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STREET SIGN CHART				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
MANNER HOUSE WAY	0+49	19' L	STOP	R1-1
MANNER HOUSE WAY	7+17	0	NO PARKING	R7-1(1)
MANNER HOUSE WAY	6+80	24' R	RANGE OF ADDRESSES (NO CODE)	
MANNER HOUSE WAY	2+69	16' R	NO PARKING	R7-1
MANNER HOUSE WAY	2+69	16' L	NO PARKING	R7-1
MANNER HOUSE WAY	4+41	17' R	NO PARKING	R7-1
MANNER HOUSE WAY	4+59	17' L	NO PARKING	R7-1

STREET LIGHT CHART				
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE	
MANNER HOUSE WAY	0+57	16' R		
MANNER HOUSE WAY	2+72	16' R	COLONIAL POST-TOP FIXTURE (LED-100) MOUNTED ON	
MANNER HOUSE WAY	5+47	16' R	14' BLACK FIBERGLASS POLE	
MANNER HOUSE WAY	6+78	17' L		

STORMWATER MANAGEMENT PRACTICES				
LOT NO.	STREET ADDRESS	DRY WELLS M-5 (Y/N)	MICRO BIO-RETENTION M-6 (Y/N)	BIO-RETENTION F-6 (Y/N)
1	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
2	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
3	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
4	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
5	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
6	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
7	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
8	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
9	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
10	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
11	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
12	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
13	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
14	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
15	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
16	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)
17	X	Y	Y PROVIDED BY M-6(3)	Y PROVIDED BY F-6(1)

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the plan as shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

Paul Gerard Cavanaugh
Date: Nov 11, 2022
PAUL GERARD CAVANAUGH #27020

STREET ADDRESS CHART	
LOT NO.	STREET ADDRESS
1	5027 MANNER HOUSE WAY
2	5031 MANNER HOUSE WAY
3	5035 MANNER HOUSE WAY
4	5056 MANNER HOUSE WAY
5	5052 MANNER HOUSE WAY
6	5049 MANNER HOUSE WAY
7	5044 MANNER HOUSE WAY
8	5040 MANNER HOUSE WAY
9	5036 MANNER HOUSE WAY
10	5032 MANNER HOUSE WAY
11	5028 MANNER HOUSE WAY
12	5024 MANNER HOUSE WAY
13	5020 MANNER HOUSE WAY
14	5012 MANNER HOUSE WAY
15	5008 MANNER HOUSE WAY
16	5004 MANNER HOUSE WAY
17	5000 MANNER HOUSE WAY

LEGEND	
SYMBOL	DESCRIPTION
[Pattern]	FOREST CONSERVATION EASEMENT (REFORST.)
[Pattern]	PUBLIC S.W.M. EASEMENT
[Pattern]	PROP. PAVING
[Pattern]	MATCHLINE

REVISIONS		
NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning
[Signature] Date: 10/16/20
 Chief, Division of Land Development

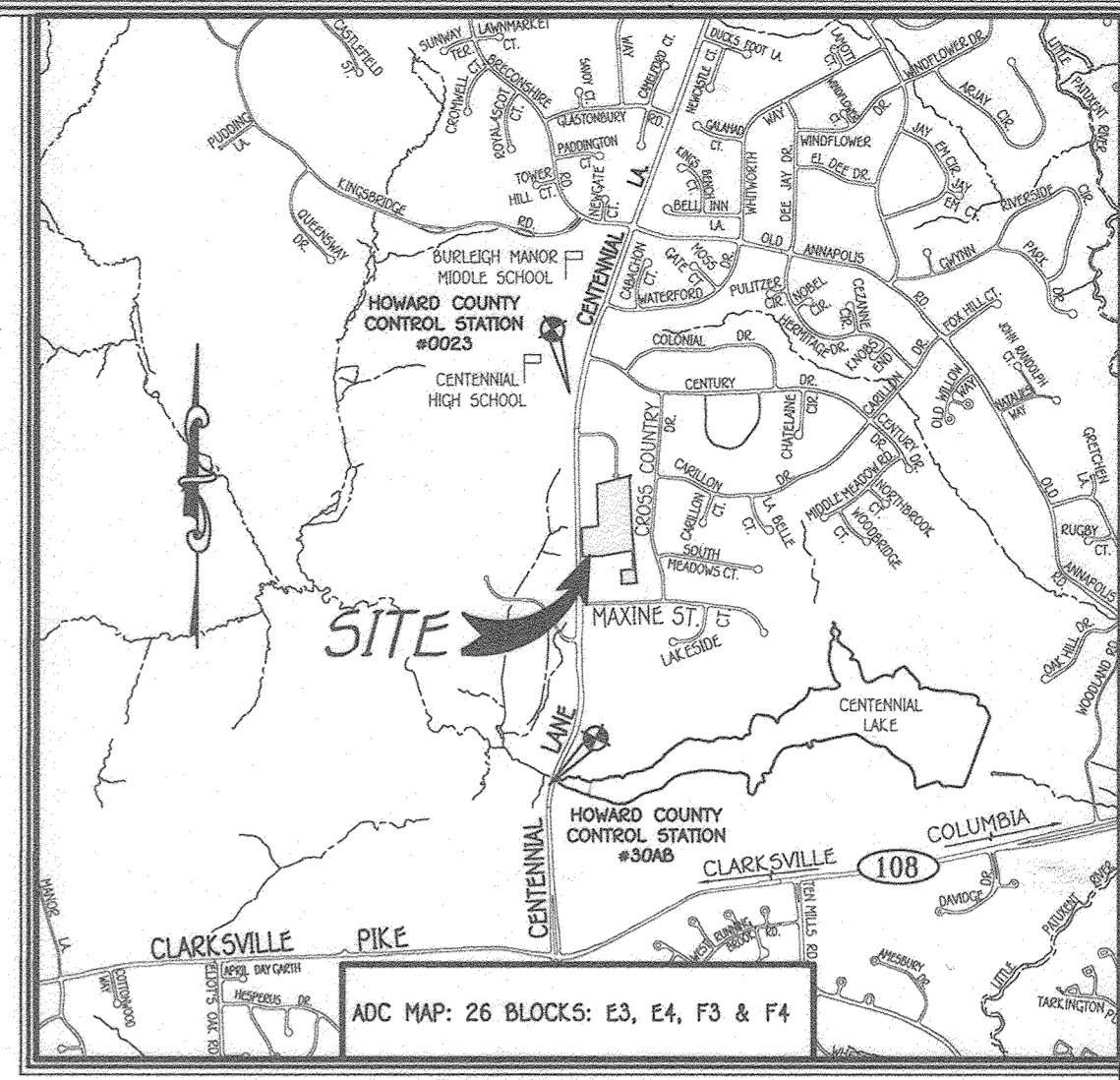
Approved: Howard County Department of Public Works
[Signature] Date: 9/4/20
 Chief, Development Engineering Division

Approved: Howard County Department of Public Works
[Signature] Date: 8/21/2020
 Chief, Bureau of Highways

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

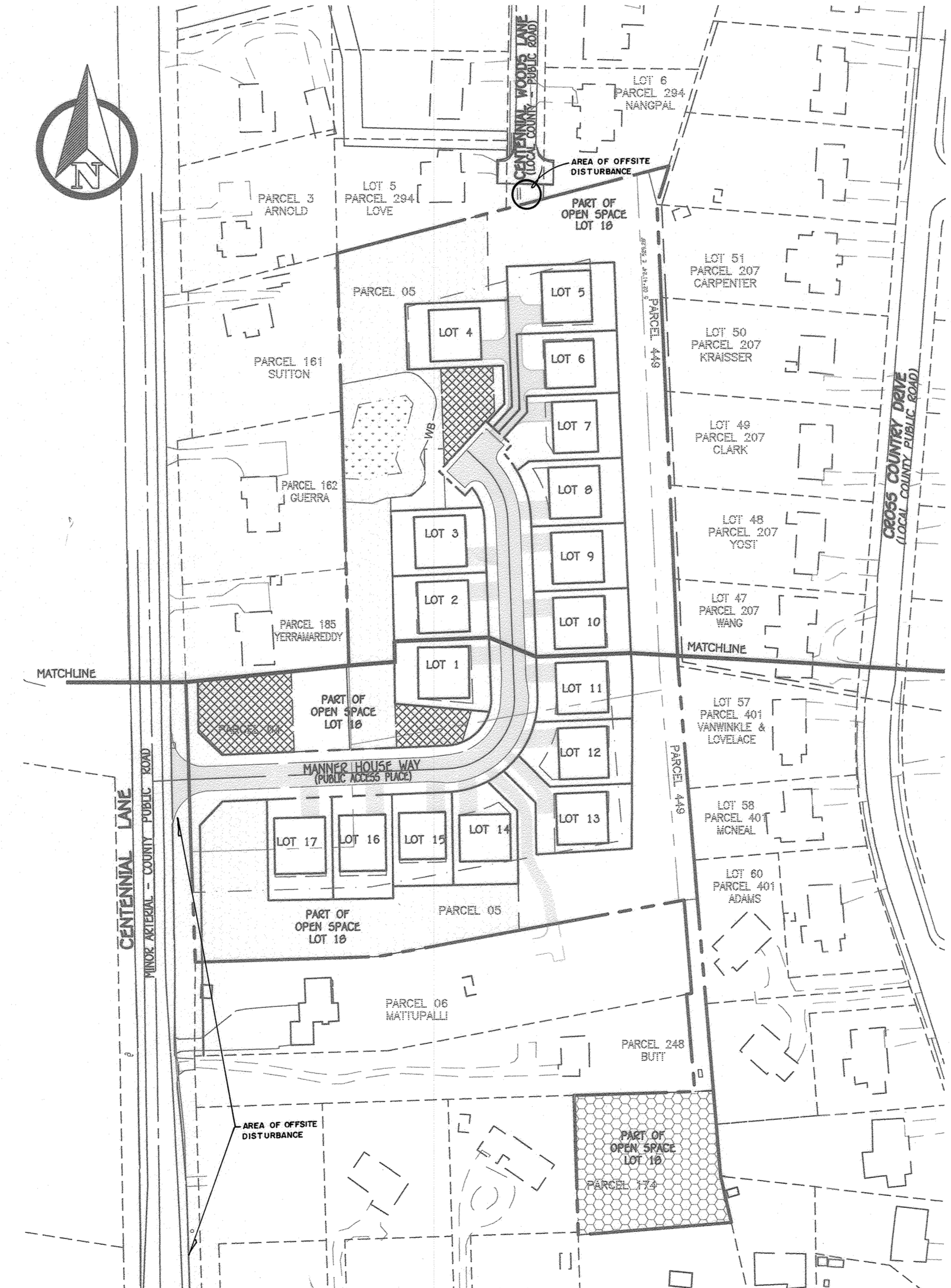
CENTENNIAL RESERVE

LOTS 1 THRU 17; OPEN SPACE LOT 18
ZONING: R-20 (RESIDENTIAL: SINGLE DISTRICT)
TAX MAP No. 30 GRID No. 01 PARCEL Nos. 04, 05, 174, and 449
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



SITE ANALYSIS DATA CHART

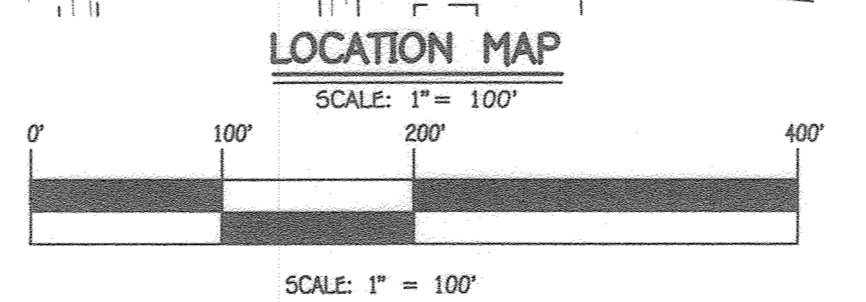
- A. TOTAL AREA OF THIS SUBMISSION = 8.13 AC.
 - PARCEL 4 = 0.76 AC.
 - PARCEL 5 (FIRST PARCEL) = 4.12 AC.
 - PARCEL 5 (SECOND PARCEL) = 2.29 AC.
 - PART OF PARCEL 174 = 0.52 AC.
 - PARCEL 449 = 0.45 AC.
 TOTAL = 8.13 AC.
- B. LIMIT OF DISTURBED AREA = Within property boundary = 6.09 AC.
 Offsite = 0.363 AC.
 TOTAL = 6.45 AC.
- C. PRESENT ZONING DESIGNATION = R-20; UTILIZING R-ED ZONING
- D. PROPOSED USE: SINGLE FAMILY DETACHED HOUSING
- E. NET TRACT AREA = 8.13 AC + 0.0 AC = 8.13 AC.
 (TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPE AREA)
 (8.13 AC - 0.0 AC + 0.0 AC) = 8.13 AC
- F. DENSITY ALLOWED:
 2 UNITS/ACRE X 8.13 = 16 UNITS
 +1 UNIT IMPORTED FROM BELMONT DUE TO USE OF R-ED ZONING
 DENSITY PROPOSED = 17 UNITS
- G. OPEN SPACE TABULATION:
 - OPEN SPACE REQUIRED = 4.056 AC +/- (8.13 AC x 50%)
 - TOTAL OPEN SPACE PROVIDED = 4.329 AC +/-
 NON-CREDITED = 0.195 AC.
 CREDITED = 4.171 AC.
 - RECREATION OPEN SPACE TABULATION:
 - RECREATION REQUIRED 300 SQ. FT. PER UNIT X 17 UNITS = 5,100 S.F.
 - TOTAL RECREATION SPACE PROVIDED = 5,259 S.F.
- H. AMENITY CREDITS: (UP TO 50% OF REQ'D REC O.S.) = 975 S.F.
 ASPHALT PATHWAY @ 325 S.F. X 3 = 2,000 S.F.
 GAZEBO 16' DIAMETER MAX CREDIT = 2,550 S.F.
 TOTAL PROVIDED = 7,829 S.F.
- I. BUILDING COVERAGE OF SITE: 50,422 sq ft 1.16 AC OR 14.3%
- J. PREVIOUS HOWARD COUNTY FILES: ECP-19-022; WP-19-047; SP-19-001;
- K. TOTAL AREA OF FLOODPLAIN LOCATED ON SITE 0.0 AC.
- L. TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.04 AC (0 AC 25% OR GREATER)
- M. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) LOCATED ON SITE = 0.28 AC.
- N. TOTAL GREEN OPEN AREA = 6.16 AC.
- O. TOTAL IMPERVIOUS AREA = 1.97 AC.
- P. AREA OF ESCAPEABLE SOILS = 0.04 AC. (EXCESS OF 15%)
- Q. PARKING TABULATION:
 - PARKING SPACE REQUIRED (17 UNITS X 2 SPACES/UNIT) = 34 SPACES
 - OVERFLOW VISITOR PARKING REQUIRED (17 UNITS X 0.3 SPACES/UNITS) = 5 SPACES
 - TOTAL PARKING REQUIRED = 40 SPACES
 - PARKING SPACES PROVIDED = 40 SPACES
 (17 UNITS X 4 (2 CAR GARAGE + 2 SPACES IN DRIVE) = 68 SPACES)



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.
- THE SUBJECT PROPERTY IS ZONED R-20 (PER 10/06/13 COMPREHENSIVE ZONING PLAN) AND BEING DEVELOPED USING R-ED CRITERIA AS PERMITTED BY SECTION 108.0.3 OF THE HOWARD COUNTY ZONING REGULATIONS.
- THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2013 ZONING REGULATIONS. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A SITE DEVELOPMENT PLAN.
- D.P.Z. FILE NO.: ECP-19-022; WP-19-047; SP-19-001 AND PS CASE NO. 444
- PROPERTY DEED REFERENCE: LIBER 1682, FOLD 00119 (CENTENNIAL RESERVE, LLC, PARCEL 5); LIBER 2868, FOLD 584 (PART OF PARCEL 174); LIBER 16372, FOLD 97 (HAMRICK, PARCEL 04); LIBER 1936, FOLD 493 (PARCEL 449)
- TOPOGRAPHY INFORMATION IS TAKEN FROM A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED ON OR ABOUT AUGUST, 2018 BY FISHER, COLLINS & CARTER, INC.
- BOUNDARY INFORMATION IS BASED ON A SURVEY PERFORMED ON OR ABOUT AUGUST, 2018 BY FISHER, COLLINS & CARTER, INC.
- COORDINATES BASED ON NAD83 HAYWARD COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY STATIONS NO. 0023 AND NO. 3048:
 ✓ HOWARD COUNTY MONUMENT NO. 0023 E. 577,373.143 N. 1,349,791.273 ELEV. 479.248
 ✓ HOWARD COUNTY MONUMENT NO. 3048 N. 973,239.309 E. 1,349,547,846 ELEV. 361.90
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT AND PUBLIC WATER AND SEWER SHALL BE UTILIZED WITHIN THIS DEVELOPMENT.
- PUBLIC SEWER FRONTAGE PROVIDED BY CONTRACT NO. 1471.
- PUBLIC WATER SERVICE PROVIDED BY CONTRACT NO. 163-W
- THE EXISTING WELL AND SEPTIC SYSTEM MUST BE PROPERLY ABANDONED WITH DOCUMENTATION SENT TO THE HEALTH DEPARTMENT PRIOR TO SIGNATURE OF THE FINAL RECORD PLAN.
- THE TRAFFIC STUDY DATED SEPTEMBER 26, 2019 FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP AND APPROVED ON JUNE 29, 2019.
- STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH CHAPTER 5 OF THE MARYLAND DEPARTMENT OF ENVIRONMENTAL AND GENERAL SERVICES DESIGN MANUAL, VOLUME 8 & 8, REVISED 2009. WE ARE PROVIDING STORM WATER MANAGEMENT BY THE USE OF 38 (M-5) DEWELLS AND 4 (M-6) MICRO-BIORETENTION FACILITIES TO MEET AND EXCEED THE REQUIRED 250 VOLUME.
- PERMITS FOR STORMWATER COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTICK AND THE ROAD R/W LINE AND NOT ONTO THE PIPESTICK LOT DRIVEWAY.
- NO UTILITIES ARE LOCATED ON-SITE BASED ON THE HOWARD COUNTY GROUND INVENTORY MAP.
- E.B.L. DENOTES BUILDING RESTRICTION LINE.
- FOREST STAND DELINEATION AND A WETLAND REPORT DATED NOVEMBER 11, 2018 WERE PREPARED BY ECO-SCIENCE PROFESSIONAL, INC. AND APPROVED ON JUNE 29, 2019.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES FOR THE FOLLOWING: (1) DRIVEWAY TO LOT 1; (2) DRIVEWAY TO LOT 2; (3) DRIVEWAY TO LOT 3; (4) DRIVEWAY TO LOT 4; (5) DRIVEWAY TO LOT 5; (6) DRIVEWAY TO LOT 6; (7) DRIVEWAY TO LOT 7; (8) DRIVEWAY TO LOT 8; (9) DRIVEWAY TO LOT 9; (10) DRIVEWAY TO LOT 10; (11) DRIVEWAY TO LOT 11; (12) DRIVEWAY TO LOT 12; (13) DRIVEWAY TO LOT 13; (14) DRIVEWAY TO LOT 14; (15) DRIVEWAY TO LOT 15; (16) DRIVEWAY TO LOT 16; (17) DRIVEWAY TO LOT 17; (18) DRIVEWAY TO LOT 18.
- STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (N 25 LOADING).
- GRADE ELEMENTS CAPABLE OF SAFELY PAVING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRAINAGE SURFACE.
- MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- THIS PLAN IS SUBJECT TO CONFORMANCE WITH THE FOLLOWING: (1) DRIVEWAY TO LOT 1; (2) DRIVEWAY TO LOT 2; (3) DRIVEWAY TO LOT 3; (4) DRIVEWAY TO LOT 4; (5) DRIVEWAY TO LOT 5; (6) DRIVEWAY TO LOT 6; (7) DRIVEWAY TO LOT 7; (8) DRIVEWAY TO LOT 8; (9) DRIVEWAY TO LOT 9; (10) DRIVEWAY TO LOT 10; (11) DRIVEWAY TO LOT 11; (12) DRIVEWAY TO LOT 12; (13) DRIVEWAY TO LOT 13; (14) DRIVEWAY TO LOT 14; (15) DRIVEWAY TO LOT 15; (16) DRIVEWAY TO LOT 16; (17) DRIVEWAY TO LOT 17; (18) DRIVEWAY TO LOT 18.
- THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT WILL BE FULFILLED BY ON-SITE REFORESTATION AND RESTORATION.
- PLEASE NOTE THAT FOR APPROVAL OF SECTION 16.1200(A)(1) 17 SPECIMEN TREES EXIST ON-SITE. THE SPECIMEN TREES (17) WILL BE REMOVED AND REPLACED BY PLANTING THE NATIVE TREES (17) ON-SITE. THE REQUIRED SPECIMEN LANDSCAPE WILL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN. IN THE AMOUNT OF \$14,250.00 BASED ON (99) SHADE TREES @ \$300.00 ea. AND (17) DECIDUOUS TREES @ \$150.00 ea.
- THE REQUIRED STREET TREE PLANTING WILL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN. IN THE AMOUNT OF \$6,900.00 BASED ON (23) SHADE TREES @ \$300.00 ea. AND (17) DECIDUOUS TREES @ \$150.00 ea.
- APPROVAL IS SUBJECT TO CONFORMANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR - THE REQUIRED SPECIMEN LANDSCAPE WILL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN. IN THE AMOUNT OF \$14,250.00 BASED ON (99) SHADE TREES @ \$300.00 ea. AND (17) DECIDUOUS TREES @ \$150.00 ea.
- DECLARATION OF COVENANTS AND RESTRICTIONS FOR CENTENNIAL RESERVE HOMEOWNERS ASSOCIATION ASSOCIATION INC. HAS BEEN RECORDED SIMULTANEOUSLY WITH THE FINAL PLAN. AT \$50,500.00 FT.).
- THE PRIVATE USE - IN-COMMON DRIVEWAY ACCESS EASEMENT AND MAINTENANCE AGREEMENT FOR SHARED DRIVEWAY ON LOTS 4 THRU 7 AND LOT 13 & PARCEL 6 IS RECORDED SIMULTANEOUSLY WITH THE PLAN.
- SUBDIVISION IS SUBJECT TO SECTION 104.0 OF THE ZONING REGULATIONS, AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.I.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED. THE DEVELOPERS SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DEPARTMENT OF HOUSING TO INDICATE HOW THE M.I.H.U. REQUIREMENT WILL BE MET. THE M.I.H.U. AGREEMENT AND COVENANTS WILL BE PUBLICLY OWNED AND JOINTLY MAINTAINED.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS/OWNERS' RESPONSIBILITY FOR ALL THE USE-IN-COMMON DRIVEWAYS IN THE DEVELOPMENT. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-9752 FOR DETAILS AND COST ESTIMATES.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME 8 (2008), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- FOR PROPOSED PUBLIC ROOMS WITH 24' WIDTH, DRP-TRAFFIC MAY RESTRICT PARKING ALONG ONE SIDE OF THE ROADWAY TO ALLOW FIRE AND EMERGENCY RESPONSE VEHICLES TO SAFELY MANUEVER THROUGH THIS ROADWAY.
- ARTICLES OF INCORPORATION FOR THE HOMEOWNERS ASSOCIATION, INC. WILL BE FILED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION PRIOR TO RECORDEMENT OF THE FINAL PLAN.
- TRAFFIC CONTROL DEVICES:
 (a) THE R1-1 (STOP) SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
 (b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 (c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 (d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2-1/2" GALVANIZED STEEL, PERFORATED GUSSET PLATE, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) - 3" LONG. THE ANCHOR SHALL EXTEND ABOVE THE ROAD SURFACE AND BE WELDED ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
 (e) A NOISE STUDY WAS PERFORMED BY THE H&S GROUP ON SEPTEMBER 13, 2019, AND WAS EXPANDED TO INCLUDE THE NORTHERN SEGMENT ALONG CENTENNIAL LANE ON APRIL 6, 2019, AND APPROVED ON JUNE 25, 2019.

AS-BUILT SURVEY NOTE:
 THE INSTRUMENTS USED IN PERFORMING AS-BUILT SURVEY: 10 SECOND ROBOTIC TOTAL STATION & PRISM



OWNERS	DEVELOPER
PARCEL 04 LENNIS HAMRICK 4489 CENTENNIAL LANE ELLIOTT CITY, MD 21042	PARCEL 449 CENTENNIAL BUILDERS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044 PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGDOOTH ROAD SEVERNA PARK, MARYLAND 21146

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

Frank Manalansan II
 FRANK MANALANSAN II
 5/28/20

- OPEN SPACE LOT 18 WILL BE OWNED BY THE HOMEOWNERS ASSOCIATION.
- USING THE DENSITY/CLUSTER EXCHANGE OPTION DESCRIBED IN SECTION 108.0(C)(2)(3) AND SECTION 128.0(C) OF THE ZONING REGULATIONS, THE DEVELOPER REQUESTS FOR 1 DEED OF THE RESIDUAL LOTS/PARCELS SHOWN ON THE SUBDIVISION PLAN FOR CENTENNIAL RESERVE (SP-19-001) WILL BE TRANSFERRED FROM THE PROPERTY OF BELMONT. (E-20-010-S)
- DEED RECEIVING UNIT TABULATION:
 a. GROSS TRACT AREA = 8.13 AC
 b. NUMBER OF UNITS ALLOWED BY MATTER OF RIGHT = 16
 c. TOTAL NUMBER OF DEED UNITS REQUIRED TO BE TRANSFERRED = 1
 d. NUMBER OF PROPOSED UNITS = 17
- EXISTING STRUCTURE AT CENTENNIAL LANE WAS BUILT APPROXIMATELY IN 1961. BASED ON AN EMAIL FROM BOTH SURVEYS, RESOURCES AFFORDS THE HISTORIC PRESERVATION COMMISSION DOES NOT NEED TO REVIEW THIS DEMOLITION FOR ADVISORY COMMENTS.
- EXISTING UTILITIES AREA BASED ON MISS UTILITY DRAWINGS, FIELD LOCATIONS AND AVAILABLE COUNTY INFORMATION.
- SOIL BORINGS WERE EXCAVATED ON NOVEMBER 2, 2019 TO DETERMINE DEPTH TO ROCK OR WATER.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE WETLAND BUFFER.
- CENTENNIAL RESERVE DEVELOPMENT IS SUBJECT TO A 2% PROJECT RFL MEASURE FROM THE PROJECT BOUNDARY AND A 25' REAR SETBACK MEASURED FROM THE LOT LINES. ACCESSORY STRUCTURES ARE NOT PERMITTED WITHIN THE 75' PROJECT RFL.
- IN ACCORDANCE WITH SECTION 129 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR SHELTERS NOT MORE THAN 16' FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, CORNERS OR DECKS OPEN OR ENCLOSED. MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACKS. THE 15' MINIMUM DISTANCE BETWEEN STRUCTURES DOES NOT APPLY TO THOSE REFERENCED FEATURES NOR BETWEEN OPEN DECKS AND A DWELLING STRUCTURE OR ANOTHER DECK. AS AN ALTERNATIVE TO THE 15' DISTANCE, SETBACKS MAY BE REDUCED TO 5 FEET.
- THIS R-20 ZONED SUBDIVISION IS BEING DEVELOPED AS R-ED AND IS SUBJECT TO ZONING BILL NO. 2, "SECTION 182.0A.1 OF THE ZONING REGULATIONS (R-ED) WHICH ALLOWS SUNROCKS AND SOON EXTENDING NOT MORE THAN 10 FEET INTO THE SETBACK ALONG A MAJORITY OF THE REAR LOT LINE FOR R-ED LOTS RECORDED AFTER THE EFFECTIVE DATE OF 5/13/12." Q.
- NO DECKS, PATIOS, SHEDS, OR OTHER IMPROVEMENTS OR SURFACES SHALL EXTEND INTO THE DRAINAGE EASEMENT AT THE REAR OF LOTS 5 THRU 13.
- SUBDIVISION IS SUBJECT TO CONFORMANCE WITH APPROVAL ON JUNE 12, 2019 FOR THE REMAINING REQUESTS. THE PLANNING DEPARTMENT APPROVED THESE REQUESTS FOR AN ALTERNATIVE COMPLIANCE OF SECTION 16.1205(A)(7) - ON-SITE FOREST RETENTION AND SECTION 16.1197(F)(1) - ACCESS RESTRICTIONS.
- APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 (a) FIELD COMMENTS DIRECT ACCESS INTO CENTENNIAL LANE WILL ONLY BE PERMITTED IF THE PROPOSED ACCESS MEETS ALL CURRENT DESIGN STANDARDS REGARDING LAYOUT, SLOPES AND SIGHT DISTANCES. ANY DEFICIENCY MUST BE REMEDIATED OR BY THE DIRECT ACCESS TO CENTENNIAL LANE WILL NOT BE PERMITTED.
 (b) REMOVAL OF SPECIMEN TREE #15 SHALL BE MITIGATED BY PLANTING 2 NATIVE TREES OF 2.5" CALIPER, PREFERABLY WITHIN THE FOREST CONSERVATION EASEMENT. PLEASE ADD THE TREES FOR MITIGATION TO THE LANDSCAPE PLANS WITH A NOTE IDENTIFYING WHICH TREE SATISFIES THIS CONDITION OF APPROVAL.
 (c) FOR RELIEF OF SECTION 18.1110(N)(1) ACCESS RESTRICTIONS - AS AN ALTERNATIVE COMPLIANCE, THE DEVELOPERS SHALL PROVIDE THE PASSED WALKING PATH, AS PROPOSED IN THE EXHIBITS AND PLANS THAT CONNECTS CENTENNIAL RESERVE WITH CENTENNIAL WOODS LANE.
 (d) UPDATE ANY NOTES ON THE PLAN THAT WERE REQUIRED BY APPROVAL DATED JANUARY 24, 2019 AND PERTAIN TO THE ADDITION DEED FOR LOT 5 TO INDICATE THAT SINCE LOT 5 IS NO LONGER PART OF THE SUBDIVISION, THE APPROVAL FOR RELIEF OF SECTION 16.147 IS VOID.
 (e) APPROVAL IS SUBJECT TO CONFORMANCE WITH ALL SEC COMMENTS REGARDING APPROVAL OF SP-19-001 CENTENNIAL RESERVE.
 (f) THE PREVIOUS APPROVAL OF SECTION 16.147 FINAL SUBDIVISION PLAN AND FINAL PLAN IS VOID SINCE SECTION 16.147 HAS BEEN REVISED.
 (g) THE REQUIRED SPECIMEN LANDSCAPE WILL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN. IN THE AMOUNT OF \$14,250.00 BASED ON (99) SHADE TREES @ \$300.00 ea. AND (17) DECIDUOUS TREES @ \$150.00 ea.
 (h) THE REQUIRED STREET TREE PLANTING WILL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN. IN THE AMOUNT OF \$6,900.00 BASED ON (23) SHADE TREES @ \$300.00 ea. AND (17) DECIDUOUS TREES @ \$150.00 ea.
- APPROVAL IS SUBJECT TO CONFORMANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR - THE REQUIRED SPECIMEN LANDSCAPE WILL BE POSTED AS PART OF THE DEVELOPERS AGREEMENT FOR THIS FINAL PLAN. IN THE AMOUNT OF \$14,250.00 BASED ON (99) SHADE TREES @ \$300.00 ea. AND (17) DECIDUOUS TREES @ \$150.00 ea.
- DECLARATION OF COVENANTS AND RESTRICTIONS FOR CENTENNIAL RESERVE HOMEOWNERS ASSOCIATION ASSOCIATION INC. HAS BEEN RECORDED SIMULTANEOUSLY WITH THE FINAL PLAN. AT \$50,500.00 FT.).
- THE PRIVATE USE - IN-COMMON DRIVEWAY ACCESS EASEMENT AND MAINTENANCE AGREEMENT FOR SHARED DRIVEWAY ON LOTS 4 THRU 7 AND LOT 13 & PARCEL 6 IS RECORDED SIMULTANEOUSLY WITH THE PLAN.
- SUBDIVISION IS SUBJECT TO SECTION 104.0 OF THE ZONING REGULATIONS, AT LEAST 10% OF THE DWELLING UNITS SHALL BE MODERATE INCOME HOUSING UNITS (M.I.H.U.) OR AN ALTERNATIVE COMPLIANCE WILL BE PROVIDED. THE DEVELOPERS SHALL EXECUTE A M.I.H.U. AGREEMENT WITH THE DEPARTMENT OF HOUSING TO INDICATE HOW THE M.I.H.U. REQUIREMENT WILL BE MET. THE M.I.H.U. AGREEMENT AND COVENANTS WILL BE PUBLICLY OWNED AND JOINTLY MAINTAINED.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS/OWNERS' RESPONSIBILITY FOR ALL THE USE-IN-COMMON DRIVEWAYS IN THE DEVELOPMENT. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-9752 FOR DETAILS AND COST ESTIMATES.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME 8 (2008), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- FOR PROPOSED PUBLIC ROOMS WITH 24' WIDTH, DRP-TRAFFIC MAY RESTRICT PARKING ALONG ONE SIDE OF THE ROADWAY TO ALLOW FIRE AND EMERGENCY RESPONSE VEHICLES TO SAFELY MANUEVER THROUGH THIS ROADWAY.
- ARTICLES OF INCORPORATION FOR THE HOMEOWNERS ASSOCIATION, INC. WILL BE FILED WITH THE STATE DEPARTMENT OF ASSESSMENTS AND TAXATION PRIOR TO RECORDEMENT OF THE FINAL PLAN.
- TRAFFIC CONTROL DEVICES:
 (a) THE R1-1 (STOP) SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
 (b) THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-2430) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 (c) ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 (d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2-1/2" GALVANIZED STEEL, PERFORATED GUSSET PLATE, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) - 3" LONG. THE ANCHOR SHALL EXTEND ABOVE THE ROAD SURFACE AND BE WELDED ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
 (e) A NOISE STUDY WAS PERFORMED BY THE H&S GROUP ON SEPTEMBER 13, 2019, AND WAS EXPANDED TO INCLUDE THE NORTHERN SEGMENT ALONG CENTENNIAL LANE ON APRIL 6, 2019, AND APPROVED ON JUNE 25, 2019.

REFERENCE FOR G.N. 43 & 44:
 ① 128.0.A.1.b. and 128.0.A.1.c. - Sub Regs
 ② 128.0.A.1.e. - Sub Regs
 ③ 107.0.D.5.c. - Zoning Regs
 THIS EXCEPTION APPLIES TO THE REAR LOT LINE AND NOT THE PROJECT RFL

TITLE SHEET
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
 TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 1 OF 24 F-20-010

"AS-BUILT"

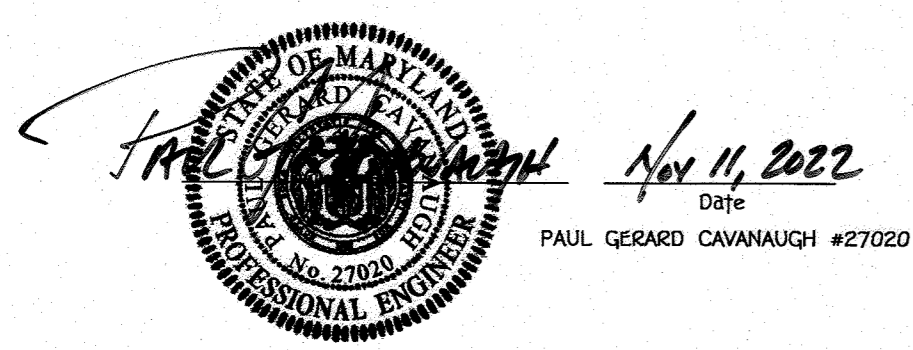
SOILS LEGEND				
SOIL	NAME	CLASS	K VALUE	
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20	
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20	
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	B	0.20	

Specimen Tree Chart

Key (X#)	Species	Size (in dbh)	CRZ (feet radius)	Comments
1	Tulip poplar	32.5	48.75	
2	Tulip poplar	31	46.5	
3	Tulip poplar	37	55.5	
4	Tulip poplar	37.5	56.25	twin stems
5	Tulip poplar	36	54	two specimen trunks joined at ground plus a 3" smaller trunk
6	Tulip poplar	44.5	66.75	fair, storm damage
7	Tulip poplar	31	46.5	
8	Black cherry	36	54	
9	Red oak	35	52.5	
10	Tulip poplar	43	64.5	
11	Tulip poplar	34	51	
12	Tulip poplar	35	52.5	
13	White pine	34	51	
14	White pine	31	46.5	
15	Tulip poplar	34	51	TO BE REMOVED

AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.



REVISIONS		
NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development *[Signature]* 10/10/20
Date

Chief, Development Engineering Division *[Signature]* 9/4/20
Date

Approved: Howard County Department Of Public Works

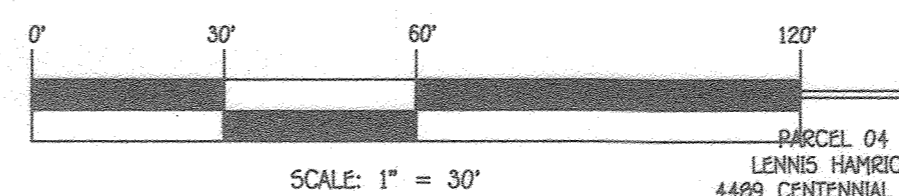
Chief, Bureau Of Highways *[Signature]* 8/21/2020
Date



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

[Signature] 5/28/20
Date



OWNERS

PARCEL 04
LENNIS HAMROCK
4489 CENTENNIAL LANE
ELIJAH CITY, MD 21042

PARCEL 449
CHITRAO BUILDINGS, INC.
5305 VILLAGE CENTER DRIVE
SUITE 305
COLUMBIA, MD 21044
PARCEL 174 & PARCEL 05
CENTENNIAL RESERVE, LLC
308 MAGOTHY ROAD
SEVERNA PARK, MARYLAND 21146

DEVELOPER

CENTENNIAL RESERVE, LLC
308 MAGOTHY ROAD
SEVERNA PARK, MARYLAND 21146
DAVE WOSSNER
240-319-1735

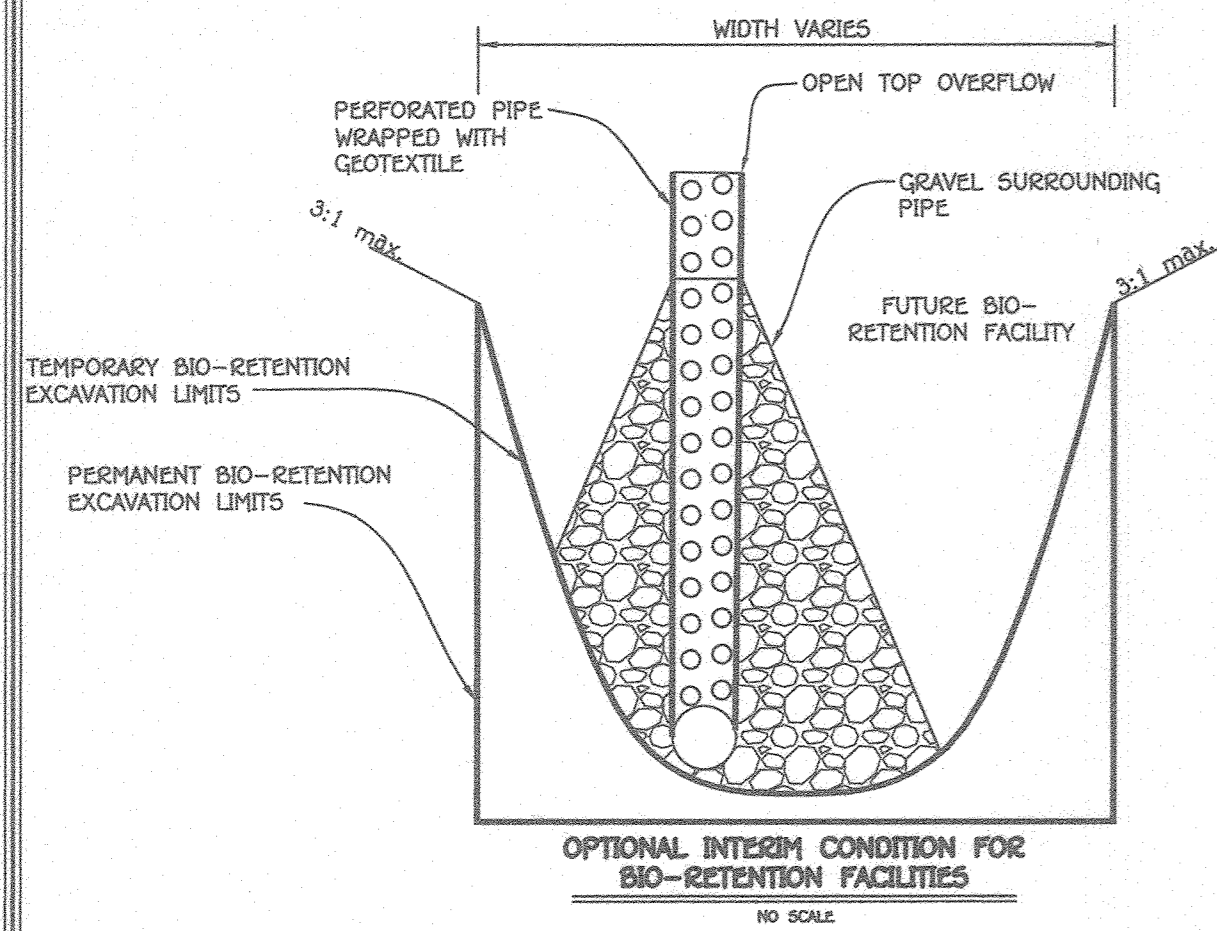
MATCHLINE SEE SHEET 3

EXISTING CONDITIONS AND DEMOLITION PLAN
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 2 OF 24

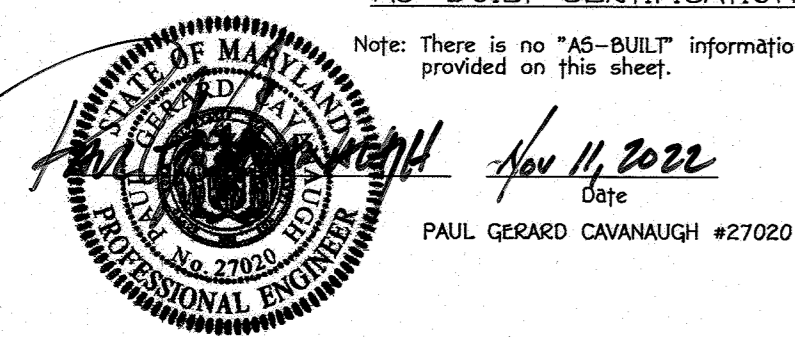
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

SOILS LEGEND			
SOIL	NAME	CLASS	K-VALUE
GgB	Glenelig loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelig loam, 8 to 15 percent slopes	B	0.20
GhB	Glenelig-Urban land complex, 0 to 8 percent slopes	B	0.20



AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.



DESIGN CERTIFICATION

I hereby certify that this Plan has been designed in accordance with current Maryland Erosion and Sediment Control Laws, Regulations and Standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Frank Manalansan II 5/28/20
 Designer's Signature Date
 FRANK MANALANSAN II 21476
 Printed Name Registration No. P.E., C.E., or R.L.A. (circle one)

OWNER/DEVELOPER CERTIFICATION

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

David Woessner 5/28/2020
 Owner's/Developer's Signature Date
 DAVID WOESSNER
 Printed Name & Title

Approved: This Plan is approved for Small Pond Construction, and Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John Roberts 6/10/20
 Howard Soil Conservation District Date

Approved: Department of Planning and Zoning

Chief, Division of Land Development 10/11/20
 Date
 Chief, Development Engineering Division 9.4.20
 Date
 Approved: Howard County Department of Public Works
 Chief, Bureau of Highways MK 8/21/2020
 Date

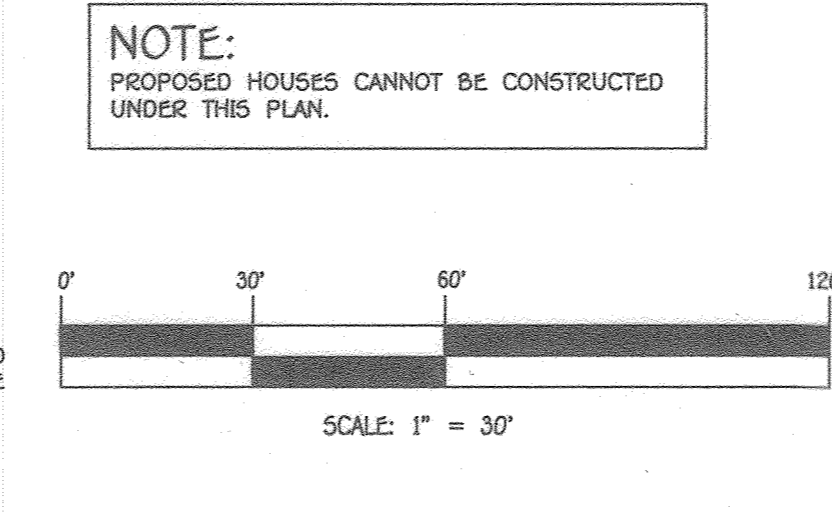
REVISIONS		
NO.	DESCRIPTION	DATE
1	REV. PATHWAY, REV. BARRICADE DETAIL NO.	8/18/22



PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional land surveyor under the laws of the State of Maryland, license No. 21476, expiration date: 7/14/21.

Frank Manalansan II 5/28/20
 Date



OWNERS		DEVELOPER	
PARCEL 04 LENNIS HARRICK 4489 CENTENNIAL LANE ELLCOTT CITY, MD 21042	PARCEL 449 CHATEAU BUILDERS, INC. 9305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044	CENTENNIAL RESERVE, LLC 308 MAGDOOTH ROAD SEVERNA PARK, MARYLAND 21146	DAVE WOESSNER 240-319-1735
PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGDOOTH ROAD SEVERNA PARK, MARYLAND 21146			

SEDIMENT AND EROSION CONTROL PLAN - PHASE 1 CENTENNIAL RESERVE

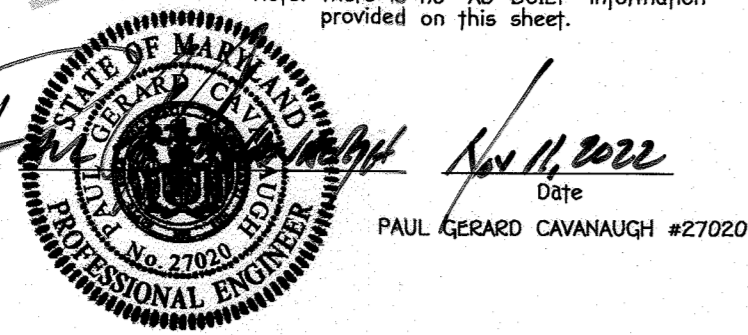
LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOs.:04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 4 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

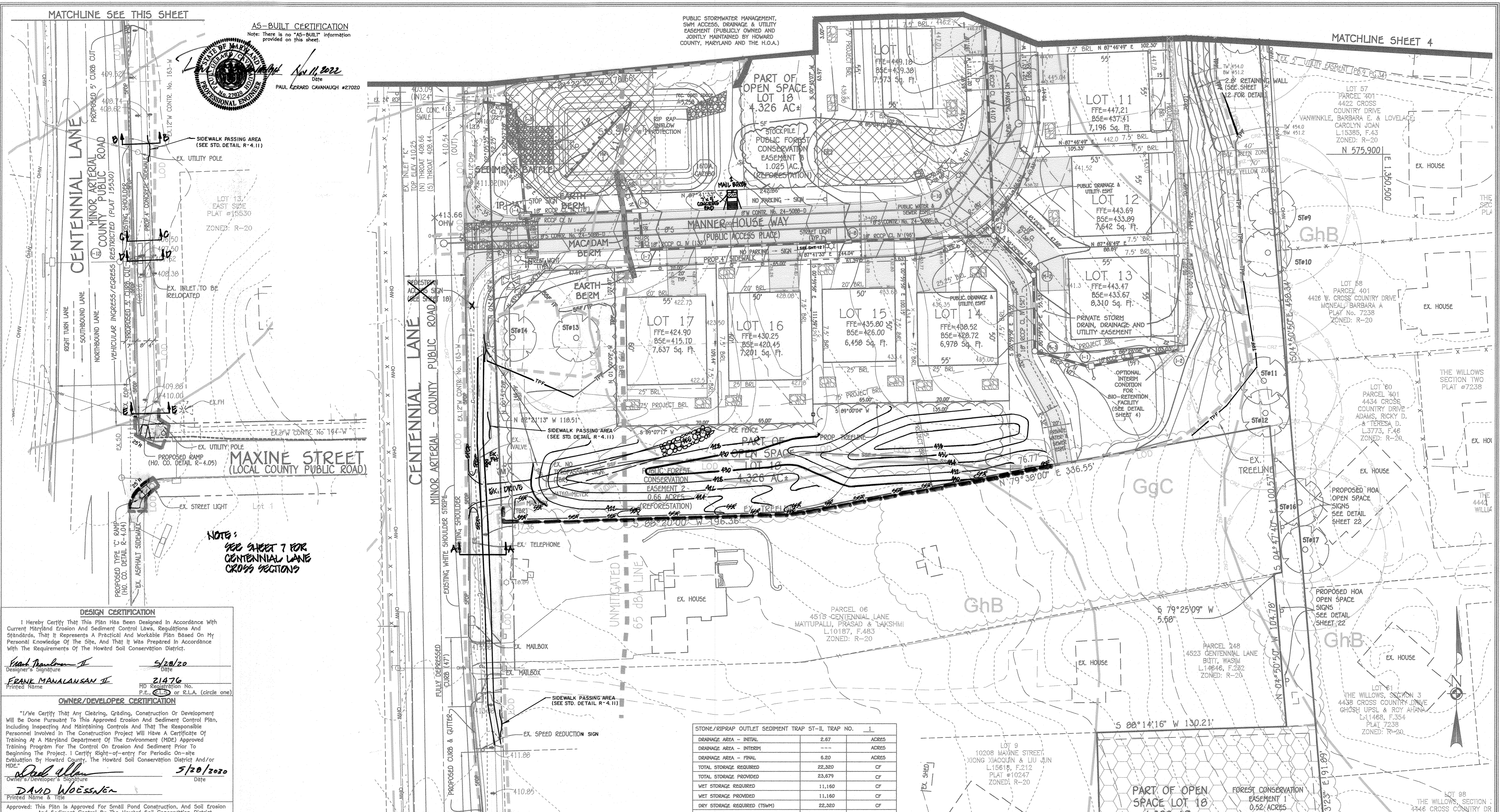
MATCHLINE SEE THIS SHEET

AS-BUILT CERTIFICATION
Note: There is no "AS-BUILT" information provided on this sheet.



PUBLIC STORMWATER MANAGEMENT, SWM ACCESS, DRAINAGE & UTILITY EASEMENT (PUBLICLY OWNED AND JOINTLY MAINTAINED BY HOWARD COUNTY, MARYLAND AND THE H.O.A.)

MATCHLINE SHEET 4



NOTE:
SEE SHEET 7 FOR CENTENNIAL LANE CROSS SECTIONS

DESIGN CERTIFICATION

I hereby certify that this plan has been designed in accordance with current Maryland Erosion and Sediment Control Laws, Regulations and Standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Frank Manalansan II 5/20/20
Designer's Signature Date
FRANK MANALANSAN II 21476
Printed Name Registration No.
P.E., C.E. or R.L.A. (circle one)

OWNER/DEVELOPER CERTIFICATION

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

David Woessner 5/20/2020
Owner's/Developer's Signature Date
DAVID WOESSNER
Printed Name & Title

Approved: This Plan is Approved For Small Pond Construction, And Soil Erosion And Sediment Control By The Howard Soil Conservation District.

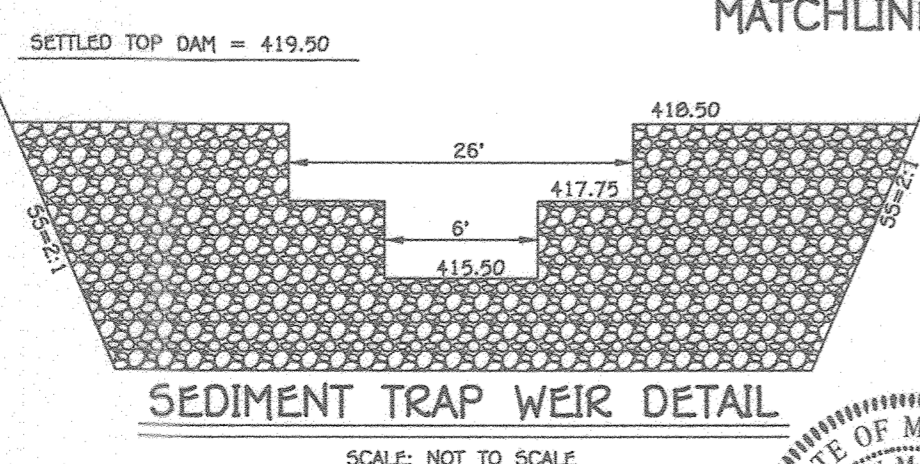
Howard Soil Conservation District 6/10/20
Date

Approved: Department of Planning And Zoning
Date

Approved: Howard County Department Of Public Works
Date

Chief, Bureau of Highways MK 8/21/2020
Date

Table with 3 columns: NO., DESCRIPTION, DATE. Row 1: 1. REV. WALK ALONG CENTENNIAL LANE, ADD MAILBOX PAD. 8/19/22

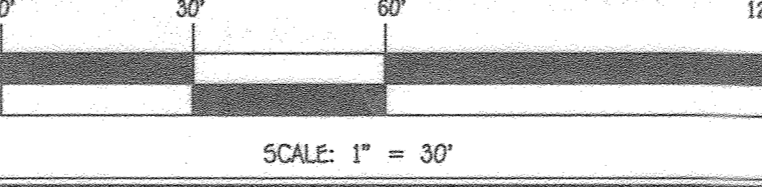


NOTE:
PROPOSED HOUSES CANNOT BE CONSTRUCTED UNDER THIS PLAN.

STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II, TRAP NO. 1. Table with 2 columns: DESCRIPTION, ACRES. Rows include: DRAINAGE AREA - INITIAL (2.67), DRAINAGE AREA - INTERIM, DRAINAGE AREA - FINAL (6.20), TOTAL STORAGE REQUIRED (22,320 CF), TOTAL STORAGE PROVIDED (23,679 CF), WET STORAGE REQUIRED (11,160 CF), WET STORAGE PROVIDED (11,160 CF), DRY STORAGE REQUIRED (TSWM) (22,320 CF), DRY STORAGE PROVIDED (TSWM) (22,320 @ 417.75 CF), EXISTING GROUND ELEVATION AT OUTLET (WET STORAGE ELEVATION) (415.50 FT), TRAP BOTTOM ELEVATION (413.00 FT), TRAP BOTTOM DIMENSIONS (41.25' x 82.5' FT x FT), WEIR LENGTH (24' FT), WEIR CREST (DRY STORAGE) ELEVATION (417.75 FT), CLEANOUT ELEVATION (414.50 FT), TOP OF EMBANKMENT ELEVATION (419.00 FT), SIDE SLOPE (2 H: 1 V), EMBANKMENT TOP WIDTH (4 FT), OUTLET PROTECTION - LENGTH (10 FT), OUTLET PROTECTION - DEPTH (19 IN).

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
Frank Manalansan II 5/20/20
Date



OWNERS

PARCEL 04
LONNIE HANCOCK
4499 CENTENNIAL LANE
ELLCOTT CITY, MD 21042

PARCEL 449
CHATEAU BUILDERS, INC.
5305 VILLAGE CENTER DRIVE
SUITE 305
COLUMBIA, MD 21044

PARCEL 174 & PARCEL 05
CENTENNIAL RESERVE, LLC
308 MAGDOYR ROAD
SEVERNA PARK, MARYLAND 21146

DEVELOPER

CENTENNIAL RESERVE, LLC
308 MAGDOYR ROAD
SEVERNA PARK, MARYLAND 21146
DAVE WOESSNER
240-319-1735

SEDIMENT AND EROSION CONTROL PLAN - PHASE 1 CENTENNIAL RESERVE

LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4499 CENTENNIAL LANE & 10202 MAXINE STREET
TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 5 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

SOILS LEGEND			
SOIL	NAME	CLASS	K'VALUE
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	B	0.20

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
448.5	SPOT ELEVATION
18" SD	EXISTING STORM DRAIN
12" RCP	PROPOSED STORM DRAIN PIPE
EX. F.H.	EXISTING FIRE HYDRANT
EX. S.W.	EXISTING SEWER LINE
PROPOSED S.W.	PROPOSED SEWER
PROPOSED W.	PROPOSED WATER
EX. C.L.	EXISTING CABLE LINE
EX. G.L.	EXISTING GAS LINE
EX. O.W.	EXISTING OVERHEAD WIRE
---	PROPOSED ASPHALT PAVING/PATH
---	PROPOSED SIDEWALKS (CONCRETE)
---	FOREST CONSERVATION EASEMENT (REFORESTATION)
---	PERMANENT FOREST CONSERVATION EASEMENT FENCING
---	ACCESS EASEMENT
---	STORM DRAIN EASEMENT
---	WATER AND SEWER EASEMENT
---	TREE PROTECTION FENCE
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
---	DEWELL (M-5)-TYPICAL
---	PROPOSED STREET LIGHT
---	SOIL LINES AND TYPES
---	EXISTING WETLANDS & WETLAND BUFFER
---	BID RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	NOTES EXISTING TREES TO BE REMOVED
---	NOTES EXISTING TREES TO REMAIN
---	CRITICAL ROOT ZONE

DESIGN CERTIFICATION
I hereby certify that this plan has been designed in accordance with current Maryland Erosion and Sediment Control Laws, Regulations and Standards, that it represents a practical and workable plan based on my personal knowledge of the site, and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

Frank Manalansan II 5/28/20
Designer's Signature Date
FRANK MANALANSAN II 21476
Printed Name MD Registration No.
P.E., () or R.L.A. (circle one)

OWNER/DEVELOPER CERTIFICATION
"I/We certify that any clearing, grading, construction or development will be done pursuant to this approved Erosion and Sediment Control Plan, including inspecting and maintaining controls and that the responsible personnel involved in the construction project will have a Certificate of Training at a Maryland Department of the Environment (MDE) approved training program for the control of erosion and sediment prior to beginning the project. I certify that I am a duly licensed professional land surveyor under the laws of the State of Maryland, license no. 21476, expiration date: 7/14/21."

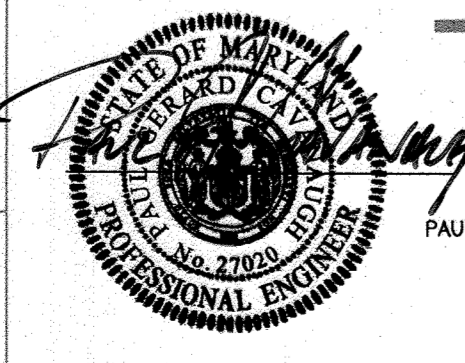
David Woessner 5/26/2020
Owner's/Developer's Signature Date
DAVID WOESSNER
Printed Name & Title

Approved: This Plan is Approved For Small Pond Construction, And Soil Erosion And Sediment Control By the Howard Soil Conservation District.
Howard Soil Conservation District
Approved: Department Of Planning And Zoning

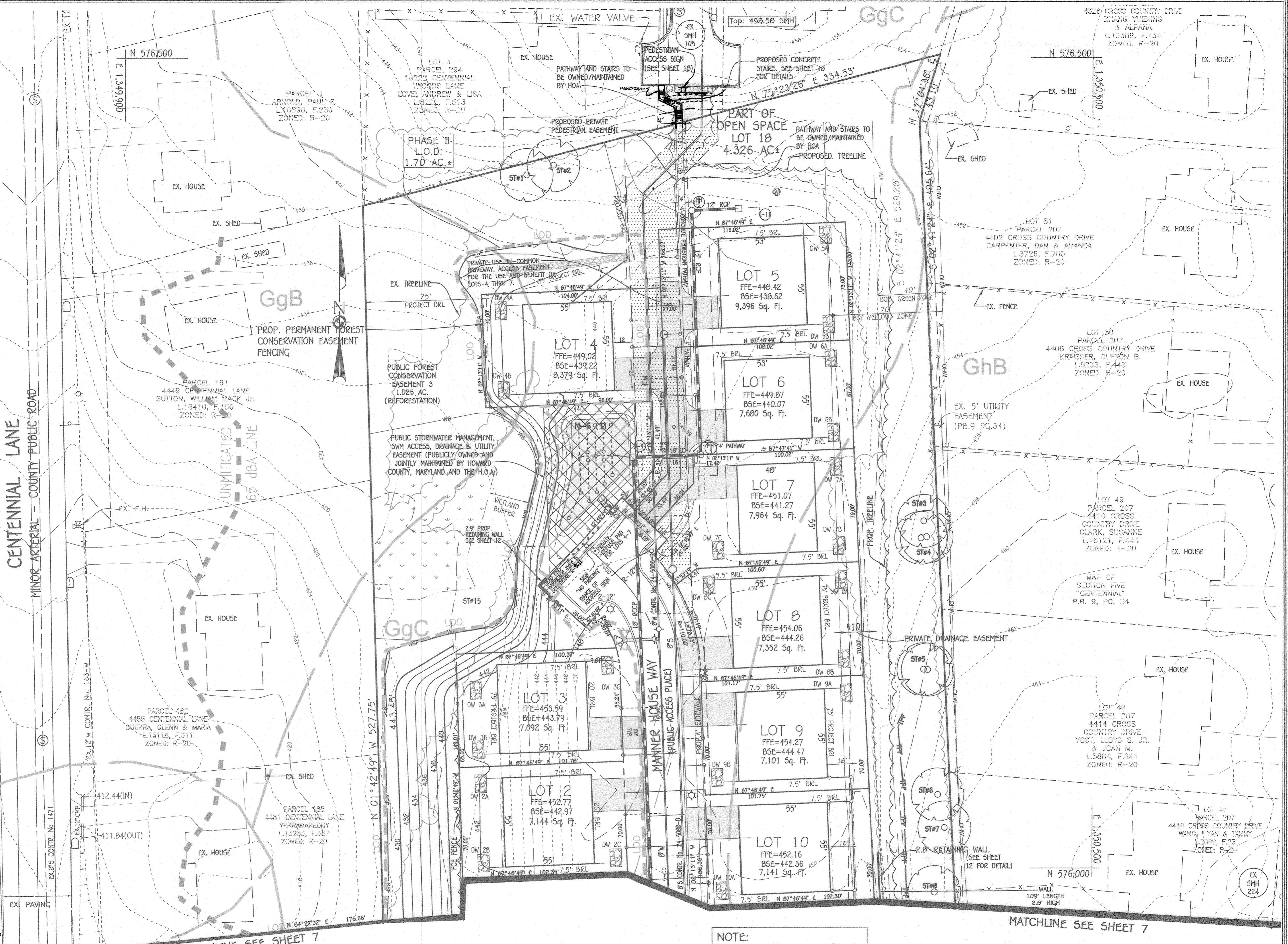
Chief, Division Of Land Development 3/20/20
Paul Gerard Cavanaugh 9/4/20
Date
Chief, Development Engineering Division
Approved: Howard County Department Of Public Works
James 8/21/2020
Date
Chief, Bureau Of Highways MK

NO.	REVISIONS	DATE
1	REV. PATHWAY & BRICKWALK DETAIL NO.	8/18/22

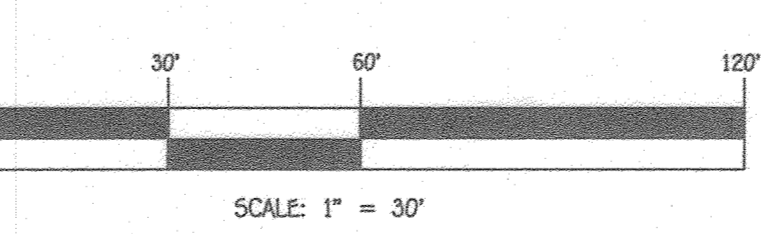
AS-BUILT CERTIFICATION
Note: There is no "AS-BUILT" information provided on this sheet.



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BATHROSE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461 - 2295



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
Frank Manalansan II 5/28/20
Date
FRANK MANALANSAN II



NOTE:
PROPOSED HOUSES CANNOT BE CONSTRUCTED UNDER THIS PLAN.

OWNERS	DEVELOPER
PARCEL 04 LENNIS HAMROCK 4489 CENTENNIAL LANE ELLCOTT CITY, MD 21042	PARCEL 449 CHATEAU BUILDERS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044
PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MARYLAND 21146	CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MARYLAND 21146 DAVE WOESSNER 240-319-1735

SEDIMENT AND EROSION CONTROL PLAN - PHASE 2
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4409 CENTENNIAL LANE & 10202 MAXINE STREET
TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 6 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

LEGEND	
SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 10' INTERVAL
	PROPOSED CONTOUR 2' INTERVAL
	SPOT ELEVATION
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN PIPE
	EXISTING WATER LINE
	EXISTING SEWER LINE
	PROPOSED WATER
	PROPOSED SEWER
	EXISTING CABLE LINE
	EXISTING GAS LINE
	EXISTING OVERHEAD WIRE
	PROPOSED ASPHALT PAVING/PATH
	PROPOSED SIDEWALKS (CONCRETE)
	FOREST CONSERVATION EASEMENT (REFORESTATION)
	PERMANENT FOREST CONSERVATION EASEMENT FENCING ACCESS EASEMENT
	STORM DRAIN EASEMENT
	WATER AND SEWER EASEMENT
	TREE PROTECTION FENCE
	LIMIT OF DISTURBANCE
	SUPER SILT FENCE
	SILT FENCE
	EXISTING TREE LINE
	PROPOSED TREE LINE
	DRYWELL (M-5)-TYPICAL
	PROPOSED STREET LIGHT
	SOIL LINES AND TYPES
	EXISTING WETLANDS & WETLAND BUFFER
	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
	PROPOSED ROOF LEADER
	DENOTES EXISTING TREES TO BE REMOVED
	DENOTES EXISTING TREES TO REMAIN
	CRITICAL ROOT ZONE

DESIGN CERTIFICATION
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Frank Namalansan II 5/28/20
 Designer's Signature Date
 Frank Namalansan II 21476
 Printed Name Registration No.
 P.E., (C.S.), or S.L.A. (circle one)

OWNER/DEVELOPER CERTIFICATION

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

David Woessner 5/26/2020
 Owner's/Developer's Signature Date
 DAVID WOESSNER
 Printed Name & Title

Approved: This Plan is Approved For Small Pond Construction, And Soil Erosion And Sediment Control By The Howard Soil Conservation District.

John R. Blanton 5/28/20
 Howard Soil Conservation District
 Approved: Department Of Planning And Zoning

Chief, Division Of Land Development 5/28/20
 Date

Chief, Development Engineering Division 4/4/20
 Date

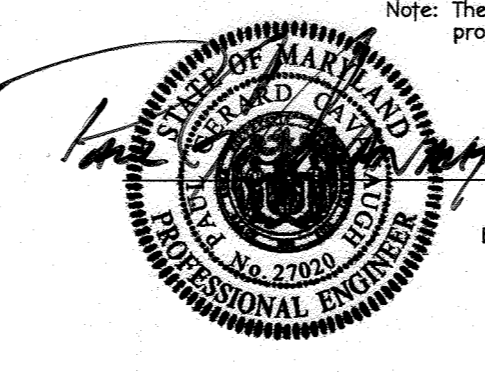
Chief, Bureau Of Highways 8/21/2020
 Date

REVISIONS		
NO.	DESCRIPTION	DATE
1.	ADD MAILBOX PAD, REVISE MAILBOX ALIGNED CENTENNIAL LANE & RELATED ACCESSORY DRIVE, M-5 (S), SIDEWALK, 25' - 5' SIDEWALK	8/18/20

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

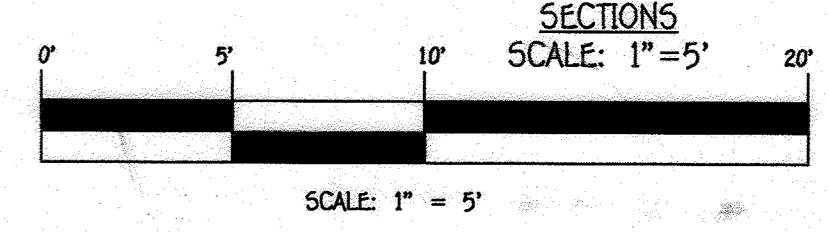
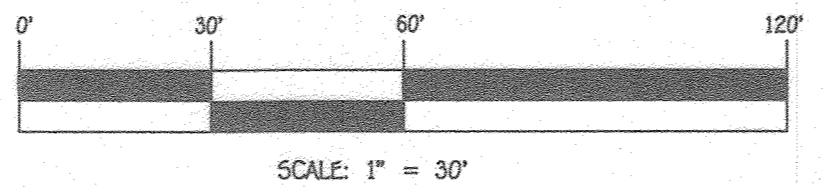


PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
 Frank Namalansan II 5/28/20
 Date



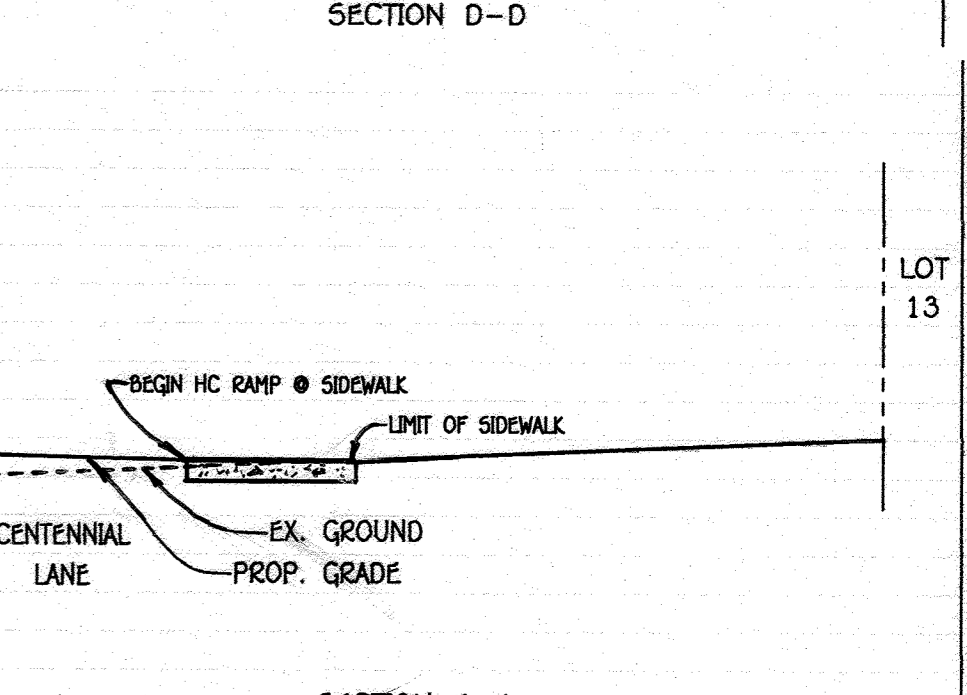
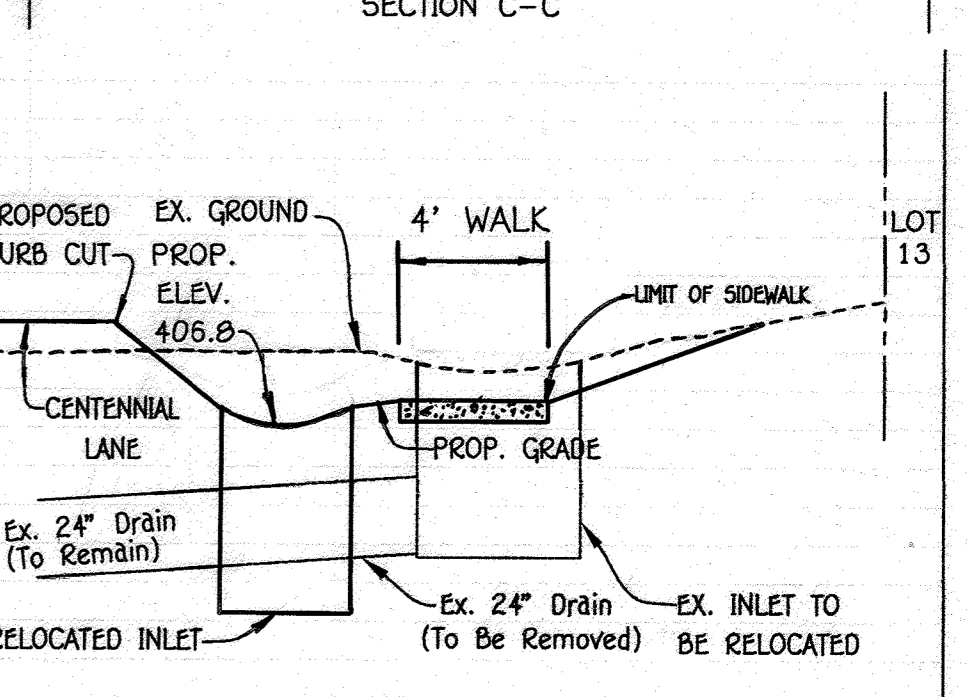
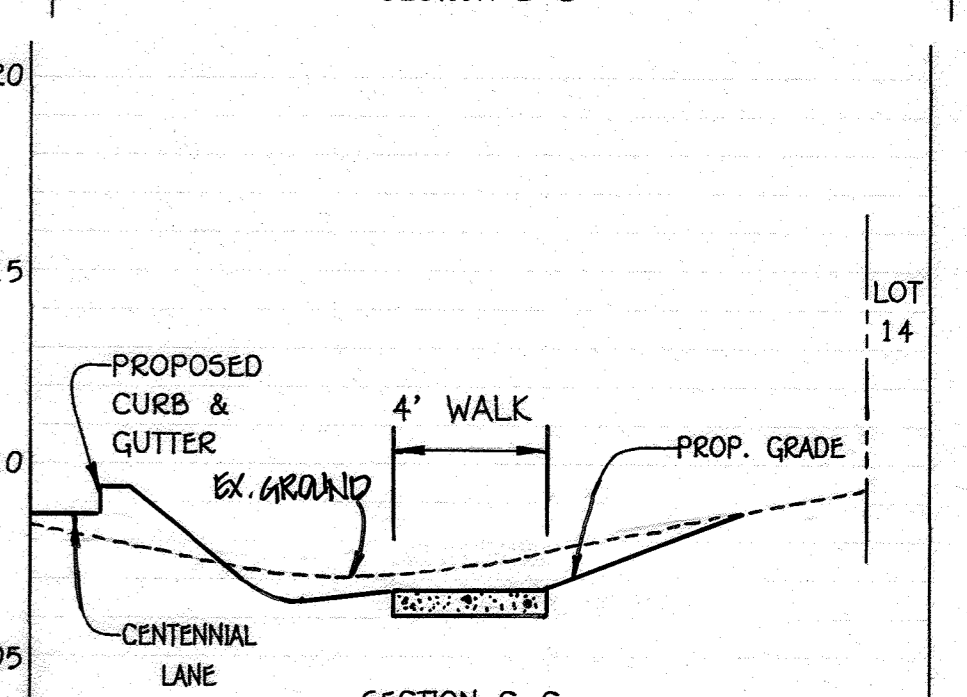
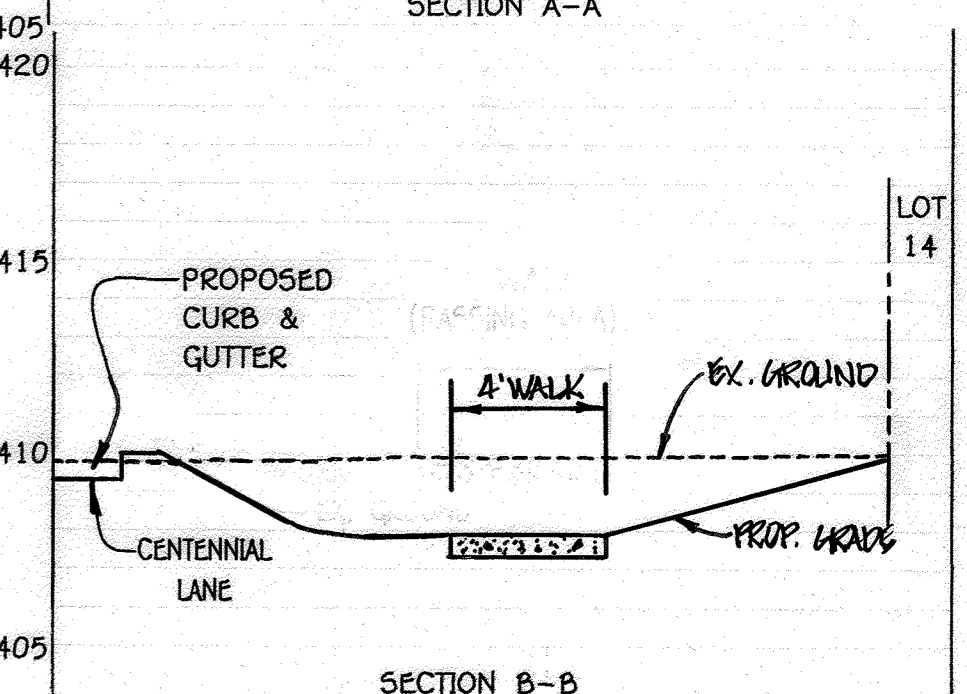
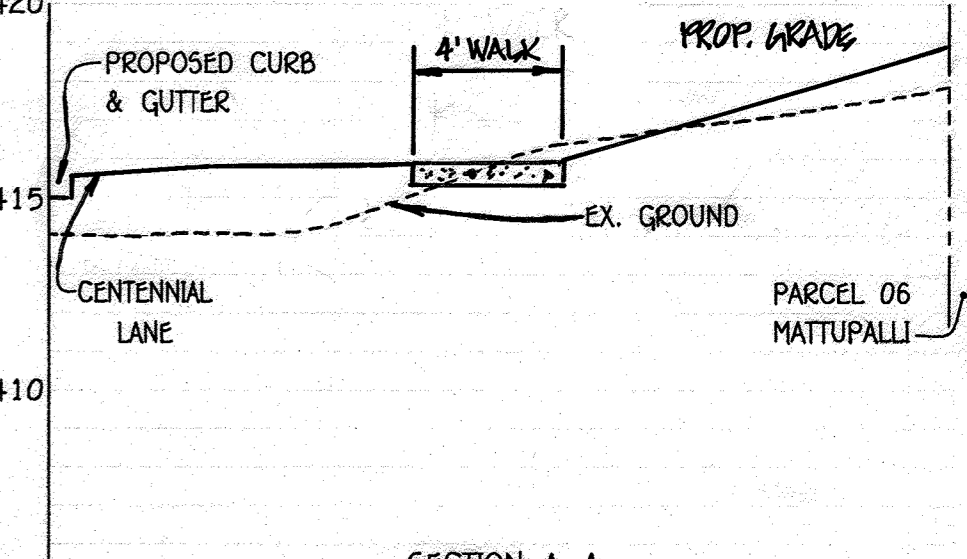
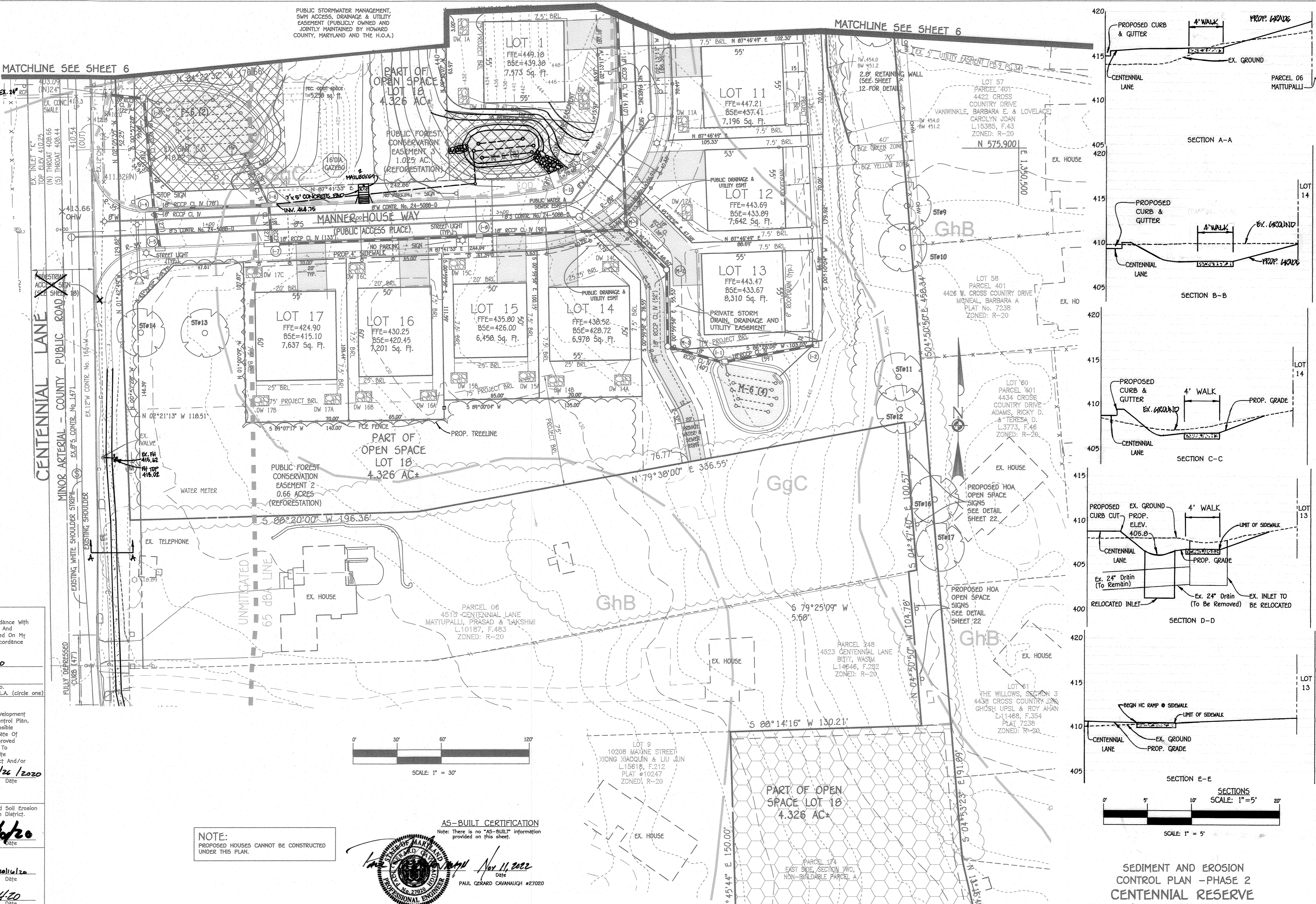
AS-BUILT CERTIFICATION
 Note: There is no "AS-BUILT" information provided on this sheet.
 Paul Gerard Cavanaugh #27020
 Date: Nov 11, 2022

NOTE:
 PROPOSED HOUSES CANNOT BE CONSTRUCTED UNDER THIS PLAN.

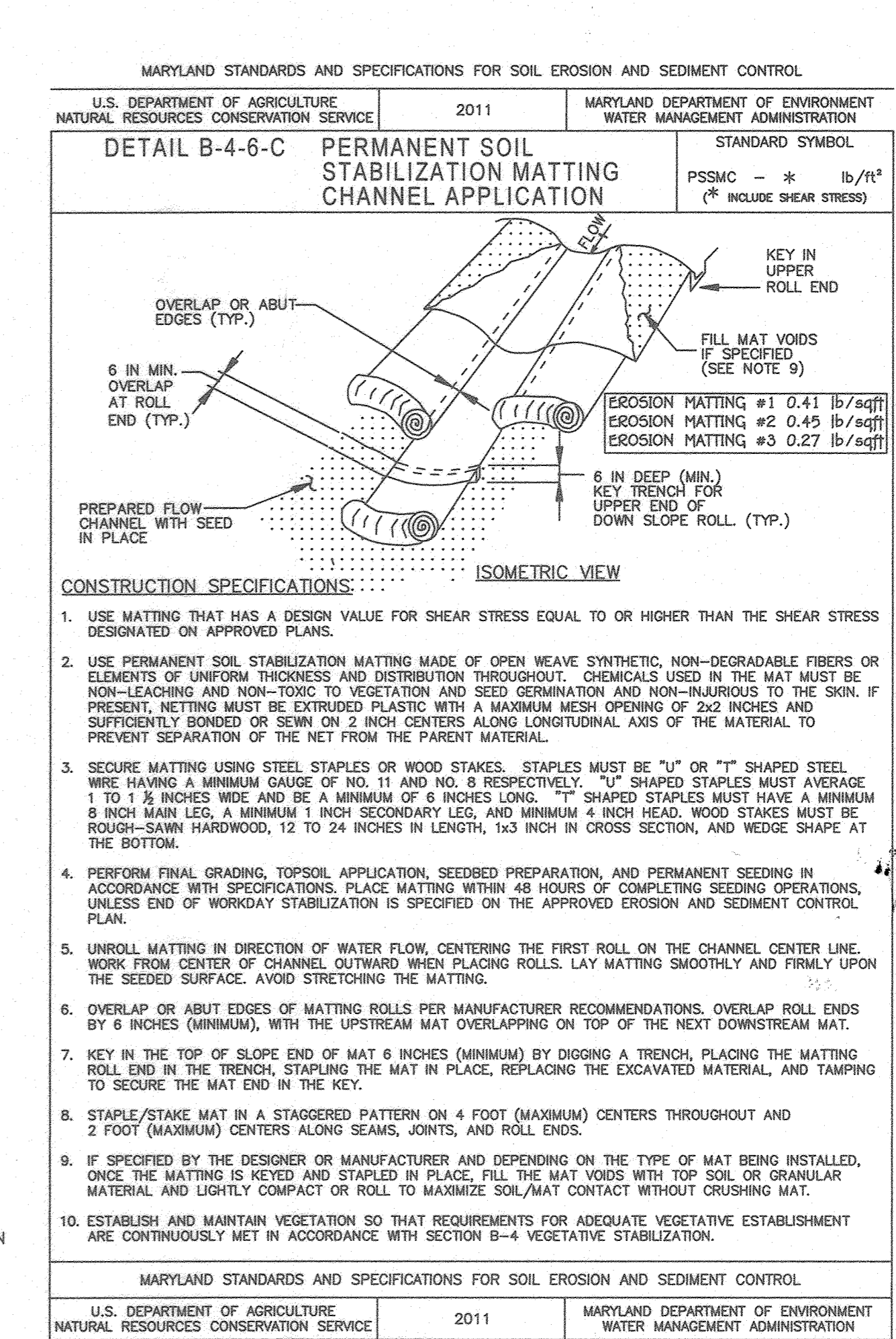
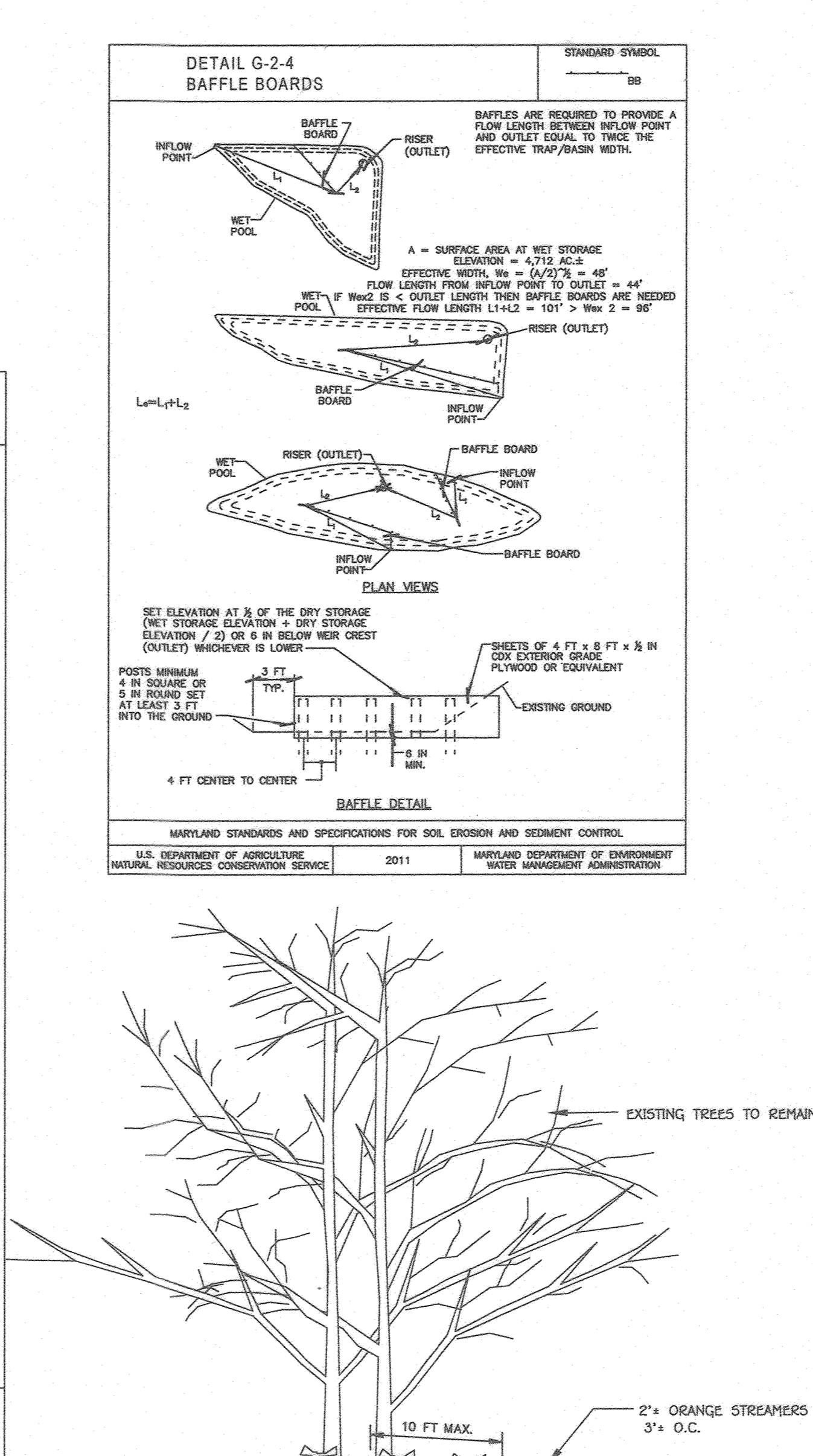
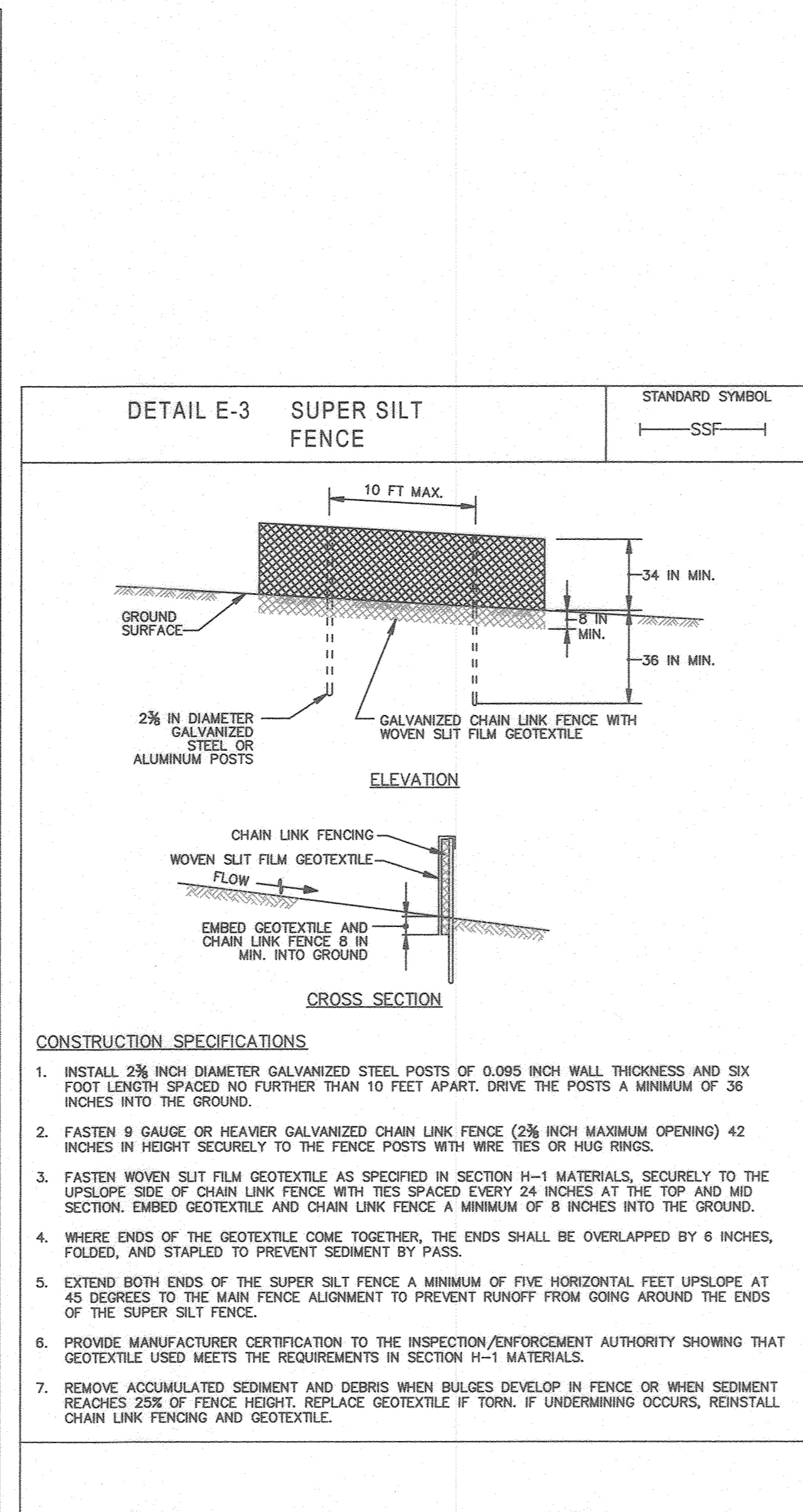
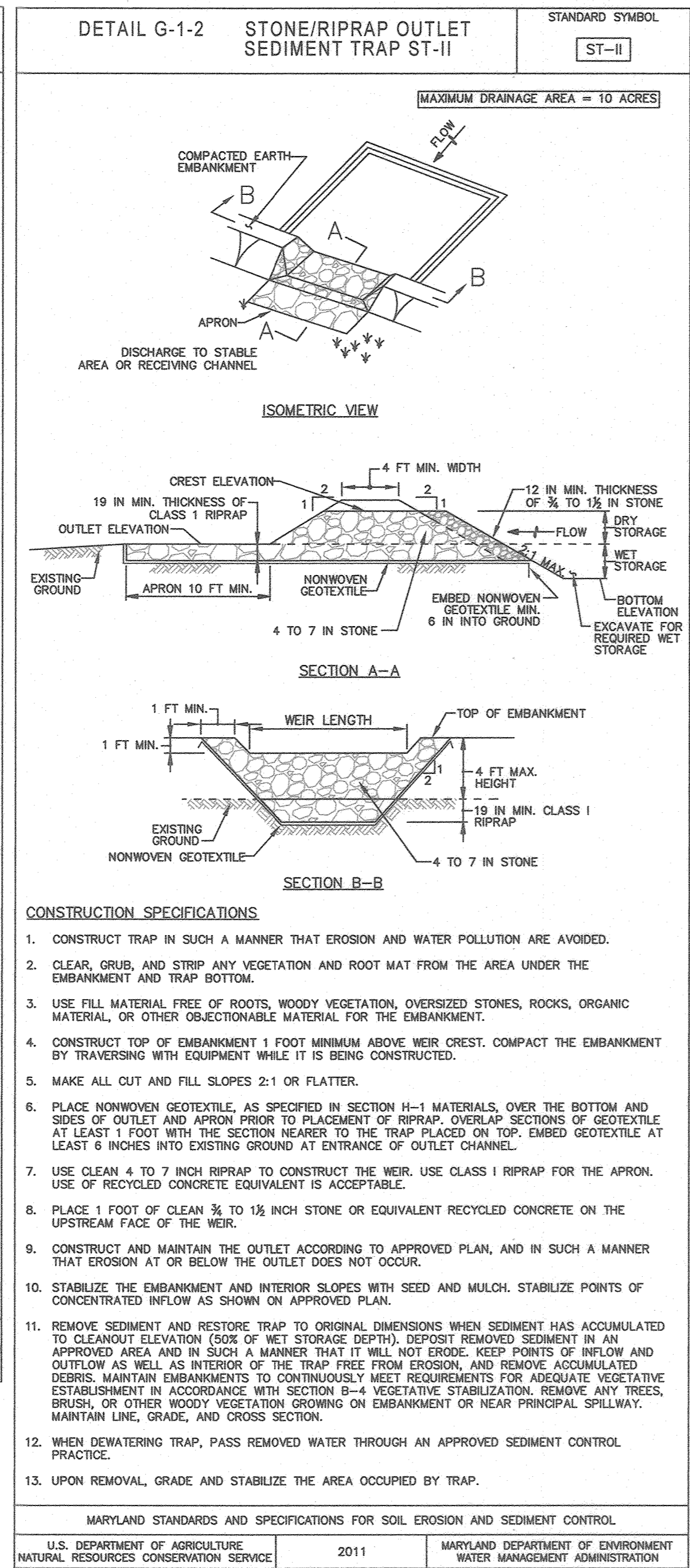
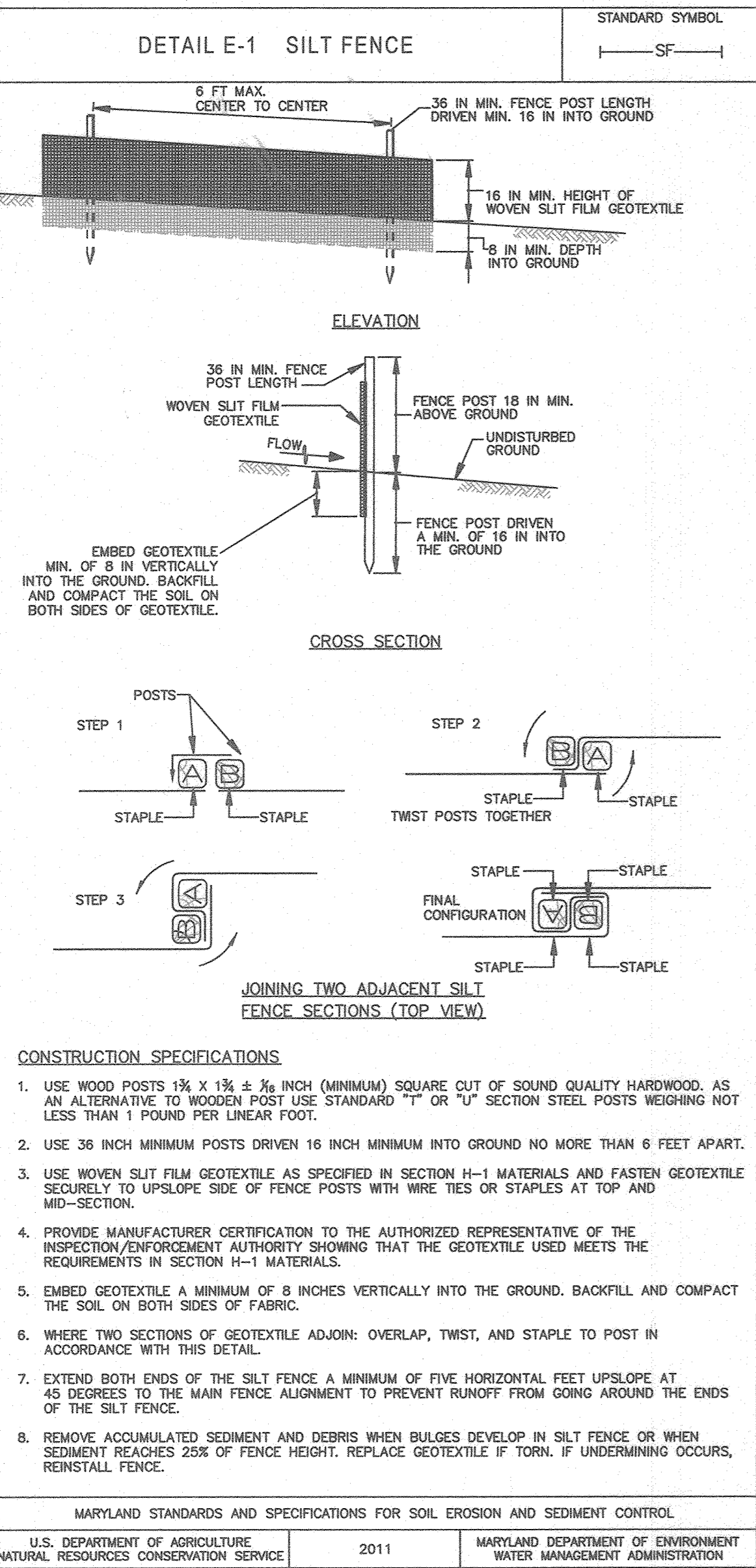


SEDIMENT AND EROSION CONTROL PLAN - PHASE 2 CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
 TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 7 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



OWNERS	DEVELOPER
PARCEL 04 LENNIS HARRICK 4489 CENTENNIAL LANE ELICOTT CITY, MD 21042	CENTENNIAL RESERVE, LLC 308 MAGDOY ROAD SEVERNA PARK, MARYLAND 21146
PARCEL 449 CHATEAU BUILDERS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044	DAVE WOESSNER 240-319-1735
PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGDOY ROAD SEVERNA PARK, MARYLAND 21146	



DESIGN CERTIFICATION

I hereby certify that this Plan Has Been Designed in Accordance with Current Maryland Erosion and Sediment Control Laws, Regulations and Standards, That It Represents A Practical And Workable Plan Based On My Personal Knowledge of the Site, And That It Was Prepared In Accordance With the Requirements of The Howard Soil Conservation District.

Paul Rowland II, Designer's Signature, 5/28/20, Date
 Frank Manalansan II, MD Registration No. 21476, P.E., (G.L.S.) or R.L.A. (circle one), Printed Name

OWNER/DEVELOPER CERTIFICATION

"I/We Certify that Any Clearing, Grading, Construction Or Development Will Be Done Pursuant To This Approved Erosion And Sediment Control Plan, Including Inspecting And Maintaining Controls And That The Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Training At A Maryland Department Of The Environment (MDE) Approved Training Program For The Control On Erosion And Sediment Prior To Beginning The Project. I Certify Right-of-entry For Periodic On-site Evaluation By Howard County The Howard Soil Conservation District And/or MDE."

David Woessner, Owner/Developer's Signature, 5/26/2020, Date

Approved: This Plan Is Approved For Small Pond Construction, And Soil Erosion And Sediment Control By The Howard Soil Conservation District.
 Approved: Department of Planning And Zoning

Approved: Department of Public Works
 Chief, Bureau Of Highways, David Woessner, 8/21/2020, Date

NO.	DESCRIPTION	DATE

AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.

PAUL GEARD Cavanaugh #27020, Date 6/11/2022

NOTE:

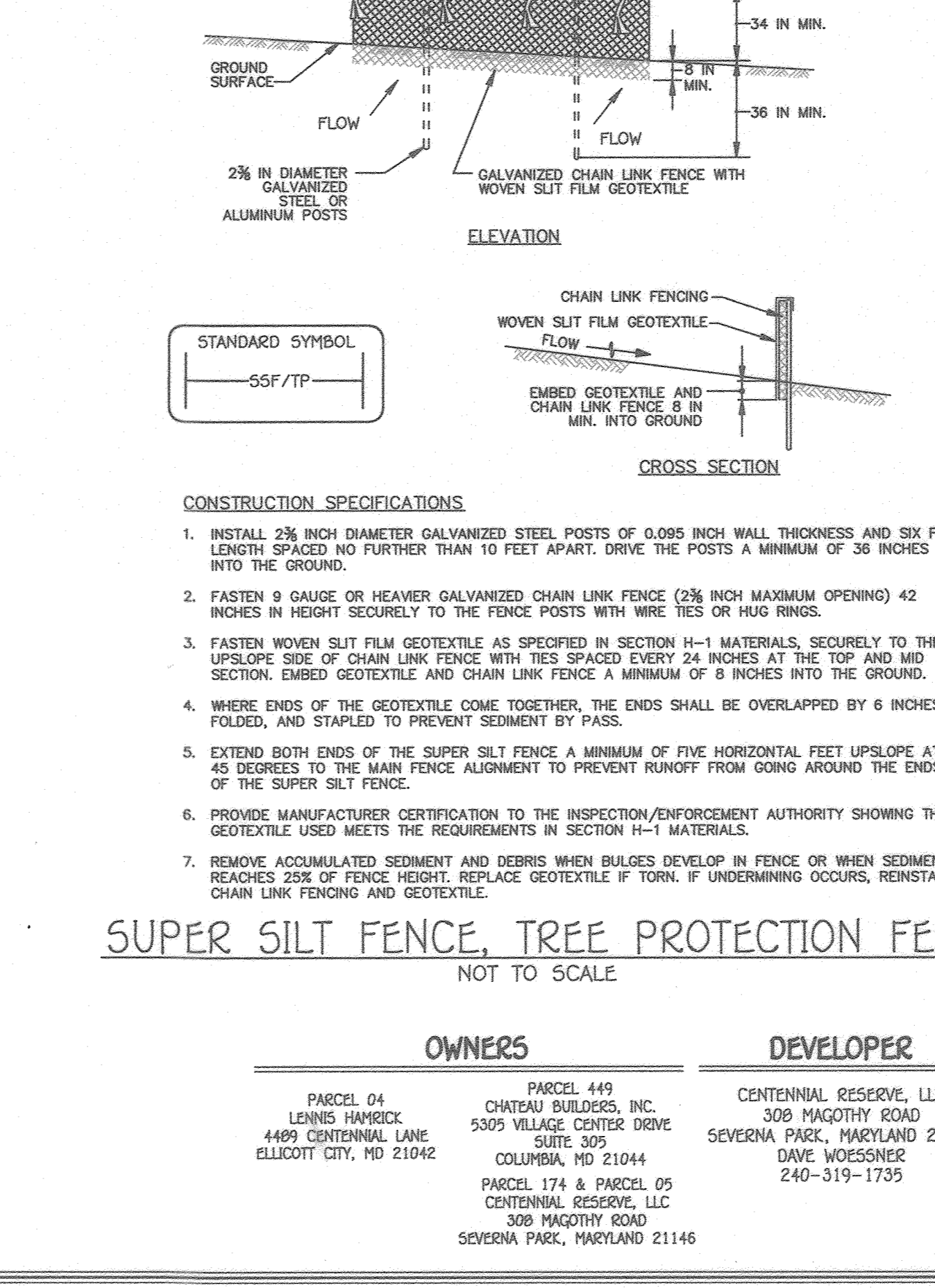
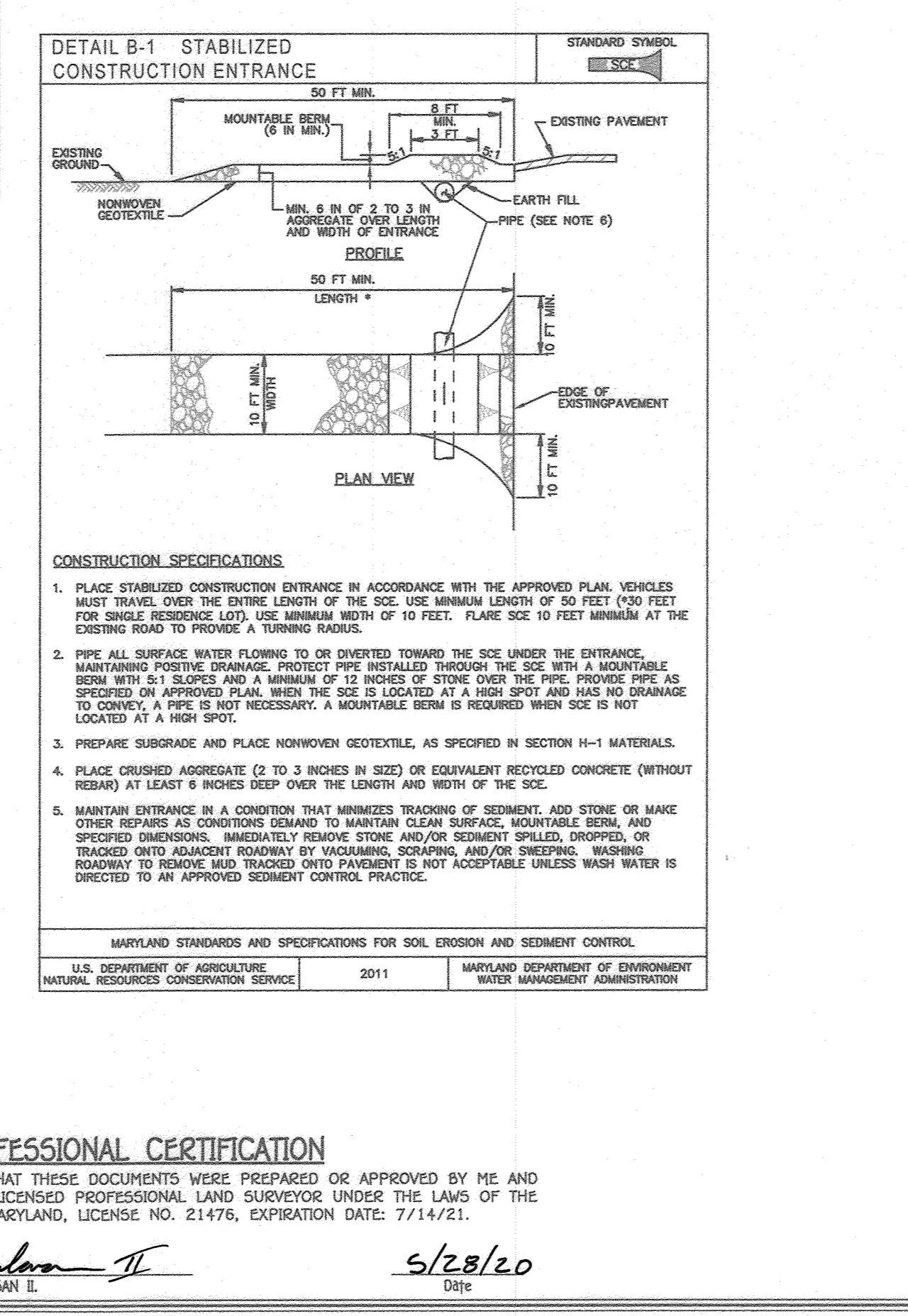
PROPOSED HOUSES CANNOT BE CONSTRUCTED UNDER THIS PLAN.

PROFESSIONAL CERTIFICATION

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Paul Rowland II, 5/28/20, Date

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895



DETAIL D-3-1 RIPRAP INFLOW PROTECTION

CONSTRUCTION SPECIFICATIONS

- PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
- CONSTRUCT INFLOW CHANNEL WITH CLASS 1 RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D₉₀) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
- INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
- BLENDED RIPRAP INTO EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

SEDI-MENT AND EROSION CONTROL NOTES AND DETAILS CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

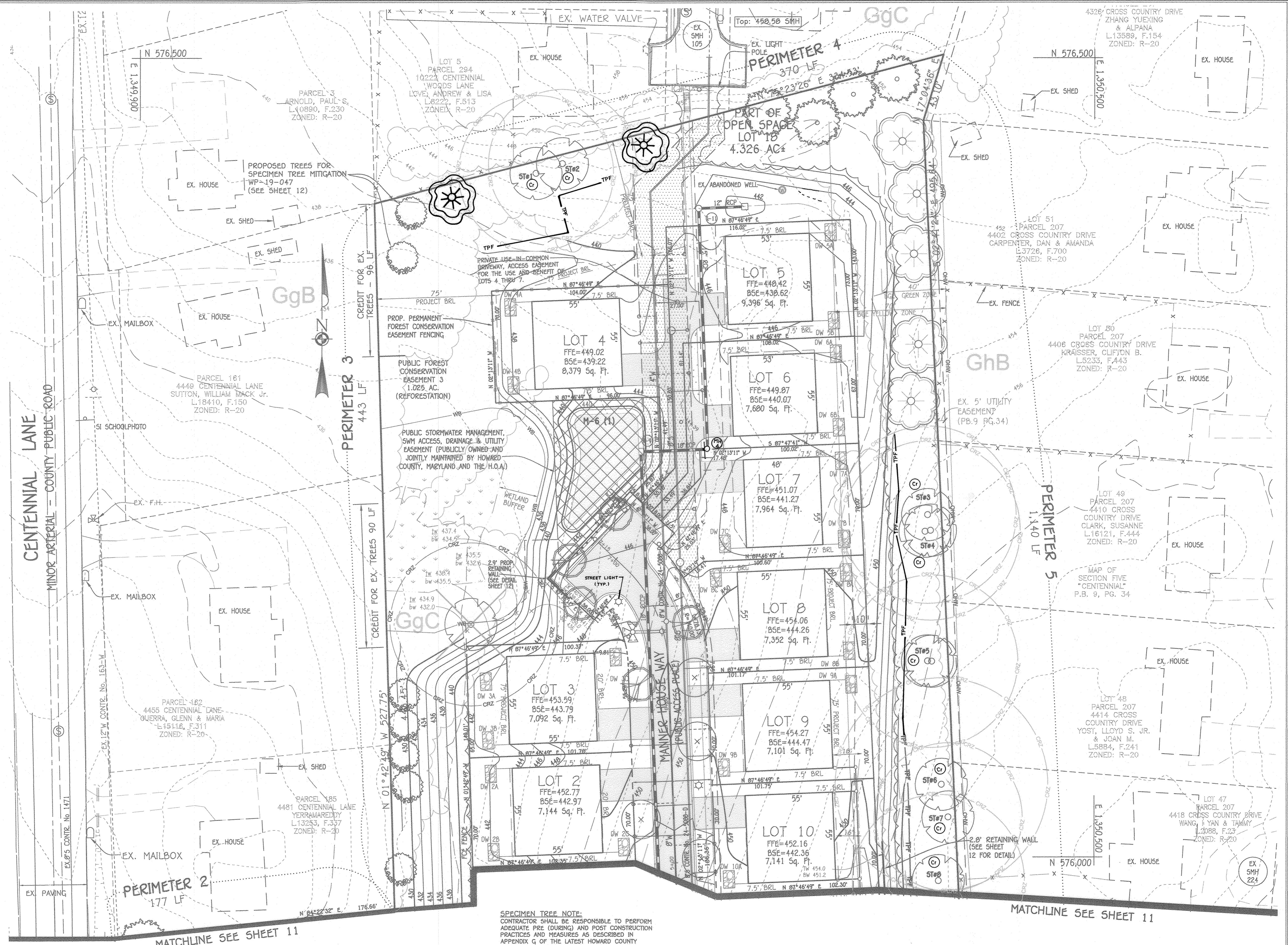
OWNER: PARCEL 04, LENNIS HANBROCK, 4489 CENTENNIAL LANE, ELLICOTT CITY, MD 21042; PARCEL 449, CHATEAU BUILDERS, INC., 5305 VILLAGE CENTER DRIVE, SUITE 305, COLUMBIA, MD 21044; PARCEL 174 & PARCEL 05, CENTENNIAL RESERVE, LLC, 308 MAGOTHY ROAD, SEVERNA PARK, MARYLAND 21146

DEVELOPER: CENTENNIAL RESERVE, LLC, 308 MAGOTHY ROAD, SEVERNA PARK, MARYLAND 21146; DAVE WOESSNER, 240-319-1735

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 9 OF 24

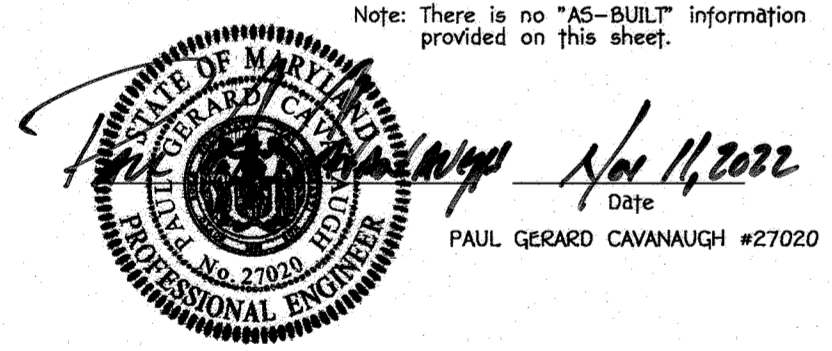
SOILS LEGEND			
SOIL	NAME	CLASS	K VALUE
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	B	0.20

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
448.5	SPOT ELEVATION
18" 50'	EXISTING STORM DRAIN
18" 50'	PROPOSED STORM DRAIN PIPE
EX. F.H.	EXISTING FIRE HYDRANT
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	EXISTING CABLE LINE
---	EXISTING GAS LINE
---	EXISTING OVERHEAD WIRE
---	PROPOSED ASPHALT PAVING/ PATH
---	PROPOSED SIDEWALKS (CONCRETE)
---	FOREST CONSERVATION EASEMENT (REFORESTATION)
---	PERMANENT FOREST CONSERVATION EASEMENT FENCING
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
55'	DRYWELL (M-5)-TYPICAL
---	SOIL LINES AND TYPES
---	EXISTING WETLANDS & WETLAND BUFFER
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	DENOTES EXISTING TREES TO REMAIN
---	CRITICAL ROOT ZONE
---	DENOTES 15%-24.9% SLOPES
---	PROPOSED TREES (SEE SHEET 12 FOR DETAILS)
PERIMETER XX XX LF	LANDSCAPE PERIMETER LABEL AND LEADER
(C)	DENOTES TREES BEING USED FOR CREDIT



AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.



LANDSCAPE DEVELOPER'S CERTIFICATE

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

Name: *Dawid* Date: *5/26/2020*

NO.	REVISIONS	DATE

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development *[Signature]* Date: *9/4/20*

Chief, Development Engineering Division *[Signature]* Date: *8/2/2020*

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways *[Signature]* Date: *8/2/2020*

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2099



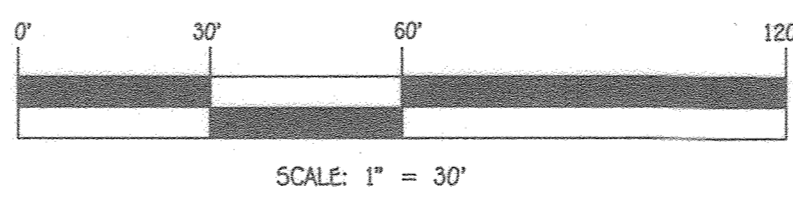
PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3038, EXPIRATION DATE: 4/17/22.

[Signature] Date: *5/28/20*

SPECIMEN TREE NOTE:
 CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM ADEQUATE PRE (DURING) AND POST CONSTRUCTION PRACTICES AND MEASURES AS DESCRIBED IN APPENDIX G OF THE LATEST HOWARD COUNTY FOREST CONSERVATION MANUAL WHEN WORKING IN THE VICINITY OF THE SPECIMEN TREES IDENTIFIED TO REMAIN WITHIN THIS PROJECT TO ENSURE THE SURVIVAL OF THE TREES.

NOTE:
 TREES MARKED AS CREDIT (C) SHALL BE PRESERVED OR REPLACED IF THEY PERISH. SPECIMEN TREES TO BE REPLACED AT 2:1.

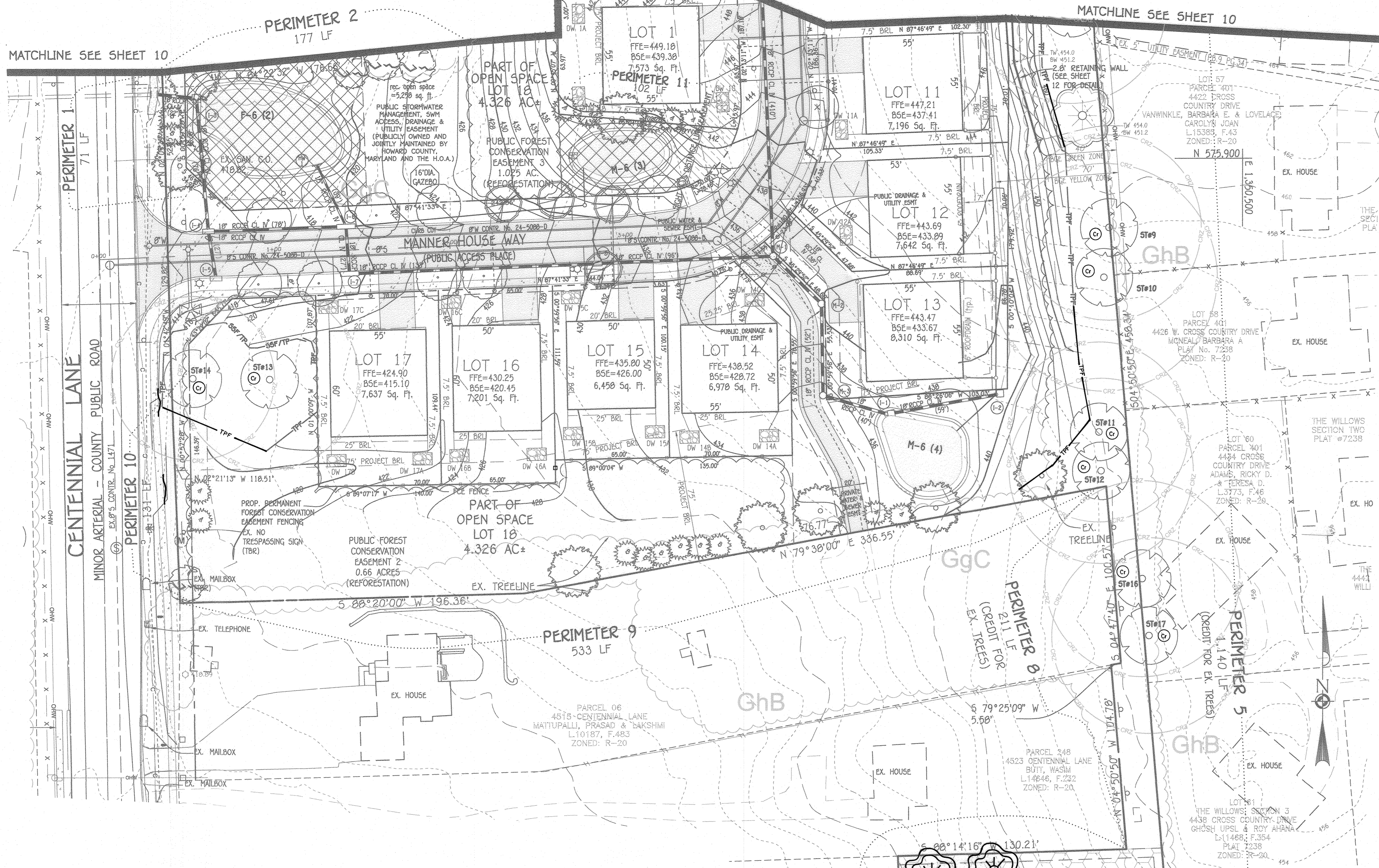


NOTE: THIS SHEET IS FOR LANDSCAPE ONLY.

MATCHLINE SEE SHEET 11

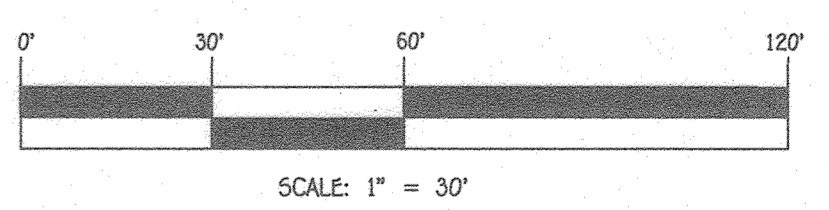
LANDSCAPE PLAN
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4409 CENTENNIAL LANE & 10202 MAXINE STREET
 ZONED R-20
 TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 10 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
x 48.5	SPOT ELEVATION
---	EXISTING STORM DRAIN
---	PROPOSED STORM DRAIN PIPE
---	EX. F.H.
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	EXISTING CABLE LINE
---	EXISTING GAS LINE
---	EXISTING OVERHEAD WIRE
---	PROPOSED ASPHALT PAVING/ PATH
---	PROPOSED SIDEWALKS (CONCRETE)
---	FOREST CONSERVATION EASEMENT (REFORESTATION)
---	PERMANENT FOREST CONSERVATION EASEMENT FENCING
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
---	DEYWELL (M-5)-TYPICAL
---	SOIL LINES AND TYPES
---	EXISTING WETLANDS & WETLAND BUFFER
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	DENOTES EXISTING TREES TO REMAIN
---	CRITICAL ROOT ZONE
---	DENOTES 15%-24.9% SLOPES
---	PROPOSED TREES (SEE SHEET 12 FOR DETAILS)
---	PERIMETER XX XX LF LANDSCAPE PERIMETER LABEL AND LEADER
---	DENOTES TREES BEING USED FOR CREDIT

NOTE: TREES MARKED AS CREDIT (C) SHALL BE PRESERVED OR REPLACED IF THEY PERISH. SPECIMEN TREES TO BE REPLACED AT 21.



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

Name: *David Wilson* Date: *5/26/2020*

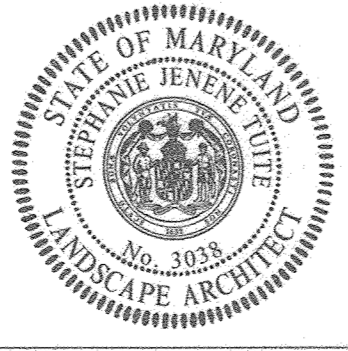
NO.	REVISIONS DESCRIPTION	DATE

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development, *9/4/20*
 Chief, Development Engineering Division, *8/21/2020*
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways, *8/21/2020*

AS-BUILT CERTIFICATION
 Note: There is no "AS-BUILT" information provided on this sheet.

Paul Gerard Cavanaugh Date: *Nov 11, 2022*
 PAUL GERARD CAVANAUGH #27020

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 3038, EXPIRATION DATE: 4/17/22.



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LANDSCAPE PLAN
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
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 TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
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 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 11 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

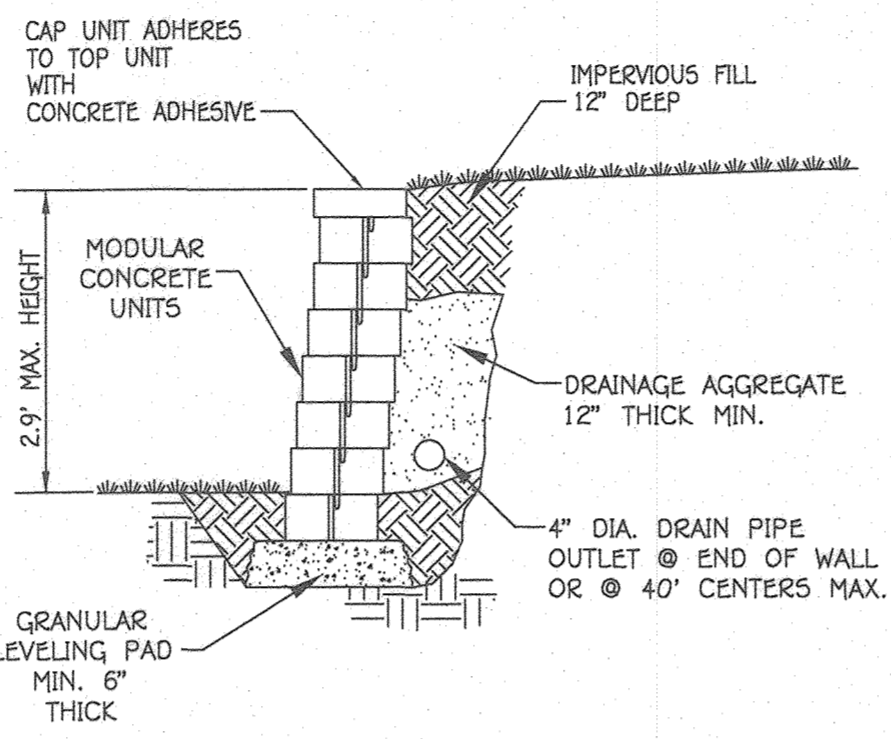
SCHEDULE A PERIMETER LANDSCAPE EDGE												
PERIMETER	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	TOTALS
CATEGORY	Open space to Roadway	Adjacent to Perimeter Properties	Adjacent to Perimeter Properties	Adjacent to Perimeter Properties	Adjacent to Perimeter Properties	Adjacent to Perimeter Properties	Adjacent to Perimeter Properties	Adjacent to Perimeter Properties	Adjacent to Perimeter Properties	Open space to Roadway	Adjacent to Roadway	PER WP-19-047
LANDSCAPE TYPE	B	A	A	A	A	A	A	A	A	B	B	
LINEAR FEET OF PERIMETER	71 LF	177 LF	443 LF	370 LF	1,140 LF	165 LF	280 LF	11 LF	533 LF	131 LF	102 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	-	YES, 186 lf	YES 2 SPEC. TREES	YES 12 SPEC. TREES	-	-	YES, 211 LF	-	YES 2 SPEC. TREES	-	227 L.F. 16 SPEC. TREES
CREDIT FOR WALL FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	NO	NO	NO	-	-	-	-	-	-	-	-	
NUMBER OF PLANTS REQUIRED												
SHADE TREES	2	3	5	5	7	3	5	0	9*	1	2*	44
EVERGREEN TREES	2	3	5	5	7	3	5	0	9*	1	2*	7
SHRUBS	-	-	-	-	-	-	-	-	-	-	-	
NUMBER OF PLANTS PROVIDED												
SHADE TREES	2	3	5	5	7	3	5	0	9*	1	2*	39
SMALL DECIDUOUS TREES	2	3	5	5	7	3	5	0	9*	1	2*	
EVERGREEN TREES	2	3	5	5	7	3	5	0	9*	1	2*	
SHRUBS	-	-	-	-	-	-	-	-	-	-	-	17

SUBSTITUTION NOTE:
 * PERIMETER 9 - 2:1 EVERGREEN SUBSTITUTION; 8 EVERGREEN TREES FOR 4 SHADE TREES (SUBSTITUTION PROVIDES NATIVE PLANT VARIETY)
 * PERIMETER 11 - 2:1 EVERGREEN SUBSTITUTION; 2 EVERGREEN TREES FOR 1 SHADE TREES (SUBSTITUTION ACCOMMODATES FOR LIMITED SPACE AND PROVIDES PLANT VARIETY)
CREDIT NOTE: TREES TAKEN FOR CREDIT ON THE APPROVED LANDSCAPE PLANS MUST BE MAINTAINED OR REPLACED IF THEY PERISH. SPECIMEN TREES USED AS CREDIT SHALL BE REPLACED 2:1 WITH 2" CALIPER TREES.

QTY.	KEY	NAME	SIZE
9*		ACER RUBRUM 'OCTOBER GLORY' (OCTOBER RED MAPLE)	2 1/2" - 3" CALIPER FULL CROWN, B&B
4		CERCIS CANADENSIS (AMERICAN REDBUD)	2 1/2" - 3" CALIPER FULL CROWN, B&B
12		PLATANUS OCCIDENTALIS (AMERICAN SYCAMORE)	2 1/2" - 3" CALIPER FULL CROWN, B&B
14		ACER RUBRUM 'RED MAPLE'	2 1/2" - 3" CALIPER FULL CROWN, B&B
9		TRILIA STANHOPEI X PLICATA (GREEN GIANT ARBOVITAE)	5'-6" HT. B&B
8		ILEX x 'NELLIE STEVENS' (NELLIE STEVENS HOLLY)	5'-6" HT. B&B

QTY.	SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
5		QUERCUS RUBRA NORTHERN RED OAK	2.5-3" CAL.	40' APART ON PUBLIC R/W
9		ACER TATARICUM TATARICUM MAPLE	2.5-3" CAL.	30' APART ON PUBLIC R/W
9		PRUNUS SERRULATA 'KWANZAN' KWANZAN CHERRY	2.5-3" CAL.	30' APART ON PUBLIC R/W

TOTAL: 23



CONCRETE BLOCK LANDSCAPE WALL DETAIL
NO SCALE

TOTAL: 39 SHADE TREES, 17 EVERGREEN TREES

* PER CONDITION #2 OF WP-19-047 TWO 2.5" CALIPER TREES ARE REQUIRED TO BE PLANTED AS MITIGATION FOR THE REMOVAL OF 1 SPECIMEN TREE IN THE FOREST CONSERVATION EASEMENT. TWO (2) 'OCTOBER GLORY' RED MAPLE TREES ARE PROPOSED AS REPLACEMENT. SEE SHEET 10 FOR LOCATION.

Table B.4 Materials Specifications for Bioretention

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	Plantings are site-specific
Planting soil (2' to 4' deep)	loamy sand (35-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content <5%
Organic content	min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		Aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	Pea gravel: ASTM-D-448	NO. 8 or NO. 9 (1/8" to 3/8")	
Curtain drain	Ornamental stone: washed cobbles	Stone: 2" to 5"	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 or NO. 6 aggregate (3/8" to 3/4")	
Underdrain piping	1" 750, Type P5 2B or AASHTO M-27B	4" to 6" rigid schedule 40 pipe; minimum of 3" of gravel over pipe; note necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth.	
Poured in place concrete (if required)	MSHA Mix NO. 3, f _c =3500 psi @ 28 days, normal weight, reinforced with #4 rebar (ASTM-A615-60)	n/a	On-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved state or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308R/199; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

LANDSCAPE DEVELOPER'S CERTIFICATE

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

Name: Paul Gerard Cavanaugh Date: 5/26/2020

NO.	REVISIONS	DESCRIPTION	DATE
1	REV. LANDSCAPE PLANT LIST, ADD BARRICADE DETAIL AND TABLE B.4		5/10/22

Approved: Department of Planning and Zoning

Chief, Division of Land Development: coluca Date: 5/20

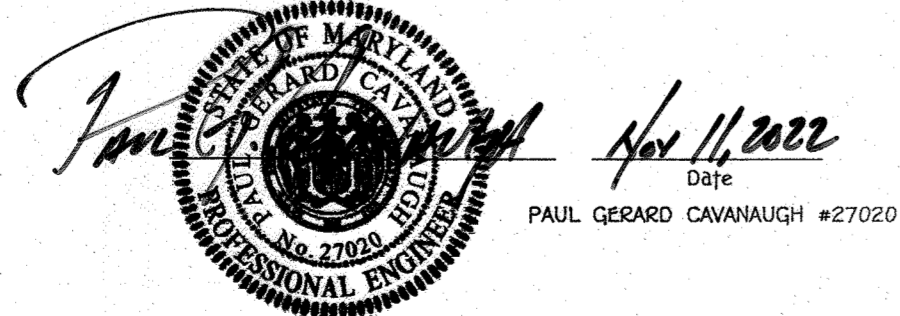
Chief, Development Engineering Division: AS Date: 8/21/2020

Approved: Howard County Department of Public Works

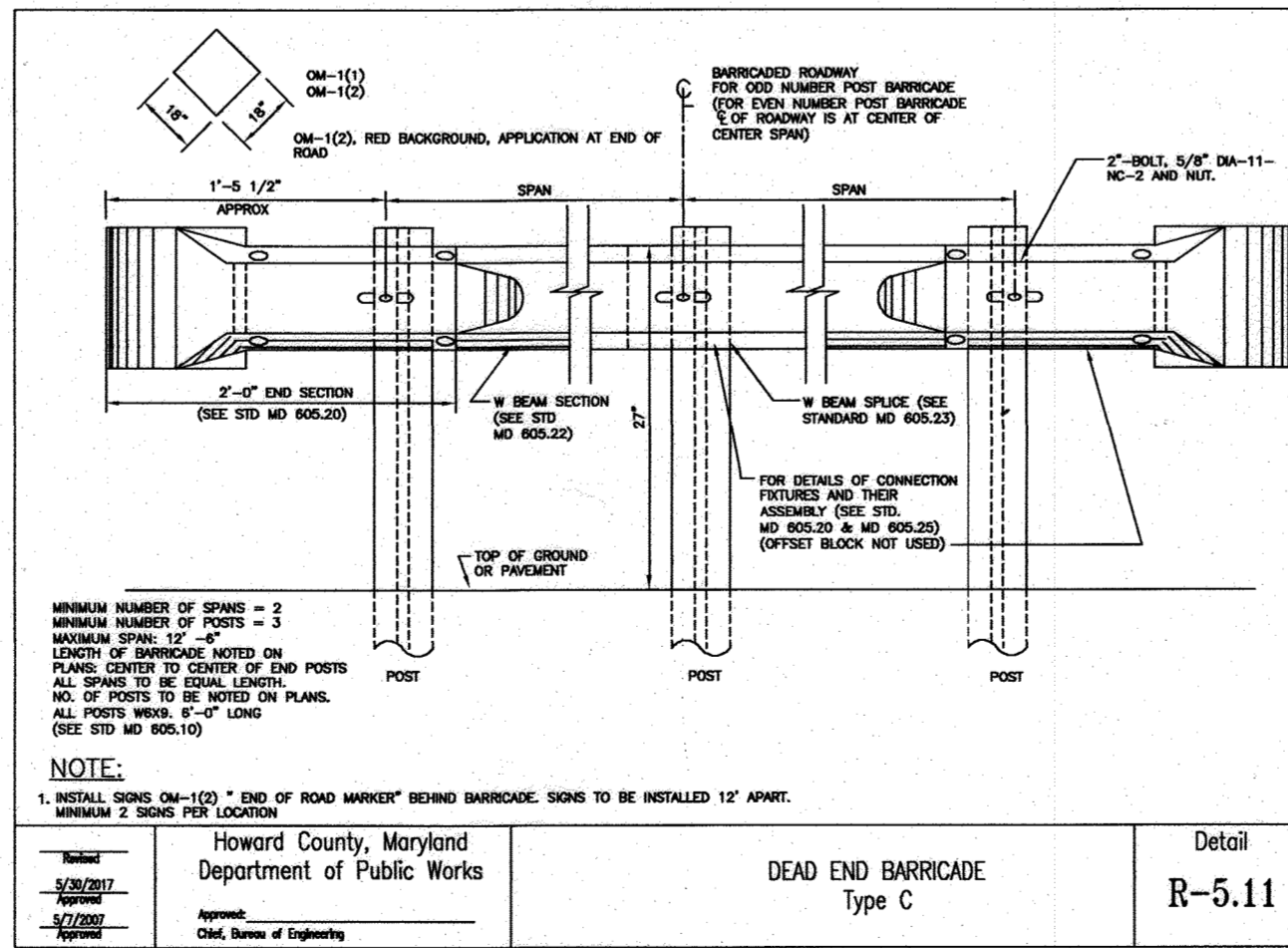
Chief, Bureau of Highways: PK Date: 8/21/2020

AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.



PAUL GERARD CAVANAUGH #27020



GAZEBO DETAIL (OR APPROVED EQUAL)
SCALE: 1"=30'

PLANTING SPECIFICATIONS

PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.

ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORERS AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEALED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL AGENDA.

CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.

BID SHALL BE BASED ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.

ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS.

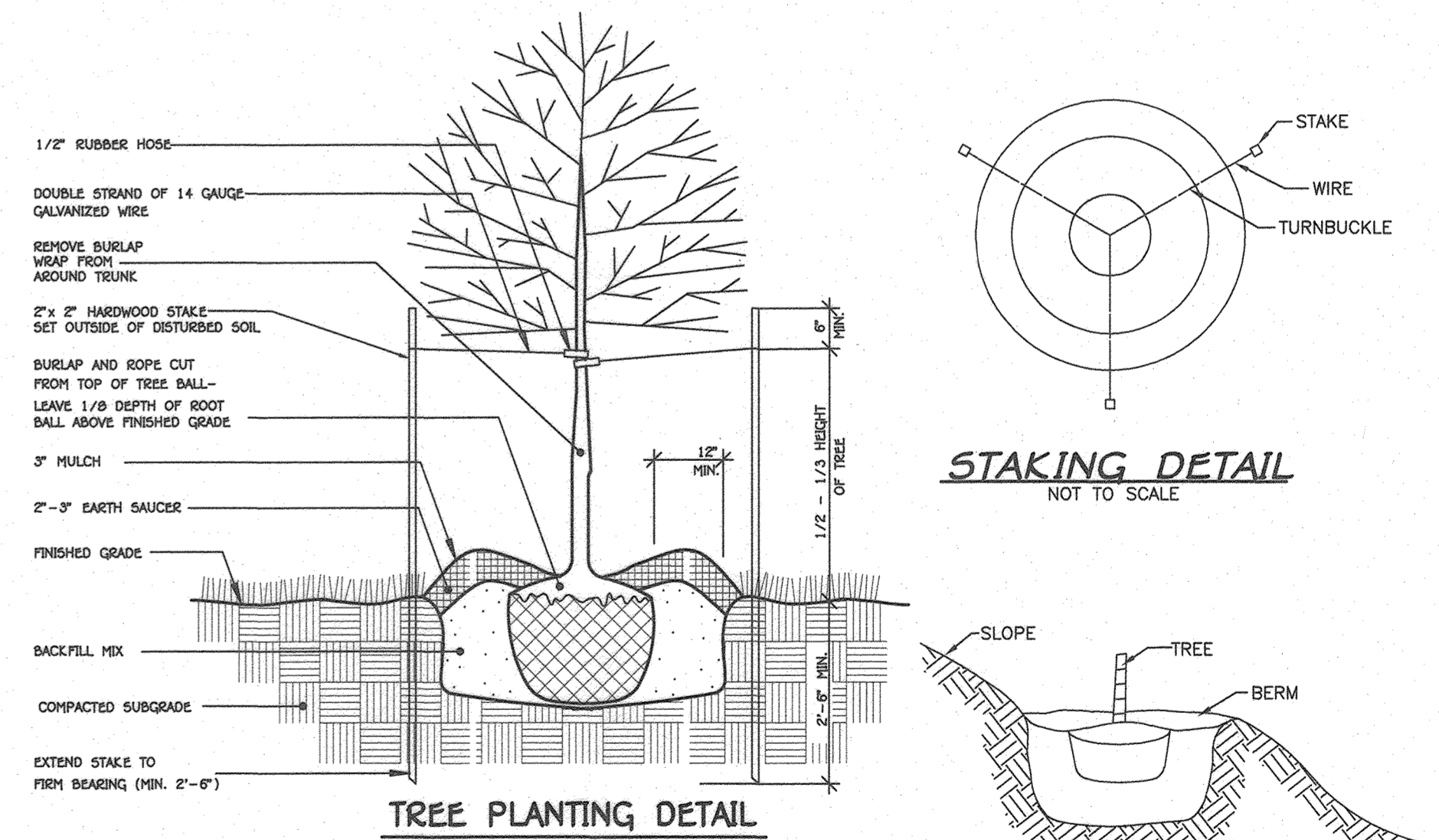
POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE.

PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE, ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.

WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED.

ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED.

A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND TREE.



TREE PLANTING DETAIL

STAKING DETAIL
NOT TO SCALE

GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

OWNERS

PARCEL 04
LENNIS HAMBRICK
4489 CENTENNIAL LANE
ELLCOTT CITY, MD 21042

DEVELOPER

PARCEL 449
CHATRAU BUILDINGS, INC.
5305 VILLAGE CENTER DRIVE
SUITE 305
COLUMBIA, MD 21044
PARCEL 174 & PARCEL 05
CENTENNIAL RESERVE, LLC
308 MAGOOTHY ROAD
SEVERNA PARK, MARYLAND 21146

CENTENNIAL RESERVE, LLC
308 MAGOOTHY ROAD
SEVERNA PARK, MARYLAND 21146
DAVE WOODSNER
240-319-1735

LANDSCAPE NOTES & DETAILS
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOs.:04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 12 OF 24

F-20-010

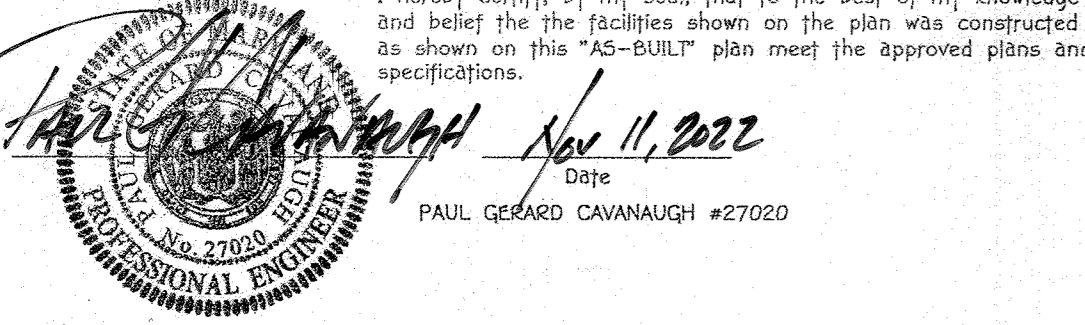
THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

B.4.C Specifications for Micro-Bioretenion, Rain Gardens, Landscape Infiltration & Infiltration Berms

- 1. Material Specifications**
The allowable materials to be used in these practices are detailed in Table B.4.1.
- 2. Filter Media or Planting Soil**
The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be used or dumped within the micro-bioretenion practice that may be harmful to plant growth or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under "Compaction".
The planting soil shall be tested and shall meet the following criteria:
• Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)
• Organic Content - Minimum 10% by dry weight (ASTM D 2074). In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
• Clay Content - Media shall have a clay content of less than 5%.
• pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.
There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH and additional tests of organic matter, and soluble salts. A general analysis is required from the site established topsoil. If topsoil is imported, then a separate analysis shall be performed for each location where the topsoil was excavated.
- 3. Compaction**
It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation boxes to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.
Compaction can be alleviated at the base of the bioretention facility by using a primary tillage operation such as a chisel plow, ripper, or subsoiler. These tillage operations are to restructure the soil profile through the 12 inch compaction zone. Subsurface methods must be approved by the engineer. Rippers typically do not till deep enough to reduce the effects of compaction from heavy equipment.
Rip till 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (ripping) base.
When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rip till the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.
When backfilling the bioretention facility, place soil in 12" to 18" lifts. Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.
- 4. Plant Material**
Recommended plant material for bioretention areas can be found in Appendix A, Section A.2.3.
- 5. Plant Installation**
Compost is a better organic material source, is less likely to float, and should be placed in the lower end of the area. Mulch should be placed in accordance to a uniform thickness of 2" to 2" of shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged (6 to 12 months) for acceptance.
Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted no later than 1/8th of the ball in above final grade surface. The diameter of the planting pit shall be at least six inches larger than the root ball. In general, this can be met with a mixture of loamy sand (60%-65%) and compost (35% to 40%) or sandy loam (30%), coarse sand (30%), and compost (40%).
Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.
Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.
The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Retiroll used fertilizer at a rate of 2 pounds per 1000 square feet.
- 6. Underdrains**
Underdrains should meet the following criteria:
Pipes - Should be 4 to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F 756, Type PS 28, or ASTM M-276) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
Perforations - If perforated pipe is used, perforations should be 1/2" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/2" (No. 4 or 4x4) galvanized hardware cloth.
Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.
The main collector pipe shall be at a minimum 0.5% slope.
A rigid, non-perforated observation well must be provided one per every 1,000 square feet to provide a clean-out port and monitor performance of the filter.
A 4" layer of pea gravel (1/4" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".
The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).
- 7. Miscellaneous**
These practices may not be constructed until all contributing drainage area has been stabilized (See sheet 12 for Table B.4).

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on the "AS-BUILT" plan meet the approved plans and specifications.



PRIVATELY OWNED OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6) (4)

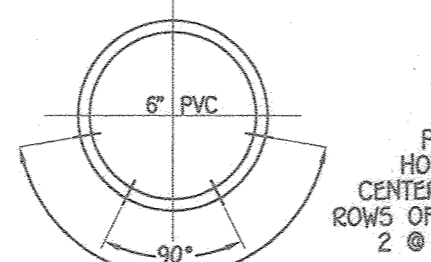
- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING, REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

- SHRUBS**
BAYBERRY
NORFOLK SPURGE
WINTERBERRY
INKBERRY
WITCH HAZEL
BUTONBRUSH BUCKEYE
BOTTLEBRUSH BUCKEYE
- GRASS**
SWITCHGRASS
HEAVY METAL SWITCHGRASS

M-6 (4)

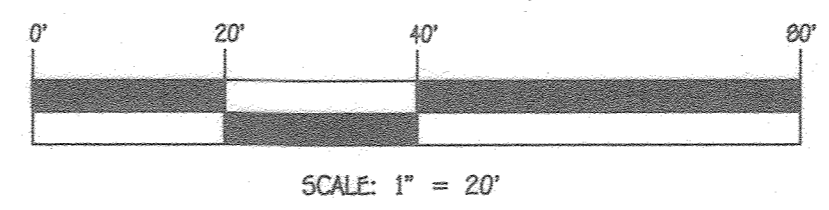
SCALE: 1" = 20'
DRAINAGE AREA: 52,963 SqFt.
FILTER AREA: 4,255 SqFt. 1583
ELEVATION: 435.75
PERIMETER: 143'
WEIR ELEVATION: 436.75

QUANTITY	NAME	MAXIMUM SPACING (FT.)
129 (388 sq.ft.)	GRASSES	36" o.c.
45	SHRUBS	36"-40" o.c.



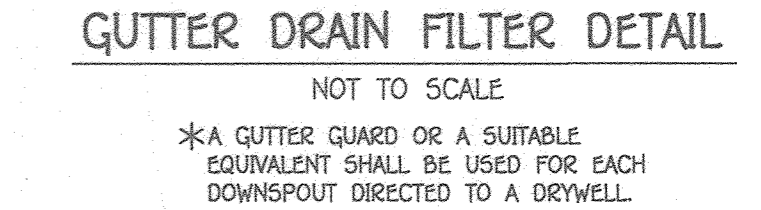
SCH40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE
NO TO SCALE

FACILITY NO.	A	B
M-6 (1)	436.72	435.75
F-6 (2)	413.75	410.75
M-6 (3)	432.50	429.75
M-6 (4)	435.75	436.75

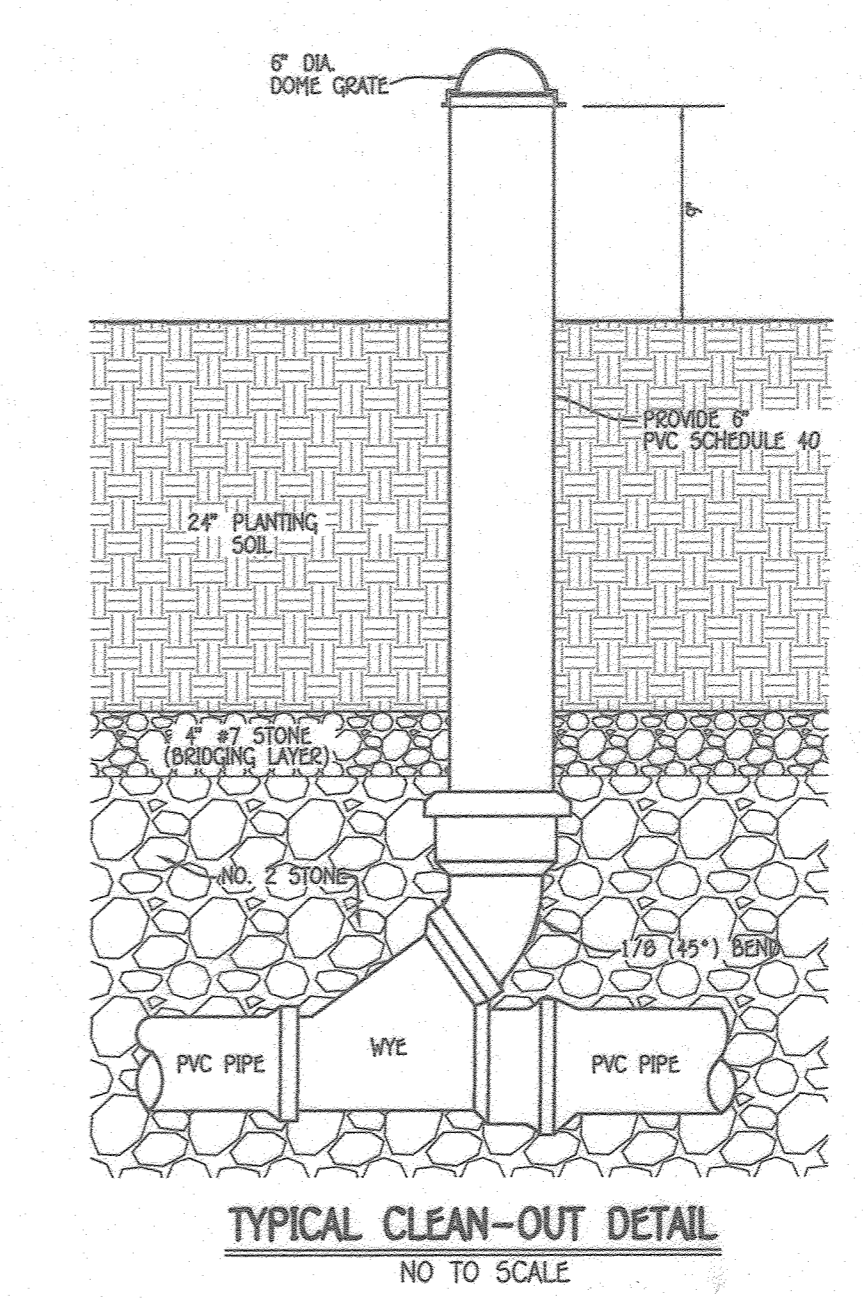


PUBLICLY OWNED AND JOINTLY MAINTAINED OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6) (1), (3) & (F-6) (2)

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDER BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING, REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.



STORMWATER MANAGEMENT NOTES AND DETAILS
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 13 OF 24

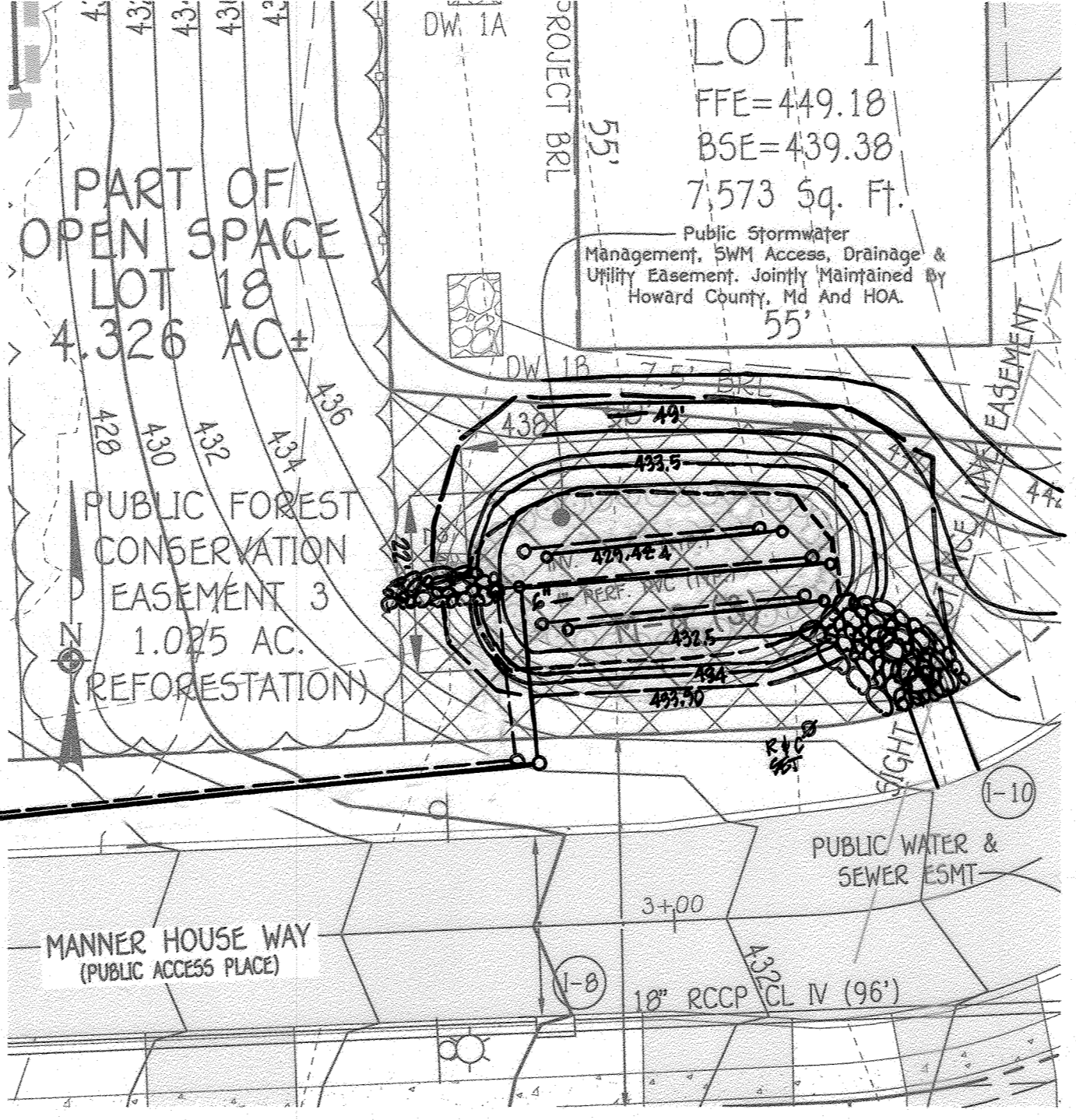
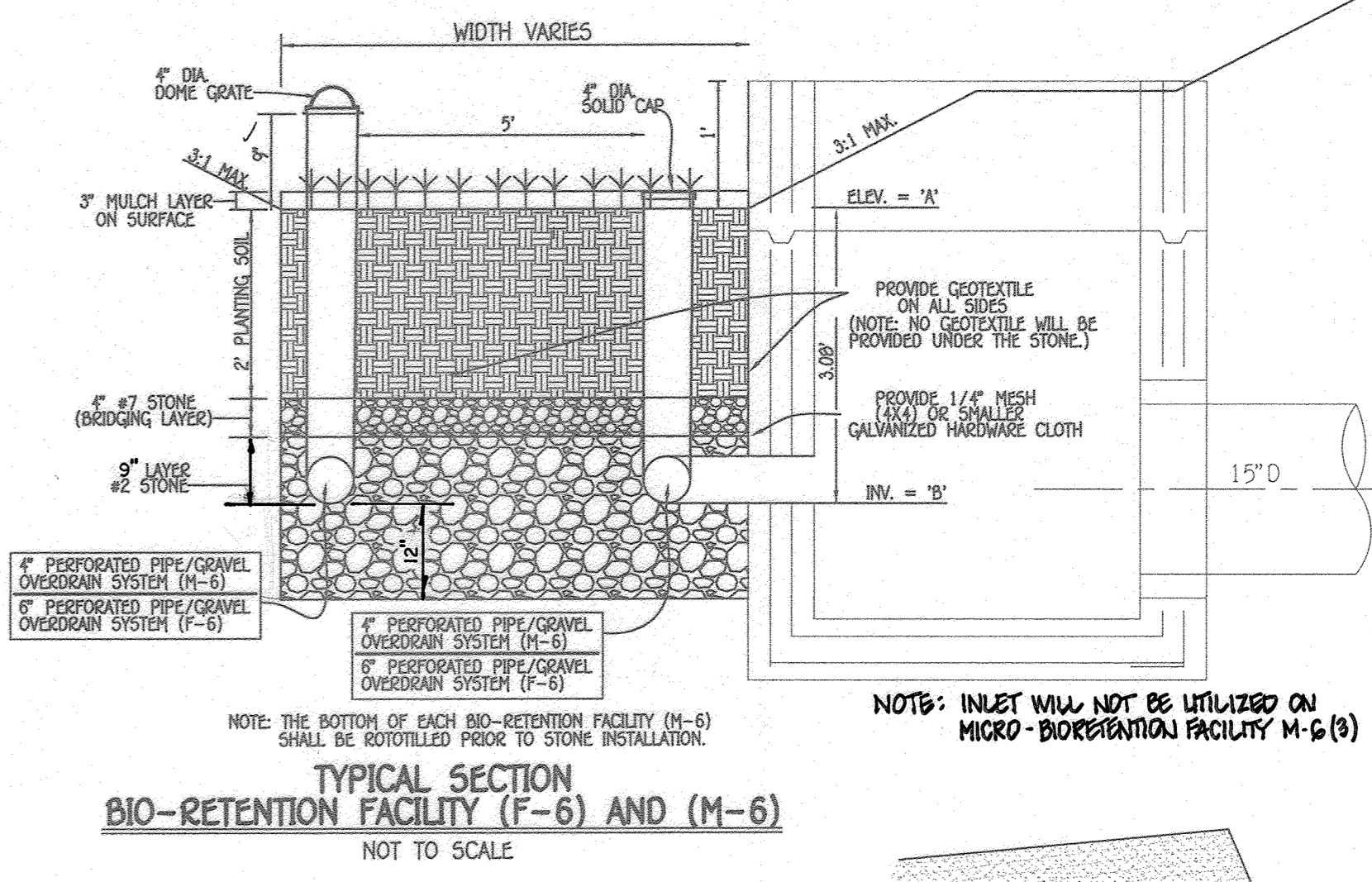


OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE DATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.

CLEANOUT/ WATER QUALITY SAMPLING PORT DETAIL

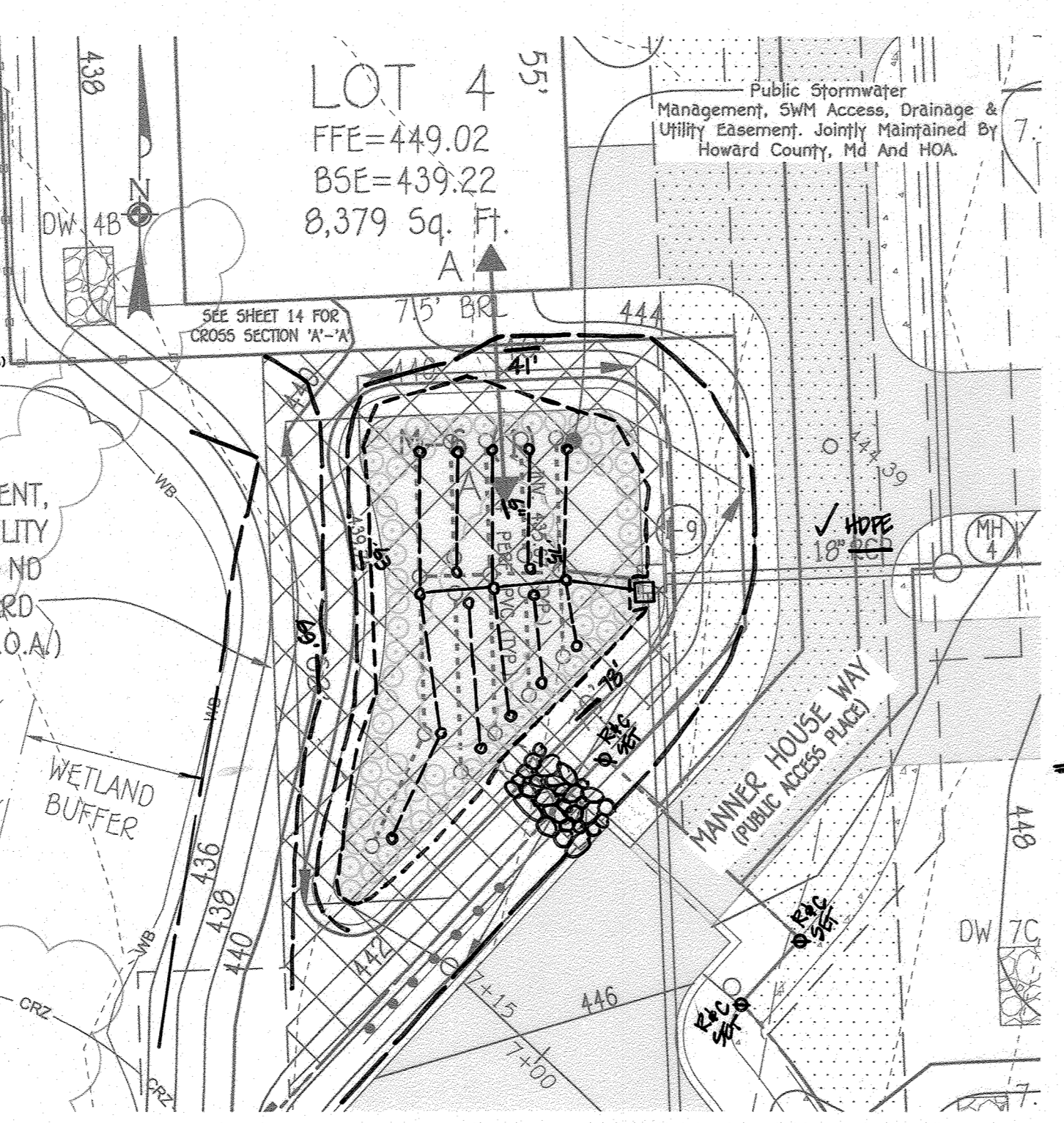
NOTE: MATERIAL SHALL BE GRAY IRON CASTING. CASTINGS MUST BE MACHINED ON BEARING SURFACES.
NOT TO SCALE



M-6 (3)

SCALE: 1" = 20'
DRAINAGE AREA: 21,090 SqFt.
FILTER AREA: 953 SqFt.
ELEVATION: 432.50
PERIMETER: 147'
WEIR ELEVATION: 433.50

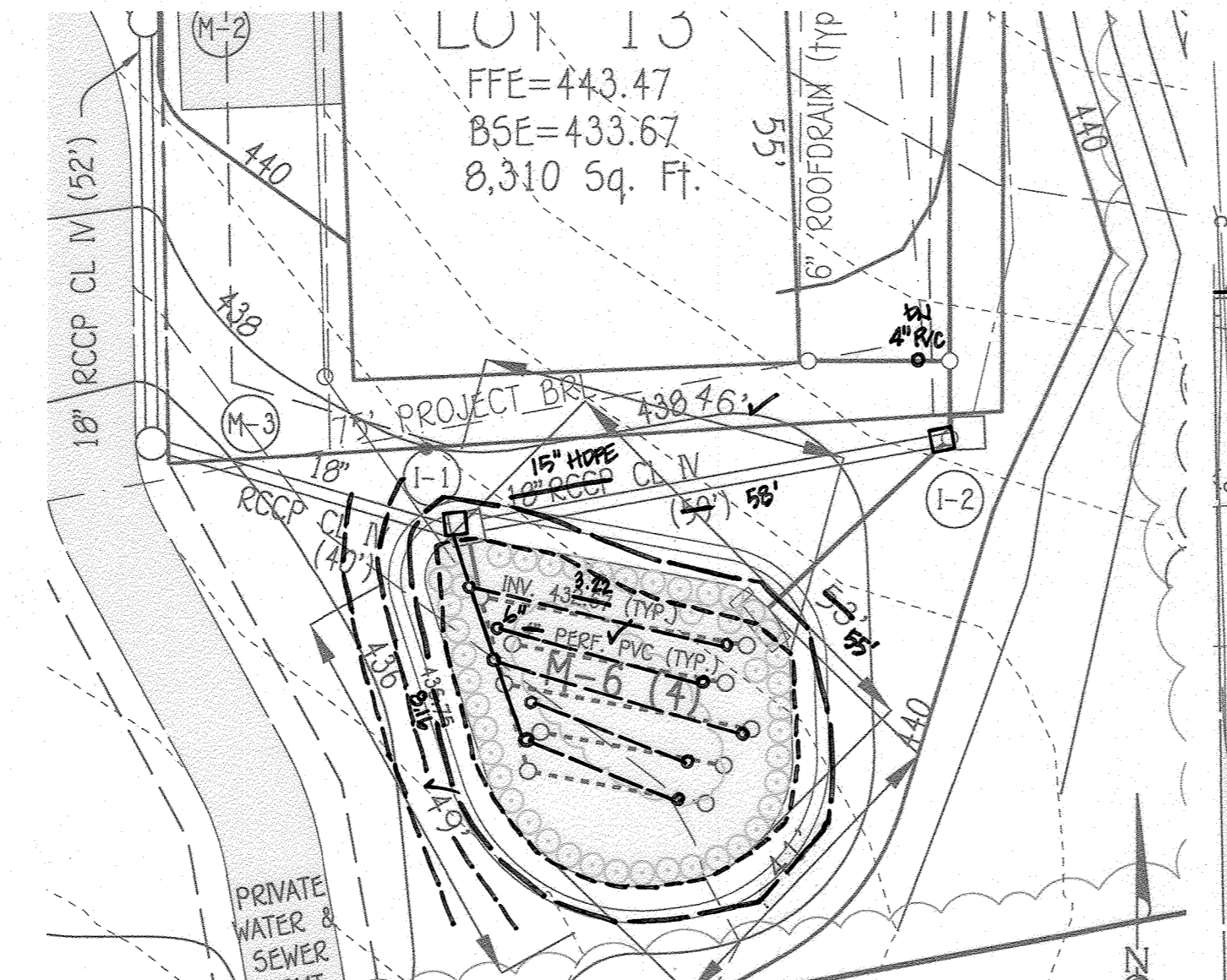
QUANTITY	NAME	MAXIMUM SPACING (FT.)
78 (235 sq.ft.)	GRASSES	36" o.c.
34	SHRUBS	36"-40" o.c.



M-6 (1)

SCALE: 1" = 20'
DRAINAGE AREA: 36,650 SqFt.
FILTER AREA: 1,664 SqFt. 2056
ELEVATION: 436.75
PERIMETER: 154'
WEIR ELEVATION: 439.75

QUANTITY	NAME	MAXIMUM SPACING (FT.)
157 (471 sq.ft.)	GRASSES	36" o.c.
69	SHRUBS	36"-40" o.c.



M-6 (4)

SCALE: 1" = 20'
DRAINAGE AREA: 52,963 SqFt.
FILTER AREA: 4,255 SqFt. 1583
ELEVATION: 435.75
PERIMETER: 143'
WEIR ELEVATION: 436.75

QUANTITY	NAME	MAXIMUM SPACING (FT.)
129 (388 sq.ft.)	GRASSES	36" o.c.
45	SHRUBS	36"-40" o.c.

F-6 (2)

SCALE: 1" = 20'
DRAINAGE AREA: 69,442 SqFt.
FILTER AREA: 6,255 SqFt. 1583
ELEVATION: 413.75
PERIMETER: 148'
WEIR ELEVATION: 414.75

QUANTITY	NAME	MAXIMUM SPACING (FT.)
221 (664 sq.ft.)	GRASSES	36" o.c.
91	SHRUBS	36"-40" o.c.

OWNERS
PARCEL 04
LENNIS HARRICK
4489 CENTENNIAL LANE
ELKLOTT CITY, MD 21042

DEVELOPER
CENTENNIAL RESERVE, LLC
308 MAGOTHY ROAD
SEVERNA PARK, MARYLAND 21146
240-319-1735

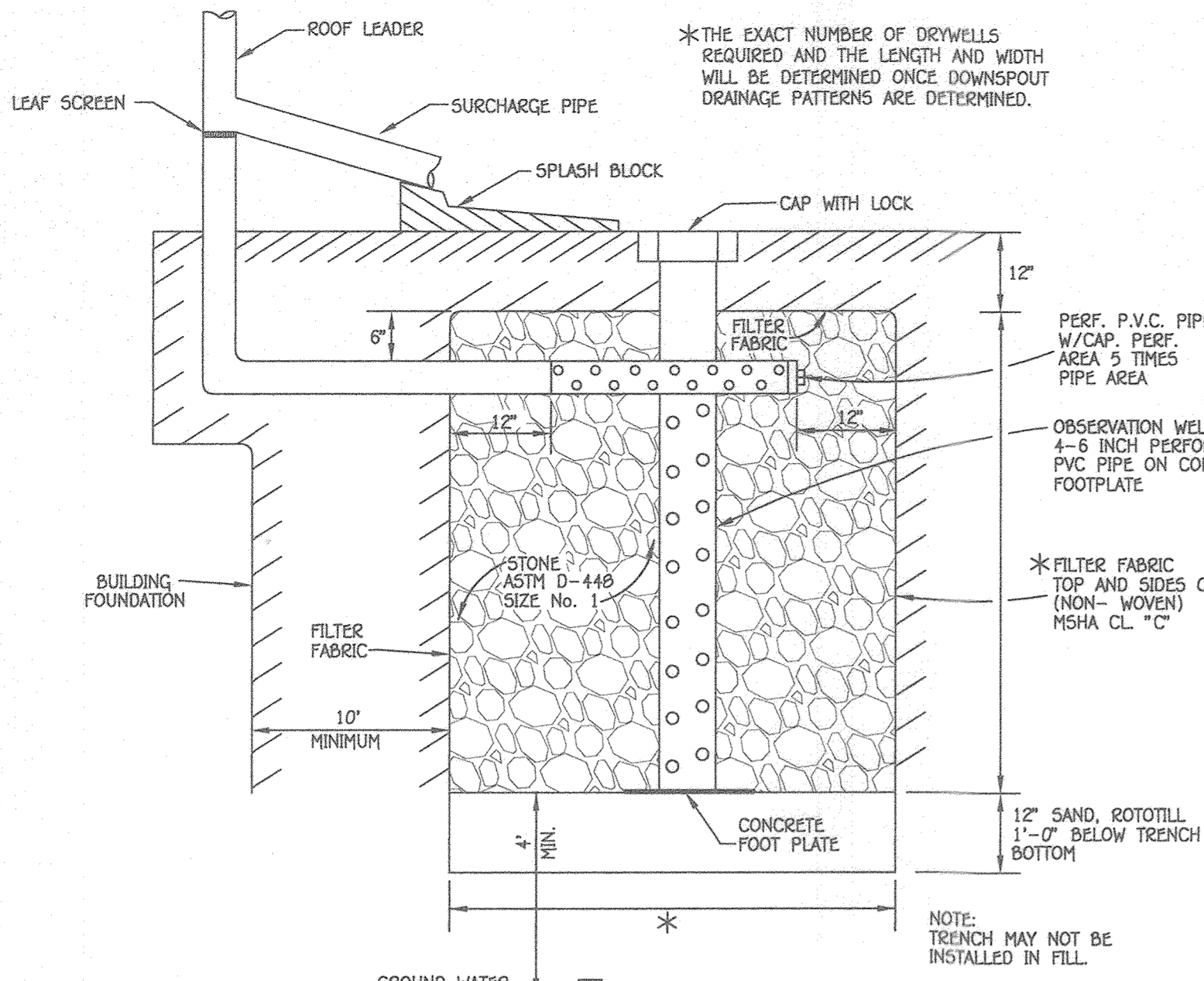
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
FRANK MANLAWAN II
5/28/20

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

NO.	REVISIONS	DATE
1	REV. PREP. CORR. I.E.L.S.V. - A NOTES FOR S.M.A. 010102.	8/21/2020

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

"AS-BUILT"



*THE EXACT NUMBER OF DRYWELLS REQUIRED AND THE LENGTH AND WIDTH WILL BE DETERMINED ONCE DOWNSPOUT DRAINAGE PATTERNS ARE DETERMINED.

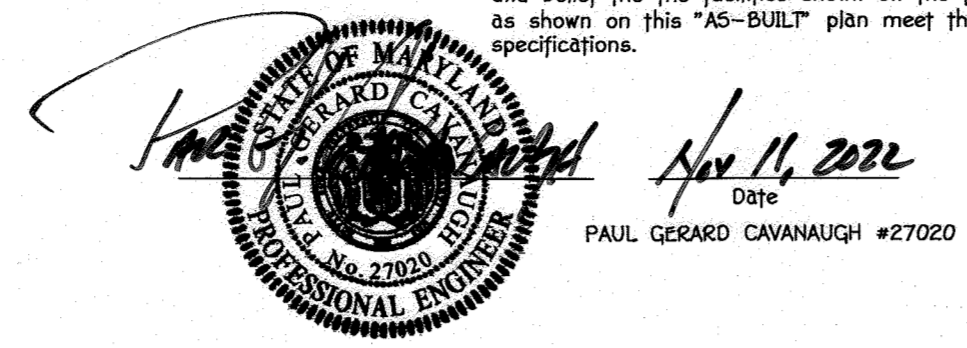
DRY WELL DETAIL
NOT TO SCALE

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

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL MAINTAIN THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN DOWN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH DRY WELLS:

EROSION AND SEDIMENT CONTROL:
FINAL GRADING FOR PROPOSED DRY WELLS SHOULD NOT TAKE PLACE UNTIL THE SURROUNDING SITE IS COMPLETELY STABILIZED. IF THIS CANNOT BE ACCOMPLISHED, RUNOFF FROM DISTURBED AREAS SHALL BE DIVERTED.

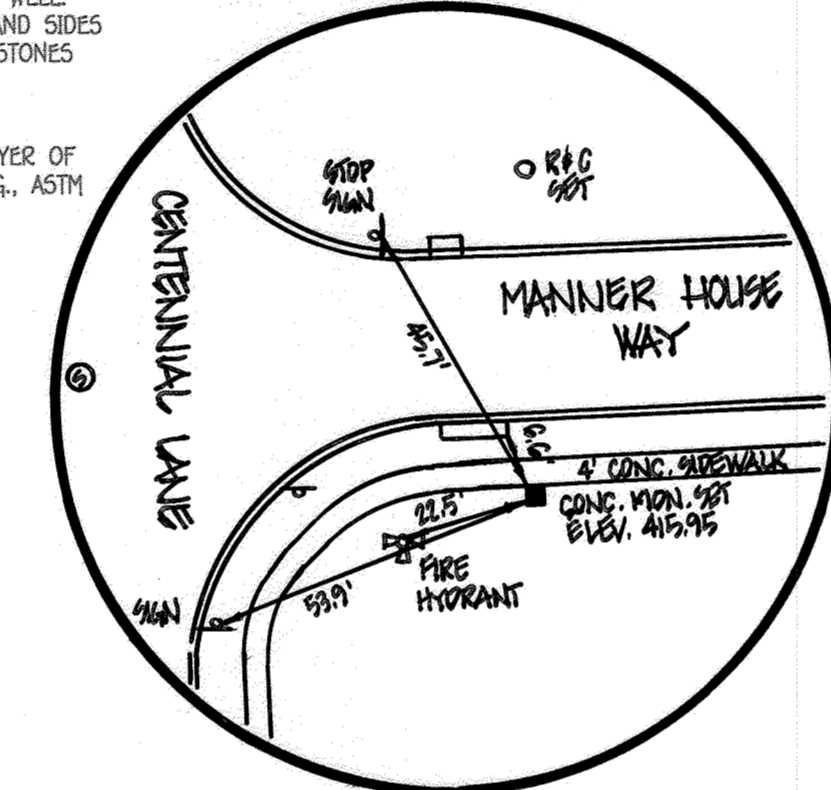
SOIL COMPACTION:
EXCAVATION SHOULD BE CONDUCTED IN DRY CONDITIONS WITH EQUIPMENT LOCATED OUTSIDE OF THE PRACTICE TO MINIMIZE BOTTOM AND SIDEWALL COMPACTION. CONSTRUCTION OF A DRY WELL SHALL BE PERFORMED WITH LIGHTWEIGHT, WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION. EXCAVATED MATERIALS SHALL BE PLACED IN A CONTAINED AREA.

UNDERGROUND CHAMBER:
A SUBSURFACE PREFABRICATED CHAMBER MAY BE USED.

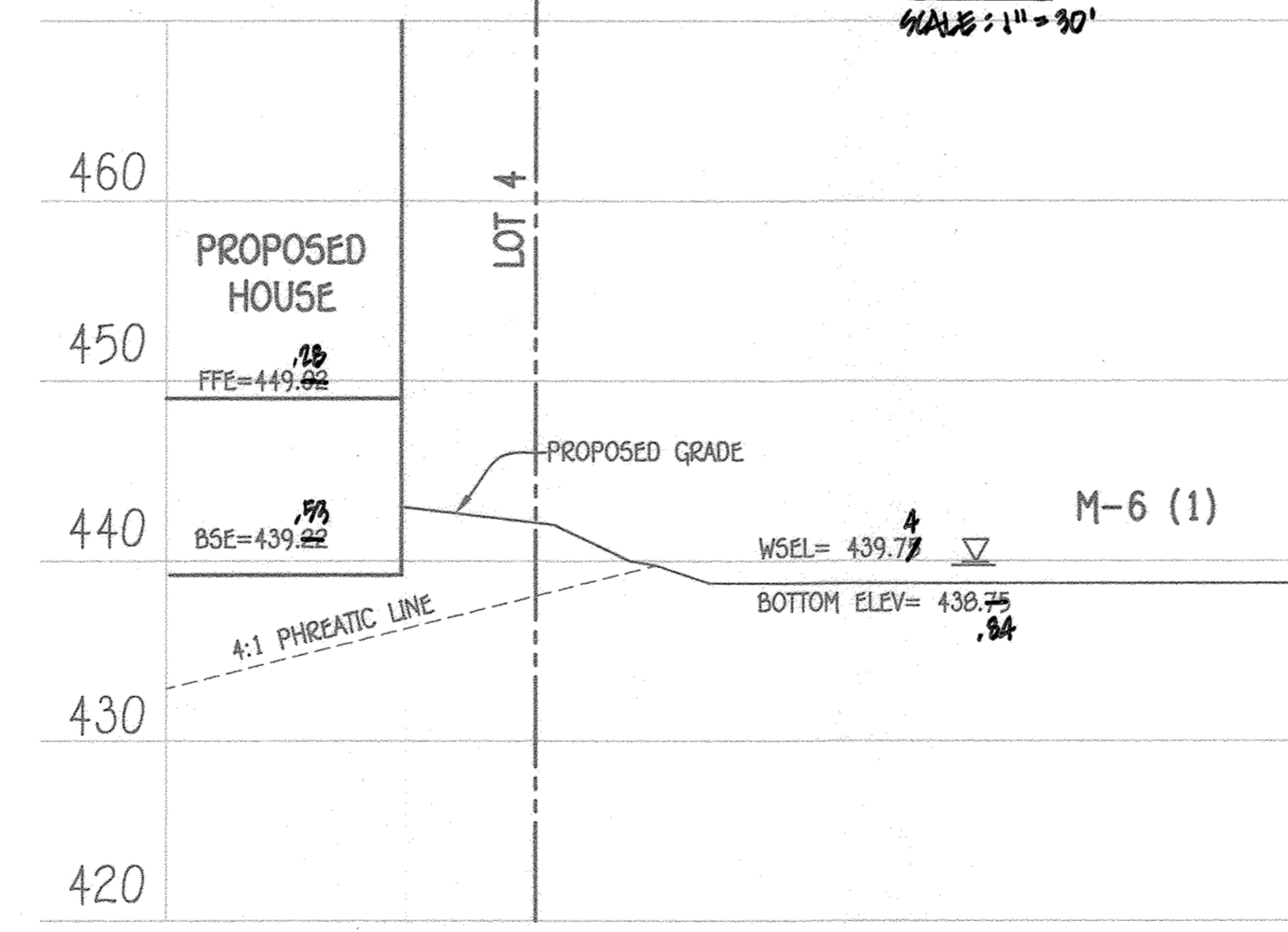
DRY WELL BOTTOM:
THE BOTTOM SHALL BE AS LEVEL AS POSSIBLE TO MINIMIZE POOLED WATER IN SMALL AREAS THAT MAY REDUCE OVERALL INFILTRATION AND LONGEVITY.

FILTER CLOTH:
FILTER CLOTH SHALL NOT BE INSTALLED ON THE BOTTOM OF THE WELL. NON-WOVEN FILTER CLOTH SHOULD BE USED TO LINE THE TOP AND SIDES OF THE DRY WELL TO PREVENT THE PORE SPACE BETWEEN THE STONES FROM BEING BLOCKED BY THE SURROUNDING NATIVE MATERIAL.

GRAVEL MEDIA:
THE AGGREGATE SHALL BE COMPOSED OF AN 18 TO 48-INCH LAYER OF CLEAN WASHED, OPEN GRADED MATERIAL WITH 40% POROSITY (E.G., ASTM D448 4, 5, OR 6 STONE OR EQUAL).



LOT NO.	DRYWELL NUMBER	NO. OF DOWNSPOUTS	AREA OF ROOF	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF STORAGE	NO. OF DRYWELLS	DIMENSIONS OF DRYWELLS
1	M-5 (1A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
1	M-5 (1B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
1	M-5 (1C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
2	M-5 (2A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
2	M-5 (2B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
2	M-5 (2C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
3	M-5 (3A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
3	M-5 (3B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
3	M-5 (3C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
4	M-5 (4A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
4	M-5 (4B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
5	M-5 (5A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
5	M-5 (5B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
6	M-5 (6A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
6	M-5 (6B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
7	M-5 (7A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
7	M-5 (7B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
7	M-5 (7C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
8	M-5 (8A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
8	M-5 (8B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
8	M-5 (8C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
9	M-5 (9A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
9	M-5 (9B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
10	M-5 (10A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
11	M-5 (11A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
12	M-5 (12A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
14	M-5 (14A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
14	M-5 (24A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
14	M-5 (14B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
15	M-5 (15A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
15	M-5 (15B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
15	M-5 (15C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
16	M-5 (16A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
16	M-5 (16B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
16	M-5 (16C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
17	M-5 (17A)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
17	M-5 (17B)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'
17	M-5 (17C)	2	756 Sq Ft	108 Cu Ft	123 Cu Ft	100%	1	11' X 7' X 4'



LOT 4 & M-6 (1)
CROSS SECTION 'A'-A'
SHOWING 4:1 PHREATIC LINE
SCALE: 1" = 10'

NOTE: THIS SHEET IS FOR S.W.M. ONLY.

REVISIONS

NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning

Chief, Division of Land Development
Date: 04/20

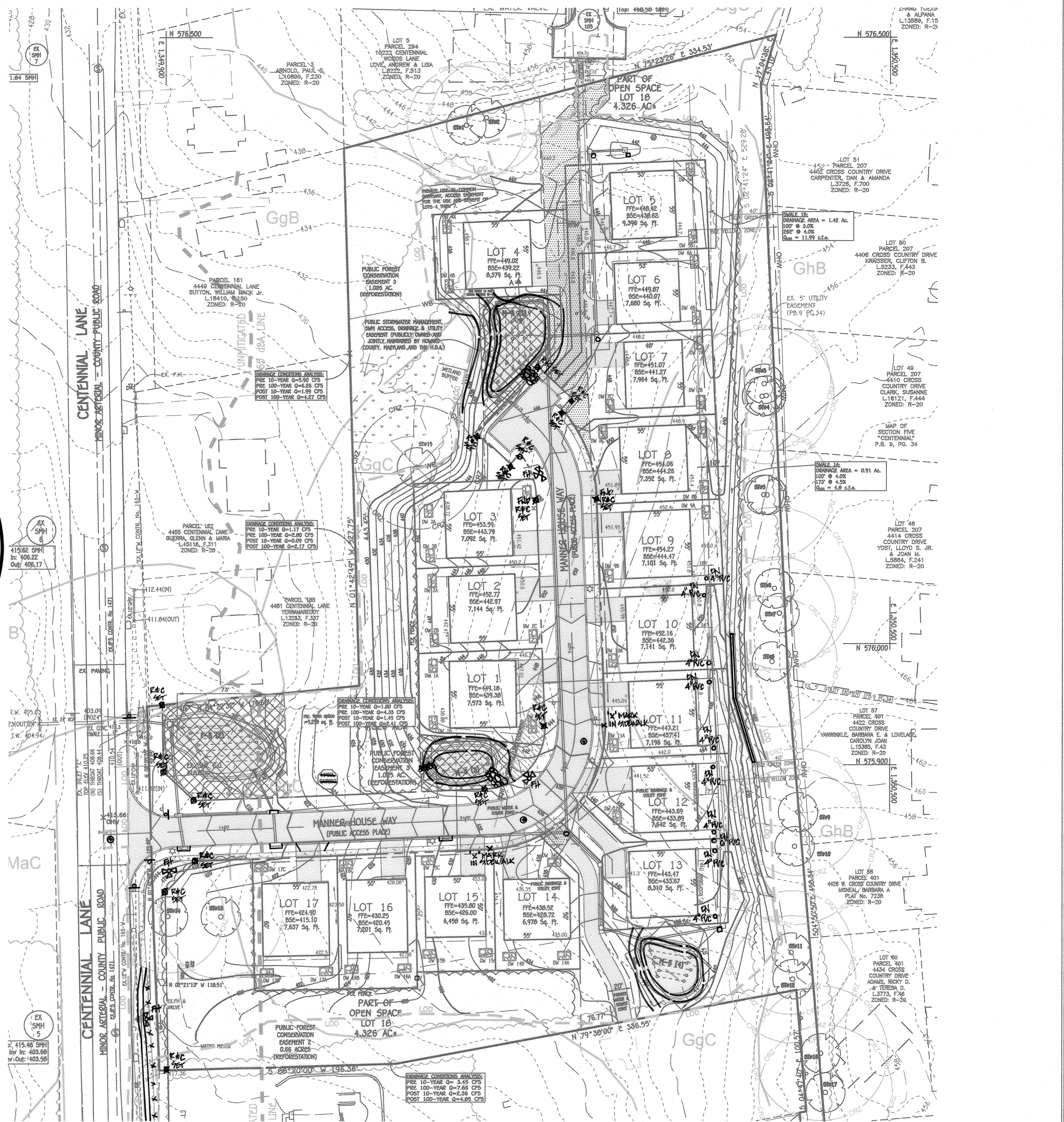
Chief, Development Engineering Division
Date: 8/2/2020

Approved: Howard County Department of Public Works
Chief, Bureau of Highways
Date: 8/2/2020

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PkE
ELLICOTT CITY, MARYLAND 21114
(410) 483 - 2993



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
Frank Havelman II
Date: 5/23/20



OWNERS
PARCEL 04
LENNIS HARRICK
4489 CENTENNIAL LANE
ELLICOTT CITY, MD 21114

PARCEL 449
CHATEAU BUILDINGS, INC.
5305 VILLAGE CENTER DRIVE
SUITE 305
COLUMBIA, MD 21044

PARCEL 174 & PARCEL 05
CENTENNIAL RESERVE, LLC
308 MAGDOOTH ROAD
SEVERNA PARK, MARYLAND 21146

DEVELOPER
CENTENNIAL RESERVE, LLC
308 MAGDOOTH ROAD
SEVERNA PARK, MARYLAND 21146
DAVE WOODSINGER
240-319-1735

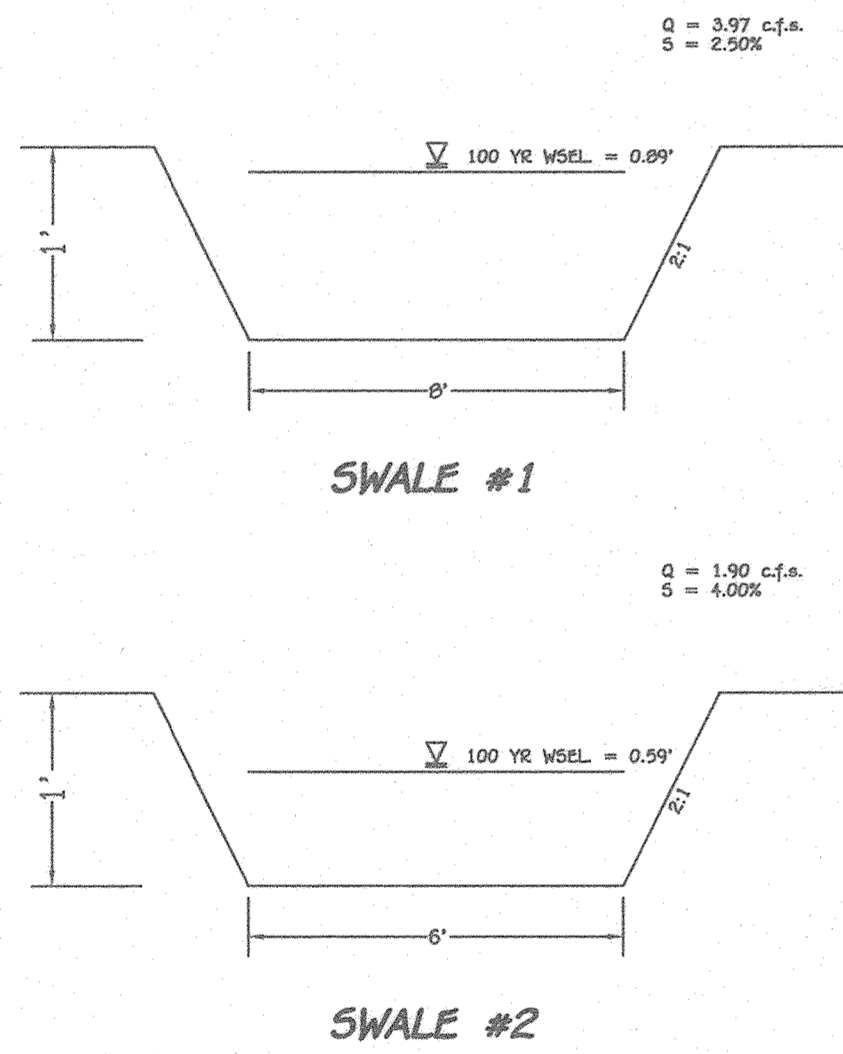
STORMWATER MANAGEMENT PLAN
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOs.:04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 14 OF 24

F-20-010
"AS-BUILT"

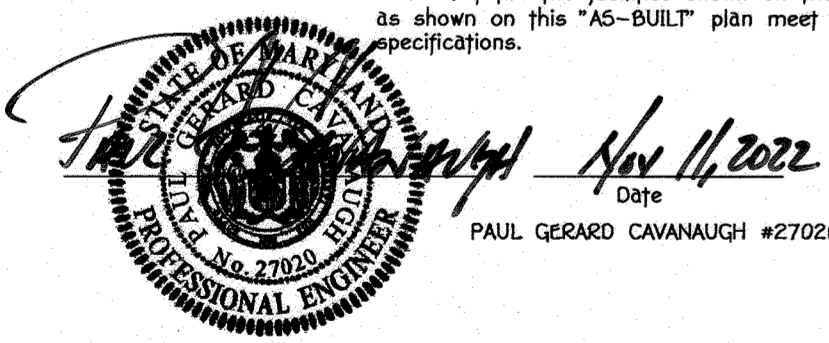
SOILS LEGEND			
SOIL	NAME	CLASS	K' VALUE
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	B	0.20

DRAINAGE AREA DATA					
AREA ID	STRUCTURE NO.	AREA	%	ZONED	% IMP.
A	I-1	0.20 AC.	.45	R-ED	37%
B	I-2	1.01 AC.	.25	R-ED	12%
C	I-3	1.82 AC.	.15	R-ED	0%
D	I-4	0.02 AC.	.95	R-ED	100%
E	I-5	0.10 AC.	.54	R-ED	49%
F	I-6	0.15 AC.	.57	R-ED	52%
G	I-7	0.28 AC.	.69	R-ED	67%
H	I-8	0.65 AC.	.63	R-ED	60%
I	I-9	0.62 AC.	.54	R-ED	49%
J	I-10	0.45 AC.	.56	R-ED	54%
K	I-11	5.04 AC.	.21	R-ED	7%
L	I-12	0.43 AC.	.91	R-ED	95%
M	EX. 'K'	5.55 AC.	.41	R-ED	32%



AS-BUILT CERTIFICATION

I hereby certify, by my seal, to the best of my knowledge and belief the facilities shown on the plan were constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



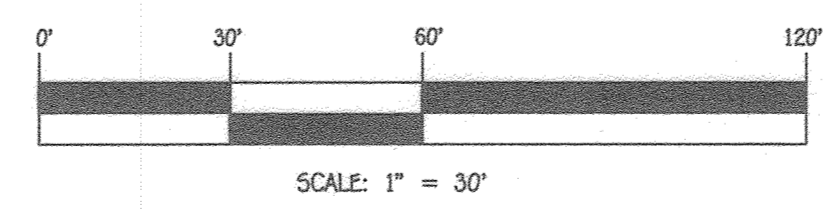
NO.	REVISIONS DESCRIPTION	DATE

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development *[Signature]* Date: 9/4/20
 Chief, Development Engineering Division *[Signature]* Date: 8/21/20
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways *[Signature]* Date: 8/21/20

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2299



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
Frank Hanulawski II Date: 5/28/20



NOTE: THIS SHEET IS FOR DRAINAGE AREAS & SOILS ONLY.

OWNERS	DEVELOPER
PARCEL 04 LENNIS HAMBREX 4489 CENTENNIAL LANE ELICOTT CITY, MD 21042	PARCEL 449 CHITRAU BUILDERS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044
PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGDOHY ROAD SEVERNA PARK, MARYLAND 21146	CENTENNIAL RESERVE, LLC 308 MAGDOHY ROAD SEVERNA PARK, MARYLAND 21146 DAVE WOODS 240-319-1735

STORMDRAIN DRAINAGE AREA MAP
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
 TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 15 OF 24

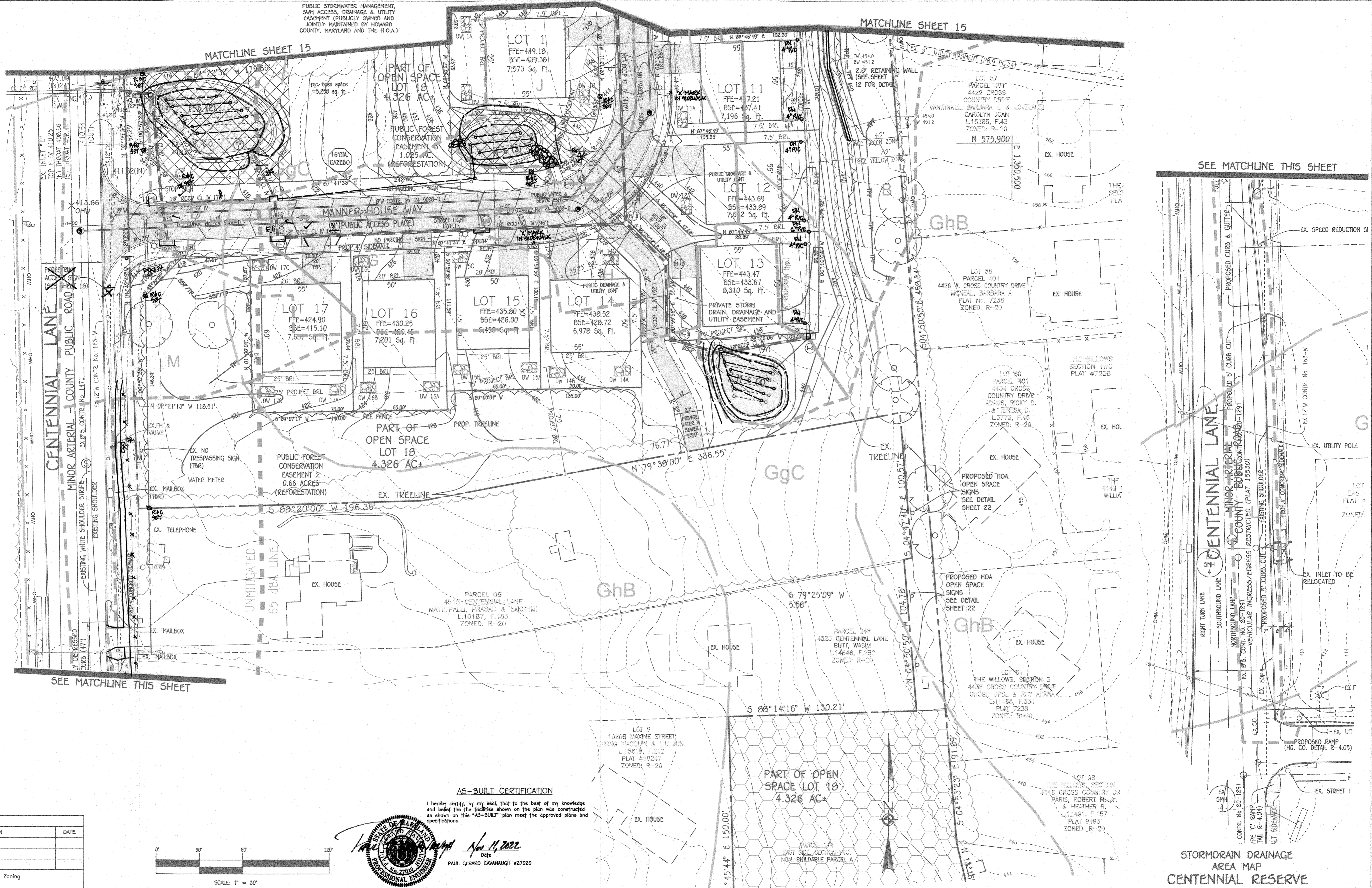
F-20-010

"AS-BUILT"

PUBLIC STORMWATER MANAGEMENT, SWM ACCESS, DRAINAGE & UTILITY EASEMENT (PUBLICLY OWNED AND JOINTLY MAINTAINED BY HOWARD COUNTY, MARYLAND AND THE H.O.A.)

MATCHLINE SHEET 15

MATCHLINE SHEET 15



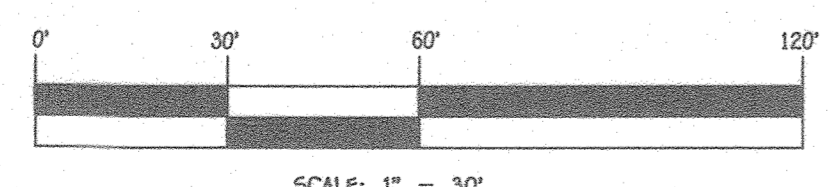
SEE MATCHLINE THIS SHEET

SEE MATCHLINE THIS SHEET

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

Paul Gerard Cavanaugh
 Date: **Nov 11, 2022**
 PAUL GERARD CAVANAUGH #27020



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

Frank Manalansan II
 Date: **5/28/20**
 FRANK MANALANSAN II

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 481-2295

OWNERS	DEVELOPER
PARCEL 04 LENNIS HAMRICK 4489 CENTENNIAL LANE ELICOTT CITY, MD 21042	CENTENNIAL RESERVE, LLC 308 MAGDOHY ROAD SEVERNA PARK, MARYLAND 21146
PARCEL 449 CHATEAU BUILDERS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044	DAVE WOSSNER 240-319-1735
PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGDOHY ROAD SEVERNA PARK, MARYLAND 21146	

STORMDRAIN DRAINAGE AREA MAP
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
 TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 16 OF 24

NO.	REVISIONS DESCRIPTION	DATE

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development *Calvin* Date: **9/4/20**

Chief, Development Engineering Division *James* Date: **8/21/2020**

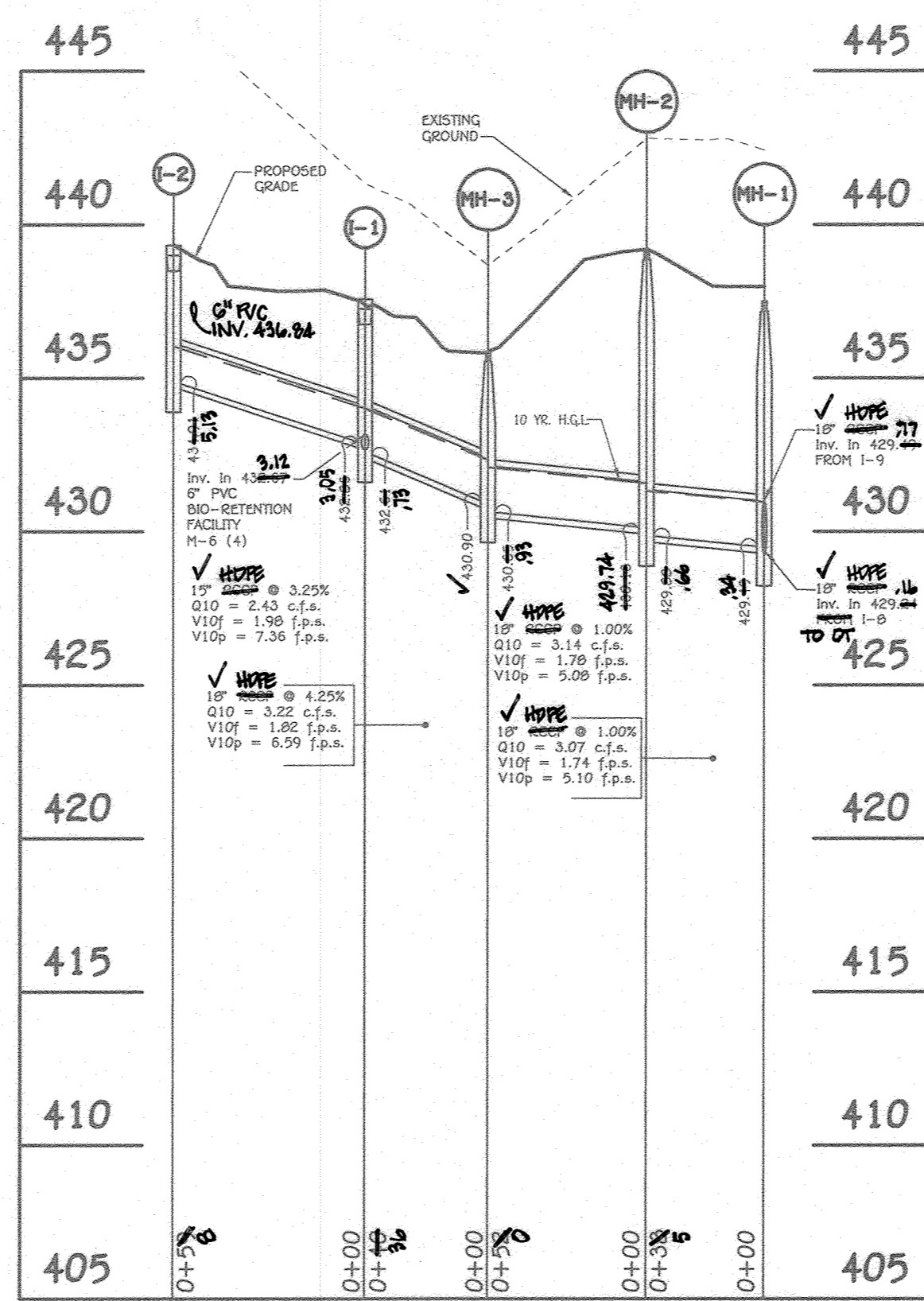
Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways *MK* Date: **8/21/2020**

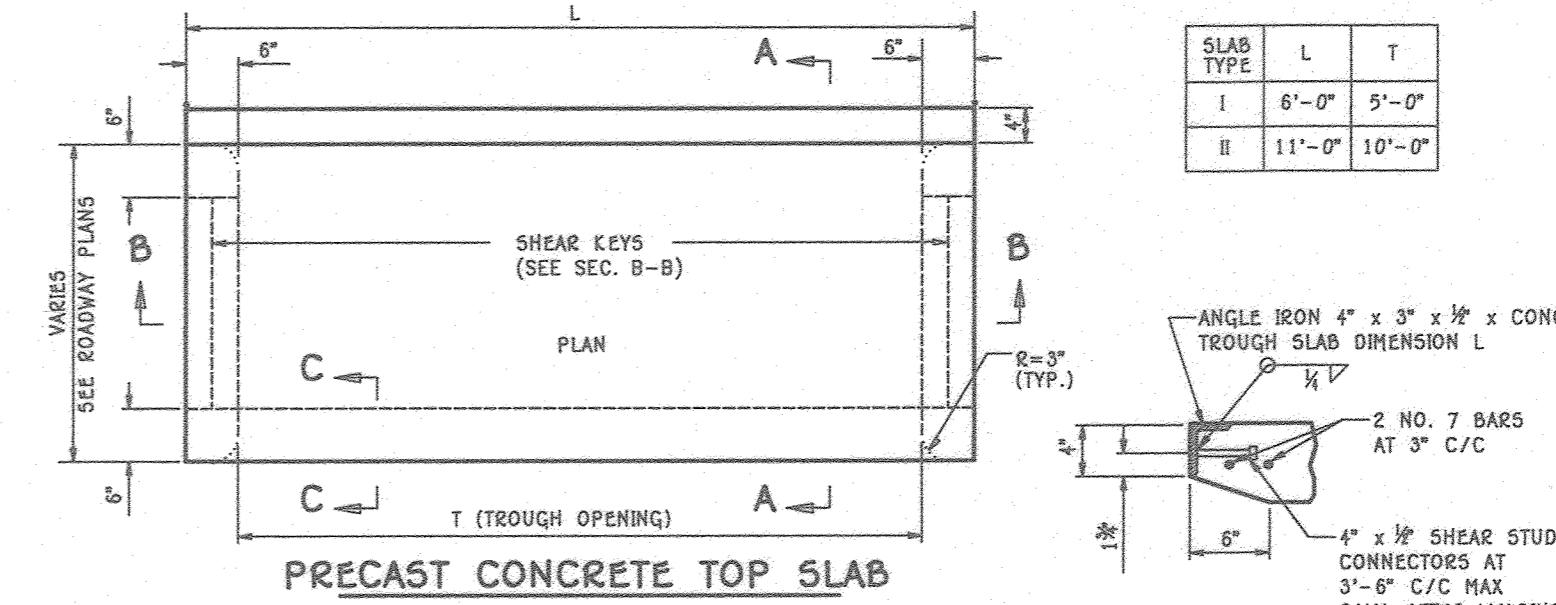
"AS-BUILT"

STRUCTURE SCHEDULE							
STRUCTURE NO.	OWNERSHIP AND MAINTENANCE	TOP ELEVATION	INV IN	INV OUT	COORDINATES	TYPE	REMARKS
EX. HW	PUBLIC	412.13	406.68 (1-3) 24"	-----			
HW-1	PRIVATE	415.75, 88	413.75 (1-6) 15"	-----	N 575896.59 E 1349972.94	TYPE 'C' ENDWALL	D. - 5.21
I-1	PRIVATE	436.75, 77	434.75 (1-2) 15"	-----	N 575755.35 E 1350300.19	'S' INLET	D. - 4.24
I-2	PRIVATE	438.51 *	-----	437.51	N 575767.00 E 1350362.05	'O' INLET	D. - 4.10
I-3	PUBLIC	415.75, 61	410.06 (1-4) 24"	-----	N 575933.70 E 1349904.19	'S' INLET	D. - 4.24
I-4	PUBLIC	414.07, 85	411.55 (1-6) 18"	-----	N 575858.48 E 1349911.18	A-5 INLET	D. - 4.02
I-5	PUBLIC	415.75, 10	-----	411.55	N 575831.80 E 1349915.54	A-10 INLET	D. - 4.03
I-6	PUBLIC	419.85, 46	415.06 (1-7) 18"	-----	N 575861.64 E 1349909.54	A-5 INLET	D. - 4.01
I-7	PUBLIC	419.85, 73	415.06 (1-8) 18"	-----	N 575834.88 E 1349991.67	A-10 INLET	D. - 4.03
I-8	PUBLIC	430.92	429.92 (MH-1) 18"	-----	N 575840.58 E 1350132.84	A-10 INLET	D. - 4.03
I-9	PRIVATE	439.75	434.86 (MH-4) 18"	-----	N 576253.88 E 1350215.00	'S' INLET	D. - 4.24
I-10	PRIVATE	434.74, 80	-----	-----	N 575874.48 E 1350186.58	COG/COS OPENING 5' WIDE	MD-374.68 SEE DETAIL THIS SHEET
I-11	PRIVATE	441.50 *	-----	438.75	N 576407.22 E 1350280.13	'O' INLET	D. - 4.10
MH-1	PRIVATE	437.50, 16	429.44 (1-9) 18"	-----	N 575844.61 E 1350232.80	4' DIA. MANHOLE	G. - 5.12
MH-2	PRIVATE	439.80, 70	429.34 (MH-2) 18"	-----	N 575817.57 E 1350260.40	4' DIA. MANHOLE	G. - 5.12
MH-3	PRIVATE	435.85, 73	430.90 (1-1) 18"	-----	N 575765.67 E 1350261.31	4' DIA. MANHOLE	G. - 5.12
MH-4	PRIVATE	445.50	435.55 (MH-5) 15"	-----	N 576255.42 E 1350256.99	4' DIA. MANHOLE	G. - 5.12
MH-5	PRIVATE	443.88, 13	437.32 (1-11) 12"	-----	N 576406.10 E 1350251.15	4' DIA. MANHOLE	G. - 5.12

* DENOTES THROAT OPENING



STORM DRAIN PROFILE
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'

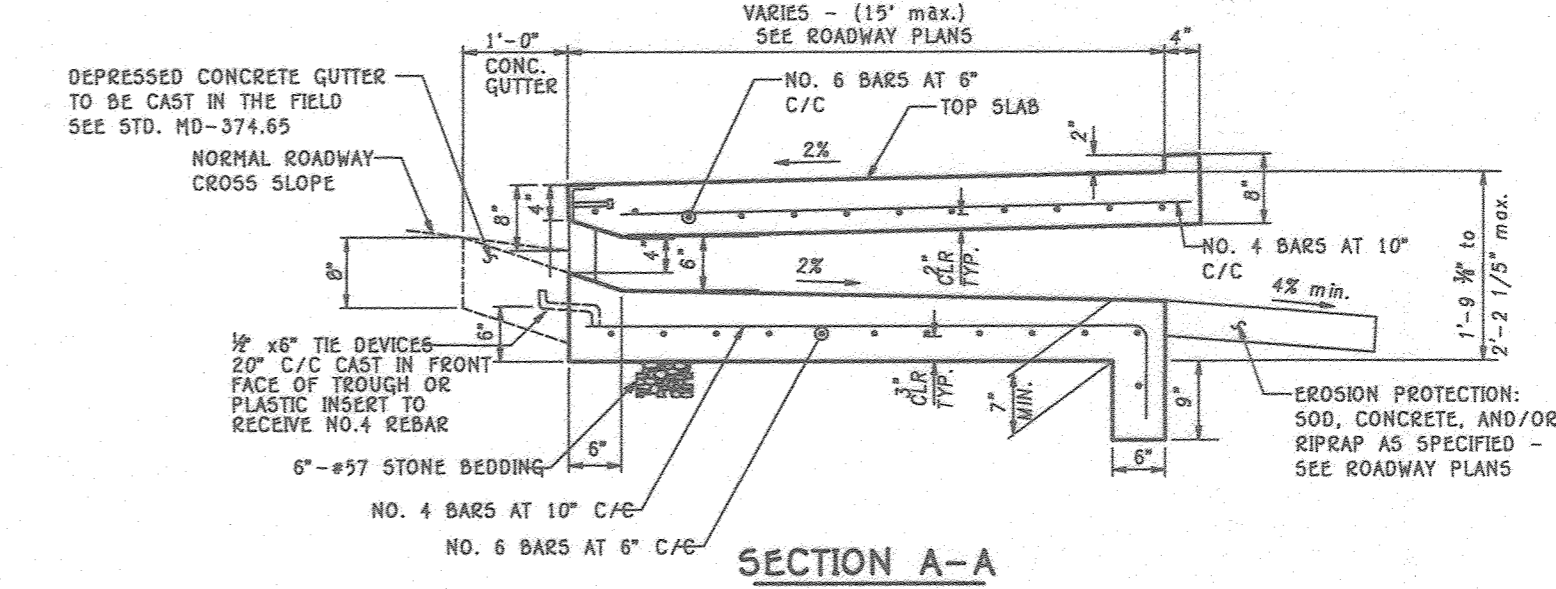


PRECAST CONCRETE TOP SLAB

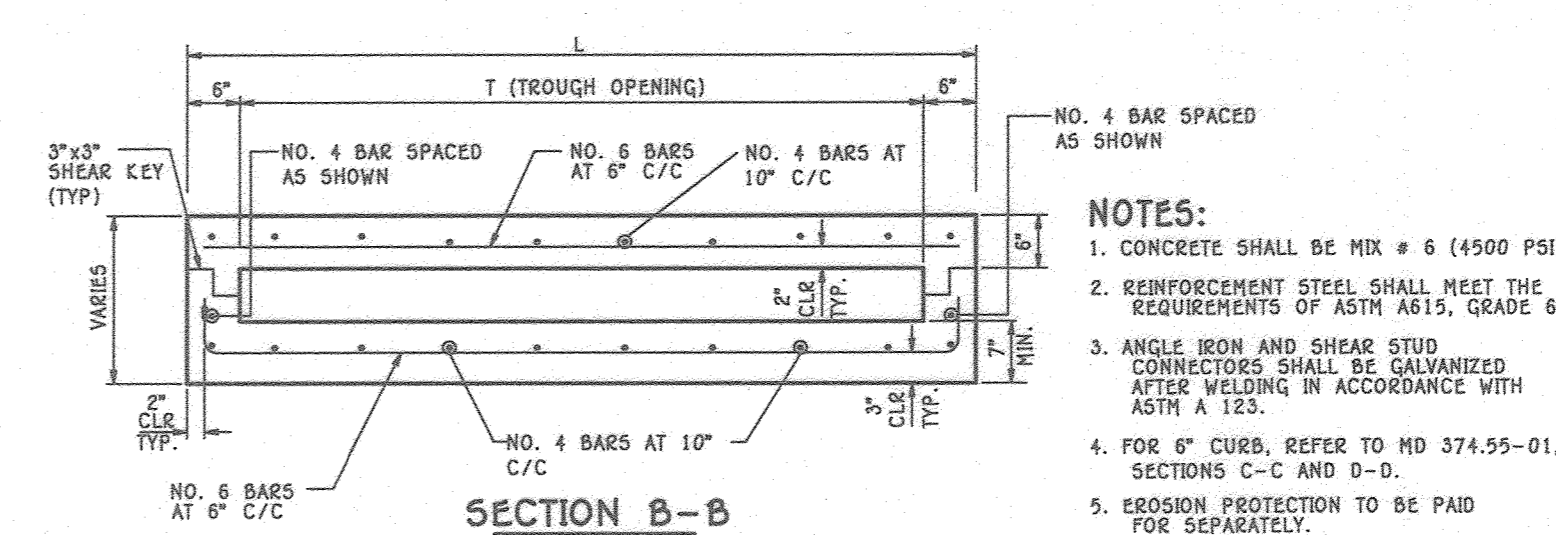
SECTION C-C

PIPE SCHEDULE		
SIZE	CLASS	LENGTH
6"	PERFORATED PVC, SCH.40	821 L.F.
6"	PVC, SCH.40	59 L.F.
12"	RCCP, CL. IV	29 L.F.
15"	RCCP, CL. IV	249 L.F.
18"	RCCP, CL. IV	955 L.F.
24"	RCCP, CL. IV	98 L.F.

NOTE: RCCP, CL. IV MAY BE SUBSTITUTED WITH HDPE PIPE MATERIAL WHERE DEPTH OF COVER PERMITS.

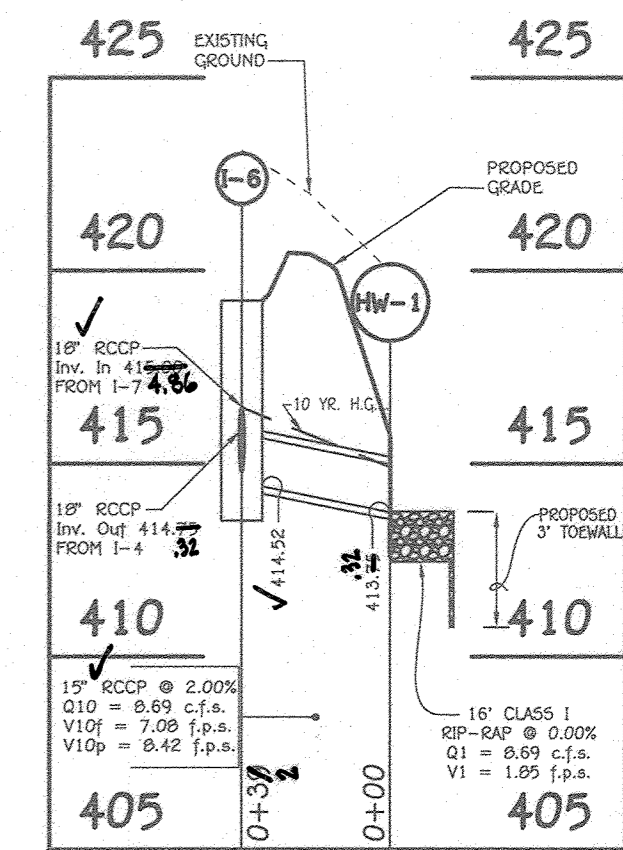


SECTION A-A

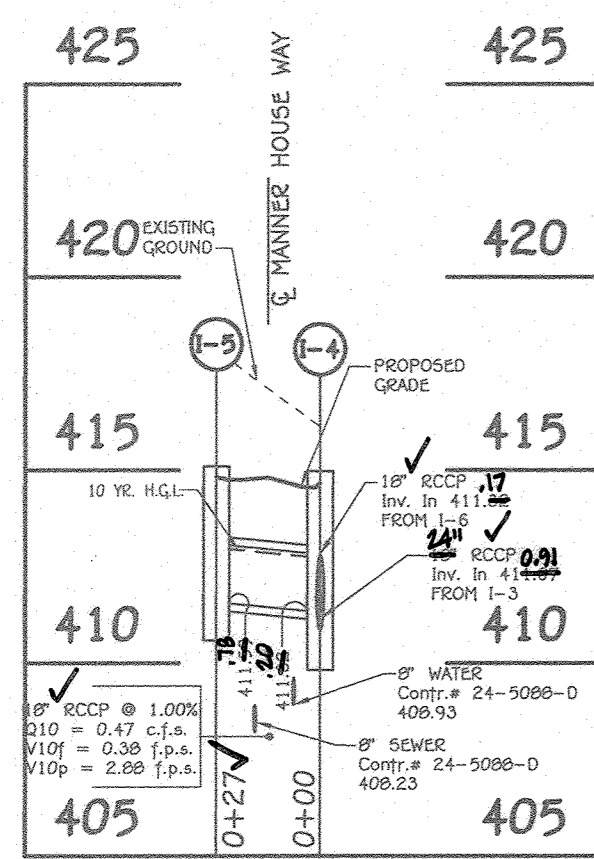


SECTION B-B

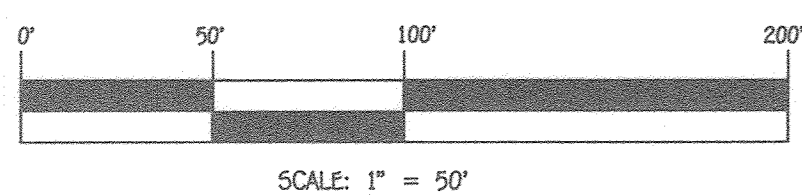
- NOTES:
1. CONCRETE SHALL BE MIX # 6 (4500 PSI).
 2. REINFORCEMENT STEEL SHALL MEET THE REQUIREMENTS OF ASTM A615, GRADE 60.
 3. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 153.
 4. FOR 6" CUBES, REFER TO MD 374.55-01, SECTIONS C-C AND D-D.
 5. EROSION PROTECTION TO BE PAID FOR SEPARATELY.



STORM DRAIN PROFILE
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'



STORM DRAIN PROFILE
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'



SCALE: 1" = 50'

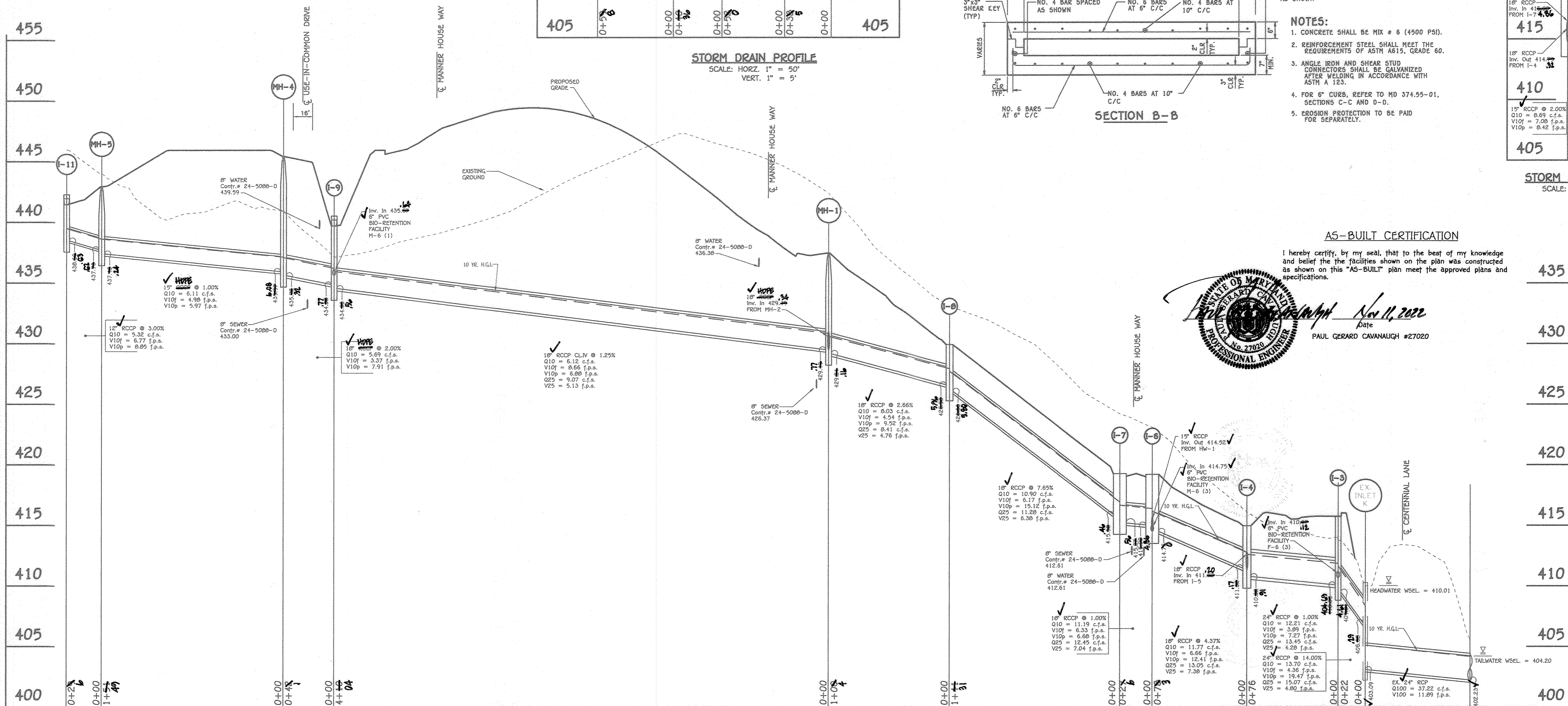
REVISIONS		
NO.	DESCRIPTION	DATE
1	REV. PROFILE TO SHOW 6" PVC BETWEEN I-1 & I-2	8/18/22

Approved: Department Of Planning And Zoning

Chief, Department Of Land Development
Date: 8/18/22

Chief, Development Engineering Division
Date: 8/18/22

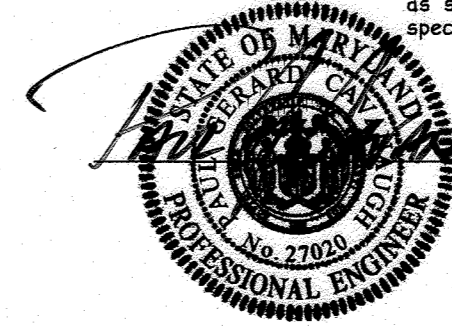
Approved: Howard County Department Of Public Works
Chief, Bureau Of Highways
Date: 8/21/2020



STORM DRAIN PROFILE
SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.



Date: Nov 11, 2022
PAUL GERARD CAVANAUGH #27020



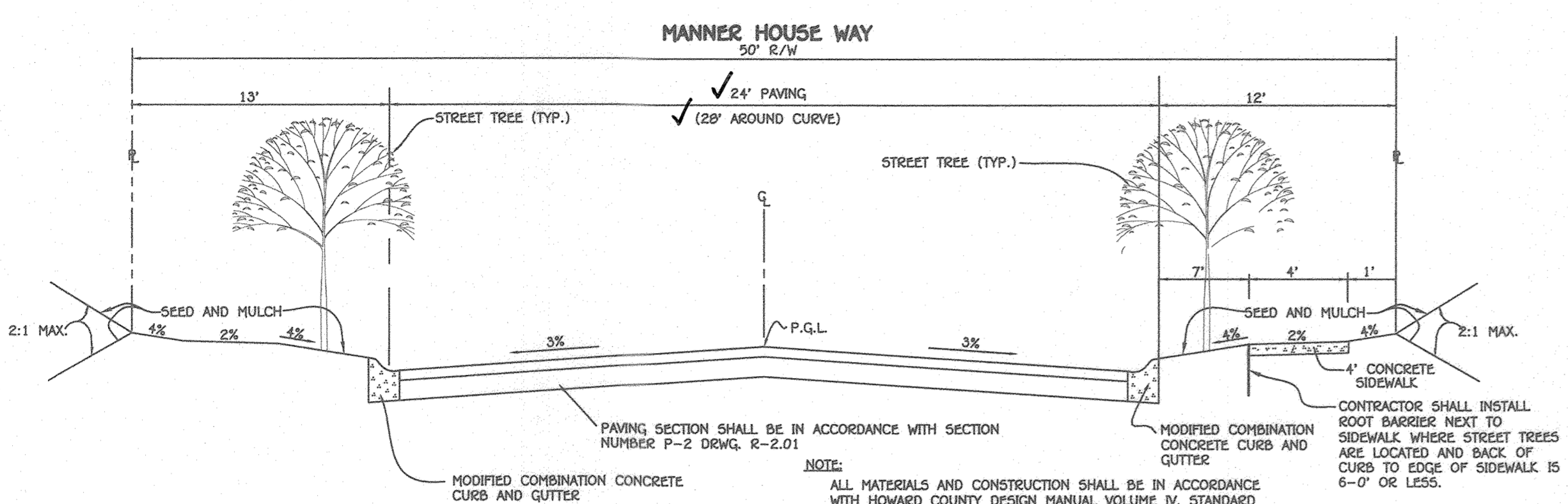
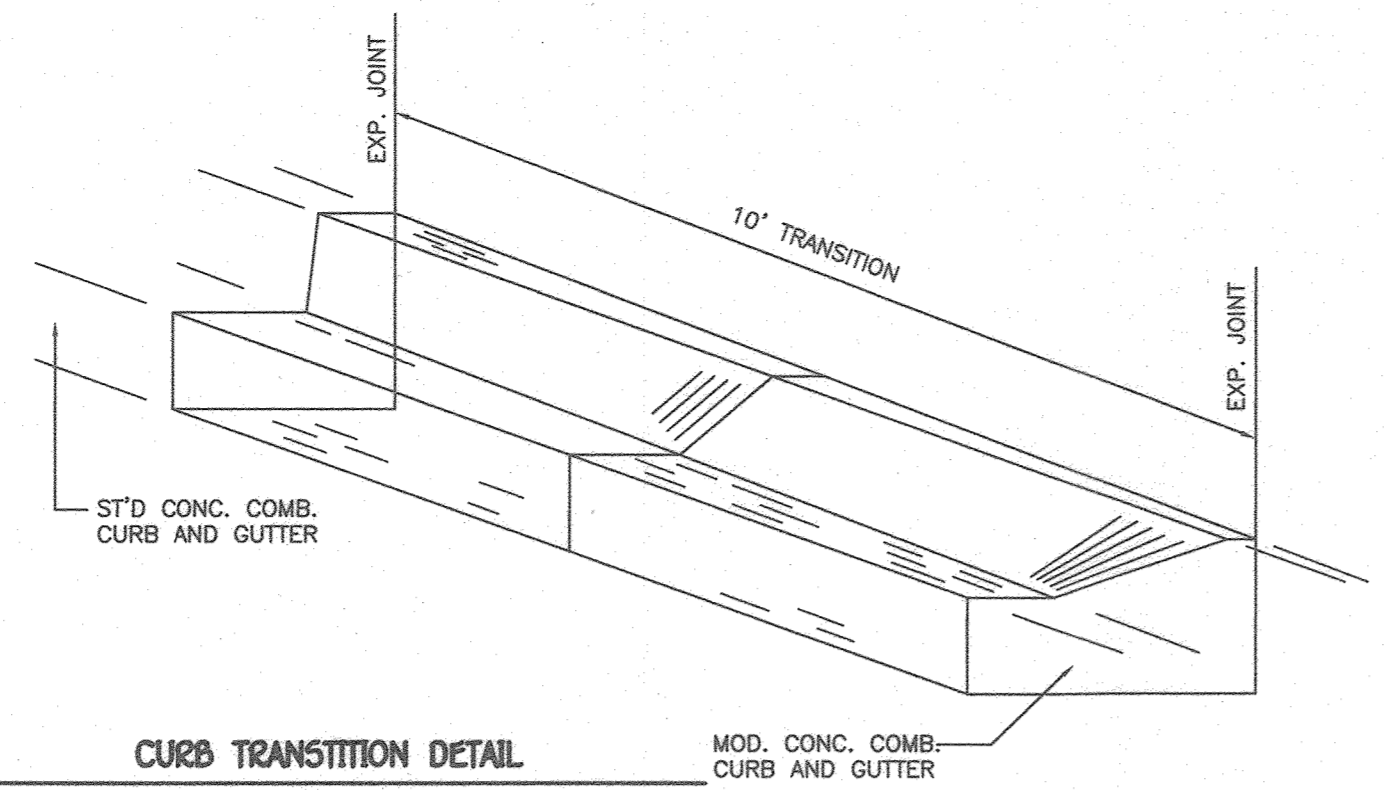
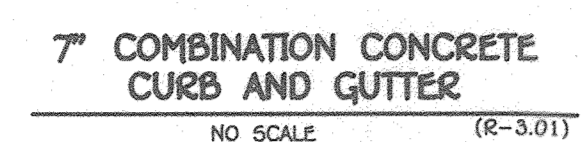
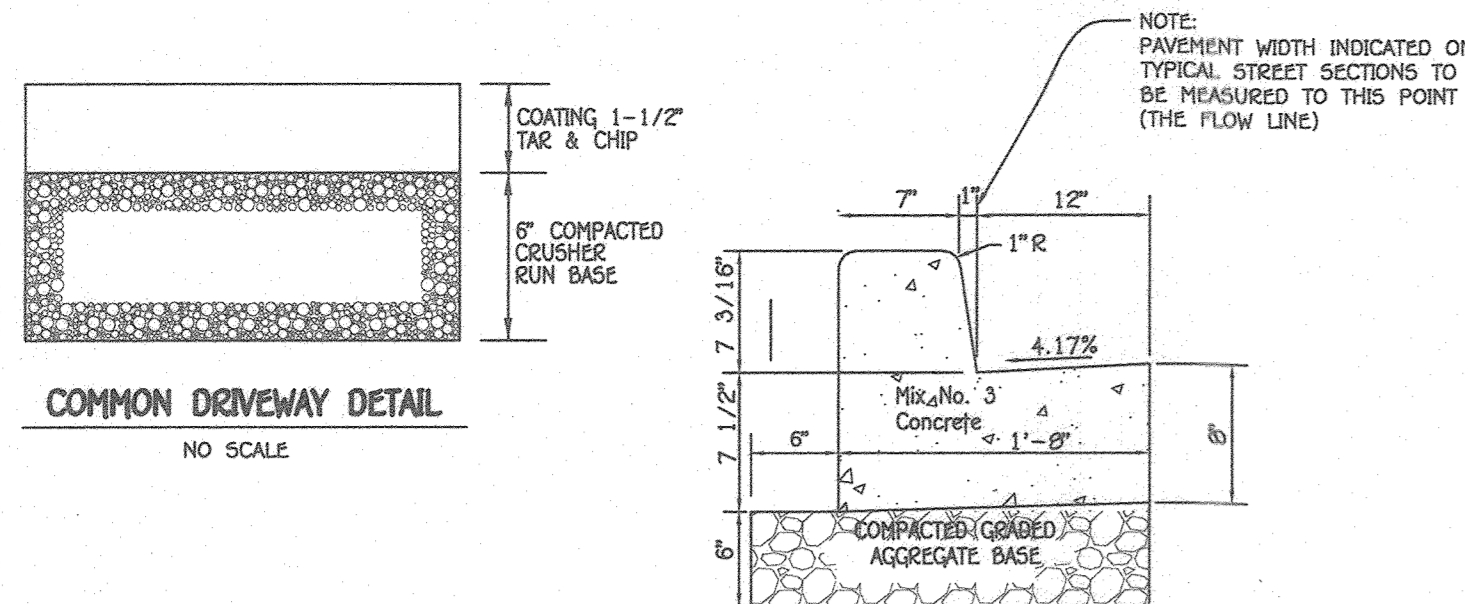
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

Frank Mamula Jr.
Date: 5/28/20

OWNERS	DEVELOPER
PARCEL 04 LENNIS HAMRICK 4489 CENTENNIAL LANE ELLCOTT CITY, MD 21042	CHATEAU BUILDERS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044
PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGDOOTH ROAD SEVERNA PARK, MARYLAND 21146	CENTENNIAL RESERVE, LLC 308 MAGDOOTH ROAD SEVERNA PARK, MARYLAND 21146

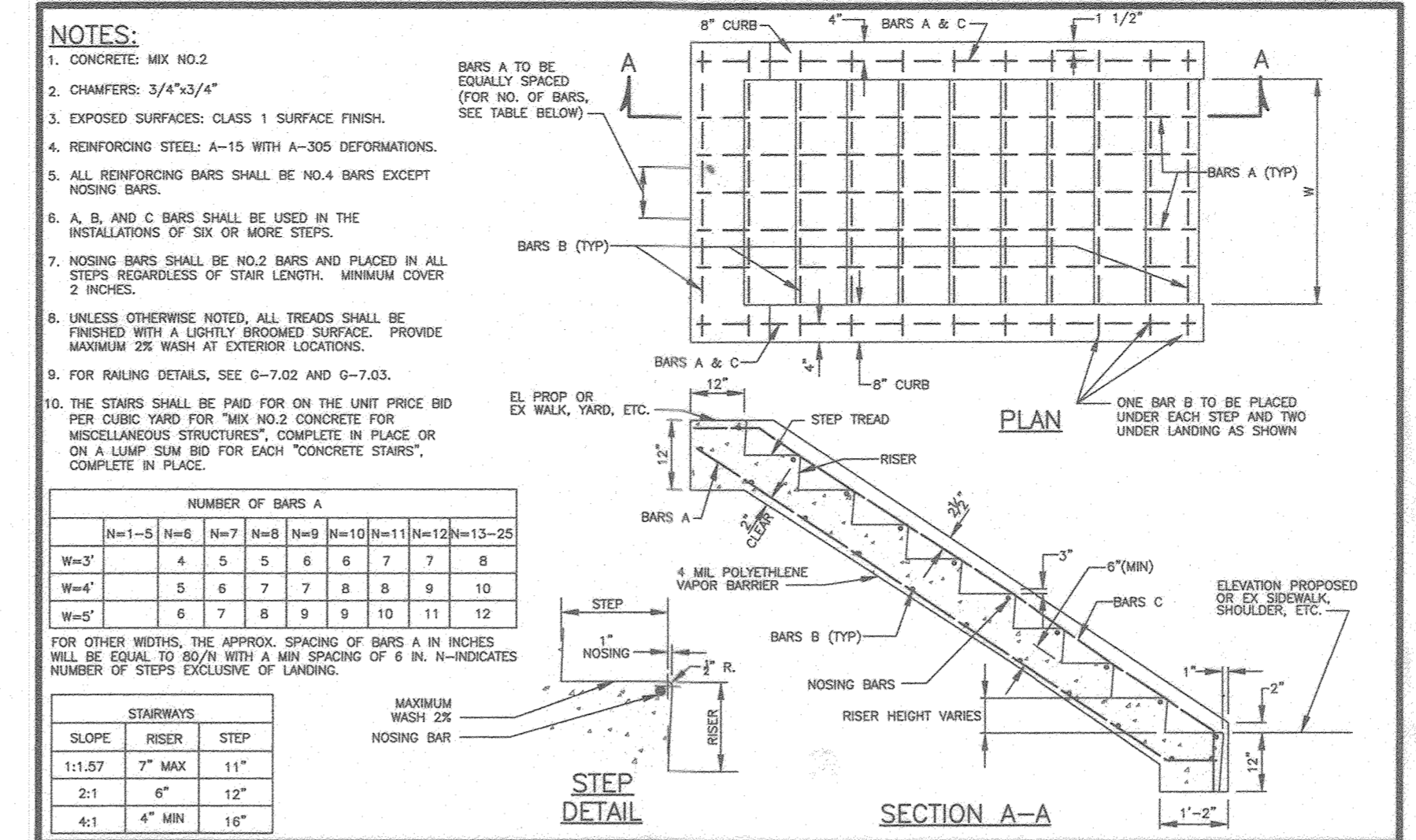
STORM DRAIN PROFILES
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 17 OF 24

F-20-010
"AS-BUILT"



PAVING SECTIONS

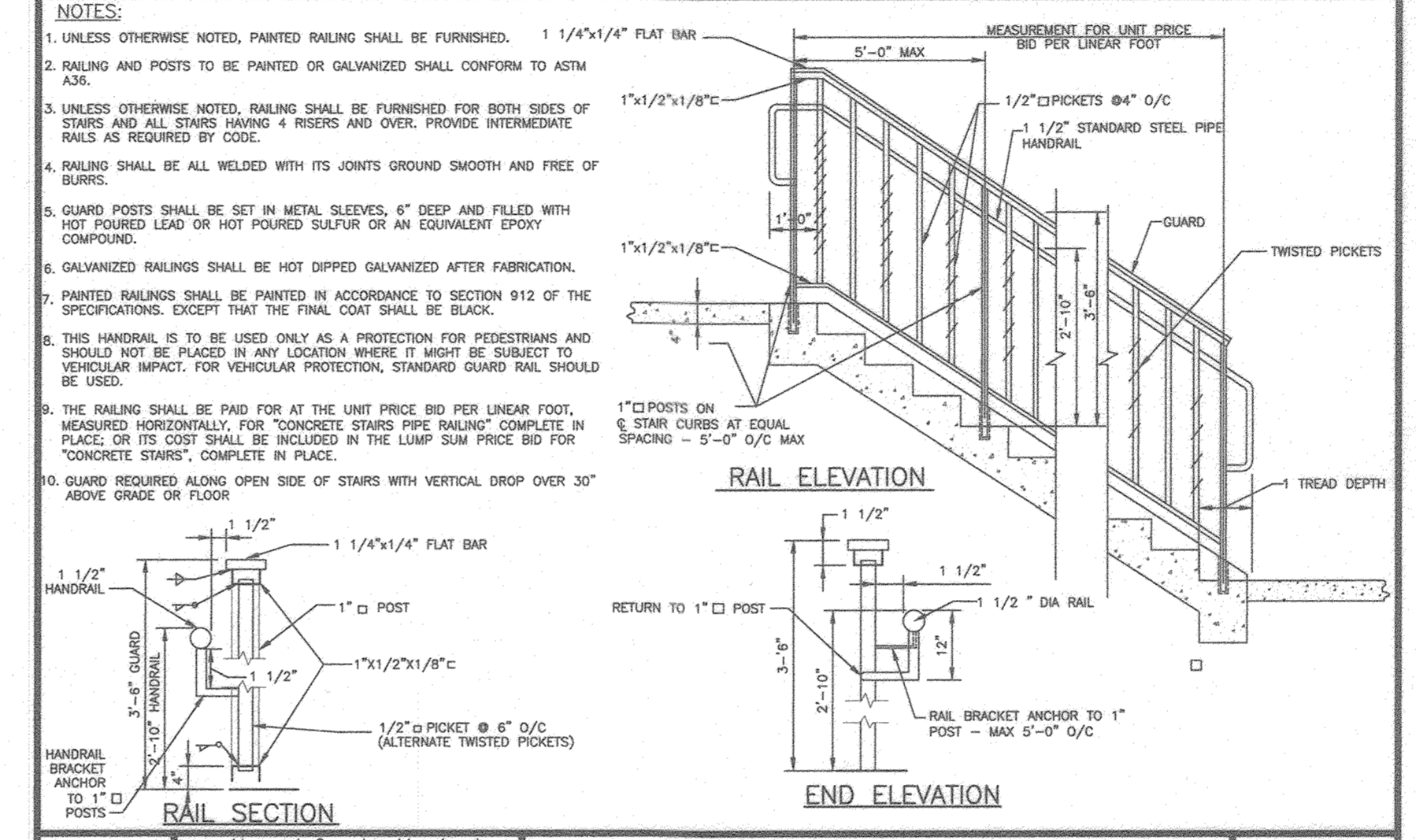
SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5>			5 TO <7>			>7		
			MIN HMA WITH GAB	HMA WITH CONSTANT GAB		MIN HMA WITH GAB	HMA WITH CONSTANT GAB		MIN HMA WITH GAB	HMA WITH CONSTANT GAB	
P-1	PARKING DRIVE ASIDES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY DRIVEWAYS	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			2.0	2.0	2.0	3.5	3.0	2.5			
			8.5	7.0	5.0	4.0	4.0	4.0			
P-2	PARKING DRIVE ASIDES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY LOCAL ROADS: ACCESS PLACE, ACCESS STREET CUL-DE-SACS: RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
			1.5	1.5	1.5	1.5	1.5	1.5			
			2.0	2.0	2.0	3.5	2.0	2.0			
			8.0	4.0	3.0	4.0	4.0	4.0			



Howard County, Maryland Department of Public Works

Concrete Stairs

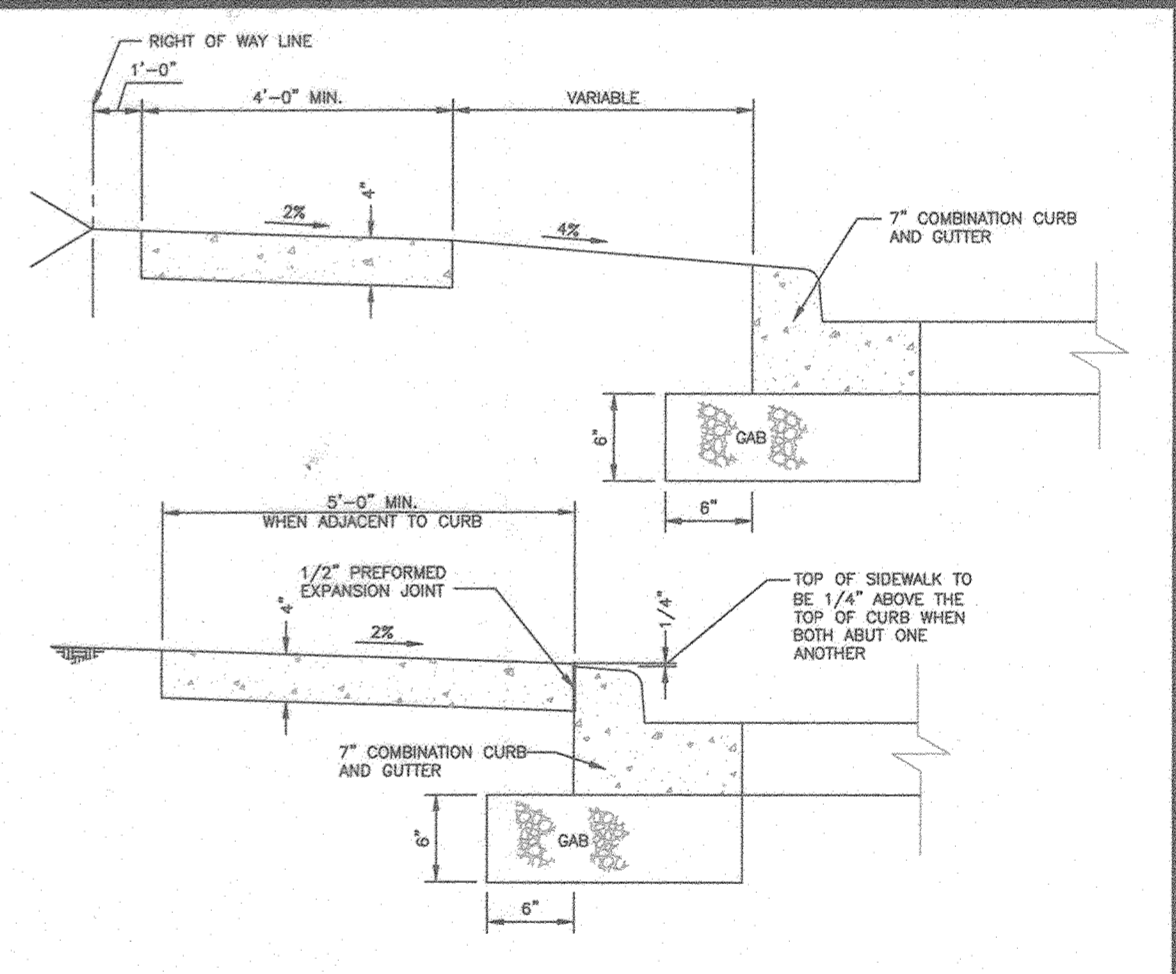
Detail G-7.01



Howard County, Maryland Department of Public Works

Concrete Stairs Ornamental Railing

Detail G-7.03

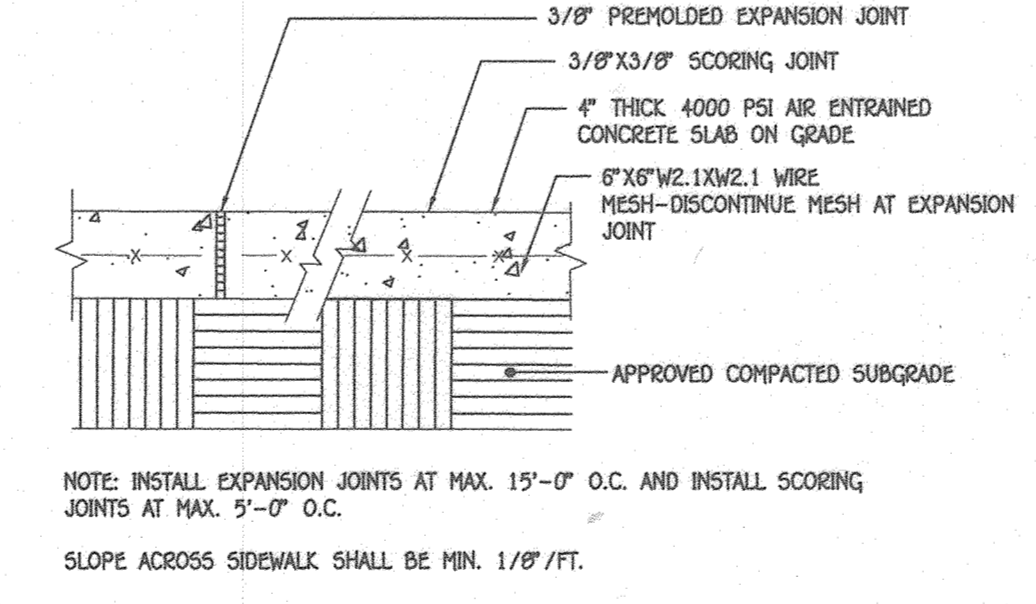
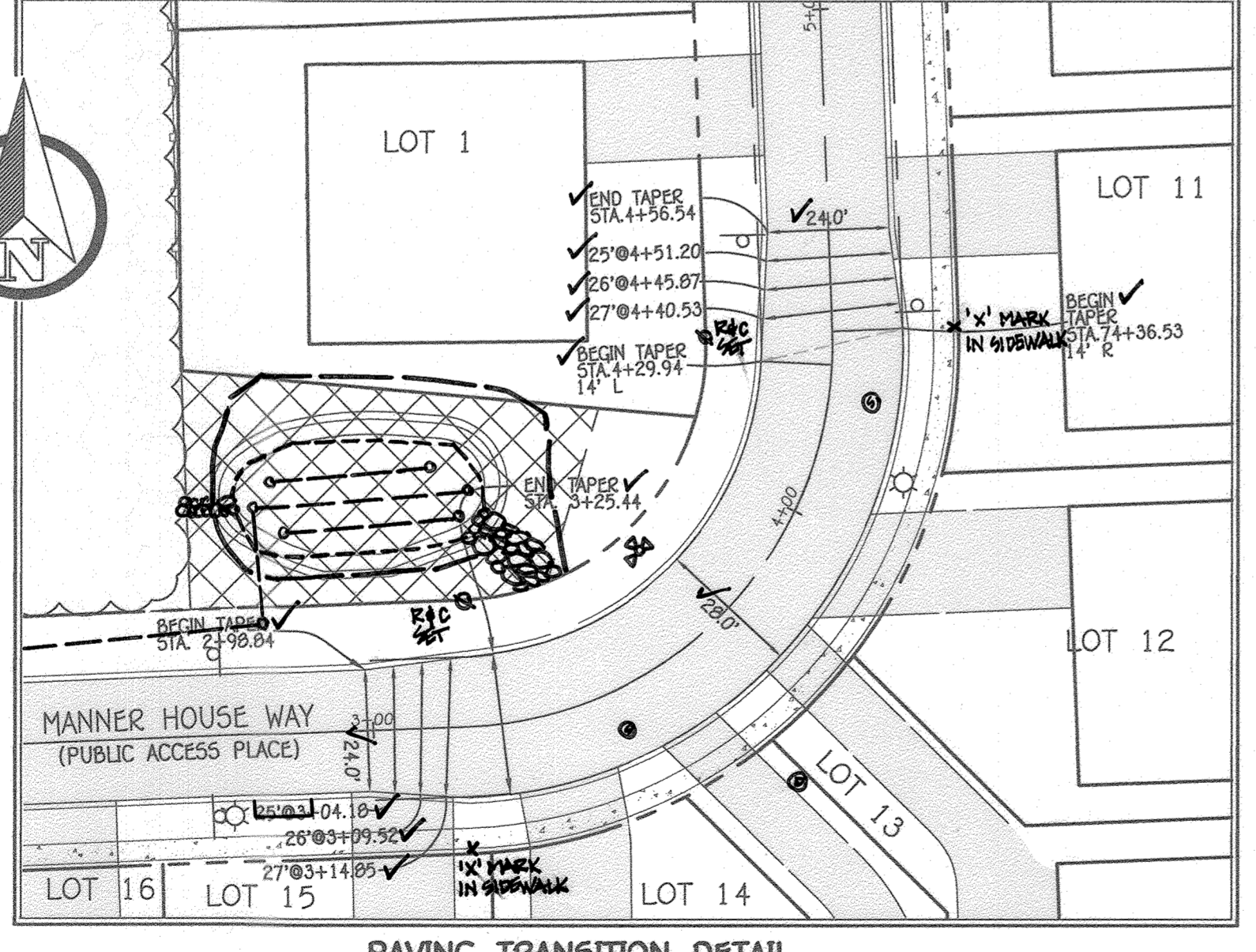


- NOTES:**
- SIDEWALK TO BE SCORBED IN 5'-0" MAXIMUM SQUARES.
 - EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART, OR 16' FOR 4' WIDE SIDEWALK.
 - 1/2" PREFORMED EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
 - CONCRETE TO BE MAX #3.
 - WHEN SIDEWALK ADJACENT TO CURB, SIDEWALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED EXPANSION JOINT BETWEEN SIDEWALK AND CURB.
 - ON LONGITUDINAL SIDEWALK GRADES OF SIX OR GREATER, A CONCRETE HEADER, 6" THICK AND 8" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL BE CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 48 FEET. THE HEADERS SHALL BE PLACED AT THE EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE SIDEWALK.
 - SIDEWALK ADJACENT TO CURB SHALL BE 5'-0" MINIMUM EXCEPT SIDEWALK ADJACENT TO CURB IN CUL-DE-SAC BULBS MAY BE 4'-0" WIDE.
 - SIDEWALK LOCATED 2' OR MORE FROM CURB MAY BE 4'-0" IN WIDTH WITH A 5'-5" PAVED SECTION PLACED 200' APART.
 - 4'-0" SIDEWALK REQUIRES A PASSING AREA (SEE DETAIL R-4.01).

Howard County, Maryland Department of Public Works

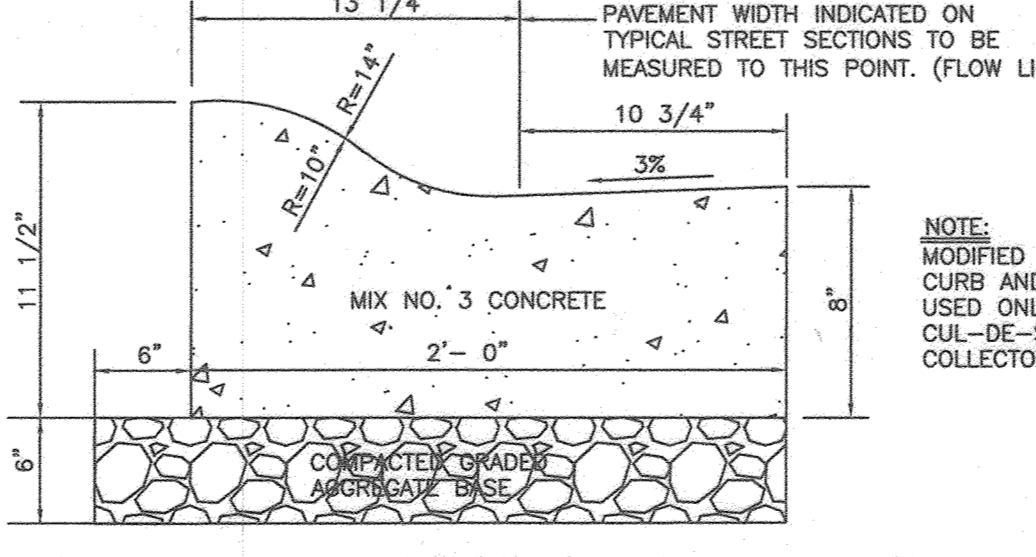
CONCRETE SIDEWALK

Detail R-3.05



CONCRETE WALK DETAIL

NO SCALE



MODIFIED COMBINATION CURB AND GUTTER

NO SCALE

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

PAUL GEARD CAVANAUGH #27020

REVISIONS

NO.	DESCRIPTION	DATE
1	REMOVE BARRICADE DETAIL	01/01/22

Approved: Department Of Planning And Zoning

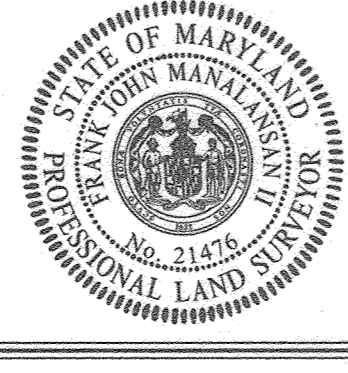
Chief, Division Of Land Development

Chief, Development Engineering Division

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 481 - 2895



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

Frank Manalusan II

5/28/20

OWNERS

PARCEL 04
 LENNIS HAMROCK
 4469 CENTENNIAL LANE
 ELICOTT CITY, MD 21042

PARCEL 449
 CHATEAU BUILDERS, INC.
 5305 VILLAGE CENTER DRIVE
 SUITE 305
 COLUMBIA, MD 21044

PARCEL 174 & PARCEL 05
 CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146

DEVELOPER

CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146
 DAVE WOODSNER
 240-319-1735

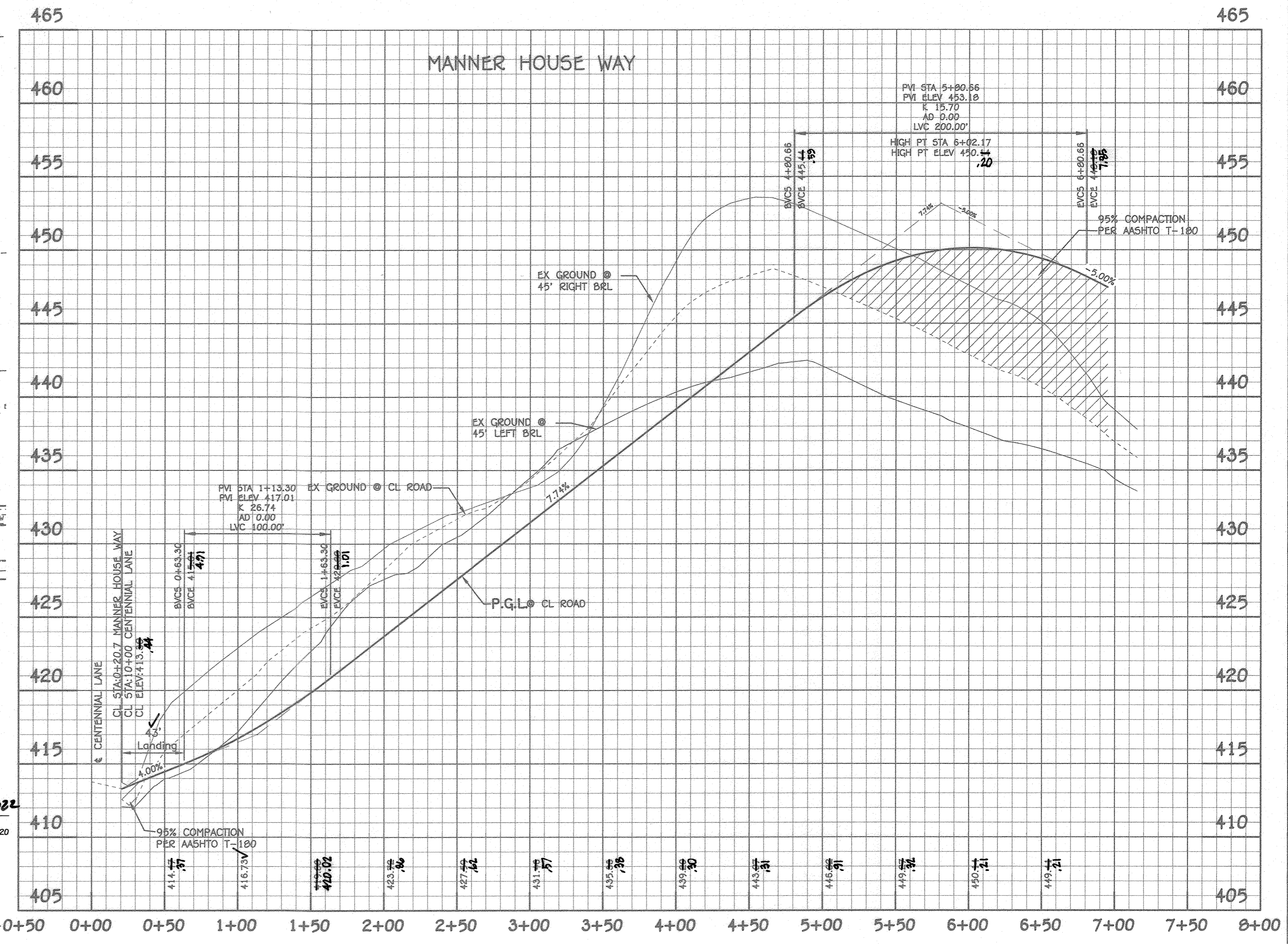
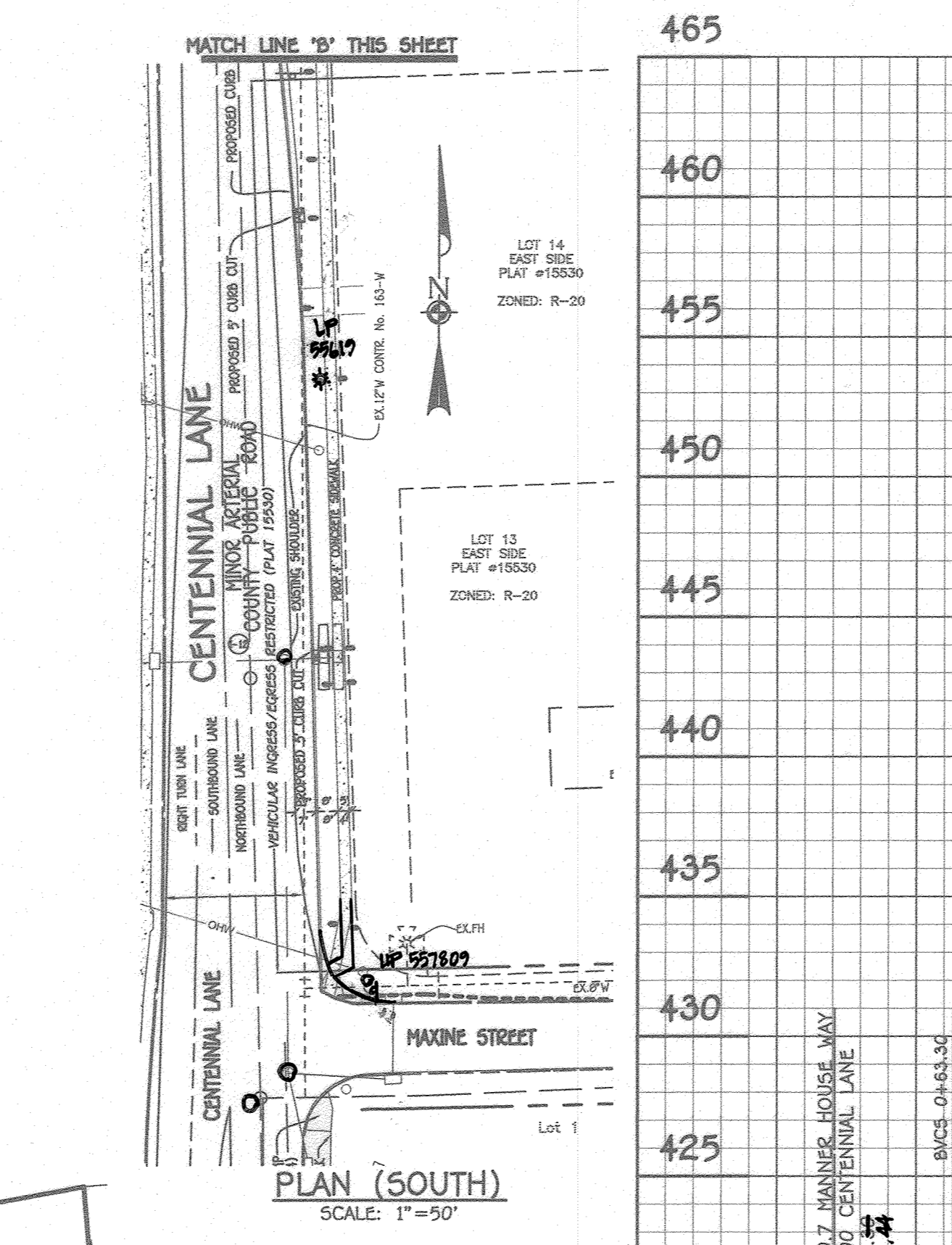
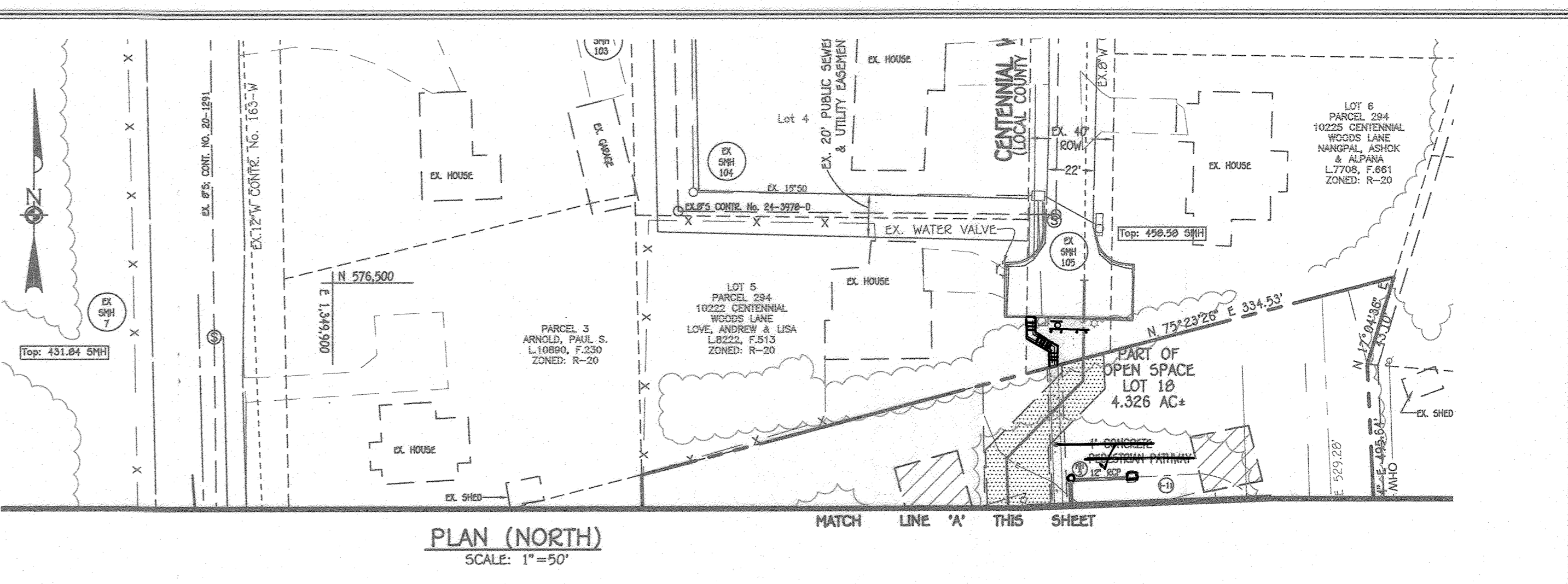
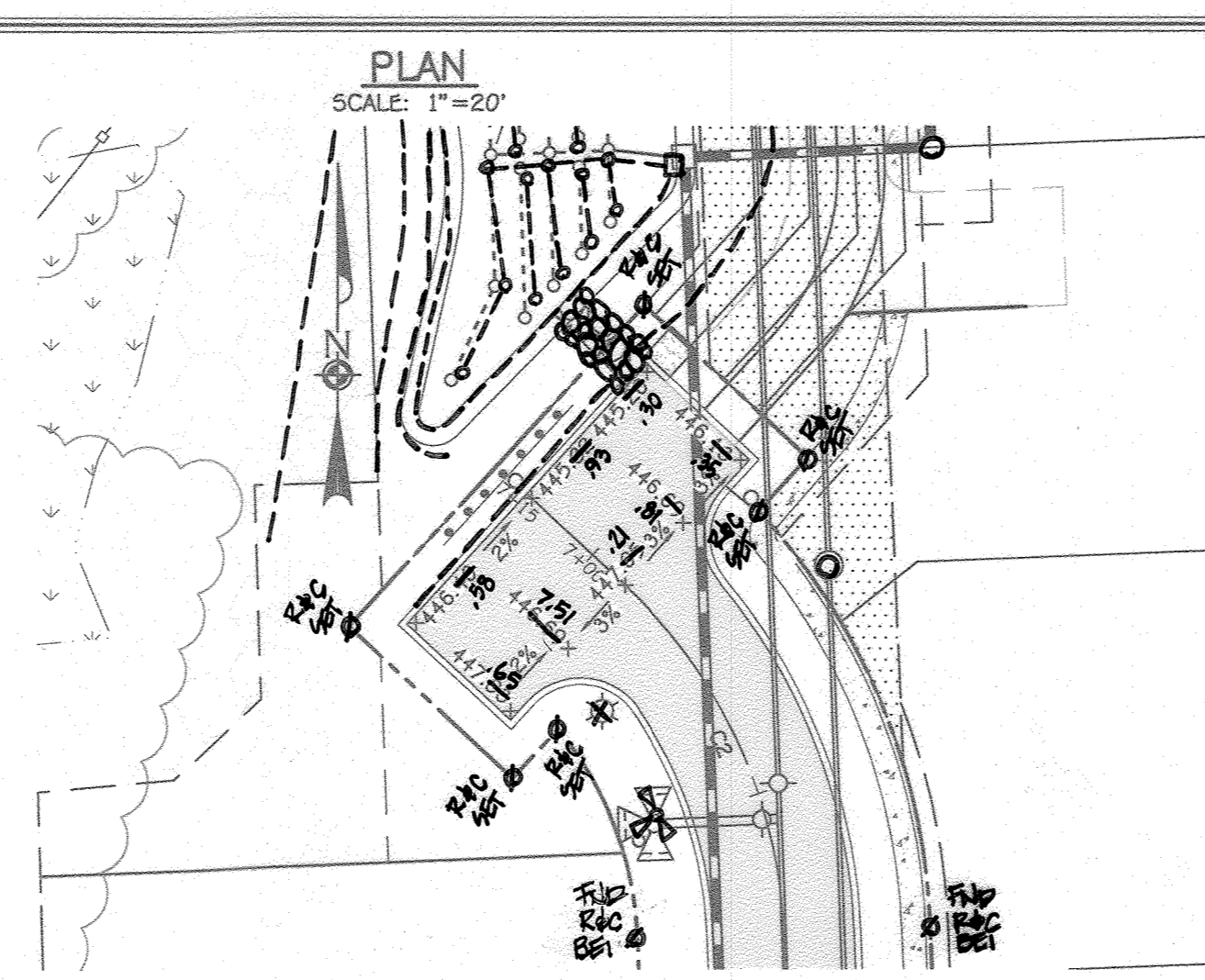
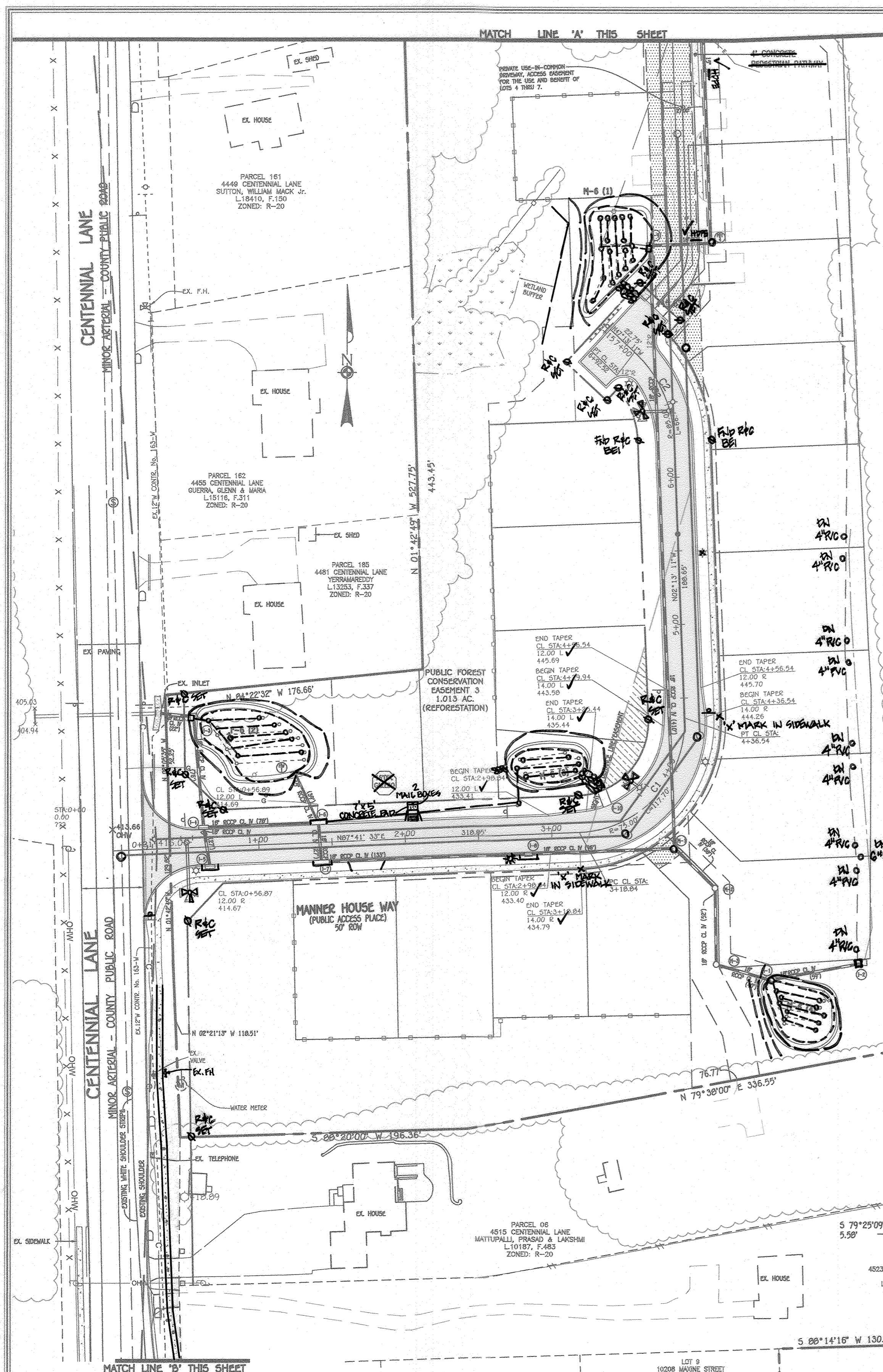
MANNER HOUSE WAY ROADWAY SECTION AND DETAILS

CENTENNIAL RESERVE

LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 18 OF 24

"AS-BUILT"



PROPOSED ALIGNMENT CURVE TABLE

CURVE #	ROAD NAME	STATION	RADIUS	LENGTH	DELTA	TANGENT	CHORD
C1	MANNER HOUSE WAY	STA 3+10.84 TO STA 4+36.54	75.00'	117.69'	076°23'40"	105.98'	N42° 44' 10.80"E
C2	MANNER HOUSE WAY	STA 6+25.19 TO STA 6+69.94	56.97'	44.74'	100°34'07"	43.60'	N24° 43' 03.28"W

REVISIONS

NO.	DESCRIPTION	DATE
1	ADD MAILBOX PAD AND RAMP, REVISE PATHWAY DIVISE PUBLIC WALK ALONG CENTENNIAL LANE	01/01/22

Approved: Department of Planning And Zoning

Chief, Division of Land Development
[Signature]
 Date: 8/21/2020

Chief, Development Engineering Division
[Signature]
 Date: 8/21/2020

Approved: Howard County Department of Public Works
 Chief, Bureau of Highways
[Signature]
 Date: 8/21/2020

AS-BUILT CERTIFICATION

I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on the plan was constructed as shown on the "AS-BUILT" plan meet the approved plans and specifications.

[Signature]
 Date: Nov 11, 2022
 PAUL GERARD CAVANAGH #27020

PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 No. 21476

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.

[Signature]
 FRANK HANULANSKI II
 Date: 5/20/20

SCALE: 1" = 50'

OWNERS

PARCEL 04
 LENNIS HAMRICK
 4489 CENTENNIAL LANE
 ELICOTT CITY, MD 21042

PARCEL 449
 CHITRAD BUILDERS, INC.
 5305 VILLAGE CENTER DRIVE
 SUITE 305
 COLUMBIA, MD 21044

PARCEL 174 & PARCEL 05
 CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146

DEVELOPER

CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146
 DAVE WOODSNER
 240-319-1735

ROAD PLAN AND PROFILE
 CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 19 OF 24

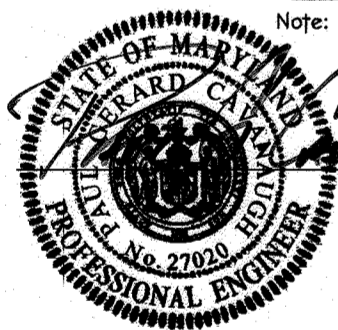
"AS-BUILT"

LEGEND	
SYMBOL	DESCRIPTION
(Symbol)	EXISTING CONTOUR 2' INTERVAL
(Symbol)	EXISTING CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 10' INTERVAL
(Symbol)	PROPOSED CONTOUR 2' INTERVAL
(Symbol)	SPOT ELEVATION
(Symbol)	EXISTING STORM DRAIN
(Symbol)	PROPOSED STORM DRAIN PIPE
(Symbol)	EXISTING WATER LINE
(Symbol)	EXISTING SEWER LINE
(Symbol)	PROPOSED SEWER
(Symbol)	PROPOSED WATER
(Symbol)	EXISTING CABLE LINE
(Symbol)	EXISTING GAS LINE
(Symbol)	EXISTING OVERHEAD WIRE
(Symbol)	PROPOSED ASPHALT PAVING/PATH
(Symbol)	PROPOSED SIDEWALKS (CONCRETE)
(Symbol)	FOREST CONSERVATION EASEMENT (REFORESTATION)
(Symbol)	PERMANENT FOREST CONSERVATION EASEMENT FENCING
(Symbol)	ACCESS EASEMENT
(Symbol)	STORM DRAIN EASEMENT
(Symbol)	WATER AND SEWER EASEMENT
(Symbol)	TREE PROTECTION FENCE
(Symbol)	LIMIT OF DISTURBANCE
(Symbol)	SUPER SILT FENCE
(Symbol)	SILT FENCE
(Symbol)	EXISTING TREE LINE
(Symbol)	PROPOSED TREE LINE
(Symbol)	DRYWELL (M-5)-TYPICAL
(Symbol)	PROPOSED STREET LIGHT
(Symbol)	SOIL LINES AND TYPES
(Symbol)	EXISTING WETLANDS & WETLAND BUFFER
(Symbol)	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
(Symbol)	PROPOSED ROOF LEADER
(Symbol)	DENOTES EXISTING TREES TO BE REMOVED
(Symbol)	DENOTES EXISTING TREES TO REMAIN
(Symbol)	CRITICAL ROOT ZONE
(Symbol)	FOREST CONSERVATION SIGN
(Symbol)	PROPOSED TREES (SEE SHEETS 10, 11, & 12 FOR DETAILS)



AS-BUILT CERTIFICATION

Note: There is no "AS-BUILT" information provided on this sheet.



Date: Nov 11, 2020
 PAUL GERARD CAVANAUGH #27020

NOTE: THIS SHEET IS FOR FOREST CON. ONLY.

NO.	REVISIONS DESCRIPTION	DATE

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Date: 8/2/2020

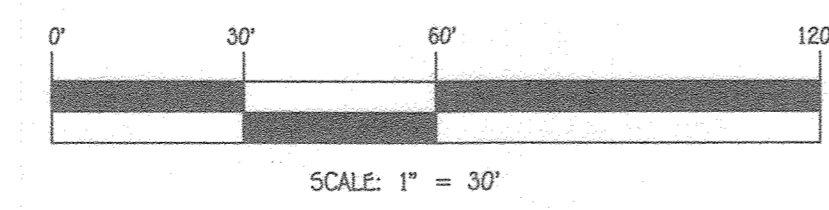
Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALFOUR NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461 - 2999



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3036, EXPIRATION DATE: 4/17/22.

Stephen Jute
 5/28/20
 STEPHANE JEANNE TUTE



SOILS LEGEND			
SOIL	NAME	CLASS	Tc VALUE
GgB	Glenelg loam, 3 to 8 percent slopes	B	0.20
GgC	Glenelg loam, 8 to 15 percent slopes	B	0.20
GhB	Glenelg-Urban land complex, 0 to 8 percent slopes	B	0.20

OWNERS

PARCEL 04
 LENNIS HAMRICK
 4489 CENTENNIAL LANE
 ELICOTT CITY, MD 21042

PARCEL 449
 CHATEAU BUILDERS, INC.
 5309 VILLAGE CENTER DRIVE
 SUITE 305
 COLUMBIA, MD 21044

PARCEL 174 & PARCEL 05
 CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146

DEVELOPER

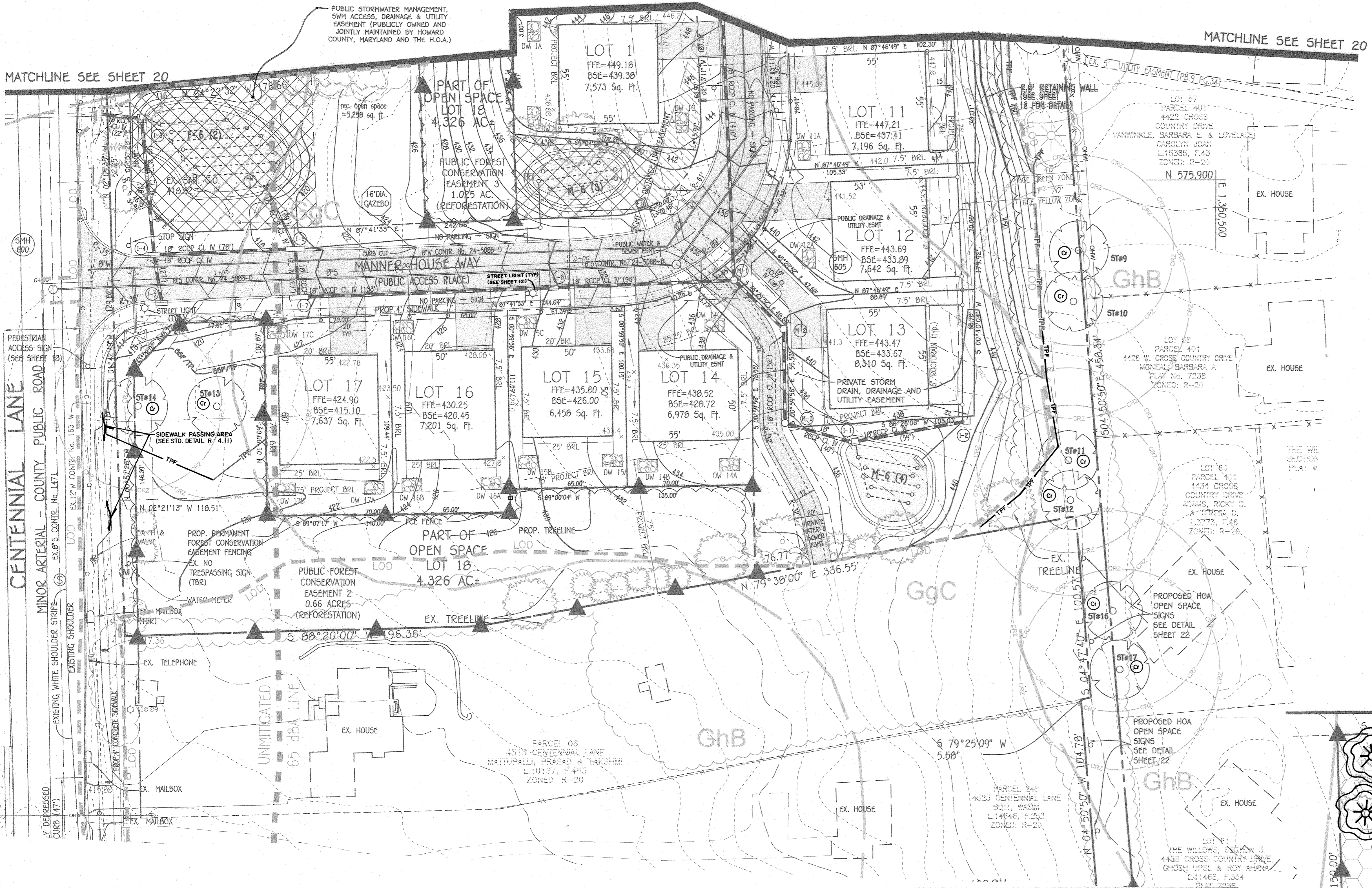
CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146
 DAVID WOODSINGER
 240-319-1755

MATCHLINE SEE SHEET 21

FOREST CONSERVATION PLAN
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 20 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET



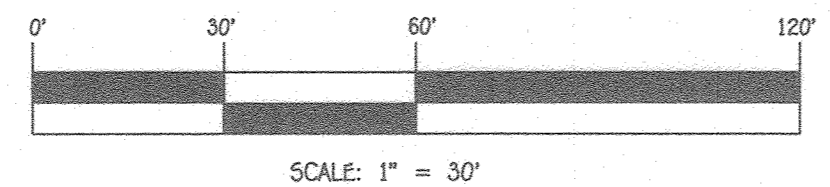
LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
440.5	SPOT ELEVATION
---	EXISTING STORM DRAIN
---	PROPOSED STORM DRAIN PIPE
---	EX. F.H.
---	EXISTING WATER LINE
---	EXISTING SEWER LINE
---	PROPOSED SEWER
---	PROPOSED WATER
---	EXISTING CABLE LINE
---	EXISTING GAS LINE
---	EXISTING OVERHEAD WIRE
---	PROPOSED ASPHALT PAVING/PATH
---	PROPOSED SIDEWALKS (CONCRETE)
---	FOREST CONSERVATION EASEMENT (REFORESTATION)
---	PERMANENT FOREST CONSERVATION EASEMENT FENCING
---	ACCESS EASEMENT
---	STORM DRAIN EASEMENT
---	WATER AND SEWER EASEMENT
---	TREE PROTECTION FENCE
---	LIMIT OF DISTURBANCE
---	SUPER SILT FENCE
---	SILT FENCE
---	EXISTING TREE LINE
---	PROPOSED TREE LINE
---	DRYWELL (M-5)-TYPICAL
---	PROPOSED STREET LIGHT
---	SOIL LINES AND TYPES
---	EXISTING WETLANDS & WETLAND BUFFER
---	BIO RETENTION FACILITY (F-6) OR (M-6) AS NOTED
---	PROPOSED ROOF LEADER
---	DENOTES EXISTING TREES TO BE REMOVED
---	DENOTES EXISTING TREES TO REMAIN
---	CRITICAL ROOT ZONE
---	FOREST CONSERVATION SIGN
---	PROPOSED TREES (SEE SHEETS 10, 11, & 12 FOR DETAILS)

MATCHLINE SEE SHEET 20

MATCHLINE SEE SHEET 20

MATCHLINE SEE THIS SHEET

MATCHLINE SEE THIS SHEET



REVISIONS		
NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development *u/wha* 4/1/20
 Chief, Development Engineering Division *4-4-20* 4-4-20

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways *8/2/2020* 8/2/2020

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 (410) 461-3095



PROFESSIONAL CERTIFICATION
 HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3038, EXPIRATION DATE: 4/17/22.

Stephanie Jenene Tuttle 5/28/20
 Stephanie Jenene Tuttle

AS-BUILT CERTIFICATION
 Note: There is no "AS-BUILT" information provided on this sheet.

Paul Gerard Cavanaugh 11/2022
 Date: 11/2022
 Paul Gerard Cavanaugh #27020

OWNERS

PARCEL 04
 LENNIS HARRICK
 4489 CENTENNIAL LANE
 ELLICOTT CITY, MD 21104

PARCEL 449
 CHATEAU BUILDINGS, INC.
 5309 VILLAGE CENTER DRIVE
 SUITE 305
 COLUMBIA, MD 21044

PARCEL 174 & PARCEL 05
 CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146

DEVELOPER

CENTENNIAL RESERVE, LLC
 308 MAGOTHY ROAD
 SEVERNA PARK, MARYLAND 21146

DAVE WOODSNER
 240-319-1795

FOREST CONSERVATION PLAN
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
 ZONED R-20
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 21 OF 24

F-20-010

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

FCE#1 Planting Area - 0.52 acres
 whips required: 182
 whips provided: 182

Qty	Species	Size	Spacing	Notes
40	Acer rubrum - Red maple	2-3" whip	11' o.c.	Climax
40	Quercus alba - White oak	2-3" whip	11' o.c.	Climax
31	Prunus serotina - Black cherry	2-3" whip	11' o.c.	Pioneer
41	Quercus rubra - Red Oak	2-3" whip	11' o.c.	Climax
50	Liriodendron tulipifera	2-3" whip	11' o.c.	Pioneer

182 Total plants
 WHIPS w/shelters = 350/AOR = 350 x 0.52 AC. = 182 whips

FCE#2 Planting Area - 0.66 acres
 whips required: 168
 whips provided: 168

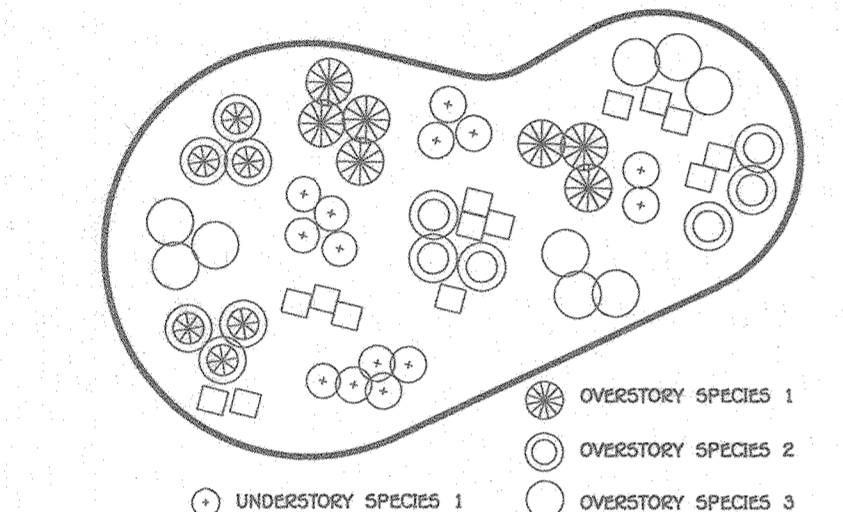
Qty	Species	Size	Spacing	Notes
40	Acer rubrum - Red maple	2-3" whip	11' o.c.	Climax
46	Quercus alba - White oak	2-3" whip	11' o.c.	Climax
46	Pinus virginiana - Virginia pine	2-3" whip	11' o.c.	Climax
46	Quercus rubra - Red Oak	2-3" whip	11' o.c.	Climax
46	Liriodendron tulipifera	2-3" whip	11' o.c.	Pioneer

168 Total plants
 WHIPS w/shelters = 350/AOR = 350 x 0.66 AC. = 231 whips

FCE#3 Planting Area - 1.025 acres
 whips required: 357 / or 204 1" caliper trees
 using 179 whips (0.51 AC.) & 102 1" caliper trees (0.51 AC.)
 whips provided: 179; 1" Caliper trees provided: 102

Qty	Species	Size	Spacing	Notes
54	Prunus serotina - Black cherry	1" cal.	15' o.c.	Pioneer
64	Quercus alba - White oak	1" cal.	15' o.c.	Climax
102	1" caliper trees			
60	Acer rubrum - Red maple	2-3" whip	11' o.c.	Climax
179	Quercus rubra - Red Oak	2-3" whip	11' o.c.	Climax
402	Liriodendron tulipifera	2-3" whip	11' o.c.	Pioneer

Total Plants (179 + 102) = 281
 WHIPS w/shelters = 350/AOR = 350 x 0.51 AC. = 179 WHIPS
 1" Caliper trees = 200/AOR = 200 x 0.51 AC. = 102 1" CALIPER TREES



RANDOM PLANTING DISTRIBUTION PLAN
 OVERSTOREY SPECIES 1
 OVERSTOREY SPECIES 2
 UNDERSTOREY SPECIES 1
 UNDERSTOREY SPECIES 2

NOTE: ALL TREE & SHRUB SPECIES TO BE DISTRIBUTED RANDOMLY IN SMALL GROUPINGS. SHRUBS TO BE EVENLY DISTRIBUTED THROUGHOUT PLANTING AREA.

FOREST CONSERVATION WORKSHEET
 VERSION 1.0

BASIC SITE DATA:	
A. TOTAL TRACT AREA	0.1 AC.
B. LAND DEDICATION ACRES (PARKS, COUNTY PARK, ETC.)	0.0
C. LAND DEDICATION ACRES FOR ROADS OR UTILITIES	0.0
D. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.0
E. OTHER DEDICATIONS	0.0
F. NET TRACT AREA	0.1 AC.
LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)	
ARA MOR IDA HDR MPD CIA	
INFORMATION FOR CALCULATIONS:	
G. AFForestation THRESHOLD	0.15x D = 1.2
H. FOREST CONSERVATION THRESHOLD	0.20x D = 1.6
EXISTING FOREST COVER:	
I. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN)	0.0
J. AREA OF FOREST ABOVE AFForestation THRESHOLD	0.0
K. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	0.0
BREAK-EVEN POINT:	
L. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	0.0
H. CLEARING PERMITTED WITHOUT MITIGATION	0.0
PROPOSED FOREST CLEARING:	
N. TOTAL AREA OF FOREST TO BE CLEARED	0.0
O. TOTAL AREA OF FOREST TO BE RETAINED	0.0
PLANTING REQUIREMENTS:	
P. AFForestation FOR CLEARING ABOVE CONSERVATION THRESHOLD	0.0
Q. AFForestation FOR CLEARING BELOW CONSERVATION THRESHOLD	1.3
R. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD	0.0
S. TOTAL AFForestation REQUIRED	1.3
T. TOTAL AFForestation REQUIRED	0.0
U. CREDIT FOR LANDSCAPING	0.0
V. TOTAL AFForestation AND REFORESTATION REQUIRED	2.0

Key (X#)	Species	Size (H-DBH)	CRZ (feet radius)	Comments
1	Tulip poplar	32.5	48.75	
2	Tulip poplar	31	46.5	
3	Tulip poplar	37	55.5	
4	Tulip poplar	37.5	56.25	twin stems
5	Tulip poplar	36	54	two specimen trunks joined at ground plus a 3" smaller trunk
6	Tulip poplar	44.5	66.75	fair, storm damage
7	Tulip poplar	31	46.5	
8	Black cherry	36	54	
9	Red oak	35	52.5	
10	Tulip poplar	43	64.5	
11	Tulip poplar	34	51	
12	Tulip poplar	35	52.5	
13	White pine	34	51	
14	White pine	31	46.5	
15	Tulip poplar	34	51	TO BE REMOVED
16	Tulip poplar	37	55.5	
17	Red maple	37	55.5	
18	Silver maple	55.5	83.25	

NO.	DESCRIPTION	DATE
1	REVISED SPLIT RAIL FENCE DETAIL & NOTES	8/10/22

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

PLANTING / SOIL SPECIFICATIONS

- Planting Of Nursery Stock Shall Take Place Between March 19th And April 30th Or September 19th And November 15th.
- A Twelve (12) Inch Layer Of Topsoil Shall Be Spread Over All Reforestation Areas Impacted By Site Grading To Assure A Suitable Planting Area, If Applicable. Disturbed Areas Shall Be Seeded And Stabilized In Accordance With The Sediment & Erosion Control Plan For This Project. Planting Areas Not Impacted By Site Grading Shall Have No Additional Topsoil Installed.
- All Bare Root Planting Stock Shall Have Their Root System Dipped Into An Anti-Dessicant Gel Prior To Planting.
- Plants Shall Be Installed So That The Top Of The Root Mass Is Level With The Top Of Existing Grade. Backfill In The Planting Pits Shall Consist Of 3 Parts Existing Soil To 1 Part Pine Fines Or Equivalent.
- Fertilizer Shall Consist Of Agrifon 22-8-2, Or Equivalent, Applied As Per Manufacturer's Specifications.
- A Two (2) Inch Layer Of Hardwood Mulch Shall Be Placed Over The Root Area Of All Plantings. See Planting Detail.
- Plant Material Shall Be Transported To The Site In A Tarped Or Covered Truck. Plants Shall Be Kept Moist Prior To Planting.
- All Non-Organic Debris Associated With The Planting Operation Shall Be Removed From The Site By The Contractor.

SEQUENCE OF CONSTRUCTION FOR REFORESTATION AREAS

- Sediment Controls And Tree Protective Devices Shall Be Installed In Accordance With Sediment & Erosion Control Plans For This Site, If Applicable. Site Shall Be Graded In Accordance With The Plans. (2 Days)
- Proposed Reforestation Areas Impacted By The Site Grading Shall Be Topsoiled And Stabilized As Per Note 2 Of The "Planting / Soil Specifications". (1 Day)
- Plants Shall Be Installed And Maintained As Per Notes And Specifications For This Project. (1 Week)
- Upon Completion Of The Plantings, Signage Shall Be Installed As Per The Signage Detail. (1 Week)

MAINTENANCE OF PLANTINGS

- Maintenance Of Plantings Shall Last For A Period Of 26 Months.
- All Plant Material Shall Be Generally Watered Twice A Month During The 1st Growing Season. Watering May Be More Or Less Frequent Depending On Weather Conditions.
- During The 2nd Growing Season, Plant Material Shall Be Watered Once A Month From May To September, As Needed.
- Invasive Exotics And Noxious Weeds Shall Be Removed From The Reforestation Area(s). Old Field Successional Species Shall Be Retained.
- Plants Shall Be Examined A Minimum Of Two (2) Times During The Growing Season For Serious Plant Pests And Diseases With The Appropriate Agent.
- Dead Branches Shall Be Pruned From The Plantings.

GUARANTEE REQUIREMENTS

A 75% Survival Rate For The Reforestation Plantings Is Required At The End Of The 24 Month Maintenance Period. All Plant Material Below The 75% Threshold Is Required To Be Replaced At The Beginning Of The Next Growing Season.

MULTIFLORA ROSE CONTROL NOTE:

BEFORE PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal Of The Multiflora Rose May Be Performed With Mowing And Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species Occurring Within The Rose Thickets Should Be Retained Wherever Possible. Herbicide Treatments Shall Occur On Two (2) Month Intervals During The First Growing Season And Once In The Spring And Once In The Fall For Subsequent Years. Herbicide Used Shall Be Made Specifically To Address Woody Plant Material And Shall Be Applied As Per Manufacturer's Specifications. Care Should Be Taken Not To Spray Planted Trees Or Naturally Occurring Native Tree And Shrub Seedlings. It Is Recommended That Initiation Of Rose Removal Begin At Least Six Months Prior To Planting So That New Growth Of Rose Removal Can Be More Successfully Managed.

CONSTRUCTION MONITORING

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

FOREST PROTECTION GENERAL NOTES

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

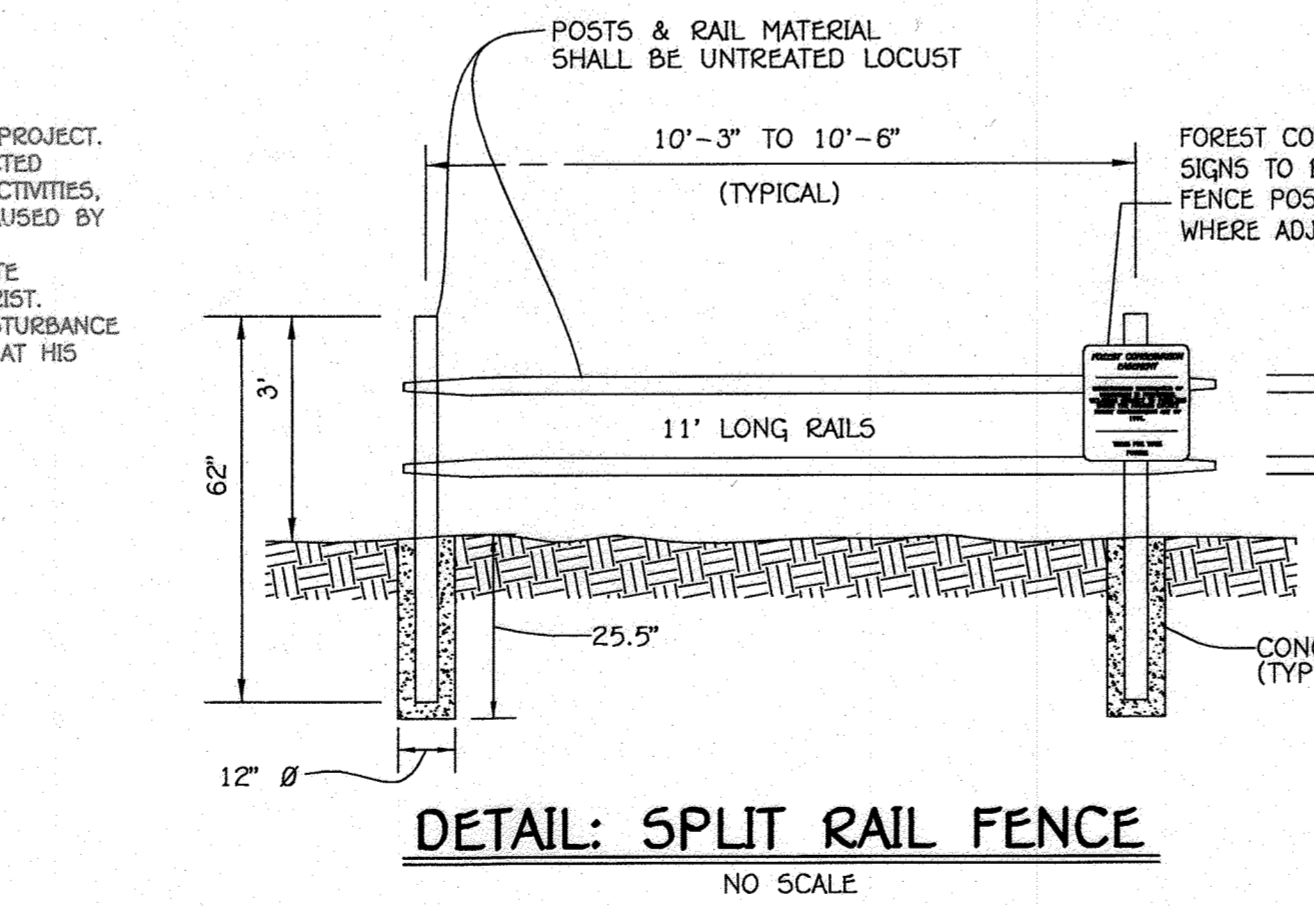
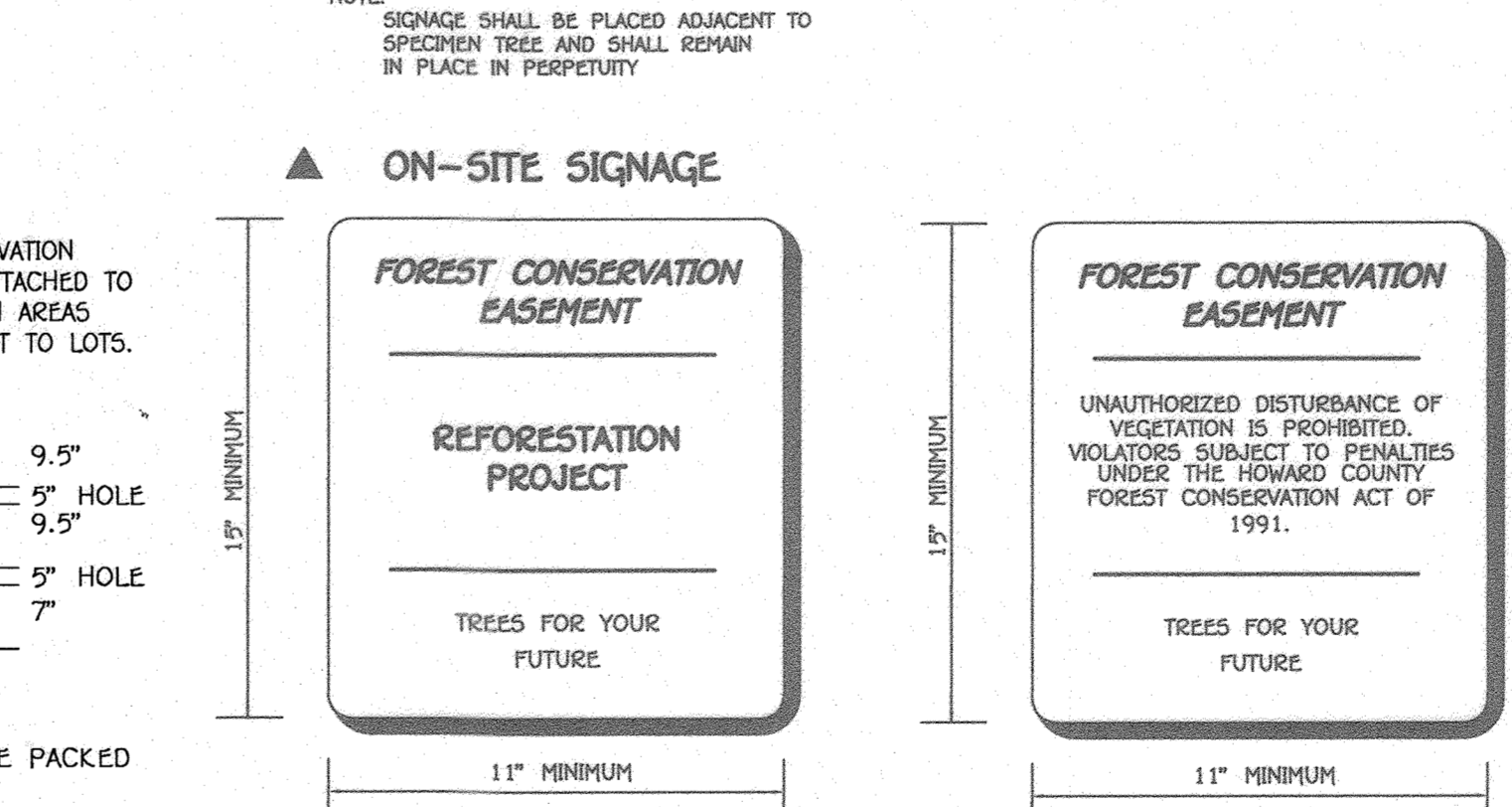
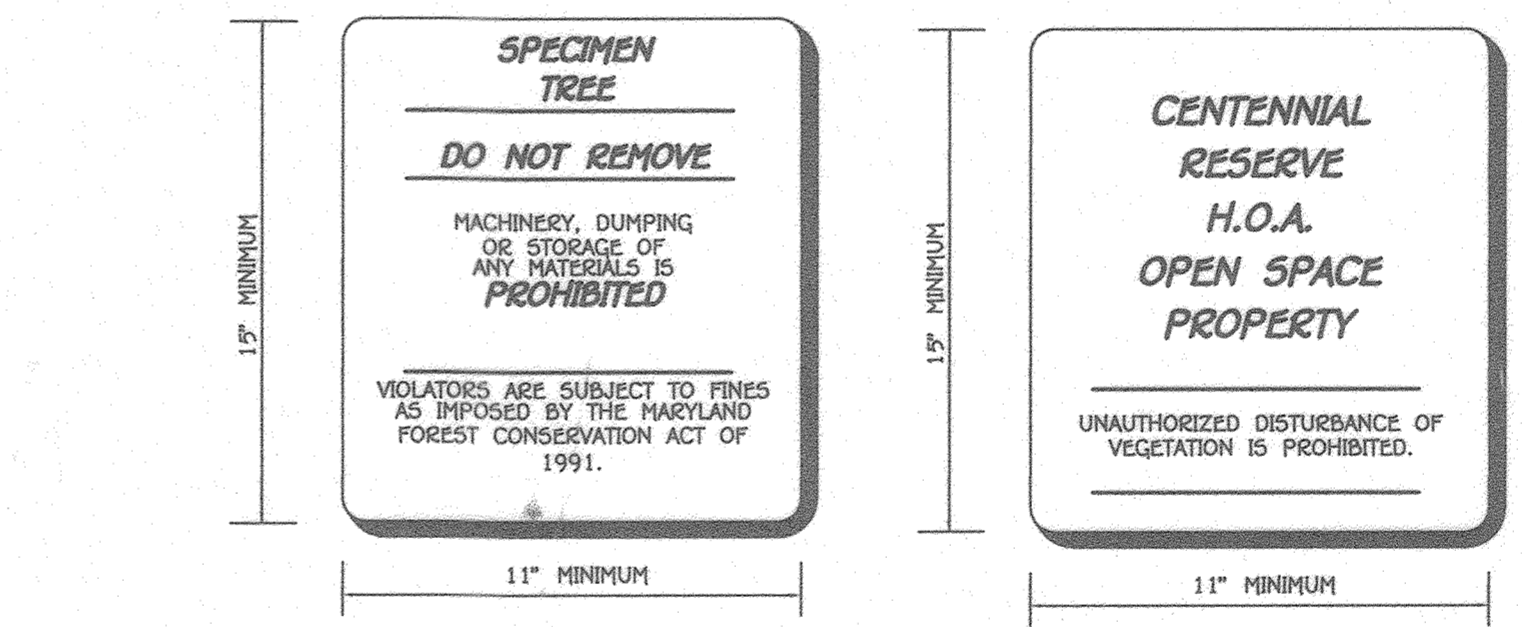
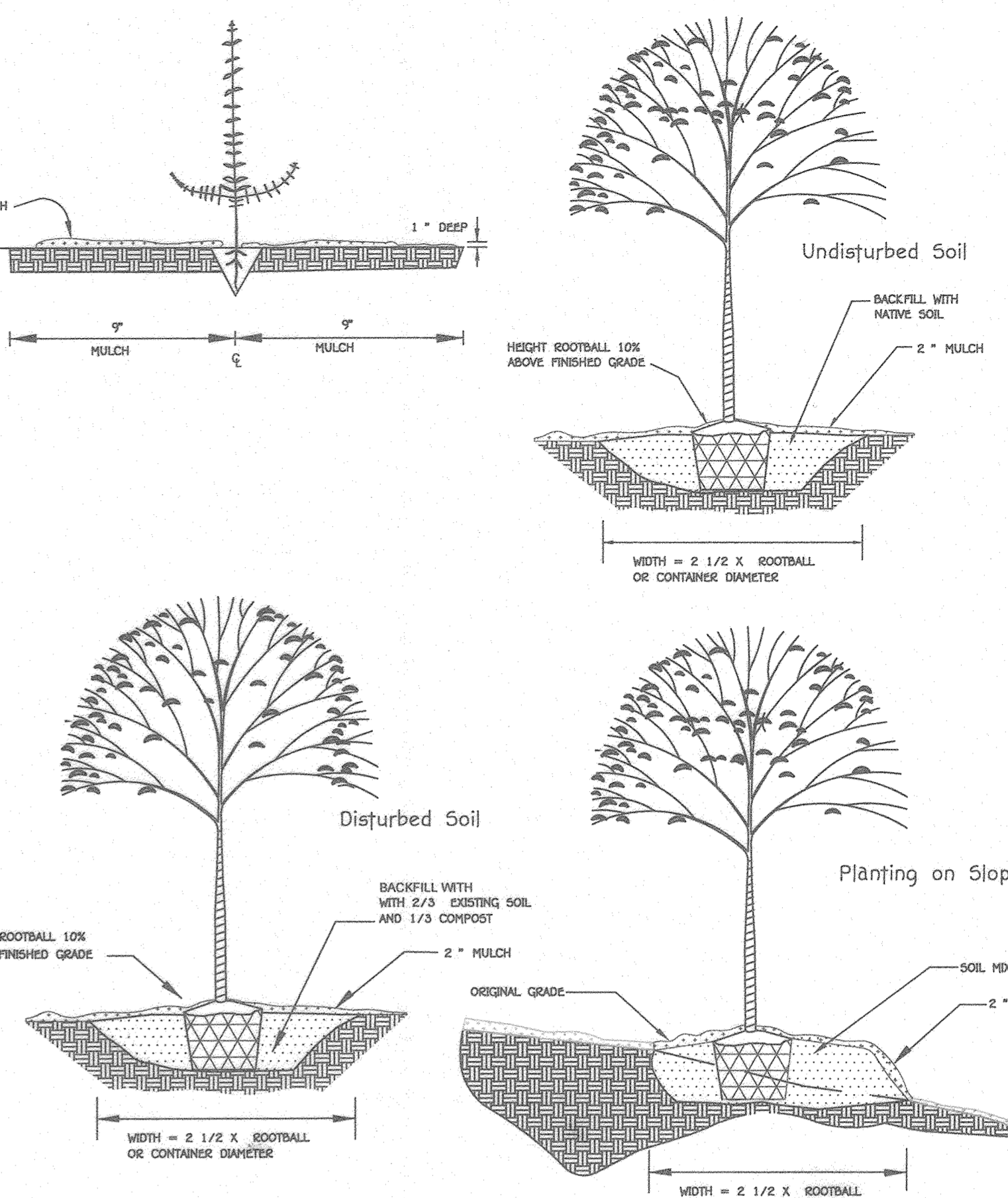
REFORESTATION PLANTING NOTES

- Plants, Related Material, And Operations Shall Meet The Detailed Description As Given On The Plans And As Described Herein.
- Plant Material, Unless Otherwise Specified, Shall Be Nursery Grown, Uniformly Branched And Have A Vigorous Root System. Plant Material Shall Be Healthy, Vigorous Plants Free From Defects, Decay, Disturbing Roots, Sunscald Injuries, Abrasions Of The Bark, Plant Disease, Insect Pest Eggs, Boxes, Infections Or Objectionable Disfigurements. Plant Material That Is Weak Or Which Has Been Cut Back From Larger Grades To Meet Specified Requirements Will Be Rejected. Trees With Forked Leaders Will Not Be Accepted. Plants Shall Be Freshly Dug; No Heeled-In Plants Or Plants From Cold Storage Will Be Accepted.
- Unless Otherwise Specified, Plant Material Shall Conform To "American Standard For Nursery Stock" ANSI Z60.1-1990, Published By The American Association Of Nurserymen, Including All Addenda.
- Contractor Will Be Required To Guarantee Plant Material For A Period Of Two (2) Years After The Date Of Acceptance And Maintain A 75% Survivability At The End Of The Two (2) Years.
- To Lessen The Chance Of Loss, The Plantings Shall Be Checked From Time To Time To Insure That They Are Receiving Sufficient Water. See "Maintenance Of Plantings" For Guidelines.
- The Location And Orientation Of All Plant Material Shall Be Randomly Planted In Designated Reforestation Areas By The Contractor. Contractor Shall Be Responsible For Moving Any Plant Material Installed Without Approval.
- Mowing And Applying Herbicides To The Reforestation Area Is Prohibited At Any All Stages Of The Planting Process In Order To Encourage The Existing Saplings To Grow.
- Contractor Is Responsible For Installing And Pruning Plant Material In The Proper Planting Season For Each Plant Type. See Tree Planting & Maintenance Calendar.
- Upon Completion Of Installation, Signage Shall Be Installed As Shown.

FOREST CONSERVATION DATA					
EASEMENT NO.	TOTAL RETENTION AREA	RETENTION OUTSIDE FLOODPLAIN	RETENTION INSIDE FLOODPLAIN	PLANTING	TOTAL EASEMENT
1	0.00 AC.	0.00 AC.	0.00 AC.	0.92 AC.	0.92 AC.
2	0.00 AC.	0.00 AC.	0.00 AC.	0.66 AC.	0.66 AC.
3	0.00 AC.	0.00 AC.	0.00 AC.	1.025 AC.	1.025 AC.
TOTAL		0.00 AC.	0.00 AC.	2.2 AC.	2.2 AC.

FCP NOTES

- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
- LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT, NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE.
- PERMANENT SIGNAGE SHALL BE PLACED 50'-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
- THE FOREST CONSERVATION EASEMENT AREAS WITHIN THIS SUBDIVISION HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION ARE ALLOWED. THE FOREST CONSERVATION ACT REQUIREMENTS FOR CENTENNIAL RESERVE WILL BE MET THROUGH THE ON-SITE PLANTING OF 2.2 ACRES IN COMBINED FCE#1, FCE#2, & FCE#3 REQUIRING A SURETY IN THE AMOUNT OF \$48,135 (BASED ON 98,269 SQ. FT./ACRE X \$49.50/SQ. FT.).
- THE FOREST CONSERVATION EASEMENT PLANTINGS ARE NOT TO BE CONSIDERED LANDSCAPING, AS IT IS USUALLY PRACTICED. THE PURPOSE OF THESE PLANTINGS IS TO CREATE A NEW FOREST COMMUNITY THAT WILL REPLACE TO SOME DEGREE THE FOREST RESOURCES THAT HAVE BEEN LOST DURING RECENT LAND DEVELOPMENT. THEIR PRIMARY PURPOSE IS ENVIRONMENTAL AND NOT AESTHETIC. THE REFORESTATION STAND WILL REQUIRE SPECIAL MANAGEMENT AND INITIALLY MAY NOT LOOK ATTRACTIVE.



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3036, EXPIRATION DATE: 4/17/22.

Stephanie Jenne Tuitt 5/28/20

STEPHANIE JENNE TUITT

AS-BUILT CERTIFICATION

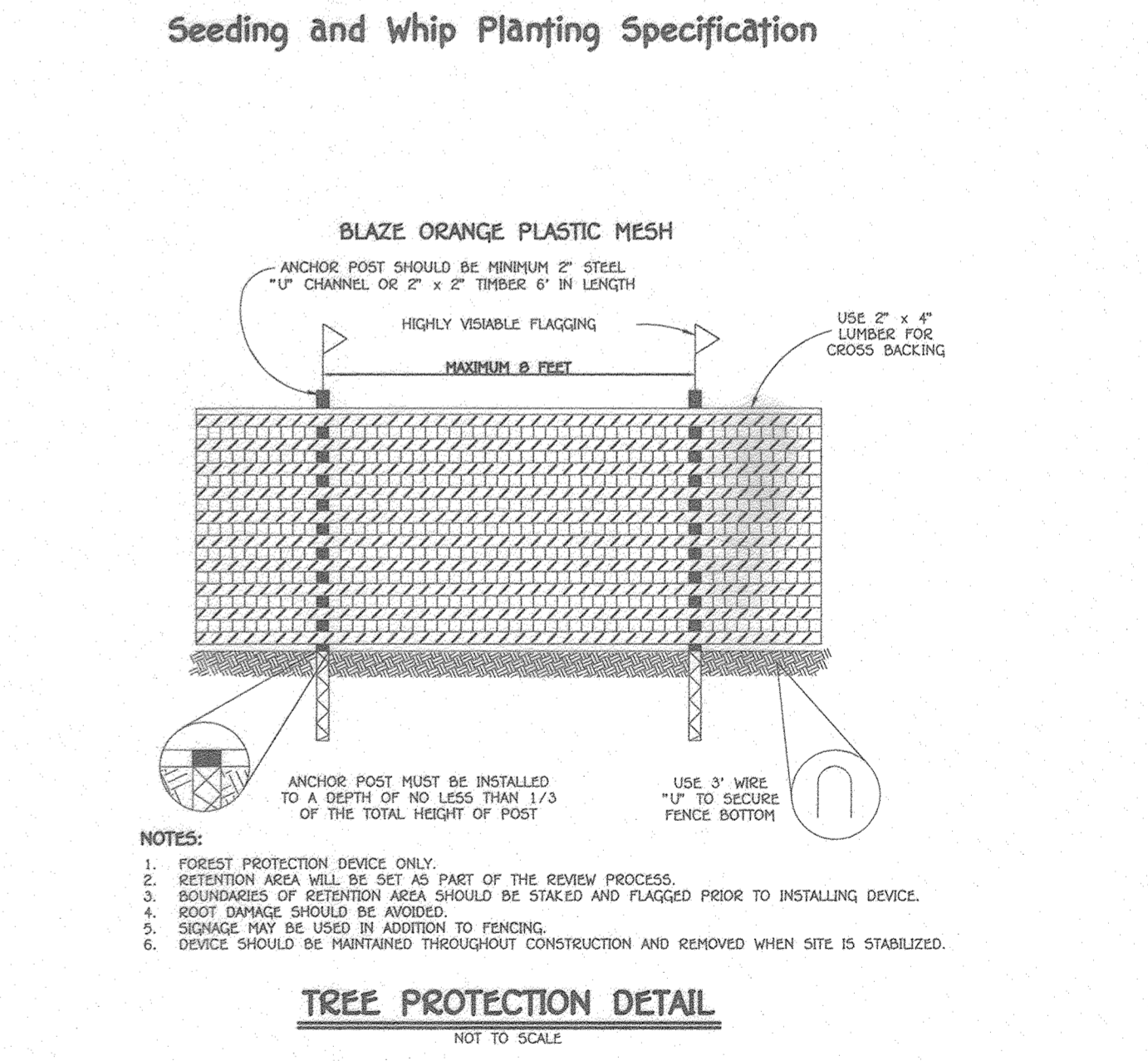
Note: There is no "AS-BUILT" information provided on this sheet.

PAUL GEARO CAVANAGH #27020

OWNERS: PARCEL 04 LENNIS HAMBICK 4489 CENTENNIAL LANE ELICOTT CITY, MD 21042

PARCEL 449 CHANTAU BUILDINGS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044

DEVELOPER: CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MARYLAND 21146 DAVE WOODSON 240-319-1735

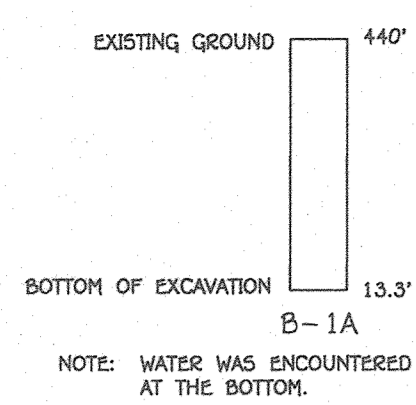


FOREST CONSERVATION NOTES AND DETAILS
CENTENNIAL RESERVE
 LOTS 1 THRU 17, OPEN SPACE LOT 18
 4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET

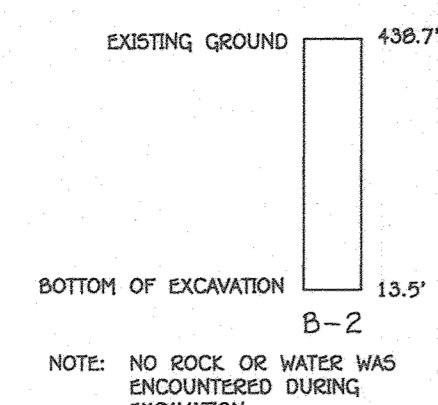
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 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: MAY, 2020
 SHEET 22 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

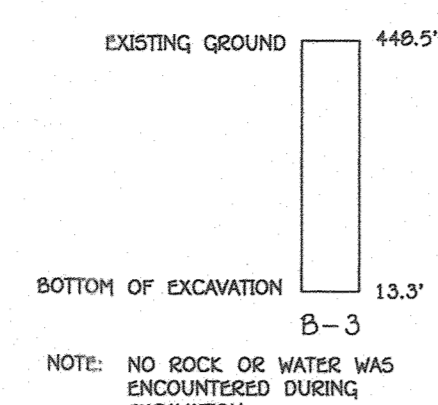
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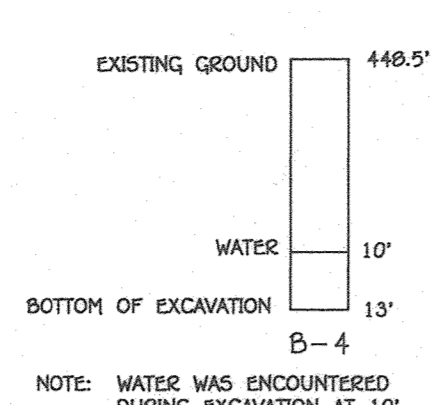
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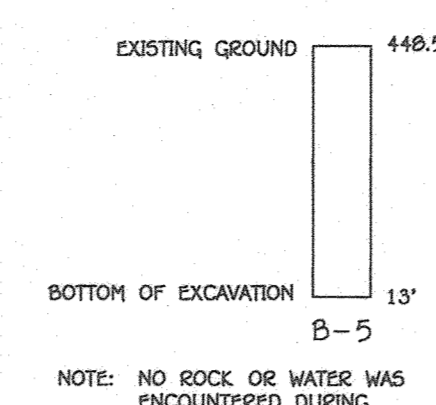
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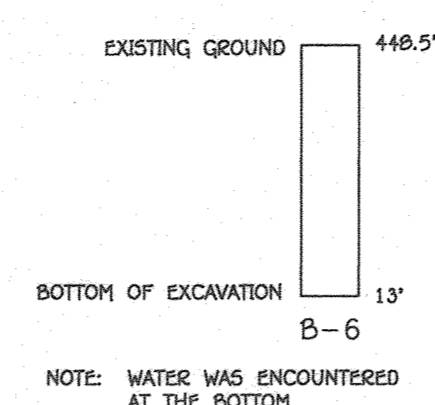
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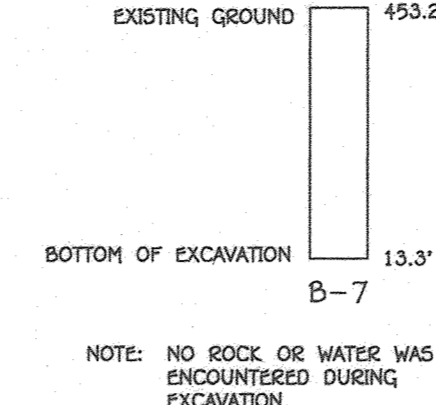
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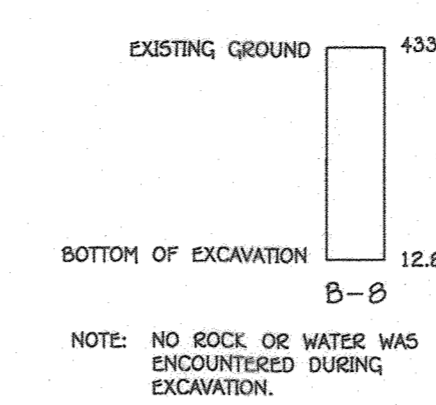
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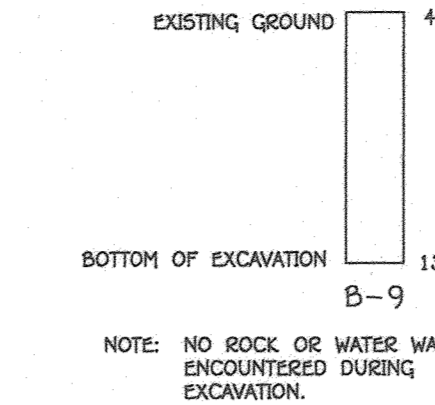
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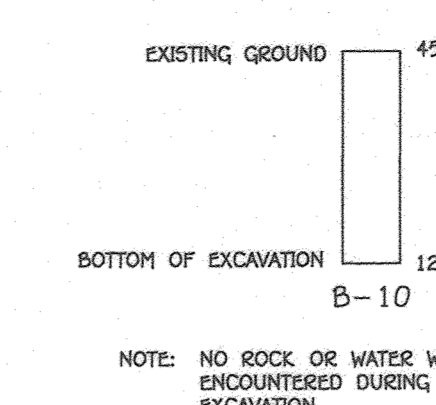
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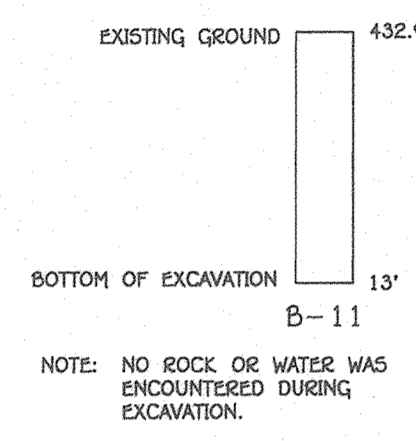
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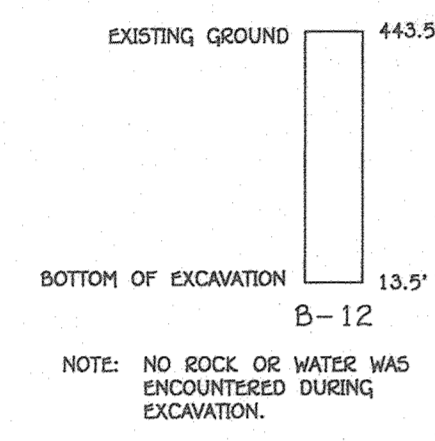
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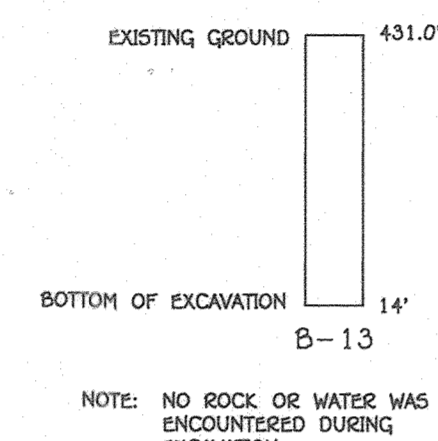
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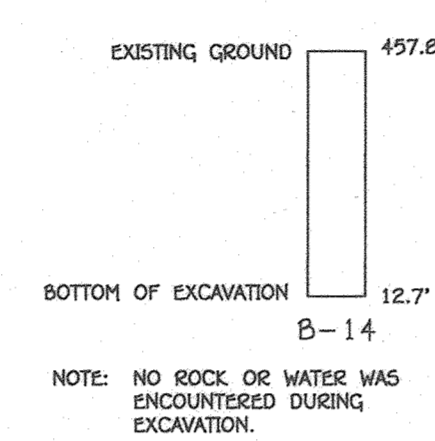
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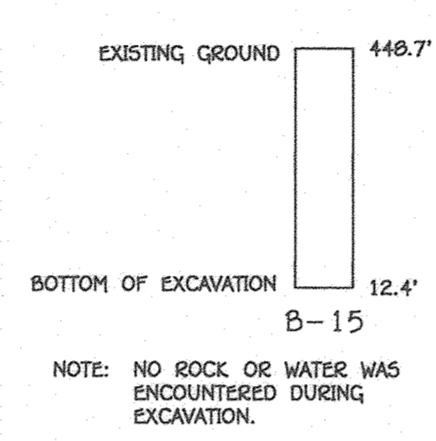
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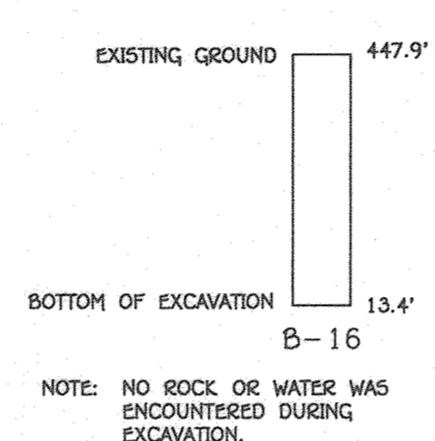
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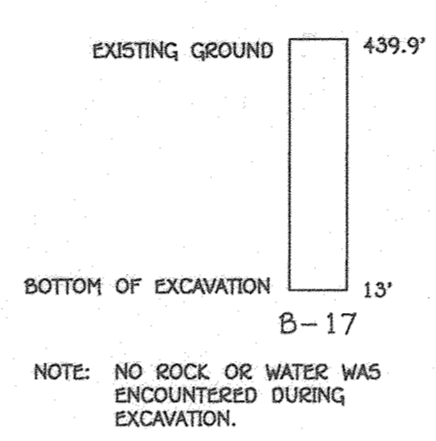
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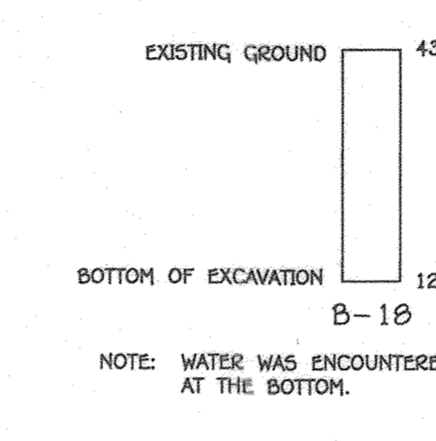
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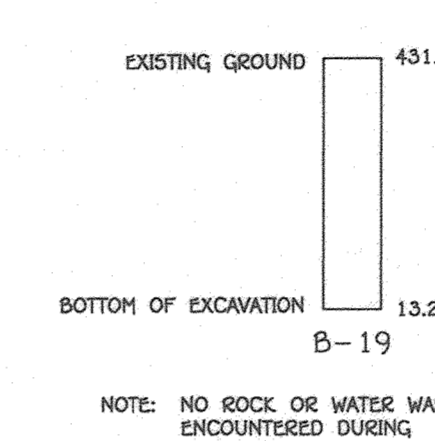
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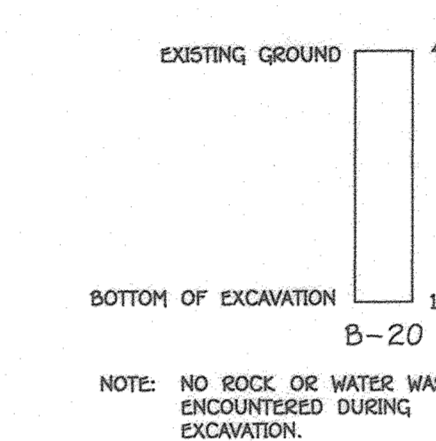
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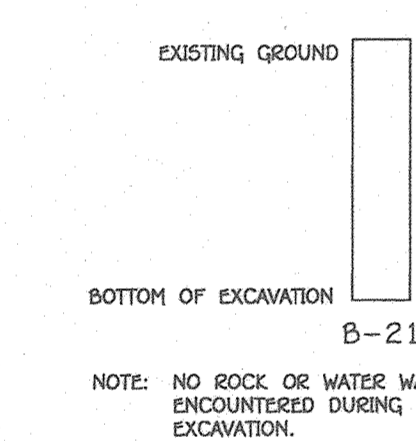
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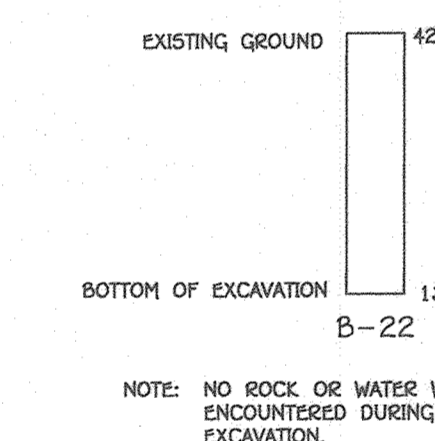
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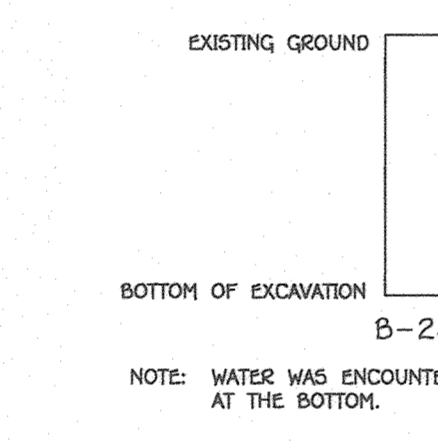
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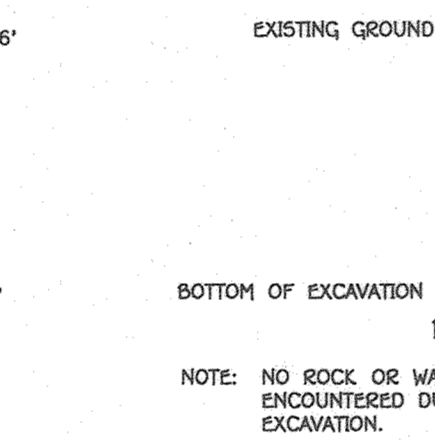
NOTE: NO ROCK OR WATER WAS ENCOUNTERED DURING EXCAVATION.



NOTE: NO ROCK OR WATER WAS ENCOUNTERED DURING EXCAVATION.



NOTE: WATER WAS ENCOUNTERED AT THE BOTTOM.



NOTE: NO ROCK OR WATER WAS ENCOUNTERED DURING EXCAVATION.

REVISIONS		
NO.	DESCRIPTION	DATE

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development *[Signature]* 10/16/20 Date

Chief, Development Engineering Division *[Signature]* 9/4/20 Date

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways *[Signature]* 8/21/2020 Date

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELIJAH CITY, MARYLAND 21042
(410) 451 - 2995



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21475, EXPIRATION DATE: 7/14/21.

[Signature] 5/28/20 Date
FRANK MANALASARAJ II

OWNERS	DEVELOPER
PARCEL 04 LENNIS HAMROCK 4489 CENTENNIAL LANE ELIJAH CITY, MD 21042	PARCEL 449 CHATEAU BUILDINGS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044 PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MARYLAND 21146
	CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MARYLAND 21146 DAVE WOISSNER 240-319-1735

AS-BUILT CERTIFICATION
Note: There is no "AS-BUILT" information provided on this sheet.

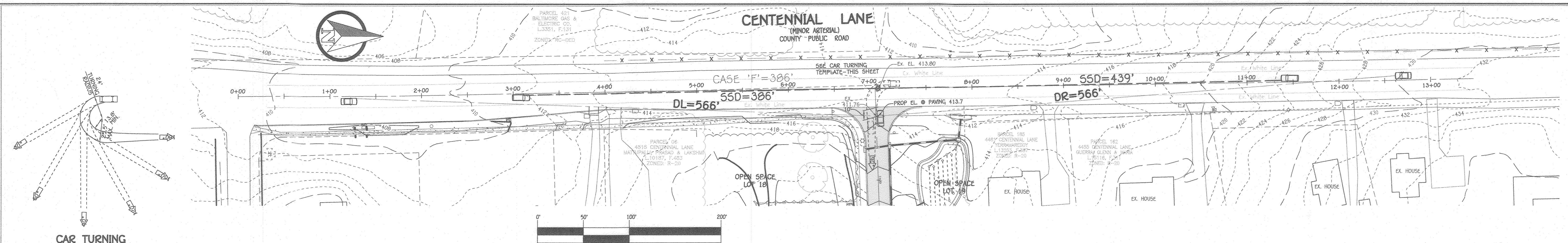
[Signature] 11/11/2022 Date
PAUL GERARD CAVANAUGH #27020

SOIL BORING LOGS
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.: 04, 05, 174, & 449
ZONED R-20
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 23 OF 24

F-20-010

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET

K:\Drawings 310501 Centennial Lane - Speedidm\dwg\F-PLANS 23-BORINGS.dwg, SHEET 23 BORINGS, 1:1



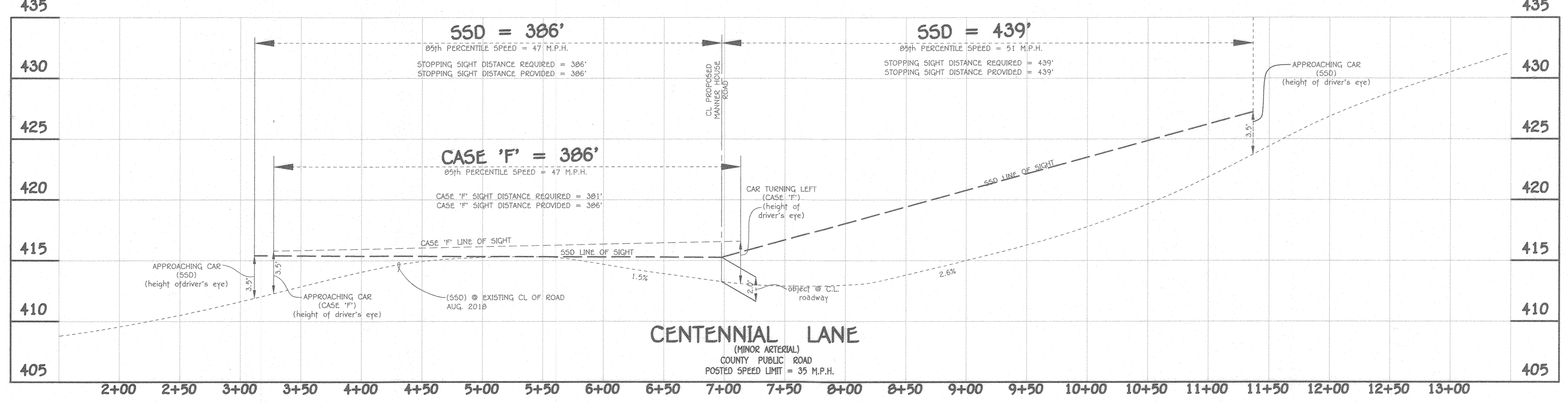
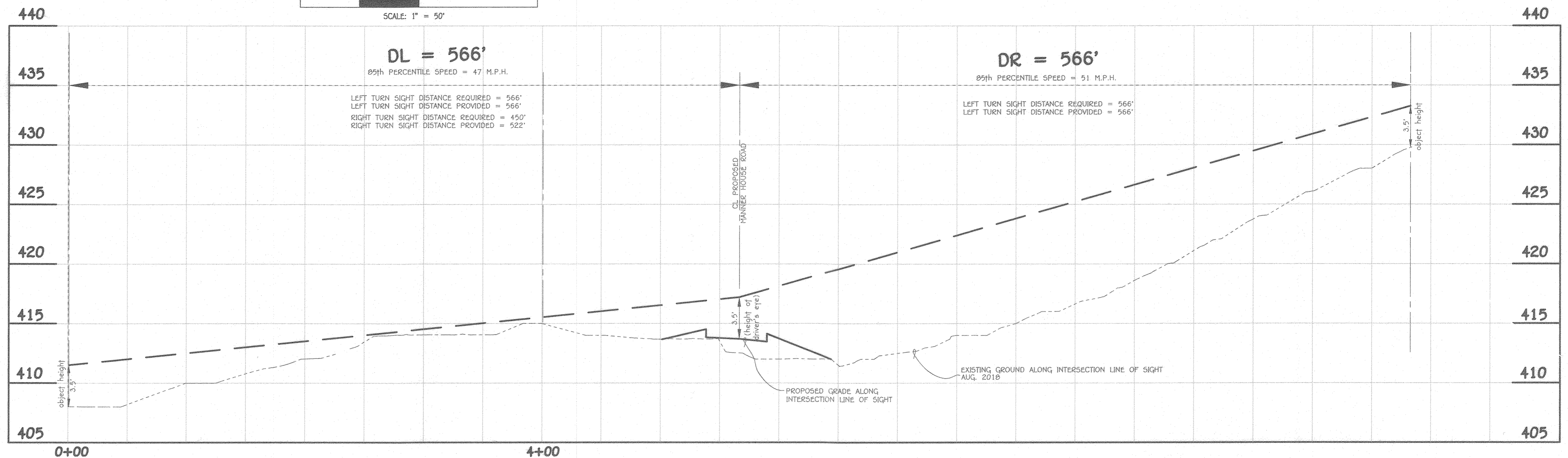
CAR TURNING TEMPLATE DETAIL
SCALE: 1"=50'

NOTE: TOPOGRAPHY INFORMATION SHOWN WITHIN CENTENNIAL LANE AND ON-SITE IS TAKEN FROM A FIELD RUN TOPOGRAPHIC SURVEY PERFORMED ON OR ABOUT AUGUST, 2018 BY FISHER, COLLINS & CARTER, INC. AND SUPPLEMENTED WITH HOWARD COUNTY 2-FOOT INTERVAL AERIAL TOPOGRAPHY.

NOTE: THE TRAFFIC STUDY DATED SEPTEMBER 26, 2018 FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP.

Southbound Stats:		Northbound Stats:	
15th Percentile : 41 MPH	15th Percentile : 37 MPH	15th Percentile : 42 MPH	15th Percentile : 37 MPH
50th Percentile : 46 MPH	50th Percentile : 42 MPH	50th Percentile : 47 MPH	50th Percentile : 42 MPH
85th Percentile : 51 MPH	85th Percentile : 47 MPH	85th Percentile : 51 MPH	85th Percentile : 47 MPH
95th Percentile : 54 MPH	95th Percentile : 50 MPH	95th Percentile : 54 MPH	95th Percentile : 50 MPH
Mean Speed(Average) : 47 MPH	Mean Speed(Average) : 43 MPH	Mean Speed(Average) : 43 MPH	Mean Speed(Average) : 43 MPH
10 MPH Pace Speed : 41-50 MPH	10 MPH Pace Speed : 36-45 MPH	10 MPH Pace Speed : 36-45 MPH	10 MPH Pace Speed : 36-45 MPH
Number in Pace : 6178	Number in Pace : 6239	Number in Pace : 6239	Number in Pace : 6239
Percent in Pace : 71.9%	Percent in Pace : 68.9%	Percent in Pace : 68.9%	Percent in Pace : 68.9%
Number of Vehicles > 40 MPH : 8045	Number of Vehicles > 35 MPH : 8688	Number of Vehicles > 35 MPH : 8688	Number of Vehicles > 35 MPH : 8688
Percent of Vehicles > 40 MPH : 93.6%	Percent of Vehicles > 35 MPH : 95.3%	Percent of Vehicles > 35 MPH : 95.3%	Percent of Vehicles > 35 MPH : 95.3%

NOTE: SEE APPO STUDY REPORT FOR FULL TRAFFIC ANALYSIS.



LANDSCAPE DEVELOPER'S CERTIFICATE

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

NO.	REVISIONS	DATE

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development: *[Signature]* Date: 8/20/20

Chief, Development Engineering Division: *[Signature]* Date: 8/21/2020

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways: *[Signature]* Date: 8/21/2020

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2955



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/21.
[Signature] 5/28/20

AS-BUILT CERTIFICATION
Note: There is no "AS-BUILT" information provided on this sheet.
[Signature] 11/11/2022
PAUL GERARD CAVANAUGH #27020

OWNERS		DEVELOPER	
PARCEL 04 LENNIS HARRICK 4489 CENTENNIAL LANE ELLCOTT CITY, MD 21042	PARCEL 449 CHATEAU BUILDERS, INC. 5305 VILLAGE CENTER DRIVE SUITE 305 COLUMBIA, MD 21044	CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MARYLAND 21146	DAVE WOESSNER 240-319-1735
PARCEL 174 & PARCEL 05 CENTENNIAL RESERVE, LLC 308 MAGOTHY ROAD SEVERNA PARK, MARYLAND 21146			

SIGHT DISTANCE PLAN AND PROFILE
CENTENNIAL RESERVE
LOTS 1 THRU 17, OPEN SPACE LOT 18
4509 & 4489 CENTENNIAL LANE & 10202 MAXINE STREET
TAX MAP NO.: 30 GRID NO.: 01 PARCEL NOS.:04, 05, 174, & 449
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 24 OF 24

THERE IS NO "AS-BUILT" INFORMATION PROVIDED ON THIS SHEET