

FINAL WATER AND SEWER PLAN

DORSEY OVERLOOK APARTMENTS

HOWARD COUNTY, MARYLAND

CONTRACT 24-5005-D

GENERAL NOTES

PART I

- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON JUNE 27, 2014 BY ROBERT H. VOGEL ENGINEERING, INC.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 300C AND 31AC. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL 300A (N 573,149.04 E 1,357,083.21)
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
GEODETIC SURVEY CONTROL 300B (N 572,298.12 E 1,353,001.79)
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATIONS OF THE TEST PITS. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATION AT HIS EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
AT&T 800-252-1133
BGE (CONTRACTOR SERVICES) 410-637-8713
BGE (EMERGENCY) 410-685-0123
BUREAU OF UTILITIES 410-313-4900
COLONIAL PIPELINE CO 410-795-1390
MISS UTILITY 800-257-7777
STATE HIGHWAY ADMINISTRATION 410-531-5533
VERIZON 800-743-0033
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.

PART II - WATER

- ALL WATER MAINS SHALL BE PVC-C900 DR-18, UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. 17 POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 12 POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
- PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF THE PVC PIPE. ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED, WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING. PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2- DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL. FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR 18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (PEX) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATES AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

PART III - SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. (SDR-35) UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL C5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-20-074.

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

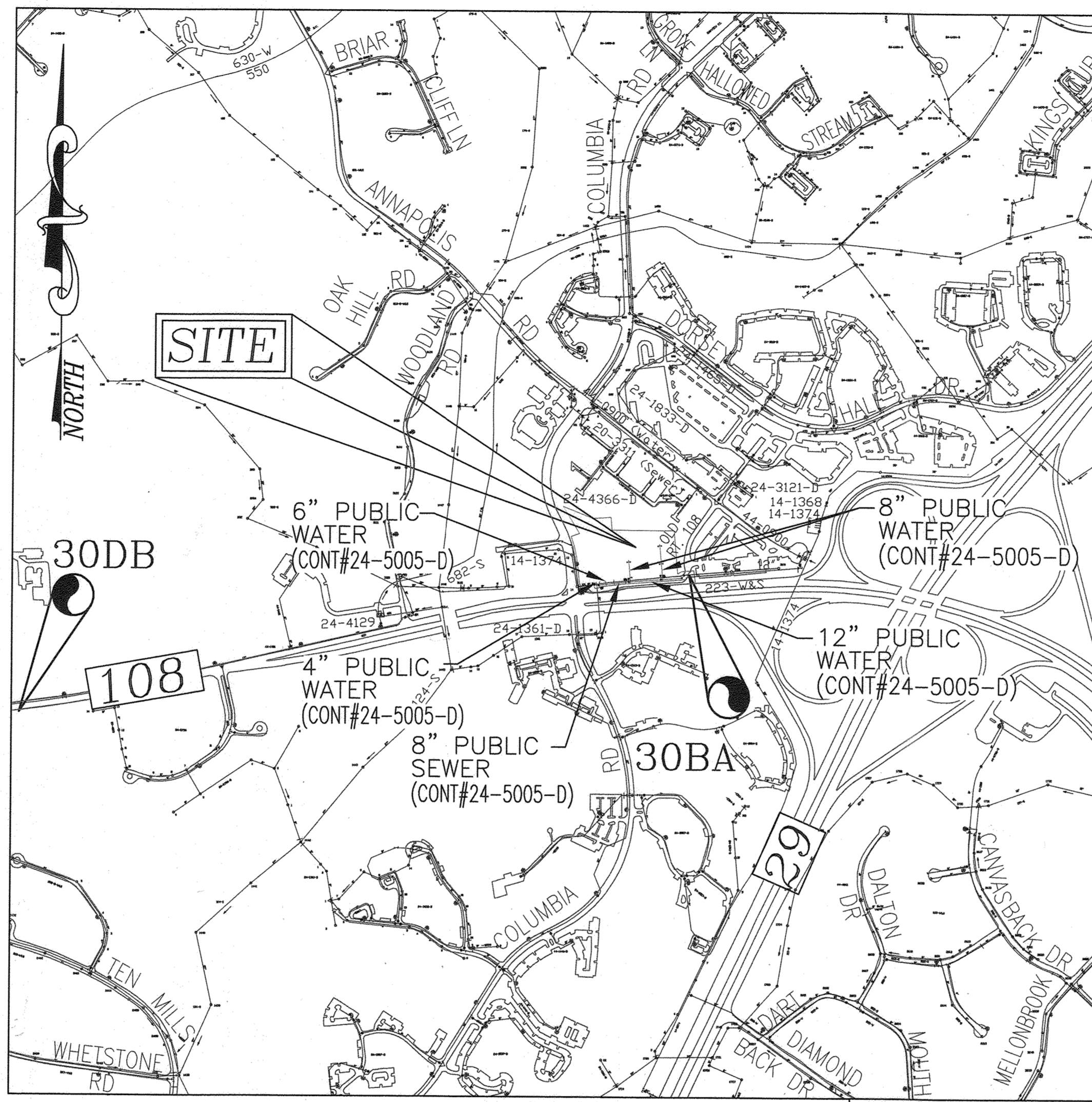
SOIL CONSERVATION DISTRICT _____ DATE _____

NOTE: SEE SHEET 4 OF 4 FOR SEQUENCE OF CONSTRUCTION

ADDRESSES IMPACTED BY WATER SHUT DOWN	
9495 OLD ANNAPOLIS ROAD	9501 OLD ANNAPOLIS ROAD

*NOTE: ADDRESSES ALONG OLD ANNAPOLIS ROAD ARE SERVED BY CONTRACT # 44-0090 AND WILL NOT BE IMPACTED BY THE WATER SHUT DOWN.

TYPE OF BUILDING:	R-APT
NO. OF LOTS/PARCELS:	10 BUILDINGS / 78 UNITS
NO. OF SINGLE WATER HOUSE CONNECTIONS:	0
NO. OF TWIN WATER HOUSE CONNECTIONS:	0
NO. OF SEWER HOUSE CONNECTIONS:	0
NO. OF TWIN SEWER HOUSE CONNECTIONS:	0
DRAINAGE AREA:	LITTLE PATUXENT RIVER
TREATMENT PLANT:	LITTLE PATUXENT WATER RECLAMATION PLANT



LOCATION MAP

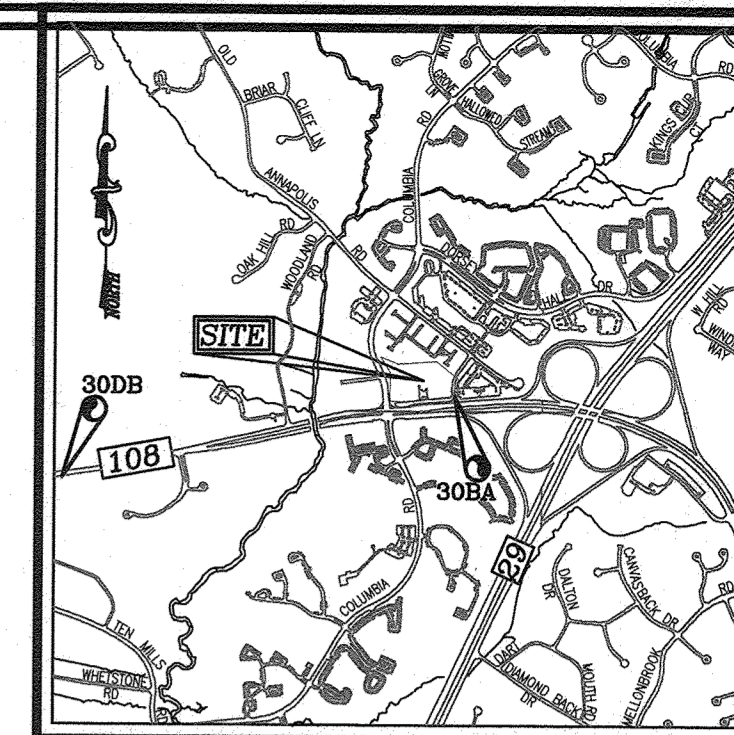
SCALE: 1"=600'

WATER ZONE:	550
TEST GRADIENT:	827
TEST PRESSURE:	199.76 PSI

BENCHMARKS

HOWARD COUNTY BENCHMARK - 300A (CONC. MONUMENT)
N 573149.04 E 1357083.21 ELEV. 397.20
LOCATION: OLD ROUTE 108, 480' SOUTH OF OLD ANNAPOLIS ROAD

HOWARD COUNTY BENCHMARK - 300B (CONC. MONUMENT)
N 572298.12 E 1353001.79 ELEV. 409.16
LOCATION: SOUTH SIDE OF ROUTE 108, 700' EAST ENTRANCE TO CENTENAL PARK



VICINITY MAP

SCALE: 1"=2000'
ADC MAP COORDINATE: 15/J,K 1

LEGEND:

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	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 FENCE
	EXISTING STORM DRAIN AND MANHOLE
	EXISTING TREES
	EXISTING TREE LINE
	PROPOSED STORM DRAIN
	PROPOSED INLETS
	PROPOSED WATER MAIN
	FIRE DEPARTMENT CONNECTION
	FIRE HYDRANT
	PROPOSED VALVE
	PROPOSED TEE
	PROPOSED SEWER MANHOLE
	PROPOSED SEWER MAIN
	WATER HOUSE CONNECTION
	PROPOSED SEWER CLEANOUT
	SEWER HOUSE CONNECTION

SHEET INDEX

DESCRIPTION	SHEET NO.
COVER SHEET & LOCATION MAP	1 OF 4
LAYOUT PLAN	2 OF 4
WATER AND SEWER PROFILES	3 OF 4
DEMOLITION, REMOVAL & RELOCATION PLAN	4 OF 4

QUANTITIES

NAME OF UTILITY CONTRACTOR:		SURVEY AND DRAFTING DIVISION AS-BUILT DATE:			
ITEMS	QUANTITIES ESTIMATED	QUANTITIES AS-BUILT		MANUFACTURER/SUPPLIER	
		ESTIMATED	AS-BUILT	TYPE	MANUFACTURER/SUPPLIER
WATER					
4" WATER (PVC-C900 DR-18)	136 LF	136 LF	DR-18	NATIONAL PIPE / LB WATER	
6" WATER (PVC-C900 DR-18)	31 LF	31 LF	DR-18	NATIONAL PIPE / LB WATER	
8" PUBLIC WATER (PVC-C900 DR-18)	366 LF	366 LF	DR-18	NATIONAL PIPE / LB WATER	
12" PUBLIC WATER (PVC-C900 DR-18)	582 LF	582 LF	DR-18	NATIONAL PIPE / LB WATER	
8" WATER (DIP CLASS 54) - FH	70 LF	70 LF	CLASS 54-FH	US PIPE / LB WATER	
12" x 8" MIP AND 12" GATE VALVE	2 EA	2	MJ	STAR PIPE / LB WATER	
12" x 6" TEE	3 EA	3	MJ	STAR PIPE / LB WATER	
12" x 4" TEE	2 EA	2	MJ	STAR PIPE / LB WATER	
8" x 6" TEE	3 EA	3	MJ	STAR PIPE / LB WATER	
8" x 4" TEE	1 EA	1	MJ	STAR PIPE / LB WATER	
8" x 4" CROSS (W/ WHC)	3 EA	3	MJ	STAR PIPE / LB WATER	
4" VALVE	9 EA	9	2500 RW GATE	AMERICAN FLOW CONTROL / LB WATER	
6" VALVE	6 EA	6	2501 RW GATE	AMERICAN FLOW CONTROL / LB WATER	
8" VALVE	2 EA	2	2502 RW GATE	AMERICAN FLOW CONTROL / LB WATER	
12" VALVE	6 EA	6	2303 RW GATE	AMERICAN FLOW CONTROL / LB WATER	
FIRE HYDRANT	5 EA	5		AMERICAN DARLING / LB WATER	
12" - 1/8" HORIZONTAL BEND	6 EA	6	C900 HIGH	NORTH AMERICAN / LB WATER	
12" - 3" HORIZONTAL DEFLECTION	1 EA	1	C900 SWEEP	NORTH AMERICAN / LB WATER	
6" CAP AND BUTTRESS	2 EA	2		STAR PIPE / LB WATER	
6" CAP AND BUTTRESS	1 EA	1		STAR PIPE / LB WATER	
4" CAP AND BUTTRESS	9 EA	9		STAR PIPE / LB WATER	
SEWER					
8" PUBLIC SEWER (PVC SDR-35)	254 LF	254 LF	SDR-35	NATIONAL PIPE / LB WATER	
8" PUBLIC SEWER (DIP CLASS 54)	349 LF	349 LF	CL 54	US PIPE / LB WATER	
6" PUBLIC SEWER (PVC SDR-35)	36 LF	36 LF	SDR-35	NATIONAL PIPE / LB WATER	
STANDARD MANHOLES	9 EA	9	PRECAST	CPC	

UTILITY ACCESS AREA NOTE:

PUBLIC WATER AND SEWER EASEMENTS SHOWN ON THIS PLAN ARE IDENTIFIED AS "ACCESS AREA" WITH DESCRIPTION FOR PRIVATE ACCESS EASEMENT-EASEMENT CONDITIONS, ON COUNTY LAND.

OWNER/DEVELOPER

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

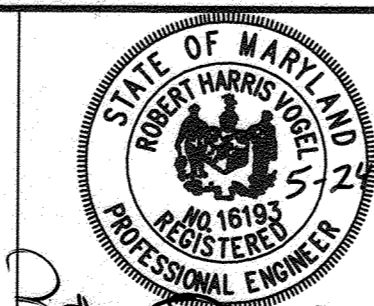
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
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
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: 09-27-2022

DES: DZE/RHV
DRN: KG/JR/DZE
CHK: RHV
DATE: MAY 2022

NO.	REVISION	DATE
AS BUILT		10/2/23
REVISE TO REPLACE TAPPING SLEEVES AND VALVES WITH TEES AND GATE VALVES, AND TO CORRECT SEWER CLASS		4-26-23

FINAL WATER AND SEWER PLAN COVER SHEET

600' SCALE MAP NO. 30

BLOCK NO. 9

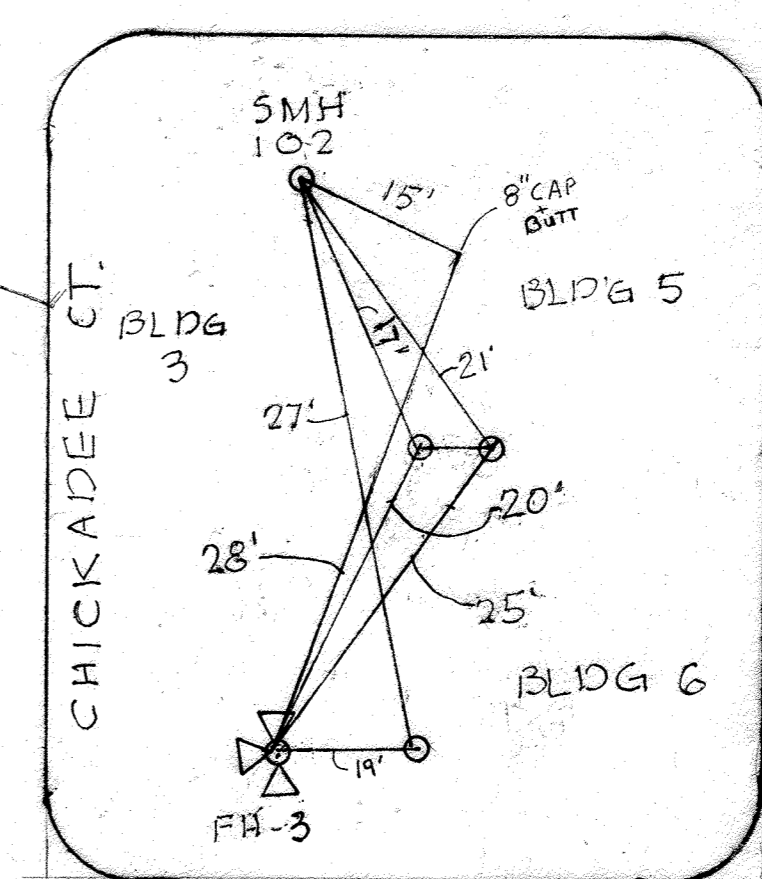
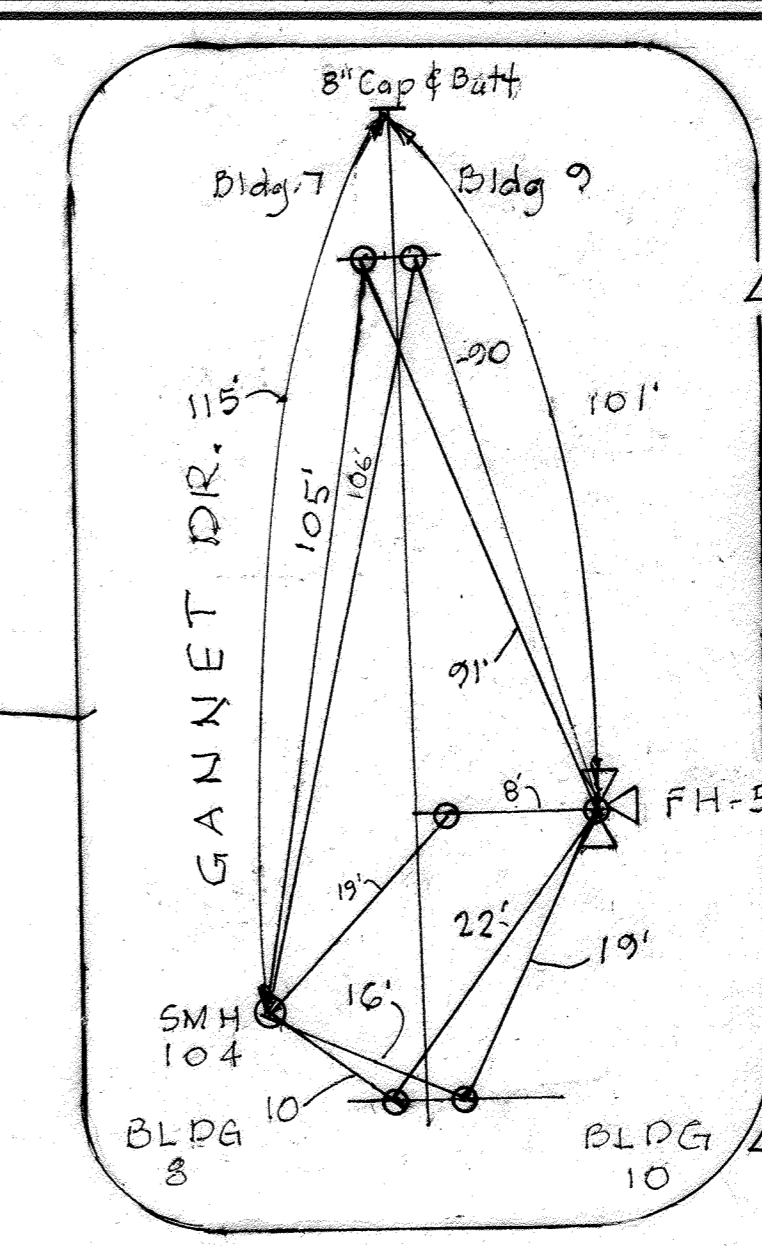
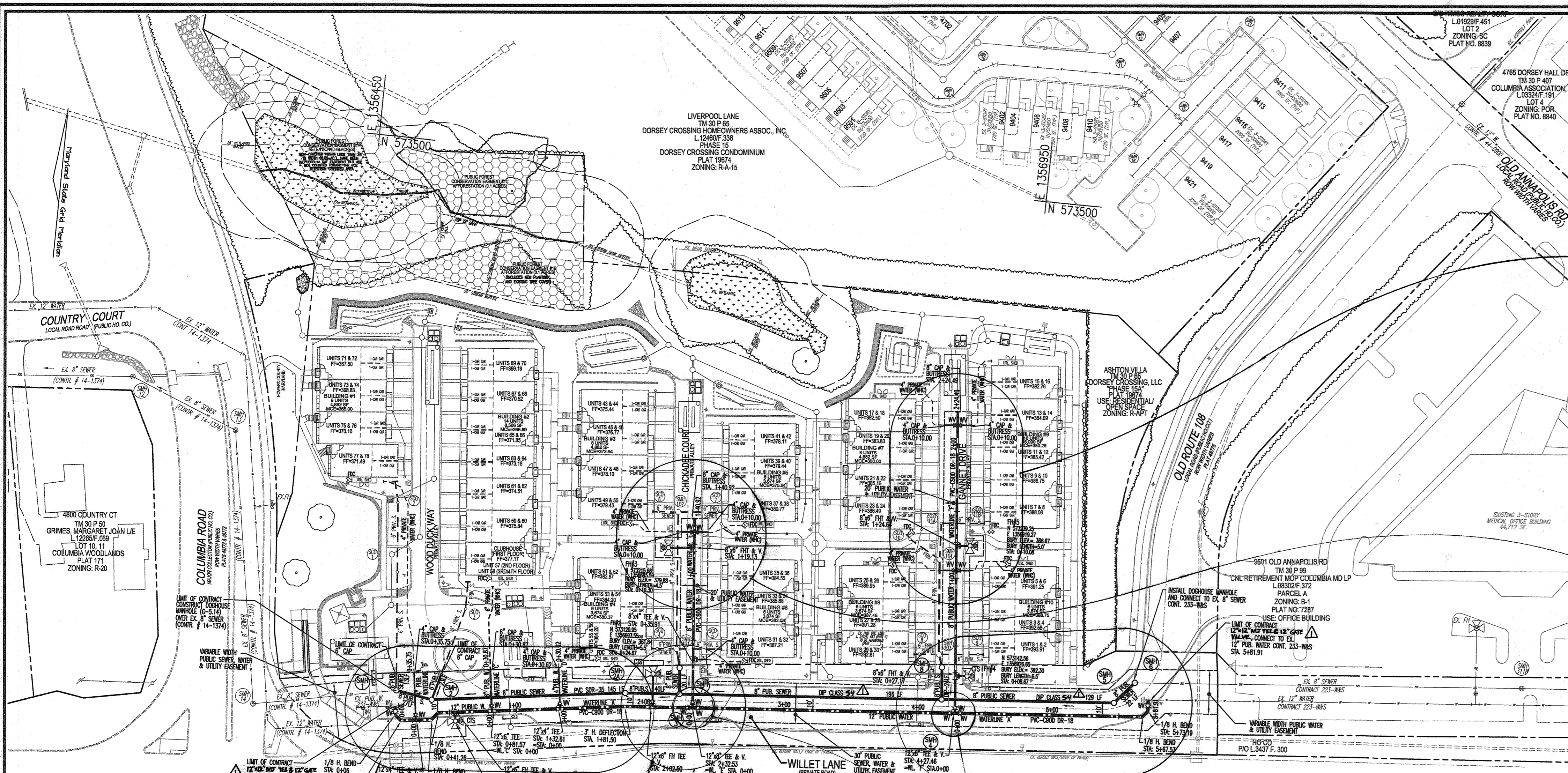
TAX MAP 30, GRID 9
2ND ELECTION DISTRICT

DORSEY OVERLOOK APARTMENT UNITS 1-78 PARCEL A CONTRACT NO. 24-5005-D

PARCELS 51, 52, 53, 54, 55, 67, 288
HOWARD COUNTY, MARYLAND

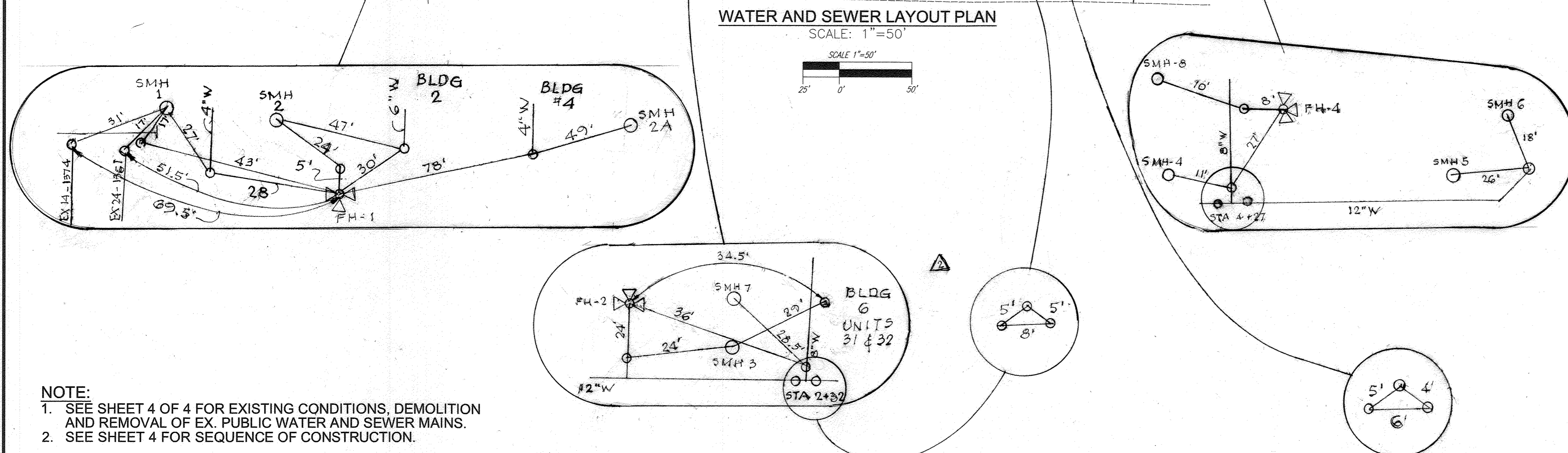
SCALE AS SHOWN

SHEET 1 OF 4



WATER MAIN LOCATION CHART			
STATION	APPURTENANCE	NORTHING	EASTING
WATERLINE 'A'			
WL 0+01.00	12"x12" 180° TEE & 12" GATE VALVE, CONNECT TO EX. 12" WATER LINE	573077.71	1356504.31
WL 0+06.00	12" - 1/8" H. BEND, ROTATE 2° UP		
WL 0+11.66	12" - 1/8" H. BEND, ROTATE 1° UP		
WL 0+22.68	12"x4" TEE (WATER LINE 'B')	573068.81	1356520.67
WL 0+41.26	12" - 1/8" H. BEND, ROTATE 1° DOWN		
WL 0+54.20	12"x6" FHM#1 TEE & 6" VALVE		
WL 0+81.57	12"x6" TEE (WATER LINE 'C')	573081.38	1356576.30
WL 1+19.91	12" - COUPLING 2' UP		
WL 1+32.61	12"x4" TEE (WATER LINE 'D')		
WL 1+81.50	3" H. DEFLECTION, ROTATE 0.50° DOWN	573088.21	1356628.89
WL 2+02.50	12"x6" FHM#2 TEE & 6" VALVE		
WL 2+27.76	12" VALVE	573098.42	1356721.45
WL 2+32.53	12"x8" TEE (WATER LINE 'E')	573098.74	1356725.44
WL 2+35.77	12" VALVE	573099.05	1356729.43
WL 2+75.78	COUPLING 1.75' DOWN		
WL 4+08.90	COUPLING 1.00' UP		
WL 4+23.46	12" VALVE	573113.89	1356916.54
WL 4+27.46	12"x8" TEE (WATER LINE 'F')	573114.25	1356920.52
WL 4+31.46	12" VALVE	573114.52	1356924.51
WL 5+25.76	COUPLING 1.50' DOWN		
WL 5+67.53	12" - 1/8" H. BEND, ROTATE 3° UP		
WL 5+73.19	12" - 1/8" H. BEND, ROTATE 2° UP		
WL 5+77.91	12" VALVE	573134.31	1357083.45
WL 5+81.91	12"x12" 180° TEE & 12" GATE VALVE, CONNECT TO EX. 12" WATER LINE	573138.29	1357083.15
WATERLINE 'B'			
WL 0+00	12"x4" TEE (WATER LINE 'A')	573068.81	1356520.67
WL 0+04	4" VALVE	573072.77	1356520.11
WL 0+10	COUPLING 2' UP		
WL 0+35.75	4" CAP AND BUTTRESS	573104.22	1356515.71
WATERLINE 'C'			
WL 0+00	12"x6" TEE (WATER LINE 'A')	573081.38	1356576.30
WL 0+04	6" VALVE	573085.34	1356575.77
WL 0+10	COUPLING 2' UP		
WL 0+30.87	6" CAP AND BUTTRESS	573111.98	1356572.17
WATERLINE 'D'			
WL 0+00	12"x4" TEE (WATER LINE 'A')	573088.21	1356628.89
WL 0+04	4" VALVE	573092.18	1356626.35
WL 0+10	COUPLING 2' UP		
WL 0+30.82	4" CAP AND BUTTRESS	573118.57	1356622.78
WATERLINE 'E'			
WL 0+00	12"x8" TEE (WATER LINE 'A')	573098.74	1356725.44
WL 0+04	8" VALVE	573102.72	1356725.08
WL 0+10	SWEEP 5' DOWN		
WL 0+20.55	SWEEP 5' DOWN		
WL 0+35.91	8"x4" TEE & V. (WHC)	573134.50	1356722.24
WL 0+48.73	COUPLING 3' DOWN		
WL 0+97.81	COUPLING 1.00' DOWN		
WL 1+19.13	8"x6" FHM#3 TEE AND VALVE		
WL 1+30.93	8"x4" CROSS & VALVES (2-WHC)	573229.14	1356713.76
WL 1+40.92	8" CAP AND BUTTRESS	573238.09	1356712.86
WATERLINE 'F'			
WL 0+00	12"x8" TEE (WATER LINE 'A')	573114.22	1356920.52
WL 0+04	8" VALVE	573118.19	1356920.16
WL 0+27.17	8"x6" FHM#4 TEE AND VALVE		
WL 0+50.00	COUPLING 3' DOWN		
WL 1+00.00	COUPLING 0.50' DOWN		
WL 1+24.64	8"x6" FHM#5 TEE AND VALVE		
WL 1+60.30	8"x4" CROSS & VALVES (2-WHC)	573220.07	1356910.88
WL 2+14.49	8"x4" CROSS & VALVES (2-WHC)	573327.81	1356901.07
WL 2+24.49	8" CAP AND BUTTRESS	573337.77	1356900.16

WATER HOUSE CONNECTION - AS-BUILT LOCATION TABLE			
UNIT#	STREET ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1-2	4000-A & B GANNET DRIVE		
3-4	4002-A & B GANNET DRIVE		
5-6	4004-A & B GANNET DRIVE		
7-8	4010-A & B GANNET DRIVE		
9-10	4012-A & B GANNET DRIVE		
11-12	4014-A & B GANNET DRIVE		
13-14	4016-A & B GANNET DRIVE		
15-16	4018-A & B GANNET DRIVE		
17-18	4019-A & B GANNET DRIVE		
19-20	4017-A & B GANNET DRIVE		
21-22	4015-A & B GANNET DRIVE		
23-24	4013-A & B GANNET DRIVE		
25-26	4005-A & B GANNET DRIVE		
27-28	4003-A & B GANNET DRIVE		
29-30	4001-A & B GANNET DRIVE		
31-32	4100-A & B CHICKADEE COURT		
33-34	4102-A & B CHICKADEE COURT		
35-36	4104-A & B CHICKADEE COURT		
37-38	4110-A & B CHICKADEE COURT		
39-40	4112-A & B CHICKADEE COURT		
41-42	4114-A & B CHICKADEE COURT		
43-44	4117-A & B CHICKADEE COURT		
45-46	4115-A & B CHICKADEE COURT		
47-48	4113-A & B CHICKADEE COURT		
49-50	4111-A & B CHICKADEE COURT		
51-52	4105-A & B CHICKADEE COURT		
53-54	4103-A & B CHICKADEE COURT		
55-56	4101-A & B CHICKADEE COURT		
CLUBHOUSE	4200-A WOOD DUCK WAY		
57-58	4200-B & C WOOD DUCK WAY		
59-60	4202-A & B WOOD DUCK WAY		
61-62	4204-A & B WOOD DUCK WAY		
63-64	4206-A & B WOOD DUCK WAY		
65-66	4208-A & B WOOD DUCK WAY		
67-68	4210-A & B WOOD DUCK WAY		
69-70	4212-A & B WOOD DUCK WAY		
71-72	4211-A & B WOOD DUCK WAY		
73-74	4209-A & B WOOD DUCK WAY		
75-76	4207-A & B WOOD DUCK WAY		
77-78	4205-A & B WOOD DUCK WAY		

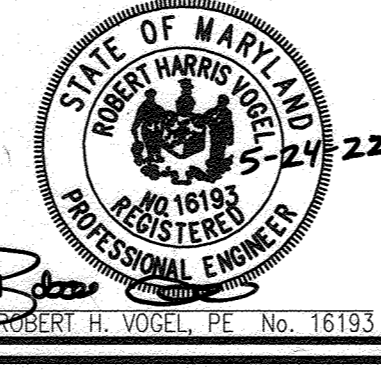


NOTE:
 1. SEE SHEET 4 OF 4 FOR EXISTING CONDITIONS, DEMOLITION AND REMOVAL OF EX. PUBLIC WATER AND SEWER MAINS.
 2. SEE SHEET 4 FOR SEQUENCE OF CONSTRUCTION.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 [Signature]
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

VOGEL ENGINEERING
TIMMONS GROUP
 3300 NORTH RIDGE ROAD, SUITE 110, ELLICOTT CITY, MD 21043
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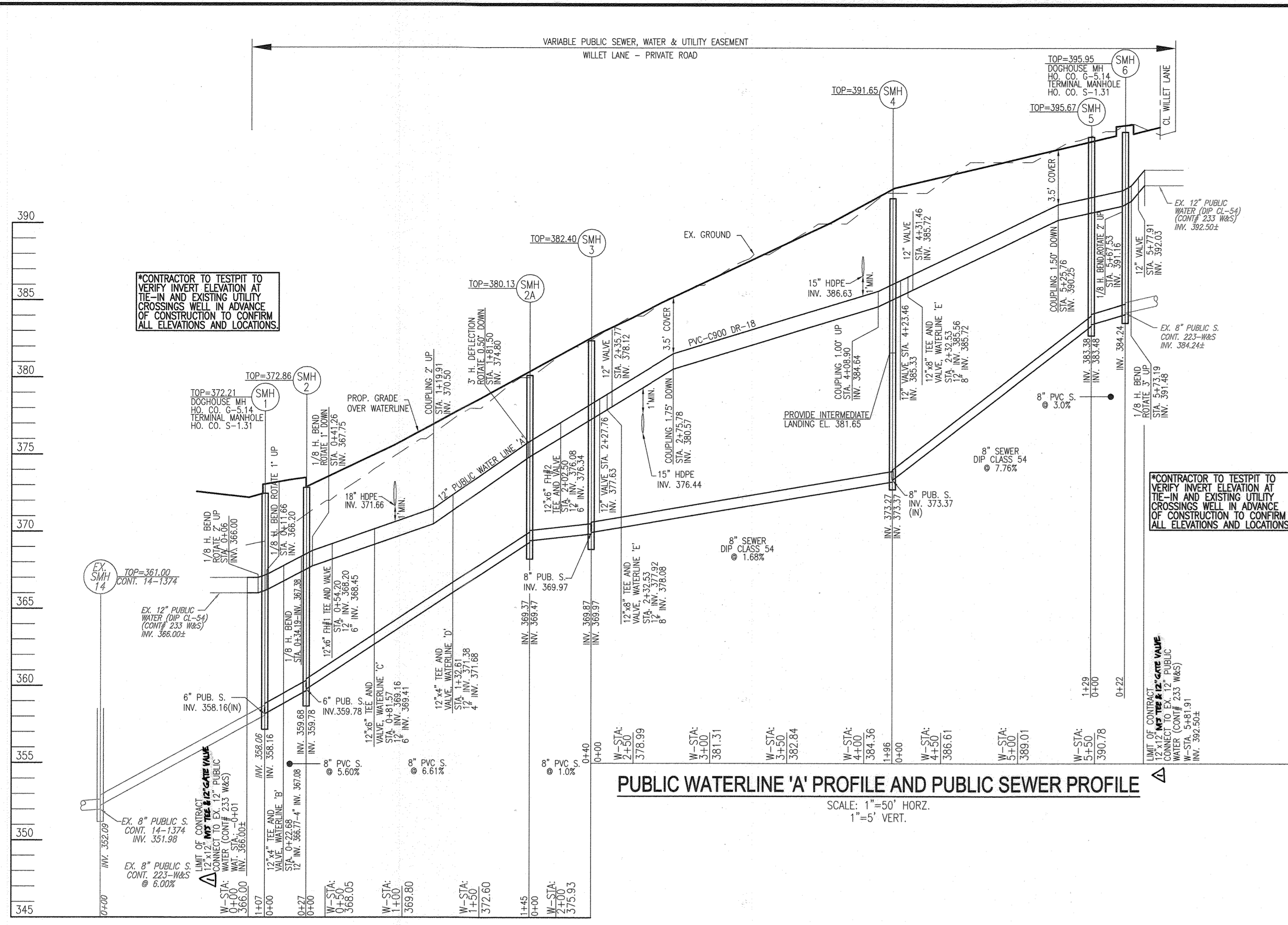


DES:	DZE/RHV	AS BUILT
DRN:	KC/JR/DZE	REVISE TO REPLACE TAPPING SLEEVES AND VALVES WITH TEES
CHK:	RHV	AND GATE VALVES AND TO CORRECT SEWER CLASS
DATE:	MAY 2022	NO. REVISION

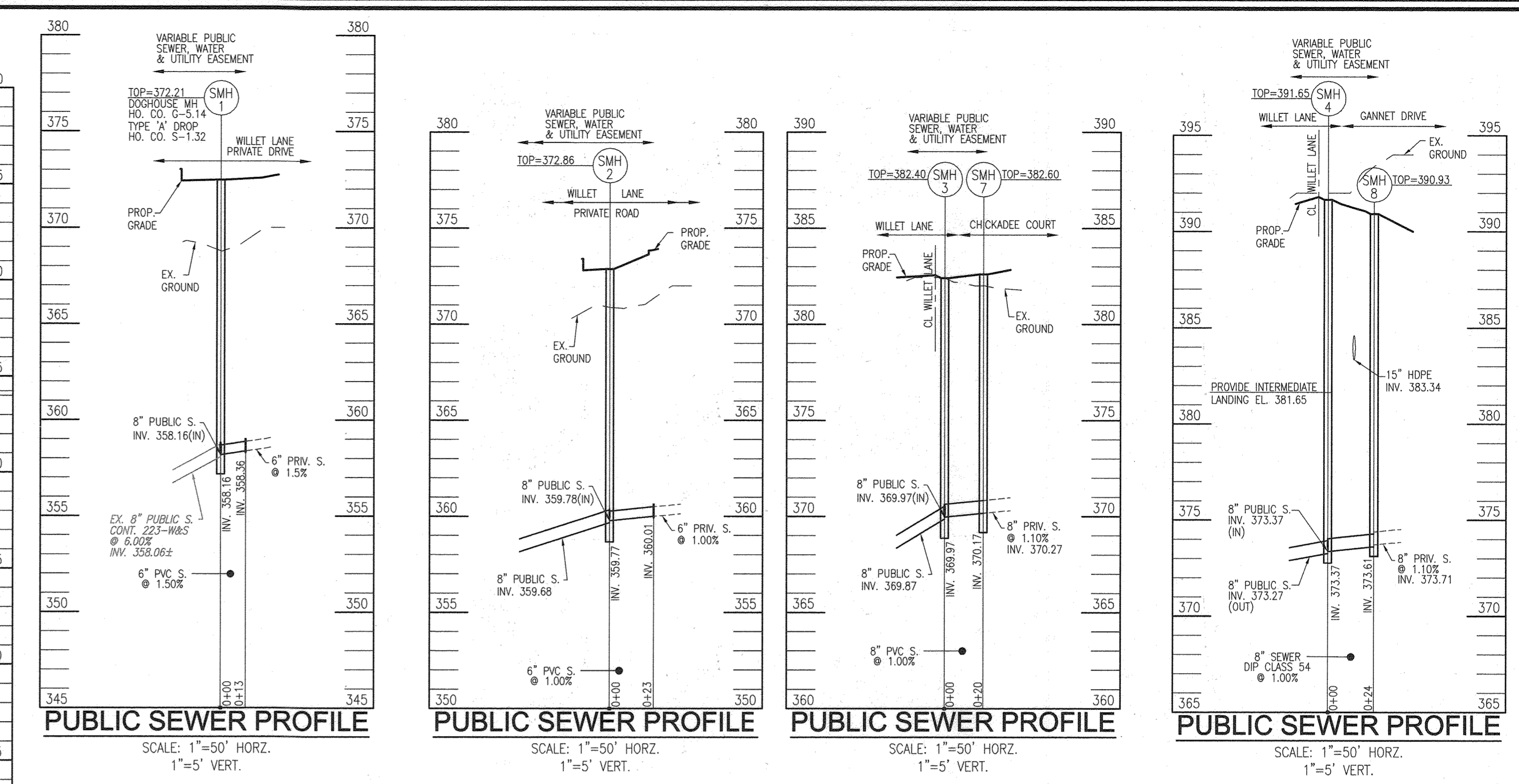
FINAL WATER AND SEWER PLAN
LAYOUT PLAN
 600' SCALE MAP NO. 30
 BLOCK NO. 9

DORSEY OVERLOOK
 APARTMENT UNITS 1-78
 PARCEL A
CONTRACT NO. 24-5005-D
 TAX MAP 30, GRID 9
 2ND ELECTION DISTRICT
 PARCELS 51, 52, 53, 54, 55, 67, 288
 HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER
 DORSEY OVERLOOK, LLLP
 C/O J. KIRBY DEVELOPMENT, LLC
 5670 B FURNACE AVENUE
 ELK RIDGE, MARYLAND 21075
 PHONE: (410) 788-0027
 SCALE AS SHOWN
 SHEET 2 OF 4



PUBLIC WATERLINE 'A' PROFILE AND PUBLIC SEWER PROFILE
SCALE: 1"=50' HORZ.
1"=5' VERT.

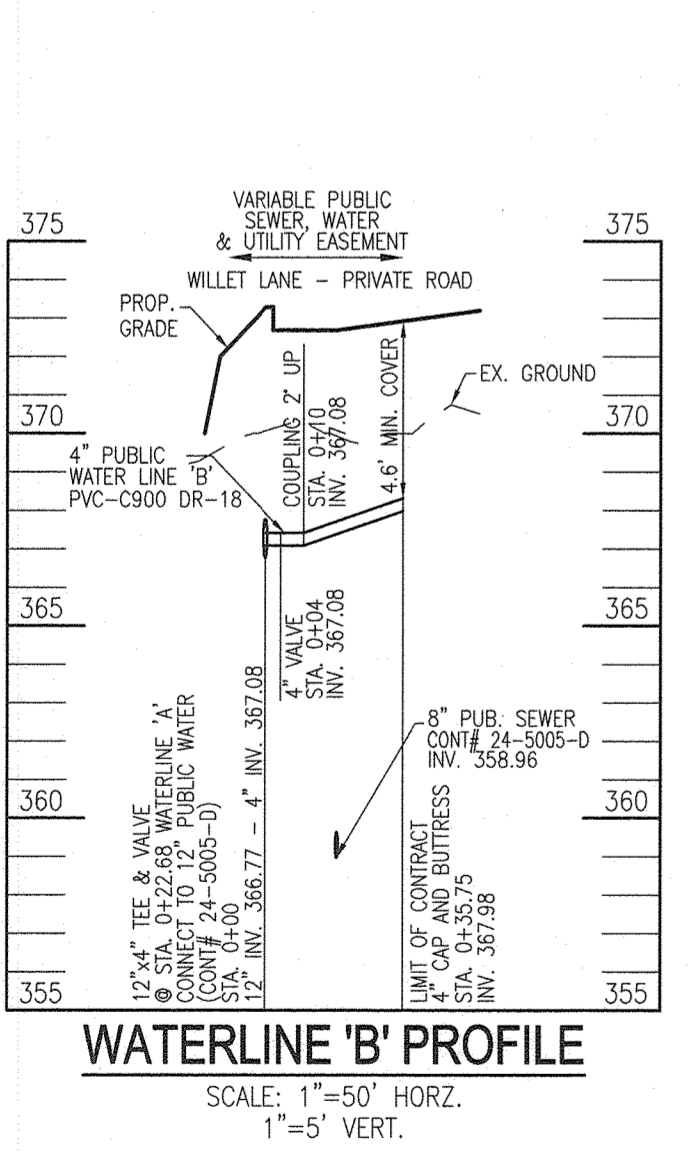


PUBLIC SEWER - MANHOLE LOCATION CHART

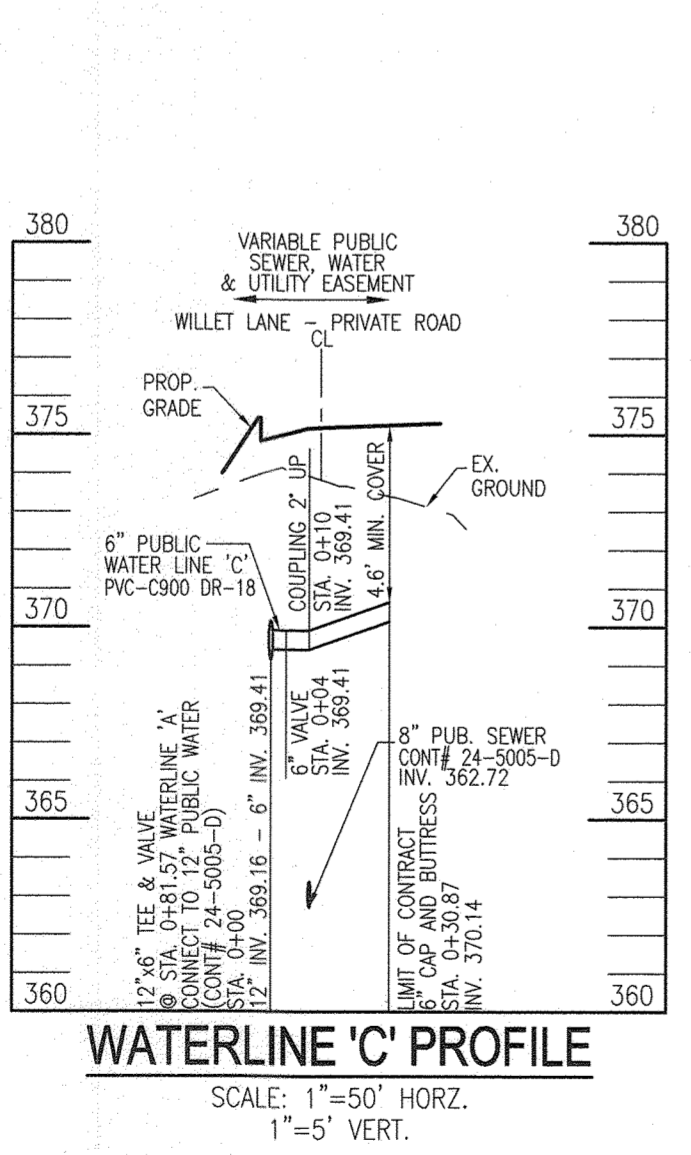
MH No.	TYPE	LOCATON	TOP ELEV.	INV. IN	INV. OUT	REMARKS
SMH-1	STD. PRECAST MH (G-5.12)	N# 573089.32 E# 1356503.97	372.21	358.16 (2)	358.06	DOGHOUSE MANHOLE HO.CO. G-5.14
SMH-2	STD. PRECAST MH (G-5.12)	N# 573094.87 E# 1356500.24	372.86	359.78 (2)	359.68	
SMH-2A	STD. PRECAST MH (G-5.12)	N# 573104.71 E# 1356574.27	380.13	369.47	369.37	
SMH-3	STD. PRECAST MH (G-5.12)	N# 573107.90 E# 1356974.58	382.40	369.97 (2)	369.87	
SMH-4	STD. PRECAST MH (G-5.12)	N# 573123.37 E# 1356909.65	391.65	373.37 (2)	373.27	PROVIDE INTERMEDIATE LANDING
SMH-5	STD. PRECAST MH (G-5.12)	N# 573133.55 E# 1357038.04	395.67	383.48	383.38	
SMH-6	STD. PRECAST MH (G-5.12)	N# 573149.98 E# 1357052.06	395.95	384.24	384.14	DOGHOUSE MANHOLE HO.CO. G-5.14
SMH-7	STD. PRECAST MH (G-5.12)	N# 573127.41 E# 1356712.83	382.80	370.27	370.17	
SMH-8	STD. PRECAST MH (G-5.12)	N# 573147.25 E# 1356907.47	380.93	373.71	373.61	

SEWER HOUSE CONNECTION - AS-BUILT LOCATION TABLE

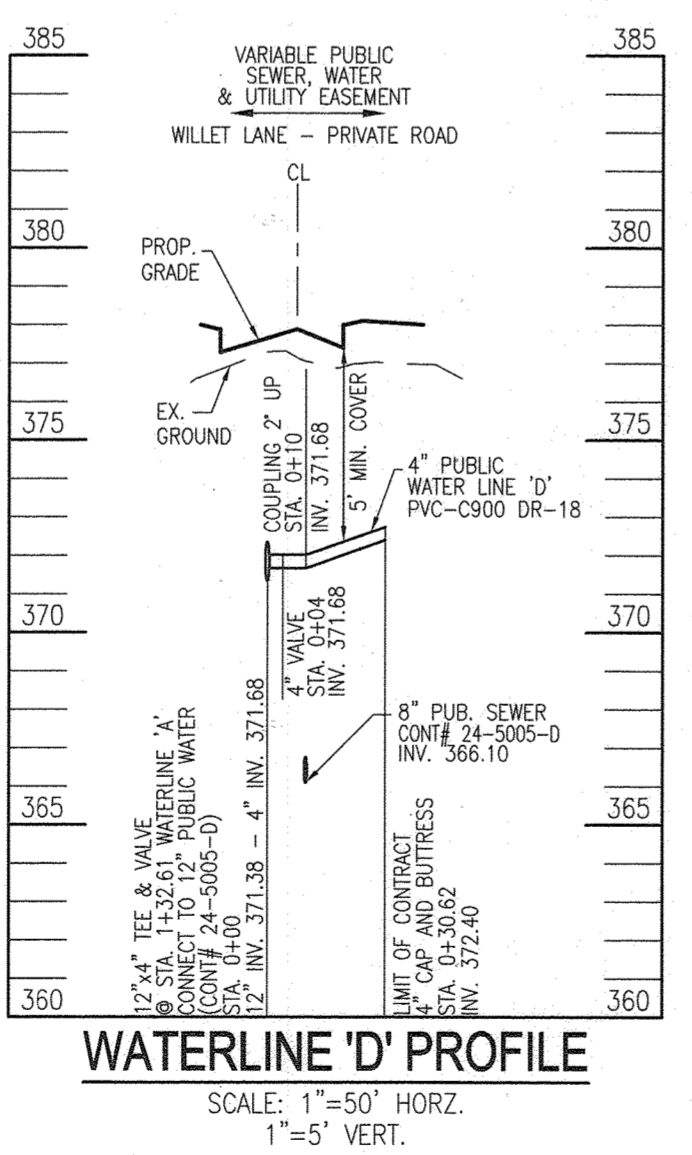
UNIT#	STREET ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1-2	4000-A & B GANNET DRIVE		
3-4	4002-A & B GANNET DRIVE		
5-6	4004-A & B GANNET DRIVE		
7-8	4010-A & B GANNET DRIVE		
9-10	4012-A & B GANNET DRIVE		
11-12	4014-A & B GANNET DRIVE		
13-14	4016-A & B GANNET DRIVE		
15-16	4018-A & B GANNET DRIVE		
17-18	4019-A & B GANNET DRIVE		
19-20	4017-A & B GANNET DRIVE		
21-22	4015-A & B GANNET DRIVE		
23-24	4013-A & B GANNET DRIVE		
25-26	4005-A & B GANNET DRIVE		
27-28	4003-A & B GANNET DRIVE		
29-30	4001-A & B GANNET DRIVE		
31-32	4100-A & B CHICKADEE COURT		
33-34	4102-A & B CHICKADEE COURT		
35-36	4104-A & B CHICKADEE COURT		
37-38	4110-A & B CHICKADEE COURT		
39-40	4112-A & B CHICKADEE COURT		
41-42	4114-A & B CHICKADEE COURT		
43-44	4117-A & B CHICKADEE COURT		
45-46	4115-A & B CHICKADEE COURT		
47-48	4113-A & B CHICKADEE COURT		
49-50	4111-A & B CHICKADEE COURT		
51-52	4105-A & B CHICKADEE COURT		
53-54	4103-A & B CHICKADEE COURT		
55-56	4101-A & B CHICKADEE COURT		
57-58	4200-A WOOD DUCK WAY		
59-60	4202-A & B WOOD DUCK WAY		
61-62	4204-A & B WOOD DUCK WAY		
63-64	4206-A & B WOOD DUCK WAY		
65-66	4208-A & B WOOD DUCK WAY		
67-68	4210-A & B WOOD DUCK WAY		
69-70	4212-A & B WOOD DUCK WAY		
71-72	4211-A & B WOOD DUCK WAY		
73-74	4209-A & B WOOD DUCK WAY		
75-76	4207-A & B WOOD DUCK WAY		
77-78	4205-A & B WOOD DUCK WAY		



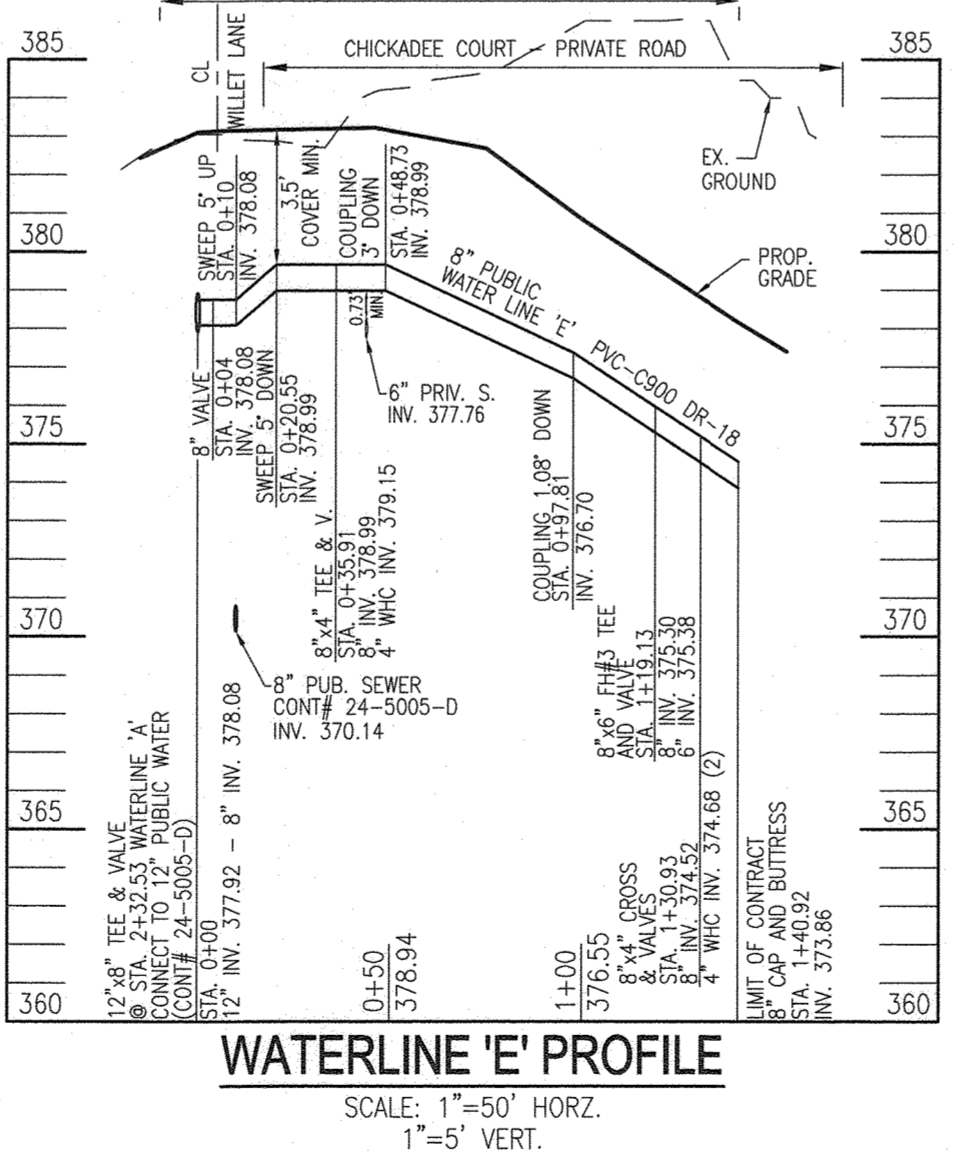
WATERLINE 'B' PROFILE
SCALE: 1"=50' HORZ.
1"=5' VERT.



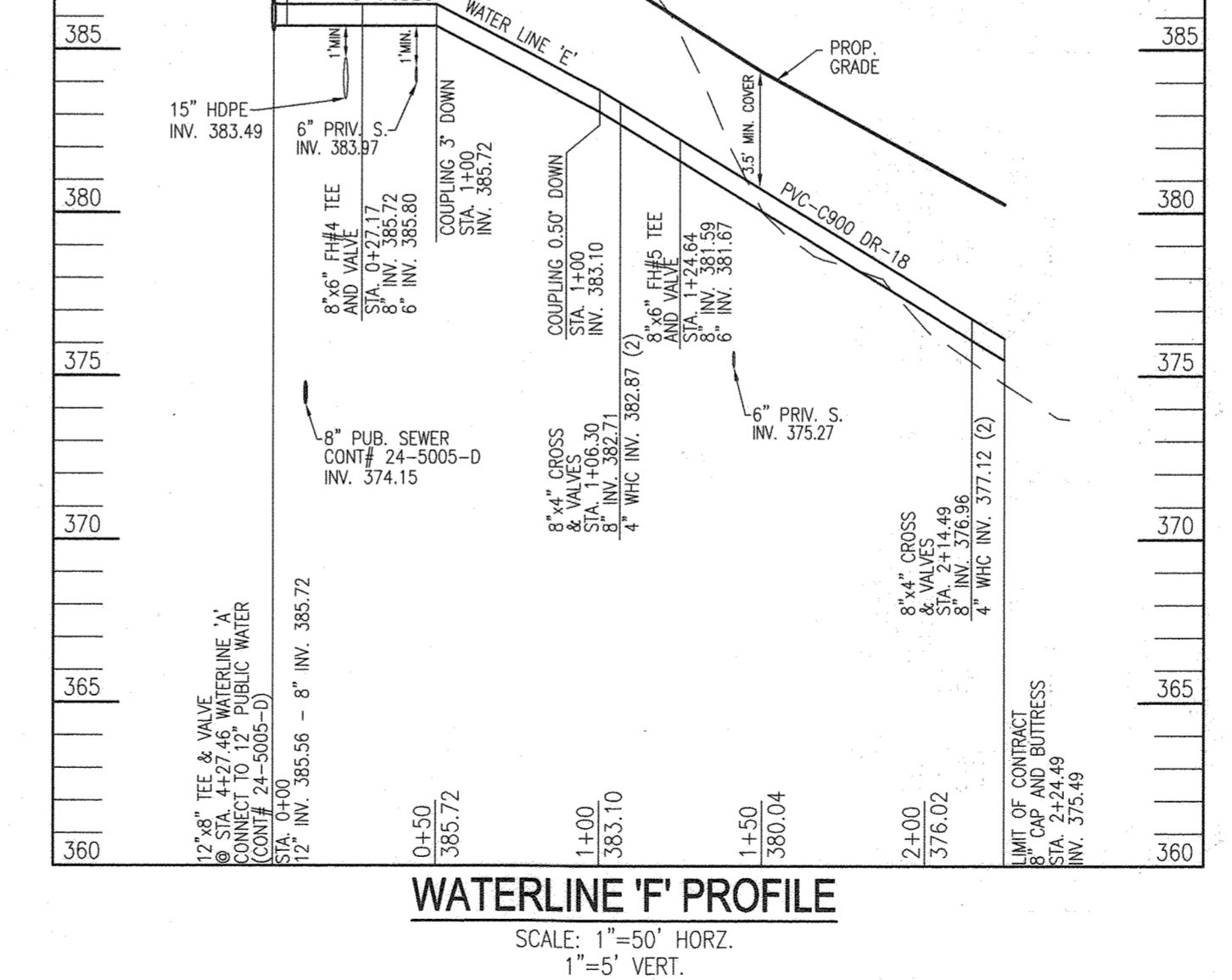
WATERLINE 'C' PROFILE
SCALE: 1"=50' HORZ.
1"=5' VERT.



WATERLINE 'D' PROFILE
SCALE: 1"=50' HORZ.
1"=5' VERT.



WATERLINE 'E' PROFILE
SCALE: 1"=50' HORZ.
1"=5' VERT.

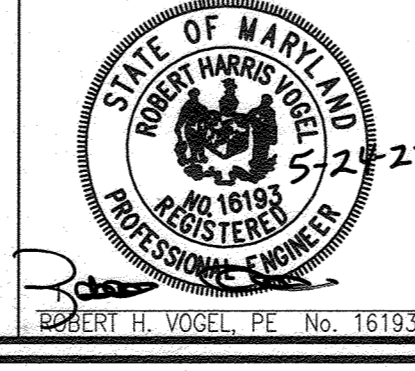


WATERLINE 'F' PROFILE
SCALE: 1"=50' HORZ.
1"=5' VERT.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature]
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
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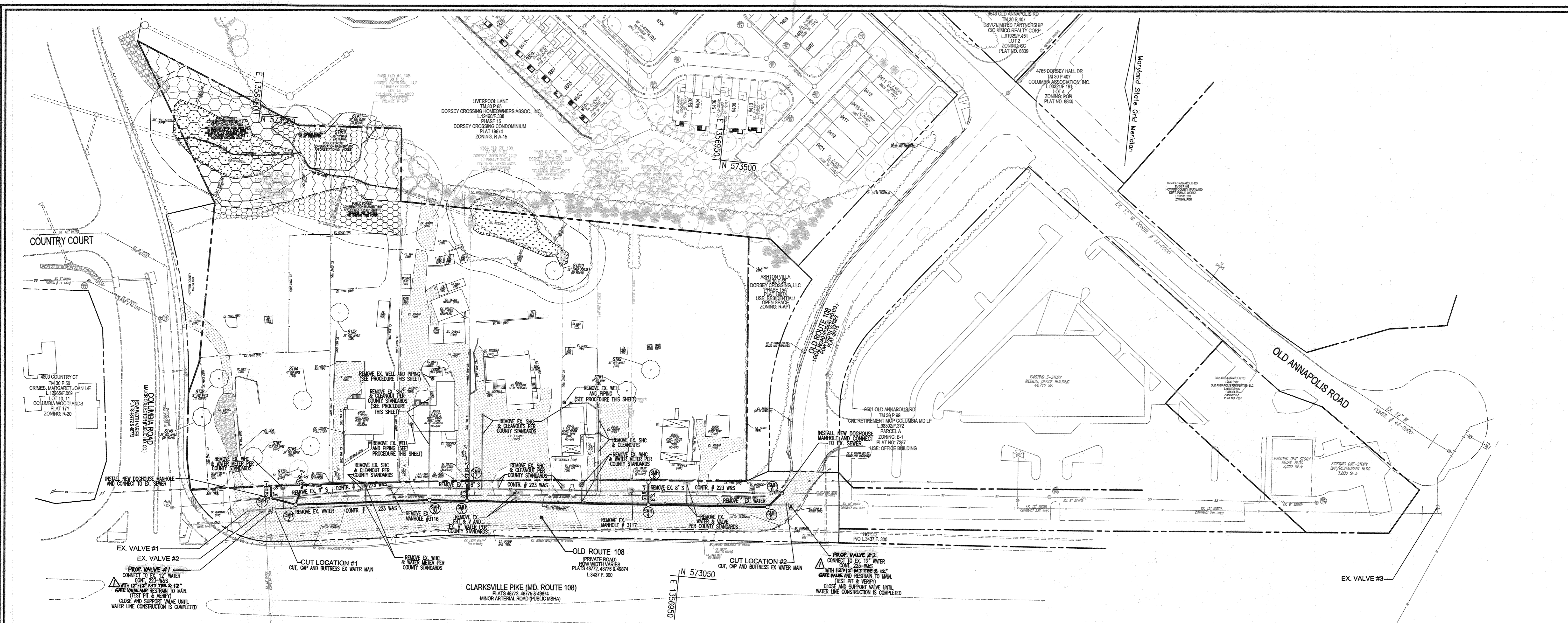


PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
DES: DZE/RHV
DRN: KG/JR/DZE
CHK: RHV
DATE: MAY 2022

FINAL WATER AND SEWER PLAN
WATER AND SEWR PROFILES
REVISION: 4-26-23
NO. 1
REVISION: REVISE TO REPLACE TAPPING SLEEVES AND VALVES WITH TEES AND GATE VALVES, AND TO CORRECT SEWER CLASS

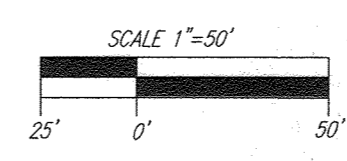
DORSEY OVERLOOK
APARTMENT UNITS 1-78
PARCEL A
CONTRACT NO. 24-5005-D
TAX MAP 30, GRID 9
2ND ELECTION DISTRICT
PARCELS 51, 52, 53, 54, 55, 67, 288
HOWARD COUNTY, MARYLAND

OWNER/DEVELOPER
DORSEY OVERLOOK, L.L.P.
C/O J. KIRBY DEVELOPMENT, LLC
5870 B FURNACE AVENUE
ELKRDIGE, MARYLAND 21075
PHONE: (410) 788-0027
SCALE AS SHOWN
SHEET 3 OF 4



**FINAL WATER AND SEWER
DEMOLITION, REMOVAL AND RELOCATION PLAN**

SCALE: 1"=50'



SEQUENCE OF CONSTRUCTION

NOTE: STEP 2, 3, 4 AND 7 SHALL BE CONDUCTED DURING NIGHT TIME HOURS. PUBLIC VALVES TO BE OPERATED BY COUNTY PERSONNEL ONLY.

1. CONTRACTOR SHALL COORDINATE WELL IN ADVANCE OF CONSTRUCTION WITH HOWARD COUNTY BUREAU OF UTILITIES TO PLAN FOR ANY NECESSARY VALVE CLOSURES OR SERVICE INTERRUPTIONS. (SEE THIS SHEET FOR APPROXIMATE LOCATION OF VALVES.)
2. WITH PERMISSION OF INSPECTOR, CLOSE EXISTING VALVES #1, #2 AND #3. CUT, CAP AND BUTTRESS EXISTING 12" WATER AT SHOWN LOCATIONS SHOWN ON THIS PLAN. (THIS STEP SHOULD BE CONDUCTED DURING NIGHT TIME HOURS)
3. INSTALL 12"x12" M.S.TEES & 12" GATE VALVES (PROP.#1 AND PROP.#2) ONTO EXISTING 12" MAIN (CONT. 223-W&S) AT BOTH LOCATIONS, AND CLOSE PROPOSED VALVES. RE-OPEN EXISTING VALVES #1, #2 AND #3. (THIS STEP SHOULD BE CONDUCTED DURING NIGHT TIME HOURS.)
4. BUILD SMH-1 AND SMH-6 OVER EXISTING 8" SEWER MAINS (CONT. 223-W&S) AT LOCATIONS SHOWN. TEMPORARILY BLOCK NEW ORIFICES AT SMH-1 (FROM SMH-1 TO SMH-2, AND FROM SMH-1 TO STUB-1). ALSO TEMPORARILY BLOCK NEW ORIFICE AT SMH-6 (SMH-6 TO SMH-5). (THIS STEP SHOULD BE CONDUCTED DURING NIGHT TIME HOURS.) THE EXISTING 8" SEWER SHALL REMAIN IN OPERATION UNTIL PROPOSED SEWER REALIGNMENT IS COMPLETED AND FUNCTIONING (SEE NOTES BELOW).
5. REMOVE EX. 12" WATER MAIN AND ALL HOUSE CONNECTIONS AND APPURTENANCES AS SHOWN.
6. INSTALL PROPOSED SEWER FROM SMH-1 TO SMH-6. INSTALL PROPOSED STUBS AS INDICATED BELOW:
 STUB-1: INSTALL SEWER FROM SMH-1 TO RIGHT-OF-WAY, AND PROVIDE TEMPORARY CAP.
 STUB-2: INSTALL 2FT OF PIPE STARTING FROM SMH-2 (TOWARDS ROW) AND TEMPORARILY CAP.
 STUB-3: INSTALL 5FT OF PIPE STARTING FROM SMH-3 (TOWARDS SMH-7) AND TEMPORARILY CAP.
 STUB-4: INSTALL SEWER FROM SMH-4 TO SMH-8.
7. ONCE ALL PROPOSED PUBLIC SEWER IS CONSTRUCTED BETWEEN, PERMANENTLY BLOCK EX. OUTFLOW ORIFICE @ SMH-6 (FROM SMH-6 TO EX. SMH-3117). ALSO, PERMANENTLY BLOCK EXISTING INFLOW @ SMH-1 (FROM EX. SMH-3116 TO SMH-1). REMOVE THE TEMPORARY ORIFICE BLOCKING AT SMH-1 AND SMH-6 (FROM STEP 4). (THIS STEP SHOULD BE CONDUCTED DURING NIGHT TIME HOURS.)
8. REMOVE ALL EXISTING SEWER BETWEEN SMH-1 TO SMH-6.
9. FINISH CONSTRUCTION OF SEWER STUB-2 AND PROVIDE TEMPORARY CAP AT RIGHT OF WAY. COMPLETE CONSTRUCTION OF STUB-3 TO SMH-7. (SEE SHEETS 2-3)
10. CONSTRUCT THE PUBLIC WATER AND ALL ASSOCIATED TEES, VALVES AND APPURTENANCES AS SHOWN ON SHEET 2.
11. WITH PERMISSION OF INSPECTOR, AND ONCE THE PROPOSED PUBLIC WATER AND ALL ASSOCIATED TEES AND VALVES INSTALLED, PRESSURE TEST AND CHLORINATE/DECHLORINATE NEW PUBLIC WATER MAIN. WHEN TEST IS COMPLETED SUCCESSFULLY, REOPEN NEW VALVES PROP.#1 AND PROP.#2.

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

PROCEDURES FOR THE REMOVAL OF EXISTING UTILITIES

ABANDONMENT AND REMOVAL OF EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUALS VOLUME II, SECTION 5.6 AND VOLUME IV, SECTION 1015, AND AS FOLLOWS:

WATER MAINS AND SERVICE CONNECTIONS:

1. WATER MAINS SHALL BE CAPPED, AND CONCRETE BLOCKING SHALL BE PLACED TO RETAIN THE CAP ON ALL WATER MAINS THAT WILL REMAIN IN SERVICE.
2. THE LIMITS OF REMOVAL FOR ALL PIPE, FITTINGS AND APPURTENANCES SHALL BE AS INDICATED ON THIS SHEET. THE CONTRACTOR SHALL REMOVE AND SALVAGE ALL ABANDONED PIPE, FITTINGS, VALVES, VALVE BOXES AND FIRE HYDRANTS, IF THEIR REUSE APPEARS PRACTICAL OTHERWISE, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE ITEMS OFFSITE. THE CONTRACTOR SHALL PROPERLY CUT AND CAP THE EXISTING MAIN AND PROVIDE ADEQUATE BUTTRESSING OR RESTRAINTS WHERE NEEDED.
3. BUILDING SERVICE CONNECTIONS SHALL BE REMOVED BY CLOSING THE CORPORATION STOP, DISCONNECTING THE BUILDING SERVICE THEREFROM, REMOVING THE CORPORATION STOP AND THE WATER LINE. ALL METERS SHALL BE REMOVED, METER PITS BACKFILLED AND METERS SALVAGED IF THEIR CONDITION PERMITS REUSE. IF WATER METERS ARE LOCATED INSIDE THE RESIDENCE OR BUILDING, THE BALL VALVE BOX SHALL BE REMOVED AT THE PROPERTY LINE.
4. NO WATER MAINS ARE TO BE ABANDONED IN PLACE FOR THIS SITE. ALL EXISTING PIPES AND APPURTENANCES ARE TO BE REMOVED.

SEWER MAINS AND SERVICE CONNECTIONS

1. NO SEWER MAINS ARE TO BE ABANDONED IN PLACE FOR THIS SITE. ALL PIPES AND STRUCTURES ARE TO BE REMOVED.

PROCEDURES FOR CONNECTING TO EXISTING UTILITIES

UTILITY CONNECTIONS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, SECTION 1002.06

PROCEDURE FOR WELL ABANDONMENT

WELLS TO BE ABANDONED IN ACCORDANCE WITH MARYLAND HEALTH DEPARTMENT REQUIREMENTS COMAR SEC. 26.04.04 AS PART OF THE CONSTRUCTION, INCLUDING THE FOLLOWING:

1. CUT AND REMOVE ALL ONSITE WELL PIPING.
2. WELLS TO BE ABANDONED SHALL BE SEALED BY A WELL DRILLER LICENSED BY THE MARYLAND STATE BOARD OF WELL DRILLERS, COMAR SEC. 26.04.04.11, ABANDONMENT STANDARDS D(3).

NOTE:
 SEE MANHOLE LOCATION CHART, SHEET 2 OF 4.

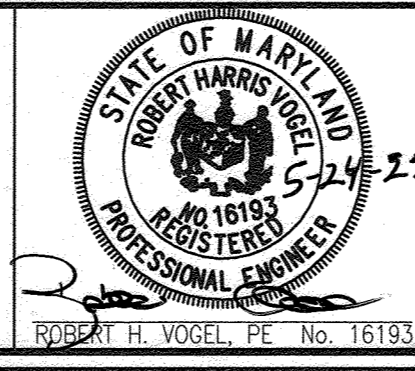
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

[Signature] 6-9-22
 CHIEF, BUREAU OF UTILITIES

[Signature] 6-20-22
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

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 OF MARYLAND, LICENSE NO. 18193, EXPIRATION DATE 09-27-2022	DES: DZE/RHV	
DRN: KG/JR/DZE	REVISION TO REPLACE TAPPING SLEEVES AND VALVES WITH TEES AND GATE VALVES AND TO CORRECT SEWER CLASS	4-26-23
CHK: RHV		
DATE: MAY 2022	NO.	REVISION

**FINAL WATER AND SEWER PLAN
 WATER AND SEWER DEMOLITION,
 REMOVAL & RELOCATION PLAN**

600' SCALE MAP NO. 30 BLOCK NO. 9

**DORSEY OVERLOOK
 APARTMENT UNITS 1-78
 PARCEL A
 CONTRACT NO. 24-5005-D**

TAX MAP 30, GRID 9
 2ND ELECTION DISTRICT

SCALE AS SHOWN
 SHEET 4 OF 4

PARCELS 51, 52, 53, 54, 55, 67, 288
 HOWARD COUNTY, MARYLAND