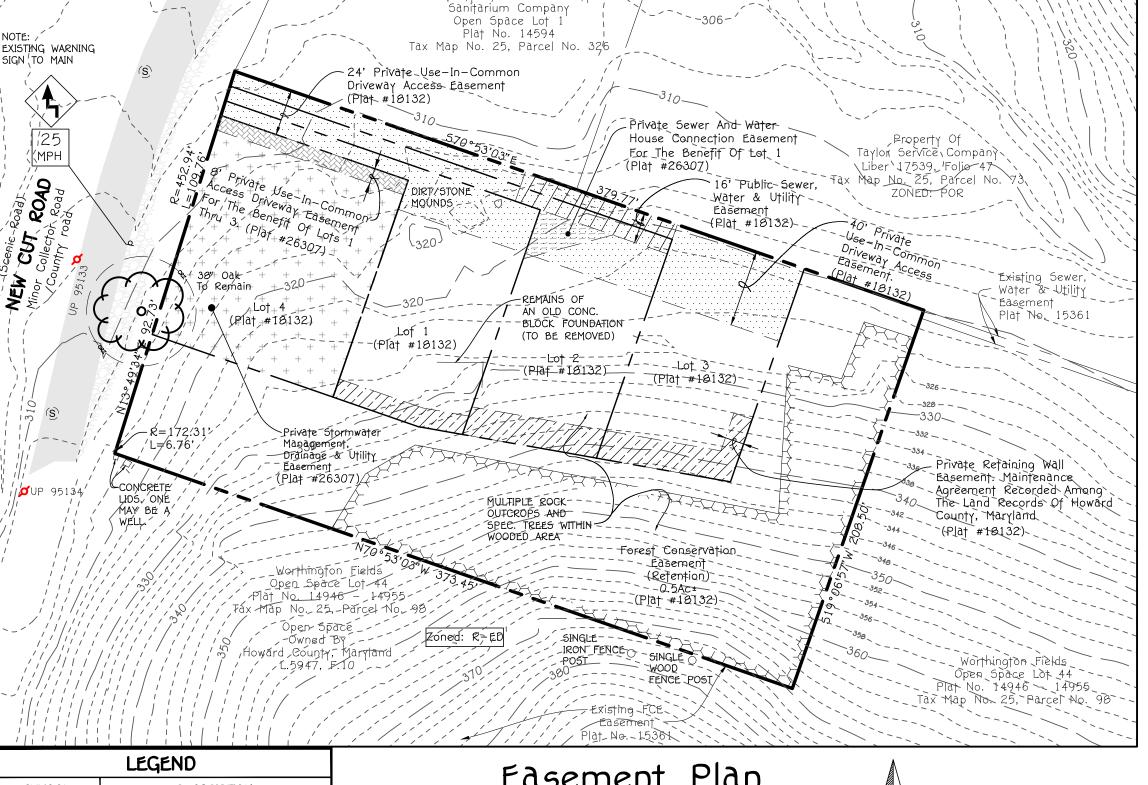
	SHEET INDEX
SHEET NO.	
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SEDIMENT & EROSION CONTROL PLAN
4-5	SEDIMENT & EROSION CONTROL NOTES & DETAILS
6	LANDSCAPE PLAN, NOTES & DETAILS
7	STORMWATER MANAGEMENT PLANS, NOTES & DETAILS
8	STORMWATER MANAGEMENT DETAILS & BORING LOGS
9	STORM DRAIN PROFILES
10	50IL5 & SWM DRAINAGE AREA MAP
11	RETAINING WALL PLANS, NOTES & DETAILS
12	RETAINING WALL LOCATION PLAN
13	RETAINING WALL SPECIFICATIONS & NOTES
14-15	RETAINING WALL TYPICAL DETAILS
16	RETAINING WALL ELEVATION

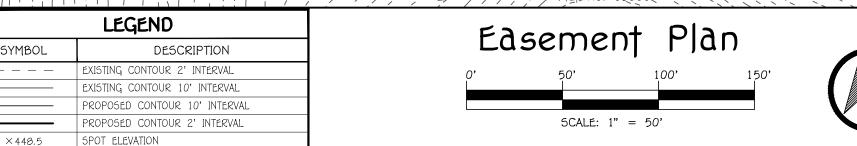
ROA	D CLASSIFICATION CHART	
ROAD NAME	CLASSIFICATION	PAVING WIDTH
PRIVATE DRIVE	PRIVATE USE-IN-COMMON DRIVE	VARIE5

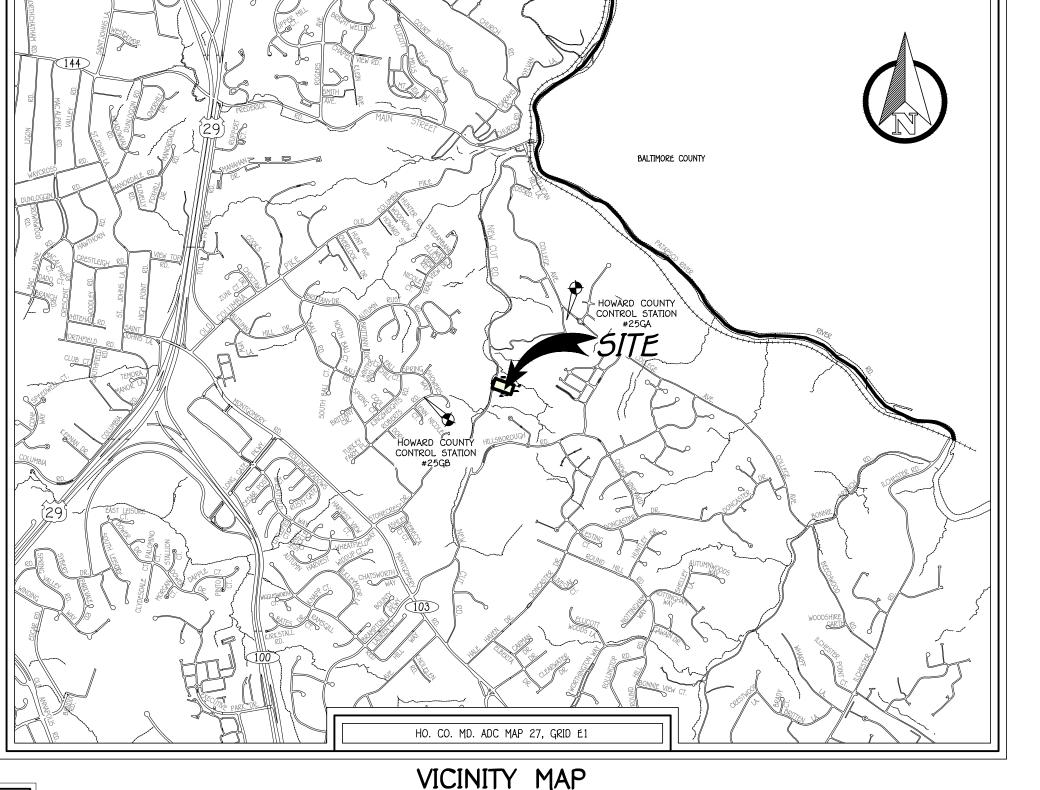
SITE DEVELOPMENT PLAN JOURNEY'S END

LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 ZONED: R-ED TAX MAP No. 25 GRID No. 20

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND







SCALE: 1" = 2,000"

		STORN	1WATER MANAGEN	MENT PR	RACTICES		
AREA ID		DISCONNECTION OF ROOFTOP RUNOFF N-1 (Y/N)	DISCONNECTION OF NON-ROOFTOP RUNOFF N-2 (Y/N)	FILTERRA INLETS (Y/N)	MICRO BIO-RETENTION M-6 (Y/N)	BIO-RETENTION F-6 (Y/N)	DRYWELL M-5 (Y/N)
LOT 1	NO	NO	NO	NO	NO	NO	YES - 2
LOT 2	NO	NO	NO	NO	NO	NO	YES - 2
LOT 3	NO	NO	NO	NO	NO	NO	YE5 - 2
0.5. LOT 4	NO	NO	NO	NO	NO	YES - 1	NO

APPROVED PLANNING BOARD of HOWARD COUNTY PB CASE No.:

STORMWATER MANAGEMENT INFORMATION								
Lot/Parcel No.	Facility Name & Number	Practice Type (Quantity)	Public	Private	HOA Maintained	Misc.		
Lo† 1	DRY WELL #1 & #2	M-5 - (2)		Х	Χ	Standard Dry Well		
Lo† 2	DRY WELL #3 & #4	M-5 - (2)		X	Χ	Standard Dry Well		
Lo† 3	DRY WELL #5 & #6	M-5 - (2)		Χ	Χ	Standard Dry Well		

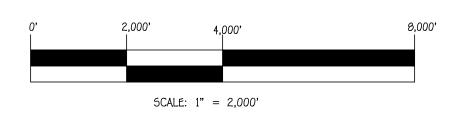
STORMWATER MANAGEMENT INFORMATION								
Lot/Parcel No.	Facility Name & Number	Practice Type (Quantity)	Public	Privațe	HOA Maintained	Misc.		
0.5. LOT 4	ESD #1	M-6 - (1)		X	χ	Micro Bio-Retention		

GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5)
- 3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 4. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 10-06-13 ZONING REGULATIONS PER COUNCIL BILL NO. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
- 5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 25GA AND NO. 25GB Station No. 25GA North 579,483.667 East 1,371,171.838 ELEV: 381.902 Station No. 25GB North 577,875.934 East 1,368,199.62 ELEV: 410.934
- 6. SUBJECT PROPERTY ZONED R-ED.
- 7. SITE ANALYSIS DATA CHART: a. SUBDIVISION NAME: JOURNEY'S END
- b. TAX MAP NO.: 25
- c. PARCELS NO.: 72 d. ZONING: R-ED e. FLECTION DISTRICT: 2nd
- TOTAL AREA OF SITE: 1.824 ACRES . NUMBER OF BUILDABLE LOTS: 3
- NUMBER OF OPEN SPACE LOTS: :
- . AREA OF BUILDABLE LOTS: 0.701 AC.: AREA OF OPEN SPACE LOTS: 1.123 AC. ±
- AREA OF PUBLIC ROADWAY TO BE DEDICATED: 0.00 ACRES o. PREVIOUS FILE NUMBERS: F-05-134 (Plat No. 18132), ECP-20-053, PLAT OF REVISION (Plat No. 26307)
- p. AREA OF FLOODPLAIN: 0.00 AC.± . AREA OF 25% OR GREATER SLOPES: 0.38 AC. ± (ON-SITE)
- LIMIT OF DISTURBANCE: 1.00 AC. ± s. PROPOSED SITE USE: SINGLE FAMILY DWELLINGS
- u. THE MODERATE INCOME HOUSING UNIT (MIHU) REQUIREMENT PER R-ED ZONING IS 10% OF THE TOTAL NUMBER OF LOTS. THE REQUIREMENT OF 0.10 x 3 LOTS = 0.3 UNITS WHICH WILL BE PAID BY A FEE-IN-LIEU AT THE TIME OF BUILDING PERMIT APPLICATION. v. RECORDING DATA = L. 09914 F. 00701; L. 5051 F. 634; L. 09855 F. 00011; PLAT 18132
- 6. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180
- 9. SINCE THIS IS A MINOR SUBDIVISION, A TRAFFIC STUDY IS NOT REQUIRED PER PLAT #10132. 10. NO CEMETERIES EXISTS ON THIS SITE BASED ON A VISUAL SITE VISIT AND AN EXAMINATION OF THE HOWARD COUNTY CEMETERY INVENTORY MAP.
- 11. EXISTING UTILITIES ARE BASED ON, WATER IS PUBLIC (CONTRACT NO. 14-3053-D), SEWER IS PUBLIC (CONTRACT NO. 10-3054-D & 14-3055-D) 12. FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MARCH 9, 2004. IN CONJUNCTION WITH PLAT 18132 (F-05-134).

- 16. ON-SITE STORMWATER MANAGEMENT FOR WATER QUALITY VOLUME AND GROUNDWATER RECHARGE VOLUME ARE BEING PROVIDED IN A BIO-RETENTION FACILITY PER CRITERIA OF THE MDE. STORMWATER MANAGEMENT DESIGN MANUAL. THIS SUBDIVISION IS REQUIRED TO PROVIDE MANAGEMENT FOR THE 100-YEAR AND 2016 ELLICOTT
- 17. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2010 MDE, CHAPTER 5 REGULATIONS AND THE LATEST HOWARD COUNTY DESIGN MANUAL, VOL. I, CHAPTER 5 ADOPTED ON OR AROUND MAY 4, 2010. GROUNDWATER RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A STONE RESERVOIR LOCATED BENEATH THE MICRO BIO-RETENTION FACILITY. THE REQUIRED ESD VOLUMES WILL BE PROVIDED BY ON LOT DRYWELLS AND A MICRO BIO-RETENTION FACILITY. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES FOR THIS SITE WILL BE PROVIDED BY THE MICRO BIO-RETENTION FACILITY LOCATED ON OPEN SPACE LOT 4. AN ADDITIONAL 10% OF QUANTITY MANAGEMENT IS REQUIRED IN THE REDUCTION OF THIS DEVELOPED PEAK FLOWS RATES. AN DISTURBANCE TO CREATE THE POND AND ASSOCIATED PIPING IS CONSIDERED AN ESSENTIAL DISTURBANCE IN ACCORDANCE WITH CB80-2016 & SECTION 16.116(C)1 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS. THIS MICRO BIO-RETENTION FACILITY WILL BE PROVIDING ROUTING OF THE 100-YEAR STORM AND THE 2016 ELLICOTT CITY FLOOD STORM. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A.
- 18. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT
- 19. NO CEMETERIES OR HISTORIC STRUCTURES EXIST WITHIN THIS SUBDIVISION.
- 20. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE.

 - a) THE R1-1 (STOP) SIGNS AND THE STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
 b) THE TRAFFIC CONTROL DEVICE LOCATIONS (SIGNS & PAVING MARKINGS) SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION (410-313-5752) PRIOR TO THE INSTALLATION OF ANY OF THESE TRAFFIC CONTROL DEVICES.
 - c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC d) 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.
- 22. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAM(S) OR THEIR REQUIRED BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN OR THEIR EXTENDED GREEN NEIGHBORHOOD BUFFERS UNLESS THE ACTIVITIES ARE CONSIDERED NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING. OR AN ALTERNATIVE COMPLIANCE IS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.
- 23. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING TREES (11 SHADE, 15 EVERGREENS, AND 5 SHRUBS) SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE
- 24. A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE FOR THE USE-IN-COMMON DRIVEWAY. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- 25. DRIVEWAY (5) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM)
 - B) SURFACE SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1 1/2" MIN.) C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 FOOT TURNING RADIUS
 - E) DRAINAGE ELEMENTS CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
 - F) STRUCTURE CLEARANCES MINIMUM 12 FEET G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- 26. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE TO BE PROVIDED AT THE JUNCTION OF FLAG/PIPESTEM AND THE ROAD RIGHT OF WAY AND NOT ONTO THE FLAG/PIPESTEM DRIVEWAY.
- 27. THIS PLAN COMPLIED WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION THROUGH ON-SITE FOREST RETENTION (0.5 AC. = 25%) F-05-134, PLAT 18132.
- 26. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, PLANT MATERIALS, BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY,
- 29. PROPERTY IS SUBJECT TO TAYLOR PROPERTIES COMMUNITY ASSOCIATION REQUIREMENTS INCLUDING THE HOA COVENANTS (PLAT No. 10132).
- 30. LOTS SHOWN ARE SUBJECT TO THE ELLICOTT CITY WATER COMPANY ANNUAL ASSESSMENTS FOR 33-YEARS FOR WATER AND SEWER. 31. PROPERTY IS SUBJECT TO AN OVERALL LOT EASEMENT FOR COMMUNICATIONS CABLE BY ELLICOTT CITY CABLE COMPANY (PLAT No. 10132).
- 32. THIS SITE DEVELOPMENT PLAN FOR LOTS 1, 2 & 3 MUST BE APPROVED BY THE PLANNING BOARD IN ACCORDANCE WITH SECTION 107.O.G.
- 33. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR
- 34. NEW CUT ROAD IS A SCENIC ROAD AND THE SCENIC ROAD REGULATIONS WERE ADDRESSED UNDER F-05-134.
- 35. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- 36. SHC ELEVATIONS ARE LOCATED AT THE PROPERTY LINE.
- 37. FOR DRIVEWAY ENTRANCE DETAILS, REFER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD DETAIL R-6.06.
- 38. THE PREVIOUS INFRASTRUCTURE SHOWN ON THE SUPPORT PLAN FOR F-05-134 HAS NOT BEEN CONSTRUCTED. A REVISION PLAT AND REDLINE TO THE F-05-134 PLAT AND SUPPORT PLAN WILL NOTE THAT THIS SDP-22-036 IS TO REPLACE THE PREVIOUS INFRASTRUCTURE PLAN.
- 39. THE DEVELOPER'S AGREEMENT FILED WITH F-05-134 HAS BEEN TRANSFERRED TO THIS SDP PLAN SUBMISSION (SDP-22-036). 40. ON DECEMBER 7, 2023, THE PLANNING BOARD APPROVED THE PLANS AS SUBMITTED WITH THE MODIFICATION THAT EXISTING VEGETATION BE PRESERVED WHERE
- POSSIBLE. FURTHER, THE APPLICANT SHOULD WORK WITH THE DEPARTMENT OF PLANNING AND ZONING TO EXPLORE PROVIDING A MORE ROBUST EVERGREEN PLANTING TO BUFFER THE VIEWS TO LOT 1 FROM NEW CUT ROAD WITH ADDITIONAL EVERGREENS BOTH ALONG THE PUBLIC ROAD FRONTAGE AND BETWEEN LOT 1
- AND OPEN SPACE LOT 4. AN ADDITIONAL 12 EVERGREENS, 2 SHADE TREES AND SURETY HAVE BEEN PROVIDED TO MEET THIS PB CONDITION OF APPROVAL. 41. A REQUEST FOR NECESSARY ENVIRONMENTAL DISTURBANCE WAS APPROVED ON MARCH 4, 2024. THE APPROVAL ALLOWS STREAMBANK BUFFER DISTURBANCES AS ESSENTIAL OR NECESSARY DISTURBANCES IN ACCORDANCE WITH SECTION 16.116(c) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS AND MITIGATION METHODS:
 - 1. THE STORMWATER MANAGEMENT IMPROVEMENT PROJECT SHALL ONLY DISTURB THOSE ENVIRONMENTAL AREAS AS STATED IN THE REQUEST AND AS DELINEATED ON THE PLAN EXHIBITS. ANY DISTURBANCES TO REGULATED ENIRONMENTAL FEATURES BEYOND THIS REQUEST ARE NOT PERMITTED UNLESS THE APPLICANT SUBMITS A FORMAL REQUEST TO THE DEPARTMENT OF PLANNING AND ZONING IN ACCORDANCE WITH SECTION 16.116(c) 2. THE APPLICANT WILL BE REQUIRED TO OBTAIN ALL NECESSARY APPROVALS AND AUTHORIZATIONS BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) AND THE US ARMY CORPS OF ENGINEERS (USACE) FOR ACTIVITIES IN REGULATED AREAS PRIOR TO BEGINNING CONSTRUCTION. 3. THE DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLANS PROVIDED WITH 5DP-22-036.



STRE	ET ADDRESS CHART
LOT No.	STREET ADDRESS
1	4253 NEW CUT ROAD
2	4251 NEW CUT ROAD
3	4249 NEW CUT ROAD

ISHER, COLLINS & CARTER, INC ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

EXISTING STORM DRAIN

EXISTING WATER LINE

EXISTING SEWER LINE

PROPOSED PAVING/PATH

PROPOSED SIDEWALKS

LIMIT OF DISTURBANCE

EXISTING TREE LINE

` PROPOSED TREE LINE

DRYWELL (M-5)-TYPICAL

SOIL LINES AND TYPES

BIO RETENTION FACILITY

(F-6) OR (M-6)

AS NOTED

PROPOSED ROOF LEADER

CRITICAL ROOT ZONE

SUPER SILT FENCE

SWM EASEMENT

15%-24.99% STEEP SLOPES

25% AND GREATER STEEP SLOPES

FOREST CONSERVATION EASEMENT (RETENTION)

FOREST CONSERVATION EASEMENT FENCING

EXISTING WETLANDS & WETLAND BUFFER

DENOTES EXISTING TREES TO BE REMOVED

DENOTES EXISTING TREES TO REMAIN

STABILIZED CONSTRUCTION ENTRANCE

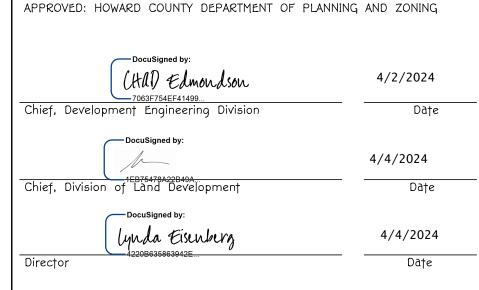
PROPOSED SEWER

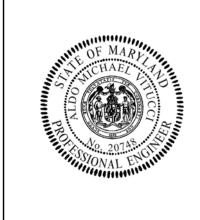
PROPOSED WATER

----- 55F ---- | SUPER SILT FENCE

— SF — | SILT FENCE

PROPOSED STORM DRAIN PIPE





Aldo M. Vitucci, P.E.	4/1/2024
Aldo M. Vitucci, P.E.	Dațe
	t these documents were prepared or approved by me, and that I am he laws of the State of Maryland, License No. <u>20740,</u>

OWNER
Historic Ellicott Properties, Inc.
c/o Taylor Property Group
8 Park Center Ct.
Suite 200
Owings Mills, Maryland 21117-5616

Tel: 410-465-3500

DEVELOPER
Autumn Development Corporation c/o Taylor Property Group 8 Park Center Ct.
Suițe 200 Owings Mills, Maryland 21117—5616 Tel: 410—465—3500

ĺ										
	NO.			RE	VISION					DATE
	SUBC	NOISION				SECTIO	N/AREA	LC	OT No.	
		IOURNEY'S	END			N/A		LO	TS 1 THRU	3
İ	PLAT	NO.	BLOCK NO.	ZONE	TAX	(/ZONE	ELEC. DIS	T.	CENSUS	TR.
	2	6307	N/A	R-ED		25	2		602 ⁻	700

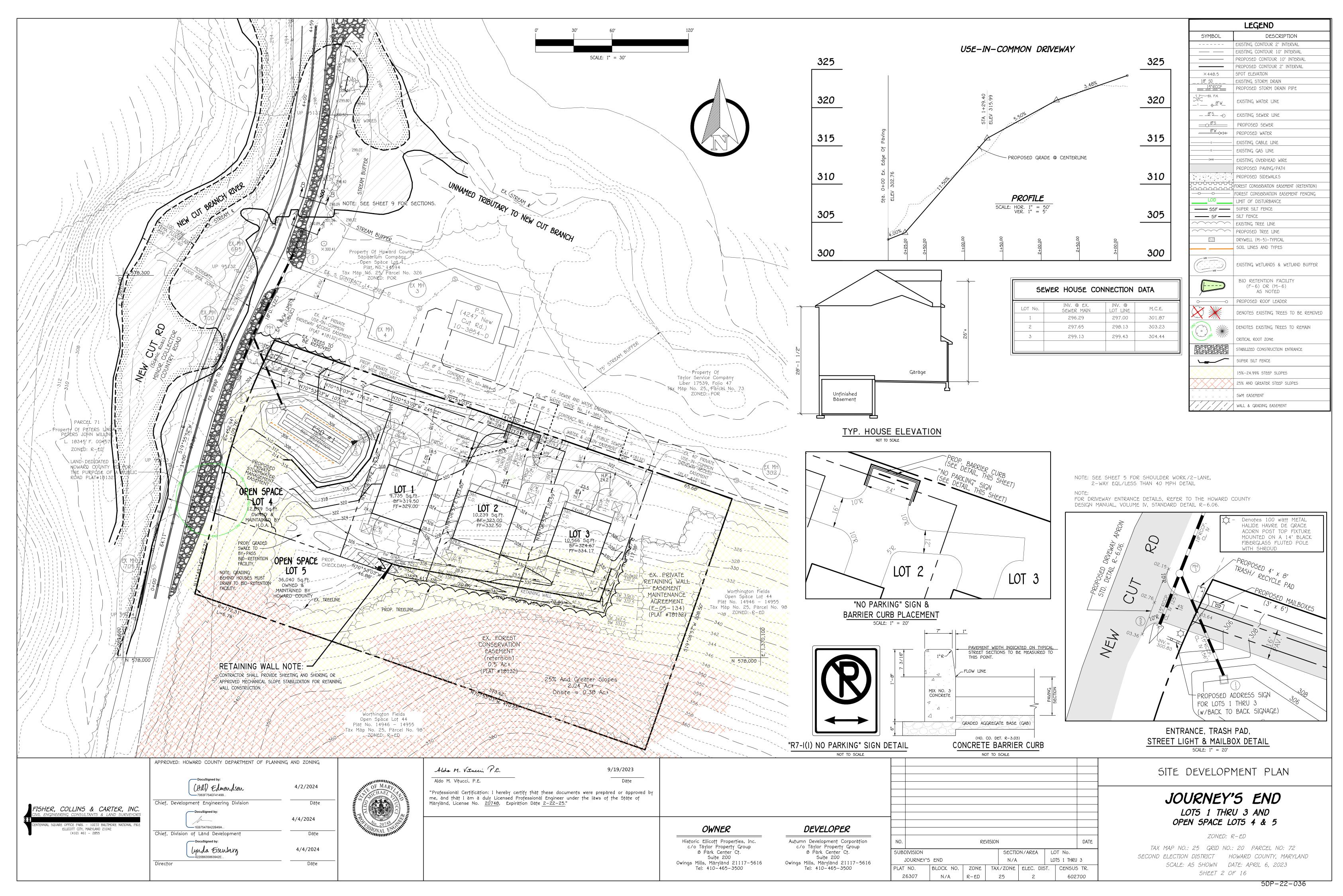
JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

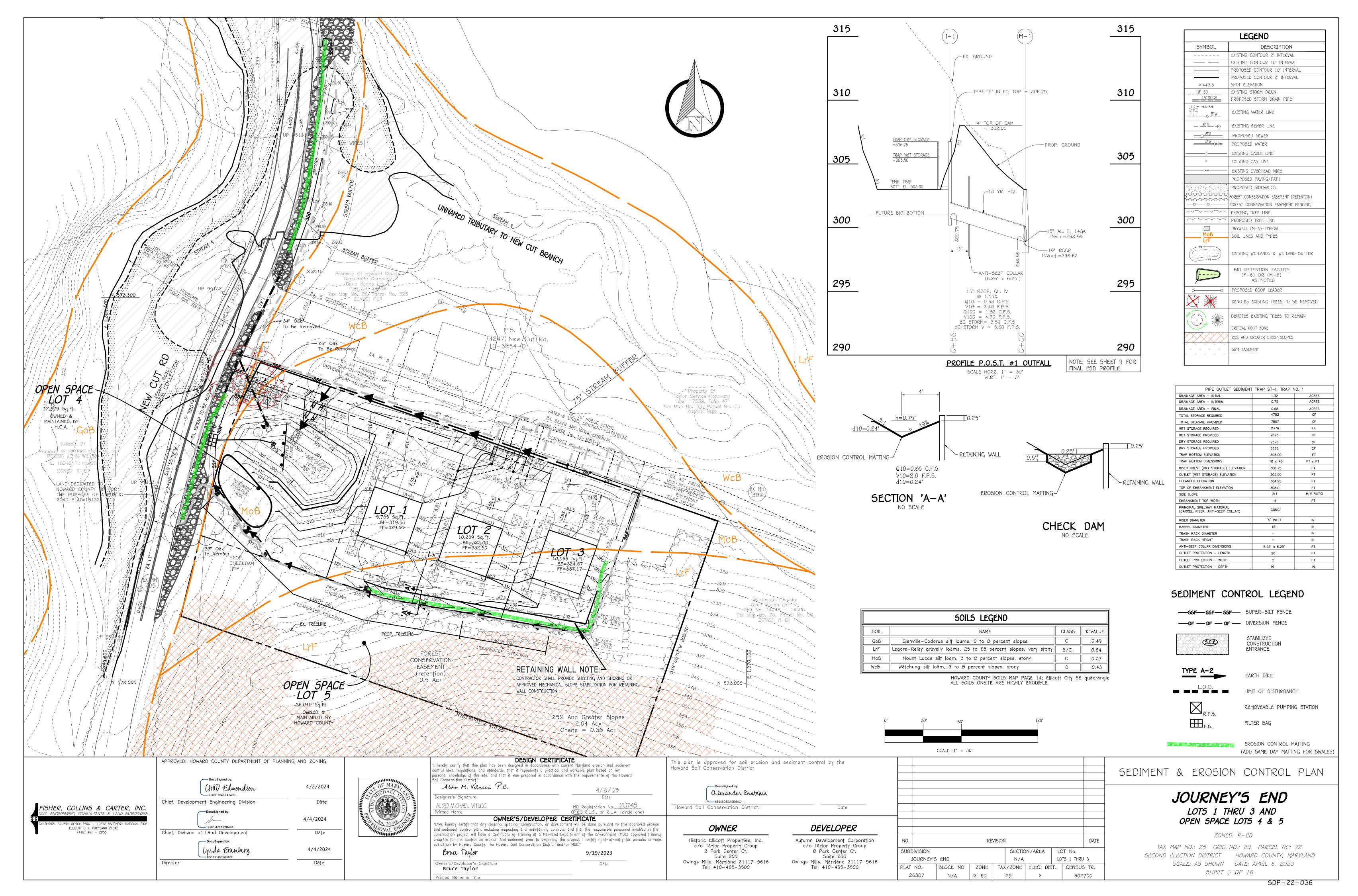
TITLE SHEET

ZONED: R-ED

TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023 SHEET 1 OF 16

5DP-22-036





SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable 2.ean Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

i Soil pH between 60 and 70 ii. Soluble salts less than 500 parts per million (ppm).

v. Soil contains sufficient pore space to permit adequate root penetration.

iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable. v. Soil contains 1.5 percent minimum organic matter by weight.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas. B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

à. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria: a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority.

Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is

excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #20 mesh sieve.

4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.

5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

TEMPORARY SEEDING NOTES (B-4-4)

To stabilize disturbed soils with vegetation for up to 6 months.

To use fast growing vegetation that provides cover on disturbed soils.

testing agency. Soil tests are not required for Temporary Seeding.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding

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emp	ora	rv	Seedina	Sumr	mary	

	ne (from Figure B. (from Table B.1):	Ferțilizer Rațe (10-20-20)	Lime Rațe		
Species	Application Rate (lb/ac)	Seeding Da†es	Seeding Depths		
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 lb/ac	2 †ons/do
OAT5	72	3/1 - 5/15, 8/15 - 10/15	1"	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)
RYE	112	3/1 - 5/15, 8/15 - 10/15	1"		

Director

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures

General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA—NRCS Technical Field Office Guide, Section 342 — Critical Area Planting.

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1.000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .

2. Turfgrāss Mixtures

à. Areàs where turfgràss mày be desired include làwns, pàrks, plàygrounds, ànd commercial sites which will receive a medium to high level of maintenance.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrāss/Perenniāl Rye: Full Sun Mixture: For use in full sun āreās where rāpid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future moving of grasses will pose no

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse

Permanent Seeding Summary

Hardi Seed	ness Zone Mix†ure (e (from Figure B. (from Table B.3):	3): <u>6b</u> 8		Ferțiliz	er Rațe (10-	20-20)	Lime Rațe
No.	Species	Application Rate (lb/ac)	Seeding Da†es	Seeding Depths	N	P ₂ O ₅	K ₂ 0	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 1-Oct. 15	1/4-1/2 in.	45 lbs. per acre	(- 10 /	90 lb/ac (2 lb/	(90 lb/
					(1.0 lb/ 1000 sf)	1000 sf)	1000 sf)	1000 sf)

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR EMPORARY STABILIZATION MUST BE COMPLETED WITHIN a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

STANDARDS AND SPECIFICATIONS <u>FOR</u> STOCKPILE AREA (B-4-8)

<u>Definition</u>

The mound or pile of soil protected by appropriately designed erosion and sediment control measures.

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the

erosion and sediment control plan. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper tha 2:1. Benching must be provided in accordance with Section B-3 Land Grading.

Runoff from the stockpile area must drain to a suitable sediment control practice. Access the stockpile area from the upgrade side. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated

flow in a non-erosive manner. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as

facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable

Maintenance

Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization. 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B—3 Land Grading.

STANDARDS AND SPECIFICATIONS <u>SEEDING AND MULCHING</u>

(B-4-3)

<u>Definition</u>

<u>Purpose</u>

<u>Criteria</u>

The application of seed and mulch to establish vegetative cover.

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Specifications

All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.

Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws. c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keetp inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can

weaken bacteria and make the inoculant less effective. d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3. or site-specific seeding summaries. ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil

b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.

Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer). i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P 0 (phosphorus), 200 pounds per acre; K O (potassium), 200 pounds per acre. ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not morê than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding. . Mix seed and fertilizer on site and seed immediately and without interruption.

R. Mulching Mulch Materials (in order of preference)

a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.

iv. When hydroseeding do not incorporate seed into the soil.

b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.

WCFM, including dye, must contain no germination or growth inhibiting factors. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

iv. WCFM material must not contain elements or compounds at concentration levels that will by WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.

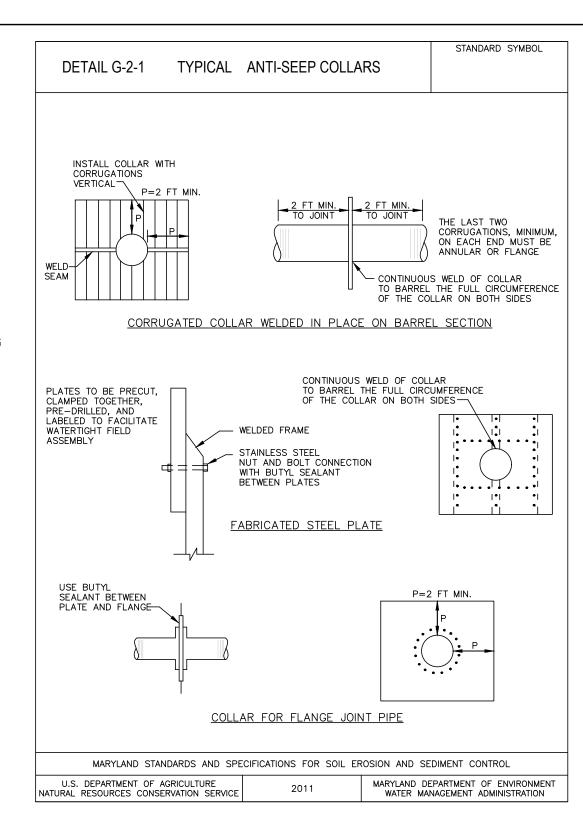
Apply mulch to all seeded areas immediately after seeding.

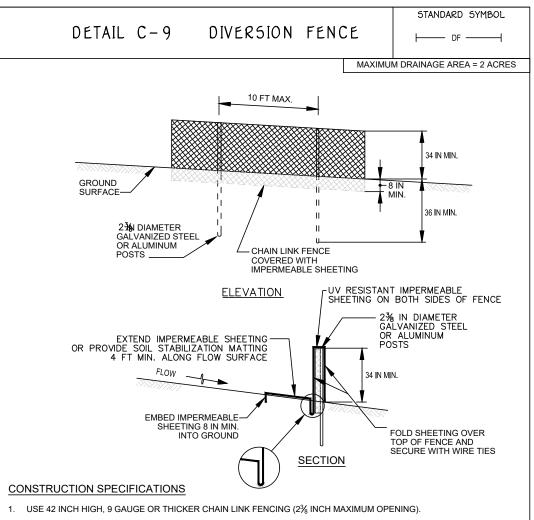
When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard: i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large

areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour. ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is

strictly prohibited. iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000





USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED

NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.

4/2/2024

Tel: 410-465-3500

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE

FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES. SECURE 10 MIL OR THICKER UV RESISTANT. IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE

8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG

EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF

WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

Detail R-2.01

DESIGN CERTIFICATE

OWNER'S/DEVELOPER CERTIFICATE

ECTION UMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7
UMBER	CLASSII ICATION	PAVEMENT MATERIAL (INCHES)	MIN H	HMA WITH	GAB	HMA WI	TH CONSTAI	NT GAB
	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO	SUPERPAVE ASPHALT MIX FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
P-2	MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS:	SUPERPAVE ASPHALT MIX INTERMEDIATE SURFACE 9.5 MM. PG 64-225; LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5
	ACCE55 PLACE, ACCE55 STREET CUL-DE-5AC5: RESIDENTIAL	SUPERPAVE ASPHALT MIX BASE 19.0 MM. PG 64-225, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0	4.0	4.0

Howard Soil Conservation District.

Suite 200

Tel: 410-465-3500

Olexander Bratchie

valuation by Howard County, the Howard Soil Conservation District and/or MDE."

il Conservation District."

Designer's Signature

Printed Name

ALDO MICHAEL VITUCCI

Bruce Taylor

rinted Name & Titl

s/veveloper's Signature Bruce Taylor

Aldo M. Vitucci, P.C.

his plan is approved for soil erosion and sediment control by the hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment Howard Soil Conservation District. ontrol laws, regulations, and standards, that it represents a practical and workable plan based on my ersonal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard

> 4/6/23) Registration No.<u>20748</u>

9/19/2023

/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion OWNER and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the onstruction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training vrogrām for the control on erosion and sediment prior to beginning the project. I certify right—of—entry for periodic on—site Historic Ellicott Properties, Inc.

DEVELOPER Autumn Development Corporation c/o Taylor Property Group c/o Taylor Property Group 8 Park Center Ct. 8 Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Owings Mills, Maryland 21117-5616

DATE **REVISION** SUBDIVISION SECTION/AREA LOT No. JOURNEY'S END LOTS 1 THRU 3 PLAT NO. BLOCK NO. | ZONE | TAX/ZONE | ELEC. DIST. CENSUS TR. N/A R-ED 25

SEQUENCE OF CONSTRUCTION 2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE ANY WORK AT

. OBTAIN GRADING PERMITS. (2 WEEKS)

DRAIN. (4 DAYS)

(8 MONTHS)

WEEK)

STANDARD NOTES:

IN SIZE.

24-HOURS BEFORE STARTING ANY WORK.

INSTALLED.) CLEAR AND GRUB SITE. (3 DAYS)

1-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF

3. INSTALL THE STABILIZED CONSTRUCTION ENTRANCES w/DRIVEWAY

CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST

AS SHOWN ON THE PLANS. (NOTE: THE SWALES UPSTREAM AND

DOWNSTREAM OF THE CULVERT SHALL BE CONSTRUCTED USING

4. INSTALL INTERNAL EARTH DIKES AND P.O.S.T. #1 w/OUTFALL STORM

5. GRADE SITE TO MASS GRADING CONTOURS FOR THE PRIVATE DRIVEWAY

AND BUILDING PADS. OBTAIN PERMISSION FROM THE SEDIMENT

6. INSTALL PUBLIC WATER HOUSE CONNECTIONS AND PUBLIC SEWER

HOUSE CONNECTIONS AS SHOWN ON THE PLANS. (1 WEEK)

7. UPON PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO

8. CONSTRUCT RETAINING WALLS, HOUSES AND DRYWELLS. INSTALL FINAL

PAVING COARSE. CONTRACTOR SHALL UTILIZE SHORING TO PROTECT

THE FOREST CONSERVATION EASEMENT DURING WALL CONSTRUCTION.

CONSTRUCTION OF THE BIO-RETENTION FACILITY CAN BE INSTALLED

10. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL

SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING DISTURBED

AREAS ON-SITE WITH PERMANENT SEEDING OR OPTIONAL SODDING. (1

CONTROL INSPECTOR BEFORE PROCEEDING. (1 WEEK)

PROCEED, INSTALL BASE COURSE PAVING. (1 WEEK)

9. UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, THE

ALONG WITH THE REMAINING STORM DRAIN. (2 WEEKS)

. THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN

2. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY

"OPEN" GROUND SHALL BE DISTURBED AT ANY GIVEN TIME, IF

REQUIRED. THIS SOP AND ASSOCIATED L.O.D. IS LESS THAN 20-AC.

MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES

SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS.

SAME-DAY STABILIZATION AT THE SAME TIME THE CULVERT IS

CULVERT, PERIMETER SUPER SILT FENCE AND EXTERNAL EARTH DIKES

INCREMENTAL STABILIZATION Establishment of vegetative cover on cut and fill slopes.

Purpose To provide timely vegetative cover on cut and fill slopes as work progresses.

B-4-1 STANDARDS AND SPECIFICATIONS

Conditions Where Practice Applies Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles. A. Incremental Stabilization — Cut Slopes 1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and

apply seed and mulch on all cut slopes as the work progresses. 2. Construction sequence example (Refer to Figure B.1): a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around b. Perform Phase 1 excavation, prepare seedbed, and stabilize. . Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as

d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any

nterruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

PHASE 2 EXCAVATION - PHASE 3 EXCAVATION Figure B.1: Incremental Stabilization - Cut

apply seed and mulch on all slopes as the work progresses.

2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading REGARDS TO THE REQUIREMENT THAT NO MORE THAN 20-ACRES OF operation ceases as prescribed in the plans. 3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.

4. Construction sequence example (Refer to Figure B.2):

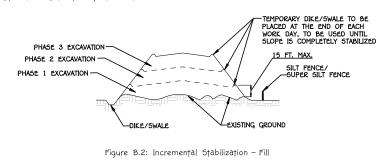
a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around

the fill. Construct silt fence on low side of fill unless other methods shown on the plans address b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner c. Place Phase 1 fill, prepare seedbed, and stabilize. d. Place Phase 2 fill, prepare seedbed, and stabilize

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the

. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as

. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and



HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 40 hour notice to CID must be given at the following stages: a. Prior to the start of earth

b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading, c. Prior to the start of another phase of construction or opening of another grading unit, d. Prior to

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto. 3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within

three (3) calendar days as to the syrface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading. 4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15'

of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All

concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B—4—6). 5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID. 6. Site Analysis:

Total Area of Site: ____1.824___ Acres ____1.0____ Acres Area Disturbed: ____0.37___ Acres Area to be roofed or paved: Area to be vegetatively stabilized: $_{--}0.73$ Acres __<u>8350</u>____ Cu. Yds. Total Cut: Total Fill: _1740____ Cu. Yds.

• Maintenance and/or corrective action performed

the removal or modification of sediment control practices.

waste/borrow area location: 7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance. 8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the

 Inspection date Inspection type (routine, pre-storm event, during rain event) Name and title of inspector Weather information (current conditions as well as time and amount of last recorded precipitation)
 Brief description of project's status (e.g., percent complete) and/or current activities
 Evidence of sediment discharges

• Other inspection items as required by the General Permit for Stormwater Associated with Construction

• Identification of sediment controls that require maintenance Identification of missing or improperly installed sediment controls
 Compliance status regarding the sequence of construction and stabilization requirements Photographs

contractor, made available upon request, is part of every inspection and should include:

Activities (NPDES, MDE). 9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorte 10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CID per the list of HSCD-approved field changes.

11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure. 13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade. 14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum

15. Stream channels must not be disturbed during the following restricted time periods Use I and IP March 1 - June 15 • Use III and IIIP October 1 - April 30

intervals, with lower ends curled uphill by 2' in elevation.

 Use IV March 1 - May 31 16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

CONTROL, and associated permits shall be on-site and available when the site is active.

NOTES & DETAILS

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

SEDIMENT AND EROSION CONTROL

ZONED: R-ED

TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023 SHEET 4 OF 16

5DP-22-036

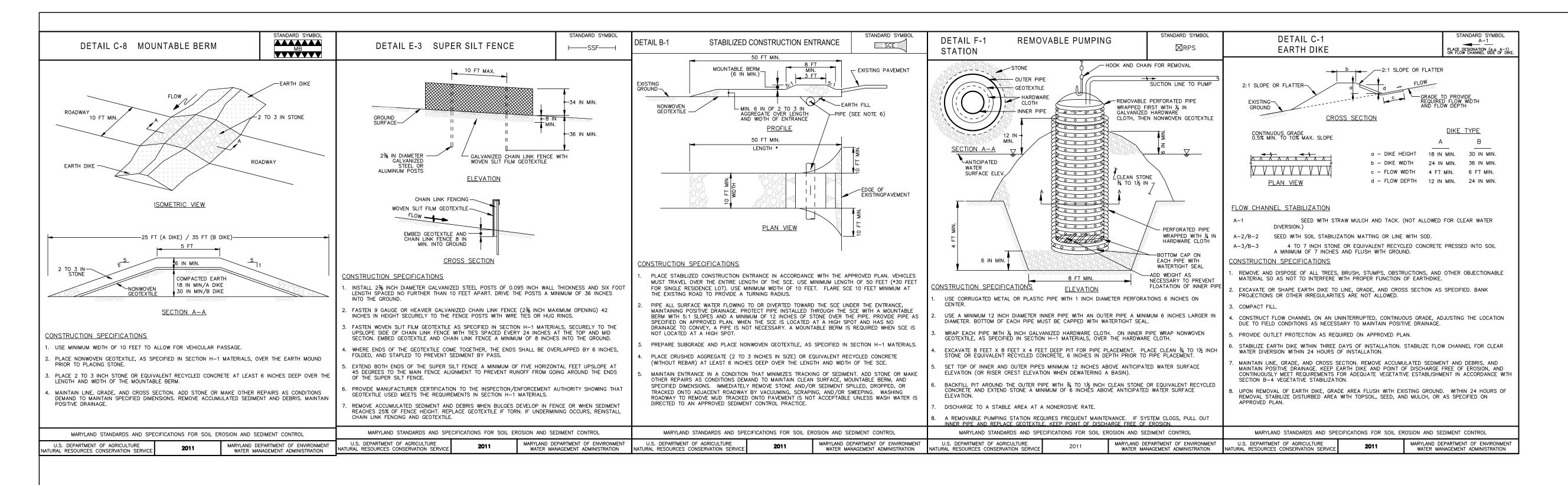
ISHER, COLLINS & CARTER, INC. ELLICOTT CITY, MARYLAND 21042

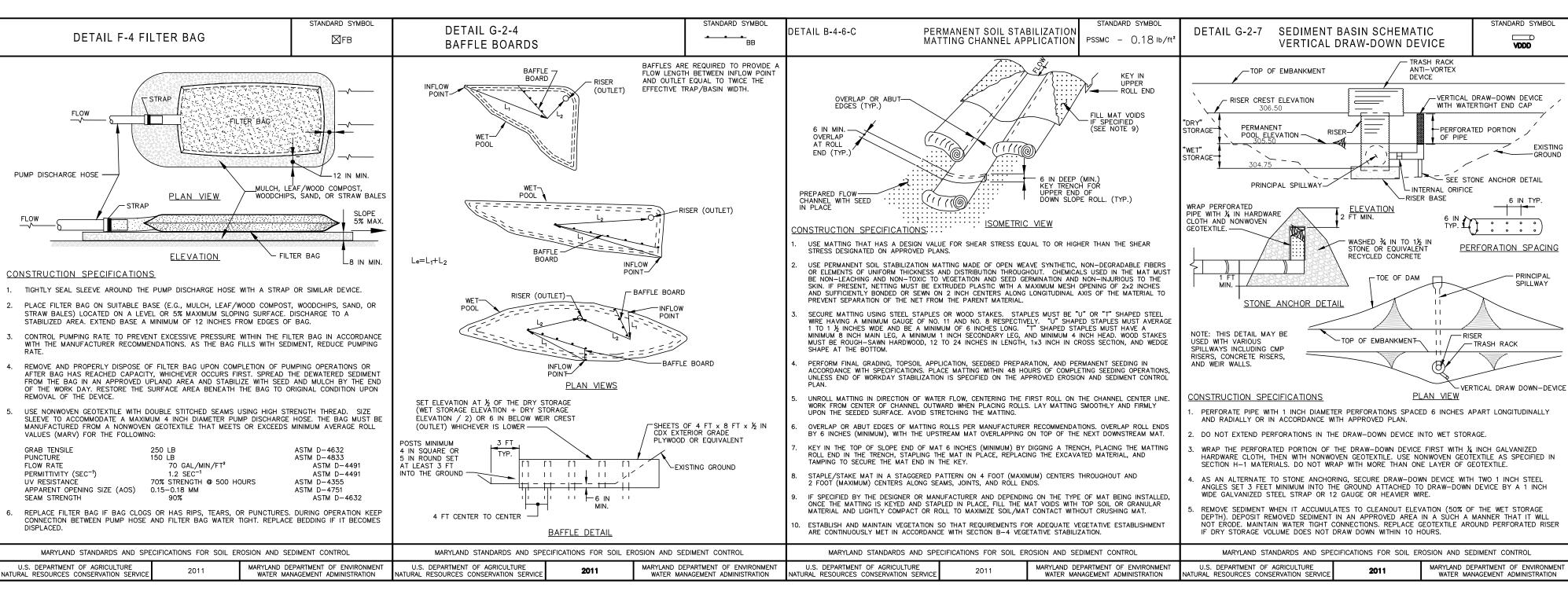


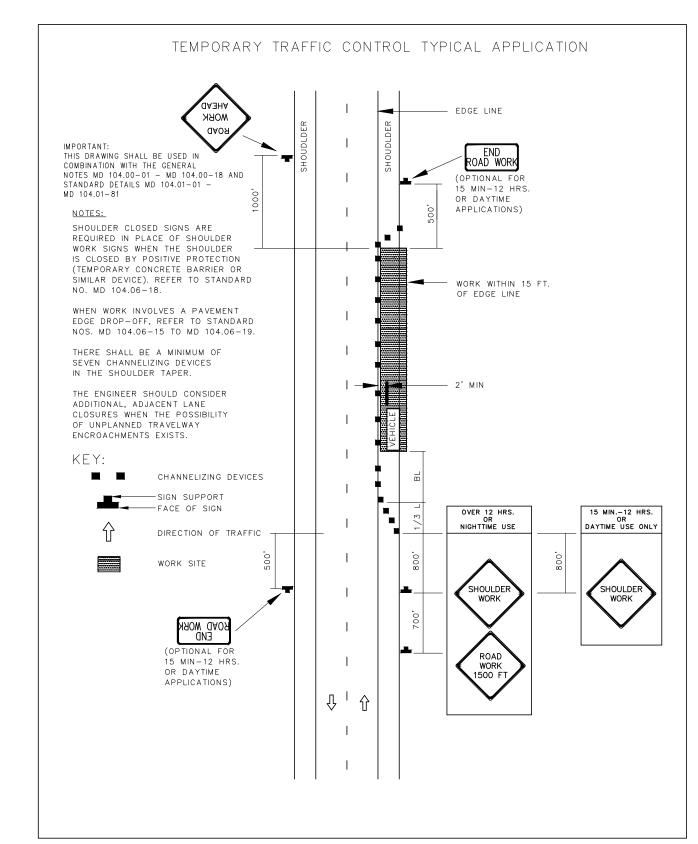
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

sheetina.









SHOULDER WORK/2-LANE, 2-WAY EQL/LESS THAN 40 MPH

> SEDIMENT AND EROSION CONTROL NOTES & DETAILS

SEDIMENT

TRAP ST-I

ISOMETRIC VIEW

TOP WIDTH

-

SECTION

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

PIPE OUTLET SEDIMENT

TRAP ST-I

CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED. CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE

PERFORATE THE RISER WITH 1 INCH DIAMETER HOLES SPACED 6 INCHES ON CENTER WITH THE LOWEST PERFORATIONS AT THE WET STORAGE ELEVATION OR PROVIDE A HORIZONTAL OR VERTICAL DRAW-DOWN DEVICE PERFORATED ACCORDING TO APPROVED PLAN. DO NOT PERFORATE THE RISER WITHIN 6 INCHES OF THE TOP OF THE HORIZONTAL BARREL.

SET RISER/BARREL ASSEMBLY PRIOR TO EMBANKMENT CONSTRUCTION. MAKE ALL PIPE CONNECTIONS WATERTIGHT. OFFSET RISER FROM EMBANKEMENT TO ACCOMODATE PLACEMENT OF THE TRASH RACK ANCHOR THE RISER WITH EITHER A REINFORCED CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. MAKE CONCRETE BASES AT LEAST TWICE THE RISER DIAMETER AND 18 INCHES THICK

USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC

HAND COMPACT IN 4 INCH LAYERS FILL MATERIAL AROUND THE PIPE SPILLWAY. PLACE A MINIMUM

OF 2 FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH

CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE RISER CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

AND GEOTEXTILE AT LEAST 6 INCHES ABOVE THE HIGHEST PERFORATIONS AND AT LEAST 6 INCHES

USE STRAPS OR CONNECTING BANDS AT THE TOP AND BOTTOM OF THE GEOTEXTILE TO HOLD THE

STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF

REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED

TO CLEANOUT ELEVATION (50% OF WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED

DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES,

BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY.

MAINTAIN LINE, GRADE, AND CROSS SECTION. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE
GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10

WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO THE APPROVED PLAN AND IN SUCH A

WRAP THE RISER WITH 1/2 INCH GALVANIZED HARDWARE CLOTH THEN WRAP WITH NONWOVEN GEOTEXTILE. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE. EXTEND HARDWARE CLOT

TOGETHER TO PREVENT BYPASS. REPLACE GEOTEXTILE AS NECESSARY TO PREVENT CLOGGING.

MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.

. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.

MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.

16. UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

REFER TO DETAIL G-2-1 -

REFER TO DETAIL G-2-2 -

REFER TO DETAIL G-2-3 -

18 IN MÌ

12 IN MIN

OMPACTED EARTH
MBANKMENT ____

DISCHARGE TO STABLE AREA,

PROTECTION

OR EQUIVALENT RECYCLED CONCRETE

RISER

STORM DRAIN SYSTEM, OR

0% SLOPE

10 FT MIN. LENGTH

1/4 INCH GALVANIZED HARDWARE CLOTH

-NONWOVEN GEOTEXTILE

WITH NONWOVEN GEOTEXTILE SECURELY FASTENED TO PERFORATED RISER

GALVANIZED HARDWARE CLOTH

CONSTRUCTION SPECIFICATIONS

EMBANKMENT AND TRAP BOTTOM.

WITH THE RISER EMBEDDED 9 INCHES.

GEOTEXTILE AND HARDWARE CLOTH IN PLACE.

CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.

ST-I

MAXIMUM DRAINAGE AREA = 5 ACRES

OUTLET PROTECTION

ELEVATION ONL'

CONCRETE OR 1/2 IN STEEL PLATE
TWICE THE RISER DIAMETER (MIN.)
ATTACHED TO RISER WITH A

CONTINUOUS WELD ON BOTTOM

TYPICAL ANTI-SEEP

CONCENTRIC TRAS

1 OF 3

2 OF 3

RISER BASE

RACK AND

DEVICE

ANTI-VORTEX

ST-I

JOURNEY'S END LOTS 1 THRU 3 AND

OPEN SPACE LOTS 4 & 5

ZONED: R-ED TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023

(HdD Edmondson 4/2/2024 Chief, Development Engineering Divisior FISHER, COLLINS & CARTER, INC 4/4/2024 ELLICOTT CITY, MARYLAND 21042 Chief, Division of Land Development (410) 461 - 2855 4/4/2024 lynda Eisenberg

Director

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Date

Date

Da†e

DESIGN CERTIFICATE hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment ontrol laws, regulations, and standards, that it represents a practical and workable plan based on my ersonal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Aldo M. Vitucci, P.C. 4/6/23 esigner's Signature ALDO MICHAEL VITUCCI

Bruce Taylor

Printed Name & Title

1D Registration No._20748 rinted Name OWNER'S/DEVELOPER CERTIFICATE /We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion

nd sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the onstruction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training rogram for the control on erosion and sediment prior to beginning the project. I certify right—of—entry for periodic on—site valuation by Howard County, the Howard Soil Conservation District and/or MDE." Bruce Taylor 9/19/2023

OWNER Historic Ellicott Properties, Inc. c/o Taylor Property Group 8 Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

Olexander Bratchie

Howard Soil Conservation District.

Howard Soil Conservation District.

This plan is approved for soil erosion and sediment control by the

Autumn Development Corporation c/o Taylor Property Group 8 Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

DEVELOPER

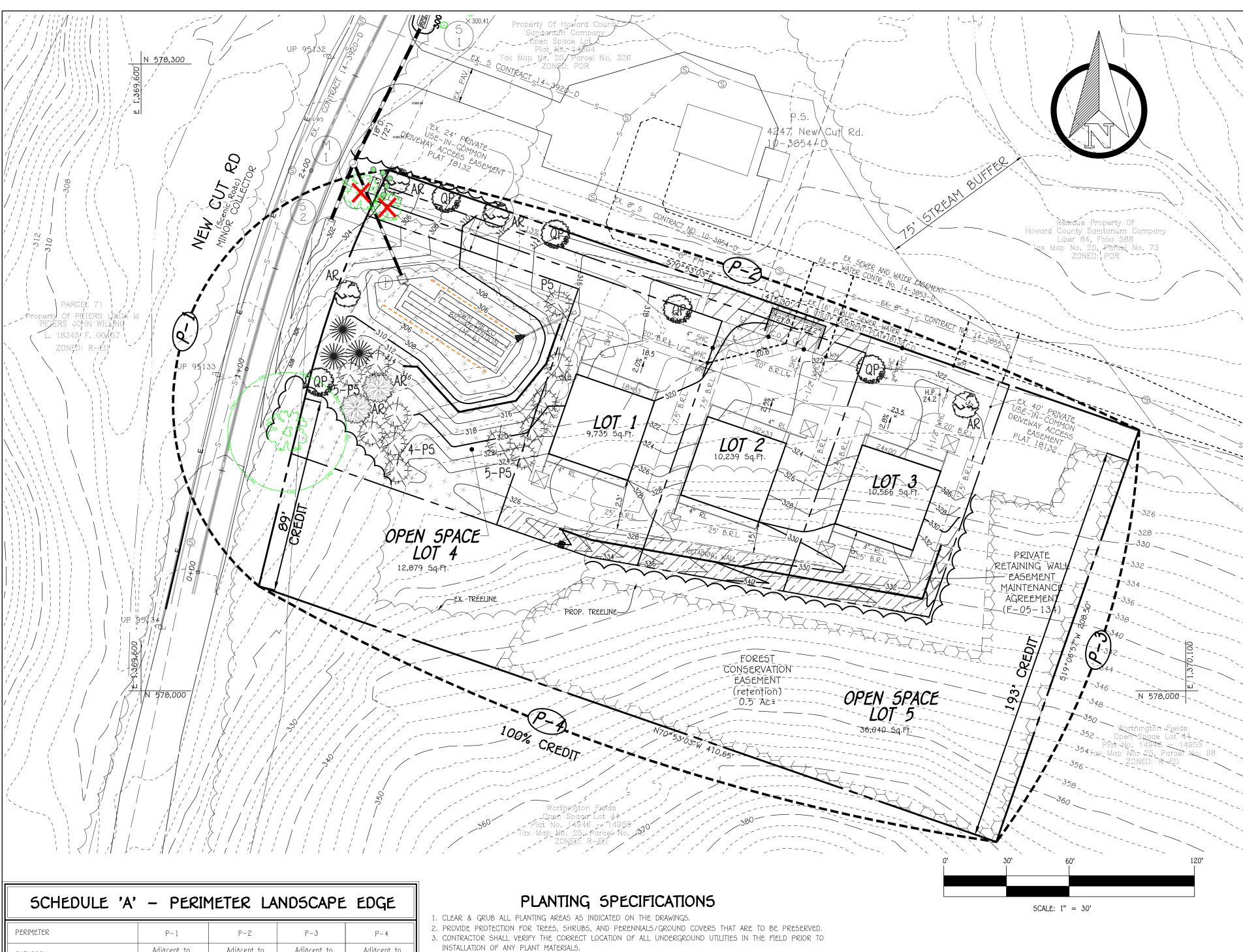
4/2/2024

Date

DATE REVISION SUBDIVISION SECTION/AREA LOTS 1 THRU 3 JOURNEY'S END

TAX/ZONE | ELEC. DIST. | CENSUS TR. PLAT NO. BLOCK NO. ZONE 26307 602700 N/A R-ED 25

SHEET 5 OF 16 5DP-22-036

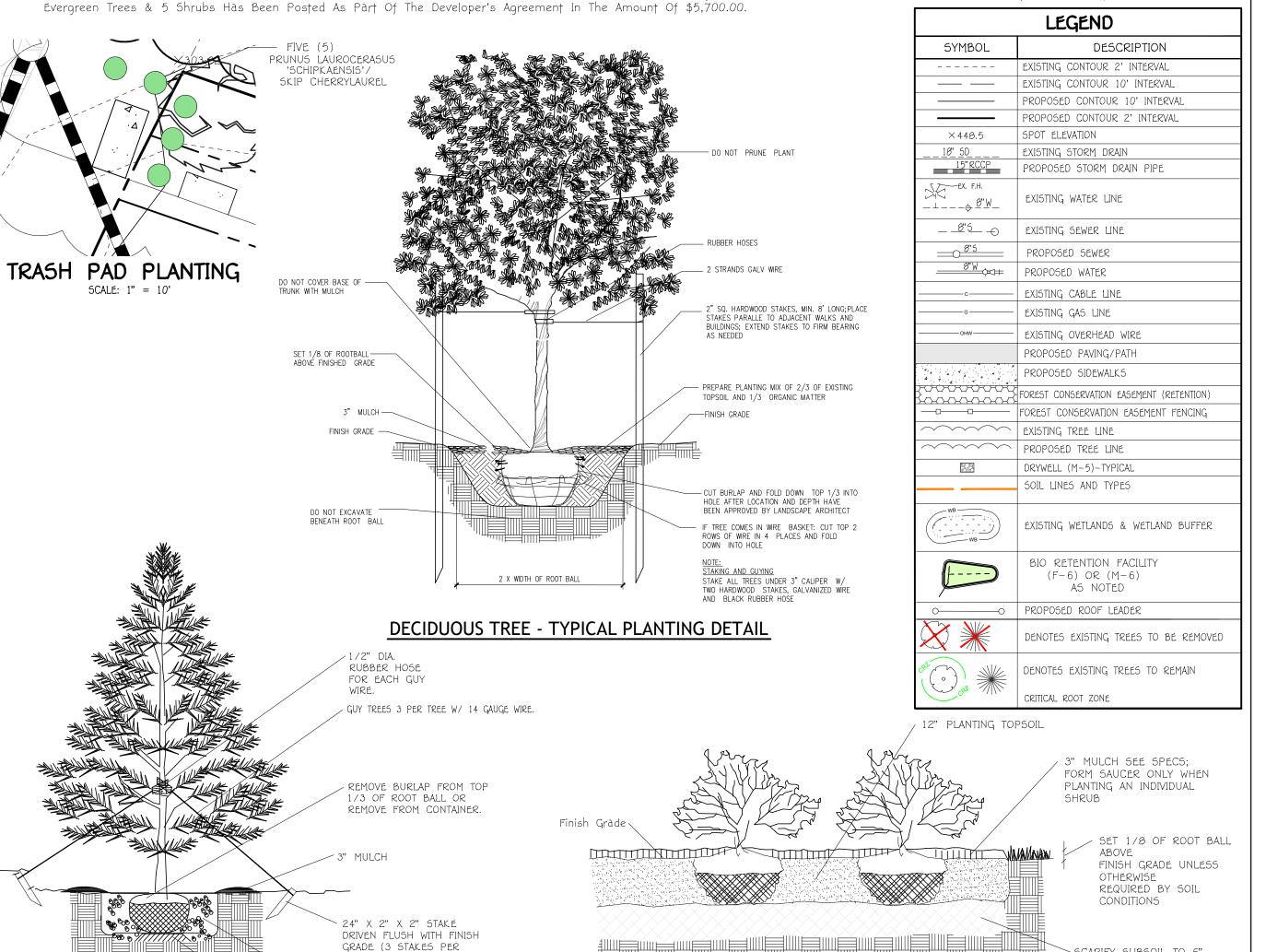


1. "Should any tree designated for preservation for which landscaping credit is given, die prior to release of bonds, the developer will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 2.5 inches in caliper and installed as required in the Howard County Landscape Manual."

2. "At the time of plant installation, all shrubs and trees listed and approved on the landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no subtitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to the applicable plans".

3. "The Owner, tenants and/or their agents shall be responsible for maintenace of the required perimeter landscaping including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced".

4. This Plan Has Been Prepared In Accordance With The Provisions Of Section 16.124 Of The Howard County Code And The Landscape Manual". Financial Surety For The Required 11 Shade, 15



- Adjacent to Adjacent to Adjacent to Adjacent to CATEGORY Ŕoadway eservation Parcell Preservation Pa eservation Parc LANDSCAPE TYPE LINEAR FEET OR ROADWAY 209.3' 379.8' 208.5' 373.6' FRONTAGE/PERIMETER YES - 89' NO YES - 193' YES - 100% X. FOREST/F.C.E.) (EX. FOREST) (F.C.E.)
- CREDIT FOR EXISTING VEGETATION (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED) CREDIT FOR WALL, FENCE OR BERM (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED) NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS
 - 8. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE AND MAINTAIN POSITIVE DRAINAGE OF ALL LAWN AREAS, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

9. ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS. 10. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE DRAWINGS AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE DRAWINGS SHALL APPLY. REPORT DISCREPANCIES TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING.

4. ALL PLANTING SHALL BE DONE AS PER PLANTING DETAILS AND SPECIFICATIONS.

5. NO CHANGES SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.

REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.

6. PRIOR TO CONSTRUCTION OF PLANTING BEDS, THE CONTRACTOR SHALL STAKE OUT PLANTING BED LINES IN THE FIELD

FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS

7. INSTALL ALL REQUIRED PLANTING AND LAWN SOILS AS PER DETAILS AND SPECIFICATIONS, AND ALL SHRUBS, GROUND

COVERS, AND PERENNIALS SHALL BE PLANTED IN PLANTING BEDS PREPARED AS REQUIRED BY THE DETAILS AND

NECESSARY. ALL FINAL PLANTING BED LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT

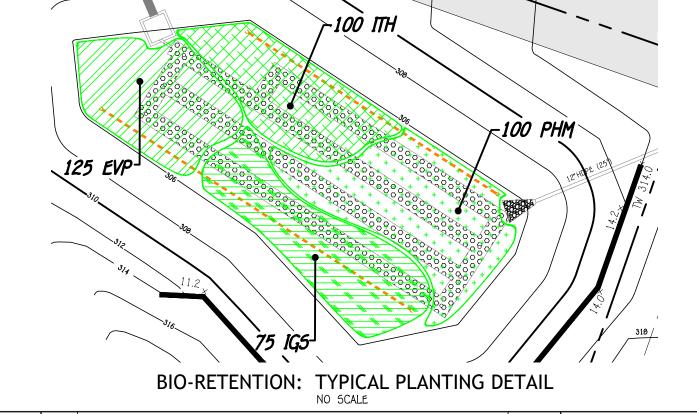
- 11. ALL PLANTS SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION. 12. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. PRIOR TO PLANTING, THE CONTRACTOR SHALL STAKE OUT THE LOCATIONS OF ALL PLANTS IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANT LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF
- 13. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED OR SODDED; SEE PLAN FOR LOCATIONS. 14. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING ALL PLANTS DURING THE WARRANTY PERIOD; REFER TO SPECIFICATIONS.

TRASH/RECYCLE	PAD LANDSCAPING
NEAR FEET OF PERIMETER	LOTS 1-3 PAD: 16 l.f.
BER OF SHRUBS PROVIDED:	5

NOTES: 1. THE TRASH/RECYCLE PAD LANDSCAPING WILL BE MAINTAINED BY THE USERS OF THE PRIVATE USE-IN-COMMON MAINTENANCE AGREEMENT

2. THE LANDSCAPING SHALL BE INSTALLED AROUND THE PERIMETER OF THE PAD EXCLUDING THE SIDE ADJACENT TO THE PUBLIC ROAD RIGHT-OF-WAY.

75	IGS	llex glabra 'Shamrock'	24"-30" Ht.	Cont.	40" o.c./Male Cultiv
		Inkberry			
125	EVP	Eupatorium dubium 'Little Joe'	# 1	Cont.	24" O.C.
		Dwarf Joe-Pye Weed			
100	ITH	Itea virginica 'Little Henry'	24"-30" ht.	Cont.	36" O.C.
		Dwarf Virginia Sweetspire			
100	PHM	Panicum virgatum 'Heavy Metal'	#1	Cont.	36" O.C.
		Heavy Metal Switchgrass			



PLANTING MIX, (2/3

ORGANIC MATTER)

EXISTING TOPSOIL AND 1/3

DO NOT EXCAVATE BENEATH

SCHEDULE 'A' - PERIMETER LANDSCAPE EDGE TRASH/RECYCLE PAD LANDSCAPING YMBOL QTY. BOTANICAL AND COMMON NAME SIZE

PERIMETER PLANT LIST FOR

SHRUB AND HEDGEROW - TYPICAL PLANTING DETAIL

SCARIFY SUBSOIL TO 6"

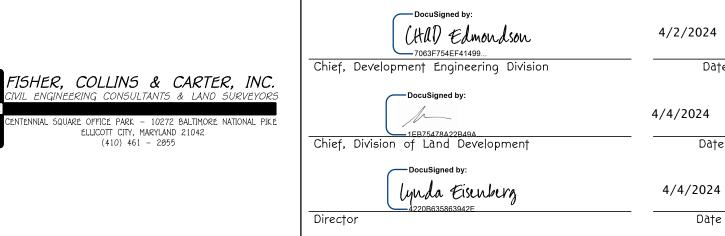
MIN. DEPTH

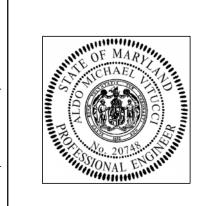
AR	4	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2-3" CAL.
QP	5	QUERCUS PALUSTRIS PIN OAK	2 1/2-3" CAL.
₩ _{P5}	3	PINUS STROBUS EASTERN WHITE PINE	6'-8' HT.
	5	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'/ SKIP CHERRYLAUREL	18" – 24" SPREAD
P5	*12	* PINUS STROBUS EASTERN WHITE PINE	6'-8' HT.
AR	*2	* ACER RUBRUM 'OCTOBER GLORY' REO MAPLE	2 1/2-3" CAL.

*ADDITIONAL TREES PROPOSED AS PART OF PLANNING BOARD APPROVAL (APPROVED DECEMBER 7, 2023)

NUMBER OF PLANTS PROVIDED

SHADE TREES EVERGREEN TREES SHRUBS





Da†e

Aldo M. Vitucci, P.C. 3/7/2024 Aldo M. Vitucci, P.E. 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

DEVELOPER'S / BUILDER'S CERTIFICATE I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD

Maryland, License No. 20748, Expiration Date 2-22-25.

COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING. Bruce Taylor 3/7/2024

OWNER

Historic Ellicott Properties, Inc. c/o Taylor Property Group 8 Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

DEVELOPER Autumn Development Corporation c/o Taylor Property Group 8 Park Center Ct. 5ui†e 200

Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

2 X THE ROOT BALL

EVERGREEN TREE - TYPICAL PLANTING DETAIL

REVISION DATE SUBDIVISION SECTION/AREA N/A LOTS 1 THRU 3 BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR. N/A R-ED 25

LANDSCAPE PLAN, NOTES & DETAILS

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

ZONED: R-ED

TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023 SHEET 6 OF 16

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC), and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

> Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging. Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention

facilities, see figure A.5 and Table A.4 for planting material guidance). > Plants known to send down deep taproots should be avoided in systems where filter fabric is

used as part of facility design. > Test soil conditions to determine if soil amendments are necessary. > Plants shall be located so that access is possible for structure maintenance.

> Stabilize heavy flow areas with erosion control mats or sod. Temporarily divert flows from seeded areas until vegetation is established. > See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume [Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993]. Soils should fall within the SM, ML, SC classifications or the optional sand layer. Pump any ponded water before preparing (rototilling) base. the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteri	sțics
Parameter	Value
pH range	5.2 †o 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P205)	75 lbs. per acre, minimum
Potassium (potash —1(K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	O †o 5%
Sil†	30 to 55%
Sand	35 †o 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mylch layer should be standard landscape style, single or double shredded hardwood mylch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a

Planting Guidance

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland—species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.

The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge

is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

B.4.C Specifications for Bioretention, Landscape Infiltration & Infiltration Berms

The allowable materials to be used in these practices are detailed in Table B.4.1.

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretention practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)

Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).

Clay Content - Media shall have a clay content of less than 5%.

pH Range — Should be between 5.5 — 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks. 4. Plant Material

Recommended plant material for bioretention practices can be found in Appendix A,

5. Plant Installation

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to

Rootstock of the plant material shall be kept moist during transport and on-site storage The plant root ball should be planted so 1/8 th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball. Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

Underdrains should meet the following criteria: Pipe— Should be 4?to 6?diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type P5 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).

Perforations - If perforated pipe is used, perforations should be 3/8" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or 4x4) galvanized hardware cloth.

Gravel — The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.

The main collector pipe shall be at a minimum 0.5% slope.

A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter. A 4" layer of pea gravel (1/4" to 3/8" stone) shall be located between the filter media and

underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

These practices may not be constructed until all contributing drainage area has been

Operation And Maintenance Schedule For Homeowners Association Owned & Maintained Bio-Retention Areas (M-6)

. The owner shall maintain the plant material, mulch layer and soil layer annually. maintenance of mulch and soil is limited to orrecting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked or disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material s limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.Í and 2.

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.

3. 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. 4. The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy

5. The owner shall maintain all observation wells, clean—outs and perforated underdrains.

5. Filter material must be replaced when water remains on the surface of the filter bed for more than 24 hours following a 1 or 2 year storm event or more than 48 hours following a 10 year storm event.

PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE

GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT

THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5%

A RIGID, NON PERFORATED OBERSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE

MICRO-BIORETENTION NOTES 1. ONLY THE SIDES OF THE MICRO-BIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETEEN LAYER OR AT THE BOTTOM OF THE MICRO-BIORETENTION WILL CAUSE THE MBR TO FAIL, AND THEREFOR SHALL NOT BE INSTALLED. 2. WRAP THE PERFORATED MBR UNDER DRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE 3. PROVIDE 5' MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLAN) STRUCTURE (TYPE D INLET) ELEV. A (ESDvol) 306.75 MULCH PROVIDE SOD-ABOVE MULCH 9" ESD -PONDING

- 4" ROUND PLASTIC ATRIUM GRATE J' MULCH LAYER 306.75(ESDvol) ELEV. B_ DEPTH ELEV. ELEV. 18" PLANTING SOIL-4" OVERFLOW 18" PLANTING SOIL-PROVIDE FILTER FABRIC (See Planting Soil DISTRIBUTION PIPE PROVIDE FILTER FABRIC (See Planting Soil (SIDES ONLY) Characteristics) (SIDES ONLY) Characteristics) ELEV. D _ ELEV. D -4" CR-7 STONE ELEV. E (BRIDGE LAYER) -4" CR-7 STONE ELEV. E (BRIDGE LAYER) 30"-5CH 40 24"-SCH 40-NO.2 WASHED ELEV. I 25% ESDV @ 40% NO.2 WASHED STONE -30" x 6" REDUCER VOID5 ELEV. STONE 6" ADDITIONAL ELEV. G AT CROWN OF PIPE 6" ADDITIONAL STONE (Rev) ELEV. INV. 6" OUT = 303.59STONE (Rev) 30"-SCH 40 PERFORATTED OR 4" UNDER DRAIN -30" HDPE PERFORATED PIPE SLOTTED PVC PIPE @ 0.0% TO OUTFALL SEE PLANS WRAPPED W/GEOTEXTILE WRAPPED WITH $\frac{1}{4}$ " HARDWIRE MESH FABRIC Inv. 301.42 MICRO-BIORETENTION (UNDERDRAIN)(M-6)

MICRO-BIORETENTION (OVERFLOW)(M-6) NO SCALE NO SCALE PIPE SIZE: 4" HOLE SIZE: 3/8" 30" x 4" CENTER TO CENTER: 3" PIPE ROWS OF HOLES: 2 @ 90° 2 @ 160° (+/-3°) Typical Clean—Out Detail (4" Underdrain to Outfall Or Inlet) NO SCALE

MICRO BIO-RETENTIONS

B C D E F G

|306.75|306.00|305.75|304.25|303.92|301.42|300.4

NOTE: WRAP PERFORATED PVC w/ 4x4 GALVANIZED HARDWARE CLOTH 5CH 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL

FOR HORIZONTAL DRAIN PIPE

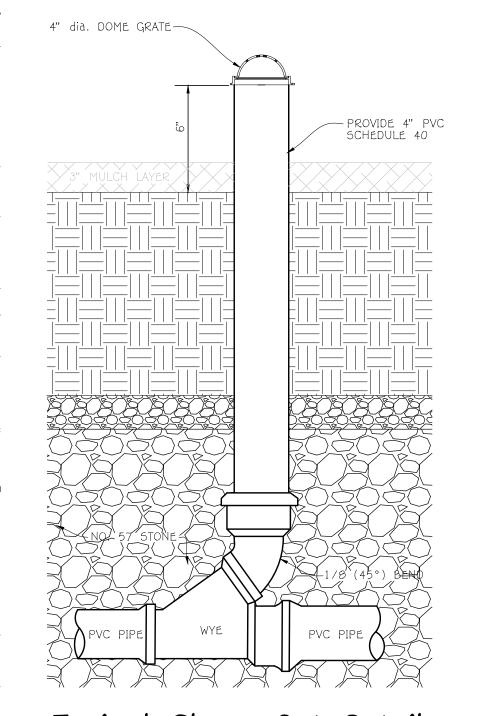
NO SCALE

UNDERDRAIN PIPE SHALL BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28 OR AASHTO-M- 278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g., PVC

SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".



USE 4" PVC CLEANOUT ADAPTER & PLUG

PROVIDE 4" PVC

| SCHEDULE 40

(FLUSH WITH MULCH) -

Typical Clean-Out Detail (4" Distribution Pipe)

FISHER, COLLINS & CARTER, INC. ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

(HD) Edmondson 4/2/2024 Chief, Development Engineering Division Da†e 4/4/2024 Chief, Division of Land Development lynda Eisenberg 4/4/2024

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING



Aldo M. Vitucci, P.C. 9/19/2023 Da†e Aldo M. Vitucci, P.E. 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. 20740, Expiration Date 2-22-25."

> DEVELOPER OWNER Historic Ellicott Properties, Inc. Autumn Development Corporation c/o Taylor Property Group c/o Taylor Property Group 8 Park Center Ct. 8 Park Center Ct. Suite 200 Suite 200 Owings Mills, Maryland 21117-5616 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500 Tel: 410-465-3500

MICRO BIO-RETENTION

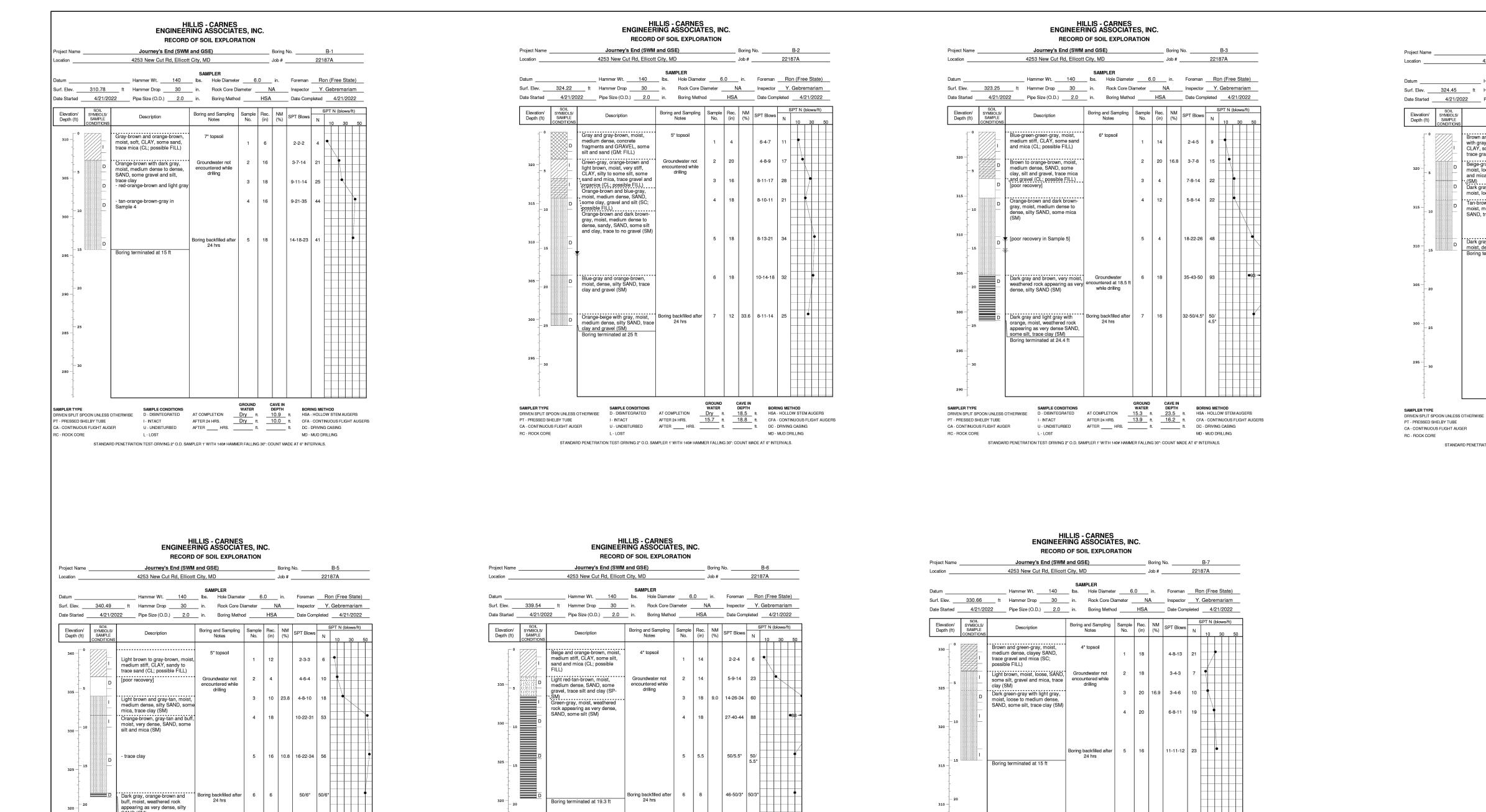
(M-6) PLAN VIEW

REVISION DATE SUBDIVISION SECTION/AREA LOT No. LOTS 1 THRU 3 BLOCK NO. | ZONE | TAX/ZONE | ELEC. DIST. CENSUS TR. N/A R-ED 25

STORMWATER MANAGEMENT PLAN, DETAILS & PROFILES

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

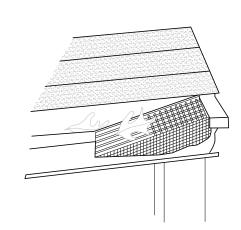
ZONED: R-ED TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023 SHEET 7 OF 16



Project Name					and GSE)				-				
Location			4253 New Cut Ro	d, Ellicott	City, MD		J	ob#.		221	87A		
					SAMPLER								
Datum			Hammer Wt		_				Foreman		on (Fre		
			Hammer Drop			_					Gebr		
Date Started _	4/21/20)22	Pipe Size (O.D.)	2.0	_ in. Boring Meth	od	HSA		_ Date Com	pleted	4	/21/20)22
Elevation/	SOIL SYMBOLS/		D		Boring and Sampling	Sample	Rec.	NM	ODT DI		SPT N	(blows	/ft)
Depth (ft)	SAMPLE CONDITIONS		Description		Notes	No.	(in)	(%)	SPT Blows	N	10	30	5
⊢ •	7777)	Brown	and green-gray, m	noiet	4" topsoil							+	+
330 —		mediu	m dense, clayey S.	and,	4 topoon	1	18		4-8-13	21		 	+
1		trace g	gravel and mica (Solle FILL)	C;							H/	++	+
	7777		orown, moist, loose		Groundwater not	2	18		3-4-3	7	4	\Box	+
	li ili ili i		orown, moist, loose silt, gravel and mic		encountered while	-	'°		3-4-3	,		\Box	\top
325 — 5		clay (S	SM)		drilling								
-	D		reen-gray with ligh loose to medium o			3	20	16.9	3-4-6	10		\Box	
-			, some silt, trace c								\square	+	Ш
-						4	20		6-8-11	19	-	╀	\sqcup
10												\vdash	+
320 —													+
}												+	+
-					Boring backfilled after	. 5	16		11-11-12	23		•	
	I				24 hrs		'"		11-11-12	20			П
315 — 15		Boring	terminated at 15 f	t									
-												$\perp \perp$	Ш
-											\vdash	\vdash	Ш
+											\vdash	\vdash	+
20											\vdash	++	+
310												++	+
_													\top
-													П
25													
305												$\perp \perp$	\perp
-											\vdash	+	\perp
-											\vdash	+	+
+											\vdash	+	+
300 - 30											\vdash	+	+
												+	+
-												\Box	\Box
-[
'						GROUND	CA	VE IN	-				
SAMPLER TYPE DRIVEN SPLIT SE	OON UNITED	OTUEDWY	SAMPLE COND BE D - DISINTEGR		AT COMPLETION	WATER Dry f	D	EPTH 1.0		NG ME	THOD OW STE	M AUG	EPS
PT - PRESSED SI		OTHERWIS	I - INTACT		AFTER 24 HRS.	Dry f	t. 1	0.8	ft. CFA		INUOUS		
CA - CONTINUOL		iER	U - UNDISTURI	BED	AFTER HRS	f					G CASI		
RC - ROCK CORE	=		L - LOST						MD -	MUD D	RILLING	i	



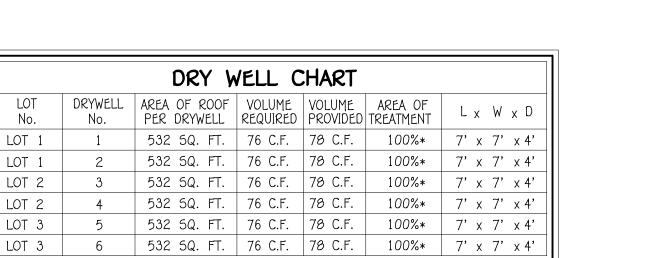
Project Name _ Location			4253 New Cut F	od Ellicot	City M	n			1-1-4		221	87A			_
Location			4255 New Cut F	nu, Ellicoti	City, ivi	<u> </u>			JOD # _		221	0/A			_
						IPLER									
Datum			Hammer Wt		_	Hole Diamete				Foreman		n (Fre			_
			Hammer Drop _			Rock Core D	iameter _	N	Α	_ Inspector	Y.	Gebr	emari	am	_
Date Started _	4/21/20	22	Pipe Size (O.D.)	2.0	_ in.	Boring Metho	d	HSA		_ Date Com	pleted	4	21/20	22	_
Elevation/	SOIL				Davis	and Sampling	Cl-	Rec.	NM		8	SPT N	(blows	/ft)	_
Depth (ft)	SYMBOLS/ SAMPLE CONDITIONS		Description		Donnig	Notes	Sample No.	(in)	(%)	SPT Blows	N	4.0			_
	CONDITIONS											10	30	5	<u>) </u>
0			and dark orange		3	" topsoil									_
-			ay, moist, mediur some silt, sand a				1	12		3-3-4	7	T			
-[avel (CL; possib												
-		Beige-a	ray with orange-	brown.		ndwater not	2	24	22.0	3-4-6	10	•		П	_
320 — 5	D	moist, l	oose, SAND, sor	me silt		intered while drilling							Ш	$\perp \downarrow$	_
1			ca, trace clay and			umily	3	20	21.7	3-3-5	8		\sqcup	\sqcup	_
1	D	Dark gr	ay and buff with	orange,				20	21.7	3-3-3	ľ	$\vdash \vdash$	\vdash	\sqcup	_
]-		moist, l	oose, silty SAND	(SM)								$\vdash\vdash$	\bot	+	_
315	D		wn and dark gra		1		4	12		11-10-13	23	\vdash	1	+	
10			nedium dense, s trace clay (SM)	siity								\vdash	\vdash	+	
-		·	• • •									\vdash	$\vdash \forall$	\forall	_
-												\vdash		Ħ	_
-		Dork ar	ay and buff with	orongo	Boring I	oackfilled after	5	18		11-16-17	33	П	-	П	_
310 —	D	moist, o	dense, silty SANI	D (SM)		24 hrs									
- 13		Boring 1	terminated at 15	ft											
-													Ш	Ш	_
-												\perp	\sqcup	\sqcup	_
1												\vdash	\vdash	+	_
305 — 20												\vdash	\vdash	+	
}												\vdash	\vdash	+	
-												\vdash	\vdash	+	_
-												\vdash	\vdash	\top	_
300														$\dagger \dagger$	_
25															_
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												\vdash	\vdash	\sqcup	_
295 — 30												\vdash	\vdash	+	_
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-												\vdash	+	+	
-												\vdash	H	+	
F										I				\perp	_
SAMPLER TYPE			SAMPLE CON	IDITIONS			GROUND WATER	- 1	AVE IN	BORI	NG ME	THOD			
DRIVEN SPLIT SP		OTHERWISE		RATED		PLETION _	Dry ft		11.0		HOLLO				
PT - PRESSED SH CA - CONTINUOU		ER	I - INTACT U - UNDISTUR	RBED	AFTER:	HRS	Dry ft		10.9		CONT			II AUC	аЕF
RC - ROCK CORE			L - LOST		70 TEN		"	_				RILLING			



GUTTER DRAIN FILTER DETAIL NOT TO SCALE

OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

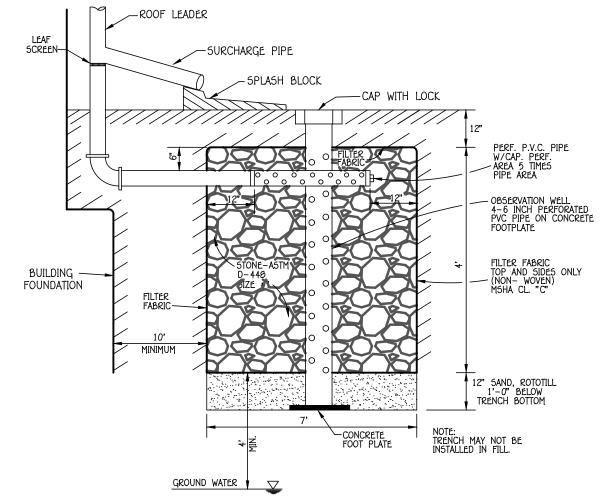
- A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS. D. WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY TWO (72) HOUR
- TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN. E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- F. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY 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.



^{*} AREA OF TREATMENT EXCEEDS THAT REQUIRED.

DRY WELL CHART

DRYWELL AREA OF ROOF VOLUME VOLUME AREA OF No. PER DRYWELL REQUIRED PROVIDED TREATMENT



DRYWELL (M-5) NO SCALE

FISHER, COLLINS & CARTER, INC. (410) 461 - 2855

SAND (SM) Boring terminated at 19 ft

PRIVEN SPLIT SPOON UNLESS OTHERWISE D - DISINTEGRATED AT COMPLETION

I - INTACT

SAMPLER TYPE

RC - ROCK CORE

PT - PRESSED SHELBY TUBE

STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1" WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS.

| CAVE IN | BORING METHOD | 15.0 | ft. | HSA - HOLLOW STEM AUGERS | 14.9 | ft. | CFA - CONTINUOUS FLIGHT AUGERS |

(HD) Edmondson 4/2/2024 Chief, Development Engineering Division Da†e 4/4/2024 Chief, Division of Land Development Date 4/4/2024 lynda Eisenberg Director Da†e

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING



STANDARD PENETRATION TEST-DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30": COUNT MADE AT 6" INTERVALS.

DRIVEN SPLIT SPOON UNLESS OTHERWISE D. DISINTEGRATED AT COMPLETION
PT - PRESSED SHELBY TUBE I - INTACT AFTER 24 HRS.

RC - ROCK CORE

| CAVE IN | DEPTH | BORING METHOD | 15.0 | ft. | HSA - HOLLOW STEM AUGERS | 14.0 | ft. | CFA - CONTINUOUS FLIGHT AUGERS

Aldo M. Vitucci, P.C.	9/19/2023	
Aldo M. Vitucci, P.E.	 Da†e	
"Professional Certification: I hereby certify that the a duly Licensed Professional Engineer under the la Expiration Date <u>2-22-25."</u>		дm

OWNER Historic Ellicott Properties, Inc. c/o Taylor Property Group 8 Park Center Ct. Sui†e 200 Owings Mills, Maryland 21117-5616

Tel: 410-465-3500

DEVELOPER Autumn Development Corporation c/o Taylor Property Group 8 Park Center Ct. 5ui†e 200 Owings Mills, Maryland 21117-5616

Tel: 410-465-3500

										_
										1
NO.			RE	VISION	I				DATE	
SUBI	I DIVISION				SECTIO	N/AREA	LC	DT No.		1
	JOURNEY'S	END			N/A			TS 1 THRU	1 3	
PLAT	NO.	BLOCK NO.	ZONE	TAX	Z/ZONE	ELEC. DIS	<u>. </u>	CEN5U5	5 TR.	1
2	6307	N/A	R-ED		25	2		602	700	

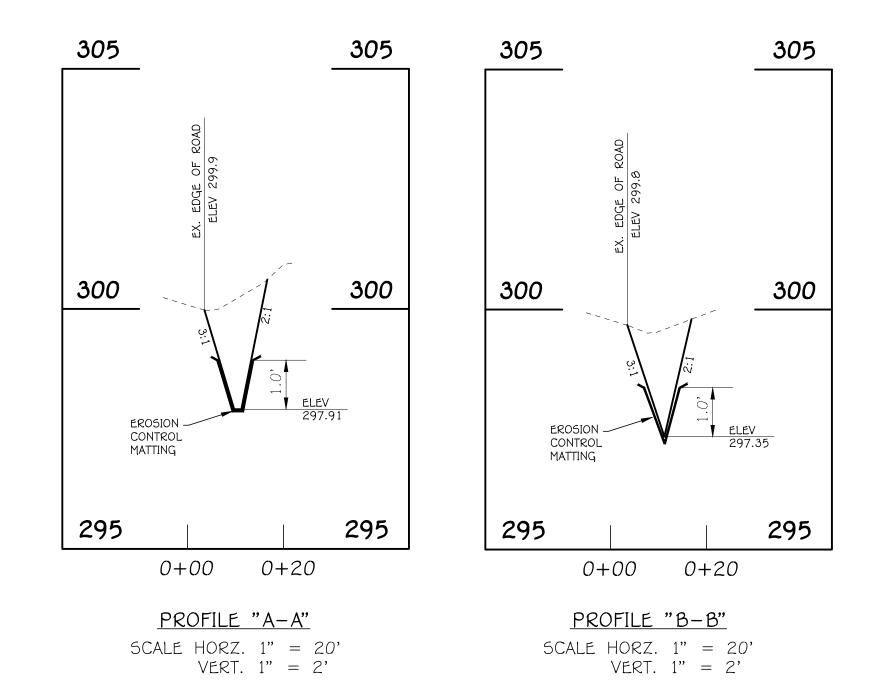
STORMWATER MANAGEMENT DETAILS & BORING LOGS

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

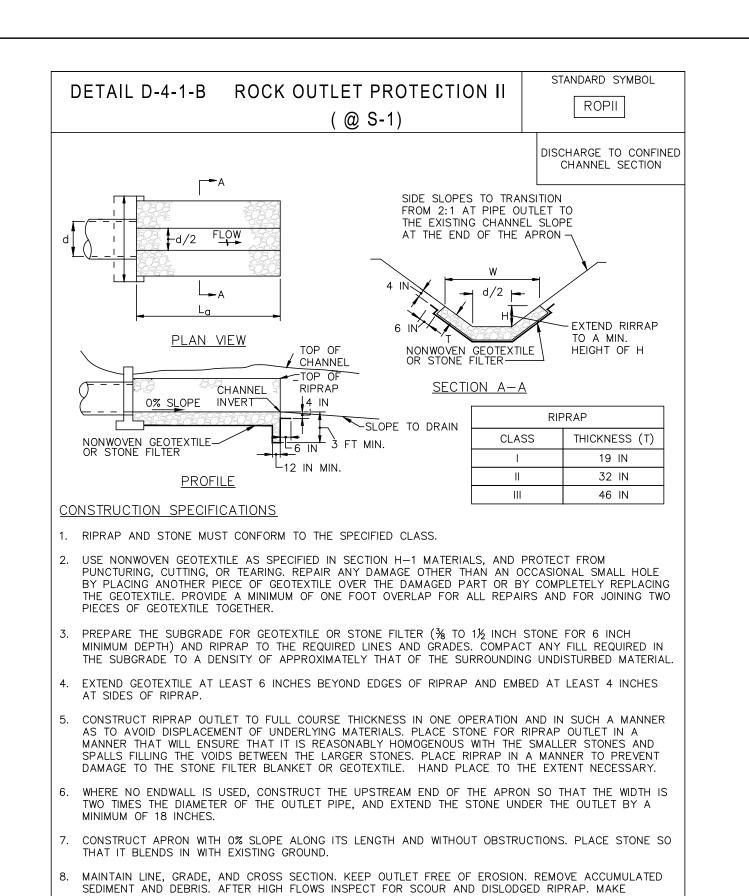
ZONED: R-ED

TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023 SHEET 8 OF 16

			STRUCTU	RE SCHE	DULE				
STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	LOCA NORTH	TION EAST	ROAD STA.	OFFSET	TYPE	REMARK5
I-1	306.75	303.59 (6")	300.75 (15")	578197.0907	1369725.0369			'5' INLET	D - 4.24
I-2	315.75		313.00 (12")	578181.2783	1369807.2612			'5' INLET	D - 4.24
M-1	303.00	298.88 (15"), 298.88 (15")	298.63 (18")	578252.2746	1369701.6058			5' DIA. SHALLOW MANHOLE	G - 5.13
5-1	299.41	297.91 (18")		578313.9719	1369727.7073			18" CONC. END SECTION	D - 5.51
5-2	302.08		300.83 (15")	578225.7833	1369691.1346			15" CONC. END SECTION	D - 5.51
5-3	307.25	306.25 (12")		578170.2866	1369783.8158			12" FLARED END SECTION	ADS OR EQUAL



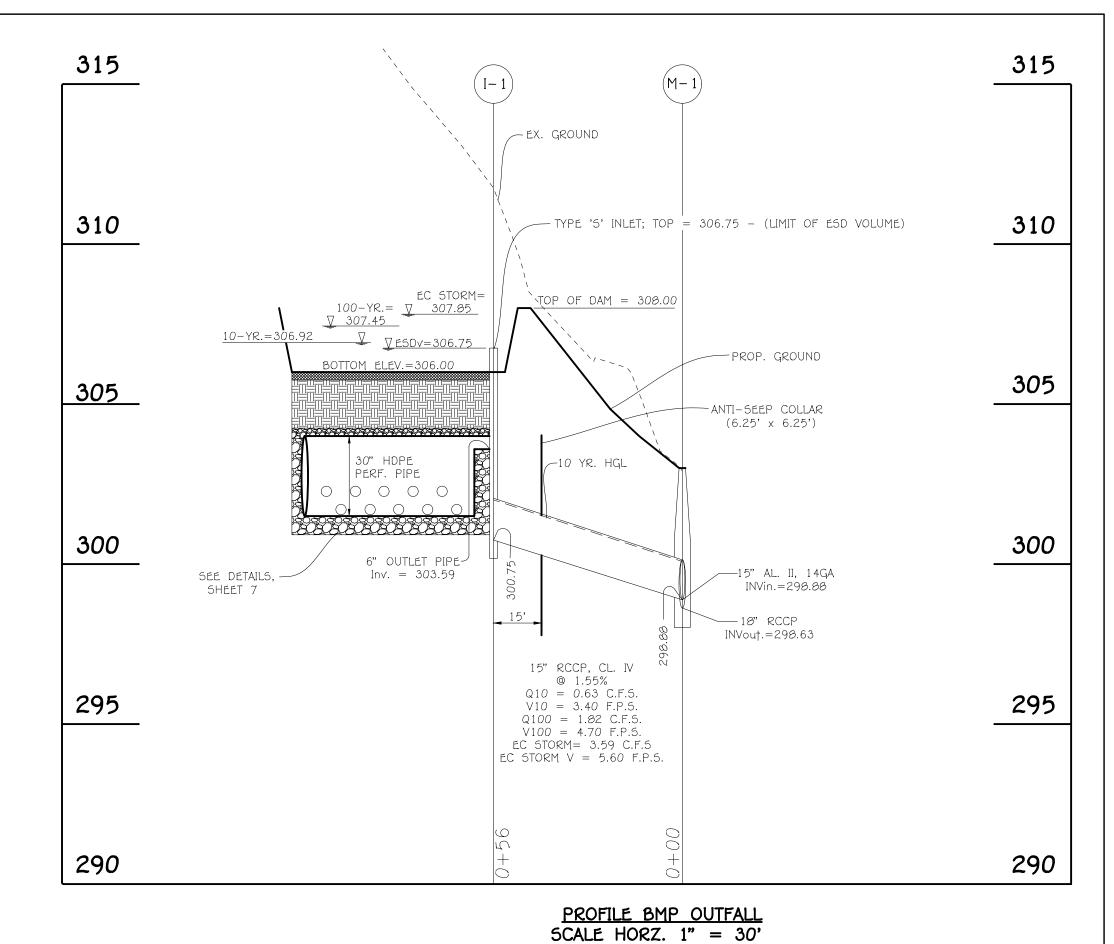
	PIPE SCHEDU	LE
SIZE	CLA55	LENGTH
4"	PVC, SCH. 40 (PERFORATED)	103 L.F.
30"	HDPE (PERFORATED)	234 L.F.
12"	HDPE	25 L.F.
15"	RCCP, CL. IV	77 L.F.
18"	RCCP, CL. IV	72 L.F.



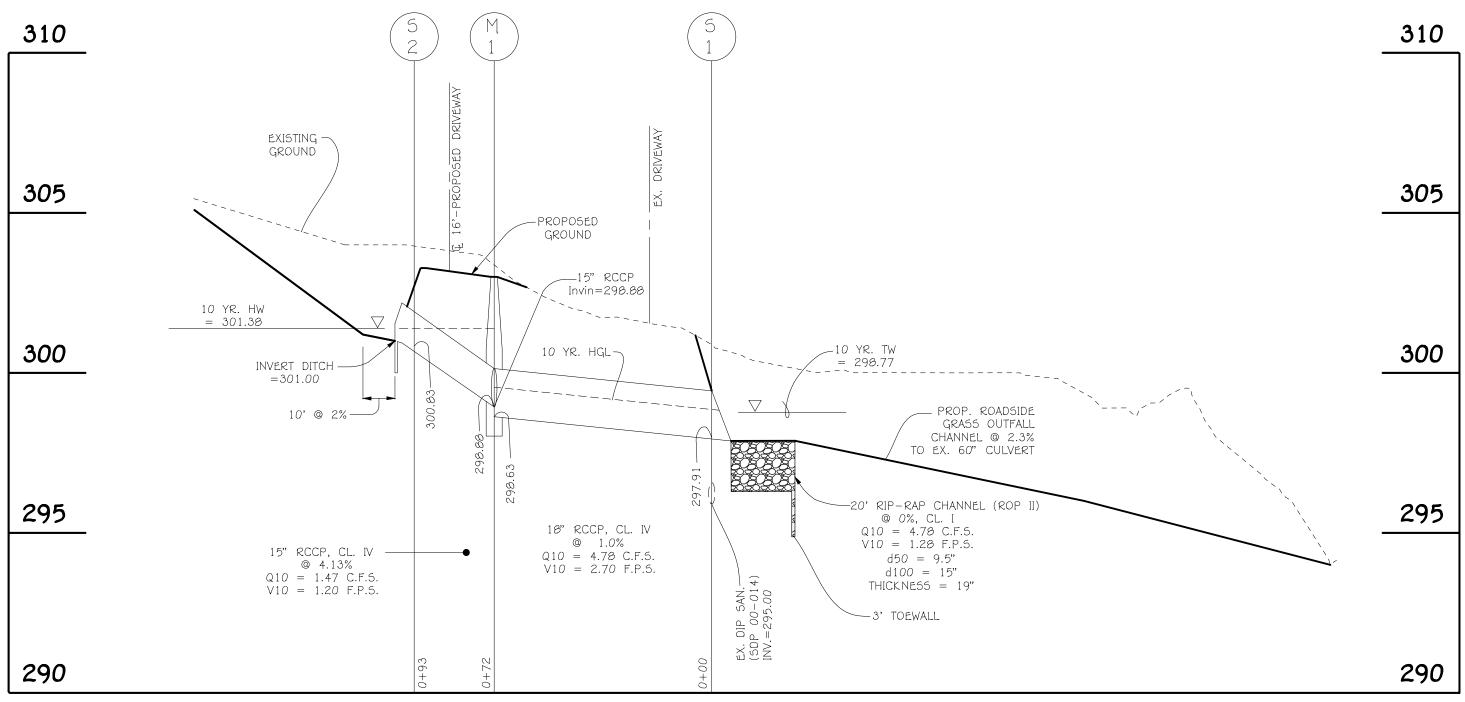
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION



VERT. 1" = 3"



PROFILE CULVERT PROFILE (1)



Docusigned by: CHD Edmondson 7063F754EF41499	4/2/2024
Chief, Development Engineering Division	Dațe
DocuSigned by: 1EB75478A22B49A Chief, Division of Land Development	4/4/2024
DocuSigned by: Lynda Eisenberg 4220B635863942E	4/4/2024
Director	Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING



Aldo M. Vitucci, P.C.	9/19/2023
Aldo M. Vitucci, P.E.	 Dațe
"Professional Certification: I hereby certify that these documen a duly Licensed Professional Engineer under the laws of the S	State of Maryland, License No. 20748,
Expiration Date <u>2-22-25."</u>	OWNER

NECESSARY REPAIRS IMMEDIATELY.

U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

REVISION DATE SUBDIVISION SECTION/AREA LOT No. JOURNEY'S END N/A LOTS 1 THRU 3 PLAT NO. BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR. N/A R-ED 25

SCALE HORZ. 1" = 30'

VERT. 1" = 3"

DEVELOPER

Autumn Development Corporation

c/o Taylor Property Group

8 Park Center Ct.

Owings Mills, Maryland 21117-5616

Tel: 410-465-3500

Sui†e 200

8 Park Center Ct.

Suite 200

Owings Mills, Maryland 21117—5616

Tel: 410-465-3500

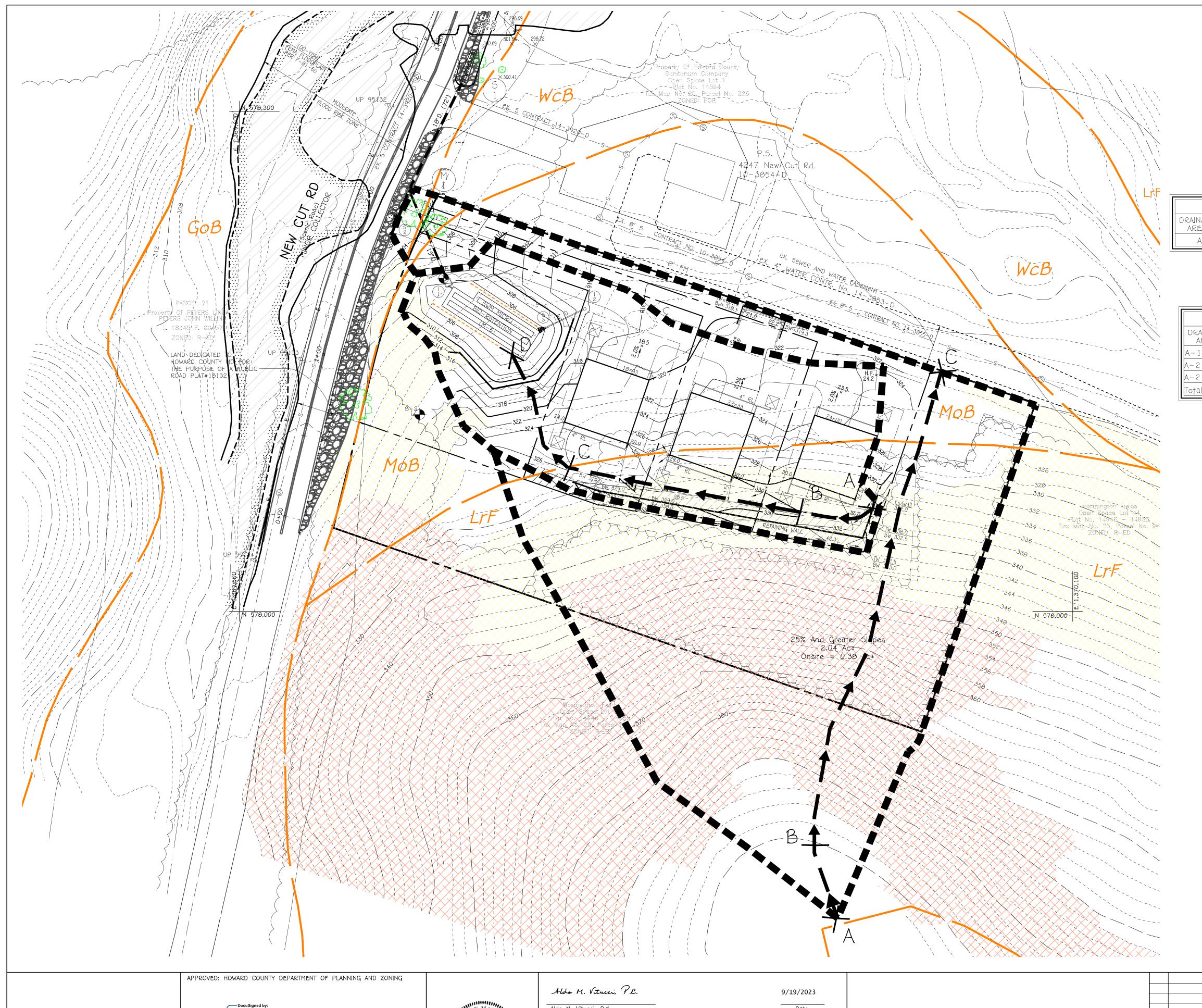
JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

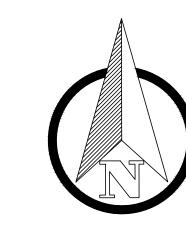
STORM DRAIN PROFILES

ZONED: R-ED

TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023 SHEET 9 OF 16

5DP-22-036





EXISTING CONDITION

SWM DRAINAGE AREA SUMMARY TABLE DRAINAGE AREA AREA AREA AREA AC. +\- RCN T/c Hrs. 10-YR. Q 100-YR. Q cfs EC Flood Q cfs A 1.93 70 0.18 4.53 8.57 14.15							
51	NM DR	PAINA	GE ARE	A SUMI	MARY T	ABLE	
DRAINAGE AREA		RCN	T/c Hrs.	10-YR. Q cfs	100-YR. Q cfs	EC Flood Q cfs	
А	1.93	70	0.18	4.53	8.57	14.15	

PROPOSED CONDITION

SWM DRAINAGE AREA SUMMARY TABLE									
DRAINAGE AREA	AREA AC. +\-	RCN	T/c Hrs.	10-YR. Q cfs	100-YR. Q cfs	EC Flood Q cfs			
A-1 to Bio	0.68	84	0.16	2.68	4.01	7.09			
A-2 Outlet	_	_	_	0.63 c.f.s. @ 306.92	1.82 c.f.s. @ 307.45	3.59 c.f.s. @ 307.85			
A-2 Bypass	1.25	72	0.15	3.40	6.12	10.04			
Total Addhyd				3.80	7.07	12.13			

*-16.7% Decrease

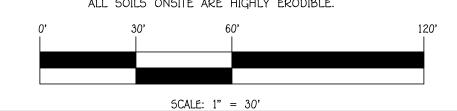
	LEGEND
SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
- <u></u> -	PROPOSED CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 2' INTERVAL
×448.5	SPOT ELEVATION
<u>18"_50_</u>	EXISTING STORM DRAIN
15" RCCP	PROPOSED STORM DRAIN PIPE
EX. F.H. - 1	EXISTING WATER LINE
_ <u>8"5</u> →	EXISTING SEWER LINE
<u>8"5</u>	PROPOSED SEWER
8"W	PROPOSED WATER
	EXISTING CABLE LINE
	EXISTING GAS LINE
OHW —	EXISTING OVERHEAD WIRE
	PROPOSED PAVING/PATH
4 4 4 4 4	PROPOSED SIDEWALKS
	FOREST CONSERVATION EASEMENT (RETENTION) FOREST CONSERVATION EASEMENT FENCING
~~~~	EXISTING TREE LINE
~~~~~	PROPOSED TREE LINE
5 28	DRYWELL (M-5)-TYPICAL
MoB LrF	SOIL LINES AND TYPES
WB WB	EXISTING WETLANDS & WETLAND BUFFER
	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
· · · · · · · · · · · · · · · · · · ·	PROPOSED ROOF LEADER
X **	DENOTES EXISTING TREES TO BE REMOVED
	DENOTES EXISTING TREES TO REMAIN
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	CRITICAL ROOT ZONE
	15%-24.99% STEEP SLOPES

Tc PATH DATA								
AREA	SEG. ID	LENGTH	FLOW TYPE	SLOPE				
	A - B	50'	OVERLAND FLOW	2.0%				
A - 1	В — C	140'	SWALE FLOW, N=0.24	2.58%				
	C - D	80'	SHALLOW CONC. FLOW - UNPAVED	17.72%				
	А — В	45'	OVERLAND FLOW	4.50%				
A - 2	B - C	290'	SWALE FLOW, N=0.24	29.00%				

SWM SUMMARY								
	ESD Volume Req. cu.ft.	Remarks						
Bio-retention #1	607	1,786	Refer to Bio comps					
Dry wells	456	468						
TOTAL SITE ESDV Required	1,063		Rev Required 234 cu.ff.					
TOTAL SITE ESDV Provided		2,254	Cpv, Rev Provided Rev = 388 cu.ft.					
TOTAL QUANTITY			ESDV has been met and quantity is required					

	50IL5 LEGEND		
50IL	NAME	CLA55	'K'VALUE
GoB	Glenville—Codorus silt loams, 0 to 8 percent slopes	С	0.49
LrF	Legore—Relay gravelly loams, 25 to 65 percent slopes, very stony	в/С	0.64
Мов	Mount Lucas silt loam, 3 to 8 percent slopes, stony	С	0.37
WcB	Watchung silt loam, 3 to 8 percent slopes, stony	D	0.43

HOWARD COUNTY SOILS MAP PAGE 14; Ellicott City SE quadrangle ALL SOILS ONSITE ARE HIGHLY ERODIBLE.



Chief, Development Engineering Division

Docusigned by:

Chief, Development Engineering Division

Dote

Docusigned by:

4/4/2024

Chief, Division of Land Development

Docusigned by:

Unda Eisenburg

4/4/2024

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

NARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKI ELLICOTT CITY, MARYLAND 21042 (410) 461 – 2855 OF MARY
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Aldo M. Vitucci, P.E.

Aldo M. Vitucci, P.E.

"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. 20748, Expiration Date 2-22-25."

Historic El

OWNER

Historic Ellicott Properties, Inc.
c/o Taylor Property Group
& Park Center Ct.
Suite 200
Owings Mills, Maryland 21117-5616
Tel: 410-465-3500

DEVELOPER

Autumn Development Corporation
c/o Taylor Property Group
8 Park Center Ct.
Suite 200

Owings Mills, Maryland 21117-5616
Tel: 410-465-3500

NO. REVISION DATE

SUBDIVISION SECTION/AREA LOT No.

JOURNEY'S END N/A LOTS 1 THRU 3

PLAT NO. BLOCK NO. ZONE TAX/ZONE ELEC. DIST. CENSUS TR.

26307 N/A R-ED 25 2 602700

50ILS & 5WM DRAINAGE AREA MAP

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

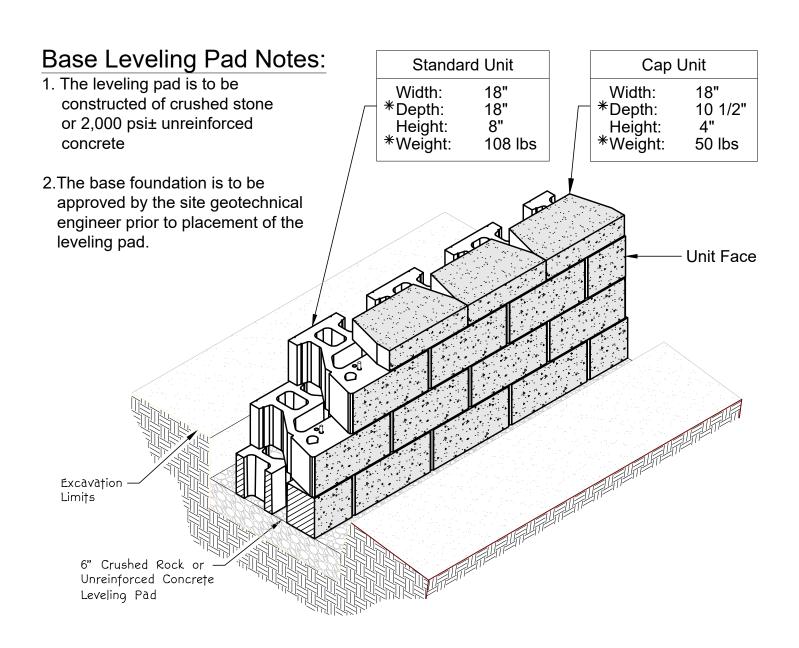
ZONED: R-ED

TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: APRIL 6, 2023

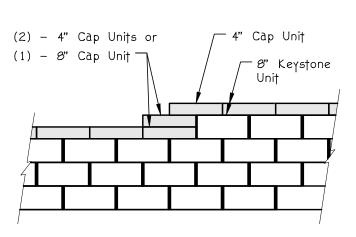
SHEET 10 OF 16



Standard Unit/Base Pad Isometric Section View * Dimensions & Weight May Vary by Region

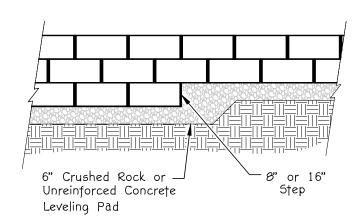
Construction Notes:

- 1. Retaining walls shall only be constructed under the observation of a Registered Professional Engineer and a (NICET, WACEL or equivalent) certified soils technician
- 2. The required bearing pressure beneath the footing of the wall shall be verified in the field by a certified spoils technician. Testing documentation shall be provided to the Howard County Inspector prior to the start of construction. The required test procedure shall be the Dynamic Cone Penetrometer Test ASTM STP-399
- 3. The suitability of fill material shall be confirmed by the onsite soils technician. Each eight (8) inch lift shall be compacted to a minimum of 95% Standard Procter Density and the testing report shall be made available to the Howard County Inspector upon completion of construction
- 4. For "CRITICAL" walls, one soil boring shall be required every 100' along the entire length of the wall Copies of all boring reports shall be provided to the Howard County Inspector prior to the start of construction
- 5. "THIS WALL IS NOT DESIGNED FOR SURCHARGE LOADS".



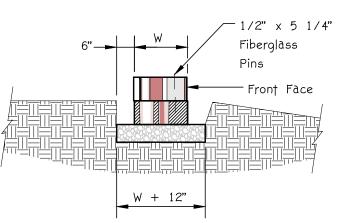
1. Secure all cap units with Keystone Kapseal or equal.

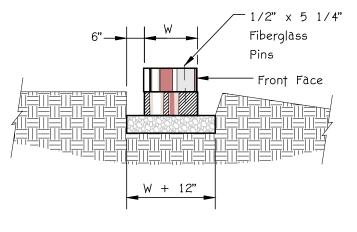
Top of Wall Steps



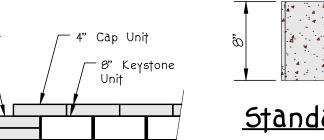
Elevation

1. The leveling pad is to be constructed of crushed stone or 2000 psi ± unreinforced concrete.

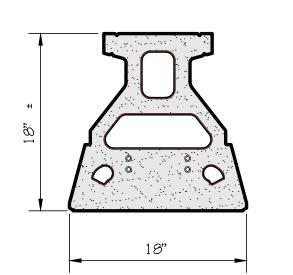




<u>Section</u> Leveling Pad Detail

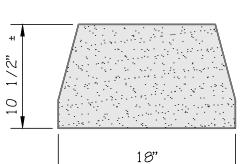


Standard Elevation 1*8*"



Standard Plan

Standard Unit * Dimensions May Vary by Region



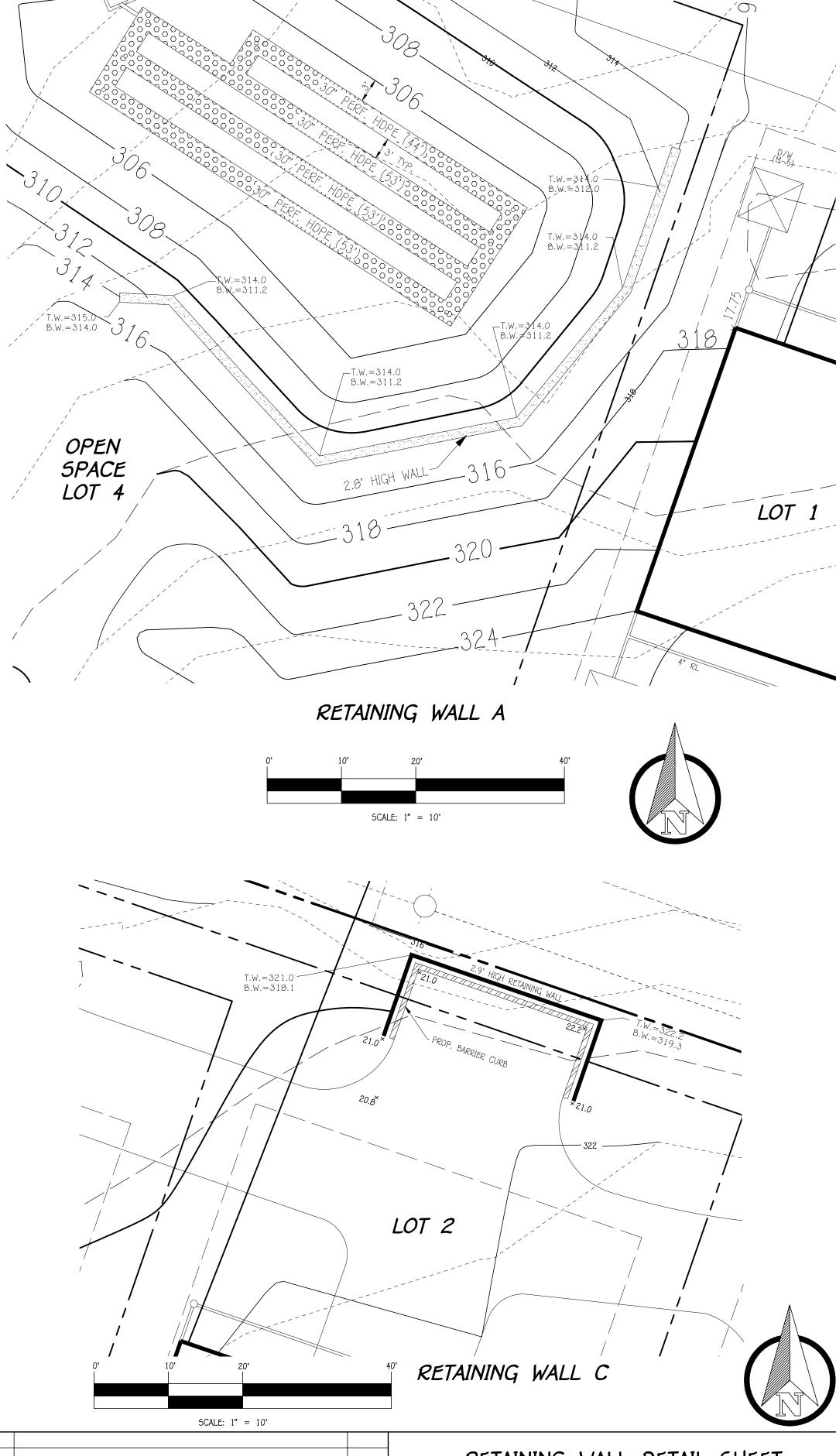
Cap Unit Plan

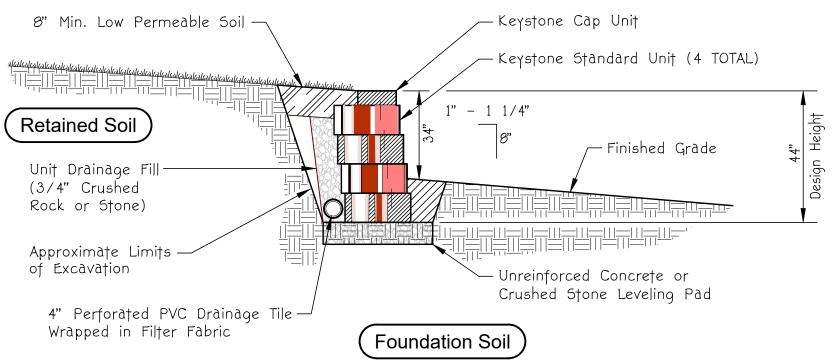
Straight Split <u>Cap Unit Option</u>

— Dimensions & Availabili†y Will Vary by Region

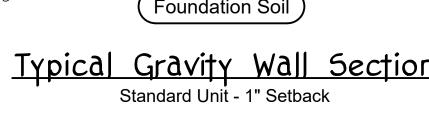


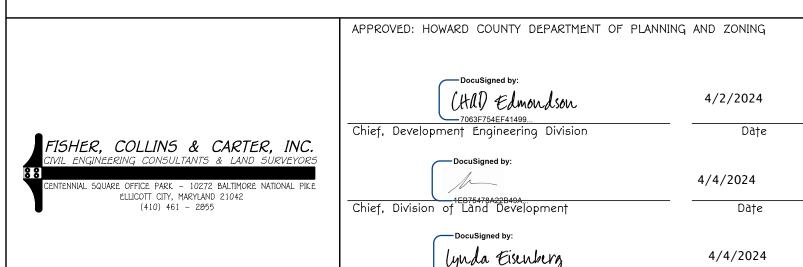
<u>Cap Unit Elevation</u>

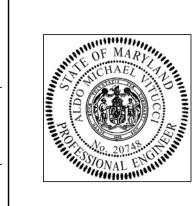




Typical Gravity Wall Section







Date

Aldo M. Vitucci, P.C.	9/19/2023
Aldo M. Vitucci, P.E.	 Dațe
"Professional Certification: I hereby certify that these documents w me, and that I am a duly Licensed Professional Engineer under th License No. <u>20748,</u> Expiration Date <u>2—22—25."</u>	

OWNER
Historic Ellicott Properties, Inc.
c/o Taylor Property Group
8 Park Center Ct.
Suițe 200
Owings Mills, Maryland 21117-5616
Tel: 410-465-3500

DEVELOPER		
Autumn Development Corporation c/o Taylor Property Group	NO.	
c/o Taylor Property Group 8 Park Center Ct.	SUBC	DIVISION
Suite 200 Owinas Mills. Maryland 21117-5616		JOURNE
Owings Mills, Maryland 21117-5616 Tel: 410-465-3500	PLAT	NO.

					SCALE: 1	." = 10'				
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5บชเ	DIVISION				SECTIO	N/AREA	LC	OT No.		
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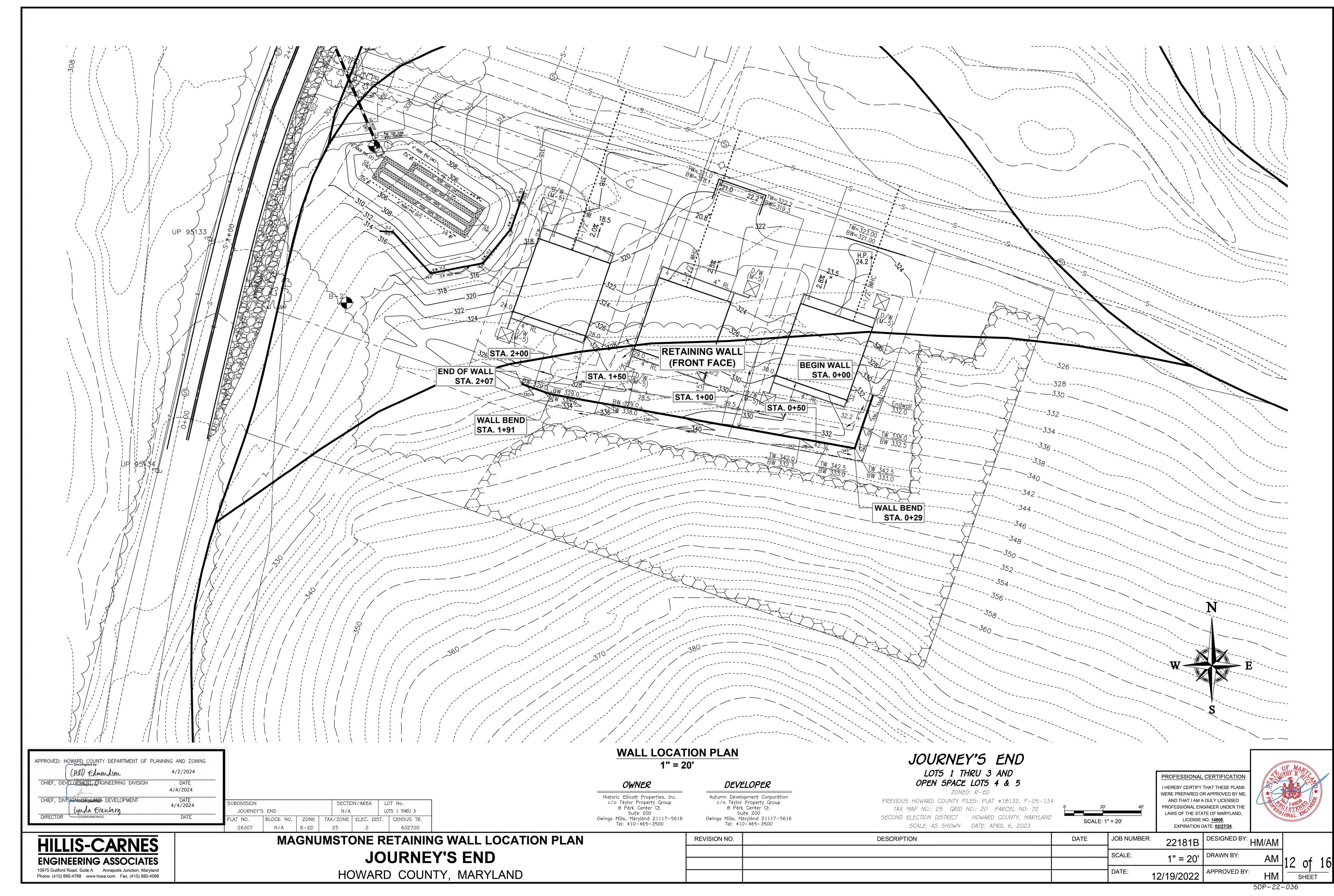
RETAINING WALL DETAIL SHEET

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

ZONED: R-ED

TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023 SHEET 11 OF 16

5DP-22-036



SPECIFICATIONS FOR MAGNUMSTONE™ GRAVITY SEGMENTAL RETAINING WALL SYSTEM

PART 1: GENERAL

1.01 DESCRIPTION

- A. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL A PRECAST CONCRETE GRAVITY SEGMENTAL RETAINING WALL (SRW) WITH MAGNUMSTONE™ UNITS AS SPECIFIED IN THE CONSTRUCTION DRAWINGS OR AS ESTABLISHED BY THE OWNER, ARCHITECT OR ENGINEER.
- B. WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT FACING SYSTEM. UNIT DRAINAGE FILL AND REINFORCED BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.

1.02 DELIVERY, STORAGE AND HANDLING

- A. CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED.
- B. CONTRACTOR SHALL PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.

1.02 REFERENCE STANDARDS

A. ENGINEERING DESIGN

- 1. AASHTO M288 GEOTEXTILE SPECIFICATION FOR HIGHWAY APPLICATIONS
- 2. AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY
- 3. NCMA DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS (SRW)
- 4. ASTM D 6638 STANDARD TEST METHOD FOR DETERMINING CONNECTION STRENGTH BETWEEN GEOSYNTHETIC REINFORCEMENT AND SEGMENTAL CONCRETE UNITS (MODULAR CONCRETE BLOCKS)
- 5. ASTM D 6916 STANDARD TEST METHOD FOR DETERMINING THE SHEAR STRENGTH BETWEEN SEGMENTAL CONCRETE UNITS

- ASTM D 698 TEST METHODS FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT
- 2. ASTM D 422 GRADATION ANALYSIS OF SOIL PARTICLES
- 3. ASTM D 4318 TEST METHODS FOR LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS
- 4. ASTM D 51 TESTING METHODS FOR MEASURING PH OF
- 5. ASTM D 2487 STANDARD CLASSIFICATION OF SOILS (UNIFIED SOIL CLASSIFICATION SYSTEM)

C. DRAINAGE PIPE

- 1. ASTM D 3034 SPECIFICATION FOR TYPE PSM POLYVINYL CHLORIDE (PVC) PIPE
- 2. ASTM D 1248 CORRUGATED PLASTIC PIPE
- D. THE OWNER OR OWNER'S REPRESENTATIVE SHALL DETERMINE THE FINAL APPLICATION, IF THE SPECIFICATIONS AND REFERENCE DOCUMENTS CONFLICT.

PART 2: MATERIALS

2.01 CONCRETE SEGMENTAL RETAINING WALL (SRW) UNITS

- A. SRW CONCRETE UNITS SHALL BE MAGNUMSTONE™ UNITS AS MANUFACTURED BY LICENSED PRODUCER IN ACCORDANCE WITH NCMA, ASTM AND/OR AASHTO STANDARDS AND CONFORM TO THE NPCA QUALITY CONTROL MANUAL FOR PRECAST CONCRETE PLANTS OR PER PROJECT ENGINEER SPECIFICATIONS.
- B. MAGNUMSTONE™ UNITS SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE OF EQUAL TO 4,000 PSI (28 MPA) (OR GREATER IF SPECIFIED) AND A MAXIMUM ABSORPTION OF 5 PCF (OR LESS IF SPECIFIED) (ASTM C 140). (SUGGESTED AIR CONTENT BETWEEN 5 AND 7%)

- C. COLOR FOR THE MAGNUMSTONE™ UNITS SHALL BE DETERMINED BY OWNER.
- D. ASTM C 1262 SHALL BE STANDARD FOR AREAS SUBJECT TO MANY FREEZE-THAW CYCLES.
- E. THE MAXIMUM WATER ABSORPTION SHALL BE LESS THAN 5%. A WATER-CEMENTITIOUS RATIO OF 0.45OR LESS IS
- F. THE HEIGHT SHALL NOT VARY MORE THAN ±3/16TH OF AN INCH (5 MM) FOR EVERY 4 FEET (1.2 M); LENGTH SHALL NOT VARY MORE THAN ±1/2" (13 MM) PER UNIT, AND DEPTH SHALL NOT VARY MORE THAN ±1/4" (6 MM) PER UNIT. ALL OTHER SPECIFICATIONS MUST MEET ASTM C 1372.
- G. THE MAGNUMSTONE™ STANDARD UNITS SHALL HAVE A FACE AREA OF 8 SQ FT (0.75 M2) AND MAGNUMSTONE™ HALF HIGH UNITS SHALL HAVE A FACE AREA OF 4 SQ FT
- H. THE MAGNUMSTONE™ STANDARD UNIT WEIGHT SHALL BE APPROXIMATELY ±1400 LBS (635 KG) WITH A GRAVEL INFILL WEIGHT OF ±800 LBS (363 KG).
- I. THE MAGNUMSTONE™ UNITS SHALL BE SOUND AND FREE OF CRACKS, CHIPS OR OTHER DEFECTS THAT MAY PREVENT THE CONTRACTOR FROM PROPERLY INSTALLING THE WALL UNITS OR REDUCE THE LONG TERM STRENGTH OF THE WALL STRUCTURE.
- J. CONCRETE SAMPLING SHALL BE IN ACCORDANCE WITH AASHTO T-141. COMPRESSION TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-23 AND AASHTO T-22. AIR CONTENT TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-152 OR AASHTO T-196. SLUMP TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-119. 28 DAY TESTING SHALL BE IN ACCORDANCE WITH AASHTO T-23 AND AASHTO T-22 OR AS SPECIFIED BY THE PROJECT
- K. REINFORCING MESH (IF REQUIRED) SHALL BE SHOP-FABRICATED OF COLD DRAWN STEEL WIRE CONFORMING TO THE MINIMUM REQUIREMENTS OF ASTM A-82 (AASHTO M-32) AND SHALL BE WELDED INTO THE FINISHED MESH FABRIC IN ACCORDANCE WITH ASTM A-185 (ASSHTO M-55). GALVANIZATION SHALL BE APPLIED AFTER THE MESH IS FABRICATED AND CONFORM TO THE MINIMUM REQUIREMENTS OF ASTM A-123 (AASHTO M-111). CONNECTOR BARS SHALL BE FABRICATED OF COLD DRAWN STEEL wire conforming to the requirements of ASTM A-82 (AASHTO M-32) and galvanized in accordance with ASTM A-123 (AASHTO M-111).
- L. ELECTROCHEMICAL REQUIREMENTS, IF APPLICABLE, WILL FOLLOW THE AASHTO SPECIFICATIONS.

2.02 FOUNDATION SOIL

ENGINEER.

- A. THE FOUNDATION SOILS SHALL BE UNDISTURBED NATIVE
- B. THE FOUNDATION SOILS SHALL BE INSPECTED AND TESTED BY AN ENGINEER BEFORE INSTALLING BASE
- C. DISTURBED OR UNSUITABLE FOUNDATION SOILS SHALL BE PROPERLY COMPACTED OR REPLACED WITH ACCEPTABLE SOILS AS SPECIFIED BY THE ENGINEER.

2.03 BACKFILL SOIL

- A. BACKFILL SOILS SHALL BE FREE OF ORGANIC MATERIALS AND OTHER UNSUITABLE MATERIALS.
- B. SOILS CLASSIFIED AS GP, GW, SP, SW, OR SM TYPES IN ACCORDANCE WITH ASTM D 2487 ARE SUITABLE. ALL SOILS SHALL BE APPROVED BY THE ENGINEER.
- C. THE PLASTICITY INDEX OF THE BACKFILL SOILS SHALL HAVE A FINE FRACTION OF LESS THAN 20.

2.04 BASE LEVELING MATERIALS

- A. THE BASE LEVELING GRAVEL SHALL BE WELL GRADED COMPACTED GRAVEL (GW).
- B. UNREINFORCED CONCRETE BASE LEVELING PAD CAN
- ALSO BE USED IF SPECIFIED. C. AASHTO SPECIFICATIONS SHALL BE FOLLOWED WHEN

CONSTRUCTING CONCRETE FOOTING FOR DOT PROJECTS. 2.05 DRAINAGE AND UNIT INFILL AGGREGATE

A. DRAINAGE AGGREGATE SHALL BE CLEAN CRUSHED GRAVEL MEETING THE GRADATION IN ACCORDANCE WITH

B. DRAINAGE AGGREGATES SHALL BE PLACED IN ALL UNIT VOIDS AND WEDGE BETWEEN UNITS WITH UNIFORM PARTICLE SIZE NO LESS THAN 1" (25 MM) AND NOT MORE THAN 5% PASSING THROUGH THE NO. 200 SIEVE.

2.06 DRAINAGE PIPE

- A. DRAINAGE PIPE SHALL BE PERFORATED PVC OR CORRUGATED HDPE PIPE WITH A MINIMUM SIZE OF 4" (0.1 M) IN DIAMETER.
- B. GEOTEXTILE WRAP AROUND THE DRAINAGE PIPE MAY BE USED AS SPECIFIED BY THE ENGINEER.
- C. DRAINAGE PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM D 3034 AND/OR ASTM D 1248.

2.07 GEOTEXTILE FABRIC

- A. GEOTEXTILES SHALL BE NON-WOVEN AS SPECIFIED BY THE SPECIFICATIONS AND CONSTRUCTION DRAWINGS.
- GEOTEXTILES WHEN USED AS A SOIL SEPARATOR SHALL BE PERMEABLE, ALLOWING WATER TO EFFECTIVELY PASS THROUGH THE FABRIC OPENINGS.

PART 3 EXECUTION

3.01 EXCAVATION A. THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING PLANS.

- B. RETAINING WALL EXCAVATIONS SHALL BE PERFORMED IN COMPLIANCE WITH MOSH AND OSHA REQUIREMENTS. CARE SHALL BE EXERCISED TO PROPERLY SHORE OR SLOPE BACK EXCAVATIONS TO MAINTAIN STABILITY. IF SLOPE FLATTENING IS NOT ACHIEVABLE. TEMPORARY SUPPORT OF EXCAVATION FOR THE RETAINING WALL CONSTRUCTION SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AND PERFORMED IN ACCORDANCE WITH ANY JURISDICTIONAL SAFETY STANDARDS.
- B. BACK EXCAVATION CUTS SHALL BE NOTCHED BENCHES OF 5 FEET (1.5 M) VERTICAL FOR EVERY 2 FEET (0.6 M) HORIZONTAL BENCH, OR AS PER THE ENGINEER'S SPECIFICATIONS.
- C. OVER-EXCAVATED OR FILLED AREAS SHALL BE WELL COMPACTED AND INSPECTED BY AN ENGINEER.
- D. EXCAVATED MATERIALS THAT ARE USED FOR THE BACKFILLING REINFORCEMENT ZONE SHALL BE PROTECTED FROM WEATHER.
- E. ORGANIC OR OTHER NON-GRAVEL MATERIALS SHALL NOT BE USED IN THE BACKFILLED REINFORCEMENT ZONE.

3.02 FOUNDATION PREPARATION

- A. THE FOUNDATION TRENCH SHALL BE EXCAVATED TO THE DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS.
- B. THE REINFORCED ZONE AND LEVELING PAD FOUNDATION SOIL SHALL BE EXAMINED BY THE ON-SITE ENGINEER TO ENSURE PROPER BEARING STRENGTH.
- C. SOILS NOT MEETING THE REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH PROPER MATERIALS.
- D. FOUNDATION MATERIALS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DRY DENSITY, OR GREATER, BEFORE PLACING LEVELING PAD (ASTM D 698).

3.03 BASE LEVELING PAD

- A. GRANULAR AGGREGATE MATERIALS, MINIMUM 6 INCHES (0.15 M) THICK AND WIDTH SPECIFIED ON THE CONSTRUCTION DRAWINGS, SHALL BE PLACED AND COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DRY DENSITY. OR GREATER (AN UNREINFORCED CONCRETE PAD MAY BE USED).
- B. THE BASE LEVELING PAD SHALL BE LEVEL HORIZONTALLY AND BACK TO FRONT TO ENSURE THE FIRST COURSE OF UNITS ARE LEVEL.
- C. THE TOP OF BASE LEVELING PAD ELEVATION AND INSTALLATION OF GRANULAR MATERIALS SHALL BE IN

- ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DRAWINGS. THE TOE OF THE WALL BURIAL DEPTH SHALL BE CONSTRUCTED AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- D. WHERE CONCRETE REINFORCED FOOTING IS REQUIRED, THEY SHALL BE INSTALLED BELOW THE FROST LEVEL AND CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSTRUCTION DRAWINGS.

3.04 UNIT INSTALLATION

- A. THE FIRST COURSE OF MAGNUMSTONE™ UNITS SHALL BE CAREFULLY PLACED ON A WELL-GRADED GRAVEL OR CONCRETE LEVELING PAD.
- B. THE FIRST ROW OF UNITS SHALL BE LEVEL FROM UNIT TO UNIT AND FROM BACK TO FRONT.
- C. A STRING LINE CAN BE USED TO ALIGN A STRAIGHT WALL. PVC FLEX PIPES CAN BE USED TO ESTABLISH SMOOTH CONVEX OR CONCAVE CURVED WALLS.
- D. THE SMOOTH BACK OF THE UNITS SHALL BE USED FOR ALIGNMENT AND MEASURING TO ENSURE SMOOTH CURVES AND STRAIGHT WALLS.
- E. THE SECOND COURSE OF UNITS SHALL HAVE THE CONCRETE CONNECTING LUGS IN THE UNIT VOIDS OF THE FIRST COURSE BELOW, AND PULLED FORWARD RESTING THE LUGS AGAINST THE FRONT EDGE OF THE TWO LOWER
- F. ALL UNITS SHALL BE LAID SNUGLY TOGETHER AND PARALLEL TO THE STRAIGHT OR CURVED LINES.
- G. THE MAGNUMSTONE™ UNITS SHALL BE SWEPT CLEAN OF ALL DIRT OR ROCKS BEFORE INSTALLING THE NEXT LAYER OF UNITS OR PLACING THE GEOSYNTHETICS.
- H. AFTER LAYING EACH COURSE, PERFORM A VISUAL OR STRING LINE STRAIGHTNESS CHECK.

3.05 DRAINAGE COMPONENTS

- A. DRAINAGE PIPE AND GEOTEXTILE SHALL BE INSTALLED AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- B. MAGNUMSTONE™ UNIT VOIDS SHALL BE FILLED WITH A FREE-DRAINING GRANULAR MATERIAL, SUCH AS 3/4" (19 MM) CLEAR ROCK (CLEAN GRAVEL).
- C. CLEAN GRAVEL DOES NOT REQUIRE MECHANICAL COMPACTION.

- A. REINFORCED BACKFILL MATERIALS SHALL BE PLACED IN MAXIMUM LIFTS OF 8" (0.2 M) AND SHALL BE COMPACTED TO A MINIMUM 95% STÀNDARD PROCTOR DENSITY OR GREATER. IN ACCORDANCE WITH ASTM D 698 TO THE LINES AND GRADES SHOWN ON THE PROJECT GRADING
- B. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE USED WITHIN 2 FEET (0.6 M) OF THE BACK OF THE
- C. SOIL DENSITY TESTING SHALL NOT BE TAKEN WITHIN THIS 2 FOOT (0.6 M) AREA.
- D. THE TOE OF THE WALL SHALL BE FILLED AND COMPACTED AS THE WALL IS BEING CONSTRUCTED.

3.07 CAP INSTALLATION

- A. THE MAGNUMSTONE™ FULL SIZE CAP UNITS SHALL BE PLACED IN THE SAME INSTALLATION PROCEDURES AS THE REGULAR MAGNUMSTONE™ UNITS.
- B. GEOTEXTILES SHOULD BE USED AS A SOIL SEPARATOR BETWEEN THE FINAL LAYER OF DRAINAGE MATERIALS AND THE TOPSOIL MATERIALS TO PREVENT FINES FROM MIGRATING INTO THE DRAINAGE GRAVEL OR THROUGH THE WALL FACE.
- C. A MAGNUMSTONE™ 6" (0.15 M) HIGH CAP CAN BE USED TO COMPLETE THE TOP OF THE WALL. CONCRETE ADHESIVE SHALL BE USED TO GLUE THE CAP UNITS TO THE REGULAR UNITS.

- NO TREES SHALL BE PLANTED WITHIN 10 FEET OF THE TOP OF THE RETAINING WALL.
- 2. RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NICET, WACEL, OR EQUIV.) CERTIFIED SOILS TECHNICIAN.
- 3. ONE SOIL BORING SHALL BE REQUIRED EVERY ONE HUNDRED FEET ALONG THE ENTIRE LENGTH OF THE WALL. COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION.
- 4. THE REQUIRED BEARING PRESSURE BENEATH THE WALL SYSTEM SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO START OF CONSTRUCTION. THE REQUIRED BEARING TEST SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM STP-399.
- 5. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN. EACH 8" LIFT MUST BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF CONSTRUCTION.
- 6. WALLS SHALL NOT BE CONSTRUCTED ON UNCERTIFIED FILL MATERIALS.
- 7. WALLS SHALL NOT BE CONSTRUCTED WITHIN A HOWARD CO. RIGHT-OF-WAY OR EASEMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 4/2/2024 (Hdl) Edmondson CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/4/2024 CHIEF, DIVISION OF COMMENT 4/4/2024 lynda Eisenberg

JBDIVISION SECTION/AREA LOT No. LOTS 1 THRU 3 JOURNEY'S END |BLOCK NO. | ZONE | TAX/ZONE | ELEC. DIST. CENSUS TR. N/A

OWNER Historic Ellicott Properties, Inc. c/o Taylor Property Group

8 Park Center Ct.

Owings Mills, Maryland 21117-5616

Autumn Development Corporation c/o Taylor Property Group 8 Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

DEVELOPER

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5 ZONED: R-ED

PREVIOUS HOWARD COUNTY FILES: PLAT #18132, F-05-134 TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023

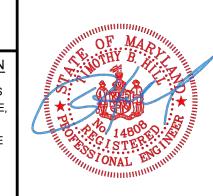
PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY M AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER TH LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14808, EXPIRATION DATE: 02/27/24 DESIGNED BY: HM/AM

AS SHOWN

12/19/2022

DRAWN BY:

APPROVED BY



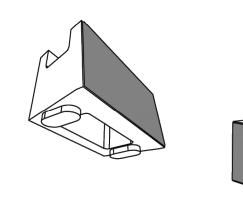


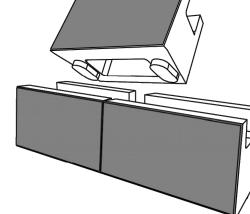
MAGNUMSTONE SPECIFICATIONS AND NOTES JOURNEY'S END

HOWARD COUNTY, MARYLAND

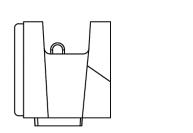
Tel: 410-465-3500 JOB NUMBER REVISION NO. DESCRIPTION DATE SCALE DATE:

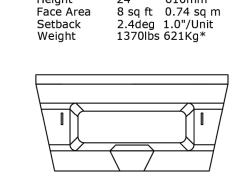
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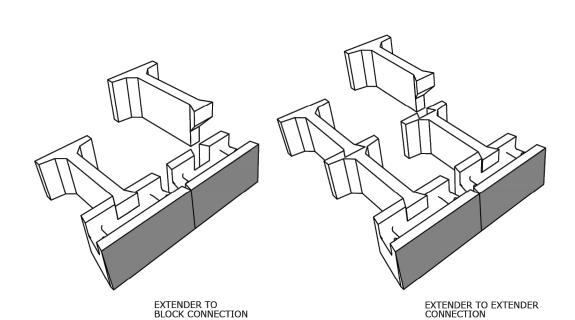






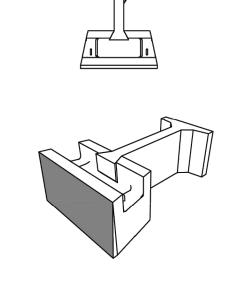


1219mm 991mm 610mm 610mm

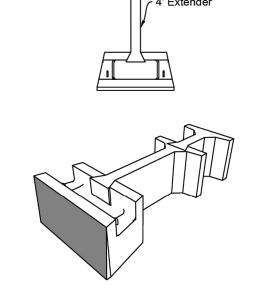


EXTENDER INSTALLATION

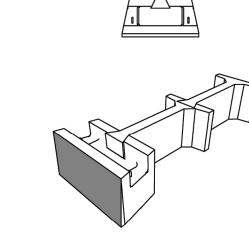
24" (610MM)



72" (1829MM)

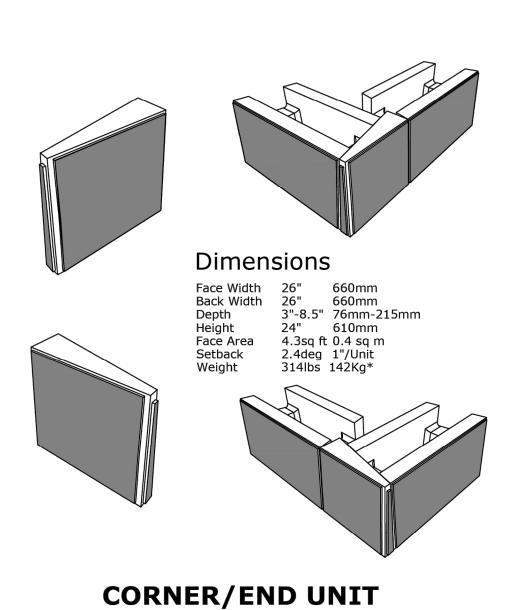


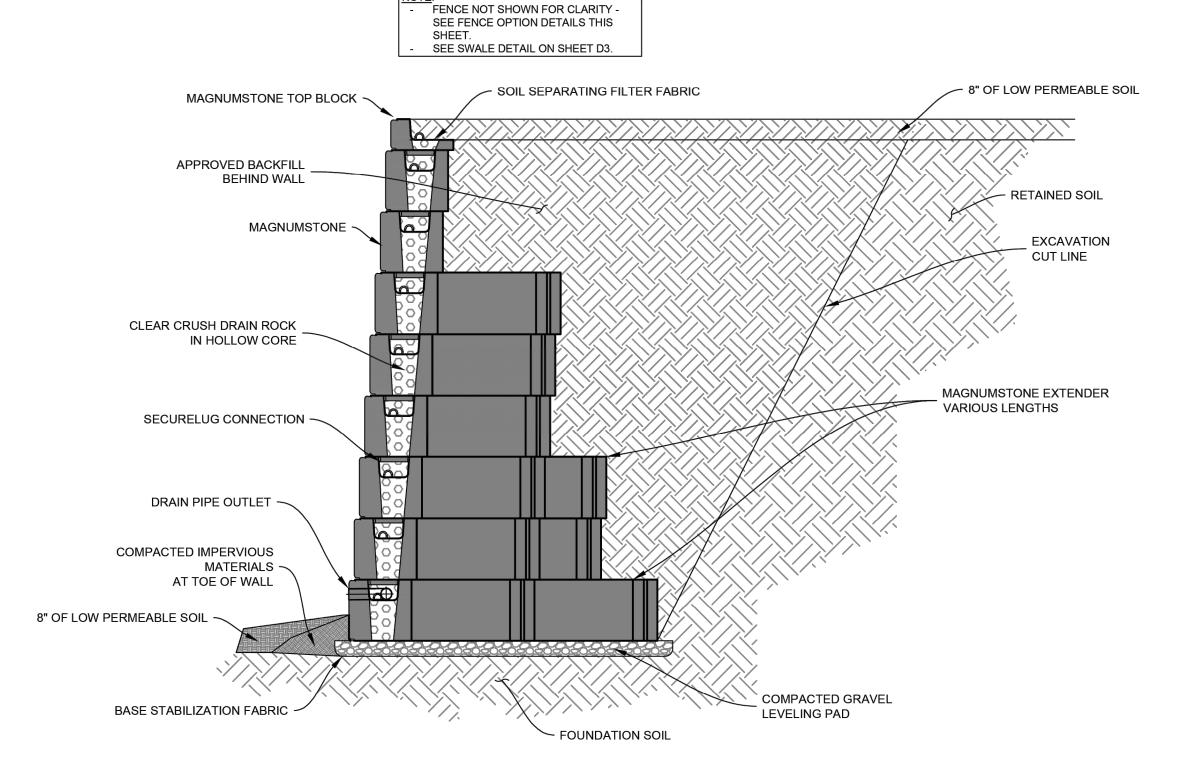
96" (2438MM)



120" (3048MM)

STANDARD UNIT





GRAVITY WALL TYPICAL SECTION WITH EXTENDERS

SUBDIVISION				SECTION/AREA LO		OT No.		
JOURNEY'S END				N/A L		LO	OTS 1 THRU 3	
PLAT NO.	BLOCK NO.	ZONE	TAX	(/ZONE	ELEC. DIS	T.	CENSUS TR.	
26307	N/A	R-ED		25	2		602700	

OWNER

Historic Ellicott Properties, Inc. c/o Taylor Property Group 8 Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development

Chief, Development Engineering Division

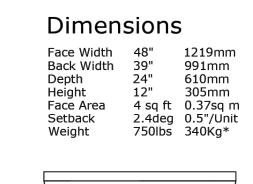
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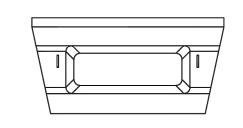
CHAD Edmondson

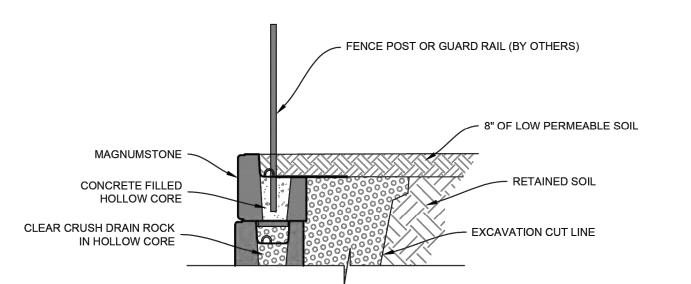
lynda Eisenberg Director - Department of Planning and Zoning 4/4/2024

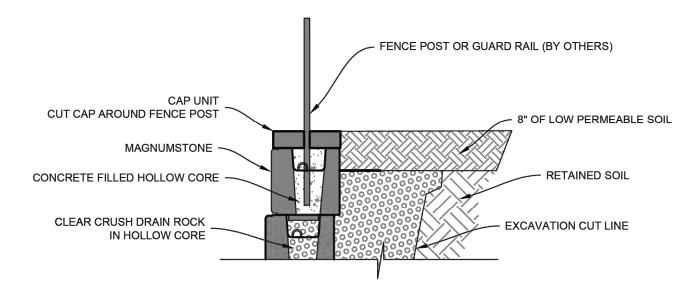
4/2/2024

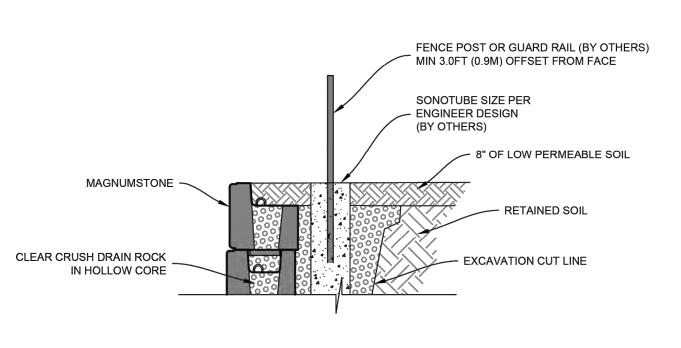
4/4/2024











JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5

ZONED: R-ED PREVIOUS HOWARD COUNTY FILES: PLAT #18132, F-05-134 TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY M AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND,

LICENSE NO. <u>14808</u>, EXPIRATION DATE: 02/27/24.



DEVELOPER

Autumn Development Corporation c/o Taylor Property Group 8 Park Center Ct.

Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

HALF HIGH UNIT FENCE THROUGH HOLLOW CORE

FENCE THROUGH HOLLOW CORE W /CAP

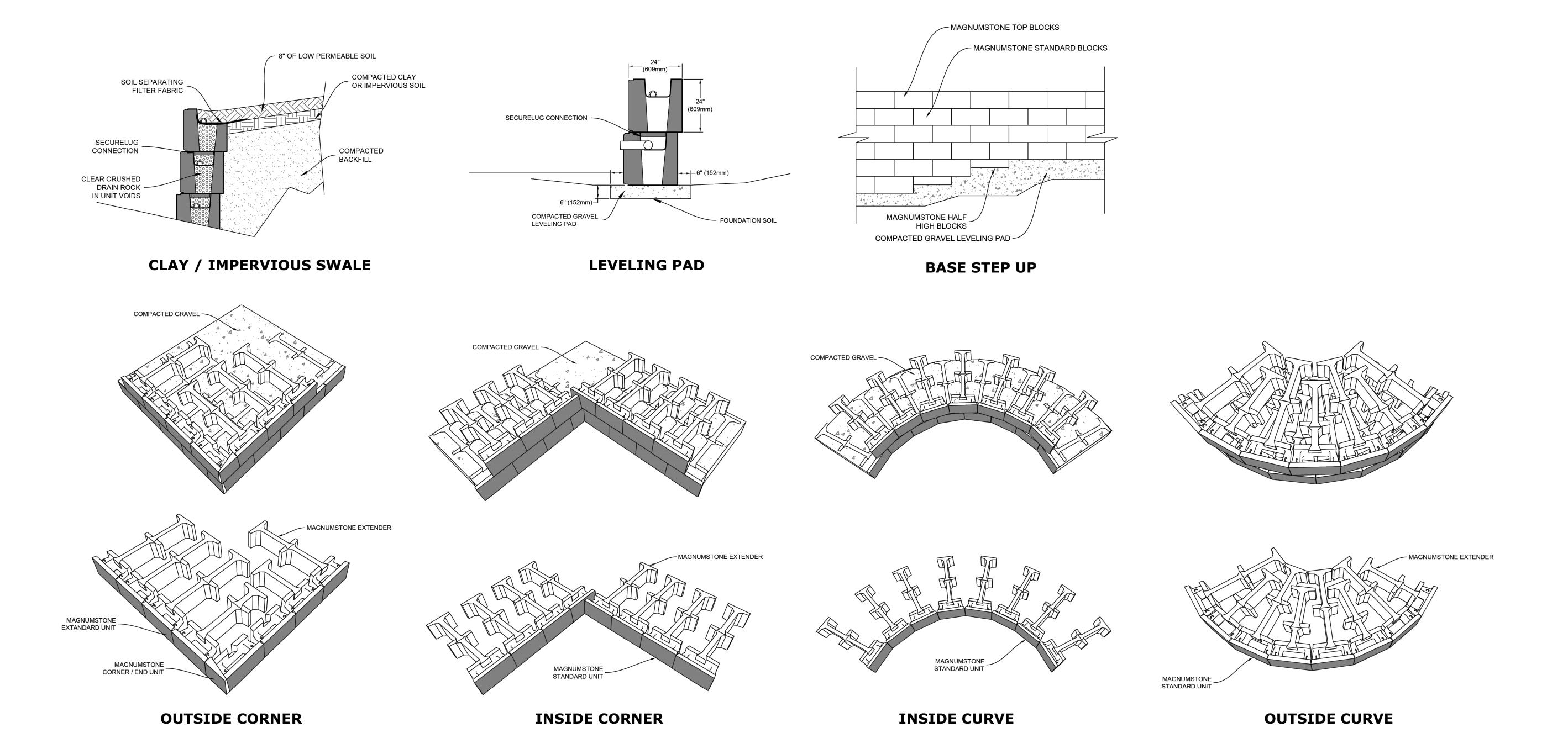
FENCE WITH SONOTUBE BEHIND BLOCK

HILLIS-CARNES **ENGINEERING ASSOCIATES** 10975 Guilford Road, Suite A Annapolis Junction, Maryland Phone: (410) 880-4788 www.hcea.com Fax: (410) 880-4098

MAGNUMSTONE GRAVITY RETAINING WALL TYPICAL DETAILS								
JOURNEY'S END								
HOWARD COUNTY, MARYLAND								

SION NO.	DESCRIPTION	DATE	JOB NUMBER:	22181B	DESIGNED BY:	- Н
			SCALE: AS		DRAWN BY:	
			DATE: 1	2/19/2022	APPROVED BY:	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 4/4/2024 Chief, Division of Land Development 4/2/2024 CHD Edmondson Chief, Development Englishering Division 4/4/2024 lynda Eisenberg Director - Department of Planning and Zoning



SUBDIVISION				SECTION/AREA LOT No.			T No.			
JOURNEY'S END				N/A		LOTS 1 THRU 3				
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE		TAX/ZONE		ELEC. DIS	T.	CENSUS TR.	
26307	N/A	R-ED	25		2		602700			

DEVELOPER Historic Ellicott Properties, Inc. c/o Taylor Property Group & Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

Autumn Development Corporation c/o Taylor Property Group & Park Center Ct. Suite 200 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500

JOURNEY'S END LOTS 1 THRU 3 AND OPEN SPACE LOTS 4 & 5 ZONED: R-ED

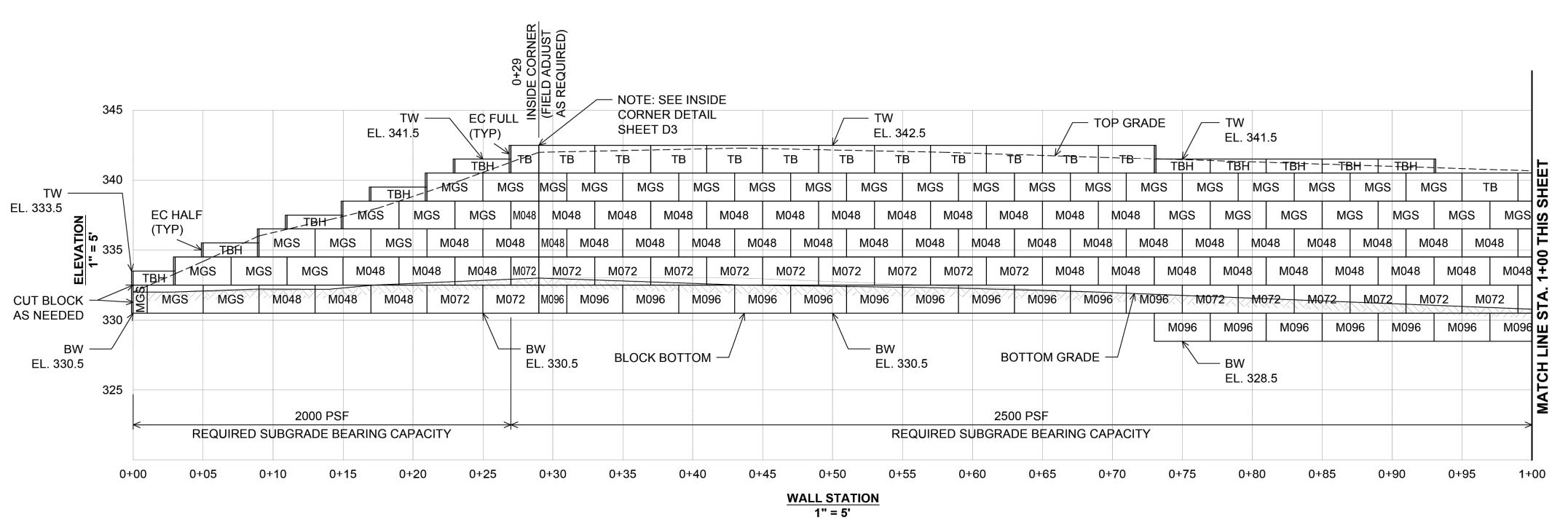
PREVIOUS HOWARD COUNTY FILES: PLAT #18132, F-05-134 TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: APRIL 6, 2023

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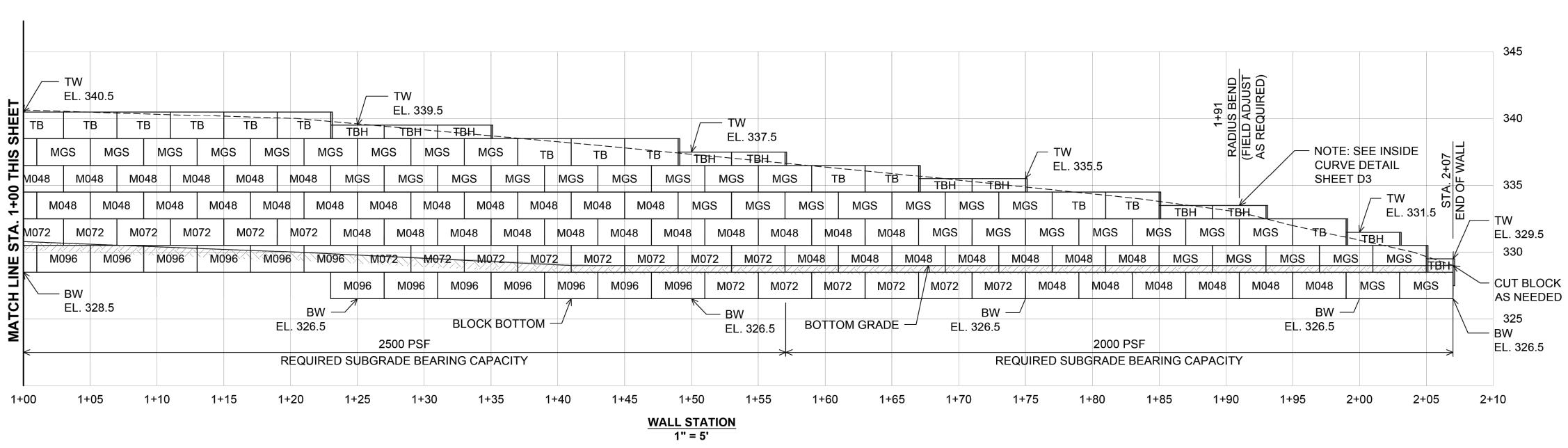
HILLIS-CARNES ENGINEERING ASSOCIATES 10975 Guilford Road, Suite A Annapolis Junction, Maryland Phone: (410) 880-4788 www.hcea.com Fax: (410) 880-4098 MAGNUMSTONE GRAVITY RETAINING WALL TYPICAL DETAILS **JOURNEY'S END** HOWARD COUNTY, MARYLAND

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REVISION NO.	DESCRIPTION	DATE	JOB NUMBER:	22181B	1
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			SCALE: A C	AS SHOWN	. L l '
			A	2 SUCANIA	
			DATE.		_
			DATE: 1	2/19/2022	/

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 4/4/2024 Chief, Division of Land Development Dațe 4/2/2024 CHAD Edmondson Chief, Development Engineering Division Docusigned by: 4/4/2024 lynda Eisenberg Director - Department of Planning and Zoning



MAGNUMSTONE WALL ELEVATION



N/A

25

BLOCK NO. ZONE TAX/ZONE ELEC. DIST.

R-ED

LOTS 1 THRU 3

CENSUS TR.

602700

MAGNUMSTONE WALL ELEVATION

SUBDIVISION

PLAT NO.

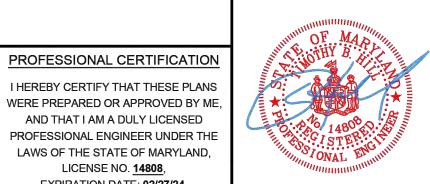
JOURNEY'S END

JOURNEY'S END LOTS 1 THRU 3 AND OWNER DEVELOPER Historic Ellicott Properties, Inc. Autumn Development Corporation SECTION/AREA LOT No.

c/o Taylor Property Group c/o Taylor Property Group 8 Park Center Ct. 8 Park Center Ct. Suite 200 Suite 200 Owings Mills, Maryland 21117-5616 Owings Mills, Maryland 21117-5616 Tel: 410-465-3500 Tel: 410-465-3500

OPEN SPACE LOTS 4 & 5 I HEREBY CERTIFY THAT THESE PLAN ZONED: R-ED WERE PREPARED OR APPROVED BY M PREVIOUS HOWARD COUNTY FILES: PLAT #18132, F-05-134 TAX MAP NO.: 25 GRID NO.: 20 PARCEL NO: 72 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND LICENSE NO. 14808,

SCALE: AS SHOWN DATE: APRIL 6, 2023



AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, EXPIRATION DATE: 02/27/24.

DRAWN BY:

APPROVED BY:



HILLIS-CARNES ENGINEERING ASSOCIATES 10975 Guilford Road, Suite A Annapolis Junction, Maryland

Phone: (410) 880-4788 www.hcea.com Fax: (410) 880-4098

MAGNUMSTONE RETAINING WALL ELEVATION JOURNEY'S END HOWARD COUNTY, MARYLAND

JOB NUMBER: REVISION NO. DESCRIPTION DATE 22181B AS SHOWN DATE: 12/19/2022

AM