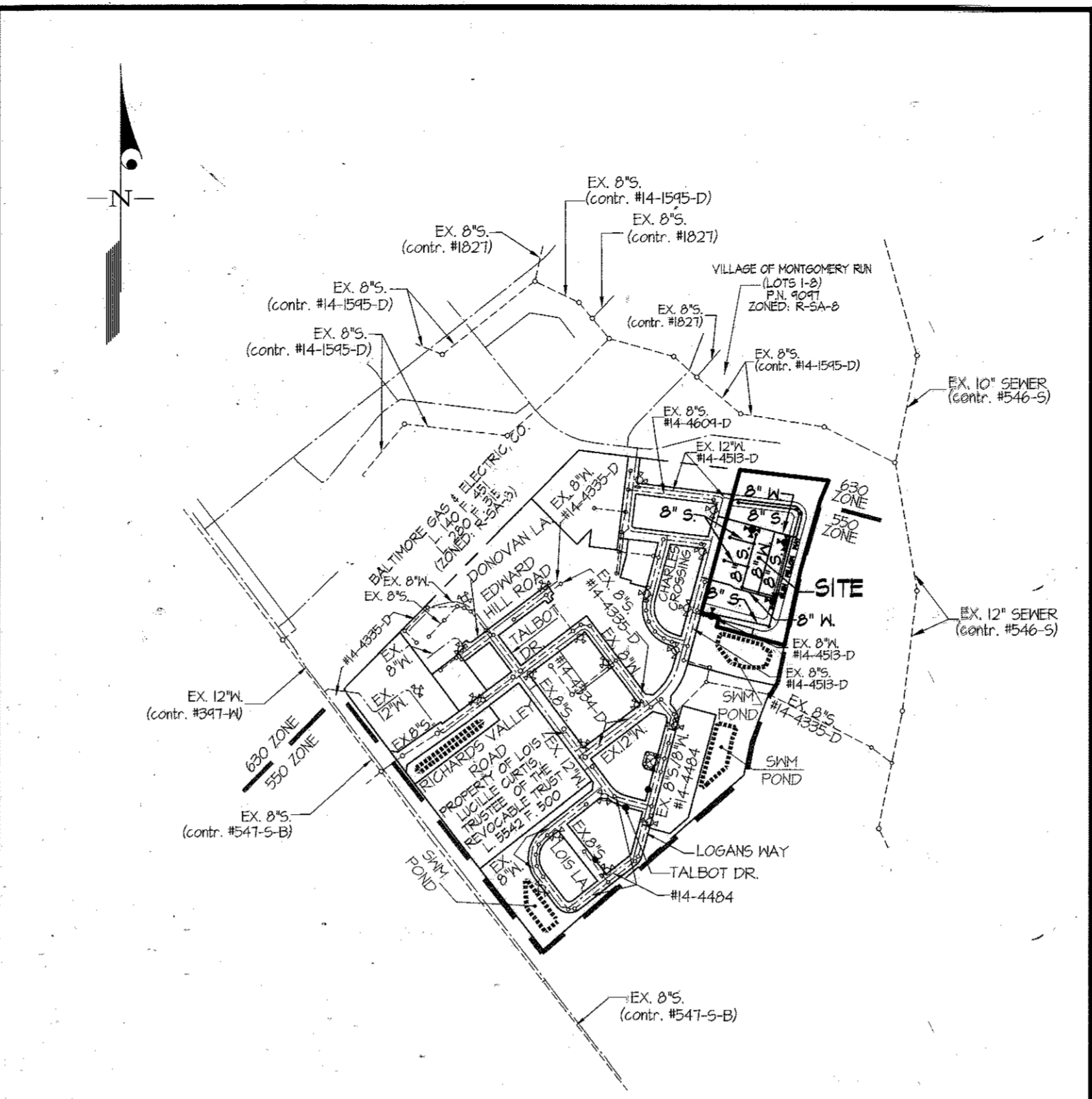


ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	SUPPLIER	MANUFACTURER/SUPPLIER
6" WATER (FH LEADS)	77 LF.	63 LF.	BELAIR ROAD SUPPLY	STAR PIPE
8" WATER (400 DR. 16 PVC)	1,416 LF.	1,499 LF.	BELAIR ROAD SUPPLY	STAR PIPE
8" SEWER MAIN (PVC)	1,760 LF.	1,828 LF.	BELAIR ROAD SUPPLY	JM EAGLE
4" MANHOLE	11 EA.	12 EA.	BELAIR ROAD SUPPLY	CONCRETE PRECAST
8" V.	2 EA.			
12" x 8" T.S.V.	2 EA.	2 EA.	BELAIR ROAD SUPPLY	FORD
12" x 4" T.S.V.	1 EA.	1 EA.	BELAIR ROAD SUPPLY	FORD
8" x 6" F.H.T.	4 EA.	4 EA.	BELAIR ROAD SUPPLY	STAR PIPE
8" HD.	4 EA.			
8" V.B.	3 EA.			
8" HD.	2 EA.			
8" V.B.	2 EA.			
4" V.B.	2 EA.			
8" V.	6 EA.	6 EA.	BELAIR ROAD SUPPLY	MUELLER
8" V.	4 EA.	4 EA.	BELAIR ROAD SUPPLY	MUELLER
4" PVC SCH. 40	1,448 LF.	1,419 LF.	BELAIR ROAD SUPPLY	JM EAGLE
1 1/2" MHC	774 LF.	658 LF.	BELAIR ROAD SUPPLY	CAMBRIDGE LEE
4" MHC (400 PVC)	4 LF.	4 LF.	BELAIR ROAD SUPPLY	GPK

SEWER HOUSE CONNECTIONS				
ADDRESS	LOC. 1	MEAS. 1	LOC. 2	MEAS. 2
5970 CHARLES CROSSING EX MH 23	15	1-100	39	
5972 CHARLES CROSSING EX MH 23	64	1-100	63	
5974 CHARLES CROSSING EX MH 23	74	1-100	74	
5901 SWEET CORN DRIVE SMH 9	133	SMH12	14	
5903 SWEET CORN DRIVE SMH 9	122	SMH12	11	
5905 SWEET CORN DRIVE SMH 9	88	SMH12	23	
5907 SWEET CORN DRIVE SMH 9	3	SMH12	34	
5909 SWEET CORN DRIVE SMH 9	38	SMH12	63	
5911 SWEET CORN DRIVE SMH 9	43	SMH12	88	
5905 PRAIRIE LANDING WAY SMH 9	33	SMH 9	54	
6005 PRAIRIE LANDING WAY SMH 9	30	SMH 9	74	
5907 PRAIRIE LANDING WAY SMH 10	107	SMH 9	18	
5909 PRAIRIE LANDING WAY SMH 10	95	SMH 9	32	
6001 PRAIRIE LANDING WAY SMH 10	63	SMH 9	48	
6004 PRAIRIE LANDING WAY SMH 7	62	SMH 10	29	
6007 PRAIRIE LANDING WAY SMH 7	34	SMH 10	14	
6009 PRAIRIE LANDING WAY SMH 7	2	SMH 10	25	
6021 PRAIRIE LANDING WAY SMH 7	16	SMH 10	38	
5910 HIDDEN GARDEN LANE SMH 10	38	SMH 11	78	
5908 HIDDEN GARDEN LANE SMH 10	89	SMH 11	57	
5906 HIDDEN GARDEN LANE SMH 10	78	SMH 11	38	
5904 HIDDEN GARDEN LANE SMH 10	38	SMH 11	21	
6002 HIDDEN GARDEN LANE SMH 10	118	SMH 11	10	
6000 CHARLES CROSSING SMH 9	122	SMH 12	12	
5985 GLEN WILLOW WAY SMH 6	22	MH 128	12	
5983 GLEN WILLOW WAY SMH 6	31	MH 128	57	
5981 GLEN WILLOW WAY SMH 6	53	MH 128	92	
5979 GLEN WILLOW WAY SMH 6	93	MH 128	31	
5977 GLEN WILLOW WAY SMH 6	81	MH 128	31	
5975 GLEN WILLOW WAY SMH 6	128	MH 128	26	
5969 GLEN WILLOW WAY SMH 6	85	MH 128	18	
5967 GLEN WILLOW WAY SMH 6	93	MH 128	22	
5965 GLEN WILLOW WAY SMH 6	112	MH 128	59	
5963 GLEN WILLOW WAY SMH 6	112	MH 128	49	
5961 GLEN WILLOW WAY SMH 6	112	MH 128	35	
5959 GLEN WILLOW WAY SMH 6	109	MH 128	34	
5957 GLEN WILLOW WAY SMH 6	109	MH 128	109	
5949 GLEN WILLOW WAY SMH 6	107	MH 128	48	
5947 GLEN WILLOW WAY SMH 6	107	MH 128	88	
5945 GLEN WILLOW WAY SMH 6	107	MH 128	88	
5943 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5941 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5939 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5937 GLEN WILLOW WAY SMH 6	107	MH 128	72	
5935 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5933 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5931 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5929 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5927 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5925 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5923 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5921 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5919 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5917 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5915 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5913 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5911 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5909 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5907 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5905 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5903 GLEN WILLOW WAY SMH 6	107	MH 128	97	
5901 GLEN WILLOW WAY SMH 6	107	MH 128	97	



WATER ZONE: 630E
TEST GRADIENT: 780

LOCATION MAP SCALE: 1" = 600'

TYPE OF BUILDING	RESIDENTIAL
NUMBER OF UNITS	67 UNITS
NUMBER OF S.H.C.'s	68
NUMBER OF W.H.C.'s	31 - TWIN W.H.C.'s & 5 - SINGLE W.H.C.'s
AREA OF COMMERCIAL LOT/PARCEL	6.59 ACRES
SEWER SHED	DORSEY - PATAPSCO
PUMPING STATION	PATAPSCO WASTEWATER TREATMENT PLANT

VICINITY MAP
SCALE: 1" = 2000'
ADC MAP PAGE 16, GRID F6

BENCHMARKS
31GA ELEV. = 511.65 N 564.925.8221 E 1361.061.1073
374A ELEV. = 431.26 N 563.835.9110 E 1361.971.6500

- GENERAL NOTES**
Revised - October 2013
- 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 AHS surveys were performed on MARCH, 2003 by MCKENZIE SNYDER.
 - Horizontal and Vertical Survey Controls:
The coordinates shown on the drawings are based on Maryland State Reference System NAD '83/11 as projected by Howard County Geodetic Control Stations No. 316A, and No. 374A.
All vertical controls are based on NAVD '88. Vertical controls provided on the drawings are STANDARD DISCS ON CONCRETE MONUMENTS.
 - 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 taller as required unless otherwise noted. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the contractor's work requires the bracing of additional poles, all cost incurred by the owner for the 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 drawing, 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 (with a cross) at the locations of the test pits. A note or notes containing the results of the test pits 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 operations 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
BGE (Construction Services) 410-631-9113
BGE (Emergency) 410-693-0123
Bureau of Utilities 410-313-4900
Colonial Pipeline Co. 410-745-1340
Miss Utility 1-800-251-7777
State Highway Administration 410-531-5533
Verizon 1-800-743-0033
- Part II WATER**
- All water mains shall be ANHA Standard C 400 DR18 PVC.
 - Sprinkler systems for residential dwelling units shall have water house connections and water meters that are sized in accordance with the design of sprinkler systems. Sprinkler systems for single residential dwellings shall have a minimum of 1/2" inch service connection with a 1" outside meter setting.
 - Taps 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 bolted 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 wires and continuity test stations shall be installed on all D.I.P. 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 51 of the ANHA Standard C400 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 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 hangers. 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 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 #51 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-degree (1/4-degree on either end of the coupling) shall be rated for a minimum 200 psi meeting the requirements of ANHA C400, shall have a minimum lay length of 4-inches and shall have center stops. PVC High deflection couplings shall be CertainTeed 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 ANHA C400 and shall be Multi Fittings (Ipe) Blue Brute DR18 or equal.
- When PVC high deflection couplings or PVC 5-degree sweeps are used to facilitate changes in horizontal or vertical alignments of ANHA C-400 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 PVC, 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 with "N" in plan and profile shall have watertight frame and cover, Standard Detail 65.52. Where watertight manhole frames 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.

WATER HOUSE CONNECTIONS				
ADDRESS	LOC. 1	MEAS. 1	LOC. 2	MEAS. 2
5970 CHARLES CROSSING	1-100	40'-6"	EX MH 23	36'-6"
5972 CHARLES CROSSING	1-100	40'-6"	EX MH 23	36'-6"
5974 CHARLES CROSSING	1-100	79'	EX MH 23	73'
5901 SWEET CORN DRIVE	MH 121	111'-6"	SMH 9	125'-6"
5903	MH 121	71'-6"	SMH 9	88'
5905	MH 121	71'-6"	SMH 9	38'
5907	MH 121	31'	SMH 9	46'
5909	MH 121	31'	SMH 9	46'
5911 SWEET CORN DRIVE	MH 121	31'	SMH 9	46'
6005 PRAIRIE LANDING WAY	1-128	128'-6"	J-128	14'-6"
6007	1-128	74'	1-128	61'
6009	1-128	34'	1-128	104'
6011	1-128	34'	1-128	104'
6013	1-128	46'	TEE VALVE	89'-6"
6015	1-128	46'	TEE VALVE	89'-6"
6017	1-128	46'	TEE VALVE	89'-6"
6019	1-128	46'	TEE VALVE	89'-6"
6021 PRAIRIE LANDING WAY	1-128	87'	TEE VALVE	46'-6"
5910 HIDDEN GARDEN LANE	1-128	68'-6"	FH D	69'
5908	1-128	25'-6"	FH D	59'
5906	1-128	99'-6"	FH D	99'
5904	1-128	99'-6"	FH D	99'
5902 HIDDEN GARDEN LANE	1-128	158'-6"	FH D	159'-6"
6000 CHARLES CROSSING VALVE	61'	EX MH 10	32'	
5985 GLEN WILLOW WAY	SMH 6	19'	MH 128	112'
5983	SMH 6	31'	MH 128	112'
5981	SMH 6	40'-6"	MH 128	72'-6"
5979	SMH 6	40'-6"	MH 128	72'-6"
5977	SMH 6	40'-6"	MH 128	44'
5975	MH 128	35'-6"	1-112	12'-6"
5969	MH 128	35'-6"	1-112	12'-6"
5967	MH 128	79'	1-112	38'-6"
5965	MH 128	79'	1-112	38'-6"
5963	MH 128	123'	1-112	82'
5961	MH 128	123'	1-112	82'
5959	1-128	89'	TEE VALVE	41'-6"
5957	1-128	89'	TEE VALVE	41'-6"
5949	1-128	49'	TEE VALVE	89'-6"
5947	1-128	49'	TEE VALVE	89'-6"
5945	1-128	9'-6"	TEE VALVE	120'
5943	1-128	108'	1-128	29'
5941	1-128	108'	1-128	29'
5939	1-128	108'	1-128	29'
5937	1-128	22'	1-128	54'-6"
5935	1-128	72'	1-128	68'-6"
5933	1-128	44'	1-128	108'
5931	1-128	44'	1-128	108'
5929	MH 120	76'	1-128	84'-6"
5927	MH 120	76'	1-128	84'-6"
5925	MH 120	39'	1-128	35'
5923	MH 120	39'	1-128	35'
5921	MH 120	43'-6"	1-128	84'-6"
5919	MH 120	43'-6"	1-128	84'-6"
5917	MH 120	82'-6"	1-128	88'-6"
5915	MH 120	82'-6"	1-128	88'-6"
5913	MH 120	82'-6"	1-128	88'-6"
5911	MH 120	82'-6"	1-128	88'-6"
5909	SMH 6	38'	MH 128	112'
5907	SMH 6	38'	MH 128	112'
5905	SMH 6	73'	MH 128	72'-6"
5903	SMH 6	73'	MH 128	72'-6"
5901	SMH 6	117'-6"	MH 128	44'
5974	SMH 6	117'-6"	MH 128	44'
5970	1-113	35'-6"	1-112	44'
5968	1-113	63'-6"	1-112	74'
5966	1-113	63'-6"	1-112	74'
5964	SMH 4	89'	MH 110	81'
5962	SMH 4	89'	MH 110	81'
5960	SMH 4	36'	MH 110	59'-6"
5958 GLEN WILLOW WAY	SMH 4	36'	MH 110	59'-6"

CONTRACT No. 14-4924-D
SHIPLEY'S GRANT-PHASE VIII
LOTS D-151 thru D-217
OPEN SPACE LOTS D-218 thru D-221
COMMON OPEN SPACE LOT D-222 & D-223
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

LEGEND

1/2" SINGLE WATER HOUSE CONNECTION
1/2" THIN WATER HOUSE CONNECTION
WATER LINE (PUBLC)
PUBLIC WATER EASEMENT
FIRE HYDRANT (A)
SEWER HOUSE CONNECTION
SEWER LINE (PUBLC)
PUBLIC SEWER EASEMENT
EXISTING SEWER LINE
EXISTING WATER LINE
PROPOSED STORM DRAIN
EXISTING STORM DRAIN
PROPOSED CURB
EXISTING CURB

D-151 --- LOT NUMBER
5 --- SLAB ELEVATION

SHEET INDEX

- COVER SHEET
- WATER & SEWER PLAN
- WATER & SEWER PROFILES

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH F-16-116, & VOLUME IV SECTION 308 OF THE SPECIFICATIONS.

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

APPROVED: *[Signature]* 11/30/16
HOWARD S.C.E. Date

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 11/16/16
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

[Signature] 12-20-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

GLW GURSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BIRTONVILLE OFFICE PARK
BIRTONVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT. 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE NOV., 2016
G.L.W. No. 13063
PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS 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. 12975
EXP. DATE: MAY 26, 2018
11-3-16 *[Signature]*

BY	NO	REVISION	DATE

COVER SHEET
SCALE AS SHOWN
SHEET 1 OF 3
CONTRACT No. 14-4924-D

PREPARED FOR:
BA WATERLOO, LLC
c/o BOZITTO HOMES, INC.
6406 IYV LANE, SUITE 700
GREENBELT, MD 20770
ATTN: CHRIS BLOCK
301-623-3672

FITTING CHART			
STATION	FITTING	NAD '83/'91 COORDINATES	
WATER MAIN 'A'			
0+00	12" x 8" T.S.V.	N 564221.1435	E 1364945.4194
1+37	8" x 1/8" H.B.	N 564186.1126	E 1364927.5441
1+58	8" x 1/8" H.B.	N 564173.3574	E 1364944.1072
2+64	8" x 8" T.	N 564144.3270	E 1364951.7042
3+43	8" x 6" F.H.T.	N 564125.1802	E 1370022.6763
3+48	8" CAP	N 564123.8843	E 1370021.4795
WATER MAIN 'B'			
0+00	8" x 8" T.	N 564144.3270	E 1364951.7042
2+44	8" x 8" T.	N 564421.7294	E 1370020.1108
WATER MAIN 'C'			
0+00	12" x 8" T.S.V.	N 564447.4221	E 1364769.8512
1+42	8" x 6" F.H.T.	N 564447.4829	E 1364954.9554
2+68	8" x 8" T.	N 564427.1294	E 1370020.1108
3+41	8" x 6" F.H.T.	N 564408.4796	E 1370099.5946
3+60	8" x 1/8" H.B.	N 564403.6226	E 1370117.5220
3+72	8" x 1/8" H.B.	N 564404.5826	E 1370121.8862
4+31	8" x 3" HDC	N 564466.4211	E 1370143.2214
4+44	8" x 1/2" H.B.	N 564471.1506	E 1370141.3121
4+74	8" x 1/8" H.B.	N 564514.0304	E 1370151.5398
5+15	8" x 1/8" H.B.	N 564542.2252	E 1370124.3630
7+74	8" x 3" HDC	N 564573.4668	E 1364987.8661
7+85	8" x 1/2" H.B.	N 564573.8755	E 1364986.8074
8+06	8" x 1/8" H.B.	N 564571.1047	E 1364984.4841

CABLE TEST STATION CHART			
STR.	STATION	OFFSET	REMARKS
EX.	WATERMAIN	(CONTR. #14-4513-D)	
1	0+07	8' LEFT	HO. CO. STD. DETAIL W-115
2	3+45	22' RIGHT	HO. CO. STD. DETAIL W-115
3	3+43	32' RIGHT	HO. CO. STD. DETAIL W-115
4	1+90	14' RIGHT	HO. CO. STD. DETAIL W-115

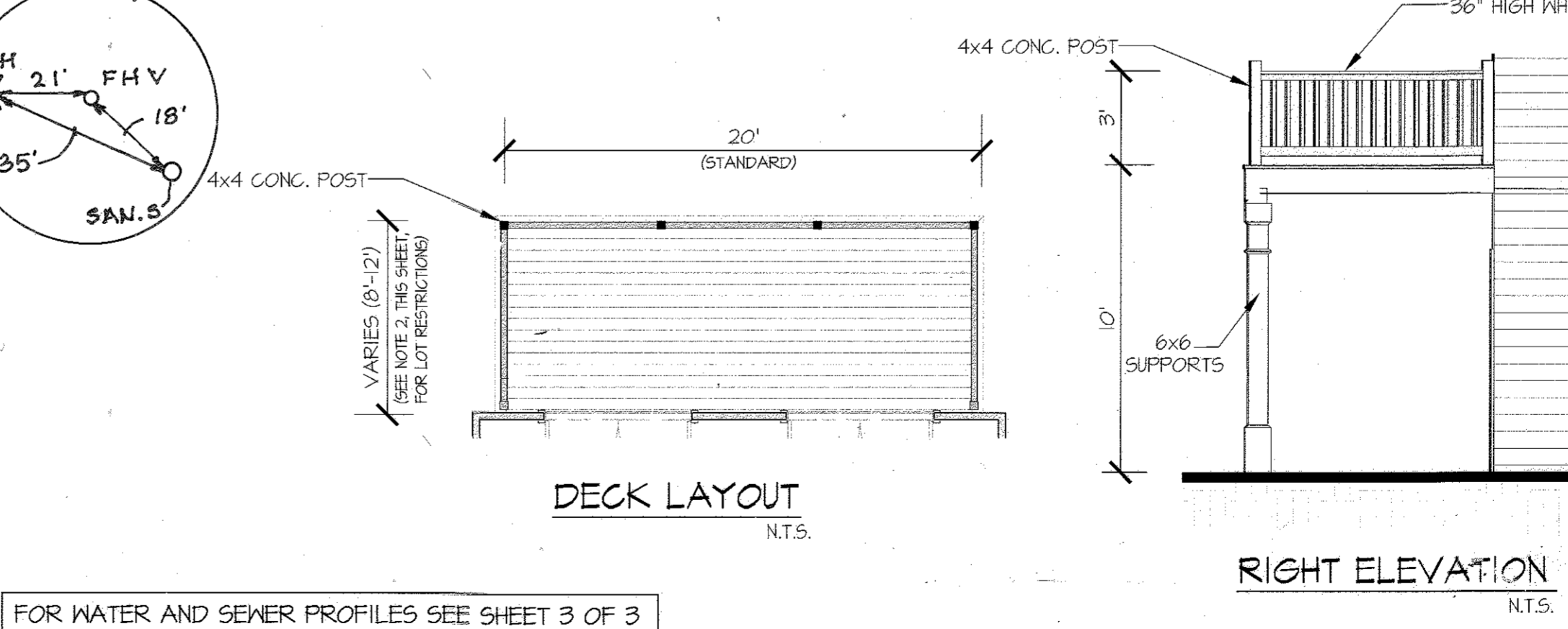
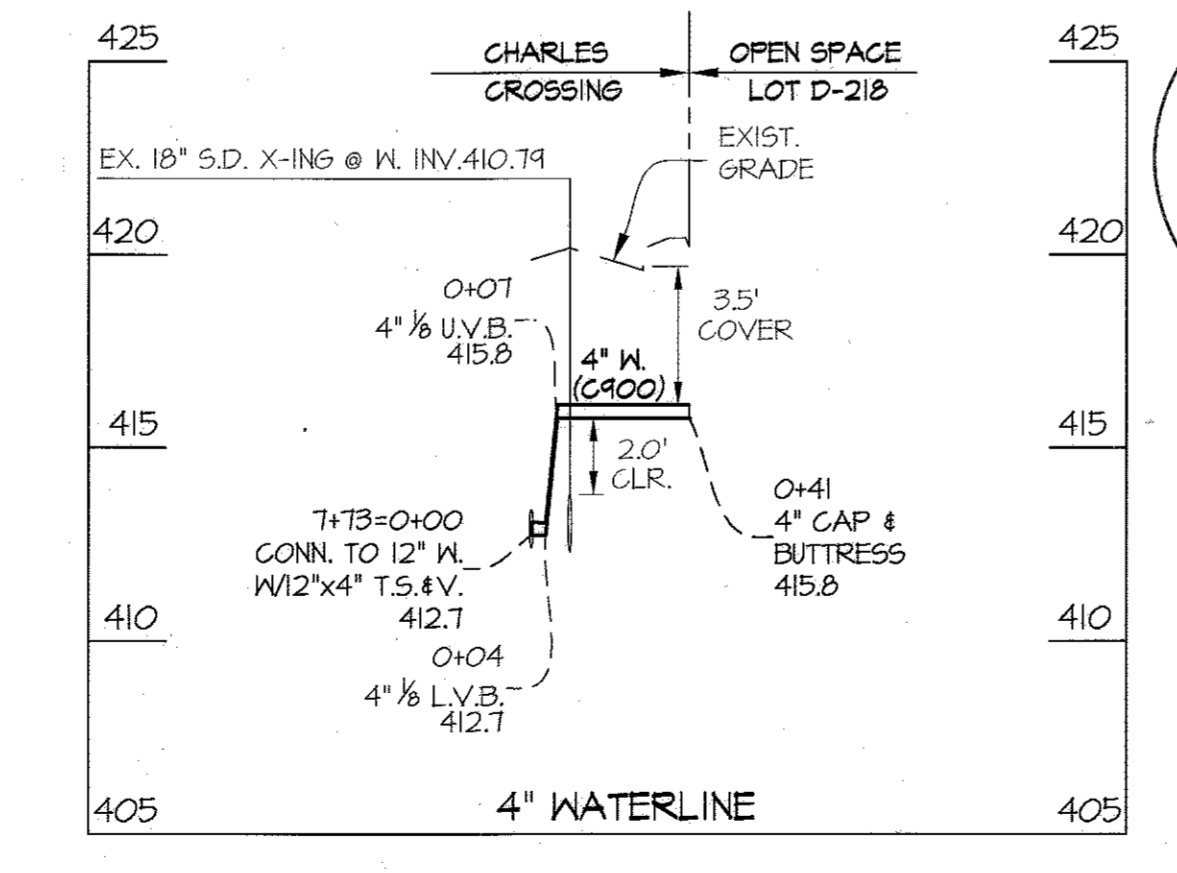
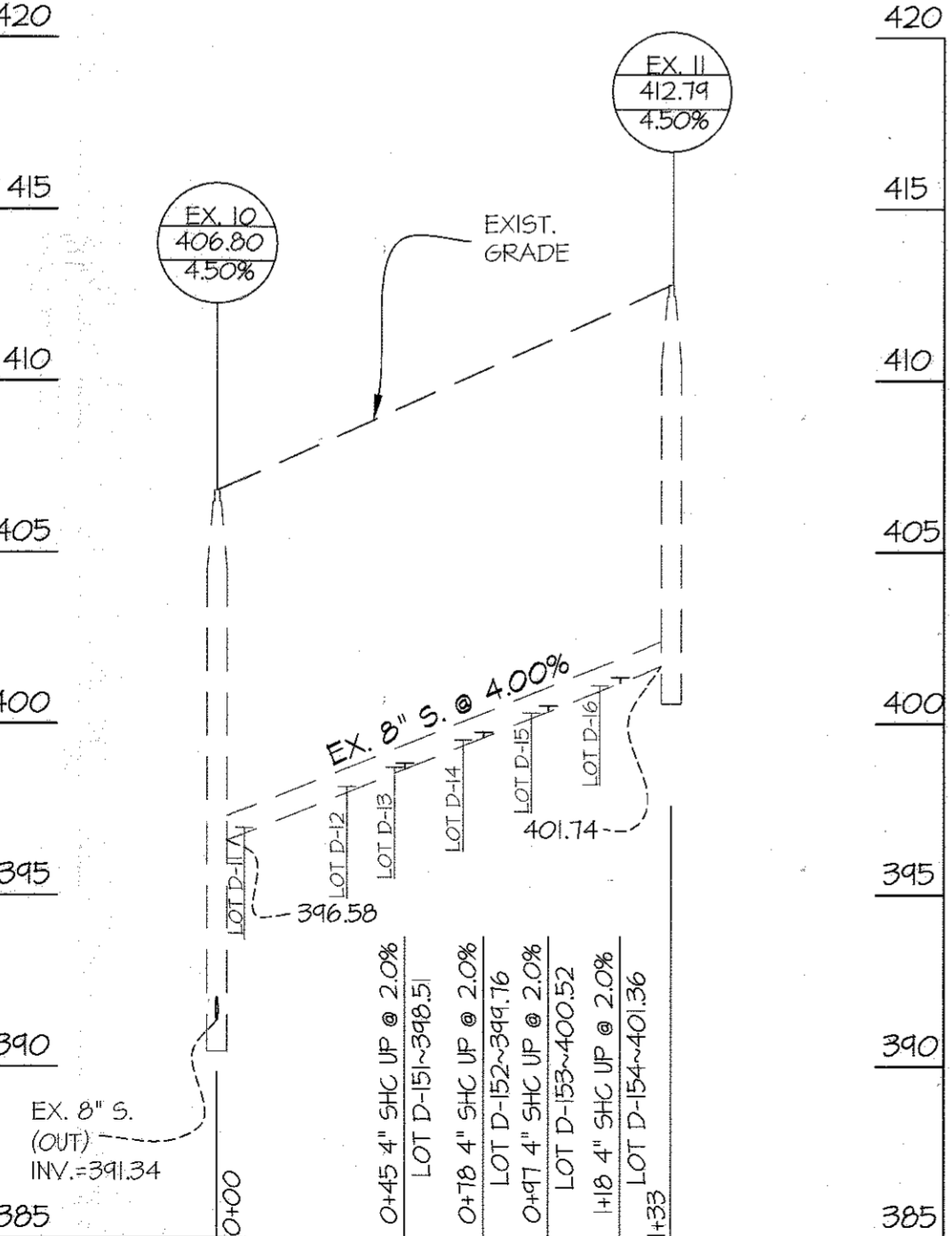
MINIMUM CELLAR ELEVATIONS		
LOT NO.	ELEVATION	INV. @ R/W/ESMT. ELEVATION
D-151	402.84	398.95
D-152	404.21	400.23
D-153	405.03	400.94
D-154	405.87	401.83
D-155	412.17	404.43
D-156	412.65	404.33
D-157	410.05	406.75
D-158	408.84	405.65
D-159	407.58	404.28
D-160	407.35	403.91
D-161	405.46	402.26
D-162	405.87	402.64
D-163	406.08	402.42
D-164	406.36	403.13
D-165	404.28	406.10
D-166	410.20	407.02
D-167	410.92	407.74
D-168	411.22	408.04
D-169	411.65	408.33
D-170	413.12	404.26
D-171	414.12	410.26
D-172	415.12	411.26
D-173	416.11	412.26
D-174	417.04	413.18
D-175	417.36	413.38
D-176	416.16	412.88
D-177	416.22	412.34
D-178	414.96	411.38
D-179	414.28	410.38
D-180	409.08	394.63
D-181	408.33	404.25
D-182	407.14	403.80
D-183	407.25	403.07
D-184	406.84	402.78
D-185	406.40	402.12
D-186	403.45	394.63
D-187	403.26	394.44
D-188	403.04	394.22
D-189	402.82	394.00
D-190	402.53	393.71
D-191	402.12	393.30
D-192	401.40	394.08
D-193	401.67	394.28
D-194	401.44	394.12
D-195	401.20	394.18
D-196	400.92	394.10
D-197	397.80	393.68
D-198	397.12	393.54
D-199	397.52	394.42
D-200	397.60	393.40
D-201	397.42	393.30
D-202	397.30	393.20
D-203	397.22	393.10
D-204	397.11	393.01
D-205	411.78	413.66
D-206	416.28	412.16
D-207	415.38	411.16
D-208	410.68	406.56
D-209	410.25	406.11
D-210	409.65	405.53
D-211	408.34	404.22
D-212	407.63	403.51
D-213	407.05	402.93
D-214	406.34	402.22
D-215	406.18	401.92
D-216	406.25	401.67
D-217	406.80	401.74

SEWER MH CHART		
MH	NAD '83/'91 COORDINATES	
2	N 563948.4750	E 1370002.4643
3	N 564131.3196	E 1370038.3106
4	N 564508.8880	E 1370140.1781
5	N 564528.3675	E 1370127.3343
6	N 564560.1284	E 1364986.4407
7	N 564404.6875	E 1364940.8200
8	N 564174.3864	E 1364987.8650
9	N 564269.0032	E 1364940.2125
10	N 564372.5049	E 1364932.1371
11	N 564401.6150	E 1364982.4241
12	N 564300.4556	E 1364781.6355

FIRE HYDRANT CHART		
FH	NAD '83/'91 COORDINATES	
A	N 564046.7651	E 1364934.9650
B	N 564103.5910	E 1370016.8256
C	N 564371.2071	E 1370091.0823
D	N 564433.8646	E 1364951.2826

LOT FRONTAGE TABLE	
LOT No.	DISTANCE
CHARLES CROSSING	
D-151	24.25'
D-152	20.00'
D-153	20.00'
D-154	28.00'
OPEN SPACE LOT D-218	
D-155	24.50'
D-156	20.00'
D-157	20.00'
D-158	20.00'
D-159	20.00'
D-160	24.50'
D-161	32.50'
D-162	22.00'
D-163	22.00'
D-164	22.00'
D-165	32.00'
D-166	32.00'
D-167	22.00'
D-168	22.00'
D-169	32.43'
D-170	25.00'
D-171	20.00'
D-172	20.00'
D-173	20.00'
D-174	20.00'
GLEN WILLOW WAY	
D-175	25.26'
D-176	20.21'
D-177	20.21'
D-178	20.21'
D-179	26.21'
D-180	21.28'
D-181	22.23'
D-182	22.23'

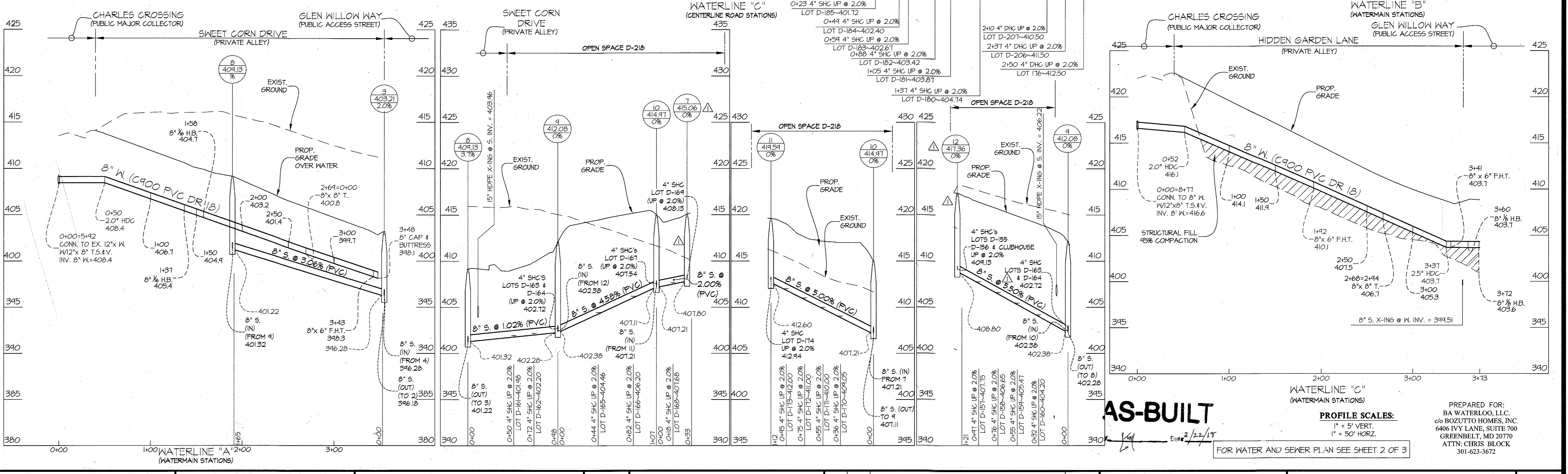
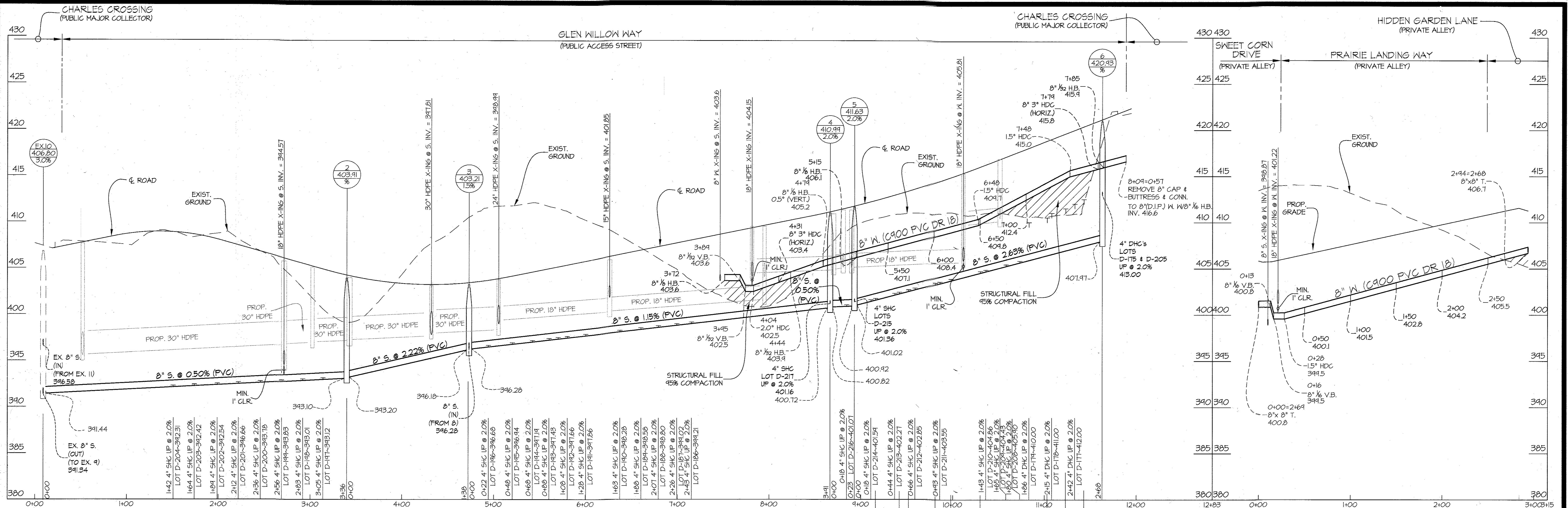
LOT FRONTAGE TABLE	
LOT No.	DISTANCE
GLEN WILLOW WAY	
D-183	22.23'
D-184	32.18'
D-185	31.15'
D-186	29.34'
D-187	20.00'
D-188	20.00'
D-189	24.00'
D-190	28.20'
D-191	28.00'
D-192	20.00'
D-193	20.00'
D-194	22.00'
D-195	20.00'
D-196	25.00'
D-197	36.35'
D-198	24.00'
D-199	24.00'
D-200	24.00'
D-201	24.00'
D-202	24.00'
D-203	24.00'
D-204	31.00'
D-205	45.18'
D-206	24.00'
D-207	24.00'
D-208	24.00'
D-209	24.00'
D-210	31.00'
D-211	31.00'
D-212	24.00'
D-213	24.00'
D-214	24.00'
D-215	25.64'
D-216	21.07'
D-217	21.00'



NOTES:
 1. P.S.U. DENOTES PUBLIC WATER, SEWER, SIDEWALK MAINTENANCE & UTILITY EASEMENT.
 2. ON MAY 12, 2016 A DESIGN MANUAL WAIVER REQUESTING A WAIVER OF SECTION 5.4 CROSSING AND CLEARANCES, PARAGRAPH B.5 OF THE HOWARD COUNTY WATER AND SEWER DESIGN MANUAL, VOLUME II, REQUIRING A MINIMUM 10 FOOT HORIZONTAL CLEARANCE BETWEEN ANY PERMANENT STRUCTURE AND THE EDGE OF A PUBLIC EASEMENT WAS APPROVED WITH THE FOLLOWING CONDITIONS: REAR DECKS SHALL NOT BE PERMITTED FOR LOTS D-161 THRU D-171 AND LOTS D-186 THRU D-196. ANY PROPOSED FUTURE DECK FOR LOTS D-170 AND D-171, SHALL BE A MAXIMUM SIZE OF 8 FEET DEEP FROM THE UNIT.

PREPARED FOR:
 BA WATERLOO, LLC.
 c/o BOZZUTO HOMES, INC.
 6406 IVY LANE, SUITE 700
 GREENBELT, MD 20770
 ATTN: CHRIS BLOCK
 301-623-3672

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND 	GLWGUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 280 - BIRTONVILLE OFFICE PARK BIRTONVILLE, MARYLAND 20866 TEL: 301-421-4024 FAX: 301-421-4188	DATE APRIL 2017 PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS 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. 12975, EXP. DATE: MAY 26, 2018 	WATER & SEWER EXTENSION PLAN SHEET 2 OF 3	SCALE 1" = 50' SHEET 2 OF 3



AS-BUILT

PROFILE SCALES:
 1" = 5' VERT.
 1" = 50' HORIZ.

FOR WATER AND SEWER PLAN SEE SHEET 2 OF 3

PREPARED FOR:
 BA WATERLOO, LLC.
 c/o BOZZITTO HOMES, INC.
 6406 IVY LANE, SUITE 700
 GREENBELT, MD 20770
 ATTN: CHRIS BLOCK
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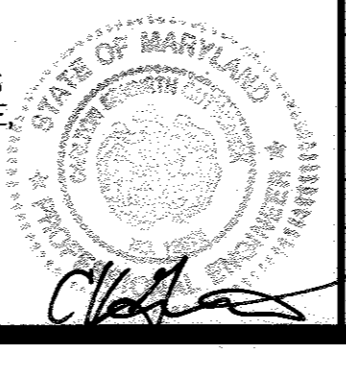
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 5/17/17

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 5/17/17

GLW Gutschick Little & Weber, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWN OFFICE PARK
 BURTONTOWN, MARYLAND 20868
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

DATE APRIL 2017
 G.L.W. No. 13063

PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE PLANS 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. 12975
 EXP. DATE: MAY 26, 2018
 4-17-17



BY	NO	REVISION	DATE
		REVISE SEWER FROM 14 & 12 TO 4 T AND 10	

WATER & SEWER PROFILES
 600' SCALE MAP NO. 37 BLOCK NO. 1&2

SHIPLEY'S GRANT - PHASE VIII
 Lots D-151 thru D-217,
 Open Space Lots 218 thru 221
 Common Open Space Lot D-222 & D-223
 HOWARD COUNTY, MARYLAND
 ELECTION DISTRICT NO. 1
 CONTRACT No. 14-4924-D

SCALE AS SHOWN
 SHEET 3 OF 3