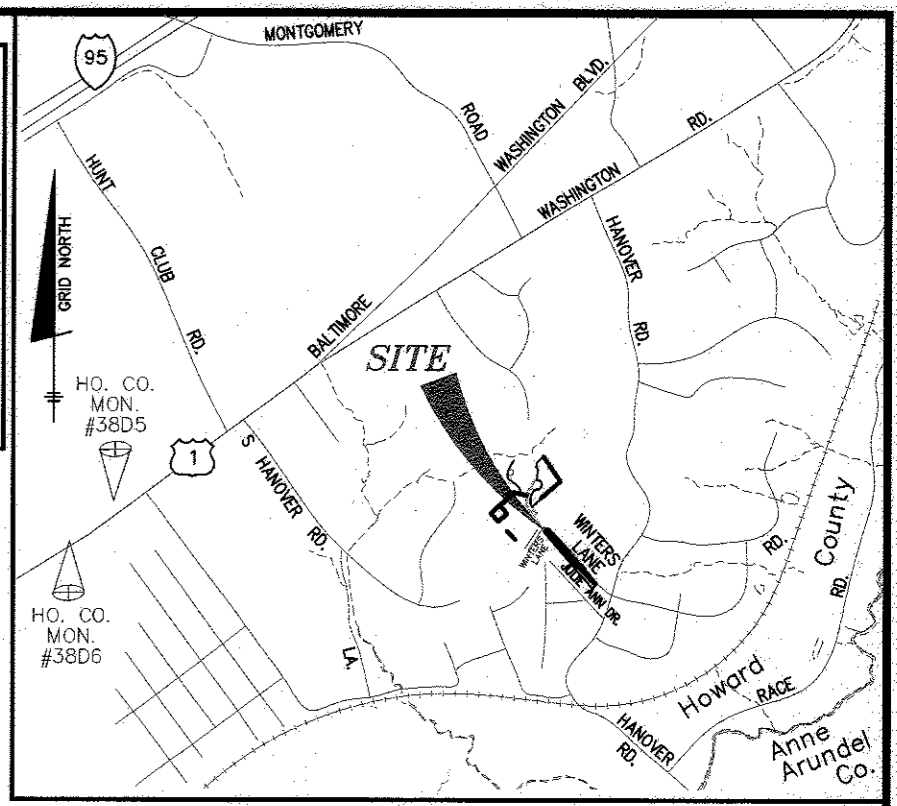


**BENCH MARKS (NAD '83)**  
 HO. CO. #3805 ELEV. 193.726  
 Stamped (brass or aluminum) disc set on top of a concrete column 1" or 2" below grade.  
 N 558,378.575 E 1,386,524.158  
 HO. CO. #3806 ELEV. 175.228  
 Stamped (brass or aluminum) disc set on top of a concrete column 1" or 2" below grade.  
 N 557,155.459 E 1,384,992.282



**VICINITY MAP**  
 1" = 2,000'  
 ADC MAP 35, GRID E-3

**CONCEPT EROSION & SEDIMENT CONTROL**

- Each lot will have an S.C.E. Silt fence or super silt fence will be placed along the LOD (except where water drains onto the site) in or order to maintain a sheet flow condition.
- Disturbed area will be stabilized in accordance with NRCS methods and time frames.
- The stockpile area on each lot shall be within the LOD and such that runoff will be filtered when leaving the site.
- A residential Stabilized Construction Entrance (SCE) shall be installed to access each separate LOD.

**ECP DESIGN NARRATIVE**

- Natural Resources Protection Enhancement: This residential site does not contain wetlands, floodplains (and associated buffers), forests, steep slopes, or specimen trees. Therefore, these resources are not impacted. Groundwater recharge will be provided as per the regulations.
- Maintenance of Natural Flow Patterns: There is no significant on-site proposed grading that will alter drainage patterns. Stormwater generally flows to the same location after development as before development. In addition, post-development one (1) year peak flow is not expected to increase after development due to the ESDv in the BMP, SWM credits and other provided practices.
- Reduction of impervious areas through better site design, alternative surfaces, non-structural practices: The SWM concept is consistent with ESD practices. The micro-bioretenation BMP is considered to be a non-structural practice.
- Integration of E&SC into SWM strategy. The E&SC design will follow HSCD standards & specifications and will meet the goal of keeping sediment from leaving the site. The practices will be integrated in SWM strategy by embracing sheet flow patterns where practicable and is a preferred ESD practice.
- Implementation of ESD planning techniques and practices: A micro-bioretenation BMP is proposed along with drywells as well as MDE/ESD design practices of non-roof disconnection credit. DED does not give "credit" for N-R Disconnection, however, this feature is proposed to be incorporated into the design.

**SITE DATA**  
 Site Area: 1.18± acres  
 Wetland and Wetland Buffers: 0.0 acres  
 Floodplain: 0.0 acres  
 Forests: 0.0 acres  
 Steep Slopes: None  
 Eroding Soils: UeB (where > 5% slope)  
 LOD: 0.59 acre (Total of Lots 1, 2, & 4, no LOD on Lot 3)  
 Proposed Site Use: Residential (R-12 zoning)  
 File References: AA 12-008, WP 16-003.  
 Impervious Area: 0.17± acres  
 Green Open Area: 1.01± acres  
 Environmental Waivers for Necessary Disturbance: N/A.

**GENERAL NOTES**

- STORMWATER MANAGEMENT HAS BEEN PROVIDED USING "ESD TO THE MEP". SPECIFICALLY, ONE (1) MICRO-BIORETENTION FACILITY, OR RAIN BARRELS, AND DRYWELLS ARE PROPOSED TO ADDRESS THE STORMWATER MANAGEMENT FOR THIS SITE. PLEASE REFER TO THE ENVIRONMENTAL CONCEPT PLAN REPORT PREPARED BY CIVIL DESIGN SERVICES, LC DATED OCTOBER 31, 2016 FOR MORE INFORMATION.
- THE PROPERTY BOUNDARY SURVEY WAS PREPARED BY PAUL K. MILLER & ASSOCIATES, INC. AND IS DATED JULY, 2014. THE TOPOGRAPHY WAS SUPPLIED BY BENCHMARK ENGINEERING, INC. (ELICOTT CITY, MD). PER BENCHMARK ENGINEERING, THE ON-SITE TOPOGRAPHY WAS FIELD SURVEYED IN FEBRUARY 2015 AND THE OFF SITE (OUTSIDE THE BOUNDARY) WAS TAKEN FROM HOWARD COUNTY G.I.S. MAPS. PER BENCHMARK ENGINEERING, THE COORDINATES ARE BASED ON HOWARD COUNTY GEODETIC CONTROL BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM. DURING FINAL DESIGN, CRITICAL ELEVATIONS SHALL BE VERIFIED.
- APPROVAL OF THIS ECP DOES NOT CONSTITUTE 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. 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.
- ALL STORMWATER PRACTICES SHOWN ON THIS PLAN WILL BE PRIVATELY OWNED AND MAINTAINED.
- THERE ARE NO WETLANDS, FLOODPLAINS (AND BUFFERS), SPECIMEN TREES, OR FORESTS LOCATED ON THESE PROPERTIES BASED ON ONSITE OBSERVATION BY ECO-SCIENCE PROFESSIONALS, INC. (GLEN ARM, MD).
- HOWARD COUNTY FOREST CONSERVATION REQUIREMENTS WILL BE ADDRESSED WITH THE FINAL SUBDIVISION PLAN.
- THE EXISTING VEGETATION ON THIS PROPERTY IS LAWN, BRUSH, AND SEVERAL TREES. SEE THE OCTOBER 27, 2016 SITE INVESTIGATION/LETTERS OF FINDINGS BY ECO-SCIENCE PROFESSIONALS, INC. (GLEN ARM, MD) FOR DETAILED VEGETATION INFORMATION.
- EXISTING UTILITY LOCATIONS ARE CONSIDERED APPROXIMATE AND WERE TAKEN FROM FIELD SURVEY, HOWARD GIS, AND INFORMATION OF RECORD.
- THE M-6 FACILITY ON THIS PLAN ASSUMES A SUBMERGED AGGREGATE OUTFALL DESIGN WILL BE USED TO MINIMIZE EMBANKMENT HEIGHT.
- RAIN BARRELS OF SUFFICIENT CAPACITY (e.g., 350 gallons) AND CONTAINING THE REQUIRED ESDv MAY BE USED IN LIEU OF THE M-6 BMP ON LOT 2.
- STORMWATER MANAGEMENT IS NOT REQUIRED FOR THE EXISTING DEVELOPMENT ON LOT 3.
- THE LOT 2 DRYWELL RECEIVING DRIVEWAY DRAINAGE SHALL INCLUDE A NYLOPLAST INLET (WITH ATTACHED PERFORATED PIPE TO DISTRIBUTE RAIN WATER IN THE AGGREGATE).
- THE INTERNAL LOT LINES ARE PROPOSED AND MAY NOT AGREE WITH THE CURRENT DEED.
- ADMINISTRATIVE ADJUSTMENTS WILL BE NEEDED FOR LOTS 1, 2, & 4 PRIOR TO THE SUBMITTAL OF THE FINAL PLAN.
- THIS PLAN IS FOR CONCEPTUAL PURPOSES ONLY AND WAS PREPARED TO EVALUATE ENVIRONMENTAL IMPACTS AND IDENTIFY THE FEASIBILITY OF THE PROPOSED STORMWATER MANAGEMENT DESIGN. THIS PLAN IS NOT FOR CONSTRUCTION.
- DRYWELLS WILL BE LOCATED 10' MINIMUM FROM HOUSE BASEMENT FOUNDATIONS AND 5' FROM THE PROPERTY LINES. THE ROOF LEADERS TO THE DRYWELLS ARE NOT SHOWN AND WILL BE INCLUDED ON THE SDP.
- REFER TO THE ECP REPORT (OCTOBER 31, 2016) FOR A DRAINAGE AREA MAP.

**NEWBURN PROPERTY ESD, SUMMARY TABLE**

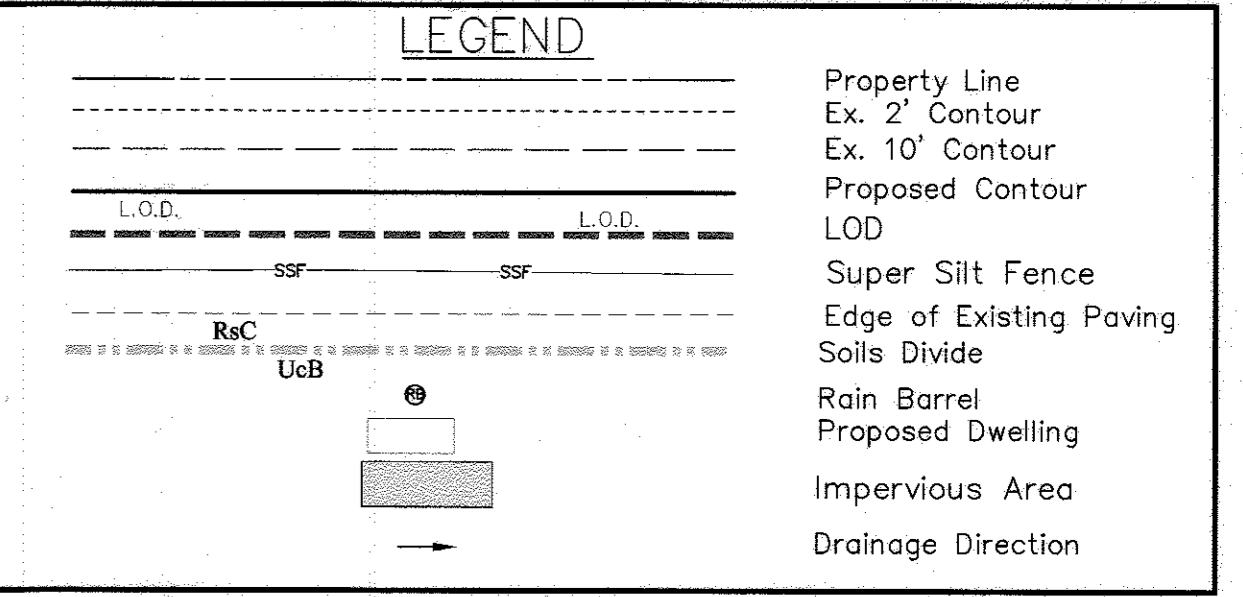
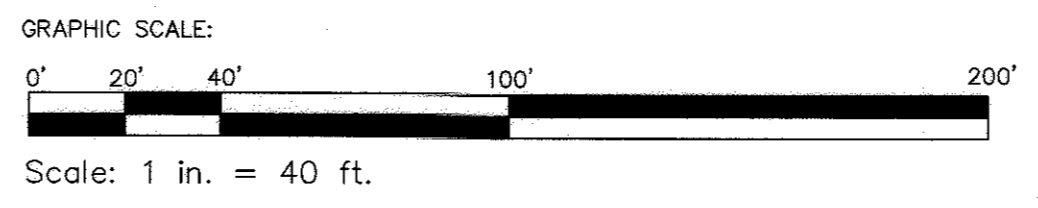
Location	Required ESDv (cf)	Provided ESDv (cf)	Practice
Lot 1	394	435	Four (4) Drywells, 11'x11'x2' (Roof) One (1) Drywell 5'x12'x2' (Driveway) One (1) Drywell, 11'x11'x2' (Driveway)
Lot 2	264	280 (assuming M-6 Bioretention BMP)	One (1) Bio-Retention (M-6) BMP or Rain Barrels for roof (in lieu of M-6 BMP)
Lot 4	296	304	Three (3) Drywells, 6'x7'x4' (Roof) One (1) Drywell, 8'x8'x4' (Roof/Driveway)
<b>TOTAL</b>	<b>954</b>	<b>1,019</b>	

**SOILS TABLE**

SYMBOL	NAME	HSG	Kw
CrD	Croom and Evesboro soils 10-15% slopes	C	0.28
RsC	Russett fine sandy loam 5-10% slopes	C	0.24
UeB	Urban land-Chillum-Beltsville complex 0-5% slopes	C	0.37

HOWARD SCD MAP NUMBER = 20

THIS IS A CONCEPT PLAN ONLY AND IS NOT FOR CONSTRUCTION



**CIVIL DESIGN SERVICES, LC**  
 6123 Holly Ridge Court, Columbia, Maryland 21044  
 240.755.0380 phone/fax  
 civildesign@comcast.net

I hereby certify that I prepared this plan and the seal signifies that I am a duly licensed professional engineer under the laws of the State of MD, License No. 15,838 w/expiration December 17, 2017.

*Andrew A. Porter*  
 Andrew A. Porter, P.E.  
 January 9, 2017

NO.	REVISION	DATE

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
TBD	14	R-12	38	1st	601201

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Antoine DeLoach*  
 Chief, Division of Land Development 3-22-17  
 Date

*Andrew A. Porter*  
 Chief, Development Engineering Division 3-30-17  
 Date

PROJECT: Newburn Property SECTION: N/A LOT No.s: 1, 2, 3, and 4

OWNER/DEVELOPER  
 Mr. James L. Newburn  
 6378 Winters Lane  
 Hanover, Maryland 21076  
 410.794.7813  
 jim.newburn88@gmail.com

**ENVIRONMENTAL CONCEPT PLAN**

**NEWBURN PROPERTY**  
 HANOVER, MARYLAND  
 LOTS 1 - 4

TAX MAP NO: 38 PARCEL NO.: 740, 815 GRID NO.: 14  
 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

March 21, 2017

SHT 1 OF 1