

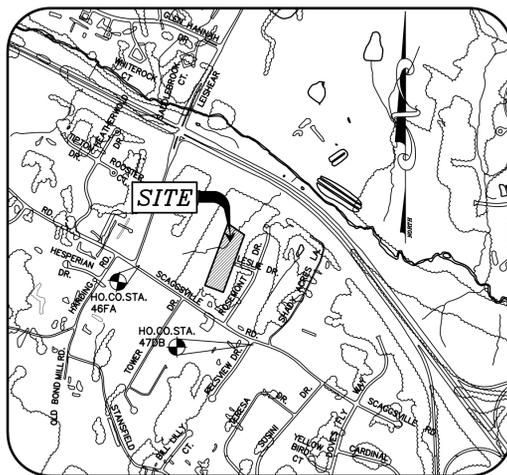
PIERCE PROPERTY

LOT 1, OPEN SPACE LOT 2 AND NON-BUILDABLE BULK PARCELS A & B

FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SHEET INDEX

SHEET NO.	TITLE
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2	SUPPLEMENTAL PLAN (GRADING, LANDSCAPE & FOREST CON.)
3	DRAINAGE AREA MAP, STORM DRAIN PROFILE AND DETAILS
4	SEDIMENT CONTROL NOTES AND DETAILS



VICINITY MAP
SCALE: 1"=1000' ADC MAP: 39, GRID F-4

GENERAL NOTES:

- SUBJECT PROPERTY ZONED "R-20" PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.
- PROJECT BACKGROUND:**
ADDRESS: 10504A SCAGGSVILLE ROAD, LAUREL MD 20723
LOCATION: TAX MAP: 46 - PARCEL : 277 TRACT 1 & TRACT 2 - GRID 12
ELECTION DISTRICT : FOURTH
DEED REFERENCE: 3962/387, 8581/224
AREA: 3.94± ACRES
PREVIOUS DPZ FILE NUMBERS : ECP-19-056, WP-20-013, WP-21-145, SP-20-004
PROPOSED USE FOR SITE : RESIDENTIAL
TOTAL NUMBER OF UNITS : 1
1 BUILDABLE LOT, 2 NON-BUILDABLE BULK PARCELS AND 1 OPEN SPACE LOT
TYPE OF PROPOSED UNIT : SFD
- EXISTING TOPOGRAPHIC INFORMATION IS BASED ON AERIAL TOPOGRAPHIC SURVEY BY WINGS AERIAL MAPPING CO., INC. DATED APRIL 10, 2008.
- BOUNDARY INFORMATION IS BASED ON FIELD RUN MONUMENTED SURVEY BY MILDENBERG, BOENDER & ASSOC., INC. DATED APRIL 2019.
- COORDINATES BASED ON NAD83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO : 46FA & 47DB
No. 46FA N 535,140.866 E 1,346,962.690 EL. 403.650
No. 47DB N 534,316.917 E 1,348,131.250 EL. 398.560
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT, WATER AND SEWER ARE PUBLIC. EXTENSION OF WATER AND SEWER CONTRACT #24-1233-D WILL BE PROVIDED.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS (COUNCIL BILL 45-2003). DEVELOPMENT OF CONSTRUCTION OF THESE LOTS MUST COMPLY WITH THE SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION, OR BUILDING/GRADING PERMIT.
- FOREST STAND AND WETLAND DELINEATIONS ARE BASED ON A STUDY PERFORMED BY ECO-SCIENCE PROFESSIONALS ON OR ABOUT APRIL, 2020.
- NO FLOODPLAIN EXIST ON SITE.
- NO HISTORIC DISTRICTS ARE ADJACENT TO THIS SITE. SITE IS ADJACENT TO LANDING ROAD, WHICH IS A DESIGNATED SCENIC ROAD. THE EXISTING STRUCTURE ON THE PROPERTY IS NOT LISTED ON THE HISTORIC REGISTRY BUT IS OLDER THAN 50 YEARS. THE DPZ RESOURCE CONSERVATION DISTRICT DETERMINED THAT THE SITE DOES NOT REQUIRE HDC APPROVAL PRIOR TO DEMOLITION.
- SOIL DELINEATION IS BASED ON HOWARD COUNTY SOIL SURVEY MAP.
- THERE IS A DWELLING ON LOT 1 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS. THERE IS AN EXISTING GARAGE ON BULK PARCEL A TO BE REMOVED. EXISTING FOUNDATIONS WILL REMAIN AT THIS STAGE. FOUNDATIONS WILL BE REMOVED AT THE SDP STAGE FOR BUILDING THE HOUSE ON FUTURE LOT 4.
- SLOPES GREATER THAN 25% EXIST ON SITE.
- NO BURIAL GROUNDS OR CEMETERIES EXIST ON SITE.
- FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT FOR THIS SUBDIVISION WILL BE FULFILLED BY ON-SITE RETENTION OF 1.63 ACRES. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- LANDSCAPING FOR THIS SUBDIVISION HAS BEEN PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL FINANCIAL SURETY FOR 14 SHADE AND 21 EVERGREEN TREES FOR PERIMETER LANDSCAPING IN THE AMOUNT OF \$7,350.00 AND 12 SHADE TREES PROVIDED AS A CONDITION OF THE APPROVAL OF WP-20-013 IN THE AMOUNT OF \$3,600.00 FOR A TOTAL OF \$10,950.00 WILL BE POSTED WITH THE DEVELOPERS AGREEMENT.
- STORMWATER MANAGEMENT IS PROVIDED BY M-6 MICRO-BIORETENTION FACILITIES IN ACCORDANCE WITH THE 2007 MARYLAND STORMWATER DESIGN MANUAL. ALL SWM FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- A PRIVATE RANGE OF ADDRESS SIGN SHALL BE FABRICATED AND INSTALLED BY THE HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPER'S / OWNER'S EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST ESTIMATE.
- THIS DEVELOPMENT IS DESIGNED TO BE IN ACCORDANCE WITH SECTION 16.127 RESIDENTIAL INFILL DEVELOPMENT OF SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. THE DEVELOPER OF THIS PROJECT SHALL CREATE COMPATIBILITY WITH THE EXISTING NEIGHBORHOOD THROUGH THE USE OF ENHANCED PERIMETER LANDSCAPING, BERMS, FENCES, SIMILAR HOUSE TYPES AND THE DIRECTIONAL ORIENTATION OF THE PROPOSED HOUSES.
- THIS PROJECT IS EXEMPT FROM MRU. IT IS NOT CREATING ANY ADDITIONAL UNITS.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- 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.
- A COMMUNITY MEETING FOR THIS PROJECT WAS HELD ON APRIL 16, 2019 AT 6:00 PM AT THE SAVAGE LIBRARY.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM LOT AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
- THIS PROJECT IS SUBJECT TO ALTERNATIVE COMPLIANCE WP-20-013 OF SECTION 16.120(C)(2), 16.121(C)(2) AND 16.1205(A)(3). ON APRIL 2, 2020 AND PURSUANT TO SECTION 16.1216, THE DIRECTOR OF THE DEPARTMENT OF PLANNING AND ZONING, DIRECTOR OF THE DEPARTMENT OF RECREATION AND PARKS AND ADMINISTRATOR OF THE OFFICE OF COMMUNITY SUSTAINABILITY CONSIDERED AND APPROVED YOUR REQUEST FOR A VARIANCE WITH RESPECT TO SECTION 16.1205(A)(3) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO REMOVE 9 SPECIMEN TREES IN ORDER TO PROVIDE ACCESS TO AND DEVELOP THE PROPERTY WITH 6 SINGLE FAMILY DETACHED LOTS AND AN OPEN SPACE LOT TO BE DEDICATED TO HOWARD COUNTY. ON APRIL 20, 2020, AND PURSUANT TO SECTION 16.104, THE DIRECTOR OF PLANNING AND ZONING CONSIDERED AND APPROVED YOUR REQUEST FOR ALTERNATIVE COMPLIANCE WITH RESPECT TO SECTIONS 16.121(A)(2)** AND SECTION 16.120(C)(2) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS TO REDUCE THE MINIMUM LOT SIZE TO 14,000 SQUARE FEET AND DEDICATE 30% OF THE GROSS ACREAGE (1.78 ACRES) AS OPEN SPACE TO HOWARD COUNTY CONTAINING A STREAM, WETLANDS AND STEEP SLOPES AND TO ALLOW THE EXISTING HOUSE TO CONTINUE ACCESS THROUGH PARCEL 36 TO SCAGGSVILLE ROAD INSTEAD OF FROM ITS PUBLIC ROAD FRONTAGE ONTO LESLIE DRIVE. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
27.1. INCLUDE ALTERNATIVE COMPLIANCE APPLICATION FILE NUMBER WP-20-013, DATE OF APPROVAL AND CONDITIONS OF APPROVAL ON ALL RELATED PLAN SUBMISSIONS.
27.2. APPROVAL OF RELIEF OF SECTION 16.120(C)(2) ONLY APPLIES TO LOT 6 AND THE EXISTING HOUSE. INCLUDE A GENERAL NOTE ON THE FINAL PLAN AND PLAT THAT MANDATES SHOULD THE EXISTING HOUSE BE DEMOLISHED OR DESTROYED, AND A NEW HOUSE BUILT, THE ACCESS THROUGH PARCEL 36 EXPRESS AND DRIVE SHALL GAIN ACCESS TO LESLIE DRIVE VIA THE SHARED DRIVEWAY. INCLUDE THAT A PLAT OF REVISION MAY BE NEEDED TO CHANGE THE HOUSE ORIENTATION AND SETBACKS. THE ENVIRONMENTAL FEATURES MUST BE WHOLLY CONTAINED WITHIN AN OPEN SPACE LOT THAT IS DEDICATED TO THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
27.3. ALL REMOVED SPECIMEN TREES SHALL BE REPLACED WITH NATIVE TREES OF 3" CALIPER TREES AT A 2:1 RATIO. SHOW THE REPLACEMENT TREES WITH A NOTE REFERENCING WP-20-013 ON FUTURE PLAN SUBMISSIONS.
27.4. ALL FUTURE PLAN SUBMISSIONS SHALL CLEARLY LABEL THE REMAINING SPECIMEN TREES AND INCLUDE A NOTE REQUIRING THE SPECIMEN TREES BE MAINTAINED IN PERPETUITY. FURTHER, SHOULD A SPECIMEN TREE PERISH, REPLACEMENT TREES OF 4" CALIPER OR GREATER SHALL BE PLANTED AT 2:1 AS MITIGATION AND A REDLINE TO THE APPROVED SDP SHALL BE PROCESSED TO REFLECT THE CHANGES.
27.6. INCLUDE THE TREE PRESERVATION METHODS OUTLINED IN THE FEBRUARY 16, 2020 RECOMMENDATIONS LETTER FROM T.D. MAYER CONSULTING ON THE SITE DEVELOPMENT PLANS AND CONSTRUCTION DRAWINGS.
27.7. THE SEQUENCE OF OPERATION SHALL INCLUDE CONTACTING DPZ STAFF TO BE PRESENT TO OBSERVE AND VERIFY ROOT PRUNING, DEEP ROOT FERTILIZATION, AND POST CONSTRUCTION TREE PROTECTION.
- DRIVEWAYS 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 - 6 INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2").
C) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. OF 45 FOOT TURNING RADIUS.
D) STRUCTURES (CULVERT/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (125 LOADINGS).
E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD PLAIN WITH NO MORE THAN 1 FOOT OF DEPTH OVER DRIVEWAY SURFACE.
F) STRUCTURE CLEARANCES - MINIMUM 12 FEET
G) MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE.
- THIS PROJECT IS SUBJECT TO ALTERNATIVE COMPLIANCE WP-21-145 OF SECTION 16.120(C)(2). A REQUEST TO ALLOW THE SUBDIVISION OF PARCEL 277 WITHOUT INCLUDING PARCEL 36 IN THE SUBDIVISION. PARCELS 277 AND 36 WERE CREATED BY DEED INSTEAD OF GOING THROUGH THE SUBDIVISION PROCESS TO ULTIMATELY RECORD A PLAT. IT WAS APPROVED BY THE DIRECTOR OF PLANNING AND ZONING, ON AUGUST 12, 2021 APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
28.1. INCLUDE FILE NUMBER WP-21-145, SECTIONS, SUMMARY OF REQUEST, DECISION, DATE OF DECISION AND CONDITIONS OF APPROVAL ON ALL SUBSEQUENT PLAN SUBMISSIONS FOR THE SUBDIVISION FINAL PLANS AND SITE DEVELOPMENT PLANS.
28.2. APPROVAL OF THIS ALTERNATIVE COMPLIANCE IS FOR THE FINAL PLANS DEVELOPING PIERCE PROPERTY PER THE APPROVED SP-20-004 ONLY. APPROVAL IS ONLY VALID AS LONG AS THE APPROVED SP-20-004 AND RELATED FINAL PLANS ARE BEING PROCESSED. SHOULD ANY OF THE PLANS BEGINS VOID FOR FAILURE TO MEET MILESTONES OR WITHDRAWN BY THE APPLICANT, WP-21-145 WILL ALSO BE VOID.
28.3. THE APPLICANT MUST SEND A COPY OF THIS APPROVAL TO THE OWNERS OF PARCEL 36 VIA CERTIFIED MAIL, IN ORDER TO NOTIFY THEM OF THIS ACTION.
- THIS PROJECT IS SUBJECT TO DESIGN MANUAL WAIVER TO STANDARD R-5.05 OF DESIGN MANUAL VOLUME III, APPROVED ON JULY 28, 2020. CONDITIONS OF APPROVAL ARE:
29.1. DRIVEWAY SHOULD BE CENTERED AT THE TEE TURN AROUND.
29.2. TEE TURN AROUND TO BE UPGRADED TO MATCH DETAIL R-5.05
29.3. A "NO PARKING TURN AROUND AREA" TO BE ADDED A RANGE OF ADDRESSES CHART TO BE ADDED ALONG WITH THE SUBDIVISION OF BULK PARCELS A & B.
29.4. IMPROVEMENTS MUST BE MADE WITHIN THE PUBLIC RIGHT OF WAY TO APPROPRIATELY CAPTURE AND CONVEY RUNOFF ELEMENTS TO DISCHARGE FROM THE PUBLIC ROAD INTO THE PRIVATE DRIVEWAY.
- DPZ STAFF TO BE CONTACTED WITH 3 DAY NOTICE TO:
30.1. TO ATTEND PRE CONSTRUCTION MEETING.
30.2. AFTER INSTALLATION OF TREE PROTECTION.
30.3. AFTER CONSTRUCTION IS COMPLETED TO DOCUMENT SPECIMEN TREE CONDITION.

Project	date
19-004	OCT. 2021
illustration	engineering
MMW	SAA
scale	approval
1"=60'	SAA

no.	description	date

PIERCE PROPERTY
LOT 1, OPEN SPACE LOT 2 AND NON-BUILDABLE BULK PARCELS A & B
TAX MAP: 46 - PARCEL : P/O 277 - GRID 12
FOURTH ELECTION DISTRICT
COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
8818 FORREST ST. ELLICOTT CITY, MD 21143
(410) 997-0286 Tel. (410) 997-0289 Fax

ENGINEER'S CERTIFICATE

I 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.

Samer Alomer
12/22/2021
SIGNATURE OF ENGINEER DATE

SAMER A. ALOMER, P.E.
PRINTED NAME OF ENGINEER

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO CONDUCT ON-SITE INSPECTION.

Donald R. Reimer Jr.
12/22/2021
SIGNATURE OF DEVELOPER DATE

DONALD R. REIMER JR.
PRINTED NAME OF DEVELOPER

DEVELOPER/OWNER

TRACT 2
LAND DESIGN & DEVELOPMENT
8318 FORREST STREET - SUITE 200
ELLICOTT CITY, MD 21043
PHONE 410-707-7054

DEVELOPER/OWNER

TRACT 1
HOWARD LAND INVESTORS LLC.
8318 FORREST STREET - SUITE 200
ELLICOTT CITY, MD 21043
PHONE 410-707-7054

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Phil Thompson
1/27/2022
DATE

PHIL THOMPSON
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Phil Thompson
1/26/2022
DATE

PHIL THOMPSON
CHIEF, DIVISION OF LAND DEVELOPMENT



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. 26859, EXP DATE 08/08/23

Samer Alomer
12/22/2021
DATE

SAMER A. ALOMER, P.E.

Samer Alomer
12/22/2021
DATE

SAMER A. ALOMER, P.E.

SOIL DESCRIPTION:

SYMBOL	RATING	NAME	K FACTOR	MAP NO.	COMMENTS
MoD	(B)	MANOR LOAM 15-25% SLOPES,	.24	46	HIGHLY ERODABLE
GmC	(C)	GLENVILLE SILT LOAM 8-15% SLOPES	.37	46	HIGHLY ERODABLE
Fa	(B)	FALLSINGTON SANDY LOAM 0-2% SLOPES	.20	46	
UcB	(D)	URBAN LAND-CHILLUM-BELTSVILLE COMPLEX 0-5% SLOPES, MODERATELY ERODED.	.37	46	

FSD NOTES:

- NO RARE, THREATENED OR ENDANGERED SPECIES OR THEIR HABITATS WERE OBSERVED ON THE PROPERTY.
- SURROUNDING LAND USE IS HIGH DENSITY RESIDENTIAL DEVELOPMENT.
- APPROXIMATELY 1.8 ACRES OF FOREST IS PRESENT WITHIN 100 FEET OF THE SUBJECT PROPERTY.
- NO 100 YEAR FLOODPLAIN IS PRESENT ON THE SUBJECT PROPERTY.
- THERE ARE STEEP SLOPES (25% OR GREATER) ON THE PROPERTY.
- THERE ARE NO KNOWN HISTORIC STRUCTURES OR CEMETERIES ON THE PROPERTY.
- THERE ARE SPECIMEN TREES, STATE CHAMPION TREES AND/OR TREES 75% OF THE SIZE OF THE STATE CHAMPION TREE ON THE PROPERTY.

FOREST CONSERVATION WORKSHEET

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

Land Use Category
 Insert the number "1" under the appropriate land use (limit to only one entry)
 Resid. Rural/LD Rural/MD Suburban Insl./Linear Retail/Off. Mixed Use/
 0 0 0 0 0 0 0 0 0 0

Forest Conservation Worksheet
 E. Afforestation Threshold (Net Tract Area x 15%)
 F. Reforestation Threshold (Net Tract Area x 20%)

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

Break Even Point
 J. Break Even Point
 K. Forest Clearing Permitted without Mitigation

Proposed Forest Clearing
 L. Total Area of Forest to be Cleared
 M. Total Area of Forest to be Retained

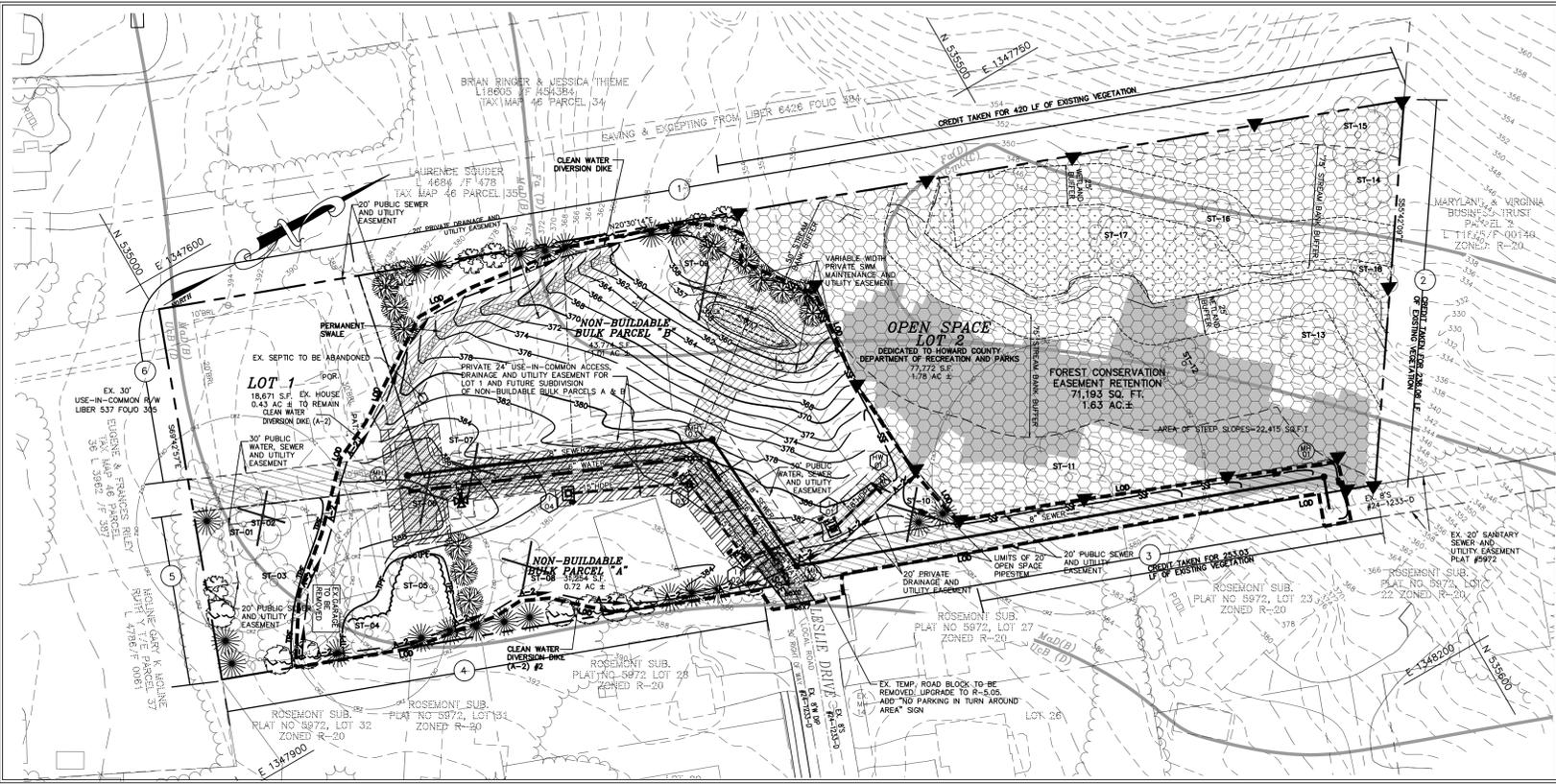
Planting Requirements Outside Watershed
 W. Total Planting within Development Site Watershed
 X. Total Afforestation Required
 Y. Remaining Planting within Watershed for Reforestation Credit
 Z. Reforestation for Clearing above the Reforestation Threshold
 AA. Reforestation for Clearing below the Reforestation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

Planting Requirements Inside Watershed
 N. Reforestation for Clearing above the Reforestation Threshold
 O. Credit for Retention above the Reforestation Threshold
 P. Total Reforestation Required
 R. Total Reforestation Required
 S. Total Afforestation Required
 T. Total Reforestation and Afforestation Requirement
 U. 75% of Total Obligation (Retention + Planting)
 V. Planting Required Onsite to meet 75% Obligation

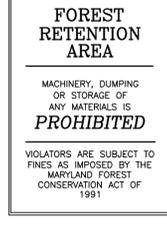
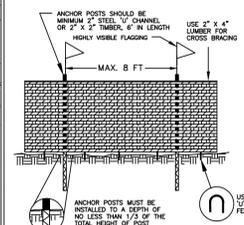
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NOTES:

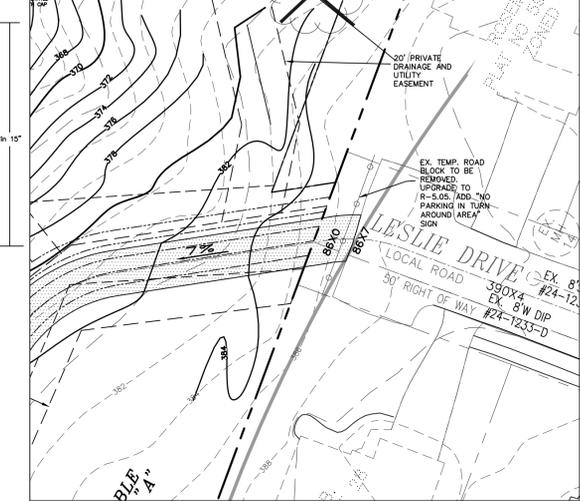
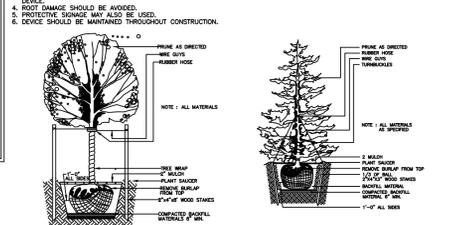
- REPLACEMENT RATIO OF 2:1 FOR TREES TO BE REMOVED. A TOTAL OF 12 TREES TO BE REPLANTED WITH CALIBER OF 3" MIN. DBH.
 - TREE PROTECTIVE FENCE TO BE INSTALLED AROUND ALL TREES TO REMAIN ON BUILDABLE LOTS DURING ALL PHASES OF CONSTRUCTION. DETAILS TO BE SHOWN ON FINAL PLANS AND SITE DEVELOPMENT PLANS.
 - TREE PRESERVATION RECOMMENDATIONS TO BE PERFORMED IN ACCORDANCE WITH THE GUIDELINES SHOWN ON THIS EXHIBIT. DETAILS WILL BE PROVIDED ON THE FINAL SDP PLANS.
- TREE PRESERVATION REQUIRED PROTECTIONS:**
- AFTER THE LIMIT OF DISTURBANCE (LOD) IS ESTABLISHED, TREES 1, 3, 4, AND 5 SHOULD BE PRUNED, THINNED AND THE DEADWOOD REMOVED.
 - THESE TREES SHALL HAVE A DEEP ROOT FERTILIZATION TO PROMOTE NEW ROOT GROWTH. THE FOLLOWING MIXTURE OR EQUIVALENT THEREOF SHOULD BE USED PER 550 GALLONS OF WATER, APPROXIMATELY 25 LBS. OF 20-20-20 NUTR-LEAF AND APPROXIMATELY 50 LBS. OF POWDER BLUE 38-0-0 SHOULD BE USED. THIS RESULTS IN A 4-1-1 RATIO. THE APPLICATION RATE SHOULD BE 5 GALLONS OF MIXTURE FOR EACH INCH OF (DBH). THE MATERIAL SHOULD BE APPLIED WITH AN APPROPRIATE HYDRAULIC SPRAYER AND THE TANK SHALL RECEIVE CONSTANT AGITATION TO KEEP THE MATERIAL IN SOLUTION. THIS MATERIAL SHOULD BE APPLIED AT APPROXIMATELY 150 TO 200 LBS. P.S.I. (PER SQUARE INCH). THIS APPLICATION IS DESIGNED TO DO TWO THINGS: TO PUT THE MATERIAL INTO THE SOIL AT THE APPROPRIATE DEPTH AND TO AERATE THE SOIL.
 - ROOT PRUNING SHOULD BE DONE AT THE LOD TO A DEPTH OF APPROXIMATELY TWO FEET. ROOTS SHOULD BE CLEANLY CUT USING A VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT. THE TRENCH SHOULD BE IMMEDIATELY BACK-FILLED WITH THE SOIL REMOVED OR ORGANIC SOIL APPROVED BY PROJECT MANAGER. NOTE: NOT MORE THAN 30% OF THE CRITICAL ROOT ZONE SHOULD BE DISTURBED AND LESS IF POSSIBLE.
 - ORANGE TREE-PROTECTION FENCING SHOULD BE INSTALLED AT THE LOD AND AROUND THE REMAINING CANOPY OF THE SAVED TREES. THE AREA SHOULD NOT BE DISTURBED BY EQUIPMENT OR USED FOR STORAGE. THE FENCE SHOULD REMAIN AS INSTALLED THROUGHOUT THE ENTIRE PROJECT.
 - FIELD INSPECTION TO MAKE SURE ALL WORK HAS BEEN COMPLETED ACCORDING TO INDUSTRY STANDARDS.
 - TREES SHOULD BE MONITORED DURING CONSTRUCTION OF THE PROJECT. THOSE PROBLEMS THAT ARE FOUND DURING THE COURSE OF CONSTRUCTION SHOULD BE CORRECTED BY THE TREE TRIMMING CONTRACTOR AT THE DIRECTION OF THE PROJECT MANAGER.
 - UPON SUCCESSFUL COMPLETION OF THE PROJECT ALL TREE PRESERVATION MATERIAL SHALL BE REMOVED.
 - A FINAL INSPECTION SHALL BE DONE AND ANY INJURY TO THE TREES (E.G., PRUNING OF DEAD, DYING AND BROKEN LIMBS) SHOULD BE DONE AT THIS TIME. THE TREES SHOULD BE MONITORED FOR A PERIOD OF TWO YEARS BEFORE FINAL RELEASE OF THE PROJECT.



TREE PROTECTION FENCE DETAIL



SIGNAGE DETAIL



SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES						
LANDSCAPE TYPE	B (PERIMETER 1)	B (PERIMETER 2)	B (PERIMETER 3)	B (PERIMETER 4)	B (PERIMETER 5)	NONE (PERIMETER 6)*	TOTAL
LINEAR FEET OF PERIMETER	697.46 LF	236.06 LF	343.65 LF	347.31 LF	103.82 LF	251.31 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 414.58 LF	YES, 236.06 LF	YES, 253.03 LF	YES	YES 2 EXISTING SHADE TREES	NO	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	6 SHADE TREES 7 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	2 SHADE TREES 2 EVERGREEN TREES 0 SHRUBS	7 SHADE TREES 9 EVERGREEN TREES 0 SHRUBS	2 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 21 EVERGREEN TREES 0 SHRUBS	17 SHADE TREES 21 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED	6 SHADE TREES 7 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	2 SHADE TREES 2 EVERGREEN TREES 0 SHRUBS	6 SHADE TREES 9 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 3 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 21 EVERGREEN TREES 0 SHRUBS	14 SHADE TREES 21 EVERGREEN TREES 0 SHRUBS

* NOTE - LANDSCAPING IS NOT REQUIRED FOR THE EXISTING DWELLING, HOWEVER, SHOULD THE EXISTING DWELLING BE DEMOLISH AND REPLACED (SEE WP-20-013) THE NEW DWELLING WILL NEED TO PROVIDE LANDSCAPING AS PART OF THE SITE PLAN DUE TO THE CHANGE IN ORIENTATION, SETBACKS AND ACCESS.

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

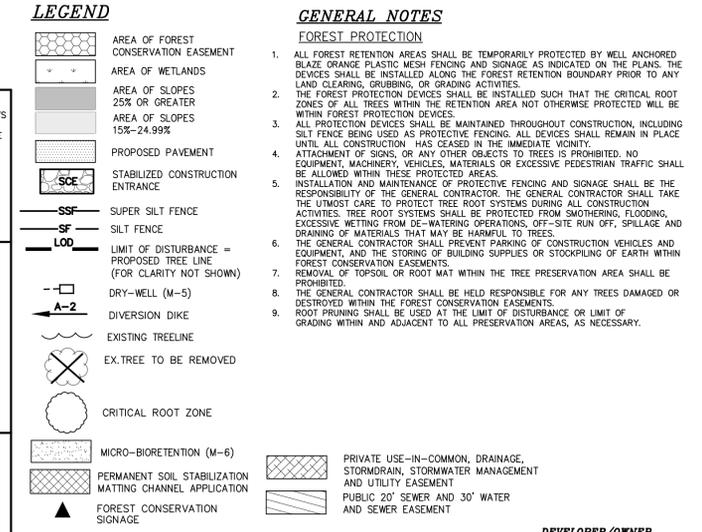
QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
7		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
21		GLEDITSIA TRIACANTHOS INERMIS 'IMPERIAL'	IMPERIAL THORNLESS HONEYLOCUST	2 1/2" - 3" CAL.
7		THUJA PLICATA	GREEN GIANT	5'-6" HGT.
TOTAL				35 (14 SHADE TREES, 21 EVERGREEN TREES)

MITIGATION TREE PLANTING SCHEDULE (WP-20-013)

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
12		PRUNUS SARGENTII	SARGENT CHERRY OR EQUIVALENT	3" CAL. MIN.
TOTAL				12 SHADE TREES AS PER WP-20-013 REQUIREMENT

NOTE - AN ADDITIONAL 12 SHADE TREES HAVE BEEN PROVIDED IN LIEU OF 6 SPECIMEN TREE REMOVED.

LEGEND



GENERAL NOTES

- FOREST PROTECTION**
- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
 - THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES.
 - ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
 - ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
 - INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINAGE OF MATERIALS THAT MAY BE HARMFUL TO TREES.
 - THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
 - REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
 - THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
 - ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, HOWARD COUNTY INSPECTORS AND A STAFF MEMBER FROM DPZ SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
 - TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
 - INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES/MAKE ALL NECESSARY ADJUSTMENTS;
 - ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

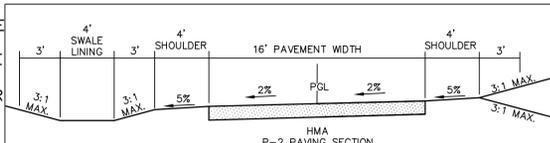
- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS.
- ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.
- THE CONSTRUCTION PROGRAM SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

SPECIMEN TREE CHART

KEY	SPECIES	SIZE	CRZ	COMMENTS	CRZ AREA SF
ST-01	TULIP POPLAR	42.5	63.75	FAIR CONDITION	12761
ST-02	TULIP POPLAR	44.5	66.75	MULTIPLE STEMS - HOLLOW - TO BE REMOVED	13990
ST-03	WHITE OAK	32	48	FAIR CONDITION	7235
ST-04	TULIP POPLAR	31.5	47.25	FAIR CONDITION	7010
ST-05	RED OAK	33	49.5	FAIR CONDITION	7694
ST-06	TULIP POPLAR	32	48	FAIR CONDITION - TO BE REMOVED	7235
ST-07	RED OAK	30.5	45.75	FAIR CONDITION - TO BE REMOVED	6572
ST-08	CHESTNUT OAK	34.5	51.75	POOR, 2ND TRUNK DEAD - SEVERE ROT AT BASE - TO BE REMOVED	84091
ST-09	RED OAK	49.5	74.25	POOR, 2ND TRUNK DEAD TO BE REMOVED	17311
ST-10	CHESTNUT OAK	34.5	51.75	POOR, 2ND TRUNK DEAD TO BE REMOVED	84091
ST-11	CHESTNUT OAK	56.5	84.75	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	22553
ST-12	CHESTNUT OAK	31	46.5	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	6789
ST-13	CHESTNUT OAK	48.5	72.75	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	16619
ST-14	CHESTNUT OAK	30	45	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	6359
ST-15	CHESTNUT OAK	46.5	69.75	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	15276
ST-16	CHESTNUT OAK	33	49.5	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	7694
ST-17	TULIP POPLAR	37	55.5	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	9672
ST-18	TULIP POPLAR	30	45	PRESERVED IN FOREST CONSERVATION ESMT ON OPEN SPACE LOT 7	6359

NOTE:

- SPECIMEN TREES 1, 3, 4, AND 5 TO BE MAINTAINED IN PERPETUITY. FURTHER, SHOULD A SPECIMEN TREE PERISH, REPLACEMENT TREES OF 4" CALIBER OR GREATER SHALL BE PLANTED AT 2:1 AS MITIGATION AND A REDLINE TO THE APPROVED SDP SHALL BE PROCESSED TO REFLECT THE CHANGES.
- PROVIDE TREE PROTECTIVE FENCE AT THE EDGE OF THE LOD INTERSECTING THE CRITICAL ROOT ZONE (CRZ) FOR SPECIMEN TREES 2, 3 & 4.
- PROVIDE A ROW OF SUPER SILT FENCE ALONG THE ENTIRE INSIDE PERIMETER OF THE FOREST CONSERVATION EASEMENT.
- PROVIDE TREE PROTECTIVE FENCE AROUND THE EXISTING GARAGE TO BE REMOVED ON PARCEL "A".



UIC DRIVEWAY TYP. SECTION

ENGINEER'S CERTIFICATE

I 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.

Samer Alomer
 SIGNATURE OF ENGINEER
 12/22/2021
 DATE

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. HOWARD SOIL CONSERVATION DISTRICT IS AUTHORIZED TO CONDUCT PERIODIC ON-SITE INSPECTION.

Donald R. Reuver
 SIGNATURE OF DEVELOPER
 12/22/2021
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Digitally signed by **Alexander Bratovic**, 1/27/2022
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Digitally signed by **Phil Thompson**, 1/27/2022
 CHIEF, DEVELOPMENT/ENGINEERING DIVISION DATE

CHIEF, DIVISION OF LAND DEVELOPMENT
 Digitally signed by **Samer Alomer**, 12/22/2021
 SAMER A. ALOMER, P.E. DATE



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. 26859, EXP DATE 08/08/23

Samer Alomer
 SIGNATURE OF DEVELOPER
 12/22/2021
 DATE

DEVELOPER/OWNER

HOWARD LAND INVESTORS LLC
 TRACT 1
 8318 FOREST STREET - SUITE 200
 ELICOTT CITY, MD 21043
 PHONE 410-707-7054

DEVELOPER/OWNER

TRACT 2
 CLARKVILLE RIDGE PROFESSION

SOIL DESCRIPTION:

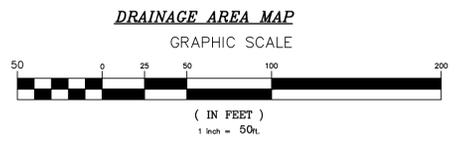
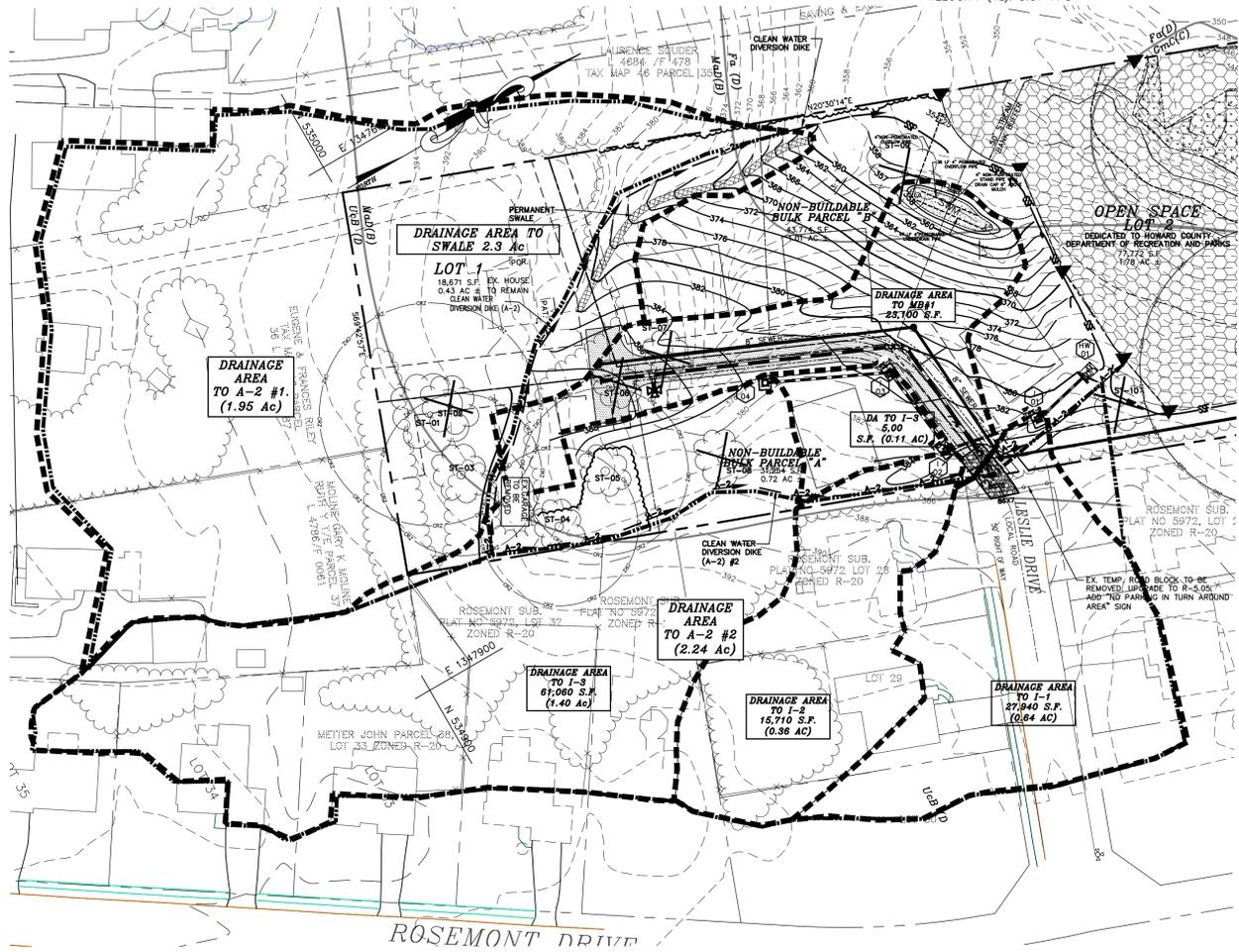
Table with 5 columns: SYMBOL, RATING, NAME, K FACTOR, MAP NO., COMMENTS. Rows include MoD (B) MANOR LOAM 15-25% SLOPES, GmC (C) GLENVILLE SILT LOAM 8-15% SLOPES, Fa (B) FALLSINGTON SANDY LOAM 0-2% SLOPES, Ucb (D) URBAN LAND-CHILLUM-BELTSVILLE COMPLEX 0-5% SLOPES, MODERATELY ERODED.

DIVERSION DIKE (A-2) #1

DRAINAGE AREA: 1.95 AC. C FACTOR: 0.37. I_z: 4.5. Q_z: 3.25 CFS. DIKE (CHANNEL): TRIANGULAR. DEPTH: 24". SLOPE: 4%.

DIVERSION DIKE (A-2) #2

DRAINAGE AREA: 2.27 AC. C FACTOR: 0.37. I_z: 4.5. Q_z: 3.78 CFS. DIKE (CHANNEL): TRIANGULAR. DEPTH: 24". SLOPE: 4%.



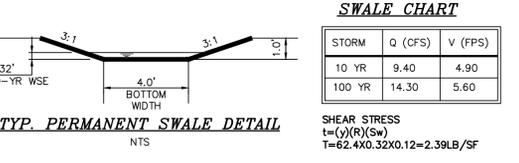
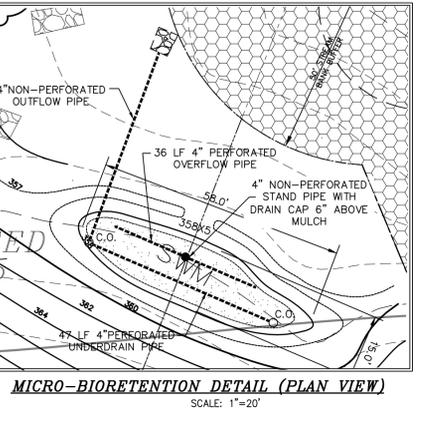
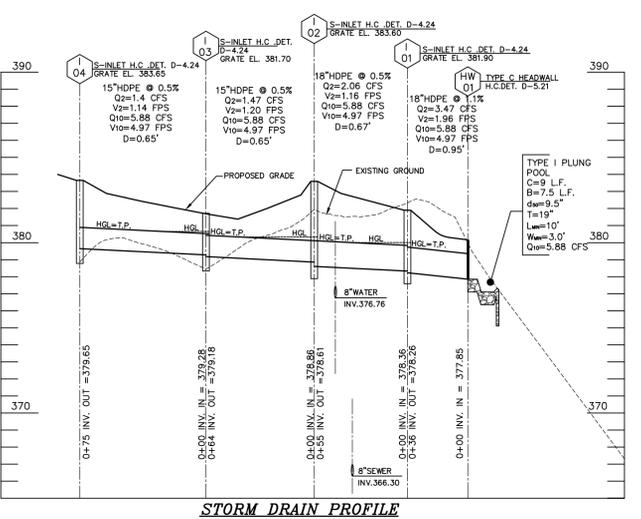
DEVELOPER/OWNER: TRACT 1 HOWARD LAND INVESTORS LLC, 8318 FORREST STREET - SUITE 200, ELLICOTT CITY, MD 21043. DEVELOPER/OWNER: TRACT 2 CLARKSVILLE RIDGE PROFESSIONAL CENTER LLC, 8318 FORREST STREET - SUITE 200, ELLICOTT CITY, MD 21043.

ENGINEER'S CERTIFICATE: I 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. Signed by Samer Alomer, dated 12/22/2021. DEVELOPERS CERTIFICATE: I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. Signed by Alexander Brachic, dated 1/27/2022. APPROVED: DEPARTMENT OF PLANNING AND ZONING. Signed by Phil Thompson, dated 1/27/2022. CHIEF, DEVELOPMENT/ENGINEERING DIVISION. DATE: 1/26/2022. CHIEF, DIVISION OF LAND DEVELOPMENT. DATE: 12/22/2021.

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. 26859, EXP DATE 08/08/23. Signed by Samer Alomer, dated 12/22/2021.

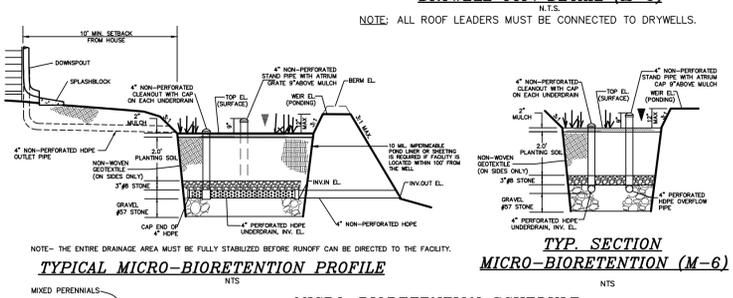
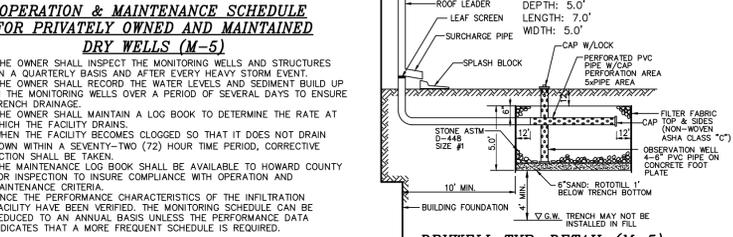
geolab GEOTECHNICAL LABORATORIES, INC. ENGINEERS • GEOLOGISTS • CONSULTANTS. June 2, 2020. Sam Alomer, P.E. Mildenberg, Boender & Assoc., Inc. 7350B Grace Drive, Columbia, MD 21044.

Re: Subsurface Exploration Pierce Properties Leslie Drive Laurel, Howard County, MD Project No. 120-096. Dear Mr. Alomer: Geotechnical Laboratories, Inc. (Geolab) has completed the requested exploration related to the above referenced project. Project information has been provided by Mildenberg, Boender & Assoc., Inc. (project Civil Engineer). Project plans indicate that five new single-family homes will be constructed. Stormwater management facilities are proposed to handle the additional runoff created by the construction of the homes due to the increase in impermeable surfaces. For this study, four soil test borings (designated as B-1 through B-4) were drilled using hand-augers to a depth of 10 feet below the existing ground surface, or refusal, whichever occurred first. The test boring locations were determined and staked by Mildenberg, Boender & Assoc., Inc. The boring locations are shown on the attached Boring Location Plan. The results of the study indicate that Test Boring Nos. B-1 through B-3 were drilled to a depth of 10 feet. Test Boring No. B-4 was terminated at a depth of 6.5 feet due to encountered rock. Groundwater was not encountered in any of the test borings to the depth explored. It should be noted that the groundwater levels on this site may vary due to seasonal conditions and recent rainfall, drought and temperature effects. Should you have any questions, please do not hesitate to contact our office at your convenience. Sincerely, Geotechnical Laboratories, Inc. David A. Rockwood, P.E. Staff Engineer.



STORM DRAIN STRUCTURE CHART. Table with 5 columns: NO., LOCATION*, TOP**, INV. IN, INV. OUT, COMMENTS. Rows include HW 01, I-01, I-02, I-04, I-03.

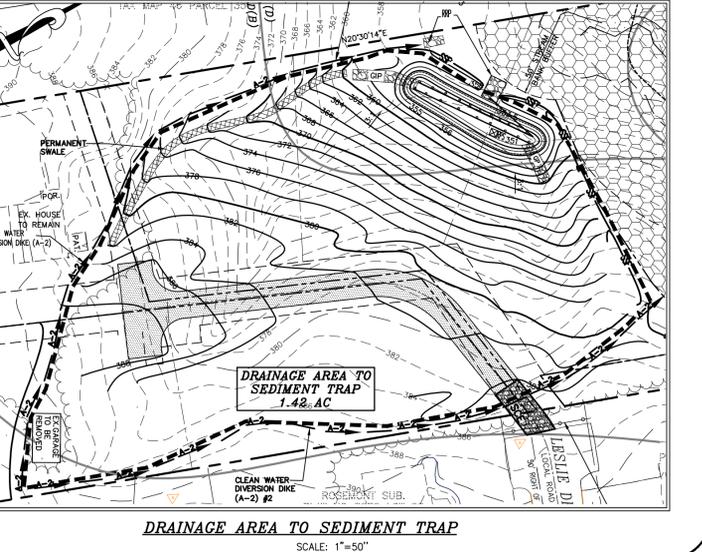
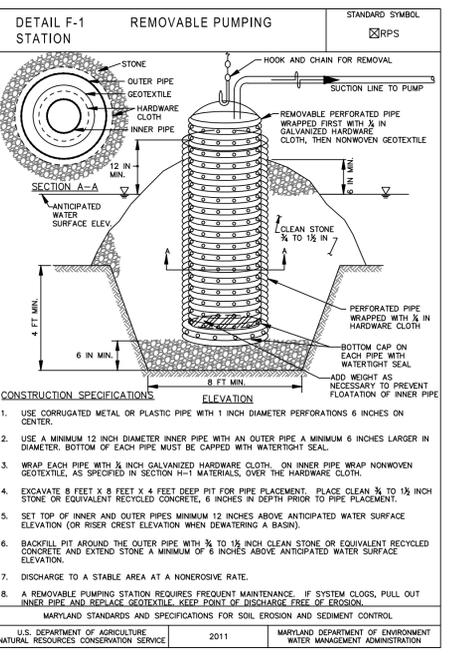
NOTES: 1. STATIONS GIVEN TO CENTERLINE FACE OF INLET AT TOP OF CURB FOR INLETS LOCATED WITHIN THE ROAD RIGHT-OF-WAY. 2. STATIONS FOR YARD INLETS TO CL OF INLET. 3. LOCATION OF MANHOLES IS TO CL OF MANHOLE COVER. 4. LOCATION OF END SECTION GIVEN TO CENTERLINE OF PIPE AT THE CONNECTION OF THE STORM DRAIN PIPE TO THE END SECTION. 5. ELEVATIONS MEASURED TO CENTER OF ALL INLETS. 6. STATIONS AND ELEVATIONS FOR HEADWALLS IS TO MID POINT OF THE HEADWALL.



MICRO-BIORETENTION SCHEDULE. Table with 7 columns: FACILITY, TOP EL. (SURFACE), WEIR EL., BERM EL., INV. IN, INV. OUT, SURFACE AREA, PONDING AREA, PONDING DEPTH, GRAVEL DEPTH UNDERNEATH. Row MB-1 shows values for a facility with a top elevation of 357.50 and a surface area of 600 S.F.

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6). 1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2. 2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL GEOTEXTILE STAKES AND WIRES. 3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED. 4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

BAFFLE DESIGN: A - AREA OF WET POOL. A=2,196 SQ.FT. D - DISTANCE BETWEEN INFLOW AND OUTFLOW. D1=53' D2=47'. We - EFFECTIVE WIDTH: A/D. We1=42' We2=47'. Le - TOTAL DISTANCE. Le1=84' Le2=94'. LE PROVIDED: L1=80' L2=80' L3=35'. Le1=125' Le2=195'. SEDIMENT TRAP (ST-II) DATA: DRAINAGE AREA: 1.42 AC. TOTAL STORAGE REQUIRED: 5,112 C.F. TOTAL STORAGE PROVIDED: 5,580 C.F. WET STORAGE REQUIRED: 2,556 C.F. WET STORAGE PROVIDED: 2,853 C.F. DRY STORAGE REQUIRED: 2,556 C.F. DRY STORAGE PROVIDED: 2,730 C.F. EX. GROUND ELEV. @ OUTLET: 355.0. BOTTOM ELEVATION: 351.0. BOTTOM DIMENSIONS: 10'x80'. WEIR LENGTH: 10'. WEIR CREST ELEV.: 355.00. CLEANOUT ELEV.: 352.25. TOP OF EMBANKMENT ELEV.: 356.0. TOP OF EMBANKMENT WIDTH: 2:1. SIDE SLOPE: 2:1. OUTLET PROTECTION LENGTH: 13'. OUTLET PROTECTION DEPTH: 9'.



Project: 19-004, date: OCT. 2021, illustration: MAM, scale: 1"=60', approval: SAA.

description: MAM, revisions: none.

PIERCE PROPERTY LOT 1, OPEN SPACE LOT 2 AND NON-BUILDABLE BULK PARCELS A & B. TAX MAP: 46 - PARCEL: P/O 277 - GRID 12. HOWARD COUNTY, MARYLAND. FOURTH ELECTION DISTRICT. DRAINAGE AREA MAP, STORM DRAIN PROFILE AND DETAILS.

MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors. 8618 FORREST ST. ELLICOTT CITY, MD 21043. (410) 997-0296 Tel. (410) 997-0298 Fax. 3 OF 4. R-21-020

Certificate Of Completion

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AutoNav: Enabled	Envelope Originator:
Envelopeld Stamping: Enabled	Anthony Cataldo
Time Zone: (UTC-05:00) Eastern Time (US & Canada)	Ellicott City, MD 21043
	acataldo@howardcountymd.gov
	IP Address: 69.243.46.152

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Carbon Copy Events	Status	Timestamp
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Lisa Kenny lkenney@howardcountymd.gov Planning Support Tech II Howard County government Security Level: Email, Account Authentication (None)	<div style="border: 2px solid blue; padding: 5px; display: inline-block; color: blue; font-weight: bold; font-size: 1.2em;">COPIED</div>	Sent: 1/28/2022 9:54:45 AM Viewed: 2/1/2022 7:36:38 AM
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Notary Events	Signature	Timestamp
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Envelope Summary Events	Status	Timestamps
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