

**GENERAL NOTES**

- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE SUBJECT PROPERTY IS ZONED R-SC PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS NO. 43EB AND 43EC WERE USED FOR THIS PROJECT.
- TRACT BOUNDARY IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED ON OR ABOUT AUGUST, 2015 BY BENCHMARK ENGINEERING, INC.
- TOPOGRAPHY SHOWN ON-SITE AND ALONG LINCOLN DRIVE IS BASED ON FIELD SURVEY BY BENCHMARK ENGINEERING, INC. DATED AUGUST 2015, AND UPDATED TO REFLECT PROPOSED UNDER F-16-093. TOPOGRAPHY SHOWN ON ADJACENT PROPERTIES IS BASED ON HOWARD COUNTY GIS. ALL CONTOURS ARE A MAXIMUM OF 2' INTERVALS.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT SINCE THE SITE IS LOCATED MORE THAN 1,000 FEET FROM ROUTE 1 AND INTERSTATE 95.
- THE TRAFFIC STUDY WAS PREPARED BY MARS GROUP, INC. IN AUGUST, 2015 AND APPROVED BY HOWARD COUNTY DPZ ON 11-20-2015. A FEE-IN-LIEU IN THE AMOUNT OF \$8,820.00 FOR THE REQUIRED ROAD MITIGATION WAS PAID AS PART OF THE DPW DEVELOPERS AGREEMENT PER DEVELOPMENT ENGINEERING DIVISION LETTER DATED APRIL 25, 2016.
- THE GEOTECHNICAL REPORT WAS PREPARED BY GEOLABS, INC. IN MARCH, 2016.
- FOREST STAND AND WETLAND DELINEATION WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS, INC. IN AUGUST, 2015. THERE ARE NO WETLANDS, WETLANDS BUFFER, STREAMS, STREAM BUFFERS, 100-YR FLOODPLAIN OR 25% OR GREATER STEEP SLOPES WITH MORE THAN 20,000 SF OF CONTIGUOUS AREA LOCATED WITHIN THE PROJECT SITE.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ON-SITE.
- THERE ARE NO HISTORIC SITES/FEATURES OR FLOODPLAINS LOCATED ON THIS SITE.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. THE DRAINAGE AREA IS THE MIDDLE PATUXENT. THE WATER AND SEWER IS PUBLIC. THE CONTRACT NUMBER IS 24-4968-D.
- THIS SUBDIVISION IS SUBJECT TO SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWERAGE ALLOCATIONS WILL BE GRANTED AT TIME OF ISSUANCE OF BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- STORMWATER MANAGEMENT HAS BEEN PROVIDED IN ACCORDANCE WITH THE "MARYLAND DEPARTMENT OF THE ENVIRONMENT STORMWATER MANAGEMENT ACT OF 2007" AND THE "HOWARD COUNTY DESIGN MANUAL VOLUME I, CHAPTER 5" TO THE MAXIMUM EXTENT PRACTICAL (MEP) VIA THE (F-1) SURFACE SAND FILTER, WHICH IS A PRIVATELY OWNED AND MAINTAINED FACILITY CONSTRUCTED UNDER F-16-093.
- LANDSCAPING IS PROVIDED WITH A CERTIFIED LANDSCAPE PLAN IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$3,900.00 FOR THE REQUIRED PERIMETER LANDSCAPING AND TWO ADDITIONAL SHADE TREES AS A CONDITION ON WP-16-072 APPROVAL (\$3,600.00 FOR 11 SHADE TREES AND \$600.00 FOR 20 SHRUBS) WAS POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT WITH THE FINAL PLAT.
- THIS SUBDIVISION COMPLIES WITH THE REQUIREMENTS OF SECTION 16.200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION VIA THE ON-SITE RETENTION OF 0.23 ACRES OF FOREST WITHIN A FOREST CONSERVATION EASEMENT AND BY 0.50 ACRES OFF-SITE WITHIN THE FOREST MITIGATION BANK ESTABLISHED UNDER PHELPS PROPERTY, SDP-14-026FC, RECORDED AS PLAT #22843.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
  - WIDTH - 12' (18' SERVING MORE THAN ONE RESIDENCE).
  - SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.).
  - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS.
  - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
  - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
  - MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
- THE PRIVATE MAINTENANCE ACCESS AGREEMENT FOR LOTS 3-6 WAS RECORDED SIMULTANEOUSLY WITH THE RECORDATION OF THE PLAT.
- THE PURPOSE OF OPEN SPACE LOT 7 IS FOR THE PROTECTION OF ENVIRONMENTAL AREAS SUCH AS EXISTING TREES AND VEGETATION. IT WILL ALSO CONTAIN AN ESD SWM PRACTICE WHICH TREATS THE LOTS AND USE-IN-COMMON DRIVEWAY. IT IS DEDICATED TO THE HOMEOWNERS ASSOCIATION.
- THERE IS NO RECREATIONAL OPEN SPACE REQUIREMENT FOR THIS PROJECT SINCE THERE ARE LESS THAN 10 LOTS.
- THE MODERATE INCOME HOUSING UNIT REQUIREMENT (COUNCIL BILL 35-2013) SHALL BE FULFILLED BY PAYMENT OF A FEE-IN-LIEU IN AN AMOUNT THAT IS TO BE CALCULATED BY THE DEPARTMENT OF INSPECTIONS LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT. THE FEE-IN-LIEU SHALL BE PAID FOR LOTS/RESIDENTIAL UNITS 2 THROUGH 6 WITHIN THIS SUBDIVISION AT TIME OF BUILDING PERMIT ISSUANCE.
- WP-16-072, A REQUEST TO WAIVE SECTION 16.1205(A)(7) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS WAS APPROVED ON JANUARY 14, 2016 AND SECTIONS 16.144(C) AND 16.146 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS WAS APPROVED ON FEBRUARY 24, 2016 SUBJECT TO THE FOLLOWING CONDITIONS:
  - THE REMOVAL OF THE ONE SPECIMEN TREE WILL REQUIRE MITIGATION WITH THE PLANTING OF 2:1 REPLACEMENT TREES (2 TOTAL) WITH A MINIMUM CALIPER NATIVE PLANT SPECIES. THE REPLACEMENT TREES SHALL BE BONDED AND SHOWN ON THE LANDSCAPE PLAN.
  - THE FINAL PLAN FOR THIS PROJECT MUST PROVIDE ALL OF THE REQUIRED INFORMATION THAT WILL ADDRESS HOW STORMWATER MANAGEMENT WILL BE PROVIDED, ANY REQUIRED PUBLIC ROAD RIGHT-OF-WAY IMPROVEMENTS, AND HOW FOREST CONSERVATION AND LANDSCAPING SHALL BE SATISFIED.
- THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 - RESIDENTIAL INFILL DEVELOPMENT - OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED PERIMETER LANDSCAPING, BERMS, FENCES, SIMILAR HOUSING UNIT TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSES.
- A PRIVATE RANGE OF ADDRESS SIGN SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS EXPENSE.
- PUBLIC SIDEWALK HAS BEEN PROVIDED ALONG THE PROPERTY FRONTAGE OF LINCOLN DRIVE. SIDEWALK IS NOT BEING PROPOSED BEYOND THE PROJECT LIMITS TO THE WEST DUE TO THE LACK OF AVAILABLE PUBLIC ROAD RIGHT-OF-WAY OR TO THE EAST SINCE THERE IS NO EXISTING ADJACENT SIDEWALK TO MAKE A CONNECTION TO AND SINCE THERE IS NO NEED FOR SIDEWALKS TO SERVE COMMERCIAL OR INSTITUTIONAL USES, SCHOOLS, PARKS OR OTHER PUBLIC FACILITIES WITHIN 1000 FEET OF THE PROPERTY.
- SIGHT DISTANCE ANALYSIS WAS APPROVED UNDER S-16-002.
- APPLICABLE DPZ FILE NUMBERS: EOP-16-009, S-16-002, WP-16-072, F-16-093.
- HOWARD COUNTY STANDARD DETAIL R-6.03 SHALL BE UTILIZED FOR THE DRIVEWAY APRONS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 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.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE PLACED PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHT IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE. THERE ARE NO STREET LIGHTS REQUIRED FOR THIS PROJECT.
- 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.
- EXISTING UTILITIES SHOWN ARE BASED ON CONTRACT DRAWINGS, AERIAL, GIS DATA AND FIELD SURVEY LOCATIONS.
- THE WETLAND DELINEATION STUDY WAS PERFORMED BY ECO-SCIENCE PROFESSIONALS, INC. IN AUGUST, 2015, AND WAS APPROVED ON 11/09/2015.
- A PRE-SUBMISSION COMMUNITY MEETING WAS HELD ON AUGUST 20, 2015, PER SECTION 16.128 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- SIC ELEVATIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.
- ON May 24, 2016 waivers were granted by DPW for DMV II sections 4.3.B.3.b, 5.4.B.1 + 5.4.B.1.

# THE CEDARS EXTENDED

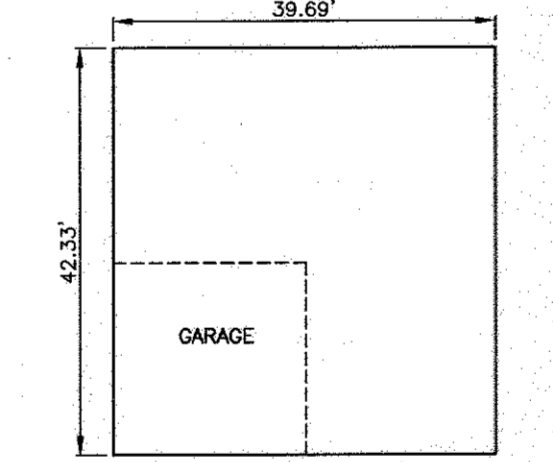
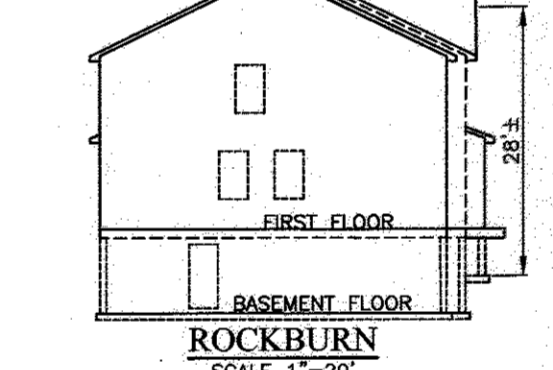
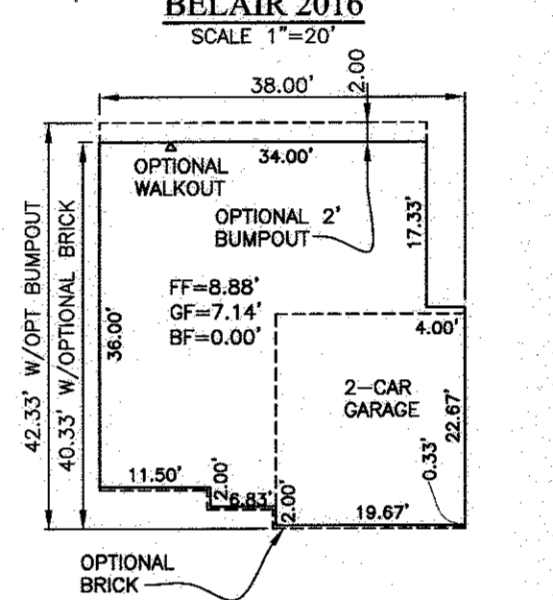
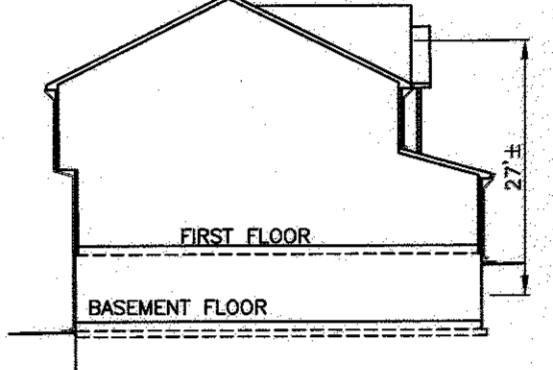
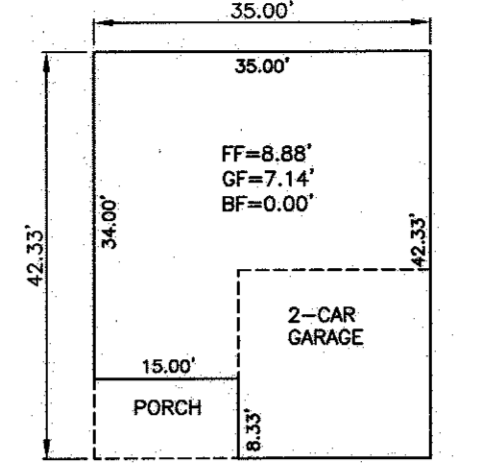
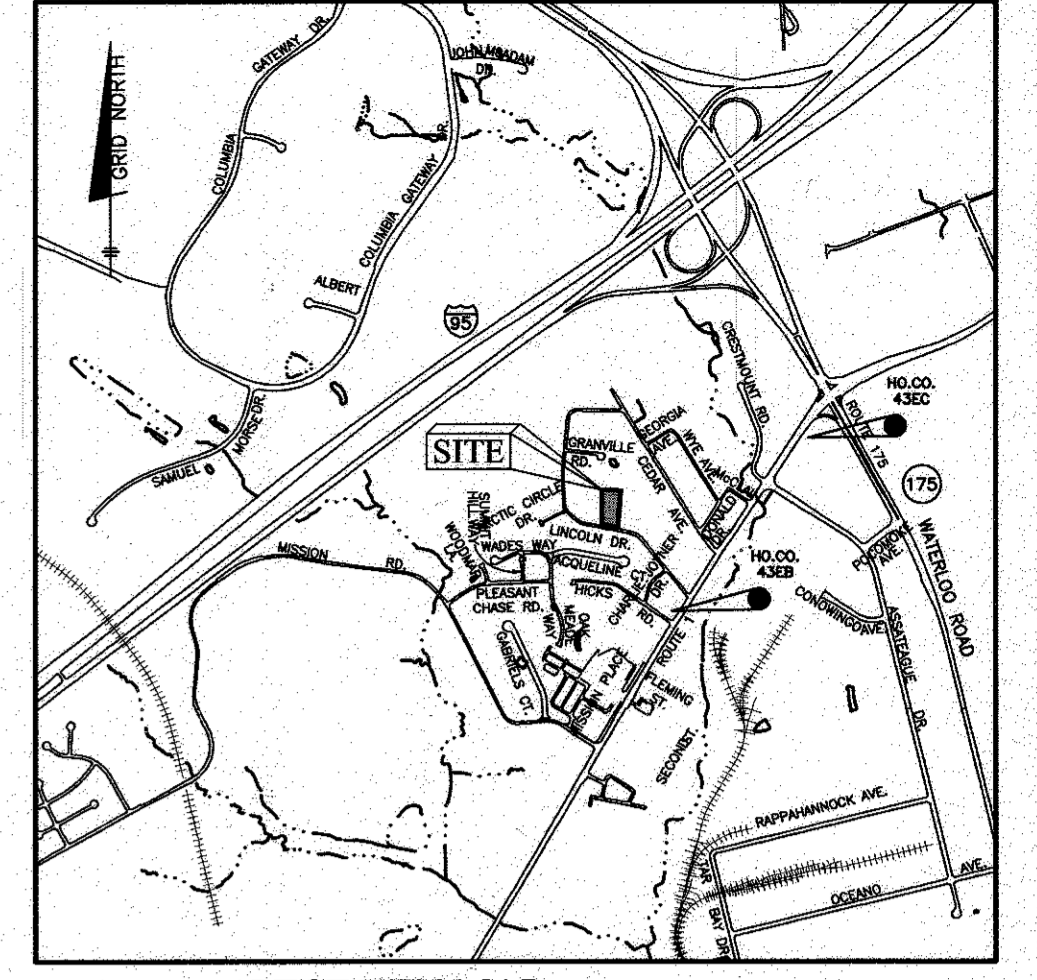
## LOTS 1 thru 6 AND OPEN SPACE LOT 7

### GENERIC SITE DEVELOPMENT PLAN



**BENCH MARKS (NAD83)**

HO. CO. No. 43EB	ELEV. 216.312'
WEST SIDE OF ROUTE 1, 6.7' FROM FACE OF CURB, 78 FEET NORTH FROM CENTERLINE OF HIGH ROAD.	N 545963.613
HO. CO. No. 43EC	ELEV. 219.998'
EAST SIDE OF ROUTE 1, 2.5' FROM FACE OF CURB, 500 FEET SOUTH FROM CENTERLINE OF ROUTE 175.	N 547821.247
	E 1372882.507



**MINIMUM LOT SIZE CHART**

LOT	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
3	8,417	1,691	6,726
4	7,950	1,098	6,852
5	9,750	2,020	7,730
6	8,227	1,505	6,722

MINIMUM LOT SIZE ALLOWED PER ZONING (SECTION 110.0.D.2): 6,000 SF

**SITE ANALYSIS DATA CHART**

A) TOTAL PROJECT AREA	1.62± acres
B) AREA OF PLAN SUBMISSION	1.62± acres
C) LIMIT OF DISTURBED AREA	1.39 acres
D) PRESENT ZONING	R-SC
E) PROPOSED USE OF SITE	RESIDENTIAL SINGLE FAMILY DETACHED
F) FLOOR SPACE ON EACH LEVEL OF BLDG PER USE	N/A
G) TOTAL NUMBER OF UNITS ALLOWED AS SHOWN ON FINAL PLAT(S)	6
H) TOTAL NUMBER OF UNITS PROPOSED	6
I) MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON SITE PER USE	N/A
J) NUMBER OF PARKING SPACES REQUIRED BY HO. CO. ZONING REGS AND/OR FDP CRITERIA	15 (6 UNITS x 2.5)
K) NUMBER OF PARKING SPACES PROVIDED ON-SITE (INCLUDES HANDICAPPED SPACES)	18 (2 PER GARAGE AND 1 PER DRIVEWAY)
L) OPEN SPACE ON-SITE	0.48 AC. (RECORDED UNDER PLAT No. )
M) AREA OF RECREATIONAL OPEN SPACE REQUIRED	N/A
N) AREA OF RECREATIONAL OPEN SPACE PROVIDED	N/A
O) BUILDING COVERAGE OF SITE	10,080 SF
P) PERCENTAGE OF GROSS AREA	14.2%
Q) APPLICABLE DPZ FILE REFERENCES:	ECP-16-009, S-16-002, WP-16-072, F-16-093

**ADDRESS CHART**

LOT	STREET ADDRESS
1	8218 LINCOLN DRIVE
2	8216 LINCOLN DRIVE
3	8007 FIELDHOUSE WAY
4	8011 FIELDHOUSE WAY
5	8015 FIELDHOUSE WAY
6	8014 FIELDHOUSE WAY

**SHEET INDEX**

NO.	TITLE
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	STORMWATER MANAGEMENT DRAINAGE AREA MAP, NOTES & DETAILS
4	GRADING, SEDIMENT & EROSION CONTROL PLAN
5	SEDIMENT & EROSION CONTROL NOTES AND DETAILS

**DESIGN NARRATIVE:**

FOR THE PROPOSED IMPERVIOUS AREAS OF THIS SUBDIVISION, (F-1) SURFACE SAND FILTER HAS BEEN PROPOSED FOR TREATMENT.

NATURAL RESOURCE PROTECTION IS BEING ACHIEVED SINCE NO ENVIRONMENTAL AREAS OR BUFFERS ARE BEING DISTURBED BY THE PROPOSED DESIGN.

NATURAL FLOW PATTERNS HAVE BEEN PRESERVED BY PLACING THE ESD PRACTICE AROUND THE OUTER PERIMETER OF THE SITE AND DISCHARGING AT THE SAME CONCENTRATED LOCATION. THIS SHALL MIMIC THE EXISTING CONDITION OF FLOW.

REDUCTION OF IMPERVIOUS AREAS HAS BEEN ACHIEVED BY UTILIZING THE NARROWEST POSSIBLE DRIVEWAY WIDTHS AS ALLOWED BY HOWARD COUNTY FOR A USE-IN-COMMON DRIVE.

SEDIMENT AND EROSION CONTROL SHALL MAINLY CONSIST OF SUPER SILT FENCE AROUND THE PERIMETER. CLEANWATER EARTH DIKE SHALL BE UTILIZED ALONG THE WESTERN SIDE OF THE PROJECT TO DIVERT RUNOFF TO AN INLET AND BYPASS THE SITE. IT IS NOT ANTICIPATED THAT ANY SEDIMENT TRAPS WILL BE NEEDED.

AS A RESULT OF UTILIZING ENVIRONMENTAL SITE DESIGN (ESD) TO THE MAXIMUM EXTENT PRACTICAL (MEP), STORMWATER MANAGEMENT HAS BEEN ADEQUATELY ADDRESSED WITHOUT THE NEED FOR STRUCTURAL PRACTICES.

**STORMWATER MANAGEMENT SUMMARY TABLE**

Practice	DA to practice (ft)	Imp Area to practice (sf)	Pe	AT (ft)		ESDv		Rev	Ownership			
				Required	Provided	Required	Provided					
(F-1) Surface Sand Filter	#1	39,000	17.08%	339	1042	PASS	2796	2796	1.6	227 sf or 0.08 acres	290 sf	Private
<b>Total Treated</b>		<b>39,000</b>	<b>17.08%</b>	<b>339</b>	<b>1042</b>		<b>2796</b>	<b>2796</b>				
<b>Site Totals</b>							<b>19,367</b>					

Site Discharge Comparison	Storm			
	1-year	2-year	10-year	25-year
	6.78 cfs	15.59 cfs	18.08 cfs	18.08 cfs
pre-developed	6.78 cfs	15.59 cfs	18.08 cfs	18.08 cfs
post-developed	6.19 cfs	14.90 cfs	17.94 cfs	17.94 cfs

Notes:  
 1. Rev is provided via 0' deep stone chamber below outfall pipe within the (F-1) Surface Sand Filter.  
 2. The 2.282 ac of impervious area not draining to the (F-1) Surface Sand Filter is the individual Lincoln Drive improvements, overways for Lot 1 and 2 and the beginning portion of the use-in-common driveway. This area will drain into Lincoln Drive. There is not sufficient room between the garage and public right-of-way for ESD practice. Overcompensation has been provided within (F-1) Surface Sand Filter for this area. The total ESDv required for the site is provided.

THE MODERATE INCOME HOUSING UNIT REQUIREMENT (COUNCIL BILL 35-2013) SHALL BE FULFILLED BY PAYMENT OF A FEE-IN-LIEU IN AN AMOUNT THAT IS TO BE CALCULATED BY THE DEPARTMENT OF INSPECTIONS LICENSES AND PERMITS AT THE TIME OF BUILDING PERMIT. THE FEE-IN-LIEU SHALL BE PAID FOR LOTS/RESIDENTIAL UNITS 2 THROUGH 6 WITHIN THIS SUBDIVISION AT TIME OF BUILDING PERMIT ISSUANCE.

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.  
 THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

**PERMIT INFORMATION CHART**

SUBDIVISION NAME:	SECTION/AREA:	LOT/PARCEL #			
THE CEDARS EXTENDED	N/A	LOTS 1 thru 7			
PLAT No.	GRID	ZONING	TAX MAP	ELECTION DISTRICT	CENSUS TRACT
24074-24077	8	R-SC	43	6th	6069.01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

<i>Chad Ch...</i>	1-20-17
CHIEF, DEVELOPMENT ENGINEERING DIVISION	
<i>Kurt...</i>	2-6-17
CHIEF, DIVISION OF LAND DEVELOPMENT	
<i>Wanda...</i>	2-7-17
DIRECTOR	

**BENCHMARK ENGINEERING, INC.**  
 8480 BALTIMORE NATIONAL PIKE A SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-6105 (F) 410-465-6644  
 WWW.BEI-CVLENGINEERING.COM

**THE CEDARS EXTENDED**  
 LOTS 1 thru 6 AND OPEN SPACE LOT 7  
 (A RESUBDIVISION OF LOT 'R' OF THE CEDARS EXTENDED PB 3 P 16)

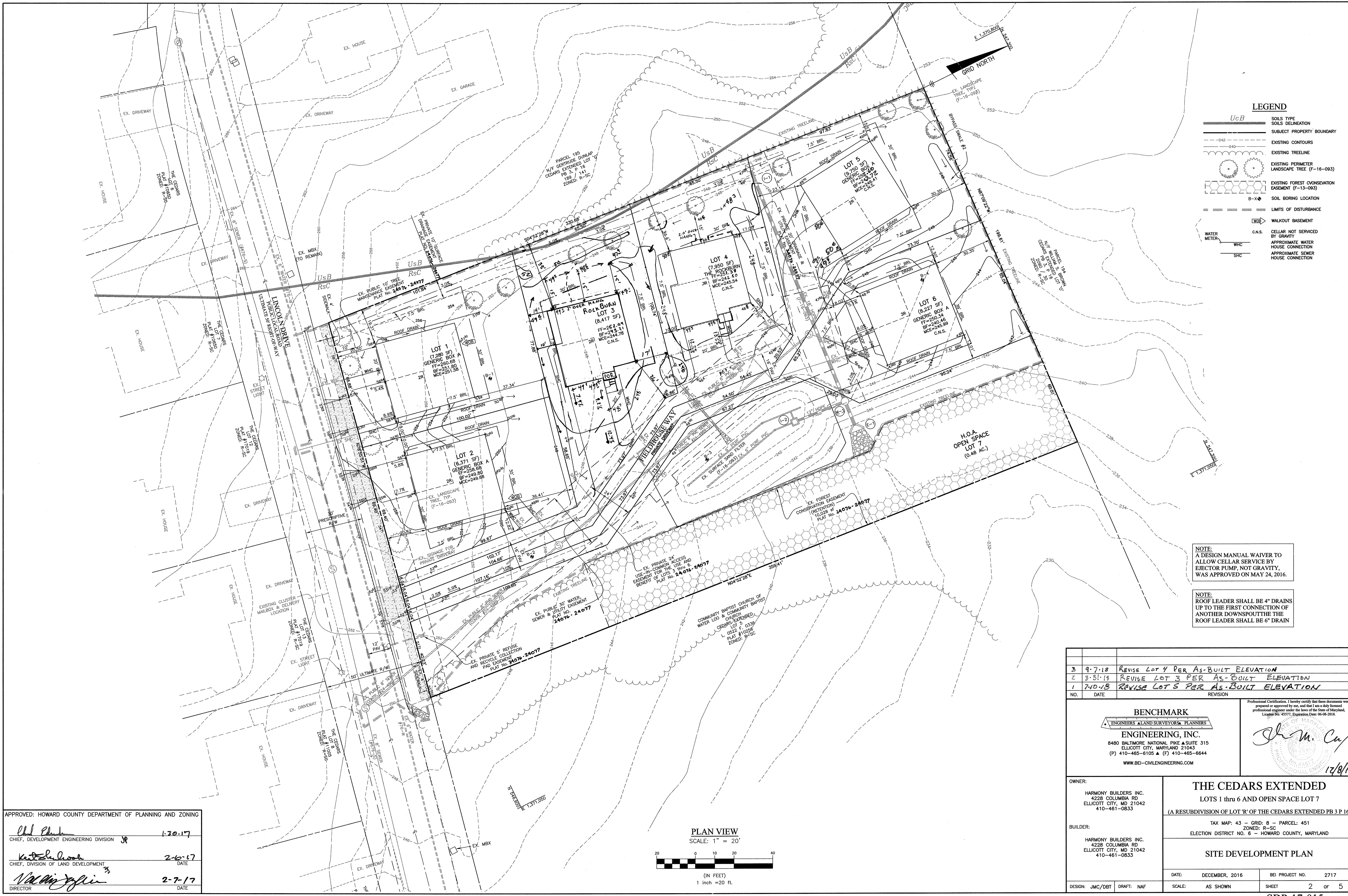
TAX MAP: 43 - GRID: 8 - PARCEL: 451  
 ZONED: R-SC  
 ELECTION DISTRICT NO: 6 - HOWARD COUNTY, MARYLAND

**COVER SHEET**

OWNER: HARMONY BUILDERS INC. 4228 COLUMBIA RD ELLICOTT CITY, MD 21042 410-461-0833

BUILDER: HARMONY BUILDERS INC. 4228 COLUMBIA RD ELLICOTT CITY, MD 21042 410-461-0833

DATE: DECEMBER, 2016 BEI PROJECT NO. 2717  
 SCALE: AS SHOWN SHEET 1 OF 5



**LEGEND**

	SOILS TYPE
	SOILS DELINEATION
	SUBJECT PROPERTY BOUNDARY
	EXISTING CONTOURS
	EXISTING TREELINE
	EXISTING PERIMETER LANDSCAPE TREE (F-16-093)
	EXISTING FOREST CONSERVATION EASEMENT (F-13-093)
	SOIL BORING LOCATION
	LIMITS OF DISTURBANCE
	WALKOUT BASEMENT
	C.N.S. CELLAR NOT SERVED BY GRAVITY
	APPROXIMATE WATER HOUSE CONNECTION
	APPROXIMATE SEWER HOUSE CONNECTION

NOTE:  
A DESIGN MANUAL WAIVER TO ALLOW CELLAR SERVICE BY EJECTOR PUMP, NOT GRAVITY, WAS APPROVED ON MAY 24, 2016.

NOTE:  
ROOF LEADER SHALL BE 4" DRAINS UP TO THE FIRST CONNECTION OF ANOTHER DOWNSPOUT THE ROOF LEADER SHALL BE 6" DRAIN

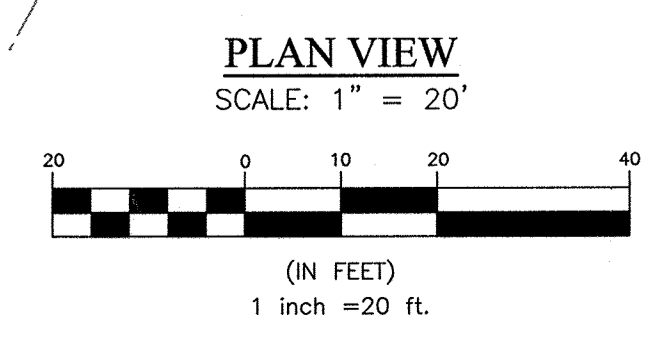
NO.	DATE	REVISION
3	9-7-18	REVISE LOT 4 PER AS-BUILT ELEVATION
2	8-31-18	REVISE LOT 3 PER AS-BUILT ELEVATION
1	7-10-18	REVISE LOT 5 PER AS-BUILT ELEVATION

**BENCHMARK ENGINEERING, INC.**  
 ENGINEERS & LAND SURVEYORS & PLANNERS  
 8480 BALTIMORE NATIONAL PIKE SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-6105 & (F) 410-465-6644  
 WWW.BEI-CIVILENGINEERING.COM

*J. M. Ca*  
 12/8/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

	DATE
	2-6-17
	2-7-17



**OWNER:**  
 HARMONY BUILDERS INC.  
 4228 COLUMBIA RD  
 ELLICOTT CITY, MD 21042  
 410-461-0833

**BUILDER:**  
 HARMONY BUILDERS INC.  
 4228 COLUMBIA RD  
 ELLICOTT CITY, MD 21042  
 410-461-0833

**THE CEDARS EXTENDED**  
 LOTS 1 thru 6 AND OPEN SPACE LOT 7  
 (A RESUBDIVISION OF LOT 'R' OF THE CEDARS EXTENDED PB 3 P 16)

TAX MAP: 43 - GRID: 8 - PARCEL: 451  
 ZONED: R-SC  
 ELECTION DISTRICT NO. 6 - HOWARD COUNTY, MARYLAND

**SITE DEVELOPMENT PLAN**

DATE: DECEMBER, 2016      BEI PROJECT NO. 2717  
 SCALE: AS SHOWN      SHEET 2 OF 5



PLASTIC	
DEPTH	WIDTH
4	12
6	18
8	24
10	30
12	36

AL DIMENSIONS IN INCHES

NOTES:

- THE "N" DIMENSION SHALL BE USED TO CALCULATE MINIMUM TRENCH FILL WIDTH.
- FOR TRENCHES WHERE TRENCH BOX OR TRENCH SYSTEMS ARE USED, MEASUREMENT FOR CONCRETE SYSTEM WIDTHS SHALL BE TAKEN ON THE TRENCH SYSTEM SYSTEM.
- FOR TRENCHES WHERE TRENCH BOX OR TRENCH SYSTEMS IS REQUIRED, MEASUREMENT FOR CONCRETE SYSTEM WIDTHS SHALL BE TAKEN ON THE TRENCH SYSTEM SYSTEM PLUS 14 INCHES.
- FOR CONCRETE, PVC AND HDPE PIPE, 3 HOLES OR SMALLER, PIPE ENDSTOPS SHALL BE USED AT THE JOINTS. ENDSTOPS SHALL BE 1/2" MINIMUM AND 1" MAXIMUM THICKNESS FOR TRENCHES 6" MINIMUM AND 12" MAXIMUM THICKNESS FOR TRENCHES 12" MINIMUM AND 18" MAXIMUM THICKNESS.
- SPECIAL DESIGN IS REQUIRED AND SHALL BE SPECIFIED OR DETAILED IN THE CONTRACT DOCUMENTS FOR THE FOLLOWING CASES:  
PVC 18" C-900 LARGER THAN 12 INCHES AND CONCRETE SPREADS WIDER THAN 12 INCHES.  
SPECIAL DESIGN SHALL BE SPECIFIED OR DETAILED IN THE CONTRACT DOCUMENTS FOR THE FOLLOWING CASES: 5-1.11 AND 5-1.12.

Howard County, Maryland  
Department of Public Works  
Pipe Trench  
Plastic & Copper  
Detail  
G-2.12

- OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED (F-1) SURFACE SAND FILTER**
- THE STORMWATER WETLAND FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
  - THE TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
  - FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
  - DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
  - VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
  - REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY, IF APPLICABLE.
  - WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
  - A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
  - THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
  - ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

THE DRAINAGE AREA INCLUDED IN THIS PLAN MATCH THE ROAD PLAN DESIGN. SEE F-16-093 FOR ADDITIONAL DESIGN, NOTES AND DETAILS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*[Signature]* 1-30-17  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

*[Signature]* 2-6-17  
CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 2-7-17  
DIRECTOR

**OFF-SITE ESD STORMWATER MANAGEMENT SUMMARY TABLE**

Practice	DA to practice (sf)	Imp Area to practice (sf)	Pe	AI (t)		ESDv		Rev	Ownership			
				Required	Provided	Required	Provided					
(F-6) Bio-Retention Facility #1	49,577	17,374	1.0	992	944	FAIL	1510	1577	1.0	NA	NA	Public
<b>Total Treated</b>	<b>49,577</b>	<b>17,374</b>		<b>992</b>	<b>944</b>		<b>1510</b>	<b>1577</b>				

Notes:

- A Pe of 1.0 was established for the sizing of the facility since this drainage area is not a product of the proposed development, but instead an existing county drainage problem within the road.
- The ESDv required is based on 75% of ESDv.

NO.	DATE	REVISION

**BENCHMARK ENGINEERING, INC.**  
8480 BALTIMORE NATIONAL PIKE & SUITE 315  
ELLICOTT CITY, MARYLAND 21043  
(P) 410-465-6105 (F) 410-465-6644  
WWW.BEI-CIVILENGINEERING.COM

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: 06-08-2018.

*[Signature]* 12/9/16

OWNER: HARMONY BUILDERS INC.  
4228 COLUMBIA RD  
ELLICOTT CITY, MD 21042  
410-461-0833

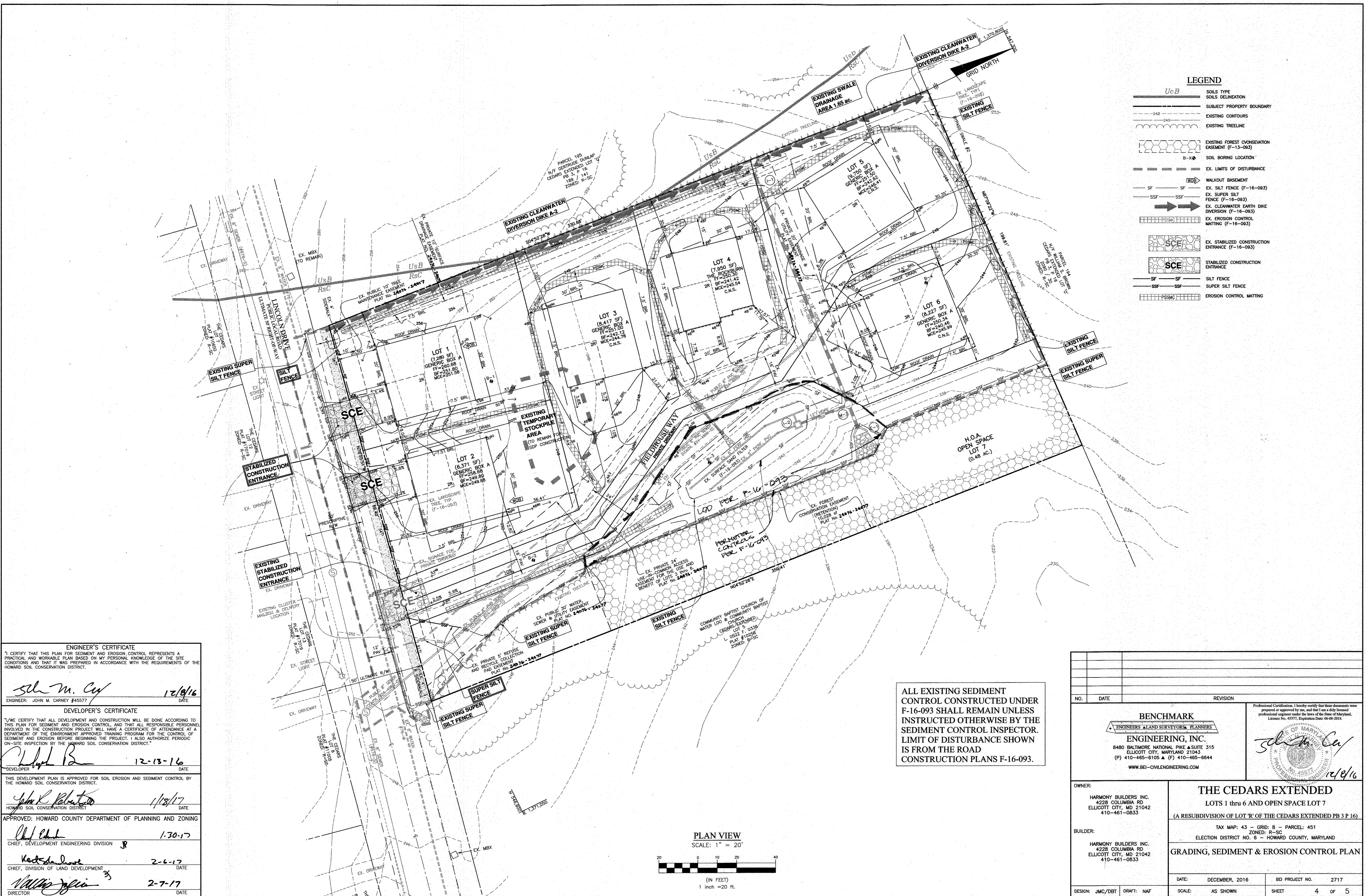
THE CEDARS EXTENDED  
LOTS 1 thru 6 AND OPEN SPACE LOT 7  
(A RESUBDIVISION OF LOT 'R' OF THE CEDARS EXTENDED PB 3 P 16)

TAX MAP: 43 - GRID: 8 - PARCEL: 451  
ZONED: R-SC  
ELECTION DISTRICT NO. 6 - HOWARD COUNTY, MARYLAND

STORMWATER MANAGEMENT DRAINAGE AREA MAP, NOTES AND DETAILS

DATE: DECEMBER, 2016  
BEI PROJECT NO. 2717

DESIGN: JMC/DBT  
DRAFT: DBT/NAF  
SCALE: AS SHOWN  
SHEET 3 OF 5



**ENGINEER'S CERTIFICATE**  
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.  
 John M. Carney 12/8/16  
 ENGINEER: JOHN M. CARNEY #45577 DATE

**DEVELOPER'S CERTIFICATE**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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.  
 12-13-16  
 DEVELOPER DATE

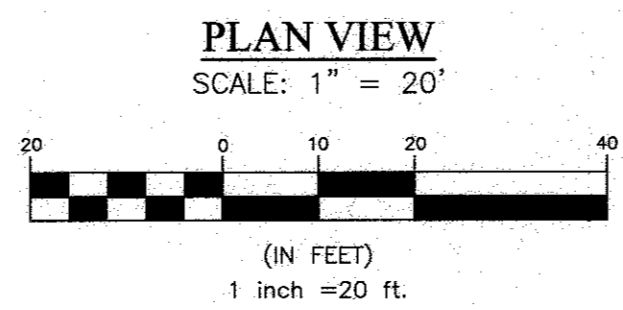
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 John K. Roberts 1/18/17  
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1-30-17  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

2-6-17  
 CHIEF, DIVISION OF LAND DEVELOPMENT

2-7-17  
 DIRECTOR

ALL EXISTING SEDIMENT CONTROL CONSTRUCTED UNDER F-16-093 SHALL REMAIN UNLESS INSTRUCTED OTHERWISE BY THE SEDIMENT CONTROL INSPECTOR. LIMIT OF DISTURBANCE SHOWN IS FROM THE ROAD CONSTRUCTION PLANS F-16-093.



NO.	DATE	REVISION

**BENCHMARK**  
**ENGINEERS & LAND SURVEYORS, PLANNERS**  
**ENGINEERING, INC.**  
 8480 BALTIMORE NATIONAL PIKE & SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 (P) 410-465-6105 (F) 410-465-6644  
 WWW.BEI-CVLENGINEERING.COM

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: 06-06-2018.

OWNER: HARMONY BUILDERS INC. 4228 COLUMBIA RD ELLICOTT CITY, MD 21042 410-461-0833	<b>THE CEDARS EXTENDED</b> LOTS 1 thru 6 AND OPEN SPACE LOT 7 (A RESUBDIVISION OF LOT 'R' OF THE CEDARS EXTENDED PB 3 P 16) TAX MAP: 43 - GRID: 8 - PARCEL: 451 ZONED: R-SC ELECTION DISTRICT NO. 6 - HOWARD COUNTY, MARYLAND
BUILDER: HARMONY BUILDERS INC. 4228 COLUMBIA RD ELLICOTT CITY, MD 21042 410-461-0833	<b>GRADING, SEDIMENT &amp; EROSION CONTROL PLAN</b>
DESIGN: JMC/DBT DRAFT: NAF	DATE: DECEMBER, 2016 SCALE: AS SHOWN BEI PROJECT NO. 2717 SHEET 4 OF 5

