

| AG # | COMMON NAME | SCIENTIFIC NAME | DBH | WIGOR | COMMENTS | Impact |
|------|------------------|-------------------------|------|-------|---------------------------------|----------------------|
| 2806 | northern red oak | Quercus rubra | 31 | Good | | Removed |
| 2807 | black oak | Quercus velutina | 31 | Fair | | Retained off Parcel |
| 2808 | northern red oak | Quercus rubra | 39 | Fair | broken stubbed branches | Retained off Parcel |
| 2809 | northern red oak | Quercus rubra | 38 | Fair | | Retained off Parcel |
| 2810 | white oak | Quercus alba | 38 | Good | | Retained off Parcel |
| 2811 | white oak | Quercus alba | 30 | Good | | Retained in easement |
| 2812 | northern red oak | Quercus rubra | 33 | Good | | Retained on lot* |
| 2813 | white oak | Quercus alba | 31.5 | Good | | Retained on lot* |
| 2814 | white oak | Quercus alba | 33 | Fair | | Removed |
| 2815 | northern red oak | Quercus rubra | 31 | Good | | Removed |
| 2816 | white oak | Quercus alba | 34 | Fair | barbed wire through trunk | Retained in easement |
| 2819 | black gum | Nyssa Sylvatica | 33 | Good | | Retained off Parcel |
| 2820 | white oak | Quercus alba | 34.5 | Good | | Removed |
| 2821 | black gum | Nyssa Sylvatica | 34 | Good | | Removed |
| 2822 | northern red oak | Quercus rubra | 34 | Good | | Retained on lot |
| 2823 | red maple | Quercus rubra | 32 | Fair | stems triple @ 5' | Retained in easement |
| 2824 | white oak | Quercus alba | 37 | Fair | leaning | Retained in easement |
| 2825 | black oak | Quercus velutina | 36.5 | Fair | irregular trunk/leaning | Retained in easement |
| 2826 | northern red oak | Quercus rubra | 33 | Good | | Retained in easement |
| 2827 | black oak | Quercus velutina | 35 | Good | | Retained in easement |
| 2828 | northern red oak | Quercus rubra | 30 | Good | | Retained in easement |
| 2829 | northern red oak | Quercus rubra | 33 | Fair | broken branches / 1/2 of double | Retained in easement |
| 2830 | northern red oak | Quercus rubra | 35 | Fair | some dead branches | Retained in easement |
| 2831 | white oak | Quercus alba | 33 | Good | | Retained in easement |
| 2832 | northern red oak | Quercus rubra | 33 | Good | | Retained in easement |
| 2833 | red maple | Quercus rubra | 30 | Fair | leaning/tree rot | Retained in easement |
| 2834 | tulip poplar | Liriodendron tulipifera | 29 | Good | | Retained in easement |
| 2835 | tulip poplar | Liriodendron tulipifera | 50 | Good | trunk rot / barbed wire | Retained in easement |
| 2837 | pin oak | Quercus palustris | 43 | Fair | dead branches | Retained in easement |
| 2838 | black oak | Quercus velutina | 50 | Fair | tree rot damage | Retained in easement |
| 2839 | southern red oak | Quercus facata | 33 | Good | | Retained in easement |
| 2840 | southern red oak | Quercus facata | 38 | Fair | dead branches | Retained in easement |
| 2841 | southern red oak | Quercus facata | 38 | Fair | | Retained in easement |
| 2842 | northern red oak | Quercus rubra | 30 | Fair | leaning | Removed |
| 2843 | black oak | Quercus velutina | 39 | Good | | Retained on lot |

LEGEND

SOILS CLASSIFICATION
SOILS DELINEATION
EXISTING CONTOURS (AERIAL 12/02)
LIMIT OF WETLANDS
EXISTING WOODS LINE
PROPOSED WOODS LINE
EXISTING STRUCTURE
EXISTING SEPTIC FIELD
PROPOSED SEPTIC FIELD
PROPOSED FOREST CONSERVATION EASEMENT
SLOPES 25% OR GREATER
SLOPES BETWEEN 15% AND 25%
EX. 100 YEAR FLOODPLAIN
HIGHLY ERODIBLE SOILS
WELL
EFFECTIVE SITE AREA
PERCOLATION TEST LOCATION



PROJECT BACKGROUND INFORMATION
PRESENT ZONING: RR-DEO - GRID 02 - PARCEL 16
LOCATION: TAX MAP 34 - GRID 02 - PARCEL 16
APPLICABLE DPZ FILE REFERENCES: F-06-067, SP-16-004
DEED REFERENCES: L16173 F.440
PROPOSED WATER AND SEWER SYSTEMS: PRIVATE WATER & PRIVATE SEWER

Site Analysis Data Sheet

| | |
|------------------------------|----------|
| Gross Area | 29.03 ac |
| 100yr Floodplain | 1.58 ac |
| Slopes 15%-24.99% (Moderate) | 1.52 ac |
| Slopes 25%+ (Steep) | 1.68 ac |
| Wetlands | 0.72 ac |
| Wetlands Buffer | 1.54 ac |
| Stream | 0.03 ac |
| Stream Buffer | 5.38 ac |
| Forested Area | 3.81 ac |
| Erodible Soils | 2.92 ac |
| Limit of Disturbance | 11.50 ac |
| Impervious Area | 2.54 ac |
| Green Space | 8.96 ac |

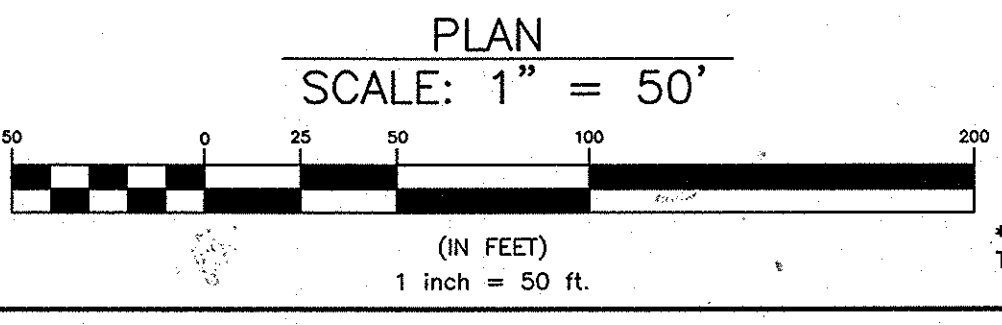
Site uses: Farming, Conservation Areas, Single-family Detached Dwellings, Underground Pipelines, and Accessory Uses

*SOME STEEP SLOPES OCCUR WITHIN FLOODPLAIN AREAS. PLEASE SEE SP-16-004 FOR DENSITY CALCULATIONS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 5-27-16
DATE: 5-25-16

CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT



SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND PAGE

| SYMBOL | HYDRC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | PERCENT SLOPES | k Value |
|--------|-------|------------------|-----------------|--|----------------|---------|
| GcB | B | | | GLENGEL LOAM, 8 TO 9 PERCENT SLOPES | 0.20 | |
| GcC | B | | | GLENGEL LOAM, 8 TO 15 PERCENT SLOPES | 0.20 | |
| GmB** | YES | C | | GLENGEL SILT LOAM, 3 TO 8 PERCENT SLOPES | 0.37 | |
| GmC** | | C | | GLENGEL COCKOUS SILT LOAM, 9 TO 8 PERCENT SLOPES | 0.37 | |
| MmC | B | | | MANOR LOAM, 8 TO 15 PERCENT SLOPES | 0.24 | |
| MmD | B | | | MANOR LOAM, 15 TO 25 PERCENT SLOPES | 0.24 | |

** HIGHLY ERODIBLE, K>0.35, AND/OR 15% OR GREATER SLOPES
TAKEN FROM THE NRCS WEB SOIL SURVEY, AUGUST 2014. SHEET 16

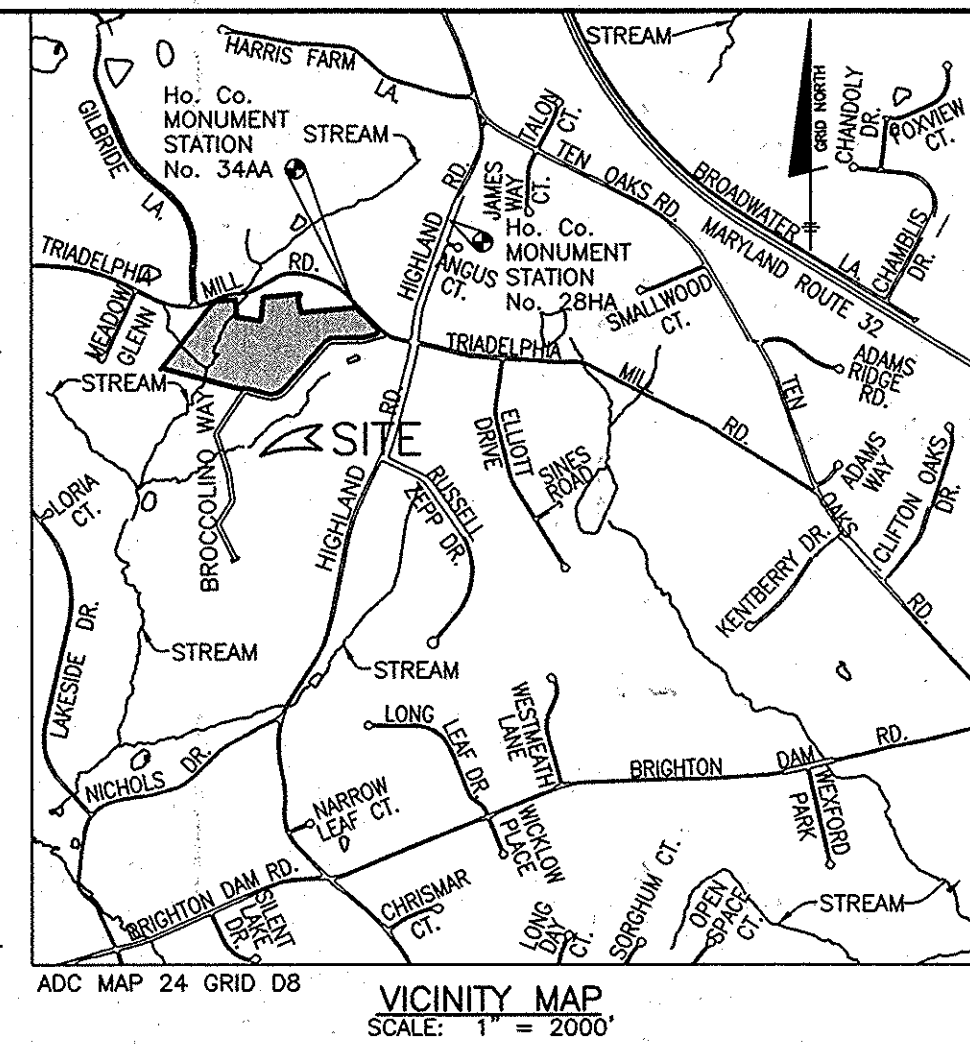
FOREST CONSERVATION WILL BE PLACED IN PRIORITY LOCATIONS FOR RETENTION/RESTORATION WHERE POSSIBLE.

SWM DESIGN NARRATIVE:
NATURAL RESOURCES, INCLUDING FORESTS, WETLANDS & STREAMS AND ASSOCIATED BUFFERS SHALL BE PRESERVED TO THE EXTENT PRACTICABLE. THERE SHOULD BE NO DISTURBANCES TO WETLANDS, WETLAND BUFFERS, STREAMS, STREAM BUFFERS, AND STEEP SLOPES OVER 25% AND 20,000 SF. EXISTING FLOW PATTERNS SHALL BE MAINTAINED UNDER ULTIMATE CONDITIONS ALL DRAINAGE FLOW SHALL EXIT THE PROPERTY IN THE SAME LOCATION AS IT DOES UNDER EXISTING CONDITIONS.

IMPERVIOUS AREAS ARE BEING HELD TO A MINIMUM BY PUSHING THE PROPOSED HOUSES AS CLOSE AS REASONABLE TO THE USE-IN-COMMON DRIVE OR FRONT BUILDING RESTRICTION LINES. THE USE-IN-COMMON DRIVE IS THE NARROWEST WIDTH ALLOWED BY COUNTY REGULATIONS (16 FEET), THE ROADWAY IS THE NARROWEST ALLOWED BY THE DESIGN MANUAL.

SEDIMENT AND EROSION CONTROL SHALL BE PROVIDED. A SCHEMATIC CONCEPT IS SHOWN ON SHEET 2. IT IS ANTICIPATED THAT IT WILL CONSIST MAINLY OF SUPER SILT FENCE AND SILT FENCE. SINCE THESE ARE RELATIVELY SMALL DRAINAGE AREAS, NO SEDIMENT TRAPS OR BASINS SHOULD BE NEEDED. THERE ARE NO IMPACTS TO SWM DESIGN BASED ON SEDIMENT AND EROSION CONTROL.

THE PROPOSED F-6 (BIO-RETENTION), M-6 (MICRO-BIORETENTION), M-5 (DRY WELLS) AND N-2 (DISCONNECTION OF NON-ROOFTOP RUNOFF) PRACTICES SHALL ADEQUATELY TREAT THE PROPOSED IMPERVIOUS AREAS. THE PRACTICES SHALL ALL DISCHARGE AT LOCATIONS THAT ARE NOT DETRIMENTAL TO THE ADJACENT PROPERTIES. INLETS SHALL BE PLACED IN THE BIO-RETENTION AND MICRO-BIORETENTIONS WHERE HIGHER STORMS MIGHT CREATE OVERFLOW ISSUES. FULL TREATMENT IS BEING PROVIDED THEREFORE THIS PROJECT CAN BE CONSIDERED TO BE TREATED TO THE MAXIMUM EXTENT PRACTICAL.



BENCHMARK INFORMATION NAD83

| | |
|---|---|
| Ho. Co. STATION 288A STAMPED DISC SET ON TOP OF CONCRETE COLUMN 14.2' EAST OF THE EDGE OF PAVING OF HIGHLAND ROAD AND 29.0' NORTH OF BRIDGE POLE NO. 334368 NORTHING: 565347.937' EASTING: 1319258.239' ELEVATION: 588.708' | Ho. Co. STATION 34AA STAMPED DISC SET ON TOP OF CONCRETE COLUMN 7.4' SOUTH OF THE EDGE OF PAVING OF TRIADAPLINA MILL ROAD AND 57.2' EAST OF C&P POLE NUMBER 32. NORTHING: 564462.943' EASTING: 1319257.375' ELEVATION: 561.105' |
|---|---|

DENSITY EXCHANGE CHART

| RECEIVING PARCEL INFORMATION | TAX MAP 34, GRID 2, PARCEL 16 |
|--|--|
| TOTAL AREA OF SUBDIVISION | 29.03 ac |
| DENSITY UNITS ALLOWED BY RIGHT | 29.03 / 4.25 = 6 D.U.* |
| MAXIMUM DEO UNITS ALLOWED | 26.22 / 2 = 13 D.U.* |
| NUMBER OF UNITS PROPOSED | 13 (12 LOTS AND 1 BUILDABLE PRESERVATION PARCEL) |
| CEO DENSITY UNITS TO BE RECEIVED FROM SENDING PARCEL | 7 |
| SENDING PARCEL INFORMATION | TBD |

*MAXIMUM DENSITY UNITS ALLOWED AS FOLLOWS:
TOTAL TRACT AREA (29.03 ac.)
FLOODPLAIN AREA (-1.68 ac.)
STEEP SLOPES AREA (-1.68 ac.)
NET TRACT AREA = 26.22 ac.

SHEET INDEX

| SHEET | TITLE |
|-------|--|
| 1-3 | ENVIRONMENTAL CONCEPT PLAN |
| 4-6 | ENVIRONMENTAL CONCEPT, STORMWATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL PLAN |

- GENERAL NOTES**
- THE SUBJECT PROPERTY ZONED RR-DEO PER THE 10/6/13 ZONING REGULATIONS.
 - THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE APRIL 13, 2004.
 - THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY BENCHMARK ENGINEERING, INC. DATED APRIL 2015. THIS PROJECT IS SUBJECT TO A SIGHT DISTANCE ANALYSIS TO BE PREPARED AND SUBMITTED WITH FURTHER PLAN SUBMISSION.
 - PREPARED BY WINGS INC. DATED DECEMBER, 2002. OFF-SITE AREAS HAVE BEEN SUPPLEMENTED WITH HO.C.O. GIS TOPOGRAPHICAL INFORMATION.
 - THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. #288A AND #34AA WERE USED FOR THIS PROJECT.
 - EXISTING UTILITIES SHOWN HAVE BEEN TAKEN FROM APPROVED CONTRACT DRAWINGS AND FIELD SURVEYED LOCATIONS. IF NECESSARY, THE CONTRACTOR SHALL ADJUST ANY OR ALL STRUCTURE TOP ELEVATIONS TO MATCH PROPOSED GRADES WITHIN THE LIMITS OF WETLANDS, STREAMS, STEEP SLOPES AND FORESTED AREAS LOCATED ON-SITE. THERE IS A 100' STREAM BUFFER AND 25' WETLAND BUFFERS LOCATED ON-SITE.
 - NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN, AND FOREST CONSERVATION EASEMENT AREAS.
 - THERE IS AN EXISTING SHED ON-SITE WITHOUT A FOUNDATION THAT SHALL BE PARTIALLY REMOVED. THERE ARE SOME RUNS ON THIS PARCEL THAT ARE TO BE REMOVED.
 - COORDED WITH ADJACENT COUNTY MAPS AND RECORDS. THERE ARE NO HISTORIC STRUCTURES OR KNOWN CEMETERIES LOCATED ON THE SUBJECT PROPERTY. THERE ARE NO STRUCTURES ON SITE THAT WILL REQUIRE HISTORIC PRESERVATION COMMISSION REVIEW PER AN EMAIL CORRESPONDENCE FROM DPZ DATED 1-8-16.
 - A NOISE STUDY IS NOT REQUIRED FOR THIS DEVELOPMENT.
 - A TRAFFIC STUDY FOR THIS PROJECT WILL BE PREPARED UNDER SUBSEQUENT PLANS SUBMISSION.
 - THIS SITE IS NOT WITHIN THE METROPOLITAN DISTRICT; WATER & SEWER IS PRIVATE.
 - ADEQUATE SITE DISTANCE APPEARS TO BE AVAILABLE AT THE ENTRANCE BASED ON FIELD VERIFICATION. THIS PROJECT IS SUBJECT TO A SIGHT DISTANCE ANALYSIS TO BE PREPARED AND SUBMITTED WITH FURTHER PLAN SUBMISSION.
 - GEOTECHNICAL INVESTIGATION IN THE FORM OF PERCOLATION TESTING WAS PERFORMED FOR THIS SITE. IF NECESSARY ADDITIONAL GEOTECHNICAL INFORMATION MAY BE GATHERED UNDER SUBSEQUENT PLANS SUBMISSION.
 - THERE ARE WETLANDS LOCATED ON-SITE AS OUTLINED IN THE WETLAND DELINEATION PLAN PREPARED BY ECOTONE, INC. DATED OCTOBER 19, 2015.
 - THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WILL BE FULFILLED BY PROVIDING ON-SITE RETENTION AND RESTORATION.
 - DURING THE PRELIMINARY PLAN STAGE THE DEVELOPER WILL PROVIDE A WAIVER REQUEST TO ALLOW REMOVAL OF SPECIMEN TREES AND TO ALLOW LOTS WITH FRONTAGE ON TWO ROADS.
 - APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN, PLAN AND/OR SITE DEVELOPMENT PLAN AND/OR RED-LINE REVISION PLAN. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAN AND/OR SITE DEVELOPMENT PLAN STAGES AND/OR RED-LINE REVISION PROCESS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED REVIEW COMMENTS (INCLUDING COMMENTS THAT MAY ALTER THE OVERALL SITE DESIGN) AS THIS PROJECT PROGRESSES THROUGH THE PLAN REVIEW PROCESS.

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WWW.BE-CVLENGINEERING.COM
BE@BE-CVLENGINEERING.COM

BRIGHTON MILL II
LOTS 1 THRU 12, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'D'
TAX MAP: 34, GRID: 2, PARCEL: 16, ZONED: RR-DEO
CLARKSVILLE, MARYLAND 21029
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

OWNER:
DAVID A. AND DALE E. CURTIS
304 KLINGER DRIVE
WESTMINSTER, MD 21157
410-751-5686

DEVELOPER:
HIGHLAND DEVELOPMENT CORP.
P.O. BOX 228
CLARKSVILLE, MARYLAND 21029
410-365-0414

TITLE: ENVIRONMENTAL CONCEPT PLAN

DATE: MAY, 2016
PROJECT NO.: 2627
DRAFT: JC | **DESIGN:** JC | **CHECK:** - | **SCALE:** 1" = 50'
SHEET: 1 OF 6



ECP NOTE:
 APPROVAL OF THIS ECP DOES NOT
 CONSTITUTE AN APPROVAL OF ANY
 SUBSEQUENT AND ASSOCIATED
 SUBDIVISION PLAN, SITE
 DEVELOPMENT PLAN, OR GRADING
 OR BUILDING PERMIT PLAN. REVIEW
 OF THIS PROJECT FOR
 COMPLIANCE WITH THE HOWARD
 COUNTY SUBDIVISION AND LAND
 DEVELOPMENT REGULATIONS AND
 THE HOWARD COUNTY ZONING
 REGULATIONS SHALL OCCUR AT
 THE SUBDIVISION, SITE
 DEVELOPMENT PLAN, OR GRADING
 AND BUILDING PERMIT STAGES.

SEE SHEET 4 FOR ESD
 ANALYSIS TABLES AND
 SEDIMENT CONTROLS

| LEGEND | |
|---------------------------------------|--|
| SOILS CLASSIFICATION | |
| SOILS DELINEATION | |
| EXISTING CONTOURS (AERIAL 12/02) | |
| LIMIT OF WETLANDS | |
| EXISTING WOODS LINE | |
| PROPOSED WOODS LINE | |
| EXISTING STRUCTURE | |
| EXISTING SEPTIC FIELD | |
| PROPOSED SEPTIC FIELD | |
| PROPOSED FOREST CONSERVATION EASEMENT | |
| SLOPES 25% OR GREATER | |
| SLOPES BETWEEN 15% AND 25% | |
| EX. 100 YEAR FLOODPLAIN | |
| HIGHLY ERODIBLE SOILS | |
| WELL | |
| EFFECTIVE SITE AREA | |
| PERCOLATION TEST LOCATION | |

MATCHLINE SEE SHEET 3

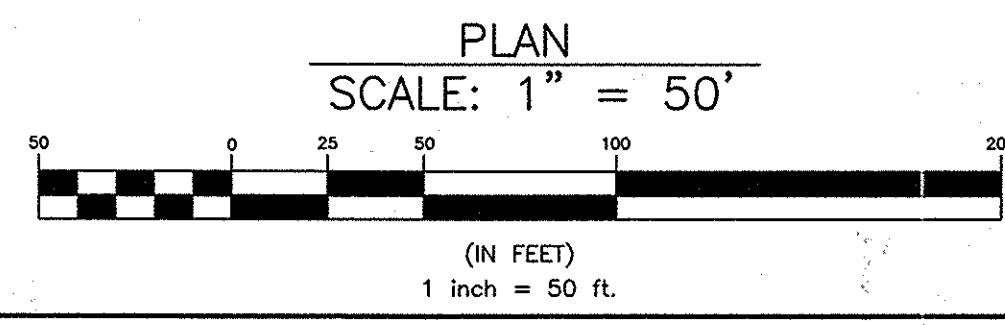
MATCHLINE SEE SHEET 1



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5-27-16

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5-25-16



| SYMBOL | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | K Value |
|--------|--------|------------------|-----------------|--|---------|
| GB | B | C | | GLENNETS LOAM, 3 TO 8 PERCENT SLOPES | 0.20 |
| GC | B | C | | GLENNETS LOAM, 8 TO 15 PERCENT SLOPES | 0.30 |
| GCB** | YES | C | | GLENNETS SILT LOAM, 3 TO 8 PERCENT SLOPES | 0.37 |
| GCB** | NO | C | | GLENNETS SILT LOAM, 8 TO 15 PERCENT SLOPES | 0.37 |
| MC | B | C | | MANOR LOAM, 6 TO 15 PERCENT SLOPES | 0.24 |
| MCB | B | C | | MANOR LOAM, 15 TO 25 PERCENT SLOPES | 0.24 |

* INDICATES HYDRIC SOILS
 ** HIGHLY ERODIBLE, K>0.35, AND/OR 15% OR GREATER SLOPES
 TAKEN FROM THE NRCS WEB SOIL SURVEY, AUGUST 2014, SHEET 16

BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
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BRIGHTON MILL II

LOTS 1 THRU 12, BUILDABLE PRESERVATION PARCEL 'A' AND
 NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'D'

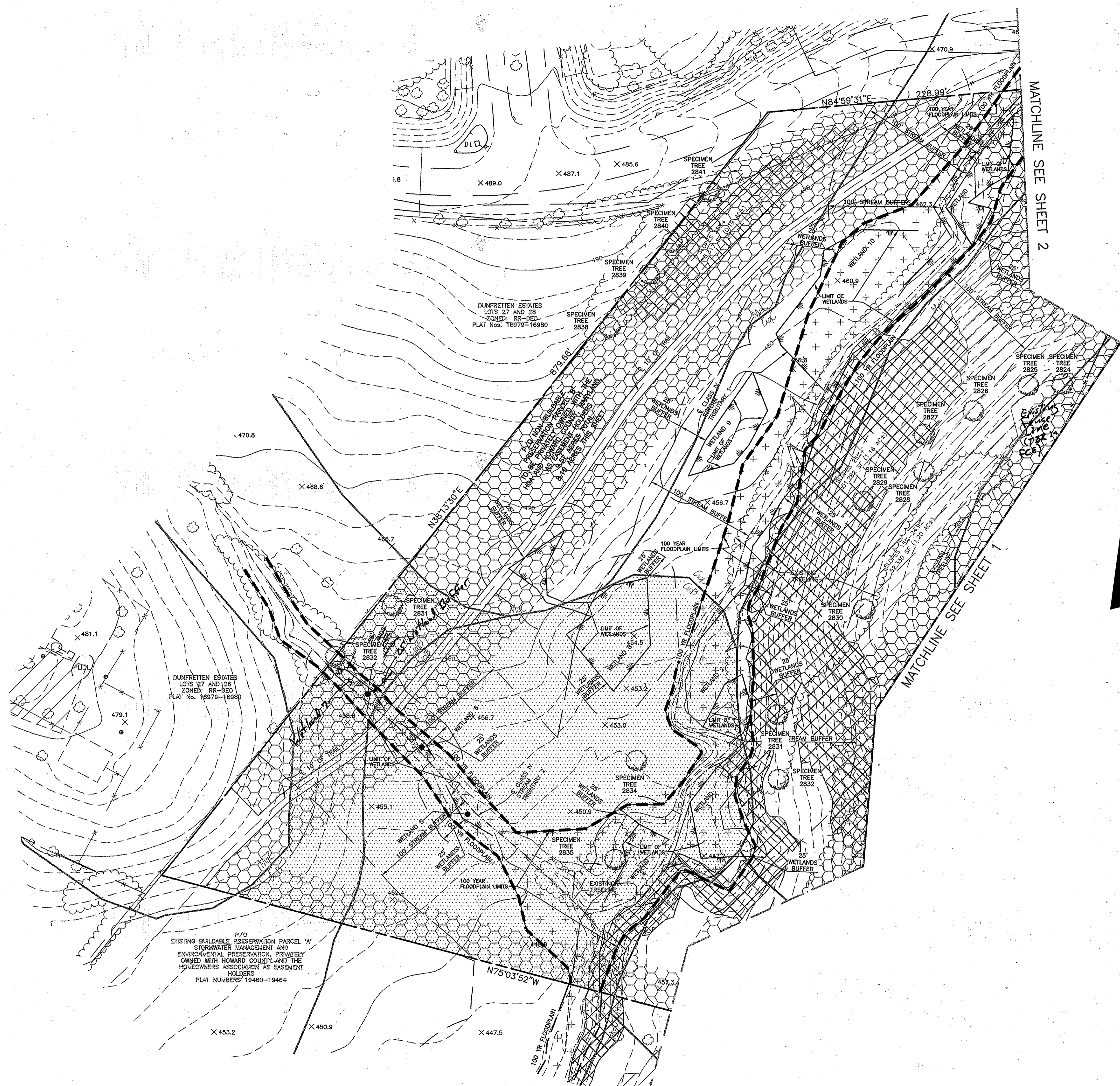
TAX MAP: 34, GRID: 2, PARCEL: 16, ZONED: RR-DEO
 BROCCOLINO WAY
 CLARKSVILLE, MD 21029
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT PLAN

DATE: MAY, 2016 PROJECT NO. 2627
 SCALE: 1" = 50' SHEET 2 OF 6

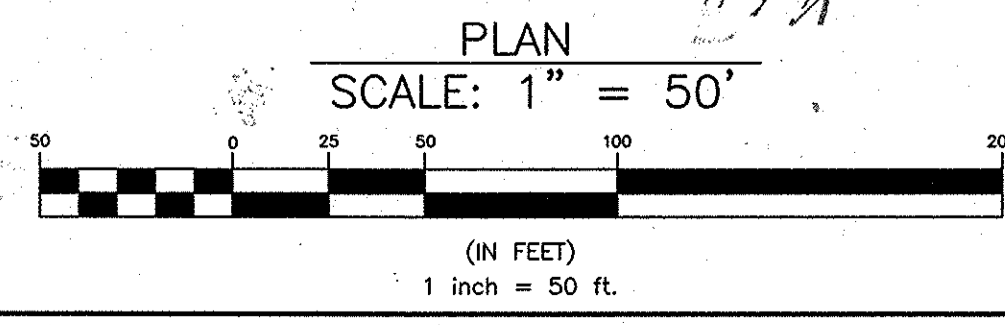
LEGEND

- SOILS CLASSIFICATION
- SOILS DELINEATION
- EXISTING CONTOURS (AERIAL 12/02)
- LIMIT OF WETLANDS
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- SLOPES 25% OR GREATER
- SLOPES BETWEEN 15% AND 25%
- HIGHLY ERODIBLE SOILS
- WELL
- EFFECTIVE SITE AREA
- PERCOLATION TEST LOCATION



P/O
EXISTING BUILDABLE PRESERVATION PARCEL 'A'
STORMWATER MANAGEMENT AND
ENVIRONMENTAL PRESERVATION, PRIVATELY
OWNED WITH HOWARD COUNTY AND THE
HOMEOWNERS ASSOCIATION AS EASEMENT
HOLDERS
PLAT NUMBERS 19460-19464

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Phil Colburn 5-27-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Veitch 5-28-16
CHIEF, DIVISION OF LAND DEVELOPMENT



| SYMBOL | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | K Value |
|--------|--------|------------------|-----------------|--|---------|
| ○ | B | | | GLENELG LOAM, 3 TO 8 PERCENT SLOPES | 0.20 |
| ○ | B | | | GLENELG LOAM, 8 TO 15 PERCENT SLOPES | 0.25 |
| ○ | C | | | GLENEVILLE SALT LOAM, 3 TO 8 PERCENT SLOPES | 0.37 |
| ○ | C | | | GLENEVILLE COCKSCURUS SALT LOAM, 0 TO 8 PERCENT SLOPES | 0.37 |
| ○ | B | | | MANOR LOAM, 8 TO 15 PERCENT SLOPES | 0.24 |
| ○ | B | | | MANOR LOAM, 15 TO 25 PERCENT SLOPES | 0.24 |

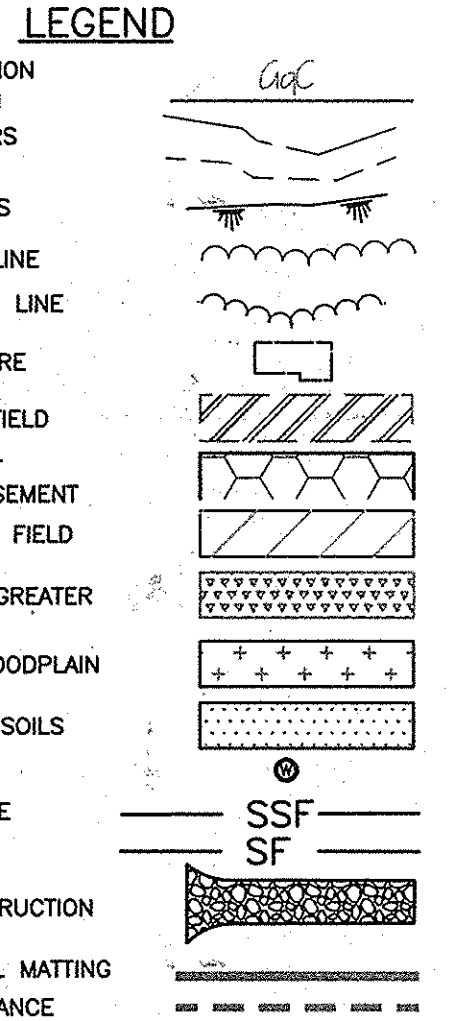
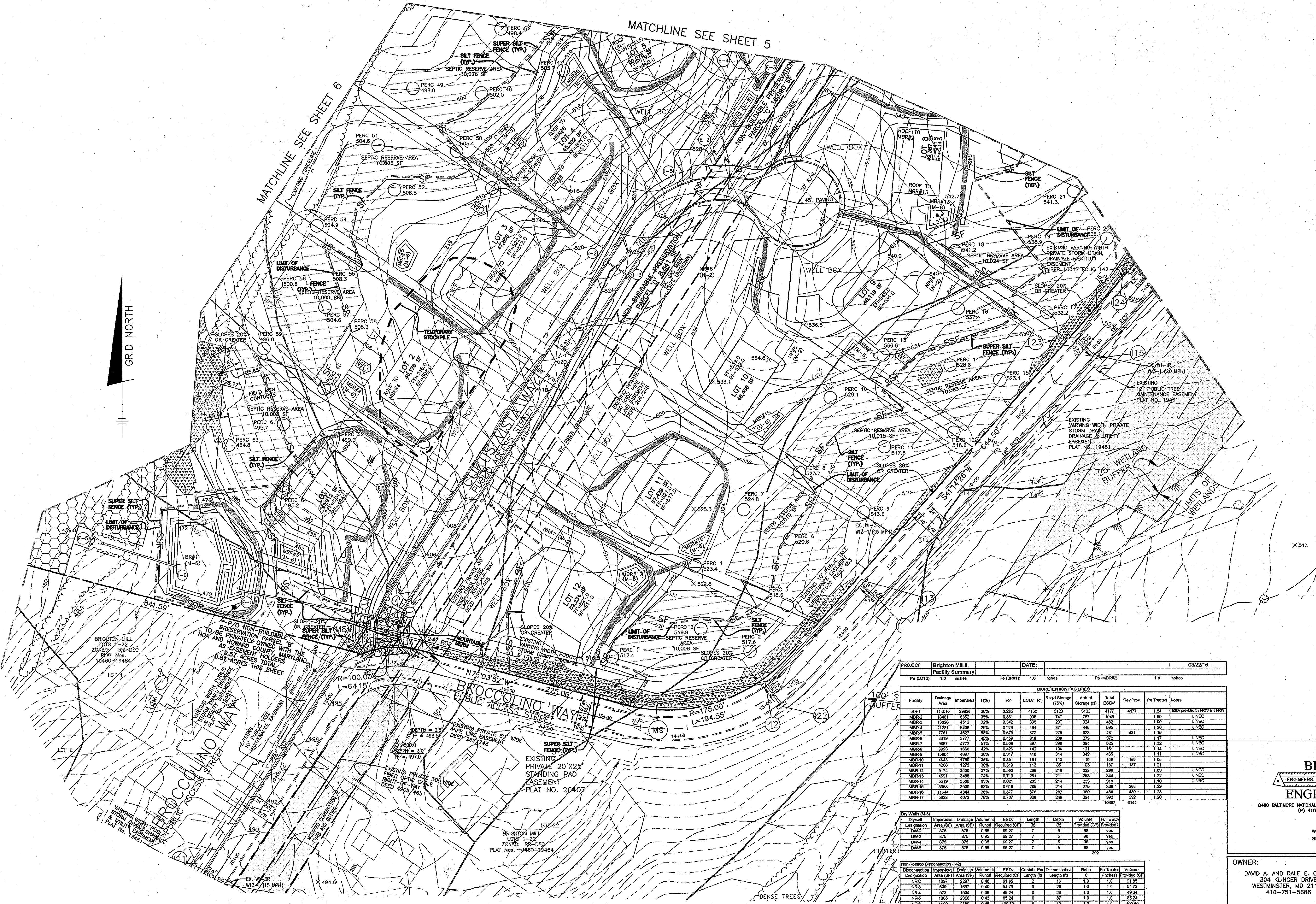
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Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577, Expiration Date: 06-08-2016.
Michael M. Carr
STATE OF MARYLAND
PROFESSIONAL ENGINEER
NO. 45577
5/16/16

OWNER:
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BRIGHTON MILL II
LOTS 1 THRU 12, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'D'
TAX MAP: 34, GRID: 2, PARCEL: 16, ZONED: RR-DEO
BROCCOLINO WAY
CLARKSVILLE, MD 21029
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
ENVIRONMENTAL CONCEPT PLAN
DATE: MAY, 2016 PROJECT NO. 2627
SCALE: 1" = 50' SHEET 3 OF 6
DRAFT: JC DESIGN: JC CHECK: -



SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

PHASE 1 - SITE CONSTRUCTION

1. Obtain grading permit. (day 1)
2. Hold on-site pre-construction meeting. (day 2)
3. Clear and grub as necessary to install stabilized construction entrance and perimeter controls (super silt fences, diversion dikes/pipes, etc.) (day 3-8)
4. Upon approval from the Howard County sediment control inspector, proceed to clear, grub and grade within the perimeter. (day 9-18)
5. Construct the storm drain system, grade in the swales and bring the road to sub-grade. Utilize inlet protection on all inlets and permanent stabilization matting within the swales. (day 19-50)
6. Construct the curb and gutter and then the roadway. (day 51-61)
7. Construct BR#1 and BR#2 but do not install plantings at this time! Wrap outer perimeter with silt fence. Utilize inlet protection. (day 62-80)
8. Upon Approval of the sediment control inspector remove the perimeter controls, inlet protections, permanently stabilize any disturbed areas and install the required plantings. (day 81-100)

PHASE 2 - PER LOT HOUSE CONSTRUCTION

1. Obtain building permit. (day 1)
2. Hold on-site preconstruction meeting. (day 2)
3. Install perimeter lot controls (i.e. silt fence). (day 3)
4. Excavate for foundation, rough grade and stabilize in accordance with the temporary seeded notes. (day 4-10)
5. Construct house, backfill and construct driveway. (day 11-90)
6. Construct on-lot SWM practices (i.e. micro bio-retentions, disconnections and drywells) complete with underdrains and plantings. Construct roof leader underdrains to the facilities. Final grade lot and stabilize in accordance with the PERMANENT seeded notes. (day 91-95)
7. Upon approval from the Howard County Sediment Control Inspector, remove all sediment control devices and stabilize any remaining disturbed areas in accordance with the permanent seeded notes. (day 96-100)

| | | |
|---------------------------|-----------------------|-----------------------|
| PROJECT: Brighton Mill II | DATE: 03/22/16 | |
| Pe (LOT): 1.0 inches | Pe (BR#1): 1.6 inches | Pe (BR#2): 1.8 inches |

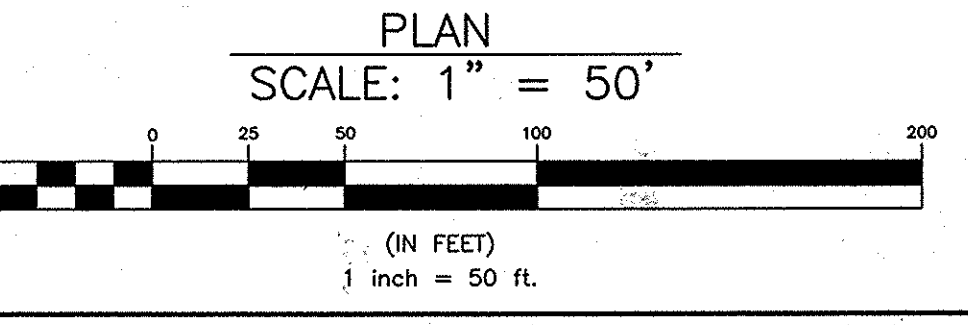
| Facility | Drainage Area | Impenon | I (%) | Rv | ESDv (ft) | Actual Storage (cu ft) | Total ESDv | Rev/Prev | Pe Treated | Notes |
|----------|---------------|---------|-------|-------|-----------|------------------------|------------|----------|------------------------------|-------|
| BR-1 | 114010 | 28028 | 20% | 0.385 | 4160 | 3133 | 4177 | 1.34 | ESDv provided by HW and HW#7 | |
| BR-2 | 18011 | 4532 | 20% | 0.361 | 598 | 727 | 1049 | 1.60 | LINED | |
| BR-3 | 13898 | 4512 | 20% | 0.342 | 396 | 297 | 324 | 1.09 | LINED | |
| BR-4 | 21281 | 5498 | 20% | 0.279 | 484 | 371 | 448 | 1.20 | LINED | |
| BR-5 | 7781 | 4227 | 20% | 0.276 | 312 | 279 | 323 | 1.16 | LINED | |
| BR-6 | 8319 | 3777 | 45% | 0.459 | 318 | 258 | 279 | 1.17 | LINED | |
| BR-7 | 3927 | 2172 | 20% | 0.209 | 297 | 228 | 284 | 1.32 | LINED | |
| BR-8 | 3953 | 1666 | 42% | 0.426 | 142 | 108 | 121 | 1.14 | LINED | |
| BR-9 | 15824 | 4697 | 20% | 0.317 | 418 | 314 | 348 | 1.11 | LINED | |
| BR-10 | 4643 | 1768 | 20% | 0.394 | 151 | 113 | 119 | 1.05 | LINED | |
| BR-11 | 4268 | 1275 | 20% | 0.319 | 85 | 65 | 103 | 1.37 | LINED | |
| BR-12 | 8114 | 3488 | 20% | 0.209 | 281 | 211 | 258 | 1.22 | LINED | |
| BR-13 | 4651 | 3488 | 74% | 0.719 | 281 | 211 | 258 | 1.22 | LINED | |
| BR-14 | 3519 | 3500 | 63% | 0.621 | 285 | 214 | 295 | 1.31 | LINED | |
| BR-15 | 5568 | 3504 | 63% | 0.618 | 292 | 214 | 276 | 1.28 | LINED | |
| BR-16 | 11944 | 4344 | 20% | 0.377 | 378 | 282 | 300 | 1.28 | LINED | |
| BR-17 | 5383 | 4073 | 20% | 0.237 | 328 | 248 | 294 | 1.20 | LINED | |

| Designation | Area (SF) | Area (SF) | Volume | ESDv | Length | Depth | Volume | Full ESDv |
|-------------|-----------|-----------|--------|------|--------|-------|--------|-----------|
| DW-1 | 705 | 1.95 | 69.27 | 7 | 5 | 88 | yes | |
| DW-2 | 875 | 1.95 | 69.27 | 7 | 5 | 88 | yes | |
| DW-3 | 875 | 1.95 | 69.27 | 7 | 5 | 88 | yes | |
| DW-4 | 875 | 1.95 | 69.27 | 7 | 5 | 88 | yes | |
| DW-5 | 875 | 1.95 | 69.27 | 7 | 5 | 88 | yes | |

| Disconnection | Area (SF) | Area (SF) | Volume | ESDv | Length | Depth | Volume | Full ESDv |
|---------------|-----------|-----------|--------|--------|--------|-------|--------|-----------|
| NR-1 | 1097 | 2.287 | 0.48 | 91.85 | 16 | 1.0 | 1.0 | 91.85 |
| NR-2 | 659 | 1.632 | 0.40 | 54.73 | 0 | 20 | 1.0 | 54.73 |
| NR-3 | 513 | 1.504 | 0.38 | 49.24 | 0 | 20 | 1.0 | 49.24 |
| NR-4 | 1005 | 2.360 | 0.43 | 85.24 | 0 | 37 | 1.0 | 85.24 |
| NR-5 | 1192 | 2.988 | 0.45 | 100.69 | 0 | 12 | 1.0 | 100.69 |
| NR-7 | 840 | 1.840 | 0.51 | 73.17 | 0 | 29 | 1.0 | 73.17 |

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 DATE: 5-27-16
 DATE: 5-25-16

| SYMBOL | HYDRIC | HYDROLOGIC GROUP | NAME | R Value |
|--------|--------|------------------|---|---------|
| CSB | B | | GLENNVILLE LOAM 3 TO 8 PERCENT SLOPES | 0.20 |
| CSG | B | | GLENNVILLE LOAM 8 TO 15 PERCENT SLOPES | 0.20 |
| CSH | B | | GLENNVILLE LOAM 15 TO 25 PERCENT SLOPES | 0.20 |
| CSM | B | | GLENNVILLE LOAM 3 TO 8 PERCENT SLOPES | 0.20 |
| CSO | B | | GLENNVILLE LOAM 8 TO 15 PERCENT SLOPES | 0.20 |
| CSQ | B | | GLENNVILLE LOAM 15 TO 25 PERCENT SLOPES | 0.20 |

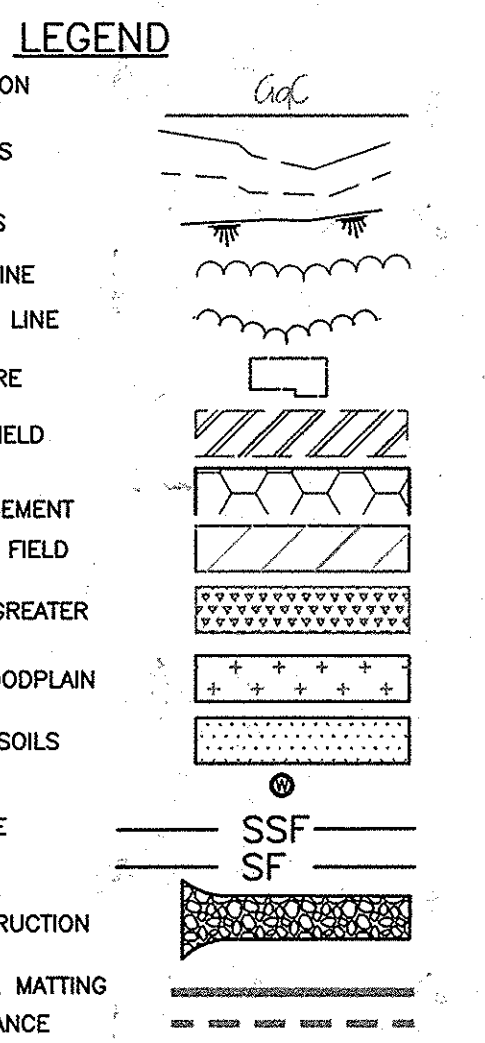
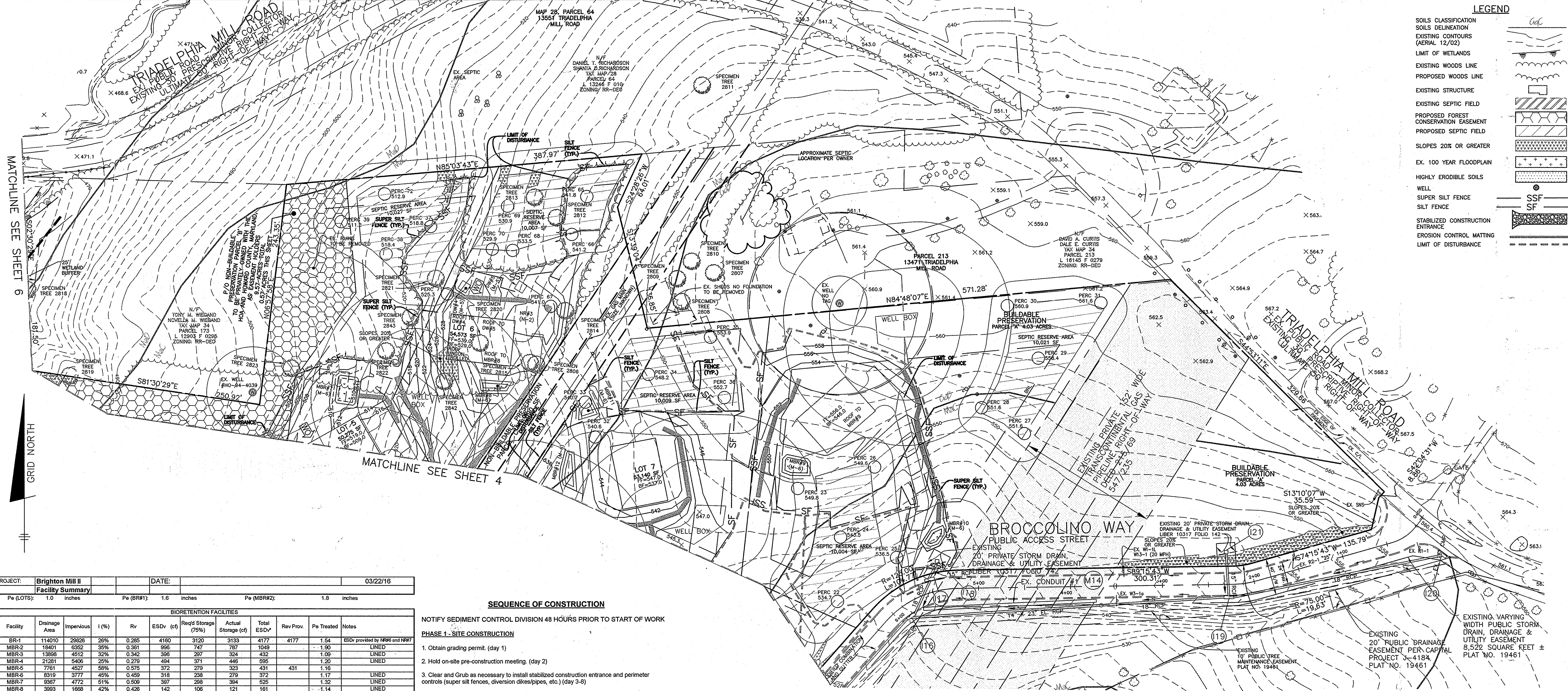


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 WWW.BE-ONLINEENGINEERING.COM
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OWNER:
 DAVID A. AND DALE E. CURTIS
 304 KLINGER DRIVE
 WESTMINSTER, MD 21157
 410-751-5686

DEVELOPER:
 HIGHLAND DEVELOPMENT CORP
 P.O. BOX 228
 CLARKSVILLE, MARYLAND 21029
 410-365-0414

PROJECT NO. 2627
ENVIRONMENTAL CONCEPT, STORMWATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL PLAN
 DATE: MAY, 2016
 SCALE: 1" = 50'
 SHEET 4 OF 6



MATCHLINE SEE SHEET 6

MATCHLINE SEE SHEET 4

| | | | |
|------------------|------------------|-------------|------------|
| PROJECT: | Brighton Mill II | DATE: | 03/22/16 |
| Facility Summary | | | |
| Pe (LOTS): | 1.0 inches | Pe (BR#1): | 1.8 inches |
| | | Pe (MBR#2): | 1.8 inches |

| Facility | Drainage Area | Impervious | I (%) | Rv | ESDv (cf) | Req'd Storage (75%) | Actual Storage (cf) | Total ESDv | Rev Prov. | Pe Treated | Notes |
|----------|---------------|------------|-------|-------|-----------|---------------------|---------------------|------------|-----------|------------|--------------------------------|
| BR-1 | 114010 | 28626 | 26% | 0.285 | 4160 | 3120 | 4177 | 4177 | 4177 | 1.54 | ESDv provided by MBR6 and MBR7 |
| MBR-2 | 18401 | 6352 | 35% | 0.361 | 956 | 747 | 787 | 1049 | | 1.90 | LINED |
| MBR-3 | 13868 | 4512 | 32% | 0.342 | 396 | 297 | 324 | 432 | | 1.09 | LINED |
| MBR-4 | 21281 | 5406 | 25% | 0.276 | 494 | 371 | 446 | 595 | | 1.20 | LINED |
| MBR-5 | 7761 | 4527 | 58% | 0.576 | 372 | 279 | 323 | 431 | | 1.16 | |
| MBR-6 | 8319 | 3777 | 45% | 0.459 | 318 | 238 | 279 | 372 | | 1.17 | LINED |
| MBR-7 | 9367 | 4772 | 51% | 0.508 | 387 | 288 | 384 | 525 | | 1.32 | LINED |
| MBR-8 | 3953 | 1668 | 42% | 0.428 | 142 | 106 | 121 | 161 | | 1.14 | LINED |
| MBR-9 | 15804 | 4687 | 30% | 0.317 | 418 | 314 | 349 | 465 | | 1.11 | LINED |
| MBR-10 | 4643 | 1759 | 38% | 0.391 | 151 | 113 | 119 | 159 | | 1.05 | |
| MBR-11 | 4268 | 1275 | 30% | 0.319 | 113 | 85 | 103 | 137 | | 1.21 | |
| MBR-12 | 6174 | 3500 | 57% | 0.580 | 288 | 218 | 222 | 296 | | 1.03 | LINED |
| MBR-13 | 4891 | 3488 | 74% | 0.719 | 261 | 211 | 269 | 344 | | 1.22 | LINED |
| MBR-14 | 5919 | 3500 | 63% | 0.621 | 285 | 214 | 235 | 313 | | 1.10 | LINED |
| MBR-15 | 5668 | 3500 | 63% | 0.616 | 286 | 214 | 276 | 368 | | 1.29 | |
| MBR-16 | 11944 | 4344 | 36% | 0.377 | 376 | 282 | 360 | 480 | | 1.26 | |
| MBR-17 | 5333 | 4073 | 76% | 0.737 | 328 | 246 | 294 | 392 | | 1.20 | |
| | | | | | | | 10697 | | 6144 | | |

| Dry Wells (M-5) | Impervious Area (SF) | Drainage Area (SF) | Volumetric Runoff | ESDv | Length (ft) | Depth (ft) | Volume Provided (CF) | Full ESDv Provided? |
|-----------------|----------------------|--------------------|-------------------|-------|-------------|------------|----------------------|---------------------|
| DW-2 | 875 | 875 | 0.95 | 89.27 | 7 | 5 | 98 | yes |
| DW-3 | 875 | 875 | 0.95 | 89.27 | 7 | 5 | 98 | yes |
| DW-4 | 875 | 875 | 0.95 | 89.27 | 7 | 5 | 98 | yes |
| DW-5 | 875 | 875 | 0.95 | 89.27 | 7 | 5 | 98 | yes |

| Non-Rooftop Disconnection (N-2) | Disconnection Area (SF) | Impervious Area (SF) | Drainage Area (SF) | Volumetric Runoff | ESDv | Contrib. Per Length (ft) | Disconnection Length (ft) | Ratio | Pe Treated | Volume Provided (CF) |
|---------------------------------|-------------------------|----------------------|--------------------|-------------------|------|--------------------------|---------------------------|-------|------------|----------------------|
| NR-2 | 1097 | 2297 | 0.48 | 91.85 | 2 | 16 | 1.0 | 1.0 | 91.85 | |
| NR-3 | 639 | 1632 | 0.40 | 54.73 | 0 | 26 | 1.0 | 1.0 | 54.73 | |
| NR-4 | 573 | 1504 | 0.39 | 49.24 | 0 | 23 | 1.0 | 1.0 | 49.24 | |
| NR-5 | 1005 | 2388 | 0.43 | 85.24 | 0 | 37 | 1.0 | 1.0 | 85.24 | |
| NR-6 | 1192 | 2689 | 0.45 | 100.60 | 6 | 12 | 1.0 | 1.0 | 100.60 | |
| NR-7 | 940 | 1840 | 0.51 | 78.17 | 0 | 29 | 1.0 | 1.0 | 78.17 | |

The total ESDv provided by this design is: 11549 CF
 The total Rev provided by this design is: 6996 CF
 Micro-Bioretention facilities within the 100' well radius must be provided with an impermeable liner.
 *Total ESDv is the treated ESDv divided by 0.75.

**The ESDv summary table portrays storage in excess of that required for Environmental Site Design requirements.
 The final plans will refine practices to eliminate treatment in excess of the target Pe and verify the best distribution of treatment across the site.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 5-27-16
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 5-25-16
 CHIEF, DIVISION OF LAND DEVELOPMENT

SEQUENCE OF CONSTRUCTION

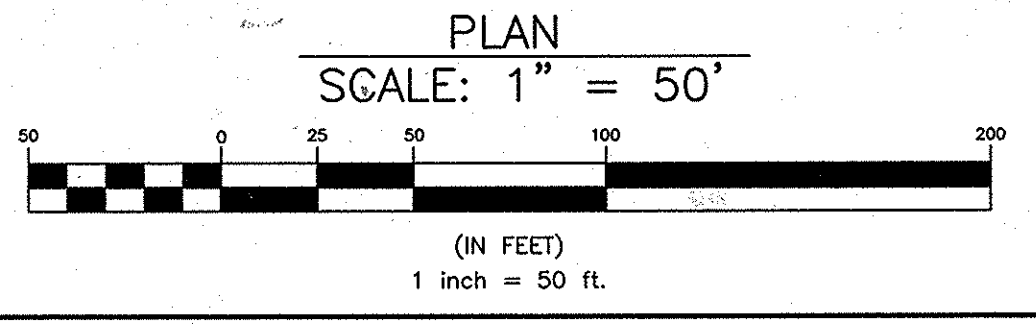
NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

PHASE 1 - SITE CONSTRUCTION

1. Obtain grading permit. (day 1)
2. Hold on-site pre-construction meeting. (day 2)
3. Clear and Grub as necessary to install stabilized construction entrance and perimeter controls (super silt fences, diversion dikes/pipes, etc.) (day 3-8)
4. Upon approval from the Howard County sediment control inspector, proceed to clear, grub and grade within the perimeter. (day 9-18)
5. Construct the storm drain system, grade in the swales and bring the road to sub-grade. Utilize inlet protection on all inlets and permanent stabilization matting within the swales. (day 19-50)
6. Construct the curb and gutter and then the roadway. (day 51-61)
7. Construct BR#1 and MB#2 but do not install plantings at this time! Wrap outer perimeter with silt fence. Utilize inlet protection. (day 62-80)
8. Upon Approval of the sediment control inspector remove the perimeter controls, inlet protections, permanently stabilize any disturbed areas and install the required plantings. (day 81-100)

PHASE 2 - PER LOT HOUSE CONSTRUCTION

1. Obtain building permit. (day 1)
2. Hold on-site preconstruction meeting. (day 2)
3. Install perimeter lot controls (i.e. silt fence). (day 3)
4. Excavate for foundation, rough grade and stabilize in accordance with the temporary seeded notes. (day 4-10)
5. Construct house, backfill and construct driveway. (day 11-90)
6. Construct on-lot SWM practices (i.e. micro bio-retentions, disconnections and drywells) complete with underdrains and plantings. Construct roof leader underdrains to the facilities. Final grade lot and stabilize in accordance with the PERMANENT seeded notes. (day 91-95)
7. Upon approval from the Howard County Sediment Control Inspector, remove all sediment control devices and stabilize any remaining disturbed areas in accordance with the permanent seeded notes. (day 96-100)



| SYMBOL/HYDRIC | HYDROLOGIC GROUP | PERMEABILITY GROUP | NAME | K Value |
|---------------|------------------|--------------------|---|---------|
| G8B | B | | GLENELO LOAM, 3 TO 8 PERCENT SLOPES | 0.20 |
| G8C | B | | GLENELO LOAM, 8 TO 15 PERCENT SLOPES | 0.20 |
| G8E** | B | | GLENELO SILT LOAM, 3 TO 8 PERCENT SLOPES | 0.37 |
| G8F** | C | | GLENELO SILT LOAM, 8 TO 15 PERCENT SLOPES | 0.37 |
| M8C | B | | MANOKO LOAM, 3 TO 15 PERCENT SLOPES | 0.28 |
| M8D | B | | MANOKO LOAM, 15 TO 25 PERCENT SLOPES | 0.24 |

* INDICATES HYDRIC SOILS
 ** HIGHLY ERODIBLE, K>0.35, AND/OR 15% OR GREATER SLOPES
 TAKEN FROM THE NRCS WEB SOIL SURVEY, AUGUST 2014. SHEET 16

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS

ENGINEERING, INC.

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5/16/16

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410-751-5686

DEVELOPER:
HIGHLAND DEVELOPMENT CORP
P.O. BOX 228
CLARKSVILLE, MARYLAND 21029
410-365-0414

BRIGHTON MILL II

LOTS 1 THRU 12, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'D'

TAX MAP: 34, GRID: 2, PARCEL: 16, ZONED: RR-DEO
BROCCOLINO WAY
CLARKSVILLE, MD 21029
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ENVIRONMENTAL CONCEPT, STORMWATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL PLAN

| | | | |
|--------|-----------|--------------|--------|
| DATE: | MAY, 2016 | PROJECT NO.: | 2627 |
| DRAFT: | JC | DESIGN: | JC |
| CHECK: | - | SHEET: | 5 OF 6 |

SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF WORK

PHASE 1 - SITE CONSTRUCTION

1. Obtain grading permit. (day 1)
2. Hold on-site pre-construction meeting. (day 2)
3. Clear and Grub as necessary to install stabilized construction entrance and perimeter controls (super silt fences, diversion dikes/pipes, etc.) (day 3-8)
4. Upon approval from the Howard County sediment control inspector, proceed to clear, grub and grade within the perimeter. (day 9-18)
5. Construct the storm drain system, grade in the swales and bring the road to sub-grade. Utilize inlet protection on all inlets and permanent stabilization matting within the swales. (day 19-50)
6. Construct the curb and gutter and then the roadway. (day 51-61)
7. Construct BR#1 and MB#2 but do not install plantings at this time¹. Wrap outer perimeter with silt fence. Utilize inlet protection. (day 62-80)
8. Upon Approval of the sediment control inspector remove the perimeter controls, inlet protections, permanently stabilize any disturbed areas and install the required plantings. (day 81-100)

PHASE 2 - PER LOT HOUSE CONSTRUCTION

1. Obtain building permit. (day 1)
2. Hold on-site preconstruction meeting. (day 2)
3. Install perimeter lot controls (i.e. silt fence). (day 3)
4. Excavate for foundation, rough grade and stabilize in accordance with the temporary seeded notes. (day 4-10)
5. Construct house, backfill and construct driveway. (day 11-90)
6. Construct on-lot SWM practices (i.e. micro bio-retentions, disconnections and drywells) complete with underdrains and plantings. Construct roof leader underdrains to the facilities. Final grade lot and stabilize in accordance with the PERMANENT seeded notes. (day 91-95)
7. Upon approval from the Howard County Sediment Control Inspector, remove all sediment control devices and stabilize any remaining disturbed areas in accordance with the permanent seeded notes. (day 96-100)

LEGEND

- SOILS CLASSIFICATION
- SOILS DELINEATION
- EXISTING CONTOURS (AERIAL 12/02)
- LIMIT OF WETLANDS
- EXISTING WOODS LINE
- PROPOSED WOODS LINE
- EXISTING STRUCTURE
- EXISTING SEPTIC FIELD
- PROPOSED FOREST CONSERVATION EASEMENT
- PROPOSED SEPTIC FIELD
- SLOPES 20% OR GREATER
- EX. 100 YEAR FLOODPLAIN
- HIGHLY ERODIBLE SOILS
- WELL
- SUPER SILT FENCE
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING
- LIMIT OF DISTURBANCE

| | | | |
|------------------|------------------|------------------------|----------|
| PROJECT: | Brighton Mill II | DATE: | 03/22/16 |
| Facility Summary | | Pe (LOTS): 1.0 inches | |
| | | Pe (BR#1): 1.6 inches | |
| | | Pe (MBR#2): 1.8 inches | |

| BIORETENTION FACILITIES | | | | | | | | | | | |
|-------------------------|---------------|-----------|-------|-------|-----------|---------------------|---------------------|------------|-----------|------------|------------------------------|
| Facility | Drainage Area | Impenious | I (%) | Rv | ESDv (cf) | Red'd Storage (75%) | Actual Storage (cf) | Total ESDv | Rev Prov. | Pe Treated | Notes |
| BR-1 | 114010 | 29826 | 26% | 0.285 | 4160 | 3120 | 3133 | 4177 | 4177 | 1.54 | ESDv provided by NR6 and NR7 |
| MBR-2 | 18401 | 6352 | 35% | 0.361 | 996 | 747 | 787 | 1049 | | 1.90 | LINED |
| MBR-3 | 13898 | 4512 | 32% | 0.342 | 396 | 297 | 324 | 432 | | 1.09 | LINED |
| MBR-4 | 21281 | 5406 | 25% | 0.279 | 494 | 371 | 446 | 595 | | 1.20 | LINED |
| MBR-5 | 7761 | 4527 | 58% | 0.575 | 372 | 279 | 323 | 431 | 431 | 1.16 | |
| MBR-6 | 8319 | 3777 | 45% | 0.459 | 318 | 238 | 279 | 372 | | 1.17 | LINED |
| MBR-7 | 9367 | 4772 | 51% | 0.509 | 397 | 298 | 394 | 525 | | 1.32 | LINED |
| MBR-8 | 3993 | 1668 | 42% | 0.426 | 142 | 106 | 121 | 161 | | 1.14 | LINED |
| MBR-9 | 15604 | 4697 | 30% | 0.317 | 418 | 314 | 349 | 465 | | 1.11 | LINED |
| MBR-10 | 4643 | 1759 | 38% | 0.391 | 151 | 113 | 119 | 159 | | 1.05 | |
| MBR-11 | 4288 | 1275 | 30% | 0.319 | 113 | 85 | 103 | 137 | 137 | 1.21 | |
| MBR-12 | 6174 | 3500 | 57% | 0.560 | 288 | 216 | 222 | 286 | | 1.03 | |
| MBR-13 | 4691 | 3468 | 74% | 0.719 | 281 | 211 | 258 | 344 | | 1.22 | LINED |
| MBR-14 | 5519 | 3500 | 63% | 0.621 | 285 | 214 | 235 | 313 | | 1.10 | LINED |
| MBR-15 | 5568 | 3500 | 63% | 0.616 | 286 | 214 | 276 | 368 | 368 | 1.29 | |
| MBR-16 | 11944 | 4344 | 36% | 0.377 | 376 | 282 | 360 | 460 | 460 | 1.28 | |
| MBR-17 | 5333 | 4073 | 76% | 0.737 | 328 | 246 | 294 | 392 | 392 | 1.20 | |
| | | | | | | | | | 10697 | 6144 | |

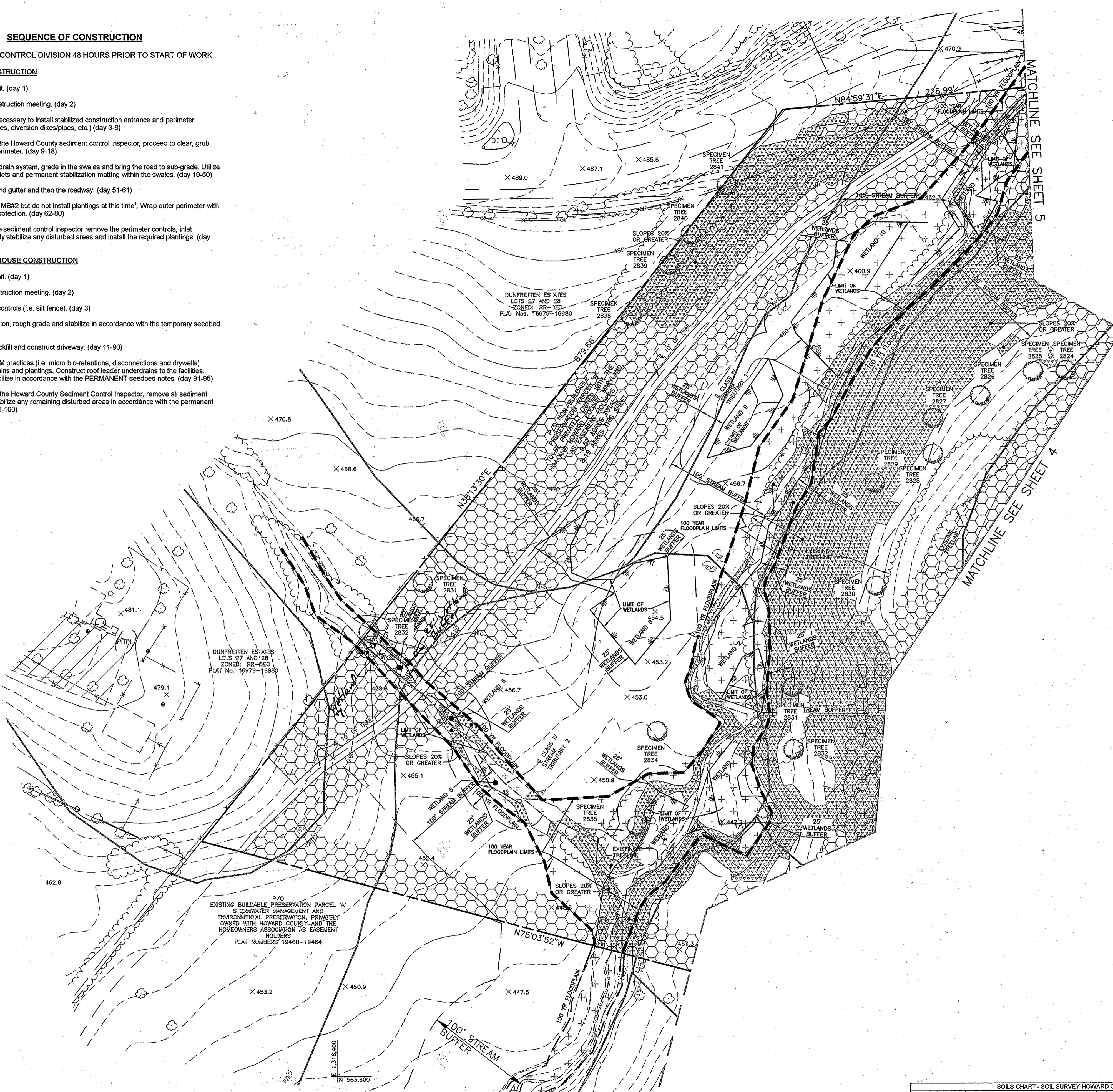
| Dry Wells (M-5) | | | | | | | | | |
|-----------------|-----------|-----------|--------|---------------|-------------|------------|--------|-----------|-----------|
| Designation | Area (SF) | Area (SF) | Runoff | Required (CF) | Length (ft) | Depth (ft) | Volume | Full ESDv | Provided? |
| DW-2 | 875 | 875 | 0.95 | 69.27 | 7 | 5 | 98 | 98 | yes |
| DW-3 | 875 | 875 | 0.95 | 69.27 | 7 | 5 | 98 | 98 | yes |
| DW-4 | 875 | 875 | 0.95 | 69.27 | 7 | 5 | 98 | 98 | yes |
| DW-5 | 875 | 875 | 0.95 | 69.27 | 7 | 5 | 98 | 98 | yes |
| | | | | | | | | | 392 |

| Non-Rooftop Disconnection (N-2) | | | | | | | | | |
|---------------------------------|-----------|-----------|--------|---------------|-------------|-------------------|-------|------------|----------------------|
| Designation | Area (SF) | Area (SF) | Runoff | Required (CF) | Length (ft) | Per Disconnection | Ratio | Pe Treated | Volume Provided (CF) |
| NR-2 | 1097 | 2297 | 0.48 | 91.85 | 2 | 16 | 1.0 | 1.0 | 91.85 |
| NR-3 | 639 | 1632 | 0.40 | 54.73 | 0 | 26 | 1.0 | 1.0 | 54.73 |
| NR-4 | 573 | 1504 | 0.39 | 49.24 | 0 | 23 | 1.0 | 1.0 | 49.24 |
| NR-5 | 1005 | 2368 | 0.43 | 85.24 | 0 | 37 | 1.0 | 1.0 | 85.24 |
| NR-6 | 1192 | 2689 | 0.45 | 100.60 | 6 | 12 | 1.0 | 1.0 | 100.60 |
| NR-7 | 940 | 1840 | 0.51 | 78.17 | 0 | 29 | 1.0 | 1.0 | 78.17 |
| | | | | | | | | | 459.83 |

The total ESDv provided by this design is: 11549 CF
 The total Rev provided by this design is: 6996 CF
 Micro-Bioretenion facilities within the 100' well radius must be provided with an impermeable liner.

*Total ESDv is the treated ESDv divided by 0.75.

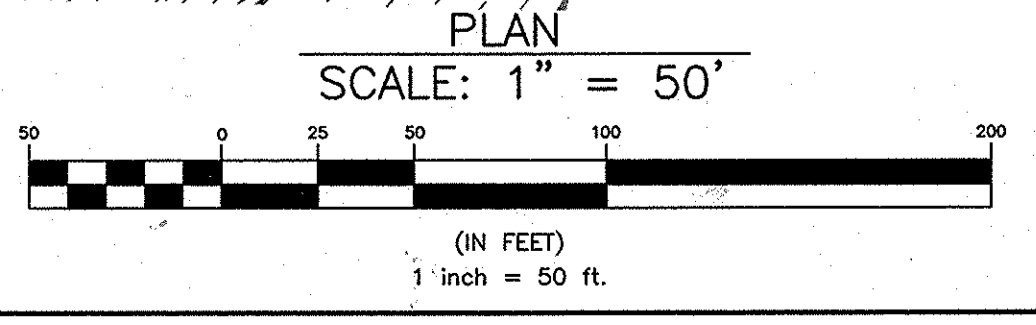
**The ESDv summary table portrays storage in excess of that required for Environmental Site Design requirements. The final plans will refine practices to eliminate treatment in excess of the target Pe and verify the best distribution of treatment across the site.



| SYMBOL | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME | k Value |
|--------|--------|------------------|-----------------|--|---------|
| G#B | B | | | GLENELG LOAM, 3 TO 8 PERCENT SLOPES | 0.20 |
| G#C | C | | | GLENELG LOAM, 8 TO 15 PERCENT SLOPES | 0.20 |
| G#B** | YES | C | | GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES | 0.37 |
| G#B** | C | | | GLENVILLE-CODORUS SILT LOAM, 0 TO 8 PERCENT SLOPES | 0.37 |
| M#C | C | | | MANOR LOAM, 8 TO 15 PERCENT SLOPES | 0.24 |
| M#D | B | | | MANOR LOAM, 15 TO 25 PERCENT SLOPES | 0.24 |

* INDICATES HYDRIC SOILS
 ** HIGHLY ERODIBLE, K>0.35, AND/OR 15% OR GREATER SLOPES
 TAKEN FROM THE NRCS WEB SOIL SURVEY, AUGUST 2014. SHEET 16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development



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 WWW.BE-CIVLENGINEERING.COM
 BE@BEI-CIVLENGINEERING.COM

BRIGHTON MILL II
 LOTS 1 THRU 12, BUILDABLE PRESERVATION PARCEL 'A' AND NON-BUILDABLE PRESERVATION PARCELS 'B' THRU 'D'
 TAX MAP: 34, GRID: 2, PARCEL: 16, ZONED: RR-DEO
 BROCCOLINO WAY
 CLARKSVILLE, MD 21029
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
ENVIRONMENTAL CONCEPT, STORMWATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL PLAN

OWNER: DAVID A. AND DALE E. CURTIS
 304 KLINGER DRIVE
 WESTMINSTER, MD 21157
 410-751-5686

DEVELOPER: HIGHLAND DEVELOPMENT CORP
 P.O. BOX 228
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 410-365-0414

DATE: MAY, 2016 PROJECT NO. 2627
 SCALE: 1" = 50' SHEET 6 OF 6