STANDARD DRAWING LEGEND

**STANDARD** 

	FOR ENTIRE PLAN SET		A	STANDARD BBREVIATIONS		
LIMIT OF WORK		LOW——LOW——				
LIMIT OF DISTUR	RBANCE ——	LODLOD	AC	FOR ENTIRE PLAN SET  ACRES	SITE	
				AMERICANS WITH		
EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE	ADA	DISABILITY ACT		
	ONSITE PROPERTY LINE / R.O.W. LINE		ARCH	ARCHITECTURAL		
	NEIGHBORING		BC BF	BOTTOM OF CURB  BASEMENT FLOOR		
	PROPERTY LINE / INTERIOR PARCEL LINE		BK	BLOCK		
	EASEMENT		BL	BASELINE		
	LINE		BLDG	BUILDING		
	SETBACK LINE		BM	BUILDING BENCHMARK		
	LINE		BRL	BUILDING RESTRICTION LINE		
			CF	CUBIC FEET	<u> </u>	
		CURB AND GUTTER	CL	CENTERLINE		
		COND AND COTTEN	CMP	CORRUGATED METAL PIPE		
	CONCRETE CURB &	SPILL TRANSITION	CONN	CONNECTION		
	GUTTER	DEPRESSED CURB AND GUTTER	CONC	CONCRETE		_ 4
			СРР	CORRUGATED PLASTIC PIPE		
•	UTILITY POLE		CY	CUBIC YARDS		
	WITH LIGHT		DEC	DECORATIVE		
	POLE LIGHT		DEP	DUCTUE IRON DIDE	SHEET INDEX	
			DOM	DUCTILE IRON PIPE  DOMESTIC	SHEET TITLE	SHEET NUMBER
<b>©</b> €	TRAFFIC LIGHT		ELEC	ELECTRIC	COVER SHEET	1
0	UTILITY	0	ELEV	ELEVATION		
	POLE	0	EP	EDGE OF PAVEMENT	GENERAL NOTES	2
	TYPICAL		ES	EDGE OF SHOULDER	EXISTING CONDITIONS & DEMOLITION PLAN	3
<u>(h</u>	LIGHT		EW	END WALL	SITE PLAN	4
\$	ACORN LIGHT	\$	EX	EXISTING	GRADING PLAN	5
	TYPICAL		FES	FLARED END SECTION	STORMWATER MANAGEMENT PLAN	6
<u> </u>	SIGN		FF	FINISHED FLOOR	COVERAGE AREA MAPS	7
$\bigwedge$	PARKING	X	FH	FIRE HYDRANT	SWM QUALITY DRAINAGE AREA MAP	8
	COUNTS	<u> </u>	FG	FINISHED GRADE	SWM QUANTITY DRAINAGE AREA MAPS	9
			G	GRADE	STORMDRAIN DRAINAGE AREA MAP	10
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	STORM SEWER		ОС	ON CENTER	LIGHTING NOTES AND DETAILS	45
S	SANITARY		PA	POINT OF ANALYSIS	MDOT SHA STANDARD DETAIL	
= == ==	SEWER MAIN	5 —————————————————————————————————————	PC	POINT CURVATURE	THE FOLLOWING STANDARDS (CONSTRUCTION AND TEMPORARY TRAFFIC C FOR THIS PROJECT:	ONTROL) ARE REC
~	HYDRANT	~	PCCR	POINT OF COMPOUND CURVATURE, CURB RETURN	MD-104-02.01 - SHOULDER WORK 2-LANE, 2-WAY GREATER THAN 40 MPH	
			PI	POINT OF INTERSECTION	MD-104-03.01 - SHOULDER WORK MULTIPLE UNDIVIDED GREATER THAN 4 MD-620.02 - STANDARD TYPES A & B CONCRETE CURB AND COMBINATION	
S	SANITARY MANHOLE		POG	POINT OF GRADE	CONCRETE CURB AND GUTTER MD-620.03 - DEPRESSED CURB FOR CURB AND GUTTER	
	STORM		PROP	PROPOSED	MD-655.40 - DETECTABLE WARNING SURFACES MD-374.55-01 - INLET SLABS AND ADJUSTMENT COLLARS FOR COG/COS IN	ILETS TO ACCOMM
(D)	MANHOLE		PT	POINT OF TANGENCY	6" CURB MD-374.68 - COG/COS OPENING FOR 8" CURB 5' OR 10' ONLY	
⊗ <sup>WM</sup>	WATER	•	PTCR	POINT OF TANGENCY,	MD-384.01 - 48" DIAMETER PRECAST MANHOLE FOR 12" TO 24" PIPES MD-386.11 - STAND JUNCTION BOX MD-386.21 - DEE CAST BEINEGORGE CONCEPTE SLAP	
WV	METER	-		CURB RETURN  POLYVINYL CHI ORIDE DIDE	MD-386.21 - PRE-CAST REINFORCED CONCRETE SLAB  MD-387.11-01 - LONGITUDINAL UNDERDRAIN LOCATED AT CURB& GUTTER PAVEMENT	EDGE FOR FLEXIL
$\bowtie$	WATER VALVE		PVC	POLYVINYL CHLORIDE PIPE POINT OF VERTICAL	PAVEMENT  FOR ALL STANDARDS REFERRED TO ON THE PLANS THE CONTRACTOR MUS	ST GO TO THE BOOK
	GAS	П	PVI	INTERSECTION	STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK O  ACCESSED AT:	
	VALVE		PVT	POINT OF VERTICAL TANGENCY	http://apps.roads.maryland.gov/businesswithsha/bizstdsspecs/desmanualstdpub/publ	ications
$\boxtimes$	GAS METER		R	RADIUS	online/ohd/bookstd/index.asp	
			RCP	REINFORCED CONCRETE PIPE	ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.	VERSION OF THE
	TYPICAL END SECTION		RET WALL	RETAINING WALL	THE ACCESS MANAGEMENT INSPECTOR MUST BE CONTACTED TO SET UP A	
) or [	HEADWALL OR	Jor [	R/W	RIGHT OF WAY	MEETING AT LEAST 2 WEEKS PRIOR TO ANY WORK BEING COMPLETED IN THE RIGHT-OF-WAY.	
	ENDWALL		S	SLOPE SANITARY SEWER	THE CONTRACTOR MUST HAVE A COPY OF THE APPROVED COMMERCIAL AC	
	GRATE INLET	<b>(III)</b>	SAN	SANITARY SEWER SQUARE FEET	APPROVED SITE PLANS AT ALL TIMES DURING ANY WORK BEING PERFORME RIGHT-OF-WAY.	.D IN THE MDOT SH
		<u> </u>	SF	SQUARE FEET STATION	$\dashv$	
	CURB INLET	<u></u>	STA	STATION		
0	CLEAN	0	S/W	SIDEWALK	APPROVED: FOR PUBLIC WA	TER
	OUT		TBR	TO BE REMOVED	& PUBLIC SEWERAGE SYSTI	
E	ELECTRIC MANHOLE	E	TBRL	TO BE RELOCATED	— DocuSigned by:	
			TC	TOP OF CURB	Michael J. Davis	H
7	TELEPHONE MANHOLE	(T)	TELE	TELEPHONE	A099773D5AB5423	DATE T
EB	ELECTRIC	EB	TPF	TREE PROTECTION FENCE	HOWARD COUNTY HEALTH DEPARTMENT	Т
[LU]	BOX	[CD]	TW	TOP OF WALL	APPROVED: DEPARTMENT	7
EP	ELECTRIC PEDESTAL	EP	TYP	TYPICAL	PLANNING AND ZONING	
<del></del>	LDESTAL	<u> </u>	UG	UNDERGROUND	DocuSigned by:	
			UP	UTILITY POLE	CHAD Edmondson 6/28/20	122
$\bigcirc$	MONITORING		W	WIDE	CHIEF, DEVELOPMENT ENGINEERING DIVISION DATI	<u> </u>
$\longrightarrow$	WELL		W/L	WATER LINE	DocuSigned by:	122
	TEST PIT	<b>—</b>	W/M	WATER METER	6/28/20	44
<b></b>		· · · · · · · · · · · · · · · · · · ·	±	PLUS OR MINUS	CHIEF, DIVISION OF LAND DEVELOPMENT DATI	<u> </u>
	BENCHMARK	•	٥	DEGREE	DocuSigned by: 6/28/20	22
	BORING	<b>•</b>	Ø	DIAMETER	Amy 61 on an	
		<b>■</b> <i>J</i>	#	NUMBER	DIRECTOR —5B4D5DD9470C4D4 DATI	-

# SITE DEVELOPMENT PLAN ISSUED FOR CONSTRUCTION

# ZASH IN

SHEET INDEX	STORE #	
SHEET TITLE	SHEET NUMBER	
COVER SHEET	1	
GENERAL NOTES	2	LOCATION OF
EXISTING CONDITIONS & DEMOLITION PLAN	3	
SITE PLAN	4	4205 MONTGOME
GRADING PLAN	5	/AAD DOLLET
STORMWATER MANAGEMENT PLAN	6	(MD ROUTE
COVERAGE AREA MAPS	7	FULLOOTT OLTY A
SWM QUALITY DRAINAGE AREA MAP	8	ELLICOTT CITY, N
SWM QUANTITY DRAINAGE AREA MAPS	9	TM 24 CDID 24 DA
STORMDRAIN DRAINAGE AREA MAP	10	TM 24, GRID 24, PA
STORMWATER MANAGEMENT NOTES & DETAILS	11-16	HOWARD COL
UTILITY PLAN	17	HOWARD COL
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LANDSCAPE PLAN	25	St John State Hudson
MDOT SHA LANDSCAPE PLAN	26	Brance Brance
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WATER PROFILE	30	RD SOMAN SINCE MANAHAN DR
SANITARY PROFILES	31	ELLICOII
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ARCHITECTURAL ELEVATIONS	34-39	THE BLUFTS AT
FOREST CONSERVATION PLAN	40	CRESTLE CH. JOSEPH 2413
FOREST CONSERVATION NOTES AND DETAILS	41	RD W

# MDOT SHA STANDARD DETAILS NOTE

# APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS

Docusigned by: Michael J. Davis  A099773D5AB5423	6/27/2022
COUNTY HEALTH OFFICER HOWARD COUNTY HEALTH DEPARTMENT	DATE

# APPROVED: DEPARTMENT OF

PLANNING AND ZO	NING
DocuSigned by: (HD) Edmondson	6/28/2022
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
DocuSigned by:	6/28/2022
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DocuSigned by:	6/28/2022
DIRECTOR 584D5DD9470C4D4	DATE

F SITE ERY ROAD MD 21043 ARCEL 311 DUNTY DISTRICT

**VICINITY MAP** 

COPYRIGHT ADC THE MAP PEOPLE PERMIT USE NO. 20602153-5 ADC MAP COORDINATES: 4815-J10 / 39-C3

### **BENCHMARKS**

ELEVATIONS ARE BASED ON NAVD88 DATUM DETERMINED BY GPS OBSERVATIONS AND TIED IN TO HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 241B WITH A PUBLISHED ELEVATION OF 390.560 FEET.

ADDITIONAL BENCHMARK NEARBY: HO. CO. #24I3 (STAMPED BRASS DISC SET ON TOP OF CONC. BASE) N 580,648.901, E 1,364,974.507, ELEV. 403.703

# PERMIT INFORMATION CHART

SUBDIVISION NAME		SECTION/AREA		LOT/PARCEL NO.		).
THE SHELL OIL	CO.	N/A		311		
PLAT # OR L/F	GRID#	ZONING	TAX MAP	ELECTION		CENSUS
11525/400	24	B-2	24	DISTRICT	2	TRACT 6028
WATER CODE:		SEWER CODE:				

### HEALTH DEPT. APPROVAL NOTE:

HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN (SDP) DOES NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PERMIT PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS SDP WILL REQUIRE REVIEW AND APPROVAL BY THE HEALTH DEPARTMENT. SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO. THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL PREPARED OR PACKAGED FOODS, OR THAT MAY HAVE EQUIPMENT THAT EMITS RADIATION.

CONTACT: ANDREW G. STINE, P.E.

# **GENERAL NOTES**

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MDOT SHA STANDARDS IF APPLICABLE

REVISION DATE:

THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS

THIS DOCUMENT IS NOT ISSUED BY BOHLER

FOR CONSTRUCTION WITHOUT (3) SIGNATURES

- PRIOR TO THE START OF WORK. 3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 4. THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) AND MDOT SHA DISTRICT 7 (301-624-8100) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES. ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MD MUTCD). ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED WITHIN COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED (QUICK PUNCH), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2.5" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO QUICK PUNCH HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH
- 5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- 6 THE PROPERTY BOUNDARY AND ON-SITE EXISTING TOPOGRAPHY IS BASED ON A BOUNDARY & TOPOGRAPHI SURVEY BY BOHLER ENGINEERING, TITLED: "ALTA/NSPS LAND TITLE SURVEY; SMO INCORPORATED; 4205 MONTGOMERY ROAD; 2ND ELECTION DISTRICT; HOWARD COUNTY, MARYLAND", PROJECT NO. SD132045,
- 7. EXISTING OFFSITE TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY GIS.
- 8. ELEVATIONS ARE BASED ON NAVD88 DATUM DETERMINED BY GPS OBSERVATIONS AND TIED IN TO HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 241B WITH A PUBLISHED ELEVATION OF 390.560 FEET.
- 9. PUBLIC WATER AND PUBLIC SEWER SHALL BE UTILIZED TO SERVE THE DEVELOPMENT. THIS DEVELOPMENT IS LOCATED WITHIN THE PATAPSCO RIVER DRAINAGE AREA.

STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS WATER QUALITY VOLUME WILL BE PROVIDED BY ONE (1) MICROBIORETENTION FACILITY AND A CONTECH 3 CARTRIDGE CATCHBASIN STORMFILTER TO MEET MDE REQUIREMENTS. RECHARGE VOLUME, CHANNEL PROTECTION, OVERBANK FLOOD PROTECTION VOLUME, AND EXTREME FLOOD VOLUME ARE REQUIRED AND BEING PROVIDED FOR THIS SITE DASH-IN WILL OWN AND MAINTAIN ITS ON-SITE STORMWATER MANAGEMENT FACILITIES TO COUNTY STANDARDS THROUGHOUT IT'S TENANCY: PROPERTY OWNER SHALL ASSUME MAINTENANCE RESPONSIBILITIES SHOULD DASH-IN VACATE THE PARCEL. THE SITE DISCHARGES TO THE LUMTREE BRANCH AND TIBER BRANCH WATERSHED AND MANAGEMENT OF THE 2016 ELLICOTT CITY STORM

- EXISTING UTILITIES ARE BASED ON A FIELD RUN SURVEY PREPARED BY BOHLER, DATED FEBRUARY 22, 2017
- A FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT. THE PROPERTY IS LOCATED IN OTHER AREAS "FIRM: FLOOD INSURANCE RATE MAP: HOWARD COUNTY, MARYLAND AND INCORPORATED AREAS, PANEL 90 OF 235", MAP NUMBER 24027C0090D, WITH A MAP EFFECTIVE DATE OF NOVEMBER 6, 2013
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND
- 4. NO WETLANDS EXIST WITHIN THE LIMIT OF DISTURBANCE AS SHOWN ON THIS PLAN PER A WETLAND DELINEATION REPORT COMPLETED FOR THIS PROJECT BY ECOSCIENCE ON MARCH 6, 2019.
- 15. A FOREST STAND DELINEATION REPORT WAS COMPLETED BY ECOSCIENCE ON MARCH 6, 2019.
- 6. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED JULY 20, 2020.
- SUBJECT PROPERTY ZONED B-2 (BUSINESS GENERAL) DISTRICT PER THE 10/6/13 COMPREHENSIVE ZONING
- 8. SOILS INFORMATION TAKEN FROM SOIL SURVEY, HOWARD COUNTY, MARYLAND, ISSUED JUNE 12, 2020
- BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY BOHLER, DATED FEBRUARY 22, 2017, LAST
- THERE ARE NOT AREAS OF STEEP SLOPES (25% OR GREATER) LOCATED ON THIS PROPERTY AS DEFINED BY
- THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.B.
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY ECS MID-ATLANTIC, LLC, DATED
- 22. THIS PROPERTY IS LOCATED INSIDE OF THE METROPOLITAN DISTRICT.
- 23. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY PURCHASE OF A FOREST CONSERVATION RIGHTS OF 0.40 ACRES AS SHOWN ON SDP-14-005.

P.O. BOX 482

- 24. NO HYDRIC SOILS, SOILS WITH HYDRIC INCLUSIONS OR SOILS WITH LESS THAN 15% SLOPES WITH SIGNIFICANT EROSION POTENTIAL EXIST ON THE SITE.
- 5. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE
- 6. A KNOX BOX (FIRE DEPARTMENT ACCESS BOX) IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. THEY SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4-5' IN HEIGHT AND NO MORE THEN 6' LATERALLY FROM THE DOOR. EACH BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTEGRATED WITH THE FIRE ALARM SYSTEM NFPA-1 10.12.1.) 27. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
- 28 PRIOR TO ANY SITE EXCAVATION THAT MAY ENCOUNTER GROUNDWATER. THE CONTRACTOR IS REQUIRED TO NOTIFY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND IMPLEMENT A SITE SPECIFIC HEALTH AND SAFETY PLAN IN ACCORDANCE WITH THE "NO FURTHER REQUIREMENTS DETERMINATION" FOR THE PROPERTY ISSUED BY THE VOLUNTARY CLEANUP PROGRAM ON MARCH 24, 2011
- 29. A CONDITIONAL USE PETITION WAS APPROVED ON SEPTEMBER 3, 2020 BY THE HOWARD COUNTY BOARD OF APPEALS TO PERMIT A MOTOR VEHICLE FUELING FACILITY. A VARIANCE TO REDUCE THE 30-FOOT SETBACK FROM A RESIDENTIAL ZONING DISTRICT TO 20.95 FEET. A VARIANCE TO REDUCE THE 10-FOOT PARKING SETBACK TO 2.92 FEET, AND A VARIANCE TO REDUCE THE REQUIRED 20 PARKING SPACES TO 17 PARKING SPACES (BA CASE NO. 19-014C AND V).
- 30. PRIOR CASE NUMBERS ASSOCIATED WITH THIS PROJECT INCLUDE ECP-19-043 & BA-19-014C&V
- THERE ARE NO KNOWN HISTORICAL STRUCTURES OR CEMETERIES ONSITE
- 2. THIS PLAN IS IN CONFORMANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
- 33. OUTDOOR LIGHTING SHALL BE IN COMPLIANCE WITH SECTION 134.0 OF THE ZONING REGULATIONS. 34. HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN (SDP) DOES NOT ENSURE APPROVAL OF
- BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PERMIT PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS SDP WILL REQUIRE REVIEW AND APPROVAL BY THE HEALTH DEPARTMENT, SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO, THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL PREPARED OR PACKAGED FOODS, OR THAT MAY HAVE EQUIPMENT THAT
- 5. ALL WORK DONE IN THE SHA RIGHT-OF-WAY WILL REQUIRE A PERMIT FROM SHA
- THE PURPOSE OF SHA PLAT NO. 61252 IS TO ACQUIRE LAND FROM THIS SITE FOR SHA PROJECT HO2275187 SHA EXPECTS TO BEGIN IMPROVEMENTS FOR PROJECT H02275487 IN SPRING OF 2022 AND WILL CONSTRUCT SIDEWALK AND RECONSTRUCT ENTRANCES ACCORDING TO PROJECT H02275487
- . LANDSCAPING WILL BE PROVIDED IN ACCORDANCE WITH THE LANDSCAPE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL STREET TREE REQUIREMENTS WILL BE MET AS PART OF SHA PROJECT HO2275487 AND WILL BE INSTALLED BY SHA. 12 STREET TREES (\$300 EACH) AND 55 SHRUBS (\$30 EACH) WILL BE INSTALLED AS PART OF THE DEVELOPER'S AGREEMENT (FOR A TOTAL SURETY OF \$5.250

### PLAN REFERENCES AND CONTACTS

# REFERENCES

♦ BOUNDARY AND TOPOGRAPHIC SURVEY BY: BOHLER ENGINEERING ENTITLED:"ALTA/NSPS LAND TITLE SURVEY; SMO INCORPORATED; 4205 MONTGOMERY ROAD; 2ND ELECTION DISTRICT: HOWARD COUNTY, MARYLAND" PROJECT NO: SD132045

GEOTECHNICAL REPORT BY: FCS MID-ATLANTIC LLC ENTITLED: "GEOTECHNICAL ENGINEERING REPORT; DASH-IN STORE #1833; 4205 MONTGOMERY ROAD: ELLICOTT CITY. HOWARD COUNTY MARYLAND"

PROJECT NO: 02:9310

DATED: 2/22/17, LAST REVISED 11/5/19

TRAFFIC IMPACT STUDY BY: THE TRAFFIC GROUP ENTITLED: "DASH-IN CONVENIENCE STORE #1833; HOWARD COUNTY, MARYLAND; ADEQUATE ROAD FACILITIES TEST EVALUATION" JOB NO: 2018-0622 DATED: 10/27/20

### **GOVERNING AGENCIES**

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING 3430 COURT HOUSE DRIVE CONTACT: CHAD EDMONDSON, DIVISION CHIEF PHONE: (410) 313-2350

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING LAND DEVELOPMENT 3430 COURT HOUSE DRIVE ELLICOTT CITY, MD 21043 CONTACT: ANTHONY CATALDO, DIVISION CHIEF PHONE: (410) 313-2350

### **UTILITY CONTACTS**

SANITARY SEWER / WATER HOWARD COUNTY DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES 8250 AND 8270 OLD MONTGOMERY ROAD COLUMBIA, MD 21045 CONTACT: ARTHUR SHAPIRO, CHIEF PHONE: (410) 313-4912

BALTIMORE GAS & ELECTRIC 1068 N. FRONT ST. ROOM 401 BALTIMORE. MD 21202 PHONE: (410) 850-4620

ENTITLED: "UTILITY TEST PIT DATA FOR DASH IN

WORK ORDER NO:16060722

RELOCATION"

ENTITLED: "4205 MONTGOMERY ROAD (POLE

#1833, 4205 MONTGOMERY ROAD, ELLICOTT CITY, HOWARD COUNTY, MARLYAND" PROJECT NO: 21055 DATED: 03/23/21

♦ HOWARD COUNTY DEPT. OF PUBLIC 8250 AND 8270 OLD MONTGOMERY ROAD COLUMBIA, MD 21045 CONTACT: THOMAS MEUNIER, ACTING DIRECTOR PHONE: (410) 313-4401

♦ MDOT SHA DISTRICT 5111 BUCKEYSTOWN PIKI FREDERICK, MD 21704 CONTACT: JOHN JENKINS PHONE: (310) 624-8174

◆ TELEPHONE

7133 RUTHERFORD ROAD BALTIMORE, MD 21244 PHONE: (410) 224-5286 **STORMWATER** 

HOWARD COUNTY DEPT. OF PUBLIC WORKS, STORMWATER MANAGEMENT DIVISION 9801 BROKEN LAND PARKWAY COLUMBIA, MD 21046 CONTACT: MARK S. RICHMOND, DIVISION CHIEF PHONE: (410) 313-6413

# SITE ANALYSIS DATA CHART

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER DOES NOT

- TOTAL PROJECT AREA: 41.536 S.F. OR 0.954 AC
- TOTAL SITE AREA: 45,294 S.F. OR 1.04 AC.
- LIMIT OF DISTURBED AREA: 41,536 S.F. OR 0.954 AC.
- PRESENT ZONING: B-2 (BUSINESS GENERAL)

CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS. BY OTHERS

- PROPOSED USE: DASH-IN (MOTOR VEHICLE FUELING FACILITY W/ CONVENIENCE STORE) PERMITTED PER BA CASE NO. 19-014C AND V

MAXIMUM BUILDING HEIGHT (ZONING SECTION 119.0.D.1.a) 40' MAX. 24' PROVIDED\*

[28.0.A.3.a] PARAPET WALLS MAY EXTEND 4' ABOVE THE MAXIMUM ALLOWED HEIGHT. [128.0.A.3.B] HEIGHT LIMITATIONS SHALL NOT APPLY TO BULKHEADS AND MECHANICAL EQUIPMENT COVERING <25%

MAXIMUM NUMBER OF EMPLOYEES: N/A PARKING SPACES REQUIRED: [ZONING SECTION 133.0.D.4.e]

5.0 SPACES PER 1.000 S.F. X 3.351 S.F. = 17 SPACES MOTOR VEHICLE FUELING STATION:

TOTAL REQUIRED = 20 SPACES\*\* PARKING SPACES PROVIDED

STANDARD PARKING SPACES (9'X18') ANDICAP (8'X18')

LOT/PARCEL

IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW ALL OF THE DRAW ECIEICATIONS ASSOCIATED WITH THIS PROJECT WORK SCOPE PRIOR TO

TIATION OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT WI

IE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR APPLICABLE CODES. IT

HE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER C

FULL RESPONSIBILITY BY THE CONTRACTOR TO COMPLETE THE SCOPE OF 1

NORK AS DEFINED BY THE DRAWINGS AND IN FULL CONFORMANCE WITH LOCA

REGULATIONS AND CODES.

RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION, FAILURE BY TH

RACTOR TO NOTIFY THE PROJECT ENGINEER SHALL C

BA CASE NO. 19-014 C& V: VARIANCE REQUEST TO REDUCE THE REQUIRED 20 PARKING SPACES TO 17 SPACES WAS RANTED ON SEPTEMBER 3, 2020.

OFF-STREET LOADING SHALL BE PROVIDED FOR RETAIL AND SERVICE BUSINESS ESTABLISHMENTS COMPUTES) PER VARIANCE CASE BA20-001S THE BELOW SIGN VARIANCES WERE REQUESTED AND HEREBY GRANTED PER

 REQUEST FOR A HEIGHT VARIANCE OF 18 FEET TO INSTALL A NEW PERMANENT 26.0-FOOT-TALL FREESTANDIN TWO-POLE PYLON IDENTIFICATION SIGN AT A LOCATION WHERE THE MAXIMUM HEIGHT WOULD BE 8 FEET REQUEST FOR AN AREA VARIANCE TO ALLOW THE PROPOSED FREESTANDING TWO-POLE PYLON IDENTIFICATION

SIGN TO EXCEED THE 16.0 SF AREA LIMITATION BY 78.25 SF REQUEST FOR A TEMPORARY HEIGHT VARIANCE OF 23.40 FEET TO MOVE THE EXISTING 25.0-FOOT-TALL REESTANDING TWO-POLE IDENTIFICATION SIGN TO A LOCATION WHICH WILL CAUSE THE MAXIMUM HEIGHT T

 REQUEST FOR A TEMPORARY AREA VARIANCE OF 110.74 SF TO MOVE THE EXISTING 25.0-FOOT-TALL FREESTANDING TWO-POLE IDENTIFICATION SIGN TO A LOCATION WHICH WILL CAUSE THE MAXIMUM AREA TO BE REQUEST FOR A TEMPORARY TOTAL AREA VARIANCE OF ALL SIGNS ON THE PROPERTY TO MOVE THE EXISTING

ADDRESS CHART

POTOMAC ENERGY HOLDINGS, LLC

PO BOX 2810 LA PLATA MD 20646

CONTACT: JASON BELT

PHONE: 240-320-6448

OWNER:

**BUILDING** #

1 (CONVENIENCE STORE)

25.0-FOOT-TALL FREESTANDING TWO-POLE IDENTIFICATION SIGN WHICH IS 15.46 SF MORE THAN THE MAXIMUM

STREET ADDRESS

4205 MONTGOMERY ROAD

ZONED: B-2

2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SECTION/AREA: N/A DEED #

**FILE NO. SDP-21-009** 

**DEVELOPER:** 

102 CENTENNIAL STREET, STE

LA PLATA MD 20645

CONTACT: JASON BELT

PHONE: 240-320-6448

901 DULANEY VALLEY ROAD, SUITE 80 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987

**REVISIONS** 

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APPROVED FOR

CONSTRUCTION

REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUC $\underline{\text{DOCUMENT}}$  UNLESS INDICATED OTHERWISE.

SITE

4205 MONTGOMERY ROAD

(MD ROUTE 103)

ELLICOTT CITY, MD 21043

TM 24, GRID 24, PARCEL 311

HOWARD COUNTY

2ND ELECTION DISTRICT

MD132045-SDP-3.DW0

DRAWN BY:

CAD I.D.:

PROJECT:

CHECKED BY:

COMMENT

REV DATE

UNDER THE LAWS OF THE STATE OF MARYLANI LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

MD@BohlerEng.com

COVER

SHEET NUMBER:

SHEET TITLE:

WITH THE PROJECT WORK SCOPE, PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION.

- THESE PLANS ARE SOLELY BASED ON INFORMATION THE OWNER AND OTHERS PROVIDED TO BOHLER ENGINEERING VA, LLC (HEREIN "BOHLER") PRIOR TO THE DATE ON WHICH ENGINEER PREPARED THESE PLANS. THE CONTRACTOR MUST FIELD VERIFY ALL
- ON THESE PLANS, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.

  THE CONTRACTOR MUST STRICTLY COMPLY WITH THESE NOTES AND ALL SPECIFICATIONS/REPORTS CONTAINED HEREIN. THE CONTRACTOR MUST ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS, THESE NOTES, AND THE REQUIREMENTS ARTICULATED IN THE NOTES CONTAINED IN ALL THE OTHER DRAWINGS THAT COMPRISE THE PLAN SET OF DRAWINGS. ADDITIONAL NOTES AND SPECIFIC PLAN NOTES MAY BE FOUND ON THE INDIVIDUAL PLANS. THESE GENERAL NOTES APPLY TO THIS ENTIRE DOCUMENT PACKAGE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED

EXISTING CONDITIONS AND IMMEDIATELY NOTIFY BOHLER . IN WRITING, IF ANY ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN

- 3. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST CONFIRM WITH THE ENGINEER OF RECORD THAT THE LATEST EDITION OF THE DOCUMENTS AND/OR REPORTS REFERENCED WITHIN THE PLAN REFERENCES ARE BEING USED FOR CONSTRUCTION. THIS IS THE CONTRACTOR'S SOLE AND COMPLETE RESPONSIBILITY.
- 4. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION IS TO BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE CONDITIONS OF APPROVAL TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AUTHORITIES AND HAS ALSO CONFIRMED THAT ALL NECESSARY AND REQUIRED PERMITS HAVE BEEN OBTAINED. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
- 5. THE CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS/REPORTS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT, AND ALL PROVISIONS IN AND CONDITIONS OF THE CONSTRUCTION CONTRACT WITH THE OWNER/DEVELOPER INCLUDING ALL EXHIBITS, ATTACHMENTS AND ADDENDATO SAME
- 6. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFULLY REVIEWING THE MOST CURRENT ARCHITECTURAL, CIVIL AND STRUCTURAL CONSTRUCTION DOCUMENTS (INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLANS, WHERE APPLICABLE). THE CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND ENGINEER OF RECORD, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS
- AMBIGUITIES WHICH EXIST BETWEEN THESE PLANS AND ANY OTHER PLANS THAT COMPRISE THE CONSTRUCTION DOCUMENTS.

  7. CONTRACTOR MUST REFER TO AND ENSURE COMPLIANCE WITH THE APPROVED ARCHITECTURAL/BUILDING PLANS OF RECORD FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
- 8. THE CONTRACTOR MUST FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS SHOWN ON THESE PLANS, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR MUST IMMEDIATELY NOTIFY ENGINEER OF RECORD, IN WRITING, IF ANY CONFLICTS, DISCREPANCIES, OR AMBIGUITIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION. NO EXTRA COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR WORK WHICH HAS TO BE RE-DONE OR REPAIRED DUE TO DIMENSIONS, MEASUREMENTS OR GRADES SHOWN INCORRECTLY ON THESE PLANS PRIOR TO BOTH (A) THE CONTRACTOR GIVING ENGINEER OF RECORD WRITTEN NOTIFICATION OF SAME AND (B) ENGINEER OF RECORD, THEREAFTER, PROVIDING THE CONTRACTOR WITH WRITTEN AUTHORIZATION TO PROCEED WITH SUCH ADDITIONAL WORK.
- 9. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND MEASUREMENTS INCLUDED ON DESIGN DOCUMENTS HEREIN AND MUST NOT SCALE OFF THE DRAWINGS DUE TO POTENTIAL PRINTING INACCURACIES. ALL DIMENSIONS AND MEASUREMENTS ARE TO BE CHECKED AND CONFIRMED BY THE GENERAL CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS, FABRICATION/ORDERING OF PARTS AND MATERIALS AND COMMENCEMENT OF SITE WORK. SITE PLAN DRAWINGS ARE NOT INTENDED AS SURVEY DOCUMENTS. DIMENSIONS SUPERSEDE GRAPHICAL REPRESENTATIONS. THE CONTRACTOR MUST MAKE CONTRACTOR'S OWN MEASUREMENTS FOR LAYOUT OF IMPROVEMENTS.
- 10. THE OWNER AND CONTRACTOR MUST BE FAMILIAR WITH, AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
- 1. WHEN INCLUDED AS ONE OF THE REFERENCED DOCUMENTS, THE GEOTECHNICAL REPORT, SPECIFICATIONS AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY, THE MORE STRINGENT REQUIREMENTS AND/OR RECOMMENDATIONS CONTAINED IN: (A) THE PLANS; AND (B) THE GEOTECHNICAL REPORT AND RECOMMENDATIONS, MUST TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND PLANS AND SPECIFICATIONS, PRIOR TO PROCEEDING WITH ANY FURTHER WORK. IF A GEOTECHNICAL REPORT WAS NOT CREATED, THEN THE CONTRACTOR MUST FOLLOW AND COMPLY WITH ALL OF THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE SPECIFICATIONS WHICH HAVE JURISDICTION OVER THIS PROJECT.
- ENGINEER OF RECORD IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, HAS NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.
   THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN AND WHERE SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS) AND ANY ADDITIONAL PRECAUTIONS TO BE TAKEN TO ASSURE THE STABILITY OF ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES. ALL
- OF THIS WORK IS TO BE PERFORMED AT CONTRACTOR'S SOLE COST AND EXPENSE.

  14. THE CONTRACTOR MUST EXERCISE EXTREME CAUTION WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE TO REMAIN EITHER FOR AN INITIAL PHASE OF THE PROJECT OR AS PART OF THE FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, BUILDINGS, AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK
- AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.

  15. DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE. ALL DEMOLITION AND CONSTRUCTION WASTES, UNSUITABLE EXCAVATED MATERIAL, EXCESS SOIL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS AND APPLICABLE CODES WHICH HAVE JURISDICTION OVER THIS PROJECT OR
- OVER THE CONTRACTOR.

  16. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO MAINTAIN RECORDS TO DEMONSTRATE PROPER AND FULLY COMPLIANT DISPOSAL ACTIVITIES, TO BE PROMPTLY PROVIDED TO THE OWNER UPON REQUEST.
- 7. THE CONTRACTOR MUST REPAIR, AT CONTRACTOR'S SOLE COST, ALL DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME TO INCLUDE, BUT NOT BE LIMITED TO, REDESIGN, RE-SURVEY, RE-PERMITTING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR AND MUST REPLACE ALL SIGNAL INTERCONNECTION CABLE, WIRING CONDUITS, AND ANY UNDERGROUND ACCESSORY EQUIPMENT DAMAGED DURING CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE CONTRACTOR MUST, PROMPTLY, DOCUMENT ALL EXISTING DAMAGE AND NOTIFY, IN WRITING, THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF
- 18. THE ENGINEER OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR AND HAVE NO CONTRACTUAL, LEGAL OR OTHER RESPONSIBILITIES FOR JOB SITE SAFETY JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME. THE ENGINEER OF RECORD AND BOHLER HAVE NOT BEEN RETAINED TO PERFORM OR TO BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF ENGINEER OF RECORD'S AND BOHLER SERVICES AS RELATED TO THE PROJECT. THE ENGINEER OF RECORD AND BOHLER ARE NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES OR ANY JOB SITE CONDITIONS, AT ANY TIME.
- 9. THE CONTRACTOR MUST IMMEDIATELY IDENTIFY IN WRITING, TO THE ENGINEER OF RECORD AND BOHLER, ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF THE CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER WRITTEN NOTIFICATION AS DESCRIBED ABOVE, IT WILL BE AT THE CONTRACTOR'S OWN RISK AND, FURTHER, THE CONTRACTOR MUST INDEMNIFY, DEFEND AND HOLD HARMLESS THE ENGINEER OF RECORD AND BOHLER FOR ANY AND ALL DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM OR ARE IN ANY WAY RELATED TO SAME INCLUDING, BUT NOT LIMITED TO, ANY THIRD PARTY AND FIRST PARTY CLAIMS.
- 20. THE ENGINEER OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS, AND CURRENT CODES, RULES, STATUTES AND THE LIKE. IF THE CONTRACTOR AND/OR OWNER FAIL TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, RULES, STATUTES, CODES AND THE LIKE, THE CONTRACTOR AND/OR OWNER AGREE TO AND MUST JOINTLY, INDEPENDENTLY, SEPARATELY, AND SEVERALLY INDEMNIFY AND HOLD THE ENGINEER OF RECORD AND BOHLER HARMLESS FOR AND FROM ALL INJURIES, CLAIMS AND DAMAGES THAT ENGINEER AND BOHLER SUFFER AND ANY AND ALL COSTS THAT ENGINEER AND BOHLER INCUR AS RELATED TO SAME.
- 21. ALL CONTRACTORS MUST CARRY AT LEAST THE MINIMUM AMOUNT OF THE SPECIFIED AND COMMERCIALLY REASONABLE STATUTORY WORKER'S COMPENSATION INSURANCE, EMPLOYER'S LIABILITY INSURANCE AND COMMERCIAL GENERAL LIABILITY INSURANCE (CGL) INCLUDING ALSO ALL UMBRELLA COVERAGES. ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME BOHLER, AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSUREDS AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THE (DEFEND, IF APPLICABLE) AND HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED AND AGREED TO BY THE CONTRACTOR HEREIN. ALL CONTRACTORS MUST FURNISH BOHLER WITH CERTIFICATIONS OF INSURANCE OR CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE COVERAGES PRIOR TO COMMENCING ANY WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR TWO YEARS AFTER THE COMPLETION OF CONSTRUCTION AND AFTER ALL PERMITS ARE ISSUED, WHICHEVER DATE IS LATER. IN ADDITION, ALL CONTRACTORS AGREE THAT THEY WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS. SERVANTS. EMPLOYEES. AFFILIATES. SUBSIDIARIES. AND RELATED ENTITIES. AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH OR TO THE PROJECT. INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTOR(S), ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED. TO THE PROJECT. THE CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION,
- SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.

  22. THE ENGINEER OF RECORD AND BOHLER ARE NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS IN SCOPE AND REVISIONS THAT RESULT FROM SAME. THE CONTRACTOR IS FULLY AND SOLELY RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS FOR COMPLETION OF THE WORK, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 23. NEITHER THE PROFESSIONAL ACTIVITIES OF: BOHLER, NOR THE PRESENCE OF BOHLER AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE (HEREIN "BOHLER PARTIES"), RELIEVES OR WILL RELIEVE THE CONTRACTOR OF AND FROM ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEEING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE WITH ALL HEALTH AND SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER AND ITS EMPLOYEES, PERSONNEL, AGENTS, SUBCONTRACTORS AND SUBCONSULTANTS HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER (OR ANY RESPONSIBILITY FOR) ANY CONSTRUCTION, THE CONTRACTOR OR ITS EMPLOYEES RELATING TO THEIR WORK AND ANY AND ALL HEALTH AND SAFETY PROGRAMS OR PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. THE

# APPROVED: DEPARTMENT OF PLANNING AND ZONING Docusigned by: CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT Docusigned by: 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT Docusigned by: 6/28/2022 Any Gronan DIRECTOR DATE

CONTRACTOR MUST INDEMNIFY, DEFEND, PROTECT AND HOLD HARMLESS BOHLER FOR AND FROM ANY LIABILITY TO BOHLER RESULTING FROM THE CONTRACTOR'S WORK, SERVICES AND/OR VIOLATIONS OF THIS NOTE, THESE NOTES OR ANY NOTES IN THE PLAN SET AND, FURTHER, THE CONTRACTOR MUST NAME BOHLER AS AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE.

- 24. WHEN IT IS CLEARLY AND SPECIFICALLY WITHIN BOHLER'S SCOPE OF SERVICES CONTRACT WITH THE OWNER/DEVELOPER, BOHLER WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF EVALUATING CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY FOR SAME. BOHLER WILL PERFORM ITS SHOP DRAWING REVIEW WITH REASONABLE PROMPTNESS, AS CONDITIONS PERMIT. ANY DOCUMENT, DOCUMENTING BOHLER'S REVIEW OF A SPECIFIC ITEM OR LIMITED SCOPE, MUST NOT INDICATE THAT BOHLER HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR MUST, IN WRITING, PROMPTLY AND IMMEDIATELY BRING ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS TO BOHLER'S ATTENTION. BOHLER IS NOT REQUIRED TO REVIEW
- PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.

  25. IF THE CONTRACTOR DEVIATES FROM THESE PLANS AND/OR SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN AUTHORIZATION OF THE ENGINEER OF RECORD AND/OR BOHLER FOR ALL DEVIATIONS WITHIN ENGINEER'S SCOPE, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK PERFORMED WHICH DEVIATES FROM THE PLANS, ALL FINES AND/OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, MUST DEFEND, INDEMNIFY, PROTECT, AND HOLD HARMLESS THE ENGINEER OF RECORD AND BOHLER PARTIES TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, FOR AND FROM ALL FEES, ATTORNEYS' FEES, DAMAGES, COSTS, JUDGMENTS, CLAIMS, INJURIES, PENALTIES AND THE LIKE RELATED TO SAME.
- 26. THE CONTRACTOR IS RESPONSIBLE FOR A MAINTAINING AND PROTECTING THE TRAFFIC CONTROL PLAN AND ELEMENTS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, FOR ALL WORK THAT AFFECTS PUBLIC TRAVEL EITHER IN THE RIGHT OF WAY OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTOR'S PRICE AND IS THE CONTRACTOR'S SOLE RESPONSIBILITY
- 27. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS IN STRICT ACCORDANCE WITH THE APPROVED PLAN(S) AND DESIGN; AND, FURTHER, THE ENGINEER OF RECORD AND/OR BOHLER ARE NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE ALL PHYSICAL SITE FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD THE ENGINEER OF RECORD AND BOHLER PARTIES, HARMLESS FOR ALL INJURIES, DAMAGES AND COSTS THAT ENGINEER OF RECORD AND/OR BOHLER INCUR AS A RESULT OF SAID FAILURE OR
- 28. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES AND MATERIALS COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL RULES AND REGULATIONS, LAWS, ORDINANCES, AND CODES, AND ALL APPLICABLE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 ET SEQ.) AS AMENDED, AND ANY
- MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.

  29. THE CONTRACTOR MUST STRICTLY COMPLY WITH THE LATEST AND CURRENT OSHA STANDARDS AND REGULATIONS, AND/OR ANY
  OTHER AGENCY WITH JURISDICTION OVER EXCAVATION AND TRENCHING PROCEDURES. ENGINEER OF RECORD AND BOHLER HAS NO
- 30. THE CONTRACTOR AND THE OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF THE CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY, INDEPENDENTLY, SEPARATELY, COLLECTIVELY, AND SEVERALLY INDEMNIFY, DEFEND, PROTECT AND HOLD ENGINEER OF RECORD AND/OR BOHLER PARTIES HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.
- 31. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN AN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS OR LOCAL GOVERNING AGENCY FOR SITES WHERE ONE (1) ACRE OR MORE IS DISTURBED BY CONSTRUCTION ACTIVITIES (UNLESS THE LOCAL JURISDICTION REQUIRES A DIFFERENT THRESHOLD). THE CONTRACTOR MUST ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF ALL SUBCONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONCE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE AND FURTHER, THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR FAILING TO DO SO.
- 32. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED DOCUMENTS PREPARED BY THE SIGNATORY PROFESSIONAL ENGINEER OF RECORD, THE USE OF THE WORDS 'CERTIFY' OR 'CERTIFICATION' CONSTITUTE(S) AN EXPRESSION ONLY OF PROFESSIONAL OPINION REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE ENGINEER OF RECORD'S KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON AND ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY NATURE OR TYPE, EITHER EXPRESSED OR IMPLIED, UNDER ANY CIRCUMSTANCES.

### GRADING NOTES

1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.

RESPONSIBILITY FOR OR AS RELATED TO EXCAVATION AND TRENCHING PROCEDURES AND WORK

- 2. SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AS REFERENCED IN THIS PLAN SET. IF NO GEOTECHNICAL REPORT HAS BEEN REFERENCED, THE CONTRACTOR MUST HAVE A GEOTECHNICAL ENGINEER PROVIDE WRITTEN SPECIFICATIONS AND RECOMMENDATIONS PRIOR TO THE CONTRACTOR COMMENCING THE GRADING WORK. THE CONTRACTOR MUST FOLLOW THE REQUIREMENTS OF ALL MUNICIPAL, COUNTY, STATE, AND FEDERAL LAWS, WHICH HAVE JURISDICTION OVER THIS PROJECT.
- 3. THE CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF-SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. THE CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO THE ENGINEER OF RECORD AND THE OWNER PRIOR TO THE CONTRACTOR COMMENCING ANY WORK.
- 4. THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFYING EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. SHOULD DISCREPANCIES BETWEEN THE PLANS AND INFORMATION OBTAINED THROUGH FIELD VERIFICATIONS BE IDENTIFIED OR EXIST, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD. IN WRITING.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND REPLACING ALL UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. THE CONTRACTOR MUST COMPACT ALL EXCAVATED OR FILLED AREAS IN STRICT ACCORDANCE WITH THE GEOTECHNICAL REPORT'S GUIDANCE. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE SUBMITTED IN A COMPACTION REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED. THIS REPORT MUST VERIFY THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES WHICH ARE IN EFFECT AND WHICH ARE APPLICABLE TO THE PROJECT. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPER'S REPRESENTATIVE, SUBBASE MUST BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL, COMPACTED AS THE GEOTECHNICAL REPORT DIRECTS. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION
- (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THERETO.

  5. THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED FINISHED GRADES WITH NO TRIPPING OR SAFETY HAZARD IN ACCORDANCE WITH ALL APPLICABLE
- STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.

  IN THE EVENT OF A DISCREPANCY(IES) AND/OR A CONFLICT(S) BETWEEN PLANS, OR RELATIVE TO OTHER PLANS, THE GRADING PLAN TAKES PRECEDENCE AND CONTROLS. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING. OF ANY DISCREPANCY(IES) AND/OR CONFLICT(S).
- 8. THE CONTRACTOR IS RESPONSIBLE TO IMPORT FILL OR EXPORT EXCESS MATERIAL AS NECESSARY TO CONFORM TO THE PROPOSED GRADING, AND TO BACKFILL EXCAVATIONS FOR THE INSTALLATION OF UNDERGROUND IMPROVEMENTS.

### ACCESSIBILITY DESIGN GUIDELINES

THAN 1:2. NO VERTICAL CHANGES OVER 1/4-INCH ARE PERMITTED.

(Rev. 1/2020)

(Rev.1/2020)

- ALL ACCESSIBLE (A.K.A. ADA) COMPONENTS AND ACCESSIBLE ROUTES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF: (A) THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT" (ADA) CODE (42 U.S.C. § 12101 ET SEQ. AND 42 U.S.C. § 4151 ET SEQ.); AND (B) ANY APPLICABLE LOCAL AND STATE GUIDELINES, AND ANY AND ALL AMENDMENTS TO BOTH, WHICH ARE IN EFFECT WHEN THESE PLANS WERE COMPLETED.
   THE CONTRACTOR MUST REVIEW ALL DOCUMENTS REFERENCED IN THESE NOTES FOR ACCURACY, COMPLIANCE AND
- CONSISTENCY WITH INDUSTRY GUIDELINES.

  THE CONTRACTOR MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ACCESSIBLE (ADA) COMPONENTS AND ACCESSIBLE ROUTES FOR THE SITE. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACES, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, AND INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE/EXIT, MUST COMPLY WITH THE ACCESSIBLE GUIDELINES AND REQUIREMENTS WHICH INCLUDE, BUT ARE NOT LIMITED
- A. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SLOPES MUST NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION.
   B. PATH OF TRAVEL ALONG ACCESSIBLE ROUTE MUST PROVIDE A 36-INCHES MINIMUM WIDTH (48-INCHES PREFERRED), OR AS SPECIFIED BY THE GOVERNING AGENCY. UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERHANGS AND/OR HANDRAILS) MUST NOT REDUCE THIS MINIMUM WIDTH. THE SLOPE MUST NOT EXCEED 1:20 (5.0%) IN THE DIRECTION OF TRAVEL AND MUST NOT EXCEED 1:50 (2.0%) IN CROSS SLOPE. WHERE ACCESSIBLE PATH OF TRAVEL IS GREATER THAN 1:20 (5.0%), AN ACCESSIBLE RAMP MUST BE PROVIDED. ALONG THE ACCESSIBLE PATH OF TRAVEL, OPENINGS MUST NOT EXCEED 1/2-INCH IN WIDTH. VERTICAL CHANGES OF UP TO 1/2-INCH ARE PERMITTED ONLY IF THEY INCLUDES A 1/4-INCH BEVEL AT A SLOPE NOT STEEPER
- C. <u>ACCESSIBLE RAMPS</u> MUST NOT EXCEED A SLOPE OF 1:12 (8.3%) AND A RISE OF 30-INCHES. <u>LEVEL LANDINGS</u> MUST BE PROVIDED AT EACH END OF ACCESSIBLE RAMPS. LANDING MUST PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURES, AND MUST NOT EXCEED 1:50 (2.0%) SLOPE IN ANY DIRECTION. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS MUST HAVE A CLEAR LANDING OF A MINIMUM OF 60-INCHES BY 60-INCHES. <u>HAND RAILS</u> ON BOTH SIDES OF THE RAMP MUST BE PROVIDED ON AN ACCESSIBLE RAMP WITH A RISE GREATER THAN 6-INCHES.
- D. <u>ACCESSIBLE CURB RAMPS</u> MUST NOT EXCEED A SLOPE OF 1:12 (8.3%). WHERE <u>FLARED SIDES</u> ARE PROVIDED, THEY MUST NOT EXCEED 1:10 (10%) SLOPE. <u>LEVEL LANDING</u> MUST BE PROVIDED AT RAMPS TOP AT A MINIMUM OF 36-INCHES LONG (48-INCHES PREFERRED). IN ALTERATIONS, WHEN THERE IS NO LANDING AT THE TOP, <u>FLARE SIDES</u> SLOPES MUST NOT EXCEED A SLOPE OF 1:12 (8.3%).
- E. <u>DOORWAY LANDINGS</u> AREAS MUST BE PROVIDED ON THE EXTERIOR SIDE OF ANY DOOR LEADING TO AN ACCESSIBLE PATH OF TRAVEL. THIS LANDING MUST BE SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO FEWER THAN 60-INCHES (5 FEET) LONG, EXCEPT WHERE OTHERWISE CLEARLY PERMITTED BY ACCESSIBLE STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICC/ANSI A117.1-2009 AND OTHER REFERENCES INCORPORATED BY CODE).
   F. WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO
- F. WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF OR TO ACCESSIBLE COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, THE CONTRACTOR MUST VERIFY ALL EXISTING ELEVATIONS SHOWN ON THE PLAN. NOTE THAT TABLE 405.2 OF THE DEPARTMENT OF JUSTICE'S ADA STANDARDS FOR ACCESSIBLE DESIGN ALLOWS FOR STEEPER RAMP SLOPES, IN RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR IN ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS BEFORE COMMENCING ANY WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER
- FREE REGULATIONS AND THE ACCESSIBLE GUIDELINES.

  G. THE CONTRACTOR MUST VERIFY ALL OF THE SLOPES OF THE CONTRACTOR'S FORMS PRIOR TO POURING CONCRETE. IF ANY NON-CONFORMANCE EXISTS OR IS OBSERVED OR DISCOVERED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, PRIOR TO POURING CONCRETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND/OR REPLACE NON-CONFORMING CONCRETE AND/OR PAVEMENT SUFFACES.
- 4. IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION TO ENSURE SAME IS CONSISTENT WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCING CONSTRUCTION.

### DEMOLITION NOTES

OR ADJACENT OR NEAR TO THE SAME

- THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE
  CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO
  THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND
  ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
   THE CONTRACTOR MUST CONDUCT DEMOLITION/REMOVALS ACTIVITIES IN SUCH A MANNER AS TO ENSURE MINIMUM
  INTERFERENCE WITH ROADS, STREETS, SIDEWALKS, WALKWAYS, AND ALL OTHER ADJACENT FACILITIES. THE
  CONTRACTOR MUST OBTAIN ALL APPLICABLE PERMITS FROM THE APPROPRIATE GOVERNMENTAL AUTHORITY(IES)
- RIGHT-OF-WAY.

  3. WHEN DEMOLITION-RELATED ACTIVITIES IMPACT ROADWAYS AND/OR ROADWAY RIGHT-OF-WAY, THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFE PRACTICES IN CONFORMANCE WITH THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND T

PRIOR TO THE COMMENCEMENT OF ANY ROAD OPENING OR DEMOLITION ACTIVITIES IN OR ADJACENT TO THE

- CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), AND THE FEDERAL, STATE, AND LOCAL REGULATIONS.

  4. THE DEMOLITION (AND/OR REMOVALS) PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION AND TO IDENTIFY ONLY CONDITIONS REGARDING ITEMS TO BE DEMOLISHED, REMOVED, AND/OR TO REMAIN.
- A. THE CONTRACTOR MUST ALSO REVIEW ALL CONSTRUCTION DOCUMENTS AND INCLUDE WITHIN THE DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
   B. THIS PLAN IS NOT INTENDED TO AND DOES NOT PROVIDE DIRECTION REGARDING THE MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE EMPLOYED TO ACCOMPLISH THE WORK. ALL MEANS, METHODS, SEQUENCING, TECHNIQUES AND PROCEDURES TO BE USED MUST BE IN STRICT ACCORDANCE AND CONFORMANCE WITH ALL STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR MUST COMPLY WITH ALL OSHA AND OTHER SAFETY PRECAUTIONS NECESSARY TO PROVIDE A SAFE WORK SITE
- FOR THE CONTRACTOR AND THE PUBLIC.

  5. THE CONTRACTOR MUST PROVIDE ALL "METHODS AND MEANS" NECESSARY TO PREVENT MOVEMENT, SETTLEMENT, OR COLLAPSE OF EXISTING STRUCTURES, AND ANY OTHER IMPROVEMENTS THAT ARE REMAINING ON OR OFF SITE. THE CONTRACTOR, AT THE CONTRACTOR'S SOLE COST, MUST REPAIR ALL DAMAGE TO ALL ITEMS AND FEATURES THAT ARE TO REMAIN. CONTRACTOR MUST USE NEW MATERIAL FOR ALL REPAIRS. CONTRACTOR'S REPAIRS MUST INCLUDE THE RESTORATION OF ALL ITEMS AND FEATURES REPAIRED TO THEIR PRE-DEMOLITION CONDITION, OR BETTER. CONTRACTOR MUST PERFORM ALL REPAIRS AT THE CONTRACTOR'S SOLE EXPENSE
- 6. ENGINEER OF RECORD AND/OR BOHLER ARE NOT RESPONSIBLE FOR JOB SITE SAFETY OR SUPERVISION. THE CONTRACTOR MUST PROCEED WITH THE DEMOLITION IN A SYSTEMATIC AND SAFE MANNER, COMPLYING WITH ALL OSHA REQUIREMENTS, TO ENSURE PUBLIC AND CONTRACTOR SAFETY AND SAFETY TO ALL PROPERTY ON THE SITE
- 7. THE CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY, WHICH MUST INCLUDE, BUT IS NOT LIMITED TO, THE INSTALLATION AND MAINTENANCE OF BARRIERS, FENCING, OTHER APPROPRIATE AND/OR NECESSARY SAFETY FEATURES AND ITEMS NECESSARY TO PROTECT THE PUBLIC FROM AREAS OF CONSTRUCTION AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST SAFEGUARD THE SITE AS NECESSARY TO PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE ENTRY OF ALL UNAUTHORIZED PERSONS AT ANY TIME, TO OR NEAR THE DEMOLITION
- PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY, THE CONTRACTOR MUST, IN WRITING, RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS AND/OR SPECIFICATIONS, ALL CONCERNS OR QUESTIONS REGARDING THE APPLICABLE SAFETY STANDARDS, AND/OR THE SAFETY OF THE CONTRACTOR AND/OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT. ANY SUCH CONCERNS MUST BE CONVEYED TO THE ENGINEER OF RECORD AND/OR BOHLER, IN WRITING AND MUST ADDRESS ALL ISSUES AND ITEMS RESPONDED TO, BY THE ENGINEER OF RECORD AND/OR BY BOHLER, IN WRITING. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND
- 9. THE CONTRACTOR MUST BECOME FAMILIAR WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AND/OR DISCONNECTION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED, REMOVED AND/OR ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES LAWS, ORDINANCES AND CODES.
- 10. PRIOR TO COMMENCING ANY DEMOLITION, THE CONTRACTOR MUST:
   A. OBTAIN ALL REQUIRED PERMITS AND MAINTAIN THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND ALL PUBLIC AGENCIES WITH JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK, AND DEMOLITION
- B. NOTIFY, AT A MINIMUM, THE MUNICIPAL ENGINEER, DESIGN ENGINEER, AND LOCAL SOIL CONSERVATION JURISDICTION, AT LEAST 72 BUSINESS HOURS PRIOR TO THE COMMENCEMENT OF WORK.

  C. INSTALL THE REQUIRED SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE DISTURBANCE, AND
- MAINTAIN SAID CONTROLS UNTIL SITE IS STABILIZED

  D. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR MUST CALL THE STATE ONE-CALL DAMAGE PROTECTION SYSTEM FOR UTILITY MARK OUT, IN ADVANCE OF ANY EXCAVATION.

  E. LOCATE AND PROTECT ALL UTILITIES AND SERVICES. INCLUDING BUT NOT LIMITED TO GAS. WATER. ELECTRIC.
- E. LOCATE AND PROTECT ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN AND ADJACENT TO THE LIMITS OF PROJECT ACTIVITIES. THE CONTRACTOR MUST USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL UNDERGROUND UTILITIES.
   F. PROTECT AND MAINTAIN IN OPERATION, ALL ACTIVE UTILITIES AND SYSTEMS THAT ARE NOT BEING REMOVED
- DURING ANY DEMOLITION ACTIVITIES.

  G. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) FOR THE TEMPORARY OR PERMANENT TERMINATION OF SERVICE REQUIRED BY THE PROJECT PLANS AND SPECIFICATIONS REGARDING THE METHODS AND MEANS TO CONSTRUCT SAME. THESE ARE NOT THE ENGINEER OF RECORD'S RESPONSIBILITY. IN
- THE EVENT OF ABANDONMENT, THE CONTRACTOR MUST PROVIDE THE UTILITY ENGINEER AND OWNER WITH IMMEDIATE WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTIONAL AND UTILITY COMPANY REQUIREMENTS.

  H. ARRANGE FOR AND COORDINATE WITH THE APPLICABLE UTILITY SERVICE PROVIDER(S) REGARDING WORKING "OFF-PEAK" HOURS OR ON WEEKENDS AS NECESSARY OR AS REQUIRED TO MINIMIZE THE IMPACT ON, OF AND TO
- THE AFFECTED PARTIES. WORK REQUIRED TO BE PERFORMED "OFF-PEAK" IS TO BE PERFORMED AT NO ADDITIONAL COST TO THE OWNER.

  I. IN THE EVENT THE CONTRACTOR DISCOVERS ANY HAZARDOUS MATERIAL, THE REMOVAL OF WHICH IS NOT ADDRESSED IN THE PROJECT PLANS AND SPECIFICATIONS, OR THE CONTRACT WITH THE OWNER/DEVELOPER, THE CONTRACTOR MUST IMMEDIATELY CEASE ALL WORK IN THE AREA OF DISCOVERY, AND IMMEDIATELY NOTIFY,
- MATERIALS TO PURSUE PROPER AND COMPLIANT REMOVAL OF SAME.

  11. THE CONTRACTOR MUST ENSURE THAT ANY EXISTING ASBESTOS-CONTAINING MATERIALS ENCOUNTERED ARE PROPERLY REMOVED FROM THE SUBJECT PREMISES AND ARE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS, PRIOR TO THE COMMENCEMENT OF DEMOLITION ON SITE AND MUST PERFORM ALL
- AGENCY NOTIFICATIONS AS REQUIRED, AT THE CONTRACTOR'S SOLE EXPENSE.

  12. THE CONTRACTOR MUST NOT PERFORM ANY EARTH MOVEMENT ACTIVITIES, DEMOLITION OR REMOVAL OF FOUNDATION WALLS, FOOTINGS, OR OTHER MATERIALS WITHIN THE LIMITS OF DISTURBANCE, UNLESS SAME IS IN STRICT ACCORDANCE AND CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, OR PURSUANT TO THE
- WRITTEN DIRECTION OF THE OWNER'S STRUCTURAL OR GEOTECHNICAL ENGINEER.

  13. DEMOLITION ACTIVITIES AND EQUIPMENT MUST NOT USE OR INCLUDE AREAS OUTSIDE THE DEFINED PROJECT LIMIT LINE, WITHOUT SPECIFIC WRITTEN PERMISSION AND AUTHORITY OF AND FROM THE OWNER AND ALL GOVERNMENTAL AGENCIES WITH ILLIPISDICTION
- 14. THE CONTRACTOR MUST BACKFILL ALL EXCAVATION RESULTING FROM, OR INCIDENTAL TO, DEMOLITION ACTIVITIES. BACKFILL MUST BE ACCOMPLISHED WITH APPROVED BACKFILL MATERIALS AND MUST BE SUFFICIENTLY COMPACTED TO SUPPORT ALL NEW IMPROVEMENTS AND MUST BE PERFORMED IN COMPLIANCE WITH THE RECOMMENDATIONS AND GUIDANCE ARTICULATED IN THE GEOTECHNICAL REPORT. BACKFILLING MUST OCCUR IMMEDIATELY AFTER DEMOLITION ACTIVITIES AND MUST BE PERFORMED SO AS TO PREVENT WATER ENTERING THE EXCAVATION. FINISHED SURFACES MUST BE GRADED TO PROMOTE POSITIVE DRAINAGE. THE CONTRACTOR IS RESPONSIBLE FOR COMPACTION TESTING AND MUST SUBMIT SUCH REPORTS AND RESULTS TO THE ENGINEER OF RECORD AND THE OWNER.
- 15. EXPLOSIVES MUST NOT BE USED WITHOUT PRIOR WRITTEN CONSENT FROM BOTH THE OWNER AND ALL APPLICABLE, NECESSARY AND REQUIRED GOVERNMENTAL AUTHORITIES. PRIOR TO COMMENCING ANY EXPLOSIVE PROGRAM AND/OR ANY DEMOLITION ACTIVITIES, THE CONTRACTOR MUST ENSURE AND OVERSEE THE INSTALLATION OF ALL OF THE REQUIRED PERMIT AND EXPLOSIVE CONTROL MEASURES THAT THE FEDERAL, STATE, AND LOCAL GOVERNMENTS REQUIRE. THE CONTRACTOR IS ALSO RESPONSIBLE TO CONDUCT AND PERFORM ALL INSPECTION AND SEISMIC VIBRATION TESTING THAT IS REQUIRED TO MONITOR THE EFFECTS ON ALL LOCAL STRUCTURES AND THE LIKE.
- IN ACCORDANCE WITH FEDERAL, STATE, AND/OR LOCAL STANDARDS, THE CONTRACTOR MUST USE DUST CONTROL MEASURES TO LIMIT AIRBORNE DUST AND DIRT RISING AND SCATTERING IN THE AIR. AFTER THE DEMOLITION IS COMPLETE, THE CONTRACTOR MUST CLEAN ALL ADJACENT STRUCTURES AND IMPROVEMENTS TO REMOVE ALL DUST AND DEBRIS WHICH THE DEMOLITION OPERATIONS CAUSE. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL ADJACENT AREAS TO THEIR "PRE-DEMOLITION" CONDITION AT CONTRACTOR'S SOLE COST.
   PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES, AND EXCEPT FOR EDGE OF BUTT JOINTS, MUST EXTEND TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE
- SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS OUTSIDE OF APPROVED AREAS WILL NOT BE PERMITTED, INCLUDING BUT NOT LIMITED TO, THE PUBLIC RIGHT-OF-WAY.

  18. THE CONTRACTOR MUST MAINTAIN A RECORD SET OF PLANS WHICH INDICATES THE LOCATION OF EXISTING UTILITIES THAT ARE CAPPED, ABANDONED IN PLACE, OR RELOCATED DUE TO DEMOLITION ACTIVITIES. THIS RECORD DOCUMENT MUST BE PREPARED IN A NEAT AND WORKMAN-LIKE MANNER AND TURNED OVER TO THE OWNER/DEVELOPER UPON COMPLETION OF THE WORK, ALL OF WHICH IS AT THE CONTRACTOR'S SOLE COST.
- 19. THE CONTRACTOR MUST EMPTY, CLEAN AND REMOVE FROM THE SITE ALL UNDERGROUND STORAGE TANKS, IF ENCOUNTERED, IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS, PRIOR TO CONTINUING CONSTRUCTION IN THE AREA AROUND THE TANK WHICH EMPTYING, CLEANING AND REMOVAL ARE AT THE CONTRACTOR'S SOLE COST.

# LIGHTING NOTES (Rev. 1/20

- THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE
  CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM
  AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND
  ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
   THE LIGHTING CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE PLANS,
  INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL AGENCY AND
- GOVERNMENTAL REGULATIONS.

  3. THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER. ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND
- LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
  4. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDLES (FC).
  5. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND RE-LAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT

IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN. UPON COMPLETION AND

OWNER'S ACCEPTANCE OF THE WORK, THE ABOVE RESPONSIBILITIES BECOMES SOLELY THE OWNER'S.

6. THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES. POWER SYSTEM, CONDUITS, WIRING AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECT'S, MECHANICAL ENGINEER'S AND/OR LIGHTING CONTRACTOR'S RESPONSIBILITY, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THE LIGHTING CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES.
7. THE CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE,

UTILITIES, OR OTHER STRUCTURE(S) TO THE ENGINEER OF RECORD'S ATTENTION, PRIOR TO THE COMMENCEMENT OF

8. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.

### SITE LAYOUT NOTES

OMITTED.

OMITTED

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- COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.

  2. PRIOR TO THE COMMENCEMENT OF GENERAL CONSTRUCTION, THE CONTRACTOR MUST INSTALL SOIL EROSION CONTROL AND ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL
- ANY STORMWATER POLLUTION PREVENTION PLAN (SWPPP) MEASURES NECESSARY, AS INDICATED ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN AND IN ACCORDANCE WITH APPLICABLE AND/OR APPROPRIATE AGENCIES' GUIDELINES TO PREVENT SEDIMENT AND/OR LOOSE DEBRIS FROM WASHING ONTO ADJACENT PROPERTIES OR THE RIGHT OF WAY.
  - ALL DIRECTIONAL/TRAFFIC SIGNING AND PAVEMENT STRIPING MUST CONFORM TO THE LATEST STANDARDS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND ANY APPLICABLE STATE OR LOCALLY APPROVED SUPPLEMENTS, GUIDELINES, RULES, REGULATIONS, STANDARDS AND THE LIKE.
     THE LOCATIONS OF PROPOSED UTILITY POLES AND TRAFFIC SIGNS SHOWN ON THE PLANS ARE SCHEMATIC AND PRELIMINARY.
  - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR FIELD-VERIFYING THEIR LOCATION. THE CONTRACTOR MUST COORDINATE THE RELOCATION OF TRAFFIC SIGNS WITH THE ENTITY WITH JURISDICTION OVER THE PROJECT.

    5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN
  - 5. ALL DIMENSIONS SHOWN ARE TO BOTTOM FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, EXCEPT WHEN DIMENSION IS TO A PROPERTY LINE, STAKE OUT OF LOCATIONS OF INLETS, LIGHT POLES, ETC. MUST BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILS. UNLESS NOTED CLEARLY OTHERWISE.

# SOIL EROSION & SEDIMENT CONTROL PLAN NOTES (Rev. 1/2020)

- 1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
  - OMITTED.
     OMITTED.
     OMITTED.
     OMITTED.

14 THE CONTRACTOR MUST REFER TO GRADING PLANS FOR ADDITIONAL INFORMATION

- 6. OMITTED.
  7. OMITTED.
  8. OMITTED.
- OMITTED.
   THIS PLAN REPRESENTS THE MINIMUM LEVEL OF IMPLEMENTATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROL
  FACILITIES, MEASURES AND STRUCTURES. ADDITIONAL FACILITIES, MEASURES AND STRUCTURES MUST BE INSTALLED WHERE
  NECESSARY TO COMPLY WITH ALL APPLICABLE CODES AND STANDARDS AND/OR TO PREVENT ANY, INCLUDING THE INCIDENTAL
- DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.

  13. THE CONTRACTOR MUST PROTECT ALL EXISTING TREES AND SHRUBS. THE CONTRACTOR MUST REFER TO THE LANDSCAPE AND/OR DEMOLITION PLAN(S) FOR TREE PROTECTION. FENCE LOCATIONS AND DETAILS.
- THE CONTRACTOR MUST CLEAN EXISTING AND PROPOSED DRAINAGE STRUCTURES AND INTERCONNECTING PIPES ON OR
  OFF-SITE AS THE JURISDICTIONAL AGENCY REQUIRES, BOTH AT THE TIME OF SITE STABILIZATION AND AT END OF PROJECT.
   SOIL EROSION CONTROL MEASURES MUST BE ADJUSTED OR RELOCATED BY THE CONTRACTOR AS IDENTIFIED DURING SITE
  OBSERVATION IN ORDER TO MAINTAIN THE COMPLETE EFFECTIVENESS OF ALL CONTROL MEASURES.
- OMITTED.
   EROSION CONTROL MEASURES MUST CONFORM TO THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL UNLESS OTHERWISE NOTED, OR AS UNLESS OTHERWISE CLEARLY AND SPECIFICALLY DIRECTED BY ENGINEER. INSTALLATION OF EROSION CONTROL, CLEARING, AND SITE WORK MUST BE PERFORMED EXACTLY AS INDICATED IN
- THE EROSION CONTROL CONSTRUCTION NOTES.

  19. REFER TO THE APPROVED EROSION AND SEDIMENT CONTROL PLANS FOR THE DISTURBED LAND AREA OF THIS SITE.

  20. REFER TO THE APPROVED EROSION AND SEDIMENT CONTROL PLANS FOR THE EROSION CONTROL MEASURES PROPOSED FOR
- 1 HIS SITE.

  21. INSTALLATION OF EROSION CONTROL DEVICES MUST BE IN ACCORDANCE WITH ALL OF THE MANUFACTURER'S RECOMMENDATIONS AND APPROVED DETAILS AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLANS.
- 22. CONTRACTOR MUST INSPECT EROSION CONTROL MEASURES WEEKLY AND AFTER EVERY RAIN EVENT. CONTRACTOR MUST IMMEDIATELY CLEAR AND REMOVE ANY SILT AS RECOMMENDED BY THE APPROVED DETAILS ON THE APPROVED EROSION AND SEDIMENT CONTROL PLANS OR AS OUTLINED IN THE SPECIFICATIONS LISTED IN NOTE #18.
  23. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, CONTRACTOR MUST COMPLETE PERMANENT OR TEMPORARY
- STABILIZATION WITHIN: A) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1), AND B) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING. WHEN AREAS ARE DISTURBED AFTER THE GROWING SEASON, CONTRACTOR MUST STABILIZE SAME WITH GEOTEXTILE FABRIC AND MAINTAIN SAME IN STRICT ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

  24. CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF REQUIRED BY THE ENGINEER OR THE LOCAL
- 24. CONTRACTOR MUST INSTALL ADDITIONAL EROSION CONTROL MEASURES IF REQUIRED BY THE ENGINEER OR THE LOCAL EROSION AND SEDIMENT CONTROL INSPECTOR, TO PREVENT THE INCIDENTAL AND ANY DISCHARGE OF SILT-LADEN RUNOFF FROM EXITING THE SITE.
- 25. THE CONTRACTOR MUST BE RESPONSIBLE FOR ALL INSPECTING AND MAINTAINING ALL EROSION CONTROL MEASURES ON THE SITE UNTIL PERMANENT PAVING AND TURF/LANDSCAPING IS ESTABLISHED AND UPON APPROVAL OF THE LOCAL EROSION AND SEDIMENT CONTROL INSPECTOR. THE COSTS OF INSTALLING AND MAINTAINING THE EROSION CONTROL MEASURES MUST BE INCLUDED IN THE BID PRICE FOR THE SITE WORK AND THE CONTRACTOR IS RESPONSIBLE FOR ALL SUCH COSTS.
- CONTRACTOR MUST CONTINUE TO MAINTAIN ALL EROSION CONTROL MEASURES UNTIL THE COMPLETION OF CONSTRUCTION AND
  THE ESTABLISHMENT OF VEGETATION AND UPON THE APPROVAL OF THE LOCAL EROSION AND SEDIMENT CONTROL INSPECTOR.
   CONTRACTOR MUST REMOVE EROSION CONTROL MEASURES, SILT AND DEBRIS AFTER ESTABLISHING PERMANENT VEGETATION
  COVER OR OTHER SPECIFIED METHOD OF STABILIZATION AND UPON THE APPROVAL OF THE LOCAL EROSION AND SEDIMENT
- CONTROL INSPECTOR.

  28. WITHOUT WRITTEN APPROVAL OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) OR LOCAL SOIL CONSERVATION
  DISTRICT (SCD), UNSTABILIZED AREAS OF DISTURBANCE THROUGHOUT THE SITE MUST NOT BE MORE THAN AS APPROVED BY
  MDE OR THE LOCAL SCD AT ANY TIME. ADDITIONAL INSPECTION REQUIREMENTS AS STIPULATED BY THE JURISDICTIONAL AGENCY

MUST BE ADOPTED AS REQUIRED FOR DISTURBANCE MORE THAN AS APPROVED BY MDE OR THE LOCAL SCD.

### DRAINAGE AND UTILITY NOTES

CONSTRUCTION, MUST RESOLVE SAME.

(Rev.1/2020)

(Rev. 1/2020)

THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY. THE CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.

- 2. LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE <u>APPROXIMATE</u>, AND THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM THOSE LOCATIONS AND SERVICES WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCING ANY CONSTRUCTION OR EXCAVATION. THE CONTRACTOR MUST INDEPENDENTLY VERIFY AND CONFIRM ALL SANITARY CONNECTION POINTS AND ALL OTHER UTILITY SERVICE CONNECTION POINTS IN THE FIELD, PRIOR TO COMMENCING ANY CONSTRUCTION. THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, ERRORS AND OMISSIONS IN WRITING, TO THE ENGINEER OF RECORD.
- THE CONTRACTOR MUST REPORT ALL DISCREPANCIES, ERRORS AND OMISSIONS IN WRITING, TO THE ENGINEER OF RECORD.
   THE CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE, REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL OF THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES WHICH OCCUR DURING CONSTRUCTION, AT NO COST TO THE OWNER AND AT CONTRACTOR'S SOLE COST AND EXPENSE. THE CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES WHICH OCCURS DURING CONSTRUCTION.
   THE CONTRACTOR MUST FIELD VERIFY THE PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND
- UTILITIES BY USING A TEST PIT TO CONFIRM EXACT DEPTH, PRIOR TO COMMENCEMENT OF CONSTRUCTION.

  5. STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON ARCHITECTURAL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING LOCATIONS OF SAME BASED UPON FINAL ARCHITECTURAL PLANS.

  6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR EXACT
- 5. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING SITE PLAN DOCUMENTS AND ARCHITECTURAL PLANS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS, GREASE TRAP REQUIREMENTS AND DETAILS, DOOR ACCESS, AND EXTERIOR GRADING. THE ARCHITECT WILL DETERMINE THE UTILITY SERVICE SIZES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITY SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS OF THE APPLICABLE JURISDICTION AND REGULATORY AGENCIES AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY/SERVICE. WHERE A CONFLICT(S) EXISTS BETWEEN THESE DOCUMENTS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER OF RECORD, IN WRITING, AND PRIOR TO
- ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE EXACTLY AS PER THE
  RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND THE CONTRACTOR MUST COORDINATE SAME WITH THE
  APPLICABLE UTILITY COMPANY SPECIFICATIONS. WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS
  FILL AND COMPACTION MUST, AT A MINIMUM, COMPLY WITH THE STATE DOT REQUIREMENTS AND SPECIFICATIONS AND
  CONSULTANT HAS NO LIABILITY OR RESPONSIBILITY FOR OR AS RELATED TO FILL, COMPACTION AND BACKFILL.
   DURING THE INSTALLATION OF SANITARY, STORM, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A
- CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE, IN ANY RESPECT, FROM THE INFORMATION CONTAINED IN THESE PLANS. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE SITE PLAN, WHICH THE CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER IMMEDIATELY UPON THE COMPLETION OF WORK.

  9. THE CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SANITARY, WATER AND STORM SYSTEMS, ARE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND OR STATE DOT DETAILS AS APPLICABLE. THE CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE
- AGENCY WITH JURISDICTION OVER SAME.

  10. FINAL LOCATIONS OF PROPOSED UTILITY POLES, AND/ OR POLES TO BE RELOCATED ARE AT THE SOLE DISCRETION OF THE RESPECTIVE UTILITY COMPANY, REGARDLESS OF WHAT THIS PLAN DEPICTS.
- RESPECTIVE UTILITY COMPANY, REGARDLESS OF WHAT THIS PLAN DEPICTS.

  11. WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY.

  THE CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VAULT, PRIOR
  TO COMMENCING CONSTRUCTION.

Andrew G. Stine, P.E.
DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, email=astine@bohlereng.com, c=US Date: 2022.05.23 14:06:36 -04'00'

OWNER: DEVELOPER:

POTOMAC ENERGY HOLDINGS, LLC DASH-IN
PO BOX 2810 102 CENTENNIAL STREET, STE. 100
LA PLATA, MD 20646 LA PLATA, MD 20645
CONTACT: JASON BELT CONTACT: JASON BELT
PHONE: 240-320-6448 PHONE: 240-320-6448

TAX MAP: 24 GRID: 24 PARCEL: 311
ZONED: B-2
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO.
SECTION/AREA: N/A
DEED #
11525 / 00400

**FILE NO. SDP-21-009** 

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV DATE COMMENT DRAWN BY CHECKED BY



APPROVED FOR CONSTRUCTION

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENC REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCT DOCUMENT UNLESS INDICATED OTHERWISE.

 CHECKED BY:
 RM:

 DATE:
 5/5/2

 CAD I.D.:
 MD132045-SDP-3.DW0

 PROJECT:

SIT

PROJECT No.:

DRAWN BY:

SITE DEVELOPMENT PLAN

DASH IN

4205 MONTGOMERY ROAD
(MD ROUTE 103)
ELLICOTT CITY, MD 21043
TM 24, GRID 24, PARCEL 311
HOWARD COUNTY
2ND ELECTION DISTRICT

BOHLER /

901 DULANEY VALLEY ROAD, SUITE 80
TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

ANDREWG, STINE

PROFESSIONAL ENGINEER

MARY AND LICENSE NO. 37687

PROFESSIONAL GEB THE CATION

I, ANDREW G, STINE, HEREBY CERTHEY THAT HESE

DOCUMENTS WERE PREPARED OF APPROFESSIONAL ENGINEER

THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER

UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO: 37687, EXPIRATION DATE: 7/12/23

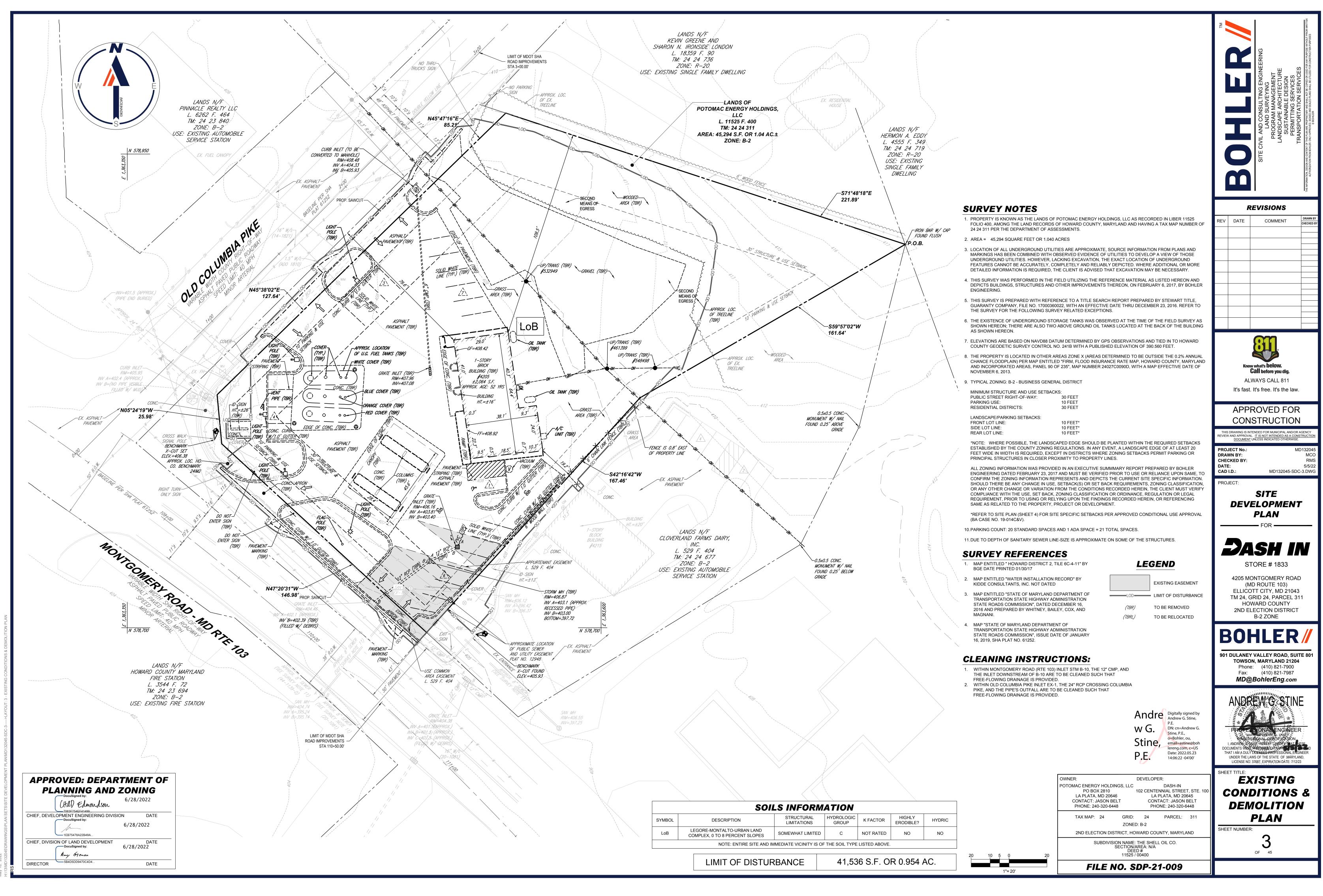
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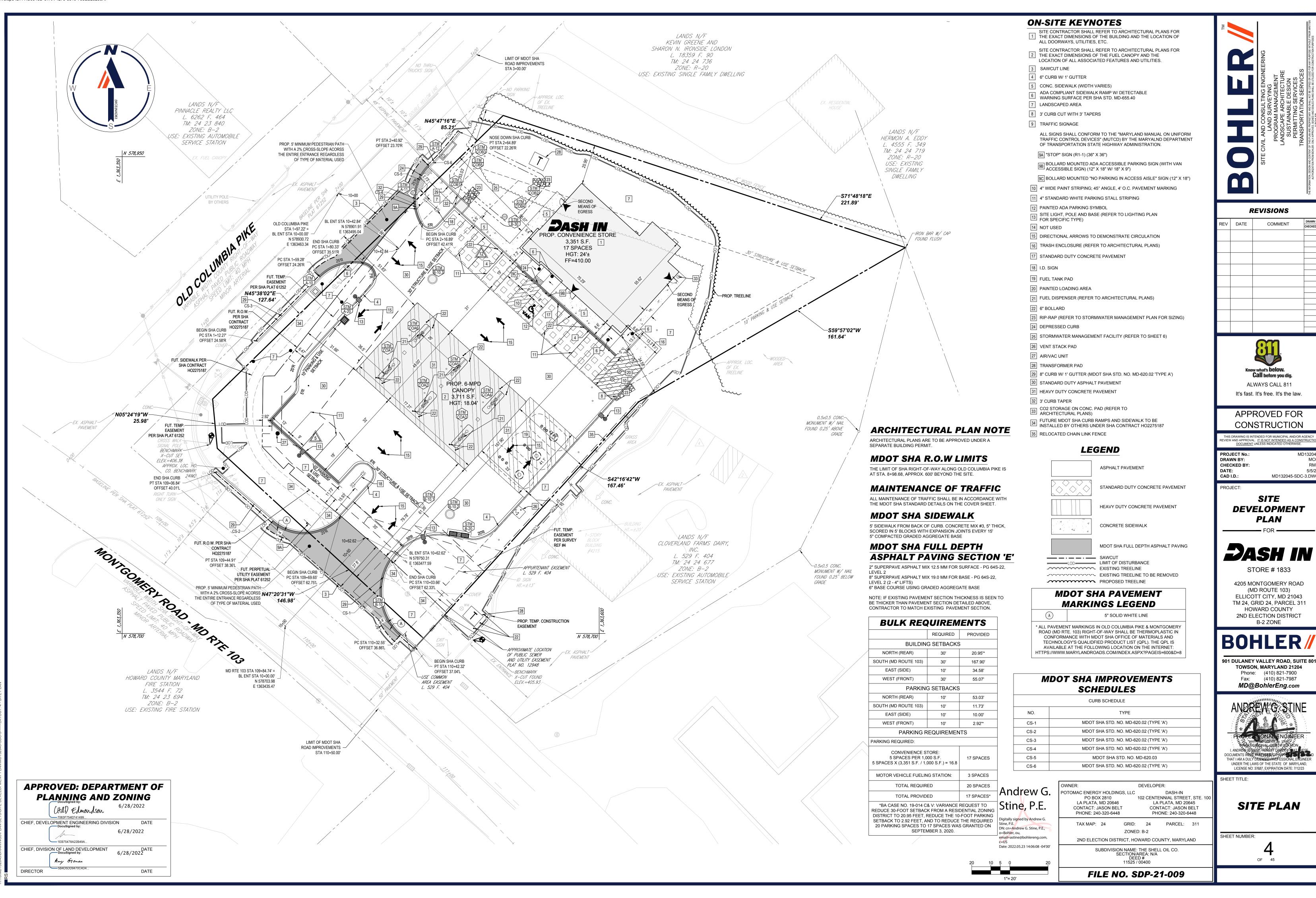
GENERAL NOTES

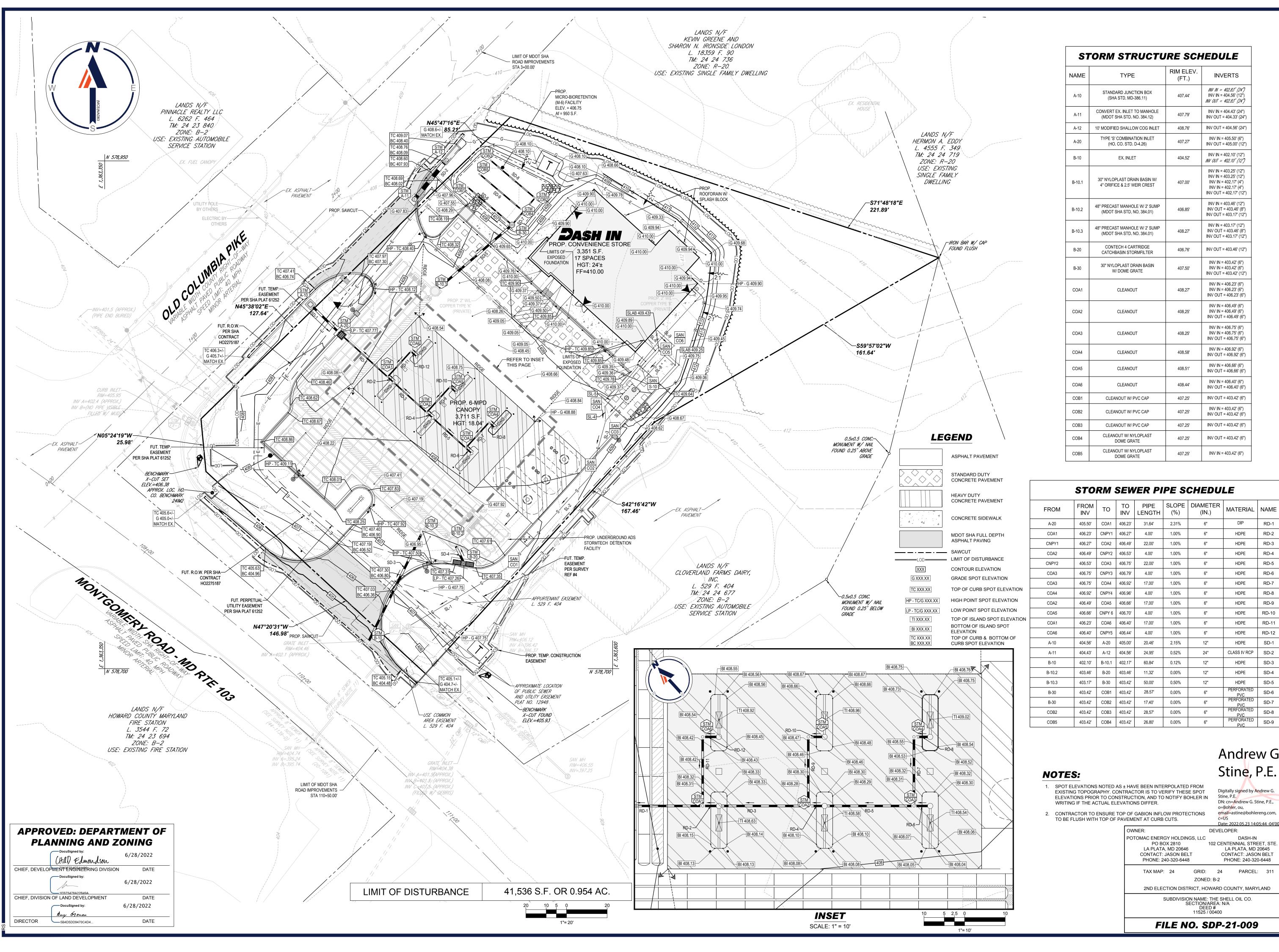
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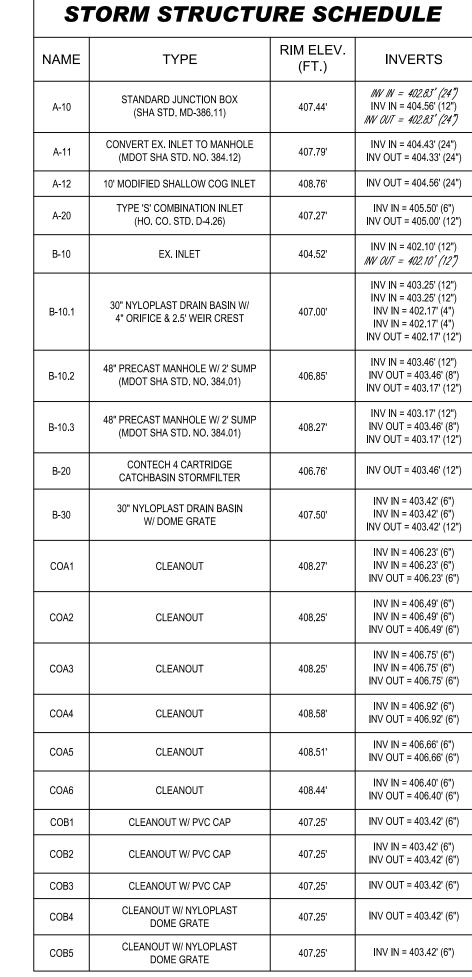
BER: 2 OF 45

18. 2022









FROM	FROM INV	то	TO INV	PIPE LENGTH	SLOPE (%)	DIAMETER (IN.)	MATERIAL	NAME
A-20	405.50'	COA1	406.23'	31.64'	2.31%	6"	DIP	RD-1
COA1	406.23'	CNPY1	406.27'	4.00'	1.00%	6"	HDPE	RD-2
CNPY1	406.27'	COA2	406.49'	22.00'	1.00%	6"	HDPE	RD-3
COA2	406.49'	CNPY2	406.53'	4.00'	1.00%	6"	HDPE	RD-4
CNPY2	406.53'	COA3	406.75'	22.00'	1.00%	6"	HDPE	RD-5
COA3	406.75'	CNPY3	406.79'	4.00'	1.00%	6"	HDPE	RD-6
COA3	406.75'	COA4	406.92'	17.00'	1.00%	6"	HDPE	RD-7
COA4	406,92'	CNPY4	406.96'	4.00'	1.00%	6"	HDPE	RD-8
COA2	406,49'	COA5	406.66'	17,00'	1.00%	6"	HDPE	RD-9
COA5	406.66'	CNPY 6	406.70'	4.00'	1.00%	6"	HDPE	RD-10
COA1	406.23'	COA6	406.40'	17.00'	1.00%	6"	HDPE	RD-11
COA6	406.40'	CNPY5	406.44'	4.00'	1.00%	6"	HDPE	RD-12
A-10	404.56'	A-20	405.00'	20.46'	2.15%	12"	HDPE	SD-1
A-11	404.43'	A-12	404.56'	24.95'	0.52%	24"	CLASS IV RCP	SD-2
B-10	402.10'	B-10.1	402.17'	60.84'	0.12%	12"	HDPE	SD-3
B-10.2	403.46'	B-20	403.46'	11.32'	0.00%	12"	HDPE	SD-4
B-10.3	403.17'	B-30	403.42'	50.00'	0.50%	12"	HDPE	SD-5
B-30	403.42'	COB1	403.42'	28.57'	0.00%	6"	PERFORATED PVC	SD-6
B-30	403.42'	COB2	403.42'	17.40'	0.00%	6"	PERFORATED PVC	SD-7
COB2	403.42'	COB3	403.42'	28.57'	0.00%	6"	PERFORATED PVC	SD-8
0005	400 401	0004	400 401	00.001	0.000/	OII.	PERFORATED	00.0

- 1. SPOT ELEVATIONS NOTED AS ± HAVE BEEN INTERPOLATED FROM EXISTING TOPOGRAPHY. CONTRACTOR IS TO VERIFY THESE SPOT ELEVATIONS PRIOR TO CONSTRUCTION, AND TO NOTIFY BOHLER IN
- 2. CONTRACTOR TO ENSURE TOP OF GABION INFLOW PROTECTIONS

Stine, P.E. DN: cn=Andrew G. Stine, P.E., email=astine@bohlereng.com,

Andrew G.

Stine, P.E.

Digitally signed by Andrew G.

DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE. 1

LA PLATA, MD 200 CONTACT: JASON I PHONE: 240-320-6	646 BELT	LA CON	A PLATA, MD 20 NTACT: JASON IONE: 240-320-6	645 BELT	
TAX MAP: 24	GRID:	24	PARCEL:	311	
	ZONED:	B-2			
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND					
SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400					

**FILE NO. SDP-21-009** 

REVISIONS					
REV	DATE	COMMENT	DRAWN BY		
KLV	DAIL	COMMENT	CHECKED B		



It's fast. It's free. It's the law.

# APPROVED FOR CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUCT DOCUMENT</u> UNLESS INDICATED OTHERWISE.

PROJECT No.: DRAWN BY: DATE: CAD I.D.: MD132045-SDC-3.DWG

PROJECT:

SITE DEVELOPMENT

PLAN



STORE # 1833 4205 MONTGOMERY ROAD

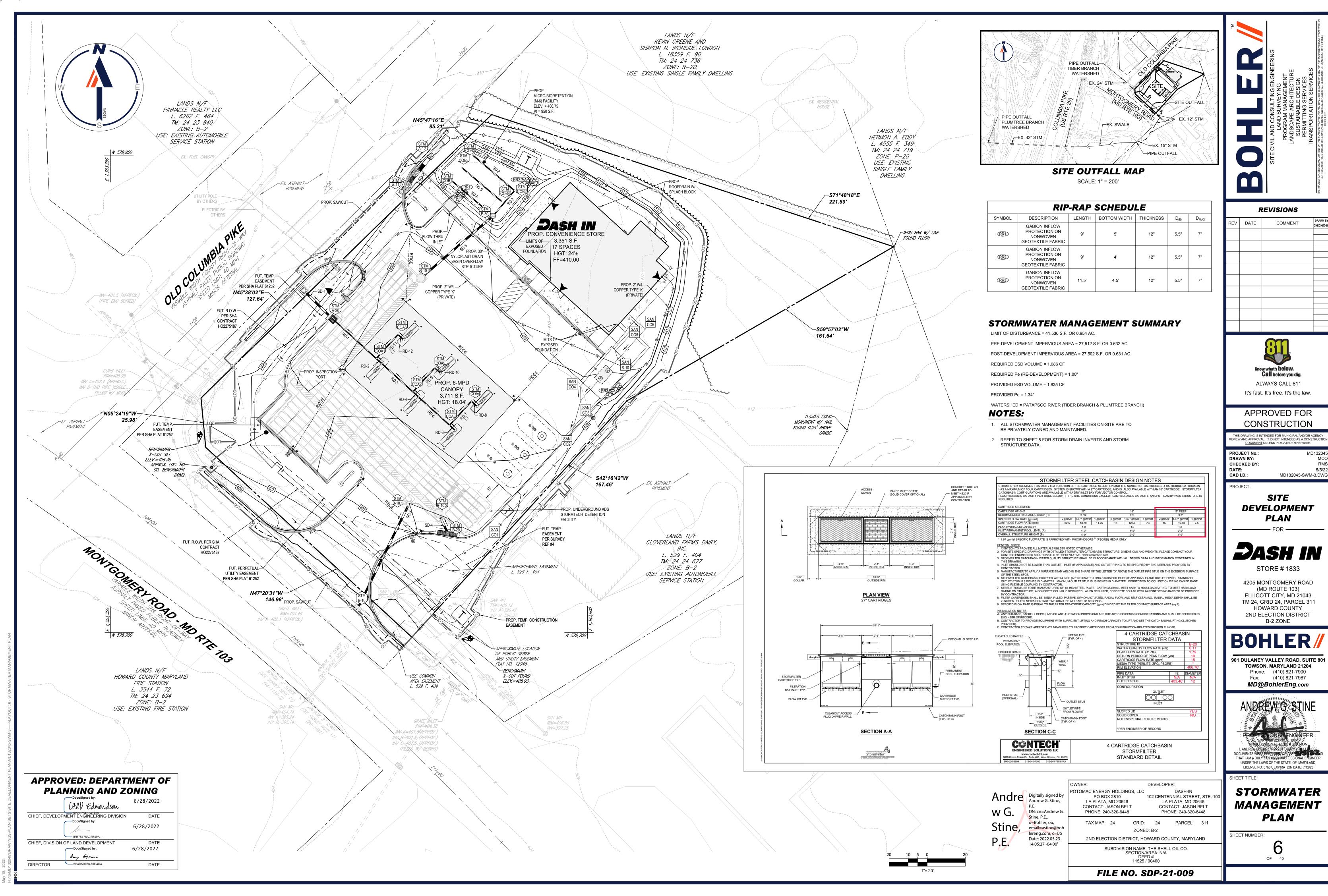
(MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

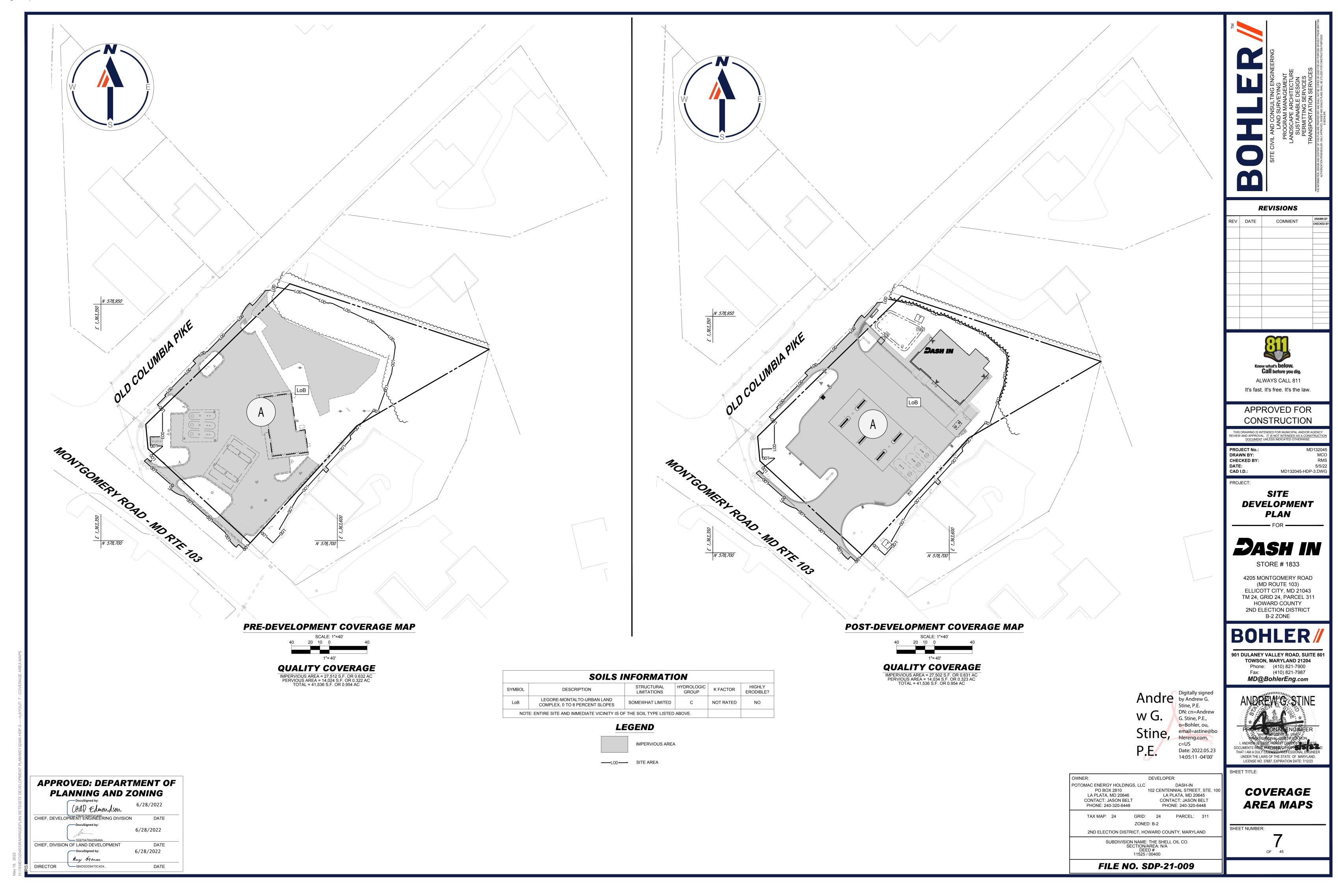
901 DULANEY VALLEY ROAD, SUITE 801 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

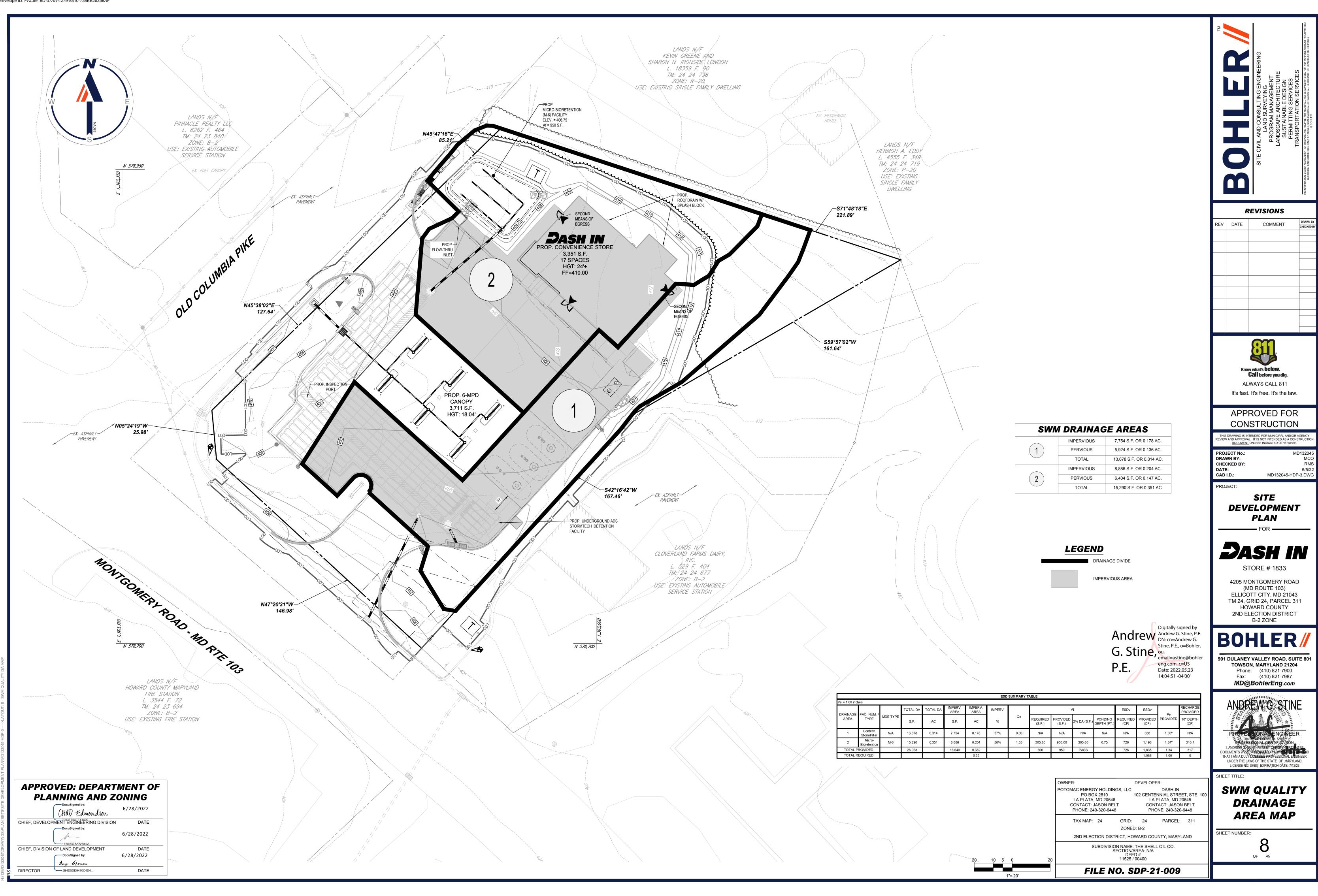


**GRADING PLAN** 

SHEET NUMBER:







APPROVED: DEPARTMENT OF

PLANNING AND ZONING

DATE

DATE

6/28/2022

6/28/2022 6/28/2022

CHAD Edmondson

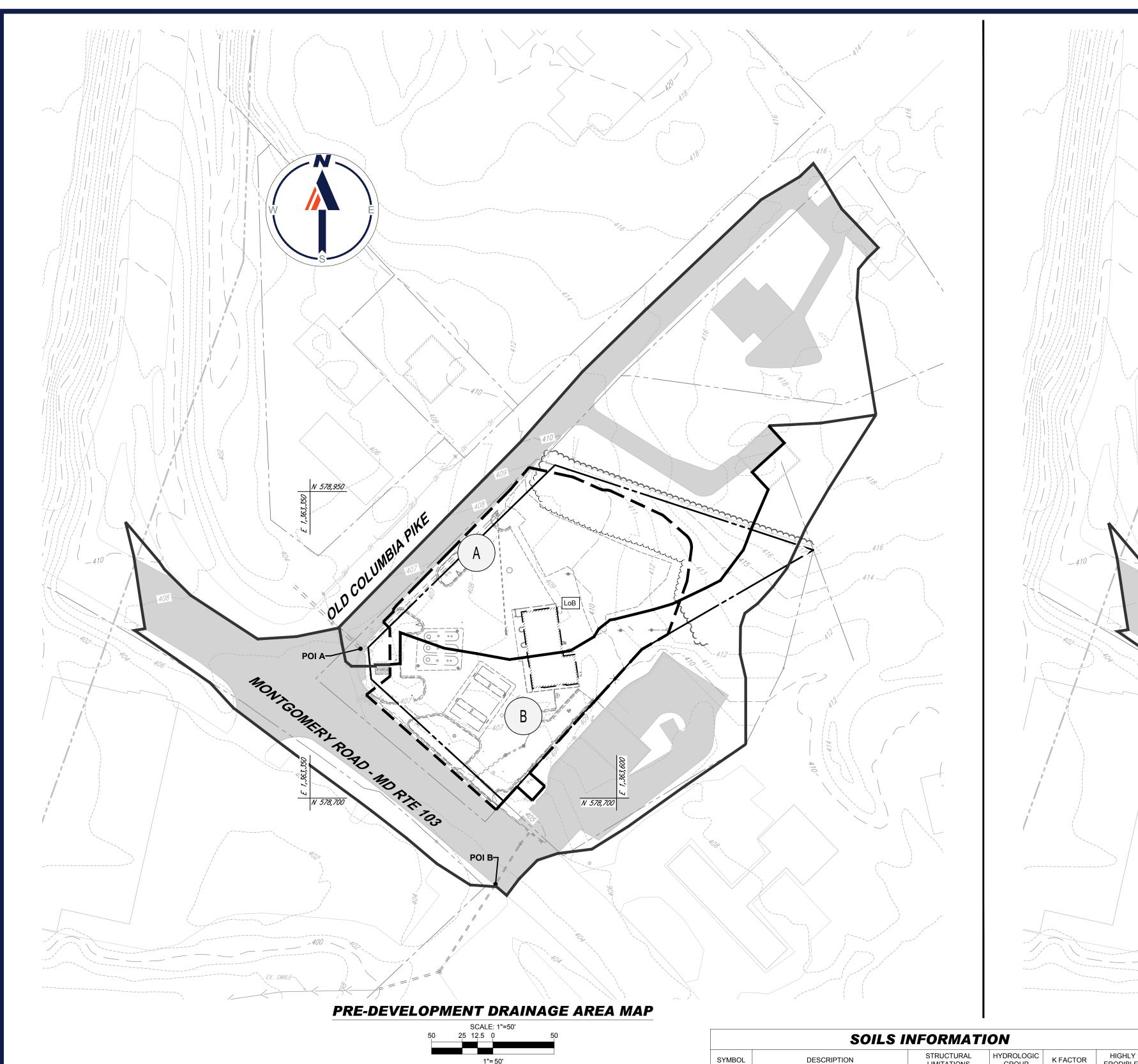
CHIEF, DEVELOPMENT ENGINEERING DIVISION

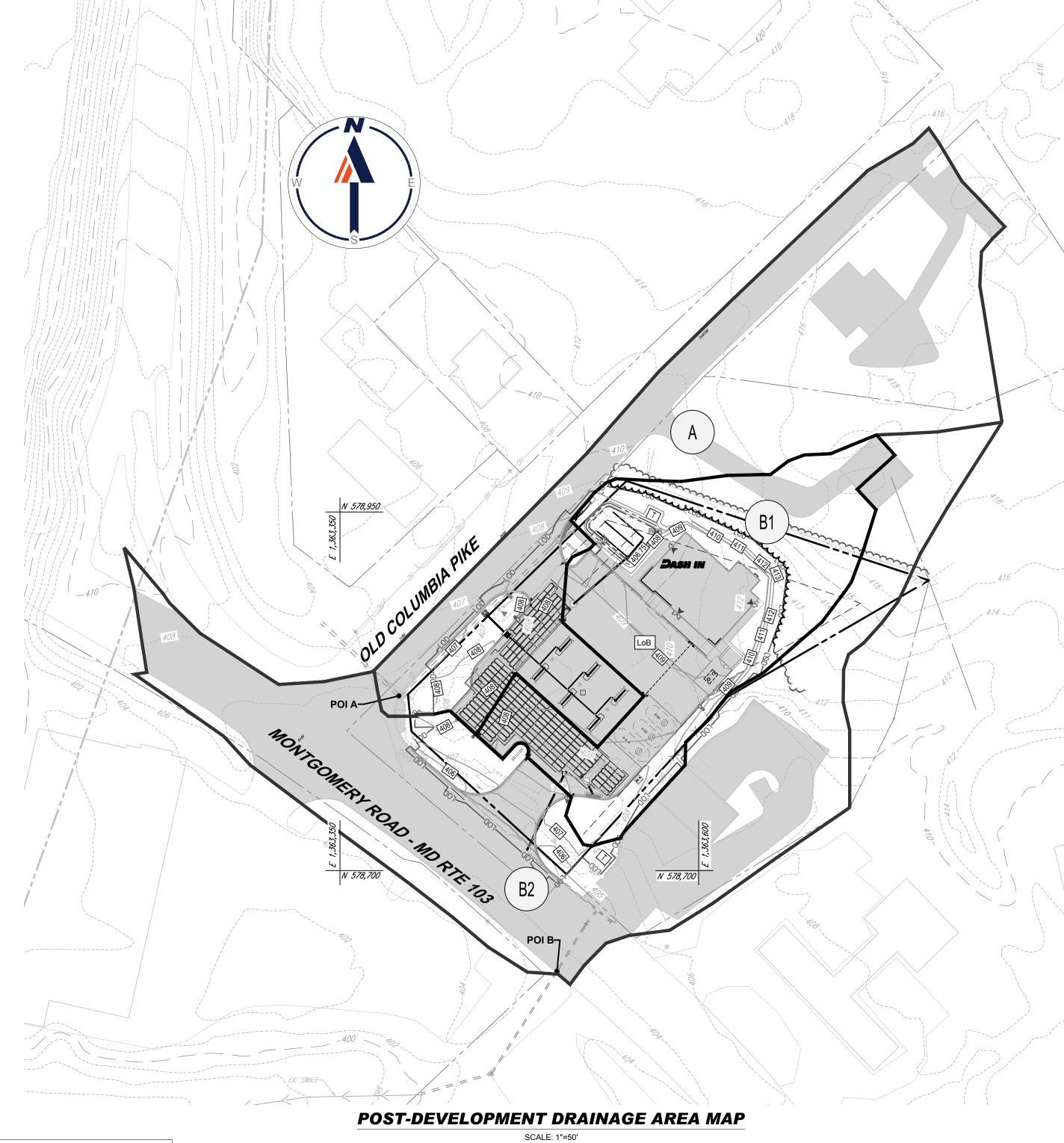
DocuSigned by:

Amy Glonan

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR





**IMPERVIOUS** 

WOODS

TOTAL

RCN

Tc

Q<sub>10</sub> (UNMANAGED)

Q<sub>100</sub> (UNMANAGED)

Q<sub>3.5</sub> (UNMANAGED)

Q<sub>100</sub>

 $Q_{3.5}$ 

Q<sub>100</sub>

 $Q_{3.5}$ 

TOTAL FLOW TO

POI B BEFORE

MANAGEMENT

TOTAL FLOW TO

POI B AFTER

MANAGEMENT

(ROUTED

UTILIZING TR-20)

36,902 S.F. OR 0.848 AC.

19,856 S.F. OR 0.455 AC.

4,360 S.F. OR 0.100 AC.

61,118 S.F. OR 1.403 AC.

91

0.10 HRS

8.02 CFS

14.73 CFS

18.09 CFS

12.57 CFS

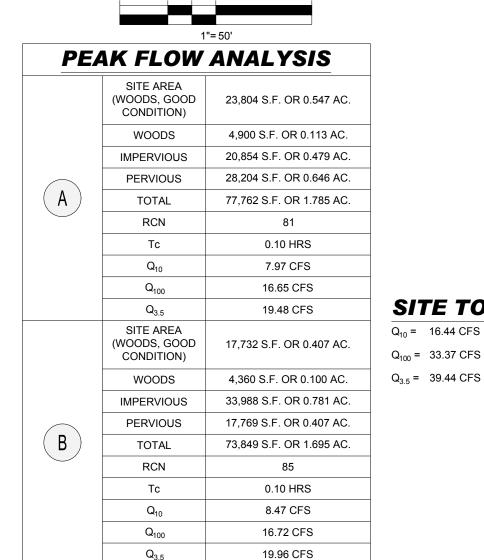
23.22 CFS

28.38 CFS

8.46 CFS

16.16 CFS

18.64 CFS



	SOILS INFORMATION					
SYMBOL	DESCRIPTION	STRUCTURAL LIMITATIONS	HYDROLOGIC GROUP	K FACTOR	HIGHLY ERODIBLE?	
LoB	LEGORE-MONTALTO-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	SOMEWHAT LIMITED	С	NOT RATED	NO	
NOT	NOTE: ENTIRE SITE AND IMMEDIATE VICINITY IS OF THE SOIL TYPE LISTED ABOVE.					

# **LEGEND**

IMPERVIOUS AREA DRAINAGE DIVIDE SITE AREA (WOODS, GOOD CONDITION)

ALL TC PATHS ARE ASSUMED TO BE 0.1 HRS SINCE THE SITE IS DEVELOPED. SITE TOTAL (ALL POI's)

NOTE:

# **PEAK FLOW ANALYSIS**

	IMPERVIOUS	27,166 S.F. OR 0.624 AC.
	PERVIOUS	27,267S.F. OR 0.626 AC.
	TOTAL	54,433 S.F. OR 1.250 AC.
(A)	RCN	88
	Tc	0.10 HRS
	Q <sub>10</sub> (UNMANAGED)	6.72 CFS
	Q <sub>100</sub> (UNMANAGED)	12.76 CFS
	Q <sub>3.5</sub> (UNMANAGED)	15.46 CFS
	IMPERVIOUS	18,469 S.F. OR 0.424 AC.
	PERVIOUS	12,872 S.F. OR 0.295 AC.
	WOODS	4,900 S.F. OR 0.113 AC.
	TOTAL	36,241 S.F. OR 0.832 AC.
	RCN	88
( B1 )	Tc	0.10 HRS
	Q <sub>10</sub> (UNMANAGED)	4.47 CFS
	Q <sub>10</sub> (MANAGED)	0.52 CFS
	Q <sub>100</sub> (UNMANAGED)	8.49 CFS
	Q <sub>100</sub> (MANAGED)	4.92 CFS
	Q <sub>3.5</sub> (UNMANAGED)	10.29 CFS
	Q <sub>3.5</sub> (MANAGED)	5.10 CFS

# SITE TOTAL UNMANAGED

com, c=US Date: 2022.05.23 14:04:33 -04'00'

# SITE TOTAL MANAGED (ALL POI's)

Q<sub>10</sub> = 15.18 CFS  $Q_{100} = 28.92 \text{ CFS}$  $Q_{3.5} = 34.10 \text{ CFS}$ 

OWNER: DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA, MD 20646 102 CENTENNIAL STREET, STE. 100 LA PLATA, MD 20645 CONTACT: JASON BELT CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448

ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

FILE NO. SDP-21-009

SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

OF 45

	PROFESSIONAL ENGINEER  MARINAND LICENSE NO. 37887  PROFESSIONAL GERTIFICATION  I, ANDREW G. STINE: HEREBY CERTIFY THAT LIFESE  DOCUMENTS WERE PREPARED OR ARPROFESSIONAL ENGINEER  UNDER THE LAWS OF THE STATE OF MARYLAND,  LICENSE NO. 37687, EXPIRATION DATE: 7/12/23
_	SHEET TITLE:
)	SWM QUANTITY DRAINAGE AREA MAPS
_	SHEET NUMBER:

**REVISIONS** 

Know what's **below. Call** before you dig.

ALWAYS CALL 811 It's fast. It's free. It's the law.

APPROVED FOR

CONSTRUCTION

SITE

**DEVELOPMENT** 

PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT **B-2 ZONE** 

901 DULANEY VALLEY ROAD, SUITE 801 **TOWSON, MARYLAND 21204** 

Phone: (410) 821-7900

Fax: (410) 821-7987

MD@BohlerEng.com

MD132045-HDP-3.DWG

PROJECT No.: DRAWN BY: CHECKED BY:

DATE: CAD I.D.:

PROJECT:

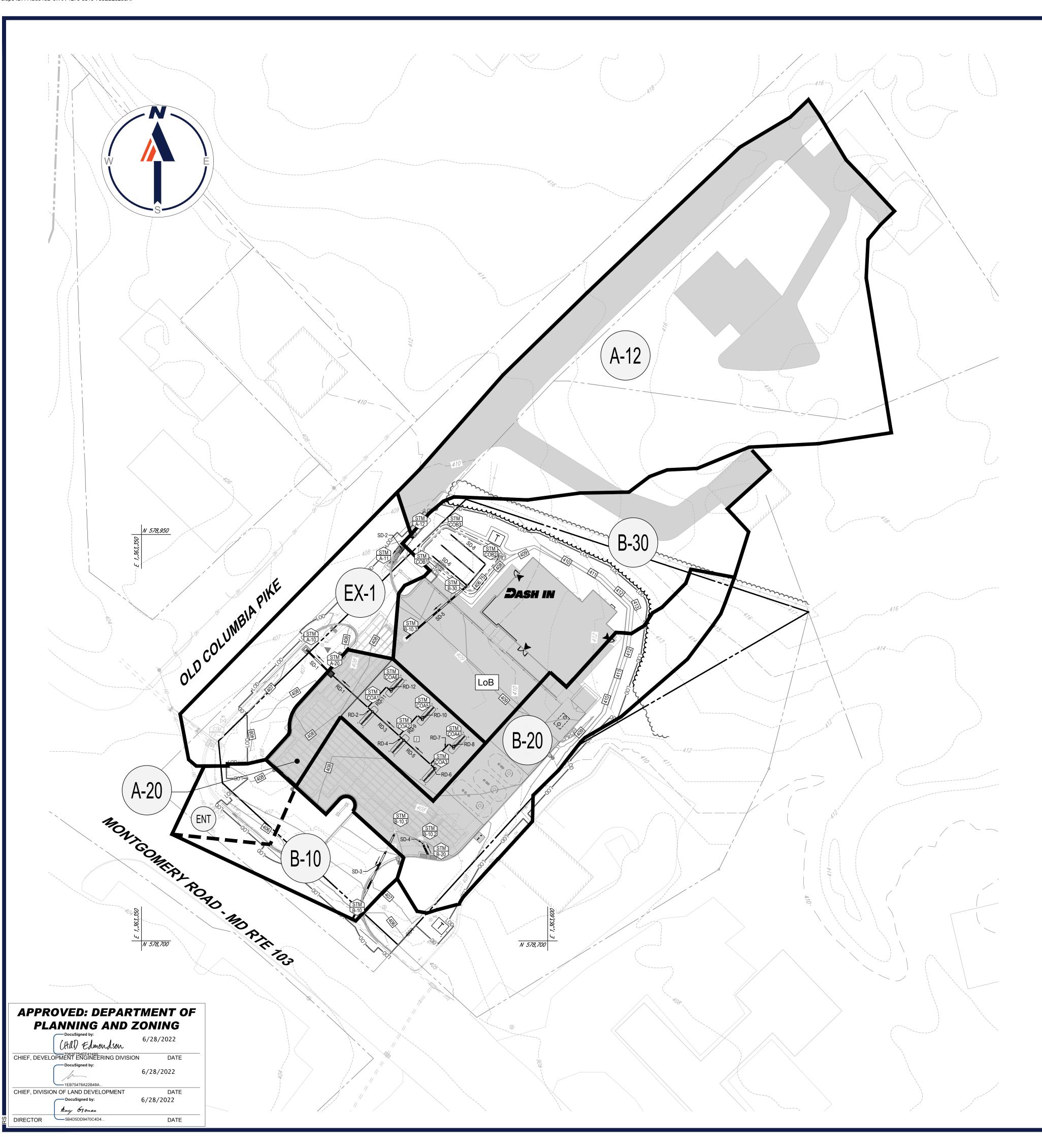
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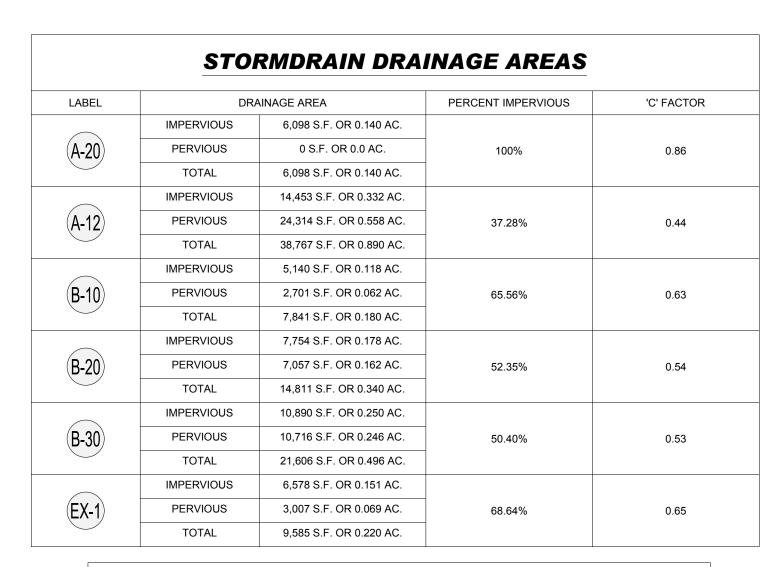
REV DATE

011	
(AL	.L POI's
Q <sub>10</sub> =	19.29 CFS
Q <sub>100</sub> =	35.98 CFS
I	

Q<sub>100</sub> = 43.84 CFS

Andrew Digitally signed by Andrew G. Stine, P.E. DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, email=astine@bohlereng





-	SHA ENTRA	NCE DRAINAGE	AREA
LABEL	DRA	AINAGE AREA	'C' FACTOR
	IMPERVIOUS	1,089 S.F. OR 0.025 AC.	
(ENT)	PERVIOUS	1,699 S.F. OR 0.039 AC.	0.45
	TOTAL	2,788 S.F. OR 0.064 AC.	

# **LEGEND**

DRAINAGE DIVIDE

SUB-DRAINAGE DIVIDE

IMPERVIOUS AREA

**SOILS INFORMATION** STRUCTURAL LIMITATIONS HYDROLOGIC GROUP K FACTOR HIGHLY ERODIBLE? SYMBOL DESCRIPTION LEGORE-MONTALTO-URBAN LAND LoB NOT RATED COMPLEX, 0 TO 8 PERCENT SLOPES

NOTE: ENTIRE SITE AND IMMEDIATE VICINITY IS OF THE SOIL TYPE LISTED ABOVE.

Andre Digitally signed by Andrew G. Stine, w G. DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, Stine, email=astine@boh lereng.com, c=US

Date: 2022.05.23 14:04:14 -04'00' DEVELOPER:

OWNER: C DASH-IN

102 CENTENNIAL STREET, STE. 1

LA PLATA, MD 20645

CONTACT: JASON BELT POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400 FILE NO. SDP-21-009

	REVISIONS					
EV	DATE COMMENT		DRAWN BY			
LV	DAIL	COMMENT	CHECKED BY			
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### APPROVED FOR CONSTRUCTION

DRAWN BY:

DATE: CAD I.D.: PROJECT:

SITE **DEVELOPMENT** 

PLAN

MD132045-HDP-3.DWG

STORE # 1833 4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY

2ND ELECTION DISTRICT B-2 ZONE

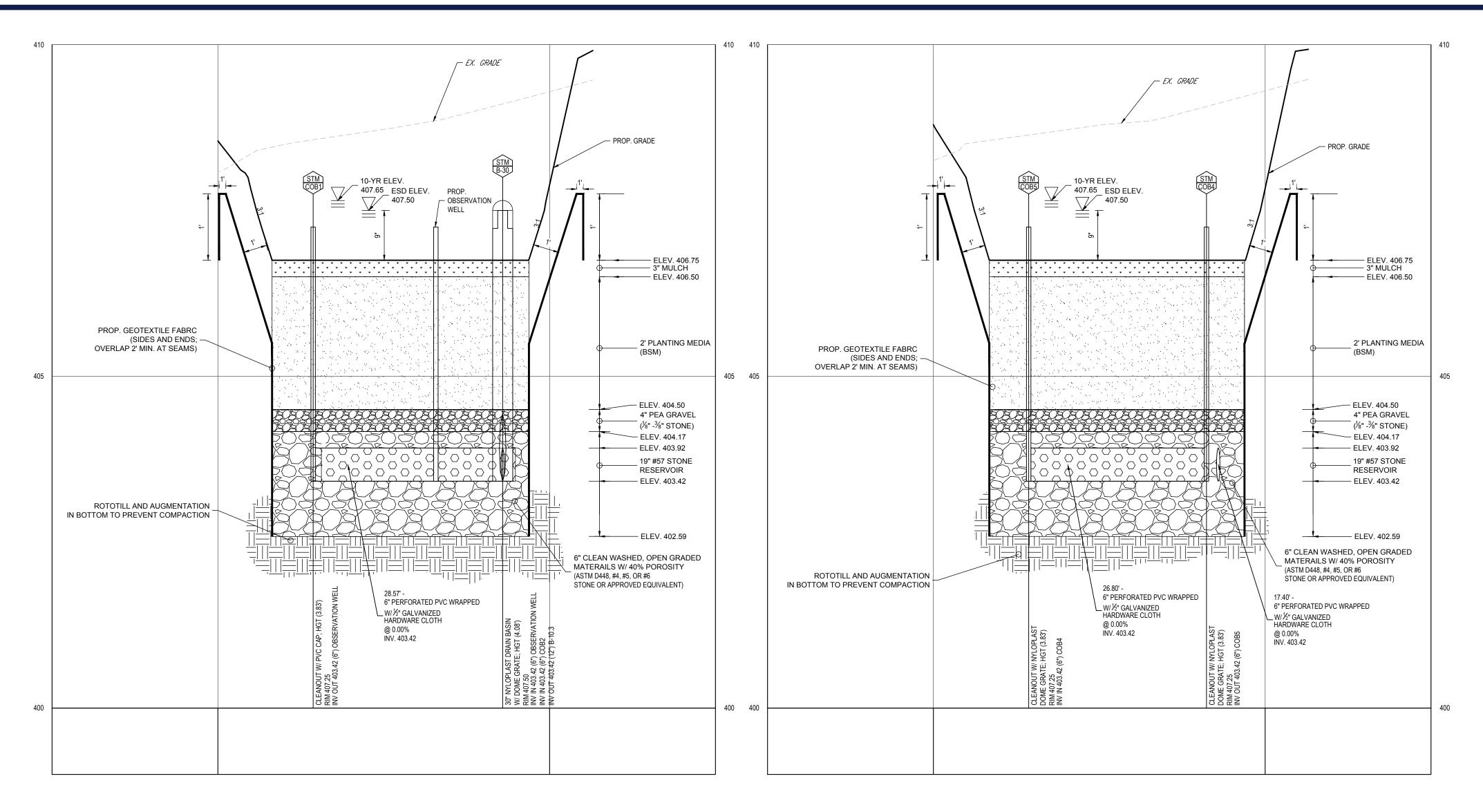
901 DULANEY VALLEY ROAD, SUITE 80° TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987 MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

**STORMDRAIN** 

DRAINAGE AREA MAP

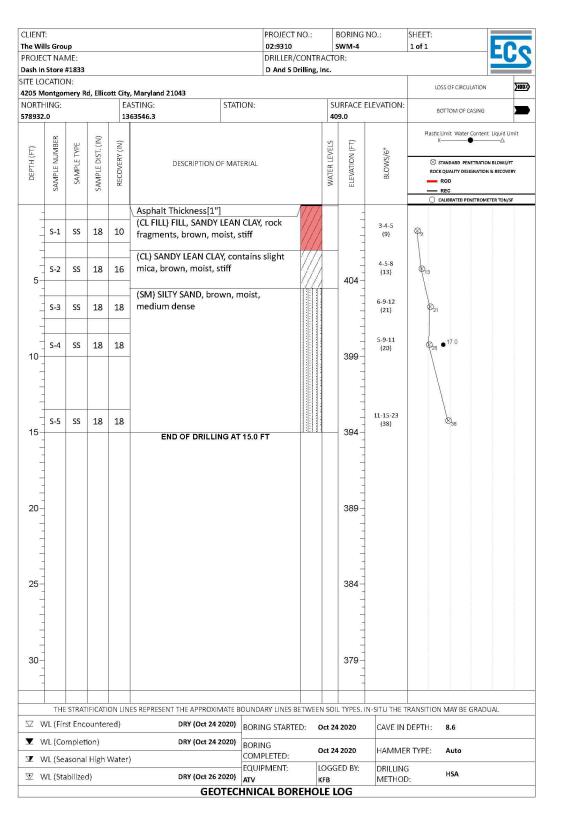
SHEET NUMBER:



# MICRO-BIORETENTION (M-6) FACILITY #2 - SECTION A-A

# -6" PERFORATED P -PROP. MICRO-BIORETENTION (M-6) ELEV. = 406.75 / PROP.— FLOW-THRU MICRO-BIORETENTION (M-6) FACILITY - PLAN

# MICRO-BIORETENTION (M-6) FACILITY #2 - SECTION B-B



Andrew G. Stine, DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, email=astine@bohl ereng.com, c=US Date: 2022.05.23

14:04:02 -04'00'

STORMWATER OWNER: DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE LA PLATA, MD 20645 PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

**FILE NO. SDP-21-009** 

MANAGEMENT

**REVISIONS** REV DATE COMMENT



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REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTI <u>DOCUMENT</u> UNLESS INDICATED OTHERWISE. PROJECT No.: DRAWN BY: CHECKED BY: DATE: CAD I.D.: MD132045-SWM-3.DWG

PROJECT:

SITE DEVELOPMENT PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 801 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND,

NOTES & **DETAILS** 

OF 45

APPROVED: DEPARTMENT OF

**PLANNING AND ZONING** 

DATE

DATE

DATE

6/28/2022

6/28/2022

CHIEF, DEVELOPMENTENETNEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR 5B4D5DD9470C4D4...

PROJECT INFORMATION PRODUCT 443-221-9489 GREGORY.MOORE@ADS-PIPE.COM MANAGER: ADS SALES REP: 202-430-9381 THOMAS.JANES@ADS-PIPE.COM





# 4205 MONTGOMERY ROAD

# ELLICOTT CITY, MD

### SC-310 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-310.
- 2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418-16a (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- 4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE ELOW OR LIMIT ACCESS FOR INSPECTION
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. SECTION 12.12. ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- 6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2)
- MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK. REQUIREMENTS FOR HANDLING AND INSTALLATION:
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2922 SHALL BE GREATER THAN OR EQUAL TO 400 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
- THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR

9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

- DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE. THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN
- EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.

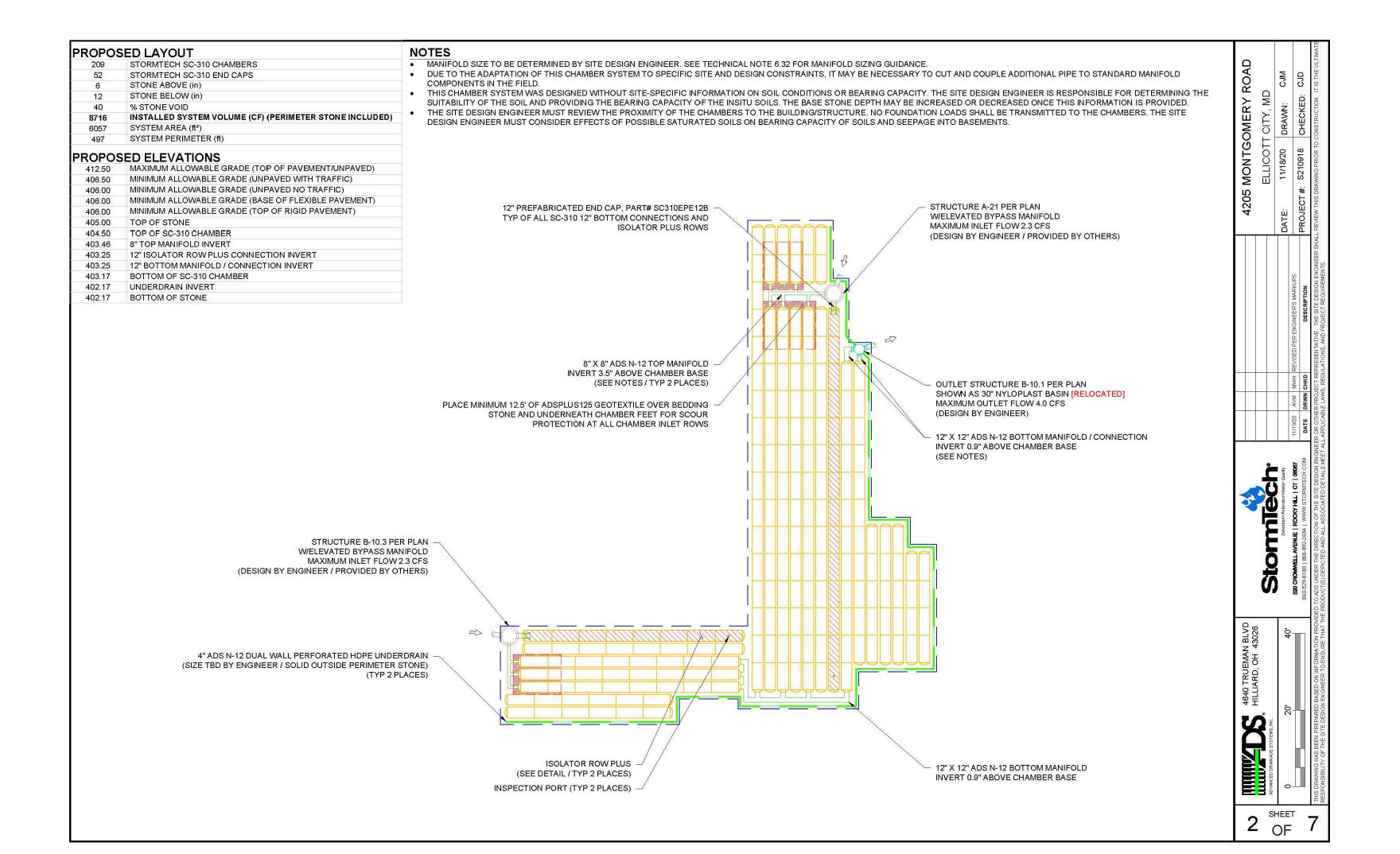
### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

- STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- 2. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
- STONESHOOTER LOCATED OFF THE CHAMBER BED. BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE. BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- 4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- 6. MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- 8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN
- 9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

### NOTES FOR CONSTRUCTION EQUIPMENT

- 1. STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
- NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS. NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE.
- WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE". • WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.



**REVISIONS** REV DATE COMMENT



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CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC'</u>

<u>DOCUMENT</u> UNLESS INDICATED OTHERWISE.

PROJECT No.: DRAWN BY: **CHECKED BY:** CAD I.D.: MD132045-SWM-3.DW

PROJECT:

SITE **DEVELOPMENT** PLAN

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

901 DULANEY VALLEY ROAD, SUITE 80 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

DN: cn=Andrew ( Stine, P.E., o=Bohler, ou, email=astine@boh lereng.com, c=US Date: 2022.05.23 14:03:49 -04'00'

OWNER:

POTOMAC ENERGY HOLDINGS, LLC

PO BOX 2810 LA PLATA, MD 20646

CONTACT: JASON BELT

PHONE: 240-320-6448

DEVELOPER:

ZONED: B-2

2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

**FILE NO. SDP-21-009** 

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23 STORMWATER 102 CENTENNIAL STREET, STE MANAGEMENT LA PLATA, MD 20645 **CONTACT: JASON BELT** NOTES & PHONE: 240-320-6448 PARCEL: 311

**DETAILS** 

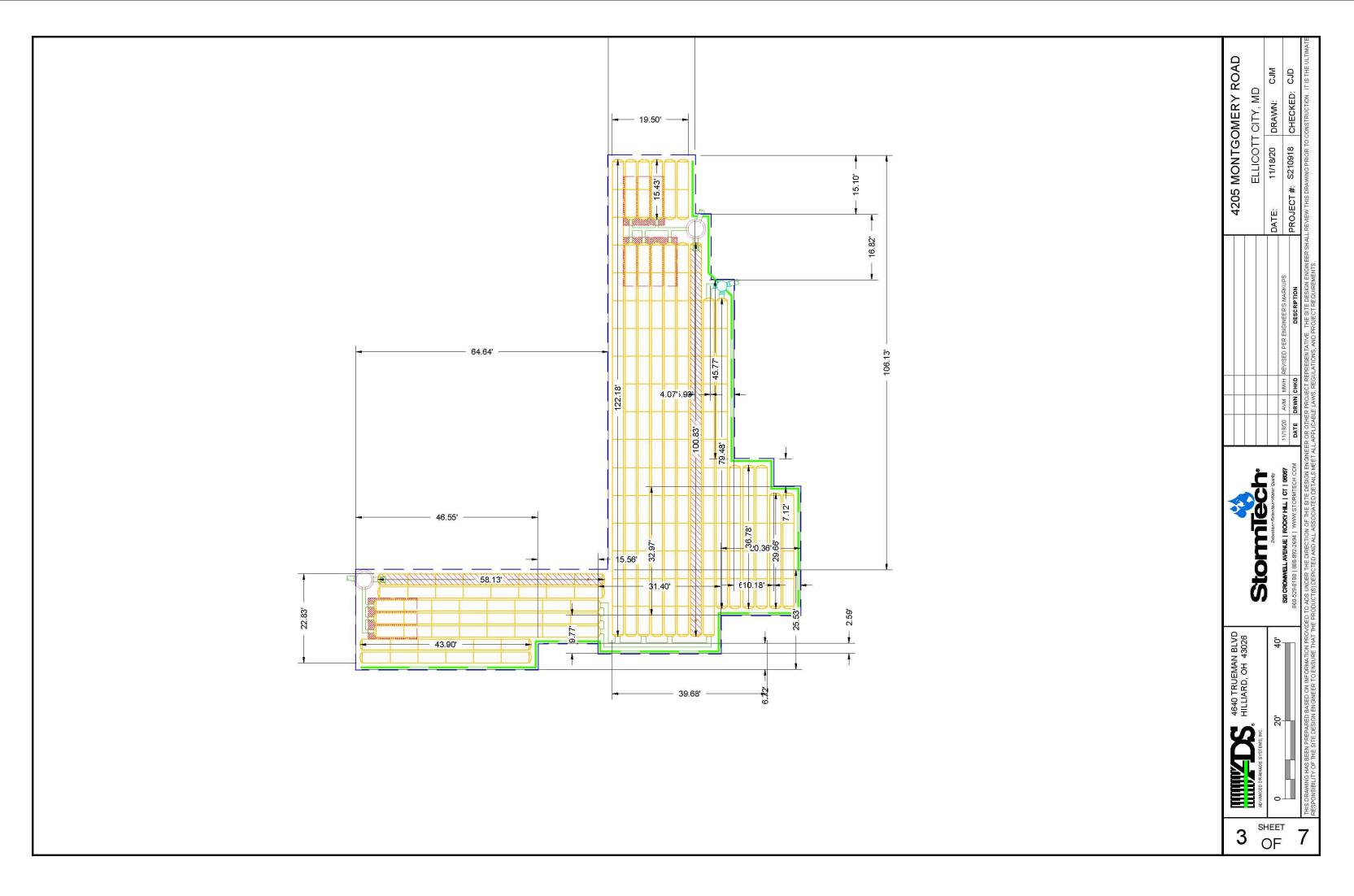
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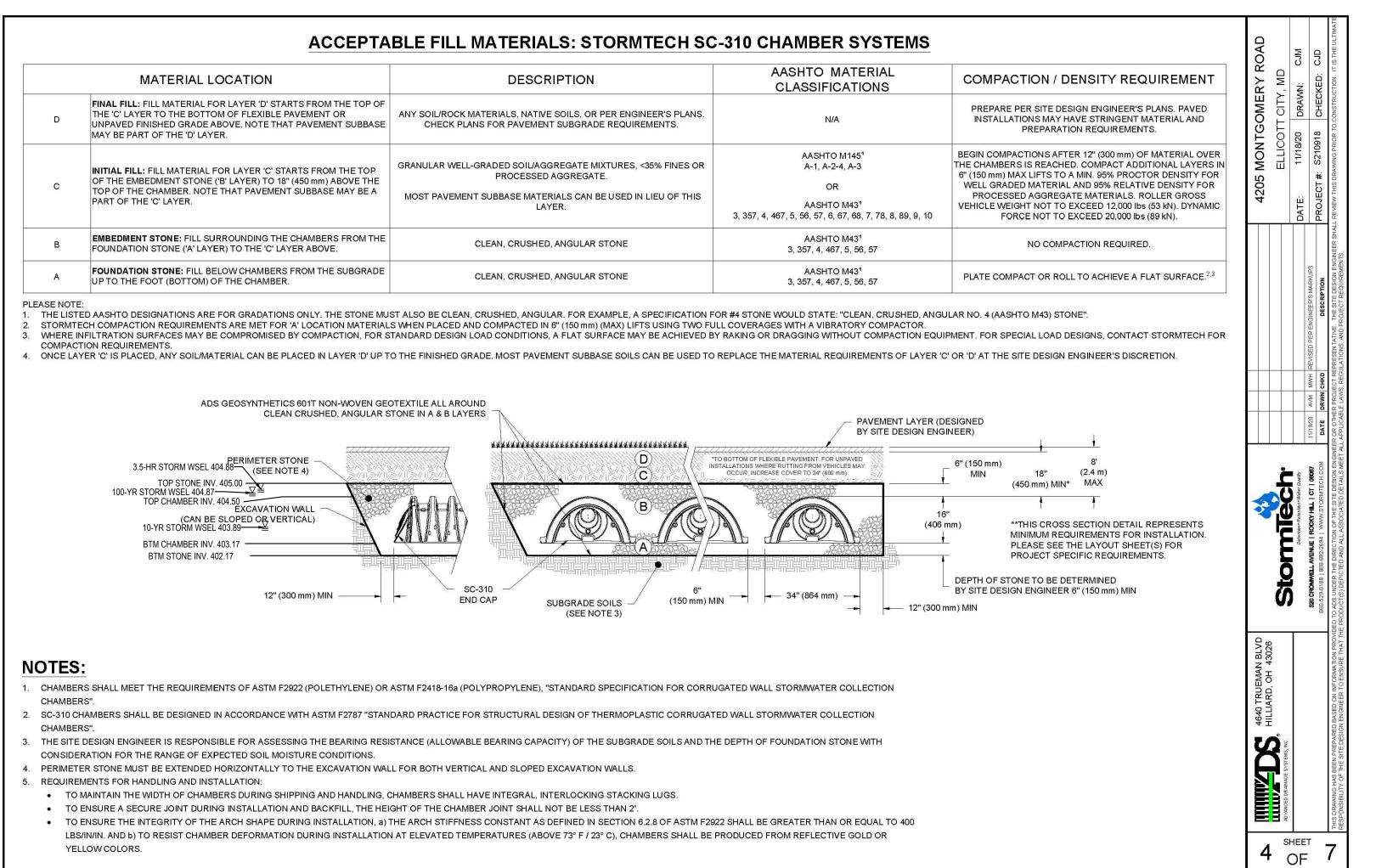
**PLANNING AND ZONING** CHIEF. DEVELOPMENTO STORES OF THE PROPERTY OF

APPROVED: DEPARTMENT OF

6/28/2022 CHIEF. DIVISION OF LAND DEVELOPMENT DATE

6/28/2022 DIRECTOR DATE







# **REVISIONS** REV DATE COMMENT



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# APPROVED FOR CONSTRUCTION

MD132045-SWM-3.DWG

PROJECT No.: DRAWN BY:

CAD I.D.: PROJECT:

SITE DEVELOPMENT

PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 801 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND,

LICENSE NO. 37687, EXPIRATION DATE: 7/12/23 Date: 2022.05.23 14:03:36 -04'00'

STORMWATER DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC MANAGEMENT 102 CENTENNIAL STREET, STE PO BOX 2810 LA PLATA, MD 20645 LA PLATA, MD 20646 CONTACT: JASON BELT CONTACT: JASON BELT NOTES & PHONE: 240-320-6448 PHONE: 240-320-6448 **DETAILS** PARCEL: 311 ZONED: B-2

Digitally signed

DN: cn=Andrew

G. Stine, P.E.,

o=Bohler, ou,

c=US

email=astine@bo

Stine, P.E.

Andre by Andrew G.

Stine, email=astine@thereng.com,

2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

**FILE NO. SDP-21-009** 

OWNER:

OF 45

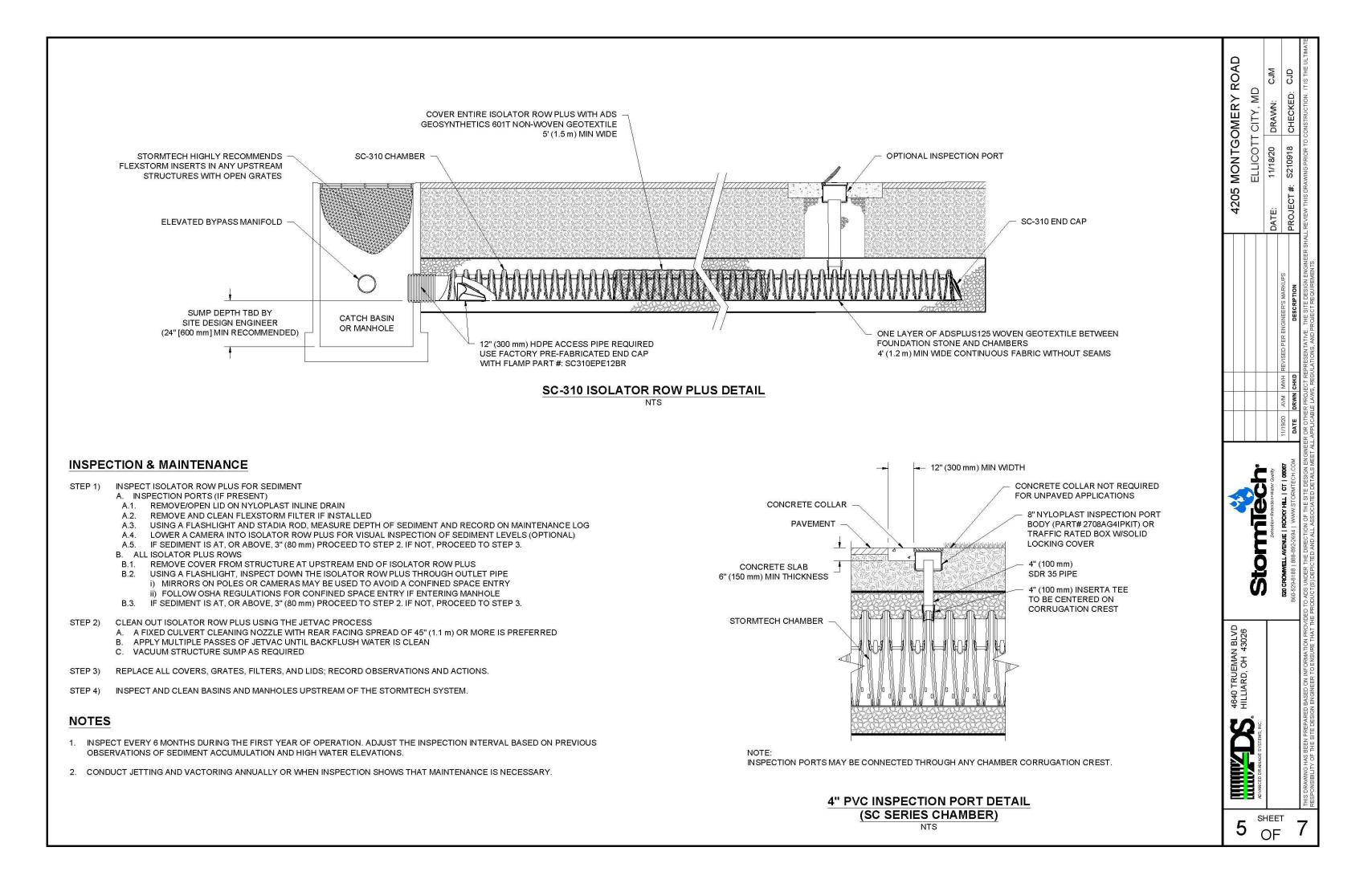
APPROVED: DEPARTMENT OF PLANNING AND ZONING 6/28/2022 CHAD Edmondson -- 7063F754EF41499... CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6/28/2022

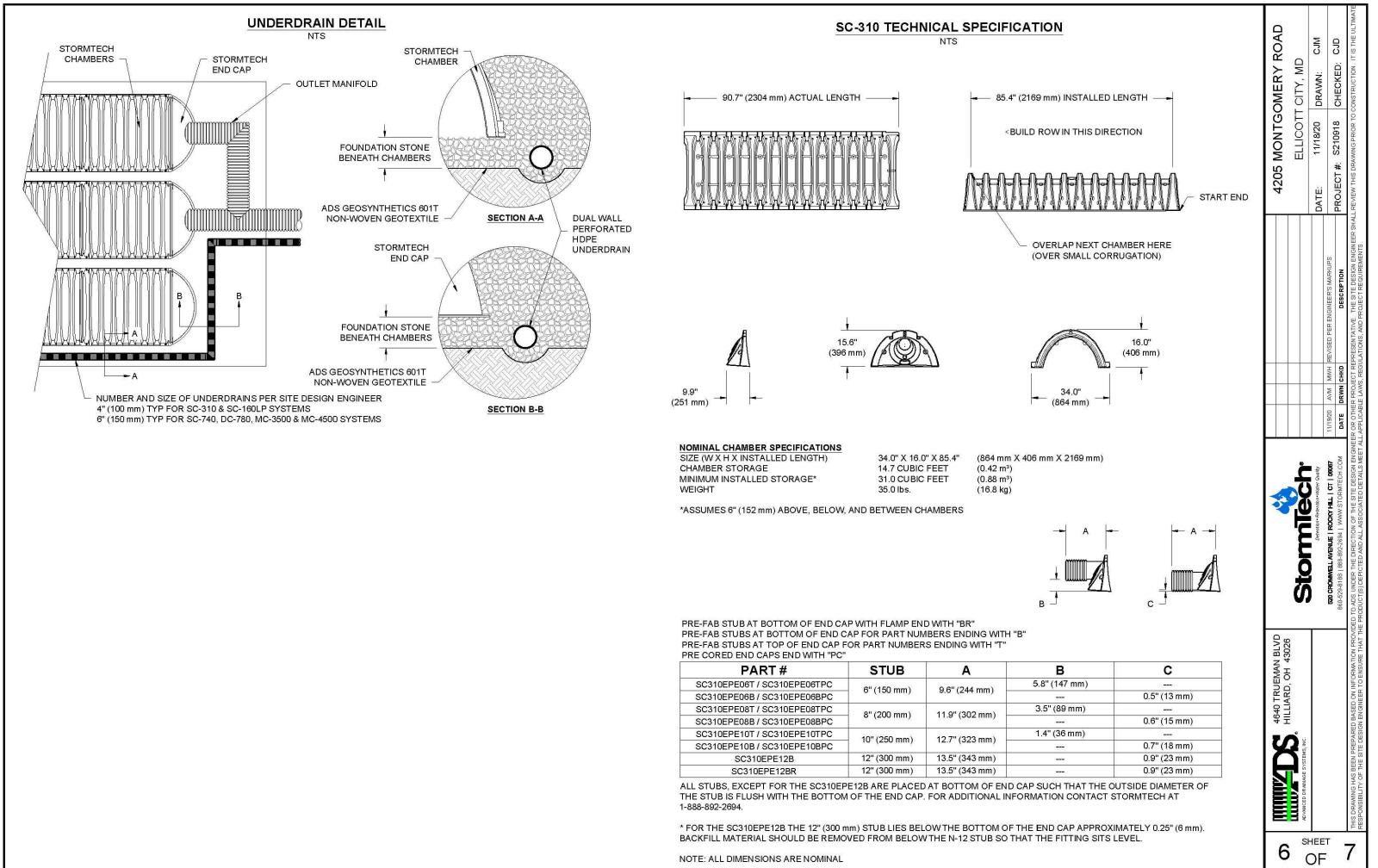
-1FB75478A22B49A CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022 Amy Gonan

DATE

----5B4D5DD9470C4D4

DIRECTOR







Andr Digitally signed by Andrew G. Stine, P.E. ew G. DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, Stine, email=astine@b ohlereng.com, c=US

Date: 2022.05.23 14:03:19 -04'00'

ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

**FILE NO. SDP-21-009** 

OWNER:

POTOMAC ENERGY HOLDINGS, LLC

PO BOX 2810

LA PLATA, MD 20646

CONTACT: JASON BELT

PHONE: 240-320-6448

DEVELOPER:

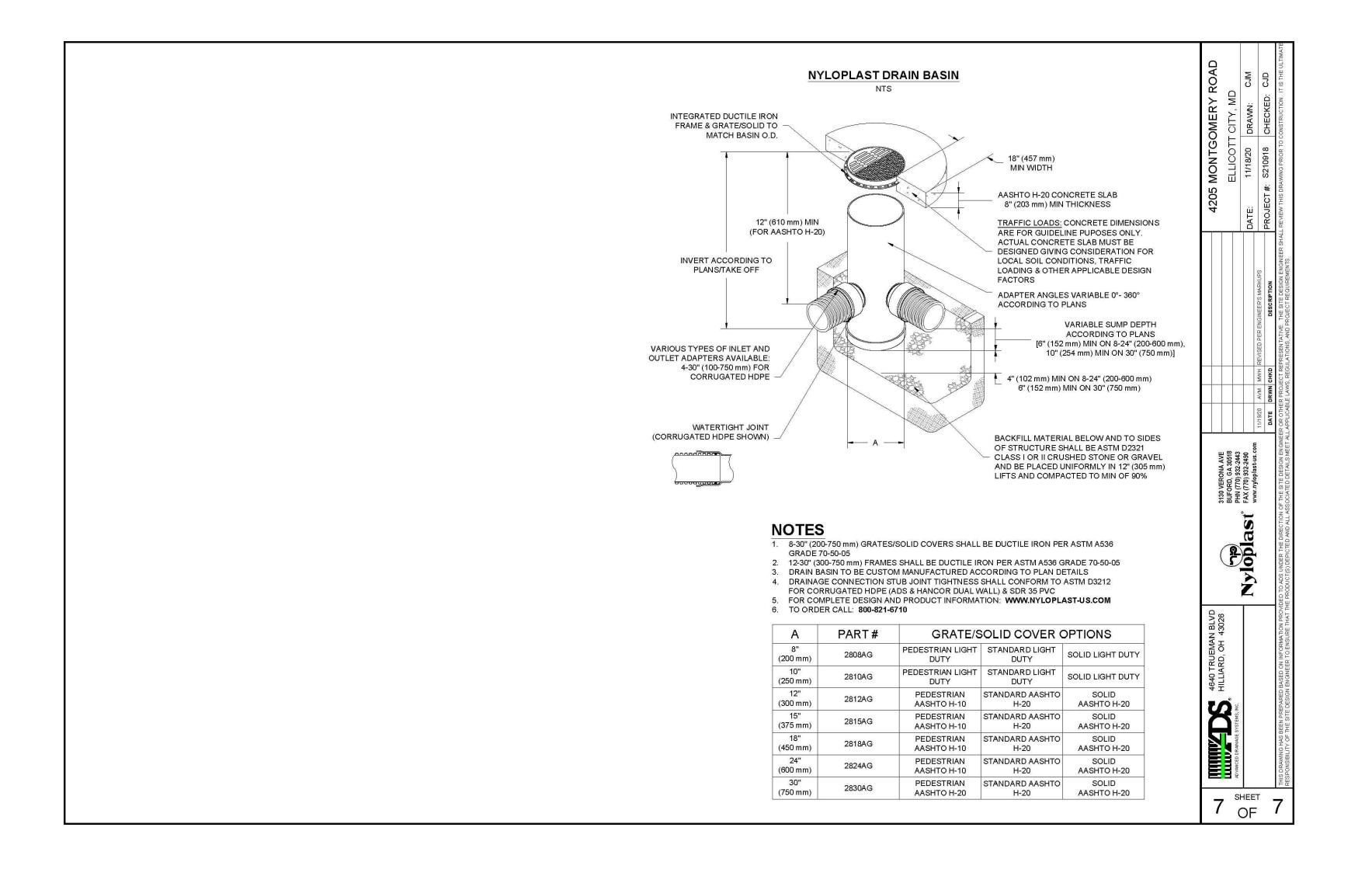
102 CENTENNIAL STREET, STE LA PLATA, MD 20645 CONTACT: JASON BELT PHONE: 240-320-6448

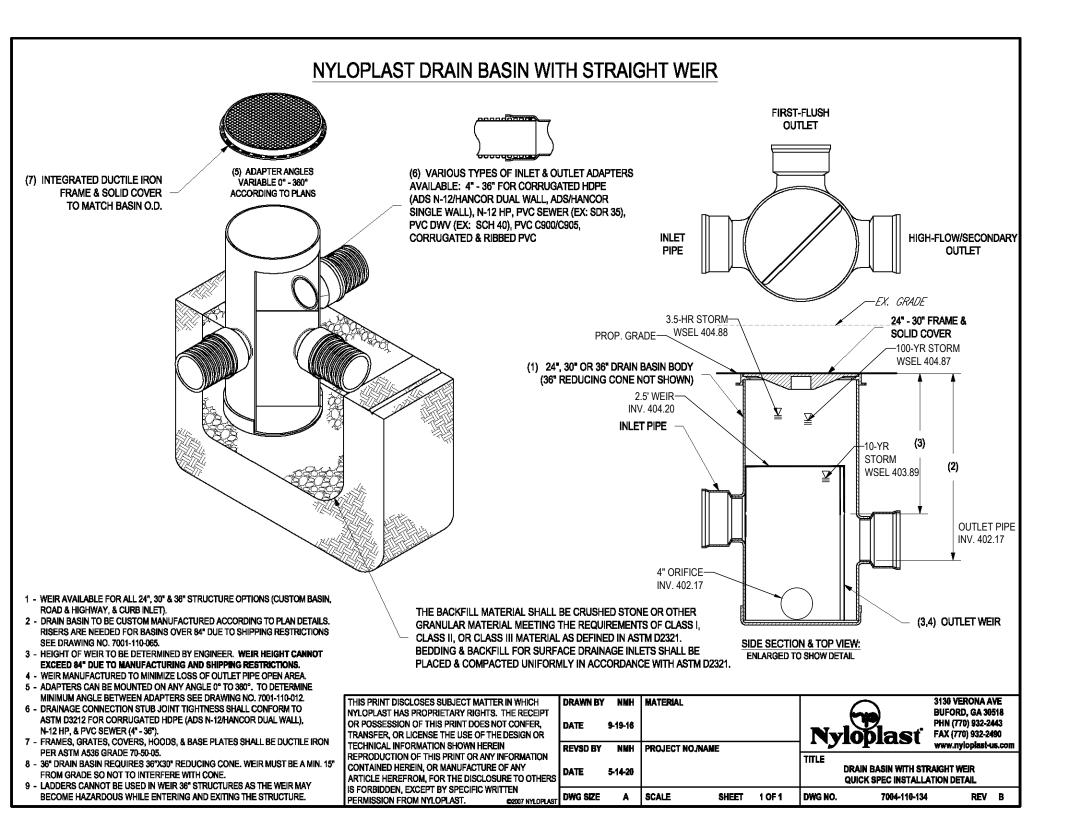
OF 45

APPROVED: DEPARTMENT OF PLANNING AND ZONING 6/28/2022 CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/28/2022

CHIEF, DIVISION OF LAND DEVELOPMENT 6/28/2022

DIRECTOR DATE





### PLANNING AND ZONING (Hd) Edmondson CHIEF, DEVELOPMENTO BY GARAGE PRING DIVISION DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6/28/2022

DATE

APPROVED: DEPARTMENT OF

Amy Glonan

5B4D5DD9470C4D4...

DIRECTOR

30" NYLOPLAST DRAIN BASIN **OUTLET CONTROL STRUCTURE** 

	F	REVISIONS	
REV	DATE	COMMENT	DRAWN BY
			CHECKED B



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# APPROVED FOR CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUCT DOCUMENT</u> UNLESS INDICATED OTHERWISE.

PROJECT No.: DRAWN BY: CHECKED BY: DATE: CAD I.D.: MD132045-SWM-3.DWG

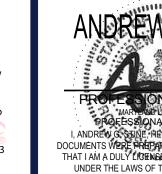
PROJECT:

SITE DEVELOPMENT PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 801 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com



=Andrew e, P.E., iler, ou, =astine@b ing.com, 2022.05.23 06 -04'00'	PROFES ONAL ENGINEER  MARY AND LICENSE NO. 37687.  PROFESSIONAL GERTIFICATION  I, ANDREW G. STINE: HEREBY CERTIFY THAT HESE  DOCUMENTS WERE PREPARED OR ARPROVED TO LICENSE  UNDER THE LAWS OF THE STATE OF MARYLAND,  LICENSE NO. 37687, EXPIRATION DATE: 7/12/23
	SHEET TITLE:

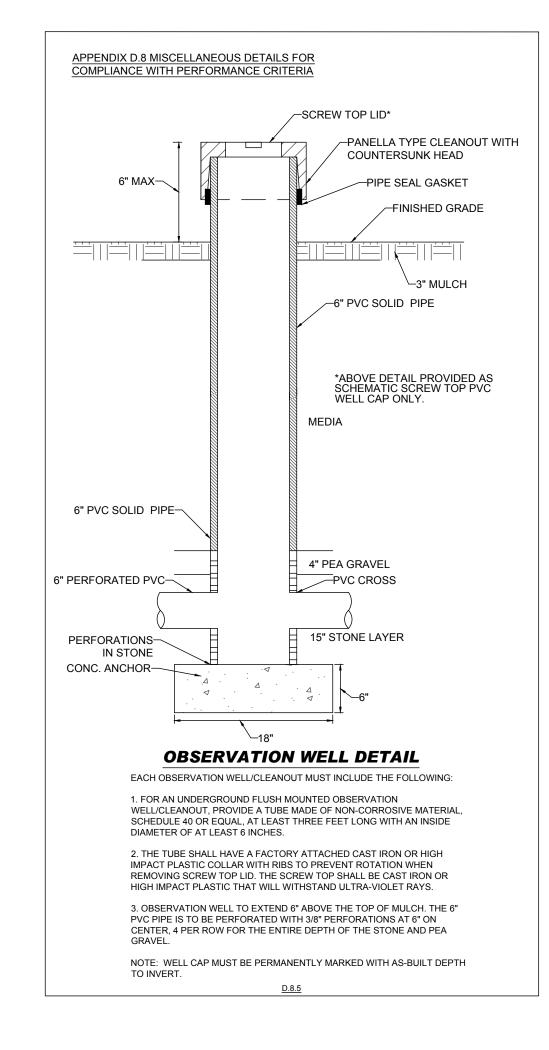
DEVELOPER: SIORMWAIER POTOMAC ENERGY HOLDINGS, LLC MANAGEMENT 102 CENTENNIAL STREET, STE. PO BOX 2810 LA PLATA, MD 20646 LA PLATA, MD 20645 CONTACT: JASON BELT CONTACT: JASON BELT NOTES & PHONE: 240-320-6448 PHONE: 240-320-6448 **DETAILS** PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

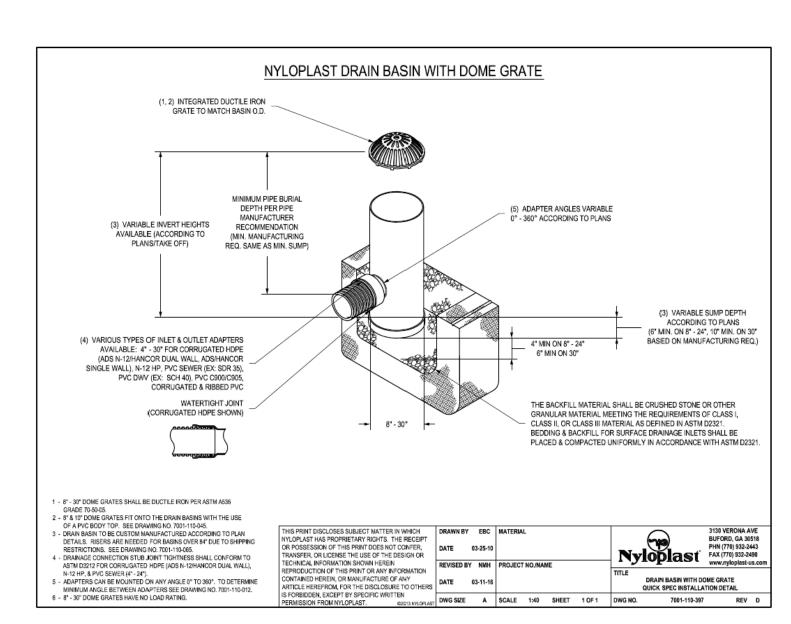
OF 45

**FILE NO. SDP-21-009** 

OWNER:

NOT TO SCALE





### APPROVED: DEPARTMENT OF **PLANNING AND ZONING** "HdD Edmondson CHIEF, DEVELOPMENTO ENTO SHEEP NG DIVISION DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT 6/28/2022 DIRECTOR DATE ----5B4D5DD9470C4D4

### PLANTING ZONES FOR MICRO-BIORETENTION FACILITIES MIDDLE ZONE , HIGHEST ZONE ZONE SPECIES ADAPTED-TO STANDING AND SPECIES FI UCTUATING WATER LEVELS SPECIES **TOLERANT TO FLUCTUATING** WATER LEVEL **CURTAIN DRAIN** FILTER

AREA TO BE PLANTED WITH MIXED PERENNIALS LISTED IN MICRO-BIORETENTION AREAS PLANTING SCHEDULES

- HERBACEOUS PERENNIALS TO BE PLANTED 18" O.C. IN GROUPS BETWEEN 15 TO 20 PLUGS 2. SHRUBS TO BE PLANTED 36" O.C. IN GROUPS BETWEEN 3 TO 7 CONTAINERS.
- 3. LANDSCAPE CONTRACTOR TO GROUP LIKE PLANTS TOGETHER IN EACH BED AS SHOWN IN PLANTING DISTRIBUTION 4. ALL MICRO-BIORETENTION AREAS ARE TO BE MULCHED WITH A 3" LAYER OF DOUBLE SHREDDED HARDWOOD BARK
- 5. PLACEMENT OF THE PLANTING SOIL SHOULD BE IN 12" TO 18" LIFTS THAT ARE LOOSELY COMPACTED (TAMPED LIGHTLY WITH A BACKHOE BUCKET OR TRAVERSED BY DOZER TRACKS.

### TYPICAL PLANTING FOR **MICRO-BIORETENTION AREAS**

NOT TO SCALE

TYPICAL CLUMP MICRO-BIORETENTION PLANTING DISTRIBUTION PATTERN 0 8 8 0 0 0 0 8 





NATURALLY OCCURRING POPULATIONS TEND TO BE FOUND IN INFORMAL GROUPINGS. A CLUSTER OF PLANTS IS REALLY A MOSAIC OF DIFFERENT SPECIES GROUPS. THE OBJECTIVE IS TO SELECT THE APPROPRIATE SPECIES AND DISTRIBUTION PATTERN FOR A CHOSEN SITE THAT MIMIC NATURAL PATTERNS

### **MICRO-BIORETENTION PLANTING** DISTRIBUTION PATTERN DETAIL

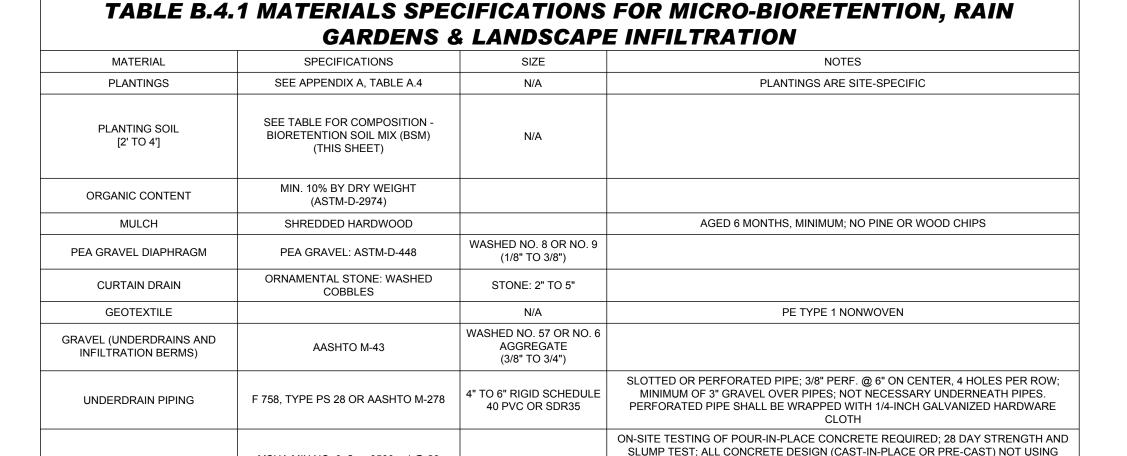
NOT TO SCALE

LANDSCAPING 920

(b) Composition. BSM shall be sampled and tested according to the requirements of MSMT 356 and conform to the following:

CC	OMPOSITI	ON- BIO	RETENT	TION S	OIL M	IX (BSM)	
TEST PROPERTY	TEST METHOD	TEST VALUE AND AMENDMENT					
Weeds	_		Free of seed and viable 920.06.02(a)(b)(c) when insp			parts of	species in
Debris	=	920.01.05(a)(2)					
			Particle		%	Passing by	Weight
		Size	mr	n	Minin	num N	Iaximum
Textural Analysis	T 88	Sand	2.0 - 0.0	50	55		85
Amarysis		Silt	0.050 - 0	0.002	_	8	20
		Clay	Clay less than 0.002		1		8
Soil pH	D 4972	pH of 5.	pH of 5.7 to 7.1.				
Organic Matter	Т 194	Minimur	n 1.5 % by	weight.			
Mauer		Concentration					
		Element		Mini	mum	Max	imum
Nutrient				ppm	FIV	ppm	FIV
Analysis	Mehlich-3	Calcium	Calcium (Ca)		25	no limit	no limit
and	Wichitch-3	Magnesi	um (Mg)	15	25	no limit	no limit
Soluble Salts		Phospho	rus (P)	18	25	92	100
Saits		Potassiu	m (K)	22	25	no limit	no limit
	J.	Sulfur (S	SO <sub>4</sub> )	25	n/a	no limit	no limit
	EC1:2 (V:V)	Soluble	Salts	40	n/a	500	n/a
Harmful Materials		920.01.0	1(a).				

- (c) Amendment or Failure. BSM that does not conform to composition requirements for pH or nutrient analysis shall be amended as specified by the NMP. BSM that exceeds maximum phosphorus concentration or fails other composition requirements will not be accepted, and shall not be delivered or used as BSM.
- (d) Storage. 920.01.02(b). BSM shall be stored in a stockpile that is protected from weather under tarp or shed. BSM stored for 6 months or longer shall be resampled, retested, and reapproved before use.
- (e) Approval. 920.01.02(c).
- (f) Certification and Delivery. 920.01.02(d).



0.02" TO 0.04"

### **CONSTRUCTION SPECIFICATIONS** FOR MICRO BIORETENTION FACILITY

MSHA MIX NO. 3; f'c = 3500 psi @ 28

AIR-ENTRAINED; REINFORCING TO

MEET ASTM-615-60

AASHTO-M-6 OR ASTM-C-33

DAYS, NORMAL WEIGHT,

- 1. SOIL COMPACTION: EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION. ONLY LIGHTWEIGHT, LOW GROUND-CONTACT EQUIPMENT SHOULD BE USED WITHIN MICRO-BIORETENTION PRACTICES AND THE BOTTOM SCARIFIED BEFORE INSTALLING UNDERDRAINS AND FILTERING
- 2. UNDERDRAIN INSTALLATION: GRAVEL FOR THE UNDERDRAIN SYSTEM SHOULD BE CLEAN, WASHED, AND FREE OF FINES. UNDERDRAIN PIPES SHOULD BE CHECKED TO ENSURE THAT BOTH THE MATERIAL AND PERFORATIONS MEET SPECIFICATIONS. THE UPSTREAM ENDS OF THE UNDERDRAIN PIPE SHOULD BE CAPPED PRIOR TO INSTALLATION.
- 3. FILTER MEDIA INSTALLATION: BSM MAY BE MIXED ON-SITE BEFORE PLACEMENT HOWEVER BSM SHOULD NOT BE PLACED UNDER SATURATED. CONDITIONS. BSM SHOULD BE PLACED AND GRADED USING EXCAVATORS OR BACKHOES OPERATING ADJACENT TO THE PRACTICE AND BE PLACED IN HORIZONTAL LAYERS (12 INCHES PER LIFT MAXIMUM). PROPER COMPACTION OF THE BSM WILL OCCUR NATURALLY. SPRAYING OR SPRINKLING WATER ON EACH LIFT UNTIL SATURATED MAY QUICKEN SETTLING TIMES.
- 4. LANDSCAPE INSTALLATION: THE OPTIMUM PLANTING TIME IS DURING THE FALL. SPRING PLANTING IS ALSO ACCEPTABLE BUT MAY REQUIRE WATERING.

	6" MAX———PVC CLEANOUT PLUG TOP OF MULCH LAYER
LONG	S TURN 45° BEND  VERT. WYE BRANCH
SOLVENT WELI (WATERTIGHT)	

PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS

SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN

THE STATE OF MARYLAND - DESIGN TO INCLUDE MEETING ACI CODE 350.R/89;

VERTICAL LOADING [H-10 OR H-20]; ALLOWABLE HORIZONTAL LOADING (BASED ON SOIL PRESSURES); AND ANALYSIS OF POTENTIAL CRACKING

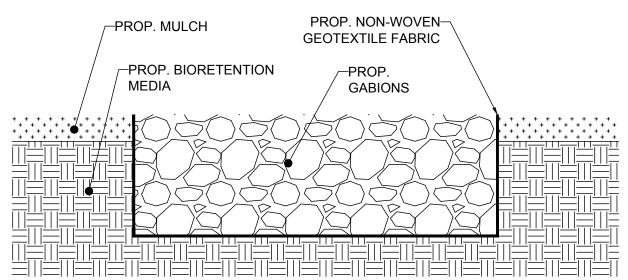
SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (AASHTO) #10 ARE NOT

ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE

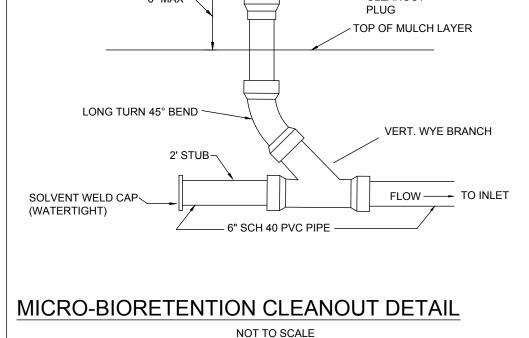
ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.

### **OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION FACILITIES**

- 1. THE STORMWATER MANAGEMENT FACILITIES ARE PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN IT'S OPERATION AND FUNCTION.
- 2. THE MICRO-BIORETENTION FACILITIES SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER
- 3. WHEN SEDIMENT ACCUMULATION OF MORE THAN 1" IS OBSERVED OR ANY DEBRIS THAT MIGHT PROPER CLEANING PROCEDURES AND PROPERLY DISPOSE OF THE REMOVED MATERIAL AND LIQUID.
- 4. THE TOP FEW INCHES OF MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE
- 6. OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.
- 8. STORM DRAINAGE SYSTEMS THE STORMWATER MANAGEMENT FACILITIES INCLUDING THE INLETS AND STORMWATER PIPING ON THIS SITE SHALL BE MAINTAINED IN PROPER WORKING ORDER IN ACCORDANCE WITH THESE PLANS AND PER THE RECOMMENDATION OF THE STRUCTURE(S) MANUFACTURER(S). MAINTENANCE OF THESE STORMWATER MANAGEMENT FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNERS UPON WHOSE LOT AREA THE FACILITIES ARE LOCATED.
- 9. ALL ONSITE INLETS, MANHOLES, AND STORMWATER PIPING SHALL BE CLEARED OF DEBRIS EVERY THREE (3) MONTHS OR WHEN ACCUMULATION HINDERS OPERATION OF THE FACILITY.
- 10. ALL SEDIMENT/DEBRIS/OIL REMOVED FROM THE STORMWATER MANAGEMENT SYSTEM SHALL BE DISPOSED PER LOCAL, STATE, AND FEDERAL STANDARDS.
- IMMEDIATELY STABILIZED AND THE INLETS, MANHOLES, AND STORMWATER PIPING SHALL BE CHECKED FOR SEDIMENT ACCUMULATION AND CLEARED IF ACCUMULATION OF SEDIMENT EXISTS.
- 12. FACILITIES MAY REQUIRE MORE FREQUENT MAINTENANCE THAN TYPICAL MICRO-BIORETENTION FACILITIES DUE TO VOLUME OF STORMWATER RUNOFF REACHING THE FACILITIES.



WITH MICRO-BIORETENTION FACILITY

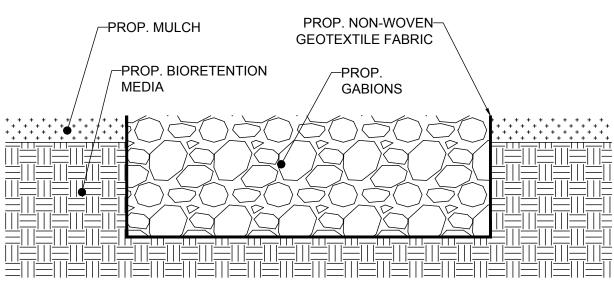


- ESPECIALLY SEVERE STORM EVENTS.
- OBSTRUCT THE OUTFALL IS OBSERVED. THE FACILITIES SHALL BE CLEANED. THE OWNER SHALL FOLLOW
- 5. THE 3" MULCH LAYER SHALL BE REPLACED ANNUALLY.

POURED IN PLACE CONCRETE (IF

REQUIRED)

- 7. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY
- 11. SHOULD ONSITE EROSION OCCUR FROM THE LANDSCAPED AREAS, SOURCE OF EROSION SHALL BE



TYPICAL GABION INSTALLATION DETAIL

Andrew Andrew G. Stine, DN: cn=Andrew G Stine, P.E., o=Bohler, ou,

email=astine@bohl ereng.com, c=US Date: 2022.05.23 14:02:51 -04'00'

OWNER: DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 102 CENTENNIAL STREET, STI LA PLATA. MD 20646 LA PLATA, MD 20645 **CONTACT: JASON BELT** CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448 PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

**FILE NO. SDP-21-009** 

**REVISIONS** REV DATE COMMENT



APPROVED FOR CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC'</u>

<u>DOCUMENT</u> UNLESS INDICATED OTHERWISE.

PROJECT No.: DRAWN BY: **CHECKED BY:** MD132045-SDP-3.DW0

CAD I.D.:

PROJECT: SITE **DEVELOPMENT** 

PLAN

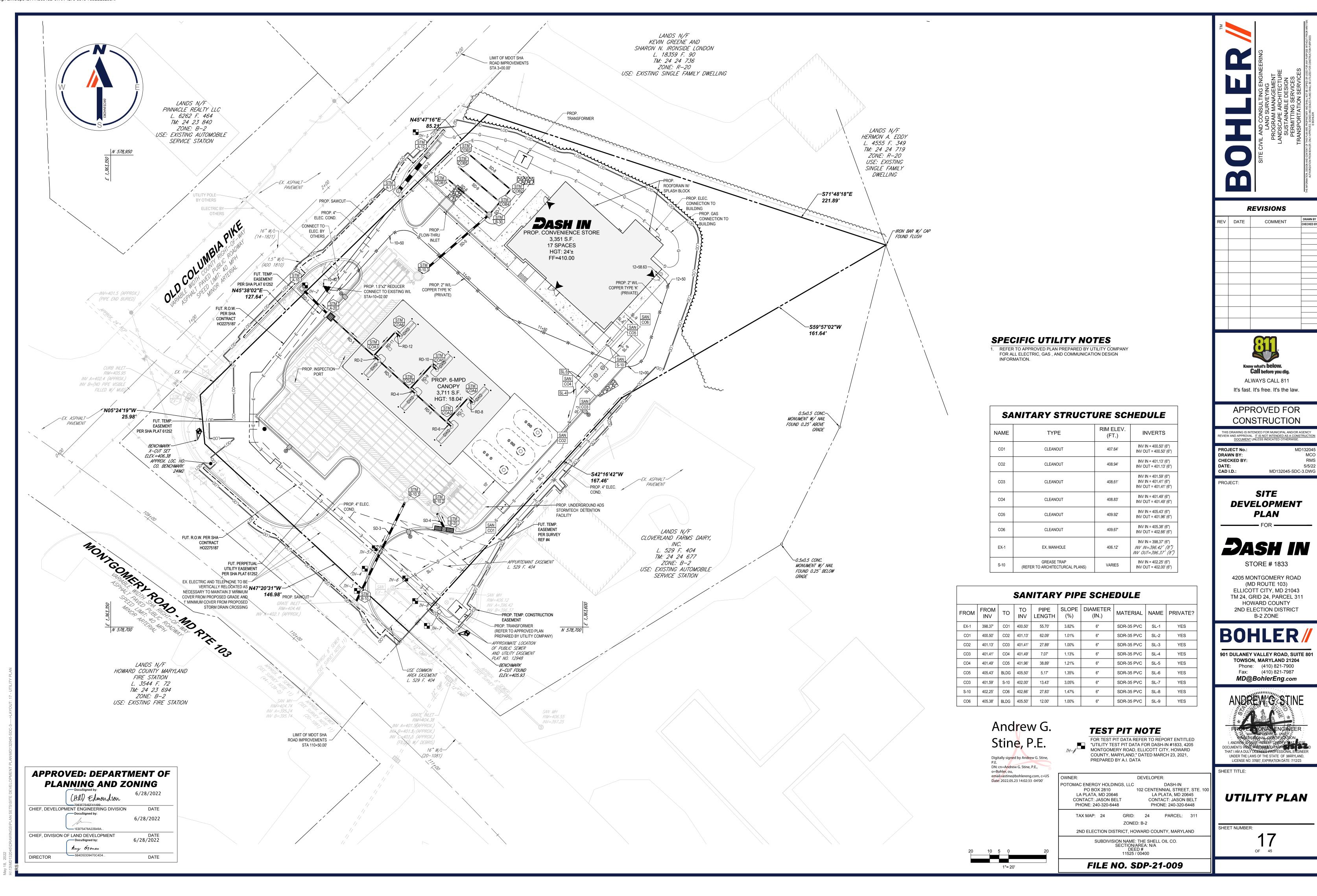
4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

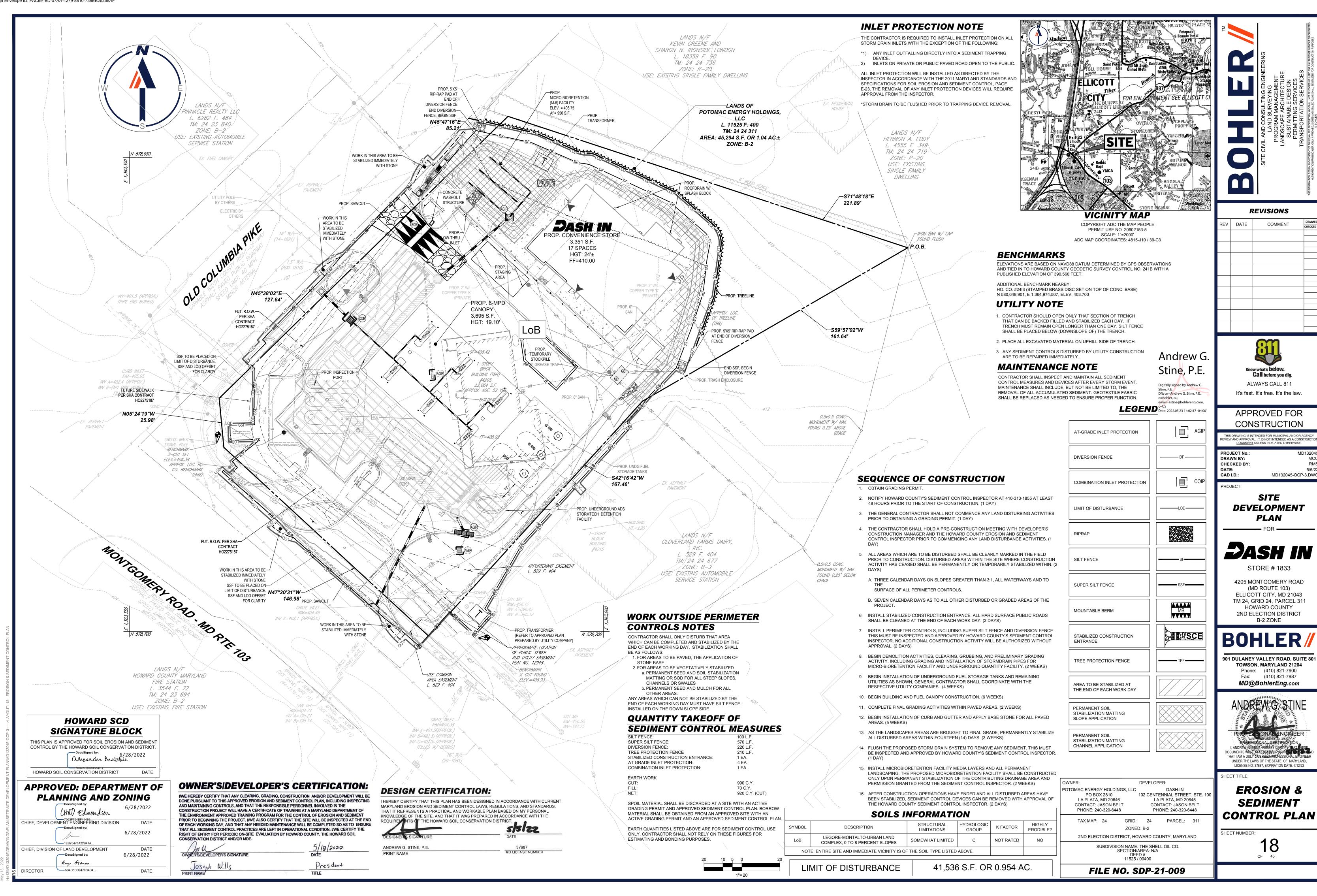
B-2 ZONE

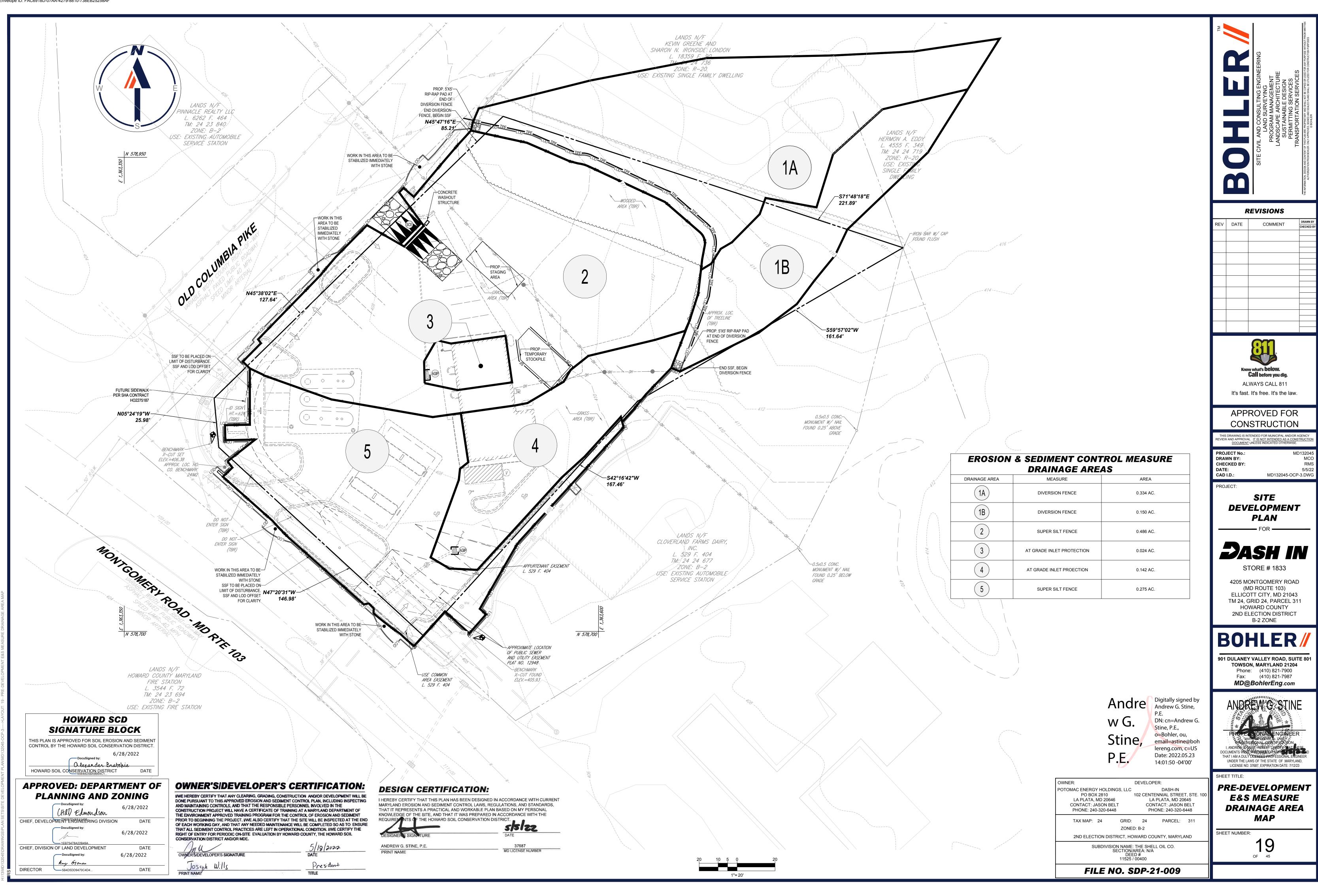
901 DULANEY VALLEY ROAD, SUITE 80 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

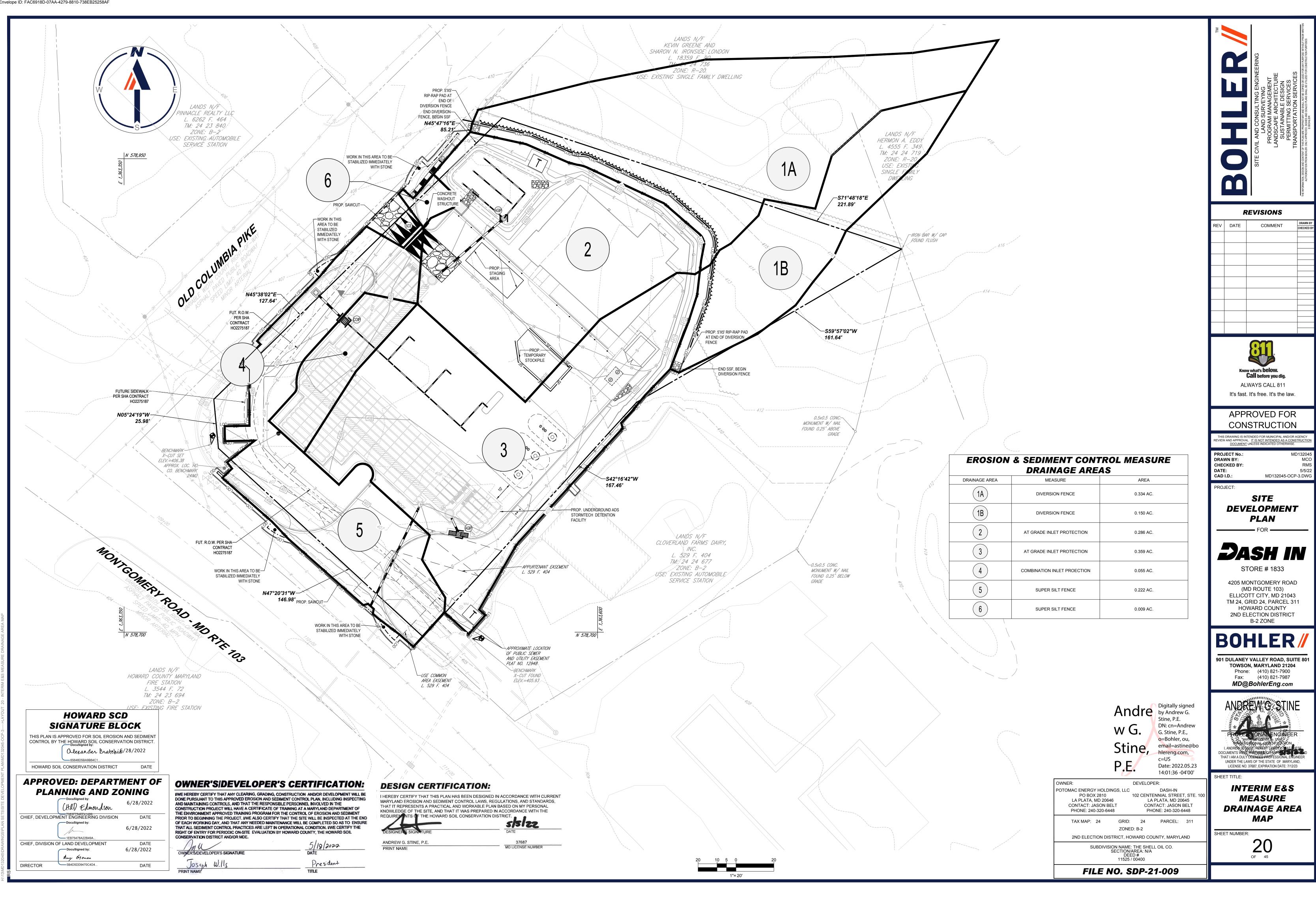
UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

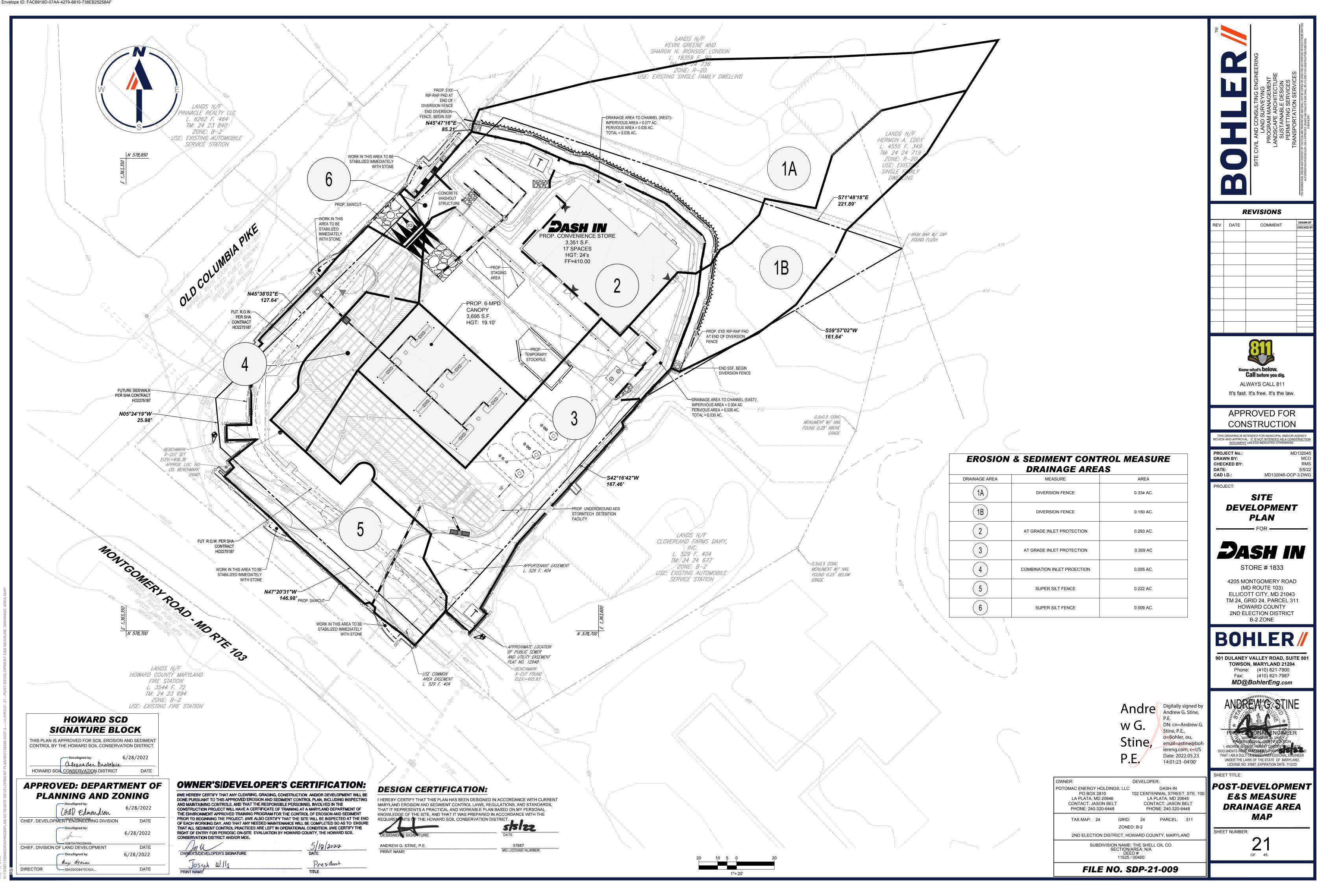
STORMWATER MANAGEMENT NOTES & **DETAILS** 











### **B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION**

JSING VEGETATION AS COVER TO PROTECT EXPOSED SOIL FROM EROSION.

TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL

ON ALL DISTURBED AREAS NOT STABILIZED BY OTHER METHODS. THIS SPECIFICATION IS DIVIDED INTO SECTIONS ON INCREMENTAL STABILIZATION; SOIL PREPARATION, SOIL AMENDMENTS AND TOPSOILING; SEEDING AND MULCHING; TEMPORARY STABILIZATION; AND PERMANENT STABILIZATION.

STABILIZATION PRACTICES ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUNOFF TO DOWNSTREAM AREAS. PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, RANSPIRATION, PERCOLATION, AND GROUNDWATER RECHARGE. OVER TIME, VEGETATION WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL AND SUBSEQUENT PLANT GROWTH.

VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITHIN THE ROOT ZONE. SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

INSPECT SEEDED AREAS FOR VEGETATIVE ESTABLISHMENT AND MAKE NECESSARY REPAIRS, REPLACEMENTS, AND RESEEDINGS WITHIN THE PLANTING SEASON.

- ADEQUATE VEGETATIVE STABILIZATION REQUIRES 95 PERCENT GROUNDCOVER. 2. IF AN AREA HAS LESS THAN 40 PERCENT GROUNDCOVER, RESTABILIZE FOLLOWING THE ORIGINAL RECOMMENDATIONS FOR LIME, FERTILIZER, SEEDBED PREPARATION, AND
- 3. IF AN AREA HAS BETWEEN 40 AND 94 PERCENT GROUNDCOVER, OVER-SEED AND FERTILIZE USING HALF OF THE RATES ORIGINALLY SPECIFIED.

### 4. MAINTENANCE FERTILIZER RATES FOR PERMANENT SEEDING ARE SHOWN IN TABLE B.6. **B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION**

ESTABLISHMENT OF VEGETATIVE COVER ON CUT AND FILL SLOPES.

O PROVIDE TIMELY VEGETATIVE COVER ON CUT AND FILL SLOPES AS WORK PROGRESSES

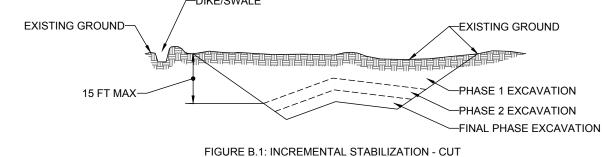
ANY CUT OR FILL SLOPE GREATER THAN 15 FEET IN HEIGHT. THIS PRACTICE ALSO APPLIES TO STOCKPILES

A. INCREMENTAL STABILIZATION - CUT SLOPES

- 1. EXCAVATE AND STABILIZE CUT SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL CUT SLOPES AS THE
- 2. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.1):
- a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO CONVEY RUNOFF AROUND THE EXCAVATION.
- b PERFORM PHASE 1 EXCAVATION PREPARE SEEDBED AND STABILIZE
- c. PERFORM PHASE 2 EXCAVATION, PREPARE SEEDBED, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY

d. PERFORM FINAL PHASE EXCAVATION, PREPARE SEEDBED, AND STABILIZE, OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.



B. INCREMENTAL STABILIZATION - FILL SLOPES

- 1. CONSTRUCT AND STABILIZE FILL SLOPES IN INCREMENTS NOT TO EXCEED 15 FEET IN HEIGHT. PREPARE SEEDBED AND APPLY SEED AND MULCH ON ALL SLOPES AS THE
- 2. STABILIZE SLOPES IMMEDIATELY WHEN THE VERTICAL HEIGHT OF A LIFT REACHES 15 FEET, OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS. 3. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-FROSIVE MANNER
- 4. CONSTRUCTION SEQUENCE EXAMPLE (REFER TO FIGURE B.2): a. CONSTRUCT AND STABILIZE ALL TEMPORARY SWALES OR DIKES THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SILT FENCE ON LOW SIDE OF FILL
- UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA. b. AT THE END OF EACH DAY, INSTALL TEMPORARY WATER CONVEYANCE PRACTICE(S), AS NECESSARY, TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE
- IN A NON-EROSIVE MANNER
- c PLACE PHASE 1 FILL, PREPARE SEEDBED, AND STABILIZE.
- d. PLACE PHASE 2 FILL, PREPARE SEEDBED, AND STABILIZE. e. PLACE FINAL PHASE FILL, PREPARE SEEDBED, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

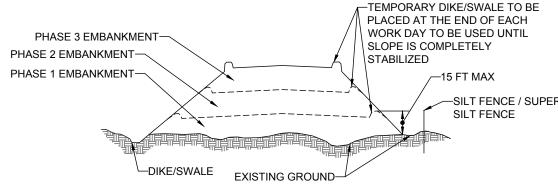


FIGURE B.2: INCREMENTAL STABILIZATION - FILL

### **B-4-2 STANDARDS AND SPECIFICATIONS FOR FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS**

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

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH

WHERE VEGETATIVE STABILIZATION IS TO BE ESTABLISHED.

A. SOIL PREPARATION TEMPORARY STABILIZATION

- a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT MUST NOT BE ROLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. b APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. PERMANENT STABILIZATION
- a. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE

ESTABLISHMENT ARE: i. SOIL PH BETWEEN 6.0 AND 7.0. ii. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).

iii. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOVEGRASS WILL BE PLANTED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD

iv. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.

v. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION. o. APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS.

C. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCARIFIED OR OTHERWISE LOOSENED TO A DEPTH OF d. APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST

e. MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS, RAKE LAWN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES. AND READY THE AREA FOR SEED APPLICATION. LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDBED PREPARATION. TRACK SLOPES 3:1 OR FLATTER WITH TRACKED EQUIPMENT LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRIABLE. SEEDBED LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.

PLANT NUTRIENTS

AUTHORITY MAY BE USED IN LIFU OF NATURAL

- TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL . TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF
- TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH. ). THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND
- 2. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH
- d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE. 4. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN
- i. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
- a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. TOPSOIL MUST NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 11/2 INCHES IN DIAMETER.
- b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUT SEDGE, POISON IVY, THISTLE, OR . TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL

- a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL
- b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE
- RESULTING FROM TOPSOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS. c. TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE

- 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES
- SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND WARRANTY OF THE PRODUCER. 3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING) WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100
- 4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. 5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRE (200-400 POUNDS PER 1.000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL

### B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER.

<u>PURPOSE</u> TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.

<u>CONDITIONS WHERE PRACTICE APPLIES</u>
TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

A. SEEDING

- 1. SPECIFICATIONS a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY TYPE OF SEED AND SEEDING RATE
- b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND THAWS. C. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, ADD FRESH INOCULANTS AS DIRECTED ON THE PACKAGE
- USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS
- ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS 2. APPLICATION
- a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS. i. INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1. PERMANENT SEEDING TABLE B.3. OR SITE-SPECIFIC SEEDING ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH A WEIGHTED
- ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT. b. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
- i. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM
- ii. APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
- c. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER). i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE TOTAL
- OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS), 200 POUNDS PER ACRE; K2O (POTASSIUM), 200 POUNDS PER ACRE. ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT MORE THAN 2 TONS ARE
- APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING. iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
- iv. WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.

1. MULCH MATERIALS (IN ORDER OF PREFERENCE)

- a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR, STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS
- WHERE ONE SPECIES OF GRASS IS DESIRED. b. WOOD CELLULOSE FIBER MULCH (WFCM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
- i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY
- ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS. iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH
- MATERIAL MUST FORM A BLOTTER-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
- v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MINIMUM. 2. APPLICATION
- a APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING

METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:

- b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. WHEN USING A MULCH ANCHORING TOOL, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO
- ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER. 3. ANCHORING a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING
  - PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY, IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR
- ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER. iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH.

TEMPODADY SEEDING SUMMADY

i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS

SUCH AS IN VALLEYS AND ON CRESTS OF BANKS, USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4 TO 15 FEET WIDE AND 300 TO 3,000 FEET LONG.

		TEMPO	DRARY SEEDING	SUMMARY			
	HARDINES SEI	FERTILIZER RATE	LIME DATE				
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	(10-20-20)	LIME RATE	
			COOL SEASON GRAS	SSES			
1	ANNUAL RYEGRASS	40	3/1 - 5/15 8/1 - 10/15	0.5"			
2	BARLEY	96	3/1 - 5/15 8/1 - 10/15	1"		2 TONS/AC (90 LB/1000 SF)	
3	OATS	72	3/1 - 5/15 8/1 - 10/15	1"	436 LB/AC (10 LB/1000 SF)		
4	WHEAT	120	3/1 - 5/15 8/1 - 10/15	1"			
5	CEREAL RYE	112	3/1 - 5/15 8/1 - 11/15	1"			
			WARM SEASON GRAS	SSES			
6	FOXTAIL MILLET	30	5/16 - 7/31	0.5"	436 LB/AC	2 TONS/AC	
7	PEARL MILLET	20	5/16 - 7/31	0.5"	(10 LB/1000 SF)	(90 LB/1000 SF)	

. SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED SERMINATION AND PURITY. AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES

SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS. WHEN PLANTED ALONE, WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FOXTAIL MILLET), DO NOT EXCEED MORE THAN 5% (BY WEIGHT) OF THE OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS, CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE

OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES. 2. FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.

3. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS. ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE

### APPROVED: DEPARTMENT OF **PLANNING AND ZONING** 6/28/2022 CHIEF, DEVELOPMENTO SENSE THE SENSE DIVISION DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022 DIRECTOR DATE

### **B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION**

DEFINITION TO STABILIZE DISTURBED SOILS WITH PERMANENT VEGETATION.

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

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE

### A. SEED MIXTURES

GENERAL USE

2 TUREGRASS MIXTURES

a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR

AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING. c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES. USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY

d. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FORM FERTILIZER (46-0-0) AT 3 ½ POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY

a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF

b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN. i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT, IRRIGATION REQUIRED IN THE AREAS OF CENTRAL

MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT. ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE

iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN DROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT. CERTIFIED KENTUCKY BLUEGRASS

PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY

CULTIVARS 0 TO 5 PERCENT, SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET, ONE OR MORE CULTIVARS MAY BE BLENDED iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES; CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 11/2 TO 3 POUNDS PER 1000 SQUARE FEET.

SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE

c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDINESS ZONES: 5B, 6A)

CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B) SOUTHERN MD. EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONES: 7A, 7B)

d. TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 11/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES e JE SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER FOR PLANT GROWTH (% TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE)

UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS,

PERMANENT SEEDING SUMMARY HARDINESS ZONE (from Figure B.3): ZONE 6B FERTILIZER RATE SEED MIXTURE (from Table B.3) (10-20-20)LIME RATE \*SEEDING SEEDING P205 K20 RATE (LB/AC) DEPTHS DATES TALL FESCUE 2/15 - 4/30 KENTUCKY BLUEGRASS 8/15 - 10/31 PERENNIAL RYE GRASS 90 LB/AC 90 LB/AC 3/1 - 5/15 PERENNIAL RYE GRASS (1.0 LB/1000 SF) | (2 LB/1000 SF) | (2 LB/1000 SF) | (90 LB/1000 SF) 8/1 - 10/15 FLAT PEA

PARTRIDGE PEA

SWITCH GRASS

CREEPING RED FESCUE

1. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE. THESE DATES MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS. ESPECIALLY NEAR THE BOUNDARIES OF THE ZONES. WHEN SEEDING TOWARD THE END OF THE LISTED PLANTING DATES, OR WHEN CONDITIONS ARE EXPECTED TO BE LESS THAN OPTIMAL, SELECT AN APPROPRIATE NURSE CROP FROM TABLE B.1 TEMPORARY SEEDING FOR SITE STABILIZATION AND PLANT TOGETHER WITH THE PERMANENT SEEDING MIX.

2/15 - 5/31

2. WHEN PLANTED DURING THE GROWING SEASON, MOST OF THESE MATERIALS MUST BE PURCHASED AND KEPT IN A DORMANT CONDITION UNTIL PLANTING. BARE-ROOT GRASSES ARE THE EXCEPTION—THEY MAY BE SUPPLIED AS GROWING (NON-DORMANT) PLANTS. ◆ ADDITIONAL PLANTING DATES FOR THE LOWER COASTAL PLAIN, DEPENDENT ON ANNUAL RAINFALL AND TEMPERATURE TRENDS. RECOMMEND ADDING A NURSE CROP, AS NOTED ABOVE, IF PLANTING DURING THIS PERIOD. ♦♦WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES. OR MOISTURE IS NOT ADEQUATE. THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE. IN GENERAL.

PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR LATER PLANTINGS, ESPECIALLY ON DROUGHTY SITES. \* ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT ESTABLISHMENT.

FREQUENT FREEZING AND THAWING OF WET SOILS MAY RESULT IN FROST-HEAVING OF MATERIALS PLANTED IN LATE FALL, IF PLANTS HAVE NOT SOD USUALLY NEEDS 4 TO 6 WEEKS TO BECOME SUFFICIENTLY ROOTED. LARGE CONTAINERIZED AND BALLED-AND-BURLAPPED STOCK MAY BE PLANTED INTO THE WINTER MONTHS AS LONG AS THE GROUND IS NOT FROZEN AND SOIL MOISTURE IS ADEQUATE. \*\* FOR THE PERIOD 5/1 - 8/14 ADD EITHER FOXTAIL OR PEARL MILLET - 6 LBS/AC. TO MIX NO. 9, 2.25 LBS/AC. TO MIX NO. 5

B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

**OWNER'SIDEVELOPER'S CERTIFICATION:** 

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE

DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING

CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT O

THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT

PRIOR TO BEGINNING THE PROJECT. IWE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END

OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO ENSURI

THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION, IWE CERTIFY THE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT

MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS,

THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL

KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE

OF THE HOWARD SOIL CONSERVATION DISTRIC

RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY. THE HOWARD SOIL

CONSERVATION DISTRICT AND/OR MDE

NMÉR'S/DEVELOPER'S SIGNATURE

**DESIGN CERTIFICATION:** 

AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE

1. GENERAL SPECIFICATIONS a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR. b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF ¾ INCH, PLUS OR MINUS ¼ INCH, AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST

EXCLUDE TOP GROWTH AND THATCH, BROKEN PADS AND TORN OR LINEVEN ENDS WILL NOT BE ACCEPTABLE c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.

d. SOD MUST NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL. e. SOD MUST BE HARVESTED. DELIVERED. AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLÂNTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION

a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD. b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DRYING OF THE ROOTS.

c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES, ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE. d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.

a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES, WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT.

c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS.

118/2022

President

MD LICENSE NUMBER

DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, email=astine@bohleren g.com, c=US Date: 2022.05.23 14:01:08 -04'00'

DATE

Digitally signed by

Andrew G. Stine, P.E.

### HOWARD SCD SIGNATURE BLOCK

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. 6/28/2022

DEVELOPER:

102 CENTENNIAL STREET, STE.

LA PLATA MD 20645

CONTACT: JASON BELT

PHONE: 240-320-6448

Olexander Bratchie HOWARD SOIL CONSERVATION DISTRICT

OWNER: OTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448

PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO.

SECTION/AREA: N/A DEED # **FILE NO. SDP-21-009** 

REV DATE COMMENT

**REVISIONS** 

Call before you div **ALWAYS CALL 811** It's fast. It's free. It's the law.

APPROVED FOR CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC'</u>

<u>DOCUMENT</u> UNLESS INDICATED OTHERWISE. PROJECT No.: DRAWN BY:

CAD I.D.:

**CHECKED BY:** 

PROJECT: SITE DEVELOPMENT

MD132045-SDP-3.DW0

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 80 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

**EROSION & SEDIMENT** CONTROL NOTES & DETAILS

118118118118

2 3/8 IN DIAMETER

CONSTRUCTION SPECIFICATIONS

U.S. DEPARTMENT OF AGRICULTURI

DETAIL B-4-6-C

OR ALUMINUM

CHAIN LINK FENCING

WOVEN SLIT FILM GEOTEXTILE

SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS

GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.

GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.

DETAIL B-4-6-D

CONSTRUCTION SPECIFICATIONS

USE NOMINAL 2 INCH x 4 INCH LUMBER

USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS LIFT GRATE, AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE

DETAIL E-9-6 COMBINATION

ATTACH A CONTINUOUS PIECE OF  $\frac{1}{2}$  INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2X4 WEIR, EXTENDING 2 FEET BEYOND THROAT ON EACH SIDE

INLET PROTECTION

COIP

├── DF ──

PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH IT TO THE WEIR. NAIL THE 2X4 WEIR TO THE TOP OF A 9 INCH LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND

PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2X4 ANCHORS (MINIMUM 2 FOOT LENGTHS OF 2x4 INCH TO THE TOP OF THE WEIR AT SPACER LOCATIONS). EXTEND 2X4 ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD

INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING. FORM THE  $rac{1}{4}$  INCH HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE OVER THE HARDWARE CLOTH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.

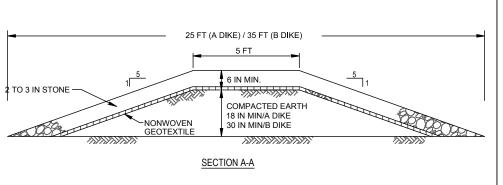
). AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTRO

DETAIL C-9 DIVERSION FENCE

6 IN DEEP (MIN.) KEY IN TRENCH ISOMETRIC VIEW

MB



CONSTRUCTION SPECIFICATIONS

USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.

DETAIL E-9-2 AT-GRADE INLET PROTECTION

PLAN / CUT AWAY VIEW

DETAIL C-8 MOUNTABLE BERM

PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH

AND WIDTH OF THE MOUNTABLE BERM. MAINTAIN LINE, GRADE, AND CROSS SECTION, ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO

MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION

MAXIMUM DRAINAGE AREA = 1 ACRE

— NONWOVEN GEOTEXTILE

WIRE TIES

☐ <sup>'</sup>AGIP

MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAG

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

SLOPE APPLICATION ISOMETRIC VIEW

TEMPORARY SOIL

STABILIZATION MATTING

DETAIL B-4-6-B

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

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

. SECURE MATTING USING STEEL STAPLES, WOOD STAKES, OR BIODEGRADABLE EQUIVALENT. STAPLES MUST BE "U' OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO  $1\frac{1}{2}$  INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG. A MINIMUM 1 INCH SECONDARY LEG AND A MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWO 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPED AT THE BOTTOM

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATION: UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION & SEDIMENT CONTROL PLAN UNROLL MATTING DOWNSLOPE. LAY MAT SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING

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

KEY IN THE UPSLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

WATER MANAGEMENT ADMINISTRATION

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

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

DETAIL E-1 SILT FENCE

STABILIZATION MATTING CHANNEL APPLICATION INCLUDE SHEAR STR —6 IN MIN. DEPTH KEY TRENCHFOR ROLL E IN MIN. OVERLAP AT 6 IN MIN. DEPTH KEY TRENCH FOR UPPER END OF DOWNSLOPE ROLL ARED SURFACE WITH SEED IN PLACE ISOMETRIC VIEW CONSTRUCTION SPECIFICATIONS USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS USE TEMPORARY SOIL STABILIZATION MATTING MADE OF DEGRADABLE (LASTS 6 MONTHS MINIMUM) NATURAL OR

TEMPORARY SOIL

DETAIL B-4-6-A

MAN-MADE FIBERS (MOSTLY ORGANIC). MAT MUST HAVE UNIFORM THICKNESS AND DISTRIBUTION OF FIBERS INFORMATION OF FIBERS OF THE ORGANIC OF THE MAT MUST BE NON-LEACHING AND NON-TO TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON : INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE

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

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATION UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL

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

KEY-IN UPSTREAM END OF EACH MAT ROLL BY DIGGING A 6 INCH (MINIMUM) TRENCH AT THE UPSTREAM END OF TH MATTING, PLACING THE ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END.

OVERLAP OR ABUT THE ROLL EDGES PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND

CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

STABILIZATION MATTING CHANNEL APPLICATION \* INCLUDE SHEAR STRES ROLL END OVERLAP AT 6 IN DEEP (MIN.) KEY RENCH FÒR UPPER END OF OWN SLOPE ROLL. (TYP ISOMETRIC VIEW CONSTRUCTION SPECIFICATIONS

FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2% INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT

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

WHERE ENDS OF THE GEOTEXTILE COME TOGETHER. THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED.

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

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BUILGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

PERMANENT SOIL

ARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

WATER MANAGEMENT ADMINISTRATION

PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT

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

USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND

SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE TO 1 % INCHES WIDE AND RE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM HARDWOOD 12 TO 24 INCHES IN LENGTH 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM

SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS, PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN LINDOLL MATTING IN DIRECTION OF WATER FLOW CENTERING THE FIRST POLL ON THE CHANNEL CENTER LINE

OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MA KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END

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

**TEMPORARY STABILIZATION** 

<u>DEFINITION</u>
TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS.

DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS.

TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT D. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE

WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE, AVOID STRETCHING THE MATTING.

IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE

. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED. ONCE

CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION MARYLAND DEPARTMENT OF ENVIRONMENT

**B-4-4 STANDARDS AND SPECIFICATIONS FOR** 

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER

APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY

SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES. SEEDING DATES AND SEEDING DEPTHS

STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING

IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND

2. FOR SITES HAVING SOIL TESTS PERFORMED. USE AND SHOW THE RECOMMENDED RATES BY THE

3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR

SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE

OVERLAP OR ABUT FILL MAT VOIDS (SEE NOTE 9) KEY IN TRENCH 6 IN MIN. OVERLAP AT ROLL END (TYP.) WITH SEED IN PLACE ISOMETRIC VIEW CONSTRUCTION SPECIFICATIONS JSE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.

ISOMETRIC VIEW

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

STABILIZATION MATTING

SLOPE APPLICATION

PERMANENT SOIL

GRATE WRAPPED

─ 2 IN x 4 IN WEIR

USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND JFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.

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

PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS, PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL

UNROLL MATTING DOWN SLOPE. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE DOWNSLOPE MAT

KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.

STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED,

ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

ONCE THE MATTING IS KEYED AND STAPLED IN PLACE. FILL THE MAT VOIDS WITH TOP SOIL OR GRANLII AR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTROL

OR ALUMINUM MPERMEABLE SHEETING SHEETING ON BOTH SIDES OF FENCE 2 3/8 IN DIAMETE EXTEND IMPERMEABLE SHEETING -OR PROVIDE SOIL STABILIZATION MATTING 4 FT MIN. ALONG FLOW SURFACE SHEETING 8 IN MIN SECURE WITH WIRE TIES **SECTION** 

CONSTRUCTION SPECIFICATIONS USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2% INCH MAXIMUM OPENING). USE 2% INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED

NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED

TORN, IF UNDERMINING OCCURS, REINSTALL FENCE.

EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG

WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING

KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL FROSION AND SEDIMENT CONTRO

CROSS SECTION CONSTRUCTION SPECIFICATIONS

SLIT FILM
SLIT FILM
MONOFILAMENT
GEOTEXTHE

MINIMUM AVERAGE ROLL VALUE

450 lb 900 lb 450 lb
U.S. Sieve 30 U.S. Sieve 70 U.S. Sieve 70

(0.59 mm) (0.21 mm) (0.21 mm)

0.28 sec<sup>-1</sup>

TEST METHOD | MD | CD | MD | CD | MD | CD

ASTM D-4355 70% strength 70% strength 70% strength

H-1 STANDARDS AND SPECIFICATIONS

MATERIALS

Table H.1: Geotextile Fabric

ab Tensile Strength ASTM D-4632 200 lb 200 lb 370 lb 250 lb 200 lb 200 lb ab Tensile Elongation ASTM D-4632 15% 10% 15% 15% 50% 50%

Trapezoidal Tear Strength | ASTM D-4533 | 75 lb | 75 lb | 100 lb | 60 lb | 80 lb | 80 lb |

All numeric values except apparent opening size (AOS) represent minimum average roll values (MARV).

Geotextiles must be evaluated by the National Transportation Product Evaluation Program (NTPEP) and

The geotextile must be inert to commonly encountered chemicals and hydrocarbons and must be rot and mildew resistant. The geotextile must be manufactured from fibers consisting of long chain synthetic polymers and

composed of a minimum of 95 percent by weight of polyolefins or polyesters, and formed into a stable network

When more than one section of geotextile is necessary, overlap the sections by at least one foot. The geotextile

must be pulled taut over the applied surface. Equipment must not run over exposed fabric. When placing

so the filaments or yams retain their dimensional stability relative to each other, including selvages

MARV is calculated as the typical minus two standard deviations. MD is machine direction; CD is cross

ASTM D-4491 0.05 sec<sup>-1</sup>

ASTM D-4632

ASTM D-6241

<sup>2</sup> Values for AOS represent the average maximum opening.

riprap on geotextile, do not exceed a one foot drop height.

Apparent Opening Size<sup>2</sup> ASTM D-4751

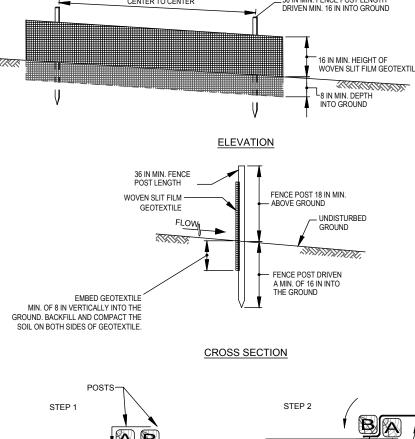
Retained at 500 hours

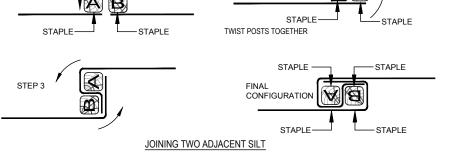
NONWOVEN GEOTEXTILI

USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.

PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL





MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

FENCE SECTIONS (TOP VIEW)

**CONSTRUCTION SPECIFICATIONS** USE WOOD POSTS 1% X 1% ± 1/6 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN POUND PER LINEAR FOOT.

DETAIL E-1 SILT FENCE

- USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
- USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE
- SECTION H-1 MATERIALS. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC
- WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH

### Call before you dig **ALWAYS CALL 811** INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN

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EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT

REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT, REPLACE GEOTEXTILE IF TORN, IF UNDERMINING OCCURS, REINSTALL FENCE

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

**OWNER'S IDEVELOPER'S CERTIFICATION:** 

IWE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE

DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING

CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF

THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT

PRIOR TO BEGINNING THE PROJECT. IWE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END

118/2022

President

MD LICENSE NUMBER

102 CENTENNIAL STREET, STE. 1

LA PLATA MD 20645

CONTACT: JASON BELT

DEVELOPER:

OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO ENSURE

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT

MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS,

THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL

KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE

👣 THE HOWARD SOIL CONSERVATION DISTRICT

POTOMAC ENERGY HOLDINGS, LLC

PO BOX 2810

LA PLATA MD 20646

CONTACT: JASON BELT

THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. IWE CERTIFY THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL

AND MAINTAINING CONTROLS. AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE

CONSERVATION DISTRICT AND/OR MDE.

**DESIGN CERTIFICATION:** 

OWNER:

DRAWN BY: **CHECKED BY** CAD I.D.: MD132045-SDP-3.DW0 PROJECT: SITE

PROJECT No.:

DEVELOPMENT PLAN

It's fast. It's free. It's the law.

APPROVED FOR

CONSTRUCTION

HIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGEN

EVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC'</u>

<u>DOCUMENT</u> UNLESS INDICATED OTHERWISE.

REVISIONS

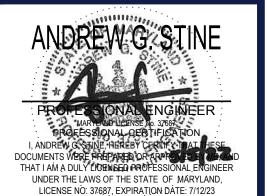
DATE

COMMENT

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 80 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com



**EROSION & SEDIMENT** CONTROL NOTES

& DETAILS

OF 45

Digitally signed by Andrew G. Stine, DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, email=astine@bohlereng.com, c=US Date: 2022.05.23 14:00:50 -04'00'

HOWARD SCD SIGNATURE BLOCK THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. 6/28/2022 Olexander Bratchie HOWARD SOIL CONSERVATION DISTRICT

-MAINTAIN STOCK PILE SURFACE IN ACCORDANCE WITH TEMPORARY STABILIZATION NOTES (MAXSIDE SLOPE TYP.) CONSTRUCT SILT **FENCE AROUND** PERIMETER OF TEMPORARY STOCKPILE DETAIL

Andrew G. Stine, P.E.

PHONE: 240-320-6448 PHONE: 240-320-6448 GRID: PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # **FILE NO. SDP-21-009** 

**PLANNING AND ZONING** 6/28/2022 CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/28/2022 CHIEF, DIVISION OF LAND BEVELOPMENT 6/28/2022 DATE IRECTOR

APPROVED: DEPARTMENT OF

LIME RATES MUST BE PUT ON THE PLAN.

# **B-4-6 STANDARDS AND SPECIFICATIONS FOR SOIL STABILIZATION MATTING**

WATER MANAGEMENT ADMINISTRATION NATURAL RESOURCES CONSERVATION SERV

 $\frac{\text{DEFINITION}}{\text{MATERIAL USED TO TEMPORARILY OR PERMANENTLY STABILIZE CHANNELS OR STEEP SLOPES UNTIL}$ GROUNDCOVER IS ESTABLISHED.

PURPOSE TO PROTECT THE SOILS UNTIL VEGETATION IS ESTABLISHED.

LENGTH, AND THE SOIL-ERODIBILITY K FACTOR.

ON NEWLY SEEDED SURFACES TO PREVENT THE APPLIED SEED FROM WASHING OUT; IN CHANNELS AND ON STEEP SLOPES WHERE THE FLOW HAS EROSIVE VELOCITIES OR CONVEYS CLEAR WATER: ON TEMPORARY SWALES, EARTH DIKES, AND PERIMETER DIKE SWALES AS REQUIRED BY THE RESPECTIVE DESIGN STANDARD; AND, ON STREAM BANKS WHERE MOVING WATER IS LIKELY TO WASH OUT NEW VEGETATIVE PLANTINGS.

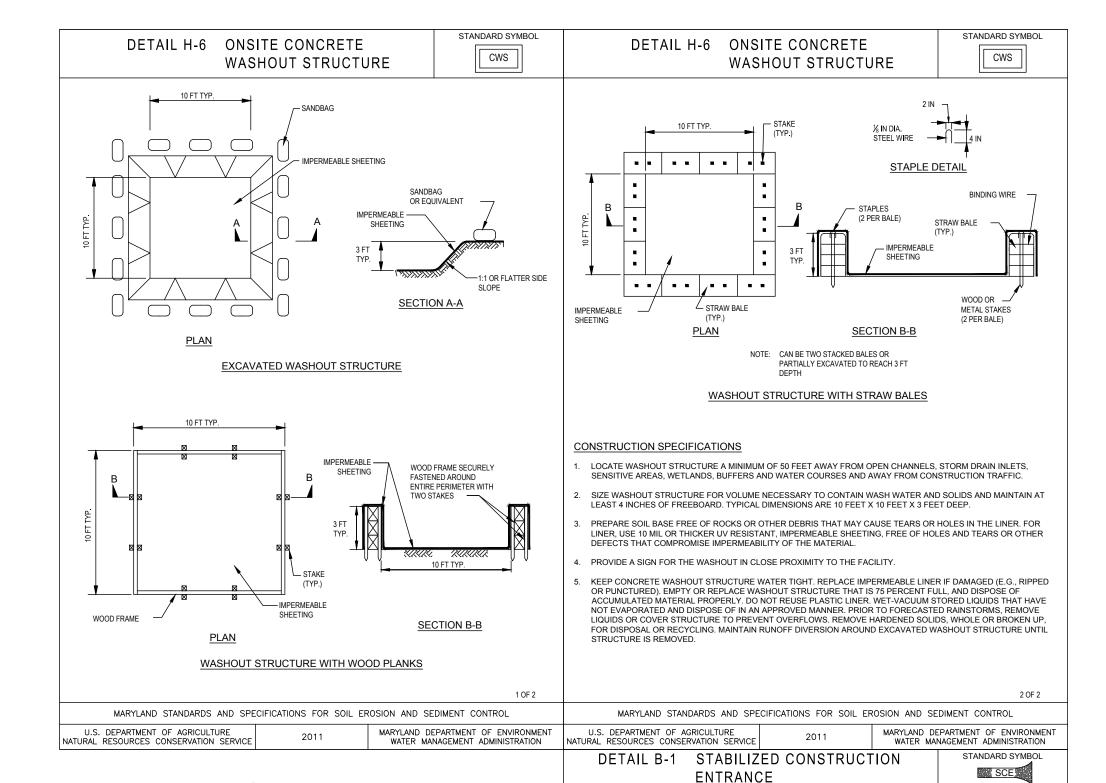
1. THE SOIL STABILIZATION MATTING THAT IS USED MUST WITHSTAND THE FLOW VELOCITIES AND SHEAR STRESSES DETERMINED FOR THE AREA, BASED ON THE 2-YEAR, 24-HOUR FREQUENCY STORM FOR TEMPORARY APPLICATIONS AND THE 10-YEAR, 24-HOUR FREQUENCY STORM FOR PERMANENT APPLICATIONS. DESIGNATE ON THE PLAN THE TYPE OF SOIL STABILIZATION MATTING USING THE STANDARD SYMBOL AND INCLUDE THE CALCULATED SHEAR STRESS FOR THE RESPECTIVE TREATMENT AREA. 2. MATTING IS REQUIRED ON PERMANENT CHANNELS WHERE THE RUNOFF VELOCITY EXCEEDS

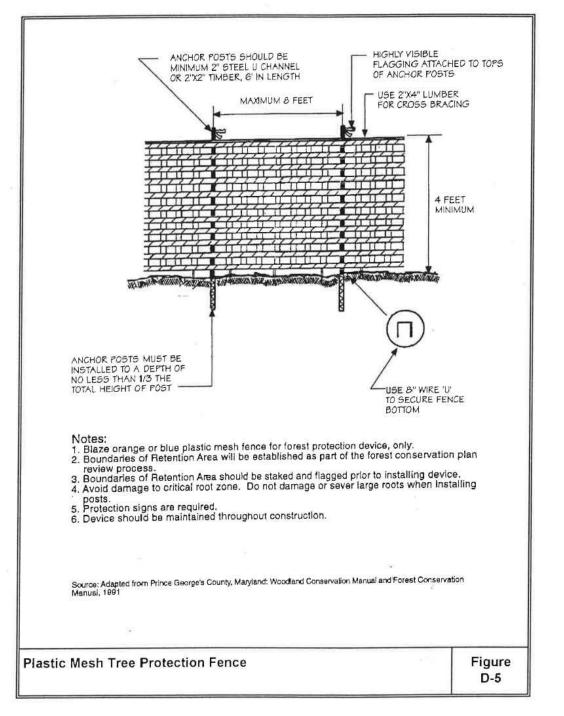
TWO AND HALF FEET PER SECOND (2.5 FPS) OR THE SHEAR STRESS EXCEEDS TWO POUNDS PER SQUARE FOOT (2 LBS/FT2). ON TEMPORARY CHANNELS DISCHARGING TO A SEDIMENT TRAPPING PRACTICE, PROVIDE MATTING WHERE THE RUNOFF VELOCITY EXCEEDS FOUR FEET PER SECOND (4 FPS) 3. TEMPORARY SOIL STABILIZATION MATTING IS MADE WITH DEGRADABLE (LASTS 6 MONTHS MINIMUM), NATURAL, OR MANMADE FIBERS OF UNIFORM THICKNESS AND DISTRIBUTION OF

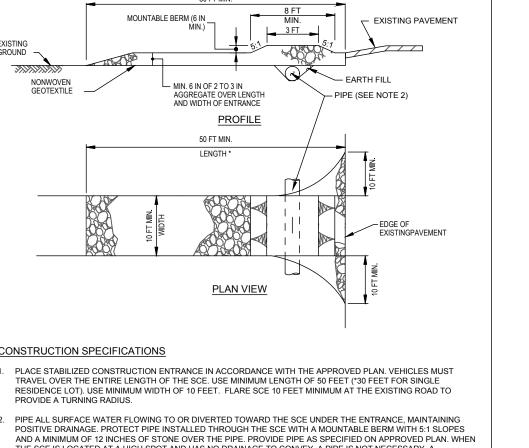
FIBERS THROUGHOUT AND IS SMOLDER RESISTANT. THE MAXIMUM PERMISSIBLE VELOCITY FOR TEMPORARY MATTING IS 6 FEET PER SECOND. 4. PERMANENT SOIL STABILIZATION MATTING IS AN OPEN WEAVE, SYNTHETIC MATERIAL CONSISTING OF NONDEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION OF WEAVE THROUGHOUT. THE MAXIMUM PERMISSIBLE VELOCITY FOR

PERMANENT MATTING IS 8.5 FEET PER SECOND. 5. CALCULATE CHANNEL VELOCITY AND SHEAR STRESS USING THE PROCEDURE OUTLINED ON PAGE B:36 OF THE MDE MANUAL. 6. USE TABLE B.7 ON PAGE B.37 OF THE MDE MANUAL TO ASSIST IN SELECTING THE APPROPRIATE SOIL STABILIZATION MATTING FOR SLOPE APPLICATIONS BASED ON THE SLOPE. THE SLOPE

VEGETATION MUST BE ESTABLISHED AND MAINTAINED SO THAT THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4







- THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE. AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT, ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSION: IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATION	ONS FOR SOIL EF	ROSION AND SEDIMENT CONTROL	
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONM WATER MANAGEMENT ADMINISTRATIO	

### HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

- 1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
  - a. PRIOR TO THE START OF EARTH DISTURBANCE, b. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
  - c. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT, d. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
  - OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- 3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
- 4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
- SITE ANALYSIS:
- TOTAL AREA OF SITE: 1.04 ACRES
- AREA DISTURBED: 0.97 ACRES AREA TO BE ROOFED OR PAVED: 0.69 ACRES
- AREA TO BE VEGETATIVELY STABILIZED: 0.35 ACRES TOTAL CUT: 990 CU. YDS.
- TOTAL FILL: 70 CU YDS

INSPECTION DATE

- OFFSITE WASTE/BORROW AREA LOCATION:
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY: AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
  - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
  - NAME AND TITLE OF INSPECTOR WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
  - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
  - EVIDENCE OF SEDIMENT DISCHARGES IDENTIFICATION OF PLAN DEFICIENCIES
  - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
  - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
  - PHOTOGRAPHS
  - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS

  - MONITORING/SAMPLING
  - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
  - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES,
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- 10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
- 11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD. NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME. WASH WATER FROM ANY EQUIPMENT. VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- 12. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
- 13. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
- 14. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE): USE I AND IP MARCH 1 - JUNE 15
  - USE III AND IIIP OCTOBER 1 APRIL 30 USE IV MARCH 1 - MAY 31
- 15. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

w G. N: cn=Andrew G Stine, P.E., o=Bohler, ou, Stine,

email=astine@bol lereng.com, c=US Date: 2022.05.23 14:00:31 -04'00'

# **OWNER'S IDEVELOPER'S CERTIFICATION:**

IWE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. IWE ALSO CERTIFY THAT THE SITE WILL BE INSPECTED AT THE END OF EACH WORKING DAY, AND THAT ANY NEEDED MAINTENANCE WILL BE COMPLETED SO AS TO ENSURE THAT ALL SEDIMENT CONTROL PRACTICES ARE LEFT IN OPERATIONAL CONDITION. IWE CERTIFY THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

1/18/2022 President

### **DESIGN CERTIFICATION:**

MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. 5/5/22

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT

MD LICENSE NUMBER

OWNER:			EVELOPI	ER:	
LA PLATA CONTACT:	GY HOLDING DX 2810 ., MD 20646 JASON BEL 40-320-6448	10 T	LA CON	DASH-IN :NNIAL STREE PLATA, MD 20 TACT: JASON DNE: 240-320-6	645 BELT
TAX MAP:	24	GRID:	24	PARCEL:	311
2ND ELEC	CTION DIST	RICT, HOW	ARD CO	JNTY, MARYLA	4ND
\$	SUBDIVISIO SI	N NAME: T ECTION/AF DEED 11525 / 0	REA: N/A	L OIL CO.	
FI	LE N	o. si	DP-2	1-009	

**REVISIONS** REV DATE COMMENT



APPROVED FOR

It's fast. It's free. It's the law.

CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC'</u>

<u>DOCUMENT</u> UNLESS INDICATED OTHERWISE. PROJECT No.: DRAWN BY: **CHECKED BY:** 

MD132045-SDP-3.DW0

PROJECT:

CAD I.D.:

SITE **DEVELOPMENT** 

PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 80° **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

**EROSION & SEDIMENT** CONTROL NOTES & DETAILS

HOWARD SCD SIGNATURE BLOCK

THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. Olexander Bratchie 28/2022

APPROVED: DEPARTMENT OF **PLANNING AND ZONING** 

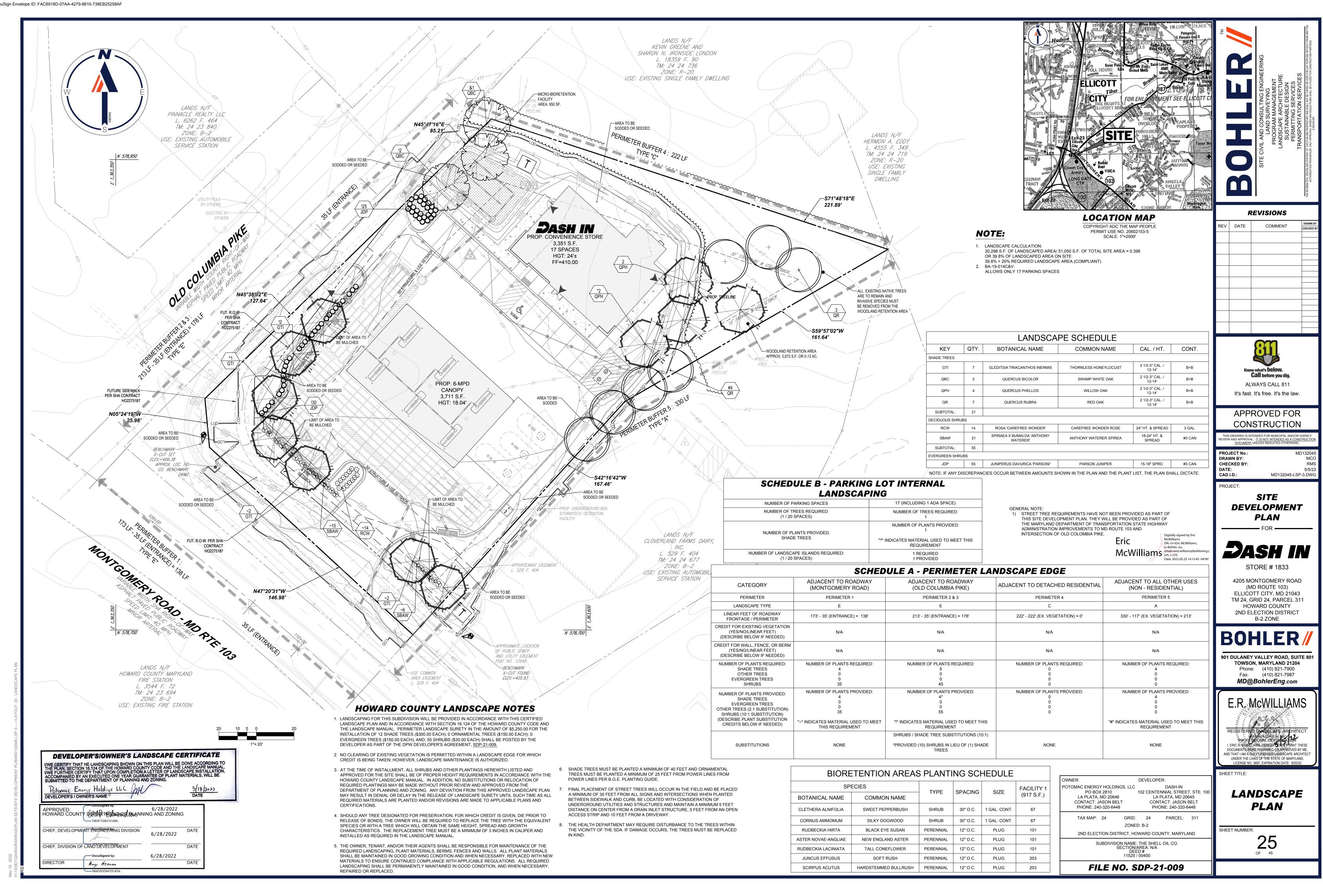
HOWARD SOIL CONSERVATION DISTRICT

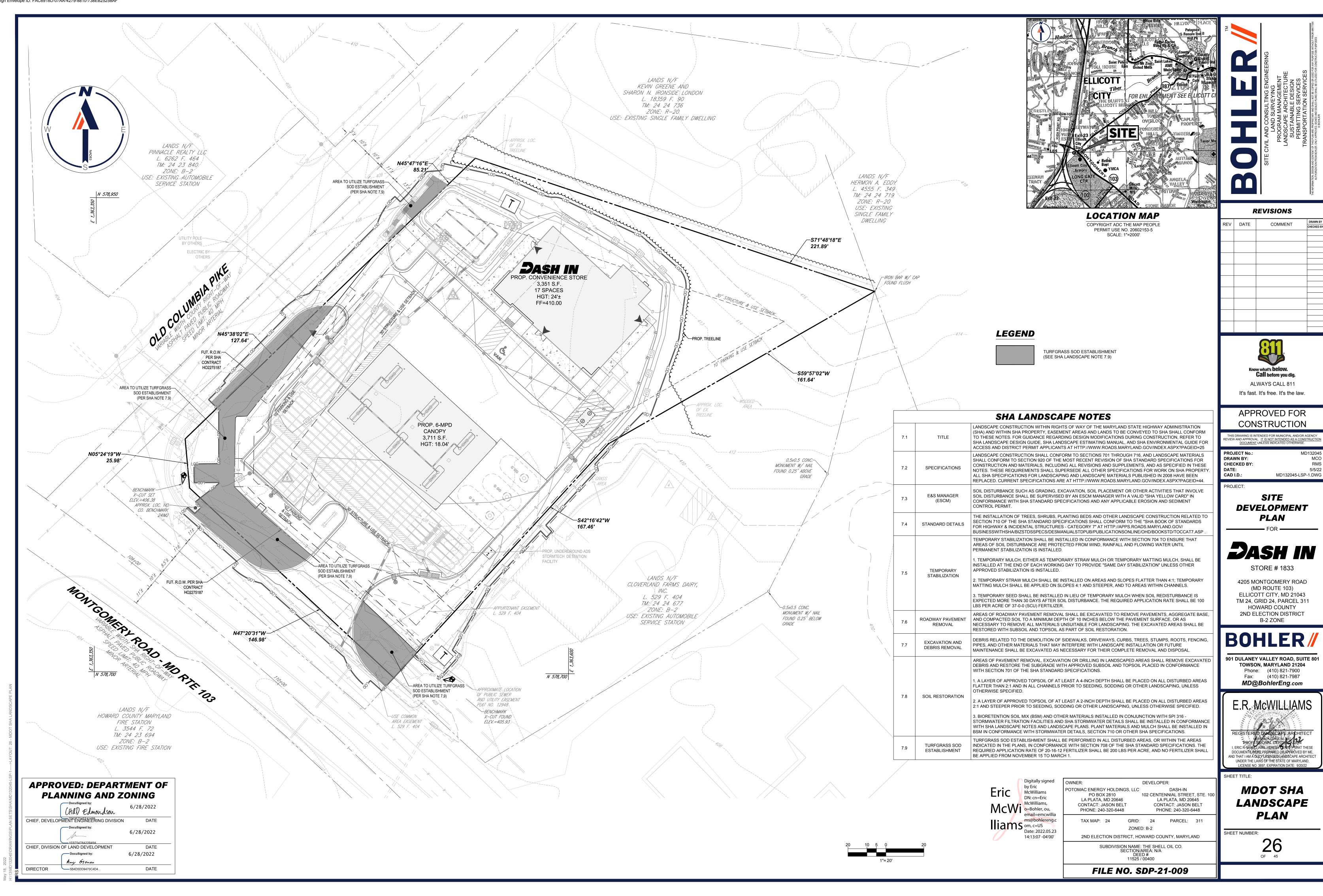
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6/28/2022 (Hdl) Edmondson CHIEF, DEVELOPMEN9管形倒NEERING DIVISION 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022

DATE

DIRECTOR





### LANDSCAPE SPECIFICATIONS

HE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR

- A. GENERAL ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS
- B. TOPSOIL NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS
- C. LAWN ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM SIX INCH (6") THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES. 1.1. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED 1.2. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. 1.3. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
- D. MULCH THE MULCH AROUND THE PERIMETER OF THE BUILDING SHALL BE A 3" LAYER OF DOUBLE SHREDDED BLACK CEDAR MULCH ONLY. ALL OTHER AREAS SHALL BE MULCHED WITH A 3" LAYER OF DOUBLE SHREDDED DARK BROWN HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.

### F FFRTII IZFR

- 1.1. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A
- 1.2. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY

### F PLANT MATERIAL

- 1.1. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE
- 1.2. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL 1.3. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT I FAST
- ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION. 1.4. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 11/4", WHICH HAVE NOT BEEN COMPLETELY CALLUSED. SHALL BE REJECTED PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.
- 1.5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE 1.6. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX
- INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE. IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER. THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE. 1.7. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE
- LONGEST BRANCH 1.8. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL

WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.

### 3. GENERAL WORK PROCEDURES

- A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED. STOCKPILED OR DISPOSED OF
- B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.

- A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.
- B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE TRUNK. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE
- C. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK

- A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.
- B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.
- C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
- D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

- A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY
- B. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS

C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY.

- COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY 1.1. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. THOROUGHLY TILL ORGANIC
- MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5. 1.2 TO INCREASE DRAINAGE MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING
- COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE. 1.3. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED
- CLAY LOAM UP TO 30% OF THE TOTAL MIX.

- A. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE
- B. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL

C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT

D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

- . CONTRACTOR SHALL PROVIDE A SIX INCH (6") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS
- B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY

BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

- CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS
- D. ALL PLANTING AND LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1.000 SQUARE FOOT AREA) 1.1. 20 POUNDS 'GROW POWER' OR APPROVED EQUAL
- 1.2. 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP

BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

- A. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
- B PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
- C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING

UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.

- D. ALL PLANTING CONTAINERS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKELLING
- E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED
- F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN. MUST BE INSTALLED. INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS
- 1.1. PLANTS: MARCH 15 TO DECEMBER 15
- 1.2. LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
- G. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
- H. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY. THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING
- ACER RUBRUM PLATANUS X ACERIFOLIA BETULA VARIETIES POPULOUS VARIETIES CARPINUS VARIETIES PRUNUS VARIETIES CRATAFGUS VARIFTIFS PYRUS VARIETIES QUERCUS VARIETIES LIQUIDAMBER STYRACIFLUA TILIA TOMENTOSA LIRIODENDRON TULIPIFERA ZELKOVA VARIETIES
- PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
- 1 PART PEAT MOSS • 1 PART COMPOSTED COW MANURE BY VOLUME
- 3 PARTS TOPSOIL BY VOLUME • 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS: A) 2 TABLETS PER 1 GALLON PLANT
  - B) 3 TABLETS PER 5 GALLON PLANT
  - C) 4 TABLETS PER 15 GALLON PLANT D) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK
- J. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND
- K. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL. THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP
- ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
- M. GROUND COVER AREAS SHALL RECEIVE A 1/4" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION
- N. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
- O. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.
- P. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.

- A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT
- B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.
- C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
- D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.
- E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN. F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE

### A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST LINTIL PLANTS ARE ESTABLISHED

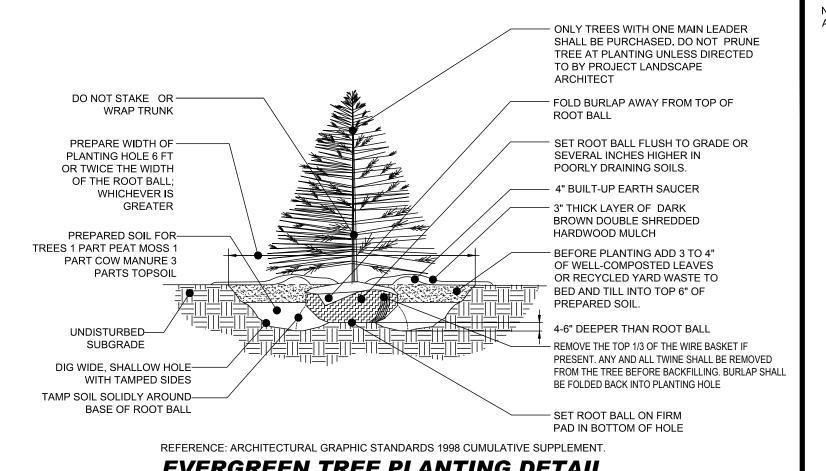
- B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
- C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

- A. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.
- B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION.
- C. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CUI TIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.
- D. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH. ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

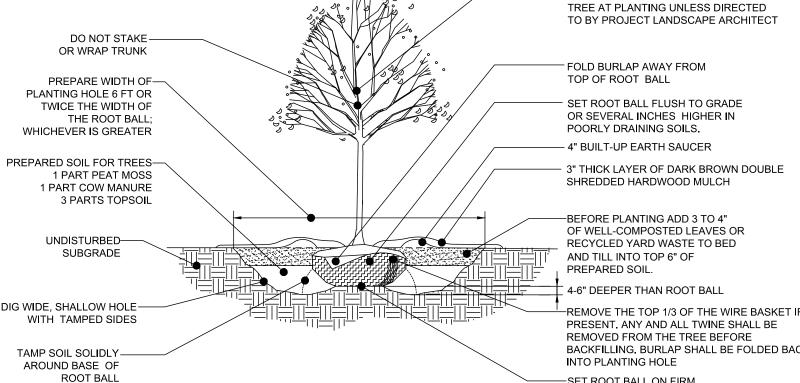
# CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED 13. CLEANUF

- A UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE. THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED
- B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE

### APPROVED: DEPARTMENT OF **PLANNING AND ZONING** 6/28/2022 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022 Amy Gonan DIRECTOR DATE



# EVERGREEN TREE PLANTING DETAIL NOT TO SCALE



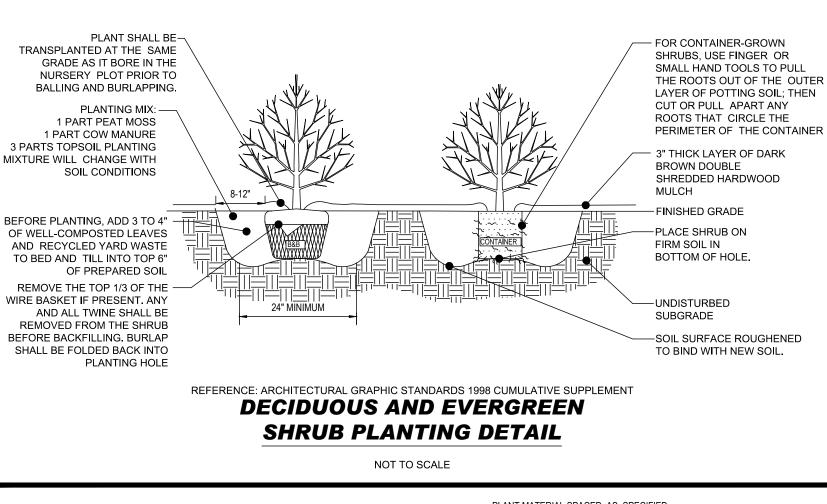
PRESENT. ANY AND ALL TWINE SHALL BE REMOVED FROM THE TREE BEFORE BACKFILLING. BURLAP SHALL BE FOLDED BACK INTO PLANTING HOLE -SET ROOT BALL ON FIRM

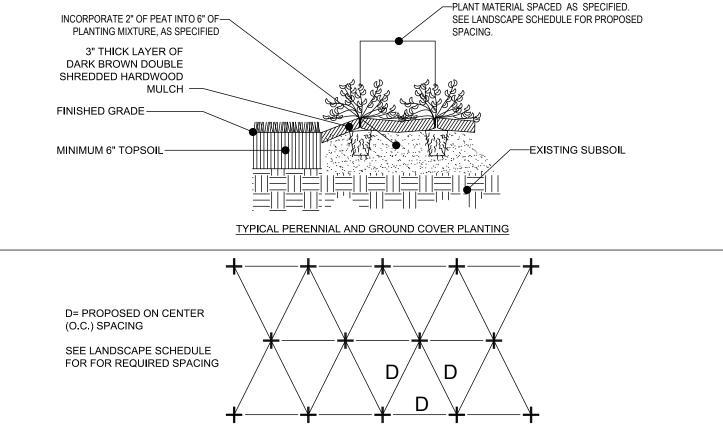
ONLY TREES WITH ONE MAIN LEADER

SHALL BE PURCHASED, DO NOT PRUNE

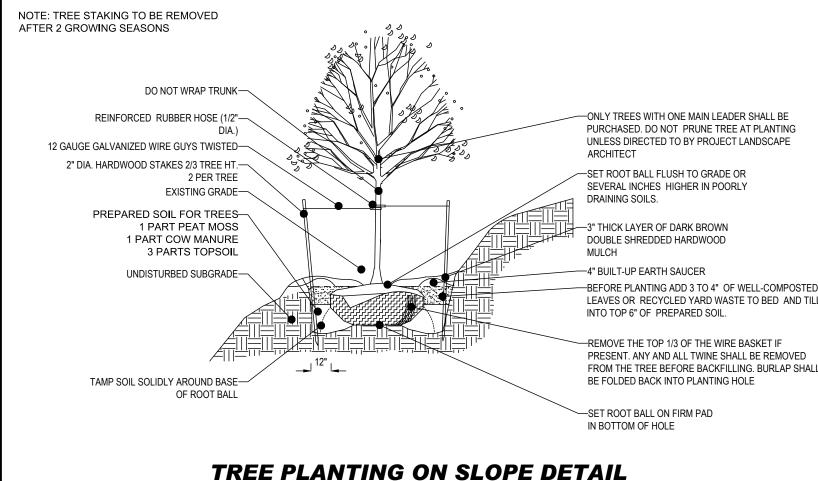
REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT

### DECIDUOUS TREE PLANTING DETAIL NOT TO SCALE





TYPICAL PERENNIAL AND GROUND COVER SPACING & LAYOUT PERENNIAL/GROUND COVER PLANTING DETAIL



PRIOR TO SEEDING. AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF

SEEDING SPECIFICATIONS

PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND

SEEDING RATES: PERENNIAL RYEGRASS 1/2 LB/1,000 SQ FT 1 LB/1 000 SQ FT KENTUCKY BI UEGRASS 1 1/2 I BS/1 000 SQ F RED FESCUE SPREADING FESCUE 1 1/2 LBS/1,000 SQ FT FERTILIZER (20:10:10) 14 LBS/1,000 SQ FT 90 LBS/1,000 SQ FT

ALL DEBRIS LARGER THAN 2" DIAMETER.

GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

# **OWNER MAINTENANCE RESPONSIBILITIES**

UPON OWNER'S (OR OWNER CONTRACTOR'S) COMPLETION OF LANDSCAPING WORK. THE OWNER IS FULLY RESPONSIBLE FOR ALL FUTURE MAINTENANCE, CARE, UPKEEP, WATERING, AND TRIMMING OF ALL INSTALLED VEGETATION, PLANTS, TREE, BUSHES, SHRUBS, GRASSES, GRASS, ORNAMENTAL PLANTS AND FLOWERS, FLOWERS, GROUND COVER, AND LANDSCAPING, INCLUDING ALL LANDSCAPE ISLANDS AND AREAS ADJACENT OR PART OF THE LANDSCAPED AREAS. THIS RESPONSIBILITY INCLUDES, BUT IS NOT LIMITED TO. THE FOLLOWING

- TREES ADJACENT TO WALKWAYS AND AREAS OF PEDESTRIAN TRAFFIC MUST BE MAINTAINED TO ASSURE THAT ANY BRANCHES MUST BE LIMBED UP TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PEDESTRIAN SURFACES) OR PRUNED BACK TO AVOID ANY INTERFERENCE WITH THE TYPICAL PATH
- TRIMMED TO A CLEARANCE HEIGHT OF 7 FT. (FROM ALL PAVED, TRAVELED SURFACES), OR AS OTHERWISE INDICATED ON THE PLANS. VEGETATIVE GROUND COVER. SHRUBS AND ORNAMENTAL PLANTS AND GRASSES MUST BE TRIMMED
- SO THAT NO PORTION OF THE PLANT EXCEEDS 30 INCHES ABOVE GRADE (OF ALL PAVED, TRAVEL SURFACES) ALONG AND WITHIN THE SIGHT LINES OF PARKING LOTS AND INGRESS-EGRESS WAYS. FALLEN PLANT FLOWERS. FRUIT. SEEDS AND DEBRIS DROPPINGS ARE TO BE REMOVED IMMEDIATEL' FROM VEHICULAR AND PEDESTRIAN TRAFFIC AREAS TO PREVENT TRIPPING, SLIPPING OR ANY
- THESE REQUIREMENTS DO NOT AFFECT THE PLANT LIFE GUARANTEES THE LANDSCAPE CONTRACTOR IS REQUIRED TO PROVIDE

OTHER HAZARDS.

Permanent Placement of NEW 6.5ft PID

PERMIT NUMBER: \$20000003

HEATH

Pylon: (A)

TREES WITHIN VEHICULAR SIGHT LINES, AS ILLUSTRATED ON THE LANDSCAPE PLAN, ARE TO BE

DASH IN = 26 SQ FT PRICER 2X REGULAR = 26 SQ FT PRICER 1X VPOWER = 13 SQ FT PRICER 1X DIESEL= 13 SQ FT TOTAL SQ FT OF SIGN = 120.25 SQ FT 2.34% ··· 2.34å 2.34%

s letters and crossed referenced them on map. 11.5.29 MDS R4: Add Ste #1833 to every page and removed dumpster enclosure page. 11.10.20 MDS Account Rep: R6: Combine building sign to one page. 12:10:20 MDS R7:Add Sevice Center to

Project Manager: Peggy Deheck Laboratories Inc.

| Components and shall meet all n.e.g. standards

Job Number: 207252 Date: 11.4.20 SITE #1833 Theet Number: 3 or 9 4205 Montgomery R Ellicott City, MD Design Number: DI207252.E Digitally signed by Eric McWilliam DN: cn=Eric McWilliams, o=Bohler,

McWilliams m, c=US
Date: 2022.05.23 14:11:23 -04'00'

OWNER: DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 102 CENTENNIAL STREET, STE LA PLATA MD 20646 LA PLATA MD 20645 CONTACT: JASON BELT CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448 PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED #

**FILE NO. SDP-21-009** 

HEET NUMBER

NOTES &

**DETAILS** 

**REVISIONS** REV DATE COMMENT



# APPROVED FOR CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC'</u>

<u>DOCUMENT</u> UNLESS INDICATED OTHERWISE. PROJECT No.: DRAWN BY:

CAD I.D.: PROJECT:

CHECKED BY:

SITE DEVELOPMENT

PLAN

MD132045-LDP-3.DW0

(MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

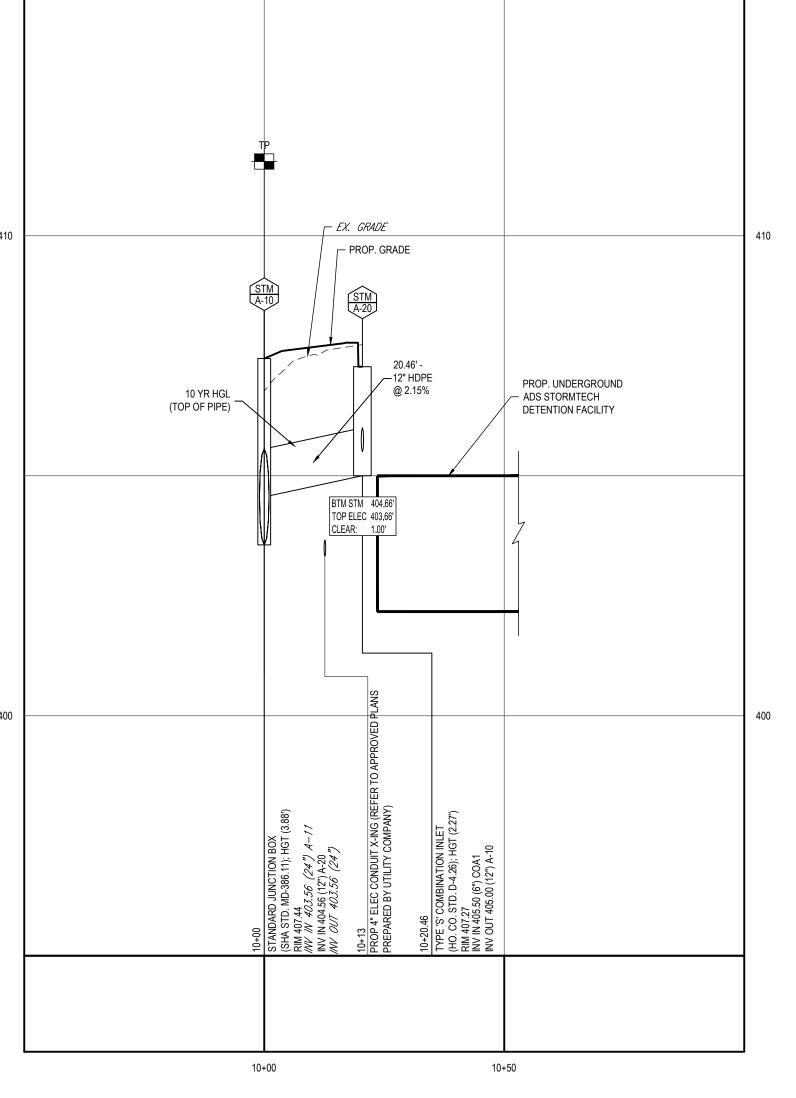
4205 MONTGOMERY ROAD

**TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

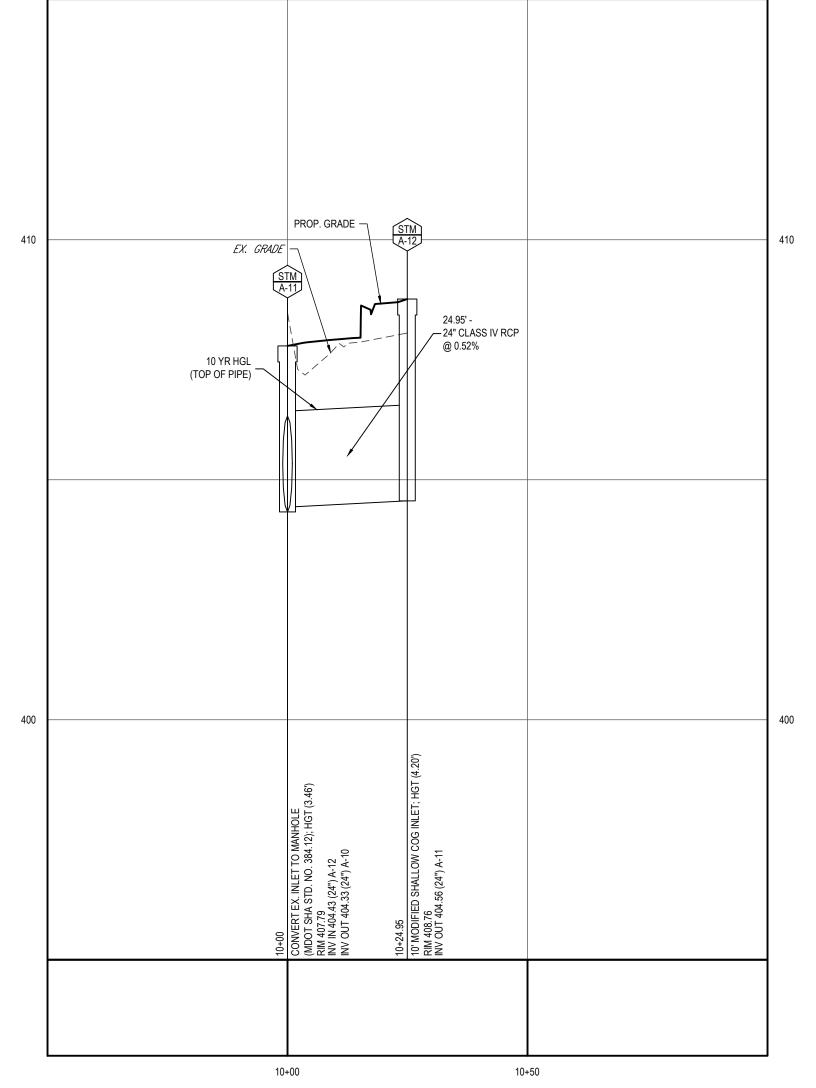
901 DULANEY VALLEY ROAD, SUITE 80

, ERIC R. MCWILLIAMS, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITEC UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 3697. EXPIRATION DATE: 9/20/22

**LANDSCAPE** 



PROPOSED STORMDRAIN PROFILE - A-10 TO A-20 SCALE: 1"= 20 ' HORIZONTAL 1"= 2 ' VERTICAL



PROPOSED STORMDRAIN PROFILE - A-11 TO A-12 SCALE: 1"= 20 ' HORIZONTAL 1"= 2 ' VERTICAL

STORMDRAIN COMPUTATIONS DESIGN FREQUENCY: 10-

Andre Digitally signed by Andrew G. Stine, Date: 2022.05.23

# NOTE:

CONTRACTOR TO VERIFY ALL STRUCTURE SIZES PRIOR TO ORDERING.

# **TEST PIT NOTE**

FOR TEST PIT DATA REFER TO REPORT ENTITLED
"UTILITY TEST PIT DATA FOR DASH-IN #1833, 4205
MONTGOMERY ROAD, ELLICOTT CITY, HOWARD COUNTY, MARYLAND," DATED MARCH 23, 2021, PREPARED BY A.I. DATA

WNER:	DEVELOPER:
DTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448	DASH-IN 102 CENTENNIAL STREET, STE. 100 LA PLATA, MD 20645 CONTACT: JASON BELT PHONE: 240-320-6448
TAX MAP: 24 GRID	D: 24 PARCEL: 311
2ND ELECTION DISTRICT, H	HOWARD COUNTY, MARYLAND
SECTION DE	IE: THE SHELL OIL CO. N/AREA: N/A EED # 5 / 00400

FILE NO. SDP-21-009

**PROFILES** 

OF 45

CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT Amy Gonan DIRECTOR 5B4D5DD9470C4D4...

APPROVED: DEPARTMENT OF

PLANNING AND ZONING

CHAD Edmondson

6/28/2022

6/28/2022

6/28/2022

DATE

DATE

DATE

901 DULANEY VALLEY ROAD, SUITE 801 DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, email=astine@bohl ereng.com, c=US

# 14:00:09 -04'00'

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

**REVISIONS** 

Know what's **below. Call** before you dig.

**ALWAYS CALL 811** It's fast. It's free. It's the law.

APPROVED FOR

CONSTRUCTION

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

SITE

**DEVELOPMENT** PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103)

ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311

HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

**TOWSON, MARYLAND 21204** Phone: (410) 821-7900

Fax: (410) 821-7987

MD@BohlerEng.com

MD132045-PPD-3.DWG

PROJECT No.: DRAWN BY: CHECKED BY: DATE: CAD I.D.:

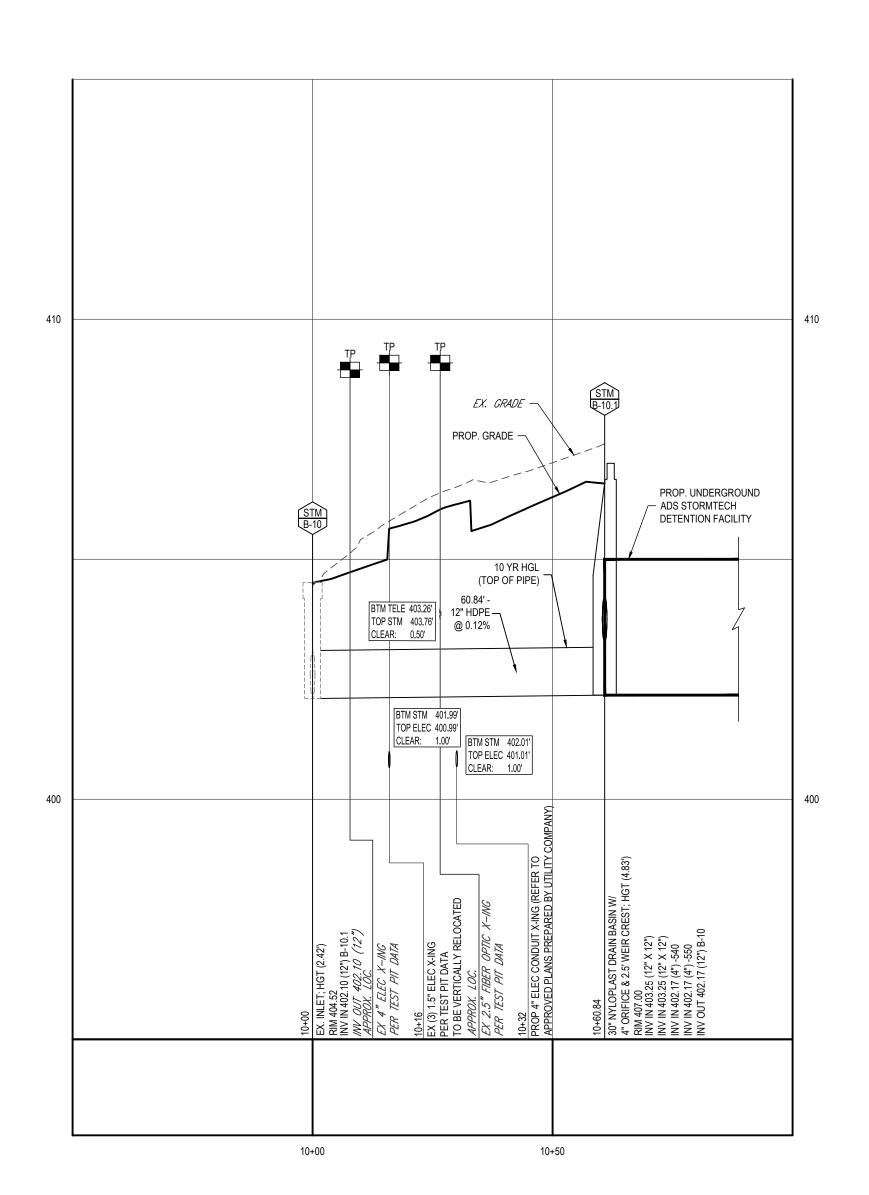
PROJECT:

COMMENT

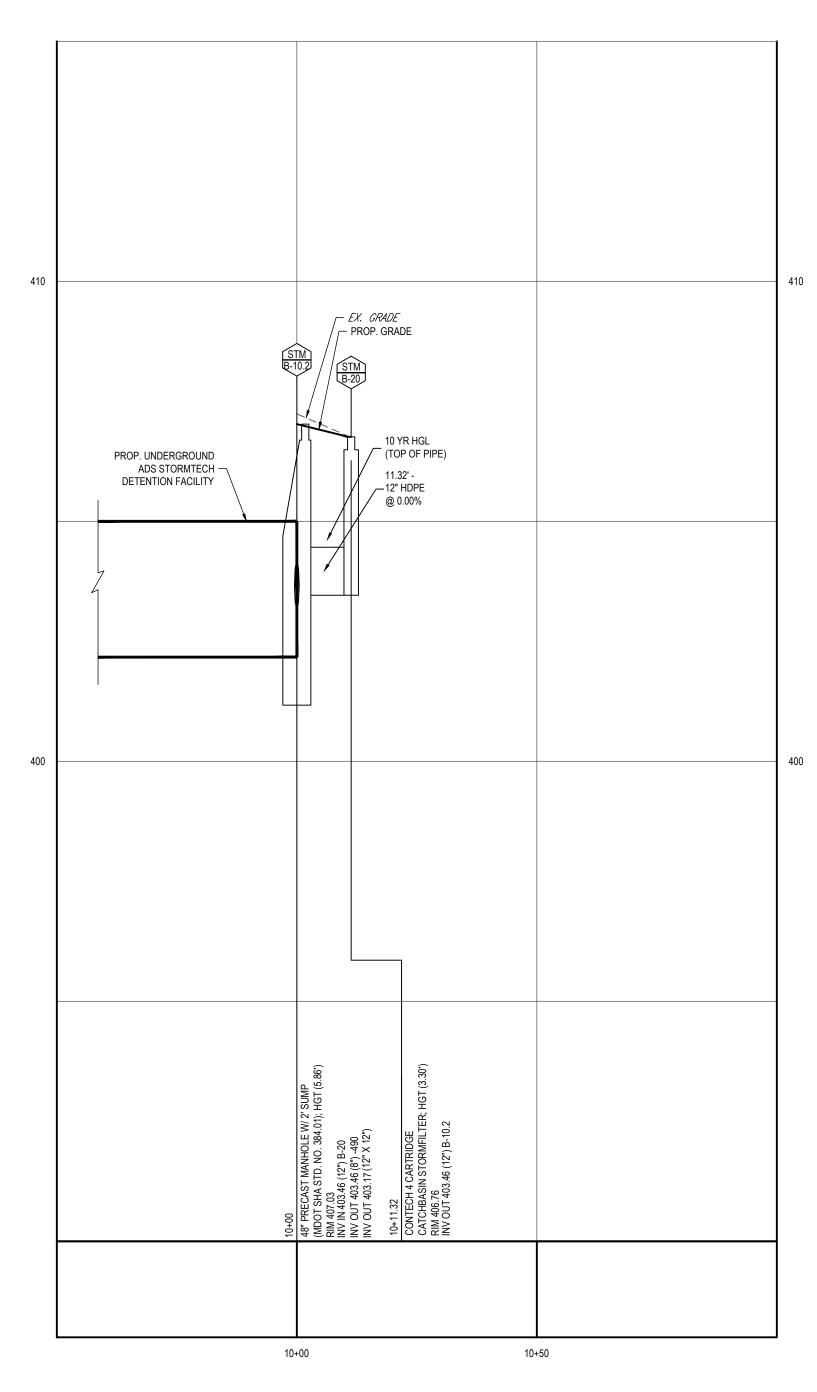
REV DATE

SHEET TITLE:

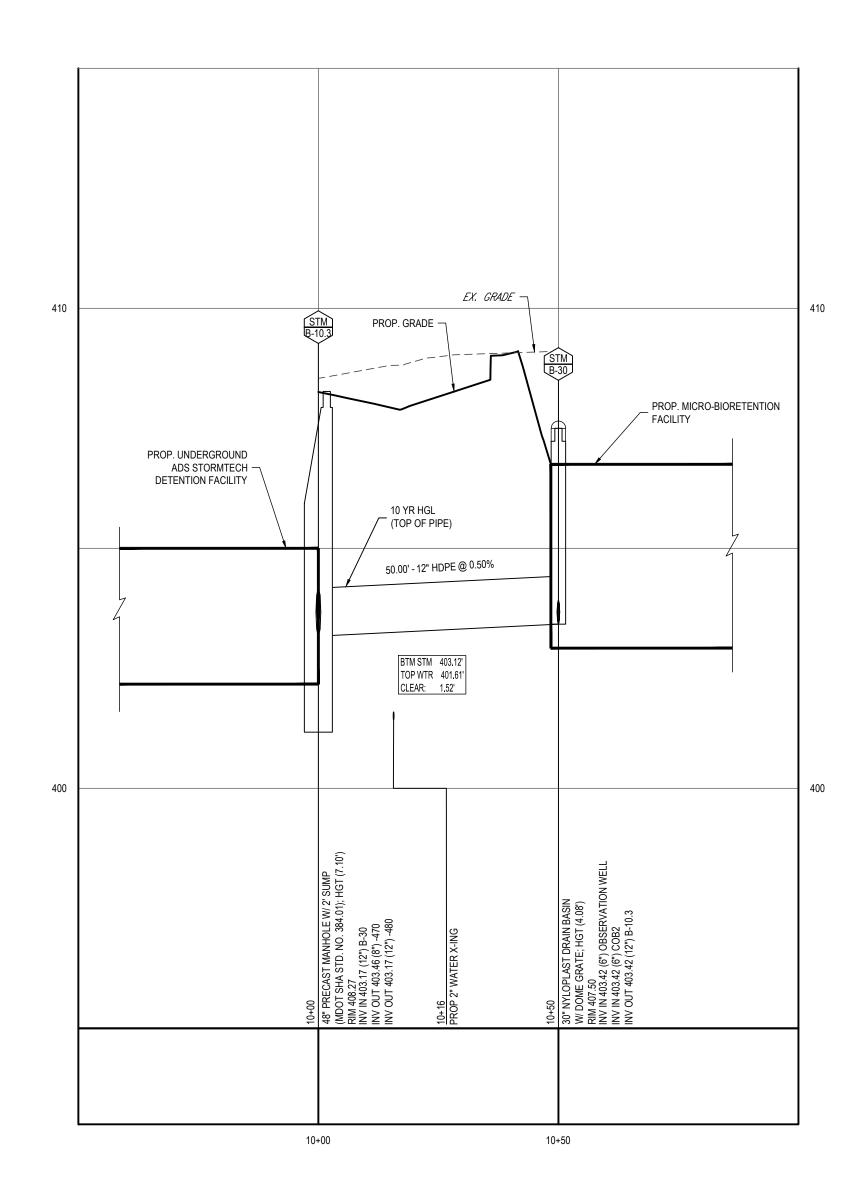
STORMDRAIN



PROPOSED STORMDRAIN PROFILE - B-10 TO B-10.1 SCALE: 1"= 20 ' HORIZONTAL 1"= 2 ' VERTICAL



PROPOSED STORMDRAIN PROFILE - B-10.2 TO B-20 SCALE: 1"= 20 ' HORIZONTAL 1"= 2 ' VERTICAL



# PROPOSED STORMDRAIN PROFILE - B-10.3 TO B-30

SCALE: 1"= 20 ' HORIZONTAL 1"= 2 ' VERTICAL

Andrew Andrew G. Stine, P.E. DN: cn=Andrew G. G. Stine, ou, email=astine@bohler Stine, P.E., o=Bohler, eng.com, c=US Date: 2022.05.23

13:59:55 -04'00'

**NOTE:** 

CONTRACTOR TO VERIFY ALL STRUCTURE SIZES PRIOR TO ORDERING.

# **TEST PIT NOTE**

FOR TEST PIT DATA REFER TO REPORT ENTITLED
"UTILITY TEST PIT DATA FOR DASH-IN #1833, 4205
MONTGOMERY ROAD, ELLICOTT CITY, HOWARD COUNTY, MARYLAND," DATED MARCH 23, 2021, PREPARED BY A.I. DATA

OWNER: DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE. LA PLATA, MD 20645 CONTACT: JASON BELT PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448 GRID: 24 PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400 FILE NO. SDP-21-009

	REVISIONS					
REV	REV DATE COMME		DRAWN BY			
\L V	DATE	COMMENT	CHECKED BY			
		<b>811</b> .				

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DATE: CAD I.D.: PROJECT: SITE

DEVELOPMENT PLAN

MD132045-PPD-3.DWG

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204 Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

SHEET TITLE:

STORMDRAIN **PROFILES** 

SHEET NUMBER:

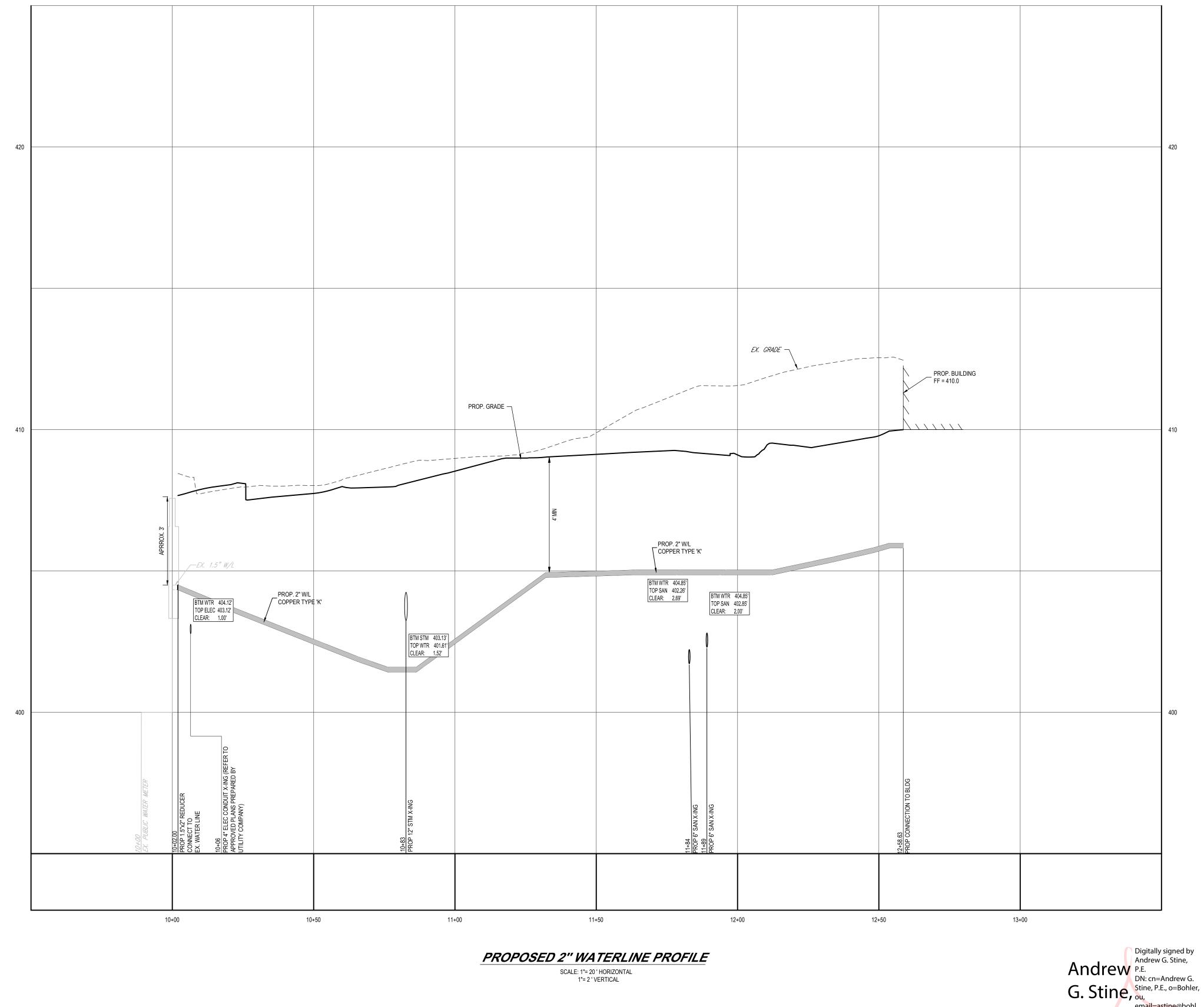
OF 45

APPROVED: DEPARTMENT OF PLANNING AND ZONING 6/28/2022 CHAD Edmondson CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022 Amy Gonan

5B4D5DD9470C4D4...

DATE

DIRECTOR



email=astine@bohl P.E. ereng.com, c=US Date: 2022.05.23 13:59:41 -04'00'

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

901 DULANEY VALLEY ROAD, SUITE 801

TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
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SITE **DEVELOPMENT** PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

MD132045-PPW-3.DWG

PROJECT No.:

CHECKED BY:

DRAWN BY:

DATE: CAD I.D.:

PROJECT:

COMMENT

REV DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING 6/28/2022 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DocuSigned by: 6/28/2022

DATE

OWNER: DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE. 100 LA PLATA, MD 20645 CONTACT: JASON BELT PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400 FILE NO. SDP-21-009

WATER **PROFILE** 

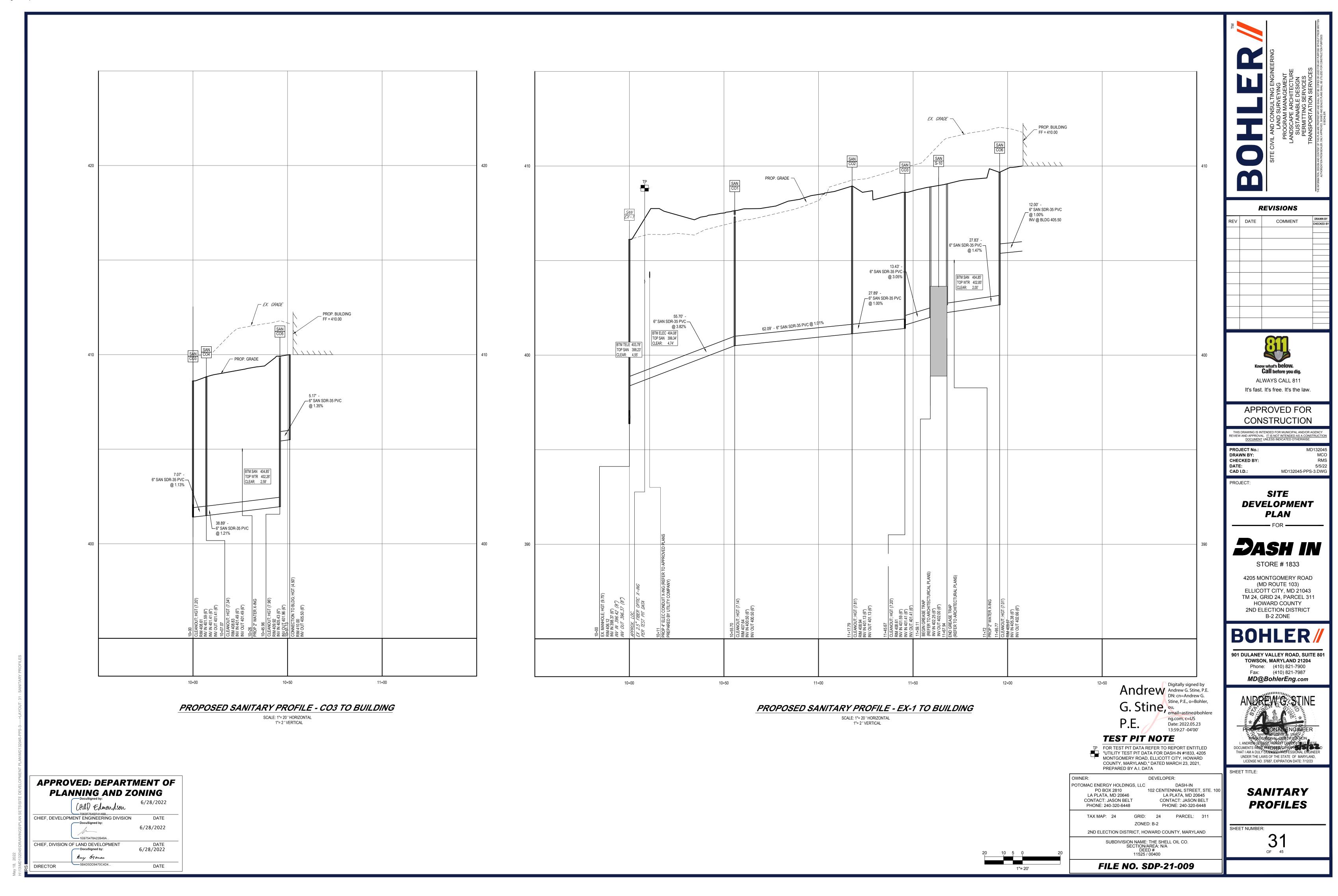
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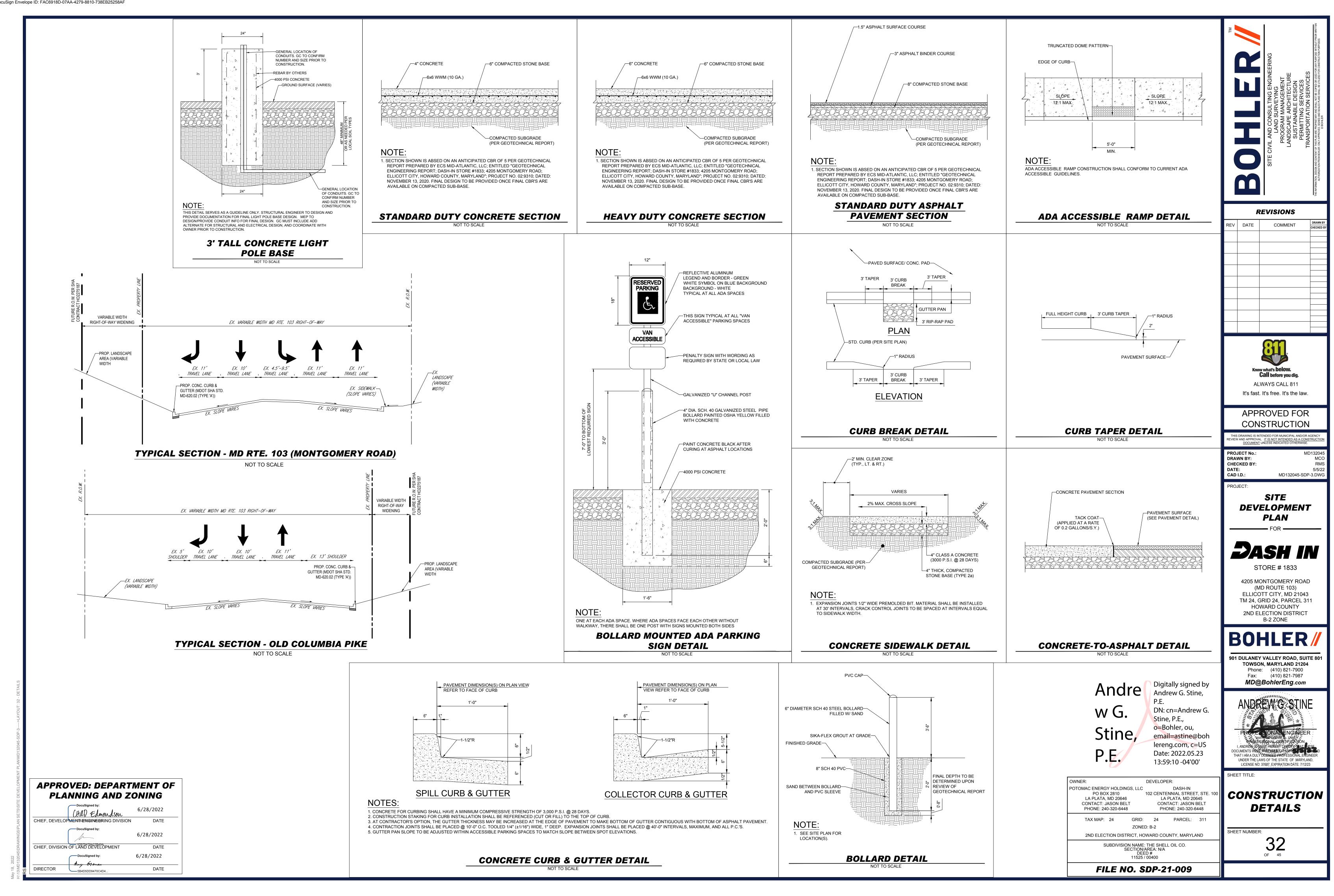
SHEET NUMBER:

30 OF 45

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022 DocuSigned by: Any Glonan 5B4D5DD9470C4D4..

DIRECTOR





APPROVED: DEPARTMENT OF

**PLANNING AND ZONING** 

(HD) Edmondson

CHIEF, DEVELOPMENT ENGINEERING DIVISION

- 1FB75478A22B49A

Any Glonan

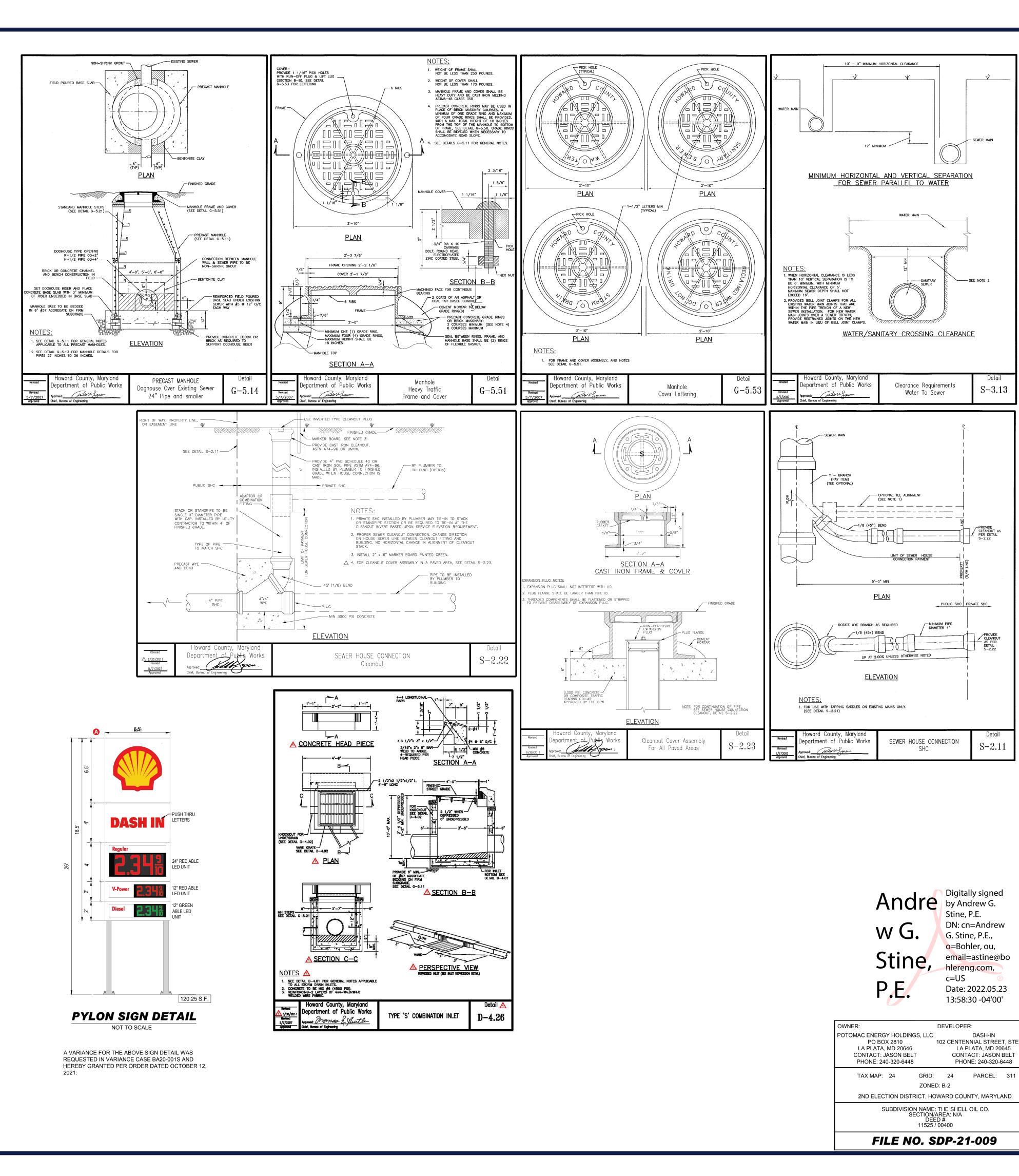
CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

6/28/2022

6/28/2022

DATE



**REVISIONS** REV DATE COMMENT

SEE NOTE 2

S - 3.13

S-2.11

CONTACT: JASON BELT

PHONE: 240-320-6448



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# APPROVED FOR CONSTRUCTION

REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE. PROJECT No.: DRAWN BY: CHECKED BY: DATE: CAD I.D.: MD132045-SDP-3.DWG

PROJECT:

SITE **DEVELOPMENT** 

PLAN

# STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311

HOWARD COUNTY 2ND ELECTION DISTRICT

901 DULANEY VALLEY ROAD, SUITE 801 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND,

LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

CONSTRUCTION **DETAILS** 



- AW-1 Awnings Final Color and Graphic Design T.B.D.
- BR-1 Thin Brick: McNEar Brick & Block, Sandmold Series, Modular: Color, Genova.
- GL-2 1/4" Thick Tempered Glass
- LT-1 LED Wall Washer

- PC-1 Precast Watertable: Eldorado Stone, Split Edge Wainscot Sill: Color, White Cloud
- PT-1 Exterior Metal Grade Paint (Window Mullions, Door Frame): Kawneer 451,

# Front Elevation

# **DASH IN 833**

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BCT ARCHITECTS 100 N Charles Street | 18th Floor Baltimore, Maryland 21201



Digitally signed by Andre wG. Stine, P.E., o=Bohler, ou, Stine,

TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com Andrew G. Stine, ANDREW G. STINE DN: cn=Andrew G. email=astine@bohl ereng.com, c=US Date: 2022.05.23

POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448

102 CENTENNIAL STREET, STE LA PLATA, MD 20645 CONTACT: JASON BELT

PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

FILE NO. SDP-21-009

13:58:13 -04'00' UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO: 37687, EXPIRATION DATE: 7/12/23

ARCHITECTURAL **ELEVATIONS** 

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SITE

DEVELOPMENT

PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311

HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

BOHLER/

901 DULANEY VALLEY ROAD, SUITE 80°

MD132045-SDP-3.DWG

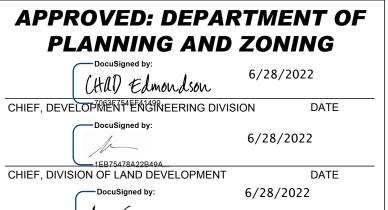
DRAWN BY: CHECKED BY:

DATE: CAD I.D.:

PROJECT:

REV DATE

OF 45



DATE

Brick Mortar: Workrite #2223 type "S" Masonry cement.

GL-1 1" Thick Insulated Glass

LT-4 LED Wall Sconces

MT-2 Metal Coping: Englert, Color, Colonial Red

MT-3 Metal Coping: Englert, Color, Bone White

Alum / Anodized, #29 Black

SD-1 Fiber Cement Panels: Nichiha, Vintage Wood, Color: Ash (EPC764F)

SG-1 Brand Standard Internally Illuminated Sign

ST-1 Stone Veneer: Eldorado Precast Stacked Stone: Color, Nantucket

altimore, Maryland 21201 410.837.2727 www.bctarchitects.com

DIRECTOR 584D5DD9470C4D4...



(AW-1) Awnings - Final Color and Graphic Design T.B.D.

BR-1 Thin Brick: McNEar Brick & Block, Sandmold Series, Modular: Color, Genova. Brick Mortar: Workrite #2223 type "S" Masonry cement.

MT-2 Metal Coping: Englert, Color, Colonial Red

MT-3 Metal Coping: Englert, Color, Bone White

PC-1 Precast Watertable: Eldorado Stone, Split Edge Wainscot Sill: Color, White Cloud

ST-1 Stone Veneer: Eldorado Precast Stacked Stone: Color, Nantucket

# Right Elevation

**DASH IN 833** 

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Andre Digitally signed by Andrew G. Stine, P.E. DN: cn=Andrew G. w G.

Stine, P.E., o=Bohler, Stine, email=astine@bohl/reng.com, c=US email=astine@bohle Date: 2022.05.23 P.E. 13:57:33 -04'00'

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO: 37687, EXPIRATION DATE: 7/12/23

POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448

102 CENTENNIAL STREET, STE LA PLATA, MD 20645 CONTACT: JASON BELT

ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

FILE NO. SDP-21-009

**ELEVATIONS** 

35 OF 45

APPROVED: DEPARTMENT OF **PLANNING AND ZONING** CHAD Edmondson CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT

5B4D5DD9470C4D4...

6/28/2022

DATE

LT-1 LED Wall Washer

PT-3 Exterior Metal Grade Paint on Door & Frame: Color to match storefront, Black

SD-1 Fiber Cement Panels: Nichiha, Vintage Wood, Color: Ash (EPC764F)

SG-1 Brand Standard Internally Illuminated Sign

BOHLER/

901 DULANEY VALLEY ROAD, SUITE 80° TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

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APPROVED FOR

CONSTRUCTION

SITE

**DEVELOPMENT** 

PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 **HOWARD COUNTY** 2ND ELECTION DISTRICT B-2 ZONE

MD132045-SDP-3.DWG

DRAWN BY:

DATE: CAD I.D.:

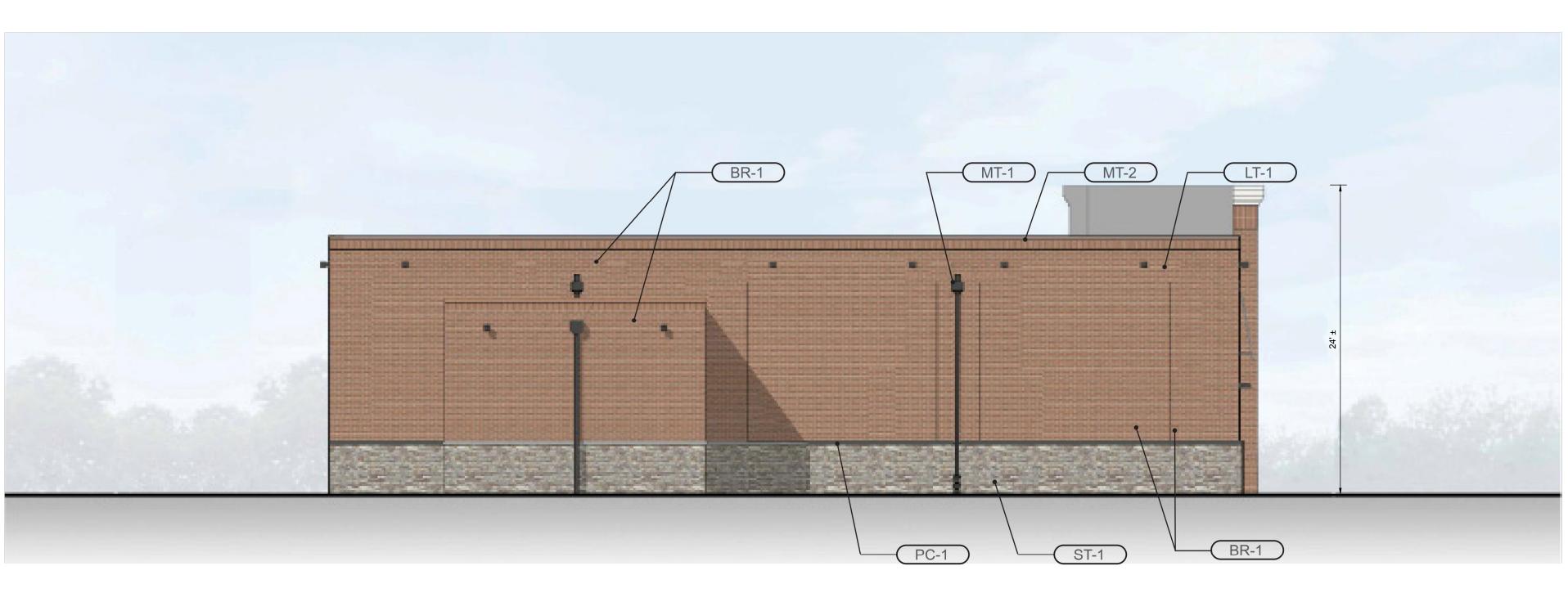
PROJECT:

COMMENT

REV DATE

ARCHITECTURAL

DIRECTOR



LT-1 LED Wall Washer

BR-1 Thin Brick: McNEar Brick & Block, Sandmold Series, Modular: Color, Genova. Brick Mortar: Workrite #2223 type "S" Masonry cement.

MT-1 Metal Down Spouts, Scuppers: Englert, Color to Match Storefront, Black

MT-2 Metal Coping: Englert, Color, Colonial Red

PC-1 Precast Watertable: Eldorado Stone, Split Edge Wainscot Sill: Color, White Cloud

ST-1 Stone Veneer: Eldorado Precast Stacked Stone: Color, Nantucket

Rear Elevation

**DASH IN 833** 

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Andre Digitally signed by Andrew G. Stine, P.E.

DN: cn=Andrew G. Stine, P.E., o=Bohler, ou, Stine, email=astine@b ohlereng.com, c=US

Date: 2022.05.23 13:57:17 -04'00'

POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE LA PLATA, MD 20645 CONTACT: JASON BELT PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448

ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

FILE NO. SDP-21-009

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO: 37687, EXPIRATION DATE: 7/12/23

ARCHITECTURAL **ELEVATIONS** 

36 OF 45

APPROVED: DEPARTMENT OF PLANNING AND ZONING CHAD Edmondson CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT Docusigned by: Amy Glonan

DATE

DIRECTOR

BOHLER/

901 DULANEY VALLEY ROAD, SUITE 80° TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

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**DEVELOPMENT** 

PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

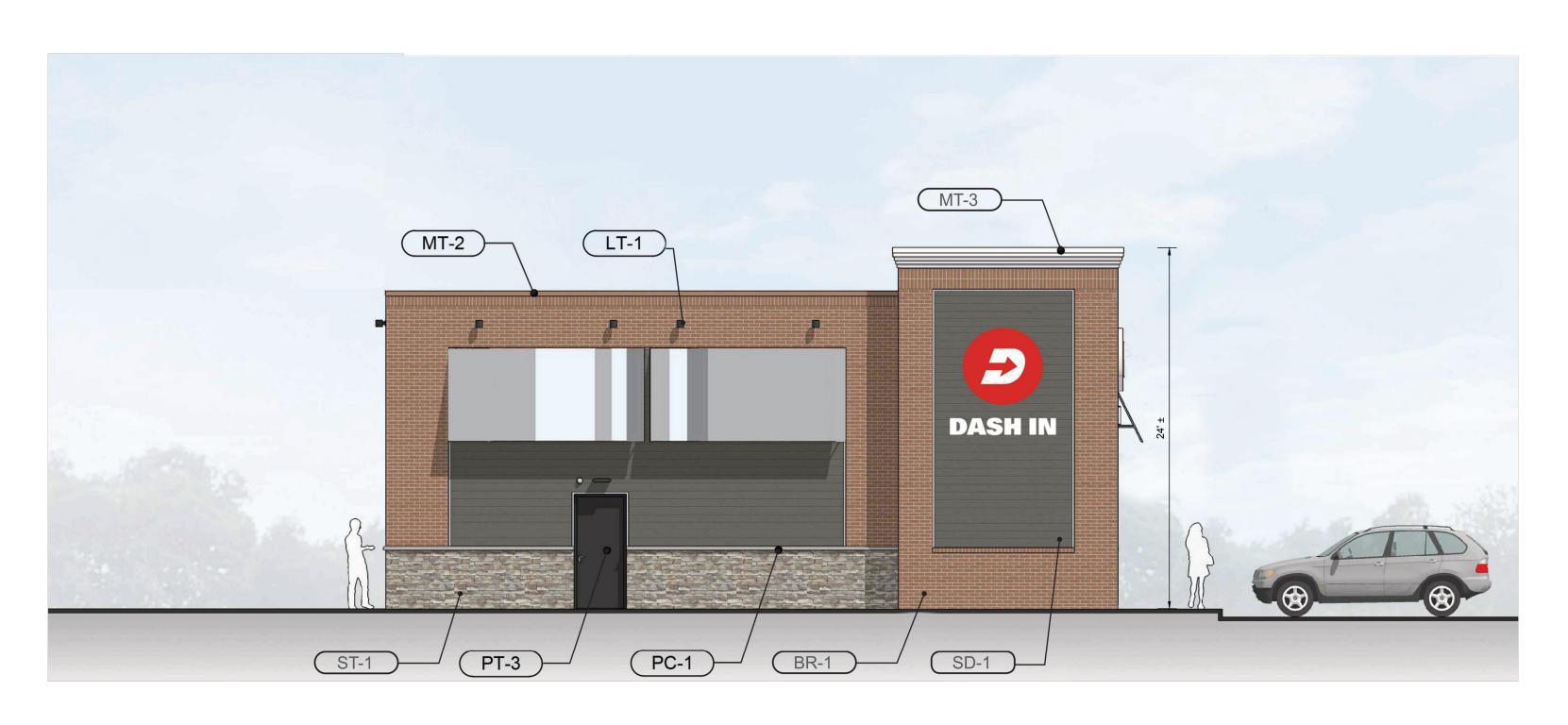
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DATE: CAD I.D.:

PROJECT:

REV DATE



- AW-1 Awnings Final Color and Graphic Design T.B.D.
- BR-1 Thin Brick: McNEar Brick & Block, Sandmold Series, Modular: Color, Genova. Brick Mortar: Workrite #2223 type "S" Masonry cement.
- LT-1 LED Wall Washer
- MT-2 Metal Coping: Englert, Color, Colonial Red
- PC-1 Precast Watertable: Eldorado Stone, Split Edge Wainscot Sill: Color, White Cloud

- PT-3 Exterior Metal Grade Paint on Door & Frame: Color to match storefront, Black
- SD-1 Fiber Cement Panels: Nichiha, Vintage Wood, Color: Ash (EPC764F)
- ST-1 Stone Veneer: Eldorado Precast Stacked Stone: Color, Nantucket

# Left Elevation

# **DASH IN 833**

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PO BOX 2810 LA PLATA, MD 20646

Andre Digitally signed by Andrew G. Stine, P.E. w G.

G. Stine, P.E., o=Bohler, ou, Stine, email=astine@b ohlereng.com, c=US Date: 2022.05.23 13:57:00 -04'00'

DN: cn=Andrew

POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE LA PLATA, MD 20645 CONTACT: JASON BELT

CONTACT: JASON BELT PHONE: 240-320-6448 ZONED: B-2

2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

FILE NO. SDP-21-009

APPROVED: DEPARTMENT OF **PLANNING AND ZONING** 6/28/2022 6/28/2022 CHIEF, DIVISION OF EAND DEVELOPMENT 6/28/2022 DATE

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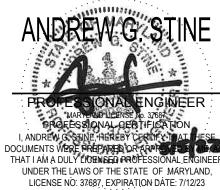
**DEVELOPMENT** PLAN

STORE # 1833 4205 MONTGOMERY ROAD

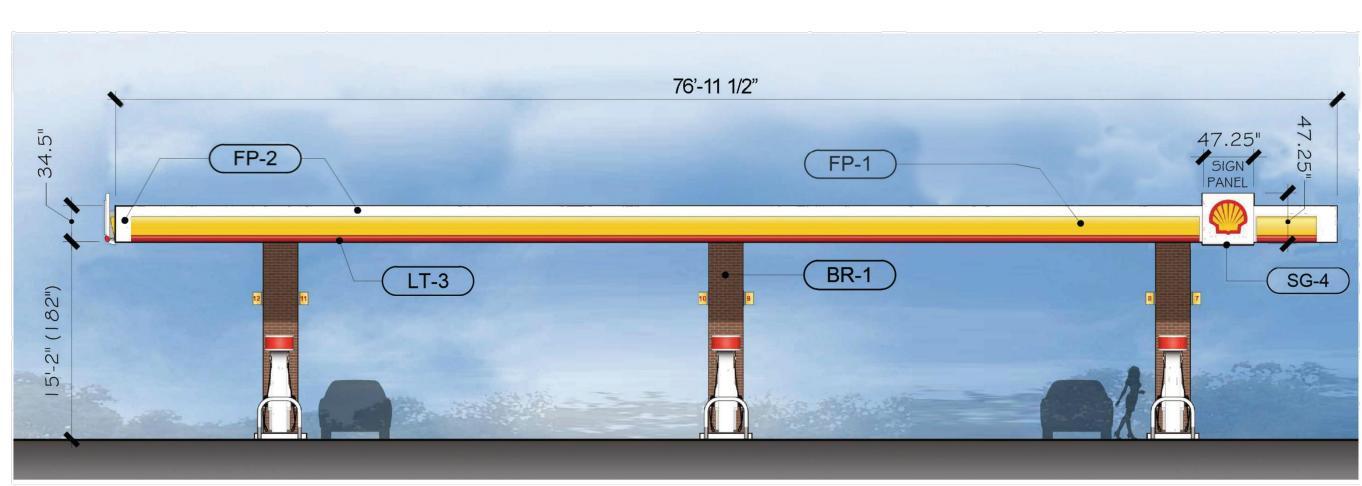
(MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 **HOWARD COUNTY** 2ND ELECTION DISTRICT B-2 ZONE



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Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com



ARCHITECTURAL **ELEVATIONS** 



South Elevation - Montgomery Road

BR-1 Thin Brick: McNEar Brick & Block, Sandmold Series, Modular: Color, Genova. Brick Mortar: Workrite #2223 type "S" Masonry cement.

FP-1 Curved Aluminum or ACM Fascia, Yellow

FP-2 Metal Fascia Panel, Exposed at Ends, White

LT-3 Internally Illuminated Linear Red Bar Light

SG-4 Internally Illuminated Shell Pecten Light Panel

ST-1 Stone Veneer: Eldorado Precast Stacked Stone: Color, Nantucket

**SIGN AREA** 

Sign 4 FT x 4 FT = 16 S.F.

Total Canopy Sign Area = (2) 16 S.F. = 32 S.F.



West Elevation - Old Columbia Pike

Gas Canopy Elevations

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Andr Digitally signed by Andrew G.

Stine, P.E. DN: cn=Andrew ew G. DN: cn=Andre G. Stine, P.E., o=Bohler, ou, Stine, email=astine@b ohlereng.com,

Date: 2022.05.23 13:56:43 -04'00'

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**ELEVATIONS** 

POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448

102 CENTENNIAL STREET, STE LA PLATA, MD 20645 CONTACT: JASON BELT PHONE: 240-320-6448

FILE NO. SDP-21-009

ARCHITECTURAL PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

38 OF 45

DIRECTOR

6/28/2022 CHAD Edmondson CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/28/2022 DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT Amy Glonan

APPROVED: DEPARTMENT OF

PLANNING AND ZONING

DATE

DRAWN BY: CHECKED BY: DATE: CAD I.D.: MD132045-SDP-3.DWG PROJECT: SITE **DEVELOPMENT** PLAN STORE # 1833

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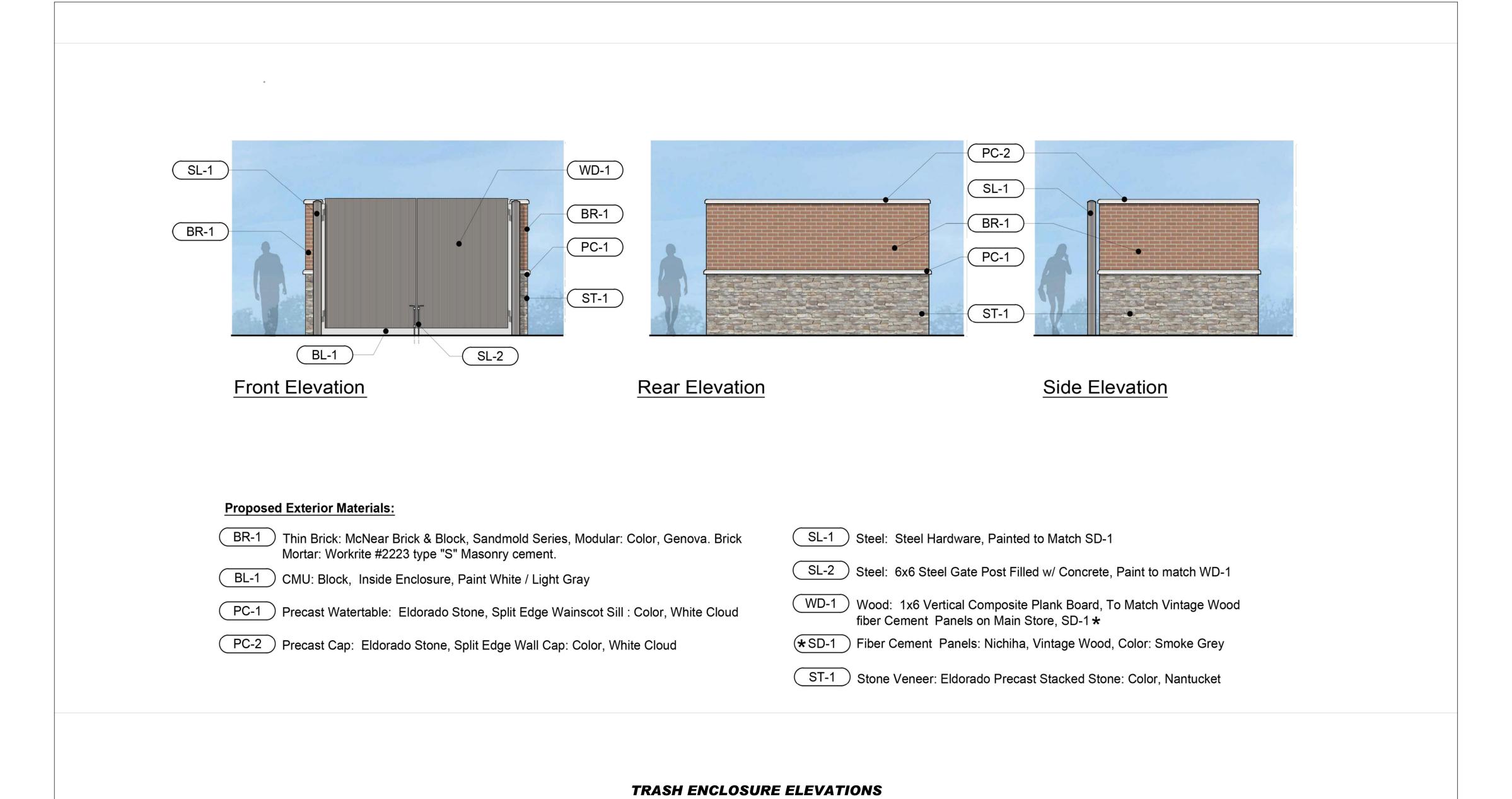
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4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 **HOWARD COUNTY** 2ND ELECTION DISTRICT B-2 ZONE

**BOHLER** 

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Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com



Andrew G. Stine, P.E.

Digitally signed by Andrew G. Stine, DN: cn=Andrew G. Stine, P.E., email=astine@bohlereng.com, c=US

Date: 2022.05.23 13:56:26 -04'00' POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE LA PLATA, MD 20645 CONTACT: JASON BELT PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448

BCT DESIGN GROUP

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Baltimore, Maryland 21201

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ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

FILE NO. SDP-21-009

ARCHITECTURAL **ELEVATIONS** 

UNDER THE LAWS OF THE STATE OF MARYLAND,

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DEVELOPMENT

PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT B-2 ZONE

**BOHLER** 

901 DULANEY VALLEY ROAD, SUITE 80°

Fax: (410) 821-7987

MD@BohlerEng.com

**TOWSON, MARYLAND 21204** Phone: (410) 821-7900

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39 OF 45

**PLANNING AND ZONING** 6/28/2022 CHAD Edmondson CHIEF, DEVELOPMENT ENGINEERING DIVISION 6/28/2022

6/28/2022

DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

Amy Gonan

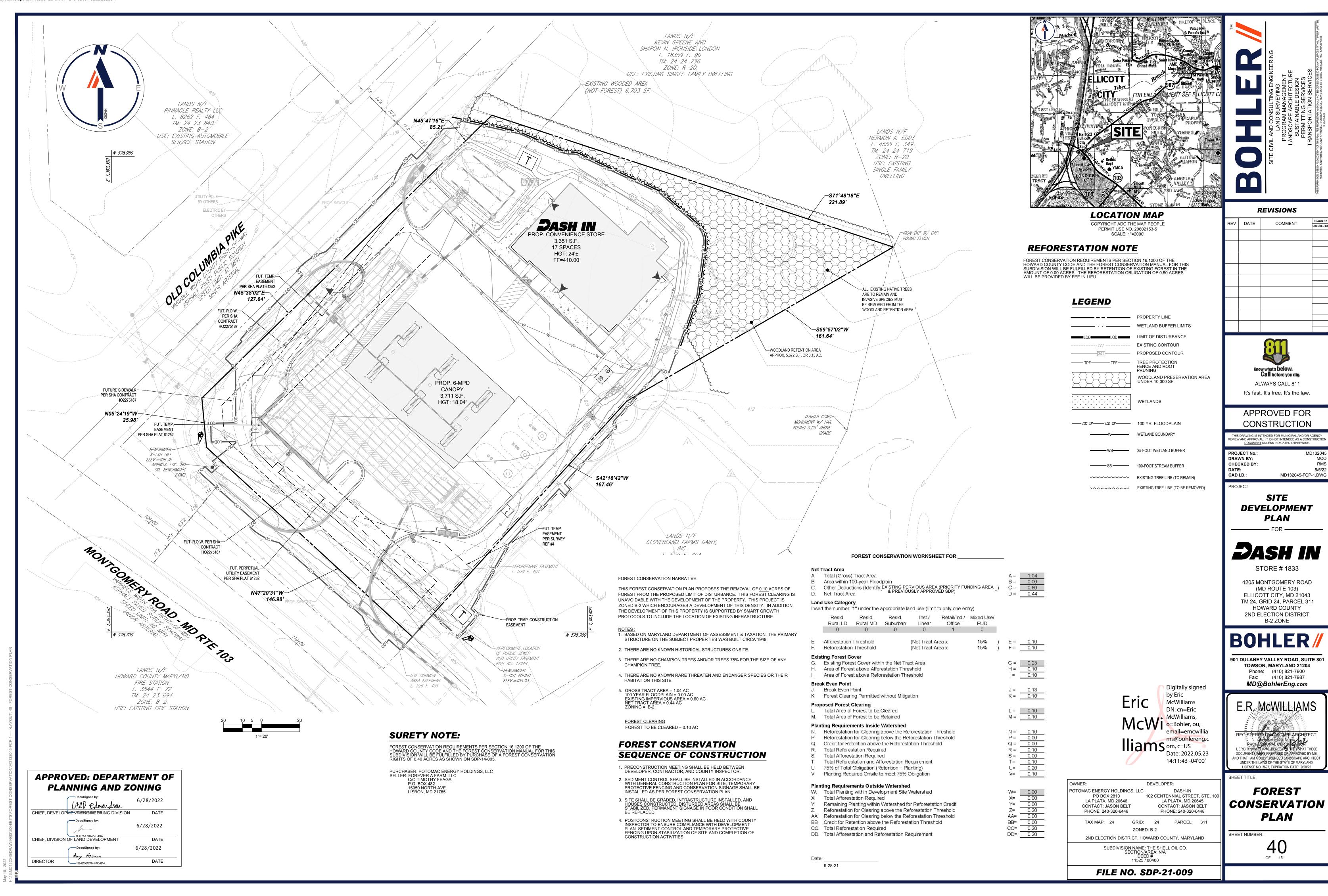
APPROVED: DEPARTMENT OF

**DASH IN 833** 

Ellicott City, MD

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P.N. 16-323 | 08.04.2020



THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.

- B. TOPSOIL NATURAL, FRIABLE, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
- C. LAWN ALL DISTURBED AREAS ARE TO BE TREATED WITH A MINIMUM SIX INCH (6") THICK LAYER OF TOPSOIL OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED WITHIN THE SOIL EROSION AND SEDIMENT CONTROL NOTES 1.1 LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.
- 1.2. SOD SHALL BE STRONGLY ROOTED. WEED AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. 1.3. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.
- D. MULCH THE MULCH AROUND THE PERIMETER OF THE BUILDING SHALL BE A 3" LAYER OF DOUBLE SHREDDED BLACK CEDAR MULCH ONLY. ALL OTHER AREAS SHALL BE MULCHED WITH A 3" LAYER OF DOUBLE SHREDDED DARK BROWN HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN.
- 1.1. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE
- STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE. 1.2. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

### F. PLANT MATERIA

- 1.1. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION
- 1.2. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRECEDENCE OVER COMMON NAMES FOR ANY AND ALL
- 1.3. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS ARE TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING THE FINAL INSPECTION. 1.4. TREES WITH ABRASION OF THE BARK, SUN SCALDS, DISFIGURATION OR FRESH CUTS OF LIMBS OVER
- 11/4", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE REJECTED.PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. 1.5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF
- GROWTH: WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE 1.6. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX
- INCHES (6") ABOVE THE NATURAL GRADE FOR TREES UP TO AND INCLUDING A FOUR INCH (4") CALIPER SIZE IF THE CALIPER AT SIX INCHES (6") ABOVE THE GROUND EXCEEDS FOUR INCHES (4") IN CALIPER THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE NATURAL GRADE 1.7. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE
- LONGEST BRANCH 1.8. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL

A. CONTRACTOR TO UTILIZE WORKMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS. MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM

### A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED

- B. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE TRUNK. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN, SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDER OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.
- CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF WORK.

A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR 15 FEET FROM THE TRUNK OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE

- B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY 'VISI-FENCE', OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL
- C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED
- D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.

- B. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS
- C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY 1.1. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6-12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. ALL
- PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A PH HIGHER THAN 7.5. 1.2. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX.
- SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED TO INCREASE DRAINAGE. 1.3. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY. SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

A. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF

- B. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL
- C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS. UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT
- ). ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

A. CONTRACTOR SHALL PROVIDE A SIX INCH (6") THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESIRED COMPACTED THICKNESS.

- B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO
- CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE
- D. ALL PLANTING AND LAWN AREAS ARE TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA) 1.1. 20 POUNDS 'GROW POWER' OR APPROVED EQUAL
- 1.2. 20 POUNDS NITRO-FORM (COURSE) 38-0-0 BLUE CHIP
- E. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS

A. INSOFAR THAT IT IS FEASIBLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

- B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
- C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL
- D. ALL PLANTING CONTAINERS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO
- E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
- F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN. MUST BE INSTALLED. INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:
- 1.1. PLANTS: MARCH 15 TO DECEMBER 15 1.2. LAWN: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1
- G. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
- H. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON
- PLATANUS X ACERIFOLIA BETULA VARIETIES POPULOUS VARIETIES CARPINUS VARIETIES PRUNUS VARIETIES CRATAEGUS VARIETIES PYRUS VARIETIES
- KOELREUTERIA QUERCUS VARIETIES LIQUIDAMBER STYRACIFLUA TILIA TOMENTOSA LIRIODENDRON TULIPIFERA ZELKOVA VARIETIES
- PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS. WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
- 1 PART PEAT MOSS
- 1 PART COMPOSTED COW MANURE BY VOLUME • 3 PARTS TOPSOIL BY VOLUME
- 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS: A) 2 TABLETS PER 1 GALLON PLANT B) 3 TABLETS PER 5 GALLON PLANT
- C) 4 TABLETS PER 15 GALLON PLANT D) LARGER PLANTS: 2 TABLETS PER ½" CALIPER OF TRUNK

SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL

- J. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
- K. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO
- L. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.
- M. GROUND COVER AREAS SHALL RECEIVE A 1/4" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.
- N. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND SIDEWALKS.
- O. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR
- P. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY LIPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

### 10. TRANSPLANTING (WHEN REQUIRED) A. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE

- B. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND
- C. PLANTS SHALL NOT BE DUG FOR TRANSPLANTING BETWEEN APRIL 10 AND JUNE 30.
- D. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.
- E. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN
- F. IF TRANSPLANTS DIE, SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE REPLACEMENT GUIDELINES.
- A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.
- B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
- C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS. HEALTHY GROWTH.

### 12. GUARANTEE

11. WATERING

A. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF ONE (1) YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE GUARANTEE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

- B. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF OFF-SITE, WITHOUT EXCEPTION
- TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION WEEDING. WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND
- TRIMMING AND OTHER OPERATIONS SUCH AS ROLLING, REGARDING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

D. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING,

### A. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.

### B. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

### REFORESTATION PLAN

- THE REFORESTATION AREA WILL BE PLACED INTO A FOREST CONSERVATION EASEMENT.
- PLANT SPECIES SELECTION WAS BASED ON OUR KNOWLEDGE REGARDING PLANT COMMUNITIES IN MARYLAND'S PIEDMONT PLATEAU AND INFORMATION PROVIDED IN THE SOIL SURVEY ON TYPICAL VEGETATION FOR THE SOIL TYPE ON THE PLANTING SITE. SPECIES SELECTION WAS ALSO BASED ON OUR

REFORESTATION WILL BE ACCOMPLISHED THROUGH A MIXED PLANTING OF WHIPS AND BRANCHED

- TRANSPLANTS. CONTAINER GROWN STOCK IS RECOMMENDED BUT BAREROOT STOCK MAY BE USED TO HELP CONTROL AFFORESTATION COSTS. IF BAREROOT STOCK IS USED THE ROOT SYSTEMS OF ALL PLANTS WILL BE DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING TO IMPROVE MOISTURE RETENTION IN THE PRIOR TO PLANTING THE PROPOSED FOREST CONSERVATION EASEMENTS ALL MULTIFLORA ROSE IN HE PLANTING AREA SHALL BE REMOVED. REMOVAL OF THE ROSE MAY BE PERFORMED WITH MOWING AND
- HERBICIDE TREATMENTS. PHYSICAL REMOVAL OF ALL TOP GROWTH FOLLOWING BY A PERIODIC HERBICIDE IREATMENT OF STUMP SPROUTS IS RECOMMENDED. NATIVE TREE AND SHRUB SPECIES OCCURRING WITHIN E ROSE THICKETS SHOULD BE RETAINED WHEREVER POSSIBLE. HERBICIDES TREATMENTS SHALL OCCUR ON 2 MONTH INTERVALS DURING THE FIRST GROWING SEASON AND ONCE EACH IN THE SPRING AND FALL FOR SUBSEQUENT YEARS. HERBICIDE USED SHALL BE MADE SPECIFICALLY TO ADDRESS WOODY PLANT MATERIAL AND SHALL BE APPLIED AS PER MANUFACTURERS SPECIFICATIONS. CARE SHOULD BE TAKEN NOT TO SPRAY PLANTED TREES OR NATURALLY OCCURRING NATIVE TREE/SHRUB SEEDLINGS. IT IS RECOMMENDED THAT INITIATION OF ROSE REMOVAL BEGIN AT LEAST SIX MONTHS PRIOR TO PLANTING.
- B. PLANTING AND SOIL SPECIFICATIONS
- PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE PLANTING DETAIL AND PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN.
- AMENDMENTS TO EXISTING SOIL WILL BE IN ACCORDANCE WITH THE PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN. SOIL DISTURBANCE WILL BE LIMITED TO INDIVIDUAL PLANTING
- C. MAINTENANCE OF PLANTINGS
- SEE POST CONSTRUCTION NOTES D. GUARANTEE REQUIREMENTS
- A 90 PERCENT SURVIVAL RATE OF THE REFORESTATION PLANTINGS WILL BE REQUIRED AFTER ONE GROWING SEASON. ALL PLANT MATERIAL BELOW THE 90 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE SECOND GROWING SEASON. AT THE END OF THE SECOND GROWING SEASON, A 75 PERCENT SURVIVAL RATE WILL BE REQUIRED. ALL PLANT MATERIAL BELOW THE 75 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED BY THE BEGINNING OF THE NEXT GROWING SEASON.

### E. SECURITY FOR REFORESTATION

SECTION 16-1209 OF THE HOWARD COUNTY FOREST CONSERVATION ACT REQUIRES THAT A DEVELOPER SHALL POST A SECURITY (BOND, LETTER OF CREDIT, ETC.) WITH THE COUNTY TO INSURE THAT ALL WORK IS DONE IN ACCORDANCE WITH THE FCP.

### CONSTRUCTION PERIOD PROTECTION PROGRAM

- A. FOREST PROTECTION TECHNIQUES
- 1. SOIL PROTECTION AREA (CRITICAL ROOT ZONE)
- THE SOIL PROTECTION AREA, OR CRITICAL ROOT ZONE, OF A TREE IS THAT PORTION OF THE SOIL COLUMN WHERE MOST OF A ITS ROOTS MAY BE FOUND. THE MAJORITY OF ROOTS RESPONSIBLE FOR WATER AND NUTRIENT UPTAKE ARE LOCATED JUST BELOW THE SOIL SURFACE. TEMPORARY FENCING SHALL BE PLACED AROUND THE CRITICAL ROOT ZONE OF THE FOREST IN AREAS WHERE THE FOREST LIMITS OCCUR WITHIN 25 FEET OF THE LIMIT OF DISTURBANCE.
- EXISTING FOREST LIMITS OCCURRING WITHIN 25 FEET OF THE LIMITS OF DISTURBANCE SHALL BE PROTECTED USING TEMPORARY PROTECTIVE FENCING. PERMANENT SIGNAGE SHALL BE PLACED AROUND THE AFFORESTATION AREA PRIOR TO PLANT INSTALLATION, AS SHOWN ON THE PLAN.
- **B. PRE-CONSTRUCTION MEETING** UPON STAKING OF LIMITS OF DISTURBANCE A PRE-CONSTRUCTION MEETING WILL BE HELD BETWEEN EVELOPER, CONTRACTOR AND APPROPRIATE COUNTY INSPECTOR. THE PURPOSE OF THE MEETING VERIFY THAT ALL SEDIMENT CONTROL IS IN ORDER, AND TO NOTIFY THE CONTRACTOR OF POSSIBLE PENALTIES FOR NON-COMPLIANCE WITH THE FCP.

### C. STORAGE FACILITIES/EQUIPMENT CLEANING

- ALL EQUIPMENT STORAGE, PARKING, SANITARY FACILITIES, MATERIAL STOCKPILING, ETC. ASSOCIATED WITH CONSTRUCTION OF THE PROJECT WILL BE RESTRICTED TO THOSE AREAS OUTSIDE OF THE PROPOSED FOREST CONSERVATION EASEMENT. CLEANING OF EQUIPMENT WILL BE LIMITED TO AREA WITHIN THE LOD OF THE PROPOSED HOMESITES. WASTEWATER RESULTING FROM EQUIPMENT CLEANING WILL BE CONTROLLED TO PREVENT RUNOFF INTO ENVIRONMENTALLY SENSITIVE AREAS.
- D. SEQUENCE OF CONSTRUCTION
- THE FOLLOWING TIMETABLE REPRESENTS THE PROPOSED TIMETABLE FOR DEVELOPMENT. THE ITEMS OUTLINED IN THE FOREST CONSERVATION PLAN WILL BE ENACTED WITHIN TWO (2) YEARS OF SUBDIVISION

### BELOW FIND A PROPOSED SEQUENCE OF CONSTRUCTION.

- 1. INSTALL ALL SIGNAGE AND SEDIMENT CONTROL DEVICES. HOLD PRE-CONSTRUCTION MEETING BETWEEN DEVELOPER, CONTRACTOR AND COUNTY
- BUILD ACCESS ROADS, INSTALL WELL AND SEPTIC SYSTEMS, AND CONSTRUCT HOUSES. STABILIZE ALL DISTURBED AREAS ACCORDINGLY

4 INSTALL PERMANENT PROTECTIVE SIGNAGE FOR EASEMENTS AND INITIATE PLANTINGS IN

- ACCORDANCE WITH FOREST CONSERVATION PLAN. PLANTINGS WILL BE COMPLETED WITHIN TWO (2) YEARS OF SUBDIVISION APPROVAL. 5. REMOVE SEDIMENT CONTRO
- 6. HOLD POST-CONSTRUCTION MEETING WITH COUNTY INSPECTORS TO ASSURE COMPLIANCE WITH FCP. SUBMIT CERTIFICATION OF INSTALLATION.

### 7. MONITOR AND MAINTAIN PLANTINGS FOR 2 YEARS. E. CONSTRUCTION MONITORING

ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL MONITOR CONSTRUCTION OF THE PROJECT TO ENSURE THAT ALL ACTIVITIES ARE IN COMPLIANCE WITH THE FOREST CONSERVATION PLAN.

### F POST-CONSTRUCTION MEETING

UPON COMPLETION OF CONSTRUCTION, ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL NOTIFY THE COUNTY THAT CONSTRUCTION HAS BEEN COMPLETED AND ARRANGE FOR A POST-CONSTRUCTION MEETING TO REVIEW THE PROJECT SITE. THE MEETING WILL ALLOW THE COUNTY INSPECTOR TO VERIFY THAT AFFORESTATION PLANTINGS HAVE BEEN

### POST-CONSTRUCTION MANAGEMENT PLAN

- HOWARD COUNTY REQUIRES A TWO YEAR POST-CONSTRUCTION MANAGEMENT PLAN BE PREPARED AS PART OF THE FOREST CONSERVATION PLAN. THE PLAN GOES INTO EFFECT UPON ACCEPTANCE OF THE CONSTRUCTION CERTIFICATION OF COMPLETION BY THE COUNTY. ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THE POST-CONSTRUCTION MANAGEMENT PLAN.
- THE FOLLOWING ITEMS WILL BE INCORPORATED INTO THE PLAN:

B. GENERAL SITE INSPECTIONS/MAINTENANCE OF PLANTINGS

# A. FENCING AND SIGNAGE

- PERMANENT SIGNAGE INDICATING THE LIMITS OF THE RETENTION/REFORESTATION AREA SHALL BE
- SITE INSPECTIONS WILL BE PERFORMED A MINIMUM OF THREE TIMES DURING THE GROWING SEASON. THE PURPOSE OF THE INSPECTIONS WILL BE TO ASSESS THE HEALTH OF THE AFFORESTATION PLANTINGS. APPROPRIATE MEASURES WILL BE TAKEN TO RECTIFY ANY PROBLEMS WHICH MAY ARISE.
- IN ADDITION, MAINTENANCE OF THE AFFORESTATION PLANTINGS WILL INVOLVE THE FOLLOWING STEPS: WATERING - ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING
- SEASON, MORE OR LESS FREQUENTLY DEPENDING ON WEATHER CONDITIONS. DURING THE SECOND GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED. REMOVAL OF INVASIVE EXOTICS AND NOXIOUS WEEDS. OLD FIELD SUCCESSIONAL SPECIES WILL BE
- IDENTIFICATION OF SERIOUS PLANT PESTS AND DISEASES, TREATMENT WITH APPROPRIATE AGENT. PRUNING OF DEAD BRANCHES.

6/28/2022

6/28/2022

DATE 6/28/2022

DATE

DATE

5. AFTER 12 AND 24 MONTHS, REPLACEMENT OF PLANTS, IF REQUIRED, IN ACCORDANCE WITH THE GUARANTEE REQUIREMENTS SHOWN ON THE FCP.

APPROVED: DEPARTMENT OF

**PLANNING AND ZONING** 

(Hd) Edmondson

CHIEF, DEVELOPMENT ENGINEERING DIVISION

-1EB75478A22B49

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

THE DEVELOPER WILL PROVIDE APPROPRIATE MATERIALS TO PROPERTY OWNERS INFORMING THEM OF THE LOCATION AND PURPOSE OF THE AFFORESTATION AREA. MATERIALS MAY INCLUDE SITE PLANS AND INFORMATION EXPLAINING THE INTENT OF THE FOREST CONSERVATION LAW.

### D. FINAL INSPECTION

AT THE END OF THE TWO YEAR POST-CONSTRUCTION MANAGEMENT PERIOD, ECO-SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL, WILL SUBMIT TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL RETENTION/AFFORESTATION REQUIREMENTS HAVE BEEN MET. UPON ACCEPTANCE OF THIS CERTIFICATION, THE COUNTY WILL RELEASE THE DEVELOPER FROM ALL FUTURE OBLIGATIONS AND RELEASE THE DEVELOPER'S BOND.

### PLANTING/SOIL SPECIFICATIONS

. PLANTING OF NURSERY STOCK SHALL TAKE PLACE BETWEEN MARCH 15TH AND APRIL 30TH OR EPTEMBER 15TH - NOVEMBER 15TH . TWELVE (12) INCH LAYER OF TOPSOIL SHALL BE SPREAD OVER ALL FORESTATION AREAS IMPACTED BY TE GRADING TO ASSURE A SUITABLE PLANTING AREA. DISTURBED AREAS SHALL BE SEEDED AND FABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT. PLANTING AREAS NOT IMPACTED BY SITE ALL BAREROOT PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS DIPPED INTO AN ANTI-DESICCANT PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE. BACKFILL IN THE PLANTING PITS SHALL CONSIST OF 3 PARTS EXISTING SOIL TO 1 PART PINE FINES FERTILIZER SHALL CONSIST OF AGRIFORM 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURER'S A TWO (2) INCH LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER THE ROOT AREA OF ALL PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

1. SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE. SITE SHALL BE GRADED IN ACCORDANCE WITH GENERAL 2. PROPOSED FORESTATION AREAS IMPACTED BY SITE GRADING SHALL BE TOPSOILED AND STABILIZED AS PER #2 OF PLANTING/SOIL SPECIFICATIONS FOR PROJECT. PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND THE PLANTING/SOIL SPECIFICATIONS FOR UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS PER THE FOREST PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.

5. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

### MAINTENANCE OF PLANTINGS

1. MAINTENANCE OF PLANTINGS SHALL LAST FOR A PERIOD OF 24 MONTHS. 2. ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON. WATERING MAY BE MORE OR LESS FREQUENT DEPENDING ON WEATHER CONDITIONS. DURING SECOND GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED.

NIVASIVE EXOTICS AND NOXIOUS WEEDS WILL BE REMOVED FROM FORESTATION AREAS. OLD FIELD 3. INVASIVE EXOTICS AND NOXIOUS WEEDS WILL BE REMOVED FROM FORESTATION AREAS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.

4. PLANTS WILL BE EXAMINED A MINIMUM TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT.

5. DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

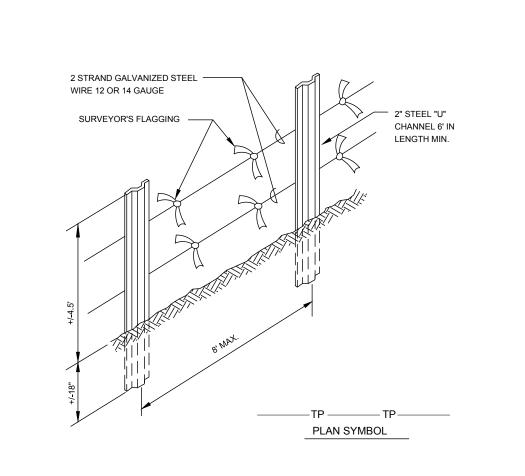
### **GUARANTEE REQUIREMENTS**

SURETY FOR FORESTATION

1. A 75 PERCENT SURVIVAL RATE OF FORESTATION PLANTINGS WILL BE REQUIRED AT THE END OF THE 24 MONTH MAINTENANCE PERIOD. ALL PLANT MATERIAL BELOW THE 75 PERCENT THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE NEXT GROWING SEASON.

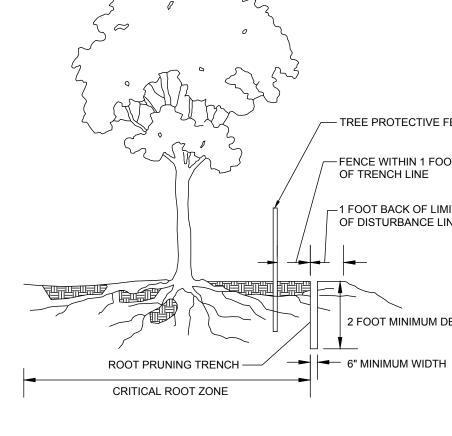
1. THE DEVELOPER SHALL POST A SURETY (BOND. LETTER OF CREDIT) TO ENSURE THAT FORESTATION LANTINGS ARE COMPLETED. UPON ACCEPTANCE OF THE PLANTINGS BY THE COUNTY, THE BOND SHALL BE

- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
- LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- NO STOCKPILES. PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION
- FENCING SHALL BE INSTALLED ALONG LIMITS OF DISTURBANCE OCCURRING WITHIN 50 FEET OF THE PROPOSED FCE LIMITS. 7. PERMANENT SIGNAGE WILL BE POSTED A AT 50-100 FOOT INTERVALS ALONG ALL FCE LIMITS.



- 1. Forest preservation, specimen tree and re/af-forestation protection device 2. Protected areas will be set as part of the review process.
- 3. Boundaries of protected areas should be staked and flagged prior to installing
- 4. Avoid root damage when placing anchor posts 5. Wire should be securely attached to posts.
- 6. Device should be properly maintained during construction. 7. Use brightly colored surveyor's flagging every 4'.
- 8. Protective signage is also recommended. 9. Contractor may use blaze orange tree protection fence or equal according to MD State Forest Conservation Technical Manual Figure D-5.

TREE PROTECTION FENCING - TYPE I



- RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS.
- 3. EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
- OTHER HIGH ORGANIC SOIL.

ROOT PRUNING DETAIL

- TREE PROTECTIVE FENCE FENCE WITHIN 1 FOOT -1 FOOT BACK OF LIMIT OF DISTURBANCE LINE 2 FOOT MINIMUM DEPTH

2. BOUNDARIES OF RETENTION AREAS SHOULD BE STAKED FLAGGED PRIOR TO TRENCHING.

4. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR

ACCEPTABLE EQUIPMENT.

# REV DATE

**ALWAYS CALL 811** It's fast. It's free. It's the law.

5. ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER

# APPROVED FOR CONSTRUCTION

Call before you dir

REVISIONS

COMMENT

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC</u> <u>DOCUMENT</u> UNLESS INDICATED OTHERWISE. PROJECT No.

CAD I.D.:

DRAWN BY:

**CHECKED BY** 

PROJECT: SITE DEVELOPMENT

MD132045-FCP-1.DW0

PLAN

4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 80

TOWSON, MARYLAND 21204 Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

REGISTERED LANDSCAPE ARCHITECT PROFESSIONAL CERTIFICATION

I, ERIC R. MCWILLIAMS, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, ND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND,

LICENSE NO. 3697 EXPIRATION DATE: 9/20/22

OWNER: DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STI PO BOX 2810 LA PLATA MD 20646 LA PLATA MD 20645 CONTACT: JASON BELT CONTACT: JASON BELT PHONE: 240-320-6448 PHONE: 240-320-6448

PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO.

> 11525 / 00400 **FILE NO. SDP-21-009**

SECTION/AREA: N/A DEED #

**FOREST** CONSERVATION **NOTES AND DETAILS** 

OF 45

**McWilliams** Digitally sig<mark>ne</mark>d by <mark>Eric</mark> McWilliams DN: cn=Eric McWilliams, o=Bohler, email=emcwilliams@bohlereng.co Date: 2022.05.23 14:12:10 -04'00'

SHEET NUMBER:

SHEET TITLE:

### Maintenance Guidelines

The primary purpose of the Stormwater Management StormFilter® is to filter and prevent pollutants from entering our waterways. Like any effective filtration system, periodically these pollutants must be removed to restore the StormFilter to its full efficiency and effectiveness.

Maintenance requirements and frequency are dependent on the pollutant load characteristics of each site. Maintenance activities occur, if warranted, during dryer months in late summer to early may be required in the event of a chemical spill or due to excessive sediment loading from site erosion or extreme storms. It is a good practice to inspect the system after major storm events.

### **Maintenance Procedures**

believe the following procedure to be efficient, using common equipment and existing maintenance protocols. The following two-step procedure is recommended::

Although there are many effective maintenance options, we

1. Inspection • Inspection of the vault interior to determine the need for

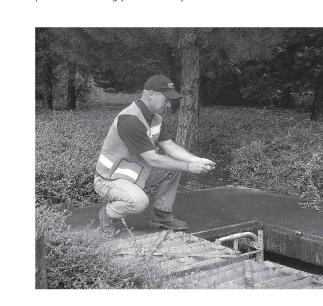
- maintenance. 2. Maintenance
- Cartridge replacement Sediment removal

### Inspection and Maintenance Timing

At least one scheduled inspection should take place per year with maintenance following as warranted. First, an inspection should be done before the winter season

During the inspection the need for maintenance should be determined and, if disposal during maintenance will be required, samples of the accumulated sediments and media should be obtained.

Second, if warranted, a maintenance (replacement of the filter cartridges and removal of accumulated sediments) should be performed during periods of dry weather.



Depending on the configuration of the particular system,

maintenance personnel will be required to enter the vault to

Filter cartridge replacement should occur during dry weather.

It may be necessary to plug the filter inlet pipe if base flows is

Replacement cartridges can be delivered to the site or customers

facility. Information concerning how to obtain the replacement

**Warning**: In the case of a spill, the maintenance personnel

is obtained. Notify the local hazard control agency and

1. If applicable, set up safety equipment to protect maintenance

2. Visually inspect the external condition of the unit and take

3. Open the doors (access portals) to the vault and allow the

including components, a general condition inspection.

the vault. Give particular attention to recording the level of

sediment build-up on the floor of the vault, in the forebay,

A. This activity will require that maintenance personnel enter

the vault to remove the cartridges from the under drain

manifold and place them under the vault opening for

lifting (removal). Disconnect each filter cartridge from the

underdrain connector by rotating counterclockwise 1/4 of

a turn. Roll the loose cartridge, on edge, to a convenient

Using appropriate hoisting equipment, attach a cable

from the boom, crane, or tripod to the loose cartridge.

B. Remove the used cartridges (up to 250 lbs. each) from the

Contact Contech Engineered Solutions for suggested

5. Make notes about the external and internal condition of

6. Using appropriate equipment offload the replacement

cartridges (up to 150 lbs. each) and set aside. 7. Remove used cartridges from the vault using one of the

4. Without entering the vault, give the inside of the unit,

To conduct cartridge replacement and sediment removal

Contech Engineered Solutions immediately.

personnel and pedestrians from site hazards.

notes concerning defects/problems.

and on top of the internal components.

spot beneath the vault access.

attachment devices.

system to vent.

following methods:

Method 1:

should abort maintenance activities until the proper guidance

cartridges is available from Contech Engineered Solutions.

**Important**: If vault entry is required, OSHA rules for confined

Maintenance

perform the maintenance

space entry must be followed.

In addition to these two activities, it is important to check the condition of the StormFilter unit after major storms for potential damage caused by high flows and for high sediment accumulation that may be caused by localized erosion in the drainage area. It may be necessary to adjust the inspection/ maintenance schedule depending on the actual operating conditions encountered by the system. In general, inspection activities can be conducted at any time, and maintenance should

### Maintenance Frequency

The primary factor for determining frequency of maintenance for the StormFilter is sediment loading.

A properly functioning system will remove solids from water by trapping particulates in the porous structure of the filter media inside the cartridges. The flow through the system will naturally decrease as more and more particulates are trapped. Eventually the flow through the cartridges will be low enough to require replacement. It may be possible to extend the usable span of the cartridges by removing sediment from upstream trapping devices on a routine as-needed basis, in order to prevent material from being re-suspended and discharged to the StormFilter treatment

The average maintenance lifecycle is approximately 1-5 years. Site conditions greatly influence maintenance requirements. StormFilter units located in areas with erosion or active construction may need to be inspected and maintained more often than those with fully stabilized surface conditions.

Regulatory requirements or a chemical spill can shift maintenance timing as well. The maintenance frequency may be adjusted as additional monitoring information becomes available during the inspection program. Areas that develop known problems should be inspected more frequently than areas that demonstrate no problems, particularly after major storms. Ultimately, inspection and maintenance activities should be scheduled based on the historic records and characteristics of an individual StormFilter system or site. It is recommended that the site owner develop a database to properly manage StormFilter inspection and maintenance programs.



The primary goal of an inspection is to assess the condition of the cartridges relative to the level of visual sediment loading as it relates to decreased treatment capacity. It may be desirable to conduct this 2. Sediment loading on top of the cartridge. inspection during a storm to observe the relative flow through the filter cartridges. If the submerged cartridges are severely plugged, then typically large amounts of sediments will be present and very 3. Submerged cartridges. little flow will be discharged from the drainage pipes. If this is the  $\alpha$  a. If >4" of static water above cartridge bottom for more case, then maintenance is warranted and the cartridges need to be replaced.

**Warning**: In the case of a spill, the worker should abort inspection activities until the proper guidance is obtained. Notify the local hazard control agency and Contech Engineered Solutions immediately.

To conduct an inspection:

**Important:** Inspection should be performed by a person who is familiar with the operation and configuration of the StormFilter reatment unit and the unit's role, relative to detention or retention facilities onsite.

- 1. If applicable, set up safety equipment to protect and notify surrounding vehicle and pedestrian traffic.
- 2. Visually inspect the external condition of the unit and take notes concerning defects/problems.
- 3. Open the access portals to the vault and allow the system vent. 4. Without entering the vault, visually inspect the inside of the
- unit, and note accumulations of liquids and solids. 5. Be sure to record the level of sediment build-up on the floor of the vault, in the forebay, and on top of the cartridges. If flow is occurring, note the flow of water per drainage pipe. Record all observations. Digital pictures are valuable for historical documentation.
- 6. Close and fasten the access portals.
- 7. Remove safety equipment. 8. If appropriate, make notes about the local drainage area relative to ongoing construction, erosion problems, or high loading of
- other materials to the system. 9. Discuss conditions that suggest maintenance and make decision as to whether or not maintenance is needed.

8. Remove accumulated sediment from the floor of the

# Maintenance Decision Tree

The need for maintenance is typically based on results of the inspection. The following Maintenance Decision Tree should be used as a general guide. (Other factors, such as Regulatory Requirements, may need to be considered).

Please note Stormwater Management StormFilter devices installed lownstream of, or integrated within, a stormwater storage facility typically have different operational parameters (i.e. draindown time). In these cases, the inspector must understand the relationship between the retention/detention facility and the treatment system by evaluating site specific civil engineering plans, or contacting the engineer of record, and make adjustments to the below guidance as necessary. Sediment leposition depths and patterns within the StormFilter are likely to be quite different compared to systems without upstream storage and therefore shouldn't be used exclusively to evaluate a need for

- 1. Sediment loading on the vault floor.
- a. If >4" of accumulated sediment, maintenance is
- a. If >1/4" of accumulation, maintenance is required.
- than 24 hours after end of rain event, maintenance is required. (Catch basins have standing water in the cartridge bay.)
- a. While not required in all cases, inspection of the media within the cartridge may provide valuable additional
- b. If pore space between media granules is absent, maintenance is required.
- 5. Bypass condition.
- a. If inspection is conducted during an average rain fall event and StormFilter remains in bypass condition (water over the internal outlet baffle wall or submerged cartridges), maintenance is required.
- Hazardous material release. a. If hazardous material release (automotive fluids or other)
- is reported, maintenance is required.
- a. If pronounced scum line (say  $\geq 1/4$ " thick) is present above top cap, maintenance is required.

- vault and from the forebay. This can most effectively be The accumulated sediment found in stormwater treatment accomplished by use of a vacuum truck. 9. Once the sediments are removed, assess the condition of the vault and the condition of the connectors to contain measurable concentrations of heavy metals and 10. Using the vacuum truck boom, crane, or tripod, lower and
- damage connections. 11. Close and fasten the door.
- 12. Remove safety equipment.
- 13. Finally, dispose of the accumulated materials in accordance with applicable regulations. Make arrangements to return the

used **empty** cartridges to Contech Engineered Solutions.

### Related Maintenance Activities

Performed on an as-needed basis StormFilter units are often just one of many structures in a more

comprehensive stormwater drainage and treatment system. In order for maintenance of the StormFilter to be successful, it is imperative that all other components be properly maintained. The maintenance/repair of upstream facilities should be carried out prior to StormFilter maintenance activities.

In addition to considering upstream facilities, it is also important to correct any problems identified in the drainage area. Drainage area concerns may include: erosion problems, heavy oil loading, and discharges of inappropriate materials.



cartridges during removal and installation. The cost of

repairing components damaged during maintenance will be

D. Continue steps a through c until all cartridges have been

# Method 2:

- A. This activity will require that maintenance personnel enter the vault to remove the cartridges from the under drain manifold and place them under the vault opening for lifting (removal). Disconnect each filter cartridge from the underdrain connector by rotating counterclockwise 1/4 of a turn. Roll the loose cartridge, on edge, to a convenient spot beneath the vault access.
- B. Unscrew the cartridge cap.
- C. Remove the cartridge hood and float.
- D. At location under structure access, tip the cartridge on its
- E. Empty the cartridge onto the vault floor. Reassemble the empty cartridge.
- F. Set the empty, used cartridge aside or load onto the hauling truck.
- G. Continue steps a through e until all cartridges have been

### Material Disposal

and conveyance systems must be handled and disposed of in accordance with regulatory protocols. It is possible for sediments organic chemicals (such as pesticides and petroleum products). include industrial areas and heavily traveled roads.





Sediments and water must be disposed of in accordance with all applicable waste disposal regulations. When scheduling maintenance, consideration must be made for the disposal of solid and liquid wastes. This typically requires coordination with a local landfill for solid waste disposal. For liquid waste disposal a number of options are available including a municipal vacuum truck decant facility, local waste water treatment plant or on-site treatment and discharge.



### ADS STORMTECH OPERATIONS & MAINTENANCE **PROCEDURES:**

### THE ISOLATOR® ROW

### INTRODUCTION

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row is a technique to inexpensively enhance Total Suspended Solids (TSS) removal and provide easy access for inspection and maintenance.

# THE ISOLATOR ROW

The Isolator Row is a row of StormTech chambers, either SC-160LP. SC-310, SC-310-3, SC-740, DC-780, MC-3500 or MC-4500 models, that is surrounded with filter fabric and connected to a closely located manhole for easy access. The fabric-wrapped chambers provide for settling and filtration of sediment as storm water rises in the Isolator Row and ultimately passes through the filter fabric. The open bottom chambers and perforated sidewalls (SC-310, SC- 310-3 and SC-740 models) allow storm water to flow both vertically and horizontally out of the chambers. Sediments are captured in the Isolator Row protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

Two different fabrics are used for the Isolator Row. A woven geotextile fabric is placed between the stone and the Isolator Row chambers. The tough geotextile provides a media for storm water filtration and provides a durable surface for maintenance operations. It is also designed to prevent scour of the underlying stone and remain intact during high pressure jetting. A non-woven fabric is placed over the chambers to provide a filter media for flows passing through the perforations in the sidewall of the chamber. The non-woven fabric is not required over the SC-160LP, DC-780, MC-3500 or MC-4500 models as these chambers do not have perforated side walls.

The Isolator Row is typically designed to capture the "first flush" and offers the versatility to be sized on a volume basis or flow rate basis. An upstream manhole not only provides access to the Isolator Row but typically includes a high flow weir such that storm water flowrates or volumes that exceed the capacity of the Isolator Row overtop the over flow weir and discharge through a manifold to the other chambers. The Isolator Row may also be part of a treatment train. By treating storm water prior to entry into the chamber system, the service life can be extended and pollutants such as hydrocarbons can be captured. Pre-treatment best management practices can be as simple as deep sump catch basins, oil-water separators or can be innovative storm water treatment devices. The design of the treatment train and selection of pretreatment devices by the design engineer is often

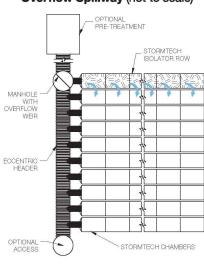
driven by regulatory requirements. Whether pretreatment is used or not, the Isolator Row is recommended by StormTech as an effective means to minimize maintenance requirements and maintenance costs. Note: See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row.



Looking down the Isolator Row from the manhole opening, woven geotextile is shown



### StormTech Isolator Row with Overflow Spillway (not to scale)



### **ISOLATOR ROW**

# INSPECTION/MAINTENANCE

INSPECTION The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices. At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year

of operation. For subsequent years, the inspection should be adjusted

based upon previous observation of sediment deposition. The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

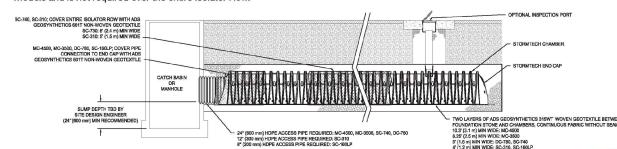
If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

The Isolator Row was designed to reduce the cost of periodic maintenance. By "isolating" sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entries.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45" are best. Most JetVac reels have 400 feet of hose allowing maintenance of an Isolator Row up to 50 chambers long. The JetVac process shall only be performed on StormTech Isolator Rows that have AASHTO class 1 woven geotextile (as specified by StormTech) over their angular base stone.

### StormTech Isolator Row (not to scale)

Note: Non-woven fabric is only required over the inlet pipe connection into the end cap for SC-160LP, DC-780, MC-3500 and MC-4500 chamber models and is not required over the entire Isolator Row.



THE MOST ADVANCED NAME IN WATER MANAGEMENT SOLUTIONS™

### ISOLATOR ROW STEP BY STEP MAINTENANCE PROCEDURES

Inspect Isolator Row for sediment.

A) Inspection ports (if present)

 Remove lid from floor box frame ii. Remove cap from inspection riser iii. Using a flashlight and stadia rod, measure depth of sediment and record results on maintenance log.

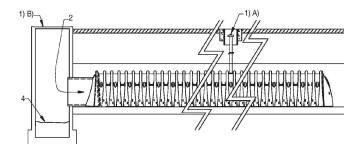
i. Remove cover from manhole at upstream end of Isolator Row

2. Follow OSHA regulations for confined space entry if entering manhole

# Clean out Isolator Row using the JetVac process.

A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable B) Apply multiple passes of JetVac until backflush water is clean C) Vacuum manhole sump as required

Inspect & clean catch basins and manholes upstream of the StormTech system.



	Stadia Ro	d Readings	Sediment Depth		
Date	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)	Fixed point to top of $\binom{1}{2}$ Ubservations/Actions Ins		Inspect
3/15/11	6,3 ft	none		New installation, Fixed point is CI frame at grade	MCG
9/24/11		6,2	0,1 ft	Some grit felt	SM
6/20/13		5.8	o.s ft	Mucky feel, debris visible in manhole and in Isolator Row, maintenance due	NV
7/7/13	6,3 ft		o	System jetted and vacuumed	MCG





iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

### ii. Using a flashlight, inspect down Isolator Row through outlet pipe 1. Mirrors on poles or cameras may be used to avoid a confined space entry

iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2. If not, proceed to Step 3.

Replace all caps, lids and covers, record observations and actions.

	Stadia Rod Readings		Sediment Depth		
Date	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)	(1)–(2)	Observations/Actions	
3/15/11	6,3 ft	none		New installation, Fixed point is CI frame at grade	MCG
9/24/11		6,2	0,1 ft	Some grit felt	SM
6/20/13		5.8	o.s ft	Mucky feel, debris visible in manhole and in Isolator Row, maintenance due	NV
7/7/13	6,3 ft		0	System jetted and vacuumed	MCC

Andre by Andrew G.

OWNER:

PO BOX 2810

LA PLATA MD 20646

CONTACT: JASON BELT

PHONE: 240-320-6448

DEVELOPER: POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE LA PLATA MD 20645 CONTACT: JASON BELT PHONE: 240-320-6448

c=US

Stine, P.E.

G. Stine, P.E.,

o=Bohler, ou,

hlereng.com,

email=astine@b

Date: 2022.05.23

13:55:45 -04'00'

DN: cn=Andrew

PARCEL: 311 ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO.

SECTION/AREA: N/A DEED # 11525 / 00400 **FILE NO. SDP-21-009**  **REVISIONS** 

REV DATE COMMENT



# APPROVED FOR CONSTRUCTION

REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUC</u> <u>DOCUMENT</u> UNLESS INDICATED OTHERWISE.

PROJECT No.: DRAWN BY: CHECKED BY: MD132045-SWM-3.DW

CAD I.D.:

PROJECT: SITE **DEVELOPMENT** 

PLAN

STORE # 1833 4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043

TM 24, GRID 24, PARCEL 311

HOWARD COUNTY

2ND ELECTION DISTRICT B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 80 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com

LICENSE NO. 37687, EXPIRATION DATE: 7/12/23 STORMWATER **FACILITY OPERATIONS & MAINTENANCE** 

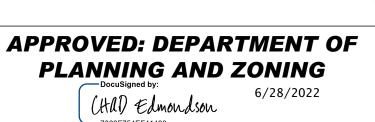
UNDER THE LAWS OF THE STATE OF MARYLAND,

OF 45

1FB75478A22B49 Amy Glonar

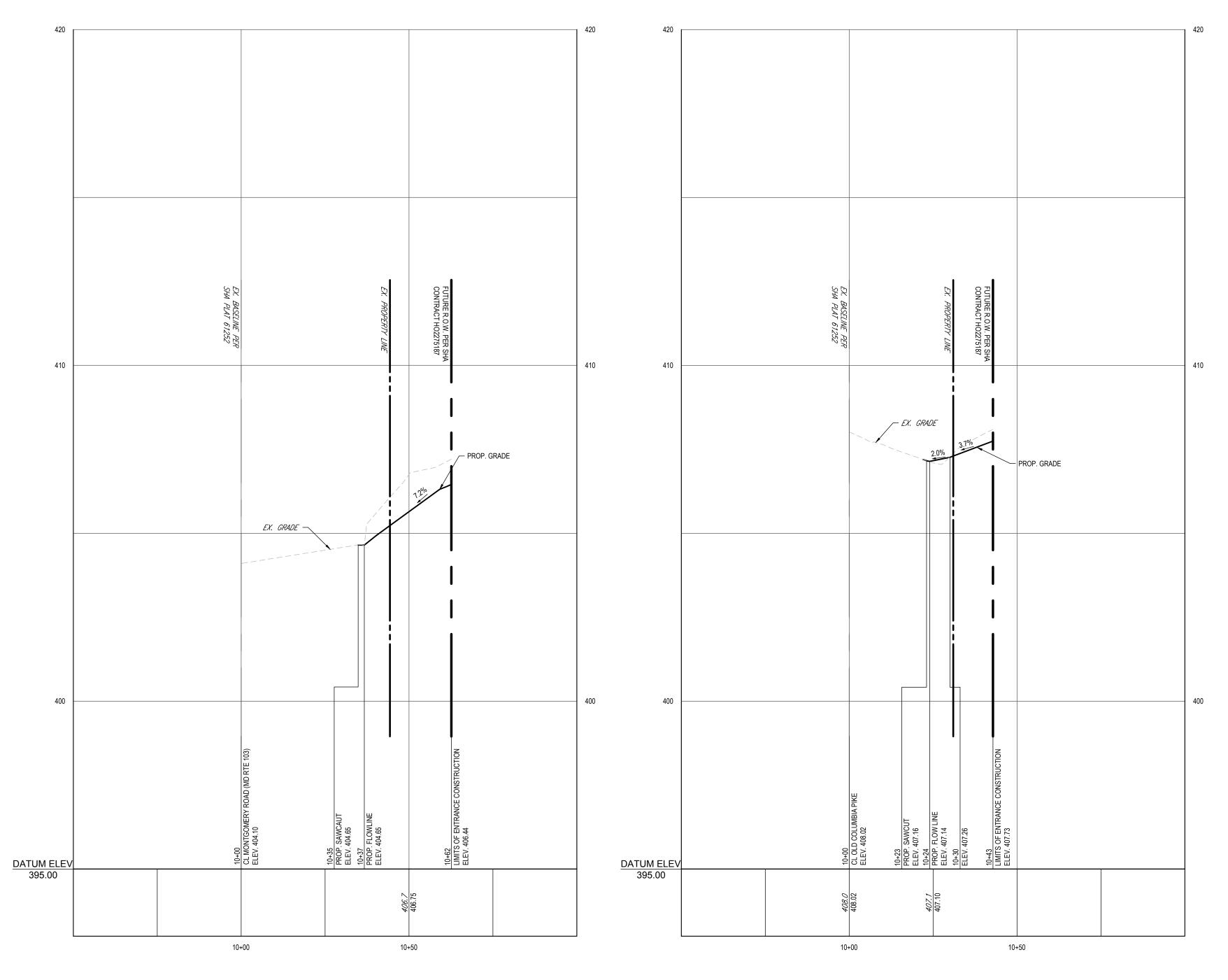
# PLANNING AND ZONING 6/28/2022 (HD) Edmondson

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022



DATE





# MONTGOMERY ROAD (MD RTE 103) ENTRANCE PROFILE SCALE: 1"= 20 ' HORIZONTAL 1"= 2 ' VERTICAL

# OLD COLUMBIA PIKE ENTRANCE PROFILE

SCALE: 1"= 20 ' HORIZONTAL 1"= 2 ' VERTICAL

Andr Digitally signed by Andrew G. Stine, P.E. ew G. DN: cn=Andro

DN: cn=Andrew o=Bohler, ou, Stine, email=astine@b ohlereng.com,

c=US Date: 2022.05.23 13:52:21 -04'00'

OWNER: POTOMAC ENERGY HOLDINGS, LLC 102 CENTENNIAL STREET, STE. 100 LA PLATA, MD 20645 CONTACT: JASON BELT PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448

ZONED: B-2 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400

FILE NO. SDP-21-009

**ENTRANCE PROFILES** PHONE: 240-320-6448 SHEET NUMBER:

OF 45

**REVISIONS** 

Know what's **below. Call** before you dig.

**ALWAYS CALL 811** 

It's fast. It's free. It's the law.

APPROVED FOR

CONSTRUCTION

SITE

**DEVELOPMENT** PLAN

STORE # 1833

4205 MONTGOMERY ROAD (MD ROUTE 103)

ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY

2ND ELECTION DISTRICT B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 801

TOWSON, MARYLAND 21204
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 37687, EXPIRATION DATE: 7/12/23

MD132045-SDC-3.DWG

DRAWN BY: CHECKED BY:

DATE: CAD I.D.:

PROJECT:

COMMENT

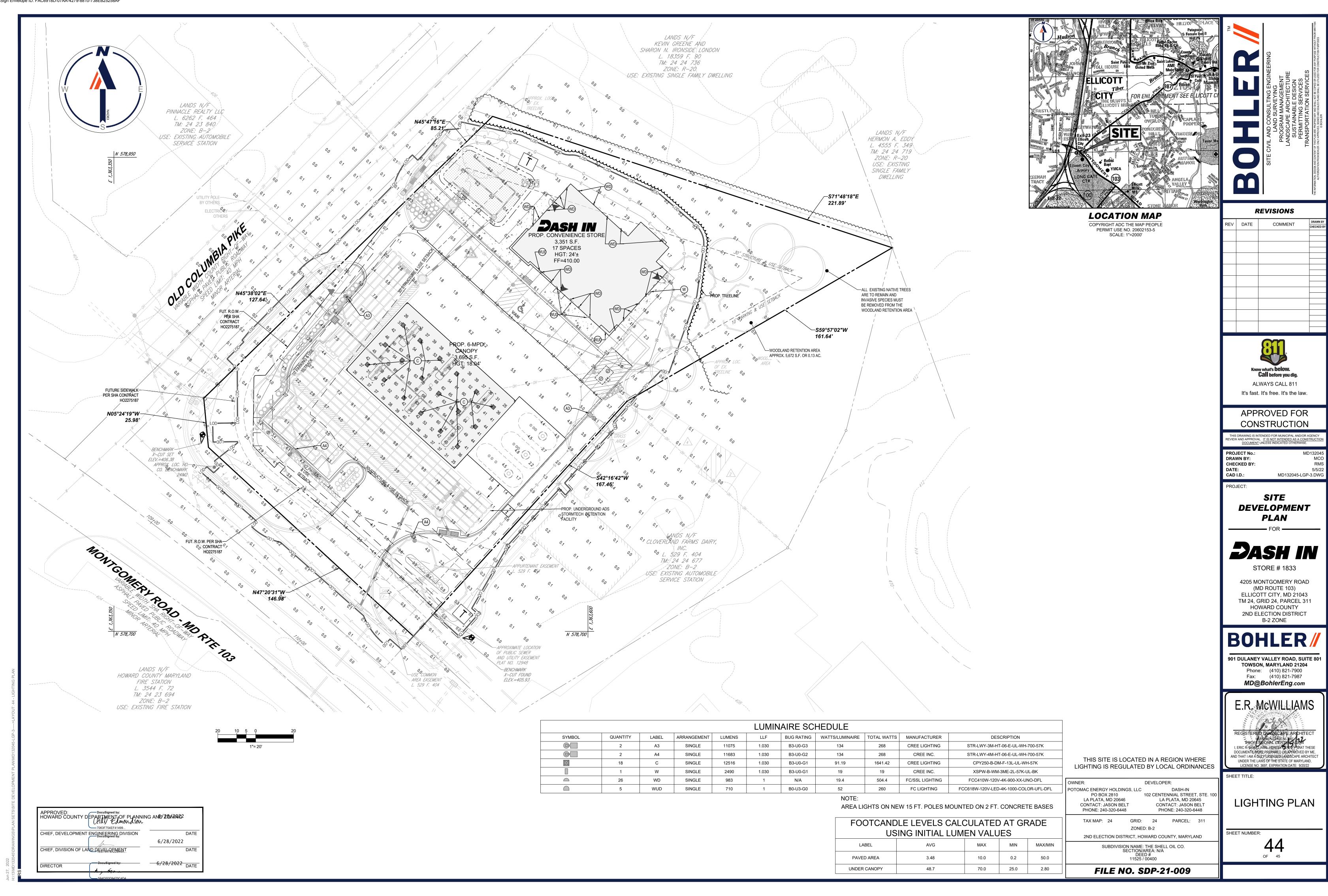
REV DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 6/28/2022 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/28/2022

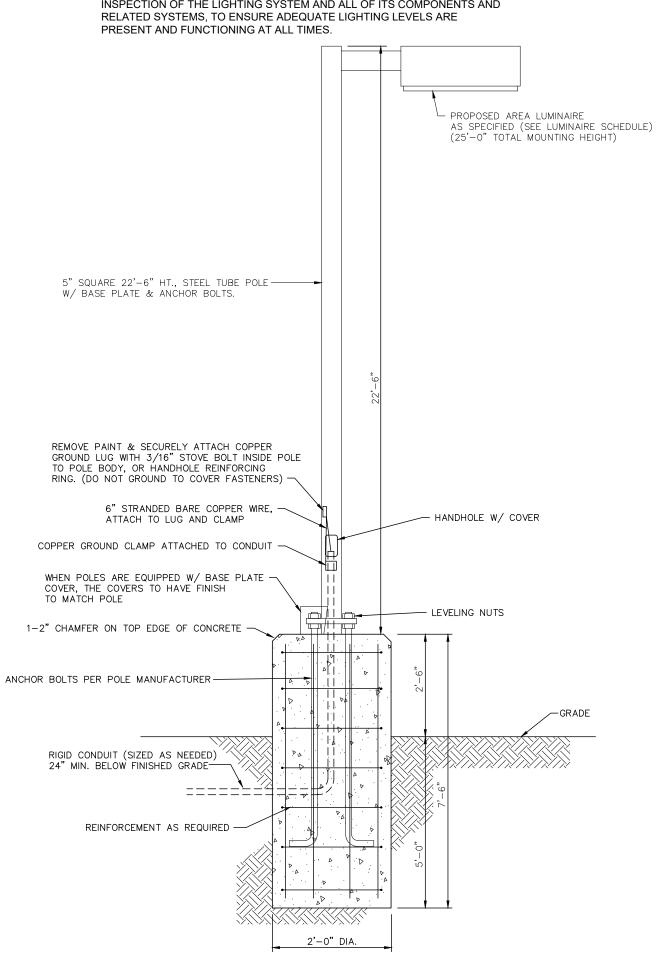
DATE

DIRECTOR 5584D5DD9470C4D4...



### **GENERAL LIGHTING NOTES**

- 1. THIS PLAN IS TO BE UTILIZED FOR LIGHTING PURPOSES ONLY. REFER TO ELECTRICAL ENGINEERING PLANS FOR CIRCUITRY DESIGN AND SPECIFICATIONS.
- 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO THE PROJECT ENGINEER (BOHLER) FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE FIXTURE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.
- 3. THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER ELECTRICAL VOLTAGE TOLERANCE IN LAMPS. THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD
- 4. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOTCANDLES.
- 5. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND RELAMPING ACCORDING TO MANUFACTURER RECOMMENDATIONS FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINARIES TO FUNCTION IMPROPERLY.
- 6. THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY, POWER SYSTEM, CONDUITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
- 7. CONTRACTOR MUST BRING TO THE DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
- 8. THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
- 9. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.



1. THIS DETAIL IS FOR BID AND BUDGETARY PURPOSES ONLY. CONTRACTOR SHALL ENSURE DESIGN IS PREPARED BY A QUALIFIED STRUCTURAL ENGINEER CONSIDERING LIGHTING MANUFACTURER REQUIREMENTS, LOCAL WIND LOADS, SITE SPECIFIC SOIL PARAMETERS.

AS DETERMINED BY A STRUCTURAL ENGINEER.

A. SOME SITE LOCATIONS AND/OR CONDITIONS MAY REQUIRE VIBRATION DAMPENING MEASURES

B. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF THE INTENT TO MOUNT ANYTHING ASIDE FROM THE LIGHT FIXTURE INCLUDING (BUT NOT LIMITED TO) CAMERAS, BANNERS, FLAGS, SIGNAGE, ETC. AS IT WILL IMPACT THE POLE AND FOUNDATION DESIGN.

REV.: 2015.03.19

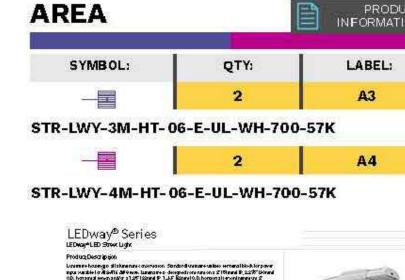
2. ALL REBAR SHALL HAVE A YIELD STRENGTH OF 60ksi, AND MAINTAIN A 3" MIN. CLEARANCE

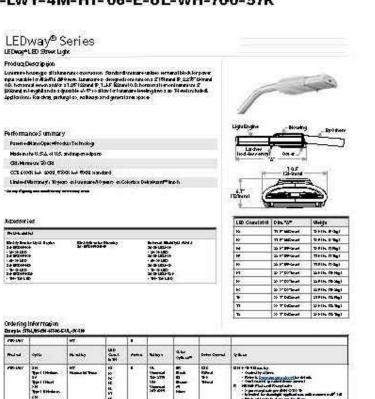
7/6/2022

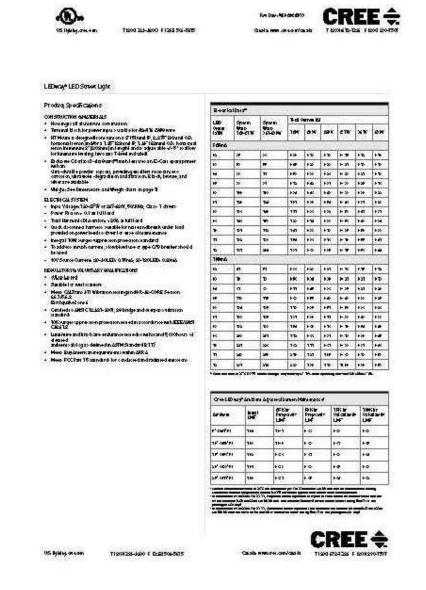
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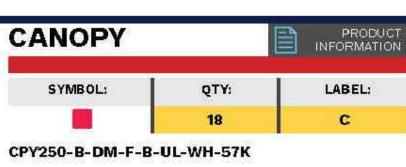
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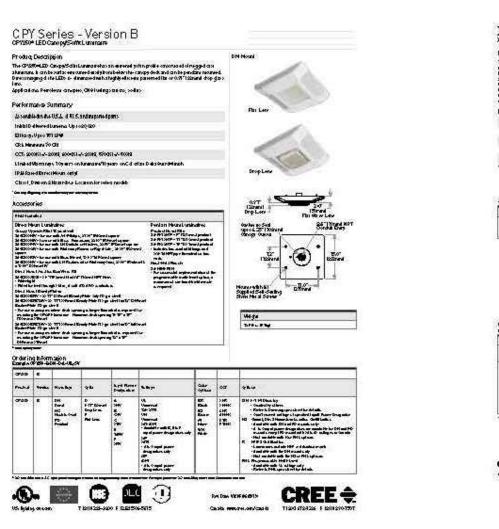


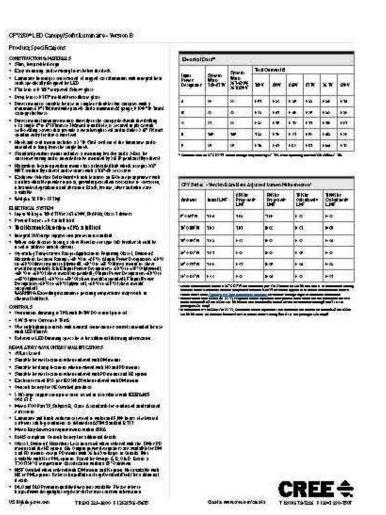


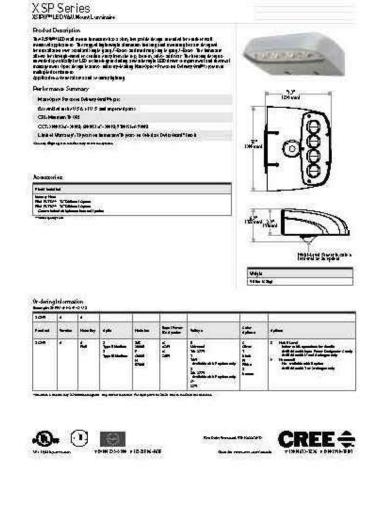


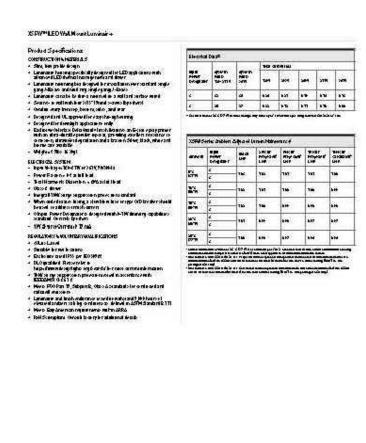












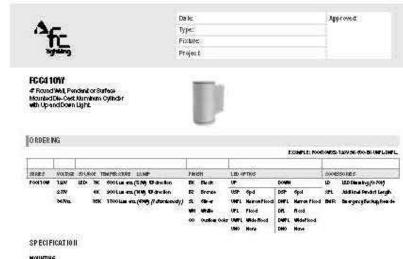
VERSE (400 2 000 ) 123 96000

CREE &



YMBOL:	QTY:	LABEL:
	26	WD

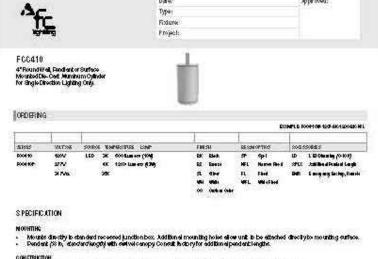
### FCC410W-120V-4K-900-XX-UNO-DFL



MOU	mine :
	Mounts directly to standard recessed germ box. Additional mounting holes allow unit to be attached directly to immuniting surface.
COH	TRUCTION
	Medine grade, correction is detaint, heavy wall at high passions discount eleminum with discount back mounting plate.
	Lone is 1/4" thick cleer tempered glees. Procision formed semilispe duter aluminum for me atmum reflectance."

- Lument date dare the minimum delivere dout of the luminate. LED lifetime is 70,00% from with the lumin depreciation greater than 1.70. All of curtisminates are LM-80 ledeed, are a CRI-80 and have a 4-dept Modulant Ellipse order conditionary, integral power supply dended in the violety 120% or 2777 dended Consultationary for other violety earl or supply dended in the violety 120% or 2777 dended Consultationary for other violety are violety and or 2777 dended Consultationary for other violety.
- Six stage attentional pre-treatment process that includes fron phosphate, to prepare the substrate for a UV stable, super durable standard polyecter powder cost.
- Ballast UL listed beliest standard. Beliest has a manufacturer leave d5 year warranty. Please consult featory for other voltage options.
- UL &sUL/ETL, U.S. and CA listed for web localion in up and other position. P96 Rating.





- Six dags channical pro-breatment process that includes linn phosphate, to prepare the extratrals for a UV stable, super durable standard polye day prestor cost.

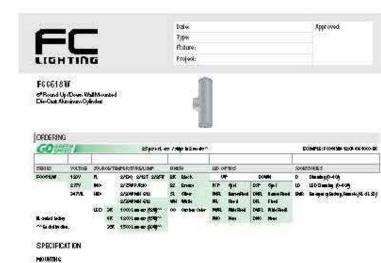
  Optional cost process leaded to the standard thick including sinc phosphate for a lyear limited warranty.
- Ballad UL listed ballest standard. Ballest have manufacturar located a year warranty. Division consult factory for other voltage options ULS CULETL, U.S. and Chileted for weatheration in down goldiers. Per Pathy

FCL jelleg in menne ke light in de op, alle od e der genelled i de probed delige. Ander to an Mary second is FC lighting i have not as offen

# **WALL MOUNTED**

SYMBOL:	QTY:	LABE
	5	WUD

FCC618W-120V-LED-4K-1000-COLOR-UFL-DFL



Mounts directly to standard in costs of junction Box. Additional mounting holosallow unit to be attached directly to mounting purface.

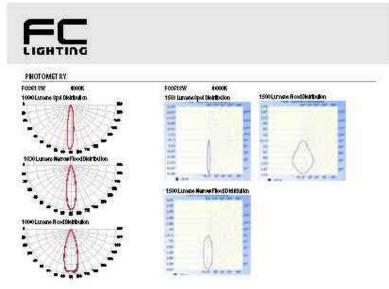
Lummaratabed are A-minimizer, delivered out of the havinaire. LED Matiros is greater than or equal to 70,000 lower with the lumm, depreciation greater than L70, All of our huminaires are LM400 tested and are 2 CP400, with a 4-step MacAdam Eligane color contribution), has pully severage ply standard. Input voltage 100 V or 2770 standard. Control to despite provides statistically color opposition (Fig. 4 cream Enter outside). Six stage chemical pre-teralment process that includes iron phosphale, to prepare the substrate for a UV stable, super durable

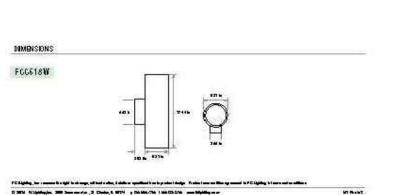
Social PL: Four pinp log in type-compactifice was reclaimenholder flump-by others. MC (1904 only): Mediumbiane perceibing a disk.
HD: G12 base perceibing socials.
Solial PL: Four-secret electrics; UL fased biables standard. HD: Be discribe balance standard. Balabethar a manufacture is seved 6
year warranty. 1909 and 2779 are standard. Please consult factory for other college options.

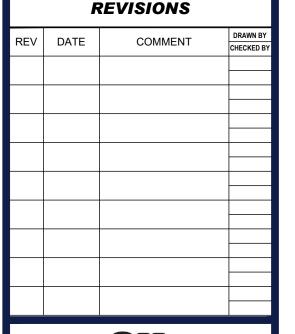
standard polyester po-weler coat. Optional 4-coat process is added to the standard frash including sinc ploop habe for a 6 year limited warranty.

LISTING

- U. & CULETI, U.S. and Collision for weblocation in up or down position. IPS Plating. The FAC validate benefit Great Speed, gold obly program are broken as various Sic (digital by one FCC (Mag to recent to sight) along a plant along to relate the experiment product of the foreign court to FC (sight) to read within a 10 Sec. Polymery to Mag to recent to FC (sight) to read within a 10 Sec. Polymery to Mag to recent to FCC (sight) to read to FCC (sight) to FCC (sight









# APPROVED FOR CONSTRUCTION

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGEN REVIEW AND APPROVAL. <u>IT IS NOT INTENDED AS A CONSTRUCTI</u>

<u>DOCUMENT</u> UNLESS INDICATED OTHERWISE. PROJECT No.: DRAWN BY: **CHECKED BY:** 

CAD I.D.: MD132045-LGP-3.DW0 PROJECT: SITE

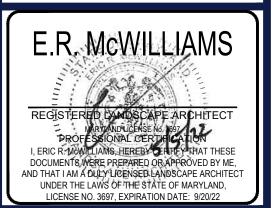
**DEVELOPMENT** PLAN

STORE # 1833

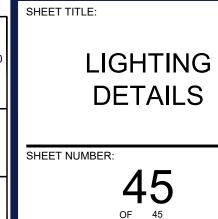
4205 MONTGOMERY ROAD (MD ROUTE 103) ELLICOTT CITY, MD 21043 TM 24, GRID 24, PARCEL 311 HOWARD COUNTY 2ND ELECTION DISTRICT

B-2 ZONE

901 DULANEY VALLEY ROAD, SUITE 80 **TOWSON, MARYLAND 21204** Phone: (410) 821-7900 Fax: (410) 821-7987 MD@BohlerEng.com



OWNER:	DEVELOPER:			
POTOMAC ENERGY HOLDINGS, LLC PO BOX 2810 LA PLATA, MD 20646 CONTACT: JASON BELT PHONE: 240-320-6448	DASH-IN 102 CENTENNIAL STREET, STE. 100 LA PLATA, MD 20645 CONTACT: JASON BELT PHONE: 240-320-6448			
TAX MAP: 24 GRID: ZONE	24 PARCEL: 311 :D: B-2			
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND				
SUBDIVISION NAME: THE SHELL OIL CO. SECTION/AREA: N/A DEED # 11525 / 00400				
FILE NO. SDP-21-009				



Paul DiMarco 用管学。 的性や性型OPMENT ENGINEERING DIVISION 7/7/2022 CHIEF, DIVISION OF LAND BEVELOPMENT 7/7/2022 Amy Gonan

FROM SURFACES.

IOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

S1 / SCALE: N.T.S.

✓ LIGHT POLE DETAIL