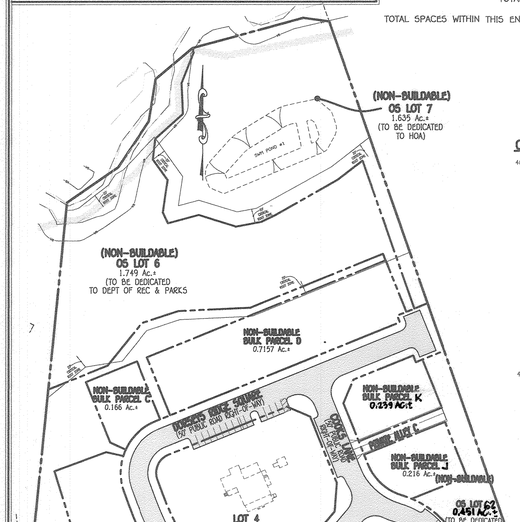

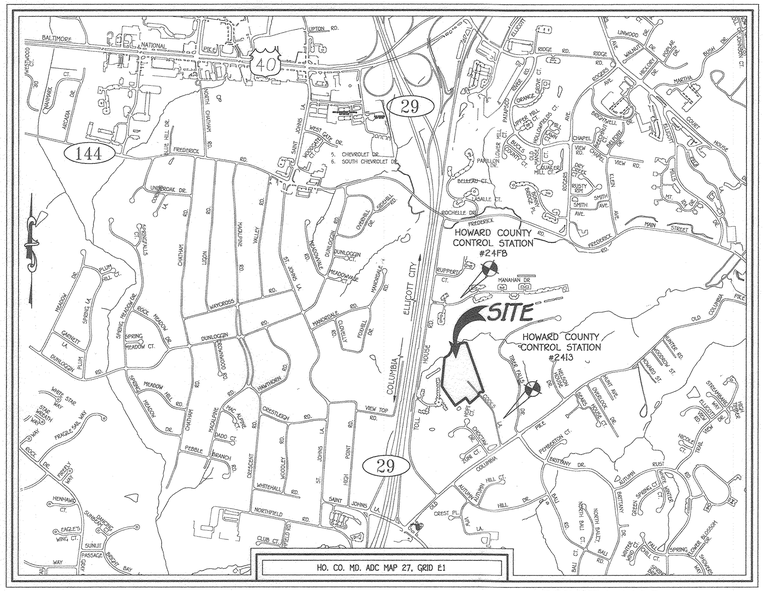

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

DORSEY'S RIDGE

PHASE I

LOTS 1 THRU 4, OPEN SPACE LOTS 6, 7, 61, 62 & NON-BUILDABLE BULK PARCELS B, G THRU K

A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT No. 18442

TAX MAP No. 24 GRID No. 18 PARCEL NO. 260

LOTS 1 thru 3

SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHEET INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	EXISTING CONDITIONS & DEMOLITION PLAN
3	COOKS LANE PLAN AND PROFILE & DORSEYS RIDGE SQUARE PLAN
4	DORSEYS RIDGE SQUARE PLAN AND PROFILE
5	ROADWAY DETAILS
6	GRADING & SEDIMENT CONTROL PLAN
7	SEDIMENT & EROSION CONTROL NOTES & DETAILS
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18	SWM NOTES & DETAILS

PROPOSED DEVELOPMENT:

RESIDENTIAL
TOWNHOUSES: 55 DU
APARTMENTS: 2 DU
TOTAL: 57 DU

PARKING REQUIRED:

NON-RESIDENTIAL (1,340 SF @ 3.3 SP/1,000 SF) 5 SPACES
RESIDENTIAL (57 DU @ 2.5 SP/DU): 143 SPACES
TOTAL REQUIRED SPACES 148 SPACES

PARKING PROVIDED:

NON-RESIDENTIAL (ON-STREET/SURFACE): 14 SPACES

RESIDENTIAL
ON-STREET & SURFACE 17 SPACES
PARKING APRONS (TANDEM) 110 SPACES
GARAGES (2 CAR GARAGE PER DU) 110 SPACES
TOTAL RESIDENTIAL SPACES 237 SPACES

TOTAL SPACES WITHIN THIS ENTIRE DEVELOPMENT 251 SPACES

LOCATION MAP

SCALE: 1" = 100'

0' 100' 200' 400'
SCALE: 1" = 100'

GENERAL NOTES continued

40. THIS PLAN IS SUBJECT TO WP-20-053 WHICH WAS APPROVED ON JANUARY 23, 2020. THE PLANNING DIRECTOR APPROVED THE REQUEST FOR THE ALTERNATIVE COMPLIANCE OF SECTION 16.116(a)(2)(II) TO ALLOW FOR GRADING FOR THE PROPOSED SWM FACILITY AND THE ACCESS ROAD FOR MAINTENANCE FACILITY, THE PROJECT IS SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL OF THIS WAIVER:
    1. REMOVAL OF THE 3-SPECIMEN TREES WILL REQUIRE REPLACEMENT MITIGATION AT A RATIO OF TWO (2) LARGER CALIPER TREES AT LEAST THREE (3) INCHES (dbh) FOR EACH SPECIMEN TREE REMOVED (SIX(6) ADDITIONAL TREES FOR THIS REQUEST, TEN (10) TREES TOTAL). THE MITIGATION PLANTING MUST BE PROVIDED WITHIN ONE OF THE FOREST CONSERVATION EASEMENT AREAS, PREFERABLY ALONG THE PERIMETER OF ONE OF THOSE EASEMENT AREAS. THE FINAL PLAN MUST SHOW THE ALTERNATIVE MITIGATION REQUIREMENT FOR THIS PROPERTY. THE MITIGATION PLANTING MUST BE BONDED WITH THE LANDSCAPING, BUT MAY NOT BE COUNTED TOWARD THE LANDSCAPING OBLIGATION FOR THIS PROJECT.
    2. SPECIMEN TREES ST-6, ST-7, ST-9, ST-13, ST-14, ST-15, AND ST-16 MUST BE PROTECTED DURING CONSTRUCTION. AN REGISTERED ARBORIST MUST INSPECT THE TREES AND IMPLEMENT RECOMMENDATIONS FOR PROFESSIONAL PRUNING OF ROOTS AND FOLIAGE. ALL PRUNING MUST BE PERFORMED BY A MARYLAND LICENSED TREE EXPERT. TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE ENTIRE PERIMETER OF SPECIMEN TREES ST-6, ST-7, ST-9, ST-13, ST-14, ST-15 AND ST-16 TO THE GREATEST EXTENT POSSIBLE. (WHILE NOT DISTURBING PROPOSED FOREST CONSERVATION AREAS), TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION.
    3. NO GRADING IS PERMITTED WITHIN SEVENTY-FIVE (75') OF THE PERENNIAL STREAM BANK EXCEPT GRADING FOR THE PROPOSED STORMWATER MANAGEMENT FACILITY AND THE PROPOSED ACCESS ROADWAY USED FOR MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITY AS SHOWN ON THE ALTERNATIVE COMPLIANCE EXHIBIT.
    4. THE APPLICANT MUST REDUCE THE AMOUNT OF THE BUFFER DISTURBANCE BY ADDING A SMALL RETAINING WALL THAT WILL ALLOW FOR DISTURBANCE TO BE REDUCED.
    5. THE APPLICANT MUST REPLACE THE RUNAROUND ON THE MAINTENANCE ROAD FOR THE POND WITH A TEE TO REDUCE THE DISTURBANCE.
41. THIS PLAN IS SUBJECT TO WP-20-097 WHICH WAS APPROVED ON APRIL 14, 2020. THE PLANNING DIRECTOR APPROVED THE REQUEST FOR THE ALTERNATIVE COMPLIANCE OF SECTION 16.120(a)(7) TO ALLOW THE REMOVAL OF APPROVAL TO PROTECT SPECIMEN TREE #14. THE PROJECT IS SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL OF THIS WAIVER:
    1. APPROVAL IS FOR REMOVAL OF SPECIMEN TREE #14 AS SHOWN ON THE ALTERNATIVE COMPLIANCE EXHIBIT. NO OTHER SPECIMEN TREE IS APPROVED TO BE REMOVED UNDER THIS REQUEST. PREVIOUS ALTERNATIVE COMPLIANCE CONDITIONS OF APPROVAL TO PROTECT SPECIMEN TREE #14 ARE NO LONGER APPLICABLE (WP-17-048 & WP-20-053).
    2. REMOVAL OF THE SPECIMEN TREE REQUIRES REPLACEMENT OF TWO NATIVE TREES WITH A DBH OF AT LEAST THREE INCHES. THE MITIGATION PLANTING MUST BE SHOWN ON THE LANDSCAPE PLAN FOR DORSEY'S RIDGE, PHASE 1 (F-19-047) AND BE BONDED AS PART OF THE LANDSCAPING SURETY. THE REPLACEMENT TREES CAN NOT COUNT TOWARD THE LANDSCAPING OBLIGATION FOR THE SUBDIVISION.
    3. SPECIMEN TREES ST-6, ST-7, ST-9, ST-13, ST-15 & ST-16 MUST BE PROTECTED DURING CONSTRUCTION. A MARYLAND LICENSED TREE EXPERT MUST INSPECT THE TREES AND IMPLEMENT RECOMMENDATIONS FOR PROFESSIONAL PRUNING OF ROOTS AND FOLIAGE. ALL PRUNING MUST BE PERFORMED BY A MARYLAND LICENSED TREE EXPERT. TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE ENTIRE PERIMETER OF THESE SPECIMEN TREES TO THE GREASTEST EXTENT POSSIBLE (WHILE NOT DISTURBING PROPOSED FOREST CONSERVATION AREAS) TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION.
41. THIS PLAN IS SUBJECT TO WP-18-136 WHICH WAS APPROVED ON SEPT. 21, 2018. THE PLANNING DIRECTOR APPROVED THE REQUEST FOR THE ALTERNATIVE COMPLIANCE OF SECTION 16.144(g) AND DEFERRED THE REQUEST FOR AN ALTERNATIVE COMPLIANCE OF SECTION 16.1205(a)(7). THE PROJECT IS SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL OF THIS WAIVER:
    1. SUBMISSION OF A FINAL PLAN APPLICATION, INCLUDING A FINAL SUBDIVISION PLAT AND ROAD CONSTRUCTION PLAN DRAWINGS WITHIN 6 MONTHS FROM THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL LETTER (50 TO 100 UNITS) (MARCH 21, 2019). A FINAL PLAN MUST BE SUBMITTED FOR PHASE 1 TO SHOW THE 5 LOTS, WITH ALL OTHER LOTS SHOWN AS NON-BUILDABLE BULK PARCEL(S) AND OPEN SPACE LOTS.
    2. ALL PROPOSED INFRASTRUCTURE AND IMPROVEMENTS FOR THE ENTIRE PROJECT (57 UNITS) MUST BE SHOWN AND BONDED THROUGH A DEVELOPER'S AGREEMENT WITH THE INITIAL SUBDIVISION PLAT AND SUPPLEMENTAL PLANS, EVEN IF THAT PLAN WILL ONLY USE THE 5 ALLOCATION CREDITS ASSOCIATED WITH THE PROPERTTY.
    3. ANY NECESSARY UNIT-SIZE CHANGES MUST BE MADE ON THE SUBSEQUENT SUBDIVISION PLAT, SUPPLEMENTAL PLANS AND SITE DEVELOPMENT PLANS.
    4. A PHASING SCHEDULE MUST BE PROVIDED ON THE FINAL PLAN FOR THIS PROJECT. THE PLAT SHOULD INDICATE THAT 5 UNITS WILL BE PHASE 1 AND THE REMAINING UNITS WILL BE PHASE 2. PHASE 2 WILL REMAIN IN THE APFO HOLD BIN UNTIL THE SCHOOLS TEST IS PASSED IN THE RELATED PLANNING AREA.
    5. AN EASEMENT FROM BG&E MUST BE OBTAINED PRIOR TO RECORDATION OF THE FINAL PLAT FOR PHASE II OF THIS PROJECT. A NOTE MUST BE PROVIDED ON THE PLAT INDICATING DATE OF RECORDATION OF THE EASEMENT AND LIBER/FOLIO NUMBERS ASSOCIATED WITH THE EASEMENT.
    6. A SEPARATE FINAL PLAN IS REQUIRED FOR EACH OF THE FOLLOWING:
        a. COOKS LANE ROAD IMPROVEMENTS
        b. THE PROPOSED PATHWAY
42. THIS SUBDIVISION IS SUBJECT TO SECTION 104.O.F. 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 DEVELOPER 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 RECORDED SIMULTANEOUSLY WITH THIS PLAT IN THE LAND RECORDS OFFICE OF HOWARD COUNTY, MARYLAND. MODERATE INCOME HOUSING UNIT (M.I.H.U.) TABULATION:
    a. PHASE 1, DORSEY'S RIDGE CREATES BUILDABLE LOTS 1 THRU 4. PROPOSED LOTS 1 THRU 3 EACH CONTAIN A SINGLE FAMILY TOWNHOUSE. PROPOSED LOT 4 CONTAINS AN EXISTING HISTORIC STRUCTURE WITH TWO (2) PROPOSED SINGLE FAMILY APARTMENTS. WITH FOUR (4) LOTS CREATED THERE WILL BE FIVE (5) RESIDENTIAL UNITS.
    b. PHASE 1, DORSEY'S RIDGE SUBDIVISION IS COMPRISED OF FIVE (5) PREVIOUSLY RECORDED LOTS WHICH HAVE A BUILDING ALLOCATION. THE FIVE (5) PREVIOUS BUILDING ALLOCATIONS ARE BEING APPLIED TO PHASE 1 DEVELOPMENT.
    c. PHASE 1 PROVIDES ONE (1) MIHU APARTMENT. THIS MIHU APARTMENT SATISFIES THE MIHU OBLIGATION OF PHASE 1.
    d. PHASE 2, DORSEY'S RIDGE PROPOSES FIFTY-TWO (52) TOWNHOUSE UNITS AND IS SUBJECT TO M.I.H.U. OBLIGATION AND WILL PROVIDE FIVE (5) MIHU TOWNHOUSES.

PHASING TABULATION

PHASE	ALLOCATION YEAR	No. OF UNITS
1	2019	5
2	2019*	52*

*-DENOTES ALLOCATIONS FOR PHASE 2 ARE PLACED ON HOLD DUE TO FAILED SCHOOLS CAPACITY TEST.

STREET ADDRESS CHART

LOT No.	STREET ADDRESS
1	3980 COOKS LANE
2	3978 COOKS LANE
3	3976 COOKS LANE
4	3948 COOKS LANE

SITE ANALYSIS CHART

A. TOTAL AREA OF THIS SUBMISSION = 10.903 AC.±.
B. LIMIT OF DISTURBED AREA = 9.42 Ac.±
C. PRESENT ZONING DESIGNATION: CEF-R
(PER ZB 1106M APPROVAL 10/13/2016)
D. PROPOSED USE: RESIDENTIAL
E. PREVIOUS HOWARD COUNTY FILES: ECP-17-034; ZB1106M; F-09-074; F-05-129; F-89-158; P-89-40; S-89-14, S-17-006; WP-17-084; WP-18-038; WP-18-136, WP-97-091, WP-20-053.
F. TOTAL AREA OF FLOODPLAIN LOCATED ON SITE = 0.336 AC.
G. TOTAL AREA OF SLOPES IN EXCESS OF 15% = 3.15 AC. (0.82 AC. 25% OR GREATER)
H. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.32 AC.±
I. TOTAL AREA OF STREAMS (INCLUDING BUFFER) = 0.99 AC.±
J. TOTAL AREA OF EXISTING FOREST = 3.65 AC.
K. TOTAL GREEN OPEN AREA = 9.403 AC.± THIS PHASE (6.945 AC.± TOTAL)
L. TOTAL IMPERVIOUS AREA = 1.50 AC.± THIS PHASE (3.959 AC.± TOTAL)
M. AREA OF ERODIBLE SOILS = 2.33 AC.±
N. AREA OF ROAD DEDICATION = 1.594 AC.
O. PROPOSED NUMBER OF BUILDABLE LOTS = 4 LOTS
P. AREA OF PROPOSED BUILDABLE LOTS = 1.118 AC±
Q. PROPOSED NUMBER OF NON-BUILDABLE BULK PARCELS = 6 PARCELS
R. AREA OF PROPOSED NON-BUILDABLE BULK PARCELS = 2.742 AC±
S. OPEN SPACE REQUIRED = 10.903 AC X 40% = 4.362 AC
T. OPEN SPACE PROVIDED = 5.449 AC.± (5.051 AC.± CREDITED)
U. RECREATIONAL OPEN SPACE REQUIRED = 57 UNITS (INCLUDING FUTURE UNITS) x 400 SQ.FT. / UNIT = 22,800 SQ.FT. OR 0.523 ACRES.
(INCLUDES 52 FUTURE UNITS)
V. RECREATIONAL OPEN SPACE PROVIDED =
2,307 SQ.FT. PLAYGROUND ON LOT 4
1,040 SQ.FT. BOCCE ON LOT 4
2,000 SQ.FT. (10 BENCHES) ON LOT 4
4,036 SQ.FT. OF LAWN AREA ON LOT 4.
13,680 SQ.FT. OF PATHWAYS (4,560 SQ.FT. x 3 SQ.FT.) ON LOT 4
~~1,263 SQ.FT. OPEN SPACE LOT 5~~
23,063 ~~24,326~~ SQ.FT. TOTAL

* *IN ACCORDANCE WITH THE PROVISIONS OF THE COMMUNITY ENHANCEMENT FLOATING DISTRICT FOR DORSEY'S RIDGE FOR OPEN SPACE AND ACTIVE RECREATION, A MINIMUM OF FORTY PERCENT (40%) OF THE GROSS ACRES OF THE SITE WILL BE DESIGNATED AS OPEN SPACE. THE ACTIVE RECREATION NEEDS OF THE COMMUNITY WILL BE MET BY THE PLAYGROUND, COMMON ARE AROUND THE PUE FULTON HOUSE LOCATED ON LOT 4, THE ON-SITE GATHERING PLACES AND MEWS AND, PATHWAYS ON-SITE AND LINKING TO OFFSITE PEDESTRIAN AND BICYCLE CONNECTIONS.*

STREET LIGHT CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
COOKS LANE	0+24	22' RT	14' BLACK FIBERGLASS POLE W/ PREMIER COLONIAL FIXTURE AND L.E.D.-100
	0+96	21' LT	
	2+54	20.5' LT	
	3+40	20' RT	
	4+21	22' LT	
DORSEYS RIDGE SQUARE	0+21	21' RT	14' BLACK FIBERGLASS POLE W/ PREMIER COLONIAL FIXTURE AND L.E.D.-100
	1+37	17' RT	
	2+57	16' RT	
	3+88	16' RT	
	5+03	16' RT	
	5+85	17' RT	
	6+85	16' RT	
	8+46	20' RT	
	9+27	20.5' RT	

APPROVED: DEPARTMENT OF PUBLIC WORKS
8/17/2020
CHIEF, BUREAU OF HIGHWAYS MK DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
9/23/20
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chad Edmondson 8-28-20
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDED GENERAL NOTE NO. 43	6/7/22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

TRAFFIC CONTROL SIGNS

ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
COOKS LANE	5+52	18' LT.	SPEED LIMIT 25 M.P.H.	R2-1
COOKS LANE	0+35.9	20' LT	STOP	R1-1
COOKS LANE	4+65	20' RT	SPEED LIMIT 25 M.P.H.	R2-1
DORSEYS RIDGE SQUARE	0+25	23' LT	STOP	R1-1

✓ NOTE: THE SUBDIVISION PLANS FOR THE REMAINDER OF THE LOTS SHOULD INCLUDE BOTH THE COOKS LANE IMPROVEMENTS AND THE PEDESTRIAN NETWORK ENHANCEMENTS AND SHALL BE APPROVED PRIOR TO THE SUBMITTAL OF ANY SDP FOR THE CEF LOTS

BULK REGULATIONS

1. The following maximum limitations shall apply:
    (a) Height
        (1) Single Family Attached .... 40 feet
        (2) Accessory structures .... 15 feet
    (b) Density .... 6.0 units per gross acre
    (c) Maximum units per structure – Single-family attached dwelling units .... 6 units per structure
    (e) Building length – single-family attached .... 164 feet
2. Minimum setback requirements:
    (a) From internal street and alley regardless of the classification of street and alley, as measured from face of curb or edge of roadway, In the absence a curb:
        (1) Single Family Attached
            a. Front .... 15 feet
            b. Front with integral garage .... 18 feet
            c. Rear .... 5 feet
            d. Side .... 10 feet
    (b) From vicinal properties
        (1) Structure setback from residential uses zoned R-ED and R-20..... 25 feet
        (2) Structure setback from Open Space Lot and BGE right-of-way .... 20 feet
3. Minimum distances between buildings:
    (a) Between Single Family (Attached)
        (1)Face To Face .... 25 feet
        (2)Face to side .... 25 feet
        (3)Rear to side .... 25 feet
        (4)Side to side .... 10 feet
        (5)Rear to Rear .... 30 feet
        (6)Rear to face .... N/A

M.I.H.U. Note: Please Note That Lots 1 Thru 4 Containing 3 Townhouse Units And 2 Apartment Units, one of which is a Moderate Income Housing Unit (M.I.H.U.) provided to satisfy the MIHU requirement for Phase 1 of this project. See General Note No. 42.

VICINITY MAP

SCALE: 1" = 1200'

GENERAL NOTES CONTINUED 1

43. LOTS THAT HAVE GARAGE ACCESS TO DORSEY RIDGE SQUARE AND COOKS LANE WILL HAVE PUBLIC TRASH PICK UP AND LOTS THAT HAVE GARAGE ACCESS TO PRIVATE ALLEYS WILL HAVE PRIVATE TRASH PICK UP.

ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
COOKS LANE	PUBLIC ACCESS STREET	30 M.P.H.	25 M.P.H.	EX. 35'
DORSEYS RIDGE SQUARE	PUBLIC ACCESS STREET	30 M.P.H.	25 M.P.H.	50'

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

GENERAL NOTES

1. SUBJECT PROPERTY ZONED CEF-R PER ZB 1106M APPROVAL TO REZONE PROPERTY FROM R-ED TO CEF-R UNDER DECISION & ORDER APPROVAL DATED OCTOBER 13, 2016. AS PART OF CEF REZONING PROCESS, SUBDIVISION WAS APPROVED BY PLANNING BOARD ON APRIL 14, 2016.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
3. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
5. TRAFFIC CONTROL DEVICES
    a) THE R1-1 ("STOP") SIGN AND THE STREET NAME SIGN (SNS) ASSEMBLY FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE 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" (MdMUTCD).
    d) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED ("QUICK PUNCH"), SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2 ½" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) – 3' LONG. THE ANCHOR SHALL NOT EXTEND MORE THAN TWO "QUICK PUNCH" HOLES ABOVE GROUND LEVEL. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
6. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
7. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003, THE 10/06/13 COMPREHENSIVE ZONING PLAN AND ZB-1106M. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH THE DEVELOPMENT CRITERIA IN ZB-1106M AND ZONING REGULATIONS IN EFFECT AT THE TIME OF BUILDING OR GRADING PERMIT APPLICATION.
8. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NOS.

✓ HOWARD COUNTY CONTROL STATION #2413 – HORIZONTAL – (NAD '83)
N 580,648.901
E 1,364,974.507
ELEVATION = 403.703 – VERTICAL – (NAVD '88)

✓ HOWARD COUNTY CONTROL STATION #24FB – HORIZONTAL – NAD '83)
N 582,652.119
E 1,364,255.979
ELEVATION = 422.492 – VERTICAL – (NAVD '88)

9. BACKGROUND INFORMATION:
    a. SUBDIVISION NAME: DORSEY'S RIDGE (RESUBDIVISION OF WILHIDE PROPERTY)
    b. TAX MAP NO.: 24
    c. PARCELS NOS.: 260
    d. ZONING: CEF-R, PER ZB1106M APPROVAL OCTOBER 13, 2016.
    e. ELECTION DISTRICT: SECOND
    f. GROSS AREA OF TRACT = 10.904 AC.±
    g. NUMBER OF OPEN SPACE LOTS: 4
    h. NUMBER OF BUILDABLE LOTS PROVIDED: (4) 5 UNITS
    i. THE TOTAL NUMBER OF BUILDABLE LOTS APPROVED= 57 UNITS UNDER S-17-006
10. EXISTING WATER IS PUBLIC (CONTRACT NO. 14-1955-D & 38W). EXISTING SEWER IS PUBLIC (CONTRACT NO. 10-0958).
11. BOUNDARY OUTLINE BASED ON A FIELD RUN MONUMENTED BOUNDARY SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. ON OR ABOUT SEPTEMBER, 2017.
12. THE EXISTING TOPOGRAPHY INFORMATION SHOWN IS BASED ON HOWARD COUNTY AERIAL CONTOURS AND SUPPLEMENTED WITH A FIELD RUN SURVEY OF WETLANDS AND STREAM BANKS PERFORMED ON OR ABOUT JANUARY, 2017 BY FISHER, COLLINS & CARTER, INC. THERE ARE STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.b.
13. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2010 MDE, CHAPTER 5 REGULATIONS AND THE LATEST HOWARD COUNTY DESIGN MANUAL, VOL. I, CHAPTER 5 ADOPTED ON OR AROUND MAY 4, 2010. GROUNDWATER RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A STONE RESERVOIRS LOCATED BENEATH THE VARIOUS ESD FACILITIES. THE REQUIRED ESD VOLUMES WILL BE PROVIDED BY PERMEABLE PAVEMENT, DRYWELLS, AND BIORETENTION FACILITIES. OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES FOR THIS SITE WILL BE PROVIDED BY AN ON-SITE FACILITY AT THE REAR OF THE PROPERTY NEAR TIBER RUN. DISTURBANCE TO CREATE THE POND AND ASSOCIATED PIPING IS CONSIDERED ESSENTIAL DISTURBANCE IN ACCORDANCE WITH CB80-2016 & SECTION 16.116(c)1 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS. AS A RESULT OF THIS POND CONSTRUCTION AN ALTERNATIVE COMPLIANCE HAS BEEN SUBMITTED FOR THE DISTURBANCE TO THE ASSOCIATED STREAM BUFFERS. THIS SWM POND FACILITY WILL BE OVER-MANAGING THE 100-YEAR STORM AT 115%. FIVE (5) OF THE SIX (6) BIORETENTION FACILITIES WILL BE PRIVATELY OWNED BY THE H.O.A. AND WITH ONE BIORETENTION LOCATED IN THE COOKS LANE RIGHT OF WAY BEING COUNTY OWNED BUT JOINTLY MAINTAINED BY H.O.A. AND HOWARD COUNTY. THE DRYWELLS AND PERMEABLE PAVEMENT WILL BE PRIVATELY OWNED AND MAINTAINED BY THE INDIVIDUAL PROPERTY OWNERS. THE REGIONAL FACILITY WILL BE PUBLICLY OWNED AND MAINTAINED BY HOWARD COUNTY.
14. FLOODPLAIN LIMITS SHOWN BASED ON CROSS SECTIONS TAKEN FROM THE CURRENT FEMA FLOODPLAIN MAP DATED NOVEMBER, 2013.
15. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY, 2017.
16. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
17. THERE ARE NO KNOWN CEMETERIES WITHIN THIS SUBDIVISION. THERE IS AN EXISTING HISTORIC SMOKE HOUSE AND DWELLING, HO-859, THE PUE-FULTON FARM, ca. 1850-1905, ON LOT 4 TO REMAIN.
18. TRAFFIC STUDY DATED NOVEMBER 12, 2015 WAS PREPARED BY THE TRAFFIC GROUP AND APPROVED ON MARCH 29, 2016.
19. GEOTECHNICAL REPORT DATED DECEMBER 14, 2017 WAS PREPARED BY SPECIALIZED ENGINEERING AND APPROVED ON JANUARY 16, 2020.
20. NO BUILDING LOT OR RECREATIONAL OPEN SPACE LOT IS WITHIN 500 FEET OF THE RIGHT OF WAY OF MD RTE 29. FOR THAT REASON A NOISE STUDY IS NOT REQUIRED BY THE DESIGN REGULATIONS.
21. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, THEIR REQUIRED BUFFERS, UNLESS THE ACTIVITIES ARE CONSIDERED NECESSARY OR ALTERNATIVE COMPLIANCE IS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING. THERE ARE NO WETLANDS ON-SITE THAT WILL BE DISTURBED OR THAT WILL REQUIRE 401 AND 404 WETLAND PERMITS FROM THE STATE OF MARYLAND.
22. SOILS SHOWN HEREON BASED ON NRCS WEBSOIL SURVEY AND HOWARD COUNTY SOIL SURVEY MAP #13
23. MIHU AGREEMENT & MIHU COVENANTS WILL BE REQUIRED IN ACCORDANCE WITH SECTION 13.402 OF THE COUNTY CODE. THEY ARE TO BE COMPLETED IN A FORMAT DICTATED BY THE DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (DHCD) AND WILL BE REVIEWED BY DHCD AND THE OFFICE OF LAW AT TIME OF FINAL PLAN APPROVAL. SIX (6) MIHU ARE REQUIRED FOR THIS SUBDIVISION AND HAVE BEEN DESIGNATED ON LOTS 48, 49, 50, 53, 54 AND 1 APARTMENT IN PUE-FULTON HOUSE.
24. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.
25. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL". FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (32 SHADE, 28 EVERGREEN & 10 ORNAMENTAL) WHICH INCLUDES THE MITIGATION TREES REQUIRED PER THE WP-17-084, WP-20-053 & WP-20-97 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $15,300.00.
26. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE ON-SITE RETENTION OF 1.48 ACRES OF FOREST. NO SURETY WILL BE REQUIRED FOR THE RETENTION (1.48 ACRES CREDITED). THE REMAINING REFORESTATION REQUIREMENT OF 1.6 ACRES WILL BE FULFILLED BY OFF-SITE PLANTING ON A FOREST BANK SDP-20-052, ENTITLED "KEYWAYDIN, OPEN SPACE LOT 37". THERE IS NO SURETY BECAUSE THIS IS AN APPROVED SITE DEVELOPMENT PLAN – TREE BANK.
27. SOIL BORINGS WILL BE REQUIRED FOR THIS PROJECT SINCE DRYWELLS, PERMEABLE PAVEMENT, AND BIORETENTION FACILITIES ARE BEING UTILIZED.
28. STRUCTURES EXIST ON THE PROPERTY, KNOWN AS 3948 COOKS LANE, WHICH IS TO REMAIN, AND 3952 & 3960 COOKS LANE WHICH ARE TO BE REMOVED.
29. PRE-SUBMISSION COMMUNITY MEETINGS WERE HELD ON APRIL 21, 2015 AND AUGUST 17, 2015.
30. IF ANY WELL OR SEPTIC SYSTEMS ARE FOUND BEFORE AND/OR DURING CONSTRUCTION, THE HEALTH DEPARTMENT MUST BE NOTIFIED AND THEY MUST BE PROPERLY ABANDONED WITH DOCUMENTATION SENT TO THE HEALTH DEPARTMENT.
31. THERE IS AN EXISTING DWELLING AND SMOKEHOUSE, HO-859, PUE-FULTON FARM, CA. 1850-1905 ON LOT 4 TO REMAIN. THIS PLAN WAS PRESENTED TO THE HISTORIC PRESERVATION COMMISSION ON MARCH 2, 2017 IN CASE HPC-17-19 FOR ADVISORY COMMENTS. THE COMMISSION HAD NO OBJECTIONS TO THE PLAN AS PRESENTED.
32. THE ZONING BOARD APPROVED CASE ZB1106M ON OCTOBER 13, 2016 SUBJECT TO THE FOLLOWING CONDITIONS:
    a. THAT ALL OPEN SPACE IDENTIFIED ON THE DCP, INCLUDING THE OPEN SPACE AREA ADJACENT TO BUILDING E, IS AND SHALL BE LABELED NON-BUILDABLE AND SHALL BE OFFERED FOR DEDICATION TO HOWARD COUNTY AS PERMANENT OPEN SPACE
    b. THAT THE ENHANCEMENT OF THE PUE-FULTON HOUSE AND ITS SURROUNDING ONE ACRE AS OUTLINED IN THE REVISED DCP AS DESCRIBED IN THE PETITION, THE PETITIONER'S EXHIBITS, AND IN THIS DECISION, MAY BECOME FINAL WHEN THE PETITIONER RETURNS TO THE ZONING BOARD WITHIN 6 MONTHS OF THIS DECISION FOR APPROVAL OF AN AGREEMENT WITH AN APPROPRIATE NON-PROFIT ORGANIZATION TO TRANSFER THE PUE-FULTON HOUSE AND LOT TO THAT NON-PROFIT ORGANIZATION, FREE OF CHARGE, WHICH ENSURES THE PERPETUAL USE AND MAINTENANCE OF THE PUE-FULTON PROPERTY FOR THE USES OF AN HISTORIC RESOURCE, TWO APARTMENTS AND A MEETING HOUSE, UTILIZING SUBSTANTIALLY FOR THE FRAMEWORK OF THAT AGREEMENT THE DOCUMENTS INTRODUCED AS APPLICANT'S EXHIBITS 8 (DORSEY'S RIDGE LLC DECLARATION OF COVENANTS, CONDITIONS, RESTRICTIONS) AND 9 (DEED AND DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS) BUT ALSO INCLUDING SUGGESTIONS MADE AT THE UPCOMING ZONING BOARD HEARING AND THE SUGGESTIONS FOR CHANGE (THE REFERENCES WILL BE TO APPLICANT'S EXHIBIT 8) MADE BY MR. BOBOTEK AND THE BOARD DURING THE HEARINGS HELD IN THIS MATTER, INCLUDING:
        (1) IN ARTICLE I, PARAGRAPH 3, AN "ACT OF GOD" EXCEPTION SHOULD BE MADE TO THE FORFEITURE OF DEPOSIT PROVISION; AND
        (2) IN ARTICLE I, PARAGRAPH 6, ANY PROPOSED TRANSFER OF OWNERSHIP APPROVAL SHOULD BE BY THE PLANNING BOARD RATHER THAN THE DEPT OF PLANNING AND ZONING
        (3) IN ARTICLE II, SECTION I, POLICY STATEMENT, THE NOISE RESTRICTIONS ON THE USE OF THE PUE-FULTON FACILITIES FOR A MEETING HOUSE SHOULD BE MADE MORE SPECIFIC;
        (4) IN ARTICLE V, PARAGRAPH 3, AN EXCEPTION TO THE INSURANCE REQUIREMENTS SHOULD BE MADE FOR SMALL EVENTS NOT INVOLVING THE PLAYING OF MUSIC OR USE OF ALCOHOL, BY WAY OF EXAMPLE
        (5) AN OPTION FOR CONVEYANCE OF THE PUE-FULTON HOUSE TO THE COUNTY AS AN OPTION SHOULD BE CONSIDERED IN THE AGREEMENT IN ORDER TO ENSURE THE USE OF THE PUE-FULTON HOUSE FOR THE ABOVE-DESCRIBED USES IN PERPETUITY.
    c. THE PETITIONER SHALL NOT BE PERMITTED TO PROCEED WITH DEVELOPMENT OF THE SINGLE FAMILY ATTACHED RESIDENTIAL PORTION OF THE DCP UNTIL THE ZONING BOARD APPROVES THE AGREEMENT REFERRED TO ABOVE IN CONCLUSION OF LAW 2.B.
33. ON APRIL 3, 2017, ZONING BOARD APPROVED THE PROPOSED AGREEMENT WITH AN APPROPRIATE NON-PROFIT ORGANIZATION, HOWARD COUNTY HISTORICAL SOCIETY, INC., TO TRANSFER THE PUE-FULTON HOUSE AND LOT ALONG WITH RECORDATION OF DECLARATION OF COVENANTS, CONDITIONS, AND RESTRICTIONS IN THE LAND RECORDS OF HOWARD COUNTY, MD.
34. ALTERNATIVE COMPLIANCE APPLICATION, WP-17-084, WAS APPROVED ON APRIL 5, 2017 FOR ALTERNATIVE COMPLIANCE TO SECTION 16.1205(a)(7) TO ALLOW THE REMOVAL OF TWO (2) SPECIMEN TREES 30" IN DIAMETER OR GREATER AND SECTION 16.120(b)(9)(i) TO ALLOW A 20-FOOT MINIMUM DISTANCE BETWEEN AN EASEMENT FOR HIGH TENSION POWER LINES IS SUBJECT TO THE FOLLOWING CONDITIONS:
    1. REMOVAL OF THE TWO (2) SPECIMEN TREES WILL REQUIRE REPLACEMENT MITIGATION AT A RATIO OF TWO (2) LARGER CALIPER TREES (AT LEAST THREE (3) INCHES DBH) FOR EACH SPECIMEN TREE REMOVED (FOUR TREES TOTAL). THE MITIGATION PLANTING CAN BE PROVIDED AS PART OF THE REQUIRED PERIMETER LANDSCAPING FOR THIS PROJECT. YOU MUST ADDRESS THIS ALTERNATIVE LANDSCAPE MITIGATION REQUIREMENT WITH THE SITE DEVELOPMENT PLAN FOR THIS PROPERTY.
    2. SPECIMEN TREES ST-13, ST-14, ST -15 AND ST-16 MUST BE PROTECTED DURING CONSTRUCTION. A REGISTERED ARBORIST MUST INSPECT THE TREES AND IMPLEMENT RECOMMENDATIONS FOR PROFESSIONAL PRUNING OF ROOTS AND FOLIAGE. ALL PRUNING MUST BE PERFORMED BY A MARYLAND LICENSED TREE EXPERT. TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE ENTIRE PERIMETER OF SPECIMEN TREES ST-13, ST-14, ST-15, AND ST-16 TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION.
35. SIGHT DISTANCE IS NOT REQUIRED AT THE INTERSECTION OF COOKS LANE AND OLD COLUMBIA PIKE SINCE IT IS AN EXISTING INTERSECTION. SITE VISIT CONFIRMS THAT A CLEAR LINE OF SIGHT EXISTS AT THE INTERSECTION LOOKING NORTH AND SOUTH ALONG OLD COLUMBIA PIKE.
36. THE REQUEST FOR A WAIVER TO DESIGN MANUAL, VOLUME III, SECTION 2.5 TABLE 2.08 MINIMUM CURB FILLET RADIUS IN FEET IS TO REDUCE THE REQUIRED CURB FILLET RADIUS OF 25' FOR A LOCAL ROAD TO A 15' RADIUS WAS DENIED. THE REQUEST FOR SECTION 2.09 IS TO ALLOW THE MAXIMUM LANDING GRADE 4% FOR A LOCAL ROAD FOR 40 FEET DISTANCE TO BE INCREASED TO A GRADE OF 12%-13% WAS DENIED. THE REQUEST IS FOR SECTION 2, APPENDIX A WHICH PROVIDES THE PUBLIC ROADWAY DESIGN CRITERIA. THE REQUEST IS TO REDUCE THE MINIMUM 350 FOOT CURVE RADIUS FOR AN ACCESS STREET TO 57 FEET AND 100 FEET ALONG DORSEY'S RIDGE SQUARE AND 100 FEET ALONG COOKS LANE BETWEEN PRIVATE ALLEY A AND DORSEYS RIDGE SQUARE WAS APPROVED ON MARCH 28, 2017. AN EASEMENT IS BEING SOUGHT FOR PROPOSED REGRADING OF COOKS LANE TO PROVIDE THE MAXIMUM LANDING GRADE. SHOULD GRADING EASEMENTS FROM THE ADJACENT PROPERTIES NOT BE POSSIBLE TO BE OBTAINED, A RECONSIDERATION OF THIS DENIAL WILL BE REQUESTED.
37. THIS PLAN IS SUBJECT TO WP-18-038 WHICH ON SEPTEMBER 21, 2018 THE PLANNING DIRECTOR APPROVED A REQUEST FOR ALTERNATIVE COMPLIANCE OF SECTION 16.146, REQUIRING A PRELIMINARY PLAN IF A SKETCH PLAN IS APPROVED OR APPROVED WITH MODIFICATIONS FOR A PROPERTY. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
    1. SUBMISSION OF A FINAL PLAN APPLICATION, INCLUDING A FINAL SUBDIVISION PLAT AND ROAD CONSTRUCTION PLAN DRAWINGS WITHIN 6 MONTHS FROM THE DATE OF THE ALTERNATIVE COMPLIANCE APPROVAL LETTER (50 TO 100 UNITS). A FINAL PLAN MUST BE SUBMITTED FOR PHASE 1 TO SHOW THE 5 LOTS, WITH ALL OTHER LOTS SHOWN AS NON-BUILDABLE BULK PARCEL(S) AND OPEN SPACE LOTS.
    2. ALL PROPOSED INFRASTRUCTURE AND IMPROVEMENTS FOR THE ENTIRE PROJECT (57 UNITS) MUST BE SHOWN AND BONDED THROUGH A DEVELOPERS AGREEMENT WITH THE INITIAL SUBDIVISION PLAT AND SUPPLEMENTAL PLANS, EVEN IF THAT PLAN WILL ONLY USE THE 5 ALLOCATION CREDITS ASSOCIATED WITH THE PROPERTY.
    3. ANY NECESSARY UNIT-SIZE CHANGES MUST BE MADE ON THE SUBSEQUENT SUBDIVISION PLAT, SUPPLEMENTAL PLANS AND SITE DEVELOPMENT PLANS.
    4. A PHASING SCHEDULE MUST BE PROVIDED ON THE FINAL PLAN FOR THIS PROJECT (IF NEEDED, PLEASE CONTACT JEFF BRONOW AT (410) 313-4370 FOR GUIDANCE REGARDING THE WORDING WITHIN THE PHASING SCHEDULE). THE PLAT SHOULD INDICATE THAT 5 UNITS WILL BE PHASE 1 AND THE REMAINING UNITS WILL BE PHASE 2. PHASE 2 WILL REMAIN IN THE APFO HOLD BIN UNTIL THE SCHOOLS TEST IS PASSED IN THE RELATED PLANNING AREA.
    5. AN EASEMENT FROM BGE MUST BE OBTAINED PRIOR TO RECORDATION OF THE FINAL PLAT FOR THIS PROJECT. A NOTE MUST BE PROVIDED ON THE PLAT INDICATING DATE OF RECORDATION OF THE EASEMENT AND LIBER/FOLIO NUMBERS ASSOCIATED WITH THE EASEMENT.
    6. ✓ A SEPARATE FINAL PLAN / SDP IS REQUIRED FOR EACH OF THE FOLLOWING:
        - COOKS LANE ROAD IMPROVEMENTS
        - PEDESTRIAN NETWORK ENHANCEMENTS
38. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT & ANY TREE.
39. ✓ NO STRUCTURES INCLUDING DECKS ARE PERMITTED WITHIN 10' OF A PUBLIC WATER and/or SEWER EASEMENT.

THE INSTRUMENTS THAT WERE USED IN PERFORMING THIS AS-BUILT SURVEY: 10 SECOND ROBOTIC TOTAL STATION AND PRISM

AS-BUILT CERTIFICATION

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

Date
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 ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Aldo M. Vitucci 7/9/2020
Signature Of Professional Engineer DATE

ALDO MICHAEL VITUCCI No. 20748

TITLE SHEET

DORSEY'S RIDGE
PHASE-I
LOTS 1 THRU 4, OPEN SPACE LOTS 6, 7, 61, 62
& NON-BUILDABLE BULK PARCELS B, G THRU K

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
AS-BUILT SHEET 1 OF 18

F-19-047

I:\2015\15000\dwg\Finals\Final - Loop Road\15000-3001 Sheet 1 title sheet.dwg, C-01 Title Sheet, 1:1

SOILS LEGEND

SOIL	NAME	CLASS
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes	C
GmC	Glenville silt loam, 8 to 15 percent slopes	C
LeB	Legore silt loam, 3 to 8 percent slopes, stony	C
LeC	Legore silt loam, 8 to 15 percent slopes, stony	C
LoB	Legore–Montalto–Urban land complex, 0 to 8 percent slopes	B
LoC	Legore–Montalto–Urban land complex, 8 to 15 percent slopes	B
LrD	Legore–Relay gravelly loams, 15 to 25 percent slopes, very stony	B/C
LrF	Legore–Relay gravelly loams, 25 to 65 percent slopes, very stony	B/C
MaC	Manor loam, 8 to 15 percent slopes	B
UaF	Udorthents, Highway, 0 to 65 percent slopes	X
WcB	Watchung silt loam, 3 to 8 percent slopes, stony	D

— TP — DENOTES TREE PROTECTION FENCE

╳ DENOTES TREE TO BE REMOVED

▨ DENOTES UTILITY TO BE REMOVED

AS-BUILT CERTIFICATION

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

Date

PAUL GERARD CAVANAUGH #27020

SPECIMEN TREE CHART

Key (ST-#)	Species	Size (in.dbh)	CRZ (feet radius)	Comments
*1	Red oak	38	57	
*2	Red oak	35	52.5	
3	Tulip poplar	34	51	
4	Black oak	35	52.5	fair, limb dieback noted
5	American beech	30	45	
6	Black walnut	34	51	
7	Tulip poplar	35	52.5	twin stems above breast height
*8	Tulip poplar	34	51	
9	Black oak	35	52.5	
*10	White oak	31	46.5	
*11	Tulip poplar	52	78	fair, limb dieback and heavy vine cover
12	American beech	34	51	
13	White oak	49.5	74.25	
**14	White oak	41	61.5	fair, heavily trimmed
15	White oak	36	54	
16	White oak	49	73.5	

* DENOTES: ST1, ST2, ST8, ST10, & ST11 ARE TO BE REMOVED.
** DENOTES ST14 TAKEN DOWN DUE TO HAZARD OF FALLING ON HOUSE.

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — DATE 8/17/2020

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/23/20

CHIEF, DEVELOPMENT ENGINEERING DIVISION HSP — DATE 8.28.20

REVISIONS

NO.	DESCRIPTION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

0' 50' 100' 150'
Scale: 1" = 50'

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Aldo M. Vitucci — Signature Of Professional Engineer

5/27/2020 — DATE

ALDO MICHAEL VITUCCI No. 20748

EXISTING CONDITIONS & DEMOLITION PLAN

DORSEY'S RIDGE

PHASE–I

LOTS 1 THRU 4, OPEN SPACE LOTS 5 THRU 8,
& NON–BUILDABLE BULK PARCELS A THRU F

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF–R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 2 OF 18

THERE IS NO AS-BUILT INFORMATION ON THIS SHEET F–19–047

I:\2015\15000\dwg\Finals\Final - Loop Road\15000-3001 Sheet 2 Demo Plan.dwg, C-02, 1:1

⊗ DENOTES REBAR AND CAP SET (FCC #108)
✕ DENOTES X-MARK SET
⊠ DENOTES PK NAIL SET
⬠ DENOTES CONCRETE MONUMENT SET

AS-BUILT CERTIFICATION

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

Date

PAUL GERARD CAVANAUGH

NO.	DESCRIPTION	DATE
2	REVISE MAILBOX, PAD & SIDEWALK	6/7/22
1	Changes to water, sewer, storm drain, Swm, lot lines 30-36 Cooks lane curb & gonnie	3/1/22

REVISIONS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/3/22

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2.23.22

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — DATE 02/14/2022

LOT 2 THE BLUFFS AT ELLICOTT MILLS PLAT No. 8801
ZONED: R-ED

Centerline Curve Table

Curve #	Street	Length	Radius	Delta	Chord Length	Chord Bearing
C1	Dorseys Ridge Square	22.91'	100.00'	13°07'39"	22.86'	S 46°53'25.76" W
C2	Dorseys Ridge Square	81.68'	52.00'	90°00'00"	73.54'	N 81°32'44.79" W
C3	Dorseys Ridge Square	113.02	400.00'	16°11'21"	112.65'	N 28°27'04.30" W
C4	Dorseys Ridge Square	80.20	52.00'	88°21'57"	73.54'	N 23°49'34.82" E
C5	Cooks Lane	90.58'	100.00'	51°53'53"	87.51'	S 47°56'23.42" E
C6	Cooks Lane	65.18'	100.00'	37°20'35"	64.03'	S 55°13'02.53" E
C7	Cooks Lane	81.83'	250.00'	18°45'16"	81.47'	S 27°10'07.91" E

Centerline Line Table

Curve #	Street	Length	Bearing
L1	Cooks Lane	141.45'	S 21°59'27" E
L2	Cooks Lane	86.37'	S 36°32'45" E
L3	Cooks Lane	202.36'	S 40°24'40" E
L4	Dorseys Ridge Square	64.20'	S 40°19'36" W
L5	Dorseys Ridge Square	132.54'	S 53°27'15" W
L6	Dorseys Ridge Square	35.54'	N 36°32'45" W
L7	Dorseys Ridge Square	23.09'	N 20°21'24" W
L8	Dorseys Ridge Square	400.52'	N 68°00'33" E

LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
319 / 320	PROPOSED CONTOURS		FOREST CONSERVATION EASEMENT
18"RCP	PROPOSED STORM DRAIN		EXISTING WETLANDS & WETLAND BUFFER
DW	PROPOSED DRYWELL (M-5)	FP	EXISTING FLOODPLAIN
W	PROPOSED WATER LINE	OHE	EXISTING OVER HEAD POWER LINES
S	PROPOSED SEWER LINE	S	EXISTING SEWER LINE
LOD	LIMIT OF DISTURBANCE	W	EXISTING WATER LINE
	PROPOSED PAVING		PROPOSED STREET TREE
	PROPOSED SIDEWALKS		
+362.5	SPOT ELEVATION		
	FLOW ARROW	F	NO PARKING SIGN
	NON-CREDITED OPEN SPACE	F	NO PARKING SIGN ON LIGHT POLE

REPLACEMENT SHEET — (F) - SEE LEGEND, SHEET 4.

*NOTE:
STREET PARKING TO BE MAINTAINED BY H.O.A

NOTE:
"NO PARKING" SIGNS OR PAINTED CURB WILL BE REQUIRED ALONG ALLEY 'A' & 'B' TO PREVENT PARALLEL PARKING ALONG CURBLINE.

0' 50' 100' 150'
Scale: 1" = 50'

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2023.

Signature Of Professional Engineer — DATE 1/17/22

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62 & NON-BUILDABLE BULK PARCELS B, G THRU K

'A Resubdivision Of "Wilhide Property, Lot 1, 2 & 3", Plat No. 18442
Zoned: CEF
Tax Map No.: 24 Grid No.: 18 Parcel No: 260 Lots: 1 Thru 3
Second Election District — Howard County, Maryland

COOKS LANE — ROAD PLAN AND PROFILE
DORSEYS RIDGE SQUARE — ROAD PLAN

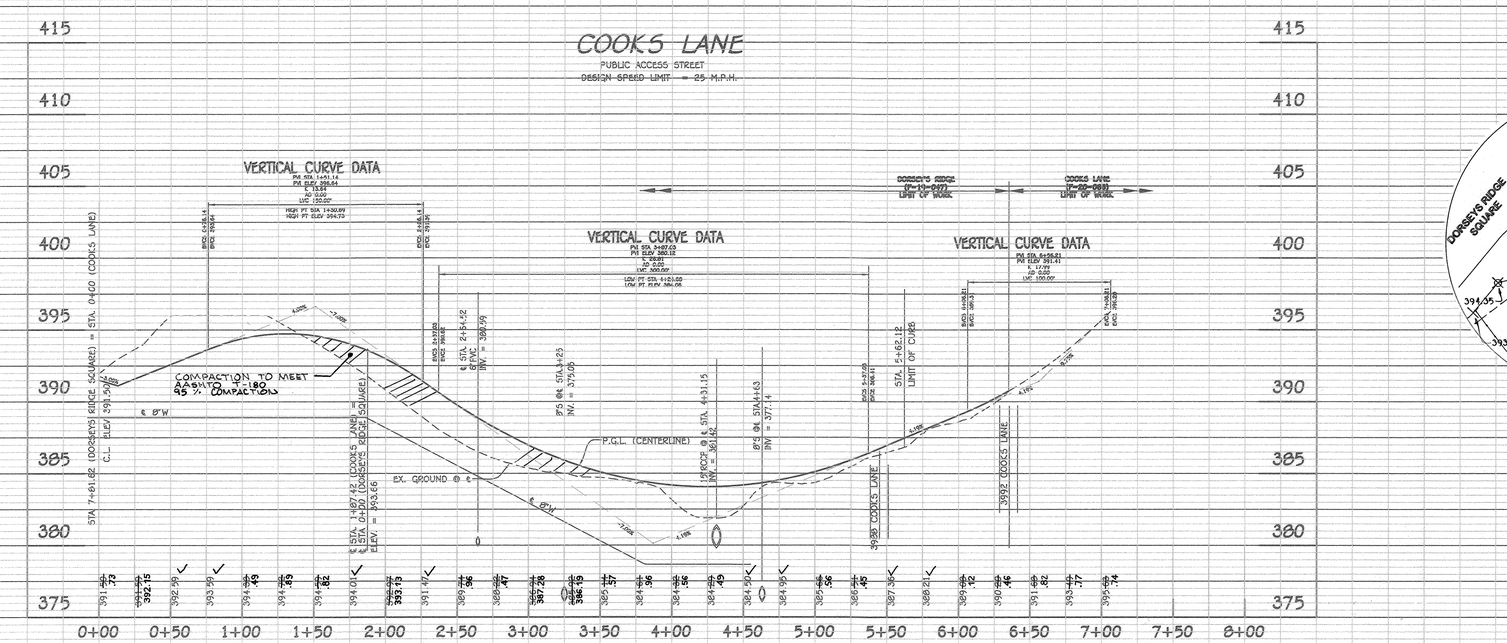
OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MACOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

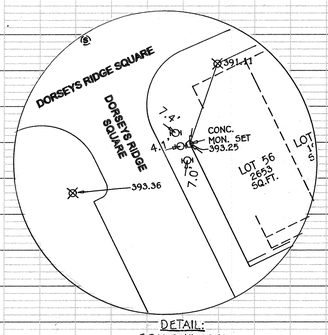
SCALE: AS SHOWN	DATE: DECEMBER, 2021	DWG. NO. 3 OF 18
DES. S.J.T.	DRN. J.C.L.	CHK. F.J.M.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

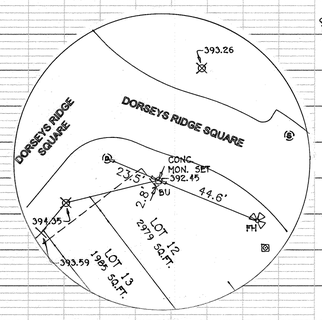
DETAIL:
SCALE: 1" = 30'



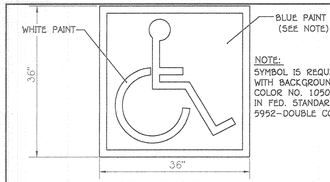
PROFILE
SCALE: HOR. : 1" = 50'
VER. : 1" = 5'

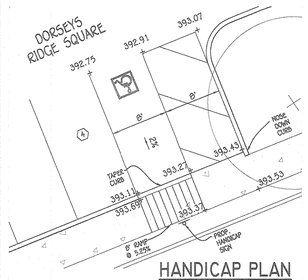


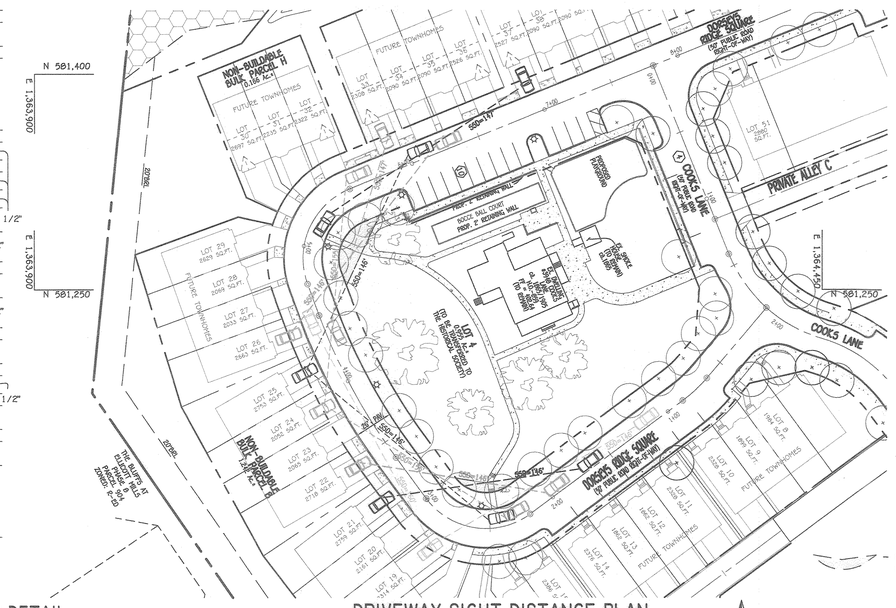
DETAIL:
SCALE: 1" = 30'



AS-BUILT F-19-047







NOTE:
SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND (WHITE ON BLUE: COLOR NO. 105090 IN FED. STANDARD 5952-DOUBLE COAT TYP.)

HANDICAP SPACE STENCIL LAYOUT

NO SCALE

HANDICAP PLAN

SCALE: 1" = 10'

NO.	DESCRIPTION	DATE
1	Changes to road profile	3/1/22

REVISIONS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 3/3/22 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION HBK — 2-23-22 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — 02/14/2022 DATE

HANDICAP PARKING SIGN DETAIL

NOT TO SCALE

GENERAL NOTES:
1. SIGNS SHALL MEET DESIGN STANDARDS OF THE FEDERAL HIGHWAY ADMINISTRATION AND CONFORM TO THE STATE OF MARYLAND STANDARD HIGHWAY SIGN BOOKLET DETAIL R7-8.
2. ONE SIGN IS REQUIRED PER SPACE PLACED AS SHOWN ON SITE IMPROVEMENT PLAN.
3. SIGNS SHALL BE POLE MOUNTED WITH HOT DIPPED GALVANIZED COUNTY APPROVED PERFORATED CHANNEL POSTS W/TOP OF SIGNS 9'-1" ABOVE FINISHED GRADE OR AS INDICATED ON SITE DRAWINGS.
4. SIGN SHALL BE ATTACHED TO FLANGED SIDE OF POST. POST SHALL EXTEND INTO GROUND 2'-6" MIN.
5. COLORS: LEGEND AND BORDER-GREEN
SYMBOL-WHITE ON BLUE BACKGROUND
BACKGROUND-WHITE
6. CONTRACTOR SHALL COORDINATE ARROW DIRECTION WITH LOCATION OF ADJACENT AISLE.

- - - DENOTES PUBLIC SIGHT DISTANCE EASEMENT

DRIVEWAY SIGHT DISTANCE PLAN

SCALE: 1" = 50'

"NO PARKING" SIGNS DETAIL

NOT TO SCALE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2023.

Aldo M. Vitucci — 01/21/22
Signature Of Professional Engineer — DATE

ALDO MICHAEL VITUCCI No. 20748

DORSEY'S RIDGE
PHASE-I
LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62
&NON-BUILDABLE BULK PARCELS B, G THRU K
'A Resubdivision Of "Wilhide Property, Lot 1, 2 & 3", Plat No. 18442
Zoned: CEF
Tax Map No.: 24 Grid No.: 18 Parcel No: 260 Lots: 1 Thru 3
Second Election District Howard County, Maryland

DORSEYS RIDGE SQUARE
DRIVEWAY SIGHT DISTANCE PLAN & ROAD PROFILE

OWNER/DEVELOPER
DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

SCALE: AS SHOWN	DATE: DECEMBER, 2021	DWG. NO. 4 OF 18
DES. S.J.T.	DRN. J.C.L.	CHK. F.J.M.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DORSEYS RIDGE SQUARE

PUBLIC ACCESS STREET
DESIGN SPEED LIMIT = 25 M.P.H.

PROFILE

SCALE: HOR. : 1" = 50'
VER. : 1" = 5'

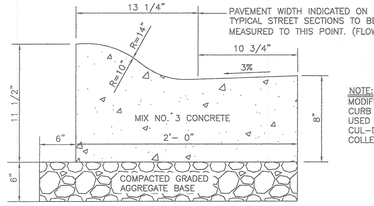
AS BUILT CERTIFICATION

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

Date

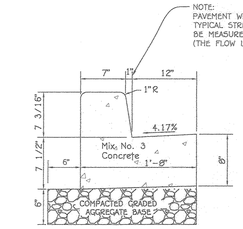
PAUL GERARD CAVANAUGH #27020

AS-BUILT



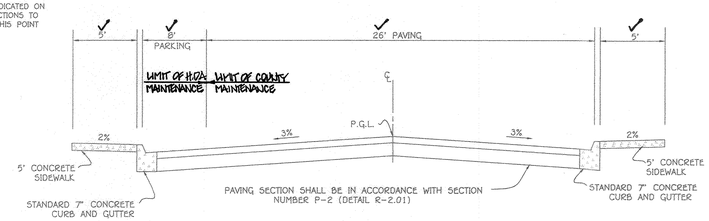
MODIFIED COMBINATION CURB AND GUTTER

NO SCALE



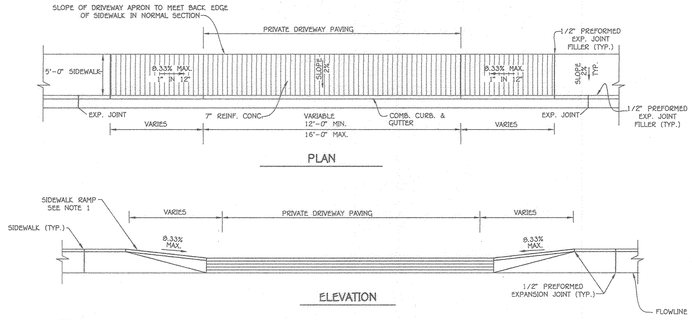
7" COMBINATION CONCRETE CURB AND GUTTER

NO SCALE (R-3.01)



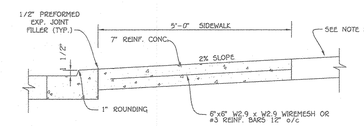
(DORSEY RIDGE SQUARE STA 0+64.70 to STA 2+15.83)
TYPICAL ROADWAY SECTION

NO SCALE



NOTES:

1. ALL RAMPS SHALL HAVE A WARNING TEXTURE EXTENDING THE FULL WIDTH OF THE RAMP.
2. TIE-IN GRADE OF PRIVATE DRIVEWAY SHALL NOT EXCEED 15%.
3. PRIVATE DRIVEWAY PAVING (IF CONC., 1/2" PREFORMED EXP. JT. IS TO BE PROVIDED AT R/W.)
4. GRASS AREA ADJACENT TO SIDEWALK MUST BE SLOPED TO MEET RAMP.



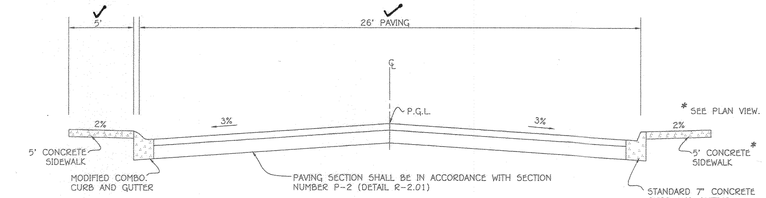
SECTION: DRIVEWAY IN NEW CURB

RESIDENTIAL DRIVEWAY ENTRANCE
7" COMBINATION CURB & GUTTER
SIDEWALK ABUTTING CURB

6 / C-11

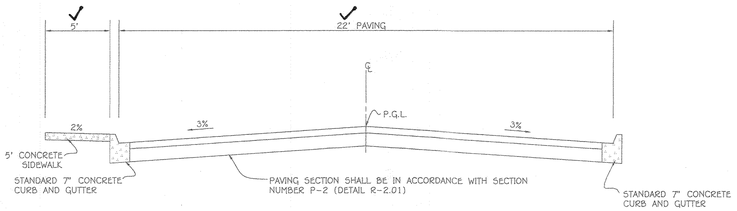
NOT TO SCALE

SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)	3 TO <5	5 TO <7	≥7	3 TO <5	5 TO <7	≥7
		PAVEMENT MATERIAL (INCHES)	MIN HMA WITH GAB			HMA WITH CONSTANT GAB		
P-2	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY	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
	LOCAL ROADS: ACCESS PLACE, ACCESS STREET	HMA SUPERPAVE INTERMEDIATE SURFACE 9.5 MM. PG 64-22; LEVEL 1 (ESAL)	1.0	1.0	1.0	1.0	1.0	1.0
	CUL-DE-SACS: RESIDENTIAL	HMA SUPERPAVE BASE 19.0 MM. PG 64-22, LEVEL 1 (ESAL)	2.0	2.0	2.0	3.5	2.0	2.0
		GRADED AGGREGATE BASE (GAB)	8.0	4.0	3.0	4.0	4.0	4.0



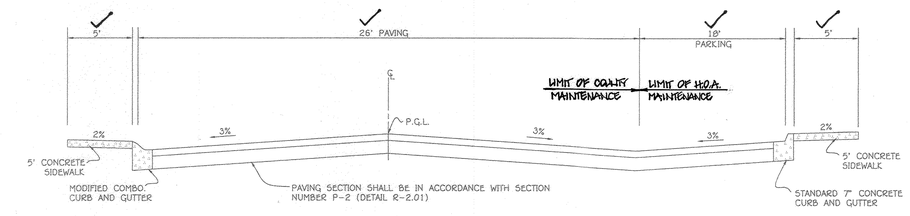
(DORSEY RIDGE SQUARE STA 0+13 TO STA 0+64.70 & STA 2+15.83 to STA 5+89.17)
TYPICAL ROADWAY SECTION

NO SCALE



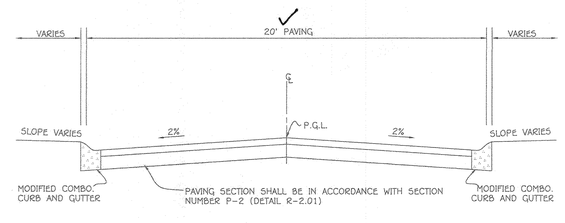
(COOKS LANE STA 3+89.19 to STA 7+57.35)
TYPICAL ROADWAY SECTION

NO SCALE



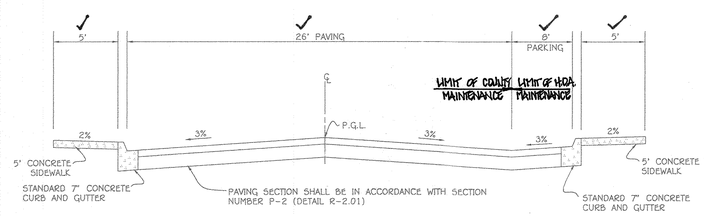
(DORSEY RIDGE SQUARE STA 5+89.17 to STA 7+34.17)
TYPICAL ROADWAY SECTION

NO SCALE



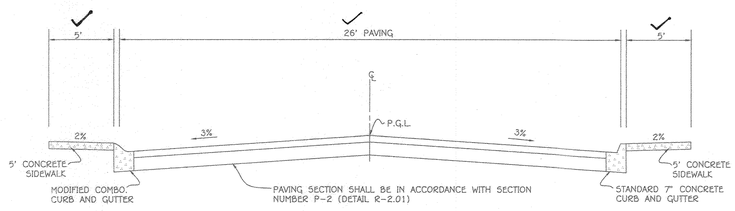
TYPICAL ALLEY SECTION

NO SCALE



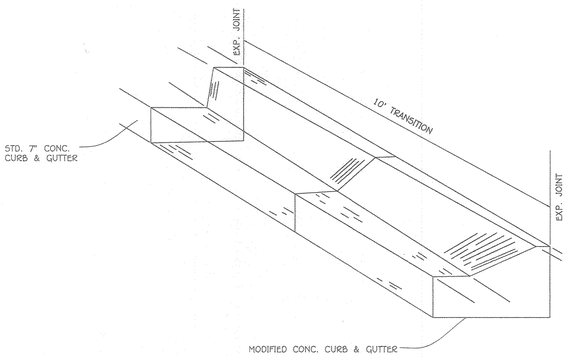
(COOKS LANE STA 0+54.67 to STA 1+42.63)
TYPICAL ROADWAY SECTION

NO SCALE



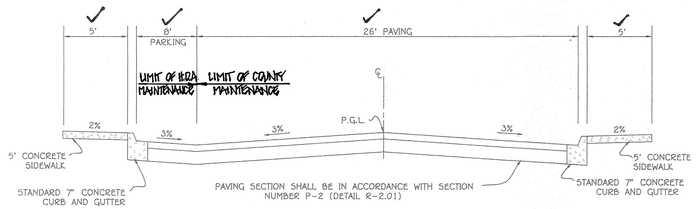
(DORSEY RIDGE SQUARE STA 7+34.17 to STA 9+53.70)
TYPICAL ROADWAY SECTION

NO SCALE



CONCRETE CURB & GUTTER TRANSITION

NO SCALE



(COOKS LANE STA 2+61.42 to STA 3+89.19)
TYPICAL ROADWAY SECTION

NO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — DATE 8/17/2020

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/23/20

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8.28.20

REVISIONS		
NO.	DESCRIPTION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

AS-BUILT CERTIFICATION

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

Date

PAUL GERARD CAVANAUGH #27020

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Signature Of Professional Engineer — DATE 5/27/2020

STATE OF MARYLAND — MICHAEL W. VITUCCI — 20748 — PROFESSIONAL ENGINEER

ROADWAY DETAILS

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 5 THRU 8, & NON-BUILDABLE BULK PARCELS A THRU F

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442

ZONED: CEF-R

TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

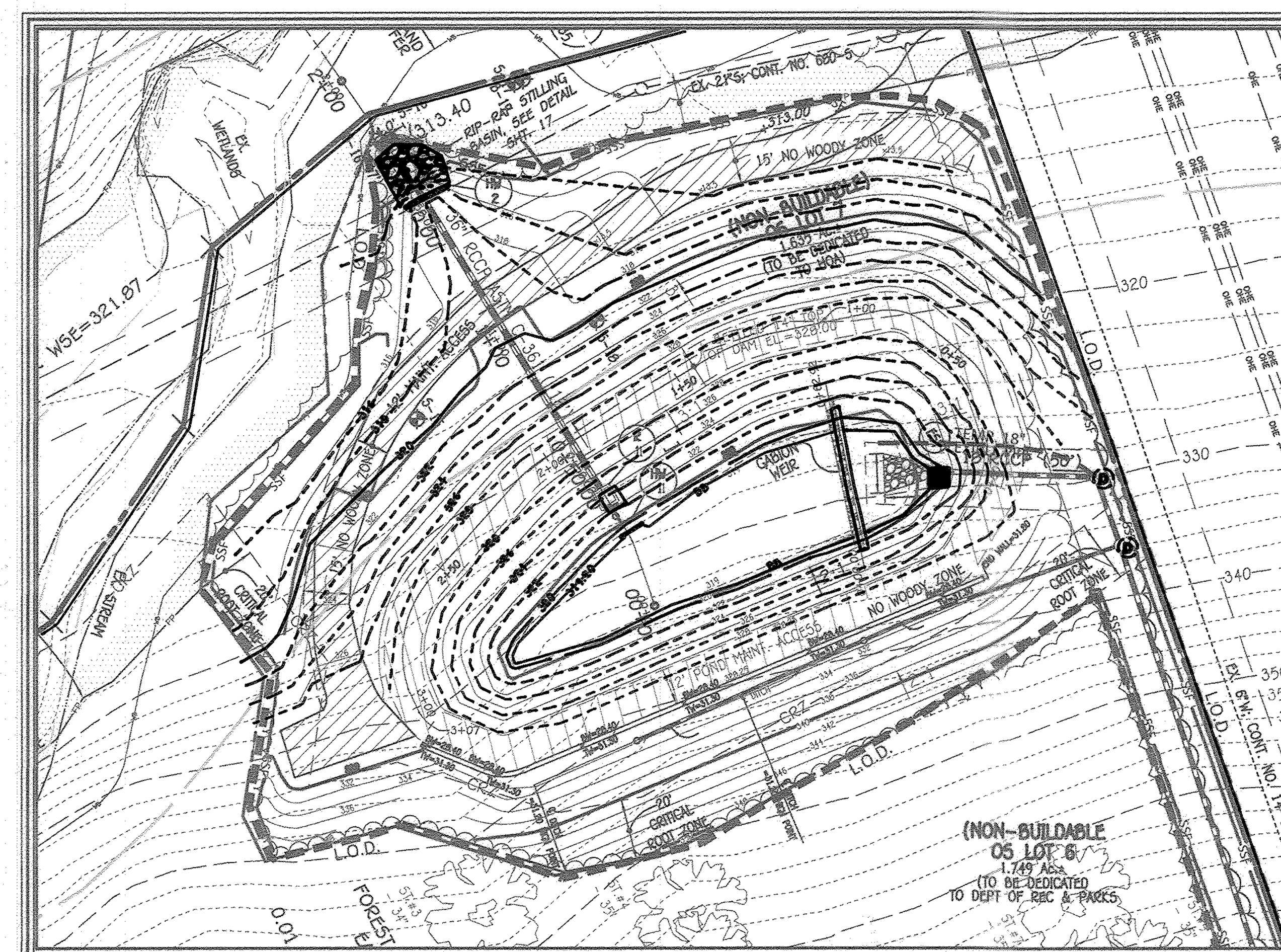
SCALE: AS SHOWN DATE: MAY, 2020

SHEET 5 OF 18

AS-BUILT F-19-047

I:\2015\15000\dwg\Finals\Final - Loop Road\15000-3001 Sheet 5 Roadway details.dwg, C-05, 1:1

I:\2015\15000\dwg\Finals\Final - Loop Road\Redlines\Red-line 15000-3001 Sheet 6-8 Grading & Sed Con Plans - Redline.dwg, 1/14/2022 3:32:29 PM, Upstairs 1500 Mylar.pc3



FINAL SWM POND PLAN @ SEDIMENT BASIN #1

Scale: 1" = 50'

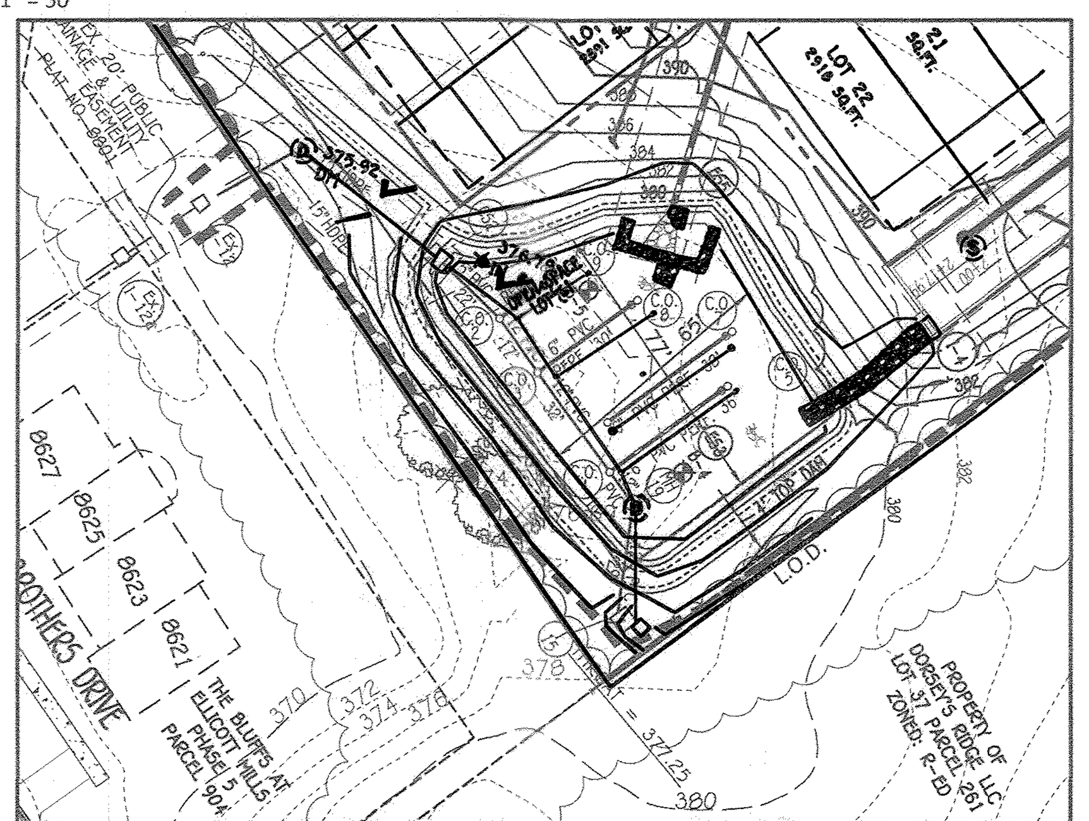
TEMPORARY SEDIMENT TRAP BASIN #1

TRAP TYPE = SEDIMENT CONTROL BASIN
EXISTING DRAINAGE AREA = 1.91 AC.
PROPOSED DRAINAGE AREA = 7.31 AC.
TOTAL STORAGE REQUIRED = 26,316 CU.FT.
TOTAL STORAGE PROVIDED = 33,614 CU.FT.
WET STORAGE REQUIRED = 13,158 CU.FT.
WET STORAGE PROVIDED = 13,158 CU.FT.
WET STORAGE ELEVATION = 321.40
DRY STORAGE REQUIRED = 13,158 CU.FT.
DRY STORAGE PROVIDED = 28,665 CU.FT. (TSWM) @ 325.11
EXISTING GROUND ELEV AT OUTLET = 317.00
BOTTOM OF BASIN ELEV = 319.00
BOTTOM OF BASIN DIMENSIONS = 30 FT x 145 FT
BARREL SIZE = 36"
CREST OF DRAW DOWN = 325.11
WEIR CREST =(BRICK UP WEIR FOR TSWM) @ 325.25
CLEANOUT ELEV = 320.38
TOP OF EMBANKMENT = 328.00
SIDE SLOPES = 3:1 EMBANKMENT
WIDTH = 14 FT (SETTLED)
EMBANKMENT HEIGHT = 9.0 FT
OUTLET PROTECTION APRON LENGTH = 16.5 FT OUTLET
PROTECTION DEPTH = 19 INCHES
PRE (EXISTING) Q1 = 0.45 C.F.S.
POST (PROPOSED) Q1 = 0.80 C.F.S.

IMMEDIATELY STABILIZE THE OUTSIDE OF SSF & LOD FOR CONSTRUCTION OF PLUNGE POOL, SEE DETAIL D-5.53

SEDIMENT CONTROL LEGEND

- SF — SILT FENCE
- SSF — SUPER-SILT FENCE
- S.C.E. — STABILIZED CONSTRUCTION ENTRANCE
- L.O.D. — LIMIT OF DISTURBANCE
- I.P. (A) — STANDARD INLET PROTECTION (TYPE 'A')
- SEDIMENT BAFFLES
- EARTH DIKE
- LoC — SOIL TYPE AND NAME
- SOIL STABILIZATION MATTING
- SLOPES 15% - 24.9%
- SLOPES 25% & GREATER
- RPS — REMOVABLE PUMPING STA.
- FB — FILTER BAG



FINAL SWM POND PLAN @ TRAP #2

Scale: 1" = 50'

OWNER/DEVELOPER CERTIFICATION

"I/We hereby certify that any clearing, grading construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible person 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 shall engage a Maryland registered professional engineer to supervise pond construction, and provide the Howard Soil Conservation District with an "As-Built" plan of the pond within 30 days of completion. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

[signature] Owners/Developer's Signature — 1/17/2022 Date

DAVID WOESSNER
Printed Name & Title

DESIGN CERTIFICATION

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulation, 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. I have notified the [stamp] that he/she must engage a registered professional engineer [stamp] construction and provide the Howard Soil Conse[stamp] "As-built" plan of the pond within 30 days of com[stamp]

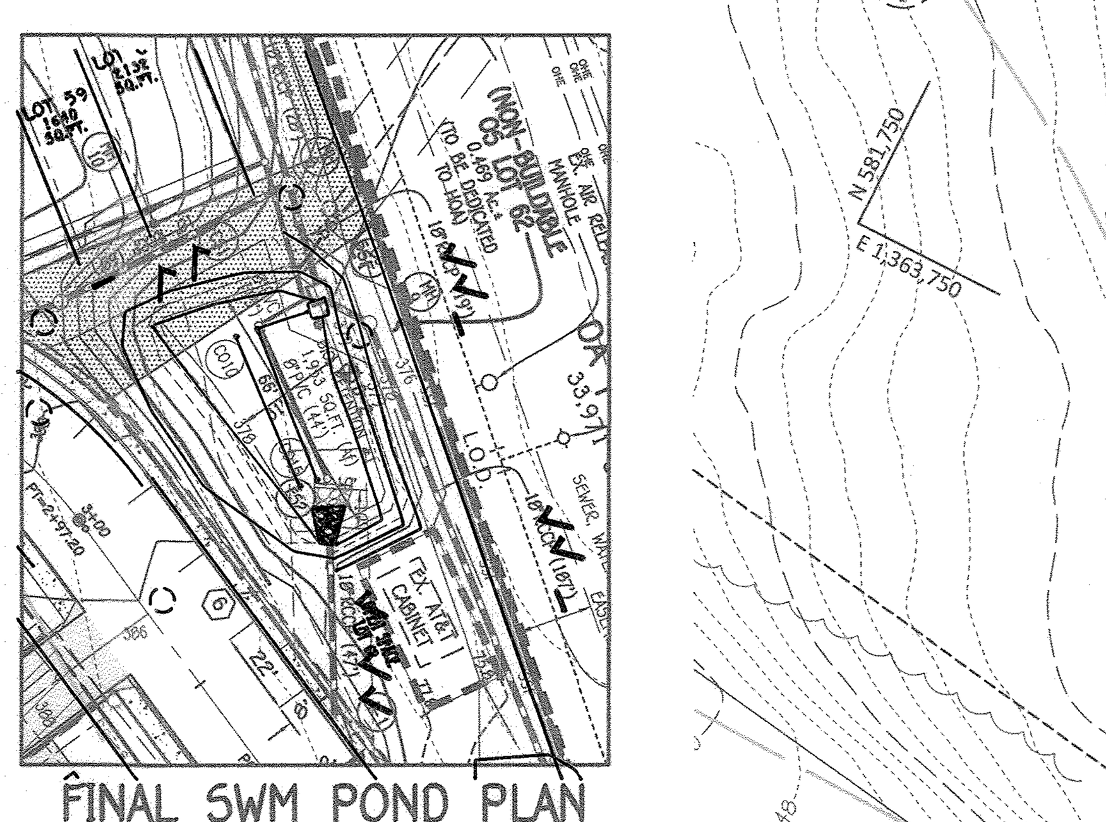
STATE OF MARYLAND ALDO MICHAEL VITUCCI No. 20748 PROFESSIONAL ENGINEER

[signature] Designer's Signature — 1/17/22 Date

ALDO [signature] Printed Name — 20748 MD Registration No.
P.E., R.L.S., or R.L.A. (circle one)

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

[signature] Howard Soil Conservation District — 02/01/22 Date



FINAL SWM POND PLAN @ TRAP #1

Scale: 1" = 50'

SOILS LEGEND

SOIL	NAME	CLASS	Kw
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes	C	0.37*
GmC	Glenville silt loam, 8 to 15 percent slopes	C	0.37*
LeB	Legore silt loam, 3 to 8 percent slopes, stony	C	0.28
LeC	Legore silt loam, 8 to 15 percent slopes, stony	C	0.28
LoB	Legore-Montalto-Urban land complex, 0 to 8 percent slopes	B	0.28
LoC	Legore-Montalto-Urban land complex, 8 to 15 percent slopes	B	0.28
LrD	Legore-Relay gravelly loams, 15 to 25 percent slopes, very stony	B/C	0.28
LrF	Legore-Relay gravelly loams, 25 to 65 percent slopes, very stony	B/C	0.28
MaC	Manor loam, 8 to 15 percent slopes	B	0.24
UaF	Udorthents, Highway, 0 to 65 percent slopes	X	X
WcB	Watchung silt loam, 3 to 8 percent slopes, stony	D	0.28

* - DENOTES HIGHLY ERODIBLE SLOPES

Approved: Department Of Planning And Zoning

[signature] Chief, Division Of Land Development — 3/3/22 Date

[signature] Chief, Development Engineering Division — 2-23-22 Date

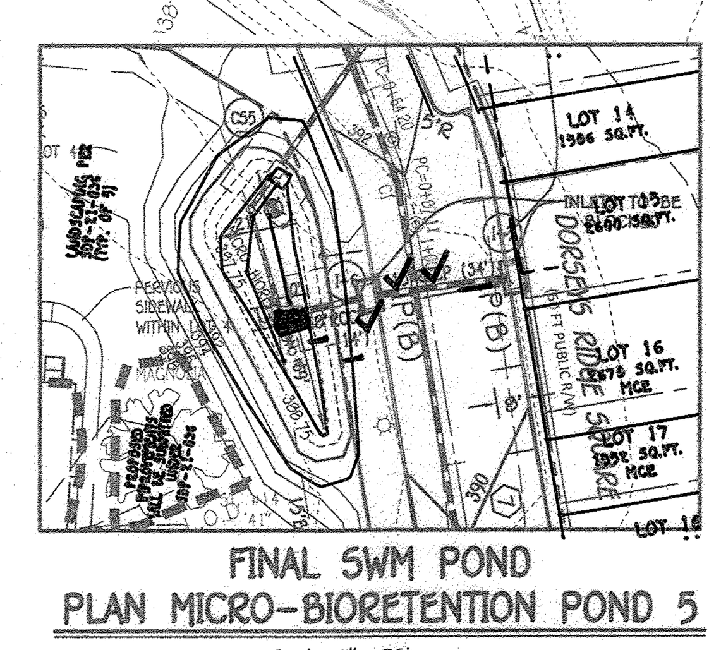
Approved: Howard County Department Of Public Works

[signature] Chief, Bureau Of Highways MK — 02/14/2022 Date

REVISIONS

NO.	DESCRIPTION	DATE
2	REVISE MAILBOX, PAD & SIDEWALK	6/7/22
1	Changes to water, sewer, stormdrain, tree protection fence on Lot 4, sed trap 1, Cooks Lane curb	3/1/22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855



FINAL SWM POND PLAN MICRO-BIORETENTION POND 5

Scale: 1" = 50'

AS-BUILT CERTIFICATION

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

______________________ ______________ Date

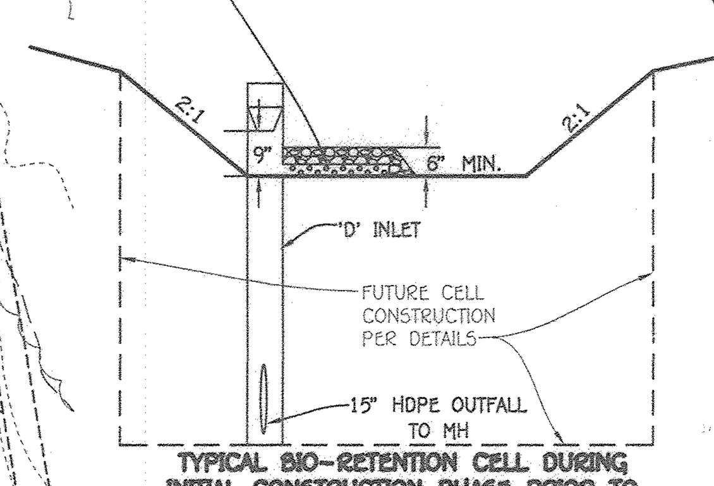
PAUL GERARD CAVANAUGH #27020

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

*TEMPORARY PIPE OUTLET SEDIMENT TRAP #1

TRAP TYPE = ST-I
PROPOSED DRAINAGE AREA = 0.97 AC.
EXISTING DRAINAGE AREA = 2.34 AC.
TOTAL STORAGE REQUIRED = 8,424 CU.FT.
TOTAL STORAGE PROVIDED = 12,029 CU.FT.
WET STORAGE REQUIRED = 4,212 CU.FT.
WET STORAGE PROVIDED = 4,212 CU.FT.
WET STORAGE ELEVATION = 375.50
DRY STORAGE REQUIRED = N/A - STORE 1-YEAR TSWM
DRY STORAGE PROVIDED = N/A
1-YEAR TSWM STORAGE REQ. = 5,271 CU.FT.
1-YEAR TSWM PROVIDED = 5,271 CU.FT. @ 376.45
BOTTOM OF TRAP ELEV = 374.00
BOTTOM OF TRAP DIMENSIONS = 41 FT x 67 FT
RISER CREST = 377.00
CLEANOUT ELEV = 374.70
TOP OF EMBANKMENT = 378.50
SIDE SLOPES = 2:1
EMBANKMENT WIDTH = 4 FT
RISER DIAMETER = 33"
BARREL DIAMETER = 15"
TRASH RACK DIAMETER = 48"
TRASH RACK HEIGHT = 29"
OUTLET PROTECTION APRON LENGTH =N/A OUTFALLS INTO CS-2 AND THEN TO EX. I-12 OF ADJACENT SUBDIVISION.
OUTLET PROTECTION DEPTH = N/A
INV. 6" DRAWDOWN (AT CS-2) = 374.00 WITH 4" ORIFICE
BEGIN VERT. PERF. AT 375.50 WITH 1" DIA. AT 4" O.C.



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED ESD#1 & 4
NO SCALE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2023.

[signature] Signature Of Professional Engineer — 1/17/22 DATE

STATE OF MARYLAND ALDO MICHAEL VITUCCI No. 20748 PROFESSIONAL ENGINEER

GRADING & SEDIMENT CONTROL PLAN

REPLACEMENT SHEET

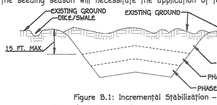
DORSEY'S RIDGE

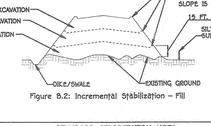
PHASE-I

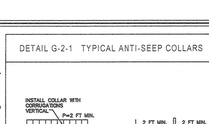
LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62, & NON-BUILDABLE BULK PARCELS B, G THRU K

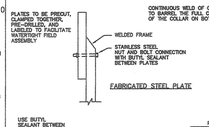
'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER, 2021

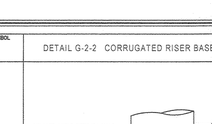
AS-BUILT F-19-047

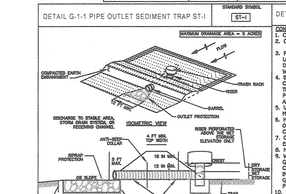












SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A. Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

2. Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

i. Soil pH between 6.0 and 7.0.
ii. Soluble salts less than 500 parts per million (ppm).
iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
iv. Soil contains 1.5 percent minimum organic matter by weight.
v. Soil contains sufficient pore space to permit adequate root penetration.

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.

e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil.

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

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.

Aldo M. Vitucci
Designer's Signature

1/17/22
Date

ALDO M. VITUCCI
Printed Name

No. 20748

20748
MD Registration No.
P.E., R.L.S., 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 Shall Engage A Maryland Registered Professional Engineer To Supervise Pond Construction, And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days of Completion. I Certify Right-of-entry For Periodic On-site Evaluation By Howard County, The Howard Soil Conservation District And/or MDE."

Owner's/Developer's Signature — 1/17/2022 Date

DAVID WOESSNER
Printed Name & Title

Approved: This Plan Is Approved For Soil Erosion And Sediment Control By The Howard Soil Conservation District.

Alexander Butchi
Howard Soil Conservation District — 02/01/22 Date

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development — 3/3/22 Date

Chief, Development Engineering Division — 2.23.22 Date

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways MK — 02/14/2022 Date

REVISIONS

NO.	DESCRIPTION	DATE
1	change soc, add basin detail, add BIO 2 detail	3/1/22

TEMPORARY SEEDING NOTES (B-4-4)

Definition

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

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b Fertilizer Rate Seed Mixture (from Table B.1):				Lime Rate (10-20-20)	
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
BARLEY	96	3/1 – 5/15, 8/15 – 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72	3/1 – 5/15, 8/15 – 10/15	1"		
RYE	112	3/1 – 5/15, 8/15 – 10/15	1"		
FOXTAIL MILLET	30	6/1 – 7/31	0.50"		

PERMANENT SEEDING NOTES (B-4-5)

A. Seed Mixtures

1. General Use

a. Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.

b. Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.

c. For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. d. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary .

2. Turfgrass Mixtures

a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.

b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.

i. Kentucky Bluegrass: Full Sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky bluegrass cultivars with each ranging from 10 to 35 percent of the total mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 1/2 to 3 pounds per 1000 square feet.

Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland"

Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line

c. Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)

d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 1/2 inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.

e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

Permanent Seeding Summary

Hardiness Zone (from Figure B.3): 6b Fertilizer Rate (10-20-20) Lime Rate Seed Mixture (from Table B.3): 8								
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P_2O_5	K_2O	
8	TALL FESCUE	100	Mar. 1-May 15 Aug. 1-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
8	MILLET FOXTAIL	50 50	May 15-June 15	1/4-1/2 in.				
8	SOD	100	Mar. 15-May 31 May 16-Sept.14 Sept.15-Nov.15	1/4-1/2 in.				
8	SWITCH GRASS BUSH CLOVER (LEGUME)	10 2	June 1-July 31	4-7 in. Max.	----	----	----	----

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

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding
  1. Specifications
    a. All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
    b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
    c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keetp inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
    d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
  2. Application
    a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil contact.
    b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
    c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P_2O_5 (phosphorus), 200 pounds per acre; K_2O (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
  1. Mulch Materials (in order of preference)
    a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
    b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
  2. Application
    a. Apply mulch to all seeded areas immediately after seeding.
    b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
    c. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
  3. Anchoring
    a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000 feet long.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization – Cut Slopes
1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
2. Construction sequence example (Refer to Figure B.1):
a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

Figure B.1: Incremental Stabilization – Cut

B. Incremental Stabilization – Fill Slopes
1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
4. Construction sequence example (Refer to Figure B.2):
a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
c. Place Phase 1 fill, prepare seedbed, and stabilize.
d. Place Phase 2 fill, prepare seedbed, and stabilize.
e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

Figure B.2: Incremental Stabilization – Fill

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA (B-4-8)

Definition

The mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper tha 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

AS-BUILT CERTIFICATION

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

Date
PAUL GERARD CAVANAUGH #27020

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 48 hour notice to CID must be given at the following stages: a. Prior to the start of earth disturbance,

b. Upon completion of the installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading,

c. Prior to the start of another phase of construction or opening of another grading unit, d. Prior to the removal or modification of sediment control practices.

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made. Other related state and federal permits shall be referenced, to ensure coordination and to avoid conflicts with this plan.

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

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed areas on the project site except for those areas under active grading.

4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec. B-4-2), permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the ground is frozen. Incremental stabilization (Sec. B-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. B-4-8) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. B-4-6).

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

6. Site Analysis:

Total Area of Site: 10.90 Acres
Area Disturbed: 9.48 Acres
Area to be roofed or paved: 1.50 Acres
Area to be vegetatively stabilized: 7.98 Acres
Total Cut: 7,500 Cu. Yds.
Total Fill: 7,500 Cu. Yds.
Offsite waste/borrow area location: ON-SITE

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

8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall be inspected by the contractor weekly; and the next day after each rain event. A written report by the contractor, made available upon request, is part of every inspection and should include:

- Inspection date
- Inspection type (routine, pre-storm event, during rain event)
- Name and title of inspector
- Weather information (current conditions as well as time and amount of last recorded precipitation)
- Brief description of project's status (e.g., percent complete) and/or current activities
- Evidence of sediment discharges
- Identification of plan deficiencies
- Identification of sediment controls that require maintenance
- Identification of missing or improperly installed sediment controls
- Compliance status regarding the sequence of construction and stabilization requirements
- Photographs
- Monitoring/sampling
- Maintenance and/or corrective action performed
- Other inspection items as required by the General Permit for Stormwater Associated with Construction Activities (NPDES, MDE).

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

10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the HSCD per the list of HSCD-approved field changes.

11. Disturbance shall not occur outside the L.O.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the HSCD. Unless otherwise specified and approved by the HSCD, no more than 30 acres cumulatively may be disturbed at a given time.

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

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

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

15. Stream channels must not be disturbed during the following restricted time periods (inclusive):

- Use I and IP March 1 – June 15
- Use II June 16 – Sept. 30
- Use III and IIIP October 1 – April 30
- Use IV March 1 – May 31

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

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT AND HOLD PRECONSTRUCTION MEETING WITH COUNTY INSPECTOR. (2 WEEKS) THE NPDES PERMIT NUMBER IS: MDRCN0560
2. NOTIFY ?MISS UTILITY?AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY DEPT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1855 AT LEAST 48 HOURS BEFORE STARTING WORK.
3. DEMOLISH EXISTING STRUCTURES (AS SHOWN ON DEMOLITION PLAN) INCLUDING EXISTING STORE/NURSERY, SMOKE GARAGE, SHEDS, SWIMMING POOL & DWELLING (#3952 COOKS LANE). (1 MONTH)
4. INSTALL PERIMETER SEDIMENT AND EROSION CONTROLS INCLUDING SILT FENCE AND SUPER-SILT FENCE. WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR, TREES MAY BE CUT PRIOR TO INSTALLATION OF FENCING, AS LONG AS EARTH IS NOT DISTURBED PRIOR TO INSTALLATION OF FENCING. CONTRACTOR SHALL TAKE EXTREME CAUTION WHEN DISTURBING THE 20?CRITICAL ROOT ZONE. THE CONTRACTOR SHALL NOT DISTURB ANY TREE ROOTS, IF POSSIBLE, WITHIN THE 20?CRITICAL ROOT ZONE. REMOVE DESIGNATED PAVED AREAS. REMOVE ALL DESIGNATED UTILITIES SHOWN TO BE REMOVED. (10 DAYS)

NOTE: ACTIVITY #5 AND #6 MAY BE DONE IN EITHER ORDER, OR SIMULTANEOUSLY, WITH THE CONDITION THAT ALL REMAINING SEDIMENT CONTROLS ARE INSTALLED IN EACH AREA, AND CONTRACTOR HAS OBTAINED APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR TO BEGIN INFRASTRUCTURE WORK IN EACH AREA.

5. INFRASTRUCTURE ALONG COOKS LANE, PRIVATE ALLEY A, PRIVATE ALLEY B, AND THE SOUTHEAST PORTION OF DORSEY'S RIDGE SQUARE (THE SUBSET OF ACTIVITIES BELOW IS IN REFERENCE TO THIS SPECIFIC DRAINAGE AREA)
   a. COMPLETE THE INSTALLATION OF ALL REMAINING SEDIMENT AND EROSION CONTROL MEASURES INCLUDING THE INSTALLATION OF SEDIMENT TRAP #1, CLEAN WATER DIVERSIONS, EARTH DIKES, SILT FENCE, AND SUPER SILT FENCE, WITHIN THE ABOVE REFERENCED AREA.
   b. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PROCEED TO THE NEXT STEP
   c. PROCEED WITH GRADING OPERATIONS AND THE INSTALLATION OF UTILITIES INCLUDING SEWER, WATER, AND STORM DRAIN
   d. FINE GRADE AND INSTALL STONE, CURB AND GUTTER, AND PAVING
   e. INSTALL EROSION CONTROL MATTING IN SWALES AS SHOWN ON THE PLANS, AND TEMPORARY SEED DISTURBED AREAS AS NECESSARY.
6. INFRASTRUCTURE ALONG NORTHWESTERN PORTION OF COOKS LANE AND REMAINING NORTHWESTERN PORTION OF DORSEY'S RIDGE SQUARE (THE SUBSET OF ACTIVITIES BELOW IS IN REFERENCE TO THIS SPECIFIC DRAINAGE AREA)
   a. COMPLETE THE INSTALLATION OF ALL REMAINING SEDIMENT AND EROSION CONTROL MEASURES INCLUDING THE INSTALLATION OF SEDIMENT BASIN #1, CLEAN WATER DIVERSIONS, EARTH DIKES, SILT FENCE, AND SUPER SILT FENCE, WITHIN THE ABOVE REFERENCED AREA.
   b. WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PROCEED TO THE NEXT STEP
   c. PROCEED WITH GRADING OPERATIONS AND THE INSTALLATION OF UTILITIES INCLUDING SEWER, WATER, AND STORM DRAIN
   d. FINE GRADE AND INSTALL STONE, CURB AND GUTTER, AND PAVING
   e. INSTALL EROSION CONTROL MATTING IN SWALES AS SHOWN ON THE PLANS, AND TEMPORARY SEED DISTURBED AREAS AS NECESSARY.
7. INSTALL PERMANENT SEEDING. (3 DAYS)
8. ONCE INDIVIDUAL LOTS ARE CONSTRUCTED AND ALL FINE GRADING & STABILIZATION IS COMPLETE (HOUSES TO BE CONSTRUCTED UNDER FUTURE SDP) AND WITH APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, CONVERT AND MUCK OUT SEDIMENT TRAPS, AND CONVERT OR INSTALL STORMWATER MANAGEMENT FACILITIES/DEVICES. (24 MONTHS)
9. UPON COMPLETION OF ALL ROUGH GRADING WITHIN THE CONTRIBUTING AREA TO THE SEDIMENT TRAP, AND APPROVAL OF SEDIMENT CONTROL INSPECTOR, CONVERT AND MUCK OUT THE SEDIMENT TRAP, THEN CONVERT TO BIO-RETENTION FACILITY THEN INSTALL REQUIRED PLANTINGS WITHIN THE FACILITY. (1 YEAR)
10. ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED. (3 DAYS)
11. PROVIDE A COPY OF THE POND AS-BUILT APPROVAL LETTER FROM THE HOWARD SCD TO THE SEDIMENT CONTROL INSPECTOR.

NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL AND ON A DAILY BASIS.

BIO #2 DETAIL
SCALE:
HORIZ: 1"=10'
VERT: 1"=2'

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2023.

Aldo M. Vitucci
Signature Of Professional Engineer

1/17/22
DATE

ALDO MICHAEL VITUCCI
No. 20748

SEDIMENT AND EROSION CONTROL NOTES & DETAILS
REPLACEMENT SHEET

DORSEY'S RIDGE

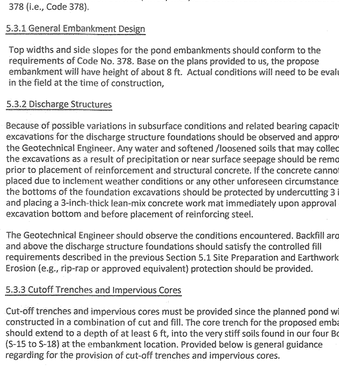
PHASE-I

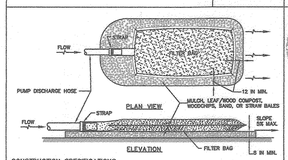
LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62, & NON-BUILDABLE BULK PARCELS B, G THRU K

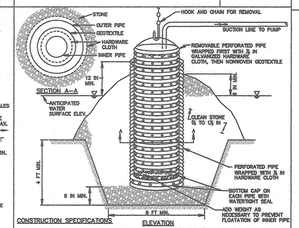
'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER, 2021
SHEET 7 OF 18

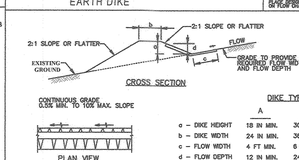
AS-BUILT
F-19-047

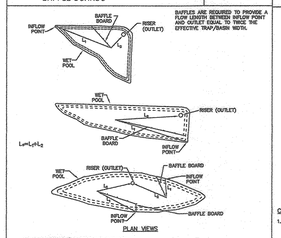
I:\2015\15000\dwg\Finals\Final - Loop Road\Redlines\Red-line 15000-3001 Sheet 6-8 Grading & Sed Con Plans - Redline.dwg, 1/10/2022 1:45:13 PM, Upstairs 1500 Mylar.pc3

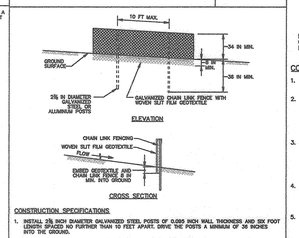


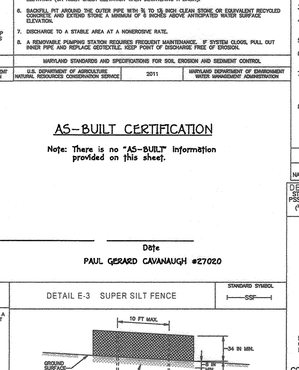












5.0 GEOTECHNICAL RECOMMENDATIONS

5.1 SITE PREPARATION

We have not been provided with a grading plan, but were asked to provide recommendations for the placement and compaction of engineered fill. The following recommendations are general comments for the satisfactory performance of the earthwork that may be involved to attain the planned grades for construction of the project.

- The site should be cleared and grubbed; all topsoil, vegetation, root-balls, and organic or other deleterious soils should be removed.
- Existing structures should be fully demolished --- to include their foundations, removing all underground utilities. Basement and utility excavations should be backfilled with well-compacted, engineered fill.
- Old fill soils beneath planned pavements should be undercut at least 2 ft.
- Following stripping and removal of unsuitable soils, grading operations may proceed. Prior to any fill placement, the site should be observed by the Geotechnical Engineer or his qualified representative for proper stripping and preparation for receiving the fill.

Proof-rolling: Once the site has been cleared and the planned subgrade exposed, the exposed subgrade soils in building and paved areas should be carefully evaluated by the Geotechnical Engineer. Proof-rolling should be performed using heavy pneumatic tired equipment (such as a loaded dump truck). Soils that are observed to rut or deflect excessively under the moving load should be under-cut and replaced with compacted fill that meets the requirements listed below. All proof-rolling and under-cutting activities should be observed and evaluated by the Geotechnical Engineer and should be performed during periods of dry weather. If proof-rolling is not practical, Dynamic Cone Penetrometer tests (DCP) can be performed to evaluate the subgrade condition.

Earthwork: Effort should be made to keep building and pavement areas free of ponding water. Subgrade strength may be reduced if soils are exposed to construction traffic and increases in moisture content, possibly resulting in the need for under-cut excavations. Note that during periods of cold weather, frozen soils cannot be used as fill or backfill (and fill should not be placed on frozen ground).

During subgrade preparation and inspection, if under-cutting is needed at isolated locations, the following recommendations are intended for the satisfactory performance of the earthwork that may be needed to provide the planned grades for the proposed construction.

- Material satisfactory for controlled fill should include clean soil or bankrun sand and gravel (GW, GM, and SM). GC and SC materials may be used, provided that the density and the liquid limit and plasticity index of the finer fraction of the material satisfy the following requirements:

  Maximum Dry Density (pcf) ≥ 105 pcf, standard Proctor
  Liquid Limit (%) ≤40
  Plasticity Index ≤15.

Some of the soils removed during the excavation processes previously discussed may be suitable for reuse.

- Highly plastic soils (MH and CH) should not be used in engineered fill. The fill materials should be free from topsoil, organics and rock fragments having a major dimension greater than 3 inches.
- The moisture content of the fill should be within plus or minus two (±2) percentage points of the optimum moisture content.
- Fill placement should be in maximum 8-inch thick, loose, horizontal lifts, compacted uniformly with suitable equipment.
- Rock fragments in the fill should be limited to maximum size of 3-inches. Larger particles should be well-distributed within the fill.
- To be considered well-compacted, Engineered Fill on the site should be compacted to at least ninety-five percent (95 percent) of the standard Proctor maximum dry density (MDD). Depending on project specifics, additional compactive effort may be required at specific locations. For example, structural fills (under and within 10 ft of buildings) might require compaction to 98 percent of the standard Proctor MDD.
- The compaction for the roadways and other paved areas will be governed by Maryland DOT requirements, or by local municipal requirements.

Limited Space Backfilling: Limited spaces are defined as areas where backfill operations are restricted to the use of small mechanical compaction equipment. Most deficiencies in compacted backfill around subsurface structures have occurred in limited spaces, where required densities are difficult to achieve because of restricted working room and where relatively low compaction effort is provided by the compaction equipment used.

All structural backfill, including that placed in limited spaces, must be systematically compacted to the project requirements, even if crushed aggregate is placed. Oversized rock fragments should not be placed around pipes or other below-ground structures.

Proper placement and compaction of backfill around pipes, conduits and utility lines is often difficult and should be given special attention. Clearly defined project specifications for confined zone backfill compaction and sufficient field monitoring is essential in preventing problems associated with utility trench backfill settlement.

Also, backfilling in limited access areas, such as in utility trenches and around below-grade structures, such as manholes, junction boxes, and curb inlets, should have a loose-lift thickness limited to 4 to 6 inches. A sufficient amount of testing or observation should be conducted to verify that proper compaction is achieved. In extremely tight spaces, use of alternate backfill materials, such as flowable fill, should be considered.

5.2 INFILTRATION OF STORMWATER

The 2007 Maryland Stormwater Design Manual with LID Practices, adopted for use by Howard County, requires a minimum infiltration rate of 1.02 inch/hour if infiltration practices are to be used. All of the tests indicated infiltration rates greater than 1.02 inch per hour. Based on these test results, well-constructed infiltration structures will likely provide good performance. Water quality improvements will be feasible through use of sand filters and other bio-retention methods that include provisions for underdrains to collect treated water for subsequent disposal at approved locations.

5.3 STORMWATER POND

Borings S-15 to S-18 were drilled near the location of a planned stormwater pond embankment dam. Soils consisted of residual silty and clayey sands, with very stiff soils encountered at a depth of 5 ft in these four borings. Groundwater was encountered at depths of 3.75 to 6.8 ft in these four borings. Decomposed rock was encountered at a depth of 8.5 ft in Boring S-18.

The data developed during this study indicate that the subsurface soil and groundwater conditions are generally suitable for the construction of the proposed stormwater management facilities, provided the facilities are designed and constructed in accordance with the recommendations of this report and the requirements of USDA Natural Resources Conservation Service (NRCS) Maryland Conservation Practice Standard No. 378 (i.e., Code 378).

5.3.1 General Embankment Design

Top widths and side slopes for the pond embankments should conform to the requirements of Code No. 378. Base on the plans provided to us, the propose embankment will have height of about 8 ft. Actual conditions will need to be evaluated in the field at the time of construction,

5.3.2 Discharge Structures

Because of possible variations in subsurface conditions and related bearing capacity, the excavations for the discharge structure foundations should be observed and approved by the Geotechnical Engineer. Any water and softened /loosened soils that may collect in the excavations as a result of precipitation or near surface seepage should be removed prior to placement of reinforcement and structural concrete. If the concrete cannot be placed due to inclement weather conditions or any other unforeseen circumstances, then the bottoms of the foundation excavations should be protected by undercutting 3 inches and placing a 3-inch-thick lean-mix concrete work mat immediately upon approval of the excavation bottom and before placement of reinforcing steel.

The Geotechnical Engineer should observe the conditions encountered. Backfill around and above the discharge structure foundations should satisfy the controlled fill requirements described in the previous Section 5.1 Site Preparation and Earthwork. Erosion (e.g., rip-rap or approved equivalent) protection should be provided.

5.3.3 Cutoff Trenches and Impervious Cores

Cut-off trenches and impervious cores must be provided since the planned pond will be constructed in a combination of cut and fill. The core trench for the proposed embankment should extend to a depth of at least 6 ft, into the very stiff soils found in our four Borings (S-15 to S-18) at the embankment location. Provided below is general guidance regarding for the provision of cut-off trenches and impervious cores.

The cutoff trenches should extend longitudinally the entire length of the pond embankment dam and should have minimum depths of 4 ft below the bottom levels of the ponds or below the bottom levels of the concrete cradles for the principal spillway pipes. The bottom widths of the cutoff trenches must accommodate the equipment used for construction and must not be less than 4ft. Side slopes for the cutoff trenches should be 1H:1V or flatter and should extend from the bottom levels of the cutoff trenches up to the bottom levels of the ponds.

The impervious cores should extend longitudinally the entire length of the dam embankment. Vertically, the impervious cores should extend from the tops of the cutoff trenches up to the 10-year-storm water surface levels for the ponds. Side slopes for the impervious concrete cores should be 1H:1V or flatter. The cutoff trenches and impervious cores should be constructed of the materials discussed in previous Section 5.1. The materials should be compacted to at least ninety-five percent (95 percent) of the maximum dry density as established by the standard Proctor (ASTM D698) test methods at moisture contents

5.3.4 Principal Spillways

Principal spillways typically consist of single 15-inch or larger diameter reinforced concrete pipes, conforming to the ASTM C-361 specification, with watertight, gasketed joints. The entire embedded lengths of the principal spillway pipes, beginning at the discharge structures, should be installed on concrete cradles, which should have a thickness of at least 6 inches and should extend up to the spring lines of the pipes. Seepage control shall be provided using filter and drainage diaphragms, designed in accordance with criteria outlined in Code No. 378. The final design should be reviewed by Specialized Engineering to determine if the design or our recommendations need to be revised since a preliminary design of the facility has not been provided.

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.

Aldo M. Vitucci — 5/27/2020
Designer's Signature — Date

ALDO M. VITUCCI — 20748
Printed Name — MD Registration No.
P.E., R.L.S., 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 Shall Engage A Maryland Registered Professional Engineer To Supervise Pond Construction, And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days of Completion. I Certify Right-of-entry For Periodic On-site Evaluation By Howard County, The Howard Soil Conservation District And/or MDE."

5/26/2020
Owner's/Developer's Signature — Date

DAVID WOESSNER
Printed Name & Title

Approved: This Plan Is Approved For Soil Erosion And Sediment Control By The Howard Soil Conservation District.

8/17/20
Howard Soil Conservation District — Date

Approved: Department Of Planning And Zoning

9/23/20
Chief, Division Of Land Development — Date

8·28·20
Chief, Development Engineering Division — Date

Approved: Howard County Department Of Public Works

8/17/2020
Chief, Bureau Of Highways MK — Date

REVISIONS

NO.	DESCRIPTION	DATE

I:\2015\15000\dwg\Finals\Final - Loop Road\15000-3001 Sheet 6-8 Grading & Sed Con Plans.dwg, C-08, 1:1

AS-BUILT CERTIFICATION

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

Date

PAUL GERARD CAVANAUGH #27020

SUPER SILT FENCE, TREE PROTECTION FENCE
NOT TO SCALE

MD-378 STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

Material – The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement – Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction – The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Cut Off Trench – The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Embankment Core – The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi; 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to the specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe – All of the following criteria shall apply for corrugated metal pipe:

1. Materials – (Polymer Coated steel pipe) – Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials – (Aluminum Coated Steel Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials – (Aluminum Pipe) – This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling banks or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections– All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24-inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepunched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2-inch greater than the corrugation depth. Pipes 24-inches in diameter and larger shall be connected by a 24-inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12-inches on the end of each pipe. Flanged joints with 3/8-inch closed cell gaskets the full width of the flange is also acceptable.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. Bedding – The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill".

6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe – All of the following criteria shall apply for reinforced concrete pipe:

1. Materials – Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361.

2. Bedding – Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Stucture Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe – Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (Anti-seep collars, valves, etc.) shall be as shown on the drawings.

Plastic Pipe

The following criteria shall apply for plastic pipe:

1. Materials – PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" – 10" inch pipe shall meet the requirement of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirement of AASHTO M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding – The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to "Structure Backfill".

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Drainage Diaphragms – When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Aldo M. Vitucci — 5/27/2020
Signature Of Professional Engineer — DATE

ALDO MICHAEL VITUCCI
No. 20748

SEDIMENT & EROSION CONTROL NOTES & DETAILS
AND MD 378 SPECIFICATIONS

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 5 THRU 8,
& NON-BUILDABLE BULK PARCELS A THRU F

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL, 2020
SHEET 8 OF 18

THERE IS NO AS-BUILT INFORMATION ON THIS SHEET F-19-047

AS-BUILT CERTIFICATION

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

Date

PAUL GERARD CAVANAUGH #27020

LEGEND

SYMBOL	DESCRIPTION
492 490	EXISTING 2'&10' CONTOURS
319 320	PROPOSED CONTOURS
	EXISTING TREELINE
	PROPOSED TREELINE
18" RCP	PROPOSED STORM DRAIN
	PROPOSED DRYWELL (M-5)
4"W	PROPOSED WATER LINE
8"S	PROPOSED SEWER LINE
L.O.D.	LIMIT OF DISTURBANCE
	PROPOSED PAVING
	PROPOSED SIDEWALKS
+362.5	SPOT ELEVATION
	FLOW ARROW
	EXISTING POWER POLE
ST-1	SPECIMEN TREE
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
	NON-CREDITED OPEN SPACE
	FOREST CONSERVATION EASEMENT
STR	PROPOSED TREES PROPOSED SPECIMEN TREE REPLACEMENTS (STR)
WB	EXISTING WETLANDS & WETLAND BUFFER
FP	EXISTING FLOODPLAIN
	SWM POND – NO 'WOODY' ZONE

SPECIMEN TREE CHART

Key (ST-#)	Species	Size (in.dbh)	CRZ (feet radius)	Comments
*1	Red oak	38	57	
*2	Red oak	35	52.5	
3	Tulip poplar	34	51	
4	Black oak	35	52.5	fair, limb dieback noted
5	American beech	30	45	
6	Black walnut	34	51	
7	Tulip poplar	35	52.5	twin stems above breast height
*8	Tulip poplar	34	51	
9	Black oak	35	52.5	
*10	White oak	31	46.5	
*11	Tulip poplar	52	78	fair, limb dieback and heavy vine cover
12	American beech	34	51	
13	White oak	49.5	74.25	
**14	White oak	41	61.5	fair, heavily trimmed
15	White oak	36	54	
16	White oak	49	73.5	

* DENOTES: ST1, ST2, ST8, ST10, & ST11 ARE TO BE REMOVED.
** DENOTES ST14 TAKEN DOWN DUE TO HAZARD OF FALLING ON HOUSE.

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 1/21/2022
Date

NOTE: FOR GRADING/DISTURBANCE WITHIN BUFFERS REFER TO GENERAL NOTE 41 ON THE TITLE SHEET FOR APPROVAL OF WP-20-053 WITH CONDITIONS.

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK 02/14/2022
DATE

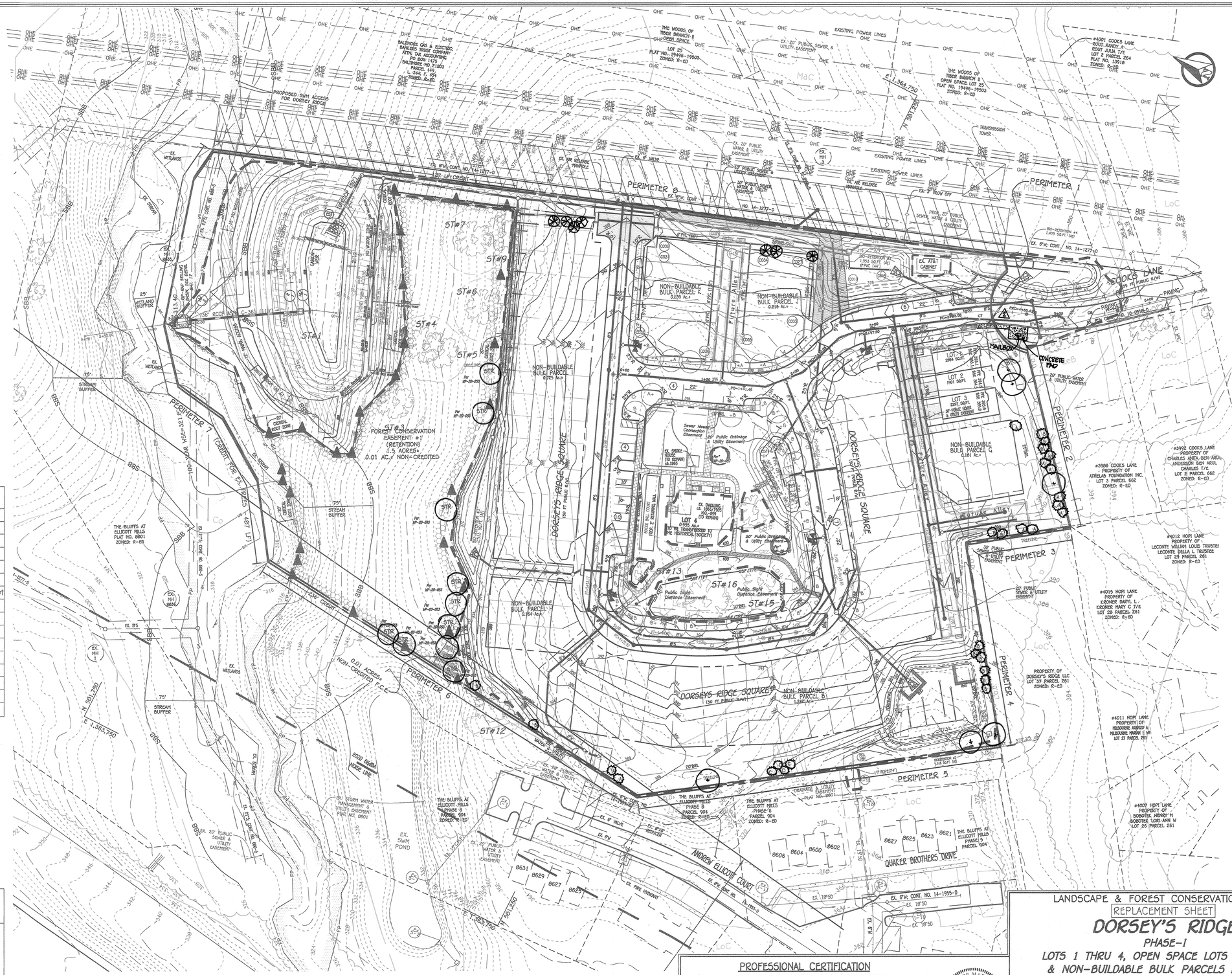
APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT 3/3/22
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION HBA 2.23.22
DATE

REVISIONS

NO.	DESCRIPTION	DATE
2	REVISE MAILBOX, PAD & SIDEWALK	6/7/22
1	change water, sewer, stormdrain, micro-bio pond 1, lot lines 30-32 Cooks Lane curb	3/1/22



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(410) 461 – 2855

0' 50' 100' 150'
Scale: 1" = 50'

OWNER/DEVELOPER
DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

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Aldo M. Vitucci 1/31/22
SIGNATURE OF LICENSED PROFESSIONAL DATE

ALDO MICHAEL VITUCCI No. 20748

LANDSCAPE & FOREST CONSERVATION PLAN
REPLACEMENT SHEET

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62, & NON-BUILDABLE BULK PARCELS B. G THRU K

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER, 2021
SHEET 9 OF 18

THERE IS NO AS-BUILT INFORMATION ON THIS SHEET

FOREST PROTECTION GENERAL NOTES

1. ALL FOREST RETENTION AREAS AND SPECIMEN TREES 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.
2. 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.
3. 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.
4. 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.
5. 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 FOR SPECIMEN TREES AND FOREST CONSERVATION AREAS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
6. 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.
7. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
8. THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS.
9. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

1. AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
   - A. TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;
   - B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
   - C. MAKE ALL NECESSARY ADJUSTMENTS;
   - D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.
   - E. SPECIMEN TREES ST-6, ST-7, ST-9, ST-13, ST-15, AND ST-16 MUST BE PROTECTED DURING CONSTRUCTION. AN REGISTERED ARBORIST MUST INSPECT THE TREES AND IMPLEMENT RECOMMENDATIONS FOR PROFESSIONAL PRUNING OF ROOTS AND FOLIAGE. ALL PRUNING MUST BE PERFORMED BY A MARYLAND LICENSED TREE EXPERT. TREE PROTECTION FENCING MUST BE INSTALLED AROUND THE ENTIRE PERIMETER OF SPECIMEN TREES ST-6, ST-7, ST-9, ST-13, ST-15 AND ST-16 TO THE GREATEST EXTENT POSSIBLE. (WHILE NOT DISTURBING PROPOSED FOREST CONSERVATION AREAS), TO PREVENT ROOT AND FOLIAGE DAMAGE DURING CONSTRUCTION.

CONSTRUCTION MONITORING

1. 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.
2. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A MARYLAND LICENSED TREE EXPERT.
3. 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 LANDSCAPE ARCHITECT.

MULTIFLORA ROSE CONTROL NOTE:

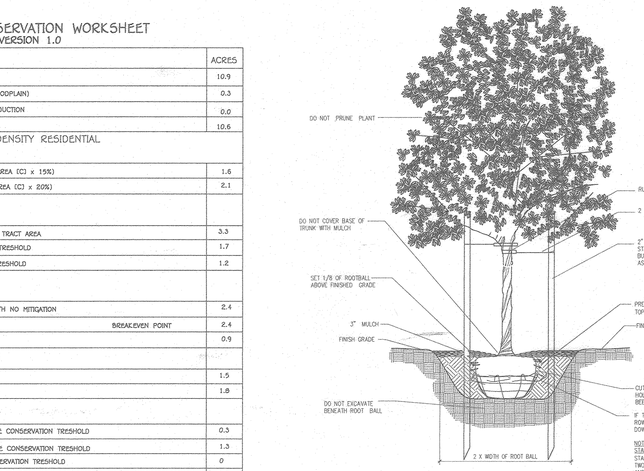
PRIOR TO PLANTING ALL MULTIFLORA ROSE WITHIN PLANTING AREAS SHALL BE REMOVED. Removal Of The Multiflora Rose May Be Performed With Mowing And Herbicide Treatments. Physical Removal Of All Top Growth Followed By A Periodic Herbicide Treatment Of Stump Sprouts Is Recommended. Native Tree And Shrub Species 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 Manufacturers 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 Roses Is Able To Be More Successfully Managed.

Table B.4. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

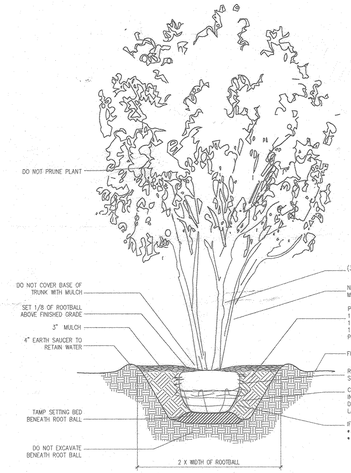
Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2' to 4' deep)	loamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40%		USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry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

FOREST CONSERVATION WORKSHEET
VERSION 1.0

NET TRACT AREA	ACRES
A. TOTAL TRACT AREA	10.9
B. DEDUCTIONS (AREA WITHIN 100 YEAR FLOODPLAIN)	0.3
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.0
D. NET TRACT AREA	10.6
LAND USE CATEGORY: HIGH DENSITY RESIDENTIAL	
E. AFFORESTATION THRESHOLD (NET TRACT AREA (C) x 15%)	1.6
F. CONSERVATION THRESHOLD (NET TRACT AREA (C) x 20%)	2.1
EXISTING FOREST COVER	
G. EXISTING FOREST COVER WITHIN THE NET TRACT AREA	3.3
H. AREA OF FOREST ABOVE AFFORESTATION TRESHOLD	1.7
I. AREA OF FOREST ABOVE CONSERVATION TRESHOLD	1.2
BREAKEVEN POINT	
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION	2.4
BREAKEVEN POINT	2.4
K. CLEARING PERMITTED WITHOUT MITIGATION	0.9
PROPOSED FOREST CLEARING	
L. TOTAL AREA OF FOREST TO BE RETAINED	1.5
M. TOTAL AREA OF FOREST TO BE CLEARED	1.8
PLANTING REQUIREMENTS	
N. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION TRESHOLD	0.3
P. REFORESTATION FOR CLEARING BELOW THE CONSERVATION TRESHOLD	1.3
Q. CREDIT FOR RETENTION ABOVE THE CONSERVATION TRESHOLD	0
R. TOTAL REFORESTATION REQUIRED	1.6
S. TOTAL AFFORESTATION REQUIRED	0
T. TOTAL PLANTING REQUIREMENT	1.6



DECIDUOUS TREE - TYPICAL PLANTING DETAIL



MULTISTEM TREE - TYPICAL PLANTING DETAIL

NOTES:

1. THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY THE ON-SITE RETENTION OF 1.48 ACRES OF FOREST. NO SURETY WILL BE REQUIRED FOR THE RETENTION. (1.47 ACRES CREDITED.) **THE REMAINING REFORESTATION REQUIREMENT OF 1.6 ACRES WILL BE FULFILLED OFF-SITE PLANTING. SEE GENERAL NOTE 26, SHEET 1.**
2. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL". FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (32 SHADE TREES , 28 EVERGREEN TREES & 10 ORNAMENTAL TREES) WHICH INCLUDES THE MITIGATION TREES REQUIRED PER THE WP-17-084, WP-20-053 & WP-20-097, HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF $15,300.00.
3. THE DEPARTMENT OF PLANNING AND ZONING APPROVED THE REMOVAL OF SIX SPECIMEN TREES; ST-10 & ST-11 UNDER WP-17-084; ST-1, ST-2 & ST-8 UNDER WP-20-053 AND ST-14 UNDER WP-20-097. APPROVAL REQUIRES MITIGATION OF 12 SHADE TREES WHICH ARE INCLUDED IN THE LANDSCAPING REQUIREMENT.
3. THIS PROJECT IS NOT SUBJECT TO CB62-2019 BECAUSE THE SUBDIVISION RECEIVED PRELIMINARY PLAN APPROVAL PRIOR TO FEBRUARY 5, 2020.

PLANTING SPECIFICATIONS

1. CLEAR & GRUB ALL PLANTING AREAS AS INDICATED ON THE DRAWINGS.
2. PROVIDE PROTECTION FOR TREES, SHRUBS, AND PERENNIALS/GROUND COVERS THAT ARE TO BE PRESERVED.
3. CONTRACTOR SHALL VERIFY THE CORRECT LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO INSTALLATION OF ANY PLANT MATERIALS.
4. ALL PLANTING SHALL BE DONE AS PER PLANTING DETAILS AND SPECIFICATIONS.
5. NO CHANGES SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT.
6. PRIOR TO CONSTRUCTION OF PLANTING BEDS, THE CONTRACTOR SHALL STAKE OUT PLANTING BED LINES IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANTING BED LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE.
7. INSTALL ALL REQUIRED PLANTING AND LAWN SOILS AS PER DETAILS AND SPECIFICATIONS, AND ALL SHRUBS, GROUND COVERS, AND PERENNIALS SHALL BE PLANTED IN PLANTING BEDS PREPARED AS REQUIRED BY THE DETAILS AND SPECIFICATIONS.
8. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE AND MAINTAIN POSITIVE DRAINAGE OF ALL LAWN AREAS, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.
9. ALL PLANT BEDS SHALL BE CONTAINED WITH A SPADED EDGE UNLESS OTHERWISE NOTED ON DRAWINGS.
10. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN ON THE DRAWINGS AND QUANTITIES SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE DRAWINGS SHALL APPLY. REPORT DISCREPANCIES TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO BIDDING.
11. ALL PLANTS SHALL CONFORM TO THE SIZES GIVEN IN THE PLANT LIST AND SHALL BE NURSERY GROWN IN ACCORDANCE WITH THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION.
12. PLANTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. PRIOR TO PLANTING, THE CONTRACTOR SHALL STAKE OUT THE LOCATIONS OF ALL PLANTS IN THE FIELD FOR REVIEW BY THE LANDSCAPE ARCHITECT. LANDSCAPE ARCHITECT SHALL MAKE ADJUSTMENTS IN THE FIELD AS NECESSARY. ALL FINAL PLANT LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT. FOR LAYOUT REVIEW, CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT A MINIMUM OF THREE DAYS IN ADVANCE. PLANTS CANNOT BE INSTALLED WITHIN PUBLIC EASEMENTS WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS.
13. ALL DISTURBED AREAS SHALL BE FINE GRADED AND SEEDED OR SODDED; SEE PLAN FOR LOCATIONS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING ALL PLANTS DURING THE WARRANTY PERIOD; REFER TO SPECIFICATIONS.

STREET TREE LOCATION REQUIREMENTS
(per Ho. Co. Landscaping Manual)

The following standards shall govern the placement of street trees in public rights-of-way:

When the distance between the curb and sidewalk is 6 feet or greater, trees shall be located within the right-of-way and shall be centered between the curb and the sidewalk.

When the distance between the curb and the sidewalk is less than 6 feet, and where trees are planted closer than 3 feet to the sidewalk, a biologic root inhibitor barrier or physical container barrier shall be required.

When the distance between the curb and the sidewalk is less than 6 feet, trees may be planted 3 feet from the sidewalk in the direction away from the road. A 10 foot wide tree maintenance easement shall be required if the right-of-way is limited.

Trees shall be planted 6 feet behind the curb when there are no sidewalks.

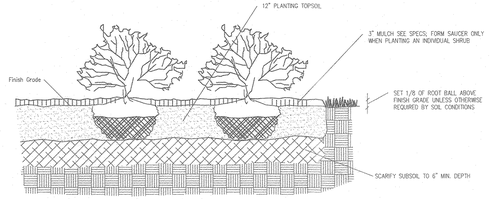
Trees shall be placed a minimum of 30 feet from all signs and intersections when planted between sidewalk and curb, and be located with consideration of underground utilities and structures. Street trees may not be planted within 5 feet of a drain inlet structure, 5 feet of an open space access strip, or 10 feet of a driveway.

COOKS LANE - 1034 LF / 40 LF = 26 TREES REQUIRED
DORSEY SQUARE - 1802 LF / 40 LF = 45 TREES REQUIRED
TOTAL STREET TREES REQUIRED = 71

PROVIDED BY			STREET TREE SCHEDULE			
SDP-21-036	SDP-21-002	F-19-047	SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
3	2	21	+ A	ACER RUBRUM 'RED SUNSET' RED MAPLE	2.5"-3" CAL.	40' APART ON PUBLIC R/W
8	1	29	+ B	ZELKOVA SERRATA 'VILLAGE GREEN' VILLAGE GREEN JAPANESE ZELKOVA	2.5"-3" CAL.	40' APART ON PUBLIC R/W
70 (@ 10.1 =7)			O	CLETHERA ALNIFOLIA SUMMER SWEET CLETHRA	2.5"-3" HGT	

TOTAL PROVIDED = 71

NOTE: 1. STREET TREE TYPES ARE ONLY A RECOMMENDATION AND MAY BE SUBSTITUTED WITH A COUNTY ACCEPTED EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL.



SHRUB AND HEDGEROW - TYPICAL PLANTING DETAIL

AS-BUILT CERTIFICATION

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

Date

PAUL GERARD CAVANAUGH #27020

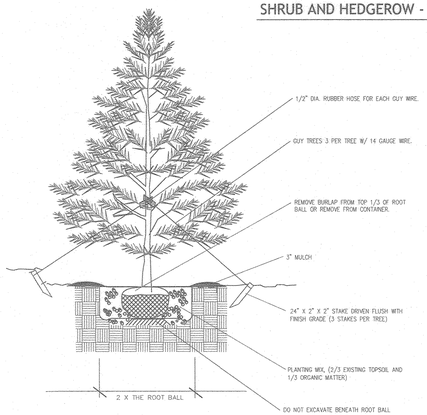
LANDSCAPING PLANT LIST

QTY.	KEY	NAME	SIZE
10*	+	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	3"-3.5" CAL. FULL CROWN, B&B
5		ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2.5"-3" CAL. FULL CROWN, B&B
5	·	QUERCUS PALUSTRIS (PIN OAK.)	2.5"-3" CAL. FULL CROWN, B&B
10	+	PRUNUS SARGENTII (SARGENT CHERRY)	2.5"-3" CAL. FULL CROWN, B&B
2*	·	QUERCUS ALBA (WHITE OAK.)	3"-3.5" CAL. FULL CROWN, B&B
10	A	ILEX 'NELLIE R. STEVENS' (NELLIE R. STEVENS HOLLY)	5' - 6' HT. B&B
14	B	THUJA STANDISHII X PLICATA (GREEN GIANT ARBORVITAE)	5' - 6' HT. B&B
4	C	ILEX OPACA (AMERICAN HOLLY)	5' - 6' HT. B&B
10		CORNUS FLORIDA (DOGWOOD)	8'-10' HT. B&B

TOTAL: 32 SHADE TREES, 28 EVERGREENS, 10 ORNAMENTAL TREES

* 4 TREE REQUIREMENT PER CONDITIONS OF WP-17-048
6 TREE REQUIREMENT PER CONDITIONS OF WP-20-053
2 TREE REQUIREMENT PER CONDITIONS OF WP-20-097

NOTE: SPECIMEN TREES TO BE REPLACED AT 3"-3.5" CALIPER, TWO (2) WITHIN LOT 4 & TEN (10) WITHIN THE FOREST CONSERVATION EASEMENT

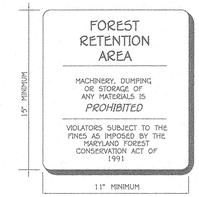


EVERGREEN TREE - TYPICAL PLANTING DETAIL

SCHEDULE A - PERIMETER LANDSCAPE EDGE

PERIMETER	1	2		3	4	5	6	7	8	TOTAL
CATEGORY	ADJACENT TO ROADWAY	ADJACENT 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	
LANDSCAPE TYPE	N/A (FRONT)	N/A (FRONT)	C (ADJ TO SFD)	A (ADJ TO OS)	A (ADJ TO OS)	A (ADJ TO OS)	A (ADJ TO OS)	A (ADJ TO OS)	A (ADJ TO BGE ROW)	
LINEAR FEET OF PERIMETER	39 L.F.	37 L.F.	195 L.F.	114 L.F.	220 L.F.	395 L.F.	472 L.F.	487 L.F.	859 L.F.	
CREDIT FOR EXISTING TREES (YES/NO, LENGTH)	N/A	N/A	N/A	N/A	N/A	N/A	YES, 236 L.F. (236 L.F. REMAINING)	YES, 487 L.F. (0 L.F. REMAINING)	YES, 127 L.F. (732 L.F. REMAINING)	
NUMBER OF PLANTS REQUIRED SHADE TREES/EVERGREENS	0	0	5/10 (195'/40' = 4.9 OR 5) (195'/20' = 9.75 OR 10)	2 (114/60' = 1.9 OR 2)	4 (220'/60' = 3.7 OR 4)	7 (395'/60' = 6.6 OR 7)	4 (236'/60' = 3.9 OR 4)	0	12 (732'/60' = 12.2 OR 12)	34 SHADE TREES 10 EVERGREENS
NUMBER OF PLANTS PROVIDED SHADE TREES SMALL/MEDIUM DECIDUOUS TREES/ EVERGREENS	0 0	0 0	5 10	0 4	1 6	5 4	2 4	0 0	7 10	20 SHADE TREES 28 EVERGREENS/ 10 ORNAMENTAL TREES

NOTE: PERIMETER NO. 8 IS SUBJECT TO BGE 'RED' ZONE PLANTING CRITERIA. MITIGATION FOR SPECIMEN TREE REMOVAL UNDER WP-17-084, WP20-053, AND WP-20-097 HAS BEEN PROVIDED ON LOT 4 AND WITHIN THE FOREST CONSERVATION EASEMENT.



NOTE: THE PROTECTIVE SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

FOREST CONSERVATION SIGN DETAIL
NOT TO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 8/17/2020

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/23/20

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8.28.20

REVISIONS		
NO.	DESCRIPTION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED REGISTERED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 3038, EXPIRATION DATE: 04/17/2022.

Signature Of Registered Landscape Architect — DATE 5/31/20

STEPHANIE JENNIFER FUTTS — STATE OF MARYLAND — No. 3038 — LANDSCAPE ARCHITECT

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 — Date 5/26/2020

LANDSCAPE & FOREST CONSERVATION NOTES & DETAILS

DORSEY'S RIDGE

PHASE-1

LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62 & NON-BUILDABLE BULK PARCELS B, G THRU K

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 10 OF 18

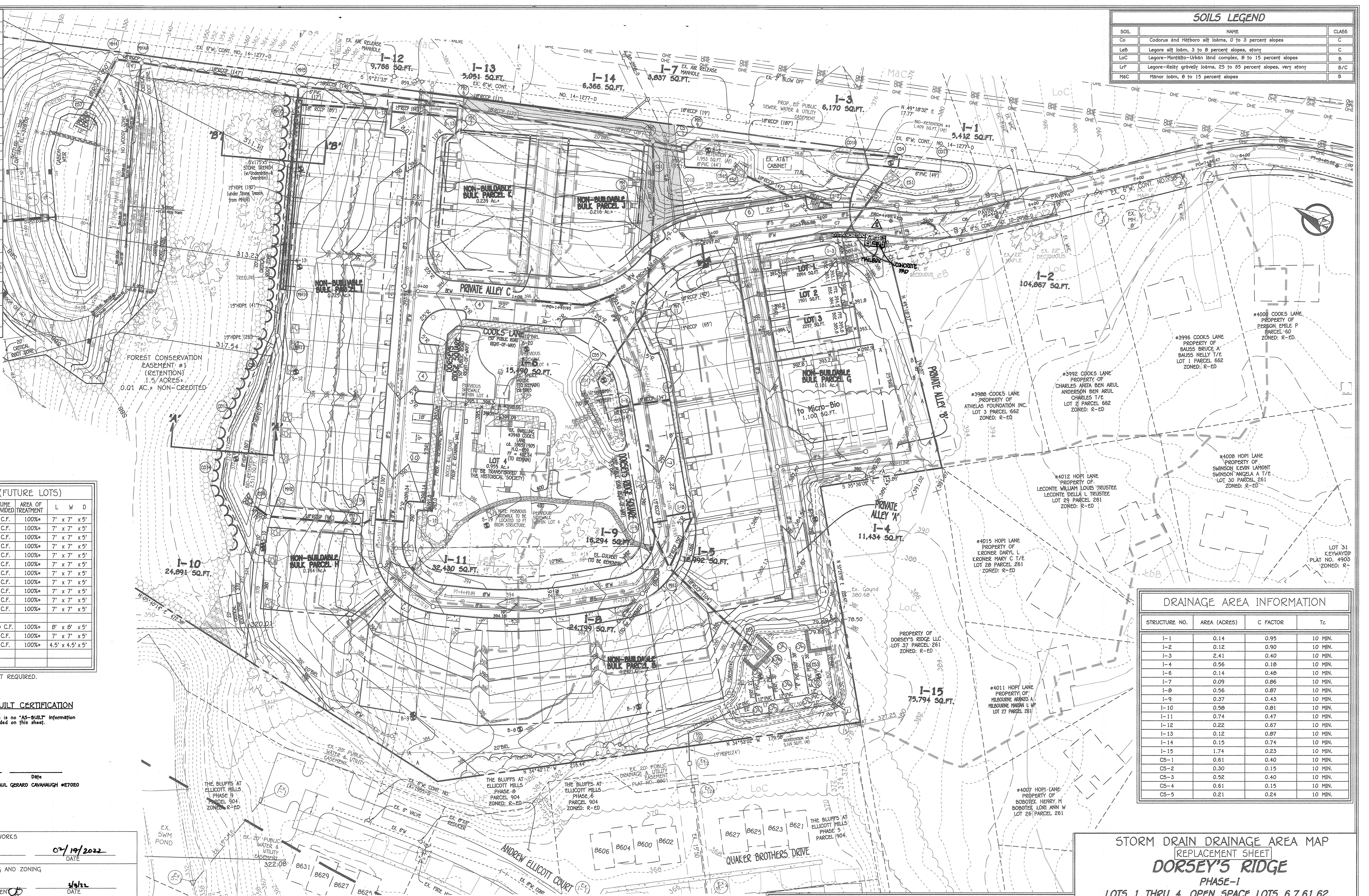
THERE IS NO AS-BUILT INFORMATION ON THIS SHEET F-19-047

LEGEND

SYMBOL	DESCRIPTION
492 / 490	EXISTING 2'&10' CONTOURS
319 / 320	PROPOSED CONTOURS
	EXISTING TREELINE
	PROPOSED TREELINE
18" RCP	PROPOSED STORM DRAIN
	PROPOSED DRYWELL (M-5)
4"W	PROPOSED WATER LINE
8"S	PROPOSED SEWER LINE
L.O.D.	LIMIT OF DISTURBANCE
	PROPOSED PAVING
	PROPOSED SIDEWALKS
+362.5	SPOT ELEVATION
	FLOW ARROW
	EXISTING POWER POLE
ST-1	SPECIMEN TREE
	EXISTING TREES
	EXISTING TREES TO BE REMOVED
	NON-CREDITED OPEN SPACE
	FOREST CONSERVATION EASEMENT
	DRAINAGE DIVIDE
	EXISTING OVER HEAD POWER LINES
	EXISTING SEWER LINE
W	EXISTING WATER LINE
G	EXISTING GAS LINE
	EXISTING WETLANDS & WETLAND BUFFER
FP	EXISTING FLOODPLAIN

SOILS LEGEND

SOIL	NAME	CLASS
Co	Codorus and Hatboro silt loams, 0 to 3 percent slopes	C
LeB	Legore silt loam, 3 to 8 percent slopes, stony	C
LoC	Legore-Montalto-Urban land complex, 8 to 15 percent slopes	B
LrF	Legore-Relay gravelly loams, 25 to 65 percent slopes, very stony	B/C
MaC	Manor loam, 8 to 15 percent slopes	B



DRY WELL CHART (FUTURE LOTS)

DRYWELL NO.	AREA OF ROOF PER DRYWELL	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT	L W D
LOT 30	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 31	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 32	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 33	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 34	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 35	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 36	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 37	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 38	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 39	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 40	600 SQ. FT.	82 C.F.	85 C.F.	100%*	7' x 7' x 5'
LOT 4(W)	719 SQ. FT.	103 C.F.	128 C.F.	100%*	8' x 8' x 5'
LOT 4(E)	616 SQ. FT.	88 C.F.	98 C.F.	100%*	7' x 7' x 5'
LOT 4(AS)	244 SQ. FT.	35 C.F.	41 C.F.	100%*	4.5' x 4.5' x 5'

* AREA OF TREATMENT EXCEEDS THAT REQUIRED.

DRAINAGE AREA INFORMATION

STRUCTURE NO.	AREA (ACRES)	C FACTOR	Tc
I-1	0.14	0.95	10 MIN.
I-2	0.12	0.90	10 MIN.
I-3	2.41	0.40	10 MIN.
I-4	0.56	0.18	10 MIN.
I-6	0.14	0.48	10 MIN.
I-7	0.09	0.86	10 MIN.
I-8	0.56	0.87	10 MIN.
I-9	0.37	0.43	10 MIN.
I-10	0.58	0.81	10 MIN.
I-11	0.74	0.47	10 MIN.
I-12	0.22	0.67	10 MIN.
I-13	0.12	0.87	10 MIN.
I-14	0.15	0.74	10 MIN.
I-15	1.74	0.23	10 MIN.
CS-1	0.61	0.40	10 MIN.
CS-2	0.30	0.15	10 MIN.
CS-3	0.52	0.40	10 MIN.
CS-4	0.61	0.15	10 MIN.
CS-5	0.21	0.24	10 MIN.

AS-BUILT CERTIFICATION

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

Date

PAUL GERARD CAVANAUGH #27020

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — DATE 02/19/2022

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/3/22

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2-23-22

REVISIONS

NO.	DESCRIPTION	DATE
2	REVISE MAILBOX, PAD & SIDEWALK	6/7/22
1	change water, sewer, storm drain, SWM, lot lines 30-46, charts	3/1/22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

Scale: 1" = 40' (0' 40' 80' 120')

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2023.

Signature Of Professional Engineer — DATE 1/17/22

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

STORM DRAIN DRAINAGE AREA MAP

REPLACEMENT SHEET

DORSEY'S RIDGE

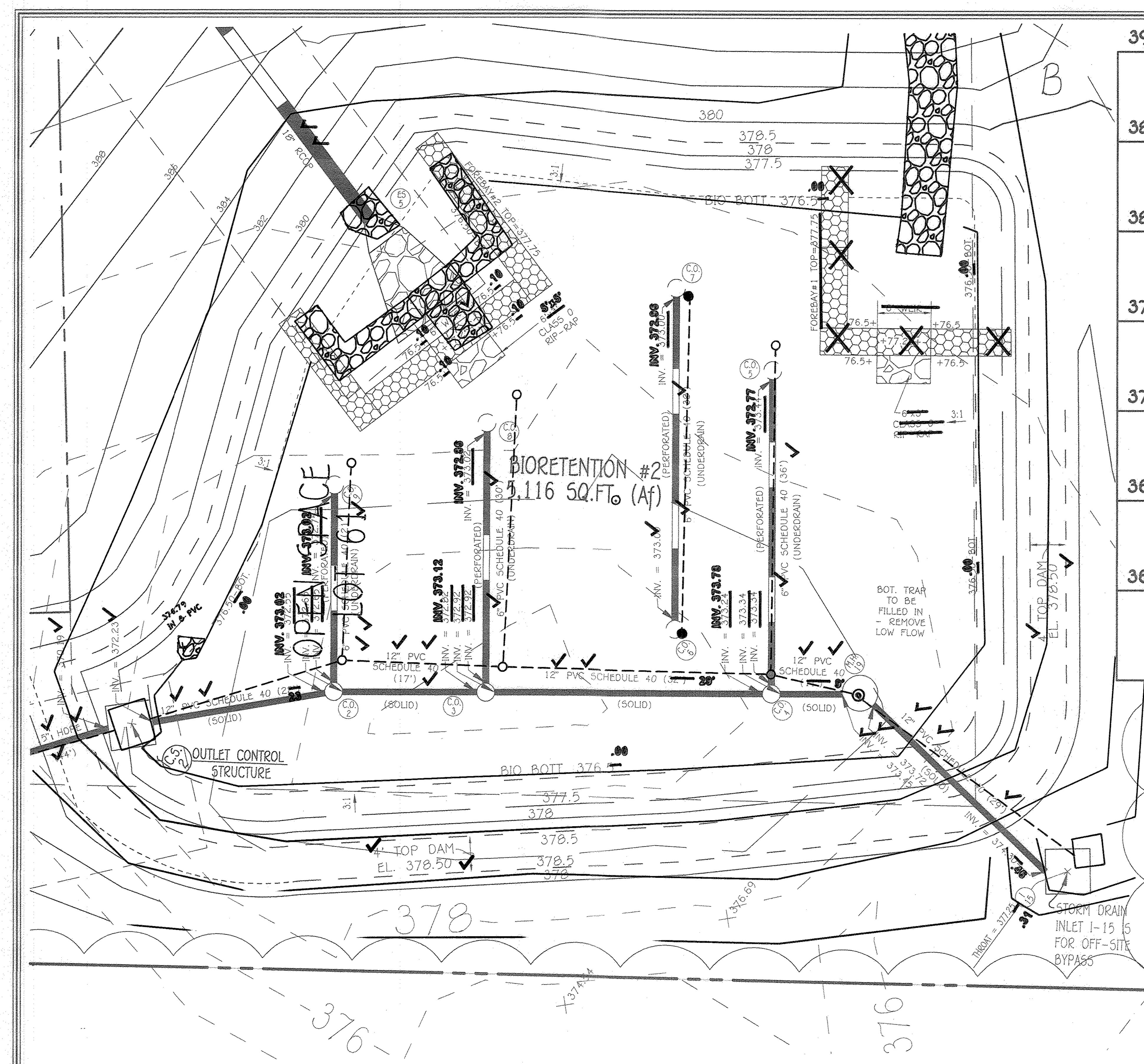
PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62, & NON-BUILDABLE BULK PARCELS B, G THRU K

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER, 2021

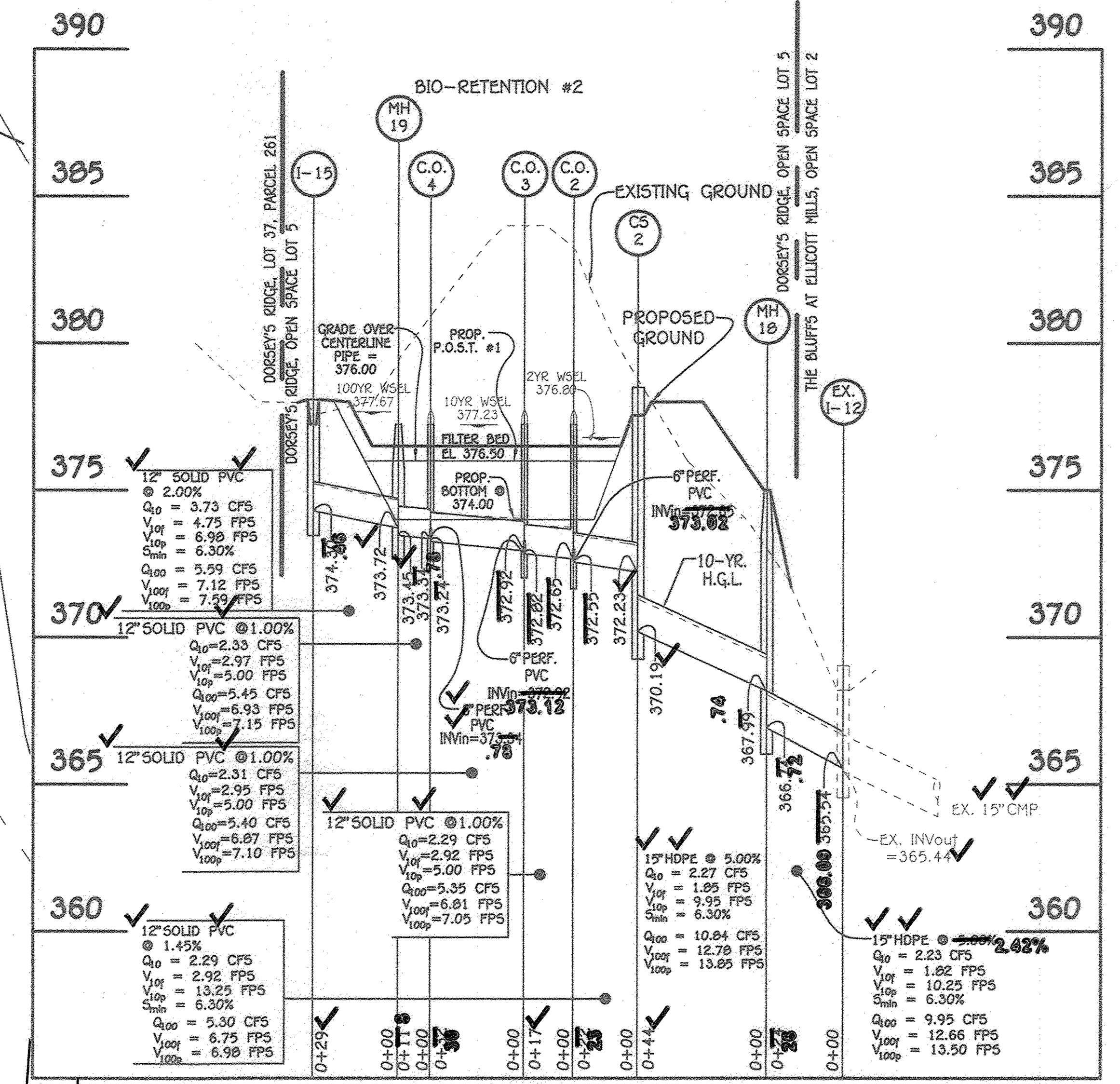
THERE IS NO AS-BUILT INFORMATION ON THIS SHEET F-19-047

I:\2015\15000\dwg\Finals\Final - Loop Road\Redlines\Red-line 15000-3001 Sheet 11-14 Storm Drain & SWM details REVISED AUGUST 2020 - Redline.dwg, 1/14/2022 3:14:30 PM, Upstairs 1500 Mylar.pc3



BIO-RETENTION No. 2 PLAN VIEW
Scale: 1" = 10'

PONDING VOLUME
DESIGN: 6,004 CU FT
AS-BUILT: 6,613 CU FT

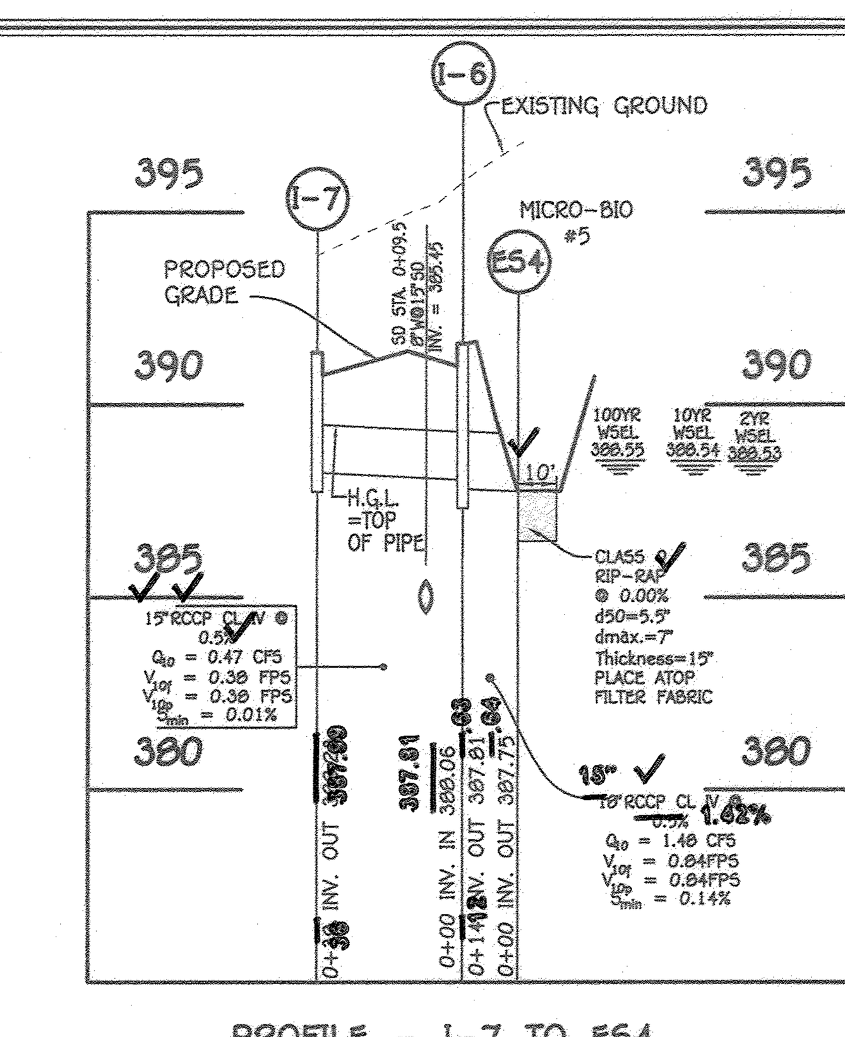


PROFILE BIO 2
SCALE HORZ. 1" = 50'
VERT. 1" = 5'

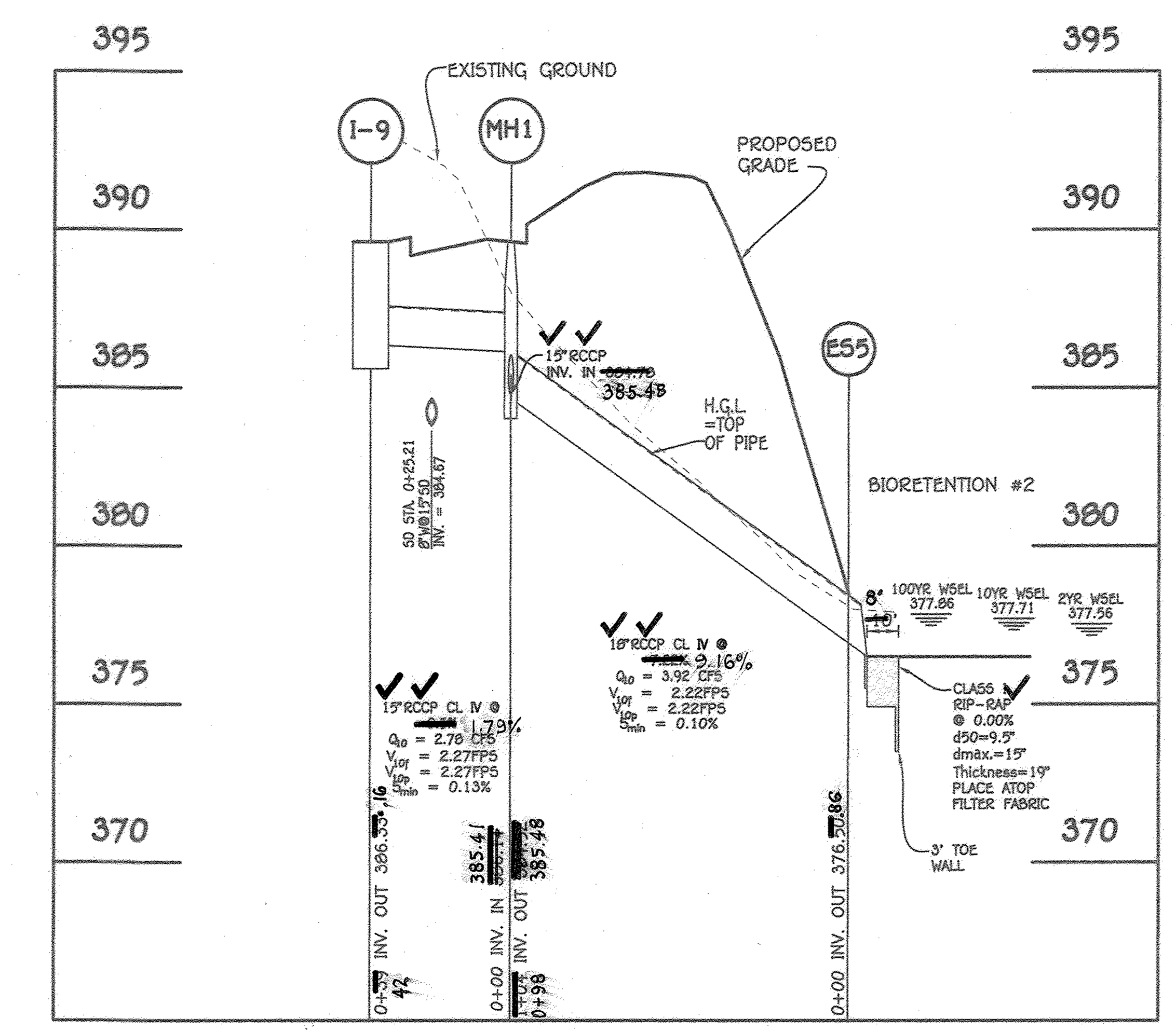
AS-BUILT CERTIFICATION

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

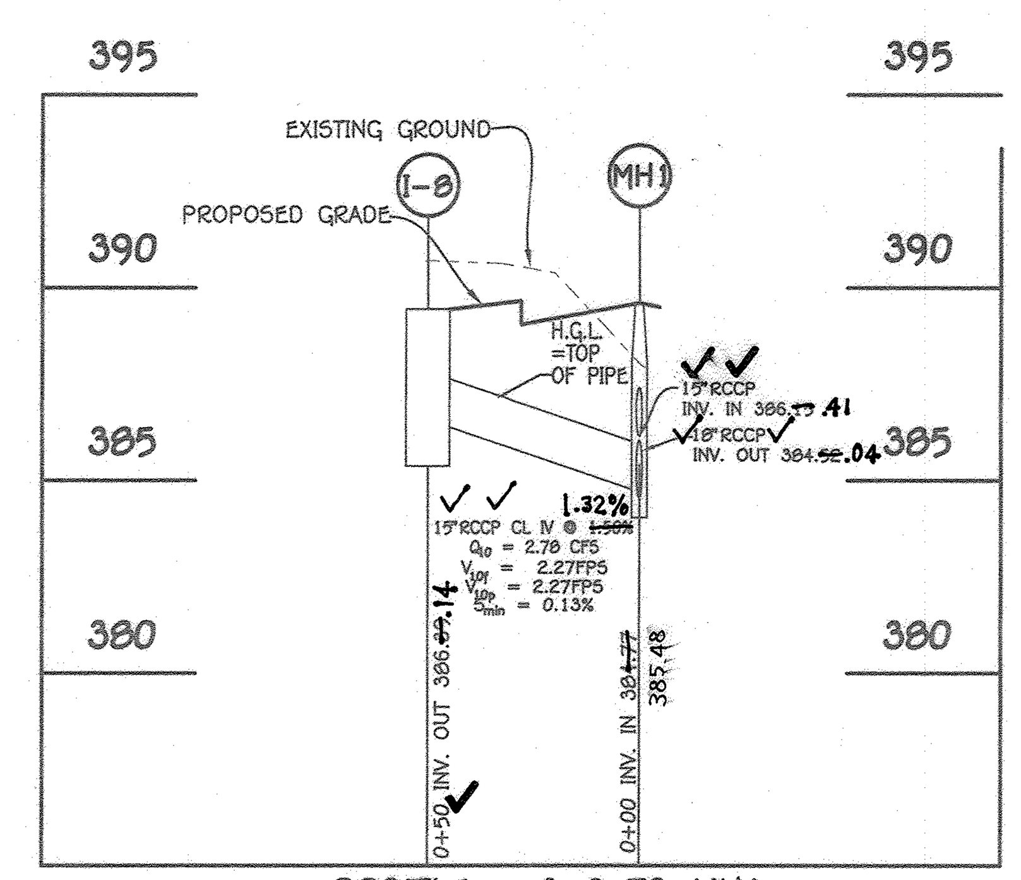
Date
PAUL GERARD CAVANAUGH #27020



PROFILE - I-7 TO E54
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PROFILE - I-9 TO E55
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PROFILE - I-8 TO MH1
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

NOTE: LOCATION OF END SECTIONS IS AT THE CENTER / END OF STORM DRAIN PIPE. LOCATION FOR MANHOLES IS THE CENTER OF THE MANHOLE. LOCATIONS FOR A-5 AND A-10 INLETS IS THE CENTER / FACE OF CURB. LOCATION OF TRENCH DRAIN IS AT THE CENTER

STRUCTURE SCHEDULE

STR #	STATION & OFFSET OR COORDINATES	TOP ELEV	TYPE	INV IN	INV OUT
ES1	N 581,060.422 E 1,364,618.861	----	CONC. END SECTION DTL. D - 5.51	-	377.00 (18"RCCP)
ES2	N 581,174.85 E 1,364,567.74	----	CONC. END SECTION DTL. D - 5.51	-	378.00 (I 1) (18"RCCP)
~~ES3~~	~~N 580,926.36 E 1,364,218.28~~	----	~~ADS FLARED END SECTION~~	-	~~376.50 (I 4) (15"HDPE)~~
ES4	N 581,187.183 E 1,364,320.791	----	CONC. END SECTION DTL. D - 5.51	-	387.~~75~~ .64 15" ~~(18"~~RCCP)
ES5	N 580,973.219 E 1,364,182.400	----	CONC. END SECTION DTL. D - 5.51	-	376.~~50~~ .86 (MH 1) (18"RCCP)
ES6	N 581,444.176 E 1,364,090.851	----	CONC. END SECTION DTL. D - 5.51	-	372.00 (MH 2) (18"RCCP)
ES7	N 581,744.077 E 1,364,339.045	----	CONC. END SECTION DTL. D - 5.51	-	319.15 ~~322.05~~ (MH 4) (18"RCCP)
MH1	STA 2+55.06 O/S 8.2' LT	389.65 .73	5' STANDARD MH DTL. G-5.13	385.~~55~~ .41 (I-9) 15"; 385.~~55~~ .48 (I-8) 15"	385.~~20~~ 48 (18"RCCP)
MH2	N 581,429.734 E 1,364,093.823	380.89	STANDARD MH DTL. G-5.12	373.~~72~~ .33 (MH-10) ~~(12"~~ 18" RCCP)	373.~~47~~ 16 (18"RCCP)
MH3	DELETED				
MH4	N 581,712.221 E 1,364,408.612	~~330.31~~ 329.85	STANDARD MH DTL. G-5.12	321.27 ~~325.76~~ (MH 4A) (18"RCCP)	~~325.71~~ 319.97 (18"RCCP)
MH4A	N 581,722.409 E 1,364,408.190	335.~~74~~ .58	STANDARD MH DTL. G-5.12	329.~~46~~ .33 (MH 5) (18"RCCP)	~~329.21~~ 321.62 (18"RCCP)
MH5	N 581,583.035 E 1,364,454.480	~~374.62~~ 375.29	STANDARD MH DTL. G-5.12	367.86 (MH 6) (18"RCCP)	363.~~71~~ .58 (18"RCCP)
MH6	N 581,443.858 E 1,364,506.29	385.77	STANDARD MH DTL. G-5.12	369.66 (MH 7) (18"RCCP)	369.41 (18"RCCP)
MH7	N 581,432.899 E 1,364,505.860	~~385.51~~ 379.54	STANDARD MH DTL. G-5.12	369.32 ~~370.02~~ (MH 8) (18"RCCP)	369.~~77~~ .24 (18"RCCP)
MH8	N 581,374.0548 E 1,364,526.5354	379.~~00~~ .54	STANDARD MH DTL. G-5.12	371.71 ~~372.25~~ (MH 10) 18"; 371.73 ~~372.25~~ (CS 1) 18"	372.00 (18"RCCP)
MH9	N 581,191.663 E 1,364,453.100	~~378.00~~ 379.62	STANDARD MH DTL. G-5.12	~~371.73 (15"HDPE)~~ MH-20 373.86 (18"RCCP)	372.~~82~~ .60 (18"HDPE)
MH10	N 581,243.4132 E 1,364,572.2009	388.08	STANDARD MH DTL. G-5.12	381.~~85~~ .58 (MH ~~14~~ 11) (18"RCCP)	381.60 .48 (12"HDPE) 10" RCCP
MH11	N 581,141.5665 E 1,364,616.0892	~~375.75~~ 392.74	SHALLOW MH DTL. G-5.12	382.77 ~~372.92~~ (~~12"~~ 15" RCCP)	~~372.82~~ 382.30 (15"RCCP)
MH12	N 581,222.4281 E 1,364,529.5458	~~378.50~~ 389.50	STANDARD MH DTL. G-5.12	~~376.12~~ 383.66 (18" RCCP)	~~375.77~~ 383.41 (18" RCCP)
MH13	~~N 581,191.6636 E 1,364,453.1007~~	~~391.8~~	~~STANDARD MH DTL. G-5.12~~	~~381.89 (18" RCCP)~~	~~381.57 (18" RCCP)~~
MH14	~~N 581,200.7603 E 1,364,425.4984~~	~~392.46~~	~~STANDARD MH DTL. G-5.12~~	~~383.00 (CS 5) (15" RCCP)~~	~~382.75 (18" RCCP)~~
MH15	N 581,574.996 E 1,364,439.526	~~376.5~~ 377.03	STANDARD MH DTL. G-5.12	371.~~00~~ .11 (18" HDPE); 373.13 ~~374.00~~ (6"PVC)	374.~~00~~ .27 (6"PVC); 371.~~00~~ .11 (18"HDPE)
MH16	N 581,510.21 E 1,364,279.11	377.~~0~~ .03	STANDARD MH DTL. G-5.12	373.66 ~~374.00~~ (6"PVC); 370.00 (8"HDPE); 366.79 ~~367.16~~ (15"HDPE)	367.06 (15"HDPE)
MH17	N 581,496.43 E 1,364,240.42	376.8	STANDARD MH DTL. G-5.12	367.70 (15"HDPE)	367.45 (15"HDPE)
MH18	N 580,990.09 E 1,364,083.16	375.~~00~~ .92	STANDARD MH DTL. G-5.12	367.~~99~~ .74 (15"HDPE)	366.~~74~~ .72 (15"HDPE)
MH19	N 580,898.57 E 1,364,170.20	377.75	STANDARD MH DTL. G-5.12	373.72 (12" PVC)	373.45 (12"PVC)
I-1	STA 4+37.72 O/S 10' RT	383.~~57~~ .64	TYPE A-10 DTL D-4.03	379.45 ~~380.13~~ (15"RCCP)	379.~~16~~ .50 (18"RCCP)
I-2	STA 4+37.72 O/S 10' LT	383.~~92~~ .71	TYPE A-10 DTL. D-4.03	-	380.~~25~~ .28 (15"RCCP)
I-3	STA 3+83.57 O/S 21.1' RT	383.97	TYPE A-10 DTL. D-4.03	-	~~378.25~~ 379.87 (15"RCCP)
I-4	N 580,947.108 E 1,364,250.788	~~380.00~~ 378.38	TYPE A-5 DTL. D-4.01	~~384.82 (12"HDPE)~~	~~378.20~~ 378.06 ~~(15"HDPE)~~ THROAT
I-5	DELETED				
I-6	STA 1+03.57 O/S 13' RT	391.~~58~~ .32	TYPE A-5 DTL. D-4.01	387.81 ~~388.06~~ (I-7) (~~18"~~ 15" RCCP)	387.~~91~~ .63 (~~18"~~ 15" RCCP)
I-7	STA 1+03.57 O/S 13' LT	391.~~75~~ .57	TYPE A-5 DTL. D-4.01	-	~~388.23~~ 387.99 (15"RCCP)
I-8	STA 2+10.16 O/S 21' LT	~~389.90~~ 388.61	TYPE A-10 DTL. D-4.03	-	386.~~06~~ .14 (15"RCCP)
I-9	STA 2+15.55 O/S 13' RT	~~389.60~~ 388.79	TYPE A-10 DTL. D-4.03	-	386.~~00~~ .16 (15"RCCP)
I-10	STA 5+69.39 O/S 13' LT	~~389.36~~ 388.73	TYPE A-10 DTL D-4.03	384.01 (I-11) (15"RCCP)	383.76 (18"RCCP)
I-11	STA 5+69.39 O/S 13' RT	~~389.70~~ 388.78	TYPE A-10 DTL. D-4.03	-	385.~~96~~ .78 (15"RCCP)
I-12	STA 9+48.03 O/S 30' LT	~~387.80~~ 385.59	TYPE A-10 DTL D-4.03	381.18 ~~383.83~~ (15"RCCP)	377.~~72~~ .01 (18"RCCP)
I-13	STA 9+48.03 O/S 30' RT	~~387.00~~ 385.59	TYPE A-10 DTL. D-4.03	-	~~384.13~~ 382.25 (15"RCCP)
I-14 (FUTURE)	N 581,352.999 E 1,364,514.455	385.90	TRENCH DRAIN NDS DURASLOPE	-	-
EX. INLET I-12	N 580,977.209 E 1,364,060.390	~~370.00~~ 369.34	EX. YARD INLET	366.09 ~~385.54~~ (15"HDPE)	365.44 (ex.15"CMP)
I-15	N 580,867.89 E 1,364,168.03	377.~~25~~ .31 (WEIR EL.)	TYPE D DTL. D-4.39	-	374.~~30~~ .46 (12" ~~HDPE~~ PVC)
CS1	N 581,236.45 E 1,364,545.39	~~378.75~~ 379.05	MODIFIED '5' INLET, SEE DETAIL, SHEET 15	373.45 (8" PERF PVC); 372.53 ~~374.12~~ (18" RCCP)	~~373.00~~ 372.51 (18" RCCP)
CS2	N 580,963.71 E 1,364113.49	~~378.25~~ 377.22		372.23 (12" ~~HDPE~~ PVC)	370.19 (15"HDPE)
CS3	N 581,491.37 E 1,364,214.90	~~373.75~~ 372.80		368.~~42~~ .17 (8" PERF PVC)	367.~~83~~ .58 (15"HDPE)
CS4	N 581,075.17 E 1,364,631.23	378.~~75~~ .98		375.05 ~~373.70~~ (6" PVC)	~~373.60~~ 375.24 (~~12"HDPE~~) 18" RCCP
CS5	N 581,211.52 E 1,364,349.43	~~389.50~~ 388.80		384.~~84~~ .17 (6" PVC)	383.77 (15" RCCP)
MH20	N 581095.27 E 1364634.08	380.22	STANDARD MH DTL G-5.12	374.66 (18" RCCP)	374.81 (18" RCCP)

**INLET TOP ELEVATIONS DENOTES THROAT ELEVATIONS WHERE APPLICABLE

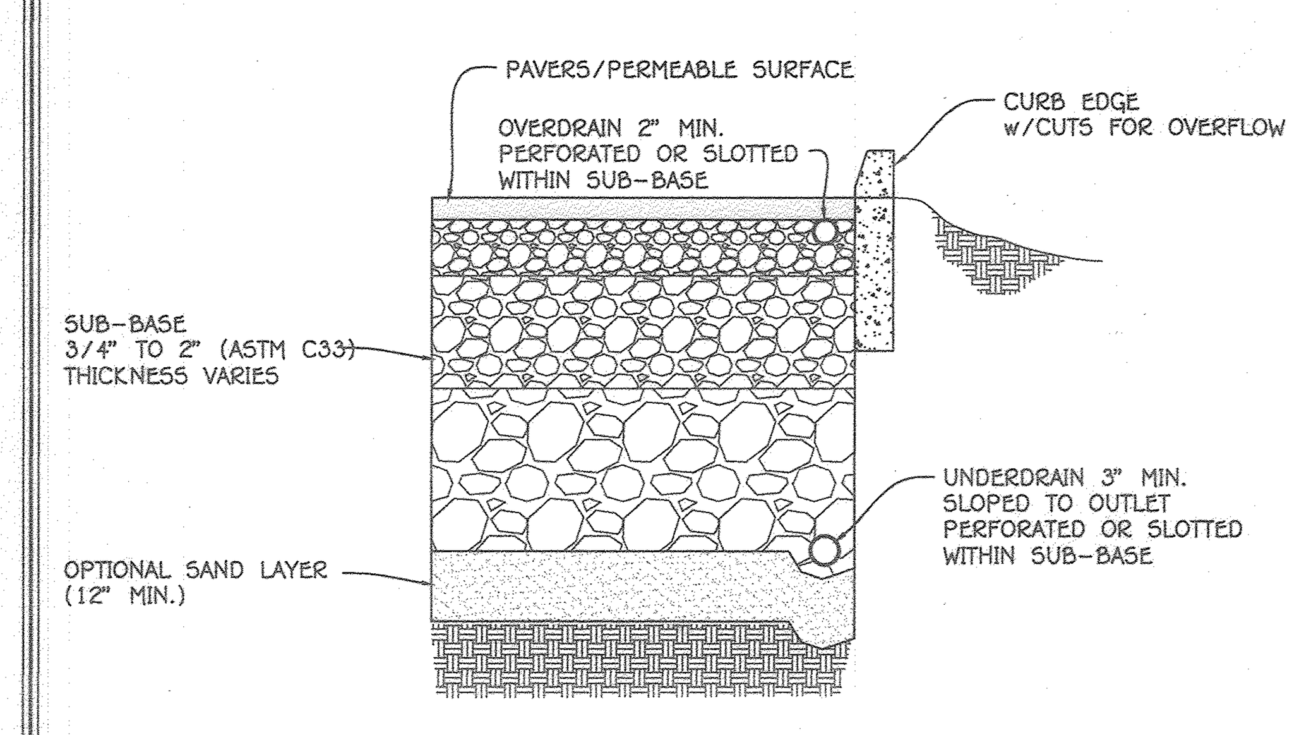
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

A. THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND INSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.

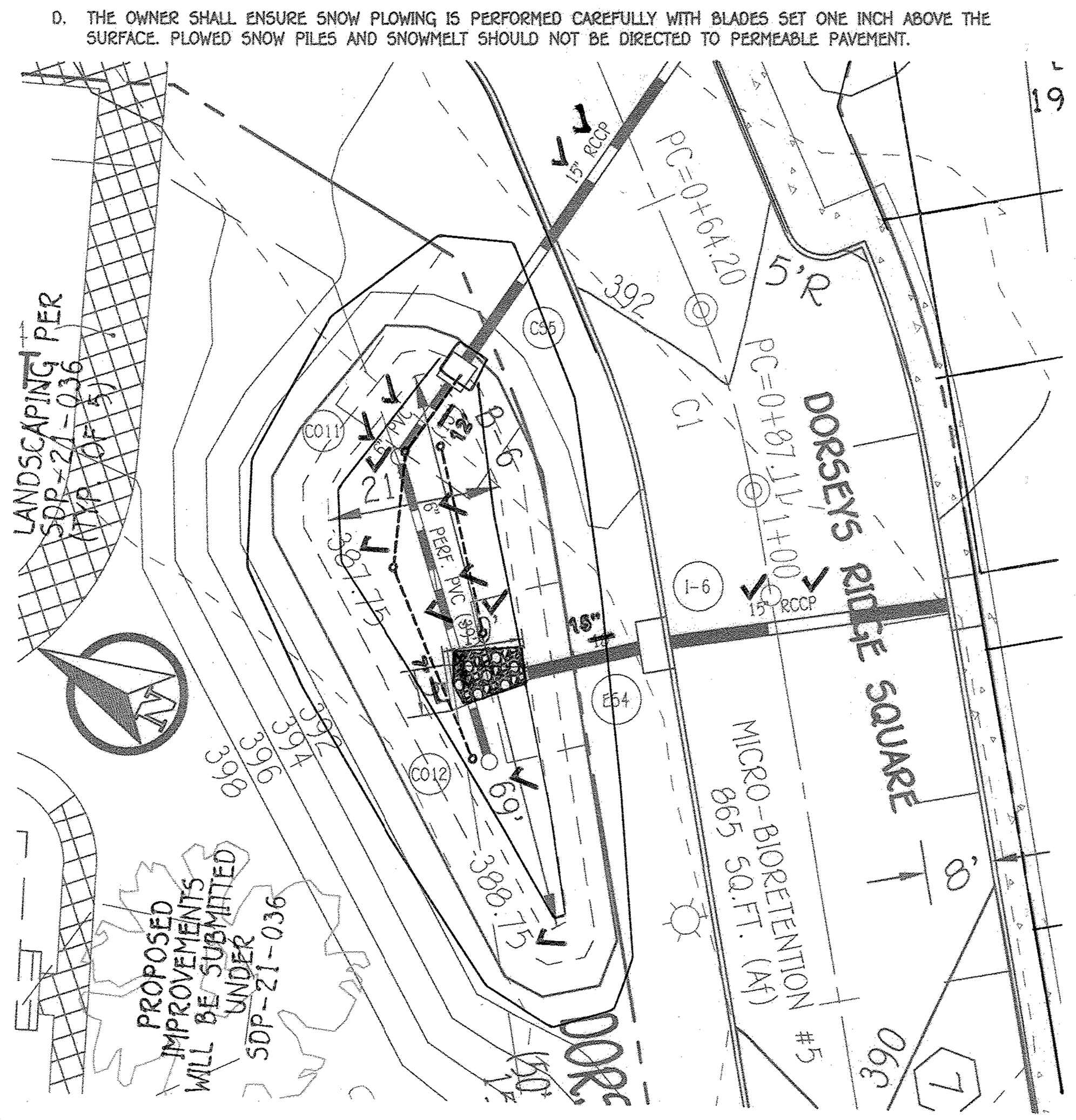
B. THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.

C. THE OWNER SHALL USE DEICERS IN MODERATION. DEICERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.

D. THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

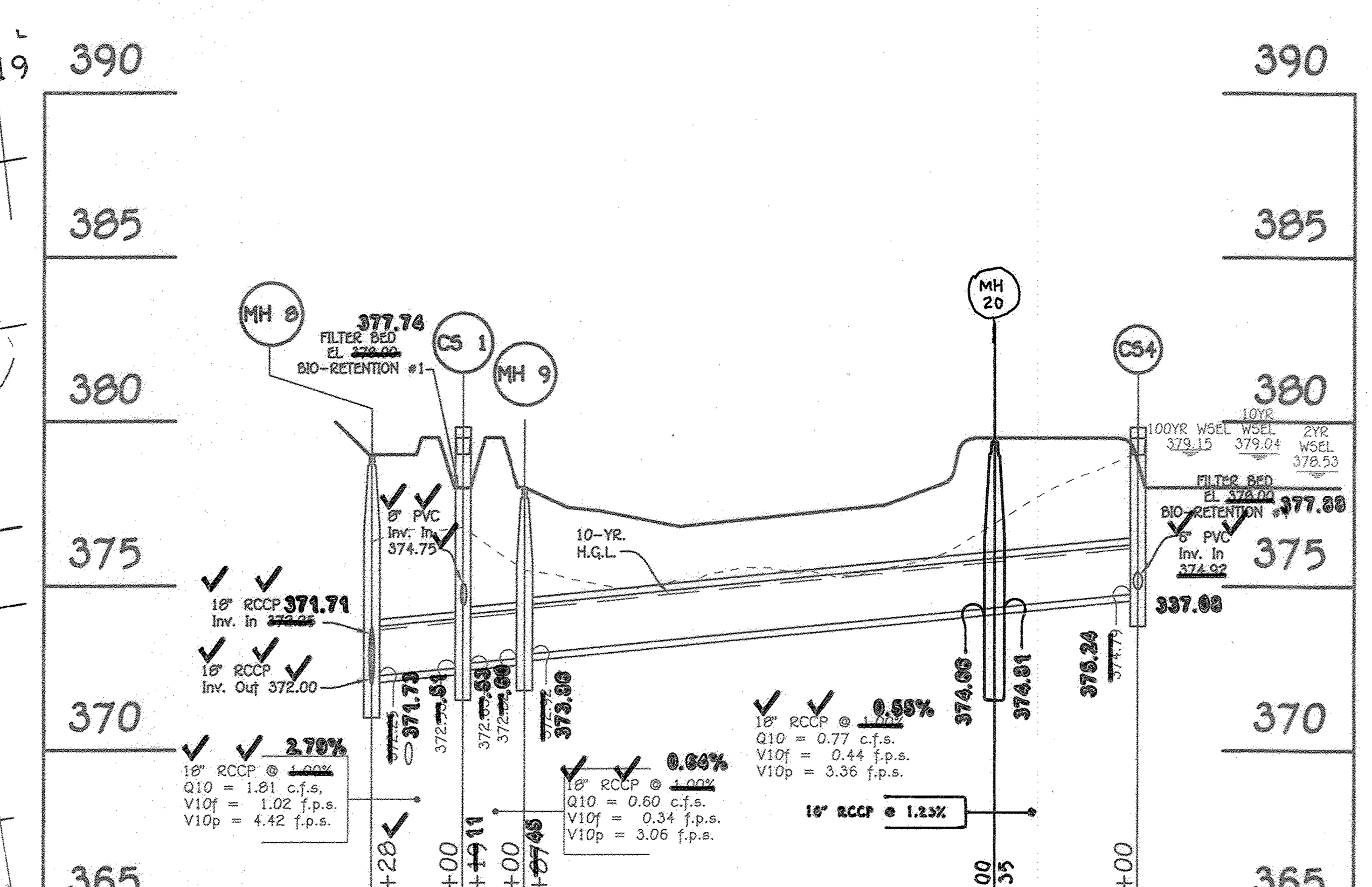


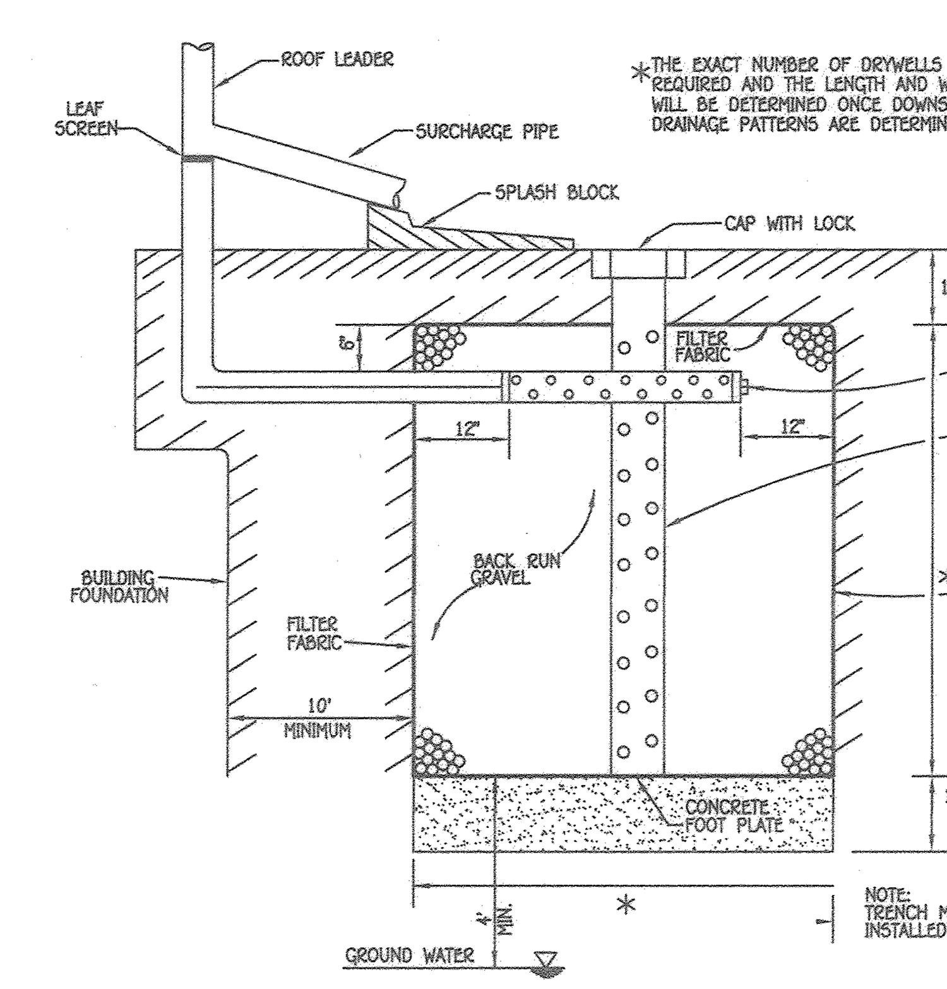
TYPICAL SECTION - PERMEABLE PAVEMENT w/ OVERDRAIN & UNDERDRAIN
NO SCALE



BIO-RETENTION No. 5 PLAN VIEW
Scale: 1" = 20'
PONDING VOLUME
DESIGN: 1,171 CU FT
AS-BUILT: 1,557 CU FT

* THE ESDv PROVIDED (23,452 CUFT) EXCEEDS OVERALL ESDv REQUIRED (22,087 CUFT) FOR ENTIRE DORSEY'S RIDGE SITE.





*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

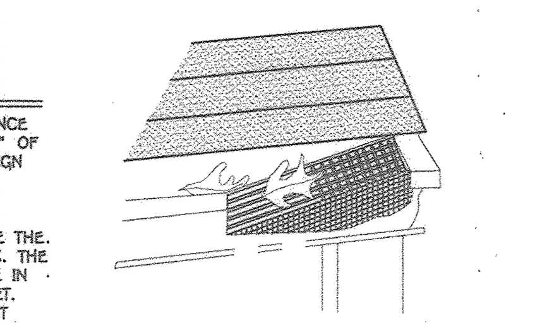
NOTE: SEE SHEET 11 FOR DRY WELL CHART

OPERATION AND MAINTENANCE SCHEDULE FOR DRYWELLS (M-5)

A. THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
B. THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO INSURE TRENCH DRAINAGE.
C. THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
D. 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.
E. THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
F. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE. LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
4. FINAL GRADING IS SHOWN ON THE SITE DEVELOPMENT PLAN.



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS MK — 02/14/2022 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT — 3/3/22 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2-23-22 DATE

REVISIONS		
NO.	DESCRIPTION	DATE
1	Storm drain profiles & structure schedule	3/1/22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER
DORSEY'S RIDGE, LLC
C/O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2023.

Signature Of Professional Engineer — 1/17/22 DATE

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — 20748 — PROFESSIONAL ENGINEER

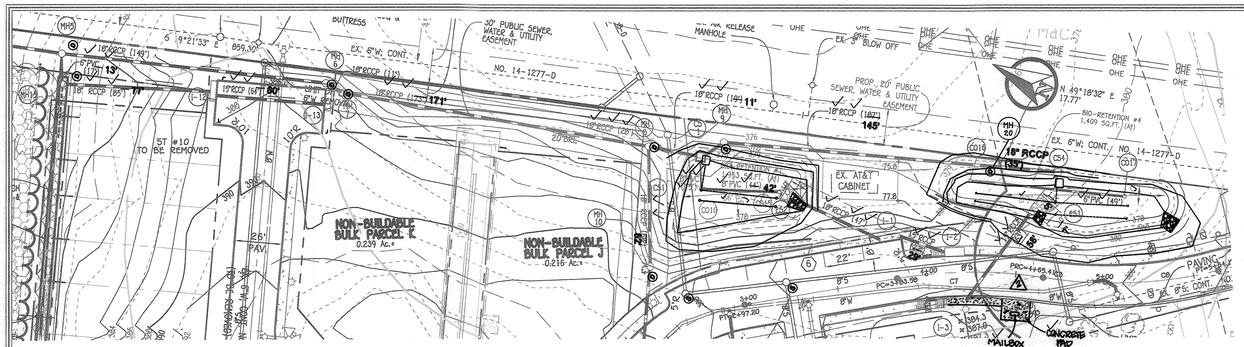
STORM DRAIN & SWM PROFILES

DORSEY'S RIDGE
PHASE-I
LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62, & NON-BUILDABLE BULK PARCELS B, G THRU K

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER, 2021

F-19-047
AS-BUILT

I:\2015\15000\dwg\Finals\Final - Loop Road\Redlines\15000-3001 Sheet 11-14 Storm Drain & SWM details REVISED AUGUST 2020 - Redline.dwg, 1/11/2022 11:24:11 AM, Upstairs 1500 Mylar.pc3



0' 40' 80' 120'

Scale: 1" = 40'

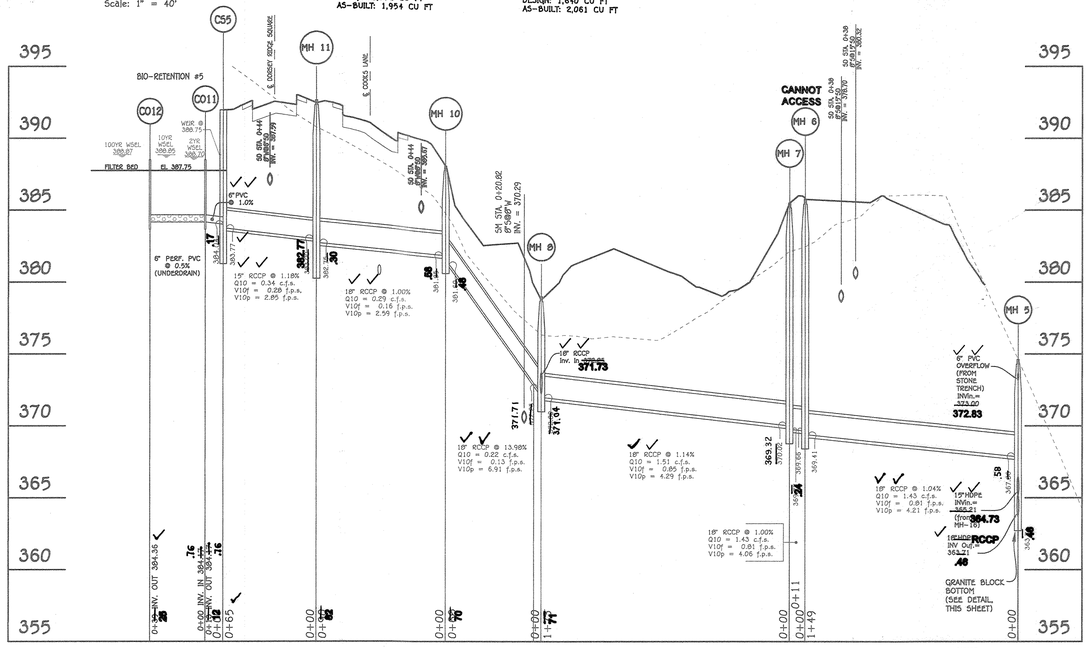
BIO-RETENTION No. 1 & 4 PLAN VIEW

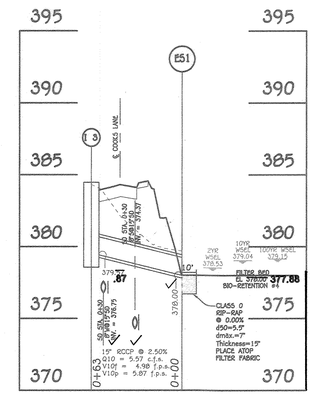
Scale: 1" = 40'

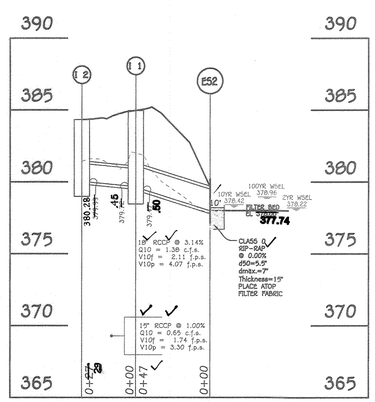
PONDING VOLUME
DESIGN: 1,772 CU FT
AS-BUILT: 1,954 CU FT

PONDING VOLUME
DESIGN: 1,640 CU FT
AS-BUILT: 2,061 CU FT

* THE EDSV PROVIDED (23,452 CUFT) EXCEEDS OVERALL ESDV REQUIRED (22,087 CUFT) FOR ENTIRE DORSEY'S RIDGE SITE.







OPERATION AND MAINTENANCE SCHEDULE FOR MICRO BIO-RETENTION AREAS (M-6)

1. The owner shall maintain the plant material, mulch layer and soil layer annually. maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.

2. The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, Treat diseased trees ans shrubs and replace all deficient stakes and wires.

3. The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years, The previous mulch layer shall be removed before the new layer is applied.

4. The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

STORMWATER MANAGEMENT PIPE SCHEDULE

SIZE	TYPE	LENGTH
6"	PVC	31 L.F.
8"	PVC	5 L.F.
6"	PVC, PERFORATED	226 L.F.
8"	PVC, PERFORATED	153 L.F.
12"	PVC	50 L.F.

CLEANOUT STRUCTURE SCHEDULE

	STR #	STATION & OFFSET OR COORDINATES	TOP ELEV	TYPE	INV IN	INV OUT
BIO-RETENTION #2	C02	N 580,946.1226 E 1,364,135.5323	377.50 .19	12" 6" CLEANOUT	~~372.55(12")~~ ~~372.65(6")~~ 373.03	~~372.55~~ 373.03
	C03	N 580,932.3408 E 1,364,145.4854	377.50	12" 6" CLEANOUT	~~372.92(12")~~ ~~372.92(6")~~ 373.12	~~372.92~~ 373.12
	C04	N 580,905.5368 E 1,364,164.2544	377.50	12" 6" CLEANOUT	~~373.24(12")~~ ~~373.34(6")~~ 373.78	373.24 .78
	C05	N 580,945.1288 E 1,364,176.4790	377.22	✓ 6" CLEANOUT	–	~~373.44~~ 372.77
	C06	N 580,914.0726 E 1,364,162.9175	377.25 376.98	✓ 6" CLEANOUT	–	373.00✓
	C07	N 581,230.2325 E 1,364,548.9385	377.25 .06	✓ 6" CLEANOUT	–	373.00✓
	C08	N 581,190.499 E 1,364,566.964	377.22	✓ 6" CLEANOUT	–	~~373.02~~ 372.86
	C09	N 581,063.5119 E 1,364,633.9137	377.25 .14	✓ 6" CLEANOUT	–	~~372.75~~ 373.03
BIO #1	C010	N 581,017.4423 E 1,364,651.7571	~~377.75~~ 378.19	✓ 8" CLEANOUT	~~373.45~~ 375.57	~~373.45~~ 375.57
BIO #5	C011	N 581,213.173 E 1,364,337.053	~~388.50~~ 388.22	✓ 6" CLEANOUT	~~384.17~~ .76	~~384.17~~ .76
	C012	N 581,186.6081 E 1,364,309.0447	~~388.50~~ 388.17	✓ 6" CLEANOUT	–	384.36✓
BIO #3	C013	N 581,480.4823 E 1,364,158.4982	372.75✓	12" 6" CLEANOUT	368.70 .88	368.70 .88
	C014	N 581,461.4316 E 1,364,102.1925	372.75 .87	8" 6" CLEANOUT	–	369.00 .16
BIO #1	C015	N 581,191.6602 E 1,364,569.6931	~~377.75~~ 379.24	✓ 8" CLEANOUT	–	~~373.45~~ 374.75
BIO #4	C016	N 581,065.0117 E 1,364,630.7835	~~377.75~~ 378.05	✓ 6" CLEANOUT	~~373.92~~ 374.87	~~373.92~~ 374.67
	C017	N 581,017.3422 E 1,364,653.1692	~~377.75~~ 380.26	✓ 6" CLEANOUT	–	~~374.18~~ 375.31

NOTE: * LOCATION OF 6" & 8" COs IS TO THE CENTER OF CLEANOUT CAP. LOCATION OF THE 48" HP MHs IS TO THE CENTER OF STRUCTURE.

Table B.4. Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration

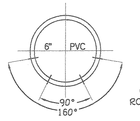
Material	Specification	Size	Notes
Plantings	see Appendix A; Table A.4	n/a	plantings are site-specific
Planting soil 12" to 4" deep)	loamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40%		USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	30% - 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum
Pea gravel diaphragm	pea gravel; ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone; washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	No. 57 or No. Aggregate (3/8" to 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe: 3/8", perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch gal/nonized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f = 3500 psi at 28 days, normal weight, air-entrained, reinforcing to meet ASTM-615-60	n.a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved plans or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Greystone (AASHTO #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

AS-BUILT CERTIFICATION

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

Date

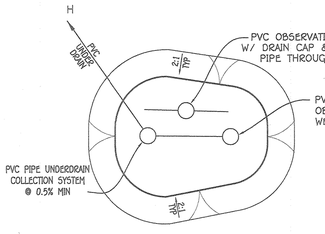
PAUL GERARD CAVANAUGH #27020



PIPE SIZE: 6"
HOLE SIZE: 3/8"
CENTER TO CENTER: 3"
ROWS OF HOLES: 2 @ 90°
2 @ 160° (+/-3°)

STORM DRAIN PIPE SCHEDULE (ROADS & ALLEYS)

SIZE	TYPE	LENGTH
12"	HDPE	68 L.F.
15"	HDPE	371 L.F.
18"	HDPE	787 L.F.
15"	RCCP, CL IV	335 L.F.
18"	RCCP, CL IV	689 L.F.



OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (F-6)

1. The owner shall maintain the plant material, mulch layer and soil layer annually, maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.

2. The owner shall perform a plant in the spring and in the fall each year. during the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material, Treat diseased trees ans shrubs and replace all deficient stakes and wires.

3. The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years, The previous mulch layer shall be removed before the new layer is applied.

4. The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.

BIO-RETENTION #4 OPERATION AND MAINTENANCE SCHEDULE FOR PUBLICLY OWNED AND JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITIES

ROUTINE MAINTENANCE - (HOA)

1. Facility shall be inspected annually and after major storms. Inspections shall be preformed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be mowed as needed.
3. Debris and litter shall be removed during regular mowing operations and as needed.
4. Visible signs of erosion in the pond as well as the rip-rap or gabion outlet area shall be repairer as soon as it is noticed.

NON-ROUTINE MAINTENANCE - (HOWARD COUNTY)

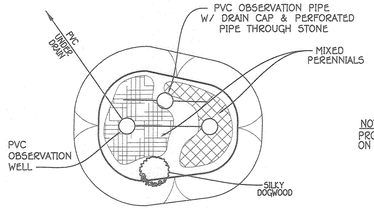
1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.

*MIXED PERENNIALS
CUT-LEAF CONEFLOWER (1.5' SP.)
BEEBALM (1.5' SP.)
JOE-PYE-WEED (3' SP.)

SILKY DOGWOOD

NOTE:
PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

*SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING



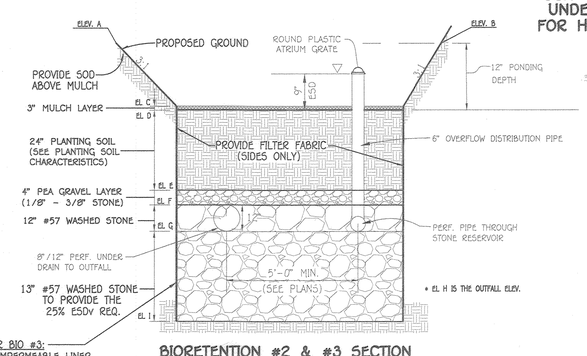
MICRO BIO / BIORETENTION PLANTING DETAIL

NOT TO SCALE

BIORETENTIONS

BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
#1	379.00	378.00	377.00	376.75	374.75	374.45	~~374.25~~ 374.85	373.00	372.37
#2	378.50	~~378.25~~ 378.00	376.50	376.00	374.25	373.95	~~373.75~~ 373.15	371.50	371.84
#3	374.00	~~373.75~~ 373.50	372.00	~~371.75~~ 371.25	369.75	369.45	~~369.25~~ 368.65	368.13	367.34
#4	379.00	~~378.80~~ 378.60	377.00	~~377.50~~ 377.00	375.25	374.95	~~374.75~~ 374.00	372.85	372.84
#5	390.00	386.75	387.75	387.50	385.50	385.17	384.17	383.77	383.09

NOTE: BIORETENTION #2 TOP OF DAM IS 378.50 (0.5 FOOT HIGHER TO PASS / CONTROL 100 YR STORM).

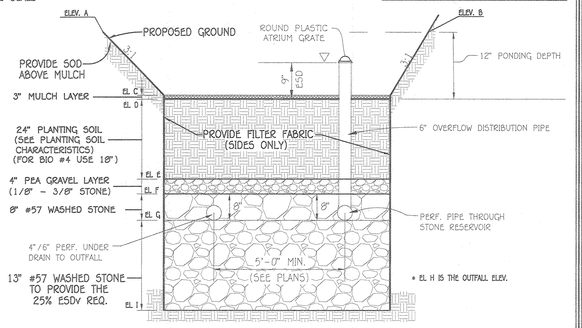


BIORETENTION #2 & #3 SECTION WITH 8"/12" OVERFLOW DISTRIBUTION PIPE

NO SCALE

SCH 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE

NO SCALE



MICRO-BIORETENTION / BIORETENTION SECTION WITH 4"/6" OVERFLOW DISTRIBUTION PIPE (#1, #4, & #5)

NO SCALE

BIORETENTION PLANT MATERIAL

BIORETENTION 1 QUANTITY	BIORETENTION 2 QUANTITY	BIORETENTION 3 QUANTITY	BIORETENTION 4 QUANTITY	MICRO-BIO 5 QUANTITY	NAME	MAXIMUM SPACING (FT.)
110	340	130	95	80	MIXED PERENNIALS	1.5 TO 3.0 FT.
3	5	3	3	1	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — DATE 02/14/2022

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/9/22

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2.23.22

REVISIONS

NO.	DESCRIPTION	DATE
2	REVISE MAILBOX, PAD & SIDEWALK	6/7/22
1	Stormdrain profiles, swm details, o & m, planting detail	3/1/22

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2023.

Signature Of Professional Engineer — DATE 1/17/22

STATE OF MARYLAND — MICHAEL V. VITUCCI — 20748 — PROFESSIONAL ENGINEER

STORM DRAIN & SWM PROFILES

REPLACEMENT SHEET

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62, & NON-BUILDABLE BULK PARCELS B, G THRU K

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442

ZONED: CEF-R

TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3

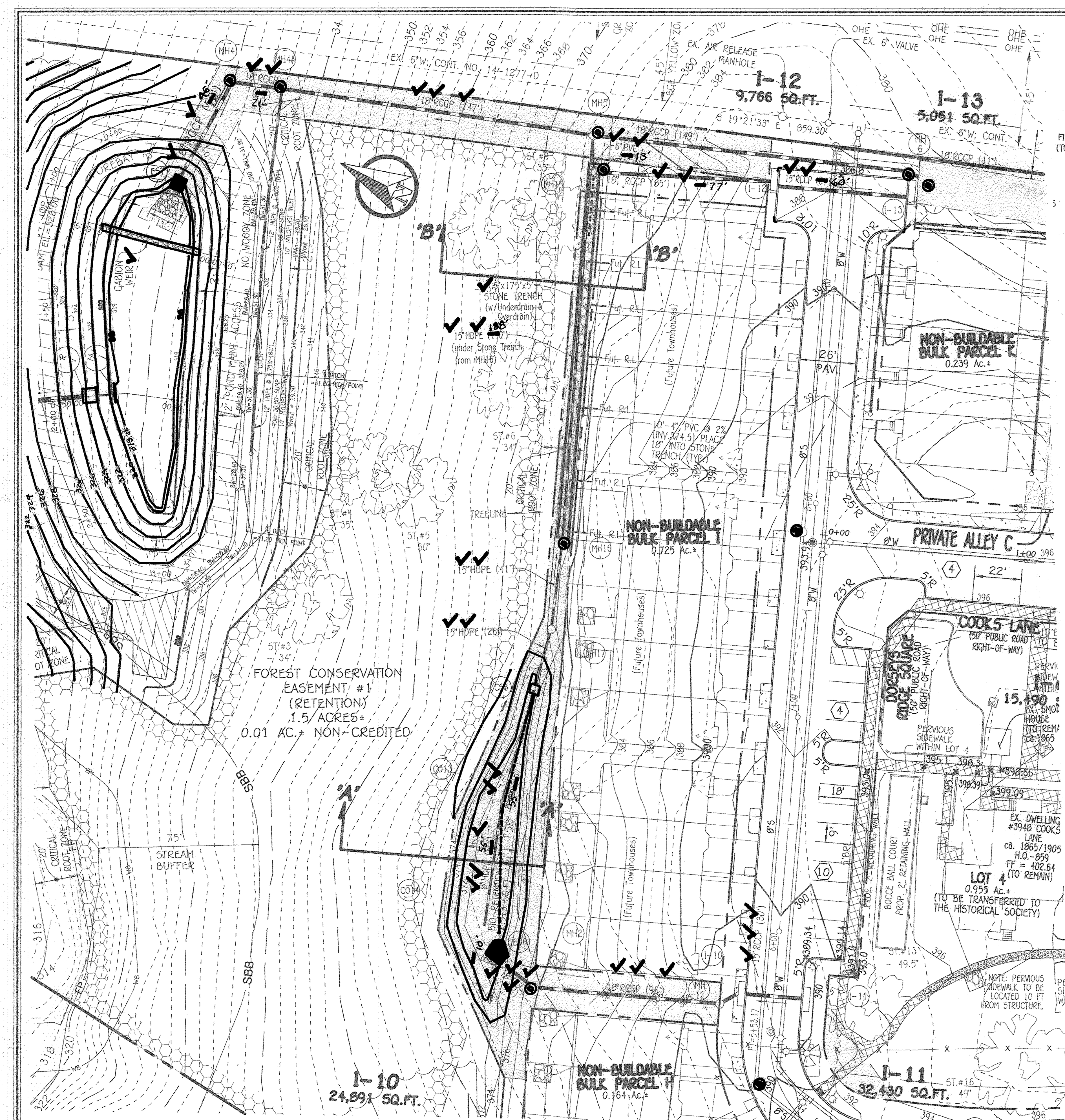
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: DECEMBER, 2021

SHEET 13 OF 18

AS-BUILT F-19-047

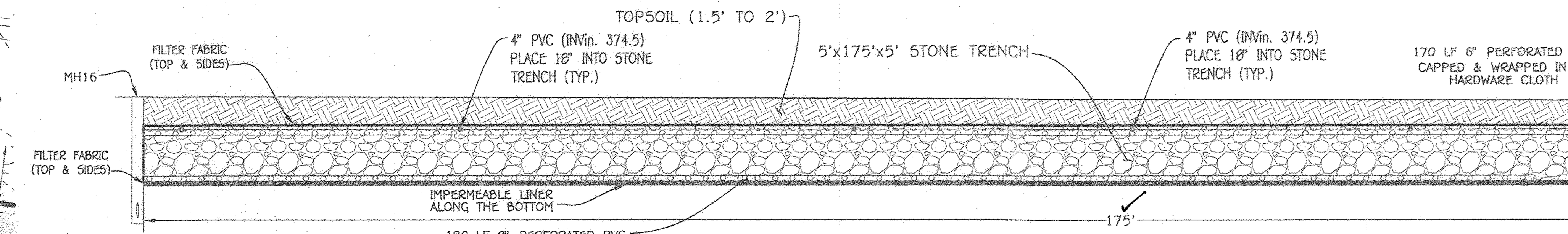
I:\2015\15000\dwg\Finals\Final - Loop Road\Redlines\Red-line 15000-3001 Sheet 11-14 Storm Drain & SWM details REVISED AUGUST 2020 - Redline.dwg, 1/11/2022 2:53:15 PM, Upstairs 1500 Mylar.pc3



BIO-RETENTION No. 3 PLAN VIEW
Scale: 1" = 40'

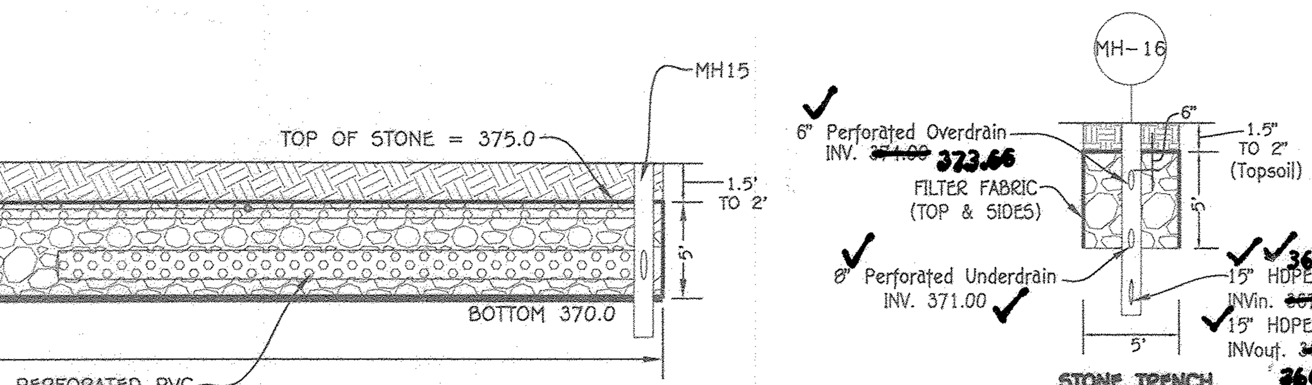
PONDING VOLUME
DESIGN: 2,015 CU FT
AS-BUILT: 2,256 CU FT

* THE ESDv PROVIDED (23,496 CU FT) EXCEEDS OVERALL ESDv REQUIRED (22,087 CU FT) FOR ENTIRE DORSEY'S RIDGE SITE.

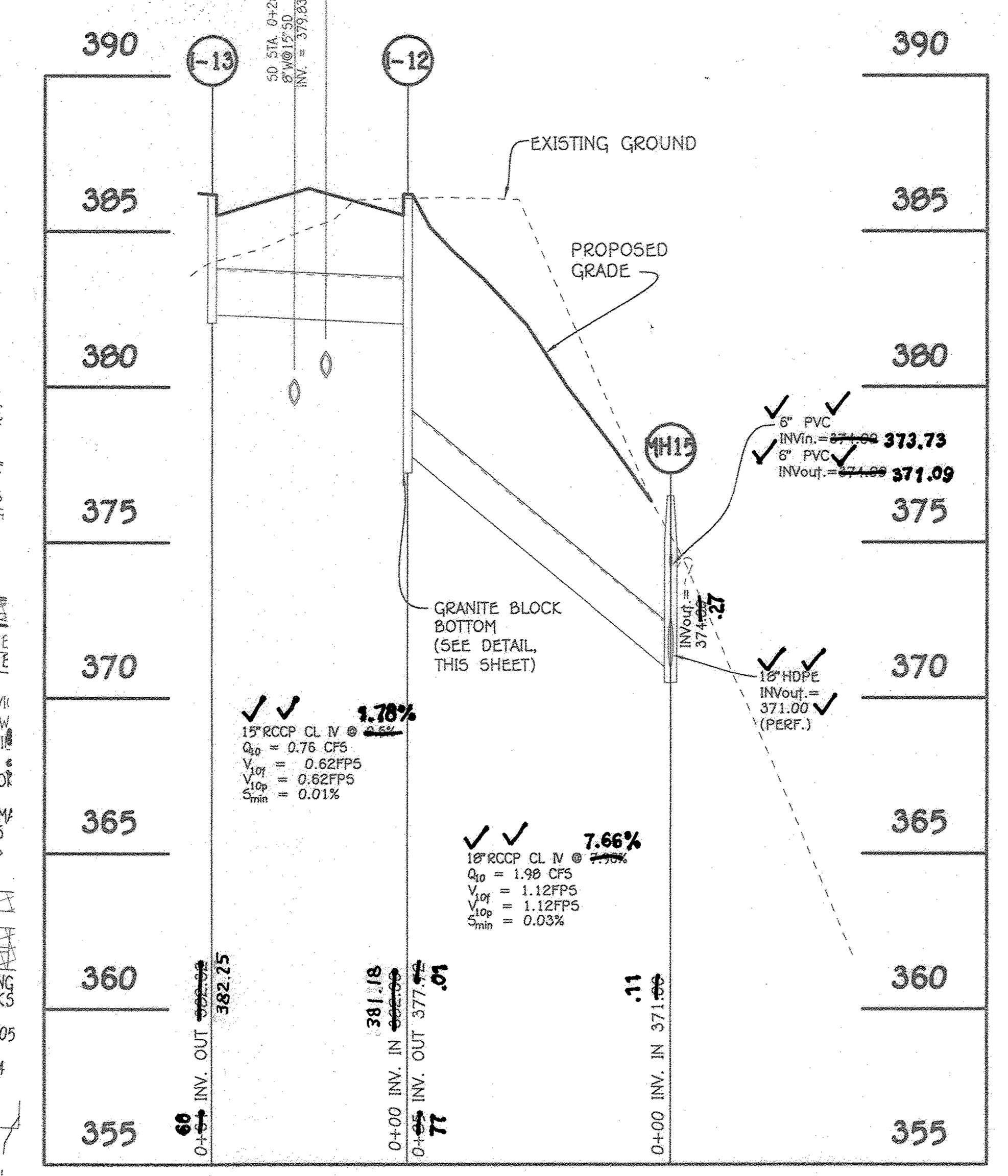


STONE TRENCH
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 1'

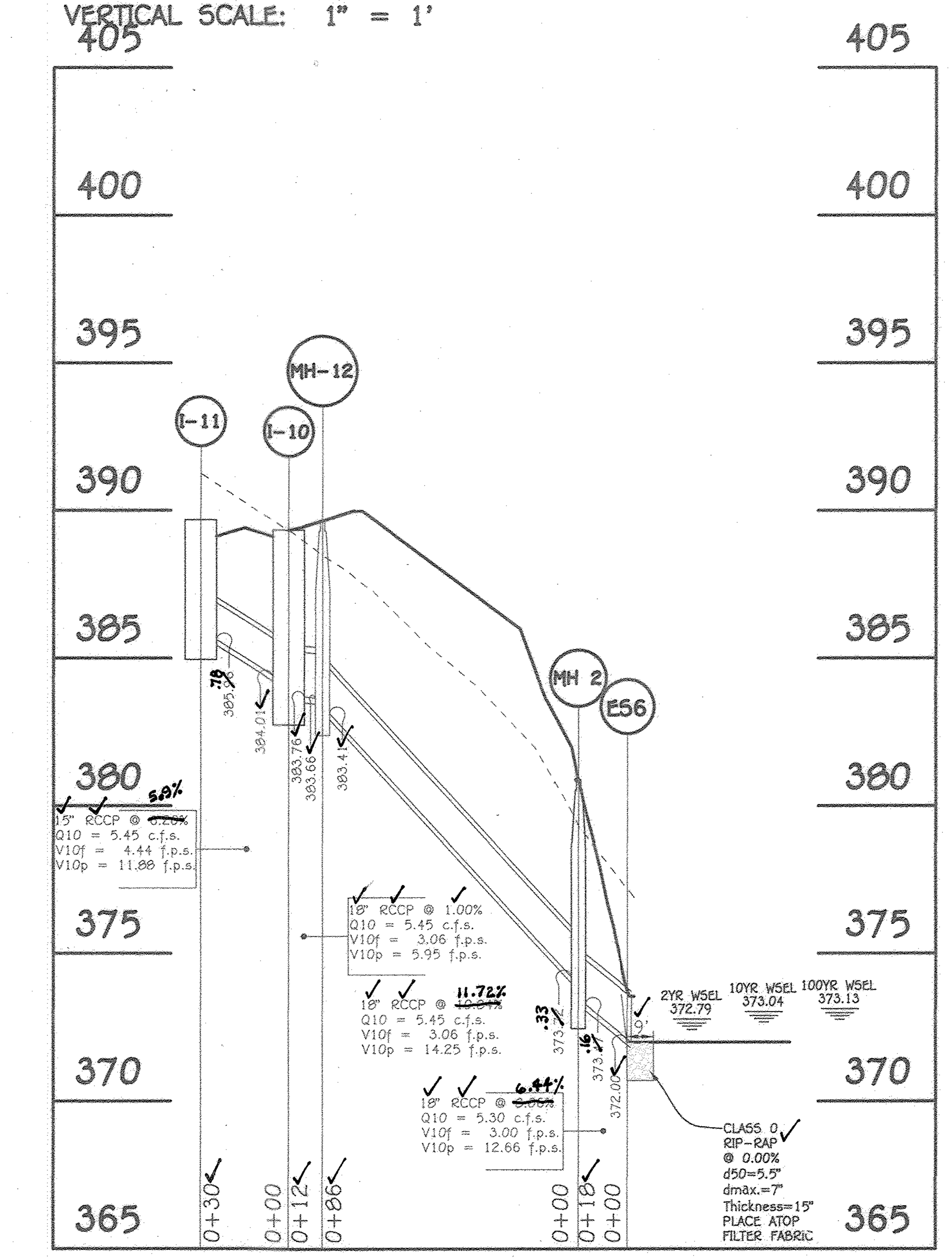
NOTE: 4" PVC PIPES FOR FUTURE TOWNHOUSE ROOFLEADER HOOK-UPS.



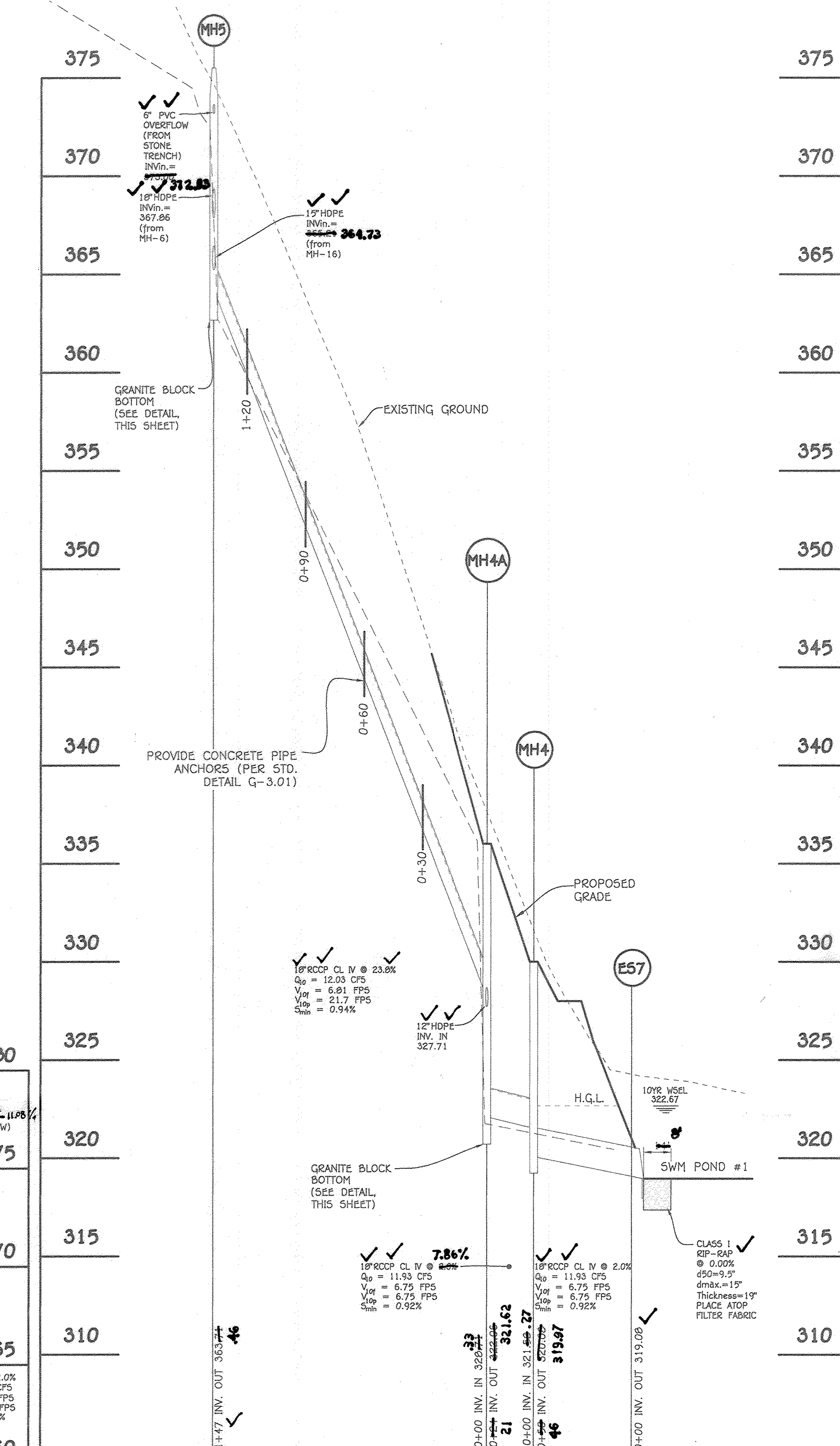
STONE TRENCH
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 1'



PROFILE - I-13 TO MH-15
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PROFILE - I-11 TO ES-6
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



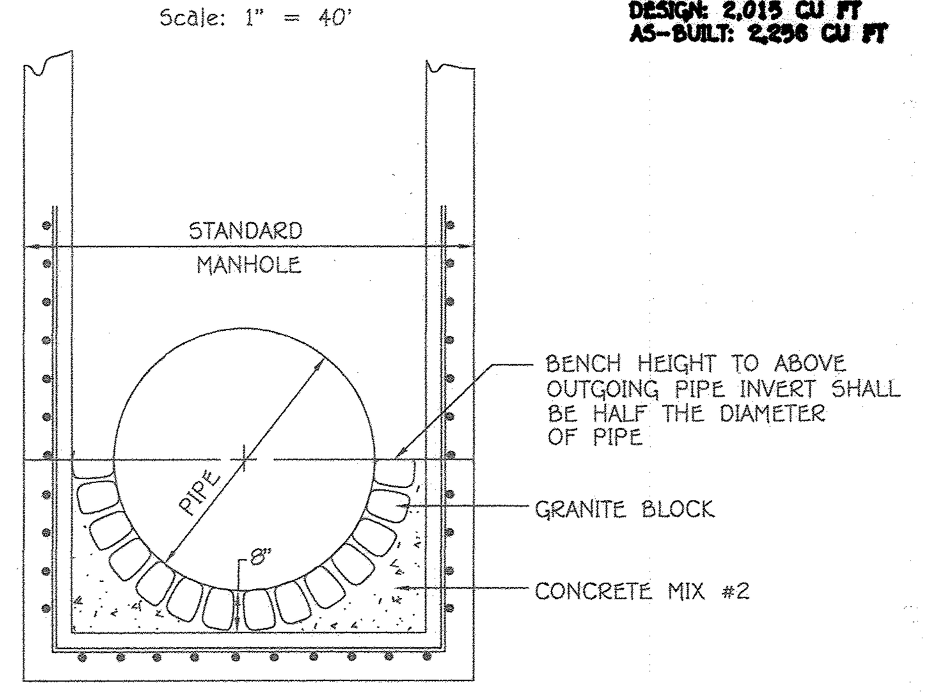
PROFILE - MH-5 TO ES7
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

AS-BUILT CERTIFICATION

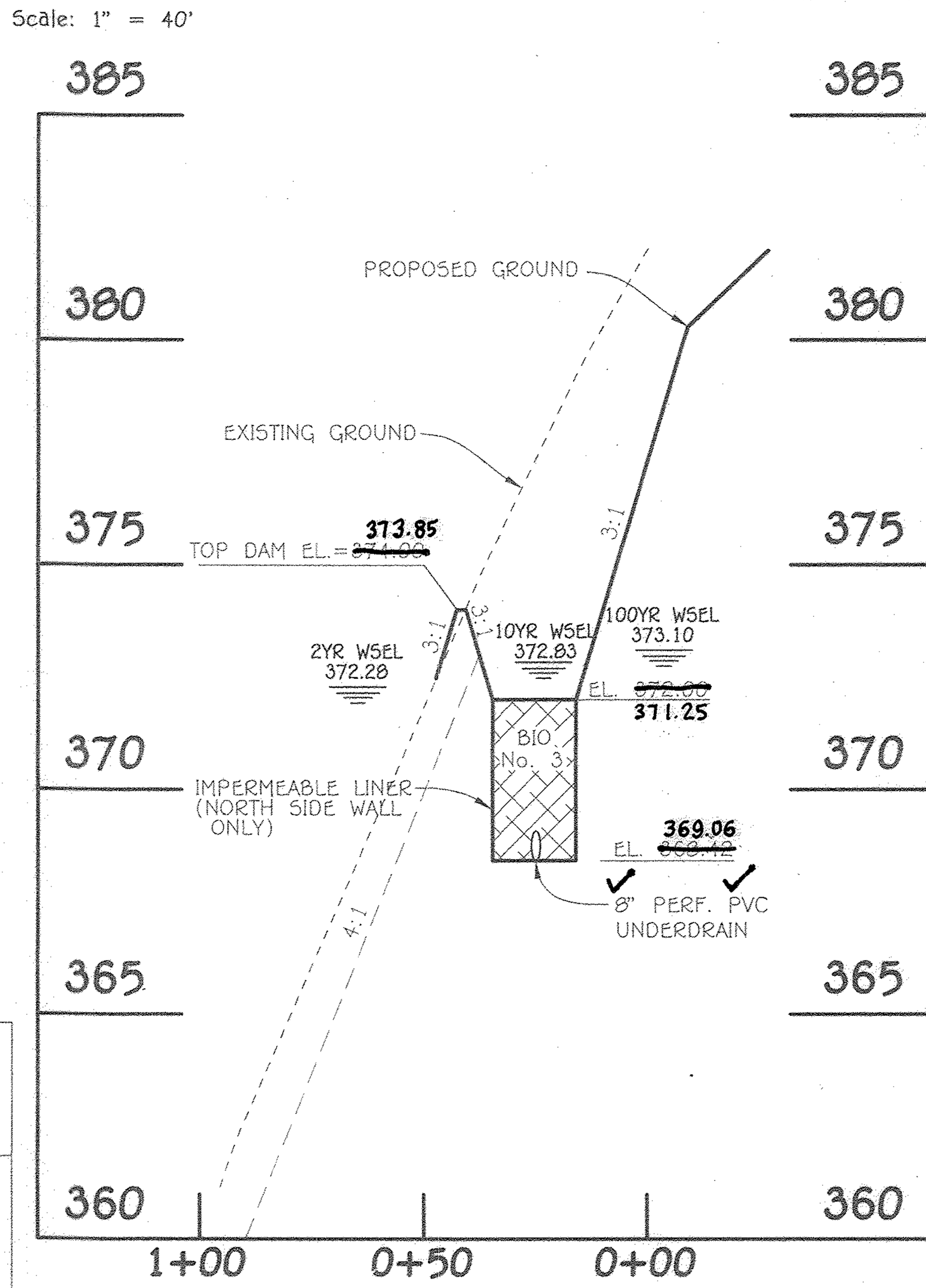
I hereby certify, by my seal, that to the best of my knowledge and belief that the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

Date

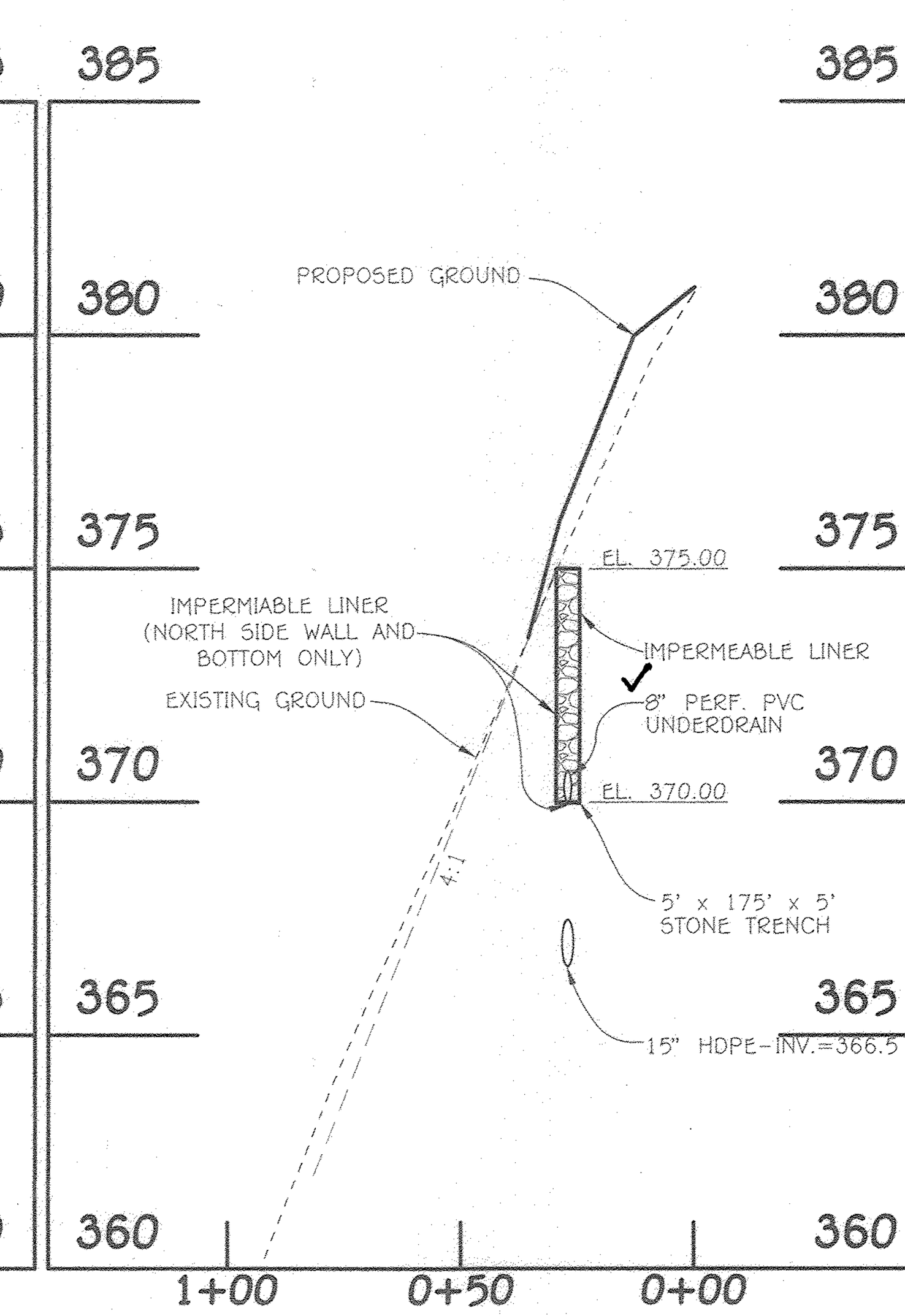
PAUL GERARD CAVANAUGH #27020



GRANITE BLOCK DETAIL
NOT TO SCALE



BIO-RETENTION FACILITY No. 3
PROFILE SECTION 'A-A'
SCALE: HORZ. 1" = 40'
VERT. 1" = 4'



BIO-RETENTION FACILITY No. 3
PROFILE SECTION 'B-B'
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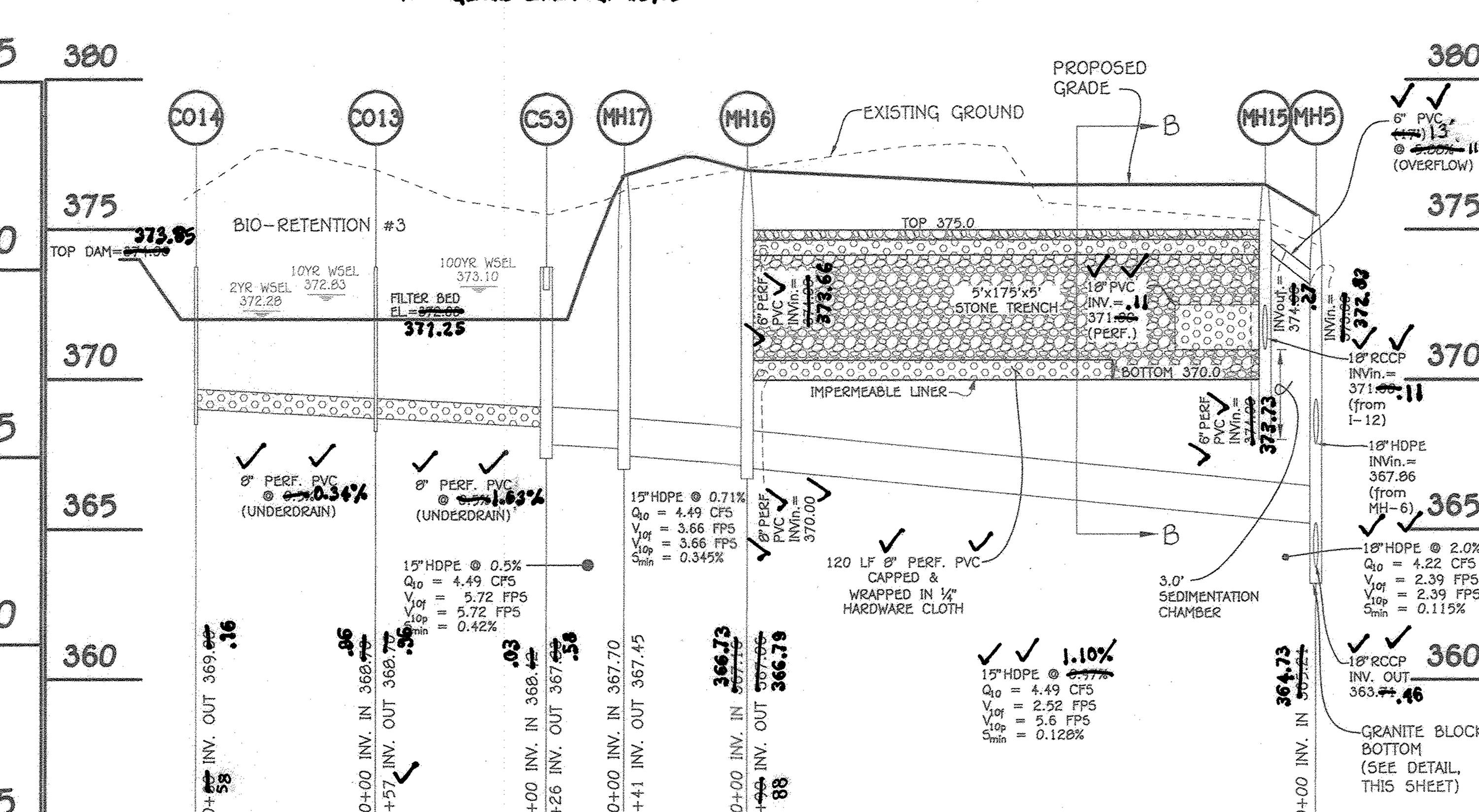

PROFILE - CO14 TO MH5
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — DATE 02/14/2022

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 3/3/22

CHIEF, DEVELOPMENT ENGINEERING DIVISION HSA — DATE 2-23-22

REVISIONS

NO.	DESCRIPTION	DATE
1	revise SD profiles	

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
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Signature Of Professional Engineer — DATE 01/17/22

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

STORM DRAIN & SWM PROFILES
REPLACEMENT SHEET

DORSEY'S RIDGE

PHASE-I
LOTS 1 THRU 4, OPEN SPACE LOTS 6,7,61,62,
& NON-BUILDABLE BULK PARCELS B, G THRU K

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: DECEMBER, 2021
SHEET 14 OF 18

AS-BUILT F-19-047

I:\2015\15000\dwg\Finals\Final - Loop Road\Redlines\Red-line 15000-3001 Sheet 11-14 Storm Drain & SWM details REVISED AUGUST 2020 - Redline.dwg, 1/17/2022 10:59:06 AM

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WQ, and for WQ in some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

> Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
> Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
> Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
> Test soil conditions to determine if soil amendments are necessary.
> Plants shall be located so that access is possible for structure maintenance.
> Stabilize heavy flow areas with erosion control mats or sod.
> Temporarily divert flows from seeded areas until vegetation is established.
> See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorous) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume (Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993). Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	0 to 5%
Silt	30 to 55%
Sand	35 to 60%

Mulch Layer

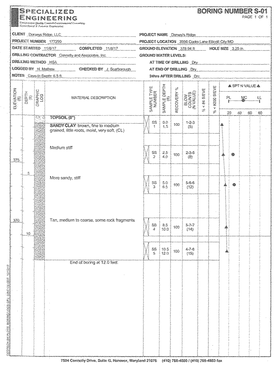
The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

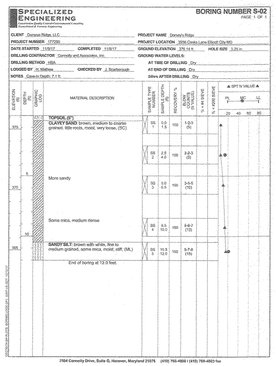
The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

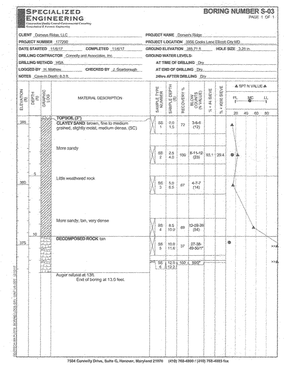
Planting Guidance

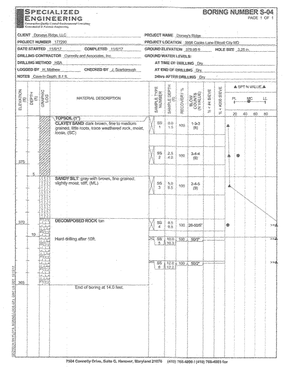
Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.

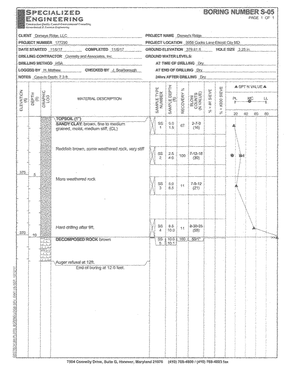
The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge
is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.

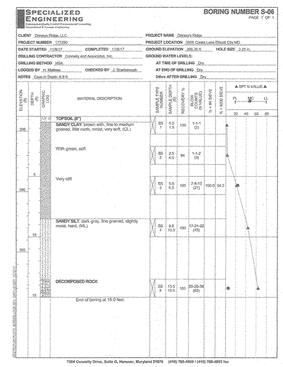


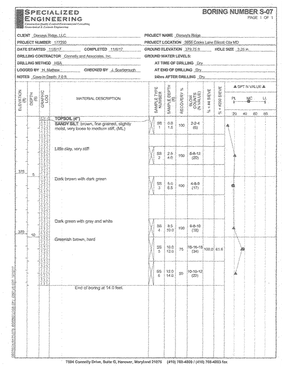


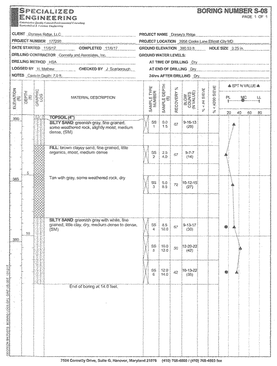


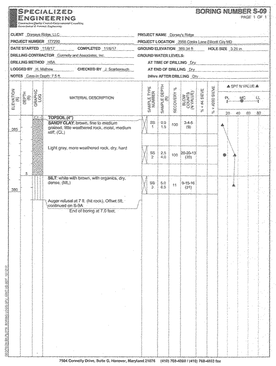


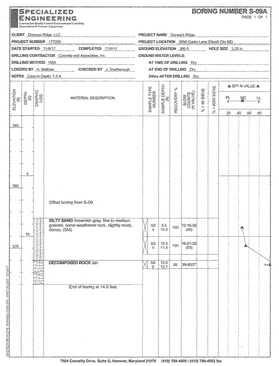


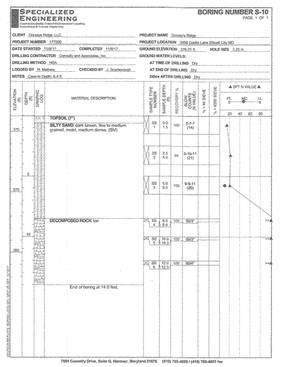


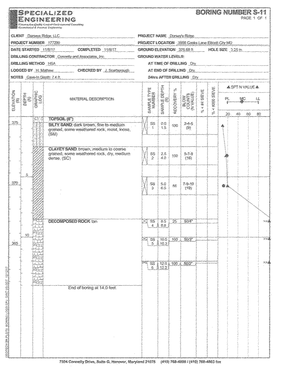


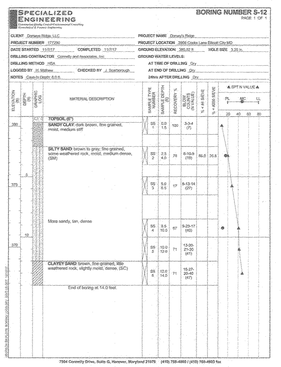


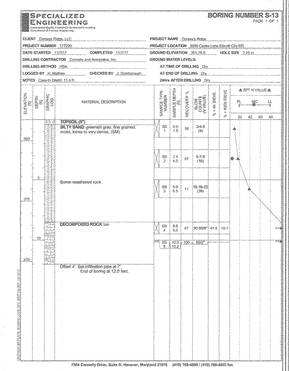


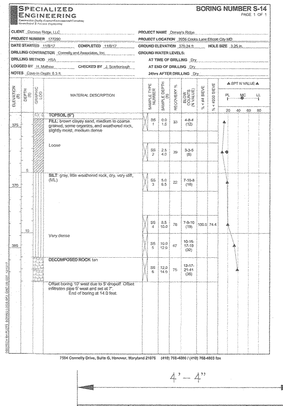


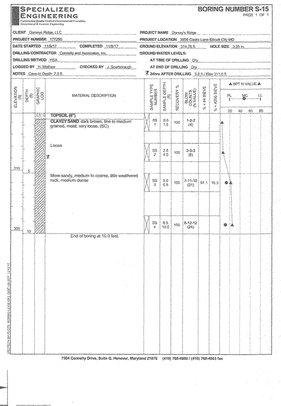


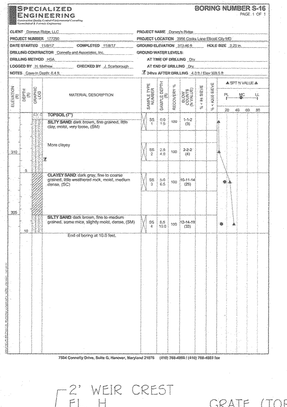


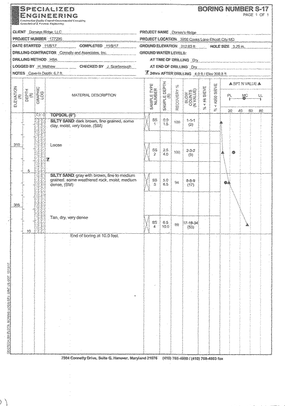


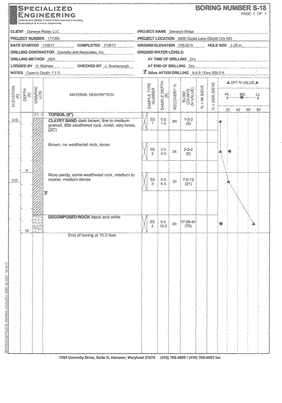


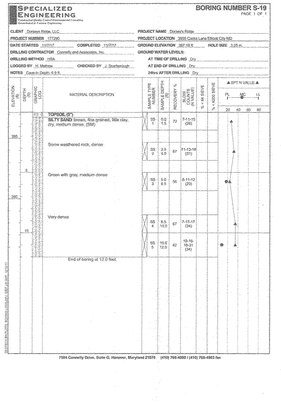


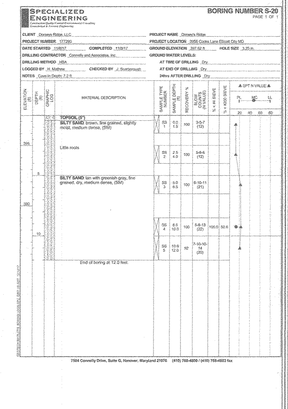










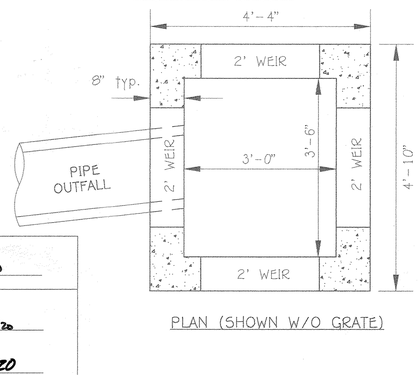


AS-BUILT CERTIFICATION

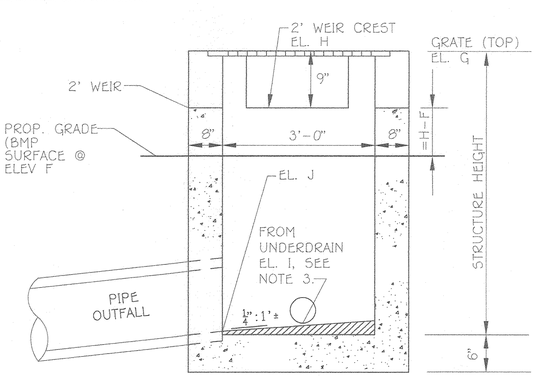
I hereby certify, by my seal, that to the best of my knowledge and belief that the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

Date

PAUL GERARD CAVANAUGH #27020



PLAN (SHOWN W/O GRATE)



ELEVATION

ELEVATION TABLE (BMP)

	C51	C52	C53	C54	C55
ELEV. F	377.~~90~~ .65	376.~~50~~ .00	~~373.00~~ 371.25	377.00	387.~~75~~ .40
ELEV. G	~~378.75~~ 379.83	378.25✓	373.~~75~~ .52	~~379.74~~ 378.74	389.50✓
ELEV. H	~~377.50~~ 379.05	377.~~50~~ .20	~~373.00~~ 372.80	~~379.00~~ 378.00	388.~~75~~ .80
ELEV. I	~~373.15~~ 374.73 ✓8" PVC✓	372.23✓ ✓12" PVC✓	368.~~77~~ .03 ✓8" PVC✓	~~373.75~~ 375.04 ✓6" PVC✓	384.~~54~~ .17 ✓6" PVC✓
ELEV. J	~~373.00~~ 372.51 ✓18" RCCP✓	371.50✓ ✓15" HDPE✓	367.~~33~~ .58 ✓15" HDPE✓	~~373.50~~ 375.24 ~~12"~~ HDPE✓	383.~~77~~ .82 ✓15" RCCP✓

18"

NOTES:
1. SEE MSHA STD DETAIL MD-378.11 FOR DETAILS NOT SHOWN.
2. USE DOUBLE OPENING WITH NO CONCRETE GUTTER APPROACHES.
3. PIPE MAY ENTER INLET AT AN ANGLE TO MAINTAIN IN CENTER OF BMP. SEE PLAN FOR PIPE ENTRANCE WALL LOCATION.
4. SLOPE RISER INVERT $\frac{1}{4}$":1' TOWARD OUTFALL WITH CONCRETE.
5. THIS STRUCTURE SHALL BE CONSTRUCTED WITH FOUR (4) 2' WIDE WEIR OPENINGS.

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS MK — DATE 8/17/2020

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/23/20

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8-28-20

REVISIONS

NO.	DESCRIPTION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

MODIFIED S-INLET TYPICAL SECTION FOR CONTROL STRUCTURES

NTS

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C/O DAVE WOESSNER
308 MAQOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Signature Of Professional Engineer — DATE 5/21/2020

STATE OF MARYLAND — MICHAEL VITTORINI — 20748 — PROFESSIONAL ENGINEER

BORINGS AND SWM SPECIFICATIONS

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 5 THRU 8, & NON-BUILDABLE BULK PARCELS A THRU F

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442

ZONED: CEF-R

TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3

SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MAY, 2020

SHEET 15 OF 18

AS-BUILT

F-19-047

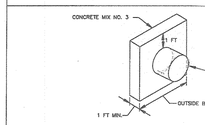
I:\2015\15000\dwg\Finals\Final - Loop Road\15000-3001 Sheet 15 Storm Drain & SWM details Ellicott City Storm\StormDrain Change.dwg, C-15, 1:1

LEGEND

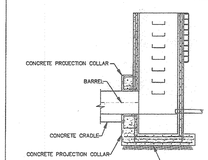
SYMBOL	DESCRIPTION
319 / 320	PROPOSED CONTOURS
18"RCP	PROPOSED STORM DRAIN
	PROPOSED DRYWELL (M-5)
W	PROPOSED WATER LINE
S	PROPOSED SEWER LINE
L.O.D.	LIMIT OF DISTURBANCE
	PROPOSED PAVING
	PROPOSED SIDEWALKS
+362.5	SPOT ELEVATION
	FLOW ARROW
	NON-CREDITED OPEN SPACE
	FOREST CONSERVATION EASEMENT
	FLOW ARROW
	EXISTING WETLANDS & WETLAND BUFFER
FP	EXISTING FLOODPLAIN
OHE	EXISTING OVER HEAD POWER LINES
S	EXISTING SEWER LINE
W	EXISTING WATER LINE
B-17	SOIL BORINGS
ST-1	SPECIMEN TREE
	EXISTING TREES

DETAIL G-2-9 PROJECTION COLLAR

STANDARD SYMBOL



CONCRETE COLLAR DETAIL



ELEVATION

CONSTRUCTION SPECIFICATIONS

1. CAST 1 FOOT THICK CONCRETE COLLAR TO OUTLET STRUCTURE WITH FOUR #4 U-SHAPED REBARS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

G.51

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITIES

ROUTINE MAINTENANCE - (HOA)

1. Facility shall be inspected annually and after major storms. Inspections shall be preformed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be mowed as needed.
3. Debris and litter shall be removed during regular mowing operations and as needed.
4. Visible signs of erosion in the pond as well as the rip-rap or gabion outlet area shall be repairer as soon as it is noticed.

NON-ROUTINE MAINTENANCE - (HOWARD COUNTY)

1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
2. Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond or forebay, is half full of sediment, or, when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

OWNER/DEVELOPER CERTIFICATION

"I/We hereby certify that any clearing, grading construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible person 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 shall engage a Maryland registered professional engineer to supervise pond construction, and provide the Howard Soil Conservation District with an "As-Built" plan of the pond within 30 days of completion. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Owners/Developer's Signature — Date: 9/8/2020

Printed Name & Title: DAVID WOESSNER

DESIGN CERTIFICATION

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulation, 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. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Designer's Signature — Date: 9/8/2020

Printed Name: ALDO M. VITUCCI — MD Registration No.: 20748

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 — Date: 9/9/20

PROFESSIONAL CERTIFICATION

"I hereby certify these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State Of Maryland.

License Number — Expiration Date

Approved: Department Of Planning And Zoning

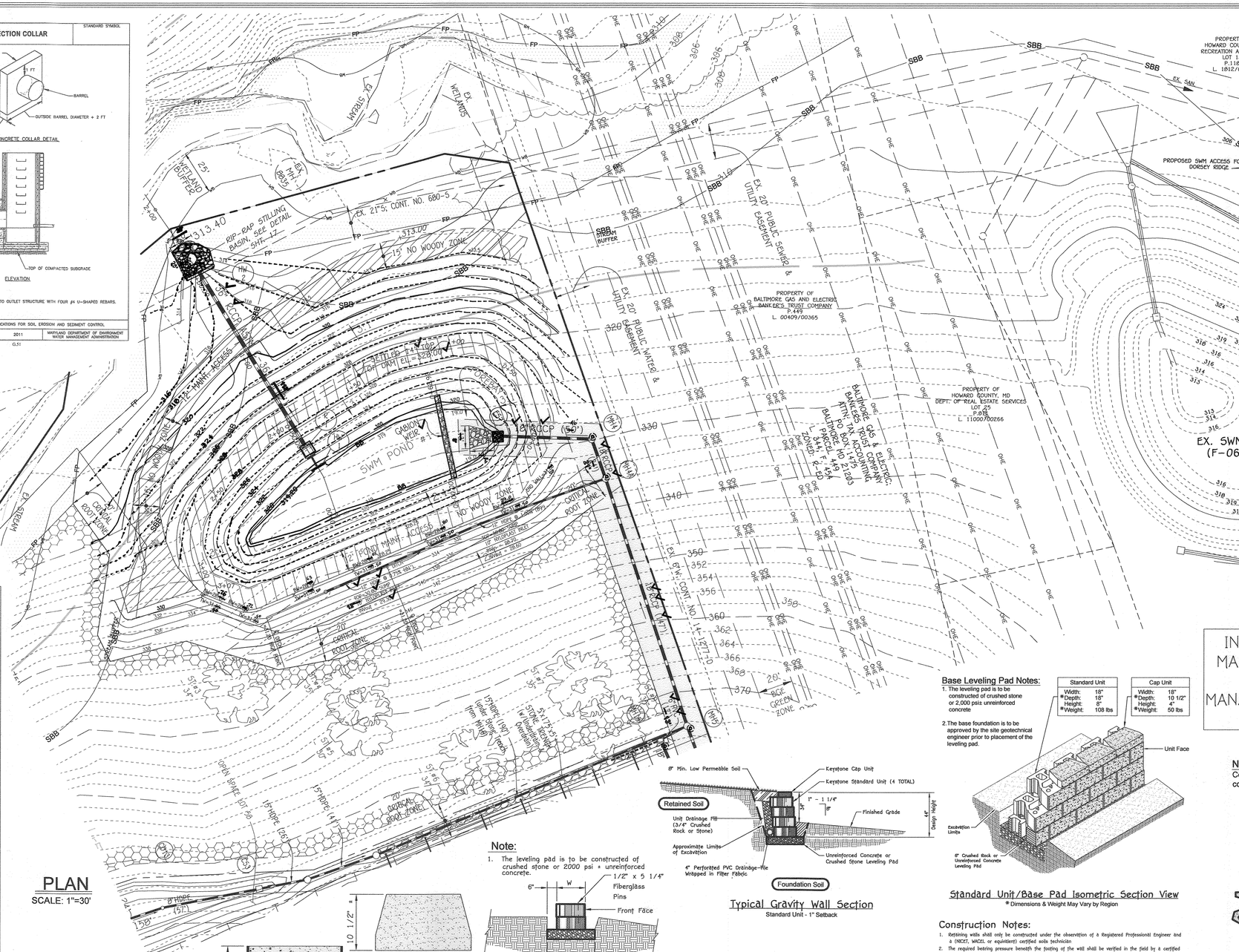
Chief, Division Of Land Development — Date: 9/23/20

Chief, Development Engineering Division — Date: 8.27.20

Approved: Howard County Department Of Public Works

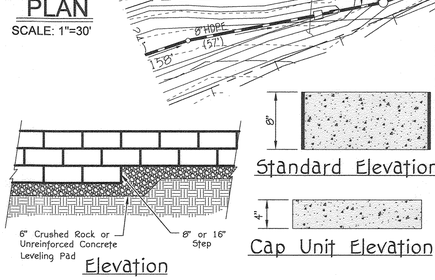
Chief, Bureau Of Highways MK — Date: 9/21/2020

REVISIONS		
NO.	DESCRIPTION	DATE



PLAN

SCALE: 1"=30'



Standard Elevation

Cap Unit Plan
Straight Split Cap Unit Option

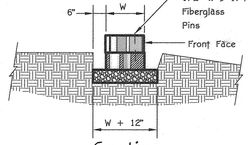
*Dimensions & Availability Will Vary by Region

Elevation

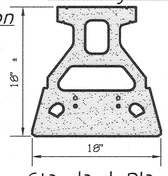
Cap Unit Elevation

Note:

1. The leveling pad is to be constructed of crushed stone or 2000 psi + unreinforced concrete.



Section
Leveling Pad Detail



Standard Plan
Standard Unit
*Dimensions May Vary by Region

Typical Gravity Wall Section
Standard Unit - 1" Setback

Base Leveling Pad Notes:

1. The leveling pad is to be constructed of crushed stone or 2,000 psi± unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

	Standard Unit	Cap Unit
Width:	18"	18"
*Depth:	18"	10 1/2"
Height:	8"	4"
*Weight:	108 lbs	50 lbs

Standard Unit/Base Pad Isometric Section View
*Dimensions & Weight May Vary by Region

Construction Notes:

1. Retaining walls shall only be constructed under the observation of a Registered Professional Engineer and a (NICET, WACEL or equivalent) certified soils technician
2. The required bearing pressure beneath the footing of the wall shall be verified in the field by a certified spoils technician. Testing documentation shall be provided to the Howard County Inspector prior to the start of construction. The required test procedure shall be the Dynamic Cone Penetrometer Test ASTM STP-399
3. The suitability of fill material shall be confirmed by the onsite soils technician. Each eight (8) inch lift shall be compacted to a minimum of 95% Standard Proctor Density and the testing report shall be made available to the Howard County Inspector upon completion of construction
4. For "CRITICAL" walls, one soil boring shall be required every 100' along the entire length of the wall Copies of all boring reports shall be provided to the Howard County Inspector prior to the start of construction
5. "THIS WALL IS NOT DESIGNED FOR SURCHARGE LOADS".

AS-BUILT CERTIFICATION

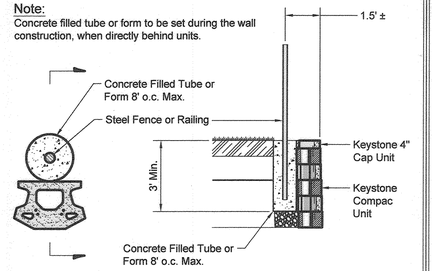
I hereby certify, by my seal, that to the best of my knowledge and belief that the facilities shown on the plan was constructed as shown on this "AS-BUILT" plan meet the approved plans and specifications.

Date

PAUL GERARD CAVANAUGH #27020

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 10, 100-YEAR. AND QUANTITY MANAGEMENT FOR THE 2016 ELLICOTT CITY FLOOD STORM EVENT.

Note:
Concrete filled tube or form to be set during the wall construction, when directly behind units.



Fence Plan Detail

Fence Section & Plan Detail
Compacll Unit - Near Vertical Setback

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C/O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/12/2021.

Signature Of Professional Engineer — DATE: 9/8/2020

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

SWM NOTES AND DETAILS

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 5 THRU 8, & NON-BUILDABLE BULK PARCELS A THRU F

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442

ZONED: CEF-R

TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3

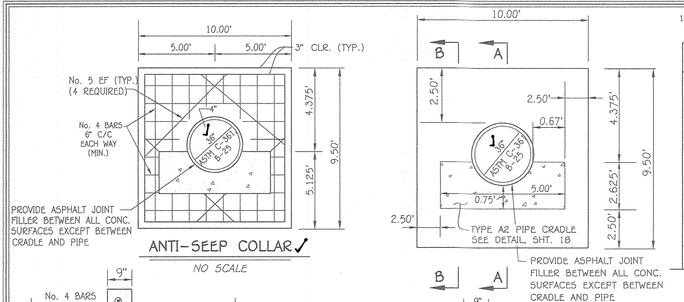
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: MAY, 2020

SHEET 16 OF 18

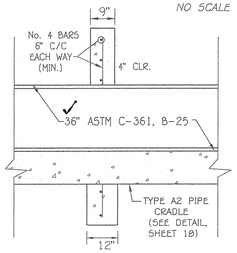
AS-BUILT F-19-047

I:\2015\15900\dwg\Final\Final - Loop Road\15900-3001 Sheet 16-18 details.dwg, Sheet 16, 1:1

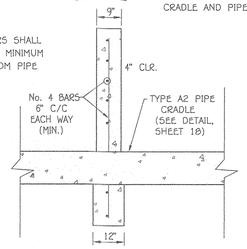


ANTI-SEEP COLLAR

NO SCALE



SECTION 'A-A'

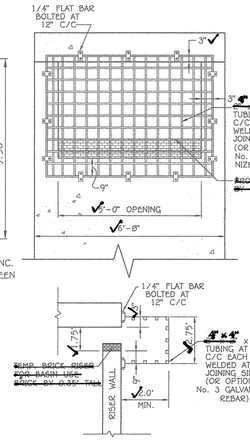


SECTION 'B-B'

NOTE: COLLARS SHALL BE PLACED A MINIMUM OF 2'-0" FROM PIPE JOINTS.

TYPICAL SECTION THROUGH BARREL, CRADLE AND ANTI-SEEP COLLAR

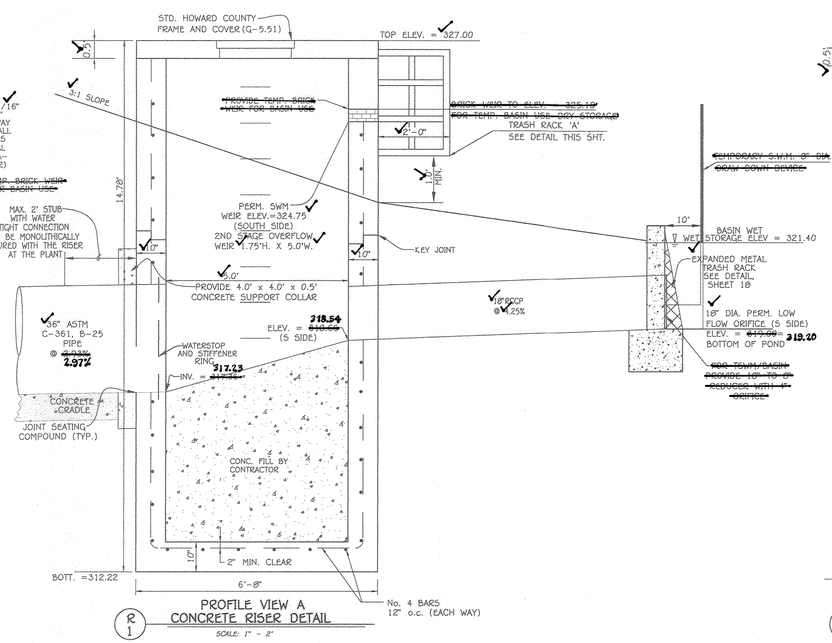
NO SCALE



TRASH RACK 'A' DETAIL

(NO SCALE)

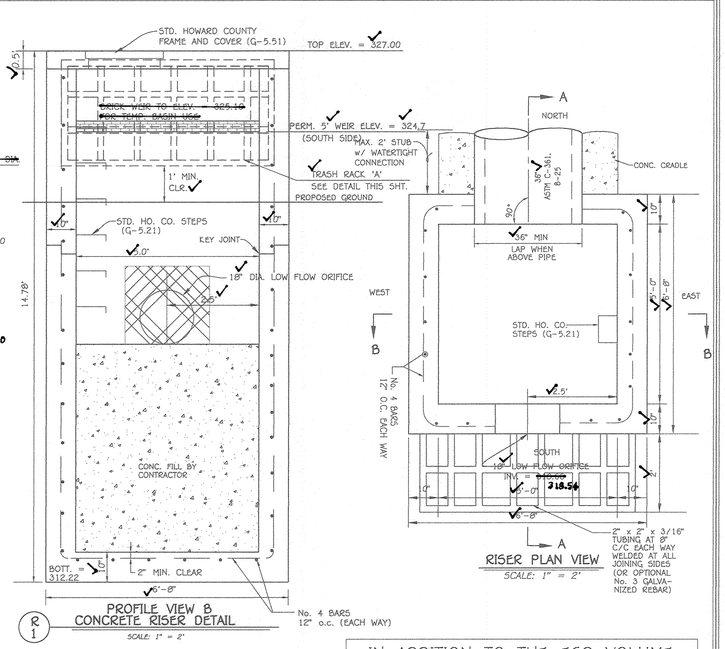
NOTES:
1. FIELD MEASURE THE STRUCTURE DIMENSIONS TO INSURE EXACT FIT OF TRASH RACK.
2. GALVANIZE ENTIRE TRASH RACK AFTER FABRICATION.
3. PAINT BATTLESHIP GRAY.



R 1

PROFILE VIEW A CONCRETE RISER DETAIL

SCALE: 1" = 2'



R 1

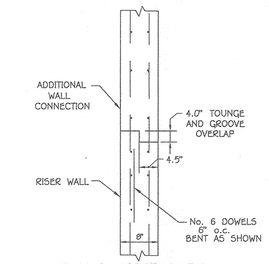
PROFILE VIEW B CONCRETE RISER DETAIL

SCALE: 1" = 2'

RISER PLAN VIEW

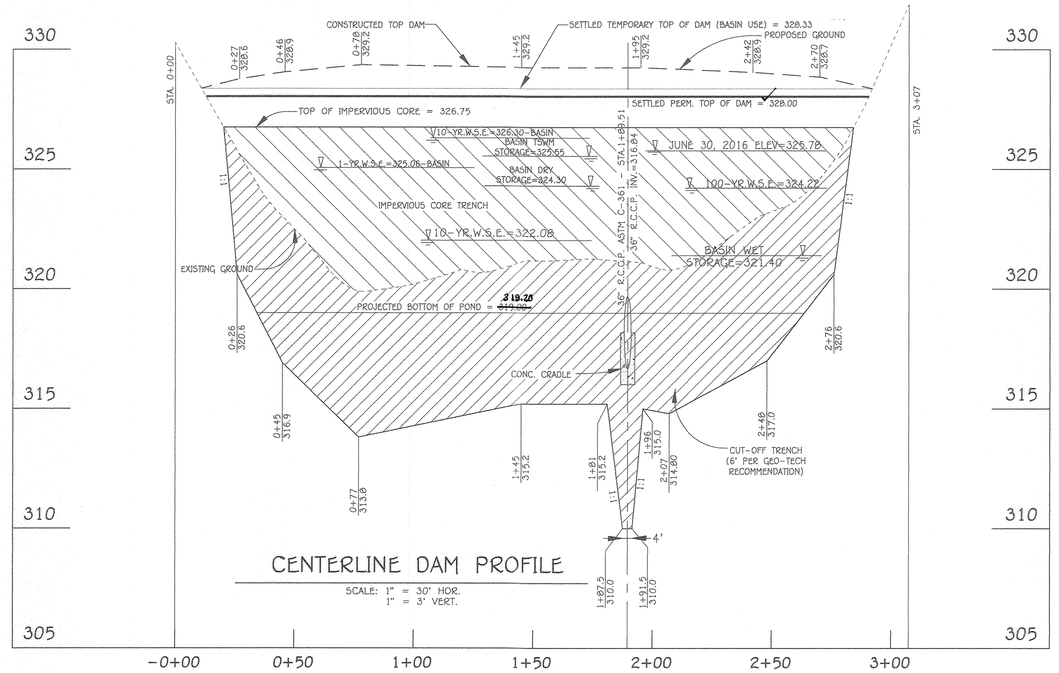
SCALE: 1" = 2'

NOTES:
1. CONCRETE SHALL BE MSHA MIX No. 3 (FC > 3,500 P.S.I.)
2. REINFORCING STEEL: GRADE 60
3. FOR WALLS OF STRUCTURE SHALL UTILIZE L.M. SCOFIELD CO. T-9055 FORM LINERS (RANDOM SPLIT-FACE ROCK) OPTIONAL.
4. PROVIDE ROUGH BROOM FINISH.
5. ANCHOR BOLTS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 5.07.03.59 OF THE MSHA STANDARDS AND SPECS.
6. ALL REINFORCING SPLICES SHALL BE LAP SPLICES OF 30 BAR DIA. UNLESS OTHERWISE SHOWN.



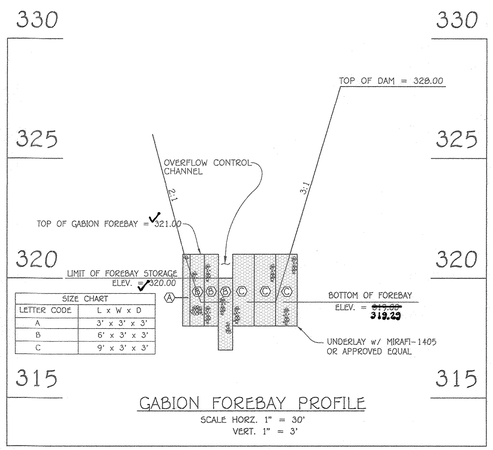
KEYED JOINT DETAIL WALL SECTION TO WALL SECTION

(NO SCALE)



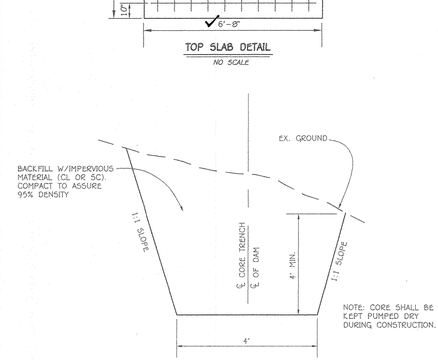
CENTERLINE DAM PROFILE

SCALE: 1" = 30' HOR.
1" = 3' VERT.



GABION FOREBAY PROFILE

SCALE HORZ. 1" = 30'
VERT. 1" = 3'



TOP SLAB DETAIL

NO SCALE

NOTE: CORE SHALL BE KEPT PUMPED DRY DURING CONSTRUCTION.

CORE TRENCH DETAIL

NOT TO SCALE

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 10, 100-YEAR. AND QUANTITY MANAGEMENT FOR THE 2016 ELLICOTT CITY FLOOD STORM EVENT.

OWNER/DEVELOPER CERTIFICATION

"I/We hereby certify that any clearing, grading construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible person 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 shall engage a Maryland registered professional engineer to supervise pond construction, and provide the Howard Soil Conservation District with an "As-Built" plan of the pond within 30 days of completion. I certify right-of-entry for periodic on-site evaluation by Howard County or the Howard Soil Conservation District and/or MDE."

Owners/Developer's Signature — Date 5/26/2020

DAVID WOESSNER
Printed Name & Title

DESIGN CERTIFICATION

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulation, 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. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Designer's Signature — Date 5/21/2020

ALDO M. VITUCCI — 20748
Printed Name — MD Registration No.

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 — Date 6/18/20

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State Of Maryland.

License Number — Expiration Date

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development — Date 9/28/20

Chief, Development Engineering Division — Date 8.28.20

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways MK — Date 8/17/2020

REVISIONS		
NO.	DESCRIPTION	DATE

AS-BUILT CERTIFICATION.

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

Date

PAUL GERARD CAVANAUGH #27020

OWNER/DEVELOPER

DORSEYS RIDGE, LLC
C\O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Signature Of Professional Engineer — DATE 5/21/2020

STATE OF MARYLAND — ALDO MICHAEL VITUCCI — No. 20748 — PROFESSIONAL ENGINEER

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

SWM NOTES AND DETAILS

DORSEY'S RIDGE

PHASE-1
LOTS 1 THRU 4, OPEN SPACE LOTS 5 THRU 8, & NON-BUILDABLE BULK PARCELS A THRU F

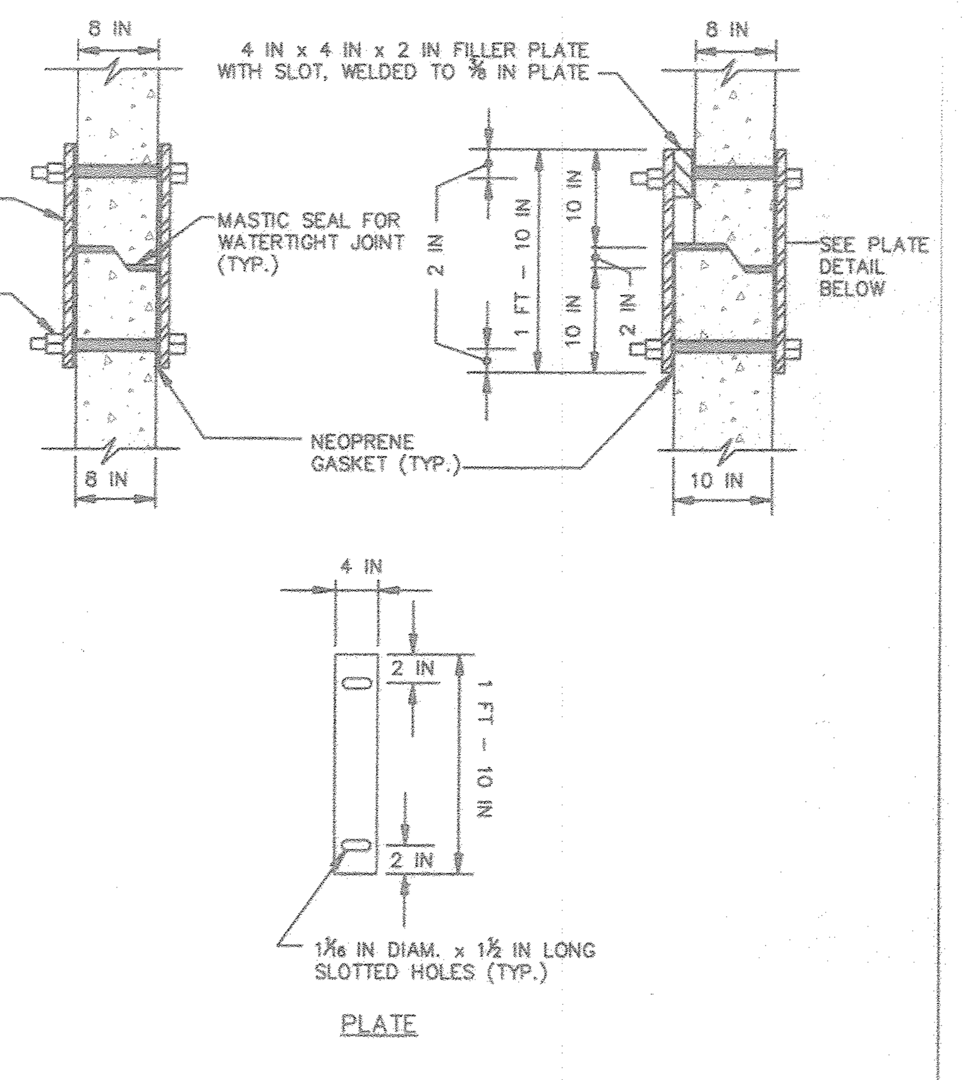
'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 17 OF 18

AS-BUILT F-19-047

I:\2015\15000\dwg\FinalsFinal - Loop Road\15000-3001 Sheet 16-18 details.dwg, Sheet 17, 1:1

DETAIL G-2-8 PRECAST RISER CONNECTOR

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

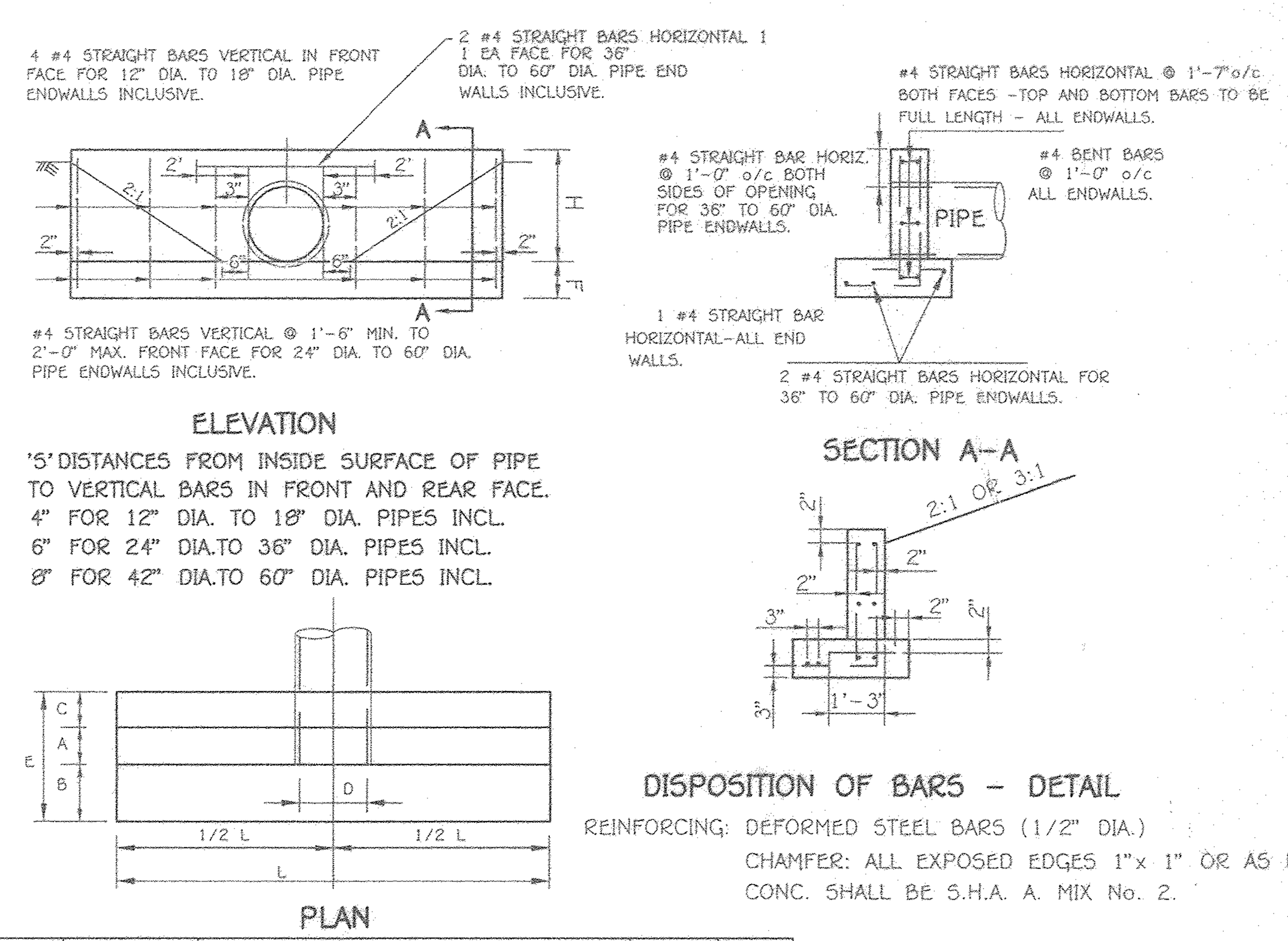
1. FABRICATE PLATE CONNECTORS FROM STAINLESS STEEL CONFORMING TO ASTM A666-72, GRADE A OR B.
2. USE TYPE 304 STAINLESS STEEL FOR BOLTS.
3. PROVIDE CONNECTORS AT CENTERLINE OF EACH PRECAST BOX FACE. FOR MANHOLES PROVIDE FOUR PLATES SPACED AT 90°.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

G.50

TYPE 'C' ENDWALL

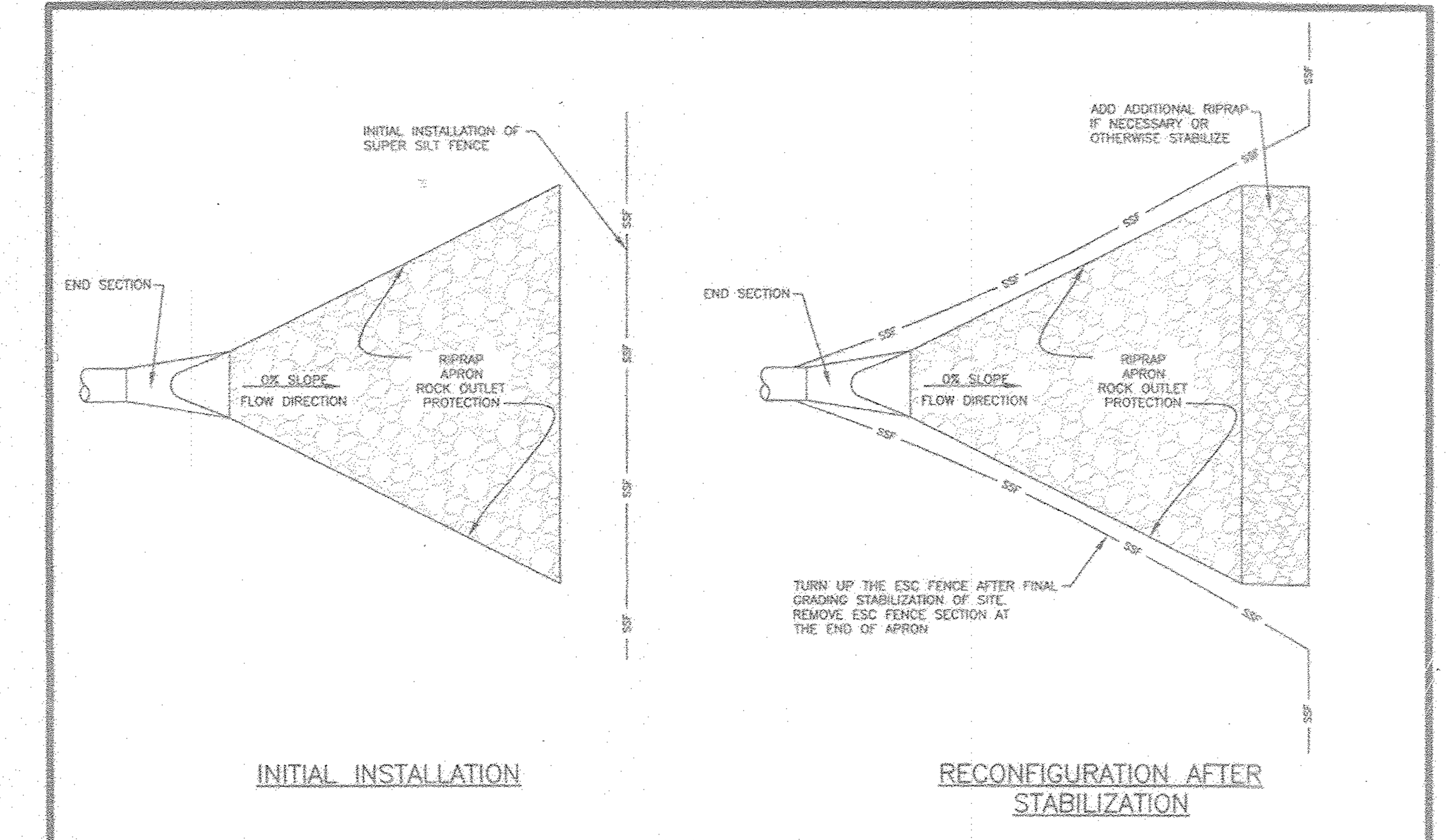


'5' DISTANCES FROM INSIDE SURFACE OF PIPE TO VERTICAL BARS IN FRONT AND REAR FACE.
4" FOR 12" DIA. TO 18" DIA. PIPES INCL.
6" FOR 24" DIA. TO 36" DIA. PIPES INCL.
8" FOR 42" DIA. TO 60" DIA. PIPES INCL.

DISPOSITION OF BARS - DETAIL
REINFORCING: DEFORMED STEEL BARS (1/2" DIA.)
CHAMFER: ALL EXPOSED EDGES 1" x 1" OR AS DIRECTED.
CONC. SHALL BE S.H.A. A MIX No. 2.

	OPENINGS		DIMENSIONS							VOLUME	STEEL
	D IN.	AREA SQ.FT.	A	B	C	E	F	H	L	CONC. C.Y.	LBS.
HW-1	18"	1.77	9"	6"	6"	1'-9"	9"	2'-3"	9'-0"	0.95	54
HW-2	36"	7.07	12"	16"	10"	3'-2"	12"	4'-0"	16'-8"	4.16	182

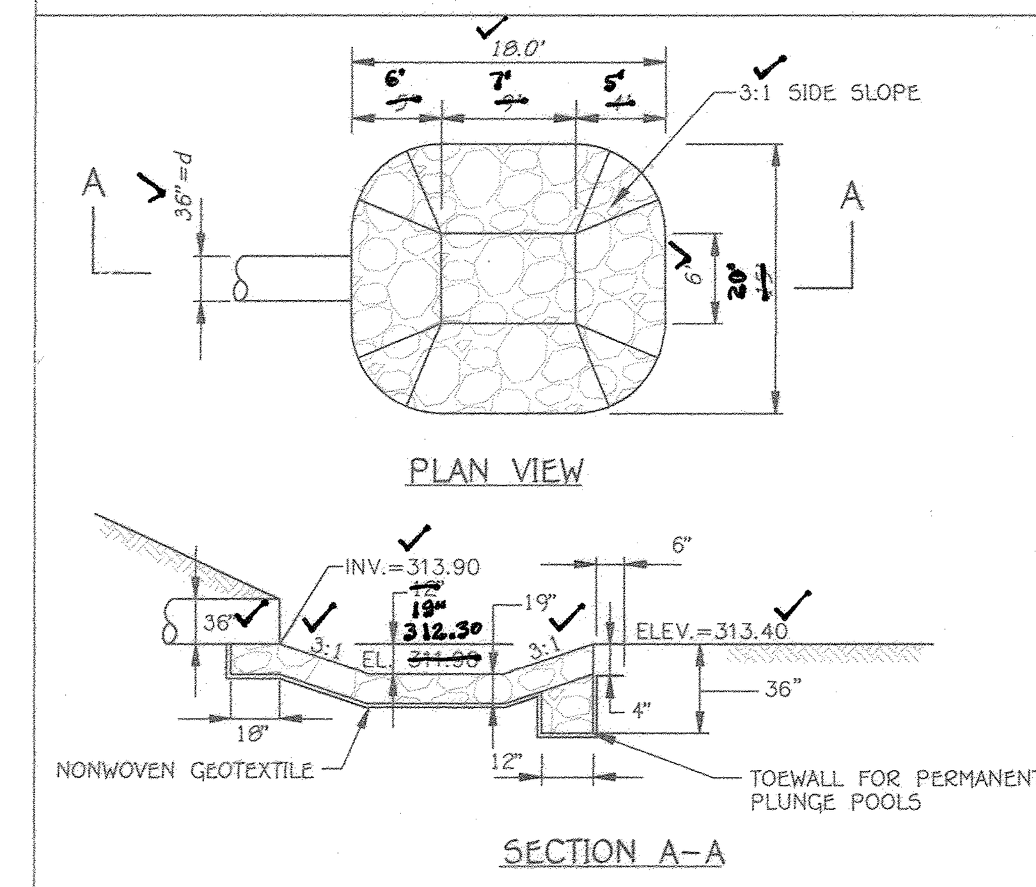
TYPE 'C' ENDWALL
NO SCALE



Howard County, Maryland Department of Public Works	SEDIMENT CONTROL FENCE RECONFIGURATION After Stabilization	Detail D-5.53

DETAIL D-4-2 PLUNGE POOL

STANDARD SYMBOL PP



CONSTRUCTION SPECIFICATIONS

1. USE CLASS I RIPRAP.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCHING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE.
3. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
4. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
5. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT. CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. DELIVER AND PLACE THE STONE FOR THE PLUNGE POOL IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
6. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

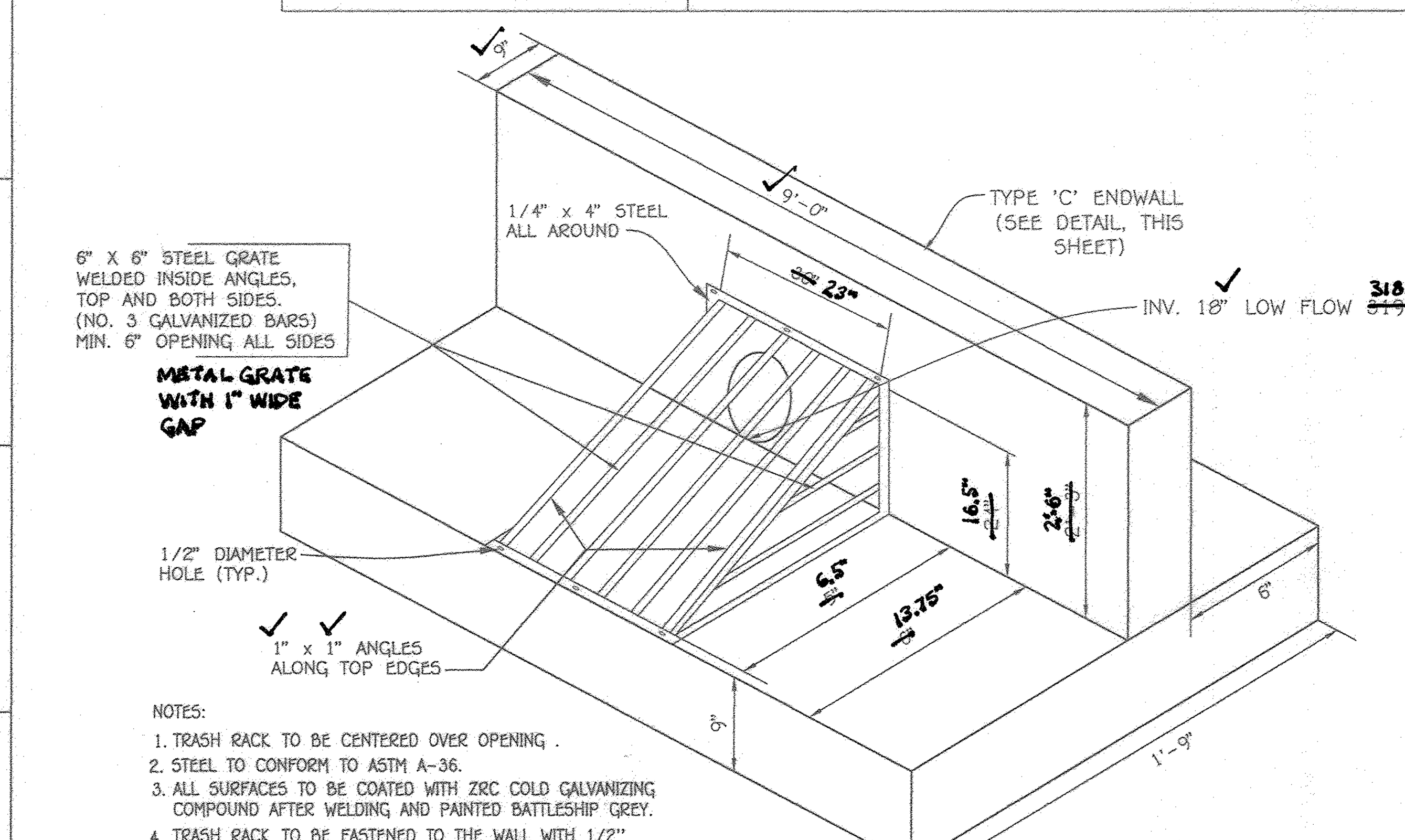
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

AS-BUILT CERTIFICATION

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

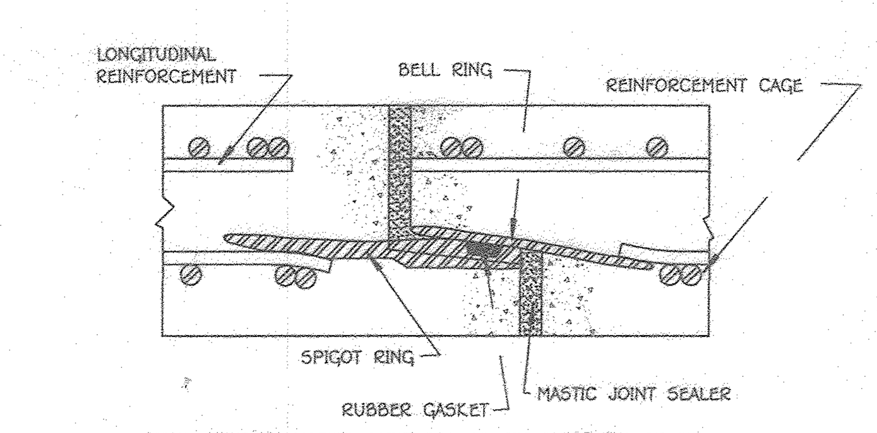
Date
PAUL GERARD CAVANAUGH #27020



NOTES:

1. TRASH RACK TO BE CENTERED OVER OPENING.
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING AND PAINTED BATTLESHIP GREY.
4. TRASH RACK TO BE FASTENED TO THE WALL WITH 1/2" MASONRY ANCHORS, TRASH RACK TO BE REMOVABLE.

EXPANDED METAL TRASH RACK @ HW-1
NOT TO SCALE

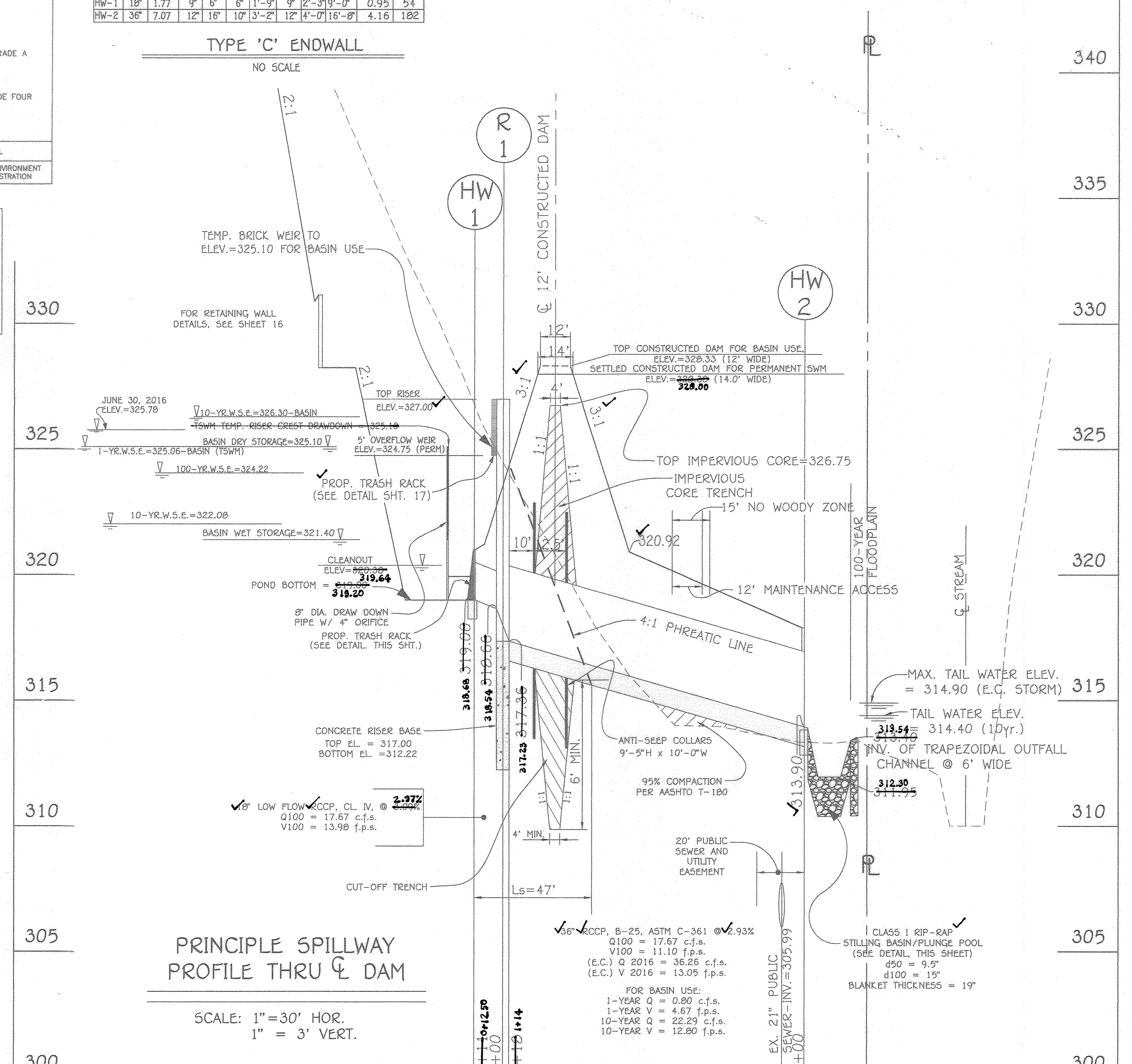


NOTE: PROVIDE MASTIC JOINT SEALER FROM OUTSIDE OF PIPE JOINTS PRIOR TO INSTALLING BARREL UNDERGROUND

ASTM DESIGNATION C361 DIAMETERS 12 THRU 168 INCH PRESSURES TO 125 FEET OF HEAD

CONCRETE PIPE JOINT DETAIL
(NO SCALE)

IN ADDITION TO THE ESD VOLUME MANAGEMENT, THIS POND PROVIDES 10, 100-YEAR. AND QUANTITY MANAGEMENT FOR THE 2016 ELLICOTT CITY FLOOD STORM EVENT.



PRINCIPLE SPILLWAY PROFILE THRU ℄ DAM

SCALE: 1"=30' HOR. 1" = 3' VERT.

OWNER/DEVELOPER CERTIFICATION

"I/We hereby certify that any clearing, grading construction, or development will be done pursuant to this approved erosion and sediment control plan, including inspecting and maintaining controls, and that the responsible person 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 shall engage a Maryland registered professional engineer to supervise pond construction, and provide the Howard Soil Conservation District with an "As-Built" plan of the pond within 30 days of completion. I certify right-of-entry for periodic on-site evaluation by Howard County, the Howard Soil Conservation District and/or MDE."

Owners/Developer's Signature — Date 5/26/2020
Printed Name & Title — DAVID WOESSNER

DESIGN CERTIFICATION

"I hereby certify that this plan has been designed in accordance with current Maryland erosion and sediment control laws, regulation, 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. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Designer's Signature — Date 5/27/2020
Printed Name ALDO M. VITTICI — MD Registration No. #20748 P.E., R.L.S., or R.L.A. (circle one)

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 — Date 6/18/20

PROFESSIONAL CERTIFICATION

"I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State Of Maryland.

License Number — Expiration Date

(This certification, seal and signature shall appear close to each other)

Approved: Department Of Planning And Zoning

Chief, Division Of Land Development — Date 9/28/20

Chief, Development Engineering Division — Date 8.28.20

Approved: Howard County Department Of Public Works

Chief, Bureau Of Highways — MK — Date 8/17/2020

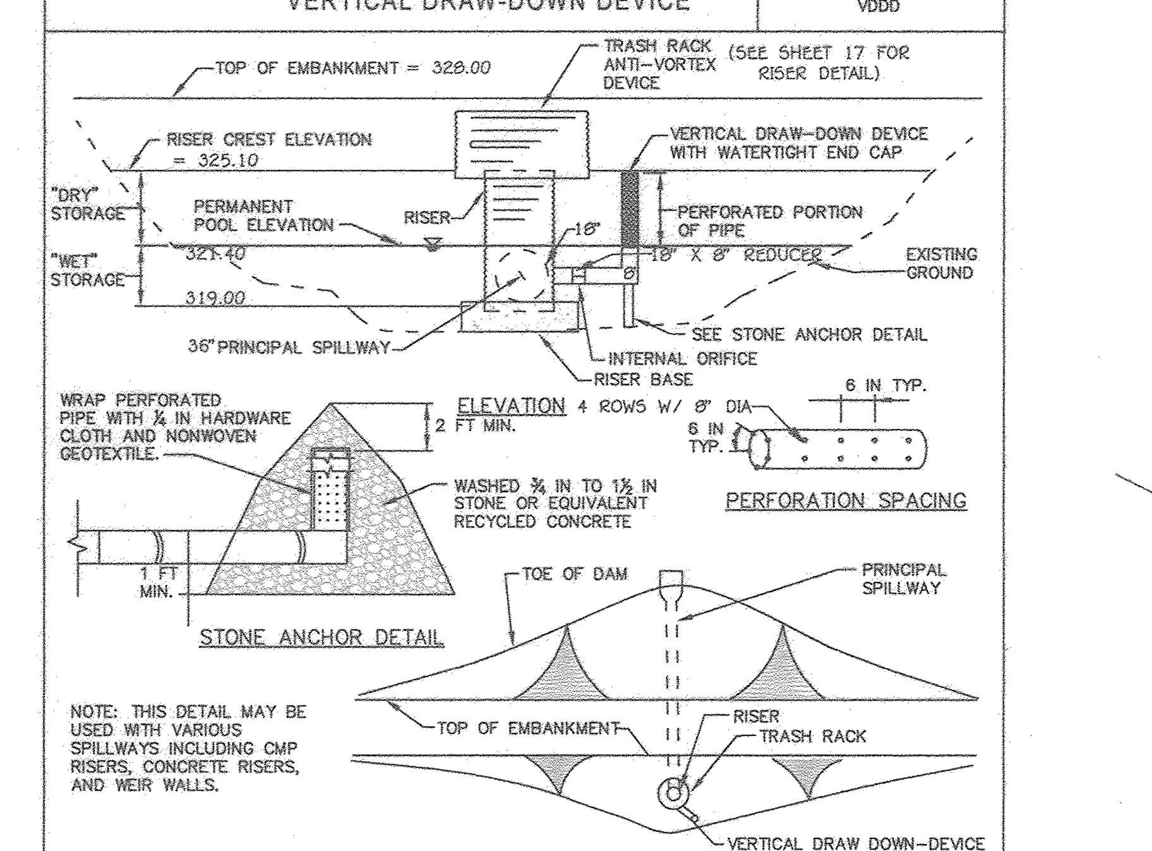
REVISIONS

NO.	DESCRIPTION	DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DETAIL G-2-7 SEDIMENT BASIN SCHEMATIC VERTICAL DRAW-DOWN DEVICE

STANDARD SYMBOL VDDD



NOTE: THIS DETAIL MAY BE USED WITH VARIOUS SPILLWAYS INCLUDING CMP RISERS, CONCRETE RISERS, AND WEIR WALLS.

CONSTRUCTION SPECIFICATIONS

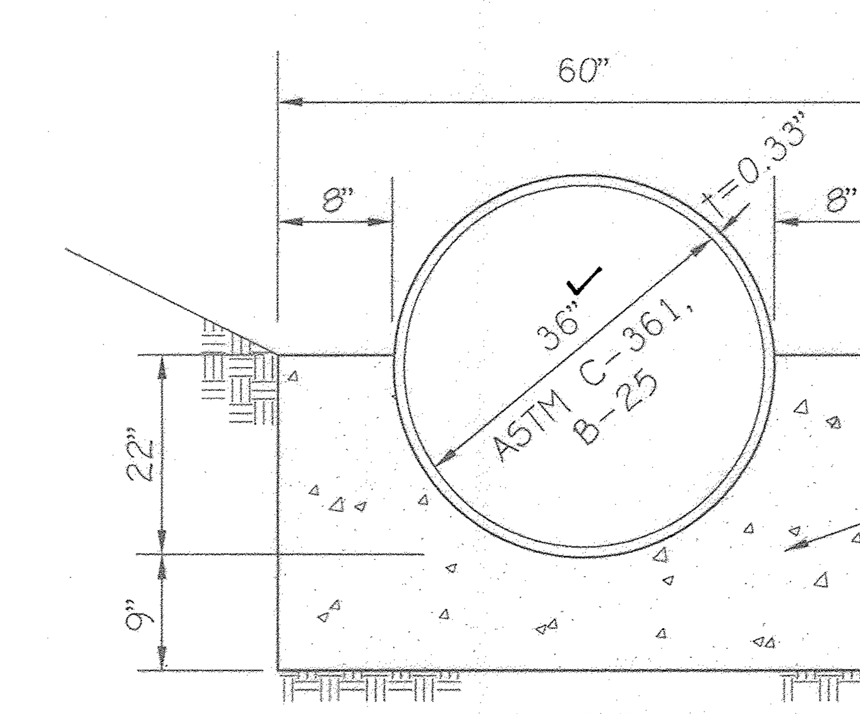
1. PERFORATE PIPE WITH 1 INCH DIAMETER PERFORATIONS SPACED 6 INCHES APART LONGITUDINALLY AND RADIALLY OR IN ACCORDANCE WITH APPROVED PLAN.
2. DO NOT EXTEND PERFORATIONS IN THE DRAW-DOWN DEVICE INTO WET STORAGE.
3. WRAP THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE FIRST WITH ½ INCH GALVANIZED HARDWARE CLOTH, THEN WITH NONWOVEN GEOTEXTILE. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE.
4. AS AN ALTERNATE TO STONE ANCHORING, SECURE DRAW-DOWN DEVICE WITH TWO 1 INCH STEEL ANGLES SET 3 FEET MINIMUM INTO THE GROUND ATTACHED TO DRAW-DOWN DEVICE BY A 1 INCH WIDE GALVANIZED STEEL STRAP OR 12 GAUGE OR HEAVIER WIRE.
5. REMOVE SEDIMENT WHEN IT ACCUMULATES TO CLEANOUT ELEVATION (50% OF THE WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA IN A SUCH A MANNER THAT IT WILL NOT ERODE. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.



A2 CRADLE
NO SCALE

MSHA MIX NO. 3 (FC > 3500 p.s.i.)

NOTE:
CONC. CRADLE TO BE POURED DIRECTLY AGAINST EARTH BANKS. IF BOTTOM OF TRENCH IS WIDER THAN THE CRADLE, SLOPING SIDES (FRAMED) SHALL BE USED.

OWNER/DEVELOPER
DORSEYS RIDGE, LLC
C/O DAVE WOESSNER
308 MAGOTHY ROAD
SEVERNA PARK, MD 21146
410-461-0837

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20748, EXPIRATION DATE: 02/22/2021.

Signature Of Professional Engineer — DATE 5/27/2020

STATE OF MARYLAND — ALDO MICHAEL VITTICI — No. 20748 — PROFESSIONAL ENGINEER

SWM NOTES AND DETAILS

DORSEY'S RIDGE

PHASE-I

LOTS 1 THRU 4, OPEN SPACE LOTS 5 THRU 8, & NON-BUILDABLE BULK PARCELS A THRU F

'A RESUBDIVISION OF "WILHIDE PROPERTY, LOT 1, 2 & 3", PLAT NO. 18442
ZONED: CEF-R
TAX MAP NO.: 24 GRID NO.: 18 PARCEL NO: 260 LOTS: 1 THRU 3
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MAY, 2020
SHEET 18 OF 18

AS-BUILT F-19-047

I:\2015\15000\dwg\Finals\Final - Loop Road\15000-3001 Sheet 16-18 details.dwg, Sheet 18, 1:1