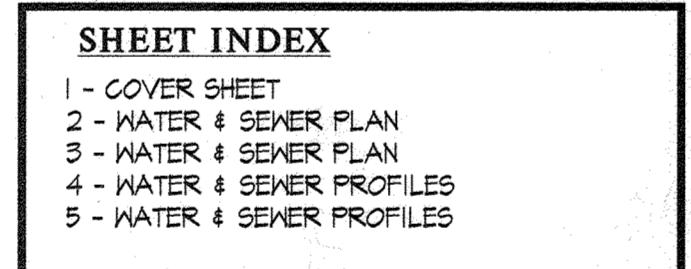
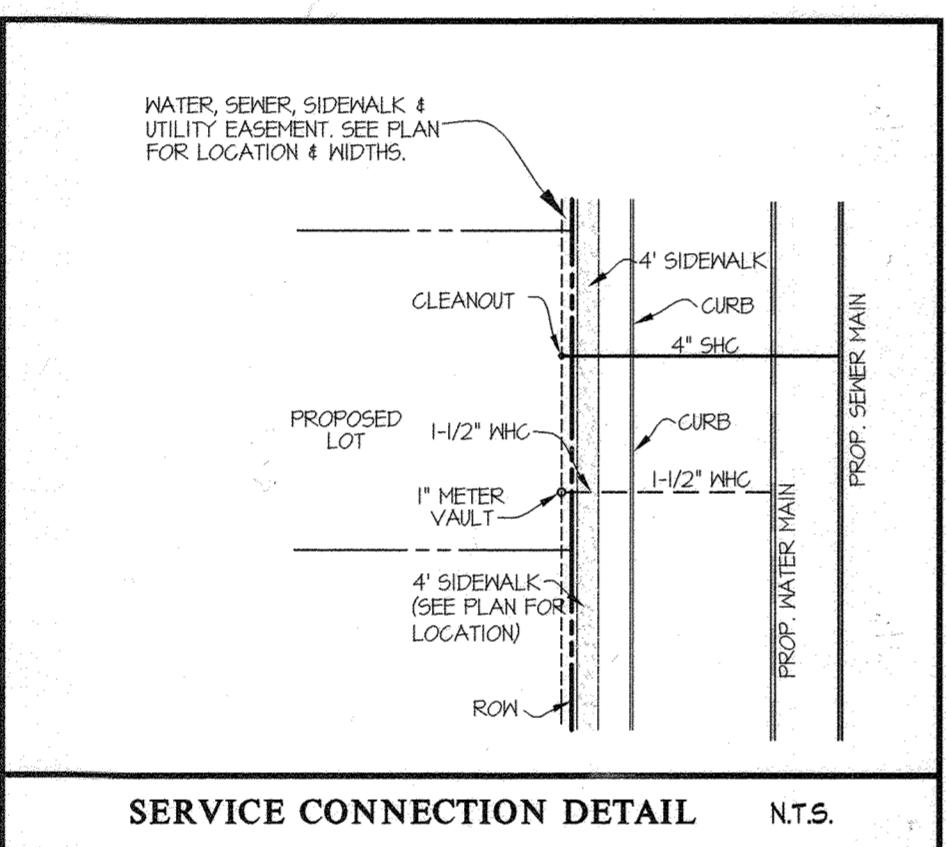
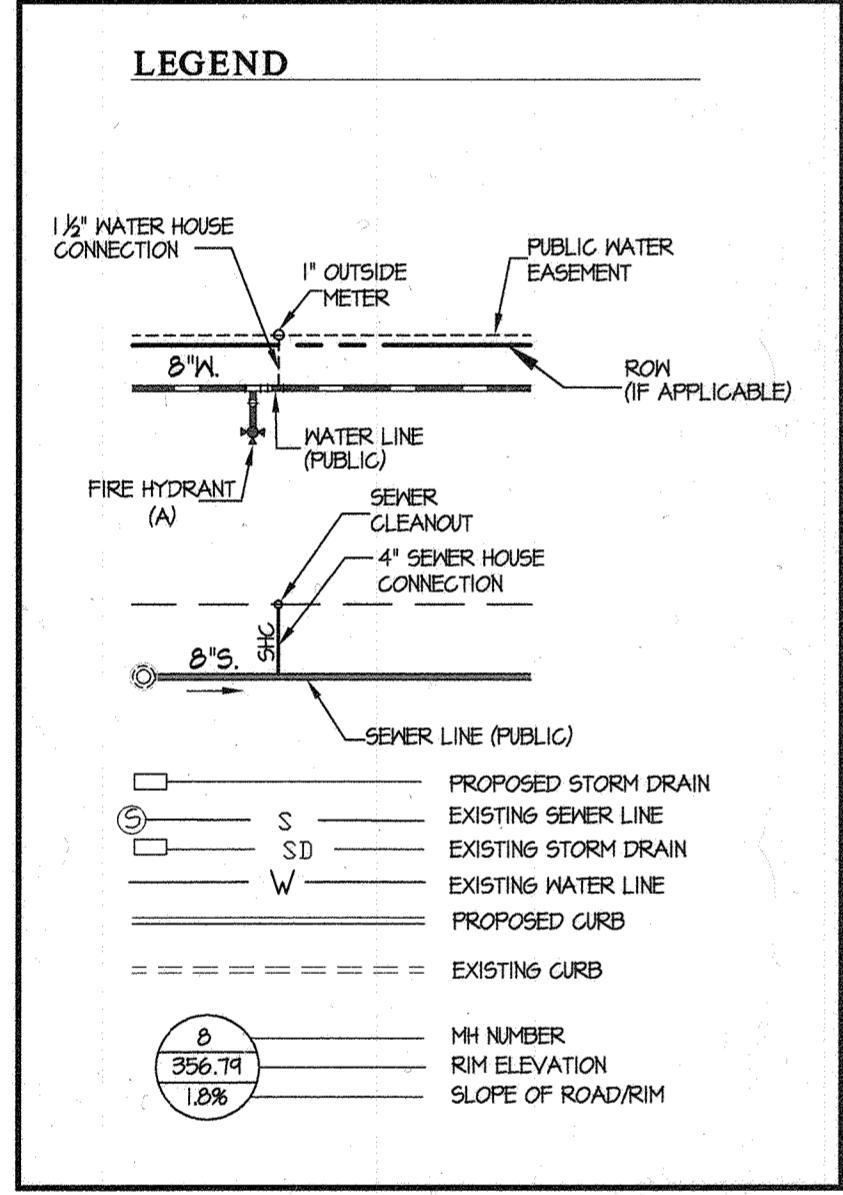


QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/ SUPPLIER
6" WATER (DIP) F.H. LEADS	56 LF.	56'	D.U.S. PIPE	NATIONAL PIPE
4" WATER (C90 PVC DR 18 PVC)	412 LF.	412'	NATIONAL PIPE	NATIONAL PIPE
8" WATER (C90 PVC DR 18 PVC)	215 LF.	215'	NATIONAL PIPE	NATIONAL PIPE
8" SEWER MAIN (PVC)	1487 LF.	1487'	U.S. PIPE	CONCRETE PRECAST
8" SEWER MAIN (DIP CL. 54)	1038 LF.	1038'	U.S. PIPE	CONCRETE PRECAST
4" MANHOLES	25 EA.	25 EA.	CONCRETE PRECAST	AMERICAN FLOW CONTROL
TYPE B DROP MANHOLES	2 EA.	2 EA.	CONCRETE PRECAST	AMERICAN FLOW CONTROL
8" VALVES	5 EA.	5 EA.	STAR PIPE	STAR PIPE
8" 1/2" H.B.	1 EA.	1 EA.	STAR PIPE	STAR PIPE
8" 1/2" H.B.	1 EA.	1 EA.	STAR PIPE	STAR PIPE
8" 1/2" H.D.C.	8 EA.	8 EA.	N.A.S./C.P. *	N.A.S./C.P. *
8" 15° H.D.C.	3 EA.	3 EA.	N.A.S./C.P. *	N.A.S./C.P. *
8" 25° H.D.C.	2 EA.	2 EA.	N.A.S./C.P. *	N.A.S./C.P. *
4" 20° H.D.C.	2 EA.	2 EA.	N.A.S./C.P. *	N.A.S./C.P. *
4" 25° H.D.C.	2 EA.	2 EA.	N.A.S./C.P. *	N.A.S./C.P. *
8" 30° H.D.C.	6 EA.	6 EA.	N.A.S./C.P. *	N.A.S./C.P. *
8" 5° SWEEP	17 EA.	15 EA.	N.A.S./C.P. *	N.A.S./C.P. *
8" 6" F.H.T.	5 EA.	5 EA.	STAR PIPE	STAR PIPE
8" 4" T.	2 EA.	2 EA.	STAR PIPE	STAR PIPE
12" 8" T.S.&V.	1 EA.	1 EA.	FORD METER BOX	PRISM PRECAST
CONTINUITY TEST STATION	5 EA.	5 EA.	PRISM PRECAST	PRISM PRECAST
1 1/2" WHCs	△ 1093 LF.	1075 L.F.	CAMBRIDGE LEG	
4" SHCs (Sch. 40 PVC)	740 LF.	740 L.F.	J. M. EAGLE	
FIRE HYDRANT	5 EA.	5 EA.	A.D.A.	

NAME OF UTILITY CONTRACTOR: ALLEN H MITCHELL CONSTRUCTION  
 SURVEY AND DRAFTING DIV. CHECKBOX: AS-BUILT DATE:

\* NORTH AMERICAN SPECIALTY/CERTAINTEED PIPE  
 \*\* AMERICAN DAZZLING/AMERICAN FLOW CONTROL



NOTE:

THE AS-BUILT FOR THIS PUBLIC WATER AND SEWER CONTRACT SHALL NOT BE SUBMITTED UNTIL THE EXISTING WELL AND SEPTIC FOR LOT 34 HAVE BEEN PROPERLY ABANDONED AND DOCUMENTATION HAS BEEN SUBMITTED TO THE HEALTH DEPARTMENT.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH F-19-038 & SECTION 308 OF THE SPECIFICATIONS.

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

APPROVED:  
*John R. Roberts* Date: 8/11/19  
 HOWARD S.C.D.

DEPARTMENT OF  
PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*John R. Roberts* 8/29/19  
 CHIEF, BUREAU OF UTILITIES  
 DATE

DEPARTMENT OF  
PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
*Chad C. Johnson* 6/10/19  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE



3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20886 | GLWPA.COM  
 PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-4166

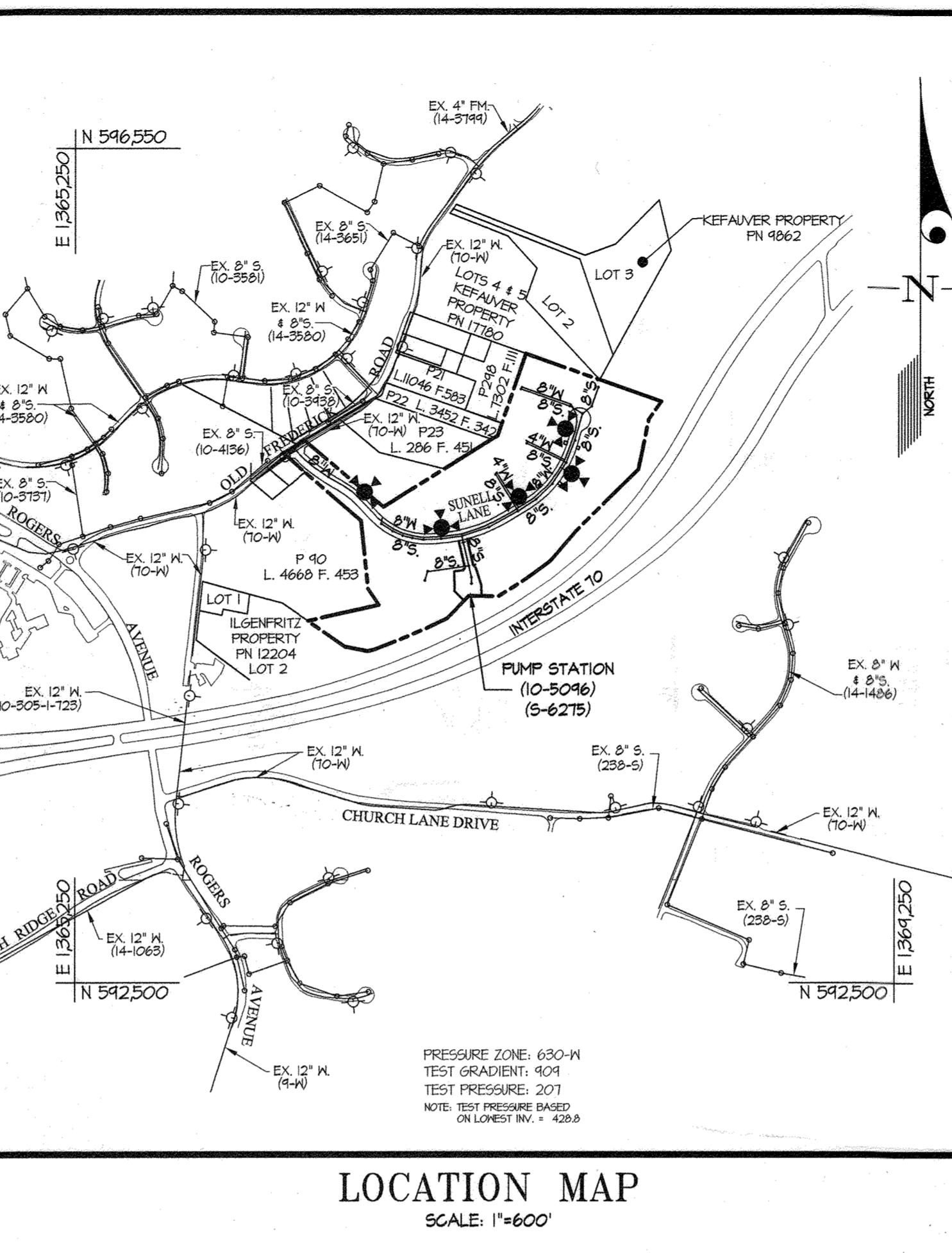
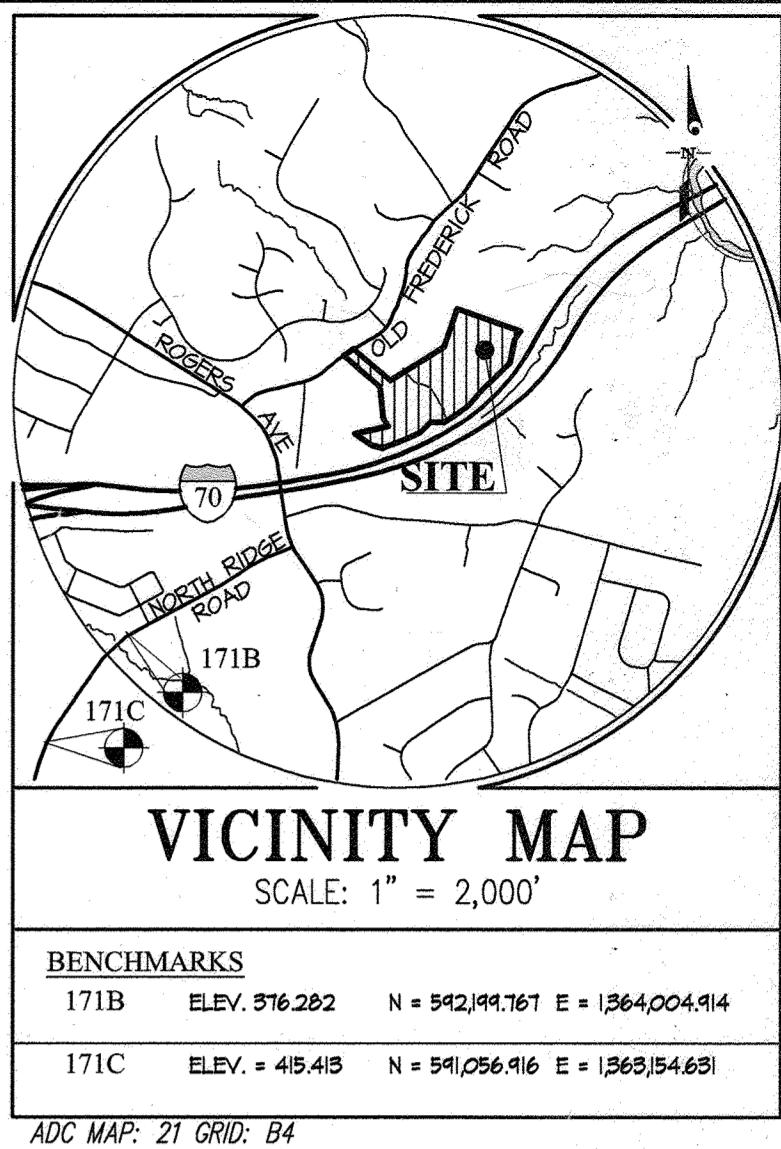
DESIGNED BY: W.S.J.	DATE: MAY, 2019	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12975 EXP. DATE: MAY 26, 2020	
DRAWN BY: W.S.J.	G.L.W. No.: 11014	DDS	

5/15/19

△ 1/16 Added 1.5" WHC to open space Lot 42 for irrigation 7/23/2020

BY NO REVISION DATE 600' SCALE MAP NO. 18 BLOCK NO. 13

TYPE OF BUILDING	RESIDENTIAL
NUMBER OF UNITS	△ 39 & PARCEL A & 20s, Lot 42
NUMBER OF S.H.C.'S	39
NUMBER OF W.H.C.'S	△ 39 SINGLE WHC's 1 TWIN WHC
AREA OF COMMERCIAL LOT/PARCEL NA	
SEWER SHED	PATAPSOCO
PUMPING STATION	DANIELS AREA



## PATAPSOCO CROSSING CONTRACT No. 14-4879-D LOT 1 THRU 39 & OPEN SPACE LOTS 40-46 A SUBDIVISION OF PARCEL 25 Liber 18476 Folio 223 HOWARD COUNTY, MARYLAND ELECTION DISTRICT No. 2 DEPARTMENT OF PUBLIC WORKS

### GENERAL NOTES

- 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 April, 2011 by McKenzie SNYDER Inc.
- Horizontal and vertical surveying 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 No. 1101 and No. 1110. All vertical controls are based on NAVD 88.
- 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 the drawings. In the event the contractor's work requires the bracing of additional poles, any 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 (2011). 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 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	I-800-252-1133
BGE (Construction Services)	410-651-8113
BGE (Emergency)	410-625-0128
Bureau of Utilities	410-318-4400
Colonial Pipeline Co.	410-745-1340
M&T Utility	I-800-251-1111
State Highway Administration	410-531-3553
Verizon	I-800-745-0033

- 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)-315-1450 at least five working days before open cutting or string/packing 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(a) of the Howard County Code

### Part II WATER

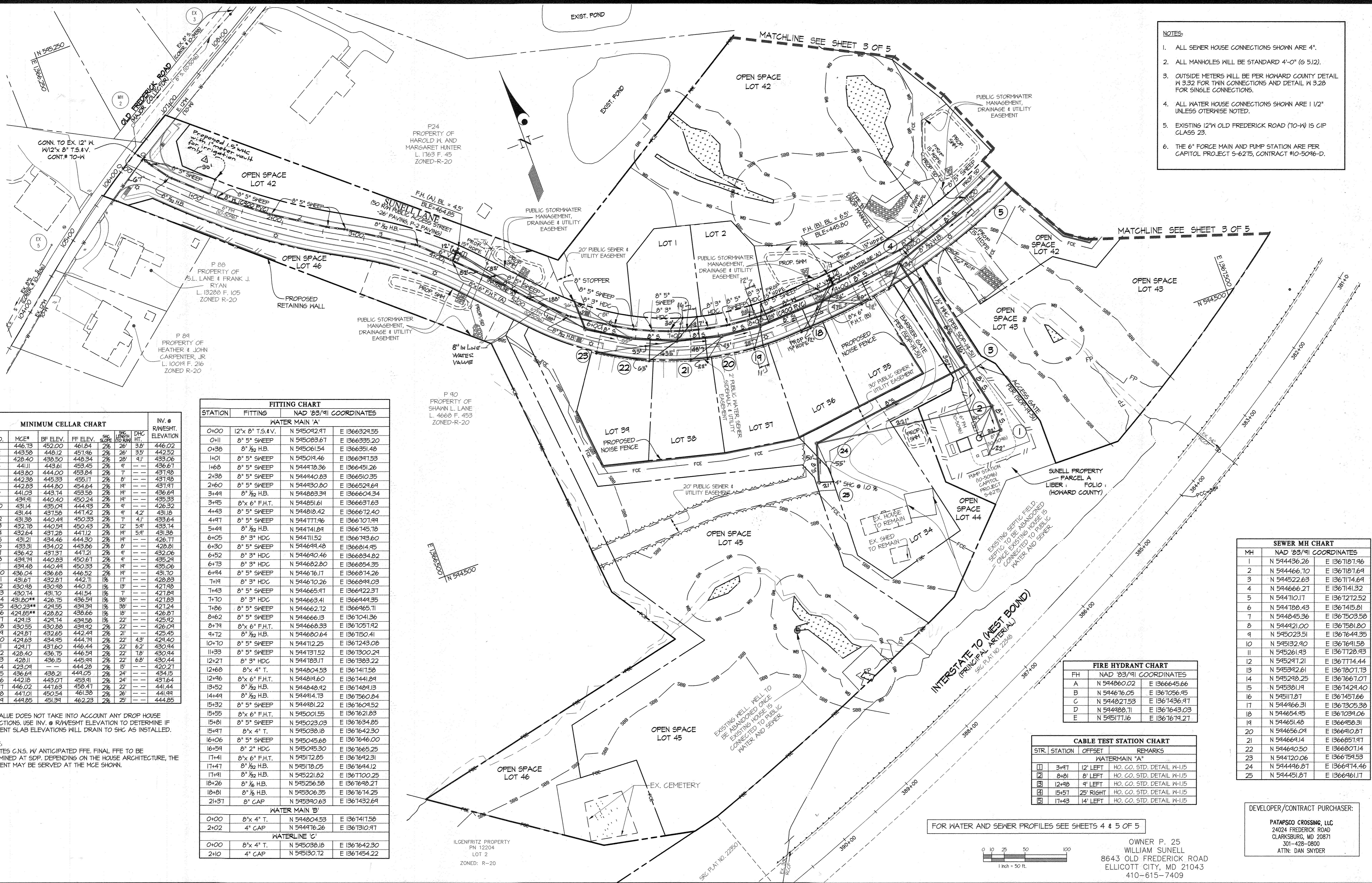
- All water mains shall be P.V.C. unless otherwise noted.
- Taps of all water mains shall have a minimum of 3'-6" of cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be buttressed or anchored with concrete in accordance with Standard Details unless otherwise specified for 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 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 ANWA Standard C900 for PVC pressure pipe shall be submitted with the pipe material certification or shop drawings prior to approval for the main. The contractor shall submit a plan for the test to the Bureau of Highways for review and approval. The test shall be conducted to allow cross referencing of the pipe supplied to the test 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 harnesses. 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 contractor shall not over insert or over hone the valve into the spigot into the bell.
- All changes in direction or vertical direction of PVC water pipe shall be made with standard bends, 3-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 3-degree sweeps are permitted, the contractor shall provide one full pipe length (20-foot long) on either side of the high deflection coupling or 3-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 3-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 (1/4-degree on either end of the coupling), shall be rated for a minimum 225 psi, DR18 meeting the requirements of ANWA C900 and shall have Multi Fitings (ipex Blue Brute DR18 or equal).

- When PVC high deflection couplings or PVC 3-degree sweeps are used to facilitate changes in horizontal or vertical alignments of ANWA C-900 PVC pipelines, the contractor shall install devices for the prevention of over-insertion of the PVC pipe spigots into the bell joint on both sides of the high deflection couplings and 3-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 EEA, Inc. or approved equal.

- III SEWER  
 1. All sewer lines shall be D.I.P. or P.V.C. unless otherwise noted.  
 2. All manholes shall be 4'-0" inside diameter unless otherwise noted.  
 3. Force mains shall be D.I.P. or P.V.C.  
 4. Manholes shown with 12" and 16" walls are for brick manholes only.  
 5. Manholes designated M.T. in plan and profile shall have watertight frame and cover, Standard Detail G5.52. Where watertight manhole frames and covers are used, set top of frame 1'-6" above finished grade unless otherwise noted on the drawings.  
 6. House(s) with the symbol C.N.S. indicates that the cellar cannot be served.

OWNER P. 25 WILLIAM SUNELL 8643 OLD FREDERICK ROAD CLARKSBURG, MD 21043 301-428-0800 ATTN: DAN SNYDER
DEVELOPER/CONTRACT PURCHASER:  PATAPSOCO CROSSING, LLC 24024 FREDERICK ROAD CLARKSBURG, MD 21043 301-428-0800 ATTN: DAN SNYDER
COVER SHEET
SCALE AS SHOWN
SHEET 1 OF 5



NOTES:

1. ALL SEWER HOUSE CONNECTIONS SHOWN ARE 4".
2. ALL MANHOLES WILL BE STANDARD 4'-0" (G 5.12).
3. OUTSIDE METERS WILL BE PER HOWARD COUNTY DETAIL W 3.32 FOR TWIN CONNECTIONS AND DETAIL W 3.28 FOR SINGLE CONNECTIONS.
4. ALL WATER HOUSE CONNECTIONS SHOWN ARE 1 1/2" UNLESS OTHERWISE NOTED.
5. EXISTING 12"W OLD FREDERICK ROAD (10-W) IS CIP CLASS 23.
6. THE 6" FORCE MAIN AND PUMP STATION ARE PER CAPITOL PROJECT S-6275, CONTRACT #10-5096-D.

FITTING CHART		
STATION	FITTING	NAD '83/'91 COORDINATES
		WATER MAIN 'A'

MINIMUM CELLAR CHART							INV. @ R/WESMT. ELEVATION
LOT NO.	MCE*	BF ELEV.	FF ELEV.	SHC SLOPE	SHC LENGTH (TO R/W)	DHC HT.	
LOT 1	446.73	452.00	461.84	2%	26'	3.8'	446.02
LOT 2	443.58	448.12	457.96	2%	26'	3.5'	442.52
LOT 3	428.40	438.50	448.34	2%	28'	9.1'	433.06
LOT 4	441.11	443.61	453.45	2%	9'	--	436.67
LOT 5	443.80	444.00	453.84	2%	7'	--	437.98
LOT 6	442.38	445.33	455.17	2%	8'	--	437.98
LOT 7	442.83	444.80	454.64	2%	19'	--	437.97
LOT 8	441.03	443.74	453.58	2%	19'	--	436.69
LOT 9	439.91	440.40	450.24	2%	19'	--	435.33
LOT 10	431.14	435.09	444.93	2%	9'	--	426.32
LOT 11	431.44	431.58	447.42	2%	9'	4.2'	431.18
LOT 12	431.38	440.49	450.33	2%	7'	4.1'	433.64
LOT 13	432.78	440.59	450.43	2%	12'	5.9'	433.74
LOT 14	432.64	431.28	447.12	2%	19'	5.9'	431.38
LOT 15	431.21	434.46	444.30	2%	19'	--	426.77
LOT 16	433.31	434.02	443.86	2%	8'	--	428.81
LOT 17	436.42	431.31	447.21	2%	9'	--	432.06
LOT 18	439.79	440.83	450.67	2%	9'	--	435.29
LOT 19	439.48	440.49	450.33	2%	19'	--	435.06
LOT 20	436.04	436.68	446.52	2%	19'	--	431.70
LOT 21	431.67	432.81	442.71	1%	17'	--	428.83
LOT 22	430.98	430.98	440.15	1%	13'	--	427.98
LOT 23	430.74	431.70	441.54	1%	7'	--	427.89
LOT 24	431.80**	426.75	436.59	1%	38'	--	427.83
LOT 25	430.23**	429.55	439.39	1%	38'	--	427.24
LOT 26	429.85**	428.82	438.66	1%	18'	--	426.87
LOT 27	429.13	429.74	439.58	1%	22'	--	425.92
LOT 28	430.55	430.88	439.92	2%	22'	--	426.09
LOT 29	429.87	432.65	442.49	2%	21'	--	425.45
LOT 30	429.63	434.95	444.79	2%	22'	4.3'	429.40
LOT 31	429.17	431.60	446.44	2%	22'	6.2'	430.94
LOT 32	428.40	436.75	446.59	2%	22'	7.8'	430.94
LOT 33	428.11	436.15	445.99	2%	22'	6.8'	430.44
LOT 34	423.09	--	444.28	2%	15'	--	420.27
LOT 35	436.69	438.21	449.05	2%	24'	--	434.15
LOT 36	442.18	443.07	453.91	2%	24'	--	437.64
LOT 37	446.02	447.63	458.47	2%	22'	--	441.44
LOT 38	447.01	450.54	461.38	2%	26'	--	441.99
LOT 39	449.85	451.39	462.23	2%	25'	--	444.85

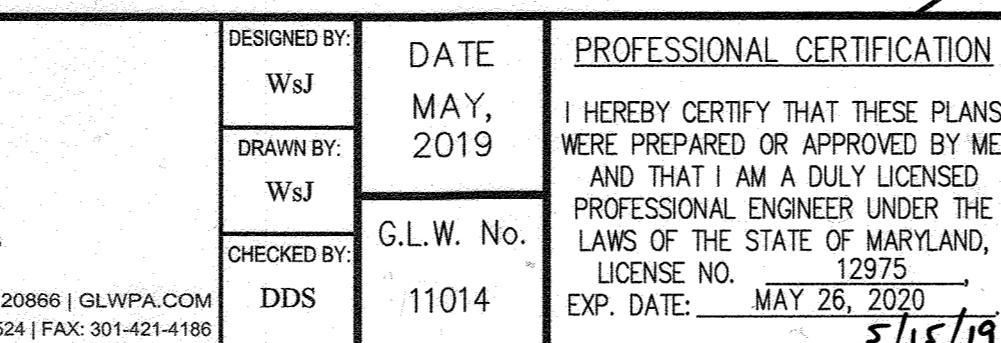
\*NOTE:  
MCE VALUE DOES NOT TAKE INTO ACCOUNT ANY DROP HOUSE CONNECTIONS. USE INV. @ R/W/ESMT ELEVATION TO DETERMINE IF BASEMENT SLAB ELEVATIONS WILL DRAIN TO SHC AS INSTALLED.

**\*\*NOTE:**  
INDICATES C.N.S. W ANTICIPATED FFE. FINAL FFE TO BE  
DETERMINED AT SDP. DEPENDING ON THE HOUSE ARCHITECTURE, THE  
BASEMENT MAY BE SERVED AT THE MCE SHOWN.

21+37	8" CAP	N 595390.63	E 1367432.69
<b>WATER MAIN 'B'</b>			
0+00	8"x 4" T.	N 594804.53	E 1367417.58
2+02	4" CAP	N 594976.26	E 1367310.97
<b>WATERLINE 'C'</b>			
0+00	8"x 4" T.	N 595038.18	E 1367642.30
2+12	4" CAP	N 595130.72	E 1367151.22

DEPARTMENT OF  
PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF  
PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND



A circular seal for a professional engineer from Maryland. The outer ring contains the text "STATE OF MARYLAND" at the top and "PROFESSIONAL ENGINEER" at the bottom. The center features a detailed crest with a bridge, surrounded by the words "CARLTON KENNETH GRIFFITHS" and "ID 13776".

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17

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Gesellschaft für Psychologie und Psychotherapie  
in der Tropen- und Entwicklungsländerforschung

SCAL  
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2 OF

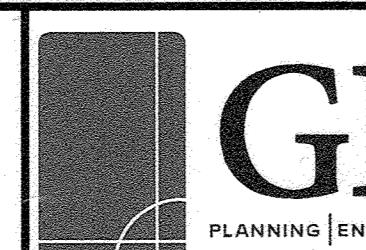
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PLUTED: 5/13/2019 9:38 AM, LAST SAVED: 5/13/2019 11:03 AM, PLUTED BY: waymona joynes

DEPARTMENT OF  
PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

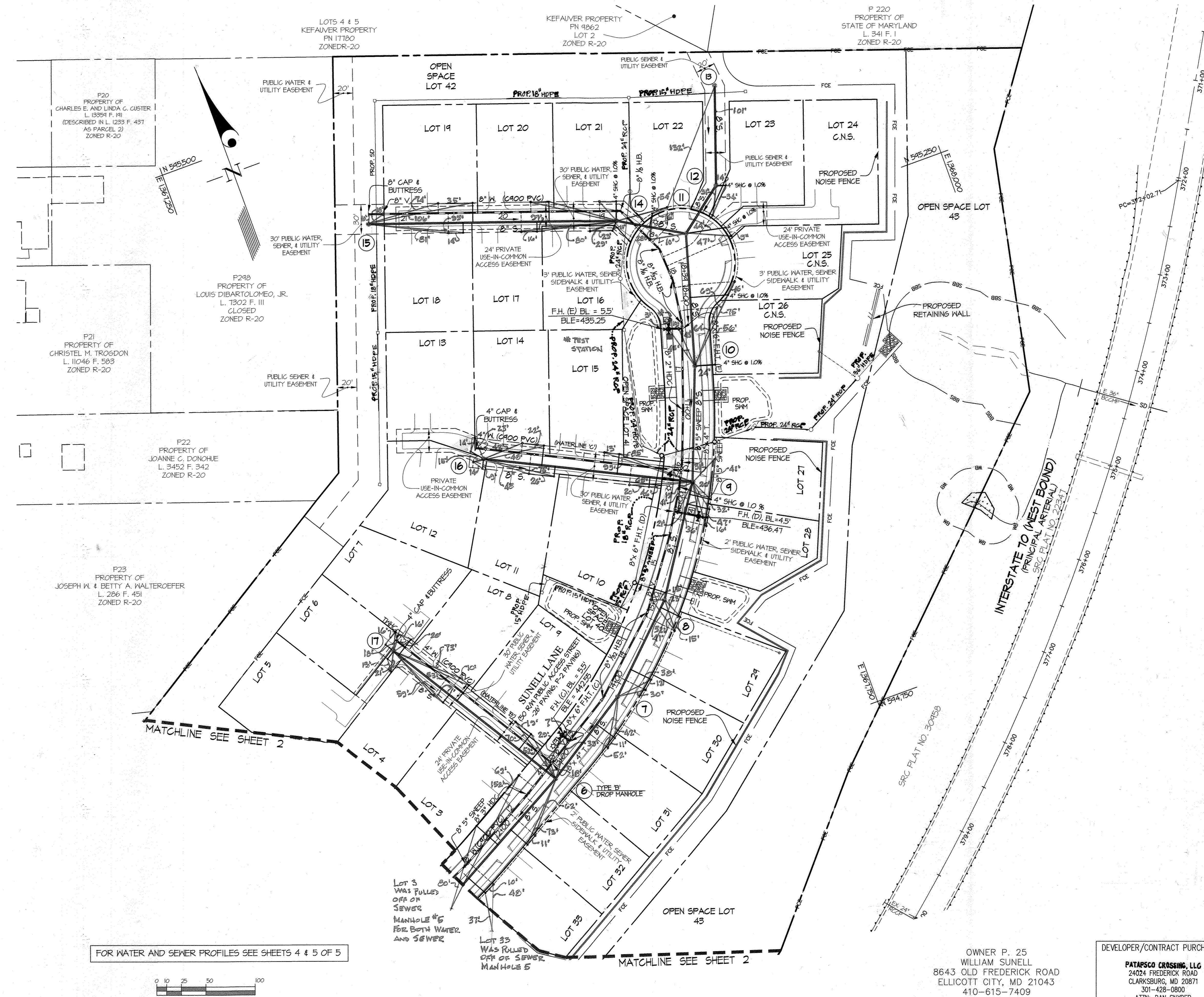
DEPARTMENT OF  
PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND



# GLW

3909 NATIONAL DRIVE | SUITE 250 | BURTONSVILLE, MD 20866 | GLWPA.COM  
PHONE: 301-421-4024 | BALT: 410-880-1820 | DC&VA: 301-989-2524 | FAX: 301-421-47

DESIGNED BY: WsJ	DATE MAY, 2019	<u>PROFESSIONAL CERTIFICATION</u>	
DRAWN BY: WsJ	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. <u>12975</u> , EXP. DATE: <u>MAY 26, 2020</u> <i>5/15/19</i>		
CHECKED BY: DDS	G.L.W. No. 11014	 <p>CARLTON KENNETH GUTHRIE PROFESSIONAL ENGINEER MD 1971</p>	
DM 186			



DEVELOPER/CONTRACT PURCHASER:  
**PATAPSCO CROSSING, LLC**  
24024 FREDERICK ROAD  
CLARKSBURG, MD 20871  
301-428-0800  
ATTN: DAN SNYDER

**PATAPSCO CROSSING**  
**CONTRACT No. 14-4879-D**  
**PATAPSCO CROSSING**  
**LOTS 1-39 & OPEN SPACE LOTS 40-46**  
**A SUBDIVISION OF PARCEL 25**  
**Liber 18476 Folio 223**  
**HOWARD COUNTY, MARYLAND**  
**ELECTION DISTRICT No. 2**

SCALE  
1"=50'  

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SHEET  
3 OF 5



