 FT. FROM FACE OF CURB AT THE INTERSECTION OF MD RT.32 AND RIVER VALLEY CHASE.
2. HOWARD COUNTY SURVEY CONTROL: 22AA
   ELEVATION 569.713
   N 587,502.739 E 1,317,897.957
   LOCATION IS 4 FT. FROM EDGE OF MD RT. 32 PAVING, 0.45 MILES EAST OF PFEFFERKORN ROAD AND 0.25 MILES WEST OF IVORY ROAD.
3. THE SYSTEM OF COORDINATES USED BY HOWARD COUNTY IS BASED ON THE FOLLOWING DATUMS AND PROJECTIONS:
   - HORIZONTAL: MARYLAND NAD83
   - VERTICAL: NAVD88

DATA SOURCES

1. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH CONTOUR INTERVALS PREPARED BY VIRGINIA RESOURCE MAPPING, INC. DATED JANUARY 2005.
2. ALL INFORMATION LOCATED OUTSIDE OF THE LIMIT OF FIELD RUN TOPO LINE HAS BEEN TAKEN FROM THE HOWARD COUNTY GIS DATABASE.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/9/12

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

NO.	DATE	BY	DESCRIPTION
1	5.17.13	JSN	REVISE ACCESS ROAD LOCATION

REVISIONS

SEAL

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453, EXPIRATION DATE: JULY 02, 2013.

BLOCK: N/A
PARCEL: 0090
ELECTION DISTRICT: 3

GRID: GRID: 16, 17, 22
ZONING: RC-DEO
TAX MAP: 0015

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21794

STORMWATER MANAGMENT PLAN II

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

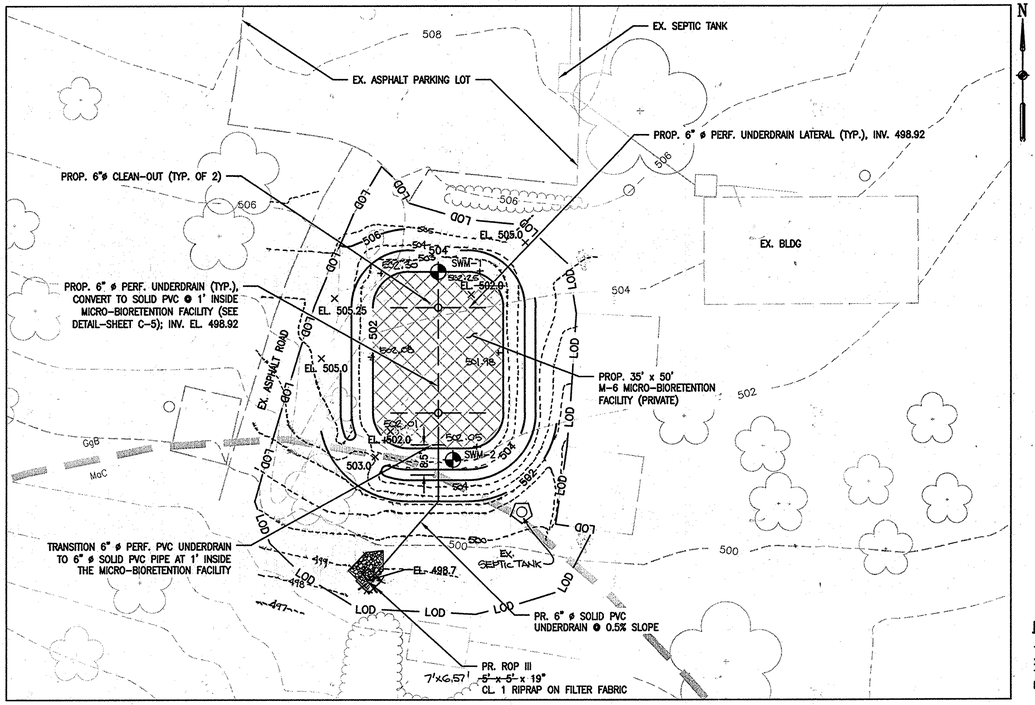
DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-4
SHEET NUMBER	5 OF 13

WP-13-018

FILE PATH: G:\PROJECTS\14825\2 - NIXON FARMS SOLAR\DWG\SP DRAWINGS\C-4.DWG [LAYOUT1] 9/21/12

MICRO-BIORETENTION PLAN INSET

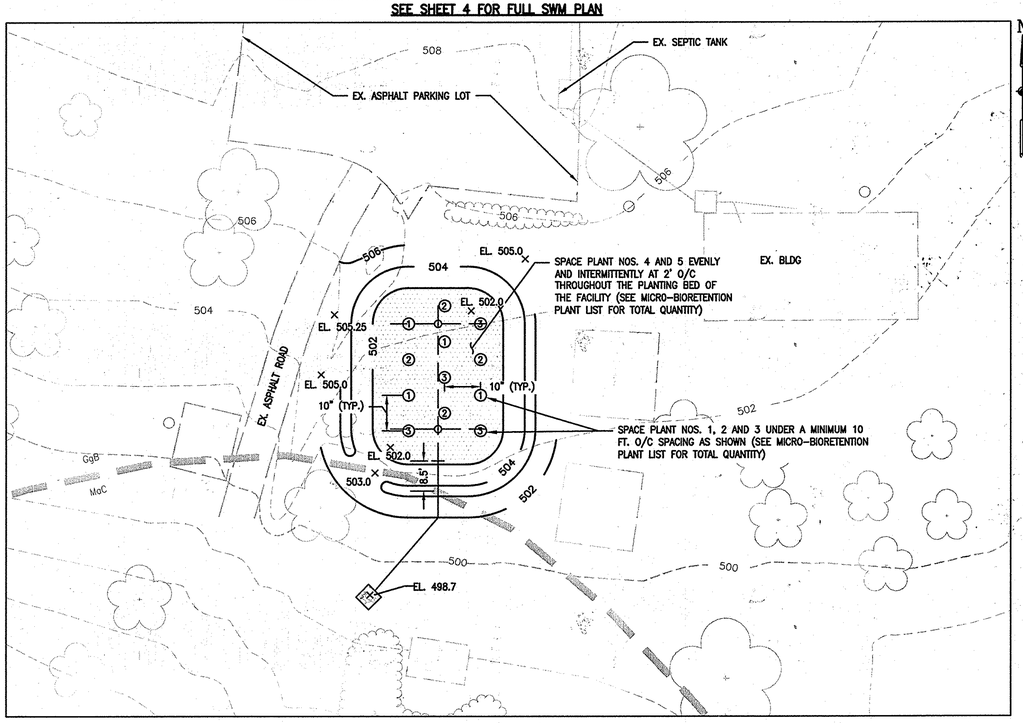
SEE SHEET 4 FOR FULL SWM PLAN



GRAPHIC SCALE IN FEET 20 10 0 20 40

MICRO-BIORETENTION PLANTING PLAN

SEE SHEET 4 FOR FULL SWM PLAN



GRAPHIC SCALE IN FEET 20 10 0 20 40

NOTE:

THE MICRO-BIORETENTION FACILITY AND ALL ASSOCIATED APPURTENANCES IS OWNED BY 2800 NIXONS FARM LANE, LLC. UNDER A LEASE AGREEMENT BETWEEN THE OWNER AND THE DEVELOPER (THE BITH GROUP), THE DEVELOPER ASSUMES ALL RESPONSIBILITY FOR FUTURE MAINTENANCE AND OPERATION OF THE MICRO-BIORETENTION FACILITY.

LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- 490 EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- EX. WETLAND
- EX. BUILDING
- EX. WELL
- EX. UTILITY POLE
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- EX. TREE
- PROP. FENCE (TO BE INSTALLED IN FUTURE PHASE)
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- LOD PROP. LIMIT OF DISTURBANCE
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- SSF PROP. SUPER SILT FENCE
- UE PROP. UNDERGROUND ELECTRIC
- DP PROP. DIVERSION PIPE
- PROP. SOLAR PANEL
- SWM DISCONNECTION AREA
- SWM NON-DISCONNECTION AREA
- MOUNTABLE BERM
- EROSION AND SEDIMENT CONTROL DRAINAGE AREA LIMIT
- PROP. EARTH DIKE
- SWM-1 SOIL BORING LOCATION
- ② PLANT ID NUMBER
- EL. 502.0 PROPOSED SPOT ELEVATION

BENCHMARK INFORMATION

1. HOWARD COUNTY SURVEY CONTROL: 22BB
   ELEVATION 538.976
   N 588,502.739 E 1,317,897.957
   LOCATION IS 24 FT. FROM FACE OF CURB AT THE INTERSECTION OF MD RT.32 AND RIVER VALLEY CHASE.
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   - HORIZONTAL: MARYLAND NAD83
   - VERTICAL: NAVD88

DATA SOURCES

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2. ALL INFORMATION LOCATED OUTSIDE OF THE LIMIT OF FIELD RUN TOPO LINE HAS BEEN TAKEN FROM THE HOWARD COUNTY GIS DATABASE.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE — PE No. 36896 DATE: 6/30/16

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. 36896, EXPIRATION DATE FEBRUARY 15, 2017.

AS-BUILT

MICRO-BIORETENTION PLANT LIST

PLANTING TYPE	PLANTING ID NO.	COMMON NAME	SCIENTIFIC NAME	FORM	MINIMUM SPACING	INDICATOR STATUS	QUANTITY
SHRUBS							
	1	BUTTONBUSH	Cephalanthus occidentalis	1 GALLON	10' OC	OBL	4
	2	BAYBERRY	Myrica pennsylvanica	1 GALLON	10' OC	FAC	4
HERBACEOUS SPECIES							
	3	JOE PYE WEED	Eupatorium purpurea	1 QUART	10' OC	FAC	4
	5	WOOLGRASS	Scirpus cyperinus	1 PLUG	2' OC	FACW	220
	5	THREE SQUARE BULLRUSH	Scirpus pungens	1 PLUG	2' OC	FACW+	220

OBL = OBLIGATE WETLAND
FAC = FACULTATIVE
FACW = FACULTATIVE WETLAND
FACW+ = FACULTATIVE WETLAND (WETTER CONDITIONS)

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/17

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/3/12

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

REVISIONS			
NO.	DATE	BY	DESCRIPTION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453, EXPIRATION DATE: JULY 07, 2013.

SEAL

BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3

GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

STORMWATER MANAGMENT PLAN III

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-4A
SHEET NUMBER	6 OF 13

WP-13-018

FILE PATH: G:\PROJECTS\14825\02 - NIXON FARMS SOLAR\WKS\SDP DRAWINGS\C-4A.DWG [LAYOUT1] 8/21/12

APPENDIX B.4. CONSTRUCTION SPECIFICATIONS FOR ENVIRONMENTAL SITE DESIGN PRACTICES

B.4.C: SPECIFICATIONS FOR MICRO–BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION AND 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

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 CONTENT – 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%–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 MAY BE MIXED INTO 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 IS EXCAVATED.

3. COMPACTION

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 A LOADER, THE CONTRACTOR SHOULD USE A WIDE TRACK OR MARCH 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 DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A 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 BIORETENTION 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 3–4 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 OF 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 A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

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

5. PLANT INSTALLATION

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 MONTHS) FOR ACCEPTANCE.

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 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.

6. UNDERDRAINS

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE – SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO–M–278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (eg., PVC OR HDPE).
- PERFORATIONS – IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A ¼" (No. 4 OR 4x4) GALVANIZED HARDWARE CLOTH.
- 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 OF 0.50% SLOPE.
- A RIGID, NON–PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN–OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (⅛" TO ⅜" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEED 24".

THE 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 1,000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS

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

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M–3), MICRO–BIORETENTION (M–6), RAIN GARDENS (M–7), BIORETENTION SWALE (M–8), ENHANCED FILTERS (M–9)

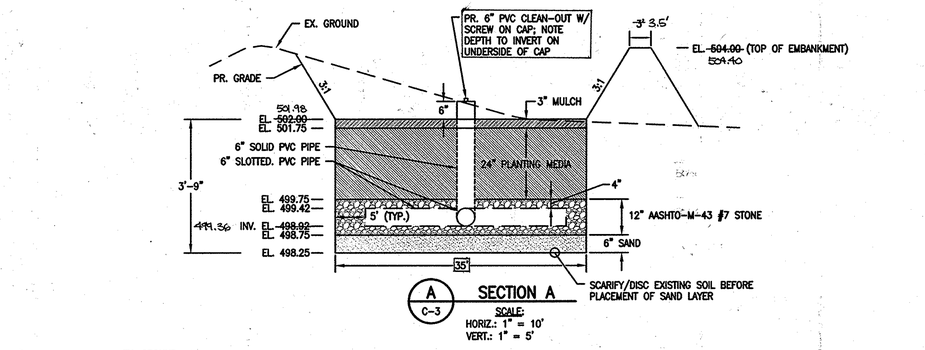
1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

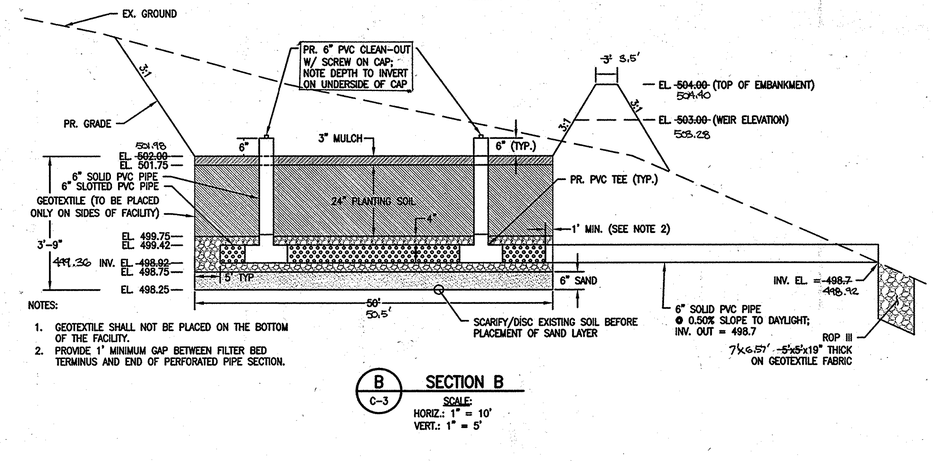
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DISCONNECTION OF ROOFTOP RUNOFF (N–1), DISCONNECTION OF NON–ROOFTOP RUNOFF (N–2)

1. 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 OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

Table B.4.1 Materials Specifications for Micro–Bioretention, Rain Gardens & Landscape Infiltration

Plantings	See Plant List (This Sheet)	n/a	Plantings are Site–specific
Planting Soil [2' to 4' deep]	loamy sand (60 – 65%) & compost (35 – 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM–D–2974)		
Mulch	shredded hardwood		Aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM–D–448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M–43	No. 57 or No. 6 Aggregate (3/8" to 3/4")	
Underdrain Piping	F 758, Type PS 28 or AASHTO M–278	4" to 6" rigid Sch. 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4–inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f'_c = 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
Sand	AASHTO–M–6 or ASTM–C–33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.





AS–BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS–BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

SIGNATURE

PE No. 36896
DATE: 6/30/16

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. 36896 EXPIRATION DATE: FEBRUARY 15, 2017.

PROJECT NAME: NIXON FARMS SOLAR – PHASE 1

AS–BUILT DATA FOR MICRO–BIORETENTION

* To be completed by the Certifying Engineer

BMP ID:

FEATURE	DESIGN	*AS–BUILT
FILTER BED DIMENSIONS (L X W)	35' x 50'	35' x 50.5'
FILTER BED SURFACE ELEVATION	EL. 502.00	EL. 501.98
MULCH DEPTH	3 in.	
OUTLET PIPE (UNDERDRAIN) SIZE/INVERT ELEVATION	6" / 498.92	6"/499.56
THICKNESS OF SAND	6 in.	
PLACEMENT OF GEOTEXTILE	✓	
PLANTINGS	✓	
THICKNESS OF GRAVEL	12 in.	
OBSERVATION WELL WITH DEPTH TO FILTER BOTTOM INDICATED ON CAP	✓	
OVERFLOW WEIR ELEVATION/WIDTH	EL. 503.00 / 5'	EL. 503.28 / 6'
PLANTING MEDIA	24"	

Date As–Built Accepted:_____

AS–BUILT

CENTURY ENGINEERING

Boring Log

Page 1 of 1

PROJECT: Nixon Farms Solar (Micro–Bioretention Facility) Boring No. SWM–1
West Friendship, Maryland PROJECT No.
LOCATION: See Plan
ELEV.: 505± DATE START: 8/7/2012 FINISH: 8/7/2012 TECHNICIAN: C. Jacobs
EXCAVATING EQUIPMENT: Hand–Auger

ELEV.	DESCRIPTION	DEPTH	SCALE	COMMENT
505.0	Topsoil (4")	0.3	0	Boring SWM–1A
504.0	Red–Brown moist Clayey SILT, little f–m SAND (ML)	1.0	1	Boring was offset 5' for borehole infiltration test Augered to depth of 5.0' and installed casing Put 24" of water in casing to pre–soak hole
502.5	Red moist micaceous Clayey SILT, trace fine Sand (ML)	2.5	2	
	Red slightly moist fine SAND & SILT (SM)		3	Conducted Borehole Infiltration Test on 8/8/12 Borehole was dry from previous day pre–soak Put 24" of water in casing and measured rate of infiltration over 4 hour period. Additional water was added to 24" depth after each 1 hour measurement.
497.5		7.5	4	
496.5	Red–Brown slightly moist Silty f. SAND, trace weathered Rock Fragments (SM)	8.0	5	
	Brown slightly moist micaceous Silty f–m SAND, trace weathered Rock Fragments (SM)		6	
495.0	Bottom of Boring @ 10.0 Ft.	10.0	7	
			8	
			9	
			10	
			11	
			12	
			13	
			14	

GROUNDWATER
DURING EXCAVATION: None ft.
AT COMPLETION: Dry ft. CAVED: 10.0 ft.
AT: 24.0 hours
WATER AT: Dry ft. CAVED: 9.8 ft.

CENTURY ENGINEERING

Boring Log

Page 1 of 1

PROJECT: Nixon Farms Solar (Micro–Bioretention Facility) Boring No.: SWM–2
West Friendship, Maryland PROJECT No.
LOCATION: See Plan
ELEV.: 503± DATE START: 8/7/2012 FINISH: 8/7/2012 TECHNICIAN: C. Jacobs
EXCAVATING EQUIPMENT: Hand–Auger

ELEV.	DESCRIPTION	DEPTH	SCALE	COMMENT
503.0	Topsoil (4")	0.3	0	Boring SWM–2A
	Red–Brown micaceous Clayey SILT, little f–m Rock Fragments (ML)		1	Boring was offset 5' for borehole infiltration test Augered to depth of 5.0' and installed casing Put 24" of water in casing to pre–soak hole
500.5	Red–Brown moist micaceous fine Sandy SILT (ML)	2.5	2	
499.0		4.0	3	Conducted Borehole Infiltration Test on 8/8/12 Borehole was dry from previous day pre–soak Put 24" of water in casing and measured rate of infiltration over 4 hour period. Additional water was added to 24" depth after each 1 hour measurement.
498.0	Red moist Silty CLAY, trace fine SAND (CL)	5.0	4	
	Red–Brown slightly moist micaceous fine SAND & SILT (SM)		5	
495.5		7.5	6	
	Brown slightly moist micaceous Silty f–m SAND, trace weathered Rock Fragments (SM)		7	
494.0	Bottom of Boring @ 9.0 Ft.	9.0	8	
			9	
			10	
			11	
			12	
			13	
			14	

Time	Drop (inches per hour)
0 - 1 hr.	24.0
1 - 2 hr.	20.8
2 - 3 hr.	18.5
3 - 4 hr.	17.5

Rate of infiltration was very high.
The silty sand at depth of 5' appeared to be quite loose.

GROUNDWATER
DURING EXCAVATION: None ft.
AT COMPLETION: Dry ft. CAVED: 9.1 ft.
AT: 24.0 hours
WATER AT: Dry ft. CAVED: 8.7 ft.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/3/12

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962–1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461–7200

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453, EXPIRATION DATE: JULY 02, 2013.

SEAL

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

GRID: 16, 17, 22 ZONING: RC–DEO
BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3 TAX MAP: 0015

STORMWATER MANAGEMENT DETAILS AND SPECIFICATIONS

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771–4950

DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C–5
SHEET NUMBER	7 OF 13

WP–13–018

FILE PATH: G:\PROJECTS\14825\02 – NIXON FARMS SOLAR\ENV\SWP DRAWINGS\C–5.DWG [LAYOUT1] 6/21/12

PROP. 12' DOUBLE LEAF CHAIN-LINK SWING GATE; 6' HIGH (TO BE INSTALLED IN FUTURE PHASE)

6 MOUNTABLE BERM C-8

2 SUPER SILT FENCE C-8
AVE. SLOPE = 3%
MAX. SLOPE LENGTH = 160'
SILT FENCE LENGTH = 50'

2 SUPER SILT FENCE C-8
AVE. SLOPE = 4%
MAX. SLOPE LENGTH = 60'
SILT FENCE LENGTH = 45'

2 SUPER SILT FENCE C-8
AVE. SLOPE = 4%
MAX. SLOPE LENGTH = 50'
SILT FENCE LENGTH = 190'

LIMIT OF EX. GRAVEL ROAD

STABILIZED CONSTRUCTION ENTRANCE 1 C-8

EX. TREELINE

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

PROPERTY OF 2800 NIXONS FARM LANE LLC L. 12565, F. 273

N 593,000 E 1,323,300

N 592,250 E 1,323,250

PROPERTY OF VALENTI DANIEL VALENTI KIMBERLY T L. 5153, F. 288

N 593,000 E 1,324,000

NIXON'S FARM LANE

EX. GRAVEL ROAD

SOIL BORING; SEE SHEET C-9 FOR BORING LOG AND SITE DEVELOPMENT PLAN REPORT FOR GEOTECHNICAL REPORT

EX. BUILDING

EX. BLDG

EXISTING PAVEMENT

B8-GEO

DIVERSION FENCE 3 C-8
DA = 0.69

EX. ASPHALT PARKING LOT

EX. SEPTIC TANK

PROP. CLEAN-OUT (TYP.)

PROP. 6" ø PERF. UNDERDRAIN LATERAL (TYP.), INV. 499.75

EL. 502.0

PROP. 35' x 50' M-6 MICRO-BIORETENTION FACILITY (PRIVATE)

EL. 503.0

PROP. 6" ø PERF. UNDERDRAIN (TYP.), CONVERT TO SOLID PVC @ 1' INSIDE MICRO-BIORETENTION FACILITY (SEE DETAIL-SHEET C-5); INV. 498.92

PR. 6" ø SOLID PVC UNDERDRAIN @ 0.5% SLOPE

ROP III 4 C-8
5'X5'X19" CL. 1 RIPRAP

DIVERSION FENCE 3 C-8
DA = 0.57

5 EARTH DIKE (A-2) C-8
MAX. SLOPE = 10%
MAX. V_2 = 3.93 fps
MAX. Q_2 = 5.62 cfs

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

PROP. 9' WIDE GRAVEL ACCESS ROAD

MATCHLINE - SEE SHEET C-4

LIMITS OF FIELD RUN TOPO
HOWARD COUNTY GIS TOPO

PROPERTY OF ZHANG RONG L. 8138, F. 435

PROPERTY OF DINOTO JOSEPH M JR
DINOTO LISA M T/E
L. 7862, F. 631

FOX CHASE ESTA

EX. TREELINE

N

LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- EX. WETLAND
- EX. BUILDING
- EX. WELL
- EX. UTILITY POLE
- EX. IRON PIN
- SLOPE 15% TO 25%
- SLOPE GREATER THAN 25%
- SOIL TYPE BOUNDARY
- EX. TREE
- PROP. FENCE (TO BE INSTALLED IN FUTURE PHASE)
- PROP. CONTOURS
- LOD — PROP. LIMIT OF DISTURBANCE
- DF — PROP. DIVERSION FENCE
- SSF — PROP. SUPER SILT FENCE
- UE — PROP. UNDERGROUND ELECTRIC
- SD — PROP. DIVERSION PIPE
- PROP. SOLAR PANEL
- SWM DISCONNECTION AREA
- SWM NON-DISCONNECTION AREA
- MOUNTABLE BERM
- EROSION AND SEDIMENT CONTROL DRAINAGE AREA LIMIT
- PROP. EARTH DIKE

NOTE:
ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO (SEE STANDARD SEDIMENT CONTROL NOTE #2 - SHEET 11 OF 13).

( ) By the developer:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer WARREN LIOO Date 09/10/2012

Print name below Signature

( ) By the Engineer:

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it awas prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer Date 10 September 2012

Print name below signature Gregory A. Tirales

( ) For the Howard Soil Conservation District:

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District Date

TOTAL SITE AREA = 96.920 ACRES
LIMIT OF DISTURBANCE = 9.460 ACRES

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/3/12

50 25 0 50 100
GRAPHIC SCALE IN FEET

DEVELOPER:
BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:
2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

DATA SOURCES

1. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH CONTOUR INTERVALS PREPARED BY VIRGINIA RESOURCE MAPPING, INC. DATED JANUARY 2005.
2. ALL INFORMATION LOCATED OUTSIDE OF THE LIMIT OF FIELD RUN TOPO LINE HAS BEEN TAKEN FROM THE HOWARD COUNTY GIS DATABASE.

BENCHMARK INFORMATION

1. HOWARD COUNTY SURVEY CONTROL: 22BB
   ELEVATION 538.976
   N 588,502.739 E 1,317,897.957
   LOCATION IS 24 FT. FROM FACE OF CURB AT THE INTERSECTION OF MD RT.32 AND RIVER VALLEY CHASE.
2. HOWARD COUNTY SURVEY CONTROL: 22AA
   ELEVATION 569.713
   N 587,502.739 E 1,317,897.957
   LOCATION IS 4 FT. FROM EDGE OF MD RT. 32 PAVING, 0.45 MILES EAST OF PFEFFERKORN ROAD AND 0.25 MILES WEST OF IVORY ROAD.
3. THE SYSTEM OF COORDINATES USED BY HOWARD COUNTY IS BASED ON THE FOLLOWING DATUMS AND PROJECTIONS:
   - HORIZONTAL: MARYLAND NAD83
   - VERTICAL: NAVD88

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453, EXPIRATION DATE: JULY 02, 2013.

SEAL

BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3

GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

EROSION AND SEDIMENT CONTROL PLAN I

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-6
SHEET NUMBER	8 OF 13

WP-13-018

FILE PATH: G:\PROJECTS\14825002 - NIXON FARMS SOLAR\DWG\SDP DRAWINGS\C-6.DWG [LAYOUT1] 9/10/12

MATCHLINE – SEE SHEET C-3

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

5 C-8 EARTH DIKE
MAX. SLOPE = 10%
MAX. V_E = 3.93 fps
MAX. Q_E = 5.62 cfs

EX. TREELINE

DIVERSION FENCE 3 C-8
DA 0.251 AC

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

MOUNTABLE BERM 6 C-8

EX. TREELINE TO REMAIN AT PROP. LANDSCAPED AREA (TYP.)

4 C-8 ROP III
CL. 1 RIPRAP
8' x 8' x 19"
PLACE GEOTEXTILE BELOW RIPRAP

PROP. SOLAR PANELS (TYP.)

PROP. 9' WIDE GRAVEL ACCESS ROAD

LIMIT OF DISTURBANCE IS LOCATED ALONG THE TREELINE. DISTURBANCE TO EXISTING TREES IN THIS AREA SHALL BE AVOIDED.

2 C-8 SUPER SILT FENCE
AVE. SLOPE = 8%
MAX. SLOPE LENGTH = 350'
SILT FENCE LENGTH = 175'

25' WETLAND BUFFER

PROP. 6' HIGH CHAIN-LINK FENCE (TO BE INSTALLED IN FUTURE PHASE)

EX. TREELINE

2 C-8 SUPER SILT FENCE
AVE. SLOPE = 8%
MAX. SLOPE LENGTH = 1000'
SILT FENCE LENGTH = 450'

EX. TREELINE

EX. TREELINE

4 C-8 ROP III
CL. 1 RIPRAP
8' x 8' x 19"
PLACE GEOTEXTILE BELOW RIPRAP

LIMITS OF FIELD RUN TOPO
HOWARD COUNTY GIS TOPO

S 00°31'59" W 1900.88'

PROPERTY OF ZHANG RONG
L. 8138, F. 435

PROPERTY OF DINOTO JOSEPH M JR
DINOTO LISA M T/E
L. 7862, F. 631

PROPERTY OF RECCE ANTHONY J JR.
RECCE AMY E T/E
L. 8238, F. 31

PROPERTY OF SANDHU GURMEL
KAUR JASVIR
L. 13147, F. 1

PROPERTY OF ROSHAN MOHAMMAD Y
ROSHAN NAFISA
L. 8255, F. 672

PROPERTY OF HOWARD COUNTY
L. 6872, F. 28

PROPERTY OF HOWARD COUNTY
L. 6872, F. 441

PROPERTY OF FOX CHASE ESTATES HOA
L. 6572, F. 441

FOX CHASE ROAD

CEDARVIEW COU

N 591,950
E 1,324,200

N 591,050
E 1,324,200

N

NOTE: ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO (SEE STANDARD SEDIMENT CONTROL NOTE #2 – SHEET 11 OF 13).

DEVELOPER:
BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:
2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

LEGEND

- EX. TREELINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- LIMIT OF FIELD RUN TOPO
- 490 EX. MAJOR CONTOUR
- EX. MINOR CONTOUR
- EX. WETLAND BUFFER
- WET EX. WETLAND
- EX. BUILDING
- W EX. WELL
- EX. UTILITY POLE
- EX. IRON PIN
- SLOPE 15% TO 25%
- SLOPE GREATER THAN 25%
- GgC / GgB SOIL TYPE BOUNDARY
- EX. TREE
- PROP. FENCE (TO BE INSTALLED IN FUTURE PHASE)
- PROP. CONTOURS
- LOD PROP. LIMIT OF DISTURBANCE
- DF PROP. DIVERSION FENCE
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- UE PROP. UNDERGROUND ELECTRIC
- SD PROP. DIVERSION PIPE
- PROP. SOLAR PANEL
- SWM DISCONNECTION AREA
- SWM NON-DISCONNECTION AREA
- MOUNTABLE BERM
- EROSION AND SEDIMENT CONTROL DRAINAGE AREA LIMIT
- PROP. EARTH DIKE

50 25 0 50 100
GRAPHIC SCALE IN FEET

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 10/2/12 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 10/09/12 DATE

DIRECTOR — 10/9/12 DATE

( ) By the developer:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer — 09/10/2012 Date
Print name below Signature WARREN WOO

( ) By the Engineer:

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it awas prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — 10 September 2012. Date
Print name below signature GUFFREY A. TIZARD

( ) For the Howard Soil Conservation District:

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date

BENCHMARK INFORMATION

1. HOWARD COUNTY SURVEY CONTROL: 22BB
   ELEVATION 538.976
   N 588,502.739 E 1,317,897.957
   LOCATION IS 24 FT. FROM FACE OF CURB AT THE INTERSECTION OF MD RT.32 AND RIVER VALLEY CHASE.
2. HOWARD COUNTY SURVEY CONTROL: 22AA
   ELEVATION 569.713
   N 587,502.739 E 1,317,897.957
   LOCATION IS 4 FT. FROM EDGE OF MD RT. 32 PAVING, 0.45 MILES EAST OF PFEFFERKORN ROAD AND 0.25 MILES WEST OF IVORY ROAD.
3. THE SYSTEM OF COORDINATES USED BY HOWARD COUNTY IS BASED ON THE FOLLOWING DATUMS AND PROJECTIONS:
   - HORIZONTAL: MARYLAND NAD83
   - VERTICAL: NAVD88

DATA SOURCES

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2. ALL INFORMATION LOCATED OUTSIDE OF THE LIMIT OF FIELD RUN TOPO LINE HAS BEEN TAKEN FROM THE HOWARD COUNTY GIS DATABASE.

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453, EXPIRATION DATE: JULY 02, 2013.

SEAL

GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015 BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

EROSION AND SEDIMENT CONTROL PLAN II

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

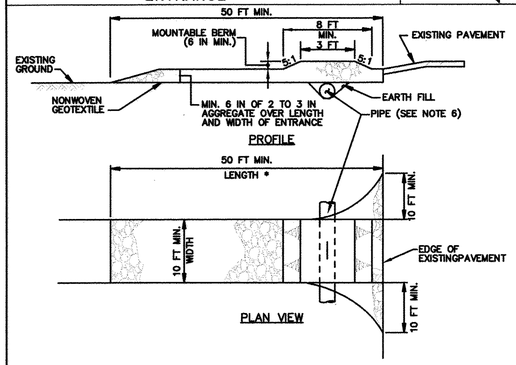
DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-7
SHEET NUMBER	9 OF 13

WP-13-018

FILE PATH: G:\PROJECTS\14825.02 - NIXON FARMS SOLAR\DWGS\SP DRAWINGS\C-7.DWG [LAYOUT1] 9/10/12

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*50 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. 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.

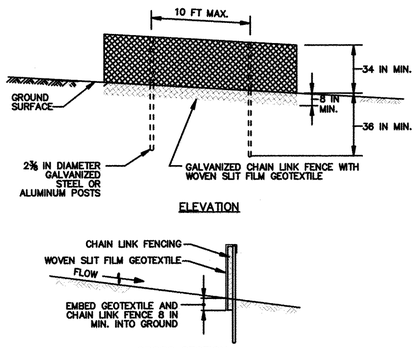
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

1 STABILIZED CONSTRUCTION ENTRANCE — C-6 — NOT TO SCALE

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HOG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. 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 AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

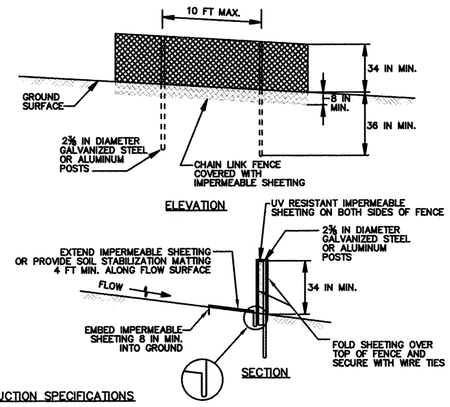
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

2 SUPER SILT FENCE — C-6 — C-7 — NOT TO SCALE

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: DF

MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

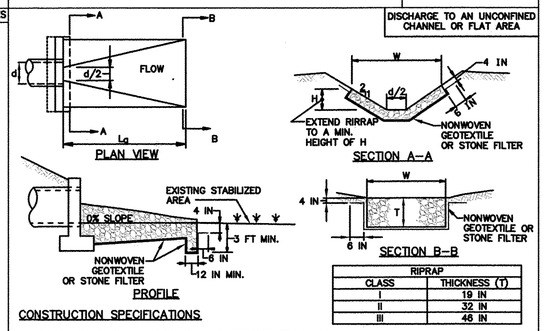
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

3 DIVERSION FENCE — C-6 — C-7 — NOT TO SCALE

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

STANDARD SYMBOL: ROPIII

DISCHARGE TO AN UNCONFINED CHANNEL OR FLAT AREA



RIPRAP	
CLASS	THICKNESS (T)
I	19 IN
II	32 IN
III	46 IN

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 PLACING 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 (⅜ TO 1½ 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 HOMOGENOUS WITH THE SMALLER STONES AND SPALLS 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 0% 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 DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

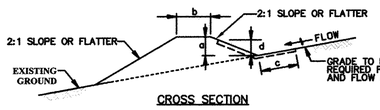
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

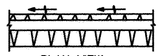
4 ROCK OUTLET PROTECTION III — C-6 — C-7 — NOT TO SCALE

DETAIL C-1 EARTH DIKE

STANDARD SYMBOL: A-1 (PLACE SYMBOL ON FLOW CHANNEL SIDE OF DIKE.)



CONTINUOUS GRADE 0.5% MIN. TO 10% MAX. SLOPE



PLAN VIEW

DIKE TYPE	A	B
a – DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b – DIKE WIDTH	24 IN MIN.	36 IN MIN.
c – FLOW WIDTH	4 FT MIN.	6 FT MIN.
d – FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION

A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)

A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.

A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

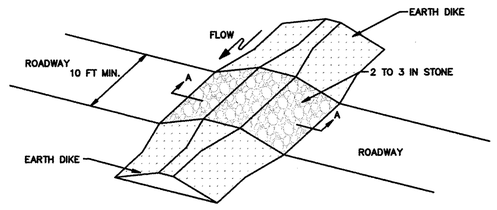
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

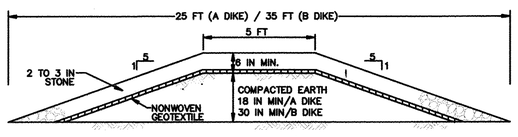
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

5 EARTH DIKE — C-6 — C-7 — NOT TO SCALE

DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL: MB





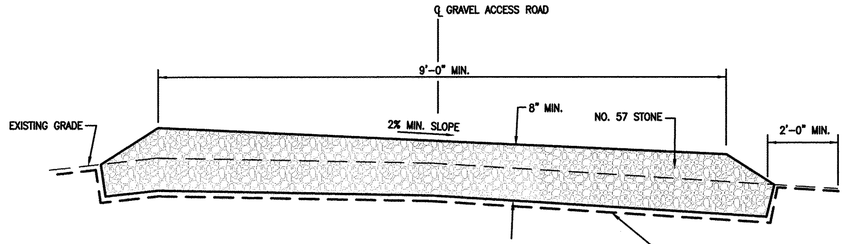
CONSTRUCTION SPECIFICATIONS

1. USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
3. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
4. MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

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

6 MOUNTABLE BERM — C-6 — C-7 — NOT TO SCALE



7 GRAVEL ACCESS ROAD DETAIL — C-3 — C-4 — NOT TO SCALE

NOTE: ACCESS ROAD SHALL BE CUT INTO EXISTING GRADE A MINIMUM OF 4-INCES.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/02/12

DIRECTOR — DATE 10/3/12

( ) By the developer:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer LARRY LEE — Date 09/10/2012
Print name below Signature

( ) By the Engineer:

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — Date 10 September 2012
Print name below signature GEOFFREY A. TEARD

( ) For the Howard Soil Conservation District:

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

REVISIONS

NO.	DATE	BY	DESCRIPTION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453, EXPIRATION DATE: JULY 02, 2013.

SEAL — 2/20/2013

BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3
GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

EROSION AND SEDIMENT CONTROL DETAILS

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-8
SHEET NUMBER	10 OF 13

WP-13-018

FILE PATH: G:\PROJECTS\14825.02 - NIXON FARMS SOLAR\DWG\SDP DRAWINGS\C-8.DWG [JMS051] 9/10/12

HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
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 MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
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 OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	96.920 ACRES
AREA DISTURBED	9.460 ACRES
AREA TO BE ROOFED OR PAVED	0.455 ACRES
AREA TO BE VEGETAITVELY STABILIZED	9.005 ACRES
TOTAL CUT	130 CU. YDS.
TOTAL FILL	130 CU. YDS
OFFSITE WASTE/BORROW AREA LOCATION: N/A	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS SHORTER.

HOWARD SOIL CONSERVATION DISTRICT
PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED --- APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.)

2. ACCEPTABLE --- APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ. FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING --- FOR THE PERIODS MARCH 1 - APRIL 30, AND AUGUST 1 - OCTOBER 15, SEED WITH 60 LBS/ACRE (1.4LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 - JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS/ACRE (.05 LBS/100() SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 - FEBRUARY 28, PROTECT SITE BY:
OPTION 1 --- TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.
OPTION 2 --- USE SOD.
OPTION 3 --- SEER: WITH 60 LBS/ACRE KENTUCKY 30 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING --- APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

MAINTENANCE --- INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RE-DISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: --- LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: --- APPLY 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.).

SEEDING: --- FOR PERIODS MARCH 1 - APRIL 30 AND FROM AUGUST 15 - OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 - AUGUST 14, SEED WITH 3 LBS/ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ. FT.). FOR THE PERIOD NOVEMBER 16 - FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: --- APPLY 1-1/2 TO 2 TONS/ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED WEED-FREE, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL/1000 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPE 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL/1000 SQ. FT.) FOR ANCHORING.

REFER TO THE 1994 MAR4AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

		DURATION
1.	OBTAIN A GRADING PERMIT.	1 DAY
2.	CONTACT HOWARD COUNTY SEDIMENT CONTROL INSPECTOR AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.	3 DAYS
3.	INSTALL ALL PERIMETER SEDIMENT CONTROL FEATURES INCLUDING STONE CONSTRUCTION ENTRANCE, SUPER SILT FENCE, TEMPORARY 15" DIVERSION PIPE, EARTH DIKES AND DIVERSION FENCES.	2 DAYS
4.	UPON INSTALLATION OF PERIMETER CONTROLS AND AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, BEGIN INSTALLATION OF GRAVEL ACCESS DRIVE, SOLAR PANELS, UNDERGROUND ELECTRIC AND INVERTERS.	30 DAYS
5.	CONTACT THE AS-BUILT CERTIFYING ENGINEER AT LEAST 72 HOURS PRIOR TO BEGINNING CONSTRUCTION OF THE MICRO-BIORETENTION FACILITY.	3 DAYS
6.	WITH A 3-DAY NOAA DRY WEATHER FORECAST, BEGIN AND COMPLETE CONSTRUCTION OF THE MICRO-BIORETENTION FACILITY.	3 DAYS
7.	UPON COMPLETION OF SOLAR PANEL CONSTRUCTION, INSTALL LANDSCAPING BUFFER AS SHOWN ON THE LANDSCAPING PLANS.	2 DAYS
8.	REMOVE SEDIMENT CONTROL PRACTICES UPON RECEIVING PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. PERMANENTLY SEED AND STABILIZE THESE AREAS IMMEDIATELY UPON REMOVAL.	1 DAY

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/05/12

DIRECTOR — DATE 10/9/12

( ) By the developer:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer WARREN WOO — Date 09/07/2012

Print name below Signature

( ) By the Engineer:

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it awas prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — Date 10 September 2012

Print name below signature Geoffrey A. Flaum

( ) For the Howard Soil Conservation District:

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard Soil Conservation District — Date

DEVELOPER:

BITH ENERGY
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT ST.
BALTIMORE, MD 21201
PHONE: (410) 962-1188

OWNER:

2800 NIXONS FARM LANE, LLC
17500 FREDERICK ROAD
MT. AIRY, MD 21771
PHONE: (410) 461-7200

NO.	DATE	BY	DESCRIPTION

REVISIONS

SEAL

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15453 EXPIRATION DATE: JULY 2, 2103

9/5/2012

NIXON FARMS SOLAR PHASE 1

2800 NIXON'S FARM LANE, WEST FRIENDSHIP, MARYLAND 21792

GRID: 16, 17, 22 ZONING: RC-DEO TAX MAP: 0015 BLOCK: N/A PARCEL: 0090 ELECTION DISTRICT: 3

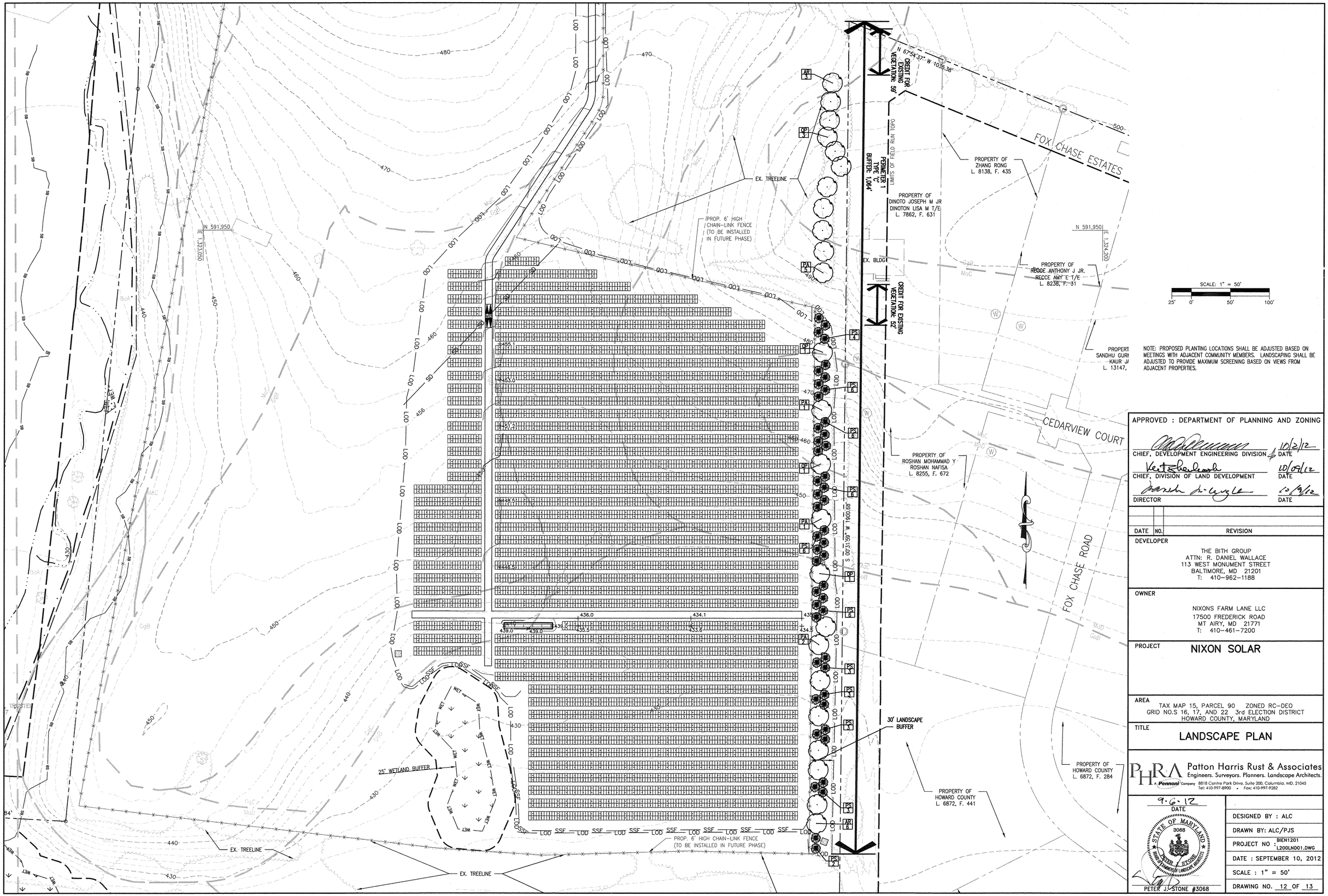
EROSION AND SEDIMENT CONTROL NOTES AND SPECIFICATIONS

EA ENGINEERING, SCIENCE, AND TECHNOLOGY
Loveton Center
15 Loveton Circle
Sparks, Maryland 21152
(410) 771-4950

DATE	AUGUST 2012
DESIGNED BY	MBS
DRAWN BY	JSP
CHECKED BY	GAT
PROJECT MANAGER	JMH
PROJECT NUMBER	14825.02
DRAWING NUMBER	C-9
SHEET NUMBER	11 OF 13

WP-13-018

FILE PATH: G:\PROJECTS\14825.02 - NIXON FARMS SOLAR\CIVIL\CSP DRAWINGS\C-9.DWG [LAYOUT1] 8/14/12



APPROVED : DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/08/12

DIRECTOR — DATE 10/9/12

DATE	NO.	REVISION

DEVELOPER

THE BITH GROUP
ATTN: R. DANIEL WALLACE
113 WEST MONUMENT STREET
BALTIMORE, MD 21201
T: 410-962-1188

OWNER

NIXONS FARM LANE LLC
17500 FREDERICK ROAD
MT AIRY, MD 21771
T: 410-461-7200

PROJECT

NIXON SOLAR

AREA

TAX MAP 15, PARCEL 90 ZONED RC-DEO
GRID NO.S 16, 17, AND 22 3rd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

LANDSCAPE PLAN

PHRA Patton Harris Rust & Associates
A Pennoni Company
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive, Suite 200, Columbia, MD. 21045
Tel: 410-997-8900 • Fax: 410-997-9282

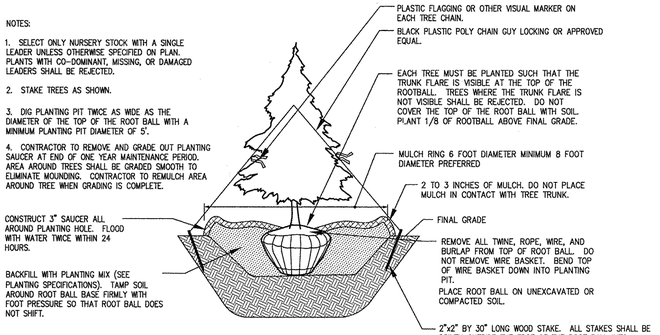
9-6-12
DATE

STATE OF MARYLAND 3068 PETER J. STONE REGISTERED LANDSCAPE ARCHITECT

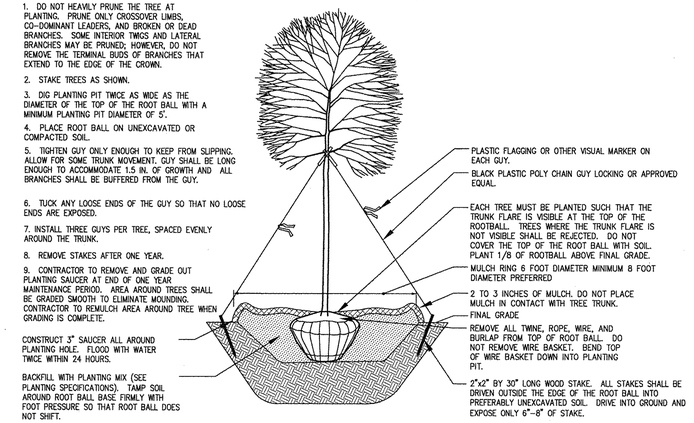
PETER J. STONE #3068

DESIGNED BY : ALC
DRAWN BY: ALC/PJS
PROJECT NO : BIEN1201 L200LND01.DWG
DATE : SEPTEMBER 10, 2012
SCALE : 1" = 50'
DRAWING NO. 12 OF 13

WP-13-018



EVERGREEN B&B TREE PLANTING DETAIL
NOT TO SCALE



DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR LARGER)
NOT TO SCALE

PLANTING SPECIFICATIONS

1. Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Landscape Manual of the applicable jurisdiction, the latter takes precedence.
2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Nursery & Landscape Association (ANLA) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed-in plants or plants from cold storage will be accepted.
3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.
4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.
5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.
6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.
7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or XCupressocyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.
8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.
9. Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.
10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.
11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.
12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope).
13. Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens' (English weeping yews): Top dress after planting with 1/4 to 1/2 cup lime each.
14. Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.
15. Weed & insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed-free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.
16. Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid dessication.
17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.
18. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.

SCHEDULE A – PERIMETER LANDSCAPE EDGE

	ADJACENT TO PERIMETER PROPERTIES					ADJACENT TO ROADWAYS	
PERIMETER	1						
LANDSCAPE TYPE	C						
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	1,064'±						
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 111'						
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO/LINEAR FEET)	NO –						
LINEAR FEET REMAINING	953'±						
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	 24 48 –						
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	 24 48 – –						

SCHEDULE 'A' NOTES:

CREDIT FOR EXISTING LANDSCAPING HAS BEEN TAKEN WHERE EXISTING TREE LINE WAS 20' OR WIDER. BASED ON FIELD EVALUATION, ADDITIONAL CREDIT MAY BE TAKEN FOR INDIVIDUAL TREES ALONG PERIMETER 1.

PLANT SCHEDULE

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREES					
AR	9	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2.5-3" CAL.	B&B	AS SHOWN
PA	9	PLATANUS X ACERIFOLIA LONDON PLANE TREE	2.5-3" CAL.	B&B	AS SHOWN
QP	6	QUERCUS PALUSTRIS PIN OAK	2.5-3" CAL.	B&B	AS SHOWN
EVERGREEN TREES					
PS	48	PINUS STROBUS EASTERN WHITE PINE	6-8' HT.	B&B	AS SHOWN

GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $14,400.00.
   24 SHADE TREES @ $300 = $7,200.00
   0 ORNAMENTAL TREES @ $150 = $0.00
   48 EVERGREEN TREES @ $150 = $7,200.00
   0 SHRUBS @ $30 = $0.00
   BONDED LANDSCAPING INCLUDES REQUIRED LANDSCAPING PER THE LANDSCAPE MANUAL.
3. THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
5. ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
6. ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.
7. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.
8. NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

DEVELOPER'S/BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE WARREN WOO — DATE 09/07/2012

APPROVED : DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10/2/12

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 10/09/12

DIRECTOR — DATE 10/9/12

DATE	NO.	REVISION

DEVELOPER

THE BITH GROUP
ATTN: R. DANIEL WALLACE
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PROJECT

NIXON SOLAR

AREA

TAX MAP 15, PARCEL 90 ZONED RC-DEO
GRID NO.S 16, 17, AND 22 3rd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

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LANDSCAPE NOTES AND DETAILS

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STATE OF MARYLAND 3068 PETER J. STONE REGISTERED LANDSCAPE ARCHITECT

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WP-13-018