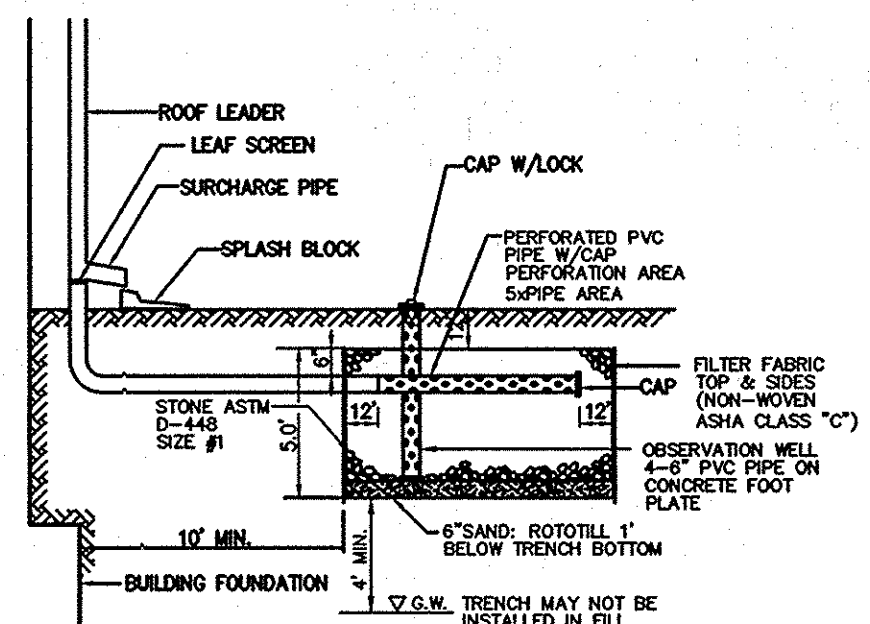
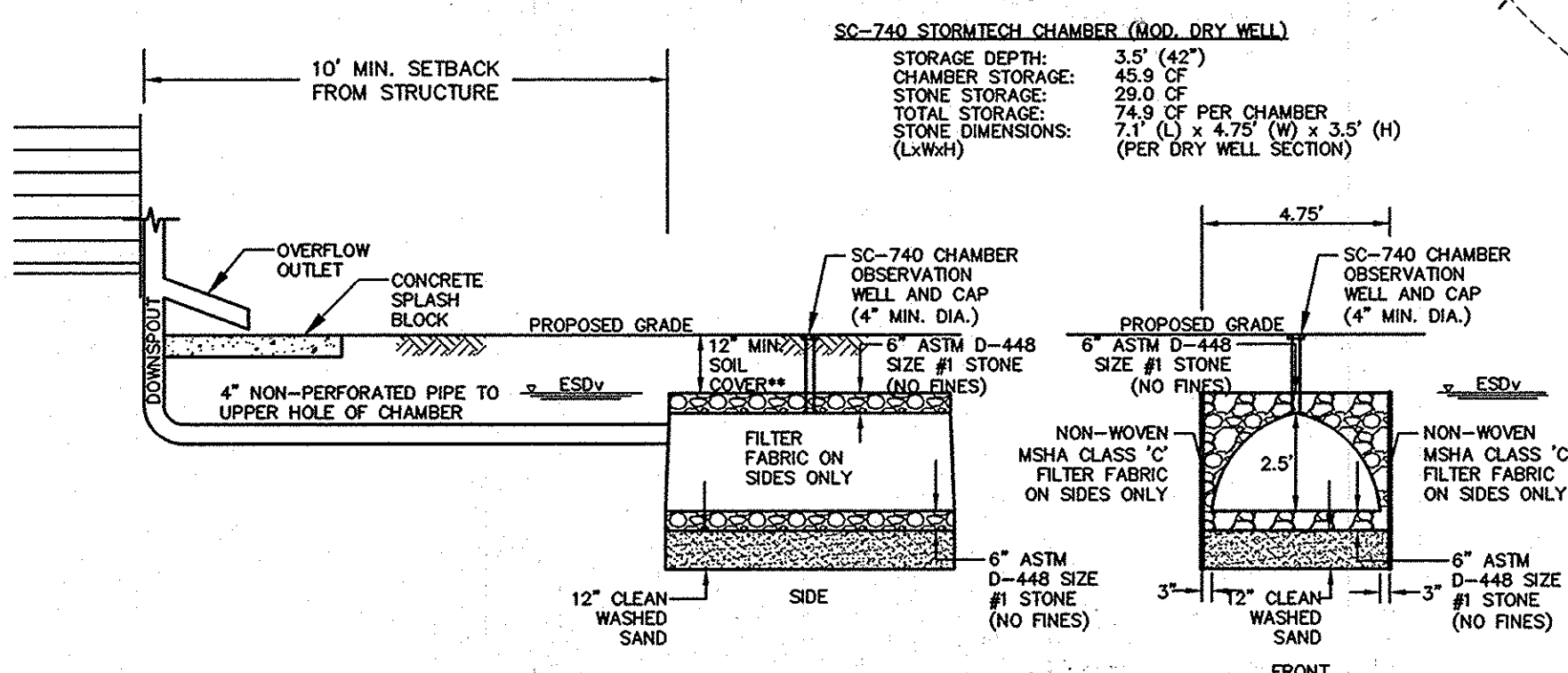


**ESD NARRATIVE**

1. NO NATURAL RESOURCES SUCH AS STEEP SLOPES, WETLANDS, STREAMS, OR VALUABLE FOREST LAND EXIST ON-SITE. THE PROPOSED DISCONNECTIONS, DRY WELLS AND MICRO-BIORETENTION FACILITIES WILL PROVIDE STORMWATER QUALITY TREATMENT FOR THE NEW DEVELOPMENT, WHICH WILL BE AN IMPROVEMENT OVER EXISTING CONDITIONS. NO EXISTING TREATMENT EXISTS FOR THE EXISTING DILAPIDATED STRUCTURE AND DRIVEWAY. IN ADDITION, THE EXISTING SITE IS COVERED WITH TRASH AND DEBRIS WHICH WILL BE REMOVED ONCE THE PROPOSED PROJECT COMMENCES.
2. THE IMPROVEMENTS AND DEVELOPED AREA WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS AS CLOSELY AS POSSIBLE. NO IMPACT IS PROPOSED THAT WOULD ALTER ANY NATURAL FLOW PATTERNS.
3. NON-STRUCTURAL PRACTICES WERE USED TO THE FULLY EXTENT POSSIBLE. NON-ROOFTOP DISCONNECTION WAS UTILIZED WHERE FEASIBLE. DUE TO THE LIMITED SIZE OF THE PROPOSED LOTS AND THE TOPOGRAPHY, ROOFTOP DISCONNECTION (N-1) WAS NOT CONSIDERED PRACTICAL.
4. THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES WILL BE IN ACCORDANCE WITH THE LATEST MDE STANDARDS AND SPECIFICATIONS UTILIZING SILT FENCES AND SUPER SILT FENCES. NO CONCENTRATION FLOW IS PROPOSED. NO SEDIMENT TRAPS OR BASINS ARE REQUIRED.
5. TABLE 5.2, SUMMARY OF SITE DEVELOPMENT STRATEGIES WAS UTILIZED TO THE EXTENT ALLOWABLE BY THE CURRENT HOWARD COUNTY ZONING AND LAND DEVELOPMENT REGULATIONS BY UTILIZING SHARED DRIVEWAY AND MINIMIZING EARTH DISTURBANCE.
6. IN DESIGNING THIS PROJECT, AND AFTER WE PLAN THE PROJECT TO MINIMIZE IMPERVIOUS AREAS, WE UTILIZED ESD MEASURES IN THE FOLLOWING ORDER OF PREFERENCE:
  - A. DISCONNECTION OF NON-ROOFTOP (N-2)
  - B. MICRO-SCALE PRACTICES (M-5)



**DRYWELL TYP. DETAIL**



**MODIFIED DRYWELL (M-5) DETAIL**

NOTE: ADJUST COVER OVER CHAMBER TO ENSURE THAT THE CLEAN WASHED SAND LAYER IS NOT PLACED IN FILL.  
NOTE: DRYWELLS MAY BE REPLACED WITH MODIFIED DRY WELLS AS SHOWN IN THE TABLE BELOW.

**DRYWELL EQUIVALENCY TABLE**

LOT	NUMBER OF DRYWELLS	DRYWELL DIMENSIONS (LxWxH)	EQUIVALENT NUMBER OF MODIFIED DRY WELLS
1	4	6' x 6' x 4'	8
2	4	6' x 6' x 4'	8
3	4	6' x 6' x 4'	8
4	4	6' x 6' x 4'	8
5	4	6' x 6' x 4'	8
6	4	6' x 6' x 4'	8

EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN ARE CONCEPTUAL. ADDITIONAL MEASURES WILL BE SHOWN ON BOTH THE FINAL PLANS AND SITE DEVELOPMENT PLANS.

STORM DRAINAGE SHOWN IS CONCEPTUAL. ADDITIONAL DESIGN AND ANALYSIS SHALL BE UNDERTAKEN DURING THE FINAL SUBDIVISION STAGE OF THE PROJECT TO DETERMINE WHAT, IF ANY, ADDITIONAL COMPONENTS ARE REQUIRED TO PROVIDE ADEQUATE STORM DRAINAGE FOR PINE ROAD.

STOCKPILE WILL BE PLACED WITHIN THE LIMIT OF DISTURBANCE.

**OWNER**  
FRANK A. MANAGO  
4109 WALRAD STREET  
BALTIMORE, MD 21228-4142  
C/O (410)375-1052

**DEVELOPER**  
PATAPSCO BUILDERS, LLC  
C/O BURKARD HOMES, LLC  
5300 DORSEY HALL DRIVE  
ELLCOTT CITY, MD 21042  
(410)375-1052

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division  
Chief, Division of Land Development

9-25-14  
9-23-14

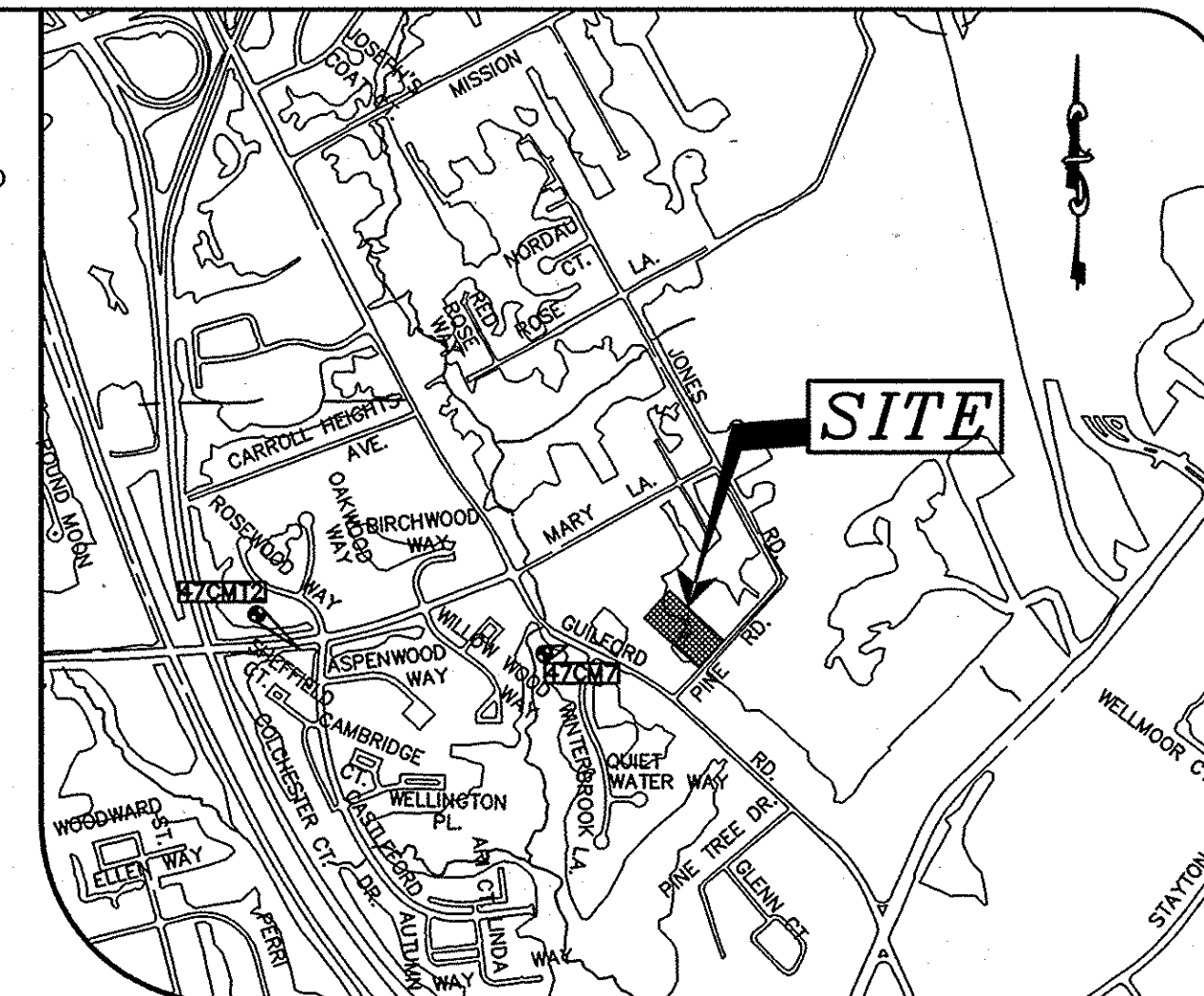


I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP DATE 2/13/15.

JEFFREY S. SOMAN, P.E.  
9/22/14

**LEGEND**

- AREA OF PAVEMENT TREATED BY N-2, NON-ROOFTOP DISCONNECTION
- AREA OF N-2, NON-ROOFTOP DISCONNECTION
- ROOF AREA TREATED BY M-5, MODIFIED DRY WELLS.
- PRIVATE USE-IN-COMMON ACCESS, DRAINAGE & UTILITY EASEMENT
- AREA TO BE DEDICATED TO HOWARD COUNTY FOR THE USE OF A PUBLIC ROAD (2,173 SF / 0.05 AC)
- M-5, DRY WELL
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE
- SILT DIVERSION FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- EXISTING TREELINE
- PROPOSED TREELINE



**VICINITY MAP**

SCALE: 1" = 1000'  
ADC MAP 20 - GRID D5

**NOTES:**

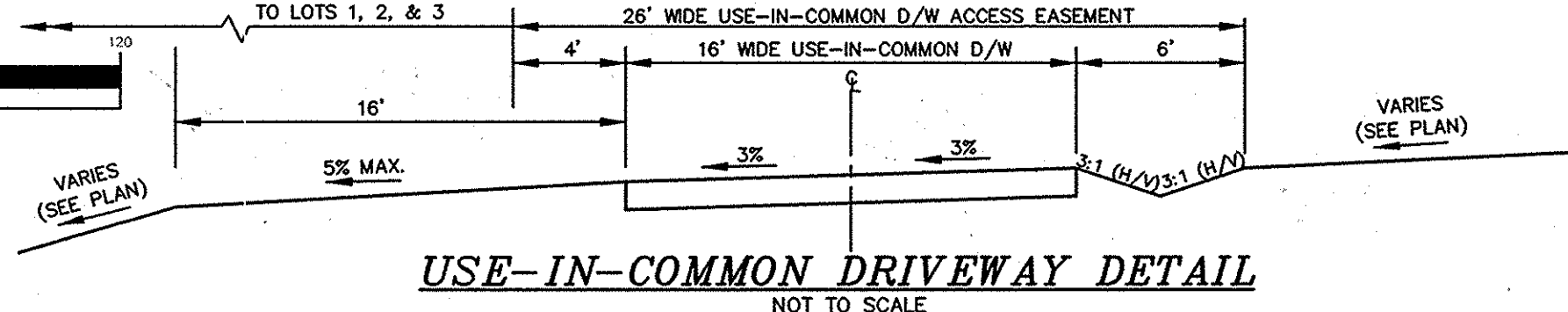
1. SITE ANALYSIS DATA:  
LOCATION: TAX MAP: 47 GRID: 6 PARCEL: 50  
ELECTION DISTRICT: SIXTH  
ZONING: R-12  
TOTAL AREA: 1.83 AC ±  
LIMIT OF DISTURBED AREA: 1.87 AC ± (INCLUDING OFFSITE)  
PROPOSED USE FOR SITE: RESIDENTIAL  
TOTAL NUMBER OF UNITS: 6  
TYPE OF PROPOSED UNIT: SFD  
DEED REFERENCE: L 9465, F 1  
PREVIOUS DPZ NUMBERS: NONE
2. HORIZONTAL AND VERTICAL DATUMS ARE RELATED TO THE MARYLAND STATE PLANE COORDINATE SYSTEM AS PROJECTED FROM HOWARD COUNTY CONTROL STATIONS NO. 47F5 & 48A  
STA. NO. 47F5 N 535,985.0412 E 1,365,653.4555 ELEV. 234.996  
STA. NO. 48A N 538,384.4474 E 1,366,415.7904 ELEV. 225.653
3. THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (COUNCIL BILL 45-2003). DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION OR BUILDING/GRADING PERMIT.
4. SITE DEVELOPMENT PLAN APPROVAL BY THE DEPARTMENT OF PLANNING AND ZONING IS REQUIRED PRIOR TO BUILDING PERMITS BEING ISSUED FOR THE CONSTRUCTION OF RESIDENTIAL DWELLINGS ON THESE LOTS.
5. THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 REGULATIONS OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPERS OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED PERIMETER LANDSCAPING, BERRIS, FENCES, SIMILAR HOUSING UNIT TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSES.
6. BOUNDARY SHOWN HEREON IS BASED ON HOWARD COUNTY GIS FILES AND THE BOUNDARY ESTABLISHED FOR THE "NORDAU SUBDIVISION, LOTS 13 THRU 18" (F-12-047).
7. ONSITE AND OFFSITE TOPOGRAPHY SHOWN HEREON IS BASED ON BOTH HOWARD COUNTY GIS FILES AND FIELD RUN TOPOGRAPHY AS SHOWN ON THE "NORDAU SUBDIVISION, LOTS 13 THRU 18" (SDP-13-067).
8. FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT FOR THIS SUBDIVISION WILL BE FULFILLED BY PAYMENT OF FEE-IN-LIEU.
9. THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
10. NO WETLAND EXISTS ON SITE AS CERTIFIED BY ECO SCIENCE, INC. IN WETLAND CERTIFICATION LETTER DATED JUNE 2014. FOREST STAND DELINEATION PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. IN JUNE 2014.
11. NO AREAS OF 100-YEAR FLOODPLAIN EXIST ONSITE.
12. APPROVAL OF THIS ECP DOES NOT CONSTITUTE ANY APPROVAL OF SUBSEQUENT SUBDIVISION OR SITE DEVELOPMENT PLANS. FURTHER COMMENTS WILL BE GENERATED UPON REVIEW OF THE APPLICABLE DEVELOPMENT PLANS IN ACCORDANCE WITH THE SUBDIVISION AND ZONING REGULATIONS.

**SITE ANALYSIS DATA:**

1. AREA OF THE SITE = 1.83 ± ACRES, LIMIT OF DISTURBANCE = 1.87 ± ACRES
2. AREA OF WETLANDS AND ITS BUFFERS = 0
3. AREA OF FLOODPLAIN = 0
4. AREA OF STREAM BUFFER = 0
5. AREA OF STEEP SLOPES = 0 ACRES
6. AREA OF FOREST = 0.5 ACRES ±
7. TOTAL ENVIRONMENTAL SENSITIVE AREA = 0 ± ACRES
8. DEVELOPABLE AREA = 1.84 ± ACRES (ON-SITE)  
NEW IMPERVIOUS AREA:  
13,200 SF / 0.30 AC (HOUSES, DECK/PATIO AND STOODS)  
5,571 SF / 0.13 AC (USE-IN-COMMON DRIVEWAY)  
1,608 SF / 0.04 AC (PINE ROAD FRONTAGE IMPROVEMENTS---  
SIDEWALK, CURB AND GUTTER, NEW ASPHALT)  
24,181 SF / 0.55 AC (TOTAL NEW IMPERVIOUS)
9. GREEN SPACE AREA = 55,534 SF / 1.27 AC
10. NO SLOPES OF 15%-24.99% OR SLOPES OF 25% OR GREATER FOR AT LEAST 10 VERTICAL FEET EXIST ONSITE FOR 10 VERTICAL FEET.
11. THIS SITE CONTAINS CHILLUM LOAM, WHICH MAY BE CONSIDERED A HIGHLY ERODIBLE SOIL.  
ONE SINGLE FAMILY DETACHED DWELLING PER LOT IS PROPOSED.
12. DUE TO THE SMALL SIZE OF THE PROJECT AND IN ACCORDANCE WITH HOWARD COUNTY REGULATIONS, FEE IN LIEU OF OPEN SPACE WILL BE PAID. HOWARD COUNTY WILL USE THAT FEE TO BETTER IMPLEMENT OPEN SPACE AREAS WITHIN THE COUNTY.

**SWM PRACTICES SCHEDULE**

AREA	ESD METHOD	TREATED AREA TYPE	ESDV (REQ)	(PROVIDED)
LOT 1	MODIFIED DRY WELL (M-5), NON-ROOFTOP DISCONNECTION (N-2)	HOUSE, DRIVEWAY		618 CF
LOT 2	MODIFIED DRY WELL (M-5), NON-ROOFTOP DISCONNECTION (N-2)	HOUSE, DRIVEWAY		625 CF
LOT 3	MODIFIED DRY WELL (M-5), NON-ROOFTOP DISCONNECTION (N-2)	HOUSE, DRIVEWAY		631 CF
LOT 4	MODIFIED DRY WELL (M-5), NON-ROOFTOP DISCONNECTION (N-2)	HOUSE, DRIVEWAY		617 CF
LOT 5	MODIFIED DRY WELL (M-5)	HOUSE		576 CF
LOT 6	MODIFIED DRY WELL (M-5)	HOUSE		576 CF
UIC	NON-ROOFTOP DISCONNECTION (N-2)	USE-IN-COMMON DRIVEWAY		249 CF
TOTAL			3,652 CF	3,893 CF



**SOILS DESCRIPTION**

SYMBOL	HYDROLOGICAL DESCRIPTION	Kw	Kf	MAP
UCB	B	0.1	0.1	0.1
UCD	C	0.2	0.2	0.2

Project	date	approval
SPP 2014	SEP 2014	MM
Illustration	scale	
JLS	1" = 80'	

description	date
revisions	

**PINE GROVE ADDITION, LOTS 1 THRU 6**  
RESUBDIVISION OF NORDAU SUBDIVISION, LOT 1, SECTION E-1  
SIXTH ELECTION DISTRICT TAX MAP: 47 PARCEL: 50  
HOWARD COUNTY, MARYLAND  
ENVIRONMENTAL CONCEPT PLAN

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
7650-B Grace Drive, Columbia, Maryland 21044  
(410) 997-0286 Fax: (410) 997-0288 Fax