

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	ENVIRONMENTAL CONCEPT PLAN TITLE SHEET
2	ENVIRONMENTAL CONCEPT PLAN
3	ENVIRONMENTAL CONCEPT PLAN
4	ENVIRONMENTAL CONCEPT PLAN EXISTING CONDITIONS PHASE ONE - SEDIMENT AND EROSION CONTROL
5	ENVIRONMENTAL CONCEPT PLAN EXISTING CONDITIONS PHASE ONE - SEDIMENT AND EROSION CONTROL
6	ENVIRONMENTAL CONCEPT PLAN PROPOSED CONDITIONS PHASE ONE - SEDIMENT AND EROSION CONTROL
7	ENVIRONMENTAL CONCEPT PLAN PROPOSED CONDITIONS PHASE TWO - SEDIMENT AND EROSION CONTROL
8	ENVIRONMENTAL CONCEPT PLAN STORMWATER MANAGEMENT DRAINAGE AREA MAP
9	ENVIRONMENTAL CONCEPT PLAN STORMWATER MANAGEMENT DRAINAGE AREA MAP

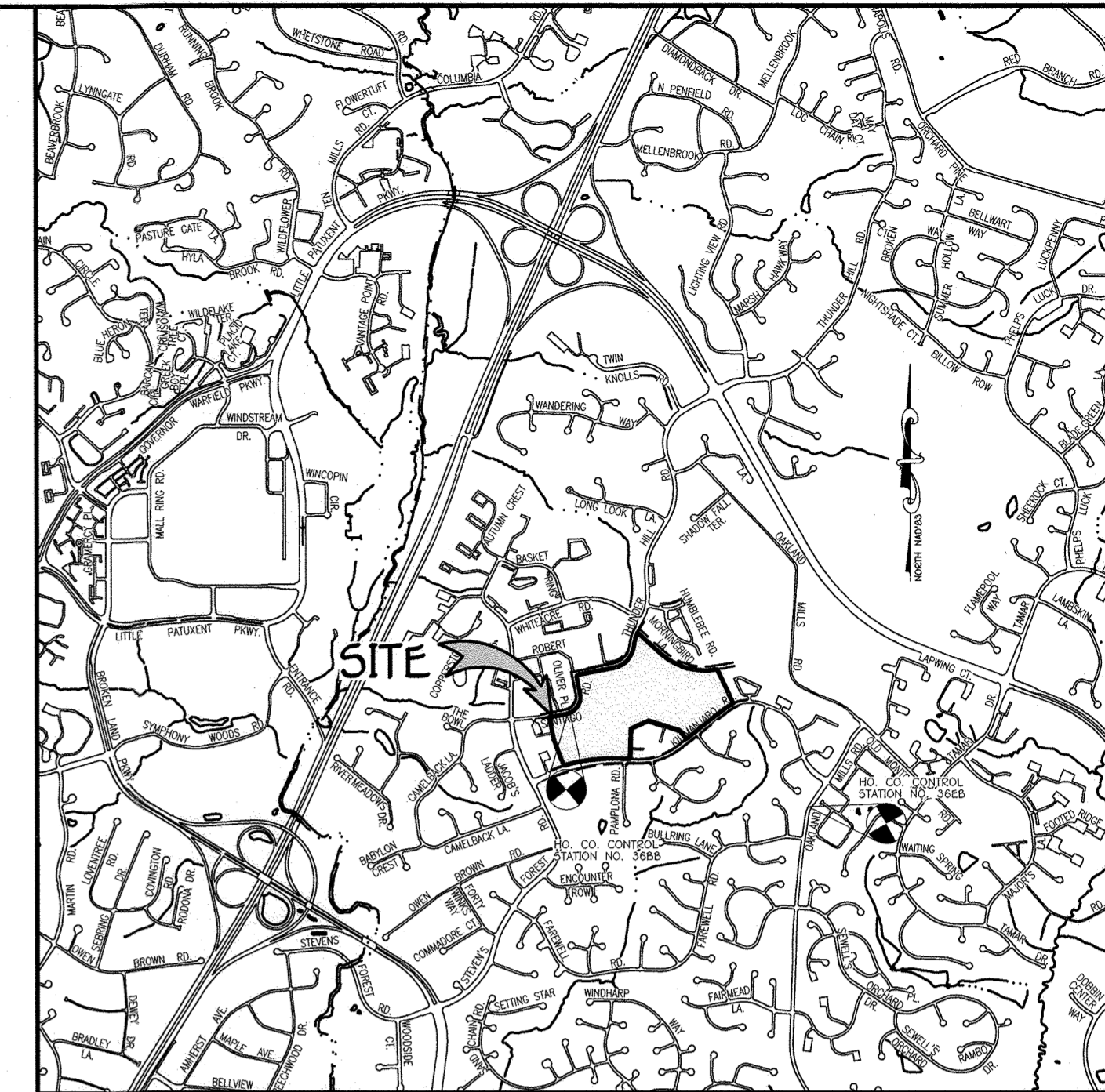
# ENVIRONMENTAL CONCEPT PLAN

# OAKLAND MILLS MIDDLE SCHOOL

## BUILDING ADDITION

## 9540 KILIMANJARO ROAD

## COLUMBIA, MARYLAND 21045

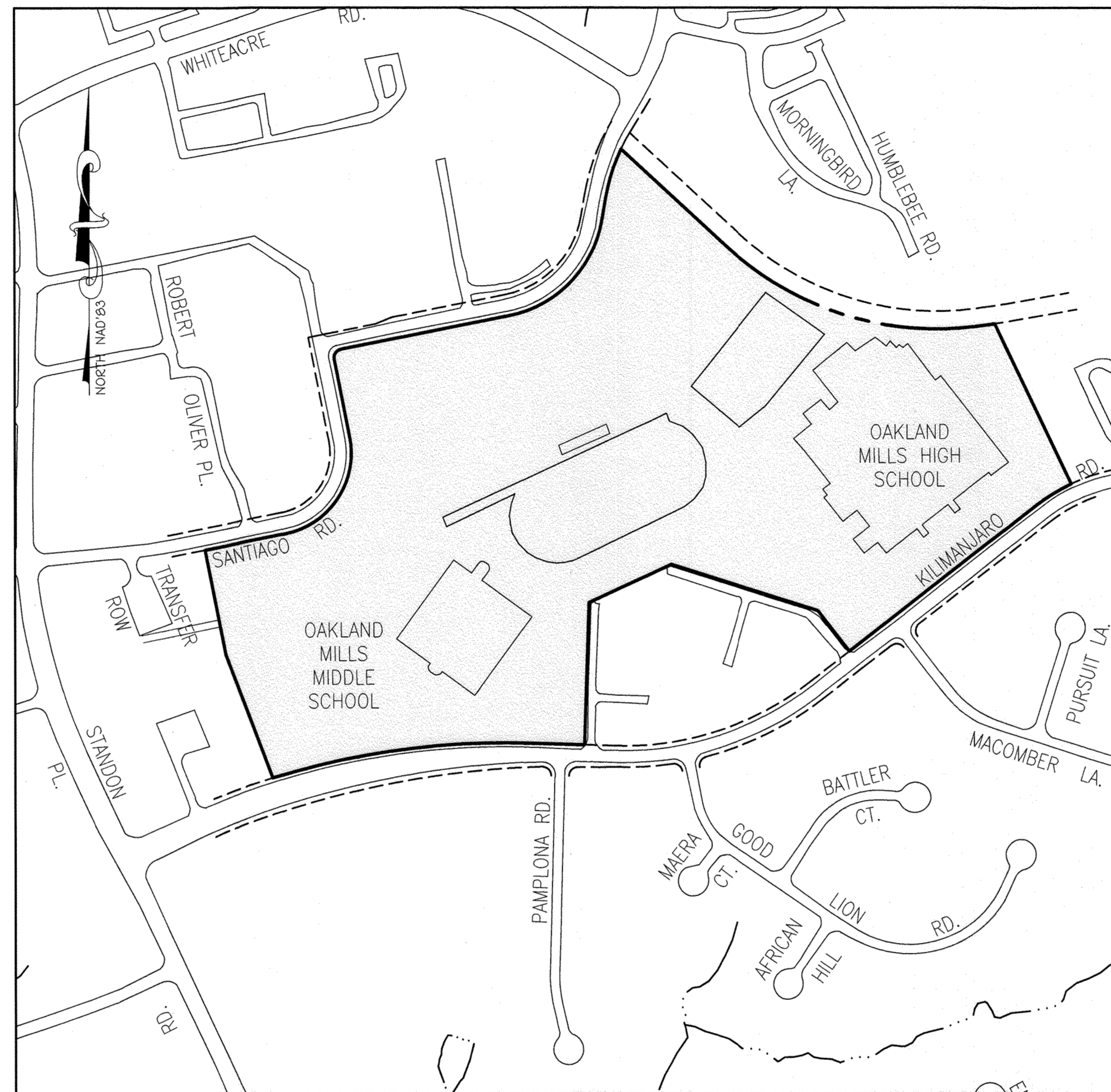


**VICINITY MAP**  
SCALE: 2000'  
ADS STREET MAP 19, GRID J-7 AND K-7  
0' 2000' 4000' 6000'

LEGEND - EX. CONDITIONS		LEGEND - PROP. CONDITIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---446---	EXISTING CONTOUR 2' INTERVAL	---446---	PROPOSED CONTOUR 2' INTERVAL
---440---	EXISTING CONTOUR 10' INTERVAL	---440---	PROPOSED CONTOUR 10' INTERVAL
S	EXISTING SAN. SEWER LINE	+ 445.51	PROPOSED SPOT ELEVATION
D	EXISTING STORM DRAIN LINE	[Symbol]	PROPOSED CONCRETE WALK
W	EXISTING WATER LINE	[Symbol]	PROPOSED MACADAM PAVING
E	EXISTING UNDERGROUND ELECTRIC LINE	[Symbol]	PROPOSED TREE LINE
T	EXISTING CABLE/TV LINE	[Symbol]	PROPOSED WATER
G	EXISTING GAS LINE	[Symbol]	PROPOSED STORM DRAIN
X	EXISTING FENCE	[Symbol]	PROPOSED SEWER
[Symbol]	EXISTING MACADAM PAVING	X	PROPOSED FENCE
[Symbol]	EXISTING TREE LINE		
[Symbol]	DEMOLITION AREA		
[Symbol]	EXISTING CONCRETE		
[Symbol]	EXISTING TREES		
[Symbol]	15%-24.9% SLOPES		
[Symbol]	SOIL LINES		

LEGEND - SEDIMENT CONTROLS	
SYMBOL	DESCRIPTION
[Symbol]	SUPER SILT FENCE
[Symbol]	L.O.D. LIMIT OF DISTURBANCE
[Symbol]	AGIP AT GRADE INLET PROTECTION
[Symbol]	CIP CURB INLET PROTECTION
[Symbol]	SCS STABILIZED CONSTRUCTION ENTRANCE



**PLAN**  
SCALE: 1" = 300'  
300' 600' 900'

**SITE ANALYSIS DATA CHART**

- TOTAL AREA OF THIS SUBMISSION = 2,130,266 SF (48.90 AC.)
- LIMIT OF DISTURBED AREA = 533,617 SQ. FT. OR 12.25 AC.
- PRESENT ZONING DESIGNATION = NEWTOWN (PER 10/06/13 COMPREHENSIVE ZONING PLAN)
- CURRENT USE: MIDDLE SCHOOL FACILITY
- PROPOSED USE: ADDITION AND RENOVATE EXISTING MIDDLE SCHOOL FACILITY
- OPEN SPACE ON SITE: N/A
- RECREATIONAL AREA PROVIDED: N/A
- EXISTING BUILDING COVERAGE OF SITE: 72,109 SQ. FT. (0.03%)
- PROPOSED BUILDING COVERAGE: 111,233 SQ. FT. (0.05%)
- PARKING SPACE DATA:  
EXISTING PARKING: 99 SPACES  
PROVIDED: 139 SPACES (INCLUDING 6 HC SPACES)
- PREVIOUS HOWARD COUNTY FILES: SDP-71-062, SDP-02-092, PB21-015
- TOTAL AREA OF EX. FLOODPLAIN LOCATED ON SITE: 0.0 AC.
- TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.69 AC.
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.0 AC.
- TOTAL AREA OF EX. FOREST (RETENTION) WITHIN L.O.D. = 0.0 AC.
- TOTAL GREEN OPEN AREA WITHIN L.O.D. = 339,379 SQ. FT. OR 7.79 AC.
- TOTAL IMPERVIOUS AREA WITHIN L.O.D. = 194,238 SQ. FT. OR 4.46 AC.
- AREA OF ERODIBLE SOILS WITHIN L.O.D. = 12.1 AC.

**DESIGN NARRATIVE**

**INTRODUCTION:**  
THIS REPORT WILL DEMONSTRATE HOW THE CRITERIA SET FORTH IN THE MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II (EFFECTIVE OCTOBER 2000, REVISED MAY 2009) WILL BE SATISFIED FOR THE PROPERTY. THE GOAL OF CREATING HYDROLOGY SIMILAR TO THAT OF "WOODS IN GOOD CONDITION" WILL BE ACCOMPLISHED THROUGH THE USE OF MICRO-BIORETENTION FACILITIES (1), BIORETENTION FACILITIES (3), FILTERRA SYSTEMS (12), RECHARGE CHAMBERS (7) AS SUGGESTED WITHIN CHAPTER 5 OF PREVIOUSLY MENTIONED MANUAL. THE ACHIEVEMENT OF THIS GOAL WILL ADDRESS THE REQUIREMENT BY PROVIDING CHANNEL PROTECTION VOLUME.

**GENERAL SITE CONDITIONS:**  
THE OAKLAND MILLS MIDDLE SCHOOL PROJECT IS ZONED NEWTOWN AND LOCATED ON TAX MAP 36, PARCEL NO. 336 OF THE HOWARD COUNTY, MARYLAND TAX MAP DATABASE SYSTEM. THIS PROPERTY CONSISTS OF 48.9 ACRES OF WHICH 12.25 ACRES ARE BEING DISTURBED.

- NATURAL RESOURCE PROTECTION:**  
TO ENSURE THE PROTECTION OF NATURAL RESOURCES LOCATED ON THIS SITE, ALL BUFFERS WILL BE HONORED AND ALL IMPROVEMENTS WILL BE LOCATED OUTSIDE OF ENVIRONMENTALLY SENSITIVE AREAS. SPECIMEN AND SIGNIFICANT TREES LOCATED ON THIS PROPERTY ARE TABULATED ON THE EXISTING CONDITIONS PLAN.
- MAINTENANCE OF NATURAL FLOW PATTERNS:**  
THE PROPOSED DEVELOPMENT IS DESIGNED WITH THE INTENT OF CREATING DRAINAGE DIVIDES SIMILAR TO THOSE OF THE NATURAL FLOW PATTERNS IN THE PROJECT AREA.
- REDUCTION OF IMPERVIOUS AREAS THROUGH BETTER SITE DESIGN, ALTERNATIVE SURFACES AND NONSTRUCTURAL PRACTICES**  
THIS SITE PROPOSES THE MINIMUM IMPERVIOUS AREAS NECESSARY TO PROVIDE ADEQUATE ACCESS TO THE PROPOSED BUILDING. ALL PROPOSED IMPERVIOUS SURFACES ARE REDUCED THROUGH THE USE OF ESD STORMWATER MANAGEMENT FACILITIES. WE ARE PROVIDING FOR 1 MICRO-BIORETENTION FACILITY, 3 BIORETENTION FACILITIES, 12 FILTERRA SYSTEMS AND 7 RECHARGE CHAMBERS TO TREAT THE PAVING AND ROOF. F-6 BIORETENTION FACILITIES WERE USED INSTEAD OF M-6 MICRO-BIORETENTION FACILITIES TO TREAT THE ROOF RUNOFF TO SIMPLIFY THE MAINTENANCE FOR THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM.
- INTEGRATION OF EROSION AND SEDIMENT CONTROLS INTO STORMWATER STRATEGY:**  
THIS SUBMISSION ONLY PROPOSES ON-LOT SEDIMENT CONTROLS SUCH AS SUPER SILT FENCE, INLET PROTECTION, A STOCKPILE AND A STABILIZED CONSTRUCTION ENTRANCE.
- IMPLEMENTATION OF ESD PLANNING TECHNIQUES AND PRACTICES TO THE MAXIMUM EXTENT PRACTICABLE (MEP)**  
THIS SUBMISSION PROPOSES 1 MICRO-BIORETENTION FACILITY (M-6), 3 BIORETENTION FACILITIES (F-6), 12 FILTERRA SYSTEMS, AND 7 RECHARGE CHAMBERS TO MEET AND EXCEED ENVIRONMENTAL SITE DESIGN TO THE MAXIMUM EXTENT PRACTICABLE (ESD TO THE MEP). ADDITIONALLY, THE EXISTING SITE CONTAINS LESS THAN 40% OF IMPERVIOUS COVER REQUIRING NEW DEVELOPMENT STORMWATER MANAGEMENT STANDARDS. THE SITE IS NOT BEING DEVELOPED UNDER REDEVELOPMENT CRITERIA. THE SITE HAS BEEN DIVIDED INTO 16 DRAINAGE AREAS. THE ESD FACILITIES DO NOT HAVE SEPARATE OUTFALLS BECAUSE THE SITE IS LANDLOCKED BY PRIVATE PROPERTY AND DEVELOPED PUBLIC RIGHT-OF-WAYS. THE ESD FACILITIES OUTFALL TO EXISTING PUBLIC STORM DRAIN SYSTEMS.
- REQUEST FOR DESIGN MANUAL WAIVER:**  
NO WAIVERS ARE EXPECTED TO BE REQUESTED ON THIS PROJECT RELATING TO SWM REQUIREMENTS.

**STORMWATER MANAGEMENT SUMMARY**

AREA ID	DRAINAGE AREA AC. (SF)	IMPERVIOUS AC. (SF)	ESDV PROVIDED CUFT.
FT-1	0.09 AC. (3,945 SF)	0.07 AC. (3,181 SF)	693
FT-2	0.45 AC. (19,538 SF)	0.37 AC. (16,222 SF)	3,191
FT-3	0.44 AC. (19,230 SF)	0.36 AC. (15,601 SF)	3,200
FT-4	0.24 AC. (10,391 SF)	0.17 AC. (7,616 SF)	1,566
FT-5	0.12 AC. (5,091 SF)	0.07 AC. (2,983 SF)	493
FT-6	0.12 AC. (5,170 SF)	0.09 AC. (4,127 SF)	847
FT-7	0.16 AC. (6,896 SF)	0.15 AC. (6,507 SF)	923
FT-8	0.21 AC. (9,002 SF)	0.19 AC. (8,088 SF)	1,695
FT-9	0.11 AC. (4,744 SF)	0.07 AC. (2,878 SF)	293
FT-10	0.41 AC. (17,605 SF)	0.31 AC. (13,347 SF)	2,743
FT-11	0.43 AC. (18,663 SF)	0.33 AC. (14,274 SF)	2,932
FT-12	0.04 AC. (1,693 SF)	0.04 AC. (1,693 SF)	346
M.B. 1	2.03 AC. (88,324 SF)	0.95 AC. (41,338 SF)	8,550
M.B. 2	1.43 AC. (62,282 SF)	1.12 AC. (48,970 SF)	4,999
M.B. 3	0.09 AC. (3,749 SF)	0.05 AC. (2,089 SF)	355
M.B. 4	1.34 AC. (58,467 SF)	1.05 AC. (45,631 SF)	8,023

ESDV REQUIRED = 29,770 Cu.Ft.  
ESDV PROVIDED = 40,649 Cu.Ft.  
WEIGHTED Pe REQUIRED = 1.79'  
Pe PROVIDED = 2.45'

**STORMWATER MANAGEMENT INFORMATION**

SITE	FACILITY NAME & NUMBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	HOA MAINTAINED	OWNER MAINTAINED
OMMS	FT-1	FILTERRA (1)	N	Y	N	Y
OMMS	FT-2	FILTERRA (1)	N	Y	N	Y
OMMS	FT-3	FILTERRA (1)	N	Y	N	Y
OMMS	FT-4	FILTERRA (1)	N	Y	N	Y
OMMS	FT-5	FILTERRA (1)	N	Y	N	Y
OMMS	FT-6	FILTERRA (1)	N	Y	N	Y
OMMS	FT-7	FILTERRA (1)	N	Y	N	Y
OMMS	FT-8	FILTERRA (1)	N	Y	N	Y
OMMS	FT-9	FILTERRA (1)	N	Y	N	Y
OMMS	FT-10	FILTERRA (1)	N	Y	N	Y
OMMS	FT-11	FILTERRA (1)	N	Y	N	Y
OMMS	FT-12	FILTERRA (1)	N	Y	N	Y
OMMS	M.B. 1	F-6 (1)	N	Y	N	Y
OMMS	M.B. 2	F-6 (1)	N	Y	N	Y
OMMS	M.B. 3	M-6 (1)	N	Y	N	Y
OMMS	M.B. 4	F-6 (1)	N	Y	N	Y

**STORMWATER MANAGEMENT PRACTICES**

SITE	PERMEABLE PAVING N-2 (Y/N)	DISCONNECTION OF ROOFTOP RUNOFF N-1 (Y/N)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)	FILTERRA INLETS (Y/N)	BIORETENTION FACILITY F-6 (Y/N)	MICRO-BIORETENTION FACILITY M-6 (Y/N)	BIOSWALE M-9 (Y/N)	SUBMERGED GRAVEL WETLANDS FACILITY N-2 (Y/N)	DRYWELL M-5 (Y/N)
OMMS	NO	NO	NO	Y (12)	Y (3)	Y (1)	NO	NO	NO

**OPERATION AND MAINTENANCE SCHEDULE FOR FILTERRA SYSTEM**

ANNUAL MAINTENANCE CONSISTS OF A MAXIMUM OF (2) SCHEDULED VISITS. THE VISITS ARE SCHEDULED SEASONALLY: THE SPRING VISIT AIMS TO CLEAN UP AFTER WINTER LOADS INCLUDING SALTS AND SANDS. THE FALL VISIT HELPS THE SYSTEM BY REMOVING EXCESSIVE LEAF LITTER. EACH MAINTENANCE INSPECTION CONSISTS OF THE FOLLOWING TASKS:

- FILTERRA UNIT INSPECTION
- FOREIGN DEBRIS, SLT, MULCH AND TRASH REMOVAL
- FILTER MEDIA EVALUATION AND RECHARGE AS NECESSARY
- PLANT HEALTH EVALUATION AND PRUNING OR REPLACEMENT AS NECESSARY
- REPLACEMENT OF MULCH
- DISPOSAL OF ALL MAINTENANCE REFUSE ITEMS
- MAINTENANCE RECORDS UPDATED AND STORED

**OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS**

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALDORRE NATIONAL PARK  
COLUMBIA, MARYLAND 21046  
(410) 461-2895

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26

*Paul Gerard Cavanaugh*  
PAUL GERARD CAVANAUGH  
PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT

4/11/24  
DATE  
3/19/24  
DATE

PREPARED FOR  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
9020 MENDENHALL COURT  
SUITE 'C'  
COLUMBIA, MARYLAND 21045  
Attention: DANIEL LUBELEY  
410-313-8203

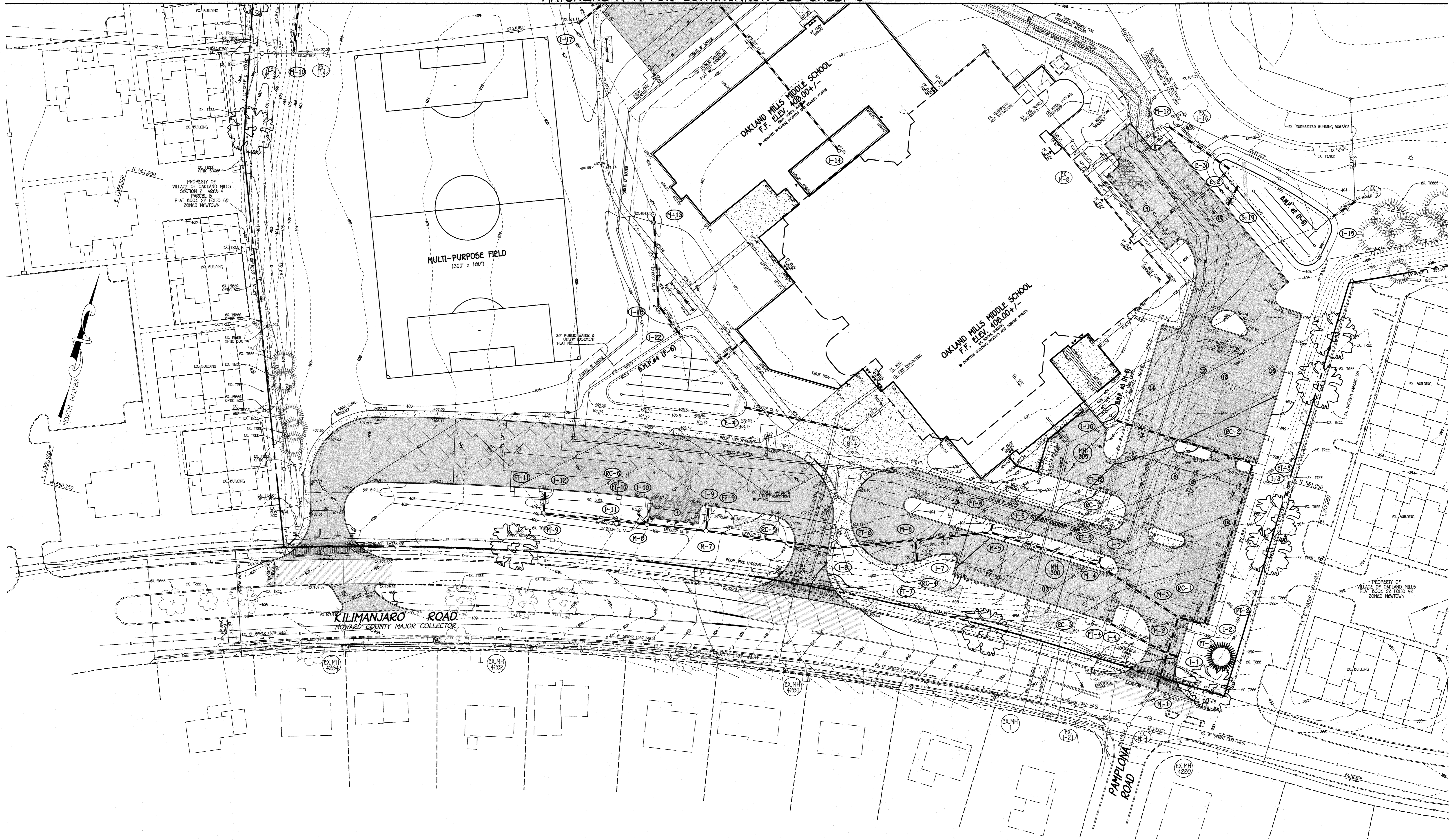
PROJECT	SECTION/AREA	PARCEL			
VILLAGE OF OAKLAND MILLS OAKLAND MILLS MIDDLE SCHOOL	2/5	336			
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
14644-14647 PB21, F.15&16	9	NEWTOWN	36	SIXTH	606603
WATER CODE	SEWER CODE				
---	---				

**ENVIRONMENTAL CONCEPT PLAN TITLE SHEET**

VILLAGE OF OAKLAND MILLS  
SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
BUILDING ADDITIONS  
9540 KILIMANJARO ROAD  
COLUMBIA, MARYLAND 21045

ZONED: NEWTOWN PARCEL NOS.: 336 TAX MAP NO.: 36 BLOCK NO.: 9  
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
SCALE: AS SHOWN DATE: MARCH 29, 2024  
SHEET 1 OF 9





**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLETT CITY, MARYLAND 21042  
 (410) 861-2899

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26.

*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 DATE: *April 1, 2024*

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: *4.1.24*

*[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: *3/19/24*

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 MENDENHALL COURT  
 SUITE 'C'  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBLELEY  
 410-313-8203

0' 40' 80' 120'  
 SCALE: 1" = 40'

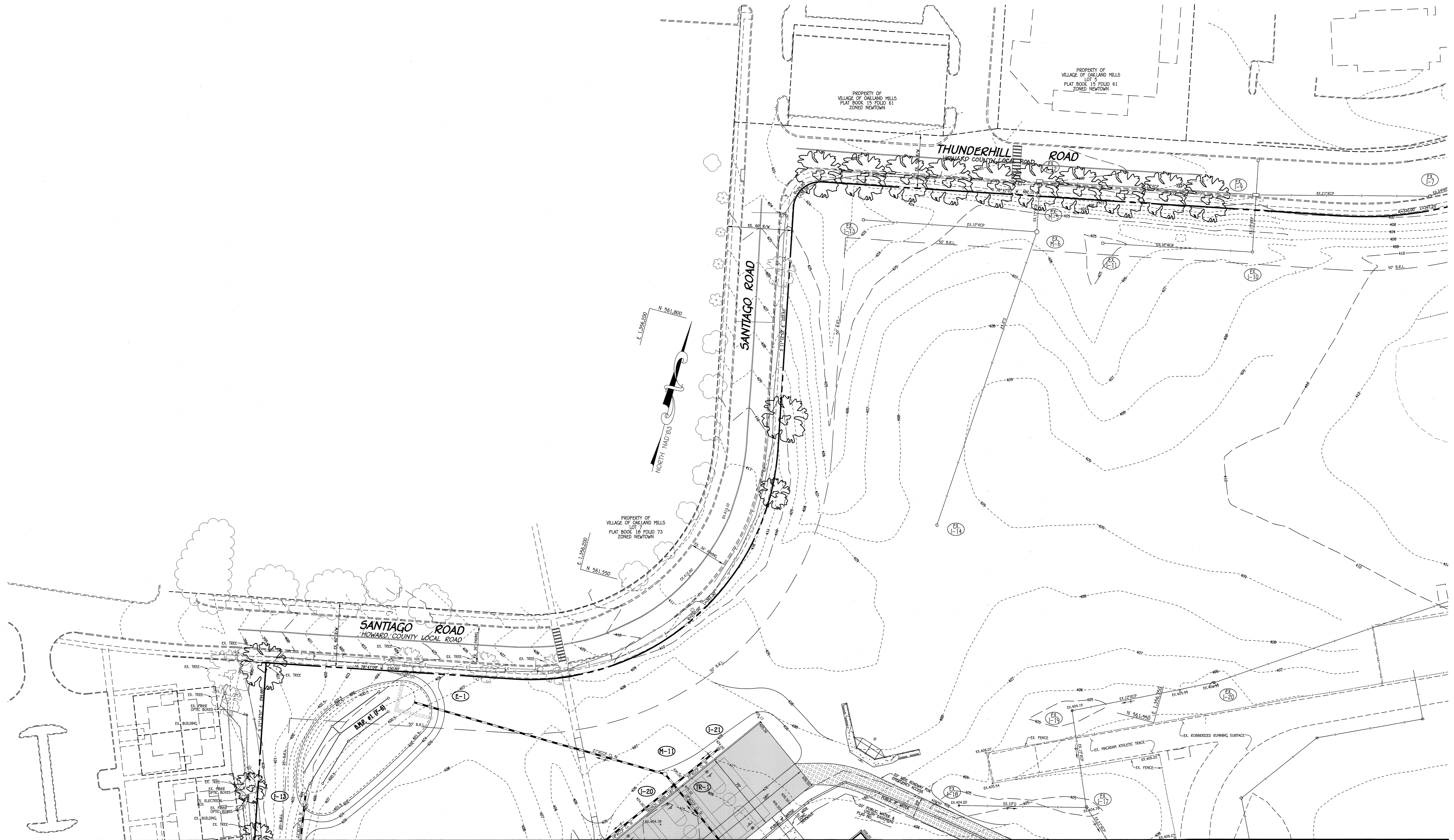
PROJECT	SECTION/AREA	PARCEL
VILLAGE OF OAKLAND MILLS	2/5	336
OAKLAND MILLS MIDDLE SCHOOL		
FLAT NOS. 14644-14647	BLOCK NO. 9	ZONE NEWTOWN
PB21, F.15&16	TAX MAP 36	ELEC. DIST. SIXTH
WATER CODE	SEWER CODE	CENSUS TR. 606603

**ENVIRONMENTAL CONCEPT PLAN**

VILLAGE OF OAKLAND MILLS  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILIMANJARO ROAD  
 COLUMBIA, MARYLAND 21045

SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40'  
 DATE: MARCH 29, 2024  
 SHEET 2 OF 9





MATCHLINE A-A FOR CONTINUATION SEE SHEET 2

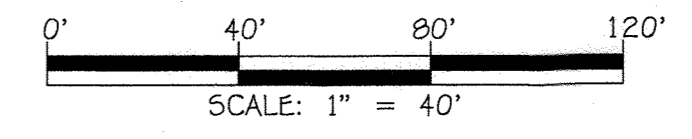
**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLETTT CITY, MARYLAND 21042  
 (410) 461-8995



"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26."  
*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 DATE: *April 1, 2024*

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*[Signature]*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: *4.11.24*  
*[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: *3/9/24*

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 MENDENHALL COURT  
 SUITE 'C'  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBELEY  
 410-313-8203



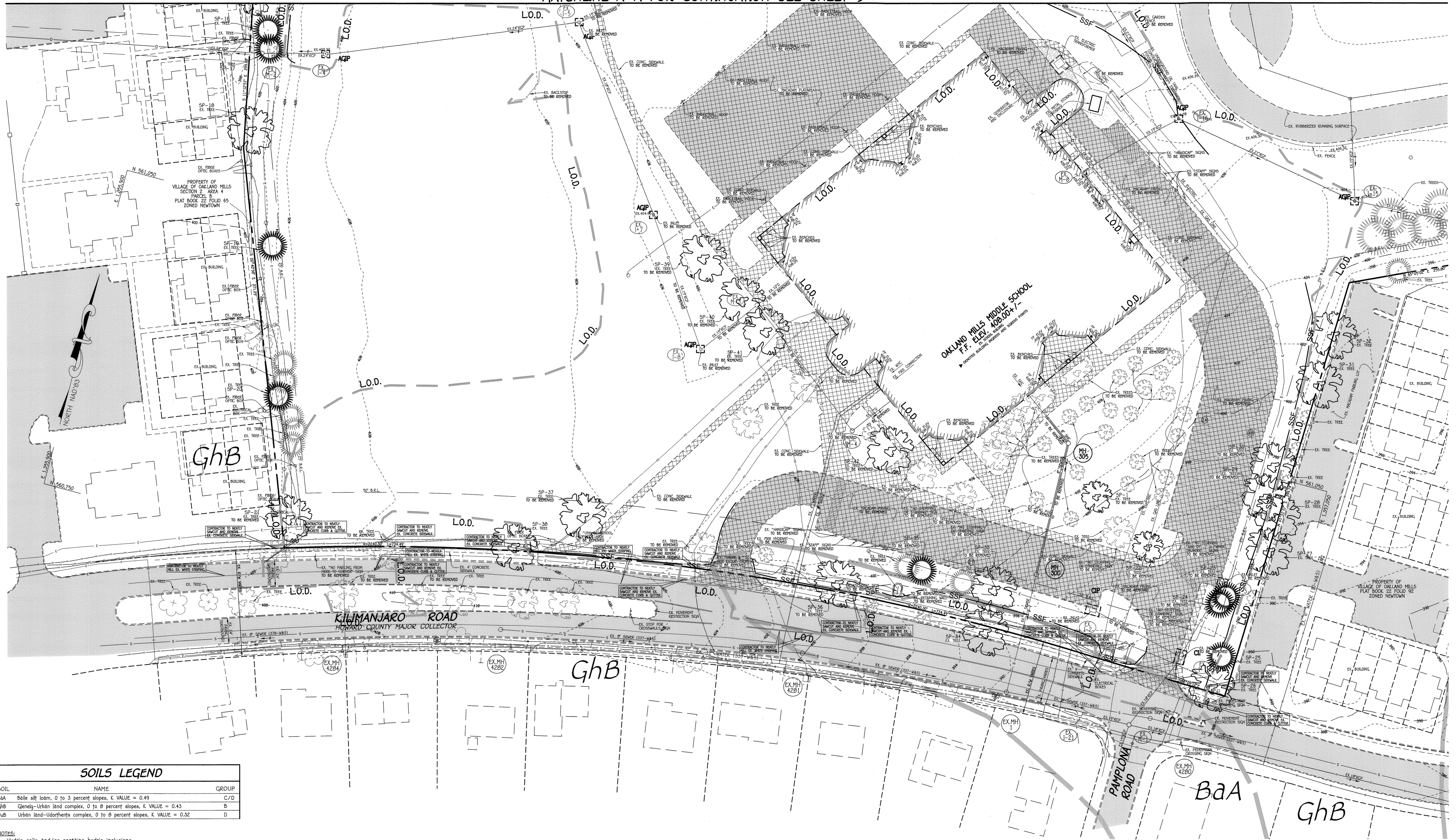
PROJECT	VILLAGE OF OAKLAND MILLS	SECTION/AREA	2/5	PARCEL	336
	OAKLAND MILLS MIDDLE SCHOOL				
FLAT NOS.	14644-14647	TAX MAP	36	ELEC. DIST.	SIXTH
PLAT NOS.	F.15&16	BLOCK NO.	9	CENSUS TR.	606603
ZONE	NEWTOWN	SEWER CODE			
WATER CODE					

**ENVIRONMENTAL CONCEPT PLAN**  
 VILLAGE OF OAKLAND MILLS  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILIMANJARO ROAD  
 COLUMBIA, MARYLAND 21045  
 ZONED: NEWTOWN PARCEL NOS.: 336 TAX MAP No.: 36 BLOCK No.: 9  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40' DATE: MARCH 29, 2024  
 SHEET 3 OF 9

I:\2024\20240318\Engineering\Drawings\ECP\ECP 02-03 ECP.dwg, ECP-3, 3/29/2024 1:04:16 PM, 1:1



MATCHLINE A-A FOR CONTINUATION SEE SHEET 5



SOILS LEGEND

SOIL	NAME	GROUP
BaA	Baile silt loam, 0 to 3 percent slopes, K VALUE = 0.49	C/D
GhB	Glenn-Urban land complex, 0 to 8 percent slopes, K VALUE = 0.43	B
Uub	Urban land-Udorthents complex, 0 to 8 percent slopes, K VALUE = 0.32	D

- NOTES:
- Hydric soils and/or contains hydric inclusions
  - May contain hydric inclusions
  - Generally only within 100-year floodplain areas

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELIZABETH CITY, MARYLAND 21042  
 (410) 461-2895



"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26."

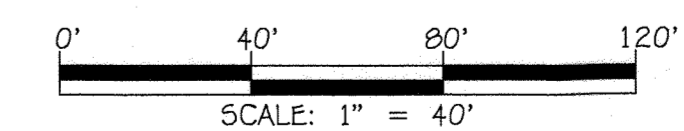
*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT

4.11.24  
 DATE  
 3/9/24  
 DATE

PREPARED FOR:  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 MENDENHALL COURT  
 SUITE 'C'  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBELEY  
 410-313-8203



PROJECT	VILLAGE OF OAKLAND MILLS	SECTION/AREA	2/5	PARCEL	336
PLAT NOS.	14644-14647	BLOCK NO.	9	ZONE	NEWTOWN
WATER CODE	---	SEWER CODE	---	TAX MAP	36
				ELEC. DIST.	SIXTH
				CENSUS TR.	606603

ENVIRONMENTAL CONCEPT PLAN  
 EXISTING CONDITIONS  
 PHASE ONE - SEDIMENT AND EROSION CONTROL  
 VILLAGE OF OAKLAND MILLS  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILIMANJARO ROAD  
 COLUMBIA, MARYLAND 21045  
 ZONED: NEWTOWN PARCEL NOS.: 336 TAX MAP NO.: 36 BLOCK NO.: 9  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40' DATE: MARCH 29, 2024  
 SHEET 4 OF 9

I:\2022\220780\Engineering\DWG\ECPC\ECPC-04-05 EXIST.DWG ECP-4, 3/29/2024 1:07:39 PM, 1:1



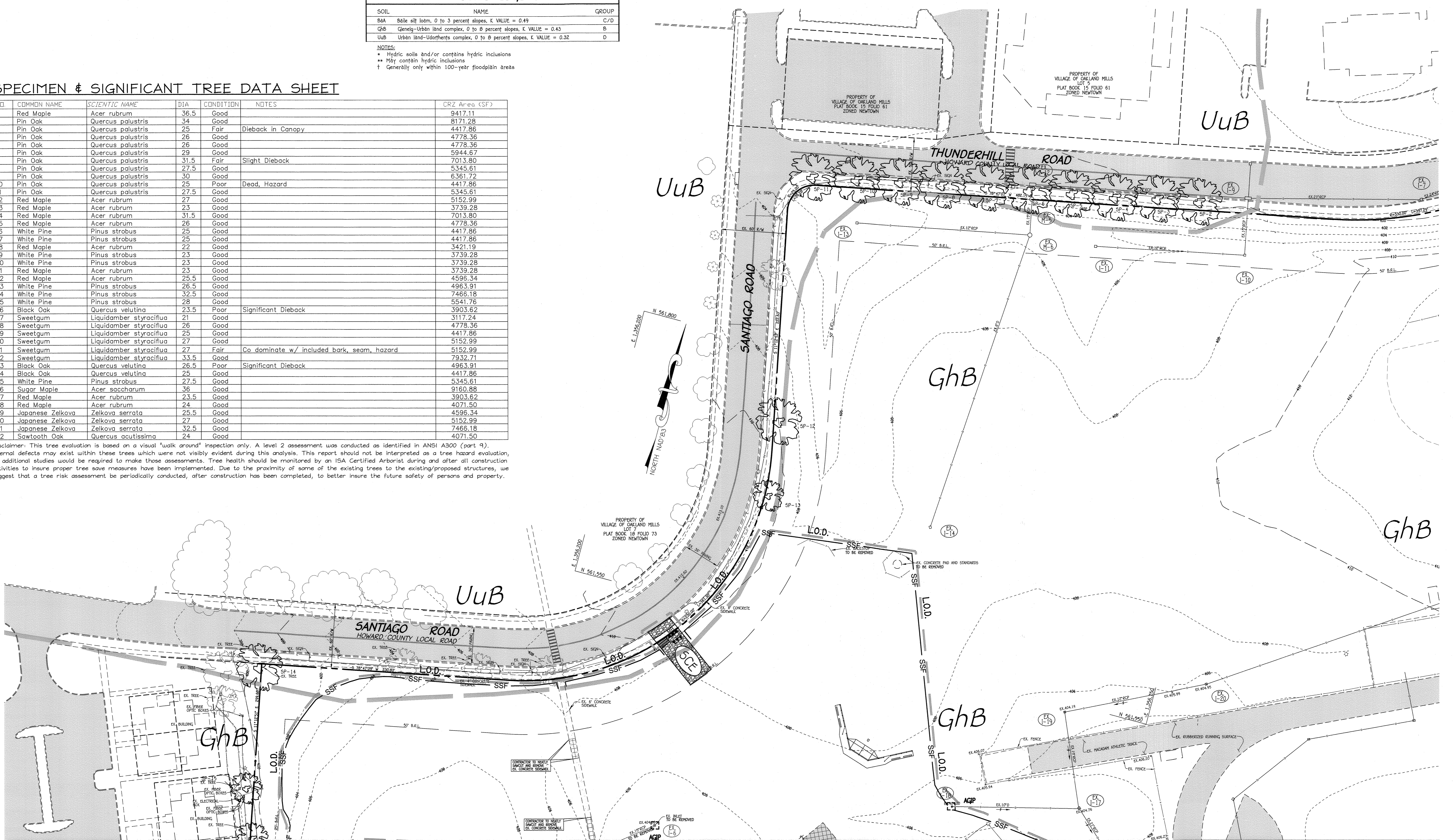
SOIL	NAME	GROUP
BAA	Baile silt loam, 0 to 3 percent slopes, K VALUE = 0.49	C/O
GhB	Glentely-Urban land complex, 0 to 8 percent slopes, K VALUE = 0.43	B
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes, K VALUE = 0.32	D

NOTES:  
 \* Hydric soils and/or contains hydric inclusions  
 \*\* May contain hydric inclusions  
 † Generally only within 100-year floodplain areas

**SPECIMEN & SIGNIFICANT TREE DATA SHEET**

NO.	COMMON NAME	SCIENTIFIC NAME	DIA	CONDITION	NOTES	CRZ Area (SF)
1	Red Maple	Acer rubrum	36.5	Good		9417.11
2	Pin Oak	Quercus palustris	34	Good		8171.28
3	Pin Oak	Quercus palustris	25	Fair	Dieback in Canopy	4417.86
4	Pin Oak	Quercus palustris	26	Good		4778.36
5	Pin Oak	Quercus palustris	26	Good		4778.36
6	Pin Oak	Quercus palustris	29	Good		5944.67
7	Pin Oak	Quercus palustris	31.5	Fair	Slight Dieback	7013.80
8	Pin Oak	Quercus palustris	27.5	Good		5345.61
9	Pin Oak	Quercus palustris	30	Good		6361.72
10	Pin Oak	Quercus palustris	25	Poor	Dead, Hazard	4417.86
11	Pin Oak	Quercus palustris	27.5	Good		5345.61
12	Red Maple	Acer rubrum	27	Good		5152.99
13	Red Maple	Acer rubrum	23	Good		3739.28
14	Red Maple	Acer rubrum	31.5	Good		7013.80
15	Red Maple	Acer rubrum	26	Good		4778.36
16	White Pine	Pinus strobus	25	Good		4417.86
17	White Pine	Pinus strobus	25	Good		4417.86
18	Red Maple	Acer rubrum	22	Good		3421.19
19	White Pine	Pinus strobus	23	Good		3739.28
20	White Pine	Pinus strobus	23	Good		3739.28
21	Red Maple	Acer rubrum	23	Good		3739.28
22	Red Maple	Acer rubrum	25.5	Good		4596.34
23	White Pine	Pinus strobus	26.5	Good		4963.91
24	White Pine	Pinus strobus	32.5	Good		7466.18
25	White Pine	Pinus strobus	28	Good		5541.76
26	Black Oak	Quercus velutina	23.5	Poor	Significant Dieback	3903.62
27	Sweetgum	Liquidamber styraciflua	21	Good		3117.24
28	Sweetgum	Liquidamber styraciflua	26	Good		4778.36
29	Sweetgum	Liquidamber styraciflua	25	Good		4417.86
30	Sweetgum	Liquidamber styraciflua	27	Good		5152.99
31	Sweetgum	Liquidamber styraciflua	27	Fair	Co dominate w/ included bark, seam, hazard	5152.99
32	Sweetgum	Liquidamber styraciflua	33.5	Good		7932.71
33	Black Oak	Quercus velutina	26.5	Poor	Significant Dieback	4963.91
34	Black Oak	Quercus velutina	25	Good		4417.86
35	White Pine	Pinus strobus	27.5	Good		5345.61
36	Sugar Maple	Acer saccharum	36	Good		9160.88
37	Red Maple	Acer rubrum	23.5	Good		3903.62
38	Red Maple	Acer rubrum	24	Good		4071.50
39	Japanese Zelkova	Zelkova serrata	25.5	Good		4596.34
40	Japanese Zelkova	Zelkova serrata	27	Good		5152.99
41	Japanese Zelkova	Zelkova serrata	32.5	Good		7466.18
42	Sawtooth Oak	Quercus acutissima	24	Good		4071.50

Disclaimer: This tree evaluation is based on a visual "walk around" inspection only. A level 2 assessment was conducted as identified in ANSI A300 (part 9). Internal defects may exist within these trees which were not visibly evident during this analysis. This report should not be interpreted as a tree hazard evaluation, as additional studies would be required to make those assessments. Tree health should be monitored by an ISA Certified Arborist during and after all construction activities to insure proper tree save measures have been implemented. Due to the proximity of some of the existing trees to the existing/proposed structures, we suggest that a tree risk assessment be periodically conducted, after construction has been completed, to better insure the future safety of persons and property.



MATCHLINE A-A FOR CONTINUATION SEE SHEET 4

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10276 BALTIMORE NATIONAL PIKE  
 GAITHERSBURG, MARYLAND 21042  
 (410) 461-2895

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26.

*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 DATE: *April 6, 2024*

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*John Polak*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: *4-11-24*

*Shirley*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: *3/28/24*

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 MENDENHALL COURT  
 SUITE 'C'  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBELEY  
 410-313-8203

0' 40' 80' 120'  
 SCALE: 1" = 40'

PROJECT	VILLAGE OF OAKLAND MILLS	SECTION/AREA	2/5	PARCEL	336
	OAKLAND MILLS MIDDLE SCHOOL				
PLAT NOS.	14644-14647	BLOCK NO.	9	ZONE	NEWTOWN
	PB21, F.15&16			TAX MAP	36
				ELEC. DIST.	SIXTH
				CENSUS TR.	606603
WATER CODE	----	SEWER CODE	----		

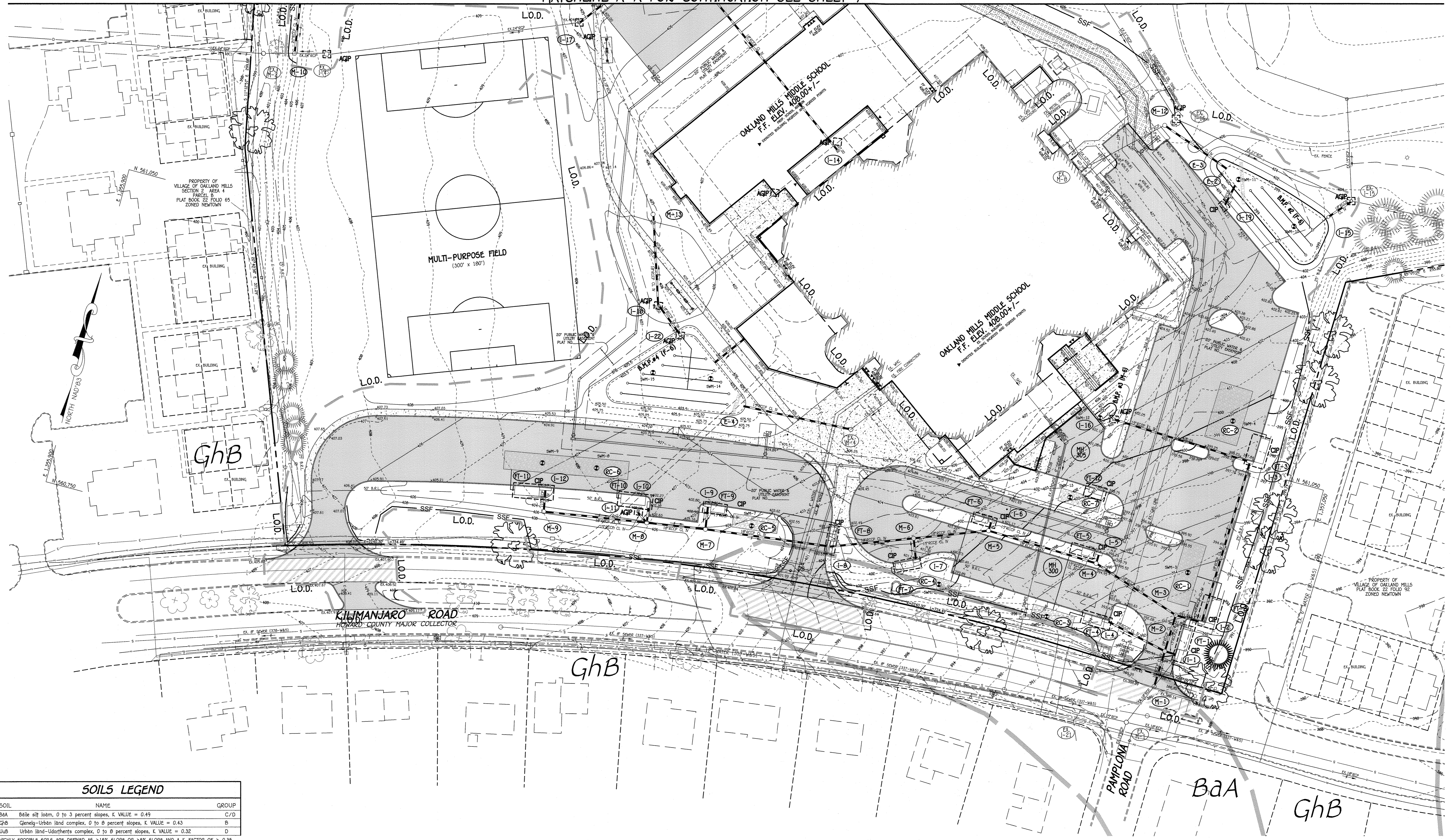
ENVIRONMENTAL CONCEPT PLAN  
 EXISTING CONDITIONS  
 PHASE ONE - SEDIMENT AND EROSION CONTROL

VILLAGE OF OAKLAND MILLS  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILMANJARO ROAD  
 COLUMBIA, MARYLAND 21045

ZONED: NEWTOWN PARCEL Nos.: 336 TAX MAP No.: 36 BLOCK No.: 9  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40' DATE: MARCH 29, 2024  
 SHEET 5 OF 9

I:\2022\22078\Engineering\DWG\ECP\CP 04-05 EXIST.dwg, ECP-5, 3/29/2024, 11:41:52 PM, 1:1



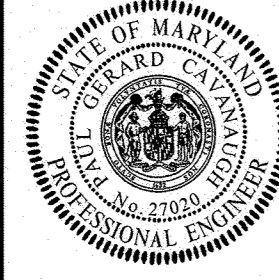


**SOILS LEGEND**

SOIL	NAME	GROUP
BaA	Baile silt loam, 0 to 3 percent slopes, K VALUE = 0.49	C/D
GhB	Glensel-Urban land complex, 0 to 8 percent slopes, K VALUE = 0.43	B
UuB	Urban land-Udortherms complex, 0 to 8 percent slopes, K VALUE = 0.32	D

HIGHLY ERODIBLE SOILS ARE DEFINED AS >15% SLOPE OR >5% SLOPE AND A K FACTOR OF > 0.35

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENAL SQUARE OFFICE, PARK - 10270 BALTIMORE NATIONAL PIKE  
 ELLESMORE CITY, MARYLAND 21045  
 (410) 461-2995



"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26."

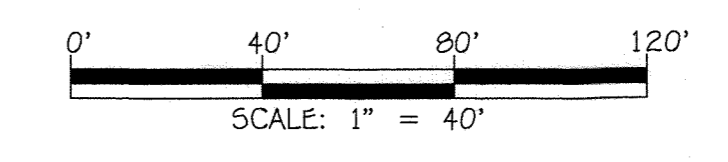
*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 DATE: April 6, 2024

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Daniel Lubley*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT

4.11.24  
 DATE  
 5/15/24  
 DATE

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 MENDENHALL COURT  
 SUITE 'C'  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBELEY  
 410-313-8203



PROJECT	SECTION/AREA	PARCEL
VILLAGE OF OAKLAND MILLS OAKLAND MILLS MIDDLE SCHOOL	2/5	336
PLAT NOS. 14644-14647 PB21, F.15&16	BLOCK NO. 9	ZONE NEWTOWN
TAX MAP 36	ELEC. DIST. SIXTH	CENSUS TR. 606603
WATER CODE	SEWER CODE	

**ENVIRONMENTAL CONCEPT PLAN  
 PROPOSED CONDITIONS  
 PHASE TWO - SEDIMENT AND EROSION CONTROL**

**VILLAGE OF OAKLAND MILLS**  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILIMANJARO ROAD  
 COLUMBIA, MARYLAND 21045

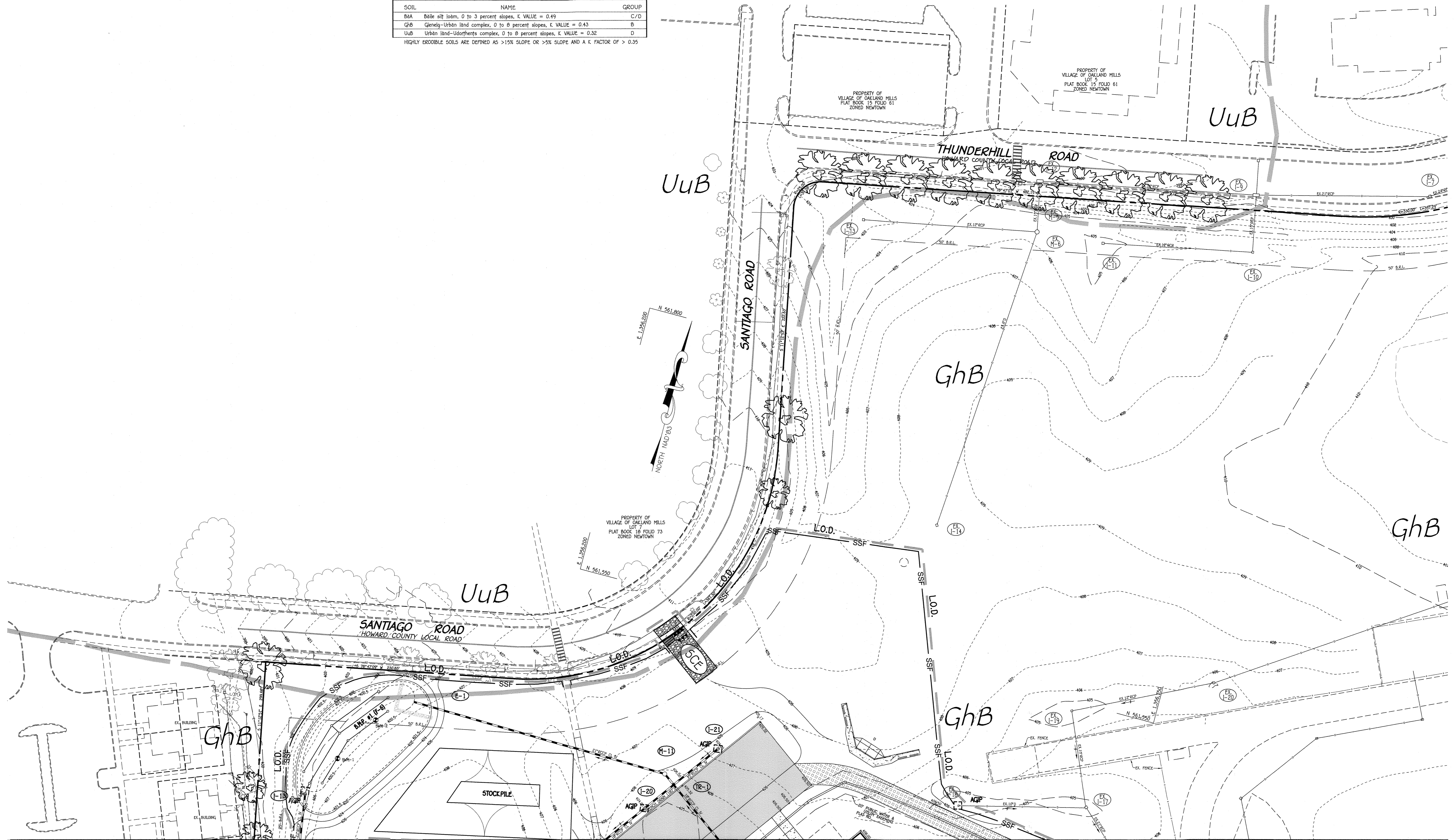
ZONED: NEWTOWN PARCEL NOS: 336 TAX MAP No: 36 BLOCK No: 9  
 SIXTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40' DATE: MARCH 29, 2024  
 SHEET 6 OF 9

I:\2024\22078\Engineering\dwg\ECF\ECF 06-07 SEC.dwg, ECF-6, 3/29/2024 1:23:18 PM, 1:1



SOILS LEGEND		
SOIL	NAME	GROUP
B&A	B&A silt loam, 0 to 3 percent slopes, K VALUE = 0.49	C/D
GhB	Glenelg-Urbán land complex, 0 to 8 percent slopes, K VALUE = 0.43	B
UuB	Urbán land-Udorthents complex, 0 to 8 percent slopes, K VALUE = 0.32	D

HIGHLY ERODIBLE SOILS ARE DEFINED AS >15% SLOPE OR >5% SLOPE AND A K FACTOR OF > 0.35



MATCHLINE A-A FOR CONTINUATION SEE SHEET 6

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLSWORTH CITY, MARYLAND 21042  
 (410) 461-2895

PROJECT #22078 DRAWN: DAM CHECKED: P.G.C.

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26.

*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 DATE: *April 1, 2024*

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Ch. Ch. Ch.*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: *4/1/24*

*[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: *3/9/24*

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 MENDENHALL COURT  
 SUITE 'C'  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBELEY  
 410-313-8203

SCALE: 1" = 40'

PROJECT	SECTION/AREA	PARCEL
VILLAGE OF OAKLAND MILLS	2/5	336
OAKLAND MILLS MIDDLE SCHOOL		
PLAT NOS.	BLOCK NO.	ZONE
14644-14647	9	NEWTOWN
PB21, F.15&16		
TAX MAP	ELEC. DIST.	CENSUS TR.
36	SIXTH	606603
WATER CODE	SEWER CODE	

ENVIRONMENTAL CONCEPT PLAN  
 PROPOSED CONDITIONS  
 PHASE TWO - SEDIMENT AND EROSION CONTROL

VILLAGE OF OAKLAND MILLS  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILIMANJARO ROAD  
 COLUMBIA, MARYLAND 21045

ZONED: NEWTOWN PARCEL NOS.: 336 TAX MAP No.: 36 BLOCK No.: 9  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40' DATE: MARCH 29, 2024  
 SHEET 7 OF 9

I:\2022\22078\Engineering\Drawings\ECP\EC2 06-07 SEC.dwg, ECP-7, 3/29/2024 1:24:16 PM, 1:1





LEGEND - SEDIMENT CONTROLS	
SYMBOL	DESCRIPTION
	BIO RETENTION FACILITY DRAINAGE LINES
	FILTERRA DRAINAGE LINES

SOILS LEGEND		
SOIL	NAME	GROUP
BaA	Baile silt loam, 0 to 3 percent slopes, K VALUE = 0.49	C/D
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes, K VALUE = 0.43	B
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes, K VALUE = 0.32	D

HIGHLY ERODIBLE SOILS ARE DEFINED AS >15% SLOPE OR >5% SLOPE AND A K FACTOR OF > 0.35

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTENAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21046  
 (410) 461-2995



"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26."

*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 DATE: *April 1, 2024*

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*[Signature]*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: *4/1/24*

*[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: *3/1/24*

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 HENDENHALL COURT  
 SUITE "C"  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBELEY  
 410-313-8203

PROJECT		SECTION/AREA		PARCEL	
VILLAGE OF OAKLAND MILLS		2/5		336	
OAKLAND MILLS MIDDLE SCHOOL					
PLAT NOS.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
14644-14647	9	NEWTOWN	36	SIXTH	606603
PB21, F.15&16					
WATER CODE	SEWER CODE				

ENVIRONMENTAL CONCEPT PLAN  
 STORMWATER MANAGEMENT DRAINAGE AREA MAP

VILLAGE OF OAKLAND MILLS  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILIMANJARO ROAD  
 COLUMBIA, MARYLAND 21045

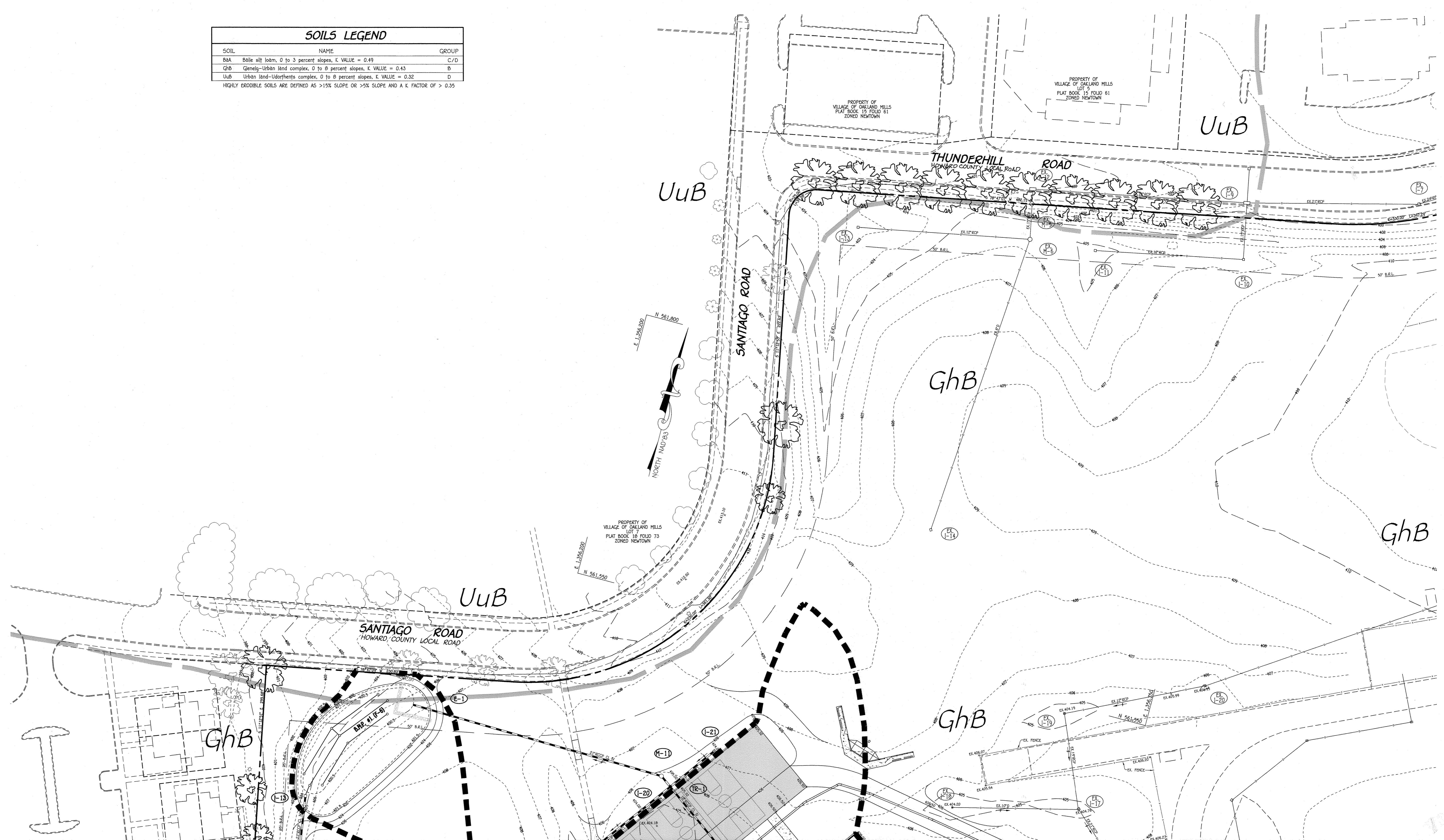
ZONED: NEWTOWN PARCEL Nos.: 336 TAX MAP No.: 36 BLOCK No.: 9  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40' DATE: MARCH 29, 2024  
 SHEET 8 OF 9

I:\2022\220789\Engineering\DWG\ECF\ECF 08-09 DA MAP.dwg, DA MAP-8, 3/29/2024 1:27:00 PM, 1:1



SOILS LEGEND		
SOIL	NAME	GROUP
B&A	B&A silt loam, 0 to 3 percent slopes, K VALUE = 0.49	C/D
GhB	Gh&B Urban land complex, 0 to 8 percent slopes, K VALUE = 0.43	B
UuB	Urban land-Udorthents complex, 0 to 8 percent slopes, K VALUE = 0.32	D

HIGHLY ERODIBLE SOILS ARE DEFINED AS >15% SLOPE OR >5% SLOPE AND A K FACTOR OF > 0.35



MATCHLINE A-A FOR CONTINUATION SEE SHEET 8

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 (410) 461-2995

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY 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. 27020, EXPIRATION DATE: 01/25/26.

*Paul Gerard Cavanaugh*  
 PAUL GERARD CAVANAUGH  
 PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Daniel Lubeley*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT

DATE: 4/11/24  
 DATE: 3/14/24

PREPARED FOR  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 9020 MENDENHALL COURT  
 SUITE 'C'  
 COLUMBIA, MARYLAND 21045  
 Attention: DANIEL LUBELEY  
 410-313-8203

0' 40' 80' 120'	
SCALE: 1" = 40'	
PROJECT	SECTION/AREA
VILLAGE OF OAKLAND MILLS	2/5
OAKLAND MILLS MIDDLE SCHOOL	336
PLAT NOS.	BLOCK NO.
14644-14647	9
PB21, F.15&16	NEWTOWN
WATER CODE	SEWER CODE
---	---

ENVIRONMENTAL CONCEPT PLAN  
 STORMWATER MANAGEMENT DRAINAGE AREA MAP

VILLAGE OF OAKLAND MILLS  
 SECTION 2, AREA 5, OPEN SPACE LOT 1  
**OAKLAND MILLS MIDDLE SCHOOL**  
 BUILDING ADDITIONS  
 9540 KILIMANJARO ROAD  
 COLUMBIA, MARYLAND 21045

ZONED: NEWTOWN PARCEL Nos.: 336 TAX MAP No.: 36 BLOCK No.: 9  
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND  
 SCALE: 1" = 40' DATE: MARCH 29, 2024  
 SHEET 9 OF 9

I:\2022\22078\Engineering\DWG\ECPC\ECPC 08-09 DA MAP.dwg, DA MAP-9, 3/29/2024 12:38:12 PM, 1:1