FINAL SITE DEVELOPMENT PLANS
FOR
ELDERSBURG OVERLOOK
A RETIREMENT VILLAGE

TAX MAP# 73, GRID# 6, PARCEL# 246
ELECTION DISTRICT: 5 CARROLL COUNTY, MARYLAND

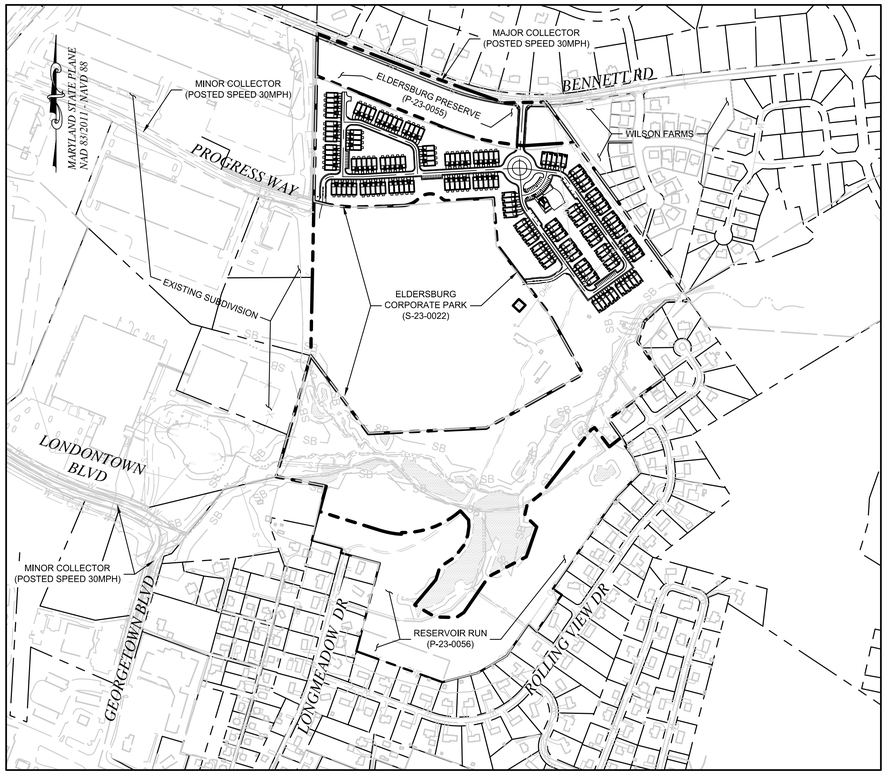
SITE ADDRESS
1701 BENNETT ROAD
ELDERSBURG, MD 21784

SITE DETAILS

1. EXISTING ZONING: R-20,000 - RESIDENTIAL DISTRICT
2. TOTAL AREA OF SITE: 58.69 AC±
3. EXISTING USE: FALLOW/ FARM
4. PROPOSED USE: 55+ RETIREMENT VILLAGE
5. TOTAL DEVELOPEMENT AREA: 40.26 AC± (1,753,725.60 S.F.)
6. THE PROPERTIES SHOWN HEREON IS OWNED BY:
   LONG MEADOW PARK, LLC
   2560 LORD BALTIMORE RD
   BALTIMORE, MD 21244
7. TAX MAP: 73
   PARCEL : 246
   GRID: #6
8. PROPERTY BOUNDARY AND EXISTING TOPOGRAPHY SHOWN PER FIELD SURVEY BY SAMS COMPANIES (FORMERLY MTPLS, INC.) DATED 11/2021.
9. LOCATION OF NEAREST WATER SUPPLY AVAILABLE FOR FIRE PROTECTION ARE EXISTING HYDRANTS LOCATED ON BENNETT ROAD, PROGRESS WAY, LONDONTOWN BLVD AND GEORGETOWN BLVD. ADDITIONAL HYDRANTS ARE PROPOSED ON SITE AS PART OF THIS SITE DEVELOPMENT PLAN TO ADDRESS FIRE PROTECTION REQUIREMENTS.
10. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND WERE BASED ON ARCHIVAL DRAWINGS PROVIDED BY CARROLL COUNTY AND/OR THE STATE OF MARYLAND. CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF ANY EXISTING UTILITIES TO THEIR OWN SATISFACTION AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK. THE ENGINEER ASSUMES NO RESPONSIBILITY OR LIABILITY RESULTING FROM ANY INACCURACIES THEREON.
11. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 THREE (3) WORKING DAYS PRIOR TO BEGINNING ANY WORK IN THE VICINITY OF EXISTING UTILITIES, AND NOT COMMENCE WORK UNTIL ALL UTILITIES HAVE BEEN CLEARLY MARKED.
12. THE CONTRACTOR SHALL NOTE THAT IN CASE OF A DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
13. ANY CHANGES TO THIS PLAN WILL REQUIRE AN AMENDED SITE DEVELOPMENT PLAN TO BE APPROVED BY THE CARROLL COUNTY PLANNING AND ZONING COMMISSION.
14. THIS SITE PLAN SHALL BECOME VOID EIGHTEEN MONTHS AFTER THE DATE OF APPROVAL IF NO BUILDING PERMIT OR ZONING CERTIFICATE HAS BEEN ISSUED FOR THIS PROJECT, UNLESS AN EXTENSION OF THE TIME LIMIT HAS BEEN ISSUED BY THE DIRECTOR OF PLANNING AND LAND MANAGEMENT.
15. NOTE: ALL PROPOSED SPOT ELEVATIONS ARE LOCATED AT BOTTOM OF CURB AND ALL DIMENSIONS ARE TO FACE OF CURB UNLESS LABELED OTHERWISE.
16. THE COORDINATES SHOWN HEREON ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED IN THE MARYLAND COORDINATE SYSTEM - NAD 83 (2011) AND ARE BASED UPON THE FOLLOWING CONTROL STATIONS:

DESIGNATION	NORTH (SFT)	EAST (SFT)	ELEV.
"BEVARD"	633722.46	1326946.06	615.11
"BEVARD AZ"	633573.26	1328331.51	583.43

17. THERE IS AN EXISTING COUNTY REGULATED FLOODPLAIN AS WELL AS WETLANDS, STREAMS AND ASSOCIATED BUFFERS ON SITE.
18. THE SITE IS APPROXIMATELY 10,000' FROM THE NEAREST PRODUCTION WELL.
19. NO CONSTRUCTION VEHICLES, CONTRACTOR OR PRIVATE, OR CONSTRUCTION MATERIALS OR EQUIPMENT MAY BE PARKED, PLACED OR STORED WITHIN ANY PUBLIC RIGHT OF WAY.
20. UNDERGROUND TANK NOTE: IF ANY UNDERGROUND TANKS ARE ENCOUNTERED ON SITE DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE CARROLL COUNTY BUREAU OF RESOURCE MANAGEMENT. THE CONTRACTOR SHALL REMOVE THE TANKS IN ACCORDANCE WITH MDE PROCEDURES ONCE APPROVAL HAS BEEN GRANTED.
21. ENTRANCE CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CARROLL COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION. CONTRACTOR IS RESPONSIBLE TO NOTIFY THAT OFFICE AT 410-386-2157 A MINIMUM OF THREE WORKING DAYS PRIOR TO BEGINNING WORK IN OR ALONG ANY PUBLIC ROAD.
22. CONTRACTOR SHALL NOTIFY CARROLL COUNTY BUREAU OF UTILITIES AT 410-386-2164 AT LEAST 48 HOURS PRIOR TO BEGINNING ANY WORK ON PUBLIC WATER OR SEWER WITHIN COUNTY RIGHT-OF-WAY OR EASEMENTS.
23. THE SITE IS LOCATED WITHIN A SURFACE WATER PROTECTION AND MANAGEMENT AREA. IF THE PROPOSED USE OF ANY BUILDING IS TO INCLUDE THE STORAGE OR USE OF REGULATED SUBSTANCES, THE REQUIREMENTS OF CHAPTER 154, WATER RESOURCE MANAGEMENT OF THE CARROLL COUNTY CODE OF PUBLIC LOCAL LAWS AND ORDINANCES MUST BE ADDRESSED.
24. WHERE SIDEWALKS CROSS DRIVEWAYS THE MAXIMUM CROSS SLOPE SHALL NOT EXCEED 2.00%.GEO
25. GEORGETOWN BOULEVARD EXTENDED WILL BE CONSTRUCTED WITH ELDERSBURG CORPORATE PARK (S-23-0022) AND RESERVOIR RUN (P-23-0056)
26. BENNETT ROAD IMPROVEMENTS OVERLAP ON ELDERSBURG PRESERVE (P-23-0055) AND ELDERSBURG OVERLOOK (S-23-0027). WHICHEVER PROJECT COMES FIRST SHALL CONSTRUCT SAID BENNETT ROAD IMPROVEMENTS FULLY. A PUBLIC WORKS AGREEMENT WILL BE REQUIRED FOR THE CONSTRUCTION.



LOCATION MAP
SCALE: 1"=400'

ENGINEER
I CERTIFY THAT THIS PLAN OF SEDIMENT CONTROL IS DESIGNED WITH MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND HAS BEEN DESIGN TO THE STANDARDS AND SPECIFICATIONS ADOPTD BY CARROLL SOIL CONSERVATION DISTRICT.

SIGNATURE: _____ DATE: _____

PRINTED NAME: _____

PE No: _____ EXPIRATION DATE: _____

DEVELOPER
I CERTIFY THAT THIS PLAN OF SEDIMENT CONTROL WILL BE IMPLEMENTED TO THE FULLEST EXTENT, AND ALL STRCUTURES WILL BE INSTALLED TO THE DISIGN AND SPECIFICATIONS AS SPELLED OUT IN THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN CONSTRUCTION OF THIS PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SOIL EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE EVALUATION BY THE CARROLL SOIL CONSERVATION DISTICT PERSONNEL AND COOPERATING AGENCIES.

SIGNATURE: _____ DATE: _____

PRINTED NAME: _____

COMPANY NAME: _____ PHONE No: _____

OWNER
I/WE CERTIFY THAT ALL PROPOSED WORK SHOWN ON THESE CONSTRUCTION DRAWINGS HAS BEEN REVIEWED BY ME/USE AND THAT I/WE FULLY UNDERSTAND WHAT IS NECESSARY TO ACCOMPLISH THIS WORK AND THAT THE WORK WILL BE CONDUCTED IS STRICT ACCORDANCE WITH THESE PLANS. I/WE UNDERSTAND THAT ANY CHANGES TO THESE PLANS WILL REQUIRE AN AMENDED PLAN TO BE REVIEWED AND APPROVED BY THE CARROLL COUNTY PLANNING AND ZONING COMMISSION BEFORE ANY CHANGE IN THE WORK IS MADE.

SIGNATURE: _____ DATE: _____

PRINTED NAME: _____

OWNER HEALTH DEPARTMENT CERTIFICATION
PUBLIC WATER AND SEWER WILL BE AVAILABLE TO ALL LOTS OFFERED FOR SALE.

BY: _____ DATE: _____

ENGINEERING REVIEW
THIS PLAN HAS BEEN REVIEWED FOR COMPLIANCE WITH CARROLL COUNTY DEPARTMENT OF PUBLIC WORKS DESIGN MANUAL - VOLUME 1 ROAD AND STORM DRAINS. THE DESIGN ENGINEER OR ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE ACCURACY OF ALL DATA AND MODIFICATIONS FOR CONSTRUCTION.

BY: _____ DATE: _____

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

APPROVED _____ DATE: _____
CARROLL S.C.D.

CARROLL COUNTY DEPARTMENT OF PUBLIC WORK BUREAU OF UTILITIES
BY: _____ DATE: _____

CARROLL COUNTY DEPARTMENT OF PUBLIC WORK BUREAU OF ENGINEERING
BY: _____ DATE: _____

CARROLL COUNTY PLANNING AND ZONING COMMISSION
BY: _____ DATE: _____

CARROLL COUNTY HEALTH DEPARTMENT
COMMUNITY WATER SUPPLY AND/OR COMMUNITY SEWAGE SYSTEMS ARE IN CONFORMANCE WITH CARROLL COUNTY MASTER PLAN

BY: _____ DATE: _____

PARKING TABULATION
USE: AGE RESTRICTED ADULT HOUSING

REQUIRED: 2 SPACES PER EACH DWELLING UNIT
156 DWELLING UNITS X 2 = 312 SPACES

PROVIDED: 2 GARAGE SPACES + 2 DRIVEWAY SPACES = 4 SPACES PER DWELLING UNIT
156 DWELLING UNITS X 4 = 624 SPACES
49 OVERFLOW PARKING SPACES

USE: COMMUNITY CENTER

REQUIRED: 1 FOR EVERY 3 PEOPLE BASED ON MAXIMUM BUILDING CAPACITY
5,100 SQ. FT. ÷ 50 SQ. FT. PER PERSON = 102 PERSON CAPACITY
102 ÷ 3 = 34 SPACES

PROVIDED: 34 SPACES

HANDICAP SPACES REQUIRED: 1 SPACE
VAN ACCESSIBLE SPACE REQUIRED : 1 SPACE

HANDICAP SPACES PROVIDED: 2 SPACES
VAN ACCESSIBLE SPACE PROVIDED : 2 SPACES

TRIP GENERATION:
ITE TRIP GENERATION MANUAL (11TH EDITION) METHODOLOGY USED:

#252 SENIOR ADULT HOUSING - MULTIFAMILY (156 UNITS)

21 AM PEAK HOUR TRIPS
22 PM PEAK HOUR TRIPS
26 SATURDAY PEAK HOUR TRIPS
476 AVERAGE DAILY TRIPS (ADT)

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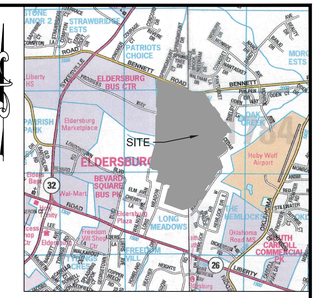

VICINITY MAP
SCALE: 1"=2000'

SITE COMPLIANCE CHECKLIST

1. CONTRACTOR SHALL NOTIFY THE CARROLL COUNTY BUREAU OF PERMITS AND INSPECTIONS AT 410-386-2674, AT LEAST ONE (1) DAY PRIOR TO BEGINNING ANY WORK.
2. SITE COMPLIANCE INSPECTIONS ARE REQUIRED AT THE FOLLOWING STAGES DURING CONSTRUCTION:
   - A. PROPOSED STRUCTURES STAKED OUT IN PROPER LOCATIONS AS SHOWN ON THESE APPROVED PLANS.
   - B. PROPOSED FOUNDATIONS INSTALLED FOR ALL BUILDINGS SHOWN ON THESE APPROVED PLANS.
   - C. SUB-GRADES ESTABLISHED FOR ALL DRIVES, PARKING LOTS, AND SURROUNDING GRADING.
   - D. COMPLETION OF ALL DRIVES, PARKING LOTS, AND SURROUNDING GRADING.
   - E. COMPLETION OF ALL WORK SHOWN ON PLAN.

   IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE CARROLL COUNTY BUREAU OF PERMITS AND INSPECTIONS AT 410-386-2674 UPON COMPLETION OF EACH PHASE OF CONSTRUCTION.
3. CONTRACTOR SHALL NOTIFY CARROLL COUNTY BUREAU OF RESOURCE MANAGEMENT, ENVIRONMENTAL INSPECTION SERVICES DIVISION AT 410-386-2210 PRIOR TO BEGINNING ANY WORK. ALL FOREST CONSERVATION PLAN DEVICES MUST BE IN PLACE PRIOR TO ANY CONSTRUCTION.
4. FINAL LANDSCAPING INSPECTION SHALL BE ARRANGED THROUGH THE BUREAU OF RESOURCE MANAGEMENT, ENVIRONMENTAL INSPECTION SERVICES DIVISION AT 410-386-2210 BY THE CONTRACTOR/DEVELOPER OR AGENT, WRITTEN APPROVAL FROM THE LANDSCAPE REVIEW SPECIALIST, BUREAU OF RESOURCE MANAGEMENT MUST BE OBTAINED FOR ANY DEVIATIONS FROM THE LANDSCAPING OR FOREST CONSERVATION PLANS OR MODIFICATIONS IN THE PLANT MATERIAL.
5. THE CONTRACTOR SHALL NOT PROCEED TO THE NEXT PHASE OF CONSTRUCTION UNTIL GIVEN APPROVAL OF PRIOR PHASE.

STORMWATER MANAGEMENT NOTE

STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE CARROLL COUNTY POLICY FOR STORMWATER MANAGEMENT, AS SPECIFIED IN CHAPTER 151.015 THE CARROLL COUNTY CODE. THE STORMWATER FROM THIS SITE DRAINS INTO SNOWDENS RUN, A USE II STREAM, ACCORDINGLY, THE 100-YEAR STORM WILL BE MANAGED THROUGH A COMBINATION OF GRASS SWALES, SAND FILTERS, SUBMERGED GRAVEL WETLANDS , MICRO-BIORETENTION FACILITIES, AND QUANTITY PONDS.

WATER RESOURCE MANAGEMENT NOTE

THIS PROPERTY DOES NOT FALL WITHIN A TIER II WATERSHED. THE PROPERTY IS WITHIN A TIER III WATERSHED, SURFACE WATER PROTECTION WATERSHED, AND SURFACE WATER MANAGEMENT AREA.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

COVER SHEET

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

OWNER	DEVELOPER
LONG MEADOW PARK, LLC	ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE	2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244	BALTIMORE, MD 21244
PHONE NO: 410-369-1207	CONTACT: MATT TAYLOR
	PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A
SHEET: 1 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (C-1&2) Cover & Abrev Sht.dwg Mar 04, 2025 3:26pm rlangrehr

GENERAL NOTES

1. CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITIONS OF THE FOLLOWING, INCLUDING ALL ADDENDA, SUPPLEMENTS OR UPDATES:
   A. DESIGN MANUAL - VOLUME ONE - ROADS AND STORM DRAINS, 1994 EDITION, OF THE CARROLL COUNTY DEPARTMENT OF PUBLIC WORKS.
   B. DESIGN GUIDE FOR FLEXIBLE PAVEMENT, 2004, OF THE CARROLL COUNTY DEPARTMENT OF PUBLIC WORKS.
   C. BOOK OF STANDARDS, HIGHWAY AND INCIDENTAL STRUCTURES OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION.
   D. STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, 2008 EDITION, OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION.
   E. MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MDMUTCD) 2009 EDITION OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION.
   F. MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, 2011 EDITION, PUBLISHED JOINTLY BY WATER RESOURCES ADMINISTRATION, SOIL CONSERVATION SERVICE AND STATE SOIL CONSERVATION COMMITTEE.

ALL OF THE ABOVE NOTED PUBLICATIONS ARE INCLUDED BY REFERENCE AS PART OF THESE CONSTRUCTION PLANS.

2. THE CONTRACTOR SHALL NOTIFY THE CARROLL COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (410-386-2157) A MINIMUM OF THREE (3) WORKING DAYS BEFORE BEGINNING WORK.

3. CONTRACTOR SHALL FURNISH, PLACE AND MAINTAIN TRAFFIC CONTROL MEASURES AS SHOWN IN THESE PLANS AND AS SPECIFIED IN THE MDMUTCD. CONTRACTOR SHALL IMMEDIATELY REMOVE AND REPLACE DEVICES WHICH ARE DAMAGED, DO NOT FUNCTION PROPERLY, OR ARE DETERMINED BY CONSTRUCTION INSPECTOR TO BE UNSUITABLE FOR THEIR PURPOSE. TRAFFIC CONTROL DEVICES MAY BE REMOVED ONLY UPON APPROVAL OF CONSTRUCTION INSPECTOR.
4. LOCATIONS OF EXISTING UTILITIES ARE SHOWN ONLY AS NOTIFICATION TO CONTRACTOR OF THE PRESENCE OF UNDERGROUND UTILITIES. CARROLL COUNTY AND THE DESIGN ENGINEER DO NOT WARRANT OR GUARANTEE CORRECTNESS OR COMPLETENESS OF INFORMATION SHOWN. CONTRACTOR IS RESPONSIBLE FOR CONTACTING MISS UTILITY AT 1-800-257-7777 FOR VERIFYING EXISTENCE AND LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK. ANY DAMAGE TO EXISTING UTILITIES DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT CONTRACTOR'S EXPENSE.

5. DEVELOPER IS RESPONSIBLE IN ALL REGARDS FOR RELOCATION OF ANY EXISTING UTILITIES.

6. IN CASE OF DISCREPANCY BETWEEN SCALED AND FIGURED DIMENSIONS, FIGURED DIMENSIONS SHALL GOVERN.

7. IF FOR ANY REASON PROPOSED FACILITIES CANNOT BE CONSTRUCTED IN ACCORDANCE WITH APPROVED PLANS, CONTRACTOR MUST IMMEDIATELY INFORM CONSTRUCTION INSPECTOR OR CONSTRUCTION INSPECTION DIVISION (410-386-2157) AND SHALL NOT BEGIN OR CONTINUE WORK ON THOSE ITEMS. IF THE DEPARTMENT OF PUBLICWORKS DETERMINES PLAN REVISIONS ARE NECESSARY, NO WORK SHALL BE PERFORMED ON THE ITEM(S) IN QUESTION UNTIL REVISED PLANS ISSUED BY THE DESIGN ENGINEER ARE APPROVED AND ISSUED FOR CONSTRUCTION BY THE BUREAU OF DEVELOPMENT REVIEW.

8. FAILURE TO MENTION SPECIFICALLY THE PROVISION OF ANY ITEM(S), OR PERFORMANCE OF ANY WORK OR PROCEDURE WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT, SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PROVIDE SUCH ITEM(S) OR TO PERFORM SUCH WORK OR PROCEDURE.

9. CONSTRUCT EARTH FILLS FOR ROADS, EMBANKMENTS, AND STRUCTURES IN ACCORDANCE WITH SECTION 204 EMBANKMENT AND SUBGRADE OF THE MD SHA STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS. COMPACT THE MATERIAL THAT IS 1 FOOT BELOW THE TOP OF SUBGRADE TO AT LEAST 92.0% OF MAXIMUM DRY DENSITY USING AASHTO T-180 METHOD. COMPACTION OF TOP ONE FOOT OF FILL SHALL NOT BE LESS THAN 97.0% OF MAXIMUM DRY DENSITY USING THE SAME METHOD.

10. DEVELOPER IS RESPONSIBLE FOR PROVIDING SOIL, BASE AGGREGATE AND HOT MIX ASPHALT COMPACTION TESTING. A CERTIFIED TECHNICIAN MUST BE ONSITE AT ALL TIMES DURING FILL OPERATIONS. COMPACTION TESTS MUST BE CERTIFIED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. COPIES OF SOIL COMPACTION TEST RESULTS MUST BE PROVIDED TO, AND APPROVED BY, THE CONSTRUCTION INSPECTION DIVISION PRIOR TO PLACEMENT OF CURBS AND/OR BASE AGGREGATE. COPIES OF BASE AGGREGATE COMPACTION TEST RESULTS MUST BE PROVIDED TO, AND APPROVED BY, THE CONSTRUCTION INSPECTION DIVISION PRIOR TO PLACEMENT OF BASE HOT MIX ASPHALT.

11. INLET GRATES IN SUMPS SHALL BE CONSTRUCTED LEVEL AT ELEVATION GIVEN IN STRUCTURE SCHEDULE. INLETS ON GRADE SHALL BE ADJUSTED SO THAT SLOPE OF GRATE MATCHES FINISHED FLOW LINE OF CURB. TOP ELEVATION SHALL APPLY TO CENTERLINE OF GRATE AT FLOW LINE OF CURB. CROSS SLOPE OF THE GRATE SHALL MATCH THE ROAD CROSS SLOPE.

12. PIPE ELEVATIONS SHOWN ON STORM DRAIN PROFILES ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.

13. WHERE DITCH OR WATERWAY STABILIZATION MATTING OF ANY TYPE IS SPECIFIED, INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. MATTING SHALL BE PLACED ON BOTTOM AND SIDE SLOPES TO PROVIDE EITHER 1.0' STABILIZED DEPTH, UNLESS OTHERWISE INDICATED ON PLANS.

14. ALL EXISTING PAVING DISTURBED BY UTILITY CUTS SHALL BE REPLACED IN ACCORDANCE WITH CARROLL COUNTY STANDARD PLATE 47, OPTION 1 OR OPTION 3 IN THE DESIGN MANUAL, VOLUME 1 OR AS NOTED IN THE UTILITY PERMIT.

15. ONCE BEGUN, ROAD CONSTRUCTION SHALL BE CONTINUED UNTIL FULL DEPTH OF AGGREGATE BASE AND PAVING AS SHOWN ON THE TYPICAL SECTION ARE PLACED, INCLUDING THE FINISHED SURFACE COURSE. AGGREGATE BASE COURSE AND HOT MIX ASPHALT BASE COURSE SHALL NOT REMAIN UNCOVERED FOR MORE THAN FIVE WORKING DAYS.

16. OFF-SITE BORROW MATERIAL TO BE IMPORTED FOR EMBANKMENT CONSTRUCTION AND SUPPORT OF PAVEMENT IS TO MEET THE MINIMUM SUBGRADE SOIL SPECIFICATIONS IN TABLE 3 OF THE DESIGN GUIDE FOR FLEXIBLE PAVEMENTS. CBR TESTING OF OFF-SITE BORROW MATERIAL SHALL BE COMPLETED AND THE TEST RESULTS SUBMITTED TO AND APPROVED BY THE BUREAU OF DEVELOPMENT REVIEW PRIOR TO DELIVERY OF THE MATERIAL. THE PAVING DESIGN SECTIONS SHOWN ON THE APPROVED PLANS SHALL BE REVIEWED AND EVALUATED USING THE CBR TESTING RESULTS OF THE BORROW MATERIAL. ANY CHANGES TO THE PAVEMENT DESIGN SECTIONS BASED ON THE CBR TEST RESULTS SHALL BE INCORPORATED THROUGH THE RED-LINE REVISION PROCESS.

17. THE DESIGN EQUIVALENT SINGLE AXLE LOADS (ESAL) AND THE DESIGN CBR VALUE SHALL BE NOTED ON THE CONSTRUCTION PLANS.

18. PERMANENT SIGNAGE AND STRIPING SHALL BE FURNISHED AND INSTALLED BY THE CARROLL COUNTY BUREAU OF ROADS OPERATIONS. CONTRACTOR SHALL NOTIFY THE BUREAU OF ROADS OPERATIONS AT 410-386-6717 A MINIMUM OF THREE (3) WEEKS PRIOR TO STARTING WORK AND THEN AGAIN 48 HOURS PRIOR TO COMPLETION OF WORK.

19. CONSTRUCTION VEHICLES, CONTRACTOR OR PRIVATE, OR CONSTRUCTION MATERIALS OR EQUIPMENT SHALL NOT BE PARKED, PLACED, OR STORED WITHIN ANY PUBLIC RIGHT-OF-WAY.

ABBREVIATIONS

APPROX.	APPROXIMATELY
AVE	AVENUE
BGE	BALTIMORE GAS & ELECTRIC
BL	BASELINE
C.O.	CLEANOUT
CAP	CONCRETE ARCH PIPE
cfs	CUBIC FEET PER SECOND
C.I.	CAST IRON
CL	CLEARANCE/CLEAR
C.L.F.	CHAIN LINK FENCE
CL IV	CLASS IV
CMAP	CORRUGATED METAL ARCH PIPE
CMP	CORRUGATED METAL PIPE
CONC.	CONCRETE
C&P	CHESAPEAKE & POTOMAC
℄	CENTER LINE
D.	STORM DRAIN
D.C.	DETECTOR CHECK
D.I.	DUCTILE IRON
D.I.P./DIP	DUCTILE IRON PIPE
DEPT	DEPARTMENT
DWG	DRAWING
(E)	EAST
E.B.	EAST BOUND
ELEC	ELECTRIC
ELEV	ELEVATION
ESMT	EASEMENT
EX.	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FF/FFE	FINISHED FLOOR ELEVATION
F.H.	FIRE HYDRANT
fps	FEET PER SECOND
G.	GAS
G.W.	GUY WIRE
GALV.	GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HGL	HYDRAULIC GRADE LINE
H.B.	HAND BOX
HORIZ	HORIZONTAL
HWY	HIGHWAY
I.	INLET
INV.	INVERT
LN	LANE
LP	LOW PRESSURE
M/MH	MANHOLE (STORM DRAIN)
MIN.	MINIMUM
(N)	NORTH
N.B.	NORTH BOUND
N/A	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
OHE	OVERHEAD ELECTRIC
PKWY	PARKWAY
PR./PROP.	PROPOSED
PVC	POLYVINYL CHLORIDE
QTY.	QUANTITY
R/W	RIGHT-OF-WAY
RCCP	REINFORCED CIRCULAR CONCRETE PIPE
RET	RETAINING
REV	REVISION
RD	ROOFDRAIN
(S)	SOUTH
S./SAN.	SANITARY
S.B.	SOUTH BOUND
S.H.C	SANITARY HOUSE CONNECTION
S/W	SIDEWALK
SCH	SCHEDULE
SD.	STORM DRAIN
SMH	SANITARY MANHOLE
SQ.FT.	SQUARE FEET
ST.	STREET
STD.	STANDARD
TCB	TRAFFIC CONTROL BOX
TYP.	TYPICAL
U/G	UNDER GROUND
UK	UNKNOWN
VERT	VERTICAL
(W)	WEST
W.	WATER
W.B.	WEST BOUND
W/	WITH
WHC	WATER HOUSE CONNECTION
WM	WATER METER

SITE LEGEND

ZONE: C-2
ZONE: I-1
N 30°52'32" W - 100.00'
Zoning Line
Property line with Bearing & Distance
Adjoiner Property line
Existing Easement line
-300 Existing Field Run Major Contour
-299 Existing Field Run Minor Contour
-300 Existing GIS Major Contour
-298 Existing GIS Minor Contour
13UC (A) / 45UB (C) Existing Soils Limits with HSG Designation
Ex 15" SD (SD, D) Existing Storm Drain Line (Less than 24") with Manhole
Ex 30" SD Existing Storm Drain Line (24" and Greater)
Existing Storm Drain Inlets
Ex 8" S (S, S) Existing Sanitary Sewer Line With Manhole
Ex 8" W (W) Existing Water Line With Valve
Ex 8" GAS (G) Existing Gas Line With Valve
UGE Existing Underground Electric Lines
OHE Existing Overhead Electric Lines with Pole
Existing Chainlink Fence
Existing Wood Fence
Existing Pavement Edge
Existing Curb & Gutter
Existing Sidewalk
Existing Structure
Existing Treeline
Existing Wood Fence
Existing Non-tidal Wetlands
25' Non-tidal Wetlands Buffer
SB SB Variable Width Stream Buffer
FP FP Flood Plain
Existing Street Light
Ex. Water Valve
WM Ex. Water Meter
Existing Fire Hydrant
SCO Ex. Sanitary Cleanout
Ex. Sign
Limit of Field Run Topo
290 Proposed Major Contour
287 Proposed Minor Contour
Proposed Structure
Proposed Pavement Edge
Proposed Curb & Gutter
Proposed Sidewalk
Proposed Crosswalk
Proposed Sidewalk Ramp
Handicap-Accessible Parking Space Symbol (for proposed handicap-accessible parking stalls)
Proposed Retaining Wall
PROP. 15" D. Proposed Storm Drain with Manhole
Proposed Storm Drain Inlets
PROP. 8" S. Proposed Sewer With Manhole
PROP. 8" W. Proposed Water
Proposed Site Lighting
Proposed Fire Hydrant
Proposed Water Reducer
Proposed Water Valve
Proposed Sign
Proposed Paving

NOTE: ALL ITEMS SHOWN IN LEGEND MAY NOT BE PRESENT ON ALL SHEETS; REFER TO INDIVIDUAL PLAN SHEETS FOR SUPPLEMENTAL PLAN-SPECIFIC LEGENDS.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC, DATED NOVEMBER 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
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CONTACT: MATT TAYLOR
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S-23-0027

DATE	BY	REVISIONS

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

LEGENDS AND ABBREVIATIONS SHEET

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
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DATE: 12-20-2024 SCALE: AS SHOWN
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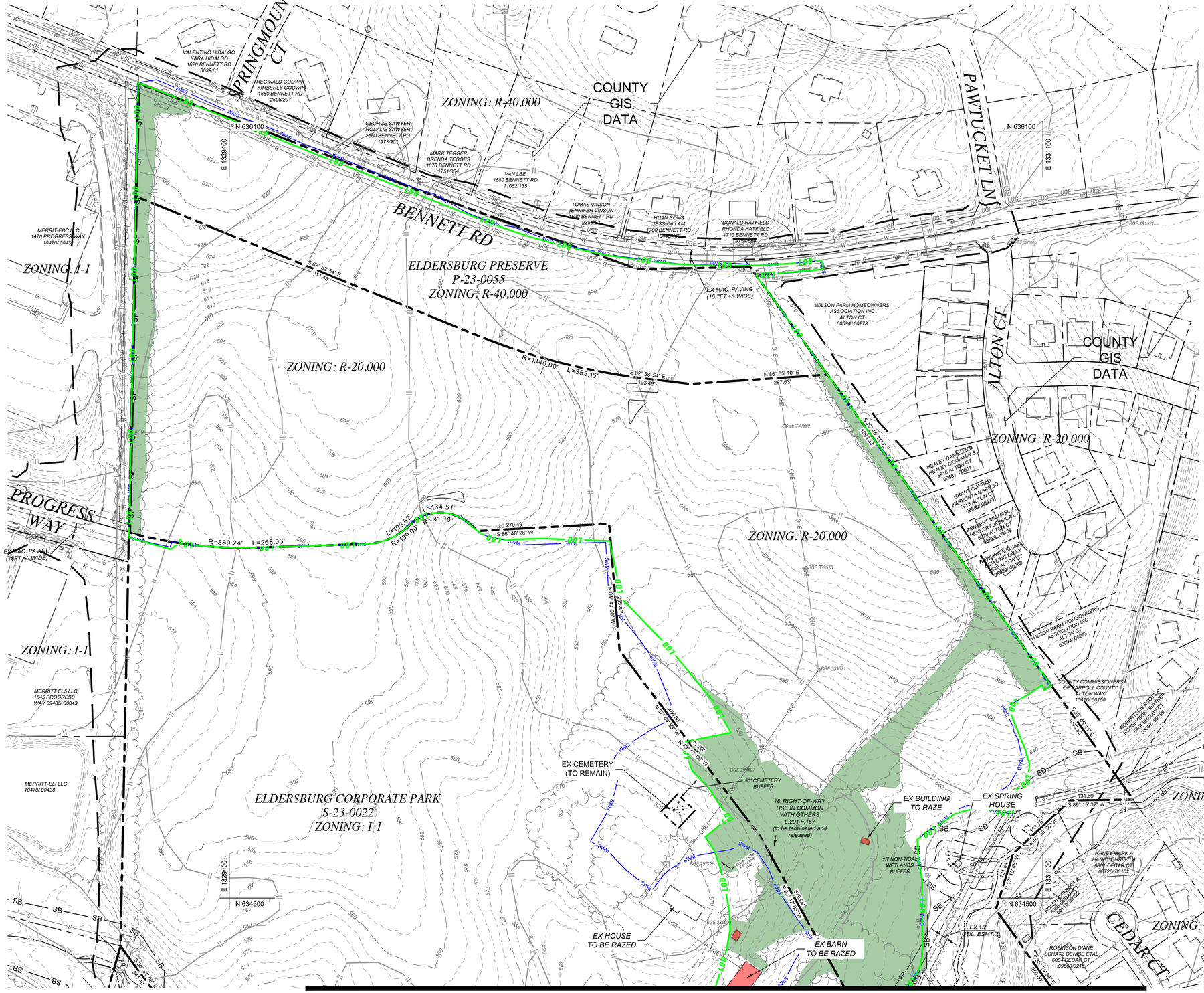
SHEET: 2 OF X

T:\2021\Facilities\20211253.002A Beatly Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (C-1&2) Cover & Abrev Sht.dwg Mar 04, 2025 3:26pm rlangrehr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PAWTUCKET LN
BENNETT RD
PROGRESS WAY
ALTON CT
CEDAR CT
ZONING: R-40,000
ZONING: R-20,000
ZONING: I-1
ZONING: CONSERVATION
COUNTY GIS DATA
ELDERSBURG PRESERVE
P-23-0055
ZONING: R-40,000
ELDERSBURG CORPORATE PARK
S-23-0022
ZONING: I-1
WILSON FARM HOMEOWNERS ASSOCIATION INC
ALTON CT
08694/ 00273
VALENTINO HIDALGO
KARA HIDALGO
1620 BENNETT RD
8639/81
REGINALD GODWIN
KIMBERLY GODWIN
1650 BENNETT RD
2605/204
GEORGE SAWYER
ROSALIE SAWYER
1650 BENNETT RD
1973/901
MARK TEGGER
BRENDA TEGGES
1670 BENNETT RD
1751/384
VAN LEE
1680 BENNETT RD
11052/135
TOMAS VINSON
JENNIFER VINSON
1690 BENNETT RD
335/81
HUAN SONG
JESSICA LAM
1700 BENNETT RD
10099/ 00001
DONALD HATFIELD
RHONDA HATFIELD
1710 BENNETT RD
MERRIT-EBC LLC
1470 PROGRESSWAY
10470/ 00431
MERRITT EL5 LLC
1545 PROGRESS WAY 09486/ 00043
MERRITT-ELI LLC
10470/ 00438
EX MAC. PAVING (15FT +/- WIDE)
EX MAC. PAVING (18FT +/- WIDE)
EX CEMETERY (TO REMAIN)
50' CEMETERY BUFFER
16' RIGHT-OF-WAY USE IN COMMON WITH OTHERS L.291 F.167 (to be terminated and released)
EX BUILDING TO RAZE
EX SPRING HOUSE
EX HOUSE TO BE RAZED
EX BARN TO BE RAZED
25' NON-TIDAL WETLANDS BUFFER
EX 15' TIL ESMT
HEALEY DANIELLE S
HEALEY BENJAMIN S
5916 ALTON CT
08681/ 00001
GRANT CONRAD
KAREN M A MARY JO
5918 ALTON CT
08680/ 00473
PENNERT MICHAEL J
PENNERT JESSICA L
5920 ALTON CT
08680/ 00139
BOWERS MICHAEL
BOWLING EMILY
5922 ALTON CT
08680/ 00058
COUNTY COMMISSIONERS OF CARROLL COUNTY
ALTON WAY
1041/ 00150
ROBERTSON SCOTT P
ROBERTSON HEATHER
5964 SHELBY CT
08697/ 00186
HANEY MARK A
HANEY CHRISTY M
6005 CEDAR CT
08725/ 00102
NELEN ELIZABETH A
6004 CEDAR CT
08681/ 00102
ROBINSON DIANE
SCHATZ DENISE ETAL
6004 CEDAR CT
09680/ 00215
N 636100
E 1329400
E 1331100
N 634500
S 67° 52' 54" E 171.46'
R=1340.00' L=393.15'
S 82° 58' 54" E 103.46'
N 86° 05' 10" E 287.63'
S 39° 45' 11" E 108.53'
S 89° 15' 32" W 131.69'
S 46° 58' 36" W 163.75'
S 17° 16' 45" W 210.24'
S 24° 44' 45" E 108.00'
S 36° 31' 16" E 141.71'
R=889.24' L=268.03'
L=134.51' R=91.00'
L=103.62' R=139.00'
S 86° 48' 26" W 270.49'
N 04° 43' 00" W 35.56'
N 01° 09' 58" W 49.80'
N 53° 53' 06" W 12.90'
N 29° 12' 35" W 379.64'
MARYLAND STATE PLANE NAD 83/2011 - NAVD 88
BGE 339569
BGE 339570
BGE 339571
BGE 339572
BGE 339573
BGE 339574
BGE 339575
BGE 339576
BGE 339577
BGE 339578
BGE 339579
BGE 339580
BGE 339581
BGE 339582
BGE 339583
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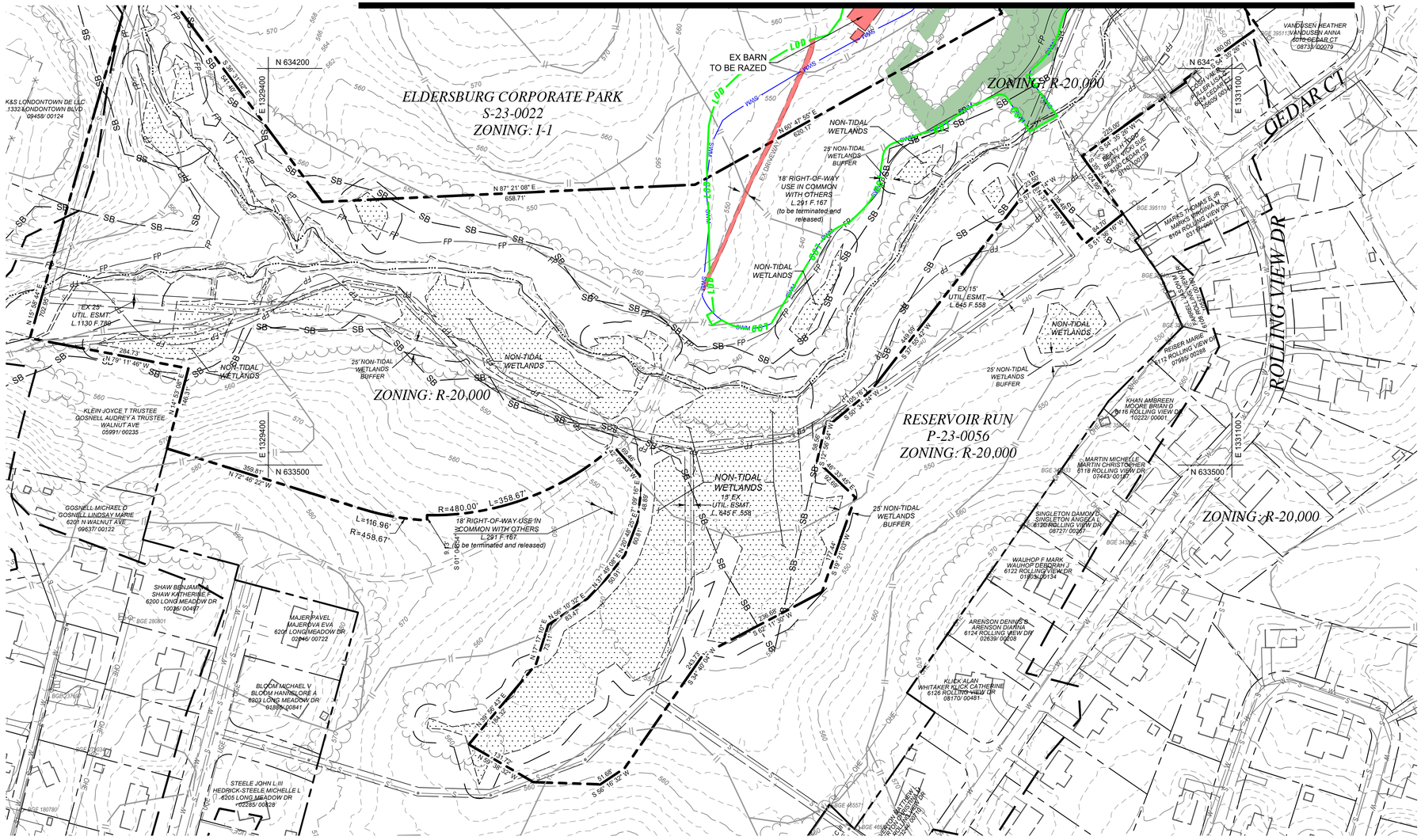
BGE 339586
BGE 339587
BGE 339588
BGE

MATCHLINE - FOR CONTINUATION SEE SHEET 3



LEGEND

- Existing Impervious Areas within LOD
- Existing Wooded Areas within LOD
- EX. Meadow Within LOD
- LOD — Limit of Disturbance
- SWM — SWM Study Area (For ESD Computations)

REFER TO SHEET 2 FOR MASTER LEGEND.



MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

R-20,000 ZONED AREA

Table 5.1 Natural Resources and the Corresponding Regulatory Authorities

FEDERAL		STATE		LOCAL	
Wetlands	Not Present	Tidal and Non-Tidal Wetlands	Shown	Steep Slopes	Shown
Major Waterways	Not Present	Wetlands of Special State Concern	Not Present	Highly Erodible Soils	Not Present
Floodplains	Not Present	Wetland Buffers	Shown	Enhanced Stream Buffers	Not Present
		Stream Buffers	Shown	Topography/Slopes	Shown
		Perennial Streams	Shown	Springs	Not Present
		Floodplains	Shown	Seeps	Not Present
		Forests	Shown	Intermittent Streams	Not Present
		Forest Buffers	Not Present	Vegetative Cover	Shown
		Critical Area	Not Present	Soils	Shown
				Bedrock/Geology	Not Present
				Existing Drainage Areas	Shown

NRCS HYDROLOGIC SOIL GROUP - CARROL COUNTY, MARYLAND

MAP UNIT SYMBOL	MAP UNIT NAME	HSG RATING	k RATING	DRAINAGE CLASS
BaA	Beltsville silt loam, 0 to 2% slopes	C	0.37	Poorly Drained
GaC	Gaila Loam, 8 to 15% slopes	B	0.49	Well Drained
GaD	Gaila Loam, 15 to 25% slopes	B	0.49	Well Drained
GdB	Glenelg Loam, 3 to 8% slopes	B	0.24	Well Drained
GdC	Glenelg Loam, 8 to 15% slopes	B	0.24	Well Drained
GeC	Glenelg Channery Loam 8 to 15% slopes	B	0.24	Well Drained
GfB	Glenelg-Urban Land Complex, 0 to 8% slopes	B	0.28	Well Drained
GfC	Glenelg-Urban Land Complex, 8 to 15% slopes	B	0.28	Well Drained
GhB	Glenville Silt Loam, 3 to 8%	C/D	0.37	Moderately Well Drained
GkB	Glenville-Urban land Udorthents complex, 0 to 8% slopes	C	.37	Moderately Well Drained
MaB	Manor Loam, 3 to 8% slopes	B	0.24	Well Drained
MaC	Manor Loam, 8 to 15% slopes	B	0.28	Well Drained
MaD	Manor Loam, 15 to 25% slopes	B	0.28	Well Drained
MaF	Manor Loam, 25 to 45% slopes	B	0.24	Well Drained
UrB	Urban Land-Udorthents complex, 0 to 8% Slopes	D	No "k" Factor	No Drainage Class
WhB	Wheaton-Glenelg Complex, 0 to 8% slopes	B	0.37	Well Drained

PLAN

SCALE: 1"=100'

100 0 100 200

SCALE:1" = 100'

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

EXISTING CONDITIONS PLAN

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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PHONE NO: 410-369-1207

DEVELOPER
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S-23-0027

DATE	BY	REVISIONS

PROFESSIONAL CERTIFICATION

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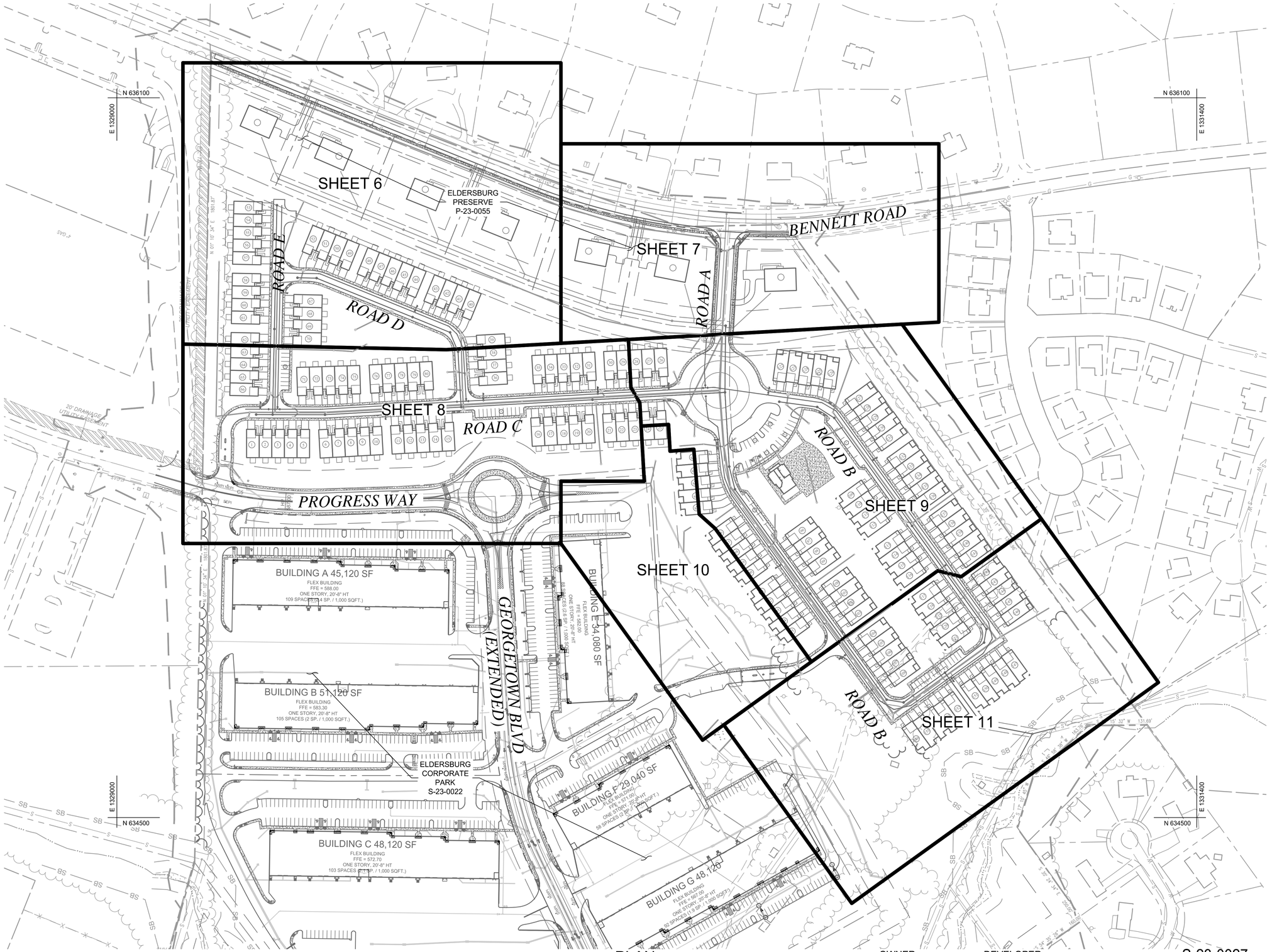
DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A
SHEET: 4 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (C-3&4) Existing Conditions.dwg Mar 04, 2025 3:27pm rlangrehr



PLAN

100 0 100 200

SCALE:1"=100'

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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FINAL SITE DEVELOPMENT PLANS
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PRIVATE SITE, UTILITY, AND LAYOUT KEY SHEET

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SHEET: 5 OF X

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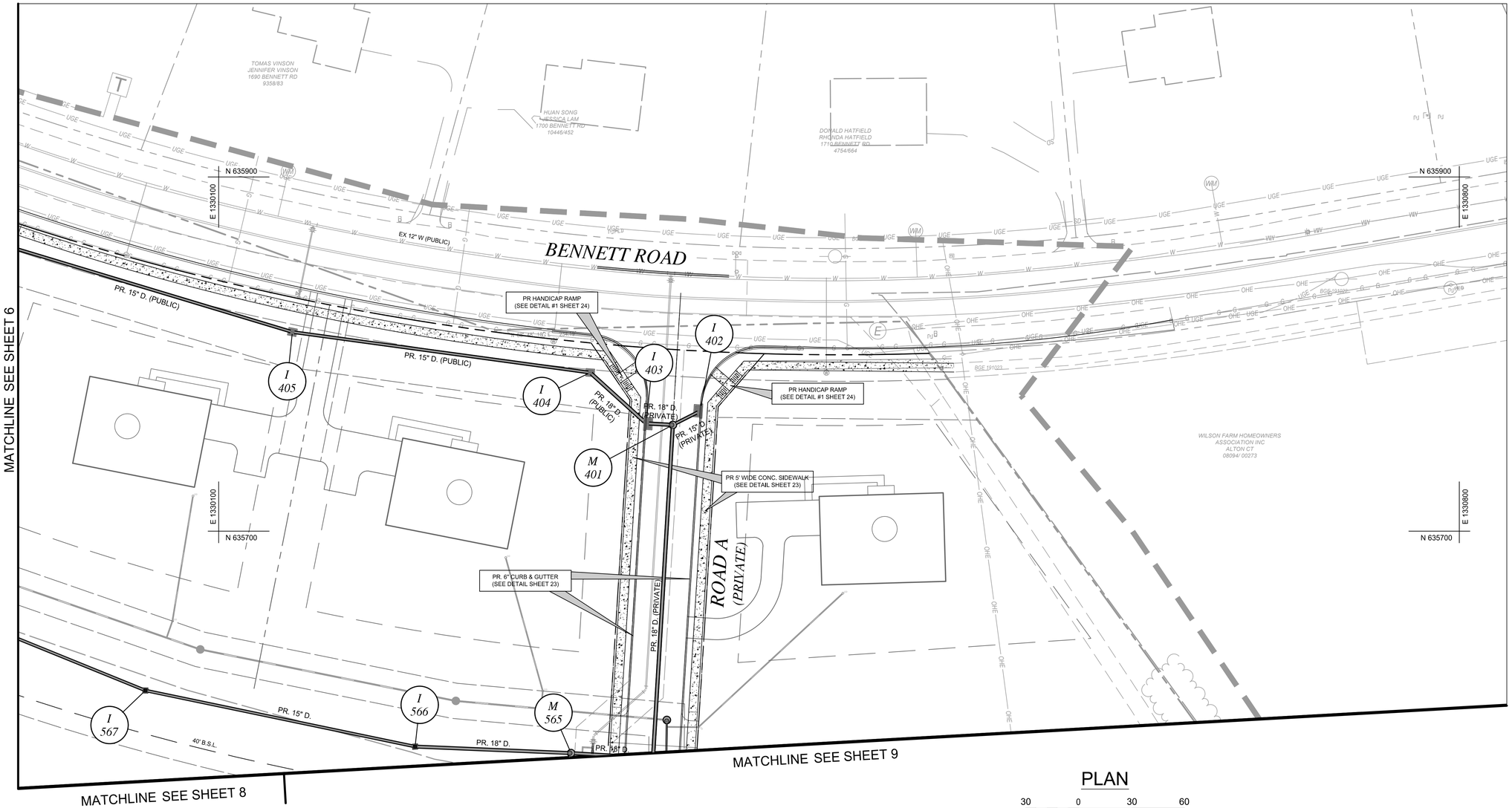
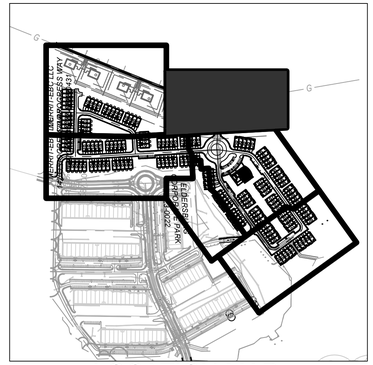


PLAN

30 0 30 60

SCALE: 1"=30'

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88



LOCATION MAP

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FINAL SITE DEVELOPMENT PLANS
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PRIVATE SITE, UTILITY, AND LAYOUT PLAN

ELDERSBURG OVERLOOK

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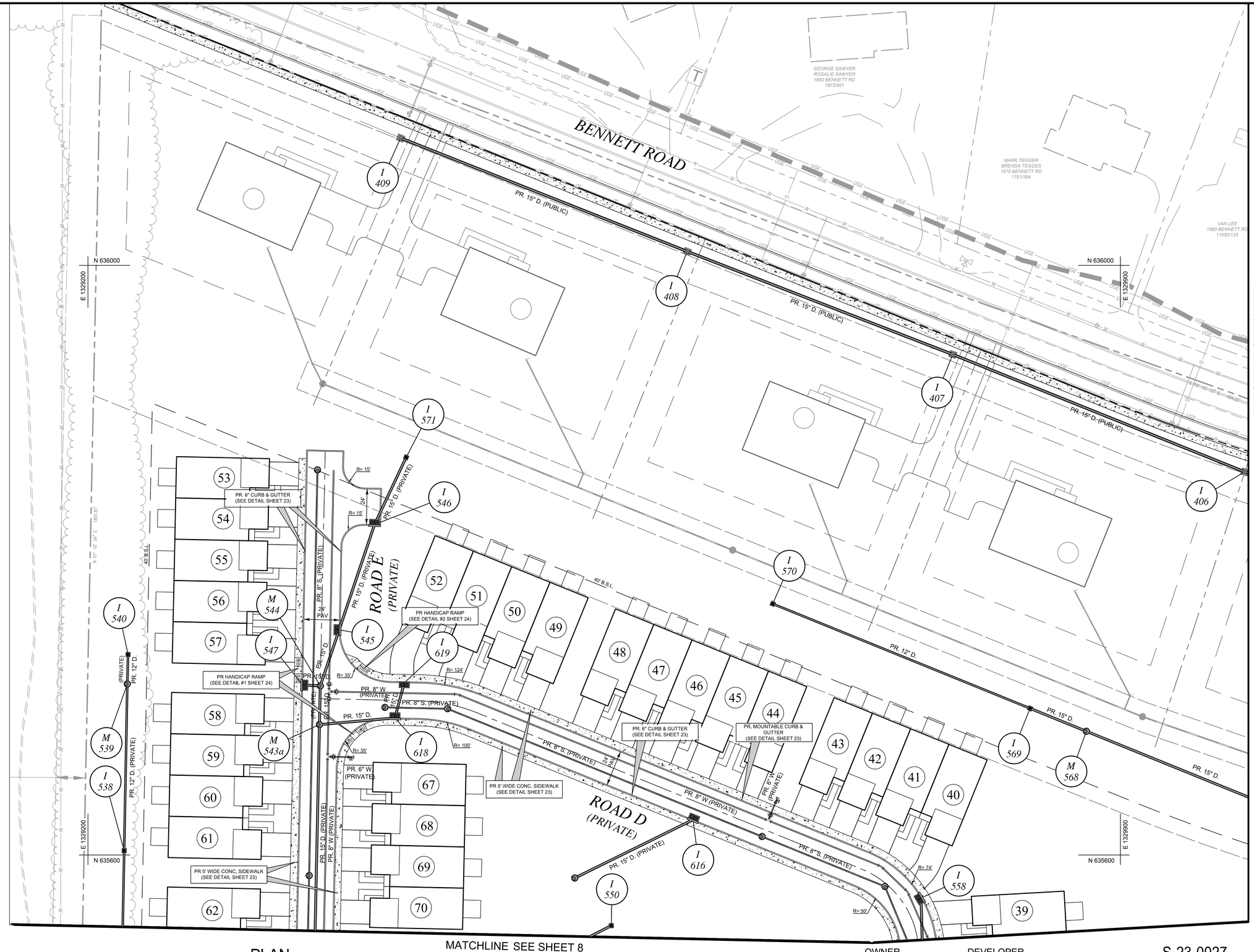


MATCHLINE SEE SHEET 8

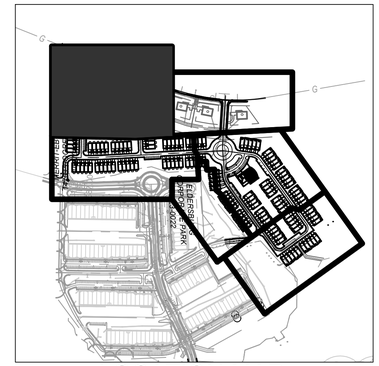
PLAN

30 0 30 60

SCALE: 1"=30'

MATCHLINE SEE SHEET 7

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88



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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

PRIVATE SITE, UTILITY, AND LAYOUT PLAN

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: 6 OF X

PROJECT NUMBER: 20211253.002A

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Private Site and Layout Sheet.dwg Mar 04, 2025 3:30pm rlangrehr

MATCHLINE FOR CONTINUATION SEE SHEET 6

MATCHLINE FOR CONTINUATION SEE SHEET 9

MATCHLINE FOR CONTINUATION SEE SHEET 10

ROAD E (PRIVATE)

ROAD D (PRIVATE)

ROAD C (PRIVATE)

PROGRESS WAY

PROGRESS WAY RESIDENT / EMERGENCY ACCESS (SEE DETAIL SHEET 23)

PR HANDICAP RAMP (SEE DETAIL #1 SHEET 24)

PR 5' WIDE CONC. SIDEWALK (SEE DETAIL SHEET 23)

PR. 6" CURB & GUTTER (SEE DETAIL SHEET 23)

PR. MOUNTABLE CURB & GUTTER (SEE DETAIL SHEET 23)

N 635500 E 1329200

N 635200 E 1329200

N 635500 E 1329900

N 635200 E 1329900

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

LOCATION MAP

PLAN

30 0 30 60

SCALE: 1"=30'

DATA SOURCES

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SHEET: 8 OF X

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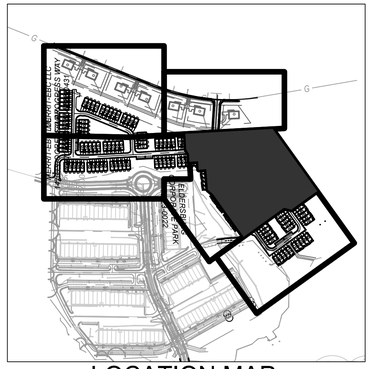

LOCATION MAP

PLAN

30 0 30 60

SCALE:1"=30'

MAGNETIC NORTH
NAD 83/2011 STATE PLANE
NAD 83/2011 NAVD 88

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PROJECT NUMBER: 20211253.002A

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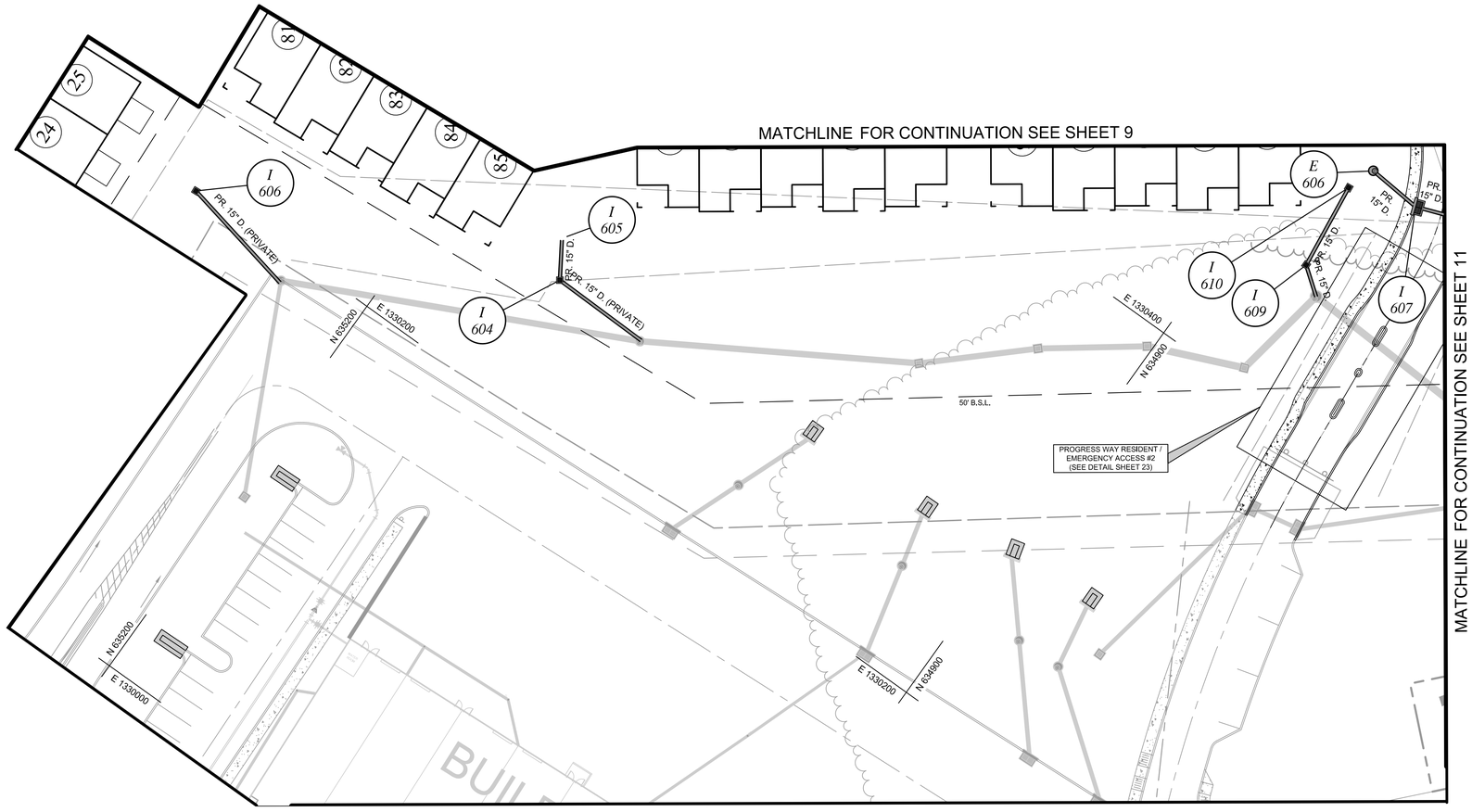
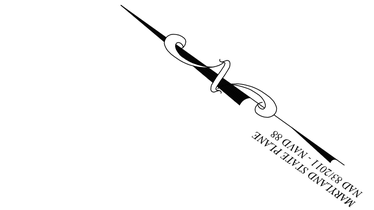


PLAN

30 0 30 60

SCALE:1"=30'



LOCATION MAP

MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

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TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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S-23-0027

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DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 10 OF X

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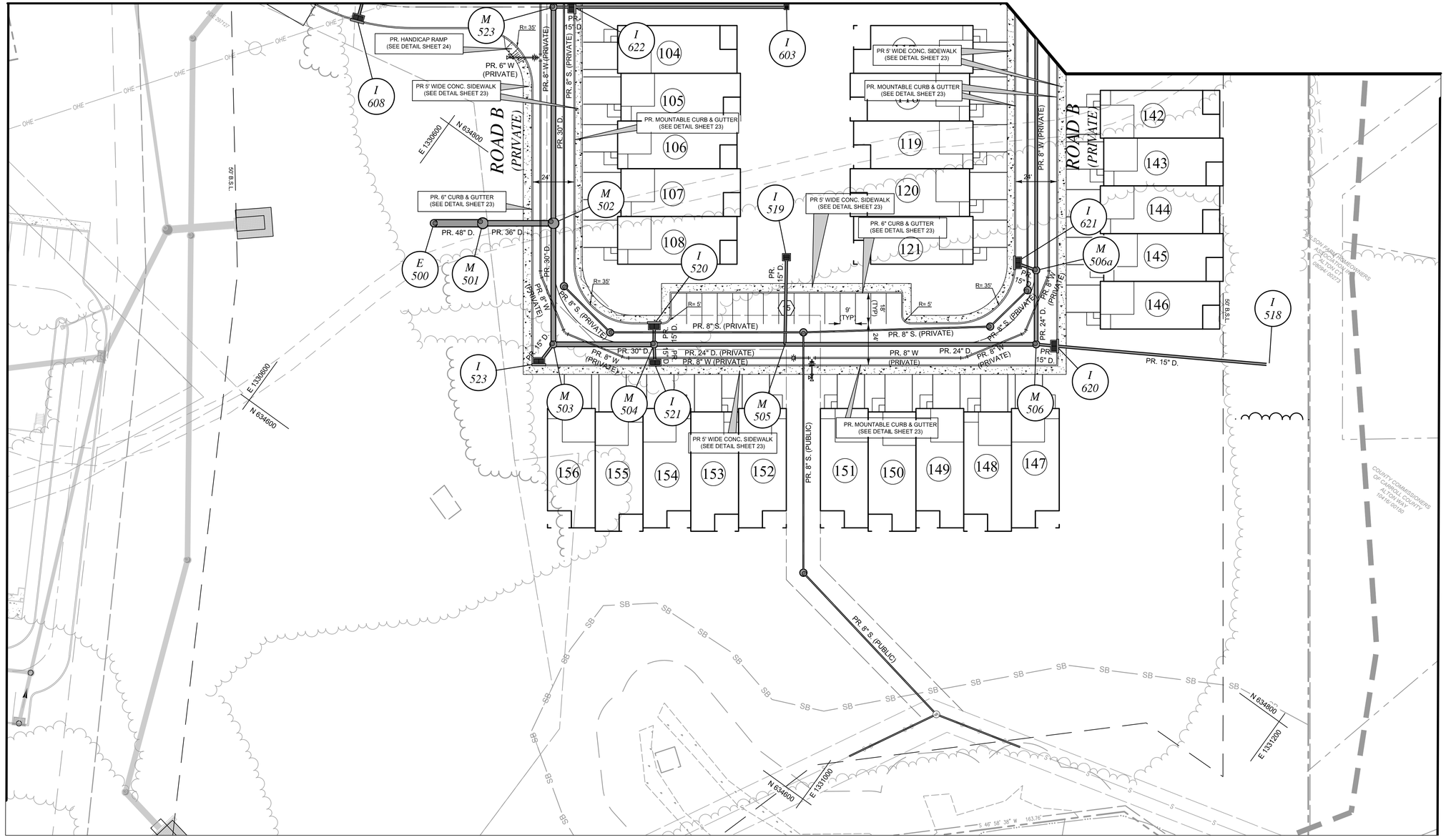
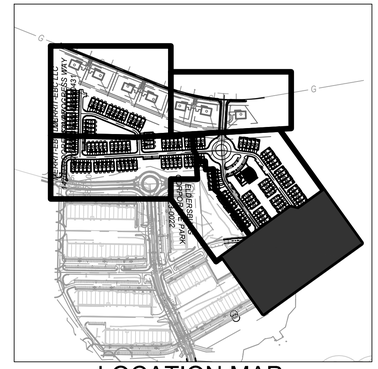
MATCHLINE FOR CONTINUATION SEE SHEET 10

MATCHLINE FOR CONTINUATION SEE SHEET 9



MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88



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ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PLAN

30 0 30 60

SCALE: 1"=30'

OWNER
LONG MEADOW PARK, LLC
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BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
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2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

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SHEET: 11 OF X

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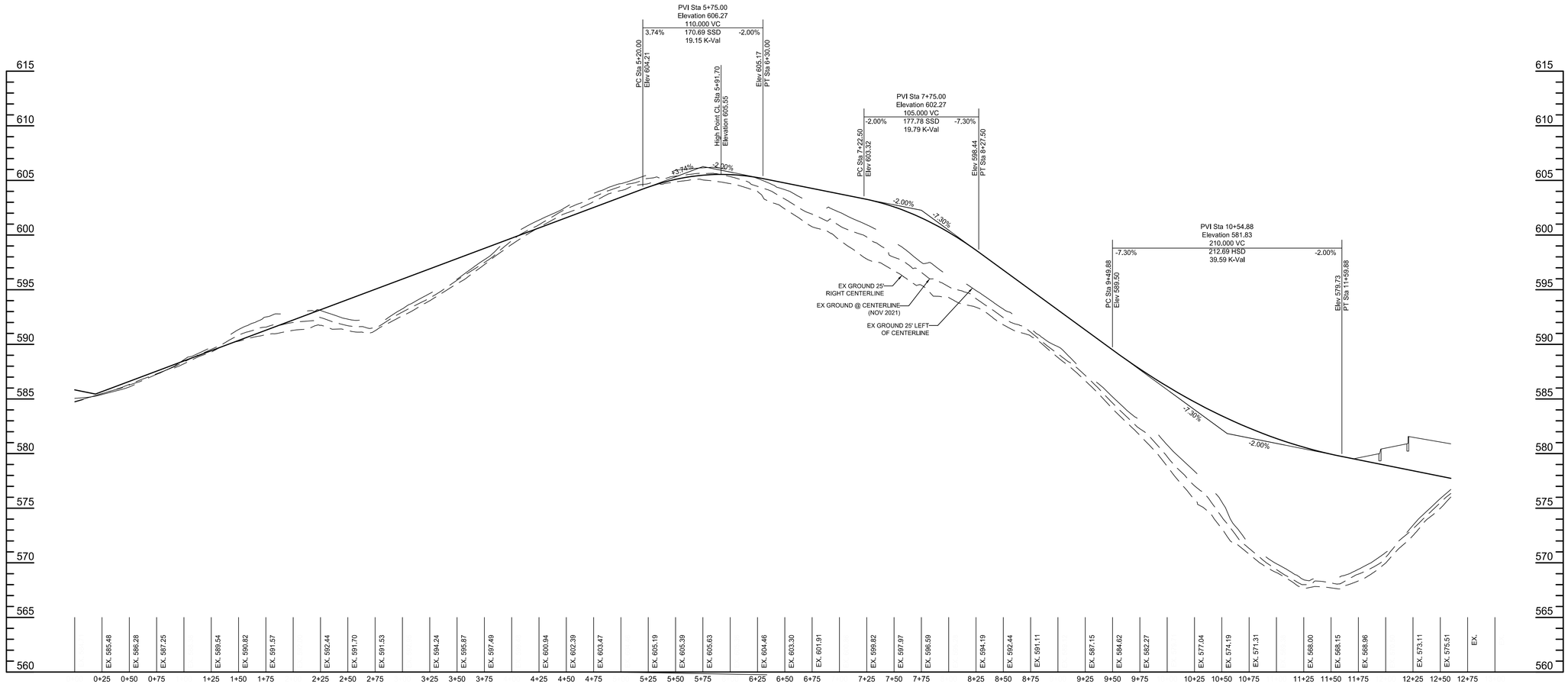
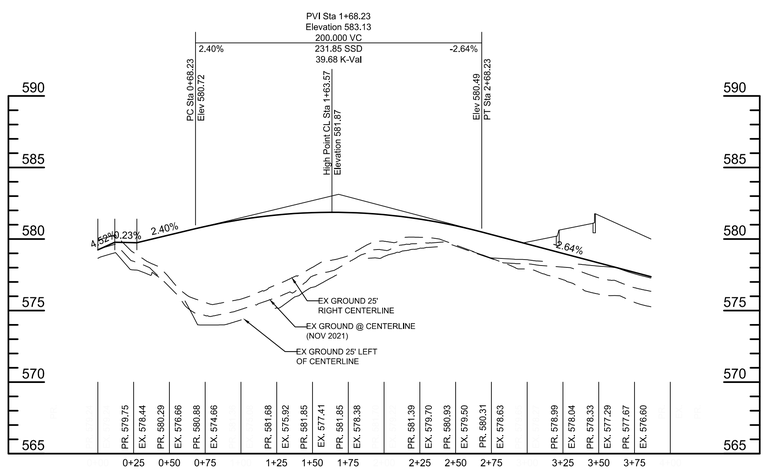


ROAD C PROFILE

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



ROAD A PROFILE

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

OWNER	DEVELOPER
LONG MEADOW PARK, LLC	ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE	2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244	BALTIMORE, MD 21244
PHONE NO: 410-369-1207	CONTACT: MATT TAYLOR
	PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

PRIVATE ROAD PROFILES

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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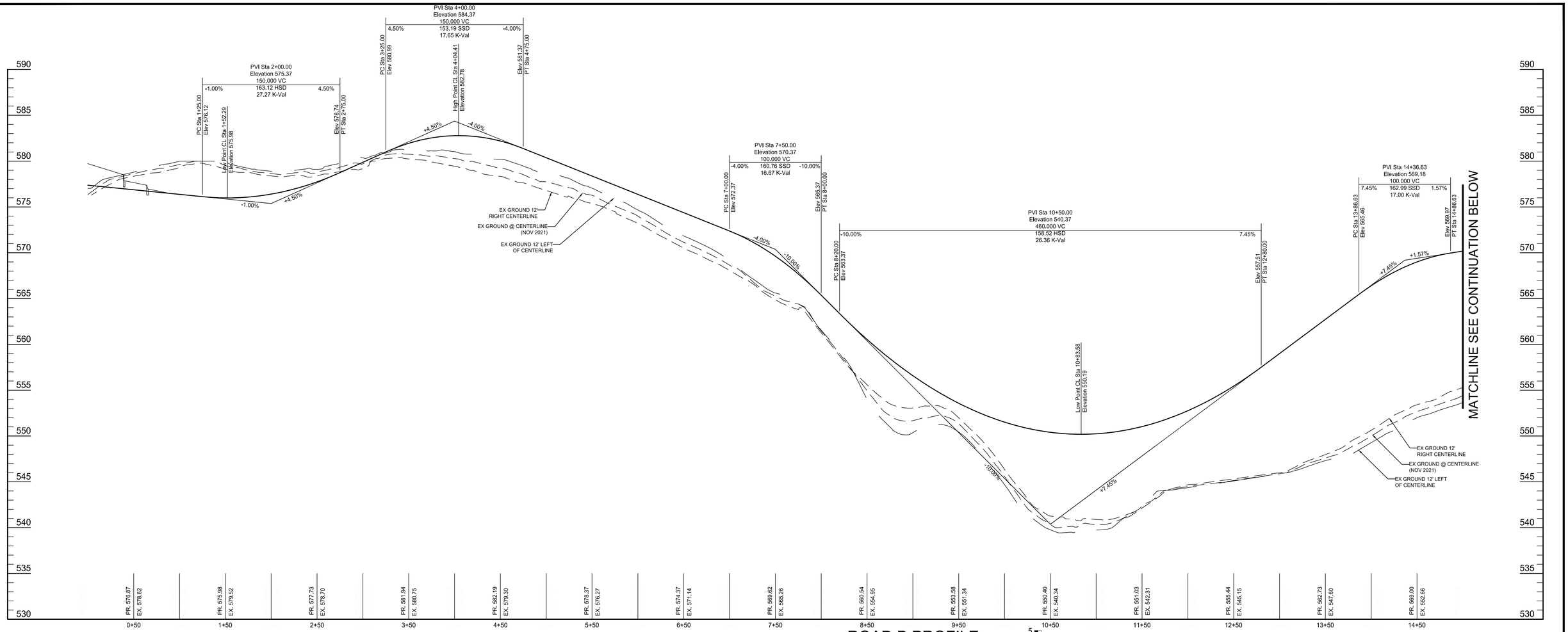

ROAD B PROFILE

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

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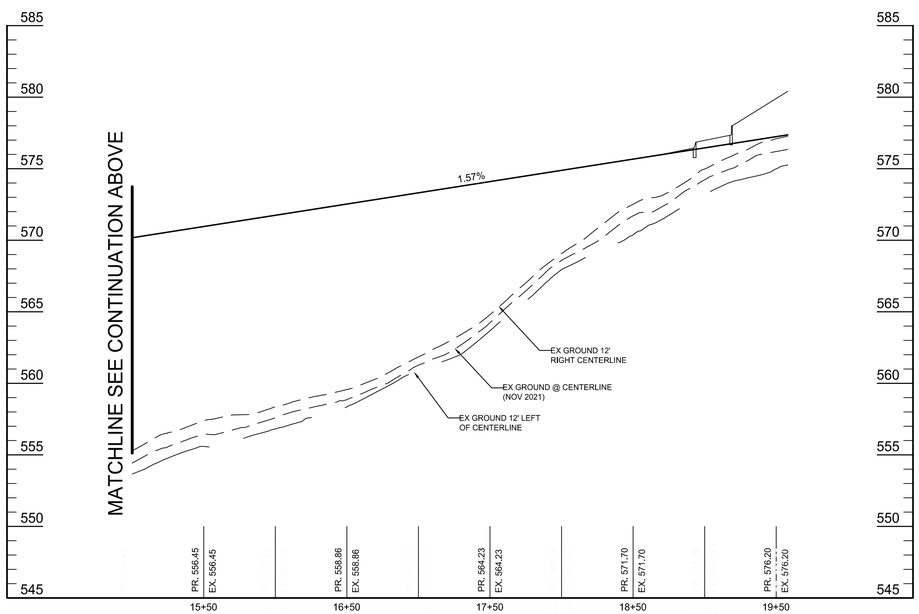

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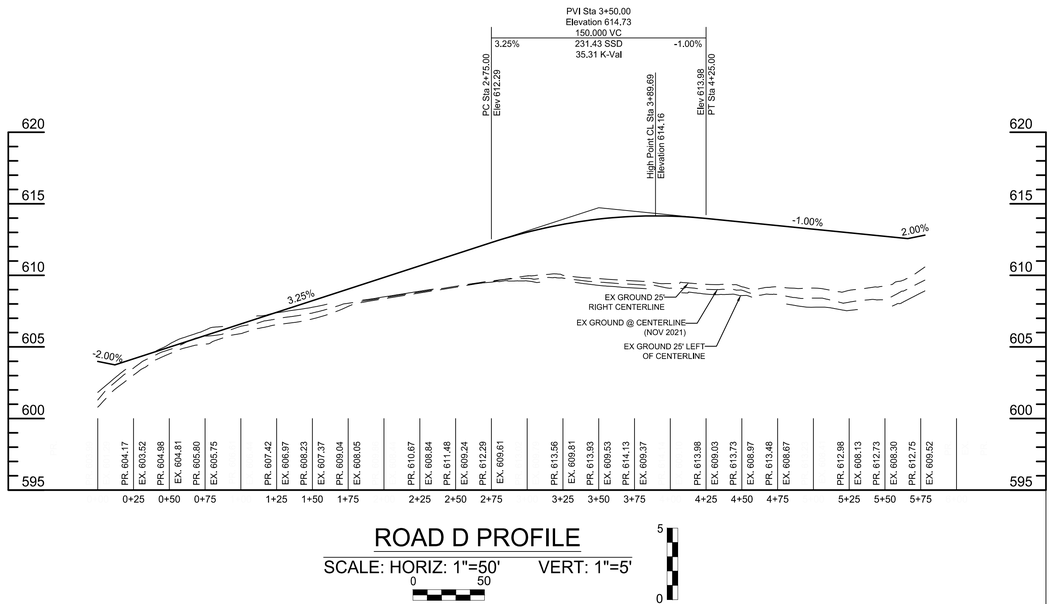
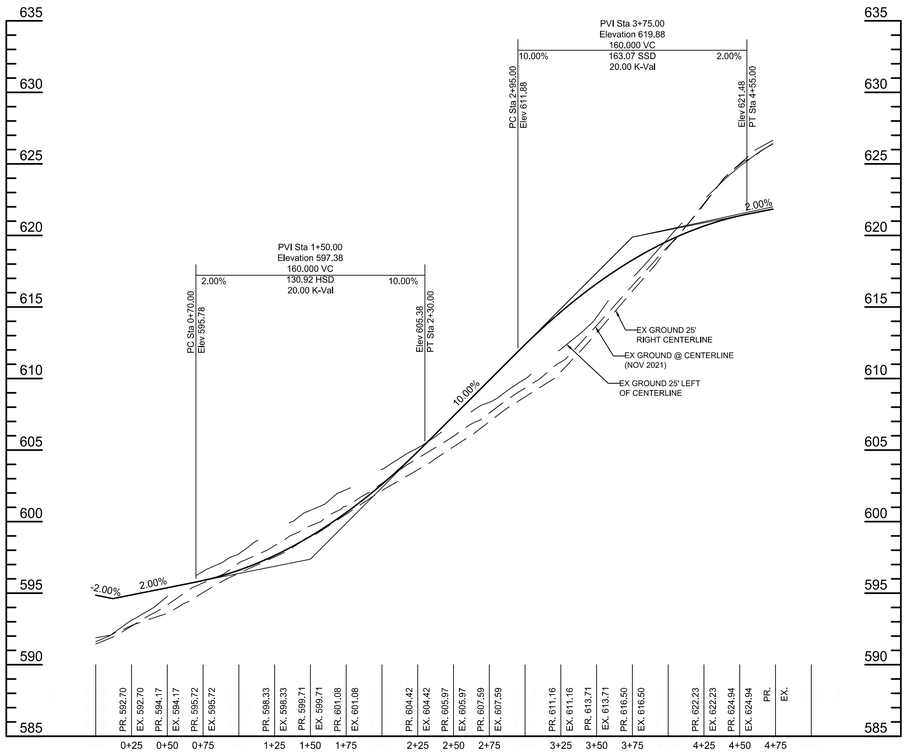


ROAD D PROFILE

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

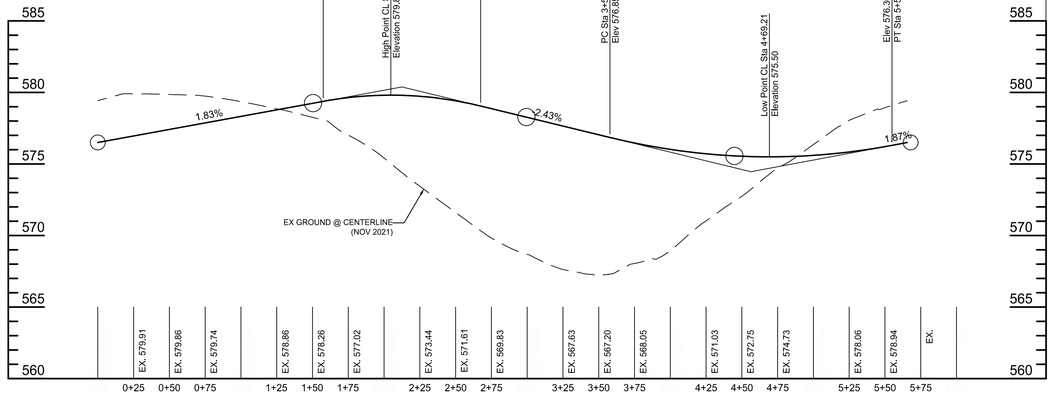
0 50 5 0



ROAD E PROFILE

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

0 50 5 0



ROUNDABOUT INSCRIBED CIRCLE PROFILE

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

0 50 5 0

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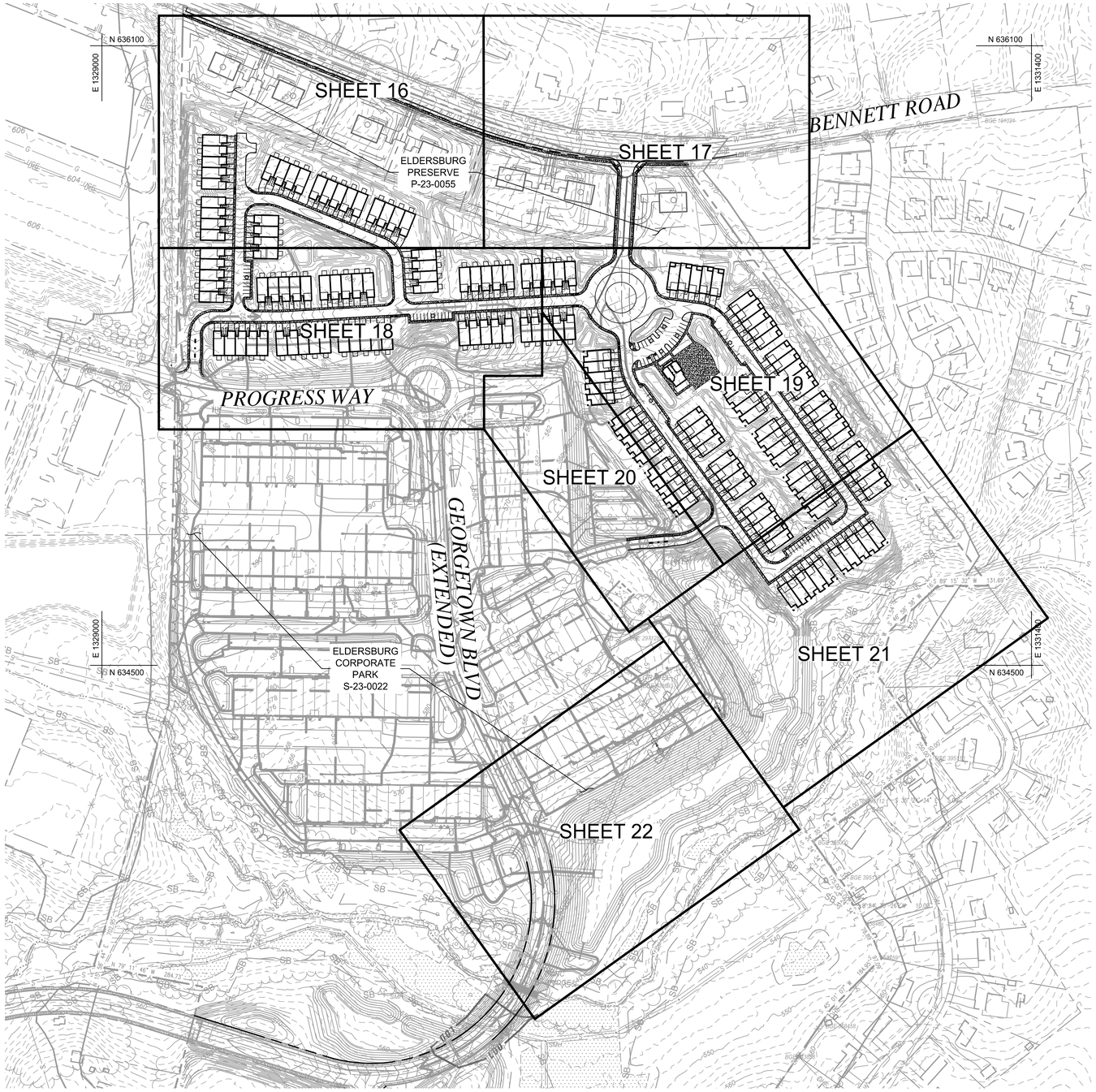

PLAN

150 0 150 300

SCALE: 1"=150'

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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GRADING PLAN KEY SHEET

ELDERSBURG OVERLOOK

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T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (FGP) Final Grading Plan.dwg Mar 04, 2025 3:36pm rlangrehr



MATCHLINE SEE SHEET 17

MATCHLINE SEE SHEET 18

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

PLAN

30 0 30 60

SCALE: 1"=30'

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

GRADING PLAN

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 16 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (FGP) Final Grading Plan.dwg Mar 04, 2025 3:37pm rlangrehr



MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

PLAN

30 0 30 60

SCALE: 1"=30'

DATA SOURCES

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MATCHLINE SEE SHEET 16

MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 20

PROGRESS WAY

ROAD A (PRIVATE)

ROAD B (PRIVATE)

ROAD C (PRIVATE)

ROAD D (PRIVATE)

ELDERSBURG CORPORATE PARK S-23-0022

RESIDENTIAL / EMERGENCY ACCESS #1 (SEE GRADING DETAIL SHEET 23)

N 635500

E 1329200

N 635200

E 1329900

MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

PLAN

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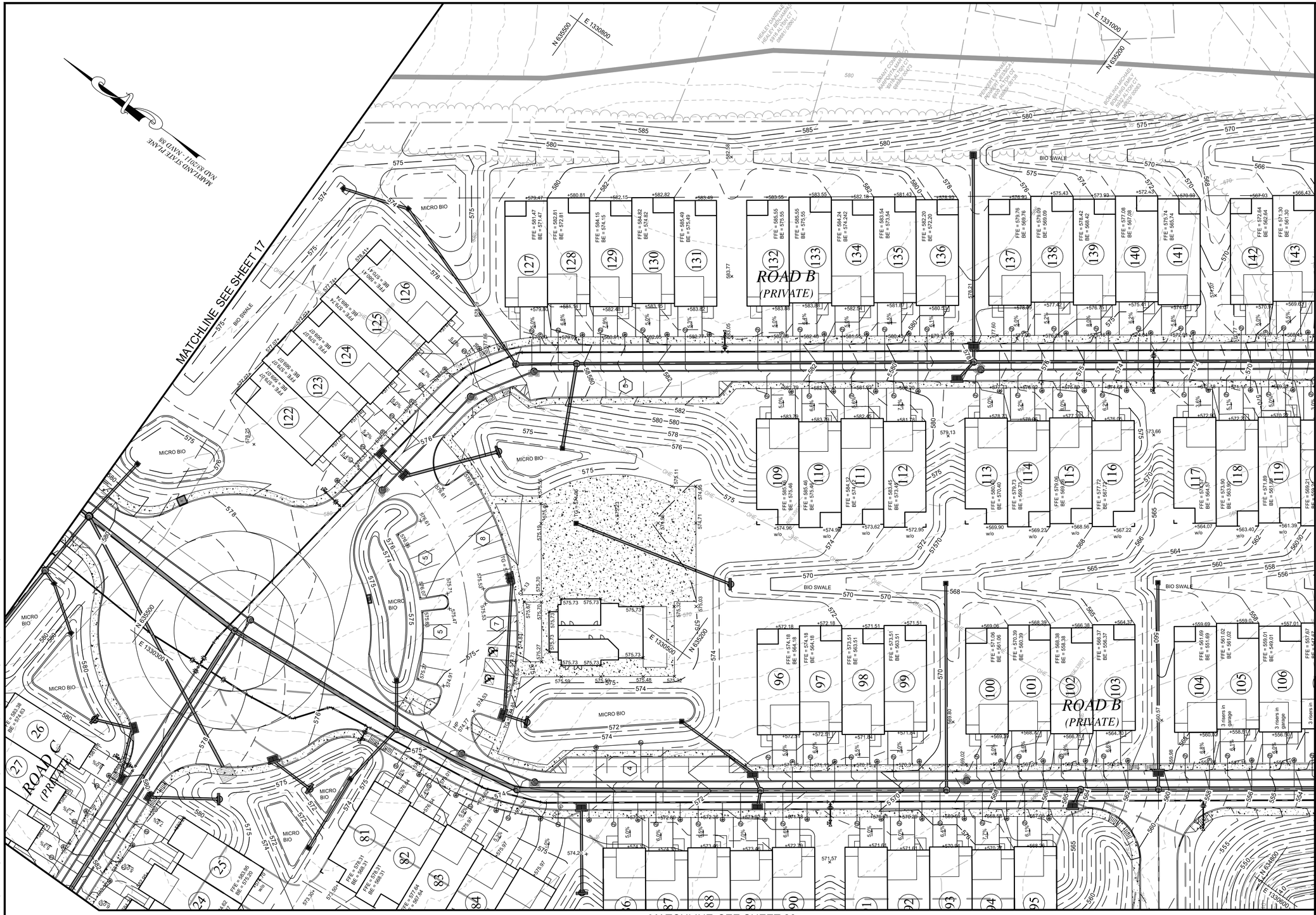

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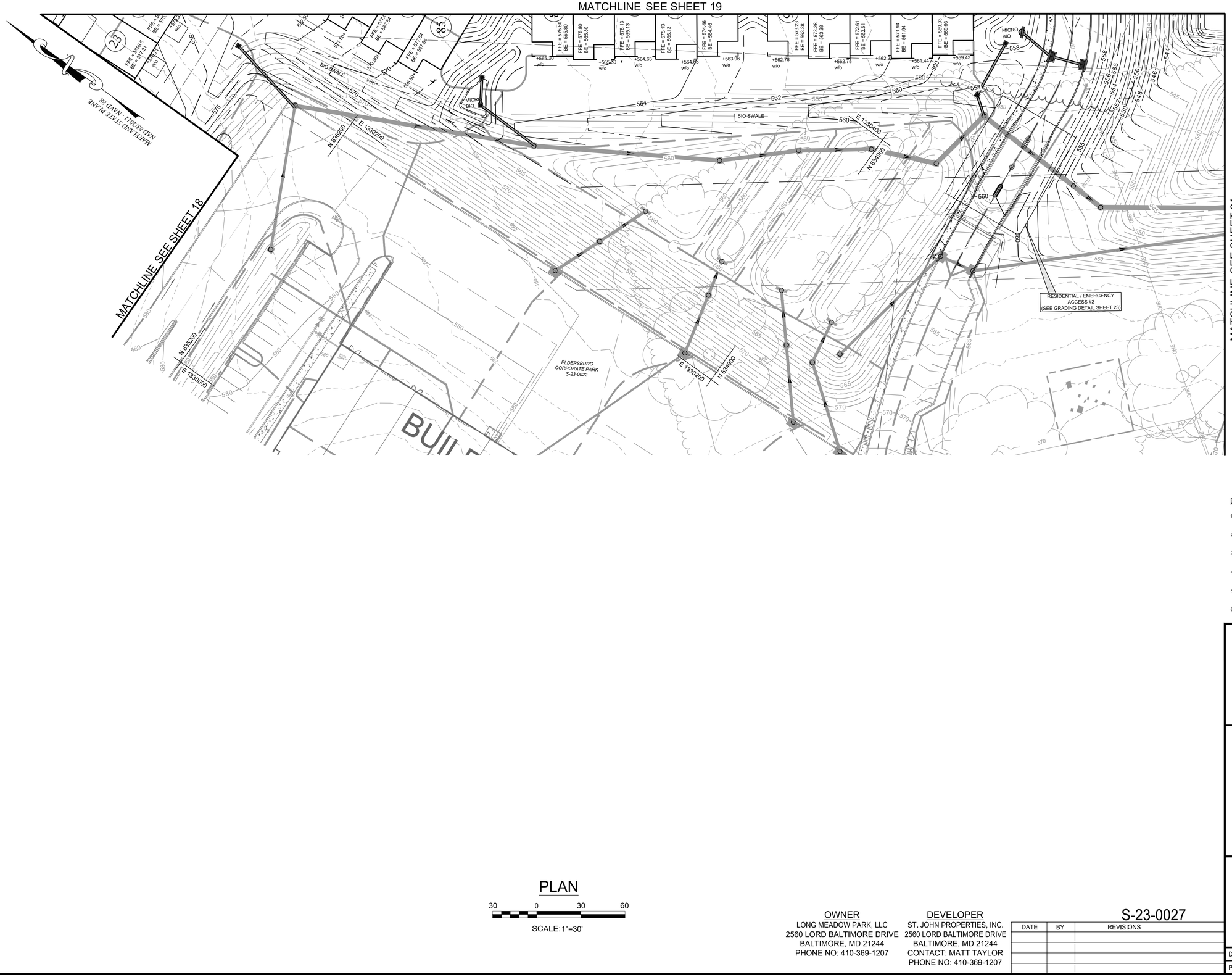

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MATCHLINE SEE SHEET 20

MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 21



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PLAN

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SCALE: 1"=30'

MARYLAND STATE PLANE
NAD 83/2011, NAVD 88

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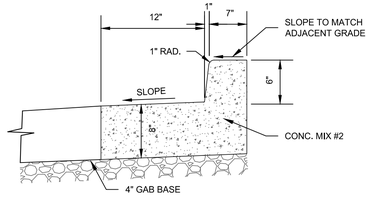
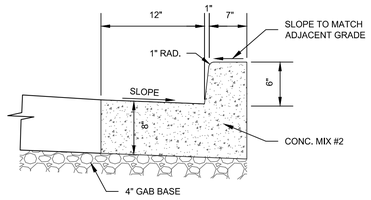


REVERSE SECTION



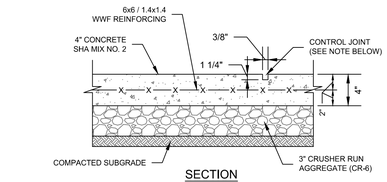
STANDARD SECTION

GENERAL NOTES:

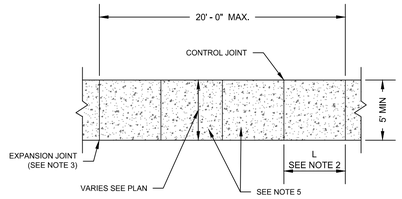
1. REFER TO LOCAL SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND EXPANSION JOINT LOCATIONS.
2. GUTTER PAN SLOPE AND DIRECTION EQUAL TO THAT OF ADJOINING PAVEMENT GRADE (4% MAX).

CONCRETE CURB & GUTTER DETAIL

NOT TO SCALE



SECTION



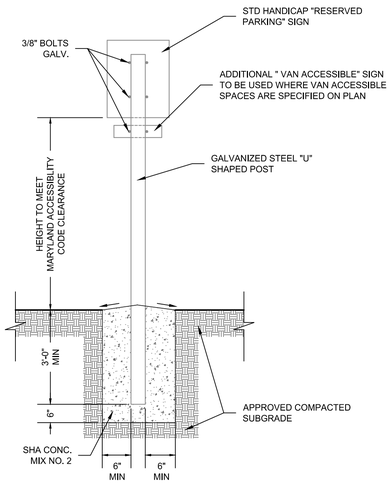
PLAN

NOTES

1. ALL CONCRETE SHALL BE 6% AIR-ENTRAINED, 3000 P.S.I. SHA MIX. NO. 2, DEPTH SHALL BE 4".
2. PROVIDE SCORED CONTROL JOINTS EVERY 4'-0" MIN. BOTH DIRECTIONS.
3. PROVIDE 1/2" EXPANSION JOINT EVERY 20' O/C MAX. MARK EXPANSION/CONTRACTION JOINTS FOR SIDE-WALK WIDTHS 4'-0" TO 8'-0", IF "W" IS 8'-0" OR GREATER, ADD ADDITIONAL LONGITUDINAL EXPANSION JOINT AT CENTERLINE OF SIDEWALK.
4. PROVIDE 1/2" EXPANSION JOINT SEALANT WHERE SIDEWALK ABUTS CURB OR OTHER RIGID STRUCTURE(S).
5. ALL BROOM FINISH STROKES IN CONCRETE SIDEWALK TO BE PERPENDICULAR TO EDGES OF CONCRETE. DO NOT ALTERNATE PATTERN.

CONCRETE SIDEWALK DETAIL

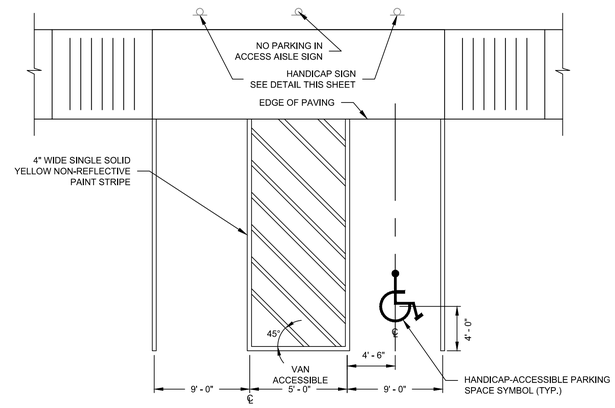
NOT TO SCALE



ALL WORK SHALL BE DONE IN ACCORDANCE MOST CURRENT CODE OF MARYLAND - MARYLAND ACCESSIBILITY CODE.

HANDICAP SIGN MOUNTING

NOT TO SCALE

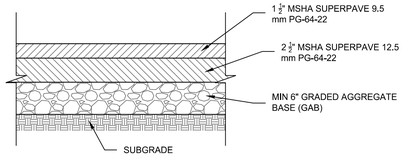


GENERAL NOTES:

1. STRIPING SHOULD END AT EDGE OF PAVING
2. STRIPING MATERIAL AND METHODS OF CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST MUTCD EDITION STDS. & SPECS.
3. (*) INSTALL "VAN ACCESSIBLE" SIGN ON 9'-0" WIDE SPACE, AS NOTED ON PLAN.
4. YELLOW PAINT MAY BE USED ON CONCRETE OR OTHER SURFACES WHERE WHITE PAINT DOES NOT PROVIDE SUFFICIENT CONTRAST. OWNER'S WRITTEN APPROVAL MUST BE OBTAINED.
5. ALL DIMENSION, LAYOUT, BACKGROUND AND COLOR TO CONFORM TO MOST CURRENT ADA GUIDELINES.

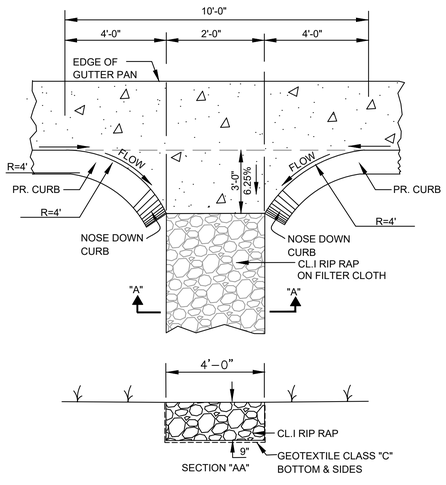
HANDICAP PARKING STRIPING

NOT TO SCALE



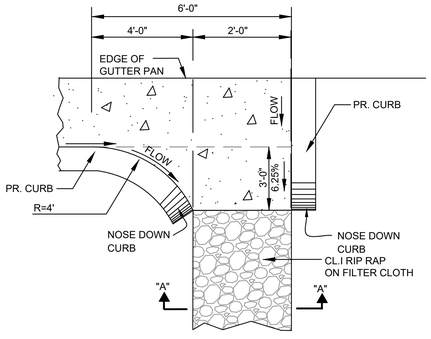
BITUMINOUS CONCRETE PAVING SECTION

NOT TO SCALE



CURB OPENING DETAIL #1

NOT TO SCALE



CURB OPENING TO BE MIRRORED WHERE NEEDED.

CURB OPENING DETAIL #2

NOT TO SCALE

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PRIVATE SITE DETAIL SHEET

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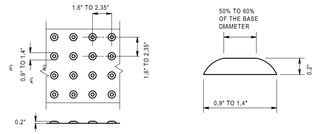
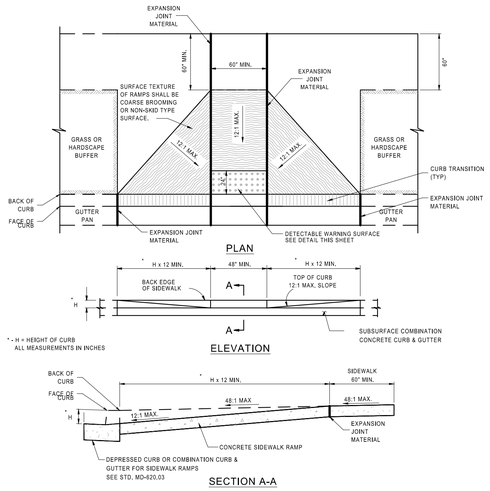


WHERE ISLANDS OR MEDIANS ARE LESS THAN 6 FEET WIDE, THE DETECTABLE WARNING SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN

NOTES

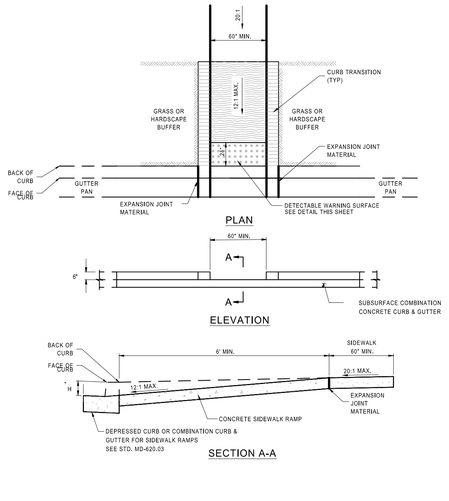
1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 0.5" AND NO MORE THAN 3.0" FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & SIGNALIZED INTERSECTIONS.

DETECTABLE WARNING SURFACE DETAIL
NOT TO SCALE

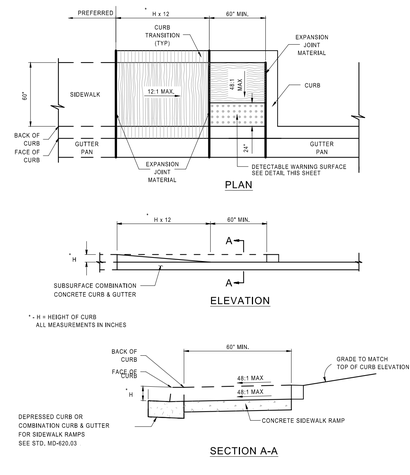


* - H = HEIGHT OF CURB
ALL MEASUREMENTS IN INCHES

HANDICAP RAMP #4 DETAIL
NOT TO SCALE

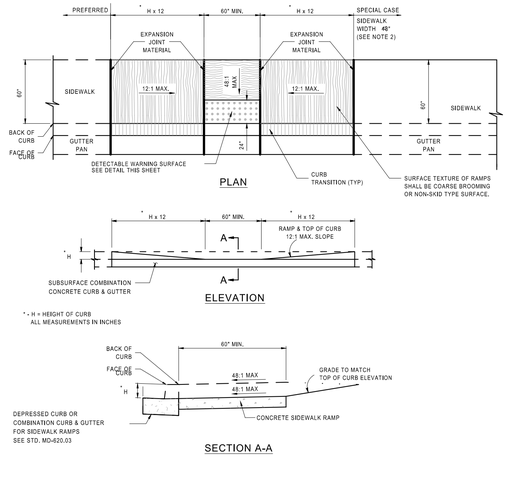


HANDICAP RAMP #3 DETAIL
NOT TO SCALE



* - H = HEIGHT OF CURB
ALL MEASUREMENTS IN INCHES

HANDICAP RAMP #2 DETAIL
NOT TO SCALE



* - H = HEIGHT OF CURB
ALL MEASUREMENTS IN INCHES

HANDICAP RAMP #1 DETAIL
NOT TO SCALE

GENERAL HANDICAP RAMP NOTES (TYP ALL RAMPS)

1. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. THE CROSS-SLOPE OF THE LANDING AREA CANNOT EXCEED GRADE OF ROADWAY
2. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.

DATA SOURCES

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6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

PRIVATE SITE DETAIL SHEET

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 24 OF X

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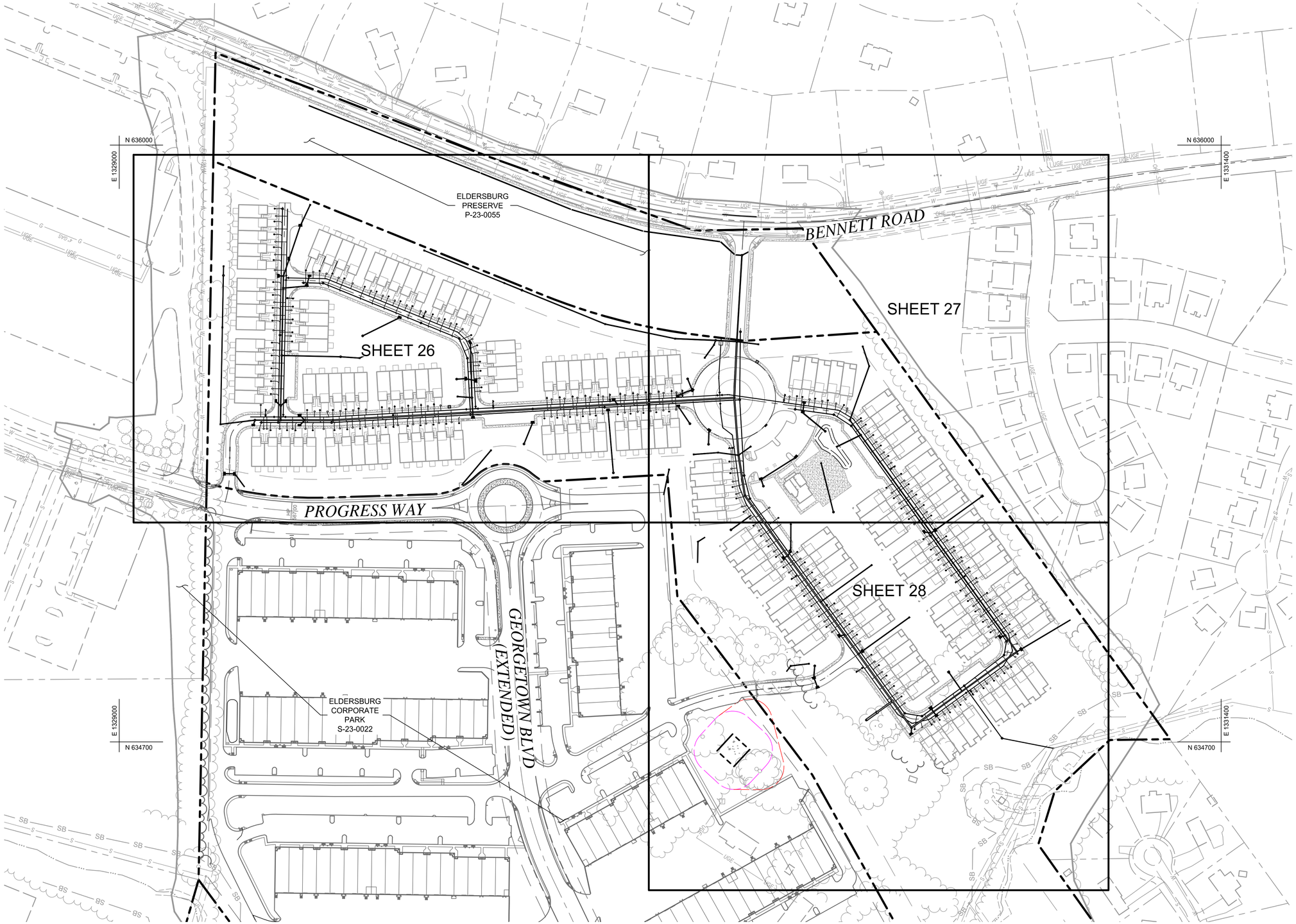

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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PLAN

100 0 100 200

SCALE:1"=100'

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FINAL SITE DEVELOPMENT PLANS
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WATER PLAN KEY SHEET

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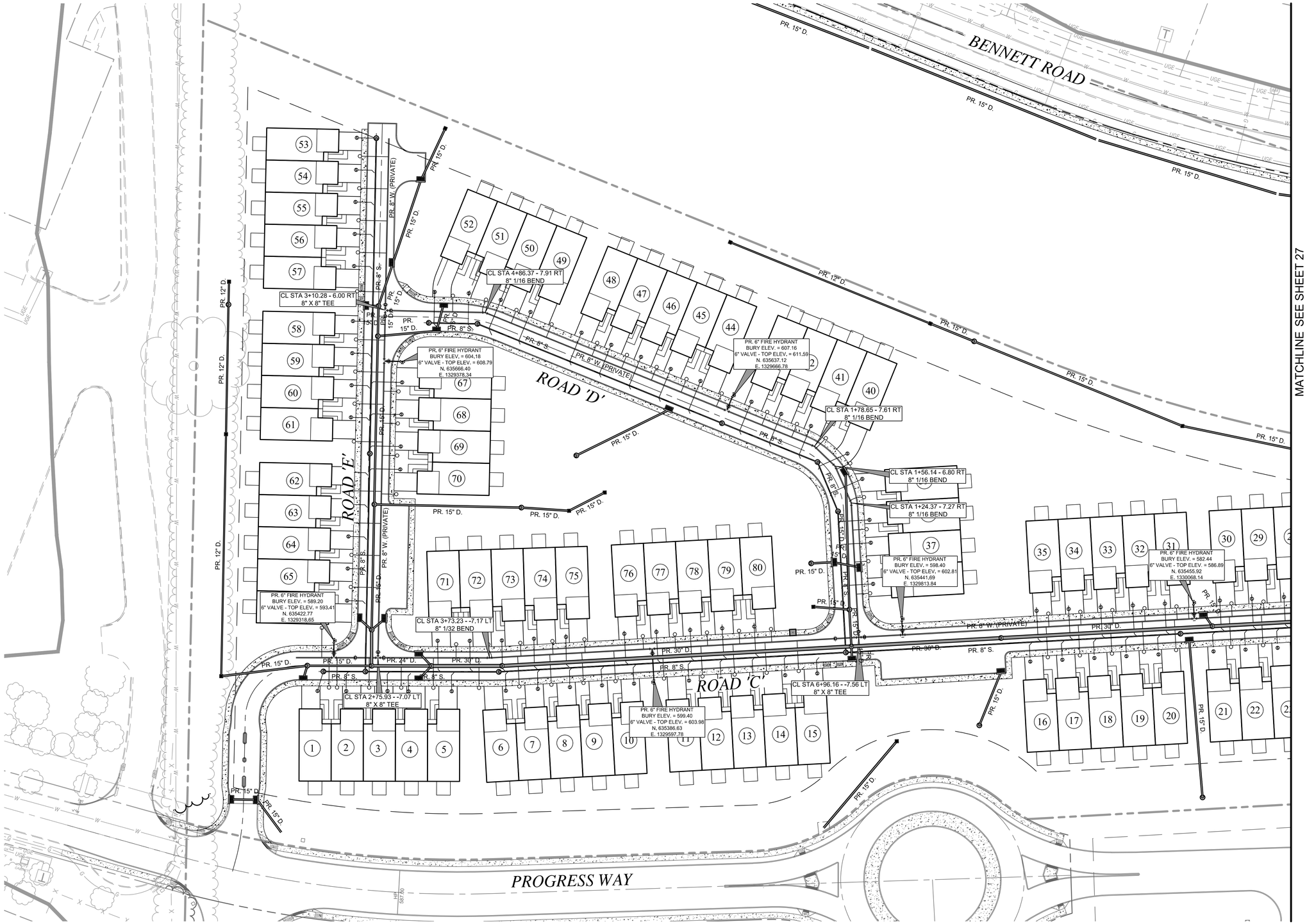

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

MATCHLINE SEE SHEET 27

PLAN

40 0 40 80

SCALE: 1"=40'

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MATCHLINE SEE SHEET 26

MATCHLINE SEE SHEET 28

BENNETT ROAD

ROAD 'A'

ROAD 'B'

ROAD 'C'

PR. 6" FIRE HYDRANT
BURY ELEV. = 575.05
6" VALVE - TOP ELEV. = 579.88
N. 635464.75
E. 1330225.98

PR. 6" FIRE HYDRANT
BURY ELEV. = 571,63
6" VALVE - TOP ELEV. = 576,19
N. 635455.42
E. 1330449.36

PR. 6" FIRE HYDRANT
BURY ELEV. = 570.95
6" VALVE - TOP ELEV. = 575.93
N. 635339.52
E. 1330329.10

PR. 6" FIRE HYDRANT
BURY ELEV. = 577.54
6" VALVE - TOP ELEV. = 582.54
N. 635300.25
E. 1330688.27

CL STA ??? - ??? ???
8" 1/32 BEND

CL STA 2+27.44 - -7.03 LT
8" 1/16 BEND

CL STA 2+61.49 - -8.91 LT
8" 1/16 BEND

CL STA 17+64.76 - -7.43 LT
8" 1/32 BEND

CL STA 17+26.65 - -8.26 LT
8" 1/32 BEND

PR. 8" W. (PRIVATE)

PR. 8" S.

PR. 15" D.

PR. 18" D.

PR. 30" D.

PR. 45" D.

PLAN

40 0 40 80

SCALE:1"=40'

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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WATER PLAN SHEET

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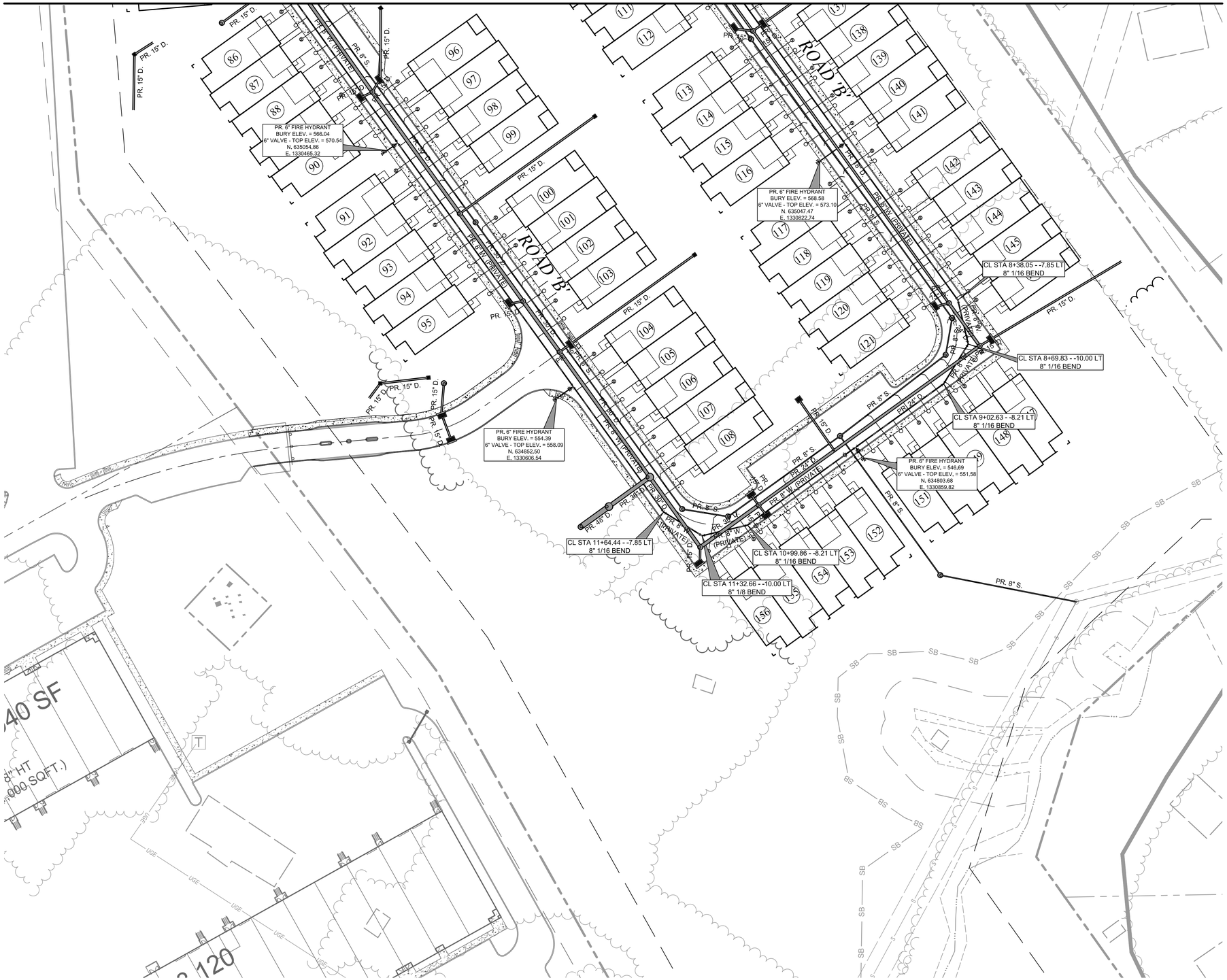

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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PLAN

20 0 20 40

SCALE:1"=40'

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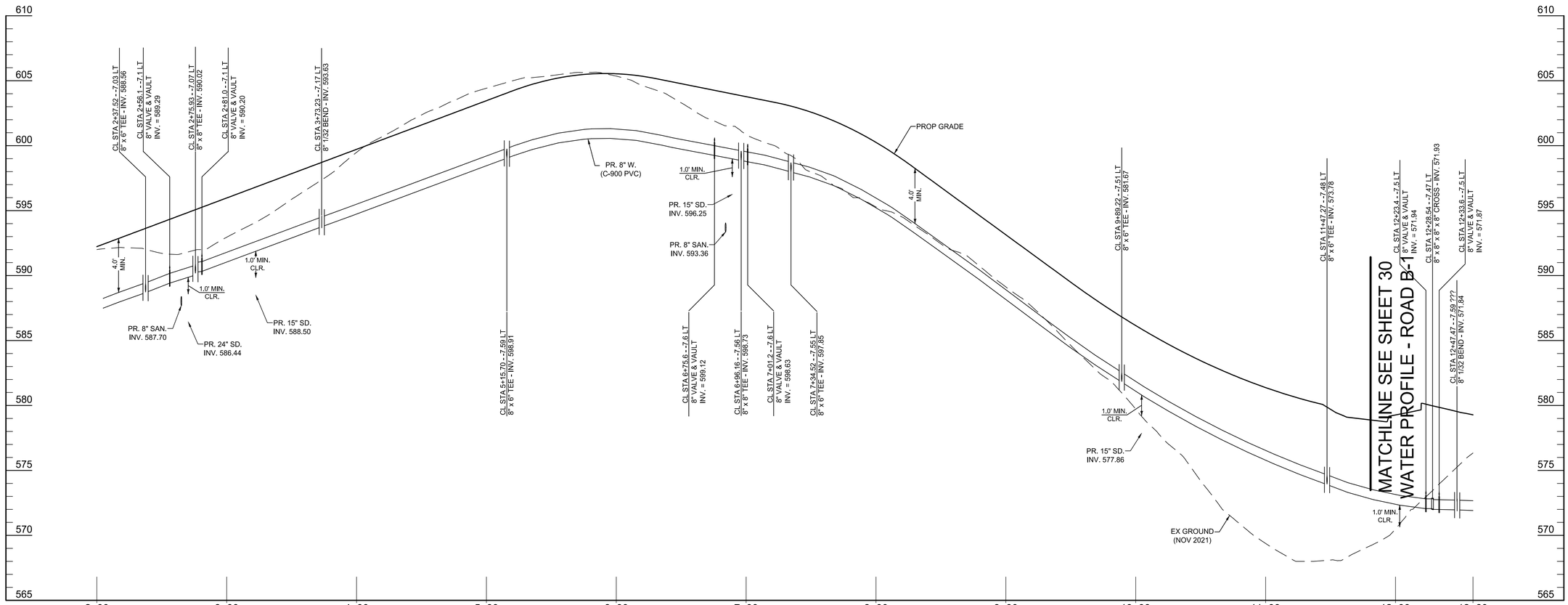

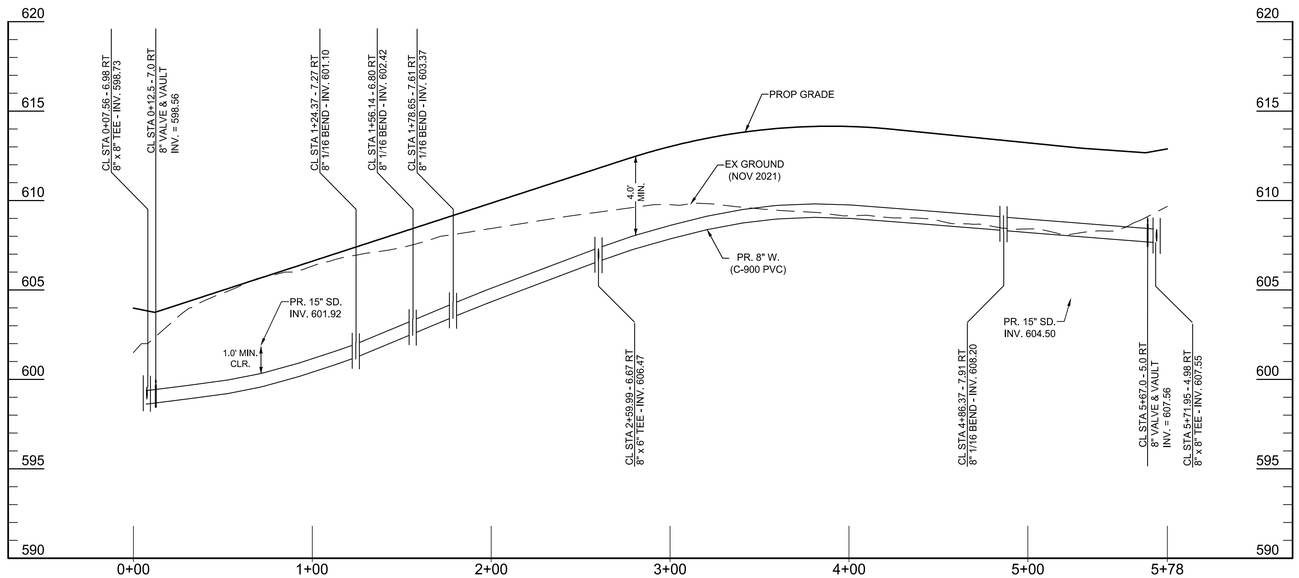

WATER PROFILE - ROAD C

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40 4 0

WATER PROFILE - ROAD D

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40 4 0

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WATER CONTRACT # XXXX S-23-0027

DATE	BY	REVISIONS

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WATER PROFILE

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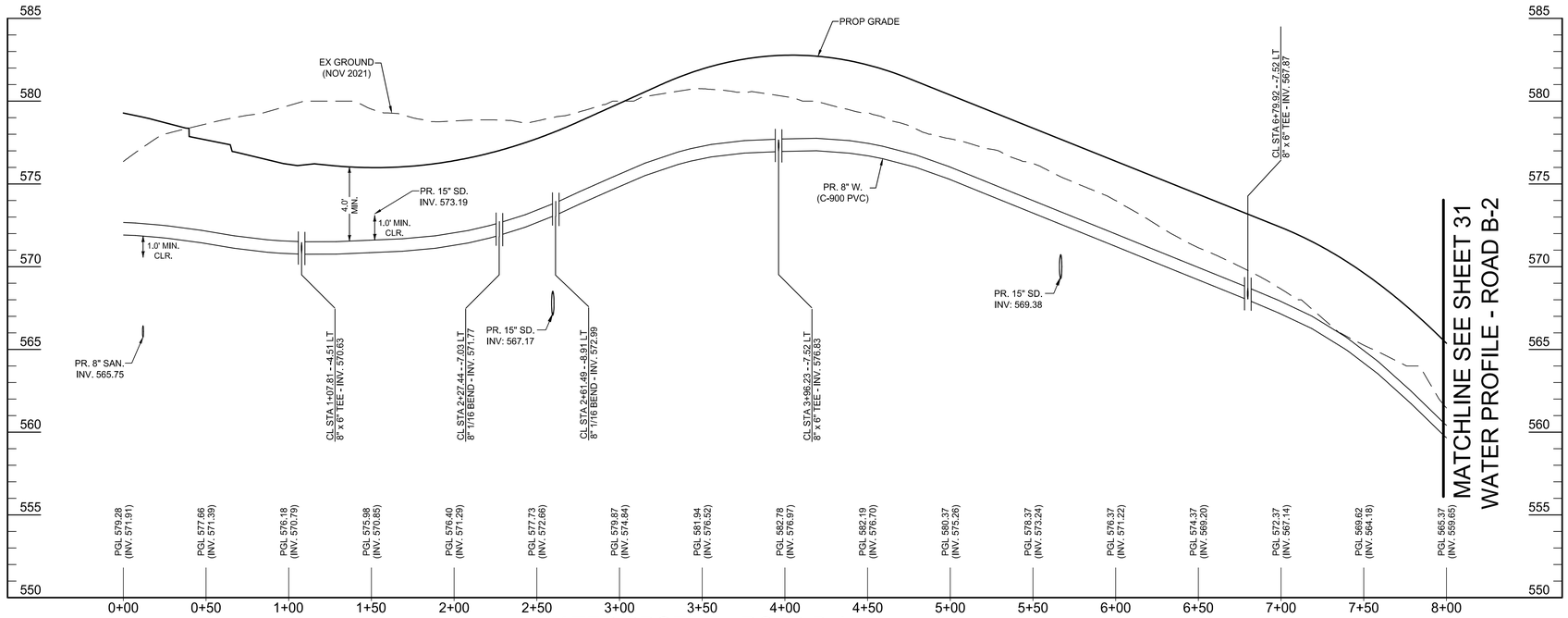
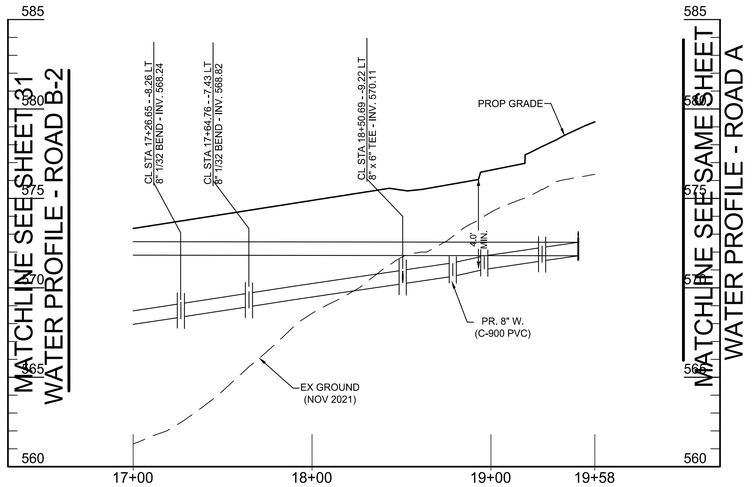


WATER PROFILE - ROAD B-1

SCALE: HORIZ: 1"=40' VERT: 1"=4'

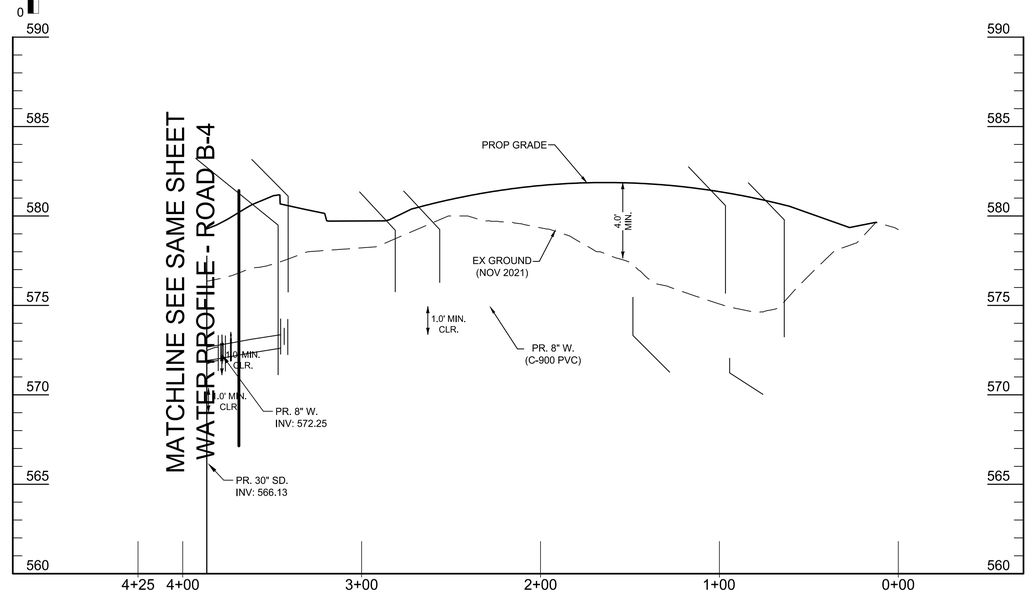
0 40 — 0 4



WATER PROFILE - ROAD B-3

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40 — 0 4



WATER PROFILE - ROAD A

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40 — 0 4

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SHEET: 30 OF X

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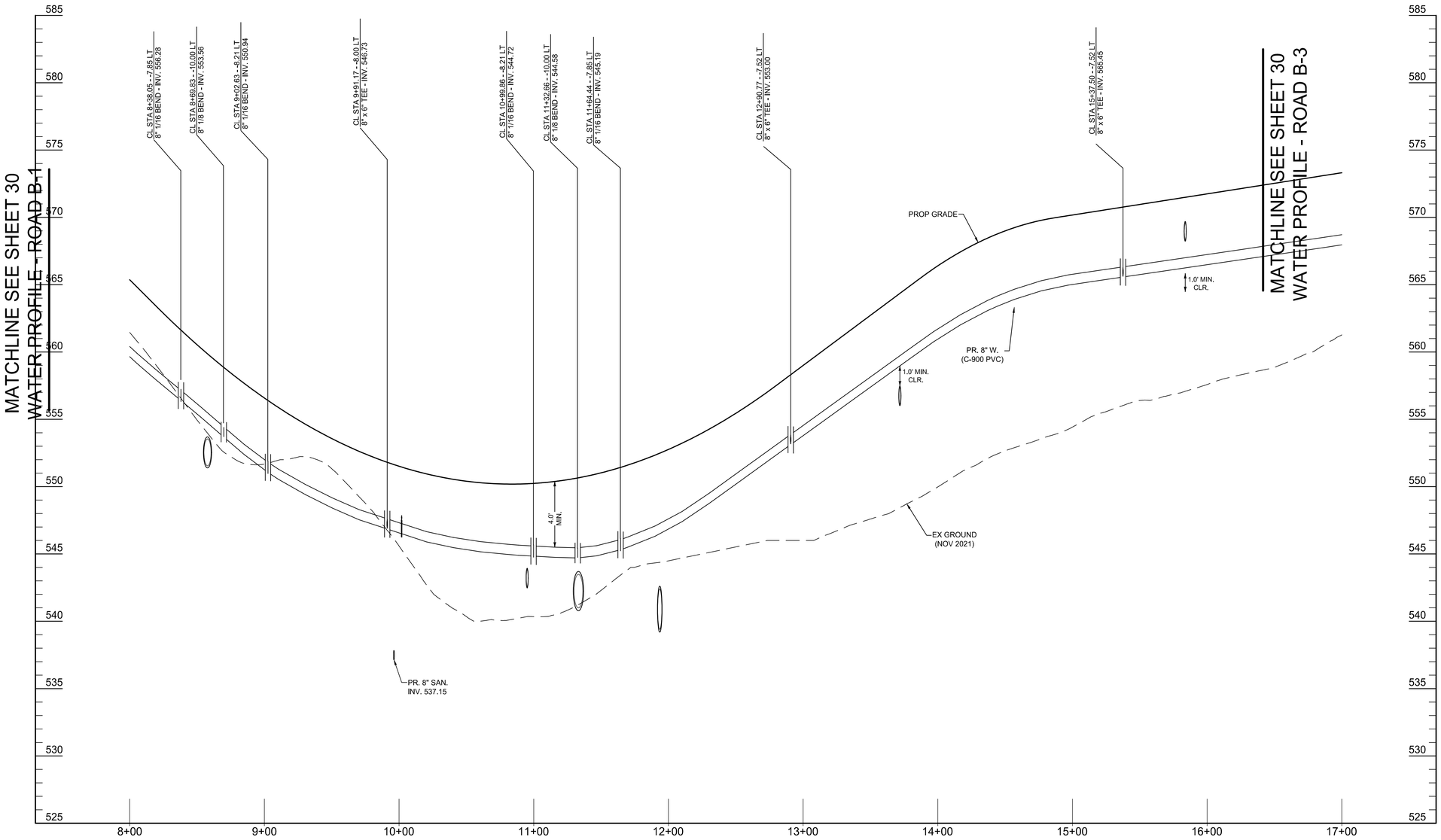

WATER PROFILE - ROAD B-2

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40

4 0

DATA SOURCES

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2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

WATER PROFILE

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN SHEET: 31 OF X
PROJECT NUMBER: 20211253.002A

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

WATER CONTRACT # XXXX S-23-0027

DATE	BY	REVISIONS

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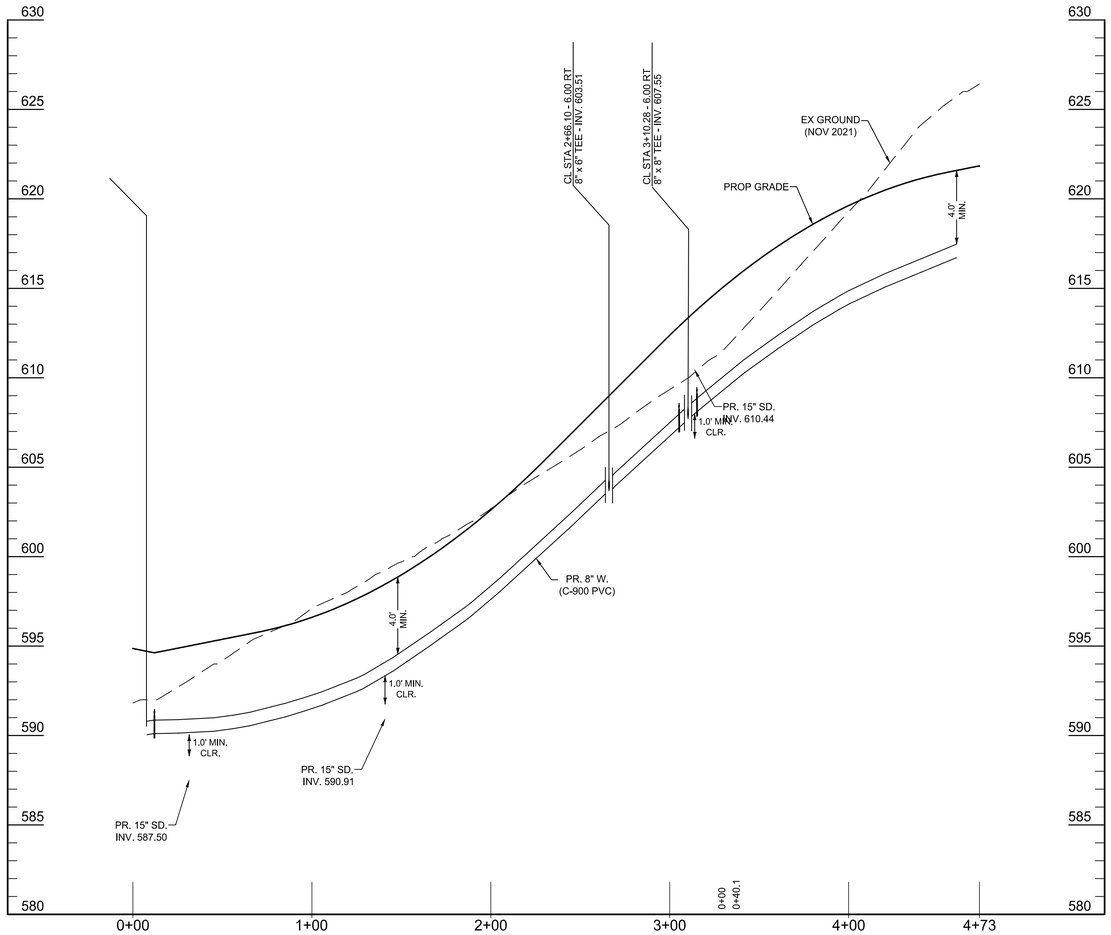

WATER PROFILE - ROAD E

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40

4 0

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DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 32 OF X

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BALTIMORE, MD 21244
PHONE NO: 410-369-1207

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2560 LORD BALTIMORE DRIVE
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CONTACT: MATT TAYLOR
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WATER CONTRACT # XXXX S-23-0027

DATE	BY	REVISIONS

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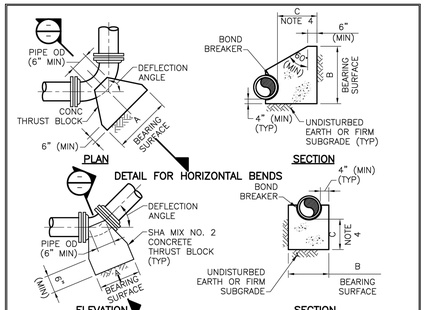
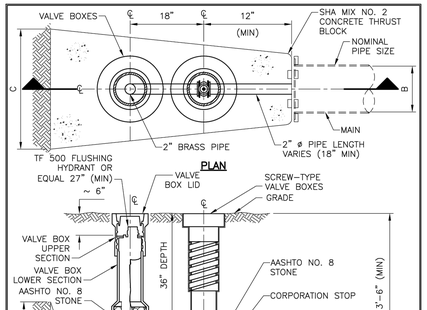


DETAIL FOR LOWER VERTICAL BENDS

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPE OD (INCHES)	REQUIRED BEARING AREA (SQ FT)					
		90 DEG	60 DEG	45 DEG	30 DEG	22.50 DEG	11.25 DEG
4	4.80	2.9	2.0	1.6	1.1	0.8	0.4
8	9.05	10	7	6	4	3	1.4
12	13.20	22	15	12	8	6	3
18	19.50	48	34	26	17	13	7
20	21.60	58	41	32	21	16	8
24	25.80	83	59	45	30	23	12

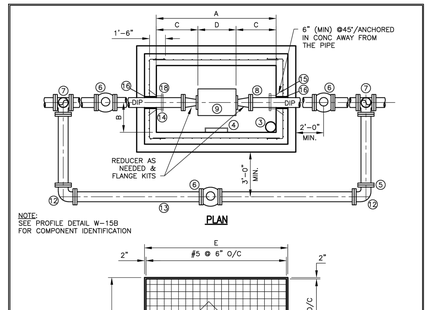
NOTES:
1. MAXIMUM TEST PRESURE = 1.5 x 150 PSI
2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
3. BEARING AREA = A x B
4. C SHALL BE GREATER THAN A/2 AND B/2.

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	THRUST-BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS	STANDARD DETAIL W-3
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



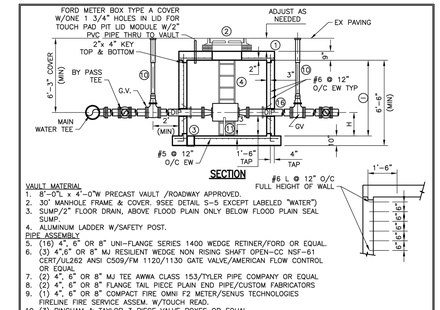
THRUST BLOCK DIMENSIONS (INCHES)						
B	4	6	8	10	12	14
C	17	17	23	29	34	45
D	10	12	16	20	24	32

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	CAP AND BLOW-OFF	STANDARD DETAIL W-5A
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022

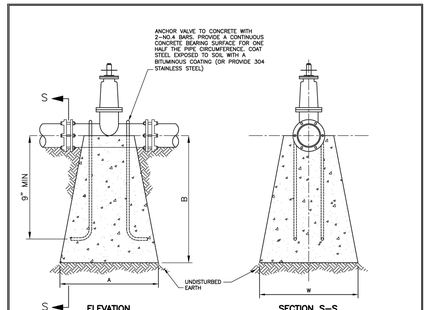


	SIZE	A	B	C	D	E	F	G
4" FM	4"	8"	4"	2'-3 1/2"	3'-10"	5'-4"	4'-8"	
6" FM	6"	8"	4"	2'-3 1/2"	3'-10"	5'-4"	4'-8"	
8" FM	8"	8"	4"	1'-9"	4'-6"	5'-4"	4'-8"	

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	FIRE & DOMESTIC METER VAULT ASSEMBLY STANDARD VAULT FOR 4", 6" & 8" FIRE METERS	STANDARD DETAIL W-15A
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	FIRE & DOMESTIC METER VAULT ASSEMBLY STANDARD VAULT FOR 4", 6" & 8" FIRE METERS	STANDARD DETAIL W-15B
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022

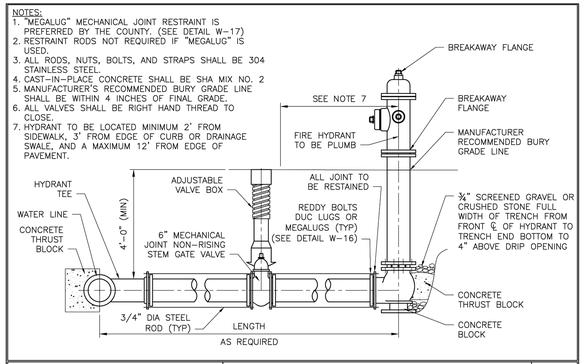


NOTE:
CONCRETE TO BE MIX NO. 2.

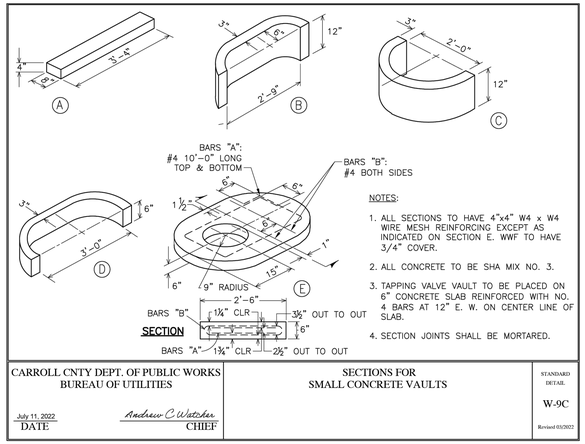
PIPE SIZE	A	B	W
4"	10"	1'-0"	1'-6"
6"	1'-0"	1'-6"	1'-6"
8"	1'-6"	2'-0"	2'-0"
12"	2'-0"	2'-0"	3'-0"

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	PVC WATER MAIN VALVE ANCHORAGE	STANDARD DETAIL W-21
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022

NOTES:
1. "MEGALUG" MECHANICAL JOINT RESTRAINT IS PREFERRED BY THE COUNTY. (SEE DETAIL W-17)
2. RESTRAINT RODS NOT REQUIRED IF "MEGALUG" IS USED.
3. ALL RODS, NUTS, BOLTS, AND STRAPS SHALL BE 304 STAINLESS STEEL.
4. CAST-IN-PLACE CONCRETE SHALL BE SHA MIX NO. 2
5. MANUFACTURER'S RECOMMENDED BURY GRADE LINE SHALL BE WITHIN 4 INCHES OF FINAL GRADE.
6. ALL VALVES SHALL BE RIGHT HAND THREAD TO CLOSE.
7. HYDRANT TO BE LOCATED MINIMUM 2' FROM SIDEWALK, 3' FROM EDGE OF CURB OR DRAINAGE SWALE, AND A MAXIMUM 12' FROM EDGE OF PAVEMENT.

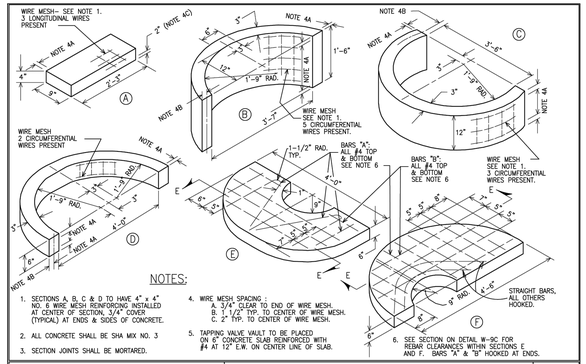


CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	TYPICAL FIRE HYDRANT SETTING	STANDARD DETAIL W-2
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



NOTES:
1. ALL SECTIONS TO HAVE 4"x4" W4 x W4 WIRE MESH REINFORCING EXCEPT AS INDICATED ON SECTION E. WWF TO HAVE 3/4" COVER.
2. ALL CONCRETE TO BE SHA MIX NO. 3.
3. TAPPING VALVE VAULT TO BE PLACED ON 6" CONCRETE SLAB REINFORCED WITH NO. 4 BARS AT 12" E. W. ON CENTER LINE OF SLAB.
4. SECTION JOINTS SHALL BE MORTARED.

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	SECTIONS FOR SMALL CONCRETE VAULTS	STANDARD DETAIL W-9C
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	SECTIONS FOR LARGE CONCRETE VAULTS	STANDARD DETAIL W-9D
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

WATER DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
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DEVELOPER
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WATER CONTRACT # XXXX S-23-0027

DATE	BY	REVISIONS

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 33 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (PW-X) Water Details.dwg Mar 04, 2025 3:43pm dangrehr



MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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PLAN

100 0 100 200

SCALE:1"=100'

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FINAL SITE DEVELOPMENT PLANS
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SANITARY SEWER PLAN KEY SHEET

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ELDERSBURG, MD
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ELECTION DISTRICT 5 CARROLL COUNTY, MD

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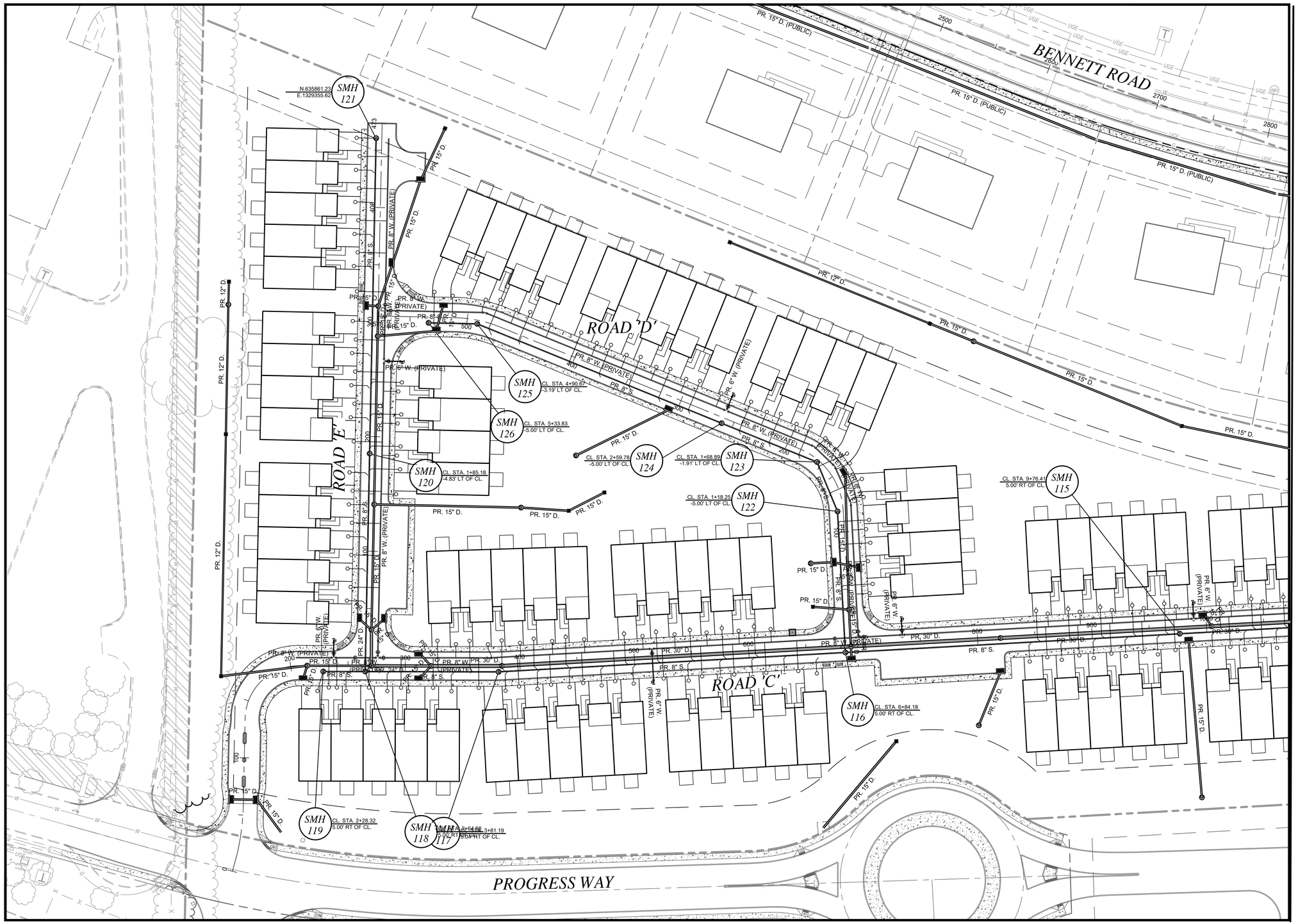
SHEET: 34 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Sanitary Sewer Plan.dwg Mar 04, 2025 3:44pm rlangrehr



MATCHLINE SEE SHEET 36

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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PLAN

40 0 40 80

SCALE:1"=40'

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FINAL SITE DEVELOPMENT PLANS
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SANITARY SEWER PLAN SHEET

ELDERSBURG OVERLOOK

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PROJECT NUMBER: 20211253.002A

SHEET: 35 OF X

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MATCHLINE SEE SHEET 35

BENNETT ROAD

ROAD 'A'

ROAD 'B'

ROAD 'C'

SMH 108 — CL. STA. 2+41.10, 6.95' LT OF CL.

SMH 107 — CL. STA. 0+12.18, 2.56' RT OF CL.

SMH 113 — CL. STA. 2+20.90, 5.68' RT OF CL.

SMH 114 — CL. STA. 1+34.71, 7.00' RT OF CL.

SMH 112 — CL. STA. 2+69.49, 4.74' RT OF CL.

SMH 106 — CL. STA. 17+88.16, 7.43' RT OF CL.

SMH 105 — CL. STA. 17+33.94, 4.68' RT OF CL.

MATCHLINE SEE SHEET 37

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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SANITARY SEWER PLAN SHEET

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ELECTION DISTRICT 5 CARROLL COUNTY, MD

PLAN
40 0 40 80
SCALE:1"=40'

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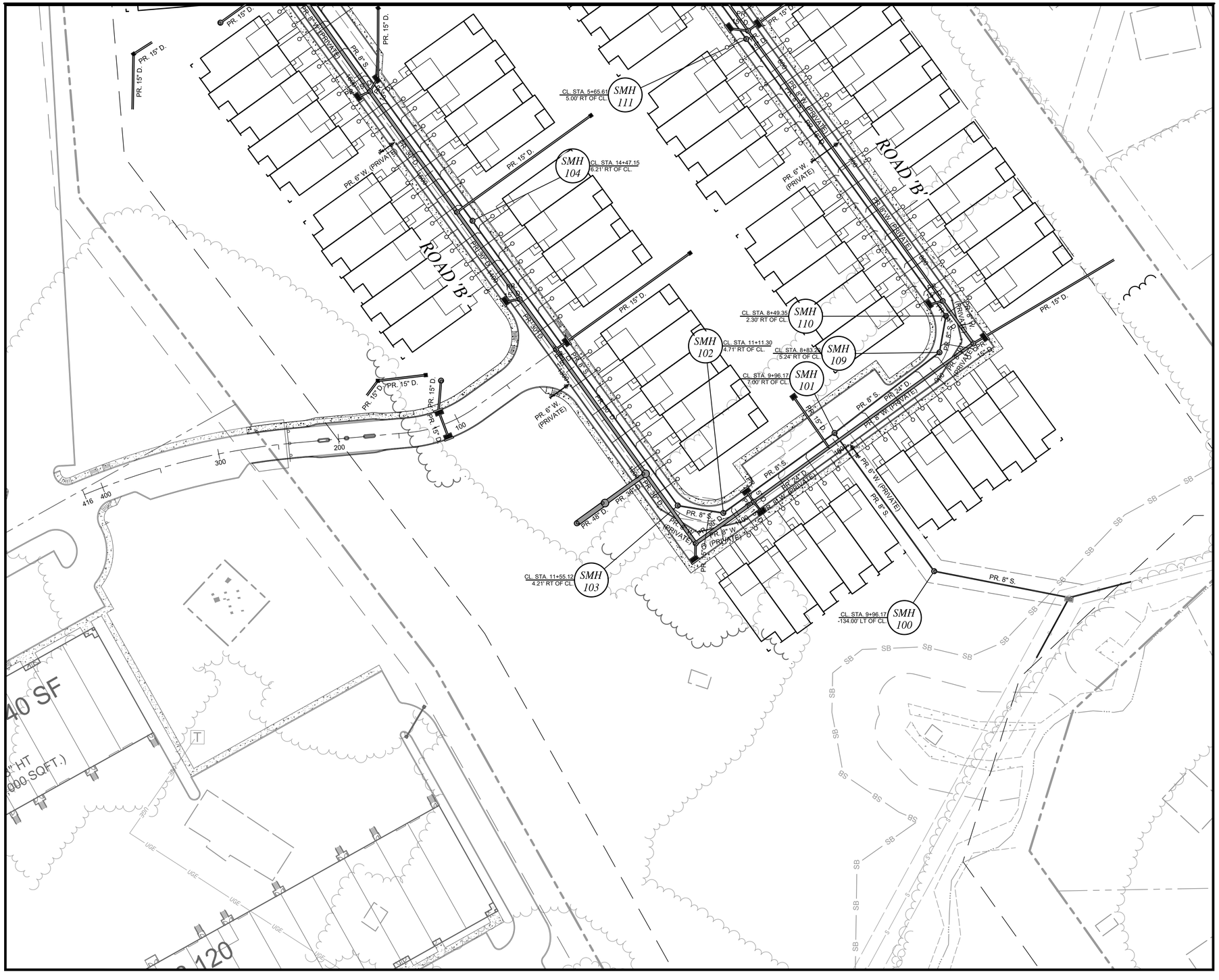
SHEET: 36 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Sanitary Sewer Plan.dwg Mar 04, 2025 3:44pm rlangrehr

MATCHLINE SEE SHEET 36



PLAN

40 0 40 80

SCALE:1"=40'

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

SANITARY SEWER PLAN SHEET

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 37 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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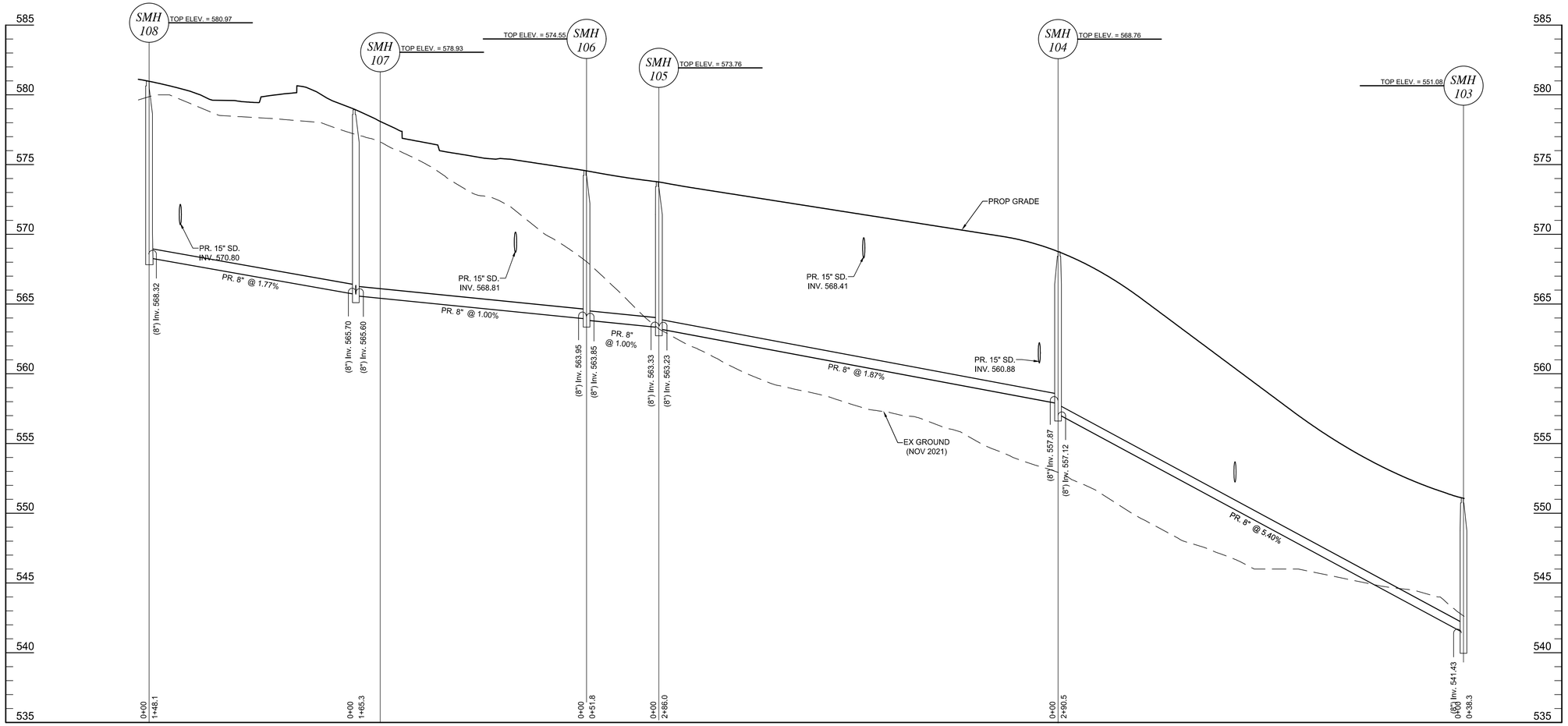

SANITARY SEWER PROFILE - ROAD A/B

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40 — 0 4

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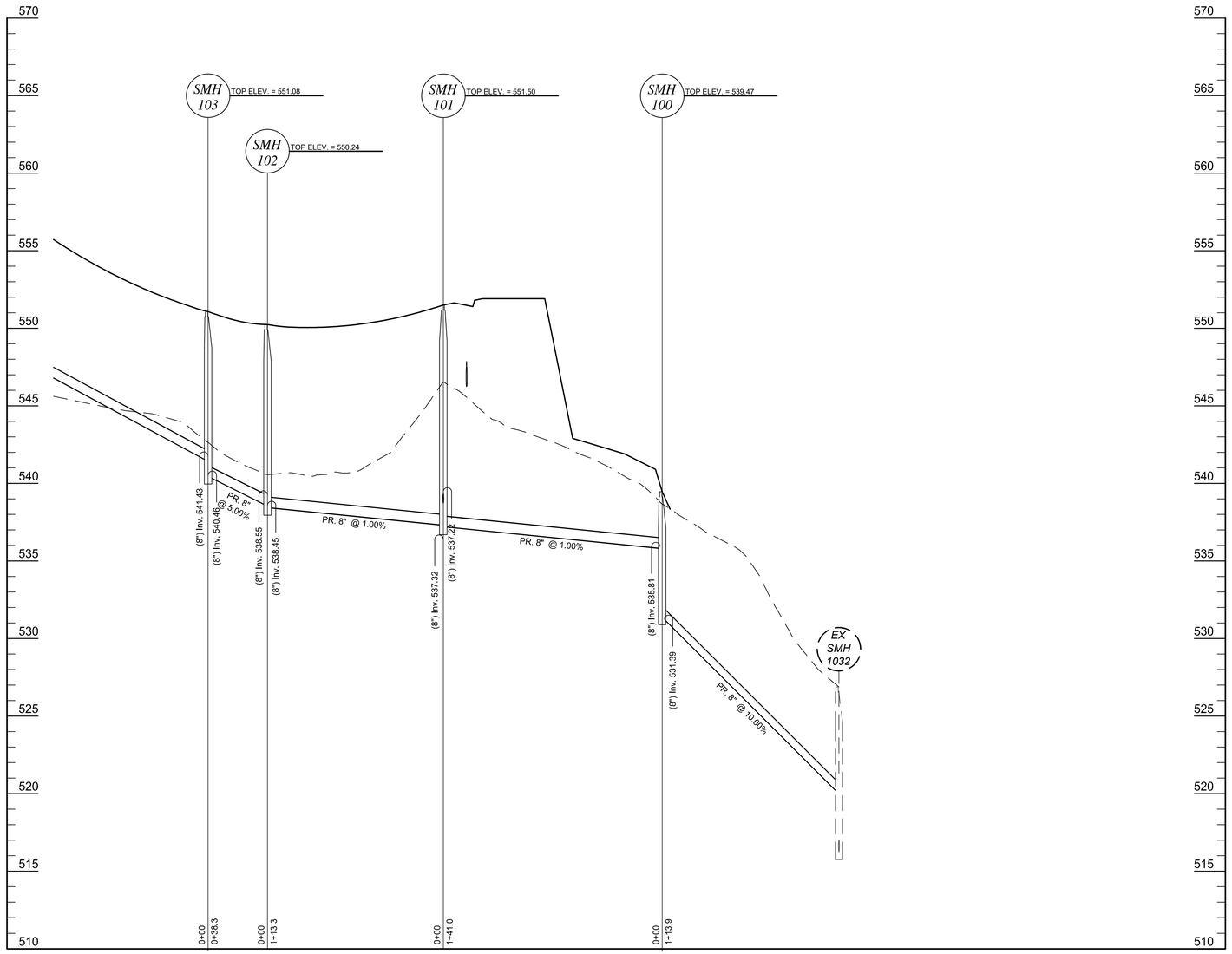

SANITARY SEWER PROFILE - ROAD B

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0 40 — 4 0

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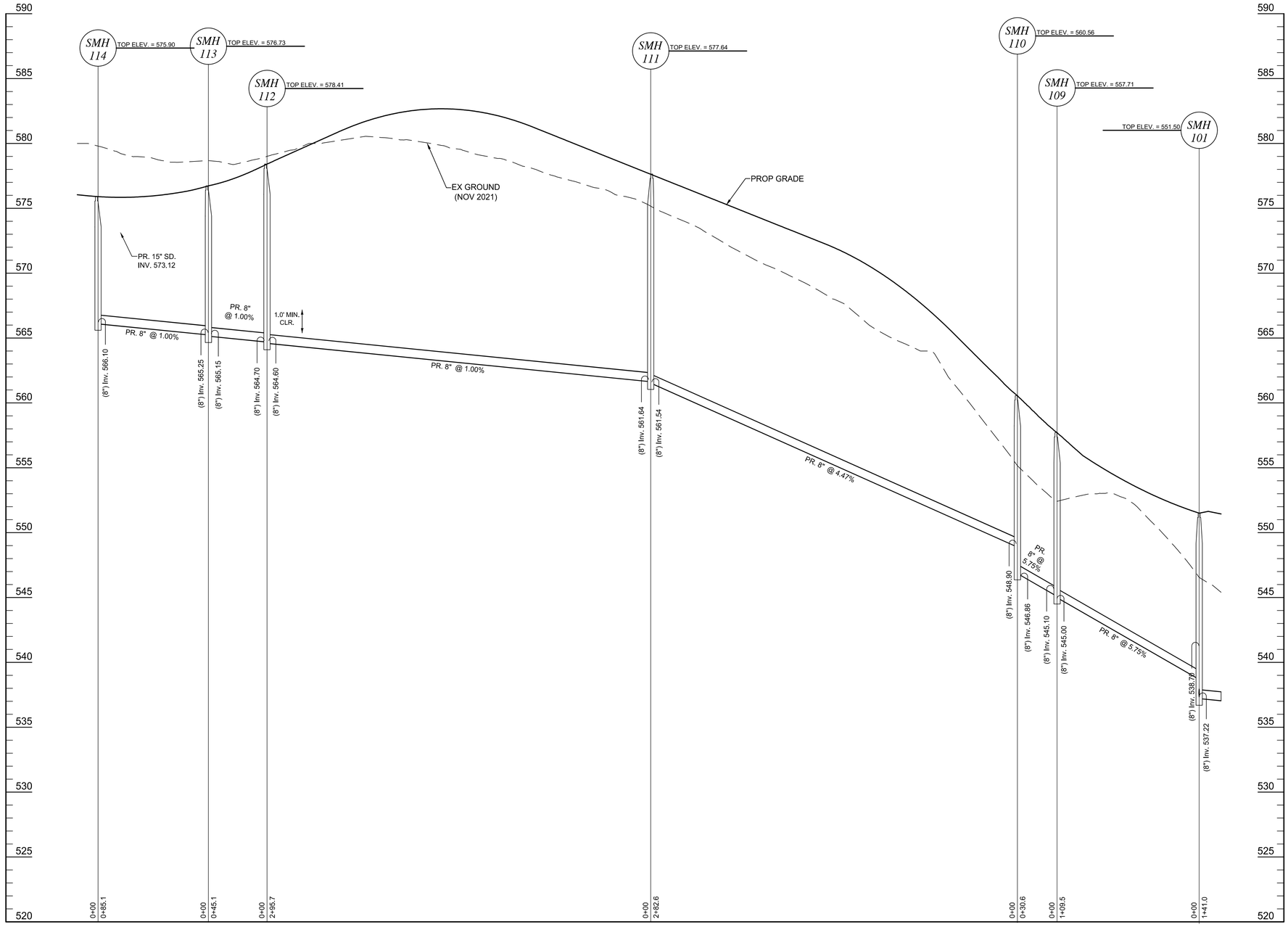

SANITARY SEWER PROFILE - ROAD B

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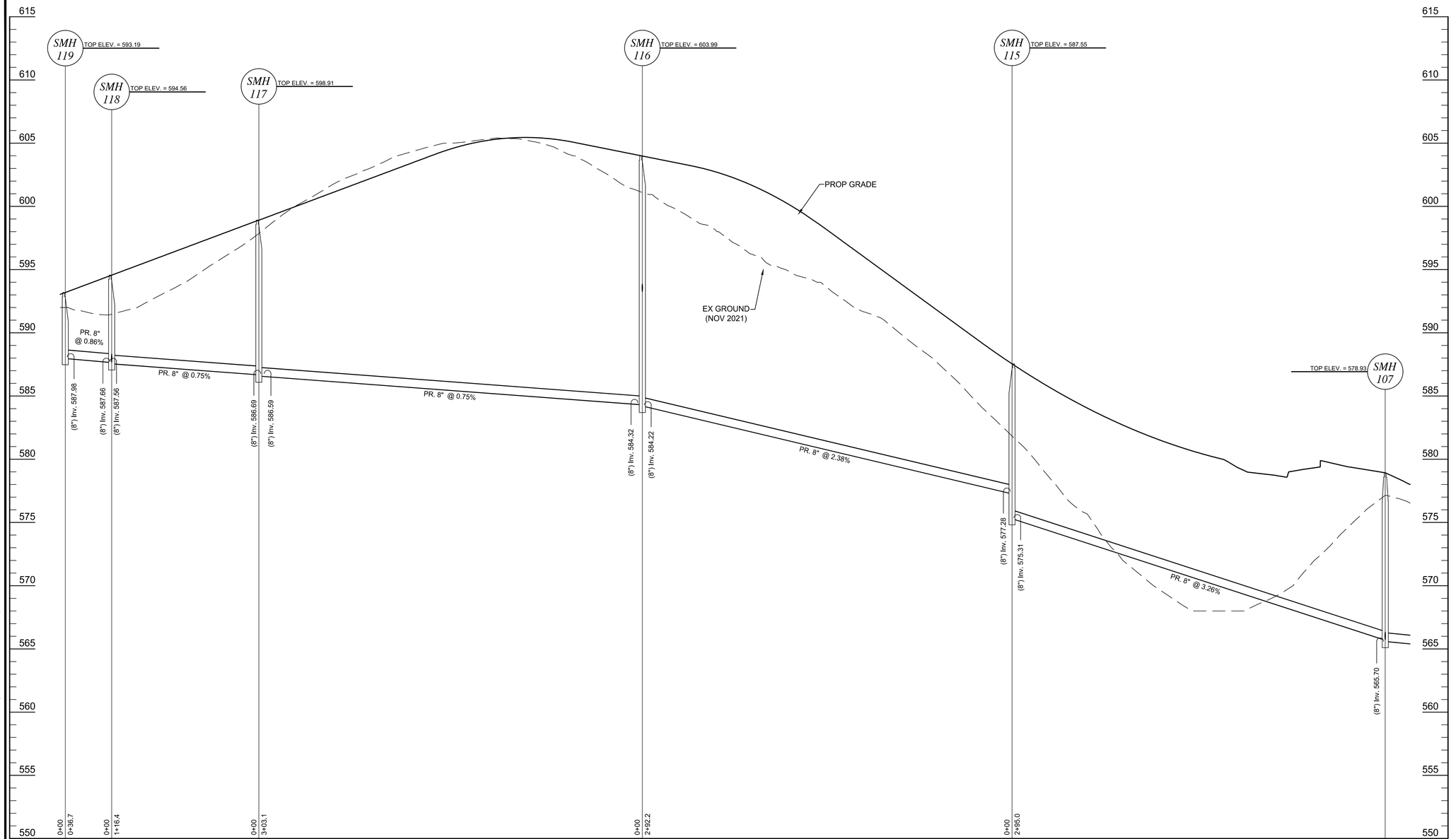

SANITARY SEWER PROFILE - ROAD C

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40 — 0 4

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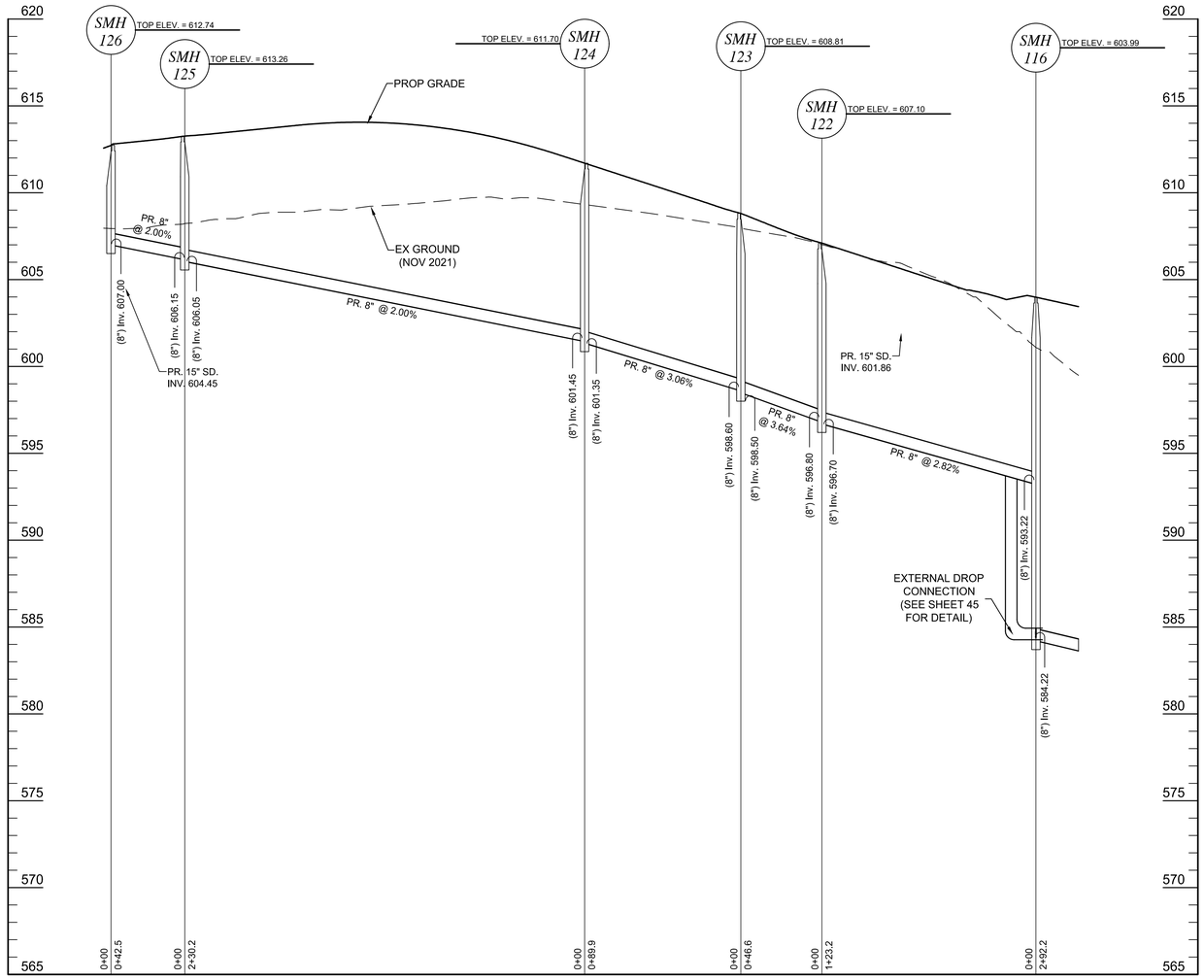

SANITARY SEWER PROFILE - ROAD C

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40 4 0

SANITARY SEWER PROFILE - ROAD D

SCALE: HORIZ: 1"=40' VERT: 1"=4'

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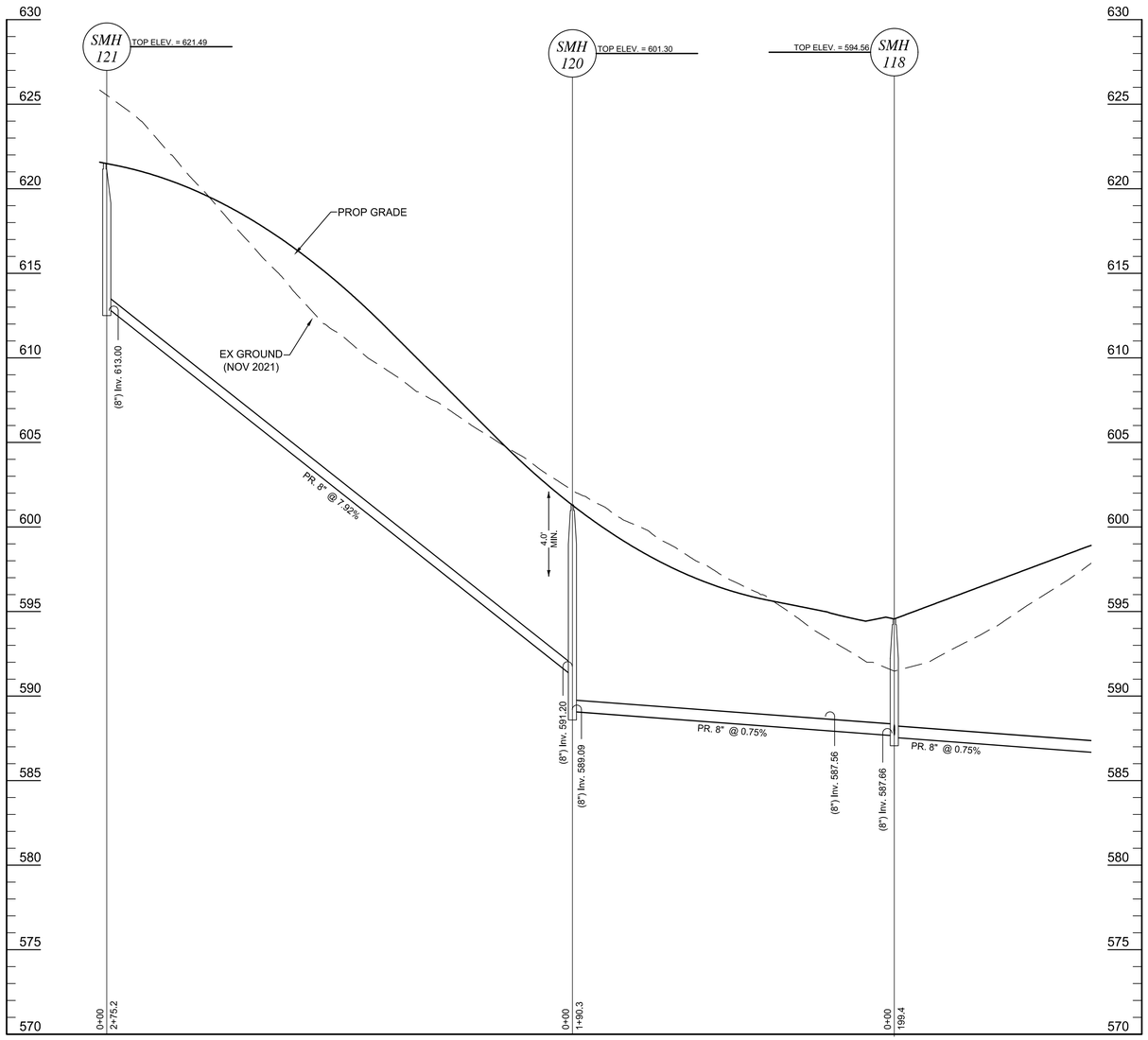

SANITARY SEWER PROFILE - ROAD E

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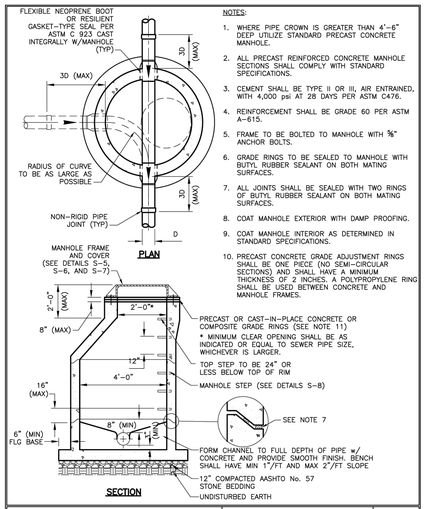
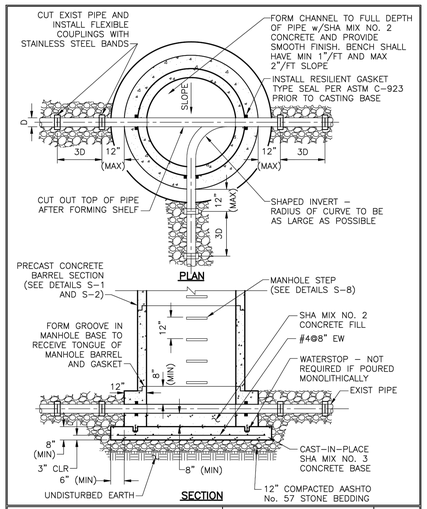


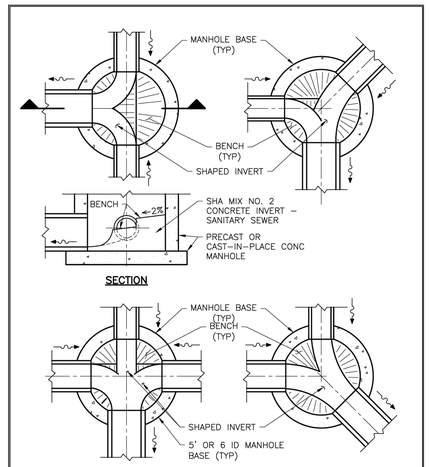
NOTES:

1. WHERE PIPE CROWN IS GREATER THAN 4'-6" DEEP UTILIZE STANDARD PRECAST CONCRETE MANHOLE.
2. ALL PRECAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL COMPLY WITH STANDARD SPECIFICATIONS.
3. CEMENT SHALL BE TYPE II OR III, AIR ENTRAINED, WITH 4,000 psi AT 28 DAYS PER ASTM C476.
4. REINFORCEMENT SHALL BE GRADE 60 PER ASTM A-615.
5. FRAME TO BE BOLTED TO MANHOLE WITH ⅝" ANCHOR BOLTS.
6. GRADE RINGS TO BE SEALED TO MANHOLE WITH BUTYL RUBBER SEALANT ON BOTH MATING SURFACES.
7. ALL JOINTS SHALL BE SEALED WITH TWO RINGS OF BUTYL RUBBER SEALANT ON BOTH MATING SURFACES.
8. COAT MANHOLE EXTERIOR WITH DAMP PROOFING.
9. COAT MANHOLE INTERIOR AS DETERMINED IN STANDARD SPECIFICATIONS.
10. PRECAST CONCRETE GRADE ADJUSTMENT RINGS SHALL BE ONE PIECE (NO SEMI-CIRCULAR SECTIONS) AND SHALL HAVE A MINIMUM THICKNESS OF 2 INCHES. A POLYPROPYLENE RING SHALL BE USED BETWEEN CONCRETE AND MANHOLE FRAMES.

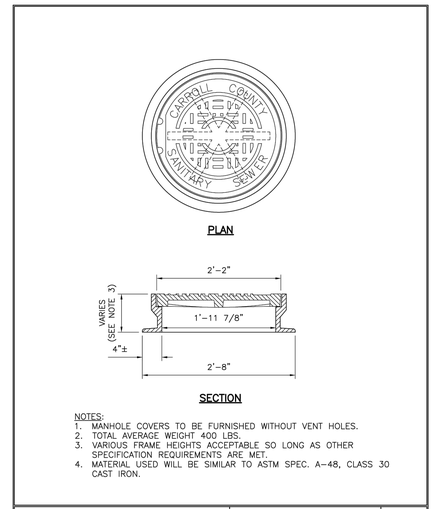
CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	STANDARD PRECAST CONCRETE MANHOLE	STANDARD DETAIL S-1
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	DOGHOUSE MANHOLE	STANDARD DETAIL S-3
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



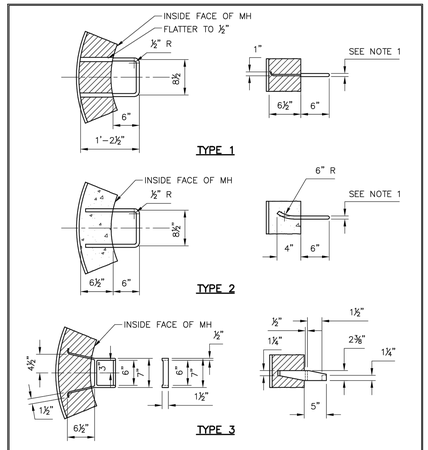
CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	MANHOLE CHANNEL ALIGNMENTS	STANDARD DETAIL S-4
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



NOTES:

1. MANHOLE COVERS TO BE FURNISHED WITHOUT VENT HOLES.
2. TOTAL AVERAGE WEIGHT 400 LBS.
3. VARIOUS FRAME HEIGHTS ACCEPTABLE SO LONG AS OTHER SPECIFICATION REQUIREMENTS ARE MET.
4. MATERIAL USED WILL BE SIMILAR TO ASTM SPEC. A-48, CLASS 30 CAST IRON.

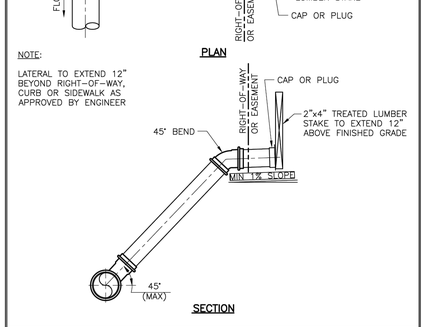
CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	HEAVY TRAFFIC MANHOLE FRAME	STANDARD DETAIL S-5
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



NOTE:

1. MANHOLES RUNGS SHALL BE ½" DIAMETER STEEL REINFORCED COPOLYMER POLYPROPYLENE PLASTIC OR 3/4" EXTENDED ALUMINUM.

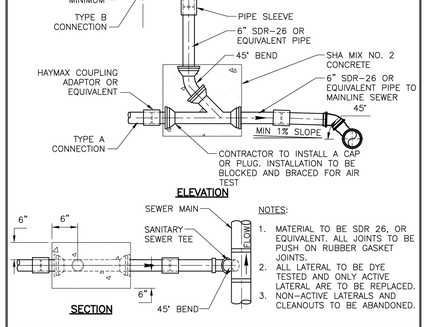
CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	MANHOLE RUNG	STANDARD DETAIL S-8
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



NOTE:

LATERAL TO EXTEND 12" BEYOND RIGHT-OF-WAY, CURB OR SIDEWALK AS APPROVED BY ENGINEER

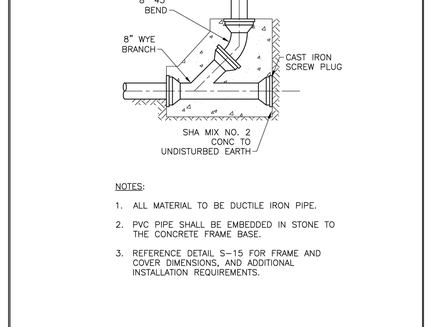
CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	STANDARD HOUSE CONNECTIONS	STANDARD DETAIL S-10
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



NOTES:

1. MATERIAL TO BE SDR 26, OR EQUIVALENT. ALL JOINTS TO BE PUSH ON RUBBER GASKET JOINTS.
2. ALL LATERAL TO BE DYE TESTED AND ONLY ACTIVE LATERAL ARE TO BE REPLACED. NON-ACTIVE LATERALS AND CLEANOUTS TO BE ABANDONED.

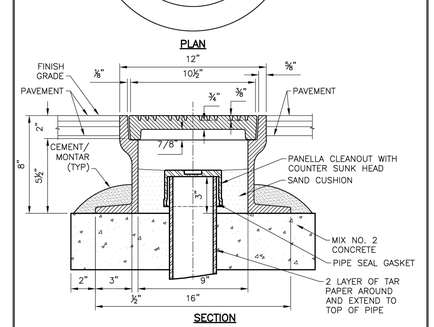
CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	CLEANOUT FOR HOUSE CONNECTION	STANDARD DETAIL S-13
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



NOTES:

1. ALL MATERIAL TO BE DUCTILE IRON PIPE.
2. PVC PIPE SHALL BE EMBEDDED IN STONE TO THE CONCRETE FRAME BASE.
3. REFERENCE DETAIL S-15 FOR FRAME AND COVER DIMENSIONS, AND ADDITIONAL INSTALLATION REQUIREMENTS.

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	MAIN LINE CLEANOUT	STANDARD DETAIL S-14
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022



NOTE:

1. ASSEMBLY TO BE USED IN ROADWAYS, SIDEWALK, DRIVEWAYS, AND ALL OTHER PAVED AREAS.

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	CLEANOUT COVER ASSEMBLY FOR ALL PAVED AREAS	STANDARD DETAIL S-15
July 11, 2022 DATE — Andrew C Watcher CHIEF		Revised 03/2022

DATA SOURCES

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

SANITARY SEWER DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 44 OF X

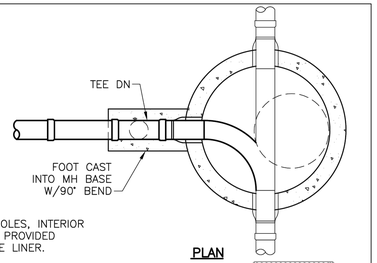
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

SEWER CONTRACT # XXXX S-23-0027

DATE	BY	REVISIONS

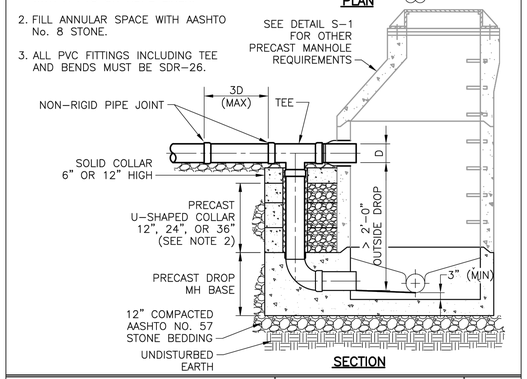
T:\2021\Facilities\20211253.002A Beatly Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (PS-X) Sanitary Details.dwg Mar 04, 2025 3:45pm rlangrehr



PLAN

NOTES:

1. FOR ALL DROP MANHOLES, INTERIOR SURFACES SHALL BE PROVIDED WITH A PVC OR HDPE LINER.
2. FILL ANNULAR SPACE WITH AASHTO No. 8 STONE.
3. ALL PVC FITTINGS INCLUDING TEE AND BENDS MUST BE SDR-26.



SECTION

CARROLL CNTY DEPT. OF PUBLIC WORKS BUREAU OF UTILITIES	EXTERNAL DROP CONNECTION	STANDARD DETAIL
July 11, 2022 DATE — Andrew C Watcher CHIEF		S-17 Revised 03/2022

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

SANITARY SEWER DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
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BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

SEWER CONTRACT # XXXX S-23-0027

DATE	BY	REVISIONS

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: 45 OF X
PROJECT NUMBER: 20211253.002A

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (PS-X) Sanitary Details.dwg Mar 04, 2025 3:45pm rlangrehr



PLAN

100 0 100 200

SCALE:1"=100'

DATA SOURCES

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORM DRAIN DRAINAGE AREA MAP KEY SHEET

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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S-23-0027

DATE	BY	REVISIONS

PROFESSIONAL CERTIFICATION

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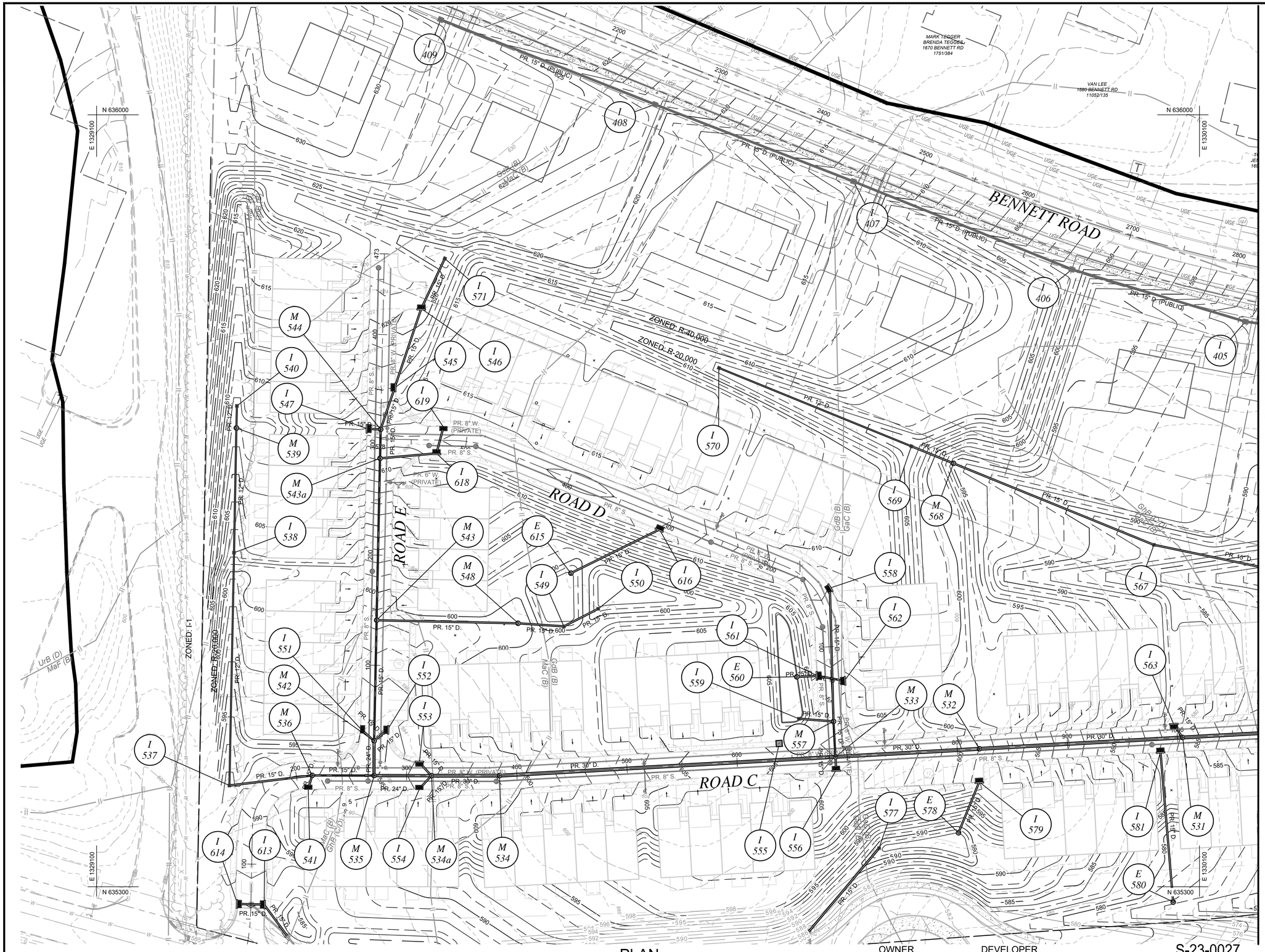
LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN SHEET: 46 OF X
PROJECT NUMBER: 20211253.002A

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Storm Drain Drainage Area Map.dwg Mar 04, 2025 3:46pm rlangrehr



MATCHLINE SEE SHEET 48

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

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FINAL SITE DEVELOPMENT PLANS
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STORM DRAIN DRAINAGE AREA MAP

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PLAN
40 0 40 80
SCALE: 1"=40'

S-23-0027

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
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DATE	BY	REVISIONS

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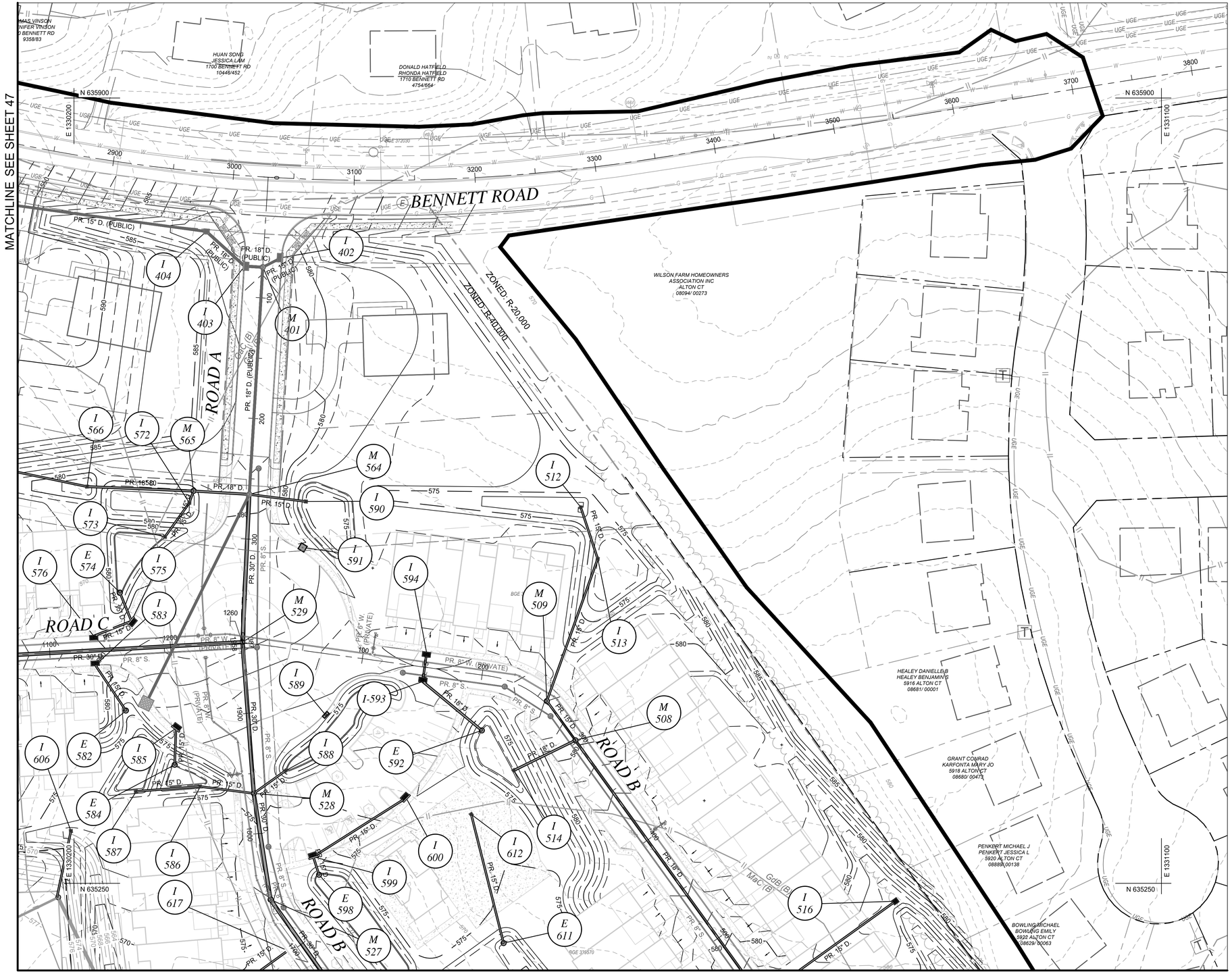
LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: 47 OF X
PROJECT NUMBER: 20211253.002A

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Storm Drain Drainage Area Map.dwg Mar 04, 2025 3:47pm rlangrehr



MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

PLAN

40 0 40 80

SCALE:1"=40'

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FINAL SITE DEVELOPMENT PLANS
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STORM DRAIN DRAINAGE AREA MAP

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
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ELECTION DISTRICT 5 CARROLL COUNTY, MD

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 48 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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ROAD C

MATCHLINE SEE SHEET 48



MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

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PLAN

40 0 40 80

SCALE:1"=40'

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FINAL SITE DEVELOPMENT PLANS
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STORM DRAIN DRAINAGE AREA MAP

ELDERSBURG OVERLOOK

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TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 49 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
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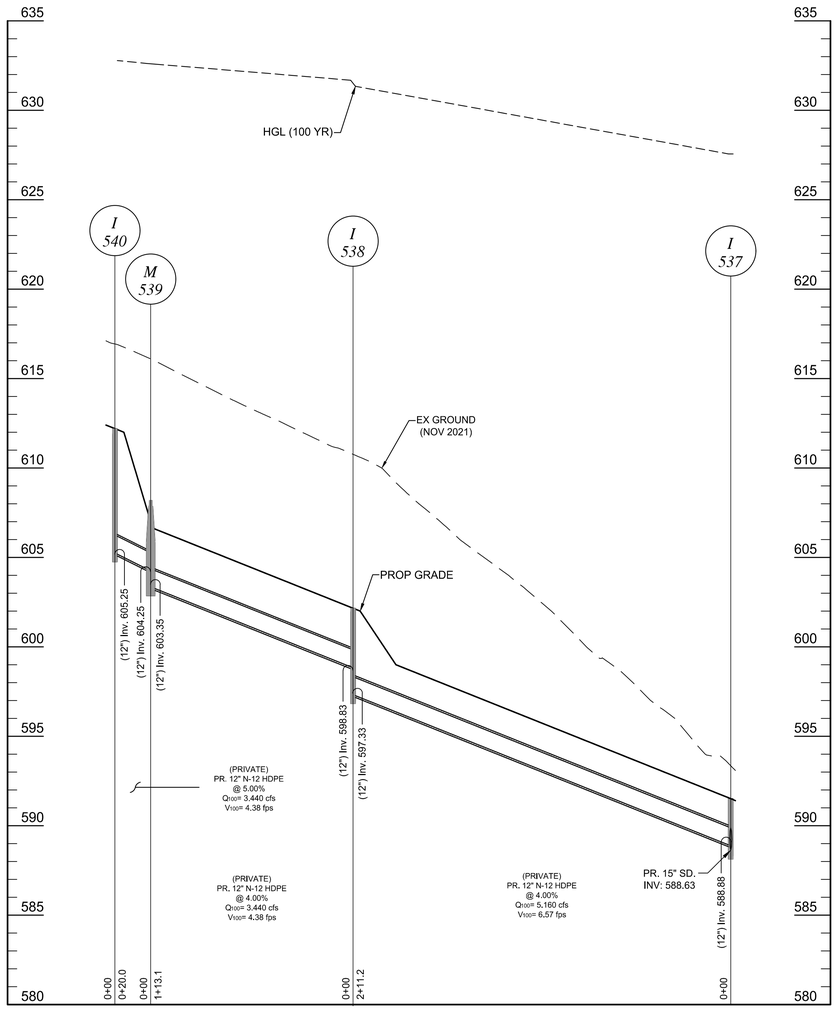
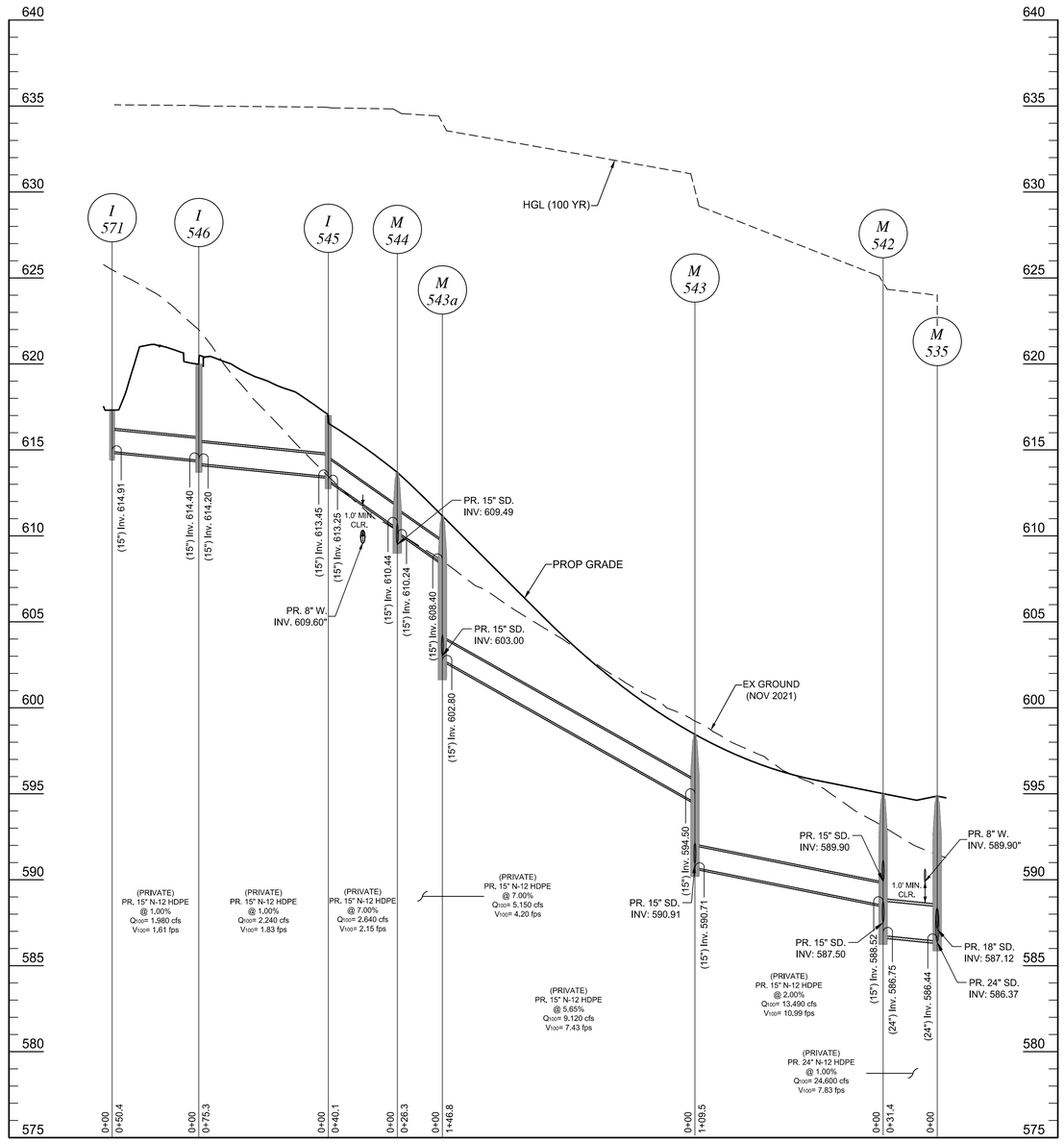
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Storm Drain Drainage Area Map.dwg Mar 04, 2025 3:47pm rfangrehr





PROFILES

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40

4 0

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORM DRAIN PROFILE

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
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ELECTION DISTRICT 5 CARROLL COUNTY, MD

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: 50 OF X
PROJECT NUMBER: 20211253.002A

OWNER
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BALTIMORE, MD 21244
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S-23-0027

DATE	BY	REVISIONS

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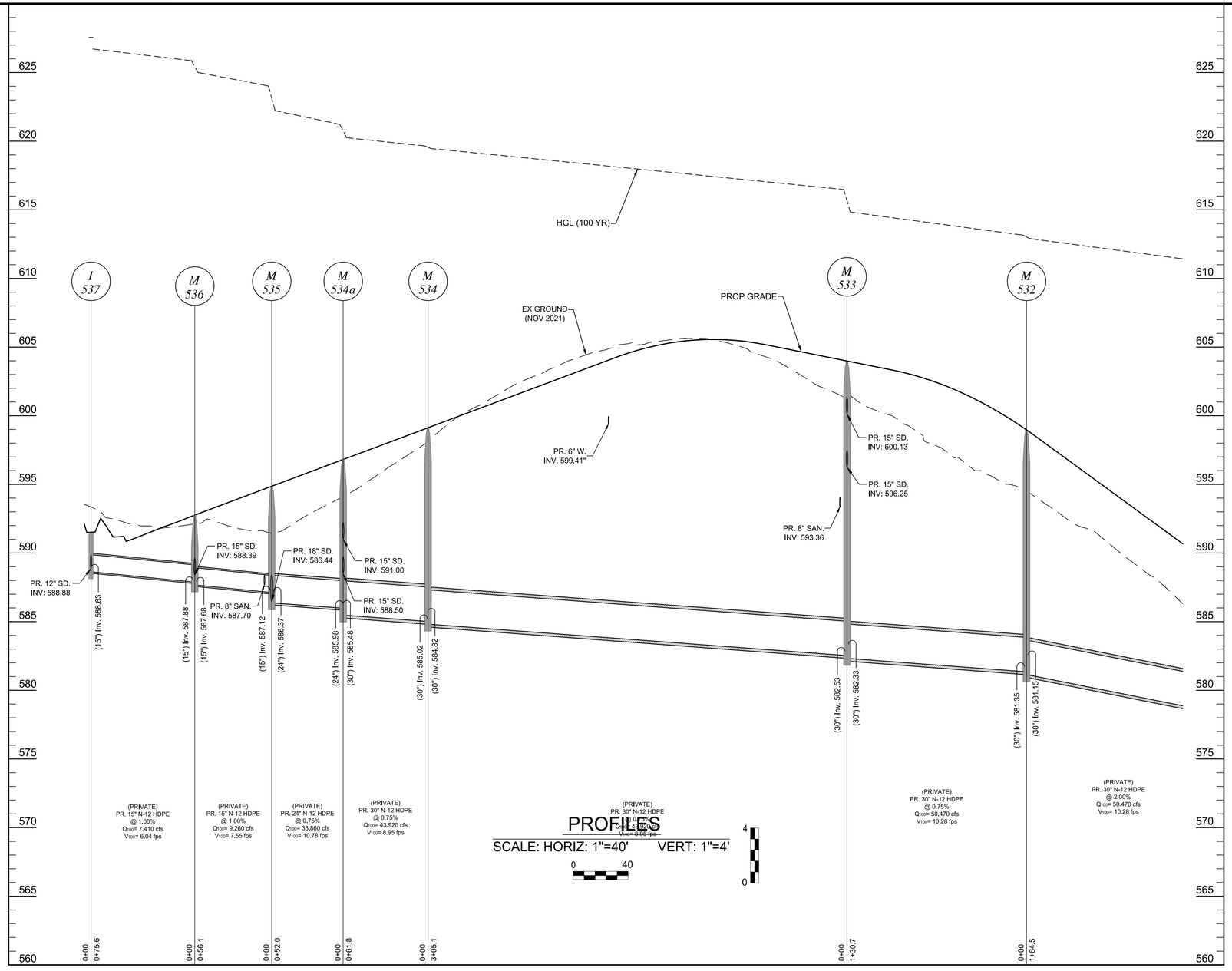
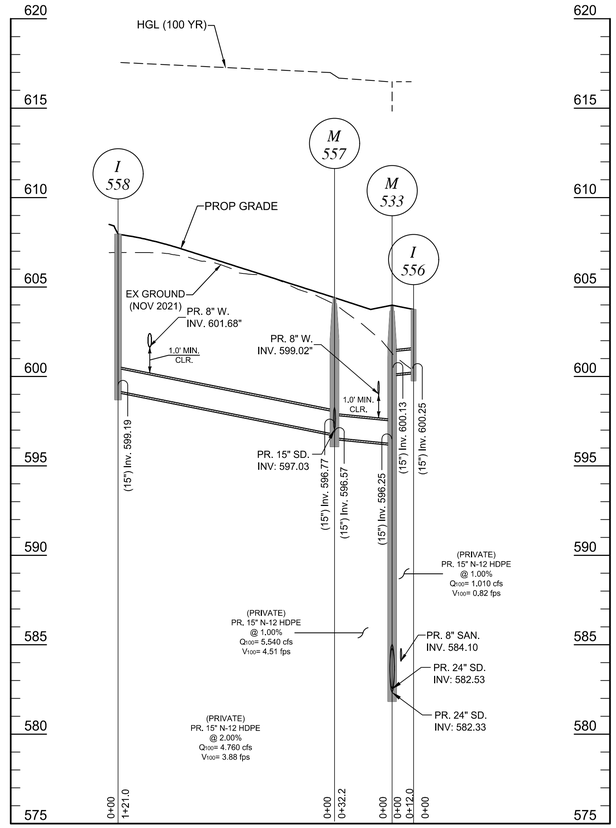


PROFILES

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40

4 0



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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORM DRAIN PROFILE

ELDERSBURG OVERLOOK

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TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 51 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
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CONTACT: MATT TAYLOR
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DATE	BY		REVISIONS

S-23-0027

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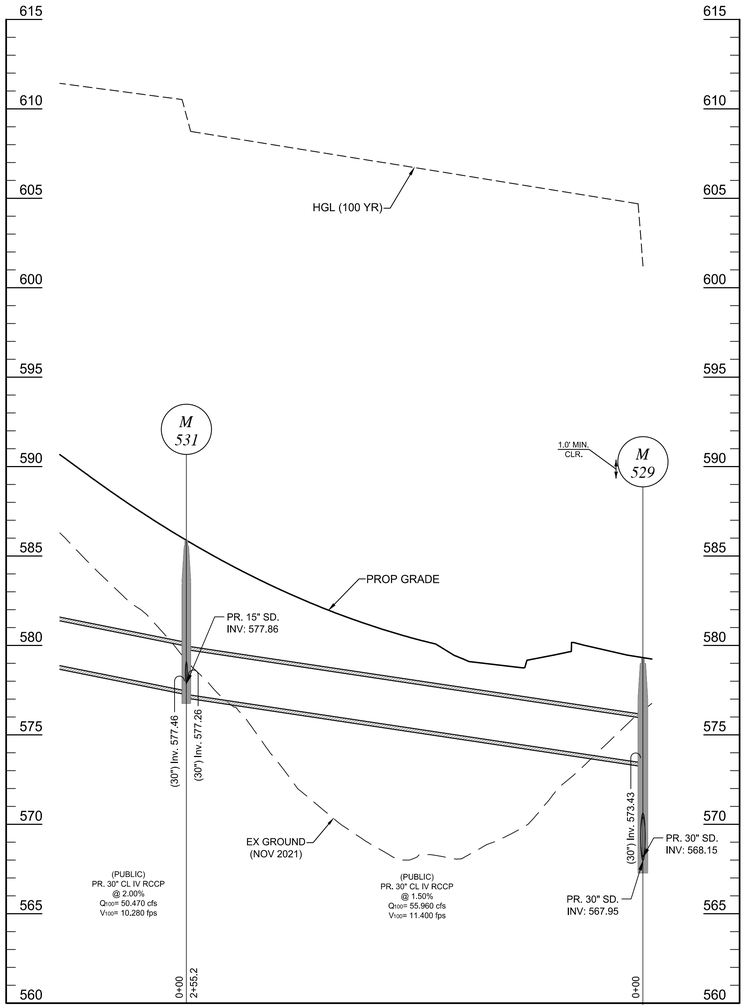

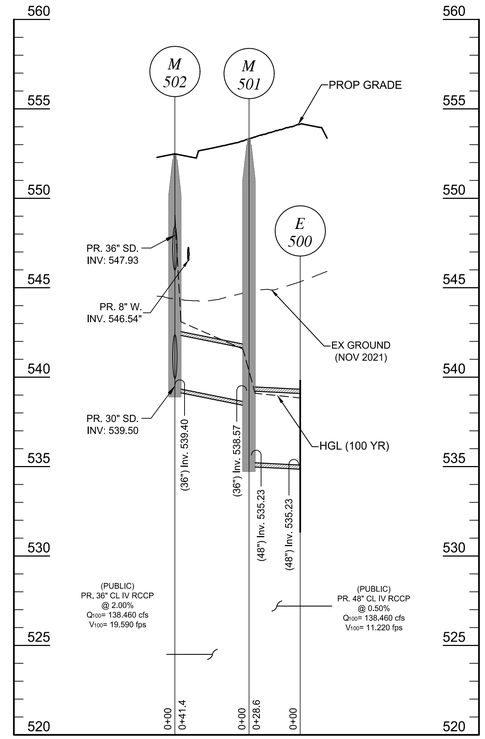

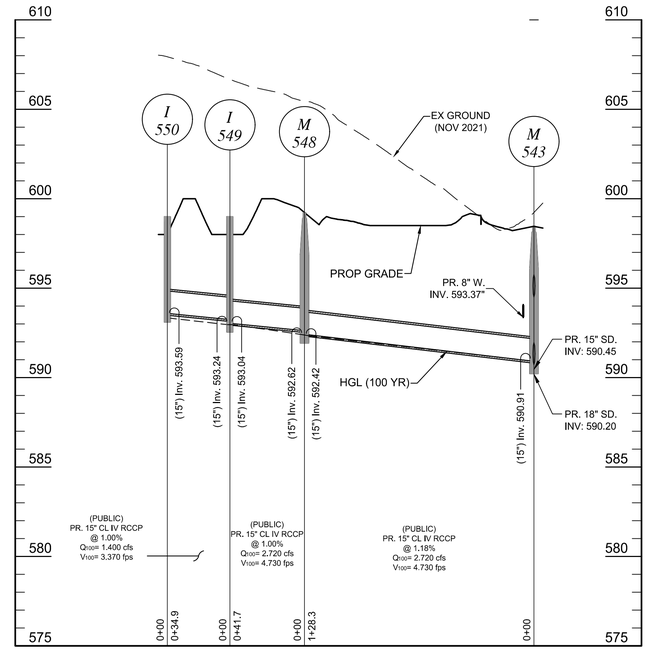

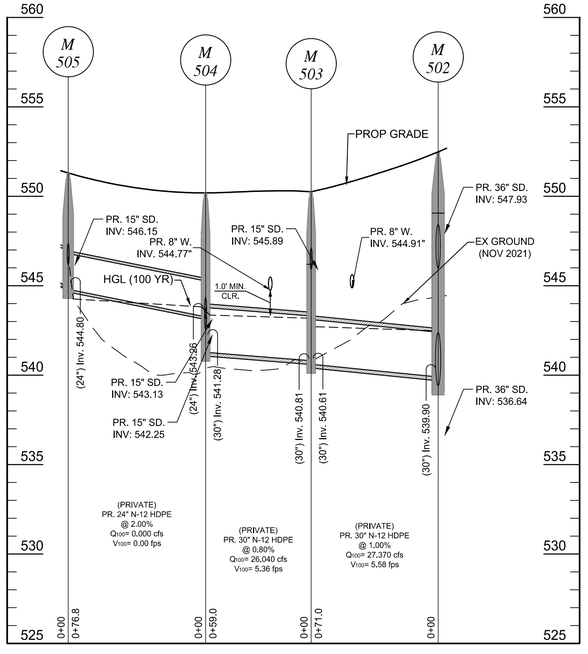

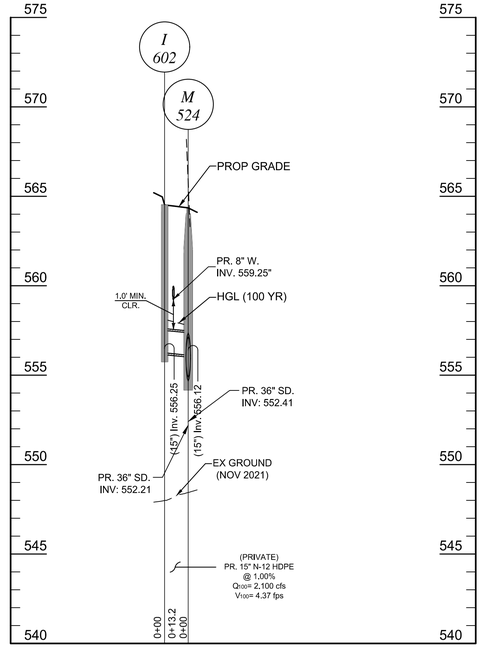

PROFILES

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40

4 0

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORM DRAIN PROFILE

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 52 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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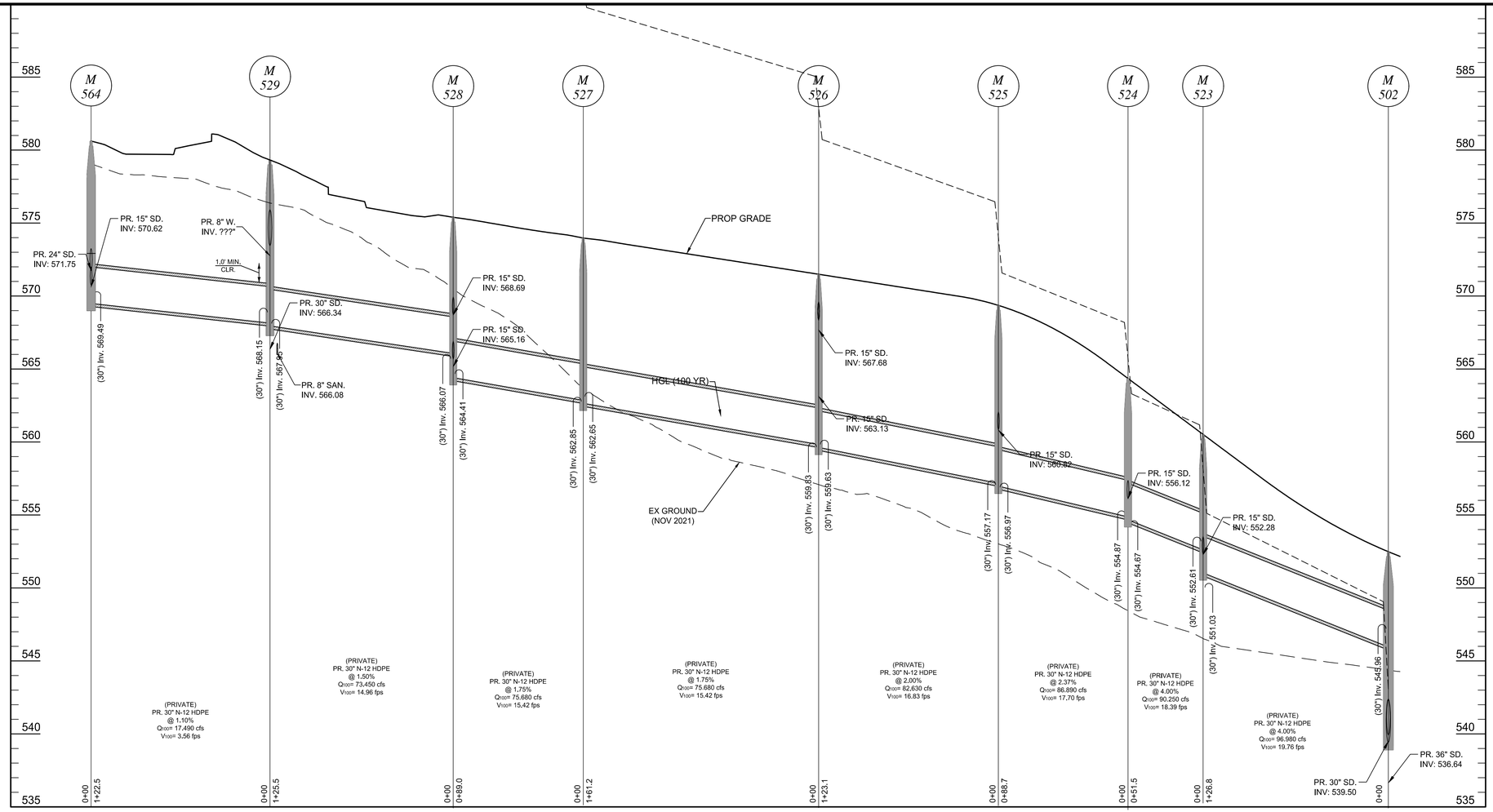

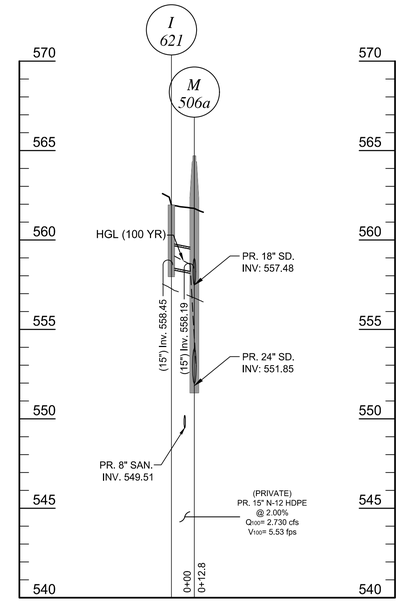

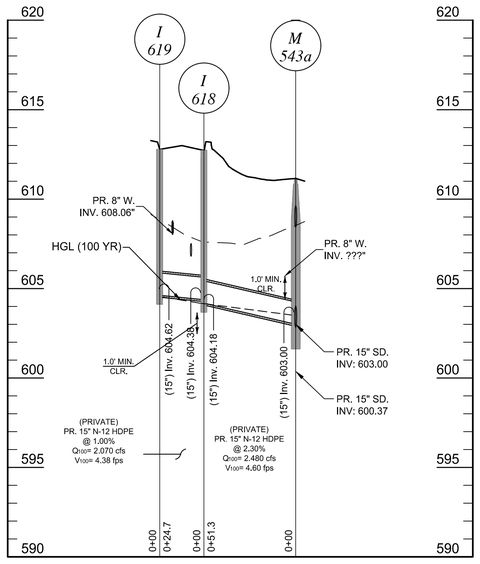

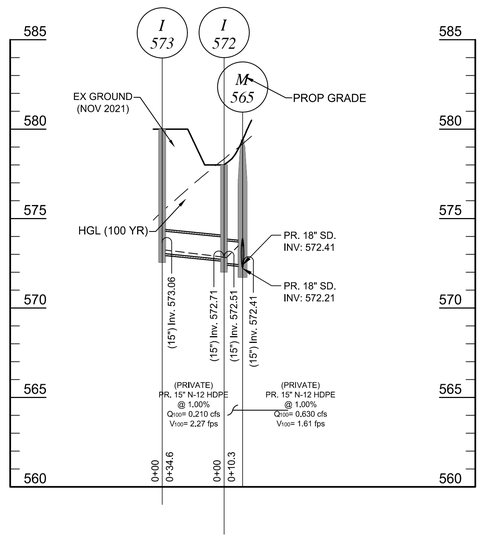

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PROJECT NUMBER: 20211253.002A

SHEET: 53 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
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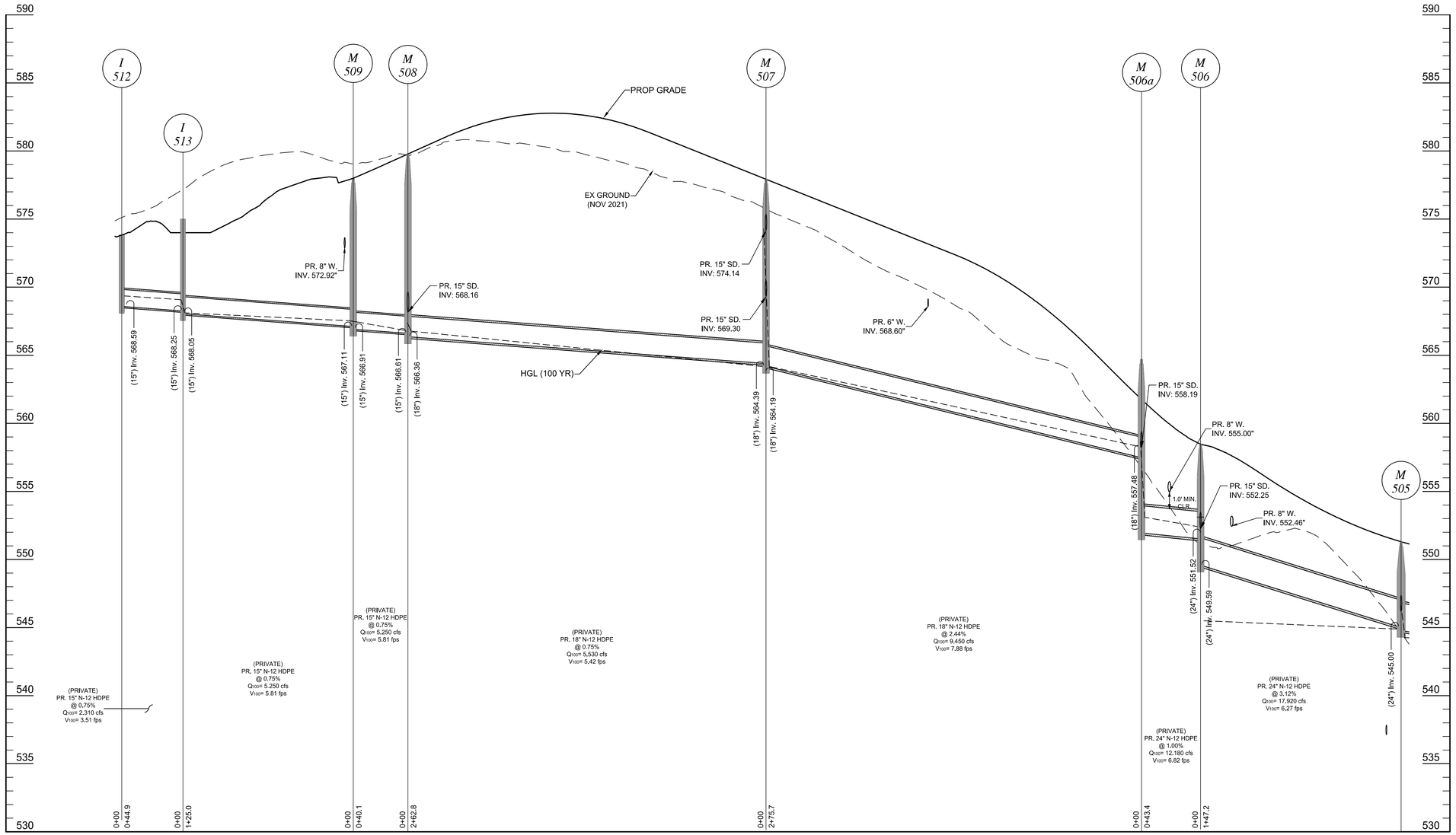

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SHEET: 54 OF X

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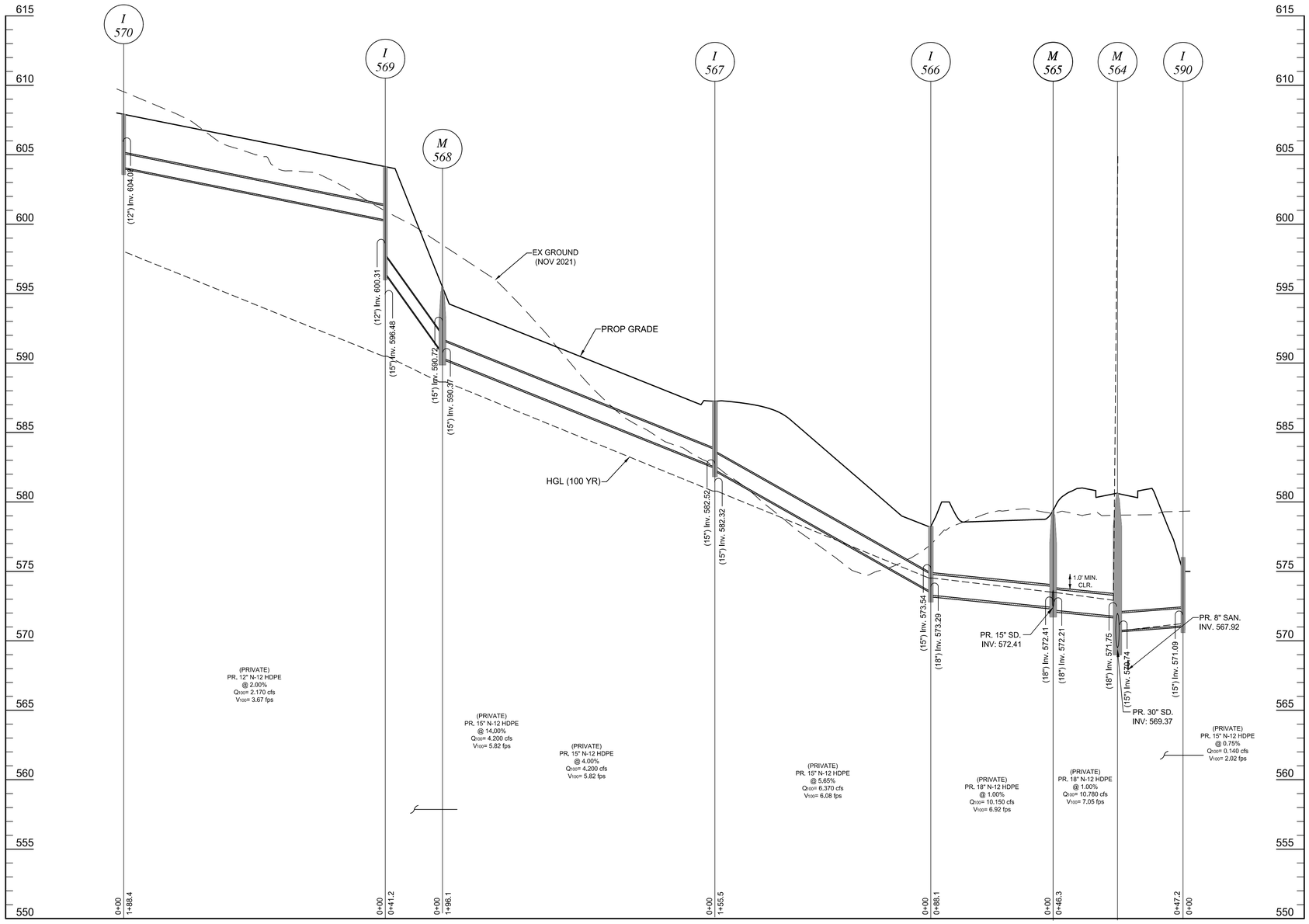

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DATE: 12-20-2024 SCALE: AS SHOWN SHEET: 55 OF X

PROJECT NUMBER: 20211253.002A

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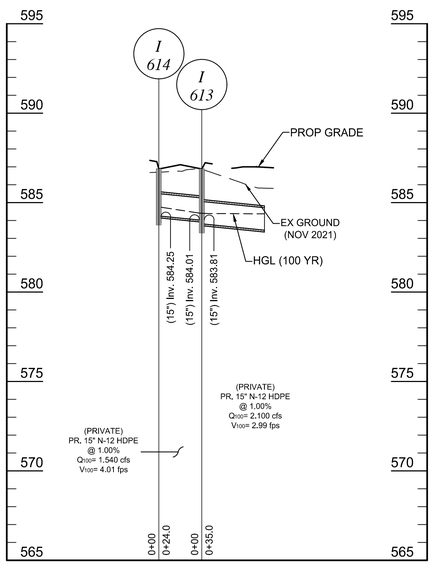

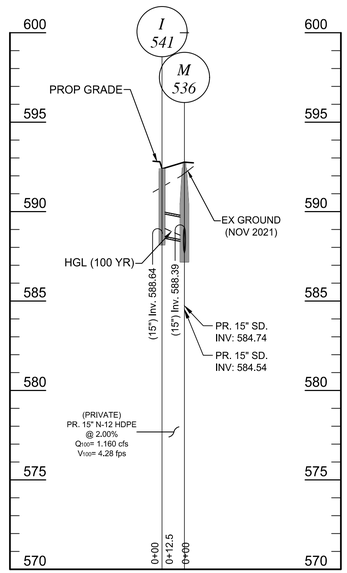

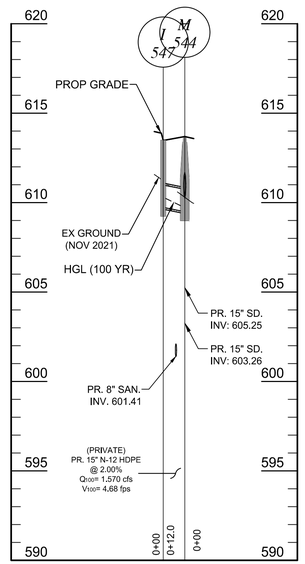

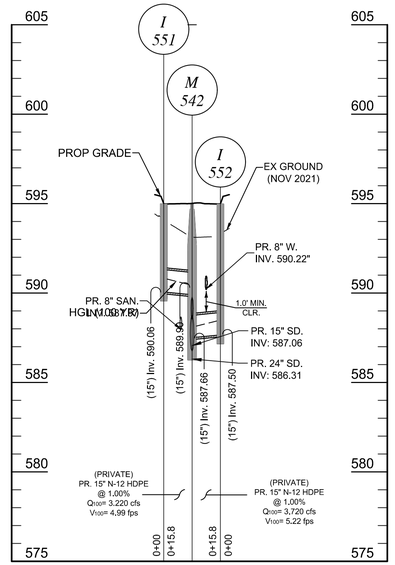

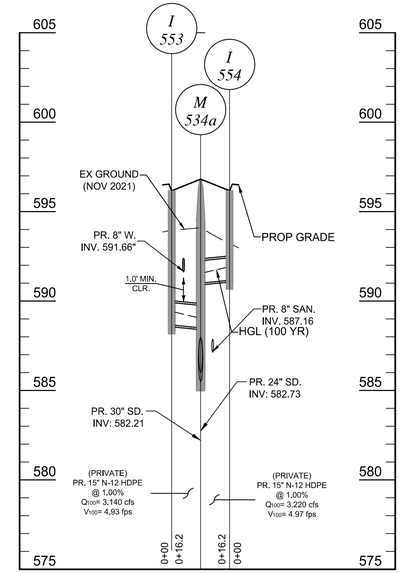

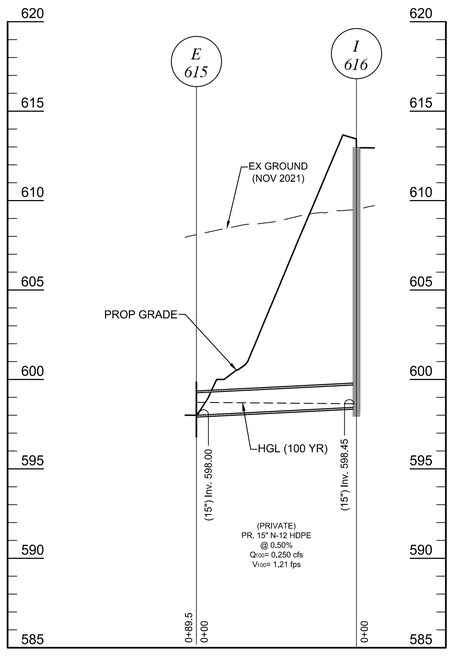

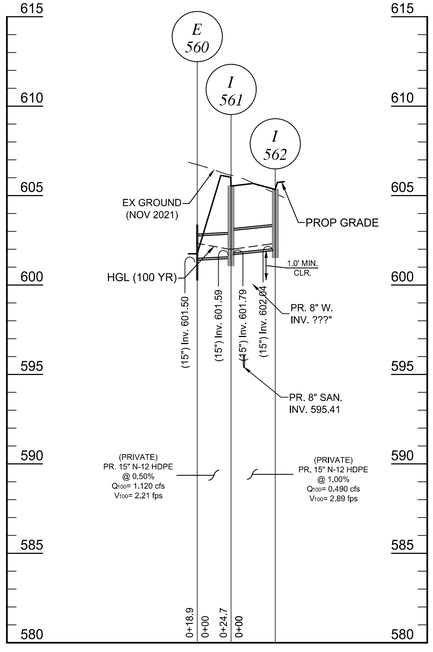

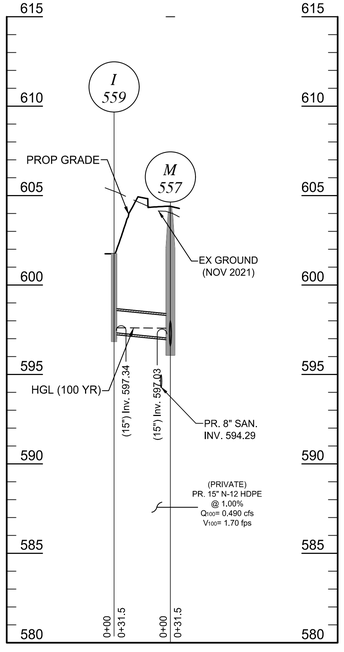

PROFILES

SCALE: HORIZ: 1"=40' VERT: 1"=4'

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S-23-0027

DATE	BY	REVISIONS

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORM DRAIN PROFILE

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 56 OF X

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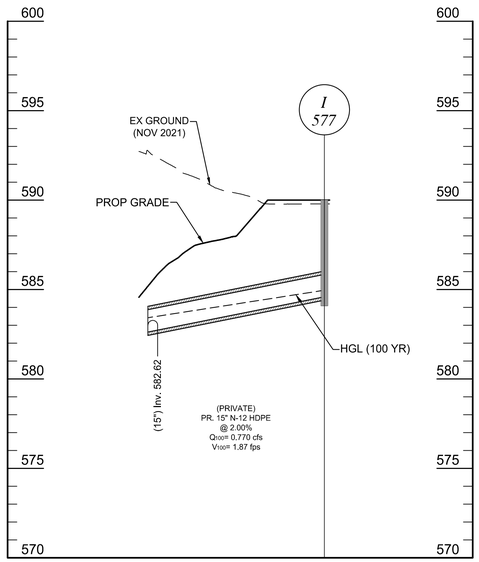

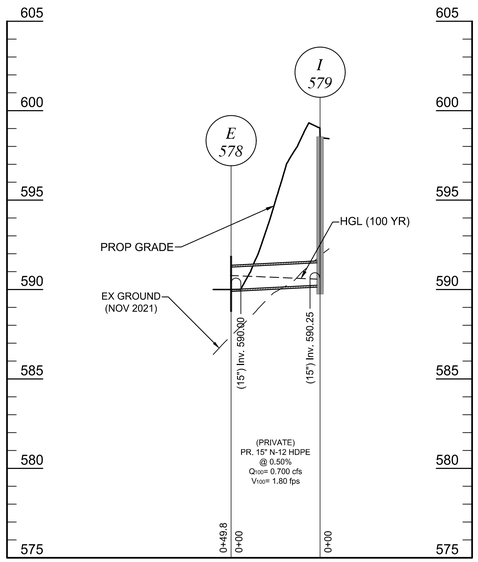

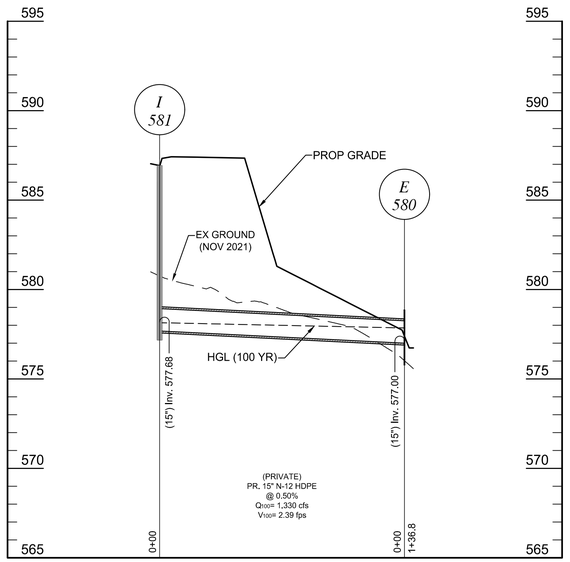

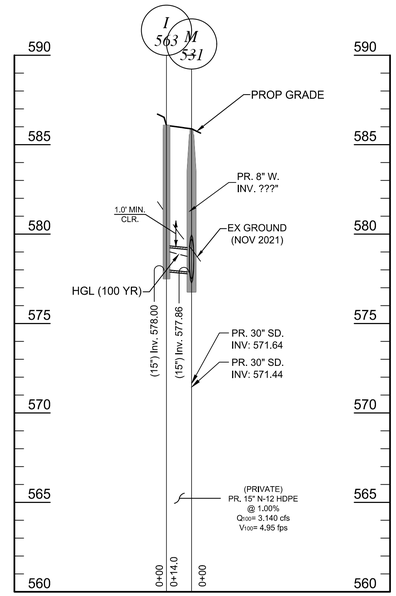

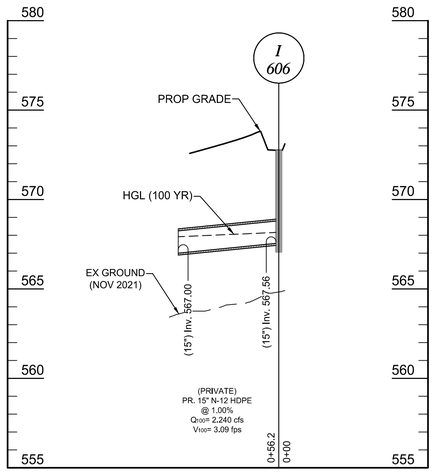

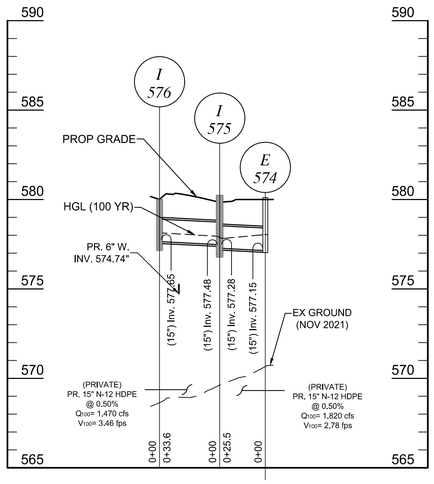

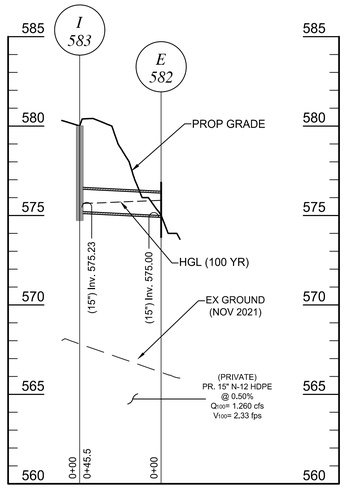

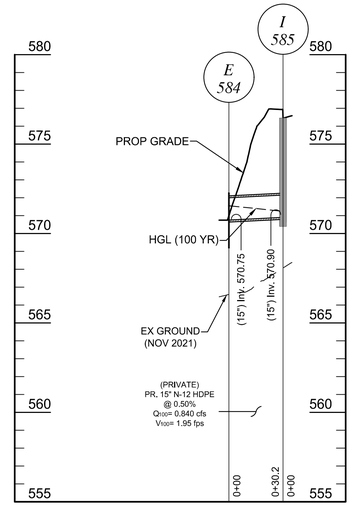

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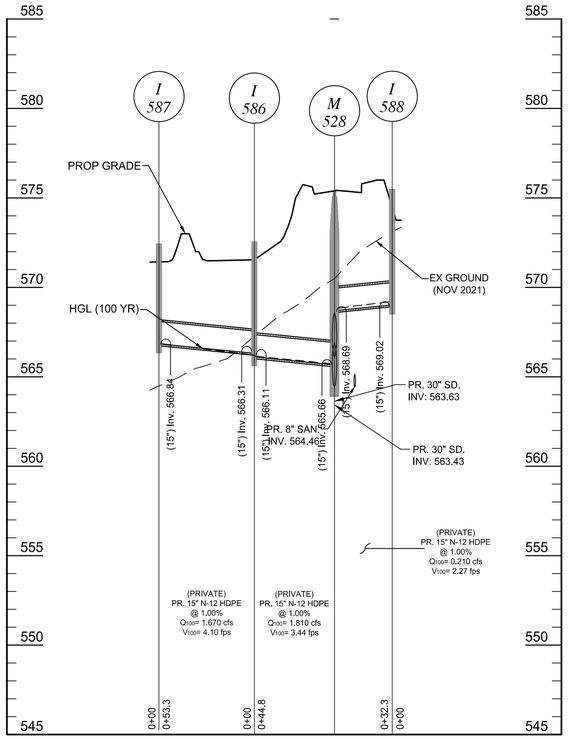

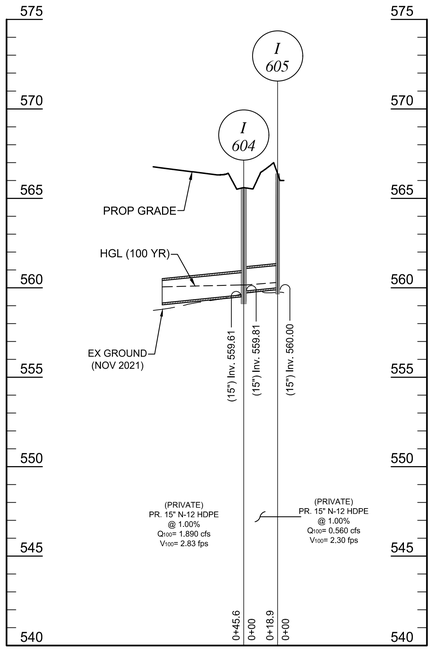

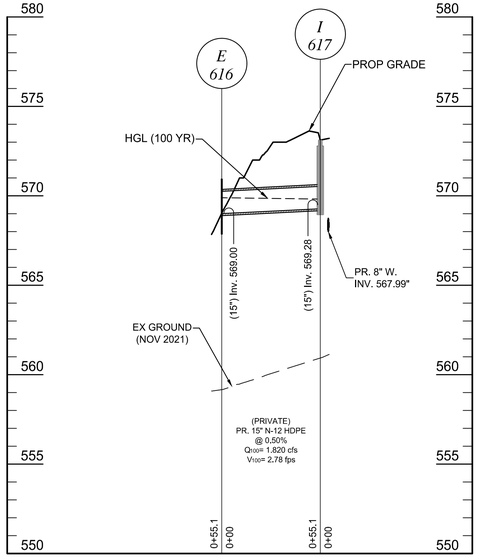

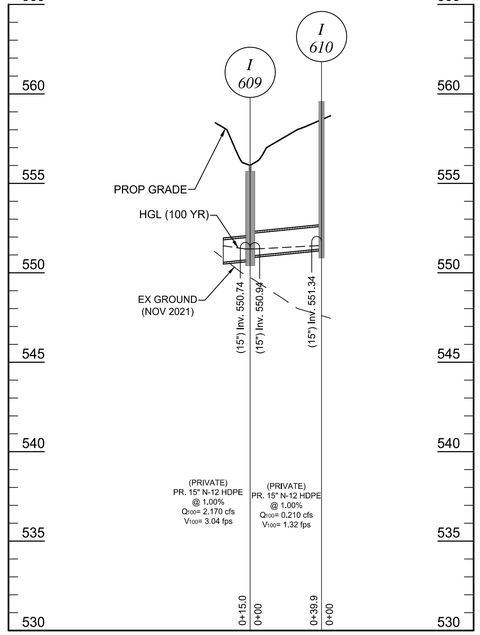

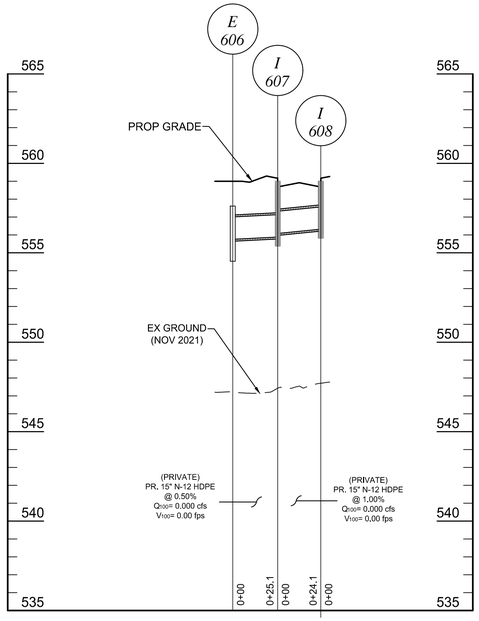

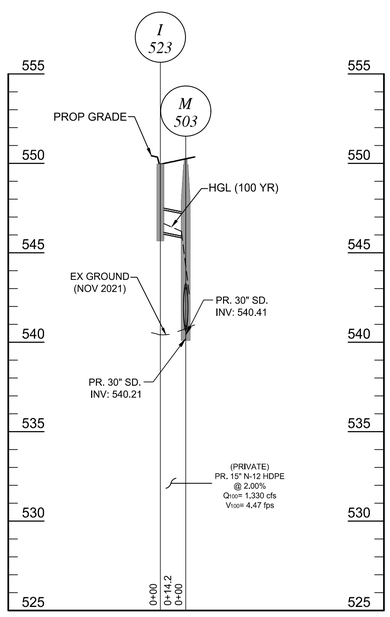

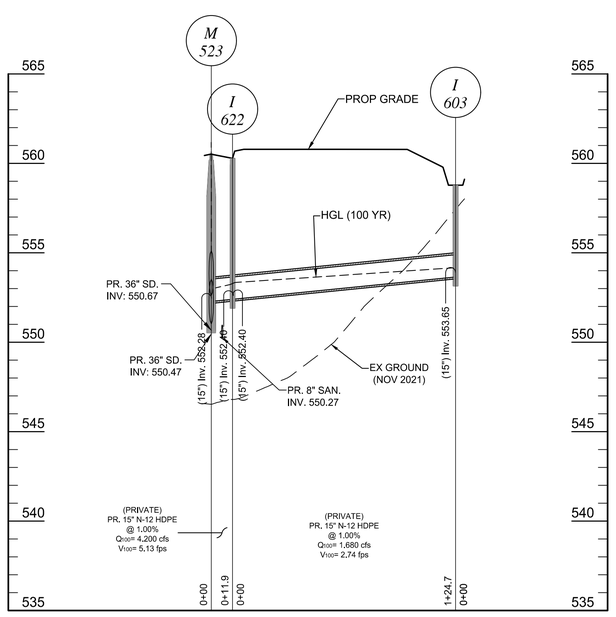

PROFILES

SCALE: HORIZ: 1"=40' VERT: 1"=4'

0 40

4 0

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STORM DRAIN PROFILE

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PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
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ELECTION DISTRICT 5 CARROLL COUNTY, MD

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 58 OF X

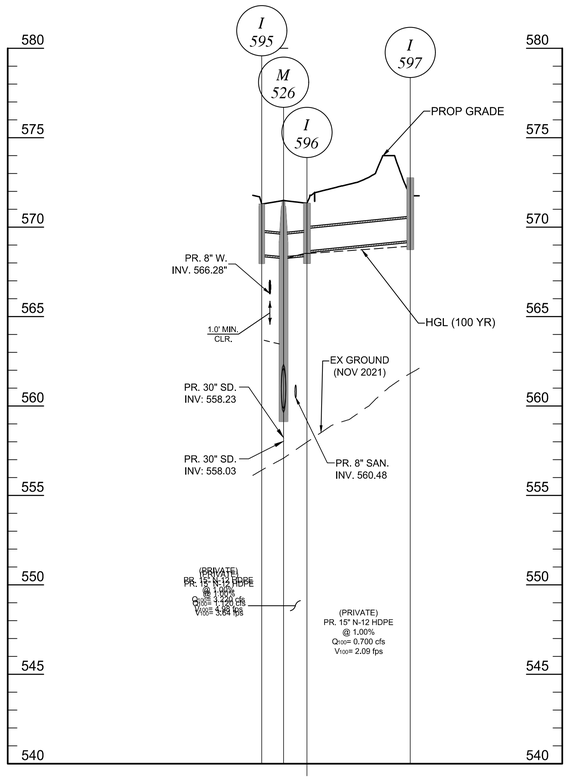
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

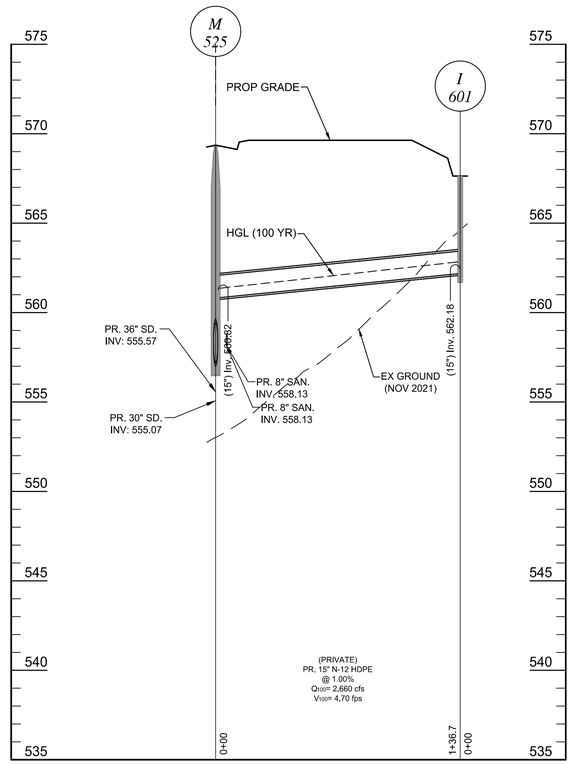
DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

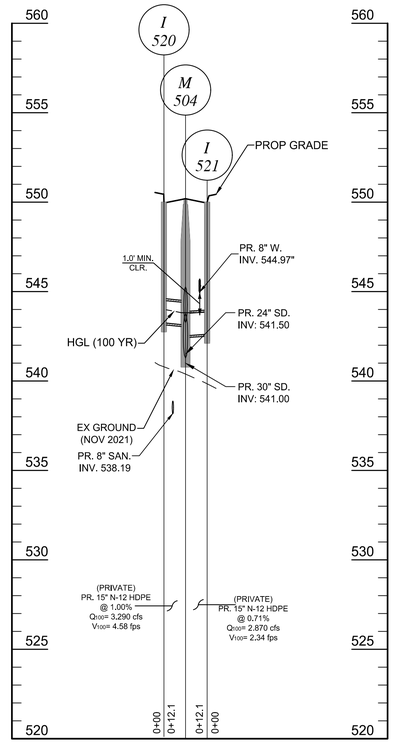
S-23-0027

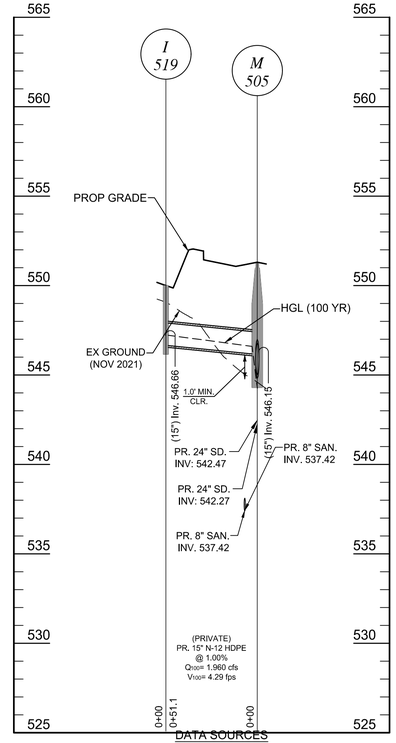
DATE	BY	REVISIONS

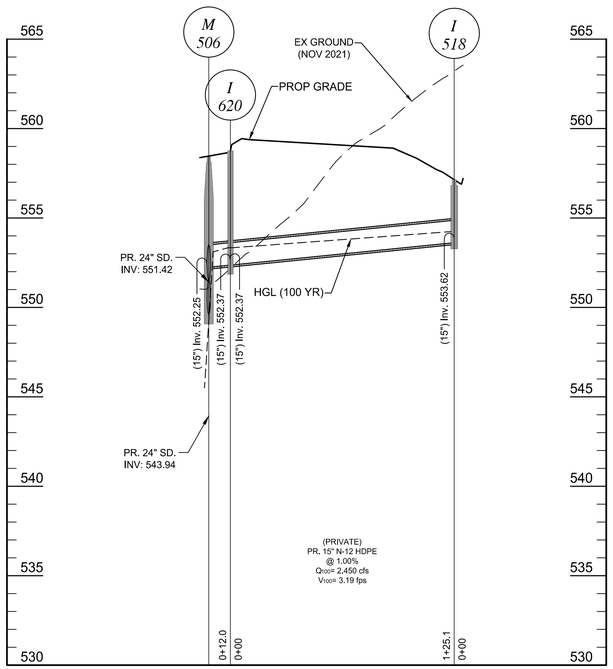
T:\2021\Facilities\20211253.002A Besty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Storm Drain Profiles.dwg Mar 04, 2025 3:49pm rlangrehr

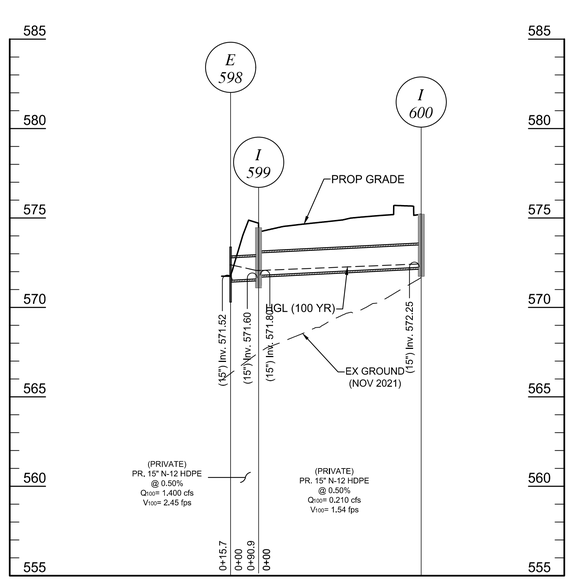


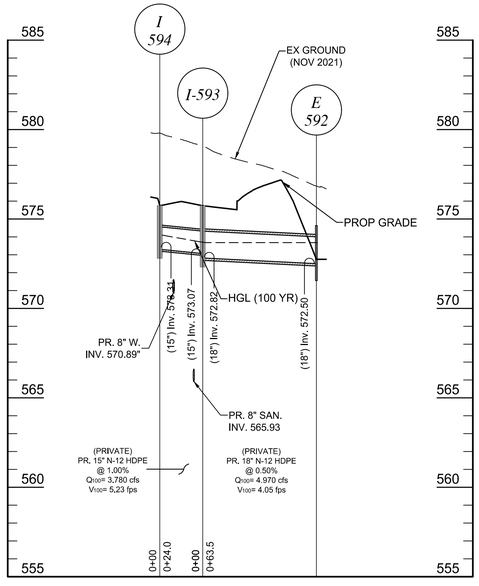












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SHEET: 59 OF X

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DATE	BY	REVISIONS

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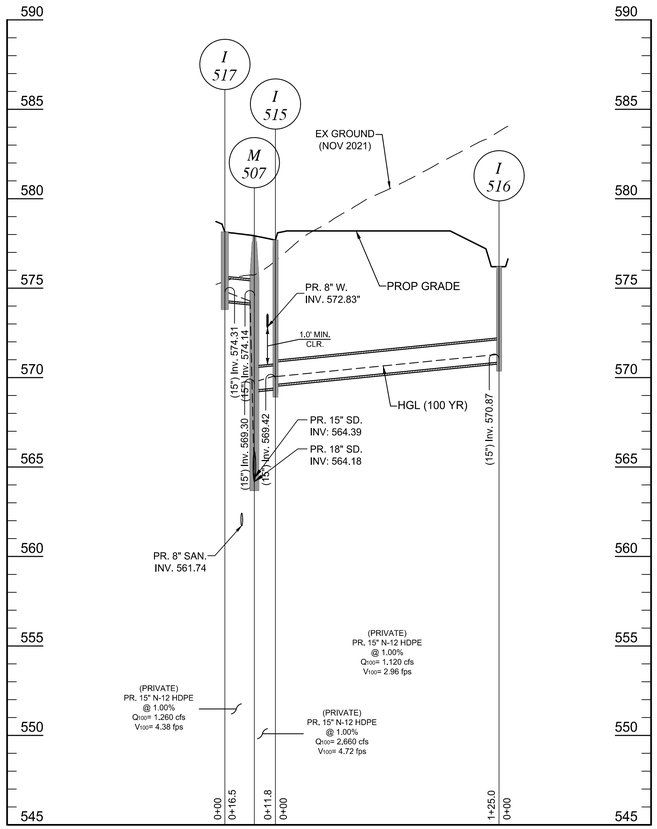

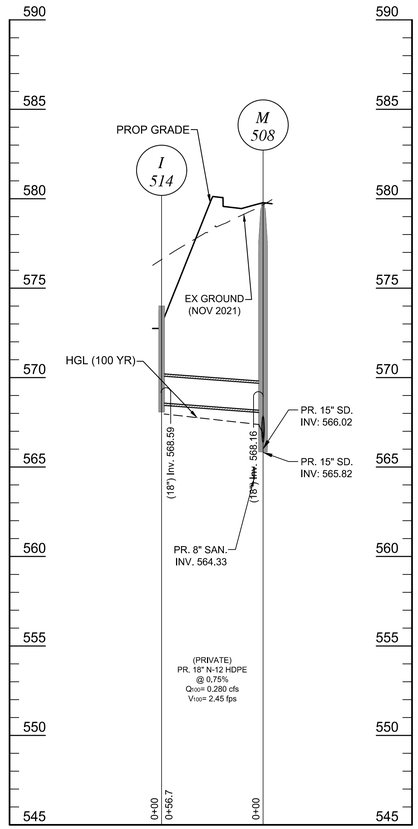

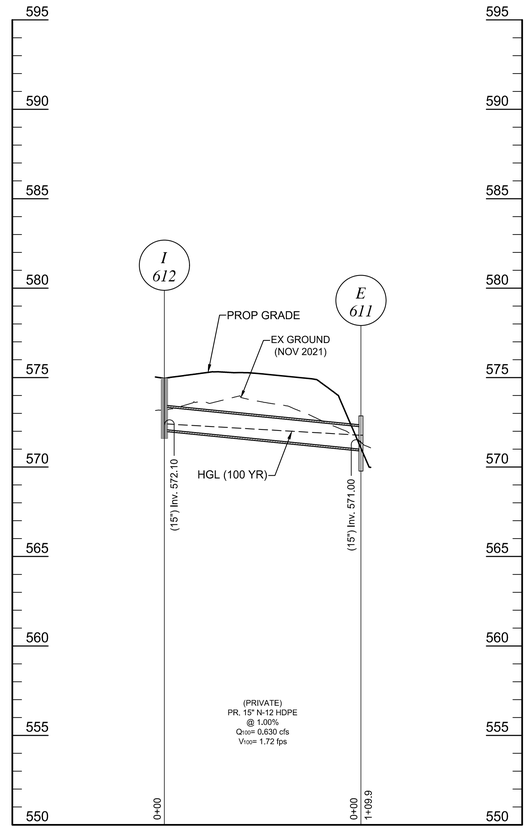

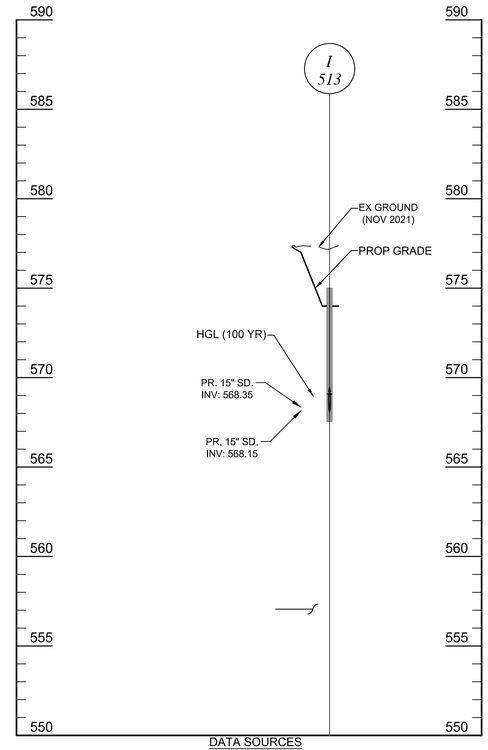

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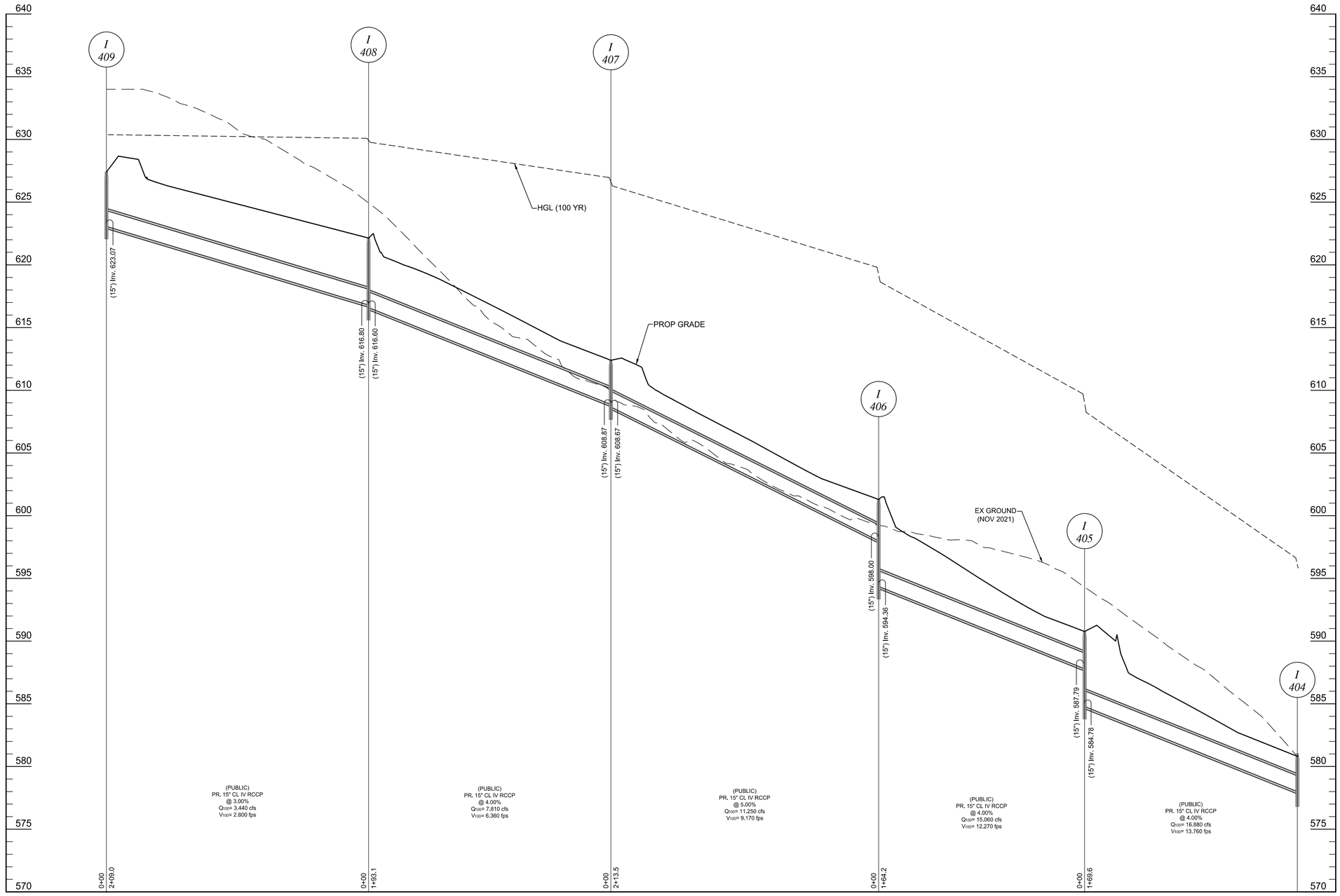

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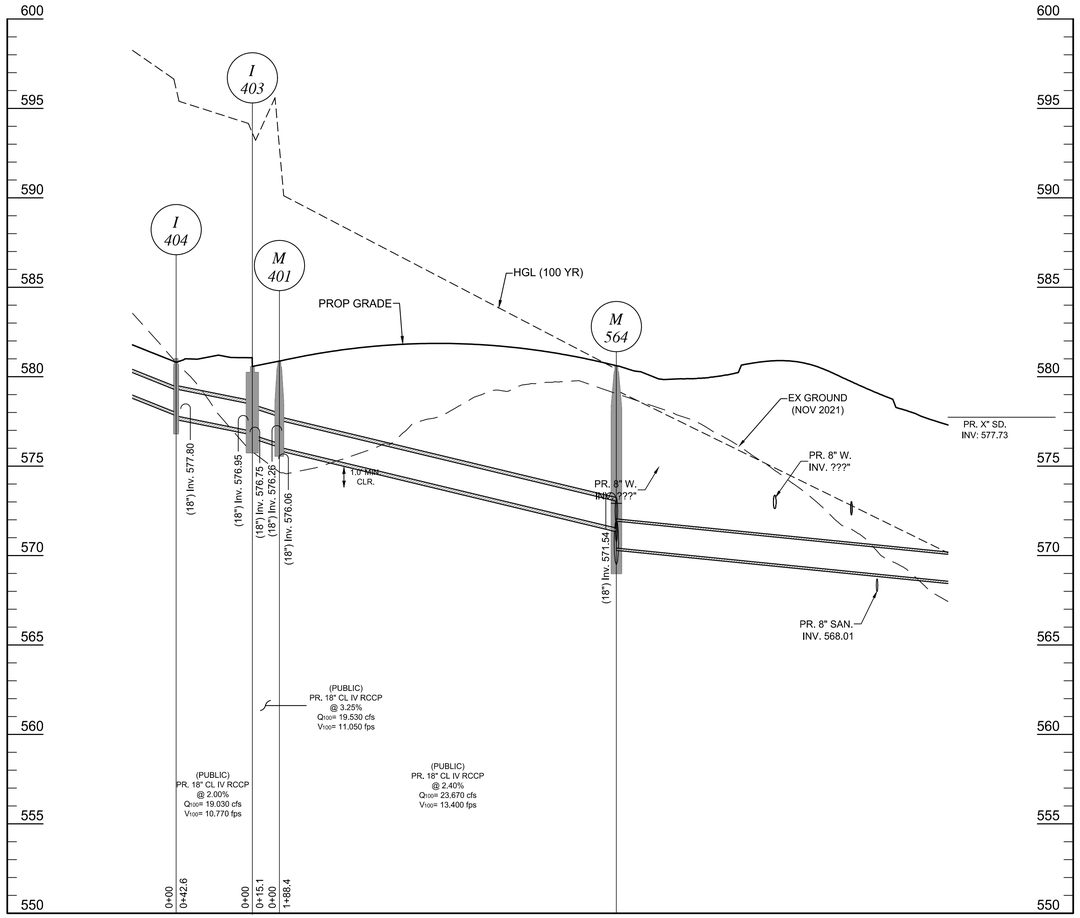

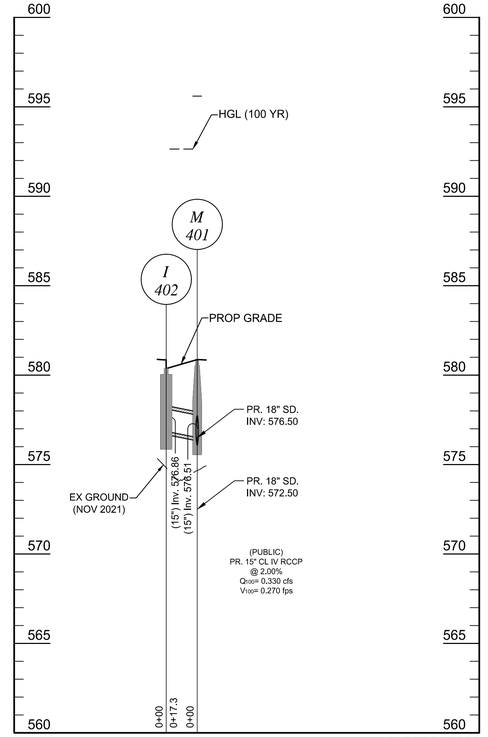

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SHEET: 62 OF X

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MARYLAND STATE HIGHWAY ADMINISTRATION
STORM SEWER DESIGN

SHEET ____ OF ____
DATE: 3/4/2025

DESIGNED BY: R. Langrehr
CHECKED BY:
CONTRACT NO. 00211253.004a
PROJECT: Eldersburg Overlook
RAINFALL FACTORS DURATION: 0-10 10.1-40 40.1-150

* Q's adjusted by 1.18 for Noaa

Structure FROM	Structure TO	Contributing C Area #	Contributing A Area Acres	Contributing Runoff Coef.	Contributing ΔCA	100 Year Runoff ΣA	100 Year Runoff ΣCA	100 Year Runoff t_c Time Conc Min.	100 Year Runoff i_{tr} Rainfall intens. (in./hr.)	100 Year Runoff *Q cfs	Pipe Size in.	Pipe Type	Pipe n Mannings Coef.	Pipe S_o Slope %	Pipe L length Ft.	Pipe V_O Vel ft./sec.	Pipe Time In Pipe min.	Pipe Capac Full cfs	Remarks
I-409	I-408	VH	0.45	0.57	0.26			5.00	11.21	3.44	15	RCCP	0.013	2.52	209.00'	7.44	0.47	10.25	
	I-408	VG	0.55	0.59	0.33			5.00	11.21	4.37									
I-408	I-407	VG & VH				1.00	0.59	5.47	11.09	7.72	15	RCCP	0.013	4.94	193.13'	11.89	0.27	14.36	
	I-407	VF	0.54	0.48	0.26			5.00	11.21	3.44									
I-407	I-406	VF - VH				1.54	0.85	5.74	11.04	11.08	15	RCCP	0.013	5.12	213.46'	13.09	0.27	14.62	
	I-406	VE	0.61	0.56	0.34			5.00	11.21	4.50									
I-406	I-405	VF -V H				2.15	1.19	6.01	10.97	15.41	15	RCCP	0.013	6.28	164.21'	15.00	0.18	16.19	
	I-405	VD	0.45	0.48	0.22			5.00	11.21	2.91									
I-405	I-404	VD - VH				2.60	1.41	6.19	10.90	18.14	15	RCCP	0.013	5.75	169.60'	12.62	0.22	15.49	
	I-404	VC	0.45	0.59	0.26			5.00	11.21	3.44									
I-404	I-403	VC - VH				3.05	1.67	6.42	10.83	21.35	18	RCCP	0.013	2.00	37.72'	8.41	0.07	14.86	
	I-403	VB	0.14	0.46	0.06			5.00	11.21	0.79									
I-403	M-401	VB -V H				3.19	1.73	6.49	10.80	22.04	18	RCCP	0.013	2.00	17.47'	8.41	0.03	14.86	
I-402	M-401	VA	0.05	0.82	0.04			5.00	11.21	0.53	15	RCCP	0.013	2.00	17.31'	4.00	0.07	9.14	
M-401	M-400	VA-VH				3.24	1.77	6.53	10.80	22.55	18	RCCP	0.013	2.00	182.14'	8.41	0.36	14.86	
I-540	M-539	WA	0.64	0.40	0.26			5.00	11.21	3.44	12	HDPE	0.012	4.00	20.00'	9.47	0.04	7.72	
M-539	I-538	WA				0.64	0.26	5.04	11.21	3.44	12	HDPE	0.012	4.00	113.10'	9.47	0.20	7.72	
	I-538	WB	0.27	0.49	0.13			5.00	11.21	1.72									
I-538	I-537	WA & WB				0.91	0.39	5.23	11.16	5.14	12	HDPE	0.012	4.00	111.18'	10.48	0.18	7.72	
	I-537	WC	0.35	0.48	0.17			5.00	11.21	2.25									
I-537	M-536	WA-WC				1.26	0.56	5.41	11.12	7.35	15	HDPE	0.012	1.00	75.60'	6.47	0.19	7.00	
I-541	M-536	WD	0.17	0.84	0.14			5.00	11.21	1.85	15	HDPE	0.012	2.00	12.50'	6.14	0.03	9.90	
M-536	M-535	WA-WD				1.43	0.70	5.61	11.07	9.14	15	HDPE	0.012	1.00	56.10'	5.70	0.16	7.00	
I-571	I-546	WE	0.54	0.29	0.15			5.00	11.21	1.98	15	HDPE	0.012	1.00	51.60'	4.88	0.18	7.00	
	I-546	WF	0.02	0.96	0.02			5.00	11.21	0.26									
I-546	I-545	WE & WF				0.56	0.17	5.18	11.16	2.24	15	HDPE	0.012	4.00	45.30'	8.35	0.09	14.00	
	I-545	WG	0.04	0.79	0.03			5.00	11.21	0.40									
I-545	M-544	WE-WG				0.60	0.20	5.27	11.14	2.63	15	HDPE	0.012	4.00	40.10'	8.69	0.08	14.00	
I-547	M-544	WH	0.24	0.79	0.19			5.00	11.21	2.51	15	HDPE	0.012	2.00	12.00'	6.70	0.03	9.90	
M-544	M-543A	WE-WH				0.84	0.39	5.34	11.14	5.13	18	HDPE	0.012	5.24	26.30'	11.44	0.04	26.05	
I-619	I-618	WI	0.36	0.69	0.25			5.00	11.21	3.31	15	HDPE	0.012	2.00	24.70'	7.18	0.06	9.90	
	I-618	WJ	0.05	0.96	0.05			5.00	11.21	0.66									
I-618	M-534A	WI & WJ				0.41	0.30	5.38	11.12	3.93	15	HDPE	0.012	2.00	51.40'	7.53	0.11	9.90	
M-534A	M-543	WE & WJ				1.25	0.69	5.50	11.09	9.03	15	HDPE	0.012	6.00	146.80'	14.09	0.17	17.14	
I-616	E615	WK	0.03	0.96	0.03			5.00	11.21	0.40	15	HDPE	0.012	0.50	89.50'	2.41	0.62	4.95	
I-550	I-549	WL	0.42	0.39	0.17			5.00	11.21	2.25	15	HDPE	0.012	1.00	34.90'	5.01	0.12	7.00	
	I-549	WM	0.36	0.44	0.16			5.00	11.21	2.12									
I-549	M-548	WK-WM				0.81	0.36	5.12	11.19	4.75	15	HDPE	0.012	1.00	41.70'	6.12	0.11	7.00	
M-548	M-543	WK-WM				0.81	0.36	5.23	11.16	4.75	15	HDPE	0.012	1.00	128.30'	6.12	0.35	7.00	
M-543	M-542	WE-WM				2.06	1.05	5.67	11.04	13.68	15	HDPE	0.012	2.00	109.50'	8.06	0.23	9.90	
I-554	M-542	WP	0.47	0.83	0.39			5.00	11.21	5.16	15	HDPE	0.012	1.00	15.80'	6.21	0.04	7.00	
I-552	M-542	WN	0.61	0.73	0.45			5.00	11.21	5.95	15	HDPE	0.012	1.00	15.80'	6.39	0.04	7.00	
M-542	M-535	WE-WP				3.14	1.89	5.90	11.00	24.53	24	HDPE	0.012	1.00	31.40'	8.89	0.06	24.51	
M-535	M-534A	WA-WP				4.57	2.59	5.95	10.97	33.54	24	HDPE	0.012	1.00	52.00'	7.80	0.11	24.51	
I-554	M-534A	WQ	0.45	0.84	0.38			5.00	11.21	5.03	15	HDPE	0.012	1.00	16.20'	6.18	0.04	7.00	
I-553	M-534A	WR	0.44	0.86	0.38			5.00	11.21	5.03	15	HDPE	0.012	1.00	16.20'	6.18	0.04	7.00	
M-534A	M-534A	WA-WR				5.46	3.35	6.07	10.94	43.24	30	HDPE	0.012	0.75	61.80'	7.84	0.13	38.48	
M-534	M-533	WA-WR				5.46	3.35	6.20	10.90	43.24	30	HDPE	0.012	0.75	305.10'	7.84	0.65	38.48	
I-558	M-557	WT	0.43	0.83	0.36			5.00	11.21	4.76	15	HDPE	0.012	2.00	121.00'	7.92	0.25	9.90	
I-562	I-561	WU	0.08	0.87	0.07			5.00	11.21	0.78	15	HDPE	0.012	1.00	24.70'	3.71	0.11	7.00	
	I-561	WV	0.09	0.96	0.09			5.00	11.21	1.01									
I-561	E-560					0.17	0.16	5.11	11.19	1.79	15	HDPE	0.012	0.50	18.90'	3.68	0.09	4.95	
	I-555	WS	0.03	0.49	0.01			5.00	11.21	0.11									cos Open Back Inlet
	I-559	WW	0.18	0.42	0.07			5.00	11.21	0.78									
I-559	M-557	WS,WU-WW				0.38	0.24	5.20	11.16	2.68	15	HDPE	0.012	1.00	31.50'	5.27	0.10	7.00	
M-557	M-533	WS-WW				0.81	0.60	5.30	11.14	6.68	15	HDPE	0.012	1.00	32.10'	6.49	0.08	7.00	
I-556	M-533	WX	0.10	0.89	0.09			5.00	11.21	1.01				1.00	12.00'		#VALUE!		
M-533	M-532	WA-WX				6.37	4.04	11.55	9.42	38.04	30	HDPE	0.012	0.75	130.70'	8.93	0.24	38.48	
M-532	M-531	WA-WX				6.37	4.04	11.80	9.37	38.04	30	HDPE	0.012	0.75	184.50'	8.93	0.34	38.48	
I-563	M-531	WY	0.64	0.76	0.49			5.00	11.21	5.49	15	HDPE	0.012	1.00	14.00'	6.30	0.04	7.00	
M-531	M-529	WA-WY				7.01	4.53	12.14	9.30	42.12	30	HDPE	0.012	1.59	255.10'	12.49	0.34	56.03	
I-570	I-569	XC	1.13	0.27	0.31			5.00	11.21	3.48	12	HDPE	0.012	4.00	188.40'	9.57	0.33	7.72	
	I-569	XD	0.71	0.41	0.29			5.00	11.21	3.25									
I-569	M-568	XC & XD				1.84	0.60	5.33	11.14	6.68	15	HDPE	0.012	4.00	41.20'	11.21	0.06	14.00	
M-568	I-567	XC & XD				1.84	0.60	5.39	11.12	6.67	15	HDPE	0.012	4.00	196.10'	11.21	0.29	14.00	
	I-567	XE	1.04	0.30	0.31			5.00	11.21	3.48									
I-567	I-566	XC-XE				2.88	0.91	5.68	11.04	10.05	15	HDPE	0.012	4.00	155.50'	12.36	0.21	14.00	
	I-566	XF	1.35	0.40	0.54			5.00	11.21	6.05									
I-566	M-565	XC-XF				4.23	1.45	5.89	11.00	15.95	18	HDPE	0.012	1.50	88.10'	7.89	0.19	13.94	
I-576	I-575	WZ	0.25	0.82	0.21			5.00	11.21	2.35	15	HDPE	0.012	0.50	33.60'	3.96	0.14	4.95	
	I-575	XA	0.05	0.96	0.05			5.00	11.21	0.56									
I-575	E-574	WZ & XA				0.30	0.26	5.14	11.19	2.91	15	HDPE	0.012	0.50	25.50'	4.19	0.10	4.95	

MARYLAND STATE HIGHWAY ADMINISTRATION
STORM SEWER DESIGN

SHEET ____ OF ____
DATE: 3/4/2025

DESIGNED BY: R. Langrehr
CHECKED BY:
CONTRACT NO. 00211253.004a
PROJECT: Eldersburg Overlook
RAINFALL FACTORS DURATION: 0-10 10.1-40 40.1-150

* Q's adjusted by 1.18 for Noaa

Structure FROM	Structure TO	Contributing C Area #	Contributing A Area Acres	Contributing Runoff Coef.	Contributing ΔCA	100 Year Runoff ΣA	100 Year Runoff ΣCA	100 Year Runoff t_c Time Conc Min.	100 Year Runoff i_{tr} Rainfall intens. (in./hr.)	100 Year Runoff *Q cfs	Pipe Size in.	Pipe Type	Pipe n Mannings Coef.	Pipe S_o Slope %	Pipe L length Ft.	Pipe V_O Vel ft./sec.	Pipe Time In Pipe min.	Pipe Capac Full cfs	Remarks
	I-573	XB	0.10	0.26	0.03			5.00	11.21	0.34									
I-573	I-572	WZ-XB				0.40	0.29	5.24	11.16	3.24	15	HDPE	0.012	1.00	34.60'	5.55	0.10	7.00	
	I-572	XG	0.22	0.26	0.06			5.00	11.21	0.67									
I-572	M-565	WZ-XB,XG				0.62	0.35	5.35	11.14	3.90	15	HDPE	0.012	1.00	10.30'	5.84	0.03	7.00	
M-565	M-564	WZ-XG				4.85	1.80	6.08	10.94	19.69	18	HDPE	0.012	2.00	46.30'	9.11	0.08	16.09	
	I-590	XH	0.43	0.73	0.31			5.00	11.21	3.48									COG Open Back Inlet
	I-590	XI	0.09	0.26	0.02			5.00	11.21	0.22									
I-590	M-564	XH & XI				0.52	0.33	5.00	11.21	3.70	15	HDPE	0.012	0.75	47.20'	5.17	0.15	6.06	
M-564	M-529	WZ-XI&VA-VH				8.61	3.90	6.89	10.66	41.56	30	HDPE	0.012	1.00	122.50'	10.28	0.20	44.44	
M-529	M-528	VAVH&WA-XI				15.62	8.43	12.48	9.20	77.59	30	HDPE	0.012	1.50	125.50'	11.09	0.19	54.42	
I-583	E-582	XJ	0.21	0.86	0.18			5.00	11.21	2.02	15	HDPE	0.012	0.50	45.50'	3.81	0.20	4.95	
I-585	E-584	XK	0.13	0.96	0.12			5.00	11.21	1.35	15	HDPE	0.012	0.50	30.30'	3.40	0.15	4.95	
	I-587	XL	0.15	0.40	0.06			5.00	11.21										
I-587	I-586	XJ & XL				0.36	0.24	5.20	11.16	2.68	15	HDPE	0.012	1.00	53.30'	5.27	0.17	7.00	
	I-586	XM	0.06	0.26	0.02			5.00	11.21	0.22									
I-586	M-528	XJ-XM				0.55	0.38	5.37	11.12	4.22	15	HDPE	0.012	1.00	44.80'	5.97	0.13	7.00	
	I-589	XN	0.06	0.96	0.06			5.00	11.21	0.67									COG Open Back Inlet
	I-588	XP	0.10	0.26	0.03			5.00	11.21	0.34									
I-588	M-528	XN-XP				0.16	0.09	5.00	11.21	1.01	15	HDPE	0.012	1.00	32.30'	4.00	0.13	7.00	
M-528	M-527	VA-VH,WA-XP				16.33	8.90	12.67	9.16	81.50	30	HDPE	0.012	1.75	89.00'	11.98	0.12	58.78	
M-527	M-526	VA-VH,WA-XP				16.33	8.90	12.79	9.13	81.50	30	HDPE	0.012	1.75	161.30'	11.98	0.22	58.78	
I-600	I-599	XQ	0.05	0.68	0.03			5.00	11.21	0.34	15	HDPE	0.012	0.50	90.90'	2.25	0.67	4.95	
	I-599	XR	0.20	0.86	0.17			5.00	11.21	1.91									
I-599	E-598					0.25	0.20	5.67	11.04	2.21	15	HDPE	0.012	0.50	15.70'	3.89	0.07	4.95	
	I-597	XS	0.19	0.52	0.10			5.00	11.21	1.12									
I-597	I-596	XQ-XS				0.44	0.30	5.74	11.04	3.31	15	HDPE	0.012	1.25	57.80'	6.08	0.16	7.82	
	I-596	XT	0.40	0.89	0.36			5.00	11.21	4.04									
I-596	M-526	XQ-XT				0.84	0.66	5.90	11.00	7.26	15	HDPE	0.012	1.15	13.10'	6.97	0.03	7.50	
I-595	M-526	XU	0.18	0.88	0.16			5.00	11.21	1.79	15	HDPE	0.012	1.00	12.20'	4.73	0.04	7.00	
M-26	M-525	VA-VH,WA-XU				17.35	9.72	13.02	9.09	88.32	30	HDPE	0.012	2.00	123.10'	12.80	0.16	62.84	
I-612	E-611	XV	0.12	0.79	0.09			5.00	11.21	1.01	15	HDPE	0.012	1.00	109.90'	4.00	0.46	7.00	
	I-601	XW	0.70	0.54	0.38			5.00	11.21	4.26									
I-601	M-525	XV & XW				0.82	0.47	5.00	11.21	5.27	15	HDPE	0.012	1.00	136.70'	6.24	0.37	7.00	
M-525	M-524	VA-VH,WA-XW				18.17	10.19	13.18	9.04	92.11	30	HDPE	0.012	2.37	88.70'	13.94	0.11	68.41	
I-602	M-524	XX	0.35	0.86	0.30			5.00	11.21	3.36	15	HDPE	0.012	1.29	13.20'	6.18	0.04	7.95	
M-524	M-523	VA-VH,WA-XX				18.52	10.49	13.28	9.02	94.57	30	HDPE	0.012	4.00	51.50'	20.42	0.04	88.87	
I-603	I-523A	XY	0.44	0.55	0.24			5.00	11.21	2.69	15	HDPE	0.012	1.10	124.70'	5.46	0.38	7.34	
	I-523A	XZ	0.45	0.80	0.36			5.00	11.21	4.04									
I-523A	M-523	XY&XZ				0.89	0.60	5.38	11.12	6.67	15	HDPE	0.012	1.00	11.90'	6.49	0.03	7.00	
M-523	M-502	A-VH,WA-XZ				19.41	11.09	13.33	9.02	99.98	30	HDPE	0.012	4.00	126.80'	18.10	0.12	88.87	
I-512	I-513	YA	0.81	0.41	0.33			5.00	11.21	3.70	15	HDPE	0.012	0.75	44.90'	5.17	0.14	6.06	
	I-513	YB	0.52	0.41	0.21			5.00	11.21	2.35									
I-513	M-509	YA & YB				1.33	0.54	5.14	11.19	6.04	15	HDPE	0.012	0.75	125.00'	5.63	0.37	6.06	
M-509	M-508	YA & YB				1.33	0.54	5.51	11.09	6.04	15	HDPE	0.012	0.75	40.10'	5.63	0.12	6.06	
I-594	I-593	YC	0.64	0.84	0.54			5.00	11.21	6.05	15	HDPE	0.012	1.00	24.00'	6.40	0.06	7.00	
	I-593	YD	0.18	0.92	0.17			5.00	11.21	1.91									
I-593	E-592	YC & YD				0.82	0.71	5.06	11.19	7.94	18	HDPE	0.012	0.50	63.50'	5.19	0.20	8.05	
	I-514	YE	0.14	0.26	0.04			5.00	11.21	0.45									
I-514	M-508	YC-YE				0.96	0.75	5.27	11.14	8.35	18	HDPE	0.012	0.75	56.70'	6.24	0.15	9.86	
M-508	M-507	YA-YE				0.96	0.75	5.63	11.07	8.30	18	HDPE	0.012	0.75	262.90'	6.24	0.70	9.86	
I-517	M-507	YF	0.20	0.89	0.18			5.00	11.21	2.02	15	HDPE	0.012	2.00	16.52'	6.26	0.04	9.90	
I-516	I-515	YG	0.31	0.51	0.16			5.00	11.21	1.79	15	HDPE	0.012	1.00	125.00'	4.73	0.44	7.00	
	I-515	YH	0.24	0.90	0.22			5.00	11.21	2.47									
I-515	M-507	YG & YH				0.55	0.38	5.44	11.12	4.22	15	HDPE	0.012	1.00	11.80'	5.97	0.03	7.00	
M-507	M-506A	YA-YH				1.71	1.31	6.34	10.87	14.24	18	HDPE	0.012	2.44	275.70'	11.15	0.41	17.78	
I-621	M-506A	YI	0.49	0.80	0.39			5.00	11.21	4.37	15	HDPE	0.012	2.00	12.80'	7.77	0.03	9.90	
M-506A	M-506	YA-YI				2.20	1.70	6.75	10.73	18.23	24	HDPE	0.012	1.00	43.40'	8.54	0.08	24.51	
I-518	I-620	YJ	0.73	0.48	0.35			5.00	11.21	3.92	15	HDPE	0.012	1.10	125.10'	6.08	0.34	7.34	
	I-620	YK	0.55	0.85	0.47			5.00	11.21	5.27									
I-620	M-506	YJ & YK				1.28	0.82	5.34	11.14	9.13	15	HDPE	0.012	1.00	12.10'	5.70	0.04	7.00	
M-506	M-505	YA-YK				3.48	2.52	6.83	10.69	26.94	24	HDPE	0.012	3.12	147.20'	14.51	0.17	43.29	
I-519	M-505	YL	0.52	0.54	0.28			5.00	11.21	3.14	15	HDPE	0.012	1.00	51.10'	5.50	0.15	7.00	
M-505	M-504	YA-YL				4.00	2.80	7.00	10.62	29.74	24	HDPE	0.012	2.00	76.80'	12.39	0.10	34.66	
I-520	M-504	YN	0.56	0.84	0.47			5.00	11.21	5.27	15	HDPE	0.012	1.00	12.00'	6.24	0.03	7.00	

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORM DRAIN FLOW TABS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 63 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A Storm Drain Flow Tabs.dwg Mar 04, 2025 3:50pm rlangrehr

INLET SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.	DETAIL
I-512	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 568.59 (S)	573.84	MD 378.03
I-513	Nyloplast 24" Drain Basin	(15") 568.25 (N)	(15") 568.05 (S)	575.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-514	Nyloplast 24" Drain Basin		(18") 568.59 (NE)	574.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-515	Type S Combination Inlet Double Grate	(15") 569.62 (NE)	(15") 569.42 (SW)	577.69	MD 379.04
I-516	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 570.87 (SW)	576.20	MD 378.03
I-517	Type S Combination Inlet Double Grate		(15") 574.31 (E)	578.14	MD 379.04
I-518	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 553.62 (SW)	557.14	MD 378.03
I-519	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 546.66 (SE)	550.00	MD 378.03
I-520	Type S Combination Inlet Double Grate		(15") 543.25 (SE)	550.00	MD 379.04
I-521	Type 'S' Inlet Double Grate Tandem		(15") 542.61 (NW)	550.00	MD 374.70
I-523	Type S Combination Inlet Double Grate		(15") 546.18 (N)	549.96	MD 379.04
I-537	Standard Single Opening Type K Inlet - Non-traffic Areas	(12") 588.88 (N)	(15") 588.63 (E)	591.51	MD 378.03
I-538	Standard Single Opening Type K Inlet - Non-traffic Areas	(12") 598.83 (N)	(12") 597.33 (S)	602.16	MD 378.03
I-540	Standard Single Opening Type K Inlet - Non-traffic Areas		(12") 605.25 (S)	612.20	MD 378.03
I-541	Type 'S' Inlet Double Grate Tandem		(15") 588.64 (N)	592.39	MD 374.70
I-545	Type S Combination Inlet Double Grate	(15") 613.45 (N)	(15") 613.25 (S)	616.99	MD 379.04
I-546	Type S Combination Inlet Double Grate	(15") 614.40 (NE)	(15") 614.20 (S)	619.98	MD 379.04
I-547	Type S Combination Inlet Double Grate		(15") 609.73 (E)	613.47	MD 379.04
I-549	Nyloplast 24" Drain Basin	(15") 593.24 (NE)	(15") 593.04 (W)	599.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-550	Nyloplast 24" Drain Basin		(15") 593.59 (SW)	599.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-551	Type 'S' Inlet Double Grate Tandem		(15") 590.06 (SE)	594.97	MD 374.70
I-552	Type S Combination Inlet Double Grate		(15") 587.66 (SW)	594.97	MD 379.04
I-553	Type S Combination Inlet Double Grate		(15") 588.66 (SE)	596.16	MD 379.04
I-554	Type 'S' Inlet Double Grate Tandem		(15") 591.16 (NE)	596.17	MD 374.70
I-555	Precast COG/COS Opening 5' Wide 6' Deep			605.19	MD 374.68
I-556	Type S Combination Inlet Double Grate		(15") 600.25 (N)	603.75	MD 379.04
I-558	Type S Combination Inlet Double Grate		(15") 599.19 (S)	607.95	MD 379.04
I-559	Nyloplast 24" Drain Basin		(15") 597.34 (E)	601.75	Nyloplast 24" Drain Basin with 24" Dome Grate
I-561	Type S Combination Inlet Double Grate	(15") 601.79 (E)	(15") 601.59 (W)	605.53	MD 379.04
I-562	Type K Inlet Single Opening		(15") 602.04 (W)	605.34	MD 379.04
I-563	Type S Combination Inlet Double Grate		(15") 578.00 (SE)	586.08	MD 379.04
I-566	Standard Single Opening Type K Inlet - Non-traffic Areas	(15") 573.54 (W)	(18") 573.29 (E)	578.24	MD 378.03
I-567	Standard Single Opening Type K Inlet - Non-traffic Areas	(15") 582.52 (W)	(15") 582.32 (E)	587.25	MD 378.03
I-569	Standard Single Opening Type K Inlet - Non-traffic Areas	(12") 600.31 (W)	(15") 596.48 (E)	604.14	MD 378.03
I-570	Standard Single Opening Type K Inlet - Non-traffic Areas		(12") 604.08 (E)	607.91	MD 378.03
I-571	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 614.91 (SW)	617.31	MD 378.03
I-572	Nyloplast 24" Drain Basin	(15") 572.71 (SW)	(15") 572.51 (N)	578.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-573	Nyloplast 24" Drain Basin		(15") 573.06 (NE)	580.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-575	Type S Combination Inlet Double Grate	(15") 577.48 (W)	(15") 577.28 (N)	580.24	MD 379.04
I-576	Type 'S' Inlet Double Grate Tandem		(15") 577.65 (E)	580.01	MD 374.70
I-577	Nyloplast 24" Drain Basin		(15") 584.59 (SW)	590.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-579	Type S Combination Inlet Double Grate		(15") 590.25 (S)	598.53	MD 379.04
I-581	Type S Combination Inlet Double Grate		(15") 577.68 (S)	586.93	MD 379.04
I-583	Type 'S' Inlet Double Grate Tandem		(15") 575.23 (SE)	580.01	MD 374.70
I-585	Type S Combination Inlet Double Grate		(15") 570.90 (S)	576.44	MD 379.04
I-586	Nyloplast 24" Drain Basin	(15") 566.31 (W)	(15") 566.11 (E)	572.54	Nyloplast 24" Drain Basin with 24" Dome Grate
I-587	Nyloplast 24" Drain Basin		(15") 566.84 (E)	572.42	Nyloplast 24" Drain Basin with 24" Dome Grate
I-589	Precast COG/COS Opening 5' Wide 3' Deep			575.71	MD 374.68
I-590	Nyloplast 24" Drain Basin		(15") 571.09 (W)	576.00	Nyloplast 24" Drain Basin with 24" Dome Grate
I-591	Precast COG/COS Opening 5' Wide 6' Deep			578.91	MD 374.68
I-593	Type 'S' Inlet Double Grate Tandem	(15") 573.07 (N)	(18") 572.82 (SE)	575.74	MD 374.70
I-594	Type 'S' Inlet Double Grate Tandem		(15") 573.31 (S)	575.74	MD 374.70
I-595	Type 'S' Inlet Double Grate Tandem		(15") 568.46 (NE)	571.28	MD 374.70
I-596	Type 'S' Inlet Double Grate Tandem	(15") 568.67 (N)	(15") 568.47 (SW)	571.33	MD 374.70
I-597	Nyloplast 24" Drain Basin		(15") 569.25 (S)	572.75	Nyloplast 24" Drain Basin with 24" Dome Grate
I-599	Type S Combination Inlet Double Grate	(15") 571.80 (NE)	(15") 571.60 (S)	574.45	MD 379.04
I-600	Type S Combination Inlet Double Grate		(15") 572.25 (SW)	575.20	MD 379.04
I-601	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 562.18 (SW)	567.63	MD 378.03
I-602	Type S Combination Inlet Double Grate		(15") 556.25 (E)	564.52	MD 379.04
I-603	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 553.65 (SW)	558.78	MD 378.03
I-604	Standard Single Opening Type K Inlet - Non-traffic Areas	(15") 559.81 (NE)	(15") 559.61 (S)	565.60	MD 378.03
I-605	Nyloplast 24" Drain Basin		(15") 560.00 (SW)	566.37	Nyloplast 24" Drain Basin with 24" Dome Grate
I-606	Standard Single Opening Type K Inlet - Non-traffic Areas		(15") 567.56 (S)	572.75	MD 378.03
I-607	Type S Combination Inlet Double Grate	(15") 556.08 (S)	(15") 555.88 (N)	559.00	MD 379.04
I-608	Type S Combination Inlet Double Grate		(15") 556.32 (N)	559.00	MD 379.04

MANHOLE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.	DETAIL
M-502	72" Dia Manhole	(30") 539.90 (SE) (30") 545.96 (NW)	(36") 539.40 (SW)	552.48	MD 384.05
M-503	60" Dia Manhole	(30") 540.81 (NE) (15") 545.89 (S)	(30") 540.61 (NW)	550.25	MD 384.03
M-504	60" Dia Manhole	(24") 543.26 (NE) (15") 543.13 (NW) (15") 542.53 (SE)	(30") 541.28 (SW)	550.19	MD 384.03
M-505	48" Dia Manhole	(24") 545.00 (NE) (15") 546.15 (NW)	(24") 544.80 (SW)	551.30	MD 384.01
M-506	48" Dia Manhole	(24") 551.52 (NW) (15") 552.25 (NE)	(24") 549.59 (SW)	558.46	MD 384.01
M-507	48" Dia Manhole	(18") 564.39 (NW) (15") 569.30 (NE) (15") 574.14 (W)	(18") 564.19 (SE)	577.93	MD 384.01
M-508	48" Dia Manhole	(15") 566.61 (NW) (18") 568.16 (SW)	(18") 566.36 (SE)	579.78	MD 384.01
M-509	48" Dia Manhole	(15") 567.11 (N)	(15") 566.91 (SE)	578.00	MD 384.01
M-523	60" Dia Manhole	(15") 552.28 (NE) (30") 552.61 (NW)	(30") 551.03 (SE)	560.52	MD 384.03
M-524	60" Dia Manhole	(30") 554.87 (NW) (15") 556.12 (W)	(30") 554.67 (SE)	564.35	MD 384.03
M-525	60" Dia Manhole	(30") 557.17 (NW) (15") 560.82 (NE)	(30") 556.97 (SE)	569.36	MD 384.03
M-526	60" Dia Manhole	(30") 559.83 (NW) (15") 568.34 (SW) (15") 568.34 (NE)	(30") 559.63 (SE)	571.49	MD 384.03
M-527	60" Dia Manhole	(30") 562.85 (N)	(30") 562.65 (SE)	573.97	MD 384.03
M-528	60" Dia Manhole	(30") 566.07 (N) (15") 565.66 (W) (15") 568.69 (NE)	(30") 564.41 (S)	575.40	MD 384.03
M-529	60" Dia Manhole	(30") 573.43 (W) (30") 568.15 (N)	(30") 567.95 (S)	579.32	MD 384.03
M-531	60" Dia Manhole	(15") 577.86 (NW) (30") 577.46 (W)	(30") 577.26 (E)	585.88	MD 384.03
M-532	48" Dia Manhole	(30") 581.35 (W)	(30") 581.15 (E)	598.97	MD 384.01
M-533	48" Dia Manhole	(30") 582.53 (W) (15") 596.25 (N) (15") 600.13 (S)	(30") 582.33 (E)	603.98	MD 384.01
M-534	48" Dia Manhole	(30") 585.02 (W)	(30") 584.82 (E)	599.12	MD 384.01
M-534a	48" Dia Manhole	(15") 588.50 (NW) (24") 585.98 (W) (15") 591.00 (SW)	(30") 585.48 (E)	596.81	MD 384.01
M-536	48" Dia Manhole	(15") 587.88 (W) (15") 588.39 (S)	(15") 587.68 (E)	592.76	MD 384.01
M-539	48" Dia Manhole	(12") 604.25 (N)	(12") 603.35 (S)	608.19	MD 384.01
M-542	48" Dia Manhole	(15") 588.52 (N) (15") 589.90 (NW) (15") 587.50 (NE)	(24") 586.75 (S)	595.01	MD 384.01
M-543	48" Dia Manhole	(15") 594.50 (N) (15") 590.91 (E)	(15") 590.71 (S)	598.46	MD 384.01
M-544	48" Dia Manhole	(15") 610.44 (N) (15") 609.49 (W)	(15") 610.24 (S)	613.69	MD 384.01
M-548	48" Dia Manhole	(15") 592.62 (E)	(15") 592.42 (W)	599.22	MD 384.01
M-557	48" Dia Manhole	(15") 596.77 (N) (15") 597.03 (W)	(15") 596.57 (S)	604.40	MD 384.01
M-564	48" Dia Manhole	(18") 571.75 (W) (15") 570.74 (E)	(30") 569.49 (S)	580.61	MD 384.01
M-565	48" Dia Manhole	(18") 572.41 (W) (15") 572.41 (S)	(18") 572.21 (E)	579.40	MD 384.01
M-568	48" Dia Manhole	(15") 590.72 (W)	(15") 590.37 (E)	595.47	MD 384.01
M 535	48" Dia Manhole	(15") 587.12 (W) (24") 586.44 (N)	(24") 586.37 (E)	594.86	MD 384.01

ENDWALL SCHEDULE

NO.	TYPE	INV. OUT	DETAIL
e-615	15" Type C Endwall	598.00	MD 354.01
E-500	54" Type C Endwall	535.09	MD 354.01
E-560	15" Type C Endwall	601.50	MD 354.01
E-574	15" Type C Endwall	577.15	MD 354.01
E-578	15" Type C Endwall	590.00	MD 354.01
E-580	15" Type C Endwall	577.00	MD 354.01
E-582	15" Type C Endwall	575.00	MD 354.01
E-584	15" Type C Endwall	570.75	MD 354.01
E-592	15" Type C Endwall	572.50	MD 354.01
E-598	15" Type C Endwall	571.52	MD 354.01
E-606	15" Type C Endwall	555.75	MD 354.01
E-616	15" Type C Endwall	569.00	MD 354.01

INLET SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEV.	DETAIL
I-609	Standard Single Opening Type K Inlet - Non-traffic Areas	(15") 550.94 (E)	(15") 550.74 (SW)	556.00	MD 378.03
I-610	Nyloplast 24" Drain Basin		(15") 551.34 (W)	559.56	Nyloplast 24" Drain Basin with 24" Dome Grate
I-612	Standard Yard Inlet		(15") 572.10 (S)	574.96	MD 384.05
I-613	Type S Combination Inlet Double Grate	(15") 584.01 (W)	(15") 583.81 (SE)	586.88	MD 379.04
I-614	Type S Combination Inlet Double Grate		(15") 584.25 (E)	586.88	MD 379.04
I-617	Type S Combination Inlet Double Grate		(15") 569.28 (SW)	573.11	MD 379.04

MARYLAND STATE HIGHWAY ADMINISTRATION
STORM SEWER DESIGN

SHEET ____ OF ____
DATE: 3/4/2025

DESIGNED BY: R. Langrehr
CHECKED BY:
CONTRACT NO.: 00211253.004a
PROJECT: Eldersburg Overlook
RAINFALL FACTORS
DURATION: 0-10 10.1-40 40.1-150

* Q's adjusted by 1.18 for Noaa

Structure		Contributing				100 Year Runoff					Pipe							
FROM	TO	C Area #	A Area Acres	Runoff Coef.	Δ CA	Σ A	Σ CA	t_c Time Conc Min.	ii_F Rainfall intens. (in./hr.)	* Q cfs	Size in.	Type	n Mannings Coef.	S_o Slope %	L length Ft.	V_O Vel ft./sec.	Time In Pipe min.	Capac Full cfs	Remarks
I-521	M-504	YM	0.47	0.87	0.41			5.00	11.21	4.60	15	HDPE	0.012	0.75	12.00'	5.43	0.04	6.06	
M-504	M-503	YA-YN				5.03	3.68	7.10	10.60	38.99	30	HDPE	0.012	0.80	59.00'	9.23	0.11	39.74	
I-523	M-503	YP	0.21	0.93	0.19			5.00	11.21	2.13	15	HDPE	0.012	2.00	14.20'	6.37	0.04	9.90	
M-503	M-502	YA-YP				5.24	3.87	7.21	10.57	40.92	30	HDPE	0.012	1.00	71.00'	10.26	0.12	44.44	
M-502	M-501	VA-VH,WA-YP				24.65	14.96	13.44	8.99	134.51	36	HDPE	0.012	2.00	41.40'	14.46	0.05	102.19	
M-501	E-500	VA-VH,WA-YP				24.65	14.96	13.49	8.97	134.16	48	HDPE	0.012	0.50	28.60'	8.76	0.05	110.04	
I-608	I-607	YQ	0.10	0.96	0.10			5.00	11.21	1.12	15	HDPE	0.012	1.00	24.10'	4.17	0.10	7.00	
	I-607	YR	0.11	0.96	0.11			5.00	11.21	1.23									
I-607	E-606	YQ & YR				0.21	0.21	5.10	11.19	2.35	15	HDPE	0.012	0.50	25.10'	3.96	0.11	4.95	
	I-610	YS	0.13	0.26	0.03			5.00	11.21	0.34									
I-610	I-609	YQ-YS				0.34	0.24	5.20	11.16	2.68	15	HDPE	0.012	1.00	39.90'	5.27	0.13	7.00	
	I-609	YY	0.59	0.47	0.28			5.00	11.21	3.14									
I-609	E.C.P.	YQ-YS&YY				0.93	0.52	5.33	11.14	5.79	15	HDPE	0.012	1.00	15.00'	6.37	0.04	7.00	Pipe to Eldersburg Coprorate Park
I-617	E-616	YW	0.29	0.91	0.26			5.00	11.21	2.91	15	HDPE	0.012	0.50	55.10'	4.19	0.22	4.95	
	I-605	YX	0.15	0.54	0.08			5.00	11.21	0.90									
I-605	I-604	YW & YX				0.44	0.34	5.22	11.16	3.80	15	HDPE	0.012	1.00	18.90'	5.80	0.05	7.00	
	I-604	YV	0.35	0.54	0.19			5.00	11.21	2.13									
I-604	E.C.P.	YV-YX				0.79	0.53	5.27	11.14	5.90	15	HDPE	0.012	1.00	45.60'	6.39	0.12	7.00	Pipe to Eldersburg Coprorate Park
I-581	E-580	YT	0.22	0.86	0.19			5.00	11.21	2.13	15	HDPE	0.012	0.50	136.80'	3.85	0.59	4.95	
	I-606	YU	0.70	0.46	0.32			5.00	11.21	3.59									
I-606	E.C.P.	YT & YU				0.92	0.51	5.59	11.07	5.64	15	HDPE	0.012	1.00	56.20'	6.34	0.15	7.00	Pipe to Eldersburg Coprorate Park
I-579	E-578	YZ	0.11	0.90	0.10			5.00	11.21	1.12	15	HDPE	0.012	0.50	49.80'	3.24	0.26	4.95	
	I-577	ZA	0.30	0.35	0.11			5.00	11.21	1.23									
I-577	E.C.P.	YZ & ZA				0.41	0.21	5.26	11.14	2.34	15	RCCP	0.013	2.00	98.70'	6.18	0.27	9.14	Pipe to Eldersburg Coprorate Park
I-614	I-613	ZB	0.29	0.77	0.22			5.00	11.21	2.47	15	HDPE	0.012	1.00	24.00'	5.14	0.08	7.00	
	I-613	ZC	0.12	0.67	0.08			5.00	11.21	0.90									
I-613	I-613A	ZB & ZC				0.41	0.30	5.08	11.19	3.36	15	HDPE	0.012	1.00	35.10'	5.60	0.10	7.00	
	I-613A	ZD	0.60	0.51	0.30			5.00	11.21	3.36									
I-613A	E.C.P.	ZB-ZD				1.01	0.60	5.18	11.16	6.70	15	RCCP	0.013	1.00	20.00'	5.99	0.06	6.46	Pipe to Eldersburg Coprorate Park

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORM DRAIN FLOW TABS AND STRUCTURE SCHEDULES

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A
SHEET: 64 OF X

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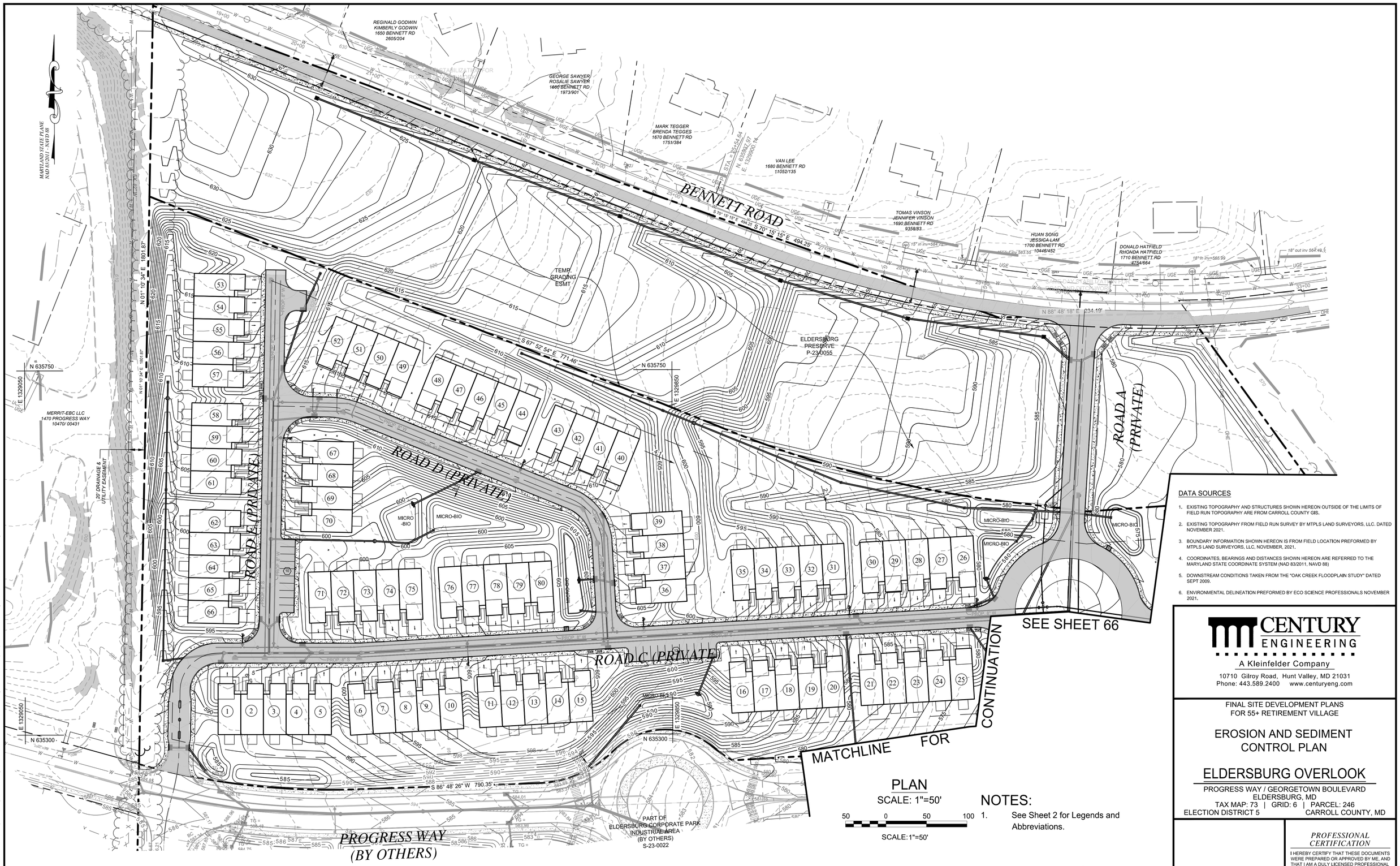

PLAN

SCALE: 1"=50'

50 0 50 100

SCALE:1"=50'

NOTES:

1. See Sheet 2 for Legends and Abbreviations.

DATA SOURCES

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4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

EROSION AND SEDIMENT CONTROL PLAN

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 65 OF X

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PLAN

SCALE: 1"=50'

50 0 50 100

SCALE:1"=50'

MATCHLINE FOR CONTINUATION SEE SHEET 67

NOTES:

1. See Sheet 2 for Legends and Abbreviations.

DATA SOURCES

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Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

EROSION AND SEDIMENT CONTROL PLAN

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 66 OF X

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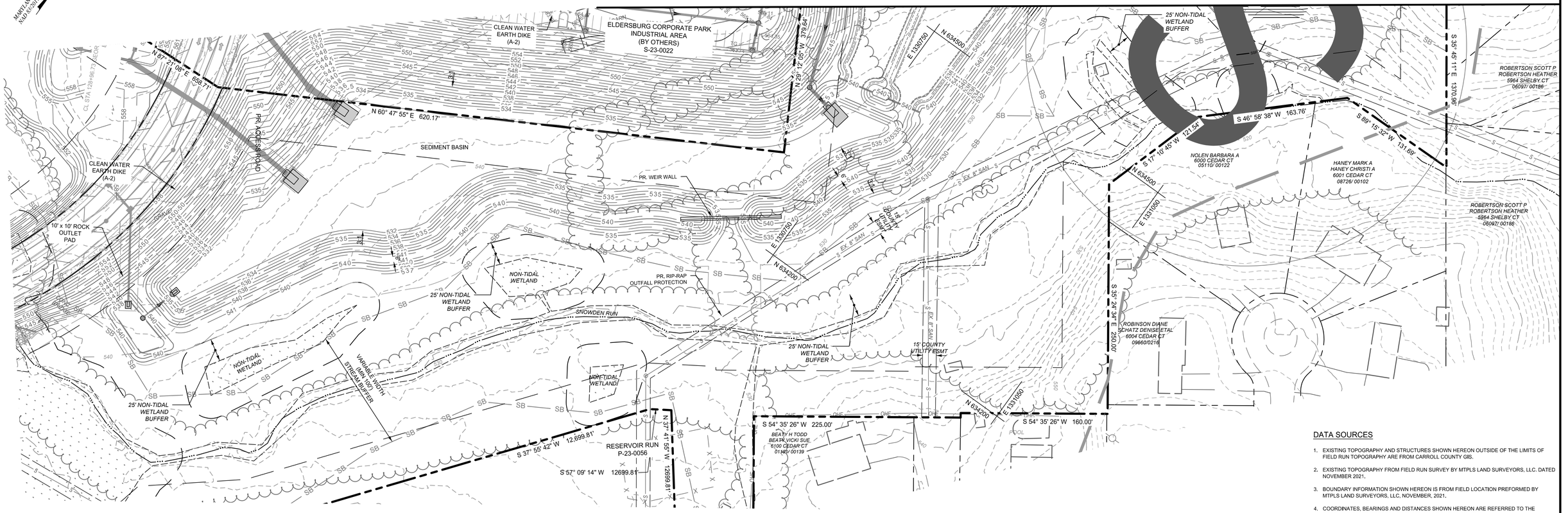
MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

MATCHLINE FOR CONTINUATION SEE SHEET 66



DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

NOTES:

1. See Sheet 2 for Legends and Abbreviations.

PLAN

SCALE: 1"=50'

50 0 50 100

SCALE:1"=50'

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CENTURY ENGINEERING
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T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\211253.00 (C-x) ESC Plans.dwg Mar 04, 2025 3:54pm rfangrehr

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover to protect exposed soil from erosion.

PURPOSE

To promote the establishment of vegetation on exposed soil.

CONDITIONS WHERE PRACTICE APPLIES

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

EFFECTS ON WATER QUALITY AND QUANTITY

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemical carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

SEDIMENT CONTROL PRACTICES MUST REMAIN IN PLACE DURING GRADING, SEEDBED PREPARATION, SEEDING, MULCHING, AND VEGETATIVE ESTABLISHMENT.

ADEQUATE VEGETATIVE ESTABLISHMENT

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

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 I 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.

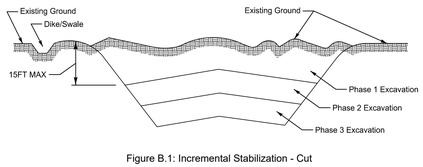

Figure B.1: Incremental Stabilization - Cut

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 the 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.

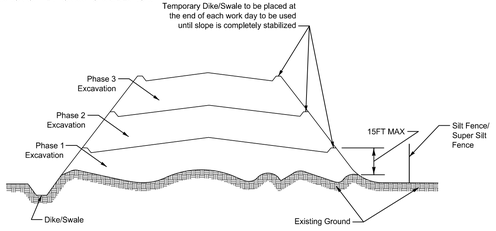

Figure B.2: Incremental Stabilization - Fill

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

DEFINITION

The process of preparing the soils to sustain adequate vegetative stabilization.

PURPOSE

To provide a suitable soil medium for vegetative growth.

CONDITIONS WHERE PRACTICE APPLIES

Where vegetative stabilization is to be established.

CRITERIA

A. Soil Preparation
   1. Temporary Stabilization
      a. Seed 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 soil is loosened, it must not be rolled or dragged smooth but left in 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 to 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 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 material.
      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 1½ 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. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

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.

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

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 keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
      d. Sod and seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control 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 a 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 ½ 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 be exceed the following: nitrogen, 100 pounds per acre total soluble nitrogen; P_2O_5 (phosphorous), 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 into the soil.

B. Mulching
   1. Mulch Materials (in order of preference)
      a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonable bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland See 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 a uniform fibrous physical state.
         i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color 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 homogenous 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 at a net dry weight of 100 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 to 15 feet wide and 300 to 3,000 feet long.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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

A. 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 the Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
B. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soils tests are not required for Temporary Seeding.
C. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch along as prescribed in Section B-4-3.A.1.1b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone: 7A
Seed Mixture: N/A

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
N/A	Annual Ryegrass *(Lolium perenne ssp. multiflorum)*	40	Feb 15 to Apr 30; Aug 15 to Nov 30	0.5 in.	436 lb/ac (10 lb/1000sf)	2 tons/ac (90 lb/1000 sf)
	Barley *(Hordeum vulgare)*	96	Feb 15 to Apr 30; Aug 15 to Nov 30	1.0 in.		
	Foxtail Millet *(Setaria italica)*	30	May 1 to Aug 14	0.5 in.		
	Pearl Millet *(Pennisetum glaucum)*	20	May 1 to Aug 14	0.5 in.		

B-4-4 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION

To stabilize disturbed soils with permanent vegetation.

PURPOSE

To use long-lived perennial grasses and legumes to establish permanent cover on disturbed soils..

CONDITIONS WHERE PRACTICE APPLIES

Exposed soils where ground cover is needed for 6 months or more..

CRITERIA

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 3½ 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 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 60 to 70 percent. Seeding Rate: 1½ 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.

3. Ideal Times of Seeding for Turf Grass Mixtures
   Western Maryland: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
   Central Maryland: 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)
4. 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 1½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
5. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch ever 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: 7A
Seed Mixture: Cool-Season Grass Mix

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	Fertilizer Rate (10-20-20) P_2O_5	Fertilizer Rate (10-20-20) K_2O	Lime Rate
9	Tall Fescue *(Lolium arundinaceum)*	60	Feb 15 to Apr 30; Aug 15 to Oct 31; Nov 1 to Nov 30	¼ to ½ in.	45 lb/ac (1 lb/ 1000sf)	90 lb/ac (2 lb/ 1000sf)	90 lb/ac (2 lb/ 1000sf)	2 tons/ac (90 lb/ 1000 sf)
	Kentucky Bluegrass *(Poa pratensis)*	40		¼ to ½ in.				
	Perennial Ryegrass *(Lolium perenne)*	20		¼ to ½ in.				

Permanent Seeding Summary

Hardiness Zone: 7A
Seed Mixture: Warm-Season Grass Mix

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	Fertilizer Rate (10-20-20) P_2O_5	Fertilizer Rate (10-20-20) K_2O	Lime Rate
4	Deertongue *(Dichanthelium clandestinum)*	15	Feb 15 to Apr 30; May 1 to May 20	¼ to ½ in.	45 lb/ac (1 lb/ 1000sf)	90 lb/ac (2 lb/ 1000sf)	90 lb/ac (2 lb/ 1000sf)	2 tons/ac (90 lb/ 1000 sf)
	Creeping Red Fescue *(Festuca rubra var. rubra)*	20						
	Virginia Wild Rye *(Elymus virginicus)*	5						

B. Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).
   1. General Specifications
      a. Class of turfgrass sod must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
      b. Sod must be machine cut at a uniform soil thickness of ¾ inches, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
      c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
      d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
      e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation
   2. Sod Installation
      a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
      b. Lay the first row of sod in a straight line with subsequent rows place parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
      c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
      d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operation of laying, tamping and irrigating for any piece of sod within eight hours.
   3. Sod Maintenance
      a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
      b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
      c. Do not mow until the sod is firmly rooted. No more than ⅓ of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREAS

DEFINITION

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

PURPOSE

To provide a designated location for the temporary storage of soil that 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

A. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
B. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
C. Runoff from the stockpile area must drain to a suitable sediment control practice.
D. Access the stockpile area from the upgrade side.
E. Clear water runoff into the stockpile area must be minimized by use of a diversion fence such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
F. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
G. 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.
H. 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.

Table B.6: Maintenance Fertilization for Permanent Seeding

Seeding Mixture	Type	lb/ac	lb/1000 sf	Time	Mowing
Tall fescue makes up 70 percent or more of cover.	10 - 10 -10 or 30 - 10 - 10	500 400	11.5 9.2	Yearly or as needed, Fall	Not closer than 3 inches, if occasional mowing is desired.
Birdsfoot Trefoil.	0 - 20 - 0	400	9.2	Spring, the year following establishment, and every 4 to 5 years, thereafter.	Mow no closer than 2 inches.
Fairly uniform stand of tall fescue or birdsfoot trefoil.	5 - 10 - 10	500	11.5	Fall, the year following establishment, and every 4 to 5 years, thereafter.	Not required, no closer than 4 inches in the fall after seed has matured.
Weeping lovegrass fairly uniform plant distribution.	5 - 10 - 10	500	11.5	Spring, the year following establishment, and every 3 to 4 years, thereafter.	Not required, not closer than 4 inches in fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures.	20 - 10 - 10	250 100	5.8 2.3	September, 30 days later, December, May 20, June 30, if needed.	Mow no closer than 2 inches for red fescue and Kentucky bluegrass, 3 inches

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

Definition

Controlling the suspension of dust particles from construction activities.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies

Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

1. Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
2. Vegetative Cover: See Section B-4-4 Temporary Stabilization.
3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

EROSION AND SEDIMENT CONTROL SPECIFICATIONS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

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BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
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CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

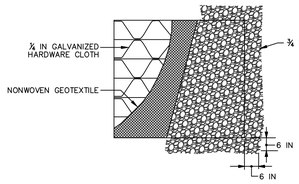
SHEET: 68 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\211253.00 (C-x) ESC details and notes.dwg Mar 04, 2025 3:54pm rlangrehr

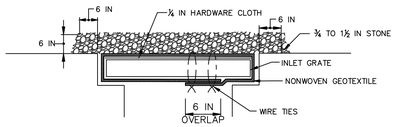
DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP

MAXIMUM DRAINAGE AREA = 1 ACRE



PLAN / CUT AWAY VIEW



CROSS SECTION

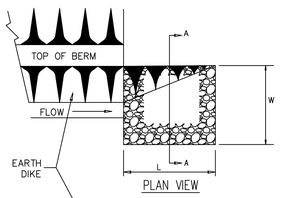
CONSTRUCTION SPECIFICATIONS

1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

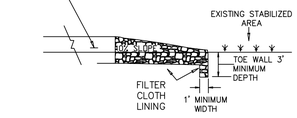
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

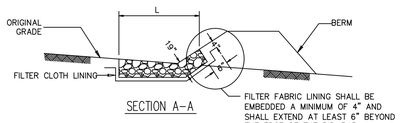
MODIFIED ROCK OUTLET PROTECTION



PLAN VIEW



ELEVATION

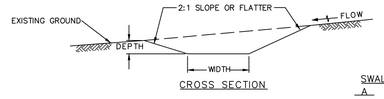


NOTE: FILTER CLOTH SHALL BE GEOTEXTILE CLASS C

NOT TO SCALE

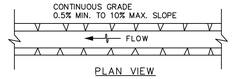
DETAIL C-2 TEMPORARY SWALE

STANDARD SYMBOL: A-1



CROSS SECTION

SWALE TYPE	A	B
MIN. DEPTH	1 FT MIN.	1 FT MIN.
BOTTOM WIDTH	4 FT MIN.	6 FT MIN.



PLAN VIEW

FLOW CHANNEL STABILIZATION

A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)

A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.

A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF TEMPORARY SWALE.
2. EXCAVATE OR SHAPE TEMPORARY SWALE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. STABILIZE TEMPORARY SWALE WITHIN THREE DAYS OF INSTALLATION. STABILIZE SWALES USED FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP TEMPORARY SWALE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
7. UPON REMOVAL OF TEMPORARY SWALE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

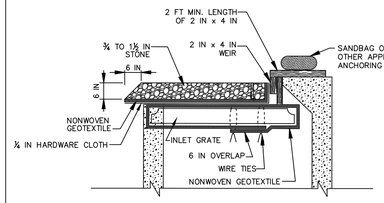
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

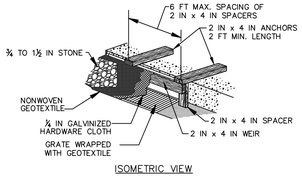
DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

MAXIMUM DRAINAGE AREA = ¾ ACRE



SECTION



ISOMETRIC VIEW

1 OF 2

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

DETAIL E-9-6 COMBINATION INLET PROTECTION

STANDARD SYMBOL: COIP

CONSTRUCTION SPECIFICATIONS

1. USE NOMINAL 2 INCH x 4 INCH LUMBER.
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. LIFT GRATE, AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.
4. ATTACH A CONTINUOUS PIECE OF ½ INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2X4 WEIR, EXTENDING 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH IT TO THE WEIR.
6. NAIL THE 2X4 WEIR TO THE TOP OF A 9 INCH LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAXIMUM 4 FEET APART).
7. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2X4 ANCHORS (MINIMUM 2 FOOT LENGTHS OF 2x4 INCH TO THE TOP OF THE WEIR AT SPACER LOCATIONS). EXTEND 2X4 ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
8. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING.
9. FORM THE ¼ INCH HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE OVER THE HARDWARE CLOTH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
10. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
11. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

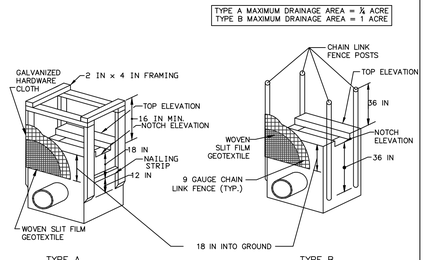
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL E-9-1 STANDARD INLET PROTECTION

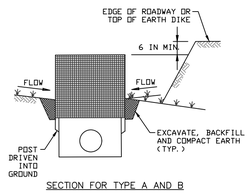
STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¾ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



TYPE A TYPE B

ISOMETRIC VIEW



SECTION FOR TYPE A AND B

1 OF 2

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

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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EROSION AND SEDIMENT CONTROL DETAILS

ELDERSBURG OVERLOOK

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PROJECT NUMBER: 20211253.002A

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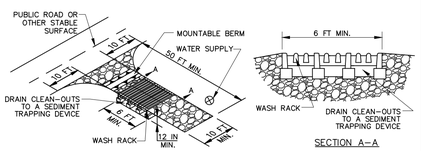
S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\211253.00 (C-x) ESC details and notes.dwg Mar 04, 2025 3:54pm rlangrehr

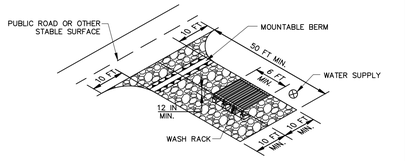
DETAIL B-2 WASH RACK OPTION

STANDARD SYMBOL: WR



ISOMETRIC VIEW – WASH RACK IN SCE

SECTION A–A



ISOMETRIC VIEW– WASH RACK ALONG SCE

CONSTRUCTION SPECIFICATIONS

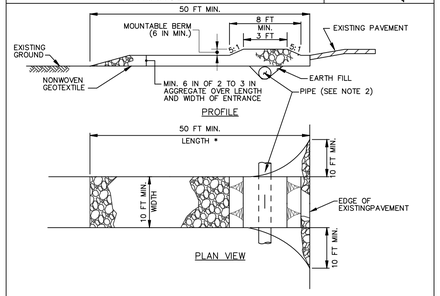
1. USE A WASH RACK DESIGNED AND CONSTRUCTED/MANUFACTURED FOR THE ANTICIPATED TRAFFIC LOADS. CONCRETE, STEEL, OR OTHER MATERIALS ARE ACCEPTABLE. PRE-FABRICATED UNITS SUCH AS CATTLE GUARDS ARE ACCEPTABLE. USE MINIMUM DIMENSION OF 6 FEET x 10 FEET. ORIENT DIRECTION OF RIBS AS SHOWN ON THE DETAIL.
2. INSTALL PRIOR TO, ALONG SIDE OF, OR AS PART OF THE SCE.
3. DIRECT WASH WATER TO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. KEEP AREA UNDER WASH RACK FREE OF ACCUMULATED SEDIMENT. IF DAMAGED, REPAIR OR REPLACE WASH RACK.

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

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

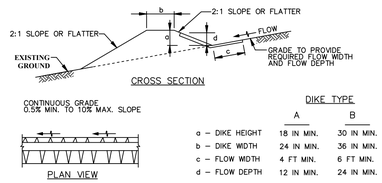
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

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

DETAIL C-1 EARTH DIKE

STANDARD SYMBOL: A–1 (PLACE DESIGNATION (e.g. A–1) ON FLOW CHANNEL SIDE OF DIKE.)



DIKE TYPE	A	B
a – DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b – DIKE WIDTH	24 IN MIN.	36 IN MIN.
c – FLOW WIDTH	4 FT MIN.	6 FT MIN.
d – FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION

A–1	SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)
A–2/B–2	SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
A–3/B–3	4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B–4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

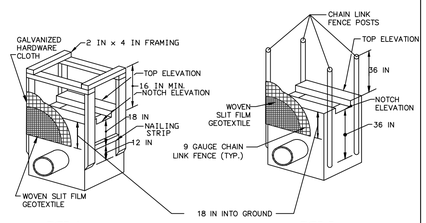
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

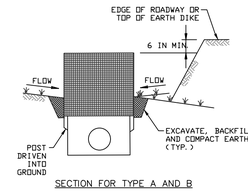
DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

TYPE A MAXIMUM DRAINAGE AREA = ¼ ACRE
TYPE B MAXIMUM DRAINAGE AREA = 1 ACRE



ISOMETRIC VIEW



SECTION FOR TYPE A AND B

1 OF 2

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

DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

CONSTRUCTION SPECIFICATIONS

1. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS.
2. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
3. FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2X4 FRAME AS SHOWN. STRETCH ½ INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.

   FOR TYPE B, USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND 6 FOOT LENGTH, DRIVEN A MINIMUM OF 36 INCHES BELOW THE WEIR CREST AT EACH CORNER OF THE STRUCTURE. FASTEN 9 GAUGE OR HEAVIER CHAIN LINK FENCE, 42 INCHES IN HEIGHT, SECURELY TO THE FENCE POSTS WITH WIRE TIES. FASTEN GEOTEXTILE SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 18 INCHES BELOW THE WEIR CREST.
4. BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
5. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

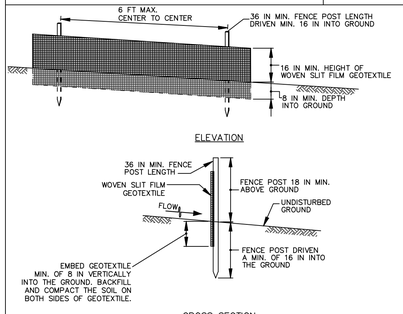
2 OF 2

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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

1 OF 2

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

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± 1/8 INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID–SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

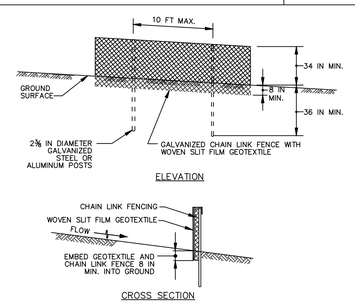
2 OF 2

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

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

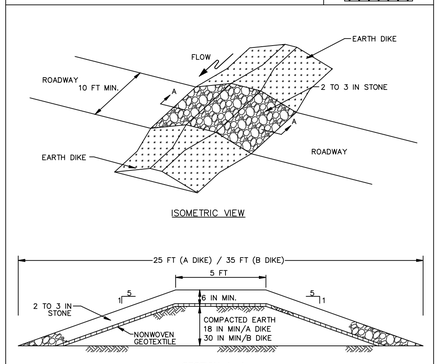
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H–1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H–1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT, REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

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

DETAIL C-8 MOUNTABLE BERM

STANDARD SYMBOL: MB



CONSTRUCTION SPECIFICATIONS

1. USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H–1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
3. PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
4. MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

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

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

211253.00 (C-X) ESC DETAILS AND NOTES - ESC DETAILS 2

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: ----OF X

PROJECT NUMBER: 20211253.002A

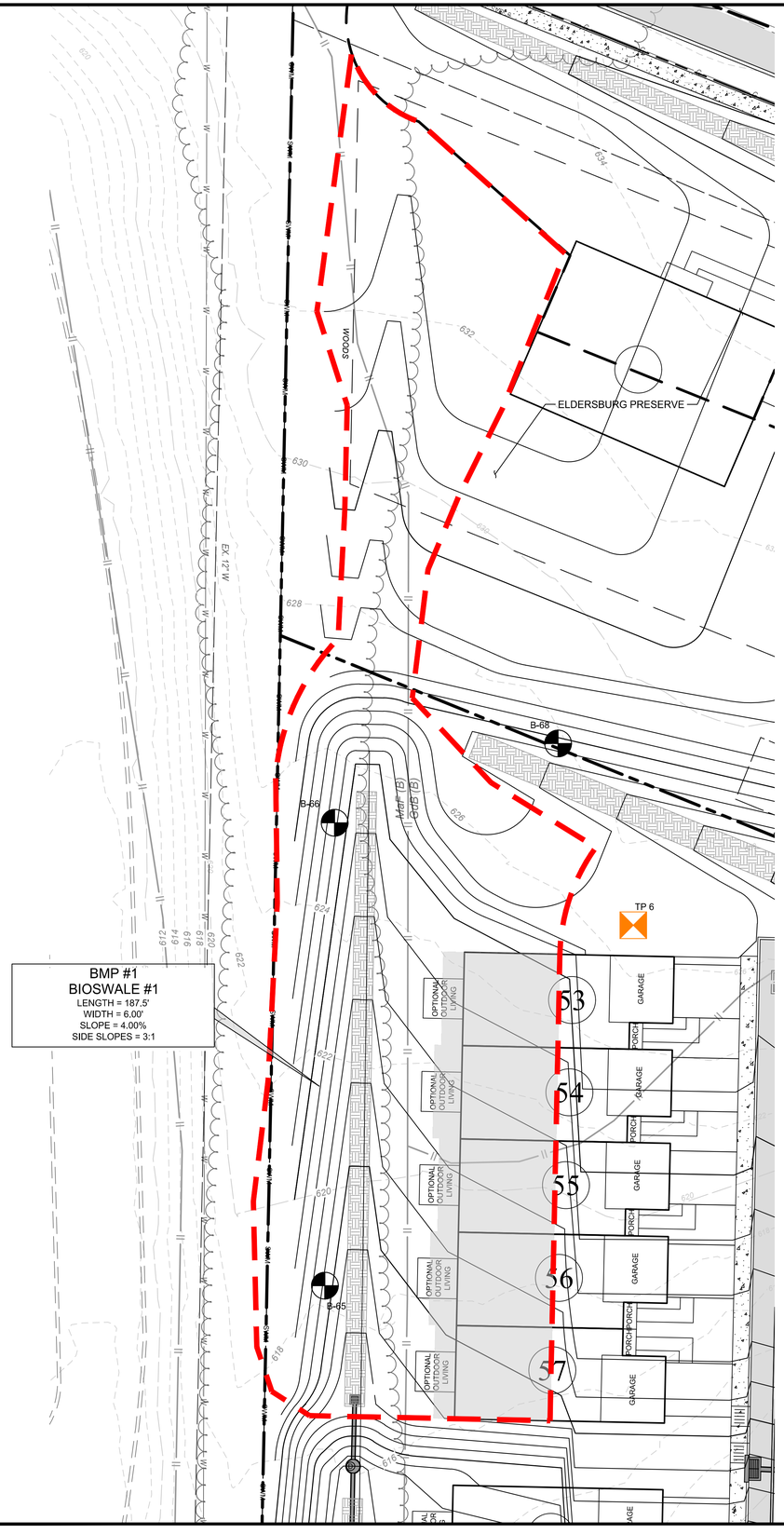
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\211253.00 (C-x) ESC details and notes.dwg Mar 04, 2025 3:54pm rfangrehr



BMP #1 - BIOSWALE #1			OWNER:	
TYPE: BIOSWALE				
LOCATION:			(N: E:)	
DRAINAGE AREA: 0.59 AC.± , 25,548 (S.F.)				
SURFACE AREA: 1,125 S.F.				
WATERSHED: SNOWDENS RUN (USE-III-P)				
RECEIVING WATERS: LIBERTY RESERVOIR				
HYDROLOGIC CRITERIA				
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.				
DESIGN DATA				
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.				
DRAINAGE AREA:	25,548 S.F.		P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	4,732 S.F.		ESD_V PROVIDED:	1,171 C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	4,732 S.F.
Tc:	0.10 HOURS		RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED: ESDv 9" PONDING DEPTH				

MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

DATA SOURCES

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2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
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4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
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S-23-0027

DATE	BY	REVISIONS

CENTURY ENGINEERING
A Kleinfelder Company
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Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 1

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
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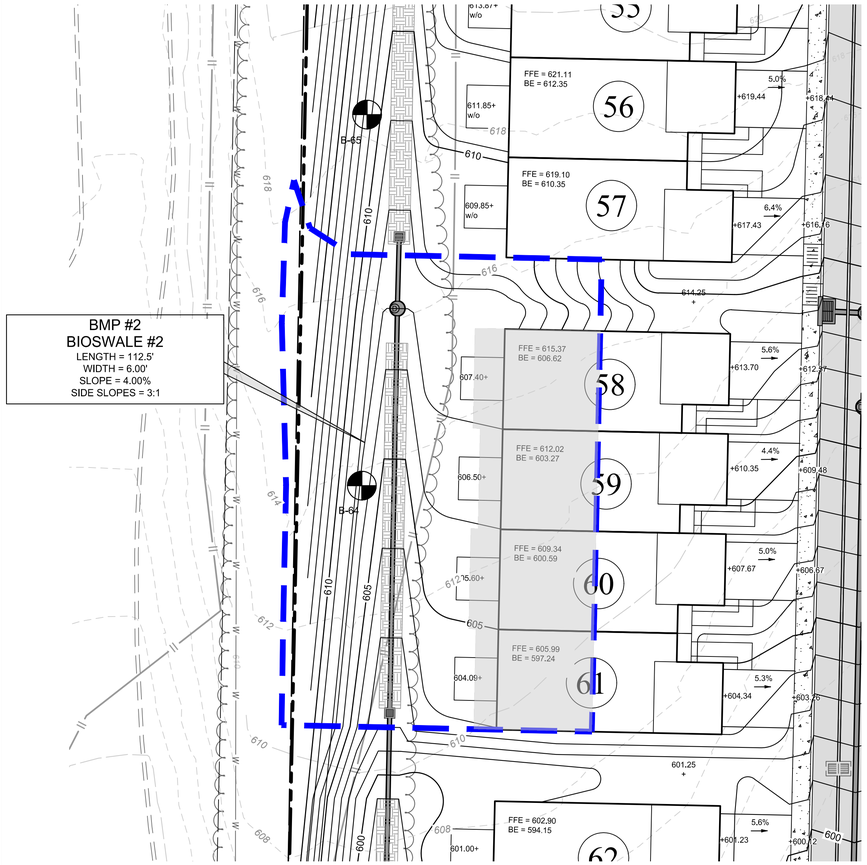
LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 71 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\Civil\CADD\Drawings\SWM Plans\20211253.002A BMP 1 DA A2a.dwg Mar 04, 2025 3:55pm rlangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

BMP #2 - BIOSWALE #2			OWNER:	
TYPE: BIOSWALE				
LOCATION: (N: E:)				
DRAINAGE AREA: 0.27 AC.± , 11,692 (S.F.)				
SURFACE AREA: 675 S.F.				
WATERSHED: SNOWDENS RUN (USE-III-P)				
RECEIVING WATERS: LIBERTY RESERVOIR				
HYDROLOGIC CRITERIA				
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.				
DESIGN DATA				
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.				
DRAINAGE AREA:	11,692 S.F.		P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	3,808 S.F.		ESD_V PROVIDED:	827 C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	4,732 S.F.
Tc:	0.10 HOURS		RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED:				
ESDv		9" PONDING DEPTH		

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 2

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 72 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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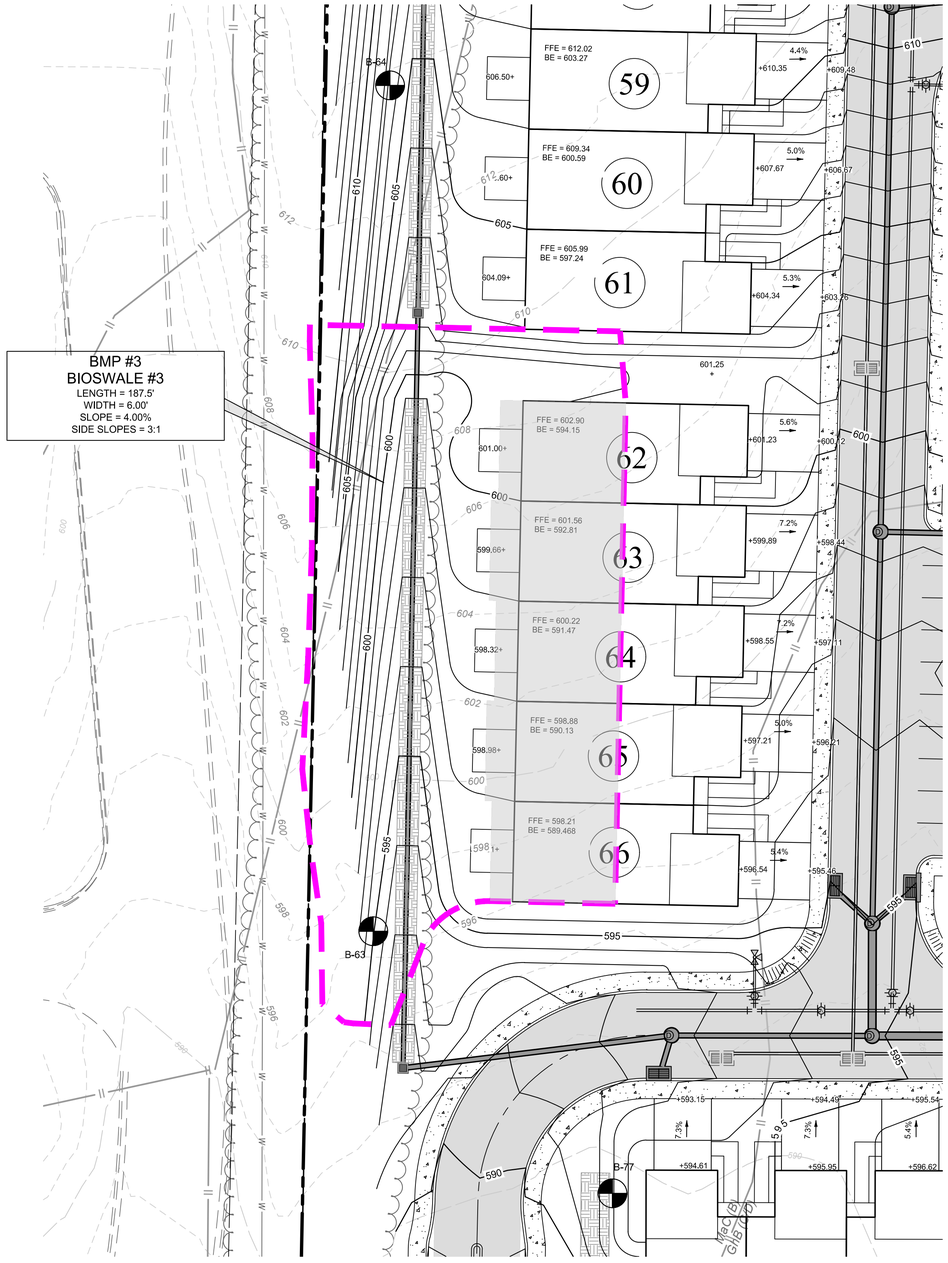

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

BMP #3 - BIOSWALE #3		OWNER:	
TYPE: BIOSWALE			
LOCATION: (N: E:)			
DRAINAGE AREA: 0.34 AC.± , 14,859 (S.F.)			
SURFACE AREA: 1,125 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	14,859	S.F.	P_E PROVIDED	2.50"	
IMPERVIOUS DRAINAGE AREA:	5,012	S.F.	ESD_V PROVIDED:	1,083	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	5,012	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 9" PONDING DEPTH

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 3

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 73 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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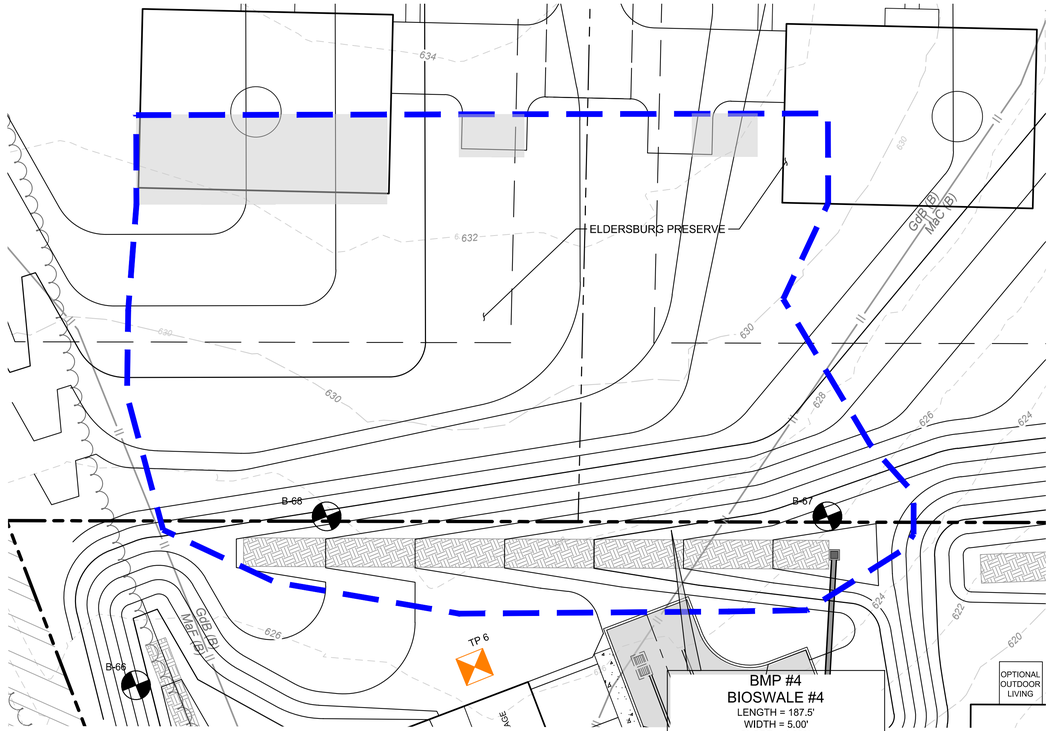

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #4 - BIOSWALE #4			OWNER:	
TYPE: BIOSWALE				
LOCATION:			(N: E:)	
DRAINAGE AREA: 0.61 AC.± , 26,588 (S.F.)				
SURFACE AREA: 937.5 S.F.				
WATERSHED: SNOWDENS RUN (USE-III-P)				
RECEIVING WATERS: LIBERTY RESERVOIR				
HYDROLOGIC CRITERIA				
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.				
DESIGN DATA				
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.				
DRAINAGE AREA:	26,588 S.F.		P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	1,969 S.F.		ESD_V PROVIDED:	665 C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	1,969 S.F.
Tc:	0.10 HOURS		RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED: ESDv 6" PONDING DEPTH				

MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 4

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 74 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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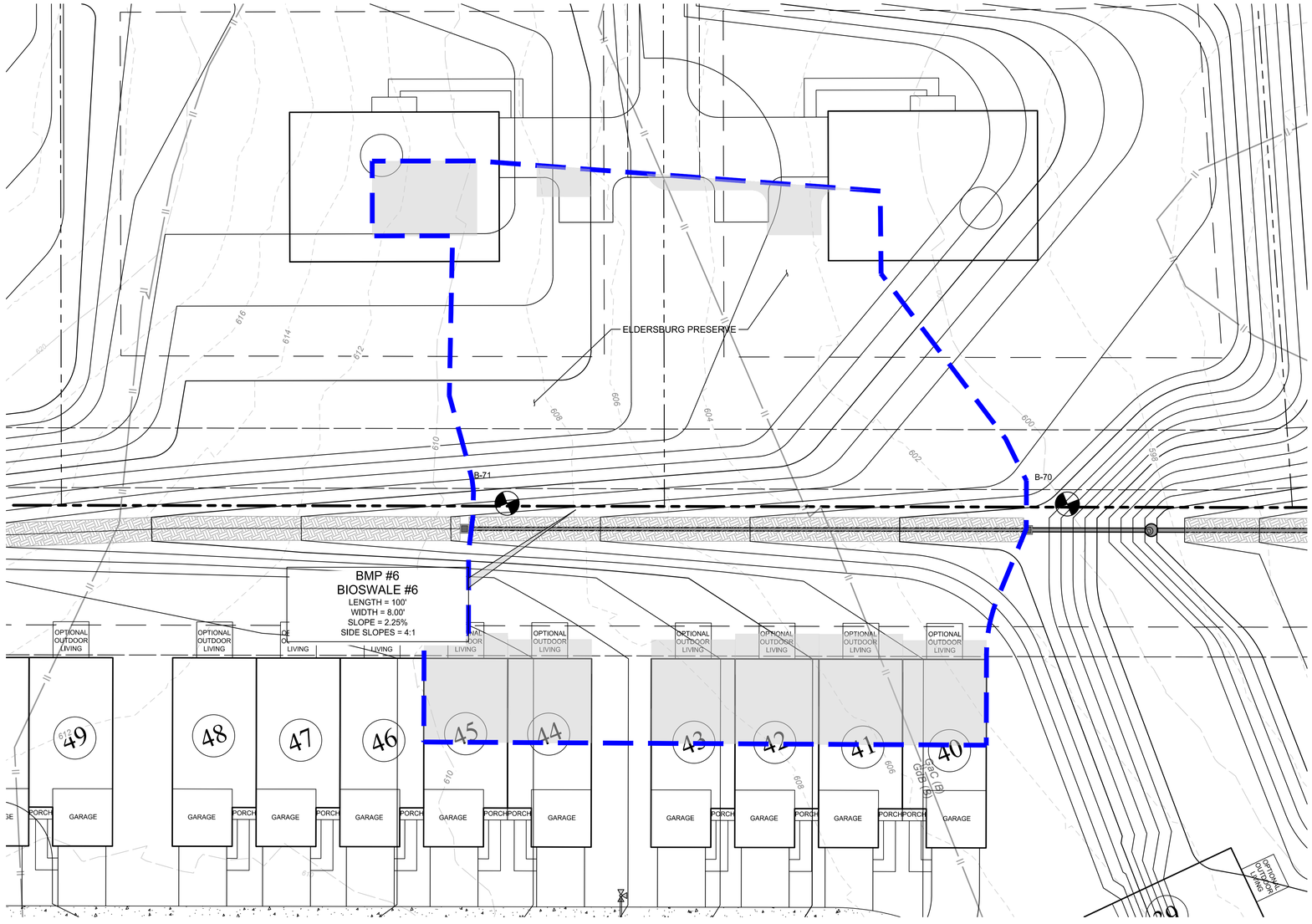

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #6 - BIOSWALE #6	OWNER:
TYPE: BIOSWALE	
LOCATION:	(N: E:)
DRAINAGE AREA: 0.76 AC.± , 33,195 (S.F.)	
SURFACE AREA: 800 S.F.	
WATERSHED: SNOWDENS RUN (USE-III-P)	
RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	33,195 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	7,517 S.F.	ESD_V PROVIDED:	1,729 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	7,517 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 9" PONDING DEPTH

MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 6

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 76 OF X

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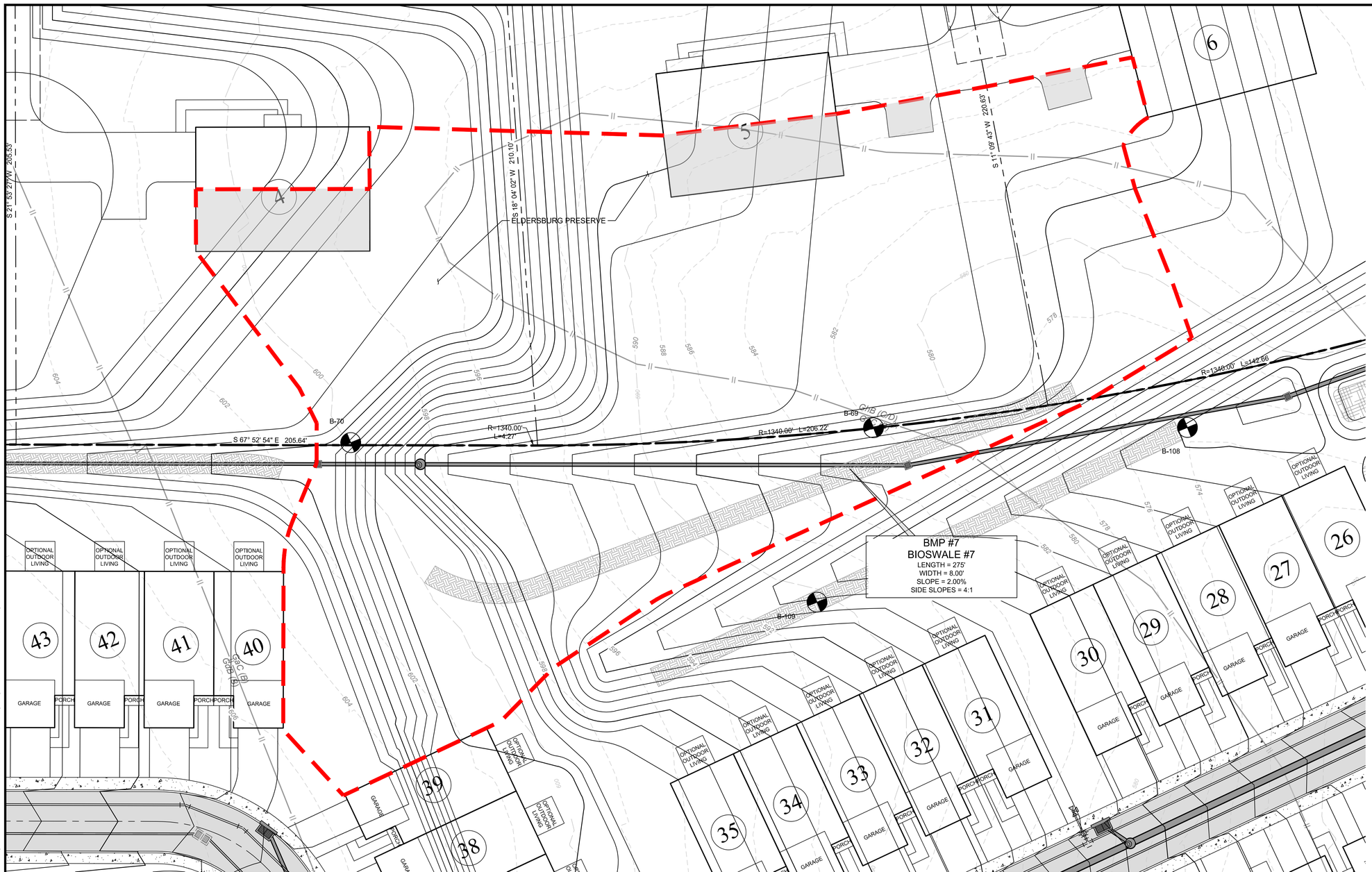

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #7 - BIOSWALE #7		OWNER:	
TYPE: BIOSWALE			
LOCATION:		(N: E:)	
DRAINAGE AREA: 1.52 AC.± , 66,625 (S.F.)			
SURFACE AREA: 1,600 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	66,625 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	3,987 S.F.	ESD_V PROVIDED:	1,388 C.F.
SOIL GROUP:	"B" & "D"	TREATED IMPERVIOUS AREA:	3,987 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED: ESDv 6" PONDING DEPTH			

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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10710 Gilroy Road, Hunt Valley, MD 21031
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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 7

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 77 OF X

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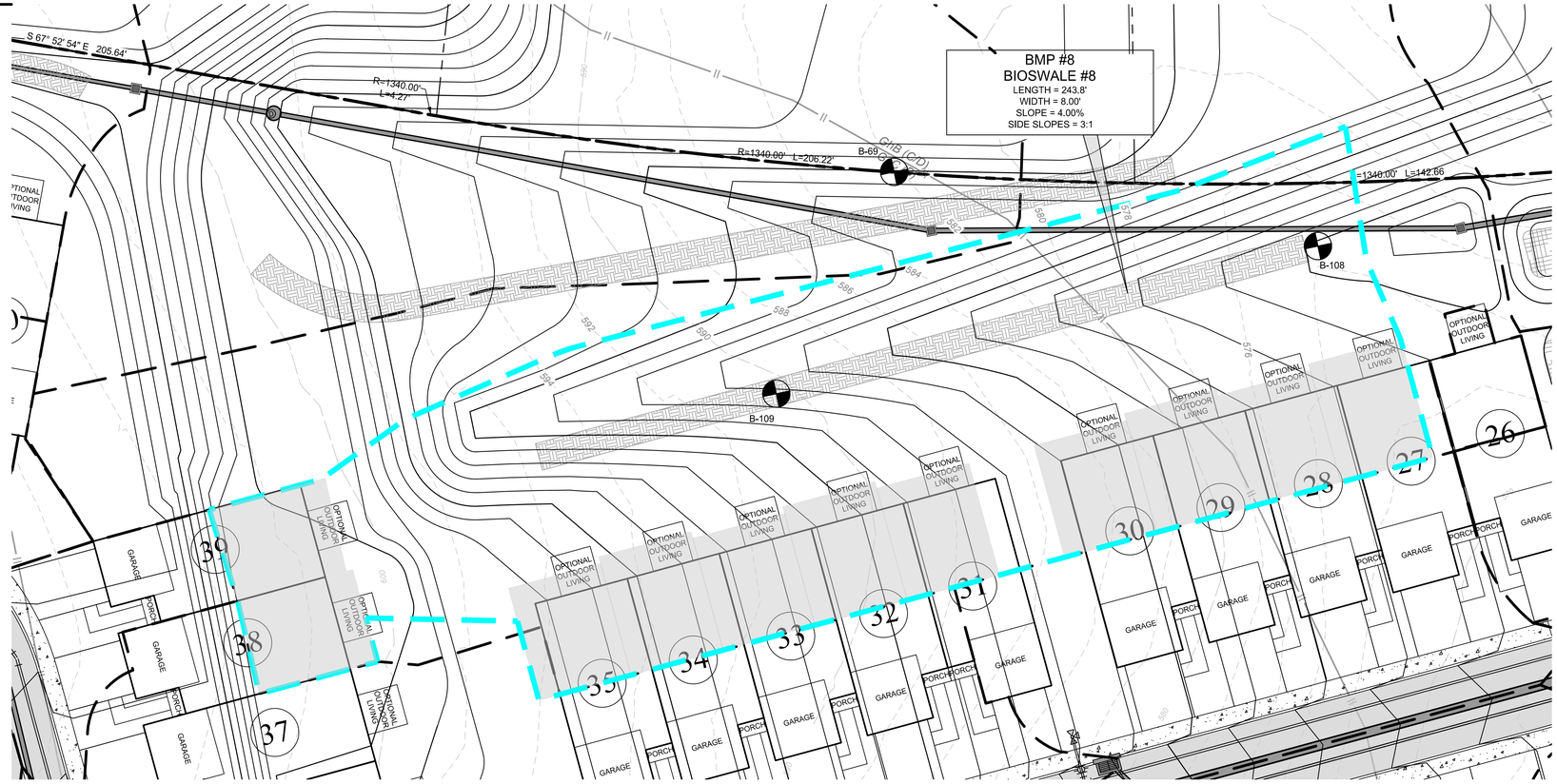

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

BMP #8 - BIOSWALE #8		OWNER:	
TYPE: BIOSWALE			
LOCATION:		(N: E:)	
DRAINAGE AREA: 0.70 AC.± , 30,528 (S.F.)			
SURFACE AREA: 1,950 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	30,528 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	10,734 S.F.	ESD_V PROVIDED:	2,353 C.F.
SOIL GROUP:	"B" & "D"	TREATED IMPERVIOUS AREA:	10,734 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 9" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 8

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 78 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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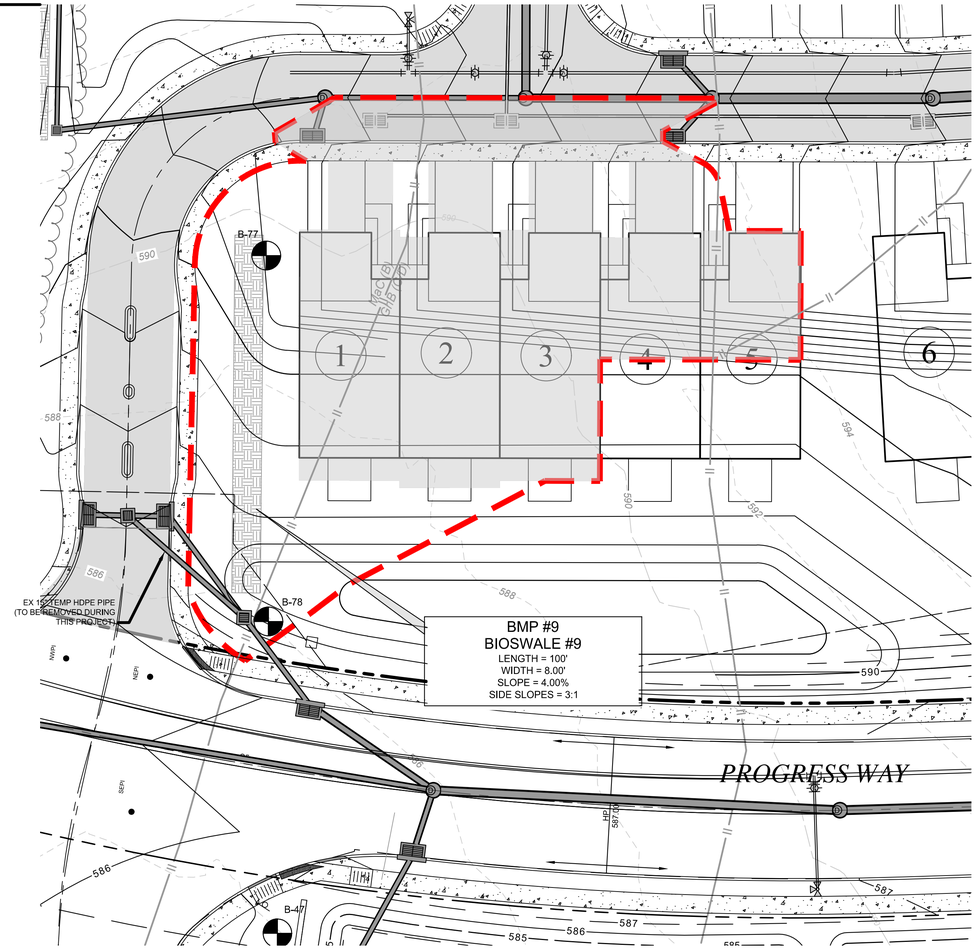
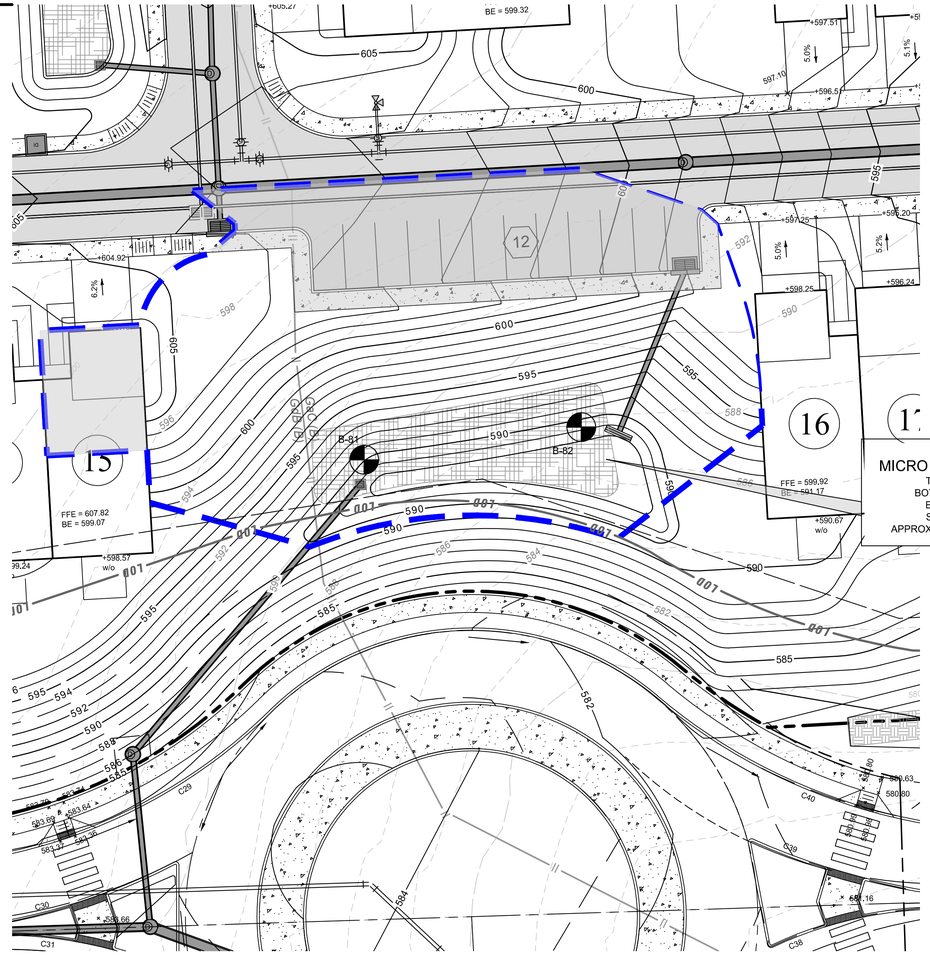

B-77
B-78
B-40
590
588
586
592
594
1
2
3
4
5
6
EX 12" EMP HDPE PIPE
(TO BE REMOVED DURING
THIS PROJECT)
BMP #9
BIOSWALE #9
LENGTH = 100'
WIDTH = 8.00'
SLOPE = 4.00%
SIDE SLOPES = 3:1
PROGRESS WAY
HP
587.00
585
586
587
WSPA
WSPA
WSPA



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #10 -MICRO BIORETENTION #1

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.37 AC.± , 16,098 (S.F.)
SURFACE AREA: 1,903 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD$_V$ HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	16,098	S.F.	P_E PROVIDED	2.50"	
IMPERVIOUS DRAINAGE AREA:	5,274	S.F.	ESD$_V$ PROVIDED:	1,140	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	5,274	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
WSEL 538.50
ESDv 6" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 10

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 80 OF X

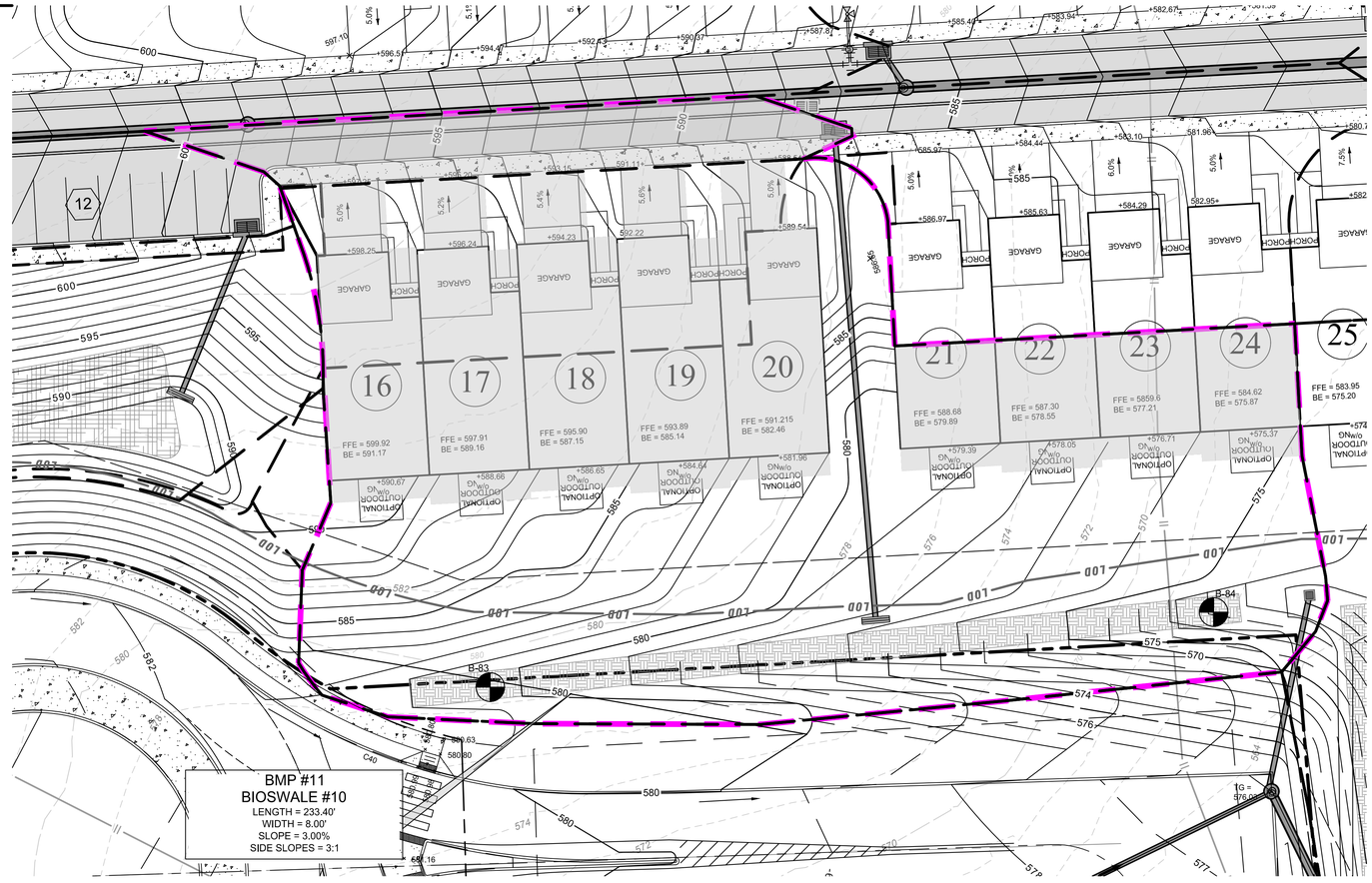
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 10 DA A2.dwg Mar 04, 2025 4:03pm rlangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

BMP #11 - BIOSWALE #10	OWNER:
TYPE: BIOSWALE	
LOCATION:	(N: E:)
DRAINAGE AREA: 0.90 AC.± , 39,414 (S.F.)	
SURFACE AREA: 2,133.6 S.F.	
WATERSHED: SNOWDENS RUN (USE-III-P)	
RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	39,414 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	18,586 S.F.	ESD_V PROVIDED:	3,859 C.F.
SOIL GROUP:	"B" &"D"	TREATED IMPERVIOUS AREA:	18,586 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 12" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 11

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 81 OF X

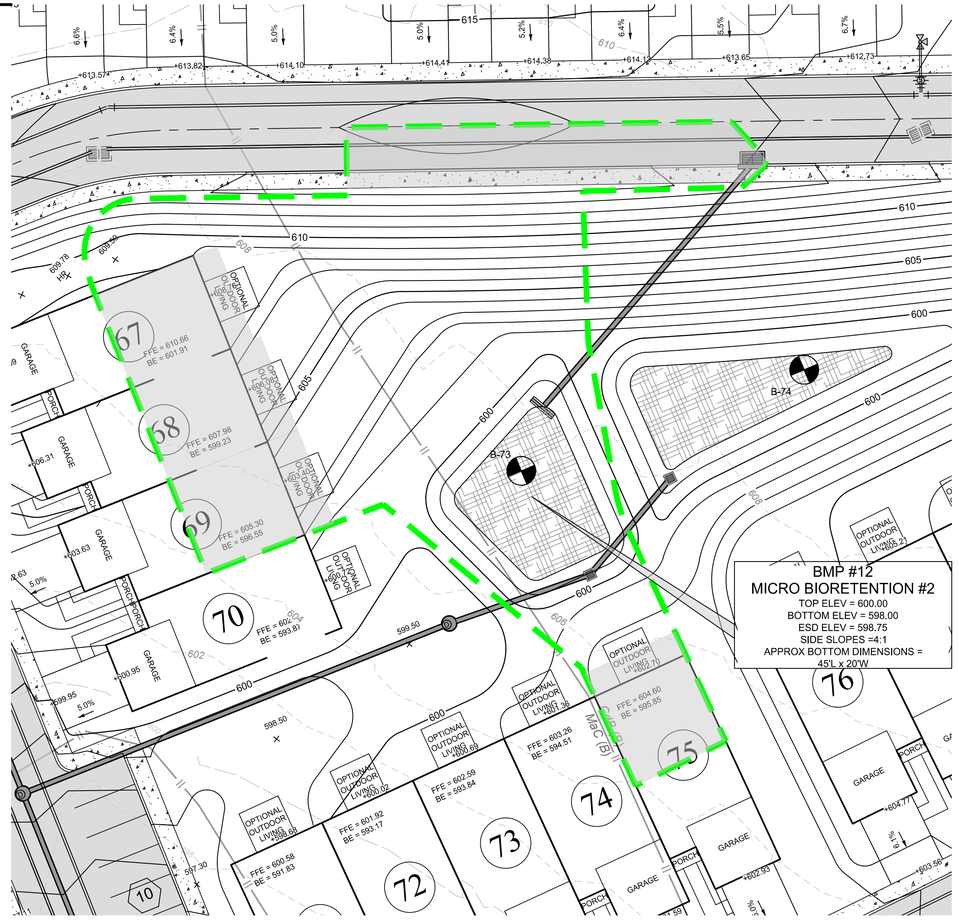
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 11 DA A2K.dwg Mar 04, 2025 4:04pm rlangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #12 -MICRO BIORETENTION #2

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.39 AC.± , 17084, (S.F.)
SURFACE AREA: 1,094 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	17,084 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	6,059 S.F.	ESD_V PROVIDED:	1,317 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	6,059 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:

WSEL	598.75
ESDv	9" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC. NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT
ESD BMP 12

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 82 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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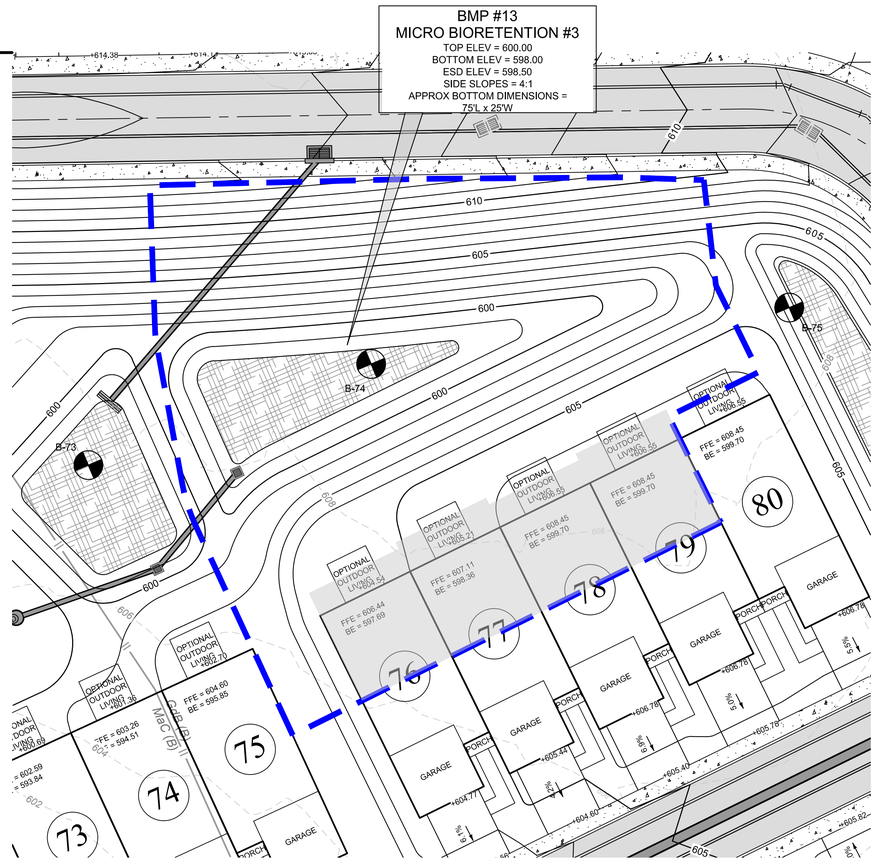

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

BMP #13 -MICRO BIORETENTION #3

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.44 AC.± , 19,038 (S.F.)
SURFACE AREA: 1,545 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	19,058 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	3,834 S.F.	ESD_V PROVIDED:	913 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	3,834 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:

WSEL	598.50
ESDv	7" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

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2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 13

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 83 OF X

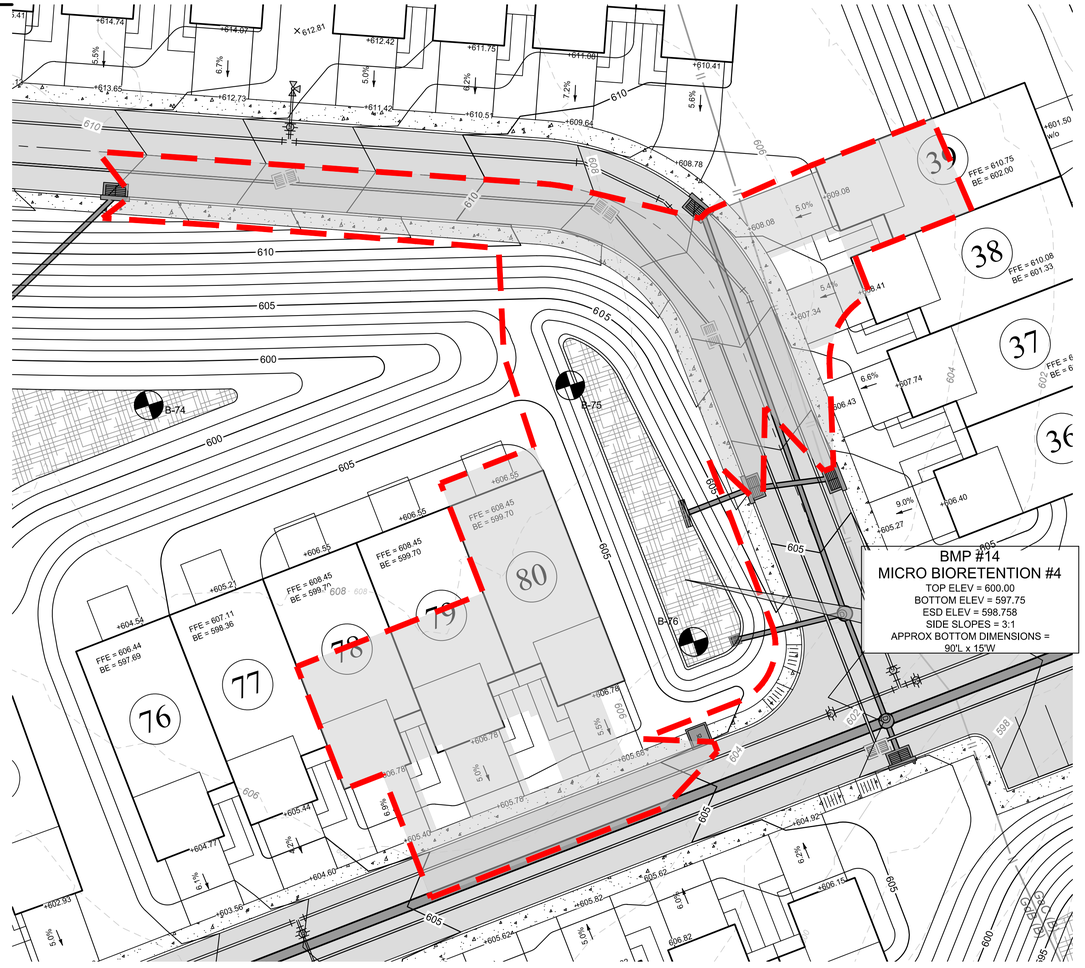
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\Civil\CADD\Drawings\SWM Plans\20211253.002A BMP 13 DA A2m.dwg Mar 04, 2025 4:06pm rlangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #14 -MICRO BIORETENTION #4

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.46 AC.± , 19,999 (S.F.)
SURFACE AREA: 1,232 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD$_V$ HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	19,999 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	13,100 S.F.	ESD$_V$ PROVIDED:	2,667 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	13,100 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
WSEL 598.75
ESDv 12" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
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Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
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Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

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4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT
ESD BMP 14

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 84 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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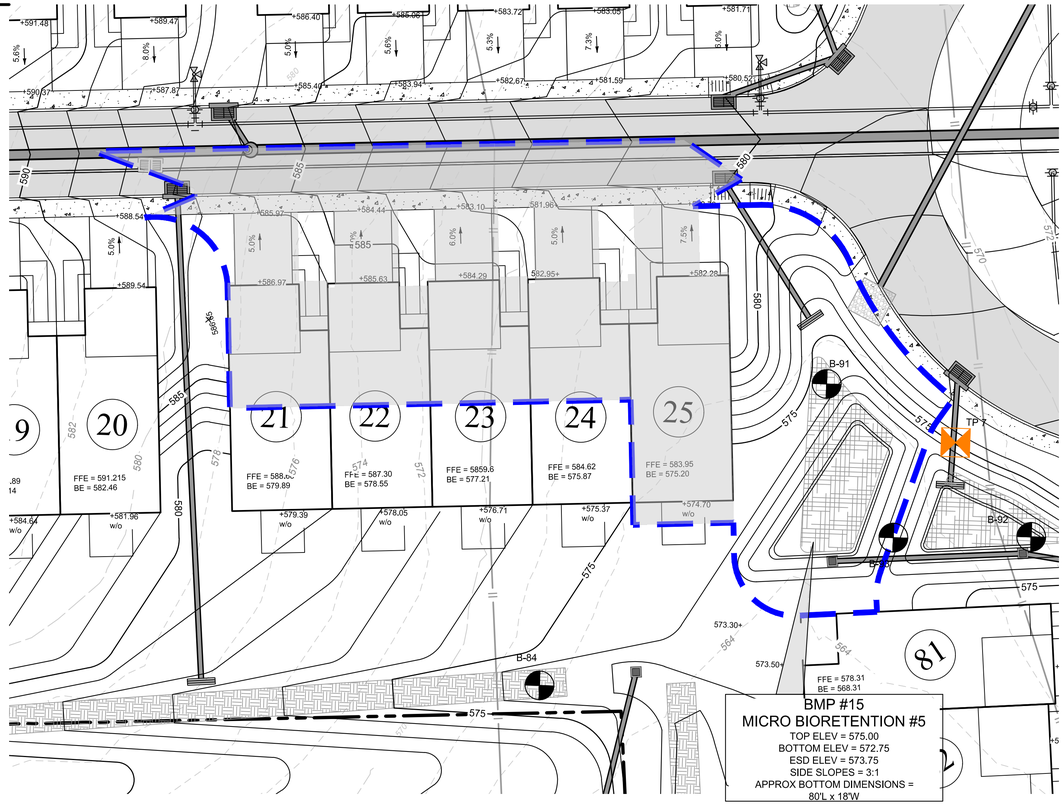

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

BMP #15 -MICRO BIORETENTION #5

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.38 AC.± , 16,512 (S.F.)
SURFACE AREA: 905 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD$_V$ HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	16,512 S.F.	P_E PROVIDED	1.95"
IMPERVIOUS DRAINAGE AREA:	10,384 S.F.	ESD$_V$ PROVIDED:	1,665 C.F.
SOIL GROUP:	"B" & "D"	TREATED IMPERVIOUS AREA:	10,384 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
WSEL 573.75
ESDv 12" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT
ESD BMP 15

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 85 OF X

OWNER
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BALTIMORE, MD 21244
PHONE NO: 410-369-1207

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DATE	BY	REVISIONS

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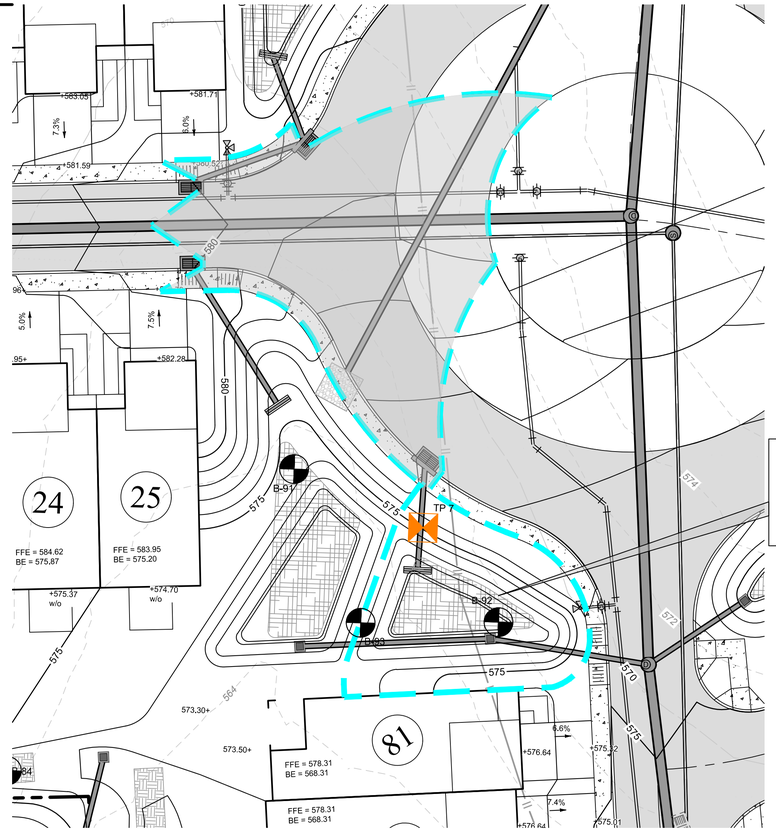

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #16 -MICRO BIORETENTION #6

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.20 AC.± , 8,514 (S.F.)
SURFACE AREA: 508 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	8,514	S.F.	P_E PROVIDED	1.99"	
IMPERVIOUS DRAINAGE AREA:	5,685	S.F.	ESD_V PROVIDED:	916	C.F.
SOIL GROUP:	"B" & "D"		TREATED IMPERVIOUS AREA:	5,685	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:

WSEL	573.75
ESDv	12" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

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2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT
ESD BMP 16

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 86 OF X

OWNER
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2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
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2560 LORD BALTIMORE DRIVE
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CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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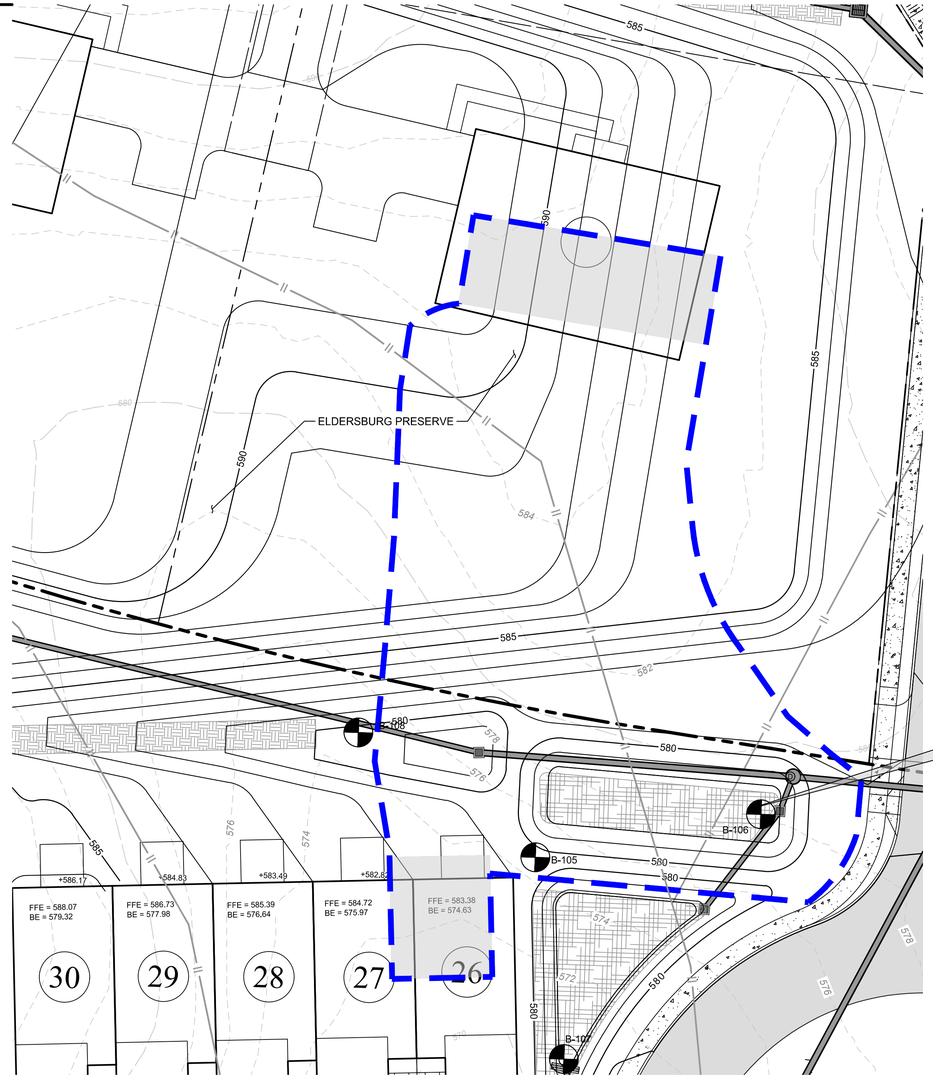

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

BMP #17
MICRO BIORETENTION #7
TOP ELEV = 579.00
BOTTOM ELEV = 577.00
ESD ELEV = 577.75
SIDE SLOPES = 4:1
APPROX BOTTOM DIMENSIONS =
64'L x 14'W

BMP #17 -MICRO BIORETENTION #7

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.46 AC.± , 19,414 (S.F.)
SURFACE AREA: 889 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	19,414	S.F.	P_E PROVIDED	2.50"	
IMPERVIOUS DRAINAGE AREA:	2,702	S.F.	ESD_V PROVIDED:	728	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	2,702	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
WSEL 577.75
ESDv 9" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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S-23-0027

DATE	BY	REVISIONS

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT
ESD BMP 17

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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B-106
B-105
B-107
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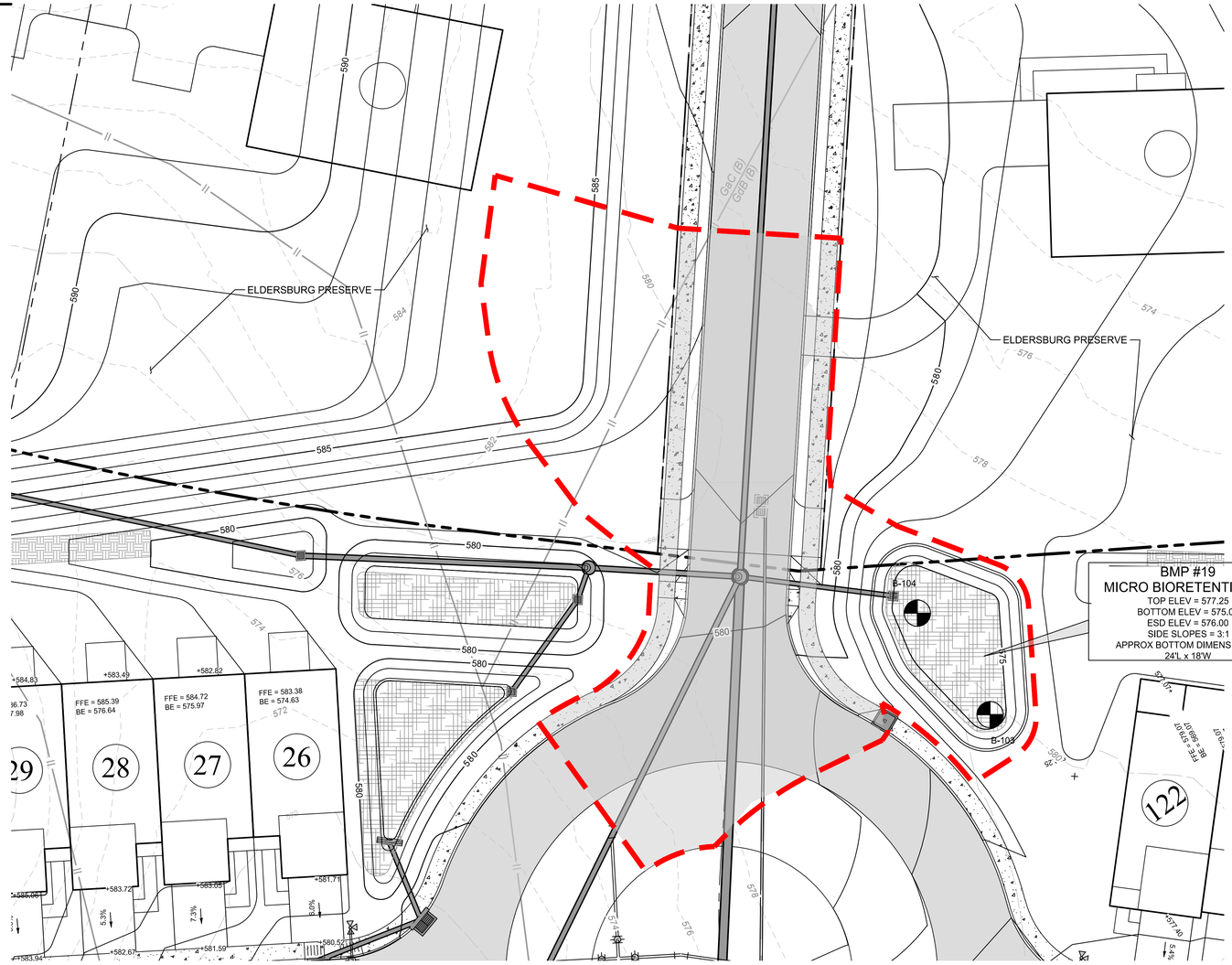

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

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Inspection Item	Inspection Requirements	Remedial Action
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

BMP #19 -MICRO BIORETENTION #9			OWNER:		
TYPE: MICRO BIORETENTION					
LOCATION: (N: E:)					
DRAINAGE AREA: 0.45 AC.± , 19,554 (S.F.)					
SURFACE AREA: 1,293 S.F.					
WATERSHED: SNOWDENS RUN (USE-III-P)					
RECEIVING WATERS: LIBERTY RESERVOIR					
HYDROLOGIC CRITERIA					
ESD_v HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.					
DESIGN DATA					
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.					
DRAINAGE AREA:	19,554	S.F.	P_2 PROVIDED	2.50"	
IMPERVIOUS DRAINAGE AREA:	9,490	S.F.	ESD_v PROVIDED:	1.996	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	9,490	S.F.
Tc:	0.10 HOURS		RCN:		
LEVEL OF STORMWATER MANAGEMENT PROVIDED:					
WSEL	576.00				
ESDv	12" PONDING DEPTH				

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT
ESD BMP 19

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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.

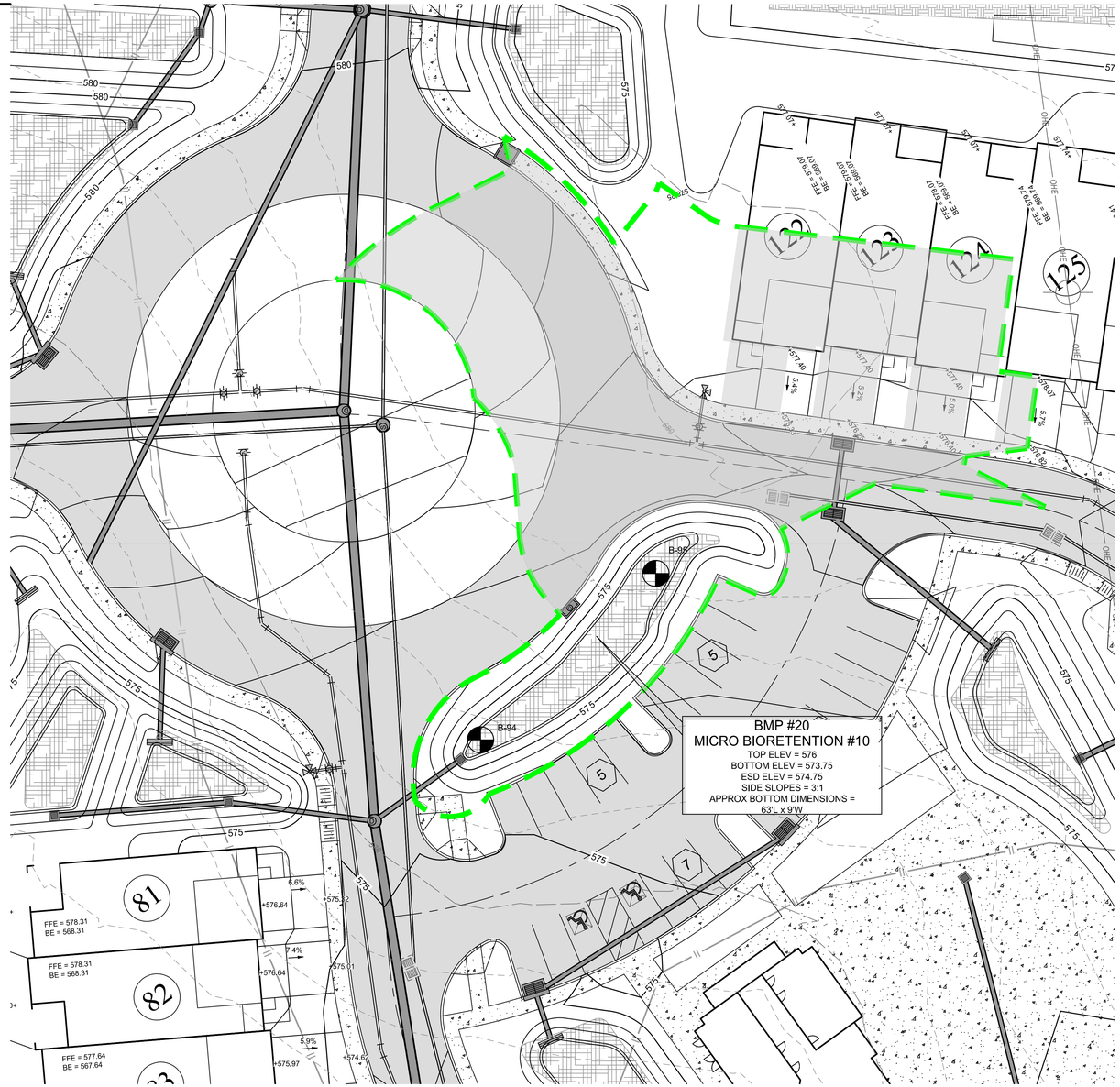
LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 89 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 19 DA A2f.dwg Mar 04, 2025 4:12pm rlangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

BMP #20 -MICRO BIORETENTION #10	OWNER:
TYPE: MICRO BIORETENTION LOCATION: (N: E:) DRAINAGE AREA: 0.34 AC.±, 14,940 (S.F.) SURFACE AREA: 1,098 S.F. WATERSHED: SNOWDENS RUN (USE-III-P) RECEIVING WATERS: LIBERTY RESERVOIR	
HYDROLOGIC CRITERIA	
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.	
DESIGN DATA	
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.	
DRAINAGE AREA: 14,940 S.F. IMPERVIOUS DRAINAGE AREA: 5,653 S.F. SOIL GROUP: "B" Tc: 0.10 HOURS	P_E PROVIDED 2.50" ESD_V PROVIDED: 2,743 C.F. TREATED IMPERVIOUS AREA: 5,653 S.F. RCN:
LEVEL OF STORMWATER MANAGEMENT PROVIDED: WSEL 574.75 ESDv 12" PONDING DEPTH	

CENTURY ENGINEERING
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10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 20

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 90 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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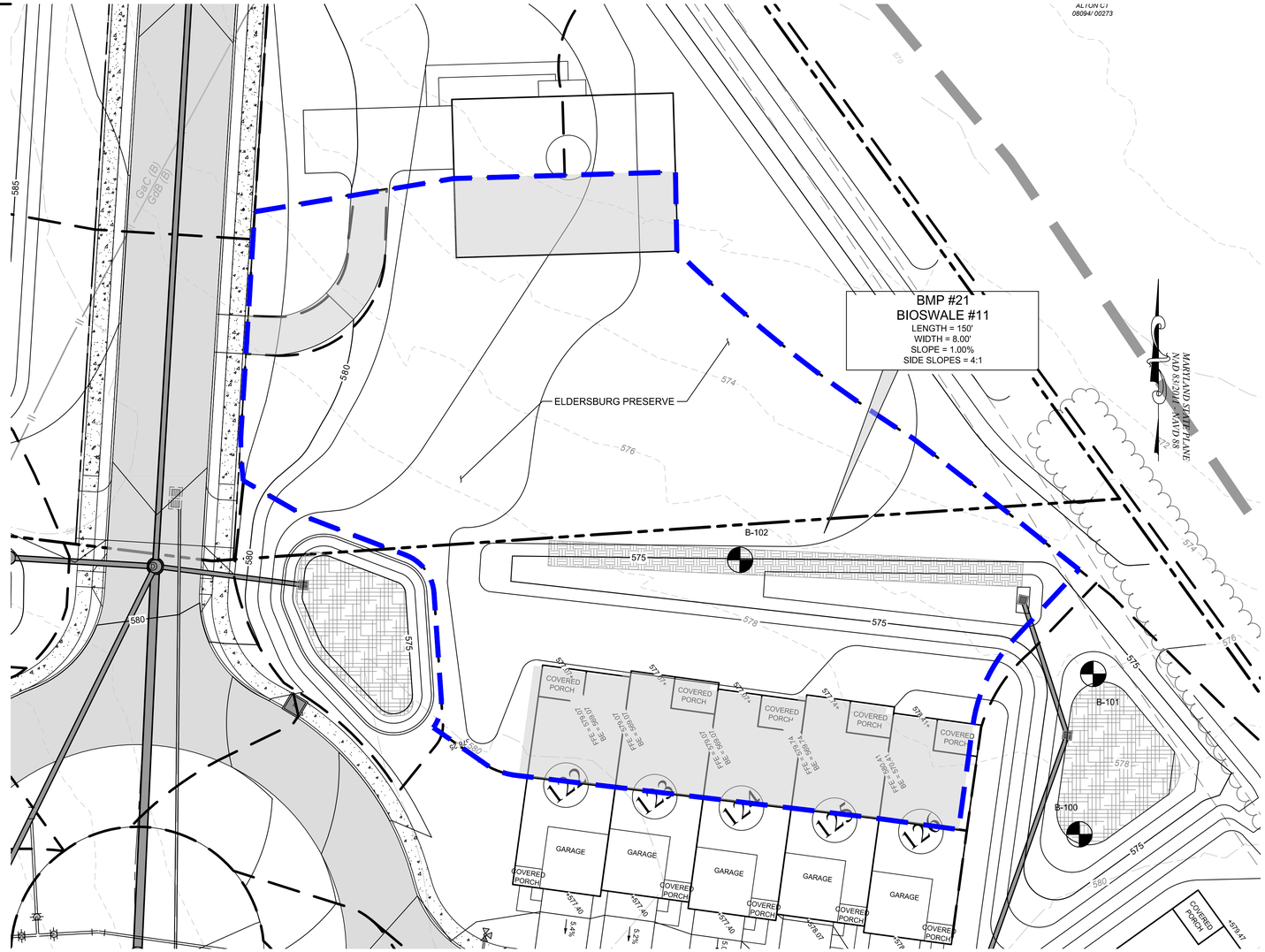

PLAN
SCALE: 1" = 20'
20 0 20 40
SCALE:1"=20'

LEGEND
PROPOSED DRAINAGE AREA
IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #21 - BIOSWALE #11	OWNER:		
TYPE: BIOSWALE			
LOCATION:	(N: E:)		
DRAINAGE AREA: 0.80 AC.±, 34,696 (S.F.)			
SURFACE AREA: 1,200 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	34,696	S.F.	P_E PROVIDED	2.46"	
IMPERVIOUS DRAINAGE AREA:	7,434	S.F.	ESD_V PROVIDED:	1,710	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	7,434	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 9" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 21

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 91 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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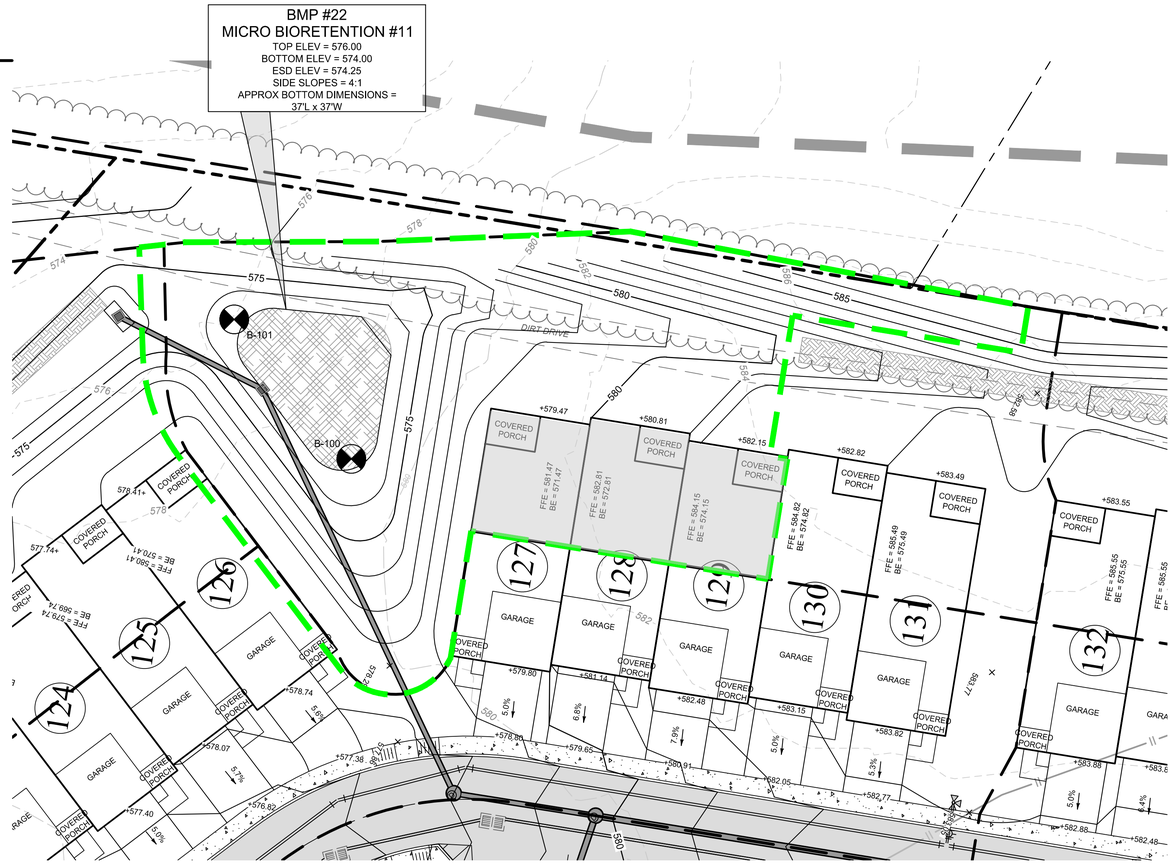

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #22 -MICRO BIORETENTION #11

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.40 AC.± , 17,551 (S.F.)
SURFACE AREA: 1,366 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	17,551 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	2,912 S.F.	ESD_V PROVIDED:	731 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	2,912 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:

WSEL	574.25
ESDv	3" PONDING DEPTH

MD 83/2011 - NAD 88
MARYLAND STATE PLANE

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 22

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 92 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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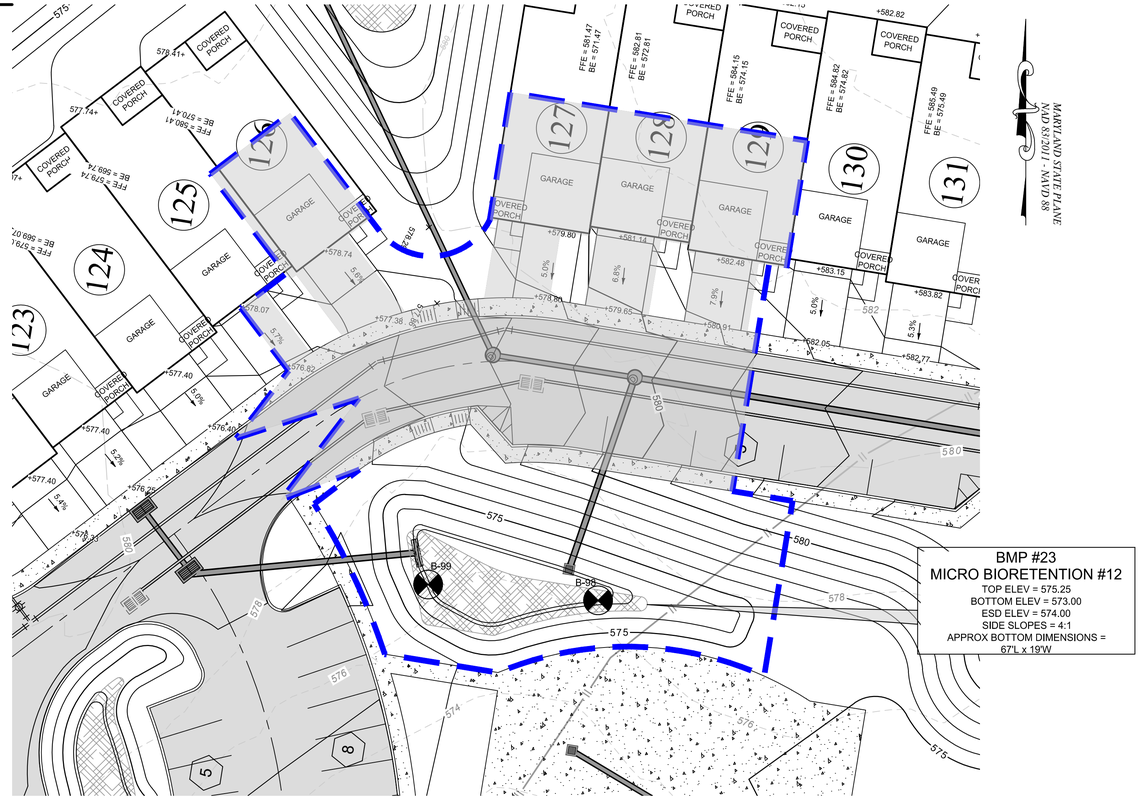

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #23 -MICRO BIORETENTION #12	OWNER:
TYPE: MICRO BIORETENTION LOCATION: (N: E:) DRAINAGE AREA: 0.43 AC.± . 18,645 (S.F.) SURFACE AREA: 897 S.F. WATERSHED: SNOWDENS RUN (USE-III-P) RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	18,645 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	11,192 S.F.	ESD_V PROVIDED:	2,292 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	11,192 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:

WSEL	574.00
ESDv	12" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
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Annual Inspection		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

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2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 23

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 93 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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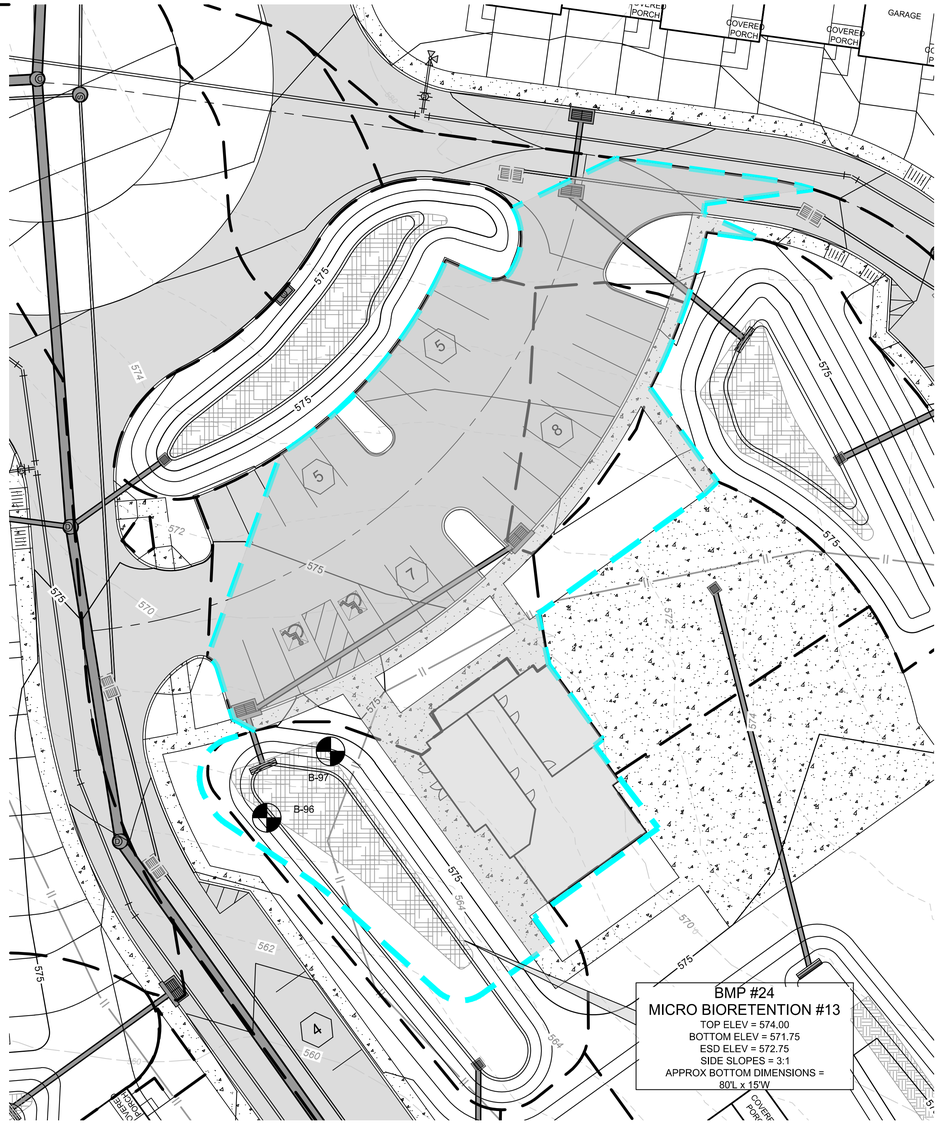


PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #24 -MICRO BIORETENTION #13		OWNER:	
TYPE: MICRO BIORETENTION			
LOCATION: (N: E:)			
DRAINAGE AREA: 0.46 AC.± , 19,822 (S.F.)			
SURFACE AREA: 1,218 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	19,822 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	13,846 S.F.	ESD_V PROVIDED:	2,808 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	13,846 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED:			
WSEL	572.75		
ESDv	12" PONDING DEPTH		

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 24

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 94 OF X

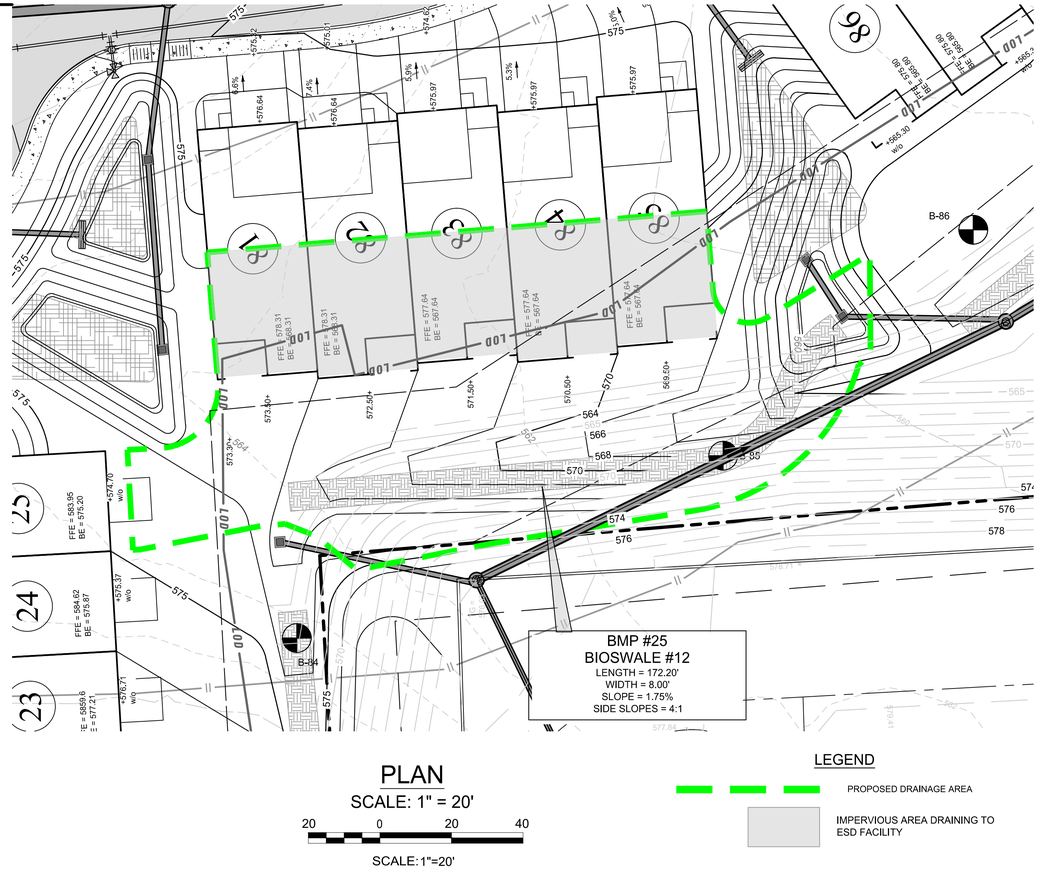
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 24 DA A2y.dwg Mar 04, 2025 4:16pm rlangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #25 - BIOSWALE #12	OWNER:
TYPE: BIOSWALE	
LOCATION:	(N: E:)
DRAINAGE AREA: 0.33 AC.± , 14,499 (S.F.)	
SURFACE AREA: 1,371.4 S.F.	
WATERSHED: SNOWDENS RUN (USE-III-P)	
RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	14,499	S.F.	P_E PROVIDED	2.50"	
IMPERVIOUS DRAINAGE AREA:	5,014	S.F.	ESD_V PROVIDED:	1,087	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	5,014	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 12" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
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4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 25

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN SHEET: 95 OF X

PROJECT NUMBER: 20211253.002A

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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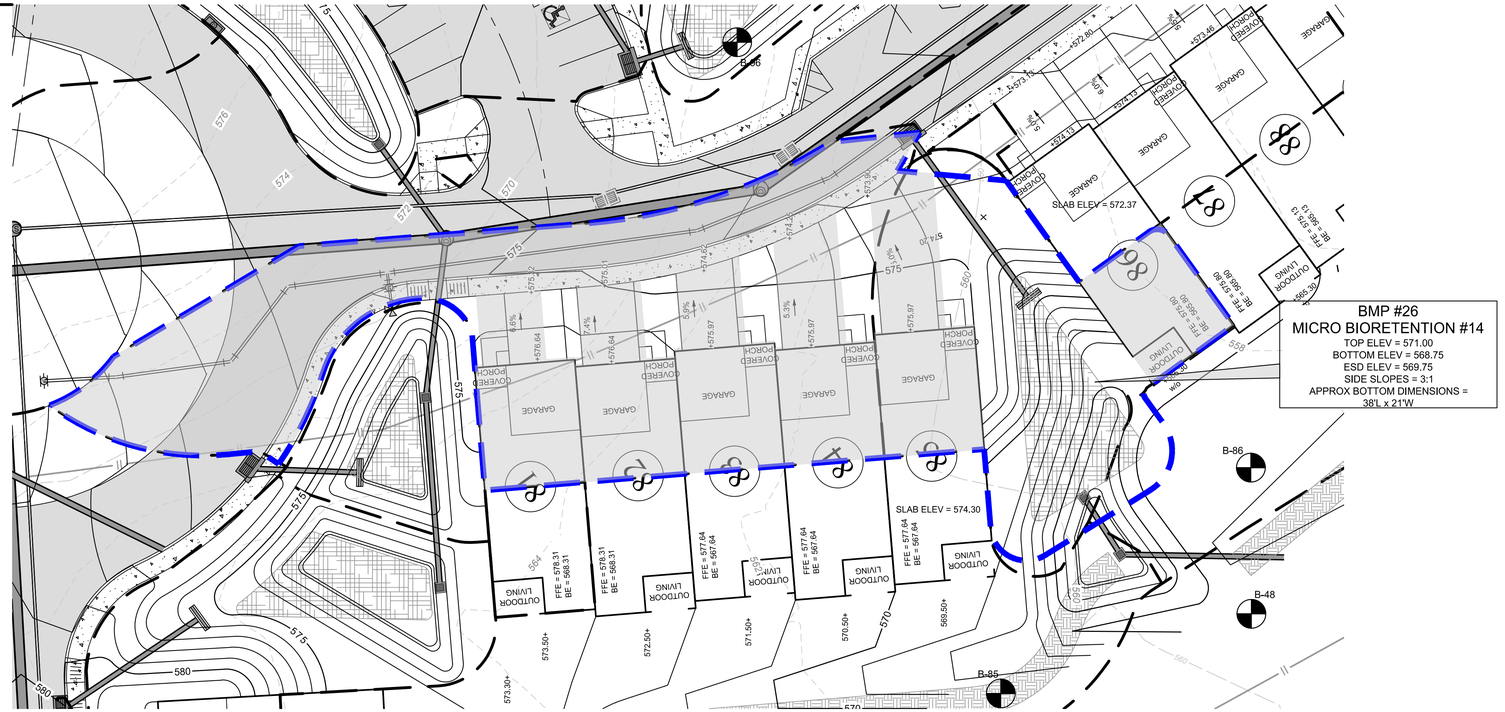

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inches in depth, remove sediment. Remove sediment from any clogged openings. Dispose of all sediment in an acceptable location.
Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

BMP #26 -MICRO BIORETENTION #14

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.44 AC.± , 19,132 (S.F.)
SURFACE AREA: 1,277 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	19,132 S.F.	P_E PROVIDED	2.02"
IMPERVIOUS DRAINAGE AREA:	11,783 S.F.	ESD_V PROVIDED:	2,094 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	11,783 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
WSEL 569.75
ESDv 12" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 26

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 96 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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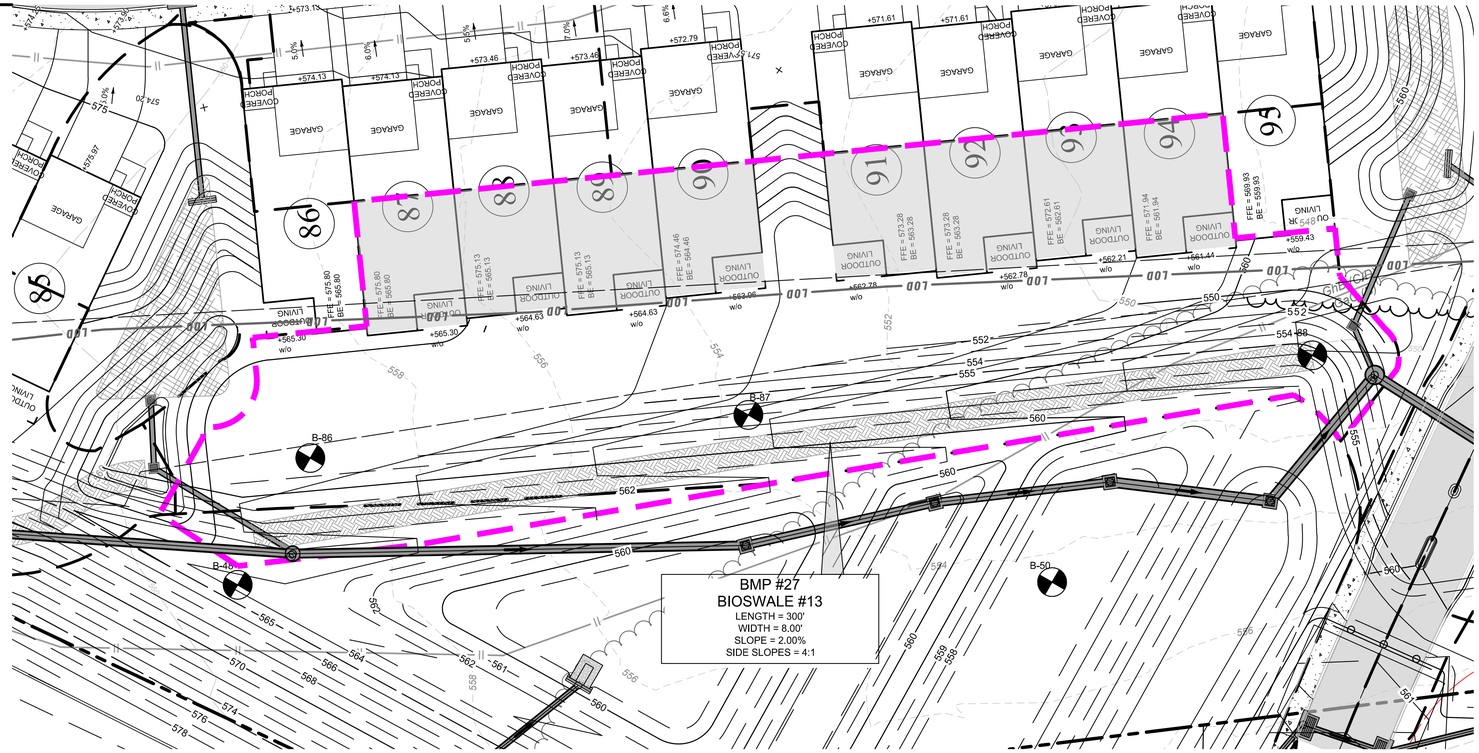

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

BMP #27 - BIOSWALE #13	OWNER:
TYPE: BIOSWALE	
LOCATION:	(N: E:)
DRAINAGE AREA: 0.72 AC.± , 31,391 (S.F.)	
SURFACE AREA: 1,950 S.F.	
WATERSHED: SNOWDENS RUN (USE-III-P)	
RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	31,391 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	8,064 S.F.	ESD_V PROVIDED:	1,761 C.F.
SOIL GROUP:	"B" &"D"	TREATED IMPERVIOUS AREA:	8,064 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 12" PONDING DEPTH

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 27

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 97 OF X

S-23-0027

DATE	BY	REVISIONS

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

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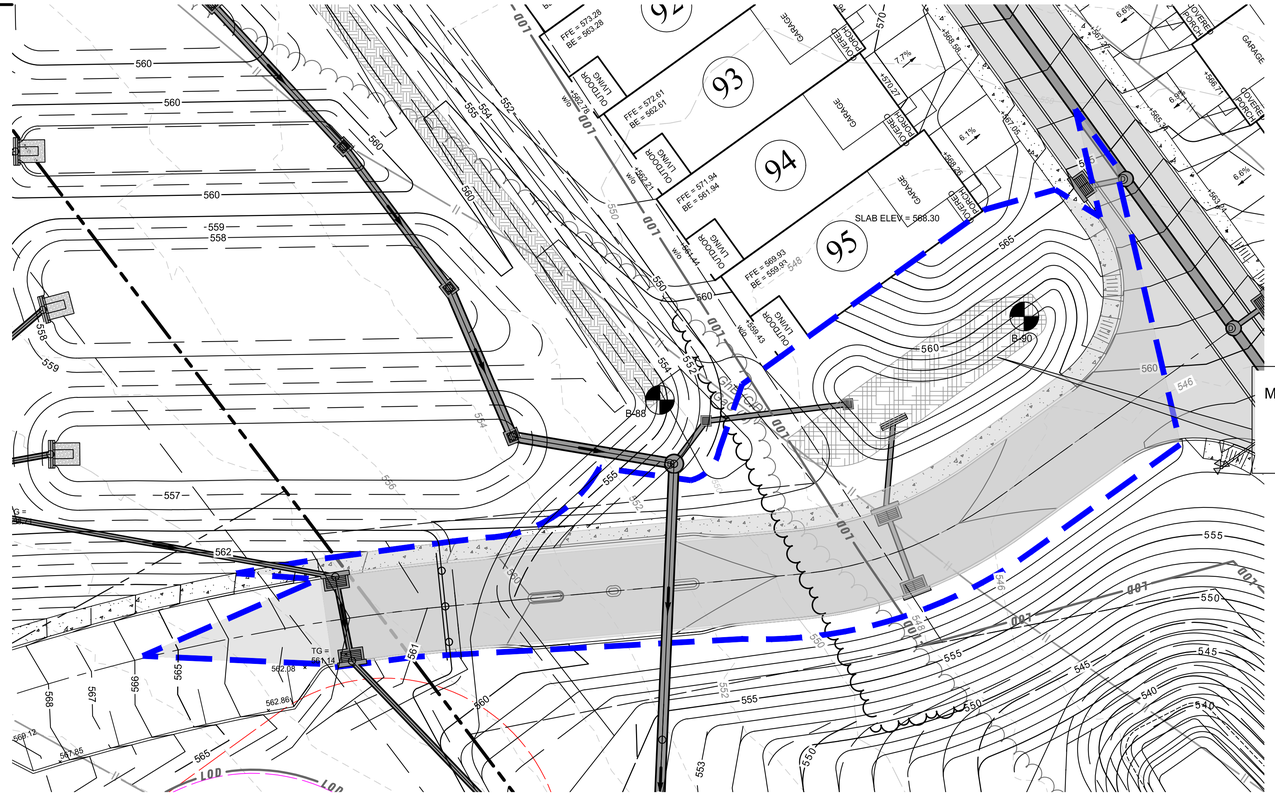

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #28 -MICRO BIORETENTION #15

OWNER:

TYPE: MICRO BIORETENTION
LOCATION: (N: E:)
DRAINAGE AREA: 0.36 AC.± , 15,821 (S.F.)
SURFACE AREA: 1,286 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	15,821 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	8,939 S.F.	ESD_V PROVIDED:	1,846 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	8,939 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:

WSEL 555.75
ESDv 12" PONDING DEPTH

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6) ESD BMP # 1

Micro BioRetention Maintenance Schedule		
Monthly Inspections		
Inspection Item	Inspection Requirements	Remedial Action
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all Trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan or Reseed and Remulch per filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed. If using filter Bed Mix, may mow bed twice per year. Remove grass clippings Re-seed or re-plant in accordance with approved landscape plans.
Mulch Layer	Check Mulch for adequate cover, sediment accumulation or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
Seasonal Inspection and after a Major Storm		
Inspection Item	Inspection Requirements	Remedial Action
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runnoff channelization.	Re-grading may be required when concentrated floe causes rills or gullying through the facility. Grade, vegetate, and/or armour to provide stable conveyance in accordance with approved plans.
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Annual Inspection		
Inspection Item	Inspection Requirements	Remedial Action
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed	Repair to good condition according to specifications on the approved plans.

DATA SOURCES

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 28

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 98 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
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CONTACT: MATT TAYLOR
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S-23-0027

DATE	BY	REVISIONS

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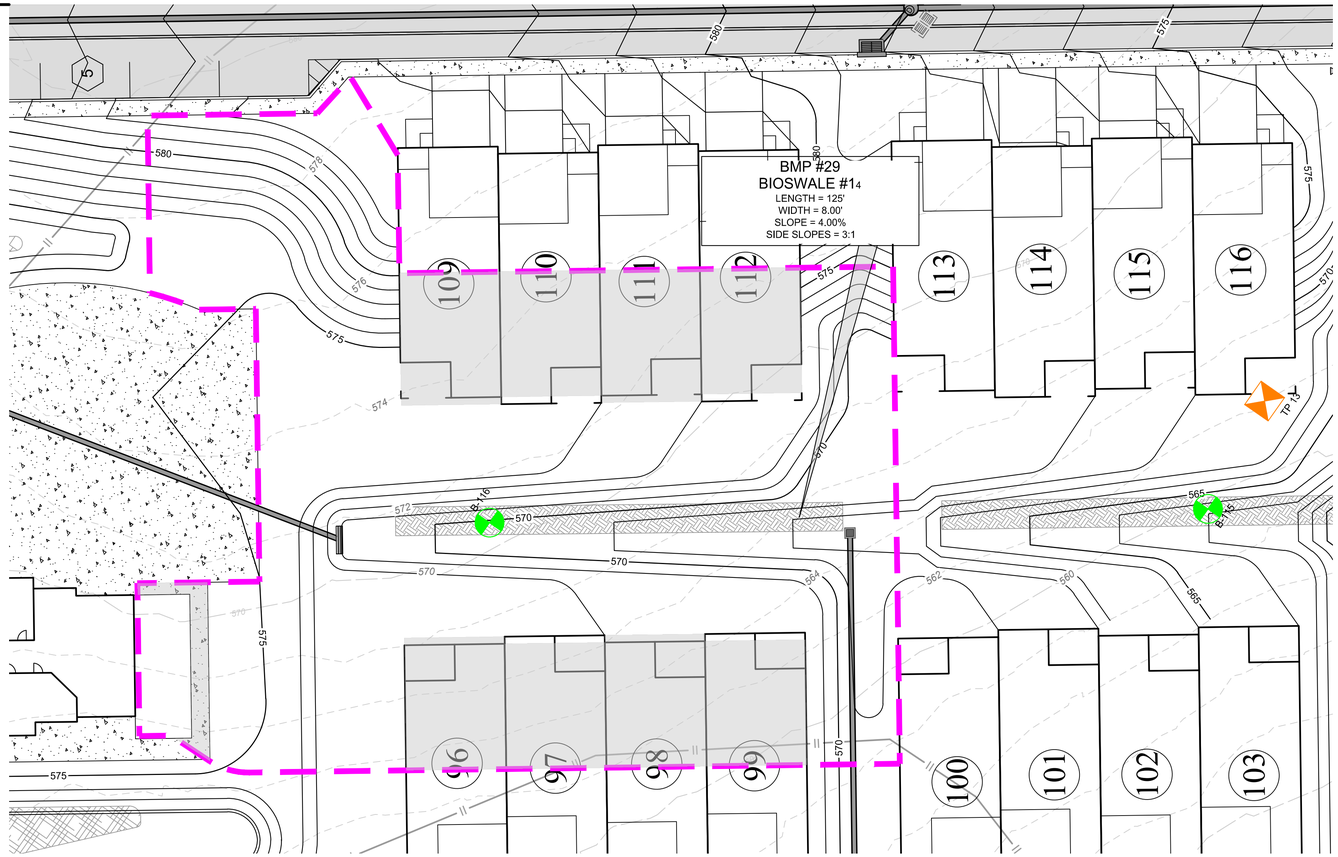


PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #29 - BIOSWALE #14	OWNER:
TYPE: BIOSWALE	
LOCATION:	(N: E:)
DRAINAGE AREA: 0.68 AC.± , 29,834 (S.F.)	
SURFACE AREA: 1,000 S.F.	
WATERSHED: SNOWDENS RUN (USE-III-P)	
RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	29,834 S.F.	P_E PROVIDED	2.46"
IMPERVIOUS DRAINAGE AREA:	8,361 S.F.	ESD_V PROVIDED:	1,833 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	8,361 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 12" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 29

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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.

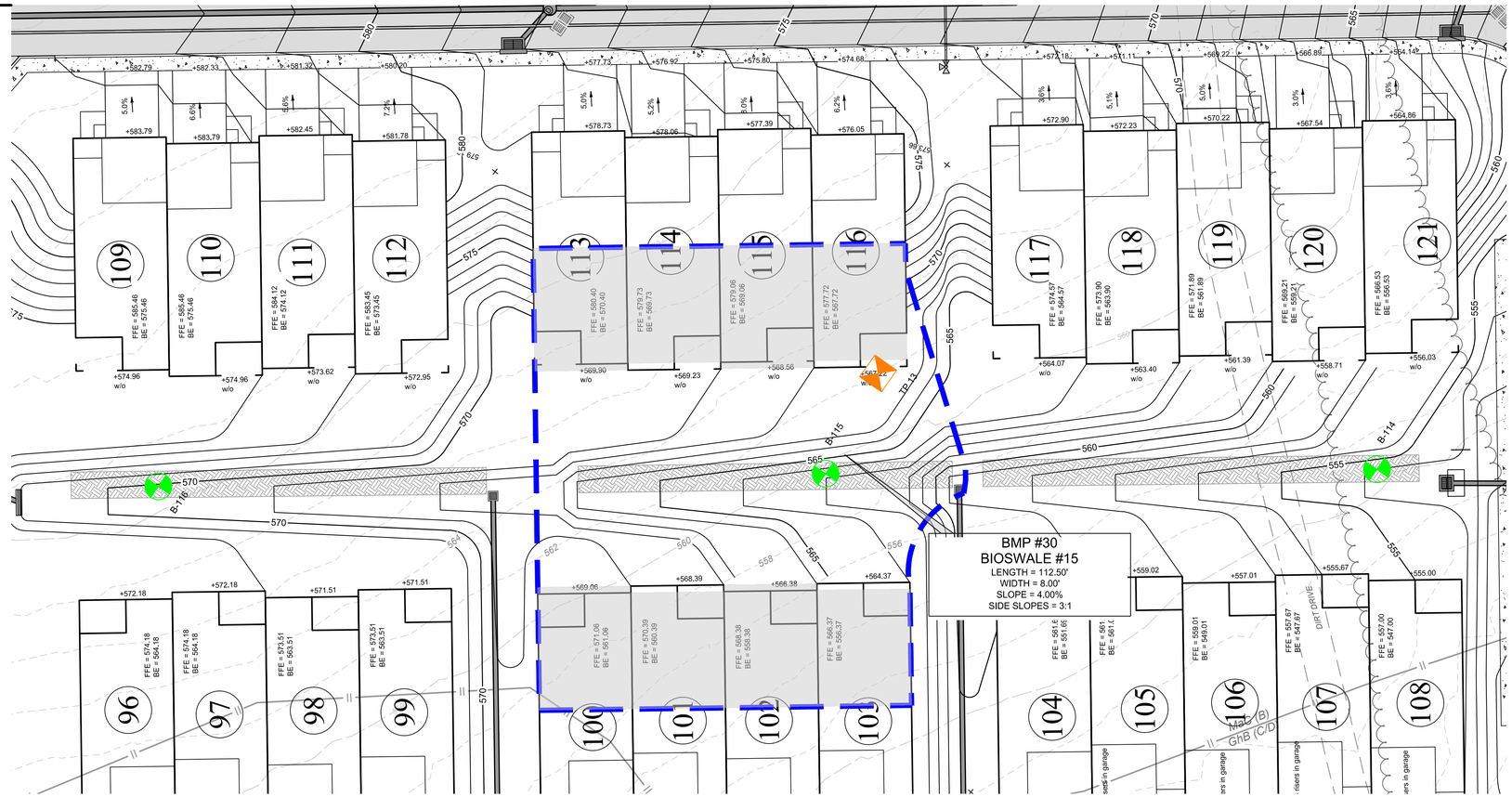
LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 99 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 29 DA A2dd.dwg Mar 04, 2025 4:22pm rlangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #30 - BIOSWALE #15	OWNER:
TYPE: BIOSWALE	
LOCATION:	(N: E:)
DRAINAGE AREA: 0.37 AC.± , 16,312 (S.F.)	
SURFACE AREA: 750 S.F.	
WATERSHED: SNOWDENS RUN (USE-III-P)	
RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	16,312 S.F.	P_E PROVIDED	2.02"
IMPERVIOUS DRAINAGE AREA:	8,064 S.F.	ESD_V PROVIDED:	1,345 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	8,064 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 9" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 30

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 100 OF X

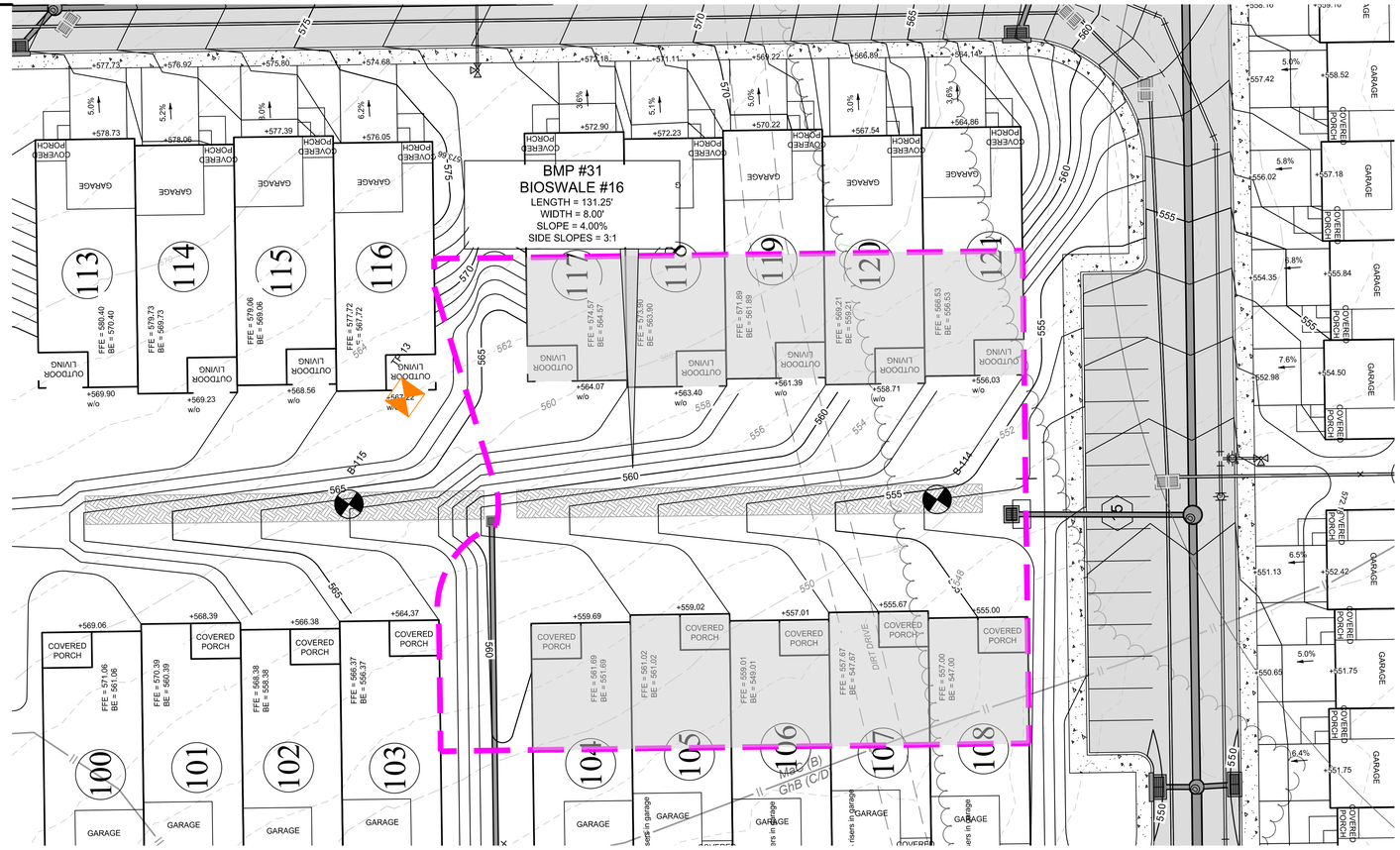
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\Civil\CADD\Drawings\SWM Plans\20211253.002A BMP 30 DA A2ee.dwg Mar 04, 2025 4:23pm rtangrehr



PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #31 - BIOSWALE #16

OWNER:

TYPE: BIOSWALE
LOCATION: (N: E:)
DRAINAGE AREA: 0.68 AC.± , 22,330 (S.F.)
SURFACE AREA: 750 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	22,330 S.F.	P_E PROVIDED	0.53"
IMPERVIOUS DRAINAGE AREA:	10,024 S.F.	ESD_V PROVIDED:	445 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	10,024 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 9" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 31

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 101 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #32 - BIOSWALE #17

OWNER:

TYPE: BIOSWALE
LOCATION: (N: E:)
DRAINAGE AREA: 0.35 AC.± , 15,058 (S.F.)
SURFACE AREA: 1,575 S.F.
WATERSHED: SNOWDENS RUN (USE-III-P)
RECEIVING WATERS: LIBERTY RESERVOIR

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	15,058 S.F.	P_E PROVIDED	2.50"
IMPERVIOUS DRAINAGE AREA:	5,880 S.F.	ESD_V PROVIDED:	1,255 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	5,880 S.F.
Tc:	0.10 HOURS	RCN:	

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 12" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 32

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN SHEET: 102 OF X
PROJECT NUMBER: 20211253.002A

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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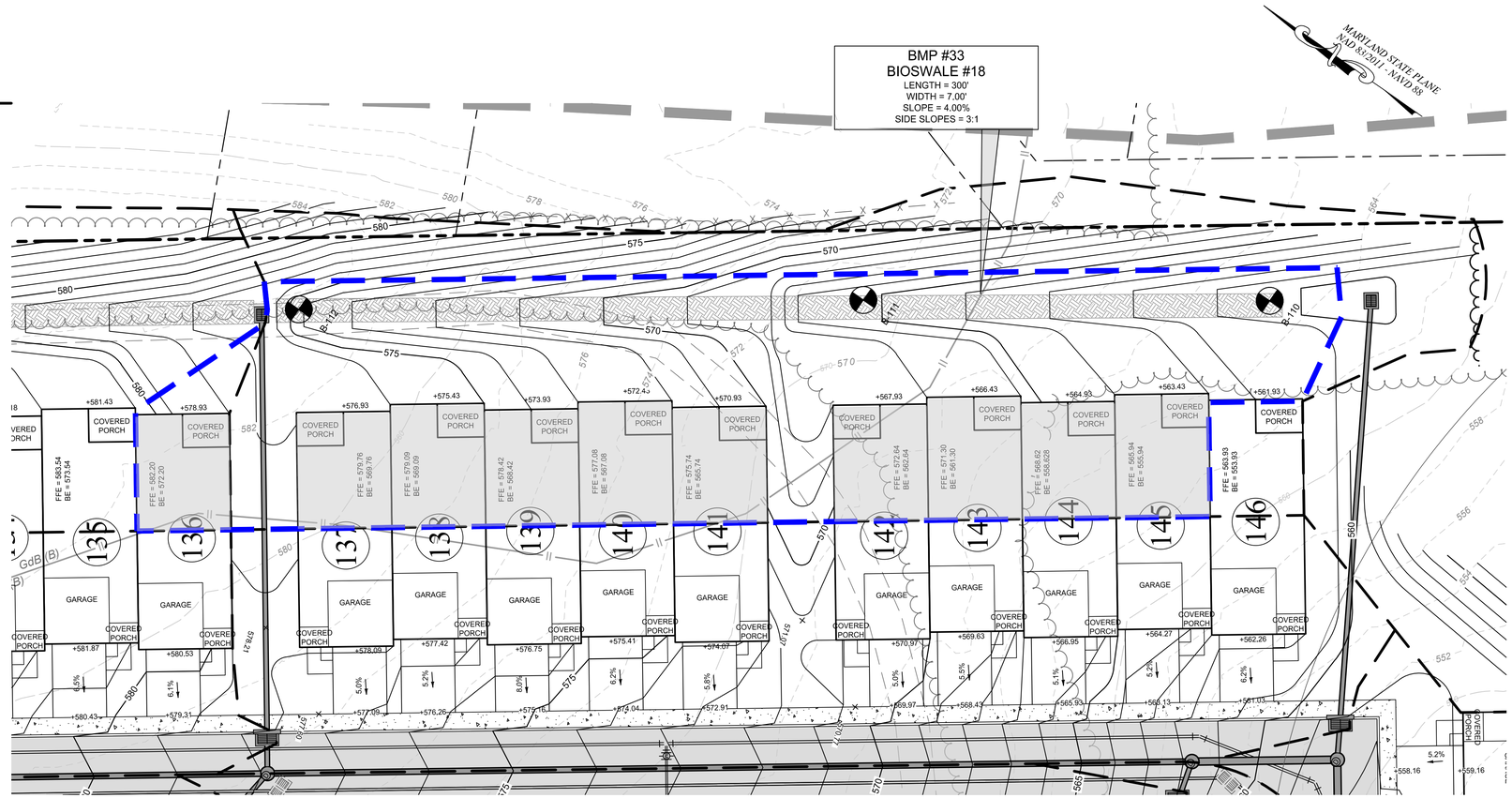

PLAN
SCALE: 1" = 20'

20 0 20 40

SCALE:1"=20'

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #33 - BIOSWALE #18				OWNER:
TYPE: BIOSWALE				
LOCATION:				(N: E:)
DRAINAGE AREA: 0.55 AC.± , 24,039 (S.F.)				
SURFACE AREA: 2,100 S.F.				
WATERSHED: SNOWDENS RUN (USE-III-P)				
RECEIVING WATERS: LIBERTY RESERVOIR				

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	24,039	S.F.	P_E PROVIDED	2.50"	
IMPERVIOUS DRAINAGE AREA:	9,744	S.F.	ESD_V PROVIDED:	2.53	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	9,744	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 12" PONDING DEPTH

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 33

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 103 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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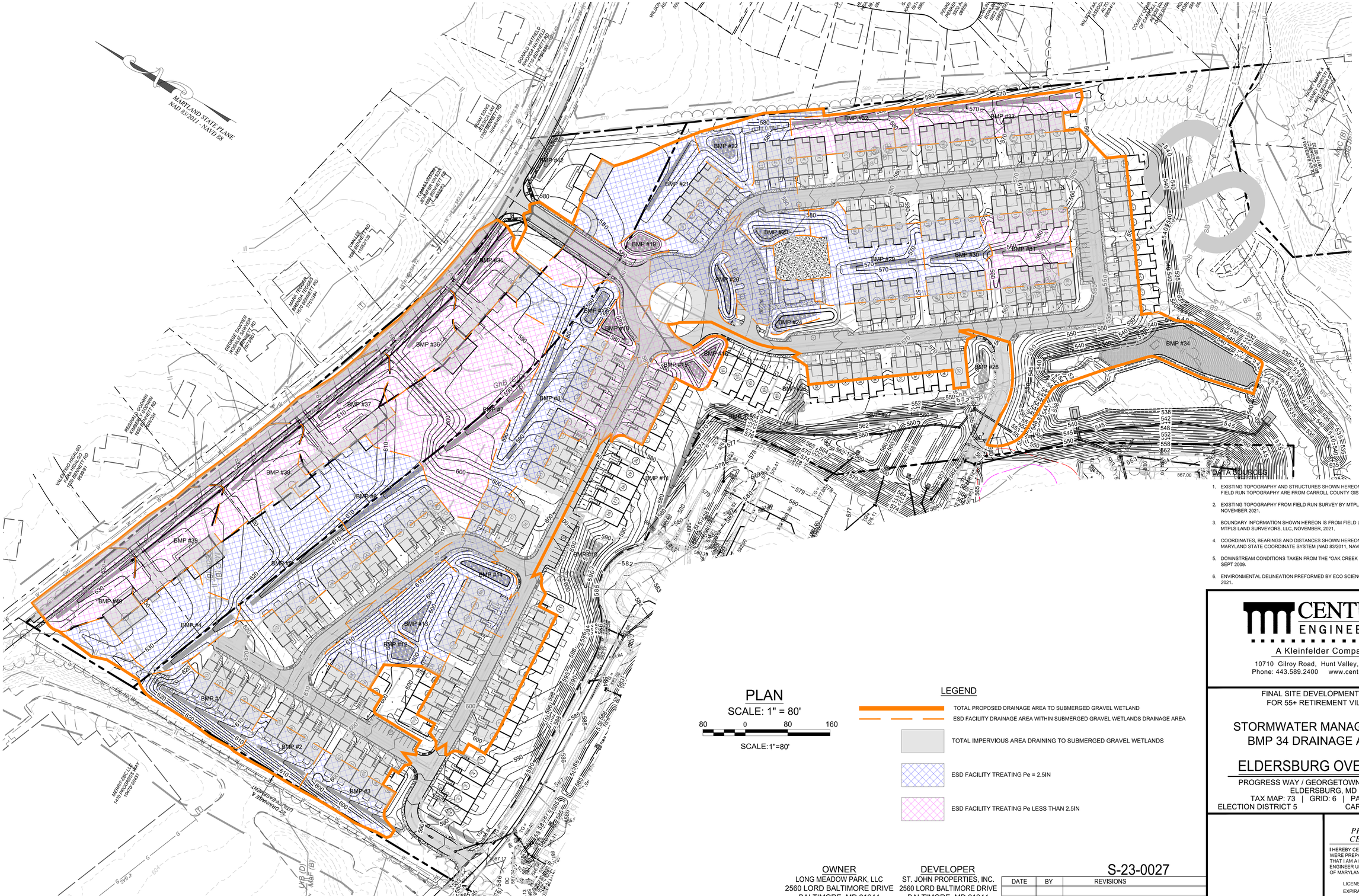
MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88
BMP #1
BMP #2
BMP #3
BMP #4
BMP #5
BMP #6
BMP #7
BMP #8
BMP #9
BMP #10
BMP #11
BMP #12
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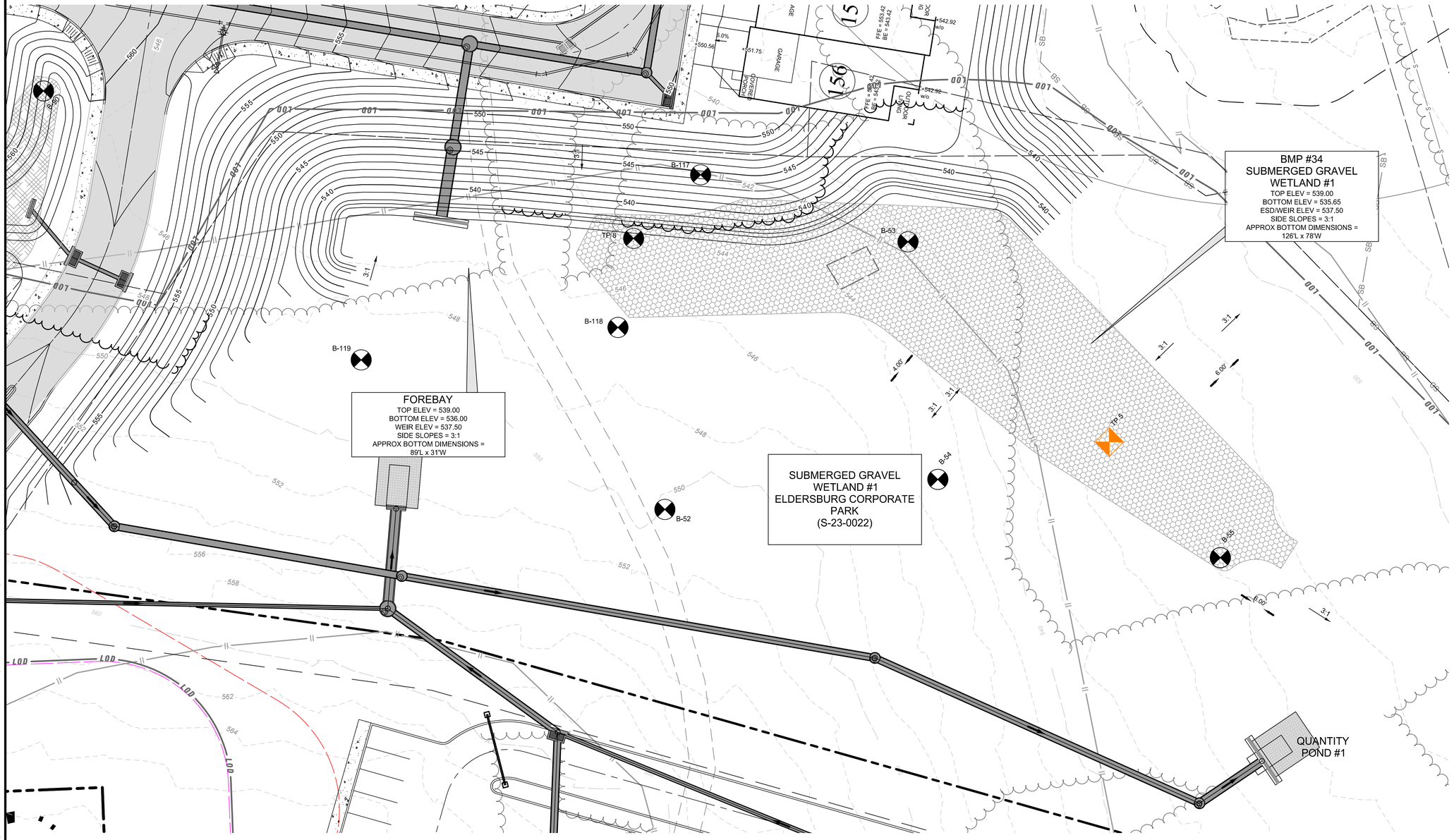
BMP #37
BMP #38
BMP #39
BMP #40
BMP #41
BMP #42
GhB (C)
MaC (B)
MaF (B)
MaF (D)
SB
SS
SW
W
G
OHW
TOP BANK
TOE
BC
EC
PROP. 8" WATER
PROP. 8" SEWER
PROP. 15" STORM DRAIN
PROP. 18" STORM DRAIN
PROP. 24" STORM DRAIN
PROP. 30" STORM DRAIN
PROP. 36" STORM DRAIN
PROP. 42" STORM DRAIN
PROP. 48" STORM DRAIN
PROP. 54" STORM DRAIN
PROP. 60" STORM DRAIN
PROP. 66" STORM DRAIN
PROP. 72" STORM DRAIN
PROP.



DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

BMP #34 - SUBMERGED GRAVEL WETLAND #1		OWNER:	
TYPE: SUBMERGED GRAVEL WETLAND LOCATION: (N: E:) DRAINAGE AREA: 10.92 AC.± , 475,557 (S.F.) SURFACE AREA: 14,651 S.F. WATERSHED: SNOWDENS RUN (USE-III-P) RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA SUBMERGED GRAVEL WETLAND.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	475,557 S.F.	P_2 PROVIDED	1.72"
IMPERVIOUS DRAINAGE AREA:	316,107 S.F.	ESD_V PROVIDED:	44,250 C.F.
SOIL GROUP:	"B" & "D"	TREATED IMPERVIOUS AREA:	306,107 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED: WSEL 537.50 ESDv 1.85" MAX. PONDING DEPTH			

PLAN
SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 34 PLAN

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 105 OF X

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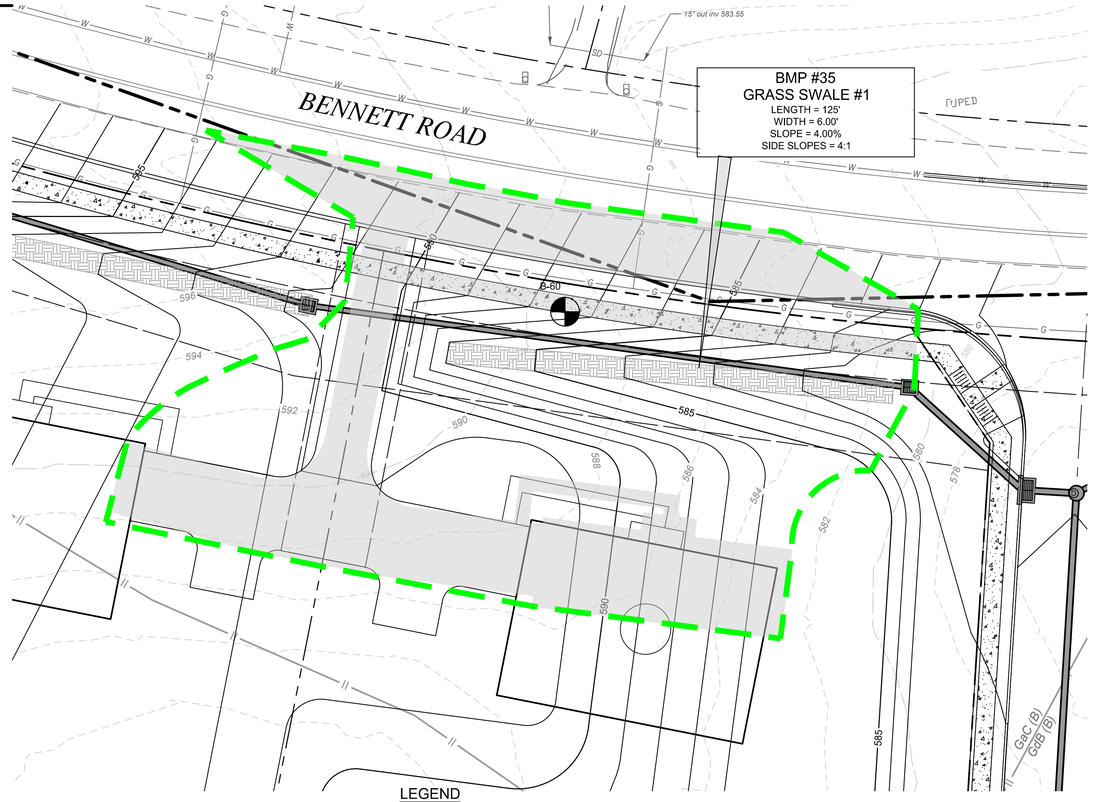


LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

BMP #35 - GRASS SWALE #1			OWNER:
TYPE: GRASS SWALE LOCATION: (N: E:) DRAINAGE AREA: 0.46 AC.± , 20 051 (S.F.) SURFACE AREA: 750 S.F. WATERSHED: SNOWDENS RUN (USE-III-P) RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	20,051 S.F.	P_E PROVIDED	0.82"
IMPERVIOUS DRAINAGE AREA:	6,533 S.F.	ESD_V PROVIDED:	625 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	6,533 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED: ESDv 1.2" PONDING DEPTH			

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 35

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

PROFESSIONAL CERTIFICATION

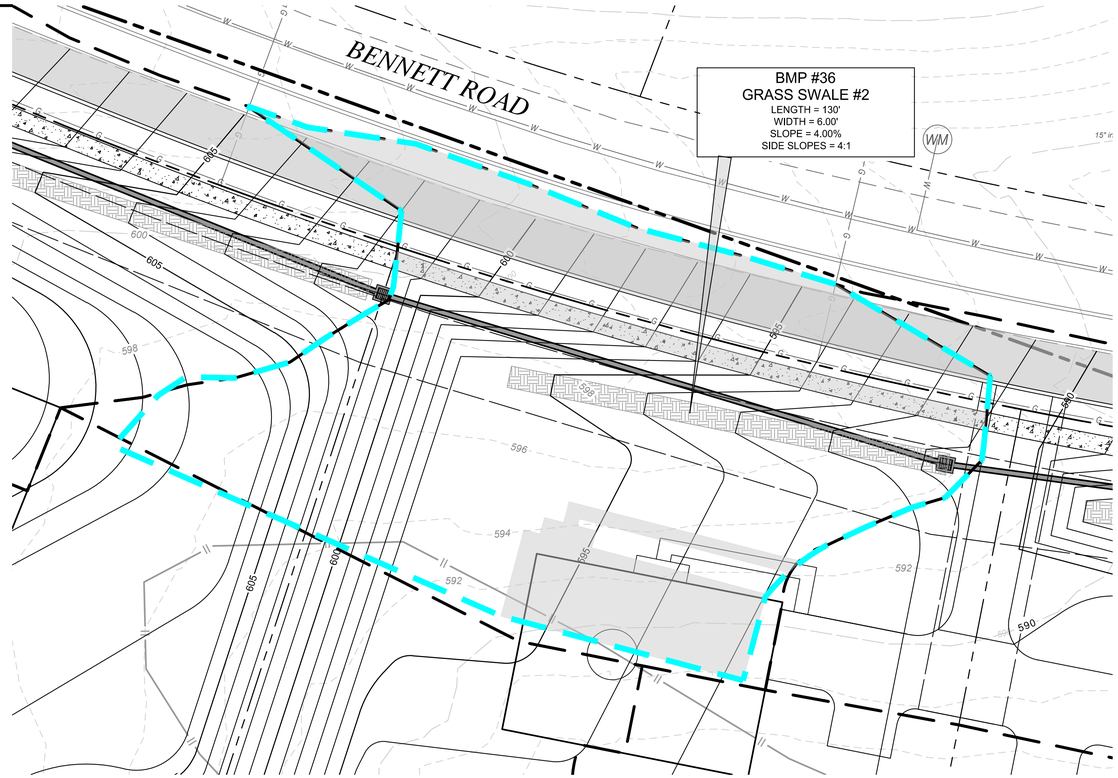
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 106 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 35 DA A2j.dwg Mar 04, 2025 4:29pm rlangrehr



LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

BMP #36 - GRASS SWALE #2			OWNER:
TYPE: GRASS SWALE			
LOCATION: (N: E:)			
DRAINAGE AREA: 0.45 AC.± , 19,546 (S.F.)			
SURFACE AREA: 780 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	19,546 S.F.	P_E PROVIDED	1.28"
IMPERVIOUS DRAINAGE AREA:	6,262 S.F.	ESD_V PROVIDED:	650 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	6,262 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED: ESDv		1.2" PONDING DEPTH	

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
4. COORDINATES, BEARINGS AND DISTANCES SHOWN HEREON ARE REFERRED TO THE MARYLAND STATE COORDINATE SYSTEM (NAD 83/2011, NAVD 88)
5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 36

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: 107 OF X

PROJECT NUMBER: 20211253.002A

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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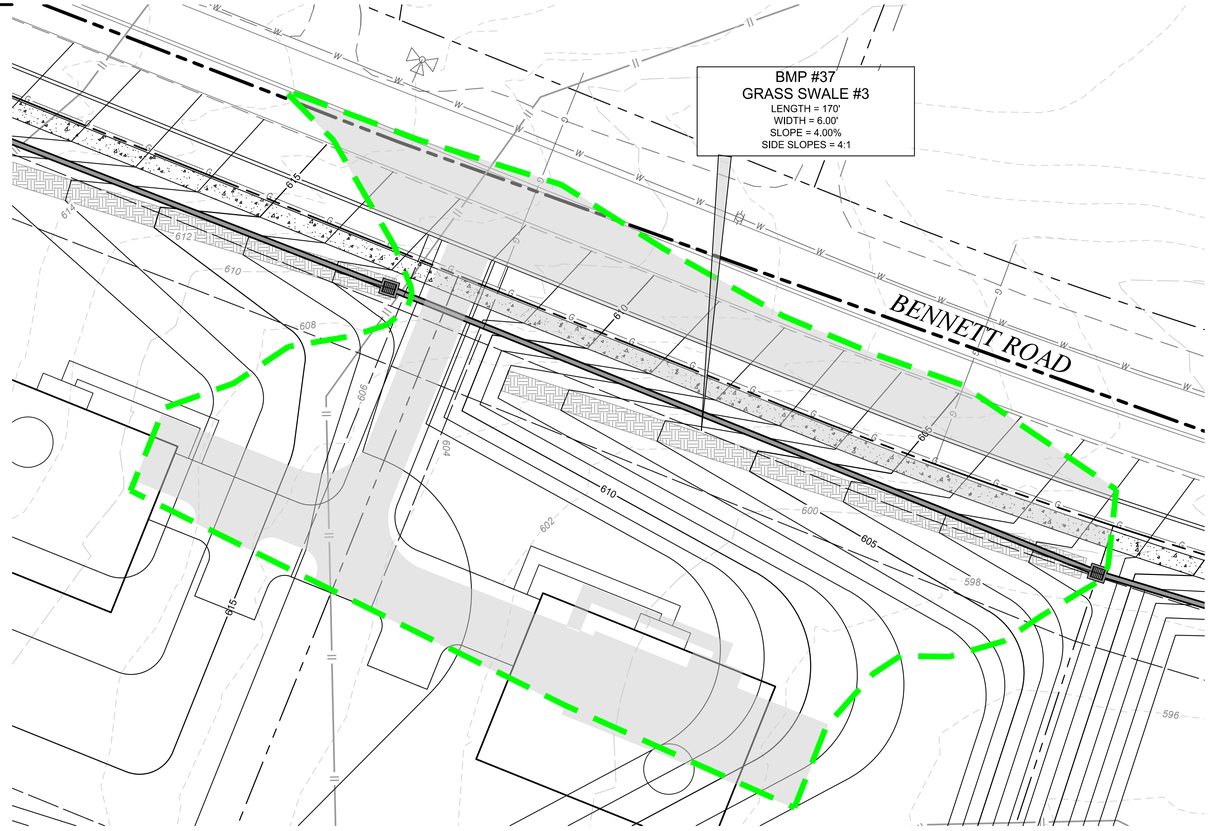

PLAN
SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

LEGEND
PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

BMP #37 - GRASS SWALE #3			OWNER:
TYPE: GRASS SWALE			
LOCATION:		(N: E:)	
DRAINAGE AREA: 0.61 AC.± , 26,355 (S.F.)			
SURFACE AREA: 1020 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	26,355 S.F.	P_E PROVIDED	0.90"
IMPERVIOUS DRAINAGE AREA:	11,123 S.F.	ESD_V PROVIDED:	850 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	11,123 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED:			
ESDv	1.44" PONDING DEPTH		

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
3. BOUNDARY INFORMATION SHOWN HEREON IS FROM FIELD LOCATION PREFORMED BY MTPLS LAND SURVEYORS, LLC, NOVEMBER, 2021.
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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 37

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN SHEET: 108 OF X

PROJECT NUMBER: 20211253.002A

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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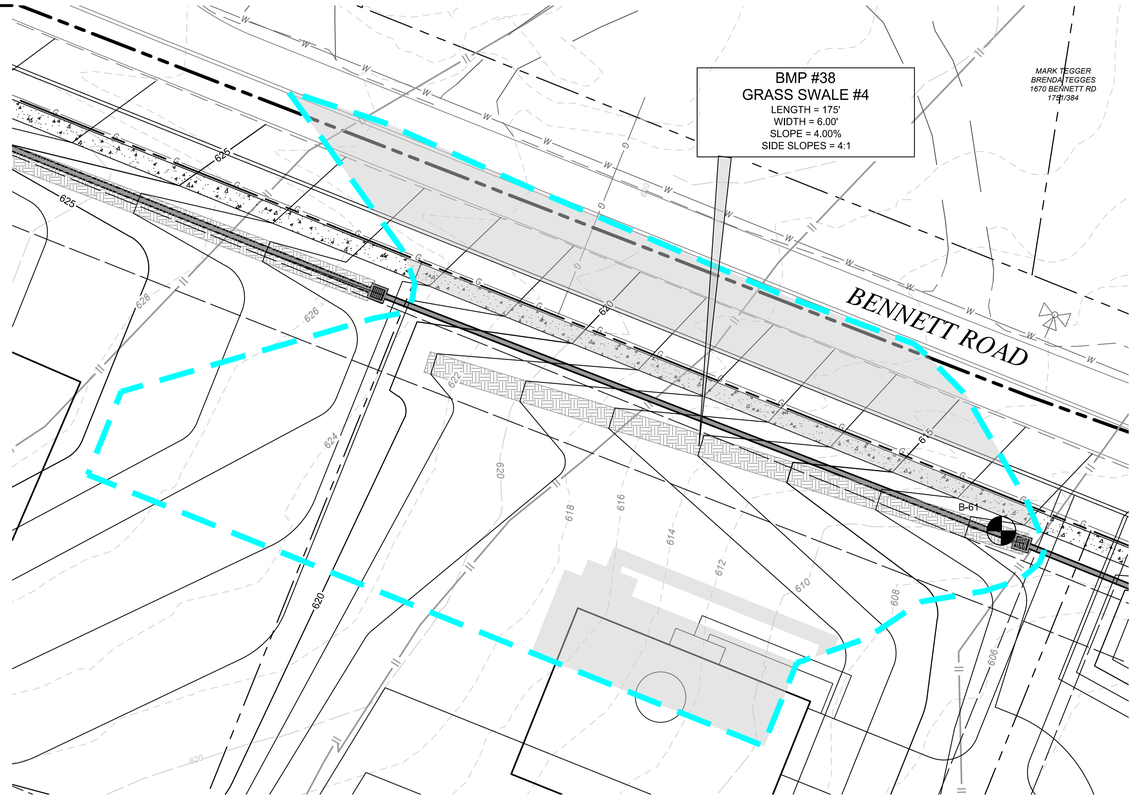

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

BMP #38 - GRASS SWALE #4	OWNER:
TYPE: GRASS SWALE	
LOCATION:	(N: E:)
DRAINAGE AREA: 0.54AC.± , 23,578 (S.F.)	
SURFACE AREA: 1050 S.F.	
WATERSHED: SNOWDENS RUN (USE-III-P)	
RECEIVING WATERS: LIBERTY RESERVOIR	

HYDROLOGIC CRITERIA

ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.

DESIGN DATA

THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.

DRAINAGE AREA:	23,578	S.F.	P_E PROVIDED	1.42"	
IMPERVIOUS DRAINAGE AREA:	7,430	S.F.	ESD_V PROVIDED:	875	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	7,430	S.F.
Tc:	0.10 HOURS		RCN:		

LEVEL OF STORMWATER MANAGEMENT PROVIDED:
ESDv 1.56" PONDING DEPTH

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
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6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 38

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 109 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
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CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

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DATE	BY	REVISIONS

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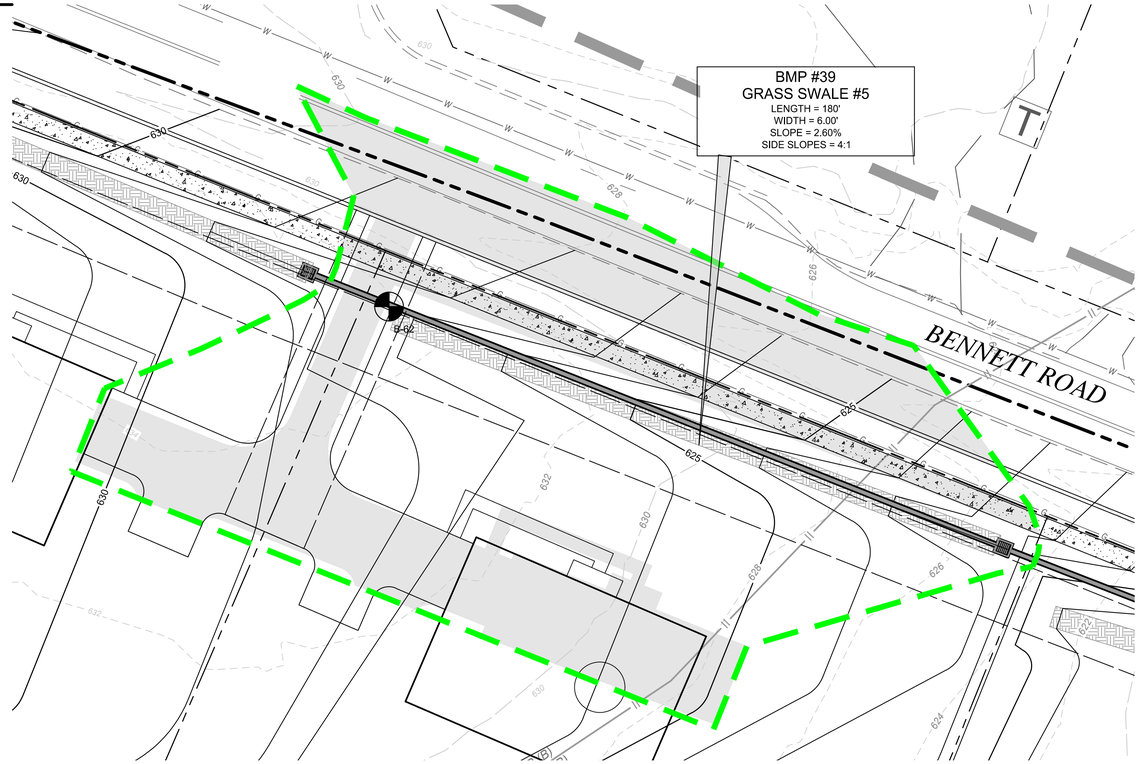

BMP #39 - GRASS SWALE #5		OWNER:	
TYPE: GRASS SWALE			
LOCATION:		(N: E:)	
DRAINAGE AREA: 0.56AC.± , 24,128 (S.F.)			
SURFACE AREA: 1080 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	24,128 S.F.	P_E PROVIDED	0.95"
IMPERVIOUS DRAINAGE AREA:	11,408 S.F.	ESD_V PROVIDED:	900 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	11,408 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED:			
ESDv	1.68" PONDING DEPTH		

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN
SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 39

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 110 OF X

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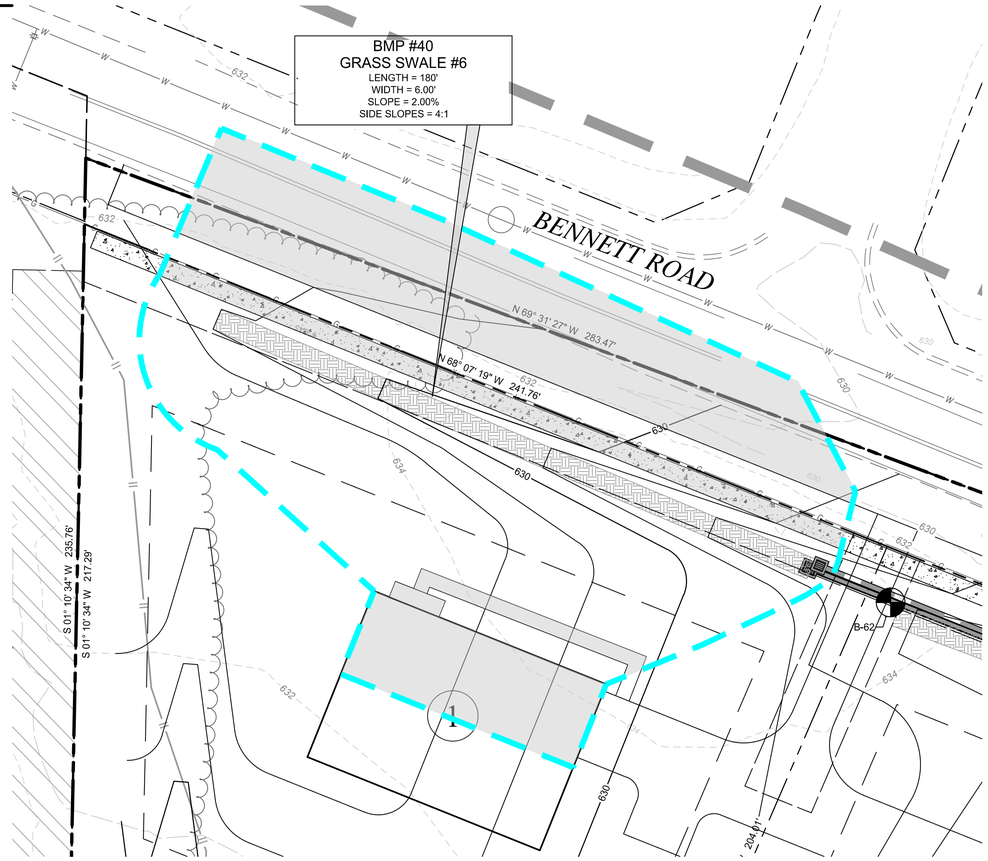

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

BMP #40 - GRASS SWALE #6			OWNER:		
TYPE: GRASS SWALE LOCATION: (N: E:) DRAINAGE AREA: 0.45AC.± , 19,676 (S.F.) SURFACE AREA: 1080 S.F. WATERSHED: SNOWDENS RUN (USE-III-P) RECEIVING WATERS: LIBERTY RESERVOIR					
HYDROLOGIC CRITERIA					
ESD_V HAS BEEN PROVIDED TO THE MEP VIA MICRO BIORETENTION.					
DESIGN DATA					
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.					
DRAINAGE AREA:	19,676	S.F.	P_E PROVIDED	1.24"	
IMPERVIOUS DRAINAGE AREA:	8,721	S.F.	ESD_V PROVIDED:	900	C.F.
SOIL GROUP:	"B"		TREATED IMPERVIOUS AREA:	8,721	S.F.
Tc:	0.10 HOURS		RCN:		
LEVEL OF STORMWATER MANAGEMENT PROVIDED: ESDv 1.80" PONDING DEPTH					

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 40

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 111 OF X

OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
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CONTACT: MATT TAYLOR
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S-23-0027

DATE	BY	REVISIONS

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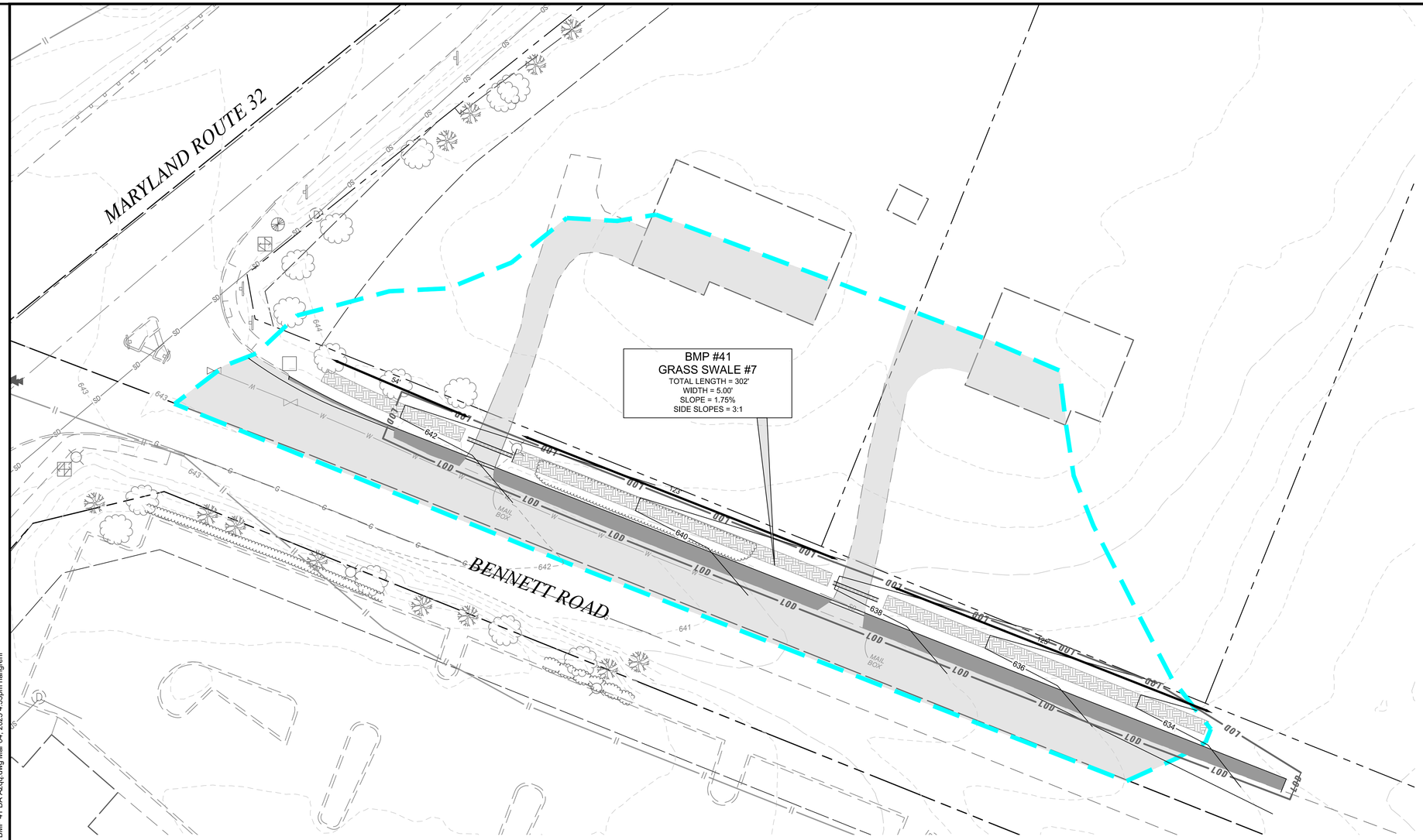

BMP #41 - GRASS SWALE #7		OWNER:	
TYPE: GRASS SWALE			
LOCATION:		(N: E:)	
DRAINAGE AREA: 0.84AC.± , 36,777 (S.F.)			
SURFACE AREA: 1,510 S.F.			
WATERSHED: SNOWDENS RUN (USE-III-P)			
RECEIVING WATERS: LIBERTY RESERVOIR			
HYDROLOGIC CRITERIA			
ESD_V HAS BEEN PROVIDED TO THE MEP VIA GRASS SWALE.			
DESIGN DATA			
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.			
DRAINAGE AREA:	36,777 S.F.	P_E PROVIDED	1.20"
IMPERVIOUS DRAINAGE AREA:	12,792 S.F.	ESD_V PROVIDED:	1,258 C.F.
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	12,792 S.F.
Tc:	0.10 HOURS	RCN:	
LEVEL OF STORMWATER MANAGEMENT PROVIDED:			
ESDv		2.64" PONDING DEPTH	

MARYLAND STATE PLANE
NAD 83/2011 / NAVD 88

LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN
SCALE: 1" = 20'

20 0 20 40
SCALE: 1"=20'

DATA SOURCES

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 41

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: 112 OF X
PROJECT NUMBER: 20211253.002A

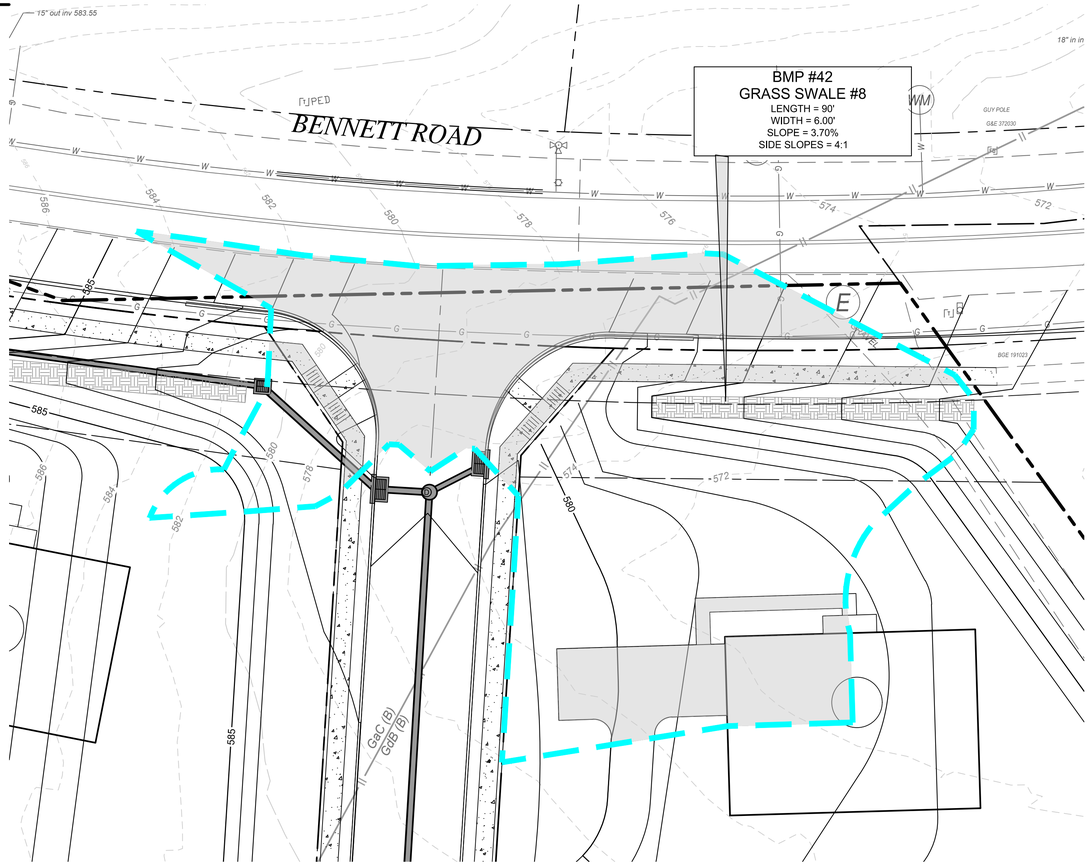
OWNER
LONG MEADOW PARK, LLC
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 41 DA A2qq.dwg Mar 04, 2025 4:33pm rlangrehr



LEGEND

PROPOSED DRAINAGE AREA

IMPERVIOUS AREA DRAINING TO ESD FACILITY

PLAN

SCALE: 1" = 20'

20 0 20 40

SCALE: 1"=20'

BMP #42 - GRASS SWALE #8			OWNER:	
TYPE: GRASS SWALE				
LOCATION: (N: E:)				
DRAINAGE AREA: 0.43 AC.± , 18,514 (S.F.)				
SURFACE AREA: 540 S.F.				
WATERSHED: SNOWDENS RUN (USE-III-P)				
RECEIVING WATERS: LIBERTY RESERVOIR				
HYDROLOGIC CRITERIA				
ESD_V HAS BEEN PROVIDED TO THE MEP VIA GRASS SWALE.				
DESIGN DATA				
THIS PRIVATE STORMWATER MANAGEMENT BMP WILL BE BUILT IN ACCORDANCE WITH CARROLL COUNTY STANDARDS AND SPECIFICATIONS AND WILL BE PRIVATELY MAINTAINED.				
DRAINAGE AREA:	18,514 S.F.	P_E PROVIDED	0.69"	
IMPERVIOUS DRAINAGE AREA:	7,979 S.F.	ESD_V PROVIDED:	450 C.F.	
SOIL GROUP:	"B"	TREATED IMPERVIOUS AREA:	7,979 S.F.	
Tc:	0.10 HOURS	RCN:		
LEVEL OF STORMWATER MANAGEMENT PROVIDED: ESDv 1.08" PONDING DEPTH				

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

DATA SOURCES

1. EXISTING TOPOGRAPHY AND STRUCTURES SHOWN HEREON OUTSIDE OF THE LIMITS OF FIELD RUN TOPOGRAPHY ARE FROM CARROLL COUNTY GIS.
2. EXISTING TOPOGRAPHY FROM FIELD RUN SURVEY BY MTPLS LAND SURVEYORS, LLC. DATED NOVEMBER 2021.
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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT ESD BMP 42

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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SHEET: 113 OF X

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S-23-0027

DATE	BY	REVISIONS

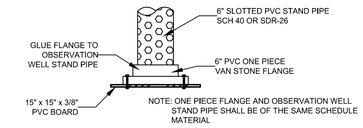
T:\2021\Facilities\20211253.002A Beatty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A BMP 42 DA A2lr.dwg Mar 04, 2025 4:34pm rlangrehr

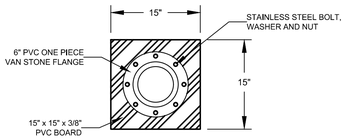
STORMWATER MAINTENANCE SCHEDULE
Submerged Gravel Wetland
Modified to Correspond to Carroll County Details

MONTHLY INSPECTION		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan **OR** Reseed and Remulch per Filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlets, weirs, and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes and embankment when grass exceeds 12 inches in height, but do not mow filter bed (Woody vegetation is prohibited on the embankment). If using Filter Bed Mix, may mow bed twice per year. Remove grass clippings. Re-seed or re-plant in accordance with approved landscaping plans.
No. 8 Stone Layer	Check No. 8 stone for sediment accumulation and evidence of erosion.	Stabilize or replace No. 8 stone according to plan specifications.
SEASONAL INSPECTION AND AFTER A MAJOR STORM		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Dewatering	Check ponding levels. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top six inches of No. 8 stone in chimney. Confirm adequate dewatering with follow-up inspections. If the facility does not fuction as intended after the above action, the entire system including underdrain may need refurbishing.
Erosion	Check inlets, wetland, outlets, and side slopes for erosion, rills, gullies, and runoff channelization.	Re-grading may be required when concentrated flow causes rills or gullying through the facility. Grade, vegetate, and/or armor to provide stable conveyance in accordance with approved plans.
Check Dams	Check for evidence of flow cutting around edges of structure and evidence of erosion at the odownstream toe.	Re-grade and repair with topsoil, seed, and matting. Provide stone at downstream toe.
Sediment Accumulation	Check for accumulated sediment in forebay. Check for accumulated sediment in No. 8 chimneys and wetland area. Check for clogged openings	When sediment in forebay accumulates to 6 inches depth, clean out sediment. When sediment in No. 8 chimney or wetland area accumulates to 1 inch in depth, remove sediment. Remove sediment from clogged openings. Discharge any sediment-laden water through a filter bag or other dewatering device. Dispose of all sediment in an acceptable location
Blockages	Check overflow inlet (riser), piping, and underdrain for blockages. Check observation wells for water level	Clear out any blockages.
ANNUAL INSPECTION		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed.	Repair to good condition according to specifications on the approved plans.

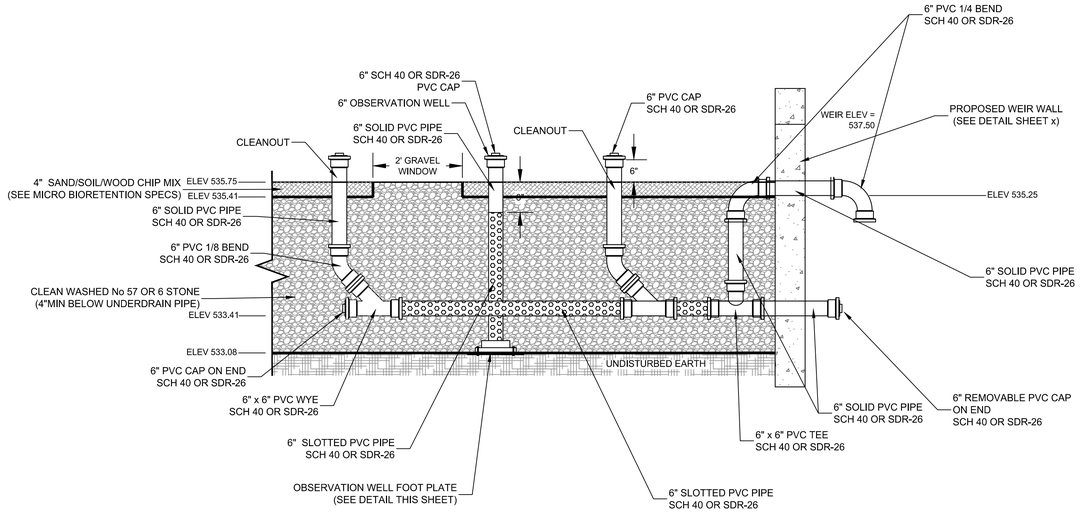
Modifications By: Martin B Covington, III, P.E.
Carroll County Stormwater Management Program Engineer
20-Dec-22

#N/A





OBSERVATION WELL FOOTPLATE DETAIL
NOT TO SCALE



SUBMERGED GRAVEL WETLANDS SECTION, CLEANOUT AND OBSERVATION WELL DETAIL
NOT TO SCALE

SUBMERGED GRAVEL WETLAND CONSTRUCTION CRITERIA

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING THE CONSTRUCTION OF PROJECTS WITH SUBMERGED GRAVEL WETLANDS:

1. SITE DISTURBANCE: ALL ON-SITE DISTURBED AREAS SHOULD BE STABILIZED PRIOR TO ALLOWING RUNOFF TO ENTER THE NEWLY CONSTRUCTED WETLAND.
2. EROSION AND SEDIMENT CONTROL: THE PROPOSED LOCATION OF A SUBMERGED GRAVEL WETLAND SHALL BE PROTECTED DURING CONSTRUCTION. SURFACE RUNOFF SHALL BE DIVERTED AWAY FROM THE PRACTICE DURING GRADING OPERATIONS. FLOW SPLITTERS AND OTHER CONVEYANCE INFRASTRUCTURE SHALL BE BLOCKED.
3. WETLAND CONSTRUCTION SHALL BE PERFORMED WITH LIGHTWEIGHT, WIDE-TRACKED EQUIPMENT TO MINIMIZE DISTURBANCE AND COMPACTION. EXCAVATED MATERIALS SHALL BE PLACED IN A CONTAINED AREA. ANY PUMPING OPERATIONS SHALL DISCHARGE FILTERED WATER TO A STABILE OUTLET.
4. GRAVEL MEDIA: THE AGGREGATE SHALL BE COMPOSED OF AN 18 TO 48 INCH LAYER OF CLEAN WASHED, UNIFORMLY GRADED MATERIAL WITH A POROSITY OF 40%. ROUNDED BANK RUN GRAVEL IS RECOMMENDED (E.G., ASTM D448 4.5 OR 6 STONE OR EQUAL).

DATA SOURCES

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6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

Carroll County Supplemental Materials Specifications for Submerged Gravel Wetlands (SGWs)			
Material	**Specification**	**Size**	**Notes**
Plantings	See Landscape Plan (At least 3 different wetland species)	N/A	Plantings are site specific and per approved landscape plan
Seed Mix	Filter Bed Mix – Use Wet Meadow Mix per MD Standards and Specifications §707. See Table 3 (13 lbs. /acre of SGW bottom)	N/A	Used with straw mulch in place of shredded hardwood mulch Incorporate seed evenly in top ½" of planting media
Mulch	Shredded Hardwood	N/A	Aged 6 months, minimum
Straw Mulch	MD Standards and Specifications §920.04. (200 lb. minimum/micro-bioretention)	N/A	1" Straw mulch over seed bed (SGW bottom)
Geotextile	Class "C" – Apparent opening size (ASTM-D-4751), Grab Tensile Strength (ASTM-D-4632), Puncture Resistance (ASTM-D-4833)	N/A	Sides only – Not needed with no. 8 perimeter chimney and reservoir Not on bottom unless specified on the plans
Underdrain, Choker Layer and Chimney Gravel	AASHTO M-43 No. 8 Stone	⅜" – ⅛"	Stone must be clean and washed If used as choker layer, above no. 57 stone, 4" minimum thickness
Reservoir Gravel	AASHTO M-43 No. 8 Stone (Preferred) or No. 57 (1" – ¼")	⅜" – ⅛"	Stone must be clean and washed
Chimney, Observation Well, and Underdrain Piping	Slotted PVC or Slotted HDPE Type "SP" Pipes Solid: Scheduled 40 PVC or HDPE Type "S"	See Plan	Refer to the Carroll County SWM Supplement Pg. 87 All pipes must be double walled (smooth core) and slotted (no circular holes)
Sand	ASTM-C-33 (3 parts to 6 within Filter Media)	0.02" – 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock-dust" can be used for sand. Manufactured sand from approved sources may be used for filters. Manufactured sand may not be used in dams.
Soil	Engineer approved loam with 20% or less clay (1 part to 6 within Filter Media)	N/A	
Wood Chips	Untreated "Green" (2 parts to 6 within Filter Media)	N/A	Untreated "green" wood chips
Filter/Planting Media	Comprised of 3 parts sand, 2 parts wood chips, 1 part soil	2 ft Minimum	See individual material specifications
Impervious Liner	Polyvinyl Chloride (PVC) or approved equal	30 Mil Minimum Thickness	Bottom and Sides See Carroll County Standard details and notes

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Martin B Covington, III, P.E.
Carroll County Stormwater Management Program Engineer
March 20, 2020; Revised December 20, 2022, January 6, 2023

ERNST SEEDS

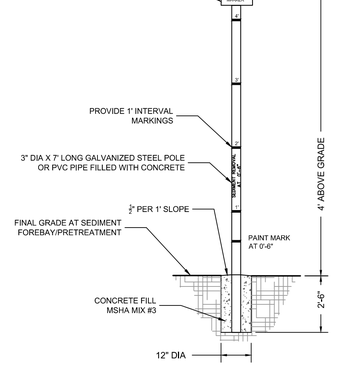
Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: September 18, 2024

OBL Wetland Mix - ERNMX-131

	Botanical Name	Common Name	Price/Lb
27.60 %	*Carex lurida, PA Ecotype*	Lurid Sedge, PA Ecotype	67.20
22.50 %	*Carex scoparia, PA Ecotype*	Blunt Broom Sedge, PA Ecotype	81.60
22.50 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	28.80
6.00 %	*Sparganium americanum*	Eastern Bur Reed	168.00
5.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	10.45
4.00 %	*Verbena hastata, PA Ecotype*	Blue Vervain, PA Ecotype	38.40
3.00 %	*Juncus effusus*	Soft Rush	48.00
2.00 %	*Asclepias incarnata, PA Ecotype*	Swamp Milkweed, PA Ecotype	177.60
1.50 %	*Glyceria striata, PA Ecotype*	Fowl Mannagrass, PA Ecotype	360.00
1.00 %	*Aster lanceolatus*	Lance Leaved Aster	432.00
1.00 %	*Eupatorium perfoliatum, PA Ecotype*	Boneset, PA Ecotype	192.00
1.00 %	*Scirpus validus, PA Ecotype*	Softstem Bulrush, PA Ecotype	432.00
0.70 %	*Solidago rugosa, PA Ecotype*	Wrinkleleaf Goldenrod, PA Ecotype	264.00
0.50 %	*Carex stipata, PA Ecotype*	Awl Sedge, PA Ecotype	235.20
0.50 %	*Lycopus americanus, PA Ecotype*	American Water Horehound, PA Ecotype	72.00
0.50 %	*Scirpus cyperinus, PA Ecotype*	Woolgrass, PA Ecotype	115.20
0.30 %	*Mimulus ringens, PA Ecotype*	Square Stemmed Monkeyflower, PA Ecotype	216.00
0.20 %	*Alisma subcordatum*	Mud Plantain	192.00
0.20 %	*Carex stricta, PA Ecotype*	Tussock Sedge, PA Ecotype	672.00
100.00 %		**Mix Price/Lb Bulk:**	**$82.81**

Seeding Rate: 20 lb per acre, or 1/2 lb per 1,000 sq ft with a cover crop. For a cover crop use one of the following: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre), or barnyard grass (1 May to 31 Aug; 10 lbs/acre).



NOTE: SEDIMENT MARKER SHALL BE PLACED IN BOTTOM OF SEDIMENT FOREBAY WHERE MINIMAL DISTURBANCE IS ANTICIPATED DURING SEDIMENT REMOVAL.

SEDIMENT MARKER DETAIL
NOT TO SCALE

CENTURY ENGINEERING
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10710 Gilroy Road, Hunt Valley, MD 21031
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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT SUBMERGED GRAVEL WETLANDS DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
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S-23-0027

DATE	BY	REVISIONS

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A (SWM-X) SWM ESD Features Details.dwg Mar 04, 2025 4:34pm rlangrehr

STORMWATER MAINTENANCE SCHEDULE
MICRO-BIORETENTION
Modified to Correspond to Carroll County Details

MONTHLY INSPECTION		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan **OR** Reseed and Remulch per Filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlet and outlet.	Remove or cut back vegetation around inlet and outlet structures. Mow side slopes and embankment when grass exceeds 12 inches in height, but do not mow filter bed (Woody vegetation is prohibited on the embankment). If using Filter Bed Mix, may mow bed twice per year. Remove grass clippings. Re-seed or re-plant in accordance with approved landscaping plans.
Mulch Layer	Check mulch for adequate cover, sediment accumulation, or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
SEASONAL INSPECTION AND AFTER A MAJOR STORM		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Dewatering	Check ponding level. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runoff channelization.	Re-grading may be required when concentrated flow causes rills or gullying through the facility. Grade, vegetate, and/or armor to provide stable conveyance in accordance with approved plans.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages).	When sediment accumulates to 1 inch depth, remove sediment. Remove sediment from clogged openings. Dispose of all sediment in an acceptable location
ANNUAL INSPECTION		
Inspection Item	**Inspection Requirements**	**Remedial Action**
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed.	Repair to good condition according to specifications on the approved plans.

Modifications By: Martin B Covington, III, P.E.
Carroll County Stormwater Management Program Engineer
August 2021
Revised December 20, 2022

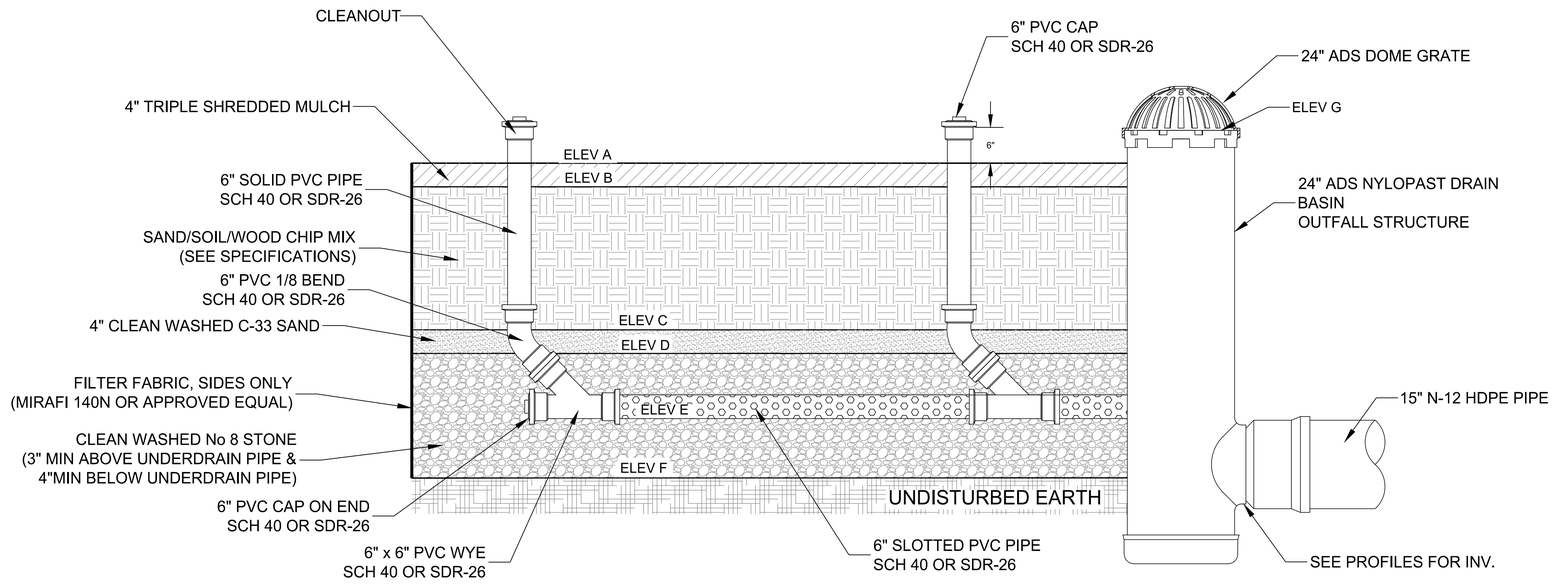
#N/A

Carroll County Supplemental Materials Specifications for Bio-Swale, Bioretention, Micro-Bioretention & Rain Gardens

Material	Specification	Size	Notes
Plantings	See Landscape Plan	N/A	Plantings are site specific and per approved landscape plan
Seed Mix	Filter Bed Mix – Use Wet Meadow Mix per MD Standards and Specifications §707. See Table 3 (1 lb. minimum/micro-bioretention)	N/A	Used with straw mulch in place of shredded hardwood mulch Incorporate seed evenly in top ½" of filter media
Mulch	Shredded Hardwood	N/A	Aged 6 months, minimum
Straw Mulch	MD Standards and Specifications §920.04.01. (200 lb. minimum/micro-bioretention)	N/A	1" Straw mulch over seed bed (facility bottom)
Geotextile	Class "C" – Apparent opening size (ASTM-D-4751), Grab Tensile Strength (ASTM-D-4632), Puncture Resistance (ASTM-D-4833)	N/A	Sides only Not on bottom unless specified on the plans
Underdrain and Reservoir Gravel	AASHTO M-43 No. 8 Stone	¾" – ⅛"	Stone must be clean and washed
Underdrain and Observation Well Piping	Slotted PVC or Slotted HDPE Type "SP" Pipes Solid: Scheduled 40 PVC or HDPE Type "S"	See Plan	Refer to the Carroll County SWM Supplement Pg. 87 All pipes must be double walled (smooth core) and slotted (no circular holes)
Sand	ASTM-C-33 (3 parts to 6 within Filter Media)	0.02" – 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock-dust" can be used for sand. Manufactured sand from approved sources may be used for filters. Manufactured sand may not be used in dams.
Soil	Engineer approved loam with 20% or less clay. (1 part to 6 within Filter Media)	N/A	
Wood Chips	Untreated "Green" (2 parts to 6 within Filter Media)	N/A	Untreated "green" wood chips
Filter/Planting Media	Comprised of 3 parts sand, 2 parts wood chips, 1 part soil	N/A	See individual material specifications
Embankments & Trench Backfill (non-378)	Soils used for embankments and trench backfill shall be uniform and in accordance with MD 378 Code, except that fill material shall conform to Unified Soil Classification, GC, SC, SM, MH, ML, CH, or CL and be compacted to a density of not less than 95% of maximum dry density. Woody vegetation is prohibited on embankments.	N/A	See Earth Fill and Structure Backfill, Carroll County Construction Specifications Carroll County SWM Supplement, Page 130
Principal Spillway Pipe (non-378)	Shall be in accordance with MD 378 Code, except that all pipe joints are to be gasketed and completely watertight. Pipes connected to risers (inlets) shall be a single piece 20-feet long with no joints.	See Plan	See Pipe Conduits, Carroll County Construction Specifications Carroll County SWM Supplement, Page 131

R:\Forms\SWM Forms\Updated Forms\Carroll County Supplemental Materials Specifications For Bio-Swale, Bioretention, Micro-Bioretention and Rain Gardens Revised 11.20.23.docx

Chad N. Waniesky, PE, CFM
Carroll County Stormwater Management Program Engineer
March 20, 2020); Dec. 20, 2022, Jan. 6, 2023; Revised July 25, 2023; Revised Nov. 20, 2023



BIORETENTION SECTION, CLEANOUT AND OBSERVATION WELL DETAIL

NOT TO SCALE

BMP Number	Facility Bottom Elev A	Bottom of Mulch Elev B	Bottom of Sand/ Soil/ Wood Chip Mix Elev C	Bottom of Sand Elev D	Inv Underdrain Elev E	Bottom of No 8 Stone Elev F	Weir Elev Elev G
1	537.75	537.42	535.42	535.09	534.59	534.26	538.75
2	555.50	555.17	553.17	552.84	552.34	552.01	556.25
3	555.50	555.17	553.17	552.84	552.34	552.01	556.25
4	550.50	550.17	548.17	547.84	547.34	547.01	551.50
5	562.75	562.42	560.42	560.09	559.59	557.59	563.75
6	568.00	567.67	565.67	565.34	564.84	563.84	568.75
7	568.75	568.42	566.42	566.09	565.59	563.09	569.75
8	568.75	568.42	566.42	566.09	565.59	565.26	569.75
9	568.75	568.42	566.42	566.09	565.59	565.26	569.75
10	568.75	568.42	566.42	566.09	565.59	565.26	569.75
11	568.75	568.42	566.42	566.09	565.59	565.26	569.75
12	567.75	567.42	565.42	565.09	564.59	564.26	568.75
13	570.50	570.17	568.17	567.84	567.34	565.34	571.50
14	579.25	578.92	576.92	576.59	576.09	571.59	580.25
15	581.75	581.42	579.42	579.09	578.59	576.59	582.75
16	583.75	583.42	581.42	581.09	580.59	578.59	584.75
17	583.75	583.42	581.42	581.09	580.59	580.26	584.75
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19	572.75	572.42	570.42	570.09	569.59	567.59	573.75
20	571.75	571.42	569.42	569.09	568.59	568.26	572.75
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27	561.75	561.42	559.42	559.09	558.59	556.59	562.75
28	561.75	561.42	559.42	559.09	558.59	557.59	562.75

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S-23-0027

DATE	BY	REVISIONS

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT
MICRO BIORETENTION
DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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DATE: 12-20-2024 SCALE: AS SHOWN

PROJECT NUMBER: 20211253.002A

SHEET: 115 OF X

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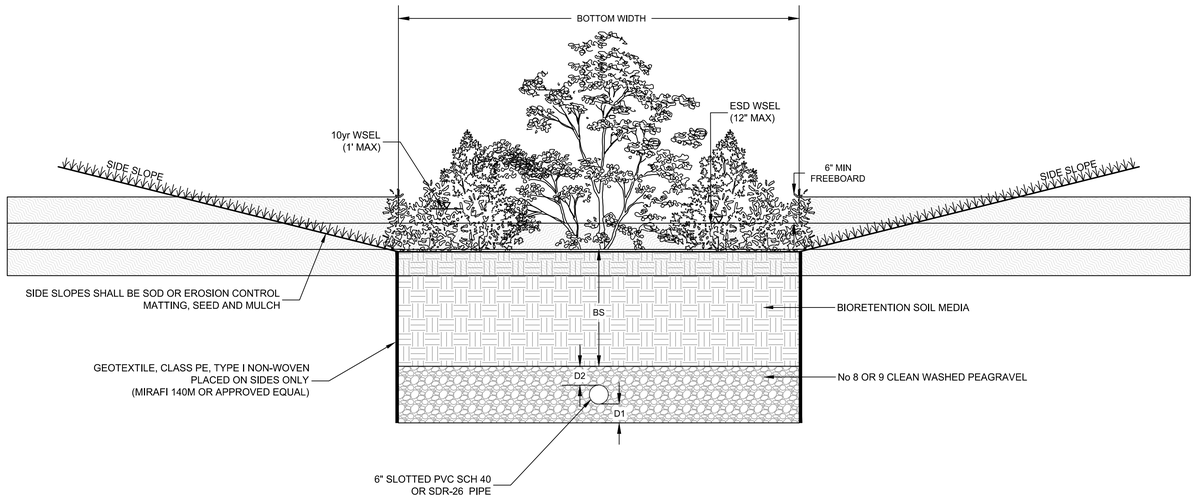
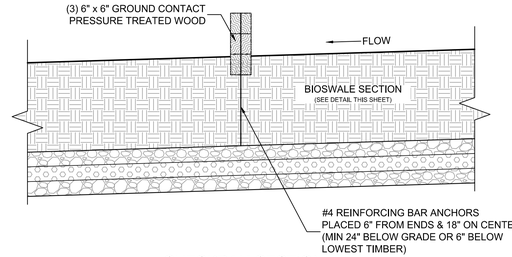
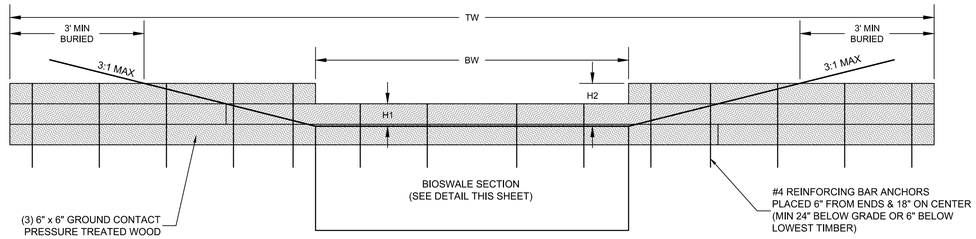


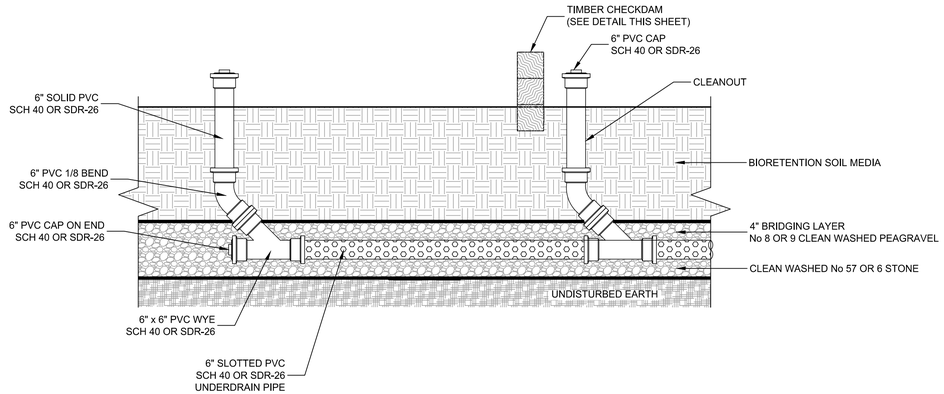
BIOSWALE SECTION
NOT TO SCALE



CHECKDAM SECTION



TIMBER CHECKDAM DETAIL
NOT TO SCALE



BIOSWALE SECTION, CLEANOUT AND UNDERDRAIN DETAIL
NOT TO SCALE

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: September 18, 2024

SWALE SEEDING MIX

	Botanical Name	Common Name	Price/Lb
26.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	22.22
25.00 %	*Panicum virgatum, 'Shawnee'*	Switchgrass, 'Shawnee'	12.10
21.00 %	*Elymus virginicus*	Virginia Wildrye	8.10
20.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	28.80
4.00 %	*Agrostis perennans, Albany Pine Bush-NY Ecotype*	Autumn Bentgrass, Albany Pine Bush-NY Ecotype	16.80
2.00 %	*Juncus effusus*	Soft Rush	48.00
1.00 %	*Juncus tenuis, PA Ecotype*	Path Rush, PA Ecotype	48.00
1.00 %	*Panicum rigidulum, PA Ecotype*	Redtop Panicgrass, PA Ecotype	57.60
100.00 %		**Mix Price/Lb Bulk:**	**$18.95**

Seeding Rate: 20 lb per acre, or 1/2 lb per 1,000 sq ft. For a cover crop: grain rye (1 Sep to 30 Apr; 30 lbs/acre), Japanese millet (1 May to 31 Aug; 10 lbs/acre).

STORMWATER MAINTENANCE SCHEDULE
BIO-SWALE
Modified to Correspond to Carroll County Details

Inspection Item	Inspection Requirements	Remedial Action
MONTHLY INSPECTION		
Debris and Trash	Check for trash and debris in facility including inlets, outlets, conveyance systems, and area around facility.	Remove all trash and debris and dispose in an acceptable manner. Unclog all openings.
Plant Composition and Health	Compare plant composition with approved plans. Check for invasive species or weeds. Check for dead or dying vegetation.	Remove invasive species and weeds. Replace dead plants in accordance with approved landscaping plan **OR** Reseed and Remulch per Filter Bed Mix.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlets, weirs, check dams, and outlet.	Remove or cut back vegetation around inlet, weirs, check dams, and outlet structures. Mow side slopes when grass exceeds 12 inches in height, but do not mow filter bed (Woody Vegetation is prohibited on embankment). If using Filter Bed Mix, may mow bed twice per year. Remove grass clippings. Re-seed or re-plant in accordance with approved landscaping plans.
Mulch Layer	Check mulch for adequate cover, sediment accumulation, or discoloration.	Replace and remove old mulch and excess sediment. Provide adequate mulch cover according to approved design.
SEASONAL INSPECTION AND AFTER A MAJOR STORM		
Dewatering	Check ponding levels. Surface storage must dewater within 48 hours of rainfall. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace top few inches of media. If the facility does not function as intended after the above action, excavate, remove, clean, and replace stone, underdrain, media, and plants in accordance with approved plans.
Erosion	Check inlets, filter bed, outlets, and side slopes for erosion, rills, gullies, and runoff channelization.	Re-grading may be required when concentrated flow causes rills or gullying through the facility. Grade, vegetate, and/or armor to provide stable conveyance in accordance with approved plans.
Check Dams (earth, stone, concrete)	Check for evidence of flow cutting around edges of structure and evidence of erosion at the downstream toe.	Re-grade and repair with stone, topsoil, seed, and matting. Provide stone at downstream toe.
Sediment Accumulation	Check for accumulated sediment in conveyance systems and on filter bed. Check for clogged openings (blockages). (Check observation wells for water level.)	When sediment accumulates to 1 inch depth, remove sediment. Remove sediment from clogged openings. Dispose of all sediment in an acceptable location
ANNUAL INSPECTION		
Structural Components	Check for evidence of structural deterioration, spalling, or cracking. Inlet, weirs, check dams, and outlet structures as well as riprap outfalls must be in good condition.	Repair to good condition according to specifications on the approved plans.
Overall Function of Facility	Check that practice is functioning as designed.	Repair to good condition according to specifications on the approved plans.

Modifications By: Martin B Covington, III, P.E.
Carroll County Stormwater Management Program Engineer
August 2021, Revised December 20, 2022

#N/A

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STORMWATER MANAGEMENT BIOSWALE DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
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SHEET: 116 OF X

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92 SPACES (1.9 SP. / 1,000 SQFT.)

PR. 6" W. (PRIVATE)

PR. 6" SAN

PR. 12" W

PR. 8" SAN

PR. X' ACCESS GATE
(SEE DETAIL SHEET x)

PR. 12' WIDE
ACCESS ROAD
(SEE DETAIL SHEET x)

GEORGETOWN BLVD
EXTENDED

PROGRESS WAY

PR. CARROLL COUNTY
MODIFIED STILL BASIN
(SEE DETAIL SHEET x)

PR. 6" SLOTTED UNDERDRAIN

PR. 15" D

QUANTITY POND #1
BOTTOM ELEV. = 532.00
TOP ELEV. = 541.00
WEIR ELEV. = 536.75

PR. 42" SPLIT
RAIL FENCE
(SEE DETAIL SHEET x)

PR. CLASS I
RIP-RAP OUTFALL
(SEE DETAIL SHEET x)

PR. CLASS 0
RIP-RAP OUTFALL
(SEE DETAIL SHEET x)

PR. 30" D

PR. 6" SOLID UNDERDRAIN

BMP #29
SUBMERGED GRAVEL
WETLANDS #1
(SEE SHEET x FOR PLAN
AND PROFILES)

SUBMERGED GRAVEL
WETLANDS #1 FOR
ELDERSBURG OVERLOOK
(S-23-0027)

BMP #1
MICRO BIORETENTION #1
(SEE SHEET x FOR PLAN AND
PROFILES)

DAM CENTERLINE
(SEE SHEET x FOR
GEOMETRIC INFORMATION)

NON-TIDAL
WETLANDS

25'
NON-TIDAL
WETLAND
BUFFER

EX 8" SAN (CONTRACT #S-19)

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

PLAN
SCALE: 1" = 30'

0' 30' 60'

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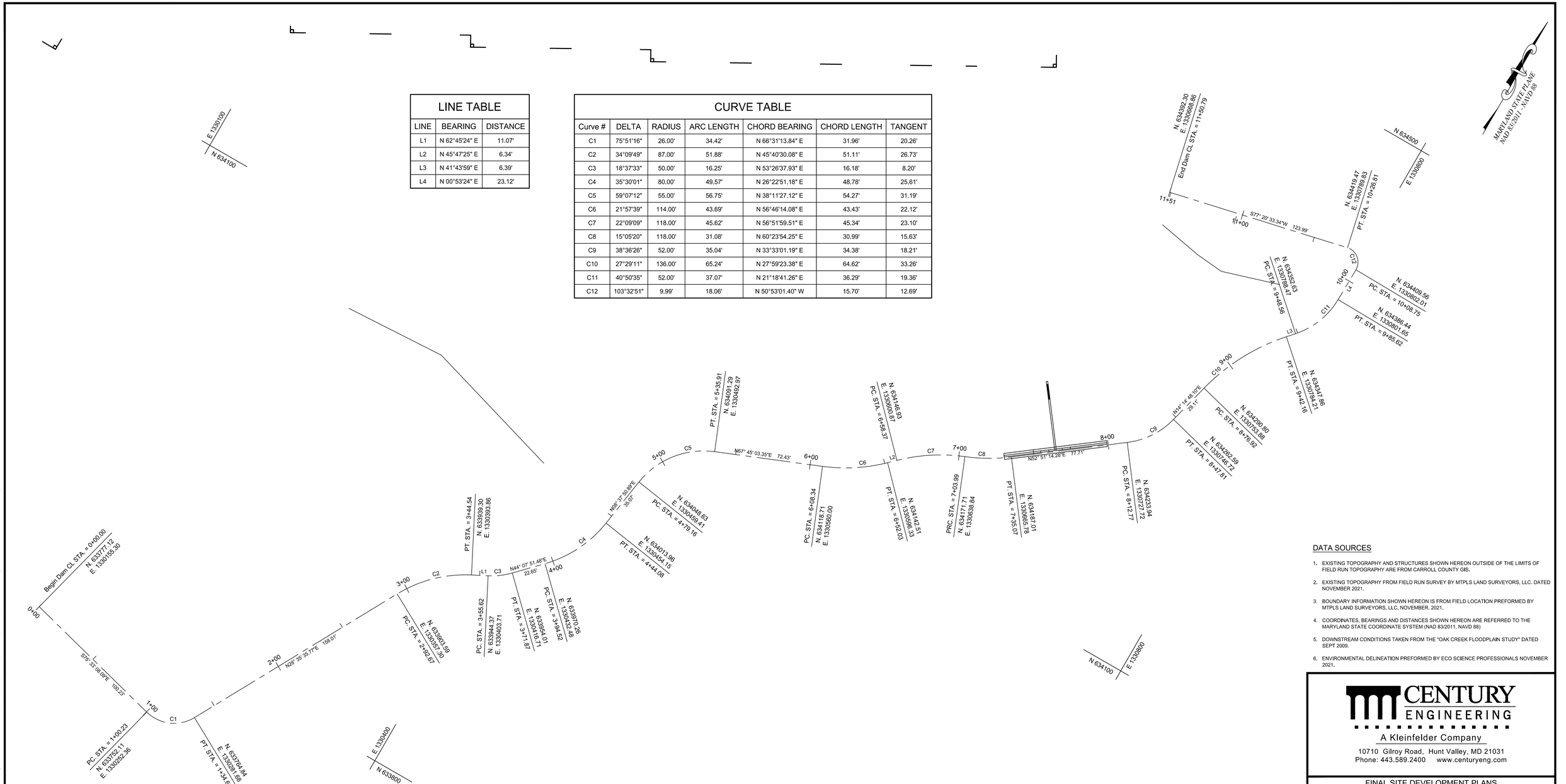
LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 62°45'24" E	11.07'
L2	N 45°47'25" E	6.34'
L3	N 41°43'59" E	6.39'
L4	N 00°53'24" E	23.12'

CURVE TABLE						
Curve #	DELTA	RADIUS	ARC LENGTH	CHORD BEARING	CHORD LENGTH	TANGENT
C1	75°51'16"	26.00'	34.42'	N 66°31'13.84" E	31.96'	20.26'
C2	34°09'49"	87.00'	51.88'	N 45°40'30.08" E	51.11'	26.73'
C3	18°37'33"	50.00'	16.25'	N 53°26'37.93" E	16.18'	8.20'
C4	35°30'01"	80.00'	49.57'	N 26°22'51.18" E	48.78'	25.61'
C5	59°07'12"	55.00'	56.75'	N 38°11'27.12" E	54.27'	31.19'
C6	21°57'39"	114.00'	43.69'	N 56°46'14.08" E	43.43'	22.12'
C7	22°09'09"	118.00'	45.62'	N 56°51'59.51" E	45.34'	23.10'
C8	15°05'20"	118.00'	31.08'	N 60°23'54.25" E	30.99'	15.63'
C9	38°36'26"	52.00'	35.04'	N 33°33'01.19" E	34.38'	18.21'
C10	27°29'11"	136.00'	65.24'	N 27°59'23.38" E	64.62'	33.26'
C11	40°50'35"	52.00'	37.07'	N 21°18'41.26" E	36.29'	19.36'
C12	103°32'51"	9.99'	18.06'	N 50°53'01.40" W	15.70'	12.69'



GEOMETRIC PLAN

SCALE: 1" = 30'

0' 30' 60'

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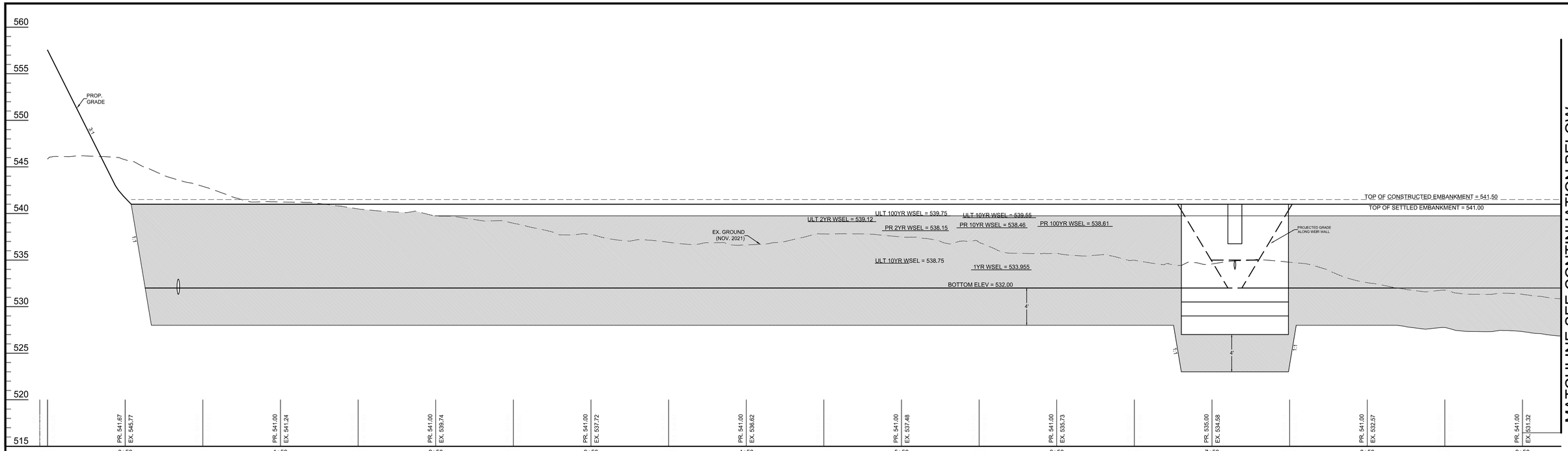
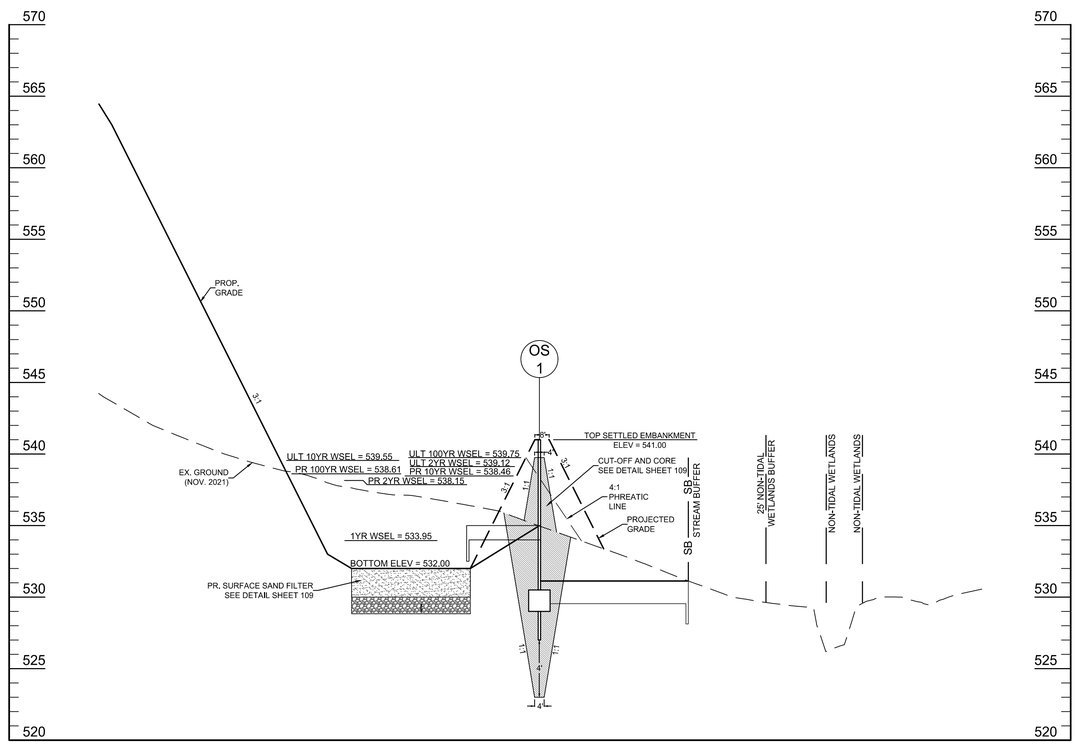


SECTION ALONG EMBANKMENT CENTERLINE

SCALE: HORIZ: 1" =30' VERT: 1"=5'

0 30 — 5 0



SECTION THROUGH OUTFALL

SCALE: HORIZ: 1" =30' VERT: 1"=5'

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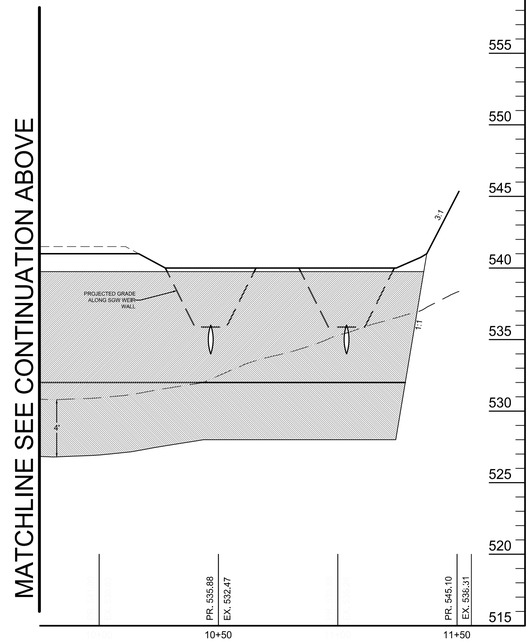

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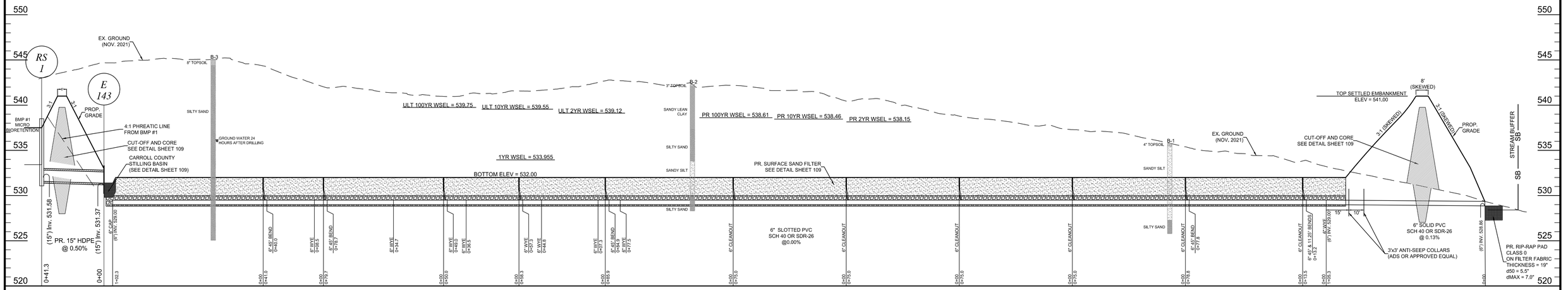
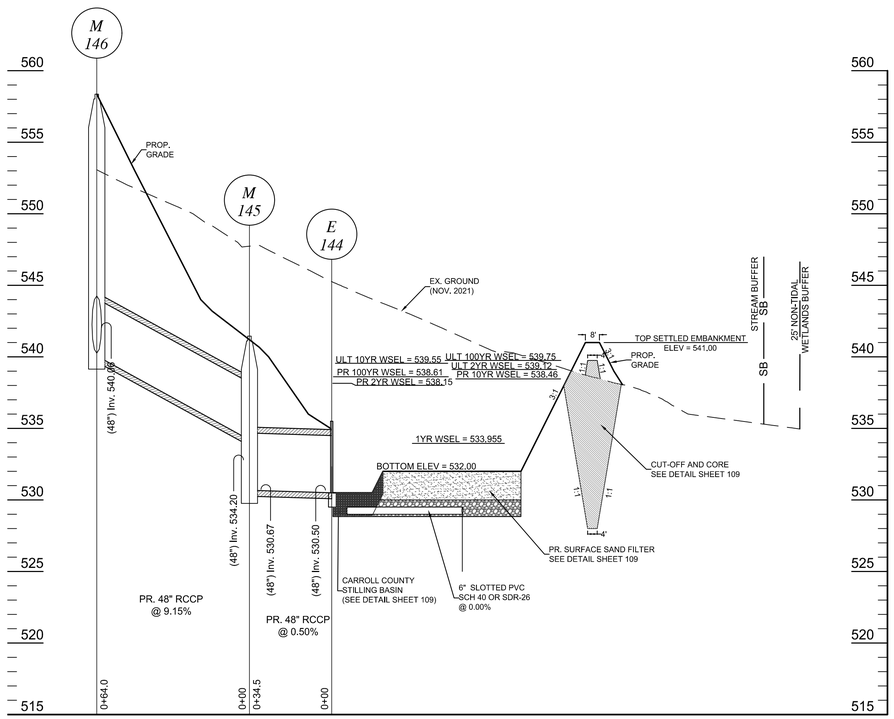


SECTION A-A

SCALE: HORIZ: 1" =30' VERT: 1"=5'

0 30 5 0



SECTION B-B

SCALE: HORIZ: 1" =30' VERT: 1"=5'

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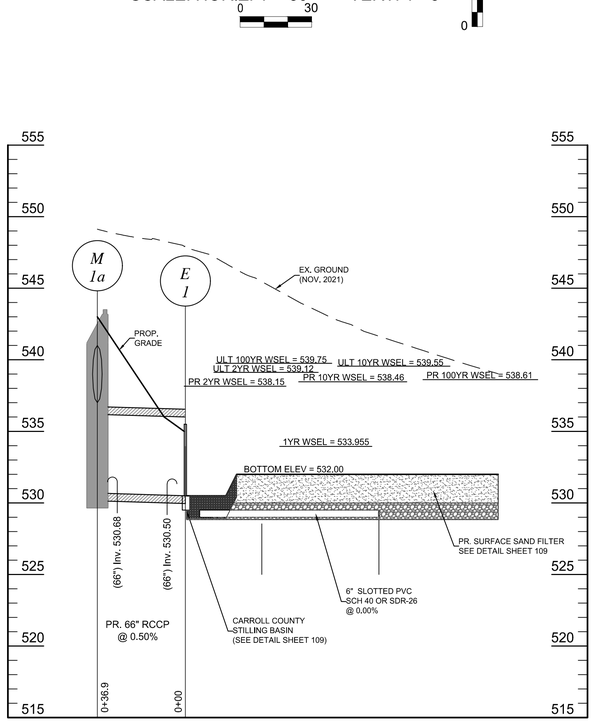

SECTION C-C

SCALE: HORIZ: 1" =30' VERT: 1"=5'

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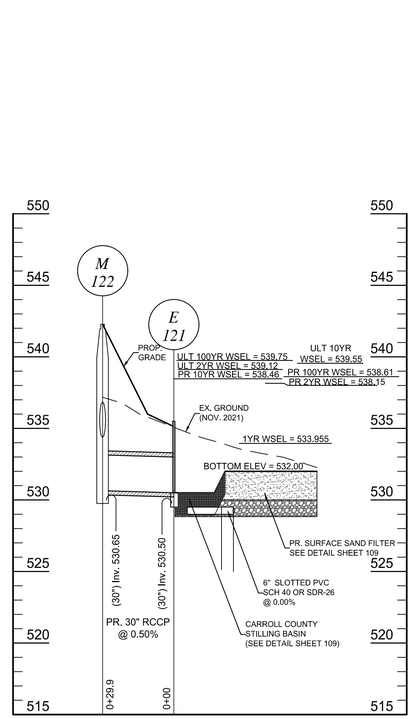

SECTION D-D

SCALE: HORIZ: 1" =30' VERT: 1"=5'

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DATA SOURCES

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
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Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT QUANTITY POND PROFILES

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
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CONTACT: MATT TAYLOR
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S-23-0027

DATE	BY	REVISIONS

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 120 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A (SWM-x) Quantity Plan and Profiles.dwg Mar 05, 2025 10:53am rlangrehr

MD-378 POND 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 United 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 a maximum 8" 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.

Where minimum required density is specified, it 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 side 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 that 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) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type "A" with watertight coupling bands or flanges. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

   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 bands 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" in diameter : flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, pre-punched to the flange bolt circle, sandwiched between adjacent flanges; a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using a minimum of 4 rods and lugs, 2 on each connecting pipe end. A 24" wide by 3/8" thick closed cell circular neoprene gasket will be installed with 12" 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 of 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 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 Designation C-361.

   2. Bedding - All 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 "Structure 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.

   4. Backfilling shall conform to "Structure Backfill."

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

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply to polyvinyl chloride (PVC) 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 requirements of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirements 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.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth 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 919.12.

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 the 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 to sumps from which 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 National 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 to be employed during the construction process.

Fencing

Fencing shall be constructed in accordance with Maryland State Highway Administration Standard Details 690.01 and 690.02. The specifications for 6'-0" fence shall be used, substituting 42" fabric and 6'-8" line post. The gate shall be constructed in accordance with M.S.H.A. Standard Detail 692.01 with 42" fabric. the fabric used for the fence and gate shall conform to AASHTO Designation M181-74.

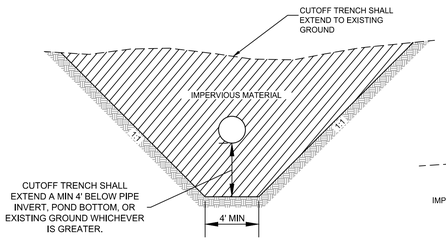
STORMWATER MAINTENANCE SCHEDULE
SURFACE SAND FILTER INSIDE MD-378 POND
Modified to Correspond to Carroll County Details

Inspection Item	Inspection Requirements	Remedial Action
MONTHLY INSPECTION		
Debris and Trash	Check for trash and debris in facility including inlets, forebay, outlets, conveyance systems, and area around facility.	Remove all trash and debris and dispose in an acceptable manner. Unclog all openings.
Vegetative Cover	Check for channelizing, erosion, and bare spots. Check for vegetation blocking inlets and outlet.	Remove or cut back vegetation around inlet, weirs, check dams, and outlet structures. Mow grass on filter and side slopes when grass exceeds 12 inches in height. Remove grass clippings. Re-seed and re-mulch per SHA special purpose seed mix.
SEASONAL INSPECTION AND AFTER A MAJOR STORM		
Dewatering	Check ponding levels. Water quality volume must dewater in 24 hours. Volume to first riser/weir opening (overflow) must dewater within 72 hours of rainfall. Check observation wells for water level. Noticeable odors, stained water on the filter surface or at the outlet, or the presence of algae or aquatic vegetation are indicators of anaerobic conditions and inadequate dewatering of the facility.	Remove and replace accumulated sediments, grass, and top few inches of filter media on filter bed. Confirm adequate dewatering with follow up inspections. If the facility does not function as intended after the above action, the entire filter bed including the underdrain may need replacement.
Erosion	Check inlets, forebay, filter bed, outlets, and side slopes for erosion, rills, gullies, and runoff channelization.	Re-grade if concentrated flow is causing rills or gullying through the facility. Grade, vegetate, and/or armor to provide stable conveyance in accordance with approved plans
Sediment Accumulation	Check for accumulated sediment in conveyance systems. Check for accumulated sediment on filter bed. Check for clogged openings.	When sediment accumulates to 1 inch depth, remove sediment. Remove sediment from clogged openings. Dispose of all sediment in an acceptable location
Blockages	Check overflow inlet (riser), piping, and underdrain for blockages. Check observation wells for water level.	Clear out any blockages.
ANNUAL INSPECTION		
Maintenance Access	Check for accessibility to facility including riser and spillways.	Remove excessive vegetative growth and obstructions. Repair access road to design condition.
Woody Vegetation	Check for woody vegetation on zones of concern: the embankment, within 15 feet of the toe of embankment, within a 25 foot radius of the control structure (riser or weir), and within 15 feet of principal spillway pipe.	Mow down woody vegetation within zones of concern. Cut trees with 4 inch or smaller diameter flush to ground. Re-seed bare areas according to plan stabilization requirements. **Contact Carroll County Bureau of Resource Management regarding removal of trees larger than 4 inch diameter.**
Inlets	Check for flow blockages, erosion, rills, gullies, and displaced riprap.	Restore any grades and re-seed or armor bare areas to provide stable conveyance in accordance with the approved plans.
Trash Rack	Check that trash rack is clear of blockages and in good condition.	Remove any blockages. Repair or replace to good working condition in accordance with approved plans.
Pond Drain (Threaded Cap)	Check that still present.	Repair in accordance with approved plans.
Riser and Barrel	Check for evidence of cracks, spalling and joint failures. Check connection between riser and barrel for water tightness. Check spillway pipe for water tight joints. Check for seepage around and along spillway pipe.	Repair or replace to good working condition in accordance with the approved plans.
Structural Components: Endwalls, Headwalls, Weirs, and Abutments	Check for evidence of structural deterioration, spalling, or cracking. Check for seepage. Check for missing manhole covers or inlet grates	Repair to good condition according to specifications on the approved plans.
Outfall	Check for displaced riprap, blow outs, unstable conveyance, and erosion below the outlet	Repair and restore function in accordance with the approved plans and to achieve stable conveyance.
Embankment Integrity	Check upstream face and downstream face for soft spots and boggy areas, boils at the toe, settlements, depressions and bagles, signs of erosion, animal burrows, slope failures, and seepage. Check that ground cover is in good condition. Check for wetland type vegetation.	Repair and stabilize in accordance with the approved plans. Presence of wetland vegetation on embankment may indicate seepage and structural integrity concerns. **Contact Carroll County Bureau of Resource Management before performing major pond repairs.**
Emergency Spillway Channel	Check for evidence of erosion, soft or wet areas, or obstructions. Check for woody vegetation. Check for displaced riprap.	Remove any obstructions. Mow and cut flush trees with 4 inch or smaller diameter. Re-seed or armor bare areas to provide stable conveyance in accordance with the approved plans. **Contact Carroll County Bureau of Resource Management regarding removal of trees larger than 4 inch diameter.**
Overall Function of Facility	Check that practice is functioning as designed.	Repair to good condition according to specifications on the approved plans.

Modifications By: Martin B Covington, III, P.E.
Carroll County Stormwater Management Program Engineer
January, 2023

#N/A

NOTE: SOILS SHALL CONFORM TO 95% OF THE T-99 MOISTURE-DENSITY BASED UPON ASTM-D698. ALL SOILS SHALL ALSO BE WITHIN 2% OF THEIR OPTIMAL MOISTURE CONTENT. SOILS SHALL ALSO CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND SHALL HAVE A MINIMUM OF 30% PASSING THE #200 SIEVE.



CUTOFF TRENCH DETAIL
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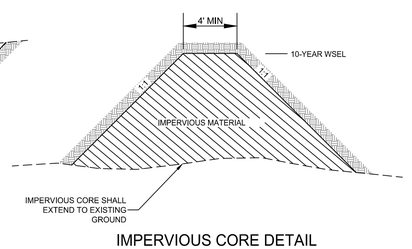

IMPERVIOUS CORE DETAIL
NO SCALE

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BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
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S-23-0027

DATE	BY	REVISIONS

Carroll County Supplemental Materials Specifications for Sand Filters

Material	Specification	Size	Notes
Plantings	See Landscape Plan	N/A	Plantings are site specific and per approved landscape plan
Seed Mix	SHA Special Purpose Seed Mix Per MD Standards & Specifications §920.06.07b	200 lbs/Acre	Used with straw mulch in place of shredded hardwood mulch Incorporate seed evenly in top ½" of filter media
Mulch	Shredded Hardwood	N/A	Aged 6 months, minimum
Straw Mulch	MD Standards and Specifications §920.04	2 Tons/Acre	1" Straw mulch over seed bed. (Filter, slopes, and embankment).
Geotextile	Class "C" – Apparent opening size (ASTM-D-4751), Grab Tensile Strength (ASTM-D-4632), Puncture Resistance (ASTM-D-4833)	N/A	Sides only Not on bottom unless specified on the plans
Underdrain and Reservoir Gravel	AASHTO M-43 No. 8 Stone	⅜" – ½"	Stone must be clean and washed
Underdrain and Observation Well Piping	Slotted PVC or Slotted HDPE Type "SP" Pipes Solid: Scheduled 40 PVC or HDPE Type "S"	See Plan	Refer to the Carroll County SWM Supplement Pg. 87 All pipes must be double walled (smooth core) and slotted (no circular holes)
Sand	ASTM-C-33 (3 parts to 6 within Filter Media)	0.02" – 0.04"	Sand substitutions such as Diabase and Graystone #10 are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock-dust" can be used for sand. Manufactured sand from approved sources may be used for filters. Manufactured sand may not be used in dams.
Soil	Engineer approved loam with 20% or less clay (1 part to 6 within Filter Media)	N/A	
Wood Chips	Untreated "Green" (2 parts to 6 within Filter Media)	N/A	Untreated "green" wood chips
Filter/Planting Media	Comprised of 3 parts sand, 2 parts wood chips, 1 part soil	2 ft Minimum	See individual material specifications
Impervious Liner	Polyvinyl Chloride (PVC) or approved equal	30 Mil Minimum Thickness	Bottom and Sides See Carroll County Standard details and notes

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Martin B Covington, III, P.E.
Carroll County Stormwater Management Program Engineer
September 28, 2022, Revised December 20, 2022, January 6, 2023

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT QUANTITY POND DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

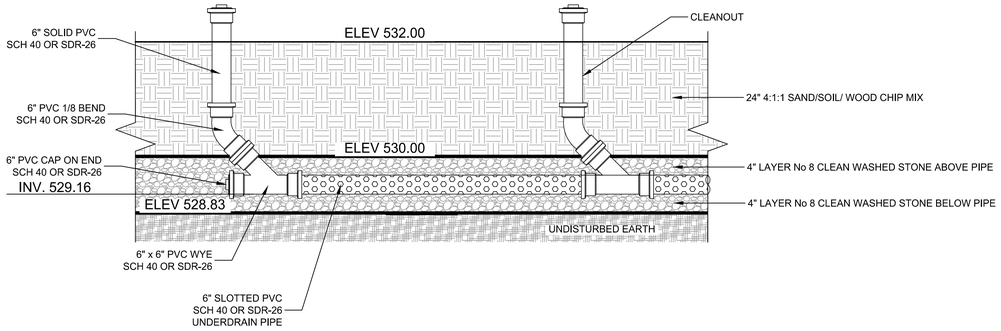
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 121 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A (SWM-x) Quantity Details and Specs.dwg Mar 05, 2025 3:19pm rlangrehr

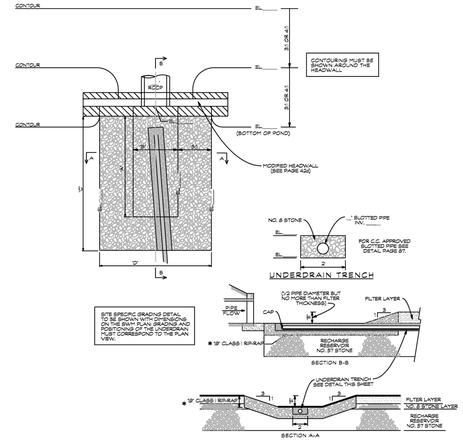


SAND FILTER SECTION, CLEANOUT AND UNDERDRAIN DETAIL

NOT TO SCALE

76

CARROLL COUNTY POND- SAND FILTER STILLING BASIN CUT INTO POND BOTTOM



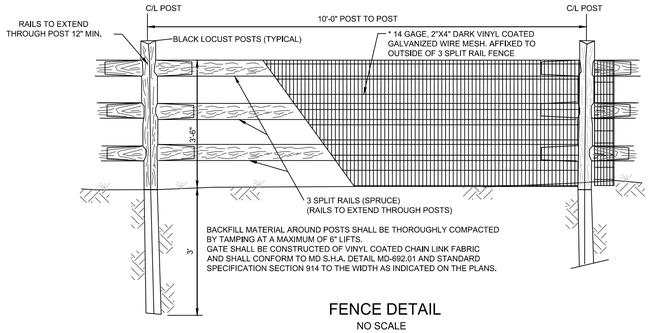
SITE SPECIFIC GRADING DETAIL TO BE SHOWN WITH DEVELOPER ON THE ENTY PLAN. GRADING AND POSITIONING OF THE UNDERDRAIN SHALL CORRESPOND TO THE PLAN VIEW.

STILLING BASIN DIMENSIONS

LEGEND					
PIPE DIA.	"A"	"B"	"C"	"D"	"E"
(IN.)	(FT.)	(FT.)	(FT.)	(FT.)	(FT.)
15"	5.64	2.50	7.50	6.28	0.63
18"	6.75	3.00	9.00	7.50	0.75
21"	7.88	3.50	10.50	8.78	0.88
24"	9.00	4.00	12.00	10.00	1.00
27"	10.14	4.50	13.50	11.28	1.13
30"	11.25	5.00	15.00	12.50	1.25
36"	13.50	6.00	18.00	15.00	1.50
42"	15.00	7.00	19.50	16.00	1.50
48"	16.50	8.00	21.00	17.00	1.50
54"	18.00	9.00	22.50	18.00	1.50
60"	19.50	10.00	24.00	19.00	1.50
72"	22.50	12.00	27.00	21.00	1.50
84"	25.50	14.00	30.00	23.00	1.50
96"	28.50	16.00	33.00	25.00	1.50
108"	31.50	18.00	36.00	27.00	1.50
120"	34.50	20.00	39.00	29.00	1.50

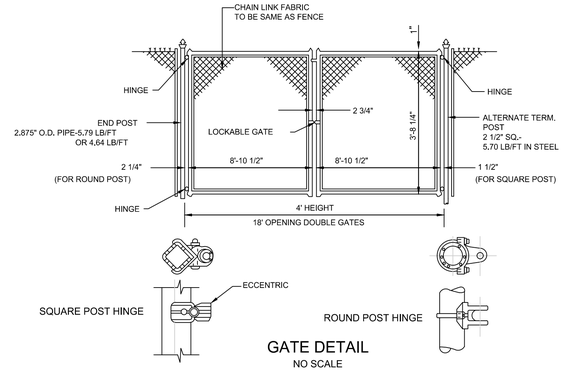
NOTES: DEPTH OF STILLING BASIN IS ½ PIPE DIAMETER UP TO THICKNESS OF FILTER LAYER. THIS TABLE IS BASED ON A 18" LAYER.

Martin B. Covington III, PE
SWM Program Engineer
DISTRIBUTED FOR COMMENT MAY 3, 2010
COMMENTS RECIEVED AT C.C. SURVEYORS MTG, MAY 19, 2010
EFFECTIVE DATE: JULY 29, 2010



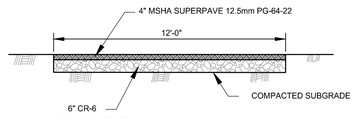
FENCE DETAIL

NO SCALE



GATE DETAIL

NO SCALE



SWM ACCESS ROAD CROSS SECTION DETAIL

NO SCALE

DATA SOURCES

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

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FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT QUANTITY POND DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

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: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 | SCALE: AS SHOWN | SHEET: 122 OF X

PROJECT NUMBER: 20211253.002A

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\SWM Plans\20211253.002A (SWM-x) Quantity Details and Specs.dwg Mar 04, 2025 4:39pm rlangrehr

CODES AND STANDARDS

A. All construction shall be completed in accordance with the following standards:

1. Maryland Department of Transportation, State Highway Administration, "Standard Specifications for Construction and Materials", Latest Edition.

B. Where conflicts occur between the MDOT-SHA "Standard Specifications for Construction and Materials" and these drawings, the more stringent requirement shall apply.

GENERAL REQUIREMENTS

A. The Contractor shall check and verify all dimensions shown on the contract drawings before proceeding with construction. All discrepancies and omissions shall be brought to the attention of the Structural Engineer of Record.

B. Scales shown on the drawings are for general information only. Do not scale the drawings.

C. The Contractor shall locate all utilities in the area of construction and prevent damage to them. Should damage occur to any utilities, the Contractor is required to repair the damage to the satisfaction of the Owner at the Contractor's expense.

D. Contractor shall coordinate detailing, fabrication and erection / installation with all related trades prior to submitting shop drawings for review. No shop drawings shall be used for construction which where returned noted as "Revise and Resubmit", "Rejected", "Returned for Correction", or words to that effect.

E. The Contractor shall review the civi drawings for other project requirements which impact the structural components.

F. No openings shall be made in any structural member unless specifically shown on the structural drawings or upon written approval from the Structural Engineer of Record.

G. The design loads shall not be exceeded during construction. Contractor shall be responsible for designing and installing temporary bracing / shoring as required during construction.

EARTHWORK, FILL & BACKFILL

A. Foundation designs are based on a geotechnical report prepared by Specialized Engineering dated February 20, 2024 and revised May 15, 2024.

B. All excavation, backfilling, and site preparation operations for the weir walls shall be completed in accordance with the project geotechnical report and under the direction and supervision of the Geotechnical Engineer of Record.

C. All fill & backfill materials for the weir walls shall be in accordance with the project geotechnical report and as approved by the Geotechnical Engineer of Record. Excessively wet and or frozen soils shall not be used as fill or backfill material.

D. The Contractor shall notify the Structural and Geotechnical Engineers of Record of all foundation and soil conditions which differ from those indicated in the contract documents and geotechnical report.

E. Foundation subgrades shall be proofrolled after clearing and stripping. Subgrade areas observed to rut or deflect excessively under the moving load shall be undercut and grades restored through placement & compaction of engineered fill as approved by the Geotechnical Engineer of Record.

F. The Contractor shall safeguard and protect all excavations, and adjacent structures, pavements, and utilities. All excavations shall be kept free of water. The Contractor is responsible for the design, installation, maintenance, and removal of all shoring, bracing, and dewatering required to properly construct the foundations and to protect adjacent structures, pavements and utilities. Do not remove shoring if it will cause settlement or damage to existing or new structures, pavement, and/or utilities.

G. Place fill & backfill in maximum 8 inch thick, loose, horizontal lifts where large mechanical compaction equipment is used, and in maximum 4 inch thick, loose, horizontal lifts where small mechanical compaction equipment is used.

H. Compact fill & backfill to at least 95% of the maximum dry density in accordance with ASTM D-698 or AASHTO T-99 (standard proctor). In place dry density of the fill & backfill shall be checked for each lift by a qualified representative of the Geotechnical Engineer of Record.

I. The Contractor shall refer to the civil drawings for all other work not shown on the structural drawings.

SPREAD FOOTING FOUNDATIONS

A. Spread Footing Foundations

1. Allowable soil bearing capacity of foundation subgrades shall be field verified and soil conditions approved by the Geotechnical Engineer of Record prior to placing foundations.
2. Edges of footings shall not be placed at a greater than 1 (vertical) to 2 (horizontal) slope with respect to any adjacent footing or excavation, without underpinning, shoring or bracing
3. Foundations shall not be placed in water or on frozen subgrade.

B. Continuous Wall Foundations

1. Construction of continuous wall foundations shall be in accordance with the project geotechnical report and under the supervision of the Geotechnical Engineer of Record.

C. Submittals

1. Certification from the Geotechnical Engineer of Record indicating suitability of proposed on-site and/or borrow material to be used as fill/backfill.

D. Inspections & Tests

1. See separate tables for Inspections and Tests. Inspections shall be performed in accordance with the MDOT-SHA "Standard Specifications for Construction and Materials" and as indicated on the drawings.

RETAINING WALLS

A. Weir Walls

1. Construction of weir walls shall be in accordance with the project geotechnical report and under the supervision of the Geotechnical Engineer of Record.
2. Stability of weir walls during construction is the responsibility of the Contractor. Do not overload weir walls with excessive lateral earth pressure caused by large mechanical compaction equipment.
3. Backfilling weir walls shall not be done until concrete has attained 75% design strength.
4. Backfill each side of weir walls in even lifts.
5. Backfill weir walls to final grades indicated on the Civil Drawings.

B. Submittals

1. Certification from the Geotechnical Engineer of Record indicating suitability of proposed on-site and/or borrow material to be used as fill/backfill.
2. Provide reinforcement shop drawings for concrete weir walls.

C. Construction Testing and Inspection

1. Allowable soil bearing capacity shall be verified in field by the Geotechnical Engineer of Record.

D. Insoections & Tests

CAST-IN-PLACE CONCRETE

A. All concrete construction shall be completed in accordance with the follow codes and standards:

1. Building Code Requirements for Reinforced Concrete (ACI 318-14)
2. Specifications for Structural Concrete (ACI 301-10)
3. Specification for Tolerances for Cast-In-Place Concrete Construction and Materials (ACI 117)
4. Manual of Standard Practice (CRSI)
5. ACI Detailing Manual (ACI SP-66)
6. Report on Chemical Admixtures for Concrete (ACI 212.3)
7. Specification for Hot Weather Concreting (ACI 305.1)
8. Standard Specification for Cold Weather Concreting (ACI 306.1)
9. Specification for Curing Concrete (ACI 308.1)
10. Guide to Formwork for Concrete (ACI 347)

B. Materials

1. All concrete materials shall comply with the MDOT-SHA "Standard Specifications for Construction and Materials"
2. Steel reinforcing: ASTM A 615 - Grade 60 Deformed. Provide epoxy powder coating as specified in MDOT-SHA Standard Specifications.

C. Miscellaneous

1. All concrete placement, finishing, and curing shall conform to the requirements contained in ACI 301 & MDOT-SHA Standard Specifications.
2. All concrete exposed to public view shall conform to the requirements contained in ACI 301.
3. Concrete shall not support design live loads until concrete has attained 75% of design strength.
4. The design of all formwork for the weir walls is the responsibility of the Contractor. Shop drawings and design calculations shall be signed & sealed and prepared under the direct supervision of a registered Professional Engineer in the project's jurisdiction.
5. Refer to the Civil drawings for all other work not shown on the Structural Drawings.
6. Do not weld reinforcing. Use epoxy coated tie wire to field assemble reinforcing steel. Turn free ends of tie wires away from concrete surfaces.
7. All structural members shall be poured for their full depths in one operation. No horizontal joints shall be placed in walls except as shown on the drawings without approval of the Structural Engineer of Record.

D. Mixes

1. All concrete shall be an MDOT-SHA standard mix as designated on the drawings.
2. All concrete shall have a slump per MDOT-SHA Standard Specifications unless otherwise noted. If a plasticizing or high range water reducing admixture is used, the slump shall be per MDOT-SHA Standard Specification limits.
3. All concrete exposed to freeze thaw cycles shall contain an air entraining admixture.

E. Submittals

1. The Contractor shall provide submittals for review in accordance with ACI 301.
2. In addition to the requirements of ACI 301, the Contractor shall submit the following:
   a. Shop drawings showing the size and location of all reinforcing steel.
   b. Formwork shop drawings signed and sealed by a Professional Engineer registered in the project's jurisdiction.
   c. Shop drawings indicating the size, type and location of construction and control joints in weir walls.

F. Inspections & Tests

1. See separate tables for Inspections and Tests. Inspections shall be performed in accordance with the MDOT-SHA "Standard Specifications for Construction and Materials" and as indicated on the drawings.

MISCELLANEOUS

A. Waterstops

1. Provide flexible PVC (Polyvinyl chloride) waterstops as manufactured by SIKA Greenstreak, or approved equal.
2. Waterstops shall comply with Corps of Engineers CRD-C572-74, MDOT-SHA Standard Specifications, applicable ASTM standards and shall be manufactured from virgin PVC materials.
3. Provide waterstop profiles as indicated in the drawings.
4. Provide factory made waterstop fabrications for intersections.
5. Use Manufacturers recommended tools & procedures for field welded splices.

B. Extruded Polystyrene Rigid Insulation Board

1. Provide closed-cell, moisture resistant extruded polystrene rigid insulation board complying with ASTM C578, Type IV, "Foamular NGX 250", manufactured by Owens Corning, or approved equal.
2. Extruded polystyrene rigid insulation board shall have a minimum compressive resistance of 25 PSI when tested in accordance with ASTM D1621.
3. Use Manufacturers recommended adhesives & accessories.

C. Polyurethane Sealant

1. Polyurethane sealants shall comply with ASTM C920, nonsag, one component, installed in accordance with Manufacturers written instructions.
2. Use "SIKA Flex 1a" or approved equal.

D. Submittals

1. Product data for waterstops, extruded polystyrene rigid insulation board & polyurethane sealant.

FOUNDATION SOILS DESIGN VALUES

Min. Allowable Bearing Capacity	2,000 psf
Frost Depth	30 inches

WEIR WALL SOILS DESIGN VALUES

Sliding Factor of Safety	1.5
Overturning Factor of Safety	2.0
Unit Weight of Backfill	120 pcf
Backfill Angle of Internal Friction	30°
Active Earth Pressure Coefficient (K_a)	0.33
Passive Earth Pressure Coefficient (K_p)	3.00

CONCRETE MIXES

ELEMENT	f'c (psi)[1]	MDOT-SHA MIX NUMBER	PROPERTIES	TYPE
Weir Wall & Foundation	4,500	Mix # 6	Per Section 902.10.03 Table 902A	Normal Weight

Notes:

1. f'c = concrete strength at 28 days

CONCRETE COVER

Footings	3" bot. & sides, 3" top
Weir Walls (Wet Side)	3"
Weir Walls (Dry Side)	2"

INSPECTIONS & TESTS

SOILS

Type of Inspection or Test	Frequency
Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Periodic
Verify excavations are extended to proper depth and have reached proper material.	Periodic
Perform classification and testing of compacted fill materials.	Periodic
Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	Continuous
Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	Periodic

CONCRETE

Type of Inspection or Test	Frequency
Verify compliance with the approved submittals.	Periodic
Inspect reinforcement. Verify size, placement, and clearances.	Periodic
Inspect waterstops cast in concrete. Verify type, placement, and location.	Periodic
Inspect formwork for shape, location and dimensions of the concrete member being formed.	Periodic
Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete in accordance with ACI 318 and ACI 301.	Continuous
Inspect concrete placement for proper application techniques.	Continuous
Verify maintenance of specified curing temperature and techniques.	Periodic

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Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

STORMWATER MANAGEMENT QUANTITY POND DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

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: 32574
EXPIRATION DATE: 1-16-2026

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2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
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2560 LORD BALTIMORE DRIVE
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CONTACT: MATT TAYLOR
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S-23-0027

DATE	BY	REVISIONS

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 123 OF X

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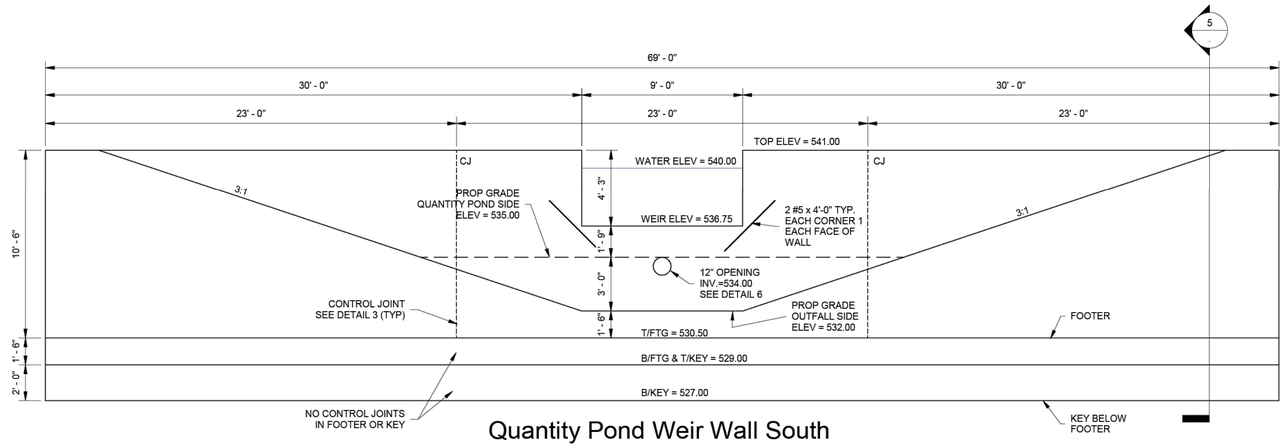
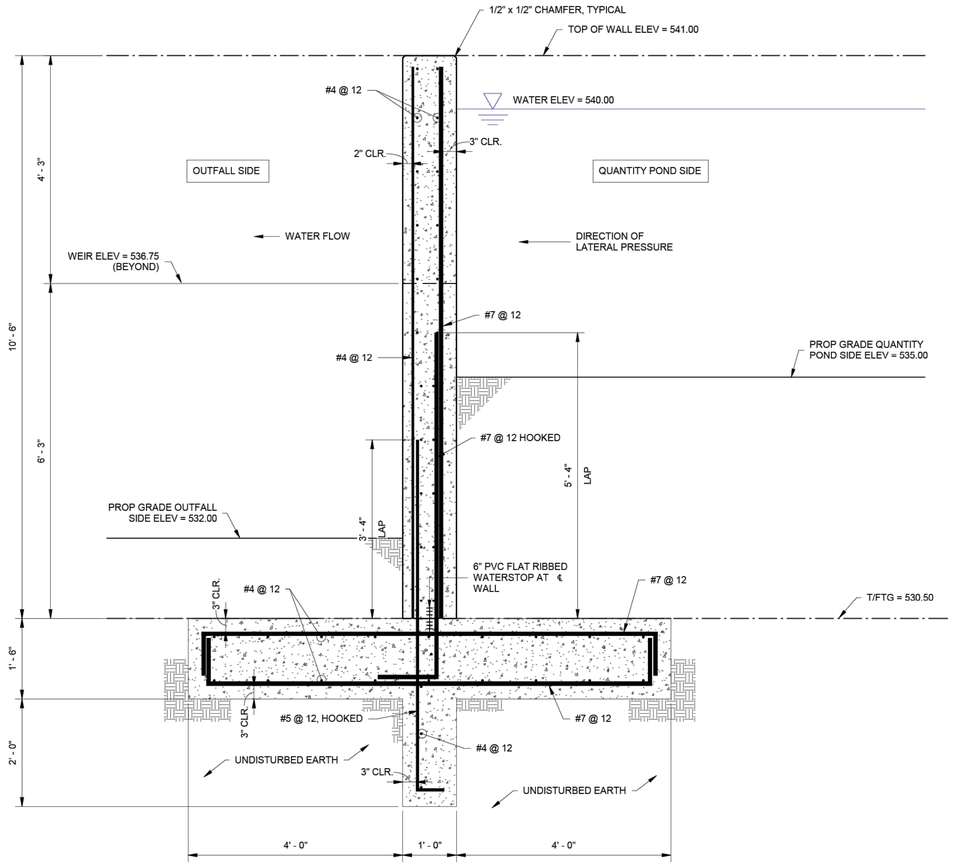


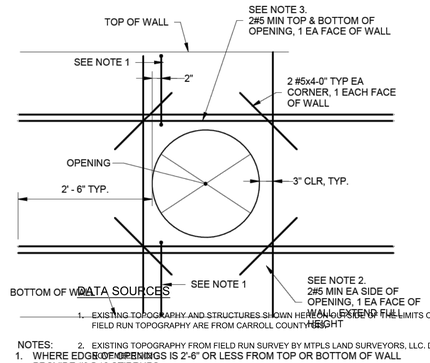
2 Quantity Pond Weir Wall South Elevation (1 Required)

SCALE: 1/4" = 1'-0"



5 Quantity Pond Weir Wall Section

SCALE: 3/4" = 1'-0"



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NOTES:

1. WHERE EDGE OF OPENINGS IS 2'-6" OR LESS FROM TOP OR BOTTOM OF WALL PROVIDE #3@12 STIRRUPS
2. PROVIDE VERTICAL REINF OF SAME SIZE & NUMBER AS BARS EA SIDE OF OPNG) AS BARS INTERRUPTED BY THE OPENING.
3. PROVIDE HORIZ REINF OF EQUIVALENT AREA OF BARS INTERRUPTED BY THE OPNG. PLACE EQUIVALENT AREA SPLIT BETWEEN TOP OF OPENING AND BOTTOM OF OPENING (ABOVE AND BELOW OPENING)

6 Concrete Wall Opening

SCALE: 3/4" = 1'-0"

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QUANTITY DETAIL SHT 4

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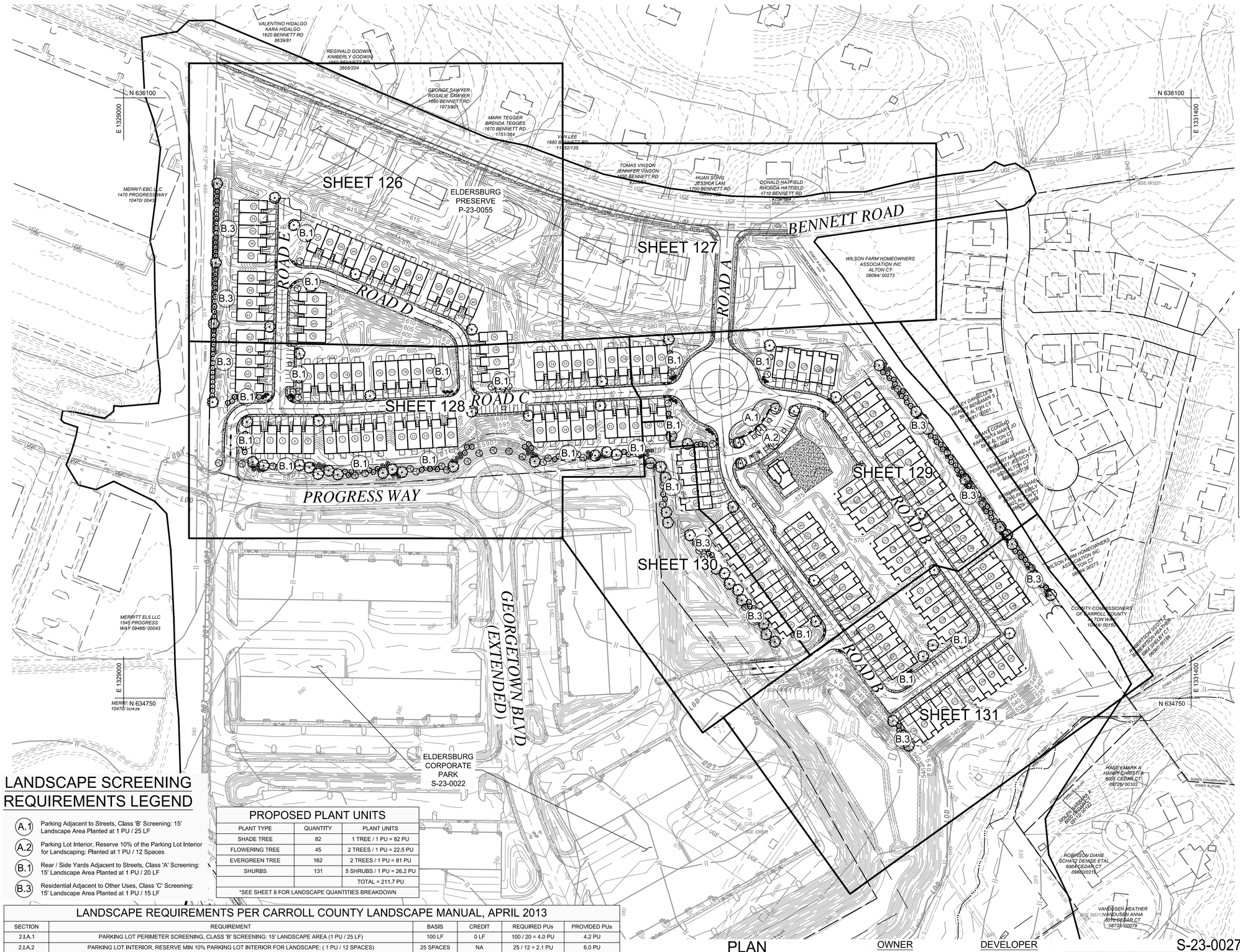

LANDSCAPE SCREENING REQUIREMENTS LEGEND

- (A.1) Parking Adjacent to Streets, Class 'B' Screening: 15' Landscape Area Planted at 1 PU / 25 LF
- (A.2) Parking Lot Interior, Reserve 10% of the Parking Lot Interior for Landscaping: Planted at 1 PU / 12 Spaces
- (B.1) Rear / Side Yards Adjacent to Streets, Class 'A' Screening: 15' Landscape Area Planted at 1 PU / 20 LF
- (B.3) Residential Adjacent to Other Uses, Class 'C' Screening: 15' Landscape Area Planted at 1 PU / 15 LF

PROPOSED PLANT UNITS

PLANT TYPE	QUANTITY	PLANT UNITS
SHADE TREE	82	1 TREE / 1 PU = 82 PU
FLOWERING TREE	45	2 TREES / 1 PU = 22.5 PU
EVERGREEN TREE	162	2 TREES / 1 PU = 81 PU
SHURBS	131	5 SHRUBS / 1 PU = 26.2 PU
		TOTAL = 211.7 PU
*SEE SHEET 8 FOR LANDSCAPE QUANTITIES BREAKDOWN		

LANDSCAPE REQUIREMENTS PER CARROLL COUNTY LANDSCAPE MANUAL, APRIL 2013

SECTION	REQUIREMENT	BASIS	CREDIT	REQUIRED PUs	PROVIDED PUs
2.I.A.1	PARKING LOT PERIMETER SCREENING, CLASS 'B' SCREENING: 15' LANDSCAPE AREA (1 PU / 25 LF)	100 LF	0 LF	100 / 20 = 4.0 PU	4.2 PU
2.I.A.2	PARKING LOT INTERIOR, RESERVE MIN 10% PARKING LOT INTERIOR FOR LANDSCAPE: (1 PU / 12 SPACES)	25 SPACES	NA	25 / 12 = 2.1 PU	6.0 PU
2.I.B.1	REAR/SIDE YARDS ADJACENT TO STREETS, CLASS 'A' SCREENING: 15' LANDSCAPE AREA (1 PU / 20 LF)	1,865 LF	0 LF	1,865 / 20 = 93.3 PU	113.6 PU
3.I.B.3	CLASS C SCREENING BETWEEN SINGLE-FAMILY RESIDENTIAL AND OTHER USES, 15' LANDSCAPE AREA (1 PU / 15 LF)	1,310 LF	0 LF	1,310 / 15 = 87.3 PU	87.9 PU
		TOTAL		186.7 PU	211.7 PU

PLAN

100 0 100 200

SCALE:1"=100'

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DATE	BY	REVISIONS

FINAL LANDSCAPE PLAN OWNER CERTIFICATION FORM

I certify that I have reviewed this Final Landscape Plan; that I have read and understood the regulations presented int eh Carroll County Landscape Manual; and I agree to comply with these regulations and all applicable policy, guidelines and ordinances. I agree to certify the implementation of this approved Final Landscape Plan no later than one (1) year from the date of approval of this plan to the Department of Planning, Bureau of Resource Management, Room 209, 225 N. Center Street, Westminster, MD 21157-5194.

Applicant Signature	Date	Print Name
Address	Street	Phone No.
City	State	Zip
File #		

DATA SOURCES

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5. DOWNSTREAM CONDITIONS TAKEN FROM THE "OAK CREEK FLOODPLAIN STUDY" DATED SEPT 2009.
6. ENVIRONMENTAL DELINEATION PREFORMED BY ECO SCIENCE PROFESSIONALS NOVEMBER 2021.

CENTURY ENGINEERING
A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

LANDSCAPE KEY SHEET

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
ELDERSBURG, MD
TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

PROFESSIONAL CERTIFICATION

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LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

SHEET: 125 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (FLP) Final Landscape Plan.dwg Mar 04, 2025 4:40pm rlangrehr



PLAN

30 0 30 60

SCALE: 1"=30'

MATCHLINE SEE SHEET 127

MARYLAND STATE PLANE
NAD 83/2011 - NAVD 88

LEGEND

- Property line
- Adjoiner Property line
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- 400 Existing Field Run Major Contour
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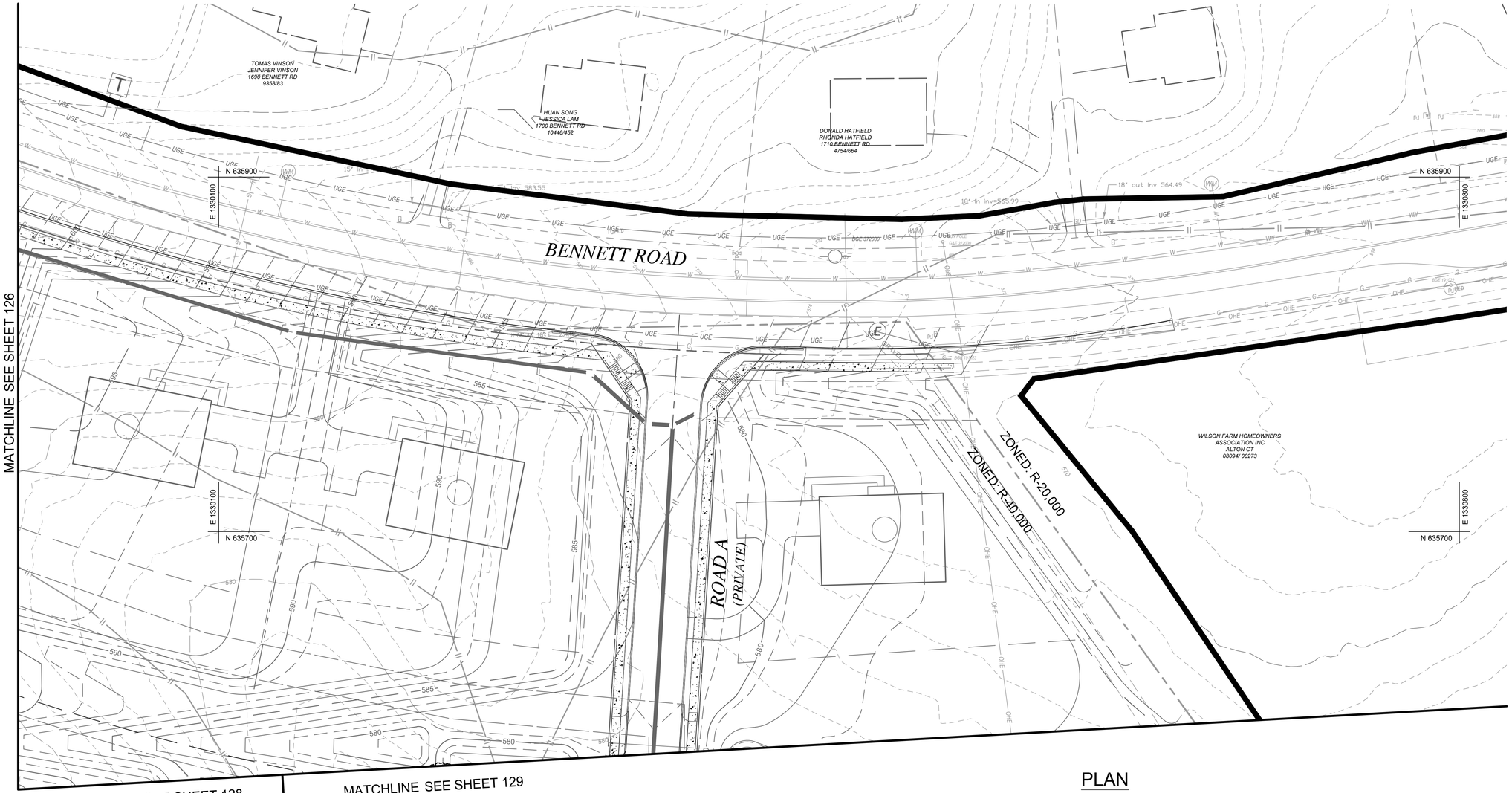

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SCALE: 1"=30'

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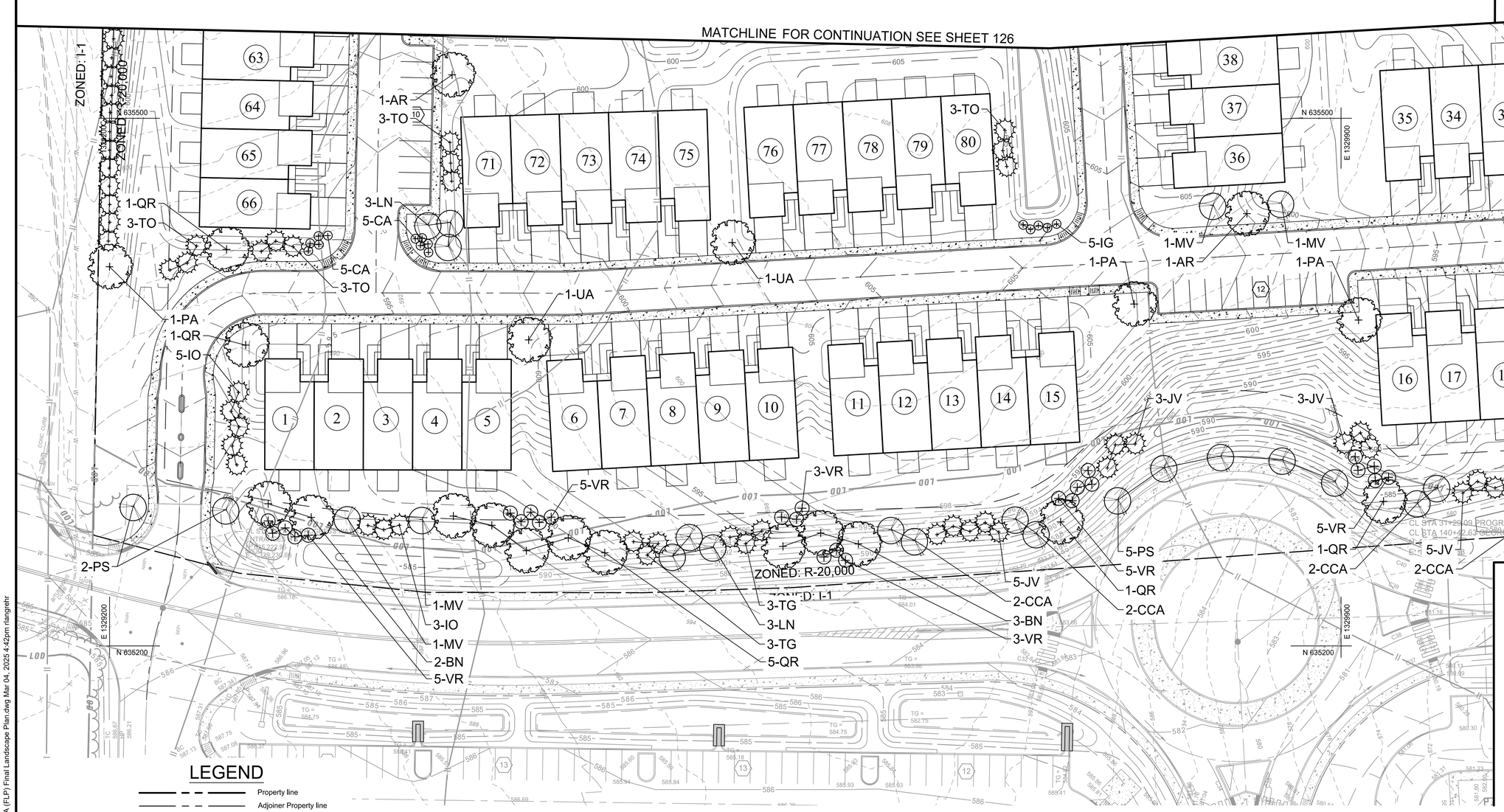

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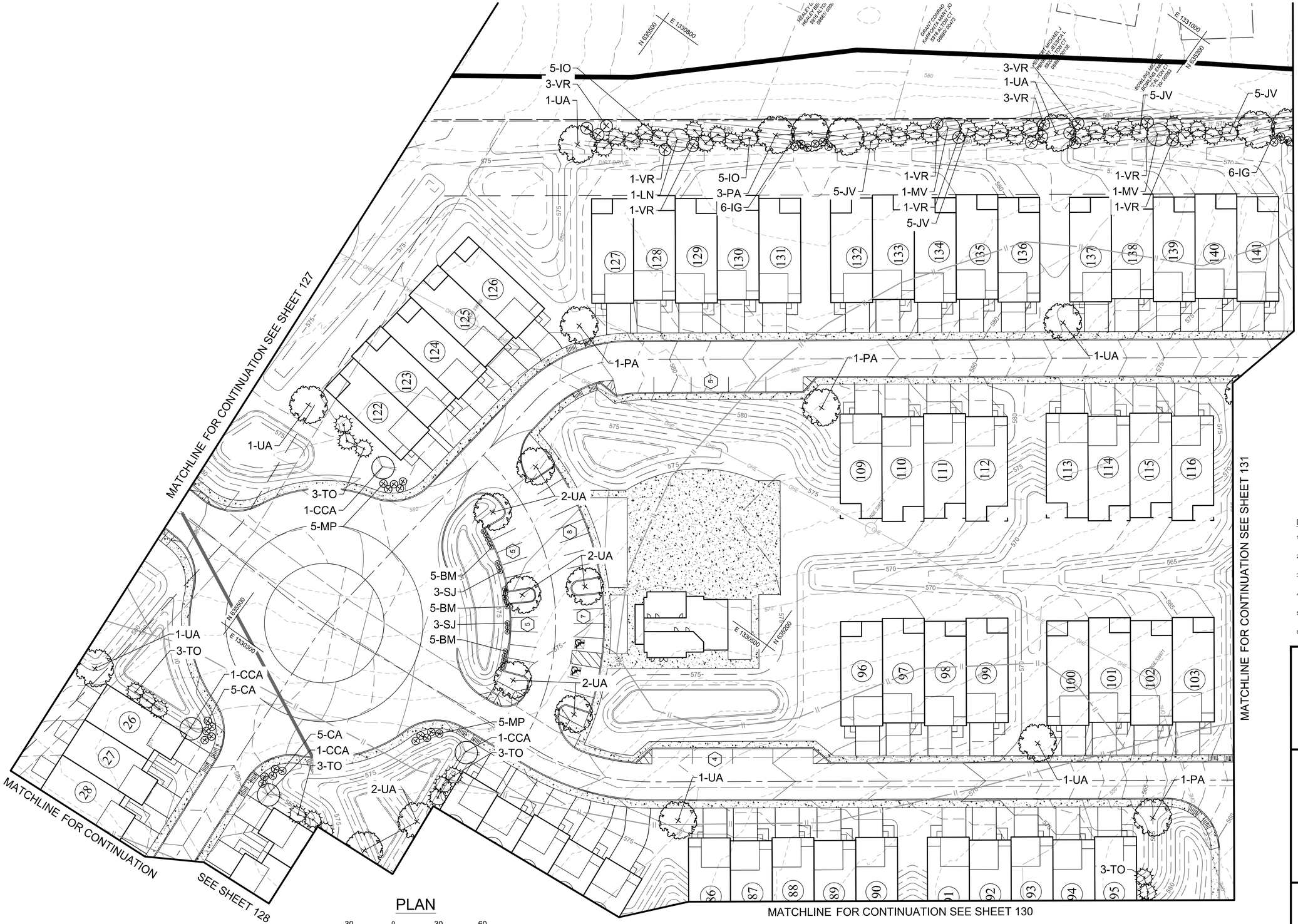

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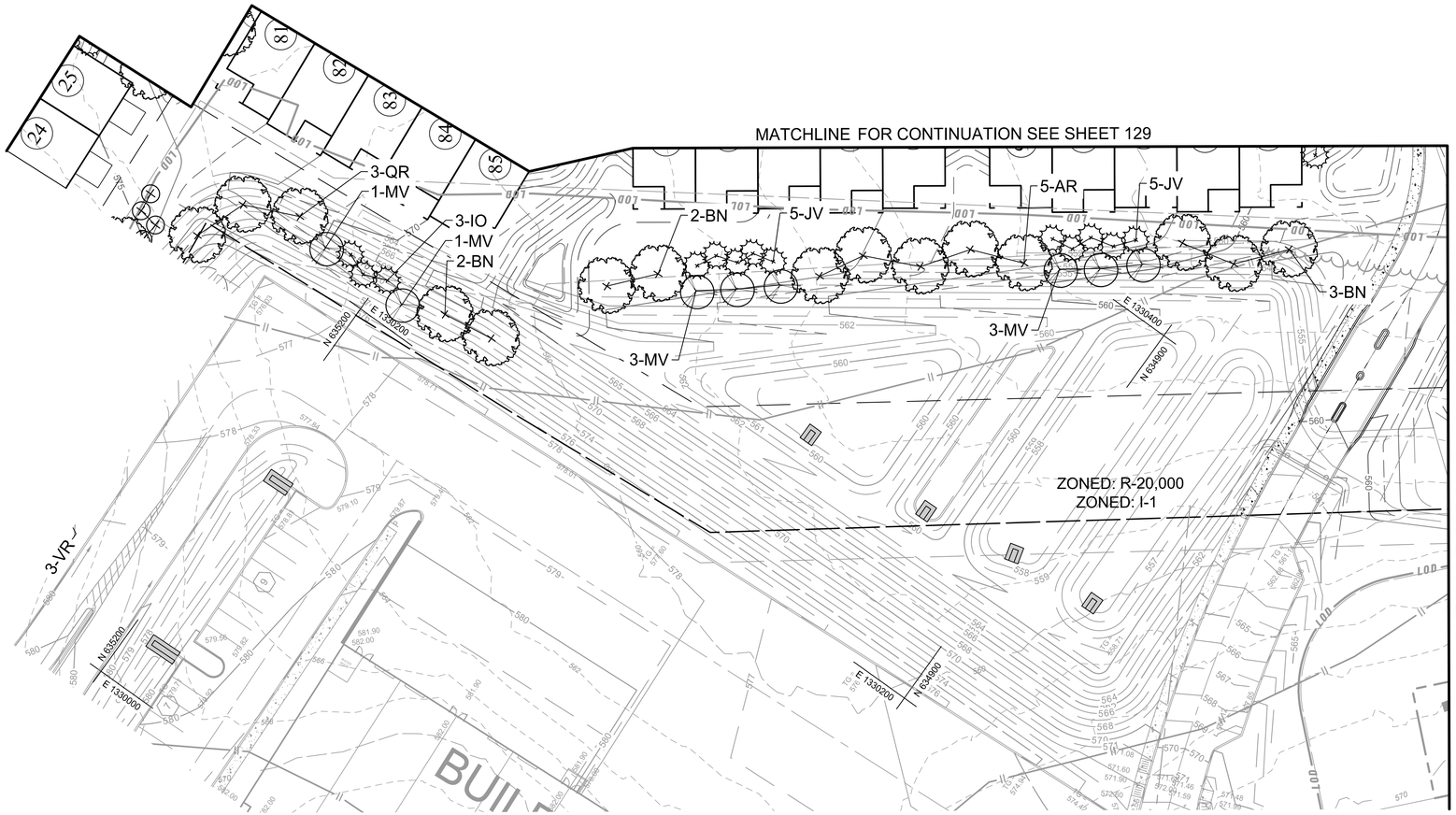

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MARYLAND STATE PLANE NAD 83/2011 - NAVD 88

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MATCHLINE FOR CONTINUATION SEE SHEET 130

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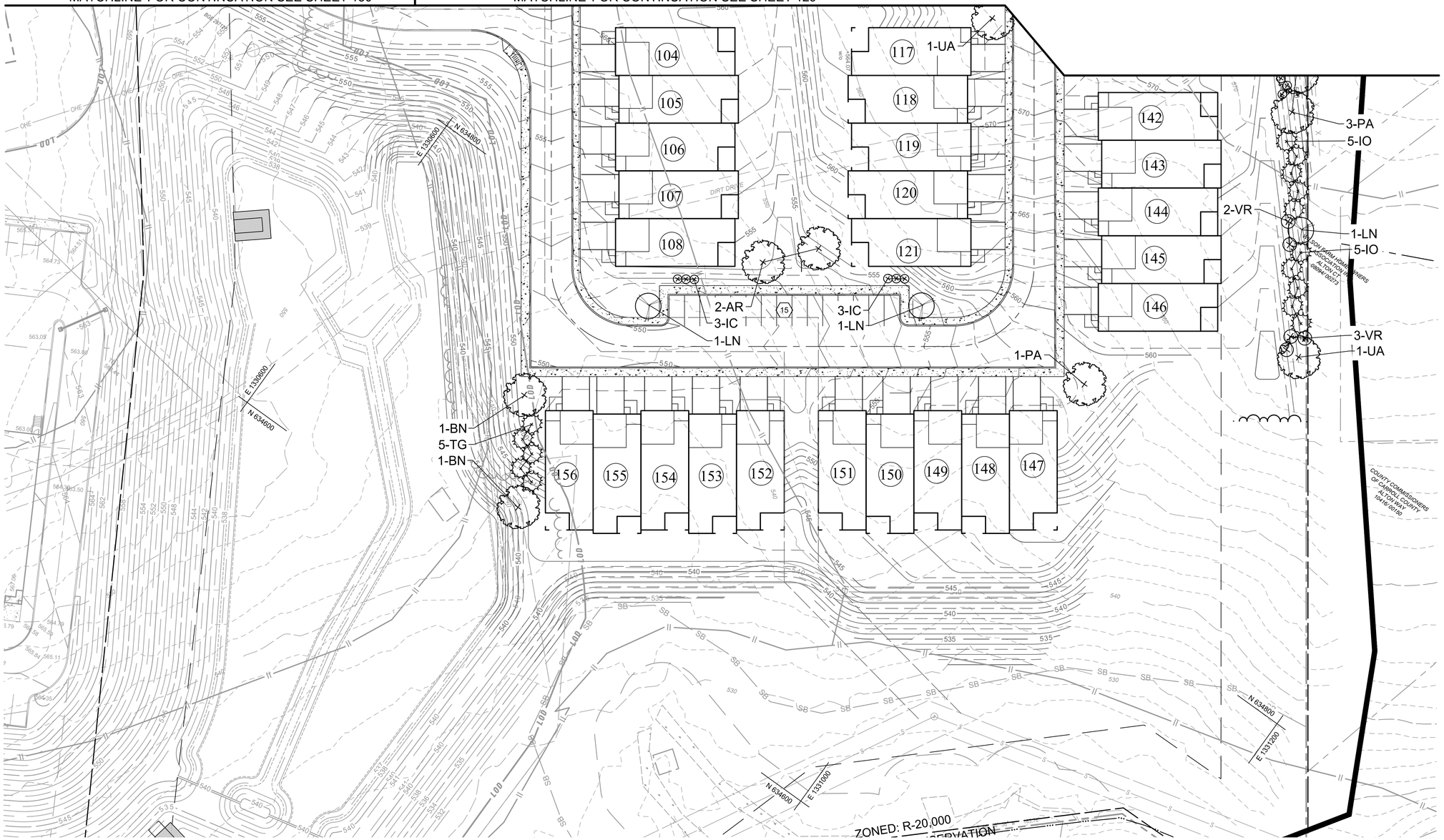

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CARROLL COUNTY LANDSCAPE SPECIFICATIONS

1. All plants shall be identified in accordance with the latest Edition of Hortus Third, by "The Staff of the Hortorium".
2. All nursery stock shall conform to American Association of Nurserymen, Inc., standards as described in American Standard for Nursery Stock, current ANSI Z-60.1 specifications.
3. Landscape specifications shall conform to Landscape Contractors Association Specification Guidelines for Maryland, Washington, D.C., and Virginia, latest edition and Century Engineering, Inc. specifications. All nursery stock shall be planted in accordance with the procedures outlined in the guidelines.
4. Three (3) inches of topsoil on all disturbed areas to be landscaped, seeded or sodded is required.
5. A separate plan labeled "Landscape Plan" (may be combined with Forest Conservation Plan) is required. Landscape requirements may not be combined with the Forest Conservation Plan.

PLANTING NOTES

1. Plant material substitutions will not be accepted without approval of the Landscape Architect.
2. All Shrubs and groundcover areas shall be planted in continuous prepared planting beds.
3. All shrub beds shall be mulched with hardwood mulch as detailed and specified except where noted on plans.
4. Maintain positive drainage out of planting beds at a minimum of two percent slope.
5. Plant quantities are provided for the convenience of the contractor. If discrepancies exist between quantities shown on the plan and those shown on the plant list, the quantities on the plan shall take precedence.
6. All areas within contract limits disturbed during or prior to construction not designated to receive plantings and mulch shall be fine graded and seeded in accordance with planting and construction.
7. The contractor shall notify Miss Utility, (800-257-7777) a minimum of three working days prior to planting and construction.
8. Contractor shall test pit prior to plant installation.

IRRIGATION METHODS

1. The use and maintenance of drip irrigation bags or rings around the trunks of newly-planted trees.
2. Hand watering, with water sources provided through either or both of the following methods:
   - 2.1. Exterior faucets on a building, located so that the farthest planting can be reached by a length of hose (100 feet recommended).
   - 2.2. A quick-coupling system, with connections located so that the farthest planting can be reached by a length of hose (100 feet recommended).
   - 2.3. A water tank or truck.
3. An automatic irrigation system with a moisture-sensing device and-or rain shut-off switch. If using an automatic irrigation system, the following requirements shall be met:
   - 3.1. All irrigation systems shall be designed to minimize vandalism.
   - 3.2. Sprinklers must not over-spray onto pavement. Sprinkler and spray heads are not permitted for planting areas less than eight (8) feet in width, to prevent overspray and run-off. Other irrigation methods shall be specified in such areas.
   - 3.3. Place lawn areas in a separate irrigation zone from shrub and groundcover beds so that each planting type can receive adequate irrigation without over-watering areas with lower irrigation needs.
   - 3.4. Drip irrigation is recommended for shrub and groundcover beds. Drip irrigation shall be used in areas smaller than five (5) feet in any direction.
4. The use of rainwater harvesting techniques combined with the use of harvested rainwater for landscape irrigation is encouraged.

NON-INVASIVE NOTE

1. Non-invasive vegetation that is native or regionally appropriate for local growing conditions has been selected to promote biodiversity.

MINIMUM LANDSCAPE MAINTENANCE REQUIREMENTS

1. A two year plant replacement warranty and two years of maintenance are required by the County.
2. Lawn areas shall be mowed to a height of 2 to 3 inches and not allowed to reach a height of 4 inches before mowing.
3. All curbs and walks shall be edged as needed.
4. All lawn areas adjacent to building faces or structures shall be trimmed.
5. A slow release nitrogen balanced fertilizer with a 2-1-1 ratio shall be applied at a rate of 2 pounds of nitrogen per 1000 square feet in September, October, and February.
6. Lime shall be applied at the rate determined by a soils report.
7. It is recommended that lawn areas be treated in mid-March to early April with pre-emergent herbicide (Betasan) or equal applied at the manufacturer's rate.
8. A post-emergent herbicide (Trimec) or equal is recommended to be sprayed on lawn areas in the late spring or early fall. Follow manufacturer's rates and recommendations.
9. Insecticides and fungicides are recommended for insect and disease contol.
10. Reseed bare areas of lawn as necessary. Yearly aeration is recommended.
11. All trash, litter, and debris shall be removed from lawn areas, parking lots, and shrub beds as needed.
12. Mulch all shrub and groundcover beds yearly with 3 inches of shredded hardwood bark.
13. Permit shrubs and trees to grow and enlarge to their design size. Consult project Landscape Architect for details.
14. Prune trees in accordance with Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas.
15. Maintenance of landscape areas includes, but is not limited to weeding, mulching, mowing, trimming, pruning, edging, cultivation, seeding, fertilization, watering, pest control, and any other maintenance necessary to ensure healthy, vigorous plant growth and well-kept property condition.
16. Landscaping elements such as walls and fences shall be constructed in a sound workmanlike manner with adequate support or footings and must be repaired or replaced as needed to preserve an attractive appearance and to function as intended.
17. Any dead plants or plants which fail to show healthy growth must be removed and replaced within 60 days of identification of deteriorated health or notification by the County. Replacement may be delayed until the next growing season only if the 60 day period occurs during a time of year not suitable for planting.
18. All replacement plants must meet the size and other characteristics of newly planted material as required in the manual.
19. Trees and large shrubs must be adequately supported, when necessary to insure proper growth. Tree staking must be removed prior to final inspection, with the exception of plants replaced during the warranty period and not yet established.
20. It is desirable to avoid excessive use of fertilizers and pesticides to minimize impacts on water quality. It is recommended that fertilizer application be need-based rather than as an automatic component of maintenance schedules and when appropriate, slow-release or natural fertilizers be selected over highly-soluble chemical fertilizers.
21. The implementation of an Integrated Pest Management (IMP) program is recommended to prevent and treat pest problems.

STANDARDS & SPECIFICATIONS FOR PLANTING

TIMETABLE FOR PLANTING

ALL B&B AND CONTAINER PLANTING SHALL BE DONE BETWEEN MARCH 25 AND APRIL 30, FOR SPRING PLANTING, AND BETWEEN OCTOBER 15 AND DECEMBER 1 FOR FALL PLANTING.

PLANT MATERIAL

SEE PLANT LIST FOR EACH PLANTING AREA.

PLANTING SITE PREPARATION

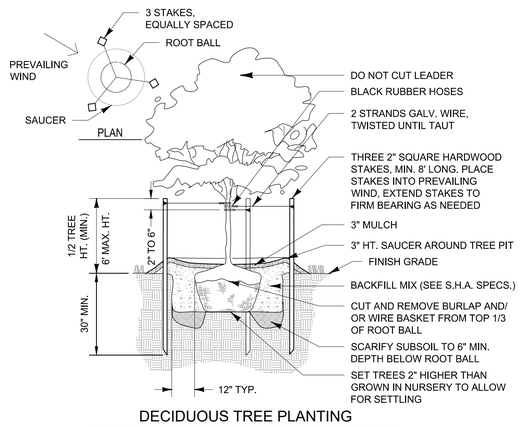
CONTRACTOR SHALL ERADICATE ALL INVASIVE PLANT MATERIAL WITHIN PLANTING AREAS PRIOR TO PLANTING. ONCE THE PLANTING AREA IS CLEAR OF INVASIVES, PREPARE A PLANTING PIT FOR EACH TREE AND SHRUB. THE AREA DISTURBED FOR THE PIT IS TO BE MULCHED WITH A SHREDDED HARDWOOD PRODUCT. SOIL TESTING IS RECOMMENDED FOR MACRONUTRIENT DEFICIENCIES AND pH LEVELS. PROPER SOIL AMENDMENTS SHOULD BE MADE IF DEEMED NECESSARY.

PLANT MATERIAL STORAGE

IT IS RECOMMENDED THAT PLANTING OCCUR WITHIN 24 HOURS OF DELIVERY TO THE SITE. PLANT MATERIALS LEFT UNPLANTED FOR MORE THAN 24 HOURS SHALL BE PROTECTED FROM DIRECT SUN AND WEATHER AND KEPT MOIST. PLANT MATERIAL SHOULD NOT BE LEFT UNPLANTED FOR MORE THAN TWO WEEKS.

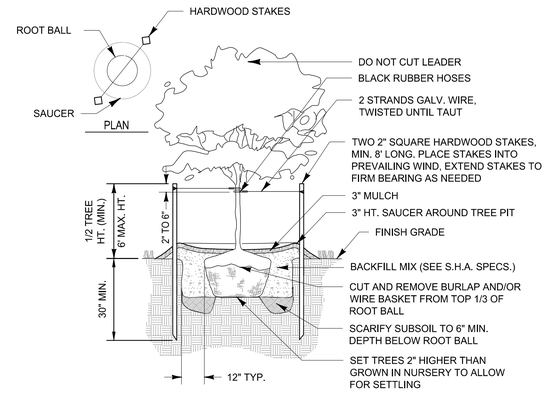
PLANTING METHOD

SEE PLANTING DETAILS FOR EACH TYPE OF PLANT MATERIAL USED .
ALL TREES SHALL BE INSTALLED WITH TREE SHELTERS.



DECIDUOUS TREE PLANTING

Not To Scale



FLOWERING TREE PLANTING

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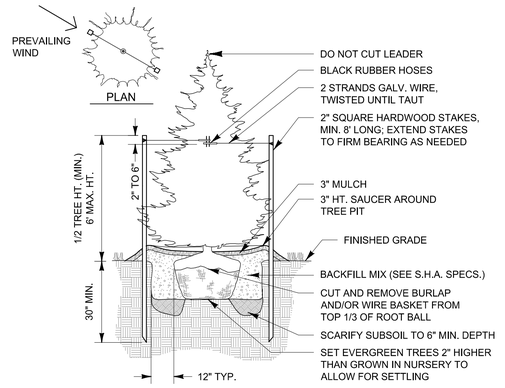
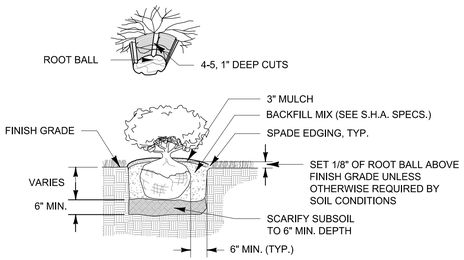


EVERGREEN TREE PLANTING

Not To Scale

NOTES:
1. FOR CONTAINER SHRUBS, COMPLETELY REMOVE ALL NON-BIODEGRADABLE CONTAINERS AND SCARIFY ROOTBALL BY USING A SHARP BLADE AND MAKING 4 TO 5 ONE INCH CUTS THE LENGTH OF THE ROOTBALL.
2. FOR B&B SHRUBS, CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOTBALL.



SHRUB PLANTING

Not To Scale

KEY	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
			MAJOR DECIDUOUS TREES			
AR	11	*Acer rubrum 'Franksred' RED SUNSET*	Red Sunset Red Maple	2" - 2 ½" cal.	30' O.C.	B&B
BN	17	*Betula nigra 'Dura-Heat'*	River Birch	2" - 2 ½" cal.	30' O.C.	B&B
PA	17	*Platanus x acerifolia 'Bloodgood'*	London Plane Tree	2" - 2 ½" cal.	60' O.C.	B&B
QR	14	*Quercus rubra*	Red Oak	2" - 2 ½" cal.	50' O.C.	B&B
UA	23	*Ulmus americana 'Princeton'*	American Elm	2" - 2 ½" cal.	50' O.C.	B&B
TOTAL	82					
			MINOR DECIDUOUS TREES			
CCA	14	*Cercis canadensis*	Eastern Redbud	1" - 1 ½" cal.	25' O.C.	B&B
LN	10	*Lagerstroemia 'Natchez'*	Natchez Crape Myrtle	1" - 1 ½" cal.	15' O.C.	B&B; Multi-stem, 3 cane min.
MV	14	*Magnolia virginiana*	Sweet Bay Magnolia	1" - 1 ½" cal.	20' O.C.	B&B; Multi-stem, 3 cane min.
PS	7	*Prunus serrulata "Okame'*	Flowering Cherry	1" - 1 ½" cal.	20' O.C.	B&B
TOTAL	45					
			EVERGREEN TREES			
IO	45	*Ilex opaca*	American Holly	6' - 8' ht.	12' O.C.	B&B; full to ground
JV	46	*Juniperus virginiana*	Red Cedar	6' - 8' ht.	15' O.C.	B&B; full to ground
TG	44	*Thuja 'Green Giant'*	Giant Arborvitae	6' - 8' ht.	15' O.C.	B&B; full to ground
TO	27	*Thuja occidentalis 'North Pole'*	North Pole Arborvitae	6' - 8' ht.	5' O.C.	B&B; full to ground
TOTAL	162					
			SHRUBS & VINES			
BM	15	*Buxus microphylla 'Winter Gem'*	Japanese Boxwood	18" - 24" ht.		Container
CA	20	*Clethra alnifolia 'Sixteen Candles'*	Summer Sweet Sixteen Candles	24" - 36" ht.		Container
IC	6	*Ilex crenata*	Japanese Holly (seedless)	24" - 36" ht.		Container
IG	17	*Ilex glabra 'Shamrock'*	Inkberry	18" - 24" ht.		Container
MP	10	*Myrica pennsylvanica*	Northern Bayberry (seedless)	24" - 36" ht.		Container
SJ	6	*Spiraea japonica x 'Anthony Waterer'*	Japanese Spirea	18" - 24" ht.		Container
VR	57	*Viburnum x rhytidophylloides 'Alleghany'*	Viburnum	24" - 36" ht.	6' O.C.	Container
TOTAL	131					

DATA SOURCES

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A Kleinfelder Company
10710 Gilroy Road, Hunt Valley, MD 21031
Phone: 443.589.2400 www.centuryeng.com

FINAL SITE DEVELOPMENT PLANS
FOR 55+ RETIREMENT VILLAGE

LANDSCAPE NOTES AND DETAILS

ELDERSBURG OVERLOOK

PROGRESS WAY / GEORGETOWN BOULEVARD
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TAX MAP: 73 | GRID: 6 | PARCEL: 246
ELECTION DISTRICT 5 CARROLL COUNTY, MD

OWNER
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2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
PHONE NO: 410-369-1207

DEVELOPER
ST. JOHN PROPERTIES, INC.
2560 LORD BALTIMORE DRIVE
BALTIMORE, MD 21244
CONTACT: MATT TAYLOR
PHONE NO: 410-369-1207

S-23-0027

DATE	BY	REVISIONS

PROFESSIONAL CERTIFICATION

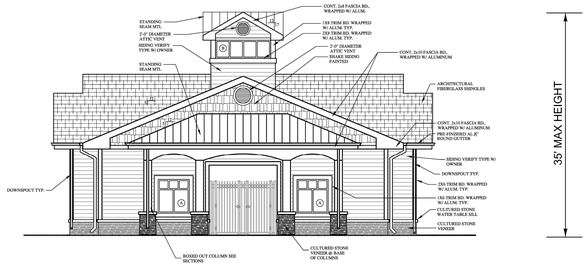
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NUMBER: 32574
EXPIRATION DATE: 1-16-2026

DATE: 12-20-2024 SCALE: AS SHOWN
PROJECT NUMBER: 20211253.002A

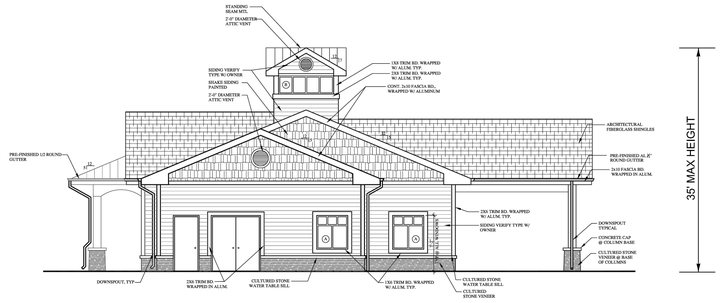
SHEET: 132 OF X

T:\2021\Facilities\20211253.002A Beaty Property Eldersburg Overlook\CIVIL\CADD\Drawings\20211253.002A (FLP) Final Landscape Plan.dwg Mar 04, 2025 4:43pm rlangrehr



POOL HOUSE FRONT EXTERIOR ELEVATION

NOT TO SCALE



POOL HOUSE RIGHT EXTERIOR ELEVATION

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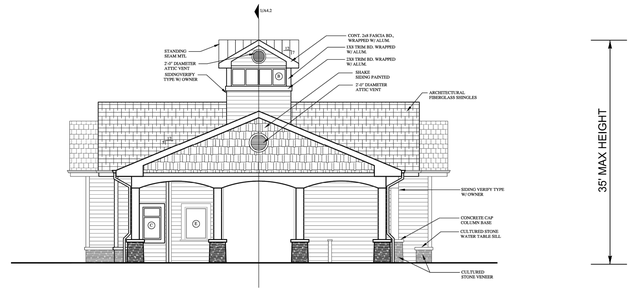

POOL HOUSE REAR EXTERIOR ELEVATION

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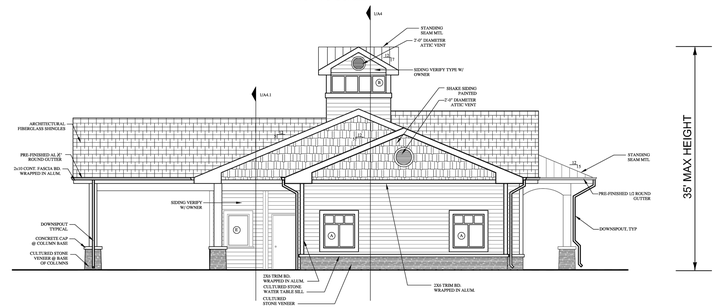


POOL HOUSE LEFT EXTERIOR ELEVATION

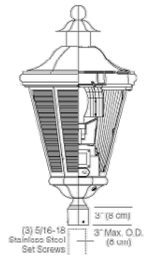
NOT TO SCALE



TOWNHOUSE FRONT ELEVATION

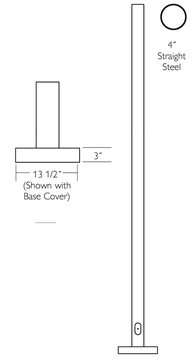
NOT TO SCALE

* 35' MAX HEIGHT



HADCO OLD WORLD LIGHT

NOT TO SCALE



HADCO P170 LIGHT POLE (16')

NOT TO SCALE

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