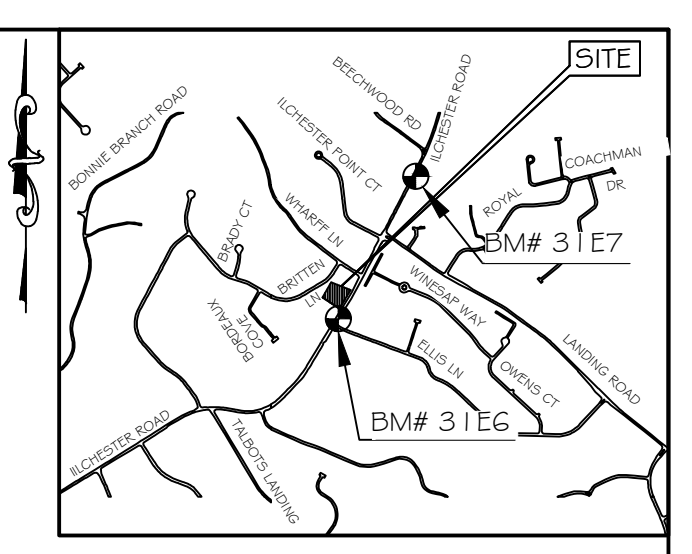


### LEGEND

	PROPOSED BUILDING		EX. WATER
	EX. BUILDING		EX. SEWER
	EX. GRADE		PROP. WATER
	PROP. GRADE		PROP. SEWER
	PROPERTY LINES		LIMIT OF DISTURBANCE
	EX. TREELINE		SUPER SILT FENCE
	EDGE OF ROAD		DIVERSION FENCE
	CENTERLINE OF ROAD		OVERHEAD ELECTRIC
	4' THICK MIX 3 CONCRETE SIDEWALK & DRIVEWAY		BUILDING RESTRICTION LINE
	UTILITY POLE		PROP. STORM DRAIN
	15-24.9% SLOPES		EX. STORM DRAIN
>25% Slopes (4,425 SF) symbol"/>	>25% SLOPES (4,425 SF)		SWM BORING
	DRAINAGE DIVIDE		AT GRADE INLET PROTECTION
			CURB INLET PROTECTION
			STABILIZED CONSTRUCTION ENTRANCE

- ### GENERAL NOTES
- SUBJECT PROPERTY IS ZONED "R-20" PER THE 10/06/2013 COMPREHENSIVE ZONING PLAN.
  - GROSS AREA OF SITE SUBJECT TO SUBDIVISION IS 1.0 AC.±
  - THIS PROPERTY IS LOCATED IN THE METROPOLITAN DISTRICT.
  - WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122B OF THE HOWARD COUNTY CODE.
  - PUBLIC WATER AND PUBLIC SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF THE ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
  - DESIGN MANUAL WAIVER (DMW) NO. DMW2-22-006 WAS APPROVED ON SEPTEMBER 21, 2021. THIS DMW STATES THAT A SEWER CONNECTION IS NOT ABLE TO SERVE THE LOWEST FLOOR OF THE PROPOSED BUILDING BY GRAVITY. A HUNG SEWER WILL BE REQUIRED FOR THE LOWEST FLOOR.
  - SOILS HAVE BEEN TAKEN FROM THE NRCS WEB SOIL SURVEY WEBSITE.
  - EXISTING TOPOGRAPHY IS BASED ON HOWARD COUNTY GIS.
  - THIS PLAN IS BASED ON A PARTIAL FIELD RUN MONUMENTED BOUNDARY SURVEY BY KCI TECHNOLOGIES, INC. PERFORMED ON OR ABOUT APRIL 4, 2019, AND AS SHOWN ON PLAT NO. 18023.
  - ALL AREAS ARE MORE OR LESS (M±).
  - THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES ON THE SITE.
  - THERE ARE NO WETLANDS ON SITE. NATURAL RESOURCES ON SITE FIELD VERIFIED BY MRIDULA GUPTA, RLA, ON OR ABOUT 9-16-2019.
  - THERE IS NO FOREST STAND DELINEATION FOR THIS SITE.
  - THERE IS NO FLOODPLAIN ON SITE.
  - NO APFO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT BECAUSE THE PROPOSED SUBDIVISION IS NOT EXPECTED TO HAVE MORE THAN 5 DAILY TRIPS.
  - THERE IS AN EXISTING DWELLING/STRUCTURE(S) LOCATED ON LOT 6 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING(S) ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATION REQUIREMENTS.
  - EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
  - GEOTECHNICAL EXPLORATION AND TESTING HAS BEEN PERFORMED BY CENKEN GROUP, LLC IN JULY, 2019. IF FUTURE INVESTIGATIONS SHOW UNSATISFACTORY SOIL CONDITIONS FOR ANY OF THE STORMWATER MANAGEMENT TREATMENTS SHOWN, EITHER UNDERDRAINS WILL BE PROVIDED OR A DIFFERENT PRACTICE WILL BE SUBSTITUTED.
  - COORDINATES BASED ON NAD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEOTECHNICAL CONTROL STATIONS 31E6 AND 31E7.
  - STORMWATER MANAGEMENT IS PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II, AS AMENDED BY THE MARYLAND STORMWATER ACT OF 2007. STORMWATER OBLIGATIONS ARE BEING MET BY THE USE OF MICRO-BIORETENTION PRACTICES. ALL FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
  - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 

STATE HIGHWAY ADMINISTRATION	410.531.5533
BGE (CONTRACTOR SERVICES)	410.850.4620
BGE (UNDERGROUND DAMAGE CONTROL)	410.787.9068
MISS UTILITY	1.800.257.7777
COLONIAL PIPELINE COMPANY	410.795.1390
HOWARD COUNTY, DEPT. OF PUBLIC WORKS, BUREAU OF UTILITIES	410.313.4900
HOWARD COUNTY HEALTH DEPARTMENT	410.313.2640
AT&T	1.800.252.1133
VERIZON	1.800.743.0034/10.224.9210
  - THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
  - ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
  - 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 PRIOR TO THE START OF WORK.
  - THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
  - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY IN ADDITION TO MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
  - ALL HOPE PIPE SPECIFICATION AND INSTALLATION SHALL MEET AASHTO M-252 TYPE S, M-294 TYPE S AND ASTM D2321, RESPECTIVELY.
  - SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. DRIVEWAY PAVING TO BE HOWARD COUNTY STANDARD P-1 PAVING SECTION.
  - ALL DRIVEWAYS WILL BE CONSTRUCTED AS PER HO. CO. STD. DETAIL R-6.03. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:
    - WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE);
    - SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM);
    - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS;
    - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (#25 LOADING);
    - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
    - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
  - ALL DITCHES AND SWALES WILL HAVE EROSION CONTROL MATTING.
  - LANDSCAPING FOR LOT 7 WAS PREVIOUSLY ADDRESS UNDER THE LOWE PROPERTY, MDR PLAT NO. 18023, F-06-123.
  - A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT SINCE IT IS MORE THAN FIVE HUNDRED FEET (500') FROM A PRINCIPAL OR INTERMEDIATE ARTERIAL HIGHWAY AND SINCE THE HEAVY TRUCK TRAFFIC ON INTERSTATE ROUTE 70 DOES NOT EXCEED AN AOT OF TEN THOUSAND (10,000) VEHICLES.
  - THE CONSTRUCTION OF THE SIDEWALK, CURB & GUTTER, LOT 6 DRIVEWAY ENTRANCE, AND ALL OTHER EARTH DISTURBANCE NOT DRAINING TO A SEDIMENT CONTROL DEVICE SHALL BE PERFORMED USING SAME-DAY STABILIZATION.
  - THE FOREST CONSERVATION WAS PREVIOUSLY ADDRESSED UNDER THE LOWE PROPERTY, MDR PLAT NO. 18023, F-06-123.
  - THE REQUEST TO HOWARD COUNTY DESIGN MANUAL VOLUME IV DETAIL R-1.03 TO HAVE THE PROPOSED 4' SIDEWALK MORE THAN 6" FROM THE FACE OF CURB NEAR THE EXISTING POWER POLE HAS BEEN APPROVED BY HOWARD COUNTY BUREAU OF HIGHWAY ON JANUARY 13, 2022.
  - THE SITE IS SUBJECT TO THE APPROVAL & CONDITIONS OF WP-22-022 DATED NOVEMBER 22, 2021 FOR ALTERNATIVE COMPLIANCE WITH RESPECT TO SECTION 16.127(C)(4)(I) & 16.144(N)(1) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO ALLOW A SEPARATE DRIVEWAY FOR THE PROPOSED SFD AND TO REACTIVATE F-20-065 HARRIS PROPERTY AND EXTEND THE RESUBMISSION DEADLINE TO ADDRESS SRC COMMENTS. APPROVAL OF THIS ALTERNATIVE COMPLIANCE IS SUBJECT TO THE FOLLOWING CONDITIONS:
    - INCLUDE A NOTE ON ALL PLAN SUBMISSIONS WITH HIS ALTERNATIVE COMPLIANCE FILE NUMBER, A SUMMARY OF THE REQUEST, DATE OF APPROVAL AND CONDITIONS OF APPROVAL.
    - COMPLIANCE WITH ALL SRC COMMENTS FOR F-20-065, HARRIS PROPERTY.
    - SUBMITTAL OF THE REVISED PLAN WITHIN 45 DAYS OF THE APPROVED ALTERNATIVE COMPLIANCE ON OR BEFORE (JANUARY 6, 2022).
  - THE SITE IS SUBJECT TO THE APPROVAL & CONDITIONS OF WP-22-130 DATED JUNE 29, 2022 FOR ALTERNATIVE COMPLIANCE WITH RESPECT TO SECTION 16.144(R)(3) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO REACTIVATE F-20-065 HARRIS PROPERTY AND EXTEND THE RESUBMISSION DEADLINE TO ADDRESS SRC COMMENTS. APPROVAL OF THIS ALTERNATIVE COMPLIANCE IS SUBJECT TO THE FOLLOWING CONDITIONS:
    - THE REVISED PLANS MUST BE SUBMITTED WITHIN 30 DAYS FROM THE DATE OF ALTERNATIVE COMPLIANCE APPROVAL (ON OR BEFORE JULY 25, 2022).
    - PLEASE PROVIDE A GENERAL NOTE REGARDING THIS ALTERNATIVE COMPLIANCE STATING THE SECTION, DATE APPROVED AND CONDITIONS OF APPROVAL.
    - A HALF REVIEW FEE OF \$367.50 WILL BE REQUIRED WITH THE REVISED SUBMISSION.
    - COMPLIANCE WITH ALL SRC COMMENTS FOR F-20-065, HARRIS PROPERTY.
  - THE FINAL PLAN HAS RECEIVED PLANNING BOARD APPROVAL ON APRIL 21, 2022.



**VICINITY MAP**  
SCALE: 1" = 2000'  
ADC MAP 4936, GRID G3

### BENCHMARKS

STATION:	LOCATION:
STATION 31E6 ELEV.: 482.76'	N 570852.372 E 1376700.647
STATION 31E7 ELEV.: 478.65'	N 572335.350 E 1377504.033

### SHEET INDEX

SHEET #	SHEET DESCRIPTION
1	SITE PLAN
2	STORMWATER MANAGEMENT DRAINAGE AREA MAP
3	STORM DRAIN DRAINAGE AREA MAP
4	STORMWATER MANAGEMENT DETAILS
5	SITE DETAILS
6	SEDIMENT AND EROSION CONTROL PLAN
7	SEDIMENT AND EROSION CONTROL DETAILS
8	SEDIMENT AND EROSION CONTROL NOTES
9	SEDIMENT AND EROSION CONTROL NOTES

### SOIL ANALYSIS

SYMBOL	NAME/DESCRIPTION	TYPE	HYDRIC	K FACTOR
CHC	CHILLUM-RUSSETT LOAMS, 5 TO 10 PERCENT SLOPES	C	NO	0.43
CHB	CHILLUM-RUSSETT LOAMS, 2 TO 5 PERCENT SLOPES	C	NO	0.43
SD	SASSAFRAS AND CROOM SOIL, 10 TO 15 PERCENT SLOPES	B	NO	0.37
CD	CROOM AND EVESBORO SOILS, 10 TO 15 PERCENT SLOPES	C	NO	0.37

### STORMWATER MANAGEMENT SUMMARY

PRACTICE	AREA TREATED	VOLUME (ESDv)
(M-C) MICRO-BIORETENTION #1	3,575.52 SF	609 CF
TOTAL ESDv REQUIRED		605 CF
TOTAL ESDv PROVIDED		609 CF
TOTAL REV. REQUIRED		64 CF
TOTAL REV. PROVIDED		157 CF

### SITE ANALYSIS DATA CHART

1	GROSS TRACT AREA	1.0 AC.
2	AREA WITHIN 100-YEAR FLOODPLAIN	0 AC.
3	TOTAL AREA OF 25% OR GREATER STEEP SLOPES (AREA NOT IN FLOODPLAIN)	0 AC.
4	NET TRACT AREA [1-(2+3)]	1.0 AC.
5	TOTAL NUMBER OF LOTS ALLOWED PER ZONING	2
6	TOTAL NUMBER OF RESIDENTIAL UNITS/LOTS PROPOSED	2
7	AREA OF BUILDABLE LOTS	1.0 AC.
8	AREA OF OPEN SPACE LOTS	0 AC.
9	AREA OF BULK PARCELS	0 AC.
10	AREA OF PUBLIC RIGHT-OF-WAY	0 AC.

### MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
6	23,575 SF	0 SF	23,575 SF
7	20,000 SF	0 SF	20,000 SF

**HOUSING TYPE CHART**  
SINGLE FAMILY DETACHED LOTS  
2

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. 35792 EXP. DATE: 8/16/2024



**OWNER / DEVELOPER'S CERTIFICATE**

"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and MDE."

*Jonathan Harris* 10/6/2022  
Signature of Owner/Developer Date

Jonathan Harris/Owner  
Printed Name & Title

**OWNER / DEVELOPER**

DEDRA & JONATHAN HARRIS  
5000 ILCHESTER RD  
ELLCOTT CITY, MD 21043  
PHONE: 240-731-6515

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

10/26/2022

10/31/2022

DATE

DATE

**KCI TECHNOLOGIES**

ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS

11830 WEST MARKET PLACE  
SUITE F  
FULTON, MD 20759  
TELEPHONE: (410) 792-8086  
FAX: (410) 792-7419

### REVISIONS

NO.	DATE	DESCRIPTION	BY	DATE
				10/05/2022

SCALE: 1" = 20'

DESIGNED BY: ASC

CHECKED BY: SAJ

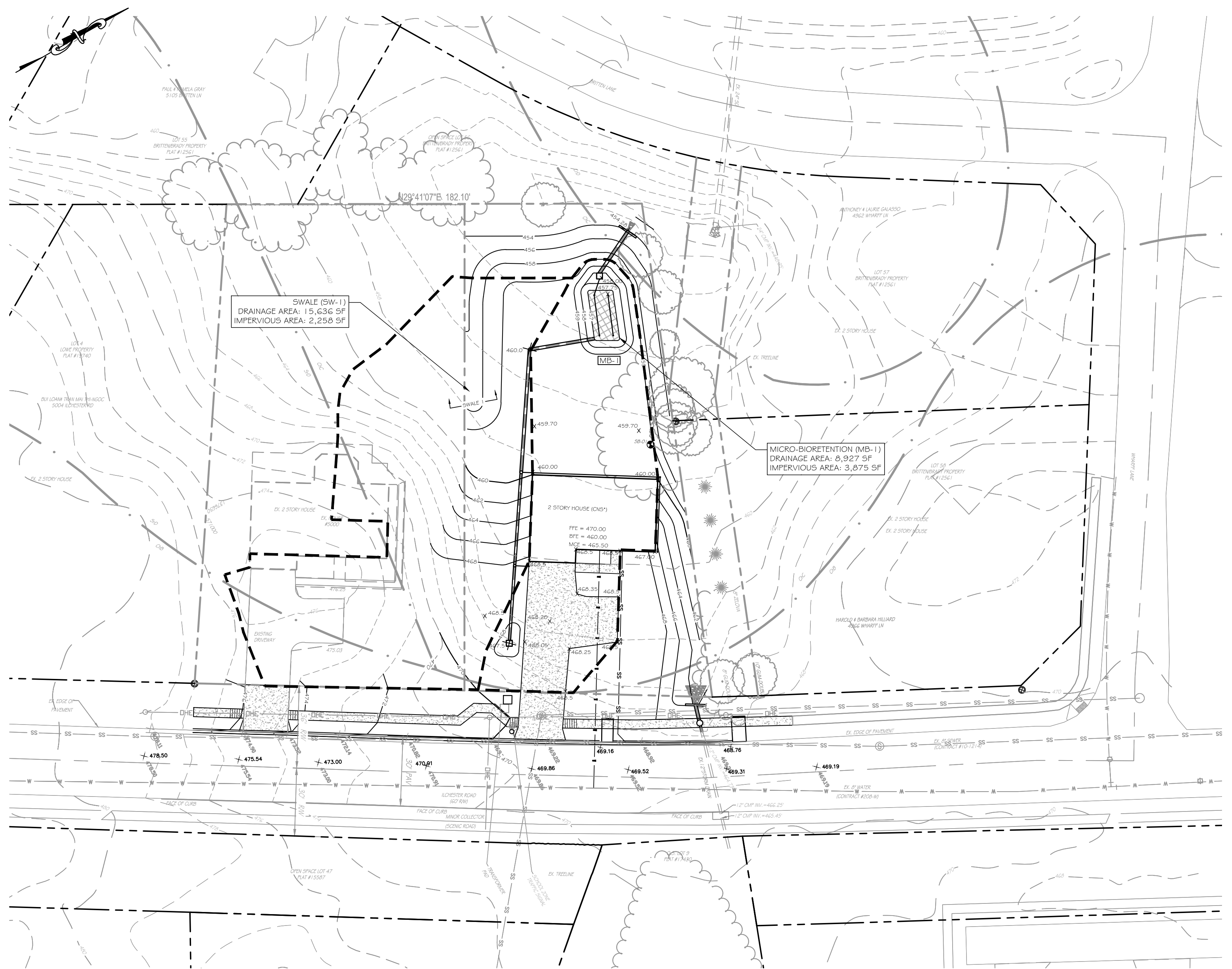
**SITE PLAN**

**HARRIS PROPERTY**  
LOTS 6 & 7  
RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023  
ILCHESTER ROAD ELLICOTT CITY, MD 21043

1st ELECTION DISTRICT; ZONING R-20  
HOWARD COUNTY, MARYLAND 21043

TAX MAP 31; GRID 10  
PARCEL 153

DRAWING NO.  
SHEET 1 OF 9  
KCI JOB NUMBER  
271901393



**OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)**

- Annual maintenance of plant material, mulch layer, sand media and soil layer is required. Maintenance of mulch and soil is limited to correction areas of erosion or washout. Check for dewatering within 48 hours. When necessary, replace filter media per plan.
- Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead, diseased and excessive vegetation considered beyond treatment. Replacement of all diseased trees, shrubs, deficient stakes and wires will be required.
- Mulch layer shall be inspected each spring. Once every 2 to 3 years, remove previous mulch layer and apply new 2 to 3 inch layer.
- Soil erosion and flow blockages to be addressed on an as needed basis with a minimum of once per month and after heavy storms. Inspect/clean out and observation wells along with overflow/outfall/exit pipes.

**CKG CENKEN GROUP, LLC**  
 Geotechnical Engineering Consultants  
 Odenton, MD 21113  
 Project Name: Stormwater Management Facility  
 Location: 5000 Ilchester Road, Ellicott City, MD

**RECORD OF SOIL / ROCK EXPLORATION**  
 Contracted With: KCI Technologies  
 Project Name: Stormwater Management Facility  
 Location: 5000 Ilchester Road, Ellicott City, MD  
 Boring #: SB-01  
 Job #: 19-063

ELEV. (ft)	SOIL DESCRIPTION Color, Moisture, Density, Plasticity, Size Proportions	SPTA DEPTH (ft)	SYMBOL	SAMPLE			BORING & SAMPLE NOTES
				Cond	Blows/ft	No. Type	
3 inches	TOPSOIL	0.3					1. No water encountered.
	Brown, moist, loose, gravelly SAND, with clay (FILL)		D	2-4-4-6	1 DS	18	2. Caved at 7 feet.
	Gray, moist, very dense, GRAVEL, little sand (FILL)	2.0	D	7-16-39-50/5"	2 DS	18	3. Infiltration probe performed at 5 feet offset location. 4. 5-inch PVC casing installed at a depth of 6 feet and pre-soaked with a two foot water column.
	Brown, moist, very dense, gravelly SAND, (FILL)	4.0	D	25-50/3"	3 DS	9	5. Boring backfilled and restored in kind.
	Brown, moist, stiff to very stiff, lean CLAY, (CL)	6.0	I/D	4-6-9-10	4 DS	18	
			I/D	2-6-12-16	5 DS	24	
	Bottom of Boring at 10.0 ft	10.0					

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

**STORMWATER MANAGEMENT PRACTICE CHART**

**HARRIS PROPERTY**

LOT NUMBER	ADDRESS	MICRO-BIORETENTION (M6)
7	ILCHESTER ROAD	1

**SOIL ANALYSIS**

SYMBOL	NAME/DESCRIPTION	TYPE	HYDRIC	K FACTOR
CHC	CHILLUM-RUSSETT LOAMS, 5 TO 10 PERCENT SLOPES	C	NO	0.43
CHB	CHILLUM-RUSSETT LOAMS, 2 TO 5 PERCENT SLOPES	C	NO	0.43
SvD	SASSAFRAS AND CROOM SOIL, 10 TO 15 PERCENT SLOPES	B	NO	0.37
CvD	CROOM AND EVESBORO SOILS, 10 TO 15 PERCENT SLOPES	C	NO	0.37

**DRAINAGE AREA SUMMARY**

FACILITY	DRAINAGE AREA (SF)	IMPEVIOUS AREA (SF)
MB-1	8,927	3,875
SW-1	15,636	2,258

**LOD SUMMARY**

SITE	AREA (AC)	PROP. IMP. AREA (AC)
LOT 7	0.46	0.08
ILCHESTER ROAD	0.12	0.07

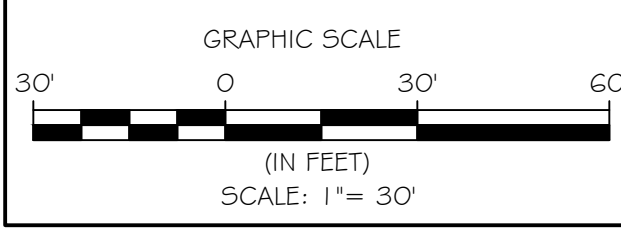


DocuSigned by:  
 Stephen Jernick 10/5/2022

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 LICENSE NO. 35792 EXP. DATE: 8/16/2024

NOTE: THE SITE IS SUBJECT TO THE APPROVAL & CONDITIONS OF WP-22-022 AS SHOWN ON GENERAL NOTE #35 ON SHEET 1.

PLOTTED: 10/26/2022 10:20:19 AM 19271901393.Dwg



OWNER / DEVELOPER  
 DEDRA & JONATHAN HARRIS  
 5000 ILCHESTER RD  
 ELLICOTT CITY, MD 21043  
 PHONE: 240-731-6515

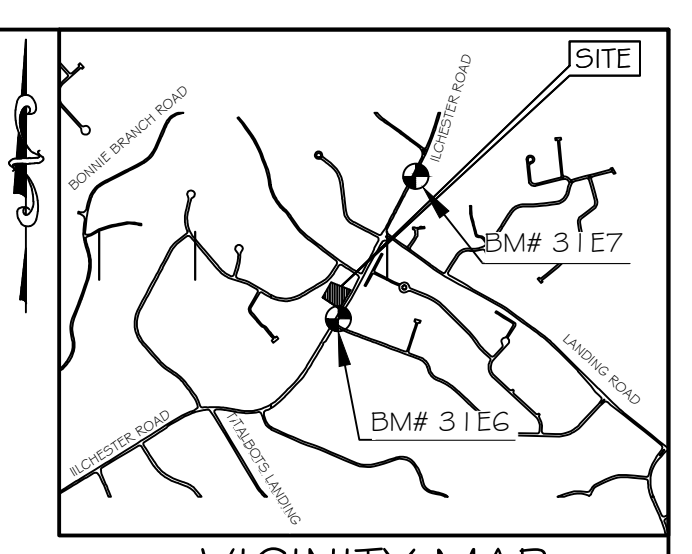
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DocuSigned by:  
 1E875478A23849A  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 10/26/2022  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 10/31/2022

**KCI TECHNOLOGIES**  
 ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS  
 11830 WEST MARKET PLACE SUITE F  
 FULTON, MD 20759  
 TELEPHONE: (410) 792-8086  
 FAX: (410) 792-7419

REVISIONS			
NO.	DATE	DESCRIPTION	BY

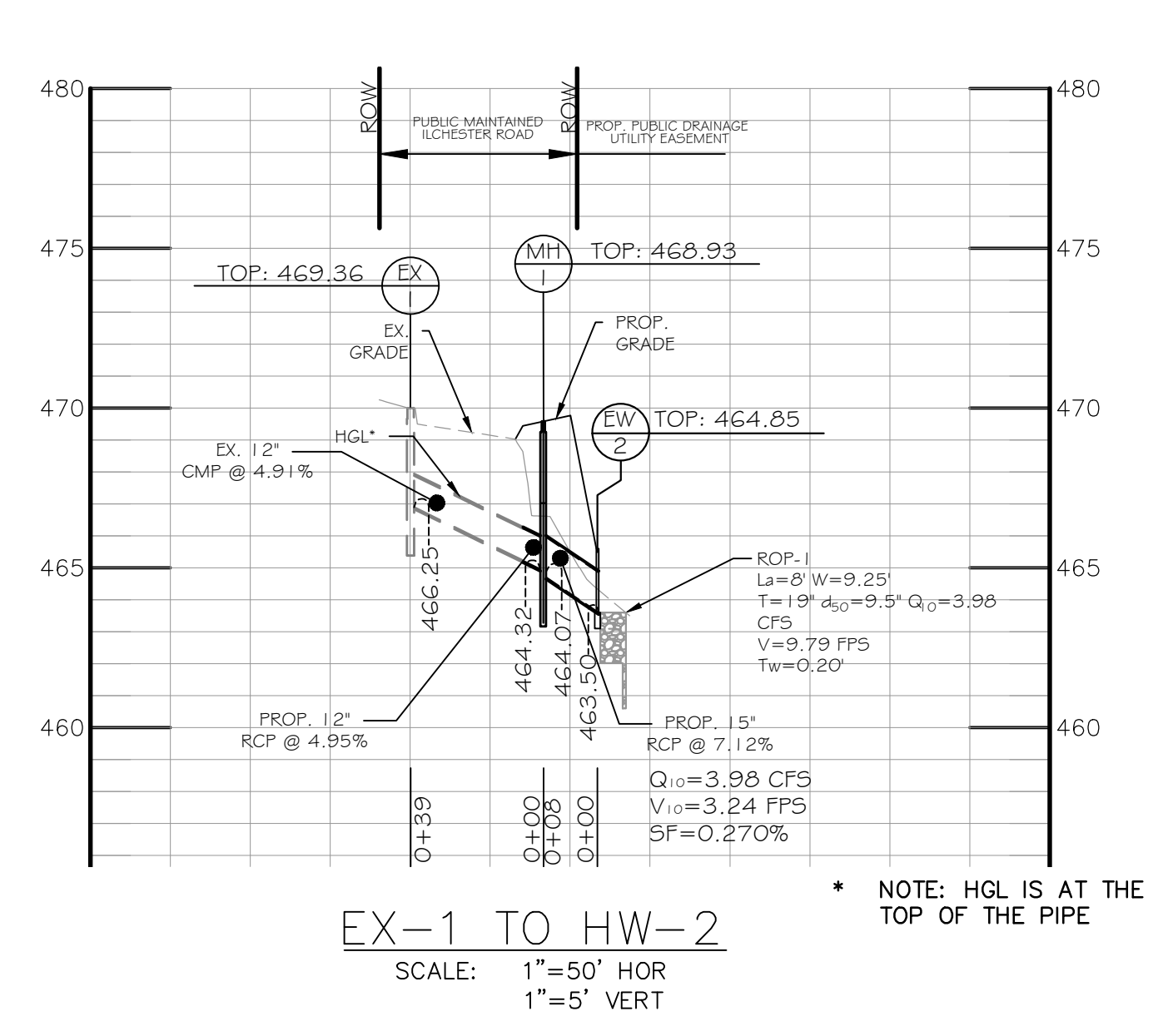
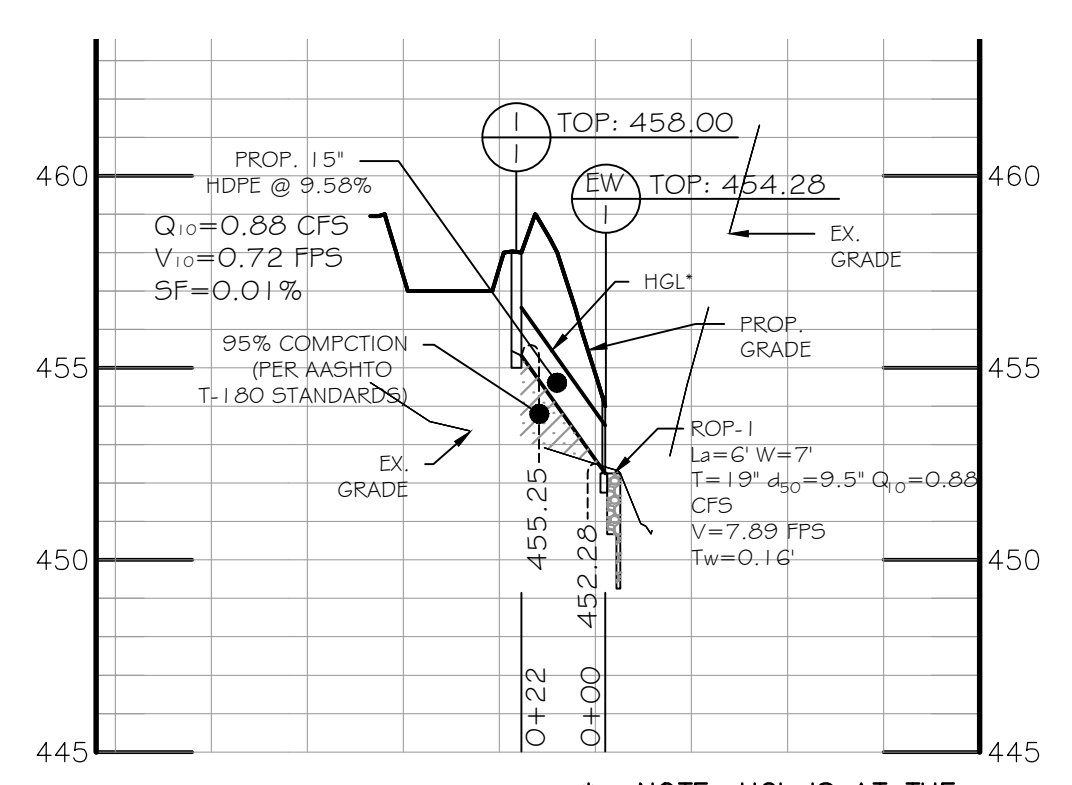
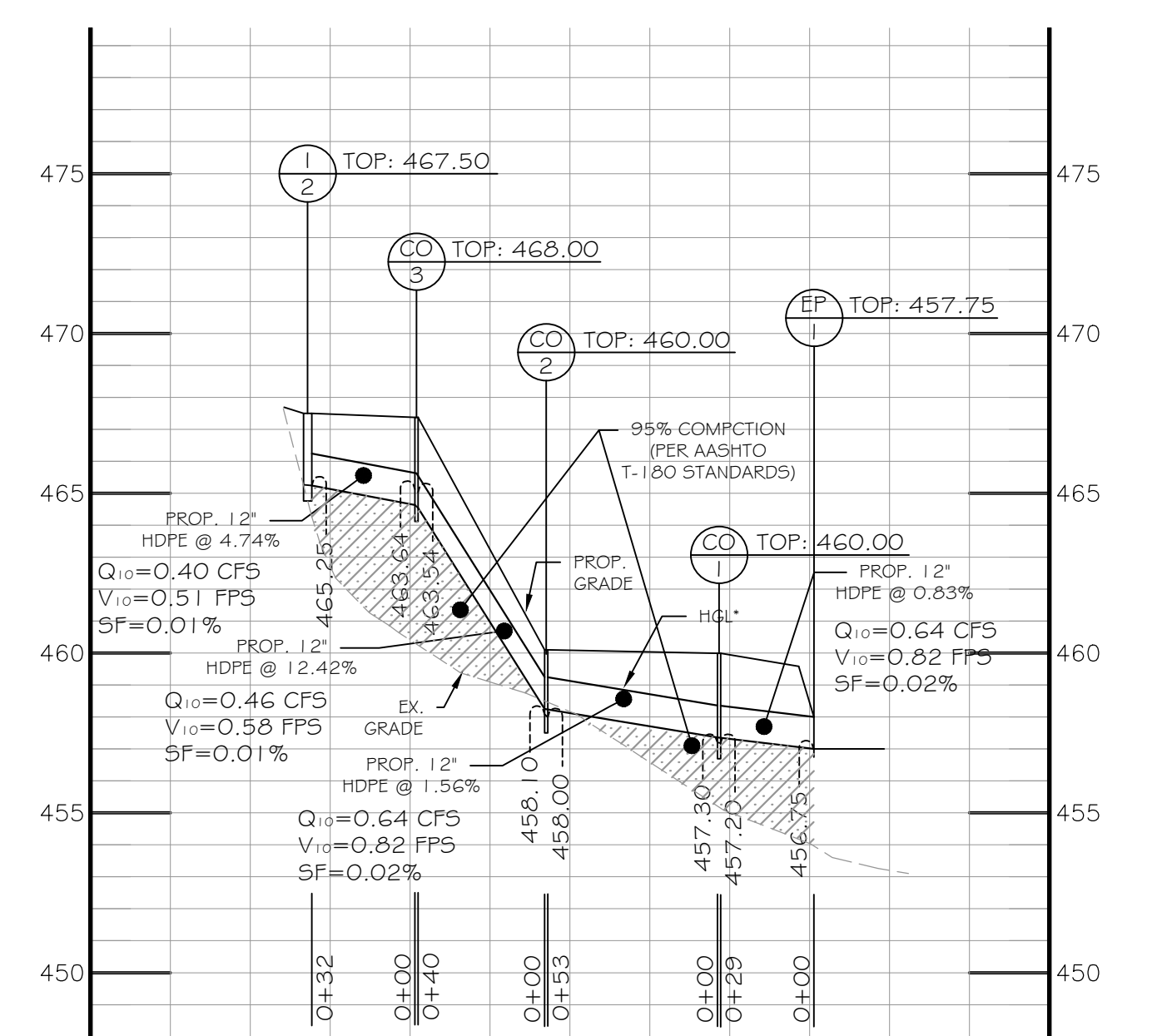
STORMWATER MANAGEMENT DRAINAGE AREA MAP  
**HARRIS PROPERTY**  
 LOTS 6 & 7  
 RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023  
 ILCHESTER ROAD ELLICOTT CITY, MD 21043  
 1st ELECTION DISTRICT; ZONING R-20  
 HOWARD COUNTY, MARYLAND 21043

DRAWING NO.  
 SHEET 2 OF 9  
 KCI JOB NUMBER  
 271901393



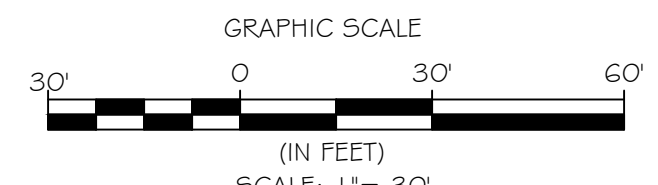
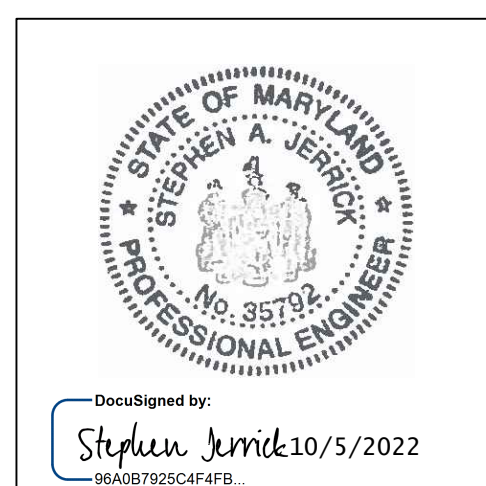
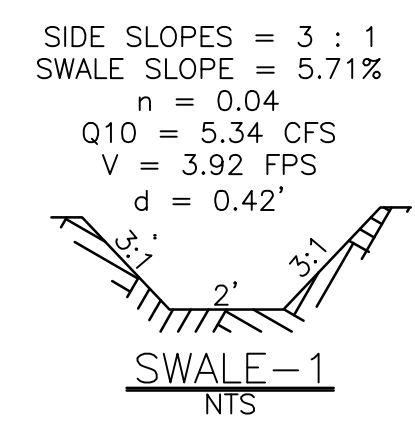
SWALE DRAINAGE AREA TABLE							
DRAINAGE AREA	BOTTOM	SIDE SLOPE	AREA TO SWALE (AC.)	%MP	C COEF.	CHANNEL SLOPE (%)	V (FPS)
SW-1	2'	3:1	0.36	14%	44	5.71	3.92

STRUCTURE SCHEDULE									
STRUCTURE NO.	TOP ELEVATION	INVERT IN	INVERT OUT	NORTHING/EASTING	CENTERLINE ROAD STA.	OFFSET	TYPE	WIDTH	REMARK
I-1	458.00	-	455.25	N 571,200.9535 E 1,376,644.3035	-	-	S INLET	2'7"	DETAIL D-4.24
I-2	467.50	-	465.75	N 571,086.6721 E 1,376,764.4139	-	-	S INLET	2'7"	DETAIL D-4.24
I-3	457.75	464.37	464.27	N 571,199.9701 E 1,376,653.4737	-	-	4" ATRIUM GRATE	4" DIA.	-
I-4	469.76	469.16	468.96	N 571,102.5251 E 1,376,823.0180	3+71	15'	FLOW THROUGH INLET	6'	DETAIL D-4.35
I-5	469.36	468.76	468.56	N 571,200.9535 E 1,376,644.3035	4+30	15'	FLOW THROUGH INLET	6'	DETAIL D-4.35
MH-1	470.00	464.32	464.07	N 571,141.7894 E 1,376,836.2089	-	-	PRECAST MANHOLE	5' DIA.	DETAIL G-5.12
EW-1	454.28	454.28	454.28	N 571,221.6648 E 1,376,633.4023	-	-	15" CONC. TYPE 'C' ENDWALL	-	DETAIL D-5.21
EW-2	465.00	463.00	463.00	N 571,140.1559 E 1,376,826.4816	-	-	15" CONC. TYPE 'C' ENDWALL	-	DETAIL D-5.21
EP-1	-	451.81	451.81	N 571,185.3739 E 1,376,667.0248	-	-	END OF PIPE	-	-
CO-1	-	457.30	457.20	N 571,158.3481 E 1,376,67.0982	-	-	12" PVC CLEANOUT	12" DIA.	-
CO-2	-	458.10	458.00	N 571,128.3825 E 1,376,701.9636	-	-	12" PVC CLEANOUT	12" DIA.	-
CO-3	459.72	463.64	463.54	N 571,105.6621 E 1,376,736.1410	-	-	12" PVC CLEANOUT	12" DIA.	-
CO-4	467.00	-	465.00	N 571,180.2276E 1376,734.0371	-	-	4" PVC CLEANOUT	4" DIA.	-
CO-5	460.00	-	458.00	N 571,162.8884E 1376,761.9234	-	-	4" PVC CLEANOUT	4" DIA.	-
CO-6	457.75	-	453.84	N 571,194.7148 E 1,376,650.4779	-	-	4" PVC CLEANOUT	4" DIA.	-
CO-7	459.72	-	453.84	N 571,187.9325 E 1,376,666.9541	-	-	4" PVC CLEANOUT	4" DIA.	-
CO-8	459.72	-	453.84	N 571,193.1877 E 1,376,669.9499	-	-	4" PVC CLEANOUT	4" DIA.	-



PIPE SCHEDULE		
SIZE	CLASS	LENGTH
4"	PVC	130 LF
4"	PERF. PVC	36 LF
12"	HDPE	157 LF
12"	CMP	3 LF
15"	RCP CL. VI	7 LF
15"	HDPE	23 LF

SOIL ANALYSIS				
SYMBOL	NAME/DESCRIPTION	TYPE	HYDRIC	K FACTOR
ChC	CHILLUM-RUSSETT LOAMS, 5 TO 10 PERCENT SLOPES	C	NO	0.43
ChB	CHILLUM-RUSSETT LOAMS, 2 TO 5 PERCENT SLOPES	C	NO	0.43
Sd	SASSAFRAS AND CROOM SOIL, 10 TO 15 PERCENT SLOPES	B	NO	0.37
Cd	CROOM AND EVESBORO SOILS, 10 TO 15 PERCENT SLOPES	C	NO	0.37



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 35792 EXP. DATE: 8/16/2024

I-2 TO EP-1  
SCALE: 1" = 50' HOR  
1" = 5' VERT

I-1 TO EW-1  
SCALE: 1" = 20' (HORIZ)  
1" = 2' (VERT)

EX-1 TO HW-2  
SCALE: 1" = 50' HOR  
1" = 5' VERT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 10/26/2022  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE  
 10/31/2022  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE

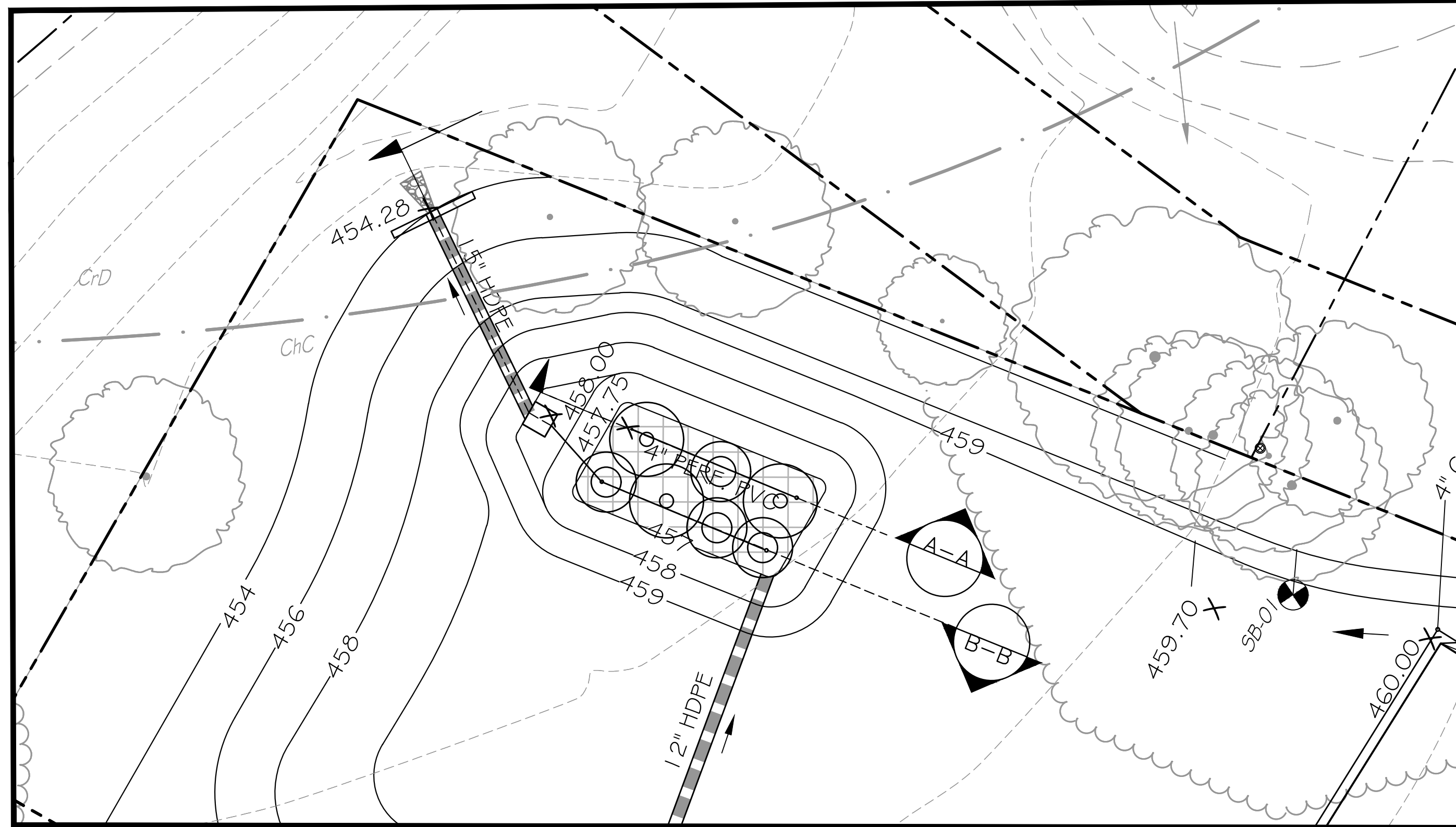
ENGINEERS  
 PLANNERS  
 SCIENTISTS  
 CONSTRUCTION MANAGERS  
**KCI**  
 TECHNOLOGIES  
 11830 WEST MARKET PLACE  
 SUITE F  
 FULTON, MD 20759  
 TELEPHONE: (410) 792-8086  
 FAX: (410) 792-7419

REVISIONS			
NO.	DATE	DESCRIPTION	BY

STORM DRAIN DRAINAGE AREA MAP  
**HARRIS PROPERTY**  
 LOTS 6 & 7  
 RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023  
 ILCHESTER ROAD ELLICOTT CITY, MD 21043  
 1st ELECTION DISTRICT; ZONING R-20  
 HOWARD COUNTY, MARYLAND 21043  
 TAX MAP 31; GRID 10  
 PARCEL 153  
 DRAWING NO.  
 SHEET 3 OF 9  
 KCI JOB NUMBER  
 271901393

SWM Planting Schedule								
Quantity	Key	Botanical	Common	Type	Area/plan (sq. ft.)	Condition	Size	Remarks
MB-1		Name	Name					
7	IG	Ilex glabra	Inkberry	Shrub	7	Container	12"	Plan 3' Apart
4	HV	Aronia arbutifolia	Red chokeberry	Shrub	7	Container	12" - 24"	Plan 3' Apart
9	IV	Iris versicolor	Blue flag	Perennial	1.5	Seeding	-	Plan 15" Apart
9	GM	Geranium maculatum	Cranesbill	Perennial	1.5	Seeding	-	Plan 15" Apart
9	SS	Solidago sphacelata	Goldenrod	Perennial	1.5	Seeding	-	Plan 15" Apart

STORMWATER MANAGEMENT ELEVATIONS TABLE										
FACILITY NAME	TOP OF FACILITY	ESD STORAGE ELEV.	PONDING DEPTH (FT)	TOP OF EMBANKMENT	UNDERDRAIN INVERT	OVERDRAIN INVERT	WEIR/OVERFLOW INLET DOME ELEVATION	GRAVEL RESERVOIR SURFACE AREA (A0)	OUTLET STRUCTURE	OWNERSHIP/ MAINTENANCE
M-6 MICRO-BIORETENTION (MB-1)	457.00	458.00	1.00	459.00	453.84	453.84	458.00	12'	S INLET - HO. CO D-4.24	PRIVATE



PLAN VIEW - MICROBIORETENTION FACILITY MB-1 (M-6)  
SCALE: 1"=10'

**CONSTRUCTION SPECIFICATIONS:**  
B.4.C Specifications for Micro-Bioretentation, Rain Gardens, Landscape Infiltration & Infiltration Berms

**1. Material Specifications:**

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

**2. Filtering Media or Planting Soil:**

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretentation practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05. The planting soil shall be tested and shall meet the following criteria:  
Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)  
Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).  
Clay Content - Media shall have a clay content of less than 5%.  
pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.  
There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH, and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

**3. Compaction**

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure. Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to refracture the soil profile through the 12 inch compaction zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment. Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base. When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade. When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

**4. Plant Material**

Recommended plant material for micro-bioretentation practices can be found in Appendix A, Section A.2.3.

**5. Plant Installation**

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance. Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation. Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball. Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications. The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers, fungicides, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

**6. Underdrains**

Underdrains should meet the following criteria:  
• Pipe - Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).  
• Perforations - If perforated pipe is used, perforations should be 1/2" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/2" (No. 4 or 4x4) galvanized hardware cloth.  
• Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.  
• The main collector pipe shall be at a minimum 0.5% slope.  
• A rigid, non-perforated observation well must be provided (one per every 1,000 square feet) to provide a clean-out port and monitor performance of the filter.  
• A 4" layer of pea gravel (1/4" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".  
The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out ports must be provided (one minimum per every 1000 square feet of surface area).

**7. Miscellaneous**

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

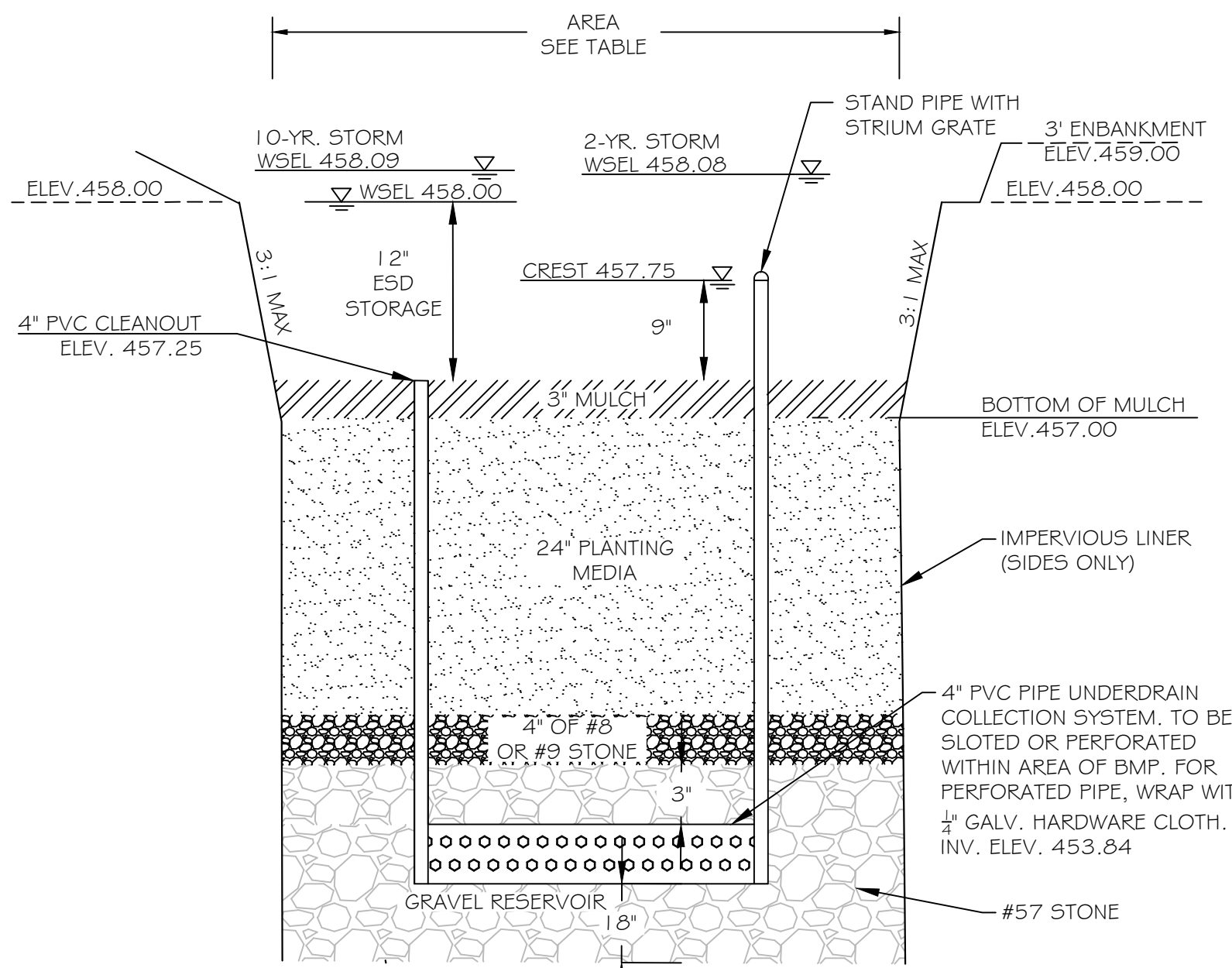
**OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)**

- Annual maintenance of plant material, mulch layer, sand media and soil layer is required. Maintenance of mulch and soil is limited to correction areas of erosion or washout. Check for dewatering within 48 hours. When necessary, replace filter media per plan.
- Schedule of plant inspection will be twice a year in spring and fall. This inspection will include removal of dead, diseased and excessive vegetation considered beyond treatment. Replacement of all diseased trees, shrubs, deficient stakes and wires will be required.
- Mulch layer shall be inspected each spring. Once every 2 to 3 years, remove previous mulch layer and apply new 2 to 3 inch layer.
- Soil erosion and flow blockages to be addressed on an as needed basis with a minimum of once per month and after heavy storms. Inspect/clean out and observation wells along with overflow/outfall/exist pipes.

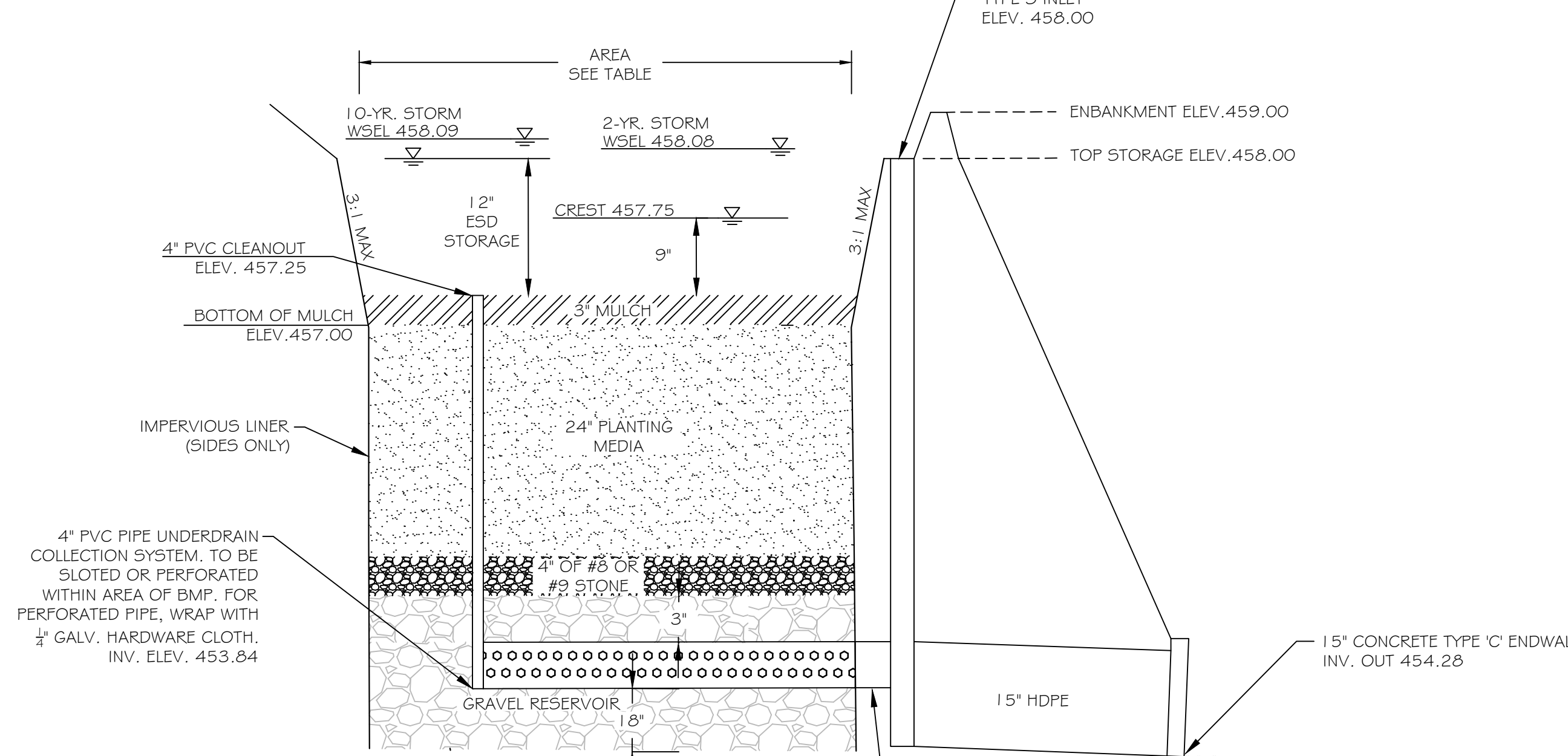
Appendix B.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1 Materials Specifications for Micro-Bioretentation, Rain Gardens & Landscape Infiltration-

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



MB-1 MICRO-BIORETENTION SECTION WITH OVERFLOW INLET (A-A)  
SCALE: NTS



MB-1 MICRO-BIORETENTION SECTION WITH OVERFLOW INLET (B-B)  
SCALE: NTS

NOTE: THE SITE IS SUBJECT TO THE APPROVAL & CONDITIONS OF WP-22-022 AS SHOWN ON GENERAL NOTE #35 ON SHEET 1.

APPROVED:	HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by:	10/26/2022
15B75472AC2085A	
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
(Signature)	10/31/2022
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE

**ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS**  
KCI TECHNOLOGIES  
11830 WEST MARKET PLACE SUITE F FULTON, MD 20759 TELEPHONE (410) 792-8086 FAX: (410) 792-7419

REVISIONS			
NO.	DATE	DESCRIPTION	BY

STORMWATER MANAGEMENT DETAILS  
**HARRIS PROPERTY**  
LOTS 6 & 7  
RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023  
ILCHESTER ROAD ELLICOTT CITY, MD 21043

DATE: 10/05/2022  
SCALE: AS SHOWN  
DESIGNED BY: ASC  
CHECKED BY: SAJ

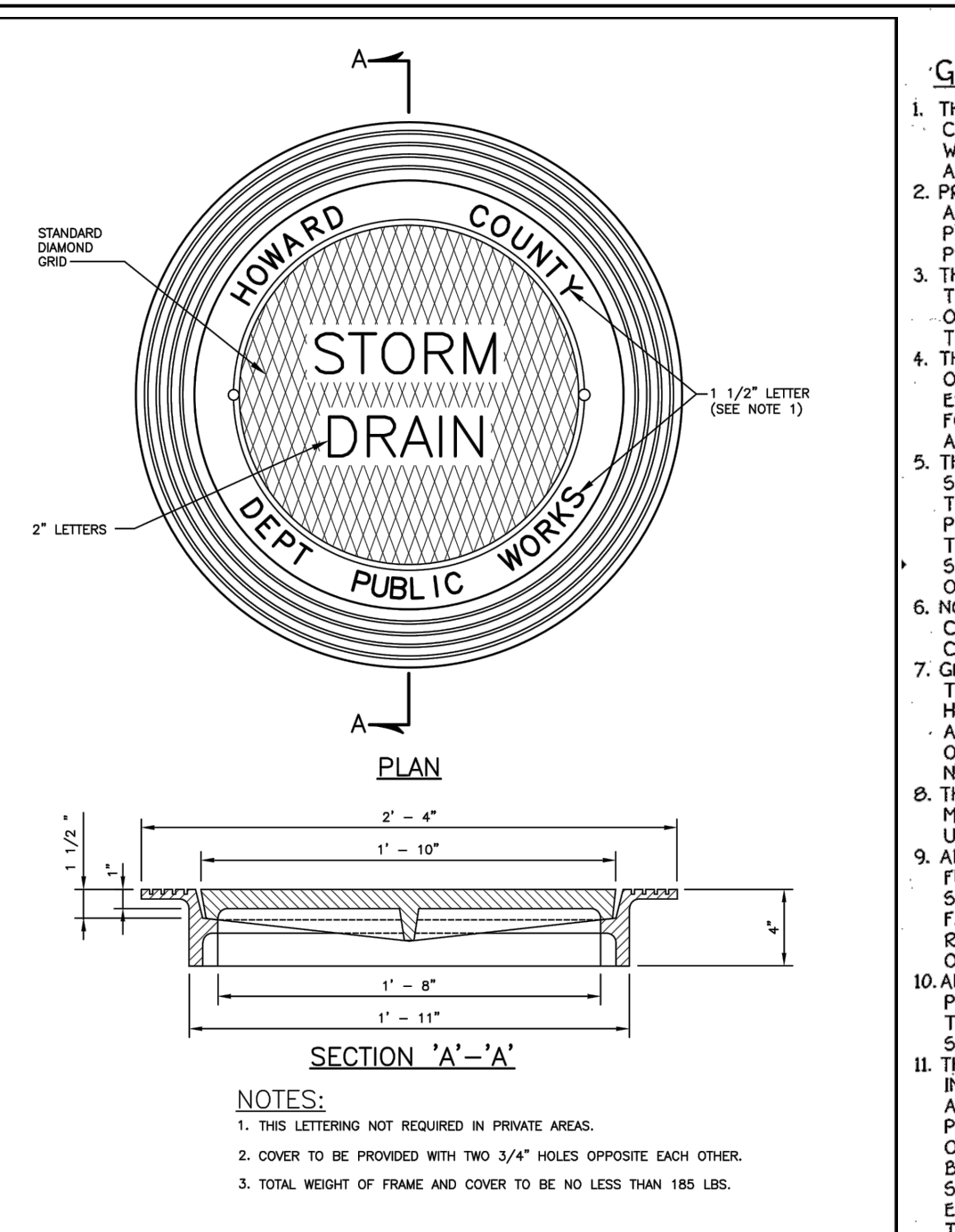
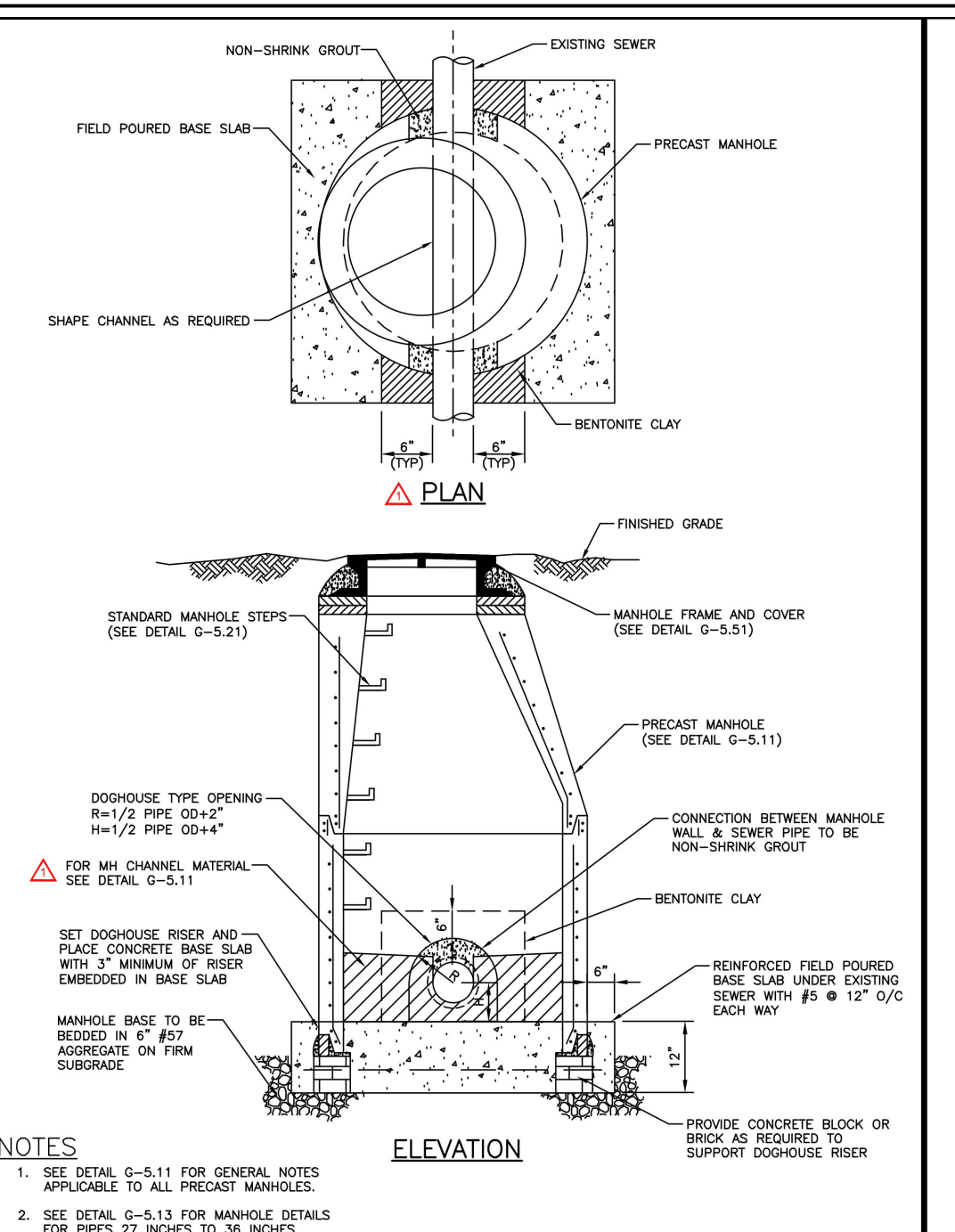
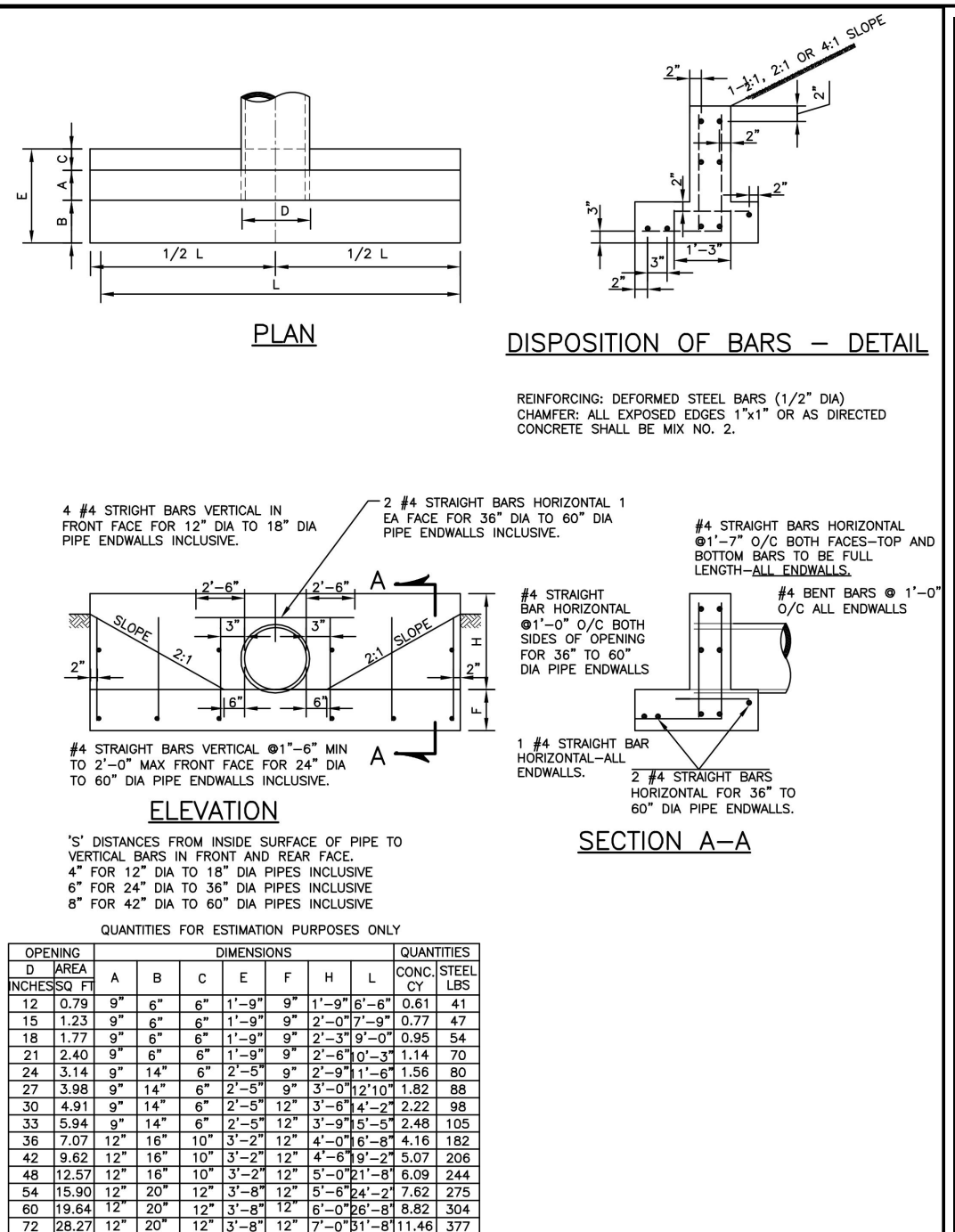
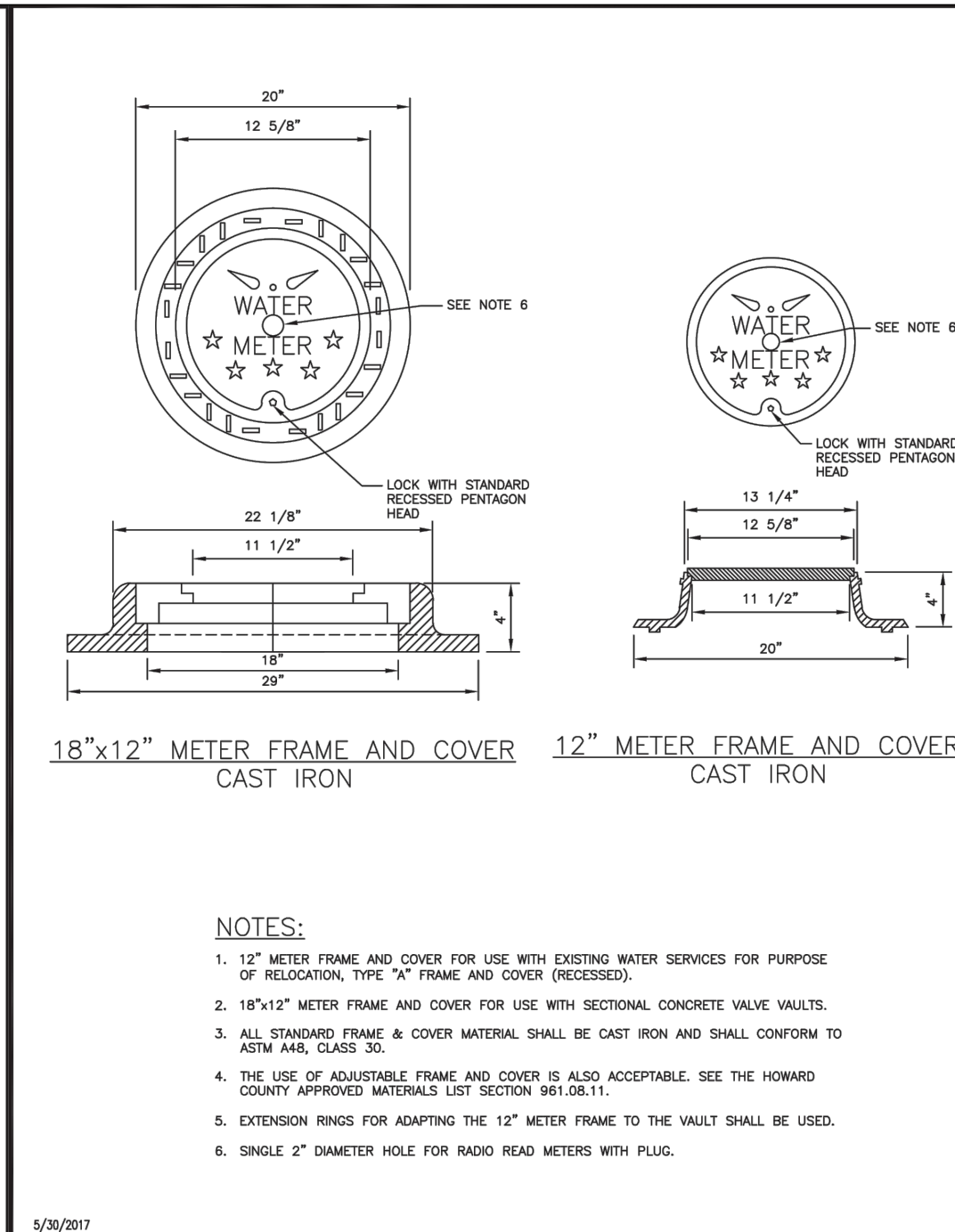
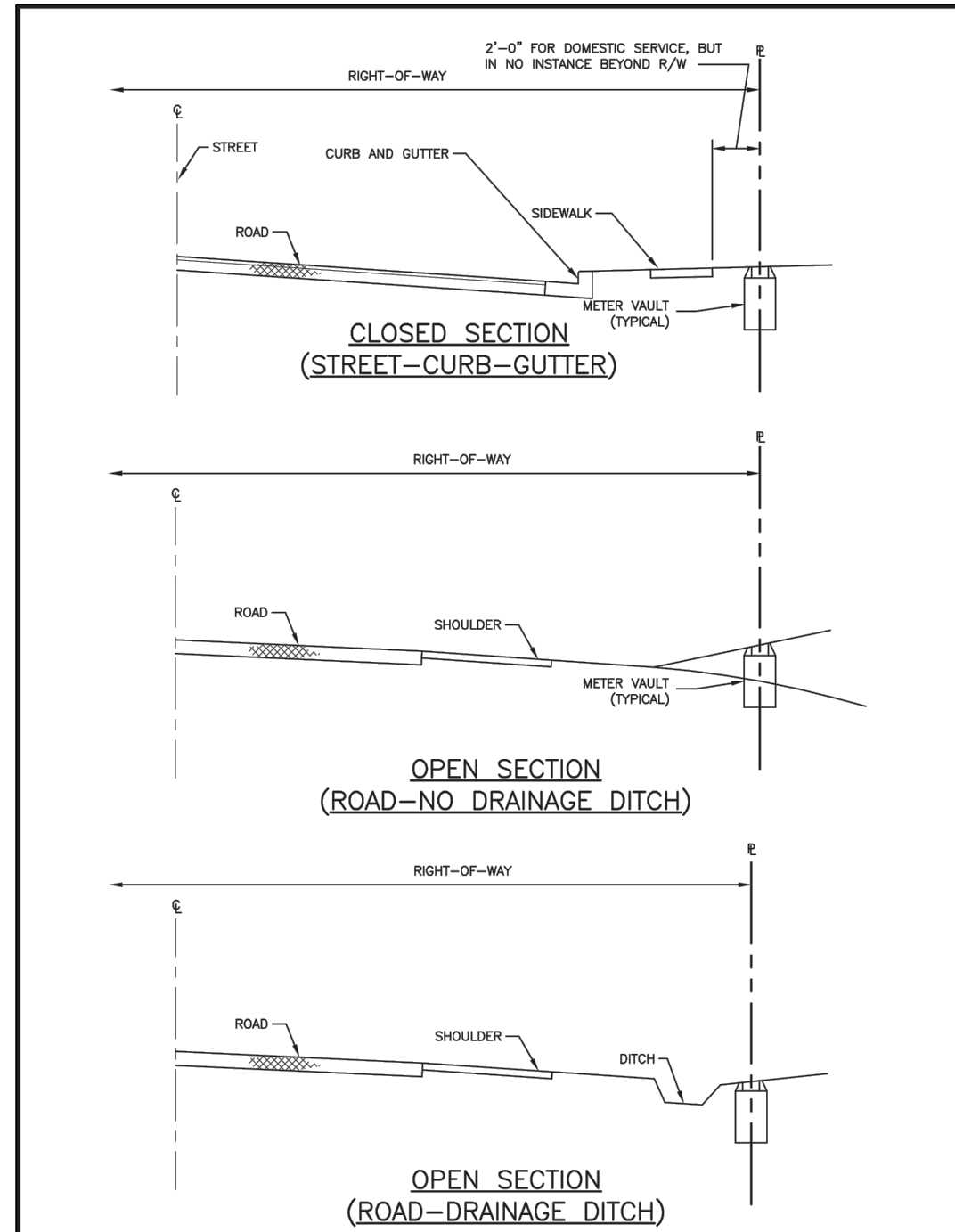
DRAWING NO. SHEET 4 OF 9  
KCI JOB NUMBER 271901393

1st ELECTION DISTRICT; ZONING R-20 HOWARD COUNTY, MARYLAND 21043 TAX MAP 31; GRID 10 PARCEL 153

DocuSigned by:  
**Stephen Jerrid** 10/5/2022  
9A0B7925C4F416

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 35792 EXP. DATE: 8/16/2024

OWNER / DEVELOPER  
DEDRA & JONATHAN HARRIS  
5000 ILCHESTER RD  
ELLICOTT CITY, MD 21043  
PHONE: 240-731-6515



- MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS**
1. THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE TO TRAFFIC WITHIN WORK AREAS, AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
  2. PROPER TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPER APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
  3. THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TCP SHALL BE IMPLIED TO INCLUDE ANY CONDITION OF TYPICAL TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
  4. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 1988 EDITION, ESPECIALLY PART VI, AND TO SECTION 814 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (CM&M), 1982, INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
  5. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FORTH IN THE TCP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUESTS TO MAKE MINOR CHANGES TO THE TCP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THIRTEEN WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
  6. NO WORK SHALL BEGIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TCP FOR THAT ACTIVITY OR PHASE ARE COMPLETELY AND PROPERLY IN PLACE TO BE CHECKED FOR APPROVED USAGE.
  7. GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSE A POTENTIAL HAZARD TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER. NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
  8. THE CONTRACTOR AND/OR PERMITTEE SHALL MAINTAIN IN NEW CONDITION, AND MOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
  9. ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TCP SHALL BE KEPT IN GOOD CONDITION, FULLY PERFORMING AS SET FORTH IN THE TCP, THE MUTCD, AND/OR SECTION 814 OF THE SPECIFICATIONS. FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSUMED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTANCE CAPABILITY OF AT LEAST 60% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST 50% OF THE VISIBLE SURFACE.
  10. ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
  11. THROUGHOUT THE PERIODS OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP. IN LIEU OF THE TCP PREPARED FOR THIS PROJECT, AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP, WHOLLY OR IN PART, OF HIS OWN DESIGN, FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATION. A TCP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TCP'S MAY BE IMPLEMENTED WITHIN A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS IN SITUATIONS WHERE TCP'S JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PREVENT CONFLICT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
  12. THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
  13. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANES) OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TCP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.

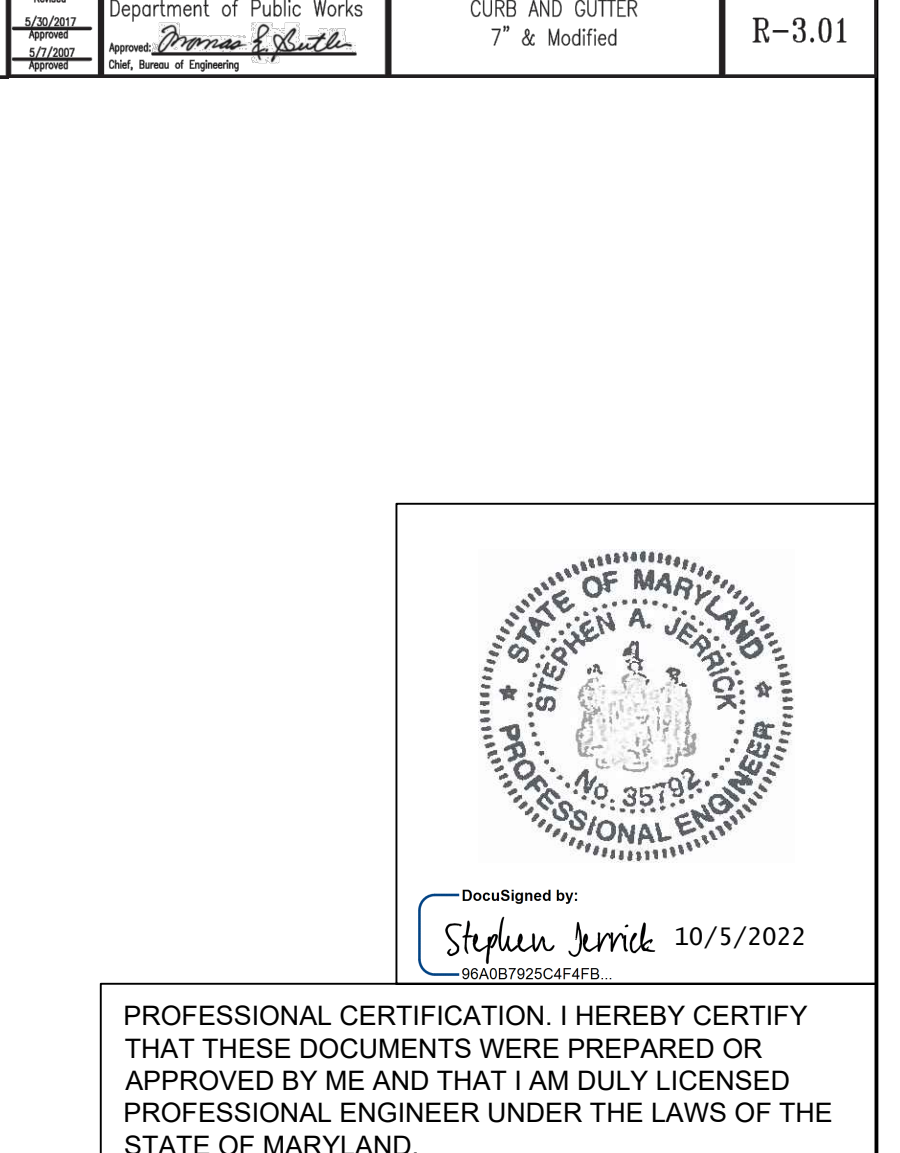
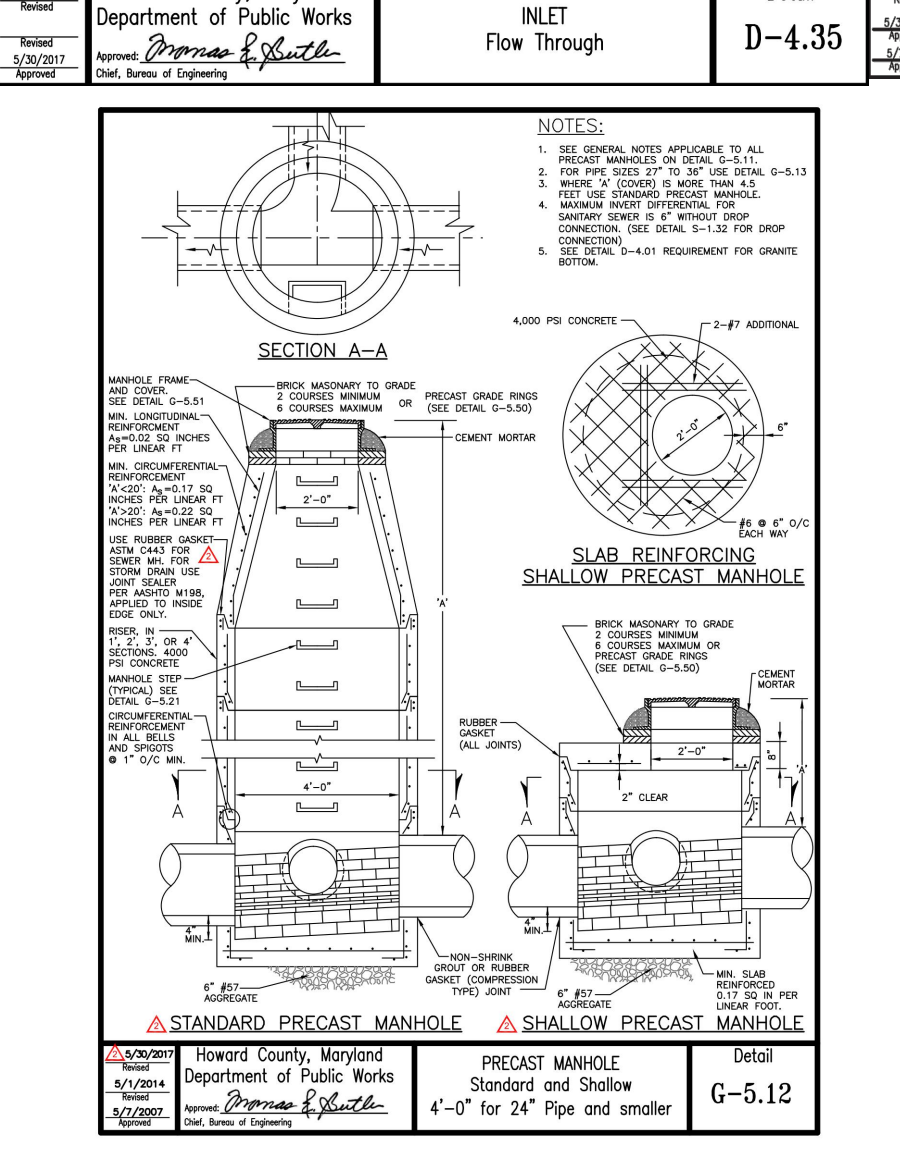
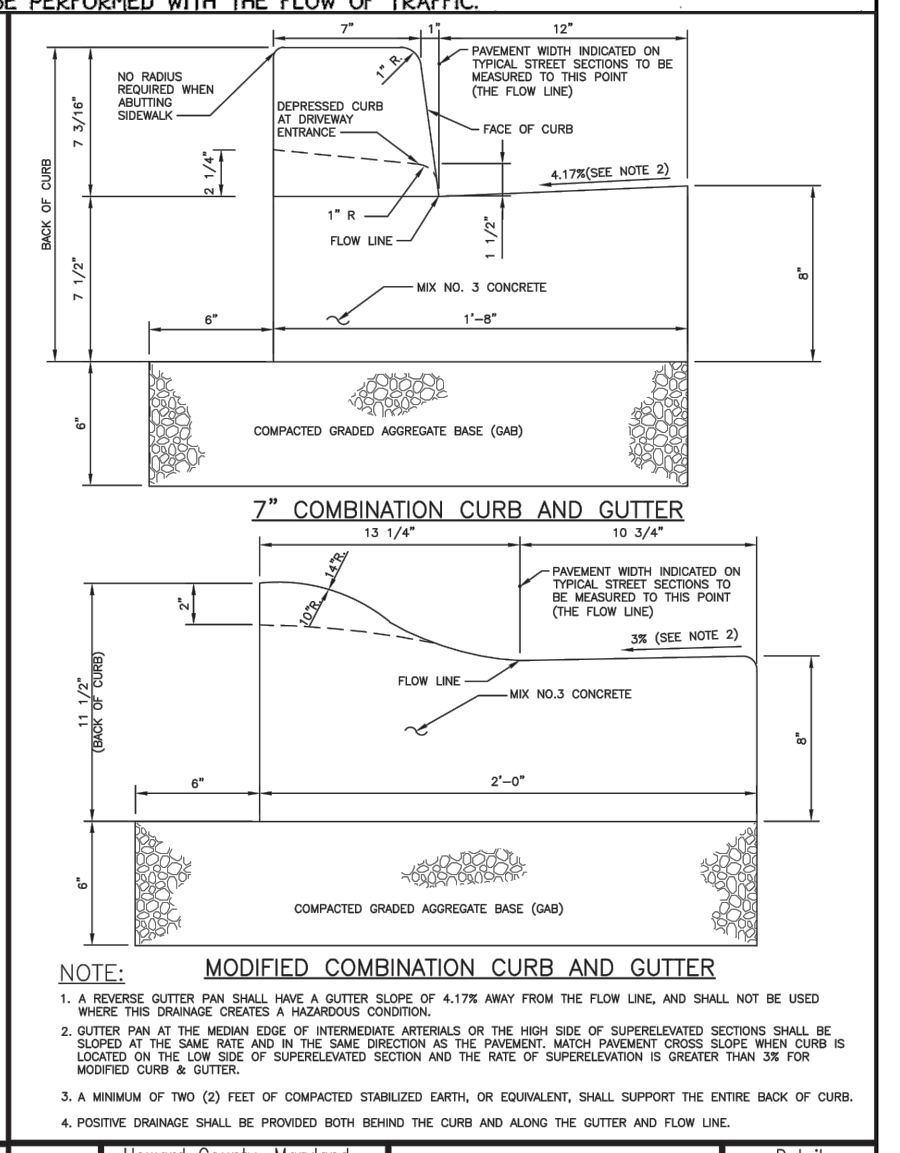
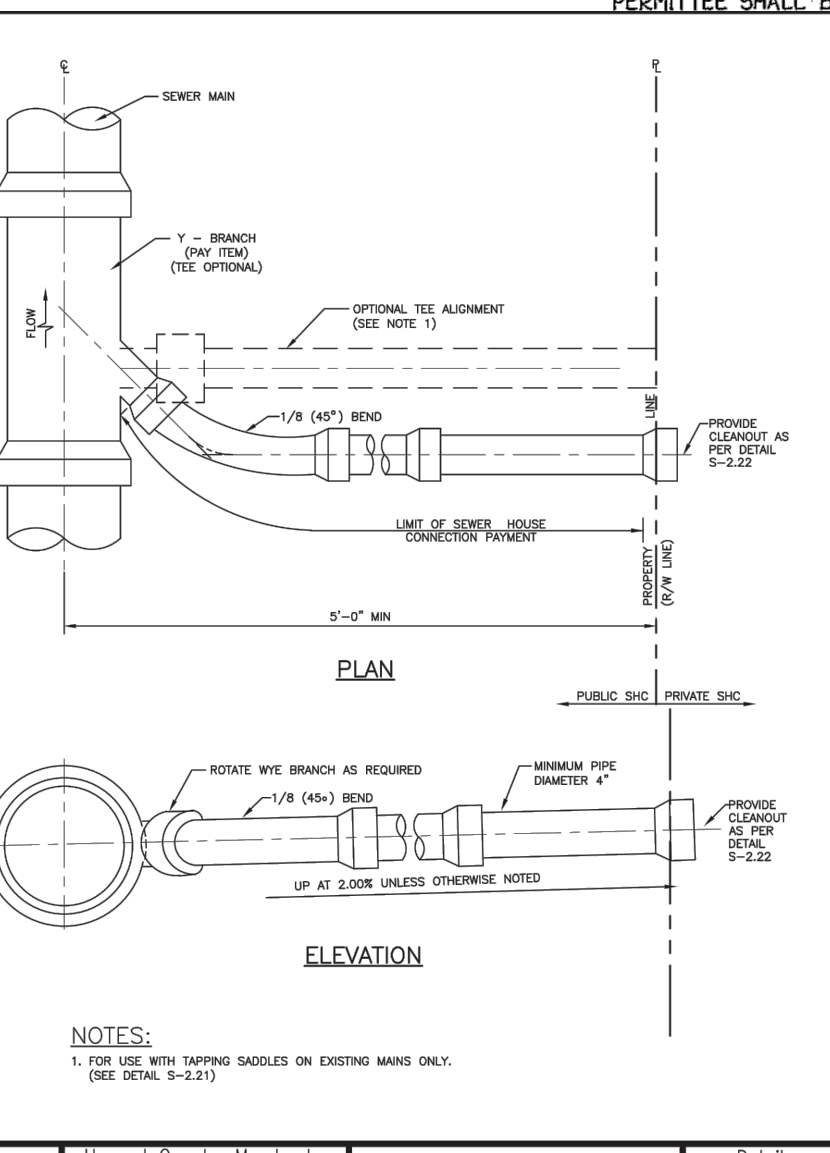
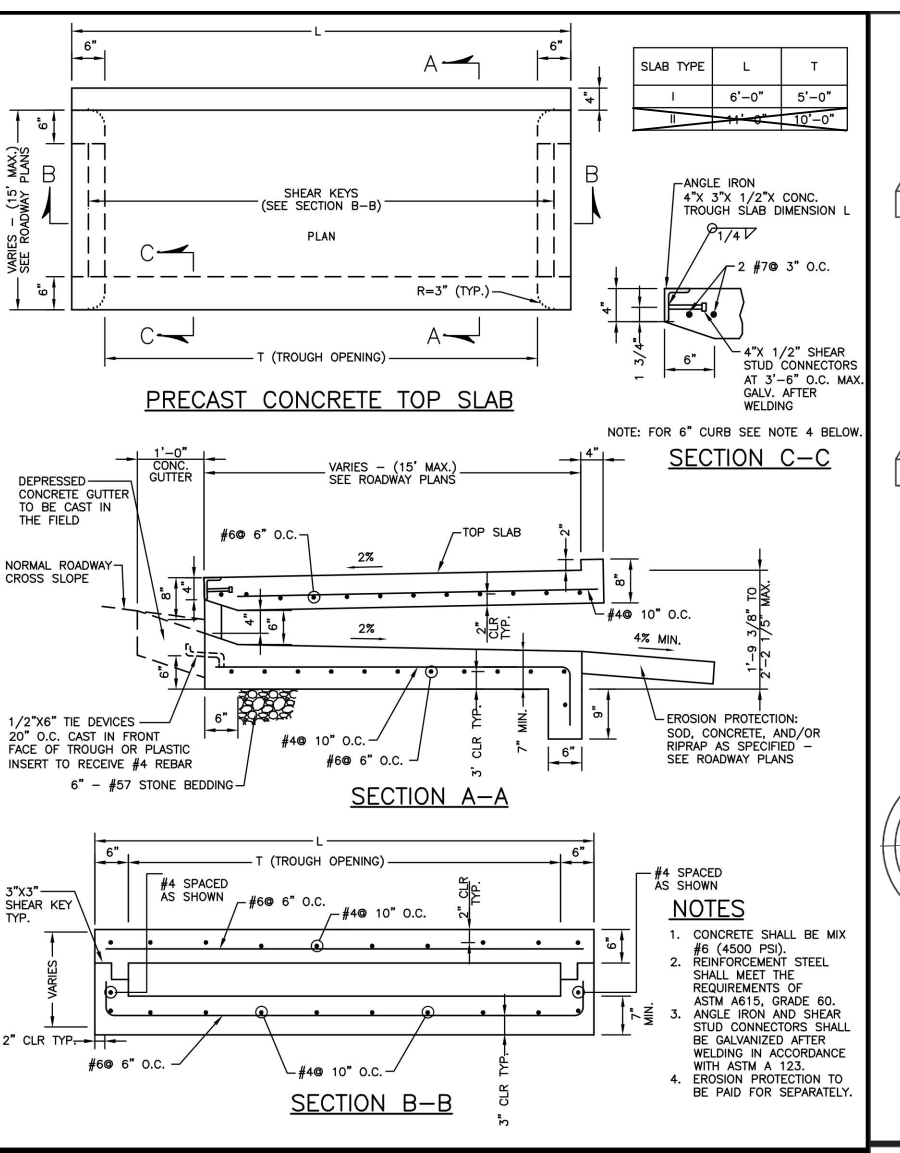
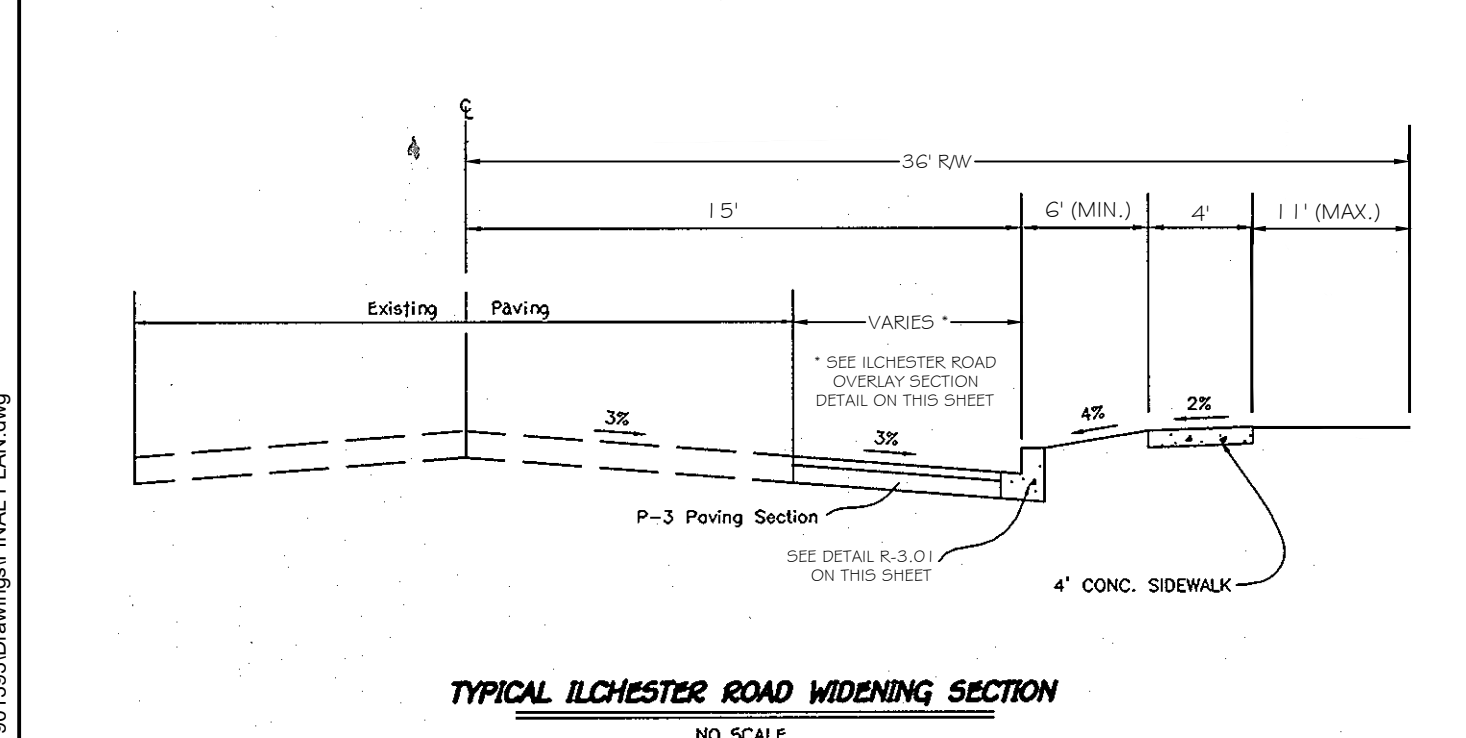
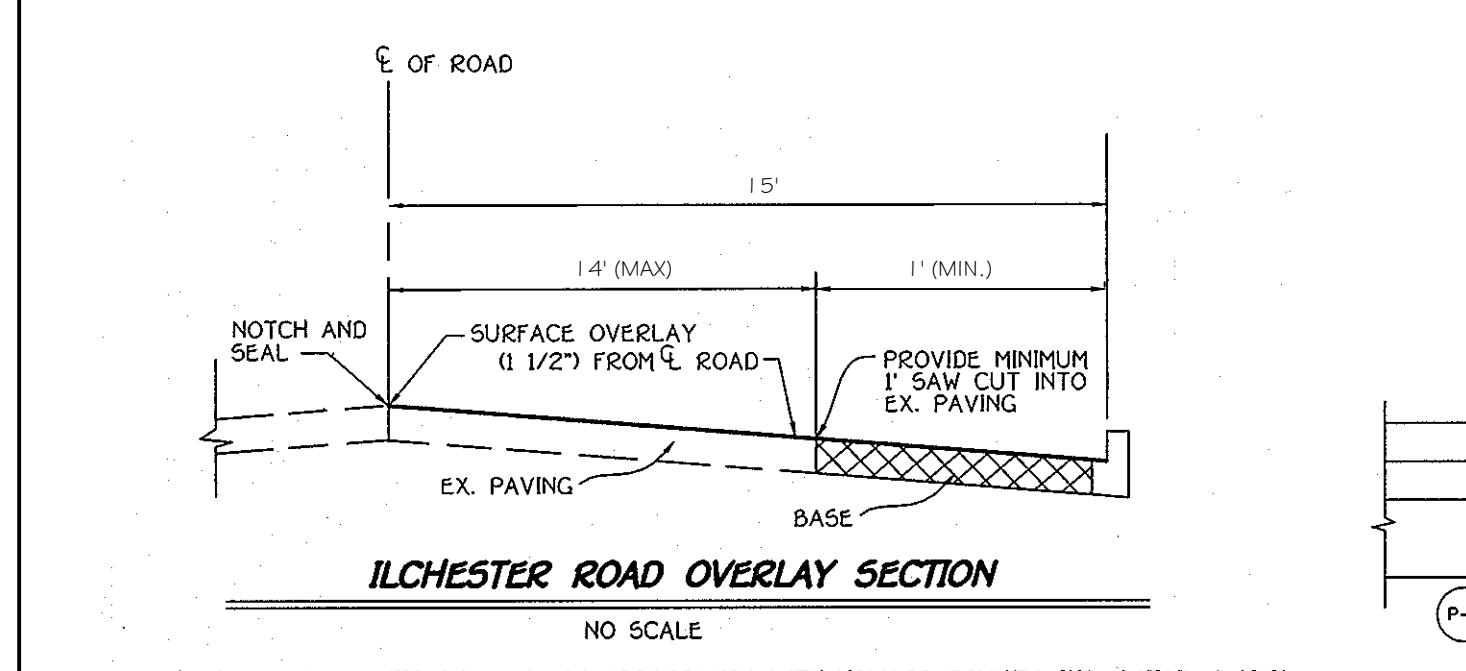
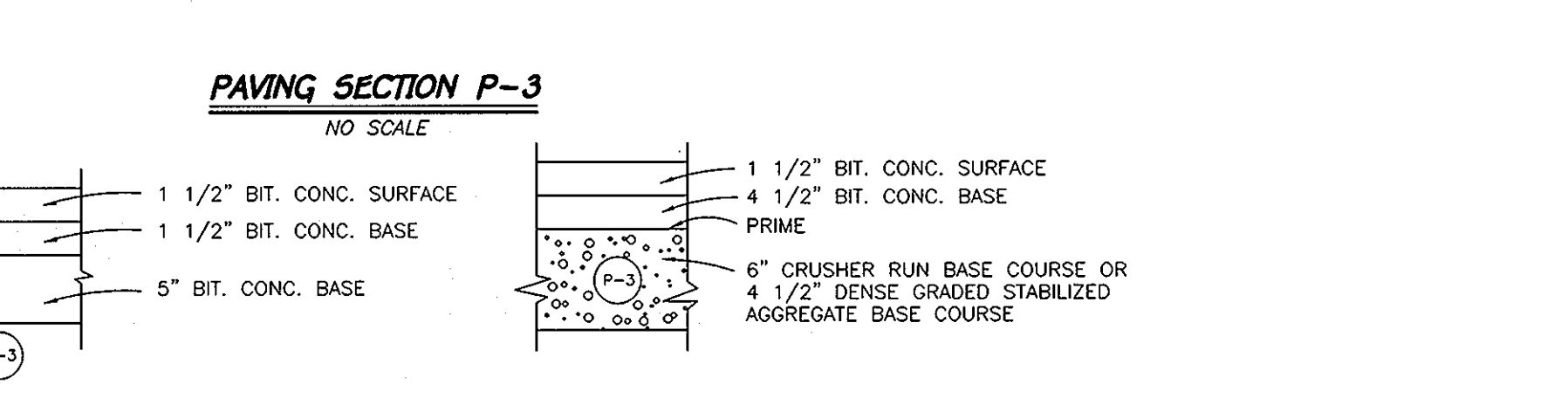
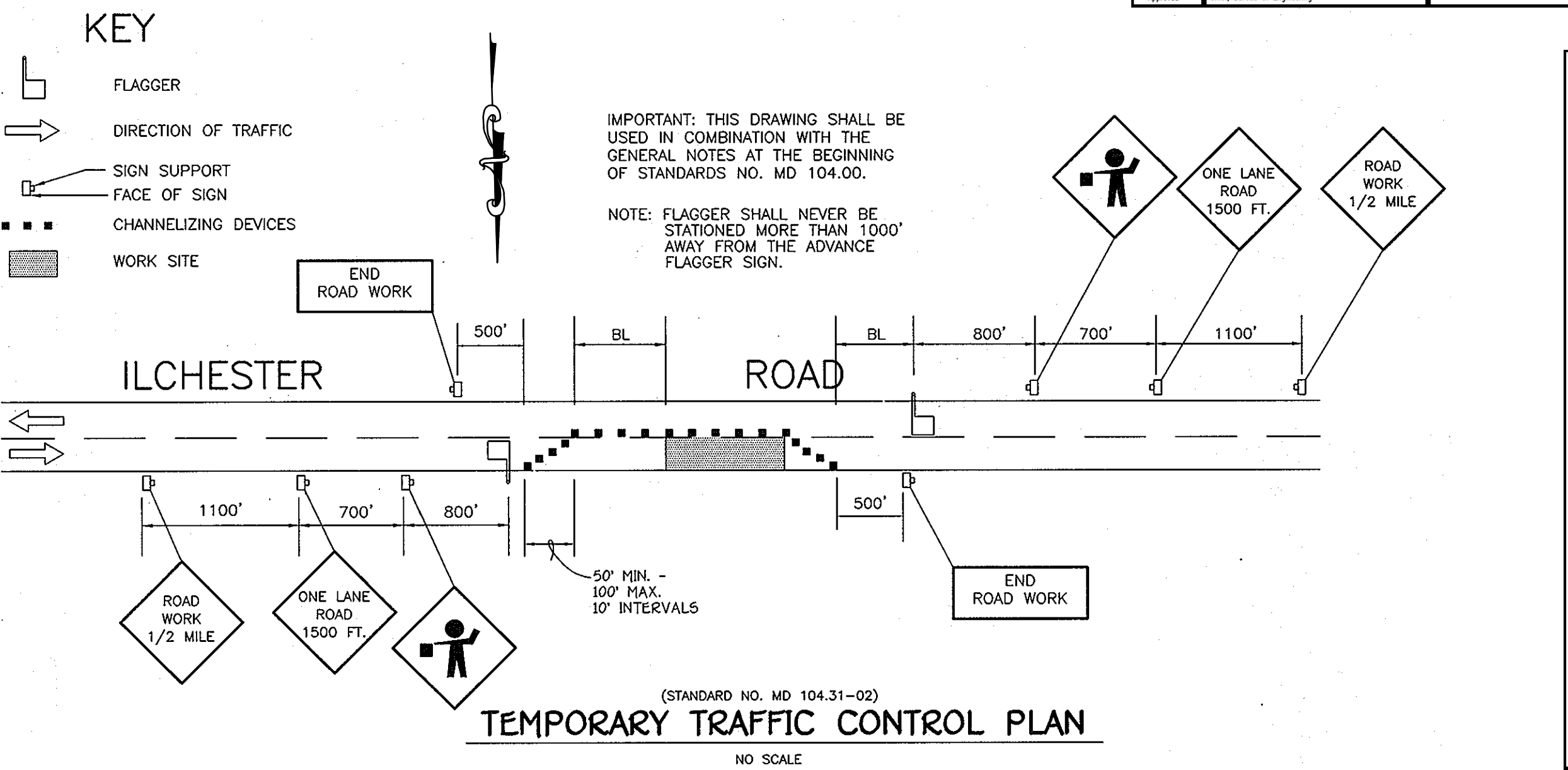
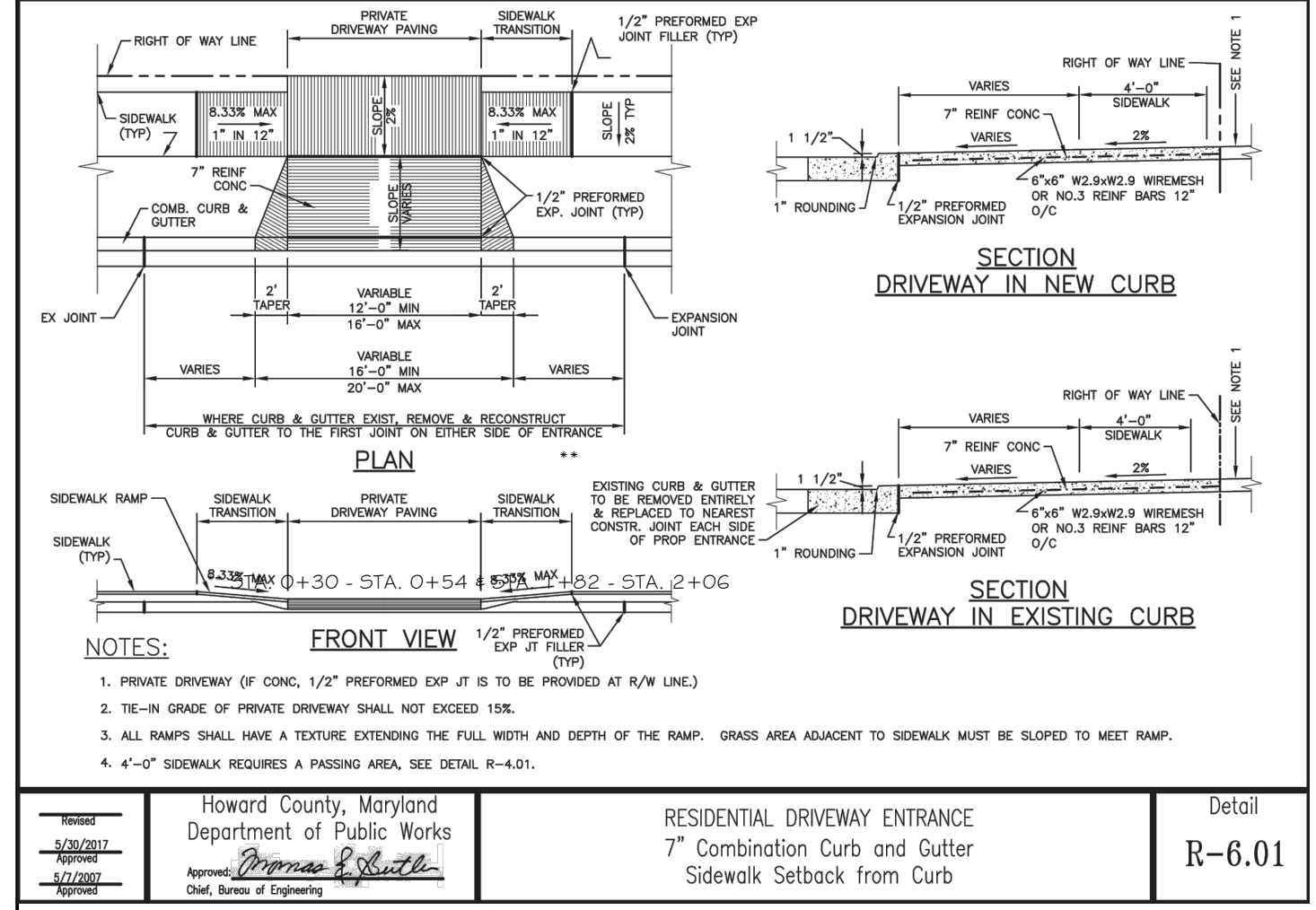
Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022	WATER METER Vault Location Outside	Detail	W-3.11	Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022
--	------------------------------------	--------	--------	--

Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022	WATER METER Frame and Cover	Detail	W-3.12	Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022
--	-----------------------------	--------	--------	--

Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022	Type 'C' Endwall Circular Pipe	Detail	D-5.21	Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022
--	--------------------------------	--------	--------	--

Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022	PRECAST MANHOLE Doghouse Over Existing Sewer 24" Pipe and Smaller	Detail	G-5.14	Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022
--	---	--------	--------	--

Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022	Sidewalk Frame & Cover	Detail	D-3.91	Howard County, Maryland Department of Public Works Approved: <i>Dorcas &amp; South</i> Date: 10/20/2022
--	------------------------	--------	--------	--



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Disapproved by: \_\_\_\_\_ DATE: 10/26/2022  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: \_\_\_\_\_  
*(Signature)* DATE: 10/31/2022  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: \_\_\_\_\_

OWNER / DEVELOPER  
 DEDRA & JONATHAN HARRIS  
 5000 ILCHESTER RD  
 ELLICOTT CITY, MD 21043  
 PHONE: 240-731-6515

ENGINEERS  
 PLANNERS  
 SCIENTISTS  
 CONSTRUCTION MANAGERS  
**KCI TECHNOLOGIES**  
 11830 WEST MARKET PLACE  
 SUITE F  
 FULTON, MD 20759  
 TELEPHONE (410) 792-8086  
 FAX: (410) 792-7419

REVISIONS				DATE
NO.	DATE	DESCRIPTION	BY	10/05/2022

**SITE DETAILS**  
**HARRIS PROPERTY**  
 LOTS 6 & 7  
 RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023  
 ILCHESTER ROAD ELLICOTT CITY, MD 21043

SCALE: AS SHOWN  
 DESIGNED BY: ASC  
 CHECKED BY: SAJ

TAX MAP 31; GRID 10  
 PARCEL 153

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 LICENSE NO. 35792 EXP. DATE: 8/16/2024

DocuSigned by:  
*Stephen Jernid*  
 10/5/2022

271901393  
 KCI JOB NUMBER

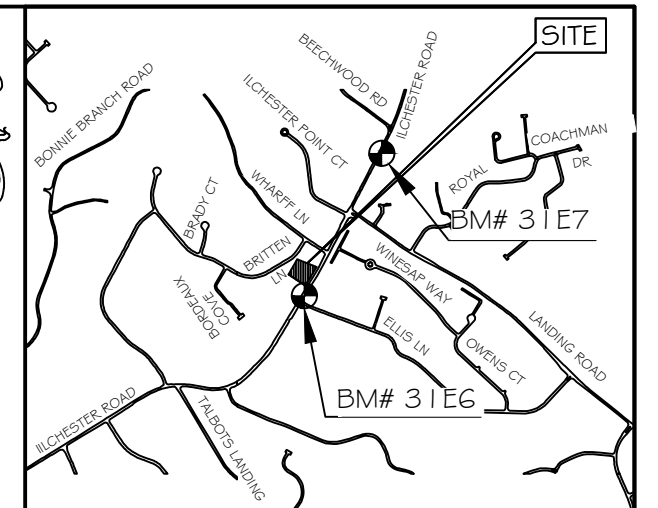
DATE: 10/05/2022  
 SCALE: AS SHOWN  
 DESIGNED BY: ASC  
 CHECKED BY: SAJ

SITE DETAILS  
**HARRIS PROPERTY**  
 LOTS 6 & 7  
 RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023  
 ILCHESTER ROAD ELLICOTT CITY, MD 21043

TAX MAP 31; GRID 10  
 PARCEL 153

271901393  
 KCI JOB NUMBER





VICINITY MAP  
SCALE: 1" = 2000'  
ADC MAP 4936, GRID G3

**BENCHMARKS**

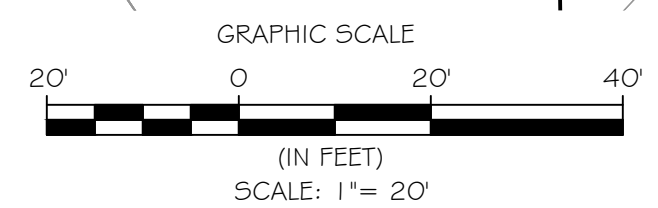
STATION:	LOCATION:
STATION 31E6 ELEV.: 482.76'	N 570852.372 E 1376700.647
STATION 31E7 ELEV.: 478.65'	N 572335.350 E 1377504.033

**LEGEND**

- PROPOSED BUILDING
- EX. BUILDING
- EX. GRADE
- PROP. GRADE
- PROPERTY LINES
- EX. TREELINE
- EDGE OF ROAD
- CENTERLINE OF ROAD
- 4' THICK MIX 3 CONCRETE SIDEWALK & DRIVEWAY
- UTILITY POLE
- 15-24.9% SLOPES
- >25% Slopes (4,425 SF) symbol"/> >25% SLOPES (4,425 SF)
- DRAINAGE DIVIDE
- EX. WATER
- EX. SEWER
- PROP. WATER
- PROP. SEWER
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE
- DIVERSION FENCE
- OVERHEAD ELECTRIC
- BUILDING RESTRICTION LINE
- PROP. STORM DRAIN
- EX. STORM DRAIN
- SWM BORING
- AT GRADE INLET PROTECTION
- CURB INLET PROTECTION
- STANDARD INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE

**SOIL ANALYSIS**

SYMBOL	NAME/DESCRIPTION	TYPE	HYDRIC	K FACTOR
ChC	CHILLUM-RUSSETT LOAMS, 5 TO 10 PERCENT SLOPES	C	NO	0.43
ChB	CHILLUM-RUSSETT LOAMS, 2 TO 5 PERCENT SLOPES	C	NO	0.43
SrD	SASSAFRAS AND CROOM SOIL, 10 TO 15 PERCENT SLOPES	B	NO	0.37
CrD	CROOM AND EVESBORO SOILS, 10 TO 15 PERCENT SLOPES	C	NO	0.37



HOWARD SCD Signature Block:  
This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

DocuSigned by:  
**Alexander Brutekic** 10/26/2022  
Howard Soil Conservation District Date

**DESIGN CERTIFICATION**  
"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."  
DocuSigned by:  
**Stephen Jerrick** 10/5/2022  
Designer's Signature Date  
**STEPHEN JERRICK** MD Registration No. 35792  
Printed Name (P.E. R.L.S., or R.L.A.M.)

**OWNER/DEVELOPER'S CERTIFICATE**  
"I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."  
DocuSigned by:  
**Jonathan Harris** 10/6/2022  
Signature of Owner/Developer Date  
**Jonathan Harris/Owner**  
Printed Name & Title

**OWNER / DEVELOPER**  
DEBRA & JONATHAN HARRIS  
5000 ILCHESTER RD  
ELLCOTT CITY, MD 21043  
PHONE: 240-731-6515

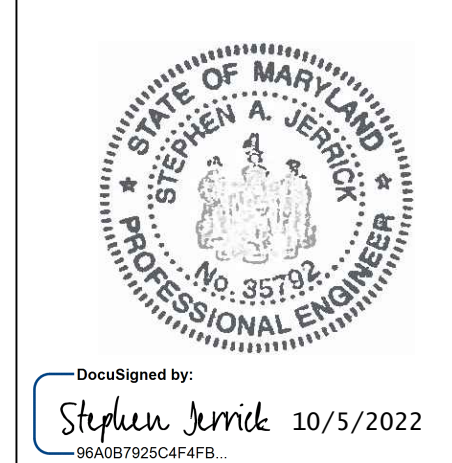
**APPROVED:** HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DocuSigned by:  
**Edmondson** 10/26/2022  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
**Edmondson** 10/31/2022  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**ENGINEERS PLANNERS SCIENTISTS CONSTRUCTION MANAGERS**  
**KCI TECHNOLOGIES**  
11830 WEST MARKET PLACE  
SUITE F  
FULTON, MD 20759  
TELEPHONE: (410) 792-8086  
FAX: (410) 792-7419

REVISIONS			
NO.	DATE	DESCRIPTION	BY

DATE 10/05/2022  
SCALE 1" = 20'  
DESIGNED BY ASC  
CHECKED BY SAJ

**EROSION & SEDIMENT CONTROL PLAN**  
**HARRIS PROPERTY**  
LOTS 6 & 7  
RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023  
ILCHESTER ROAD ELLICOTT CITY, MD 21043  
1st ELECTION DISTRICT; ZONING R-20  
HOWARD COUNTY, MARYLAND 21043  
DRAWING NO. SHEET 6 OF 9  
KCI JOB NUMBER 271901393  
TAX MAP 31; GRID 10  
PARCEL 153



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. 35792 EXP. DATE: 8/16/2024

PLOT: 10/05/2022 10:20:19 AM 191033.Dwg



STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

PURPOSE

TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION.

CONDITIONS WHERE PRACTICE APPLIES

TO THE SURFACE OF ALL PERIMETER CONTROLS, SLOPES, AND ANY DISTURBED AREA NOT UNDER ACTIVE GRADING.

CRITERIA

- 1. SEEDING
A. 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...

- B. 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 SUMMARIES...

- 2. MULCHING
A. MULCH MATERIALS (IN ORDER OF PREFERENCE)
a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR...

- B. APPLICATION
a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
b. WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES...

STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

CRITERIA

- 1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS...

TEMPORARY SEEDING TABLE
HARDINESS ZONE (FROM FIGURE B.3): 7A
NO. SPECIES APPLICATION RATE (LB/AC) SEEDING DATES SEEDING DEPTHS FERTILIZER RATE (10-20-20) LIME RATE

STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

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

CRITERIA

- 1. SEED MIXTURES
A. GENERAL USE
a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FOUND ON TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY...

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...

- 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)

PERMANENT SEEDING TABLE

PERMANENT SEEDING TABLE
HARDINESS ZONE (FROM FIGURE B.3): 7A
NO. SPECIES APPLICATION RATE (LB/AC) SEEDING DATES SEEDING DEPTHS FERTILIZER RATE (10-20-20) LIME RATE

- 2. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).
A. GENERAL SPECIFICATIONS
a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR...

GEOTEXTILE FABRICS

Table with columns: PROPERTY, TEST METHOD, MD, CD, MD, CD, MD, CD. Rows include GRAB TENSILE STRENGTH, GRAB TENSILE ELONGATION, TRAPEZOIDAL TEAR STRENGTH, PUNCTURE STRENGTH, APPARENT OPENING SIZE, PERMITTIVITY, ULTRAVIOLET RESISTANCE.

1 ALL NUMERIC VALUES EXCEPT APPARENT OPENING SIZE (AOS) REPRESENT MINIMUM AVERAGE ROLL VALUES (MARV). MARV IS CALCULATED AS THE TYPICAL MINUS TWO STANDARD DEVIATIONS. MD IS MACHINE DIRECTION; CD IS CROSS DIRECTION.

VALUES FOR AOS REPRESENT THE AVERAGE MAXIMUM OPENING.

2 GEOTEXTILES MUST BE EVALUATED BY THE NATIONAL TRANSPORTATION PRODUCT EVALUATION PROGRAM (NTPPE) AND CONFORM TO THE VALUES IN TABLE H.1.

NOTE: THE SITE IS SUBJECT TO THE APPROVAL & CONDITIONS OF WP-22-022 AS SHOWN ON GENERAL NOTE #35 ON SHEET 1.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DocuSigned by: 10/26/2022
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10/31/2022
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE:



Table with columns: NO., DATE, DESCRIPTION, BY. Includes rows for SCALE, AS SHOWN, DESIGNED BY, CHECKED BY.

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...

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 RIPRAP ON GEOTEXTILE, DO NOT EXCEED A ONE FOOT DROP HEIGHT.

TABLE H.2: STONE SIZE

Table with columns: TYPE, SIZE RANGE, D50, D100, AASHTO, MIDSIZE WEIGHT. Rows include NUMBER 57, NUMBER 1, RIPRAP (CLASS 0), CLASS I, CLASS II, CLASS III.

1 THIS CLASSIFICATION IS TO BE USED ON THE UPSTREAM FACE OF STONE OUTLETS AND CHECK DAMS.

2 THIS CLASSIFICATION IS TO BE USED FOR GABIONS.

3 OPTIMUM GRADATION IS 50 PERCENT OF THE STONE BEING ABOVE AND 50 PERCENT BELOW THE MIDSIZE.

STONE MUST BE COMPOSED OF A WELL GRADED MIXTURE OF STONE SIZED SO THAT FIFTY (50) PERCENT OF THE PIECES BY WEIGHT ARE LARGER THAN THE SIZE DETERMINED BY USING THE CHARTS. A WELL GRADED MIXTURE, AS USED HEREIN, IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF LARGER STONE SIZES BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE SMALLER VOIDS BETWEEN THE STONES...

NOTE: RECYCLED CONCRETE EQUIVALENT MAY BE SUBSTITUTED FOR ALL STONE CLASSIFICATIONS FOR TEMPORARY CONTROL MEASURES ONLY. CONCRETE BROKEN INTO THE SIZES MEETING THE APPROPRIATE CLASSIFICATION, CONTAINING NO STEEL REINFORCEMENT, AND HAVING A MINIMUM DENSITY OF 150 POUNDS PER CUBIC FOOT MAY BE USED AS AN EQUIVALENT.

TABLE H.3: COMPOST

Table with columns: PARAMETERS, ACCEPTABLE RANGE. Rows include PH, MOISTURE CONTENT, ORGANIC MATTER CONTENT, PARTICLE SIZE, PHYSICAL CONTAMINANTS (MANMADE INERTS).

ADAPTED FROM AASHTO STANDARDS AND SPECS FOR COMPOST FILTER SOCKS AND EPA EXAMPLE COMPOST FILTER PARAMETERS

1 RECOMMENDED TEST METHODOLOGIES ARE PROVIDED IN TEST METHODS FOR THE EXAMINATION OF COMPOSTING AND COMPOST (TMEC, THE U.S. COMPOSTING COUNCIL)

HOWARD SCD Signature Block:
This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

DocuSigned by: Alexander Bratohie 10/26/2022

OWNER / DEVELOPER

DEBRA # JONATHAN HARRIS
5000 ILCHESTER RD
ELLCOTT CITY, MD 21043
PHONE: 240-731-6515

DESIGN CERTIFICATION
I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

DocuSigned by: Stephen Jerrick 10/5/2022

STEPHEN JERRICK MD Registration No. 35792
Printed Name R.L.S., or R.L.A.M.

OWNER/DEVELOPER'S CERTIFICATE

I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District, or the MDE.

DocuSigned by: Jonathan Harris 10/6/2022

Signature of Owner/Developer Jonathan Harris
Printed name & Title



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 35792 EXP. DATE: 8/16/2024

SEDIMENT AND EROSION CONTROL NOTES

HARRIS PROPERTY
LOTS 6 & 7
RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023
ILCHESTER ROAD ELLICOTT CITY, MD 21043

DRAWING NO.

SHEET 8 OF 9
KCI JOB NUMBER
271901393

1st ELECTION DISTRICT; ZONING R-20 HOWARD COUNTY, MARYLAND 21043 TAX MAP 31; GRID 10 PARCEL 153



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.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the 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).

5. All sediment control structures are to remain in place, and are to be maintained in operative condition until permission for their removal has been obtained from the CID.

6. Site Analysis: Total Area of Site: 1.00 +/- Acres Area Disturbed: 0.60 +/- Acres Area to be roofed or paved: 0.12 +/- Acres Area to be vegetatively stabilized: 0.44 +/- Acres Total Cut: 831 Cu. Yds. Total Fill: 2,148 Cu. Yds. Offsite waste/borrow area location: TBD

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly, and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include: •Inspection date •Inspection type (routine, pre-storm event, during rain event) •Name and title of inspector •Weather information (current conditions as well as time and amount of last recorded precipitation) •Brief description of project's status (e.g., percent complete) and/or current activities •Evidence of sediment discharges •Identification of plan deficiencies •Identification of sediment controls that require maintenance •Identification of missing or improperly installed sediment controls •Compliance status regarding the sequence of construction and stabilization requirements •Photographs •Monitoring/sampling •Maintenance and/or corrective action performed •Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).

9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is 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 be 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.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a sediment basin or other approved washout structure.

13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum intervals, with lower ends curled uphill by 2" in elevation.

15. Stream channels must not be disturbed during the following restricted time periods (inclusive): •Use I and IP March 1 - June 15 •Use III and IIIP October 1 - April 30 •Use IV March 1 - May 31

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and associated permits shall be on-site and available when the site is active.

B-4-2 STANDARDS AND SPECIFICATIONS

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

- A. Soil Preparation 1. Temporary Stabilization a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope. b. Apply fertilizer and lime as prescribed on the plans. c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means. 2. 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 be acceptable. iv. Soil contains 1.5 percent minimum organic matter by weight. v. Soil contains sufficient pore space to permit adequate root penetration. b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions. c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches. d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test. e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

- B. Topsoiling 1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation. 2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS. 3. Topsoiling is limited to areas having 2:1 or flatter slopes where: a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients. c. The original soil to be vegetated contains material toxic to plant growth. d. The soil is so acidic that treatment with limestone is not feasible. 4. Areas having slopes steeper than 2:1 require special consideration and design. 5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria: a. Topsoil must be a loam, sandy loam, clay loam, silt loam, silty loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1/2 inches in diameter. b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified. c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. 6. Topsoil Application a. Erosion and sediment control practices must be maintained when applying topsoil. b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets. c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

- C. Soil Amendments (Fertilizer and Lime Specifications) 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses. 2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer. 3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve. 4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means. 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.

VEGETATIVE ESTABLISHMENT

Following initial soil disturbances or redistribution, permanent or temporary stabilization shall be completed within three calendar days for the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and seven days for all other disturbed or graded areas on the project site.

- 1. Permanent Seeding: A. Soil Tests: Lime and fertilizer will be applied per soil tests results for sites greater than 5 acres. Soil tests will be done at completion of initial rough grading or as recommended by the sediment control inspector. Rates and analyses will be provided to the grading inspector as well as the contractor. Occurrence of acid sulfate soils (grayish black color) will require covering with a minimum of 12 inches of clean soil with 6 inches minimum capping of top soil. No stockpiling of material is allowed. If needed, soil tests should be done before and after a 6-week incubation period to allow oxidation of sulfates. The minimum soil conditions required for permanent vegetative establishment are: a. Soil pH shall be between 6.0 and 7.0. b. Soluble salts shall be less than 500 parts per million (ppm). c. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or sericea lespedeza is to be planted, then a sandy soil (< 30% silt plus clay) would be acceptable. d. Soil shall contain 1.5% minimum organic matter by weight. e. Soil must contain sufficient pore space to permit adequate root penetration. f. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with the Standard and Specification for Soil Preparation, Topsoiling and Soil Amendments from the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control or amendments made as recommended by a certified agronomist. B. Seedbed Preparation: Area to be seeded shall be loose and friable to a depth of at least 3-5 inches. The top layer shall be loosened by raking, disking or other acceptable means before seeding occurs. For sites less than 5 acres, apply 100 pounds dolomitic limestone and 21 pounds of 10-10-10 fertilizer per 1,000 square feet. Harrow or disk lime and fertilizer into the soil to a depth of at least 3-5 inches on slopes flatter than 3:1. C. Seeding: Apply 5-6 pounds per 1,000 square feet of tall fescue between February 1 and April 30 or between August 15 and October 31. Apply seed uniformly on a moist firm seedbed with a cyclone seeder, cultipacker seeder or hydroseeder (slurry includes seeds and fertilizer, recommended on steep slopes only). Maximum seed depth should be 1/4 inch in clayey soils and 1/2 inch in sandy soils when using other than the hydroseeder method. Irrigate where necessary to support adequate growth until vegetation is firmly established. If other seed mixes are to be used, select from Table B3 and B5 of the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control. D. Mulching: Mulch shall be applied to all seeded areas immediately after seeding. During the time periods when seeding is not permitted, mulch shall be applied immediately after grading. Mulch shall be unrotted, unchopped, small grain straw applied at a rate of 2 tons per acre or 90 pounds per 1,000 square feet (2 bales). If a mulch-anchoring tool is used, apply 2.5 tons per acre. Mulch materials shall be relatively free of all kinds of weeds and shall be completely free of prohibited noxious weeds. Spread mulch uniformly, mechanically or by hand, to a depth of 1-2 inches. E. Securing Straw Mulch: Straw mulch shall be secured immediately following mulch application to minimize movement by wind or water. The following methods are permitted: i. Use a mulch-anchoring tool which is designed to punch and anchor mulch into the soil surface to a minimum depth of 2 inches. This is the most effective method for securing mulch, however, it is limited to relatively flat areas where equipment can operate safely. ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. If mixed with water, use 50 pounds of wood cellulose fiber per 100 gallons of water. iii. Liquid binders may be used. Apply at higher rates at the edges where wind catches mulch, such as in valleys and on crests of slopes. The remainder of the area should appear uniform after binder application. Binders listed in the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control or approved equal shall be applied at rates recommended by the manufacturers. iv. Lightweight plastic netting may be used to secure mulch. The netting will be stapled to the ground according to manufacturer's recommendations.

- 2. Temporary Seeding: Lime: 100 pounds of dolomitic limestone per 1,000 square feet. Fertilizer: 15 pounds of 10-10-10 per 1,000 square feet. Seed: Perennial rye - 0.92 pounds per 1,000 square feet (February 1 through April 30 or August 15 through October 31). Millet - 0.92 pounds per 1,000 square feet (May 1 through August 15). Mulch: Same as 1 D and E above.

3. No fills may be placed on frozen ground. All fill is to be placed in approximately horizontal layers, each layer having a loose thickness of not more than 8 inches. All compaction requirements are in accordance to Anne Arundel County Standard Specifications for Construction as well as the AA County Design Manual and Standard Details. Fills for pond embankments shall be compacted as per MD-378 Construction Specifications. All other fills shall be compacted sufficiently so as to be stable and prevent erosion and slippage.

4. Permanent Sod: Installation of sod should follow permanent seeding dates. Seedbed preparation for sod shall be as noted in section (B) above. Permanent sod is to be tall fescue, state approved sod; lime and fertilizer per permanent seeding specifications and lightly irrigate soil prior to laying sod. Sod is to be laid on the contour with all ends tightly abutting. Joints are to be staggered between rows. Water and roll or tamp sod to insure positive root contact with the soil. All slopes steeper than 3:1, as shown, are to be permanently sodded or protected with an approved erosion control netting. Additional watering for establishment may be required. Sod is not to be installed on frozen ground. Sod shall not be transplanted when moisture content (dry or wet) and/or extreme temperature may adversely affect its survival. In the absence of adequate rainfall, irrigation should be performed to ensure establishment of sod.

5. Mining Operations: Sediment control plans for mining operations must include the following seeding dates and mixtures: For seeding dates of February 1 through April 30 and August 15 through October 31, use seed mixture of tall fescue at the rate of 2 pounds per 1,000 square feet and sericea lespedeza at the minimum rate of 0.5 pounds per 1,000 square feet.

6. Topsoil shall be applied as per the Standard and Specifications for Soil Preparation, Topsoiling, and Soil Amendments from the 2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

OWNER / DEVELOPER'S CERTIFICATE. I/We hereby certify that any clearing, grading, construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control on erosion and sediment prior to beginning the project. I certify right-of-entry for periodic quality evaluation by Howard County, the Howard Soil Conservation District and/or MDE. Jonathan Harris 10/6/2022

DESIGN CERTIFICATION. I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulations, and standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. Stephen Jerrick 10/5/2022

SEQUENCE OF CONSTRUCTION

- 1. Obtain grading permit. - 1 day
2. Notify MISSUTILITY and have all existing utilities marked in the field - 1 day
3. Notify Howard County DPW, Construction Inspection Division (CID) (410-313-1855) at least 24 hours before starting any work to schedule pre-construction meeting. - 1 day
4. Install stabilized construction entrance, diversion fence, clear water diversion pipe, standard inlet protection, and perimeter super silt fence. Obtain inspector approval of installation before proceeding. - 2 days
5. Install storm drain from EW-1 TO I-1, EP-2 TO I-2, EW-2 to existing 12" CMP - 1 week
6. Clear and grub site to LOD. Maintain all sediment control devices as necessary - 1 week
7. Rough grade site, install I-3, I-4 inlet flow throughs. Upon completion of work in a given area, stabilize area immediately with seed and mulch & temporary stabilization soil matting on Swale-1 - 1 week
8. Fine grade the site. - 2 months
9. Upon completion of fine grade of site, remove all heavy equipment from site and install surface course on driveway. Install access path - 1 week
10. Stabilize all disturbed areas with seed & mulch - 1 day
11. Construct micro-bioretenion facility with at grade inlet protection, and stabilize any disturbed area. - 1 week
12. With approval of Inspector, remove all erosion & sediment control measures - 2 days

STOCKPILE AREA

PURPOSE

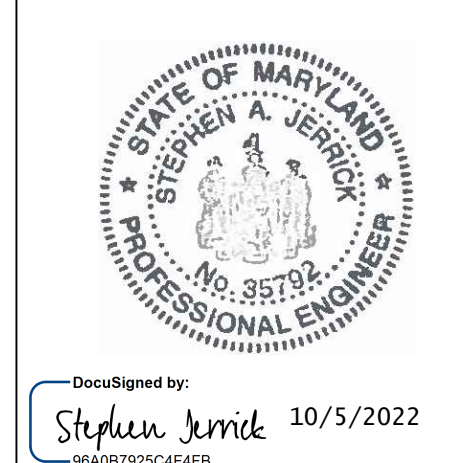
TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CRITERIA

- 1. THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN. THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
2. RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
3. ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
4. CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
5. WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
6. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION.
7. IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

MAINTENANCE

THE STOCKPILE AREA MUST CONTINUOUSLY MEET THE REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. SIDE SLOPES MUST BE MAINTAINED AT NO STEEPER THAN A 2:1 RATIO. THE STOCKPILE AREA MUST BE KEPT FREE OF EROSION. IF THE VERTICAL HEIGHT OF A STOCKPILE EXCEEDS 20 FEET FOR 2:1 SLOPES, 30 FEET FOR 3:1 SLOPES, OR 40 FEET FOR 4:1 SLOPES, BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.



Designed by: Stephen Jerrick 10/5/2022

HOWARD SCD Signature Block: This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District. Alexander Bratchie 10/26/2022

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 35792 EXP. DATE: 8/16/2024

PLOTTED: 10/26/2022 12:20:19:27:19018933:Drainage/FINAL PLAN.dwg

OWNER / DEVELOPER DEDRA # JONATHAN HARRIS 5000 ILCHESTER RD ELLICOTT CITY, MD 21043 PHONE: 240-731-6515

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Chief, Division of Land Development: (MDE) Edmondson 10/31/2022. Chief, Development Engineering Division



Table with columns: NO., DATE, REVISIONS, DESCRIPTION, BY, DATE. Includes rows for SCALE AS SHOWN, DESIGNED BY ASC, CHECKED BY SAJ.

SEDIMENT # EROSION CONTROL NOTES. HARRIS PROPERTY LOTS 6 & 7. RESUBDIVISION OF LOT 3, LOWE PROPERTY, PLAT # 18023. ILCHESTER ROAD ELLICOTT CITY, MD 21043. SHEET 9 OF 9 KCI JOB NUMBER 271901393