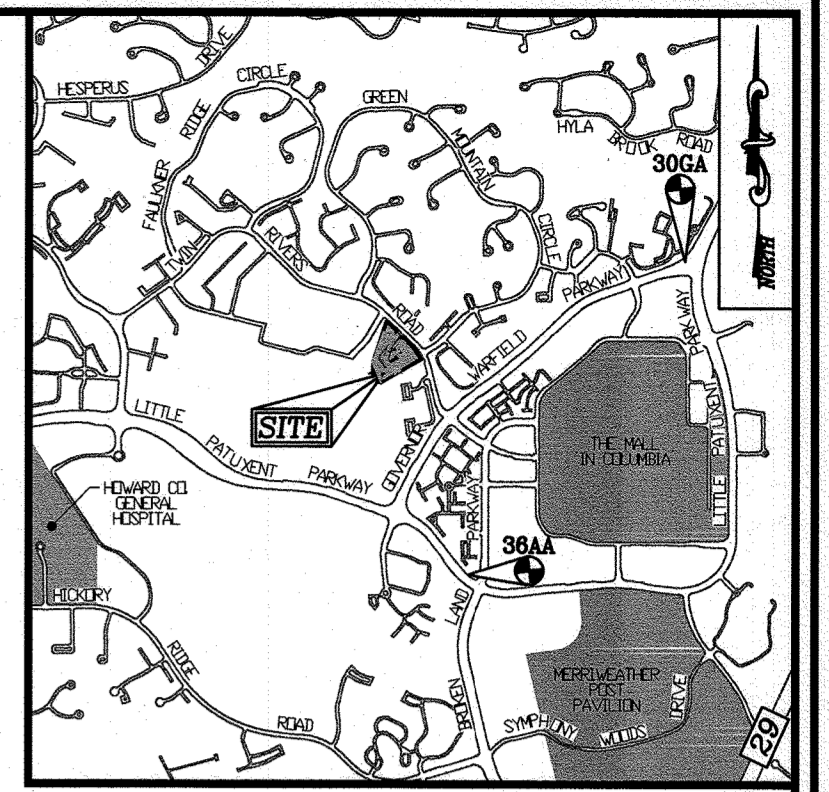


ENVIRONMENTAL CONCEPT PLAN ROSLYN RISE VILLAGE OF WILDE LAKE, SECTION 10, AREA 4, LOT 2

BENCHMARKS

HOWARD COUNTY BENCHMARK - 30GA (CONC. MONUMENT)
N 566,053.579 E 1,352,177.604 ELEV. 339.894
LOCATION: COR. GOV. WARFIELD PKWY & LITTLE PATUXENT PKWY

HOWARD COUNTY BENCHMARK - 36AA (CONC. MONUMENT)
N 562,804.842 E 1,349,906.240 ELEV. 359.163
LOCATION: COR. LITTLE PATUXENT PKWY & BROKEN LAND PKWY



VICINITY MAP

SCALE: 1"=200'
ADC MAP 4935 - GRIDS A5 & A6

LEGEND

- EXISTING CONTOUR
- EXISTING CURB AND GUTTER
- EXISTING STORM DRAIN
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING STREAM BANK
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- SOILS BOUNDARY
- PROPOSED SIDEWALK
- EXISTING TREELINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLETS
- PROPOSED CURB AND GUTTER
- MICRO-BIORETENTION
- SILT FENCE
- LIMIT OF DISTURBANCE
- COMBINATION INLET PROTECTION
- STANDARD INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE

SHEET INDEX

DESCRIPTION	SHEET NO.
COVER SHEET AND ESDV PLAN	1 OF 2
SWM DRAINAGE AREA MAP, NOTES AND DETAILS	2 OF 2

OWNER/DEVELOPER

94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

ENVIRONMENTAL CONCEPT PLAN

COVER SHEET AND LAYOUT

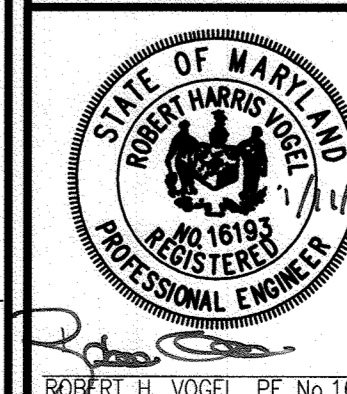
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOT 2
COLUMBIA, MD 21044
HUD PROJECT NO.:

TAX MAP 30 BLOCK 19 4TH ELECTION DISTRICT ZONED: NT PARCEL: 272
HOWARD COUNTY, MARYLAND

VOGEL ENGINEERING

TIMMONS GROUP

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



DESIGN BY: RHV/GAH
DRAWN BY: GAH
CHECKED BY: RHV
DATE: MAY 2020
SCALE: AS SHOWN
W.O. NO.: 41539

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 16193 EXPIRES 09-27-2022

1 SHEET OF 2

GENERAL NOTES

- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS OR ALTERNATIVE COMPLIANCE REQUESTS HAVE BEEN APPROVED.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY GIS AND AVAILABLE RECORD DRAWINGS.
- THE PROJECT BOUNDARY IS BASED ON A PRECISION INPUT BOUNDARY TAKEN FROM F-68-33, BY PURDUM AND JESCHKE, DATED AUGUST 28, 1968.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
- THE SUBJECT PROPERTY IS ZONED "NT" IN ACCORDANCE WITH THE 10/6/2013 COMPREHENSIVE ZONING PLAN AND IS SUBJECT TO THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS EFFECTIVE 10/2/03 PER COUNCIL BILL 75-2003.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING OR NEW STRUCTURES SHALL BE PERMITTED WITHIN THE WETLANDS, STREAM(S) OR THEIR REQUIRED BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100-YEAR FLOODPLAIN.
- WATER FOR THIS PROJECT IS TO BE PROVIDED BY PUBLIC EXTENSION OF THE EXISTING WATER CONSTRUCTED UNDER CONTRACT NO. 169-W&S.
- SEWER FOR THIS PROJECT IS TO BE PROVIDED BY PUBLIC EXTENSION OF THE EXISTING SEWER CONSTRUCTED UNDER CONTRACT NO. 201-S AND 327-S.
- EXISTING UTILITIES HAVE BEEN LOCATED FROM HOWARD COUNTY GIS AND AS-BUILT DRAWINGS. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- THIS SUBDIVISION IS EXEMPT FROM THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BECAUSE OF THE EXEMPTION FOR THE NT ZONING DISTRICT.
- A NOISE STUDY SHALL BE PREPARED BY ROBERT H. VOGEL, ENGINEERING AS PART OF THE SITE DEVELOPMENT PLAN PACKAGE.
- GEOTECHNICAL INVESTIGATIONS SHALL BE COMPLETED AND SUBMITTED WITH THE FUTURE SITE DEVELOPMENT PLAN.
- THE PROPOSED INTERNAL STREETS AND DRIVEWAYS ARE TO BE CLASSIFIED AS PRIVATE.
- TO THE BEST OF THE OWNER'S KNOWLEDGE, THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- THE PROPOSED UNITS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE MICRO-BIORETENTION (M-7), BIO-SWALES (M-8), AND PERMEABLE PAVEMENT (A-2).
- IN ACCORDANCE WITH SECTION 16.121(A)(4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, THERE IS NO OVERALL OPEN SPACE REQUIREMENT FOR THIS NT APARTMENT PROJECT. 6,845 S.F. OF AMENITY AREA IS PROVIDED, CONSISTING OF A DOG PARK (5,500 SF) AND A PATIO AREA (3,345 SF).
- IN ACCORDANCE WITH SECTION 112.1.F OF THE 10/06/13 COMPREHENSIVE ZONING REGULATIONS, THIS SUBDIVISION IS SUBJECT TO MODERATE INCOME HOUSING UNITS. A MHU AGREEMENT AND MHU COVENANTS WILL BE REQUIRED IN ACCORDANCE WITH SECTION 13.402 OF THE HOWARD COUNTY CODE.

ENVIRONMENTAL SITE DESIGN NARRATIVE

- THE PROPERTY DOES NOT CONTAIN ANY WETLANDS, OR OTHER PROTECTED ENVIRONMENTAL FEATURES.
- THE SITE GENERALLY SLOPES FROM THE CENTER OF THE SITE TO THE NORTH AND TO THE SOUTH. THE PROPOSED DEVELOPMENT WILL HAVE NO CHANGE IN THE EXISTING CHARACTER OF THE EXISTING NATURAL FLOW PATTERNS.
- THIS PROJECT QUALIFIES FOR REDEVELOPMENT. THE CONCEPTUAL REDUCTION IN IMPERVIOUS AREA THROUGH BETTER SITE DESIGN IS ACHIEVED THROUGH THE ENVIRONMENTAL SITE DESIGN (ESD) FOR THE PROJECT TO THE MAXIMUM EXTENT PRACTICABLE (MEP). THE ESD CONCEPT PROPOSES THE USE OF MICRO-BIORETENTION FACILITIES (M-8), BIO-SWALES (M-8), AND PERMEABLE PAVEMENT (A-2). THE SWM FACILITIES WILL DISCHARGE TO AN EXISTING DRAINAGE SWALE TO THE SOUTH AND TO EXISTING STORM DRAIN TO THE NORTH. THE PROPOSED ESD PRACTICES SHALL BE PRIVATELY OWNED AND MAINTAINED.
- SEDIMENT CONTROL FOR THIS SPECIFIC SITE PLAN WILL BE PROVIDED THROUGH THE USE OF A SEDIMENT TRAP AND PERIMETER CONTROLS (SILT FENCE, SUPER SILT FENCE, DIVERSION FENCE) AND INLET PROTECTION. SEDIMENT CONTROL SHALL BE IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND SHALL BE APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.

NOTE:

- APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN DOES NOT CONSTITUTE ANY APPROVALS OF ANY SUBSEQUENT SUBDIVISION PLANS, SITE DEVELOPMENT PLANS OR RED-LINE REVISIONS TO PREVIOUSLY APPROVED SFP PLANS, AND GRADING OR BUILDING PERMITS. THE APPLICANT AND CONSULTANT SHOULD EXPECT ADDITIONAL AND MORE DETAILED COMMENTS THAT MAY ALTER THE SITE DESIGN, HOUSE OR STRUCTURE LOCATION, GRADING, TREE CLEARING OR OTHER REQUIREMENTS AS THE DEVELOPMENT PROGRESSES THROUGH THE PLAN REVIEW AND/OR PERMIT APPLICATION PROCESS IN ACCORDANCE WITH THE SUBDIVISION, LAND DEVELOPMENT AND ZONING REGULATIONS.

SITE DATA

LOCATION: TWIN RIVERS ROAD, COLUMBIA, MD
TAX MAP 30, BLOCK 19, PARCEL 272
4TH ELECTION DISTRICT
PRESENT ZONING: NT
PARCEL AREA: 3.49 AC.
AREA OF EXISTING ENVIRONMENTAL FEATURES: 0.00 AC.
DEVELOPABLE AREA: 3.49 AC.
AREA OF EXISTING SITE IMPERVIOUS: 1.48 AC(42.4%)
DPZ REFERENCES: L17980/F.426, PB. 15/31, PB.15/F.78-81, FDP-41-A, SDF-91-011, ZB-1120M.

USE OF STRUCTURES:

BUILDING 1: CONDOMINIUM
BUILDING 2: CONDOMINIUM

BUILDING COVERAGE:

BUILDING 1: 20,666 SF (0.4744 AC. OR 13.59%)
BUILDING 2: 24,665 SF (0.5662 AC. OR 16.22%)

TOTAL BUILDING:

45,331 SF
(1.041 OR 29.82% OF GROSS AREA)

PAVED DRIVEWAYS/PARKING LOT:

48,473 SF
(1.128 AC. OR 31.89% OF GROSS AREA)

AREA OF LANDSCAPE ISLAND:

4,470 SF
(0.10 AC. OR 2.94% OF GROSS AREA)

LIMIT OF DISTURBED AREA:

152,119 SF / 3.49 AC.

WETLANDS ON SITE:

0.00 AC.

WETLAND BUFFERS ON SITE:

0.00 AC.

STREAMS AND THEIR BUFFERS ON SITE:

0.00 AC.

AREA OF EXISTING FOREST ON SITE:

0.00 AC.

AREA OF MDE STEEP SLOPES (20% OR GREATER):

0.00 AC.

AREA OF ERODIBLE SOILS:

0.00 AC.

AREA MANAGED BY ESDV (THIS PLAN):

1.54 AC.

*IMPERVIOUS AREA:

1.15 AC.

*GREEN AREA:

0.39 AC.

EXISTING 8" SEWER TO BE REMOVED AND RELOCATED. CONTRACTOR TO MAINTAIN SEWER SERVICE TO UPSTREAM PROPERTIES. REPLACEMENT SEWER SHALL BE IN PLACE PRIOR TO DISCONNECTION AND REMOVAL OF EXISTING.

EXISTING 8" WATER TO BE REMOVED AND REPLACED WITH NEW 12" TAPPING SLEEVE AND VALVE AND NEW 8" WATER LINE. CONTRACTOR TO MINIMIZE DISRUPTION TO WATER SERVICE TO NEARBY PROPERTIES.

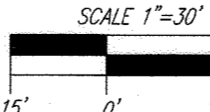
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 2/19/21

CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 2/16/21

PLAN VIEW

SCALE: 1"=30'



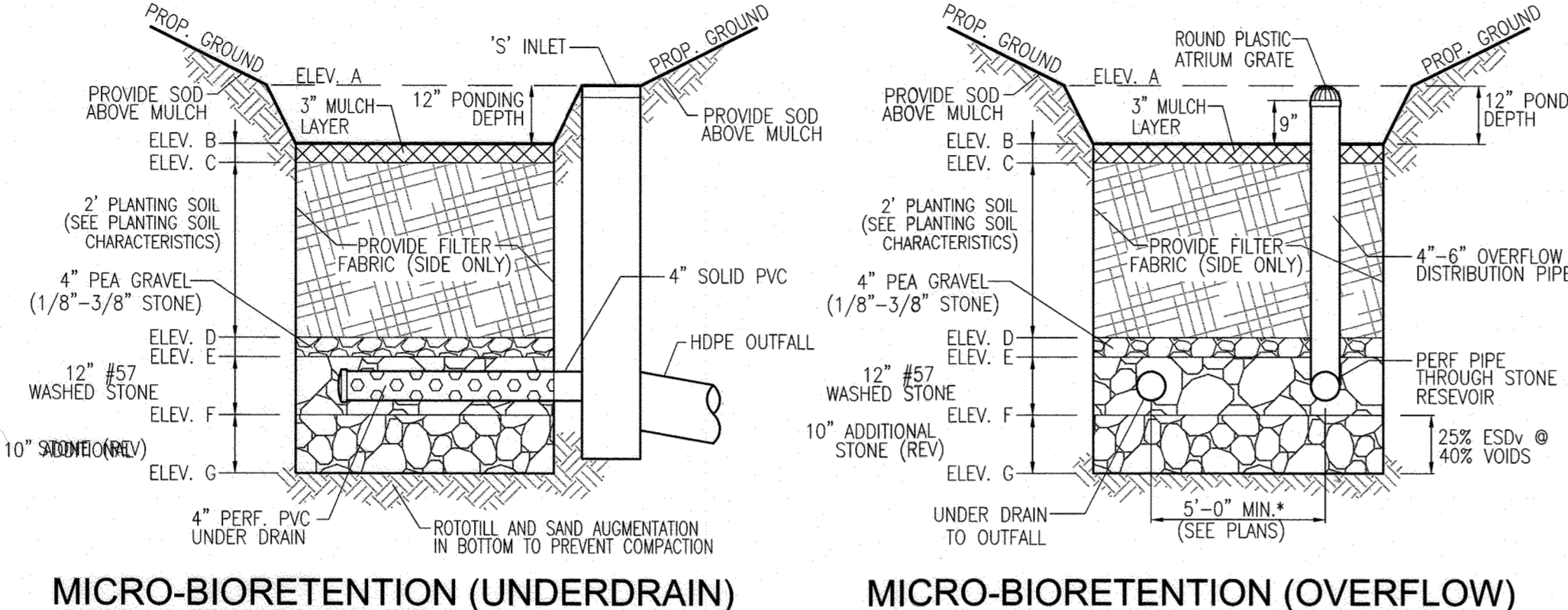
APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION. RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

- 1. MATERIAL SPECIFICATIONS
2. FILTERING MEDIA OR PLANTING SOIL
3. COMPACTION
4. PLANT MATERIAL

SOILS LEGEND table with columns: SYMBOL, NAME/DESCRIPTION, SOIL TYPE, ERODIBLE, 'K' VALUE, HYDRIC

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

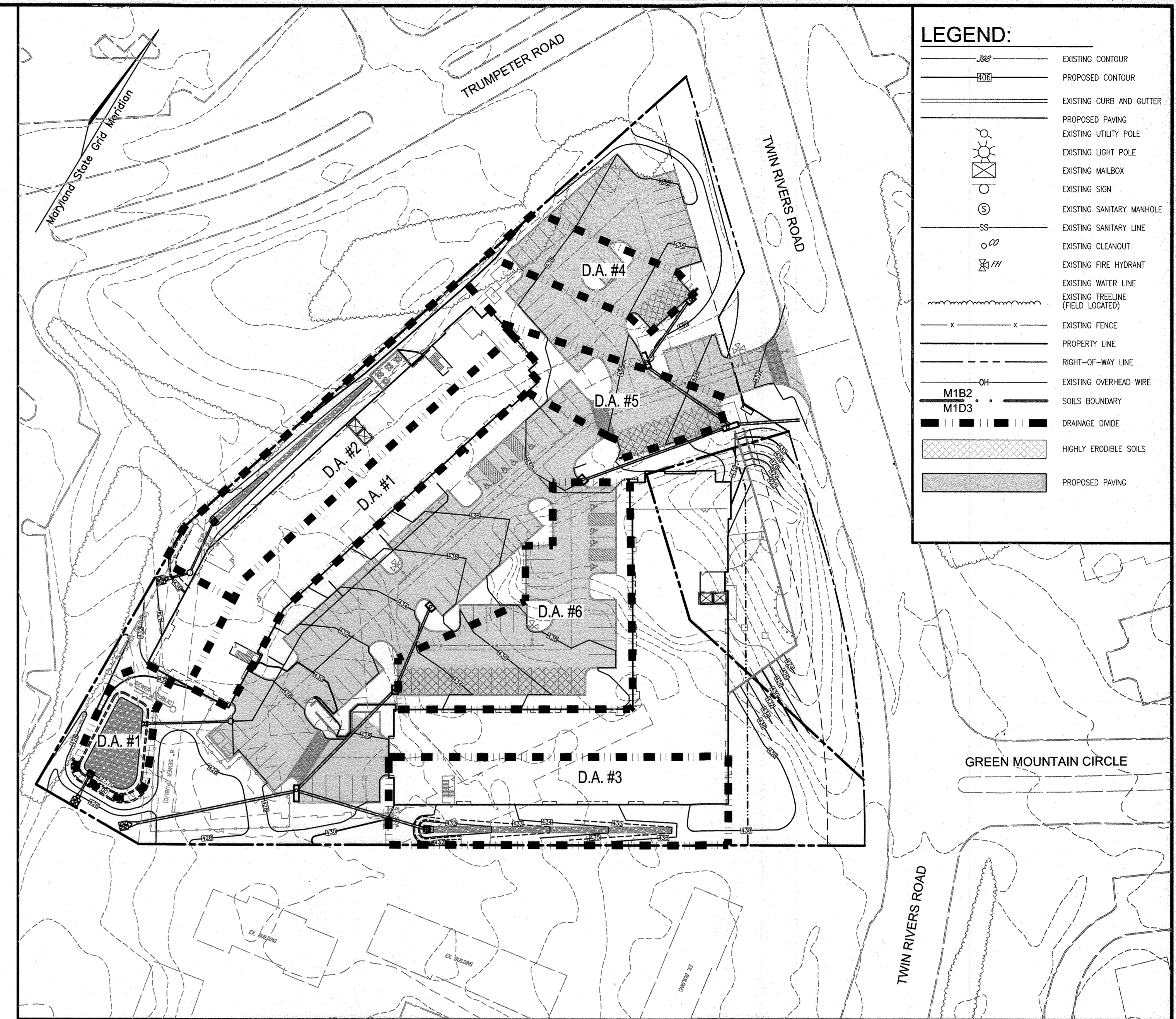
- NOTES:
1. APPROVAL OF THIS ECP DOES NOT CONSTITUTE AN APPROVAL OF ANY SUBSEQUENT AND ASSOCIATED BUILDING AND/OR GRADING PERMIT
2. REVIEW OF THIS PLAN FOR COMPLIANCE WITH ZONING AND SUBDIVISION AND LAND DEVELOPMENT REGULATIONS SHALL OCCUR AT THE PERMIT STAGES; AND THEREFORE, THIS PLAN IS SUBJECT TO ADDITIONAL AND MORE DETAILED COMMENTS AS THE PLAN PROGRESSES THROUGH THE PERMIT PROCESS.



MICRO-BIORETENTION (UNDERDRAIN) NOT TO SCALE and MICRO-BIORETENTION (OVERFLOW) NOT TO SCALE

- MICROBIORETENTION NOTES:
1. ONLY THE SIDES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC.
2. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
3. WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.
4. PROVIDE 5" MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)

Table B.4.1 Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration. Columns include Material, Specification, Size, and Notes.



LEGEND: Symbols and lines for existing contours, proposed contours, existing curb and gutter, existing utility pole, existing light pole, existing mailbox, existing sign, existing sanitary manhole, existing sanitary line, existing cleanout, existing fire hydrant, existing water line, existing treeline (field located), existing fence, property line, right-of-way line, existing overhead wire, soils boundary, drainage divide, highly erodible soils, and proposed paving.

ROTTILL TO 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING WATER BEFORE PREPARING (ROTTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. 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.

COMPACTION CAN BE ALLEVATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTTILL TO 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING WATER BEFORE PREPARING (ROTTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. 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.

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

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 WELDED (6 TO 12 MONTHS) FOR ACCEPTANCE. DURING TRANSPORT AND ON-SITE STORAGE, THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST 1/8" 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 4" 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 SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS. BIORETENTION PROVIDES ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS DEFERS, OR AT A MINIMUM, IMPEDS THIS SOIL. ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTTILL 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 (ASTM F 758, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, RIGID PIPE (E.G. 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.

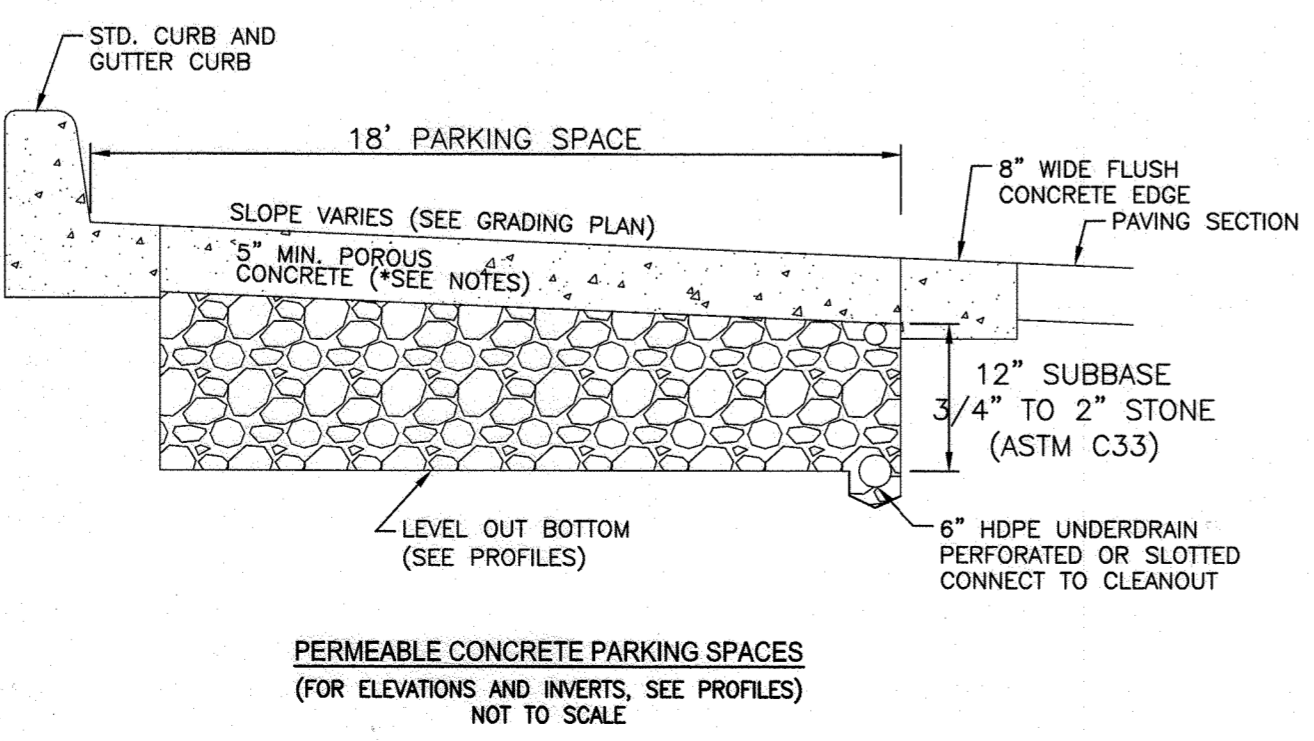
THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5% OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

MISCELLANEOUS: THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2):
1. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM PERMEABLE PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
2. THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.
3. THE OWNER SHALL USE DEICERS IN MODERATION. DEICERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.
4. THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

- 1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL. PRUNING, ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF 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 STORM.



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

INDIVIDUAL PRACTICE ESDv SUB-AREA DESIGN COMPUTATIONS
Project: Roslyn Rise
50% of Existing Impervious: 32,234 s.f. (0.74 Ac)
100% of Proposed Impervious: 39,113 s.f. (0.90 Ac)
Impervious (Ex. + Prop.): 71,347 s.f. (1.64 Ac)
Target P: 1.60 in.
Total ESDv Required (Ex. + Prop.): 7,505 c.f.
ESDv=(P*xv)/12
Rv=0.05+0.009k'

Table with columns: PRACTICE, DA (SF), PRACTICE DA (AC), IMPERV (SF), IMPERV (AC), PERV (SF), PERV (AC), PRACTICE IMPERV, PRACTICE PERV, MIN PRACTICE VOLUME (L1), TARGET Pt VOLUME (1.6'), MAX PRACTICE VOLUME (2.6'), TOTAL PRACTICE VOLUME PROVIDED, REMARKS.

OWNER/DEVELOPER:
94 UNIT BUILDING 2 (4%): ROSLYN RISE FOUR, LLC
59 UNIT BUILDING 1 (9%): ROSLYN RISE NINE, LLC
C/O MACKENZIE KIESEL
875 HOLLINS STREET, SUITE 202
BALTIMORE, MD 21201
(410) 230-2117

Table with columns: NO., REVISION, DATE.

ENVIRONMENTAL CONCEPT PLAN
SWM DRAINAGE AREA MAP, NOTES AND DETAILS
ROSLYN RISE
VILLAGE OF WILDE LAKE, SEC. 10, AREA 4, LOT 2
COLUMBIA, MD 21044
HUD PROJECT NO.:
ZONED: NT
PARCEL 272
TAX MAP 30 BLOCK 19
4TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
VOGEL ENGINEERING
TIMMONS GROUP
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
P: 410.461.7666 F: 410.461.8961 www.timmons.com
DESIGN BY: RHV/GAH
DRAWN BY: GAH
CHECKED BY: RHV
DATE: MAY 2020
SCALE: AS SHOWN
W.O. NO.: 41539
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND UNDER LICENSE NUMBER 11183 EXPIRATION DATE 08-27-2022
ROBERT H. VOGEL, PE No.16193