

ENVIRONMENTAL CONCEPT PLAN

UPTON ROAD

AGE RESTRICTED APARTMENTS

9011 UPTON ROAD
ELLICOTT CITY, MARYLAND 21042

GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON SURVEY CONDUCTED BY VOGEL ENGINEERING + TIMMONS GROUP, INC. DATED DECEMBER 10, 2015 AND HOWARD COUNTY GIS.
- BEARINGS AND DISTANCES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY CONDUCTED BY VOGEL ENGINEERING + TIMMONS GROUP, INC. DATED MAY, 2014 AND HOWARD COUNTY GIS.
- 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. 24BF AND 24CA WERE USED FOR THIS PROJECT.
- THE SUBJECT PROPERTY IS ZONED "POR" IN ACCORDANCE WITH THE 10/6/13 ZONING REGULATIONS, AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS, WETLAND BUFFERS, STREAM BUFFERS OR STEEP SLOPES BESIDES THOSE APPROVED AS ALTERNATIVE COMPLIANCE.
- AN INTERMITTENT STREAM AND ITS 50' BUFFER IS LOCATED ON-SITE.
- THERE IS NO 100-YEAR FLOODPLAIN LOCATED ON-SITE.
- STEEP SLOPES (>25%) OVER 20,000 SF CONTIGUOUS ARE NOT LOCATED ON-SITE.
- THE FOREST, AND WETLANDS ON-SITE ARE BASED ON FOREST STAND DELINEATION SDP-05-119 ECO-SCIENCE PROFESSIONALS, INC. C/O MR. JOHN CANOLES, DATED MARCH 7, 2017, RECERTIFIED NOVEMBER 14, 2023.
- FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT HAVE BEEN ADDRESSED UNDER SITE DEVELOPMENT PLAN SDP-05-119. THE FOREST CONSERVATION OBLIGATION FOR THIS PROJECT IS 3.04 ACRES OF AFFORESTATION THE OBLIGATION IS BEING MET BY THE RETENTION OF 6.08 ACRES (2:1) OF EXISTING FOREST ON THE LAFON PROPERTY (RE-06-06(S2)), PLAT NOS. 18549-51.
- GEOTECHNICAL INVESTIGATIONS SHALL BE COMPLETED AND SUBMITTED WITH THE SITE DEVELOPMENT PLANS.
- A NOISE STUDY WILL BE COMPLETED AND SUBMITTED WITH THE SITE DEVELOPMENT PLANS.
- UPTON ROAD IS CLASSIFIED AS A LOCAL ROAD. ST. JOHNS LANE IS CLASSIFIED AS A MAJOR COLLECTOR. US 40 (BALTIMORE NATIONAL PIKE) IS CLASSIFIED AS AN INTERMEDIATE ARTERIAL. US 29 IS CLASSIFIED AS A PRINCIPAL ARTERIAL.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF ALTERNATIVE SURFACES, MICRO-SCALE AND STRUCTURAL PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. THESE PRACTICES INCLUDE NINE (9) PERMEABLE PAVEMENT AREAS (A-2), FOUR (4) MICRO-BIORETENTION FACILITIES (M-6), AND TWO (2) INFILTRATION TRENCH FACILITIES (I-1) AND ONE (1) CONTECH FILTERRA. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED SUBDIVISION PLAN/PLAT 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 AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION PLAN/PLAT AND/OR SITE DEVELOPMENT PLAN 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.
- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN (ECP) BY THE HOWARD SOIL CONSERVATION DISTRICT DOES NOT GRANT APPROVAL OF THE PROPOSED SEDIMENT CONTROL SCHEME. THE SITE DEVELOPMENT PLAN SHALL INCLUDE A SEQUENCE OF CONSTRUCTION WHICH SHALL DETAIL SEDIMENT & EROSION CONTROLS AND PHASING AND ADDRESS THE PROJECT TEMPORARY STORMWATER MANAGEMENT REQUIREMENTS.
- DESIGN MANUAL WAIVER IS ANTICIPATED REGARDING THE PROPOSED INFILTRATION TRENCHES FOR ESD.

ENVIRONMENTAL SITE DESIGN NARRATIVE:

- THERE ARE ENVIRONMENTAL FEATURES LOCATED ON THE SITE. THERE IS ONE FOREST STAND ON-SITE. A WETLAND AND ITS BUFFER AND AN INTERMITTENT STREAM AND ITS 50' BUFFER ARE LOCATED IN THE NORTHERN SECTION OF THE PROPERTY. THE STREAM RUNS FROM SOUTH TO NORTH AND DISCHARGES TOWARD US 29. FOUR (4) SPECIMEN TREES WERE LOCATED ON-SITE WHICH WILL BE REMOVED. THIS PROJECT PREVIOUSLY ADDRESSED FOREST CONSERVATION IN CONJUNCTION WITH SDP-05-119. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAMS, WETLAND BUFFERS, STREAM BUFFERS BESIDES THOSE APPROVED AS ALTERNATIVE COMPLIANCE.
- THE SITE HAS 3 EXISTING DRAINAGE DIVIDES.
 - THE FIRST DRAINAGE AREA (DA #1) FLOWS SOUTH TOWARDS US 40 AFTER BEING TREATED FOR QUANTITY IN AN EXISTING DETENTION FACILITY AND ALSO CAPTURES RUNOFF FROM AN EXISTING OFF-SITE DEVELOPMENT. A DETENTION SYSTEM HAS BEEN PROPOSED TO MANAGE THE OFF-SITE AND PROPOSED DEVELOPMENT RUNOFF IN ACCORDANCE WITH THE TIBER BRANCH WATERSHED REQUIREMENTS AND WILL FLOW SOUTH TOWARDS US 40 AFTER BEING TREATED. THE RELEASE RATE OF THE PROPOSED DETENTION FACILITY WILL BE LIMITED TO THE EXISTING RUNOFF RATE.
 - THE SECOND DRAINAGE AREA (DA #2) FLOWS EASTWARD TO US 29. A SECOND DETENTION FACILITY IS PROPOSED TO MANAGE THE PROPOSED DEVELOPMENT LOCATED IN EXISTING DRAINAGE AREAS #2 AND #3. HOWEVER, THE ALLOWABLE RELEASE RATE FOR THE PROPOSED DETENTION FACILITY IS LIMITED TO THE EXISTING RUNOFF RATE OF DA #2.
 - THE THIRD DRAINAGE AREA (DA #3) FLOWS NORTH TOWARDS AN EXISTING STREAM AND WETLAND WHICH FLOWS TOWARDS US 29. THE PROPOSED DRAINAGE AREA IS UNMANAGED BUT SMALLER THAN THE EXISTING AREA RESULTING IN A LOWER RUNOFF RATE THAN THE EXISTING CONDITIONS.
- THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT TO THE MAXIMUM EXTENT PRACTICABLE (MEP). THE RESULTS OF THE ENVIRONMENTAL SITE DESIGN FOR THIS PROJECT WILL REFLECT "WOODS IN GOOD CONDITION". THE ESD CONCEPT INCLUDES THE USE OF NINE (9) PERMEABLE PAVEMENT (A-2), FOUR (4) MICRO-BIORETENTION FACILITIES (M-6), TWO (2) INFILTRATION TRENCH FACILITIES (I-1) AND ONE (1) CONTECH FILTERRA. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED. THE PROPOSED PROJECT IS LOCATED IN THE TRIBUTARY DRAINAGE AREAS TO THE TIBER BRANCH WATERSHED AND SHALL BE REQUIRED TO PROVIDE 10-YR, 100-YR AND 6.6 INCH PEAK MANAGEMENT CONTROL. THEREFORE, A PE OF 1.0" WILL BE TREATED FOR ESD. THE 10-YR, 100-YR AND 6.6 INCH STORM EVENTS WILL BE CONTROLLED WITH AN UNDERGROUND DETENTION PIPE FACILITIES AND CONTROL STRUCTURES.
- SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF PROPOSED SUPER SILT FENCE, EARTH DIKE PERMETER CONTROLS, AND INLET PROTECTION. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT DURING THE FUTURE SITE DEVELOPMENT PLAN PHASE OF THE PROJECT.
- STORMWATER MANAGEMENT FOR THE PROJECT SHALL BE MET THROUGH THE USE OF NINE (9) PERMEABLE PAVEMENT (A-2), FOUR (4) MICRO-BIORETENTION FACILITIES (M-6), TWO (2) INFILTRATION TRENCH FACILITIES AND ONE (1) CONTECH FILTERRA. THE INFILTRATION TRENCHES WILL TREAT WQV and Rev. A DESIGN MANUAL WAIVER IS ANTICIPATED REGARDING THE PROPOSED INFILTRATION TRENCHES AND ESD. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED. PROPOSED PRACTICES HAVE BEEN MAXIMIZED TO THE EXTENT PRACTICAL. THE CALCULATED RAINFALL TARGET (PE) FOR THIS PROJECT IS 1.0", AND THE TOTAL RUNOFF VOLUME (ESDV) REQUIRED IS 9,832 CF. TOTAL RUNOFF VOLUME (ESDV) PROVIDED IS 10,784 CF, PE=1.20".
- NO ENVIRONMENTAL SENSITIVE AREAS ARE PROPOSED FOR DISTURBANCE.

SITE ANALYSIS DATA CHART

A. TOTAL SITE AREA:	5.66 AC.
B. AREA OF PLAN SUBMISSION:	5.16 AC. (CONSTRUCTION LOD)
C. AREA OF WETLANDS AND BUFFERS:	1,574 SF OR 0.04 AC.
D. AREA OF FLOODPLAIN:	0.00 SF OR 0.00 AC.
E. AREA OF 50' STREAM BUFFER:	3,499 SF OR 0.08 AC.
F. AREA OF FOREST:	3.8 AC.
G. AREA OF MODERATE SLOPES (15%-24.99%):	0.00 SF OR 0.00 AC.±
H. AREA OF STEEP SLOPES (25% & GREATER):	0.00 SF OR 0.00 AC.±
I. ERODIBLE SOILS:	54,969 SF OR 1.26 AC.±
J. LIMIT OF DISTURBED AREA:	5.16 AC.± (CONSTRUCTION LOD)
K. STORMWATER MANAGEMENT LOD:	5.05 AC.± (SWM LOD)
L. PROPOSED USES FOR SITE AND STRUCTURES:	AGE RESTRICTED RESIDENTIAL APARTMENT COMPLEX
M. BUILDING UNITS:	135
N. GREEN OPEN AREA:	3.10 AC.± (WITHIN PROPERTY)
O. PROPOSED IMPERVIOUS AREA:	2.56 AC.± (WITHIN LOD)
P. PRESENT ZONING DESIGNATION:	POR
Q. DPZ FILE REFERENCES:	RE-06-06(S2), SDP-05-119, BA-23-018V

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

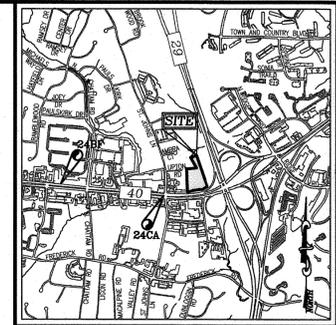


 CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/18/24 DATE



 CHIEF, DIVISION OF LAND DEVELOPMENT 4/18/24 DATE

BENCHMARKS		
HOWARD COUNTY BENCHMARK 24BF	N 586,785.152	E 1,359,229.986
HOWARD COUNTY MONUMENT		ELEV.: 385.925'
HOWARD COUNTY BENCHMARK 24CA	N 586,506.202	E 1,361,634.340
HOWARD COUNTY MONUMENT		ELEV.: 398.260'



VICINITY MAP
SCALE: 1"=2000'
ADC MAP/GRID = 12/B7

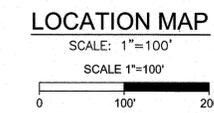
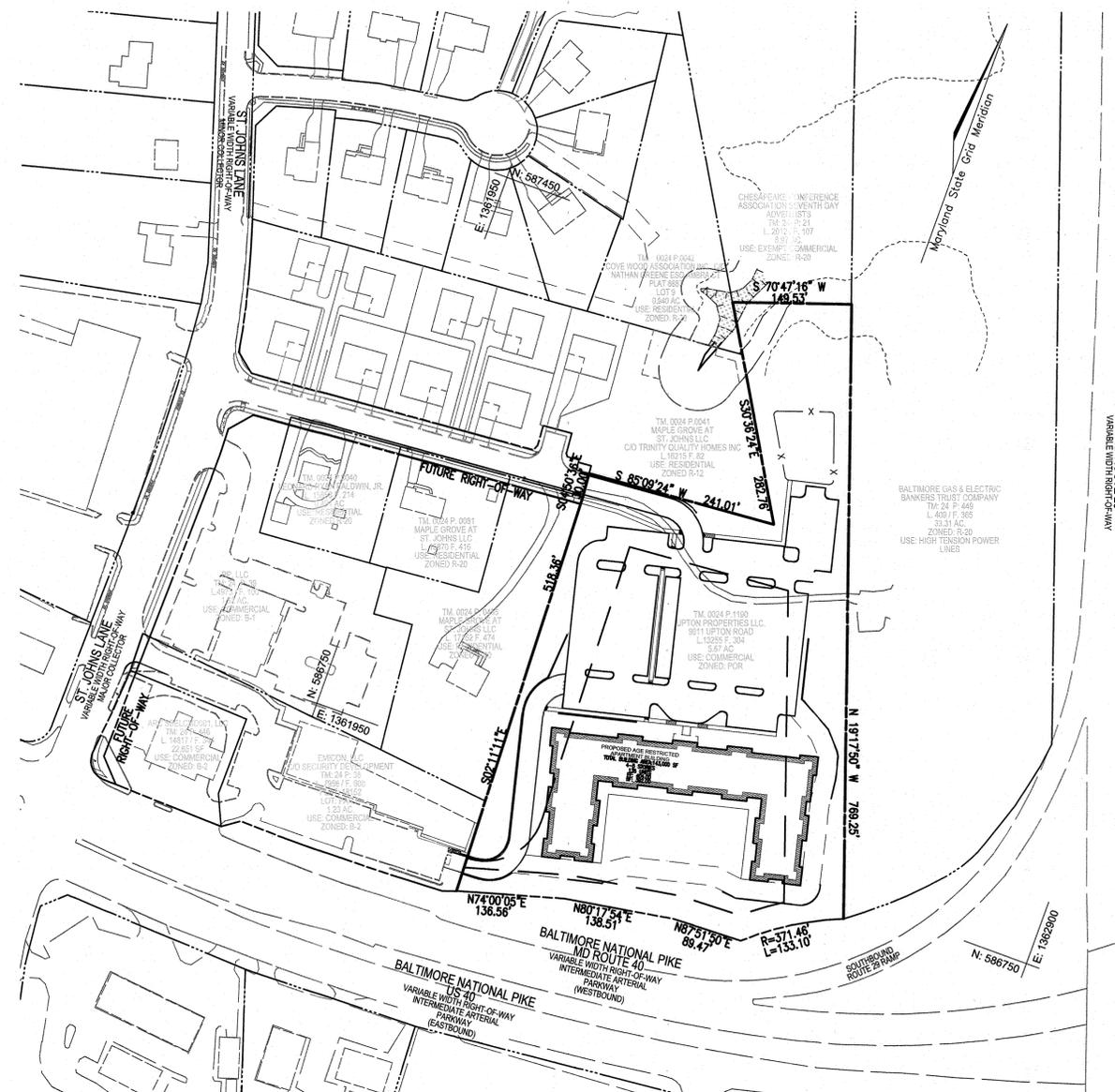
LEGENDS:

---	PARCEL BOUNDARY
---	ADJACENT BOUNDARY
---	RIGHT-OF-WAY
---	STRUCTURE AND USE SETBACK

SHEET INDEX	
DESCRIPTION	SHEET NO.
COVER SHEET	1 OF 6
ESDV CONCEPT PLAN	2 OF 6
ESDV CONCEPT PLAN	3 OF 6
STORMWATER MANAGEMENT DRAINAGE AREA MAP, NOTES & DETAILS	4 OF 6
QUANTITY CONTROL EXISTING CONDITIONS	5 OF 6
QUANTITY CONTROL PROPOSED CONDITIONS	6 OF 6

OWNER
UPTON PROPERTIES, LLC.
410-465-2321
1210 SCOTS KNOLL CT
LUTHERVILLE, MD 21093

DEVELOPER
KIRBY DEVELOPMENT, LLC.
410-746-6669
825 BAY BRIDGE AVE.
ANNAPOLIS, MD 21403



SPECIMEN TREE CHART					
KEY	SPECIES	SIZE (N. DBH)	CRZ (FEET RADIUS)	CRZ	COMMENTS
1	RED OAK	40"	60'	GOOD	TO REMAIN
2	BLACK WALNUT	37"	55.5'	GOOD	TO REMAIN
3	BLACK WALNUT	31"	46.5'	GOOD	TO REMAIN
4	AMERICAN BEECH	41"	61.5'	POOR, TRUNK ROT	TO REMAIN
5	BLACK WALNUT	33.5"	50.25'	FAIR, LIMB FAILURE NOTED	TBR
6	BLACK WALNUT	31"	46.5'	FAIR, LIMB DIEBACK NOTED	TBR
7	SILVER MAPLE	35.5"	53.25'	GOOD	TBR
8	AMERICAN BEECH	38"	57'	FAIR, TRUNK ROT, LIMITED CANOPY ENGLISH IVORY COVERAGE	TBR
9	RED MAPLE	31"	46.5'	POOR, TRUNK ROT, MULTI-STEMMED ABOVE BREAST HEIGHT	TO REMAIN
10	SILVER MAPLE	41"	61.5'	FAIR, MULTIPLE JOINED STEMS	TO REMAIN
11	SILVER MAPLE	40"	60'	FAIR, LIMB DIEBACK WITH TRUNK ROT	TO REMAIN
12	PRINCESS TREE	61"	91.5'	POOR, TRUNK ROT AND CABLED, NOT NATIVE	TO REMAIN
13	SILVER MAPLE	41"	61.5'	POOR, TRUNK ROT AND LIMB DIEBACK	TO REMAIN
14	RED MAPLE	46"	69'	POOR, TRUNK ROT, HEAVILY PRUNED	TO REMAIN

NO. _____ REVISION _____ DATE _____

ENVIRONMENTAL CONCEPT PLAN
COVER SHEET

UPTON ROAD
AGE RESTRICTED APARTMENTS
9011 UPTON ROAD, ELLICOTT CITY, MD 21042

TAX MAP 24 BLOCK 5 ZONED POR
2ND ELECTION DISTRICT PARCEL 1190
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP

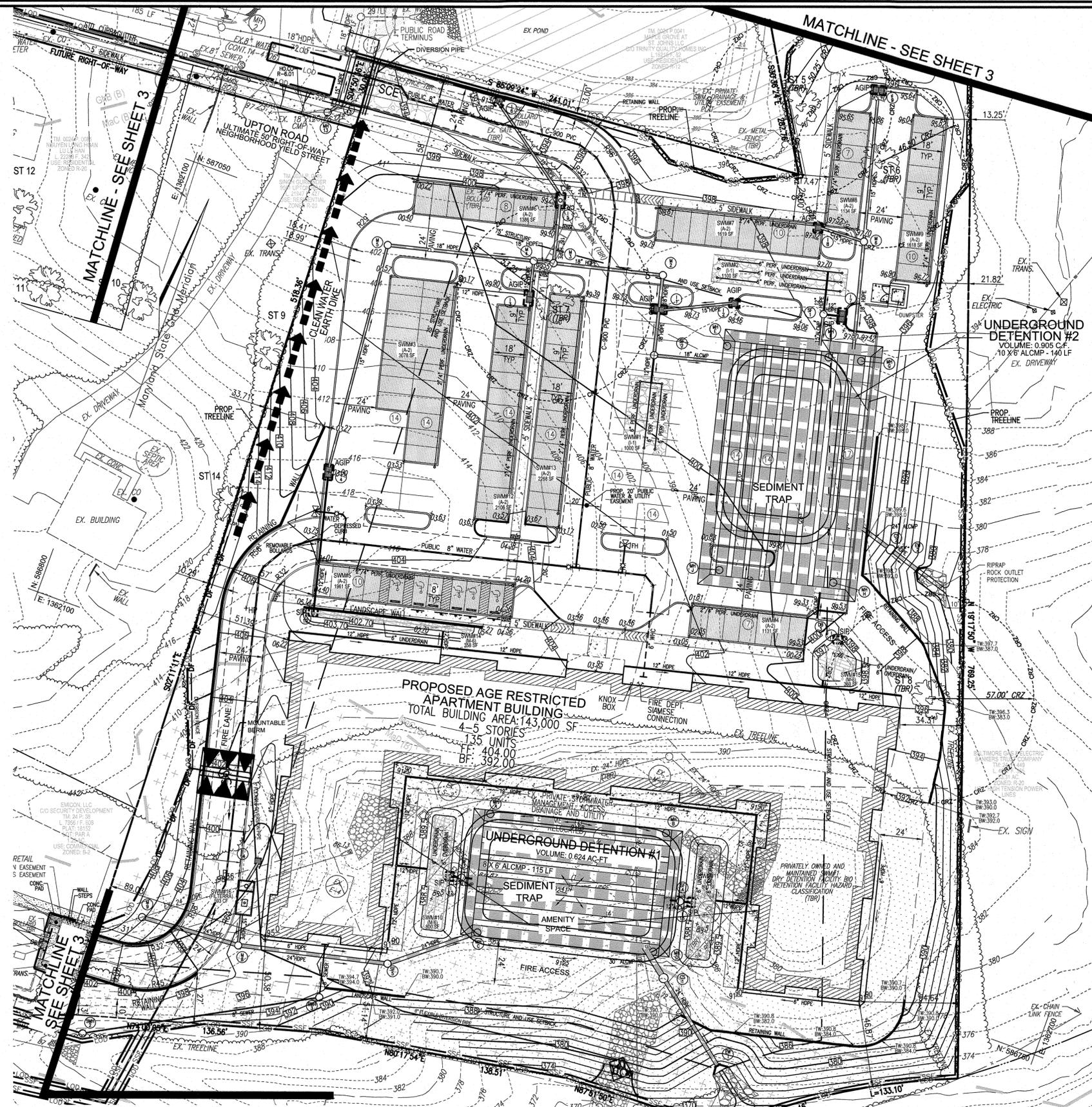
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: KG/JMH
CHECKED BY: RHV
DATE: APRIL 2024
SCALE: AS SHOWN
W.O. NO.: 50198

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 08-27-2024

1 SHEET OF 6



MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND

SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	Kw RANGE	HIGHLY ERODIBLE
MdC	B	NO	0.32	NO
MdD	B	NO	0.32	YES
C-2	C	YES	0.49	YES

NOTE:
TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, AND HOWARD COUNTY SOIL CONSERVATION DISTRICT WEBSITE DOCUMENTS
HTS://WWW.HOWARDSOILS.ORG/DOCUMENTS

HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

LEGEND:

---	PROPERTY LINE
---	RIGHT-OF-WAY LINE
---	ADJACENT PROPERTY LINE
---	EXISTING PAVING
---	EXISTING 10' CONTOUR
---	EXISTING 2' CONTOUR
---	SOILS BOUNDARY
---	EXISTING TREELINE
---	EXISTING OVERHEAD LINE
---	EXISTING SEWER LINE
---	EXISTING WATER LINE
---	EXISTING MAILBOX
---	EXISTING JUNCTION BOX
---	EXISTING SIGN
---	EXISTING UTILITY POLE
---	EXISTING CURB AND GUTTER
---	EXISTING WETLANDS
---	WETLAND BUFFER
---	EX. STREAM
---	EX. STREAM BUFFER
---	EXISTING SPECIMEN TREE & CRITICAL ROOT ZONE
---	HIGHLY ERODIBLE SOILS
---	PROP. SIDEWALK
---	FIRE ACCESS SECTION
---	PROPOSED TREELINE
---	PROPOSED CURB
---	PROPOSED 10' CONTOUR
---	PROPOSED 2' CONTOUR
---	PROPOSED SPOT GRADE
---	STORMDRAIN LINE
---	SUPER SILT FENCE
---	LIMIT OF DISTURBANCE
---	STABILIZED CONSTRUCTION ENTRANCE
---	EARTH DIKE
---	INLET PROTECTION
---	MICRO-BORENTION (4-6)
---	PERVIOUS PAVEMENT (A-2)
---	INFILTRATION TRENCH (I-1)
---	PUBLIC WATER & UTILITY EASEMENT

NOTE:
1. SEE SHEET 4 FOR ESDv REQUIRED AND PROVIDED SUMMARY TABLE.
2. SEE SHEET 5 AND 6 FOR QUANTITY CONTROL SUMMARY TABLE.

OWNER
UPTON PROPERTIES, LLC.
410-465-2321
1210 SCOTS KNOLL CT
LUTHERVILLE, MD 21093

DEVELOPER
KIRBY DEVELOPMENT, LLC.
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825 BAY BRIDGE AVE.
ANNAPOLIS, MD 21403

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/10/24
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/10/24
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

ESDv CONCEPT PLAN
SCALE: 1"=30'
SCALE 1"=30'
0 30' 60'

NATIONAL PIKE
40
RIGHT

NO.	REVISION	DATE
ENVIRONMENTAL CONCEPT PLAN ESDv CONCEPT PLAN		
UPTON ROAD AGE RESTRICTED APARTMENTS 9011 UPTON ROAD, ELLICOTT CITY, MD 21042		
TAX MAP 24 BLOCK 5 2ND ELECTION DISTRICT		ZONED POR PARCEL 1190 HOWARD COUNTY, MARYLAND
VOGEL ENGINEERING		
TIMMONS GROUP		
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043 P: 410.461.7666 F: 410.461.8961 www.timmons.com		
DESIGN BY: RHV		PROFESSIONAL CERTIFICATE 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. 16193, EXPIRATION DATE: 08-27-2024
DRAWN BY: KG/IMH		
CHECKED BY: RHV		
DATE: APRIL 2024		
SCALE: AS SHOWN		
W.O. NO.: 50198		2 SHEET OF 6



MAPLE GROVE BY OTHERS

MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND			
SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	HEAVY ERODIBLE
M3C MAJOR LOAM, 8 TO 15 PERCENT SLOPES	B	NO	0.32 NO
M3D MAJOR LOAM, 15 TO 25 PERCENT SLOPES	B	NO	0.32 YES
G3B GLENVILLE-SALE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	YES	0.49 YES

NOTE:
 TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, AND HOWARD COUNTY SOIL CONSERVATION DISTRICT WEBSITE DOCUMENTS
[HTTPS://WWW.HOWARDSCD.ORG/DOCUMENTS](https://www.howardscd.org/documents)
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

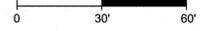
NOTE:
 1. SEE SHEET 4 FOR ESDV REQUIRED AND PROVIDED SUMMARY TABLE.
 2. SEE SHEET 4 FOR QUANTITY CONTROL SUMMARY TABLE.

LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING PAVING
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	SOILS BOUNDARY
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	WETLAND BUFFER
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	EX. STREAM BUFFER
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	HIGHLY ERODIBLE SOILS
	PROP. SIDEWALK
	FIRE ACCESS SECTION
	PROPOSED TREELINE
	PROPOSED CURB
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED SPOT GRADE
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ESDv CONCEPT PLAN

SCALE: 1"=30'
 SCALE: 1"=30'



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DEVELOPER
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 825 BAY BRIDGE AVE.
 ANNAPOLIS, MD 21403

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
 ESDv CONCEPT PLAN

UPTON ROAD
 AGE RESTRICTED APARTMENTS
 9011 UPTON ROAD, ELLICOTT CITY, MD 21042

TAX MAP 24 BLOCK 5
 2ND ELECTION DISTRICT

ZONED FOR
 PARCEL 1190
 HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. MY LICENSE NO. IS 16183 AND MY EXPIRATION DATE IS 08-27-2024.

DESIGN BY: RHW
 DRAWN BY: KG/IMH
 CHECKED BY: RHW
 DATE: APRIL, 2024.
 SCALE: AS SHOWN
 W.O. NO.: 50198

3 SHEET OF 6

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 4.18.24
 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT DATE



UPTON ROAD APARTMENTS- ECP - ESDv COMPUTATIONS

DRAINAGE #	% IMPERV	Rv	DA (SF)	DA (AC)	VOLUME	MAXIMUM VOLUME	VOLUME PROVIDED	Rev PROVIDED	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS	SF
A	74.53	0.7208	24973	0.57	1500	3900	1000	400	18611	0.43	0.15	SWMM1 - GRAVEL INFILTRATION TRENCH (B-1)	1000
B	58.39	0.5755	8873	0.20	426	1106	500	0	5181	0.12	0.08	SWMM3 - PERMEABLE PAVEMENT (A-2) HSG B Soil	300
C	86.25	0.8262	1767	0.04	122	316	224	0	1524	0.03	0.01	SWMM4 - PERMEABLE PAVEMENT (A-2) HSG B Soil	224
D	82.77	0.7950	3274	0.08	217	564	188	0	2730	0.06	0.01	SWMM5 - PERMEABLE PAVEMENT (A-2) HSG B Soil	388
E	70.37	0.6833	6307	0.14	359	934	378	0	4438	0.10	0.04	SWMM6 - PERMEABLE PAVEMENT (A-2) HSG B Soil	274
F	83.42	0.8008	3878	0.20	592	1540	646	0	7436	0.17	0.03	SWMM7 - PERMEABLE PAVEMENT (A-2) HSG B Soil	320
G	89.78	0.8580	3678	0.08	263	684	300	85	3302	0.08	0.01	SWMM8 - PERMEABLE PAVEMENT (A-2) HSG B Soil	224
H	94.77	0.9029	3593	0.08	270	703	320	0	3405	0.08	0.00	SWMM9 - PERMEABLE PAVEMENT (A-2) HSG B Soil	320
I	62.40	0.6116	20101	0.46	1025	2664	1067	320	12544	0.29	0.17	SWMM10 - MICROSCALE MICRO-BIORETENTION (M-6)	1067
J	62.40	0.6116	20102	0.46	1025	2664	1067	320	12544	0.29	0.17	SWMM11 - MICROSCALE MICRO-BIORETENTION (M-6)	1067
M	100.00	0.9500	4860	0.11	385	1000	617	0	4800	0.11	0.00	SWMM12 - PERMEABLE PAVEMENT (A-2) HSG B Soil	417
N	85.59	0.8293	3444	0.08	238	619	440	0	2992	0.07	0.01	SWMM13 - PERMEABLE PAVEMENT (A-2) HSG B Soil	440
O	71.45	0.6931	8173	0.19	472	1227	477	143	5840	0.13	0.05	SWMM14 - MICROSCALE MICRO-BIORETENTION (M-6)	477
P	60.46	0.5941	5660	0.22	478	1243	380	144	5840	0.13	0.09	SWMM15 - MICROSCALE MICRO-BIORETENTION (M-6)	480
Q	43.99	0.4459	15961	0.37	593	1542	993	0	7023	0.16	0.21	SWMM16 - FILTERBA	993
TOTAL	74.05	0.7165	150548	3.45	8989	23370	10784	1852	115884	2.56	0.50		

- LEGEND:**
- PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - ADJACENT PROPERTY LINE
 - EXISTING PAVING
 - EXISTING 10' CONTOUR
 - EXISTING 2' CONTOUR
 - SOILS BOUNDARY
 - EXISTING TREELINE
 - EXISTING OVERHEAD LINE
 - EXISTING SEWER LINE
 - EXISTING WATER LINE
 - EXISTING MAILBOX
 - EXISTING JUNCTION BOX
 - EXISTING SIGN
 - EXISTING UTILITY POLE
 - EXISTING CURB AND GUTTER
 - EXISTING WETLANDS
 - WETLAND BUFFER
 - EX. STREAM
 - EX. STREAM BUFFER
 - EXISTING SPECIMEN TREE & CRITICAL ROOT ZONE
 - HIGHLY ERODIBLE SOILS
 - FIRE ACCESS SECTION
 - PROP. SIDEWALK
 - PROPOSED TREELINE
 - PROPOSED CURB
 - PROPOSED 10' CONTOUR
 - PROPOSED 2' CONTOUR
 - PROPOSED SPOT GRADE
 - STORMDRAIN LINE
 - DRAINAGE DIVIDE
 - MICRO-BIORETENTION (M-6)
 - PERVIOUS PAVEMENT (A-2)
 - INFILTRATION TRENCH (I-1)
 - PUBLIC WATER & UTILITY EASEMENT

OWNER
 UPTON PROPERTIES, LLC.
 410-465-2321
 1210 SCOTTS KNOLL CT
 LUTHERVILLE, MD 21093

DEVELOPER
 KIRBY DEVELOPMENT, LLC.
 410-746-6669
 825 BAY BRIDGE AVE.
 ANNAPOLIS, MD 21403

STORMWATER MANAGEMENT DRAINAGE AREA MAP
 SCALE: 1"=50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/18/24
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/16/24
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	Kw RANGE	HIGHLY ERODIBLE
M6C	MINOR LOW, 8 TO 19 PERCENT SLOPES	B	NO	0.32	NO
M6D	MINOR LOW, 15 TO 25 PERCENT SLOPES	B	NO	0.32	YES
G6B	GLENDALE-SALE Silt LOAMS, 0 TO 8 PERCENT SLOPES	C	YES	0.49	YES

NOTE:
 TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, AND HOWARD COUNTY SOIL CONSERVATION DISTRICT WEBSITE DOCUMENTS
 HTTPS://WWW.HOWARDSDOC.GOV/DOCUMENTS

HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
STORMWATER MANAGEMENT DRAINAGE AREA MAP AND DETAILS
UPTON ROAD
AGE RESTRICTED APARTMENTS
 9011 UPTON ROAD, ELLICOTT CITY, MD 21042

TAX MAP 24 BLOCK 5
 2ND ELECTION DISTRICT

ZONED POR
 PARCEL 1190
 HOWARD COUNTY, MARYLAND

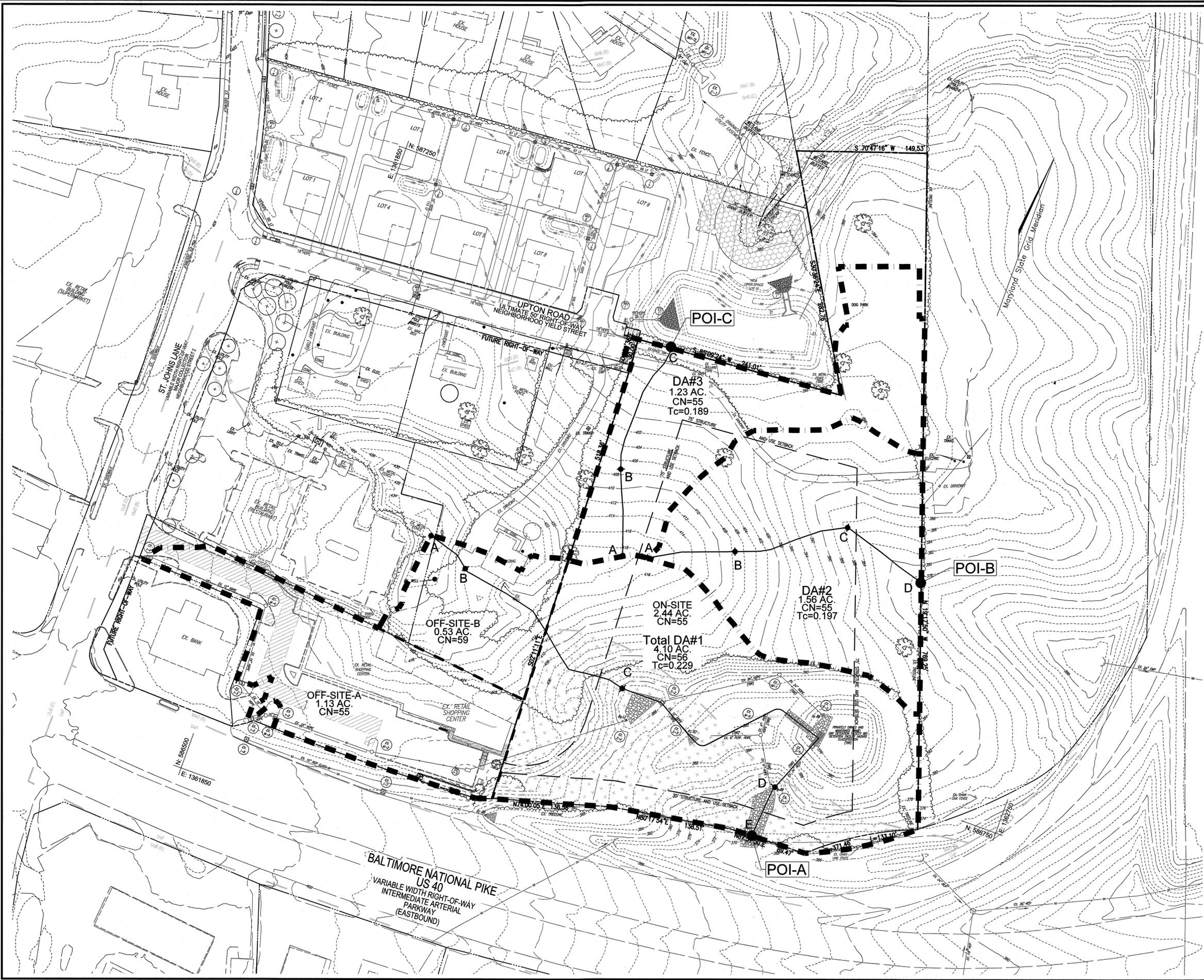
VOGEL ENGINEERING

TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: RHV	 PROFESSIONAL CERTIFICATE I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. MY LICENSE EXPIRES ON 08-31-2024.
DRAWN BY: KG/JMH	
CHECKED BY: RHV	
DATE: APRIL 2024	
SCALE: AS SHOWN	
W.O. NO.: 50198	

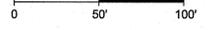
4 SHEET OF 6

 4/18/24
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 4/18/24
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



QUANTITY SUMMARY					
		10-YR	100-YR	(Tributary/Plumtree Watershed) 3.55 hr, 6.6 inch	
POI-A	EXISTING	3.5	10.8	16.2	
	POST DEVELOPMENT UNMANAGED	DA#1	11.7	17.4	30.4
		DA#3	1.5	3.3	4.9
	POST DEVELOPMENT MANAGED	DA#1	1.0	7.8	11.8
		DA#3 (UNMANAGED)	-	-	-
	SUB TOTAL	1.8	9.5	14.4	
POI-B	EXISTING	1.4	4.2	6.3	
	POST DEVELOPMENT UNMANAGED	DA#2	14.0	19.5	35.0
		DA#4	0.7	1.6	2.4
	POST DEVELOPMENT MANAGED	DA#2	0.5	3.5	3.5
		DA#4 (UNMANAGED)	-	-	-
	SUB TOTAL	0.9	3.9	3.8	
POI-C	EXISTING	1.1	3.4	5.1	
	POST DEVELOPMENT UNMANAGED (SUB TOTAL)	DA#5	0.6	1.4	2.1
TOTAL	EXISTING	6.0	18.2	27.4	
	POST-DEVELOPMENT	3.3	14.8	20.3	

QUANTITY CONTROL EXISTING CONDITIONS

SCALE: 1"=50'
 SCALE 1"=50'


OWNER
 UPTON PROPERTIES, LLC
 410-465-2321
 1210 SCOTS KNOLL CT
 LUTHERVILLE, MD 21093
DEVELOPER
 KIRBY DEVELOPMENT, LLC
 410-746-6669
 825 BAY BRIDGE AVE.
 ANNAPOLIS, MD 21403

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
EXHIBIT QUANTITY CONTROL EXISTING CONDITIONS
UPTON ROAD
AGE RESTRICTED APARTMENTS
 9011 UPTON ROAD, ELLICOTT CITY, MD 21042
 TAX MAP 24 BLOCK 5 ZONED FOR PARCEL 1190
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

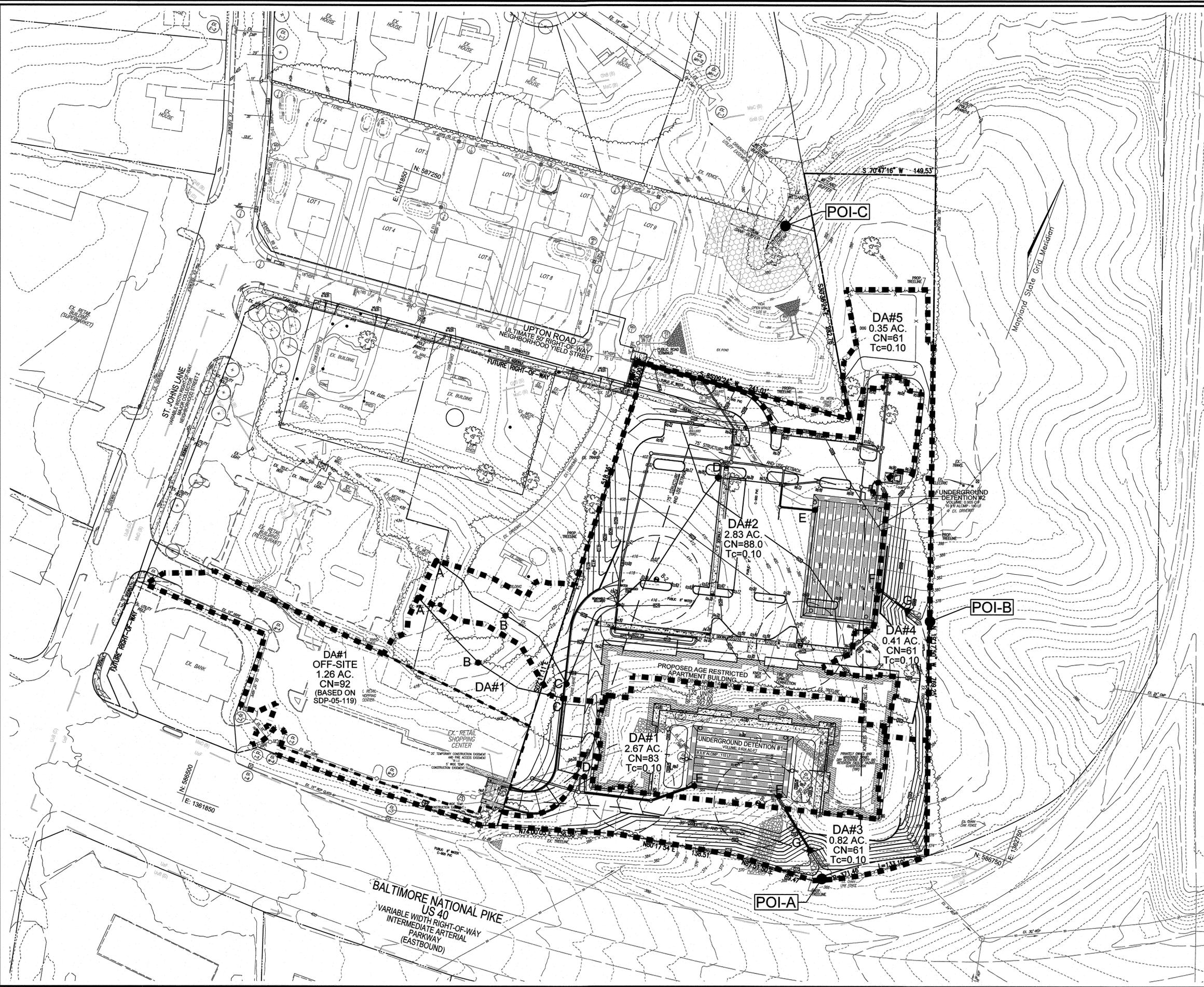
TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: RHV	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. 16193, EXPIRES 04/18/2024.
DRAWN BY: KG/IMH	
CHECKED BY: RHV	
DATE: APRIL, 2024	
SCALE: AS SHOWN	
W.O. NO.: 50198	PROFESSIONAL CERTIFICATE 

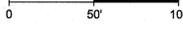
5 SHEET OF 6

 4/18/24
 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



QUANTITY SUMMARY					
		10-YR	100-YR	(Tiberbranch/Plumtree Watershed) 3.55 hr, 6.6 inch	
POI-A	EXISTING	3.5	10.8	16.2	
	POST DEVELOPMENT UNMANAGED	DA#1	11.7	17.4	30.4
		DA#3	1.5	3.3	4.9
	POST DEVELOPMENT MANAGED	DA#1	1.0	7.8	11.8
		DA#3 (UNMANAGED)	-	-	-
SUB TOTAL		1.8	9.5	14.4	
POI-B	EXISTING	1.4	4.2	6.3	
	POST DEVELOPMENT UNMANAGED	DA#2	14.0	19.5	35.0
		DA#4	0.7	1.6	2.4
	POST DEVELOPMENT MANAGED	DA#2	0.5	3.5	3.5
		DA#4 (UNMANAGED)	-	-	-
SUB TOTAL		0.9	3.9	3.8	
POI-C	EXISTING	1.1	3.4	5.1	
	POST DEVELOPMENT UNMANAGED (SUB TOTAL)	DA#5	0.6	1.4	2.1
TOTAL	EXISTING	6.0	18.2	27.4	
	POST-DEVELOPMENT	3.3	14.8	20.3	

QUANTITY CONTROL PROPOSED CONDITIONS
 SCALE: 1"=50'
 SCALE 1"=50'


OWNER
 UPTON PROPERTIES, LLC.
 410-455-2321
 1210 SCOTS KNOLL CT
 LUTHERVILLE, MD 21093
DEVELOPER
 KIRBY DEVELOPMENT, LLC.
 410-746-6669
 825 BAY BRIDGE AVE.
 ANNAPOLIS, MD 21403

NO.	REVISION	DATE

ENVIRONMENTAL CONCEPT PLAN
EXHIBIT QUANTITY CONTROL PROPOSED CONDITIONS
UPTON ROAD AGE RESTRICTED APARTMENTS
 9011 UPTON ROAD, ELLICOTT CITY, MD 21042
 TAX MAP 24 BLOCK 5 ZONED POR
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PROFESSIONAL CERTIFICATE
 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. 16193, EXPIRATION DATE 06-27-2024.
 DESIGN BY: RHV
 DRAWN BY: KG/MMH
 CHECKED BY: RHV
 DATE: APRIL 2024
 SCALE: AS SHOWN
 W.O. NO.: 50198
 ROBERT H. VOGEL, PE No.16193