

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION CONSTRUCTION DRAWINGS

CITY OF ROCKVILLE
MONTGOMERY COUNTY, MARYLAND

CITY OF ROCKVILLE GENERAL NOTES (11/16)

OPERATION, MAINTENANCE AND INSPECTION
INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY IN ACCORDANCE WITH THE SCHEDULED AND REQUIREMENTS COMPLETED WITHIN USACE, NRCS STANDARDS AND SPECIFICATIONS FOR POND(S). THE POND OWNER(S) AND ANY SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

BEFORE YOU DIG CALL
1-800-257-7777 OR DIAL 811



GENERAL SITE NOTES

- TOPOGRAPHIC SURVEY PERFORMED BY BAYLAND CONSULTANTS & DESIGNERS, INC., DATED 3-28-2019.
- HORIZONTAL AND VERTICAL CONTROL ESTABLISHED FROM REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING SYSTEM (GPS) CONTROL POINTS, TRAVERSE POINTS ARE IRON REBAR UNLESS OTHERWISE SPECIFIED. COORDINATES AND BEARINGS SHOWN HEREON ARE REFERRED TO THE MARYLAND COORDINATE SYSTEM (NAD83/1991). ELEVATIONS SHOWN HEREON ARE REFERRED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD83).

HT	NORTHING	EASTING	ELEVATION	DESCRIPTION
TFS #1	519,241.70	1,275,119.33	389.60	REBAR W/ CAP
TFS #2	519,638.69	1,274,844.50	408.92	REBAR W/ CAP
TFS #3	519,460.32	1,274,612.09	392.84	REBAR W/ CAP
TFS #4	519,363.20	1,274,768.29	386.77	REBAR W/ CAP
TFS #5	519,120.16	1,275,007.91	386.20	REBAR W/ CAP

- CONTOURS AND PLANIMETRICS SHOWN OUTSIDE OF LIMIT OF WORK ARE BASED ON CITY OF ROCKVILLE 2013, 2014 & 2017 GIS TOPOGRAPHY.
- PROPERTY LINES SHOWN ARE BASED ON MONTGOMERY COUNTY 2014 CADASTRAL DATA.
- ONLY TREES WITH A 6" DIAMETER OR GREATER THAT ARE WITHIN THE LIMIT OF WORK WERE FIELD LOCATED.
- FEMA FIRM #2403103340 EFFECTIVE SEPTEMBER 29TH 2006 SHOWS THAT THE PROJECT SITE IS NOT WITHIN FEMA FLOODPLAIN LIMITS.
- ROCKS SHOWN IN PLAN VIEW AND PROFILE ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES.
- THE FACILITY DISCHARGES TO CREEK ROCK VIA AN UNNAMED TRIBUTARY (CREEK CREEK WATERSEED MD BASIN CODE: 02140206) WHICH IS A USE 1 STREAM WITH A STREAM CLOSURE PERIOD FROM MARCH 1ST THROUGH JUNE 15TH.
- THE PROJECT SITE IS NOT LOCATED WITHIN THE CRITICAL AREA.
- AS PER COORDINATION WITH THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, THE PROJECT IS EXEMPT FROM STATE WETLAND AND WATERWAY IMPACT PERMITTING AS ALL RESOURCES ARE WITHIN THE EXISTING FACILITY. THE PROJECT QUALIFIES AS A SELF-VERIFICATION ACTIVITY UNDER THE U.S. ARMY CORPS OF ENGINEERS REG. FEDERAL PERMIT ACTIVITY A: RETROFITS OF EXISTING STORMWATER MANAGEMENT FACILITIES.
- THE GENERAL PERMIT NUMBER FOR STORMWATER DISCHARGE FROM CONSTRUCTION ASSOCIATED ACTIVITY GREATER THAN 1 ACRE IS MD09P052.

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKVILLE STANDARD SPECIFICATIONS OR DETAILS FOR CONSTRUCTION UNLESS OTHERWISE NOTED. THE STATE HIGHWAY ADMINISTRATION'S HIGHWAY STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND THE BOOK OF STANDARDS FOR HIGHWAY & INCIDENTAL STRUCTURES SHALL BE USED IF NO CITY OF ROCKVILLE STANDARDS OR DETAILS EXIST.
- THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO THEIR SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MANHOLE AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S OWN EXPENSE.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 AND THE CITY UTILITIES MAINTENANCE DIVISION AT 240-314-8567 A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES.
- MECHANICAL EXCAVATION SHALL NOT BE CONDUCTED WITHIN 3 FEET HORIZONTALLY OR WITHIN 2 FEET VERTICALLY OF KNOWN UTILITY LOCATIONS. HAND OR SHOULDER DIGGING SHALL BE DONE WITHIN THESE LIMITS. UNDERGROUND UTILITIES, ONCE UNCOVERED, SHALL BE PROTECTED FROM BEING STRUCK BY EQUIPMENT.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLETE SUCH WORK.
- ALL TREES WITH A DIAMETER GREATER THAN 12 INCHES WITHIN THE LIMIT OF DISTURBANCE SHALL NOT BE REMOVED UNLESS PRIOR APPROVAL IS OBTAINED OR EXPLICITLY SHOWN ON THE PLANS TO BE REMOVED. ALL TREES TO REMAIN WITHIN THE LIMIT OF DISTURBANCE THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED.
- ALL FILL AREAS SHALL BE CLEANED OF ALL VEGETATION AND DEBRIS, SCORIFIED TO A MINIMUM DEPTH OF 12 INCHES PRIOR TO THE PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN CONTROLLED LOTS WITH A MAXIMUM THICKNESS OF 12 INCHES PRIOR TO COMPACTION THAT IS CONTINUOUS OVER THE ENTIRE AREA OF FILL. EACH LAYER OF FILL SHALL BE COMPACTED WITH THE MINIMUM NUMBER OF PASSES NECESSARY TO PRODUCE A FULL ASYMPTOTIC COMPACTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS TESTING INCLUDING CONCRETE, FLOWABLE FILL, HOT MIX ASPHALT AND FILL COMPACTION. ALL MATERIALS TESTING SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE COMPLETED FOR AS PART OF THE APPROPRIATE PAY ITEM.
- SEE STANDARD GEOTECHNICAL NOTES FOR FILL COMPACTION TESTING REQUIREMENTS.
- ALL DISTURBED AREAS SHALL HAVE PERMANENT OR TEMPORARY STABILIZATION COMPLETED WITHIN:
 - END OF THE WORK DAY FOR AREAS WITHIN WATERWAYS.
 - THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1 AND TO THE SURFACE OF ALL PERMETER SEDIMENT CONTROLS.
 - SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS.
- ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH 100% BIOGRADABLE SOIL STABILIZATION MATTING THAT HAS A SUFFICIENT DESIGN SHEAR STRESS FOR THE APPLICATION OR AS SHOWN ON THE APPROVED SEDIMENT AND EROSION CONTROL PLANS.
- ALL PERMANENTLY STABILIZED AREAS SHALL INCLUDE A MINIMUM OF 4" OF TOPSOIL PER THE 2011 MDE SPECIFICATIONS.
- ALL STAKING, RESTAINING, AND CUT SHEETS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH STATE OF MARYLAND OCCUPATIONAL SAFETY LAWS.
- CONTRACTOR MUST ENSURE THAT COPIES OF FEDERAL, STATE, AND CITY PERMITS ARE POSTED ON SITE PRIOR TO THE START OF ANY WORK.
- ALL ROADS SHALL BE CLEANED AND CLEARED BY THE END OF EACH DAY. ANY MUD OR ROCKS TRACKED ON THE ROADWAYS SHALL BE SWEEP BEFORE THE END OF SHIFT EACH DAY.
- CONTRACTOR SHALL RESTORE ALL AREAS IMPACTED BY CONSTRUCTION ACTIVITY. THIS SHALL INCLUDE BUT IS NOT LIMITED TO GRASS AREAS, ROADS, PAVED AREAS, ETC...



LOCATION MAP
SCALE: 1"=2000'

LEGEND

TRAVERSE POINT	EX. LIGHT POLE
EX. PROPERTY LINE/RIGHT-OF-WAY	EX. UTILITY POLE
EX. MAJOR CONTOUR	EX. FIRE HYDRANT
EX. MINOR CONTOUR	EX. SIGN
EX. ROAD	EX. GUY WIRE
EX. TREELINE	PR. MAJOR CONTOUR
EX. WOOD FENCE	PR. MINOR CONTOUR
EX. SOIL	PR. ODD CONTOUR
EX. EASEMENT	BORING LOCATION
EX. SEWER & MANHOLE	PR. LIMIT OF DISTURBANCE
EX. STORM DRAIN, INLET & MANHOLE	PR. EASEMENT
EX. WATER & VALVE	PR. RR/PAV
EX. TREELINE	PR./EX. TO PATH
EX. CRITICAL ROOT ZONE	PR./EX. DRAINAGE AREA
	PR. TREELINE
	PR. CHAINLINK FENCE
	PR. SD PIPE AND HEADWALL
EX. TREE	
EX. TREE (TO BE REMOVED)	

SITE ANALYSIS

1. TOTAL SITE AREA:	5.90 ACRES
1.1. PROPOSED DISTURBED AREA:	2.35 ACRES
2. TOTAL AREA TO BE STABILIZED:	2.35 ACRES
2.1. TOTAL EX. IMPERVIOUS AREA:	0.18 ACRES
2.2. TOTAL EX. IMPERVIOUS AREA TO REMAIN:	0.18 ACRES
2.3. TOTAL PR. IMPERVIOUS AREA:	0.00 ACRES
2.4. TOTAL TO BE STABILIZED WITH VEGETATION:	1.42 ACRES
2.5. TOTAL FILL:	0.75 ACRES
3. PROPOSED IMPERVIOUS AREA:	0.00 ACRES
4. ESTIMATED CUT:	4030 CY
5. ESTIMATED FILL:	300 CY

NOTE: THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. BAYLAND MAKES NO GUARANTEE OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE DEVELOPER AND CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION. ESTIMATED CUT QUANTITIES DO NOT INCLUDE UNDERCUT FOR RR/PAV, STONE, IMPERVIOUS BACKFILL OR THE STRIPPING OF TOPSOIL IN AREAS OF PROPOSED FILL OR OUTSIDE THE LIMITS OF GRADING. ESTIMATED FILL QUANTITIES DO NOT INCLUDE MATERIAL FILLS SUCH AS RR/PAV, STONE, IMPERVIOUS BACKFILL, OR TOPSOIL.

SHEET LIST TABLE

SHEET	DESCRIPTION
1	COVER SHEET
2/7C-01	TREE TABLE
3	BORING LOGS
4/7C-02	EXISTING CONDITIONS & NN REMOVAL PLAN
5	SITE PLAN
6	PROFILES & DETAILS
7	PROFILES & NOTES
8	CROSS SECTIONS
9	RSC DETAILS & NOTES
10	NEAL DRIVE BORENOTATION
11	WESLEY ROAD BORENOTATION
12	STRUCTURE DETAILS & NOTES
13	DRAINAGE AREA MAP
14	EROSION & SEDIMENT CONTROL PLANS
15	EROSION & SEDIMENT CONTROL PLANS
16	EROSION & SEDIMENT CONTROL NOTES & DETAILS
17	EROSION & SEDIMENT CONTROL NOTES
18	TRAFFIC CONTROL PLAN
19/7C-03	FOREST CONSERVATION AND PLANTING PLAN
20/7C-04	FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS
21/7C-05	FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS
22/7C-06	FOREST CONSERVATION AND PLANTING PLAN NOTES

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BAYLAND JOB NO. B_31901

DESIGNED: CS/GS
DRAFTED: JS/MW
CHECKED: CS

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE.
ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
Craig L. Simonaux
2021.11.08 17:08:13-0500
DIRECTOR OF PUBLIC WORKS
PKWF
SUPP 2021-00012
SCFP 2021-00009
FTFP 2020-00001

AS BUILT PLAN APPROVAL
CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
COVER SHEET

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED:
10/8/2021
SCALE: AS SHOWN
SHEET NO. 1 OF 22
FILE # F-295

DESIGN AND QUANTITIES CERTIFICATION APPROVAL FOR WORK IN CITY PARKS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL CONSERVATION AND SEDIMENT CONTROL, AND THE ORDINANCE OF THE ROCKVILLE CITY CODE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL HAS BEEN COMPUTED TO BE 4,000 CUBIC YARDS OF EXCAVATION AND 300 CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE 2.35 ACRES, ALL OF WHICH IS ON-SITE, THE IMPERVIOUS AREA SUBJECT TO STORMWATER MANAGEMENT SHOWN ON THIS PLAN IS 27.99 ACRES.

CHRISTOPHER STEPP P.E.
7/28/2021
DATE
33146
MD P.E. REGISTRATION NO.

OWNER'S/DEVELOPER'S CERTIFICATION
I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT, OR ALL OF THE ABOVE, HAS BEEN PLANNED AND CONDUCTED IN ACCORDANCE WITH THE ORDINANCE INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF TRAINING AT A MONTGOMERY COUNTY ENVIRONMENTAL TRAINING PROGRAM. THE CONTRACTOR SHALL OBTAIN A SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT AND THAT THE APPLICABLE SEDIMENT CONTROL PLAN SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKVILLE AND THE STATE OF MARYLAND. I/WE THE DEVELOPER/S HAVE HEREBY MADE THIS PLAN.
Craig L. Simonaux
2021.11.08 17:08:13-0500
DATE
OWNER/DEVELOPER SIGNATURE
CHRISTOPHER STEPP

USDA - NRCS MARYLAND POND CODE 378 APPROVAL
2/16/21
DATE
DIRECTOR OF RECREATION AND FORESTRY

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 23146, EXPIRATION DATE: 01/14/2023

EXISTING TREE SURVEY

Table with 10 columns: TREE NUMBER, DBH IN (ONCE STEM), DBH IN (AWL STEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN/OUT FOREST), REPLACEMENTS REQUIRED. Rows 1-48.

Table with 10 columns: TREE NUMBER, DBH IN (ONCE STEM), DBH IN (AWL STEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN/OUT FOREST), REPLACEMENTS REQUIRED. Rows 49-96.

Table with 10 columns: TREE NUMBER, DBH IN (ONCE STEM), DBH IN (AWL STEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN/OUT FOREST), REPLACEMENTS REQUIRED. Rows 97-144.

Table with 10 columns: TREE NUMBER, DBH IN (ONCE STEM), DBH IN (AWL STEM CALCULATED), LATIN NAME, COMMON NAME, CONDITION, CRZ (FT), LOCATION (IN/OUT FOREST), REPLACEMENTS REQUIRED. Rows 145-225.

*TO BE REMOVED DUE TO SITE IMPACTS
**TO BE REMOVED DUE TO MD-378 REGULATIONS

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED PROFESSIONAL ENGINEER QUALIFIED TO SUPERVISE THE CONSTRUCTION OF THE WORKS OF THIS PROJECT AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.

Signed: _____ Date: 07/12/2021
JASON TRABAND
7455 NEW RIDGE ROAD, SUITE 1
HANOVER, MD 21076
JTR@KORBERLANDINC.COM



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DESIGNED CS/GS
DRAWN JG/MS
CHECKED CS
DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND



DESIGN PLAN APPROVAL
Stamp: CRZ 11/08/17-8150610
DIRECTOR OF PUBLIC WORKS
DATE: _____

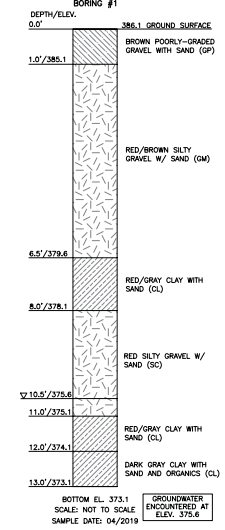
AS BUILT PLAN APPROVAL
Stamp: SUPP 2021-00012
DATE: _____

STORMWATER MANAGEMENT PLAN
TREE TABLE
CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE: _____

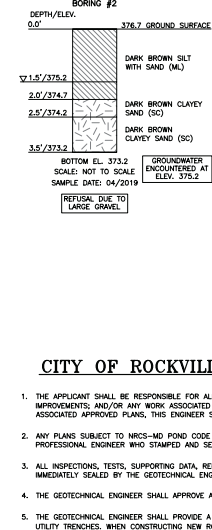
NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/9/2021
NO. REVISIONS: 1
SCALE: _____
SHEET NO. 2 OF 22
FILE # F-295

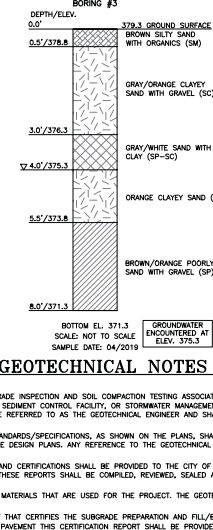
SOIL BORING LOG



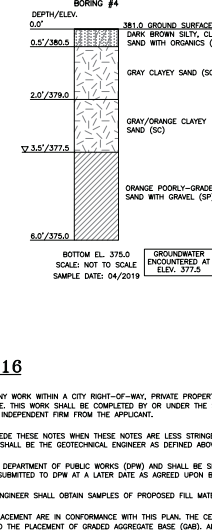
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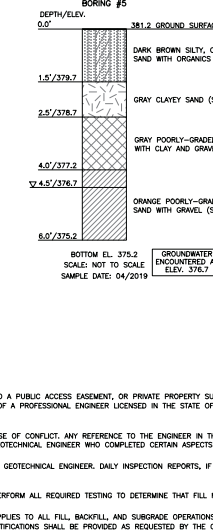
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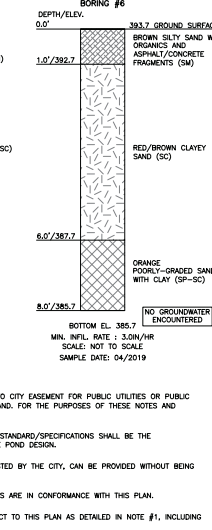
SOIL BORING LOG



SOIL BORING LOG



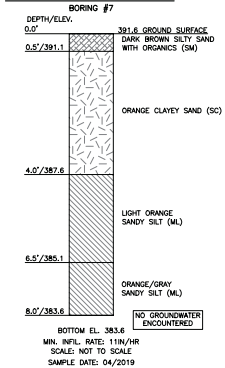
SOIL BORING LOG



CITY OF ROCKVILLE GEOTECHNICAL NOTES 11/16

- THE APPLICANT SHALL BE RESPONSIBLE FOR ALL SUBGRADE INSPECTION AND SOIL COMPACTION TESTING ASSOCIATED WITH ANY WORK WITHIN A CITY RIGHT-OF-WAY, PRIVATE PROPERTY SUBJECT TO A PUBLIC ACCESS EASEMENT, OR PRIVATE PROPERTY SUBJECT TO CITY EASEMENT FOR PUBLIC UTILITIES OR PUBLIC IMPROVEMENTS; AND/OR ANY WORK ASSOCIATED WITH A SEDIMENT CONTROL FACILITY, OR STORMWATER MANAGEMENT PRACTICE. THIS WORK SHALL BE COMPLETED BY OR UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND. FOR THE PURPOSES OF THESE NOTES AND ASSOCIATED APPROVED PLANS, THIS ENGINEER SHALL BE REFERRED TO AS THE GEOTECHNICAL ENGINEER AND SHALL BE AN INDEPENDENT FIRM FROM THE APPLICANT.
- ANY PLANS SUBJECT TO NRCS-MD POND CODE 378 STANDARDS/SPECIFICATIONS, AS SHOWN ON THE PLANS, SHALL SUPERSEDE THESE NOTES WHEN THESE NOTES ARE LESS STRINGENT OR IN CASE OF CONFLICT. ANY REFERENCE TO THE ENGINEER IN THE 378 STANDARD/SPECIFICATIONS SHALL BE THE PROFESSIONAL ENGINEER WHO STAMPED AND SEALED THE DESIGN PLANS. ANY REFERENCE TO THE GEOTECHNICAL ENGINEER AS DEFINED ABOVE OR THE GEOTECHNICAL ENGINEER WHO COMPLETED CERTAIN ASPECTS OF THE POND DESIGN.
- ALL INSPECTIONS, TESTS, SUPPORTING DATA, REPORTS, AND CERTIFICATIONS SHALL BE PROVIDED TO THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AND SHALL BE SEALED BY THE GEOTECHNICAL ENGINEER. DAILY INSPECTION REPORTS, IF REQUESTED BY THE CITY, CAN BE PROVIDED WITHOUT BEING IMMEDIATELY SEALED BY THE GEOTECHNICAL ENGINEER. THESE REPORTS SHALL BE COMPLETED, REVIEWED, SEALED AND THEN SUBMITTED TO DPW AT A LATER DATE AS AFORESAID BY THE CITY.
- THE GEOTECHNICAL ENGINEER SHALL APPROVE ALL FILL MATERIALS THAT ARE USED FOR THE PROJECT. THE GEOTECHNICAL ENGINEER SHALL OBTAIN SAMPLES OF PROPOSED FILL MATERIALS AND PERFORM ALL REQUIRED TESTING TO DETERMINE THAT FILL MATERIALS ARE IN CONFORMANCE WITH THIS PLAN.
- THE GEOTECHNICAL ENGINEER SHALL PROVIDE A REPORT THAT CERTIFIES THE SUBGRADE PREPARATION AND FILL/BACKFILL PLACEMENT ARE IN CONFORMANCE WITH THE PLAN. THE CERTIFICATION APPLIES TO ALL FILL, BACKFILL AND SUBGRADE OPERATIONS SUBJECT TO THIS PLAN AS DETAILED IN NOTE #1, INCLUDING UTILITY TRENCHES. WHEN CONSTRUCTING NEW ROADWAY PAVEMENT THIS CERTIFICATION REPORT SHALL BE PROVIDED PRIOR TO THE PLACEMENT OF GRADED AGGREGATE BASE (GAB). ALL OTHER CERTIFICATIONS SHALL BE PROVIDED AS REQUESTED BY THE CITY.
- ALL FILL AND/OR BACKFILL MATERIAL SHALL BE FREE FROM ORGANICS, FROZEN MATERIAL, ROCKS/STONES GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION, WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR OTHER DELETERIOUS MATERIALS; SHALL BE A MINIMUM OF 100 POUNDS PER CUBIC FOOT FOR THE MAXIMUM DRY DENSITY ACCORDING TO AASHTO T-180, METHOD C; AND SHALL NOT HAVE A LIQUID LIMIT GREATER THAN 30 NOR A PLASTICITY INDEX GREATER THAN SIX ACCORDING TO ASTM D-4318. ALL OTHER MATERIALS SHALL MEET THE REQUIREMENTS STATED IN CATEGORY 900 OF THE LATEST EDITION OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (MSHA) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS.
- COMPACT THE MATERIAL THAT IS ONE FOOT BELOW THE TOP OF SUBGRADE TO AT LEAST 92 PERCENT OF THE MAXIMUM DRY DENSITY PER AASHTO T-180. COMPACT THE TOP ONE FOOT TO AT LEAST 97 PERCENT OF THE MAXIMUM DRY DENSITY. WHEN NECESSARY, ADD WATER OR DRY THE LAYER IN ORDER TO COMPACT TO THE REQUIRED DENSITY. GENERALLY THE MATERIAL SHALL BE WITHIN TWO PERCENT OF THE OPTIMUM MOISTURE CONTENT BUT MAY BE OUTSIDE OF THIS RANGE IF APPROVED BY THE GEOTECHNICAL ENGINEER.
- FILL AND BACKFILL MATERIALS MUST COMPLETELY FILL ALL SPACES UNDER AND ADJACENT TO THE STRUCTURE OR PIPE. FOR STORMWATER MANAGEMENT ENHANCEMENTS, THE APPLICANT SHALL SCARIFY EACH LIFT WITH A SHEEPSFOOT ROLLER OR CLAW TO A MINIMUM DEPTH OF TWO-INCHES PRIOR TO PLACING THE NEXT LIFT. THE APPLICANT SHALL SCARIFY ENHANCEMENTS PARALLEL WITH THE CENTERLINE OF THE DRAIN COUSE. PERPENDICULAR TO THE PRINCIPAL SPILLWAY, BEDDING SHALL BE PROVIDED IN ACCORDANCE WITH DETAILS INDICATED ON THE CONSTRUCTION DRAWINGS. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR-FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL THE APPLICANT DRIVE EQUIPMENT OVER ANY PART OF A CORRUGATED METAL PIPE UNLESS THERE IS A COMPACTED FILL OF 24-INCHES OR GREATER OVER THE STRUCTURE OR PIPE.
- AT A MINIMUM, COMPACTION TESTS SHALL BE COMPLETED FOR EVERY LIFT OF FILL OR BACKFILL. THE TESTING FREQUENCY SHALL BE AT LEAST ONCE PER 150 LINEAR FEET OF TRENCH OR ONCE PER 1,500 SQUARE FEET OF FILL. AT A MINIMUM, THERE SHALL BE AT LEAST ONE COMPACTION TEST PER LIFT AND A LEAST TWO COMPACTION TESTS PER DAY. THE GEOTECHNICAL ENGINEER SHALL SUPPLY DPW WITH CERTIFIED COMPACTION TEST RESULTS, INCLUDING CERTIFICATION OF PIPE BEGING SUBGRADE AND FILL SUBGRADE.
- PRIOR TO PLACING ANY ROADWAY FILL ON EXISTING GRADES (ORIGINAL GRADE AFTER TOPSOIL HAS BEEN STRIPPED), FILL PREPARED BY OTHERS OUTSIDE OF THIS PLAN OR FILL NOT PREPARED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER, SCARIFY THE MINIMUM TOP EIGHT-INCHES OF SOIL MATERIAL. COMPACT THIS LAYER TO THE COMPACTION REQUIREMENTS IN THESE NOTES. PROOF-ROLL THIS COMPACTED LAYER USING A FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE SUBGRADE IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION. SUBGRADE AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:
 - SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE SUBGRADE MATERIALS.
 - UNDERCUTTING SOFT OR UNSUITABLE AREAS OF SUBGRADE AND BACKFILLING WITH COMPACTED SELECT BORROW (MSHA SECTION 916).
 - UNDERCUTTING OF SOFT OR UNSUITABLE AREAS OF SUBGRADE AND PLACING A LAYER OF GEOTEXTILE COVERED BY MD SHA #57 COARSE AGGREGATE (TABLE 901A).
 DPW MAY APPROVE AN ALTERNATE APPROACH FOR SOIL REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER.
- EXCEPT WHEN SPECIFIED, DO NOT PLACE LAYERS EXCEEDING EIGHT-INCHES UN-COMPACTED DEPTH. PLACE THE MATERIAL IN HORIZONTAL LAYERS ACROSS THE FULL WIDTH OF THE EMBANKMENT. PERFORM ALL ROLLING IN A LONGITUDINAL DIRECTION ALONG THE EMBANKMENT. BEGIN AT THE OUTER EDGES AND PROGRESS TOWARDS THE CENTER. VARY THE TRAVEL PATHS OF TRAFFIC AND EQUIPMENT OVER THE WIDTH OF THE EMBANKMENT TO AID IN OBTAINING UNIFORM COMPACTION.
- UNIFORMLY GRADE AREAS TO A SMOOTH SURFACE, FREE OF IRREGULAR SURFACE CHANGES. GRADE AND PREPARE THE SUBGRADE SECTION TO THE LINES, GRADES, CROSS SECTIONS AND/OR ELEVATIONS SHOWN ON THE PLANS. AT ALL TIMES, MAINTAIN THE SUBGRADE SURFACE IN SUCH CONDITION AS TO READILY DRAIN.
- DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. VEHICULAR AND EQUIPMENT TRAFFIC SHALL BE DISTRIBUTED ACROSS THE PREPARED SURFACE IN SUCH A MANNER AS TO PREVENT DISTURBANCE. REPAIR ANY DAMAGE TO THE PREPARED SURFACE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER MUST APPROVE THE STORAGE OR STOCKPILING OF HEAVY LOADS ON A ROADWAY SURFACE.
- UNUSABLE EXISTING FILL, SOFT OR LOOSE NATURAL SOILS, ORGANIC MATERIAL, AND RUBBLE SHALL BE STRIPPED TO APPROVED GRADES AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- PROTECT ALL STRUCTURES AND UTILITIES FROM ANY DAMAGE IN THE HANDLING, PROCESSING OR COMPACTING OF EMBANKMENT OR BACKFILL MATERIAL. EXERCISE CAUTION NEAR ARCHES, RETAINING WALLS, CULVERTS AND UTILITY TRENCHES TO PREVENT UNDEE STRAIN OR MOVEMENT. THE GEOTECHNICAL ENGINEER MAY REQUIRE THE USE OF SPECIALLY SELECTED MATERIAL ADJACENT TO STRUCTURES TO PROTECT AGAINST DAMAGE. DO NOT USE ROCK GREATER THAN ONE AND A HALF INCHES IN ANY DIMENSION ADJACENT TO STRUCTURES.
- WHEN PLACING AND COMPACTING EMBANKMENT ON HILLSIDES OR AGAINST EXISTING EMBANKMENTS, CONTINUOUSLY BENCH THE SLOPES WHERE THE SLOPE IS STEEPER THAN 4:1 WHEN MEASURED AT RIGHT ANGLES TO THE ROADWAY OR EMBANKMENT CENTERLINE. PERFORM THE BENCHING OPERATION AS THE EMBANKMENT IS CONSTRUCTED IN LAYERS. MAINTAIN A BENCH WIDTH OF AT LEAST FIVE-FEET, BEGIN EACH HORIZONTAL CUT AT THE INTERSECTION OF THE ORIGINAL GROUND AND THE VERTICAL SIDES OF THE PREVIOUS CUT. IF THE MATERIAL CUT FROM THE BENCHES MEETS FILL REQUIREMENTS, COMPACT THIS MATERIAL ALONG WITH THE NEW EMBANKMENT MATERIAL.
- WHEN PLACING FILL OVER EXISTING PAVEMENT, THOROUGHLY BREAK UP, SCARIFY, OR REMOVE THE PAVEMENT AS SPECIFIED OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- PRIOR TO THE PLACEMENT OF ASPHALT PAVEMENT, PROOF-ROLL THE COMPACTED GRADED AGGREGATE BASE (GAB) LAYER USING A FULLY LOADED DUMP TRUCK (MINIMUM 20 TON PAYLOAD CAPACITY). THE GEOTECHNICAL ENGINEER SHALL INSPECT THE PROOF-ROLLING AND DETERMINE IF THE GAB IS ACCEPTABLE OR IF THERE ARE AREAS THAT REQUIRE REMEDIATION. GAB AREAS THAT FAIL PROOF-ROLLING SHALL BE REMEDIATED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER BY EITHER OF THE FOLLOWING METHODS:
 - SCARIFYING, MOISTURE CONDITIONING, AND RE-COMPACTION OF THE GAB MATERIALS.
 - UNDERCUTTING SOFT OR UNSUITABLE AREAS OF GAB AND REPLACING WITH COMPACTED GAB.
 DPW MAY APPROVE AN ALTERNATE APPROACH FOR GAB REMEDIATION/IMPROVEMENT IF IT IS RECOMMENDED AND SEALED BY THE GEOTECHNICAL ENGINEER. THE GEOTECHNICAL ENGINEER SHALL PROVIDE A SEALED APPROVAL OF THE GAB PRIOR TO PLACEMENT OF ASPHALT. DPW MAY ACCEPT AN ORAL OR EMAIL APPROVAL WHILE THE FINAL APPROVAL AND REPORTS ARE BEING COMPILED AND COMPLETED.

SOIL BORING LOG



SOIL CLASSIFICATION

BORING NUMBER	DEPTH (FEET)	MOISTURE CONTENT (%)	SOIL DESCRIPTION (USC)	PERCENT PASSING			PERCENT PASSING			PERCENT PASSING			PERCENT PASSING			BULK DENSITY (G/CM ³)	BULK DENSITY (LB/FT ³)	NOTES
				LL	PL	PI	NO. 1	NO. 2	NO. 4	NO. 10	NO. 20	NO. 40	NO. 60	NO. 100	NO. 200			
B-2	2'-2.5'		DARK BROWN SILTY, CLAYEY SAND				72.7	70.9	67.4	67.2	63.3	53.6	43.2	43.2	1.46	91.14		
B-3	0.5'-3'		GRAY/ORANGE CLAYEY SAND WITH GRAVEL				97.2	90.5	89.9	83.8	68.9	50.9	26.0		1.49	93.02		
B-4	2'-3.5'		GRAY/ORANGE CLAYEY SAND				100	100	97.6	97.6	95.8	95.8	24.9		1.50	93.64		
B-5	1.5'-2.5'		GRAY CLAYEY SAND				100	100	96.7	96.6	93	93	75.1	61	1.58	98.64		
B-1	1'-6.5'		RED/BROWN SILTY GRAVEL WITH SAND	35	26	9	76.6	72.7	67.4	67.2	63.3	53.6	43.2	43.2				
B-2	2.5'-3.5'		DARK BROWN CLAYEY SAND	30	22	8	100	100	97.2	90.5	89.9	83.8	68.9	50.9	26.0			
B-6	1'-4'		RED/BROWN CLAYEY SAND	32	21	11	100	100	97.6	97.6	95.8	95.8	24.9					
B-7	4'-4.5'		LIGHT ORANGE SANDY SILT	35	27	8	100	100	96.7	96.6	93	93	75.1	61				

- NOTES:
 1. SOIL BORINGS ARE NOT TO SCALE.
 2. BORING LAYERS IDENTIFIED IN THE SOIL CLASSIFICATION TABLE HAVE UNDERGONE LABORATORY TESTING AND ASTM D2487 USCS CLASSIFICATION PROCEDURES. ALL OTHER BORING LOGS ARE BASED ON VISUAL FIELD CLASSIFICATION ONLY.
 3. SOIL BORINGS WERE OBTAINED FOR DESIGN PURPOSES ONLY. BORING DATA IS PROVIDED FOR THE CONTRACTOR'S CONVENIENCE AND IS ACCURATE ONLY AT THE SPECIFIC POINTS WHERE THE BORINGS WERE PERFORMED. NO WARRANTY IS IMPLIED FOR THE CONTINUITY OF SUBSURFACE CONDITIONS.

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CITY OF ROCKVILLE
 111 MARYLAND AVE. ROCKVILLE, MARYLAND

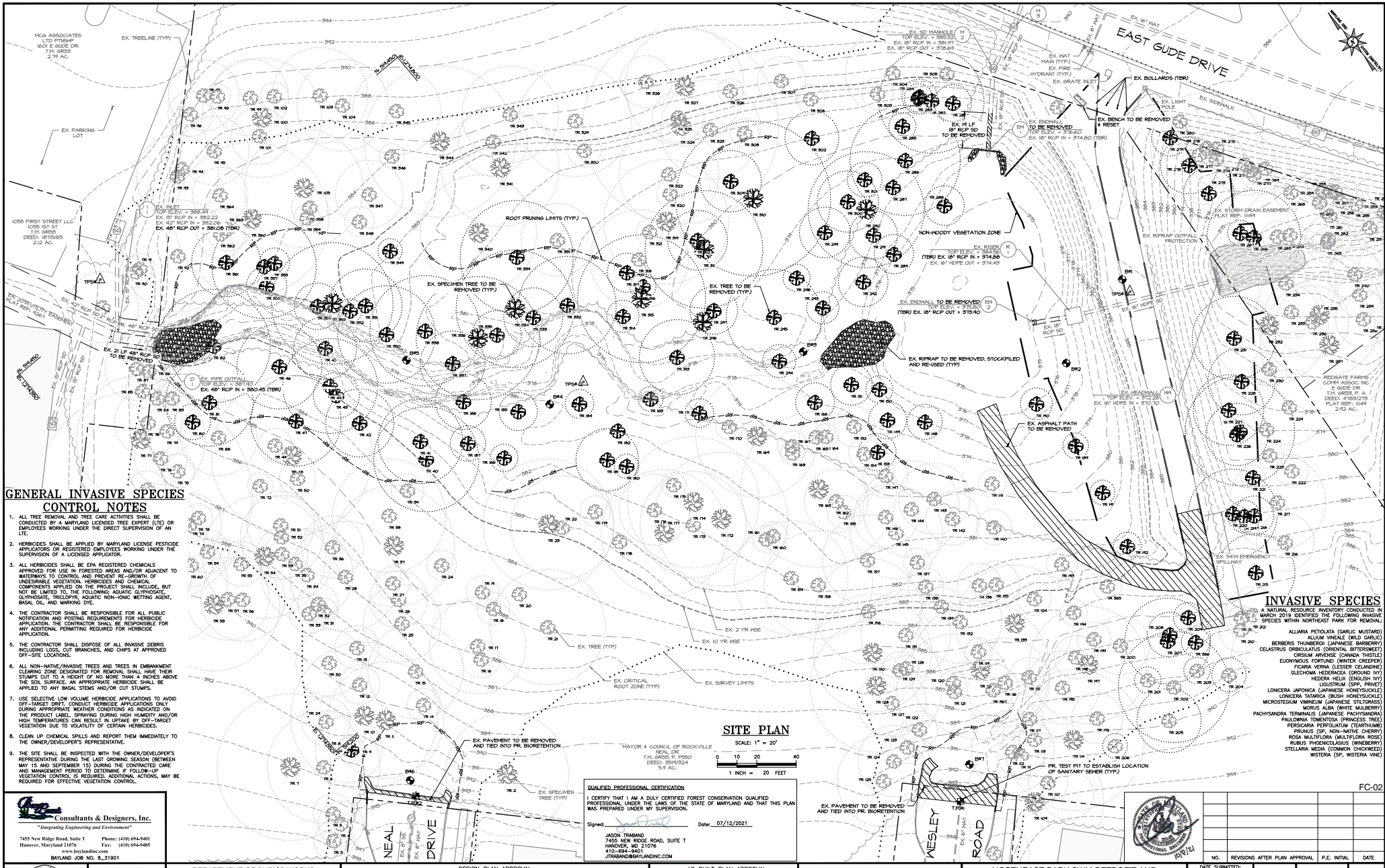
DESIGN PLAN APPROVAL
 [Signature] Chief Engineer
 2021.11.08.17:08:15:05:00
 DIRECTOR OF PUBLIC WORKS
 PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL
 [Signature] Chief Construction Management
 PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
 BORING LOGS

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
 BURGUNDY & CHESTNUT GROVE, P550
 CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
 REVISIONS AFTER PLAN APPROVAL: -
 SCALE: -
 SHEET NO. 3 OF 22
 FILE # F-295



GENERAL INVASIVE SPECIES CONTROL NOTES

1. ALL TREE REMOVAL AND TREE CARE ACTIVITIES SHALL BE CONDUCTED BY A MARYLAND LICENSED TREE EXPERT (LTE) OR EMPLOYEES WORKING UNDER THE DIRECT SUPERVISION OF AN LTE.
2. HERBICIDES SHALL BE APPLIED BY MARYLAND LICENSE PESTICIDE APPLICATORS OR REGISTERED EMPLOYEES WORKING UNDER THE SUPERVISION OF A LICENSED APPLICATOR.
3. ALL HERBICIDES SHALL BE EPA REGISTERED CHEMICALS APPROVED FOR USE IN FORESTED AREAS AND/OR ADJACENT TO WATERWAYS TO CONTROL AND PREVENT RE-GROWTH OF UNDERGROWTH VEGETATION. HERBICIDES AND CHEMICAL COMPONENTS APPLIED ON THIS PROJECT SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: AGUATEX SUPPRESSANT, GLYPHOSATE, TRICLOPYR, GLYCOLIC NON-IONIC WEEDING AGENT, BASKO OIL, AND MARKING DYE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC NOTIFICATION AND POSTING REQUIREMENTS FOR HERBICIDE APPLICATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING REQUIRED FOR HERBICIDE APPLICATION.
5. THE CONTRACTOR SHALL DISPOSE OF ALL INVASIVE DEBRIS INCLUDING LOGS, CUT BRANCHES, AND CHIPS AT APPROVED OFF-SITE LOCATIONS.
6. ALL NON-NATIVE/INVASIVE TREES AND TREES IN EMBARMENT CLEARING ZONE DESIGNATED FOR REMOVAL SHALL HAVE THEIR STAMPS CUT TO A HEIGHT OF NO MORE THAN 4 INCHES ABOVE THE SOIL SURFACE. AN APPROPRIATE HERBICIDE SHALL BE APPLIED TO ANY BASAL STEMS AND/OR CUT STUMPS.
7. USE SELECTIVE LOW VOLUME HERBICIDE APPLICATIONS TO AVOID OFF-TARGET DRIFT. CONDUCT HERBICIDE APPLICATIONS ONLY DURING APPROPRIATE WEATHER CONDITIONS AS INDICATED ON THE PRODUCT LABEL. SPRAYING DURING HIGH HUMIDITY AND/OR HIGH TEMPERATURES CAN RESULT IN UPTAKE BY OFF-TARGET VEGETATION DUE TO VOLATILITY OF CRYSTAL HERBICIDES.
8. CLEAN UP CHEMICAL SPILLS AND REPORT THEM IMMEDIATELY TO THE OWNER/DEVELOPER'S REPRESENTATIVE.
9. THE SITE SHALL BE INSPECTED WITH THE OWNER/DEVELOPER'S REPRESENTATIVE DURING THE LAST GROWING SEASON (BETWEEN MAY 15 AND SEPTEMBER 15) DURING THE CONTRACTED CARE AND MANAGEMENT PERIOD TO DETERMINE IF FOLLOW-UP VEGETATION CONTROL IS REQUIRED. ADDITIONAL ACTIONS MAY BE REQUIRED FOR EFFECTIVE VEGETATION CONTROL.

INVASIVE SPECIES

- A NATURAL RESOURCE INVENTORY CONDUCTED IN MARCH 2018 IDENTIFIED THE FOLLOWING INVASIVE SPECIES WITHIN NORTHEAST PARK FOR REMOVAL:
- ALLIARIA PETIOLATA (GARLIC MUSTARD)
 - ALHAMBRA VINE (WILD GARLIC)
 - BERRBERIS THUNBERGII (JAPANESE BARBERY)
 - CELASTRUS ORBICULATUS (ORIENTAL Bittersweet)
 - CIRSILIUM ARVENSE (CANADA THISTLE)
 - DIQUONIA FORTUNEI (WINTER CREEPER)
 - FIGARIA VENA (LESSER CELANDINE)
 - GLEDITSIA NEDERLEZI (GROUND IVY)
 - HEDERA HELIX (ENGLISH IVY)
 - LOGANIUM (SP. PRIVET)
 - LONGICERA TATARICA (BUSH HONEYSUCKLE)
 - MICROTILIUM VIMBRINUM (JAPANESE STICKLEWEEED)
 - MORUS ALBA (WHITE MULBERRY)
 - PACHYANDRA TERMINALIS (JAPANESE PACHYANDRA)
 - PALLOMIA TOMENTOSA (PRINCESS TREE)
 - PERFORATA PROFRUTICANS (TEARLEAF)
 - RUBUS ALBA (WHITE CHERRY)
 - RUBUS PRINCEPS (BLACKBERRY)
 - STELLARIA MEDIA (COMMON CHICKWEED)
 - WISTERIA (SP. WISTERIA VINE)

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED FOREST CONSERVATION QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.
Signed: _____ Date: 07/12/2021
JASON TRABAND
7455 NEW RIDGE ROAD, SUITE 1
HANOVER, MD 21076
410-694-8401
JTRABAND@BAYLANDINC.COM

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DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
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DESIGN PLAN APPROVAL
DIR. OF PUBLIC WORKS
PKF SC97 2021-00009
SMPF 2021-00012 FTPF 2020-00001

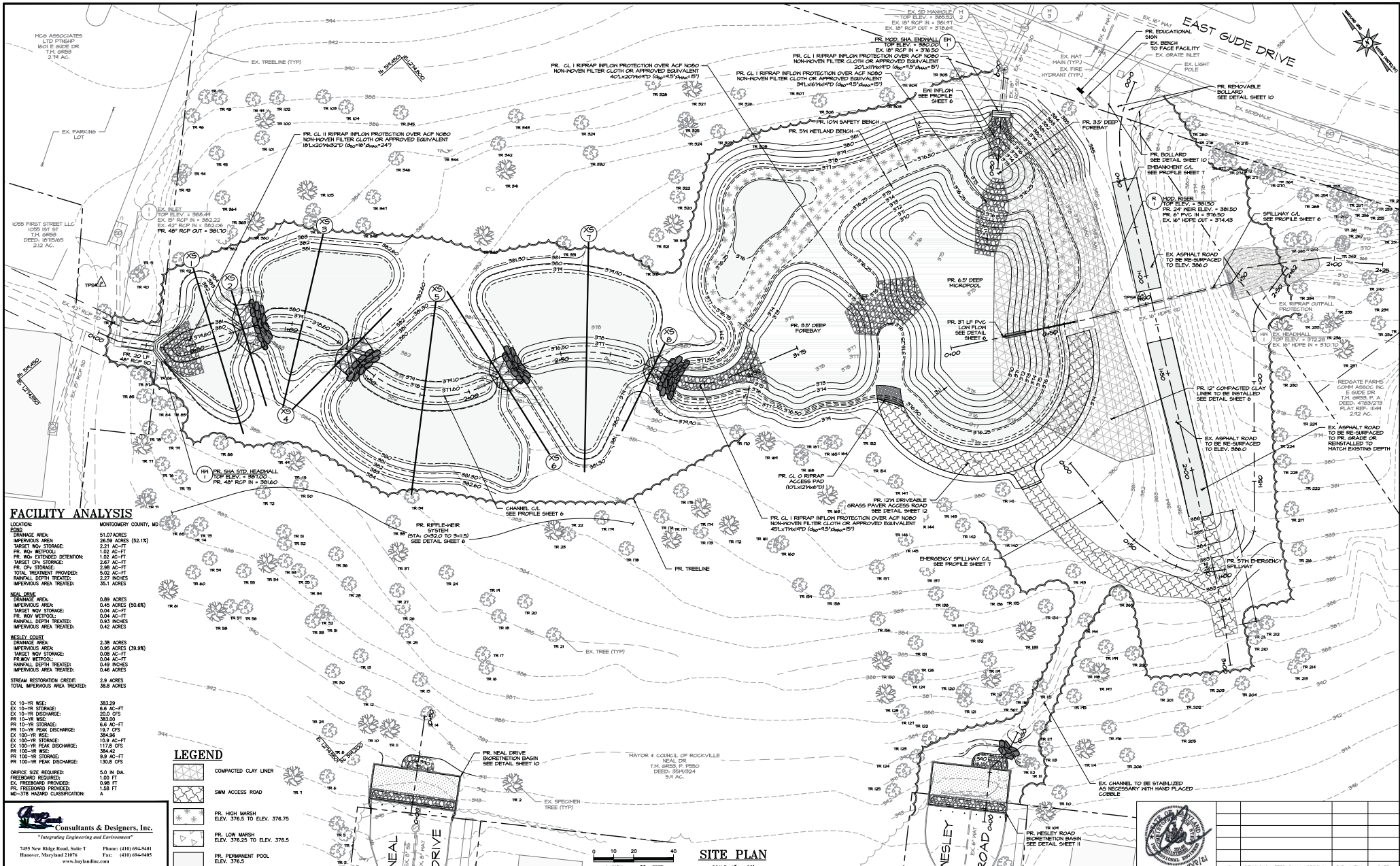
AS BUILT PLAN APPROVAL
CHIEF, CONSTRUCTION MANAGEMENT

STORMWATER MANAGEMENT PLAN
EXISTING CONDITIONS &
NNI REMOVAL PLAN

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED: 10/8/2021
SCALE: 1" = 20'
SHEET NO. 4 OF 22
FILE # F-295



FACILITY ANALYSIS

LOCATION: MONTGOMERY COUNTY, MD

FORM

51.07 ACRES (52.15)

IMPERVIOUS AREA: 26.59 ACRES (52.15)

TARGET WQ STORAGE: 1.02 AC-FT

PR. WQ METEOROL: 1.02 AC-FT

PR. WQ EXTENDED DETENTION: 2.47 AC-FT

TARGET CW STORAGE: 2.47 AC-FT

PR. CW STORAGE: 2.47 AC-FT

TOTAL TREATMENT PROVIDED: 5.08 AC-FT

RAINFALL DEPTH TREATED: 2.27 INCHES

IMPERVIOUS AREA TREATED: 35.1 ACRES

NEAL DRIVE

5.99 ACRES

IMPERVIOUS AREA: 0.42 ACRES (50.85)

TARGET WQ STORAGE: 0.04 AC-FT

PR. WQ METEOROL: 0.04 AC-FT

RAINFALL DEPTH TREATED: 0.32 INCHES

IMPERVIOUS AREA TREATED: 0.42 ACRES

WESLEY ROAD

2.38 ACRES

IMPERVIOUS AREA: 0.88 ACRES (39.05)

TARGET WQ STORAGE: 0.04 AC-FT

PR. WQ METEOROL: 0.04 AC-FT

RAINFALL DEPTH TREATED: 0.48 INCHES

IMPERVIOUS AREA TREATED: 0.44 ACRES

STREAM RESTORATION CHANNELS

2.53 ACRES

TOTAL IMPERVIOUS AREA TREATED: 38.8 ACRES

EX 10-1R WQ: 380.29

EX 10-1R STORAGE: 6.4 AC-FT

EX 10-1R DISCHARGE: 200.0 CFS

PR 10-1R WQ: 380.00

PR 10-1R STORAGE: 6.4 AC-FT

PR 10-1R PEAK DISCHARGE: 197.0 CFS

EX 100-1R WQ: 384.4

EX 100-1R STORAGE: 10.8 AC-FT

EX 100-1R DISCHARGE: 304.2

PR 100-1R WQ: 384.4

PR 100-1R STORAGE: 8.8 AC-FT

PR 100-1R PEAK DISCHARGE: 130.8 CFS

ORFICE SIZE REQUIRED: 5.0 IN DIA.

FREEDOM PROVIDED: 1.08 FT

PR. FREEDOM PROVIDED: 0.98 FT

PR. FREEDOM PROVIDED: 1.08 FT

MD-378 HAZARD CLASSIFICATION: A

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DESIGNED: CS/AG
DRAFTED: JS/AM
CHECKED: CS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. | ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

Chief: S. Sherrill
202-311.08.11.08.1-09.09

DIRECTOR OF PUBLIC WORKS

PRWK: 2021-00009
SMPW: 2021-00012 | FTPW: 2020-00001

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

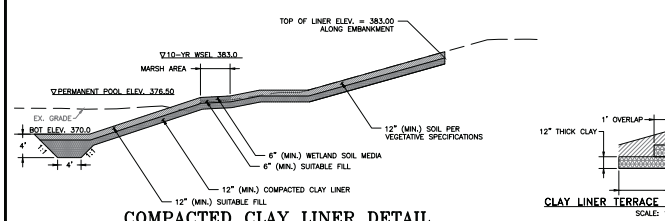
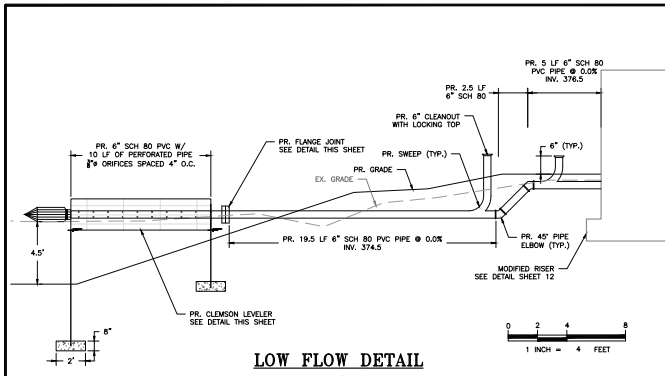
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN

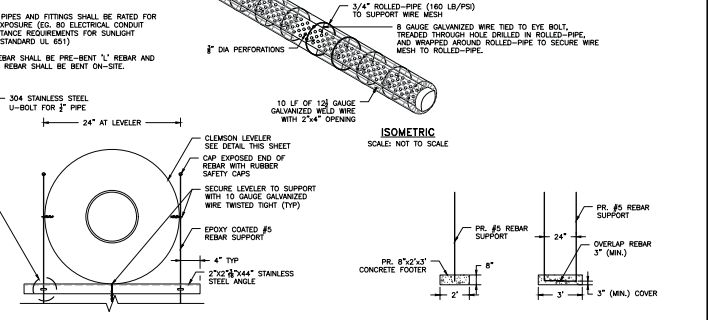
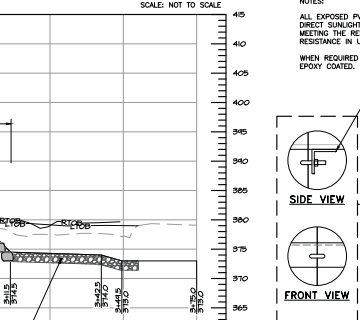
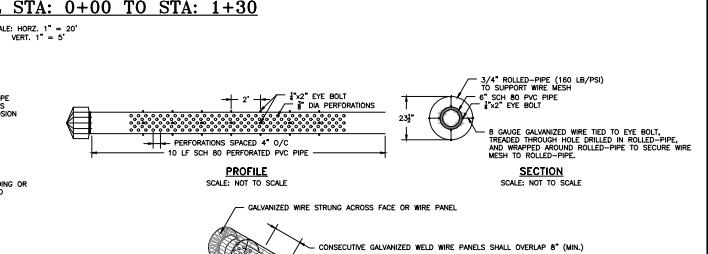
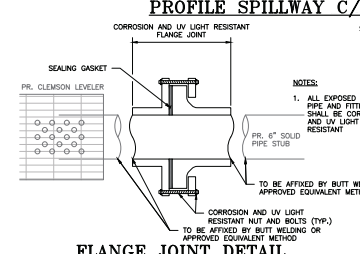
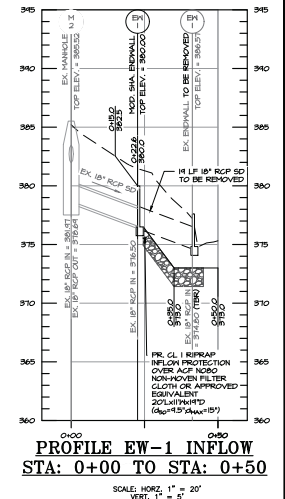
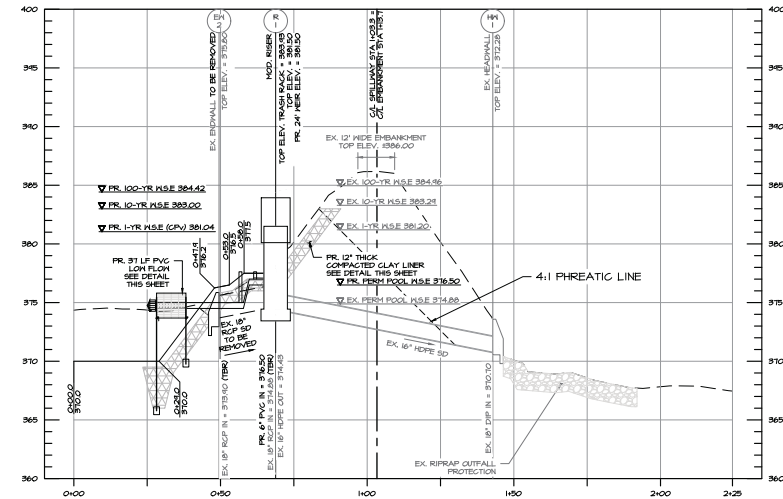
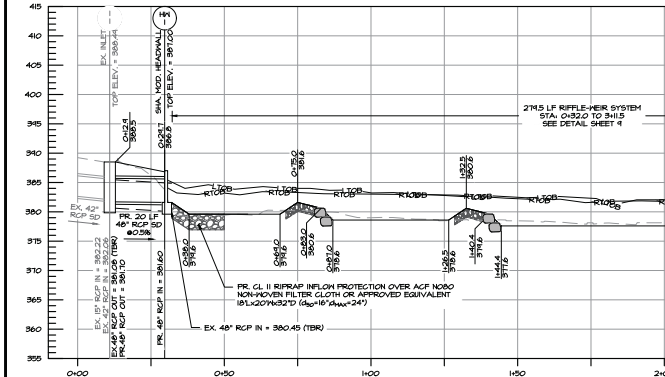
SITE PLAN

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
SCALE: 1" = 20'
SHEET NO. 5 OF 22
FILE # F-295



- NOTES:**
1. THE 12" COMPACTED CLAY LINER SHALL MEET THE MD-378 REQUIREMENTS FOR IMPERVIOUS MATERIAL (GC, SC, CH, CL) AND SHALL HAVE A PERMEABILITY OF LESS THAN 10⁻⁷ CM/SEC.
 2. THE 12" COMPACTED CLAY LINER SHALL BE INSTALLED AS PER MD-378 CONSTRUCTION SPECIFICATIONS, IN TWO (2) 8" LIFTS BEFORE COMPACTION.
 3. THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF THE MAXIMUM DRY WEIGHT WITH A MOISTURE CONTENT WITH 2% OF THE OPTIMUM. EACH LAYER SHALL BE COMPACTED AS NECESSARY TO OBTAIN THE DENSITY AND IS TO BE CERTIFIED BY A GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE COMPLETED AS PER AASHTO METHOD T-99 (STANDARD PROCTOR).
 4. BELOW PERMANENT POOL, THERE SHALL BE A MINIMUM OF 12" SUITABLE FILL OVER COMPACTED CLAY LINER. IN WETLAND MARSH AREAS, 4" OF WETLAND SOIL MEDIA SHALL BE INSTALLED OVER 6" OF SUITABLE OVER THE COMPACTED CLAY LINER. A MINIMUM OF 4" OF TOPSOIL AND 8" OF SUITABLE FILL OVER THE COMPACTED CLAY LINER ALONG THE EMBANKMENT. CONTRACTOR SHALL INSTALL COMPACTED CLAY LINER UNDER DRIVABLE GRASS ACCESS ROAD WHERE SPECIFIED.
 5. THE COMPACT CLAY LINER MAY BE INSTALLED ON SLOPES 3:1 OR STEEPER IN UP TO 4 FOOT WIDE FLAT TERRACES WITH A MINIMUM OVERLAP OF 12" ON EACH TERRACE.



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DESIGN PLAN APPROVAL
Craig L. Stronach
382.11.08.17.28.18.06.07
DIRECTOR OF PUBLIC WORKS
PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL
CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
PROFILES & DETAILS

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/9/2021
SCALE: AS SHOWN
SHEET NO. 6 OF 22
FILE # F-295

MD-378 CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBSTRUCTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBSTRUCTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH, AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE, FOR DRY STORMWATER MANAGEMENT POND, A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBSTRUCTIONABLE MATERIAL. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL SPICES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

PLACEMENT AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACT THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVELLED BY NOT LESS THAN ONE TRAILER TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER Tired OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORCED INTO A BALL, IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 90% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN ± 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PRACTICE).

CUT OFF TRENCH THE CUTTING TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE WIDTH OF THE TRENCH SHALL BE DETERMINED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMBERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

EMBANKMENT CORE THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10 YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMBERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADDJONING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMBERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE DEEPER THAN FOUR FEET TO ANY PART OF A STRUCTURE UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 1500 PSI 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE SPREADABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND AN AVERAGE RESISTIVITY OF 1000 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER AND, ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIBBON CONDUITS. AVERAGE SLOPE OF THE FILL SHALL BE 2 TO 1 TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE, WHEN USING FLOWABLE FILL. ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADDJONING SOIL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMBERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL Voids ADJACENT TO THE FLOWABLE FILL ZONE, AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE DEEPER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

CORRUGATED METAL PIPE ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:

1. MATERIALS (POLYMER COATED STEEL PIPE) STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-245 & M-246 WITH WATER TIGHT COUPLING BANDS OR FLANGES.

MATERIALS (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM COATED STEEL PIPE WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A.

ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT.

MATERIALS (ALUMINUM PIPE) THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-211 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM PIPE WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS TO THE SUBORDINATING SOLS SHALL BE BETWEEN 4 AND 9.

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC., SHALL BE COMPOSED OF THE SAME MATERIAL AND COATINGS AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. DAMPLE BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.

ALL CONNECTORS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORUGATIONS TO ACCOMMODATE THE BANDWIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24 INCHES IN DIAMETER. FLANGES ON BOTH ENDS OF THE PIPE WITH A CIRCULAR 3/8 INCH NEOPRENE GASKET. PREPARED TO THE FLANGE RIBS. A 12-INCH WIDE RUBBER TIE BAND WITH O-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2 INCH GREATER THAN THE CORUGATION DEPTH. PIPES 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG ANNULAR CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) RODS AND LUGS, 2 ON EACH CONNECTING PIPE END. A 24-INCH WIDE BY 3/8-INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET SHALL BE INSTALLED WITH 12 INCHES ON THE END OF EACH PIPE. FLANGED JOINTS WITH 3/8 INCH CLOSED CELL GASKETS THE FULL WIDTH OF THE FLANGES IS ALSO ACCEPTABLE.

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CAULKING OR A NEOPRENE BAND.

4. BEDDING THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH, WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO STRUCTURE BACKFILL.

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

BEDDED REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE:

1. MATERIALS REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.

2. BEDDING REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADLE IS NOT USED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE STRUCTURE BACKFILL SECTION OF THE STANDARD. ORGEL BEDDING IS NOT PERMITTED.

3. LAYING PIPE BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINT IS MADE FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO STRUCTURE BACKFILL.

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:

1. MATERIALS PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D1785 OR ASTM D-2241. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4 TO 10 INCH PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M224 TYPE S, AND 12 THROUGH 24 INCH SHALL MEET THE REQUIREMENTS OF AASHTO M234 TYPE S.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.

3. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH, WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILLING SHALL CONFORM TO STRUCTURE BACKFILL.

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

DRAINAGE DAPHRAGMS WHEN A DRAINAGE DAPHRAGM IS USED, A REGISTERED PROFESSIONAL ENGINEER WILL SUPERVISE THE DESIGN AND CONSTRUCTION INSPECTION.

CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414, MIX NO. 3.

ROCK RIPRAP

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 311.

GEOTEXTILE SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09, CLASS C.

CASE OF WATER DURING CONSTRUCTION

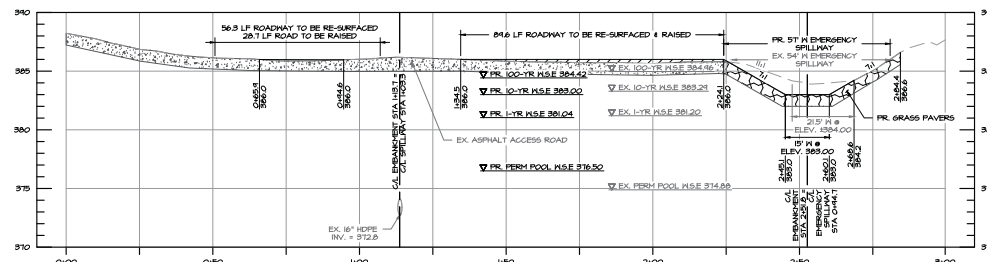
ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK, AFTER HAVING SERVED THEIR PURPOSE. ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELLED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM REQUIRED EXCAVATION AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS DURING THE PLACING AND COMPACTING OF MATERIAL. IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFLECTED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER SHOPS FROM WHICH THE WATER SHALL BE PUMPED.

STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPILL, AND BORROW AREAS, AND BERMUS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (M0-142) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

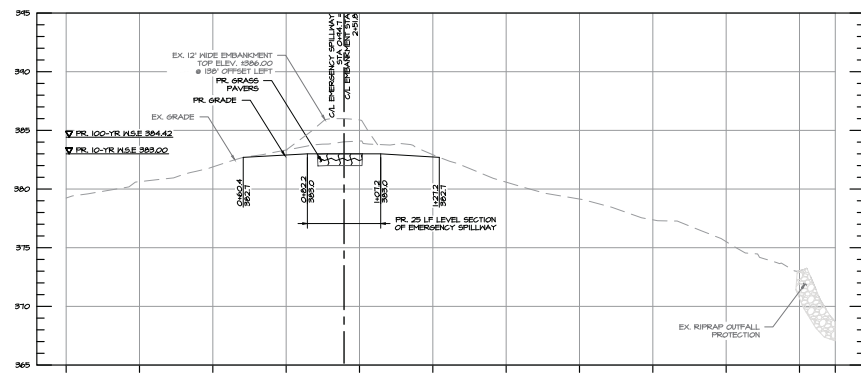
EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION EROSION SHALL DETAIL, EROSION AND SEDIMENT CONTROL, MEASURES.



PROFILE EMBANKMENT C/L STA: 0+00 TO STA: 3+00

SCALE: HORZ. 1" = 20'
VERT. 1" = 5'



PROFILE EMERGENCY SPILLWAY C/L STA: 0+00 TO STA: 2+62

SCALE: HORZ. 1" = 20'
VERT. 1" = 5'

Consultants & Designers, Inc.
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BAYLAND JOB NO. B-31901

DESIGNED CS/GS DEPARTMENT OF PUBLIC WORKS
DRAFTED JS/MW CITY OF ROCKVILLE
CHECKED CS 111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
AS BUILT PLAN APPROVAL

STORMWATER MANAGEMENT PLAN
PROFILES & NOTES

AS BUILT PLAN APPROVAL
CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

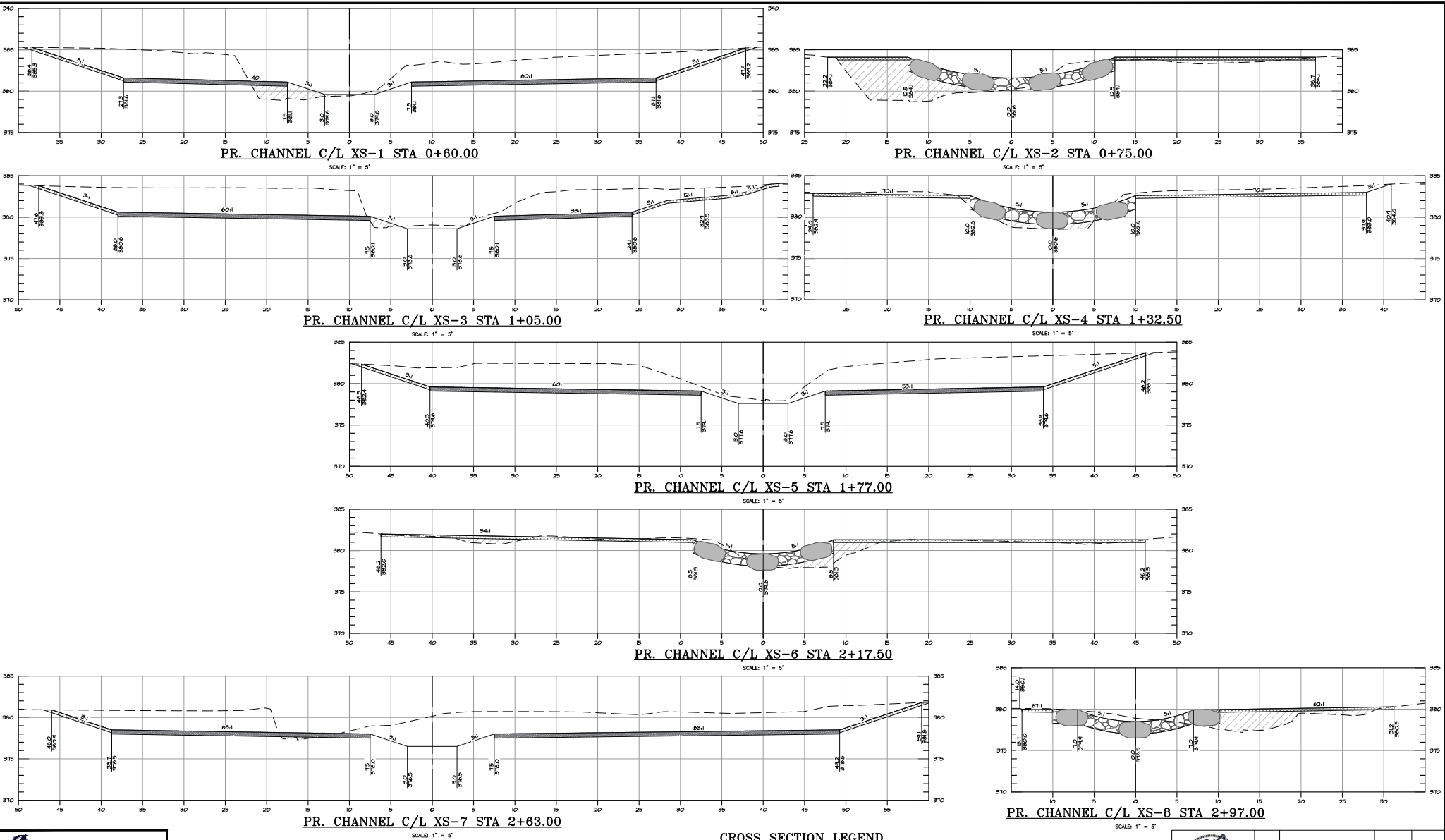
STORMWATER MANAGEMENT PLAN
PROFILES & NOTES

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO. REVISIONS AFTER PLAN APPROVAL P.E. INITIAL DATE

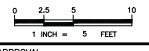
DATE SUBMITTED: 10/8/2021
SCALE AS SHOWN
SHEET NO. 7 OF 22
FILE # F-295

10/9/21



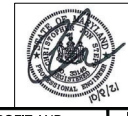
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NOTE: ROCKS SHOWN ON CROSS SECTION VIEWS ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES. SEE ROCK SIZING TABLES SHEET 9 FOR ACTUAL ROCK DIMENSIONS.



CROSS SECTION LEGEND

- EX. GRADE
- PR. GRADE
- PR. RSC BOULDERS
- PR. FILTER FABRIC
- PR. RSC COBBLE (3/8-9")
- PR. SUITABLE FILL MATERIAL
- PR. TOPSOIL
- PR. WETLAND SOIL MEDIA



DESIGNED CS/AG
DRAFTED JS/MW
CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
Chief Engineer
DIRECTOR OF PUBLIC WORKS
PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL
Chief Construction Management
PLAN APPROVAL DATE

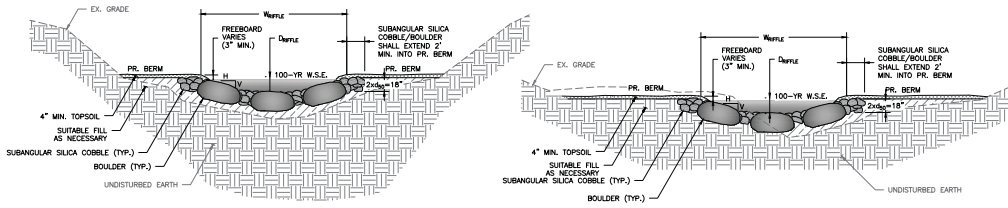
SM# 2021-00012
FTP# 2020-00001

STORMWATER MANAGEMENT PLAN
CROSS SECTIONS

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

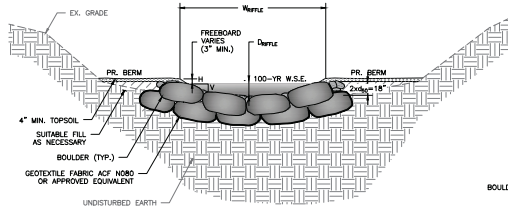
NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED: 10/8/2021
SCALE: 1" = 5'
SHEET NO. 8 OF 22
FILE # F-295

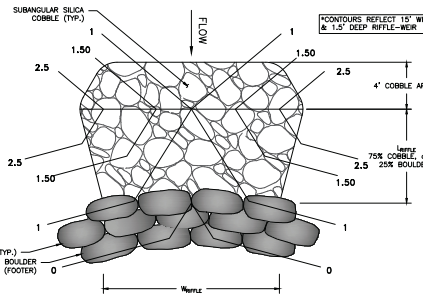


SECTION A
WEIR BACK VIEW (THROUGH COBBLE)
IN CUT
SCALE: NOT TO SCALE

SECTION A
WEIR BACK VIEW (THROUGH COBBLE)
IN CUT
SCALE: NOT TO SCALE



SECTION B
WEIR FRONT VIEW (THROUGH BOULDER)
SCALE: NOT TO SCALE



RIFFLE-WEIR TYPICAL PLAN VIEW
SCALE: NOT TO SCALE

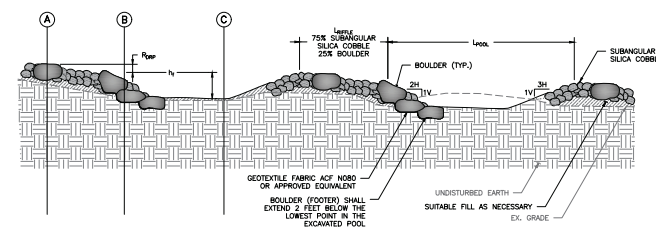
RIFFLE-WEIR DATA TABLE

	PR. REGENERATIVE STORMWATER CONVEYANCE SYSTEM (RSC) FROM STA: 0+32.0 TO 3+11.5
Length (RIFFLE LENGTH)	VARIES - SEE PROFILE
Locs. (POOL LENGTH)	VARIES - SEE PROFILE
N (POOL DEPTH)	2.0 FT.
W (POOL WIDTH)	VARIES - SEE SECTIONS
W (RIFFLE WIDTH)	VARIES - SEE SECTIONS
Depth (RIFFLE DEPTH)	VARIES - SEE PROFILE
R (DROP ACROSS RIFFLE)	VARIES - SEE PROFILE
HV (RIFFLE SIDE SLOPE)	SH:1V

RIFFLE-WEIR ROCK SIZE TABLE

ROCK TYPE	ROCK SIZE	% MIX
SUBANGULAR SILICA COBBLE	D50 = 1\"/>	
BOULDERS	GREATER THAN 6\"/>	
	3\"/>	
	LESS THAN 3\"/>	

NOTE:
1. BOULDERS SHALL BE STACKABLE, OBLONG AND FLAT IN APPEARANCE.
2. PERCENTAGES BY WEIGHT SHOWN REFER TO THE MAXIMUM ALLOWABLE.
3. ROCK SIZE DISTRIBUTION
3\"/>



RIFFLE/POOL TYPICAL PROFILE
SCALE: NOT TO SCALE

RIFFLE-WEIR CONSTRUCTION SPECIFICATIONS

MATERIALS

THE CONTRACTOR WILL NOT BE GRANTED AN EXTENSION OF EXTRA TIME OR EXTRA COMPENSATION DUE TO DELAY CAUSED BY SAMPLING, TESTING, APPROVAL OR DISAPPROVAL OF THE MATERIALS UNDER THE REQUIREMENTS OF THESE SPECIFICATIONS. THE MATERIALS SHALL BE AS SPECIFIED ON THE RIFFLE WEIR ROCK SIZE TABLE AND REFER TO THE RIFFLE WEIR ROCK SIZE TABLE FOR APPROVAL. A QUARRY AND PROVIDE CERTIFICATION OF ORIGIN ANALYSIS OF SAMPLES OF STONE TO THE CITY FOR APPROVAL. PRIOR TO INSTALLATION, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY ARRANGEMENTS WITH THE SOURCE OF SUPPLY IN A TIMELY FASHION, SO THAT THE CONTRACTOR SHALL MAINTAIN AN ADEQUATE SUPPLY OF ALL MATERIALS AND THAT WORK SHALL NOT BE UNNECESSARILY DELAYED DUE TO INSUFFICIENT SUPPLY.

FOOTER AND WEIR BOULDERS - BOULDERS SHALL BE AS SPECIFIED ON THE RIFFLE-WEIR ROCK SIZE TABLE. BOULDERS SHALL BE EITHER SANDSTONE OR GRANITE, STACKABLE, OBLONG, AND FLAT IN APPEARANCE, AND DARK BROWN OR DARK GRAY IN COLOR. THE MINIMUM DRY UNIT WEIGHT OF SANDSTONE WILL BE 140 POUNDS PER CUBIC FOOT & GRANITE BOULDERS WILL BE 135 POUNDS PER CUBIC FOOT. IN GENERAL, FOOTER ROCKS SHALL BE SELECTED TO BE THE LARGEST ROCKS AVAILABLE. FOOTER ROCKS SHALL BE PLACED AT THE BOTTOM AND DOWNSTREAM SIDE OF THE TRENCH. FOOTER BOULDERS SHALL EXTEND 2 FEET BELOW THE LOWEST POINT IN THE EXCAVATED POOL. SANDSTONE BOULDERS ARE PREFERRED, HOWEVER, GRANITE BOULDERS MAY BE USED IF THE CONTRACTOR SHOWS THE CITY DUE DILIGENCE IN ATTEMPTING TO LOCATE SANDSTONE BOULDERS. ANY SUBSTITUTION WILL BE AT NO COST TO THE CITY.

COBBLE - THE STONE SHALL BE SUBANGULAR SILICA COBBLE AND SHALL BE COMPOSED OF A WELL-GRADED MIXTURE OF STONE SIZE SO THAT 50% OF THE PIECES, BY WEIGHT, SHALL BE LARGER THAN THE D50 SIZE NOTED IN RIFFLE-WEIR ROCK SIZE TABLE. A WELL-GRADED MIXTURE OF STONE SIZE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE LARGE VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE SHALL NOT EXCEED 1.5 TIMES THE SPECIFIED D50 SIZE. THE MINIMUM DRY UNIT WEIGHT OF COBBLE WILL BE 135 POUNDS PER CUBIC FOOT.

WOODY DEBRIS - LARGE WOODY DEBRIS OR INVERTED ROOTWAYS SHALL BE CUT FROM HARDWOOD TREES WITH A TRUNK DIAMETER AT BREAST HEIGHT (DBH) OF 6 INCHES TO 24 INCHES. ROOT FANS SHALL BE OBLONG TO CIRCULAR SHAPE AND HAVE A MINIMUM SPREAD OF 2 FEET AS MEASURED AT ITS NARROWEST AXIS AND COVERING AN AREA A MINIMUM OF 10 SQUARE FEET. THE ATTACHED TRUNK SHALL BE A MINIMUM OF 6 FEET IN LENGTH AND BE CLEAR OF LEAF MATTER. THEIR SIZE SHALL NOT EXCEED 10 PERCENT OF THE POOL VOLUME.

LARGE WOODY DEBRIS CAN BE SALVAGED FROM THE PROJECT SITE PROVIDED THEY MEET THE ABOVE REQUIREMENTS AND ARE CLEARLY FLAGGED FOR CLEANING AND GRUBBING. NO LIVE TREES SHALL BE HARVESTED FOR THE SOLE PURPOSE OF PROVIDING MATERIALS FOR THIS ITEM IF SUFFICIENT MATERIALS MEETING THE ABOVE REQUIREMENTS ARE NOT AVAILABLE FROM THE PROJECT SITE, THE CONTRACTOR SHALL THEN OBTAIN OFF-SITE MATERIAL MEETING THE SPECIFIED REQUIREMENTS.

TOPSOIL - TOPSOIL SHALL BE PER THE STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS AS SPECIFIED ON SHEET 17. TOPSOIL SHALL NOT BE SALVAGED FROM AREAS AFFECTED BY NRI REMOVAL. THE CONTRACTOR SHALL MAINTAIN A SEPARATE STOCKPILE FOR TOPSOIL, AND IT SHALL NOT BE COMINGLED WITH OTHER FILL MATERIALS.

FILTER CLOTH - FILTER CLOTH SHALL NOT EXCEED THE REQUIREMENTS OF AC7 HOMO POLYPROPYLENE NONWOVEN GEOTEXTILE FABRIC. THE CONTRACTOR SHALL PROVIDE MATERIAL SPECIFICATION TO THE COUNTY FOR APPROVAL. FILTER FABRIC SHALL BE PLACED UNDER ALL BOULDERS. REFER TO CONSTRUCTION DRAWINGS FOR PLACEMENT LOCATION. TO PREVENT UNDOING, A CONTINUOUS SHEET OF FILTER FABRIC SHALL BE USED ALONG THE CROSS-SECTION. FILTER FABRIC SHALL NOT BE PLACED IN THE POOLS SO AS NOT TO IMPEDE FILTRATION.

SUBMITTALS

- FOOTER AND WEIR BOULDERS - THE CONTRACTOR WILL LOCATE POTENTIAL SOURCES FOR THE STONE. THE CONTRACTOR SHALL SUBMIT TO THE CITY A CERTIFICATE VERIFYING THE FOLLOWING BOULDER INFORMATION:
 - STONE CLASSIFICATION
 - STONE DENSITY (I.E., WEIGHT PER CUBIC FOOT)
 - WEIGHT OF STONE BEING SUPPLIED.
 - STONE QUALITY SHALL MEET ALL OF THE ABOVE SPECIFICATIONS.
- COBBLE - THE CONTRACTOR SHALL OBTAIN COBBLE SAMPLES FROM THE QUARRY AND SUBMIT TO THE CITY THE SAMPLES AND A CERTIFICATE VERIFYING THE FOLLOWING COBBLE INFORMATION:
 - STONE CLASSIFICATION
 - STONE DENSITY (I.E., WEIGHT PER CUBIC FOOT)
 - WEIGHT OF STONE BEING SUPPLIED.
 - STONE QUALITY SHALL MEET ALL OF THE ABOVE SPECIFICATIONS.
- TOPSOIL - THE CONTRACTOR SHALL OBTAIN A TOPSOIL SAMPLE AND SUBMIT TO THE CITY FOR APPROVAL. THE SAMPLE AND CERTIFICATE WITH THE SOURCE AND SPECIFICATIONS OF THE COMPOST.
- FILTER CLOTH - THE CONTRACTOR SHALL PROVIDE MATERIAL SPECIFICATION TO THE CITY FOR APPROVAL.

CONSTRUCTION

THE RIFFLE-WEIR SYSTEM SHALL BE INSTALLED ACCORDING TO THE SEQUENCE OF CONSTRUCTION, THE CONSTRUCTION DRAWINGS, THESE SPECIFICATIONS, AND AS DIRECTED BY THE CITY.

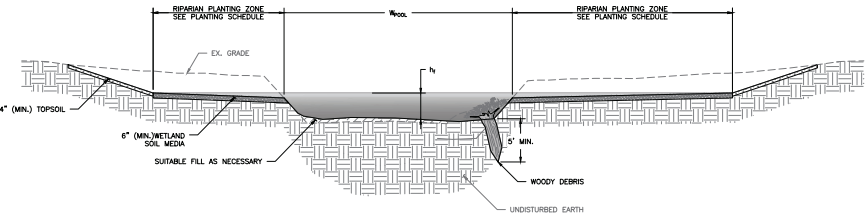
CONSTRUCTION OF THE RIFFLE-WEIR SYSTEM SHALL BEGIN AT THE UPSTREAM END AND PROCEED DOWNSTREAM TO THE SWM POND. CONTRACTOR MAY WORK DOWNSTREAM TO UPSTREAM PER STEPS BELOW WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR.

EXCAVATE THE FIRST POOL AND INSTALL RIPRAP INFLOW PROTECTION TO PROVIDE STABILIZATION. THEN INSTALL THE RIFFLE-WEIR. FOOTER BOULDERS SHALL BE PLACED AT THE INTERFACE OF THE POOLS AND RIFFLES AS SHOWN ON THE CONSTRUCTION DRAWINGS. A CONTINUOUS SHEET OF GEOTEXTILE SHALL BE USED TO SEPARATE ANY POTENTIAL EARTHEN FILL AND THE BOULDERS THAT LINE THE FACILITY BOTTOM. ADDITIONAL BOULDERS SHALL BE PLACED ON TOP OF THE FOOTER BOULDERS AT THE WEIR ELEVATION UPSTREAM OF THE FOOTER BOULDERS TO FORM THE WEIR CHANNEL. PARABOLIC SHAPE. BOULDERS SHALL BE ARRANGED HORIZONTALLY IN THE CENTER OF THE CHANNEL AND THE ARMS ON EITHER SIDE OF THE CHANNEL SHALL BE EXTENDED PARABOLICALLY/APPROXIMATELY 20 DEGREE ANGLE LONGITUDINALLY TO THE CENTER OF THE POOL. THE BOULDERS SHALL BE ARRANGED TO MAXIMIZE INTERLOCKING. THE FACE OF THE BOULDERS SHALL BE TILTED DOWNSTREAM TO OCCUPY HALF OF THE INCLINE (6 VERTICAL) MADE UP OVER THE ENTIRE LENGTH OF THE WEIR.

ONCE THE BOULDERS HAVE BEEN PLACED, FILL WITH 75% COBBLE AND 25% BOULDERS TO FORM THE BACKSIDE OF THE WEIR. A SMALL COBBLE APRON SHALL BE PLACED WHERE THE BOULDERS MEET THE POOL ON THE DOWNSTREAM SIDE. ONCE THE WEIR-POOL COMBINATION IS COMPLETE, THE ENTIRE SURFACE SHALL BE STABILIZED WITH TEMPORARY SEEDING. ANY DISTURBED AREA SHALL BE STABILIZED AT THE END OF EACH WORKING DAY WITH TEMPORARY SEEDING. EXCAVATED MATERIAL SHALL BE USED TO BLEND THE EDGES OF DOWNSTREAM WEIR AND SURROUNDING GRADE.

CONTINUE THE PROCESS OF ALTERNATING POOLS AND RIFFLES/WEIRS DOWN THROUGH THE SYSTEM TO THE SWM POND. PLACE LARGE WOODY DEBRIS/INVERTED ROOT WADS IN POOLS AS SHOWN ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL PUSH THE TRUNK STEM DOWN INTO SOIL OR EXCAVATE THE TRENCH FOR THE INVERTED ROOT WAD AND PLACE IN THE TRENCH SO THE INVERTED ROOT WAD SITS WITH THE ROOT MASS UPWARD IN THE SHALLOW AQUATIC POOLS AND BACKWASH TO SECURE. ROOT WADS SHALL BE EMBEDDED 5 FEET BELOW THE INVERT OF THE POOL IN A VERTICAL ALIGNMENT.

BLOW TOPSOIL OVER THE TOPS OF THE WEIRS AND BERMS. CONTRACTOR SHALL NOT BE BLOWN OVER TEMPORARILY DISTURBED WETLANDS. COMPLETE FINAL STABILIZATION AND PERMANENT SEEDING AS INDICATED IN THESE CONSTRUCTION DRAWINGS.



SECTION C
THROUGH POOL
TYPICAL RIFFLE-WEIR SECTIONS
SCALE: NOT TO SCALE

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BAYLAND JOB NO. B_31901

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

AS BUILT PLAN APPROVAL

STORMWATER MANAGEMENT PLAN
RSC DETAILS & NOTES

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED:
10/9/2021

SCALE
AS SHOWN

SHEET
NO. 9
OF 22

FILE #
F-295

DESIGNED CS/G
DRAWN JS/MW
CHECKED CS

DESIGN PLAN APPROVAL

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STORMWATER MANAGEMENT PLAN
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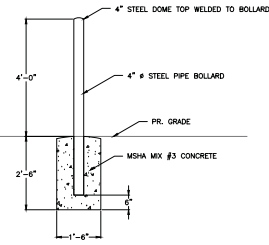
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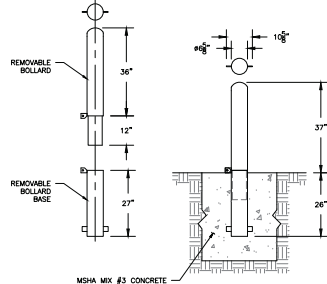
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- NOTES:**
1. ALL PIPE TO BE STANDARD WEIGHT AS PER AISC MANUAL.
 2. ALL EXPOSED METAL SURFACES SHALL BE PAINTED WITH GALVANNEED PAINT - ONE COAT METAL PRIMER AND TWO COATS HUNTER GREEN PAINT. 5009 FROM KEYSTONE ROSE DESIGN.
 3. 18" x 18" YELLOW REFLECTOR (REFLECTIVE PAINT/TAPE) BE SECURELY FASTENED TO EVERY OTHER BOLLARD. IF REFLECTIVE TAPE IS USED, THE MINIMUM ROLL WIDTH SHALL BE 6" AND THERE SHALL BE NO GAPS BETWEEN LAYERS. SIGNAGE WILL NOT BE ALLOWED ON BOLLARDS. END OF ROAD MARKER (MUTCO TYPE 4 OBJECT MARKER 004-3) SHALL BE INSTALLED SEPARATELY ADHERING TO SIGNAGE REQUIREMENTS FOR HEIGHT, IF REQUIRED.



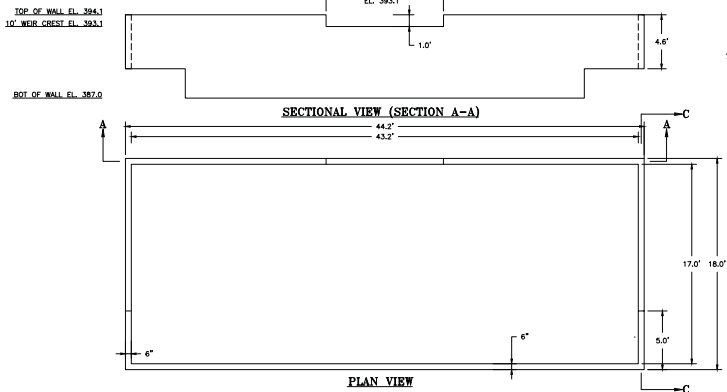
PROPOSED BOLLARD DETAIL

SCALE: 1" = 2'



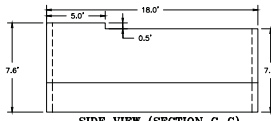
PROPOSED REMOVABLE BOLLARD DETAIL

SCALE: NOT TO SCALE



NEAL DRIVE BIORETENTION STRUCTURE DETAIL

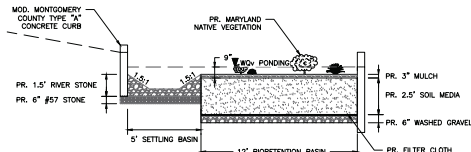
SCALE: 1" = 5'



SIDE VIEW (SECTION C-C)

OPERATION, MAINTENANCE & INSPECTION

1. THE FACILITY WILL BE INSPECTED EVERY THREE YEARS AND MAINTAINED BY THE CITY OF ROCKVILLE DPW.
 - A. SEDIMENT REMOVAL SHALL OCCUR WHEN 50% OF THE TOTAL FOREBAY CAPACITY (0.75' DEPTH @ ELEV. 392.75) HAS BEEN LOST.
2. WET WEATHER INSPECTIONS MUST BE CONDUCTED AFTER MAJOR STORM EVENTS DURING THE FIRST YEAR AFTER CONSTRUCTION THEN BI-ANNUALLY AT A MINIMUM. INSPECTORS TO ENSURE THAT THE BIORETENTION IS OPERATING AS DESIGNED AND INTENDED. INSPECTORS SHALL EXAMINE FOR EVIDENCE OF CLOGGING, EXCESSIVE FLOW RATE, EROSION, SEDIMENTATION, ADEQUACY OF INFLOWS AND OUTFLOWS, ETC. INSPECTIONS SHOULD BE PERFORMED WITH AS-BUILT PLANS IN HAND.
3. DEBRIS AND LITTER REMOVAL SHALL BE ENSURED DURING REGULAR INSPECTIONS.
4. THE TOP FEW INCHES OF BASIN MEDIA SHOULD BE REMOVED WITH LIGHT EQUIPMENT TO PREVENT COMPACTION AND REPLACED WITH NEW MEDIA WHEN WATER PONDING FOR MORE THAN 72 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
5. OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION SHALL BE PERFORMED AS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.



PR. TYPICAL NEAL DRIVE BIORETENTION SECTION

SCALE: 1" = 4'

BIORETENTION MATERIAL SPECIFICATIONS

MATERIAL	SPECIFICATION	SIZE	NOTES
MULCH	HARDWOOD MULCH	SINGLE OR DOUBLE SHROUDED WELL AGED, NO PINE OR WOOD CHIPS.	
SOIL MEDIA	LOAMY SAND (65-85%) & COMPOST (15-40%) OR SANDY LOAM (30%), COARSE SAND (20%) & COMPOST (40%).	USDA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT <5%; ORGANIC CONTENT 5-10%; pH RANGE: 5.5-7.0; REQUIRED INFILTRATION RATES: LOAMY SAND = 2.41 IN/HR (4.8 FT/DAY) SANDY LOAM = 1.02 IN/HR (2.0 FT/DAY) COARSE SAND = 8.27 IN/HR (16.5 FT/DAY)	
NON-WOVEN FILTER CLOTH	ACF NORDO OR APPROVED EQUIVALENT	N/A	FOR USE AS SHOWN
WASHED GRAVEL #57 STONE	AASHTO M-43	NO. 57 OR NO. 6	3/8" TO 3/4"
RIVER STONE	MARYLAND RIVER STONE	2" TO 4"	
CONCRETE	MSHA MIX NO. 3		PRE-CAST AND BROUGHT ON SITE

WATER QUALITY VOLUME ANALYSIS NEAL DRIVE BIORETENTION INSET

DRAINAGE AREA	0.89 ACRES
IMPERVIOUS AREA:	0.45 ACRES (51%)
TARGET WOV STORAGE:	0.037 AC-FT
PR. WOV PROVIDED:	0.035 AC-FT
RAINFALL DEPTH TREATED:	0.93 INCHES
IMPERVIOUS AREA TREATED:	0.42 ACRES

SCALE: 1" = 5'

NEAL DRIVE BIORETENTION SECTION A-A' STA 0+22.75

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BAYLAND JOB NO. 8_31901

DESIGNED CS/AG
DRAFTED JS/MW
CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

Chief: [Signature] 3/2/21
Director of Public Works

DATE: 3/2/21

PRJ# 2021-00012 SC# 2021-00009
SMP# 2021-00012 FTP# 2020-00001

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

Chief, Construction Management

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
NEAL DRIVE BIORETENTION

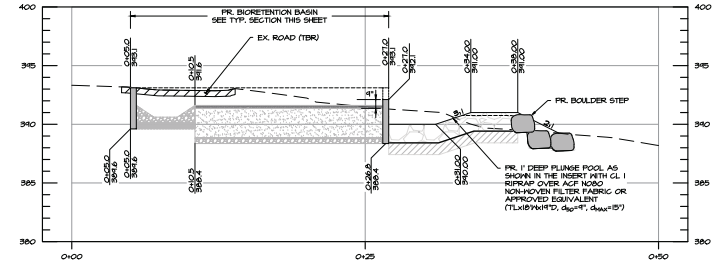
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
SCALE: AS SHOWN
SHEET NO. 10 OF 22
FILE # F-295

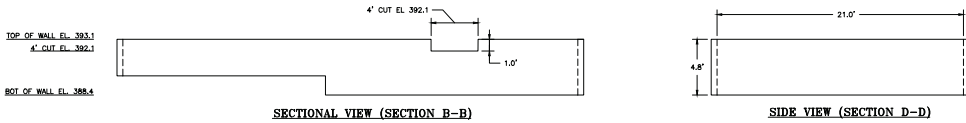
NO. REVISIONS AFTER PLAN APPROVAL P.E. INITIAL DATE

OPERATION, MAINTENANCE & INSPECTION

- THE FACILITY WILL BE INSPECTED ONCE EVERY THREE YEARS AND MAINTAINED BY THE CITY OF ROCKVILLE DPW.
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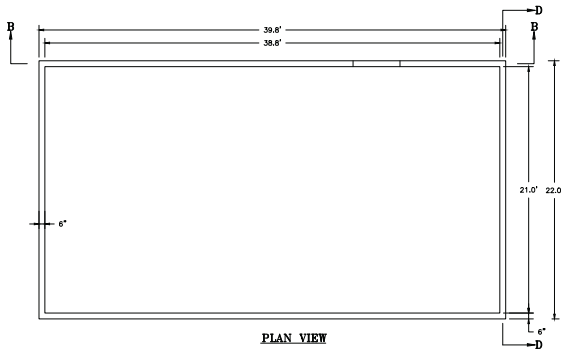


**PROFILE WESLEY ROAD BIORETENTION C/L
STA: 0+00 TO STA: 0+50**
SCALE: HORIZ. 1" = 5'
VERT. 1" = 5'

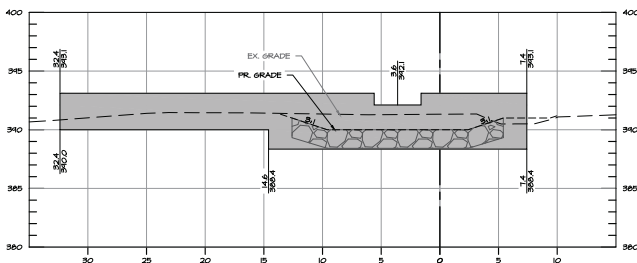


SECTIONAL VIEW (SECTION B-B)

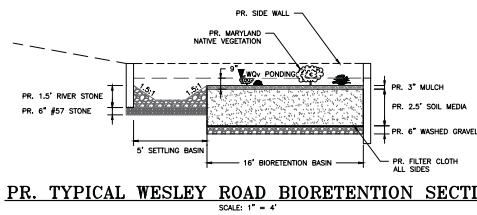
SIDE VIEW (SECTION D-D)



WESLEY ROAD BIORETENTION STRUCTURE DETAIL
SCALE: 1" = 5'



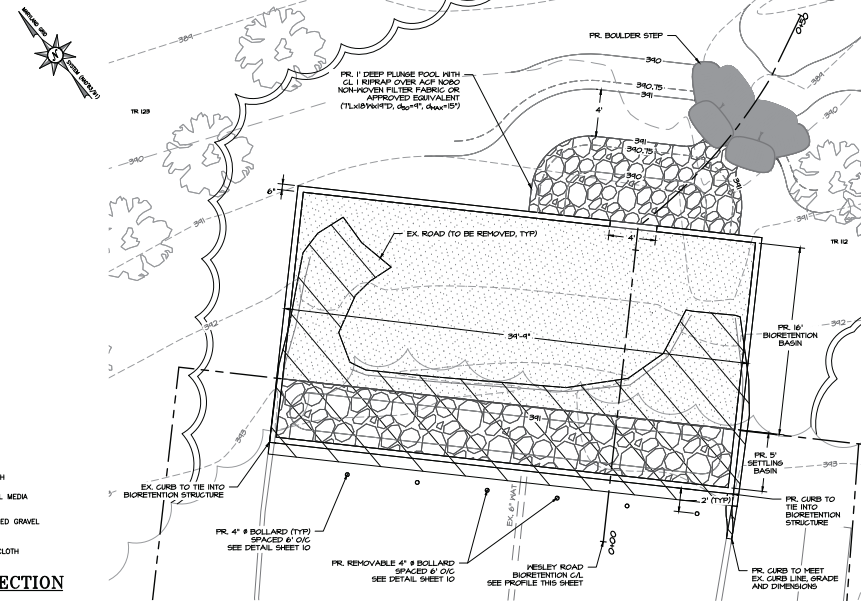
WESLEY ROAD BIORETENTION SECTION B-B' STA 0+26.75



PR. TYPICAL WESLEY ROAD BIORETENTION SECTION
SCALE: 1" = 4'

WATER QUALITY VOLUME ANALYSIS

DRAINAGE AREA:	2.38 ACRES
IMPERVIOUS AREA:	0.95 ACRES (40%)
TARGET WQ STORAGE:	0.081 AC-FT
PR. WQ PROVIDED:	0.039 AC-FT
RAINFALL DEPTH TREATED:	0.49 INCHES
IMPERVIOUS AREA TREATED:	0.46 ACRES



WESLEY ROAD BIORETENTION INSET
SCALE: 1" = 5'

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BAYLAND JOB NO. B_31901

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
Craig E. Sidorowicz
DIRECTOR OF PUBLIC WORKS
PR# 2021-00012
PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT
PLAN APPROVAL DATE

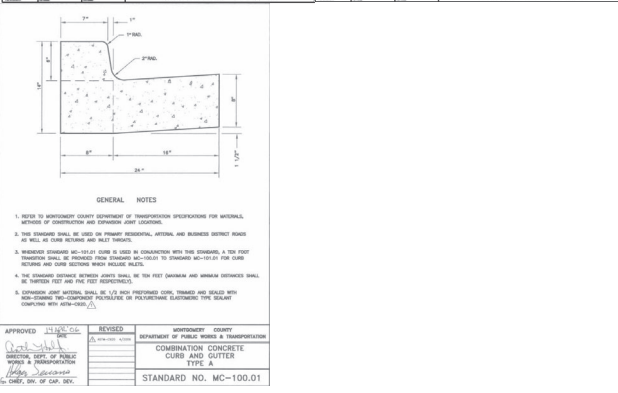
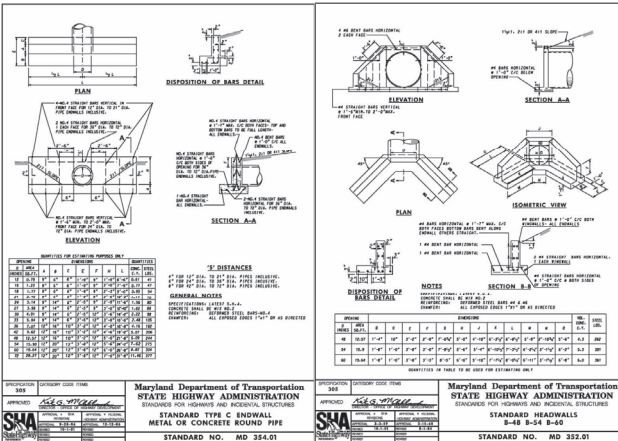
STORMWATER MANAGEMENT PLAN
WESLEY ROAD BIORETENTION

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021	SCALE AS SHOWN	SHEET NO. 11	FILE # F-295
NO. REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE	
IFB #05-22		OF 22	

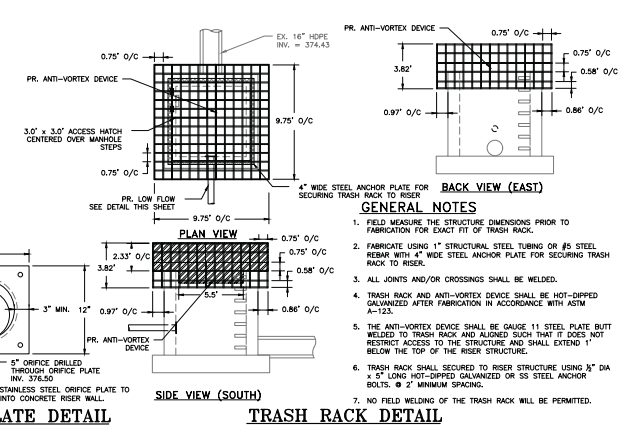
GENERAL STRUCTURAL NOTES

- BUILDING CODES**
 - 1.1. ALL CONSTRUCTION SHALL CONFORM WITH THE 2000 IRC BUILDING CODE AND ALL SUBSEQUENT SUPPLEMENTS.
 - 1.2. IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH THE GOVERNING LOCAL BUILDING CODE.
- MISCELLANEOUS**
 - 2.1. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONSTRUCTION DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR OR OWNER FOR REVIEW BY THE REGISTERED ENGINEER. IF THE CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONSTRUCTION DRAWINGS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.
 - 2.2. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONSTRUCTION DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
 - 2.3. THE CONTRACTOR SHALL NOT SUBMIT REPRODUCTIONS OF THE STRUCTURAL CONSTRUCTION DRAWINGS AS SHOP DRAWINGS.
 - 2.4. SCALES SHOWN ON THE STRUCTURAL CONSTRUCTION DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SPLITTING THE DRAWINGS.
- CAST-IN-PLACE CONCRETE**
 - 3.1. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 308)" AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318)".
 - 3.2. IN ADDITION TO THE ABOVE, ALL CONCRETE WORK SHALL CONFORM TO THE FOLLOWING:
 - 3.2.1. RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING (ACI 305)
 - 3.2.2. RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING (ACI 306)
 - 3.2.3. RECOMMENDED PRACTICE FOR CONCRETE FLOORING (ACI 307)
 - 3.3. ALL CONCRETE EXPOSED TO PUBLIC VIEW SHALL CONFORM TO THE REQUIREMENTS FOR ARCHITECTURAL CONCRETE CONTAINED IN ACI 301.
 - 3.4. ALL CONCRETE, UNLESS OTHERWISE NOTED, SHALL BE STONE AGGREGATE CONCRETE HAVING A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 5% +/- 1%. NO ADmixTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. MAXIMUM AGGREGATE SIZE SHALL BE 1" AND MAXIMUM SLUMP SHALL BE 4". 3" FOR SLABS ON GRADE. ALL CONCRETE EXCEPT FOOTINGS SHALL CONTAIN A WATER REDUCING ADMIXTURE. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150 AND NORMAL WEIGHT AGGREGATES SHALL CONFORM TO ASTM C 33.
 - 3.5. ALL REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A 615 GRADE 60. ALL WELDED WIRE FABRIC (W.W.F.) SHALL CONFORM TO ASTM A 185. LAP ALL REINFORCING BARS A MINIMUM OF 4 BAR DIAMETERS AND ALL W.W.F. A MINIMUM OF 2 FULL GRIDS, UNLESS NOTED OTHERWISE.
 - 3.6. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE DESIGN MANUAL OF STANDARD PRACTICE, ACI 315 DETAILS AND DETAILING OF CONCRETE REINFORCEMENT, ACI SP 66 "DETAILING MANUAL".
 - 3.7. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED INDEPENDENT TESTING AGENCY. ALL CONCRETE SHALL BE SAMPLED AND TESTED BY THE TESTING AGENCY. THE CONTRACTOR SHALL NOTIFY THE TESTING AGENCY 48 HOURS PRIOR TO THE PLACEMENT OF ANY CONCRETE. THE TESTING AGENCY SHALL PERFORM ALL SAMPLING AND TESTING IN ACCORDANCE WITH ASTM C 1077.
 - 3.8. THE CONCRETE STRUCTURE SHALL NOT SUPPORT THE DESIGN LIVE LOAD FOR A MINIMUM OF 28 DAYS AND ALL SHORING AND REINFORCING REQUIRED TO SUPPORT THE CONCRETE STRUCTURE DURING CONSTRUCTION SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR. SHOP DRAWINGS, SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW. SHOP DRAWINGS SHALL INDICATE THE TYPE, EXTENT, SIZE AND LOCATION OF ALL SHORING AND REINFORCING AS WELL AS THE SEQUENCE OF CONSTRUCTION.
 - 3.9. GROUND BLAST FURNACE SLAG MAY BE USED TO REPLACE UP TO 50% OF THE PORTLAND CEMENT IN A MIX, AND FLY ASH OR POZZOLAN MAY BE USED TO REPLACE UP TO 25% OF PORTLAND CEMENT, SUBJECT TO THE APPROVAL OF THE STRUCTURAL ENGINEER AND SHALL CONFORM TO ASTM C 898.
 - 3.10. MINIMUM COVER FOR ALL REINFORCING SHALL BE 3" UNLESS NOTED OTHERWISE.
 - 3.11. THE GENERAL CONTRACTOR SHALL SUBMIT PLANS SHOWING ALL PENETRATIONS THROUGH THE FRAMED CONCRETE SLABS. THE OPENINGS SHALL BE ACCURATELY LOCATED AND DIMENSIONED.
- PRECAST CONCRETE**
 - 4.1. ALL PRECAST CONCRETE ELEMENTS SHALL BE DESIGNED BY THE CONTRACTOR AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4500 PSI. HIGHER STRENGTH CONCRETE MAY BE USED IF PROVIDED BY DESIGN. COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND, SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.
 - 4.2. ALL PRECAST CONCRETE ELEMENTS SHALL BE DESIGNED TO SUPPORT THE DEAD AND LIVE LOADING CONDITIONS SHOWN OR INDICATED IN THE CONSTRUCTION DOCUMENTS. THE CONNECTIONS FOR PRECAST CONCRETE ELEMENTS SHOWN ARE SCHEMATIC AND FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF ALL CONNECTIONS.
 - 4.3. THE CONTRACTOR SHALL NOT CUT OR DRILL ANY OPENINGS INTO THE PRECAST CONCRETE ELEMENTS WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER AND PRECAST MANUFACTURER.
 - 4.4. REFER TO "CAST-IN-PLACE CONCRETE SECTION" FOR ADDITIONAL INFORMATION ON CONCRETE AND REINFORCING.



MODIFICATIONS TO CONCRETE STRUCTURES GENERAL NOTES

1. ALL REMOVAL SHALL BE COMPLETED WITH SAW CUTS.
2. ANY EXPOSED REBAR SHALL BE PROTECTED FROM CORROSION BY USING A REPAIR EPOXY SPRAY, BACK COULING AND FILL HOLES WITH MORTAR, OR OTHER APPROVED METHOD.
3. THE EXISTING CONCRETE SURFACE SHALL BE PREPARED BY SCABBING, SCAMPING, HIGH PRESSURE (5000 TO 45000 PSI) WATER JETTING OR OTHER APPROVED METHOD. THE SURFACE SHALL THEN BE CLEANED, LOW PRESSURE (5000 PSI) WATER CLEANING, DETERGENT CLEANING, OR OTHER APPROVED METHOD AND ALLOWED TO DRY THOROUGHLY.
4. FOLLOWING SURFACE PREPARATION, ALL CUT CONCRETE SURFACES SHALL BE COATED WITH AN EPOXY POLYSULFIDE JOINT SEALANT.
5. REBAR DOWELS SHALL BE INSTALLED TO THE NEW CONCRETE WITH THE EXISTING STRUCTURE AND SHALL BE CONTINUOUS A MINIMUM OF 3 INCHES INTO THE EXISTING STRUCTURE.
6. ALL REBAR SHALL BE EPOXYED INTO THE EXISTING STRUCTURE TO FORM A TIGHT FIT. EPOXY SHALL BE FILL HIT-800 VS OR APPROVED EQUIVALENT.
7. SEE "GENERAL STRUCTURAL NOTES" FOR INFORMATION ON CONCRETE AND STEEL REINFORCING SPECIFICATIONS.



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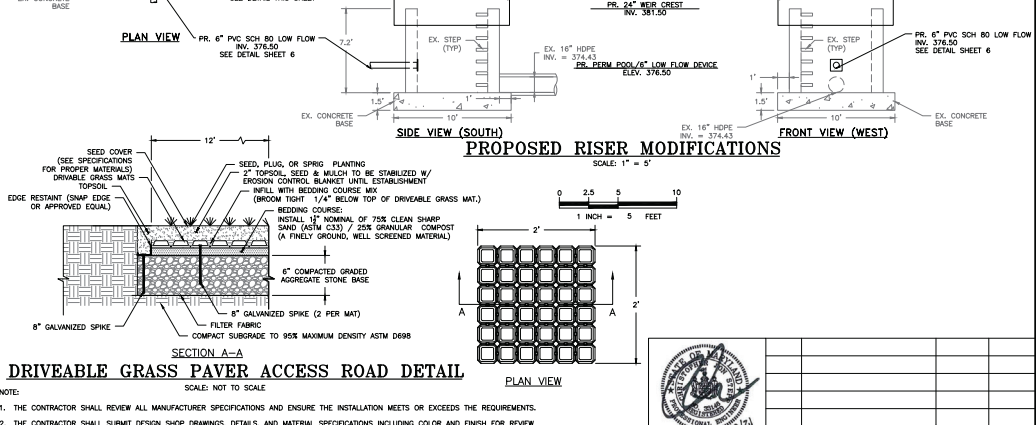
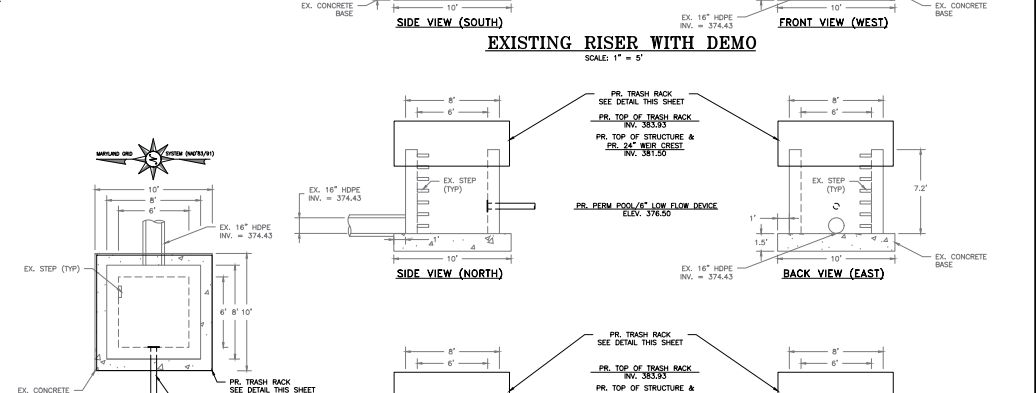
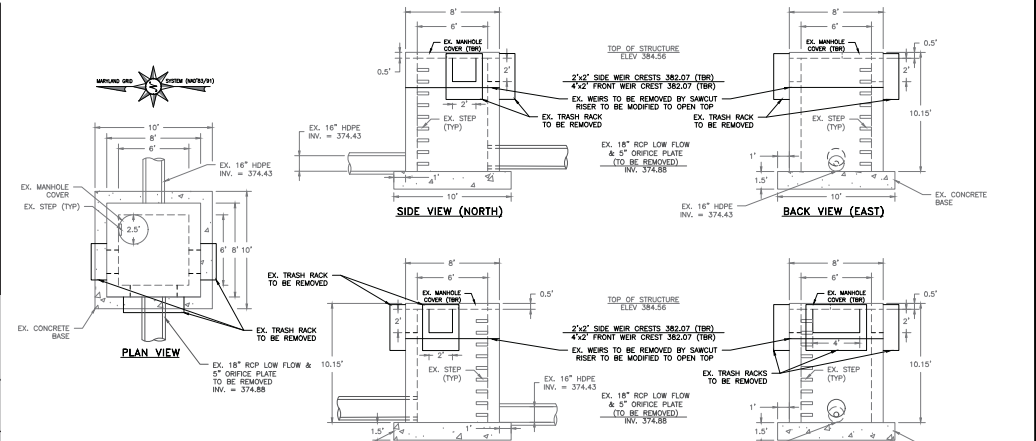
BAYLAND JOB NO. B-31901

DESIGNED CS/GG
DRAFTER JS/AM
CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
Cheryl S. Sherrill
202-1108-1748-2426/207
DIRECTOR OF PUBLIC WORKS

AS BUILT PLAN APPROVAL
PKW
SMF 2021-00012
SCALE: 1" = 5'



DATE SUBMITTED: 10/8/2021
SCALE: 1" = 5'
SHEET NO. 12 OF 22
FILE # F-295

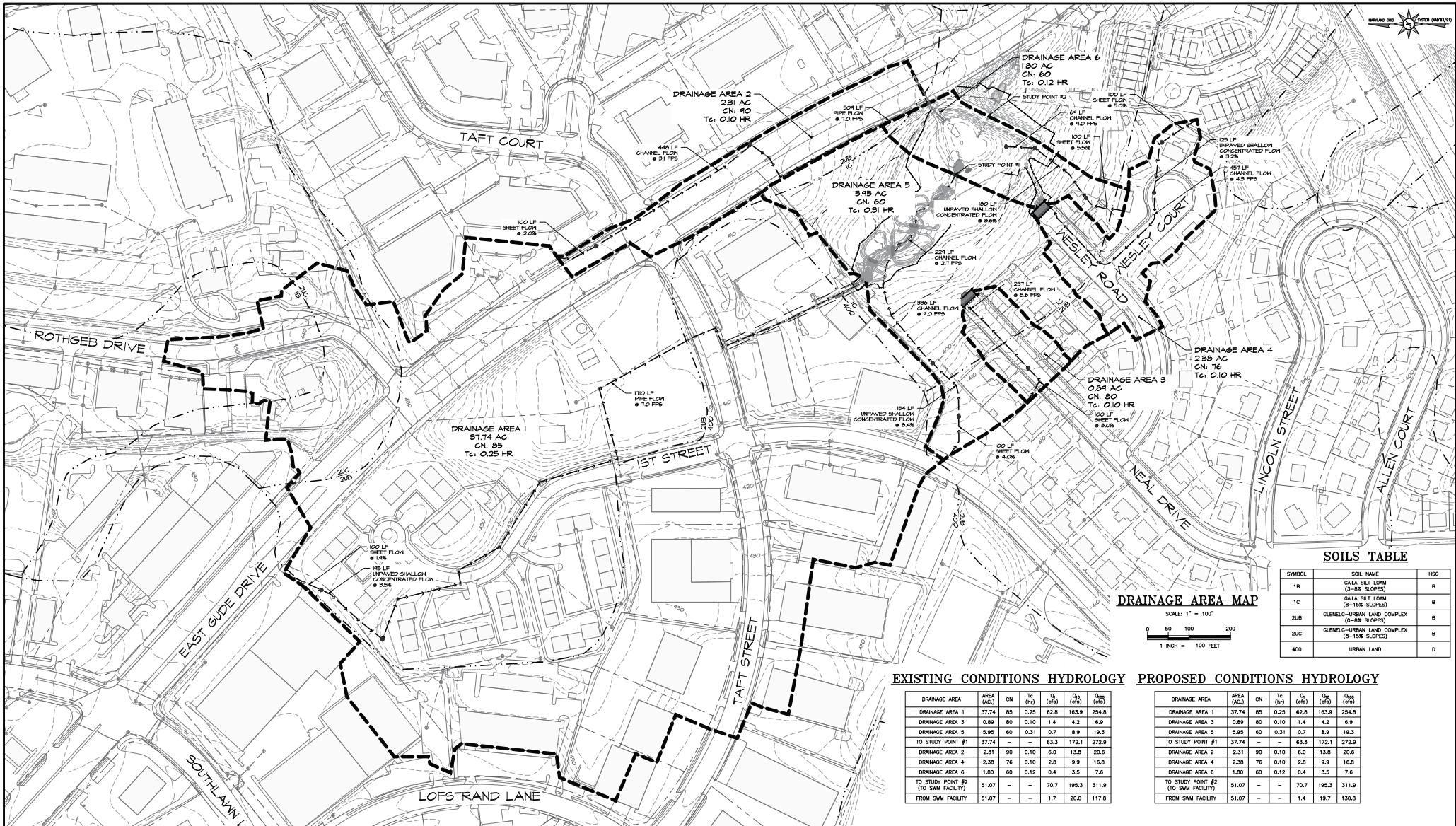
NO. REVISIONS AFTER PLAN APPROVAL P.E. INITIAL DATE

1. THE CONTRACTOR SHALL REVIEW ALL MANUFACTURER SPECIFICATIONS AND ENSURE THE INSTALLATION MEETS OR EXCEEDS THE REQUIREMENTS.

2. THE CONTRACTOR SHALL SUBMIT DESIGN SHOP DRAWINGS, DETAILS, AND MATERIAL SPECIFICATIONS INCLUDING COLOR AND FINISH FOR REVIEW AND APPROVAL.

STORMWATER MANAGEMENT PLAN
STRUCTURE DETAILS & NOTES

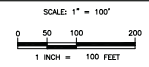
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND



SOILS TABLE

SYMBOL	SOIL NAME	HSG
1B	GALIA SILT LOAM (3-8% SLOPES)	B
1C	GALIA SILT LOAM (8-15% SLOPES)	B
2UB	GLENELG-URBAN LAND COMPLEX (0-8% SLOPES)	B
2UC	GLENELG-URBAN LAND COMPLEX (8-15% SLOPES)	B
400	URBAN LAND	D

DRAINAGE AREA MAP



EXISTING CONDITIONS HYDROLOGY PROPOSED CONDITIONS HYDROLOGY

DRAINAGE AREA	AREA (AC)	CN	Tc (hr)	Q (cfs)	Q ₁₀ (cfs)	Q ₅₀ (cfs)
DRAINAGE AREA 1	37.74	85	0.25	62.8	163.9	254.0
DRAINAGE AREA 3	0.89	80	0.10	1.4	4.2	6.9
DRAINAGE AREA 5	5.95	60	0.31	0.7	8.9	19.3
TO STUDY POINT #1	37.74	--	--	63.3	172.1	272.9
DRAINAGE AREA 2	2.31	90	0.10	6.0	13.8	20.6
DRAINAGE AREA 4	2.39	76	0.10	2.8	9.9	15.8
DRAINAGE AREA 6	1.80	60	0.12	0.4	3.5	7.6
TO STUDY POINT #2 (TO SWM FACILITY)	51.07	--	--	70.7	195.3	311.9
FROM SWM FACILITY	51.07	--	--	1.7	20.0	117.8

DRAINAGE AREA	AREA (AC)	CN	Tc (hr)	Q (cfs)	Q ₁₀ (cfs)	Q ₅₀ (cfs)
DRAINAGE AREA 1	37.74	85	0.25	62.8	163.9	254.0
DRAINAGE AREA 3	0.89	80	0.10	1.4	4.2	6.9
DRAINAGE AREA 5	5.95	60	0.31	0.7	8.9	19.3
TO STUDY POINT #1	37.74	--	--	63.3	172.1	272.9
DRAINAGE AREA 2	2.31	90	0.10	6.0	13.8	20.6
DRAINAGE AREA 4	2.39	76	0.10	2.8	9.9	15.8
DRAINAGE AREA 6	1.80	60	0.12	0.4	3.5	7.6
TO STUDY POINT #2 (TO SWM FACILITY)	51.07	--	--	70.7	195.3	311.9
FROM SWM FACILITY	51.07	--	--	1.4	19.7	130.6

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DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

CRAG L. STEINHAUS
3831.11.09.17.08.04-03/07
DIRECTOR OF PUBLIC WORKS

PK# SUPP 2021-00012 SC# 2021-00009
FTP# 2020-00001

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
DRAINAGE AREA MAP

NORTHEAST PARK SWM RETROFIT AND
STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

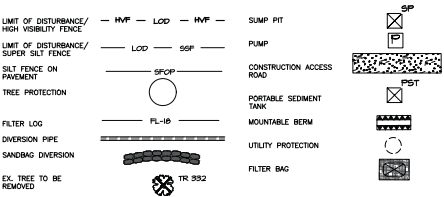
DATE SUBMITTED: 10/9/2021

SCALE: 1" = 100'

SHEET NO. 13 OF 22

FILE # F-295

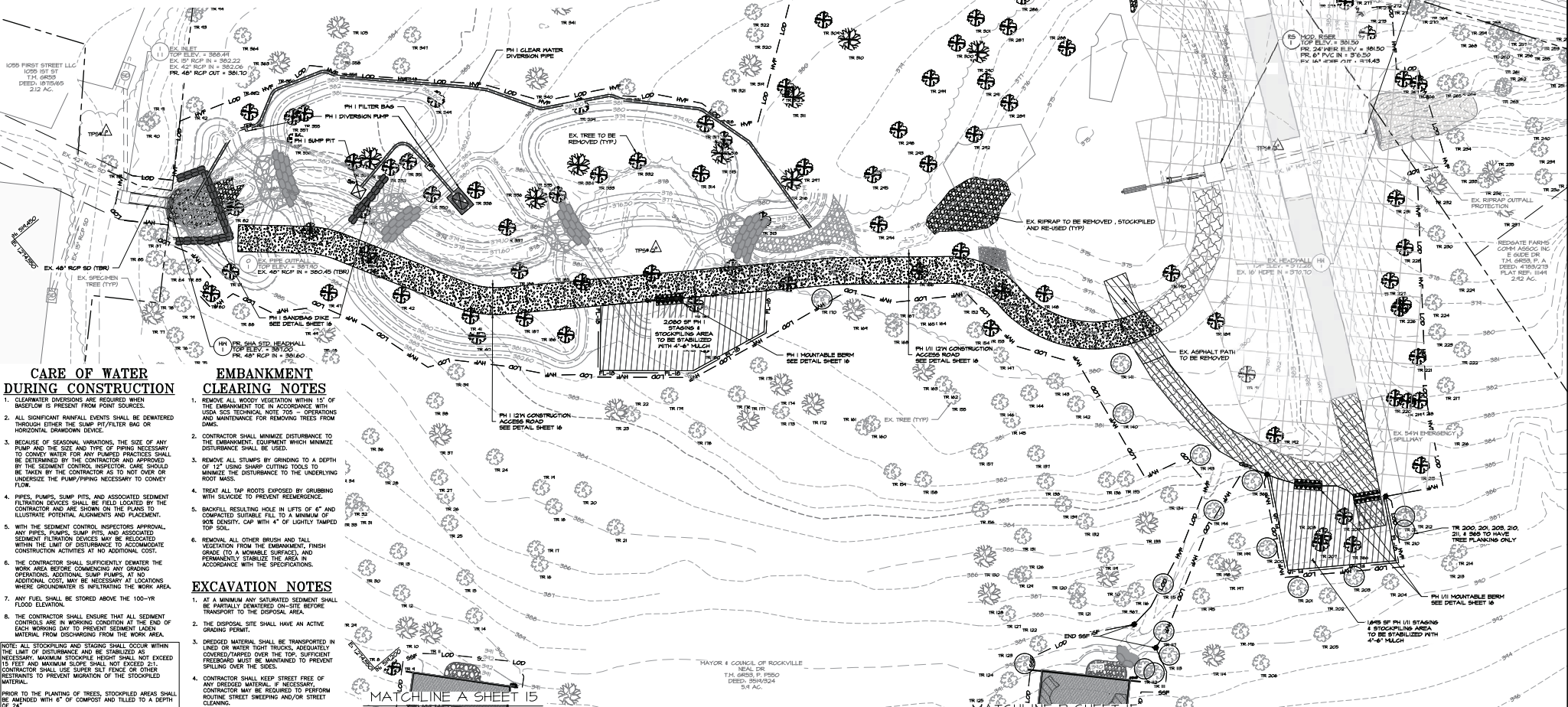
SEDIMENT CONTROL LEGEND



SUMMARY OF ESC QUANTITIES

ERASE I/A	2,175 LF
HIGH VISIBILITY FENCE/TREE PROTECTION FENCE	17 EA
TREE PLANTING	2 EA
UTILITY PROTECTION	205 LF
MOUNTABLE BERM	276 LF
CONSTRUCTION ACCESS ROAD	130 LF
SUPER SILT FENCE	90 LF
SILT FENCE ON PAVEMENT	205 LF
FILTER LOG	
ERASE	385 LF
INVERSION & DOWNGRADE PIPE	1 EA
PUMP	1 EA
SUMP PIT	1 EA
FILTER BAG	1 EA
MOUNTABLE BERM	225 LF
CONSTRUCTION ACCESS ROAD	90 LF
SANDBAG DIVERSION	205 LF
FILTER LOG	

NOTE: THIS SUMMARY OF SEDIMENT CONTROL QUANTITIES IS FOR USE BY THE CITY INSPECTORS ONLY. THIS SUMMARY IS NOT INTENDED TO BE USED BY THE CONTRACTOR FOR ESTIMATING AND BIDDING PURPOSES. ALL TREES WITHIN LOD SHALL BE PROTECTED UNLESS OTHERWISE NOTED ON PLANS.



CARE OF WATER DURING CONSTRUCTION

1. CLEARWATER DIVERSIONS ARE REQUIRED WHEN BASINFLOW IS PRESENT FROM POINT SOURCES.
2. ALL SIGNIFICANT RAINFALL EVENTS SHALL BE DETAILED THROUGH EITHER THE SUMP PIT/FILTER BAG OR HORIZONTAL SANDBAG DIVERSION.
3. BECAUSE OF SEASONAL VARIATIONS, THE SIZE OF ANY PUMP AND THE SIZE AND TYPE OF PIPING NECESSARY TO CONVEY WATER FOR ANY RAISED DIVERSION SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE SEDIMENT CONTROL INSPECTOR. CARE SHOULD BE TAKEN BY THE CONTRACTOR AS TO NOT OVER OR UNDERSIZE THE PUMP/PIPING NECESSARY TO CONVEY FLOW.
4. PIPES, PUMPS, SUMP PITS, AND ASSOCIATED SEDIMENT FILTRATION DEVICES SHALL BE FIELD LOCATED BY THE CONTRACTOR AND ARE SHOWN ON THE PLANS TO ILLUSTRATE POTENTIAL ALIGNMENTS AND PLACEMENT.
5. WITH THE SEDIMENT CONTROL INSPECTORS APPROVAL, ANY PIPES, PUMPS, SUMP PITS, AND ASSOCIATED SEDIMENT FILTRATION DEVICES MAY BE REQUESTED WITHIN THE LIMIT OF DISTURBANCE TO ACCOMMODATE CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST.
6. THE CONTRACTOR SHALL SUFFICIENTLY DENATURE THE WORK AREA BEFORE COMMENCING ANY GRADING OPERATIONS. ADDITIONAL SUMP PUMPS, AT NO ADDITIONAL COST, MAY BE NECESSARY AT LOCATIONS WHERE GROUNDWATER IS INFRINGING THE WORK AREA.
7. ANY FUEL SHALL BE STORED ABOVE THE 100-YR FLOOD ELEVATION.
8. THE CONTRACTOR SHALL ENSURE THAT ALL SEDIMENT CONTROLS ARE IN WORKING CONDITION AT THE END OF EACH WORKING DAY TO PREVENT SEDIMENT LADEN MATERIAL FROM ESCAPING FROM THE WORK AREA.

EMBANKMENT CLEARING NOTES

1. REMOVE ALL WOODY VEGETATION WITHIN 15' OF THE EMBANKMENT TOE IN ACCORDANCE WITH USDA SCS TECHNICAL NOTE 705 - OPERATIONS AND MAINTENANCE FOR REMOVING TREES FROM DAMS.
2. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EMBANKMENT EQUIPMENT WHICH MINIMIZE DISTURBANCE SHALL BE USED.
3. REMOVE ALL STUMPS BY GRINDING TO A DEPTH OF 12" USING SHARP CUTTING TOOLS TO MINIMIZE THE DISTURBANCE TO THE UNDERLYING ROOT MASS.
4. TREAT ALL TAP ROOTS EXPOSED BY GRUBBING WITH SILVICIDE TO PREVENT REEMERGENCE.
5. BACKFILL RESULTING HOLE IN LIFTS OF 6" AND COMPACTED SUITABLE FILL TO A MINIMUM OF 90% DENSITY. CAP WITH 4" OF LIGHTLY TAMPED TOP SOIL.
6. REMOVAL ALL OTHER BRUSH AND TALL VEGETATION FROM THE EMBANKMENT, FINISH GRADE TO A SMOOTH SURFACE, AND PERMANENTLY STABILIZE THE AREA IN ACCORDANCE WITH THE SPECIFICATIONS.

EXCAVATION NOTES

1. AT A MINIMUM ANY SATURATED SEDIMENT SHALL BE PARTIALLY DETAILED ON-SITE BEFORE TRANSPORT TO THE DISPOSAL AREA.
2. THE DISPOSAL SITE SHALL HAVE AN ACTIVE GRADING PERMIT.
3. DREDGED MATERIAL SHALL BE TRANSPORTED IN LINED OR WATER TIGHT TRUCKS, ADEQUATELY COVERED/MARDED OVER THE TOP, SUFFICIENT FREIGHTWEIGHT MUST BE MAINTAINED TO PREVENT SPILLING OVER THE SIDES.
4. CONTRACTOR SHALL KEEP STREET FREE OF ANY DREDGED MATERIAL, IF NECESSARY, CONTRACTOR MAY BE REQUIRED TO PERFORM ROUTINE STREET SWEEPING AND/OR STREET CLEANING.

NOTE: ALL STOCKPILING AND STAGING SHALL OCCUR WITHIN THE LIMIT OF DISTURBANCE AND SHALL BE STABILIZED AS NECESSARY. MAXIMUM STOCKPILE HEIGHT SHALL NOT EXCEED 15 FEET AND MAXIMUM WIDTH SHALL NOT EXCEED 20 FEET. CONTRACTOR SHALL USE SUPER SILT FENCE OR OTHER RESTRAINTS TO PREVENT MIGRATION OF THE STOCKPILED MATERIAL.

PRIOR TO THE PLANTING OF TREES, STOCKPILED AREAS SHALL BE MIXED WITH 1" OF COMPOST AND TILLED TO A DEPTH OF 24".

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CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

CHIEF OF PUBLIC WORKS
SMP# 2021-00012

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

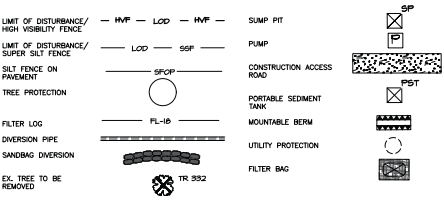
PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
EROSION & SEDIMENT CONTROL PLANS

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE
DATE SUBMITTED:	SCALE:	SHEET NO.:	FILE #
10/8/2021	1" = 20'	14	
IFB #05-22		OF 22	

SEDIMENT CONTROL LEGEND

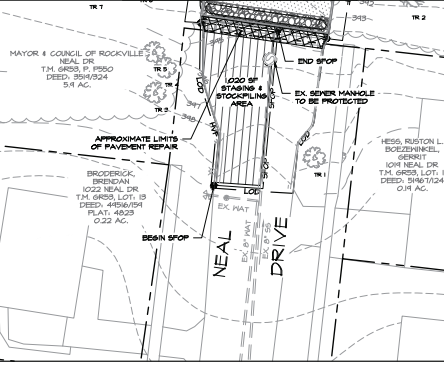


SUMMARY OF ESC QUANTITIES

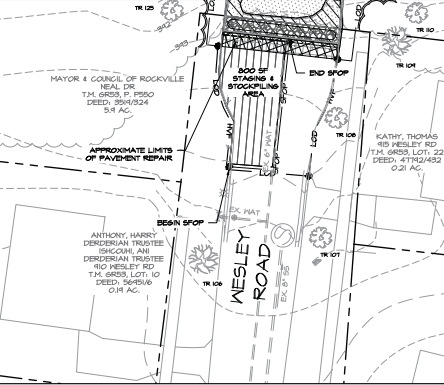
ERASE (A)	2,175	LF
HIGH VISIBILITY FENCE/TREE PROTECTION FENCE:	1	EA
TREE PLANTING:	2	EA
UTILITY PROTECTION:	205	LF
MOUNTABLE BERM:	276	LF
CONSTRUCTION ACCESS ROAD:	130	LF
SUPER SILT FENCE:	125	LF
SILT FENCE ON PAVEMENT:	90	LF
ERASE (B)	385	LF
DIVERSION & DOWATERING PIPE:	1	EA
PUMP:	1	EA
SUMP PIT:	1	EA
FILTER BAG:	280	LF
MOUNTABLE BERM:	90	LF
CONSTRUCTION ACCESS ROAD:		
SANDBAG DIVERSION:		

NOTE: THIS SUMMARY OF SEDIMENT CONTROL QUANTITIES IS FOR USE BY THE CITY INSPECTORS ONLY. THIS SUMMARY IS NOT INTENDED TO BE USED BY THE CONTRACTOR FOR ESTIMATING AND BIDDING PURPOSES. ALL TREES WITHIN LOD SHALL BE PROTECTED UNLESS OTHERWISE NOTED ON PLANS.

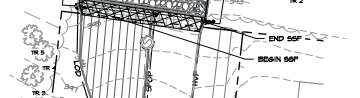
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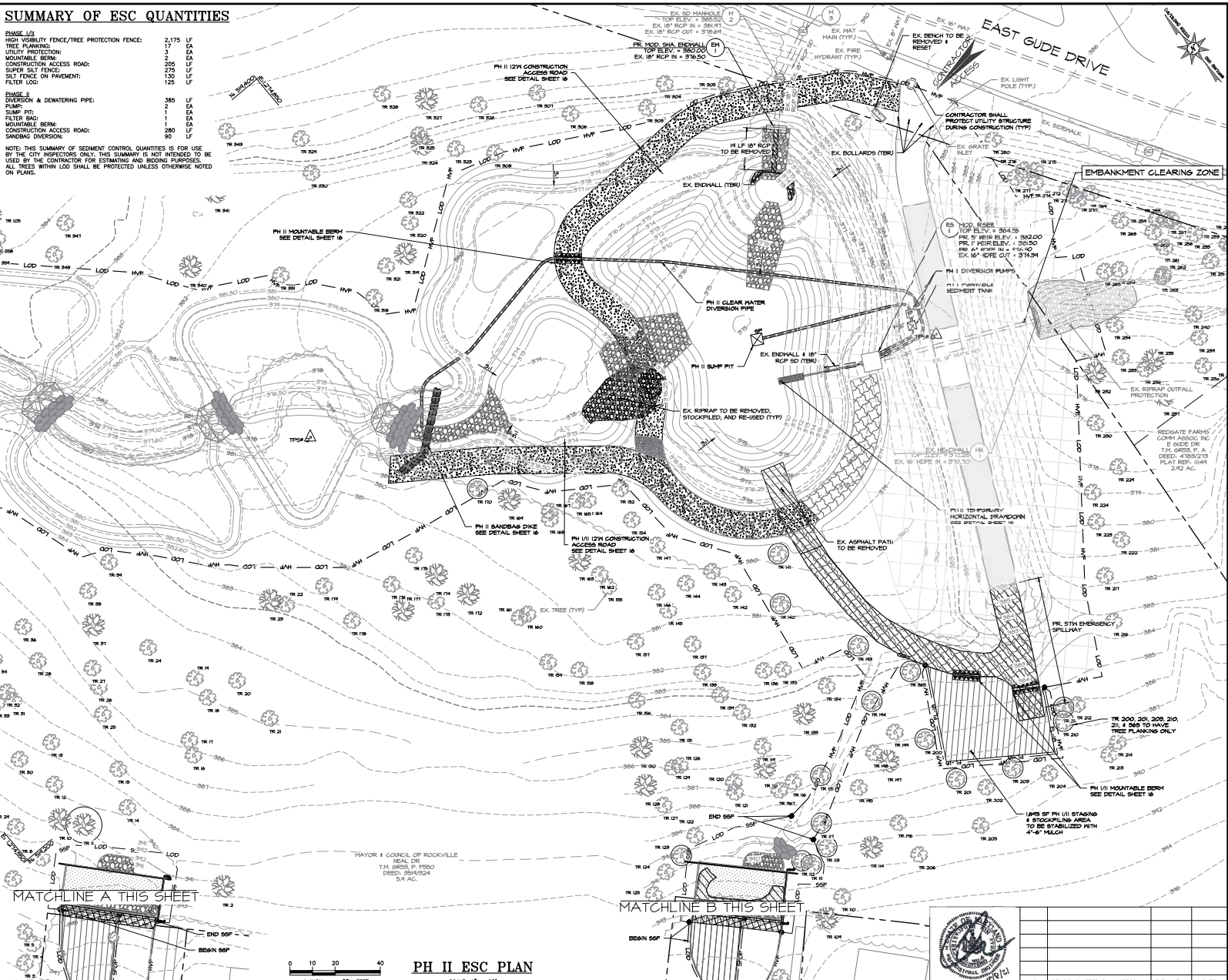
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DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN
EROSION & SEDIMENT CONTROL PLANS

PLAN APPROVAL DATE

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
SCALE: 1" = 20'
SHEET NO. 15 OF 22
FILE #

STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

- A. SOIL PREPARATION
1. TEMPORARY STABILIZATION
a. SEEDBED PREPARATION
b. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL
2. PERMANENT STABILIZATION
a. SOIL TEST
b. APPLICATION OF AMENDMENTS
c. GRADED AREAS
d. APPLY SOIL AMENDMENTS
e. APPLY LIME AND FERTILIZER
f. SOIL AMENDMENTS
g. TOPSOILING
h. APPLY MULCH
i. APPLICABLE LAWS AND WARRANTIES
j. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR THIS WORK.

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

- A. SEEDING
1. SPECIFICATIONS
a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW
b. ALL SEED MUST BE SUBJECT TO RE-TESTING
c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED
d. HYDROSEEDING
e. APPLICABLE LAWS AND WARRANTIES
2. APPLICATION
a. STRAW
b. WOOD CELLULOSE FIBER MULCH
c. WORM MATERIAL
d. ANCHORED STRAW MULCH
e. WOOD CELLULOSE FIBER MULCH

CITY OF ROCKVILLE STANDARD EROSION AND SEDIMENT CONTROL NOTES 11/16

- 1. THE APPLICANT MUST OBTAIN INSPECTION AND APPROVAL BY THE CITY OF ROCKVILLE DEPARTMENT OF PUBLIC WORKS (DPW) AT THE FOLLOWING POINTS:
a. BEFORE REQUIRED PRECONSTRUCTION MEETINGS
b. AT THE INSTALLATION OF EROSION CONTROL MEASURES
c. BEFORE THE INSTALLATION OF A SEDIMENT BASIN OR STORMWATER MANAGEMENT STRUCTURE
d. BEFORE REMOVAL OR MODIFICATION OF ANY SEDIMENT CONTROL DEVICES
e. BEFORE FINAL ACCEPTANCE
2. ALL EROSION CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE PUBLISHED STANDARDS AND SPECIFICATIONS AND THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. THE APPLICANT SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SPECIFICATIONS.
4. THE APPLICANT SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD.
5. THE APPLICANT SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD.

SEQUENCE OF CONSTRUCTION

NOTES:

- 1. CONTACT THE FOLLOWING ENTITIES AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION: CITY UTILITIES SECTION AT 240-314-8567 AND MASS UTILITY AT 1-800-257-7777.
2. TREE FELLING AND REMOVAL SHALL NOT IMPACT TREES THAT ARE TO REMAIN.
3. EXISTING TOPSOIL, BERRAP AND/OR SOIL STOCKPILES SHALL BE INSPECTED WEEKLY, AND AFTER EACH RAIN FALL EVENT, BY THE CONTRACTOR OR OTHER RESPONSIBLE PERSON, AND ANY NEEDED MAINTENANCE PERFORMED IMMEDIATELY.
4. EXISTING TOPSOIL, BERRAP AND/OR SOIL STOCKPILES SHALL BE MAINTAINED THROUGHOUT SITE CONSTRUCTION.
5. ANY MATERIAL TAKEN OFF SITE MUST GO TO A SITE WITH AN ACTIVE AND APPROVED SEDIMENT AND EROSION CONTROL PLAN.
6. STANDARD STABILIZATION MEASURES FOLLOWING NATURAL SOIL DISTURBANCE OR RE-DISTURBANCE: SEEDING FOR PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN THREE (3) CALENDAR DAYS TO THE SURFACE OF ALL PERMITTED CONSTRUCTION, DIVERSIONS, FERTILIZER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED GRADES AND AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
7. THE SEQUENCE OF CONSTRUCTION IS INTENDED TO COVER THE INSTALLATION OF SEDIMENT CONTROL DEVICES AND GENERAL INSTRUCTION TO THE CONTRACTOR. THE SEQUENCE MAY VARY IN THE FIELD WITH THE SEWERAGE CONSTRUCTION TO ACCOMMODATE CONTRACTOR'S MEANS AND METHODS. ANY CHANGES TO THE PLAN SHALL BE APPROVED BY THE CITY OF ROCKVILLE.
8. CONTRACTOR MUST PROTECT AND REPAIR/REPLACE EXISTING INFRASTRUCTURE AS WELL AS DAMAGED INFRASTRUCTURE TO THE EXTENT OF NECESSITY.
9. REMOVE ALL DEBRIS RESULTING FROM CONSTRUCTION SUCH AS BOTTLES AND TRASH DAILY.
10. CONTRACTOR SHALL MAINTAIN AND PROTECT ALL EXISTING INFRASTRUCTURE AS WELL AS DAMAGED INFRASTRUCTURE TO THE EXTENT OF NECESSITY.
11. AREAS OUTSIDE LOT SHALL NOT BE DISTURBED DURING PLACEMENT OF THE DIVERSION PIPE. NO MECHANICAL EQUIPMENT SHALL BE USED FOR PLACEMENT OF DIVERSION PIPE.
12. SEDIMENT AND EROSION CONTROLS CANNOT BE REMOVED UNTIL THE SITE HAS ADEQUATE STABILIZATION, ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% COVERED OVER TO BE CONSIDERED ADEQUATELY STABILIZED AND THE SOIL SEDIMENT CONTROL INSPECTOR SHALL APPROVE SUCH REMOVAL.
13. REMOVE ALL DEBRIS RESULTING FROM CONSTRUCTION SUCH AS BOTTLES AND TRASH DAILY.
14. IF REQUIRED BY DPW, THE CONTRACTOR SHALL CONTACT THE MARYLAND DEPARTMENT OF THE ENVIRONMENT COMPLIANCE PROGRAM AT 301-665-2850 AT LEAST 5 DAYS IN ADVANCE OF THE PRE-CONSTRUCTION MEETING.

PHASE I:

PHASE II:

BEST MANAGEMENT PRACTICES FOR WORKING IN NON TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS AND 100 YEAR FLOODPLAINS

- 1. NO EXCESS FILL CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NON TIDAL WETLANDS, NON TIDAL WETLAND BUFFERS, WATERWAYS OR THE 100-YEAR FLOODPLAIN.
2. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NON TIDAL WETLANDS, NON TIDAL WETLAND BUFFERS, WATERWAYS OR THE 100 YEAR FLOODPLAIN.
3. DO NOT USE EXCAVATED MATERIAL AS BACK FILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DEleterious SUBSTANCE.
4. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLE SURFACE TO PREVENT DAMAGE TO NON TIDAL WETLANDS, NON TIDAL WETLAND BUFFERS, OR WATERWAYS OR THE 100 YEAR FLOOD PLAN.
5. REPAIR AND MAINTAIN ANY SENSITIVE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NON TIDAL WETLANDS, NON TIDAL WETLAND BUFFERS, OR WATERWAYS, NON TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR THE 100 YEAR FLOODPLAIN.
6. RECTIFY ANY NON TIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR 100 YEAR FLOOD PLAN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
7. ALL STABILIZATION IN THE NON TIDAL WETLAND AND NON TIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES: ANNUAL PEGANISSIMUM MULTIFLORUM, MILLETSETARIA (P.A.), BARELYHORDEUM (S.P.), OATS (HIVOLA SP.) AND/OR PINE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE ESTABLISHMENT OF THE SITE BUILT BY THE USE OF NATURAL AND OTHER NON PERISTITENT VEGETATION. THESE SPECIES WILL BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHALL NOT BE RESEEDED OR REVEGETATED AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRASSES AND ELEVATIONS THE SAME AS THE ORIGINAL GRASSES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
9. TO PROTECT AQUATIC SPECIES, IN STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM: USE 1 WATERWAYS.
10. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
11. COLLECTORS SHALL BE CONSTRUCTED AND ANY RIP RAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPROVE WATER.

Table with 4 columns: No., Annual Application Rate (lb/a/1000 sq ft), Seeding Dates, Fertilizer Rate (lb/1000 sq ft) (10-20-20), and Lime Rate (lb/1000 sq ft). Includes rows for Annual and Foral Mulch.

Table with 4 columns: No., Annual Application Rate (lb/a/1000 sq ft), Seeding Dates, Fertilizer Rate (lb/1000 sq ft) (10-20-20), and Lime Rate (lb/1000 sq ft). Includes rows for Annual and Foral Mulch.

- 1. SEEDING RATES FOR THE WARM-SEASON SPECIES ARE IN POUNDS OF PURE LIME USE (PLU) ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT FERTILIZER ANALYSIS.
2. FOR SANDY SOILS PLANT SEEDS AT THE DEPTH LISTED ABOVE.
3. THE PLANTING DEPTH LISTED ABOVE AREAS FOR EACH SEED AND WHAT REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY SAND AND SANDSTONE AREAS.

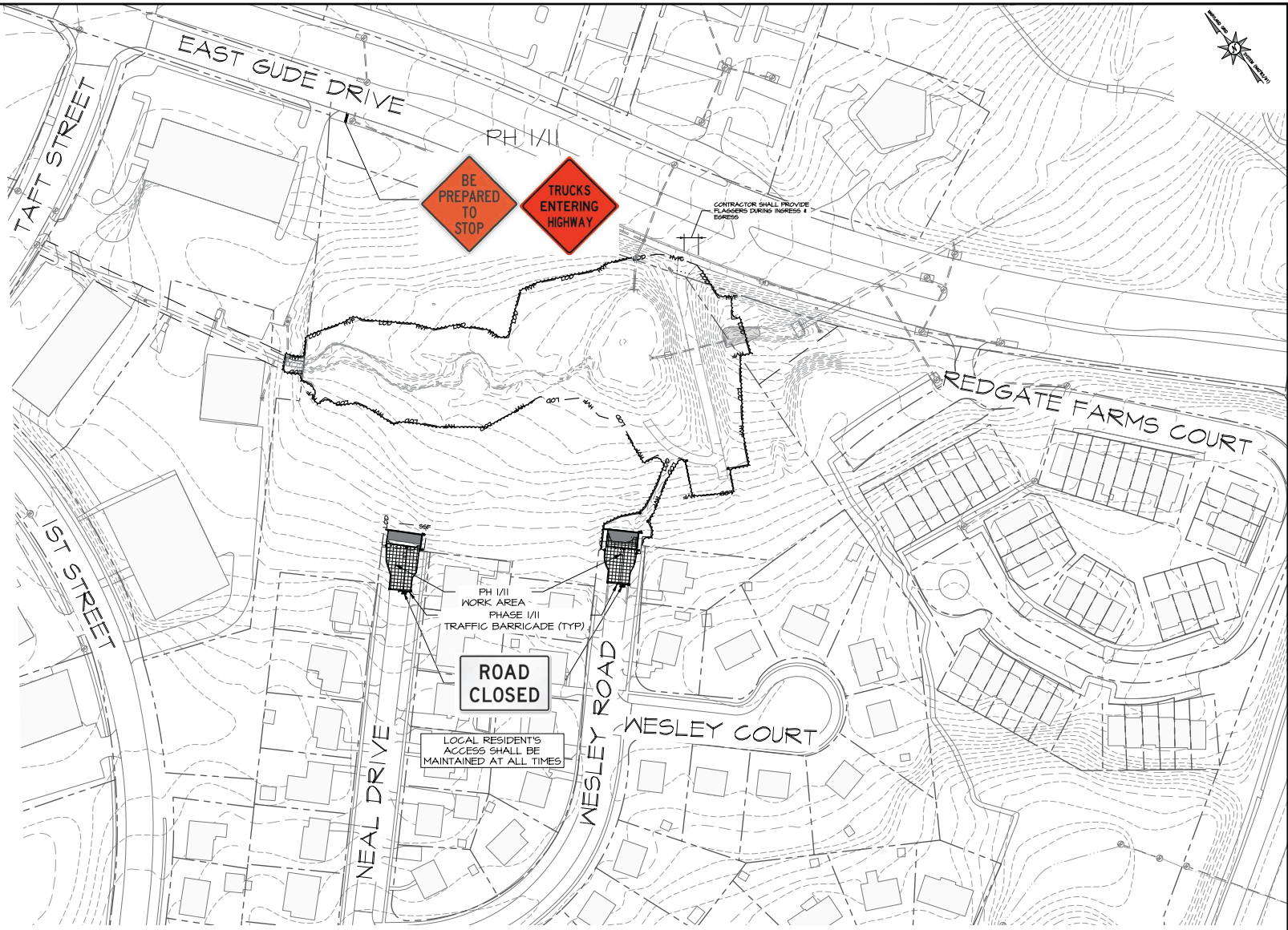
- 1. PERMANENT STABILIZATION SHALL ONLY BE NECESSARY FOR STABILIZATION OF AREAS WHERE THE PERMANENT LANDSCAPING PLAN DOES NOT PROVIDE VEGETATION.
2. THE APPLICANT IS RESPONSIBLE FOR ALL ACTIONS OF CONTRACTOR AND SUBCONTRACTORS, INCLUDING REPAIRING DAMAGE TO SEDIMENT CONTROL DEVICES AND EXISTING INFRASTRUCTURE.

Administrative header and footer including: Consultants & Designers, Inc. (logo and contact info), DESIGN PLAN APPROVAL (City of Rockville, Director of Public Works), AS BUILT PLAN APPROVAL (Chief Construction Manager), DESIGN PLAN APPROVAL (City of Rockville, Director of Public Works), AS BUILT PLAN APPROVAL (Chief Construction Manager), and a table for project details (DATE SUBMITTED: 10/8/2021, SCALE, SHEET NO. 17, FILE #, etc.).

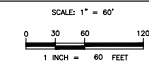
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TEMPORARY TRAFFIC CONTROL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MD MUTCD); STATE HIGHWAY ADMINISTRATION (SHA) BOOK OF STANDARDS, SPECIFICATIONS AND GUIDELINES; THESE PLANS; THE PROJECT SPECIAL PROVISIONS; AND ALL OTHER CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FABRICATING AND POSTING NO PARKING SIGNS 48 HOURS BEFORE BASING ON-STREET PARKING SIGNS/LETTERS TEMPORARILY.
3. THE CONTRACTOR SHALL NOTIFY UPCOMING CONSTRUCTION TO THE CITY INSPECTOR, NEIGHBORHOOD RESOURCES COORDINATOR (240-314-8344), CITY POLICE (240-314-8900), AND AFFECTING HOA AT LEAST TWO WEEKS PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL NOTIFY MIES UTILITY AT 1-800-257-7777, 5 WORKING DAYS BEFORE WORK.
5. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN CIRCULATIONS DURING CONSTRUCTION FOR ANY SIDEWALK CLOSURE, THE CONTRACTOR SHALL SET UP APPLICABLE DETOUR SIGNS AND BARRICADES BASED ON THE MD SHA STANDARDS NO. 104.06-09A, 104.06-09B, OR 104.06-09C.
6. ACCESS TO THE RESIDENTIAL PROPERTIES AND DRIVEWAYS MUST BE MAINTAINED AT ALL TIMES.
7. THE CONTRACTOR SHALL ONLY PERFORM AS MUCH WORK AS CAN BE COMPLETED DURING EACH WORK DAY.
8. AT THE END OF EACH WORK DAY, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY SIGNS THAT ARE NOT APPLICABLE.
9. PERMANENT SIGNS IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL SETUPS SHALL BE COVERED OR REMOVED AND SHALL BE RETURNED TO THEIR ORIGINAL PLACES AFTER THE COMPLETION OF CONSTRUCTION.
10. ANY PAVEMENT MARKINGS, SIGNS, CITY FACILITIES OR OTHER TRAFFIC CONTROL DEVICES DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION.
11. ADDITIONAL CONSTRUCTION WARNING SIGNS SHALL BE PLACED AS NEEDED WHEN DIRECTED BY THE CITY ENGINEER OR INSPECTOR.
12. FOR ROADWAY CLOSURE, THE APPLICANT SHALL PLACE A VARIABLE MESSAGE SIGN BOARD IN EACH DIRECTION OF THE ROAD AT LEAST 48 HOURS PRIOR TO THE CLOSURE AND THE MESSAGE SHOULD BE APPROVED BY THE CITY'S CHIEF OF CONSTRUCTION MANAGEMENT OR CITY INSPECTOR.
13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK ON OR ADJACENT TO A PUBLIC ROAD TO PROVIDE, INSTALL, AND MAINTAIN APPROPRIATE TRAFFIC CONTROL DEVICES, AS WELL AS ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT MAY BE REQUIRED TO ENSURE THE SAFE AND EFFICIENT MOVEMENT OF TRAFFIC AND PEDESTRIANS THROUGH OR AROUND THE WORK AREA AND TO PROVIDE THE REQUIRED PROTECTION FOR THE SAFETY OF ROAD WORKERS.
14. THE MAINTENANCE OF TRAFFIC DRAWINGS SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES IN SHA STANDARDS MD 104.00-01 TO MD 104.00-18 AND STANDARD DETAILS IN SHA STANDARDS MD 104.01-1 TO MD 104.01-62.
15. WORK MAY NOT BE PERFORMED UNTIL ALL APPLICABLE TRAFFIC CONTROL DEVICES ARE IN PLACE, TRAFFIC CONTROL DEVICES MUST BE IN PLACE ANY TIME WORK IS IN PROGRESS.
16. THE CITY MUST APPROVE ANY CORRECTIONS, MODIFICATIONS, OR ADDITIONS TO THIS PLAN.
17. LOCATIONS OF DEVICES MAY BE MODIFIED AS DIRECTED BY THE CITY TO ACCOMMODATE FIELD CONDITIONS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES AND SHALL IMMEDIATELY REPLACE ANY WHICH ARE MISSING OR DETERMINED BY THE CITY TO BE UNSUITABLE FOR USE.
19. ALL SIGNS THAT ARE PART OF A WORK ZONE FOR MORE THAN THREE (3) DAYS SHALL BE PLACED ON POSTS.
20. ALL CONSTRUCTION SHALL BE COMPLETED DURING THE HOURS OF 7AM AND 5PM OR AS DIRECTED BY THE CITY. IT IS ANTICIPATED THAT PHASE I/II WILL BE COMPLETED IN APPROXIMATELY 84 WORKING DAYS WITH EAST GUDE DRIVE OPEN TO TRAFFIC. IT IS ANTICIPATED THAT THE PROPOSED BORTENTIONS WILL BE COMPLETED IN APPROXIMATELY 13 WORKING DAYS WITH THE ENDS OF NEAL DRIVE AND WESLEY ROAD CLOSED FOR THAT TIME.
21. PHASE I/II TRAFFIC CONTROL INCLUDES:
 - 21.1. INSTALLATION OF WARNING SIGNS
 - 21.2. REMOVAL OF PHASE I/II SIGNAGE UPON COMPLETION OF STREAM RESTORATION AND POND RETROFIT
22. NEAL DRIVE AND WESLEY ROAD TRAFFIC CONTROL INCLUDES:
 - 22.1. INSTALLATION OF WARNING SIGNS AND TRAFFIC BARRICADE
 - 22.2. FLAGGING AS NECESSARY TO ALLOW CONSTRUCTION VEHICLE PASSAGE DURING BORTENTION CONSTRUCTION
 - 22.3. REMOVAL OF NEAL DRIVE AND WESLEY ROAD SIGNAGE AND BARRICADES UPON COMPLETION OF THE PROJECT



TRAFFIC CONTROL PLAN



Consultants & Designers, Inc.
"Integrating Engineering and Environment"

7455 New Ridge Road, Suite T Phone: (410) 694-9481
Hanover, Maryland 21076 Fax: (410) 694-9485
www.baylandinc.com
BAYLAND JOB NO. 8_31961

DESIGNED CS/GG
DRAFTED JS/MW
CHECKED CS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL

Chris L. Sirotenko
2024.11.08.17.08.1618.007

DIRECTOR OF PUBLIC WORKS

PR# 2021-00012 SC# 2021-00009
SMP# 2021-00012 FTP# 2020-00001

PLAN APPROVAL DATE

AS BUILT PLAN APPROVAL

CHIEF, CONSTRUCTION MANAGEMENT

PLAN APPROVAL DATE

STORMWATER MANAGEMENT PLAN

TRAFFIC CONTROL PLAN

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

DATE SUBMITTED: 10/8/2021

SCALE: 1" = 60'

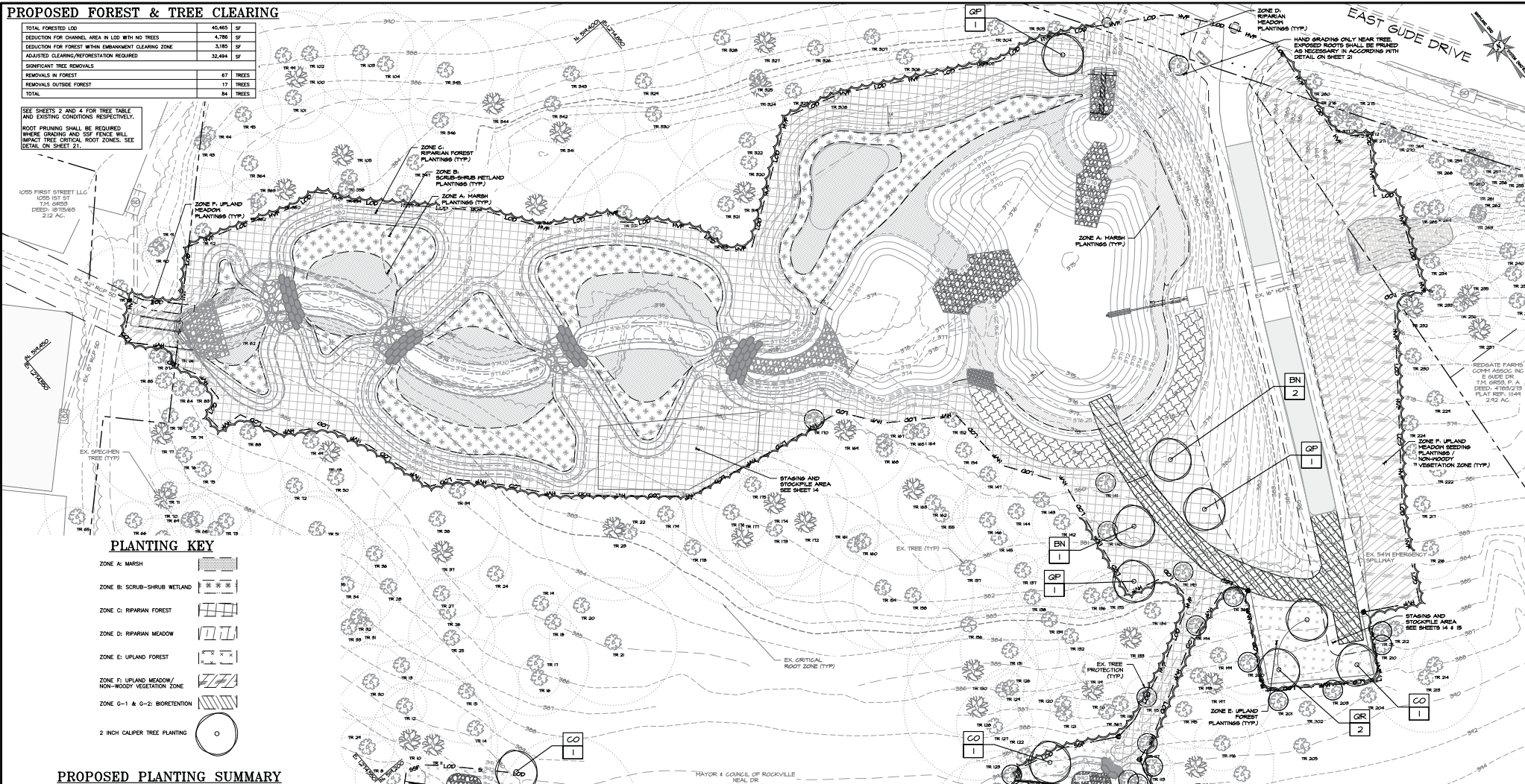
SHEET NO. 18 OF 22

FILE # F-295

PROPOSED FOREST & TREE CLEARING

TOTAL FORESTED LOD	40,485 SF
DEDUCTION FOR CHANNEL AREA IN LOD WITH NO TREES	4,786 SF
DEDUCTION FOR FOREST WITH EMBANKMENT CLEARING ZONE	3,185 SF
ADJUSTED CLEARING/REFORESTATION REQUIRED	32,494 SF
SIGNIFICANT TREE REMOVALS	
REMOVALS IN FOREST	67 TREES
REMOVALS OUTSIDE FOREST	17 TREES
TOTAL	84 TREES

SEE SHEETS 2 AND 4 FOR TREE TABLE AND EXISTING CONDITIONS RESPECTIVELY.
ROOT PRUNING SHALL BE REQUIRED WHERE GRADING AND 10% FENCE WILL IMPACT TREE CRITICAL ROOT ZONES. SEE DETAIL ON SHEET 21.



PLANTING KEY

- ZONE A: MARSH
- ZONE B: SCRUB-SHRUB WETLAND
- ZONE C: RIPARIAN FOREST
- ZONE D: RIPARIAN MEADOW
- ZONE E: UPLAND FOREST
- ZONE F: UPLAND MEADOW/
NON-WOODY VEGETATION ZONE
- ZONE G-1 & G-2: BIORETENTION
- 2 INCH CALIPER TREE PLANTING

PROPOSED PLANTING SUMMARY

ZONE A: HIGH MARSH PLANTING	9,076 SF
ZONE B: SCRUB-SHRUB WETLAND PLANTING	3,262 SF
ZONE C: RIPARIAN FOREST	22,767 SF
ZONE D: RIPARIAN MEADOW	6,429 SF
ZONE E: UPLAND FOREST	2,872 SF
ZONE F: UPLAND MEADOW	6,337 SF
ZONE G-1 & G-2: BIORETENTION	1,140 SF
TOTAL REFORESTATION AREA (ZONE B, C & E)	36,261 SF

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED FOREST CONSERVATION QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.

Signed: _____ Date: 07/12/2021

JASON TRABAND
7455 NEW RIDGE ROAD, SUITE 1
HANOVER, MD 21076
410-694-9901
JTRABAND@LANDINC.COM

FC-03

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BAYLAND JOB NO. B_31901

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
AS BUILT PLAN APPROVAL
DATE SUBMITTED: 10/9/2021
SCALE: 1" = 20'
SHEET NO. 19 OF 22
FILE # F-295

DESIGNED: CS/AG
DRAFTED: JS/AM
CHECKED: CS

FOREST CONSERVATION AND PLANTING PLAN
NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

NO. REVISIONS AFTER PLAN APPROVAL P.E. INITIAL DATE

ZONE A: HIGH MARSH PLANTING SCHEDULE - 9,076 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various plant species like Asclepias incarnata, Carex vulpinoidea, etc.

ZONE B: SHRUB-SCRUB WETLAND PLANTING SCHEDULE - 7,602 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various plant species like Cornus amomum, Salix nigra, Alnus serrulata, etc.

ZONE C: RIPARIAN FOREST PLANTING SCHEDULE - 25,787 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various tree species like Betula nigra, Quercus phellos, etc.

ZONE D: RIPARIAN MEADOW SEEDING SCHEDULE - 8,429 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various seed mix components like Native Wetland Seed Mix, etc.

ZONE E: UPLAND FOREST PLANTING SCHEDULE - 2,478 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various tree species like Celtis occidentalis, Quercus rubra, etc.

ZONE F: UPLAND MEADOW SEEDING SCHEDULE - 8,995 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various seed mix components like Native Wetland Seed Mix, etc.

ZONE G-1: NEAL DRIVE BIORETENTION PLANTING SCHEDULE - 520 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various plant species like Chamaenerion laticolatum, Carex vulpinoidea, etc.

ZONE G-2: WESLEY ROAD BIORETENTION PLANTING SCHEDULE - 620 SF

Table with columns: BOTANICAL NAME/ TECHNICAL DESCRIPTION, COMMON NAME, INDICATOR STATUS, SIZE, TYPE, SPACING, QUANTITY. Lists various plant species like Chamaenerion laticolatum, Carex vulpinoidea, etc.

NATIVE WETLAND SEED MIX COMPOSITION

Table showing composition percentages for Native Wetland Seed Mix, listing species like Carex vulpinoidea, Elmus virginicus, etc.

NATIVE DETENTION AREA SEED MIX COMPOSITION

Table showing composition percentages for Native Detention Area Seed Mix, listing species like Carex vulpinoidea, Elmus virginicus, etc.

COVER/NURSE CROP SEEDING TABLE

Table with columns: SEEDING RATE, BOTANICAL NAME, COMMON NAME, SEEDING DATE. Lists various cover crop species and their planting dates.

NATIVE UPLAND SEED MIX COMPOSITION

Table showing composition percentages for Native Upland Seed Mix, listing species like Sorghastrum nutans, Elymus virginicus, etc.

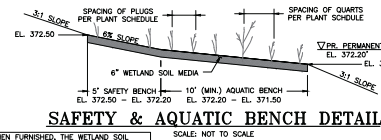
NATIVE FLOODPLAIN SEED MIX COMPOSITION

Table showing composition percentages for Native Floodplain Seed Mix, listing species like Sorghastrum nutans, Elymus virginicus, etc.

QUALIFIED PROFESSIONAL CERTIFICATION

I certify that I am a duly certified forest conservation qualified professional under the laws of the State of Maryland and that this PLAN WAS PREPARED UNDER MY SUPERVISION.

Signature and Date: Jason Trabant, 07/12/2021. Includes contact information for Trabant & Associates, Inc.



NATIVE RIPARIAN WOODY SEED MIX

Table showing composition percentages for Native Riparian Woody Seed Mix, listing species like Cornus racemosa, Liriodendron tulipifera, etc.

Consultants & Designers, Inc. Integrating Engineering and Environment. 7455 New Ridge Road, Suite T, Hanover, Maryland 21076.



DEPARTMENT OF PUBLIC WORKS CITY OF ROCKVILLE 111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL: Craig L. Simmons, Director of Public Works. Date: 07/12/2021.

AS BUILT PLAN APPROVAL: Chief, Construction Management. Date: 07/12/2021.

FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS. Includes a checklist for various planting and maintenance tasks.

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION. BURGUNDY & CHESTNUT GROVE, P550 CITY OF ROCKVILLE, MARYLAND.

DATE SUBMITTED: 10/9/2021. SCALE: AS NOTED. SHEET NO. 20 OF 22. FILE # F-295.

GENERAL PLANTING NOTES

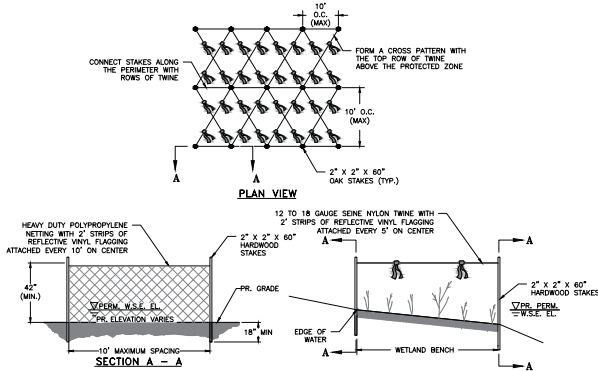
1. ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL CONFORM TO AMERICAN ASSOCIATION OF NURSERYMEN, INC. STANDARDS.
2. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL UTILITY LOCATIONS PRIOR TO PLANTING MATERIAL. IF CONFLICTS ARISE, BAYLAND, INC. AND THE CITY OF ROCKVILLE MUST BE NOTIFIED PRIOR TO ANY GROUND BREAKING.
3. WETLAND PLANTING WILL BE ACCOMPLISHED BETWEEN MARCH 15TH AND MAY 15TH (SPRING PLANTING SEASON) OR SEPTEMBER 15TH AND NOVEMBER 15TH (FALL PLANTING SEASON).
4. TREES AND SHRUBS SHALL BE PLANTED FROM MARCH 1 TO MAY 31 AND FROM SEPTEMBER 15 TO DECEMBER 15. PLANTING MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND ROOT FREE TOPSOIL PLANTING MATERIALS ARE USED.
5. NO CONTAINER-GROWN MATERIAL SHALL BE PLANTED IF NOT ACCUMATED TO THE CURRENT WEATHER CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR GENERAL MAINTENANCE INCLUDING WATERING.
6. NO AQUATIC BENCH PLANTINGS SHALL BE INSTALLED UNTIL POND HAS BEEN ALLOWED TO FILL AND BENCH HAS BECOME SATURATED. IMMEDIATELY INSTALL GOOSE PROTECTION FENCING (DETAIL THIS SHEET) AFTER INSTALLATION OF AQUATIC BENCH PLANTINGS).
7. ALL PLANTING MATERIAL AND PLANTING METHODS SHALL CONFORM TO CONSTRUCTION SPECIFICATIONS.
8. ALL AREAS WITHIN THE LIMITS OF DISTURBANCE SHALL BE STABILIZED PER THE DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT.
9. IF A MINIMUM COVERAGE OF 85% IS NOT ACHIEVED IN THE PLANTED AQUATIC BENCH AFTER THE SECOND GROWING SEASON, A REINFORCEMENT PLANTING WILL BE REQUIRED.
10. REMOVE GOOSE PROTECTION FENCING AFTER TWO GROWING SEASONS IF THE PLANTS HAVE BECOME ESTABLISHED.

PLANT MATERIALS AND PLANTING METHODS

PLANT MATERIALS
THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.

1. PLANT NAMES
PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM TO "STANDARDIZED PLANT NAMES", LATEST EDITION.
2. PLANT STANDARDS
ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATE AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER HEELED IN PLANTS NOR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
3. PLANT IDENTIFICATION
LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MAJOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOIES OF OTHER PLANT MATERIAL GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.

- PLANTING METHODS**
4. PLANTING SEASONS ARE DESCRIBED AS FOLLOWS:
ALL PROPOSED PLANT MATERIAL ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING PLANTING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:
A. PLANTING SHALL BE IN ACCORDANCE WITH CITY OF ROCKVILLE SPECIFICATIONS AND SHALL NOT BE CONDUCTED BETWEEN JUNE 1 AND SEPTEMBER 1, OR AS DIRECTED BY THE CITY.
B. EXCAVATION OF PLANT PITS
A. LOCATIONS OF ALL PROPOSED TREES SHALL BE STAKED AND APPROVED IN THE FIELD BY THE CITY FORESTRY INSPECTOR BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.
B. PLANTING PITS SHALL BE IN ACCORDANCE WITH CITY OF ROCKVILLE SPECIFICATIONS OR AS DIRECTED BY THE CITY.
 6. PLANT GUARANTEE
ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION TWO (2) YEARS WITH 100% CARE AND REPLACEMENT WARRANTY ON ALL TREES AND A TWO (2) YEAR, 85% CARE AND REPLACEMENT WARRANTY ON ALL OTHER LANDSCAPING PLANTS.
THE PERIOD OF CARE AND REPLACEMENT SHALL BEGIN AFTER FINAL INSPECTION AND APPROVAL OF THE INITIAL INSTALLATION OF ALL PLANTS AND CONTINUE FOR TWO YEARS, WITH TWO (2) POTENTIAL PLANT REPLACEMENT PERIODS EACH YEAR. THE CITY WILL ASSUME MAINTENANCE AND REPLACEMENT WARRANTY RESPONSIBILITY AFTER THE TWO-YEAR CARE AND REPLACEMENT WARRANTY HAS BEEN COMPLETED.
PLANT REPLACEMENTS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF ROCKVILLE SPECIFICATIONS.

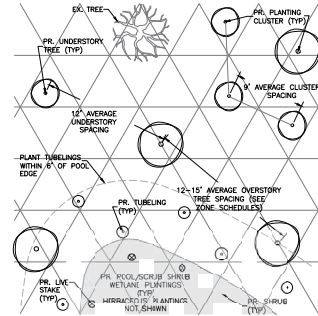


NOTES:

1. HARDWOOD T-POSTS SHALL BE INSTALLED IN TWO ROWS ALONG THE INNER AND OUTER WETLAND BENCH PERIMETER. STAKES SHALL BE SPACED A MAXIMUM OF 10' O/C, AND SHALL BE DRIVEN A MINIMUM OF 18" DEEP.
2. HEAVY DUTY POLYPROPYLENE NETTING WITH 1"x5/4" OPENINGS SHALL BE STRETCHED TAUGHT AND ATTACHED TO EACH ADJACENT STAKE IN THE SAME ROW USING 4-8 HEAVY DUTY UV RESISTANT ZIP TIES TO CREATE AN INNER AND OUTER PERIMETER FENCE.
3. EVERY 100' OF OUTER PERIMETER FENCE, THE INNER NETTING WILL BE STRETCHED ACROSS THE WETLAND BENCH TO THE OUTER PERIMETER FENCE AND BACK TO THE INNER PERIMETER TO CONTINUE THE INNER PERIMETER FENCE.
4. 2' STRIPS OF FLUORESCENT COLORED REFLECTIVE VINYL FLAGGING SHALL BE SECURELY FASTENED TO THE PERIMETER FENCE BETWEEN THE HARDWOOD STAKES AT A MAXIMUM 10' O/C.
5. 12 TO 18 GAUGE NYLON SENE TWINE SHALL BE STRUNG ACROSS THE WETLAND BENCH IN A 20-240 PATTERN RUNNING FROM INNER STAKE TO OUTER STAKE. ADDITIONAL FLUORESCENT COLORED REFLECTIVE VINYL FLAGGING SHALL SECURELY FASTENED TO THE NYLON SENE TWINE AT A MAXIMUM 5' O/C. ADDITIONAL STAKES MAY BE REQUIRED TO ADEQUATELY SUPPORT THE NYLON SENE TWINE IN WIDER SECTIONS OF THE WETLAND BENCH.
6. THE GOOSE PROTECTION FENCING SHALL COMPLETELY ENCLOSE THE WETLAND BENCH AND PREVENT GOOSE ACCESS TO THE WATER FROM LAND AND VISE VERSA.
7. THE FENCING MUST REMAIN IN PLACE UNTIL THE VEGETATION HAS HAD TIME TO BECOME ESTABLISHED. AFTER TWO GROWING SEASONS OR AT THE DIRECTION OF THE OWNER/DEVELOPER THE FENCING SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.

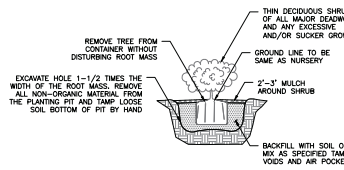
GOOSE EXCLUSION FENCING DETAIL

SCALE: NOT TO SCALE



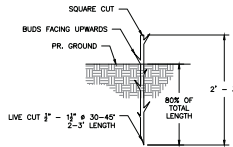
TYPICAL 30'X30' NATURALIZED WOODY PLANTING DETAIL

SCALE: NOT TO SCALE



SHRUB PLANTING - CONTAINER GROWN

SCALE: NOT TO SCALE



NOTES:

1. LIVE STAKES MUST BE INSTALLED WHILE DORMANT (DECEMBER 1 - APRIL 1). DO NOT ALLOW THEM TO DRY OUT.
2. LIVE STAKE MATERIALS SHALL CONSIST OF DORMANT BRANCHES OF CORNUS ANONAM (SLKY DOGWOOD) AND SALIX NIGRA (BLACK WILLOW) ONLY. EACH SPECIES SHALL COMPOSE 50 PERCENT OF THE MIX. MATERIALS SHALL BE PURCHASED FROM A NURSERY SPECIALIZING IN THE PRODUCTION OF SIMILAR MATERIALS AND SHALL INCLUDE CONFIRMATION OF SPECIES. EACH LIVE CUTTING SHALL RANGE IN DIAMETER FROM 0.5 TO 1.5 IN. AT ITS SMALLEST POINT AND SHALL HAVE A MINIMUM LENGTH OF 2 FT.

LIVE STAKE DETAIL

SCALE: NOT TO SCALE

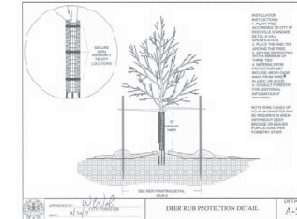
NOTES:

1. HEIGHT OF CAGE SHALL BE 4 FT. (MIN).
2. CUT A SECTION OF WELDED WIRE FENCING WITH PLANT(S) IN CENTER.
3. CREATE ENCLOSURE BY FASTENING 1 1/2" RELEASABLE CABLE TIES (ONE AT TOP AND ONE 6 IN. MIN. ABOVE THE GROUND AT EACH POST) TO EACH POST.
4. DO NOT DAMAGE PLANT DURING INSTALLATION.
5. CAGE SHALL PROVIDE 12" OF SPACE BETWEEN PLANT(S) AND WIRE FABRIC.
6. ENCLOSURES MUST BE APPROVED BY THE FOREST CONSERVATION INSPECTOR. CAGES TO BE REMOVED AT THE DIRECTION OF THE FOREST CONSERVATION INSPECTOR.

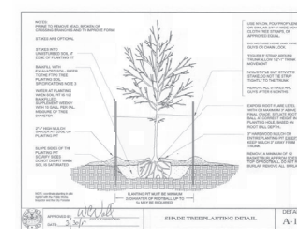
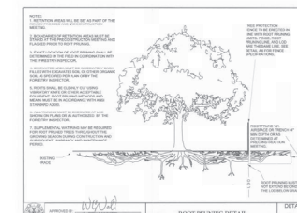
SHRUB PLANTING/MULTI-STEM TREE/GROUPED PLANTING

DEER BROWSE PROTECTION

NOT TO SCALE



NOTE: TREE PROTECTION CAGES MUST BE WELDED WIRE.

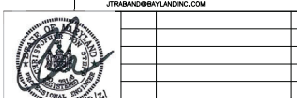


SEE SHEET 16 FOR THE FOLLOWING DETAILS:
TREE PROTECTION/HIGH VISIBILITY FENCE
TREE PROTECTION SIGN

QUALIFIED PROFESSIONAL CERTIFICATION
I CERTIFY THAT I AM A DULY CERTIFIED FOREST CONSERVATION QUALIFIED PROFESSIONAL UNDER THE LAWS OF THE STATE OF MARYLAND AND THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION.

Signed: Jason Triband Date: 07/12/2021

JASON TRIBAND
7465 NEW RIDGE ROAD, SUITE T
HANOVER, MD 21076
410-694-9901
JTR@BAYLANDLANDING.COM



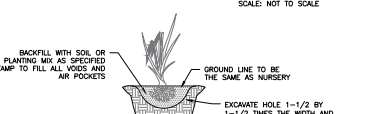
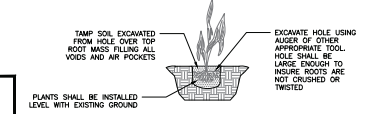
NO.	REVISIONS AFTER PLAN APPROVAL	P.E. INITIAL	DATE

HERBACEOUS PLANTING - PLUG

SCALE: NOT TO SCALE

HERBACEOUS PLANTING - QUART

SCALE: NOT TO SCALE



DEPARTMENT OF PUBLIC WORKS
CITY OF
ROCKVILLE
111 MARYLAND AVE. ROCKVILLE, MARYLAND

DESIGN PLAN APPROVAL
AS BUILT PLAN APPROVAL
AS FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS

FOREST CONSERVATION AND PLANTING PLAN NOTES AND DETAILS

NORTHEAST PARK SWM RETROFIT AND STREAM RESTORATION
BURGUNDY & CHESTNUT GROVE, P550
CITY OF ROCKVILLE, MARYLAND

DATE SUBMITTED: 10/8/2021
SCALE: AS NOTED
SHEET NO. 21 OF 22
FILE # F-295

