

STANDARD DRAWING LEGEND FOR ENTIRE PLAN SET (NOT TO SCALE)		
EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
---	ONSITE PROPERTY LINE / R.O.W. LINE	---
- - - -	NEIGHBORING PROPERTY LINE / INTERIOR PARCEL LINE	- - - -
- - - -	EASEMENT LINE	- - - -
- - - -	SETBACK LINE	- - - -
---	CONCRETE CURB & GUTTER	---
---	UTILITY POLE WITH LIGHT	---
---	POLE LIGHT	---
---	TRAFFIC LIGHT	---
---	UTILITY POLE	---
---	TYPICAL LIGHT	---
---	ACORN LIGHT	---
---	TYPICAL SIGN	---
---	CONTOUR LINE	---
---	SANITARY SEWER LATERAL	---
---	UNDERGROUND WATER LINE	---
---	UNDERGROUND ELECTRIC LINE	---
---	UNDERGROUND GAS LINE	---
---	OVERHEAD WIRE	---
---	UNDERGROUND TELEPHONE LINE	---
---	UNDERGROUND CABLE LINE	---
---	STORM SEWER	---
---	SANITARY SEWER MAIN	---
---	HYDRANT	---
---	SANITARY MANHOLE	---
---	STORM MANHOLE	---
---	WATER METER	---
---	WATER VALVE	---
---	TYPICAL END SECTION	---
---	HEADWALL OR ENDWALL	---
---	YARD INLET	---
---	CURB INLET	---
---	CLEAN OUT	---
---	ELECTRIC MANHOLE	---
---	TELEPHONE MANHOLE	---
---	ELECTRIC BOX	---
---	ELECTRIC PEDESTAL	---
---	MONITORING WELL	---
---	BENCHMARK	---
---	BORING	---
---	FLOODPLAIN	---
---	STEP SLOPES (>2%)	---
---	IMPERVIOUS AREA	---
---	DRAINAGE AREA IDENTIFICATION	---
---	WATER QUALITY FACILITY DRAINAGE AREA	---
---	STREAM BUFFER	---

STANDARD DRAWING LEGEND FOR ENTIRE PLAN SET (NOT TO SCALE)		
EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
---	STABILIZED CONSTRUCTION ENTRANCE	---
---	SILT FENCE	---
---	SOILS LINE	---
---	WETLAND BUFFER	---
---	STREAM BUFFER	---
---	TREELINE	---
(TBR)	TO BE REMOVED	(TBR)
---	SOIL STABILIZATION MATING	---
---	FOREST CONSERVATION AREA	---
---	OVERFLOW INLET	---
---	FLOW THROUGH INLET	---
---	SANITARY INLET	---
---	CURB INLET	---
---	LIMIT OF FIELD RUN SURVEY	---
---	POINT-OF-INVESTIGATION	---
---	SPECIMEN TREE	---
---	DIVERSION DIKE	---
---	SUPER SILT FENCE	---
---	TREE PROTECTION	---

SOILS TABLE							
SOILS NAME	SOILS DESCRIPTION	HYDROLOGIC SOILS GROUP	HIGHLY ERODIBLE SOIL	HYDRIC SOIL	K FACTOR	AREA - AC.	
Ca	COODRUS AND HARBORO SILT LOAMS, 0 OR 3 PERCENT SLOPES	AD	NO	NO	0.37	1.63	
GgB	GLENGLE LOAM, 3 TO 8 PERCENT SLOPES	AD	NO	NO	0.28	0.88	
GgC	GLENGLE LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	0.91	
GgB	GLENGLE LOAM, 15 TO 25 PERCENT SLOPES	B	NO	NO	0.43	0.09	
MgC	MANOR SILT LOAM, 8 TO 15 PERCENT SLOPES	AD	NO	NO	0.28	0.03	
MdD	MANOR SILT LOAM, 15 TO 25 PERCENT SLOPES	B	NO	NO	0.28	0.04	

ADDRESS CHART/STORMWATER MANAGEMENT PRACTICES						
LOT	ADDRESS	FACILITY TYPE & NUMBER	LOT/PARCEL NUMBER	FACILITY NAME & NUMBER	PRACTICE TYPE (QUANTITY)	MISC.
1	3918 OAK HILL DRIVE	DRYWELLS #1-3 (MDE M-5)	1	DRYWELL #1-3	MDE M-5	HOME OWNER MAINTENANCE
2	3918 OAK HILL DRIVE	DRYWELLS #4-6 (MDE M-5)	2	DRYWELL #4-6	MDE M-5	HOME OWNER MAINTENANCE
3	3918 OAK HILL DRIVE	DRYWELLS #7-9 (MDE M-5)	3	DRYWELL #7-9	MDE M-5	HOME OWNER MAINTENANCE
4	3918 OAK HILL DRIVE	DRYWELLS #10-12 (MDE M-5)	4	DRYWELL #10-12	MDE M-5	HOME OWNER MAINTENANCE
5	3918 OAK HILL DRIVE	DRYWELLS #13-15 (MDE M-5)	5	DRYWELL #13-15	MDE M-5	HOME OWNER MAINTENANCE
6	3918 OAK HILL DRIVE	DRYWELLS #16-18 (MDE M-5)	6	DRYWELL #16-18	MDE M-5	HOME OWNER MAINTENANCE
				MICRO-BIO #1	MDE M-6	X
				MICRO-BIO #2	MDE M-6	X
				BIO-SWALE	MDE M-8	X

STORMWATER MANAGEMENT PRACTICES					
LOT NO.	PERMEABLE PAVING A-2 (Y/N)	ESD FACILITY TYPE AND NUMBER	TOTAL AREA (SF)	ESDv	
				REQUIRED (C.F.)	PROVIDED (C.F.)
1	N	DRYWELLS (M-5)	633	87	130
1	N	DRYWELLS (M-5)	633	87	130
1	N	DRYWELLS (M-5)	633	87	130
2	N	DRYWELLS (M-5)	633	87	130
2	N	DRYWELLS (M-5)	633	87	130
2	N	DRYWELLS (M-5)	633	87	130
3	N	DRYWELLS (M-5)	633	87	130
3	N	DRYWELLS (M-5)	633	87	130
3	N	DRYWELLS (M-5)	633	87	130
4	N	DRYWELLS (M-5)	633	87	130
4	N	DRYWELLS (M-5)	633	87	130
4	N	DRYWELLS (M-5)	633	87	130
5	N	DRYWELLS (M-5)	633	87	130
5	N	DRYWELLS (M-5)	633	87	130
5	N	DRYWELLS (M-5)	633	87	130
6	N	DRYWELLS (M-5)	633	87	130
6	N	DRYWELLS (M-5)	633	87	130
6	N	DRYWELLS (M-5)	633	87	130
DRIVEWAY	N	BIO-SWALE (M-6)	45,644	1408	523
DRIVEWAY	N	MICRO-BIORETENTION #1 (M-6)	14,796	542	760
DRIVEWAY	N	MICRO-BIORETENTION #2 (M-6)	10,564	474	505
		TOTALS	74,701	3,990	5,128

SITE ANALYSIS DATA / TABULATION	
TOTAL PROJECT AREA (GROSS)	4.47 AC.
AREA OF WETLANDS AND BUFFER	2.16 AC.
AREA OF 100-YR FLOODPLAIN	1.68 AC.
AREA OF FOREST	1.47 AC.
AREA OF STEEP SLOPES (15% TO 25%)	0.70 AC.
AREA OF STEEP SLOPES (25% OR GREATER)	0.20 AC.
HIGHLY ERODIBLE SOILS (K<0.35)	1.74 AC.
NET TRACT AREA	2.59 AC.
LIMIT OF DISTURBED AREA	2.22 AC.
PRESENT ZONING DESIGNATION	R-20 AC.
PROPOSED USE	RESIDENTIAL
IMPERVIOUS COVER	0.63 AC.

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- EXISTING TOPOGRAPHIC CONTOURS BASED ON BOUNDARY & TOPOGRAPHIC SURVEY PERFORMED BY CONTROL POINT ASSOCIATES, INC ON 5/20/16.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HORIZONTAL AND VERTICAL CONTROL DATUM ARE BASED ON HOWARD COUNTY MONUMENT NOS. 24GE AND 30BC WHICH WERE USED FOR THIS PROJECT.
- HOWARD COUNTY MONUMENT NO. 24GE ELEV. = 445.809
HOWARD COUNTY MONUMENT NO. 30BC ELEV. = 366.732
- WATER IS PUBLIC (CONTRACT NO. 813-D-W8S)
- SEWER IS PUBLIC (CONTRACT NO. 124-S)
- STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2010 MDE CHAPTER 5 REGULATIONS AND THE LATEST HOWARD COUNTY DESIGN MANUAL, VOL. 1, CHAPTER 5 ADOPTED ON OR ABOUT MAY 4, 2010. GROUNDWATER RECHARGE VOLUMES WILL BE PROVIDED THROUGH THE USE OF STONE RESERVOIRS LOCATED BENEATH THE WARD'S ESD FACILITIES. THE REQUIRED ESD VOLUMES WILL BE PROVIDED BY ESD PRACTICES. OVERBANK FLOOD PROTECTION VOLUMES AND EXCESS FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. FACILITIES TREATING AREAS WITHIN PUBLIC ROW WILL BE PLACED IN EASEMENTS AND WILL BE MAINTAINED BY HOA. HOWARD COUNTY WILL MAINTAIN PIPES AND PROPERTY OWNERSHIP-OA WILL MAINTAIN FACILITY SURFACES.
- EXISTING UTILITIES ARE BASED ON FIELD RUN SURVEY PERFORMED BY CONTROL POINT ASSOCIATES, INC PREPARED ON 5/20/16.
- A FLOOD PLAN STUDY WAS COMPLETED BY FISHER, COLLINS, INC. ON 10/22/2012, AND APPROVED ON MARCH 14, 2013. FLOODPLAIN DOES EXIST ON THIS SITE. PROPOSED IMPROVEMENTS DO NOT IMPACT EX. FLOOD PLAN. BOHLER HAS PREPARED AND SUBMITTED A SUPPLEMENTARY FLOODPLAIN REPORT AND COMPUTATION DATED JULY 17TH, 2017. APPROVED ON 7/24/17.
- WETLANDS EXIST ON SITE BASED UPON A WETLAND DELINEATION REPORT BY ECO-SCIENCE PROFESSIONALS, INC. DATED 10/22/12. FIELD WORK WAS PERFORMED ON 11/21/14. APPROVED ON 3/28/17.
- A. GROSS AREA OF TRACT = 4.47 AC.
B. AREA OF FLOODPLAIN = 1.68 AC.
C. AREA OF 25% OR GREATER SLOPES = 0.20 AC.
D. NET AREA OF TRACT = 2.59 AC.
- LAND DEDICATED TO HOWARD COUNTY, MARYLAND, FOR PURPOSES OF THE PUBLIC ROAD (0.45 ACRES).
- NUMBER OF PARCELS PROPOSED: 9
A. BUILDABLE = 9
B. OPEN SPACE = 3
- RELATED DPZ FILE NUMBERS ASSOCIATED WITH THIS PROJECT INCLUDE WP-13-048, ECP-13-038, BA-95-028, SP-13-008, 24-4787-D.
- SOILS INFORMATION TAKEN FROM SOIL SURVEY, HOWARD COUNTY, MARYLAND, ISSUED MAY 2008.
- BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY CONTROL POINT ASSOCIATES, INC ON 5/20/16.
- A PORTION (0.20 AC.) OF THE PROPERTY QUALIFIES AS STEEP SLOPES (25% OR GREATER) AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.B. THIS AREA IS SHOWN ON THE GRADING PLAN AND WILL REMAIN UNDISTURBED EXCEPT FOR ON LOT 4 AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN - PHASE I.
- THIS PROPERTY IS LOCATED INSIDE OF THE METROPOLITAN DISTRICT.
- NO CEMETERIES EXIST WITHIN THIS SUBDIVISION.
- A FOREST STAND DELINEATION REPORT WAS COMPLETED BY ECO-SCIENCE PROFESSIONALS, INC. ON 10/22/12. FIELD WORK WAS PERFORMED ON 9/21/12 AND 9/22/12.
- THE FOLLOWING ALTERNATIVE COMPLIANCE HAS BEEN APPROVED (WP-17-014) ON NOVEMBER 17, 2016: WP-17-112 IS CURRENTLY UNDER REVIEW.

SECTION 16.1205(a)(7). FOREST RETENTION PRIORITIES:
TO ALLOW FOR THE REMOVAL OF NINE (9) SPECIMEN TREES 30" IN DIAMETER OR GREATER (34" BLACK OAK, RED OAK, 32" MOCKERNUT HICKORY, 31" RED OAK, RED OAK, 31" BLACK OAK, 31" RED OAK, AND 31" BLACK OAK)

SECTION 16.116(a)(2)(ii) PROTECTION OF WETLAND, STREAMS AND STEEP SLOPES:
STATES THAT GRADING, REMOVAL OF VEGETATIVE COVER AND TREES, PAVING, AND NEW STRUCTURES SHALL NOT BE PERMITTED WITHIN ONE HUNDRED FEET OF PERENNIAL STREAM BANK FOR USE III AND IV STREAMS.

APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

- REMOVAL OF THE NINE (9) SPECIMEN TREES WILL REQUIRE REPLACEMENT MITIGATION AT A RATIO OF TWO(2) LARGER CALIPER TREES SPECIES (AT LEAST THREE (3) INCHES DBH FOR EACH SPECIMEN TREE REMOVED) (18 TREES TOTAL). THE MITIGATION PLANTING CAN BE PROVIDED AS PART OF THE REQUIRED PERMITTER LANDSCAPING FOR THIS PROJECT. YOU MUST SUBMIT A SUPPLEMENTAL PLAN WITH YOUR FINAL SUBDIVISION PLAN FOR THIS PROPERTY THAT SHOWS HOW YOU PLAN TO ADDRESS THIS ALTERNATIVE FOREST CONSERVATION / LANDSCAPE MITIGATION.
- ALL SPECIMEN TREES EXCEPT SPECIMEN TREE "18" MUST BE PROTECTED DURING CONSTRUCTION. A REGISTERED ARBORIST MUST INSPECT THE TREES AND MAKE RECOMMENDATIONS FOR PROTECTIVE COVER AND FOLIAGE. ALL PROTECTIVE COVER MUST BE PERFORMED BY A MARYLAND LICENSED TREE EXPERT. TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE ENTIRE PERIMETER OF EACH SPECIMEN TREE TO THE GREATEST EXTENT POSSIBLE TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION. ALTERNATIVE DESIGNS OF THE SITE MUST BE CONDUCTED BY THE CONSULTANT IN ORDER TO MINIMIZE ROOT DAMAGE.
- SUBMISSION OF A FINAL PLAN APPLICATION, INCLUDING A FINAL SUBDIVISION PLAN AND A SUPPLEMENTAL PLAN.
- D. THE PROPOSED DRIVEWAY TO SERVE NEW LOTS 2 THROUGH 7 SHALL COMPLY WITH SECTION 16.1205(b)(v) OF THE HOWARD COUNTY SUBDIVISION REGULATIONS. PER SECTION 16.1205(b)(v), THE DRIVEWAYS FOR PRESTEM LOTS SHALL BE LOCATED AT LEAST TEN FEET FROM THE PROJECT PERIMETER TO PROVIDE SPACE FOR REQUIRED PERMITTER LANDSCAPING TO BUFFER THE ADJACENT PROPERTY, WHERE A TEN FOOT BUFFER IS NOT POSSIBLE DUE TO THE EXISTING PARCELS' CONDITIONS OR EXISTING CONSTRAINTS, OR TO UNDERGO CONSTRUCTION OF THE ADJOINING PARCEL. ANY REQUIRED BUFFERING SHALL BE SHARED WITH THE USE-IN-COMMON DRIVEWAY UNDER SUBSECTION (c)(iv) OF THIS SECTION. THE DEPARTMENT OF PLANNING AND ZONING MAY APPROVE A FIVE-FOOT DRIVEWAY BUFFER IN SUCH INSTANCES, A HEDGE, SOLID PENCE WALL, OR TYPE II LANDSCAPE EDGE IS REQUIRED, EXCEPT IN THE FRONT SETBACK FROM PUBLIC ROAD, WHERE SOLID SCREEN WOULD BLOCK SIGHT DISTANCE.
- ENCROACHMENT INTO THE STREAM BUFFER MAY NOT EXCEED THE 0.13 ACRE (5,642 SQUARE FOOT) AREA AS SHOWN ON THE ALTERNATIVE COMPLIANCE EXHIBIT SUBMITTED WITH YOUR ALTERNATIVE COMPLIANCE PROPOSAL.
- ANY DISTURBANCES WITHIN THE STREAM BUFFER SHALL BE THE MINIMUM DISTURBANCE NECESSARY TO AFFORD RELIEF.
- ANY DISTURBED AREA WITHIN THE STREAM BUFFER SHALL BE RETURNED TO ITS ORIGINAL CONDITION TO THE GREATEST EXTENT POSSIBLE. THIS INCLUDES, BUT NOT LIMITED TO, REPLANTING AT THE SAME DENSITY AND WITH SIMILAR VEGETATION AS EXISTED PRIOR TO THE DISTURBANCE.

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 - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATINGS
- C. GEOMETRY - MAXIMUM 10% GRADE CHANGE AND MINIMUM 45' TURNING RADIUS
- D. STRUCTURES (OVERLIES/BRIDGES) CAPABLE OF SUPPORTING 25 TONS TRUCKS (H-25 LOADING)
- E. DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
- F. STRUCTURE CLEARANCES - MINIMUM 12 FEET
- G. MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE

NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.

FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.

THIS SUBDIVISION IS SUBJECT TO SECTION 16.122B OF THE HOWARD COUNTY CODE.

ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-190.

A HOMEOWNERS ASSOCIATION WILL BE ESTABLISHED FOR THE RESIDENTS OF THIS SUBDIVISION AND PROTECTIVE COVENANTS AND COVENANTS GOVERNING THE MAINTENANCE OF THE COMMONTY OPEN SPACE LOTS WILL BE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY SIMULTANEOUS WITH THE RECORING OF THE SUBDIVISION PLAT.

THE SHARED DRIVEWAY ACCESS AND MAINTENANCE OBLIGATION AGREEMENTS FOR THE 16 DRIVEWAYS WHICH SERVE LOTS 1 THRU 6 WILL BE RECORDED IN THE LAND RECORDS OF HOWARD COUNTY SIMULTANEOUSLY WITH THE RECORING OF THIS SUBDIVISION PLAT, F-17-067.

TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)". A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREETLIGHT AND ANY TREE.

ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (16 GAUGE), INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE), 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY TRAFFIC CONCEPTS, INC., DATED JANUARY, 2017, AND WAS APPROVED ON 6/13/17.

A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY THAT NEEDS TO BE INSTALLED AT THE INTERSECTION OF THE PRIVATE ROAD WITH THE PUBLIC ROAD SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-2430 FOR DETAILS AND COST.

SIDEWALK OR MULTI-USE PATHWAY ALONG THE OLD ANNAPOLIS ROAD FRONTAGE TO CONNECT WITH THE EXISTING SIDEWALK/PATHWAY SYSTEM FOR CENTENNIAL LAKE OVERLOOK SUBDIVISION THAT ULTIMATELY CONNECTS TO CENTENNIAL PARK.

FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY 0.41 ACRES OF ON-SITE REFORESTATION FOR A TOTAL CREDITED ON-SITE CONSERVATION EASEMENT AREA OF 0.41 ACRES. THE TOTAL SURETY AMOUNT FOR ON-SITE REFORESTATION IS \$5,172 FOR A TOTAL SURETY AMOUNT OF \$5,172, WHICH WILL BE PART OF THE DEVELOPERS AGREEMENT WITH THE REMAINING FOREST CONSERVATION REQUIREMENT OF 0.31 ACRES WILL BE MET BY PAYMENT OF FEE IN FULL TO HOWARD COUNTY'S FOREST CONSERVATION FUND IN THE AMOUNT OF \$10,120 (\$1,504 X 0.75).

LANDSCAPING FOR THIS SUBDIVISION WILL BE PROVIDED IN ACCORDANCE WITH THIS CERTIFIED LANDSCAPE PLAN AND IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. PERMITTER LANDSCAPE SURETY IN THE AMOUNT OF \$17,700.00 FOR THE INSTALLATION OF 59 SHADY TREES (\$300.00 EACH), SHALL BE POSTED BY THE DEVELOPER AS PART OF THE DPW DEVELOPERS AGREEMENT, F-17-067.

FINANCIAL SURETY FOR THE REQUIRED 19 STREET TREES WILL BE PROVIDED WITH THE DEVELOPERS AGREEMENT COST ESTIMATE UNDER THE FINAL PLAN SUBMISSION IN THE AMOUNT OF \$5,700.

FINAL PLAN

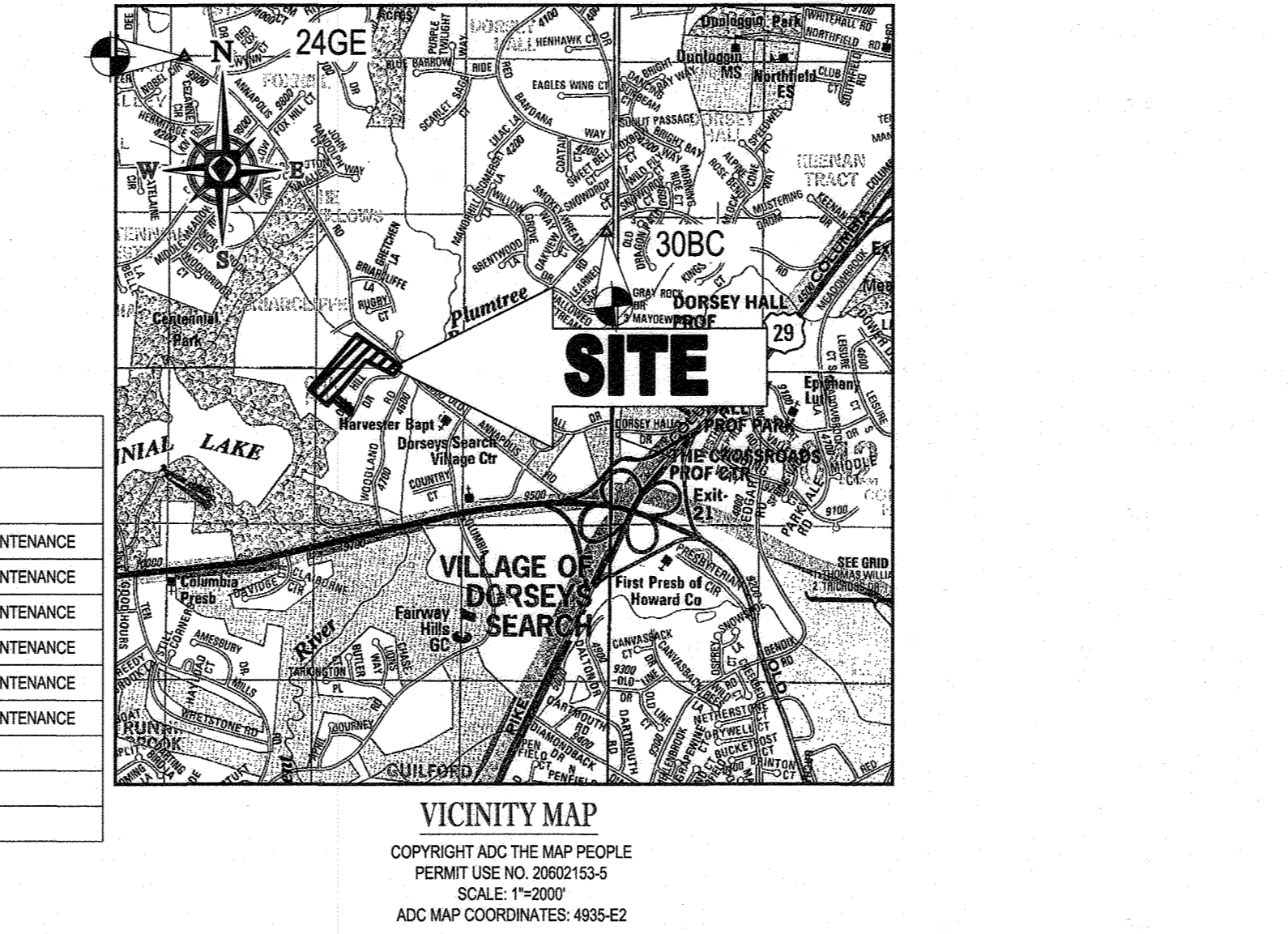
FOR

OAK HILL SUBDIVISION

LOTS 1 THRU 6 (RESUBDIVISION OF LOT 16)

LOCATION OF SITE

**9692 OAK HILL DRIVE
ELLCOTT CITY, MD
MAP 30, GRID 3, PARCELS 368 (LOT 16) & 321
2ND ELECTION DISTRICT, ZONED: R-20
HOWARD COUNTY**



SHEET INDEX	
SHEET TITLE	SHEET NUMBER
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PREPARED BY

BOHLER ENGINEERING

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

Phone: (410) 821-7900
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CONTACT: BRANDON R. ROWE, P.E.

PURPOSE NOTE

THE PURPOSE OF THIS PLAT IS TO REVISE LOT 16 AS SHOWN ON RECORD PLATS 1247-1364

BENCHMARK

GEODETIC SURVEY CONTROL - 24GE CONC. MON.
ELEV. 445.809
N. 578.736.590
E. 1,352,699.732

GEODETIC SURVEY CONTROL - 38BC CONC. MON.
ELEV. 366.732
N. 578,751.288
E. 1,357,633.282

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE
COLUMBIA, MD 21044
CONTACT: BRIAN GOLDSTEIN
PHONE: 301.875.8460

TAX MAP: 30 GRID: 3 ZONED: R-20
PARCELS: 368 (LOT 16) & 321
CONTACT: BRIAN GOLDSTEIN
PHONE: 301.875.8460

NO AS-BUILT INFO

6-9-23

PROFESSIONAL CERTIFICATION
BRANDON R. ROWE, 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. 48928. EXPIRATION DATE: 7/31/2019.

REVISIONS

REV	DATE	COMMENT	BY
1	06/23	NO AS-BUILT INFO	AVG

NOT APPROVED FOR CONSTRUCTION

PROJECT No.: MD162006
DRAWN BY: AVG
CHECKED BY: JR
DATE: 1/5/18
SCALE: AS SHOWN
CAD I.D.: SDS

FINAL PLAN

FOR
OAK HILL SUBDIVISION
(RE-SUBDIVISION OF LOT 16)

LOCATION OF SITE
9692 OAK HILL DRIVE
ELLCOTT CITY, MD
MAP 30, GRID 3, PARCELS 368
(LOT 16) & 321
2ND ELEC. DISTRICT, ZONED: R-20
HOWARD COUNTY

BOHLER ENGINEERING

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

B.R. ROWE

PROFESSIONAL ENGINEER
MARYLAND LICENSE NO. 48928

11/1/18

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
1 of 18

APPROVED - DEPARTMENT OF PUBLIC WORKS
10/11/2018

APPROVED - DEPARTMENT OF PLANNING AND ZONING
11-06-18

APPROVED - DEPARTMENT OF LAND DEVELOPMENT
10-26-18

APPROVED - DEPARTMENT OF ENGINEERING DIVISION

GENERAL NOTES:

CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE NOTES AND SPECIFICATIONS CONTAINED HEREIN. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL SUBCONTRACTORS FULLY AND COMPLETELY CONFORM TO AND COMPLY WITH THESE REQUIREMENTS.

- THE FOLLOWING DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THIS SITE PLAN:
 - "SURVEY - BOUNDARY & TOPOGRAPHIC SURVEY OAK HILL SUBDIVISION" 9892 OAK HILL DRIVE MAP 30 GRID 3 PARCELS 6 & 321 ELLICOTT CITY, HOWARD COUNTY MD
- PROR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST VERIFY THAT HE/SHE HAS THE LATEST EDITION OF THE DOCUMENTS REFERENCED ABOVE. THIS IS CONTRACTORS RESPONSIBILITY.
- ALL ACCESSIBLE (ADA) PARKING SPACES MUST BE CONSTRUCTED TO MEET, AT A MINIMUM, THE MORE STRINGENT OF THE REQUIREMENTS OF THE "AMERICANS WITH DISABILITIES ACT (ADA) CODE (42 U.S.C. § 12101 et seq. AND 42 U.S.C. § 4151 et seq.) OR THE REQUIREMENTS OF THE JURISDICTION WHERE THE PROJECT IS TO BE CONSTRUCTED, AND ANY AND ALL AMENDMENTS TO BOTH WHICH ARE IN EFFECT WHEN THESE PLANS ARE COMPLETED.
- PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED THE COMMENTS TO ALL PLANS AND OTHER DOCUMENTS REVIEWED AND APPROVED BY THE PERMITTING AGENCIES AND CONFIRMED THAT ALL NECESSARY OR REQUIRED PERMITS HAVE BEEN OBTAINED. CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND APPROVALS ON SITE AT ALL TIMES.
- THE OWNER/CONTRACTOR MUST BE FAMILIAR WITH AND RESPONSIBLE FOR THE PROCUREMENT OF ANY AND ALL CERTIFICATIONS REQUIRED FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
- ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND CONDITIONS OF APPROVAL, AND ALL APPLICABLE REQUIREMENTS, RULES, REGULATIONS, STATUTORY REQUIREMENTS, CODES, LAWS AND STANDARDS OF ALL GOVERNMENTAL ENTITIES WITH JURISDICTION OVER THIS PROJECT.
- THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SET FORTH HEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND, IN CASE OF CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORT AND THESE PLANS, THE MORE STRINGENT OF THE GEOTECHNICAL REPORT AND RECOMMENDATIONS SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR MUST NOTIFY THE ENGINEER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THE GEOTECHNICAL REPORTS AND PLANS AND SPECIFICATIONS PRIOR TO PROCEEDING WITH ANY FURTHER WORK.
- THESE PLANS ARE BASED ON INFORMATION PROVIDED TO BOHLER ENGINEERING BY THE OWNER AND OTHERS PRIOR TO THE TIME OF PLAN PREPARATION. CONTRACTOR MUST FIELD VERIFY EXISTING CONDITIONS AND NOTIFY BOHLER ENGINEERING, IN WRITING, IMMEDIATELY IF ACTUAL SITE CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLAN, OR IF THE PROPOSED WORK CONFLICTS WITH ANY OTHER SITE FEATURES.
- ALL DIMENSIONS SHOWN ON THE PLANS MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, OF ANY DISCREPANCY, DISCREPANCY OR AMBIGUITY BETWEEN THESE PLANS AND THE ACTUAL SITE CONDITIONS. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, OF ANY SUCH CONFLICT, DISCREPANCY OR AMBIGUITY BETWEEN THESE PLANS AND THE ACTUAL SITE CONDITIONS PRIOR TO PROCEEDING WITH ANY FURTHER WORK.
- CONTRACTOR MUST REFER TO THE ARCHITECTURAL/BUILDING PLANS "OR RECORD" FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRY/EXIT POINTS, ELEVATIONS, PRECISE BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY LOCATIONS.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST COORDINATE THE BUILDING LAYOUT BY CAREFUL REVIEW OF THE ENTIRE SITE PLAN AND THE LATEST ARCHITECTURAL PLANS (INCLUDING, BUT NOT LIMITED TO, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND FIRE SUPPRESSION PLAN, WHERE APPLICABLE). CONTRACTOR MUST IMMEDIATELY NOTIFY OWNER, ARCHITECT AND SITE ENGINEER, IN WRITING, OF ANY CONFLICTS, DISCREPANCIES OR AMBIGUITIES WHICH EXIST.
- DEBRIS MUST NOT BE BURIED ON THE SUBJECT SITE AND ALL UNSUITABLE EXCAVATED MATERIAL AND DEBRIS (SOLID WASTE) MUST BE DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ANY AND ALL GOVERNMENTAL AUTHORITIES WHICH HAVE JURISDICTION OVER THIS PROJECT OR OVER CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING WHEN SHORING IS REQUIRED AND FOR INSTALLING ALL SHORING REQUIRED DURING EXCAVATION (TO BE PERFORMED) IN ACCORDANCE WITH CURRENT AND ALL APPLICABLE STANDARDS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL SHORING AND BRACING FOR EXCAVATION. CONTRACTOR IS RESPONSIBLE FOR ADJACENT, NEARBY AND CONTIGUOUS STRUCTURES AND PROPERTIES.
- THE CONTRACTOR IS TO EXERCISE EXTREME CARE WHEN PERFORMING ANY WORK ACTIVITIES ADJACENT TO PAVEMENT, STRUCTURES, ETC. WHICH ARE FULFILLING THE FUNCTION OF THE PROJECT OR PART OF THE FINAL CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR TAKING ALL APPROPRIATE MEASURES REQUIRED TO ENSURE THE STRUCTURAL STABILITY OF SIDEWALKS AND PAVEMENT, UTILITIES, ETC., AND INFRASTRUCTURE WHICH ARE TO REMAIN, AND TO PROVIDE A SAFE WORK AREA FOR THIRD PARTIES, PEDESTRIANS AND ANYONE INVOLVED WITH THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO ANY NEW OR EXISTING CONSTRUCTION OR PROPERTY DURING THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO DRAINAGE UTILITIES, PAVEMENT, CURBS, ETC. AND SHALL BEAR ALL COSTS ASSOCIATED WITH SAME. THE CONTRACTOR SHALL NOT BE LIMITED TO THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE COURSE OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO THE COURSE OF CONSTRUCTION AND MUST BEAR ALL COSTS ASSOCIATED WITH SAME. THE REPAIR OF ANY SUCH NEW OR EXISTING CONSTRUCTION OR PROPERTY MUST RESTORE SUCH CONSTRUCTION OR PROPERTY TO A CONDITION EQUIVALENT TO OR BETTER THAN THE CONDITIONS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION, AND IN CONFORMANCE WITH APPLICABLE CODES, LAWS, RULES, REGULATIONS, STATUTORY REQUIREMENTS AND STATUTES. CONTRACTOR MUST BEAR ALL COSTS ASSOCIATED WITH SAME. CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL EXISTING DAMAGE AND TO NOTIFY THE OWNER AND THE CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION.
- ALL CONCRETE MUST BE AIR ENTRAINED AND HAVE THE MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS AND/OR GEOTECHNICAL REPORT.
- THE ENGINEER IS NOT RESPONSIBLE FOR CONSTRUCTION METHODS, MEANS, TECHNIQUES OR PROCEDURES, GENERALLY OR FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES OR PROCEDURES FOR COMPLETION OF THE WORK DEPICTED BOTH ON THESE PLANS, AND FOR ANY CONFLICTS/SCOPE REVISIONS WHICH RESULT FROM SAME. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE METHODS/MEANS FOR COMPLETION OF THE WORK PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR JOB SITE SAFETY. THE ENGINEER OF RECORD HAS NOT BEEN RETAINED TO PERFORM OR BE RESPONSIBLE FOR JOB SITE SAFETY, SAME BEING WHOLLY OUTSIDE OF ENGINEERS SERVICES AS RELATED TO THE PROJECT. THE ENGINEER OF RECORD IS NOT RESPONSIBLE TO IDENTIFY OR REPORT ANY JOB SITE SAFETY ISSUES, AT ANY TIME.

18. ALL CONTRACTORS MUST CARRY THE SPECIFIED STATUTORY WORKERS COMPENSATION INSURANCE, EMPLOYERS LIABILITY INSURANCE AND LIMITS OF COVERAGE GENERAL LIABILITY INSURANCE (GL), ALL CONTRACTORS MUST HAVE THEIR O&P POLICIES ENDORSED TO NAME BOHLER ENGINEERING, AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AS ADDITIONAL NAMED INSURED AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THIS HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH BOHLER ENGINEERING WITH CERTIFICATIONS OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON REVISION OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION AND FOR ONE YEAR AFTER THE COMPLETION OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, INDEMNIFY, DEFEND AND HOLD HARMLESS BOHLER ENGINEERING AND ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, INJURIES, CLAIMS, ACTIONS, PENALTIES, EXPENSES, PUNITIVE DAMAGES, TORT DAMAGES, STATUTORY CLAIMS, STATUTORY CAUSES OF ACTION, LOSSES, CAUSES OF ACTION, LIABILITIES OR COSTS, INCLUDING, BUT NOT LIMITED TO, REASONABLE ATTORNEY'S FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY MANNER RELATED TO THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS, ALL CLAIMS BY THIRD PARTIES AND ALL CLAIMS RELATED TO THE PROJECT. CONTRACTOR MUST NOTIFY ENGINEER, IN WRITING, AT LEAST THIRTY (30) DAYS PRIOR TO ANY TERMINATION, SUSPENSION OR CHANGE OF ITS INSURANCE HEREUNDER.

19. BOHLER ENGINEERING WILL REVIEW OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONSTRUCTION MEANS AND/OR METHODS AND/OR TECHNIQUES OR PROCEDURES, COORDINATION OF THE WORK WITH OTHER TRADES, AND CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND BOHLER HAS NO RESPONSIBILITY OR LIABILITY FOR SAME HEREUNDER. BOHLER ENGINEERING'S SHOP DRAWING REVIEW WILL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM MUST NOT INDICATE THAT BOHLER ENGINEERING HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. BOHLER ENGINEERING WILL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT PROMPTLY AND IMMEDIATELY BROUGHT TO HIS ATTENTION, IN WRITING, BY THE CONTRACTOR. BOHLER ENGINEERING WILL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.

20. NEITHER THE PROFESSIONAL ACTIVITIES OF BOHLER ENGINEERING, NOR THE PRESENCE OF BOHLER ENGINEERING AND/OR ITS PAST, PRESENT AND FUTURE OWNERS, OFFICERS, DIRECTORS, PARTNERS, SHAREHOLDERS, MEMBERS, PRINCIPALS, COMMISSIONERS, AGENTS, SERVANTS, EMPLOYEES, AFFILIATES, SUBSIDIARIES, AND RELATED ENTITIES, AND ITS SUBCONTRACTORS AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, OVERSEENING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND COMPLIANCE ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES WITH JURISDICTION OVER THE PROJECT AND/OR PROPERTY. BOHLER ENGINEERING HAS NO AUTHORITY TO EXERCISE ANY CONTROL, SUPERVISORY OR PROCEDURE, OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY. BOHLER ENGINEERING SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND MUST BE NAMED AN ADDITIONAL INSURED UNDER THE GENERAL CONTRACTORS POLICIES OF GENERAL LIABILITY INSURANCE AS DESCRIBED ABOVE IN NOTE 19 FOR JOB SITE SAFETY.

21. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED HEREIN, WITHOUT FIRST OBTAINING THE PRIOR WRITTEN APPROVAL OF THE ENGINEER OF RECORD, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS INCURRED IN CORRECTING ANY WORK DONE WHICH DEVIATES FROM THE PLANS, ALL FINES AND PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND, FURTHER, SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER TO THE FULLEST EXTENT PERMITTED UNDER THE LAW, IN ACCORDANCE WITH PARAGRAPH 19 HEREIN, FOR AND FROM ALL FEES, ATTORNEY'S FEES, DAMAGES, COSTS, ADJUDGMENTS, PENALTIES AND THE LIKE RELATED TO SAME.

22. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF TRAFFIC PLAN FOR ALL WORK THAT AFFECTS PUBLIC TRAFFIC EITHER IN THE R.O.W. OR ON SITE. THE COST FOR THIS ITEM MUST BE INCLUDED IN THE CONTRACTORS PRICE.

23. ALL SIGNING AND PAVEMENT STRIPING MUST CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES OR LOCALLY APPROVED SUPPLEMENT.

24. ENGINEER IS NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM CONTRACTORS FAILURE TO BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH THE APPROVED PLANS. IF CONTRACTOR AND/OR OWNER FAIL BUILD OR CONSTRUCT IN STRICT ACCORDANCE WITH APPROVED PLANS, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS.

25. OWNER MUST MAINTAIN AND PRESERVE ALL PHYSICAL SITE FEATURES AND DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, IN STRICT ACCORDANCE WITH THE APPROVED PLANS) AND DESIGN AND, FURTHER ENGINEER IS NOT RESPONSIBLE FOR ANY FAILURE TO SO MAINTAIN OR PRESERVE SITE AND/OR DESIGN FEATURES. IF OWNER FAILS TO MAINTAIN AND/OR PRESERVE SUCH FEATURES AND/OR DESIGN FEATURES DEPICTED ON THE PLANS AND RELATED DOCUMENTS, OWNER AGREES TO INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES

THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.

26. ALL DIMENSIONS MUST BE TO FACE OF CURB, EDGE OF PAVEMENT, OR EDGE OF BUILDING, UNLESS NOTED OTHERWISE.

27. ALL CONSTRUCTION AND MATERIALS MUST COMPLY WITH AND CONFORM TO APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, ORDINANCES, RULES AND CODES, AND ALL APPLICABLE OSHA REQUIREMENTS.

28. CONTRACTOR AND OWNER MUST INSTALL ALL ELEMENTS AND COMPONENTS IN STRICT COMPLIANCE WITH AND ACCORDANCE WITH MANUFACTURERS STANDARDS AND RECOMMENDED INSTALLATION CRITERIA AND SPECIFICATIONS. IF CONTRACTOR AND/OR OWNER FAIL TO DO SO, THEY AGREE TO JOINTLY AND SEVERALLY INDEMNIFY AND HOLD ENGINEER HARMLESS FOR ALL INJURIES AND DAMAGES THAT ENGINEER SUFFERS AND COSTS THAT ENGINEER INCURS AS A RESULT OF SAID FAILURE.

29. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ON-SITE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN COMPLIANCE WITH EPA REQUIREMENTS FOR SITES WHERE ONE (1) ACRE OR MORE (UNLESS THE LOCAL JURISDICTION REQUIRES FEWER) IS DISTURBED BY CONSTRUCTION ACTIVITIES. CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL ACTIVITIES, INCLUDING THOSE OF CONTRACTORS, ARE IN COMPLIANCE WITH THE SWPPP, INCLUDING BUT NOT LIMITED TO LOGGING ACTIVITIES (MINIMUM ONE PER WEEK AND AFTER RAINFALL EVENTS) AND CORRECTIVE MEASURES, AS APPROPRIATE.

30. AS CONTAINED IN THESE DRAWINGS AND ASSOCIATED APPLICATION DOCUMENTS PREPARED BY THE SIGNATORY PROFESSIONAL ENGINEER, THE USE OF THE WORDS "CERTIFY" OR "CERTIFICATION" CONSTITUTES AN EXPRESSION OF "PROFESSIONAL OPINION" REGARDING THE INFORMATION WHICH IS THE SUBJECT OF THE UNDERSIGNED PROFESSIONAL KNOWLEDGE OR BELIEF AND IN ACCORDANCE WITH COMMON ACCEPTED PROCEDURE CONSISTENT WITH THE APPLICABLE STANDARDS OF PRACTICE, AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EITHER EXPRESSED OR IMPLIED.

ADA INSTRUCTIONS TO CONTRACTOR

CONTRACTORS SHALL EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA (HANDICAP) ACCESSIBLE COMPONENTS AND ACCESS ROUTES FOR THE SITE. THESE COMPONENTS, AS CONSTRUCTED, MUST COMPLY WITH THE CURRENT ADA STANDARDS AND REGULATIONS BARRIER FREE ACCESS AND ANY MODIFICATIONS, REVISIONS OR UPDATES TO SAME. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTER-BUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCE(E) MUST COMPLY WITH THESE ADA CODE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

- PARKING SPACES AND PARKING AISLES - SLOPE SHALL NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION.
- CURB RAMPS - SLOPE SHALL NOT EXCEED 1:12 (8.3%) FOR A MAXIMUM OF SIX (6) FEET.
- LANDINGS - SHALL BE PROVIDED AT EACH END OF RAMPS, MUST PROVIDE POSITIVE DRAINAGE, AND MUST NOT EXCEED 1:50 (2.0%) IN ANY DIRECTION.
- PATH OF TRAVEL ALONG ACCESSIBLE ROUTE - MUST PROVIDE A 48-INCH OR GREATER UNOBSTRUCTED WIDTH OF TRAVEL (CAR OVERTHINGS AND/OR HANDRAILS CANNOT REDUCE THIS MINIMUM WIDTH). THE SLOPE MUST BE NO GREATER THAN 1:20 (5.0%) IN THE DIRECTION OF TRAVEL AND MUST NOT EXCEED 1:50 (2.0%) IN CROSS SLOPE. WHERE PATH OF TRAVEL WILL BE GREATER THAN 1:20 (5.0%), ADA RAMP REQUIREMENTS MUST BE ADHERED TO. A MAXIMUM SLOPE OF 1:12 (8.3%), FOR A MAXIMUM RISE OF 2.3 FEET, SHALL BE PROVIDED. THE RAMP MUST HAVE ADA HAND RAILS AND "LEVEL" LANDINGS ON EACH END THAT ARE CROSS SLOPED NO MORE THAN 1:50 (2.0%) IN ANY DIRECTION 2.0% FOR POSITIVE DRAINAGE.
- DOORWAYS - MUST HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED AWAY FROM THE DOOR NO MORE THAN 1:50 (2.0%) FOR POSITIVE DRAINAGE. THIS LANDING AREA MUST BE NO LESS THAN 36 INCHES (6 FEET) LONG, EXCEPT WHERE OTHERWISE PERMITTED BY ADA STANDARDS FOR ALTERNATIVE DOORWAY OPENING CONDITIONS. (SEE ICCANSI A117.1-2009 AND OTHER REFERENCED INCORPORATED BY CODE).
- WHEN THE PROPOSED CONSTRUCTION INVOLVES RECONSTRUCTION, MODIFICATION, REVISION OR EXTENSION OF, OR TO ADA COMPONENTS FROM EXISTING DOORWAYS OR SURFACES, CONTRACTOR MUST VERIFY EXISTING ELEVATIONS SHOWN ON THE PLAN. NOTE THAT TABLE 405.2 OF THE DEPARTMENT OF JUSTICE'S ADA STANDARDS FOR ACCESSIBLE DESIGN ALLOWS FOR STEEPER RAMP SLOPES, IN RARE CIRCUMSTANCES. THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER OF ANY DISCREPANCIES AND/OR FIELD CONDITIONS THAT DIFFER IN ANY WAY OR ANY RESPECT FROM WHAT IS SHOWN ON THE PLANS, IN WRITING, BEFORE COMMENCEMENT OF WORK. CONSTRUCTED IMPROVEMENTS MUST FALL WITHIN THE MAXIMUM AND MINIMUM LIMITATIONS IMPOSED BY THE BARRIER FREE REGULATIONS AND THE ADA REQUIREMENTS.
- THE CONTRACTOR MUST VERIFY THE SLOPES OF CONTRACTORS FORMS PRIOR TO POURING CONCRETE. IF ANY NON-COMFORMANCE IS OBSERVED OR EXISTS, CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER PRIOR TO POURING CONCRETE. CONTRACTOR IS RESPONSIBLE FOR ALL COSTS TO REMOVE, REPAIR AND REPLACE NON-COMFORMING CONCRETE.

IT IS STRONGLY RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

GENERAL DEMOLITION NOTES:

- THIS PLAN REFERENCE DOCUMENTS AND INFORMATION BY:
 - BOUNDARY & TOPOGRAPHIC SURVEY "OAK HILL SUBDIVISION" 9892 OAK HILL DRIVE MAP 30 GRID 3 PARCELS 6 & 321 ELLICOTT CITY, HOWARD COUNTY MD DATE: 05/05/2016 JOB#: 02-16024-00
- CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970, (29 U.S.C. 651 et seq.) AS AMENDED AND ANY MODIFICATIONS, AMENDMENTS OR REVISIONS TO SAME.
- BOHLER ENGINEERING HAS NO CONTRACTUAL, LEGAL, OR OTHER RESPONSIBILITY FOR JOB SITE SAFETY OR JOB SITE SUPERVISION, OR ANYTHING RELATED TO SAME.
- THE DEMOLITION PLAN IS INTENDED TO PROVIDE GENERAL INFORMATION, ONLY, REGARDING ITEMS TO BE DEMOLISHED AND/OR REMOVED. THE CONTRACTOR MUST ALSO REVIEW THE OTHER SITE PLAN DRAWINGS AND INCLUDE IN DEMOLITION ACTIVITIES ALL INCIDENTAL WORK NECESSARY FOR THE CONSTRUCTION OF THE NEW SITE IMPROVEMENTS.
- CONTRACTOR MUST RAISE ANY QUESTIONS CONCERNING THE ACCURACY OR INTENT OF THESE PLANS OR SPECIFICATIONS, CONCERNS REGARDING THE APPLICABLE SAFETY STANDARDS, OR THE SAFETY OF THE CONTRACTOR OR THIRD PARTIES IN PERFORMING THE WORK ON THIS PROJECT, WITH BOHLER ENGINEERING, IN WRITING, AND RESPONDED TO BY BOHLER. IN WRITING, PRIOR TO THE INITIATION OF ANY SITE ACTIVITY AND ANY DEMOLITION ACTIVITY. ALL DEMOLITION ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS AND ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, RULES, REQUIREMENTS, STATUTES, ORDINANCES AND CODES.
- PRIOR TO STARTING ANY DEMOLITION, CONTRACTOR IS RESPONSIBLE FOR:
 - A. OBTAINING ALL REQUIRED PERMITS AND MAINTAINING THE SAME ON SITE FOR REVIEW BY THE ENGINEER AND OTHER PUBLIC AGENCIES HAVING JURISDICTION THROUGHOUT THE DURATION OF THE PROJECT, SITE WORK AND DEMOLITION WORK.

GENERAL GRADING & UTILITY NOTES

- LOCATIONS OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE INDEPENDENTLY CONFIRMED WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS MUST BE INDEPENDENTLY CONFIRMED BY THE CONTRACTOR IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES MUST IMMEDIATELY BE REPORTED TO THE ENGINEER. CONSTRUCTION MUST COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. PROPOSED INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- CONTRACTOR MUST VERTICALLY AND HORIZONTALLY LOCATE ALL UTILITIES AND SERVICES INCLUDING, BUT NOT LIMITED TO, GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE OR WORK SPACE, WHICHEVER IS GREATER. THE CONTRACTOR MUST USE REFER TO, AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION, AT NO COST TO THE OWNER. CONTRACTOR SHALL BEAR ALL COSTS ASSOCIATED WITH DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION.
- IT IS THE CONTRACTORS RESPONSIBILITY TO REVIEW ALL CONSTRUCTION CONTRACT DOCUMENTS INCLUDING, BUT NOT LIMITED TO, ALL OF THE DRAWINGS AND SPECIFICATIONS ASSOCIATED WITH THE PROJECT WORK, SCORE PRIOR TO THE INITIATION AND COMMENCEMENT OF CONSTRUCTION. SHOULD THE CONTRACTOR FIND A CONFLICT AND/OR DISCREPANCY BETWEEN THE DOCUMENTS RELATIVE TO THE SPECIFICATIONS OR THE RELATIVE OR APPLICABLE CODES, REGULATIONS, LAWS, RULES, STATUTES AND/OR ORDINANCES, IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO NOTIFY THE PROJECT ENGINEER OF RECORD, IN WRITING, OF SAID CONFLICT AND/OR DISCREPANCY. PRIOR TO THE START OF CONSTRUCTION, CONTRACTORS FAILURE TO NOTIFY THE PROJECT ENGINEER SHALL CONSTITUTE CONTRACTORS FULL AND COMPLETE ACCEPTANCE OF ALL RESPONSIBILITY TO COMPLETE THE SCOPE OF WORK AS DEFINED BY THE DRAWINGS AND IN FULL COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, STATUTES, ORDINANCES AND CODES AND, FURTHER, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH SAME.
- THE CONTRACTOR MUST LOCATE AND CLEARLY AND UNAMBIGUOUSLY DEFINE VERTICALLY AND HORIZONTALLY ALL ACTIVE AND INACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE TO BE REMOVED. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE AND INACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/DELOCATED DURING SITE ACTIVITY.
- THE CONTRACTOR MUST FAMILIARIZE ITSELF WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR THE PROJECT. THE CONTRACTOR MUST PROVIDE THE OWNER WITH WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH THE JURISDICTION AND UTILITY COMPANY REQUIREMENTS AND ALL OTHER APPLICABLE REGULATIONS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
- THE CONTRACTOR MUST INSTALL ALL STORM SEWER AND SANITARY SEWER COMPONENTS WHICH FUNCTION BY GRAVITY PRIOR TO THE INSTALLATION OF ALL OTHER UTILITIES.

- CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. CONTRACTOR IS RESPONSIBLE FOR REFERENCING AND EXTERIOR GRADING. THE ARCHITECT WILL DEFINE THE UTILITY SERVICE LINES. THE CONTRACTOR MUST COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL COMPANIES, TO AVOID CONFLICTS AND TO ENSURE THAT PROPER DEPTHS ARE ACHIEVED. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT INSTALLATION OF ALL IMPROVEMENTS COMPLIES WITH ALL UTILITY REQUIREMENTS WITH JURISDICTION AND/OR CONTROL OF THE SITE AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES AND, FURTHER, IS RESPONSIBLE FOR COORDINATING THE UTILITY RE-INSPECTIONS PRIOR TO CONNECTING TO THE EXISTING UTILITY SERVICE, WHERE A CONFLICT(S) EXISTS BETWEEN THESE SITE PLANS AND THE ARCHITECTURAL PLANS, OR WHERE ARCHITECTURAL PLAN UTILITY CONNECTION POINTS DIFFER, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE ENGINEER, IN WRITING, AND PRIOR TO CONSTRUCTION, RESOLVE SAME.
- WATER SERVICE MATERIALS, BURIAL DEPTH, AND COVER REQUIREMENTS MUST BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTORS PRICE FOR WATER SERVICE MUST INCLUDE ALL FEES, COSTS AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE FULL AND COMPLETE WORKING SERVICE. CONTRACTOR MUST CONTACT THE APPLICABLE MUNICIPALITY TO CONFIRM THE PROPER WATER METER AND VALVE, PRIOR TO COMMENCING CONSTRUCTION.
- ALL NEW UTILITIES/SERVICES, INCLUDING ELECTRIC, TELEPHONE, CABLE TV, ETC. ARE TO BE INSTALLED UNDERGROUND. ALL NEW UTILITIES/SERVICES MUST BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
- SITE GRADING MUST BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND REPLACING UNSUITABLE MATERIALS WITH SUITABLE MATERIALS AS SPECIFIED IN THE GEOTECHNICAL REPORT. ALL EXCAVATED OR FILLED AREAS MUST BE COMPACTED AS OUTLINED IN THE GEOTECHNICAL REPORT. MOISTURE CONTENT AT TIME OF PLACEMENT MUST BE A COMPACTOR REPORT PREPARED BY A QUALIFIED GEOTECHNICAL ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE ARE WITHIN THE BUILDING FOOTPRINT AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT MUST BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. MUST SUBBASE BE DEEMED UNSUITABLE BY OWNER/DEVELOPER, OR OWNER/DEVELOPERS REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED AS DIRECTED BY THE GEOTECHNICAL REPORT. EARTHWORK ACTIVITIES INCLUDING, BUT NOT LIMITED TO, EXCAVATION, BACKFILL, AND COMPACTING MUST COMPLY WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT AND ALL APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES. EARTHWORK ACTIVITIES MUST COMPLY WITH THE STANDARD STATE DOT SPECIFICATIONS FOR ROADWAY CONSTRUCTION (LATEST EDITION) AND ANY AMENDMENTS OR REVISIONS THEREOF.

- ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION MUST BE AS PER THE RECOMMENDATIONS PROVIDED IN THE GEOTECHNICAL REPORT AND MUST BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS, WHEN THE PROJECT DOES NOT HAVE GEOTECHNICAL RECOMMENDATIONS, FILL AND COMPACTION MUST, AT A MINIMUM, COMPLY WITH THE STATE DOT REQUIREMENTS AND SPECIFICATIONS AND CONSULTANT SHALL HAVE NO LIABILITY OR RESPONSIBILITY FOR OR AS RELATED TO FILL, COMPACTION AND BACKFILL. FURTHER, CONTRACTOR IS FULLY RESPONSIBLE FOR EARTHWORK/BACKFILL.
- THE CONTRACTOR MUST COMPLY, TO THE FULLEST EXTENT, WITH THE LATEST OSHA STANDARDS AND REGULATIONS AND/OR ANY OTHER AGENCY WITH JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE MEANS AND METHODS REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES AND CONSULTANT SHALL HAVE NO RESPONSIBILITY FOR OR AS RELATED TO FILL, COMPACTION AND BACKFILL.
- PAVEMENT MUST BE SAW CUT IN STRAIGHT LINES, AND EXCEPT FOR EDGE OF BUTT JOINTS, MUST EXTEND TO THE FULL DEPTH OF THE EXISTING PAVEMENT. ALL DEBRIS FROM REMOVAL OPERATIONS MUST BE REMOVED FROM THE SITE AT THE TIME OF EXCAVATION. STOCKPILING OF DEBRIS WILL NOT BE PERMITTED.
- THE TOPS OF EXISTING MANHOLES, INLET STRUCTURES, AND SANITARY CLEANOUT TOPS MUST BE ADJUSTED, AS NECESSARY, TO MATCH PROPOSED GRADES IN ACCORDANCE WITH ALL APPLICABLE STANDARDS, REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
- DURING THE INSTALLATION OF SANITARY SEWER, STORM SEWER, AND ALL UTILITIES, THE CONTRACTOR MUST MAINTAIN A CONTEMPORANEOUS AND THOROUGH RECORD OF CONSTRUCTION TO IDENTIFY THE AS-INSTALLED LOCATIONS OF ALL UNDERGROUND INFRASTRUCTURE. THE CONTRACTOR MUST CAREFULLY NOTE ANY INSTALLATIONS THAT DEVIATE FROM THE INFORMATION CONTAINED IN THE UTILITY PLAN. THIS RECORD MUST BE KEPT ON A CLEAN COPY OF THE SITE PLAN, WHICH CONTRACTOR MUST PROMPTLY PROVIDE TO THE OWNER AT THE COMPLETION OF WORK.

- THE CONTRACTOR IS FULLY RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCING ANY CONSTRUCTION. CONTRACTOR MUST CONFIRM AND ENSURE 0.7% MINIMUM SLOPE AGAINST ALL ISLANDS, GUTTERS, AND CURBS; 1.0% ON ALL CONCRETE AND ASPHALT. EXCEPT WHERE ADA REQUIREMENTS LIMIT GRADIES, TO PREVENT PONDING, CONTRACTOR MUST IMMEDIATELY IDENTIFY, IN WRITING TO THE ENGINEER, ANY DISCREPANCIES THAT MAY OR COULD AFFECT THE PUBLIC SAFETY, HEALTH OR GENERAL WELFARE, OR PROJECT COST. IF CONTRACTOR PROCEEDS WITH CONSTRUCTION WITHOUT PROVIDING PROPER NOTIFICATION, MUST BE AT THE CONTRACTORS OWN RISK AND, FURTHER, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS THE DESIGN ENGINEER FOR ANY DAMAGES, COSTS, INJURIES, ATTORNEY'S FEES AND THE LIKE WHICH RESULT FROM SAME.
- PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 1" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MINIMUM 0.1% GUTTER GRADIENT ALONG CURB FACE. IT IS CONTRACTORS OBLIGATION TO ENSURE THAT DESIGN ENGINEER APPROVES FINAL CURBSIDE CUT SHEETS PRIOR TO INSTALLATION OF SAME.
- REFER TO SITE PLAN FOR ADDITIONAL NOTES.
- IN THE EVENT OF DISCREPANCIES AND/OR CONFLICTS BETWEEN PLANS OR RELATIVE TO OTHER PLANS, THE SITE PLAN WILL TAKE PRECEDENCE AND CONTROL. CONTRACTOR MUST IMMEDIATELY NOTIFY THE DESIGN ENGINEER, IN WRITING, OF ANY DISCREPANCIES AND/OR CONFLICTS.

- CONTRACTOR IS REQUIRED TO SECURE ALL NECESSARY AND/OR REQUIRED PERMITS AND APPROVALS FOR ALL OFF SITE MATERIAL SOURCES AND DISPOSAL FACILITIES. CONTRACTOR MUST SUPPLY A COPY OF APPROVALS TO ENGINEER AND OWNER PRIOR TO INITIATING WORK.
- WHERE RETAINING WALLS (WHETHER OR WHEN THEY MEET THE JURISDICTIONAL DEFINITION) ARE IDENTIFIED ON PLANS, ELEVATIONS IDENTIFIED ARE FOR THE EXPOSED PORTION OF THE WALL. WALL FOOTING/FOUNDATION ELEVATIONS ARE NOT IDENTIFIED HEREIN AND ARE TO BE DETERMINED BY THE CONTRACTOR BASED ON FINAL STRUCTURAL DESIGN SHOP DRAWINGS PREPARED BY THE APPROPRIATE PROFESSIONAL LICENSEE IN THE STATE WHERE THE CONSTRUCTION OCCURS.
- STORM DRAINAGE PIPE:
 - UNLESS IDENTIFIED OTHERWISE, ALL STORM SEWER PIPE MUST BE REINFORCED CONCRETE PIPE (RCP) CLASS III WITH SILT TIGHT JOINTS. WHEN HIGH-DENSITY POLYETHYLENE PIPE (HDPE) IS CALLED FOR ON THE PLANS, IT MUST CONFORM TO AASHTO M294 AND TYPE S (SMOOTH INTERIOR WITH ANGLAR CORRUGATIONS) WITH GASKET FOR SILT TIGHT JOINT. PVC PIPE FOR ROOF DRAIN CONNECTION MUST BE SDR 35 OR SCHEDULE 40 UNLESS INDICATED OTHERWISE.
 - SANITARY SEWER PIPE MUST BE POLYVINYL CHLORIDE (PVC) SDR 35 EXCEPT WHERE INDICATED OTHERWISE. SANITARY LATERAL MUST BE PVC SCHEDULE 40 OR PVC SDR 26 UNLESS INDICATED, IN WRITING, OTHERWISE.
- STORM AND SANITARY SEWER PIPE LENGTHS INDICATED ARE NOMINAL AND MEASURED CENTER OF INLET AND/OR MANHOLES STRUCTURE TO CENTER OF STRUCTURE.
- STORMWATER ROOF DRAIN LOCATIONS ARE BASED ON PRELIMINARY ARCHITECTURAL PLANS. CONTRACTOR IS RESPONSIBLE TO AND FOR VERIFYING LOCATIONS OF SAME BASED ON FINAL ARCHITECTURAL PLANS.

- SEWERS CROSSING STREAMS AND/OR LOCATION WITHIN 10 FEET OF THE STREAM EMANKMENT, OR WHERE SITE CONDITIONS SO INDICATE, MUST BE CONSTRUCTED OF STEEL, REINFORCED CONCRETE, DUCTILE IRON OR OTHER SUITABLE MATERIAL.
- SEWERS CONVEYING SANITARY FLOW, COMBINED SANITARY AND STORMWATER FLOW, OR INDUSTRIAL FLOW MUST BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 18 INCHES HORIZONTALLY. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES MUST BE IN SEPARATE TRENCHES WITH THE SEWER AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN, OR SUCH OTHER SEPARATION AS APPROVED BY THE GOVERNMENT AGENCY WITH JURISDICTION OVER SAME.
 - WHERE APPROPRIATE SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER MUST BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOBS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER MUST BE PROVIDED.
- WATER MAIN PIPING MUST BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS AND SPECIFICATIONS OF THE LOCAL WATER PURVEYOR. IN THE ABSENCE OF SUCH REQUIREMENTS, WATER MAIN PIPING MUST BE CEMENT-GLUED DUCTILE IRON (DIP) MINIMUM CLASS 5 THICKNESS. ALL PIPE AND APPURTENANCES MUST COMPLY WITH THE APPLICABLE AWWA STANDARDS IN EFFECT AT THE TIME OF APPLICATION.
- CONTRACTOR MUST ENSURE THAT ALL UTILITY TRENCHES LOCATED IN EXISTING PAVED ROADWAYS INCLUDING SEWER, WATER AND STORM

SYSTEMS, MUST BE REPAIRED IN ACCORDANCE WITH REFERENCED MUNICIPAL, COUNTY AND/OR STATE DETAILS AS APPLICABLE. CONTRACTOR MUST COORDINATE INSPECTION AND APPROVAL OF COMPLETED WORK WITH THE AGENCY WITH JURISDICTION OVER SAME.

- WHERE BASEMENTS ARE TO BE PROVIDED FOR PROPOSED DWELLING UNITS, THE DEVELOPER SHALL, BY BORING OR TEST PIT, DETERMINE THE DEPTH TO GROUNDWATER AT THE LOCATION OF THE PROPOSED DWELLINGS. WHERE GROUNDWATER IS ENCOUNTERED IN THE BASEMENT AREA BASEMENTS WILL NOT BE INSTALLED UNLESS SPECIAL CONSTRUCTION METHODS ARE UTILIZED, TO BE REVIEWED AND APPROVED BY THE MUNICIPAL CONSTRUCTION CODE OFFICIAL. IF AND WHERE SUMP PUMPS ARE INSTALLED, ALL DISCHARGES MUST BE CONNECTED TO THE STORM SEWER. A CLEANOUT MUST BE PROVIDED PRIOR TO THE CONNECTION TO THE STORM DRAIN IN ORDER THAT BLOCKAGES CAN BE ADDRESSED.
- FOR SINGLE AND TWO-FAMILY RESIDENTIAL PROJECTS, WHERE THE PROPOSED DWELLING AND ADJACENT SPOT ELEVATIONS) ARE SCHEMATIC FOR GENERIC BUILDING FOOTPRINT, GRADES MUST BE ADJUSTED BASED ON FINAL ARCHITECTURAL PLANS TO PROVIDE A MINIMUM OF SIX (6) INCHES BELOW TOP OF BLOCK AND OR SIX (6) INCHES BELOW FINISH FLOOR, WHICHEVER IS LOWEST, AND MUST PROVIDE POSITIVE DRAINAGE (2% MIN) AWAY FROM DWELLING. ALL CONSTRUCTION, INCLUDING GRADING, MUST COMPLY WITH THE LATEST LOCAL AND STATE BUILDING CODE AND ALL OTHER APPLICABLE REQUIREMENTS, RULES, STATUTES, LAWS, ORDINANCES AND CODES.
- LOCATION OF PROPOSED UTILITY POLE RELOCATION IS AT THE SOLE DISCRETION OF UTILITY COMPANY.
- CONSULTANT IS NEITHER LIABLE NOR RESPONSIBLE FOR ANY SUBSURFACE CONDITIONS AND FURTHER, SHALL HAVE NO LIABILITY FOR ANY HAZARDOUS MATERIALS, HAZARDOUS SUBSTANCES, OR POLLUTANTS ON, ABOUT OR UNDER THE PROPERTY.

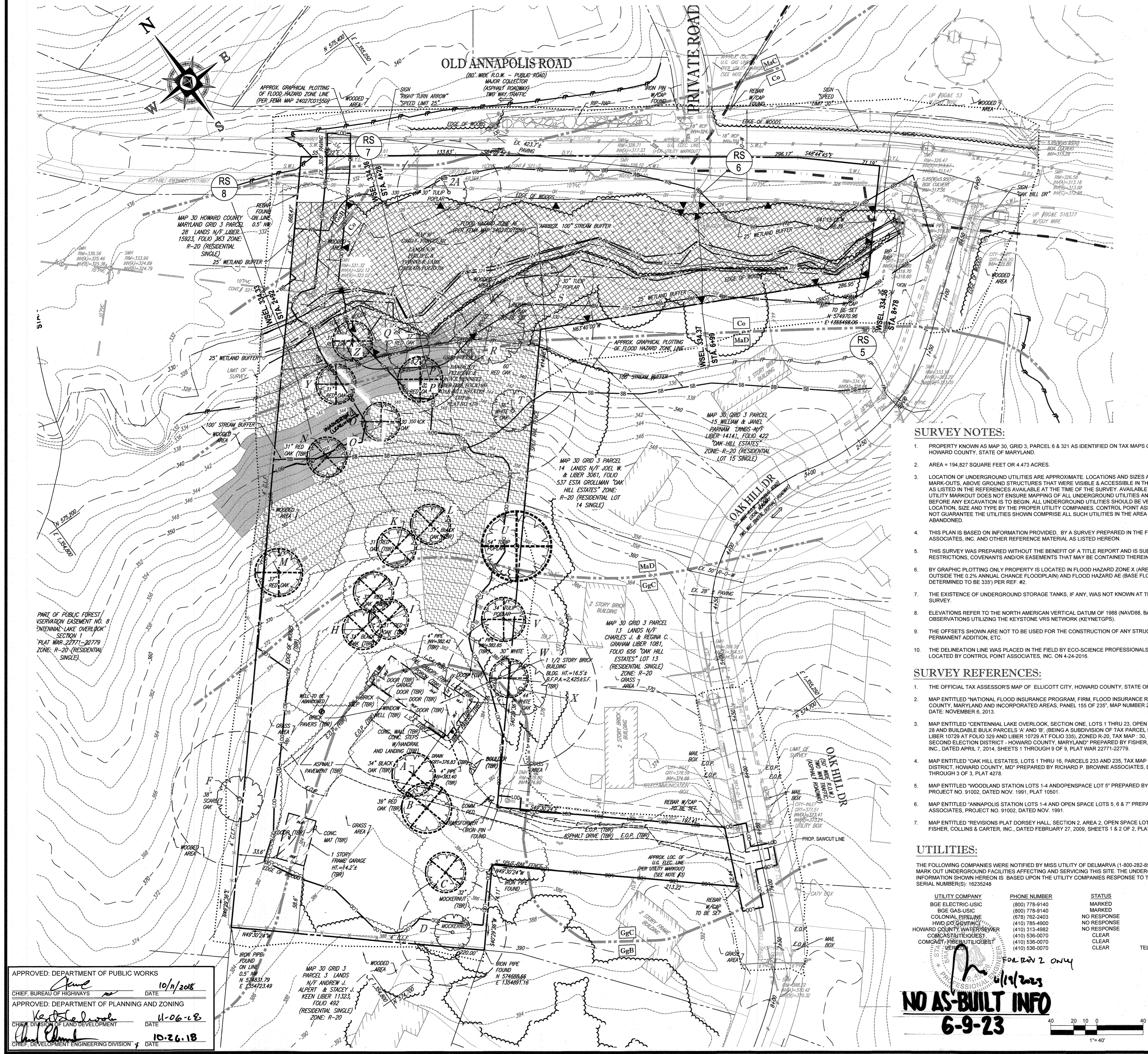
LIGHTING NOTES:

- THE LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURERS). ACTUAL SUSTAINED ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMP, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
- THE LIGHT LOSS FACTORS USED IN THESE LIGHTING CALCULATIONS ARE 0.69 FOR ALL LED LUMINAIRES, 0.69 FOR ALL HIGH-PRESSURE SODIUM LUMINAIRES OR I72 FOR ALL METAL HALIDE LUMINAIRES UNLESS OTHERWISE SPECIFIED. THESE FACTORS ARE INDICATIVE OF TYPICAL LIGHTING INDUSTRY MODELING STANDARDS.
- THE LIGHTING VALUES AND LOCATION POINTS DEPICTED ON THE PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THE PLAN ARE IN FOOT-CANDALS.
- THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND REPLACING (IF NECESSARY) AT LEAST ONCE EVERY SIX (6) MONTHS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINAIRES, LAMPS AND LENSES TO FAIL OR PROPERLY FUNCTION.
- WHERE APPLICABLE, THE EXISTING CONDITION LIGHT LEVELS ILLUSTRATED ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES. UNLESS ACTUAL FIELD MEASUREMENTS ARE TAKEN WITH A LIGHT METER AND ARE, CONSEQUENTLY, APPROXIMATIONS ONLY. DUE TO FACTORS SUCH AS FIXTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC. ACTUAL LIGHT LEVELS MAY DIFFER. EXISTING LIGHT LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE.
- THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. POWER SYSTEM, CONDUIITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT. MEP AND/OR LIGHTING CONTRACTOR AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.
- CONTRACTOR MUST BRING TO DESIGNERS ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.
- IT IS LIGHTING CONTRACTORS RESPONSIBILITY TO COORDINATE WITH THE PROJECT ARCHITECT OR OWNER REGARDING THE POWER SOURCE(S) FROM WITHIN THE BUILDING, AND TUNING DEVICES NECESSARY TO MEET THE DESIGN INTENT.
- THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.
- THE CONTRACTOR MUST VERIFY THAT INSTALLATION OF LIGHTING FIXTURES COMPLIES WITH THE REQUIREMENTS FOR SEPARATION FROM OVERHEAD ELECTRICAL WIRES AS INDICATED IN THE HIGH VOLTAGE PROXIMITY REGULATIONS N.E.A.C. 12-186.
- WHEN A BANK ATM IS INCLUDED IN THE PLAN, THE LIGHTING DESIGN REPRESENTS BOHLER'S UNDERSTANDING AND INTERPRETATION OF THE REGULATORY LIGHTING LEVELS INTENDED BY PUBLISHED STANDARDS.
- UPON OWNERS ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.

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ARCHITECTURE
 CIVIL ENGINEERING
 ELECTRICAL ENGINEERING
 ENVIRONMENTAL ENGINEERING
 GEOTECHNICAL ENGINEERING
 MECHANICAL ENGINEERING
 PLUMBING ENGINEERING
 SOIL REMEDIATION
 STRUCTURAL ENGINE



SOILS TABLE						
SOILS NAME	SOILS DESCRIPTION	HYDROLOGIC SOILS GROUP	HIGHLY ERODIBLE SOIL	HYDRIC SOIL	K FACTOR	AREA - AC.
Co	CODORUS AND HATBORO SILT LOAMS, 0 OR 3 PERCENT SLOPES	AD	NO	YES	0.37	1.63
GgB	GLENELO LOAM, 3 TO 8 PERCENT SLOPES	AD	NO	NO	0.28	0.88
GgC	GLENELO LOAM, 8 TO 15 PERCENT SLOPES	B	NO	NO	0.28	0.91
GgB	GLENELO LOAM, 8 TO 15 PERCENT SLOPES	AD	YES	NO	0.43	0.09
MaC	MANOR SILT LOAM, 8 TO 15 PERCENT SLOPES	AD	NO	NO	0.28	0.03
MaD	MANOR SILT LOAM, 15 TO 25 PERCENT SLOPES	B	YES	NO	0.28	0.94

SPECIMEN TREE TABLE						
KEY	SPECIES NAME	SIZE	CONDITION	TBR (Y/N)	ROOT ZONE RADIUS	
A	BLACK OAK	34"	FAIRLY GOOD	Y	51	
B	RED OAK	39"	FAIR	Y	59	
C	MOCKERNUT	32"	GOOD	Y	48	
D	MOCKERNUT	31"	GOOD	N	47	
F	SCARLET OAK	38"	FAIRLY GOOD	N	57	
H	BLACK OAK	31"	FAIR	Y	47	
I	RED OAK	31"	FAIRLY GOOD	Y	47	
J	RED OAK	32"	GOOD	Y	48	
K	RED OAK	31"	FAIR	Y	47	
L	BLACK OAK	31"	FAIRLY GOOD	Y	47	
M	RED OAK	37"	POOR	Y	56	
N	RED OAK	31"	FAIRLY GOOD	Y	47	
O	BLACK OAK	30"	FAIRLY GOOD	Y	45	
P	RED OAK	35"	GOOD	Y	53	
Q	RED OAK	37"	FAIR	N	56	
R	RED OAK	60"	POOR	N	90	
S	TULIP POPLAR	30"	GOOD	N	45	
T	WHITE OAK	36"	FAIR	N	54	
U	TULIP POPLAR	54"	FAIRLY GOOD	Y	81	
V	TULIP POPLAR	34"	FAIRLY GOOD	Y	51	
W	WHITE OAK	30"	GOOD	Y	45	
X	WHITE OAK	44"	GOOD	N	66	
Y	RED OAK	31"	FAIR	Y	47	
Z	RED OAK	31"	FAIRLY GOOD	Y	47	
2A	TULIP POPLAR	30"	FAIR	N	45	

SURVEY NOTES:

- PROPERTY KNOWN AS MAP 30, GRID 3, PARCEL 6 & 321 AS IDENTIFIED ON TAX MAPS OF ELLICOTT CITY, HOWARD COUNTY, STATE OF MARYLAND.
- AREA = 194,827 SQUARE FEET OR 4.473 ACRES.
- LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARK-OUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.
- THIS PLAN IS BASED ON INFORMATION PROVIDED, BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
- BY GRAPHIC PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AND FLOOD HAZARD AE (BASE FLOOD ELEVATIONS DETERMINED TO BE 335') PER REF. #2.
- THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1989 (NAVD88, BASED ON GPS OBSERVATIONS UTILIZING THE KEYSTONE VRS NETWORK (KEYNETGPS)).
- THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.
- THE DELINEATION LINE WAS PLACED IN THE FIELD BY ECO-SCIENCE PROFESSIONALS, INC., AND FIELD LOCATED BY CONTROL POINT ASSOCIATES, INC. ON 4-24-2016.

SURVEY REFERENCES:

- THE OFFICIAL TAX ASSESSOR'S MAP OF ELLICOTT CITY, HOWARD COUNTY, STATE OF MARYLAND.
- MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM FLOOD INSURANCE RATE MAP, HOWARD COUNTY, MARYLAND AND INCORPORATED AREAS, PANEL 155 OF 235", MAP NUMBER 24027C0155D, EFFECTIVE DATE: NOVEMBER 6, 2013.
- MAP ENTITLED "CENTENNIAL LAKE OVERLOOK, SECTION ONE, LOTS 1 THRU 23, OPEN SPACE, LOTS 24 THRU 28 AND BUILDABLE BULK PARCELS 'A' AND 'B', (BEING A SUBDIVISION OF TAX PARCEL NO. 86, TAX MAP NO. 30, LIBER 10728 AT FOLIO 329 AND LIBER 10729 AT FOLIO 335), ZONED R-20, TAX MAP - 30, GRID 2, PARCEL 86, SECOND ELECTION DISTRICT - HOWARD COUNTY, MARYLAND" PREPARED BY FISHER, COLLINS & CARTER, INC., DATED APRIL 7, 2014, SHEETS 1 THROUGH 9 OF 9, PLAT WAR 22771-22779.
- MAP ENTITLED "OAK HILL ESTATES, LOTS 1 THRU 16, PARCELS 233 AND 235, TAX MAP 30, 2ND ELECTION DISTRICT, HOWARD COUNTY, MD" PREPARED BY RICHARD P. BROWNE ASSOCIATES, DATED 5-9-78, SHEETS 1 THROUGH 3 OF 3, PLAT 4278.
- MAP ENTITLED "WOODLAND STATION LOTS 1-4 AND OPEN SPACE LOT 5" PREPARED BY BOENDER ASSOCIATES, PROJECT NO. 91002, DATED NOV. 1991, PLAT 10501.
- MAP ENTITLED "ANNAPOLIS STATION LOTS 1-4 AND OPEN SPACE LOTS 5, 6 & 7" PREPARED BY BOENDER ASSOCIATES, PROJECT NO. 91002, DATED NOV. 1991.
- MAP ENTITLED "REVISIONS PLAT DORSEY HALL, SECTION 2, AREA 2, OPEN SPACE LOT 3" PREPARED BY FISHER, COLLINS & CARTER, INC., DATED FEBRUARY 27, 2009, SHEETS 1 & 2 OF 2, PLAT 21052.

UTILITIES:

THE FOLLOWING COMPANIES WERE NOTIFIED BY MISS UTILITY OF DELMARVA (1-800-282-8555) AND REQUESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS REQUEST. SERIAL NUMBER(S): 16235248

UTILITY COMPANY	PHONE NUMBER	STATUS	COMMENTS
BGE ELECTRIC-USIC	(800) 778-9140	MARKED	PLANS NOT PROVIDED
BGE GAS-USIC	(800) 778-9140	MARKED	PLANS NOT PROVIDED
COLONIAL PIPELINE	(878) 782-2403	NO RESPONSE	NOT SHOWN
HWD CO (GOWTRIC)	(410) 785-4900	NO RESPONSE	NOT SHOWN
HOWARD COUNTY WATER/SEWER COMCAST/UTILITIES	(410) 313-4982 (410) 536-0070 (410) 536-0070 (410) 536-0070	NO RESPONSE CLEAR CLEAR CLEAR	NOT SHOWN N/A N/A TELECOM BOXES OBSERVED

FOR REVISION 1 ONLY

B.R. ROWE

LEGEND

- LIMIT OF DISTURBANCE
- ▨ FLOODPLAIN
- ▩ STEEP SLOPES (> 25%)
- ▧ 15% - 25% SLOPE
- ▦ WETLANDS
- EXISTING CONTOURS
- TREELINE
- SPECIMEN TREE
- ▨ FLOODPLAIN
- STREAM BUFFER
- SOIL LIMIT
- STREAM
- SPECIMEN TREE (TBR)

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SUBDIVISION NAME: OAK HILL SUBDIVISION SECTION/AREA: N/A	TAX MAP: 30 GRID: 3 ZONED: R-20
00457 / 00477 / 16883 / 00498	PARCELS: 368 (LOT 16) & 321
PREVIOUS FILE NO.: F-78-191, WP-17-014, WP-17-112	2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

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REVISIONS

REV	DATE	COMMENT	BY
1	9/10/19	REVISED LOTS 16 & 321 TO IN PROGRESS (L&Z)	BRW
2	6/9/23	NO AS-BUILT INFO	AVG

NOT APPROVED FOR CONSTRUCTION

PROJECT NO.: MD162006
 DRAWN BY: AVG
 CHECKED BY: JR
 DATE: 11/8/17
 SCALE: 1" = 40'
 CAD I.D.: SS4

FINAL PLAN

FOR
OAK HILL SUBDIVISION
 (RE-SUBDIVISION OF LOT 16)

LOCATION OF SITE
 9692 OAK HILL DRIVE
 ELLICOTT CITY, MD
 MAP 30, GRID 3, PARCELS 368 (LOT 16) & 321
 2ND ELEC. DISTRICT, ZONED R-20
 HOWARD COUNTY

BOHLER ENGINEERING
 901 DULANEY VALLEY ROAD, SUITE 801
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 Fax: (410) 821-7987
 MD@BohlerEng.com

B.R. ROWE
 PROFESSIONAL ENGINEER
 MARYLAND LICENSE NO. 8088
 2/1/19

EXISTING CONDITIONS AND DEMOLITION PLAN

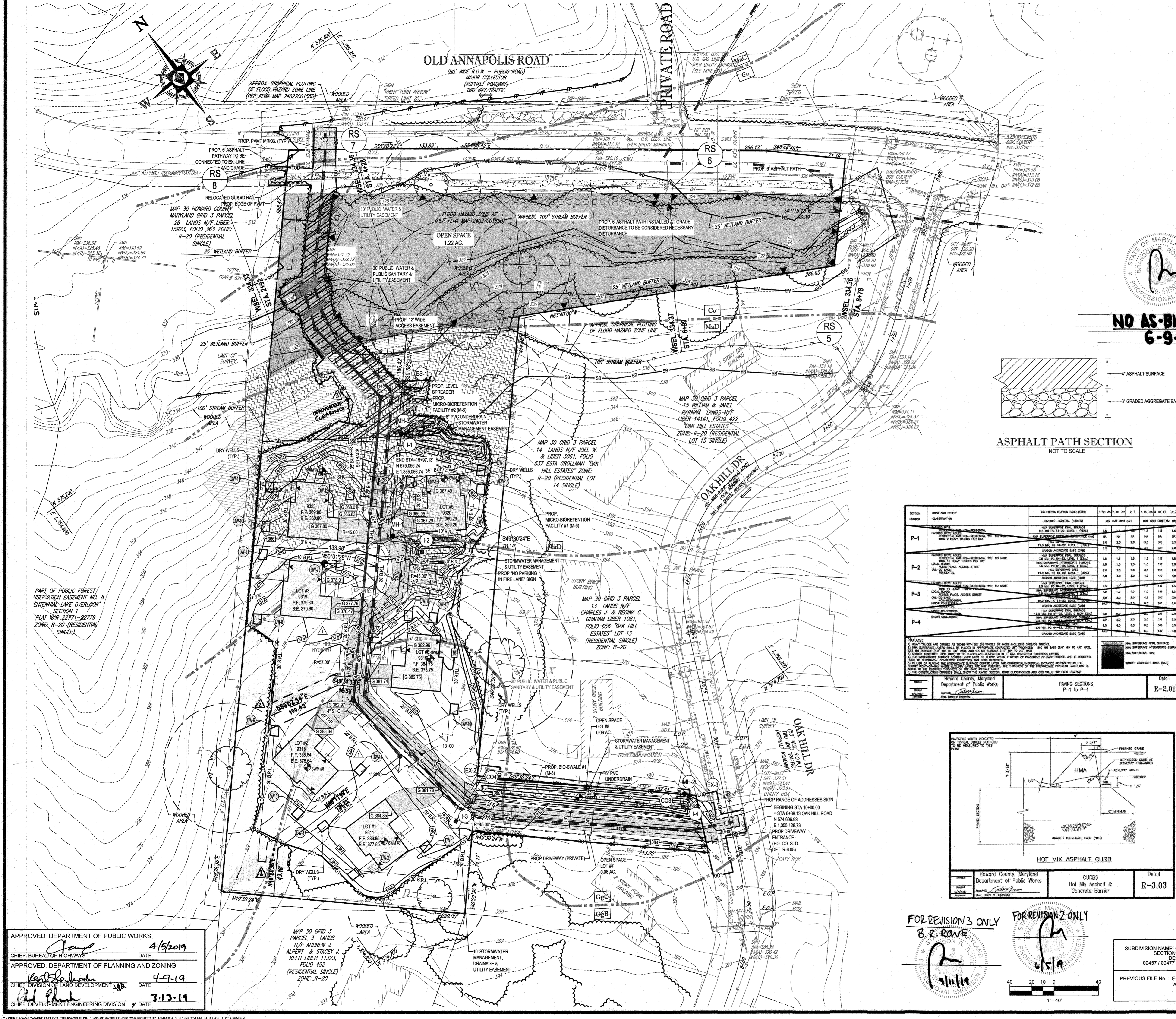
SHEET NUMBER: 3 of 18

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE: 10/1/2018

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 11-06-23

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 10-26-18

NO AS-BUILT INFO
 6-9-23



CUT/FILL ANALYSIS

TOTAL CUT = 7,884 CY
 TOTAL FILL = 1,221 CY
 TOTAL EXPORT = 5,783 CY

*NUMBERS REFLECT ADDITIONAL CUT FOR 12" PAVEMENT, BASEMENTS, STORMWATER FACILITIES AND DRYWELLS

SWM FACILITIES
 TOTAL CUT = 193 CY
 TOTAL FILL = 13 CY
 TOTAL EXPORT = 193 CY

LIMIT OF DISTURBANCE: 2.22 AC
 EXCESS SOIL MATERIAL WILL BE STOCKPILED ONSITE

SOIL MATERIAL SHALL BE DISCARDED AT A SITE WITH AN ACTIVE GRADING PERMIT AND APPROVED SEDIMENT CONTROL PLAN. BORROW MATERIAL SHALL BE OBTAINED FROM AN APPROVED SOURCE WITH AN ACTIVE GRADING PERMIT AND AN APPROVED SEDIMENT CONTROL PLAN.

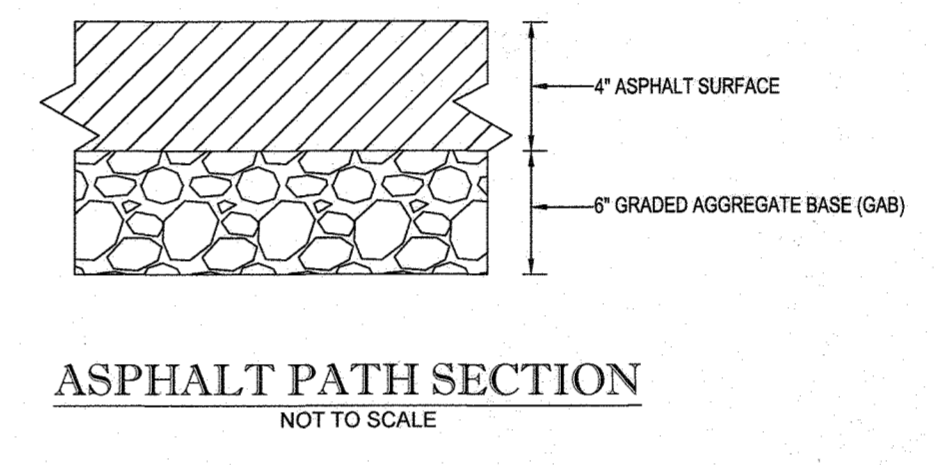
EARTH QUANTITIES LISTED ABOVE ARE FOR SEDIMENT CONTROL USE ONLY. CONTRACTOR SHALL NOT RELY ON THESE FIGURES FOR ESTIMATING AND BIDDING PURPOSES.

SITE STATISTICS

- OWNER / DEVELOPER: 6314 GOLDEN STAR PLACE, COLUMBIA, MD 21044. CONTACT: BRIAN GOLDSTEIN. PHONE: 301.675.8460
- TOTAL ACRES OF PROPERTY: 4.47 AC. PARCEL #231: 1.65 AC. PARCEL #368: 2.82 AC.
- FLOODPLAIN ACREAGE WITHIN FSD: 1.68 AC.
- WATERSHED: LITTLE PATUXENT RIVER.
- FEMA: #24027C0155D

NOTES

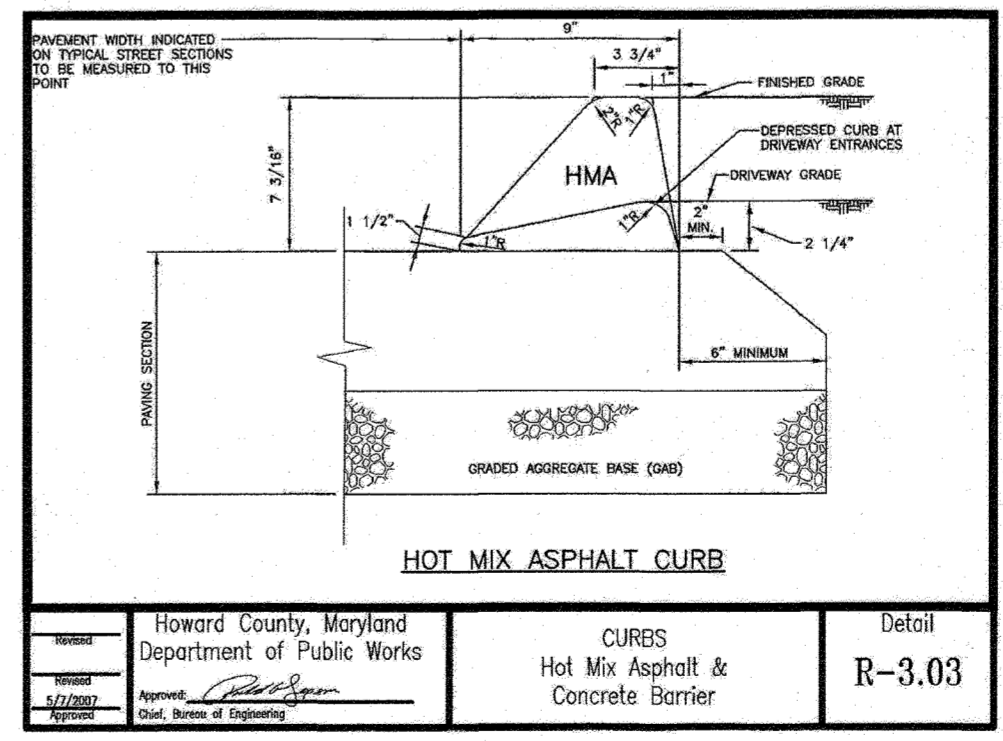
- ALL UNDERGROUND ROOF LEADERS WILL BE 6" PVC PIPE.
- ALL BIO-RETENTION FACILITIES LEADING TO THEIR OWN OUTFALL POINT WILL HAVE OUTFALL PIPES SIZED TO HANDLE THE 10-YR STORM EVENT.
- STORMWATER QUALITY MANAGEMENT WILL BE PROVIDED BY DRYWELLS AND TWO (2) MICRO-BIORETENTION, AND ONE (1) BIO-SWALE FACILITY.
- HAZARD CLASS FOR ALL SWM FACILITIES FAILURE IS "A" DUE TO NO LIFE LOSS FOR FAILURE.
- REFER TO BORING LOGS LATER IN THIS SET.



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <4.5 TO 1 (C)	4.5 TO 1 TO 1 (C)	1 TO 1 TO 1 (C)	2 TO 1 TO 1 (C)	3 TO 1 TO 1 (C)	4 TO 1 TO 1 (C)	5 TO 1 TO 1 (C)	6 TO 1 TO 1 (C)
P-1	PAVING SECTION FOR THE USE IN COMMON DRIVEWAY	18.0 MPA (26.00 PSI) (18.0)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-2	PAVING SECTION FOR THE USE IN COMMON DRIVEWAY	18.0 MPA (26.00 PSI) (18.0)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-3	PAVING SECTION FOR THE USE IN COMMON DRIVEWAY	18.0 MPA (26.00 PSI) (18.0)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
P-4	PAVING SECTION FOR THE USE IN COMMON DRIVEWAY	18.0 MPA (26.00 PSI) (18.0)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

LEGEND

- LOD --- LOD --- LIMIT OF DISTURBANCE
- SOIL LIMIT ---
- FLOODPLAIN ---
- STEEP SLOPES (> 25%) ---
- 15% - 25% SLOPE ---
- WETLANDS ---
- PROP. SWM FACILITY ---
- FOREST CONSERVATION EASEMENT ---
- DRYWELL (M-6) ---
- FLOODPLAIN ---
- STREAM BUFFER ---
- 25' WETLAND BUFFER ---



REVISED ROAD CONSTRUCTION PLAN

PURPOSE: TO ADJUST GRADING BASED ON SELECTION OF HOME BUILDER

APPROVED: *[Signature]* 3/6/19
 DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 4/5/2019

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 4-9-19

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3-13-19

FOR REVISION 3 ONLY
[Signature]
 B.R. ROWE

FOR REVISION 2 ONLY
[Signature]
 B.R. ROWE

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE, COLUMBIA, MD 21044. CONTACT: BRIAN GOLDSTEIN. PHONE: 301.675.8460

SUBDIVISION NAME: OAK HILL SUBDIVISION
 SECTION/VAR: N/A
 DEED #: 00457 / 00477 & 16883 / 00498

TAX MAP: 30 GRID: 3 ZONED: R-20
 PARCELS: 368 (LOT 16) & 321
 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

PROFESSIONAL CERTIFICATION
 BRANDON R. ROWE, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42808, EXPIRATION DATE: 7/31/2019

BOHLER ENGINEERING

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

RALEIGH, NC
 LEHIGH VALLEY, PA
 REHOBOTH BEACH, DE
 BALTIMORE, MD
 NEW YORK, NY
 NEW JERSEY
 PHILADELPHIA, PA
 CENTRAL VIRGINIA

REVISIONS

REV	DATE	COMMENT	BY
1	1/29/19	REVISED PER GRADING UPDATES	AVG
2	4/2/19	TO REVISE PROPOSED LINES ON LOTS 1, 2 & 3	RIB
3	9/10/19	TO REWELAND DUE TO INCREASED M CLEARING	CRG
4	6/1/23	NO AS-BUILT INFO	AVG

BOHLER ENGINEERING

THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE IN VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE: CHL-1111

(VA 1-800-245-4848) (MD 1-800-242-1778) (DC 1-800-257-7777) (VA 1-800-952-7001) (MD 1-800-257-7777) (DE 1-800-252-8900)

PROJECT No: MD162008
 DRAWN BY: JR
 DATE: 7/23/18
 SCALE: 1" = 40'
 CAD I.D.: S56

CONTRACTOR TO UTILIZE THE P-2 PAVING SECTION FOR THE USE IN COMMON DRIVEWAY

REVISED ROAD CONSTRUCTION PLAN

FOR
OAK HILL SUBDIVISION
 (RE-SUBDIVISION OF LOT 16)

LOCATION OF SITE
 9692 OAK HILL DRIVE
 ELLICOTT CITY, MD
 MAP 30, GRID 3, PARCELS 368 (LOT 16) & 321
 2ND ELEC. DISTRICT, ZONED: R-20
 HOWARD COUNTY

BOHLER ENGINEERING

901 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21284
 Phone: (410) 821-7900
 Fax: (410) 821-7987
 MD@BohlerEng.com

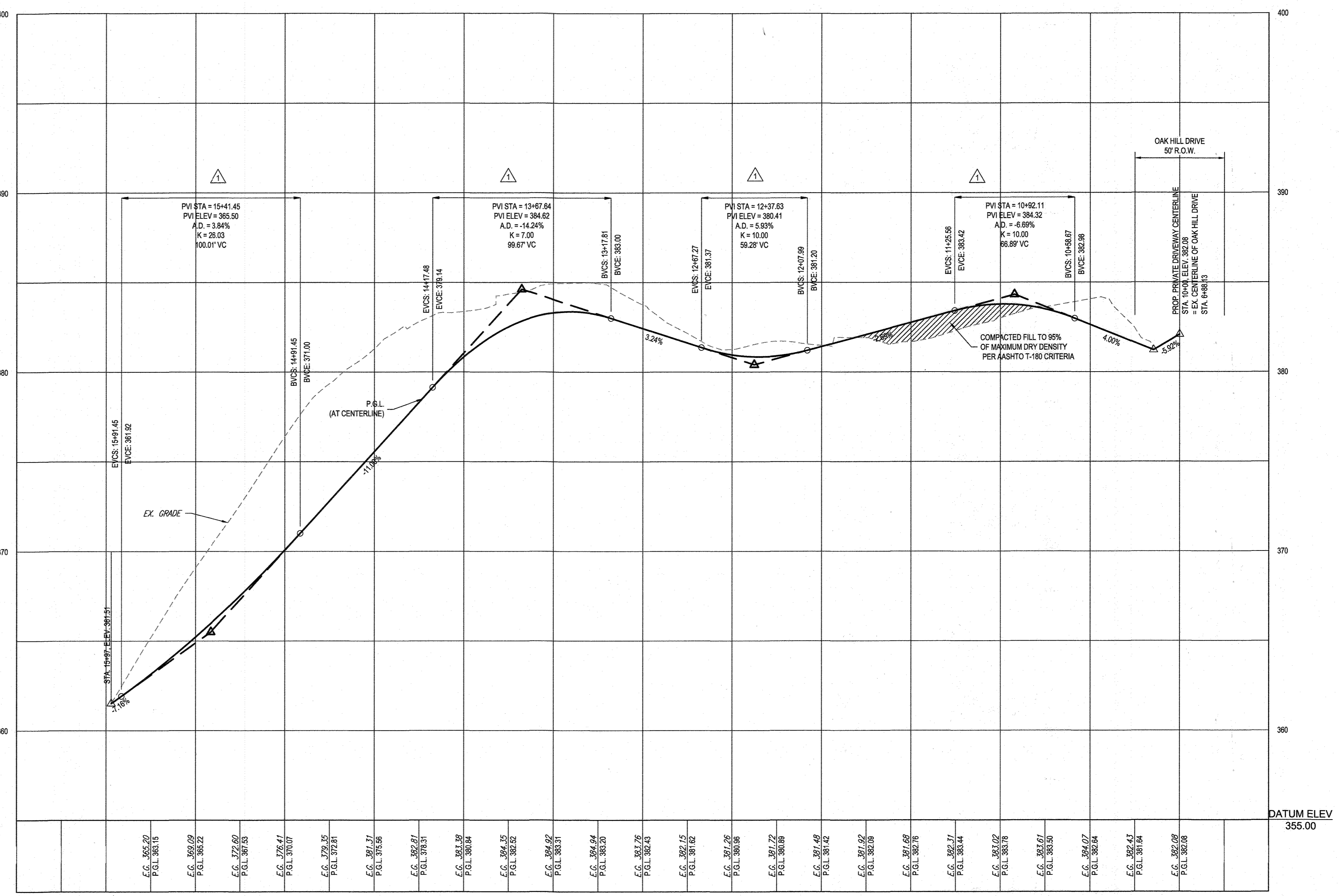
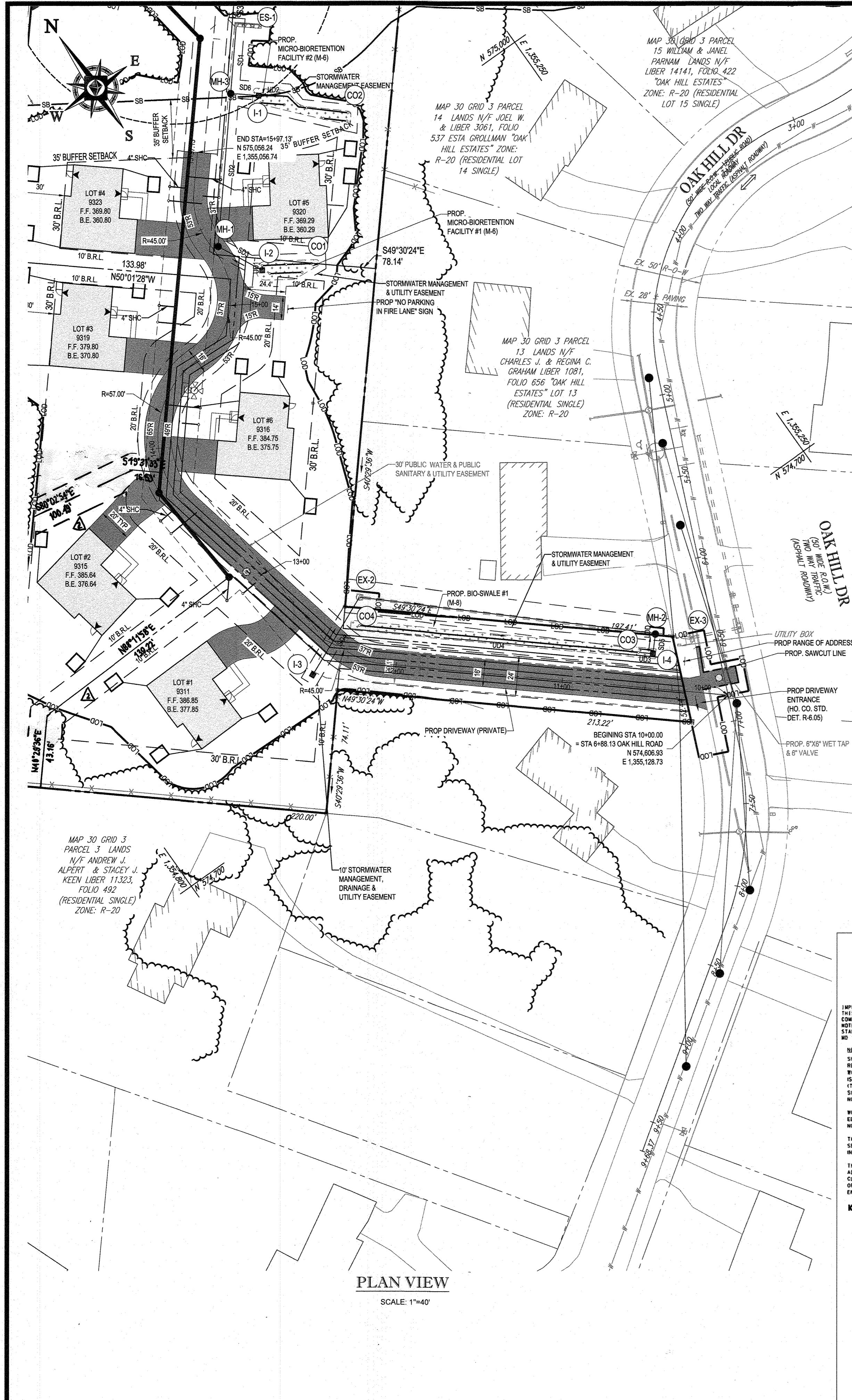
B.R. ROWE

PROFESSIONAL ENGINEER
 MARYLAND LICENSE NO. 42808

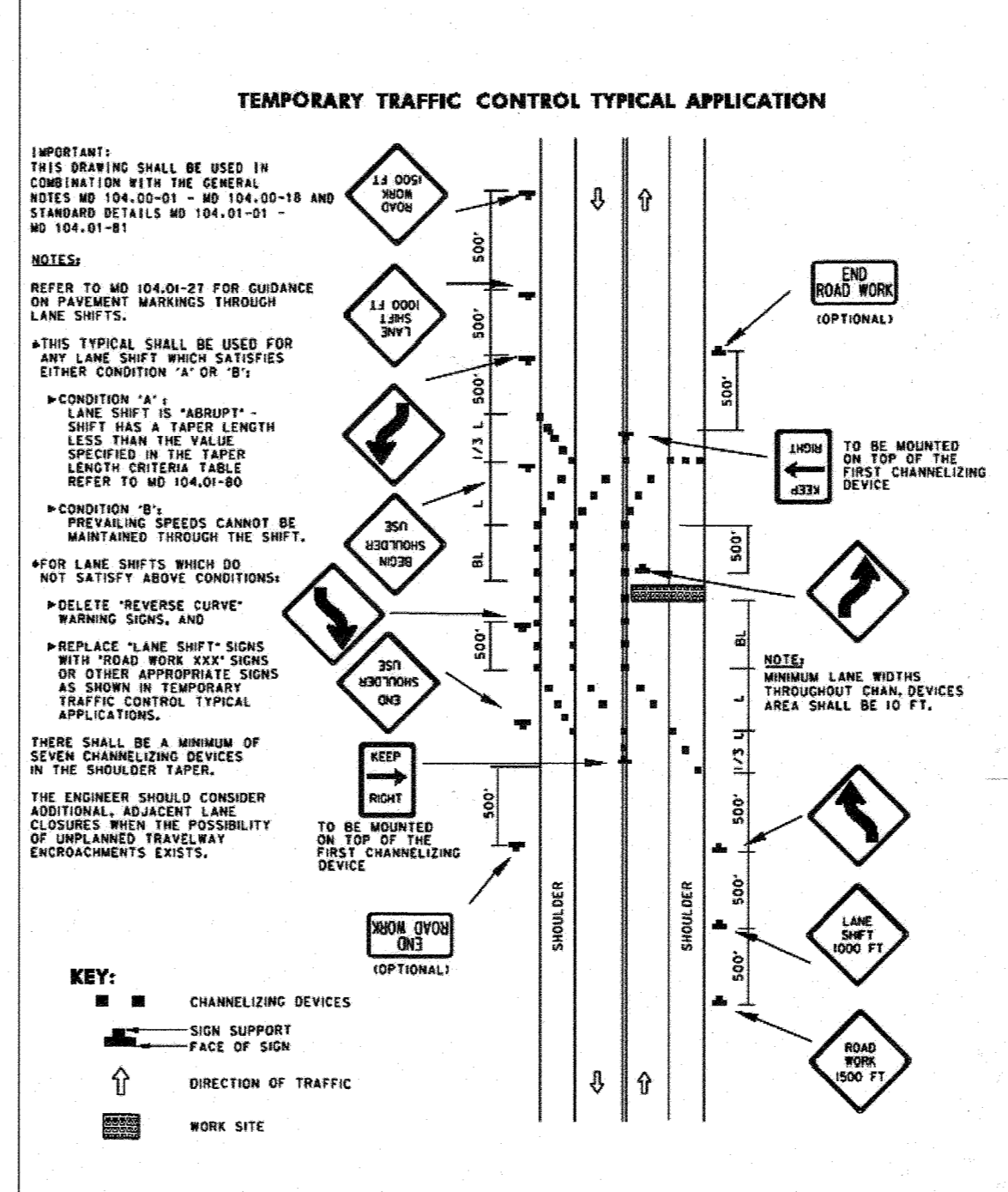
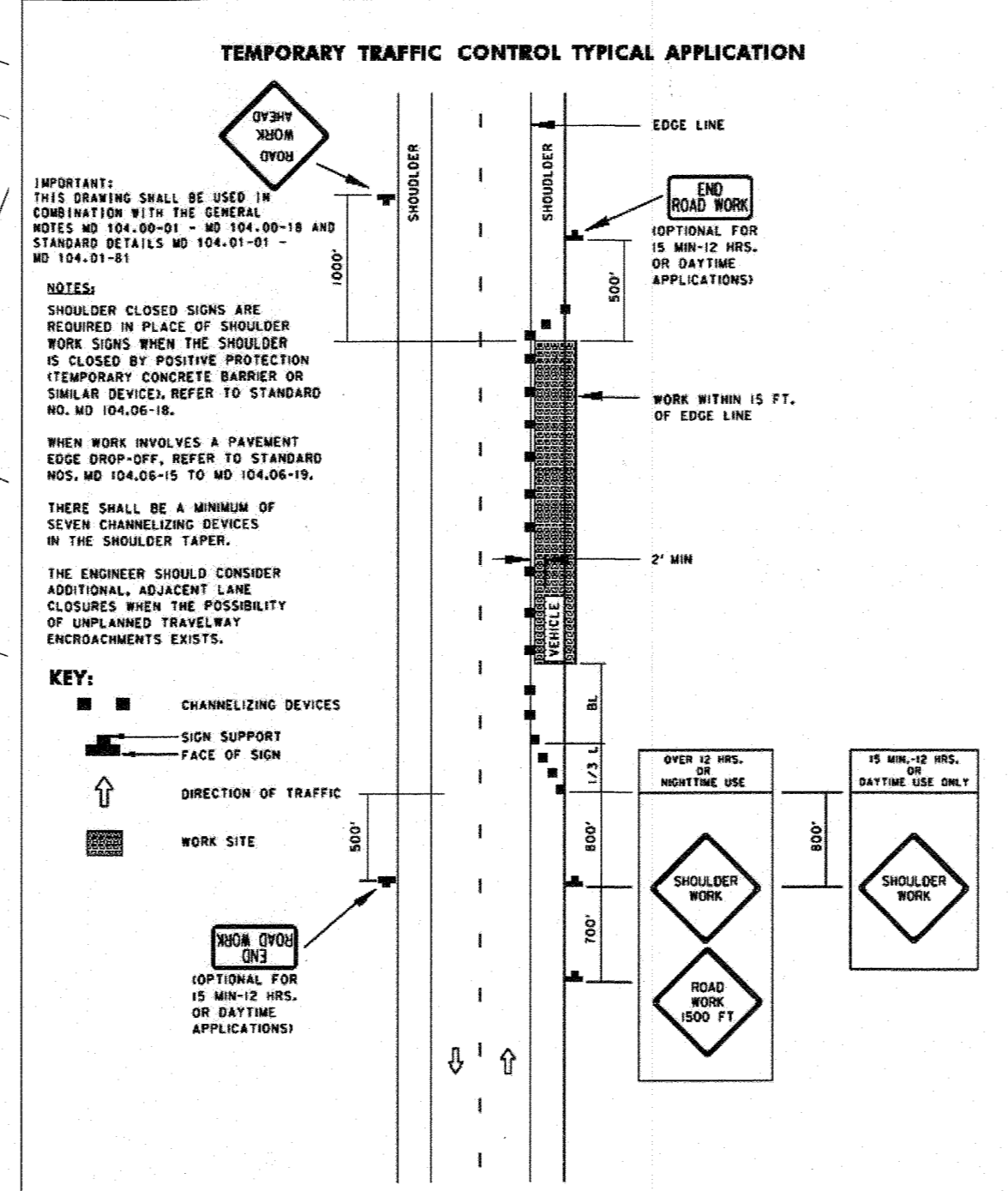
4/2/19

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
4 OF 18



CENTERLINE DRIVEWAY PROFILE
USE-IN-COMMON
 SCALE: 1"=40' HORIZONTAL
 1"=4' VERTICAL



APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE 4/5/2019
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 4-9-19
 APPROVED: CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 3-13-19

APPROVED: MARYLAND DEPARTMENT OF TRANSPORTATION
 DIVISION - OFFICE OF TRAVEL AND SAFETY
 APPROVAL: 0-23-20 APPROVAL: 0-23-20
 APPROVAL: 0-23-20 APPROVAL: 0-23-20
 APPROVAL: 0-23-20 APPROVAL: 0-23-20

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHOULDER WORK/2-LANE, 2-WAY
EQL/LESS THAN 40 MPH
 STANDARD NO. MD 104.02-02

APPROVED: MARYLAND DEPARTMENT OF TRANSPORTATION
 DIVISION - OFFICE OF TRAVEL AND SAFETY
 APPROVAL: 0-23-20 APPROVAL: 0-23-20
 APPROVAL: 0-23-20 APPROVAL: 0-23-20
 APPROVAL: 0-23-20 APPROVAL: 0-23-20

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
LANE SHIFT RIGHT OR LEFT SIDE/2-LANE,
2-WAY EQL/LESS THAN 40 MPH/15 MIN -
12 HRS. OR DAYTIME ONLY
 STANDARD NO. MD 104.02-04

REVISED ROAD CONSTRUCTION PLAN
 PURPOSE: TO ADJUST GRADING BASED ON SELECTION OF HOMEOWNER

NO AS-BUILT INFO
6-9-23

FOR PREVIEW 2 ONLY
 6/19/19

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

APPROVED: *John R. Rowe* 3/6/19
 HOWARD SCD DATE

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE
 COLUMBIA, MD 21044
 CONTACT: BRIAN GOLDSTEIN
 PHONE: 301.875.8460

TAX MAP: 30 GRID: 3 ZONED: R-20
 PARCELS: 368 (LOT 16) & 321
 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

PROFESSIONAL CERTIFICATION
 I, BRANDON R. ROWE, 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. 40886, EXPIRATION DATE: 7/20/19

BOHLER ENGINEERING

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

RALEIGH, NC
 LENOX VALLEY, PA
 BOSTON, MA
 BALTIMORE, MD
 NEW YORK, NY
 PHILADELPHIA, PA
 CHARLOTTE, NC
 TAMPA, FL
 ATLANTA, GEORGIA
 NORFOLK, VA
 CENTRAL VIRGINIA

REVISIONS

REV	DATE	COMMENT	BY
1	1/28/19	REVISED PER GRADING UPDATES	AVG
2	4/19/19	TO REVISE PROPERTY LINES ON LOTS 1, 2, 3	RB
3	6/19/19	NO AS-BUILT INFO	AVG

THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE OF VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE: CALL 811 (WWW.1-800-245-4848) (PA 1-800-242-1778) (DC 1-800-257-7777) (WV 1-800-662-7001) (MD 1-800-227-7777) (DE 1-800-283-8500)

PROJECT No: MD162008
 DRAWN BY: AVG
 CHECKED BY: JR
 DATE: 7/23/18
 SCALE: AS SHOWN
 CAD I.D.: FRG

REVISED ROAD CONSTRUCTION PLAN
OAK HILL SUBDIVISION
 (RE-SUBDIVISION OF LOT 16)

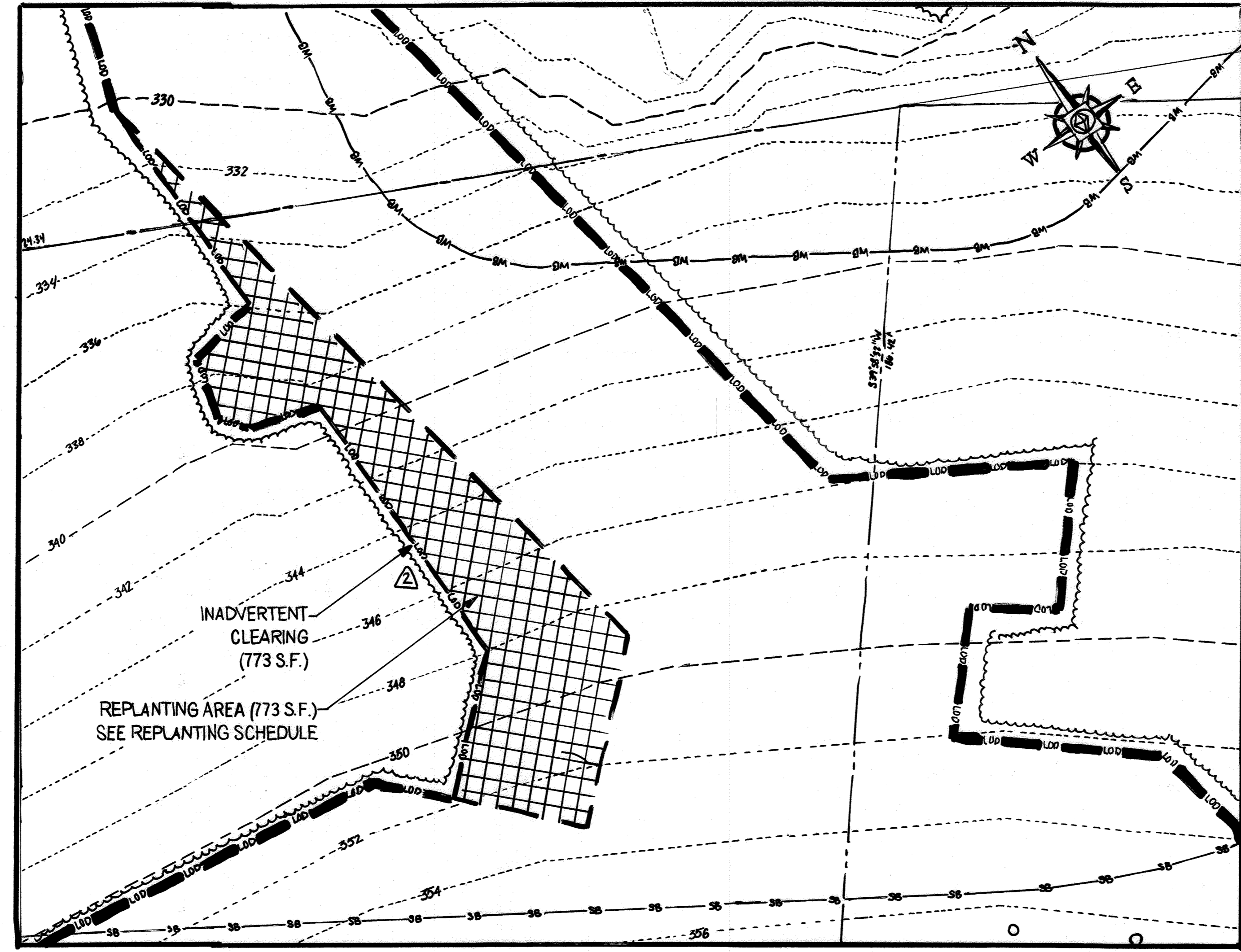
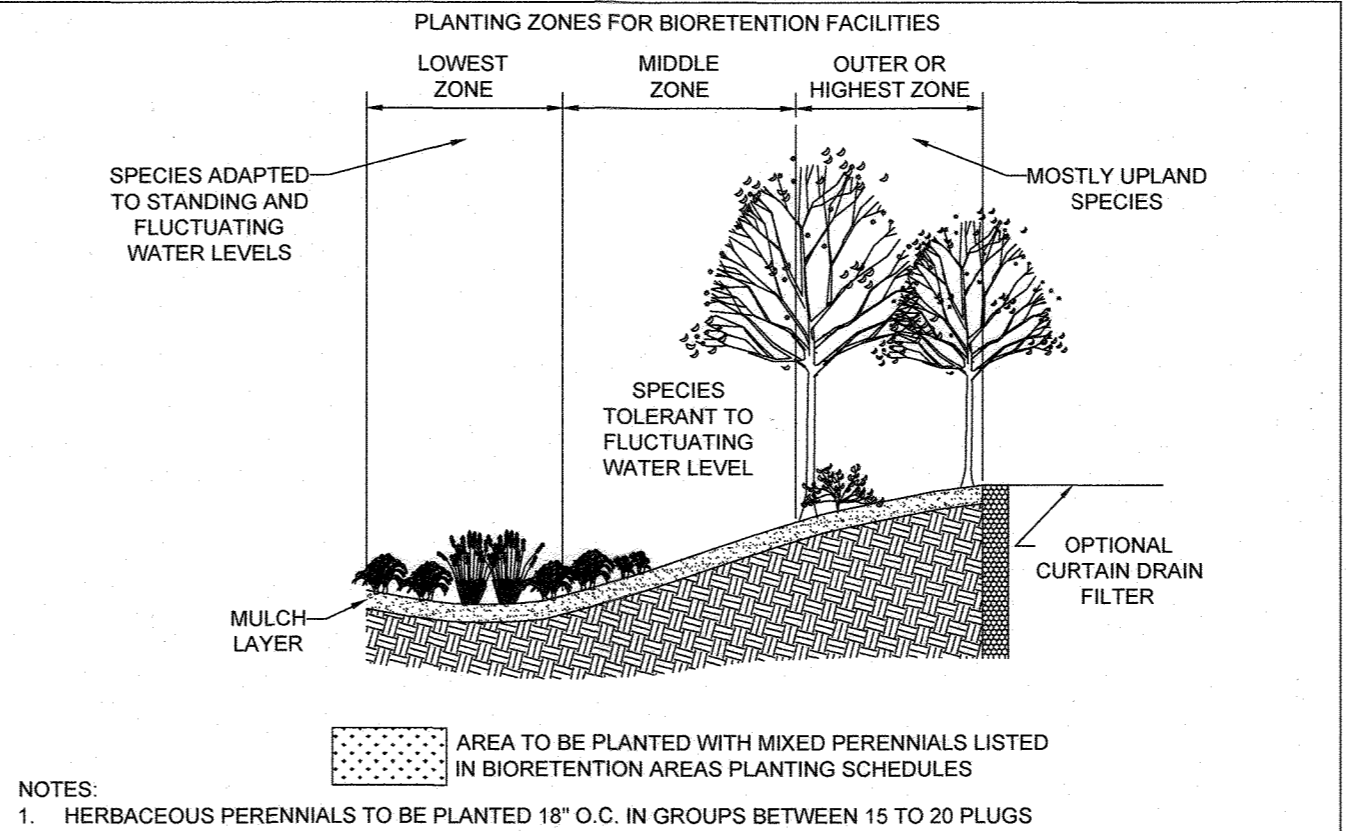
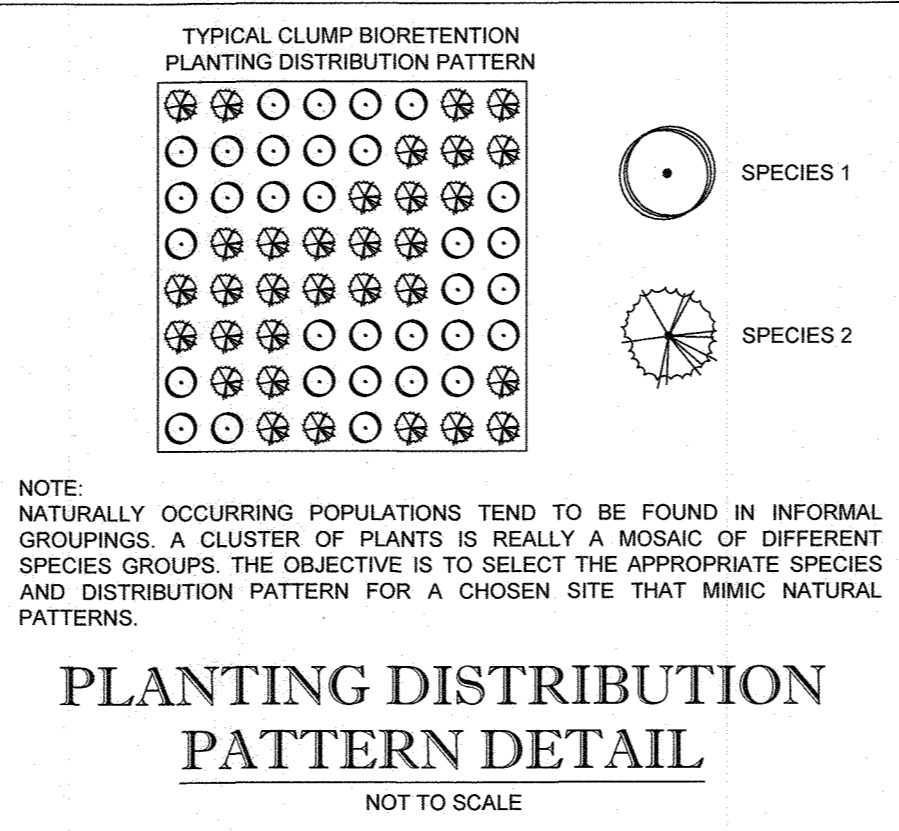
LOCATION OF SITE
 9692 OAK HILL DRIVE
 ELLICOTT CITY, MD
 MAP 30, GRID 3, PARCELS 368 (LOT 16) & 321
 2ND ELEC. DISTRICT, ZONED: R-20
 HOWARD COUNTY

BOHLER ENGINEERING
 901 DULANEY VALLEY ROAD, SUITE 801
 TOWSON, MARYLAND 21284
 Phone: (410) 821-7900
 Fax: (410) 821-7987
 MD@BohlerEng.com

B.R. ROWE
 PROFESSIONAL ENGINEER
 LICENSE NO. 40886

SHEET TITLE: ROAD PLAN
 SHEET NUMBER: 5 of 18

FOR REVISION 2 ONLY
B.R. ROWE



UTILITY CLEARING REPLANTING PLAN
SCALE: 1" = 10'

INFILTRATION AND FILTER SYSTEM CONSTRUCTION SPECIFICATIONS

INFILTRATION AND FILTER SYSTEMS EITHER TAKE ADVANTAGE OF EXISTING PERMEABLE SOILS OR CREATE A PERMEABLE MEDIA SUCH AS SAND FOR INCI. AND RE.V. IN SOME INSTANCES WHERE PERMEABILITY IS GREAT, THESE FACILITIES MAY BE USED FOR OP AS WELL. THE MOST COMMON SYSTEMS INCLUDE INFILTRATION TRENCHES, INFILTRATION BASINS, SAND FILTERS, AND ORGANIC FILTERS.

WHEN PROPERLY PLANTED VEGETATION WILL THRIVE AND ENHANCE THE FUNCTIONING OF THESE SYSTEMS. FOR EXAMPLE, PRE-TREATMENT BUFFERS WILL TRAP SEDIMENTS THAT OFTEN ARE BOUND WITH PHOSPHOROUS AND METALS. VEGETATION PLANTED IN THE FACILITY WILL AID IN NUTRIENT UPTAKE AND WATER STORAGE. ADDITIONALLY, PLANT ROOTS WILL PROVIDE ARTERIES FOR STORMWATER TO PERMEATE SOIL FOR GROUNDWATER RECHARGE. FINALLY, SUCCESSFUL PLANTINGS PROVIDE AESTHETIC VALUE AND WILDLIFE HABITAT MAKING THESE FACILITIES MORE DESIRABLE TO THE PUBLIC.

- DESIGN CONSTRAINTS:
- PLANTING BUFFER STRIPS OF AT LEAST 20 FEET WILL CAUSE SEDIMENTS TO SETTLE OUT BEFORE REACHING THE FACILITY THEREBY REDUCING THE POSSIBILITY OF CLOGGING.
- DETERMINE AREAS THAT WILL BE SATURATED WITH WATER AND WATER TABLE DEPTH SO THAT APPROPRIATE PLANTS MAY BE SELECTED (HYDROLOGY WILL BE SIMILAR TO BIORETENTION FACILITIES. SEE FIGURE A5 AND TABLE A4 FOR PLANTING MATERIAL GUIDANCE).
- PLANTS KNOWN TO SEND DOWN DEEP TAPROOTS SHOULD BE AVOIDED IN SYSTEMS WHERE FILTER FABRIC IS USED AS PART OF FACILITY DESIGN.
- TEST SOIL CONDITIONS TO DETERMINE IF SOIL AMENDMENTS ARE NECESSARY.
- PLANTS SHALL BE LOCATED SO THAT ACCESS IS POSSIBLE FOR STRUCTURE MAINTENANCE.
- STABILIZE HEAVY FLOW AREAS WITH EROSION CONTROL MATS OR SOD.
- TEMPORARILY DIVERT FLOWS FROM SEEDS AREAS UNTIL VEGETATION IS ESTABLISHED.
- SEE TABLE A5 FOR ADDITIONAL DESIGN CONSIDERATIONS.

BIO-RETENTION SOIL BED CHARACTERISTICS THE CHARACTERISTICS OF THE SOIL FOR THE BIORETENTION FACILITY ARE PERHAPS AS IMPORTANT AS THE FACILITY LOCATION SIZE, AND TREATMENT VOLUME. THE SOIL MUST BE PERMEABLE ENOUGH TO ALLOW RUNOFF TO FILTER THROUGH THE MEDIA WHILE HAVING CHARACTERISTICS SUITABLE TO PROMOTE AND SUSTAIN A ROBUST VEGETATIVE COVER CROP. IN ADDITION, MUCH OF THE NUTRIENT POLLUTANT UPTAKE (NITROGEN AND PHOSPHORUS) IS ACCOMPLISHED THROUGH ABSORPTION AND MICROBIAL ACTIVITY WITHIN THE SOIL PROFILE. THEREFORE, SOILS MUST BALANCE THEIR CHEMICAL AND PHYSICAL PROPERTY TO SUPPORT BIOTIC COMMUNITIES ABOVE AND BELOW GROUND.

TABLE A.3 PLANTING SOIL CHARACTERISTICS. A table with columns for PARAMETER and VALUE. Parameters include PH RANGE, ORGANIC MATTER, MAGNESIUM, PHOSPHORUS (PHOSPHATE - P205), POTASSIUM (POTASH - TK20), SOLUBLE SALTS, CLAY, SILT, and SAND.

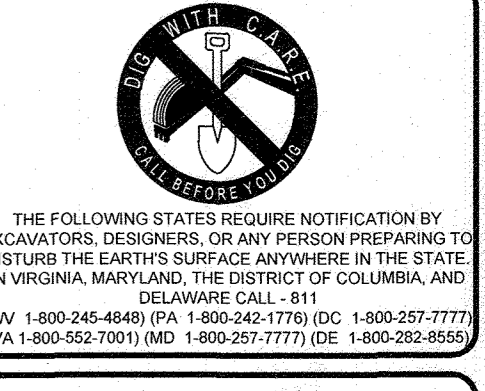
MULCH LAYER THE MULCH LAYER PLAYS AN IMPORTANT ROLE IN THE PERFORMANCE OF THE BIORETENTION SYSTEM. THE MULCH LAYER HELPS MAINTAIN SOIL MOISTURE AND AVOIDS SURFACE SEALING, WHICH REDUCES PERMEABILITY. MULCH HELPS PREVENT EROSION AND PROVIDES A MICROENVIRONMENT SUITABLE FOR SOIL BIOTA AT THE MULCH/SOIL INTERFACE. IT ALSO SERVES AS A PRE-TREATMENT LAYER, TRAPPING THE FINER SEDIMENTS, WHICH REMAIN SUSPENDED AFTER THE PRIMARY PRE-TREATMENT.

PLANTING GUIDANCE PLANT MATERIAL SELECTION SHOULD BE BASED ON THE GOAL OF SIMULATING A TERRESTRIAL FORESTED COMMUNITY OF NAT. SPECIES. BIORETENTION SIMULATES AN UPLAND-SPECIES ECOSYSTEM. THE COMMUNITY SHOULD BE DOMINATED BY TREES, BUT CAN STILL TOLERATE OCCASIONAL INUNDATION BY WATER. THE OUTER EDGE IS THE HIGHEST ELEVATION AND GENERALLY SUPPORTS PLANTS ADAPTED TO DRYER CONDITIONS. A SAMPLE OF APPROPRIATE PLANT MATERIALS FOR BIORETENTION FACILITIES ARE INCLUDED IN TABLE A4. THE LAYOUT OF PLANT MATERIAL SHOULD BE FLEXIBLE, BUT SHOULD FOLLOW THE GENERAL PRINCIPLES DESCRIBED IN TABLE A5. THE OBJECTIVE IS TO HAVE A SYSTEM, WHICH RESEMBLES A RANDOM, AND NATURAL PLANT LAYOUT, WHILE MAINTAINING OPTIMAL CONDITIONS FOR PLANT ESTABLISHMENT AND GROWTH. FOR A MORE EXTENSIVE BIORETENTION PLAN, CONSULT ETAB, 1993 OR CLAYTON AND SCHUELER, 1993.

THE PROPER SELECTION AND INSTALLATION OF PLANT MATERIALS IS KEY TO A SUCCESSFUL SYSTEM. THERE ARE ESSENTIALLY THREE ZONES WITHIN A BIORETENTION FACILITY (FIGURE A5). THE LOWEST ELEVATION SUPPORTS PLANT SPECIES ADAPTED TO STANDING AND FLUCTUATING WATER LEVELS. THE MIDDLE ELEVATION SUPPORTS PLANTS THAT LIKE DRIER SOIL CONDITIONS, BUT CAN STILL TOLERATE OCCASIONAL INUNDATION BY WATER. THE OUTER EDGE IS THE HIGHEST ELEVATION AND GENERALLY SUPPORTS PLANTS ADAPTED TO DRYER CONDITIONS. A SAMPLE OF APPROPRIATE PLANT MATERIALS FOR BIORETENTION FACILITIES ARE INCLUDED IN TABLE A4. THE LAYOUT OF PLANT MATERIAL SHOULD BE FLEXIBLE, BUT SHOULD FOLLOW THE GENERAL PRINCIPLES DESCRIBED IN TABLE A5. THE OBJECTIVE IS TO HAVE A SYSTEM, WHICH RESEMBLES A RANDOM, AND NATURAL PLANT LAYOUT, WHILE MAINTAINING OPTIMAL CONDITIONS FOR PLANT ESTABLISHMENT AND GROWTH. FOR A MORE EXTENSIVE BIORETENTION PLAN, CONSULT ETAB, 1993 OR CLAYTON AND SCHUELER, 1993.

BOHLER ENGINEERING logo and contact information for various offices: BALTIMORE, MD; BOSTON, MA; CHARLOTTE, NC; COLUMBIA, MD; FORT LAUDERDALE, FL; GREENSBORO, NC; HARTFORD, CT; NEW YORK, NY; PHILADELPHIA, PA; RICHMOND, VA; WASHINGTON, DC.

REVISIONS table with columns for REV, DATE, COMMENT, and BY. Shows two revisions dated 9/4/19 and 9/9/19.



NOT APPROVED FOR CONSTRUCTION PROJECT No. MD162008, DRAWN BY: AVG, CHECKED BY: AR, DATE: 11/8/17, SCALE: AS SHOWN, CAD I.D.: SD4

FINAL PLAN FOR OAK HILL SUBDIVISION (RE-SUBDIVISION OF LOT 16). LOCATION OF SITE: 9692 OAK HILL DRIVE, ELLICOTT CITY, MD. MAP 30, GRID 3, PARCELS 368 (LOT 16) & 321. 2ND ELEC. DISTRICT, ZONED: R-20, HOWARD COUNTY.

BOHLER ENGINEERING logo and address: 901 DULANEY VALLEY ROAD, SUITE 801, TOWSON, MARYLAND 21284. Phone: (410) 821-7900. Fax: (410) 821-7987. MD@BohlerEng.com

B.R. ROWE PROFESSIONAL ENGINEER seal for B.R. Rowe, State of Maryland, License No. 40882, dated 9/11/2019.

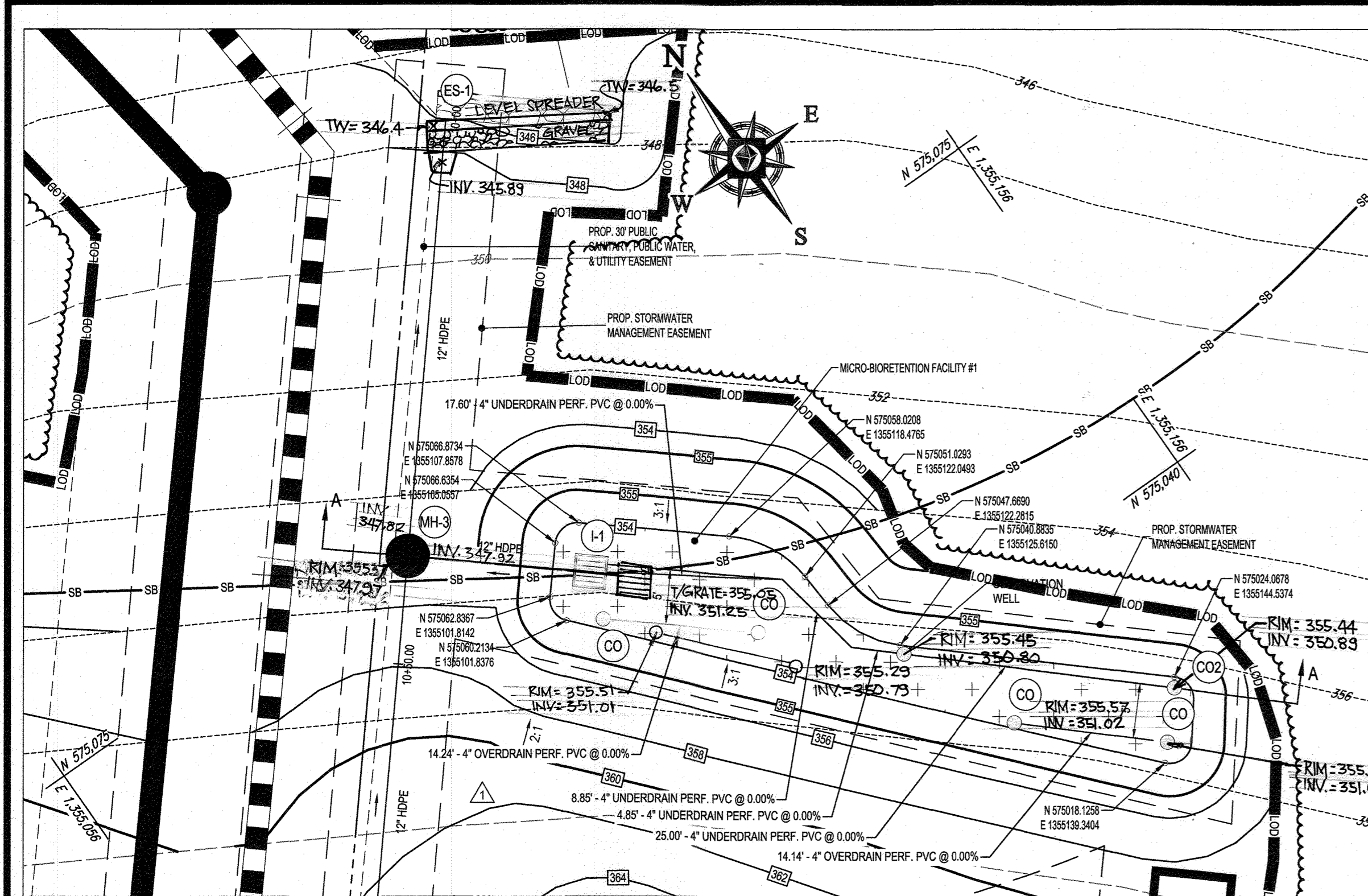
REPLANTING SCHEDULE table with columns for AREA #1, AREA #2, QUANTITY, SPECIES, SIZE, SPACING, TOTAL PLANTINGS. Includes a grid diagram for the replanting area.

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE, COLUMBIA, MD 21044. CONTACT: BRIAN GOLDSTEIN, PHONE: 301.875.8460. SUBDIVISION NAME: OAK HILL SUBDIVISION, SECTION/AREA: N/A, DEED #: 00457/00477 & 16883/00498. TAX MAP: 30, GRID: 3, ZONED: R-20, PARCELS: 368 (LOT 16) & 321. 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND. PREVIOUS FILE No.: F-78-191, WP-17-014, WP-17-112.

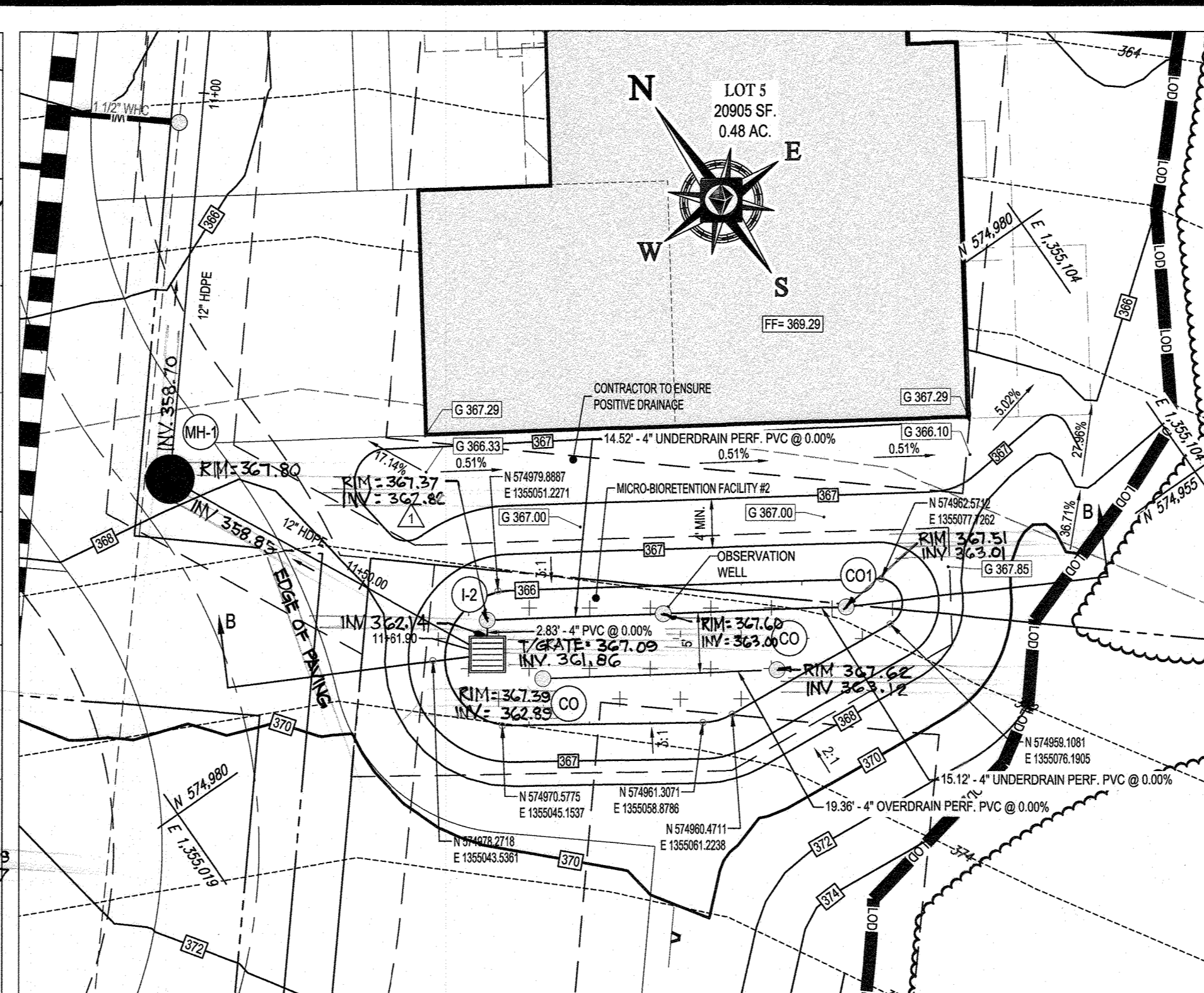
ENGINEER'S CERTIFICATE, DEVELOPER'S CERTIFICATE, and APPROVED: DEPARTMENT OF PUBLIC WORKS, DEPARTMENT OF PLANNING AND ZONING. Includes signatures and dates for approval.

AS-BUILT CERTIFICATE: I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS. Includes signature and date.

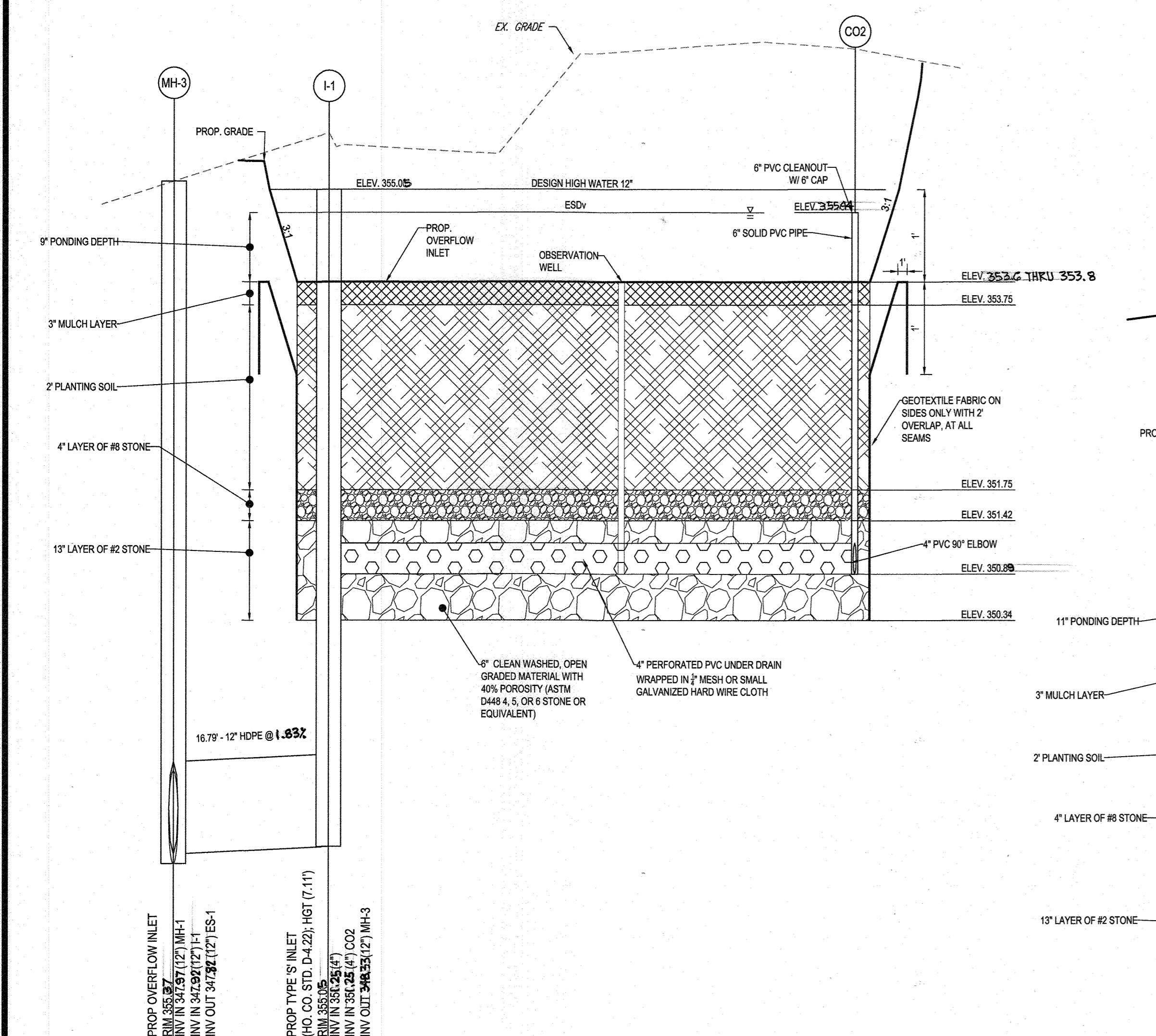
STORMWATER MANAGEMENT NOTES AND LANDSCAPE DETAILS. SHEET NUMBER: 6 of 18.



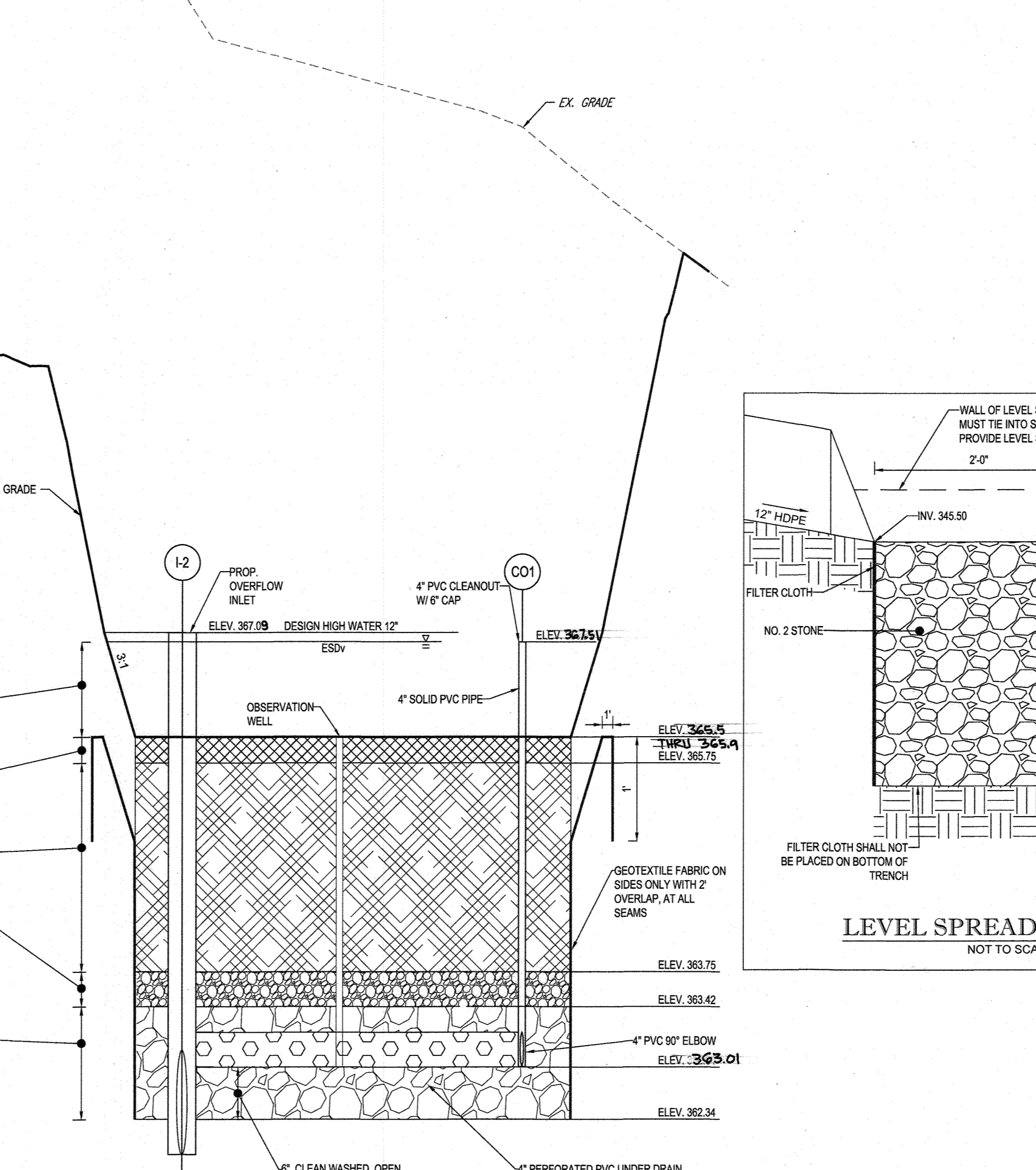
MICRO-BIORETENTION (M-6) FACILITY #1 PLAN VIEW
SCALE: 1"=10'



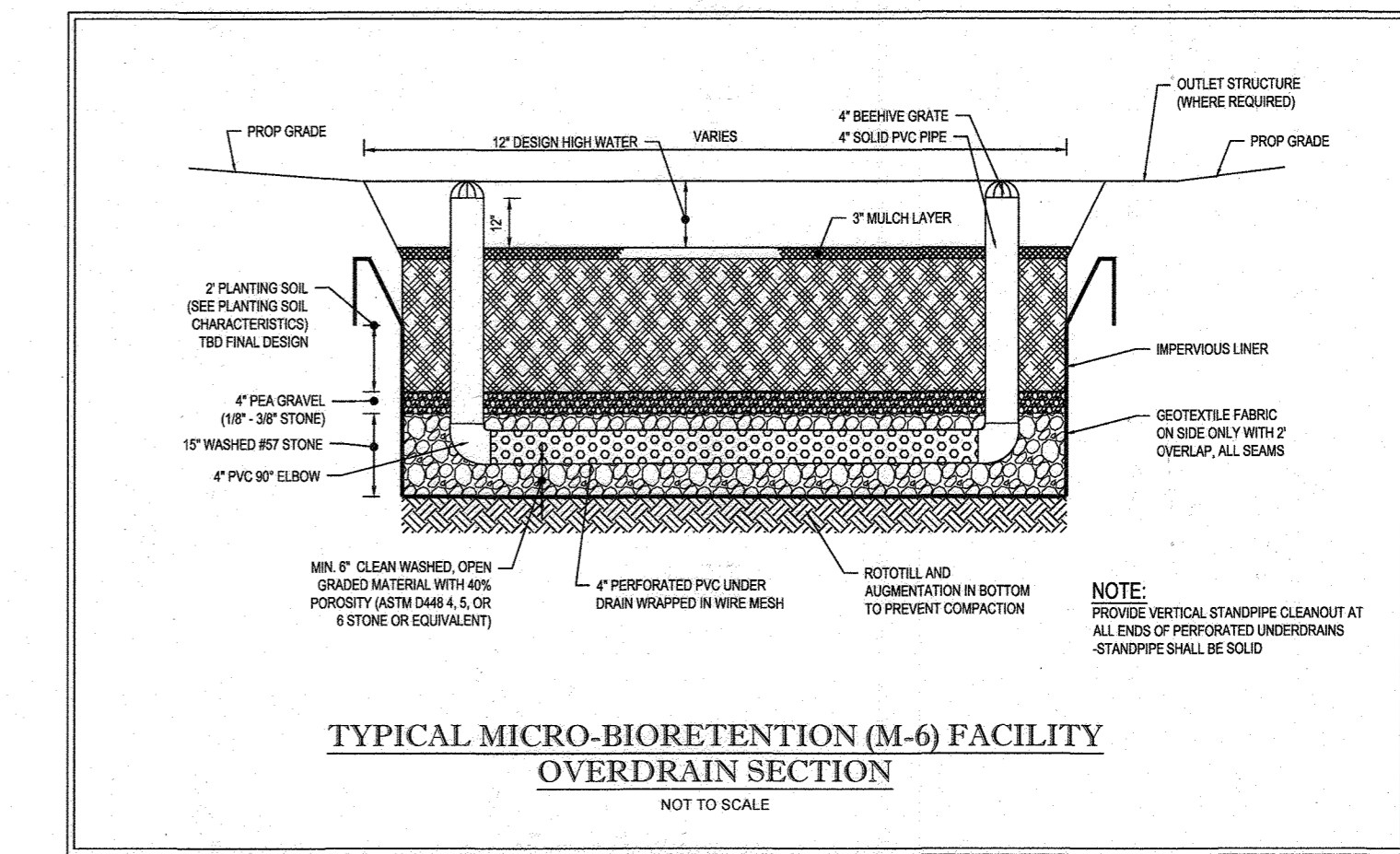
MICRO-BIORETENTION (M-6) FACILITY #2 PLAN VIEW
SCALE: 1"=10'



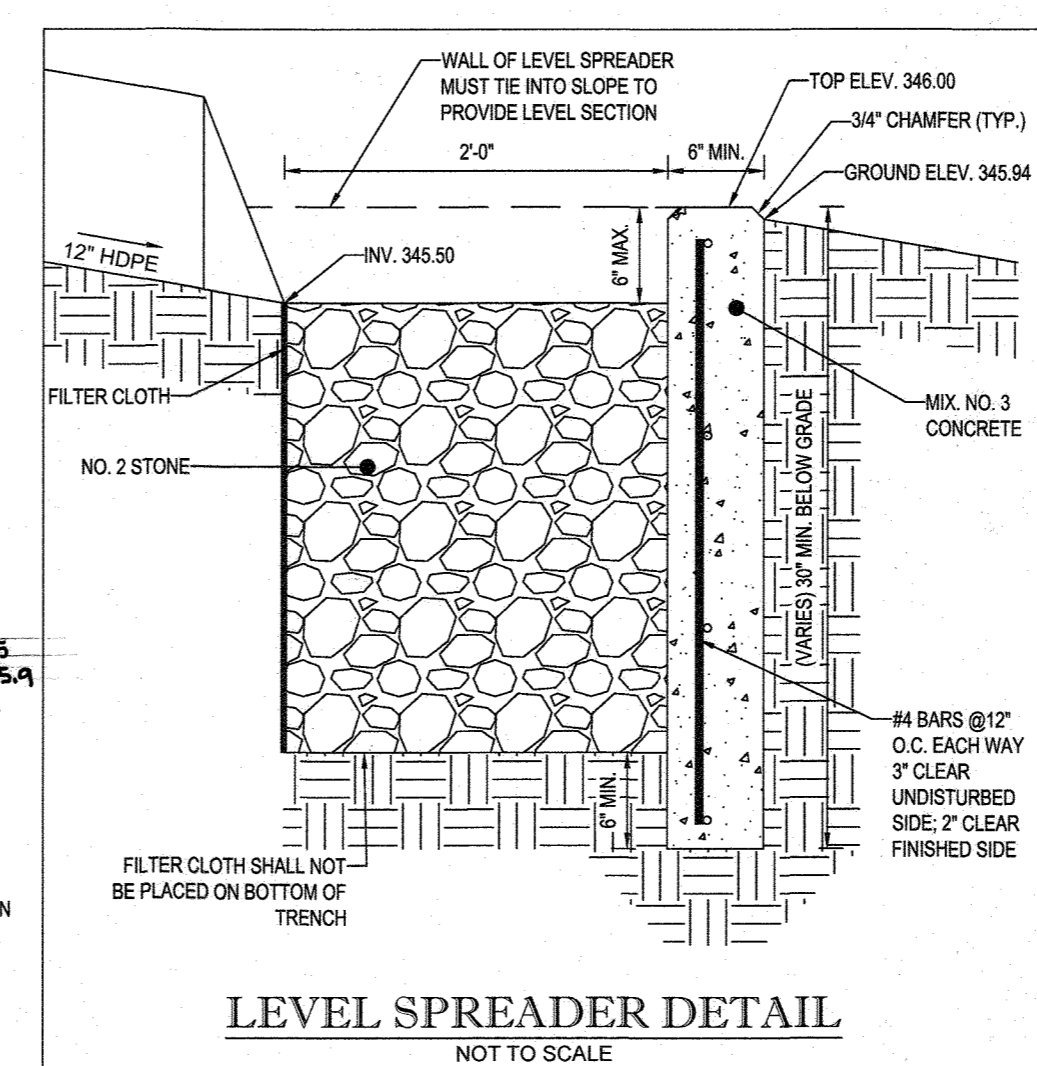
MICRO-BIORETENTION (M-6) FACILITY #1
SECTION B-B
SCALE: 1"=10' HORIZ
1"=1' VERT.



MICRO-BIORETENTION (M-6) FACILITY #2
SECTION A-A
SCALE: 1"=10' HORIZ
1"=1' VERT.



TYPICAL MICRO-BIORETENTION (M-6) FACILITY
OVERDRAIN SECTION
NOT TO SCALE



LEVEL SPREADER DETAIL
NOT TO SCALE

Table B.4. Material Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration.

Material	Specification	Size	Notes
Plantings	See Appendix A, Table A.4	n/a	plantings are site-specific
Fluffing soil	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (50%) & compost (50%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)	n/a	aged 6 months, minimum; no pine or wood chips
Mulch	shredded hardwood	n/a	
Pea gravel diaphragm	pea gravel: ASTM-D-448	No. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	conformal stone: washed cobble	stone: 2" to 5"	
Geotextile	n/a	n/a	PT Type 1 nonwoven
Gravel (underdrains and infiltration berm)	AASHTO M-43	No. 57 OR NO. 6 AGRIGGREGATE (1/8" TO 3/4")	
Underdrain piping	F 75e, Type PR 28 or AASHTO M-278	4" or 6" rigid schedule-40 PVC or SDR35	Slotted or perforated pipe; 3/8" pipe @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipe; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized landscape cloth.
Placed in place concrete (if required)	MSHA Mix No. 3; f'c = 3500 psi @ 28 days; normal weight; 40-60% sand; 100% cement; meet ASTM-615-00	n/a	on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (see in-place or pre-cast) not using previously approved. Site or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACT Code 89.09; vertical loading (10-10 or 10-20), allowable horizontal loading (based on soil processes), and analysis of potential cracking.
Sand	AASHTO M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Durbane and Graystone (AASHTO) #10 are not acceptable. No calcium carbide or dolomite used unless otherwise approved. No "rock dust" can be used for sand.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE: 4/5/2019
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 4-9-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 3-13-19

REVISOR ROAD CONSTRUCTION PLAN
 PURPOSE: TO ADJUST GRADING BASED ON SELECTION OF HOMEOWNER
 SUBDIVISION NAME: OAK HILL SUBDIVISION SECTION/AREA: N/A DEED #: 00457 / 00477 & 16883 / 00498
 TAX MAP: 30 GRID: 3 ZONED: R-20 PARCELS: 368 (LOT 16) & 321
 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
 OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE COLUMBIA, MD 21044 CONTACT: BRIAN GOLDSTEIN PHONE: 301.675.8460
 PREVIOUS FILE NO.: F-78-191, WP-17-014, WP-17-112
 PROFESSIONAL CERTIFICATION
 BRANDON R. ROWE, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40808, EXPIRATION DATE: 7/31/2019

BOHLER ENGINEERING

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

RALEIGH, NC
 LEHIGH VALLEY, PA
 WASHINGTON, DC
 BOXTON, MA
 NEW YORK, NY
 PHILADELPHIA, PA
 BALTIMORE, MD
 REEBOTH BEACH, DE
 TAMPA, FL
 SOUTH FLORIDA
 NORTHERN VIRGINIA

REVISIONS

REV	DATE	COMMENT	BY
1	1/29/19	REVISED PER GRADING UPDATES	AVG
2	6/9/23	AS PER AS-BUILT BY COLBERT MATZ ROSEN FELT	AVG

BOHLER ENGINEERING

THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO EXCURE THE EARTH'S SURFACE ANYWHERE IN THE STATE IN VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE CALL 1-811 (WV 1-800-245-4848) (PA 1-800-242-1776) (DC 1-800-257-7777) (VA 1-800-552-7000) (MD 1-800-257-7777) (DE 1-800-362-8000)

PROJECT No: MD162006
 DRAWN BY: JR
 DATE: 7/23/18
 SCALE: AS SHOWN
 CAD ID: SW6

PROJECT: **REVISED ROAD CONSTRUCTION PLAN FOR OAK HILL SUBDIVISION (RE-SUBDIVISION OF LOT 16)**

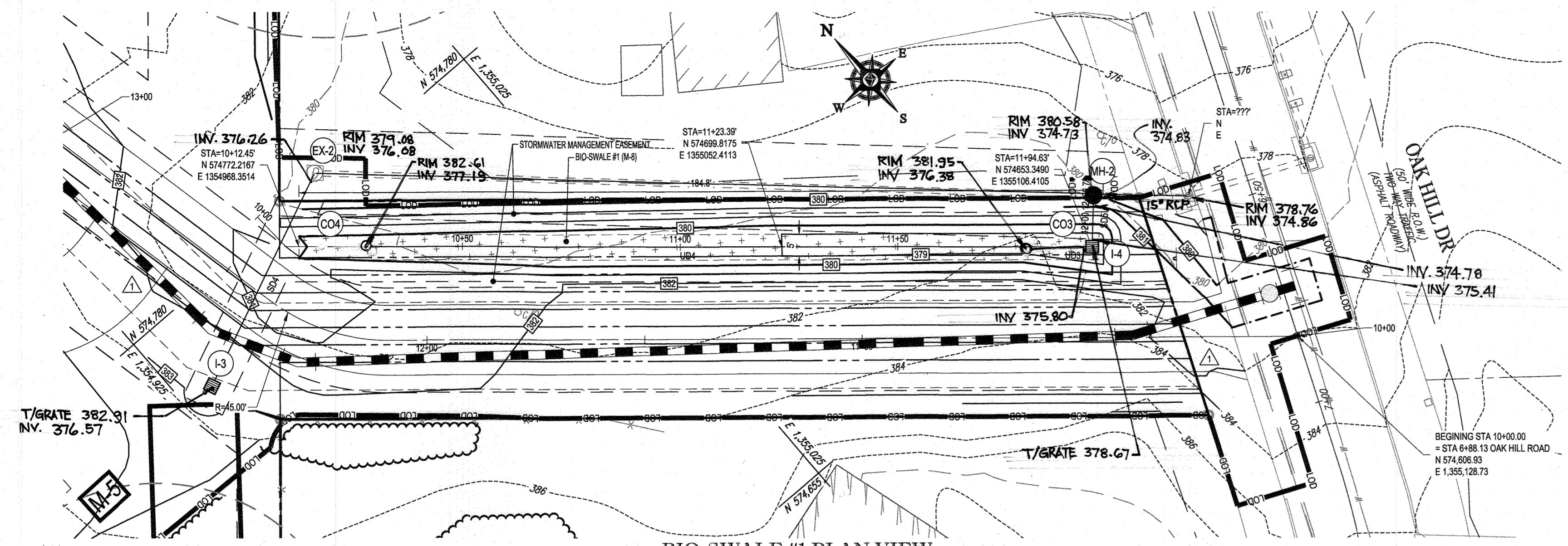
LOCATION OF SITE
 9692 OAK HILL DRIVE
 ELLICOTT CITY, MD
 MAP 30, GRID 3, PARCELS 368 (LOT 16) & 321
 2ND ELEC. DISTRICT, ZONED R-20
 HOWARD COUNTY

BOHLER ENGINEERING

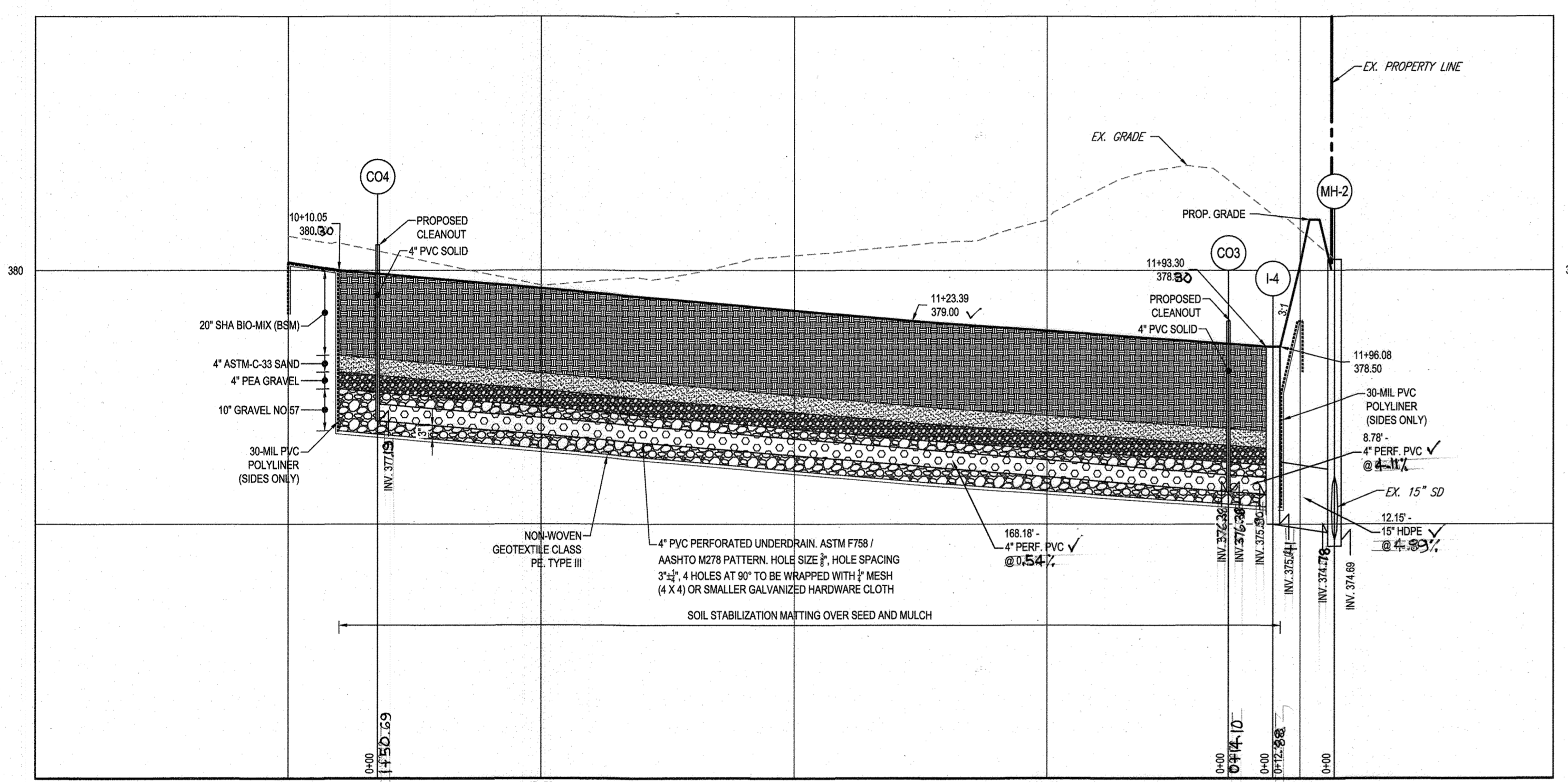
901 DULANEY VALLEY ROAD, SUITE 801 TOWSON, MARYLAND 21204
 Phone: (410) 821-7900
 Fax: (410) 821-7987
 MD@BohlerEng.com

B.R. ROWE
 PROFESSIONAL ENGINEER
 APR 12 2022
 MAY 25 2022
 AS-BUILT SHEET 1 OF 3

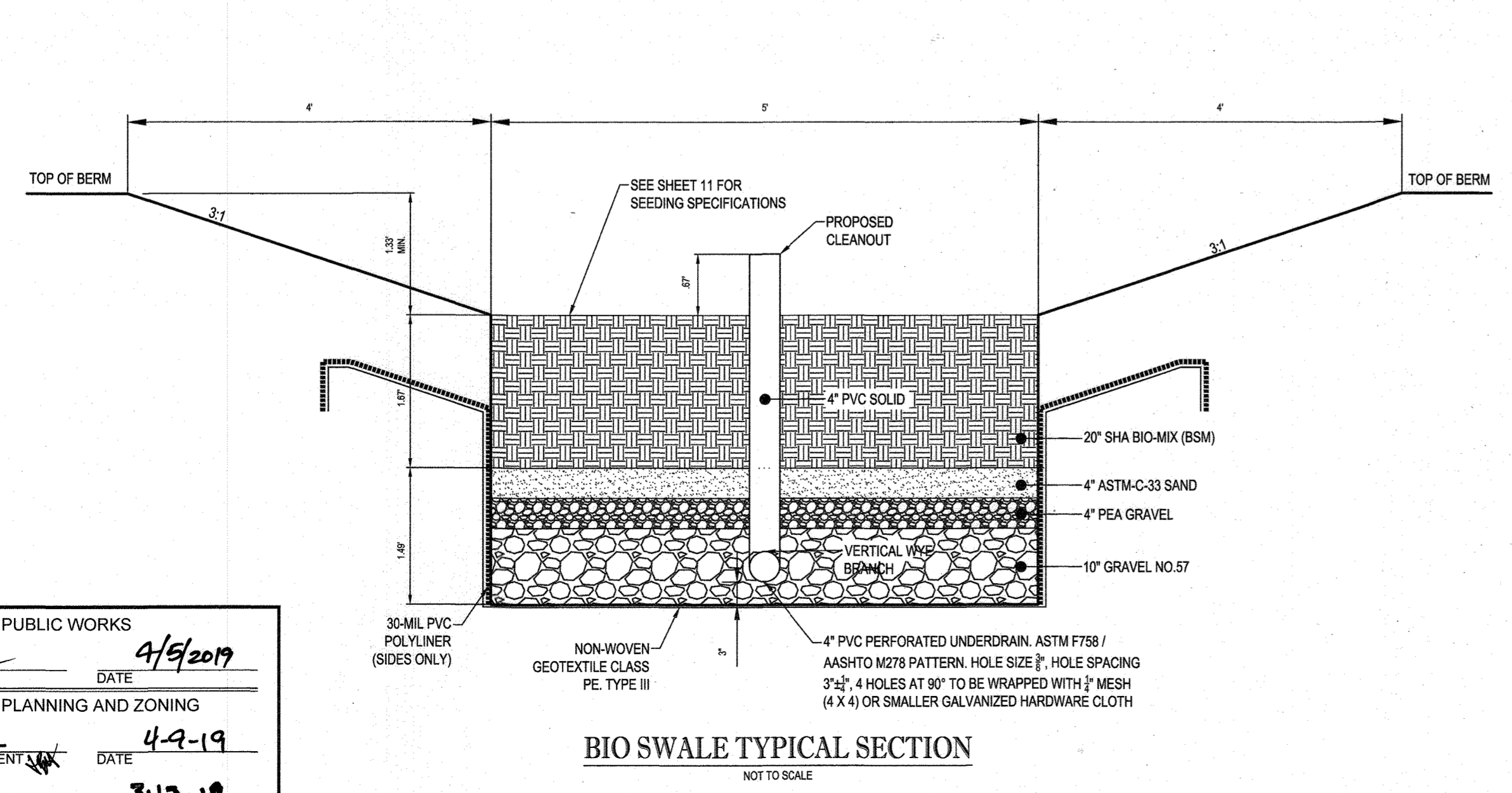
SHEET TITLE: **STORMWATER MANAGEMENT DETAILS**
 SHEET NUMBER: **7 of 18**



BIO-SWALE #1 PLAN VIEW
SCALE: 1"=20'



BIO-SWALE #1 PROFILE
SCALE: 1"=20' HORIZ.
1"=2' VERT.

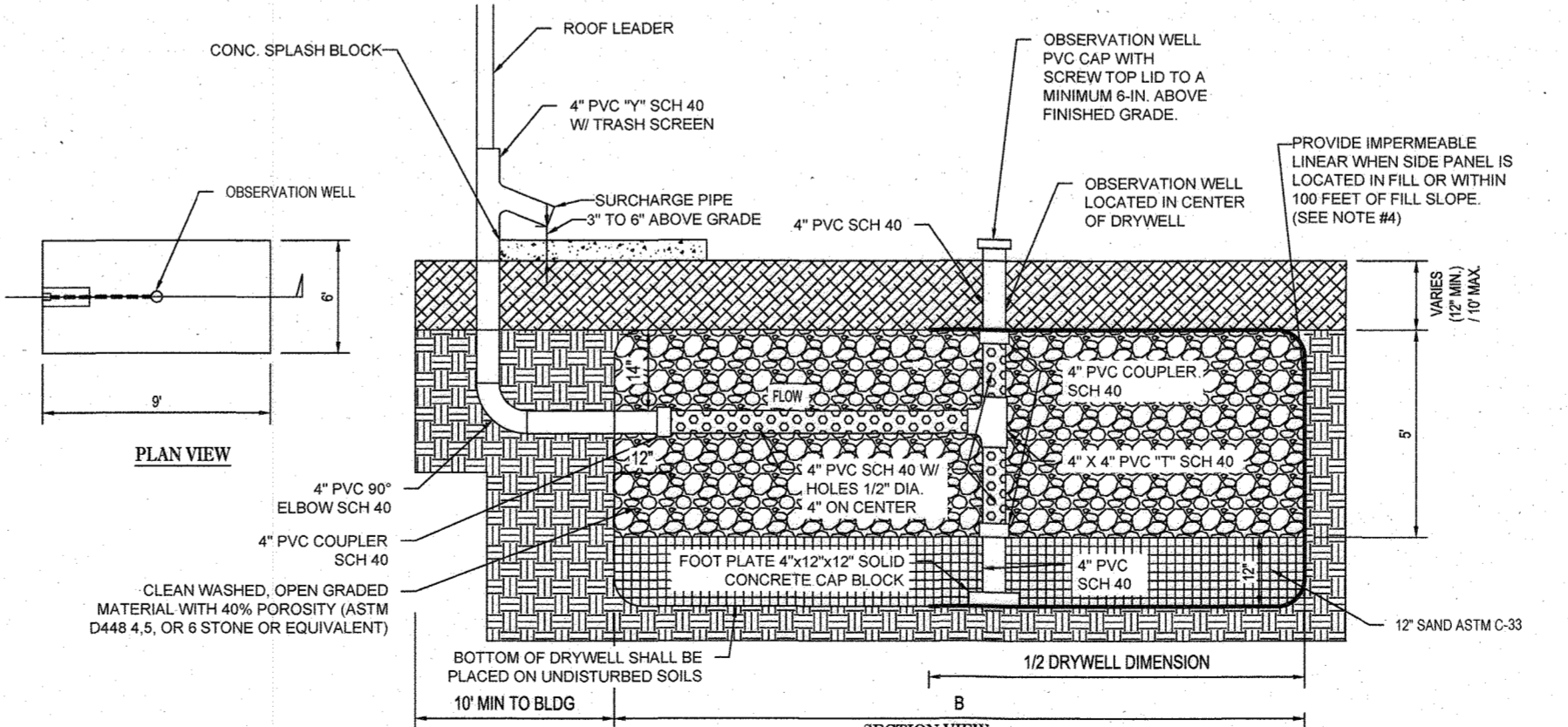


BIO SWALE TYPICAL SECTION
NOT TO SCALE

DRYWELL (M-5) ELEVATION CHART

DRYWELL #	LOT #	DIMENSIONS	GROUND ELEV.	BOTTOM ELEV.
1	1	9'L X 5'W X 5'D	383.68	378.68
2	1	9'L X 5'W X 5'D	383.98	378.98
3	1	9'L X 5'W X 5'D	383.11	378.11
4	2	9'L X 5'W X 5'D	384.01	379.01
5	2	9'L X 5'W X 5'D	382.30	377.30
6	2	9'L X 5'W X 5'D	380.40	375.40
7	3	9'L X 5'W X 5'D	371.35	366.35
8	3	9'L X 5'W X 5'D	372.32	367.32
9	3	9'L X 5'W X 5'D	365.34	360.34
10	4	9'L X 5'W X 5'D	362.36	367.36
11	4	9'L X 5'W X 5'D	356.56	351.56
12	4	9'L X 5'W X 5'D	365.45	360.45
13	5	9'L X 5'W X 5'D	358.91	353.91
14	5	9'L X 5'W X 5'D	362.17	357.17
15	5	9'L X 5'W X 5'D	363.94	358.94
16	6	9'L X 5'W X 5'D	381.00	376.00
17	6	9'L X 5'W X 5'D	377.29	372.29
18	6	9'L X 5'W X 5'D	376.78	371.78

AS-BUILT
APRIL 12 AND MAY 25, 2022
AS-BUILT SHEET 2 OF 3



STANDARD DRYWELL SECTION
NOT TO SCALE

- NOTES:**
- FROM THE DOWNSPOUT TO THE DRYWELL THE DRAIN PIPE MUST BE AT LEAST 6" BELOW GRADE.
 - NONWOVEN GEOTEXTILE FABRIC TO BE INSTALLED ON TOP AND SIDES ONLY. THESE GEOTEXTILES ARE AVAILABLE IN FINKSBURG @ ESSG DISTRIBUTORS 2601 EMORY RD. BLDG 8. 886-744-9001. ANY EQUIVALENT GEOTEXTILE IS ACCEPTABLE.
 - DRYWELL BOTTOM TO BE INSTALLED AS LEVEL AS POSSIBLE AND IN UNDISTURBED SOILS.
 - WHEN TOP OF DRYWELL IS PLACED IN FILL WITHIN 100' OF SLOPES 15% OR GREATER, AN IMPERMEABLE LINER SHALL BE PROVIDED ON THE STEEP SLOPE SIDE OF THE FACILITY AS SHOWN ABOVE.
 - ALL ROOF DRAINS LEADING TO A DRYWELL FACILITY SHALL HAVE A GUTTER DRAIN FILTER.
 - CONSTRUCTION OF A DRYWELL SHALL BE PERFORMED WITH A LIGHTWEIGHT WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION.

DRYWELL CONSTRUCTION SPECIFICATIONS

- REGULAR INSPECTIONS SHALL BE DURING THE FOLLOWING STAGES OF CONSTRUCTION:
- DURING EXCAVATION TO SUBGRADE
 - DURING PLACEMENT OF BACKFILL AND PERFORATED INLET PIPE AND OBSERVATION WELL
 - DURING PLACEMENT OF GEOTEXTILES AND ALL FILTER MEDIA
 - DURING CONSTRUCTION OF THE APPURTENANT CONVEYANCE
 - UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

NOTES:

- FROM THE DOWNSPOUT TO THE DRYWELL THE DRAIN PIPE MUST BE AT LEAST 6" BELOW GRADE.
- NONWOVEN GEOTEXTILE FABRIC TO BE INSTALLED ON TOP AND SIDES ONLY. THESE GEOTEXTILES ARE AVAILABLE IN FINKSBURG @ ESSG DISTRIBUTORS 2601 EMORY RD. BLDG 8. 886-744-9001. ANY EQUIVALENT GEOTEXTILE IS ACCEPTABLE.
- DRYWELL BOTTOM TO BE INSTALLED AS LEVEL AS POSSIBLE AND IN UNDISTURBED SOILS.
- WHEN TOP OF DRYWELL IS PLACED IN FILL WITHIN 100' OF SLOPES 15% OR GREATER, AN IMPERMEABLE LINER SHALL BE PROVIDED ON THE STEEP SLOPE SIDE OF THE FACILITY AS SHOWN ABOVE.
- ALL ROOF DRAINS LEADING TO A DRYWELL FACILITY SHALL HAVE A GUTTER DRAIN FILTER.
- CONSTRUCTION OF A DRYWELL SHALL BE PERFORMED WITH A LIGHTWEIGHT WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION.

STORMWATER MANAGEMENT NOTES

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL.

STORMWATER MANAGEMENT PRACTICES

LOT	ESD CODE	TREATMENT
1	M-5	(3) DRYWELLS
2	M-5	(3) DRYWELLS
3	M-5	(3) DRYWELLS
4	M-5	(3) DRYWELLS
5	M-5	(3) DRYWELLS
6	M-5	(3) DRYWELLS
ACCESS DRIVEWAY	M-8	BIO SWALE 1
ACCESS DRIVEWAY	M-6	MICRO-BIO 1
ACCESS DRIVEWAY	M-6	MICRO-BIO 2

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) AND BIO-SWALES (M-8)

- 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 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 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.

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

- THE MONITORING WELLS AND STRUCTURES SHALL BE INSPECTED ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM EVENT.
- WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS SHALL BE RECORDED OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
- A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN THE 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.

REVISED ROAD CONSTRUCTION PLAN

PURPOSE: TO ADJUST GRADING BASED ON SELECTION OF HOME BUILDER

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE, COLUMBIA, MD 21044
CONTACT: BRIAN GOLDSTEIN
PHONE: 301.875.8490

TAX MAP: 30 GRID: 3 ZONED: R-20
PARCELS: 368 (LOT 16) & 321
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

PROFESSIONAL CERTIFICATION
BRANDON R. ROWE, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40808, EXPIRATION DATE: 7/23/19

BOHLER ENGINEERING

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING PROGRAM MANAGEMENT LANDSCAPE ARCHITECTURE
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PHILADELPHIA, PA

ATLANTA, GA
REHOBOTH BEACH, DE
BALTIMORE, MD
NORTH CAROLINA
NORTH VIRGINIA
CENTRAL VIRGINIA

REVISIONS

REV	DATE	COMMENT	BY
1	1/29/19	REVISED PER GRADING UPDATES	AVG
2	6/19/22	AS PER AS-BUILT BY COLBERT WATZ ROSENFELT	AVG

B.R. ROWE
PROFESSIONAL ENGINEER
LICENSE NO. 14603
EXPIRES 12/31/2022

PROJECT No: MD162005
DRAWN BY: JR
CHECKED BY: ASH
DATE: 7/23/18
SCALE: AS SHOWN
CAD I.D.: SW6

REVISED ROAD CONSTRUCTION PLAN
FOR
OAK HILL SUBDIVISION
(RE-SUBDIVISION OF LOT 16)

LOCATION OF SITE
9692 OAK HILL DRIVE
ELLICOTT CITY, MD
MAP 30, GRID 3, PARCELS 368
(LOT 16) & 321
2ND ELEC. DISTRICT, ZONED: R-20
HOWARD COUNTY

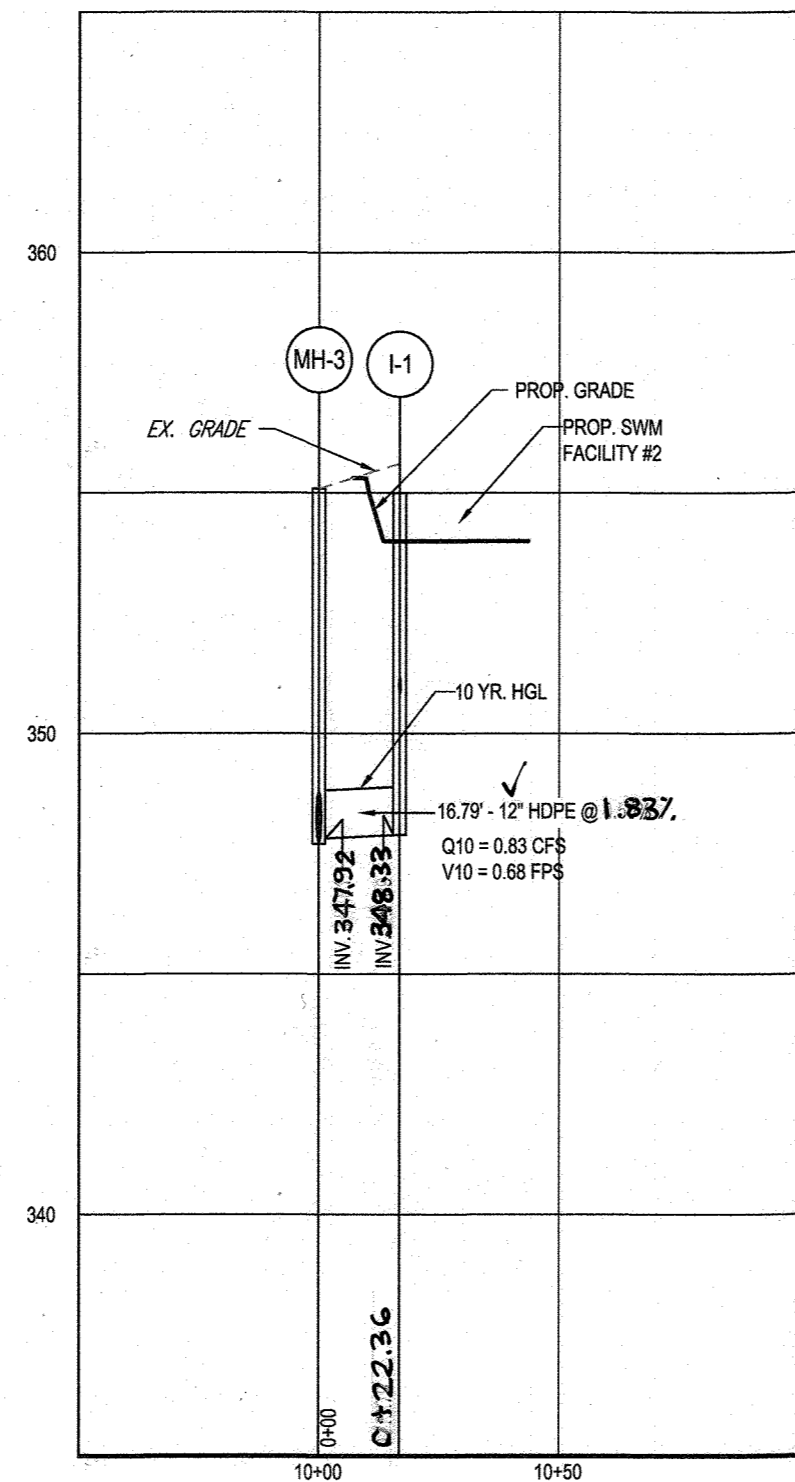
BOHLER ENGINEERING

901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

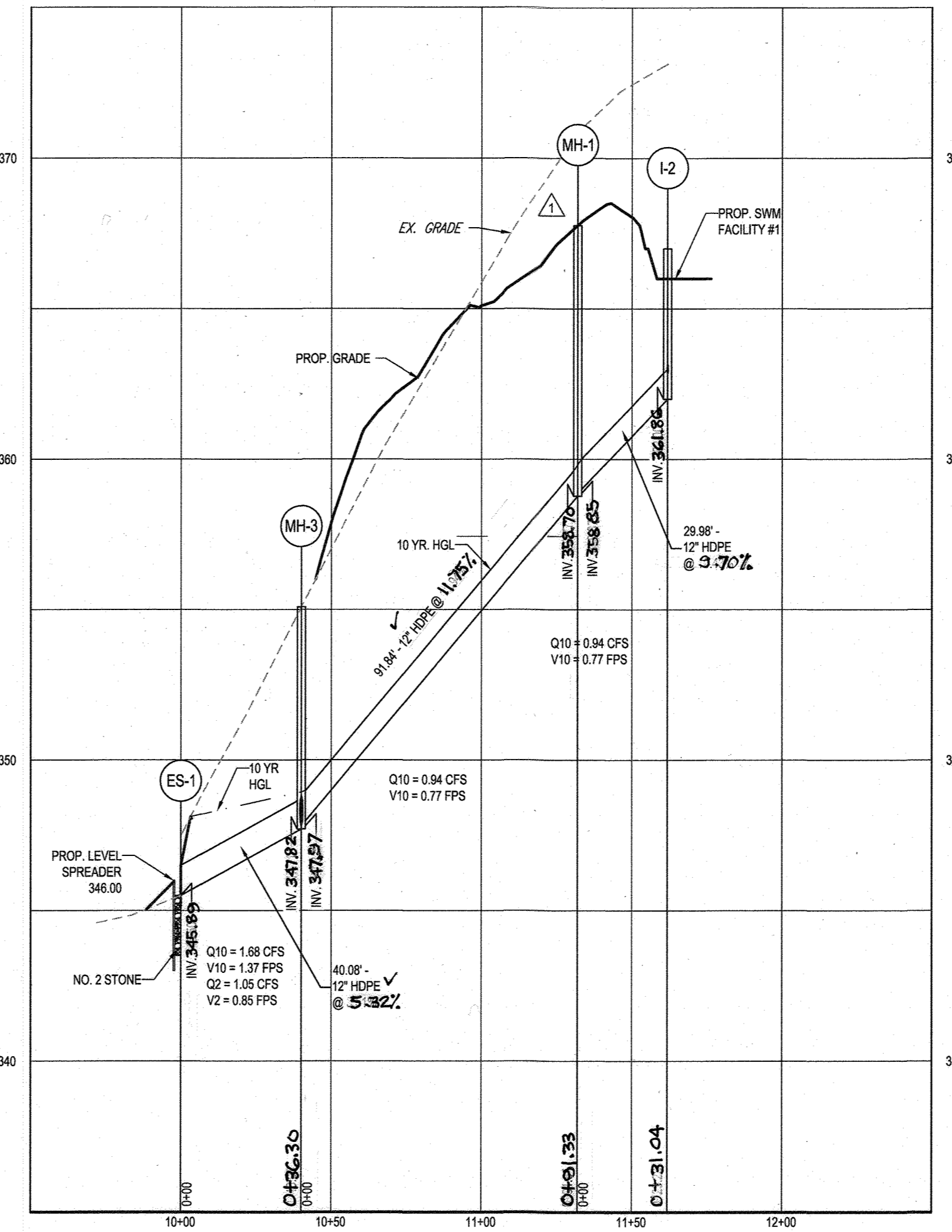
B.R. ROWE
PROFESSIONAL ENGINEER
LICENSE NO. 14603
EXPIRES 12/31/2022

SHEET TITLE:
STORMWATER MANAGEMENT DETAILS

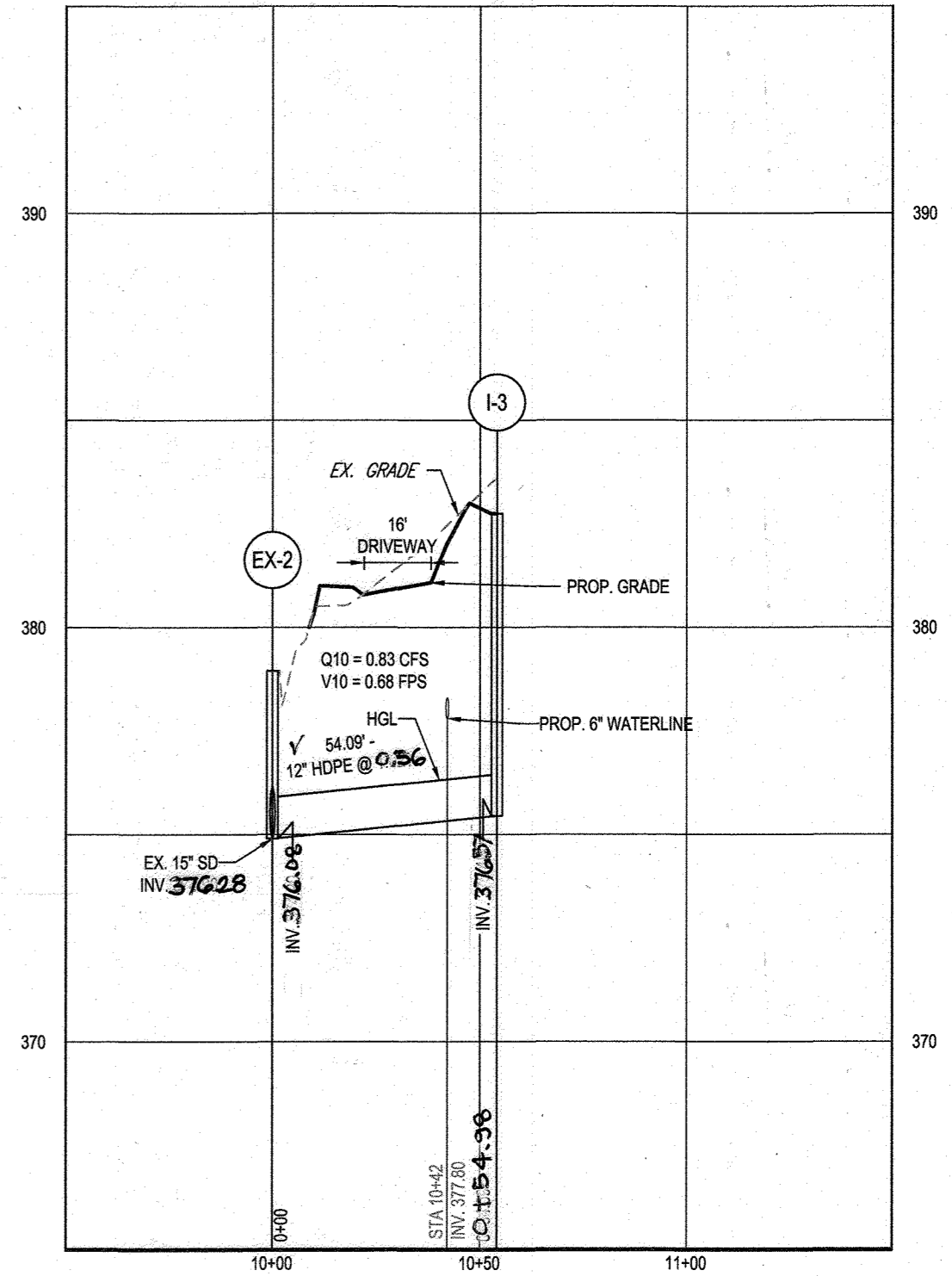
SHEET NUMBER:
8 of 18



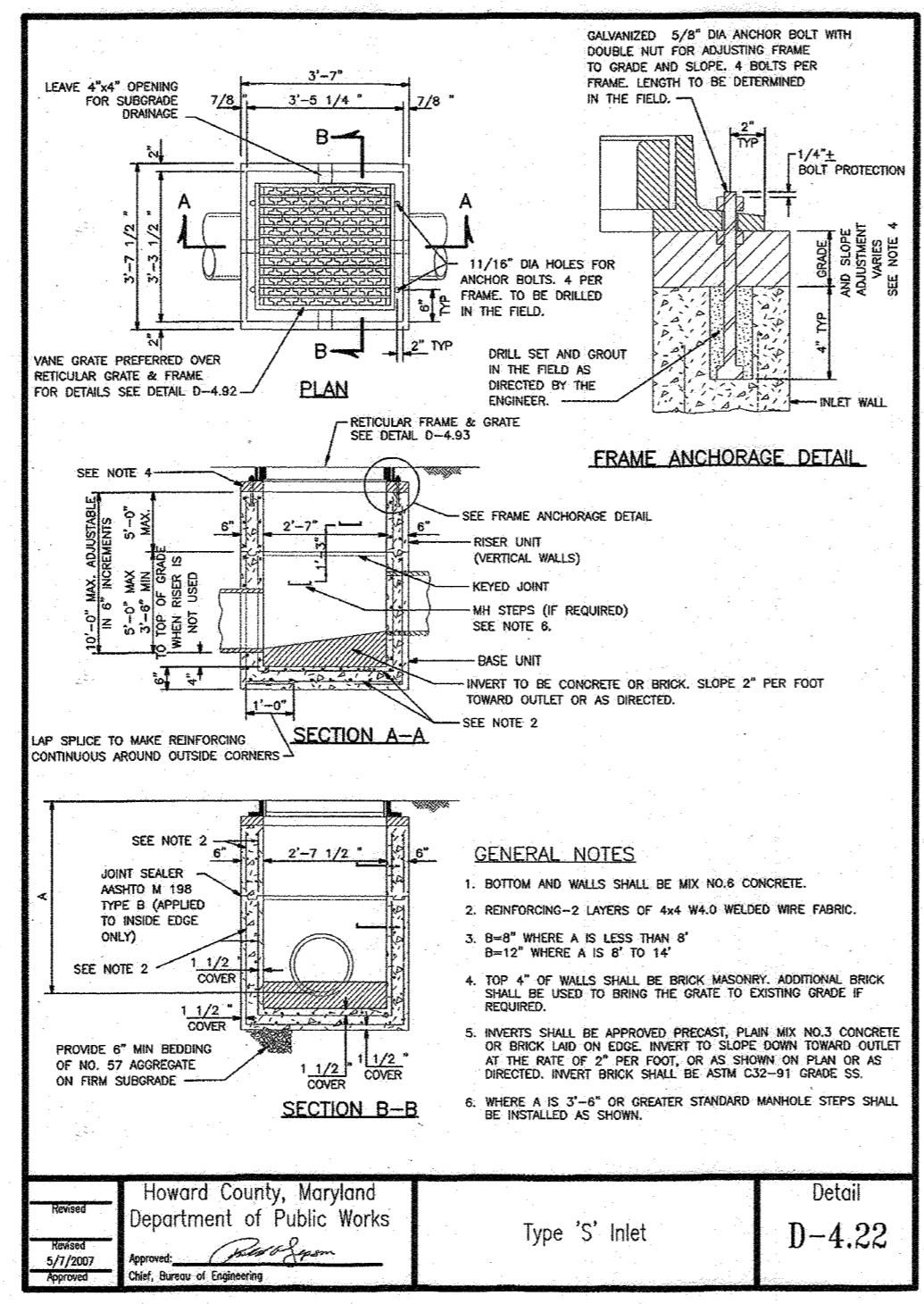
PROPOSED STORM DRAIN PROFILE - STM MH-1 TO STM I-1
SCALE: 1"=10' HORIZONTAL
1"=1' VERTICAL



PROPOSED STORM DRAIN PROFILE - STM ES-1 TO STM I-2
SCALE: 1"=10' HORIZONTAL
1"=1' VERTICAL



PROPOSED STORM DRAIN PROFILE - STM EX-2 TO STM I-3
SCALE: 1"=10' HORIZONTAL
1"=1' VERTICAL



NAME	TYPE	RIM ELEV. (FT.)	INVERTS
CO1	CLEANOUT	367.51	INV IN = 363.01 ✓
CO2	CLEANOUT	355.44	INV OUT = 350.94 ✓
CO3	CLEANOUT	381.95	INV IN = 377.45 ✓
CO4	CLEANOUT	382.61	INV OUT = 378.11 ✓
ES-1	LEVEL SPREADER	344.45	INV IN = 345.91 (12") ✓
EX-2	EX. INLET	378.08	INV IN = 374.58 (12") ✓ INV OUT = 376.08 (15") ✓
I-1	TYPE 'S' INLET (HO. CO. STD. D-4.22)	355.05	INV IN = 351.55 (4") ✓ INV OUT = 348.05 (12") ✓
I-2	TYPE 'S' INLET (HO. CO. STD. D-4.22)	367.09	INV IN = 363.59 (12") ✓ INV OUT = 362.14 (15") ✓
I-3	TYPE 'S' INLET (HO. CO. STD. D-4.22)	382.91	INV IN = 379.41 (12") ✓ INV OUT = 377.91 (15") ✓
I-4	TYPE 'S' INLET (HO. CO. STD. D-4.22)	378.67	INV IN = 375.17 (12") ✓ INV OUT = 373.67 (15") ✓
MH-1	PRECAST MANHOLE (HO. CO. STD. G-5.11)	367.90	INV IN = 364.40 (12") ✓ INV OUT = 362.90 (15") ✓
MH-2	PRECAST MANHOLE (HO. CO. STD. G-5.11)	380.58	INV IN = 377.08 (12") ✓ INV OUT = 375.58 (15") ✓
MH-3	PRECAST MANHOLE (HO. CO. STD. G-5.11)	355.37	INV IN = 351.87 (12") ✓ INV OUT = 349.37 (15") ✓

FROM	PIPE NO.	LOWER INVERT	LENGTH	SLOPE (%)	SIZE (in.)	MATERIAL	UPPER INVERT	TO
ES-1	SD1	344.89	36.30	5.32%	12"	HDPE	347.82	MH-3
MH-3	SD2	347.97	91.33	11.75%	12"	HDPE	358.70	MH-1
MH-1	SD3	358.85	31.04	8.70%	12"	HDPE	361.86	I-2
EX-2	SD4	374.08	54.98	0.56%	12"	HDPE	376.57	I-3
MH-2	SD5	374.78	12.68	4.89%	15"	HDPE	375.41	I-4
MH-3	SD6	347.82	22.36	1.83%	12"	HDPE	348.33	I-1
I-2	UD1	362.14	33.11	2.62%	4"	PVC	363.01	CO1
I-1	UD2	351.25	50.61	-0.71%	4"	PVC	350.89	CO2
I-4	UD3	375.30	14.11	4.11%	4"	PVC	376.38	CO3
CO3	UD4	376.38	150.71	0.51%	4"	PVC	377.13	CO4

AS-BUILT
APRIL 12 AND MAY 25, 2022
AS-BUILT SHEET 3 OF 3

THE HORIZONTAL LOCATIONS, ELEVATIONS AND PERCENT OF FIVE SLOPES SHOWN HEREON IN RED WERE DERIVED FROM A FIELD AS-BUILT SURVEY PERFORMED BY COLBERT MATZ ROSENFELT ON APRIL 12 AND MAY 25, 2022.

REVISED ROAD CONSTRUCTION PLAN
PURPOSE: TO ADJUST GRADING BASED ON SELECTION OF HOMEOWNER

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE
COLUMBIA, MD 21044
CONTACT: BRIAN GOLDSTEIN
PHONE: 301.875.8400

SUBDIVISION NAME: OAK HILL SUBDIVISION
SECTION/AREA: N/A
DEED #: 00457 / 00477 & 18883 / 00498
TAX MAP: 30
GRID: 3
ZONED: R-20
PARCELS: 368 (LOT 16) & 321
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 48088, EXPIRATION DATE: 7/31/2019

APPROVED: DEPARTMENT OF PUBLIC WORKS
4/5/2019
CHIEF, BUREAU OF HIGHWAYS
APPROVED: DEPARTMENT OF PLANNING AND ZONING
4-9-19
CHIEF, DIVISION OF LAND DEVELOPMENT
3-13-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BOHLER ENGINEERING
SITE CIVIL AND CONSTRUCTION ENGINEERING
LAND SURVEYING PROGRAM MANAGEMENT LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN PERMITTING SERVICES TRANSPORTATION SERVICES
● BALTIMORE, MD ● BALTIMORE, MD ● BALTIMORE, MD ● BALTIMORE, MD ● BALTIMORE, MD
● BOSTON, MA ● BOSTON, MA ● BOSTON, MA ● BOSTON, MA ● BOSTON, MA
● NEW YORK, NY ● NEW YORK, NY ● NEW YORK, NY ● NEW YORK, NY ● NEW YORK, NY
● PHILADELPHIA, PA ● PHILADELPHIA, PA ● PHILADELPHIA, PA ● PHILADELPHIA, PA ● PHILADELPHIA, PA
● RALEIGH, NC ● RALEIGH, NC ● RALEIGH, NC ● RALEIGH, NC ● RALEIGH, NC
● TAMPA, FL ● TAMPA, FL ● TAMPA, FL ● TAMPA, FL ● TAMPA, FL
● ATLANTA, GA ● ATLANTA, GA ● ATLANTA, GA ● ATLANTA, GA ● ATLANTA, GA
● CHARLOTTE, NC ● CHARLOTTE, NC ● CHARLOTTE, NC ● CHARLOTTE, NC ● CHARLOTTE, NC
● FORT LAUDERDALE, FL ● FORT LAUDERDALE, FL ● FORT LAUDERDALE, FL ● FORT LAUDERDALE, FL ● FORT LAUDERDALE, FL
● JACKSONVILLE, FL ● JACKSONVILLE, FL ● JACKSONVILLE, FL ● JACKSONVILLE, FL ● JACKSONVILLE, FL
● NORTHERN VIRGINIA ● NORTHERN VIRGINIA ● NORTHERN VIRGINIA ● NORTHERN VIRGINIA ● NORTHERN VIRGINIA

REV	DATE	COMMENT	BY
1	1/29/19	REVISED PER GRADING UPDATES	AVG
2	4/9/22	AS-BUILT SURVEY UPDATES	AVG
3	4/9/22	AS-BUILT SURVEY UPDATES	AVG

B.R. ROWE
PROFESSIONAL ENGINEER
4/19

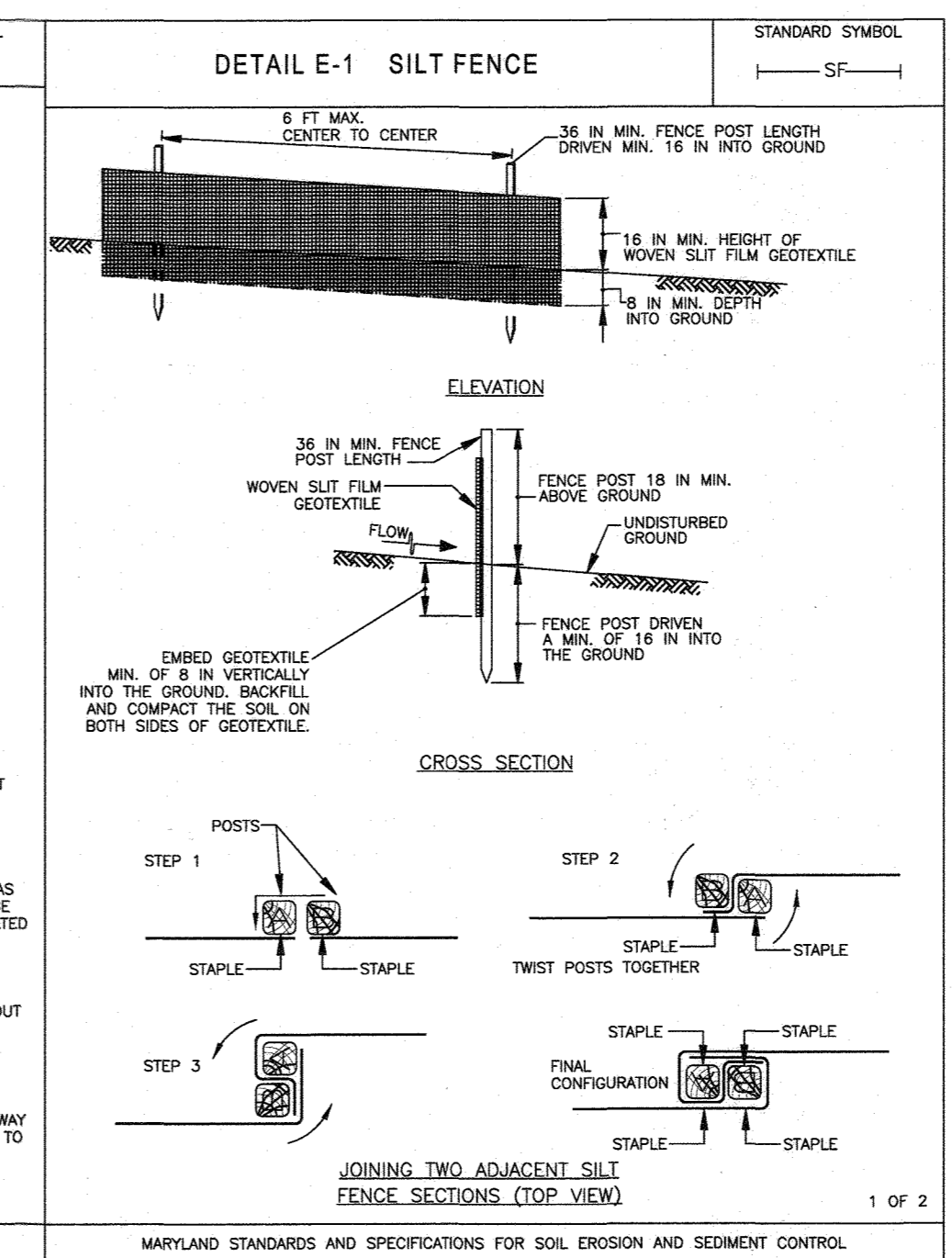
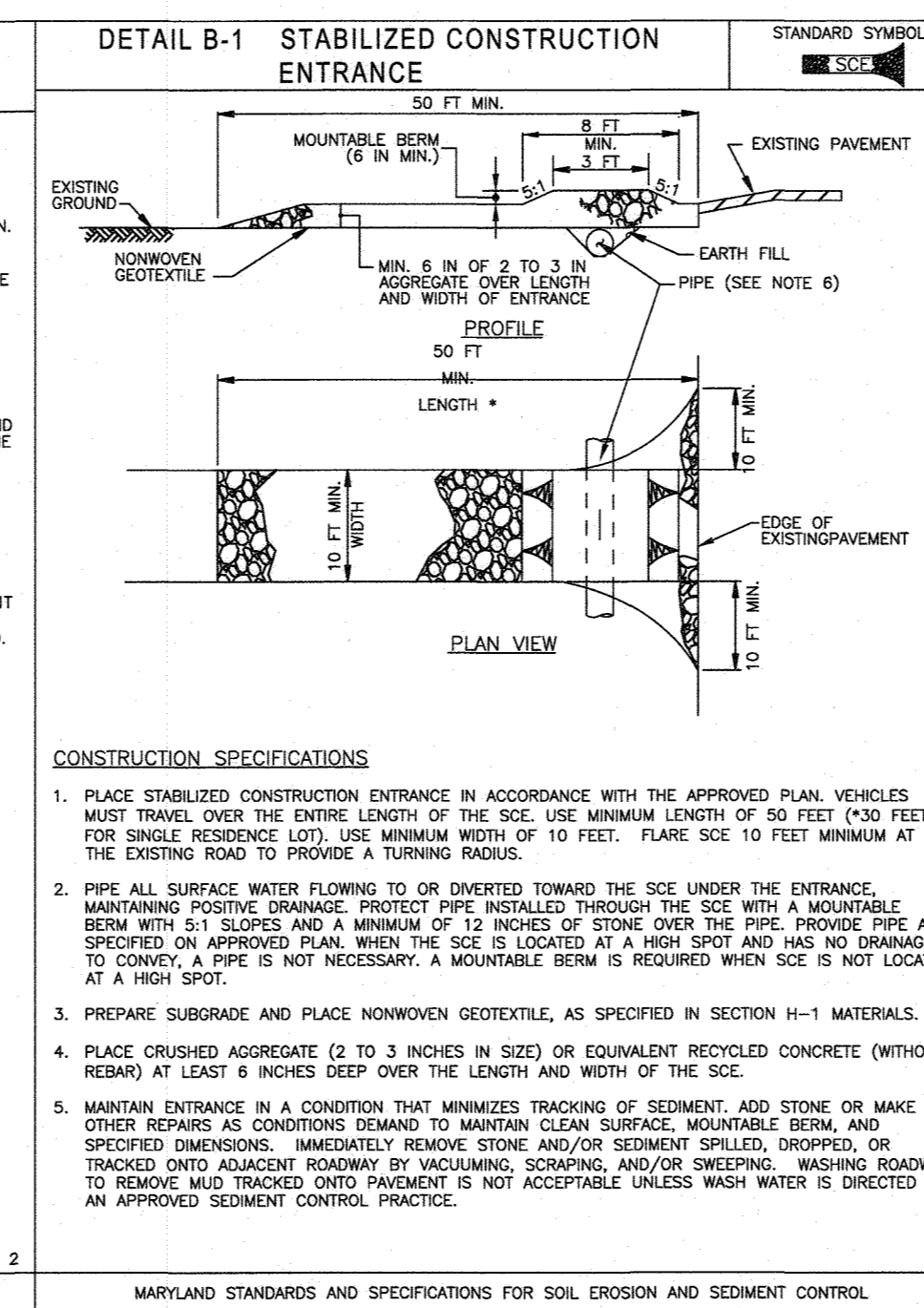
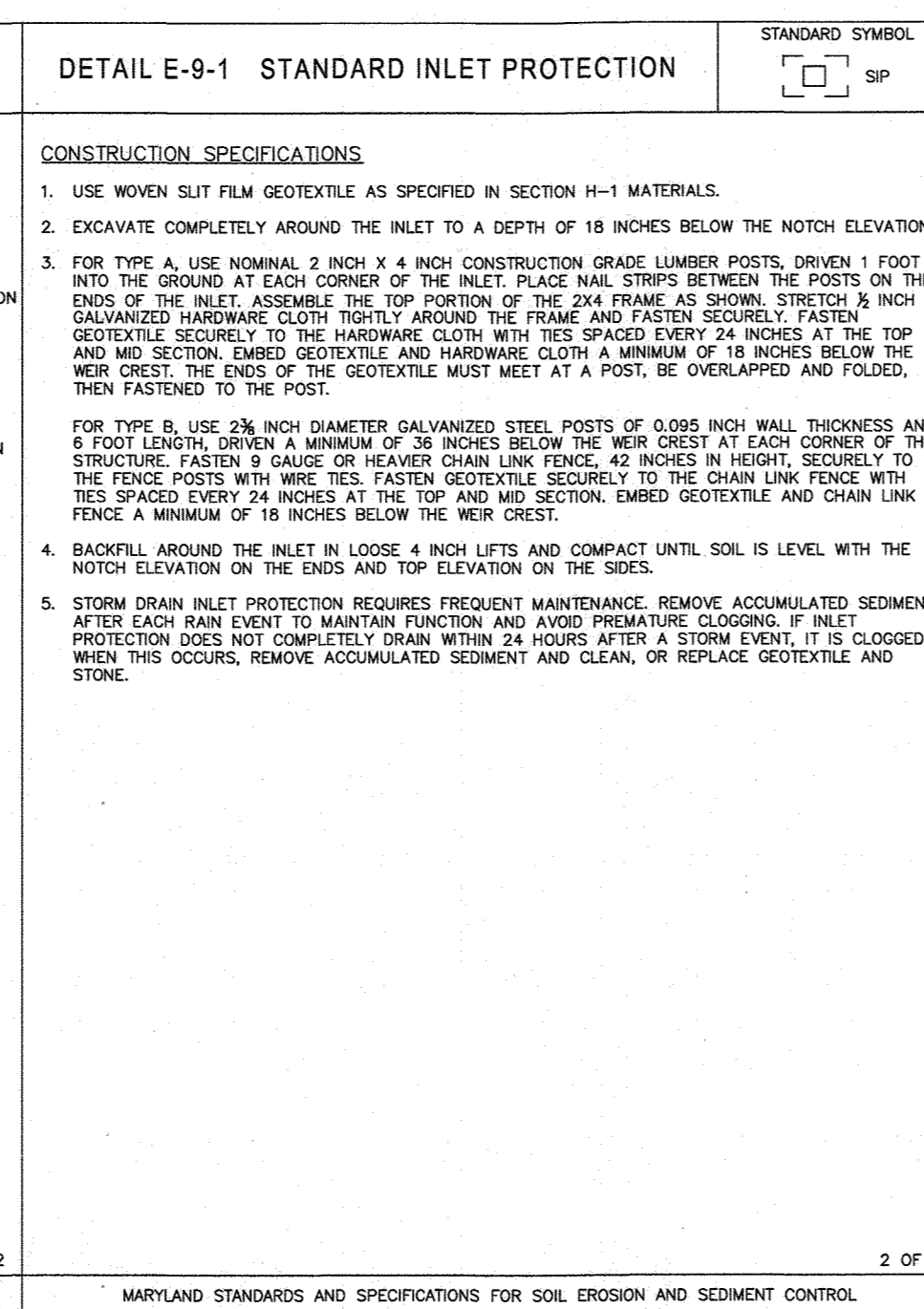
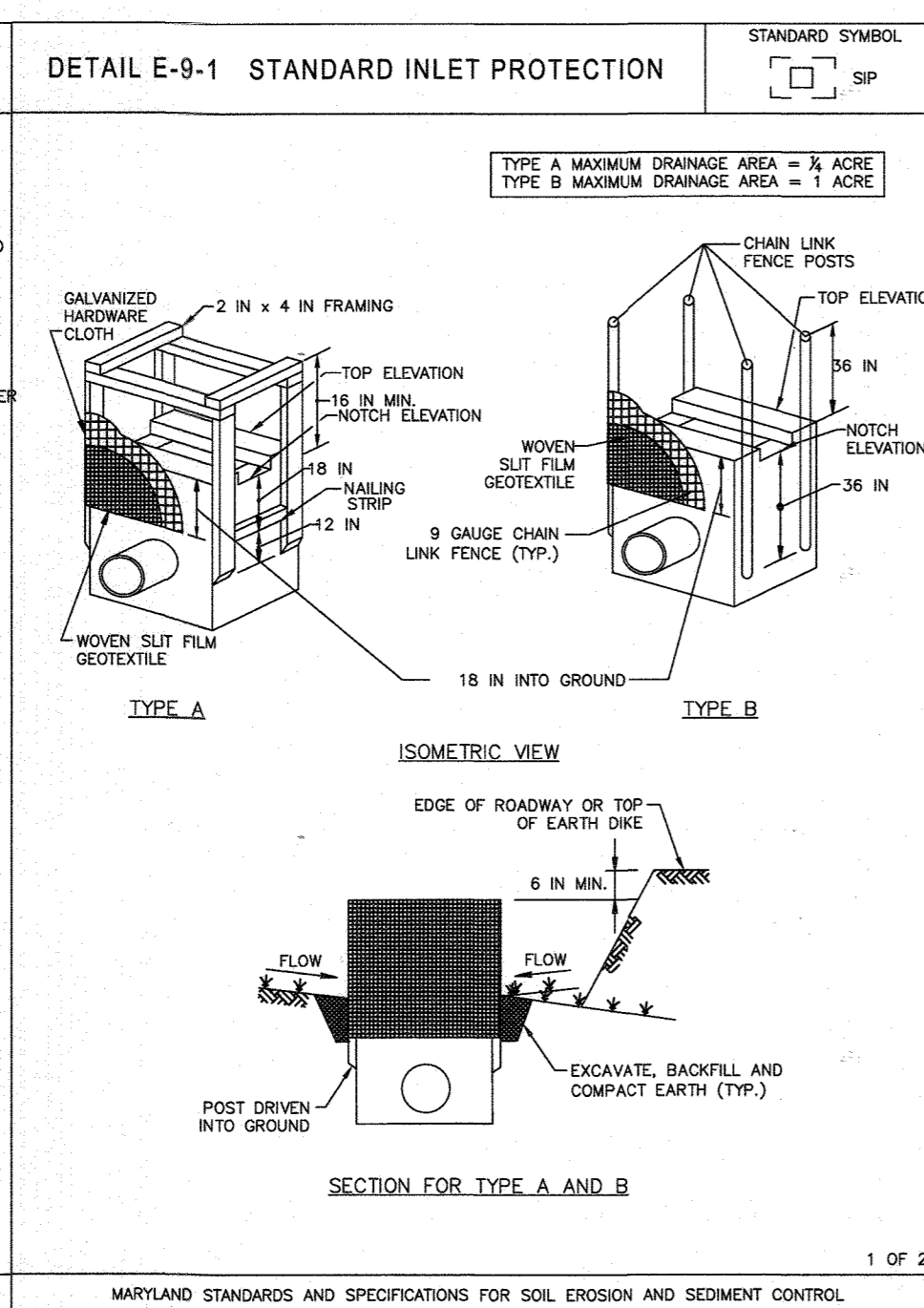
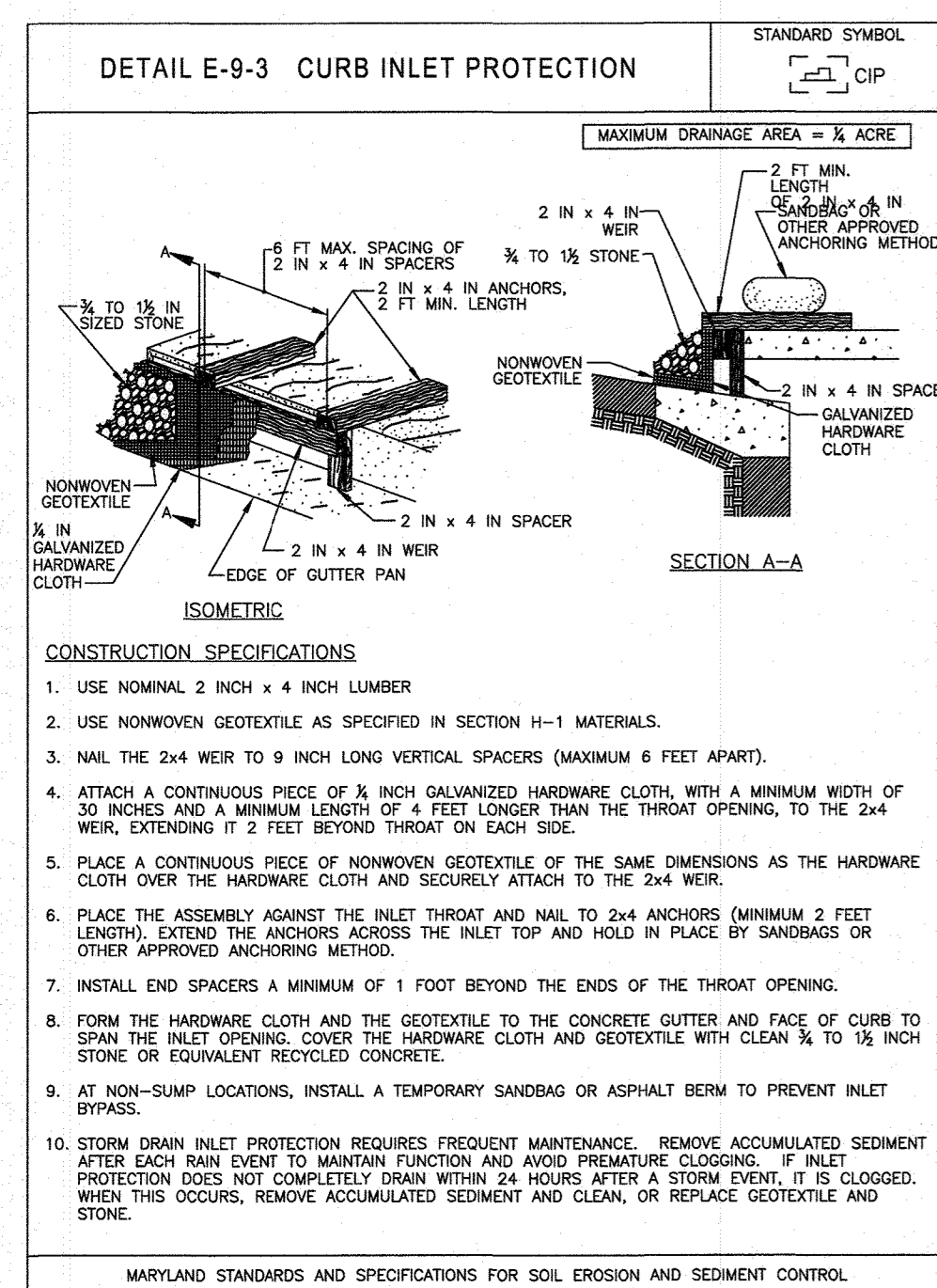
PROJECT No: MD162006
DRAWN BY: JR
CHECKED BY: JR
DATE: 7/23/18
SCALE: AS SHOWN
CAD I.D.: SWS

REVISED ROAD CONSTRUCTION PLAN
FOR
OAK HILL SUBDIVISION
(RE-SUBDIVISION OF LOT 16)
LOCATION OF SITE
9692 OAK HILL DRIVE
ELICOTT CITY, MD
MAP 30, GRID 3, PARCELS 368 (LOT 16) & 321
2ND ELEC. DISTRICT, ZONED: R-20
HOWARD COUNTY

BOHLER ENGINEERING
901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

B.R. ROWE
PROFESSIONAL ENGINEER
4/19

SHEET TITLE:
STORMWATER MANAGEMENT DETAILS
SHEET NUMBER:
9 of 18



B-4-7 STANDARDS AND SPECIFICATIONS FOR HEAVY USE AREA PROTECTION

DEFINITION
THE STABILIZATION OF AREAS FREQUENTLY AND INTENSIVELY USED BY SURFACING WITH SUITABLE MATERIALS (E.G., MULCH AND AGGREGATE).

PURPOSE
TO PROVIDE A STABLE, NON-ERODING SURFACE FOR AREAS FREQUENTLY USED AND TO IMPROVE THE WATER QUALITY FROM THE RUNOFF OF THESE AREAS.

CONDITIONS WHERE PRACTICE APPLIES
THIS PRACTICE APPLIES TO INTENSIVELY USED AREAS (E.G., EQUIPMENT AND MATERIAL STORAGE, STAGING AREAS, HEAVILY USED TRAVEL LANES).

CRITERIA

- A MINIMUM 4-INCH BASE COURSE OF CRUSHED STONE OR OTHER SUITABLE MATERIALS INCLUDING WOOD CHIPS OVER NONWOVEN GEOTEXTILE SHOULD BE PROVIDED AS SPECIFIED IN SECTION H-1 MATERIALS.
- SELECT THE STABILIZING MATERIAL BASED ON THE INTENDED USE, DESIRED MAINTENANCE FREQUENCY, AND RUNOFF CONTROL.
- THE TRANSPORT OF SEDIMENTS, OILS, CHEMICALS, PARTICULATE MATTER ASSOCIATED WITH VEHICULAR TRAFFIC AND EQUIPMENT, AND MATERIAL STORAGE NEEDS TO BE CONSIDERED IN THE SELECTION OF MATERIAL. ADDITIONAL CONTROL MEASURES MAY BE NECESSARY TO CONTROL SOME OF THESE POTENTIAL POLLUTANTS.
- SURFACE EROSION CAN BE A PROBLEM ON LARGE HEAVY USE AREAS. IN THESE SITUATIONS, MEASURES TO REDUCE THE FLOW LENGTH OF RUNOFF OR EROSION VELOCITIES NEED TO BE CONSIDERED.

MAINTENANCE
THE HEAVY USE AREAS MUST BE MAINTAINED IN A CONDITION THAT MINIMIZES EROSION. THIS MAY REQUIRE ADDING SUITABLE MATERIAL, AS SPECIFIED ON THE APPROVED PLANS, TO MAINTAIN A CLEAN SURFACE.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

DEFINITION
A MOUND OR PILE OF SOIL PROTECTED BY APPROPRIATELY DESIGNED EROSION AND SEDIMENT CONTROL MEASURES.

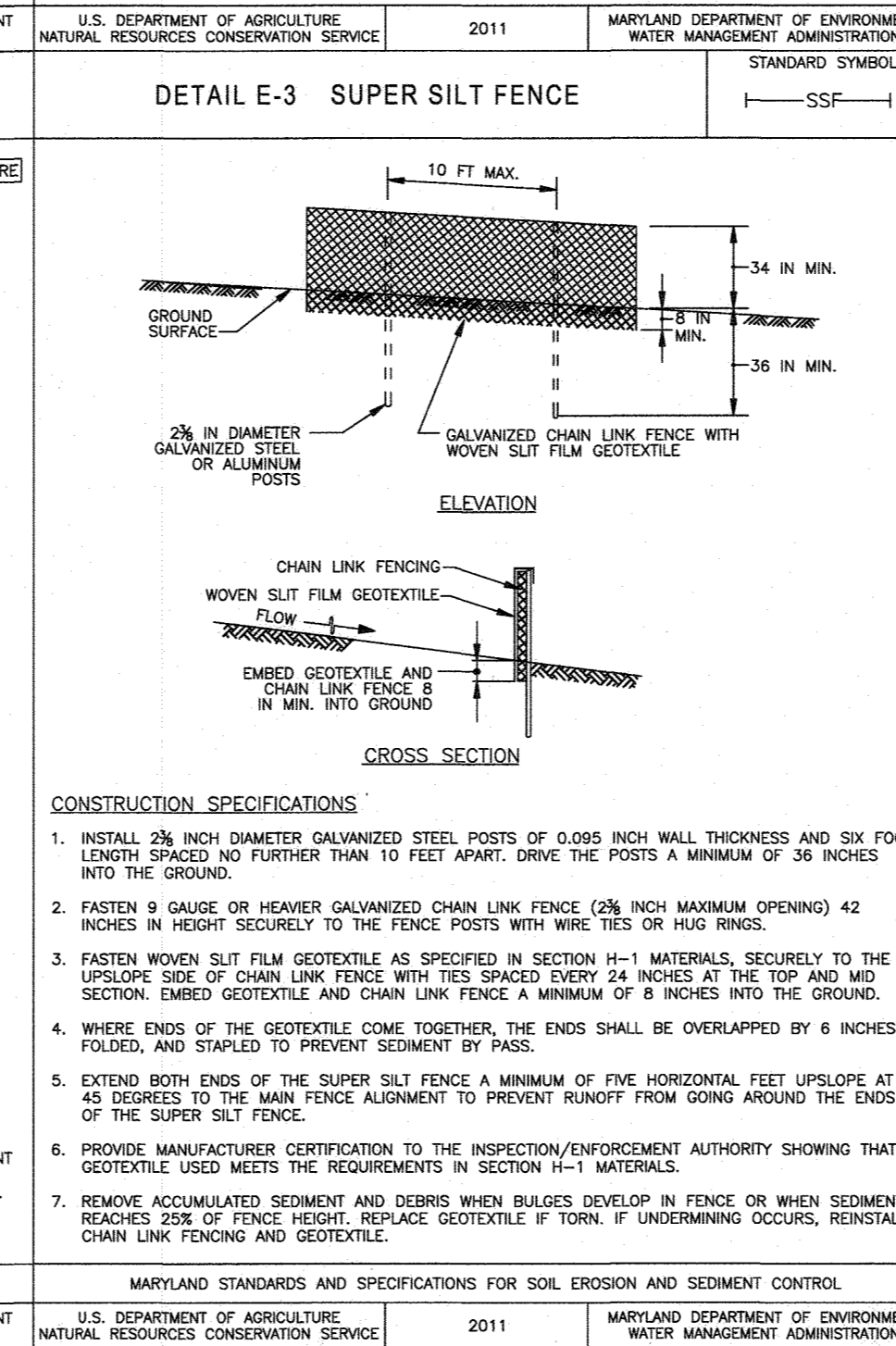
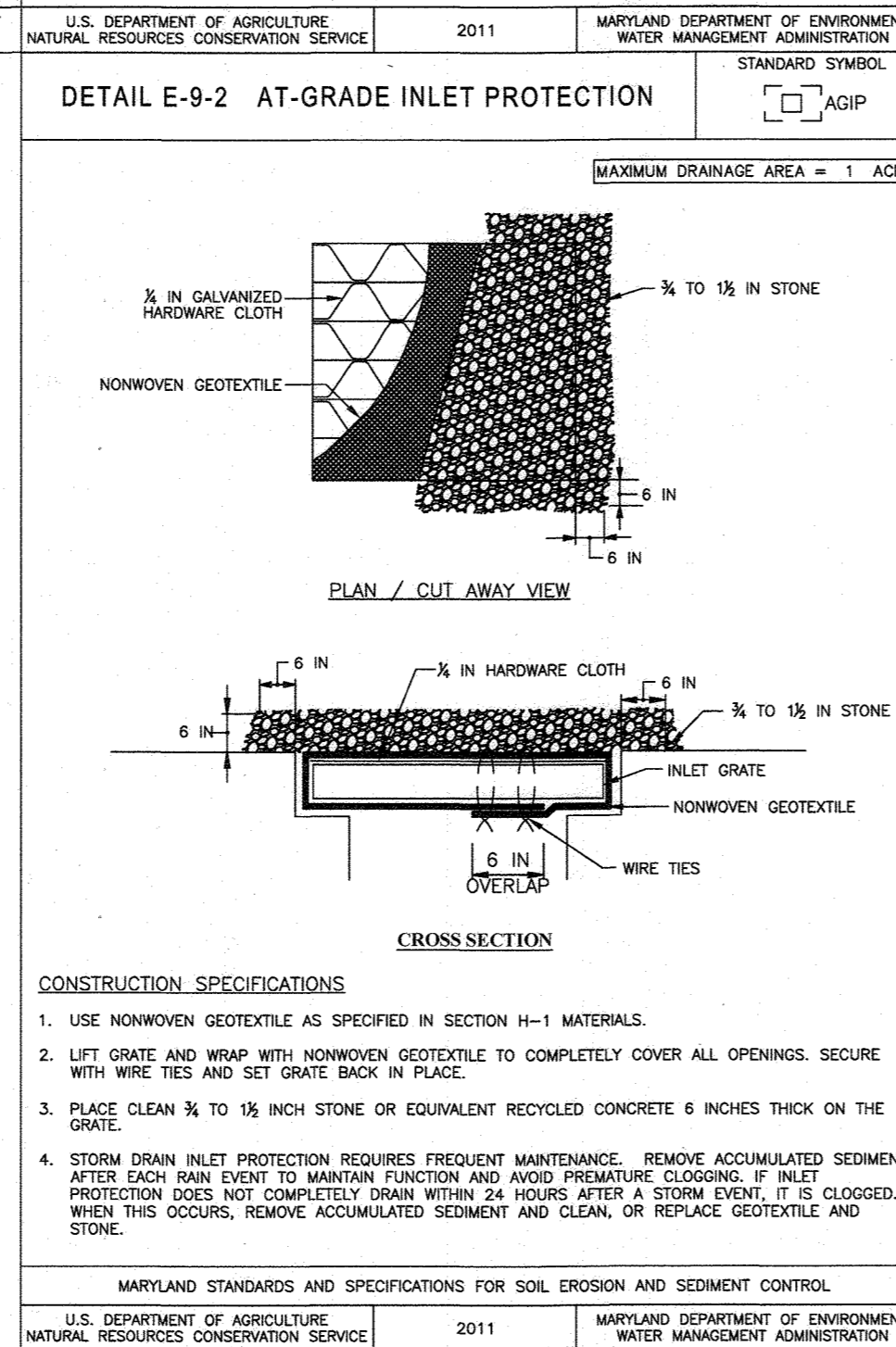
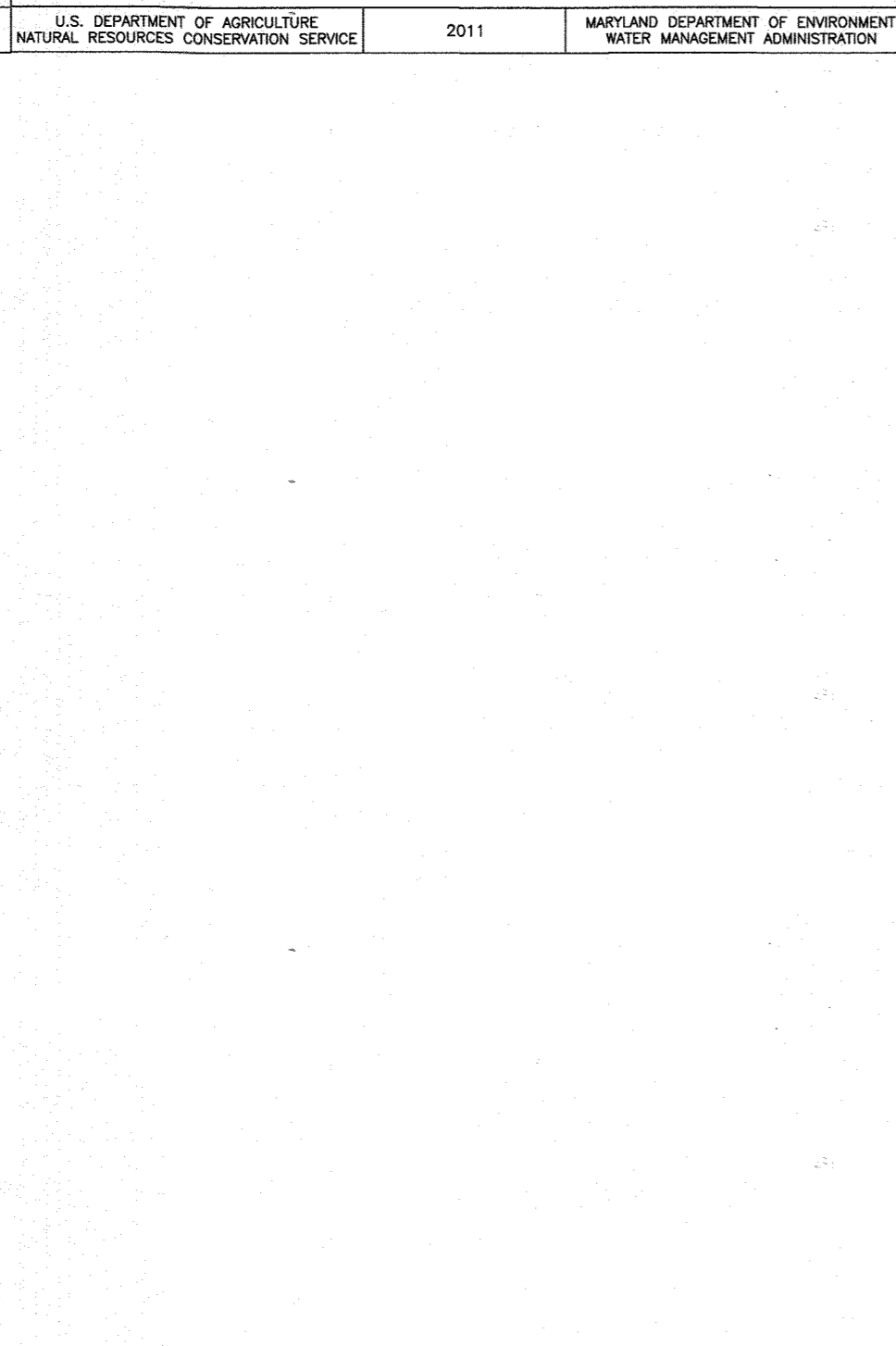
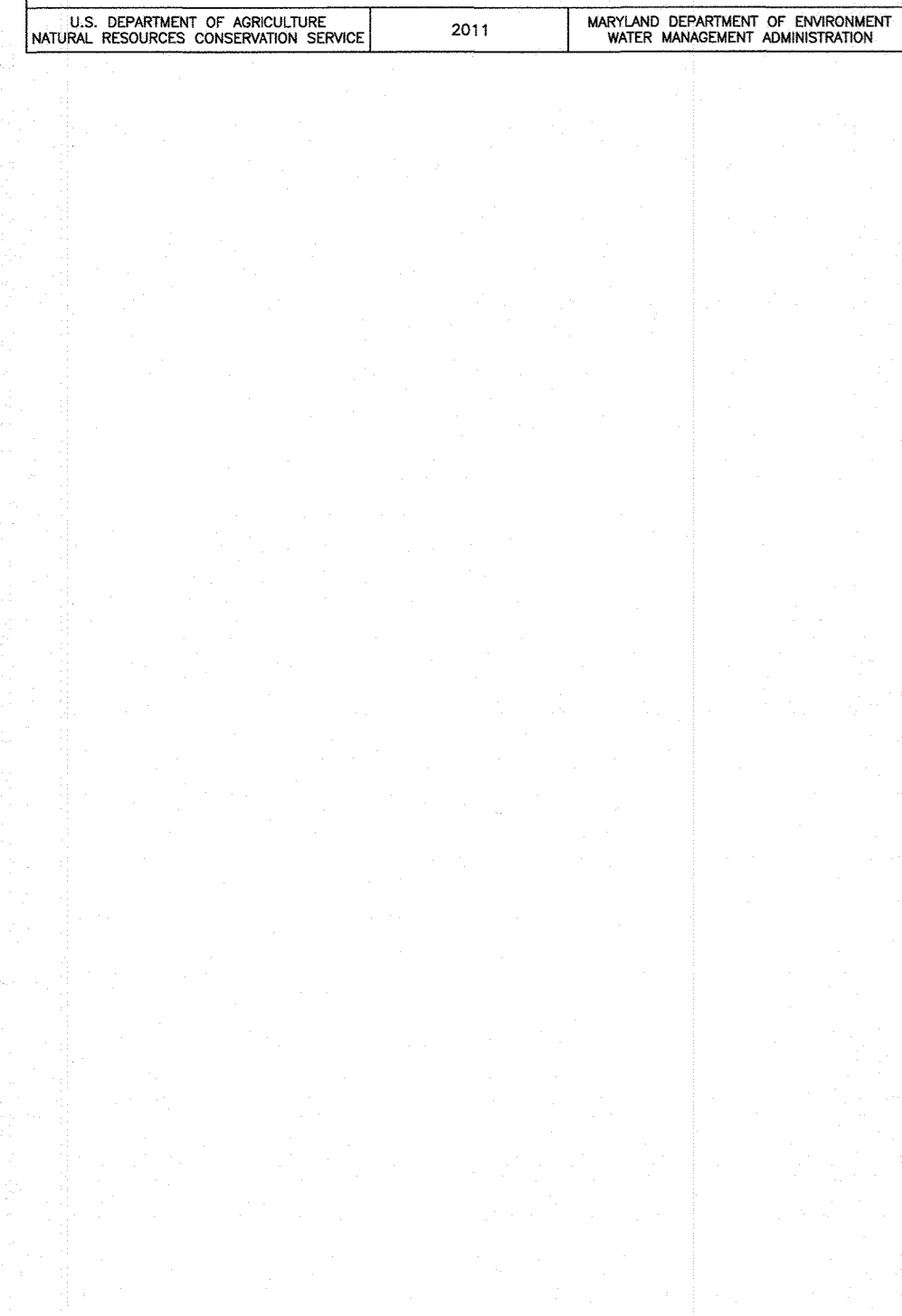
PURPOSE
TO PROVIDE A DESIGNATED LOCATION FOR THE TEMPORARY STORAGE OF SOIL THAT CONTROLS THE POTENTIAL FOR EROSION, SEDIMENTATION, AND CHANGES TO DRAINAGE PATTERNS.

CONDITIONS WHERE PRACTICE APPLIES
STOCKPILE AREAS ARE UTILIZED WHEN IT IS NECESSARY TO SALVAGE AND STORE SOIL FOR LATER USE.

CRITERIA

- THE STOCKPILE LOCATION AND ALL RELATED SEDIMENT CONTROL PRACTICES MUST BE CLEARLY INDICATED ON THE EROSION AND SEDIMENT CONTROL PLAN.
- THE FOOTPRINT OF THE STOCKPILE MUST BE SIZED TO ACCOMMODATE THE ANTICIPATED VOLUME OF MATERIAL AND BASED ON A SIDE SLOPE RATIO NO STEEPER THAN 2:1. BENCHING MUST BE PROVIDED IN ACCORDANCE WITH SECTION B-3 LAND GRADING.
- RUNOFF FROM THE STOCKPILE AREA MUST DRAIN TO A SUITABLE SEDIMENT CONTROL PRACTICE.
- ACCESS THE STOCKPILE AREA FROM THE UPGRADE SIDE.
- CLEAR WATER RUNOFF INTO THE STOCKPILE AREA MUST BE MINIMIZED BY USE OF A DIVERSION DEVICE SUCH AS AN EARTH DIKE, TEMPORARY SWALE OR DIVERSION FENCE. PROVISIONS MUST BE MADE FOR DISCHARGING CONCENTRATED FLOW IN A NON-EROSIVE MANNER.
- WHERE RUNOFF CONCENTRATES ALONG THE TOE OF THE STOCKPILE FILL, AN APPROPRIATE EROSION/SEDIMENT CONTROL PRACTICE MUST BE USED TO INTERCEPT THE DISCHARGE.
- STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 3/7 DAY STABILIZATION REQUIREMENT AS WELL AS STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4.4 TEMPORARY STABILIZATION.
- IF THE STOCKPILE IS LOCATED ON AN IMPERVIOUS SURFACE, A LINER SHOULD BE PROVIDED BELOW THE STOCKPILE TO FACILITATE CLEANUP. STOCKPILES CONTAINING CONTAMINATED MATERIAL MUST BE COVERED WITH IMPERMEABLE SHEETING.

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



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

APPROVED: DEPARTMENT OF PUBLIC WORKS

10/11/2018
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

11-06-18
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

10-26-18
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

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

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

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

NO AS-BUILT INFO

6-9-23

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

9/29/18 DATE

OWNER/DEVELOPER: 8314 GOLDEN STAR PLACE
COLUMBIA, MD 21044
CONTACT: BRIAN GOLDSTEIN
PHONE: 301.875.6490

SUBDIVISION NAME: OAK HILL SUBDIVISION
SECTION/AREA: N/A
PARCELS: 388 (LOT 16) & 321
00457 / 00477 & 16883 / 00498

TAX MAP: 30 GRID: 3 ZONED: R-20
PARCELS: 388 (LOT 16) & 321
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

PREVIOUS FILE NO.: F-78-191, WP-17-014,
WP-17-112

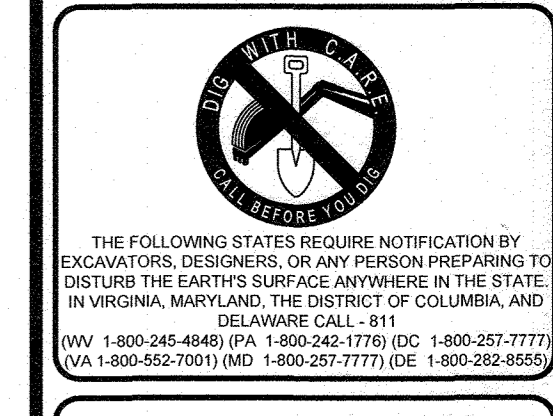
PROFESSIONAL CERTIFICATION
I, BRANON R. ROWE, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 46688, EXPIRATION DATE: 7/31/2019

BOHLER ENGINEERING

SITE CHARTER AND CONSULTING ENGINEERING
LAND SURVEYING, PLANNING, ARCHITECTURE
SUSTAINABLE DESIGN, PERMITTING SERVICES, TRANSPORTATION SERVICES

● BALDWIN, NC
● CHARLOTTE, NC
● FAYETTEVILLE, NC
● FLORENCE, SC
● GREENSBORO, NC
● HUNTSVILLE, AL
● JARVIS, SC
● LENOIR, NC
● MARYLAND
● NEW YORK, NY
● PHOENIX, AZ
● RICHMOND, VA
● SOUTH FLORIDA

REV	DATE	COMMENT	BY
1	6/9/23	NO AS-BUILT INFO	AVG



NOT APPROVED FOR CONSTRUCTION

PROJECT No.: MD162008
DRAWN BY: AVG
CHECKED BY: JR
DATE: 1/5/18
SCALE: AS SHOWN
CAD I.D.: SDS

FINAL PLAN

FOR
OAK HILL SUBDIVISION
(RE-SUBDIVISION OF LOT 16)

LOCATION OF SITE
9692 OAK HILL DRIVE
ELLCOTT CITY, MD
MAP 30, GRID 3, PARCELS 388
(LOT 16) & 321
2ND ELEC. DISTRICT, ZONED: R-20
HOWARD COUNTY

BOHLER ENGINEERING

901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 821-7900
Fax: (410) 821-7987
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B.R. ROWE

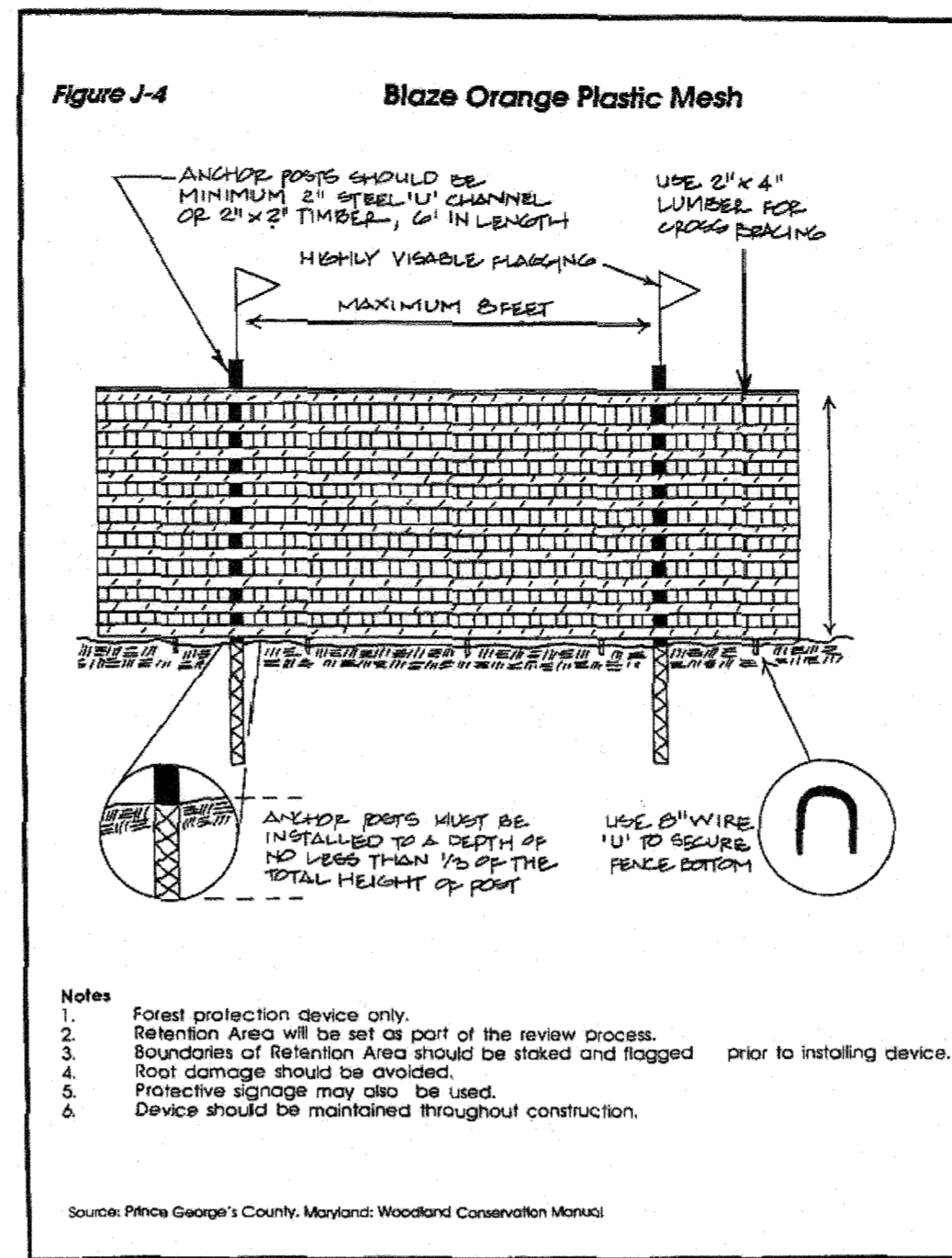
PROFESSIONAL ENGINEER
MARYLAND LICENSE NO. 46688

SHEET TITLE:
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:
14 of 18

**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION (CID) 410-313-1855 AFTER THE FUTURE LOT AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
 - PRIOR TO THE START OF EARTH DISTURBANCE.
 - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
 - PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1), AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4.2), PERMANENT SEEDING (SEC. B-4.5), TEMPORARY SEEDING (SEC. B-4.4) AND MULCHING (SEC. B-4.3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4.1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15 OF CUT AND/OR FILL STOCKPILES (SEC. B-4.8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4.6).
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.



J-4
TREE PROTECTION FENCE DETAIL
NOT TO SCALE

SEQUENCE OF CONSTRUCTION

DESCRIPTION	TIME
1. NOTIFY HOWARD COUNTY'S SEDIMENT CONTROL INSPECTOR AT 410-313-1855 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.	1 DAY
2. THE GENERAL CONTRACTOR SHALL NOT COMMENCE ANY LAND DISTURBING ACTIVITIES PRIOR TO OBTAINING A GRADING PERMIT.	
3. THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH THE CONSTRUCTION MANAGER AND THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES. (1 DAY)	1 DAY
4. ALL AREAS WHICH ARE TO BE DISTURBED SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO CONSTRUCTION. DISTURBED AREAS WITHIN THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED SHALL BE PERMANENTLY OR TEMPORARILY STABILIZED WITHIN: <ol style="list-style-type: none"> THREE (3) CALENDAR DAYS ON SLOPES GREATER THAN 3:1, ALL WATERWAYS AND TO THE SURFACE OF ALL PERIMETER CONTROLS. SEVEN (7) CALENDAR DAYS ON ALL OTHER DISTURBED OR GRADED AREAS OF THE PROJECT. 	2 DAYS
5. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN. ALL HARD SURFACE PUBLIC ROADS SHALL BE CLEANED AT THE END OF EACH WORK DAY.	2 DAYS
6. INSTALL PERIMETER SILT FENCE AND SUPER SILT FENCE AS SHOWN ON THE SEDIMENT CONTROL PLANS. INSTALL FOREST PROTECTION MEASURES AND SPECIMEN TREE PROTECTION MEASURES. SUPER SILT FENCE CROSSING THE PROPOSED STORM DRAIN SHALL BE INSPECTED DAILY AND REINSTALLED OR REPAIRED AS NEEDED AT THE CLOSE OF CONSTRUCTION EACH WORKING DAY.	5 DAYS
7. UPON APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB THE AREAS IDENTIFIED ON THE PLANS.	1 WEEK
8. ROUGH GRADE THE SITE TO PROPOSED SUBGRADE AS IDENTIFIED ON THE PLAN.	2 WEEKS
9. INSTALL UTILITIES AS SHOWN ON THE PLAN. INSTALL STANDARD INLET PROTECTION ON ALL PROPOSED INLETS IMMEDIATELY AFTER INSTALLATION. INSTALL WATER AND SEWER ACROSS THE STREAM BY USING THE PUMP AROUND AND SEQUENCE OF CONSTRUCTION ON SHEET 4 ON THE PUBLIC WATER AND SEWER PLANS (CONTRACT 24-5002-D).	4 WEEKS
10. AS THE SITE IS BROUGHT TO FINAL GRADE, PERMANENTLY STABILIZE ALL DISTURBED AREAS WITHIN SEVEN (7) CALENDAR DAYS.	1 WEEK
11. AS DISTURBED AREAS ARE STABILIZED, INSTALL ALL MICRO-BASIN FACILITIES, SUD-BASINS, DRYWELL PITS, TRENCHES, AND MEDIA-FILTER STORM DRAIN SYSTEM AND STABILIZE ALL SLOPES.	1 WEEK
12. INSTALL PERMANENT LANDSCAPING.	1 WEEK
13. NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.	3 DAYS
14. NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.	1 DAY

- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON, AFTER EACH RAINFALL AND ON A DAILY BASIS.
- ALL OF THE PRIVATE ON-LOT FACILITIES WILL BE CONSTRUCTED AT THE SITE DEVELOPMENT PLAN STAGE.

6. SITE ANALYSIS:

TOTAL AREA OF SITE:	4.47 ACRES
AREA DISTURBED:	2.22 ACRES
AREA TO BE ROOFED OR PAVED:	0.63 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	3.84 ACRES
TOTAL CUT:	5,590 CU. YDS.
TOTAL FILL:	1,690 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION:	TBD

- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY, AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
 - INSPECTION DATE
 - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
 - NAME AND TITLE OF INSPECTOR
 - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
 - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
 - EVIDENCE OF SEDIMENT DISCHARGES
 - IDENTIFICATION OF PLAN DEFICIENCIES
 - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
 - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
 - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
 - PHOTOGRAPHS
 - MONITORING/SAMPLING
 - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
 - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
- DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD. NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION UNTIL FINAL GRADE.
- ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON THE CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UP HILL BY 2' IN ELEVATION.
- STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
 - USE I AND II MARCH 1 - JUNE 15
 - USE III AND IIII OCTOBER 1 - APRIL 30
 - USE IV MARCH 1 - MAY 31
- A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

BOHLER ENGINEERING

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

RALEIGH, NC
CHARLOTTE, NC
DURHAM, NC
FAYETTEVILLE, NC
GREENSBORO, NC
HARRISBURG, PA
LEHIGH VALLEY, PA
PHILADELPHIA, PA
PITTSBURGH, PA
RICHMOND, VA
ROANOKE, VA
SOUTH FORT MYERS, FL
TAMPA, FL
WEST PALM BEACH, FL

UPSTATE NEW YORK
NEW YORK METRO
NEW JERSEY
PHILADELPHIA, PA

IF YOU ARE A CONTRACTOR OR SUB CONTRACTOR AND YOU ARE NOT REGISTERED WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION (CID) 410-313-1855, YOU MUST REGISTER WITH THE CID PRIOR TO THE START OF CONSTRUCTION.

REVISIONS

REV	DATE	COMMENT	BY
1	01/19/23	NO AS-BUILT INFO	AVG

THE FOLLOWING STATES REQUIRE NOTIFICATION BY EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE STATE IN VIRGINIA, MARYLAND, THE DISTRICT OF COLUMBIA, AND DELAWARE: CALIFORNIA, ILLINOIS, INDIANA, IOWA, KANSAS, MISSOURI, NEBRASKA, OHIO, PENNSYLVANIA, TEXAS, WISCONSIN, AND WYOMING.

VA 1-800-245-4848 (PA 1-800-245-1776) DC 1-800-257-7777
MD 1-800-552-7101 (MO 1-800-257-7777) DE 1-800-282-8555

NOT APPROVED FOR CONSTRUCTION

PROJECT No.: MD162008
DRAWN BY: AVG
CHECKED BY: JR
DATE: 1/5/18
SCALE: AS SHOWN
CAD I.D.: SDS

FINAL PLAN

FOR
OAK HILL SUBDIVISION
(RE-SUBDIVISION OF LOT 16)

LOCATION OF SITE
9692 OAK HILL DRIVE
ELLCOTT CITY, MD
MAP 30, GRID 3, PARCELS 368
(LOT 16) & 321
2ND ELEC. DISTRICT, ZONED: R-20
HOWARD COUNTY

BOHLER ENGINEERING

901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

B.R. ROWE

PROFESSIONAL ENGINEER
MARYLAND LICENSE NO. 8080

6/11/2018

SHEET TITLE:
EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

SHEET NUMBER:
15 of 18

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

John P. Roberts 9/26/18
HOWARD SCD DATE

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE COLUMBIA, MD 21044 CONTACT: BRIAN GOLDSTEIN PHONE: 301.875.8480	TAX MAP: 30 GRID: 3 ZONED: R-20 PARCELS: 368 (LOT 16) & 321 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SUBDIVISION NAME: OAK HILL SUBDIVISION SECTION/AREA: N/A DEED # 00457 / 00477 & 16883 / 00498	PREVIOUS FILE NO.: F-78-191, WP-17-014, WP-17-112

PROFESSIONAL CERTIFICATION
I, BRANDON R. ROWE, 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. 46988, EXPIRATION DATE: 7/31/2019

APPROVED: DEPARTMENT OF PUBLIC WORKS

Samuel 10/11/2018
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Kent DeWool 11-06-18
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John 10-26-18
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

LANDSCAPE SPECIFICATIONS

9. PLANTING

- A. INsofar that it is feasible, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNINSTALLED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.
- B. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION.
- C. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHING SHALL BE REMOVED.
- D. ALL PLANTING CONTAINERS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING PLANTING. NATURAL FIBER BURLAP MUST BE CUT FROM AROUND THE TRUNK OF THE TREE AND FOLDED DOWN AGAINST THE ROOT BALL PRIOR TO BACKFILLING.
- E. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
- F. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVED LANDSCAPE PLAN, MUST BE INSTALLED, INSPECTED AND APPROVED BY THE APPROVING AGENCY. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS: THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:

1. TREES: MARCH 15 TO DECEMBER 15
2. SHRUBS: MARCH 15 TO JUNE 15 OR SEPT. 1 TO DECEMBER 1

- G. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBSTITUTIONS.
- H. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

- ACER RUBRUM
- BETULA VARIETIES
- CARPINUS VARIETIES
- CRATAEGUS VARIETIES
- KOELBUERIA
- LIQUIDAMBER STYRACIFLUA
- LIRIODENDRON TULIPIFERA
- PLATANUS X ACERIFOLIA
- POPULUS VARIETIES
- PRUNUS VARIETIES
- PYRUS VARIETIES
- QUERCUS VARIETIES
- TILIA TOMENTOSA
- ZELKOVA VARIETIES

- I. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
- 1 PART PEAT MOSS
 - 1 PART COMPOSTED COW MANURE BY VOLUME
 - 3 PARTS TOPSOIL BY VOLUME
- 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:
- A) 2 TABLETS PER 1 GALLON PLANT
 - B) 3 TABLETS PER 5 GALLON PLANT
 - C) 4 TABLETS PER 15 GALLON PLANT
 - D) LARGER PLANTS: 2 TABLETS PER 1" CALIPER OF TRUNK

- J. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.
- K. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.
- L. ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS OR DRIVEWAYS SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCHING HEIGHT OF 7' FROM GRADE.

- M. GROUND COVER AREAS SHALL RECEIVE A 1/2" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.
- N. NO PLANT, EXCEPT GROUND COVERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND WALKWAYS.

- O. ALL PLANTING AREAS AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.
- P. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

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

11. WATERING
- A. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.
- B. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.
- C. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT ANY FAILURE OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

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

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

REFORESTATION PLAN

THE REFORESTATION AREA WILL BE PLACED INTO A FOREST CONSERVATION EASEMENT.

A. PLANTING PLAN AND METHODS

PLANT SPECIES SELECTION WAS BASED ON OUR KNOWLEDGE REGARDING PLANT COMMUNITIES IN MARYLAND'S PIEDMONT PLATEAU AND INFORMATION PROVIDED TO THE PLAN. SPECIES SELECTION WAS ALSO BASED ON OUR KNOWLEDGE OF PLANT AVAILABILITY IN THE NURSERY INDUSTRY.

REFORESTATION WILL BE ACCOMPLISHED THROUGH A MIXED PLANTING OF WHIPS AND BRANCHED TRANSPLANTS. CONTAINER GROWN STOCK IS RECOMMENDED IN THE REFORESTATION PLAN. THE USE OF THE ROOT SYSTEMS OF THE PLANTS IS TO BE MAINTAINED. THE ROOT SYSTEMS OF ALL PLANTS WILL BE DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING TO IMPROVE MOISTURE RETENTION IN THE ROOT SYSTEMS.

PRIOR TO PLANTING THE PROPOSED FOREST CONSERVATION EASEMENT SHALL BE MAINTAINED. THE USE OF THE ROOT SYSTEMS OF THE PLANTS IS TO BE MAINTAINED. THE ROOT SYSTEMS OF ALL PLANTS WILL BE DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING TO IMPROVE MOISTURE RETENTION IN THE ROOT SYSTEMS.

HERBICIDES TREATMENTS SHALL OCCUR ON 12 MONTH INTERVALS DURING THE FIRST GROWING SEASON AND ONCE EACH IN THE SPRING AND FALL FOR AS LONG AS POSSIBLE. HERBICIDES TREATMENTS SHALL BE APPLIED TO THE TRUNKS OF THE TREES AND SHRUBS TO PREVENT THE GROWTH OF INVASIVE SPECIES. IT IS RECOMMENDED THAT APPLICATION OF HERBICIDES BE LIMITED TO AT LEAST SIX INCHES.

B. PLANTING AND SOIL SPECIFICATIONS

PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE PLANTING DETAIL AND PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN. AMENDMENTS TO EXISTING SOIL WILL BE IN ACCORDANCE WITH THE PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN. SOIL DISTURBANCE WILL BE LIMITED TO INDIVIDUAL PLANTING LOCATIONS.

C. MAINTENANCE OF PLANTINGS

SEE POST CONSTRUCTION NOTES

D. GUARANTEE REQUIREMENTS

A 75 PERCENT SURVIVAL RATE OF THE REFORESTATION PLANTINGS WILL BE REQUIRED AFTER ONE GROWING SEASON. ALL PLANT MATERIAL BELOW THE 90 PERCENT SURVIVAL RATE WILL BE REPLACED AT THE BEGINNING OF THE SECOND GROWING SEASON. A 75 PERCENT SURVIVAL RATE WILL BE REQUIRED. ALL PLANT MATERIAL BELOW THE 75 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED BY THE BEGINNING OF THE NEXT GROWING SEASON.

E. SECURITY FOR REFORESTATION

SECTION 16-109 OF THE HOWARD COUNTY FOREST CONSERVATION ACT REQUIRES THAT A DEVELOPER SHALL POST A SECURITY (BOND, LETTER OF CREDIT, ETC.) WITH THE COUNTY TO INSURE THAT ALL WORK IS DONE IN ACCORDANCE WITH THE FCP.

CONSTRUCTION PERIOD PROTECTION PROGRAM

A. FOREST PROTECTION TECHNIQUES

1. SOIL PROTECTION AREA (CRITICAL ROOT ZONE)

THE SOIL PROTECTION AREA, OR CRITICAL ROOT ZONE, OF A TREE IS THAT PORTION OF THE SOIL COLUMN WHERE MOST OF ITS ROOTS MAY BE FOUND. THE CRITICAL ROOT ZONE OF THE FOREST IN AREAS WHERE THE FOREST LIMITS OCCUR WITHIN 25 FEET OF THE LIMIT OF DISTURBANCE.

2. FENCING AND SIGNAGE

PERMANENT SIGNAGE SHALL BE PLACED AROUND THE AFFORESTATION AREA PRIOR TO PLANT INSTALLATION, AS SHOWN ON THE PLAN.

B. PRE-CONSTRUCTION MEETING

UPON STAKING OF LIMITS OF DISTURBANCE A PRE-CONSTRUCTION MEETING WILL BE HELD BETWEEN THE DEVELOPER, CONTRACTOR AND APPROPRIATE COUNTY INSPECTOR TO VERIFY THAT ALL SEDIMENT CONTROL DEVICES, FENCING, AND TO NOTIFY THE CONTRACTOR OF POSSIBLE PENALTIES FOR NON-COMPLIANCE WITH THE FCP.

C. STORAGE FACILITIES/EQUIPMENT CLEANING

ALL EQUIPMENT STORAGE, PARKING, SANITARY FACILITIES, MATERIAL STOCKPILING, ETC. ASSOCIATED WITH CONSTRUCTION OF THE PROJECT WILL BE RESTRICTED TO THOSE AREAS OUTSIDE OF THE PROPOSED FOREST CONSERVATION EASEMENT. CLEANING OF EQUIPMENT SHALL BE PERFORMED TO PREVENT THE LEAKAGE OF OILS AND FUELS INTO THE FOREST AREAS.

D. SEQUENCE OF CONSTRUCTION

THE FOLLOWING TIMETABLE REPRESENTS THE PROPOSED TIMETABLE FOR DEVELOPMENT. THE ITEMS OUTLINED IN THE FOREST CONSERVATION PLAN WILL BE ENDED WITHIN TWO (2) YEARS OF SUBDIVISION APPROVAL.

BELOW FIND A PROPOSED SEQUENCE OF CONSTRUCTION

1. INSTALL ALL SIGNAGE AND SEDIMENT CONTROL DEVICES
2. HOLD PRE-CONSTRUCTION MEETING BETWEEN DEVELOPER, CONTRACTOR AND COUNTY INSPECTOR
3. BUILD ACCESS ROADS, INSTALL WELL AND SEPTIC SYSTEMS, AND CONSTRUCT HOUSING. STABILIZE ALL DISTURBED AREAS ACCORDINGLY
4. INSTALL PERMANENT PROTECTIVE SIGNAGE FOR EASEMENTS AND INITIATE PLANTINGS IN ACCORDANCE WITH FOREST CONSERVATION PLAN. PLANTINGS WILL BE COMPLETED WITHIN TWO (2) YEARS OF SUBDIVISION APPROVAL.
5. REMOVE SEDIMENT CONTROL
6. HOLD POST-CONSTRUCTION MEETING WITH COUNTY INSPECTORS TO ASSURE COMPLIANCE WITH FCP. SUBMIT CERTIFICATION OF INSTALLATION.
7. MONITOR AND MAINTAIN PLANTINGS FOR 2 YEARS.

E. CONSTRUCTION MONITORING

E.C.O. SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL MONITOR CONSTRUCTION OF THE PROJECT TO INSURE THAT ALL WORK IS IN COMPLIANCE WITH THE FOREST CONSERVATION PLAN.

F. POST-CONSTRUCTION MEETING

UPON COMPLETION OF CONSTRUCTION, E.C.O. SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL NOTIFY THE COUNTY THAT CONSTRUCTION HAS BEEN COMPLETED AND ARRANGE FOR A POST-CONSTRUCTION MEETING TO REVIEW THE PROJECT SITE. THE MEETING WILL BE HELD WITHIN TWO (2) YEARS OF SUBDIVISION APPROVAL.

POST-CONSTRUCTION MANAGEMENT PLAN

HOWARD COUNTY REQUIRES A TWO YEAR POST-CONSTRUCTION MANAGEMENT PLAN TO BE PREPARED AS PART OF THE FOREST CONSERVATION PLAN. THE PLAN SHALL BE EFFECTIVE UPON ACCEPTANCE OF THE CONSTRUCTION CERTIFICATION OF COMPLETION BY THE COUNTY. THE POST-CONSTRUCTION MANAGEMENT PLAN SHALL BE REVIEWED BY THE COUNTY INSPECTOR TO VERIFY THAT REFORESTATION PLANTINGS HAVE BEEN INSTALLED.

THE FOLLOWING ITEMS WILL BE INCORPORATED INTO THE PLAN:

- A. FENCING AND SIGNAGE**
- PERMANENT SIGNAGE INDICATING THE LIMITS OF THE RETENTION/REFORESTATION AREA SHALL BE MAINTAINED.
- B. GENERAL SITE INSPECTIONS/MAINTENANCE OF PLANTINGS**
- SITE INSPECTIONS WILL BE CONDUCTED AT A MINIMUM OF THREE TIMES DURING THE GROWING SEASON. THE PURPOSE OF THE INSPECTIONS WILL BE TO ASSESS THE HEALTH OF THE REFORESTATION PLANTINGS. APPROPRIATE MEASURES WILL BE TAKEN TO RECTIFY ANY PROBLEMS WHICH MAY ARISE.
- IN ADDITION, MAINTENANCE OF THE AFFORESTATION PLANTINGS WILL INVOLVE THE FOLLOWING STEPS:

1. WATERING: ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON, MORE OR LESS FREQUENTLY DEPENDING ON WEATHER CONDITIONS. DURING THE SECOND GROWING SEASON, ONCE A MONTH DURING MAY THROUGH SEPTEMBER.
2. REMOVAL OF INVASIVE EXOTICS AND NOXIOUS WEEDS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.
3. IDENTIFICATION OF SERIOUS PLANT PESTS AND DISEASES, TREATMENT WITH APPROPRIATE AGENT.
4. PRUNING OF DEAD BRANCHES.
5. AFTER 12 AND 24 MONTHS, REPLACEMENT OF PLANTS, IF REQUIRED, IN ACCORDANCE WITH THE GUARANTEE REQUIREMENTS SHOWN ON THE FCP.

C. EDUCATION

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

D. FINAL INSPECTION

AT THE END OF THE TWO YEAR POST-CONSTRUCTION MANAGEMENT PERIOD, E.C.O. SCIENCE PROFESSIONALS, OR ANOTHER QUALIFIED PROFESSIONAL, WILL SUBMIT TO THE COUNTY A FINAL INSPECTION REPORT. THE REPORT WILL BE REVIEWED BY THE COUNTY INSPECTOR TO VERIFY THAT REFORESTATION REQUIREMENTS HAVE BEEN MET AND THE DEVELOPER'S BOND RELEASED.

PLANTING/SOIL SPECIFICATIONS

1. PLANTING OF NURSERY STOCK SHALL TAKE PLACE BETWEEN MARCH 15TH AND APRIL 30TH OR SEPTEMBER 15TH - NOVEMBER 15TH.
2. ALL PLANTS SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.
3. ALL BACKFILL PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING.
4. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:

- 1 PART PEAT MOSS
 - 1 PART COMPOSTED COW MANURE BY VOLUME
 - 3 PARTS TOPSOIL BY VOLUME
- 21 GRAMS 'AGRIFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS PER MANUFACTURER'S SPECIFICATIONS.
- A 1/2" LAYER OF HAY OR STRAW SHALL BE PLACED OVER THE ROOT AREA OF ALL PLANTINGS.
- ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION

1. SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE. SITE SHALL BE PROTECTED FROM EROSION AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT.
2. PLANTING AREAS NOT IMPACTED BY SITE GRADING SHALL BE INSTALLED AS PER PLANT SCHEDULE AND THE PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.
3. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS

1. MAINTENANCE OF PLANTINGS SHALL LAST FOR A PERIOD OF 24 MONTHS.

2. WATERING OF PLANTINGS SHALL BE CONDUCTED TWICE A MONTH DURING THE 1ST GROWING SEASON. WATERING MAY BE MORE OR LESS FREQUENT DEPENDING ON WEATHER CONDITIONS. DURING THE SECOND GROWING SEASON, ONCE A MONTH DURING MAY THROUGH SEPTEMBER.

3. REMOVAL OF INVASIVE EXOTICS AND NOXIOUS WEEDS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.

4. IDENTIFICATION OF SERIOUS PLANT PESTS AND DISEASES, TREATMENT WITH APPROPRIATE AGENT.

5. PRUNING OF DEAD BRANCHES.

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

GUARANTEE REQUIREMENTS

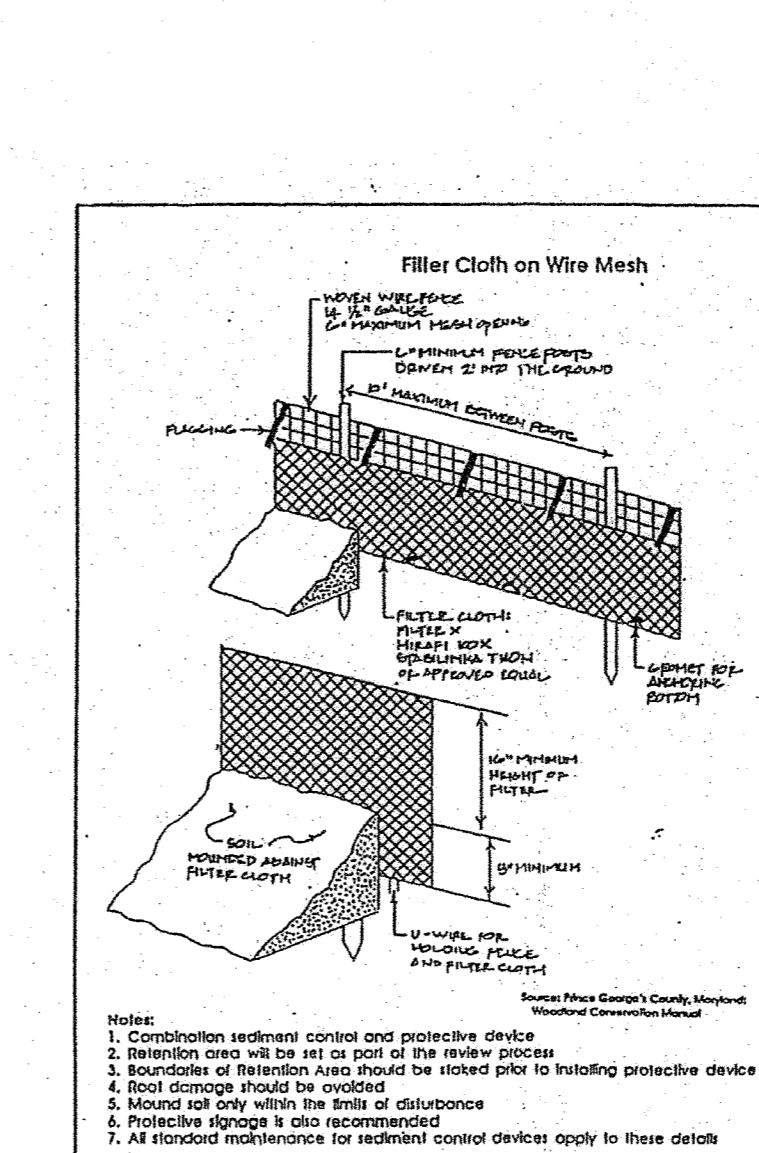
A 75 PERCENT SURVIVAL RATE OF FORESTATION PLANTINGS WILL BE REQUIRED AT THE END OF THE 24 MONTH MAINTENANCE PERIOD. ALL PLANT MATERIAL BELOW THE 75 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE NEXT GROWING SEASON.

SURETY FOR REFORESTATION

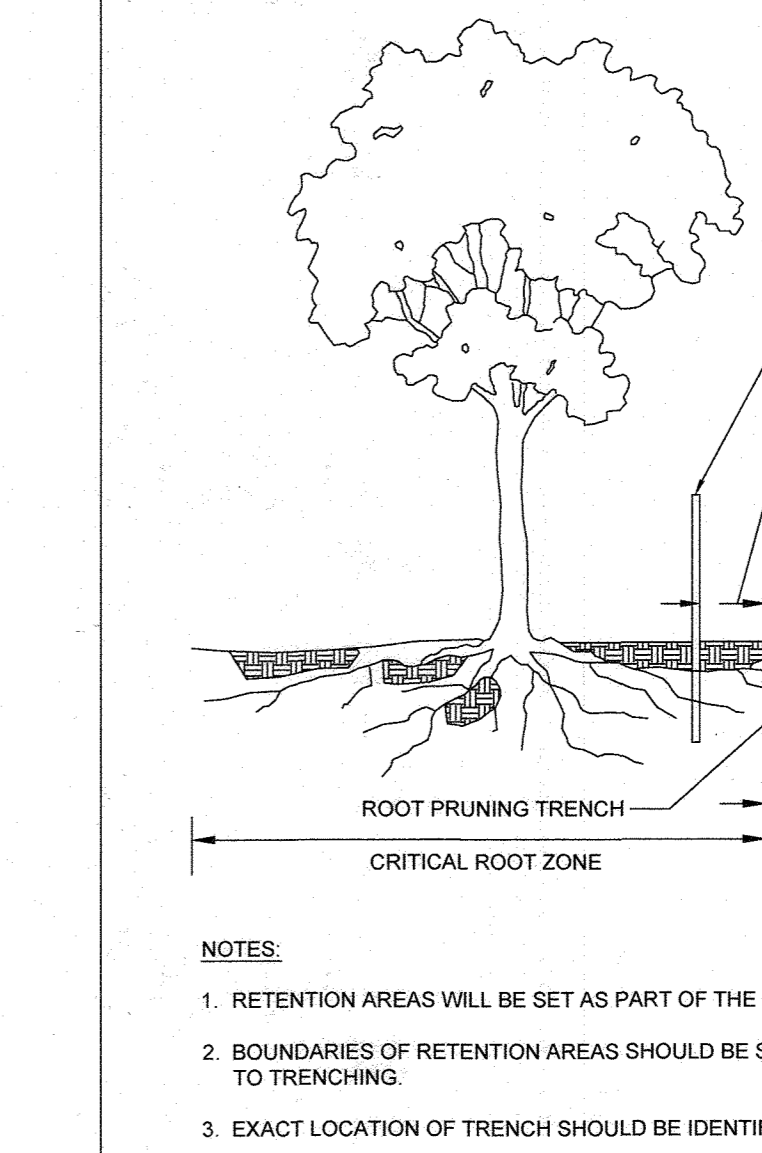
THE DEVELOPER SHALL POST A SURETY (BOND, LETTER OF CREDIT) TO ENSURE THAT FORESTATION PLANTINGS ARE COMPLETED. UPON ACCEPTANCE OF THE PLANTINGS BY THE COUNTY, THE BOND SHALL BE RELEASED.

FCP NOTES

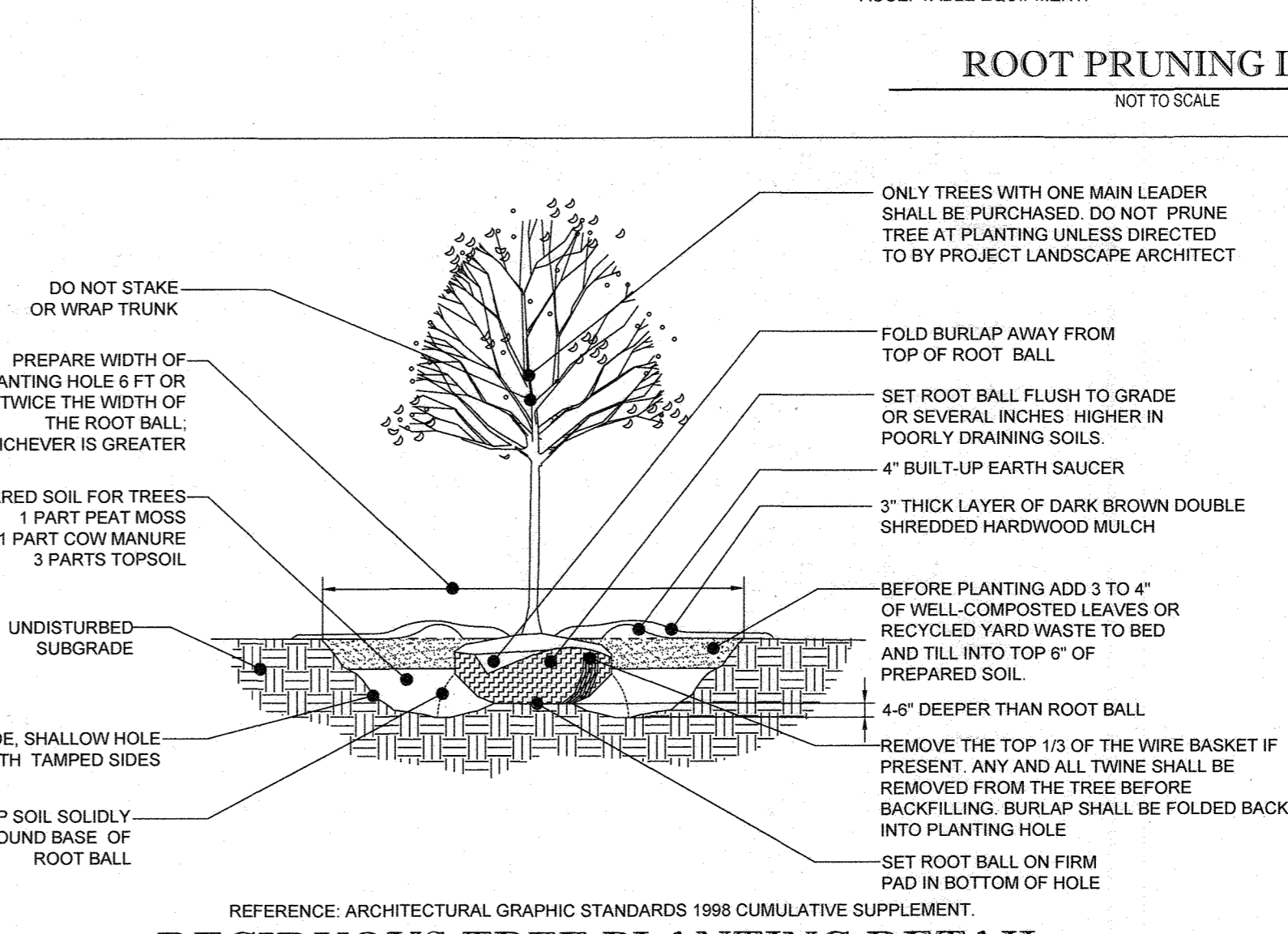
1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO ANY RESTRICTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
2. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO THE FCE REQUIREMENTS.
3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
4. THERE SHALL BE NO GRADING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS AUTHORIZED BY THE HOWARD COUNTY ENGINEER.
5. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN THE FOREST CONSERVATION EASEMENT.
6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. FENCING SHALL BE INSTALLED ALONG LIMITS OF DISTURBANCE OCCURRING WITHIN 50 FEET OF THE PROPOSED FCE LIMITS.
7. PERMANENT SIGNAGE WILL BE POSTED AT 60-100 FOOT INTERVALS ALONG ALL FCE LIMITS.
8. THE FOREST CONSERVATION ACT REQUIREMENTS FOR THIS PROJECT WILL BE MET THROUGH THE RETENTION OF 80 ACRES OF NET TRACT AREA FOREST WITHIN THE LIMITS OF A FOREST CONSERVATION EASEMENT AND A REFORESTATION OBLIGATION ON THE AFFORESTATION AREA. THE FOREST CONSERVATION OBLIGATION WILL BE LIMITED TO INDIVIDUAL PLANTING LOCATIONS.
9. EXISTING FOREST CALCULATIONS DIFFER BETWEEN THE APPROVED FOREST STAND DELINEATION AND THE FOREST CONSERVATION PLAN. THE FOREST CONSERVATION PLAN IS THE BASIS FOR THE FCE. THE APPROXIMATE FLOODPLAIN LIMITS ON THE FCP WERE LARGER THAN THOSE CALCULATED IN THE MAPPED FLOODPLAIN LIMITS. THE APPROXIMATE FLOODPLAIN LIMITS ON THE FCP WERE LARGER THAN THOSE CALCULATED IN THE MAPPED FLOODPLAIN LIMITS. THE APPROXIMATE FLOODPLAIN LIMITS ON THE FCP WERE LARGER THAN THOSE CALCULATED IN THE MAPPED FLOODPLAIN LIMITS. THE APPROXIMATE FLOODPLAIN LIMITS ON THE FCP WERE LARGER THAN THOSE CALCULATED IN THE MAPPED FLOODPLAIN LIMITS.



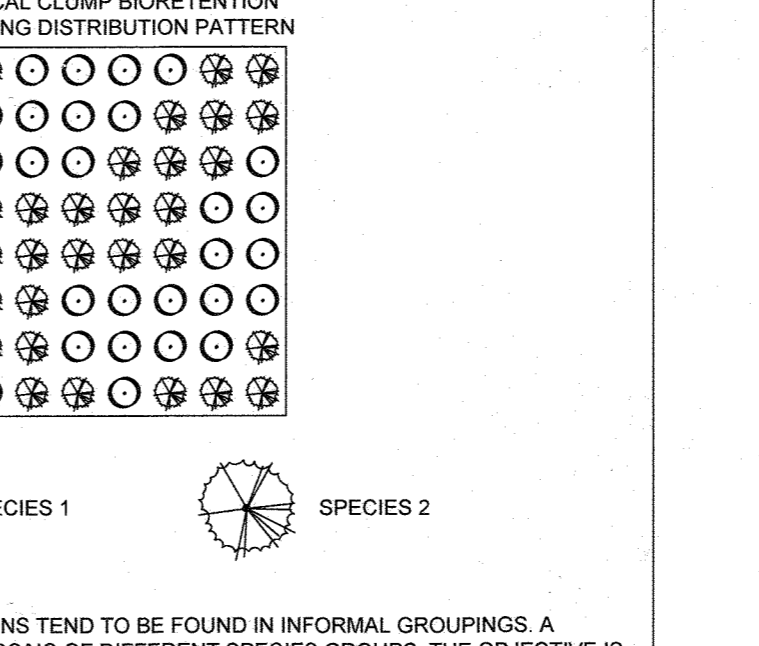
PROTECTIVE TREE FENCE DETAIL
NOT TO SCALE



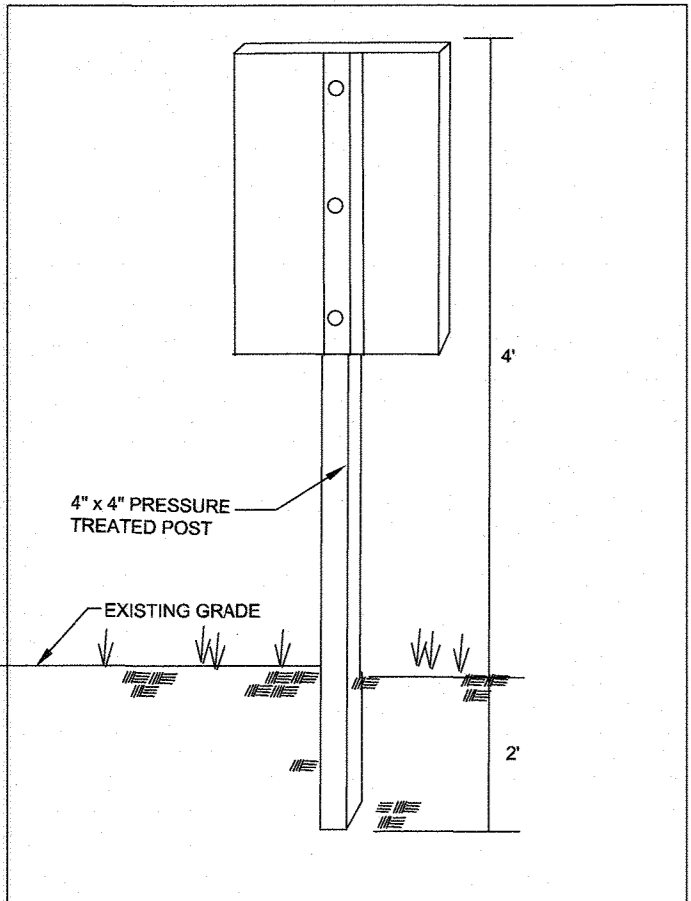
ROOT PRUNING DETAIL
NOT TO SCALE



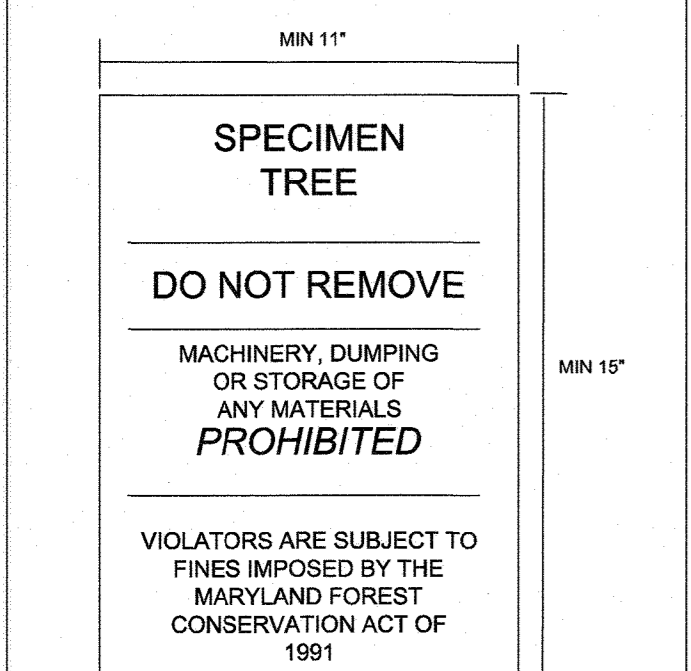
DECIDUOUS TREE PLANTING DETAIL
REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT.
NOT TO SCALE



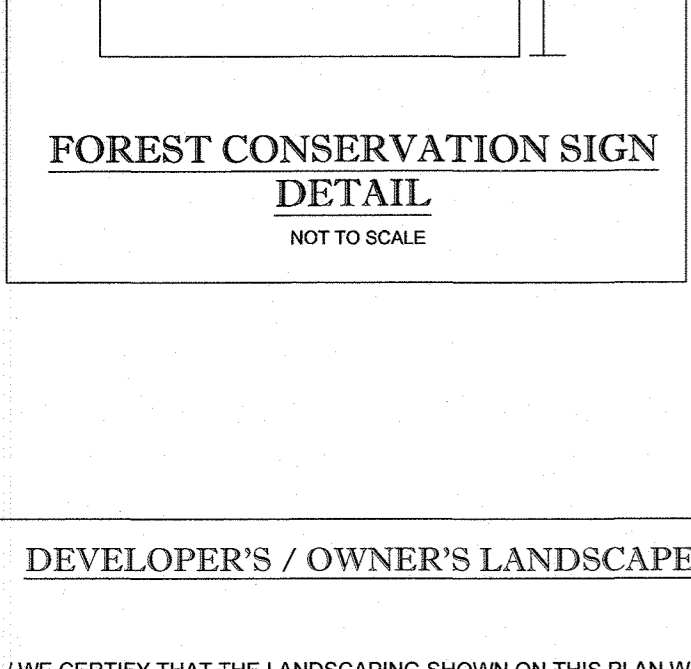
PLANTING DISTRIBUTION PATTERN DETAIL
NOT TO SCALE



FOREST RETENTION AREA
MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS PROHIBITED
VIOLATORS ARE SUBJECT TO FINES IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991



SPECIMEN TREE
DO NOT REMOVE
MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS PROHIBITED
VIOLATORS ARE SUBJECT TO FINES IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991



FOREST CONSERVATION SIGN DETAIL
NOT TO SCALE

DEVELOPER'S / OWNER'S LANDSCAPE CERTIFICATE

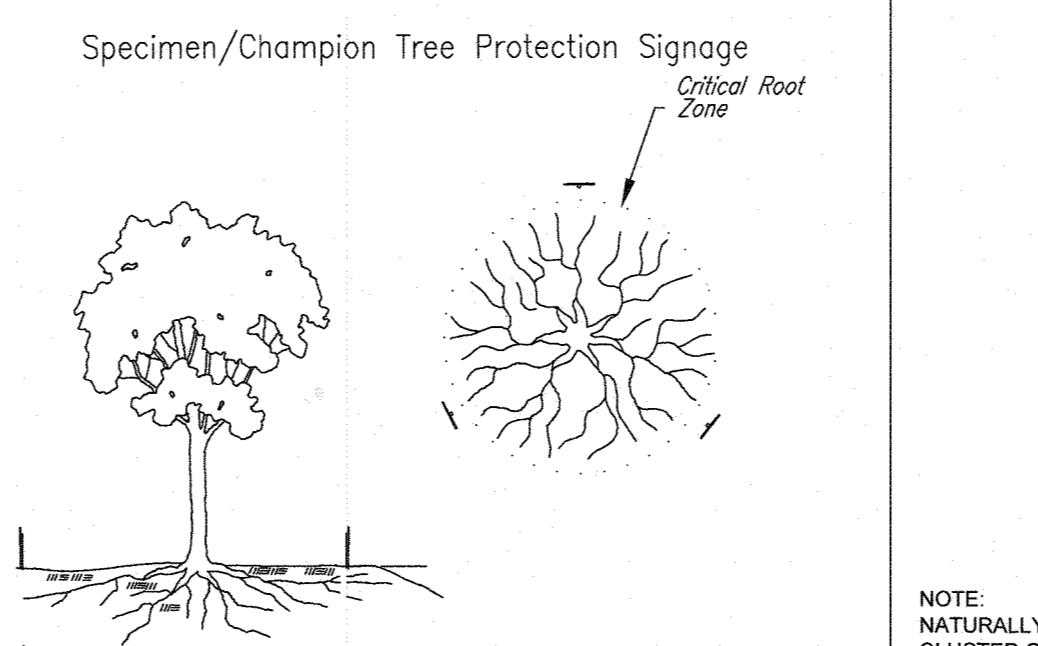
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.121 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DEVELOPER'S / OWNER'S NAME: _____ DATE: 8/21/18

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS: _____ DATE: 10/11/2018

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT: _____ DATE: 11-26-18

CHIEF, DEVELOPMENT ENGINEERING DIVISION: _____ DATE: 10-26-18



- Notes:
1. Retention Areas will be set as part of the review process.
 2. Boundaries of Retention Areas/Critical Root Zones should be marked with signage prior to construction.
 3. Signs should be placed at edge or 1-foot outside the Critical Root Zone.
 4. Signs should be placed around each specimen tree as indicated on the plan.

BOHLER ENGINEERING

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

RALEIGH, NC
LEHIGH VALLEY, PA
BOSTON, MA
NEW YORK, NY
BALTIMORE, MD
NEW JERSEY
ATLANTA, GA
TAMPA, FL
SOUTH FLORIDA
PHILADELPHIA, PA
CENTRAL VIRGINIA

REVISIONS

REV	DATE	COMMENT	BY
1	6/9/23	NO AS-BUILT INFO	PMG

NOT APPROVED FOR CONSTRUCTION

PROJECT NO: MD162006
DRAWN BY: AVIC
CHECKED BY: JR
DATE: 11/8/17
SCALE: N.T.S.
CAD I.D.: F04

FINAL PLAN

FOR
OAK HILL SUBDIVISION
(RE-SUBDIVISION OF LOT 16)

LOCATION OF SITE
9692 OAK HILL DRIVE
ELLCOTT CITY, MD
MAP 30, GRID 3, PARCELS 368
(LOT 16) & 321
2ND ELEC. DISTRICT, ZONED R-20
HOWARD COUNTY

BOHLER ENGINEERING

901 DULANEY VALLEY ROAD, SUITE 801
TOWSON, MARYLAND 21284
Phone: (410) 821-7900
Fax: (410) 821-7987
MD@BohlerEng.com

E.R. McWILLIAMS

REGISTERED LANDSCAPE ARCHITECT

FOR REV. 1 ONLY
6-9-23

FOREST CONSERVATION NOTES & DETAILS

SHEET NUMBER: 17 of 18

PROFESSIONAL CERTIFICATION

I, ERIC S. McWILLIAMS, HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 3697, EXPIRATION DATE: 9/20/19

OWNER/DEVELOPER: 6314 GOLDEN STAR PLACE
COLUMBIA, MD 21044
CONTACT: BRIAN GOLDSTEIN
PHONE: 301.875.8400

SUBDIVISION NAME: OAK HILL SUBDIVISION
SECTION/AREA: N/A
DEED #: 00457 / 00477 & 16883 / 00498

TAX MAP: 30 GRID: 3 ZONED: R-20
PARCELS: 368 (LOT 16) & 321
2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

PREVIOUS FILE NO.: F-78-191, WP-17-014, WP-17-112

