GENERAL NOTES

-GREEN AREA PROVIDED

-PUBLIC WATER & SEWER

-WATER CONTRACT NO. #24-4626 CAP PROJ W-8285. -SEWER CONTRACT NO. #20-3940. L.16875, F. 188 CB210583, ECP-22-043.

ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS, PLUS MSHA AND OSHA UNLESS WAIVERS HAVE BEEN APPROVED.

THE CONTRACTOR SHALL NOTIFY HOWARD COUNTY TRAFFIC (410-313-5751) 2 WEEKS PRIOR TO THE START OF THE RE-CONSTRUCTION OF THE EXISTING ENTRANCE ONTO MISSION ROAD.

THE PROJECT BOUNDARY SHOWN HEREON ARE BASED ON A FIELD RUN BOUNDARY SURVEY PREPARED BY VOGEL ENGINEERING+TIMMONS GROUP DATED APRIL 4, 2022.

THE COORDINATES AND ELEVATIONS ARE BASED ON MARYLAND COORDINATE SYSTEM — NAD83 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 4218 AND 42CB.

EXISTING UTILITIES LOCATED FROM FIELD SURVEYS, PUBLIC WATER AND AND SEWER EXTENSION PLANS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. 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. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.

WATER FOR THIS PROJECT IS VIA AN EXISTING CONNECTION TO WATER CONTRACT #24-4626 CAP PROJ W-8285 SEWER FOR THIS PROJECT IS VIA AN EXISTING CONNECTION TO SEWER CONTRACT #20-3940

TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE WEB SOIL SURVEY HOWARD COUNTY, MARYLAND.

20. A SIMPLIFIED FOREST STAND DELINEATION PLAN AND ASSOCIATED LETTER DATED DECEMBER 22, 2021 WAS PREPARED BY MR.

MISSION ROAD IS CLASSIFIED AS A MINOR COLLECTOR. SITE ACCESS SHALL BE VIA THE PROPOSED COMMERCIAL ENTRANCE. STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA.

STORMWATER FACILITIES UTILIZED ARE MICRO-SCALE PRACTICE, MICRO-BIORETENTION (M-6) AND BIORETENTION (F-6). THESE FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED.

NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION AREAS, EXCEPT AS APPROVED BY DPZ.

THE OFFICIAL PRE-SUBMISSION COMMUNITY MEETING WAS HELD FOR THIS PROJECT ON JANUARY 31, 2023, 6:00 PM AT THE HOWARD COUNTY LIBRARY SYSTEM — SAVAGE BRANCH.

. PARKING IS PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH THE HOWARD COUNTY ZONING REGULATIONS, SECTION 133.0.D.8 — OTHER USES. IN AN EMAIL DATED JULY 6, 2023, THE CHIEF OF THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING — DIVISION OF LAND DEVELOPMENT REVIEWED AND APPROVED THE PARKING TABULATION. (SEE PARKING TABULATION THIS SHEET)

TRAFFIC CONTROL WILL BE PROVIDED FOR THE PROPOSED ROAD IMPROVEMENTS TO MISSION ROAD IN ACCORDANCE WITH THE LATEST MDMUTCD.

A. MD-104.02-02 - SHOULDER WORK / 2-LANE, 2-WAY - EQL/LESS THAN 40 MPH
B. MD-104.02-04 - LANE SHIFT RIGHT OR LEFT SIDE / 2 LANE, 2 WAY EQL/LESS THAN 40 MPH/15 MIIN-12 HRS.

MD-104.02-06 - WORK IN CENTER OF LOW-VOLUME ROAD, 2-LANE, 2-WAY / EQL/LESS THAN 40 MPH, 15 MIN

C. MD-104.02-06 - WORK IN CENTER OF LOW-VOLUME ROAD, 2-LANE, 2-WAT / EQL/LESS THAN 40 MPH, 13 MINN - 12 HRS OR DAYTIME ONLY
D. MD-104.02-10 - FLAGGING OPERATION / 2-LANE, 2-WAY EQL/LESS THAN 40 MPH
-FOR ALL STANDARDS REFERRED TO ON THIS PLAN THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT:
HTTP://APPS.ROADS.MARYLAND.GOV/BUSINESSWITHSHA/BIZZSTDSPECS/DESMANUALSTDPUB/UPUBLICATIONSONLINE/OHD/BOOKSTD/

INDEX.ASP
-ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

2. TRAFFIC CONTROL DEVICES:

A. THE R1-1(STOP) SIGNS AND STREET NAME SIGN (SNS) ASSEMBLIES FOR THIS DEVELOPMENT MUST BE INSTALLED
BEFORE THE BASE PAVING IS COMPLETE.
B. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY
HOWARD COUNTY TRAFFIC DIVISION (410)-313-2430 PRIOR TO THE INSTALLATION OF ANY OF THE 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 CONTROL DEVICES' (MDMUTCD).

D. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT—OF—WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, "QUICK PUNCH") SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2—%"

GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE — 3' LONG). THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.

36. ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S

37. ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH THE CURRENT HOWARD COUNTY STANDARDS AND SPECIFICATIONS.

38. CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT

43. FOREST CONSERVATION PLAN HAS BEEN PREPARED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY FOREST CONSERVATION MANUAL. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD

-TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED IN ACCORDANCE WITH THE HOWARD COUNTY CODE, SECTION 16.1211 BY A PAYMENT OF FEE-IN-LIEU FOR THE REQUIRED AFFORESTATION OBLIGATION
-THE TOTAL OBLIGATION (AFFORESTATION) IS 0.2 AC = 8,712 SQ. FT X \$1.25 = \$10,890.00

COUNTY CODE, AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THE LANDSCAPING IN THE AMOUNT OF \$ 6,000. \$1,200 FOR 4 SHADE TREES, \$ 2,100 FOR 14 EVERGREEN TREES, AND \$ 1,200 FOR 40 SHRUBS, \$ 600 FOR 2 PARKING LOT TREES AND \$ 900 FOR 6 STREET TREES.

FIELD INVESTIGATED BY ECO-SCIENCE PROFESSIONALS, INC. NO STREAMS, WETLANDS AND THEIR BUFFERS ARE

J. BRODY MCALLISTER ISA CERTIFIED ARBORIST #MA6471A, MD DNR FCA QUALIFIED PROFESSIONAL FOR ECO—SCIENCE PROFESSIONALS INC. NO FOREST OR SPECIMEN TREES ARE LOCATED ONSITE.

THERE ARE NO STEEP SLOPES WITH A CONTIGUOUS AREA OF 20,000 SF LOCATED ON THE PROPERTY.

19. TEST PITS FOR ESD STORMWATER MANAGEMENT WERE PERFORMED NOVEMBER 2022 AND WITNESSED BY VOGEL ENGINEERING+TIMMONS GROUP.

THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIÓR TO START OF WORK.

THERE ARE NO AREAS OF "100 YEAR FLOODPLAIN" LOCATED ON THE PROJECT SITE.

16. THERE ARE NO WETLANDS, STREAMS OR BUFFERS LOCATED WITHIN THE PROJECT BOUNDARY.

28. THE ENVIRONMENTAL CONCEPT PLAN (ECP-22-043) WAS APPROVED ON AUGUST 1, 2022.

33. TRASH AND RECYCLING COLLECTION WILL BE PROVIDED BY PRIVATE SERVICE.

40. ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

35. ALL ELEVATIONS ARE TO FLOW LINE / BOTTOM OF CURB, UNLESS OTHERWISE NOTED.

39. WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.

41. ALL EXTERIOR LIGHTING SHALL CONFORM TO ZONING REGULATIONS, SECTION 134.

42. SIGNAGE SHALL BE PROVIDED ON THE BUILDING IDENTIFYING THE BUILDING ADDRESS.

34. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

THIS SITE DRAINS TO DORSEY RUN AND LIES WITHIN THE LITTLE PATUXENT RIVER WATERSHED.

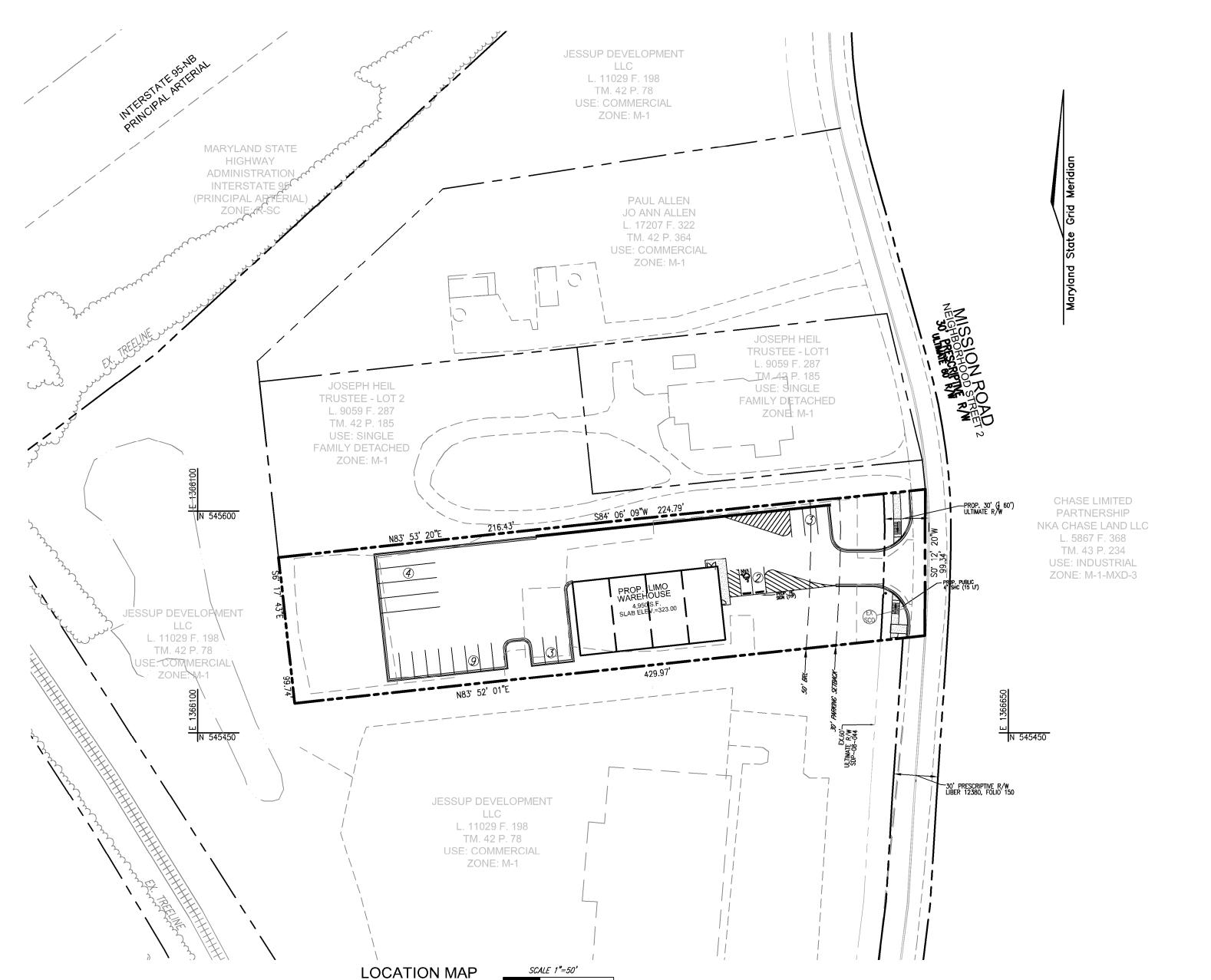
18. THERE ARE NO SPECIMEN TREES ON THE SITE.

SITE DEVELOPMENT PLAN N/A TAX MAP 42, BLOCK 18 –SUBDIVISION: SECTION/AREA: ZONING: _____ - AREA OF R/W TRANSFER: - NUMBER OF PROPOSED BUILDINGS: - NET AREA OF PROJECT: - AREA OF PROPOSED R/W:

8570 MISSION RD, JESSUP 20794

8570 MISSION ROAD

HOWARD COUNTY, MD



VICINITY MAP

SCALE: 1"=2000 ADC MAP/GRID NO. 5054/A4

SHEET INDEX DESCRIPTION SHEET NO COVER SHEET AND LOCATION MAP 1 OF 12 2 OF 12 EXISTING CONDITIONS PLAN LAYOUT PLAN 3 OF 12 SITE DETAILS 4 OF 12 RADING, SOIL EROSION AND SEDIMENT CONTROL PLAN 5 OF 12 RADING, SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES 6 OF 12 RADING, SOIL EROSION AND SEDIMENT CONTROL PLAN DETAILS 7 OF 12 STORM DRAIN DRAINAGE AREA MAP, UTILITY PROFILES AND DETAILS 8 OF 12 9 OF 12 ANDSCAPE PLAN, NOTES AND DETAILS FOREST CONSERVATION PLAN 10 OF 12 SD STORMWATER MANAGEMENT DRAINAGE AREA MAP, 11 OF 12 NOTES & DETAILS ESD BIORETENTION AND MICRO—BIORETENTION FACILITY PLANTING & CONSTRUCTION PLANS, NOTES & DETAILS 12 OF 12

TRAFFIC NOTE:

BENCHMARKS

42I8 N 542,107,856 E 1,362,386,084 NAVD88 ELEV, 301,495

42CB N 549,320.827 E 1,366,327.333 NAVD88 ELEV. 335.482

HOWARD COUNTY BENCHMARK

HOWARD COUNTY BENCHMARK

— — — — — — EXISTING EDGE OF PAVING

____ EXISTING CURB

RIGHT-OF-WAY LINE

- PROPOSED EDGE OF PAVE

PROPOSED LANDSCAPE WALI

PROPOSED CONC. SIDEWALK

PROPOSED CURB & GUTTER

LEGEND:

A TRAFFIC EVALUATION REPORT WAS PREPARED BY THE "TRAFFIC GROUP" ON DECEMBER 21, 2022. THE PROPOSED USE WILL GENERATE FEWER THAN 5 PEAK HOUR TRIPS. IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, THE PROPOSED DEVELOPMENT SATISFIES HOWARD COUNTY'S ARFTE (ADEQUATE ROAD FACILITIES TEST EVALUATION) REQUIREMENTS. NO ADDITIONAL TRAFFIC EVALUATIONS SHOULD BE REQUIRED FOR THIS PROJECT. SEE NOTE 25

SUMMARY OF FINDINGS FOR APFO TRAFFIC ANALYSIS:

- A. DATE OF REPORT: DECEMBER 21,2022
- REPORT SUBMITTED AS PART OF PLAN NUMBER: NOT APPLICABLE PROVIDE STATEMENT THAT SCHOOLS WERE IN SESSION ON THAT DATE(S).
- LIST INTERSECTIONS STUDIED, IDENTIFY INTERSECTION AS STATE OR COUNTY JURISDICTION, AND LABEL LOS FOR THE HORIZON YEAR OF EACH INTERSECTION:
- PROVIDE STATEMENT AS TO WHETHER MITIGATION IS REQUIRED AND EXPLAIN
- THE METHOD OF MITIGATION/IN LIEU FEE. NOT APPLICABLE

OWNER/DEVELOPER

SIMRAN GROUP, LLC 10427 SNOW POINT DRIVE BETHESDA, MD 20814

PHONE: (410) 504-9416 REVISION SITE DEVELOPMENT PLAN

> **COVER SHEET & LOCATION MAP**

8570 MISSION ROAD

TAX MAP 42 BLOCK 18 6TH ELECTION DISTRICT

DEED L.16875 - F.188

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



ROBERTO HTT VOCEL. PE No.1619

DESIGN BY: DRAWN BY: <u>ONB</u> CHECKED BY: SCALE:

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2024 __SHEET__12_

HOWARD COUNTY, MARYLAN

APPROVED: HOWARD COUNTY DEPARTMENT OF	PLANNING AND ZONING
CHAD Edmondson	6/27/2024
7063F754FF41499	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	N DATE
bootolighed by.	7/1/2024
CHIEF, DIVISION OF LAND BEFOREMENT	DATE
	7/1/2024
Lynda Eisenberg	
DIRECTOR 4220B635863942E	DATE

GENERAL NOTES CONTINUED

- 45. A FIRE DEPARTMENT CONNECTION FOR FIRE PROTECTION SYSTEMS SHALL BE LOCATED:

 (A.) ON THE SIDE OF THE STRUCTURE DISPLAYING THE ADDRESS CLEARLY VISIBLE TO THE RESPONDING UNITS, (UNLESS AN ALTERNATE LOCATION IS APPROVED BY THE OFFICE OF THE FIRE MARSHAL);

 B.) WITHIN 100 FT. OF A FIRE HYDRANT; (II) THE APPROPRIATE SIGN SHALL BE MOUNTED ON THE BUILDING'S WALL BETWEEN 8 AND 12 FEET ABOVE THE FIRE DEPARTMENT CONNECTION; (III) A FREE-STANDING FIRE DEPARTMENT CONNECTION SHALL HAVE THE SIGN MOUNTED ON A POLE DIRECTLY BEHIND THE CONNECTION SHALL HAVE THE SIGN MOUNTED ON A POLE DIRECTLY BEHIND THE CONNECTION SHALL HAVE THE SIGN MOUNTED ON A POLE DIRECTLY BEHIND THE CONNECTION SHALL HAVE APPROXIMATELY 6 FEET HIGH; (IV) SIGNS IDENTIFYING THE LOCATION SHALL HAVE A WHITE REFLECTIVE BACKGROUND WITH A RED REFLECTIVE BORDER, RED REFLECTIVE LETTERS AND A RED REFLECTIVE ARROW. THE BORDER SHALL HAVE A 3/8" STROKE. THE LETTERS SHALL BE 6" HIGH WITH A 1" STROKE. THE ARROW SHALL HAVE A STROKE NOTE LESS THAN 2". THE OVERALL SIGN MEASUREMENTS SHALL BE 12" BY 18"; (V) ANY OBSTRUCTION OR CONDITION THAT DETERS OR HINDERS ACCESS TO A FDC IS PROHIBITED. A MINIMUM CLEAR SPACE OF 15 FEET (7.5 FEET ON ALL SIDES) SHALL BE MAINTAINED.
- 46. A KNOX BOXES SHALL BE LOCATED WITHIN 6' TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4—5' IN HEIGHT. THE CONTRACTOR SHOULD CONTACT THE OFFICE OF THE FIRE MARSHAL PRIOR TO PURCHASING AND INSTALLING KNOX BOXES TO DETERMINE IF ADDITIONAL KNOX BOXES WILL BE REQUIRED AS WELL AS TO VERIFY THE LOCATION(S) WHERE THEY ARE TO BE MOUNTED."
 - b. A MANUALLY OPERATED GATE ACROSS THE FRONTAGE REQUIRES ACCESS BY A KNOX PADLOCK.

SITE ANALYSIS DATA CHART

TOTAL PROJECT AREA: AREA OF PLAN SUBMISSION: LIMIT OF DISTURBED AREA:

SCALE: 1"=50'

- PRESENT ZONING DESIGNATION: PROPOSED USES FOR SITE AND STRUCTURES: NUMBER OF PARKING SPACES PROVIDED:
- OPEN SPACE ON-SITE: AREA OF RECREATION OPEN SPACE: DPZ FILE REFERENCES: ANY OTHER INFORMATION
 - ERODIBLE SOILS (>0.35): - EXISTING IMPERVIOUS AREA: - PROPOSED IMPERVIOUS AREA:
 - PROPOSED GREEN AREA: — ARFA OF WFTLANDS: AREA OF FLOODPLAIN:
 - AREA OF FOREST: - AREA OF STEEP SLOPES:
- 25 (REFER TO PARKING TABULATION) ECP 22-043 CITATION # CB210583 0 S.F. OR 0.00 AC.

OTHER USES (PER SEC. 133.08)

43,560 S.F. OR 1.00 AC.

41,818 S.F. OR 0.96 AC.

41,818 S.F. OR 0.96 AC.

LIMO WAREHOUSE

0 S.F. OR 0.00 AC. 25,114 S.F. OR 0.58 AC. 0.42 AC. 0 S.F. OR 0.00 AC. 0 S.F. OR 0.00 AC. 0 S.F. OR 0.00 AC 0 S.F. OR 0.00 AC.

PARKING TABULATION

SECTION 133.0.D.8, - OTHER USES - (SEE NOTE 30)

REQUIRED SPACES = 4 LIMOUSINE CARS 4 LIMOUSINE VANS 8 TOTAL SPACES REQUIRED

4 LIMOUSINE SPACES IN BUILDING (LIMO WAREHOUSE) 4 TOTAL BUILDING PARKING SPACES PROVIDED

4 SURFACE LIMOUSINE SPACES 17 SURFACE SPACES (16 SPACES + 1 HANDICAP) 21 TOTAL SURFACE PARKING SPACES PROVIDED

NAME & PUBLIC | PRIVATE | MAINTENANCE BY ADDRESS (QUALITY) Owner of Parcel 352 F-6-Bioretention 8570 MISSION RD MBR #2 M-6 Micro-Bioretention Owner of Parcel 352

'HIS PLAN IS REQUIRED TO INITIATE THE PERMIT PROCESS IN AN EFFORT TO COMPLY WITH

(DILP) NOTICE OF VIOLATION CB210583: GARAGE, OFFICE TRAILER COMMERCIAL FENCE AND

CONTRACTOR SHALL TEST PIT FOR LOCATION AND DEPTH OF EXISTING UTILITIES AND STORM

STORMWATER MANAGEMENT INFORMATION

PARKING LOT CONSTRUCTED WITHOUT THE REQUIRED PERMITS.

DRAINS PRIOR TO COMMENCEMENT OF ANY NEW CONSTRUCTION.

18

TEST PIT NOTE

PARCEL#/STREET

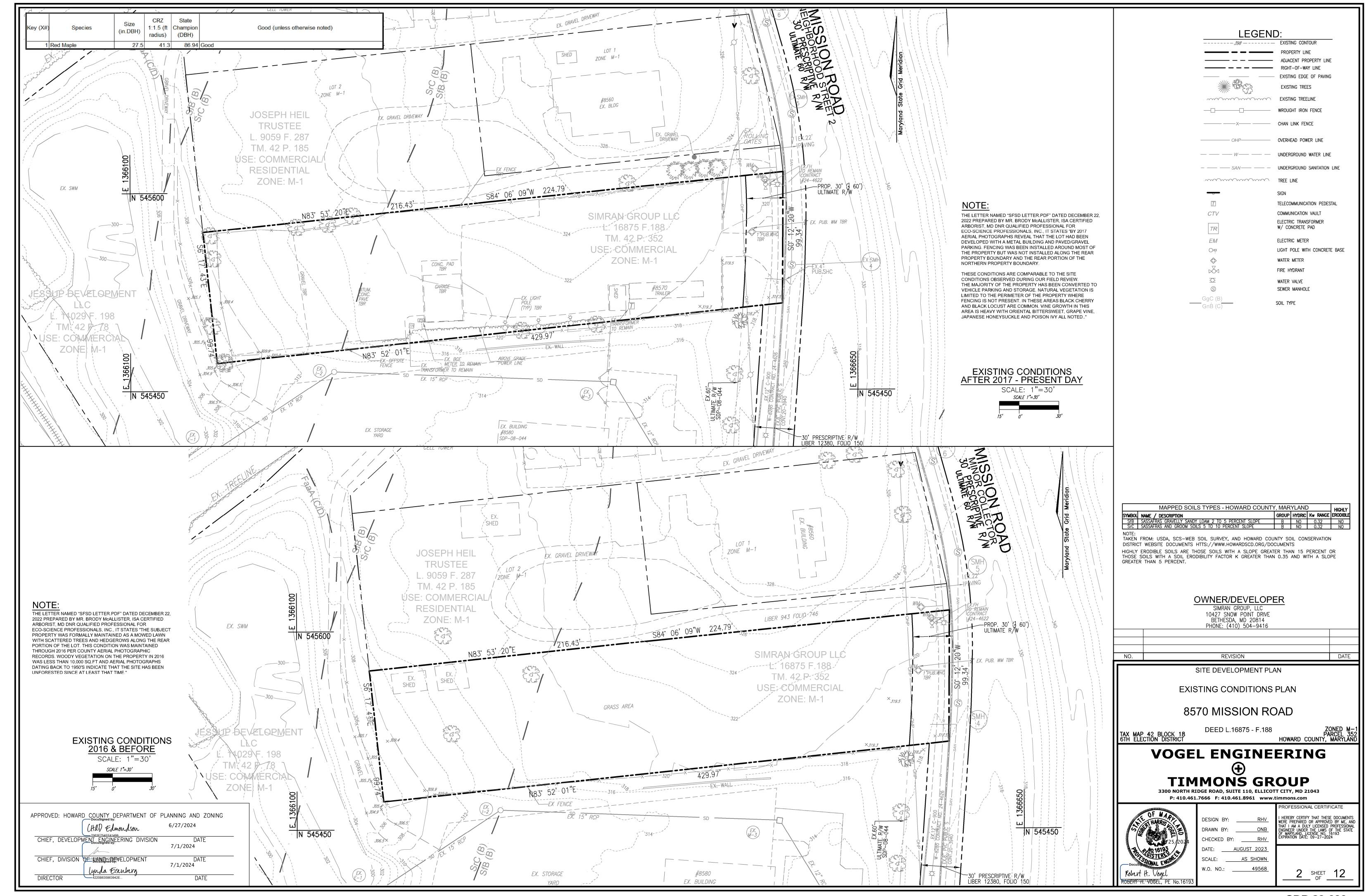
THE REQUIREMENTS OF HOWARD COUNTY DEPARTMENT OF INSPECTIONS LICENSING & PERMITS

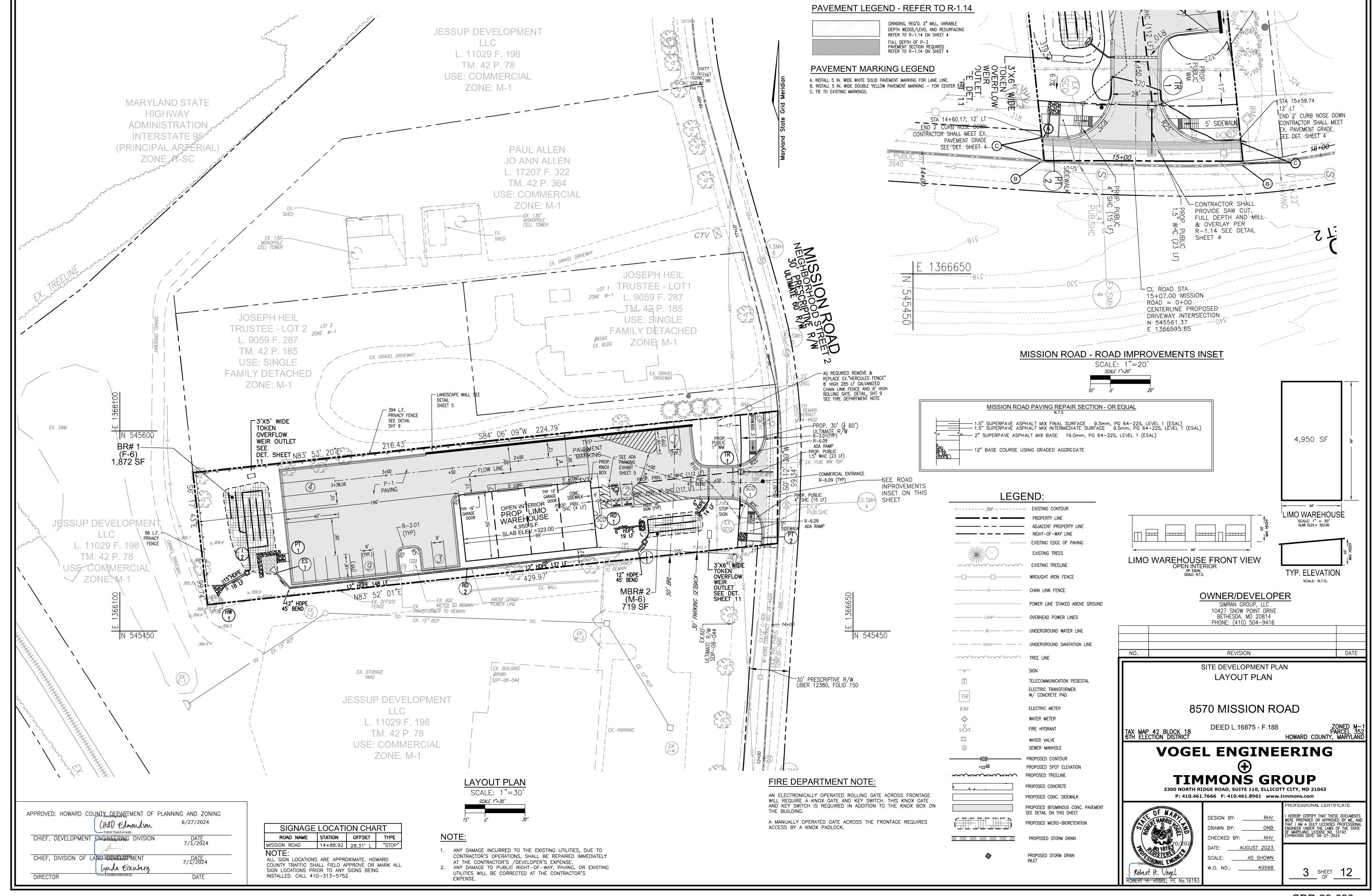
ADDRESS CHART									
PARCEL#		STREET ADDRESS							
352	85	70 MIS	SSION RE	, JES	SUP M	D 2079	4		
	PI	ERMI	T INFO	RMA	TION	CHAR	Γ		
SUBDIVISION	NAME	NAME SECTION / AREA LOT / PARCEL					RCEL		
-		-				PA	ARCEL 3	352	
LIBER/FOLIO	BLOCK	NO	ZONE	TAX	MAP	ELECT	DIST.	CENSUS	TR

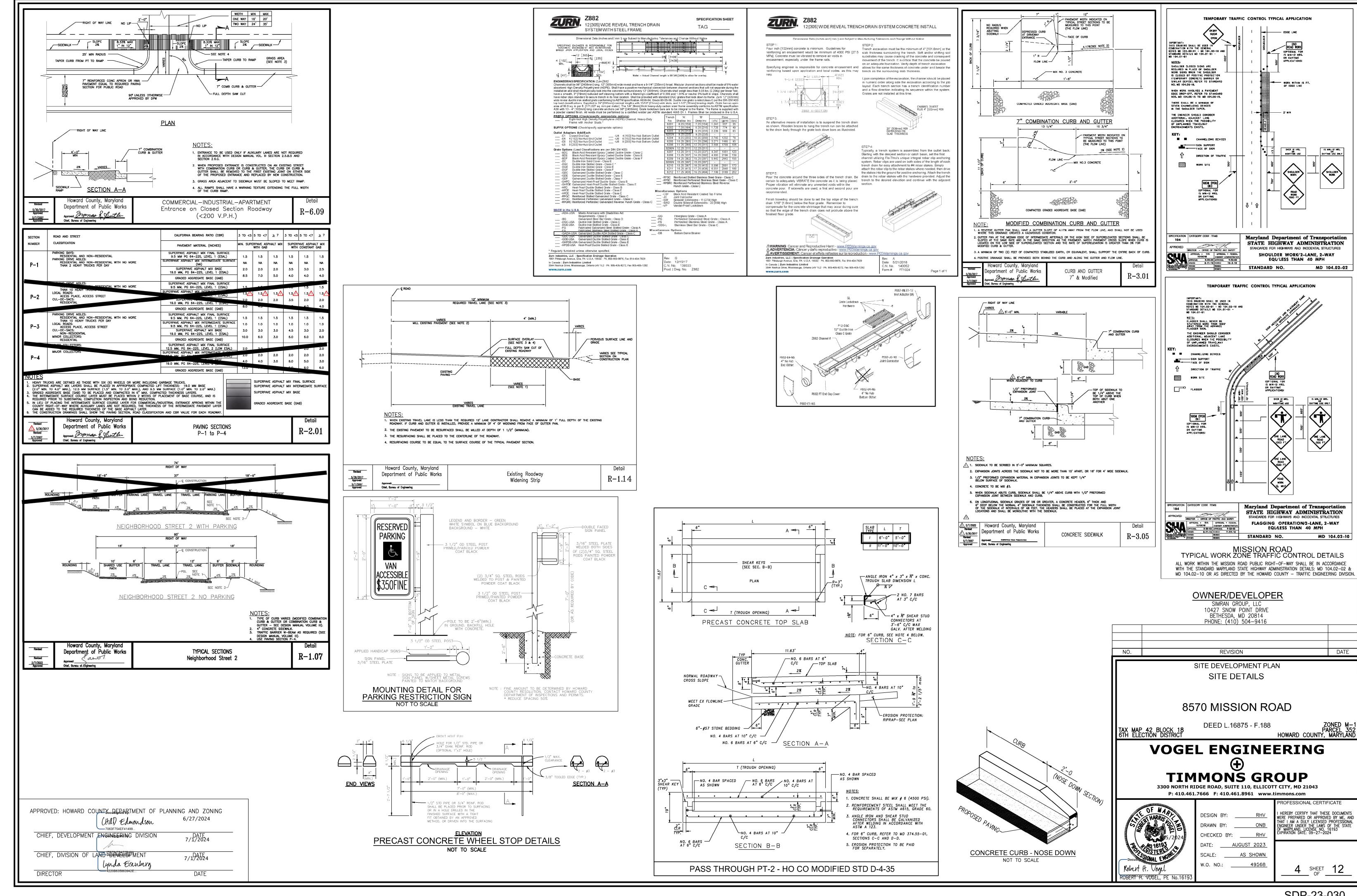
| M-1 | 42 |

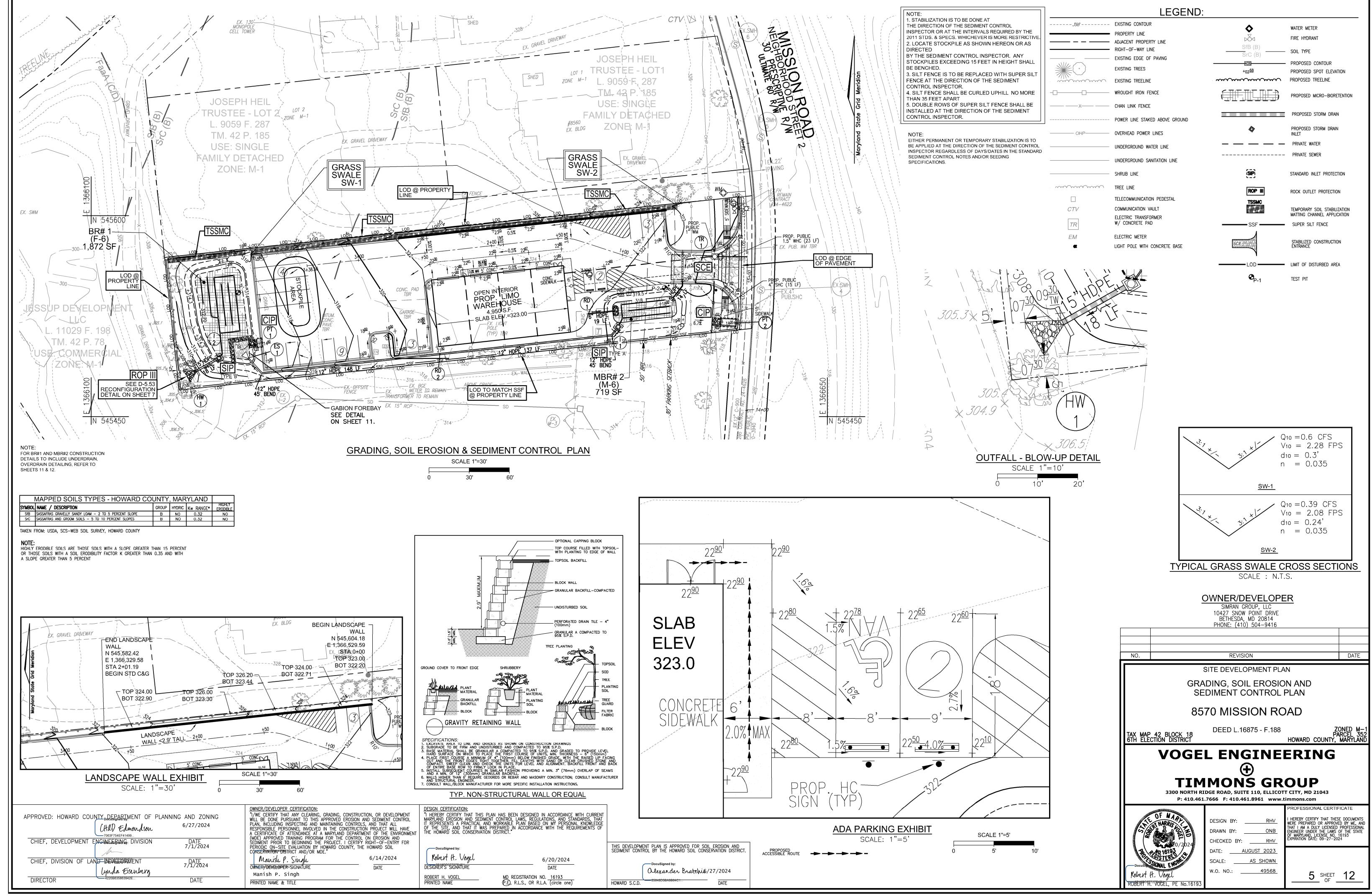
6TH

606901









HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- 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 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
- A. PRIOR TO THE START OF EARTH DISTURBANCE A. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH
- DISTURBANCE OR GRADING. B. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
- C. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL

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

- 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 FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE 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
- 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). EMPORARY 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). 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.

SITE ANALYSIS TOTAL AREA OF SITE:

ARFA DISTURBED:

AREAS UNDER ACTIVE GRADING.

AREA TO BE ROOFED OR PAVED: ACRES AREA TO BE VEGETATIVELY STABILIZED: ACRES OFFSITE WASTE/BORROW AREA LOCATION: ___ONSITE / SDP-23-030

ACRES *

ACRES**

(1) REFER TO ITEM 11 BELOW

- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- 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 CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE: 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
- IDENTIFICATION OF PLAN DEFICIENCIES
- 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 MONITORING/SAMPLING
- MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR
- STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
- 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 SHORTER. 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 FIFLD CHANGES 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
- CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER
- SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO
- 14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY
- 2' IN ELEVATION STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
- USE I AND IP MARCH 1 JUNE 15 USE III AND IIIP OCTOBER 1 - APRIL 30
- 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.
- ITEM 11, REGARDING PROJECT DISTURBANCE IS NO LONGER A REQUIREMENT OF THE STATE OF MARYLAND, HOWEVER REMAINS A REQUIREMENT OF HOWARD COUNTY.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE

DATE

DATE

7/1/2024

7/1/2024

(Hdl) Edmondson

lynda Eisenberg

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF BOOK SAPEVELOPMENT

DIRECTOR

B-4-5 STANDARDS AND SPECIFICATIONS PERMANENT STABILIZATION

TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

TO USE LONG-LIVED PERENNIAL GRASSES AND LEGUMES TO ESTABLISH PERMANENT GROUND COVER ON DISTURBED SOILS.

CONDITIONS WHERE PRACTICE APPLIES EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.

A. SEED MIXTURES

- A SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TARLE 8.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 8.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE 8.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY TH SUMMARY IS TO BE PLACED ON THE PLAN. 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 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT
- 2. TURFGRASS MIXTURES A. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS. PARKS. PLAYGROUNDS. AND 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
- 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 BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/ CERTIFIED KENTUCKY BILLIEGRASS 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 TOTAL MIXTURE BY WEIGHT. III. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDILIM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE
- 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: 11/2 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

C. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES

CULTIVARS MAY BE BLENDED.

- WESTEM MD: MARCH 15 TO JUNE 1, AUGUST ITO 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 11/4 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES WILL POSE NO DIFFICULTY 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 SITES.
- B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
- A. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR. B. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GROWTH AND THATCH. BROKEN PADS AND TOM OR UNEVEN ENDS WILL NOT BE C. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- D. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL. È. SOD MUST BE HARVESTÉD, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
- A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD. B. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS. C. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. D. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE
- SOD MAINTENANCE A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING. B. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT. C. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A

PERMANENT SEEDING SUMMARY

GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT

R-4-2 STANDARDS AND SPECIFICATIONS SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS

DEFINITION

THE PROCESS OF PREPARING THE SOILS TO SUSTAIN ADEQUATE VEGETATIVE STABILIZATION.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.

CONDITIONS WHERE PRACTICE APPLIES WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SOIL PREPARATION

- I. 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 CHISFL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION FQUIPMENT 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 MEANS. 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 6.0 AND 7.0.
- II. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM). 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 À MODERATE AMOUNT OF MOISTURE. AN EXCÉPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
- IV. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT. V. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION. B. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON

APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO

- 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 IKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER FOUIPMENT 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.
- I. 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 CONCEM 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-3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE: A. 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
- O SUPPORT PLANTS OR FLIRNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT 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 TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING
- 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 11/2 INCHES IN DIAMETER. 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 : TOPSOH SUBSTITUTES OR AMENDMENTS AS RECOMMENDED BY A QUALIFIED
- AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL. A. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING B UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPAC 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

AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL

MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION. C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

I. 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 ANALYSES. FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER

5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS

PER 1.000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL

SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS

2 FERTILIZERS MUST BE UNIFORM IN COMPOSITION FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE 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 98 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.

SEEDING AND MULCHING

<u>DEFINITION</u>
THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

B-4-3 STANDARDS AND SPECIFICATIONS

 $rac{ ext{PURPOSE}}{ ext{TO PROTECT}}$ 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 <u>CRITERIA</u>

- A. SEEDING 1.SPECIFICATIONS
- A. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE 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. B. 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 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 KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE D. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS
- OR CHEMICALS USED FOR WEED CONTROL 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. I. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE 8.1, PERMANENT SEEDING TABLE 8.3, 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 A WEIGHTED ROLLER TO PROVIDE GOOD SFED TO SOIL CONTACT. B. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL. I. 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.

- C. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND 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; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K20 (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 MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
- I. MULCH MATERIALS (IN ORDER OF PREFERENCE) A. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, LYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE

III. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

IV. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

- MARYLAND SFFD 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. B. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE. I. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY II. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - III. 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 IV. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT
 - CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC V. 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.
 - A. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. B. 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. C. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT 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
 - A. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWIN 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

CELLULOSE FIBER PER 100 GALLONS OF WATER.

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. III. 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 TO 15 FEET WIDE

B-4-8 STANDARDS AND SPECIFICATIONS

STOCKPILE AREA

A 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

CONDITIONS WHERE PRACTICE APPLIES STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

- 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MILIST RE CLEARLY INDICATED ON THE FROSION AND SEDIMENT CONTROL PLAN. 2. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO
- STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING 3. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT
- CONTROL PRACTICE. 4. 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. 6. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN
- APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE. 7. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY

STABILIZATION REQUIREMENT AS WELL AS 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 FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE

<u>MAINTENANCE</u>

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 FROSION. 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.

B-4-4 STANDARDS AND SPECIFICATIONS TEMPORARY STABILIZATION

- DEFINITION TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.
- TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.
- 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 8.1 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 8.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT . FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY
- 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 SEASON.

TEMPORARY SEEDING SUMMARY

	HARDINESS Z SEED MIXTUR	FERTILIZER RATE	LIME RATE			
NO	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	(10-20-20)	
1	COOL SEASON ANNUAL RYEGRASS OR EQUAL	40 LB / AC	MAR 1 TO MAY 15 AUG 1 TO OCT 15	1/2 IN.	436 LB/AC (10 LB PER 1000 SF)	2 TONS/AC (90 LB PER 1000 SF)
2	WARM SEASON FOXTAIL MILLET	30 LB / AC	MAY 16 TO JUL 31	1/2 IN.		

FOR ALTERNATES, REFER TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL PAGE B.20, TABLE B.1,

MILLET OR EQUAL

Table B.1: Temporary Seeding for Site Stabilization

	Seedi	Seeding Rate 1/		Recommended Seeding Dates by Plant Hardiness Zone 34			
Plant Species	lb/ac lb/1000 ft ²		Seeding Depth ^{2/} (inches)	5b and 6a	6b	7a and 7b	
Annual Ryegrass (Lolium perenne ssp. multiflorum)	40	1.0	0.5	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Barley (Hordeum vulgare)	96	2.2	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Oats (Avena sativa)	72	1.7	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Wheat (Triticum aestivum)	120	2.8	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Cereal Rye (Secale cereale)	112	2.8	1.0	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Nov 15	Feb 15 to Apr 30; Aug 15 to Dec 15	
Foxtail Millet (Setaria italica)	30	0.7	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	
Pearl Millet (Pennisetum glaucum)	20	0.5	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	

Seeding rates for the warm-season grasses are in pounds of Pure Live Seed (PLS). Actual planting rates shall be adjusted to reflect percent seed germination and purity, as

Seeding rates listed above are for temporary seedings, when planted alone. When planted as a nurse crop with permanent seed mixes, use 1/3 of the seeding rate listed above for barley, oats, and wheat. For smaller-seeded grasses (annual ryegrass, pearl millet, foxtail millet), do not exceed more than 5% (by weight) of the overall permanent seeding mix. Cereal rye generally should not be used as a nurse crop, unless planting will occur in very late fall beyond the seeding dates for other temporary seedings. Cereal rye has allelopathic properties that inhibit the germination and growth of other plants. If it must be used as a nurse crop, seed at 1/3 of the rate listed above Oats are the recommended nurse crop for warm-season grasses

/ For sandy soils, plant seeds at twice the depth listed above. The planting dates listed are averages for each Zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone

B.20

NOTES

SITE.

DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE THE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:

A. 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES. DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1. B. 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT

SEQUENCE OF CONSTRUCTION

WORK. - 1 WEEK.

1 WEEK

- 1. OBTAIN GRADING PERMIT. 1 DAY DEVELOPER / CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE
- ENFORCEMENT AUTHORITY PRIOR TO BEGINNING CONSTRUCTION. 1 DAY NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (410-313-1880) AT LEAST 24 HOURS
- BEFORE STARTING ANY WORK. 1 DAY 4. STAKEOUT LIMITS OF DISTURBANCE. - 3 DAYS
- EXISTING ELECTRIC, WATER AND SEWER SERVICE SHALL BE LOCATED AND PROTECTED PRIOR TO BEGINNING

GRADING AND SOIL EROSION & SEDIMENT CONTROL PLAN

- INSTALL THE PROJECT STABILIZED CONSTRUCTION ENTRANCE (SCE), WHERE SHOWN HEREON. 1 DAY REMOVE EXISTING ROLL GATE AND BUILDING STRUCTURE / TRAILER. - 5 DAYS
- COMPLETE CLEARING AND GRUBBING FOR THE INSTALLATION OF THE PERIMETER CONTROLS 1 DAY INSTALL PERIMETER CONTROLS AT THE LIMIT OF DISTURBANCE, WHERE SHOWN OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. - 14 DAYS
- WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, COMPLETE THE CONSTRUCTION OF THE PROJECT'S STORM DRAIN SYSTEM AND OUTFALL AS SHOWN HEREON. STABILIZE AREA STABILIZE THE DISTURBED AREAS FROM THE AFOREMENTIONED DISTURBANCES WITH TEMPORARY SEEDING MIXTURE AND STRAW MULCH.
- 10. AS PART OF THE SITE MASS GRADING OPERATIONS THE MICRO-BIORETENTION AND/OR BIO-RETENTION SYSTEMS CAN BE EXCAVATED AT THIS POINT TO AN ELEVATION AT LEAST 1 FOOT ABOVE ULTIMATE UNDERDRAIN PIPE INVERT ELEVATION, THIS WILL ALLOW THE FEEDING STORM DRAIN SYSTEMS TO FUNCTION, THIS MATERIAL CAN BE UTILIZED FOR ONSITE MASS GRADING FILL MATERIALS AS WELL AS PROVIDE POCKETS OF SEDIMENT STORAGE -COMPLETION OF A PROJECT STORMWATER ESD - MICRO-BIORETENTION OR BIO-RETENTION SYSTEMS SHALL
- OCCUR WHEN ITS CONTRIBUTING DRAINAGE AREA IS STABILIZED (DAILY) 11. ABOVE DISTURBANCES SHALL BE IMMEDIATELY STABILIZED WITH PERMANENT SEEDING MIXTURE AND STRAW
- MULCH. 2 DAYS INSTALL INLET PROTECTION - 1 DAY WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, COMPLETE SITE MASS GRADING OPERATIONS, PLACING PARKING LOT TO SUBGRADE AND LIMO WAREHOUSE TO PAD SUBGRADE. DISTURBANCES DRAINING TOWARD
- THE STABILIZED CONSTRUCTION ENTRANCE SHOULD BE DIRECTED TO THE TEMPORARY EXCAVATED MICRO-BIORETENTION FACILITY (ITEM10.) - 1 WEEK 14. EXTEND EXISTING PUBLIC SEWER CONNECTION AND INSTALL NEW SEWER CONNECTION PER THE
- DETAILS HEREIN. ABANDON EXISTING 1-INCH WATER SERVICE AND METER VAULT AND REPLACE WITH STANDARD 1-1/2 INCH WATER HOUSE CONNECTION WITH 1" METER AND NEW SERVICE PER THE DETAILS HEREIN. - 3 DAYS
- 15. WITH WAREHOUSE PAD ESTABLISHED, BEGIN LIMO WAREHOUSE BUILDING CONSTRUCTION. 4 MONTHS WITH PARKING LOT AT SUBGRADE, INSTALL ONSITE LANDSCAPE WALL. 2 DAYS WITH LANDSCAPE WALL COMPLETE. COMPLETE MISSION ROAD SAW CUT AS REQUIRED FOR THE IMPROVEMENTS SHOWN HEREIN AND INSTALL PROJECT CURBING, CONSTRUCT THE SWALE ATOP THE LANDSCAPE WALL AND BEHIND CURBING TO KEEP OFFSITE CLEANWATER FROM ENTERING THE PROJECT SITE. SWALE SHALL BE
- LINED WITH TSSMC AND IMMEDIATELY STABILIZED WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH. 18. INSTALL STONE BASE WITH PARKING LOT AND MISSION ROAD AND INSTALL BASE COURSE PAVEMENT. - 3 DAYS 19. UPON COMPLETION OF THE LIMO WAREHOUSE BUILDING STABILIZED DRAINAGE AREAS AND WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR AND A CLEAR WEATHER FORECAST, REMOVE SEDIMENT FROM THE MICRO-BIORETENTION AND BIO-RETENTION EXCAVATIONS. COMPLETE THE CONSTRUCTION OF THE MICRO-BIORETENTION AND BIO-RETENTION FACILITIES IN ACCORDANCE WITH THE SPECIFICATIONS AND DETAILS HEREIN. ONCE CONSTRUCTED, PROTECT ANY INSTALLED ESD FACILITIES FROM RECEIVING "DIRTY" RUNOFF BY
- IMMEDIATELY STABILIZING FACILITY SIDE SLOPES WITH SOD AND SURROUND FACILITY WITH SILT FENCE 20. INSTALL PROJECT LANDSCAPING AND FENCING. STABILIZE DISTURBANCES WITH PERMANENT SEEDING MIXTURE
- AND STRAW MULCH. 3 DAYS INSTALL TRENCH DRAIN, TOP COAT PAVEMENT AND RE-INSTALL ROLL GATE. - 3 DAYS
- . CONSTRUCT MISSION ROAD SIDEWALK, STABILIZE DISTURBANCES WITH PERMANENT SEEDING MIXTURE AND 23. AFTER PERMISSION HAS BEEN GIVEN BY SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING E/S

CONTROLS AND STABILIZE THE DISTURBED AREAS FROM THE AFOREMENTIONED DISTURBANCES WITH

ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION

PERMANENT SEEDING MIXTURE AND STRAW MULCH - DAILY

OWNER/DEVELOPER SIMRAN GROUP, LLC

PHONE: (410) 504-9416 REVISION

SITE DEVELOPMENT PLAN

10427 SNOW POINT DRIVE

BETHESDA, MD 20814

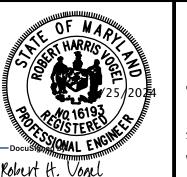
SOIL EROSION AND SEDIMENT CONTROL PLAN NOTES

8570 MISSION ROAD

DEED L.16875 - F.188 HOWARD COUNTY, MARYLANI

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



ROBJER9PP9772VEGEL, PE No.

TAX MAP 42 BLOCK 18 6TH ELECTION DISTRICT

DESIGN BY: DRAWN BY: CHECKED BY: SCALE: W.O. NO.: 49568

WERE PREPARED OR APPROVED BY ME. AN ONB AUGUST 2023 ____AS SHOWN

SHEET 12

ROFESSIONAL CERTIFICATE

HARDINESS ZONE (FROM FIGURE B.3): ZONE 6b SEED MIXTURE (FROM TABLE B.3):						FERTILIZER RATE (10–20–20)			
NO	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P ₂ 0 ₅	K ₂ 0		
9	COOL SEASON TALL FESCUE	T.F. 60 LB / AC	MAR 1 TO MAY 15	1/4-1/2 IN.	45 LB/AC	90 LB/AC	90 LB/AC	2 TONS/AC (90 LB PER	
	& KENTUCKY BLUEGRASS PERENNIAL	CKY SS K.B. 40 LB / AC AUG 15 TO OCT 15		AUG 15 TO		1000 SF) 10			
	RYEGRASS OR EQUAL	P.R. 20 LB / AC							
4	WARM/COOL SEASON	DT 15 LB / AC	MAR 1 TO MAY 15 <><>						
	GRASS MIX DEERTOUNGE	CRF 20 LB / AC	MAY 16 TO						
	CREEPING RED FESCUE & CANADA WILD	CWR. 5 LB / AC	JUNE 15*						

RYE FOR ALTERNATES, REFER TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL - PAGES B.26 - B.32

> OWNER/DEVELOPER CERTIFICATION: "I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION. OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

Manish P. Singh

OWNER 99 EVEL OF ER ... SIGNATURE

Manish P. Singh

PRINTED NAME & TITLE

DocuSigned by: Robert H. Vogel 4/22/2024 DESIGNER SOSTGNATURE Q REGISTRATION NO. <u>16193</u> PRINTED NAME (P.E), R.L.S., OR R.L.A. (circle one)

DESIGN CERTIFICATION:

THEREBY CERTIFICATION THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT TREPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT." 4/25/2024

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. Olexander Bratchie/27/2024 HOWARD S.C.D.

APPROVED: HOWARD CO	OUNTY DEPARTMENT OF	PLANNING AND ZONING
(ocusigned by: HD Edmondson	6/27/2024
CHIEF, DEVELOPMENT	ENGINEERING DIVISION	DATE
	ocuSigned by:	7/1/2024
CHIEF, DIVISION OF	AND ADEVELOPMENT Docusioned by:	DATE
	unda Eisunbura	7/1/2024
DIRECTOR	4220B635863942E	DATE

DETAIL E-3 SUPER SILT FENCE

WOVEN SLIT FILM GEOTEXTILE

CONSTRUCTION NOTES

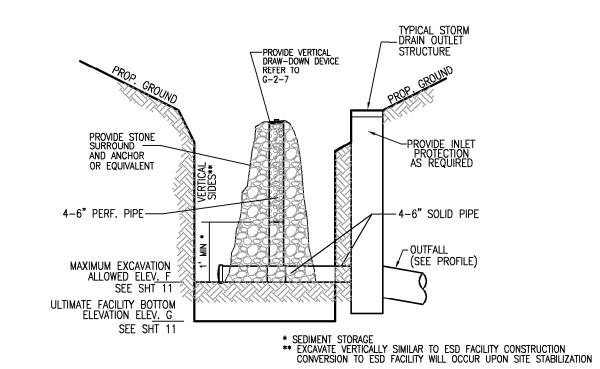
OWNER/DEVELOPER CERTIFICATION: "I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL REAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT—OF—ENTRY FOR PERIODIC ON SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE. Manish P. Singh 4/22/2024 Manish P. Singh PRINTED NAME & TITLE

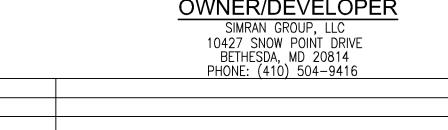
"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT." DocuSigned by: Robert H. Vogel 4/25/2024 DESIGNER'S SIGNATURE DATE MD REGISTRATION NO. 16193 P.E, R.L.S., OR R.L.A. (circle one) ROBERT H. VOGEL
PRINTED NAME

DESIGN CERTIFICATION:

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. 6/27/2024 Olexander Bratchie HOWARD S.C.D.

BIORETENTION AND MICRO-BIORETENTION SEDIMENT CONTROL **CHAMBER & DEWATERING DEVICE** NOT TO SCALE





OWNER/DEVELOPER

REVISION

SITE DEVELOPMENT PLAN SOIL EROSION AND SEDIMENT CONTROL PLAN DETAILS

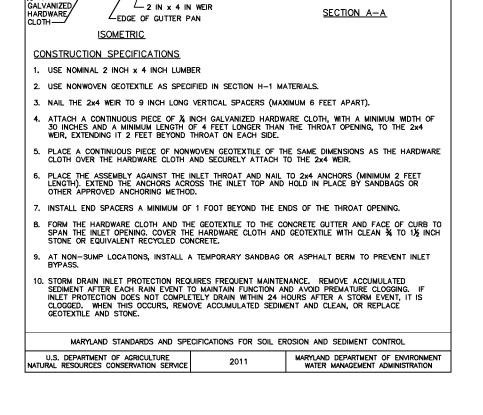
8570 MISSION ROAD

DEED L.16875 - F.188

VOGEL ENGINEERING

TIMMONS GROUP

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043

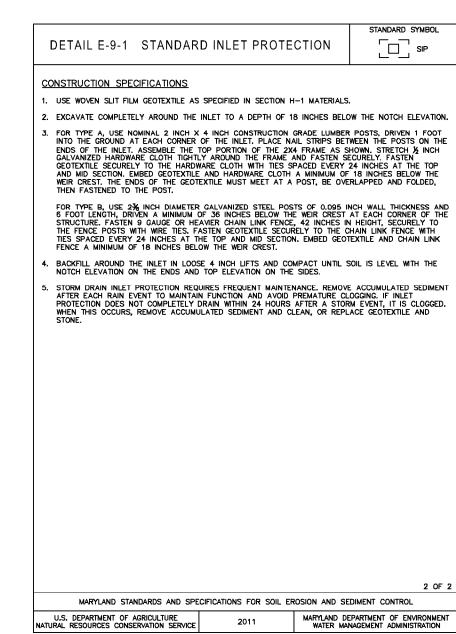


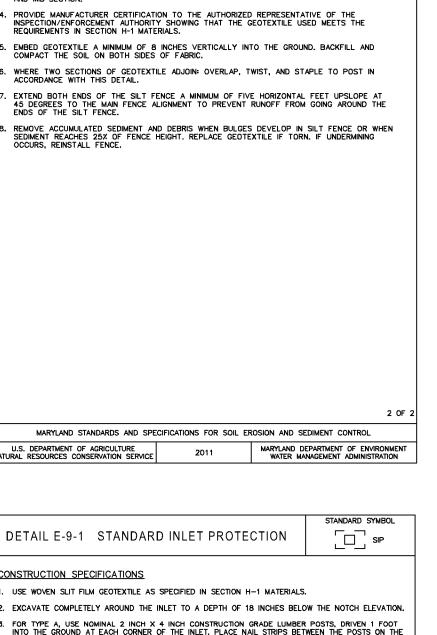
DETAIL E-9-3 CURB INLET PROTECTION

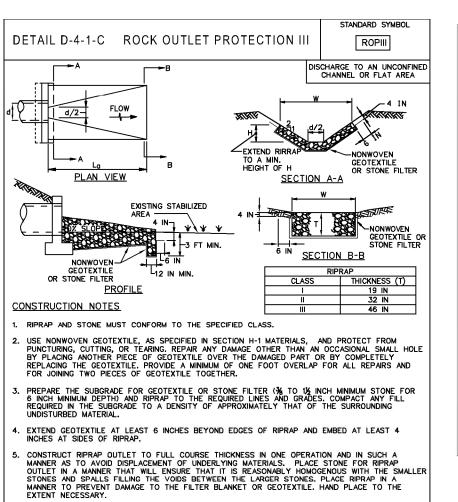
6 FT MAX. SPACING OF % TO 11/2 STONE -

TOP ELEVATION ∠2 IN x 4 IN FRAMING TOP ELEVATION -16 IN MIN. -NOTCH ELEVATION LINK FENCE (TYP.) — 18 IN INTO GROUND -TYPE A ISOMETRIC VIEW SECTION FOR TYPE A AND B MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL 2011

DETAIL E-9-1 STANDARD INLET PROTECTION







CHANNEL APPLICATION

CONSTRUCTION SPECIFICATIONS ISOMETRIC VIEW

PREPARED SURFACE WITH
SEED IN PLACE

USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

P. USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM)
NATURAL OR MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND
DISTRIBUTION OF FIBERS THROUGHOUT AND BE SMOLDER RESISTANT. CHEMICALS USED IN THE MAT
MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS
TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING
OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL
AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.

5. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM, GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1½ INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "I" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM.

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING

OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTERLINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MAT SMOOTHLY AND FIRMLY ON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.

OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.

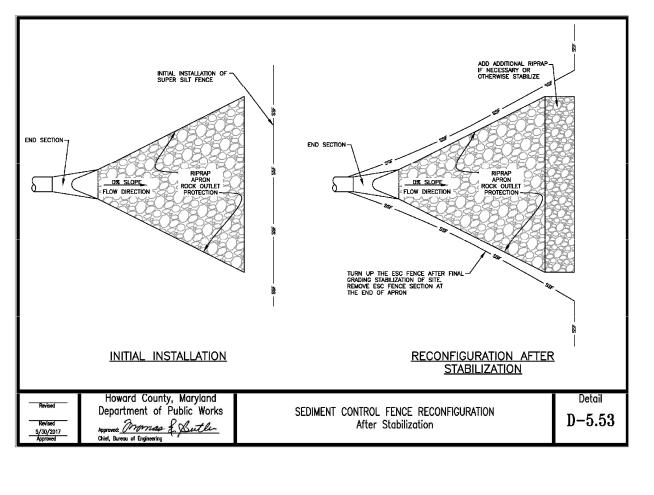
3. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

2011

MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.



STANDARD SYMBOL

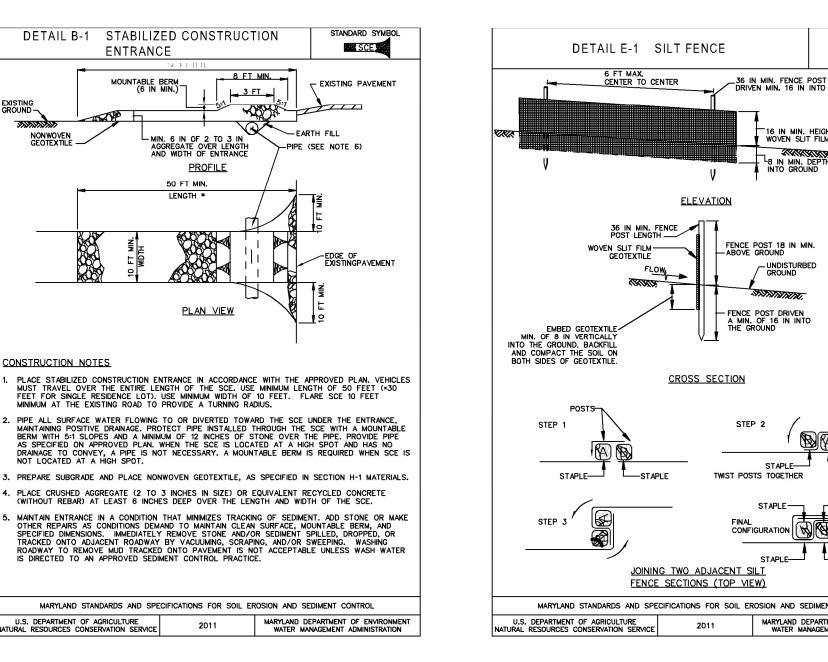
[ZZ] CIP

OF 2 IN x 4 IN

SANDBAG OR
OTHER APPROVED
ANCHORING METHO

MAXIMUM DRAINAGE AREA = 1/4 ACRE

2 IN x 4 IN WEIR-



-36 IN MIN.

— GALVANIZED CHAIN LINK FENCE WITH WOVEN SLIT FILM GEOTEXTILE

ELEVATION

CROSS SECTION

INSTALL 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.

FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.

. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.

. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE

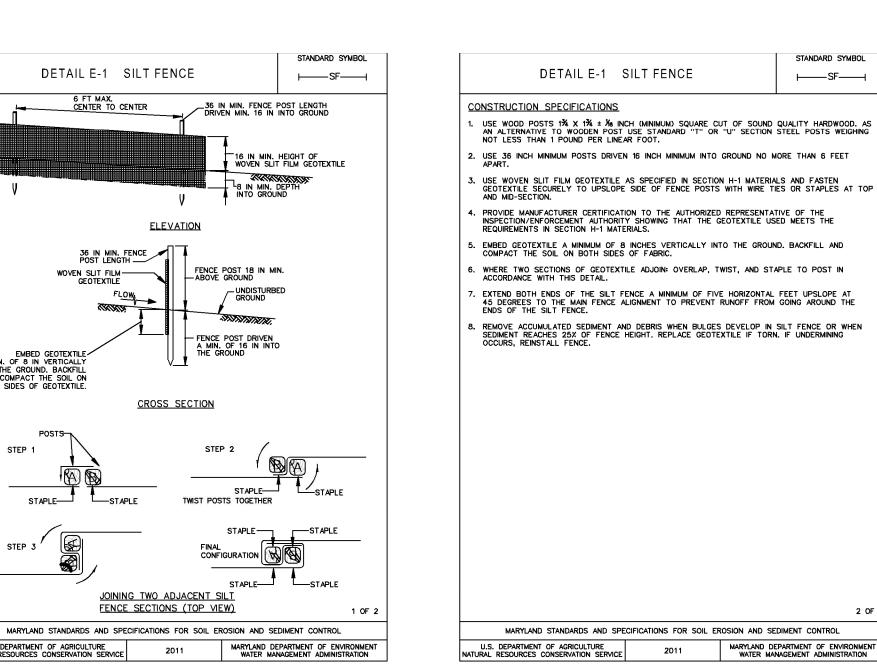
45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.

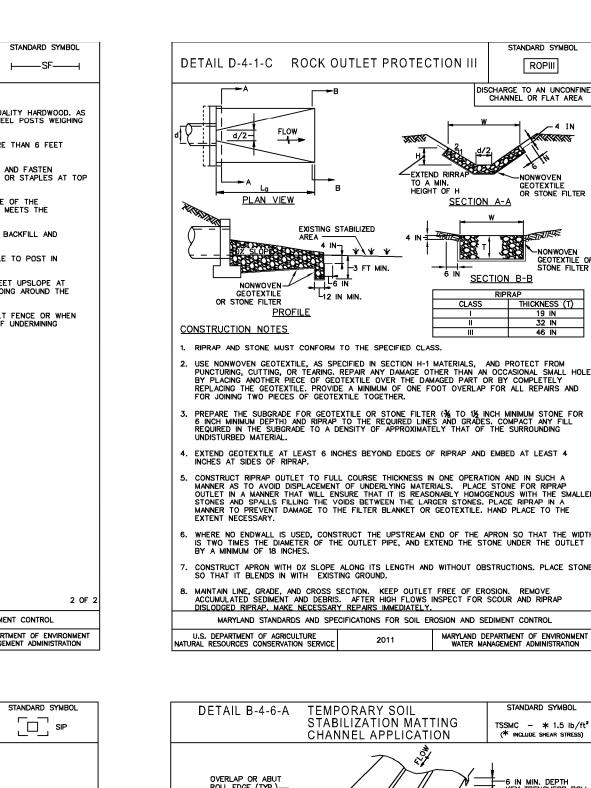
. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN, LINK FENCING, AND GEOTEXTILE ROSION AND SEDIMENT CONTROL MARYLAND STANDARDS AND SPECIFICATIONS FOR SUIL ROSION AND SEDIMENT CONTROL

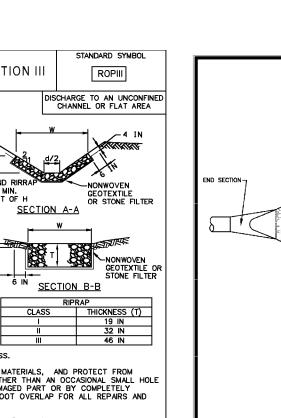
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
2011

FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.



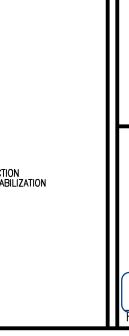


6 IN MIN. OVERLAP__ AT ROLL END (TYP.)

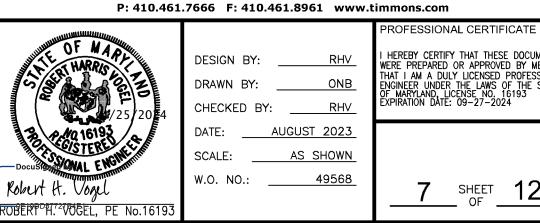


MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

TSSMC - * 1.5 lb/ft² (* include shear stress)



TAX MAP 42 BLOCK 18 6TH ELECTION DISTRICT

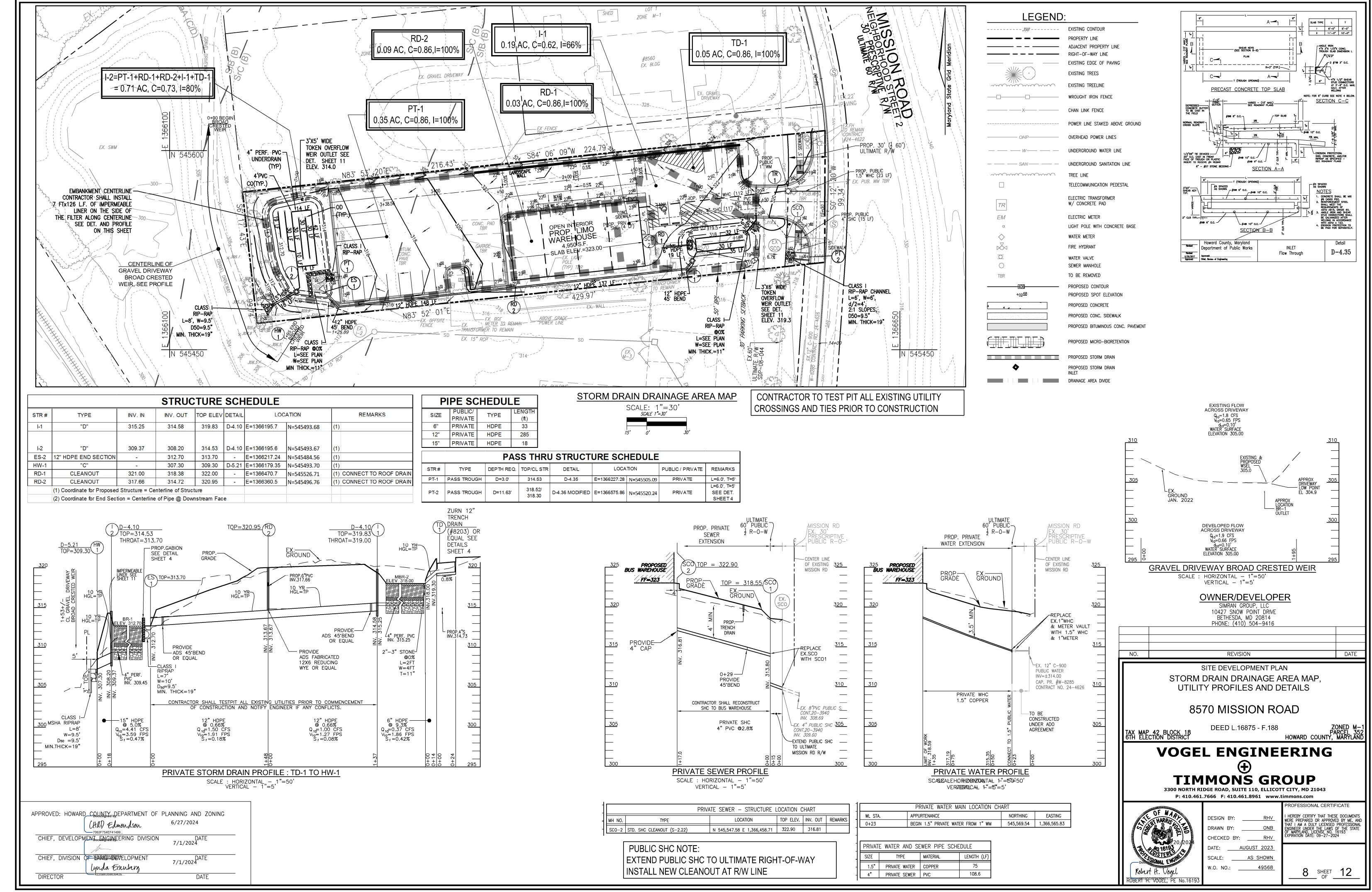


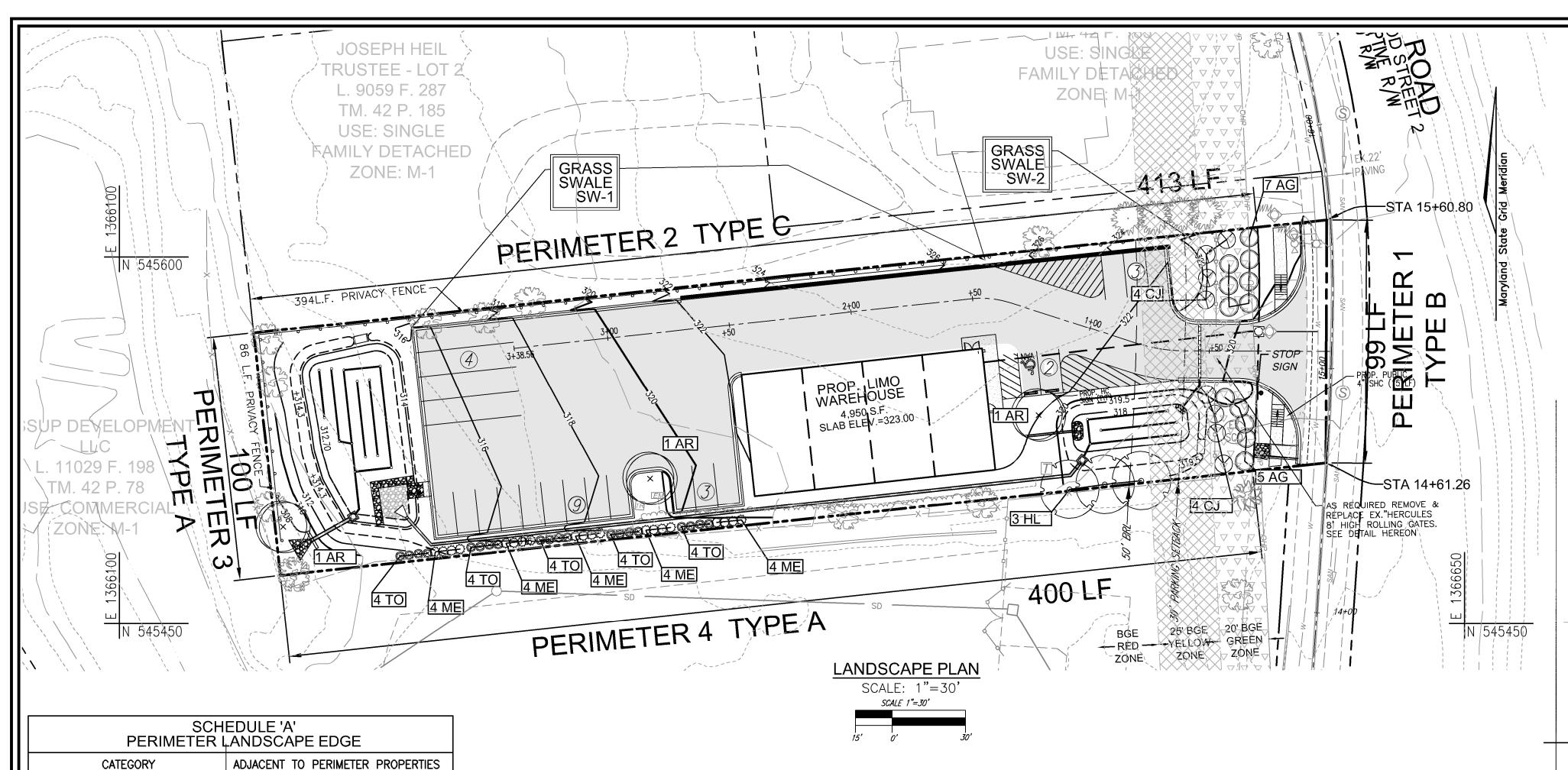
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09-27-2024 __ SHEET _____12___

ZONED M-PARCEL 352 HOWARD COUNTY, MARYLAND

SDP-23-030

DATE





LANDSCAPING NOTES

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 SUBSTITUTIONS 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.

THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED 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 OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED. SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING

CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER 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 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

SURETY FOR THE PROPOSED LANDSCAPING SHALL BE BASED ON THE NUMBER OF PLANTINGS REQUIRED. THE REMOVAL OF TREES 30" OR GREATER DHB IS PROHIBITED WITHOUT COUNTY

APPROVAL. 14* 40***

* PERIMETER 1 AND PERIMETER 2 WILL BE REPLACED WITH BGE COMPLIANT PLANTINGS AT A 2:1 RATIO. * 40 SHRUBS SUBSTITUTION FOR 4 SHADE TREES AT A 1:10 RATIO

_

10*

Α

100'

NO

YES

86'

14'

1:60 1 1:60 7

400'

NO

NO

400'

_

_

40**

413'

NO

YES

394'

19'

4*

1:50 2 | 1:40 1 |

1:40 3 | 1:20 1

NO

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THE LANDSCAPING IN THE AMOUNT OF \$ 6,000. \$ 1,200 FOR 4 SHADE TREES, \$ 2,100 FOR 14 EVERGREEN TREES, AND \$ 1,200 FOR 40 SHRUBS, \$ 600 FOR 2 PARKING LOT TREES AND \$ 900 FOR 6 STREET TREES.

PERIMETER/FRONTAGE DESIGNATION

CREDIT FOR EXISTING VEGETATION

CREDIT FOR WALL, FENCE OR BERM

(DESCRIBE BELOW IF NEEDED)

(DESCRIBE BELOW IF NEEDED)

NUMBER OF PLANTS REQUIRED

NUMBER OF PLANTS PROVIDED

OTHER TREES (2:1 SUBSTITUTION)

SHRUBS (10:1 SUBSTITUTION)

(DESCRIBE PLANT SUBSTITUTION CREDITS

EVERGREEN TREES

EVERGREEN TREES

LANDSCAPE TYPE

LINEAR FEET OF ROADWAY

FRONTAGE/PERIMETER

(YES, NO, LINEAR FEET)

(YES, NO, LINEAR FEET)

SHADE TREES

SHADE TREES

DIRECTOR

SCHEDULE 'B' PARKING LOT INTERNAL LANDSC	APING
NUMBER OF PARKING SPACES PROVIDED	21*
NUMBER TREES REQUIRED 1 SHADE TREE PER 20 PS	1
NUMBER OF ISLANDS AND TREES PROVIDED	
ISLANDS AND SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	2 -

*SURFACE SPACES. REFER TO PARKING TABULATION, SHEET 1

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 COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DocuSigned by:	
Manish P. Singh	6/4/2024
SIGNATURE OF DEVELOPER	DATE

APPROVED: HOWARD COUNTY DEPRAPTMENT OF PLANNING AND ZONING 6/27/2024 (HdD Edmondson

7063F754EF41499	
CHIEF, DEVELOPMENT ENGINEERING DIVISION	7/1/2024
CHIEF, DIVISION OF LAND BEGGER MENT Lynda Eisenburg	7/192554

		LANDSCAPE SCHEDULE PROVIDED PLANTING								
	LEGEND	KEY	QUAN.	BOTANICAL NAME	SIZE	CAT				
TREES	\bigcirc	AR	3	ACER RUBRUM 'OCTOBER GLORY' OCOTBER GLORY RED MAPLE	2.5"-3" CAL	В & В				
SHADE		HL	3	GLEDITSIA TRIACANTHOS INERMIS SHADEMASTER THORNLESS HONEYLOCUST 'SHADEMASTER'	2.5"-3" CAL	В & В				
APLIANT INGS		AG *	12	ACER GINNALA AMUR MAPLE (BGE COMPLIANT)	1 1/2"-2" CAL.	B & B				
BGE COMPLIANT PLANTINGS	\bigotimes	S	8	CHINESE JUNIPER ROBUSTA GREEN (BGE COMPLIANT)	10'-12' Ht.	В & В				
SHRUBS	©	то	20	TAXUS CUSPIDATA 'NANA' DWARF JAPANESE YEW	18"–24" SPREAD	В & В				
罗	٥	ME	20	EUONYMOUS KIAUTSCHOVICUS 'MANHATTAN' MANHATTAN EUONYMOUS	2.5'-3' HT.	В &с В				

NOTE: WITH PERMISSION FROM HOWARD COUNTY, PLANTINGS SPECIFIED HEREON MAY BE SUBSTITUTED WITH APPROVED SPECIES LISTED IN APPENDIX B & C OF THE HOWARD COUNTY LANDSCAPE MANUAL.

* 6 TREES REQUIRED TO MEET STREET TREE REQUIREMENT

LANDSCAPE SCHEDULE NOTE: I. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.

2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING. 3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES. 4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

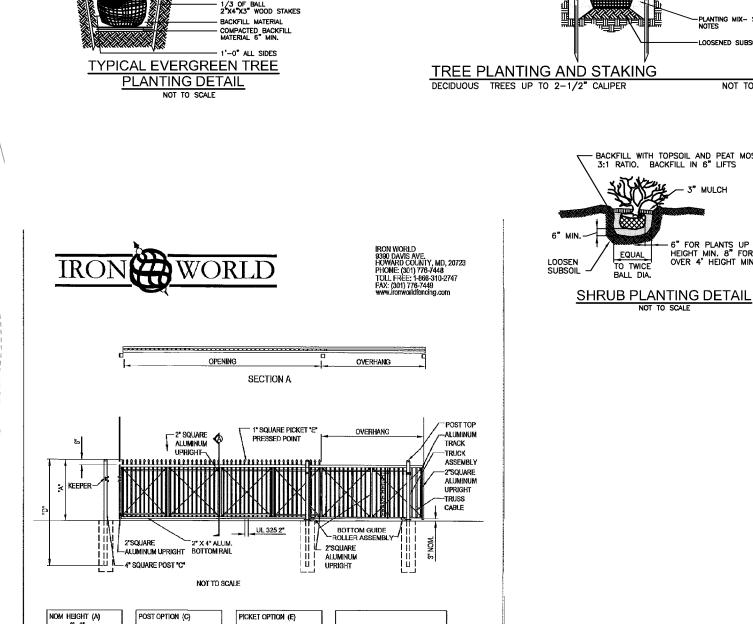
SCHEDULE 'C' STREET TREE PLANTING					
STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED		
MISSION RD (STA. 14+61.26-15+60.80)	99/30	3	6*		
SUBSTITUTION WITH BGE COMPLIANT	PLANTINGS AT	A 2:1 RATIO.			

PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF <u>\$ 900</u> SHALL BE POSTED AS PART OF THE DEVELOPER AGREEMENT.

STREET TREE NOTES:

1. WHEN THE DISTANCE BETWEEN THE CURB AND SIDEWALK IS 6 FEET OR GREATER, TREES SHALL BE LOCATED WITHIN THE RIGHT OF WAY AND SHALL BE CENTERED BETWEEN THE CURB AND THE SIDEWALK. 2. WHEN THE DISTANCE BETWEEN THE CURB AND THE SIDEWALK IS LESS THAN 6 FEET, AND WHERE TREES ARE PLANTED CLOSER THAN 3 FEET TO THE SIDEWALK, A BIOLOGIC ROOT INHIBITOR BARRIER OR PHYSICAL CONTAINER BARRIER SHALL BE REQUIRED. 3. WHEN THE DISTANCE BETWEEN THE CURB AND THE SIDEWALK IS LESS THAN 6 FEET, TREES MAY BE PLANTED 3 FEET FROM THE SIDEWALK IN THE DIRECTION AWAY FROM THE ROAD. A 10 FOOT WIDE TREE MAINTENANCE EASEMENT SHALL BE REQUIRED IF THE RIGHT OF WAY IS LIMITED. 4. TREES SHALL BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, AND BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES. STREET TREES MAY NOT BE PLANTED WITHIN 5 FEET OF A DRAIN INLET STRUCTURE, 5 FEET OF AN OPEN SPACE ACCESS STRIP, OR 10

IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN: 1) THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS. 2) THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.



FACE TO FACE OF POSTS
GAUGE

_ * POST LENGTH _ * PICKET SIZE ___ GAUGE

CERTAINTEED FENCE

DECK AND RAIL DIVISION

231 SHIP CANAL PARKWAY

BUFFALO, NY 14218

TOLL FREE: 1-800-333-0569

PHONE: (716) 823-3023 FAX: (716) 823-2843

www.certainteed.com

POST CENTRES

4 FT FENCE

T CENTRES

6 FT FENCE

REVISION DATE 05/31/2

— Prune as directe — Rubber Hose — Wire Guys

— Plant Saucer — Remove Burlap From Top

NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

Vinyl Fence Products

☐ FRONTIER BLEND

☐ ARBOR BLEND

☐ ARCTIC BLEND

☐ WEATHERED BLEND ☐ BRAZILIAN BLEND ☐ TIMBER BLEND ☐ SIERRA BLEND

POST CENTRES

5 x 5 = 97" -

5 FT FENCE

2. DO NOT SCALE DRAWING.

学の子もと子ももとという。 Republication of the Company of the

49568-09 LANDSC FC

REFERENCE NUMBER 035-017C.

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.

PRIVACY FENCING OR EQUAL

5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER

(BUFFTECH) CHESTERFIELD W/ CERTAGRAIN $^{\rm TM}$ TEXTURE - 4, 5 & 6 FT. HEIGHT

THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS

4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY

SELECT DESIRED HEIGHT

SELECT DESIRED COLOR

□ 6'

☐ ALMOND ☐ NATURAL CLAY

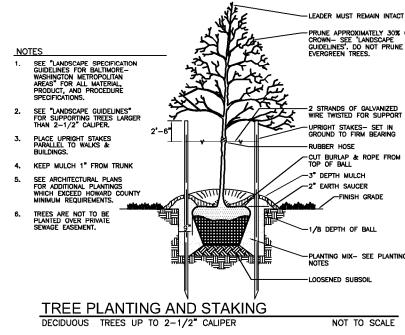
SINGLE CANTILEVERED SLIDE GATE, 1 INCH PICKETS, 6 FT. TO 30 FT. OPENING

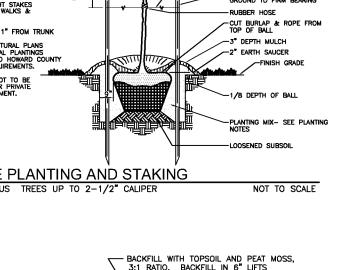
DO NOT SCALE DRAWINGS.
 SPECIFICATIONS SHOWN CAN BE CHANGED ONLY BY THE MANUFACTURER.

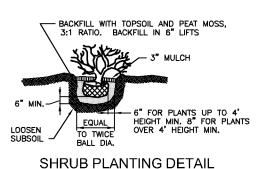
4. FOOTING WIDTH TO BE (4) X POST WIDTH.
5. FINISH SHALL BE POWDER COATED TOUGH™ BLACK

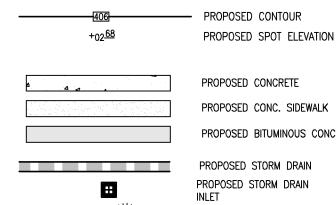
\BARCELONA GATE

"HERCULES" ROLLING GATE OR EQUAL









LEGEND:

----- EXISTING CONTOUR

EXISTING TREELINE

WROUGHT IRON FENCE

- --- SAN--- - UNDERGROUND SANITATION LINE

ADJACENT PROPERTY LINE RIGHT-OF-WAY LINE

EXISTING EDGE OF PAVING

POWER LINE STAKED ABOVE GROUND

EXISTING TREES

CHAN LINK FENCE

OVERHEAD POWER LINES

ELECTRIC TRANSFORMER W/ CONCRETE PAD

ELECTRIC METER WATER METER

FIRE HYDRANT

WATER VALVE

SEWER MANHOLE

PROPOSED CONC. SIDEWALK

PROPOSED BITUMINOUS CONC. PAVEMENT PROPOSED STORM DRAIN PROPOSED STORM DRAIN



PROPOSED MICRO-BIORETENTION

PROPOSED TREES

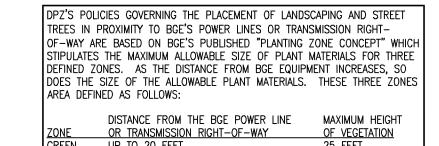
BGE "GREEN ZONE" TREE HEIGHT LIMITED (TREE HEIGHT 25' MAX.) BGE "YELLOW ZONE" TREE HEIGHT LIMITED (TREE HEIGHT 25'-40' MAX.)

BG&E NOTES:

1. BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY. 2. THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OR A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT. IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT. A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE

ITS TRANSMISSION 3. CALL MISS UTILITY TO MARK UP THE LOCATION OF EXISTING GAS LINE BEFORE PLANTING TREES ALONG MISSION ROAD. PLANT STREET TREES 10' AWAY FROM EXISTING GASLINE AS REQUIRED.

WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT



40 FFFT

BETWEEN 20 FEET AND 45 FEET YELLOW BEYOND 45 FEET ABOVE 40 FEET

OWNER/DEVELOPER

SIMRAN GROUP, LLC 10427 SNOW POINT DRIVE BETHESDA, MD 20814 PHONE: (410) 504-9416

REVISION SITE DEVELOPMENT PLAN LANDSCAPE PLAN NOTES & DETAILS

8570 MISSION ROAD

TAX MAP 42 BLOCK 18 6TH ELECTION DISTRICT

NO.

DEED L.16875 - F.188

VOGEL ENGINEERING

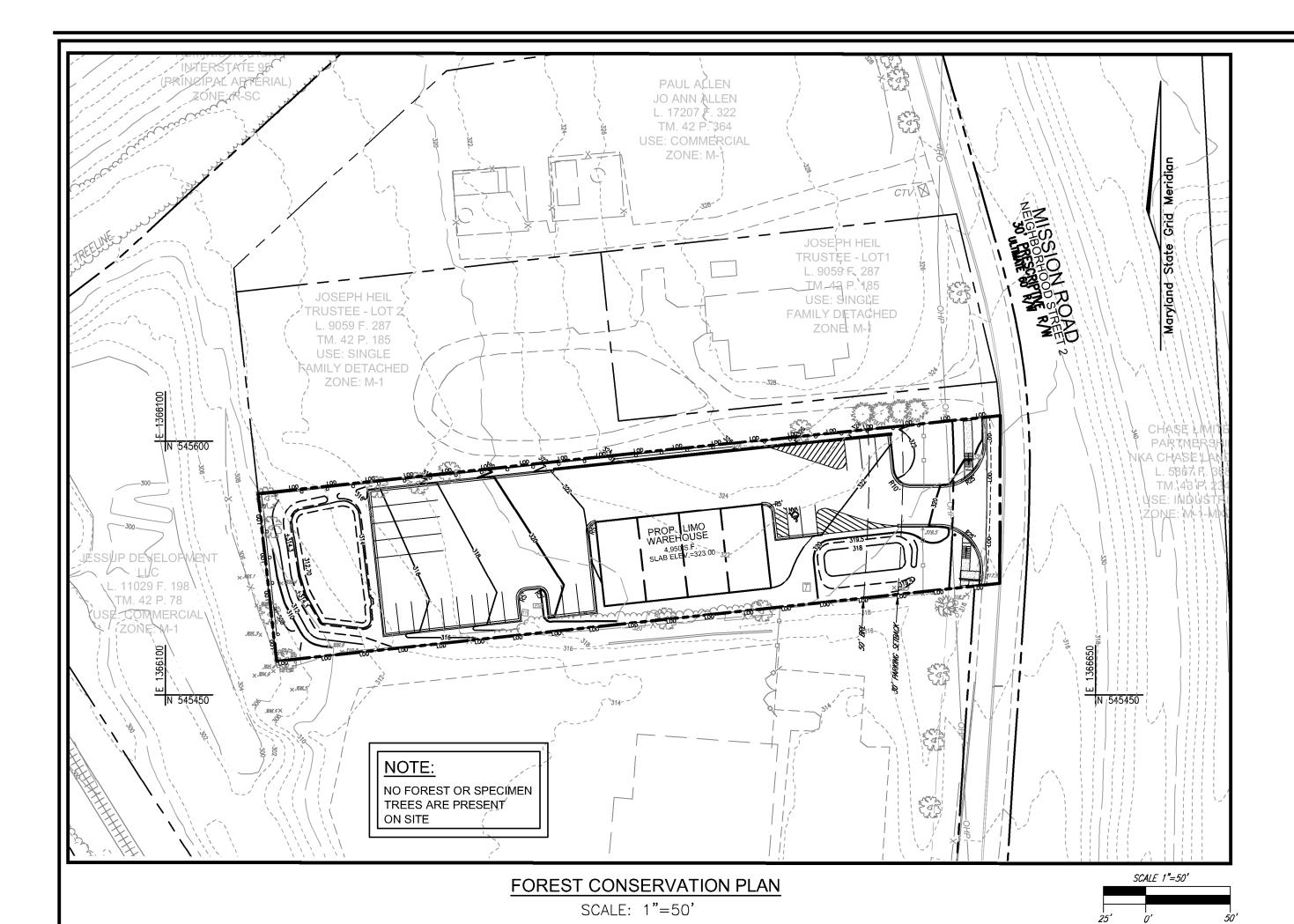
TIMMONS GROUP 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043 P: 410.461.7666 F: 410.461.8961 www.timmons.com



	DESIGN BY:	RH
	DRAWN BY:	ON
dd	CHECKED BY: _	RH
Trans.	DATE:AUGU	JST 202
	SCALE: A	S SHOW
	W.O. NO.:	4956

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE: 09–27–2024 SHEET 12

HOWARD COUNTY, MARYLAN



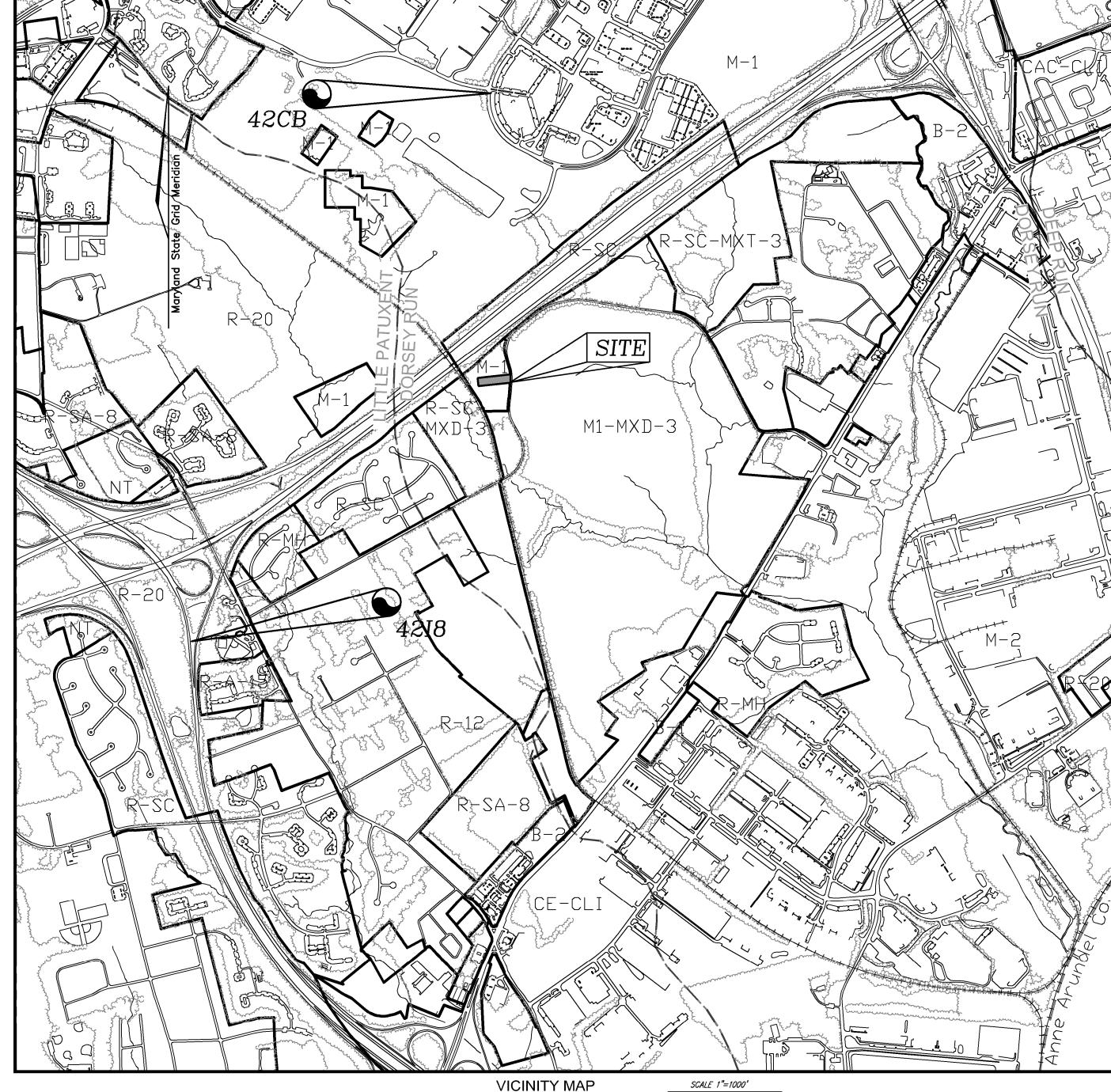
BENCHMARKS

HOWARD COUNTY BENCHMARK 4218 N 542,107.856 E 1,362,386.084 NAVD88 ELEV. 301.495 HOWARD COUNTY BENCHMARK 42CB N 549,320.827 E 1,366,327.333 NAVD88 ELEV. 335.482

LEGEND:

EXISTING CONTOUR
PROPERTY LINE
- ADJACENT PROPERTY LINE
RIGHT-OF-WAY LINE
 EXISTING EDGE OF PAVING
EXISTING TREES
EXISTING TREELINE
WROUGHT IRON FENCE
CHAN LINK FENCE
OVERHEAD POWER LINES
TELECOMMUNICATION PEDEST
ELECTRIC TRANSFORMER W/ CONCRETE PAD
ELECTRIC METER
PROPOSED CONTOUR
PROPOSED EDGE OF PAVE

PROPOSED LANDSCAPE WALI PROPOSED CURB & GUTTER PROPOSED CONC. SIDEWALK



SCALE: 1"=1000' ADC MAP/GRID NO. 5054/A4

J. Brody McAllister

J. Brody McAlleter Statement Control

Telephone (410) 683-7840 www.ecoscienceprofessionalsinc.

FOREST STAND DELINEATION NARRATIVE

The subject property is a 1.0 acre lot located at the referenced address in the Jessup section of Howard County, Maryland. The property is shown County tax map 42 as parcel 352.

The property was formally maintained as a mowed lawn with scattered trees and hedgerows along the rear portion of the lot. This condition was maintained through 2016 per County aerial photographic records. Woody vegetation on the property in 2016 was less than 10,000 sq.ft and aerial photographs dating back to 1950's indicate that the site has been unforested since at least that time.

By 2017 aerial photographs reveal that the lot had been developed with a metal building and paved/gravel parking. Fencing was been installed around most of the property but was not installed along the rear property boundary and the rear portion of the northern property boundary.

These conditions are comparable to the site conditions observed during our field review. The majority of the property has been converted to vehicle parking and storage. Natural vegetation is limited to the perimeter of the property where fencing is not present. In these areas black cherry and black locust are common. Vine growth in this area is heavy with Oriental bittersweet, grape vine, Japanese honeysuckle and poison ivy all noted.

Surrounding land uses include residential property to the north and commercial property to the south. An existing stormwater management facility is present to the west of the property.

No forest or specimen trees are present on the site.

No wetlands, streams or buffers are present on the property. The site is located in a Use I-P portion of the Little Patuxent River watershed (021311050952).

No steep slopes are present on the property.

No 100 year floodplain is present on the property.

No historic elements or cemeteries are known to be present on the property.

No rare, threatened or endangered species are known to occur on the property.

The subject property is zoned M-1.

Forest Conservation Act Compliance

The development of the subject property is required to comply with Forest Conservation Act because there are no exemptions for single lot developments in non-residential zoning, even if no forest impacts are required.

Per the Forest Conservation Worksheet the afforestation obligation is 0.2 acres, Therefore 0.2 acres of afforestation obligation is required for this site. This can be met in a County approved offsite forest conservation bank or payment of the County fee-in-lieu if no banks are available. There are no priority planting areas onsite.

APPROVED: HOWARD COUNTY DEPARTMENT OF	PLANNING AND ZONING
CHAD Edmondson	6/27/2024
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 7/1/2024
CHIEF, DIVISION OF LANDSTRUMENT Lynda Eisenburg	DATE 7/1/2024
DIRECTOR 4220B635863942E	DATE

FOREST CONSERVATION COMPUTATIONS

	FOREST CONSERVATION WORKSHEET FOR 8570 Mision	Roa	ad
A. B. C. D.	Tract Area Total (Gross) Tract Area Area within 100-year Floodplain Other Deductions (Identify: Net Tract Area d Use Category	_)	A = 1.00 B = 0.00 C = 0.00 D = 1.00
ı	t the number "1" under the appropriate land use (limit to only one entry)		
	Resid.Resid.Inst./Retail/Ind./Mixed Use/Rural LDRural MDSuburbanLinearOfficePUD00010		
E. F.	Afforestation Threshold (Net Tract Area x 15% Reforestation Threshold (Net Tract Area x 15%)	E = 0.20 F = 0.20
Exis G. H. I.	ting Forest Cover Existing Forest Cover within the Net Tract Area Area of Forest above Afforestation Threshold Area of Forest above Reforestation Threshold		G = 0.00 H = 0.00 I = 0.00
Brea J. K.	ak Even Point Break Even Point Forest Clearing Permitted without Mitigation		J = 0.00 K = 0.00
Proj L. M.	oosed Forest Clearing Total Area of Forest to be Cleared Total Area of Forest to be Retained		L = 0.00 M = 0.00
Plan N. P Q. R. S. T U	Reforestation for Clearing above the Reforestation Threshold Reforestation for Clearing below the Reforestation Threshold Credit for Retention above the Reforestation Threshold Total Reforestation Required Total Afforestation Required Total Reforestation and Afforestation Requirement 75% of Total Obligation (Retention + Planting) Planting Required Onsite to meet 75% Obligation		N = 0.00 P = 0.00 Q = 0.00 R = 0.00 S = 0.20 T = 0.20 U = 0.20 V = 0.20
W. X. Y. Z. AA. BB. CC.	Total Planting within Development Site Watershed Total Afforestation Required Remaining Planting within Watershed for Reforestation Credit Reforestation for Clearing above the Reforestation Threshold Reforestation for Clearing below the Reforestation Threshold Credit for Retention above the Reforestation Threshold Total Reforestation Required Total Afforestation and Reforestation Requirement		W= 0.00 X= 0.20 Y= 0.00 Z= 0.00 AA= 0.00 BB= 0.00 CC= 0.00 DD= 0.20

FOREST CONSERVATION FOR THIS PROJECT IS IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY FOREST CONSERVATION MANUAL. TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED IN ACCORDANCE WITH THE HOWARD COUNTY CODE, SECTION 16.1211 BY A PAYMENT OF FEE-IN-LIEU FOR THE REQUIRED AFFORESTATION OBLIGATION. THE AFFORESTATION OBLIGATION FOR IS 0.2 AC = 8,712 SQ. FT X \$1.25 = \$10,890.00

FOREST CONSERVATION GENERAL NOTES

WATERSHED NAME: PATUXENT RIVER (LITTLE PATUXENT RIVER) WATERSHED NUMBER: MDE 8-DIGIT 2131105 MDE 12-DIGIT WATERSHED #021311050952 A. GROSS SITE AREA: 1.00 AC. NET SITE AREA (GROSS-FLOODPLAIN-STEEP SLOPES):

B. AREA OF 100YEAR FLOODPLAIN: 0.00 AC. AREA OF WETLANDS AND BUFFERS (ONSITE): 0.00 AC AREA OF STREAMS AND BUFFERS (ONSITE): 0.00 AC AREA OF >25% STREEP SLOPES (ONSITE): 0.00 AC EXISTING FOREST (FSD): 0.00 AC

COMMERCIAL EXISTING USE: H. PROPOSED USE: COMMERCIAL

2016 aerial photograph

2020 aerial photograph



FOREST STAND DELINEATION NOTES

THERE ARE NO 100 YEAR FLOOD PLAINS ON SITE. THERE ARE NO STATE CHAMPION TREES ON SITE.

THERE ARE NO HABITATS OF RARE, THREATENED OR ENDAGERED SPECIES ON SITE. THERE ARE NO KNOWN HISTORIC STRUCTURES OR RESOURCES ON SITE.

MAPPED SOILS TYPES - HOWARD COUNTY, MARYLAND Y, MARYLAND
GROUP HYDRIC KW ERODIBLE TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, AND HOWARD COUNTY SOIL CONSERVATION

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.

DISTRICT WEBSITE DOCUMENTS HTTS://WWW.HOWARDSCD.ORG/DOCUMENTS

Silva, llc CONSULTING ECOLOGIST & ARBORIST

ISA Certified Arborist : Cert ID: MA6471A MD DNR FCA Qualified Profess Eco-Science Professionals, Inc. CONSULTING ECOLOGISTS

PHONE: (410) 504-9416 REVISION DATE NO. SITE DEVELOPMENT PLAN FOREST CONSERVATION PLAN

OWNER/DEVELOPER

SIMRAN GROUP, LLC 10427 SNOW POINT DRIVE BETHESDA, MD 20814

8570 MISSION ROAD

DEED L.16875 - F.188 ZONED M-1 PARCEL 352 HOWARD COUNTY, MARYLAND TAX MAP 42 BLOCK 18 6TH ELECTION DISTRICT **VOGEL ENGINEERING**

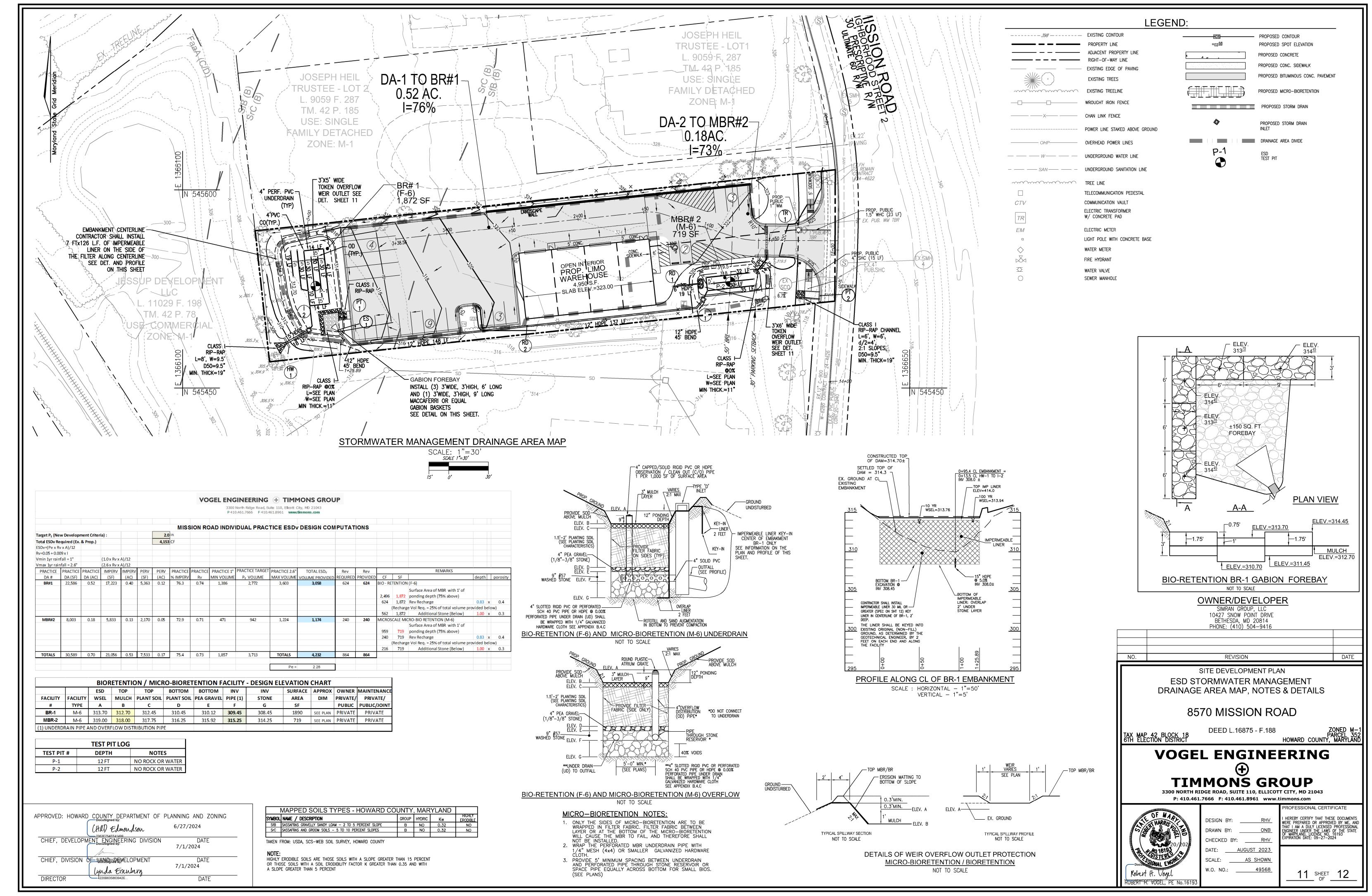
TIMMONS GROUP

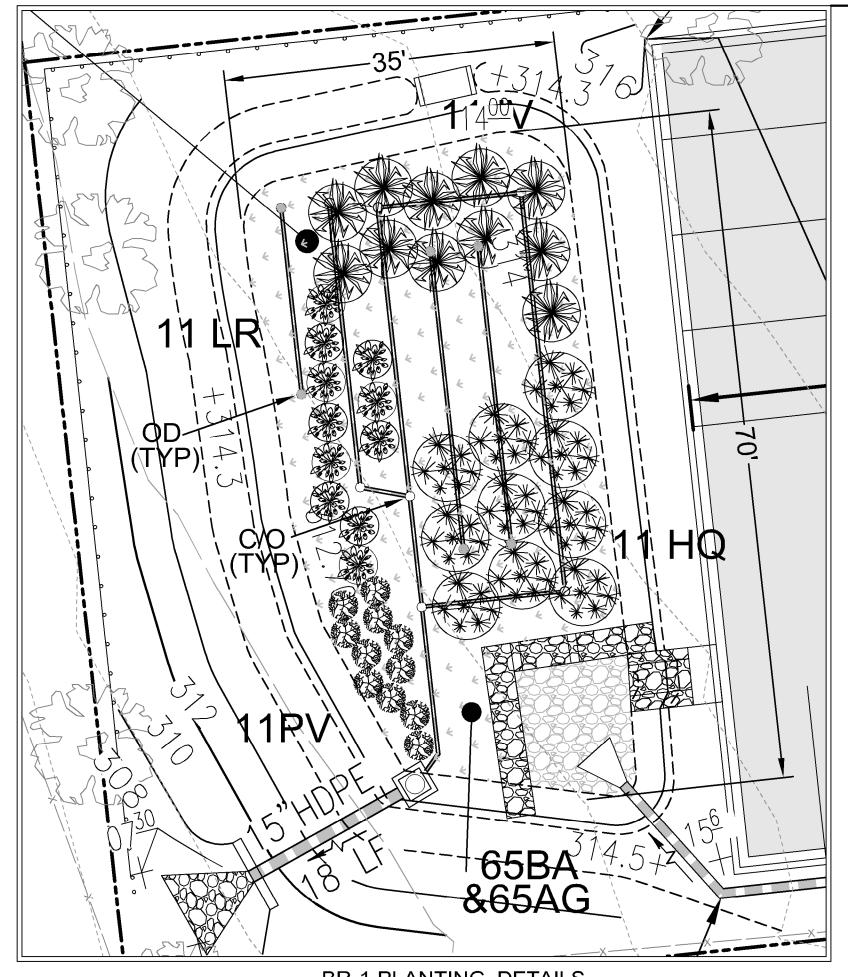
P: 410.461.7666 F: 410.461.8961 www.timmons.com



DESIGN BY: ONB DRAWN BY: CHECKED BY: DATE: <u>AUGUST 2023</u> SCALE: AS SHOWN 49568 W.O. NO.:

10 SHEET 12





BR-1 PLANTING DETAILS

				;	SCALE: 1"=	10				
PLANTING REQUIREMENTS			PLANTINGS PROVIDED			PERRENIALS/GROUND COVER				
PRACTICE #	AREA	STEMS REQUIRED (0.0227)	STEMS PROVIDED	IV	PV	HQ	LR	ВА	AG	TOTAL
BR-1	1872	43	44	11	11	11	11	65	65	130
MBR-2	719	17	20	5	5	5	5	25	25	50
TOTALS:	2591	60	64	16	16	16	16	90	90	180
AREAS ARE T	AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.0227 STEMS PER SQUARE FOOT).									

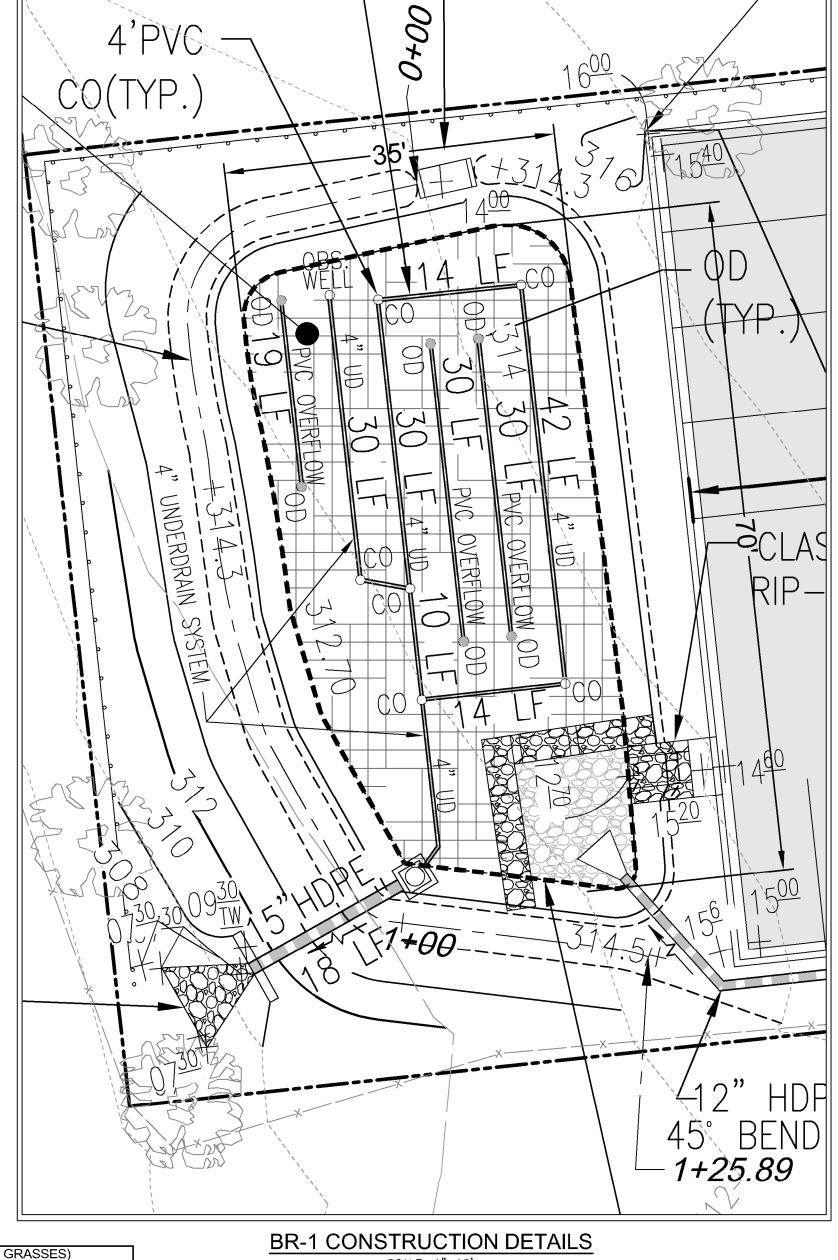
Appendix A. Landscaping Guidance for Stormwater BMPs Specific Landscaping Criteria

Frees	Shrubs	Herbaceous Species
Açer rubrum	Aesculus pariviflora	Andropogon virginicus
Rai Maple	Bottlebrush Buckeye	Broomsedge
Beti la nigra	Cephalanthus occidentalis	Eupatorium perpurea
Rivel Birch	Buttonbush	Joe Pye Weed
Junipe us virginiana	Hamemelis virginiana	Scirpus pungens
Eastern Red Cedar	Witch Hazel	Three Square Bulrush
Chionant us virgi licus	Vaccinium corymbosum	Iris versicolor
Fringe-tree	Highbush Blueberry	Blue Flag
Nyssa sylvat va	Ilex glabra	Lobelia cardinalis
Black Gum	Inkberry	Cardinal Flower
Diospyros vegiciana	Ilex verticillata	Panicum virgatum
Persimmor	Winterberry	Switchgrass
Platanus occidente lis	Viburnum dentatum	Dichanthelium scoparium
Sycamore	Arrowwood	Broom Panic Grass
Querc's palustris	Lindera benzoin	Rudbeckia laciniata
Pin Cak	Spicebush	Tall Coneflower
Quercus phellos	Myrica pennsylvanica	Scirpus cyperinus
Willow Oak	Bayberry	Woolgrass
alix nigra		Vernonia noveboracensis
Black willow	\	New York Ironweed

1. TABLE A.4 IS TAKEN FROM THE "2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II - APPENDIX A. 2. CONTRACTOR SHALL BE FAMILIAR WITH APPENDIX B.4.C. CONSTRUCTION SPECIFICATIONS AND TABLE B.4.1 MATERIAL SPECFICAITIONS. IN ADDITION THE "2000 MARYLAND STORMWATER DESIGN MANUAL - VOLUME II - APPENDIX A OFFERS ADDITIONAL HELPFUL INFORMATION. 3. NO TREES SHALL BE PLANTED WITHIN A MBR FACILITY. USE ONLY

SHRUB OR HERBACEOUS SPECIES. 4. ABOVE TABLE A.4. IS FOR INFORMATIONAL PURPOSES ONLY. LANDSCAPE CONTRACTOR SHALL INSTALL PLANTINGS SPECIFIED OR USE APPROVED EQUAL SPECIES WHICH ARE TOLERANT TO FLUCTUATING WATER LEVELS. 5. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE OWNER/DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THIS

APPROVED: HOWARD COUNTY DEPARTMENT OF CHID Edmondson	PLANNING AND ZONING 6/27/2024
CHIEF, DEVELOPMENT GINGERING DIVISION	DATE 7/1/2024
CHIEF, DIVISION OF BANGENELOPMENT Lynda Eisenberg	7/1/2024 DATE
DIRECTOR	DATE



MBR PLANTING SCHEDULE (SHRUB/ORNIMENTAL GRASSES) LEGEND/KEY QTY BOTANICAL NAME/COMMON NAME SIZE ITEA VIRGINICA 'HENRY'S GARNETT' GALLON VIRGINIA SWEETSPIRE HYDRANGEA QUERCIFOLIA GALLON OAKLEAF HYDRANGEA LEUCOTHEO RACEMOSA 1 GAL. ETTERBUSH PANICUM VIRGATUM 1 GAL. SWITCHGRASS MBR PERENNIALS/GROUNDCOVER PLANTING SCHEDULE LEGEND QTY BOTANICAL NAME/COMMON NAME SIZE REMARKS " POT AND BOTTOM OF MBR, MIX ALL VARIETIES IN A NATURALIZED RANDOM BAPTISIA AUSTRALIS FALSE INDIGO ВА PATTERN THROUGHOU PLANT IN GROUPS OF NO LESS THAN 9 PLANTS PER CLUMP ACORUS GRAMINEUS 'OGON' AG | GOLDEN VARIEGATED SWEET FLAG NOTE: WITH PERMISSION FROM HOWARD COUNTY, PLANTINGS SPECIFIED HEREON MAY BE SUBSTITUTED WITH APPROVED SPECIES LISTED IN TABLE A-4 AS SHOWN HEREON.

"BIO-RETENTION AND MICRO-BIORETENTION" PLANTING SCHEDULE NOTES:

1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR O DIGGING. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE

SWALES. 4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN. 5. MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (.0229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ESD_V SUMMARY. 6. FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH

5 HQ (TYP) 825AG (TYP)	
MBR-1 PLANTING DETAILS SCALE: 1"=10"]

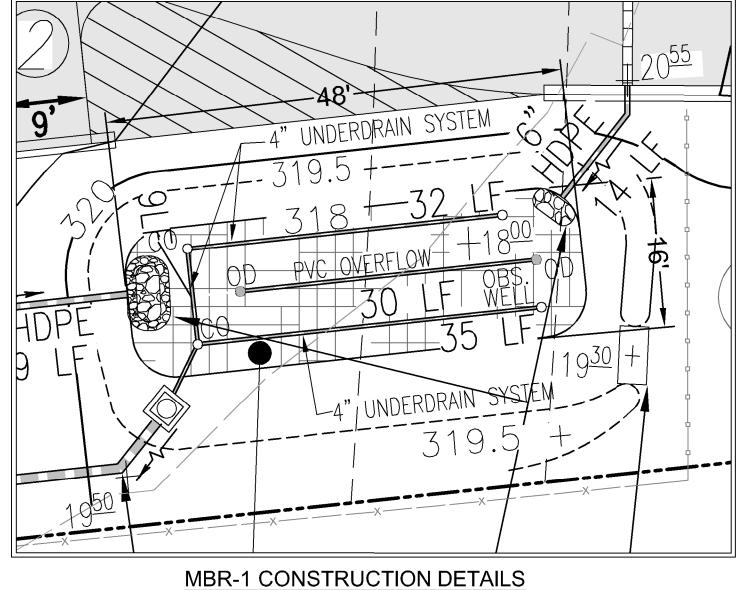


Table B.3.2 Materials Specifications for Bioretention

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
planting soil (2.6' to 1' doep) 2' PROPOSED	sand 35 - 60% silt 30 - 55% clay 10 - 25%	n/a	USDA soil types loamy sand, sandy loam or loam
mulch	shredded hardwood		aged 6 months, minimum
pea gravel diaphragm and curtain drain	pea gravel: ASTM-D-448 ornamental stone: washed cobbles	pea gravel: No. 6 stone: 2" to 5"	
geotextile	Class "C" - apparent opening size (ASTM-D-4751), grab tensile strength (ASTM-D- 4632), puncture resistance (ASTM-D-4833)	n/a	for use as necessary beneath underdrains only
underdrain gravel	AASHTO M-43	0.375" to 0.75"	
underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes
poured in place concrete (if required)	MSHA Mix No. 3; f'e = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
sand [1' deep]	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

Material	Specification/Test Method	Size	Notes
impermeable liner (if required)	ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb., elongation 200%) ASTM-D-624 (Tear resistance - 150 lb./in) ASTM-D-471 (water adsorption: +8 to -2% mass)	30 mil thickness	Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture.

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	pecifications for Micro-Biorete Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil [2' to 1' deep]	loamy sand (60 - 65%) & compost (35 - 40%)	n/a	USDA soil types loamy sand or sandy loam; clay content
1.5' PROPOSED	or sandy loam (30%), coarse sand (30%) & compost (40%)		
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 hol row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f° _c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by professional structural engineer licensed in the State of Ma-design to include meeting ACI Code 350.R/89; vertical k [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASH #10 are not acceptable. No calcium carbonated or dolomiti substitutions are acceptable. No "rock dust" can be used for

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

1. MATERIAL SPECIFICATIONS THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL 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 O 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 IN TO

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

3. COMPACTION

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 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

COMPACTION CAN BE ALLEVIATED 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. 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 THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE. 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 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.

4. PLANT MATERIAL

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

5. PLANT INSTALLATION

FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

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 12 ROOTSTÓCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST 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 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 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 SPECIFICATIONS.
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

6. UNDERDRAINS UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- * PIPE SHOULD 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 OF 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
- * THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE. * A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,0000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- * 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 IN TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24"

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).

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

OPERATION AND MAINTENANCE SCHEDULE FOR LANSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIO-SWALE (M-8), BIORETENTION (F-6)

ND 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

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.

OWNER/DEVELOPER SIMRAN GROUP, LLC

10427 SNOW POINT DRIVE BETHESDA, MD 20814 PHONE: (410) 504-9416

REVISION SITE DEVELOPMENT PLAN **ESD BIORETENTION AND MICRO-BIORETENTION** FACILITY PLANTING & CONSTRUCTION PLANS

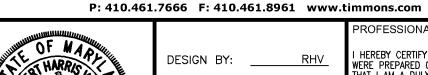
8570 MISSION ROAD

NOTES & DETAILS

ZONED M-1 PARCEL 352 HOWARD COUNTY, MARYLAND DEED L.16875 - F.188

VOGEL ENGINEERING

TIMMONS GROUP 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043





ROBERTOM: 778/06EL, PE No.161

TAX MAP 42 BLOCK 18 6TH ELECTION DISTRICT

CHECKED BY: SCALE: W.O. NO.: 49568

WERE PREPARED OR APPROVED BY ME. AN ONB ____AS SHOWN

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