

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANGEMENT PLANS SAPARIYA PROPERTY LOTS 1 AND 2 R-20 ZONING DISTRICT TAX MAP No. 35 GRID No. 02 PARCEL NO. 180 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS, SOILS AND DEMOLITION PLAN
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8	LANDSCAPE PLAN
9	SIGHT DISTANCE PROFILE
10	RETAINING WALL ELEVATION
11	RETAINING WALL ELEVATION NOTES AND DETAILS
12	BORING PLAN AND LOGS

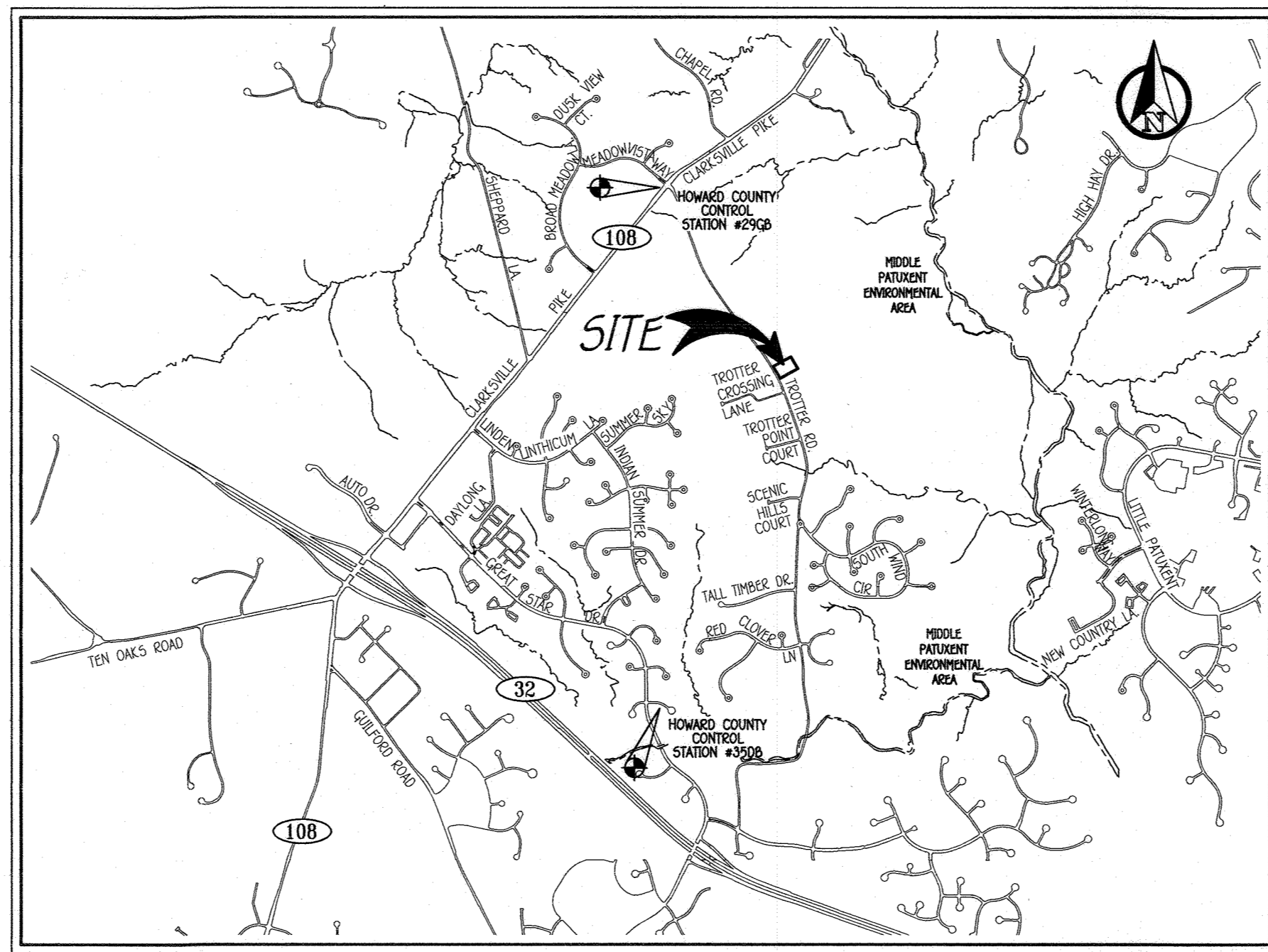
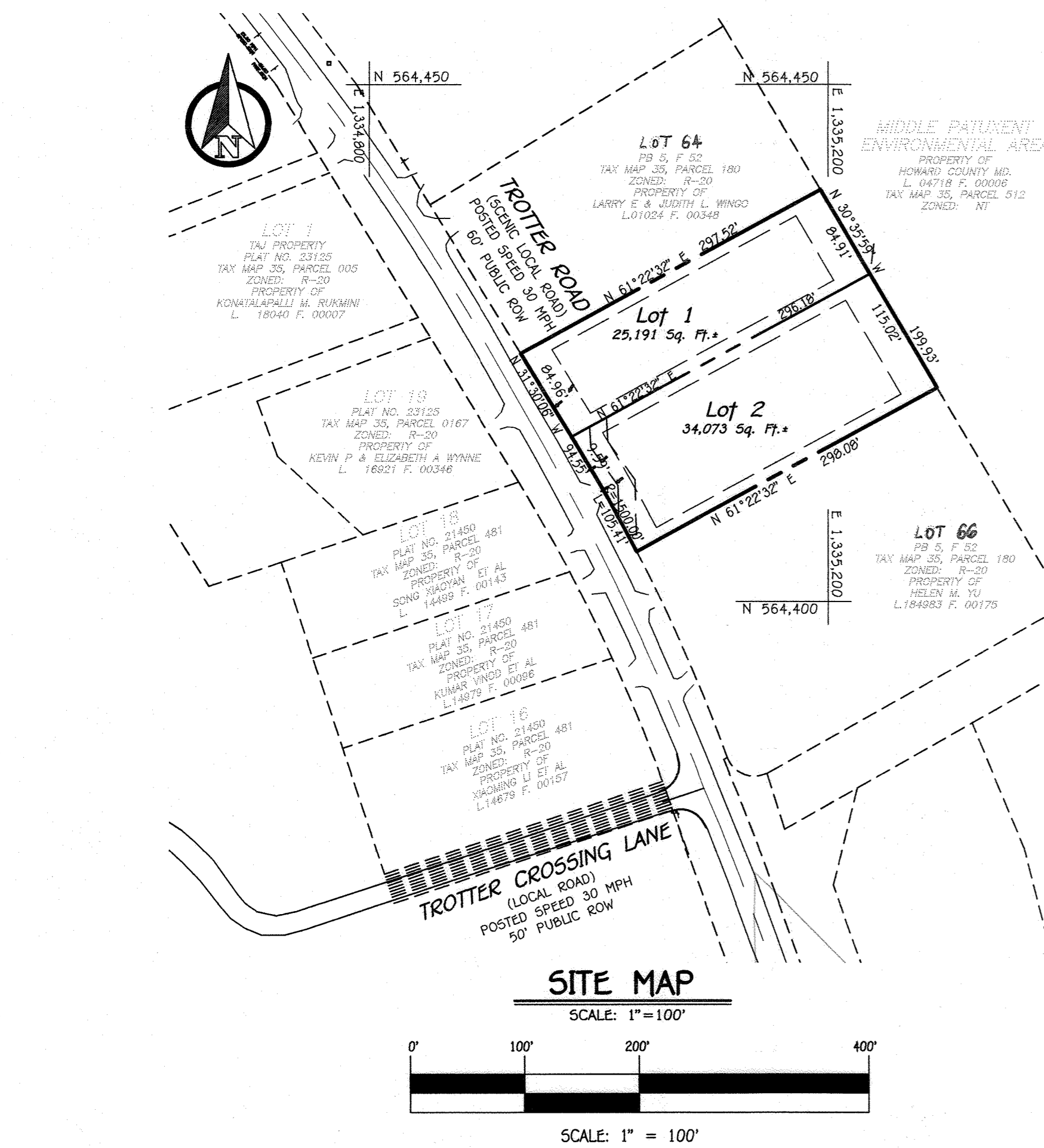
SOILS LEGEND			
SOIL	NAME	CLASS	*K VALUE
QbB	Gladstone loam, 3 to 8 percent slopes	B	.32
QbC	Gladstone loam, 8 to 15 percent slopes	B	.32

HOWARD COUNTY WEBSOILS SURVEY 09/15/20

STORMWATER MANAGEMENT PRACTICES BY LOT			
AREA ID	MICRO-BIO (M-6) NUMBER	DRY WELL (M-5) NUMBER	REMARKS
LOT 1			PARKING AREA AND PORTION OF UIC DRIVEWAY DRAINS TO BIO ON LOT 1
	1A & 1B		PROPOSED HOUSE TREATED BY ON LOT DRY WELLS (2)
			PARKING AREA AND PORTION OF UIC DRIVEWAY DRAINS TO BIO ON LOT 2
LOT 2	2A,2B,2C		PROPOSED HOUSE TREATED BY ON LOT DRY WELLS (3)

GROSS AREA = 1.36 ACRES
LOD = 0.78 ACRES
RCN = 55.0
TARGET Pe = 1.8" (1,069 Cuft.)
PROVIDED Pe = 2.3" (2,408 Cuft.)

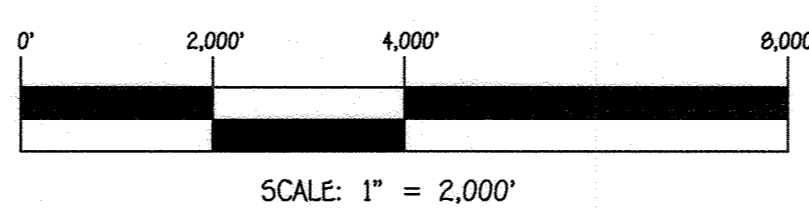
STORMWATER MANAGEMENT PRACTICES							
AREA ID	LOCATION	ADDRESS	DRAINAGE AREA SF.	% IMPERVIOUS	ESDv REQUIRED Cuft.	ESDv PROVIDED Cuft.	DRY WELL (Y/N)
DW 1A	LOT 1	5669 TROTTER RD	980	100%	140	144	Y
DW 1B	LOT 1	5669 TROTTER RD	768	100%	110	144	Y
BIO 1	LOT 1	5669 TROTTER RD	4,738	56%	392	565	Y
DW 2A	LOT 2	5673 TROTTER RD	309	100%	44	128	Y
DW 2B	LOT 2	5673 TROTTER RD	709	100%	101	128	Y
DW 2C	LOT 2	5673 TROTTER RD	881	100%	126	128	Y
BIO 2	LOT 2	5673 TROTTER RD	8,462	49%	622	721	Y



HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 3104 N 571,700.664 E 1,369,606.417 ELEVATION: 494.445'
HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 3108 N 569,563.569 E 1,359,155.211 ELEVATION: 429.348'
REFER TO HOWARD CO. ADC MAP 25-E8

VICINITY MAP

SCALE: 1" = 2,000'



SCALE: 1" = 2,000'

1. IN ACCORDANCE WITH HOWARD COUNTY SUBDIVISION REGULATIONS SECTION 16.125(c), THE PROJECT WAS APPROVED BY THE PLANNING BOARD ON JUNE 2, 2022.

GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED R-20 (PER 10/06/13 COMPREHENSIVE ZONING PLAN).
- BOUNDARY IS BASED ON A FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS & CARTER ON OR ABOUT APRIL, 2022.
- CONTOURS ARE BASED ON A TOPOGRAPHIC FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS & CARTER, ON OR ABOUT APRIL, 2020.
- COORDINATES BASED ON NAD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 350B AND NO. 29GB:
HOWARD COUNTY MONUMENT NO. 350B N 557,696.143 E 1,333,974.615 ELEV. 400.941'
HOWARD COUNTY MONUMENT NO. 29GB N 566,826.147 E 1,333,265.923 ELEV. 455.964'
- STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT, PUBLIC WATER AND SEWER WILL BE UTILIZED FOR THIS PROJECT UNDER WATER AND SEWER CONTRACT NO. 34-4805.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- A COMMUNITY MEETING WAS CONDUCTED ON FEBRUARY 17, 2021 FOR THE PURPOSE OF PROVIDING INFORMATION TO THE COMMUNITY REGARDING THE PROPOSED RESIDENTIAL DEVELOPMENT IN ACCORDANCE WITH SECTION 16.128(d) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.
- SOILS SHOWN HEREON ARE BASED ON THE HOWARD COUNTY SOILS MAP #28.
- PERIMETER LANDSCAPING SHALL BE IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$3,600.00 FOR 9 SHADE TREES (10' TO 6" CALIBER DECIDUOUS TREES (\$150 EA.) WILL BE PROVIDED AS PART OF THE SITE DEVELOPMENT PLAN (LOT 1 - \$1,500, LOT 2 - \$3,100). PER SECTION 16.127-G.1 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS FOR INFILL DEVELOPMENT A TYPE 'A' LANDSCAPE BUFFER HAS BEEN PROVIDED.
- THE FOREST STAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS INC. DATED SEPTEMBER 2020, AND WAS APPROVED WITH THE FINAL PLAN APPROVED JULY 2021. THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.12.00 OF THE HOWARD COUNTY CODE FOR THIS SUBDIVISION SHALL BE MET BY USE OF THE HIMEL PROPERTY FOREST RETENTION BANK (SDP-09-132) FOR LOTS 1 AND 2 PROVIDING 1.6 ACRES OF FOREST RETENTION.
- DRIVEWAY SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
A) WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)
B) SURFACE - SIX (6") INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING
C) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 FOOT TURNING RADIUS
D) STRUCTURE CLEARANCES - MINIMUM 12 FEET
E) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
F) ENTRANCE CONSTRUCTED PER HOWARD COUNTY STANDARD DETAIL R-6-01
- STORM WATER MANAGEMENT DEVICES, WHICH CONSIST OF FIVE M-5 DRYWELLS AND TWO M-6 MICRO-BIRETENTION FACILITIES, WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER OF EACH LOT.
- EXISTING UTILITIES ARE BASED ON MISS UTILITY MARKINGS, FIELD LOCATIONS AND AVAILABLE COUNTY INFORMATION.
- TO THE BEST OF OUR KNOWLEDGE NO CEMETERIES ARE LOCATED ON-SITE BASED ON THE HOWARD COUNTY CEMETERY INVENTORY MAP.
- R.E.L. DENOTES BUILDING RESTRICTION LINE
- EXISTING OVERHEAD WIRE
- EXISTING FENCE LINE
- PROPOSED PAVING
- PRIVATE UIC EASEMENT
- PRIVATE DRAINAGE & UTILITY EASEMENT
- LIMIT OF DISTURBANCE
- SSP/TP SUPER SILT FENCE/TREE PROTECTION FENCE
- DF/TP DIVERSION FENCE/TREE PROTECTION FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- DRAINAGE DIVIDE
- PERMANENT SOIL STABILIZATION CONTROL MATTING
- SOIL LINES AND TYPES
- BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
- PROPOSED ROOF LEADER
- DENOTES EXISTING TREES TO BE REMOVED
- DENOTES EXISTING TREES TO REMAIN
- SPECIMEN TREE
- CRITICAL ROOT ZONE
- DENOTES 15%-24.9% SLOPES

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	EXISTING FENCE
---	SPOT ELEVATION
---	EXISTING STORM DRAIN
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	EXISTING OVERHEAD WIRE
---	EXISTING FENCE LINE
---	PROPOSED PAVING
---	PRIVATE UIC EASEMENT
---	PRIVATE DRAINAGE & UTILITY EASEMENT
---	LIMIT OF DISTURBANCE
---	SSP/TP SUPER SILT FENCE/TREE PROTECTION FENCE
---	DF/TP DIVERSION FENCE/TREE PROTECTION FENCE
---	EXISTING TREE LINE
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---	DRAINAGE DIVIDE
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---	SOIL LINES AND TYPES
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	DENOTES EXISTING TREES TO BE REMOVED
---	DENOTES EXISTING TREES TO REMAIN
---	SPECIMEN TREE
---	CRITICAL ROOT ZONE
---	DENOTES 15%-24.9% SLOPES

SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 1.36 AC.
- LIMIT OF DISTURBED AREA = 0.55 AC.
- PRESENT ZONING DESIGNATION = R-20 (PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL SINGLE FAMILY DETACHED
- PREVIOUS HOWARD COUNTY FILES: R20-091
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0 AC
- TOTAL AREA OF SLOPES IN EXCESS OF 25% = 0 AC
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0 AC
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0 AC
- TOTAL AREA OF EXISTING FOREST = 0.60 AC
- TOTAL AREA OF FOREST TO BE RETAINED = 0.37 AC
- TOTAL AREA OF LOTS / BUILDABLE PARCELS = 1.36 AC
- TOTAL GREEN OPEN AREA (PERVIOUS) = 1.08 AC
- TOTAL IMPERVIOUS AREA EXCLUDES EXISTING IMPERVIOUS) = 0.27 AC (WITHIN LOD)
- TOTAL AREA OF ESCAPEABLE SOILS = 0 AC
- TOTAL AREA OF STEEP SLOPES 15%-24.9% = 0.04 AC

ADDRESS CHART	
LOCATION	ADDRESS
LOT 1	5669 TROTTER RD
LOT 2	5673 TROTTER RD

MODERATE INCOME HOUSING UNITS (MIHU) ALLOCATION EXEMPTIONS TRACKING TABULATION	
Total Number of Lots/Units Proposed	2
Number of MIHU Provided Onsite (exempt from APFO allocations)	0
Number of APFO Allocations Required (remaining lots/units)	1
MIHU Fee-in-Lieu (indicate lot/unit numbers)	2

REVISIONS		
NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning	
Chief, Division Of Land Development	11/2/22 Date
Chief, Development Engineering Division	10-12-22 Date
Approved: Howard County Department Of Public Works	
Chief, Bureau Of Highways	10/04/2022 Date



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/24.

PAUL G. CAVANAUGH
DATE: 10/13/2022

OWNER/DEVELOPER
DIVYESH SAPARIYA,
SOHILRAJ SAPARIYA AND
HITESH ANKOLA
5669 TROTTER ROAD
CLARKSVILLE, MARYLAND 21029
PH# 301-275-0762

TITLE SHEET
SAPARIYA PROPERTY
5669 TROTTER ROAD
A RESUBDIVISION OF CRISWOOD MANOR
SECTION TWO - LOT 65
PLAT BOOK 5, PAGE 52
TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180
ZONED R-20
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEBRUARY, 2022
SHEET 1 OF 12
F-21-046

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	EXISTING FENCE
	EXISTING STORM DRAIN
	EXISTING WELL
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING FENCE LINE
	EXISTING OVERHEAD WIRE
	BUILDING AND DRIVES TO BE REMOVED
	EXISTING PAVING
	EXISTING TREE LINE
	SOIL LINES AND TYPES
	DENOTES EXISTING TREES TO BE REMOVED
	DENOTES EXISTING TREES TO REMAIN
	SPECIMEN TREE
	CRITICAL ROOT ZONE
	DENOTES 15%-24.9% SLOPES

SPECIMEN TREE CHART					
TREE NUMBER	SPECIES	SIZE (inches)	CRZ (feet radius)	COMMENTS	REMAIN OR REMOVE
1	BLACK OAK	36	54	GOOD CONDITION	REMOVE
2	WHITE OAK	38.5	57.75	FAIR CONDITION, LEANING	REMOVE
3	BLACK OAK	32.5	48.75	GOOD CONDITION	REMAIN
4	TULIP POPULAR	37	55.5	GOOD CONDITION	REMAIN
5	BLACK OAK	31.5	47.25	GOOD CONDITION	REMAIN
6	BLACK OAK	32	48	GOOD CONDITION	REMAIN
7	BLACK OAK	30	45	GOOD CONDITION	REMAIN
8	RED OAK	39	58.5	GOOD CONDITION	REMAIN
9	TULIP POPULAR	30	45	GOOD CONDITION	REMAIN
10	BLACK OAK	32	48	POOR CONDITION, MAJOR TRUNK ROT	REMOVE



SOILS LEGEND			
SOIL	NAME	CLASS	K-VALUE
GbB	Gladstone loam, 3 to 6 percent slopes	B	.32
GbC	Gladstone loam, 6 to 15 percent slopes	B	.32

HOWARD COUNTY WEBSOILS SURVEY 09/15/20

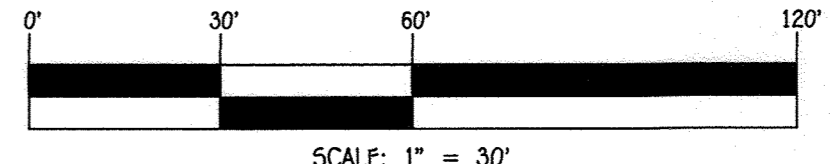
REVISIONS		
NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning
 Chief, Division of Land Development
 Approved: Chief, Development Engineering Division
 Approved: Chief, Department Of Public Works
 Chief, Bureau Of Highways



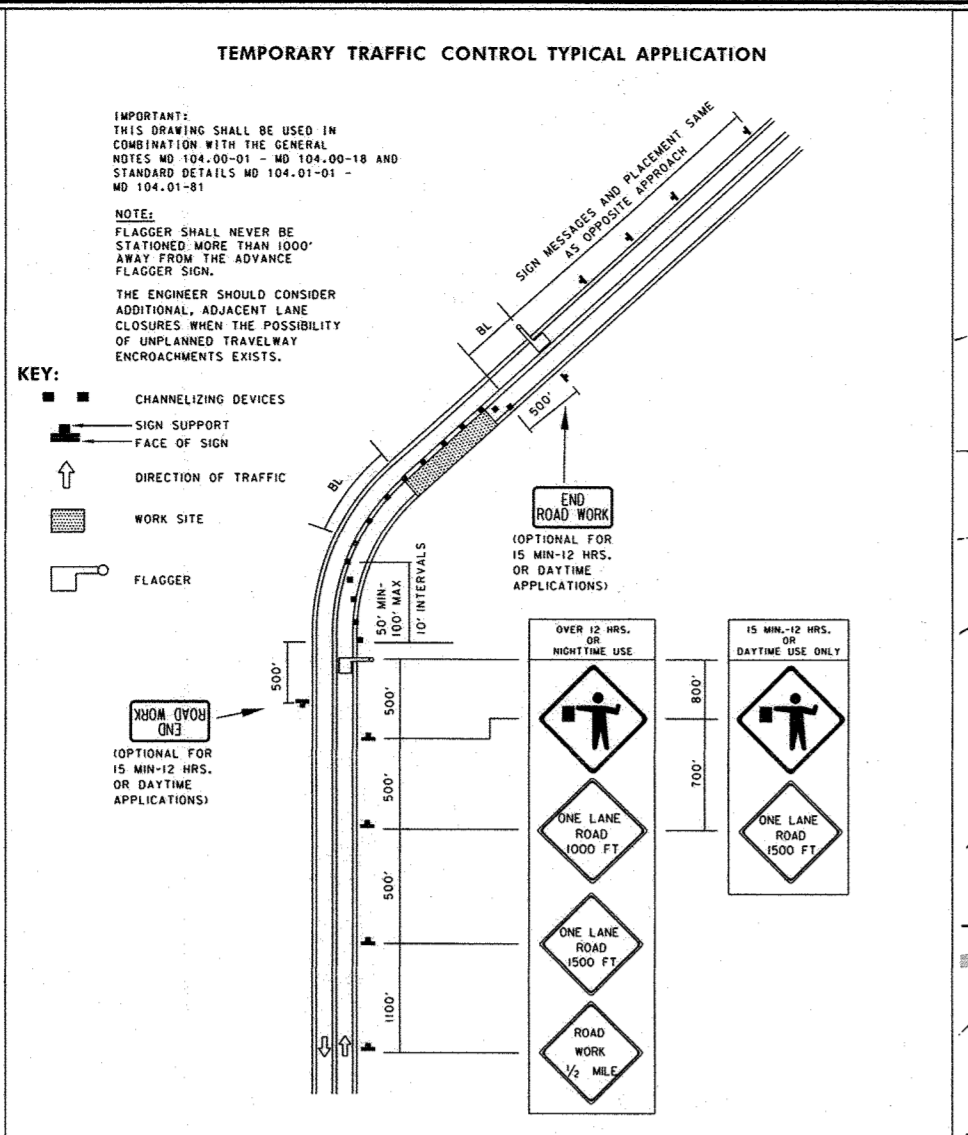
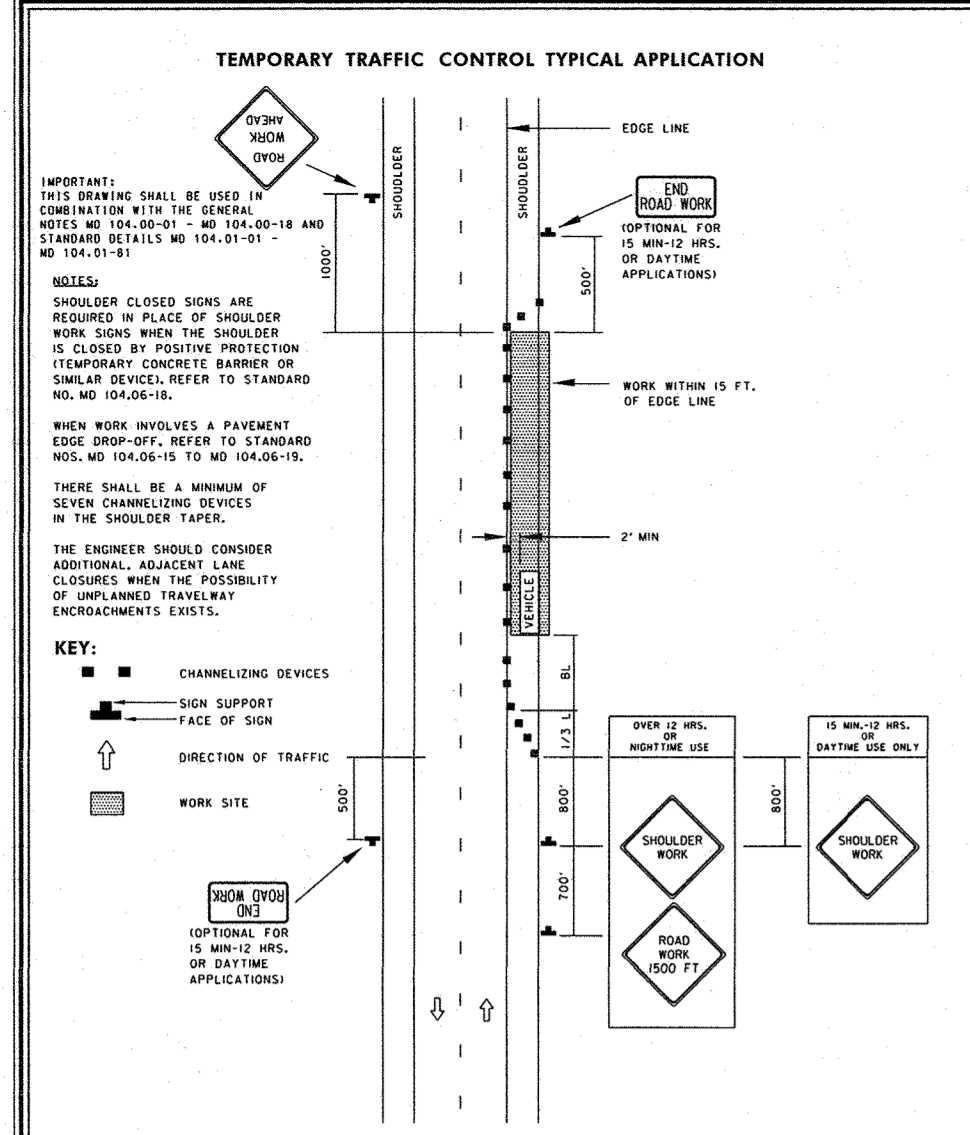
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PLAN VIEW
 SCALE: 1" = 30'



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 SOHILRAJ SAPARIYA AND
 HITESH ANKOLA
 5669 TROTTER ROAD
 CLARKSVILLE, MARYLAND 21029
 PH# 301-275-0762

EXISTING CONDITIONS, SOILS & DEMOLITION PLAN
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 5669 TROTTER ROAD
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 PLAT BOOK 5, PAGE 52
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 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: FEBRUARY, 2022
 SHEET 2 OF 12



APPROVED: **SMA** STATE HIGHWAY ADMINISTRATION
 STANDARD NO. MD 104.02-02

APPROVED: **SMA** STATE HIGHWAY ADMINISTRATION
 STANDARD NO. MD 104.02-10

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	EXISTING FENCE
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---	DENOTES EXISTING TREES TO BE REMOVED
---	DENOTES EXISTING TREES TO REMAIN
ST 3	SPECIMEN TREE
---	CRITICAL ROOT ZONE
---	DENOTES 15%-24.9% SLOPES
---	DENOTES MBR OVERLAND FLOWPATH

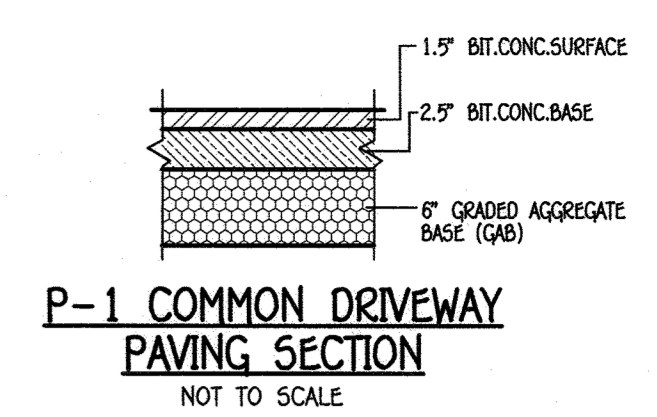
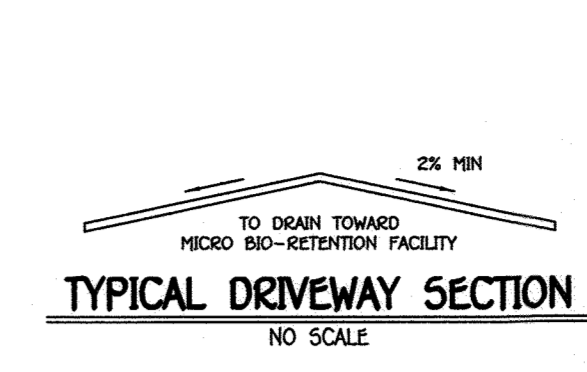
REVISIONS
 NO. DESCRIPTION DATE

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways

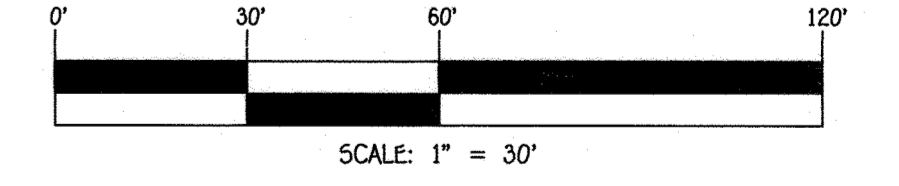
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PK
 ELLICOTT CITY, MARYLAND 21042
 410.461.2995



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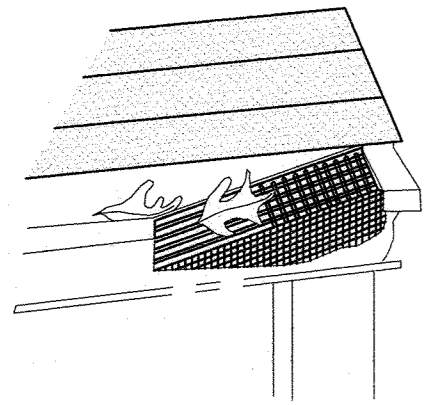


PLAN VIEW
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SUPPLEMENTAL PLAN
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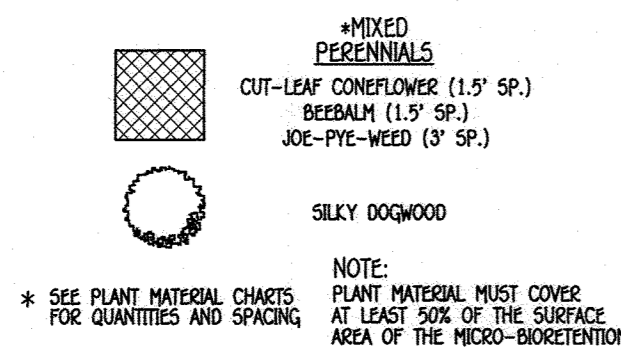
GUTTER DRAIN FILTER DETAIL
NOT TO SCALE

DRY WELL CHART									
LOT NO.	DRYWELL NO.	NO. OF DOWNSPOUTS	AREA OF ROOF	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF STORAGE	AREA OF TREATMENT	NO. OF DRYWELLS	DIMENSIONS OF DRYWELLS
LOT 1	1A	1	671 SqFt	140 CuFt	144 CuFt	100%	100%	1	9' X 8' X 5'
LOT 1	1B	1	768 SqFt	110 CuFt	144 CuFt	100%	100%	1	9' X 8' X 5'
LOT 2	2A	1	308 SqFt	44 CuFt	128 CuFt	100%	100%	1	8' X 8' X 5'
LOT 2	2B	1	708 SqFt	101 CuFt	128 CuFt	100%	100%	1	8' X 8' X 5'
LOT 2	2C	1	881 SqFt	126 CuFt	128 CuFt	100%	100%	1	8' X 8' X 5'

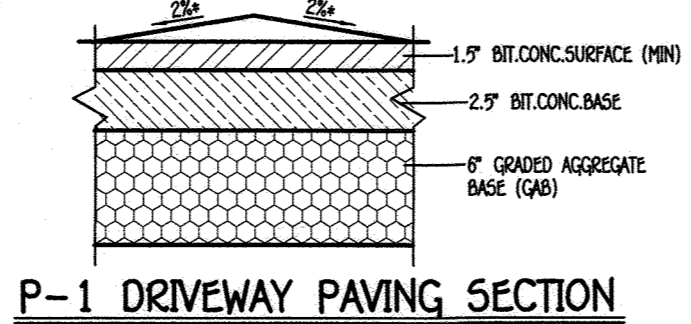
NOTES:
1) A MODIFICATION TO THE STORAGE REQUIREMENT (DRYWELL SIZE) MAY BE DETERMINED WHEN THE ACTUAL HOUSE TYPE IS SITED ON THE INDIVIDUAL LOT.

MICRO-BIORETENTIONS PLANT MATERIAL				
MICRO-BIO 1 QUANTITY	MICRO-BIO 2 QUANTITY		NAME	MAXIMUM SPACING (FT.)
21	26		MIXED PERENNIALS	1.5 TO 3.0 FT.
9	11		SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

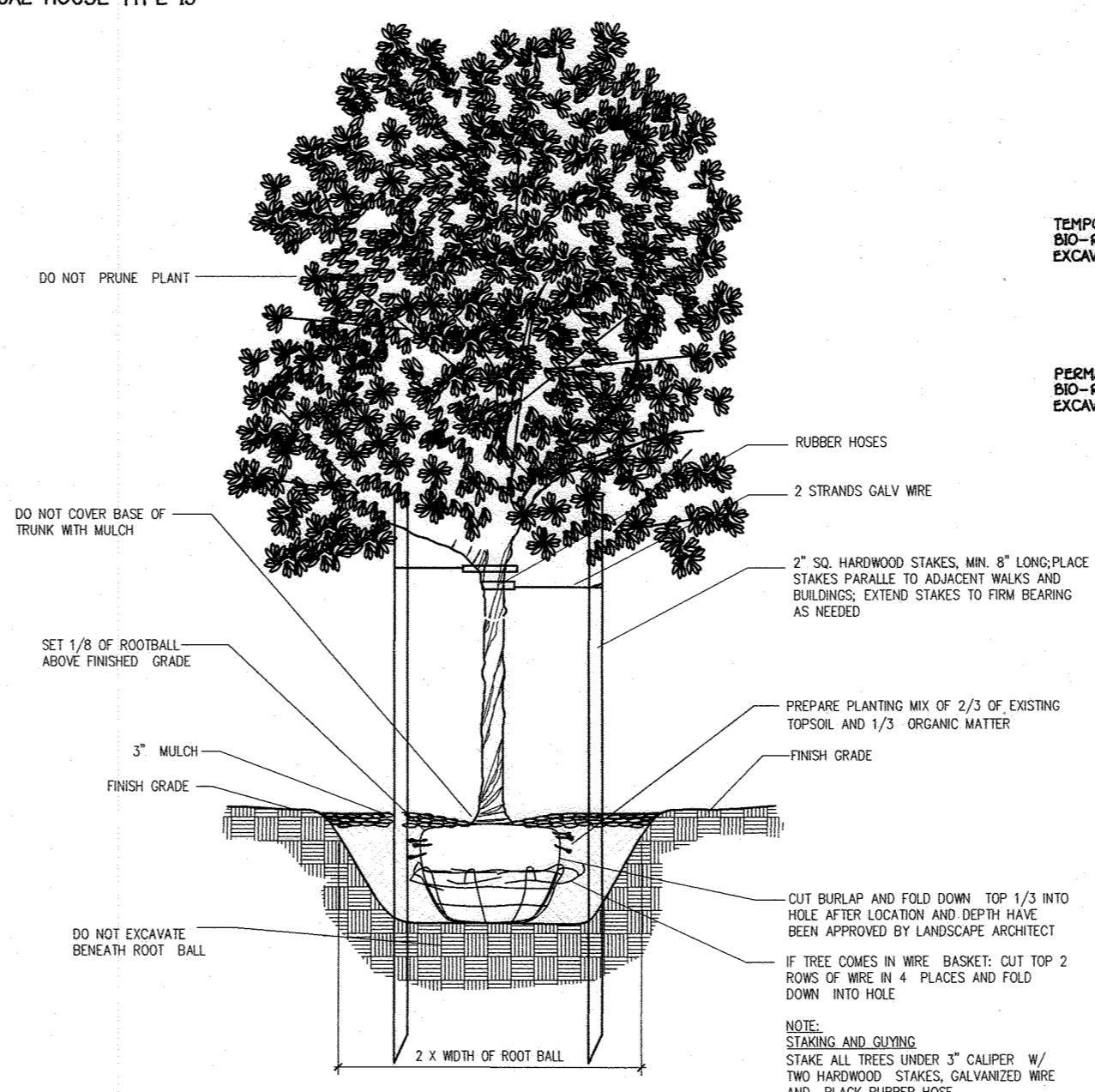
PRACTICE TYPE (QUANTITY)						
LOT NO.	FACILITY NAME & NUMBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	HOA MAINTAINS	MISC.
LOT 1	M-5(1A)	144 Cu.Ft.	N	Y	N	
LOT 1	M-5(1B)	144 Cu.Ft.	N	Y	N	
LOT 1	M-6(1)	565 Cu.Ft.	N	Y	N	
LOT 2	M-5(2A)	128 Cu.Ft.	N	Y	N	
LOT 2	M-5(2B)	128 Cu.Ft.	N	Y	N	
LOT 2	M-5(2C)	128 Cu.Ft.	N	Y	N	
LOT 2	M-6(2)	721 Cu.Ft.	N	Y	N	



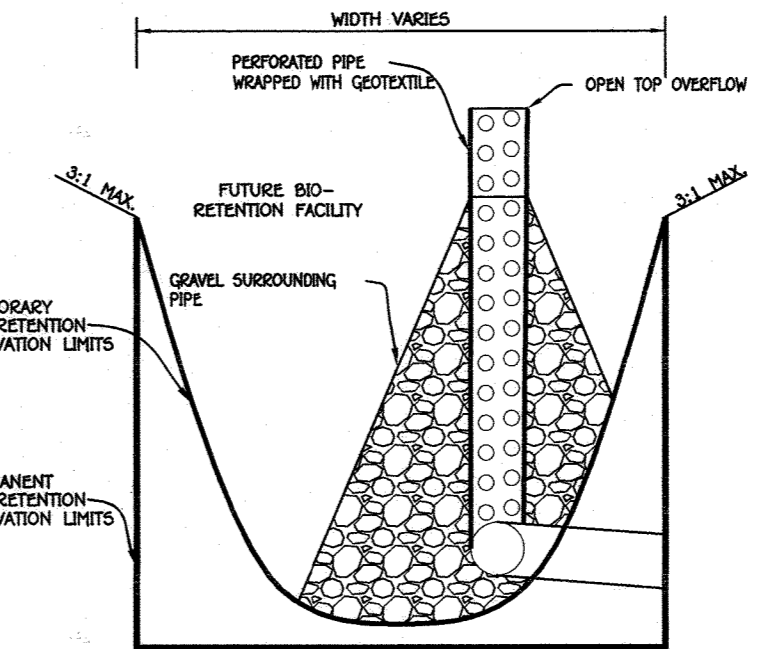
MIXED PERENNIALS
CUT-LEAF CONIFER (1.5' SP.)
JOE-PYE-WEED (3' SP.)
SILKY DOGWOOD
NOTE: PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING.
PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION



P-1 DRIVEWAY PAVING SECTION
NO SCALE
ROADWAY SHALL BE CROWNED TO DIRECT RUNOFF TO MICRO-BIORETENTION FACILITIES



DECIDUOUS TREE - TYPICAL PLANTING DETAIL



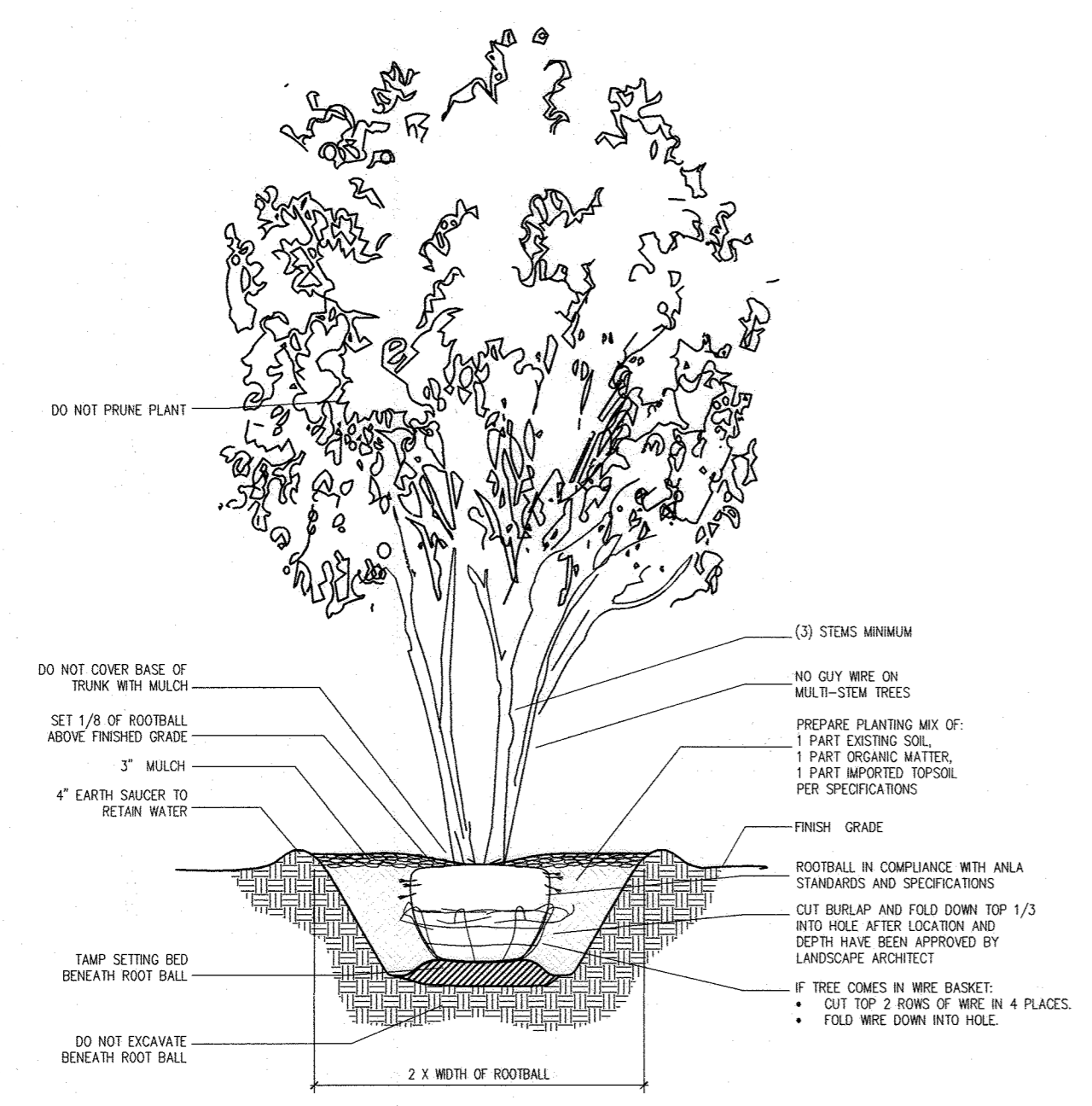
TYPICAL SECTION - OPTIONAL INTERIM BIO-RETENTION FACILITY
NO SCALE

PLANTING SPECIFICATIONS

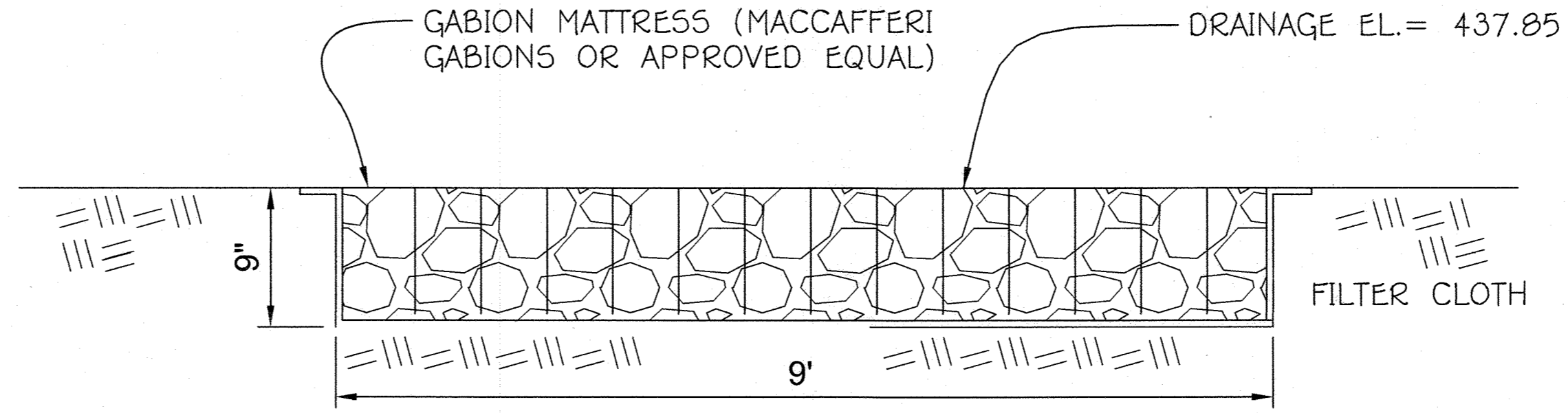
PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.
ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERMEN (AAN) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORERS AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEATED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL AGENDA.
CONTRACTOR SHALL BE GUARANTEED ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.
BID SHALL BE BASE ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.
ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS.
POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS (2 PERCENT SLOPE).
PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.
WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED.
ALL AREAS WITHIN CONTACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED.
A MINIMUM OF 20" SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND TREE.

Table B.4. Materials Specifications for Micro-Bio-retention, 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%		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
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobble	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	No. 57 or No. 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 pipe; not necessary underdrain slope. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Min. No. 3; f = 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 308.2R; vertical loading 1H-10 or 1H-20; allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.075" to 0.04"	Sand substitutions such as Dolomite and Gypstone (AASHTO) #10 are not acceptable. No calcium carbonate or dolomite sand substitutions are acceptable. No "rock dust" can be used for sand.



MULTISTEM TREE - TYPICAL PLANTING DETAIL

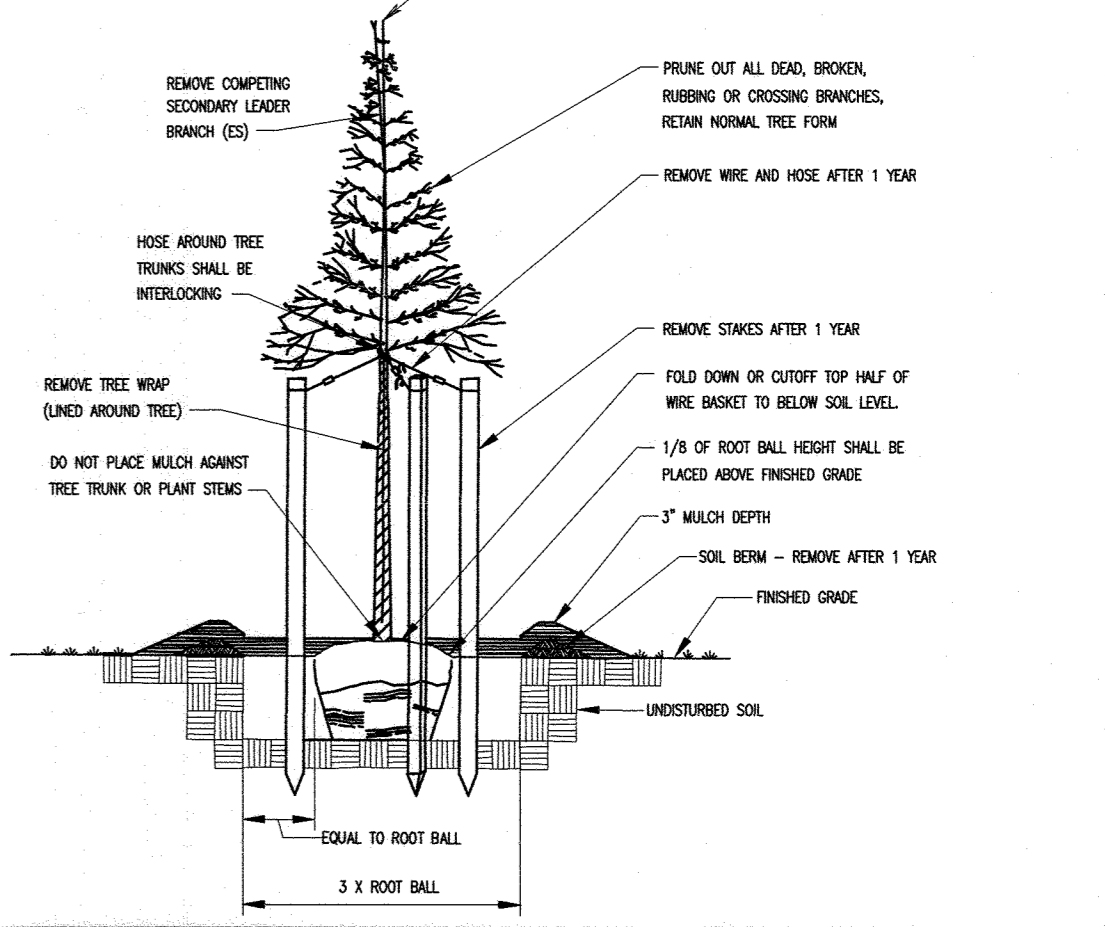


6'X9'X9" GABION MATTRESS
NO SCALE

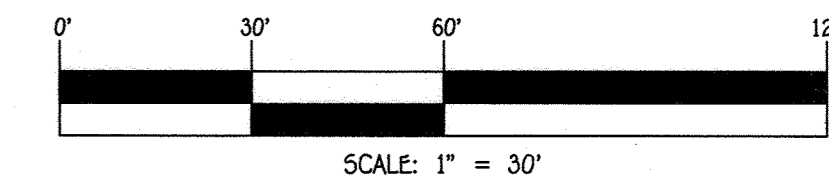
STRUCTURE SCHEDULE				
STRUCTURE	MATERIAL	TOP ELEVATION	INVERT IN	INVERT OUT
I-1	15" NYLOPLAST BASIN	442.0	438.5	438.4
I-2	15" NYLOPLAST BASIN	444.0	8" - 440.3	440.2
I-3	12" NYLOPLAST BASIN	445.8	-	445.0

GENERAL NOTES APPLICABLE TO ALL LANDSCAPING DETAILS:

- USE FOR USE AROUND TREE TRUNKS SHALL BE INTERLOCKING.
- TREE SUPPORTS INCLUDING WIRES, STAKES AND HOSE SHALL BE REMOVED AFTER 1 YEAR TO ALLOW TREES TO SWAY.
- FOLD DOWN OR CUT OFF HALF OF WIRE BASKET TO BELOW SOIL LEVEL.
- PIT DIAMETER SHALL BE THREE TIMES THE DIAMETER OF THE ROOT BALL.
- ROOT BALLS SHALL HAVE 1/8" OF HEIGHT ABOVE GRADE.
- SOIL BERMS SHALL BE REMOVED AFTER 1 YEAR.
- MULCH SHALL NOT BE DIRECTLY PLACED AGAINST TREE TRUNKS OR PLANT STEMS.
- PRUNING PATTERNS SHALL BE AS FOLLOWS:
PRUNE TO REMOVE BROKEN, DEAD AND DAMAGED BRANCHES. ON TREES WITH DOMINANT LEADERS, REMOVE COMPETING SECONDARY LEADERS. ALL PRUNING SHALL BE AS APPROVED BY THE ENGINEER.
6. SOIL COLLAR HEIGHT (SEE DETAIL FOR PLANTING IN WELL-DRAINED SOIL SHALL NOT BE USED. ONLY ROOT HEIGHT DETAILS FOR COMPACTED SOIL OR POORLY DRAINING SOIL SHALL BE USED.



Howard County, Maryland Department of Public Works Approved: <i>Thomas R. Smith</i> Chief, Bureau of Engineering	Landscaping General Notes	Detail L-1.01
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SCALE: 1" = 30'

DETAILS AND NOTES
SAPARIYA PROPERTY
5669 TROTTER ROAD
A RESUBDIVISION OF CRISWOOD MANOR
SECTION TWO - LOT 65
PLAT BOOK 5, PAGE 52
TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180
ZONED R-20
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEBRUARY, 2022
SHEET 4 OF 12

OWNER/DEVELOPER
DIVYESH SAPARIYA,
SOHILRAJ SAPARIYA AND
HITESH ANKOLA
5669 TROTTER ROAD
CLARKSVILLE, MARYLAND 21029
PH# 301-275-0762

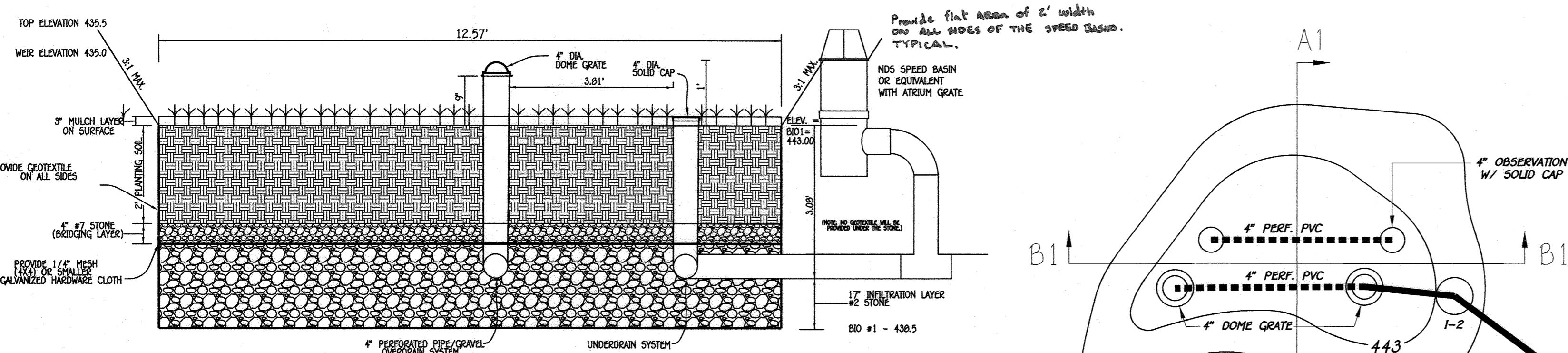
REVISIONS
NO. DESCRIPTION DATE
1 Approved: Department Of Planning And Zoning
Chief, Division Of Land Development
Date: 4/17/22
2 Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways
Date: 10/09/2022

Approved: Department Of Planning And Zoning
Chief, Division Of Land Development
Date: 4/17/22
Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways
Date: 10/09/2022

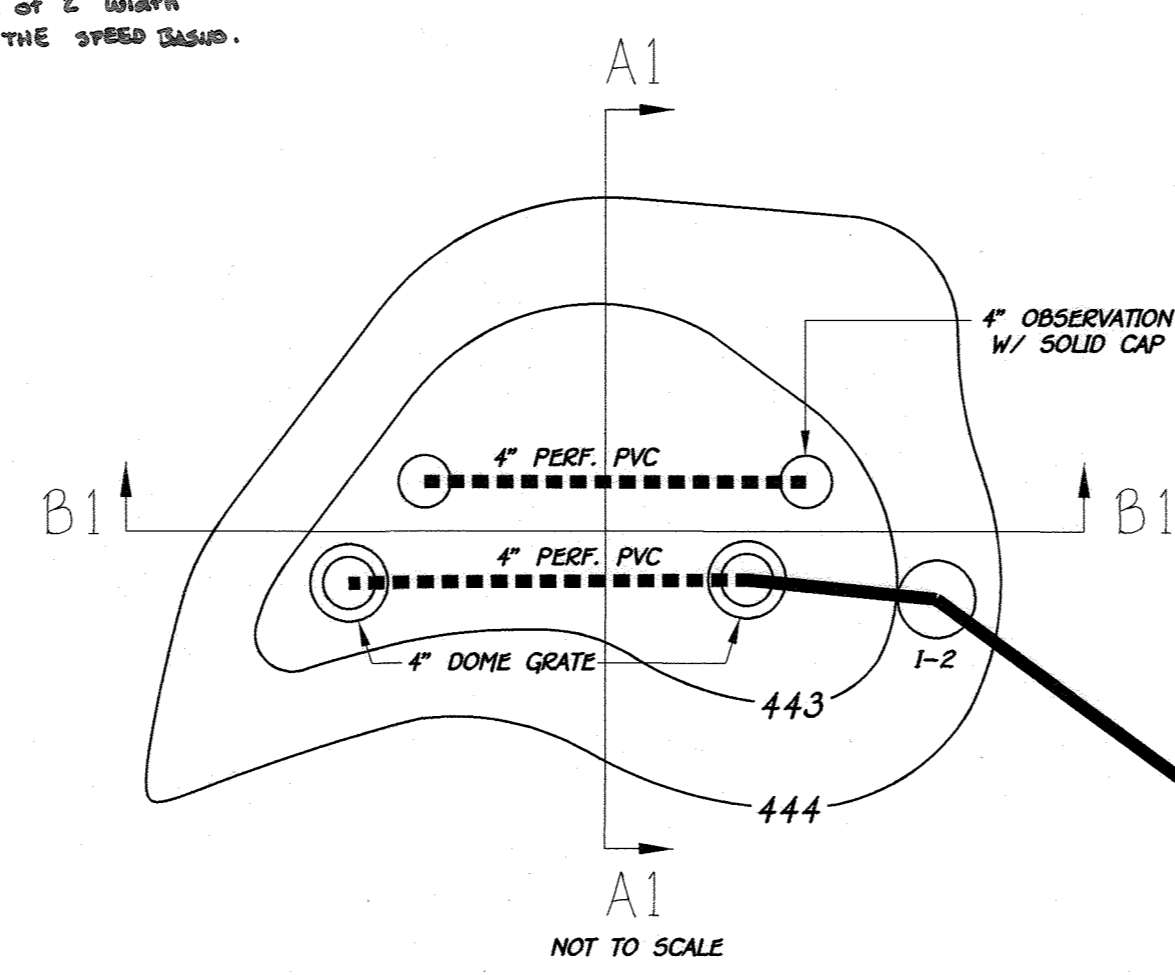


PROFESSIONAL CERTIFICATION
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Paul G. Cavanaugh DATE: 4/18/2022
PAUL G. CAVANAUGH

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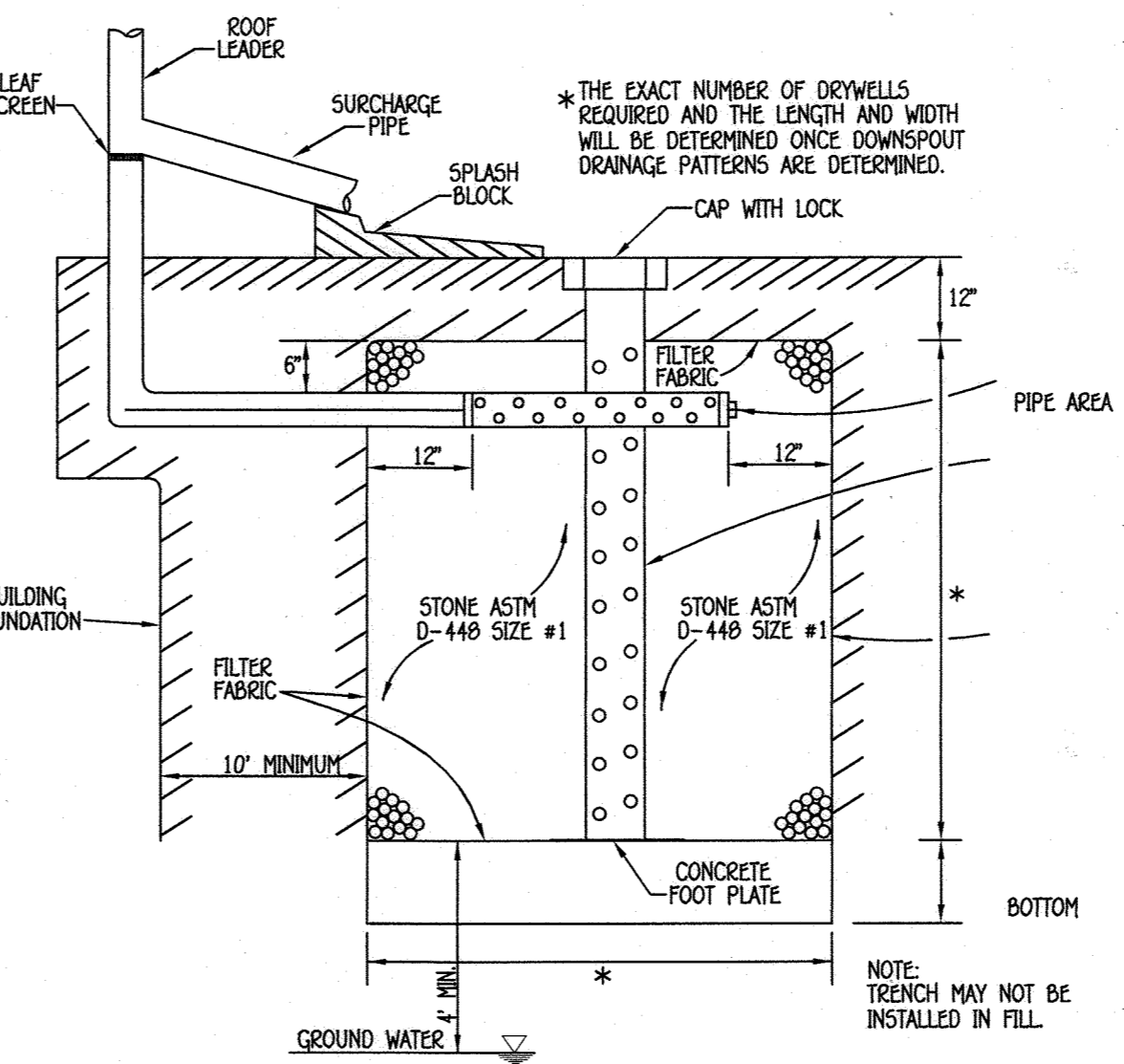
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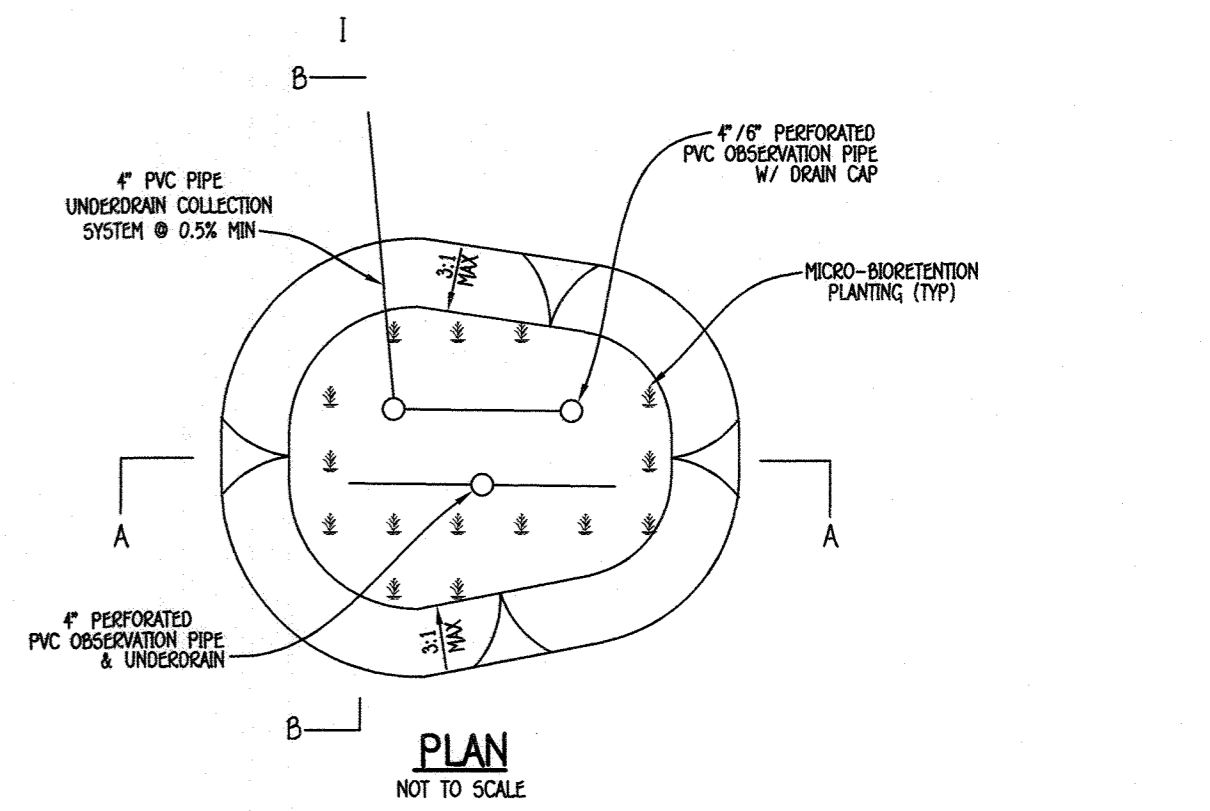
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OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

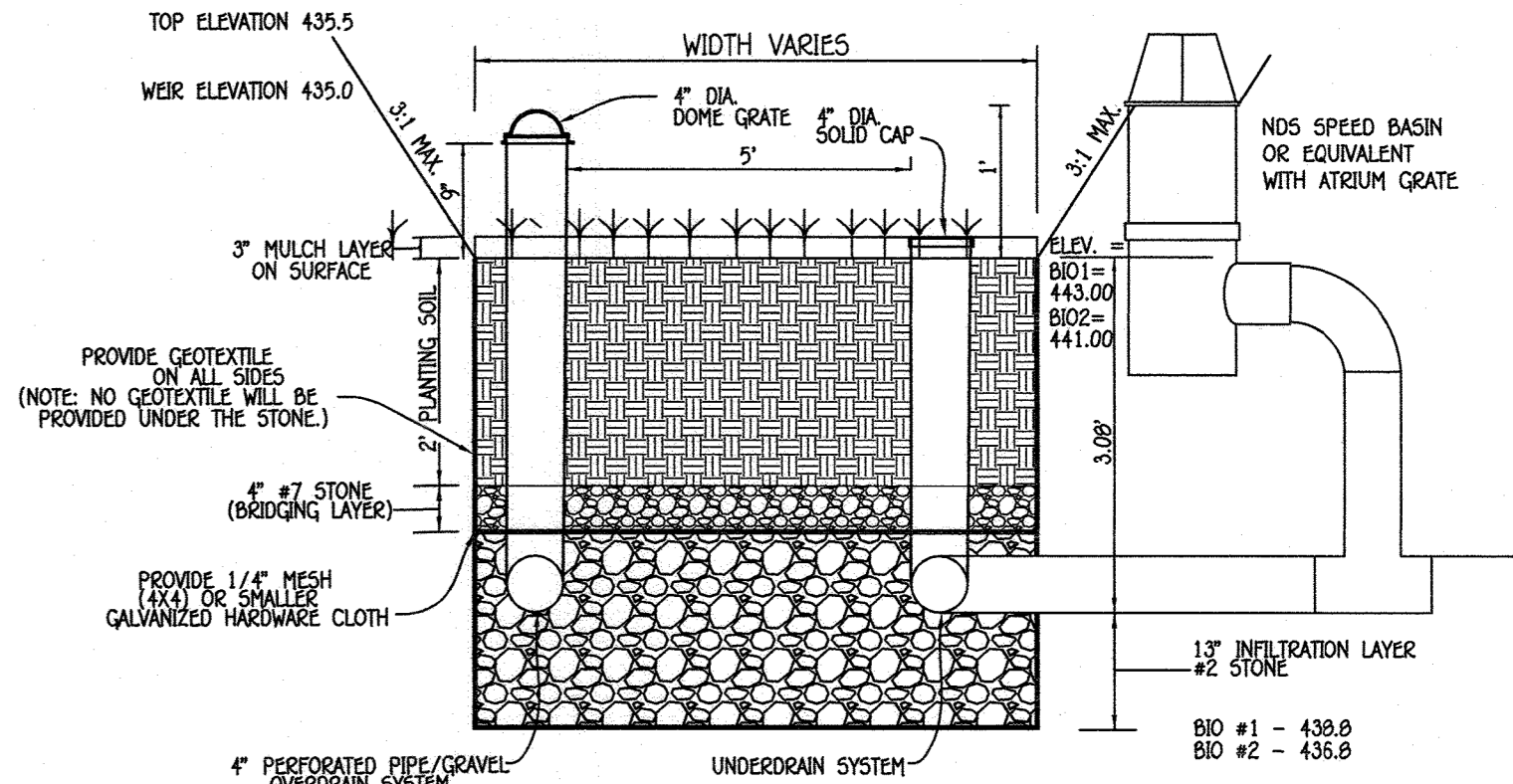
- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.



DRY WELL DETAIL (M-5)
NOT TO SCALE



PLAN
NOT TO SCALE



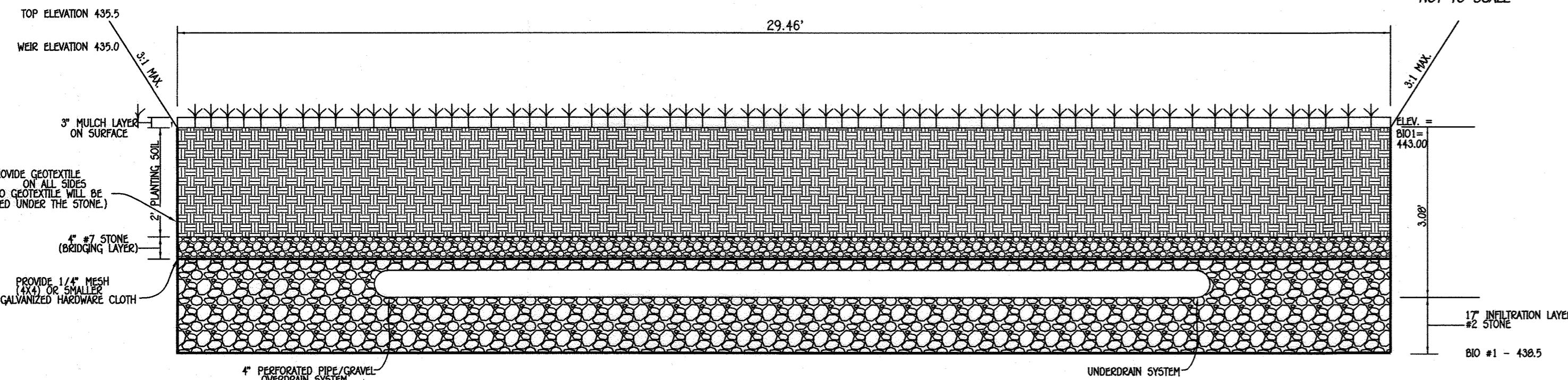
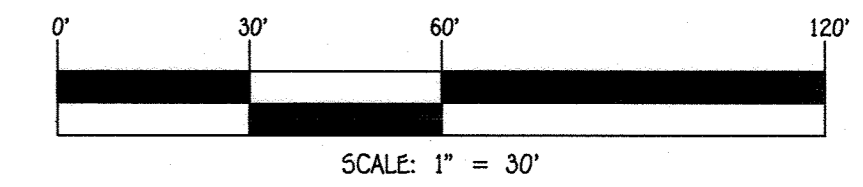
TYPICAL SECTION BIO-RETENTION FACILITY (M-6)
NO SCALE

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

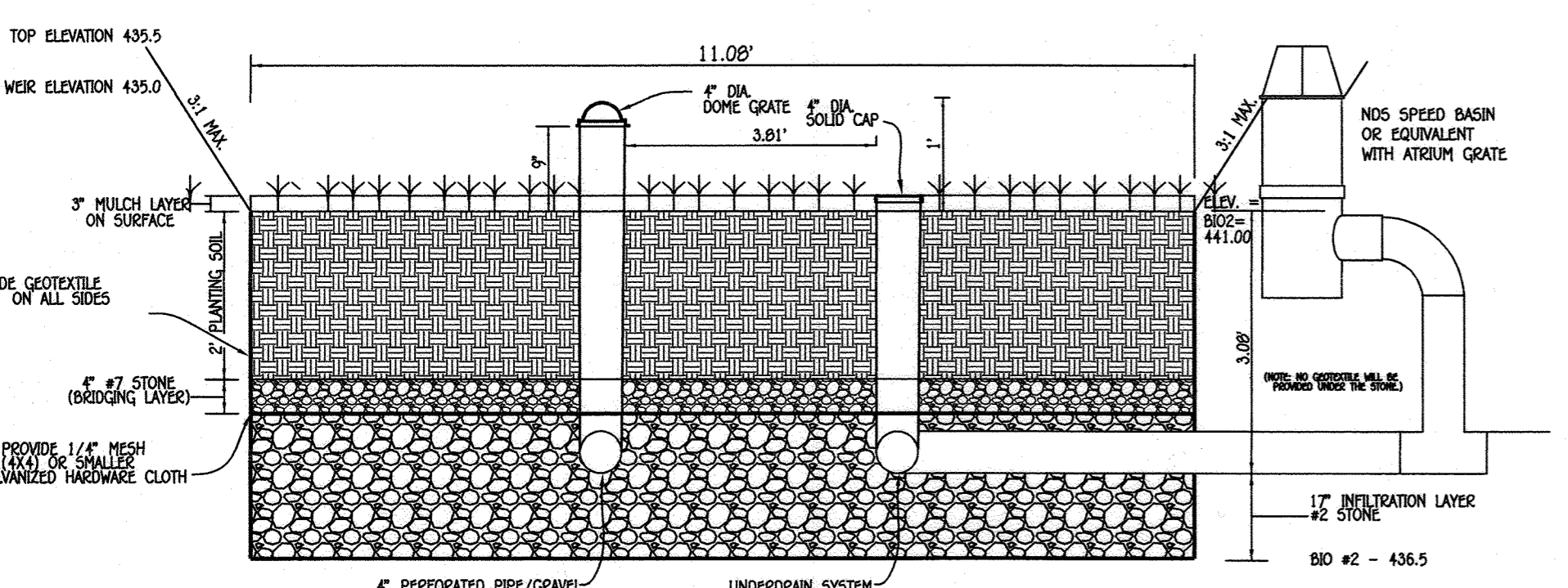
- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING, THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

STORMWATER MANAGEMENT NOTES

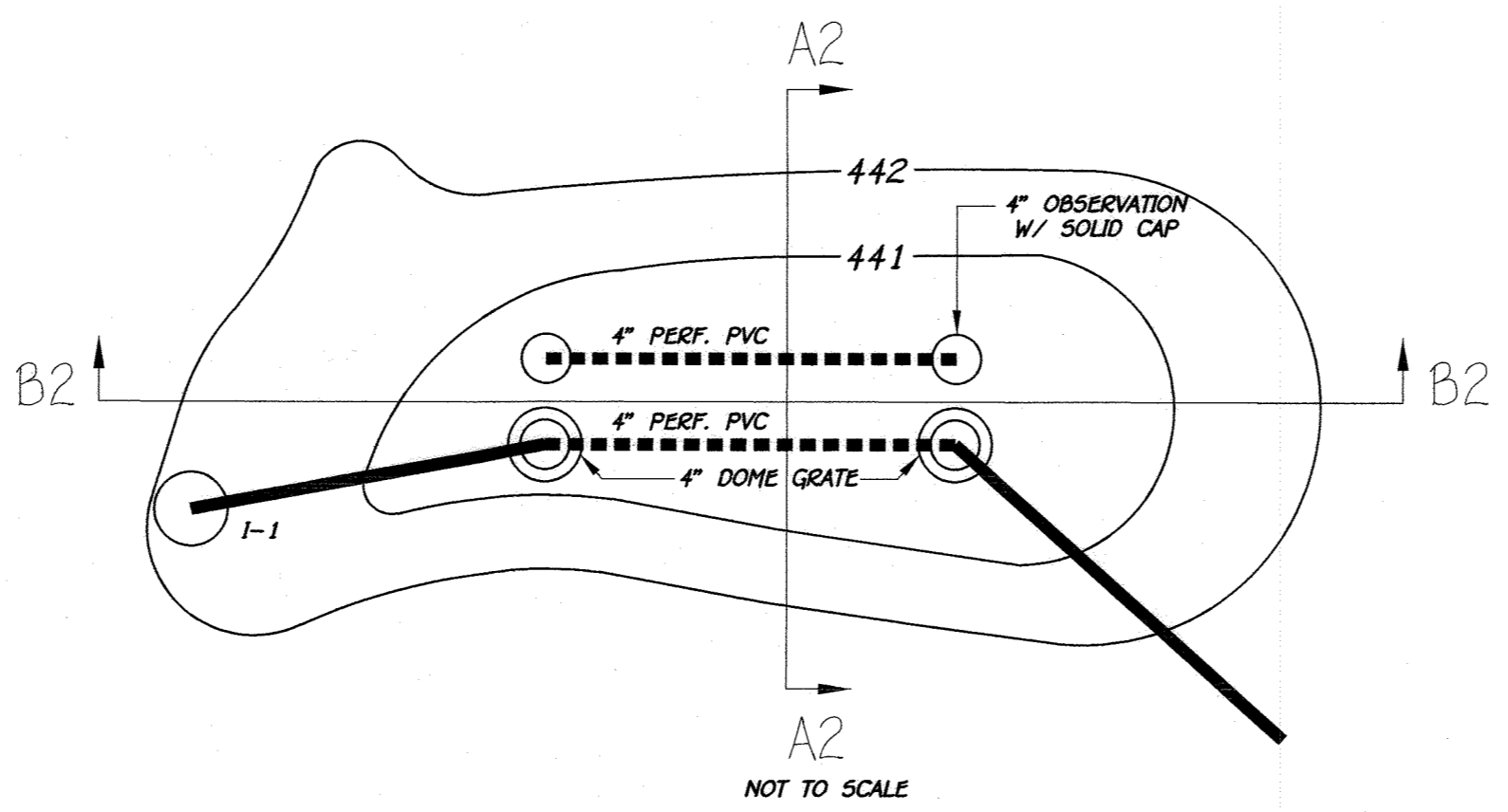
- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 500 SQ. FT. OR LESS.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5% SLOPE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.



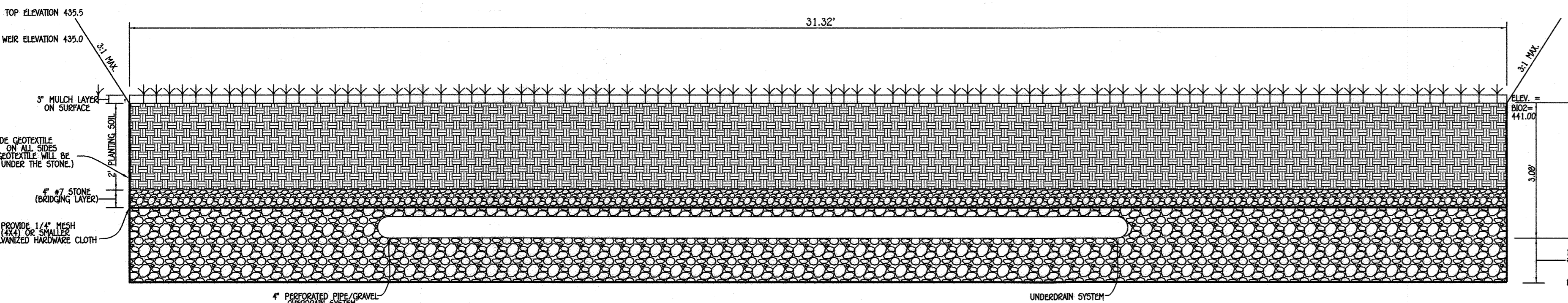
SECTION B1-B1
NOT TO SCALE



SECTION A2-A2
NOT TO SCALE



NOT TO SCALE



SECTION B2-B2
NOT TO SCALE

NO.	REVISIONS DESCRIPTION	DATE

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development *[Signature]* 11/17/22 Date
 Chief, Development Engineering Division *[Signature]* 10-2-22 Date
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways *[Signature]* 10/04/2022 Date

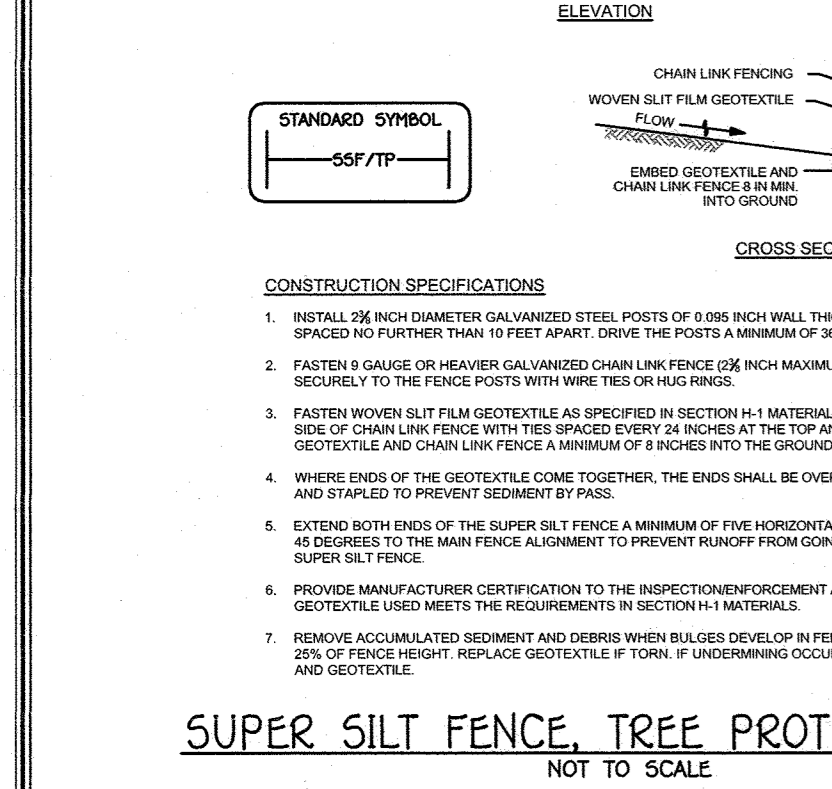
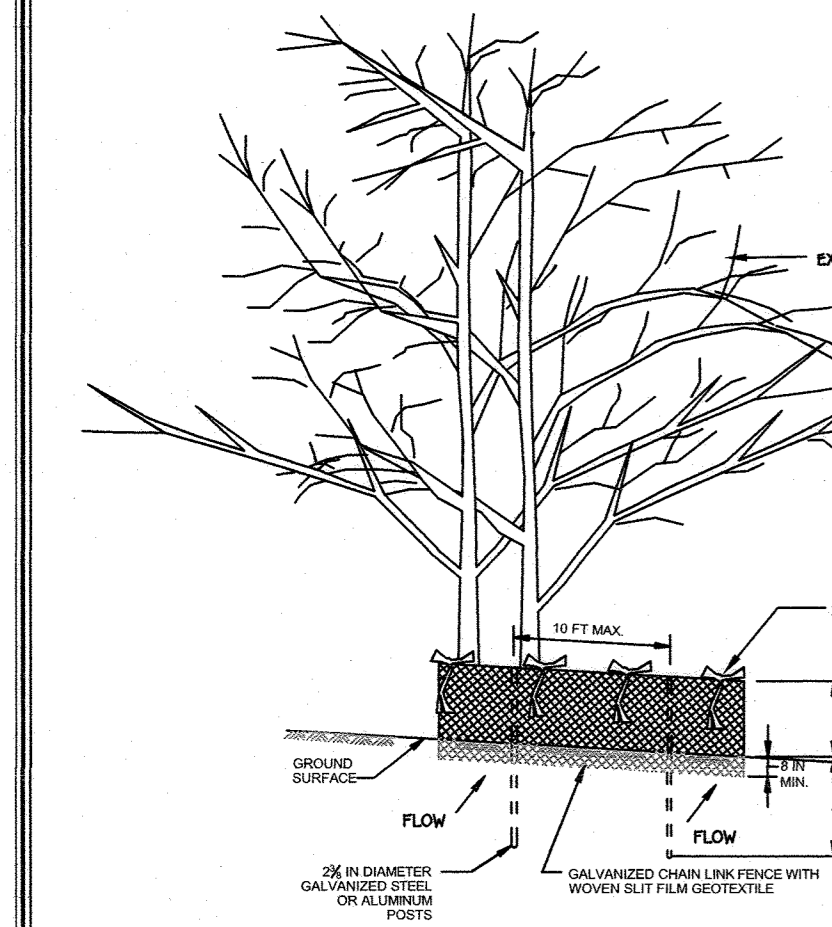


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[Signature] 10/18/2022 DATE
 PAUL G. CAVANAUGH

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 (410) 461-2299

SWM DETAILS AND NOTES
SAPARIYA PROPERTY
 5669 TROTTER ROAD
 A RESUBDIVISION OF CRISWOOD MANOR
 SECTION TWO - LOT 65
 PLAT BOOK 5, PAGE 52
 TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180
 ZONED R-20
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: FEBRUARY, 2022
 SHEET 5 OF 12
OWNER/DEVELOPER
 DIVYESH SAPARIYA,
 SOHILRAJ SAPARIYA AND
 HITESH ANKOLA
 5669 TROTTER ROAD
 CLARKSVILLE, MARYLAND 21029
 PH# 301-275-0762
F-21-046

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	EXISTING FENCE
X 449.5	SPOT ELEVATION
---	EXISTING STORM DRAIN
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	EXISTING OVERHEAD WIRE
---	EXISTING FENCE LINE
---	PROPOSED PAVING
---	PRIVATE UIC EASEMENT
---	PRIVATE DRAINAGE & UTILITY EASEMENT
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE/TREE PROTECTION FENCE
---	DIVERSION FENCE/TREE PROTECTION FENCE
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
---	DRAINAGE DIVIDE
---	PERMANENT SOIL STABILIZATION CONTROL MATTING
---	SOIL LINES AND TYPES
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	DENOTES EXISTING TREES TO BE REMOVED
---	DENOTES EXISTING TREES TO REMAIN
ST 3	SPECIMEN TREE
---	CRITICAL ROOT ZONE
---	DENOTES 15%-24.9% SLOPES
---	DENOTES MBR OVERLAND FLOWPATH



REVISIONS		
NO.	DESCRIPTION	DATE

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DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL:

TYPE A MAXIMUM DRAINAGE AREA = 1/2 ACRE
 TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE

SECTION FOR TYPE A AND B

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

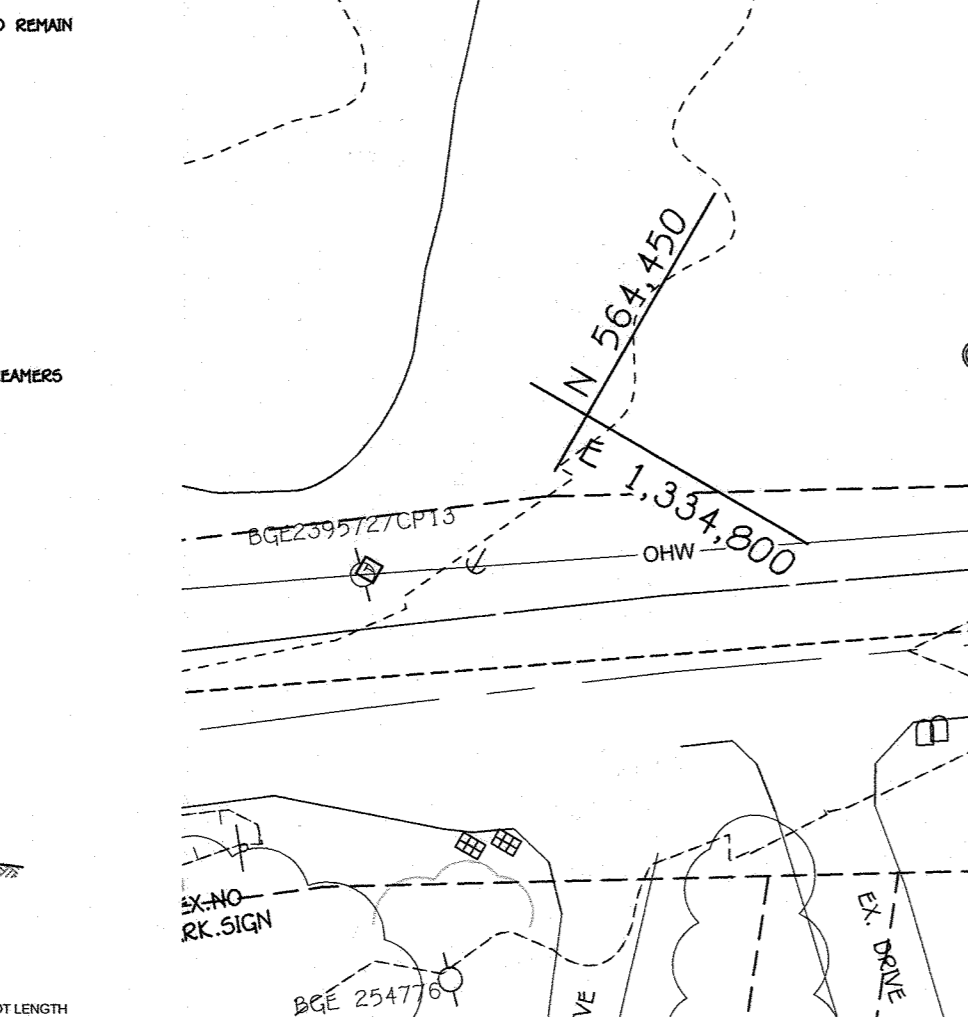
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION STANDARD SYMBOL

CONSTRUCTION SPECIFICATIONS

- USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ATTACH THE TOP PORTION OF THE 2x4 FRAME AS SHOWN. STRETCH 1/2 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE MAIN CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- FOR TYPE B, USE 2 1/2 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 18 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE MAIN CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE STEEL POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE MAIN CREST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LETTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOSING. 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

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION STANDARD SYMBOL



DEVELOPER'S CERTIFICATE

"I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary."

Paul G. Cavanaugh *Aug 18, 2022*
 Signature Of Developer Date

PROFESSIONAL CERTIFICATE

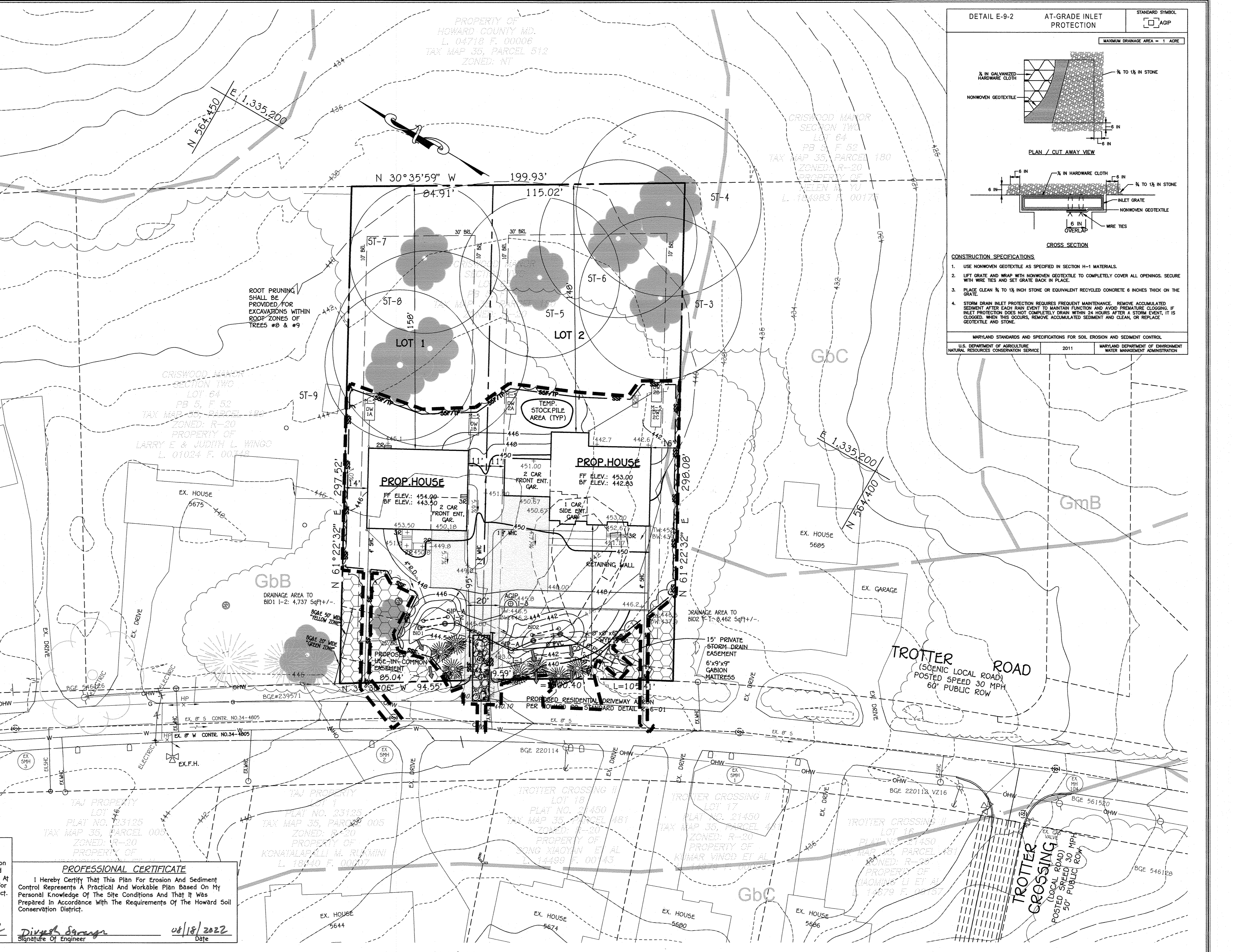
I Herby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Divyesh Sapariya *08/18/2022*
 Signature Of Engineer Date

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/24.

Paul G. Cavanaugh *Aug 18, 2022*
 Signature Date



PLAN VIEW
 SCALE: 1" = 30'

GRADING AND EROSION/SEDIMENT CONTROL PLAN

SAPARIYA PROPERTY
 5669 TROTTER ROAD
 A RESUBDIVISION OF CRISWOOD MANOR
 SECTION TWO - LOT 65
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 CLARKSVILLE, MARYLAND 21029
 PH# 301-275-0762

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. Soil Preparation

- 1. Temporary Stabilization
a. Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...
b. Apply fertilizer and lime as prescribed on the plan.

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...
2. Topsoil salvaged from an existing site may be used as topsoil meet the following criteria:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

- 1. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection...
2. Application
a. Apply mulch to all seeded areas immediately after seeding.

TEMPORARY SEEDING NOTES (B-4-4)

- Definition
To stabilize disturbed soils with vegetation for up to 6 months.
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.

Table with columns: Hardiness Zone, Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, Fertilizer Rate (lb/ac), Lime Rate (tons/ac). Rows include BARLEY, OATS, and RYE.

PERMANENT SEEDING NOTES (B-4-5)

- A. Seed Mixtures
1. General Use
a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone...
2. Turfgrasses Mixtures
a. Areas where turfgrasses may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

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

- Definition
The application of seed and mulch to establish vegetative cover.
Conditions Where Practice Applies
To protect disturbed soils from erosion during the end of construction.
A. Seeding
1. Specifications
a. All seed must meet the requirement of the Maryland State Seed Law...
2. Application
a. Dry Seeding: This includes use of conventional drill or broadcast spreaders.

Table with columns: Hardiness Zone, Species, Application Rate (lb/ac), Seeding Dates, Seeding Depths, N, P2O5, K2O, Lime Rate (tons/ac). Rows include TALL FESCUE and RYE.

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

- 1. General Specifications
a. Classes of turfgrass sod must be Maryland State Certified. Sod blades must be made available to the job foreman and inspector.
b. Sod must be machine cut at a uniform soil thickness of 1/2 inch, plus or minus 1/8 inch, at the time of cutting.

B-4-B STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

- Definition
A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
Purpose
To provide a designated location for the temporary storage of soil that contains the potential for erosion, sedimentation, and changes to drainage patterns.
Conditions Where Practice Applies
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

- 1. A pre-construction meeting must occur with the Howard County Public Safety, Construction Inspection Division (CID), 410-313-1550 after the future LID and protected areas are marked clearly in the field...
2. All vegetation or grading inspection reports may not be authorized until the initial approval by the inspection agency is made.
3. All existing 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.

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDENS, LANDSCAPE INFILTRATION & INFILTRATION BEDS

- 1. Material Specifications
a. The aggregate material to be used in these practices are detailed in Table B.4.1.
2. Filtering Media or Planting Soil
a. The soil shall be a uniform mix, free of stones, clumps, roots or other similar objects larger than 1/2 inch.

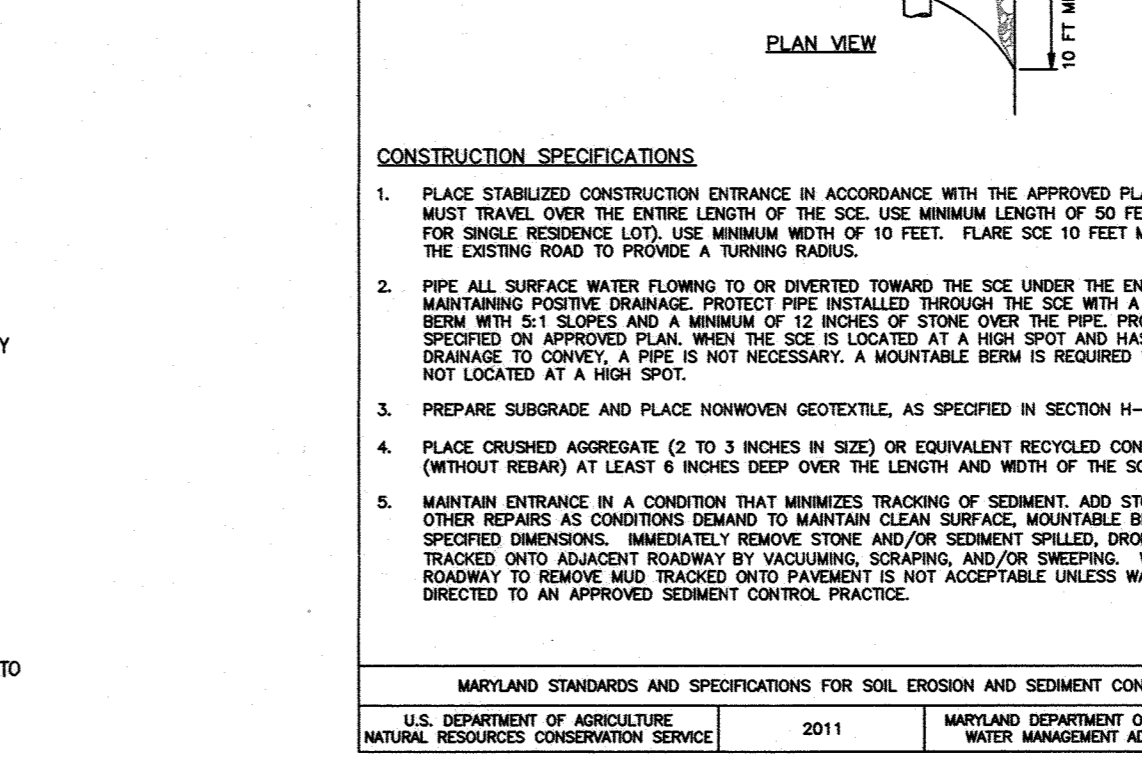
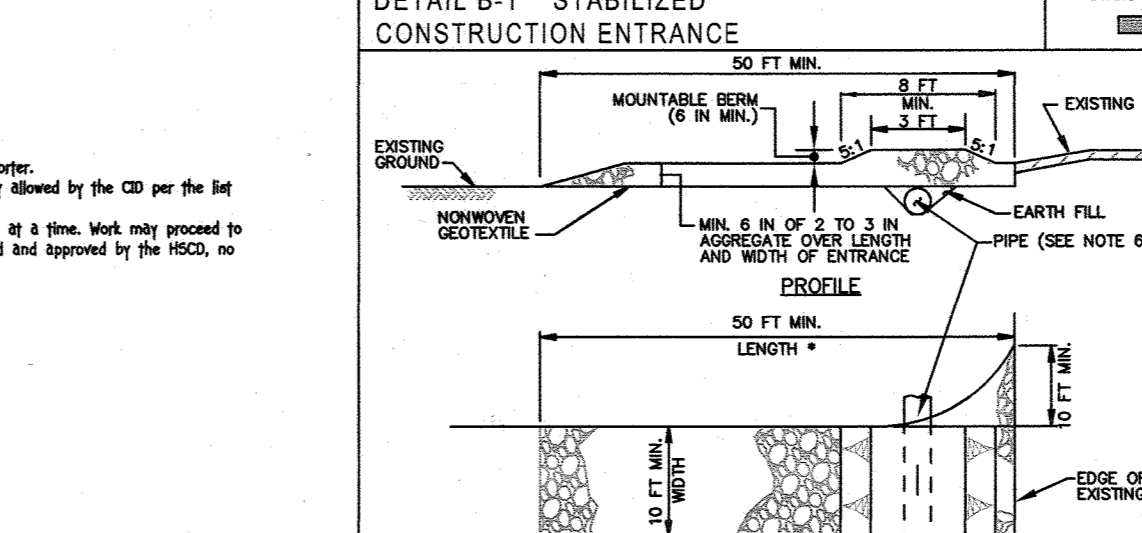
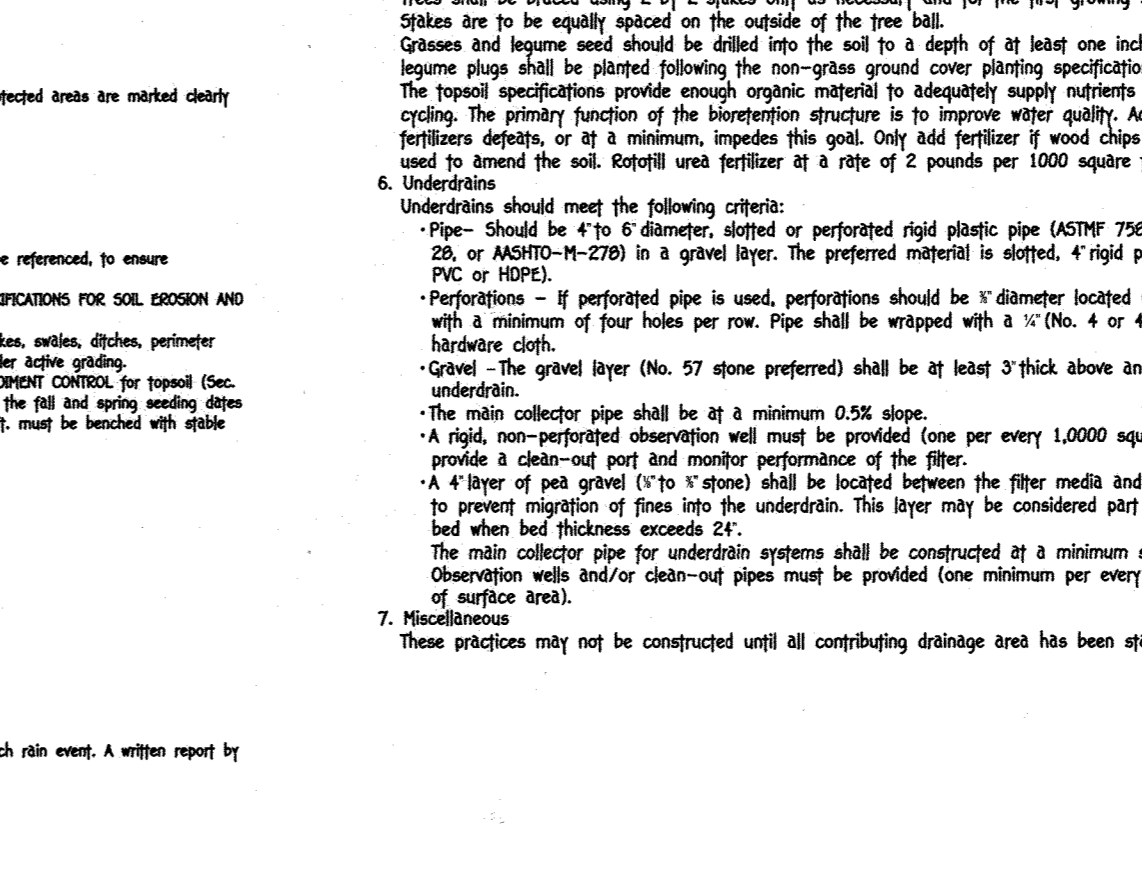


Table with columns: NO., REVISIONS, DESCRIPTION, DATE. Includes a signature block for the Chief, Division Of Land Development, dated 4/17/22.

Table with columns: NO., REVISIONS, DESCRIPTION, DATE. Includes a signature block for the Chief, Development Engineering Division, dated 10.12.22.

Table with columns: NO., REVISIONS, DESCRIPTION, DATE. Includes a signature block for the Chief, Bureau Of Highways, dated 10/16/2022.

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/24.
PAUL G. CAVANAUGH

CONSTRUCTION SPECIFICATIONS
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SIZE. MINIMUM LENGTH OF 50 FEET (30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 16 FEET. FLARE SIDE TO FUTURE SIDE OF THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.

CONSTRUCTION SPECIFICATIONS
1. USE WOOD POSTS 1 1/2 x 1 1/2 x 8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST, USE STANDARD 7/8 IN. UP SECTION STEEL POSTS BENDING NOT LESS THAN 1 FOOT PER BREAK FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SILT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE MANUFACTURER TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.

CONSTRUCTION SPECIFICATIONS
1. INSTALL 26 INCH DIAMETER GALVANIZED STEEL POSTS OF 0.065 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DAVE THE PILES A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 6 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (26 INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.

SEC DETAILS AND NOTES
GRADING PLAN
SAPARIYA PROPERTY
5669 TROTTER ROAD
A RESUBDIVISION OF CRISWOOD MANOR
SECTION TWO - LOT 65
PLAT BOOK 5, PAGE 52
TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180 ZONED R-20
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: FEBRUARY, 2022
SHEET 7 OF 12
OWNER/DEVELOPER
DIVYESH SAPARIYA, SOHILRAJ SAPARIYA AND HITESH ANKOLA
5669 TROTTER ROAD
CLARKSVILLE, MARYLAND 21029
PH# 301-275-0762
SCALE: 1" = 30'

SOILS LEGEND			
SOIL	NAME	CLASS	T VALUE
GbB	Gladstone loam, 3 to 8 percent slopes	B	.32
GbC	Gladstone loam, 8 to 15 percent slopes	B	.32

HOWARD COUNTY WEBSOILS SURVEY 09/15/20

SCHEDULE A PERIMETER LANDSCAPE EDGE						
PERIMETER	P1	P2	P3	P4	MITIGATION	TOTALS
CATEGORY	ADJACENT TO ROADWAY	ADJACENT TO PERIMETER PROPERTY	ADJACENT TO PERIMETER PROPERTY	ADJACENT TO PERIMETER PROPERTY	2:1 REPLACEMENT FOR REMOVAL OF THREE SPECIMEN TREES	
LANDSCAPE TYPE	NONE	A	A	A		
LINEAR FEET OF PERIMETER	200 LF	290 LF	200 LF	290 LF		
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (SCORE BELOW IF NEEDED)	NO	YES, 159 LF	YES-200 LF	YES-149 LF		
CREDIT FOR WALL, FENCE OR BERTH (YES, NO, LINEAR FEET) (SCORES IF NEEDED)	NO	NO	NO	NO		
NUMBER OF PLANTS REQUIRED						
SHADE TREES	0	3	0	3	6	12
EVERGREEN TREES	0	0	0	0	0	0
SHRUBS	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED						
SHADE TREES	0	3	0	3	6	6
SMALL DECIDUOUS	0	0	0	0	0	0
EVERGREEN TREES	0	0	0	0	0	0
SHRUBS	0	0	0	0	0	0

- LANDSCAPE NOTES**
- PERIMETER LANDSCAPING SHALL BE IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$3,600.00 FOR 9 SHADE TREES (\$300 ea.) AND 6 SMALL DECIDUOUS TREES (\$150 ea.) AND WILL BE PROVIDED AS PART OF THE SITE DEVELOPMENT PLAN (LOT 1 - \$1,500; LOT 2 - \$2,100). PER SECTION 16.127.C.1.8 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS FOR INFILL DEVELOPMENT A TYPE 'A' LANDSCAPE BUFFER HAS BEEN PROVIDED.
 - AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
 - THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERM, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
 - FOR ANY TREE DESIGNATED FOR PRESERVATION, FOR WHICH CREDIT IS GIVEN, BE REMOVED OR DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR IF THE TREE IS LISTED AS A PROHIBITED OR INVASIVE SPECIES ON THE DPZ TREE LIST IT SHOULD BE REPLACED WITH A RECOMMENDED TREE SPECIES WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE LANDSCAPE MANUAL.

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	EXISTING FENCE
x 448.5	SPOT ELEVATION
1" 50	EXISTING STORM DRAIN
EX. FH	EXISTING WATER LINE
EX. SW	EXISTING SEWER LINE
EX. OH	EXISTING OVERHEAD WIRE
---	EXISTING FENCE LINE
---	PROPOSED PAVING
---	PRIVATE UIC EASEMENT
---	PRIVATE DRAINAGE & UTILITY EASEMENT
---	LIMIT OF DISTURBANCE
SSP/TP	SUPER SILT FENCE/TREE PROTECTION FENCE
DF/TP	DIVERSION FENCE/TREE PROTECTION FENCE
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
---	DRAINAGE DIVIDE
---	PERMANENT SOIL STABILIZATION CONTROL MATTING
GbB	SOIL LINES AND TYPES
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	DENOTES EXISTING TREES TO BE REMOVED
---	DENOTES EXISTING TREES TO REMAIN
ST 3	SPECIMEN TREE
---	CRITICAL ROOT ZONE
---	DENOTES 15%-24.9% SLOPES



FOREST CONSERVATION WORKSHEET

Net Tract Area	A=1.36
A.Total (Gross) Tract Area	B=0.00
B.Area within 100-year Floodplain	C=0.00
C.Other Deductions (Identify)	D=1.36
D.Net Tract Area	

Land Use Category: Institutional

E.Afforestation Threshold (Net Tract Area x15%)	E=0.20
F.Reforestation Threshold (Net Tract Area x20%)	F=0.30

Existing Forest Cover

G.Existing Forest Cover within the Net Tract Area	G=0.47
H.Area of Forest above Afforestation Threshold	H=0.30
I.Area of Forest above Reforestation Threshold	I=0.20

Break Even Point

J.Break Even Point	J=0.37
K.Forest Clearing Permitted without Mitigation	K=0.10

Proposed Forest Clearing

L.Total Area of Forest to be Cleared	L=0.37
M.Total Area of Forest to be Retained	M=0.10

Planting Requirements Inside Watershed

N.Reforestation for Clearing above the Reforestation Threshold	N=0.10
P.Reforestation for Clearing below the Reforestation Threshold	P=0.40
Q.Credit for Retention above the Reforestation Threshold	Q=0.00
R.Total Reforestation Required	R=0.50
S.Total Afforestation Required	S=0.00
T.Total Reforestation and Afforestation Requirement	T=0.50
U.75% of Total Obligation (Retention + Planting)	U=0.50
V.Planting Required Onsite to meet 75% Obligation	V=0.40

Planting Requirements Outside Watershed

W.Total Planting within Development Site Watershed	W=0.00
X.Total Afforestation Required	X=0.00
Y.Remaining Planting within Watershed for Reforestation Credit	Y=0.00
Z.Reforestation for Clearing above the Reforestation Threshold	Z=0.20
AA.Reforestation for Clearing below the Reforestation Threshold	AA=0.60
BB.Credit for Retention above the Reforestation Threshold	BB=0.00
CC.Total Reforestation Required	CC=0.80
DD.Total Afforestation and Reforestation Requirement	DD=0.80

The Forest Conservation Obligation will be satisfied outside of the watershed. The 0.80 Acre obligation will be satisfied within the Himeh Property (SDP-05-132) Forest Retention Bank in the amount of 1.6 Acres.

LANDSCAPING PLANT LIST

QTY.	KEY	NAME	SIZE
5	(Symbol)	ACER RUBRUM (OCTOBER GLORY) (OCTOBER RED MAPLE) OR	2 1/2" - 3" CALIPER FULL CROWN, BAB
4	(Symbol)	QUERCUS RUBRA (NORTHERN RED OAK) OR	2 1/2" - 3" CALIPER FULL CROWN, BAB
3	(Symbol)	CORNUS FLORIDA 'SUNBA' (RED FLOWERING DOGWOOD) COP	6'-8'
3	(Symbol)	PRUNUS SEROTINATA 'KAWAZAN' (KAWAZAN CHERRY) OR	6'-8'

REFER TO SHEET 4 FOR MICRO BID PLANTINGS, DETAILS, AND SPECIFICATIONS

REVISIONS

NO.	DESCRIPTION	DATE

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2255

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development *[Signature]* 11/7/22 Date

Chief, Development Engineering Division *[Signature]* 10-12-22 Date

Approved: Howard County Department of Public Works

Chief, Bureau of Highways *[Signature]* 10/09/2022 Date



LANDSCAPE DEVELOPER'S CERTIFICATE

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/We further certify that upon completion a letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

LANDSCAPE DEVELOPER'S CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21020, EXPIRATION DATE: 01/25/24.

[Signature] 10/18/2022 DATE
 PAUL G. Cavanaugh

OWNER/DEVELOPER

DIVYESH SAPARIYA,
 SOHILRAJ SAPARIYA AND
 HITESH ANKOLA
 5669 TROTTER ROAD
 CLARKSVILLE, MARYLAND 21029
 PH# 301-275-0762

[Signature] 08/18/2022 DATE
 Divyesh Sapariya

LANDSCAPE PLAN

SAPARIYA PROPERTY
 5669 TROTTER ROAD
 A RESUBDIVISION OF CRISWOOD MANOR
 SECTION TWO - LOT 65
 PLAT BOOK 5, PAGE 52
 TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180
 ZONED R-20

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: FEBRUARY, 2022
 SHEET 8 OF 12

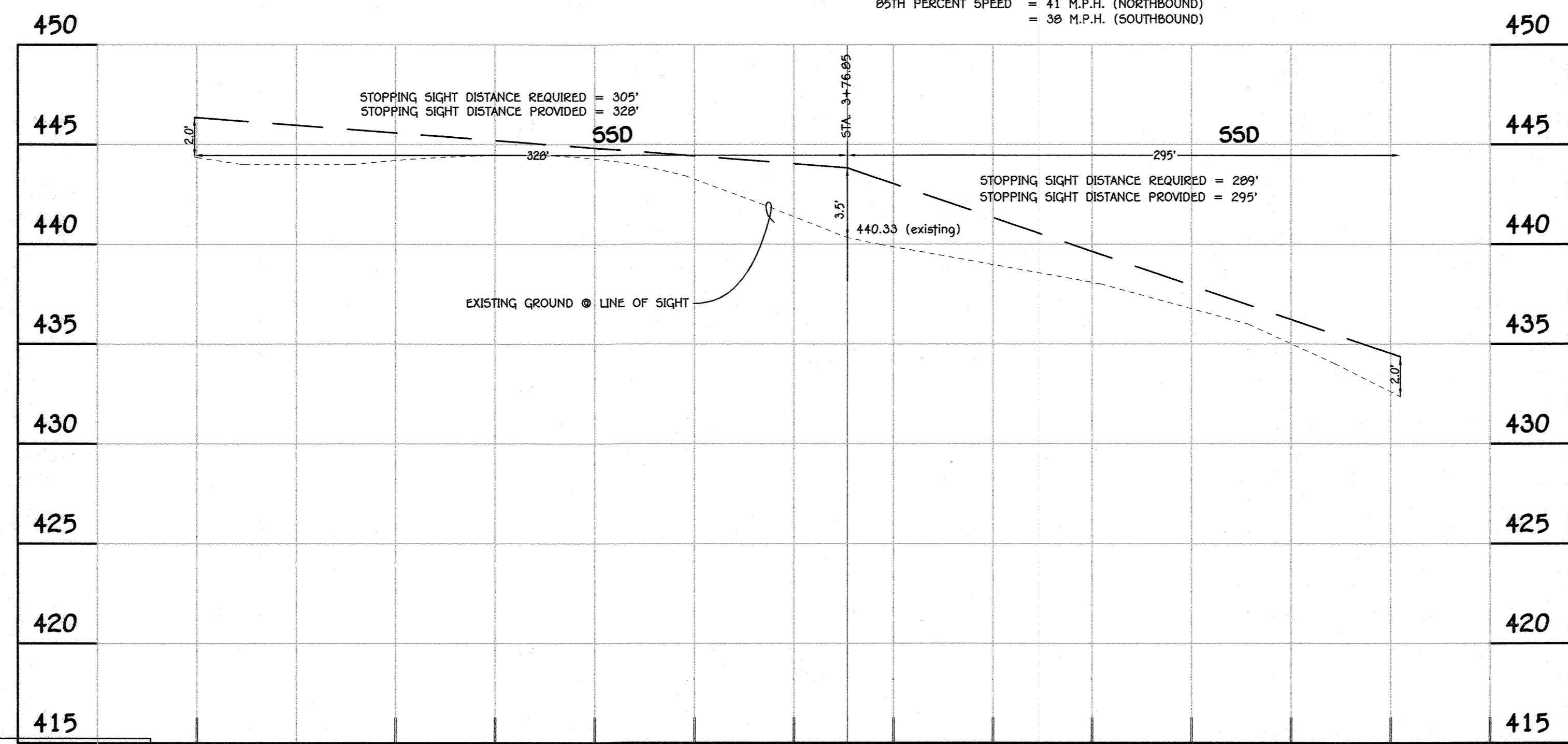
F-21-046



PLAN VIEW
SCALE: 1" = 50'

TROTTER ROAD

(MINOR COLLECTOR)
POSTED SPEED LIMIT = 30 M.P.H.
95TH PERCENT SPEED = 41 M.P.H. (NORTHBOUND)
= 38 M.P.H. (SOUTHBOUND)



PROFILE

SCALE HORIZ. 1" = 50'
VERT. 1" = 5'

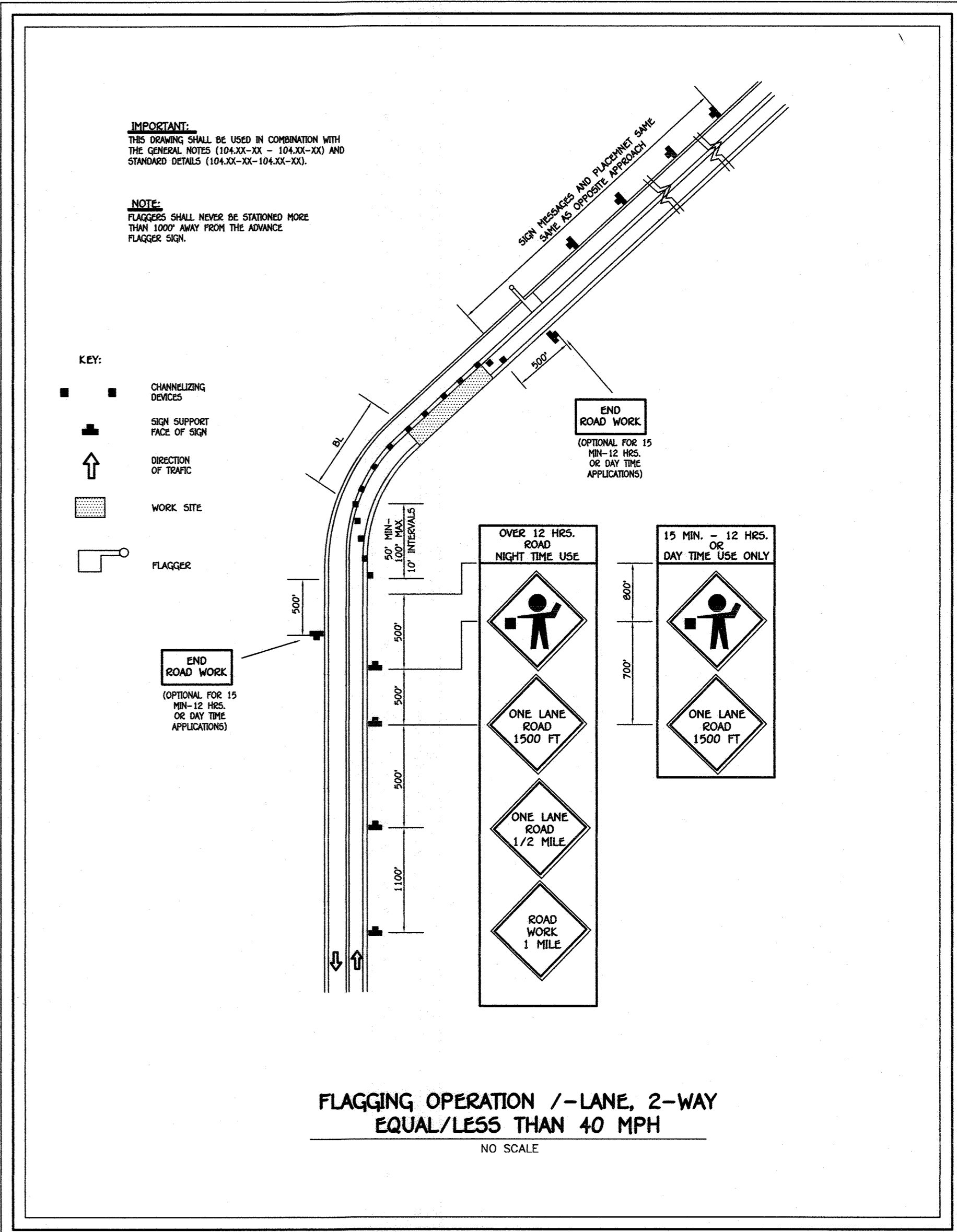
LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	EXISTING FENCE
---	SPOT ELEVATION
---	EXISTING STORM DRAIN
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	EXISTING OVERHEAD WIRE
---	EXISTING FENCE LINE
---	PROPOSED PAVING
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---	PRIVATE DRAINAGE & UTILITY EASEMENT
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE/TREE PROTECTION FENCE
---	DIVERSION FENCE/TREE PROTECTION FENCE
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
---	DRAINAGE DIVIDE
---	PERMANENT SOIL STABILIZATION CONTROL MATTING
---	SOIL LINES AND TYPES
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	DENOTES EXISTING TREES TO BE REMOVED
---	DENOTES EXISTING TREES TO REMAIN
---	SPECIMEN TREE CRITICAL ROOT ZONE

REVISIONS		
NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways

0+00 0+50 1+00 1+50 2+00 2+50 3+00 3+50 4+00 4+50 5+00 5+50 6+00 6+50 7+00

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 PAUL G. CAVANAUGH
 DATE: Aug 18, 2022

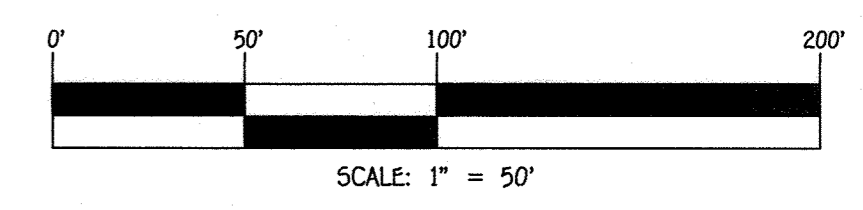


FLAGGING OPERATION /-LANE, 2-WAY
EQUAL/LESS THAN 40 MPH
NO SCALE

TABLE 2.01
STOPPING SIGHT DISTANCE

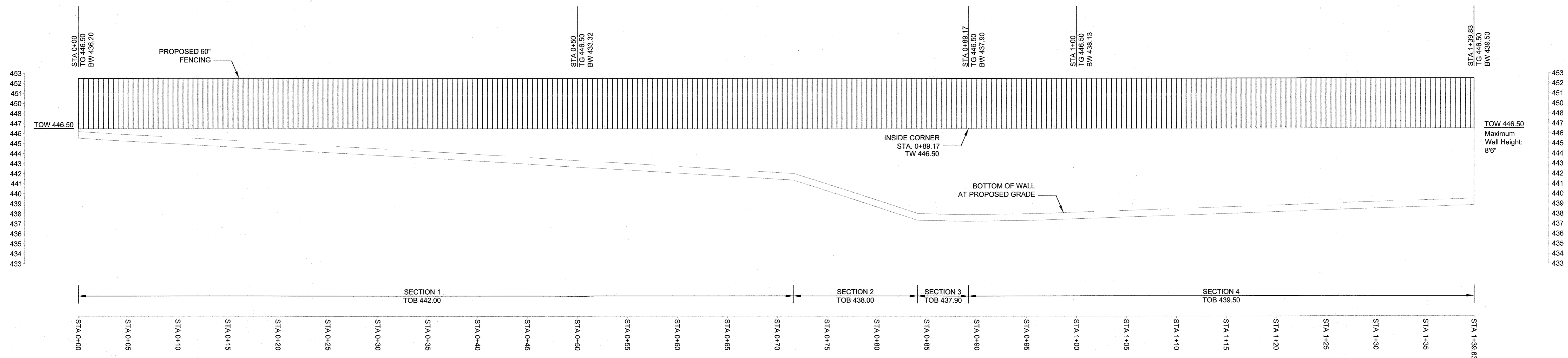
Design Speed (mph)	Downgrades			Upgrades		
	Level (ft)	3%	6%	3%	6%	9%
15	80	80	82	85	75	74
20	115	116	120	126	109	107
25	155	158	165	173	147	143
30	200	205	215	227	200	184
35	250	257	271	287	237	222
40	305	315	333	354	289	278
45	360	378	400	427	344	331
50	425	446	474	507	405	388
55	495	520	553	593	469	450
60	570	598	638	686	538	515
65	645	682	728	785	612	584
70	730	771	825	891	690	658

= SOUTHBOUND
 = NORTHBOUND



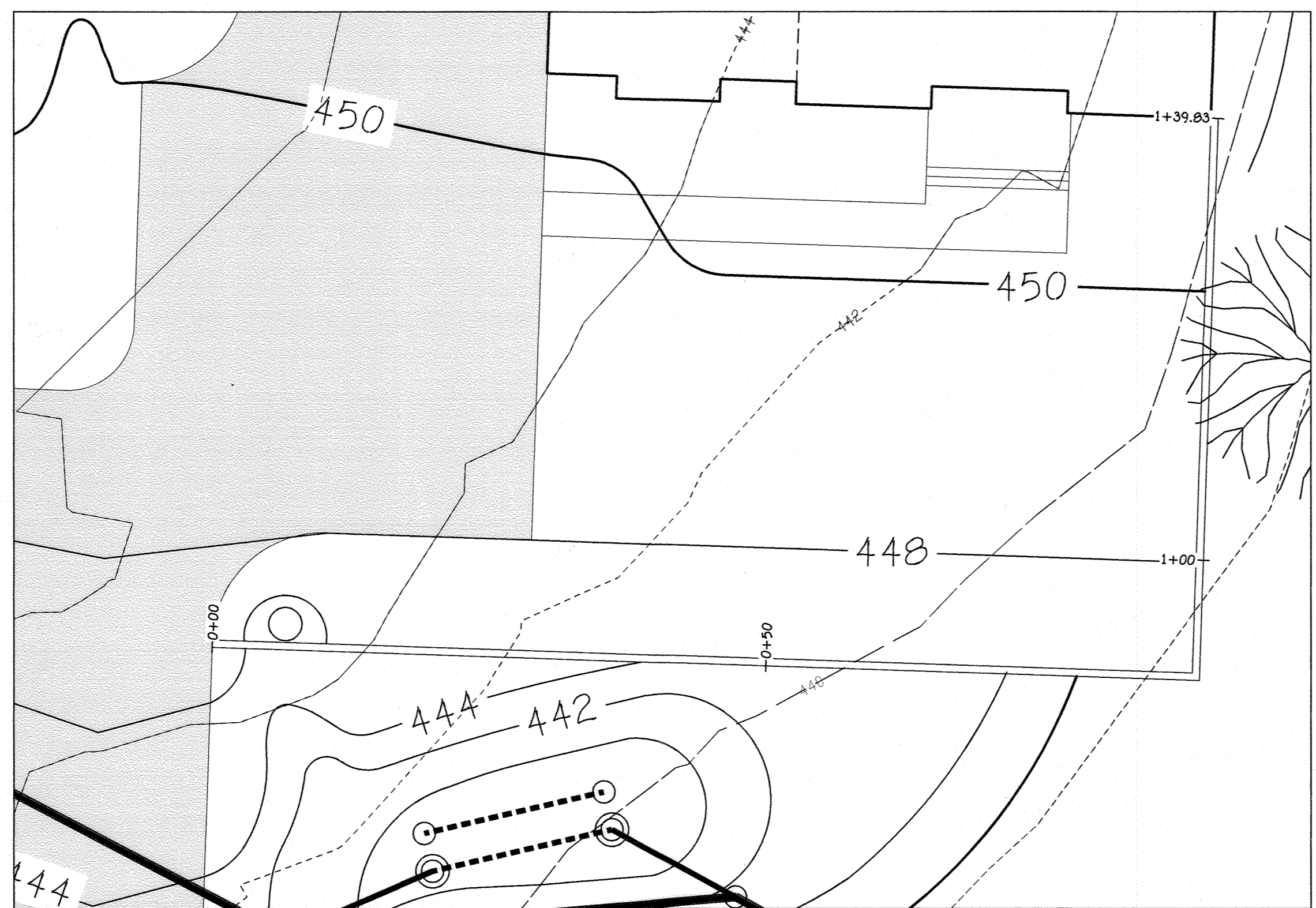
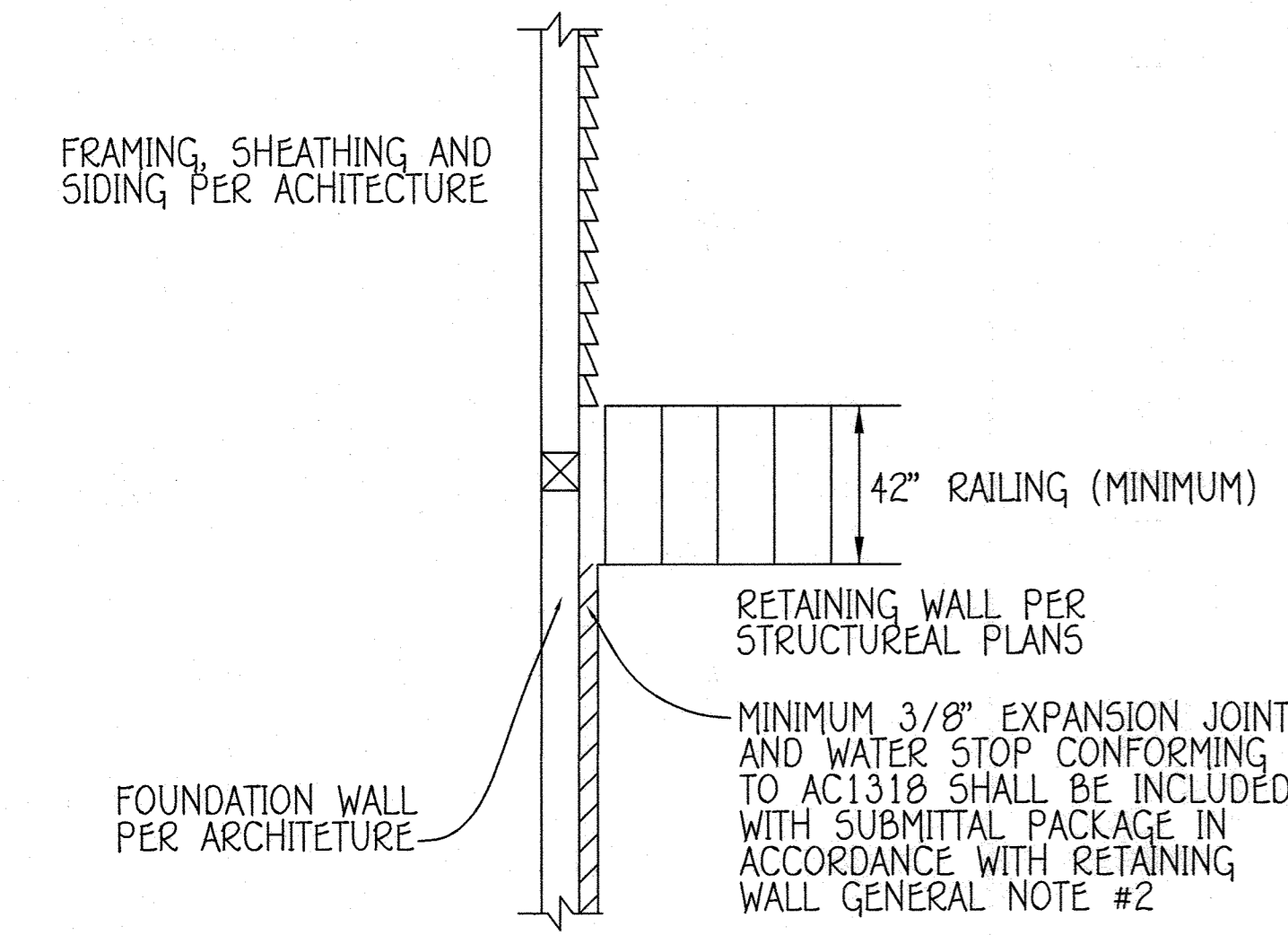
SITE DISTANCE PROFILE
SAPARIYA PROPERTY
 5669 TROTTER ROAD
 A RESUBDIVISION OF CRISWOOD MANOR
 SECTION TWO - LOT 65
 PLAT BOOK 5, PAGE 52
 TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180
 ZONED R-20
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: FEBRUARY, 2022
 SHEET 9 OF 12

OWNER/DEVELOPER
 DIVYESH SAPARIYA,
 SOHILRAJ SAPARIYA AND
 HITESH ANKOLA
 5669 TROTTER ROAD
 CLARKSVILLE, MARYLAND 21029
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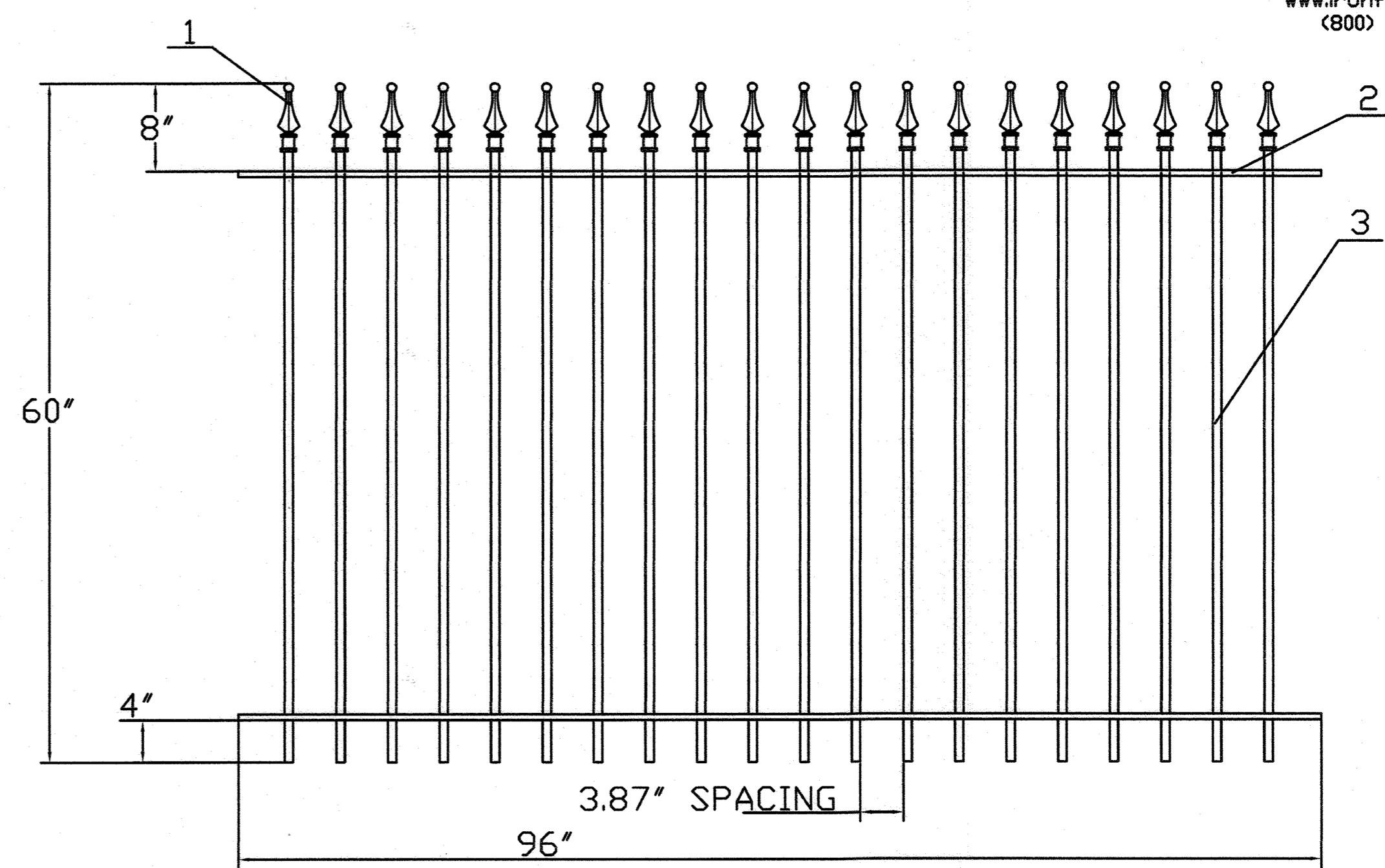


NOTES:

1. WALL FORMWORK SHALL INCLUDE BRICK PATTERN
2. WALLS SHALL BE PAINTED TAN (ANTIQUÉ WHITE) WITH ACCENT COLOR ENTICING RED, OR APPROVED EQUAL AS DETERMINED BY OWNER
3. CONTRACTOR SHALL PROVIDE RANDOM BRICKS WITH ACCENT COLOR (6 SF OF ACCENT FOR EVERY 60 SF OF WALL)
4. PAINT SHALL BE SUITABLE FOR THE APPLICATION.
5. CONSTRUCTION OF WALL SHALL NOT IMPEDE ADJACENT PROPERTY.



5'H X 8'W STRONGHOLD IRON FENCE PANEL OR APPROVED EQUAL
SIGNATURE GRADE - STYLE #1: CLASSIC



NO.	MATERIAL	QTY
1	CAST IRON FINIAL	20
2	1 1/2"X1/2"X1/8"	2
3	3/4"X3/4"X16gauge	20

TP0508-2C

REVISIONS

NO.	DESCRIPTION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2995

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development *[Signature]* 4/7/22
Date

Chief, Development Engineering Division *[Signature]* 10-12-22
Date

Approved: Howard County Department Of Public Works

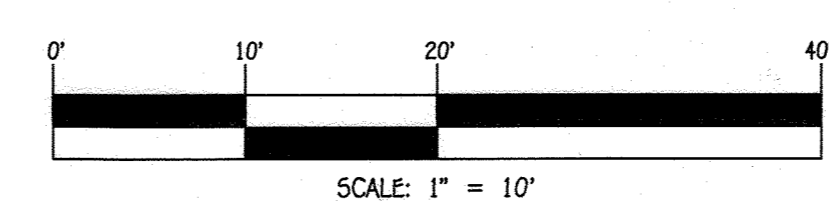
Chief, Bureau Of Highways *[Signature]* 10/04/2022
Date



PROFESSIONAL CERTIFICATION

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[Signature] 10/13/2022
PAUL G. CAVANAUGH DATE



OWNER/DEVELOPER

DIVYESH SAPARIYA,
SOHLRAJ SAPARIYA AND
HITESH ANKOLA
5669 TROTTER ROAD
CLARKSVILLE, MARYLAND 21029
PH# 301-275-0762

RETAINING WALL ELEVATIONS

SAPARIYA PROPERTY
5669 TROTTER ROAD
A RESUBDIVISION OF CRISWOOD MANOR
SECTION TWO - LOT 65
PLAT BOOK 5, PAGE 52
TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180
ZONED R-20
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: A5 SHOWN DATE: FEBRUARY, 2022
SHEET 10 OF 12

GENERAL NOTES

- BUILDING CODE:**
THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE 2018. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THIS CODE, ITS LATEST ADOPTED AMENDMENTS AND LOCAL REQUIREMENTS.
- SUBMITTALS**
 - THE FOLLOWING ITEMS REQUIRE SUBMITTAL OF SHOP AND ERECTION DRAWINGS, FOR REVIEW AND APPROVAL:
 - REINFORCING STEEL FOR CAST-IN-PLACE CONCRETE
 - THE FOLLOWING ITEMS REQUIRE SUBMITTAL OF SHOP AND ERECTION DRAWINGS AND STRUCTURAL CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF THIS PROJECT FOR REVIEW AND APPROVAL:
 - EXCAVATION SUPPORT, SHEETING, OR BENCHING WHERE SOILS REQUIRE SUCH BY VIRTUE OF OSHA REQUIREMENTS (ALL EXCAVATIONS GREATER THAN 5' REQUIRE SPECIFIC TRENCHING CONSIDERATIONS) OR SOIL CONDITIONS
 - SUBMITTALS ISSUED TO THE DESIGN TEAM FOR REVIEW SHALL BEAR THE CONTRACTOR'S STAMP OF APPROVAL, CERTIFYING THAT ALL FIELD MEASUREMENTS, CONSTRUCTION CRITERIA, MATERIALS, ETC. HAVE BEEN VERIFIED AND EACH SHEET HAS BEEN REVIEWED FOR COMPLETENESS, COORDINATION BETWEEN TRADES, AND COMPLIANCE WITH THE CONTRACT DOCUMENTS. FURTHER, STRUCTURAL SHOP DRAWINGS WILL ONLY BE REVIEWED ONCE ANY REQUIRED CALCULATION PACKAGES FOR THAT WORK HAS BEEN ISSUED ALONG WITH A SIGNED AND SEALED LETTER BY THE CONTRACTOR'S ENGINEER CERTIFYING THAT THE SHOP DRAWINGS HAVE PROPERLY INCORPORATED THEIR DESIGN, IN ACCORDANCE WITH THE 2010 AISC CODE OF STANDARD PRACTICE-SECTION 3.1.2 (OPTION 3), OTHERWISE THE SUBMITTAL PACKAGE WILL BE REJECTED.
- SPECIAL INSPECTIONS:** AS PER IBC CHAPTER 17, THE FOLLOWING ITEMS ARE SUBJECT TO SPECIAL INSPECTION BY AN INDEPENDENT INSPECTION AND/OR TESTING AGENCY HIRED BY THE OWNER AND APPROVED BY THE ARCHITECT AND BUILDING OFFICIAL. OWNERS/SPECIAL INSPECTOR SHALL PROVIDE SPECIAL INSPECTION REPORTS WITHIN 5 DAYS OF PERFORMING THE INSPECTION AND IMMEDIATELY NOTIFY THE ENGINEER.
 - CONCRETE CONSTRUCTION (1705.3)
 - SOILS (1705.6)
- DESIGN LOADS:**
 - GRAVITY SURCHARGE LOAD: YARD 100 PSF
- THE CONTRACTOR SHALL CHECK THE BUILDING LOCATION WITH REGARD TO PROPERTY LINE, AND VERIFY ALL EXISTING CONDITIONS BEFORE EXCAVATION AND SHOP DRAWING PREPARATION. NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- IN CASE OF CONTRADICTION BETWEEN THE DRAWINGS, THE SPECIFICATIONS, AND THE CODES, OR IF ANY CHANGE IS REQUIRED, THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY. NO CHANGE SHALL BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.
- THE STABILITY OF STRUCTURE, ADJACENT STRUCTURES IMPACTED BY THE WORK, AND SITE SAFETY ARE THE CONTRACTOR'S RESPONSIBILITY UNTIL CONSTRUCTION IS COMPLETE AND THE STRUCTURE HAS REACHED ITS FINAL CONDITION. THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY BRACING, ERECTION PIECES, CONSTRUCTION SUPPORTS, FALL PROTECTION, DEBRIS CATCHES, TEMPORARY SHORING, ETC. AS REQUIRED TO SAFEGUARD THE SITE THROUGHOUT THE COURSE OF CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY THAT ANY CONSTRUCTION LOADS DO NOT EXCEED THE DESIGN CAPACITY OF THE STRUCTURE.

FOUNDATION NOTES

- GENERAL**
 - FOUNDATIONS HAVE BEEN DESIGNED TO AN ALLOWABLE SOIL BEARING PRESSURE OF 3,500 PSF, BASED ON A SOILS REPORT ISSUED BY HARDIN-KIGHT ASSOCIATES, INC. DATED FEBRUARY 18, 2021. THIS CAPACITY SHALL BE VERIFIED BY A REGISTERED SOILS ENGINEER. SHOULD CONDITIONS VARY FROM THOSE ASSUMED, THE ARCHITECT SHALL BE NOTIFIED BEFORE CONTINUATION OF WORK.
 - ALL FOOTINGS SHALL BE PLACED DIRECTLY ON COMPETENT NATURAL, GRANULAR SOILS OR ENGINEERED CERTIFIED COMPACTED FILL OVER COMPETENT NATURAL SOILS.
 - ALL FILL SHALL BE PLACED IN EIGHT INCH LOOSE LIFTS (MAXIMUM) COMPACTED WITH VIBRATORY ROLLERS. FILL MATERIAL SHALL BE TESTED BY MODIFIED PROCTOR DENSITY METHOD (ASTM D1557) AND MUST QUALIFY AS SELECT, WITH LESS THAN 10% PASSING THROUGH THE NO. 200 SIEVE. SOIL SHALL BE PLACED WITH MOISTURE CONTENT AND ENERGY TO PROVIDE 92% OF MAXIMUM DRY DENSITY BELOW SLABS ON GRADE AND 95% BELOW FOOTINGS. IN PLACE DENSITY TESTS SHALL BE TAKEN FOR EACH 10,000 s.f. IN EACH LIFT. FOR ACCEPTANCE OF SOIL, AVERAGE OF DENSITY TESTS MUST EXCEED THE SPECIFIED COMPACTION. NO TESTS SHALL BE PERMITTED TO FAIL BELOW 88% COMPACTION BELOW SLABS ON GRADE OR 90% COMPACTION BELOW FOOTINGS.
 - ALL FOUNDATION WALLS AND RETAINING WALLS SHALL BE DRAINED. SEE SOILS REPORT MENTIONED IN NOTE 'A' ABOVE FOR REQUIREMENTS.
- SHALLOW FOUNDATIONS**
 - ALL EXTERIOR FOOTINGS SHALL BE PLACED A MINIMUM OF 2'-6" BELOW FINAL GRADE WHEN BEARING ON SOIL.
 - WHERE NECESSARY, FOOTING STEPS SHALL BE CONSTRUCTED AT MAXIMUM SLOPE OF 1 VERTICAL TO 2 HORIZONTAL.
 - EXCAVATIONS SHALL BE DEWATERED TO ALLOW INSTALLATION OF FOOTINGS IN DRY ATMOSPHERE.
 - DIFFERENTIAL BACKFILL AGAINST FOUNDATION WALLS SHALL NOT EXCEED FOUR FEET UNTIL TOP BRACING SLAB OR FRAMEWORK HAS BEEN IN PLACE FOR A MINIMUM OF THREE DAYS. CANTILEVERED RETAINING WALLS MAY BE BACKFILLED AFTER 14 DAYS FROM CONCRETE PLACEMENT, BUT IN NO CASE SHALL DIFFERENTIAL OF BACKFILL, ON OPPOSITE SIDES OF THE WALL, EXCEED THE FINAL DESIGN DIFFERENTIAL.
 - ALL BOTTOM OF FOOTING ELEVATIONS ARE SUBJECT TO CHANGE UPON INSPECTION OF SOIL CONDITION. ELEVATION OF ADJACENT FOOTING BOTTOMS SHALL NOT EXCEED A MAXIMUM SLOPE OF:
 - 1H:1V FOR COHESIVE SOILS WITH AN UNCONFINED COMPRESSIVE STRENGTH GREATER THAN 0.5 TSF
 - 1 1/2H:1V FOR COHESIVE SOILS WITH AN UNCONFINED COMPRESSIVE STRENGTH OF 0.5 TSF OR LESS.
 - THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHERE BOTTOM OF FOOTING ELEVATION IS CHANGED AND OBTAIN REVISED DESIGN OF THE FOUNDATION AND RETAINING WALLS AS REQUIRED.

CAST-IN-PLACE CONCRETE

- GENERAL**
 - ALL CONCRETE WORK SHALL CONFORM TO REQUIREMENTS OF THE A.C.I. BUILDING CODE REQUIREMENT FOR STRUCTURAL CONCRETE (318-14 ULTIMATE STRENGTH DESIGN).
 - 28 DAY MINIMUM COMPRESSIVE STRENGTH AND RELATED PROPERTIES FOR CONCRETE SHALL BE AS FOLLOWS:
F_c MAX W/C RATIO MAX DENSITY
FOOTINGS 4,500PSI 0.40 NWC (145 PCF)
 - CONCRETE COVERING OF REINFORCING STEEL (INCLUDING TIES AND STIRRUPS) SHALL CONFORM TO THE FOLLOWING MINIMUM REQUIREMENTS:
2" FOUNDATION WALL, FOOTING & GRADE BEAM FACES NOT CAST AGAINST EARTH
3" CONCRETE CAST AGAINST EARTH
 - ALL CONCRETE, INCLUDING FOUNDATIONS, EXPOSED TO WEATHER AND/OR OUTSIDE THE BUILDING ENVELOPE SHALL BE AIR ENTRAINED, 6%±1.5% BY VOLUME FOR 3/4" COARSE AGGREGATE. AIR ENTRAINING ADMIXTURE TO COMPLY WITH ASTM C260.
 - ALL PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I.
 - ALL NORMAL WEIGHT CONCRETE AGGREGATE SHALL CONFORM TO ASTM C33.
 - MAXIMUM CONCRETE SLUMP SHALL BE 4" FOR CONCRETE NOT RECEIVING HIGH-RANGE WATER REDUCING ADMIXTURES.
 - ALL BARS MARKED CONTINUOUS SHALL BE LAPPED AT SPLICES AND CORNERS IN ACCORDANCE WITH THE SCHEDULE SHOWN ON THESE DRAWINGS, EXCEPT AS OTHERWISE SHOWN OR REQUIRED.
 - WELDING OF REINFORCEMENT IS PROHIBITED U.O.N.
 - ALL REINFORCING BARS SHALL BE OF NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60 (F_y = 60,000 PSI)
 - VERTICAL CONSTRUCTION JOINTS USING APPROVED BULKHEADS MAY BE MADE WITHIN THE MIDDLE THIRD OF BEAM, WALL, OR SLAB SPANS WHERE STOP IN CONCRETE WORK IS NECESSARY. A PLAN SHOWING PROPOSED JOINTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED ONLY AS SHOWN ON DRAWINGS. CONSTRUCTION JOINTS SHALL CONFORM TO ACI 318, SECTION 6.4. ALL REINFORCING STEEL SHALL BE CONTINUOUS THROUGH JOINTS U.O.N. FOR ALL CONSTRUCTION JOINTS BELOW WATER TABLE. PROVIDE WATERSTOPS.
 - ALL HORIZONTAL JOINTS IN CONCRETE POURS (WHERE SHOWN ON STRUCTURAL DRAWINGS OR EXPLICITLY APPROVED BY THE ENGINEER IN WRITING) SHALL BE RAKED TO 1/4" AMPLITUDE WHILE CONCRETE IS FRESH.
 - ALL CONCRETE SHALL BE MIXED, TRANSPORTED AND PLACED IN ACCORDANCE WITH ACI STANDARDS 318 AND 304.
 - ALL REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE TO ACI 315.
 - TEST CYLINDERS SHALL BE TAKEN FROM THE MIXER IN ACCORDANCE WITH ASTM C172 AND THE PROJECT SPECIFICATIONS.
 - STONE AGGREGATE USED IN CONCRETE MIX SHALL BE FREE OF MATERIALS WITH HARMFUL REACTIVITY TO ALKALI IN CEMENT.
 - THE MAXIMUM WATER SOLUBLE CHLORIDE ION (CL-) CONTENT IN CONCRETE FROM ALL INGREDIENTS SHALL BE LESS THAN 0.06% OF WEIGHT OF CEMENT, PER ASTM C1218.
- CONCRETE FOR FOUNDATIONS**
 - ALL VERTICAL SURFACES OF CONCRETE SHALL BE FORMED FOR WALLS, FOOTINGS, AND GRADE BEAMS.
 - CONTRACTOR SHALL PROVIDE A MINIMUM AREA OF STEEL REINFORCEMENT EQUAL TO .0018 TIMES THE GROSS CONCRETE AREA IN CONCRETE SLABS AND FOOTINGS, EXCEPT WHERE CONCRETE IS PRESTRESSED. PROVIDE MINIMUM BONDED REINFORCEMENT FOR PRESTRESSED CONCRETE IN ACCORDANCE WITH ACI 318 - SECTION 18.9. FOR WALLS, PROVIDE MINIMUM REINFORCING IN ACCORDANCE WITH ACI 318 - SECTION 14.3.

NOTES:

- RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A (NCEIT, WACL, OR EQUIVALENT) CERTIFIED SOILS TECHNICIAN
- THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER TEST ASTM 51P-399
- THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ONSITE SOILS TECHNICIAN. EACH EIGHT (8) INCH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY AND THE TESTING REPORT SHALL BE MADE AVAILABLE TO THE HOWARD COUNTY INSPECTOR UPON COMPLETION OF THE CONSTRUCTION
- COPIES OF ALL BORING REPORTS SHALL BE PROVIDED TO THE HOWARD COUNTY INSPECTOR PRIOR TO THE START OF CONSTRUCTION

BAR SIZE	d _s (in)	TENSION							COMPRESSION	STANDARD 90° HOOK (in)
		3,000	4,000	5,000	6,000	7,000	8,000	9,000		
#3	0.375	22	19	17	16	14	14	13	12	6
#4	0.25	29	25	22	21	19	18	17	16	8
#5	0.625	33	31	28	26	24	22	21	20	10
#6	0.75	43	37	33	31	28	27	25	24	12
#7	0.875	63	54	49	44	41	39	36	35	14
#8	1.00	72	62	53	51	47	44	42	39	16
#9	1.125	81	70	63	57	53	50	47	44	19
#10	1.27	91	79	71	64	60	56	53	50	22
#11	1.56	101	87	78	71	66	62	58	55	24

NOTE: SPLICE LENGTHS INDICATED ABOVE SHALL BE MULTIPLIED BY THE FOLLOW FACTORS:
 A. BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW LAP... 1.3
 B. CLEAR COVER < 4" ... 1.5
 C. CLEAR COVER < 4" FOR BARS ENCLOSED BY STIRRUPS OR CLEAR COVER < 2 x d FOR ALL OTHER BARS... 1.5
 D. LIGHTWEIGHT CONCRETE... 1.3

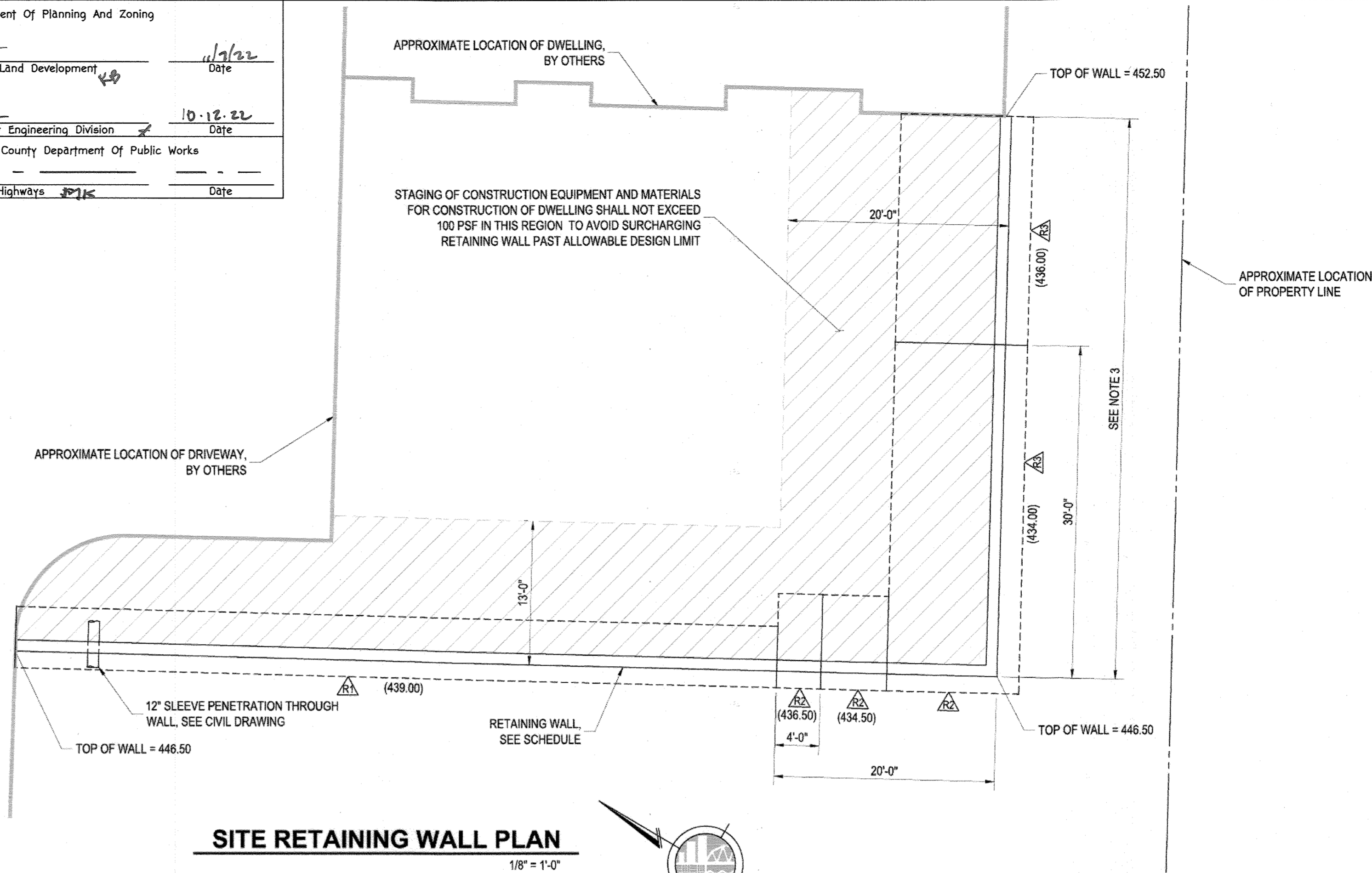
RETAINING WALL ELEVATIONS AND DETAILS
SAPARIYA PROPERTY
 5669 TROTTER ROAD
 A RESUBDIVISION OF CRISWOOD MANOR
 SECTION TWO - LOT 65
 PLAT BOOK 5, PAGE 52
 TAX MAP NO.: 35 GRID NO.: 02 PARCEL NO.: 0180
 ZONED R-20
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: NOVEMBER, 2020
 SHEET 11 OF 12

PROFESSIONAL CERTIFICATION

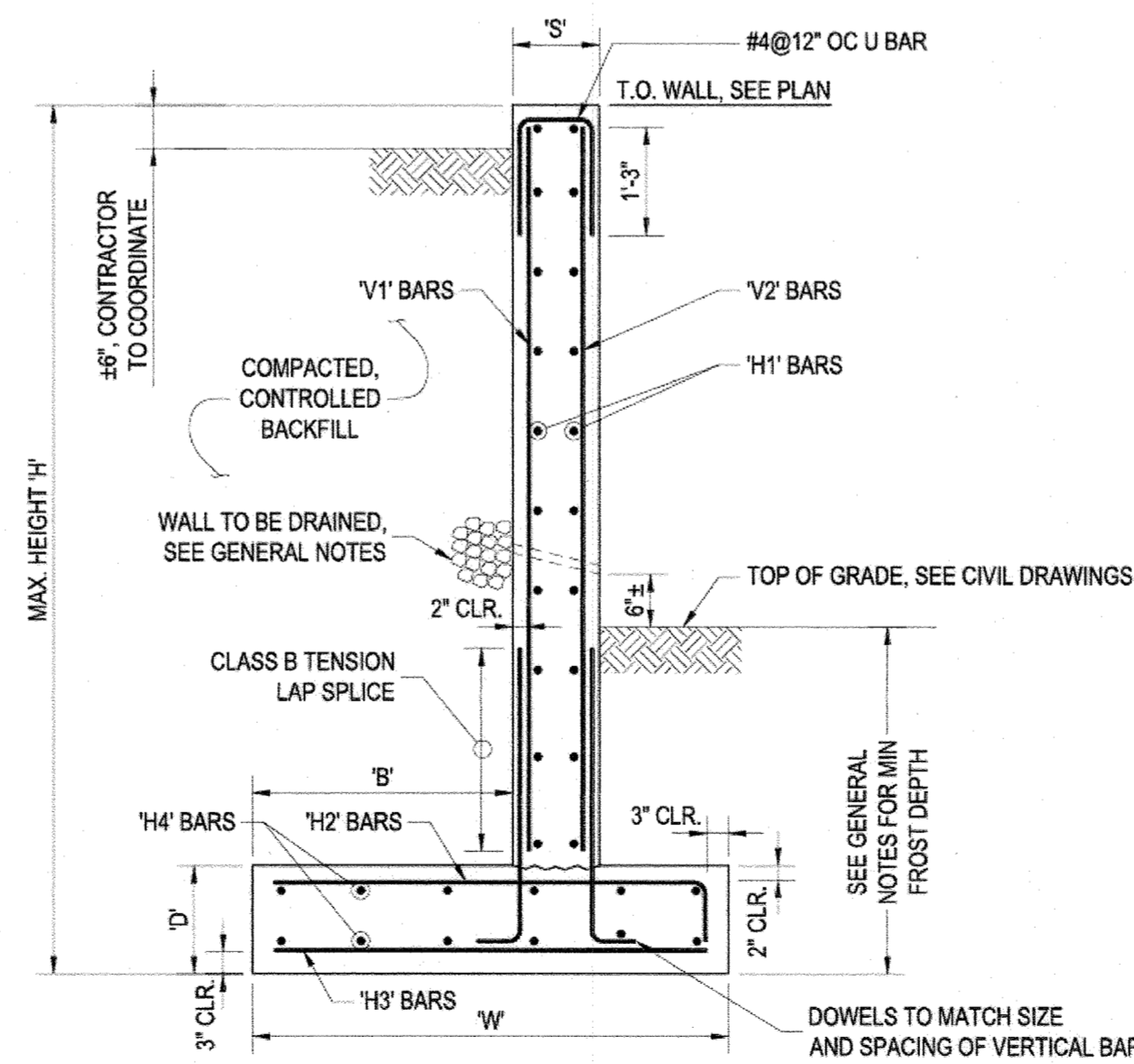
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 012020, EXPIRATION DATE: 01/25/24.
 PAUL G. CAVANAUGH
 DATE: May 19, 2022

REVISIONS		
NO.	DESCRIPTION	DATE

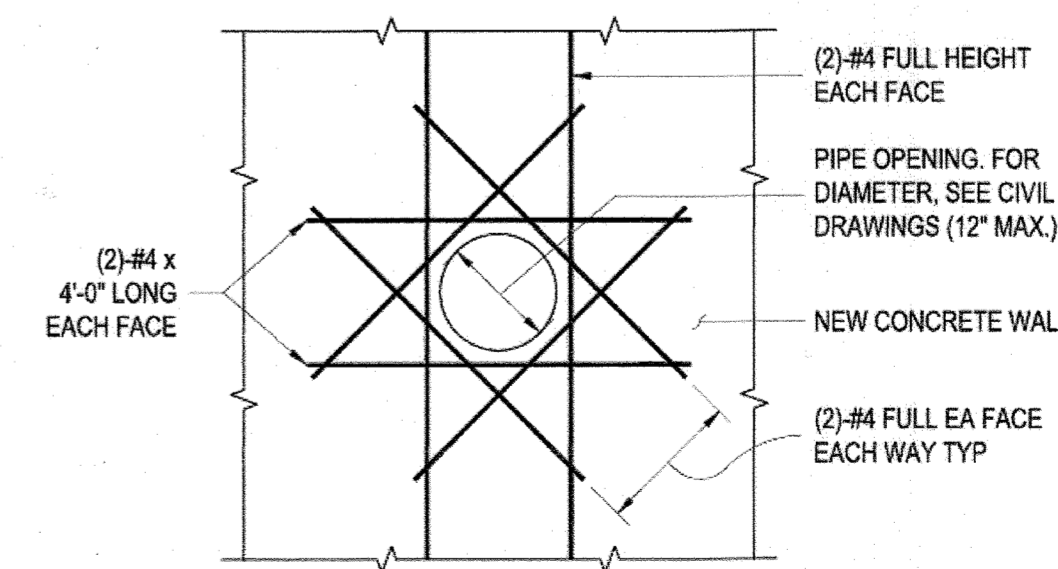
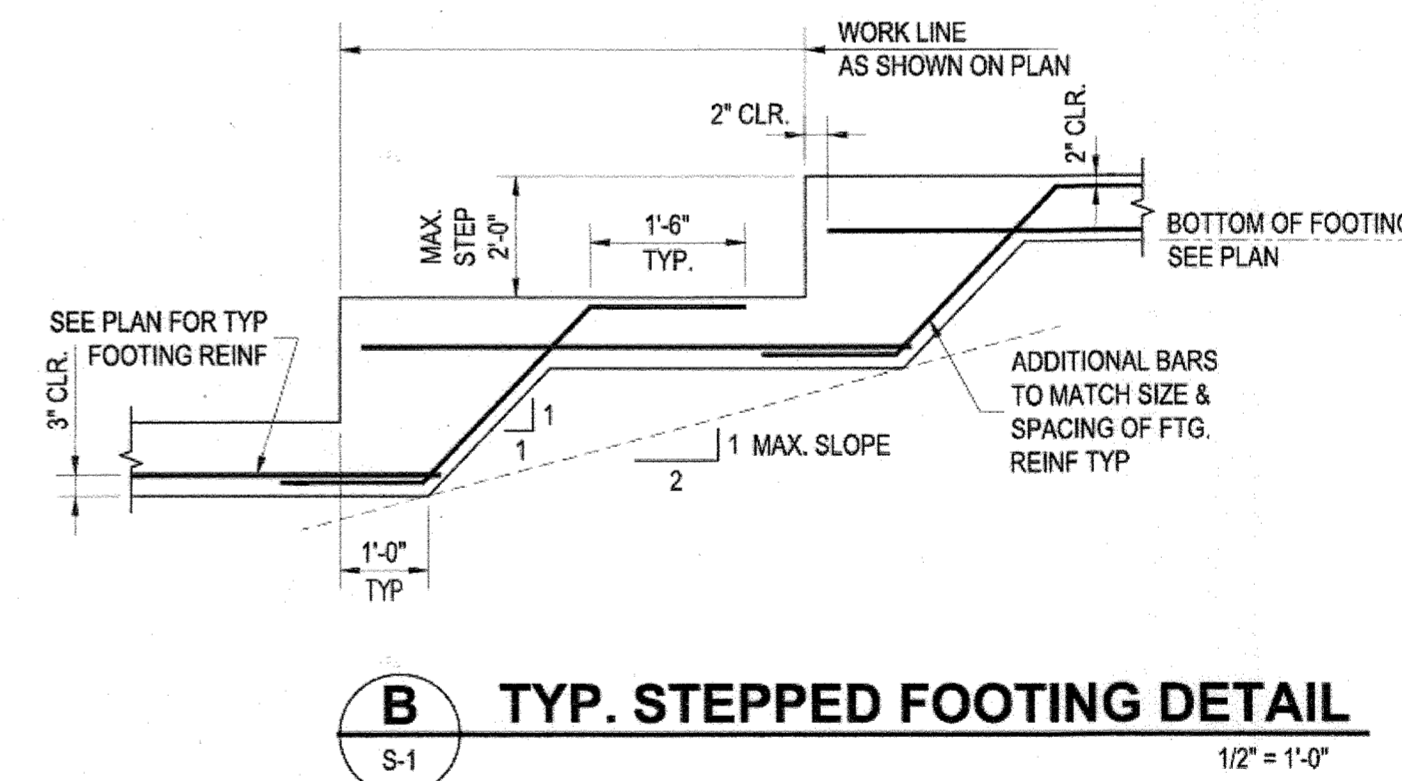
Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development 10/12/22
 Chief, Development Engineering Division 10-12-22
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways 10/12/22



- NOTES:**
- ELEVATION OF BOTTOM OF WALL FOOTINGS ARE INDICATED ON PLAN THUS: (000.00).
 - REINFORCED CONCRETE RETAINING WALLS ARE INDICATED ON PLAN THUS: Δ REFER TO RETAINING WALL SCHEDULE SHOWN IN DETAIL A.
 - TOP OF WALL ELEVATION TO BE WITHIN 8" ABOVE OR BELOW FINISHED GRADE ELEVATION. REFER TO CIVIL DRAWINGS. CONTRACTOR TO STEP TOP OF WALL, AS REQUIRED.
 - EQUIPMENT AND MATERIALS ARE NOT TO BE STAGED IN A MANNER THAT THE LOADING WOULD EXCEED 100 PSF IN REGION SHOWN ON PLAN THUS: \square



RETAINING WALL SCHEDULE											
SECTION NUMBER	WIDTH 'W'	HEEL 'B'	FTG. 'D'	STEM 'S'	'Y1' BARS	'V2' BARS	'H1' BARS	'H2' BARS	'H3' BARS	'H4' BARS	MAX. HEIGHT 'H'
Δ	5'-6"	3'-0"	12"	12"	#4 @ 14"	#4 @ 14"	#4 @ 16"	#6 @ 14"	#4 @ 14"	#4 @ 16"	8'-0"
Δ	8'-6"	6'-0"	18"	12"	#6 @ 12"	#4 @ 12"	#4 @ 12"	#6 @ 12"	#4 @ 12"	#4 @ 12"	12'-0"
Δ	12'-0"	9'-0"	24"	12"	#8 @ 8"	#4 @ 8"	#4 @ 12"	#6 @ 8"	#4 @ 12"	#6 @ 16"	16'-6"

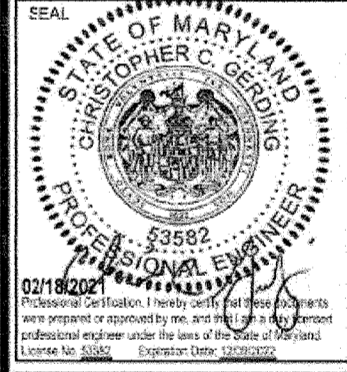


FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
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 (410) 461-2995



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 McLaren Technical Services, Inc.
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 T: 410.243.8787 F: 410.243.4656 www.mclarengroup.com

PROJECT: 5669 TROTTER ROAD
 CLARKSVILLE, MARYLAND



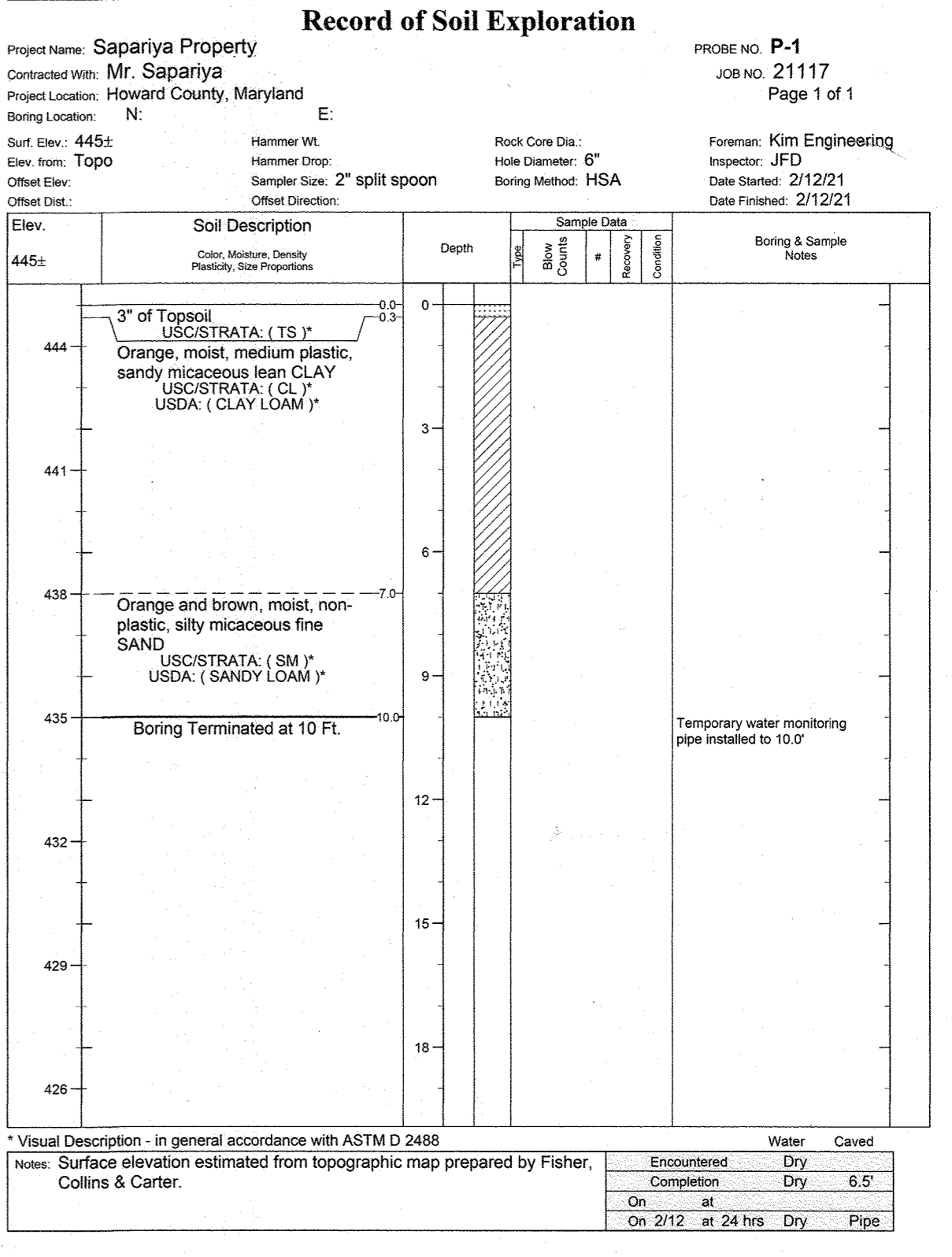
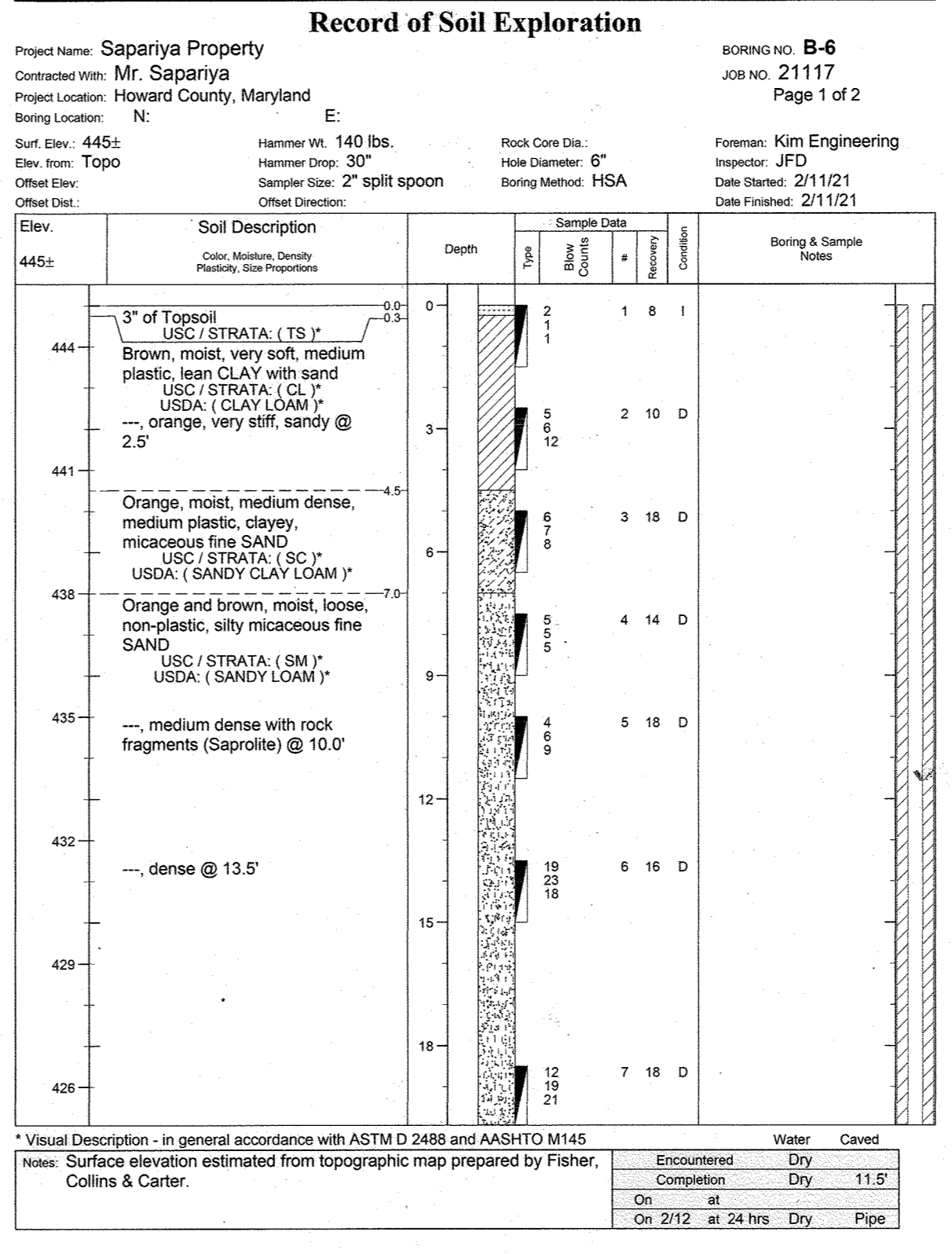
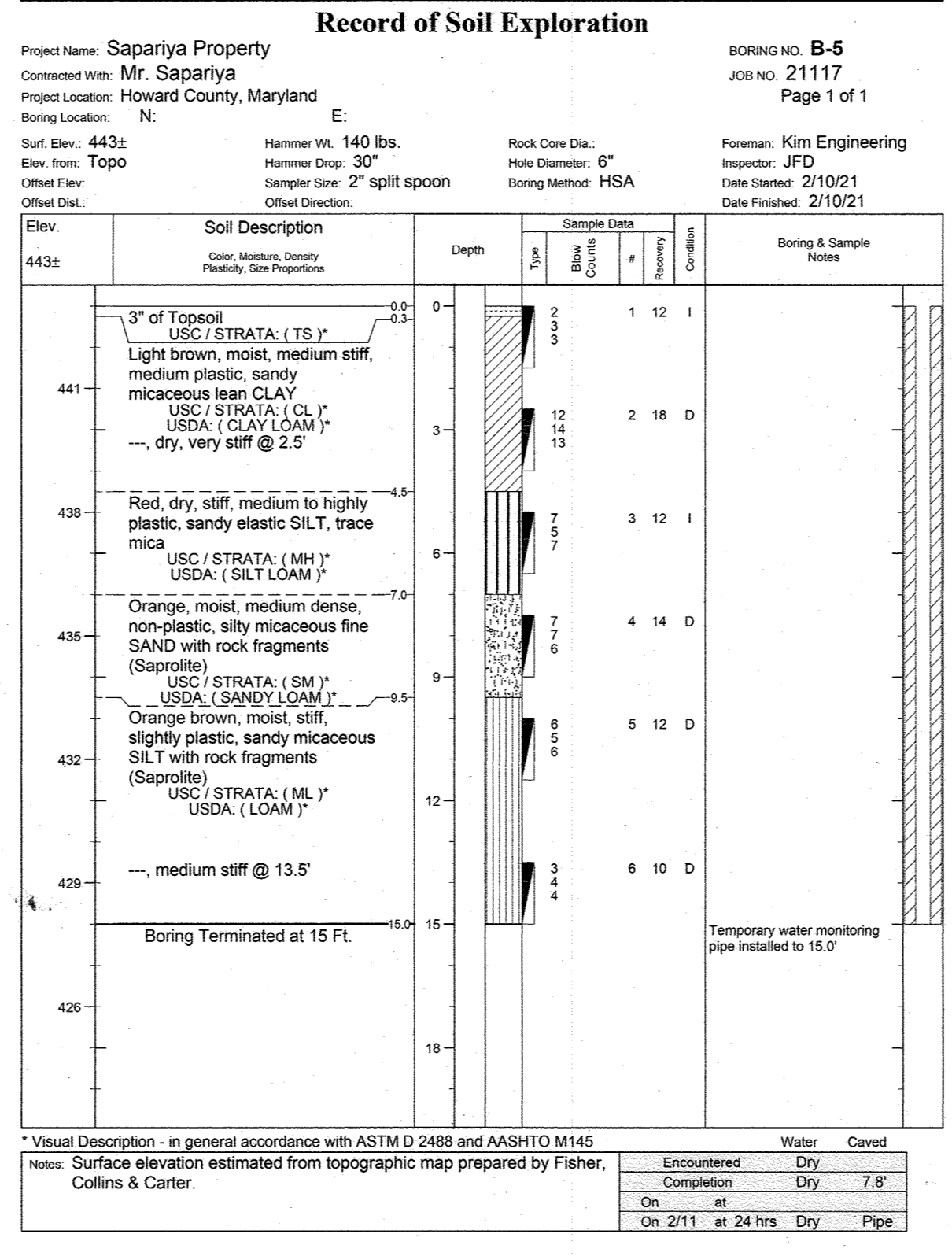
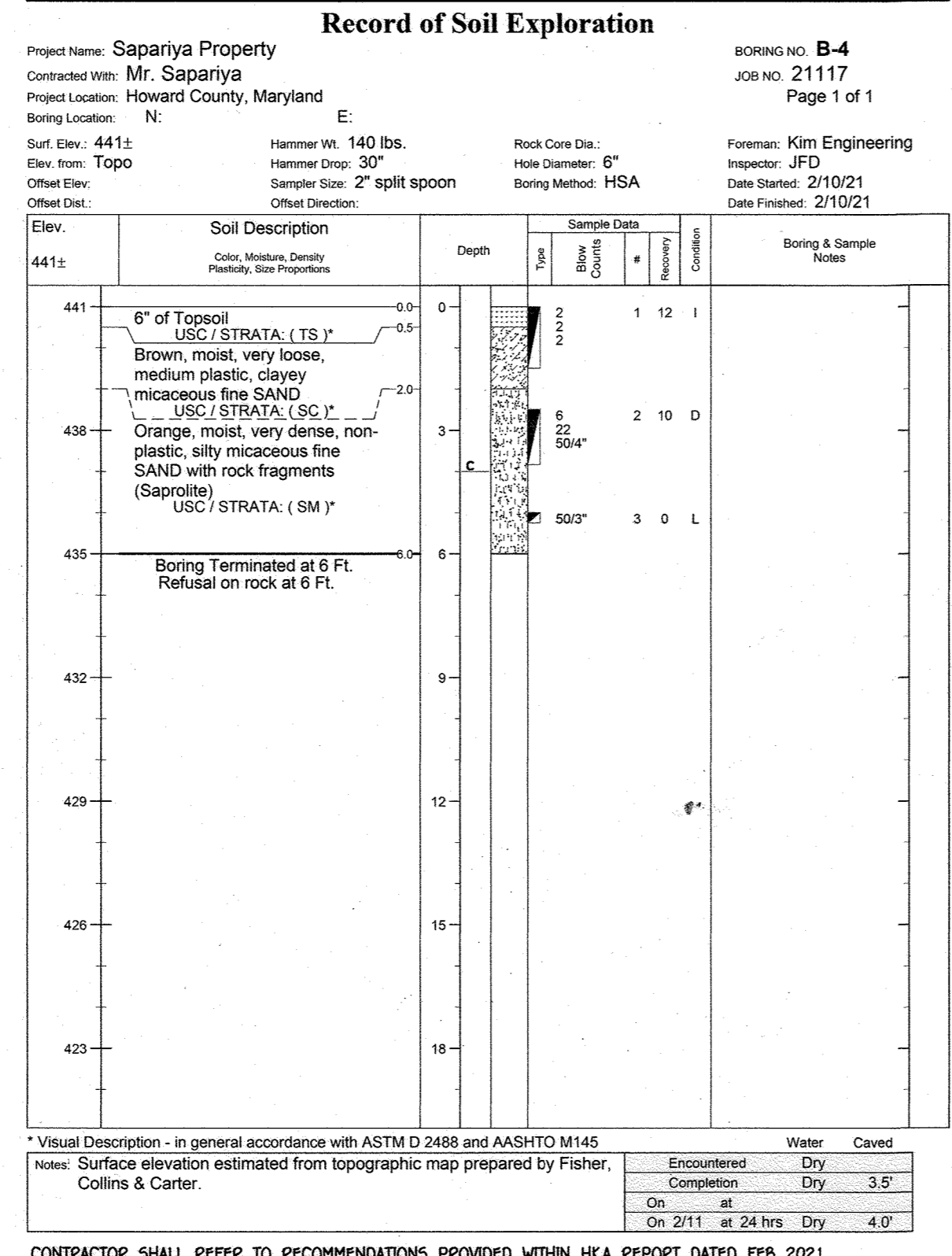
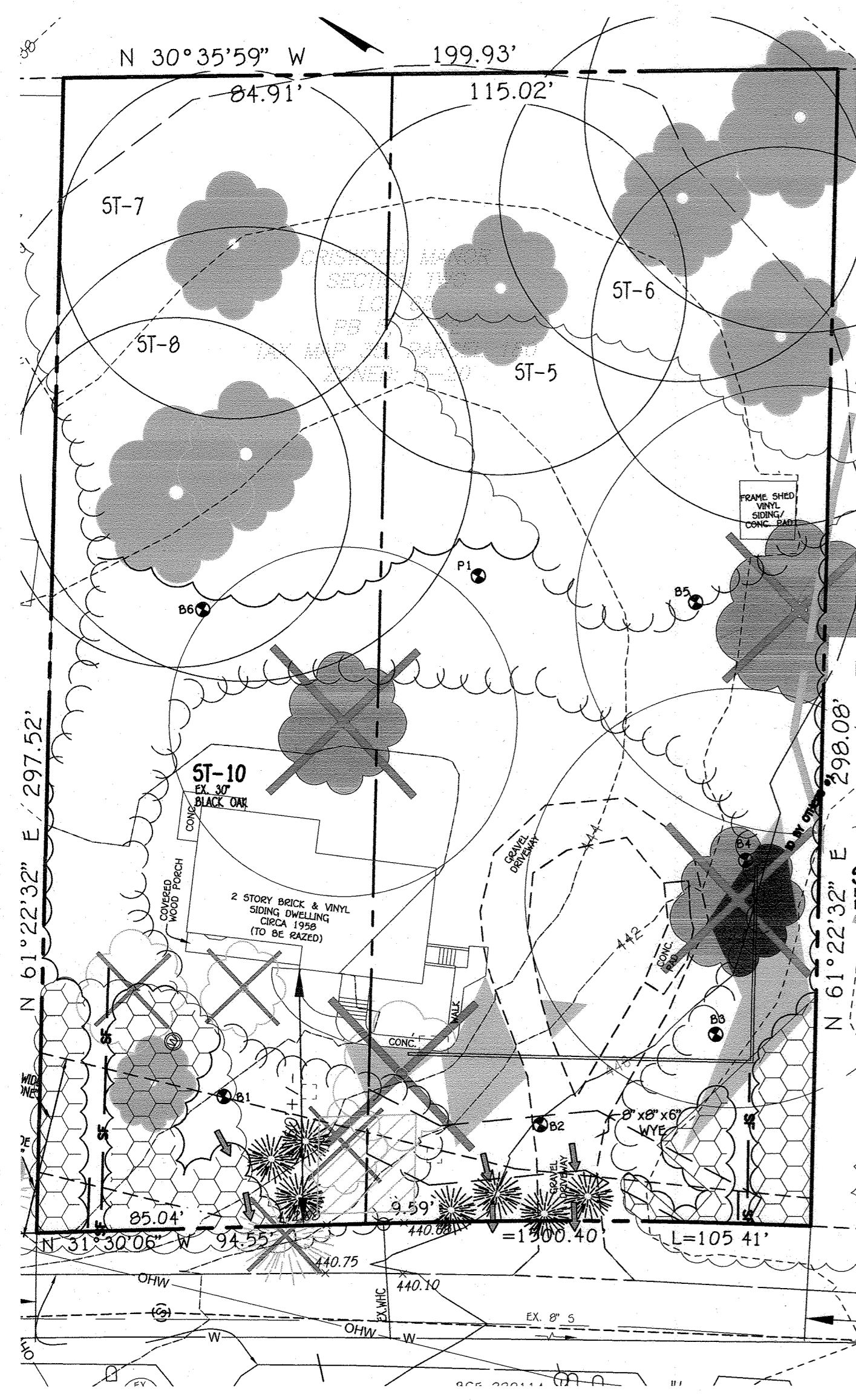
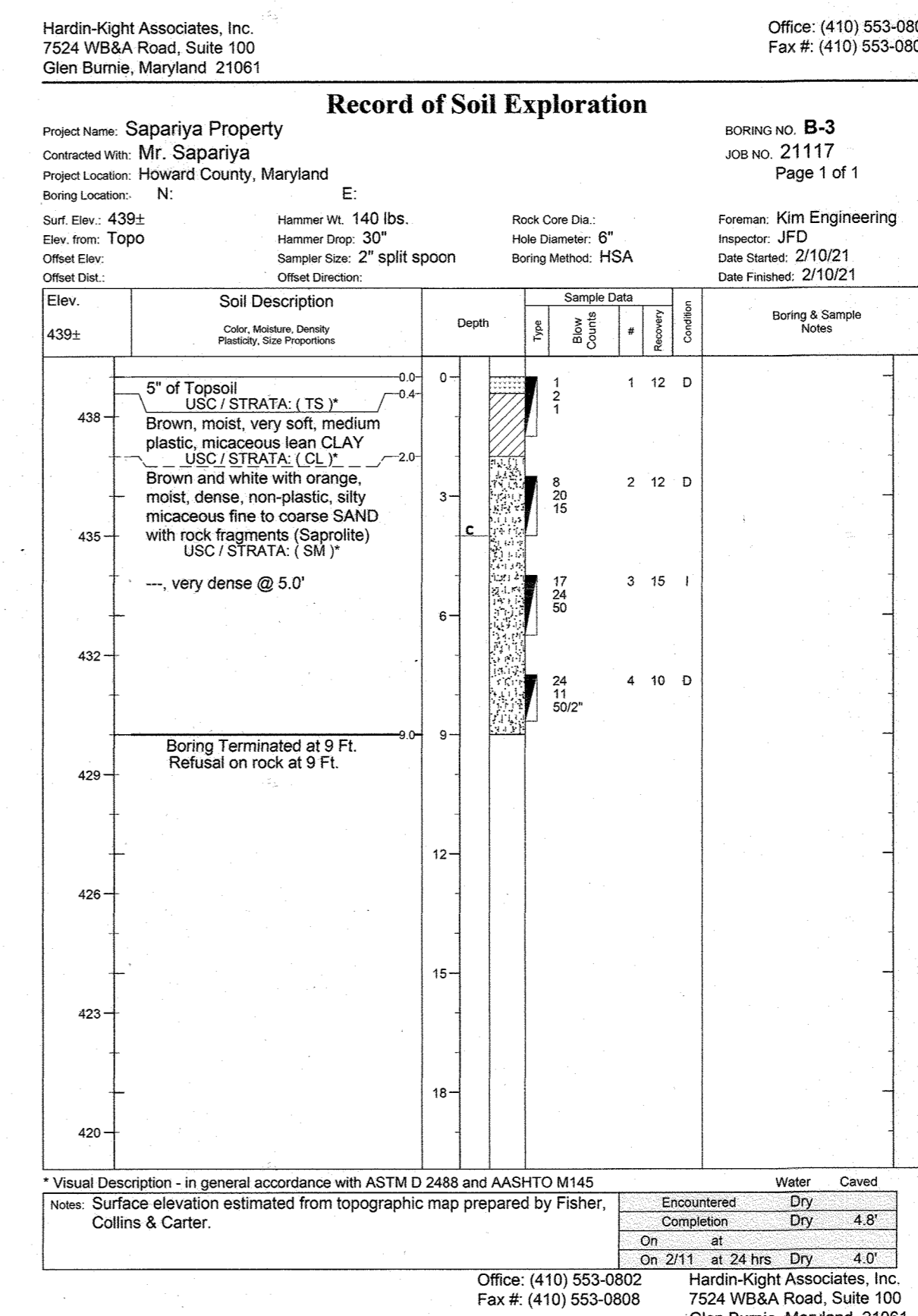
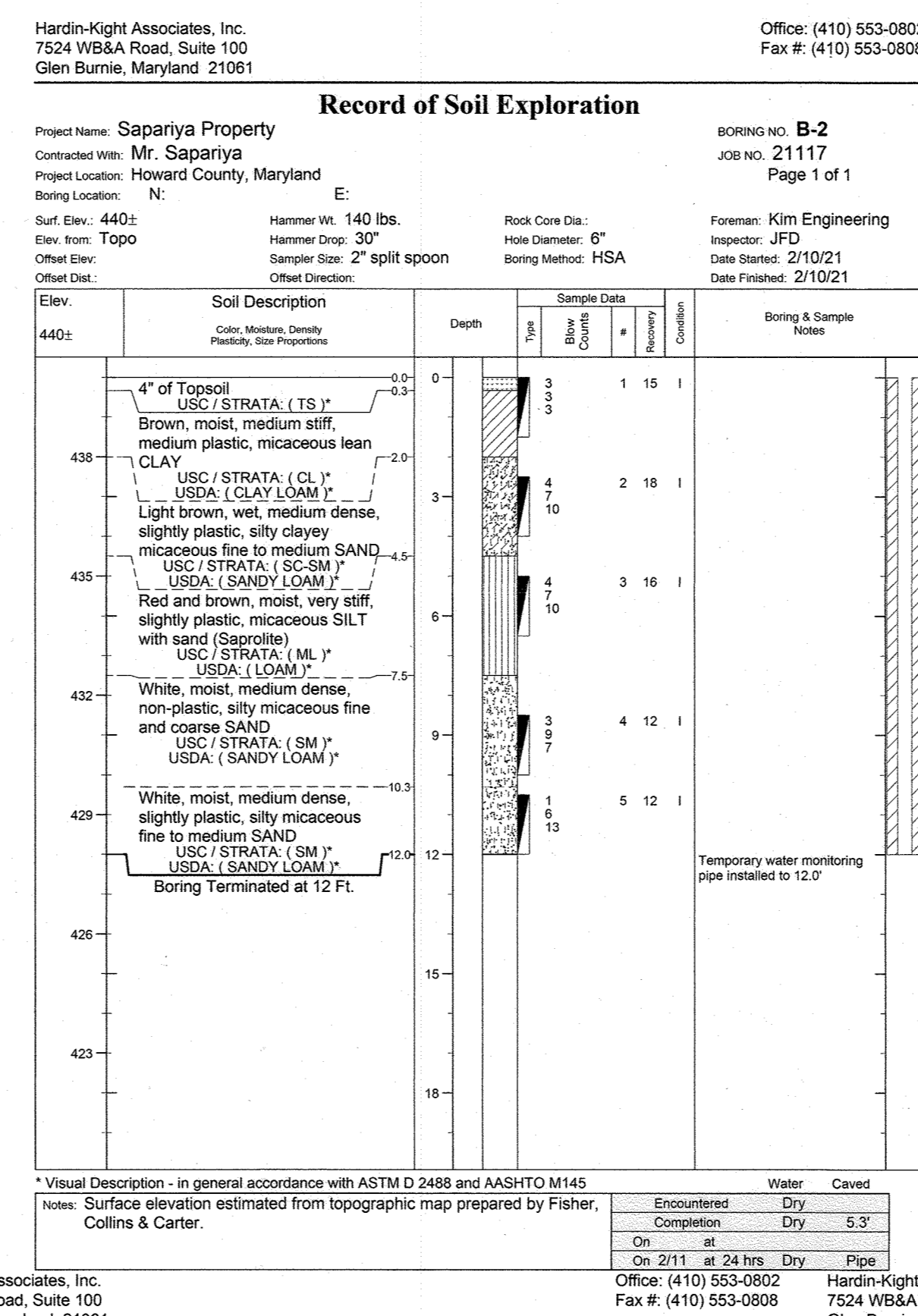
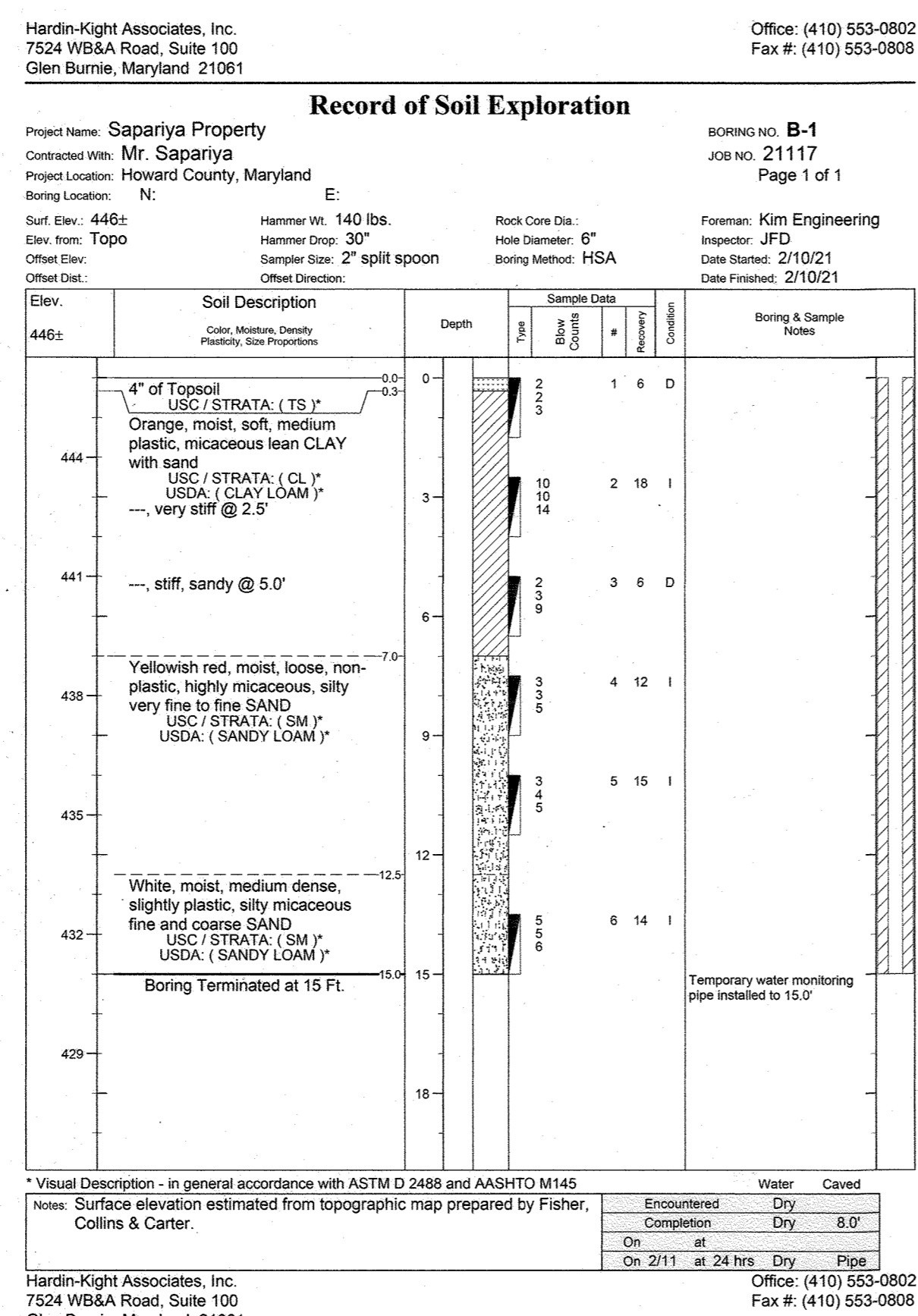
GENERAL NOTES, SITE RETAINING WALL PLAN, AND TYPICAL DETAILS

PROJECT NO: 210124
 SCALE: AS SHOWN
 DATE: 02/18/2021
 DRAWN BY: KR
 CHECKED BY: CCG
 DRAWING NO: SHEET 11 OF 12

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	EXISTING FENCE
	EXISTING STORM DRAIN
	EXISTING WELL
	EXISTING WATER LINE
	EXISTING SEWER LINE
	EXISTING FENCE LINE
	EXISTING OVERHEAD WIRE
	BUILDING AND DRIVES TO BE REMOVED
	EXISTING PAVING
	EXISTING TREE LINE
	SOIL LINES AND TYPES
	DENOTES EXISTING TREES TO BE REMOVED
	DENOTES EXISTING TREES TO REMAIN
	SPECIMEN TREE
	CRITICAL ROOT ZONE

SOILS LEGEND			
SOIL	NAME	CLASS	'K' VALUE
G-B	Gladstone loam, 3 to 8 percent slopes	B	.32
G-C	Gladstone loam, 8 to 15 percent slopes	B	.32

HOWARD COUNTY WEBSOILS SURVEY 09/15/20



CONTRACTOR SHALL REFER TO RECOMMENDATIONS PROVIDED WITHIN HKA REPORT DATED FEB 2021

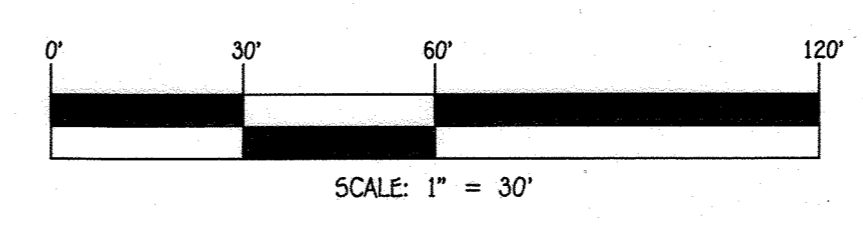
REVISIONS		
NO.	DESCRIPTION	DATE

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 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FLD
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2995

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Date: 01/17/22
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways
 Date: 10/04/2022



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME PLAN VIEW
 AND THAT I AM A BULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 27020, EXPIRATION DATE: 01/25/24.
 PAUL G. CAVANAGH
 DATE: 01/13/2022



OWNER/DEVELOPER
 DIVYESH SAPARIYA,
 SOHILRAJ SAPARIYA AND
 HITEESH ANKOLA
 5669 TROTTER ROAD
 CLARKSVILLE, MARYLAND 21029
 PH# 301-275-0762

BORING PLAN AND LOGS
SAPARIYA PROPERTY
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