

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.
- TOPOGRAPHY FIELD SURVEYS WERE PERFORMED ON MARCH 1998 BY POTOMAC AERIAL SURVEYS, AND BY A FIELD-RUN TOPOGRAPHIC SURVEY WITH 2-FOOT CONTOUR INTERVALS PREPARED BY VOGEL ENGINEERING + TIMMONS GROUP, DATED JULY 05, 2017.
- 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 43B2 AND 43B6.
ALL VERTICAL CONTROLS ARE BASED ON NAVD' 88. VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:
GEODETIC SURVEY CONTROL 43B2 (N 551,654.993/E 1,378,176.951)
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
GEODETIC SURVEY CONTROL 43B6 (N 550,601.597/E 1,376,866.072)
BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
- 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 (C) 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 OWN 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	1-800-252-1133
BOE (CONSTRUCTION SERVICES)	410-637-8713
BOE (EMERGENCY)	410-685-0123
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033
- 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 THE 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 LIVING 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 C-900 PVC (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 MATERIALS 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 REST 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 VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. SEVENTEEN (17) POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. TWELVE (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 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 COMPACTATION 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 LAP 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, DR18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.

- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENT 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 INCORPORATE 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.

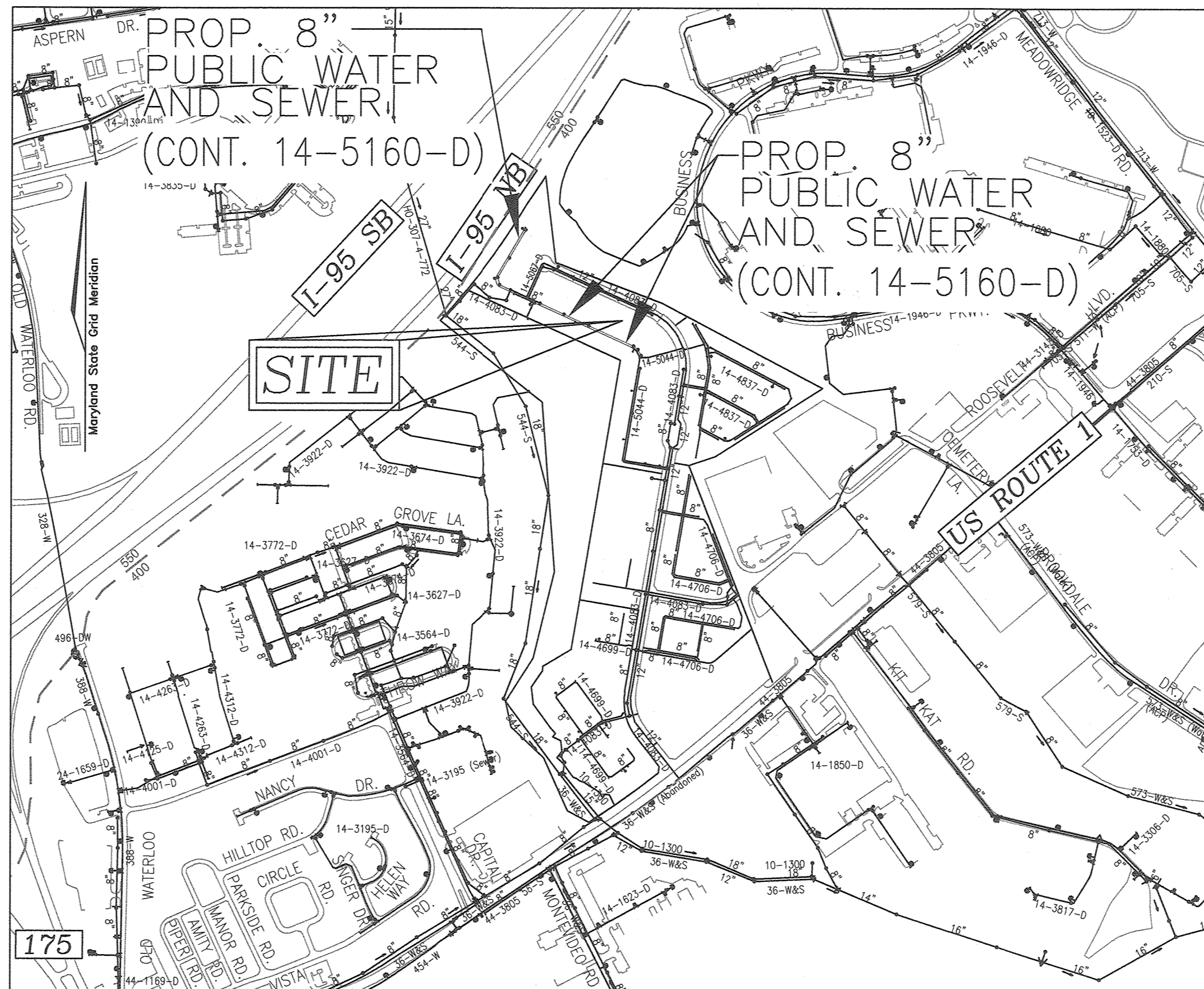
PART III - SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C 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 COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT FRAME AND COVER IS 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 CELLAR CANNOT BE SERVED.

FINAL WATER AND SEWER CONSTRUCTION PLAN DELACOUR AT BLUE STREAM - PHASE 2

LOTS 52-73, 79-103, 137-150, AND OPEN SPACE LOT 151
A RE-SUBDIVISION OF BUILDABLE BULK PARCEL L-4
TOWNHOMES - SECTION 3

CONTRACT 14-5160-D
HOWARD COUNTY, MARYLAND



LOCATION MAP
SCALE: 1"=600'

WATER ZONE:	400
TEST GRADIENT:	677
TEST PRESSURE:	203.27

GENERAL NOTES:

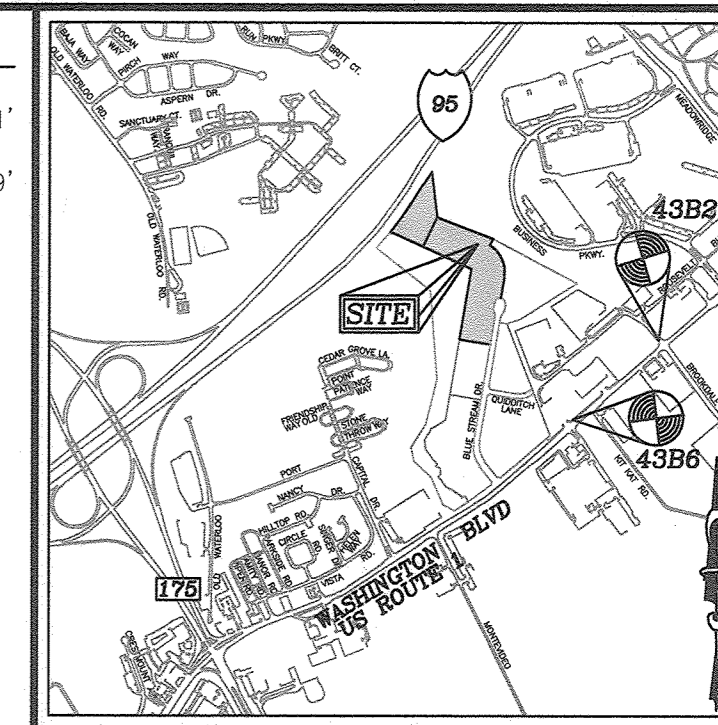
PART IV - DESIGN MANUAL WAIVER APPROVALS

- THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER (DMW-18-020) TO DESIGN MANUAL VOLUME II; APPROVED 10/18/18; TO SECTION 5.4.8.5 WHICH REQUIRES A MINIMUM 10' HORIZONTAL CLEARANCE BETWEEN ANY PERMANENT STRUCTURE AND THE EDGE OF A PUBLIC UTILITY EASEMENT.
IMPACTS INCLUDE:
A. STORM DRAIN STRUCTURES:
1-4, MH-28, 1-8, 1-6, 1-10, 1-5, 1-9, 1-12, 1-16, 1-30, 1-34, 1-46, 1-27, 1-28, AND 1-49 SHOWN ON SDP-18-022.
B. UNITS:
5-10, 11, 13, 23-30, 35-44, 47-48, 51-52, 55-56, 62, 63, 75, 78, 93, 94, 174, 176, 178, AND 180 SHOWN ON SDP-18-022.
- THIS PLAN IS SUBJECT TO A DESIGN MANUAL WAIVER (DMW-19-010) TO THE FOLLOWING DESIGN MANUALS VOLUME II; WAIVER REQUEST WAS NOT APPROVED 04/25/19; TO SECTION 4.5.F WHICH REQUIRES APPROVAL FROM THE DEPARTMENT OF PUBLIC WORKS (DPW) FOR THE USE OF TWIN SEWER HOUSE CONNECTIONS PER COUNTY DETAIL 5-2.14.

TYPE OF BUILDING :	RESIDENTIAL
NO. OF APARTMENT BUILDINGS :	-
NO. OF TOWNHOUSE BUILDINGS :	61
NO. OF SINGLE SEWER HOUSE CONNECTIONS :	61
NO. OF TWIN SEWER HOUSE CONNECTIONS :	0
NO. OF SINGLE WATER HOUSE CONNECTIONS :	7
NO. OF TWIN WATER HOUSE CONNECTIONS :	27
SEWER SHED :	PATAPSCO
TREATMENT PLANT :	PATAPSCO RIVER

BENCHMARKS

HOWARD COUNTY BENCHMARK 43B2	N 551,654.993	E 1,378,176.951	ELEV.: 209.601'
HOWARD COUNTY BENCHMARK 43B6	N 550,601.597	E 1,376,866.072	ELEV.: 210.559'



VICINITY MAP
SCALE: 1"=2000'
ADC MAP/GRID NO. 34/E6

LEGEND

EXISTING TREELINE	
PROPOSED TREELINE	
EXISTING WATER MAIN	
PROPOSED WATER MAIN	
FIRE HYDRANT	
PROPOSED VALVE	
PROPOSED TEE	
PROPOSED STORM DRAIN	
PROPOSED SEWER MAIN	
EXISTING STORM DRAIN	
EXISTING SEWER	
SEWER MANHOLE	
PRIVATE WATER HOUSE CONNECTION	
PRIVATE SEWER	
PROPOSED SIGN	
PROPOSED LIGHT	

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
WATER				
8" WATER C-900 PVC (DR-18)	1,063 LF	1010	C-900	NATIONAL PIPE AND PLASTICS
8" WATER C-900 PVC (DR-18)	36 LF	35	C-900	NATIONAL PIPE AND PLASTICS
8" X 6" TEE	3 EA	3	C-153	TYLER/UNION
FIRE HYDRANT	3 EA	3	A-422	MUELLER COMPANY
8" VALVE	3 EA	3	A236123	MUELLER COMPANY
8" VALVE	3 EA	3	A236123	MUELLER COMPANY
8" CAP	1 EA	1	C-153	TYLER/UNION
8" - 1/16" H. BEND	4 EA	4	C-153	TYLER/UNION
1-1/2" WHC	760 LF	767	TYPE-K	MUELLER COMPANY
1" OUTSIDE METER VAULT	34 EA	34	-	HORNE CONCRETE
SEWER				
STANDARD MANHOLE	9 EA	9	-	CONTRACTORS PRECAST
TYPE 'A' DROP	1 EA	1	-	CONTRACTORS PRECAST
SEWER CLEANOUT	61 EA	61	-	HORNE CONCRETE
8" PVC SEWER	1,048 LF	1035	-	NATIONAL PIPE AND PLASTICS
4" SHC	1,207 LF	1220	-	NATIONAL PIPE AND PLASTICS

PUBLIC UTILITY NOTE:

THE COUNTY SHALL BEAR ABSOLUTELY NO RESPONSIBILITY FOR THE RECONSTRUCTION, REPAIR OR REMEDIAL MAINTENANCE REQUIRED DUE TO ANY DAMAGE TO PRIVATE UTILITIES INCLUDING, BUT NOT LIMITED TO STORM DRAINS, STORM DRAIN STRUCTURES, (EG. INLETS AND MANHOLES), AND OTHER PRIVATE SYSTEMS OR FEATURES RESULTING FROM OR INCURRED DURING MAINTENANCE AND/OR REPAIR OF THE PUBLIC WATER, SEWER OR UTILITIES. ANY COST INCURRED BY THE COUNTY THAT IS ASSOCIATED WITH RECONSTRUCTION OF PRIVATE UTILITIES AND STRUCTURES FOLLOWING MAINTENANCE OF THE PUBLIC UTILITIES, BY THE COUNTY, SHALL BE THE RESPONSIBILITY OF THE OWNER OR ITS SUCCESSORS OR ASSIGNS. THE AFOREMENTIONED INCLUDES PRIVATE UTILITIES AND OR STRUCTURE PERMITTED WITHIN THE EASEMENTS OR WITHIN THE 10-FOOT EASEMENT SETBACK VIA APPROVED WAIVER FROM THE DEPARTMENT OF PUBLIC WORKS.

OWNER/DEVELOPER

U.S. HOME CORPORATION
10211 WINGOPIN CIRCLE
SUITE 300
COLUMBIA, MD 21044
410-423-0407

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

Alexander Bratchie
SOIL CONSERVATION DISTRICT

11/18/2020
DATE

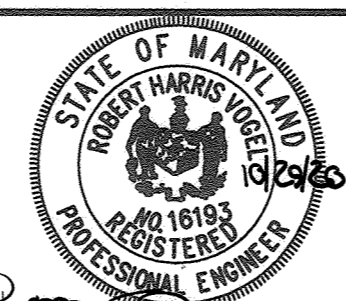
SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-18-022.

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: 410.461.7656 F: 410.461.8951 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 08-27-2022

DRN: KG DES: DZE
CHK: RHV
DATE: OCTOBER 2020

WRA	AS-BUILT, ADDED QUANTITIES	6/11/2021	
BY	NO.	REVISION	DATE

**FINAL WATER AND SEWER
CONSTRUCTION PLAN
CONTRACT 14-5160-D
COVER SHEET**

DELACOUR AT BLUE STREAM-PHASE 2
LOTS 52-73, 79-103, 137-150, AND OPEN SPACE LOT 151
A RE-SUBDIVISION OF BUILDABLE BULK PARCEL L-4
TOWNHOMES - SECTION 3
ZONED: CAC-CL1

SCALE AS SHOWN

SHEET 1 OF 4

CHIEF, BUREAU OF UTILITIES

11/19/2020 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

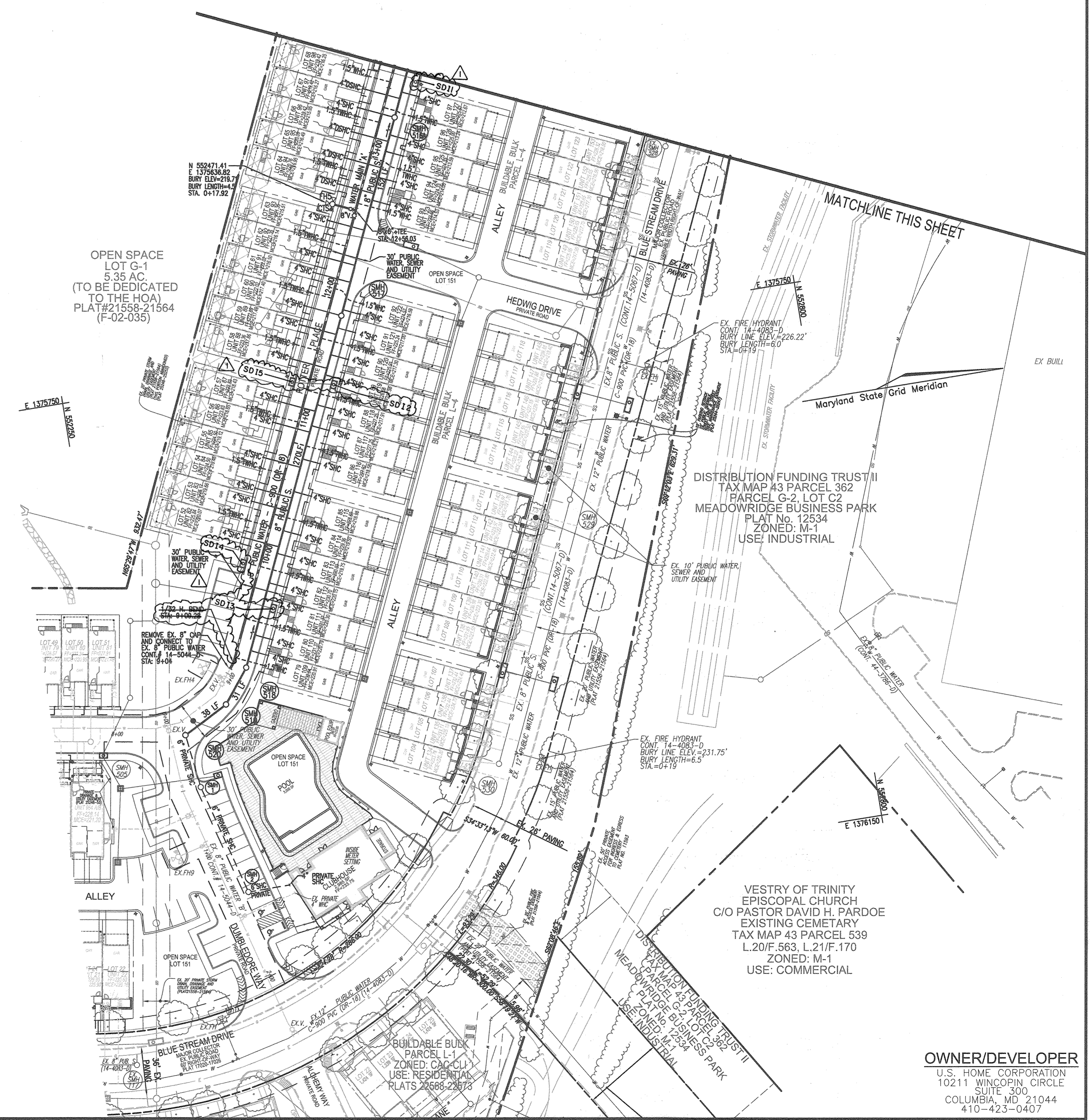
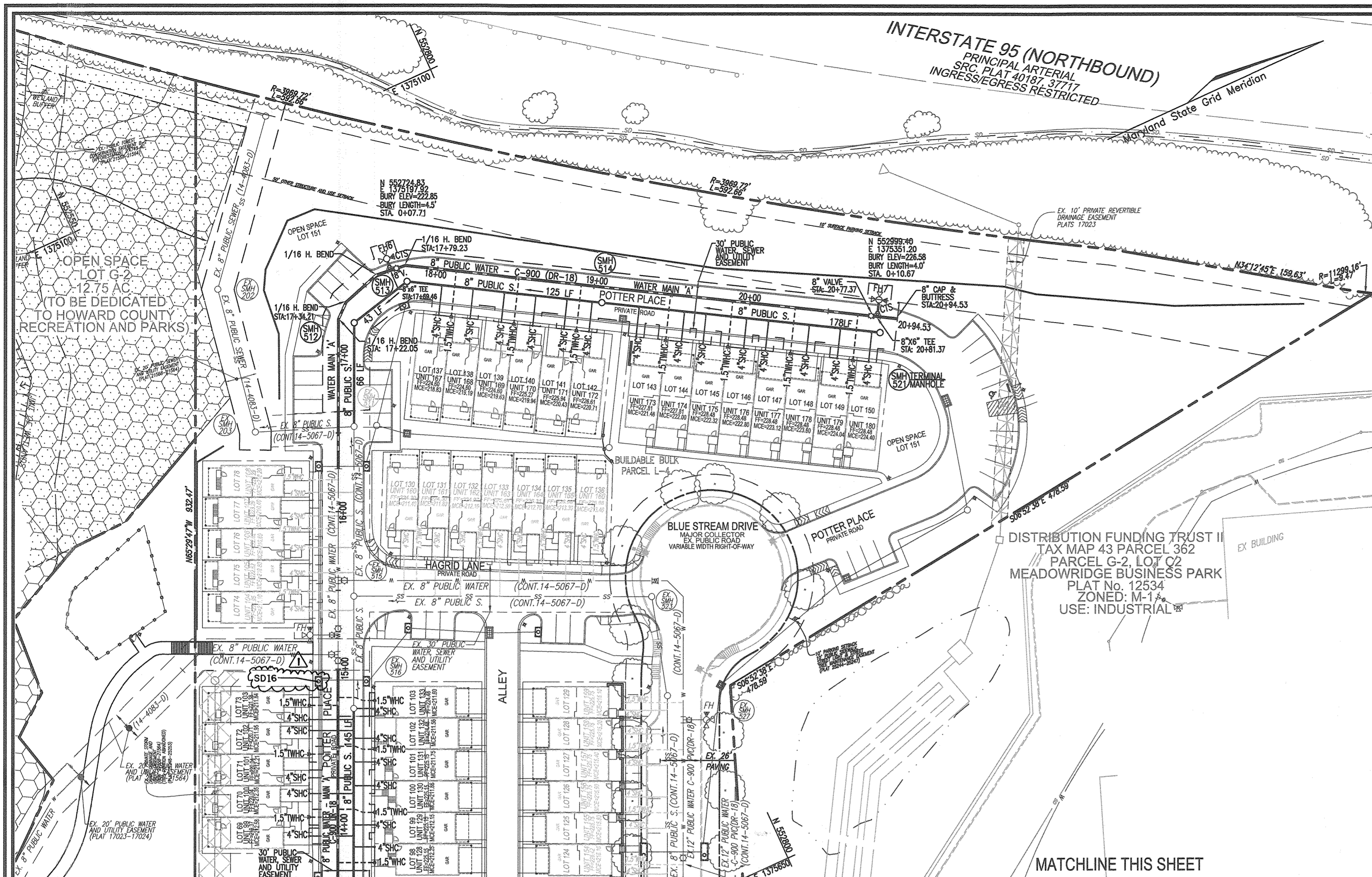
12-9-20 DATE

600' SCALE MAP NO. 43

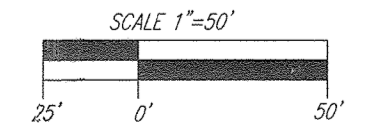
BLOCK NO. 4

TAX MAP 43 GRID 4
1ST ELECTION DISTRICT

PARCEL 14
HOWARD COUNTY, MARYLAND



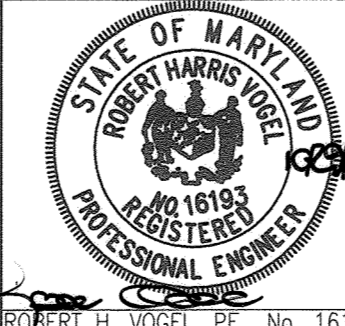
LAYOUT PLAN
SCALE: 1"=50'



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
P: 410.461.7666 F: 410.461.8961 www.timmons.com



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DRN: KG DES: DZE
CHK: RHV
DATE: OCTOBER 2020

BY	NO.	REVISION	DATE
WRA	1	AS-BUILT. ADDED STORM DRAIN MANHOLE I.D.	6/11/2012

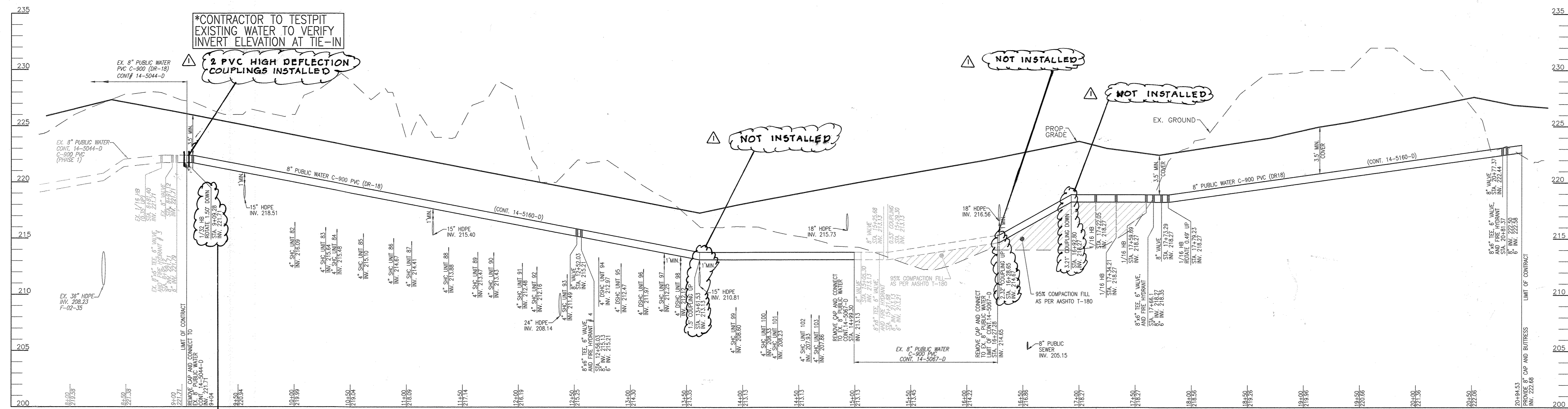
FINAL WATER AND SEWER CONSTRUCTION PLAN
CONTRACT 14-5160-D
LAYOUT PLAN

DELACOUR AT BLUE STREAM-PHASE 2
LOTS 52-73, 79-103, 137-150, AND OPEN SPACE LOT 151
A RE-SUBDIVISION OF BUILDABLE BULK PARCEL L-4
TOWNHOMES - SECTION 3
ZONED: CAC-CL1

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10211 WINGOPIN CIRCLE
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COLUMBIA, MD 21044
410-423-0407

SCALE AS SHOWN
SHEET 2 OF 4

TAX MAP 43, GRID 4
1ST ELECTION DISTRICT
PARCEL 14
HOWARD COUNTY, MARYLAND



PUBLIC WATER PROFILE (WATER MAIN 'A')
 SCALE: HORIZONTAL = 1"=50'
 VERTICAL = 1"=5'

*CONTRACTOR TO TESTPIT EXISTING WATER TO VERIFY INVERT ELEVATION AT TIE-IN
 2 PVC HIGH DEFLECTION COUPLINGS INSTALLED

NOT INSTALLED

NOT INSTALLED

NOT INSTALLED

NOT INSTALLED

WATER MAIN LOCATION CHART WATER MAIN 'A'		AS BUILTS	
WL STA.	APPURTENANCE	LOCATION 1	LOCATION 2
WL STA: 9+09.28	REMOVE EX. 8" CAP, CONNECT TO EX. 8" WATER 1/32" H. BEND, ROTATE 1.50° DOWN X		
WL STA: 12+52.03	8" VALVE ✓	FH5 (18.0')	SMH 516A (80.5')
WL STA: 12+56.03	8"x6" FHT & 6" VALVE ✓	FH5 (17.0')	SMH 516A (78.0')
WL STA: 13+61.53	1.5" COUPLING UP X		
WL STA: 16+28.65	2.32" COUPLING UP X		
WL STA: 16+92.80	3.21" COUPLING DOWN X		
WL STA: 17+22.05	1/16" H. BEND ✓		
WL STA: 17+34.21	1/16" H. BEND ✓		
WL STA: 17+59.69	1/16" H. BEND ✓		
WL STA: 17+66.10	8"x6" FHT & 6" VALVE ✓	SMH 513 (12.5')	FH6 (8.0')
WL STA: 17+73.29	8" VALVE ✓	SMH 512 (10.0')	FH6 (9.5')
WL STA: 17+79.23	1/16" H. BEND, ROTATE 0.49° UP ✓		
WL STA: 20+77.37	8" VALVE ✓	SMH 21 (21.5')	FH7 (11.0')
WL STA: 20+81.37	8"x6" FHT & 6" VALVE ✓	SMH 21 (21.0')	FH7 (9.5')
WL STA: 20+94.53	8" CAP AND BUTTRESS ✓		

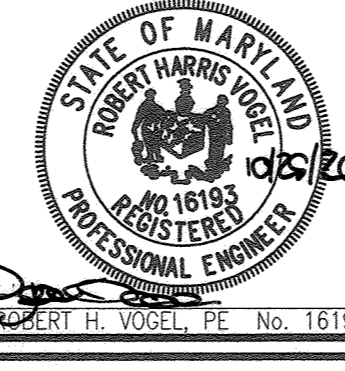
LOT/PARCEL	UNIT	STREET ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
52	82	7979 POTTER PLACE	SD14 (34.0')	SD15 (110.0')
53	83	7981 POTTER PLACE	..	..
54	84	7983 POTTER PLACE	SD14 (74.0')	SD15 (69.0')
55	85	7985 POTTER PLACE	..	..
56	86	7987 POTTER PLACE	SD14 (11.5')	SD15 (29.0')
57	87	7989 POTTER PLACE	..	..
58	88	7993 POTTER PLACE	SMH 517 (43.0')	FH5 (106.')
59	89	7995 POTTER PLACE	..	..
60	90	7997 POTTER PLACE	SMH 517 (33.0')	FH5 (68.0')
61	91	7999 POTTER PLACE	..	..
62	92	8001 POTTER PLACE	SMH 517 (61.0')	FH5 (28.0')
63	93	8003 POTTER PLACE	..	..
64	94	8009 POTTER PLACE	FH5 (28.0')	SMH 516A (98.0')
65	95	8011 POTTER PLACE	..	..
66	96	8013 POTTER PLACE	FH5 (68.0')	SMH 516A (31.0')
67	97	8015 POTTER PLACE	..	..
68	98	8017 POTTER PLACE	FH5 (98.0')	SMH 516A (36.0')
69	99	8021 POTTER PLACE	SMH 516A (79.0')	SD16 (86.0')
70	100	8023 POTTER PLACE	..	..
71	101	8025 POTTER PLACE	SMH 516A (117.0')	SD16 (47.0')
72	102	8027 POTTER PLACE	..	..
73	103	8029 POTTER PLACE	SD16 (17.0')	EX.FH 15+25(46.0')
79	109	7970 POTTER PLACE	SMH 518 (18.0')	EX.FH 7 (44.0')
80	110	7972 POTTER PLACE	SMH 518 (43.0')	EX.FH 7 (61.0')
81	111	7974 POTTER PLACE	..	..
82	112	7976 POTTER PLACE	SMH 518 (83.0')	EX.FH 7 (95.0')
83	113	7978 POTTER PLACE	..	..
84	114	7980 POTTER PLACE	SD13 (68.0')	SD14 (54.5')
85	115	7982 POTTER PLACE	..	..
86	116	7986 POTTER PLACE	SD13 (118.0')	SD14 (101.0')
87	117	7988 POTTER PLACE	..	..
88	118	7990 POTTER PLACE	SMH 517 (62.0')	SD15 (36.0')
89	119	7992 POTTER PLACE	..	..
90	120	7994 POTTER PLACE	SMH 517 (29.0')	SD15 (94.0')
91	121	7996 POTTER PLACE	..	..
92	122	7998 POTTER PLACE	SMH 517 (21.0')	SD15 (81.0')
93	123	8010 POTTER PLACE	FH5 (42.0')	SMH 516A (72.0')
94	124	8012 POTTER PLACE	FH5 (56.0')	SMH 516A (40.0')
95	125	8014 POTTER PLACE	..	..
96	126	8016 POTTER PLACE	FH5 (89.0')	SMH 516A (14.0')
97	127	8018 POTTER PLACE	..	..
98	128	8022 POTTER PLACE	SMH 516A (49.0')	SD11 (13.5')
99	129	8024 POTTER PLACE	SMH 516A (79.0')	SD11 (46.0')
100	130	8026 POTTER PLACE	..	..
101	131	8028 POTTER PLACE	SMH 516A (18.0')	SD11 (87.0')
102	132	8030 POTTER PLACE	..	..
103	133	8032 POTTER PLACE	SD11 (113.0')	SD16 (37.0')
137	167	8050 POTTER PLACE	SMH 513 (39.0')	FH6 (33.0')
138	168	8052 POTTER PLACE	..	..
139	169	8054 POTTER PLACE	SMH 513 (76.0')	FH6 (91.0')
140	170	8056 POTTER PLACE	..	..
141	171	8058 POTTER PLACE	SMH 513 (112.0')	SMH 514 (23.0')
142	172	8060 POTTER PLACE	..	..
143	173	8064 POTTER PLACE	SMH 514 (80.0')	SD10 (31.0')
144	174	8066 POTTER PLACE	..	..
145	175	8068 POTTER PLACE	SMH 514 (87.0')	SD10 (70.0')
146	176	8070 POTTER PLACE	..	..
147	177	8072 POTTER PLACE	SMH 521 (61.0')	FH7 (66.0')
148	178	8074 POTTER PLACE	..	..
149	179	8076 POTTER PLACE	SMH 521 (23.0')	FH7 (43.0')
150	180	8078 POTTER PLACE

OWNER/DEVELOPER
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DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 CHIEF, BUREAU OF UTILITIES
 11/9/2020

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 12.9.20

VOGEL ENGINEERING
TIMMONS GROUP
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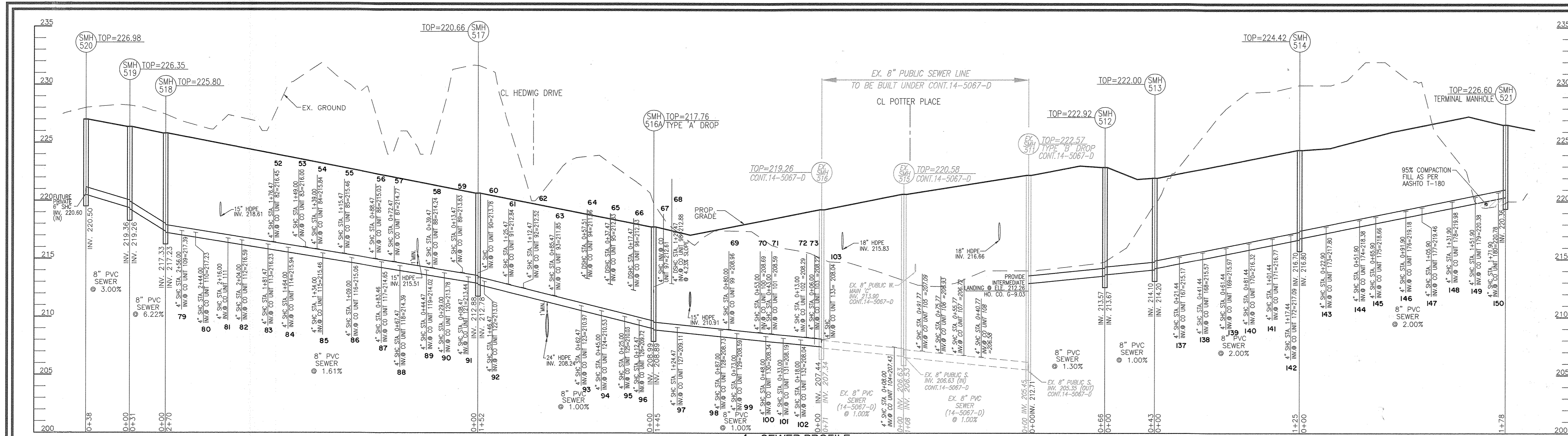
PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 08-27-2022
 DRN: KG DES: DZE
 CHK: RHW
 DATE: OCTOBER 2020

WRA	BY	NO.	AS-BUILT, ADDED DATA TO WATER LOCATION CHART AND WHIC AS-BUILT TABLE, UPDATE PROFILE.	REVISION	DATE
Δ					6/11/2021

FINAL WATER AND SEWER CONSTRUCTION PLAN
CONTRACT 14-5160-D
WATER LINE PROFILES
 600' SCALE MAP NO. 43 BLOCK NO. 4

DELACOUR AT BLUE STREAM-PHASE 2
 LOTS 52-73, 79-103, 137-150, AND OPEN SPACE LOT 151
 A RE-SUBDIVISION OF BUILDABLE BULK PARCEL L-4
 TOWNHOMES - SECTION 3
 ZONED: CAC-CLI
 TAX MAP 43 GRID 4
 1ST ELECTION DISTRICT
 PARCEL 14
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 3 OF 4



SEWER PROFILE
POTTER PLACE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

SEWER HOUSE CONNECTION INVERT AND MCE TABULATION

LOT	UNITS#	TYPE	INV SHC @ OVER MAIN	DIST TO ESMT/R/W	SHC SLOPE TO CO	EL @ ESMT/CO	DIST FROM CO TO REAR OF HSE	SHC SLOPE TO HSE	INV @ REAR HSE	MCE
52	82	SHC	215.80	28	2.0%	216.45	56	2.0%	217.57	220.07
53	83	SHC	215.44	28	2.0%	216.00	56	2.0%	217.16	219.66
54	84	SHC	215.28	28	2.0%	215.84	56	2.0%	216.96	219.46
55	85	SHC	214.90	28	2.0%	215.46	56	2.0%	216.62	219.12
56	86	SHC	214.47	28	2.0%	215.03	56	2.0%	216.15	218.65
57	87	SHC	214.21	28	2.0%	214.77	56	2.0%	215.93	218.43
58	88	SHC	213.68	28	2.0%	214.24	56	2.0%	215.36	217.86
59	89	SHC	213.27	28	2.0%	213.83	56	2.0%	214.99	217.49
60	90	SHC	213.22	28	2.0%	213.78	56	2.0%	214.90	217.40
61	91	SHC	212.28	28	2.0%	212.84	56	2.0%	214.00	216.50
62	92	SHC	211.98	28	2.0%	212.52	56	2.0%	213.64	216.14
63	93	SHC	211.28	28	2.0%	211.85	58	2.0%	213.01	215.51
64	94	DSHC	212.77	28	2.0%	213.33	56	2.0%	214.45	216.95
65	95	DSHC	212.27	28	2.0%	212.83	58	2.0%	213.99	216.49
66	96	DSHC	211.77	28	2.0%	212.33	56	2.0%	213.45	215.95
67	97	SHC	212.05	28	2.0%	212.61	58	2.0%	213.77	216.27
68	98	DSHC	211.70	28	4.23%	212.88	56	1.55%	213.75	216.25
69	99	SHC	208.40	28	2.0%	208.96	56	2.0%	210.08	212.58
70	100	SHC	208.13	28	2.0%	208.69	58	2.0%	208.85	212.35
71	101	SHC	208.03	28	2.0%	208.59	56	2.0%	208.71	212.21
72	102	SHC	207.73	28	2.0%	208.29	58	2.0%	208.45	211.85
73	103	SHC	207.86	28	2.0%	208.22	56	2.0%	208.34	211.84
79	109	SHC	217.13	13	2.0%	217.39	51	2.0%	218.41	220.91
80	110	SHC	216.97	13	2.0%	217.23	53	2.0%	218.29	220.79
81	111	SHC	216.62	13	2.0%	216.78	51	2.0%	217.80	220.30
82	112	SHC	216.33	13	2.0%	216.59	53	2.0%	217.65	220.15
83	113	SHC	215.97	13	2.0%	216.23	51	2.0%	217.25	219.75
84	114	SHC	215.68	13	2.0%	215.94	53	2.0%	217.00	219.50
85	115	SHC	215.20	13	2.0%	215.46	51	2.0%	216.48	218.98
86	116	SHC	214.80	13	2.0%	215.06	51	2.0%	216.08	218.58
87	117	SHC	214.39	13	2.0%	214.65	53	2.0%	215.71	218.21
88	118	SHC	214.13	13	2.0%	214.39	51	2.0%	215.41	217.91
89	119	SHC	213.76	13	2.0%	214.02	53	2.0%	215.08	217.58
90	120	SHC	213.62	13	2.0%	213.78	51	2.0%	214.80	217.30
91	121	SHC	213.18	13	2.0%	213.44	53	2.0%	214.50	217.00
92	122	SHC	212.81	13	2.0%	213.07	51	2.0%	214.09	216.59
93	123	SHC	210.71	13	2.0%	210.97	53	2.0%	212.03	214.53
94	124	SHC	210.27	13	2.0%	210.53	51	2.0%	211.55	214.05
95	125	SHC	209.77	13	2.0%	210.03	53	2.0%	211.09	213.59
96	126	SHC	208.46	13	2.0%	208.72	51	2.0%	210.74	213.24
97	127	SHC	208.85	13	2.0%	208.11	53	2.0%	210.17	212.67
98	128	SHC	208.47	13	2.0%	208.73	51	2.0%	209.75	212.25
99	129	SHC	208.33	13	2.0%	208.59	53	2.0%	209.65	212.15
100	130	SHC	208.08	13	2.0%	208.34	51	2.0%	209.36	211.86
101	131	SHC	207.93	13	2.0%	208.19	53	2.0%	209.25	211.75
102	132	SHC	207.78	13	2.0%	208.04	51	2.0%	209.06	211.56
103	133	SHC	207.78	13	2.0%	208.04	53	2.0%	209.10	211.60
137	167	SHC	214.79	19	2.0%	215.17	58	2.0%	216.33	218.83
138	168	SHC	215.19	19	2.0%	215.57	56	2.0%	216.69	219.19
139	169	SHC	215.59	19	2.0%	215.97	58	2.0%	217.13	219.63
140	170	SHC	215.94	19	2.0%	216.32	56	2.0%	217.44	219.94
141	171	SHC	216.39	19	2.0%	216.77	58	2.0%	217.93	220.43
142	172	SHC	216.71	19	2.0%	217.09	56	2.0%	218.21	220.71
143	173	SHC	217.42	19	2.0%	217.80	58	2.0%	218.96	221.46
144	174	SHC	218.00	19	2.0%	218.38	56	2.0%	219.50	222.00
145	175	SHC	218.28	19	2.0%	218.66	58	2.0%	219.82	222.32
146	176	SHC	218.80	19	2.0%	219.18	56	2.0%	220.30	222.80
147	177	SHC	219.08	19	2.0%	219.46	58	2.0%	220.62	223.12
148	178	SHC	219.60	19	2.0%	219.98	56	2.0%	221.10	223.60
149	179	SHC	220.00	19	2.0%	220.38	58	2.0%	221.54	224.04
150	180	SHC	220.40	19	2.0%	220.78	56	2.0%	221.90	224.40

STRUCTURE SCHEDULE

STR #	TYPE	LOCATION	TOP	INV. IN	INV. OUT	REMARKS
512	STD. PRECAST MANHOLE (G-5.12)	N 552689.22, E 1375226.28	222.92	213.67	213.57	
513	STD. PRECAST MANHOLE (G-5.12)	N 552730.58, E 1375216.41	222.00	214.20	214.10	
514	STD. PRECAST MANHOLE (G-5.12)	N 552637.94, E 1375279.73	224.42	216.80	216.70	
516-A	STD. PRECAST MANHOLE (G-5.12)	N 552587.63, E 1375449.15	217.76	208.89/212.05	208.89	
517	STD. PRECAST MANHOLE (G-5.12)	N 553484.45, E 1375719.40	220.88	212.88/213.22	212.78	
518	STD. PRECAST MANHOLE (G-5.12)	N 552352.51, E 1375984.99	225.80	217.33	217.23	
519	STD. PRECAST MANHOLE (G-5.12)	N 552333.31, E 1375988.57	228.35	220.38	219.28	
520	STD. PRECAST MANHOLE (G-5.12)	N 552299.94, E 1376007.30	228.88	220.60	220.50	
521	TERMINAL MH HO. CO. STD. DET. S-1.31	N 552691.41, E 1375370.39	226.60		220.36	PATCHED

(1) Coordinate for Proposed Structure = Center Top of Structure

LOT/PARCEL	UNIT	STREET ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
52	82	7979 POTTER PLACE	SD1 4 (22.0')	SD1 5 (120.0')
53	83	7981 POTTER PLACE	48.0'	74.0'
54	84	7983 POTTER PLACE	57.0'	85.0'
55	85	7985 POTTER PLACE	80.0'	63.0'
56	86	7987 POTTER PLACE	107.0'	34.0'
57	87	7989 POTTER PLACE	SD1 5 (18.0')	SMH 517 (79.0')
58	88	7993 POTTER PLACE	SMH 517 (52.0')	FH5 (115.0')
59	89	7995 POTTER PLACE	35.0'	92.0'
60	90	7997 POTTER PLACE	33.0'	78.0'
61	91	7999 POTTER PLACE	42.0'	52.0'
62	92	8001 POTTER PLACE	50.0'	40.0'
63	93	8003 POTTER PLACE	73.0'	13.0'
64	94	8009 POTTER PLACE	100.0'	17.0'
65	95	8011 POTTER PLACE	FH 5 (34.0')	SMH 516A (50.0')
66	96	8013 POTTER PLACE	56.0'	37.0'
67	97	8015 POTTER PLACE	75.0'	33.0'
68	98	8017 POTTER PLACE	89.0'	35.0'
69	99	8021 POTTER PLACE	SMH 516A (70.0')	EX. FH 15+25 (25.0')
70	100	8023 POTTER PLACE	95.0'	100.0'
71	101	8025 POTTER PLACE	102.0'	93.0'
72	102	8027 POTTER PLACE	EX. FH 15+25 (62.0')	SD1 6 (33.0')
73	103	8029 POTTER PLACE	54.0'	25.0'
79	109	7970 POTTER PLACE	SMH 518 (22.0')	EX. FH 4 (49.0')
80	110	7972 POTTER PLACE	30.0'	54.0'
81	111	7974 POTTER PLACE	57.0'	75.0'
82	112	7976 POTTER PLACE	69.0'	SD1 3 (20.0')
83	113	7978 POTTER PLACE	90.0'	41.0'
84	114	7980 POTTER PLACE	SD1 2 (115.0')	60.0'
85	115	7982 POTTER PLACE	86.0'	89.0'
86	116	7986 POTTER PLACE	SMH 517 (110.0')	SD1 2 (62.0')
87	117	7988 POTTER PLACE	87.0'	37.0'
88	118	7990 POTTER PLACE	69.0'	18.0'
89	119	7992 POTTER PLACE	48.0'	19.0'
90	120	7994 POTTER PLACE	35.0'	21.0'
91	121	7996 POTTER PLACE	18.0'	42.0'
92	122	7998 POTTER PLACE	14.0'	56.0'
93	123	8010 POTTER PLACE	SMH 516A (69.0')	FH 5 (43.0')
94	124	8012 POTTER PLACE	49.0'	51.0'
95	125	8014 POTTER PLACE	31.0'	64.0'
96	126	8016 POTTER PLACE	21.0'	74.0'
97	127	8018 POTTER PLACE	23.0'	100.0'
98	128	8022 POTTER PLACE	SMH 516 (90.0')	SD1 1 (23.0')
99	129	8024 POTTER PLACE	75.0'	38.0'
100	130	8026 POTTER PLACE	53.0'	61.0'
101	131	8028 POTTER PLACE	37.0'	77.0'
102	132	8030 POTTER PLACE	25.0'	92.0'
103	133	8032 POTTER PLACE	17.0'	108.0'
137	167	8050 POTTER PLACE	SMH 514 (107.0')	SMH 513 (31.0')
138	168	8052 POTTER PLACE	88.0'	SD1 0 (100.0')
139	169	8054 POTTER PLACE	66.0'	99.0'
140	170	8056 POTTER PLACE	47.0'	61.0'
141	171	8058 POTTER PLACE	33.0'	41.0'
142	172	8060 POTTER PLACE	22.0'	23.0'
143	173	8064 POTTER PLACE	SMH 514 (30.0')	13.0'
144	174	8066 POTTER PLACE	57.0'	41.0'
145	175	8068 POTTER PLACE	SMH 521 (112.0')	FH 7 (117.0')
146	176	8070 POTTER PLACE	90.0'	93.0'
147	177	8072 POTTER PLACE	76.0'	79.0'
148	178	8074 POTTER PLACE	51.0'	88.0'
149	179	8076 POTTER PLACE	36.0'	48.5'
150	180	8078 POTTER PLACE	23.5'	41.0'

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DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature]
CHIEF, BUREAU OF UTILITIES
DATE: 1/9/2020

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