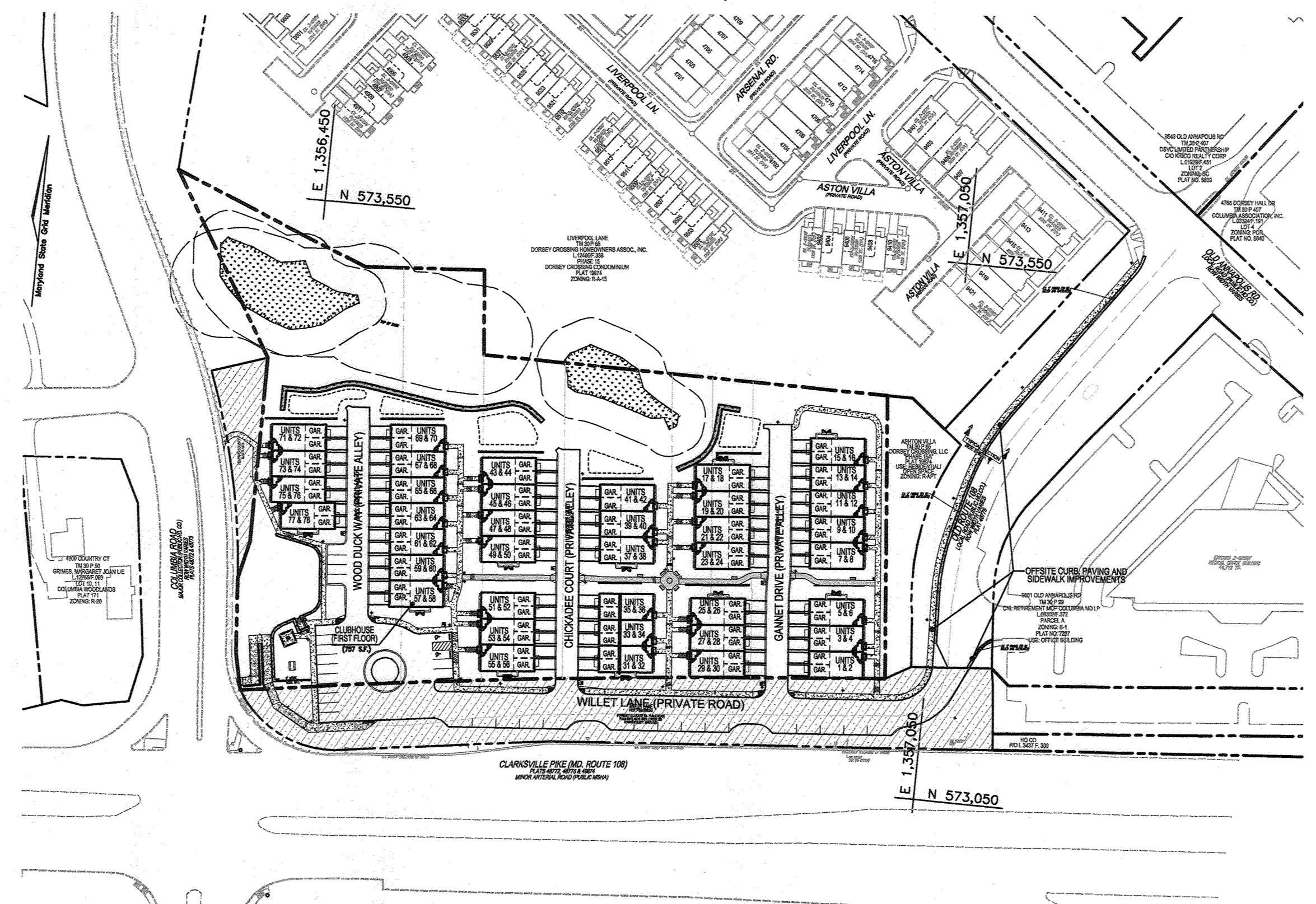


GENERAL NOTES:

- 1. PROJECT BACKGROUND: SUBDIVISION NAME: COLUMBIA WOODLANDS (PLAT BOOK 1, PAGE 71) GRID: 9 TAX MAP: 30 SECTION/AREA: N/A LOT/PARCEL: PARCELS 67, 51, 52, 288, 53, 54, AND 55 ZONING: R-APT / R-20 BA-20-003V; AA-21-010 (ZB/BA) 2ND TRACT AREA: 4.49 ACRES AREA OF PERPETUAL EASEMENT: 1.08 AC. NUMBER OF PROPOSED UNITS: 78 APARTMENTS TOTAL AREA OF PROJECT: 5.57 ACRES± (TRACT AREA 4.49 ACRES + PERPETUAL EASEMENT 1.08 ACRES) AREA OF PROPOSED R/W: 0.00 AC. OPEN SPACE REQ.: N/A GREEN AREA PROVIDED: 2.82 ACRES± WATER & SEWER: WATER CONTRACT NO. 223-W/S SEWER CONTRACT NO. 223-W/S AND 14-1374 ECP-15-012, WP-16-112, S-16-004, P-17-003, F-21-023 (PLAT 26183-84), BA-20-003V; AA-21-010, WP-22-014, L-21387/F/246

DORSEY OVERLOOK SITE DEVELOPMENT PLAN APARTMENT UNITS 1-78 PARCEL 'A' HOWARD COUNTY, MARYLAND



LOCATION MAP SCALE: 1"=100'

AMENITY AREA TABULATION: SECTION 112.1.G AMENITY AREAS: R-APT DEVELOPMENTS SHALL INCLUDE AN AMENITY AREA OR AREAS. A MINIMUM OF 10% OF THE NET ACREAGE SHALL BE PROVIDED AS OPEN SPACE WHICH MUST BE DESIGNED AS AN AMENITY AREA. NO AMENITY AREA SHALL BE SMALLER THAN 0.25 ACRES. THE AMENITY AREA SHALL INCLUDE SEATING AND TREES PROPORTIONAL TO THE SIZE OF THE AMENITY AREA. AMENITY AREAS SHALL BE CONNECTED BY PEDESTRIAN AND BICYCLE IMPROVEMENTS THAT LINK WITH EXISTING AND FUTURE CONNECTIONS TO SURROUNDING DEVELOPMENTS. REQUIRED = 10% X NET AREA = 10% X 5.57 ACRES = 0.557 ACRES OR 24,263 SF PROVIDED = 0.56 ACRES OR 24,492± SF LAND AREA

BENCHMARKS: HOWARD COUNTY BENCHMARK - 308A (CONC. MONUMENT) N 573149.04 E 1357083.21 ELEV. 397.20 LOCATION: OLD ROUTE 108, 480' SOUTH OF OLD ANNAPOLIS ROAD HOWARD COUNTY BENCHMARK - 308B (CONC. MONUMENT) N 572298.12 E 1353001.79 ELEV. 409.16 LOCATION: SOUTH SIDE OF ROUTE 108, 700' EAST ENTRANCE TO CENTENAL PARK

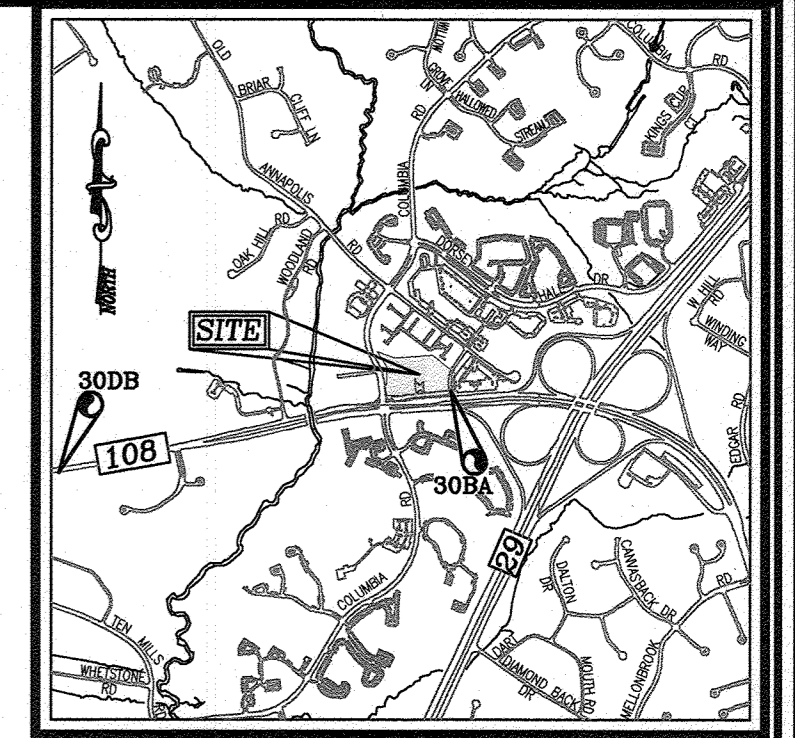


Table with 6 columns: SUBDIVISION AREA, FLOODPLAIN, STEEP SLOPES, NET AREA, UNITS PERMITTED, UNITS PROPOSED. Values: 4.49 ACRES, 0.00 ACRES, 0.00 ACRES, 4.49 AC, 112, 78 APARTMENTS

ADDRESS CHART table with columns: BUILDING, UNIT, ADDRESS. Lists units 1-78 and their corresponding addresses like 4000-A GANNET DRIVE.

LEGEND:

- PROPERTY LINE
RIGHT-OF-WAY LINE
ADJACENT PROPERTY LINE
EXISTING CURB AND GUTTER
PROPOSED CURB AND GUTTER
PROPOSED CONCRETE
STAMPED CONCRETE SIDEWALK
PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A L-21387/F-246

SHEET INDEX

Table with 3 columns: COVER SHEET, DESCRIPTION, SHEET NO. Lists various sheets like SITE LAYOUT PLAN, EXISTING CONDITIONS, etc.

OWNER/DEVELOPER: DORSEY OVERLOOK, LLLP C/O J. KIRBY DEVELOPMENT, LLC 5670 B FURNACE AVENUE ELKRIODE, MARYLAND 21075 PHONE: (410) 788-0027

GENERAL NOTES (CONT'D)

- 46. REFERENCE VARIANCE PETITION BOA CASE NO. BA-20-003V, APPROVED OCTOBER 26, 2020. A. SECTION 112.1.D.4.A.(1)(A) A1. REDUCE THE REQUIRED 30' STRUCTURE SETBACK TO 8.74' FOR THE PURPOSE OF RETAINING WALL ALONG COLUMBIA ROAD. A2. REDUCE THE REQUIRED 30' USE SETBACK TO 10.41' FOR THE PURPOSE OF PRIVATE DRIVE, SIDEWALK AND PARKING. B. SECTION 112.1.D.4.C.(2)(A) B1. REDUCE THE REQUIRED 50' APARTMENT SETBACK TO 40.67' FOR THE PURPOSE OF AN APARTMENT BUILDING AT NORTH SITE BOUNDARY. B2. REDUCE THE REQUIRED 50' APARTMENT SETBACK TO 20.70' FOR THE PURPOSE OF APARTMENTS ALONG EAST SITE BOUNDARY. C. SECTION 112.1.D.4.C.(2)(B) C1. REDUCE THE REQUIRED 20' OTHER STRUCTURES AND USE SETBACK TO 16.05' FOR THE PURPOSE OF SIDEWALK ALONG THE NORTHERN BOUNDARY. C2. REDUCE THE REQUIRED 20' BUILDING AND USE SETBACK TO 5.0' FOR SIDEWALK ALONG THE EAST BOUNDARY. D. SECTION 112.1.D.4.B.(1)(C): REDUCE THE REQUIRED 20' STRUCTURE AND USE SETBACK FROM 20' TO 16.39' TO A PRIVATE STREET FOR THE CLUBHOUSE. E. SECTION 112.1.D.4.B.(1)(C): REDUCE THE REQUIRED 20' STRUCTURE AND USE SETBACK TO 16.39' TO A PRIVATE STREET FOR THE CLUBHOUSE. F. THE 65 DBA NOISE CONTOUR LINE SHOWN ON THIS DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY 1992, AND CANNOT BE CONSIDERED TO EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT. NOISE LEVELS IN THE BUILDINGS WILL MEET THE INTERIOR NOISE DBA REQUIREMENTS PER HUD. G. REFERENCE COUNTY RESOLUTION CR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108 (NOW WILLET LANE), ALONG WITH A PORTION OF COLUMBIA ROAD, THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO WAIVE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, LLLP (L-21387 / F-246), RECORDED ON MARCH 4th, 2022. H. OUTDOOR LIGHTING SHALL BE IN ACCORDANCE WITH SECTION 134.0 OF THE ZONING REGULATIONS. I. INSULATION: NOISE INCLUDING WINDOW. J. REFERENCE AA-21-010, APPROVED 05/10/2022, TO THE SECTIONS LISTED BELOW. A. SECTION 112.1.D.4.B.(1)(C) - TO REDUCE THE REQUIRED 20' STRUCTURE AND USE SETBACK TO A PRIVATE ROAD (WILLET LANE) TO A MINIMUM OF 16.00' (20% REDUCTION). B. SECTION 112.1.D.4.C.(2)(A) - TO REDUCE THE REQUIRED 50' APARTMENT DWELLINGS SETBACK TO THE R-15 DISTRICT TO 40.00' (20% REDUCTION). C. SECTION 112.1.D.5.C. - TO REDUCE THE REQUIRED 30' SIDE TO SIDE DIMENSION BETWEEN APARTMENT BUILDINGS TO A MINIMUM OF 24.00' (20% REDUCTION). D. SECTION 112.1.D.5.D - TO REDUCE THE REQUIRED 60' REAR TO REAR DIMENSION BETWEEN APARTMENT BUILDINGS TO A MINIMUM OF 51' (15% REDUCTION).

SITE ANALYSIS DATA CHART

Table with 2 columns: ORIGINAL TRACT AREA, PROPOSED IMPERVIOUS AREA. Lists various areas like 4.49 AC, 5.57 AC, etc.

PARKING TABULATION

Table with 2 columns: STACKED TOWNHOUSE APARTMENT, OFF-STREET STRIPED COMMON PARKING. Lists required and provided spaces for various unit types.

Moderate Income Housing Units (MIHU) Allocation Exemptions Tracking table with columns: TOTAL NUMBER OF LOTS/UNITS PROPOSED, NUMBER OF MIHU PROVIDED, etc.

PERMIT INFORMATION CHART

Table with 5 columns: SUBDIVISION NAME, SECTION/AREA, LOT/PARCELS, PLAT REF #, BLOCK NO. Values: DORSEY OVERLOOK, SDP-20-074, N/A, PARCELS 51-55, 67 AND 288, 09, 30, 2, 60230 TR

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Chief, Development Engineering Division: 1/23/2023. Chief, Division of Land Development: 1/24/2023. Director: 1/24/2023.

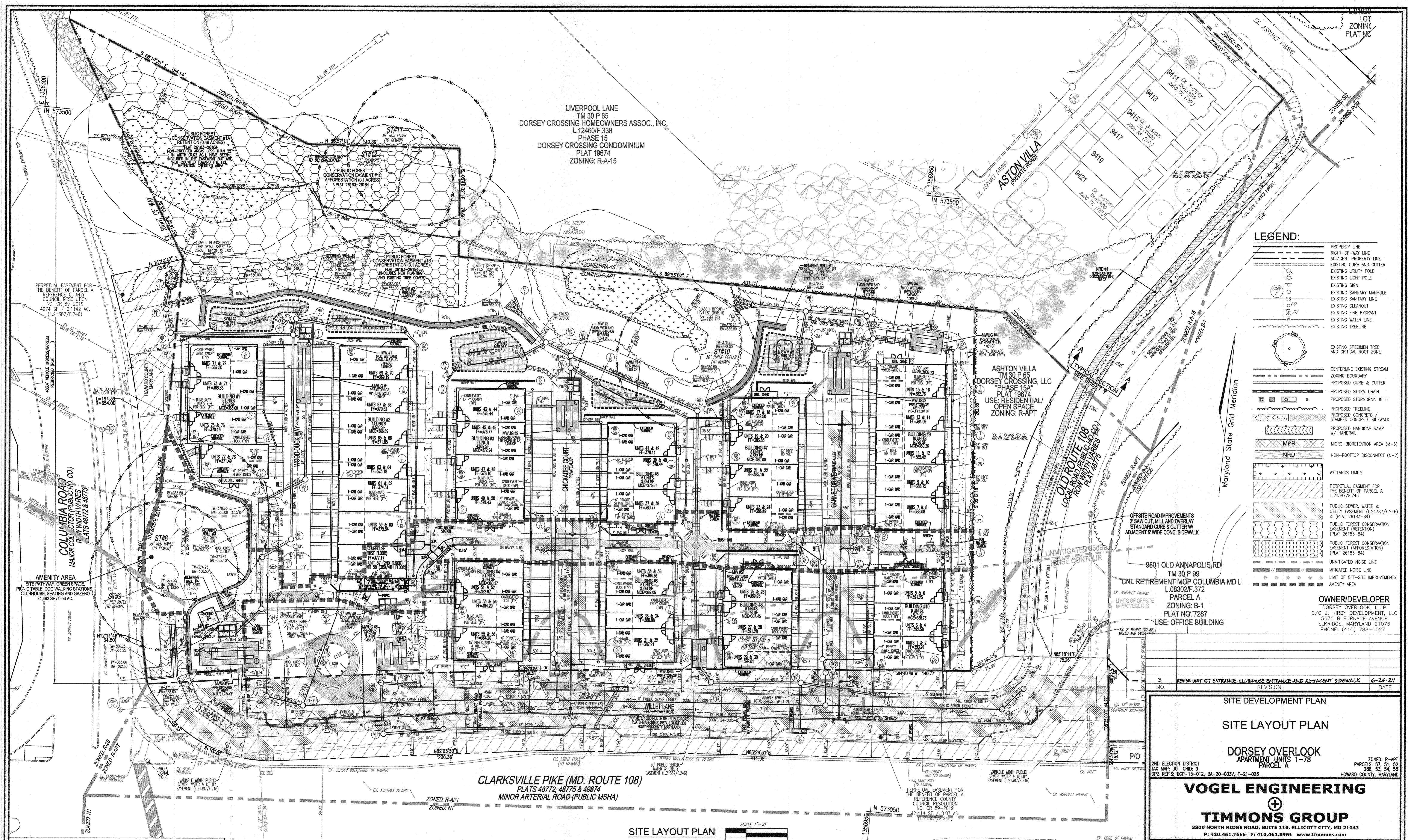
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Chief, Bureau of Highways: 1/24/2023.

SITE DEVELOPMENT PLAN COVER SHEET

DORSEY OVERLOOK APARTMENT UNITS 1-78 PARCEL A. 2ND ELECTION DISTRICT TAX MAP: 30 GRID: 9 DPZ REF: ECP-15-012, BA-20-003V, F-21-023

VOGEL ENGINEERING TIMMONS GROUP 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE. DESIGN BY: DZE/RHV. DRAWN BY: DZE/JR/KG. CHECKED BY: RHV. DATE: NOVEMBER 2022. SCALE: AS SHOWN. W.O. NO.: 12-69. 1 SHEET OF 30.



**LEGEND:**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANDIRT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING SPECIMEN TREE AND CRITICAL ROOT ZONE
- CENTERLINE EXISTING STREAM
- ZONING BOUNDARY
- PROPOSED CURB & GUTTER
- PROPOSED STORM DRAIN
- PROPOSED STORMRAIN INLET
- PROPOSED TRENCH
- PROPOSED CONCRETE STAMPED CONCRETE SIDEWALK
- PROPOSED HANDICAP RAMP W/ HANDRAIL
- MBR
- NRD
- WETLANDS LIMITS
- PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A (L21387/F246)
- PUBLIC SEWER, WATER & UTILITY EASEMENT (L21387/F246) & PLAT 26183-84
- PUBLIC FOREST CONSERVATION EASEMENT (RETENTION) (PLAT 26183-84)
- PUBLIC FOREST CONSERVATION EASEMENT (AFFORESTATION) (PLAT 26183-84)
- UNMITIGATED NOISE LINE
- MITIGATED NOISE LINE
- LIMIT OF OFF-SITE IMPROVEMENTS
- AMENITY AREA

**OWNER/DEVELOPER**  
 DORSEY OVERLOOK, L.L.P.  
 C/O J. KIRBY DEVELOPMENT, LLC  
 5670 B FURNACE AVENUE  
 ELKBRIDGE, MARYLAND 21075  
 PHONE: (410) 788-0027

CLARKVILLE PIKE (MD. ROUTE 108)  
 PLATS 48772, 48775 & 49874  
 MINOR ARTERIAL ROAD (PUBLIC MSHA)

SITE LAYOUT PLAN  
 SCALE: 1"=30'

- NOTES:**
- REFER TO ARCHITECTURAL PLANS FOR NOISE MITIGATION NOTES AND DETAILS FOR UNITS THAT FALL WITHIN THE UNMITIGATED NOISE LINE.
  - SEE SHEET 9 OF 30 FOR MSHA CROSSWALK DETAIL.
  - DIMENSIONS WITH AN ASTERISK (\*) HAVE BEEN APPROVED UNDER BA-20-003V AND AA-21-010 FOR LESS THAN THE MINIMUM REQUIRED SETBACKS UNDER SECTION 112.1 OF THE HOWARD COUNTY ZONING REGULATIONS.
  - SEE SHEET 23 FOR TOWNHOUSE GARAGE STEP(S) CHART.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE  
 DIRECTOR  
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/24/2023  
 CHIEF, BUREAU OF HIGHWAYS  
 DATE

**NOTE:**  
 REFERENCE COUNCIL RESOLUTION CR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108, (ALONG WITH A PORTION OF COLUMBIA ROAD), THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO WAIVE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL, NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, L.L.P. (L21387/F246)  
 SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0A.10 OF THE ZONING REGULATIONS.

3  
 NO. REVISION DATE  
 REVISE UNIT 67 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK 6-26-24

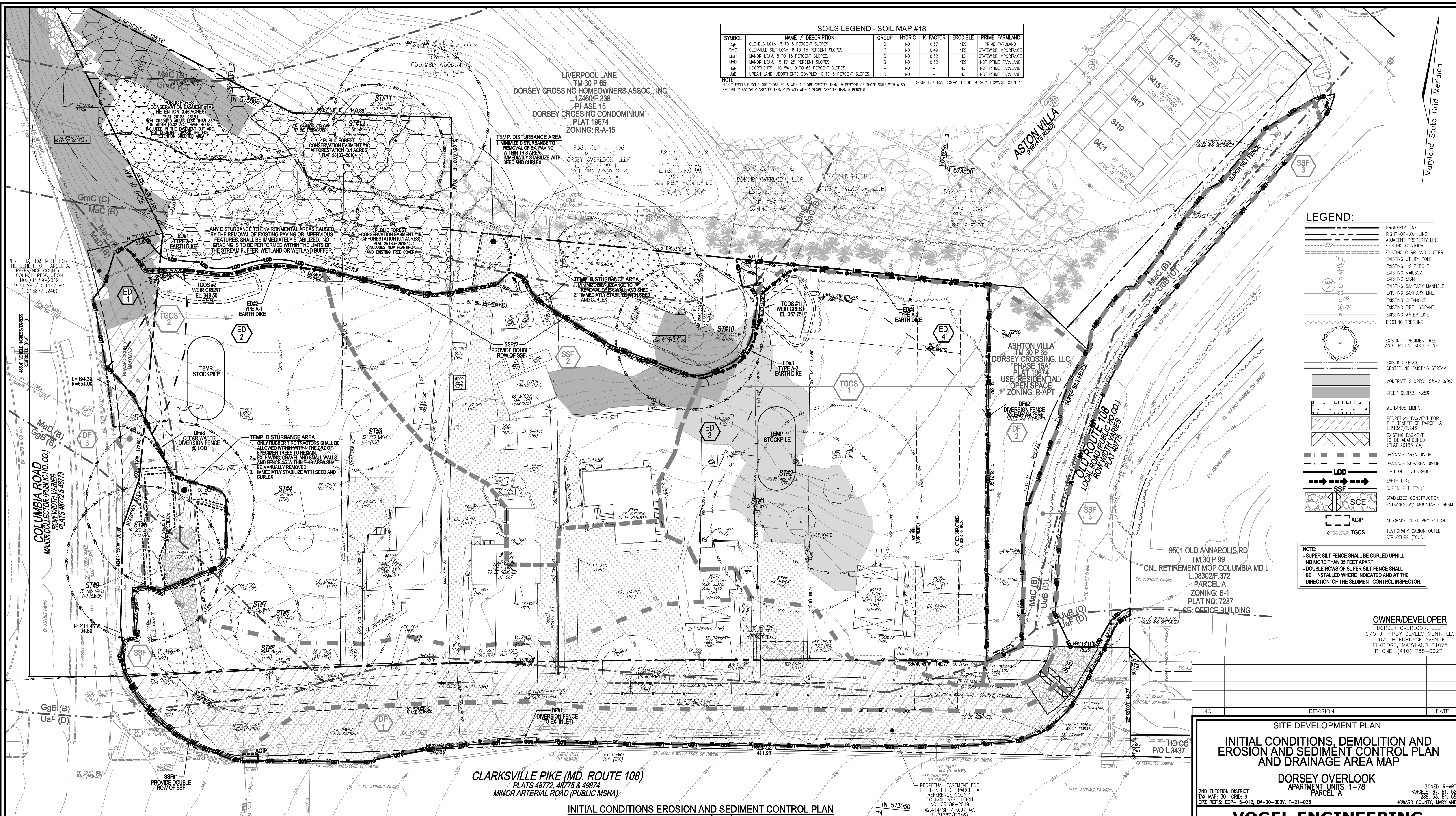
SITE DEVELOPMENT PLAN  
 SITE LAYOUT PLAN  
 DORSEY OVERLOOK  
 APARTMENT UNITS 1-78  
 PARCEL A

**VOGEL ENGINEERING**  
 TIMMONS GROUP  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

DESIGN BY: DZE/RHY  
 DRAWN BY: DZE/IR/KG  
 CHECKED BY: RHY  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

2 SHEET OF 30



**SOILS LEGEND - SOIL MAP #18**

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K FACTOR	ERODIBLE	PRIME FARMLAND
GgB	GLENNLEIGH LOAM, 3 TO 8 PERCENT SLOPES.	B	NO	0.37	YES	PRIME FARMLAND
GpC	GLENNLEIGH SILT LOAM, 8 TO 15 PERCENT SLOPES.	C	NO	0.49	YES	STATEWIDE IMPORTANCE
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES.	B	NO	0.32	NO	STATEWIDE IMPORTANCE
MdD	MANOR LOAM, 15 TO 25 PERCENT SLOPES.	B	NO	0.32	YES	NOT PRIME FARMLAND
UaF	UDORTHERNS, HIGHWAY, 0 TO 8 PERCENT SLOPES.	-	NO	-	NO	NOT PRIME FARMLAND
UaF	UDORTHERNS, HIGHWAY, 0 TO 8 PERCENT SLOPES.	D	NO	-	NO	NOT PRIME FARMLAND

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

SOURCE: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY

**LEGEND:**

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CONTOUR
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TRESTLE
	EXISTING SPECIMEN TREE AND CRITICAL ROOT ZONE
	EXISTING FENCE
	CENTERLINE EXISTING STREAM
	MODERATE SLOPES 15%-24.99%
	STEEP SLOPES >25%
	WETLANDS LIMITS
	PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A
	EXISTING EASEMENT TO BE ABANDONED (PLAT 26183-84)
	DRAINAGE AREA DIVIDE
	DRAINAGE SUBAREA DIVIDE
	LIMIT OF DISTURBANCE
	EARTH DIKE
	SUPER SILT FENCE
	STABILIZED CONSTRUCTION ENTRANCE W/ MOUNDABLE BERM
	AT GRADE INLET PROTECTION
	TEMPORARY INLET OUTLET STRUCTURE (TGOS)

**NOTE:**  
 - SUPER SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART  
 - DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED WHERE INDICATED AND AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

**OWNER/DEVELOPER**  
 DORSEY OVERLOOK, LLLP  
 C/O J. KIRBY DEVELOPMENT, LLC  
 5670 B FURNACE AVENUE  
 ELKARIDGE, MARYLAND 21075  
 PHONE: (410) 788-0027

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 DocuSigned by: *[Signature]* 1/24/2023  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 DocuSigned by: *[Signature]* 1/23/2023  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
 DocuSigned by: *[Signature]* 1/24/2023  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
 DocuSigned by: *[Signature]* 1/24/2023  
 DIRECTOR DATE

**OWNER/DEVELOPER CERTIFICATION:**  
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE. 11/14/2022  
 Robert H. Vogel  
 OWNER/DEVELOPER SIGNATURE DATE  
 Kyle Wittman  
 PRINTED NAME & TITLE

**DESIGN CERTIFICATION:**  
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 DocuSigned by: *[Signature]* 11/14/2022  
 Robert H. Vogel  
 DESIGNER'S SIGNATURE DATE  
 Robert H. Vogel  
 PRINTED NAME MD REGISTRATION NO. 16193  
 (E) R.L.S., OR R.L.A. (circle one)  
 HOWARD S.C.D. DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 DocuSigned by: *[Signature]* 1/23/2023  
 Alexander Bratovich  
 HOWARD S.C.D. DATE

**INITIAL SEC DRAINAGE AREA AND PRACTICE DATA**

NAME	AREA	SLOPE	PRACTICE TYPE	DETAIL NO.	REMARKS
TGOS-1	1.14 AC.	-	TEMP. CARBON OUTLET STRUCTURE	E-8	BOT. EL. 365.50, WEIR EL. 367.75
TGOS-2	1.42 AC.	-	TEMP. CARBON OUTLET STRUCTURE	E-8	BOT. EL. 347.25, WEIR EL. 349.50
ED-1	0.05 AC.	3.25%	TEMPORARY EARTH DIKE	C-1/B-4-6	TYPE A-2 / TSSMC 0.18 LB/FT <sup>2</sup>
ED-2	1.25 AC.	1.00%	TEMPORARY EARTH DIKE	C-1/B-4-6	TYPE A-1 / SEED & MULCH
ED-3	0.12 AC.	9.55%	TEMPORARY EARTH DIKE	C-1/B-4-6	TYPE A-2 / TSSMC 0.49 LB/FT <sup>2</sup>
ED-4	0.12 AC.	6.30%	TEMPORARY EARTH DIKE	C-1/B-4-6	TYPE A-2 / TSSMC 0.20 LB/FT <sup>2</sup>
SSF-1	0.87 AC.	-	SUPER SILT FENCE	E-3	DOUBLE ROW
SSF-2	0.69 AC.	-	SUPER SILT FENCE	E-3	DOUBLE ROW
SSF-3	0.23 AC.	-	SUPER SILT FENCE	E-3	DOUBLE ROW
DF-1	0.35 AC.	4.95%	DIVERSION FENCE	C-9	
DF-2	0.21 AC.	5.10%	DIVERSION FENCE (CLEAN WATER)	C-9	
DF-3	0.12 AC.	3.25%	DIVERSION FENCE (CLEAN WATER)	C-9	
EX. INLET	0.35 AC.	-	AGIP-AT GRADE INLET PROTECTION	E-9-2	EX. INLET/INSIDE JERSEY WALL

**NOTE:**  
 REFERENCE COUNCIL RESOLUTION OR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108, (ALONG WITH A PORTION OF COLUMBIA ROAD), THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO MAKE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, LLLP. (L21387/F.246)  
 SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0A.10 OF THE ZONING REGULATIONS.

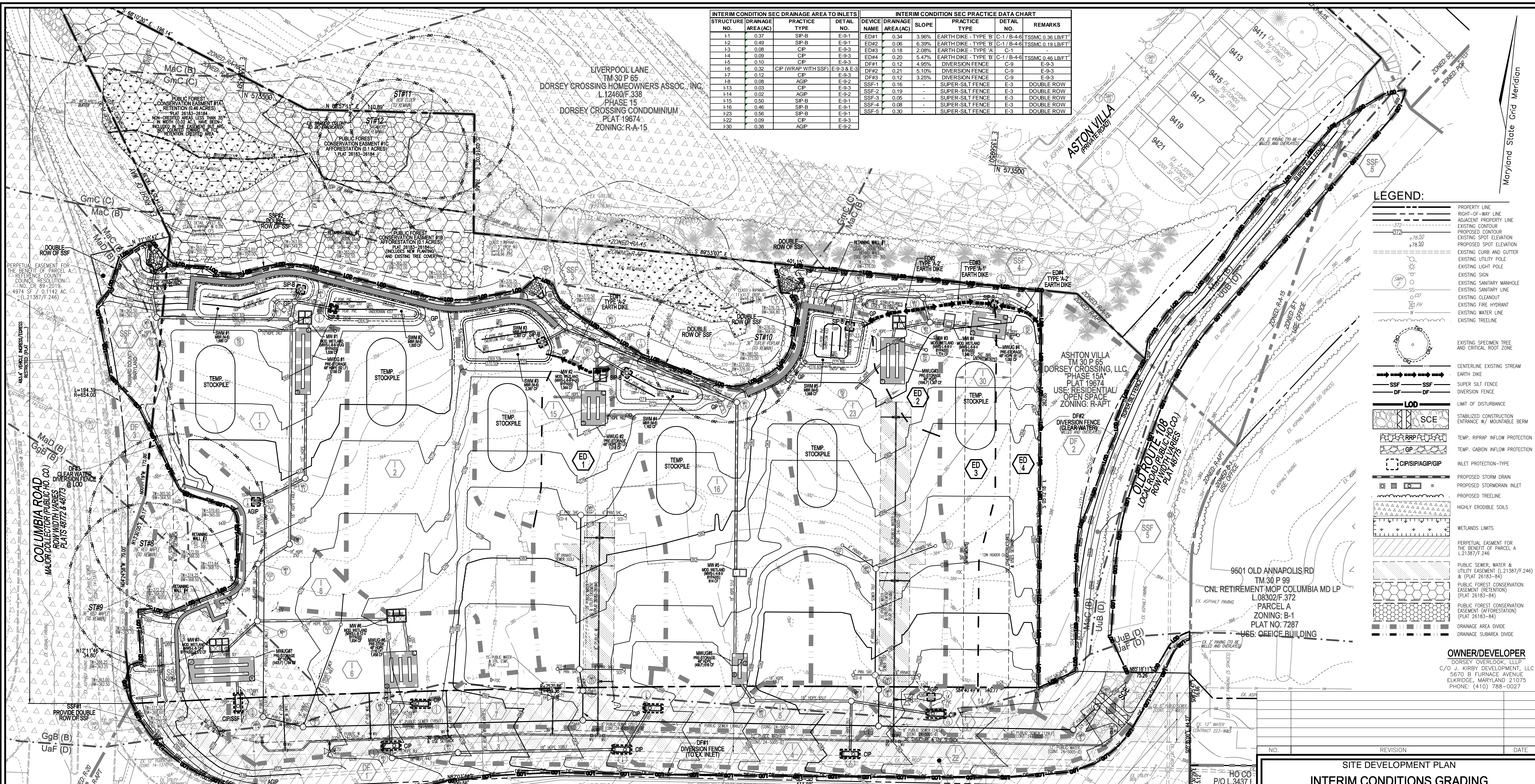
**SITE DEVELOPMENT PLAN**  
**INITIAL CONDITIONS, DEMOLITION AND EROSION AND SEDIMENT CONTROL PLAN AND DRAINAGE AREA MAP**  
**DORSEY OVERLOOK**  
 APARTMENT UNITS 1-78  
 PARCEL A  
 ZONED: R-APT  
 PARCELS: ST. 51, 52, 288, 53, 54, 55  
 HOWARD COUNTY, MARYLAND  
 2ND ELECTION DISTRICT  
 TAX MAP: 30 GRID: 9  
 DPZ REFS: ECP-15-012, BA-20-003V, F-21-023

**VOGEL ENGINEERING**  
 TIMMONS GROUP  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7656 F: 410.461.8961 www.timmons.com

**PROFESSIONAL CERTIFICATE**  
 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.  
 EXPIRATION DATE: 09-27-2024

DESIGN BY: DZE/RHV  
 DRAWN BY: DZE/JR/KG  
 CHECKED BY: RHV  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

3 SHEET OF 30



INTERIM CONDITION SEC DRAINAGE AREA TO INLETS				INTERIM CONDITION SEC PRACTICE DATA CHART					
STRUCTURE NO.	DRAINAGE AREA (AC)	PRACTICE TYPE	DETAIL NO.	DEVICE NAME	DRAINAGE AREA (AC)	SLOPE	PRACTICE TYPE	DETAIL NO.	REMARKS
L-1	0.37	SP-B	E-9-1	ED#1	0.34	3.98%	EARTH DIKE - TYPE B	C-1/B-4-6	TSSMC 0.36 LB/FT
L-2	0.49	SP-B	E-9-1	ED#2	0.06	6.39%	EARTH DIKE - TYPE B	C-1/B-4-6	TSSMC 0.19 LB/FT
L-3	0.08	CP	E-9-3	ED#3	0.18	2.08%	EARTH DIKE - TYPE A	C-1	
L-4	0.09	CP	E-9-3	ED#4	0.20	5.47%	EARTH DIKE - TYPE B	C-1/B-4-6	TSSMC 0.46 LB/FT
L-5	0.10	CP	E-9-3	DF#1	0.12	4.95%	DIVERSION FENCE	C-9	E-9-3
L-6	0.32	CIP (WRAP WITH SSF)	E-9-3 & E-3	DF#2	0.21	5.10%	DIVERSION FENCE	C-9	E-9-3
L-7	0.12	CP	E-9-3	DF#3	0.12	3.25%	DIVERSION FENCE	C-9	E-9-3
L-8	0.08	AGP	E-9-2	SSF-1	0.16	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
L-13	0.03	AGP	E-9-3	SSF-2	0.19	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
L-14	0.02	AGP	E-9-2	SSF-3	0.05	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
L-15	0.50	SP-B	E-9-1	SSF-4	0.08	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
L-16	0.46	SP-B	E-9-1	SSF-5	0.30	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
L-23	0.56	SP-B	E-9-1						
L-22	0.09	CP	E-9-3						
L-30	0.38	AGP	E-9-2						

**LEGEND:**

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING CURB AND GUTTER
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREELINE
	EXISTING SPECIMEN TREE AND CRITICAL ROOT ZONE
	CENTERLINE EXISTING STREAM
	EARTH DIKE
	SUPER SILT FENCE
	DIVERSION FENCE
	LIMIT OF DISTURBANCE
	STABILIZED CONSTRUCTION ENTRANCE W/ MOUNTABLE BERM
	TEMP. RIPRAP INFLOW PROTECTION
	TEMP. GABION INFLOW PROTECTION
	INLET PROTECTION-TYPE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED TREELINE
	HIGHLY ERODIBLE SOILS
	WETLANDS LIMITS
	PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A (L21387/F-246) & (PLAT 26183-84)
	PUBLIC SEWER, WATER & UTILITY EASEMENT (RETENTION) (PLAT 26183-84)
	PUBLIC FOREST CONSERVATION EASEMENT (AFFORESTATION) (PLAT 26183-84)
	DRAINAGE AREA DIVIDE
	DRAINAGE SUBAREA DIVIDE

**CLARKSVILLE PIKE (MD ROUTE 108)**  
PLATS 48772, 48775 & 48974  
MINOR ARTERIAL ROAD (PUBLIC MSHA)

**INTERIM CONDITIONS GRADING, EROSION AND SEDIMENT CONTROL PLAN**  
SCALE: 1"=30'

**ASHTON VILLA**  
TM 30 P 65  
DORSEY CROSSING, LLC  
PHASE 15A  
USE: RESIDENTIAL/ OPEN SPACE  
ZONING: R-APT

**9501 OLD ANNAPOLIS RD**  
TM 30 P 99  
CNL RETIREMENT MOP COLUMBIA MD LP  
L.08302/F.372  
PARCEL A  
ZONING: B-1  
PLAT NO. 7287  
USE: OFFICE BUILDING

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
1/24/2023  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT  
1/24/2023  
DIRECTOR

**OWNER/DEVELOPER CERTIFICATION:**  
I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

11/14/2022  
DATE

**OWNER/DEVELOPER SIGNATURE:**  
KYLE WILKINSON  
DATE

**DESIGN CERTIFICATION:**  
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

11/14/2022  
DATE

**DESIGNER'S SIGNATURE:**  
ROBERT H. VOGEL  
DATE

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

1/23/2023  
DATE

**DESIGNED BY:**  
ALEXANDER BRATCHE  
DATE

**NOTE:** REFER TO SEQUENCE OF CONSTRUCTION ON PUBLIC WATER AND SEWER CONTRACT 24-5005-D FOR THE REMOVAL OF THE EXISTING PUBLIC WATER AND SEWER, AND FOR THE CONSTRUCTION OF EXISTING SEWER, WHICH MUST BE DONE CONCURRENTLY.

**SOILS LEGEND - SOIL MAP #18**

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K FACTOR	ERODIBLE	PRIME FARMLAND
GcB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES.	B	NO	0.37	YES	PRIME FARMLAND
GmC	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES.	C	NO	0.49	YES	STATEWIDE IMPORTANCE
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES.	B	NO	0.32	NO	STATEWIDE IMPORTANCE
MdD	MANOR LOAM, 15 TO 25 PERCENT SLOPES.	B	NO	0.32	YES	NOT PRIME FARMLAND
UgF	UDORTHENTS, HIGHWAY, 0 TO 65 PERCENT SLOPES.	D	NO	-	NO	NOT PRIME FARMLAND
UuB	URBAN LAND-UDORTHENTS COMPLEX, 0 TO 8 PERCENT SLOPES.	D	NO	-	NO	NOT PRIME FARMLAND

**NOTE:** HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

**SITE DEVELOPMENT PLAN**  
**INTERIM CONDITIONS GRADING, EROSION AND SEDIMENT CONTROL PLAN AND DRAINAGE AREA MAP**  
**DORSEY OVERLOOK**  
APARTMENT UNITS 1-78  
PARCEL A

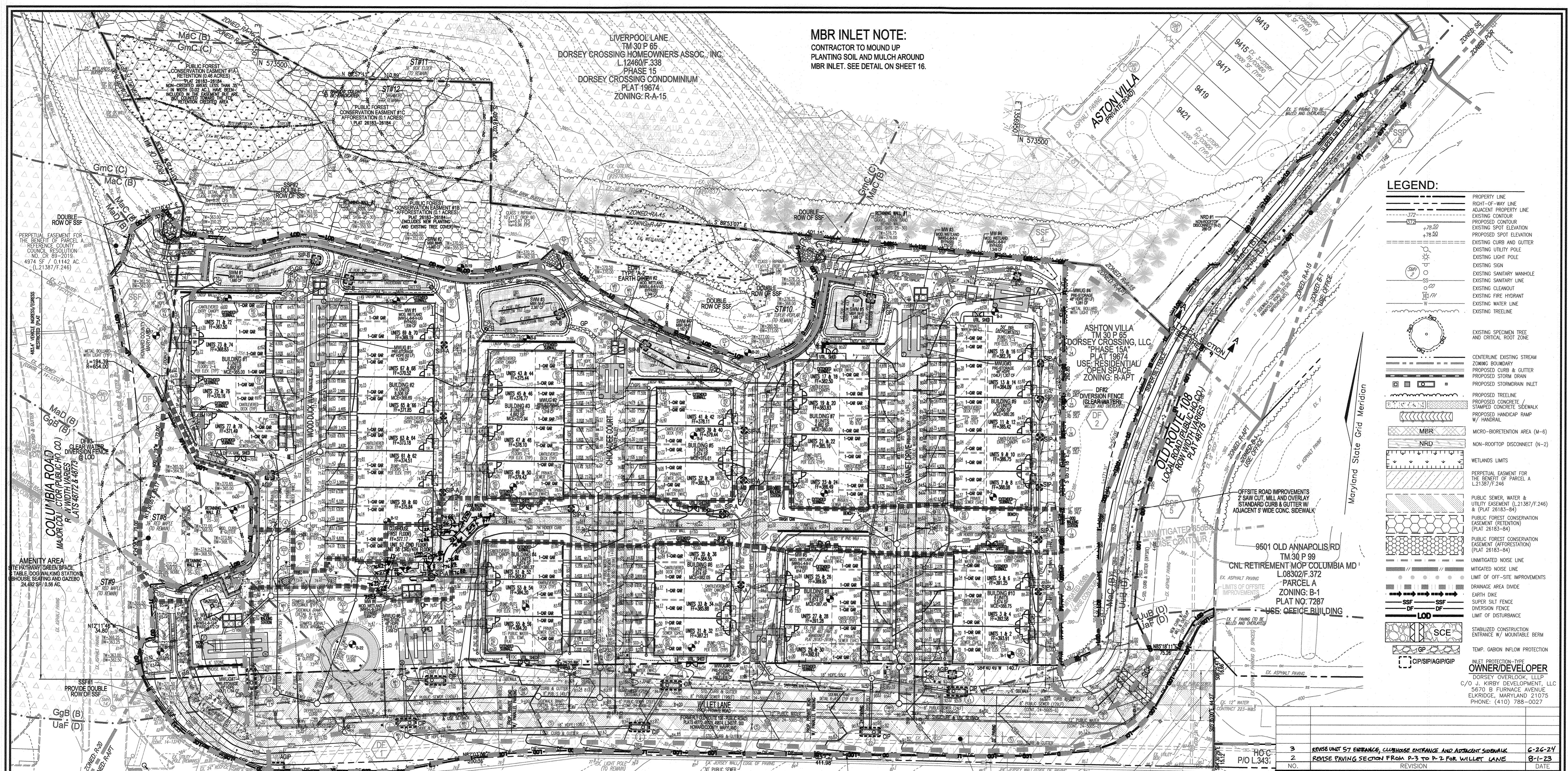
2ND ELECTION DISTRICT  
TAX MAP, 30 GRID: 9  
DPZ REF'S: ECP-15-012, BA-20-003V, F-21-023

**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7656 F: 410.461.8961 www.timmons.com

DESIGN BY: DZE/RHV  
DRAWN BY: DZE/RJG/KG  
CHECKED BY: RHV  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.D. NO.: 12-69

PROFESSIONAL CERTIFICATE  
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.  
EXPIRATION DATE: 09-27-2024

4 SHEET OF 30



**MBR INLET NOTE:**  
 CONTRACTOR TO MOUND UP  
 PLANTING SOIL AND MULCH AROUND  
 MBR INLET. SEE DETAIL ON SHEET 16.

**LEGEND:**

[Symbol]	PROPERTY LINE
[Symbol]	RIGHT-OF-WAY LINE
[Symbol]	ADJACENT PROPERTY LINE
[Symbol]	EXISTING CONTOUR
[Symbol]	PROPOSED CONTOUR
[Symbol]	EXISTING SPOT ELEVATION
[Symbol]	PROPOSED SPOT ELEVATION
[Symbol]	EXISTING CURB AND GUTTER
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING LIGHT POLE
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING SANITARY MANHOLE
[Symbol]	EXISTING SANITARY LINE
[Symbol]	EXISTING CLEANOUT
[Symbol]	EXISTING FIRE HYDRANT
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING TREELINE
[Symbol]	EXISTING SPECIMEN TREE AND CRITICAL ROOT ZONE
[Symbol]	CENTERLINE EXISTING STREAM
[Symbol]	ZONING BOUNDARY
[Symbol]	PROPOSED CURB & GUTTER
[Symbol]	PROPOSED STORM DRAIN
[Symbol]	PROPOSED STORMRAIN INLET
[Symbol]	PROPOSED TREELINE
[Symbol]	PROPOSED CONCRETE SIDEWALK
[Symbol]	PROPOSED STAMPED CONCRETE SIDEWALK
[Symbol]	PROPOSED HANDICAP RAMP W/ HORIZONTAL
[Symbol]	MBR
[Symbol]	NON-ROOFTOP DISCONNECT (N-2)
[Symbol]	WETLANDS LIMITS
[Symbol]	PRESERVATION EASEMENT FOR THE BENEFIT OF PARCEL A L21387/F.246
[Symbol]	PUBLIC SEWER, WATER & UTILITY EASEMENT (L21387/F.246) & (PLAT 26183-84)
[Symbol]	PUBLIC FOREST CONSERVATION EASEMENT (AFFORESTATION) (PLAT 26183-84)
[Symbol]	PUBLIC FOREST CONSERVATION EASEMENT (AFFORESTATION) (PLAT 26183-84)
[Symbol]	UNMITIGATED NOISE LINE
[Symbol]	UNMITIGATED NOISE LINE
[Symbol]	LIMIT OF OFF-SITE IMPROVEMENTS
[Symbol]	DRAINAGE AREA DIVIDE
[Symbol]	EARTH DIKE
[Symbol]	SUPER SILT FENCE
[Symbol]	DIVERSION FENCE
[Symbol]	LIMIT OF DISTURBANCE
[Symbol]	STABILIZED CONSTRUCTION ENTRANCE W/ MOUNTABLE BERM
[Symbol]	TEMP. CARBON INFLOW PROTECTION
[Symbol]	INLET PROTECTION-TYPE OWNER/DEVELOPER
[Symbol]	DORSEY OVERLOOK, LLLP
[Symbol]	C/O J. KIRBY DEVELOPMENT, LLC
[Symbol]	5670 B FURNACE AVENUE
[Symbol]	ELK RIDGE, MARYLAND 21075
[Symbol]	PHONE: (410) 788-0027

**CLARKSVILLE PIKE (MD. ROUTE 108)**  
 PLATS 48772, 48775 & 49874  
 MINOR ARTERIAL ROAD (PUBLIC MSHA)

**FINAL CONDITIONS EROSION AND SEDIMENT CONTROL PLAN**  
 SCALE: 1"=30'

**SOILS LEGEND - SOIL MAP #18**

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K FACTOR	ERODIBLE	PRIME FARMLAND
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES.	B	NO	0.37	YES	PRIME FARMLAND
GmC	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES.	C	NO	0.49	YES	STATEWIDE IMPORTANCE
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES.	B	NO	0.32	NO	STATEWIDE IMPORTANCE
UgF	UDORCHENTS, HIGHWAY, 0 TO 65 PERCENT SLOPES.	-	NO	0.32	YES	NOT PRIME FARMLAND
UgE	URBAN LAND-UDORCHENTS COMPLEX, 0 TO 8 PERCENT SLOPES.	D	NO	-	NO	NOT PRIME FARMLAND

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

NOTE:  
 1. MICRO-BIORETENTION FACILITIES TO BE PROTECTED WITH SILT FENCE AS SHOWN ON SHEET 8 OF 30.  
 2. SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.  
 3. SILT FENCE/SUPER SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 35 FEET APART.  
 4. DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

- NOTES:**
- SEE SHEET 6 FOR GRADING ENLARGEMENT DETAIL OF AMENITY AREAS AND ADA ACCESSIBLE ROUTES TO HANDICAP PARKING, GAZEBO, MULTI-PURPOSE PATHWAY AND CLUBHOUSE.
  - DRAINAGE AREA TO INLETS IN FINAL CONDITION SEC ARE SAME AS FINAL DRAINAGE AREAS TO INLETS. DRAINAGE AREAS AND SEC PRACTICE CHART ARE SHOWN ON THIS SHEET. REFERENCE SHEET 13 FOR FINAL STORM DRAIN DRAINAGE AREA MAP.
  - SEE SHEET 23 FOR TOWNHOUSE GARAGE STEP(S) CHART.

**FINAL CONDITION SEC PRACTICE DATA CHART**

DEVICE	DRAINAGE AREA(AC)	SLOPE	PRACTICE	DETAIL NO.	REMARKS
DF#1	0.12	4.95%	DIVERSION FENCE	C-9	E-9-3
DF#2	0.21	5.10%	DIVERSION FENCE	C-9	E-9-3
DF#3	0.12	3.25%	DIVERSION FENCE	C-9	E-9-3
SSF-1	0.16	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
SSF-2	0.17	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
SSF-3	0.04	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
SSF-4	0.10	-	SUPER-SILT FENCE	E-3	DOUBLE ROW
SSF-5	0.30	-	SUPER-SILT FENCE	E-3	DOUBLE ROW

**FINAL CONDITION SEC DRAINAGE AREA TO INLETS**

STRUCTURE NO.	DRAINAGE AREA(AC)	PRACTICE	DETAIL NO.
1-1	0.24	SP-B	E-9-1
1-2	0.06	SP-B	E-9-1
1-3	0.08	CP	E-9-3
1-4	0.08	CP	E-9-3
1-5	0.10	CP	E-9-3
1-6	0.34	CIP (WRAP WITH SSF)	E-9-3 & E-3
1-7	0.12	SP	E-9-3
1-8	0.07	AGP	E-9-2
1-9	0.02	SP-A	E-9-1
1-10	0.04	SP-A	E-9-1
1-11	0.04	SP-A	E-9-1
1-12	0.06	SP-A	E-9-1
1-13	0.05	CP	E-9-3
1-14	0.02	AGP	E-9-2
1-15	0.35	SP-B	E-9-1
1-16	0.07	SP-A	E-9-1
1-17	0.07	SP-A	E-9-1
1-18	0.04	SP-A	E-9-1
1-19	0.05	SP-A	E-9-1
1-20	0.03	SP-A	E-9-1
1-21	0.07	SP-A	E-9-1
1-22	0.10	CP	E-9-3
1-23	0.40	SP-A	E-9-1
1-24	0.01	SP-A	E-9-1
1-25	0.01	SP-A	E-9-1
1-26	0.01	SP-A	E-9-1
1-27	0.09	SP-A	E-9-1
1-28	0.02	SP-A	E-9-1
1-29	0.02	SP-A	E-9-1
1-30	0.06	SP-B	E-9-1

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/24/2023  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 1/23/2023  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 1/24/2023  
 DIRECTOR

**OWNER/DEVELOPER CERTIFICATION:**  
 I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

**DESIGN CERTIFICATION:**  
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL REGULATIONS AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

OWNER/DEVELOPER SIGNATURE: kyle wittman  
 DATE: 1/18/2023  
 PRINTED NAME & TITLE

DESIGNER'S SIGNATURE: Rob Vogel  
 DATE: 1/18/2023  
 PRINTED NAME: ROBERT H. VOGEL  
 MD REGISTRATION NO. 16193  
 R.L.S., OR R.L.A. (circle one)  
 HOWARD S.C.D. DATE

NO.	REVISION	DATE
3	REVISE UNIT 57 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK	6-26-24
2	REVISE PAVING SECTION FROM P-3 TO P-2 FOR WILLET LANE	8-1-23

**SITE DEVELOPMENT PLAN**  
**FINAL CONDITIONS GRADING**  
**EROSION AND SEDIMENT CONTROL PLAN,**  
**AND DRAINAGE AREA MAP**

**DORSEY OVERLOOK**  
 APARTMENT UNITS 1-78  
 PARCEL A

ZONED: R-APT  
 PARCELS: 87, 91, 92  
 TAX MAP: 30, GRID: 9  
 DPZ REF'S: ECP-15-012, BA-20-003V, F-21-023  
 HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

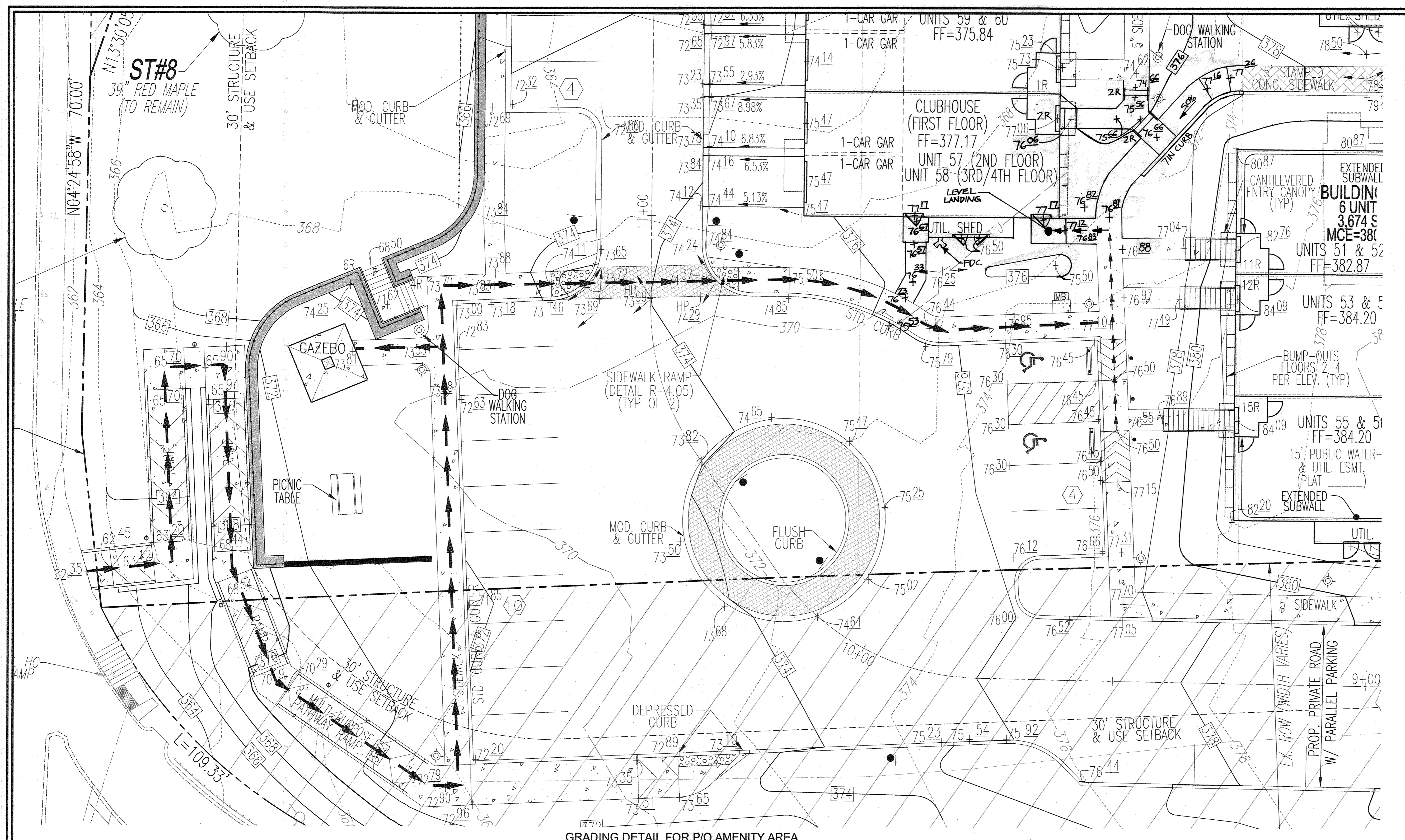
**PROFESSIONAL CERTIFICATE**

DESIGN BY: DZE/RHV  
 DRAWN BY: DZE/JR/KG  
 CHECKED BY: RHV  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

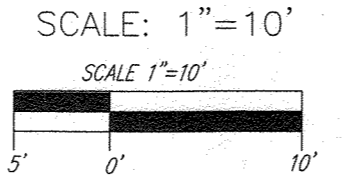
1. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

Rob Vogel  
 ROBERT H. VOGEL, PE No. 16193

5 SHEET OF 30



GRADING DETAIL FOR P/O AMENITY AREA



**LEGEND:**

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING CURB AND GUTTER
	PROPOSED CURB & GUTTER
	PROPOSED TREETRINE
	PROPOSED CONCRETE SIDEWALK
	STAMPED CONCRETE SIDEWALK
	PROPOSED HANDICAP RAMP W/ HANDRAIL
	PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A L21387/F248
	ADA ACCESSIBLE ROUTE

**OWNER/DEVELOPER**  
 DORSEY OVERLOOK, LLLP  
 C/O J. KIRBY DEVELOPMENT, LLC  
 5670 B FURNACE AVENUE  
 ELK RIDGE, MARYLAND 21175  
 PHONE: (410) 788-0027

NO.	REVISION	DATE
3	REVISE UNIT 57 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK	6-26-24

**SITE DEVELOPMENT PLAN**  
**GRADING DETAIL FOR A.D.A. ROUTES AND P/O AMENITY AREA**

**DORSEY OVERLOOK**  
 APARTMENT UNITS 1-78  
 PARCEL A

2ND ELECTION DISTRICT  
 TAX MAP: 30 GRID: 9  
 DPZ REF'S: ECP-15-012, BA-20-003V, F-21-023

ZONED: R-APT  
 PARCELS: 87, 51, 52, 288, 53, 54  
 HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**  
  
**TIMMONS GROUP**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21143  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

**PROFESSIONAL CERTIFICATE**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

DESIGN BY: DZE/RHY  
 DRAWN BY: DZE/R/KC  
 CHECKED BY: RHY  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

6 SHEET OF 30

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/24/2023  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

1/23/2023  
 CHIEF, DIVISION OF LAND DEVELOPMENT

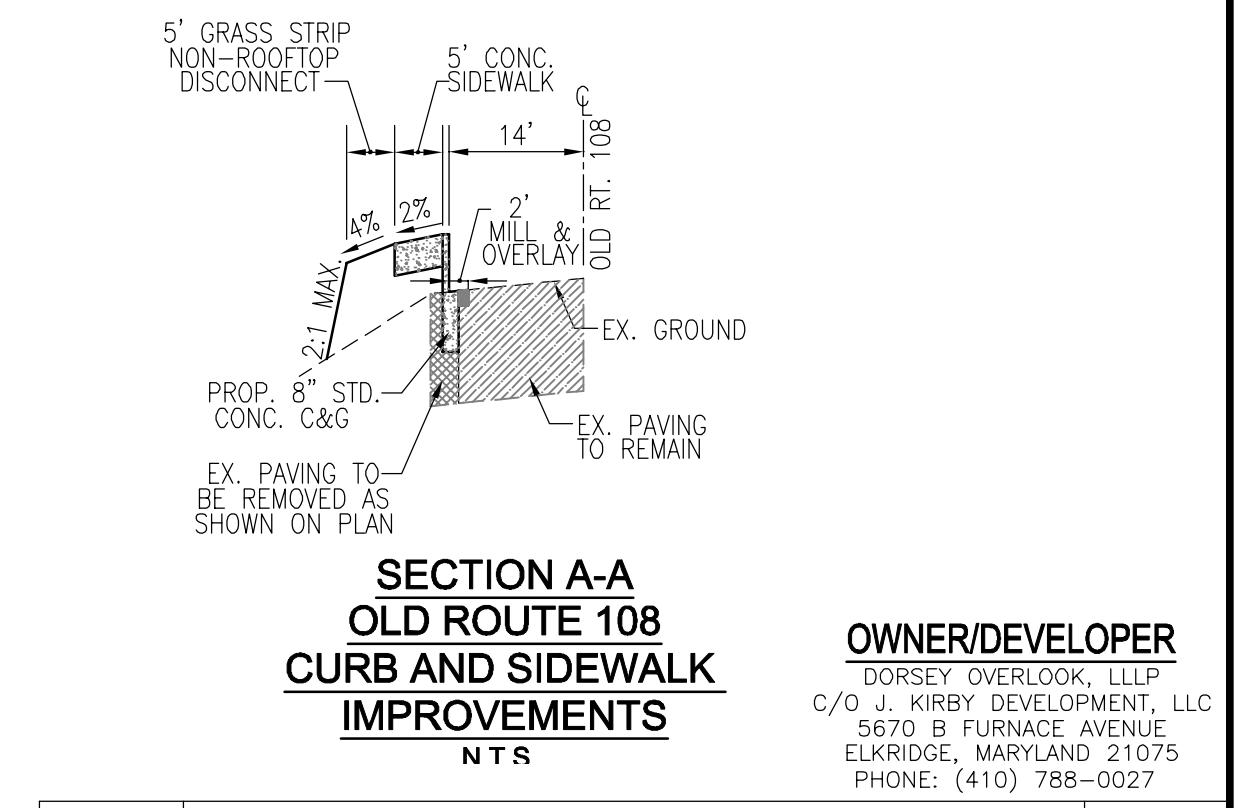
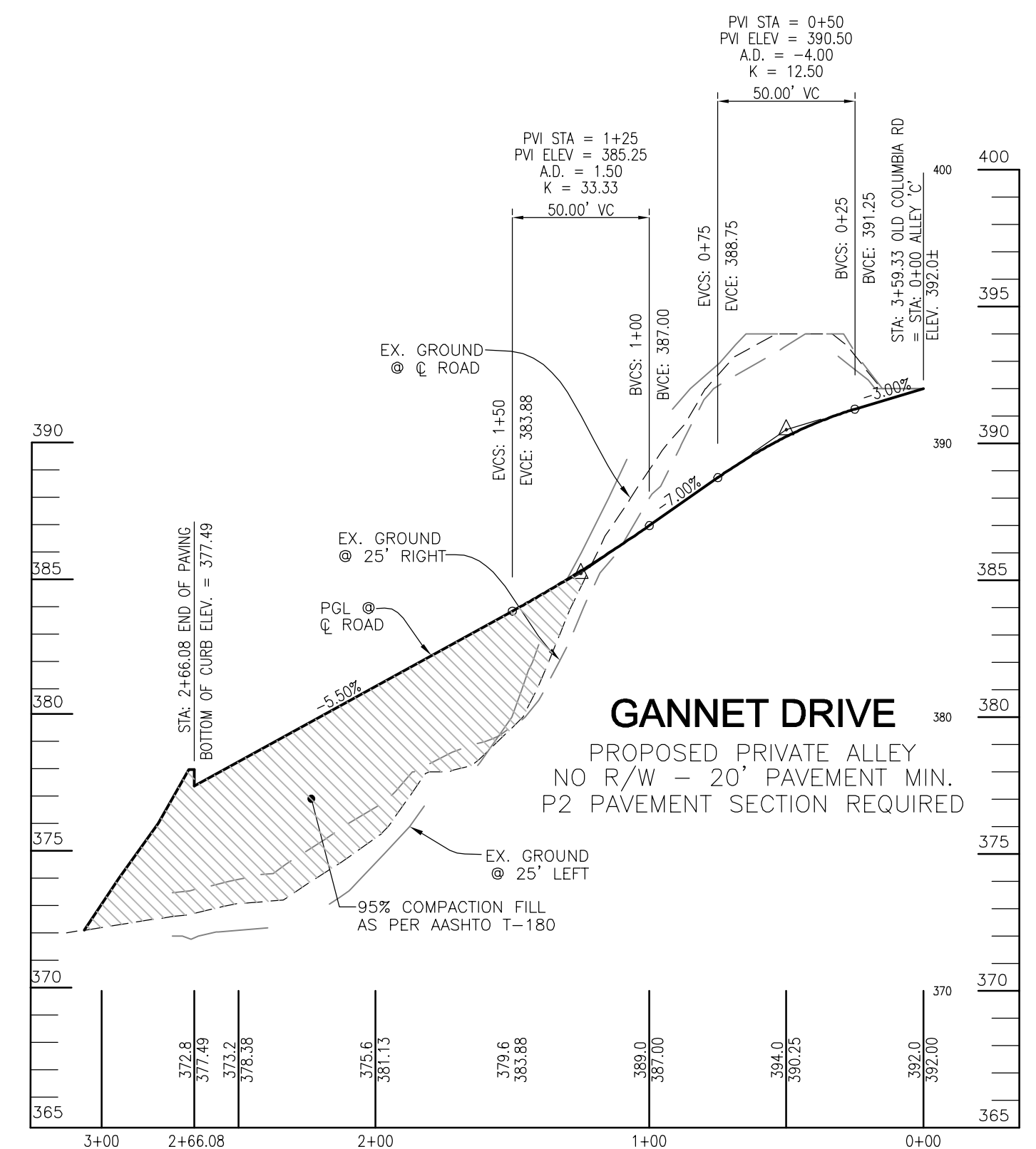
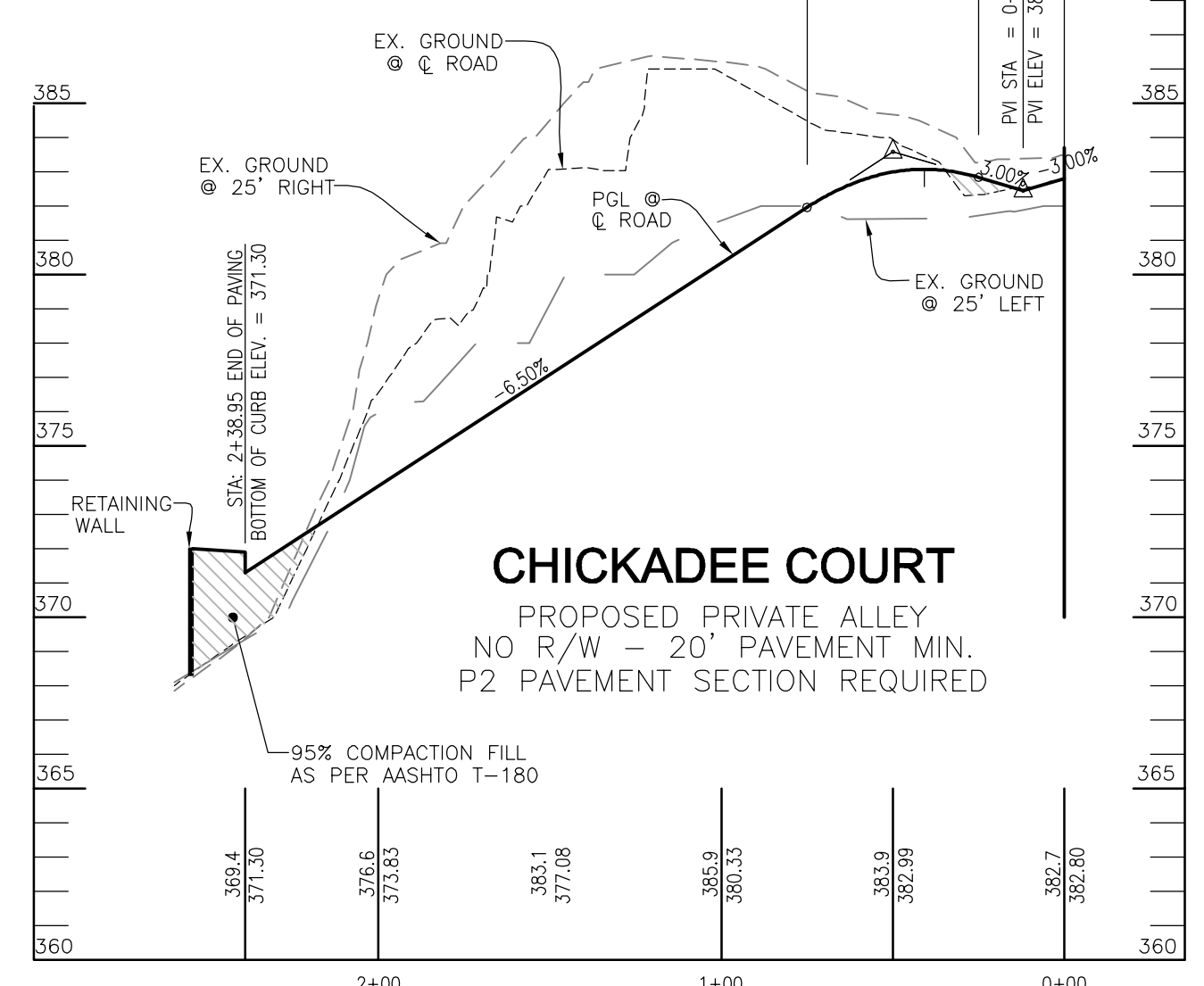
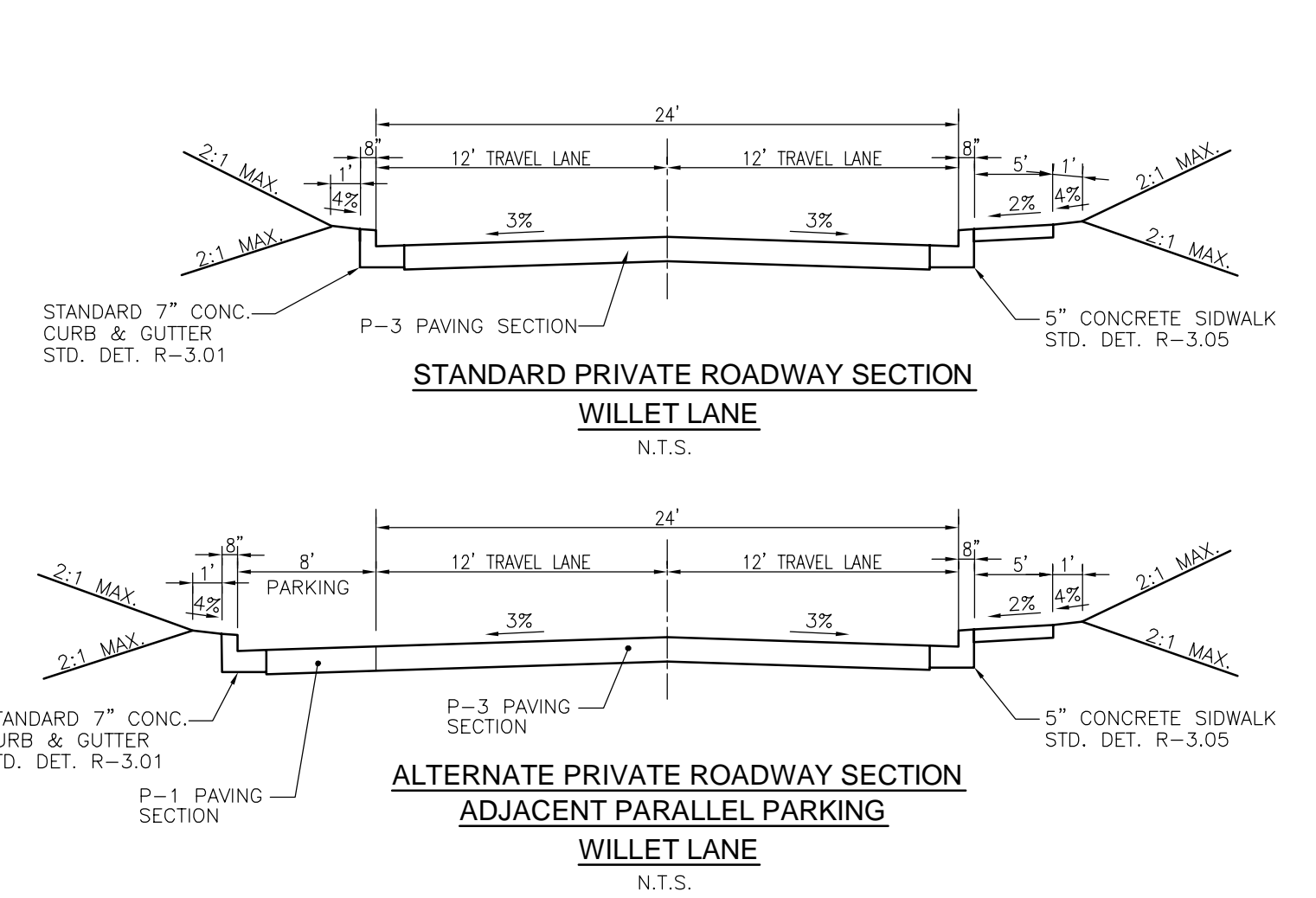
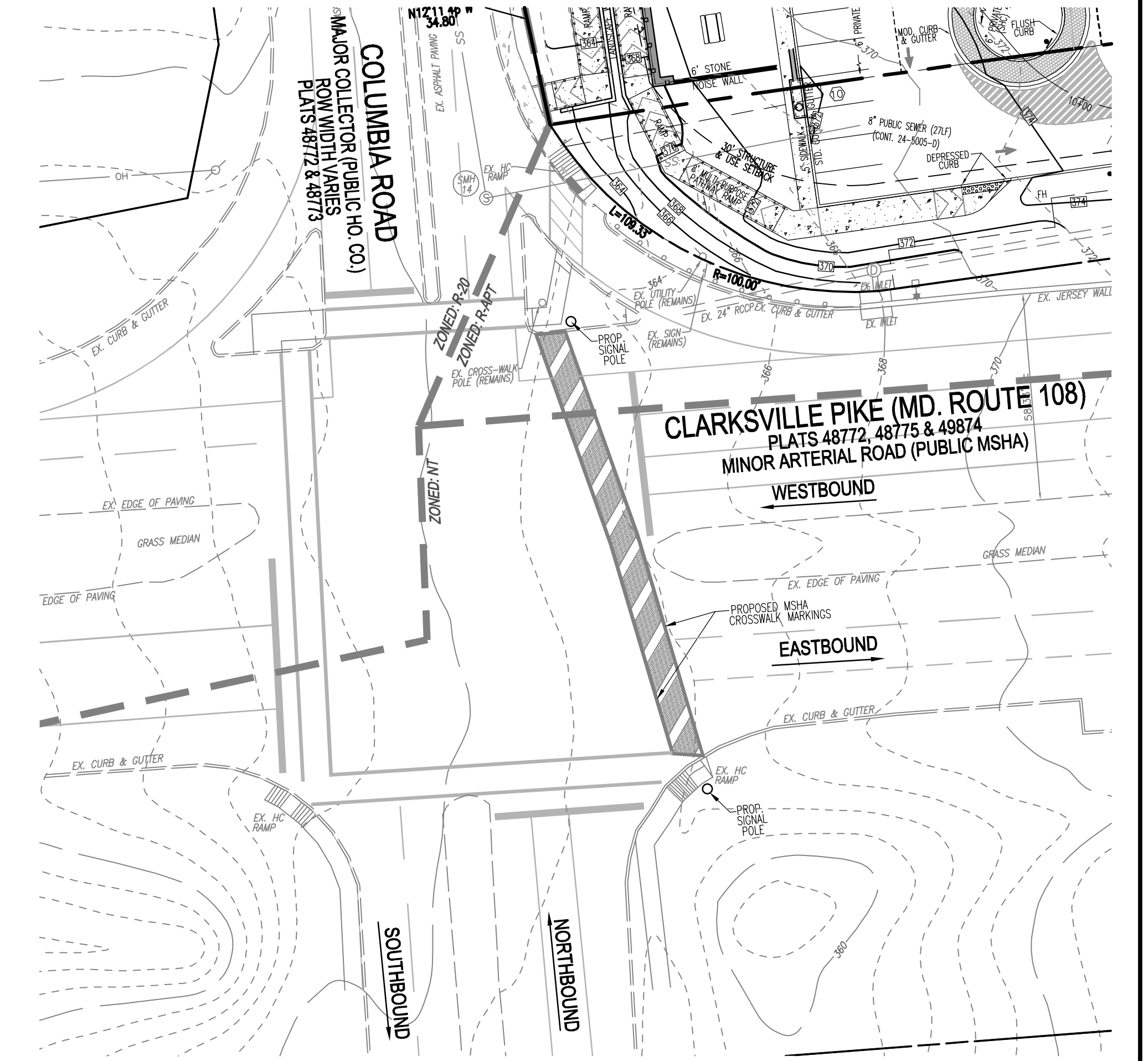
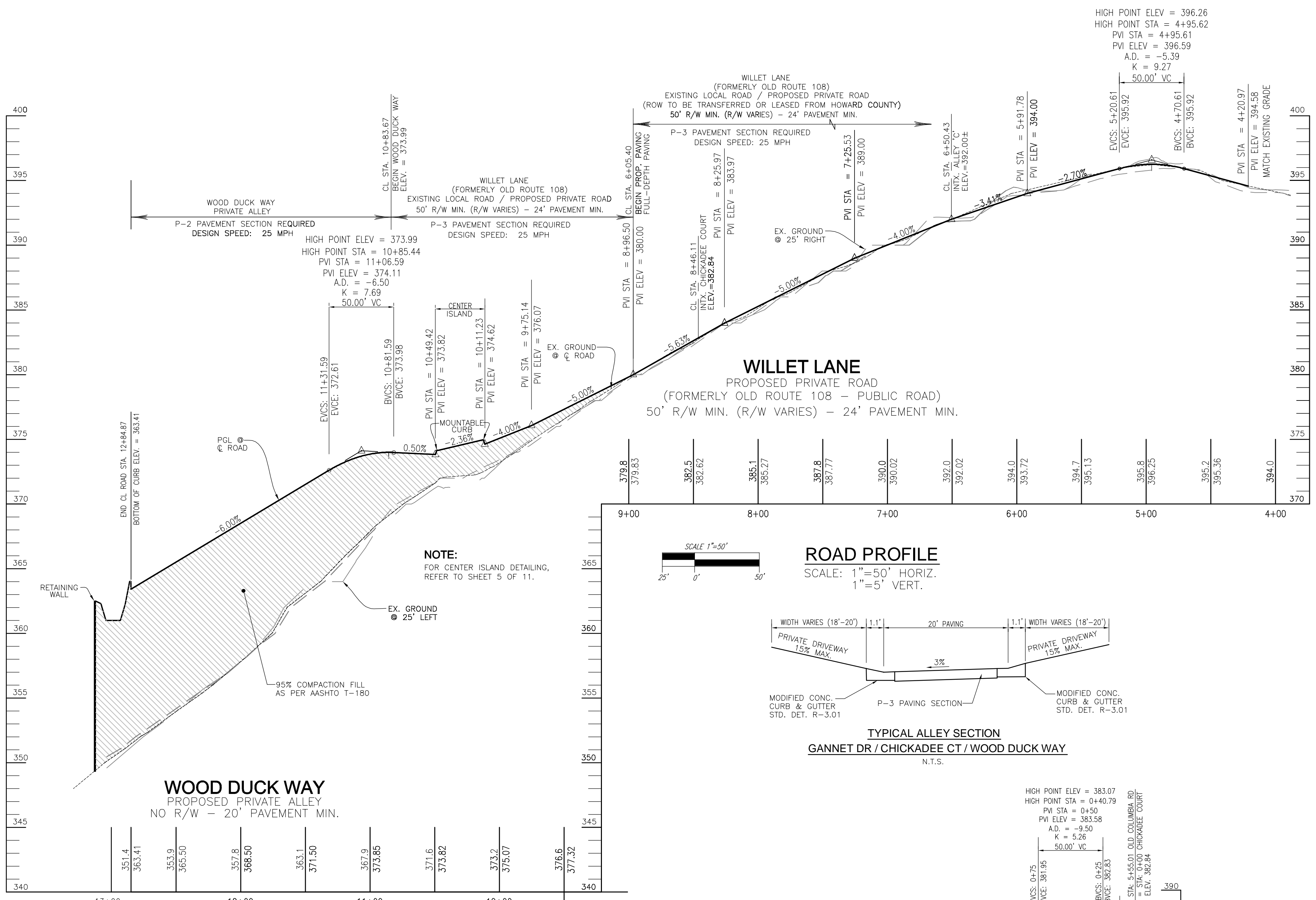
1/24/2023  
 DIRECTOR

**NOTE:**  
 REFERENCE COUNCIL RESOLUTION CR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108, (ALONG WITH A PORTION OF COLUMBIA ROAD), THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO WAIVE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, LLLP, (L21387/F248)  
 SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0A.10 OF THE ZONING REGULATIONS.









APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023

CHIEF, DEVELOPMENT & ENGINEERING DIVISION  
DATE: 1/23/2023

CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 1/24/2023

DIRECTOR  
DATE:

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
1/24/2023

CHIEF, BUREAU OF HIGHWAYS  
DATE:

**SITE DEVELOPMENT PLAN**

**ROAD PROFILES, TYPICAL SECTIONS AND CROSSWALK DETAILS**

**DORSEY OVERLOOK APARTMENT UNITS 1-78**  
PARCEL A

**VOGEL ENGINEERING**

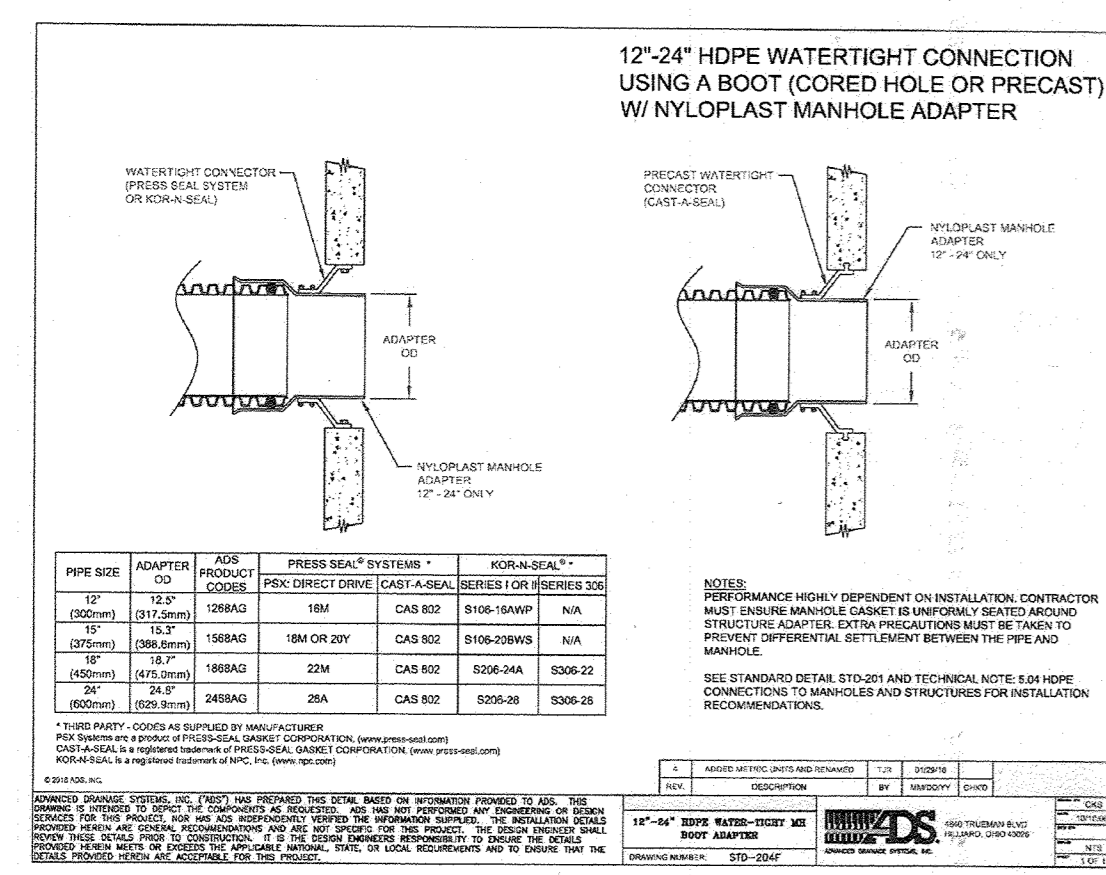
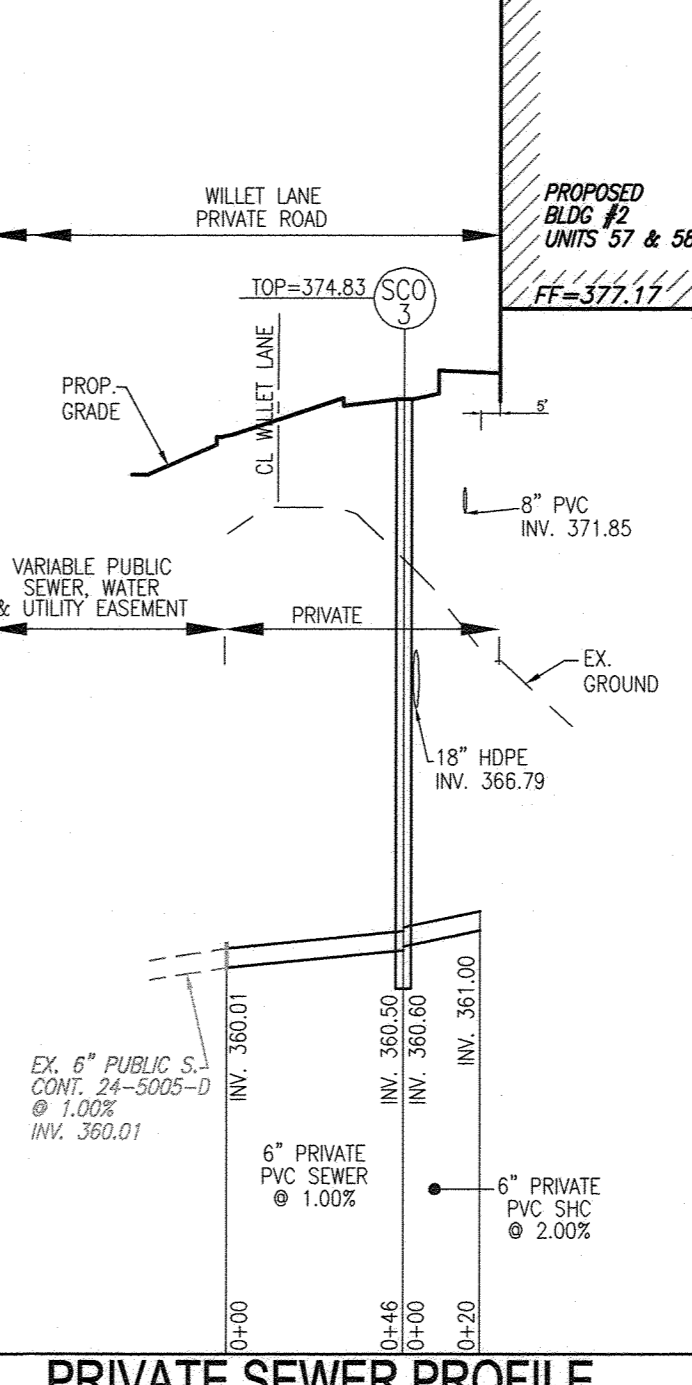
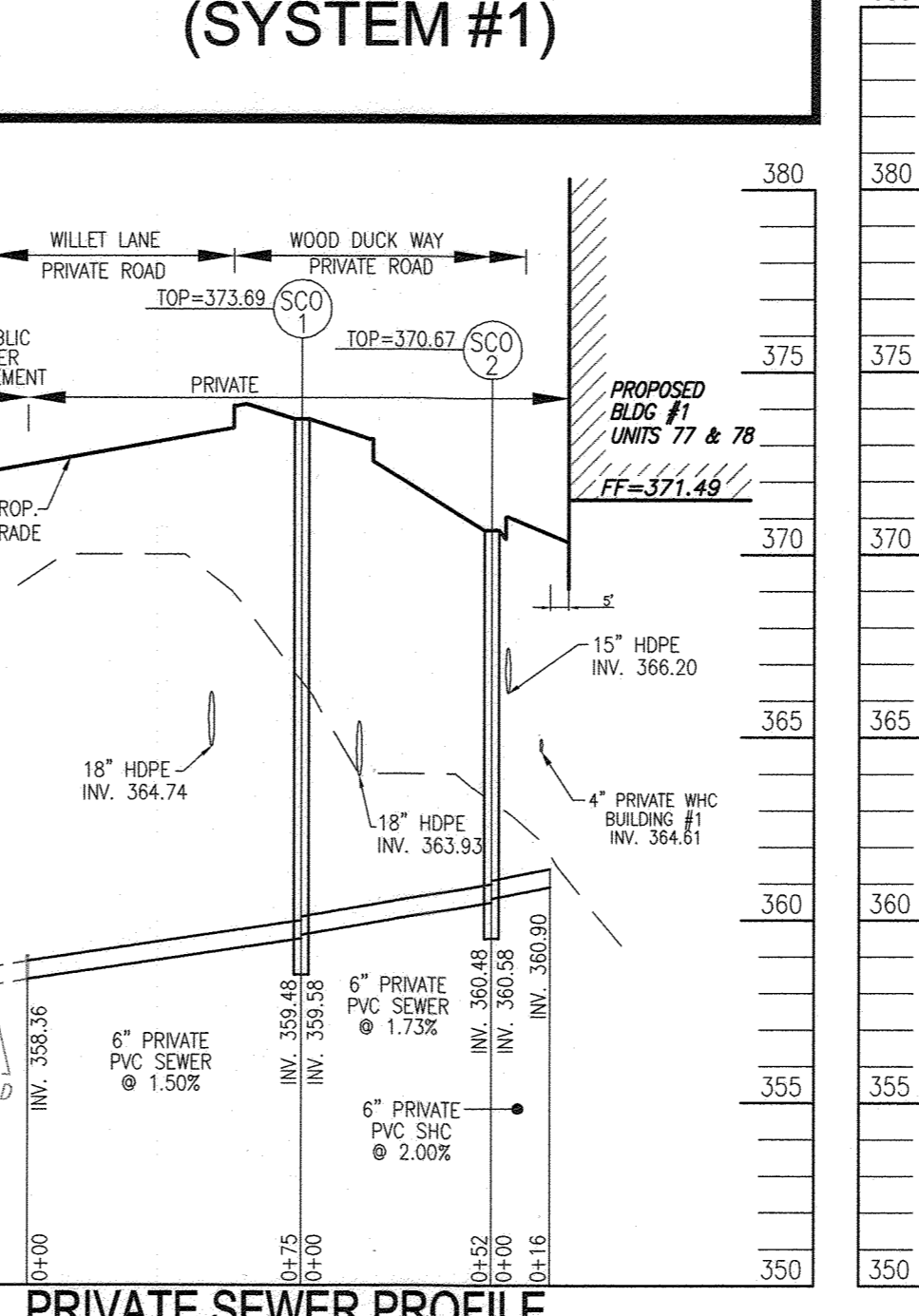
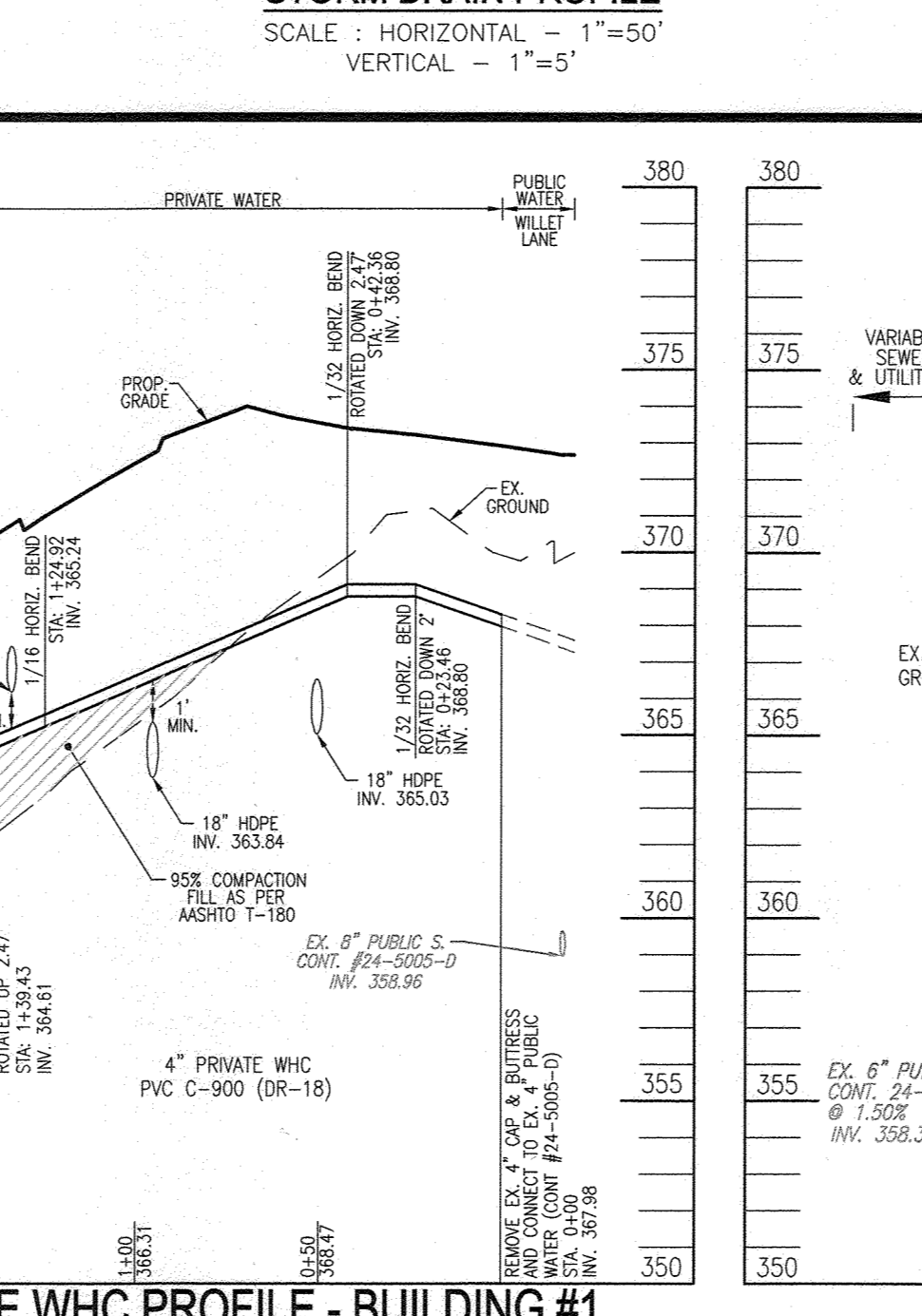
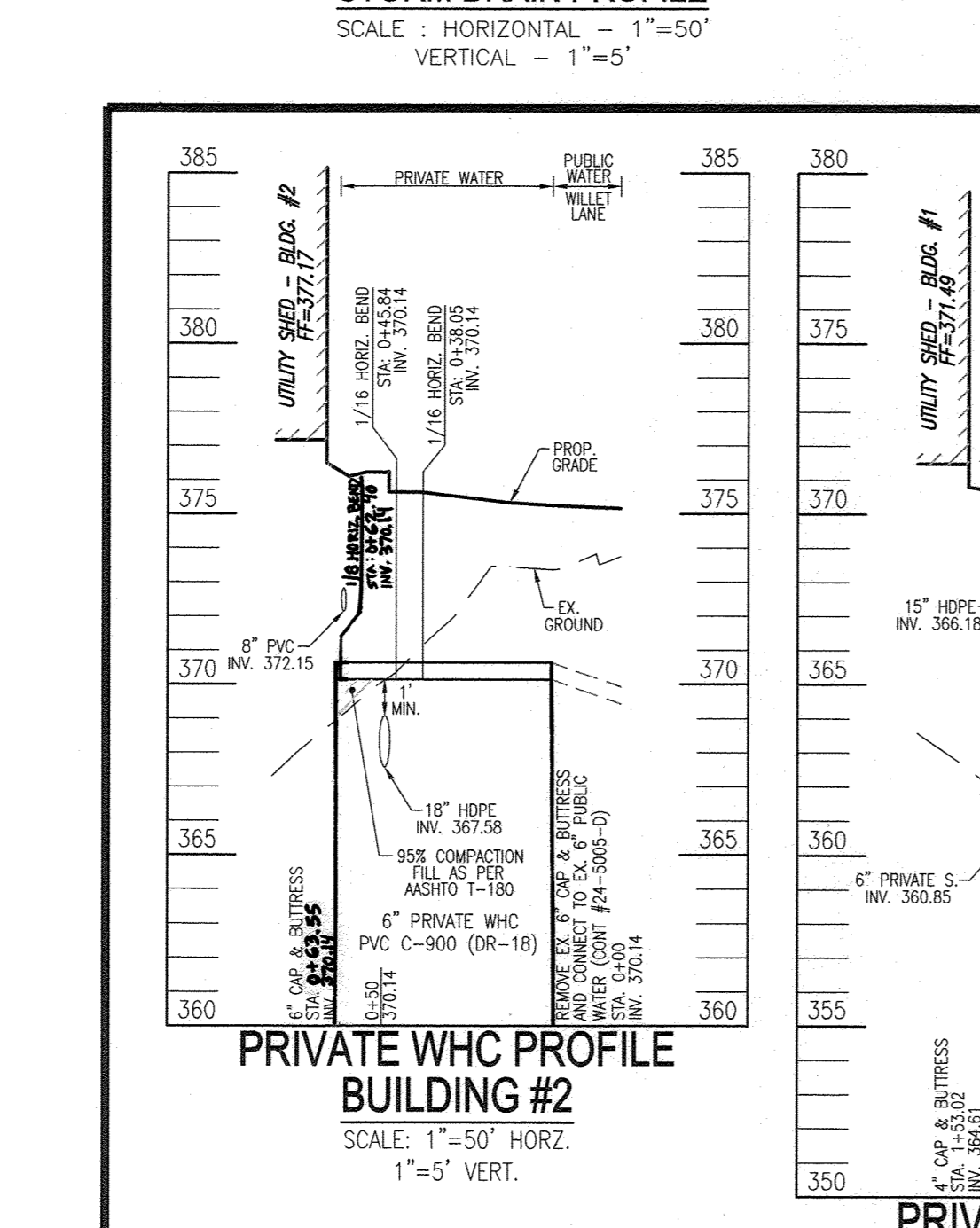
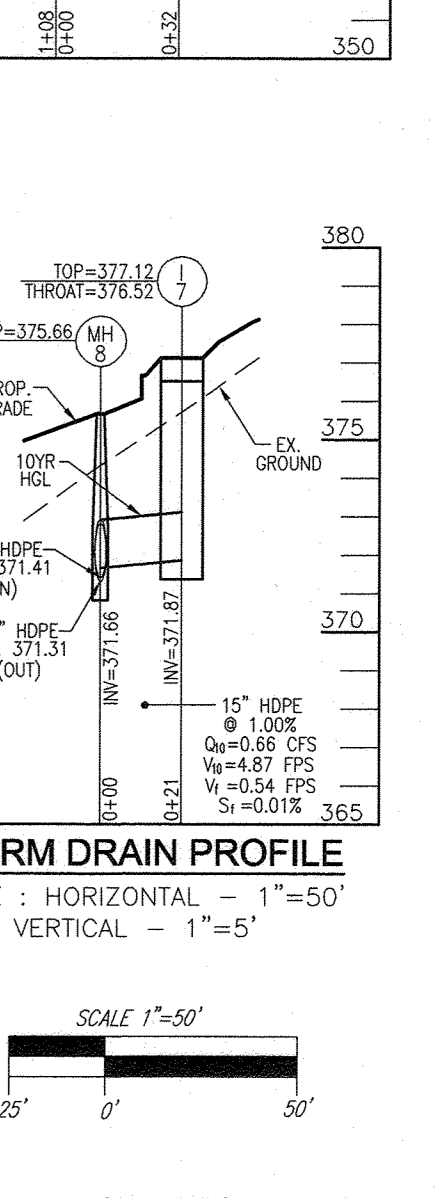
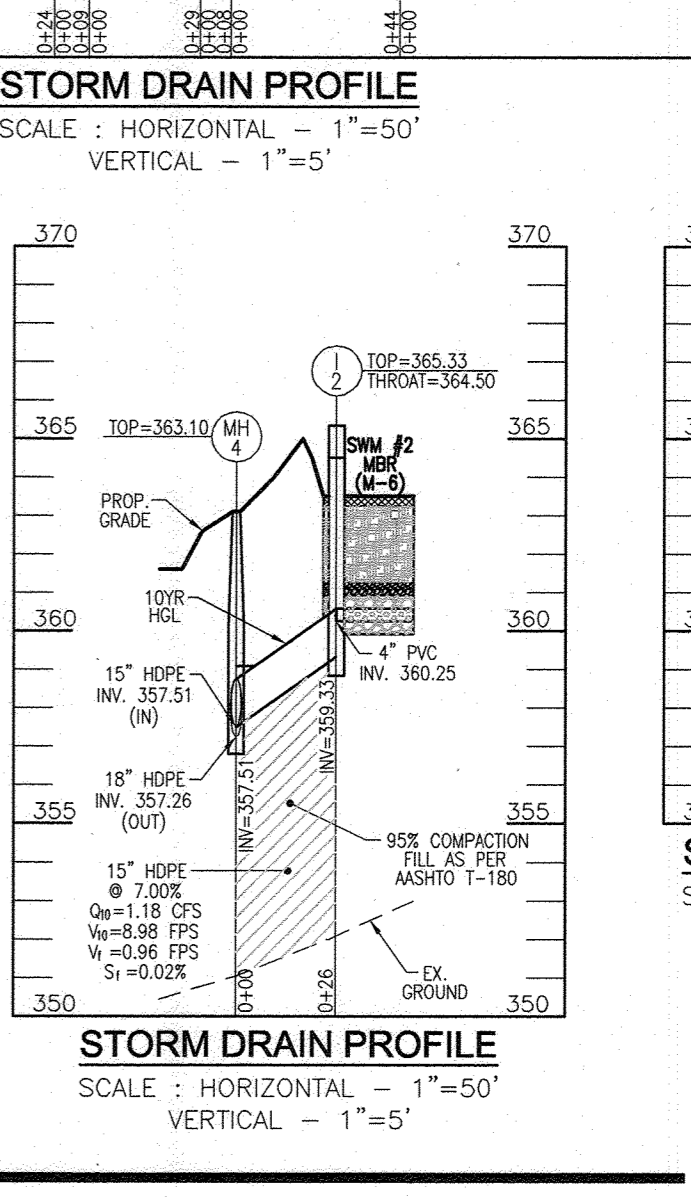
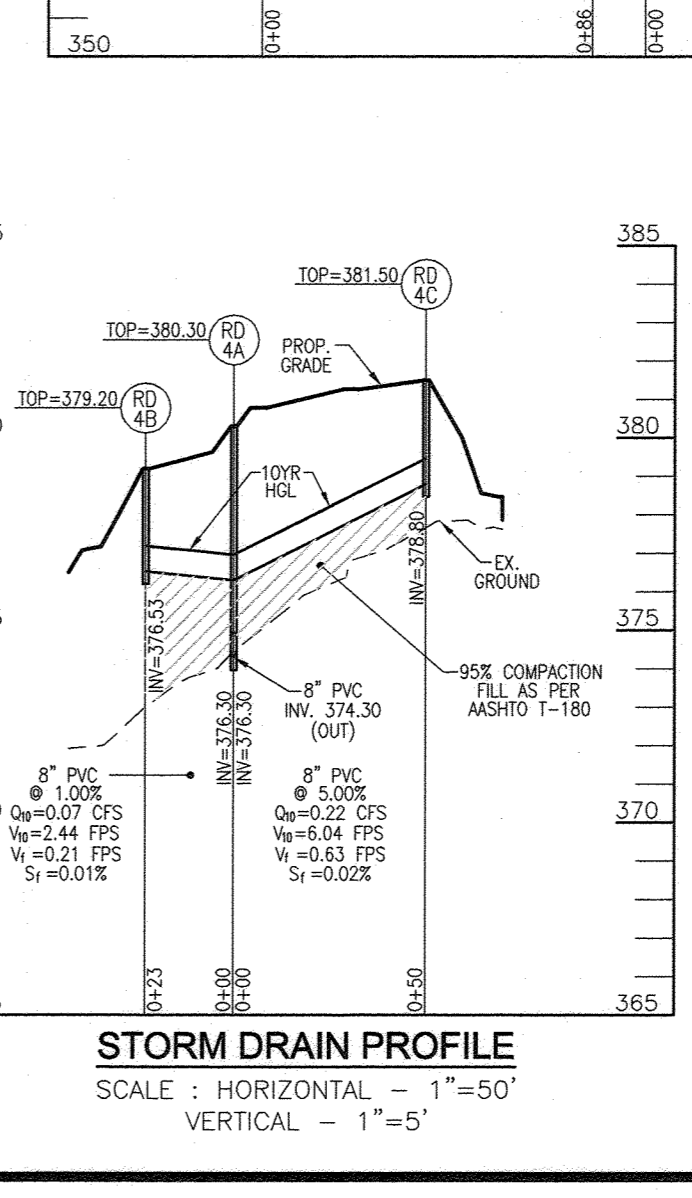
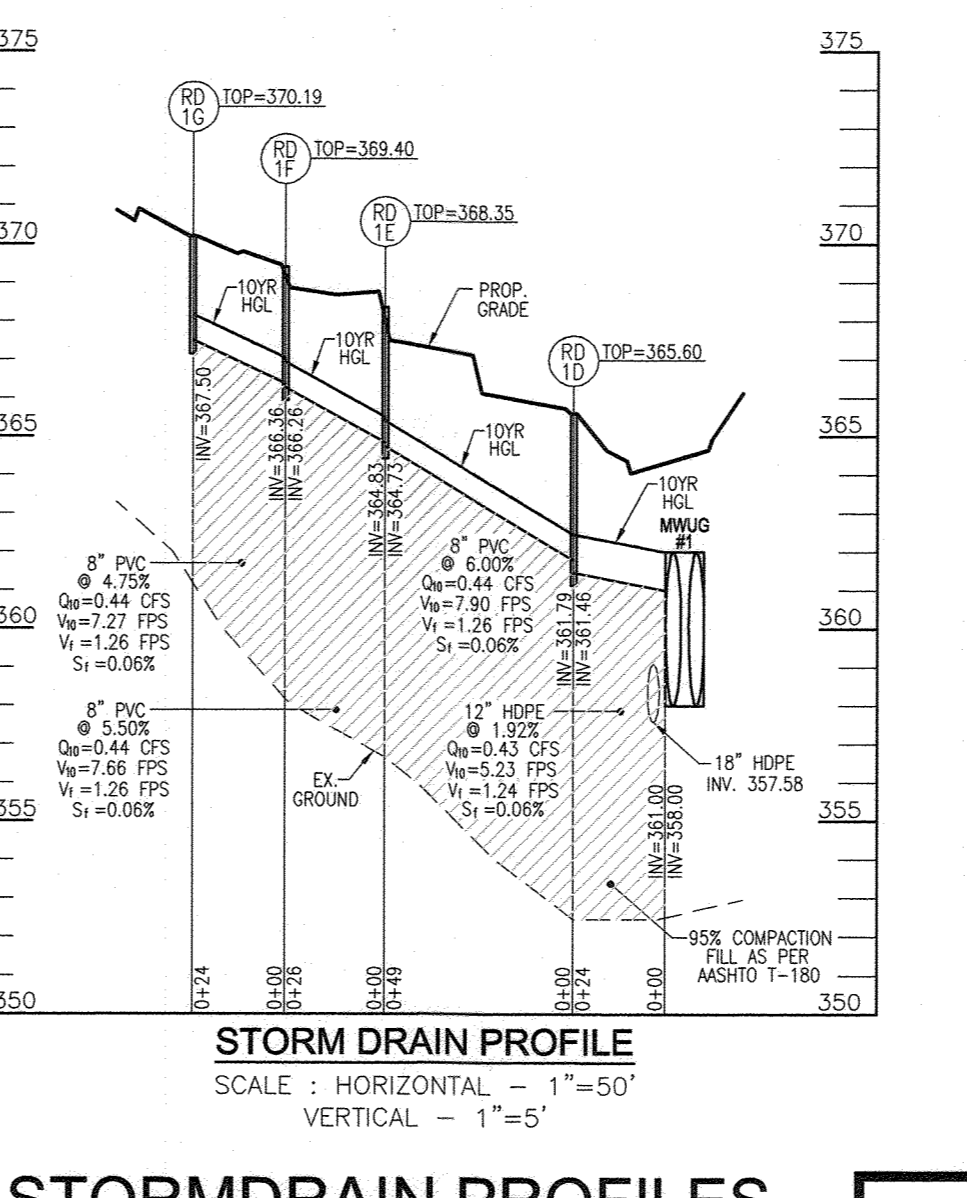
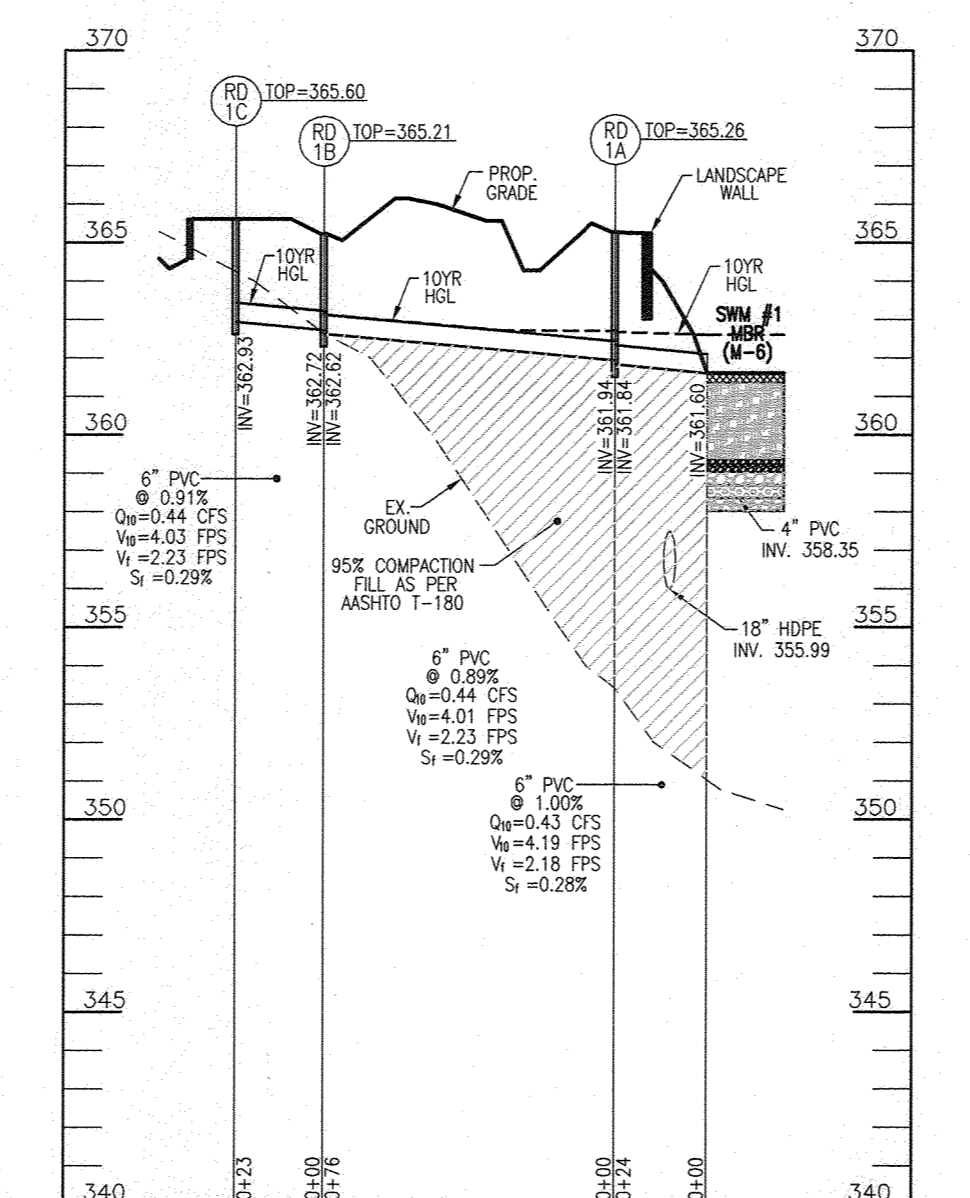
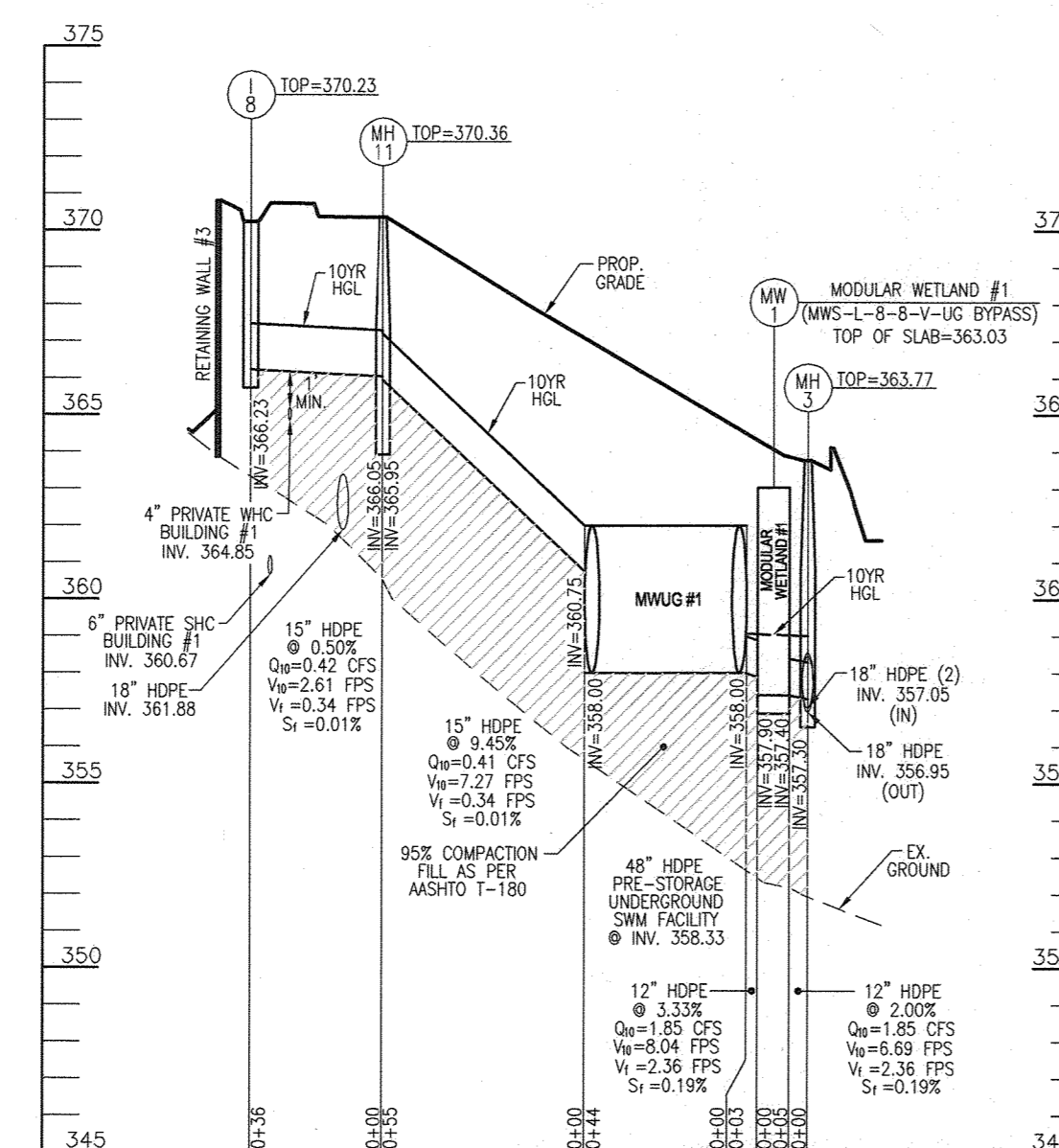
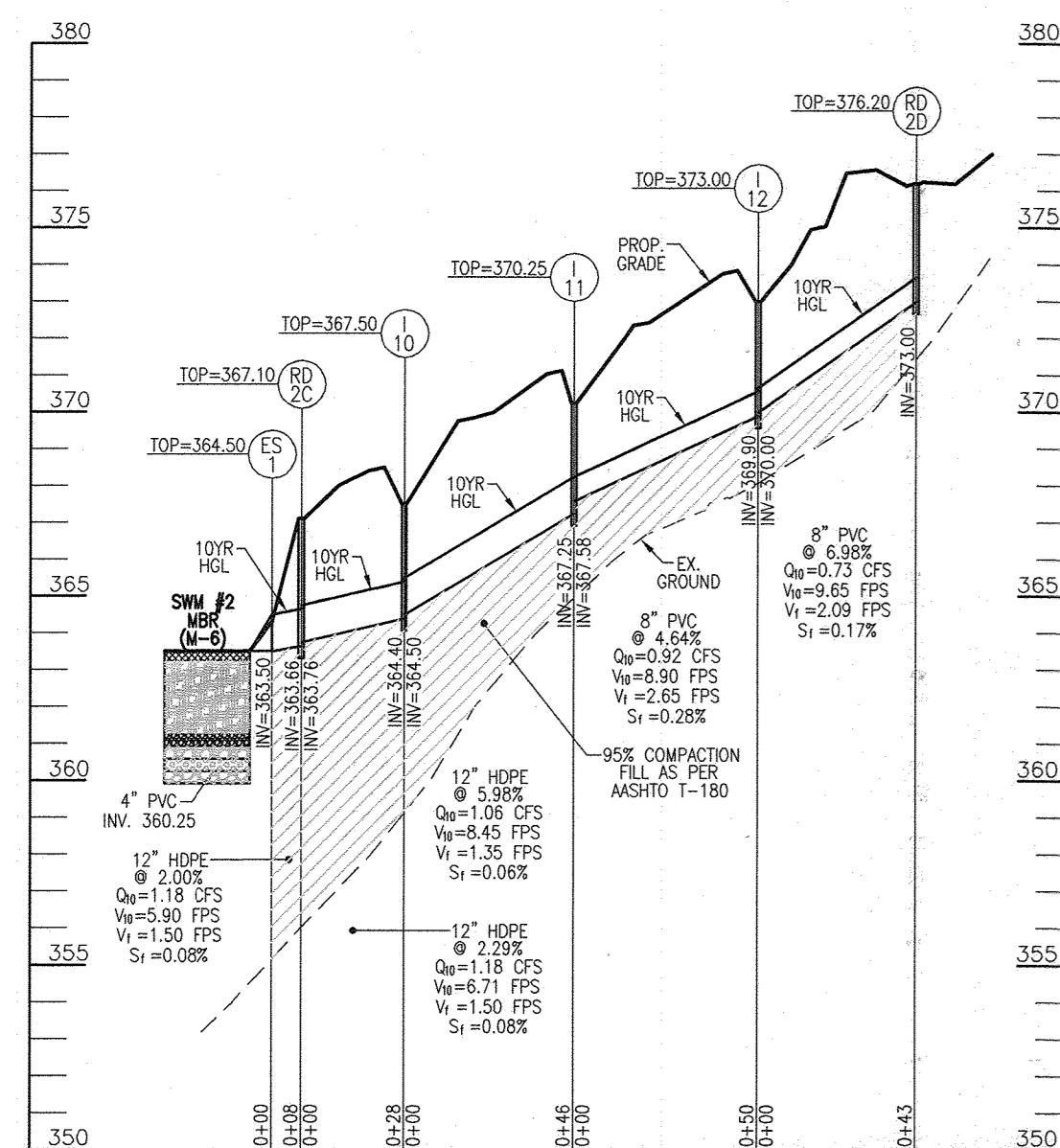
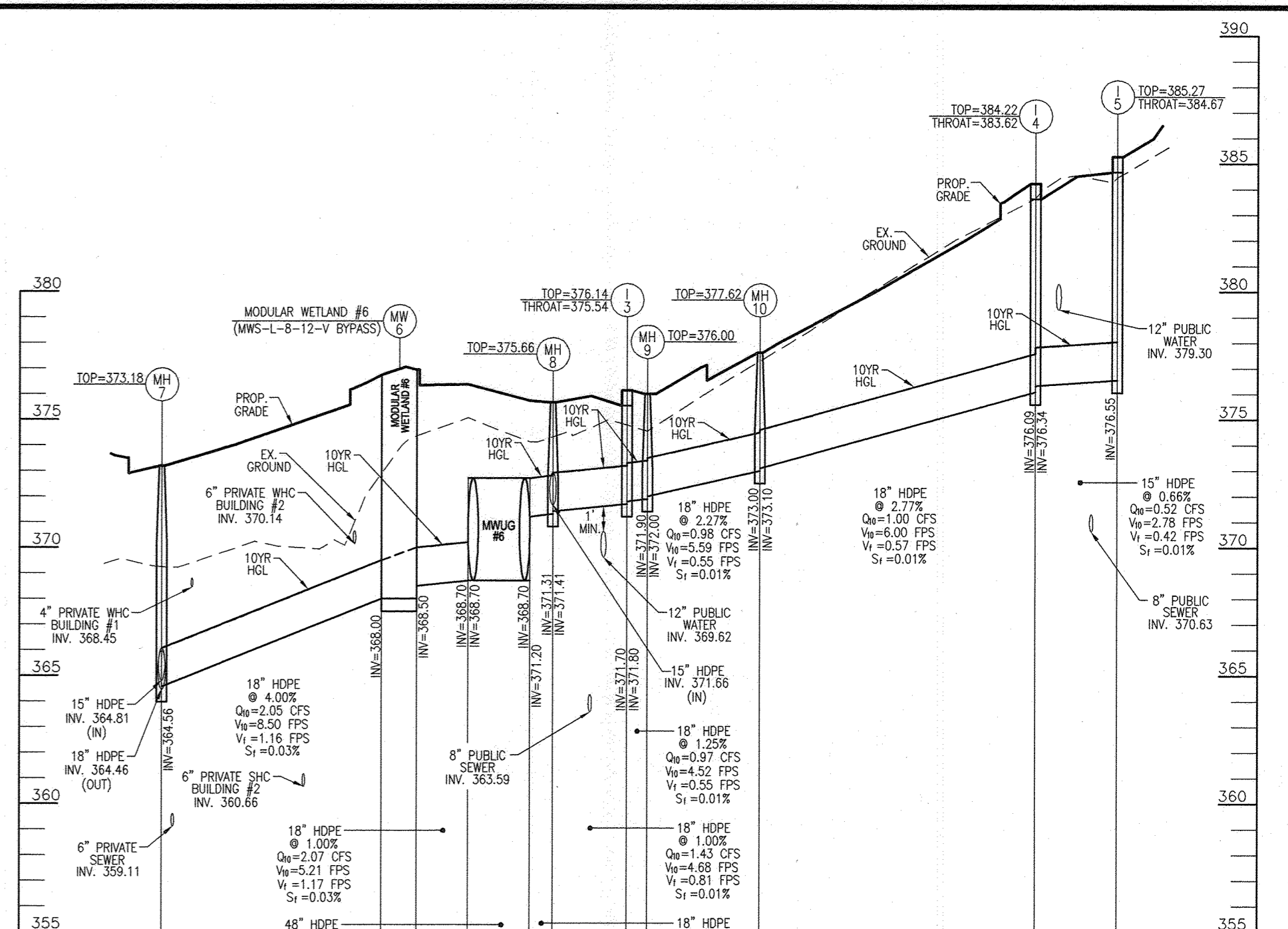
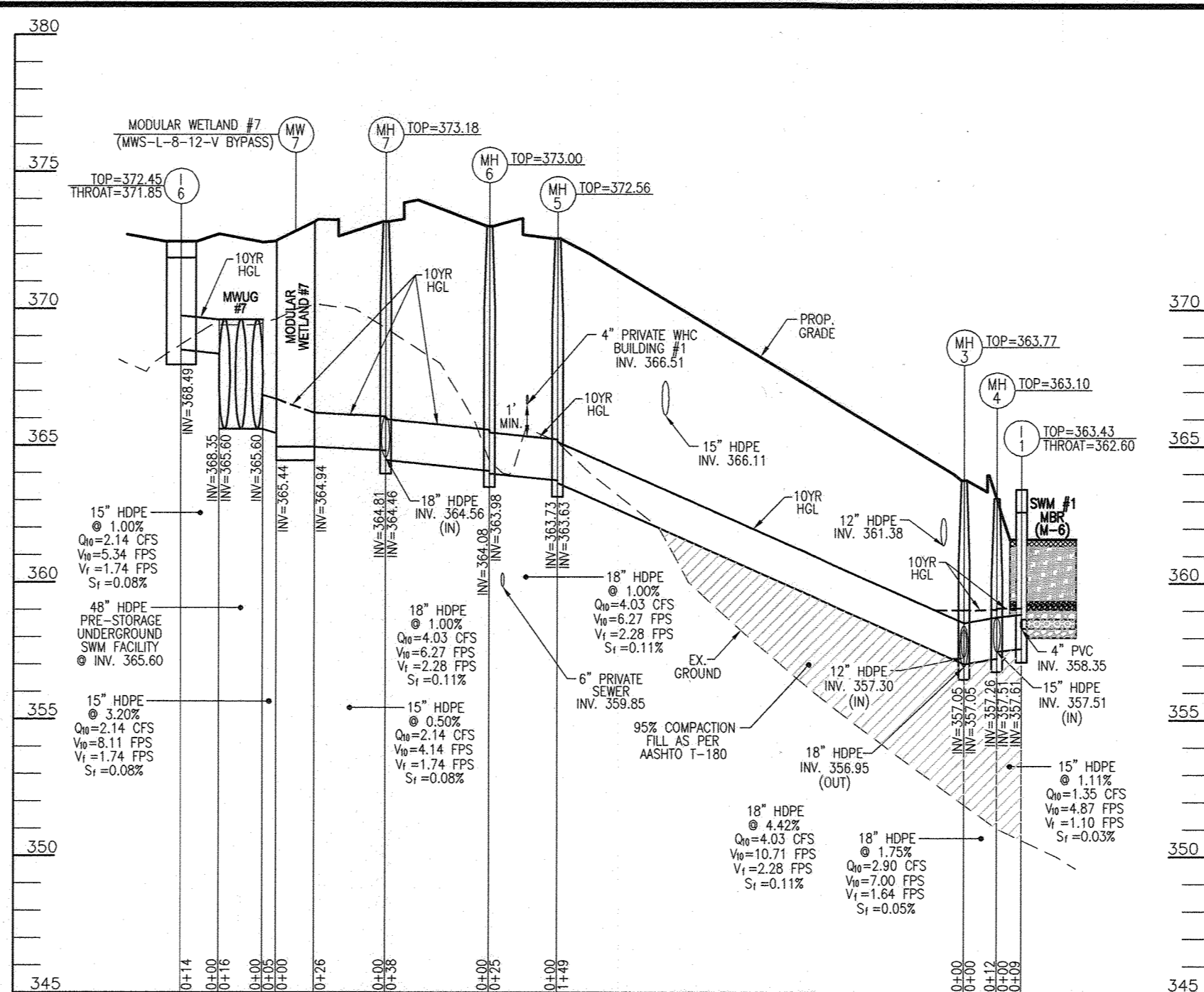
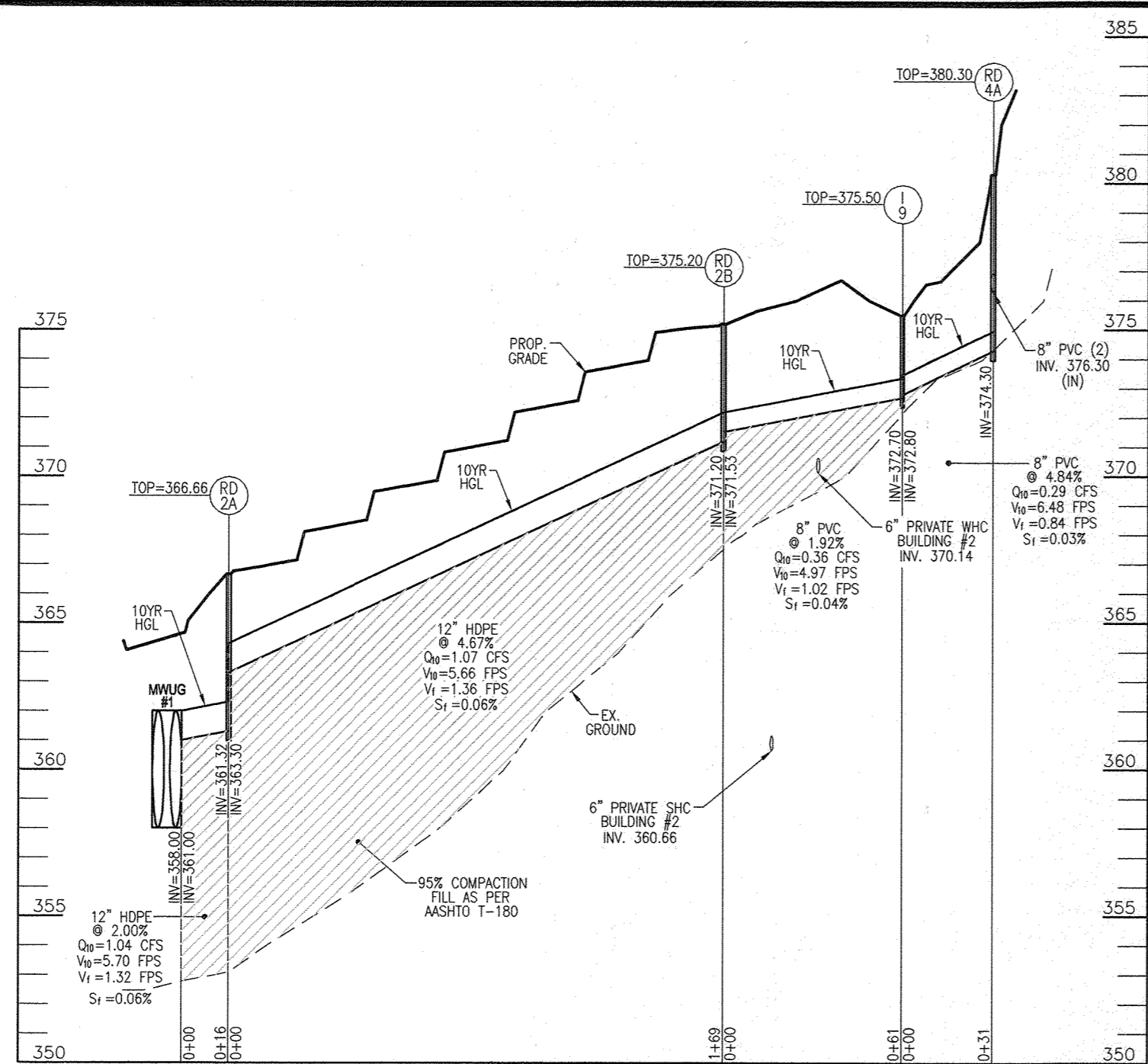
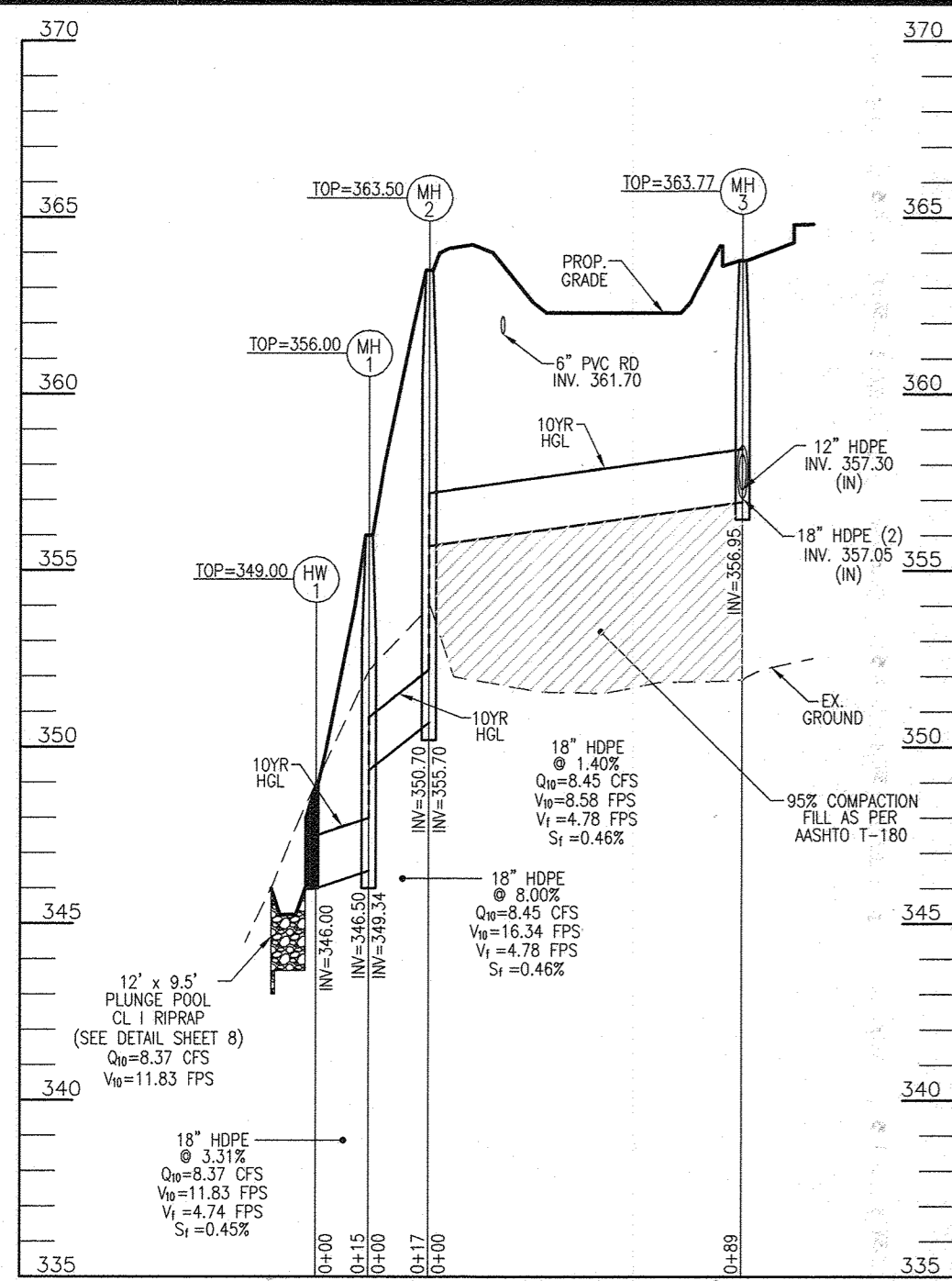
**TIMMONS GROUP**

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: DZE/RHV  
DRAWN BY: DZE/JR/KS  
CHECKED BY: RHV  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

9 OF 30



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE  
 DIRECTOR  
 DATE

**STORM DRAIN PROFILES (SYSTEM #1)**

**PRIVATE WATER & SEWER PROFILES**

NO.	REVISION	DATE
3	REVISE UNIT 57 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK	6-26-21

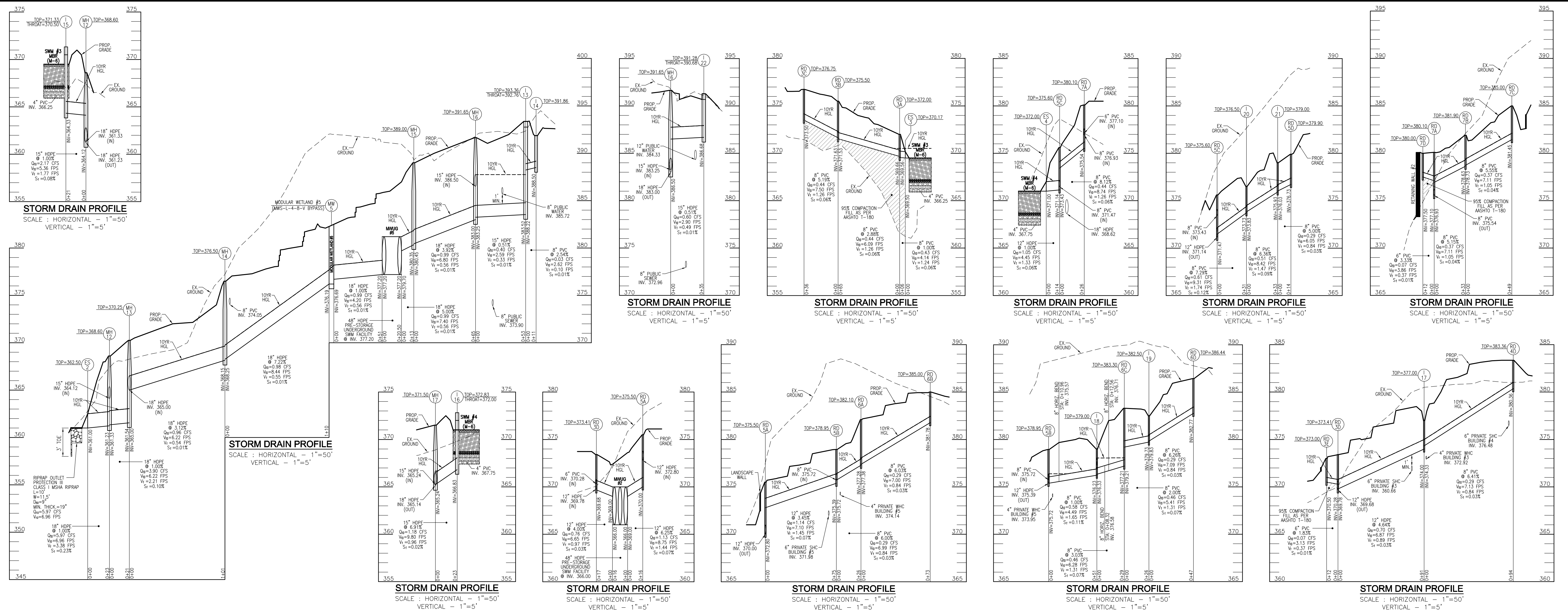
**SITE DEVELOPMENT PLAN**  
**PRIVATE STORM DRAIN, SEWER AND WATER PROFILES**  
 DORSEY OVERLOOK  
 APARTMENT UNITS 1-78  
 PARCEL A  
 2ND ELECTION DISTRICT  
 TAX MAP: 30 GRID: 9  
 DPZ REF: EDP-15-012, BA-20-003V, F-21-023

**VOGEL ENGINEERING**  
 TIMMONS GROUP  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

**PROFESSIONAL CERTIFICATE**  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15493, EXPIRATION DATE: 09-27-2024

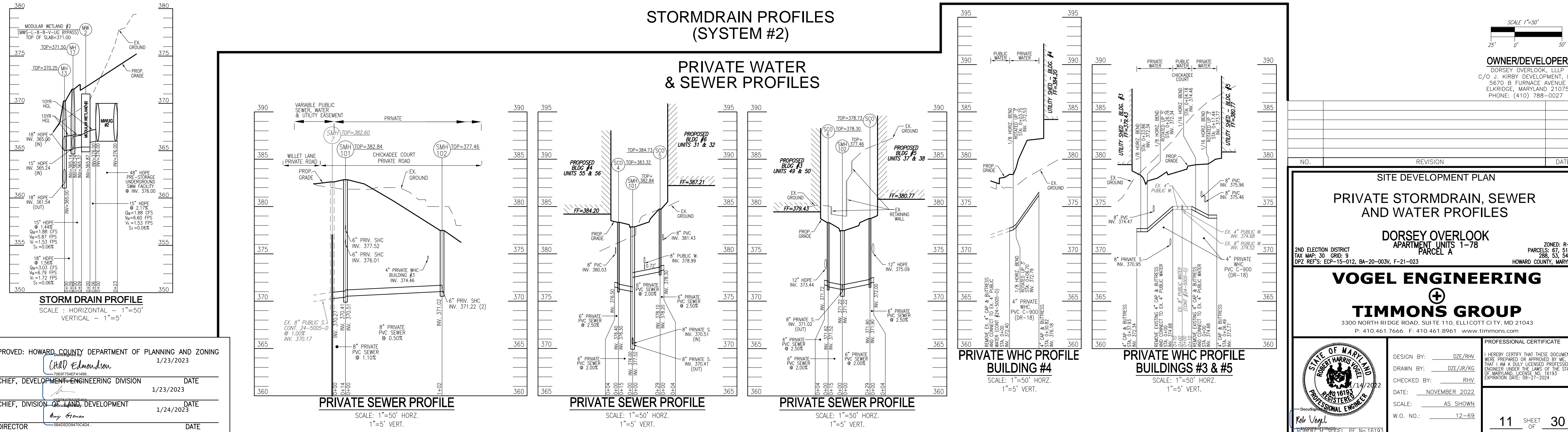
DESIGN BY: DZE/RHV  
 DRAWN BY: DZE/JR/KG  
 CHECKED BY: RHV  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

10 SHEET OF 30



**STORMDRAIN PROFILES (SYSTEM #2)**

**PRIVATE WATER & SEWER PROFILES**



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023  
[Signature]  
CHIEF, DEVELOPMENT & ENGINEERING DIVISION  
1/23/2023  
CHIEF, DIVISION OF LAND DEVELOPMENT  
1/24/2023  
DIRECTOR  
DATE

SCALE 1"=50'  
OWNER/DEVELOPER  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5870 B FURNACE AVENUE  
ELK RIDGE, MARYLAND 21075  
PHONE: (410) 788-0027

**SITE DEVELOPMENT PLAN  
PRIVATE STORMDRAIN, SEWER  
AND WATER PROFILES**

DORSEY OVERLOOK  
APARTMENT UNITS 1-78  
PARCEL A

**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: DZE/RHW  
DRAWN BY: DZE/RHW/KG  
CHECKED BY: RHW  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69  
PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193  
EXPIRATION DATE: 09-27-2024  
11 OF 30  
SDP-20-074



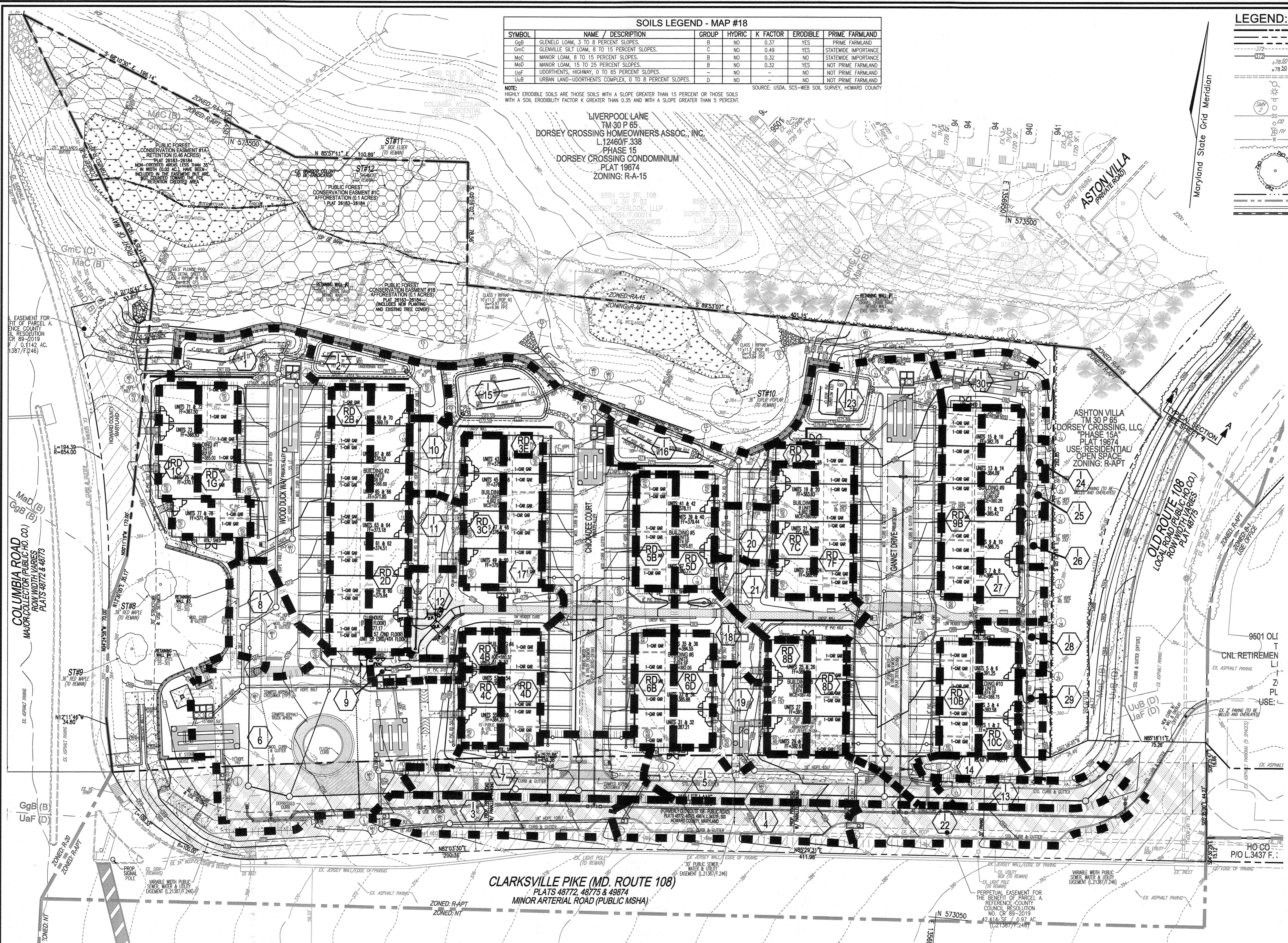
**SOILS LEGEND - MAP #18**

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K FACTOR	ERODIBLE	PRIME FARMLAND
GaB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES.	B	NO	0.37	YES	PRIME FARMLAND
GmC	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES.	C	NO	0.49	YES	STATEWIDE IMPORTANCE
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES.	B	NO	0.32	NO	STATEWIDE IMPORTANCE
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES.	B	NO	0.32	YES	NOT PRIME FARMLAND
UaF	UDRTHENTS, HIGHWAY, 0 TO 65 PERCENT SLOPES.	-	NO	-	NO	NOT PRIME FARMLAND
UaB	URBAN LAND-UDRTHENTS COMPLEX, 0 TO 8 PERCENT SLOPES.	D	NO	-	NO	NOT PRIME FARMLAND

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.  
SOURCE: USDA, SCS-WEBB SOIL SURVEY, HOWARD COUNTY

**LEGEND:**

	PROPERTY LINE		PROPOSED STORM DRAIN INLET
	RIGHT-OF-WAY LINE		PROPOSED TREE LINE
	ADJACENT PROPERTY LINE		PROPOSED CONCRETE SIDEWALK
	EXISTING CONTOUR		PROPOSED HAND RAMP W/ HANDRAIL
	PROPOSED CONTOUR		MICRO-BIORETENTION AREA (M-6)
	EXISTING SPOT ELEVATION		NON-ROOFTOP DISCONNECT (N-2)
	PROPOSED SPOT ELEVATION		WETLANDS LIMITS
	EXISTING CURB AND GUTTER		PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A (L-21387/F.246)
	EXISTING UTILITY POLE		PUBLIC SEWER, WATER & UTILITY EASEMENT (L-21387/F.246) & (PLAT 26183-84)
	EXISTING SIGN		PUBLIC FOREST CONSERVATION EASEMENT (AFFORESTATION) (PLAT 26183-84)
	EXISTING SANITARY MANHOLE		PUBLIC FOREST CONSERVATION EASEMENT (AFFORESTATION) (PLAT 26183-84)
	EXISTING SANITARY LINE		DRAINAGE AREA DIVIDE
	EXISTING FIRE HYDRANT		
	EXISTING WATER LINE		
	EXISTING TREE LINE		
	EXISTING SPECIMEN TREE		
	CENTERLINE EXISTING STREAM		
	ZONING BOUNDARY		
	PROPOSED CURB & GUTTER		
	PROPOSED STORM DRAIN		



**SD Drainage Area Chart**

DRAINAGE AREA & STRUCTURE NO.	DRAINAGE AREA (AC)	DRAINAGE FACTOR	C	IMP %
RD-1C	0.06	0.86	100%	100%
RD-1G	0.06	0.86	100%	100%
RD-2B	0.10	0.86	100%	100%
RD-2D	0.10	0.86	100%	100%
RD-3C	0.06	0.86	100%	100%
RD-3E	0.01	0.86	100%	100%
RD-4B	0.01	0.86	100%	100%
RD-4C	0.03	0.86	100%	100%
RD-4D	0.04	0.86	100%	100%
RD-5B	0.04	0.86	100%	100%
RD-5D	0.04	0.86	100%	100%
RD-6B	0.04	0.86	100%	100%
RD-6D	0.04	0.86	100%	100%
RD-7C	0.05	0.86	100%	100%
RD-7D	0.01	0.86	100%	100%
RD-7F	0.06	0.86	100%	100%
RD-8B	0.04	0.86	100%	100%
RD-8D	0.04	0.86	100%	100%
RD-9B	0.07	0.86	100%	100%
RD-10B	0.04	0.86	100%	100%
RD-10C	0.04	0.86	100%	100%
I-1	0.24	0.64	67%	
I-2	0.06	0.19	0%	
I-3	0.08	0.71	76%	
I-4	0.08	0.71	75%	
I-5	0.10	0.61	62%	
I-6	0.34	0.74	82%	
I-7	0.12	0.65	67%	
I-8	0.07	0.70	75%	
I-9	0.02	0.40	31%	
I-10	0.04	0.39	29%	
I-11	0.04	0.39	30%	
I-12	0.06	0.38	28%	
I-13	0.05	0.86	100%	
I-14	0.02	0.20	0%	
I-15	0.35	0.59	60%	
I-16	0.07	0.25	9%	
I-17	0.07	0.70	75%	
I-18	0.04	0.37	26%	
I-19	0.05	0.39	30%	
I-20	0.03	0.37	26%	
I-21	0.07	0.37	27%	
I-22	0.10	0.71	76%	
I-23	0.40	0.61	63%	
I-24	0.01	0.48	43%	
I-25	0.01	0.48	43%	
I-26	0.01	0.51	48%	
I-27	0.09	0.77	86%	
I-28	0.02	0.37	27%	
I-29	0.02	0.50	45%	
I-30	0.06	0.70	76%	

49

**OWNER/DEVELOPER**  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5670 B FURNACE AVENUE  
ELK RIDGE, MARYLAND 21075  
PHONE: (410) 788-0027

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023  
*Wendy Edmondson*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE: 1/23/2023

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
1/24/2023  
*David*  
CHIEF, BUREAU OF HIGHWAYS  
DATE: 1/24/2023

**DRAINAGE AREA MAP FOR STORM DRAIN**  
SCALE: 1"=30'

NOTE:  
REFERENCE COUNCIL RESOLUTION CR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108, (ALONG WITH A PORTION OF COLUMBIA ROAD), THE COMBINED AREA CONTAINING APPROXIMATELY 1,087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO WAIVE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL NON-EXCLUSIVE EASEMENT IN THE 1,087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, LLLP, (L-21387/F.246).  
SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0A.10 OF THE ZONING REGULATIONS.

NO.	REVISION	DATE
3	REVISE UNIT 57 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK	6-26-24

**SITE DEVELOPMENT PLAN**  
**STORM DRAIN DRAINAGE AREA MAP**

**DORSEY OVERLOOK**  
APARTMENT UNITS 1-78  
PARCEL A

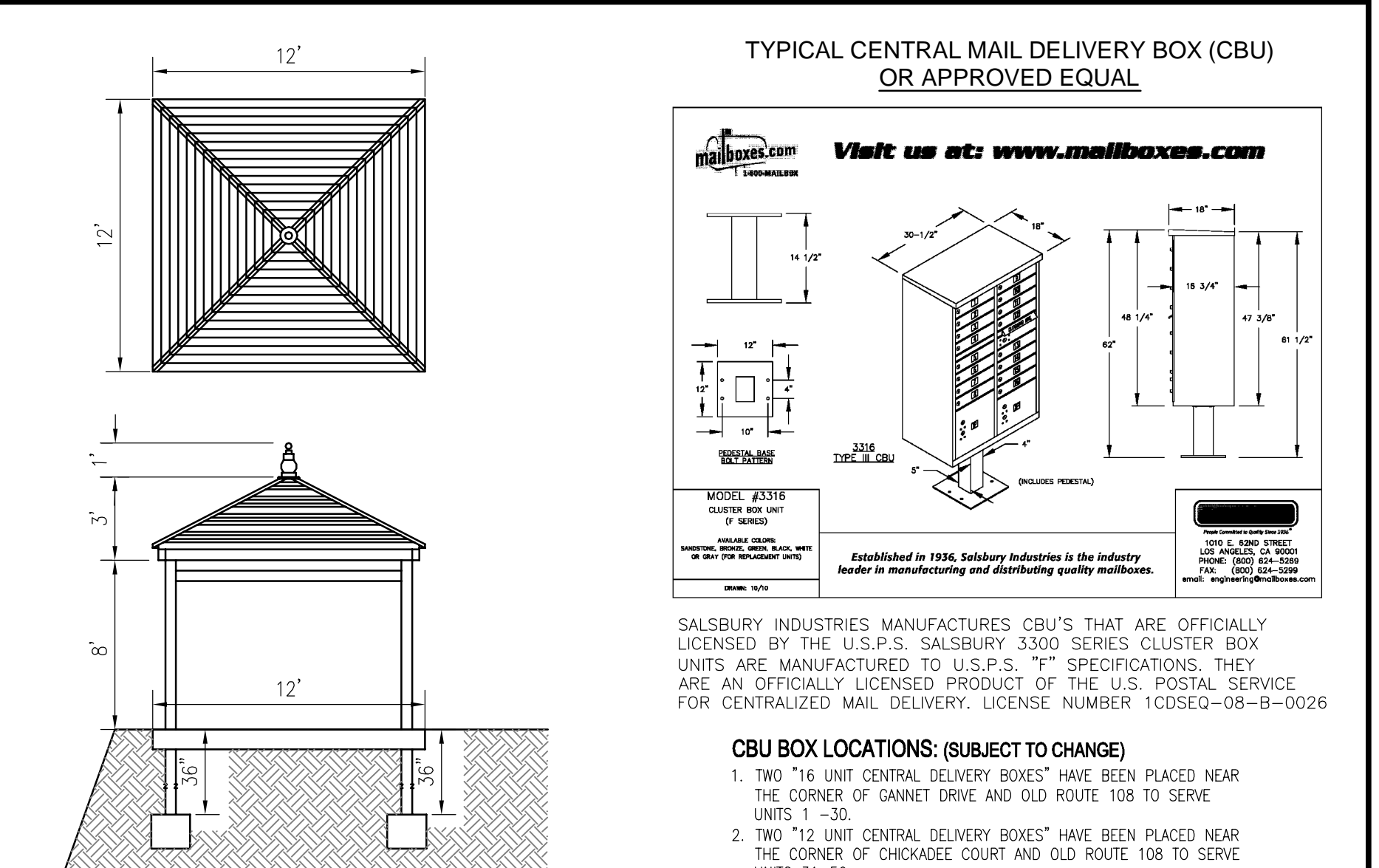
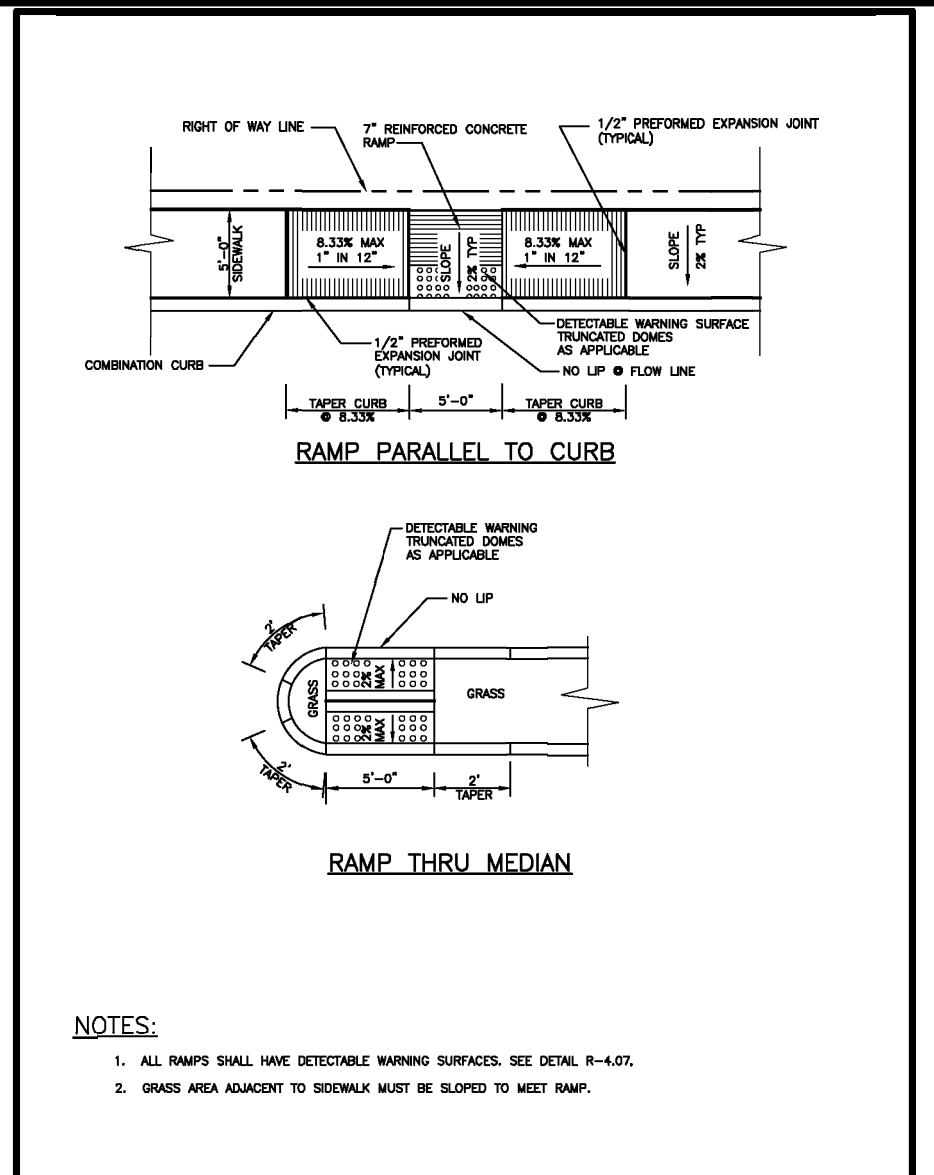
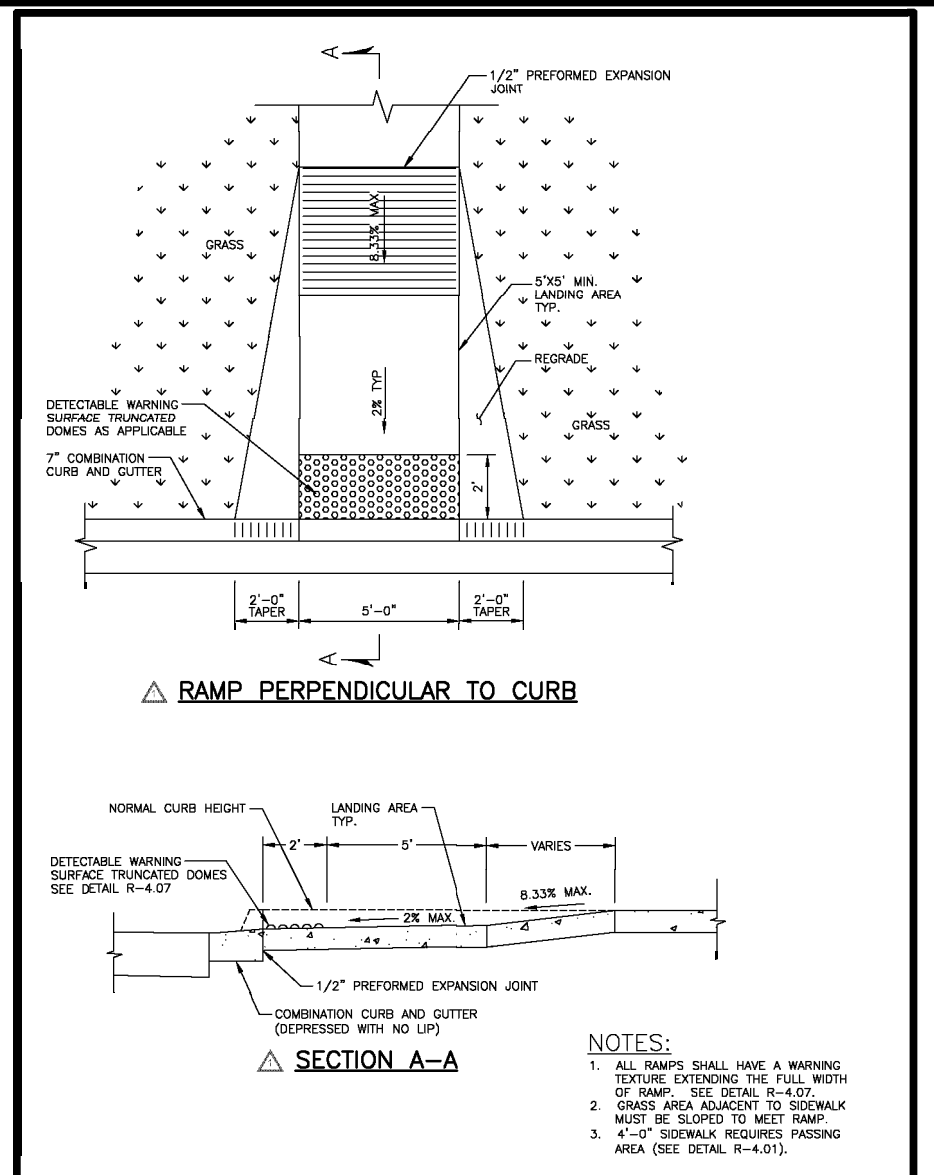
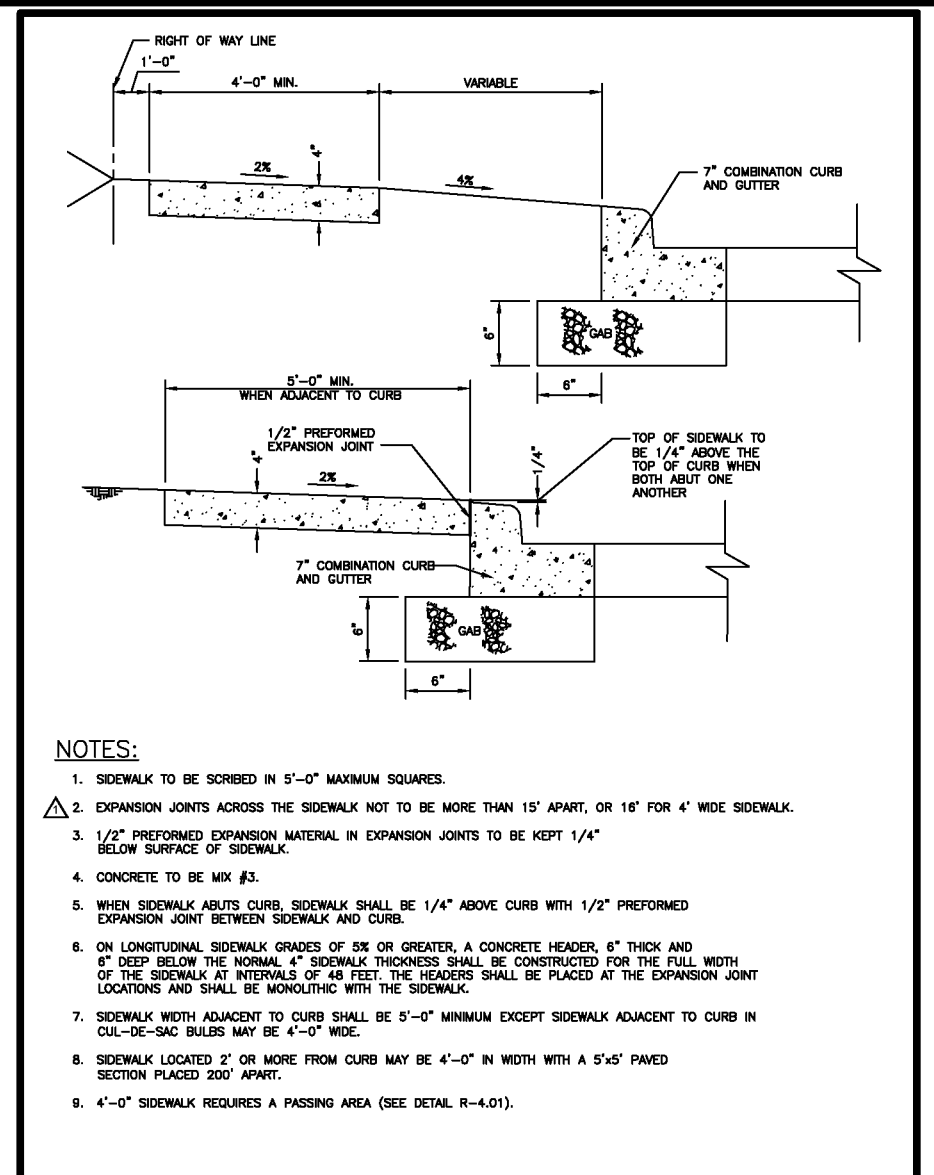
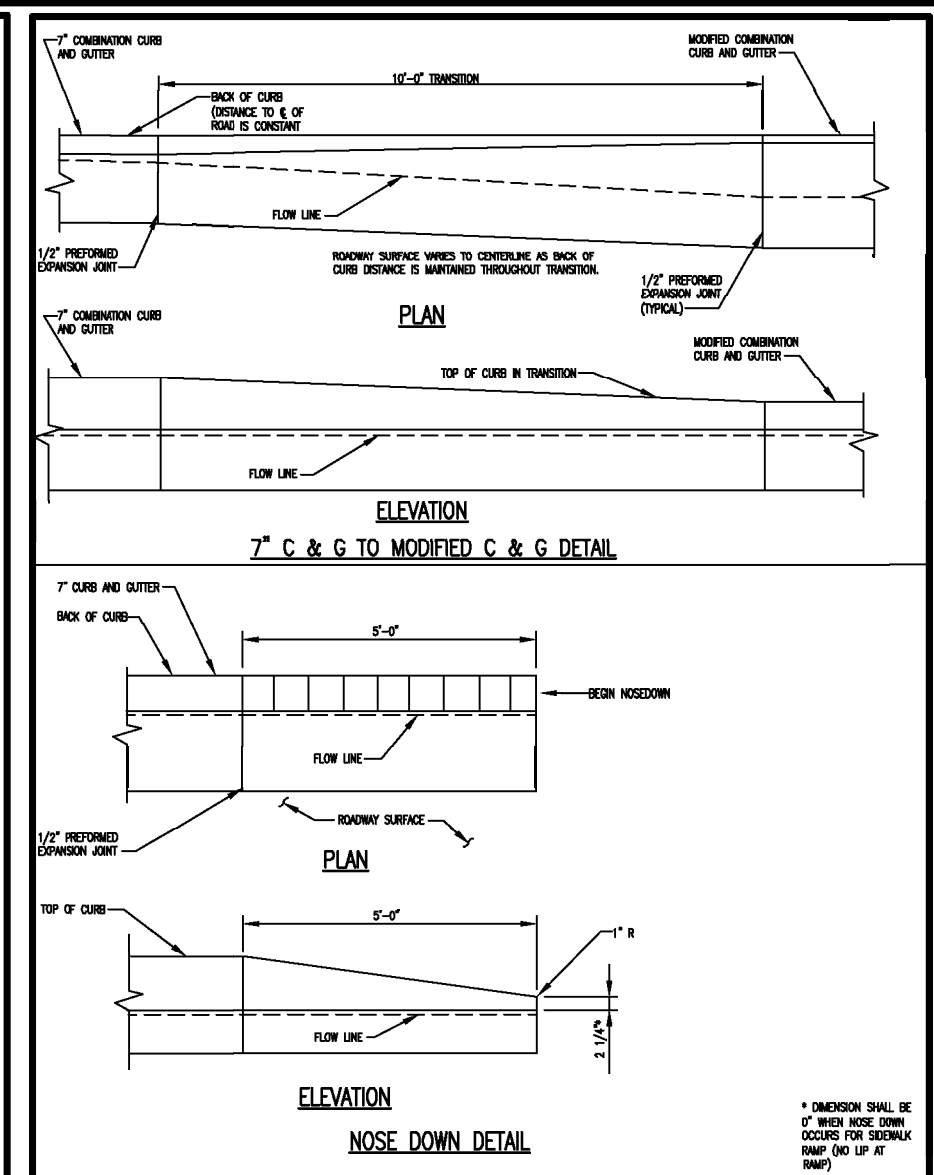
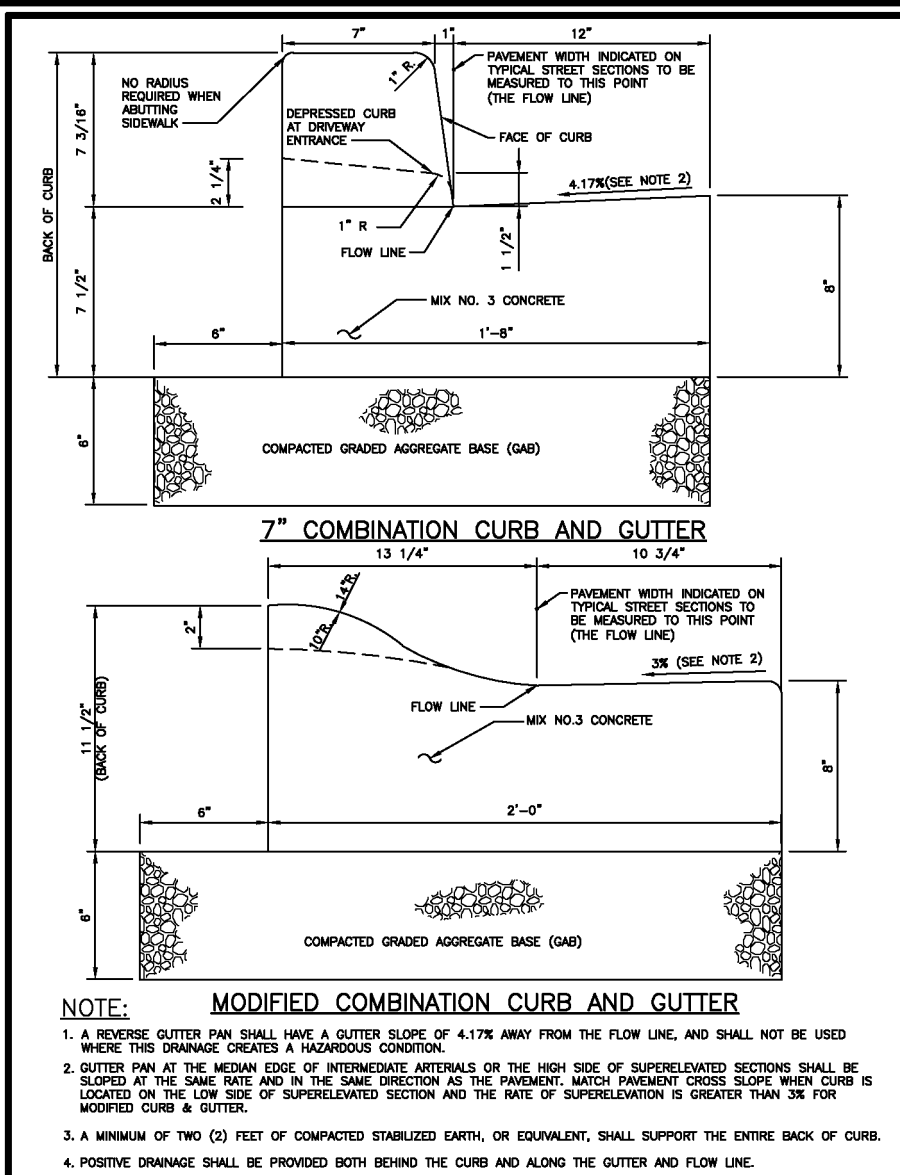
**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7656 F: 410.461.8961 www.timmons.com

**PROFESSIONAL CERTIFICATE**

DESIGN BY: DZE/RHV  
DRAWN BY: DZE/JR/KG  
CHECKED BY: RHV  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE JURISDICTION OF THE STATE OF MARYLAND. EXPIRATION DATE: 09-27-2024

13 SHEET OF 30



SECTION	ROAD AND STREET CLASSIFICATION	CA CALIFORNIA STANDARD SPECIFICATIONS (CSS)	3 TO 12	12 TO 24	24 TO 36	36 TO 48	48 TO 60	60 TO 72
P-1	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-2	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-3	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-4	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5

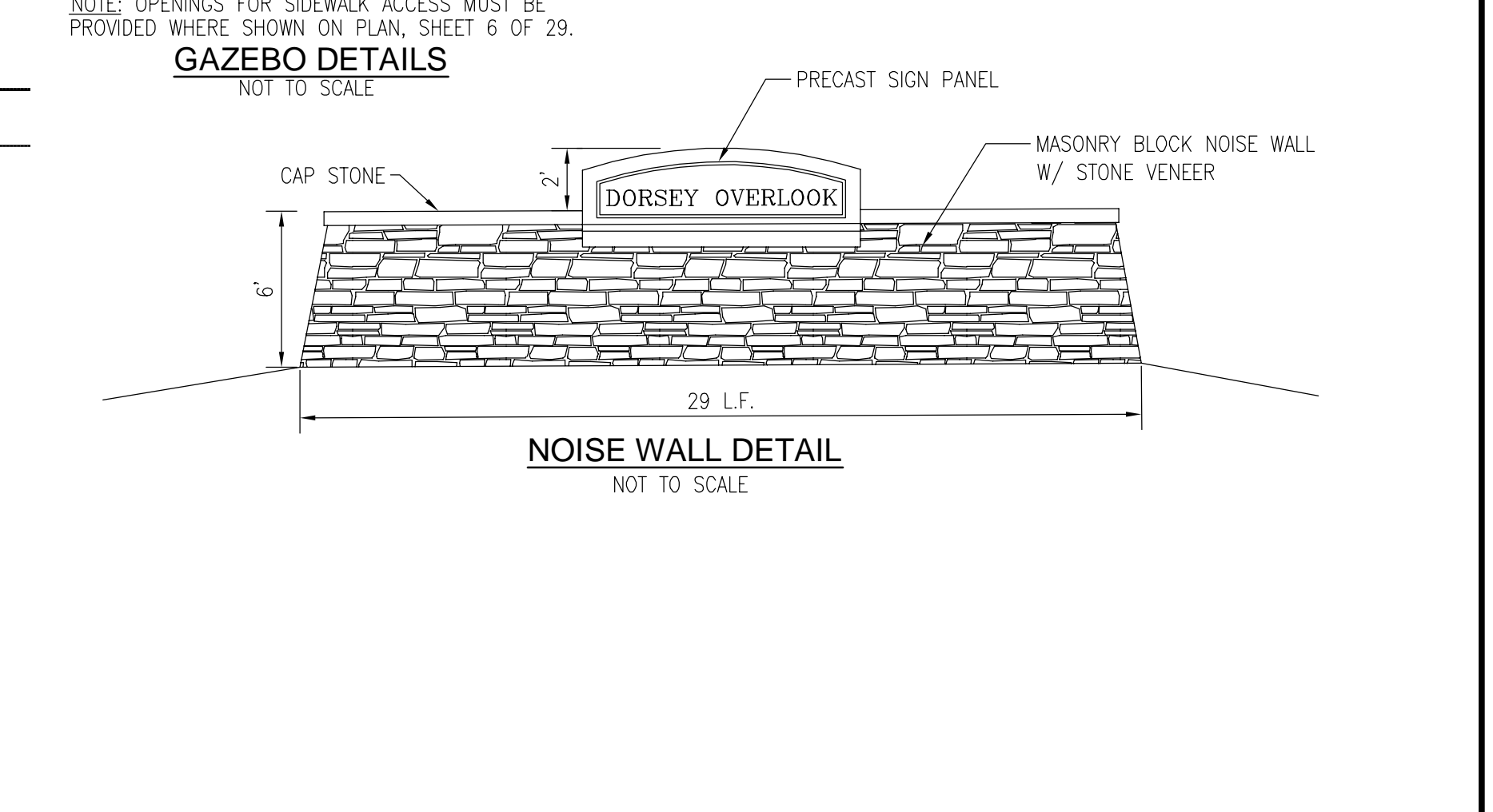
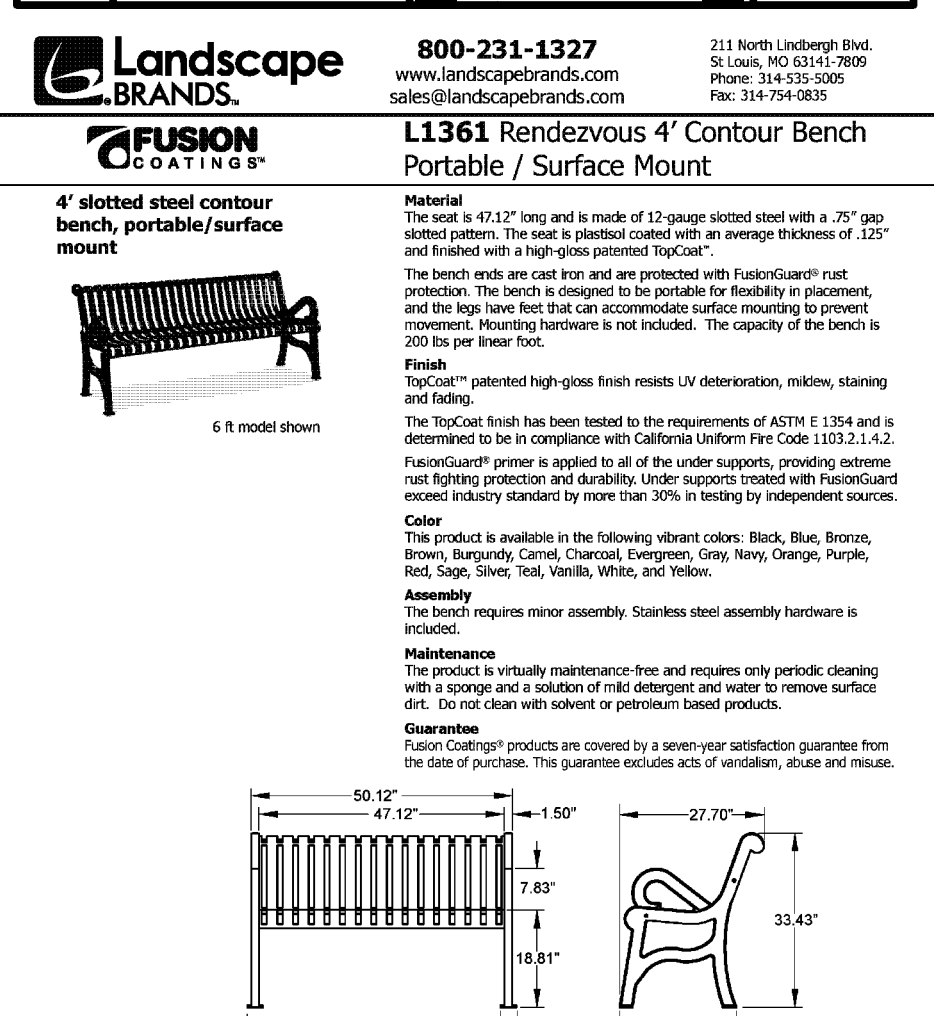
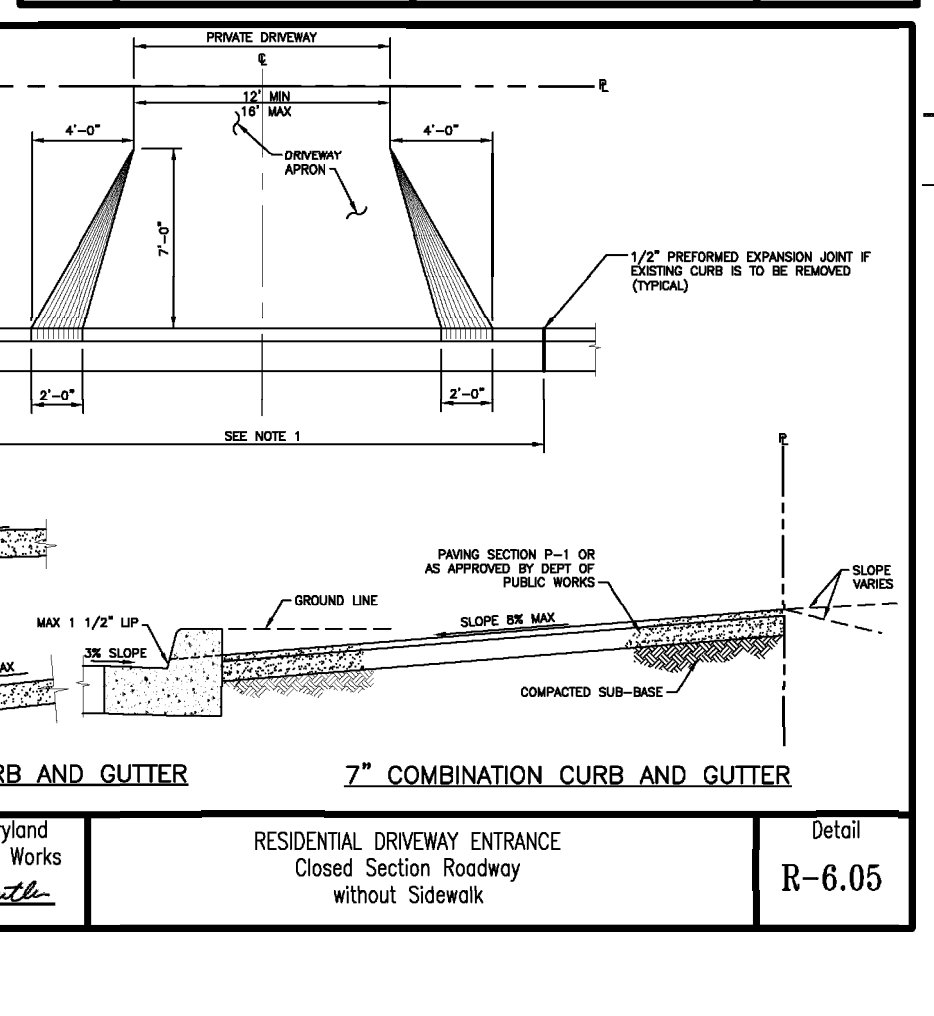
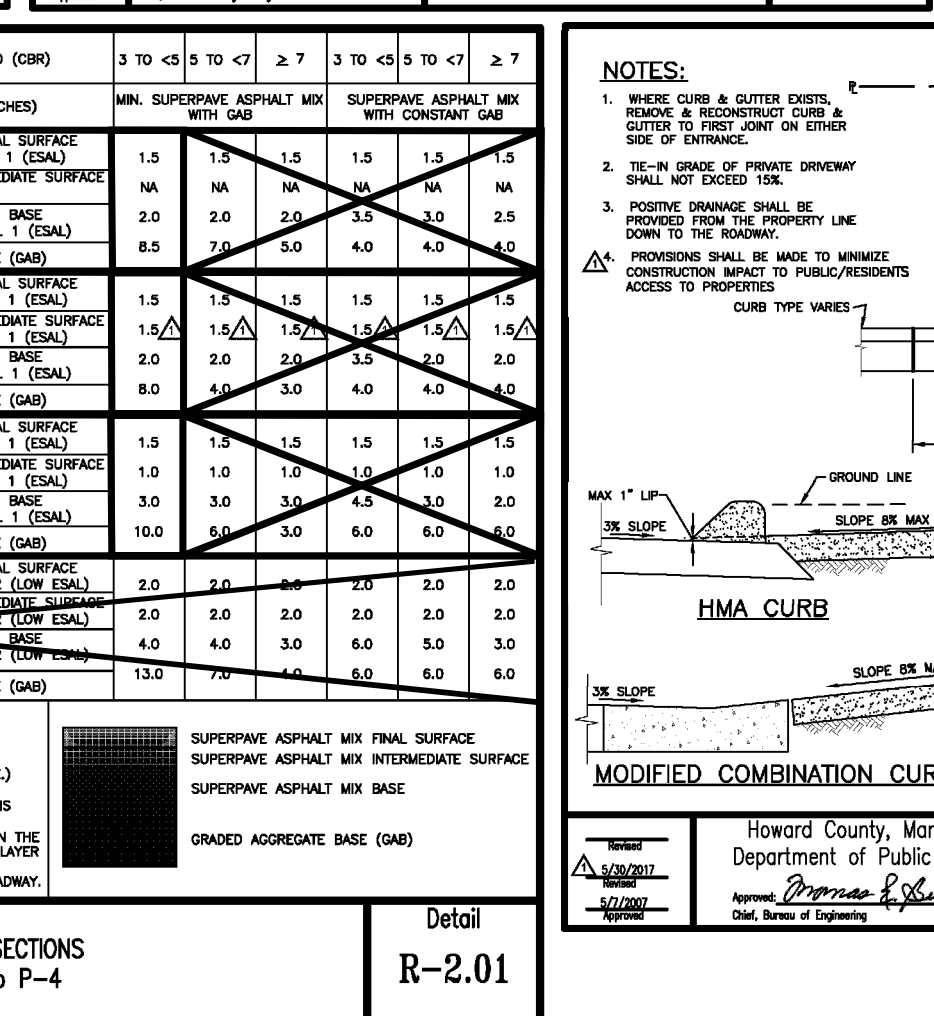
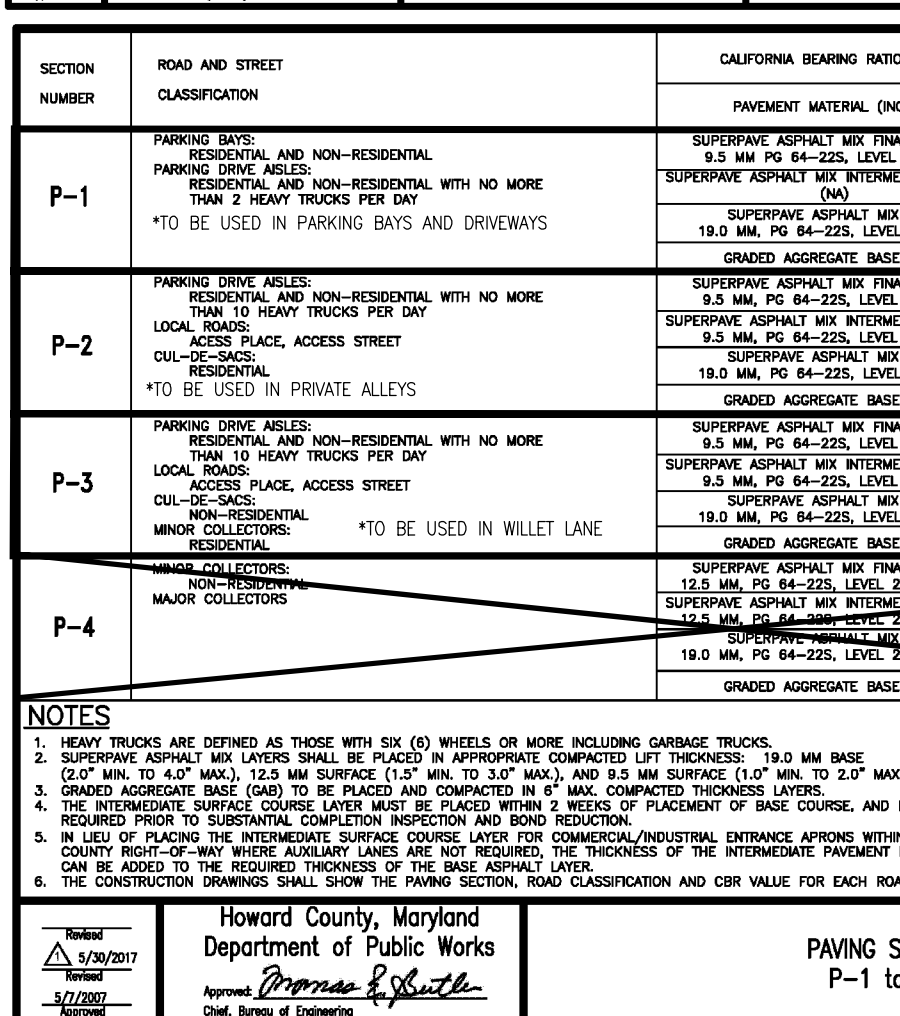
SECTION	ROAD AND STREET CLASSIFICATION	CA CALIFORNIA STANDARD SPECIFICATIONS (CSS)	3 TO 12	12 TO 24	24 TO 36	36 TO 48	48 TO 60	60 TO 72
P-1	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-2	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-3	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-4	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5

SECTION	ROAD AND STREET CLASSIFICATION	CA CALIFORNIA STANDARD SPECIFICATIONS (CSS)	3 TO 12	12 TO 24	24 TO 36	36 TO 48	48 TO 60	60 TO 72
P-1	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-2	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-3	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-4	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5

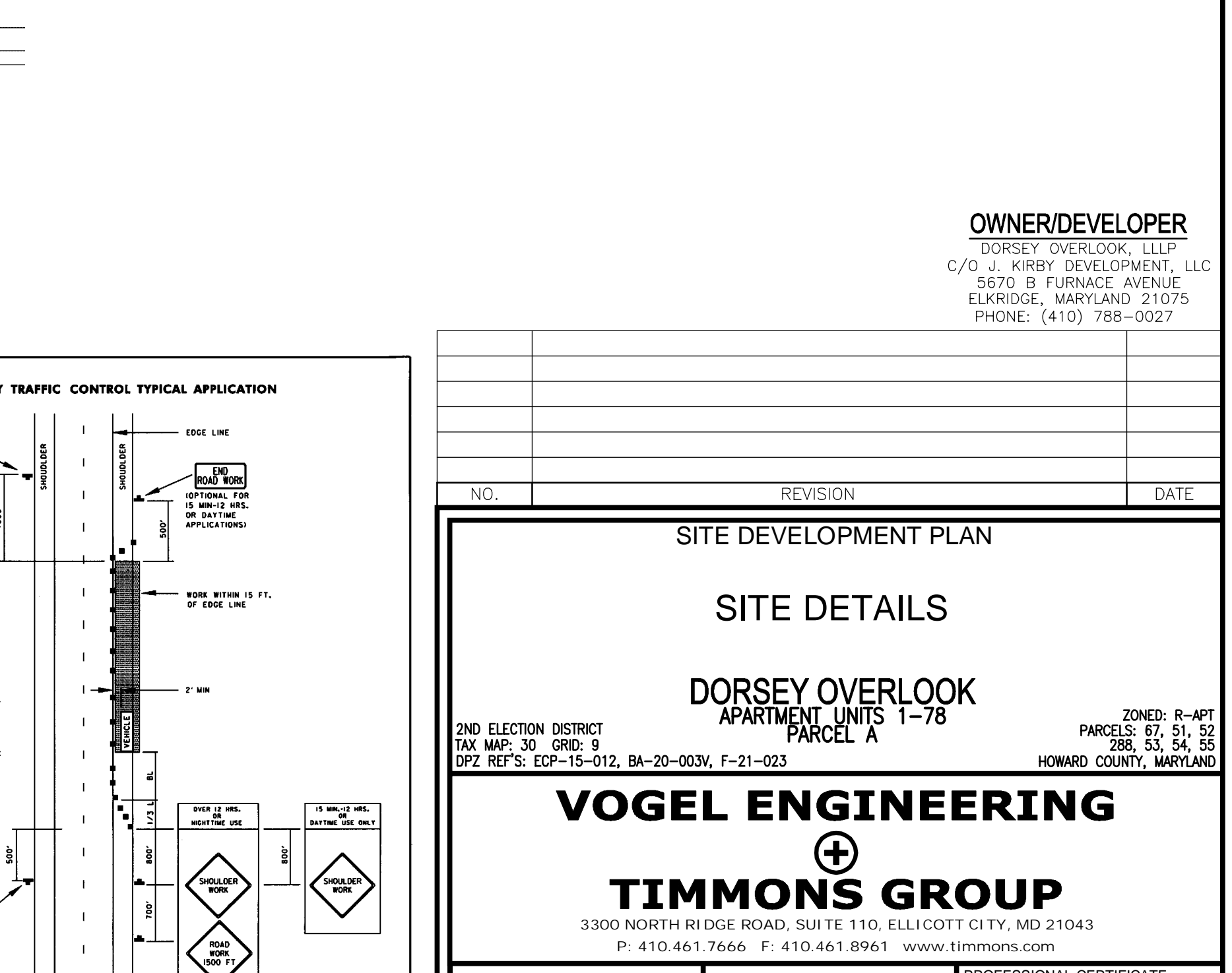
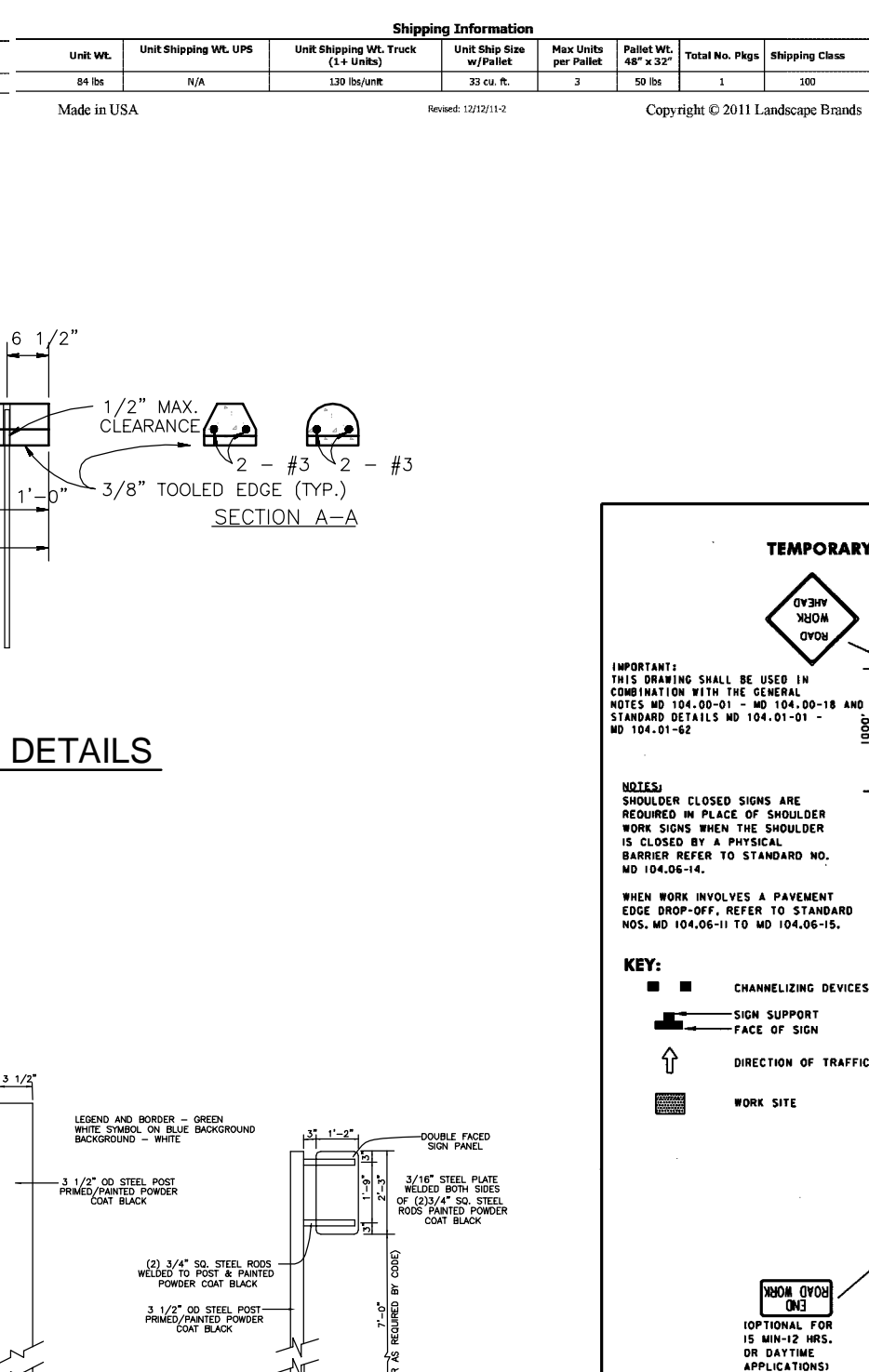
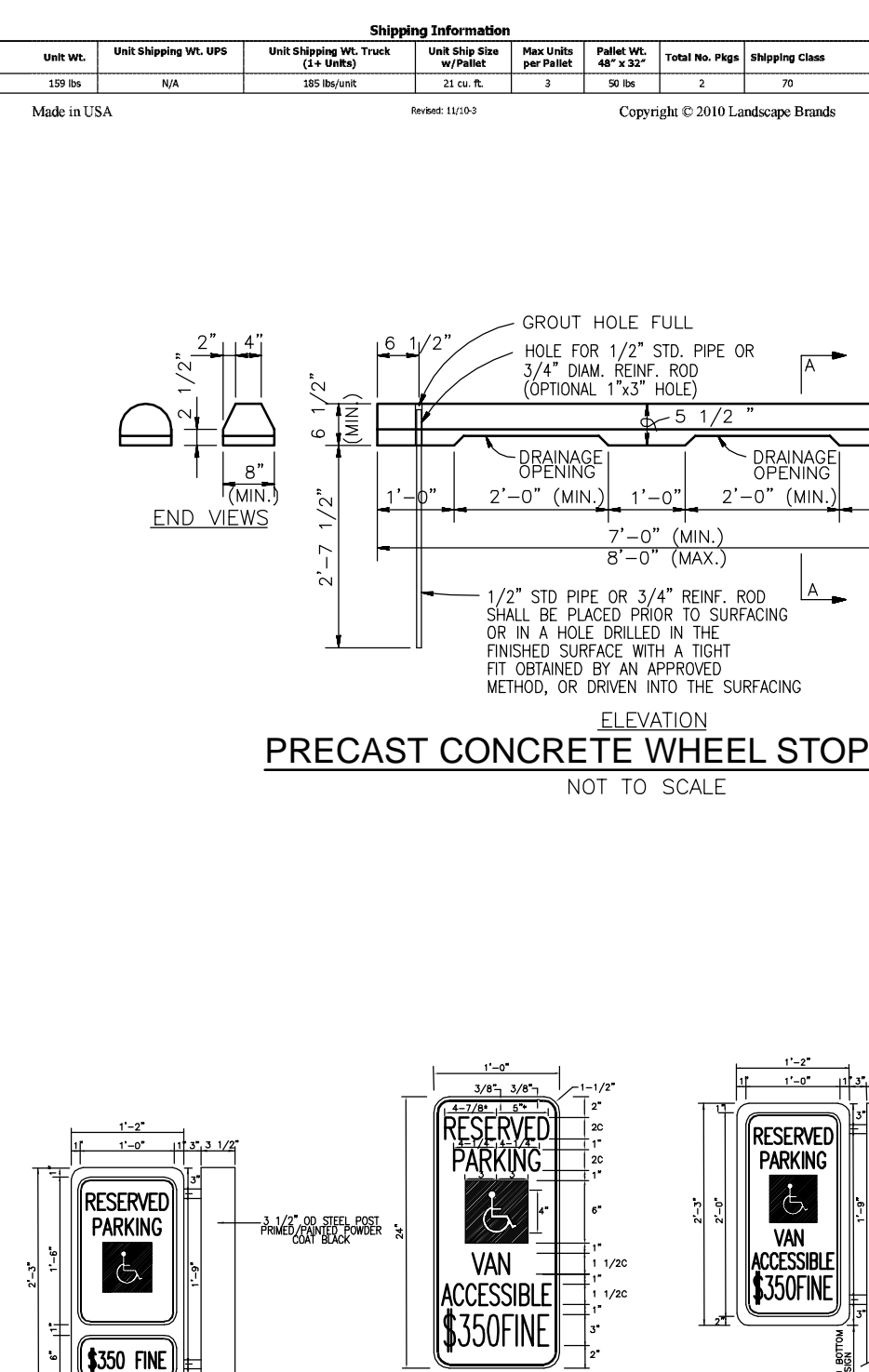
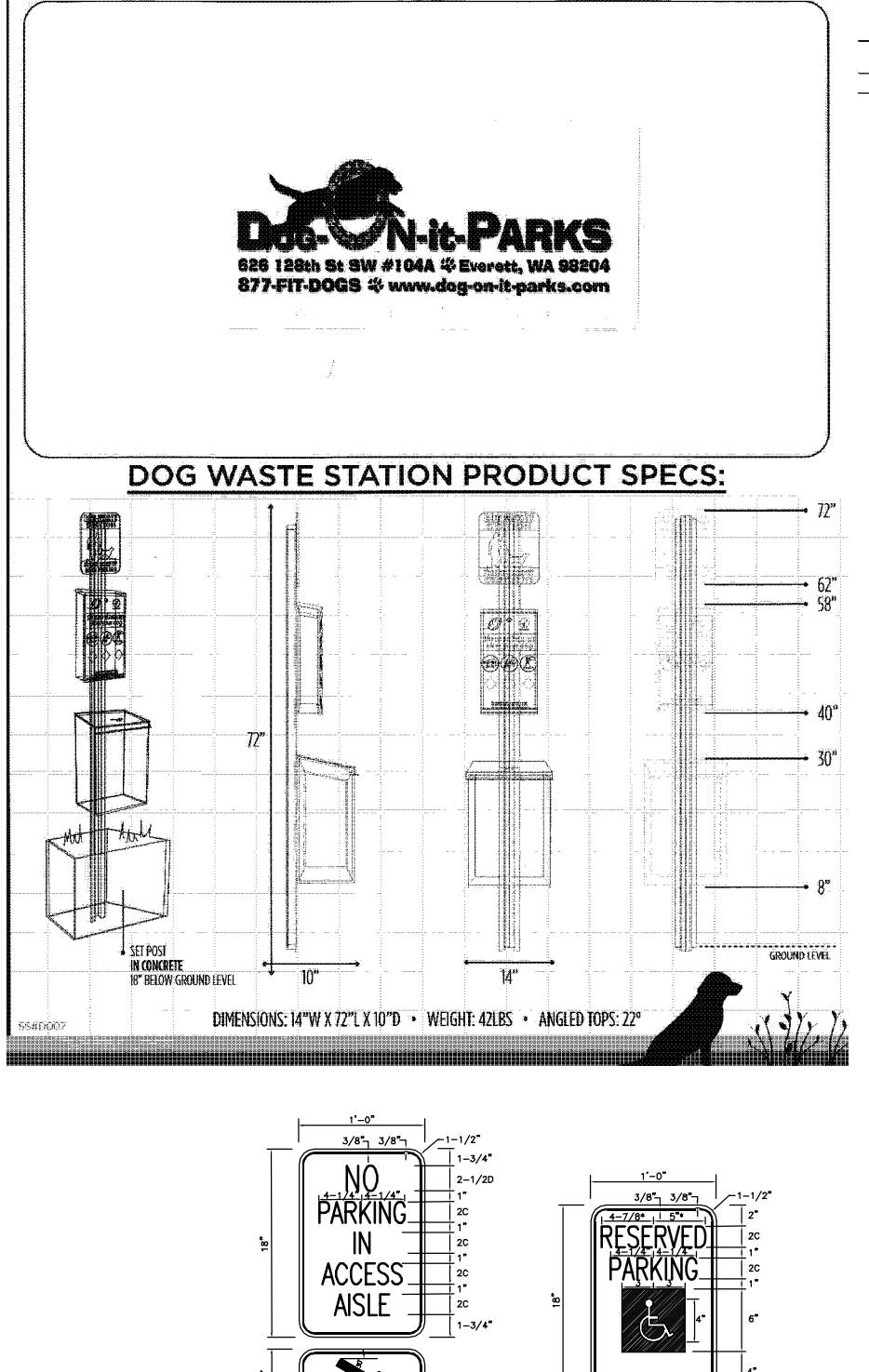
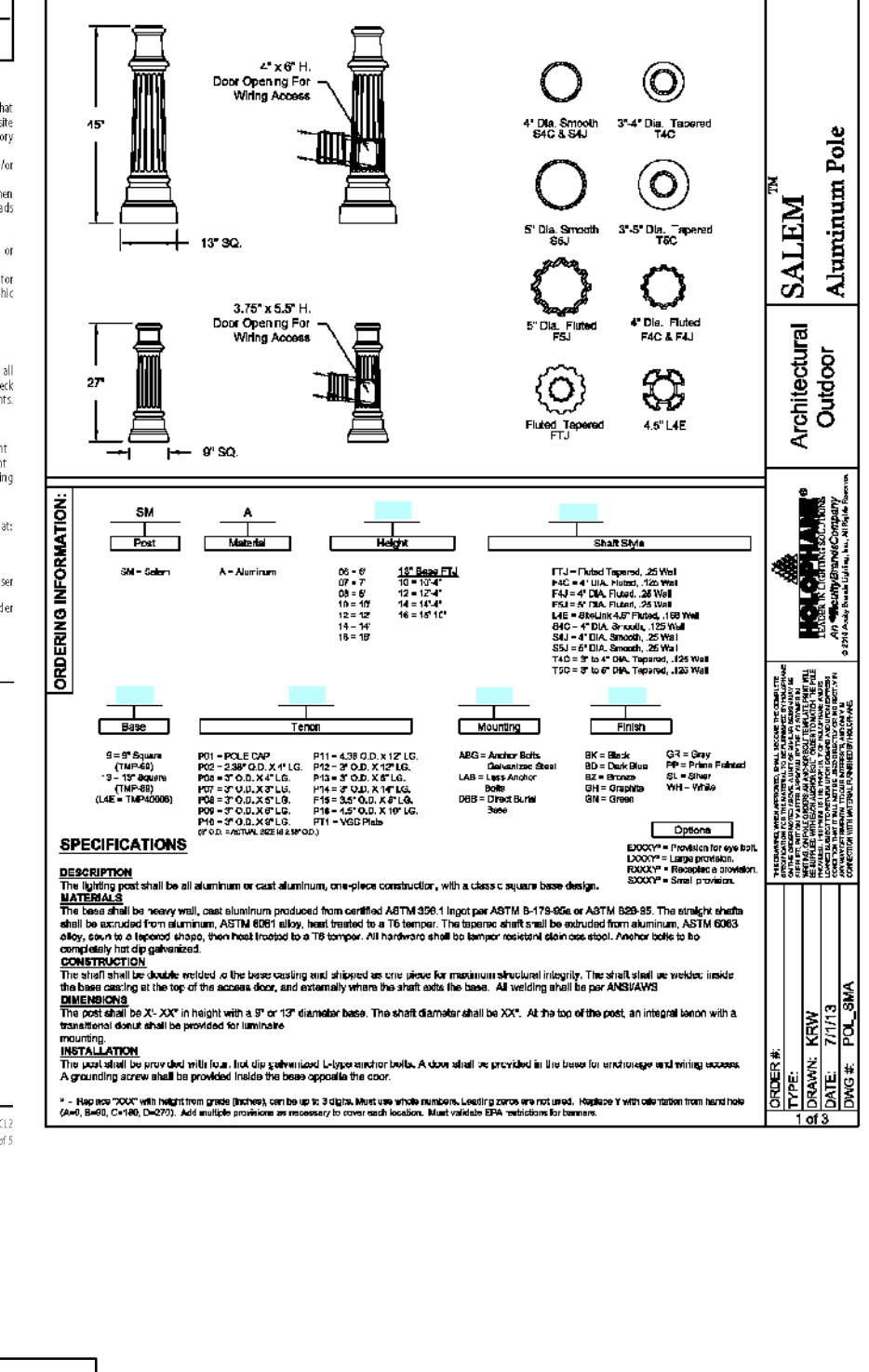
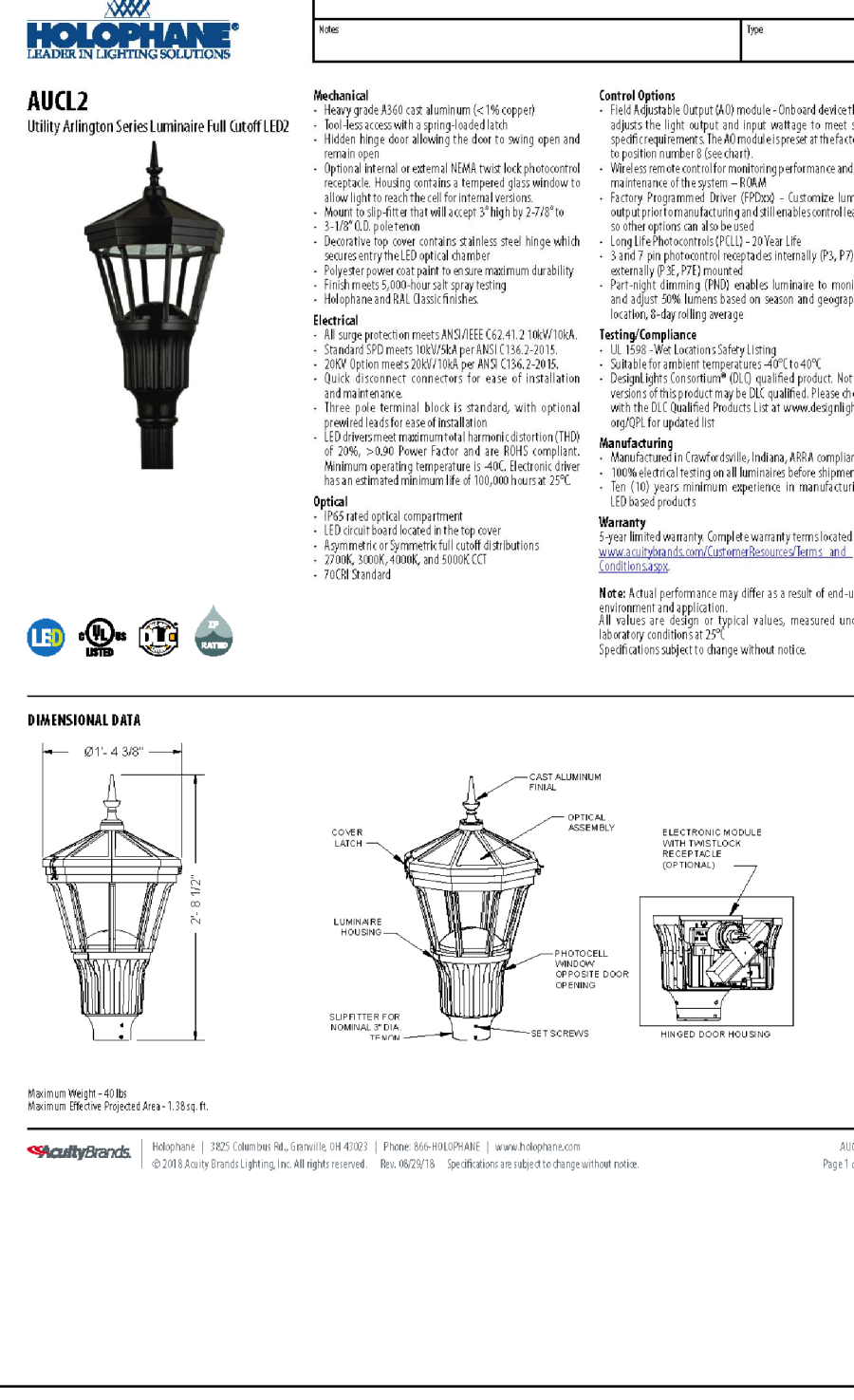
SECTION	ROAD AND STREET CLASSIFICATION	CA CALIFORNIA STANDARD SPECIFICATIONS (CSS)	3 TO 12	12 TO 24	24 TO 36	36 TO 48	48 TO 60	60 TO 72
P-1	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-2	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-3	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-4	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5

SECTION	ROAD AND STREET CLASSIFICATION	CA CALIFORNIA STANDARD SPECIFICATIONS (CSS)	3 TO 12	12 TO 24	24 TO 36	36 TO 48	48 TO 60	60 TO 72
P-1	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-2	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-3	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-4	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5

SECTION	ROAD AND STREET CLASSIFICATION	CA CALIFORNIA STANDARD SPECIFICATIONS (CSS)	3 TO 12	12 TO 24	24 TO 36	36 TO 48	48 TO 60	60 TO 72
P-1	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-2	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-3	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5
P-4	RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	PAVEMENT MATERIAL (INCHES)	1.5	1.5	1.5	1.5	1.5	1.5



NOTE: ALL SURFACE HANDICAP PARKING SHALL BE 7\"/>



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE 1/23/2023  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE 1/24/2023  
 DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/24/2023  
 CHIEF, BUREAU OF HIGHWAYS  
 DATE

RESERVED PARKING  
 VAN ACCESSIBLE  
 \$350 FINE

RESERVED PARKING  
 VAN ACCESSIBLE  
 \$350 FINE

RESERVED PARKING  
 VAN ACCESSIBLE  
 \$350 FINE

**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

**SITE DEVELOPMENT PLAN**  
**SITE DETAILS**  
**DORSEY OVERLOOK**  
 APARTMENT UNITS 1-78  
 PARCEL A

2ND ELECTION DISTRICT  
 TAX MAP: 30 GRID: 9  
 OPZ REF'S: ECP-15-012, BA-20-003V, F-21-023

ZONED: R-4PT  
 PARCELS: 67, 51, 52  
 288, 53, 54, 55  
 HOWARD COUNTY, MARYLAND

DESIGN BY: DZE/RHW  
 DRAWN BY: DZE/RJKG  
 CHECKED BY: RHW  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

14 SHEET OF 30

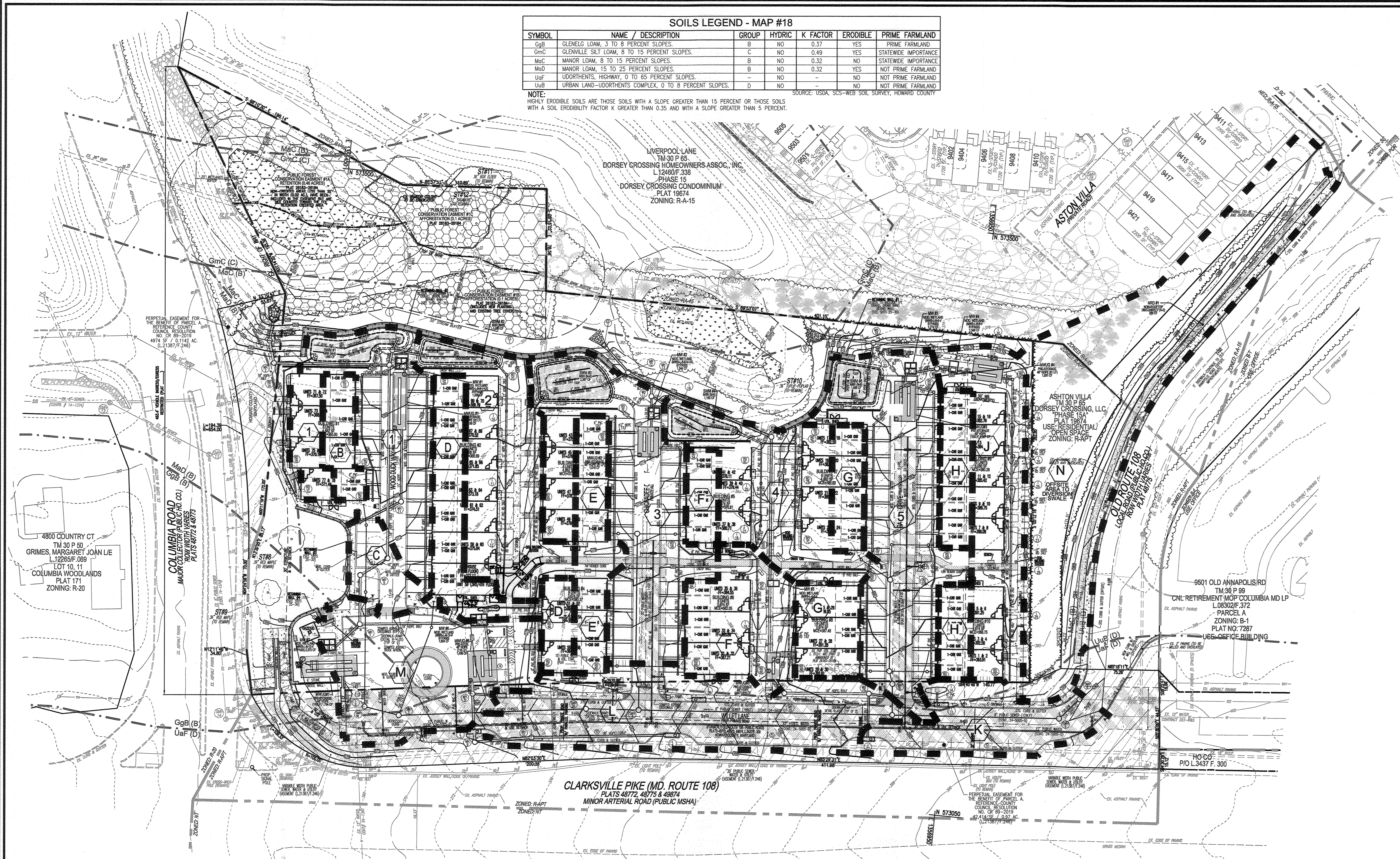
**SOILS LEGEND - MAP #18**

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K FACTOR	ERODIBLE	PRIME FARMLAND
GgB	GLENELG LOAM, 3 TO 8 PERCENT SLOPES.	B	NO	0.37	YES	PRIME FARMLAND
GmC	GLENVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES.	C	NO	0.49	NO	STATEWIDE IMPORTANCE
MdC	MANDOR LOAM, 8 TO 15 PERCENT SLOPES.	B	NO	0.32	NO	STATEWIDE IMPORTANCE
MdD	MANDOR LOAM, 15 TO 25 PERCENT SLOPES.	B	NO	0.32	YES	NOT PRIME FARMLAND
UaF	UDORHENTS, HIGHWAY, 0 TO 65 PERCENT SLOPES.	-	NO	-	NO	NOT PRIME FARMLAND
UaB	URBAN LAND-UDORHENTS COMPLEX, 0 TO 8 PERCENT SLOPES.	D	NO	-	NO	NOT PRIME FARMLAND

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.  
SOURCE: USDA, SCS-WEBB SOIL SURVEY, HOWARD COUNTY

**LEGEND:**

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING SPOT ELEVATION
	PROPOSED SPOT ELEVATION
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	EXISTING TREE LINE
	EXISTING SPECIMEN TREE AND CRITICAL ROOT ZONE
	CENTERLINE EXISTING STREAM
	ZONING BOUNDARY
	PROPOSED CURB & GUTTER
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED TREE LINE
	PROPOSED CONCRETE SIDEWALK
	PROPOSED HANDICAP RAMP W/ HANDRAIL
	MICRO-BIORETENTION AREA (M-6)
	NON-ROOFTOP DISCONNECT (N-2)
	WETLANDS LIMITS
	PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A (L21387/F.246) & (PLAT 26183-84)
	PUBLIC SEWER, WATER & UTILITY EASEMENT (L21387/F.246) & (PLAT 26183-84)
	PUBLIC FOREST CONSERVATION EASEMENT (RETENTION) (PLAT 26183-84)
	PUBLIC FOREST CONSERVATION EASEMENT (APPRESTATION) (PLAT 26183-84)
	DRAINAGE AREA DIVIDE
	DRAINAGE AREA NO.



**NOTE:**  
REFERENCE COUNCIL RESOLUTION OR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108, (ALONG WITH A PORTION OF COLUMBIA ROAD), THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO WAIVE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, L.L.P. (L21387/F.246) SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0.A.10 OF THE ZONING REGULATIONS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE 1/23/2023  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE 1/24/2023  
 DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/24/2023  
 [Signature]  
 CHIEF, BUREAU OF HIGHWAYS  
 DATE

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

**SWM PRACTICE CHART - DORSEY OVERLOOK PARCEL A (HOA)**

LOT #	ESD PRACTICES BY LOT	ADDRESS
PARCEL A	FIVE (5) MICRO-BIORETENTION FACILITIES, SEVEN(7) MODULAR WETLAND SYSTEMS WITH PRE-STORAGE PIPES, ONE (1) NON-ROOFTOP DISCONNECT.	4200 WOOD DUCK WAY

NOTE: ALL M-6 MICRO-BIORETENTION FACILITIES HAVE IMPERMEABLE LINERS. Rev TO BE PROVIDED BY MODULAR WETLANDS.

Project: Dorsey Overlook  
 Site Target PE= 1.96  
 ESDv=(PexRvx)/12  
 Rv=0.05+0.009xl  
 Vmin 1yr rainfall = 1"  
 Vmax 1yr rainfall = 2.6"

DRAINAGE AREA	SWMF NAME	SWMF TYPE	PRACTICE DA (AC)	IMPERV (AC)	PERV AREA (AC)	% IMPERV	PRACTICE Rv	MIN PRACTICE VOLUME (1")	TARGET ESDv PE VOLUME (1.96")	MAX PRACTICE VOLUME (2.6")	TOTAL PRACTICE VOLUME PROVIDED
B & C & D	MW #1	MOD. WETLAND	0.30	0.26	0.04	87	0.84	905	1,778	2,353	1,539
1	SWM #1	MBR (M-6)	0.30	0.22	0.08	72	0.70	765	1,502	1,988	1,680
2	SWM #2	MBR (M-6)	0.28	0.13	0.15	47	0.47	482	947	1,254	1,000
3	SWM #3	MBR (M-6)	0.41	0.26	0.15	63	0.62	919	1,805	2,389	2,387
E & F	MW #2	MOD. WETLAND	0.34	0.26	0.08	76	0.73	902	1,771	2,345	1,344
4	SWM #4	MBR (M-6)	0.26	0.13	0.13	50	0.50	481	945	1,251	1,162
G & H	MW #3	MOD. WETLAND	0.25	0.25	0.00	100	0.95	871	1,710	2,264	1,741
5	SWM #5	MBR (M-6)	0.41	0.27	0.14	65	0.63	940	1,846	2,444	1,588
J	MW #4	MOD. WETLAND	0.25	0.25	0.00	100	0.95	871	1,710	2,264	1,349
K	MW #5	MOD. WETLAND	0.17	0.12	0.05	71	0.69	426	837	1,108	814
L	MW #6	MOD. WETLAND	0.39	0.26	0.13	67	0.65	921	1,808	2,394	1,934
M	MW #7	MOD. WETLAND	0.33	0.27	0.05	83	0.80	949	1,863	2,467	2,372
N	NRD #1	NON-ROOFTOP	0.70	0.05	0.65	6.9	0.11	286	561	743	286
<b>TOTALS</b>			<b>4.40</b>	<b>2.73</b>	<b>1.67</b>				<b>TOTALS ESDv PROVIDED</b>		<b>19,195</b>

3 NO. REVISE UNIT 57 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK 6-26-24 REVISION DATE

**SITE DEVELOPMENT PLAN**

**STORMWATER MANAGEMENT DRAINAGE AREA MAP**

**DORSEY OVERLOOK APARTMENT UNITS 1-78 PARCEL A**

2ND ELECTION DISTRICT PARCELS: 87, 51, 52 ZONED: R-APT  
 TAX MAP: 30 GRID: 9 288, 53, 54, 55  
 DPZ REF'S: ECP-15-012, BA-20-003W, F-21-023 HOWARD COUNTY, MARYLAND

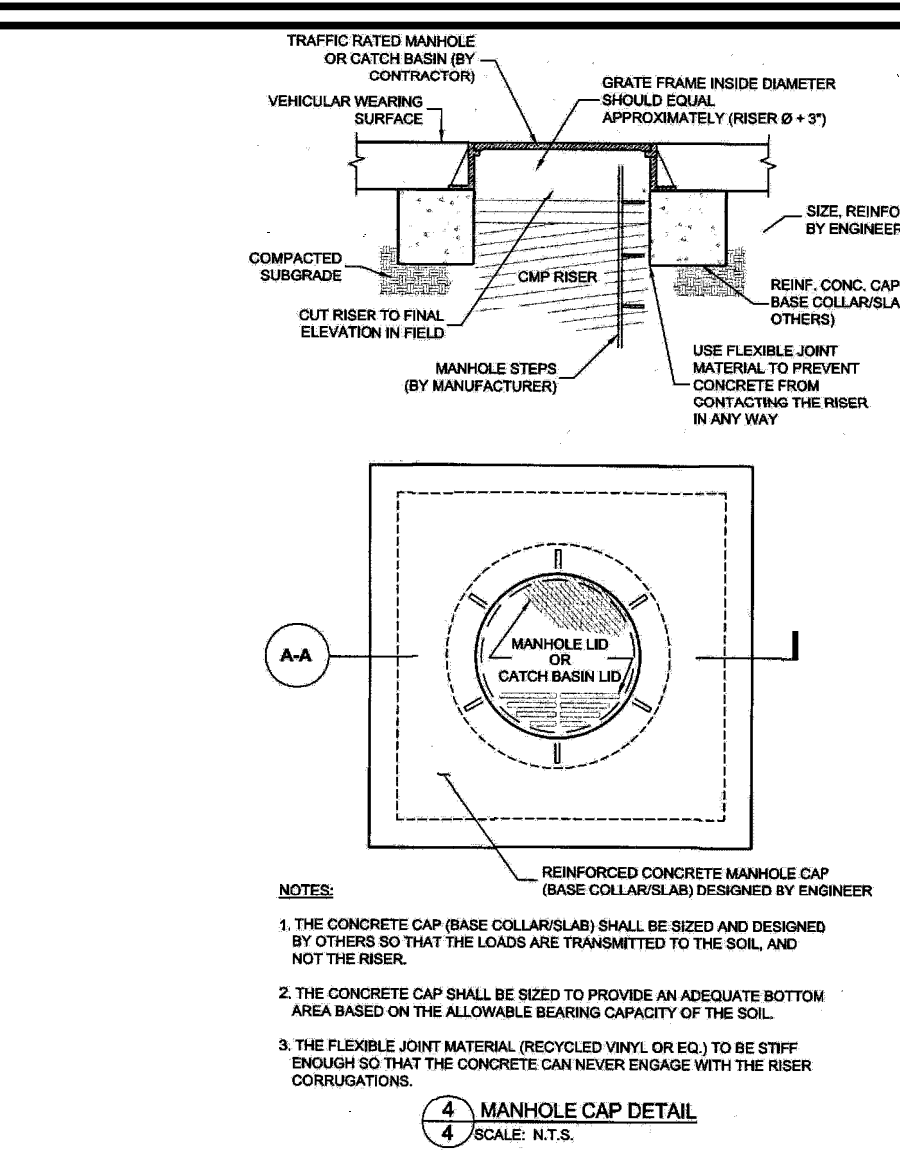
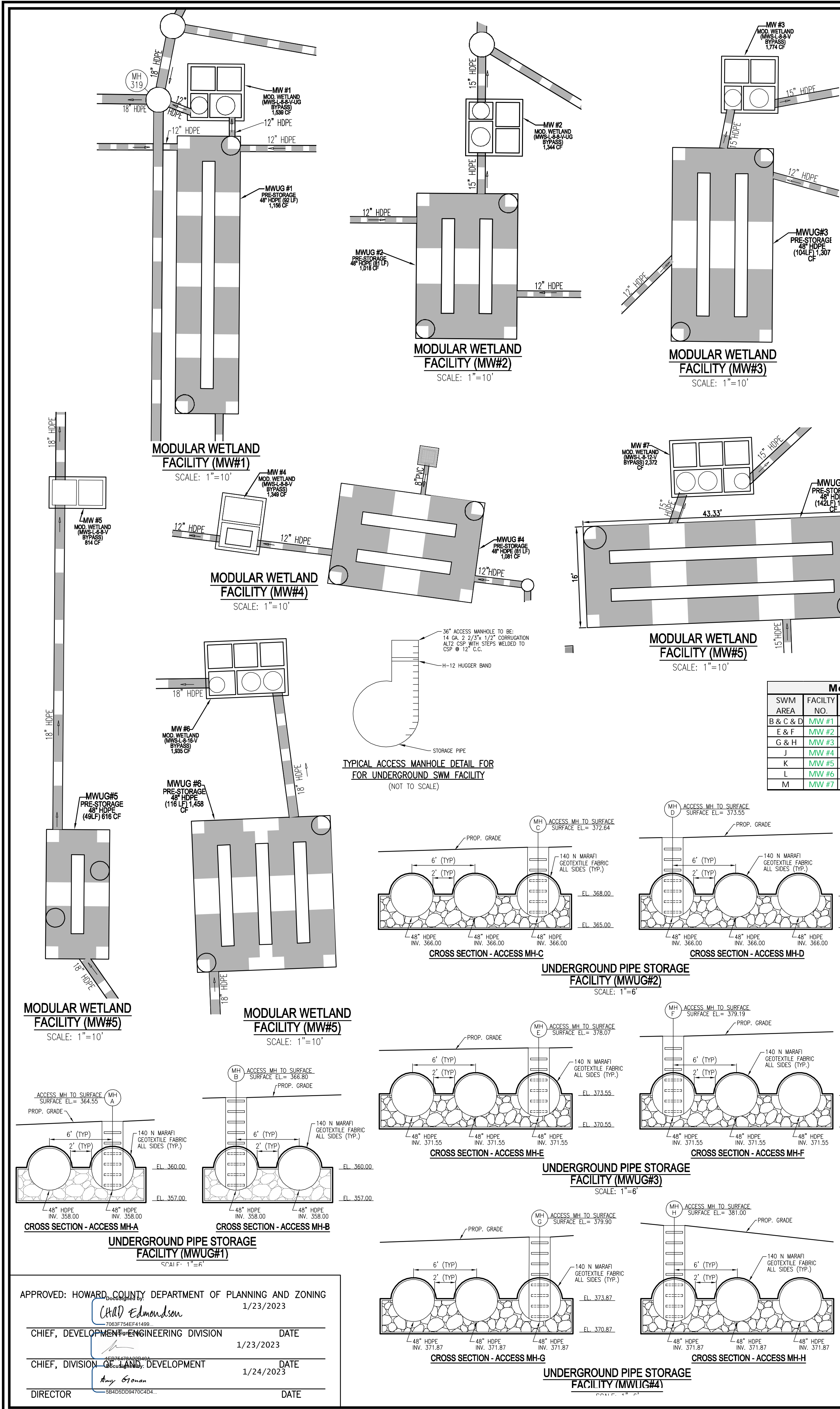
**VOGEL ENGINEERING**

**TIMMONS GROUP**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7656 F: 410.461.8961 www.timmons.com

DESIGN BY: DZE/RHV  
 DRAWN BY: DZE/RHV/KG  
 CHECKED BY: RHV  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19043 EXPIRATION DATE: 09-27-2024

15 SHEET OF 30



**48" UNDERGROUND DETENTION SYSTEM NOTES:**

- CONTRACTOR SHALL ENSURE THAT THE UNDERGROUND DETENTION FACILITY IS WATER-TIGHT.
- ALL PIPE CONNECTIONS AT STRUCTURES SHALL BE CEMENTED TO ENSURE WATER-TIGHT CONNECTION.
- ALL PIPE JOINTS SHALL USE 12" WIDE HUGGER BAND WITH "O" RING GASKETS.
- TRENCH BEDDING TO BE IN ACCORDANCE WITH RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEER IN THE FIELD.
- PROVIDE WATER-TIGHT JOINTS AT ALL PIPE CONNECTIONS. (FOR REINFORCED CONCRETE PIPE, ASTM C-361, RUBBER GASKET PIPE).
- ALL ACCESS POINTS FOR THE UNDERGROUND DETENTION SYSTEM TO BE VENTED AND ARE WIDE ENOUGH TO ACCOMMODATE MAINTENANCE PERSONNEL WITH BREATHING EQUIPMENT.

**OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND FACILITIES**

- THE UNDERGROUND STORMWATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
- THE UNDERGROUND STORMWATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
- WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFALL IS OBSERVED, THE FACILITY SHALL BE CLEANED.
- THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.
- THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORMWATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
- THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.

**Modular Wetland Pre-Storage Detention Pipe Calculation**

SWM AREA	FACILITY NO.	FACILITY TYPE	REQ. VOL (CF)	PIPE SIZE (IN)	AREA OF PIPE STORAGE (SQ FT)	PIPE STORAGE REQ. (LF)	PRE-STORAGE PIPE PROVIDED (LF)
B & C & D	MW #1	MOD. WETLAND	1,154	48	12.57	91.84	92
E & F	MW #2	MOD. WETLAND	1,008	48	12.57	80.19	81
G & H	MW #3	MOD. WETLAND	1,306	48	12.57	103.92	104
I	MW #4	MOD. WETLAND	1,012	48	12.57	80.54	81
J	MW #5	MOD. WETLAND	611	48	12.57	48.59	49
L	MW #6	MOD. WETLAND	1,450	48	12.57	115.41	116
M	MW #7	MOD. WETLAND	1,779	48	12.57	141.56	142

**SPECIFICATIONS FOR 30 MIL PVC LINER**

PROPERTIES	TEST METHOD	REQUIRED PGI 1197 VALUE	TYPICAL VALUE
GAUGE (NOMINAL) (MI)		30.0	—
PROFILE THICKNESS (MINIMUM 1/8" (MI))	ASTM D-1593	30.0	30.0
SPECIFIC GRAVITY	ASTM D792	1,200	1,200
MIN. TENSILE PROPERTIES (LBS./INCH WIDTH) (1" WIDE)	ASTM D-882	73	73
1. BREAKING FACTOR	METHOD A OR B	—	—
2. ELONGATION AT BREAK (2" AIR SEPARATION)	METHOD A OR B	350	350
3. MODULUS (FORCE) @ 100% (LBS./INCH WIDTH)	METHOD A OR B	34	34
TEAR RESISTANCE (LBS./MI)	ASTM D-1004 (DIE C)	8.5	8.5
LOW TEMPERATURE (LBS./MI)	ASTM 1790	-29	PASS
WATER EXTRACTION (AS MOIST BY NSF)	ASTM D1204	0.15	0.15
DIMENSIONAL STABILITY (EACH DIRECTION, % CHANGE MAXIMUM)	ASTM D1204	+/- 3	PASS
VOLATILITY LOSS (AS LOSS MAXIMUM)	ASTM 1203, METHOD A	0.7	0.70
RESISTANCE TO SOIL BURIAL (% CHANGE MAXIMUM IN ORIGINAL VALUE)	ASTM D3083 (AS MOIST BY NSF)	—	—
1. BREAKING FACTOR	—	+/- 5	PASS
2. ELONGATION AT BREAK	—	+/- 20	PASS
3. MODULUS (FORCE) @ 100% ELONGATION	—	+/- 20	PASS
HYDROSTATIC RESISTANCE (PSI MIN)	ASTM D-751 METHOD A	100	100

**APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION. RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS**

**1. MATERIAL SPECIFICATIONS**

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

**2. FILTERING MEDIA OR PLANTING SOIL**

THE SOIL SHALL BE A UNIFORM MIX FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMMON SOURCE. THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

- \* SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- \* ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35%-40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
- \* CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- \* PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE TESTED IN THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH AND ADDITIONAL TESTS OF BUFFERING CAPACITY AND SOLUBLE CALCIUM. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE. STOCKPILED TOPSOIL, IF TOPSOIL IS IMPORTED, THEN A TEXTURAL ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE MEDIA WAS STOCKPILED.

**3. COMPACTION**

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE MEDIA OF BIORRETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, MULCH SHOULD BE PLACED IN SURROUNDING AREAS OF PROVISION OR WASH OUT. THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT OR LIGHT EQUIPMENT WITH TIRE PILES. USE OF TRENCHING EQUIPMENT WITH NARROW TIRES RUBBER TIRES WITH LARGE TREADS WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE AVOIDED AT THE BASE OF THE BIORRETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL, FLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRATURIZE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORRETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDING WATER BEFORE BACKFILLING. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND. THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE. WHEN BACKFILLING THE BIORRETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORRETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORRETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

**4. PLANT MATERIAL**

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION 4.2.3.

**5. PLANT INSTALLATION**

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING AREAS TO A UNIFORM THICKNESS OF 2" TO 4". SHROUDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORRETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHROUDED MULCH MUST BE WELL KEPT 16 TO 12 MONTHS FOR ACCEPTANCE.

POSITION OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/6TH OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST 54 INCHES LARGER THAN THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION. TREES SHALL BE BRACED USING 2" BY 2" STRIKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STRIKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE SPRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME SEEDS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPORT NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORRETENTION STRUCTURE IS TO IMPROVE WATER QUALITY. ADDING FERTILIZERS CERTAINLY WILL MINIMIZE WEEDS. THIS SOIL ONLY ADD FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL AREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

**6. UNDERDRAINS**

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- \* PIPE - SHOULD BE 4" TO 6" DIAMETER. SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F306, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G. PVC OF HDPPE).
- \* PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 144) GALVANIZED HARDWARE CLOTH.
- \* GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
- \* THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- \* A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT POINT FROM MONITOR PERFORMANCE OF THE UNDERDRAIN.
- \* A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINE MATERIAL TO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

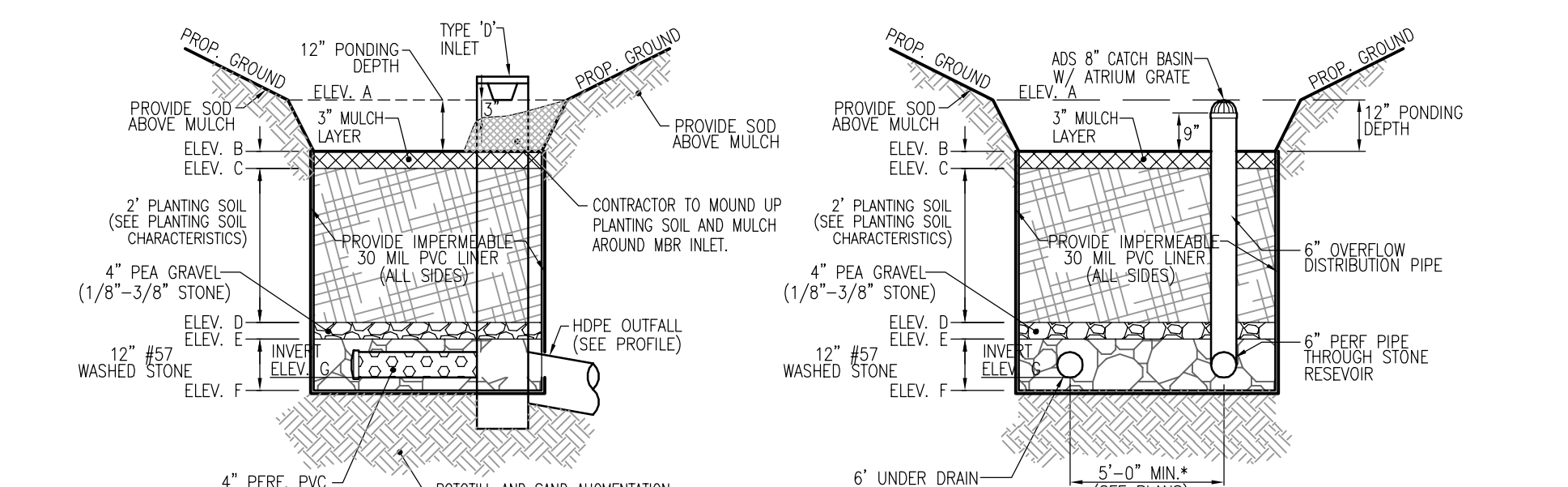
THIS MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

**7. MISCELLANEOUS**

THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

**MICRO-BIORETENTION DATA CHART**

SMW # / MBR Facility Number	MBR Facility Type	Ponding Depth (ft)	Top of Mulch Elev. A	Bottom of Mulch Elev. B	Bottom of Plant Mix Elev. C	Bottom of Plant Mix Elev. D	Bottom of Plant Mix Elev. E	Depth of Stone (ft)	Depth of Additional Stone (ft)	Bottom of Stone Elev. F	Bottom of Stone Elev. G	Depth of Stone (ft)	Bottom of Stone Elev. H
SWM #1	Micro-Bioretentation (M-6)	1.00	362.60	361.60	361.35	2.00	359.35	359.02	1.00	358.35	0.00	358.02	0.00
SWM #2	Micro-Bioretentation (M-6)	1.00	364.50	363.50	363.25	2.00	361.25	360.92	1.00	360.25	0.00	359.92	0.00
SWM #3	Micro-Bioretentation (M-6)	1.00	370.50	369.50	369.25	2.00	367.25	366.92	1.00	366.25	0.00	365.92	0.00
SWM #4	Micro-Bioretentation (M-6)	1.00	372.00	371.00	370.75	2.00	368.75	368.42	1.00	367.75	0.00	367.42	0.00
SWM #5	Micro-Bioretentation (M-6)	1.00	376.60	375.60	375.35	2.00	373.35	373.02	1.00	372.35	0.00	372.02	0.00



**MICRO-BIORETENTION NOTES:**

- ALL SIDES OF MICROBIORRETENTION ARE TO BE WRAPPED IN IMPERMEABLE 50 MIL PVC LINER. REV TO BE PROVIDED BY OTHER METHODS/FACILITIES.
- WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.
- PROVIDE 5" MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS).

**Appendix B.4. Construction Specifications for Environmental Site Design Practices**

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60 - 65% & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-0-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone, washed cobbles	stone: 2" to 5"	
Geotextile	n/a	n/a	PE Type 1 nonwoven
Gravel underdrains and infiltration berms	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row, minimum of 3" of gravel over pipes, not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; $F_c = 3500$ psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using pre-viously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 318R-09; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressure); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Gypsumstone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

**Table B.4.1 Materials Specifications for Micro-Bioretentation, Rain Gardens & Landscape Infiltration**

**OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORRETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)**

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH DEFICIENCY SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT PRESENTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME 1, TABLE 4.4.1 AND 4.4.2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. TRIM CRACKED TREES AND SHRUBS. REPLACE MULCH AND MULCH LAYER WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE KNOWN BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

**OWNER/DEVELOPER**  
 DORSEY OVERLOOK, LLLP  
 C/O J. KIRBY DEVELOPMENT, LLC  
 5870 B FURNACE AVENUE  
 ELK RIDGE, MARYLAND 21075  
 PHONE: (410) 788-0027

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 CHIEF, DEVELOPMENT & ENGINEERING DIVISION  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

**SITE DEVELOPMENT PLAN**  
**STORMWATER MANAGEMENT**  
**NOTES AND DETAILS**

**DORSEY OVERLOOK**  
 APARTMENT UNITS 1-78  
 PARCEL A

**VOGEL ENGINEERING**

**TIMMONS GROUP**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

**PROFESSIONAL CERTIFICATE**

DESIGN BY: DZE/RHV  
 DRAWN BY: DZE/RJ/KS  
 CHECKED BY: RHV  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

16 OF 30

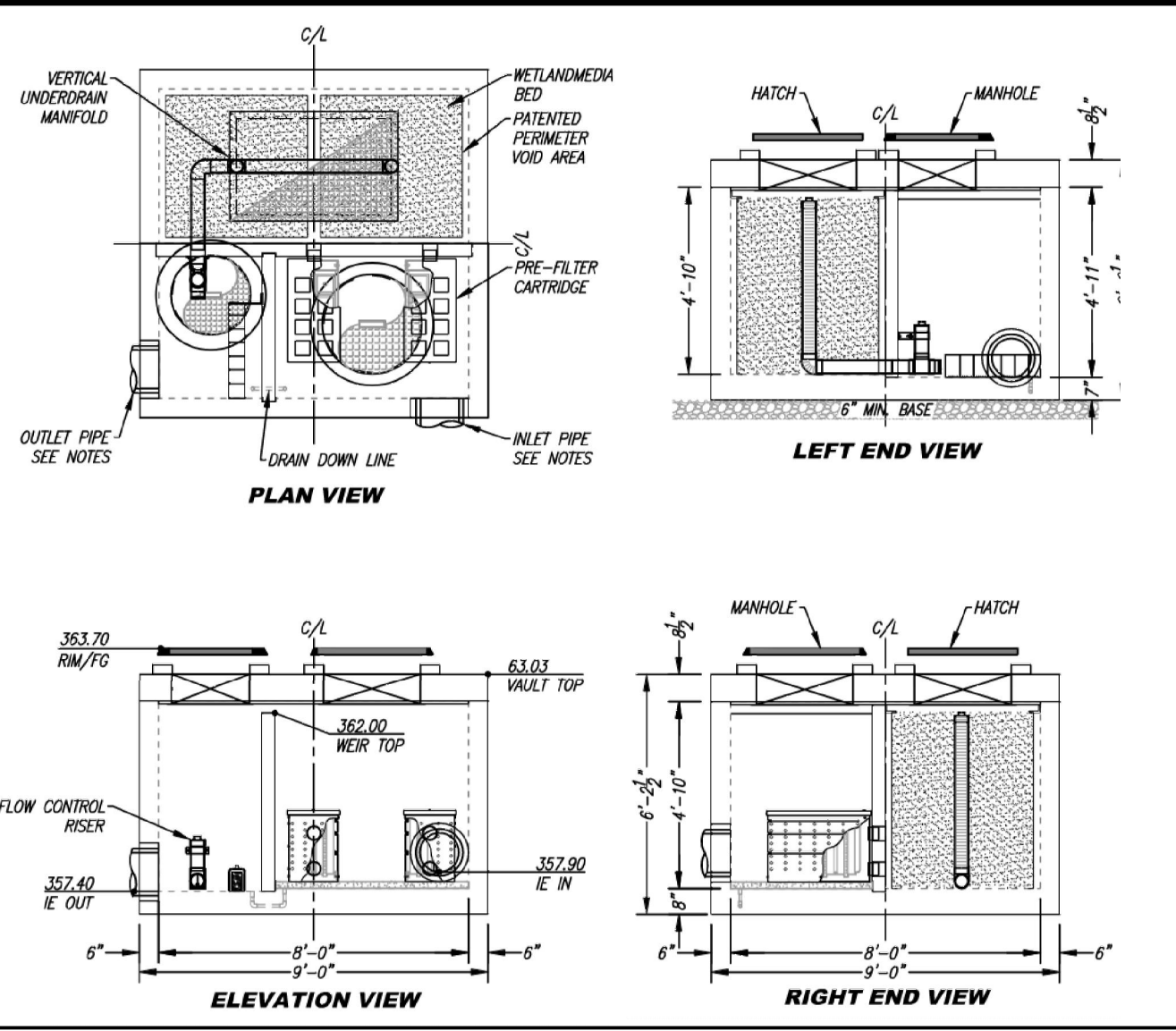
ALL STORM DRAINS AND STORMWATER MANAGEMENT FACILITIES INCLUDING MODULAR WETLAND TO BE PRIVATELY OWNED AND MAINTAINED.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #1		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	1349	N/A	
TREATMENT HQL AVAILABLE (FT)	4.62		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	1.46		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	371.75	HDPE	12"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	371.25	HDPE	12"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	379.30	379.30	379.30
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	30" X 48"	OPEN PLANTER	N/A
WETLAND MEDIA VOLUME (CY)	6.22		
ORIFICE SIZE (DIA. INCHES)	#0.87"		

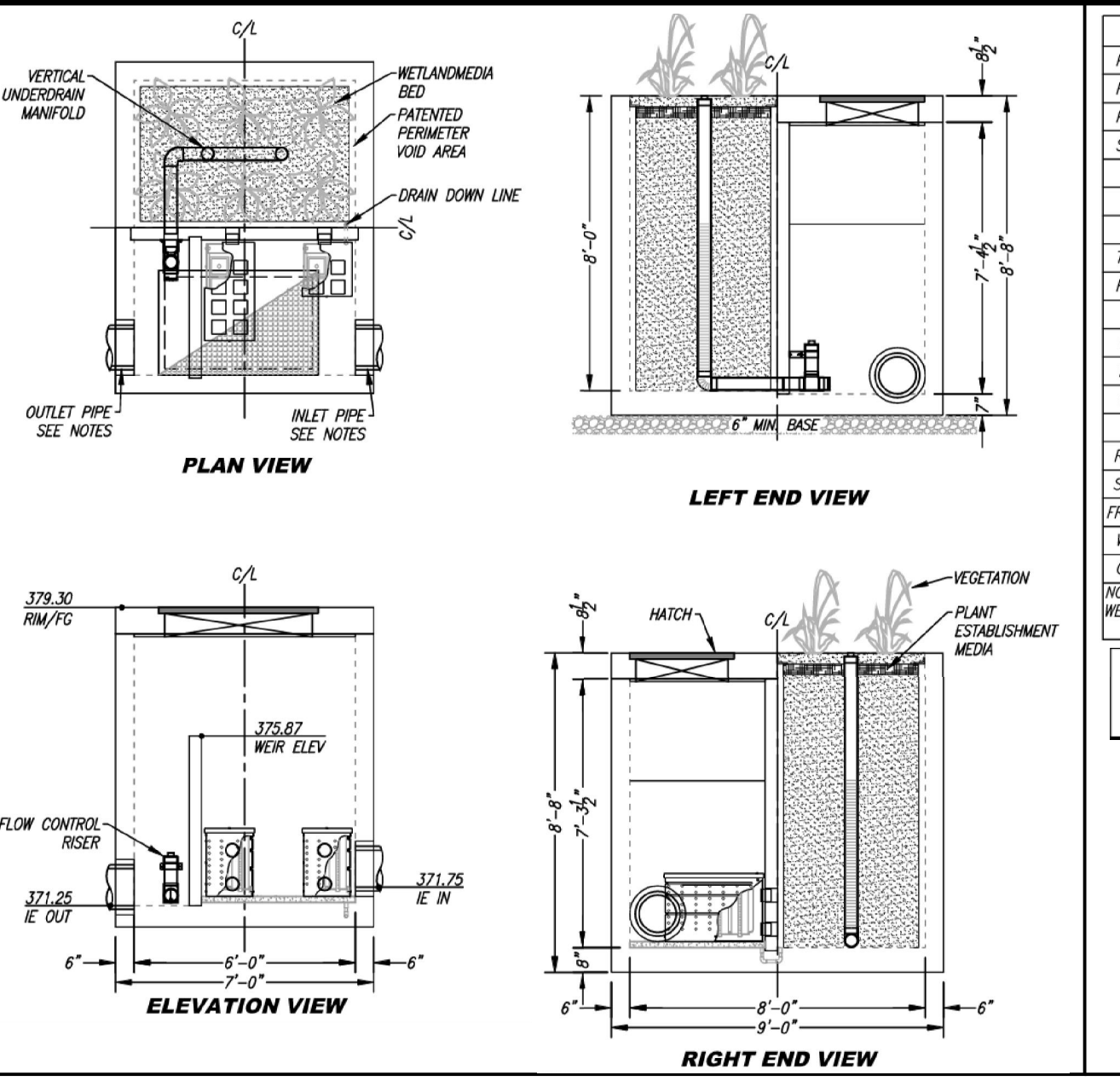
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 136 SQ FT OF WETLAND MEDIA PROVIDED, 100 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #1		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	1349	N/A	
TREATMENT HQL AVAILABLE (FT)	4.62		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	1.46		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	371.75	HDPE	12"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	371.25	HDPE	12"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	379.30	379.30	379.30
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	30" X 48"	OPEN PLANTER	N/A
WETLAND MEDIA VOLUME (CY)	6.22		
ORIFICE SIZE (DIA. INCHES)	#0.87"		

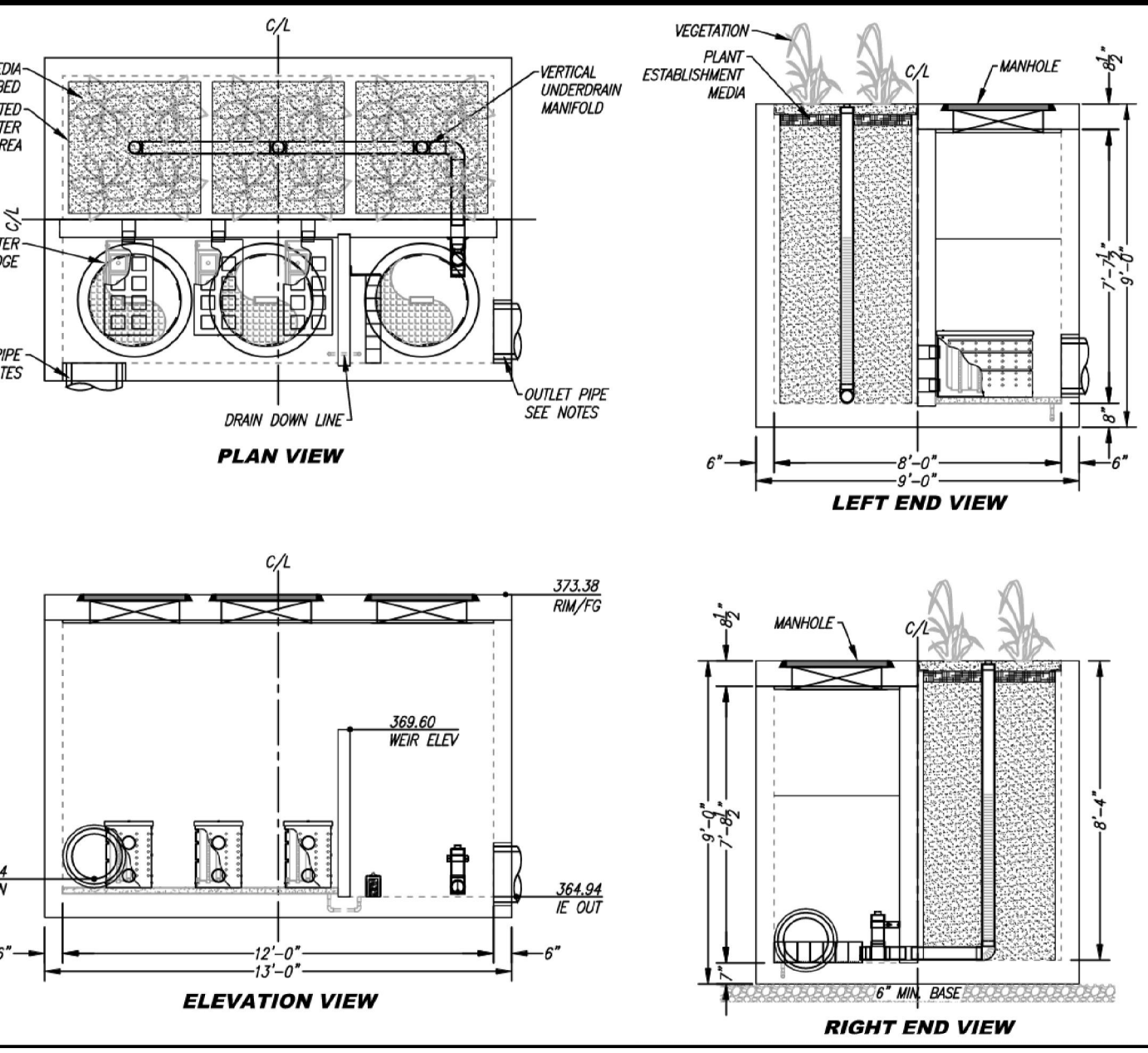
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 87 SQ FT OF WETLAND MEDIA PROVIDED, 78 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #7		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	2,372	N/A	
TREATMENT HQL AVAILABLE (FT)	4.60		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	2.14		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	365.44	HDPE	15"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	364.84	HDPE	15"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	373.36	373.36	373.36
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	24" X 30"	OPEN PLANTER	#30"
WETLAND MEDIA VOLUME (CY)	12.71		
ORIFICE SIZE (DIA. INCHES)	#1.34"		

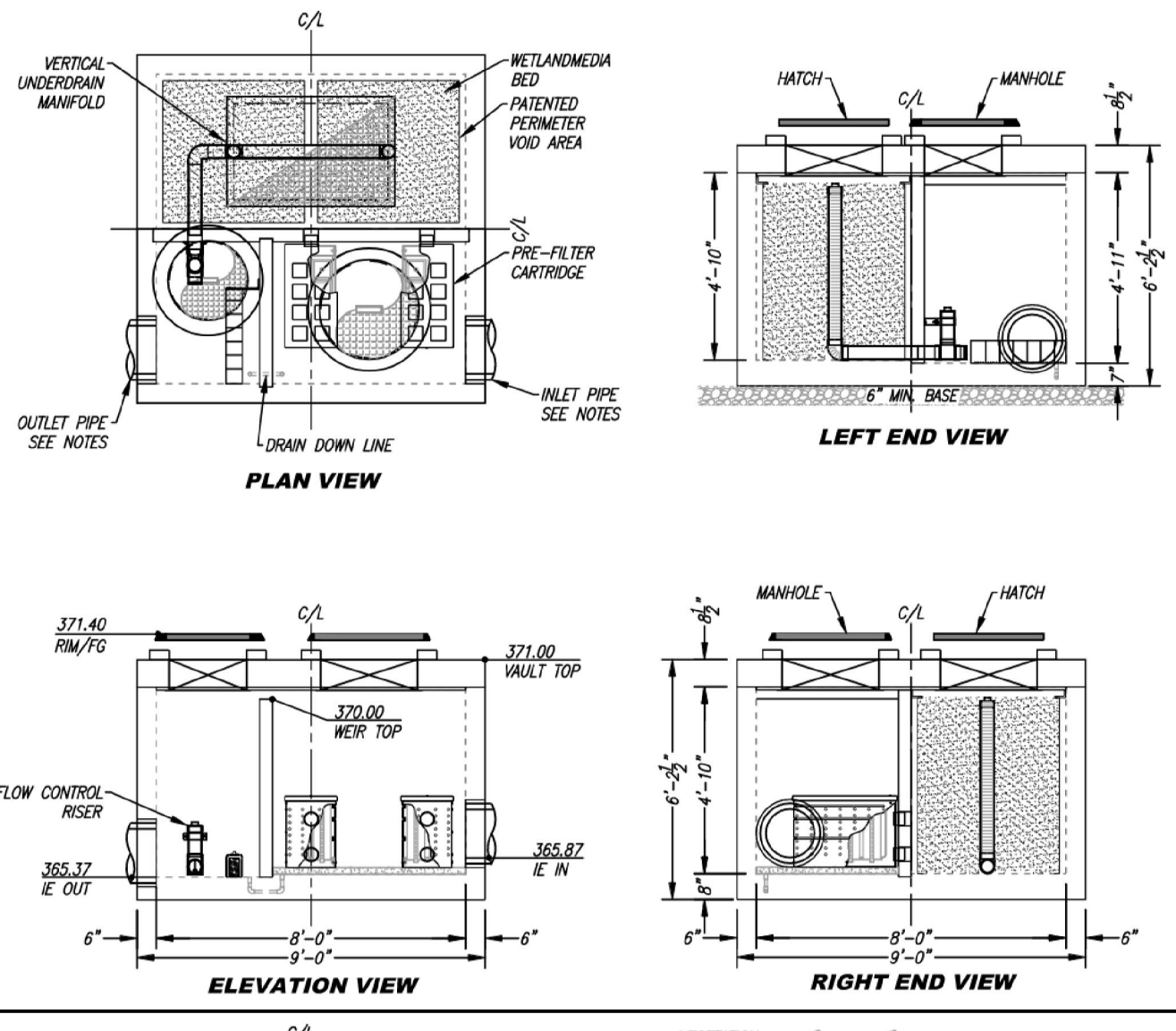
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 207 SQ FT OF WETLAND MEDIA PROVIDED, 162 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #2		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	1,344	N/A	
TREATMENT HQL AVAILABLE (FT)	4.63		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	1.88		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	365.87	HDPE	15"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	365.37	HDPE	15"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	372.00	371.92	371.40
SURFACE LOAD	H-20	H-20	H-20
FRAME & COVER	430" X 30"	48"	#24"
WETLAND MEDIA VOLUME (CY)	4.61		
ORIFICE SIZE (DIA. INCHES)	#1.09"		

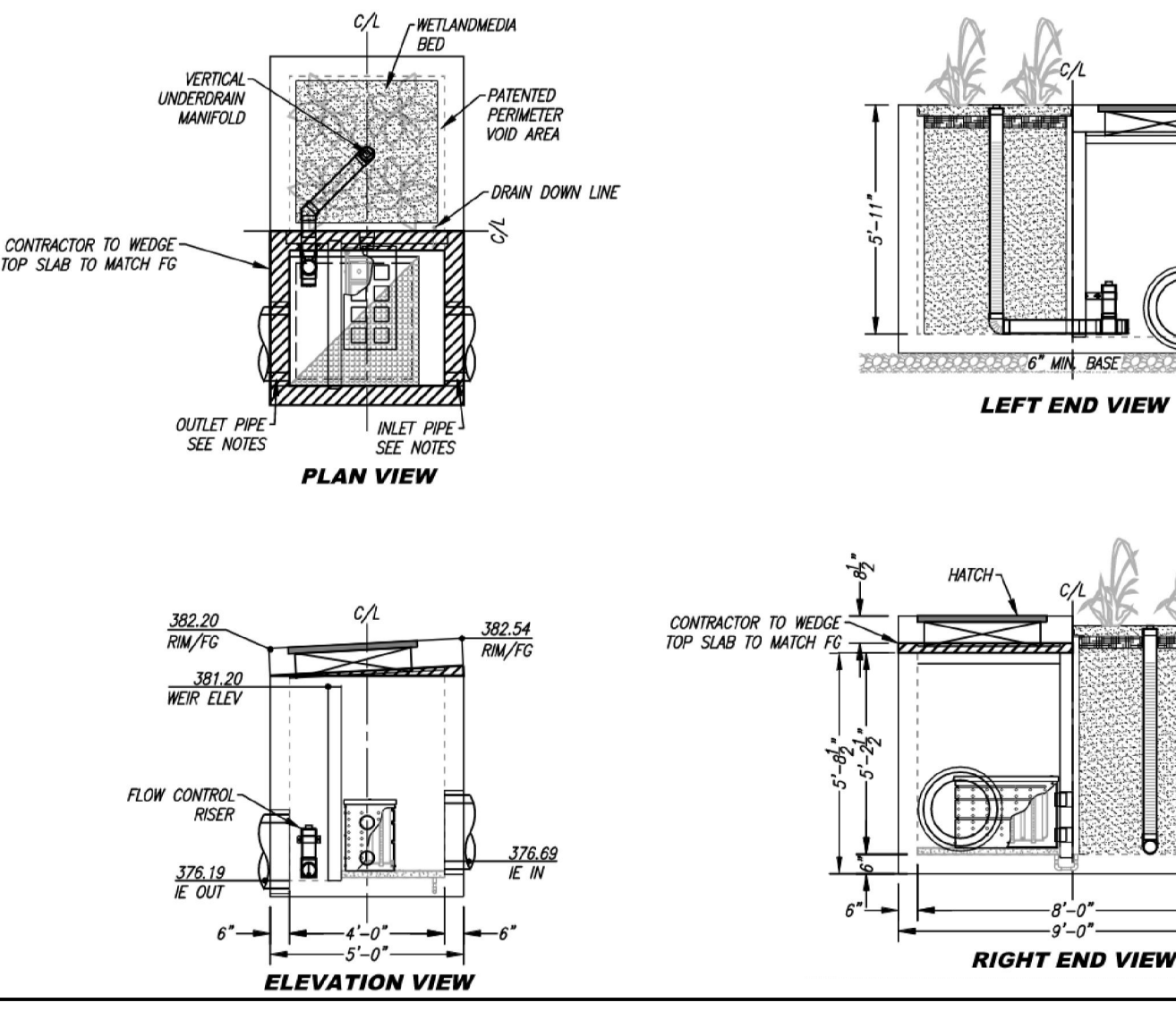
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 137 SQ FT OF WETLAND MEDIA PROVIDED, 100 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #5		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	814	N/A	
TREATMENT HQL AVAILABLE (FT)	5.01		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	0.88		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	376.69	HDPE	18"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	376.19	HDPE	18"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	382.54	382.97	382.20
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	36" X 36"	OPEN PLANTER	N/A
WETLAND MEDIA VOLUME (CY)	3.01		
ORIFICE SIZE (DIA. INCHES)	#0.77"		

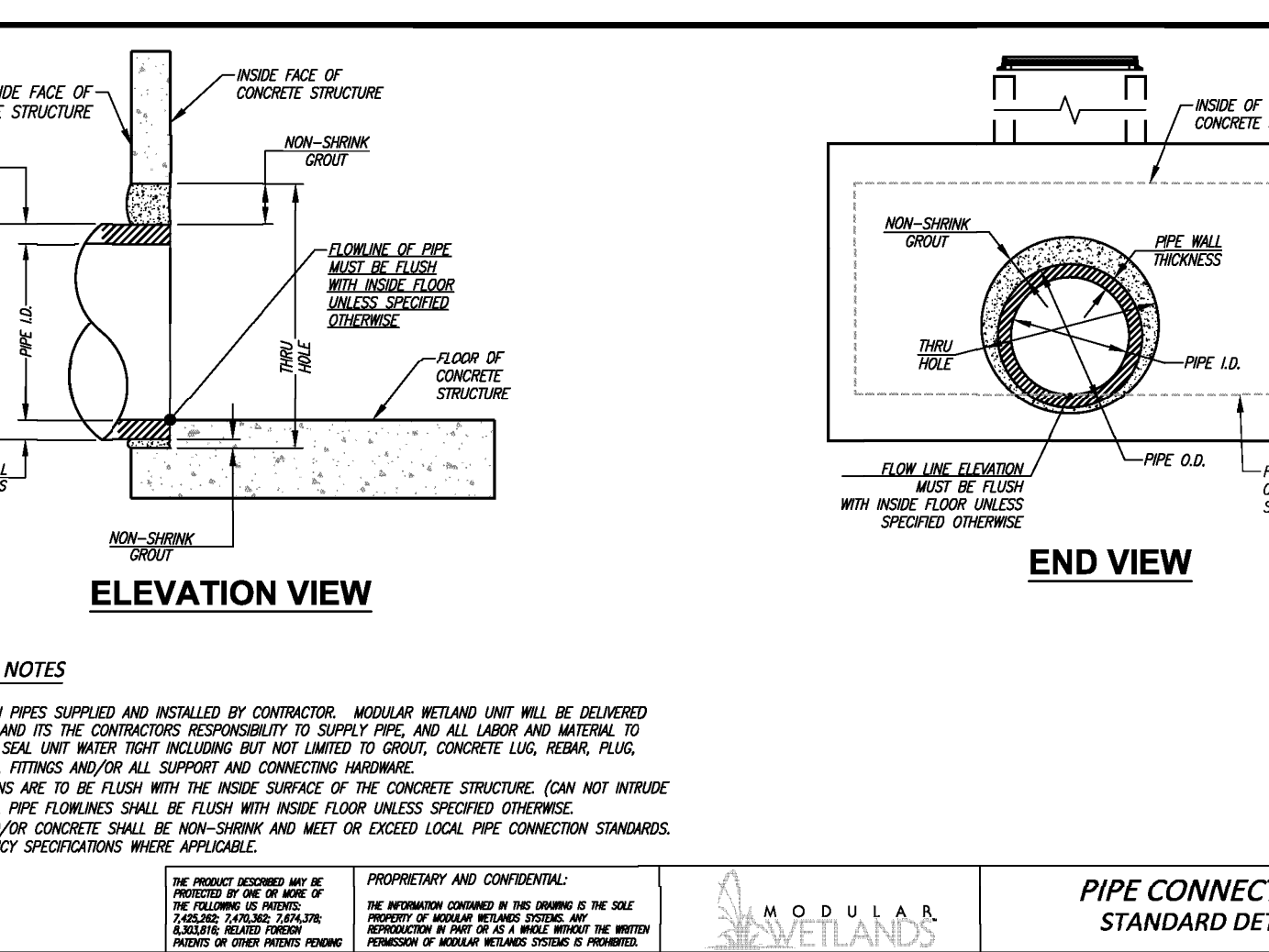
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 74 SQ FT OF WETLAND MEDIA PROVIDED, 64 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #3		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	1,741	N/A	
TREATMENT HQL AVAILABLE (FT)	4.60		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	1.78		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	371.43	HDPE	15"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	370.93	HDPE	15"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	378.39	378.39	378.39
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	430" X 30"	OPEN PLANTER	#24"
WETLAND MEDIA VOLUME (CY)	7.48		
ORIFICE SIZE (DIA. INCHES)	#1.09"		

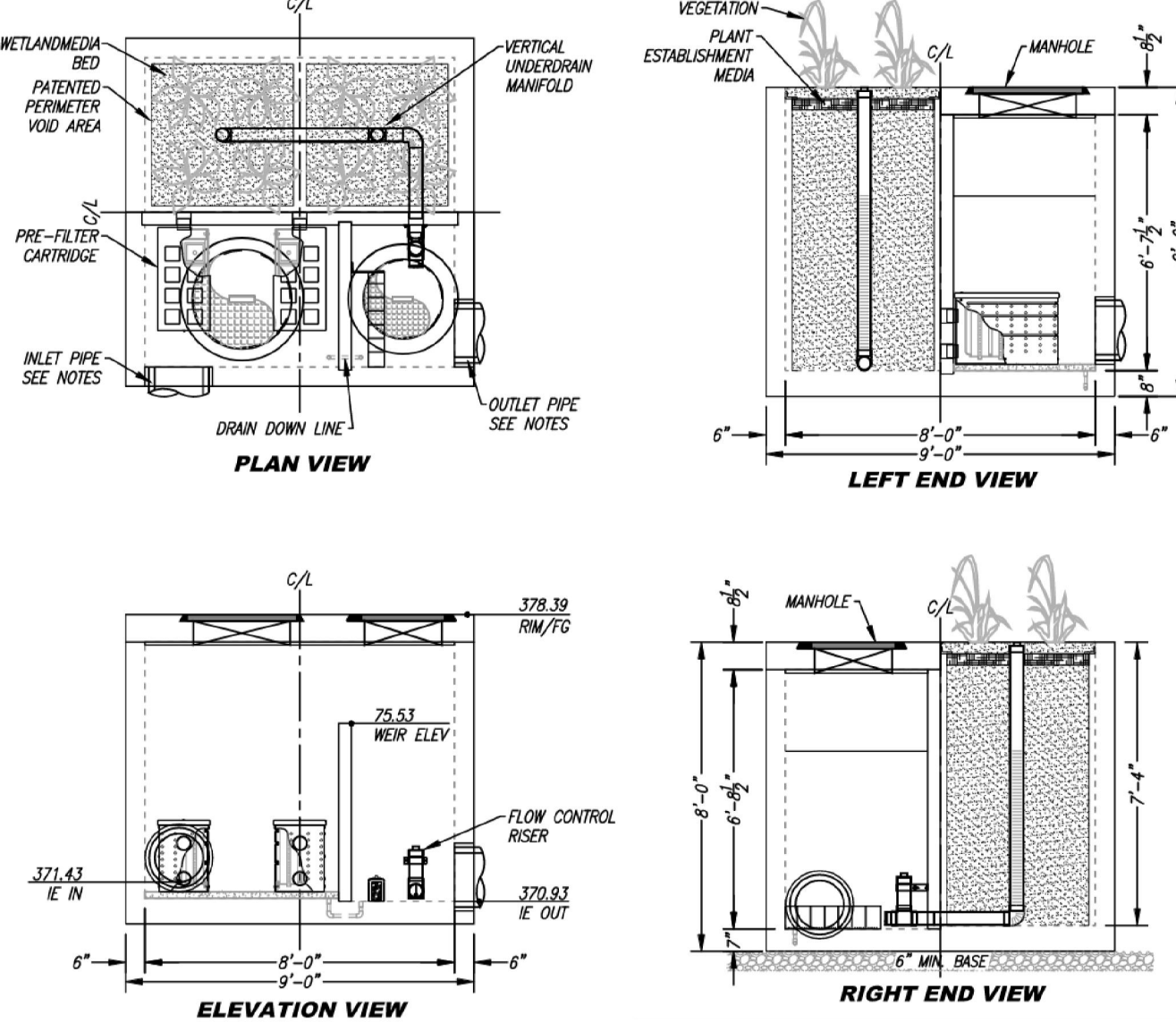
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 136 SQ FT OF WETLAND MEDIA PROVIDED, 100 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #6		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	1,741	N/A	
TREATMENT HQL AVAILABLE (FT)	4.60		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	1.78		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	371.43	HDPE	15"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	370.93	HDPE	15"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	378.39	378.39	378.39
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	430" X 30"	OPEN PLANTER	#24"
WETLAND MEDIA VOLUME (CY)	7.48		
ORIFICE SIZE (DIA. INCHES)	#1.09"		

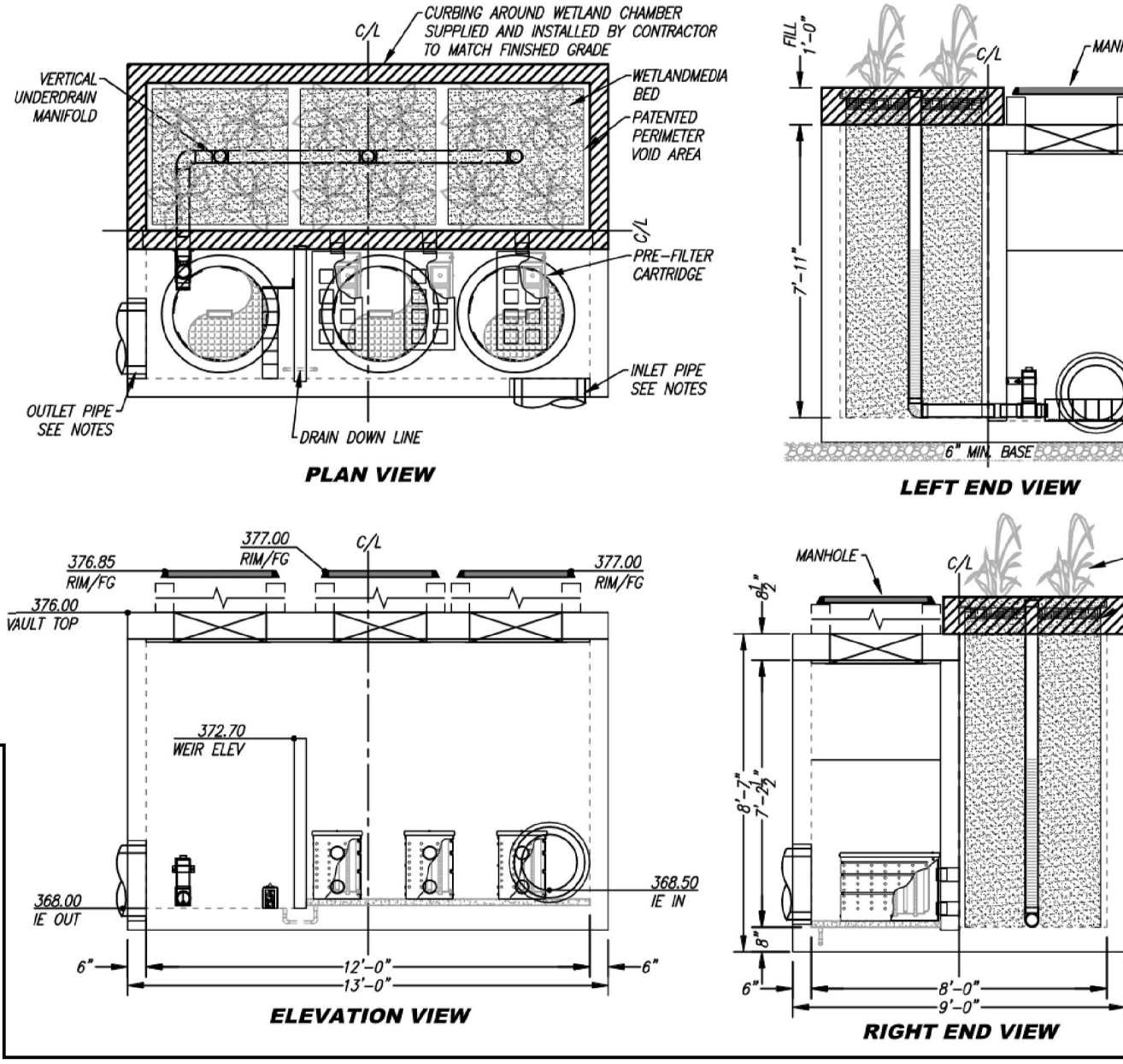
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 136 SQ FT OF WETLAND MEDIA PROVIDED, 100 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #6		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	1,741	N/A	
TREATMENT HQL AVAILABLE (FT)	4.70		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	2.05		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	368.50	HDPE	18"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	368.00	HDPE	18"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	378.85	378.40	377.00
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	24" X 30"	OPEN PLANTER	#30"
WETLAND MEDIA VOLUME (CY)	13.58		
ORIFICE SIZE (DIA. INCHES)	#1.34"		

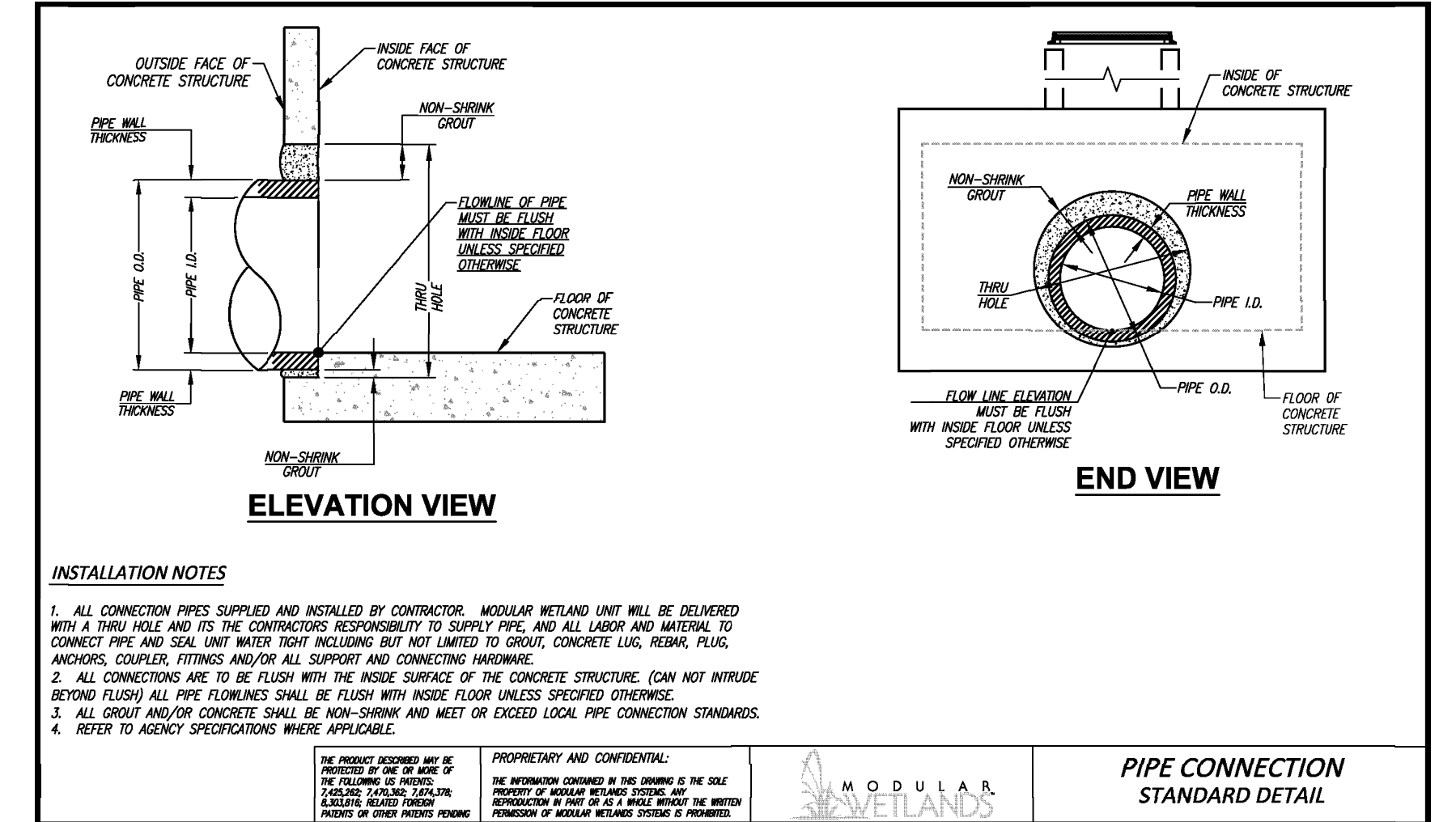
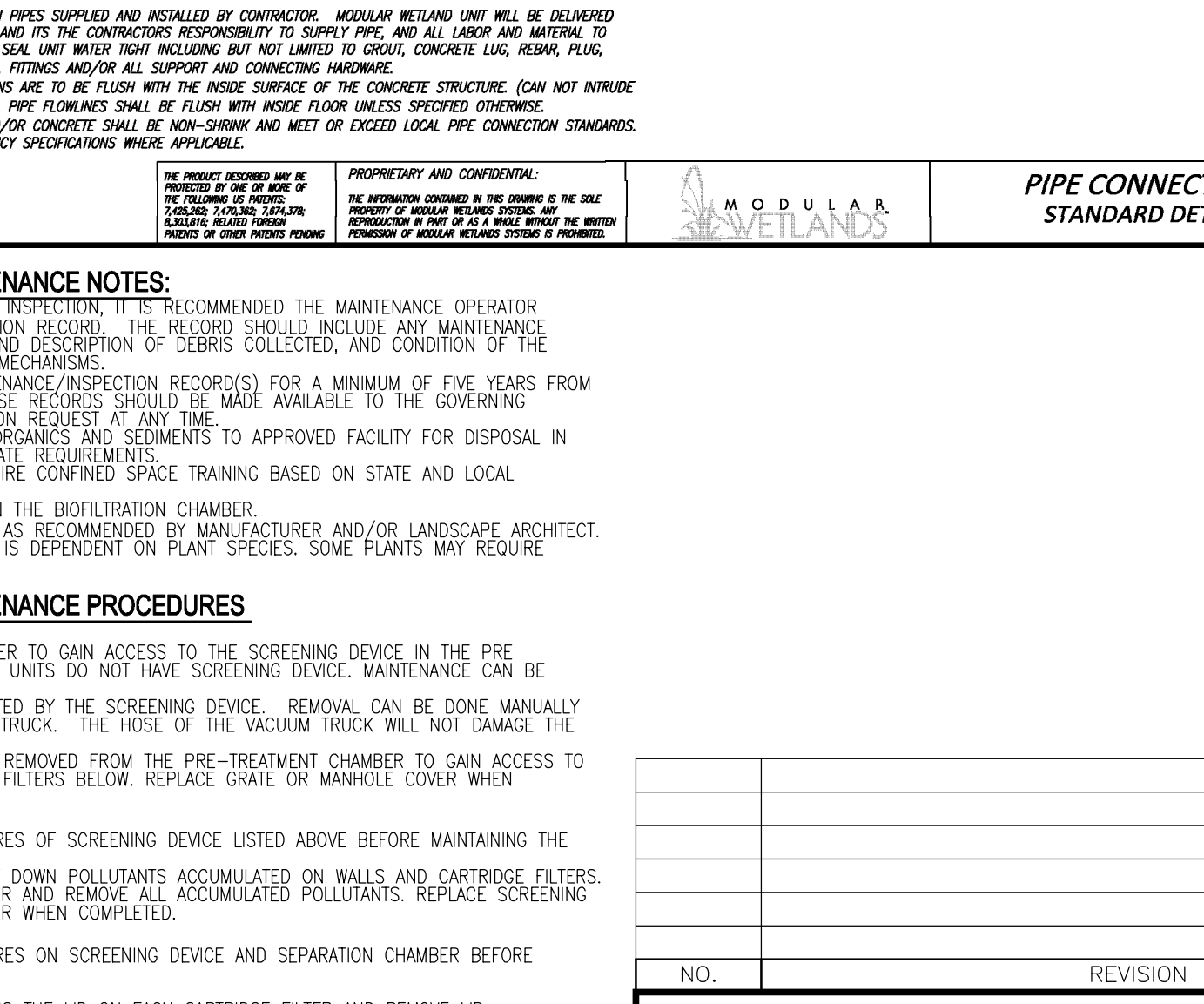
NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 208 SQ FT OF WETLAND MEDIA PROVIDED, 162 SQ FT MINIMUM.



**SITE SPECIFIC DATA**

PROJECT NUMBER	11487		
PROJECT NAME	DORSEY OVERLOOK		
PROJECT LOCATION	HOWARD COUNTY, MD		
STRUCTURE ID	MWS #6		
TREATMENT REQUIRED	ESDv (CF)	FLOW BASED (CFS)	
	1,741	N/A	
TREATMENT HQL AVAILABLE (FT)	4.60		
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE	1.78		
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	371.43	HDPE	15"
INLET PIPE 2	N/A	N/A	N/A
OUTLET PIPE	370.93	HDPE	15"
PRETREATMENT	BIOFILTRATION	DISCHARGE	
RM ELEVATION	378.39	378.39	378.39
SURFACE LOAD	PEDESTRIAN	N/A	PEDESTRIAN
FRAME & COVER	430" X 30"	OPEN PLANTER	#24"
WETLAND MEDIA VOLUME (CY)	7.48		
ORIFICE SIZE (DIA. INCHES)	#1.09"		

NOTES: PRELIMINARY NOT FOR CONSTRUCTION, 136 SQ FT OF WETLAND MEDIA PROVIDED, 100 SQ FT MINIMUM.



**MODULAR WETLAND MAINTENANCE NOTES:**

- FOLLOWING MAINTENANCE AND/OR INSPECTION, IT IS RECOMMENDED THE MAINTENANCE OPERATOR PREPARE A MAINTENANCE/INSPECTION RECORD. THE RECORD SHOULD INCLUDE ANY MAINTENANCE ACTIVITIES PERFORMED, QUANTITY AND DESCRIPTION OF DEBRIS COLLECTED, AND CONDITION OF THE SYSTEM AND ITS VARIOUS FILTER MECHANISMS.
- THE OWNER SHOULD KEEP MAINTENANCE/INSPECTION RECORD(S) FOR A MINIMUM OF FIVE YEARS FROM THE DATE OF MAINTENANCE. THESE RECORDS SHOULD BE MADE AVAILABLE TO THE GOVERNING MUNICIPALITY FOR INSPECTION UPON REQUEST AT ANY TIME.
- TRANSPORT ALL DEBRIS, TRASH, ORGANICS AND SEDIMENTS TO APPROVED FACILITY FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS.
- ENTRY INTO CHAMBERS MAY REQUIRE CONTINUING SPACE TRAINING BASED ON STATE AND LOCAL REGULATIONS.
- IRRIGATION SHOULD BE PROVIDED AS RECOMMENDED BY MANUFACTURER AND/OR LANDSCAPE ARCHITECT. AMOUNT OF IRRIGATION REQUIRED IS DEPENDENT ON PLANT SPECIES. SOME PLANTS MAY REQUIRE IRRIGATION.

**MODULAR WETLAND MAINTENANCE PROCEDURES**

- SCREENING DEVICE**
- REMOVE GRATE OR MANHOLE COVER TO GAIN ACCESS TO THE SCREENING DEVICE IN THE PRE TREATMENT CHAMBER. WALL PIPE UNITS DO NOT HAVE SCREENING DEVICE. MAINTENANCE CAN BE PERFORMED WITHOUT ENTRY.
  - REMOVE ALL POLLUTANTS COLLECTED BY THE SCREENING DEVICE. REMOVAL CAN BE DONE MANUALLY OR WITH THE USE OF A VACUUM TRUCK. THE HOSE OF THE VACUUM TRUCK WILL NOT DAMAGE THE SCREENING DEVICE.
  - SCREENING DEVICE CAN EASILY BE REMOVED FROM THE PRE-TREATMENT CHAMBER TO GAIN ACCESS TO SEPARATION CHAMBER AND MEDIA FILTERS BELOW. REPLACE GRATE OR MANHOLE COVER WHEN COMPLETED.
- SEPARATION CHAMBER**
- PERFORM MAINTENANCE PROCEDURES OF SCREENING DEVICE LISTED ABOVE BEFORE MAINTAINING THE SEPARATION CHAMBER.
  - WITH A PRESSURE WASHER SPRAY DOWN POLLUTANTS ACCUMULATED ON WALLS AND CARTRIDGE FILTERS.
  - VACUUM OUT SEPARATION CHAMBER AND REMOVE ALL ACCUMULATED POLLUTANTS. REPLACE SCREENING DEVICE, GRATE OR MANHOLE COVER WHEN COMPLETED.
- CARTRIDGE FILTERS**
- PERFORM MAINTENANCE PROCEDURES ON SCREENING DEVICE AND SEPARATION CHAMBER BEFORE MAINTAINING CARTRIDGE FILTERS.
  - ENTER SEPARATION CHAMBER.
  - UNSCREW THE TWO BOLTS HOLDING THE LID ON EACH CARTRIDGE FILTER AND REMOVE LID.
  - REMOVE EACH OF 4 TO 8 MEDIA CAGES HOLDING THE MEDIA IN PLACE.
  - SPRAY DOWN THE CARTRIDGE FILTER REMOVE ANY ACCUMULATED POLLUTANTS.
  - VACUUM OUT OLD MEDIA AND ACCUMULATED POLLUTANTS.
  - REINSTALL MEDIA CAGES AND FILL WITH NEW MEDIA FROM MANUFACTURER OR OUTSIDE SUPPLIER. MANUFACTURER WILL PROVIDE MEDIA AND SOURCES TO PURCHASE.
  - RELEASE THE LID AND TIGHTEN DOWN BOLTS. REPLACE SCREENING DEVICE, GRATE OR MANHOLE COVER WHEN COMPLETE.
- DRAIN DOWN FILTER**
- REMOVE HATCH OR MANHOLE COVER OVER DISCHARGE CHAMBER AND ENTER CHAMBER.
  - UNLOCK AND LIFT DRAIN DOWN FILTER HOUSING AND REMOVE OLD MEDIA BLOCK. REPLACE WITH NEW MEDIA BLOCK. LOWER DRAIN DOWN FILTER HOUSING AND LOCK INTO PLACE.
  - EXIT CHAMBER AND REPLACE HATCH OR MANHOLE COVER.

**MAINTENANCE GUIDELINES FOR MODULAR WETLAND SYSTEM LINEAR:**

- MAINTENANCE SUMMARY**
- REMOVE TRASH FROM SCREENING DEVICE AVERAGE MAINTENANCE INTERVAL IS 6 TO 12 MONTHS. (5 MINUTE AVERAGE SERVICE TIME).
  - REMOVE SEDIMENT FROM SEPARATION CHAMBER AVERAGE MAINTENANCE INTERVAL IS 12 TO 24 MONTHS. (10 MINUTE AVERAGE SERVICE TIME).
  - REPLACE CARTRIDGE FILTER MEDIA AVERAGE MAINTENANCE INTERVAL IS 12 TO 24 MONTHS. (10-15 MINUTE PER CARTRIDGE AVERAGE SERVICE TIME).
  - REPLACE DRAIN DOWN FILTER MEDIA AVERAGE MAINTENANCE INTERVAL IS 12 TO 24 MONTHS. (5 MINUTE AVERAGE SERVICE TIME).
  - TRIM VEGETATION AVERAGE MAINTENANCE INTERVAL IS 6 TO 12 MONTHS. (SERVICE TIME Varies).

**OWNER/DEVELOPER**  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5870 S FURNACE AVENUE  
ELKDRIDGE, MARYLAND 21075  
PHONE: (410) 788-0027

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**

**STORMWATER MANAGEMENT NOTES AND DETAILS**

**DORSEY OVERLOOK APARTMENT UNITS 1-78**

**PARCEL A**

2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
DPZ REF: ECP-15-012, BA-20-003V, F-21-023

ZONED: R-4PT  
PARCELS: 67, 51, 52  
288, 53, 54, 55  
HOWARD COUNTY, MARYLAND

**VOGEL ENGINEERING**

**TIMMONS GROUP**

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

PROFESSIONAL CERTIFICATE

DESIGN BY: DZE/RHV  
DRAWN BY: DZE/R/KS  
CHECKED BY: RHV  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69

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.

11/17/2022  
Rob Vogel  
PROFESSIONAL ENGINEER  
PE No. 16193

17 OF 30

ALL STORM DRAINS AND STORMWATER MANAGEMENT FACILITIES INCLUDING MODULAR WETLAND TO BE PRIVATELY OWNED AND MAINTAINED.

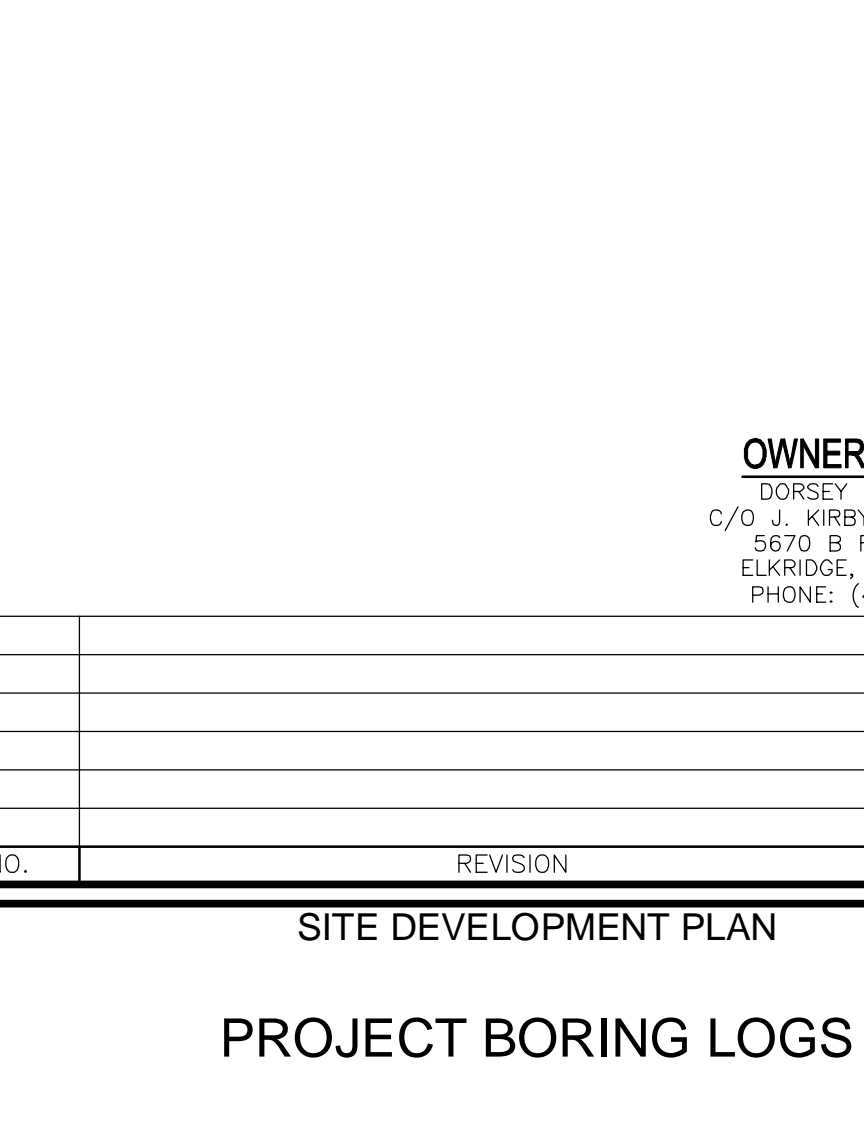
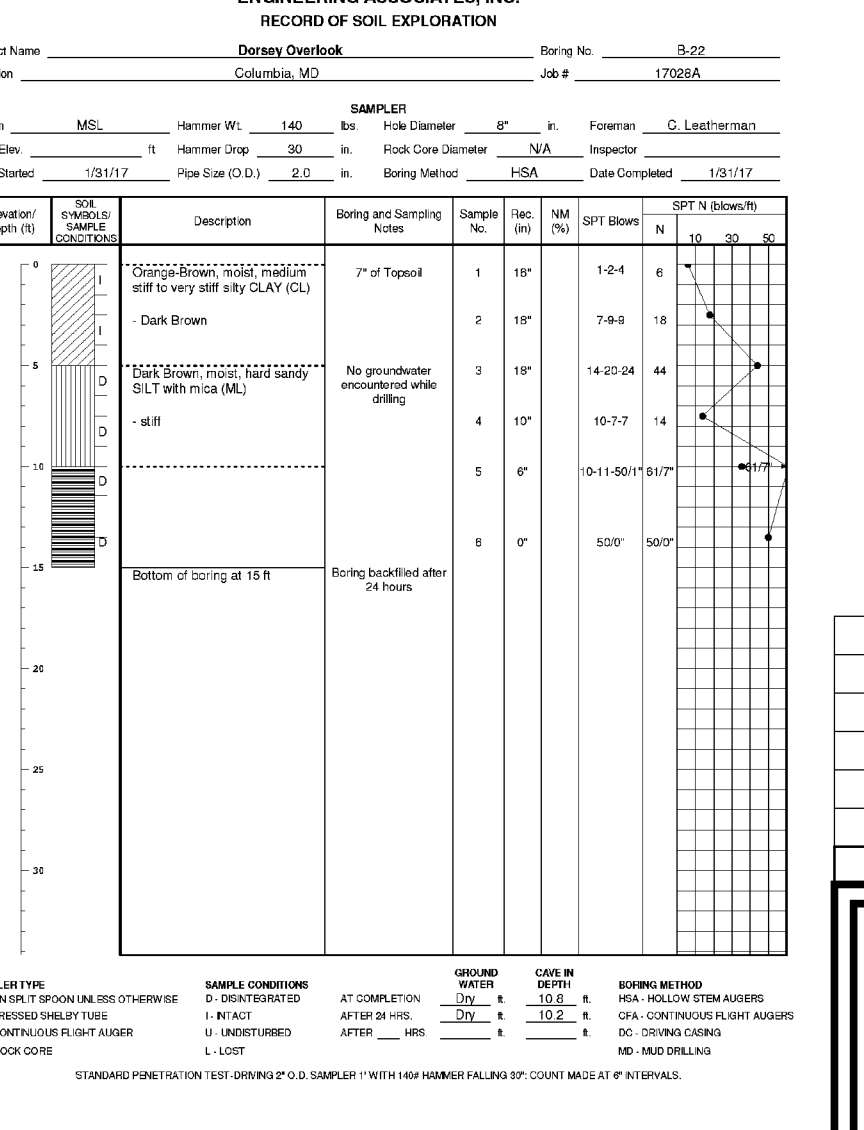
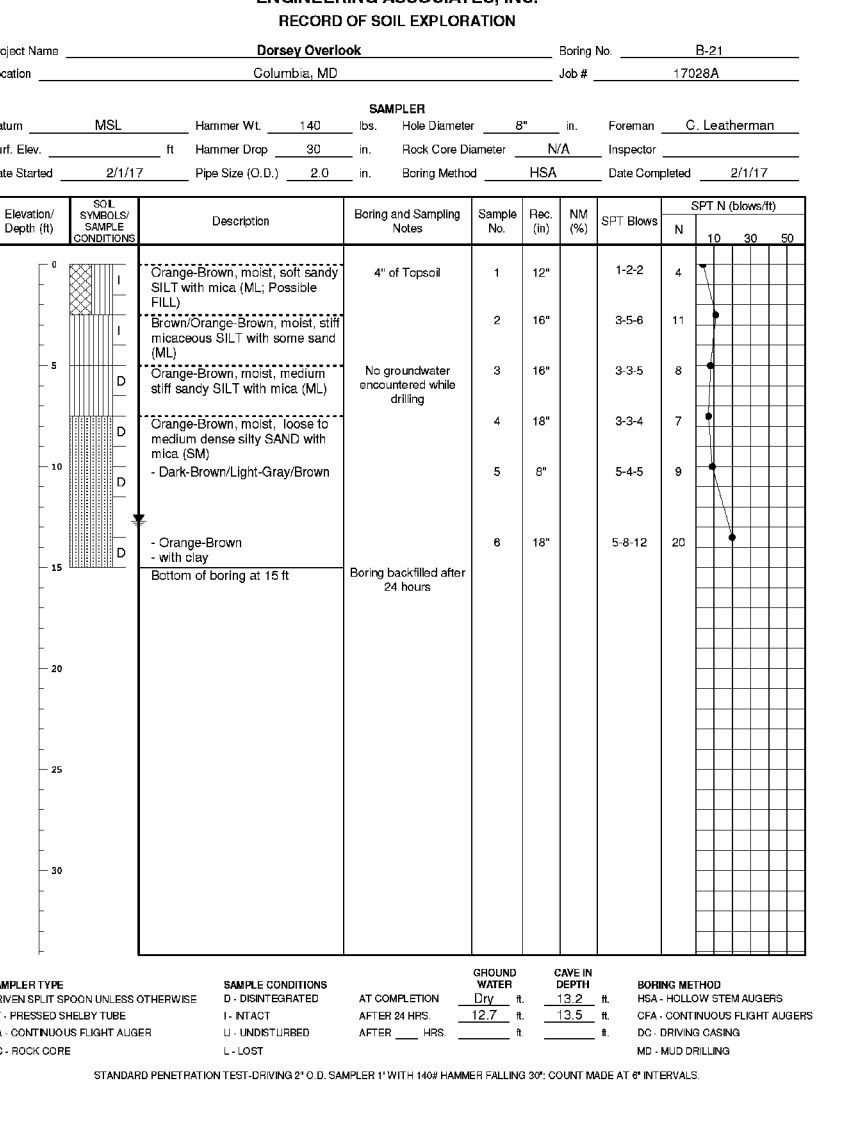
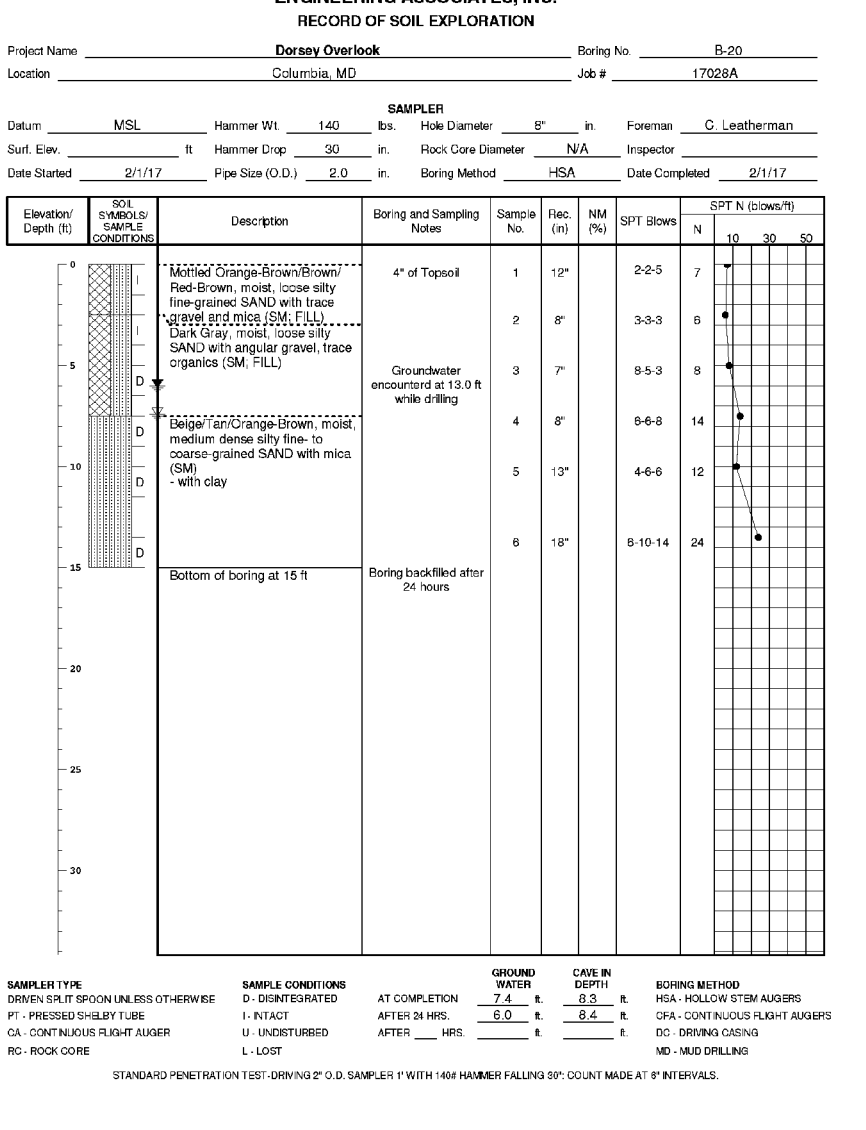
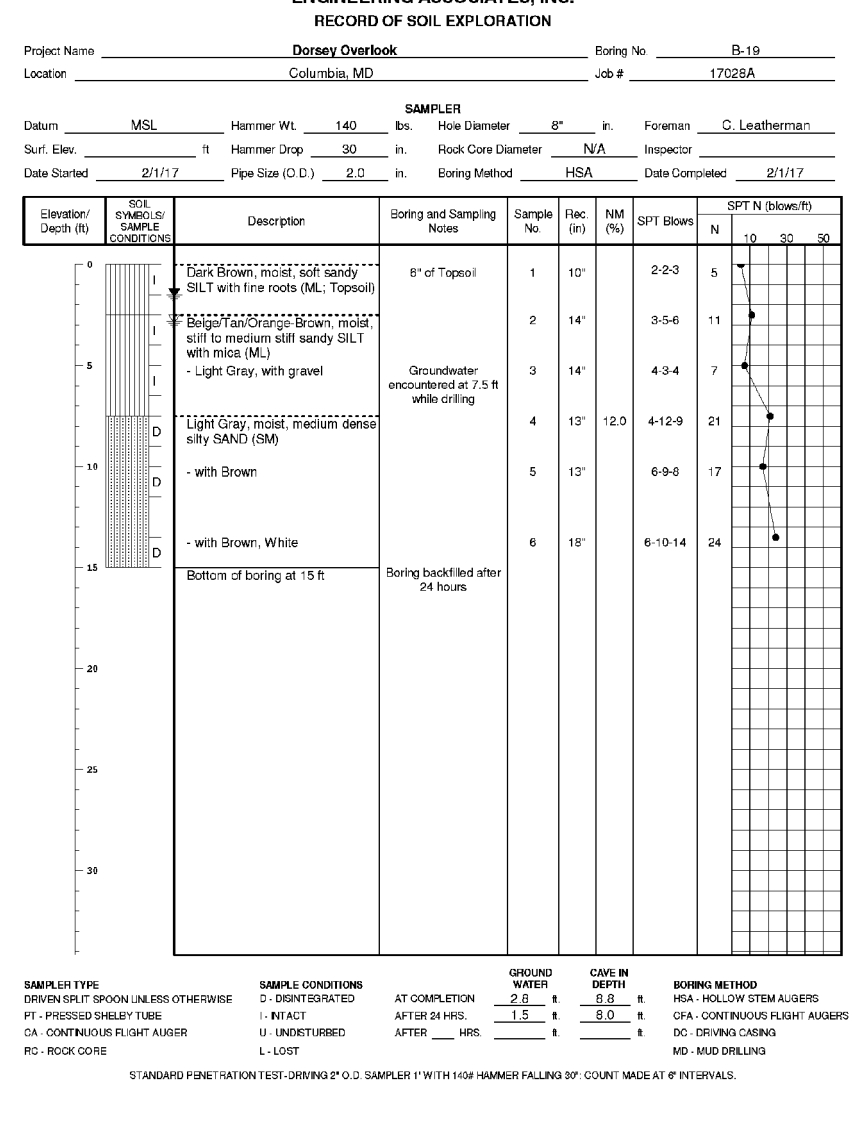
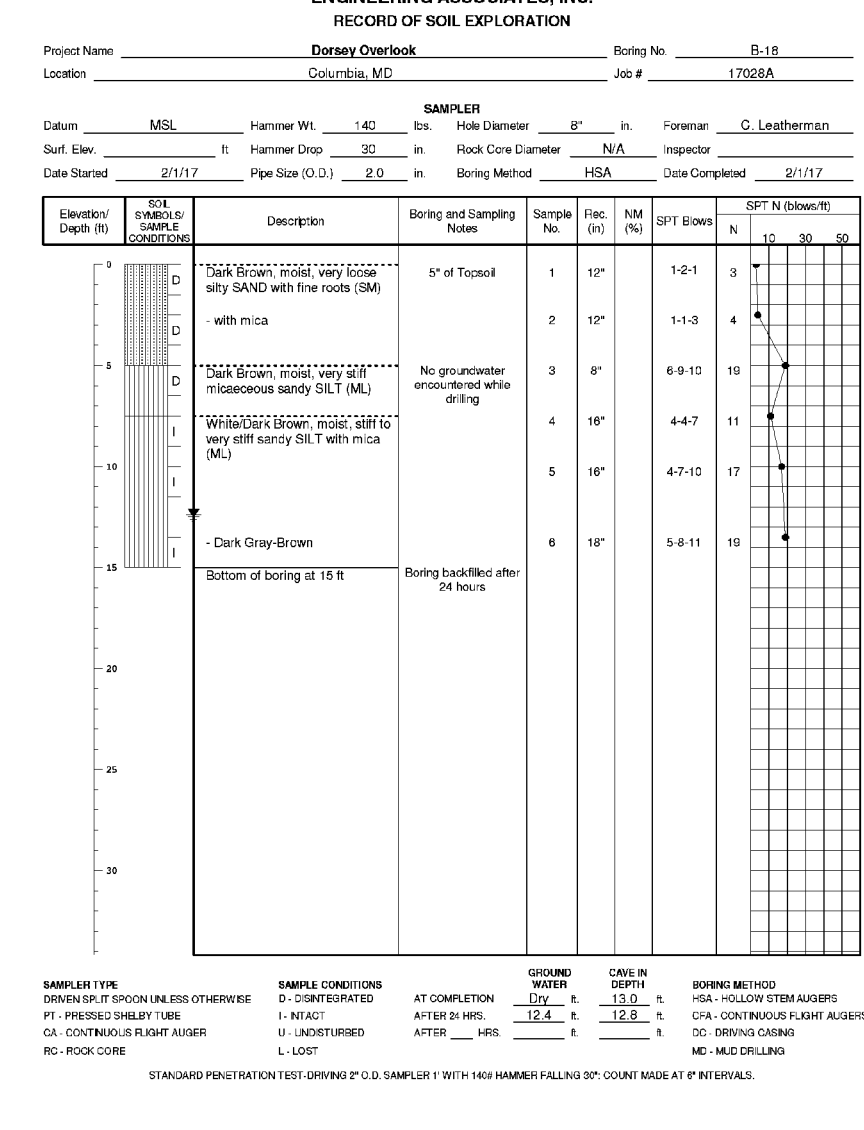
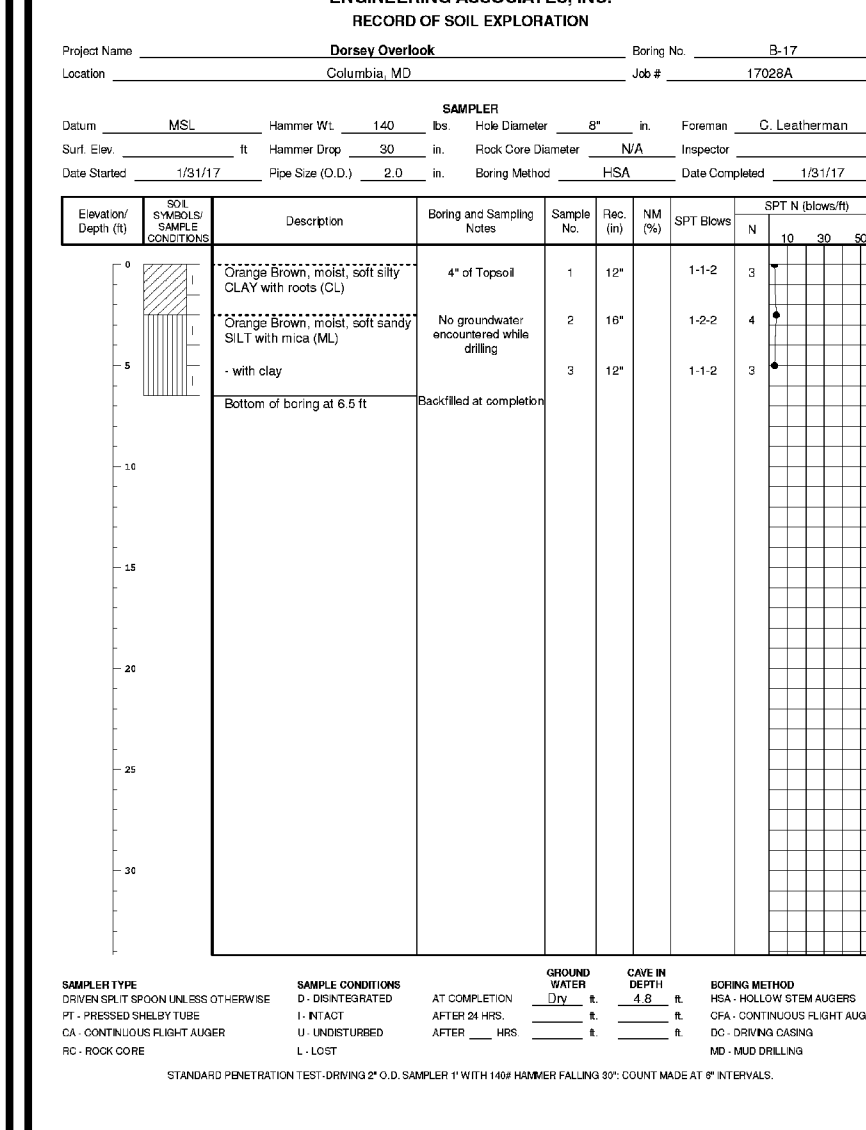
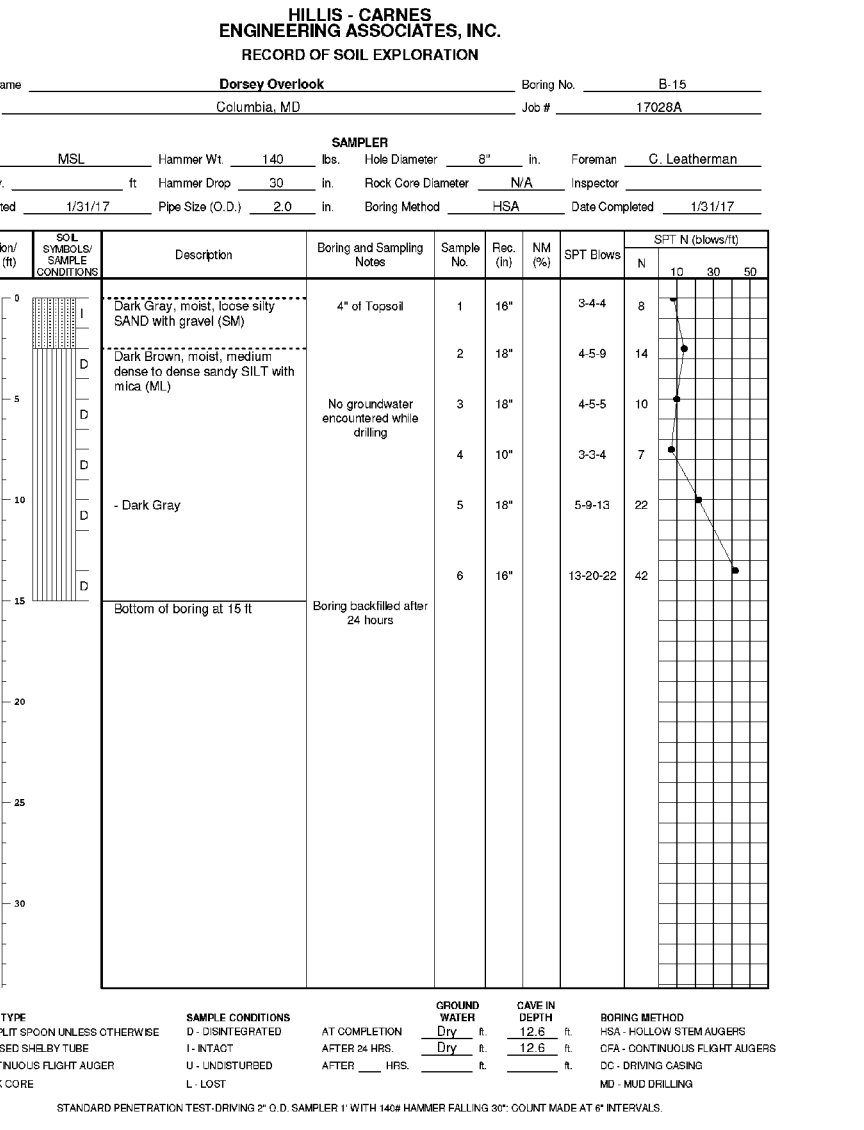
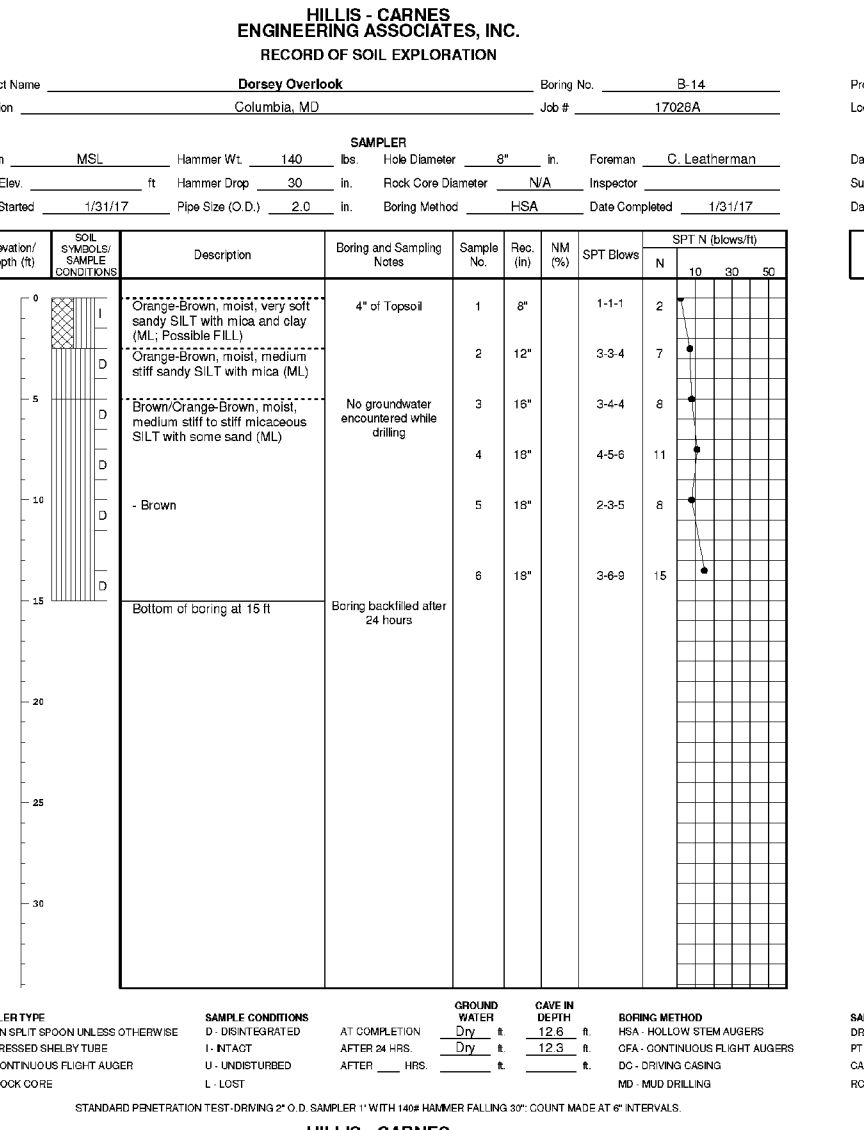
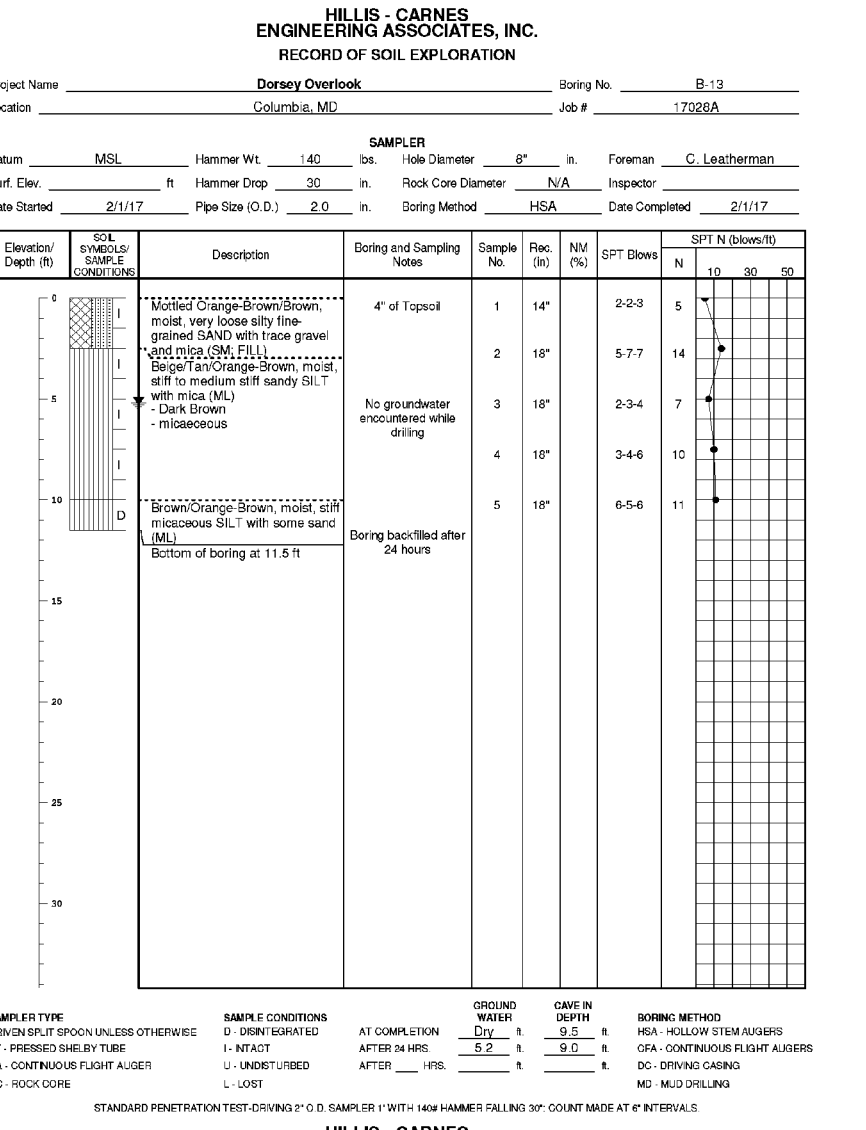
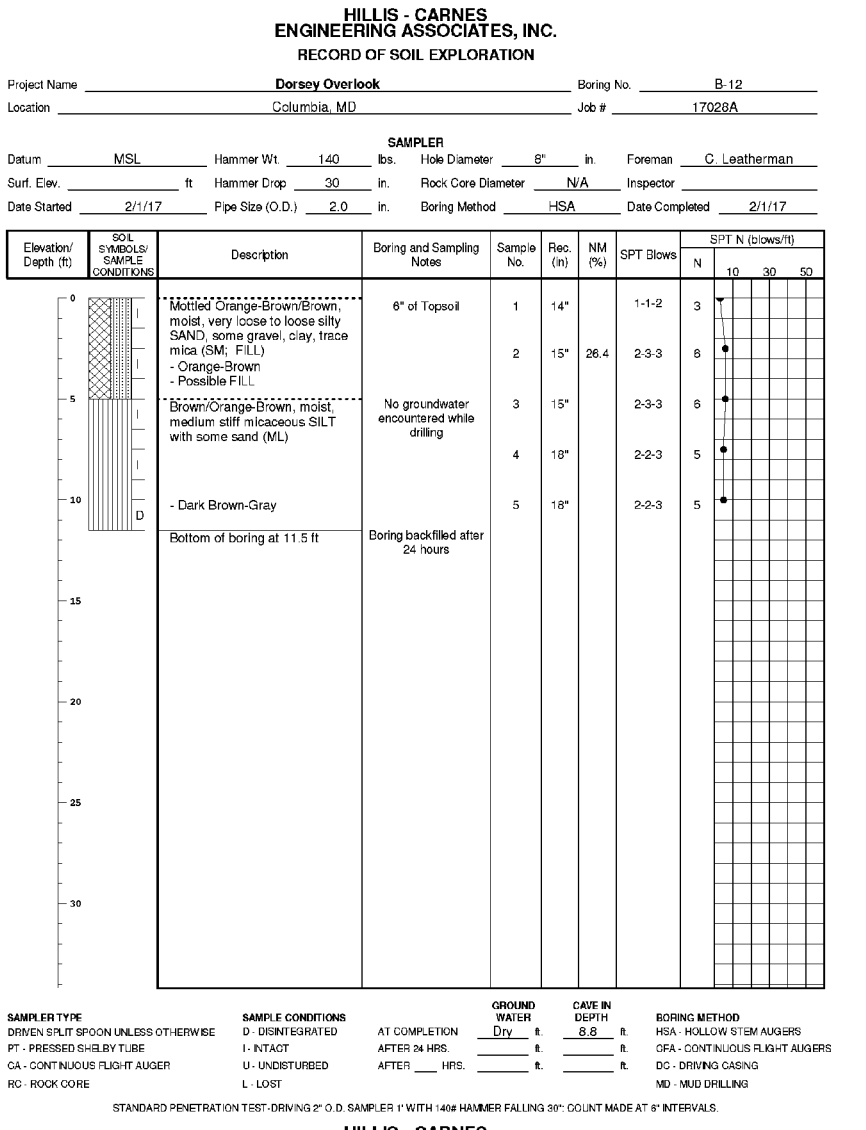
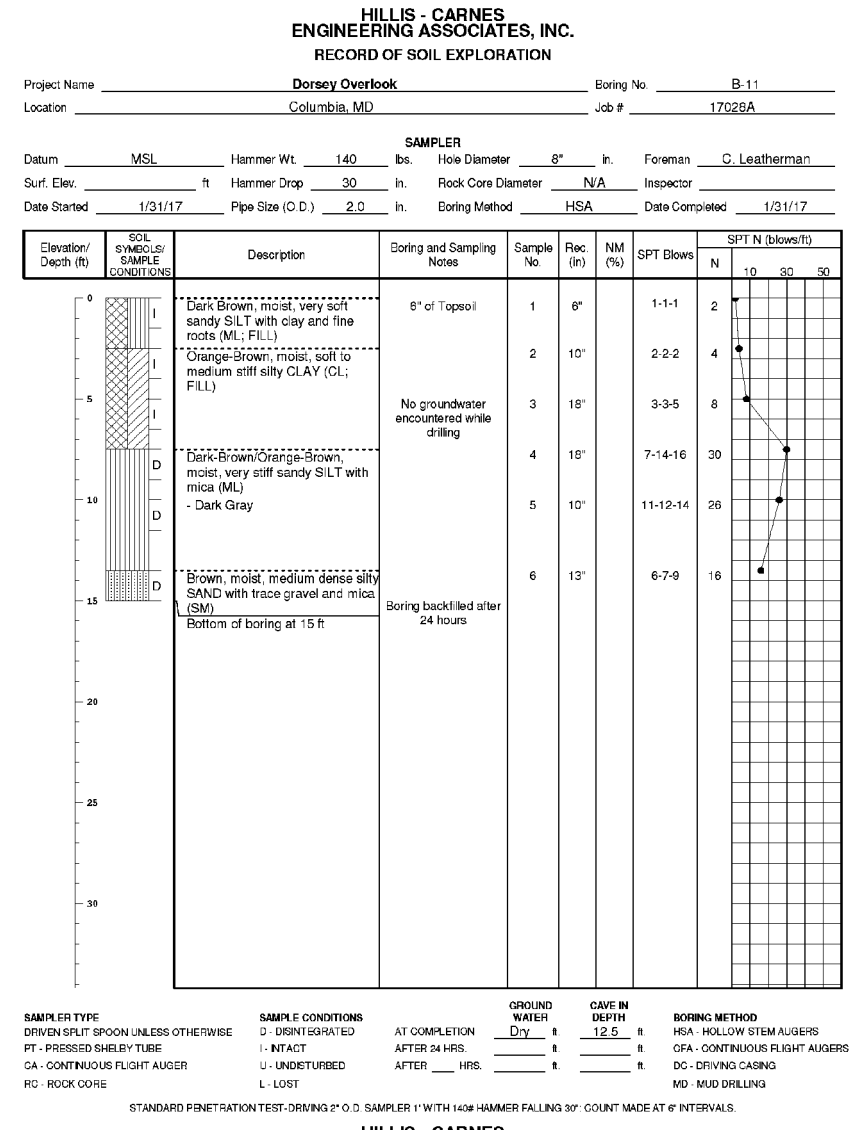
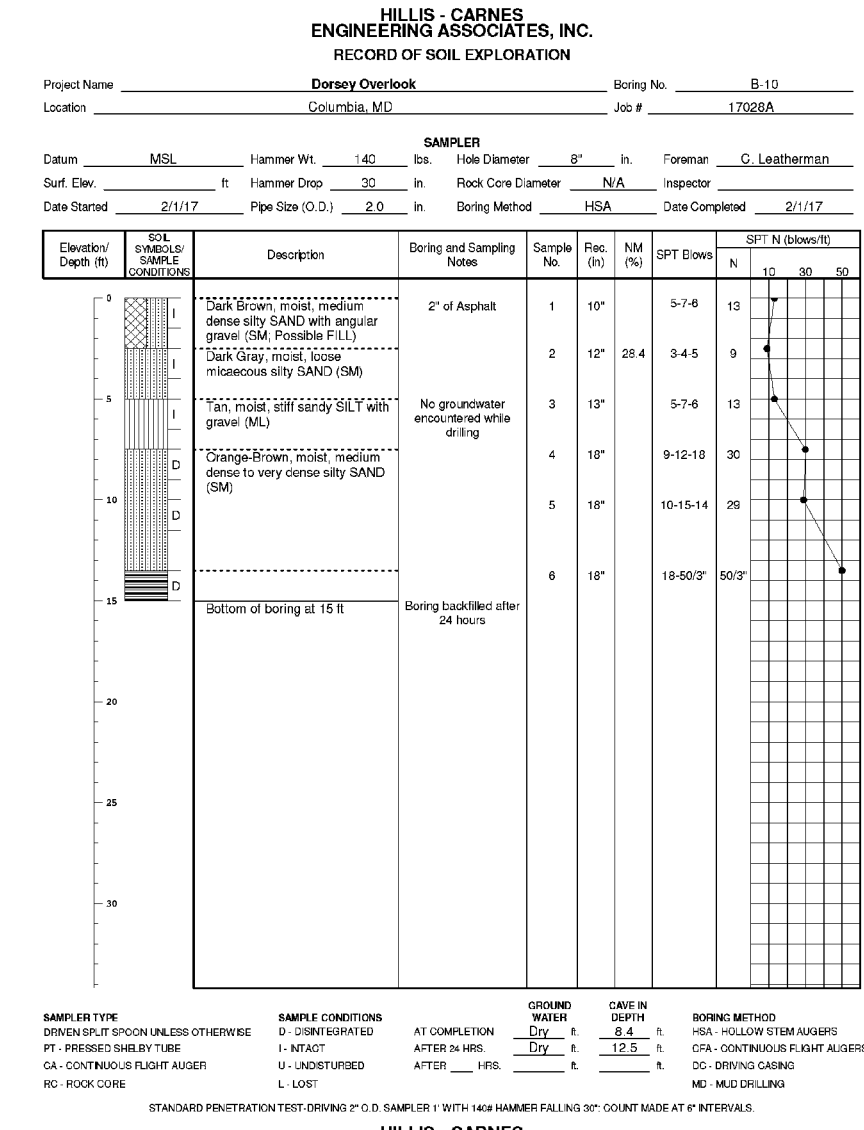
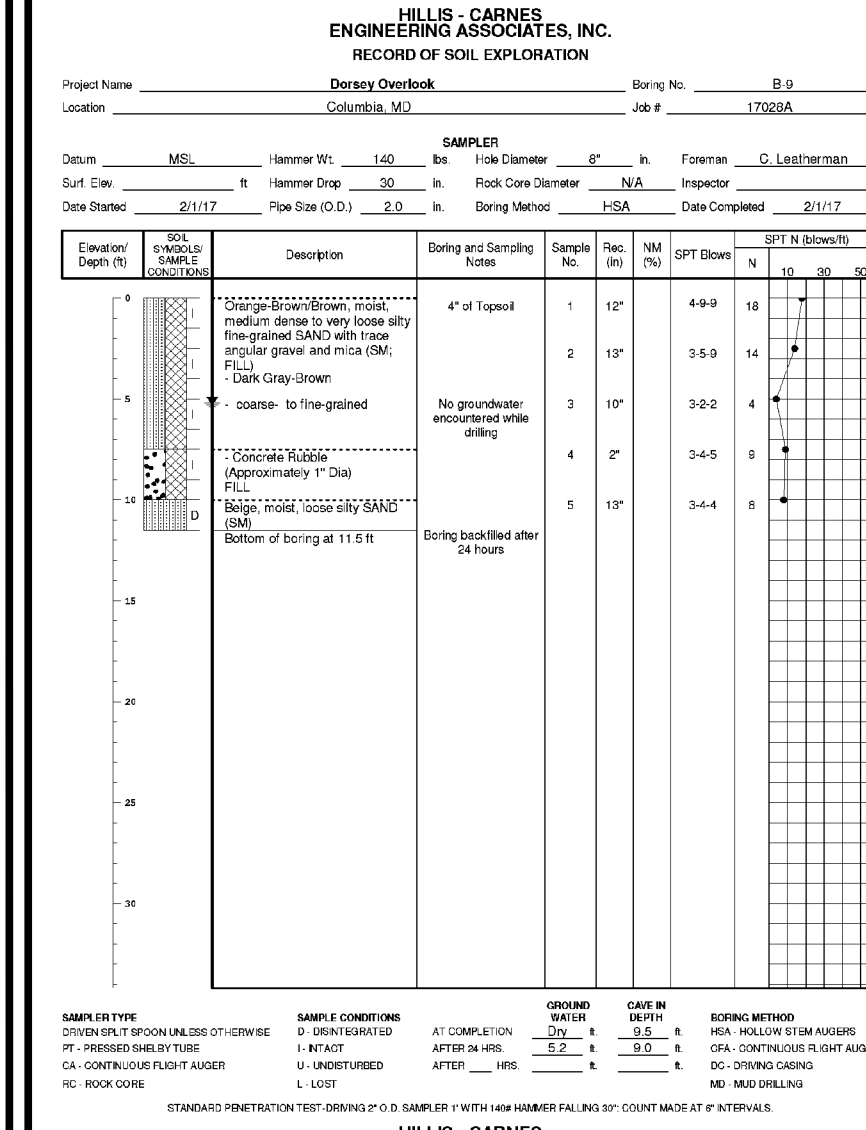
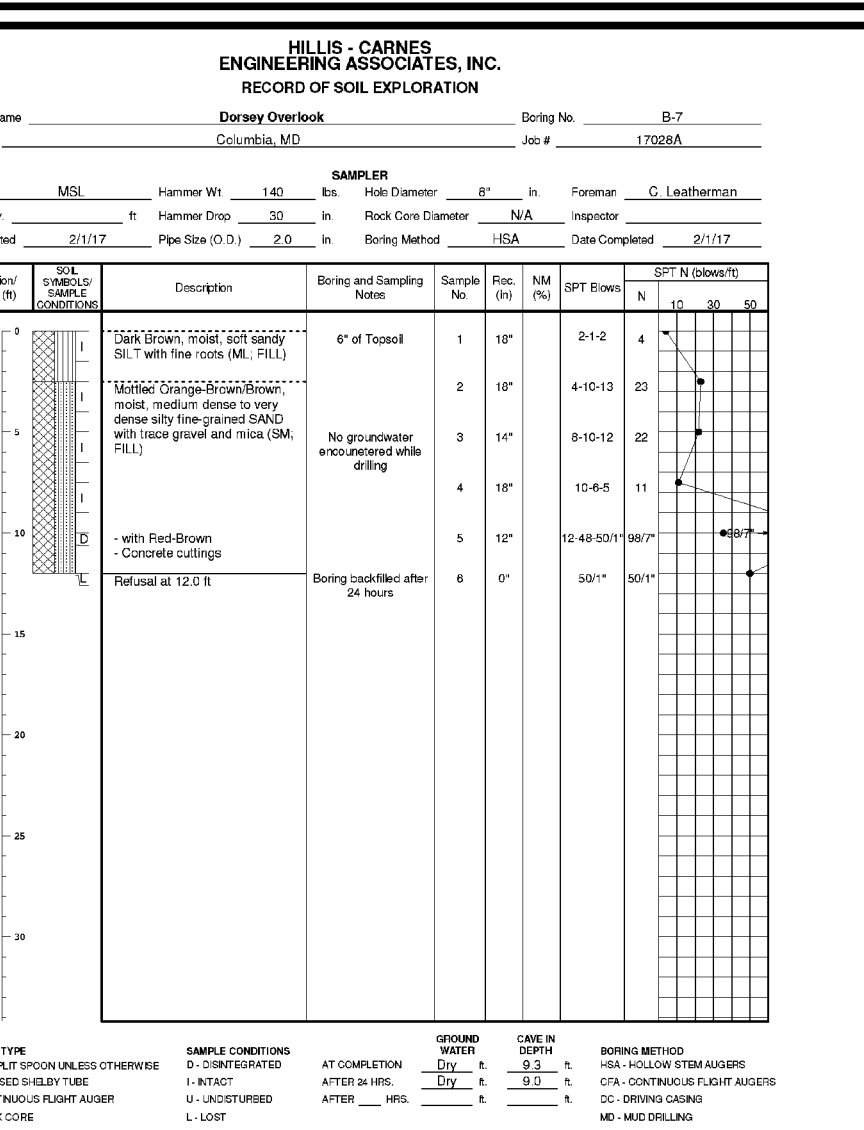
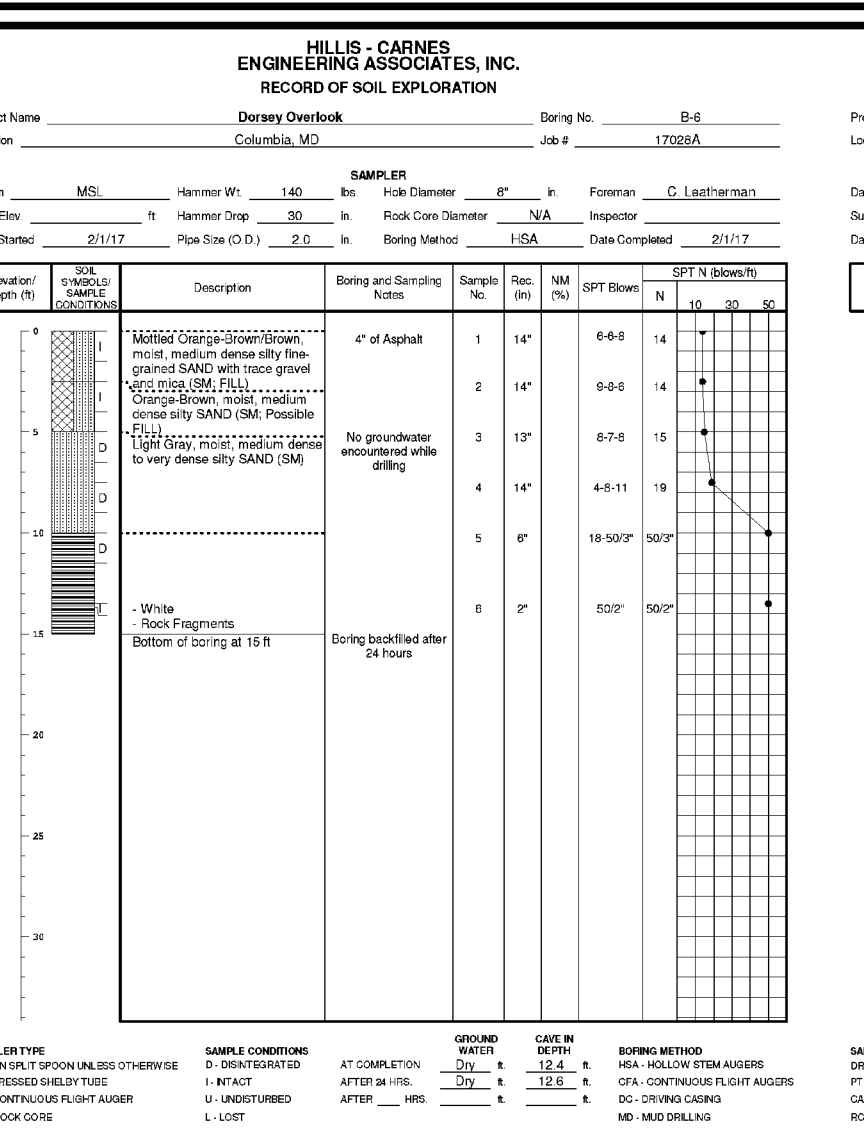
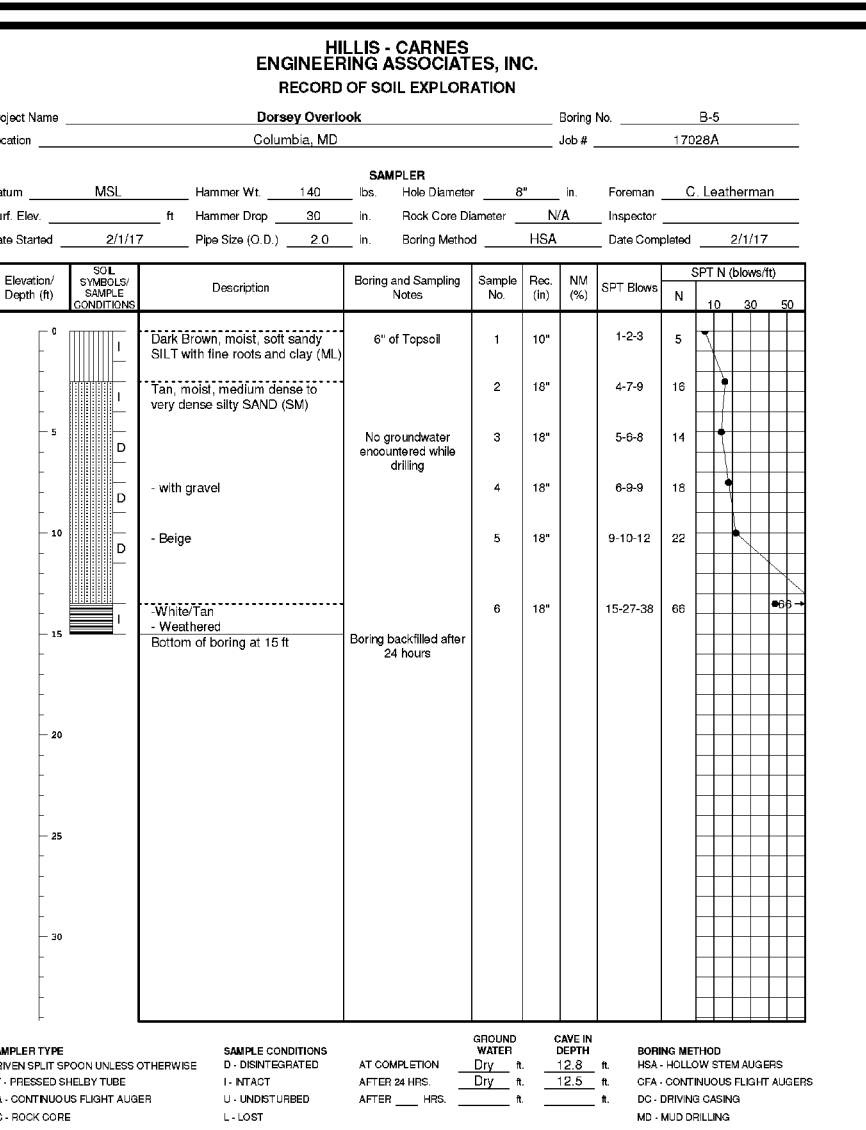
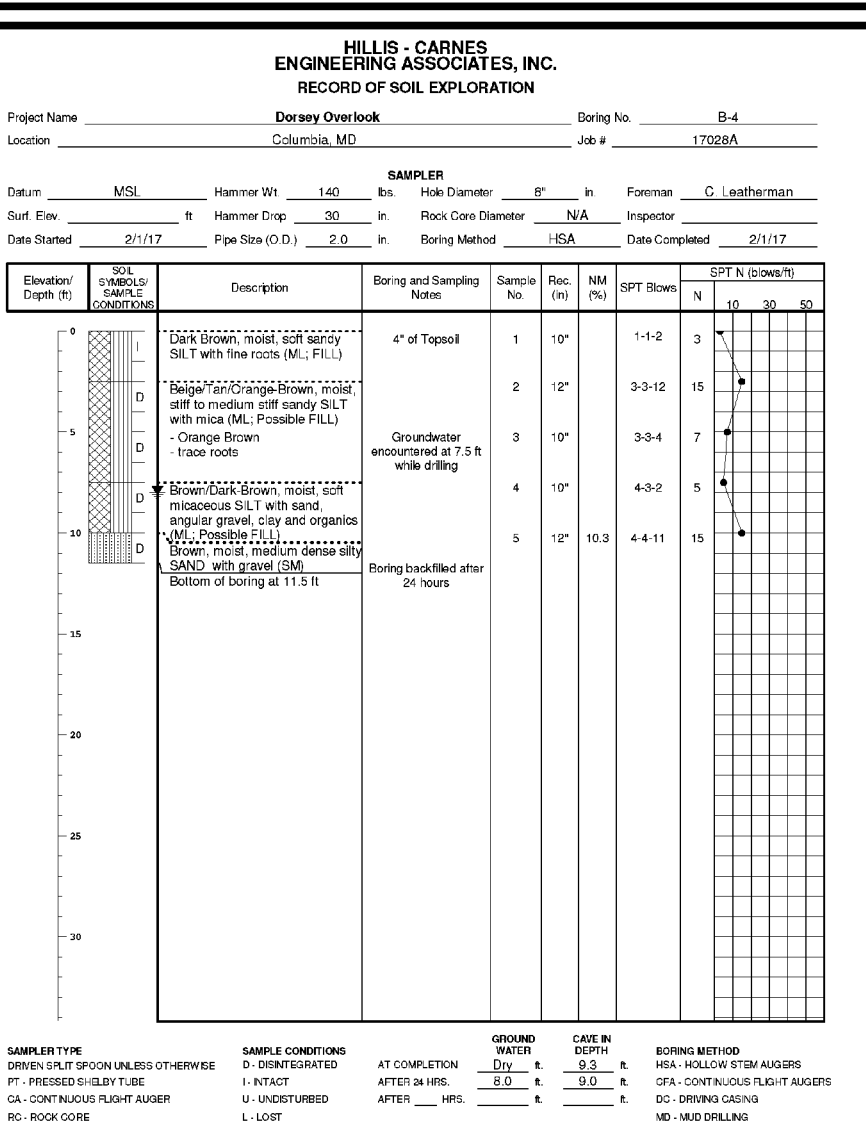
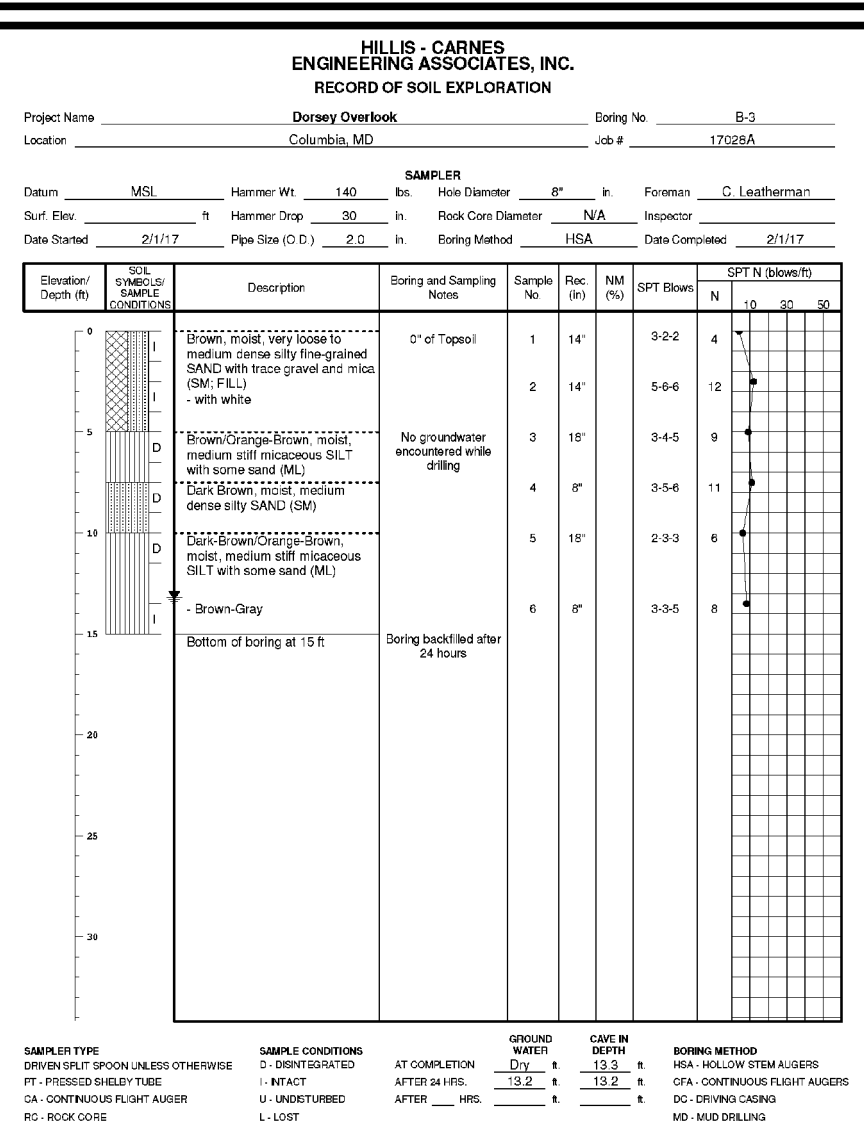
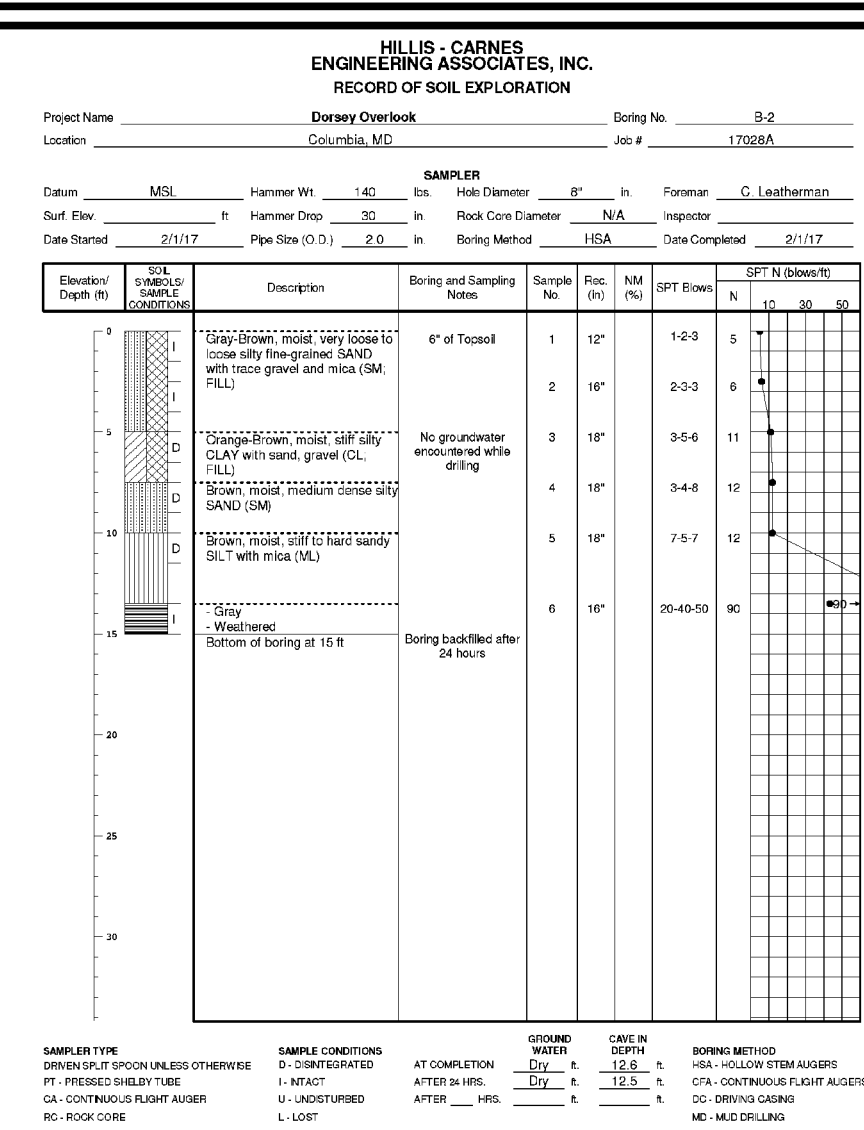
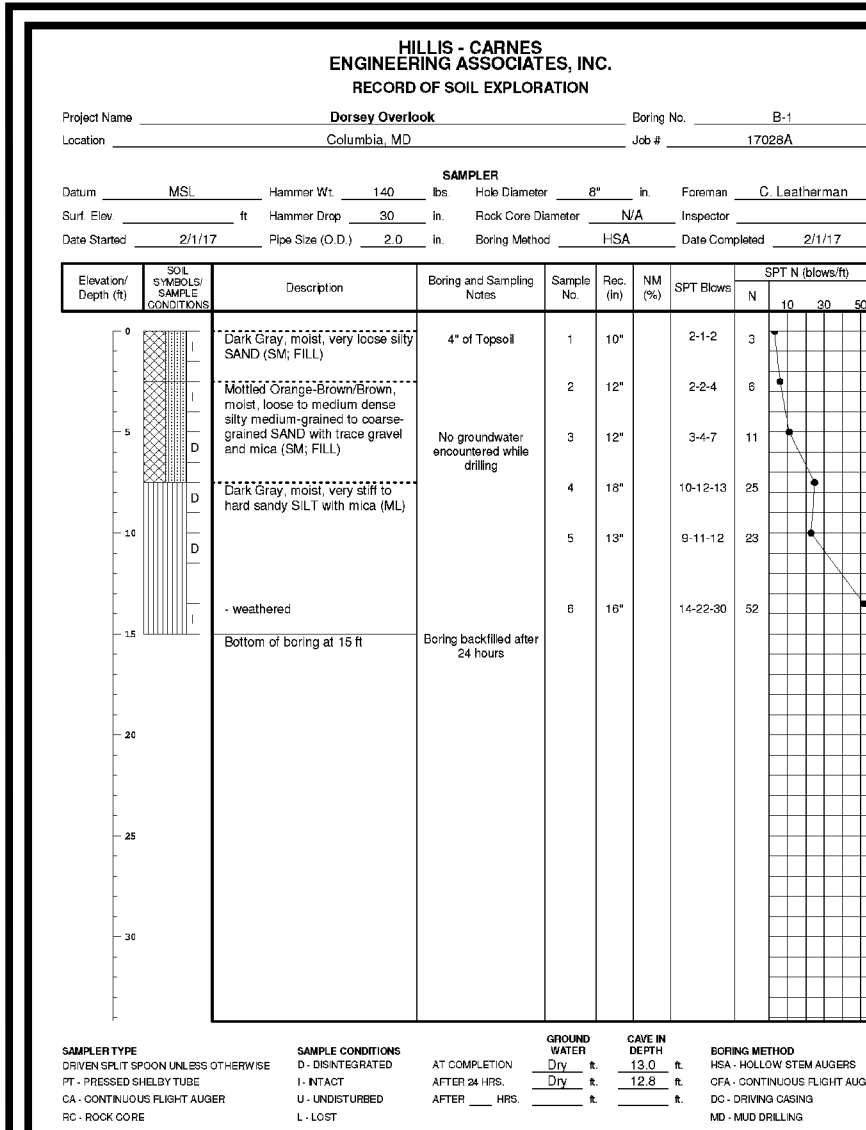
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
1/23/2023

CHIEF, DIVISION OF LAND DEVELOPMENT  
1/24/2023

DIRECTOR  
DATE

- MODULAR WETLANDS INSTALLATION NOTES:**
- CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
  - UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
  - CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTERLUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
  - CONTRACTOR RESPONSIBLE FOR INSTALLATION OF ALL PIPES, RISERS, MANHOLES AND HATCHES. CONTRACTOR TO USE SPOUT AND/OR BRICKS TO MATCH COVERS WITH FINISHED SURFACE UNLESS SPECIFIED OTHERWISE.
  - FOR UNITS WITH VEGETATION, SUCH VEGETATION SHALL BE SUPPLIED AND INSTALLED BY OTHERS. ALL UNITS WITH VEGETATION MUST HAVE DRIP OR SPRAY IRRIGATION SUPPLIED AND INSTALLED BY OTHERS.
  - CONTRACTOR RESPONSIBLE FOR CONTRACTING BIO CLEAN FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A BIO CLEAN REPRESENTATIVE.
- MODULAR WETLAND GENERAL NOTES:**
- CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
  - ALL DIMENSIONS, ELEVATIONS, SPECIFICATIONS AND CAPACITIES ARE SUBJECT TO CHANGE FOR PROJECTS. SPECIFIC DRAWINGS DETAILING EXACT DIMENSIONS, WEIGHTS AND ACCESSORIES, PLEASE CONTACT BIO CLEAN.



OWNER/DEVELOPER  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5270 S FURMACE AVENUE  
ELKRDGE, MARYLAND 21075  
PHONE: (410) 788-0027

NO.	REVISION	DATE

## SITE DEVELOPMENT PLAN PROJECT BORING LOGS

**DORSEY OVERLOOK**  
APARTMENT UNITS 1-78  
PARCEL A

ZONED: R-4PT  
PARCELS: 67, 51, 52  
288, 53, 54, 55  
OPZ REF'S: ECP-15-012, BA-20-003V, F-21-023

**VOGEL ENGINEERING**  
TIMMONS GROUP

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

DESIGN BY: DZE/RHW  
DRAWN BY: DZE/RJKS  
CHECKED BY: RHW  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE

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.

EXPIRATION DATE: 09-27-2024

18

OF 30

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023

*CRD Edmondson*  
7037354E41499

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 1/23/2023

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 1/24/2023

DIRECTOR DATE

STREET TREE CALCULATIONS				
STREET NAME	STATION	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
EX. OLD RT. 108 (PUBLIC)	0+15 TO 4+67	452/40 (ONE SIDE)	12	12
WILLET LANE (PRIVATE)	4+67 TO 9+68	501/40	13	13
WILLET LANE (SM) (PRIVATE)	4+67 TO 9+68	501/30	17	17
TOTAL			42	42

SPECIMEN TREE MITIGATION	
NUMBER OF SPECIMEN TREES REMOVED	6
NUMBER OF SHADE TREES REQUIRED	12
NUMBER OF SHADE TREES PROVIDED	12

KEY DESCRIPTION

(S) STREET TREE  
 (A3) SCHEDULE 'A' PERIMETER LANDSCAPING AND PERIMETER NUMBER  
 (B) SCHEDULE 'B' PARKING LOT LANDSCAPING  
 (C) SCHEDULE 'C' INTERNAL LANDSCAPING  
 (M) SPECIMEN TREE MITIGATION  
 (O) OTHER LANDSCAPING

LANDSCAPE SCHEDULE - REQUIRED PLANTING												
SYMB.	KEY	SCHED. 'A' QUANTITY	SCHED. 'B' QUANTITY	SCHED. 'C' QUANTITY	STREET TREE QUANTITY	*SPECIMEN TREE MITIGATION	**OTHER LANDSCAPING QUANTITY	TOTAL QUANTITY	BOTANICAL NAME	SIZE	CAT.	
QR	2	-	-	-	-	-	-	2	QUERCUS ROBUR 'FASTIGIATA' COLUMNAR ENGLISH OAK	2.5"-3" CAL.	B & B	
PS	25	4	-	-	-	-	-	29	PRUNUS SARGENTII SARGENT CHERRY	2.5"-3" CAL.	B & B	
AR	6	-	9	25	12	-	-	52	ACER RUBRUM 'ARMSTRONG' ARMSTRONG COLUMNAR RED MAPLE	3" CAL. DBH	B & B	
GB	-	-	4	-	-	-	-	4	GINKGO BILOBA 'FASTIGIATA' FASTIGIATA MADEIRA TREE (MALE ONLY)	2.5"-3" CAL.	B & B	
AM	7	-	8	17	-	-	-	32	ACER GINMA AMUR MAPLE	2.5"-3" CAL.	B & B	
CM	-	-	10	-	-	-	-	10	LAGERSTROEMIA INDICA CREPE MYRTLE	6"-8" HGT.	B & B	
PA	18	-	-	-	-	-	-	18	PIERIS ARBOREA NORWAY SPRUCE	6"-8" HGT.	B & B	
JS	7	-	8	-	-	-	-	15	JUNIPERUS SCOPULORUM BLUE ARROW JUNIPER	5"-6" HGT.	B & B	
IL	41	-	-	-	-	-	22	63	LEY CERATA 'SKY PENCIL' SKY PENCIL HOLLY	2.5"-3" HGT.	B & B	
CJ	114	-	-	-	-	-	-	68	182	CHROMOLAESA JAPONICA TEXAS SCARLET TEXAS SCARLET FLOWERING QUINCE	18" - 24" SPREAD	B & B

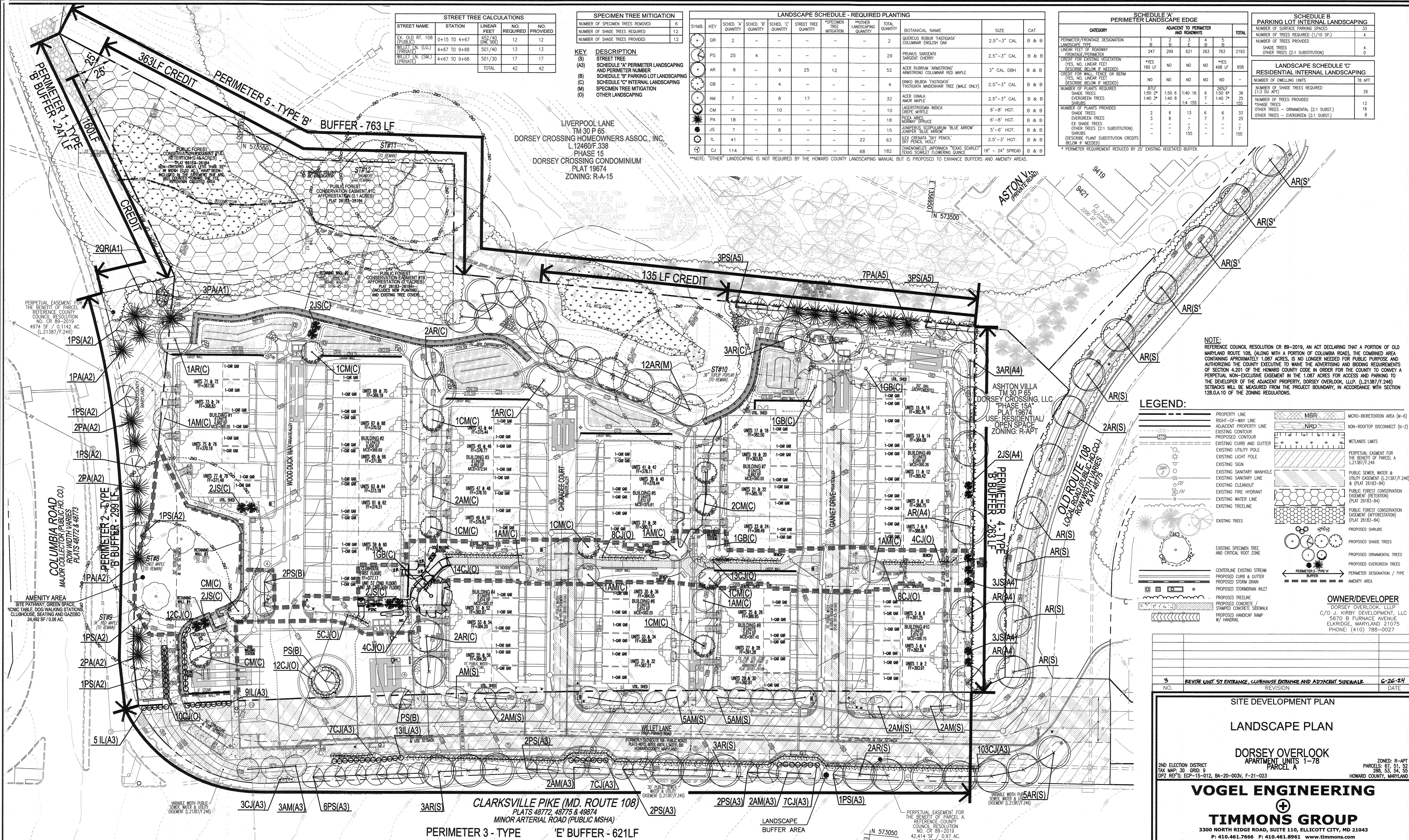
\*NOTE: "OTHER" LANDSCAPING IS NOT REQUIRED BY THE HOWARD COUNTY LANDSCAPING MANUAL BUT IS PROPOSED TO ENHANCE BUFFERS AND AMENITY AREAS.

SCHEDULE 'A' PERIMETER LANDSCAPE EDGE						
CATEGORY	ADJACENT TO PERIMETER AND ROADWAYS					TOTAL
	1	2	3	4	5	
PERIMETER FRONTAGE DESIGNATION	B	B	B	B	B	2193
LANDSCAPE TYPE	B	B	B	B	B	2193
LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	247	299	621	263	763	2193
CREDIT FOR EXISTING VEGETATION	YES	NO	NO	NO	YES	498 LF
CREDIT FOR WALL FENCE OR BERM	YES	NO	NO	NO	NO	0
CREDIT BELOW IF NEEDED	NO	NO	NO	NO	NO	0
NUMBER OF PLANTS REQUIRED	NO	NO	NO	NO	NO	0
SHADE TREES	2/11	1/50	1/50	6	2/6/11	36
EVERGREEN TREES	1/40	1/40	1/40	8	7	25
SHRUBS	1/4	1/4	1/4	155	7	155
NUMBER OF PLANTS PROVIDED	NO	NO	NO	NO	NO	0
SHADE TREES	2	6	13	6	6	33
EVERGREEN TREES	3	8	7	7	7	28
EX. SHADE TREES	-	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-	-
SHRUBS	-	-	-	-	-	-
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	-	-	-	-	-	-

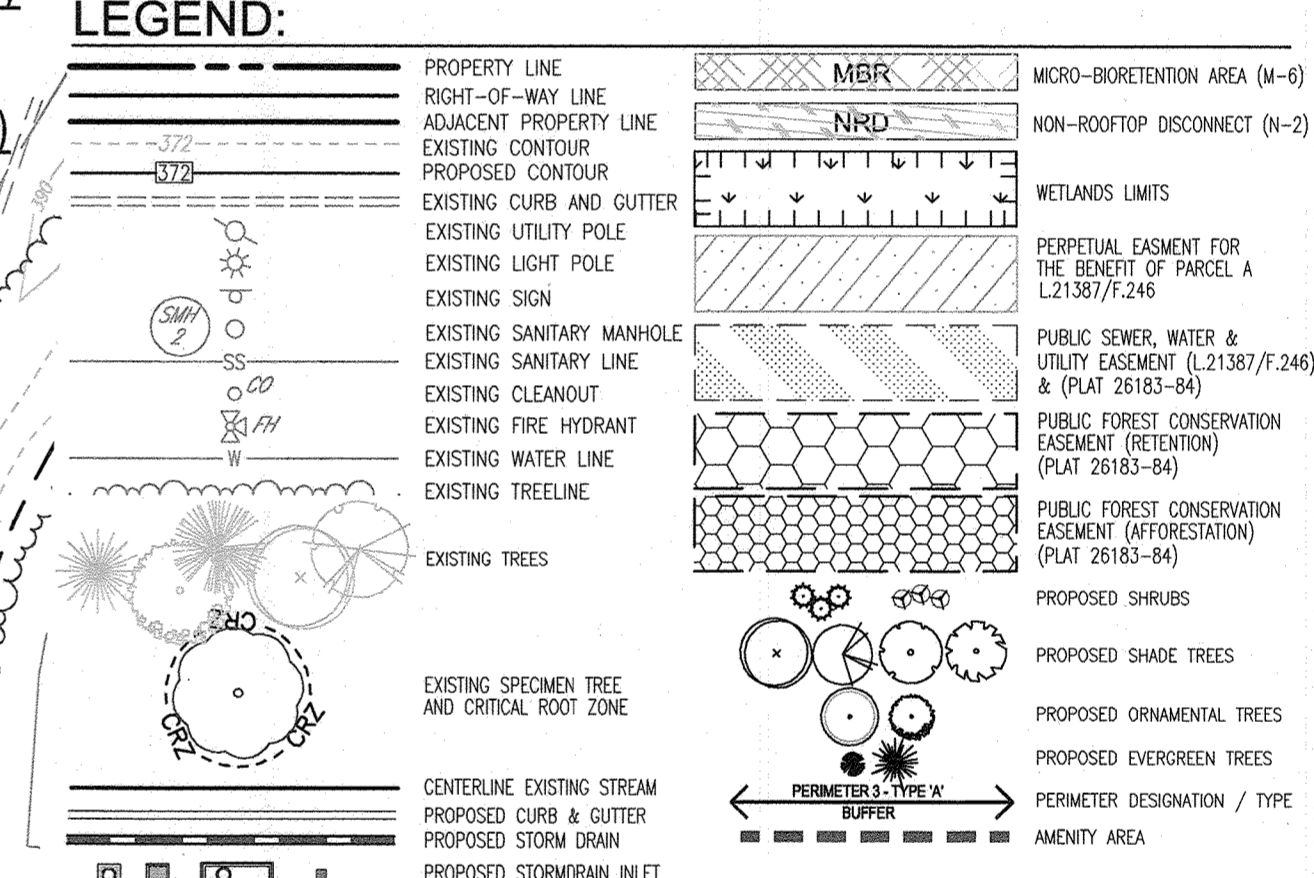
\* PERIMETER REQUIREMENT REDUCED BY 25' EXISTING VEGETATED BUFFER.

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF SURFACE PARKING SPACES	33
NUMBER OF TREES REQUIRED (1/10 SP)	4
NUMBER OF TREES PROVIDED	4
SHADE TREES	4
OTHER TREES (2:1 SUBSTITUTION)	0

LANDSCAPE SCHEDULE 'C' RESIDENTIAL INTERNAL LANDSCAPING	
NUMBER OF DWELLING UNITS	78 APT
NUMBER OF SHADE TREES REQUIRED (1:3 DU APT)	26
NUMBER OF TREES PROVIDED	13
SHADE TREES	7
OTHER TREES - ORNAMENTAL (2:1 SUBST.)	18
OTHER TREES - EVERGREEN (2:1 SUBST.)	8



NOTE: REFERENCE COUNCIL RESOLUTION CR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108, ALONG WITH A PORTION OF COLUMBIA ROAD, THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO WAIVE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4-201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, L.L.P. (L21387/F/246). SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0.4.10 OF THE ZONING REGULATIONS.



OWNER/DEVELOPER  
 DORSEY OVERLOOK, L.L.P.  
 C/O J. KIRBY DEVELOPMENT, LLC  
 5670 B. FURNACE AVENUE  
 ELKRDGE, MARYLAND 21075  
 PHONE: (410) 788-0027

NO.	REVISION	DATE
3	REVISE UNIT 57 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK	6-26-24

SITE DEVELOPMENT PLAN  
 LANDSCAPE PLAN  
 DORSEY OVERLOOK  
 APARTMENT UNITS 1-78  
 PARCEL A

2ND ELECTION DISTRICT: PARCELS: 67, 51, 78  
 TAX MAP: 30 GRID: 9 PARCELS: 288, 53, 54, 55  
 DPZ REF'S: ECP-15-012, BA-20-003V, F-21-023

**VOGEL ENGINEERING**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

**TIMMONS GROUP**

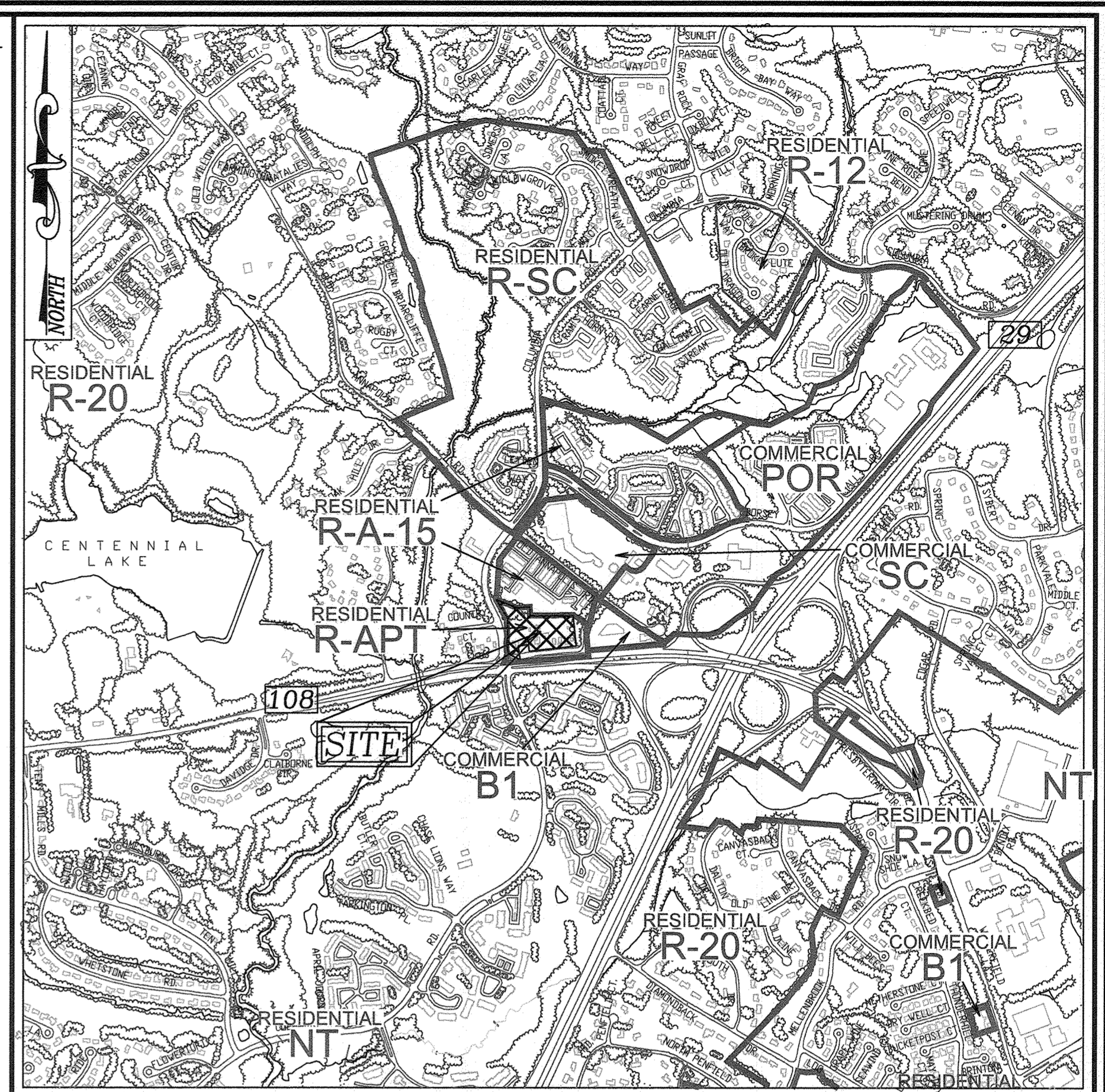
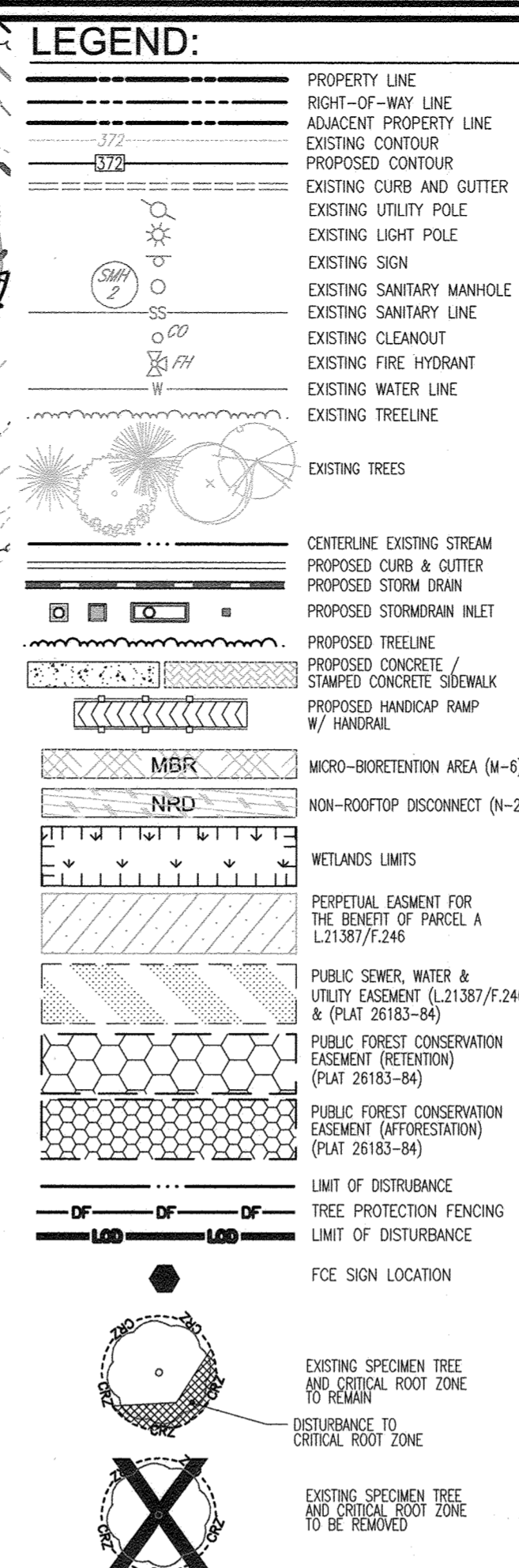
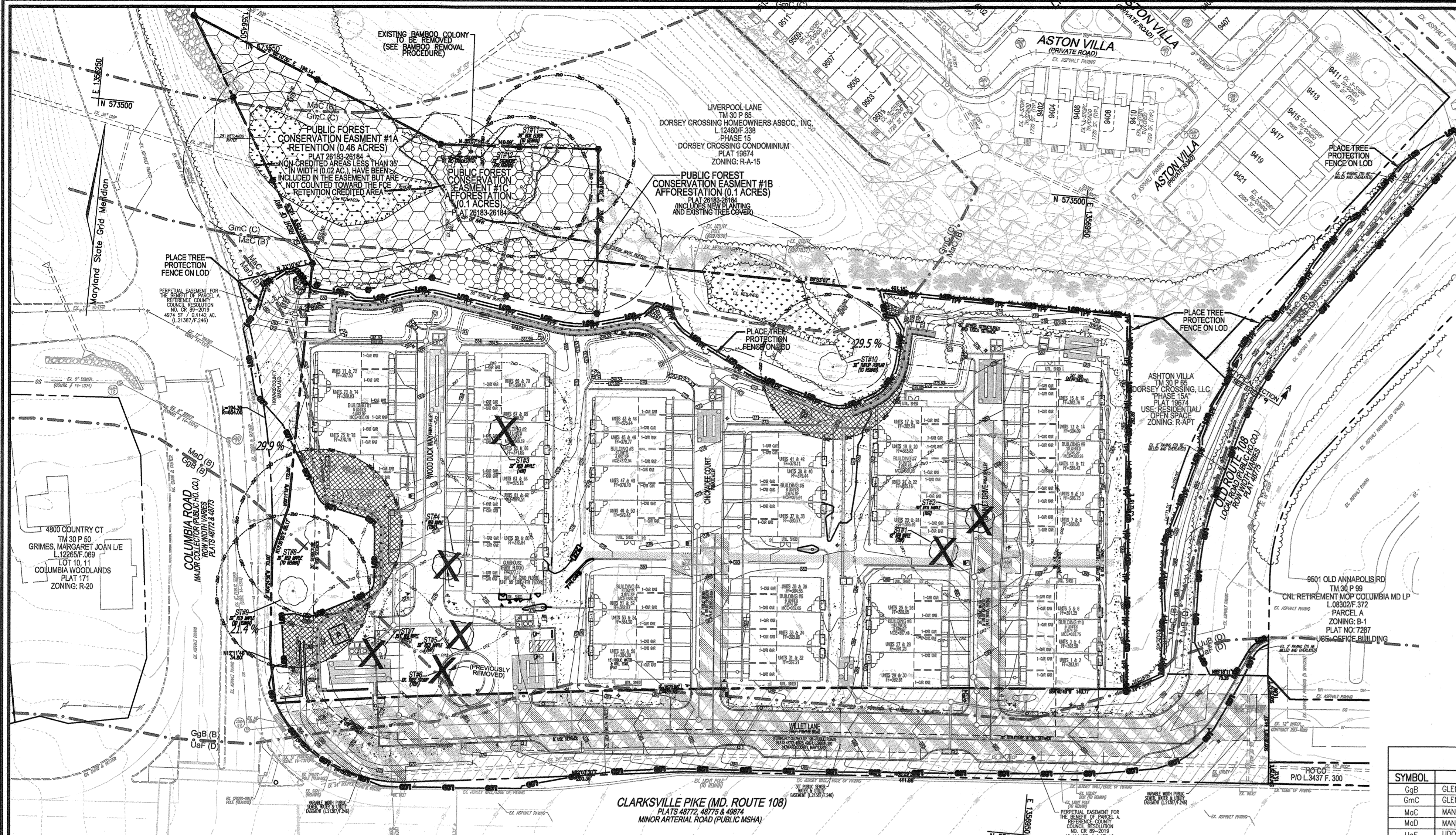
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 Chief, Development Engineering Division  
 Chief, Division of Land Development  
 Director

DEVELOPER'S/BUILDER'S CERTIFICATE  
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
 Signed by: Kyle Withman  
 Signature of Developer  
 11/14/2022  
 Date

LANDSCAPE PLAN  
 SCALE: 1"=30'  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/24/2023  
 Chief, Bureau of Highways

NOTE:  
 SEE SHEET 21 FOR LANDSCAPING NOTES, DETAILS, PLANTING RESTORATION AND FOREST CONSERVATION DETAILS.

PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69  
 19 SHEET OF 30



**BENCHMARKS**

SCALE: 1"=100'

ADC MAP COORDINATE: 15/J,K 1

HOWARD COUNTY BENCHMARK - 300A (CONC. MONUMENT)	E 1357083.21	ELEV. 397.20
LOCATION: OLD ROUTE 108, 480' SOUTH OF OLD ANNAPOLIS ROAD		
HOWARD COUNTY BENCHMARK - 300B (CONC. MONUMENT)	E 1353001.79	ELEV. 409.16
LOCATION: SOUTH SIDE OF ROUTE 108, 700' EAST ENTRANCE TO CENTENNIAL PARK		

**SOILS LEGEND - MAP #18**

SOURCE: USDA, 8C3-WEB SOIL SURVEY, HOWARD COUNTY

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	K FACTOR	ERODIBLE	PRIME FARMLAND
GbB	GLENELO LOAM, 3 TO 9 PERCENT SLOPES.	B	NO	0.37	YES	STATEWIDE IMPORTANCE
GmC	GLENELO SILT LOAM, 8 TO 15 PERCENT SLOPES.	C	NO	0.49	YES	STATEWIDE IMPORTANCE
mC	MANOR LOAM, 8 TO 15 PERCENT SLOPES.	B	NO	0.32	NO	STATEWIDE IMPORTANCE
mD	MANOR LOAM, 15 TO 25 PERCENT SLOPES.	B	NO	0.32	YES	NOT PRIME FARMLAND
uB	UDORINTHS, HIGHWAY, 0 TO 65 PERCENT SLOPES.	NO	NO	-	NO	NOT PRIME FARMLAND
uF	URBAN LAND-UDORINTHS COMPLEX, 0 TO 8 PERCENT SLOPES.	D	NO	-	NO	NOT PRIME FARMLAND

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

**FOREST CONSERVATION AREA SIGNS**

<b>SPECIMEN TREE</b> DO NOT REMOVE MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991	<b>FOREST RETENTION AREA</b> DO NOT DISTURB MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991	<b>FOREST CONSERVATION AREA</b> DO NOT DISTURB MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991
--	---	--

**FOREST CONSERVATION PLAN**  
SCALE: 1"=50'

**AFFORESTATION PLANTING SCHEDULE**  
FOREST CONSERVATION EASEMENTS  
0.2 ACRES

EASEMENT #1B: 0.1 AC. (AFFORESTATION) @ 200 TREES/AC. = 20 TREES	QTY.	BOTANICAL NAME	SIZE	SPACING
4	BETULA NIGRA RIVER BIRCH	1" CAL.	15' x 15'	
4	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	1" CAL.	15' x 15'	
4	NYSSA SYLVATICA BLACK GUM	1" CAL.	15' x 15'	
4	QUERCUS RUBRA RED OAK	1" CAL.	15' x 15'	
4	TAXODIUM DISTICHUM COMMON BALDCYPRESS	1" CAL.	15' x 15'	

**SPECIMEN TREE TABLE**

KEY	SPECIES	SIZE (DIA. IN)	CRZ (FT. RAD.)	COMMENTS	TOTAL
1	RED MAPLE	42	63	FAIR CONDITION	TO BE REMOVED
2	RED MAPLE	39	58.5	POOR CONDITION	TO BE REMOVED
3	RED MAPLE	32	48	POOR CONDITION	TO BE REMOVED
4	RED MAPLE	42	63	POOR CONDITION, STORM DAMAGE	TO BE REMOVED
5	RED MAPLE	38	57	POOR CONDITION, SUCKER GROWTH	TO BE REMOVED
6	N/A	N/A	N/A	TREE HAS BEEN REMOVED	
7	RED MAPLE	35.5	53.25	POOR CONDITION	TO BE REMOVED
8	RED MAPLE	39	58.5	GOOD CONDITION	TO BE RETAINED-CRZ IMPACTS LESS THAN 29.8%
9	RED MAPLE	36	54	FAIR CONDITION	TO BE RETAINED-CRZ IMPACTS LESS THAN 21.4%
10	TULIP POPLAR	36	51	GOOD CONDITION, IN BUFFER	TO BE RETAINED-CRZ IMPACTS LESS THAN 29.5%
11	BOX ELDER	36	54	GOOD CONDITION, IN BUFFER	NO IMPACT-TO BE RETAINED
12	SYCAMORE	33	49.5	GOOD CONDITION, IN BUFFER	NO IMPACT-TO BE RETAINED

**GENERAL NOTES**

WATERSHED NAME: LITTLE PATUXENT RIVER  
WATERSHED NUMBER: 02131105

A. GROSS SITE AREA: 5.57 AC.  
B. NET SITE AREA (GROSS-FLOORPLAN-STEEL SLOPES): 5.57 AC.  
C. AREA OF 100-YEAR FLOODPLAIN: 0.00 AC.  
D. AREA OF WETLANDS AND BUFFERS(ONSITE): 0.51 AC.  
E. AREA OF STREAM AND BUFFERS(ONSITE): 0.59 AC.  
F. AREA OF > 25% STEEP SLOPES: 0.00 AC.  
G. EXISTING FOREST (FSD): 0.5 AC.  
H. ZONED: R-APT/R-20 RESIDENTIAL APARTMENT  
I. EXISTING USE: RESIDENTIAL  
J. PROPOSED USE:

**FOREST RETENTION AREAS AND NOTES**

- THERE ARE WETLANDS AND WETLAND BUFFERS LOCATED ONSITE.
- NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
- FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS. NO MARYLAND STATE CHAMPION TREES OR TREES 75% OF THE DIAMETER OF A MD STATE CHAMPION TREES EXIST ON SITE. CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN ALLOWED.
- SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES, RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- SURROUNDING LAND USE CONSISTS OF HIGH DENSITY RESIDENTIAL DEVELOPMENT AND COMMERCIAL USES.
- PROJECT SITE IS APPROXIMATELY 5.6 ACRES IN SIZE.
- SEVERAL HISTORIC STRUCTURES ARE PRESENT ON THE SITE.
- THERE IS 0.4 ACRES OF FOREST ON THE PROPERTY. ALL FOREST ON THE SITE IS WITHIN WETLANDS AND BUFFERS AND WILL NOT BE IMPACTED BY PROPOSED SITE DEVELOPMENT.
- LESS THAN 1 ACRE OF FOREST IS PRESENT ON ADJACENT PROPERTY WITHIN 100 FEET OF THE PROPERTY.
- NO 100 YEAR FLOODPLAIN IS PRESENT ON THE SITE.
- THIS PROJECT COMPLIES WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION. FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT SHALL BE MET BY A FOREST CONSERVATION PLAN SUBMITTED WITH THIS SITE DEVELOPMENT PLAN, INCLUDING 0.2 ACRES OF ON-SITE AFFORESTATION, 0.4 ACRES OF ON-SITE FOREST RETENTION AND THE EQUIVALENT OF 0.2 ACRES OF AFFORESTATION IN AN OFF-SITE FOREST BANK. TOTAL FOREST CONSERVATION SURETY FOR THE ON-SITE AFFORESTATION IN THE AMOUNT OF \$4,356,000 (0.2 AC. OR 8,712 SF x \$0.50) HAS BEEN PAID WITH THE DEVELOPER AGREEMENT. THERE IS NO SURETY FOR THE ON-SITE RETENTION AREAS. THE LOCATION OF THE OFF-SITE FOREST CONSERVATION BANK PURCHASE IS THE ROSHAN PROPERTY, SDP-16-041(51).

**FOREST CONSERVATION EASEMENT TABLE**

EASEMENT	RETENTION	REAFFORESTATION	AFFORESTATION	TOTAL
FCE#1A	0.4 AC	0 AC	0 AC	0.4 AC
FCE#1B	0 AC	0 AC	0 AC	0.1 AC
FCE#1C	0 AC	0 AC	0 AC	0.1 AC
TOTAL	0.4 AC	0 AC	0 AC	0.6 AC

**NOTE: SEE SHEET 21 FOR LANDSCAPING AND PLANTING NOTES AND DETAILS, TREE PROTECTION, RESTORATION AND FOREST CONSERVATION NOTES AND DETAILS.**

**NOTE:**  
REFERENCE COUNCIL RESOLUTION OR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108, (ALONG WITH A PORTION OF COLUMBIA ROAD), THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO MAKE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, L.L.P. (L 21387/FZ 246). SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0.A.10 OF THE ZONING REGULATIONS.

- NOTE:**
- BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
  - SIGNS TO BE PLACED APPROXIMATELY 50-100 FEET APART, CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART, WHERE SIGNS ARE TO BE PLACED AT THE REAR OF PROPOSED LOTS, SPACING SHALL BE APPROX. 25'-30'+/-.
  - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
  - ALL FOREST CONSERVATION SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.
  - IGN LOCATION SYMBOL.

- SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION**
- PRE-CONSTRUCTION MEETING / SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
  - STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
  - INSTALL TREE PROTECTION FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
  - PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN, WHICH IS TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
  - TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

- CONSTRUCTION PERIOD PROTECTION AND MANAGEMENT NOTES FOR FOREST CONSERVATION**
- PRE-CONSTRUCTION PHASE**
- FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
  - FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED IF DAMAGED.
  - A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNING TREES AND WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.
- CONSTRUCTION PHASE**
- NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
  - NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
  - IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED REGULARLY.
- POST-CONSTRUCTION PHASE**
- AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
  - FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
  - DO NOT REMOVE SIGNS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE 1/23/2023

CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE 1/24/2023

DIRECTOR  
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
1/24/2023

CHIEF, BUREAU OF HIGHWAYS  
DATE

**FOREST CONSERVATION WORKSHEET DORSEY OVERLOOK**

**Net Tract Area**

A. Total (Gross) Tract Area	A = 5.6
B. Area within 100-year Floodplain	B = 0.0
C. Other Deductions (Identify: )	C = 0.0
D. Net Tract Area	D = 5.6

**Land Use Category**

Insert the number "1" under the appropriate land use (limit to only one entry)

Resid.	Resid.	Resid.	Inst./	Retail/Ind./	Mixed Use/
Rural LD	Rural MD	Suburban	Linear	Office	PUD
0	1	0	0	0	0

**Existing Forest Cover**

G. Existing Forest Cover within the Net Tract Area	G = 0.4
H. Area of Forest above Afforestation Threshold	H = 0.0
I. Area of Forest above Reforestation Threshold	I = 0.0

**Break Even Point**

J. Break Even Point	J = 0.0
K. Forest Clearing Permitted without Mitigation	K = 0.0

**Proposed Forest Clearing**

L. Total Area of Forest to be Cleared	L = 0.0
M. Total Area of Forest to be Retained	M = 0.4

**Planting Requirements Inside Watershed**

N. Reforestation for Clearing above the Reforestation Threshold	N = 0.0
P. Credit for Retention above the Reforestation Threshold	P = 0.0
Q. Credit for Retention below the Reforestation Threshold	Q = 0.0
R. Total Reforestation Required	R = 0.0
S. Total Afforestation Required	S = 0.4
T. Total Reforestation and Afforestation Requirement	T = 0.4
U. 75% of Total Obligation (Retention + Planting)	U = 0.6
V. Planting Required Onsite to meet 75% Obligation	V = 0.2

**Planting Requirements Outside Watershed**

W. Total Planting within Development Site Watershed	W = 0.2
X. Total Afforestation Required	X = 0.2
Y. Remaining Planting within Watershed for Reforestation Credit	Y = 0.0
Z. Reforestation for Clearing above the Reforestation Threshold	Z = 0.0
AA. Credit for Retention above the Reforestation Threshold	AA = 0.0
BB. Credit for Retention below the Reforestation Threshold	BB = 0.0
CC. Total Reforestation Required	CC = 0.0
DD. Total Afforestation and Reforestation Requirement	DD = 0.2

**Eco-Science Professionals, Inc.**  
CONSULTING ECOLOGISTS  
FOR RWS, MDC, CLEA, AND MARYLAND STATE

**J. Brody McAllister**  
ISA Certified Arborist  
Cert ID: M64671A  
MD DNR FCA Qualified Professional

**VOGEL ENGINEERING**

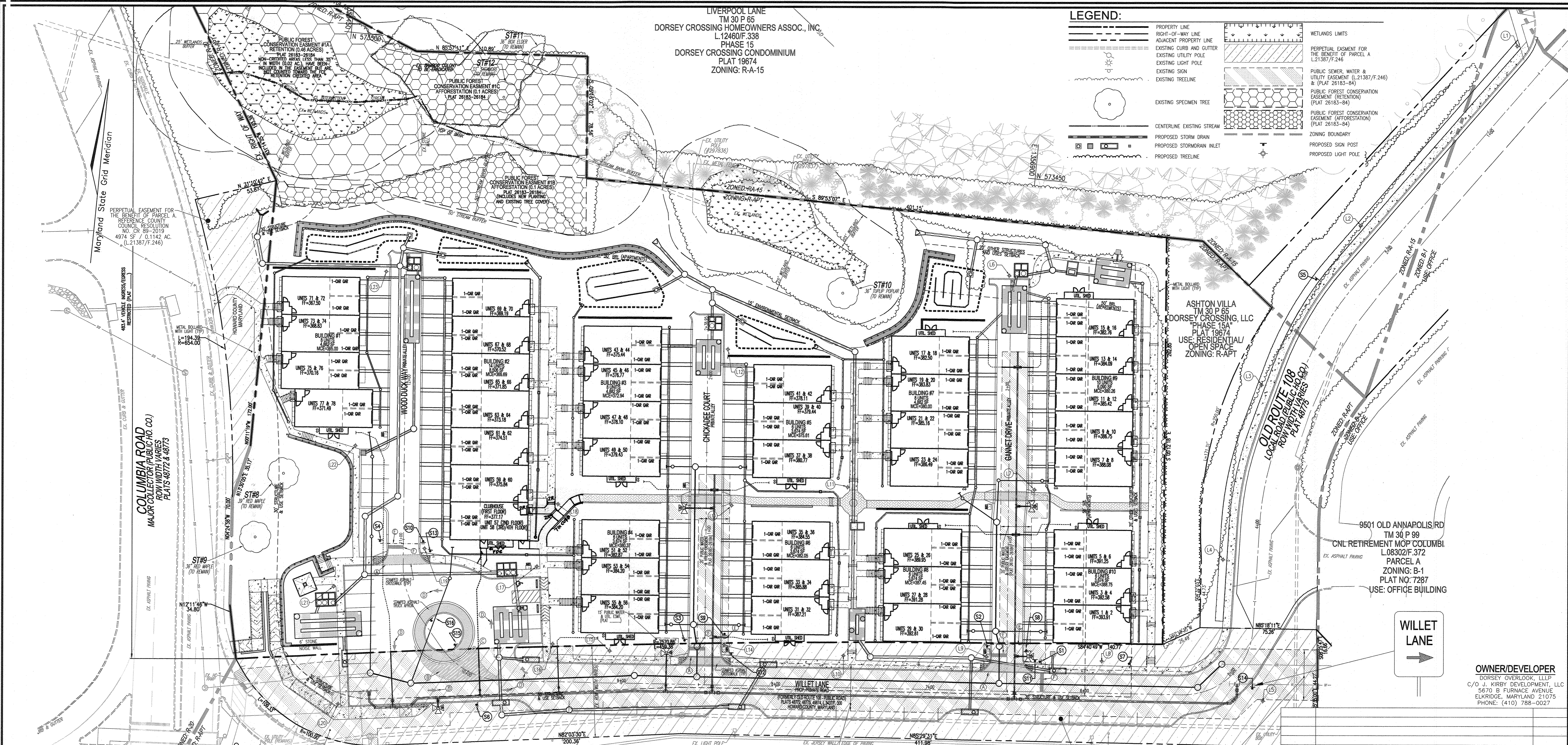
**TIMMONS GROUP**  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.9961 www.timmons.com

DESIGN BY: DZE/RHV  
DRAWN BY: DZE/JR/KG  
CHECKED BY: RHV  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE  
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. EXPIRATION DATE: 09-27-2024

20 SHEET 30





**LEGEND:**

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING TREETRUNK
- EXISTING SPECIMEN TREE
- CENTERLINE EXISTING STREAM
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- PROPOSED TREETRUNK
- WETLANDS LIMITS
- PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL A (L21387/F.246)
- PUBLIC SEWER, WATER & UTILITY EASEMENT (L21387/F.246) & (PLAT 26183-84)
- PUBLIC FOREST CONSERVATION EASEMENT (RESTRICTION) (PLAT 26183-84)
- PUBLIC FOREST CONSERVATION EASEMENT (AFFORESTATION) (PLAT 26183-84)
- ZONING BOUNDARY
- PROPOSED SIGN POST
- PROPOSED LIGHT POLE

LIVERPOOL LANE  
 TM 30 P 65  
 DORSEY CROSSING HOMEOWNERS ASSOC., INC.  
 L12460/F.338  
 PHASE 15  
 DORSEY CROSSING CONDOMINIUM  
 PLAT 19674  
 ZONING: R-A-15

ASHTON VILLA  
 TM 30 P 65  
 DORSEY CROSSING, LLC  
 PHASE 15A  
 PLAT 19674  
 USE: RESIDENTIAL/  
 OPEN SPACE  
 ZONING: R-APT

9501 OLD ANNAPOLIS RD  
 TM 30 P 99  
 CNL RETIREMENT MOP COLUMBI  
 L.08302/F.372  
 PARCEL A  
 ZONING: B-1  
 PLAT NO. 7287  
 USE: OFFICE BUILDING

OWNER/DEVELOPER  
 DORSEY OVERLOOK, LLLP  
 C/O J. KIRBY DEVELOPMENT, LLC  
 5670 B FURNACE AVENUE  
 ELKBRIDGE, MARYLAND 21075  
 PHONE: (410) 788-0027

CLARKSVILLE PIKE (MD. ROUTE 108)  
 PLATS 48772, 48775 & 49874  
 MINOR ARTERIAL ROAD (PUBLIC MSHA)

**SITE LAYOUT PLAN**  
 SCALE: 1" = 30'

**SIGNAGE LOCATION CHART**

NO.	NORTHINGS	EASTINGS	TYPE
S1	573,139.89	1,356,034.55	"STOP" SIGN MUTCD R1-1
S2	573,146.16	1,356,889.60	"STOP" SIGN MUTCD R1-1
S3	573,130.47	1,356,704.31	"STOP" SIGN MUTCD R1-1
S4	573,174.79	1,356,503.12	"STOP" SIGN MUTCD R1-1
S5	573,403.49	1,357,087.50	W1-1R W/ W13-1 "10 MPH" PLATE BELOW *
S6	573,075.69	1,356,574.47	"NO NOT ENTER" SIGN MUTCD R5-1
S7	573,144.38	1,356,992.22	"SPEED LIMIT 15" SIGN MUTCD R2-1
S8	573,146.33	1,356,925.15	"SPEED LIMIT 15" SIGN MUTCD R2-1/NO OUTLET MUTCD W14-2
S9	573,135.87	1,356,729.76	"SPEED LIMIT 15" SIGN MUTCD R2-1/NO OUTLET MUTCD W14-2
S10	573,177.45	1,356,529.57	"SPEED LIMIT 15" SIGN MUTCD R2-1/NO OUTLET MUTCD W14-2
S11	573,177.45	1,356,529.57	STREET SIGN "GANNETT DR" AND "WILLET LN"
S12	573,124.74	1,356,735.27	STREET SIGN "CHICKADEE CT" AND "WILLET LN"
S13	573,171.41	1,356,634.24	STREET SIGN "WOODDUCK WAY" AND "WILLET LN"
S14	573,136.37	1,357,073.23	"WILLET LN" W/ ARROW RIGHT (WHITE/BROWN)
S15	573,114.31	1,356,557.18	RS-4 DOUBLE CHEVRON
S16	573,128.61	1,356,542.80	RS-4 DOUBLE CHEVRON

- PAVEMENT MARKING LEGEND**
- ① HOWARD COUNTY CROSSWALK
  - ② 10" WIDE YELLOW HATCH MARKINGS-PAINT
  - ③ 5" SOLID YELLOW PAINT LINE
  - ④ LANE ARROWS
  - ⑤ PVC STREET LIGHT CONDUIT LOCATIONS (4" PVC SCHD 40 S/PULL STRING)
  - ⑥ STOP BAR (2'x10' ALLEYS/2'x12' WILLET LN)

**NOTE:**  
 SEE SHEET 8 OF 30 FOR MSHA CROSSWALK DETAIL.

**NOTE:**  
 REFERENCE COUNCIL RESOLUTION OR 89-2019, AN ACT DECLARING THAT A PORTION OF OLD MARYLAND ROUTE 108 (ALONG WITH A PORTION OF COLUMBIA ROAD), THE COMBINED AREA CONTAINING APPROXIMATELY 1.087 ACRES, IS NO LONGER NEEDED FOR PUBLIC PURPOSE AND AUTHORIZING THE COUNTY EXECUTIVE TO WAIVE THE ADVERTISING AND BIDDING REQUIREMENTS OF SECTION 4.201 OF THE HOWARD COUNTY CODE IN ORDER FOR THE COUNTY TO CONVEY A PERPETUAL, NON-EXCLUSIVE EASEMENT IN THE 1.087 ACRES FOR ACCESS AND PARKING TO THE DEVELOPER OF THE ADJACENT PROPERTY, DORSEY OVERLOOK, L.L.P. (L21387/F.246) SETBACKS WILL BE MEASURED FROM THE PROJECT BOUNDARY, IN ACCORDANCE WITH SECTION 128.0A.10 OF THE ZONING REGULATIONS.

**LIGHTING LOCATION CHART** \* SEE SHEET 14 FOR LUMINAIRE AND POST DETAILS.

NO.	NORTHINGS	EASTINGS	LAMP TYPE	POST TYPE
L1	573,566.40	1,357,202.05	HOLOPHANE 100 WATT LED POST TOP (PUBLIC)	SM-A-14-FSJ
L2	573,440.84	1,357,112.89	HOLOPHANE 100 WATT LED POST TOP (PUBLIC)	SM-A-14-FSJ
L3	573,332.03	1,357,059.40	HOLOPHANE 100 WATT LED POST TOP (PUBLIC)	SM-A-14-FSJ
L4	573,217.26	1,357,046.01	HOLOPHANE 100 WATT LED POST TOP (PUBLIC)	SM-A-14-FSJ
L5	573,128.90	1,357,080.85	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L6	573,386.11	1,356,889.78	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L7	573,250.07	1,356,919.84	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L8	573,144.24	1,356,974.57	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L9	573,139.77	1,356,899.75	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L10	573,131.01	1,356,807.71	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L11	573,239.60	1,356,799.50	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L12	573,320.49	1,356,713.28	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L13	573,220.37	1,356,725.95	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L14	573,130.23	1,356,729.96	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L15	573,119.04	1,356,656.79	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L16	573,119.80	1,356,619.61	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L17	573,168.60	1,356,604.40	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L18	573,210.10	1,356,613.94	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L19	573,172.80	1,356,530.94	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L20	573,067.17	1,356,485.17	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L21	573,142.48	1,356,474.76	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L22	573,234.49	1,356,479.59	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ
L23	573,348.45	1,356,488.19	HOLOPHANE AUCL2 UTILITY ARLINGTON FULL CUTOFF LED 2	SM-A-14-FSJ

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 1/23/2023  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE 1/23/2023  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE 1/24/2023  
 DIRECTOR  
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 1/24/2023  
 [Signature]  
 CHIEF, BUREAU OF HIGHWAYS  
 DATE

NO.	REVISION	DATE
3	REVISE UNIT 97 ENTRANCE, CLUBHOUSE ENTRANCE AND ADJACENT SIDEWALK	G-26-24

**SITE DEVELOPMENT PLAN**  
**LIGHTING, SIGNAGE AND STRIPING PLAN**

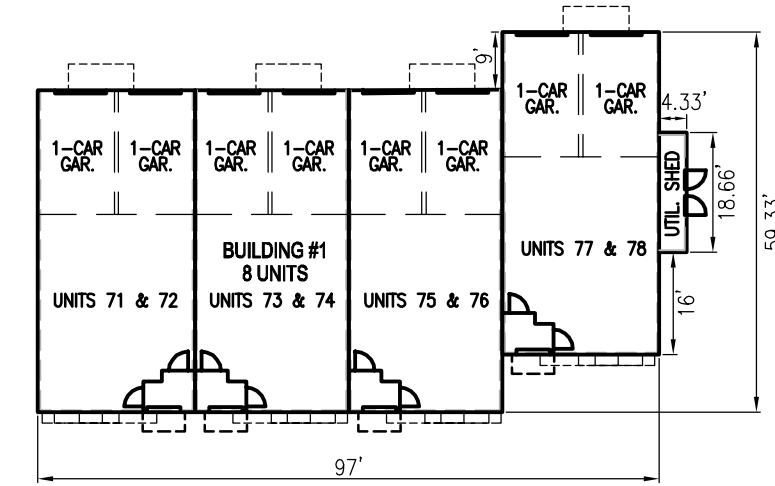
DORSEY OVERLOOK  
 APARTMENT UNITS 1-78  
 PARCEL A

**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
 P: 410.461.7666 F: 410.461.8961 www.timmons.com

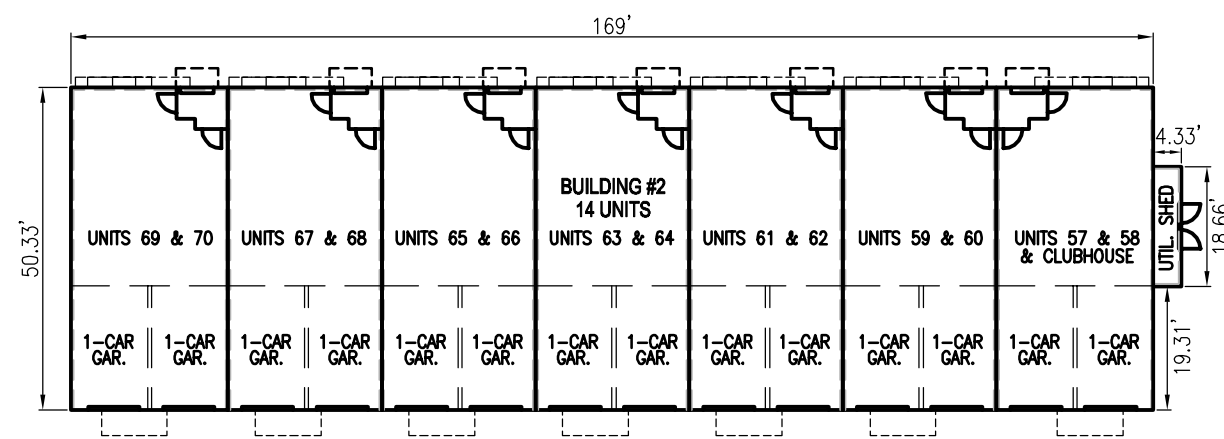
PROFESSIONAL CERTIFICATE  
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
 EXPIRATION DATE: 09-27-2024

DESIGN BY: DZE/RHV  
 DRAWN BY: DZE/JR/KG  
 CHECKED BY: RHV  
 DATE: NOVEMBER 2022  
 SCALE: AS SHOWN  
 W.O. NO.: 12-69

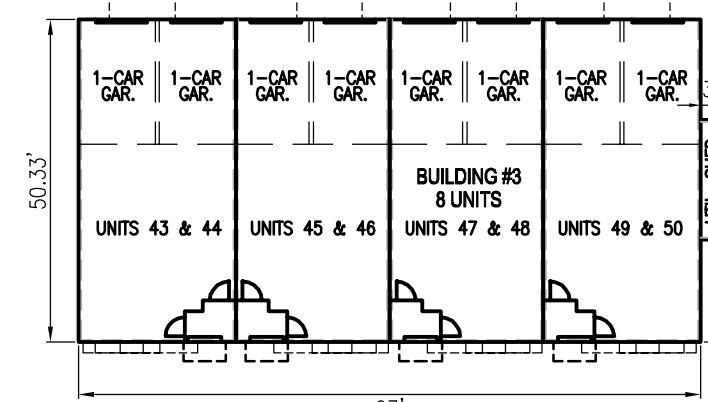
22 SHEET OF 30



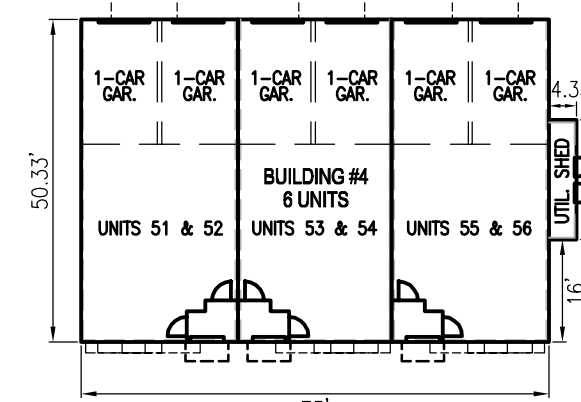
**BUILDING #1**  
SCALE: 1"=30'



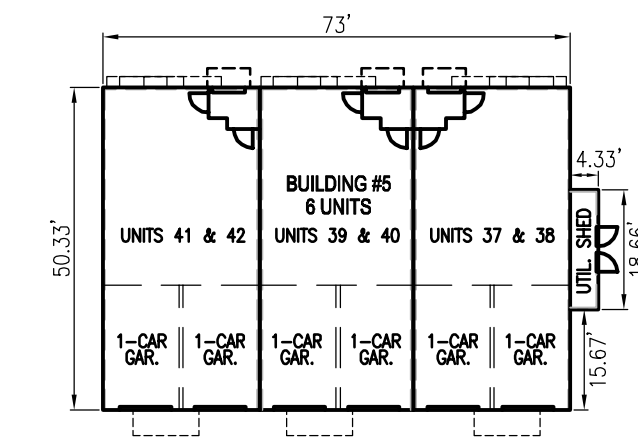
**BUILDING #2**  
SCALE: 1"=30'



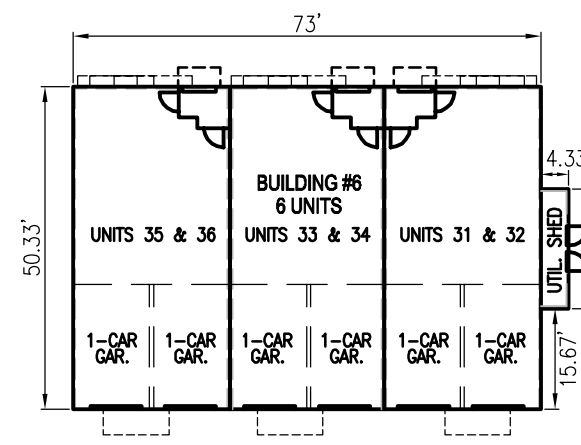
**BUILDING #3**  
SCALE: 1"=30'



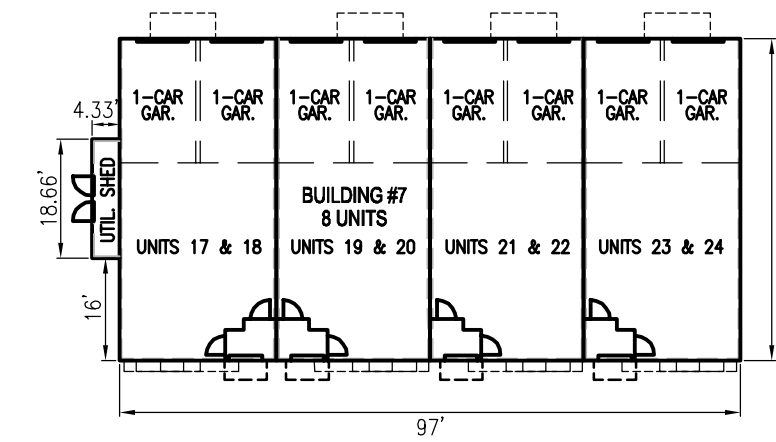
**BUILDING #4**  
SCALE: 1"=30'



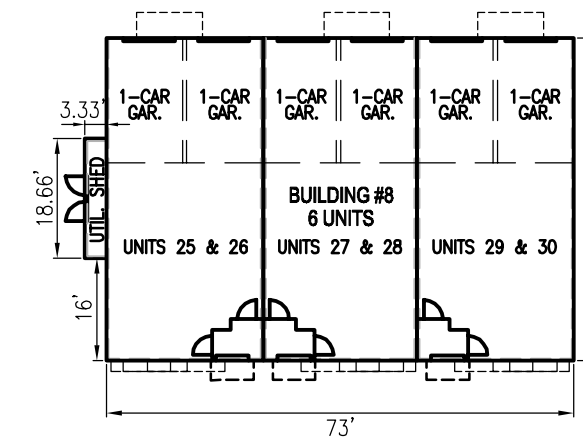
**BUILDING #5**  
SCALE: 1"=30'



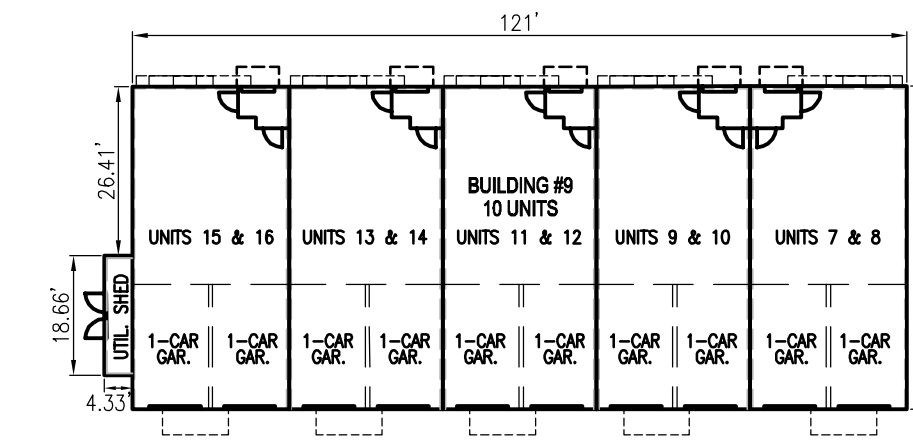
**BUILDING #6**  
SCALE: 1"=30'



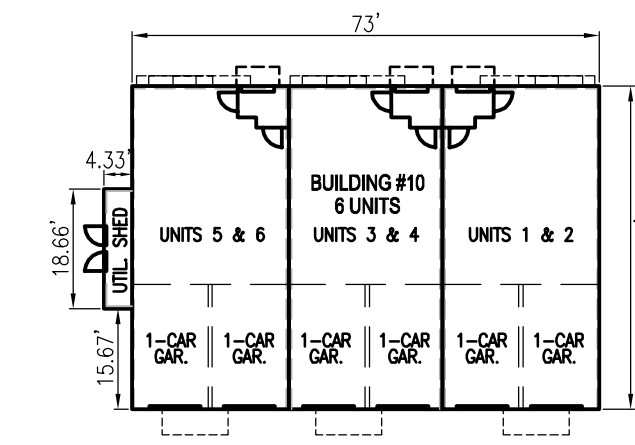
**BUILDING #7**  
SCALE: 1"=30'



**BUILDING #8**  
SCALE: 1"=30'



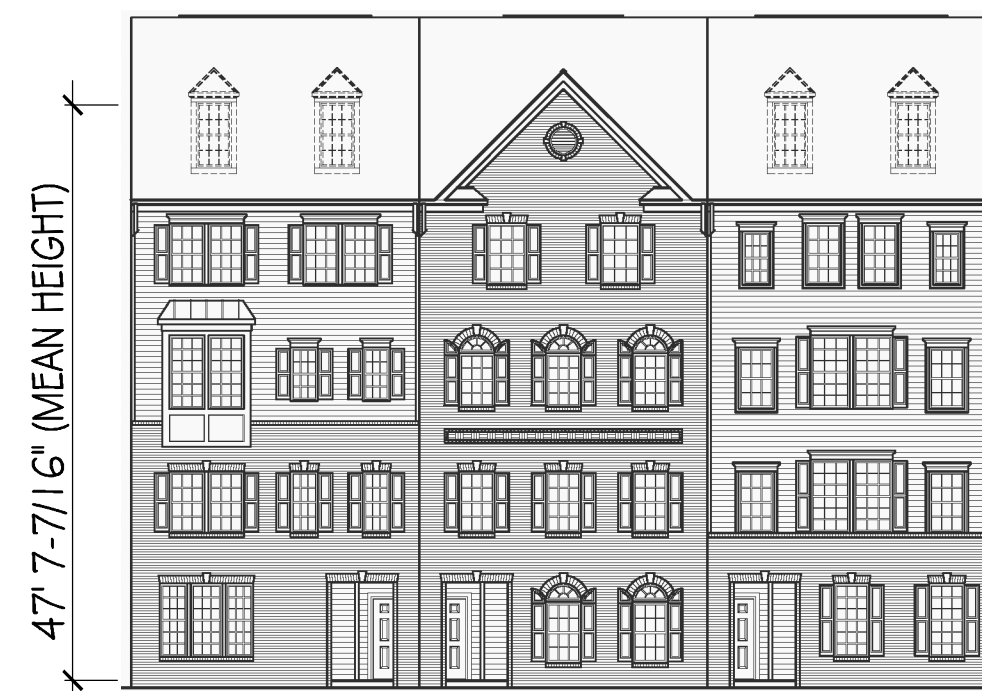
**BUILDING #9**  
SCALE: 1"=30'



**BUILDING #10**  
SCALE: 1"=30'

TOWNHOUSE GARAGE STEPS CHART			
BUILDING	UNIT	ADD'L STEPS IN GARAGE	
1	71/72	1	
	73/74	1	
	75/76	0	
	77/78	1	
2	57/58	2	
	59/60	2	
	61/62	2	
	63/64	2	
	65/66	2	
	67/68	2	
3	69/70	2	
	43/44	2	
	45/46	1	
	47/48	1	
4	49/50	0	
	51/52	0	
	53/54	0	
5	55/56	0	
	37/38	2	
	39/40	2	
6	41/42	2	
	31/32	2	
	33/34	2	
7	35/36	2	
	17/18	1	
	19/20	1	
8	21/22	1	
	23/24	0	
	25/26	1	
9	27/28	0	
	29/30	0	
	7/8	2	
10	9/10	2	
	11/12	2	
	13/14	2	
	15/16	2	
10	1/2	1	
	3/4	2	
	5/6	2	

\*EACH TOWNHOUSE SHALL HAVE A MINIMUM OF 1 STEP IN GARAGE (4" HT). THIS CHART INDICATE ADDITIONAL STEPS (6" HT).



**FRONT ELEVATION**  
**BUILDING #4, 5, 6, 8, & 10**  
(INDIVIDUAL UNIT ELEVATIONS MAY VARY)  
NOT TO SCALE



**FRONT ELEVATION**  
**BUILDING #1, 3 & 7**  
(INDIVIDUAL UNIT ELEVATIONS MAY VARY)  
NOT TO SCALE



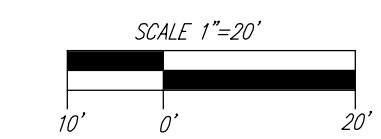
**FRONT ELEVATION**  
**BUILDING #9**  
(INDIVIDUAL UNIT ELEVATIONS MAY VARY)  
NOT TO SCALE



**FRONT ELEVATION**  
**BUILDING #2**  
(INDIVIDUAL UNIT ELEVATIONS MAY VARY)  
NOT TO SCALE

**OWNER/DEVELOPER**  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5870 S FURNACE AVENUE  
ELK RIDGE, MARYLAND 21075  
PHONE: (410) 788-0027

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023  
*Chris Edmondson*  
7063754EF41499  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE 1/23/2023  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE 1/24/2023  
*Amy Groman*  
56405008470C104  
DIRECTOR DATE



NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**BUILDING FOOTPRINTS AND ELEVATIONS**

**DORSEY OVERLOOK**  
APARTMENT UNITS 1-78  
PARCEL A

2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
DPZ REF'S: ECP-15-012, BA-20-003V, F-21-023

ZONED: R-4PT  
PARCELS: 67, 51, 52  
288, 53, 54, 55  
HOWARD COUNTY, MARYLAND

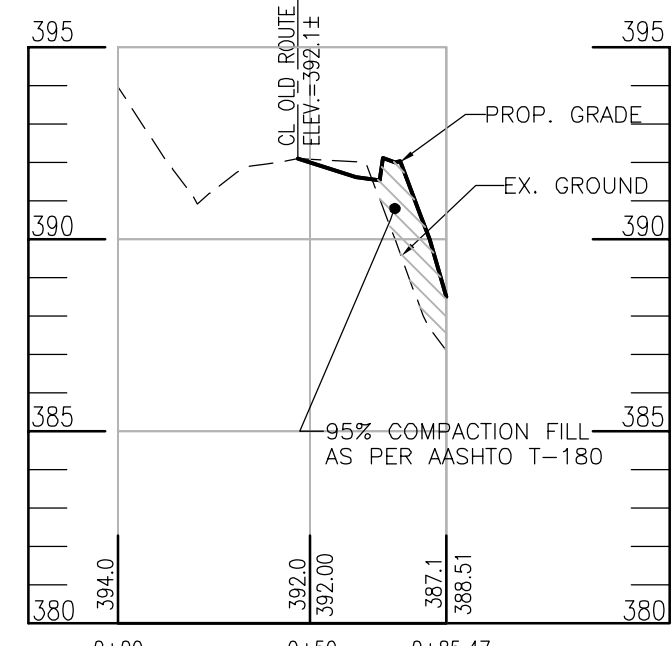
**VOGEL ENGINEERING**  
**TIMMONS GROUP**

3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

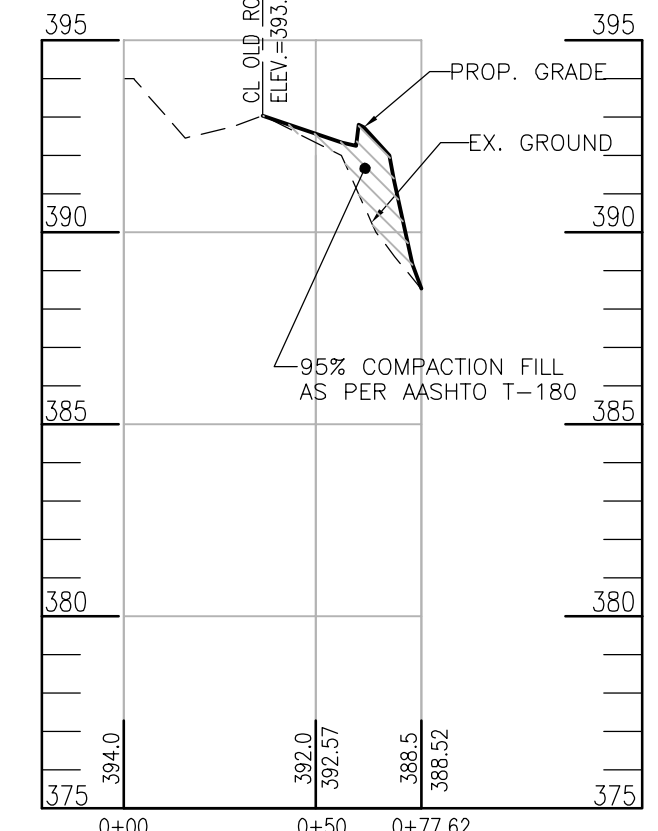
DESIGN BY: DZE/RHV  
DRAWN BY: DZE/JR/KG  
CHECKED BY: RHV  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69

PROFESSIONAL CERTIFICATE  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

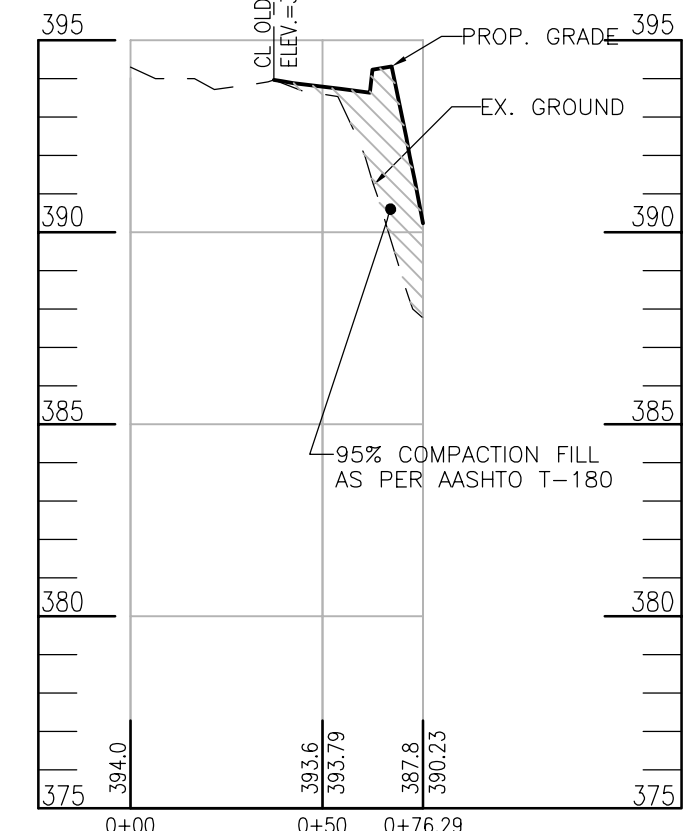
**23** OF **30**



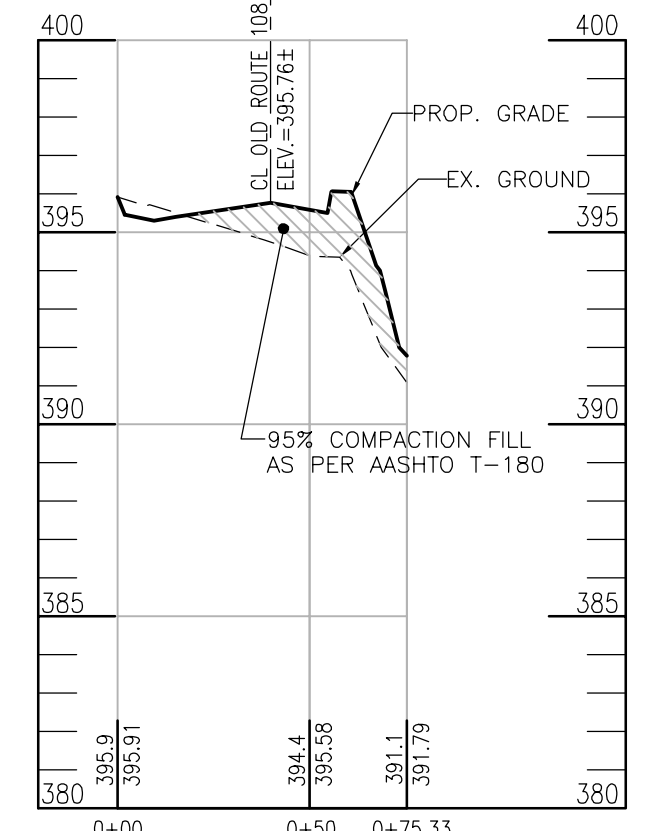
**SECTION @ STA. 0+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



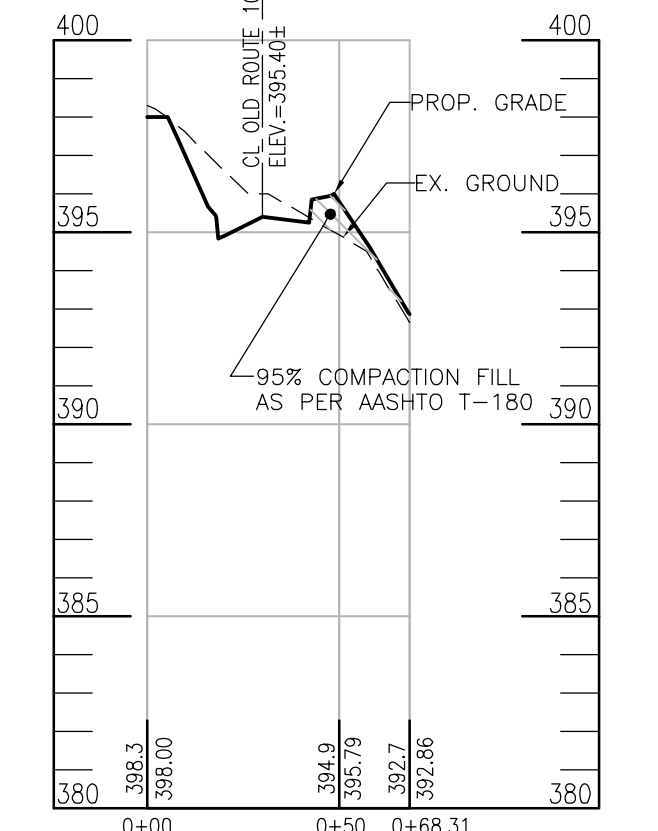
**SECTION @ STA. 0+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



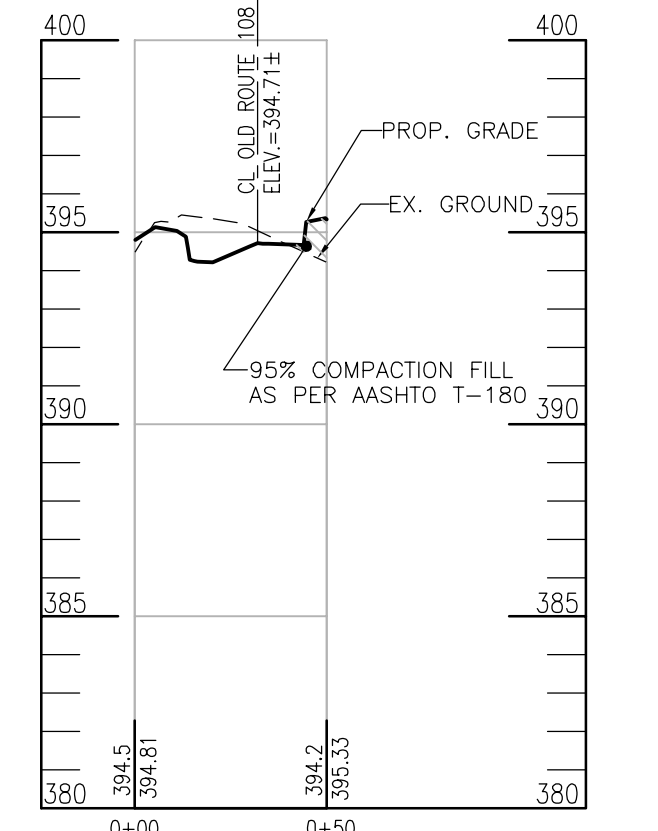
**SECTION @ STA. 1+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



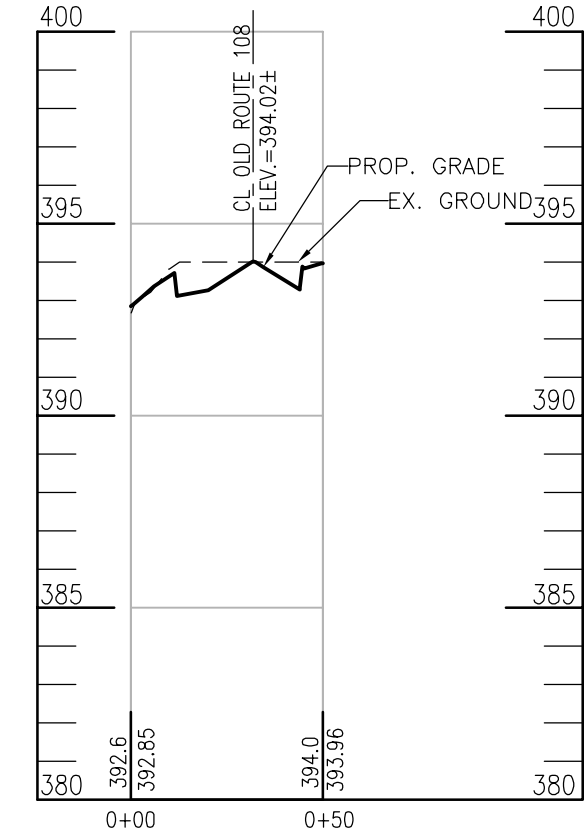
**SECTION @ STA. 1+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



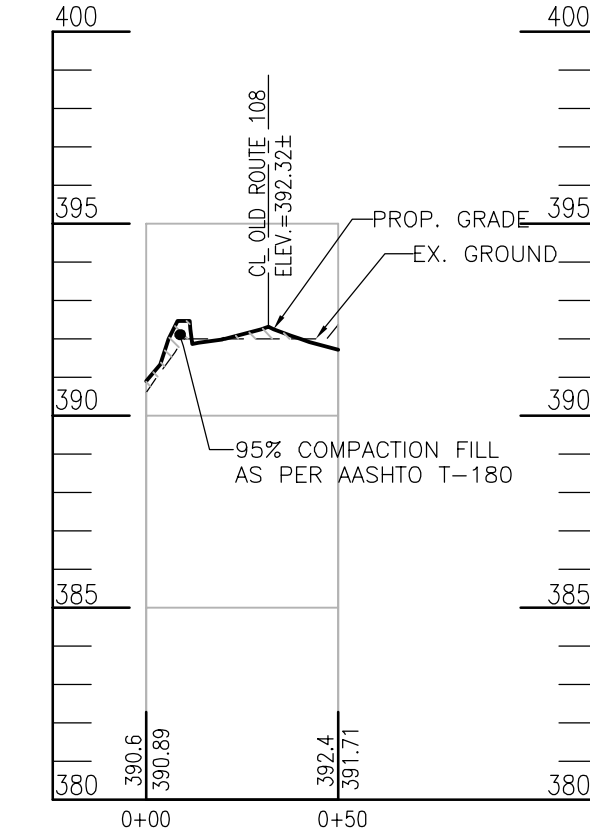
**SECTION @ STA. 2+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



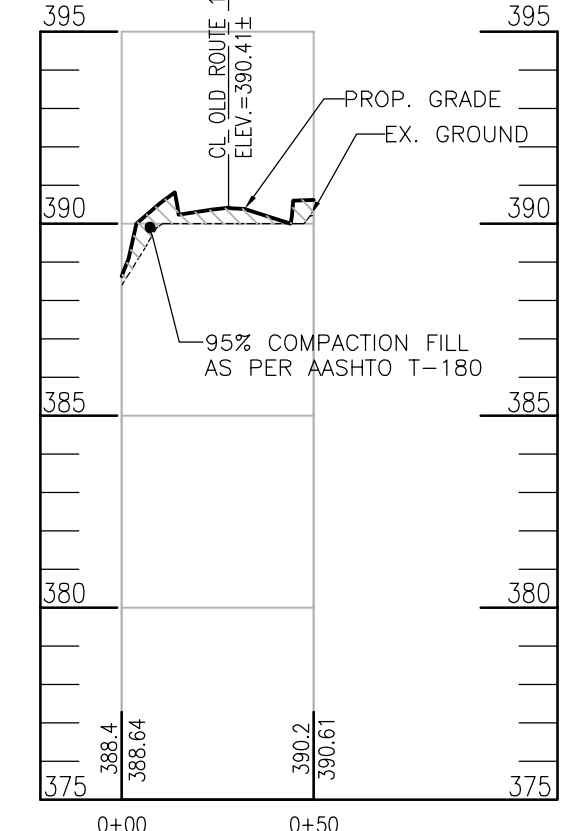
**SECTION @ STA. 2+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



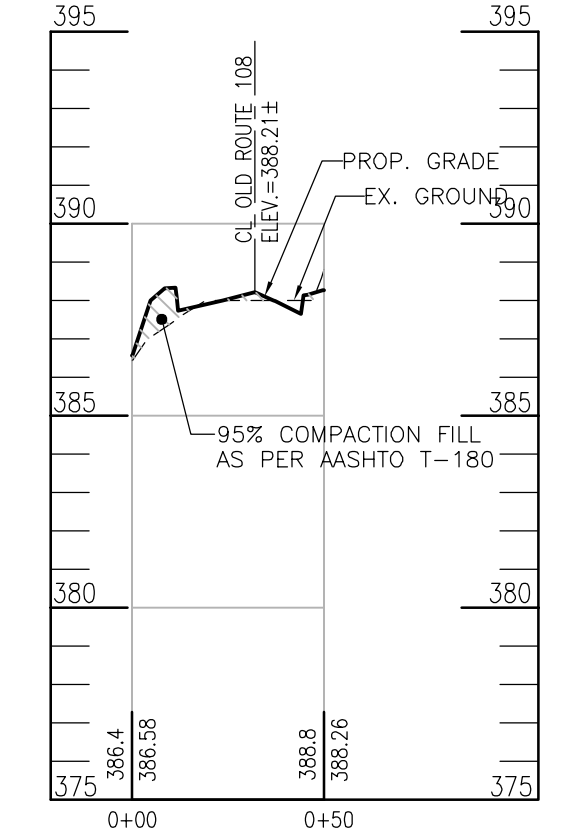
**SECTION @ STA. 3+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



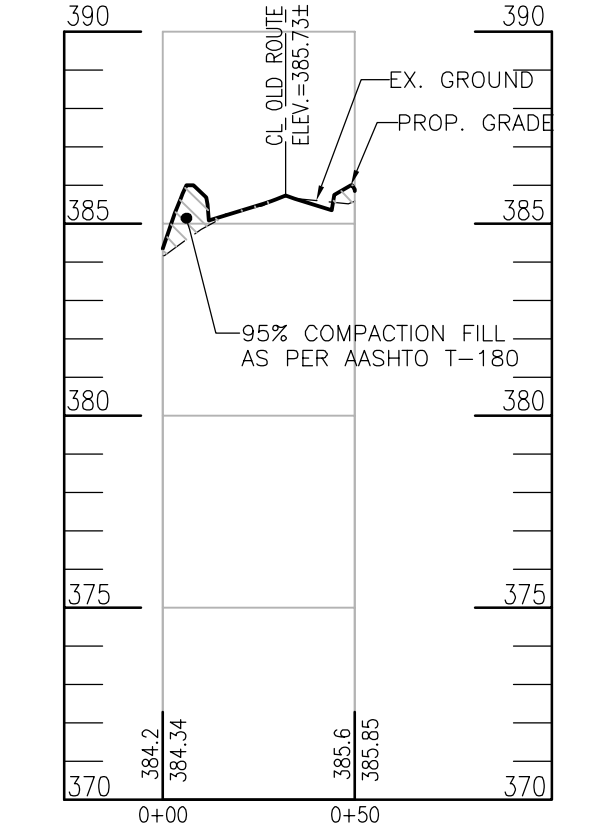
**SECTION @ STA. 3+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



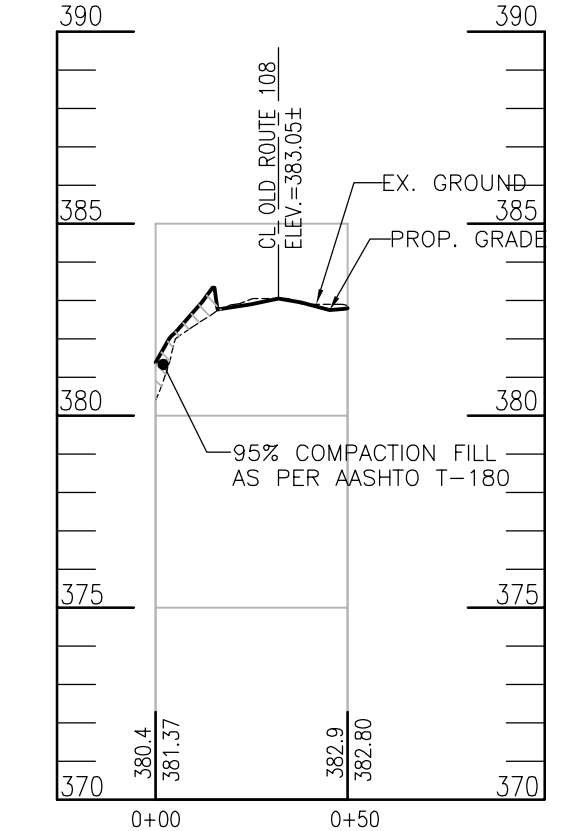
**SECTION @ STA. 4+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



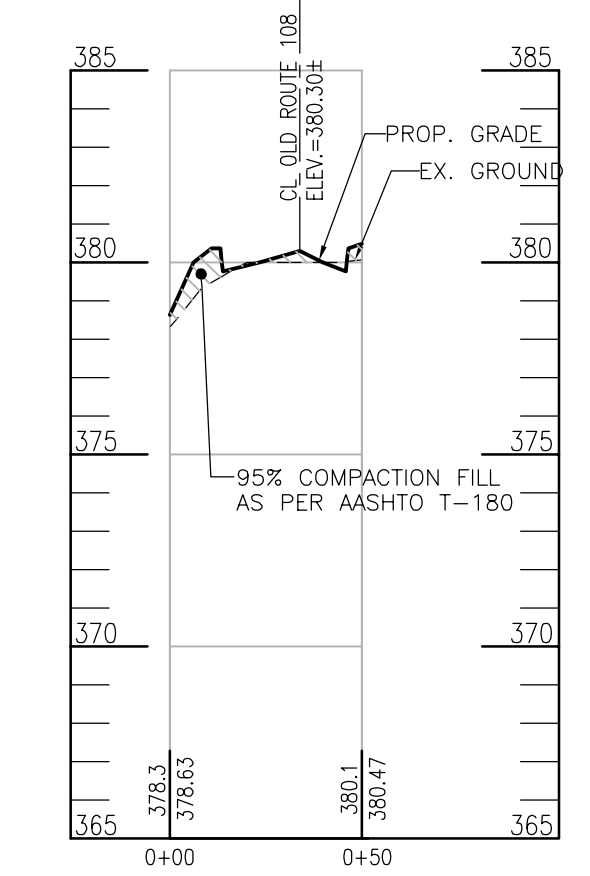
**SECTION @ STA. 4+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



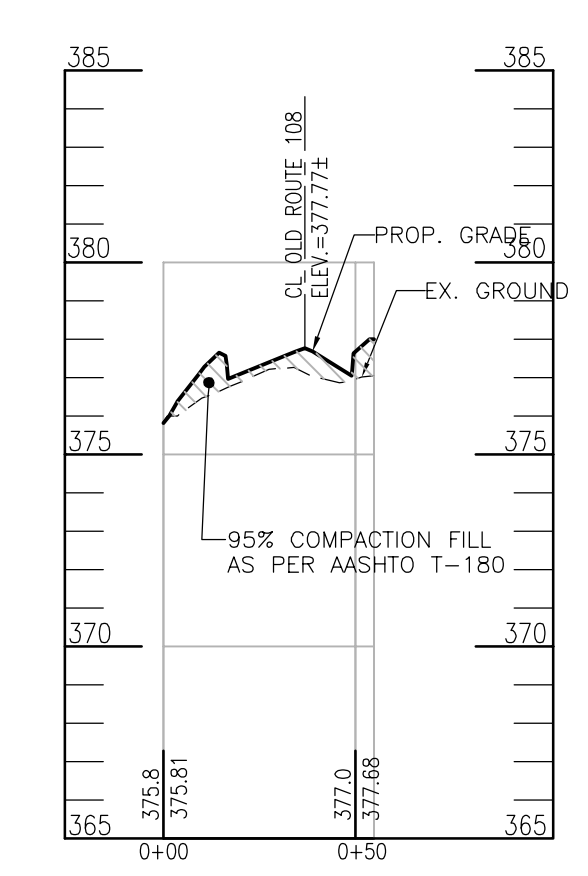
**SECTION @ STA. 5+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



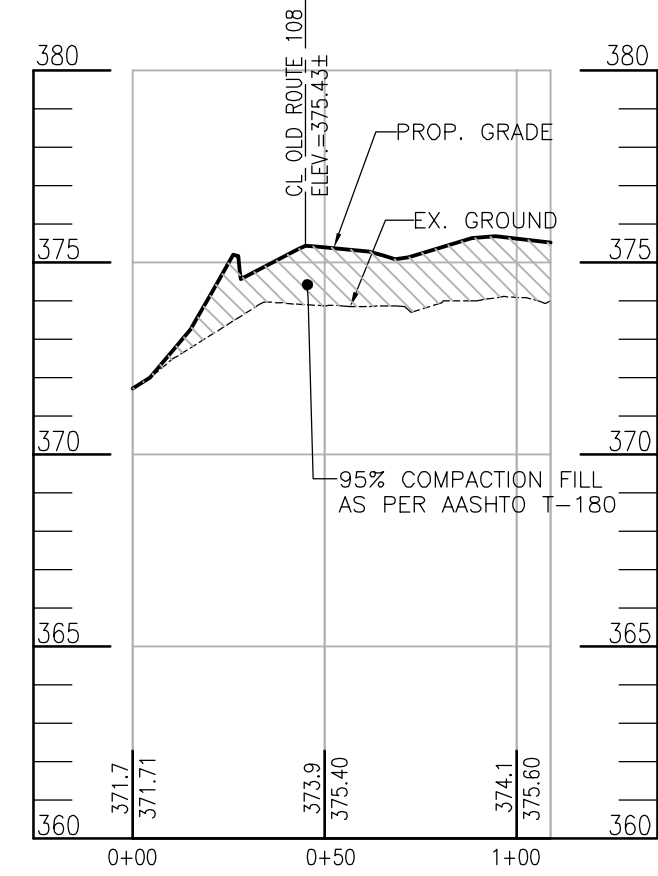
**SECTION @ STA. 5+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



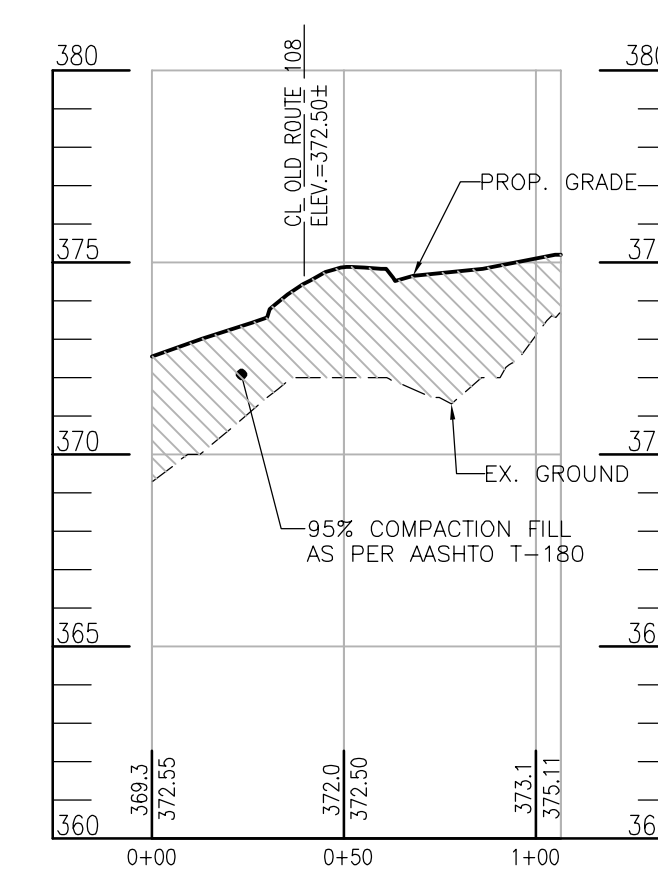
**SECTION @ STA. 6+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



**SECTION @ STA. 6+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



**SECTION @ STA. 7+00**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.



**SECTION @ STA. 7+50**  
SCALE: 1"=50' HORIZ.  
1"=5' VERT.

**OWNER/DEVELOPER**  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5870 S FURNACE AVENUE  
ELKRIDGE, MARYLAND 21075  
PHONE: (410) 788-0027

NO.	REVISION	DATE

**SITE DEVELOPMENT PLAN**  
**OLD ROUTE 108 CROSS SECTIONS**  
**DORSEY OVERLOOK**  
APARTMENT UNITS 1-78  
PARCEL A  
2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
DPZ REF'S: ECP-15-012, BA-20-003V, F-21-023

**VOGEL ENGINEERING**  
**TIMMONS GROUP**  
3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043  
P: 410.461.7666 F: 410.461.8961 www.timmons.com

**PROFESSIONAL CERTIFICATE**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2024

DESIGN BY: DZE/RHV  
DRAWN BY: DZE/JR/KG  
CHECKED BY: RHV  
DATE: NOVEMBER 2022  
SCALE: AS SHOWN  
W.O. NO.: 12-69

STATE OF MARYLAND  
ROBERT H. VOGEL  
REGISTERED PROFESSIONAL ENGINEER  
No. 16193  
EXPIRES 09/27/2024

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
1/24/2023  
CHIEF, BUREAU OF HIGHWAYS



# PRECAST MODULAR BLOCK RETAINING WALL NOTES

## PART 1 - GENERAL

- 1.1 DESCRIPTION
- A. WORK INCLUDES FURNISHING AND INSTALLING PRECAST MODULAR BLOCKS WALL UNITS, WALL FILL AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS AND AS SPECIFIED HEREIN. THE CONTRACT ALSO INCLUDES FURNISHING AND INSTALLING ALL APPURTENANT MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR CONSTRUCTION OF THE PRE-CAST MODULAR BLOCK RETAINING WALL SYSTEM.
  - B. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY. THE ARCHITECT/ENGINEER AND OWNER SHALL NOT BE RESPONSIBLE FOR MEANS OR METHODS OF CONSTRUCTION OR FOR SAFETY OF WORKERS OR THE PUBLIC.
  - C. ALL EXISTING AND PROPOSED CONSTRUCTION AND SITE GRADING INFORMATION WAS REFERENCED FROM UNTITLED, UNDATED, ELECTRONIC COPIES OF THE SITE PLAN PREPARED VOGEL ENGINEERING + TIMMONS GROUP (V+T), THE PROJECT CIVIL ENGINEER, AND PROVIDED TO GTA ON MARCH 28, 2022.
  - D. SOIL DESIGN PARAMETERS ARE BASED ON LIMITED SUBSURFACE DATA FROM THE REVISED - GEOTECHNICAL ENGINEERING STUDY, DORSEY OVERLOOK SENIOR BUILDING, DATED APRIL 5, 2018 PREPARED BY HILLIS CARNES ENGINEERING ASSOCIATES (HCEA). THIS REPORT INCLUDED LIMITED EXPLORATIONS WITHIN THE VICINITY OF THE PROPOSED RETAINING WALLS. PRIOR TO CONSTRUCTION OF THE PROPOSED RETAINING WALLS, THE CONTRACTOR SHOULD PERFORM TEST PITS IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER, TO EVALUATE THE SUBSURFACE CONDITIONS. IF VARYING CONDITIONS ARE ENCOUNTERED, GTA SHOULD BE CONTACTED TO REVIEW AND POSSIBLY REVISE THE DESIGN PRESENTED HEREIN.
  - E. CONSTRUCTION OF THIS WALL WILL REQUIRE COORDINATION WITH THE SITE CONTRACTOR DURING INSTALLATION. STORMWATER MANAGEMENT (SWM) FACILITIES AND TOWNHOME UNITS. PRIOR TO WALL CONSTRUCTION, A PRECONSTRUCTION MEETING SHOULD BE HELD BETWEEN THE WALL CONTRACTOR, THE SITE CONTRACTOR, THE CLIENT, AND GTA TO FACILITATE WALL CONSTRUCTION COORDINATION.

- 1.2 REFERENCES
- A. ASTM C1776 - STANDARD SPECIFICATIONS FOR WET-CAST PRECAST MODULAR RETAINING WALL UNITS
  - B. ASTM C136 - STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE
  - C. ASTM D4318 - STANDARD TEST METHOD FOR LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS
  - D. ASTM D698 - STANDARD TEST METHOD FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING STANDARD EFFORT
  - E. ASTM D2487 - STANDARD PRACTICE FOR CLASSIFICATION OF SOILS FOR ENGINEERING PURPOSES (UNIFIED SOIL CLASSIFICATION SYSTEM)
  - F. ASTM D3034 - SPECIFICATION FOR POLYVINYL CHLORIDE (PVC) PIPE
  - G. NCMA TEST METHOD SRWU-2 - DETERMINATION OF SHEAR STRENGTH BETWEEN SEGMENTAL CONCRETE UNITS
  - H. NCMA - "DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS"
  - I. MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION (MDOT SHA) - STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, JULY 2018
  - J. 2018 INTERNATIONAL BUILDING CODE (IBC)
  - K. NATIONAL CONCRETE MASONRY ASSOCIATION - DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3RD EDITION

- 1.3 DELIVERY, STORAGE, AND HANDLING
- A. CONTRACTOR SHALL CHECK THE MATERIALS UPON DELIVERY TO ENSURE THAT PROPER MATERIALS HAVE BEEN RECEIVED.
  - B. CONTRACTOR SHALL PROTECT THE MATERIALS FROM DAMAGE. DAMAGED MATERIAL SHALL NOT BE INCORPORATED INTO THE WALL.
  - C. CONTRACTOR SHALL PREVENT EXCESSIVE MUD, WET CEMENT, EPOXY, ADHESIVES, AND LIKE MATERIALS WHICH MAY AFFIX THEMSELVES, FROM COMING IN CONTACT WITH THE MATERIALS.
  - D. EXPOSED FACES OF MODULAR BLOCK UNITS SHALL BE REASONABLY FREE OF CHIPS, CRACKS, OR STAINS.

- 1.4 SUBMITTALS/CERTIFICATION
- A. IF REQUESTED BY GTA OR THE OWNER, CONTRACTOR SHALL SUBMIT QUALIFICATIONS AND DOCUMENTATION OF PRIOR EXPERIENCE TO SHOW THE NECESSARY SKILL AND EXPERIENCE. PRIOR EXPERIENCE SHALL INCLUDE RETAINING WALL CONSTRUCTION OF SIMILAR SIZE/TYPE TO THOSE SHOWN ON THIS PLAN (MINIMUM THREE PROJECTS IN THE LAST FIVE YEARS).
  - B. CONTRACTOR SHALL SUBMIT MANUFACTURER'S CATALOG FOR THE PROPOSED MATERIALS TO GTA FOR APPROVAL A MINIMUM OF SEVEN DAYS BEFORE START OF CONSTRUCTION.
  - C. IF REQUESTED BY GTA OR THE OWNER, CONTRACTOR SHALL SUBMIT SAMPLES OF PROPOSED MATERIALS TO GTA A MINIMUM OF SEVEN DAYS BEFORE START OF CONSTRUCTION.
  - D. MATERIALS SHALL BE TRANSPORTED TO THE SITE ONLY AFTER APPROVAL OF THE PROPOSED MATERIAL BY GTA.

## PART 2 - PRODUCTS

- 2.1 DEFINITIONS
- A. WALL UNITS ARE PRECAST, MODULAR BLOCK UNITS THAT FORM THE FACE OF THE RETAINING WALL.
  - B. TAIL EXTENSIONS ARE CAST-IN-PLACE CONCRETE PLACED BEHIND THE BLOCK TO INCREASE WALL STABILITY.
  - C. LEVELING PAD IS A COMPACTED, AGGREGATE LAYER SUPPORTING THE BOTTOM WALL UNIT.
  - D. GRAVEL FILL IS DRAINAGE AGGREGATE THAT IS PLACED WITHIN AND IMMEDIATELY BEHIND THE WALL UNITS.
  - E. RETAINED FILL IS COMPACTED, STRUCTURAL FILL PLACED BEHIND THE WALL UNITS AND EXTENDS TO THE PROPOSED GRADES ON TOP OF THE WALL AT A 1:1 SLOPE FROM THE BACK OF THE LEVELING PAD.
  - F. CONTROLLED FILL IS COMPACTED, STRUCTURAL FILL PLACED BEHIND THE RETAINED FILL AND/OR SUPPORTING THE LEVELING PAD AND RETAINED FILL.
  - G. FILTER FABRIC IS A NON-WOVEN, POLYPROPYLENE GEOTEXTILE USED TO PROVIDE SEPARATION BETWEEN GRAVEL FILL AND RETAINED FILL.
  - H. LOW-PERMEABILITY SOIL IS A LAYER OF COMPACTED, LOW-PERMEABILITY SOIL FILL PLANNED AT THE GROUND SURFACE, EXTENDING FROM JUST BEHIND TOP WALL UNIT TO THE BACK OF THE RETAINED FILL.
  - I. DRAINAGE PIPE IS PVC OR HDPE PIPING PLACED BEHIND AND/OR THROUGH THE WALL UNITS TO FACILITATE DRAINAGE OF WATER FROM BEHIND THE RETAINING WALL.

- 2.2 MATERIALS
- A. WALL UNITS
- 1. WALL UNITS SHALL BE STONE STRONG UNITS MANUFACTURED UNDER LICENSE FROM STONE STRONG, LLC.
  - 2. WALL UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM C1776.
  - 3. CONCRETE FOR PRECAST MODULAR BLOCKS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI. COMPRESSIVE STRENGTH MAY BE DETERMINED FROM CYLINDERS CAST PERIODICALLY FROM BATCH CONCRETE RATHER THAN BY TESTING FULL-SIZE UNITS. CONCRETE BATCH DESIGN SHALL BE PROPORTIONED AND PRODUCED IN ACCORDANCE WITH ACI 318 AND ACI 301. MIX AND DELIVER IN ACCORDANCE WITH ASTM C94. ENTRAINED AIR CONTENT SHALL BE BETWEEN 5 AND 7%.
  - 4. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615, GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A497.
  - 5. GALVANIZED REINFORCING AND WELDED WIRE FABRIC SHALL BE HOT-DIPPED AND CONFORM TO THE REQUIREMENTS OF ASTM A767.
  - 6. MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 1 1/2 INCHES.
  - 7. THE FACE PATTERN SHALL BE SELECTED FROM THE MANUFACTURER'S STANDARD MOLDS. THE COLOR OF THE UNITS SHALL BE SELECTED BY THE ARCHITECT/ENGINEER OR OWNER. A CONCRETE STAIN MAY BE FIELD APPLIED TO COLOR THE UNITS IF SPECIFIED BY THE ARCHITECT/ENGINEER OR OWNER.
- B. TAIL EXTENSIONS
- 1. CAST-IN-PLACE CONCRETE TAIL EXTENSIONS SHALL BE INSTALLED AT THE LOCATIONS AND DEPTHS SHOWN ON THE RETAINING WALL PROFILES.
  - 2. TAIL EXTENSIONS WITH A REQUIRED DEPTH LESS THAN 2X THE HEIGHT SHALL BE REINFORCED AS SHOWN IN THE TYPICAL DETAILS ON SHEET 30.
  - 3. TAIL EXTENSIONS SHALL BE FRESHLY MIXED CONCRETE WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI. TAIL EXTENSIONS SHALL BE ALLOWED TO CURE FOR A MINIMUM OF 3 DAYS PRIOR TO BACKFILLING AND SUBSEQUENT WALL CONSTRUCTION.
- C. LEVELING PAD
- 1. LEVELING PAD MATERIALS SHALL CONSIST OF COMPACTED, FREE-DRAINING, COARSE AGGREGATES MEETING THE REQUIREMENTS OF MARYLAND SHA NO. 57 STONE.
  - 2. LEVELING PAD SHALL BE A MINIMUM OF 9 INCHES DEEP. THE WIDTH OF THE LEVELING PAD WILL BE DETERMINED BY THE BOTTOM BLOCK SIZE AND INCLUDE AN ADDITIONAL 9 INCHES IN FRONT AND BEHIND THE REQUIRED BLOCK OR BEHIND THE REQUIRED CAST-IN-PLACE CONCRETE TAIL EXTENSION.
- D. GRAVEL FILL
- 1. GRAVEL FILL SHALL BE FREE-DRAINING, COARSE AGGREGATES MEETING THE REQUIREMENTS OF MARYLAND SHA #57 STONE.

## PART 2 - PRODUCTS (CONTINUED)

- E. RETAINED FILL
- 1. RETAINED FILL (UNLESS OTHERWISE SPECIFIED HEREIN) SHALL BE NON-PLASTIC SOIL MEETING THE REQUIREMENTS OF AASHTO A-2-4 OR MORE GRANULAR. IF ADEQUATE QUANTITIES ARE NOT AVAILABLE ON-SITE, MATERIALS MEETING THESE REQUIREMENTS WILL NEED TO BE IMPORTED.
  - 2. RETAINED FILL SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698.
  - 3. RETAINED FILL FOR WALL NO. 1 FROM APPROXIMATE STA. 0+76 TO STA. 0+86 SHALL BE COMPACTED, FREE-DRAINING, COARSE AGGREGATES MEETING THE REQUIREMENTS OF MARYLAND SHA NO. 57 STONE DUE TO THE VICINITY OF UNITS 17 AND 18 BEHIND THE WALL.
- F. CONTROLLED FILL
- 1. CONTROLLED FILLS TO BE PLACED OUTSIDE OF THE RETAINED FILL ZONE SHALL CONSIST OF ON-SITE OR BORROW SOILS MEETING THE REQUIREMENT OF AASHTO A-4 OR MORE GRANULAR.
  - 2. CONTROLLED FILLS SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED TO 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698.
- G. FILTER FABRIC
- 1. FILTER FABRIC SHALL BE NON-WOVEN, POLYPROPYLENE GEOTEXTILE MIRAFI 140N MANUFACTURED BY TENCATE GEOSYNTHETICS AMERICAS OR TERRATEX NO4.5 MANUFACTURED BY HANES GEO COMPONENTS. EQUIVALENT MATERIALS MAY BE SUBSTITUTED WITH PRIOR APPROVAL OF GTA.
- H. LOW-PERMEABILITY SOIL
- 1. LOW-PERMEABILITY SOILS TO BE PLACED AT THE TOP OF THE WALL, WHERE SPECIFIED, SHOULD CONSIST OF SANDY, SILTY, OR CLAYEY SOILS MEETING THE UNIFIED SOILS CLASSIFICATION SYSTEM CRITERIA FOR ML, CL, SM, OR SC WITH A MINIMUM OF 25% PASSING THE #200 SIEVE.
- I. DRAINAGE PIPE
- 1. THE DRAINAGE PIPES SHALL BE PERFORATED OR SLOTTED PVC PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D3034.

## PART 3 - EXECUTION

- 3.1 EXCAVATION
- A. THE CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. UNDER NO CIRCUMSTANCES SHALL THE EXCAVATION LINES AND GRADES BE EXCEEDED, EXCEPT WITH OWNER'S APPROVAL. THE CONTRACTOR SHALL PROTECT THE EXCAVATION FROM SLOUGHING BY PLACING A MEMBRANE OVER THE FACE OF THE EXCAVATION.
  - B. PRIOR TO RETAINING WALL CONSTRUCTION AND PLACEMENT OF FILL, ALL TOPSOIL SHALL BE STRIPPED AND REMOVED FROM THE SITE.
  - C. EXCAVATIONS SHALL BE SLOPED OR OTHERWISE SUPPORTED IN ACCORDANCE WITH OCCUPATION SAFETY AND HEALTH ADMINISTRATION (OSHA) AND OTHER STATE AND LOCAL REGULATIONS.
  - D. BASED ON THE AVAILABLE SUBSURFACE INFORMATION, UNDOCUMENTED EXISTING FILL SOILS WERE ENCOUNTERED NEAR THE EXISTING GRADES. THESE SOILS ARE NOT CONSIDERED SUITABLE FOR SUPPORT OF THE PROPOSED WALLS AND SHOULD BE UNDERCUT AND REPLACED IF ENCOUNTERED AT THE RETAINING WALL FOUNDATION SUBGRADE ELEVATIONS. THE GEOTECHNICAL ENGINEER OR THEIR QUALIFIED REPRESENTATIVE SHOULD BE PRESENT DURING CONSTRUCTION TO EVALUATE THE SUBGRADE PRIOR TO CONSTRUCTION. TEST PITS SHOULD BE PERFORMED ALONG THE RETAINING WALL ALIGNMENTS TO FURTHER CHARACTERIZE THE EXISTING FILL SOILS. EXISTING FILLS OR OTHER SOILS THAT ARE OBSERVED TO BE UNSUITABLE FOR THE SUPPORT OF THE PROPOSED WALL SHOULD BE OVER-EXCAVATED AND REPLACED PER THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER BASED ON ACTUAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

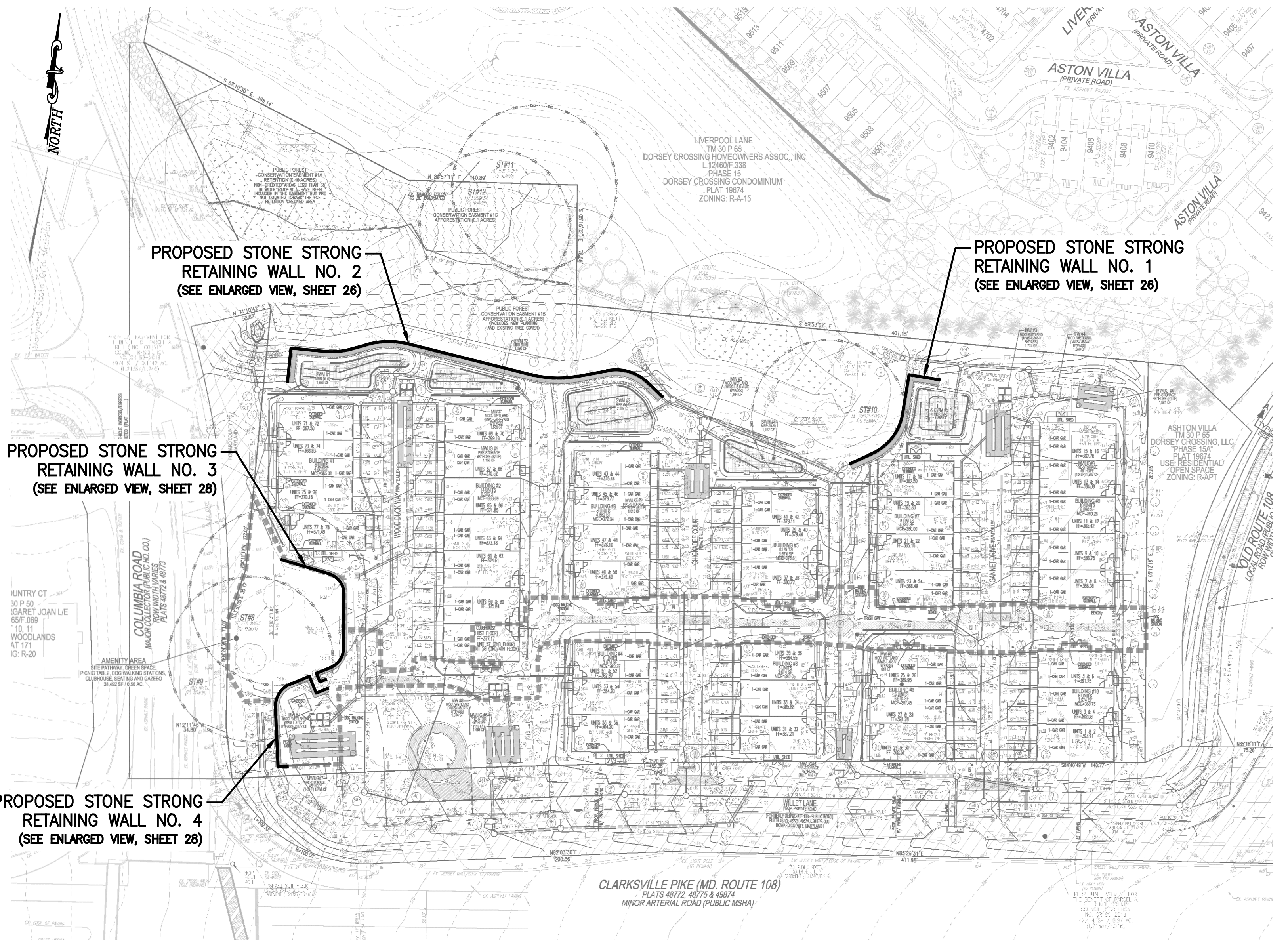
- 3.2 FOUNDATION SUBGRADE PREPARATION
- A. FOUNDATION SOIL SHALL BE EXCAVATED AS REQUIRED FOR INSTALLATION OF THE LEVELING PAD AND OTHER ELEMENTS SHOWN ON THE CONSTRUCTION DRAWINGS.
  - B. EXPLORATIONS PERFORMED BY HCEA ENCOUNTERED EXISTING FILL SOILS. IF ENCOUNTERED AT THE FOUNDATION SUBGRADE ELEVATION, THESE SOILS SHALL BE REMOVED AND REPLACED AS DIRECTED IN THE FIELD BY THE GEOTECHNICAL ENGINEER OR THEIR QUALIFIED REPRESENTATIVE.
  - C. FOUNDATION SOIL SHALL BE EXAMINED BY THE TESTING AGENCY TO ENSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS ASSUMED DESIGN STRENGTH. SOILS NOT MEETING REQUIRED STRENGTH SHALL BE REMOVED AND REPLACED WITH CONTROLLED FILL, MEETING THE MATERIAL AND COMPACTION REQUIREMENTS STATED IN NOTE 2.2.F.
  - D. THE ALLOWABLE BEARING PRESSURE FOR NATURAL AND CONTROLLED FILL SOILS SHALL BE AS SPECIFIED IN PART 5.
  - E. THE EXPOSED FOUNDATION SHALL BE PROTECTED WITH A LOADED DUMP TRUCK. ANY SOFT OR UNSTABLE AREAS IDENTIFIED DURING THIS EVALUATION SHALL BE OVEREXCAVATED AND BACKFILLED WITH CONTROLLED FILL.
  - F. ANY FILLS REQUIRED TO ESTABLISH SLOPING SURFACES IN FRONT OF THE WALLS SHALL CONSIST OF CONTROLLED FILL MEETING THE REQUIREMENTS STATED IN NOTE 2.2.F AND SHALL BE TESTED BY THE TESTING AGENCY.

- 3.3 LEVELING PAD
- A. THE LEVELING PAD SHALL BE PLACED AS SHOWN ON THE CONSTRUCTION DRAWINGS WITH A MINIMUM THICKNESS OF 9 INCHES.
  - B. LEVELING PAD MATERIALS SHALL BE PLACED ON A SUBGRADE AS DESCRIBED IN SECTION 3.2 AND APPROVED BY THE TESTING AGENCY.
  - C. LEVELING PAD SHALL BE PREPARED TO ENSURE COMPLETE CONTACT OF THE FIRST COURSE WITH THE BASE. GAPS SHALL NOT BE ALLOWED.

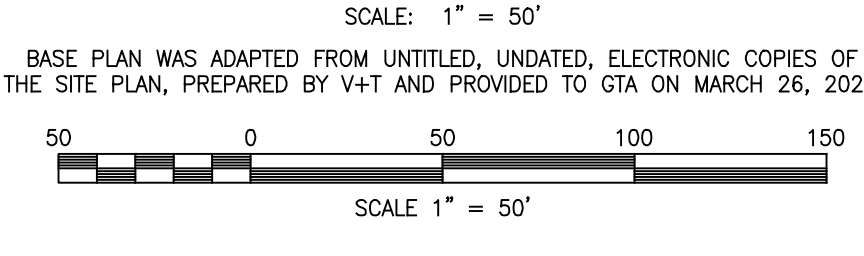
- 3.4 UNIT INSTALLATION
- A. PLACE THE FIRST COURSE OF WALL UNITS DIRECTLY ON THE LEVELING PAD. THE WALL UNITS SHALL BE CHECKED FOR LEVEL AND ALIGNMENT. ADJACENT WALL UNITS SHOULD BE IN CONTACT. THE FIRST COURSE IS THE MOST IMPORTANT TO PROVIDE ACCURATE AND ACCEPTABLE RESULTS. IF POSSIBLE, BEGIN PLACING UNITS AT THE LOWEST SECTION OF THE WALL.
  - B. ENSURE THAT WALL UNITS ARE IN FULL CONTACT WITH THE LEVELING PAD.
  - C. UNITS ARE PLACED SIDE BY SIDE FOR FULL LENGTH OF WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE.
  - D. WHERE REQUIRED, CONSTRUCT CAST-IN-PLACE CONCRETE TAIL EXTENSIONS AS INDICATED ON THE PLANS. CONCRETE SHALL BE PLACED IN A CONTINUOUS PLACEMENT INSIDE THE SIDE VOIDS BETWEEN THE BLOCKS EXTENDING TO THE MINIMUM WIDTH BEHIND THE WALL UNITS AS INDICATED ON THE DRAWINGS. TAIL EXTENSIONS WITH A REQUIRED DEPTH LESS THAN 2X THE HEIGHT SHALL BE REINFORCED AS SHOWN IN THE TYPICAL DETAILS ON SHEET 30. TAIL EXTENSIONS SHALL BE PLACED IN LIFTS NOT TO EXCEED 4 1/2 FEET UNTIL THE PREVIOUS LIFT HAS FULLY SET AND ALLOWED TO CURE FOR A MINIMUM OF 3 DAYS BEFORE BACKFILL IS PLACED ABOVE THE TOP OF THE EXTENSION.
  - E. FILL ALL VOIDS BETWEEN AND WITHIN THE BLOCKS WITH GRAVEL FILL.
  - F. REMOVE ALL EXCESS AGGREGATE AND OTHER MATERIALS FROM THE TOP OF THE UNITS BEFORE LAYING UP THE NEXT COURSE.
  - G. CONTINUE PLACING SUCCESSIVE COURSES TO THE ELEVATIONS SHOWN ON THE PLANS. CONSTRUCT WALL IN LEVEL STAGES, PLACING THE UNITS AT EACH COURSE FOR THE ENTIRE LENGTH OF THE WALL, IF POSSIBLE. GRAVEL FILL AND BACKFILL SHOULD BE PLACED TO THE LEVEL OF THE TOP OF THE FACING UNIT BEFORE PLACING THE NEXT COURSE.
  - H. CONVEX AND CONCAVE CURVES SHALL BE MADE USING WALL UNITS LAID AS TO CREATE THE MINIMUM RADIUS POSSIBLE.
  - I. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE FOR THE BACK OF THE RETAINING WALL DURING CONSTRUCTION.

- 3.5 FILL PLACEMENT
- A. RETAINED AND CONTROLLED FILL SHALL BE PLACED AND COMPACTED AS DESCRIBED IN SECTION 2.2 AND IN ACCORDANCE WITH APPLICABLE COUNTY REQUIREMENTS.
  - B. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN 4 FEET OF WALL FACE.
  - C. ALL FILL AND BACKFILL OPERATIONS SHALL BE OBSERVED ON A FULL-TIME BASIS BY A QUALIFIED SOIL TECHNICIAN TO DETERMINE IF MINIMUM COMPACTION REQUIREMENTS ARE BEING MET AND THAT MATERIALS MEETING THE SPECIFICATION REQUIREMENTS ARE USED.
- 3.6 DRAINAGE
- A. GRAVEL FILL SHALL EXTEND A MINIMUM OF 12 INCHES BEHIND THE WALL UNITS OR TAIL EXTENSION WHERE REQUIRED.
  - B. PLACE FILTER FABRIC BEHIND THE GRAVEL FILL AND THE RETAINED FILL.
  - C. POSITIVE DRAINAGE SHALL BE MAINTAINED DURING AND AFTER CONSTRUCTION. RETAINED FILL THAT BECOMES WET DURING CONSTRUCTION SHALL BE DRIED AND RECOMPACTED, OR REMOVED AND REPLACED WITH NEW RETAINED FILL.
  - D. INSTALL THE PERFORATED DRAINAGE PIPES AND LATERAL DRAINAGE PIPES INCREMENTALLY ALONG WITH THE INSTALLATION OF WALL UNITS AND PLACEMENT OF RETAINED FILL.

- PART 4 - CONSTRUCTION OBSERVATION AND TESTING
- A. THE RETAINING WALLS SHALL ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF GTA TO CONFIRM THAT THE SOILS AND MATERIALS USED DURING CONSTRUCTION MEET THE REQUIREMENTS SPECIFIED HEREIN. IF GTA IS NOT CONTRACTED TO PROVIDE CONSTRUCTION OBSERVATION AND TESTING SERVICES DURING WALL CONSTRUCTION, GTA IS RELIEVED OF ALL RESPONSIBILITY FOR THE PERFORMANCE OF THE WALLS.
  - B. THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHALL BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO GTA PRIOR TO THE START OF WALL CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER (DCP) TEST ASTM SP399.
  - C. THE SUITABILITY OF FILL MATERIAL SHALL BE CONFIRMED BY THE ON-SITE TESTING AGENCY REPRESENTATIVE.



### RETAINING WALL LOCATION PLAN



## PART 5 - DESIGN PARAMETERS

GRAVEL FILL DENSITY (PCF):	110
PHI (DEG.):	36
COHESION (PSF):	0
RETAINED_ZONE DENSITY (PCF):	ON-SITE SOILS PLACED AS FILL
PHI (DEG.):	28
COHESION (PSF):	0
FOUNDATION SOIL DENSITY (PCF):	NATURAL SOIL
PHI (DEG.):	120
COHESION (PSF):	28
LEVELING PAD:	0
REQUIRED ALLOWABLE BEARING PRESSURE:	AGGREGATE, MDSA #57 STONE 3,000 PSF

MODULAR_BLOCK_DATA	24-86 UNIT VERTICAL FACE (24-86), 24SF UNIT VERTICAL FACE (24SF), 24SF TOP UNIT VERTICAL FACE (24SF), 6SF UNIT (6SF), 6SF TOP UNIT (6SF), 3SF UNIT (3SF), 3SF TOP UNIT (3SF), 6-28 UNIT (6-28), 6-28 TOP UNIT (6-28), CORNER UNIT (CRN), CORNER TOP UNIT (CRNT), DUAL FACE UNIT (DF), DUAL FACE HALF UNIT (DFHU), DUAL FACE END UNIT (DFEU), AND END UNIT (EU)
--------------------	--

OWNER/DEVELOPER  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5670 B FURNACE AVENUE  
ELK RIDGE, MARYLAND 21075  
PHONE: (410) 788-0027

1	REVISIONS TO ADDRESS COUNTY COMMENTS	05/27/2022

NO.	REVISION	DATE
-----	----------	------

### LOCATION PLAN AND GENERAL NOTES

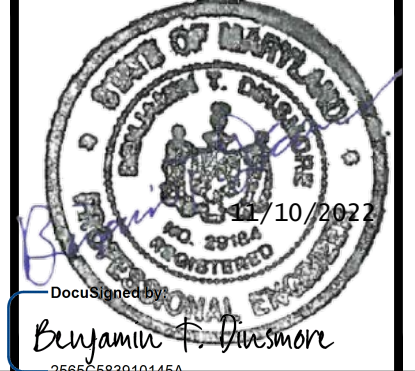
## DORSEY OVERLOOK RETAINING WALLS

2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
07Z REFS: EOP-15-012, BA-20-003V, F-21-023

ZONED: R-AFT  
PARCELS: 67, 51, 52  
288, 53, 54, 55  
HOWARD COUNTY, MARYLAND

**GEO-TECHNOLOGY ASSOCIATES, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

14280 PARK CENTER DRIVE, SUITE: A  
LAUREL, MARYLAND 20707  
(410) 792-9446 or (301) 470-4470  
WWW.GTAENG.COM  
©GEO-TECHNOLOGY ASSOCIATES, INC.



DESIGN BY: ADM  
DRAWN BY: VMH  
CHECKED BY: BTD  
DATE: MARCH 10, 2022  
SCALE: AS SHOWN  
JOB NO.: 181841x1

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21814, EXPIRATION DATE: 08/16/2023

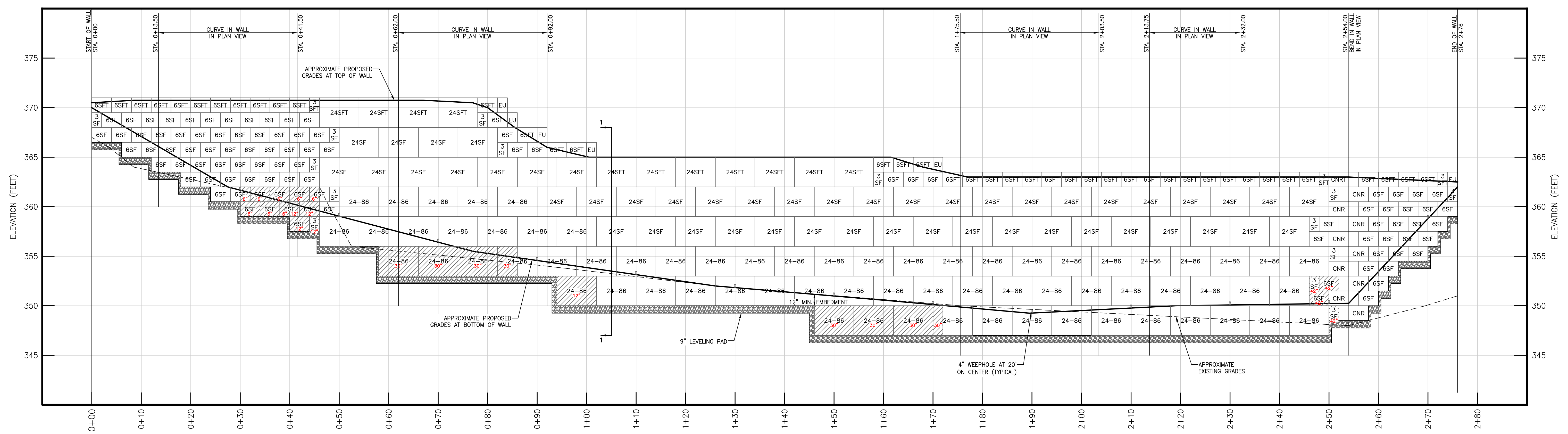
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE 1/23/2023

CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE 1/24/2023

DIRECTOR  
DATE



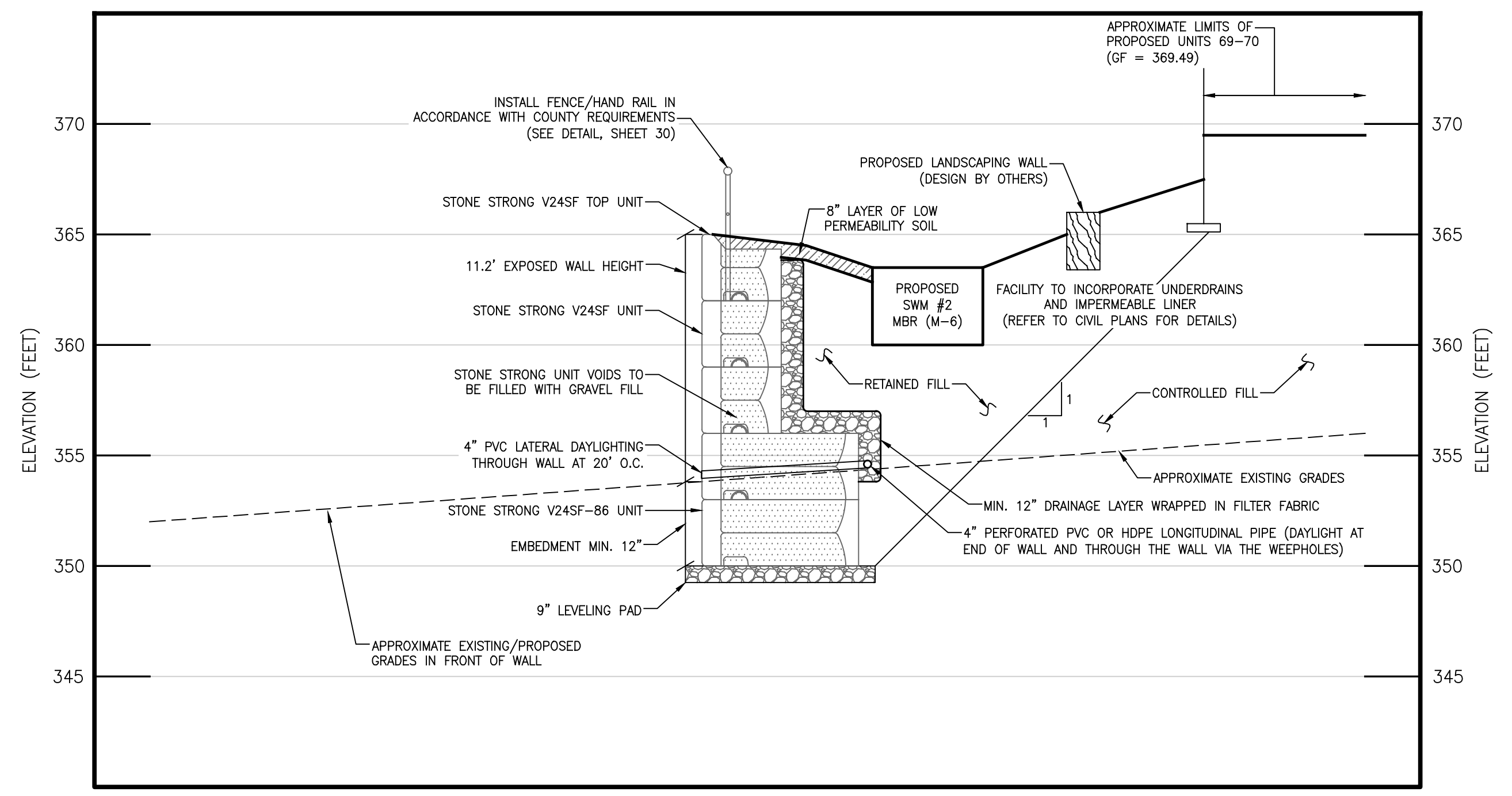


**RETAINING WALL NO. 2 - PROFILE**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 5'

- LEGEND:**
- 6SF — BLOCK TYPE
  - 6SF — BLOCK WITH CAST-IN-PLACE CONCRETE TAIL EXTENSION
  - 6SF — BLOCK TYPE
  - 6SF — DEPTH OF CAST-IN-PLACE CONCRETE TAIL EXTENSION

**NOTE:** BASED ON THE AVAILABLE SUBSURFACE INFORMATION, VARIABLE, UNDOCUMENTED EXISTING FILL SOILS WERE ENCOUNTERED NEAR THE EXISTING GRADES. THESE SOILS ARE NOT CONSIDERED SUITABLE FOR SUPPORT OF THE PROPOSED WALL AND SHOULD BE UNDERCUT AND REPLACED IF ENCOUNTERED AT THE RETAINING WALL FOUNDATION SUBGRADE ELEVATIONS. THE GEOTECHNICAL ENGINEER OR THEIR QUALIFIED REPRESENTATIVE SHOULD BE PRESENT DURING CONSTRUCTION TO EVALUATE THE SUBGRADE PRIOR TO CONSTRUCTION. TEST PITS SHOULD BE PERFORMED ALONG THE RETAINING WALL ALIGNMENTS TO FURTHER CHARACTERIZE THE EXISTING FILL SOILS. EXISTING FILLS OR OTHER SOILS THAT ARE OBSERVED TO BE UNSUITABLE FOR THE SUPPORT OF THE PROPOSED WALL SHOULD BE OVER-EXCAVATED AND REPLACED PER THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER BASED ON ACTUAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION.



**RETAINING WALL NO. 2 - SECTION 1 (APPROXIMATE STATION 1+05)**

HORIZONTAL SCALE: 1" = 5'  
VERTICAL SCALE: 1" = 5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023  
*Will Edmondson*  
7063754EF41469  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE 1/23/2023  
1837076A2038A  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE 1/24/2023  
Amy Simon  
594252040C04C04  
DIRECTOR

NO.	REVISION	DATE
1	REVISIONS TO ADDRESS COUNTY COMMENTS	05/27/2022

**WALL NO. 2 PROFILE AND SECTION**

**DORSEY OVERLOOK**  
RETAINING WALLS

ZONED: R-APT  
PARCELS: 67, 51, 52  
288, 53, 54, 55  
2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
DPZ REF'S: EOP-15-012, BA-20-003V, F-21-023  
HOWARD COUNTY, MARYLAND

**GTA** **GEO-TECHNOLOGY ASSOCIATES, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
14280 PARK CENTER DRIVE, SUITE: A  
LAUREL, MARYLAND 20707  
(410) 792-9446 or (301) 470-4470  
WWW.GTAENG.COM  
©GEO-TECHNOLOGY ASSOCIATES, INC.

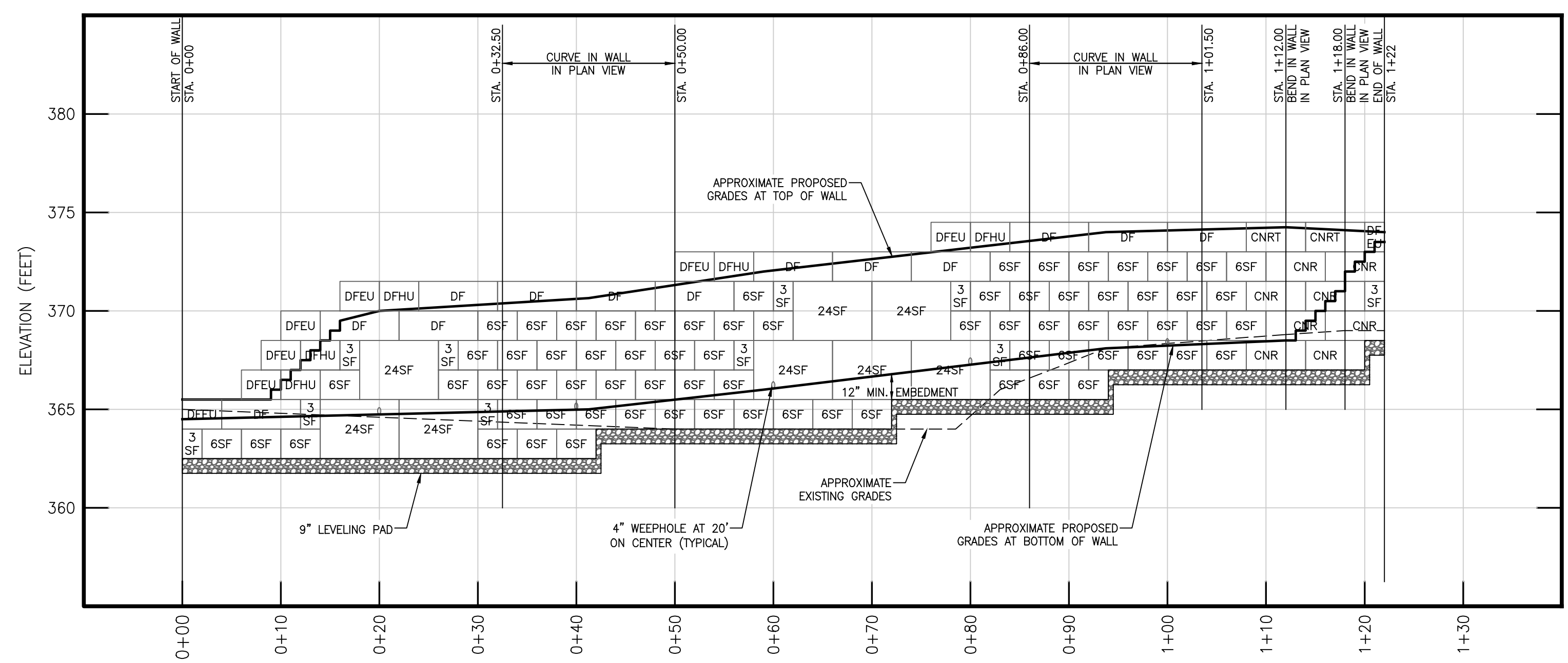
DESIGN BY: ADM  
DRAWN BY: VMH  
CHECKED BY: BTJ  
DATE: MARCH 10, 2022  
SCALE: AS SHOWN  
JOB NO.: 181841X1

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 29184, EXPIRATION DATE: 06/16/2023

*Benjamin J. Edmondson*  
Professional Engineer

27 SHEET OF 30

OWNER/DEVELOPER  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5670 B FURNACE AVENUE  
ELKRIDGE, MARYLAND 21075  
PHONE: (410) 788-0027

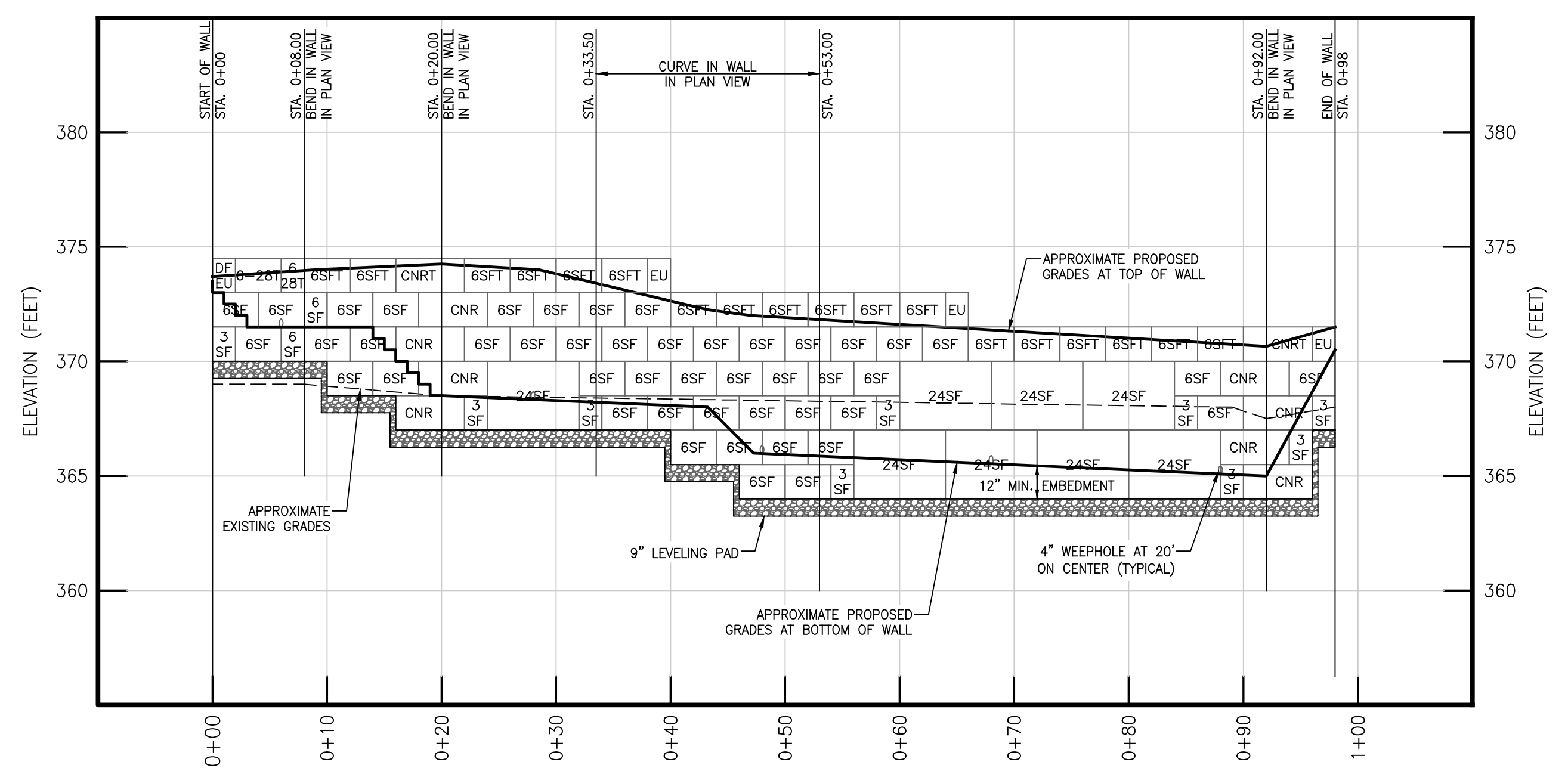


**RETAINING WALL NO. 3 - PROFILE**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 5'

LEGEND:  
6SF — BLOCK TYPE

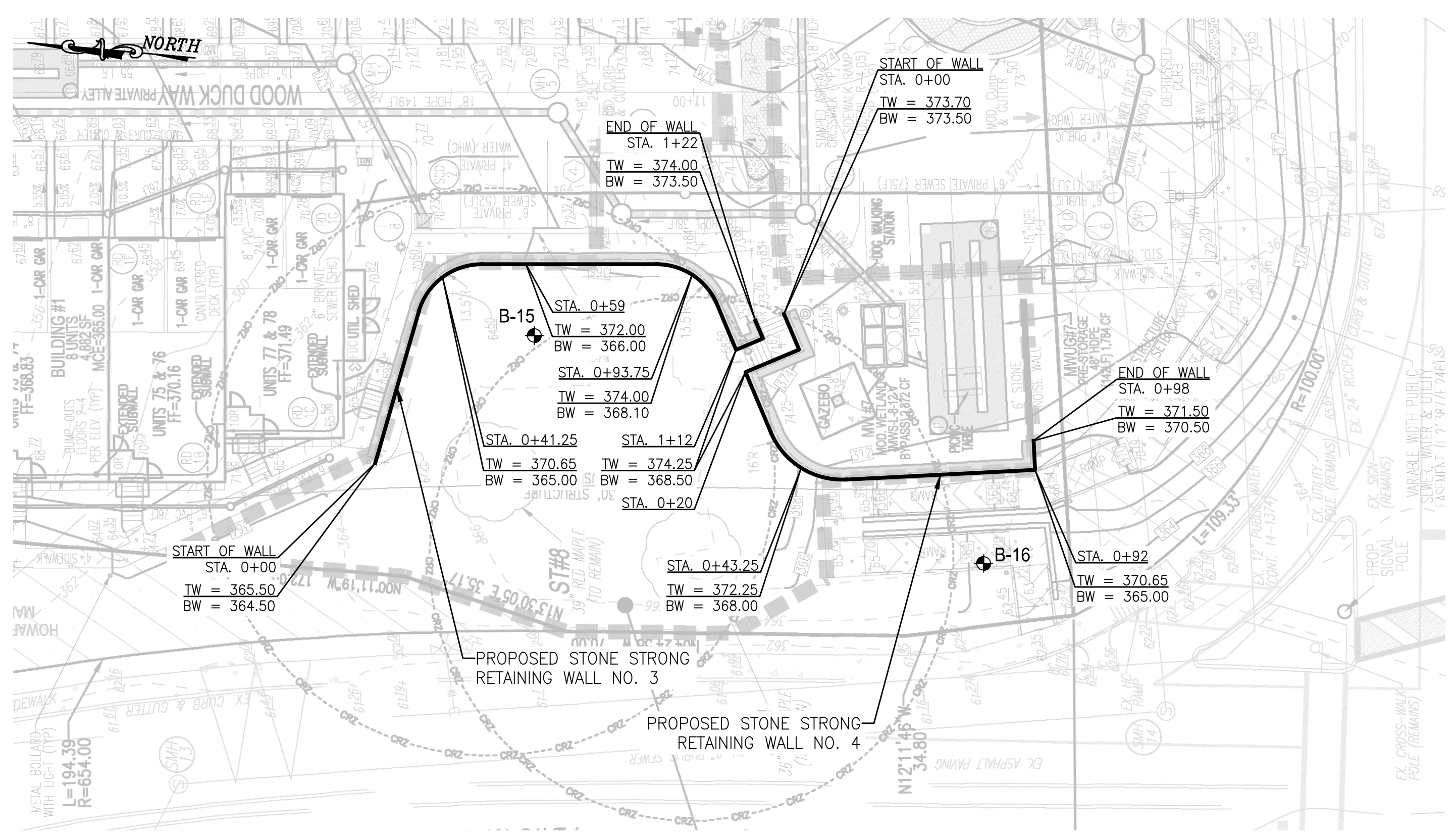
**NOTE:** BASED ON THE AVAILABLE SUBSURFACE INFORMATION, VARIABLE, UNDOCUMENTED EXISTING FILL SOILS WERE ENCOUNTERED NEAR THE EXISTING GRADES. THESE SOILS ARE NOT CONSIDERED SUITABLE FOR SUPPORT OF THE PROPOSED WALL AND SHOULD BE UNDERCUT AND REPLACED IF ENCOUNTERED AT THE RETAINING WALL FOUNDATION SUBGRADE ELEVATIONS. THE GEOTECHNICAL ENGINEER OR THEIR QUALIFIED REPRESENTATIVE SHOULD BE PRESENT DURING CONSTRUCTION TO EVALUATE THE SUBGRADE PRIOR TO CONSTRUCTION. TEST PITS SHOULD BE PERFORMED ALONG THE RETAINING WALL ALIGNMENTS TO FURTHER CHARACTERIZE THE EXISTING FILL SOILS. EXISTING FILLS OR OTHER SOILS THAT ARE OBSERVED TO BE UNSUITABLE FOR THE SUPPORT OF THE PROPOSED WALL SHOULD BE OVER-EXCAVATED AND REPLACED PER THE RECOMMENDATION OF THE GEOTECHNICAL ENGINEER BASED ON ACTUAL CONDITIONS ENCOUNTERED DURING CONSTRUCTION.



**RETAINING WALL NO. 4 - PROFILE**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 5'

LEGEND:  
6SF — BLOCK TYPE



**RETAINING WALL NOS. 3 & 4 PLAN VIEW**

SCALE: 1" = 20'  
BASE PLAN WAS ADAPTED FROM UNTITLED, UNDATED, ELECTRONIC COPIES OF THE SITE PLAN, PREPARED BY V+T AND PROVIDED TO GTA ON MARCH 26, 2022.

LEGEND  
B-15 IDENTIFICATION AND APPROXIMATE LOCATION OF STANDARD PENETRATION TEST (SPT) BORINGS PERFORMED BY HILLIS CARNES ENGINEERING ASSOCIATES (HCEA) IN MARCH OF 2018 AND JANUARY AND FEBRUARY OF 2017.

NOTES  
1. BORING LOCATIONS WERE REFERENCED FROM THE BORING LOCATION PLAN, PREPARED BY HCEA AND PRESENTED IN THEIR REVISED - GEOTECHNICAL ENGINEERING STUDY, DORSEY OVERLOOK SENIOR BUILDING, DATED APRIL 5, 2018.

NO.	REVISION	DATE
1	REVISIONS TO ADDRESS COUNTY COMMENTS	05/27/2022

**WALL NOS. 3 & 4 PLAN VIEW AND PROFILES**

**DORSEY OVERLOOK  
RETAINING WALLS**

ZONED: R-APT  
PARCELS: 67, 51, 52  
288, 53, 54, 55  
HOWARD COUNTY, MARYLAND

2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
DPZ REF'S: EOP-15-012, BA-20-003V, F-21-023

**GTA**  
**GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS**  
14280 PARK CENTER DRIVE, SUITE: A  
LAUREL, MARYLAND 20707  
(410) 792-9446 or (301) 470-4470  
WWW.GTAENG.COM  
©GEO-TECHNOLOGY ASSOCIATES, INC.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
1/23/2023

CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE 1/23/2023

CHIEF, DIVISION OF PLANNING AND DEVELOPMENT  
DATE 1/24/2023

DIRECTOR  
DATE

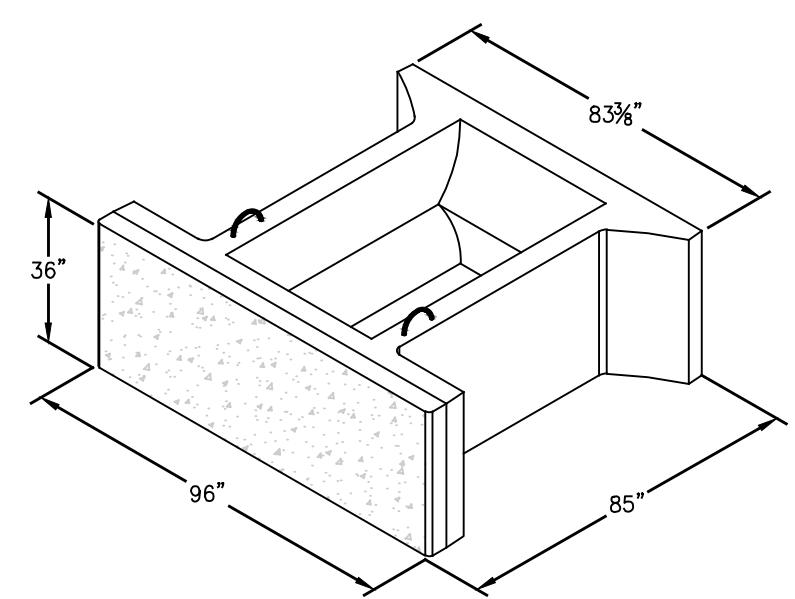
OWNER/DEVELOPER  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5670 B FURNACE AVENUE  
ELK RIDGE, MARYLAND 21075  
PHONE: (410) 788-0027



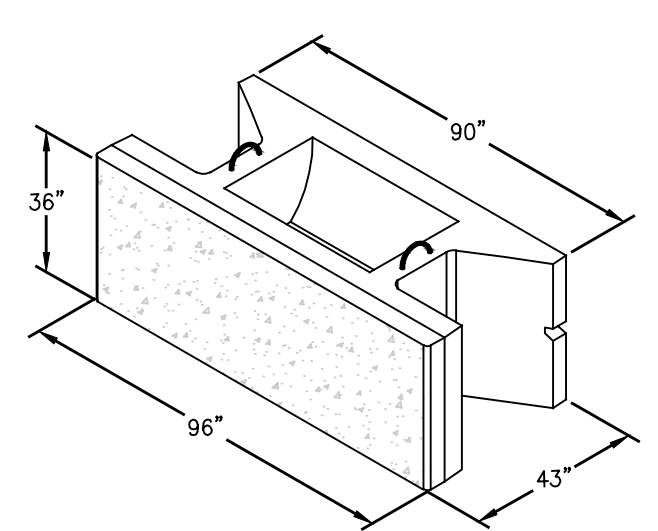
DESIGN BY: ADM  
CHECKED BY: VMH  
DATE: MARCH 10, 2022  
SCALE: AS SHOWN  
JOB NO.: 181841X1

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 29184, EXPIRATION DATE: 06/16/2023.

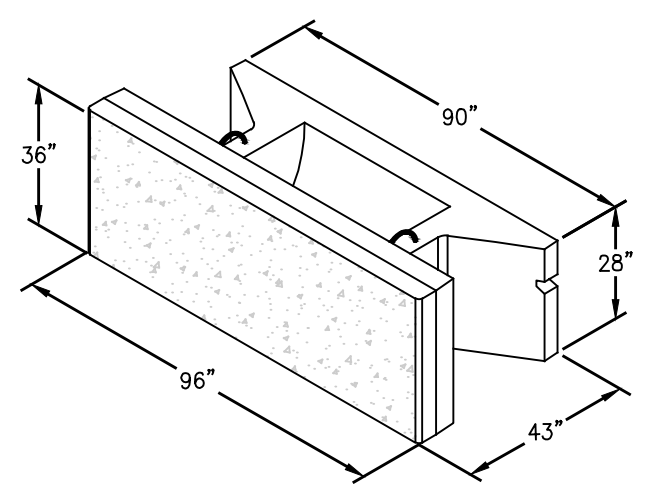
28 SHEET OF 30



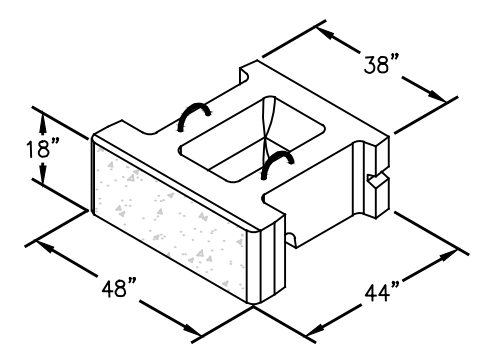
**STONE STRONG 24-86 UNIT**  
**VERTICAL FACE (24-86)**  
NOT TO SCALE



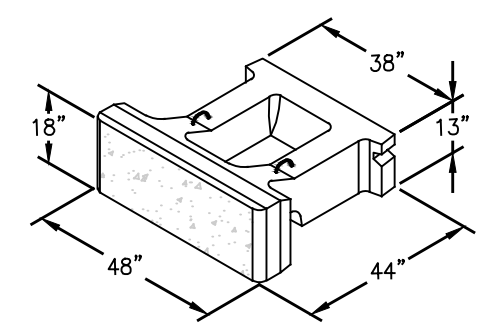
**STONE STRONG 24SF UNIT**  
**VERTICAL FACE (24SF)**  
NOT TO SCALE



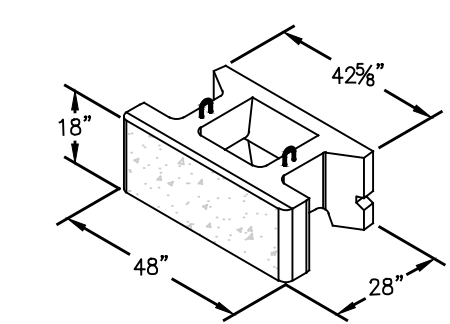
**STONE STRONG 24SF TOP UNIT**  
**VERTICAL FACE (24SFT)**  
NOT TO SCALE



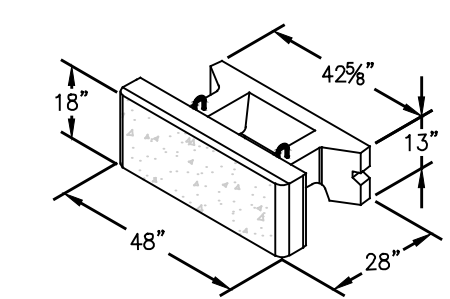
**STONE STRONG 6SF UNIT (6SF)**  
NOT TO SCALE



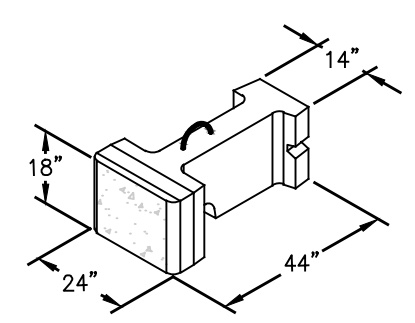
**STONE STRONG 6SF TOP UNIT (6SFT)**  
NOT TO SCALE



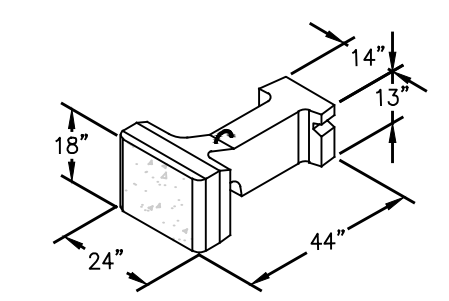
**STONE STRONG 6-28 UNIT (6-28)**  
NOT TO SCALE



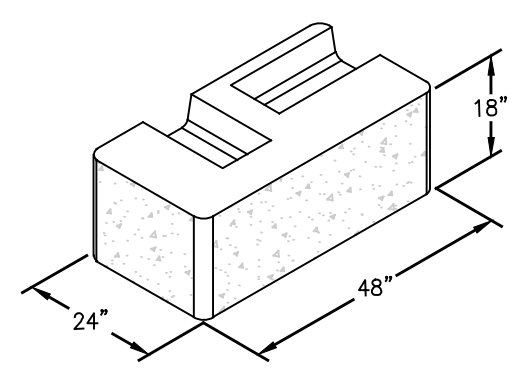
**STONE STRONG 6-28 TOP UNIT (6-28T)**  
NOT TO SCALE



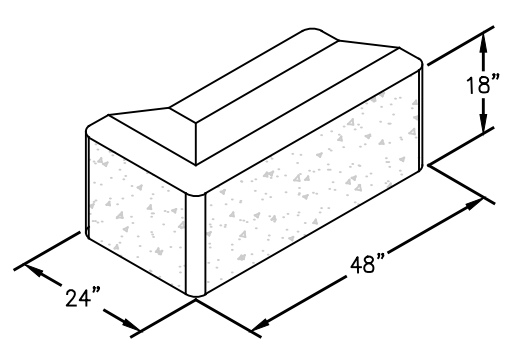
**STONE STRONG 3SF UNIT (3SF)**  
NOT TO SCALE



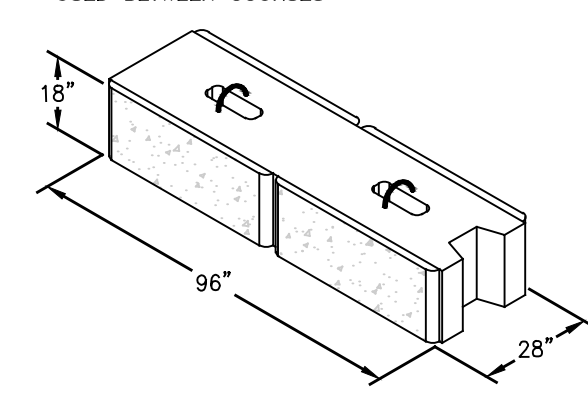
**STONE STRONG 3SF TOP UNIT (3SFT)**  
NOT TO SCALE



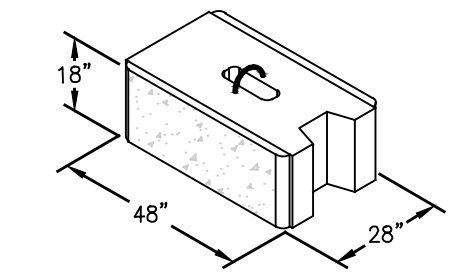
**STONE STRONG CORNER UNIT (CNR)**  
NOT TO SCALE



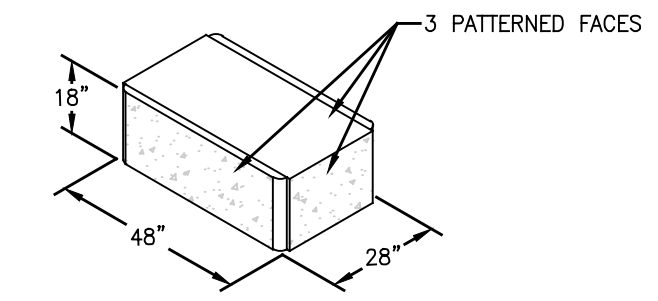
**STONE STRONG END UNIT (EU)**  
NOT TO SCALE



**STONE STRONG DUAL FACE UNIT (DF)**  
NOT TO SCALE



**STONE STRONG DUAL FACE HALF UNIT (DFHU)**  
NOT TO SCALE

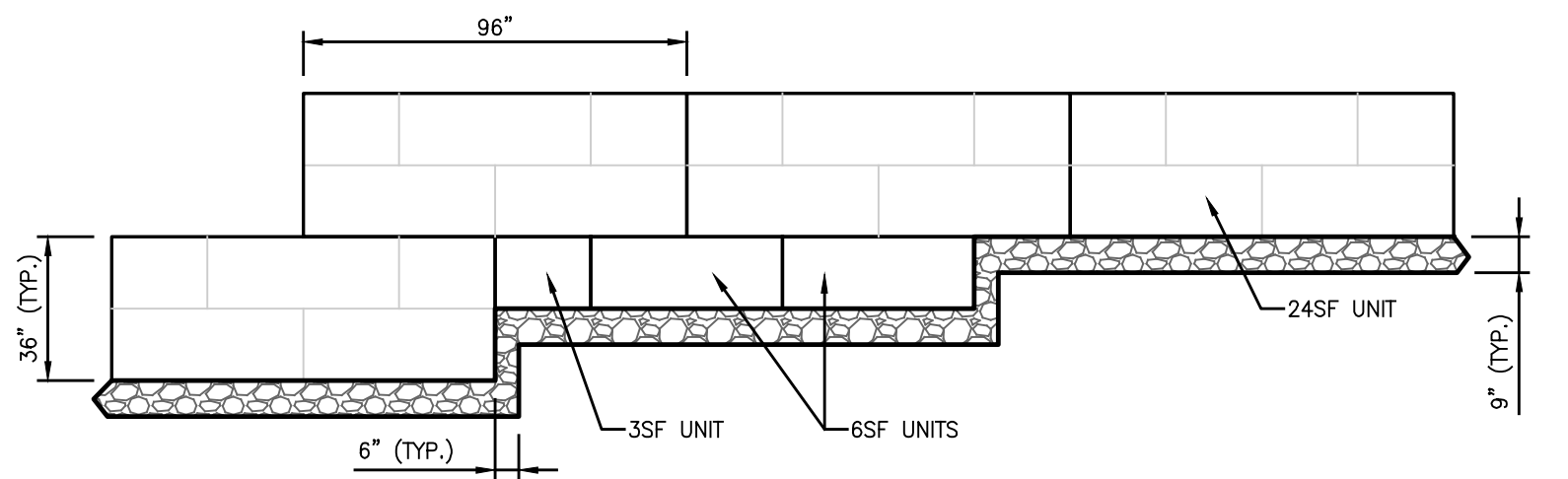


**STONE STRONG DUAL FACE END UNIT (DFEU)**  
NOT TO SCALE

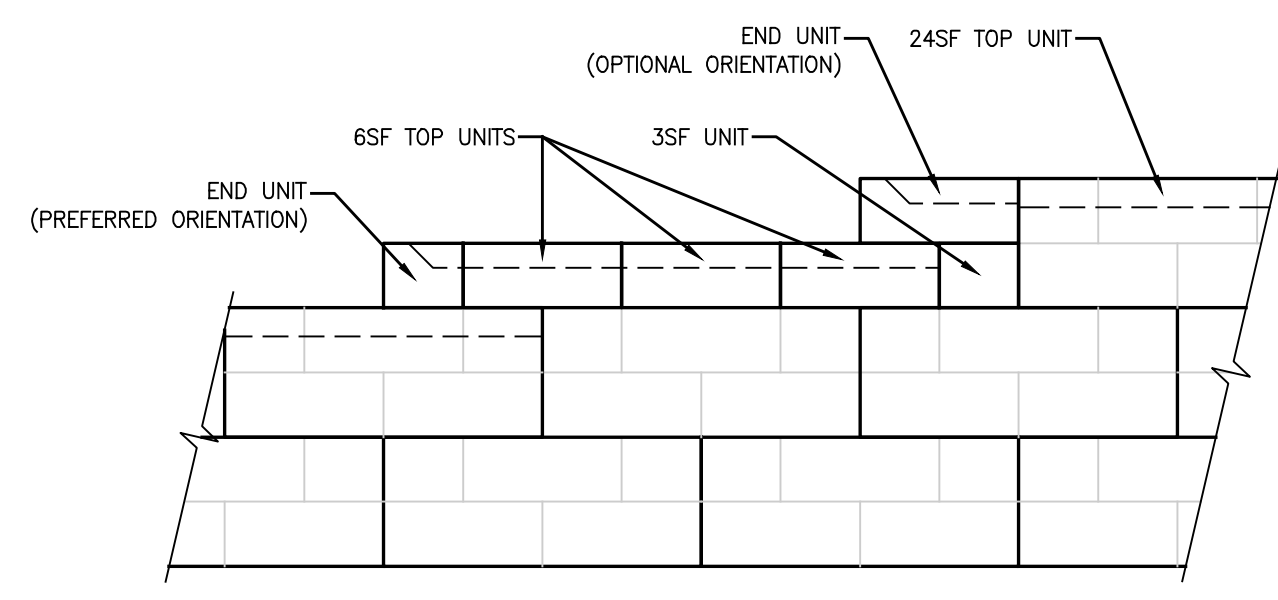
NOTE:  
END MAY BE MITERED FOR INSTALLATION ON A RADIUS.  
UNITS MAY BE CUT OR FORMED AS NEEDED IN LENGTH  
BETWEEN 2.0 FEET AND 8.0 FEET.  
OPTIONAL - BACKER RODS, GROUT OR MASTIC MAY BE  
USED BETWEEN COURSES

NOTE:  
END MAY BE MITERED FOR INSTALLATION ON A RADIUS.  
UNITS MAY BE CUT OR FORMED AS NEEDED IN LENGTH  
BETWEEN 2.0 FEET AND 4.0 FEET.  
OPTIONAL - BACKER RODS, GROUT OR MASTIC MAY BE  
USED BETWEEN COURSES

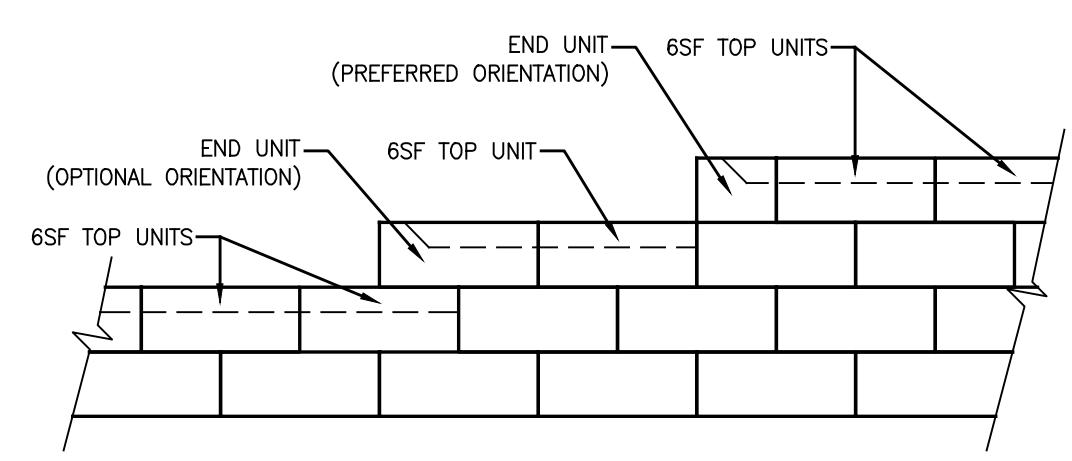
NOTE:  
OPTIONAL - BACKER RODS, GROUT OR  
MASTIC MAY BE USED BETWEEN COURSES



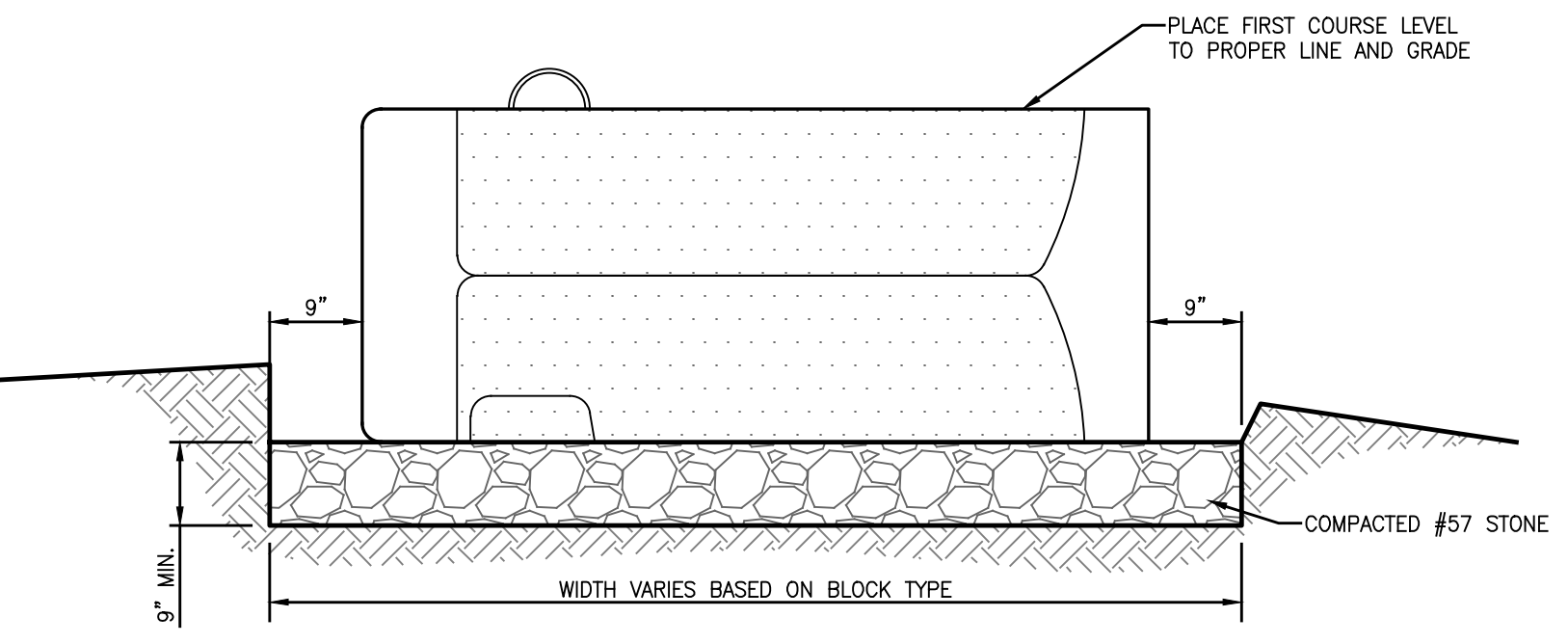
**ELEVATION**



**24SF UNITS**



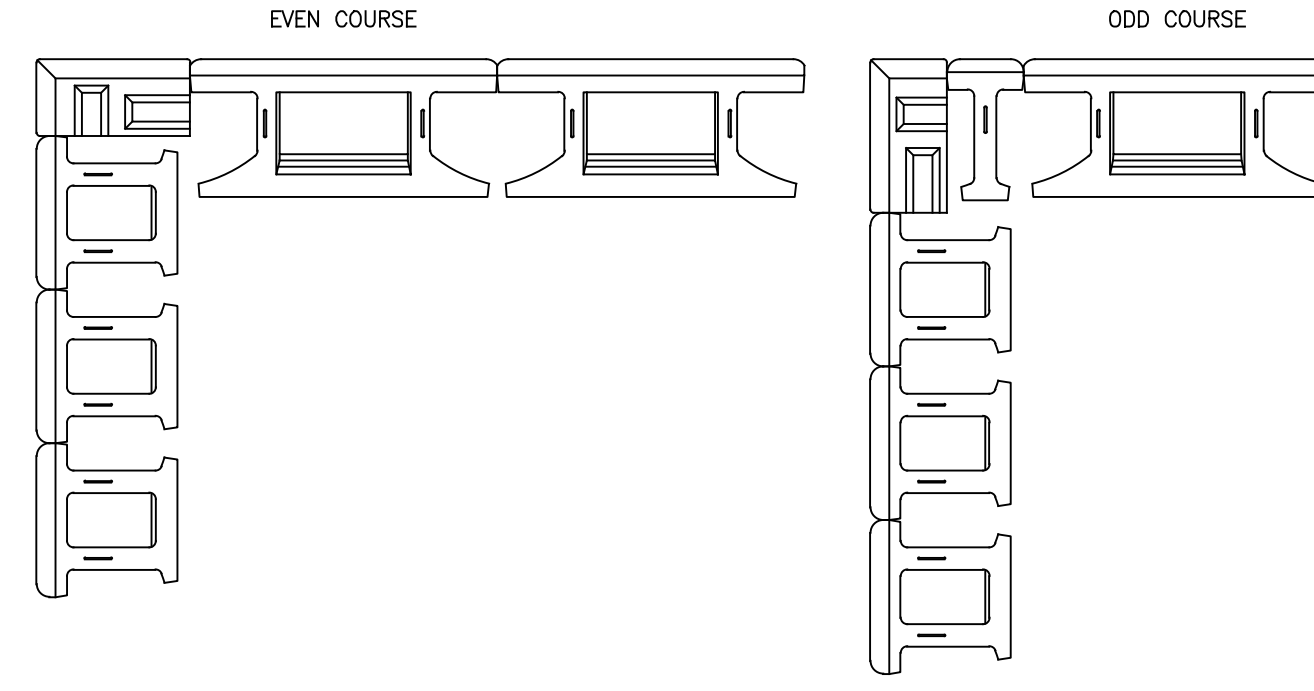
**6SF UNITS**



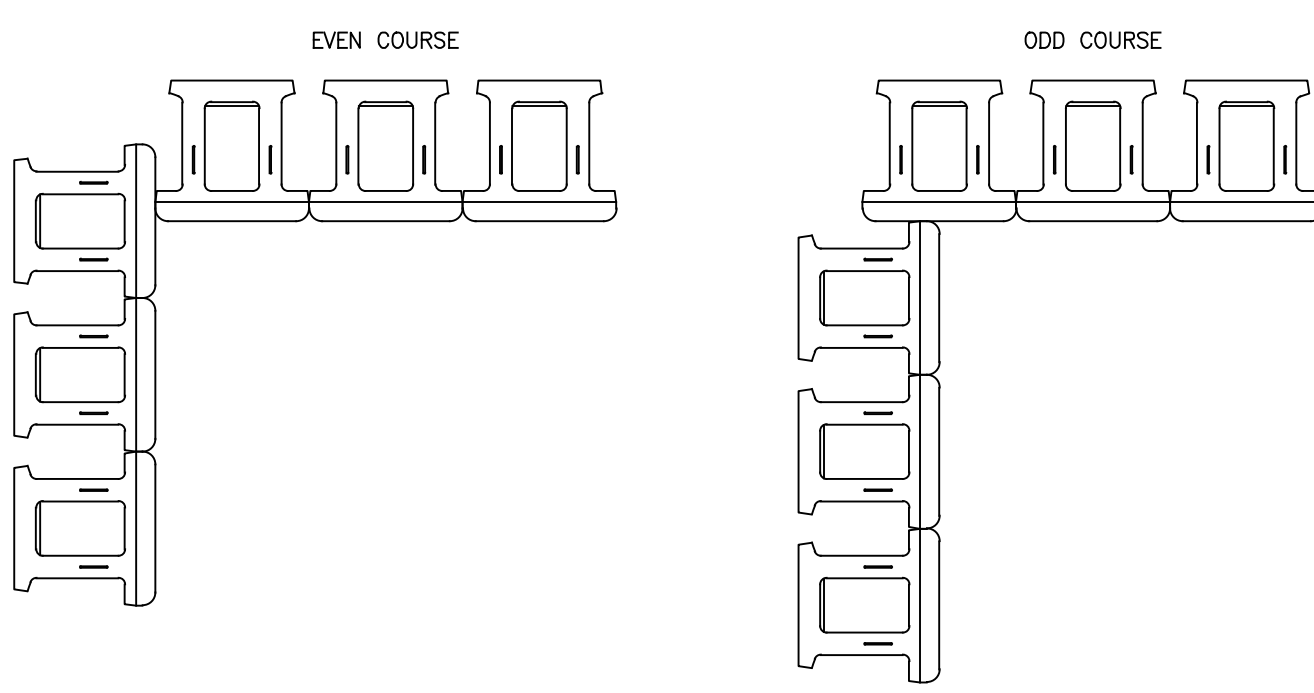
**SECTION**

**LEVELING PAD DETAIL**  
NOT TO SCALE

NOTE:  
BLOCK TYPE VARIES BASED ON PROFILE LAYOUT. CAST  
SLEEVE FOR FENCE POST IN TOP CORNER BLOCK.



**90° OUTSIDE CORNER DETAIL**  
NOT TO SCALE



**90° LACED INSIDE CORNER DETAIL**  
NOT TO SCALE

NO.	REVISION	DATE
1	REVISIONS TO ADDRESS COUNTY COMMENTS	05/27/2022

**TYPICAL DETAILS**

**DORSEY OVERLOOK**  
**RETAINING WALLS**

2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
DPZ REF'S: EOP-15-012, BA-20-003V, F-21-023

**GTA** **GEO-TECHNOLOGY ASSOCIATES, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
14280 PARK CENTER DRIVE, SUITE: A  
LAUREL, MARYLAND 20707  
(410) 792-9446 or (301) 470-4470  
WWW.GTAENG.COM  
©GEO-TECHNOLOGY ASSOCIATES, INC.

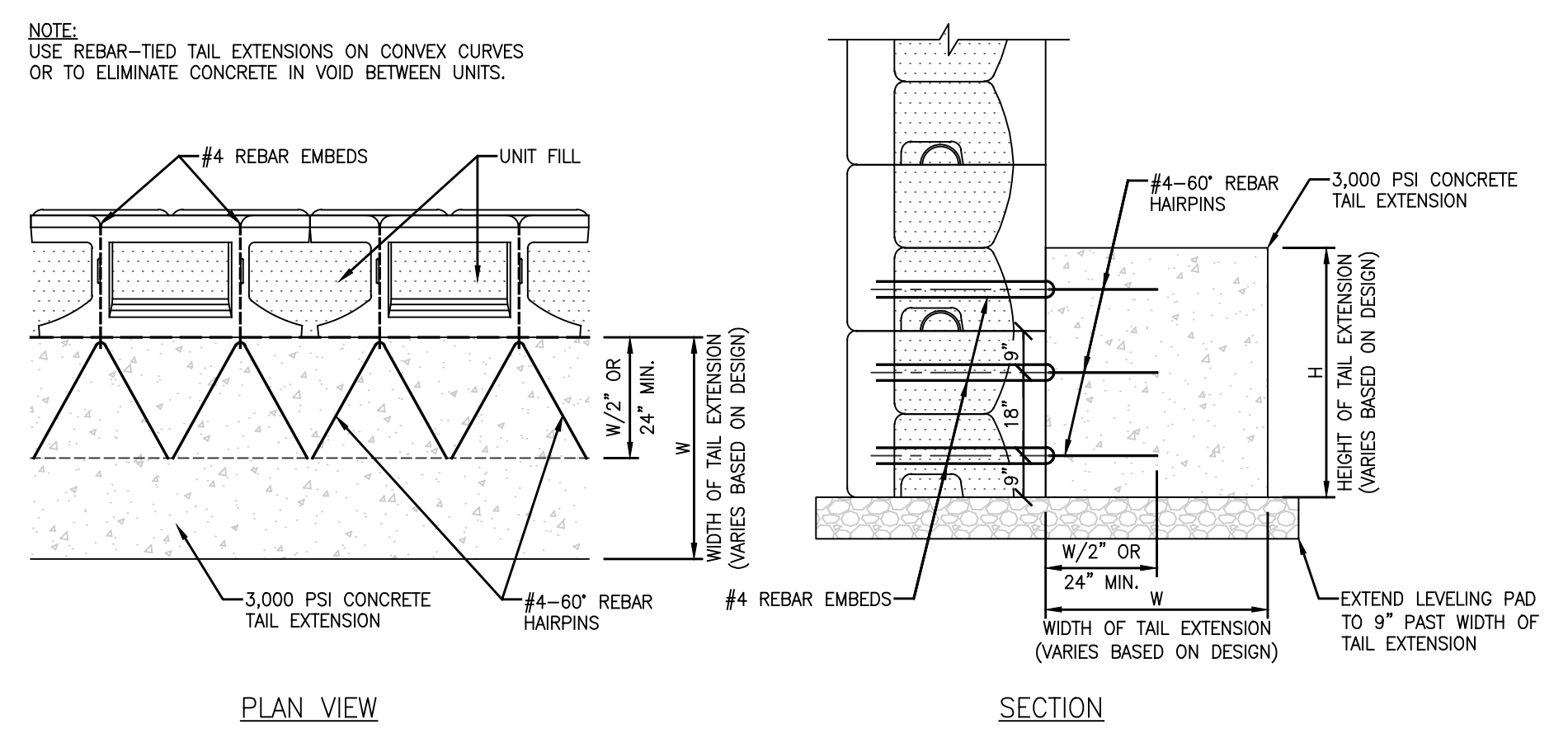


DESIGN BY: ADM  
DRAWN BY: VMH  
CHECKED BY: BTJ  
DATE: MARCH 10, 2022  
SCALE: AS SHOWN  
JOB NO.: 181841X1

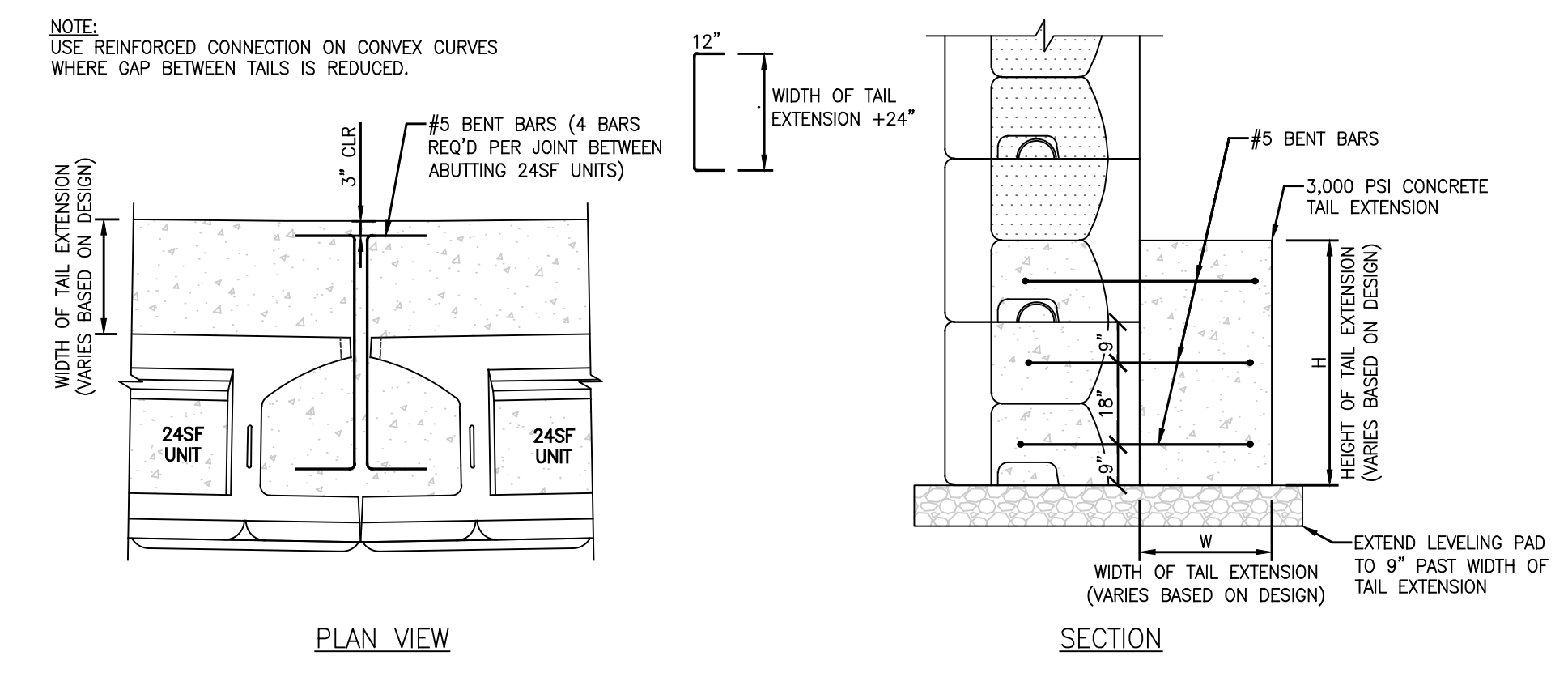
I HEREBY CERTIFY THAT THESE DOCUMENTS  
WERE PREPARED OR APPROVED BY ME, AND  
THAT I AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE  
OF MARYLAND, LICENSE NO. 21814  
EXPIRATION DATE: 06/16/2023

APPROVED: HOWARD COUNTY, DEPARTMENT OF PLANNING AND ZONING  
1/23/2023  
Howard Edmondson  
7003F754E41499...  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
DATE 1/23/2023  
Amey Gnanan  
1E037547A2020404...  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE 1/24/2023  
DIRECTOR  
DATE

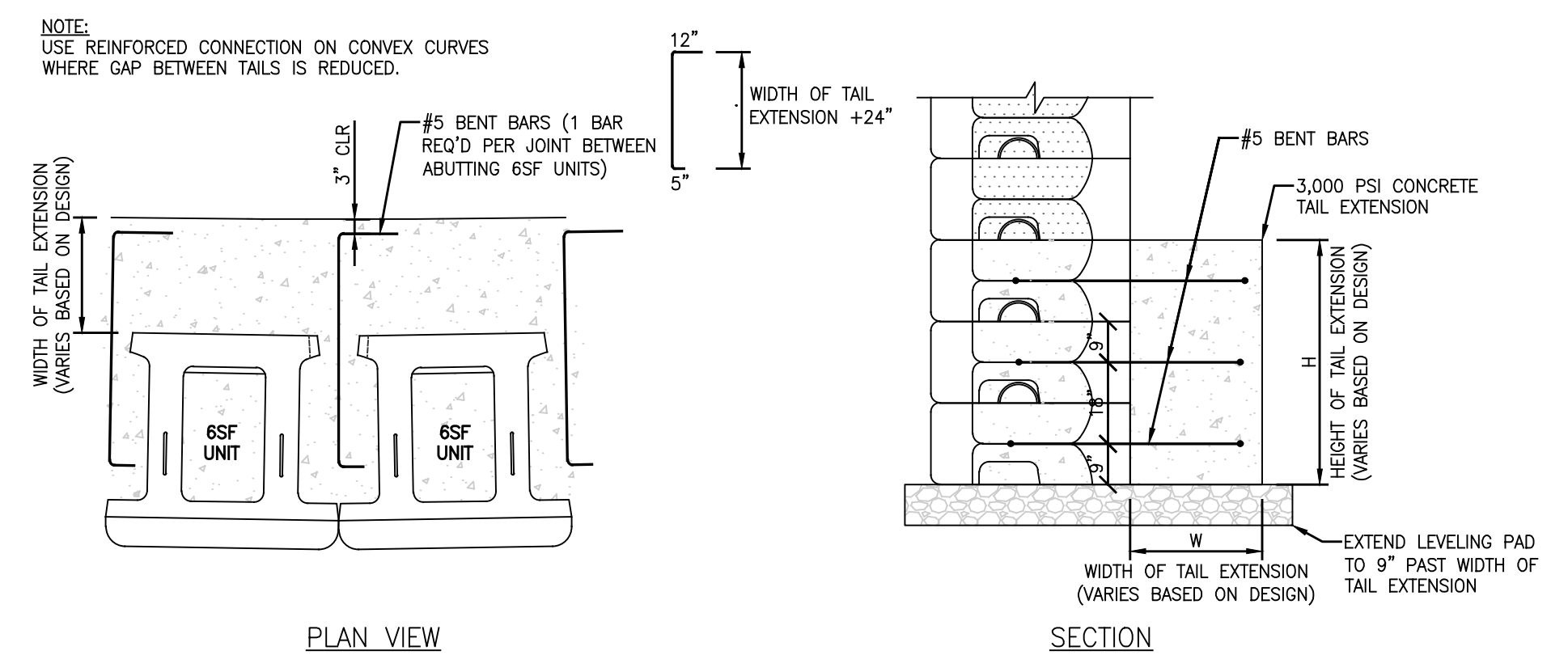
OWNER/DEVELOPER  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5670 B FURNACE AVENUE  
ELK RIDGE, MARYLAND 21075  
PHONE: (410) 788-0027



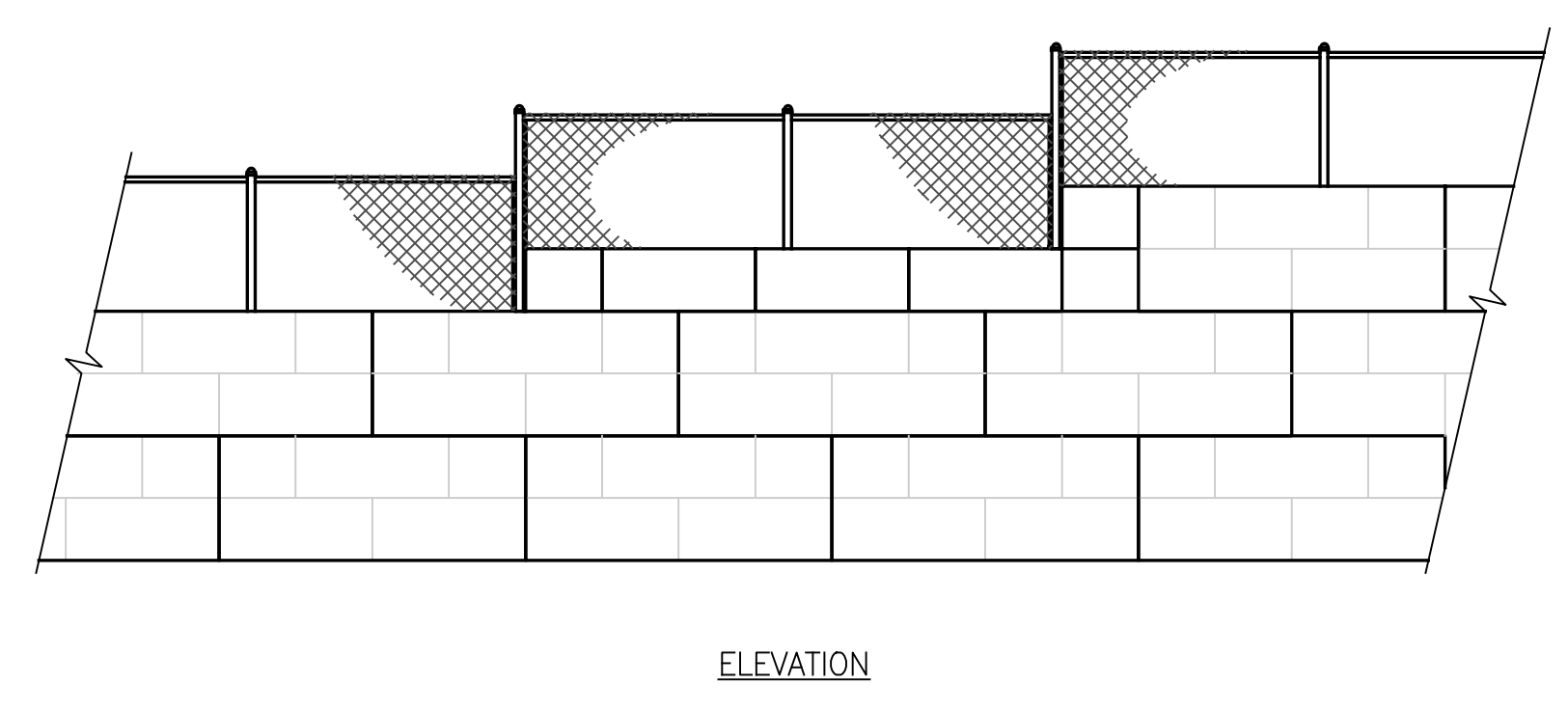
**REBAR-TIED CAST-IN-PLACE CONCRETE TAIL EXTENSION**  
NOT TO SCALE



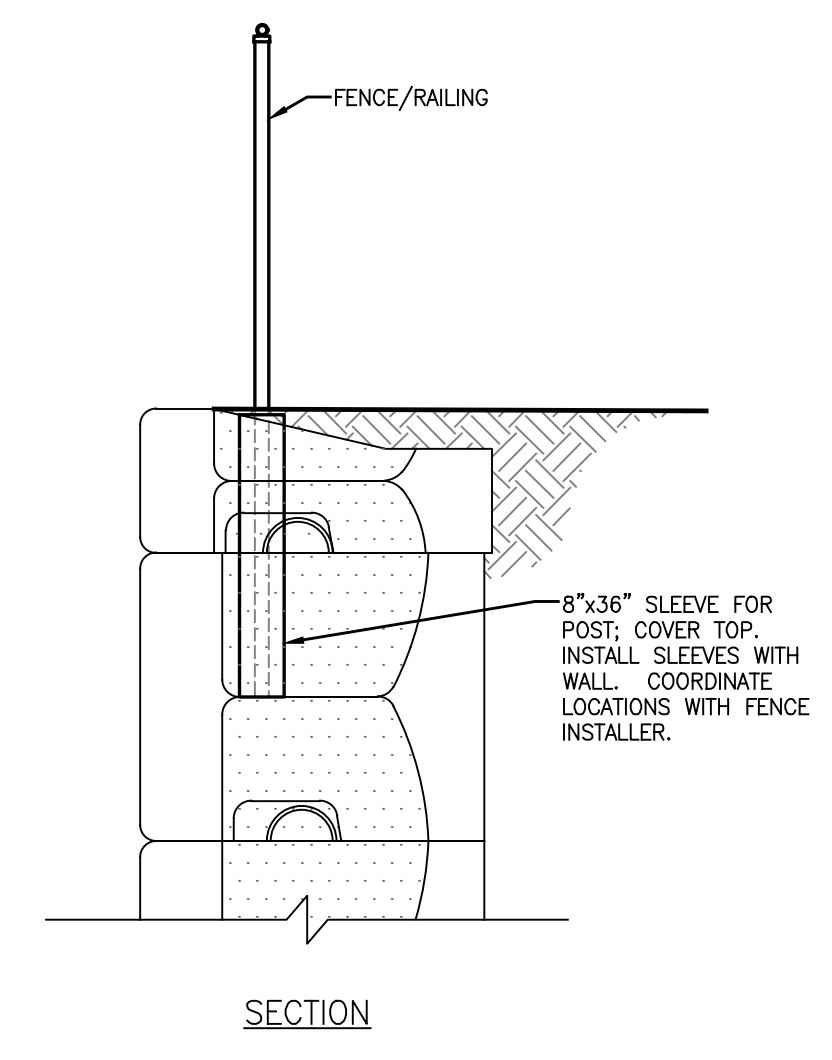
**REINFORCED CAST-IN-PLACE CONCRETE TAIL EXTENSION FOR 24SF UNITS**  
NOT TO SCALE



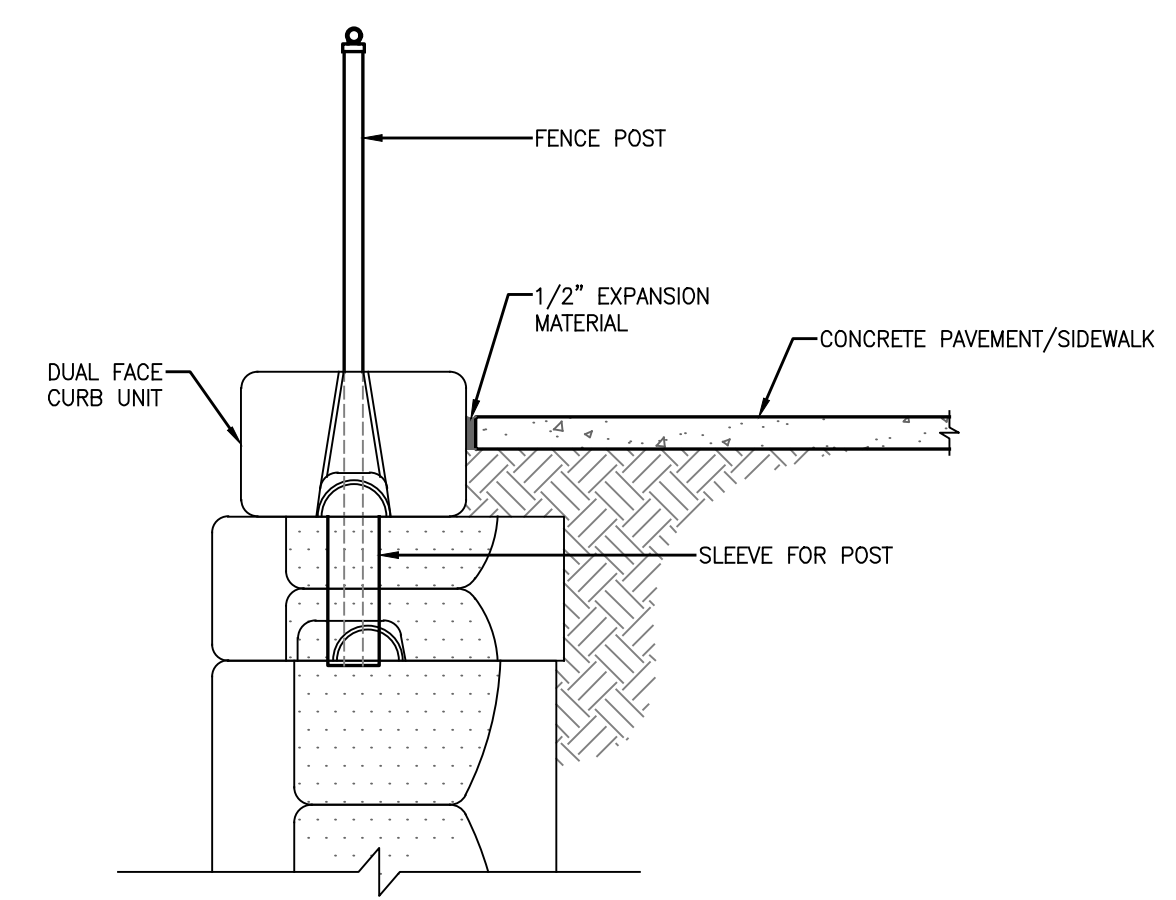
**REINFORCED CAST-IN-PLACE CONCRETE TAIL EXTENSION FOR 6SF UNITS**  
NOT TO SCALE



ELEVATION



**TYPICAL DETAIL FOR FENCE/RAILING**  
NOT TO SCALE



**TOP OF WALL WITH SIDEWALK USING DUAL FACE UNIT**  
NOT TO SCALE

NO.	REVISION	DATE
1	REVISIONS TO ADDRESS COUNTY COMMENTS	05/27/2022

**TYPICAL DETAILS**

**DORSEY OVERLOOK  
RETAINING WALLS**

2ND ELECTION DISTRICT  
TAX MAP: 30 GRID: 9  
DPZ REF'S: EOP-15-012, BA-20-003V, F-21-023

ZONED: R-APT  
PARCELS: 67, 51, 52  
288, 53, 54, 55  
HOWARD COUNTY, MARYLAND

**GTA** **GEO-TECHNOLOGY ASSOCIATES, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
14280 PARK CENTER DRIVE, SUITE: A  
LAUREL, MARYLAND 20707  
(410) 792-9446 or (301) 470-4470  
WWW.GTAENG.COM  
©GEO-TECHNOLOGY ASSOCIATES, INC.

	DESIGN BY: <u>ADM</u>	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20184, EXPIRATION DATE: 06/16/2023.
	DRAWN BY: <u>VMH</u>	
	CHECKED BY: <u>BTD</u>	
	DATE: <u>MARCH 10, 2022</u>	
SCALE: <u>AS SHOWN</u>	JOB NO.: <u>181841X1</u>	<b>30</b> SHEET <b>30</b> OF

APPROVED: HOWARD COUNTY, DEPARTMENT OF PLANNING AND ZONING

*AMW Edmondson* 1/23/2023  
7003754E41499...  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 1/23/2023

*Amy Olan* 1/24/2023  
1410747A202040A...  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 1/24/2023

DIRECTOR DATE

OWNER/DEVELOPER  
DORSEY OVERLOOK, LLLP  
C/O J. KIRBY DEVELOPMENT, LLC  
5670 B FURNACE AVENUE  
ELK RIDGE, MARYLAND 21075  
PHONE: (410) 788-0027