

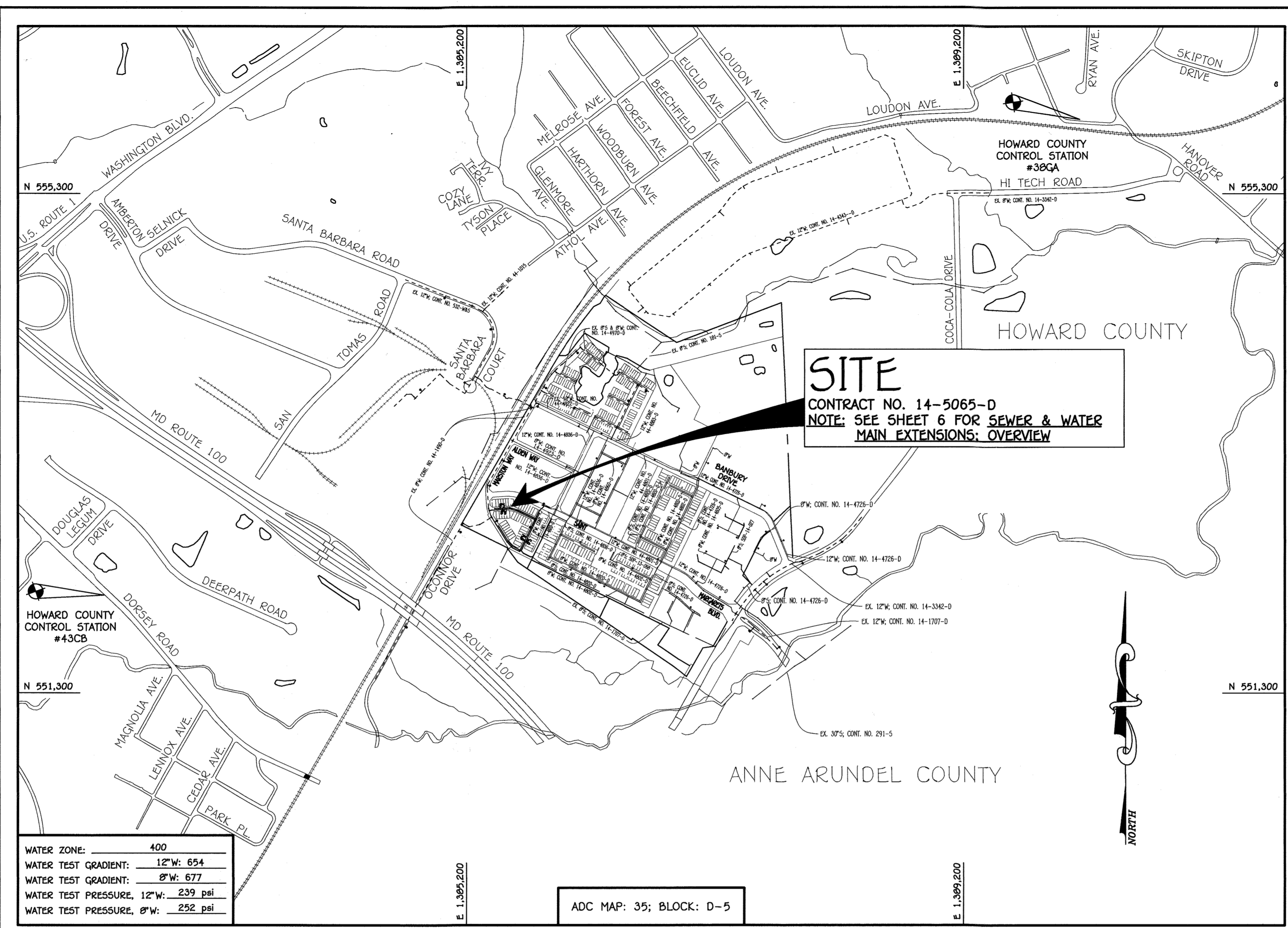
QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	SUPPLIER
8" PVC SD6-35	1,065 L.F.	1,065 L.F.		NORTH AMERICAN
4" PVC SD6-35	884 L.F.	884 L.F.		NORTH AMERICAN
MANHOLES	10 EACH	10 EACH		CONTRACTORS PRECAST
TYPE 'B' DROP MANHOLES	2 EACH	2 EACH		"
CLEAN-OUTS	56 EACH	56 EACH		"
12" W. C900 PVC DR-14	69 L.F.	69 L.F.		NORTH AMERICAN
8" W. C900 PVC DR-14	1,159 L.F.	1,159 L.F.		"
6" W. C900 PVC DR-14	37 L.F.	37 L.F.		"
1-1/2" W.H.C.	611 L.F.	611 L.F.		CAMBRIDGE LEE
12" VALVE	1 EACH	1 EACH		AMERICAN FLOW CONTROL
8" VALVE	6 EACH	6 EACH		"
6" VALVE	3 EACH	3 EACH		"
8" X 8" CROSS	1 EACH	1 EACH		TYLER UNION
12" X 8" TEE	1 EACH	1 EACH		"
8" X 8" TEE	1 EACH	1 EACH		"
12" X 8" F.H. TEE	1 EACH	1 EACH		"
8" X 8" F.H. TEE	2 EACH	2 EACH		"
FIRE HYDRANT	3 EACH	3 EACH		AMERICAN FLOW CONTROL
CONTINUITY TEST STATION	3 EACH	3 EACH		PRISM CONCRETE
3" DEFLECTION COUPLING	2 EACH	2 EACH		NORTH AMERICAN
1/32" H.B.	4 EACH	4 EACH		TYLER UNION
1/16" H.B.	3 EACH	3 EACH		"
12" PLUG & BUTTRESS	1 EACH	1 EACH		"
8" PLUG & BUTTRESS	2 EACH	2 EACH		"
SINGLE OUTSIDE METER SETTING	8 EACH	8 EACH		A.Y. MC DONALD
TWIN OUTSIDE METER SETTING	24 EACH	24 EACH		A.Y. MC DONALD

NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED
 SURVEY & DRAFTING DIVISION AS-BUILT DATE: 12/2/2019

BENCHMARK INFORMATION

B.M.#1 - HOWARD COUNTY CONTROL STATION #38A - HORIZONTAL - NA'83
 (LOCATED ALONG RAILROAD AVENUE, JUST SOUTH OF RYAN AVENUE, APPROX. 22.6' NORTH FROM THE CENTER LINE OF RAILROAD AVENUE.
 N 555,897.3373
 E 1,390,132.0933
 ELEVATION = 80.783 - VERTICAL - (NAVD '88)

B.M.#2 - HOWARD COUNTY CONTROL STATION #43C - HORIZONTAL - (NAD '83)
 (LOCATED ALONG THE SOUTHSIDE OF DORSEY ROAD, APPROX. 2.2' OFF THE EDGE OF PAVING, APPROX. 46.7' EAST OF POWER POLE NO. 19)
 N 552,084.2466
 E 1,382,282.4190
 ELEVATION = 144.391 - VERTICAL - (NAVD '88)



TYPE OF BUILDING:	RESIDENTIAL: TOWNHOMES
NUMBER OF LOTS:	56
NO. OF WATER HOUSE CONNECTIONS:	56
NO. OF SEWER HOUSE CONNECTIONS:	56
SEWER SHED:	PATAPSCO
TREATMENT PLANT:	PATAPSCO WASTEWATER TREATMENT PLANT CITY OF BALTIMORE

LOCATION MAP
SCALE: 1" = 600'

PLAN REFERENCE NUMBERS:	F-18-084 (RECORD PLAT) SDP-18-019 Q10VZ-18-021
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DEVELOPER'S CERTIFICATION

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Paul W. Kriebel, FOR:
 PRESTON SCHEFFENACKER PROPERTIES 02-11-19
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Paul W. Kriebel
 SIGNATURE OF ENGINEER 02-11-19
 DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 309 OF THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV: STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THE SITE DEVELOPMENT PLAN, SDP-18-019.

Paul W. Kriebel, FOR:
 PRESTON SCHEFFENACKER PROPERTIES 02-11-19
 SIGNATURE OF DEVELOPER DATE

SDP-18-019

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

APPROVED: John R. Robertson 3/18/19
 HOWARD SOIL CONSERVATION DISTRICT

NOTE: SEE NOTE NO. 1, SHEET 2, FOR THE CONDITIONS AND LIMITATIONS REGARDING THE INSTALLATION OF DECKS ON THE TOWNHOUSES OF "THE YARDS".

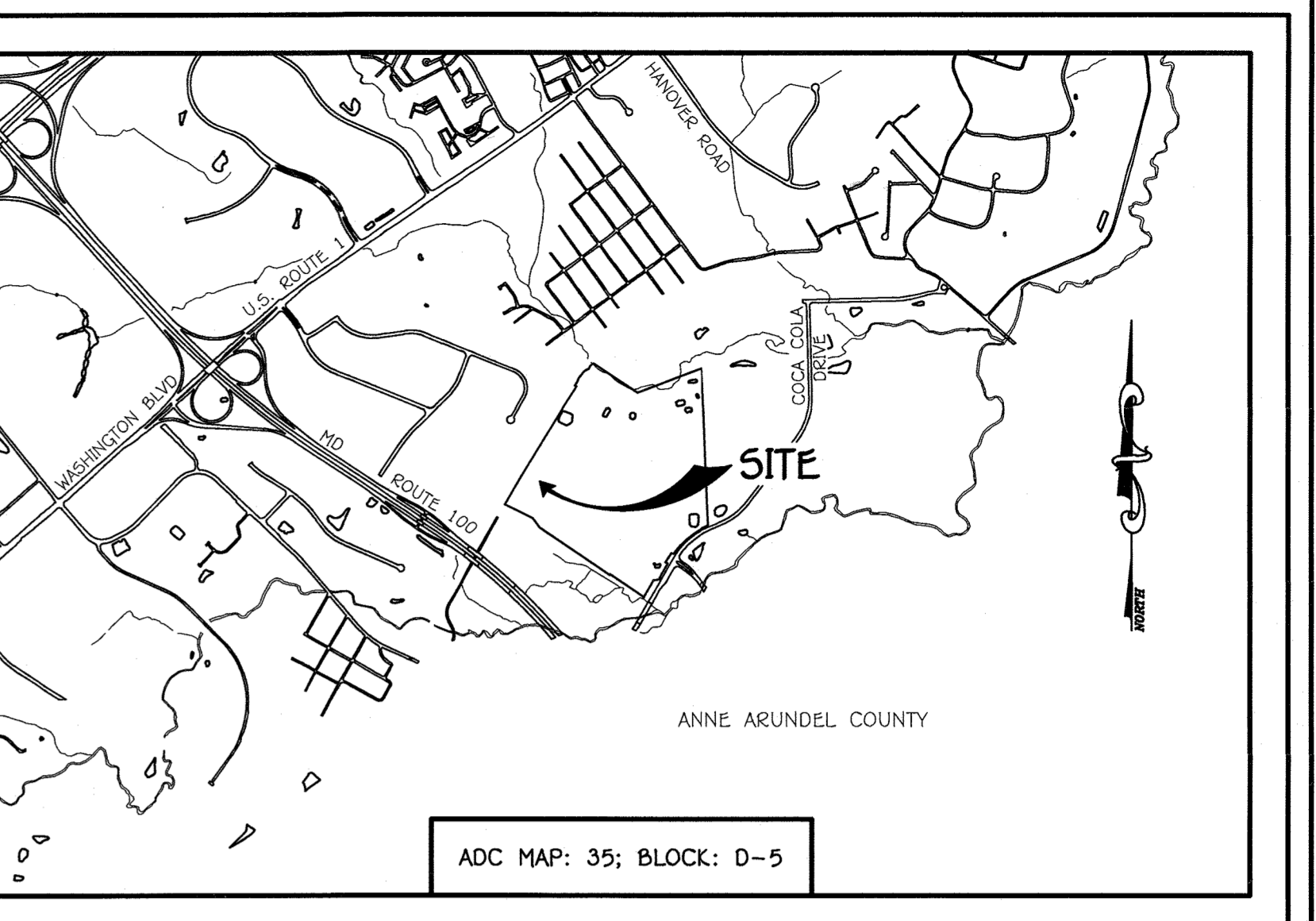
CONTRACT NO. 14-5065-D
OXFORD SQUARE
 LOTS 379-434,
 OPEN SPACE LOTS 435-439 &
 PARCEL 'I-I'
"THE YARDS"
 SEWER & WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

AS-BUILT

12/31/19

OWNER
 KELLOGG-OP, LLC
 c/o DAVID P. SCHEFFENACKER, JR.
 MANAGING MEMBER
 100 WEST ROAD, SUITE 304
 TOWSON, MARYLAND 21284
 PHONE: 410-296-3800

DEVELOPER
 PRESTON SCHEFFENACKER PROPERTIES
 100 WEST ROAD, SUITE 304
 TOWSON, MARYLAND 21284
 PHONE: 410-296-3800



GENERAL NOTES

VICINITY MAP
SCALE: 1" = 2000'

- 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 OR ABOUT MAY, 2010 BY FISHER, COLLINS & CARTER, 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 NO. 380A & NO. 43C. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 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 BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF THE 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 SITE.
- 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 HAD 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
 - ACE (CONTRACTOR SERVICES) 1-800-252-1133
 - BGE (EMERGENCY) 410-637-8713
 - BUREAU OF UTILITIES 410-699-0123
 - COLUMBIAN PIPELINE CO 410-513-4900
 - MISS UTILITY 410-759-1980
 - STATE HIGHWAY ADMINISTRATION 1-800-257-7777
 - STATE POLICE 410-531-9533
 - STATE FIRE 1-800-743-0033 / 410-224-9210
- 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.
- 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.
- 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(a) OF THE HOWARD COUNTY CODE.

- PART B: WATER MAIN GENERAL NOTES**
- ALL WATER MAINS SHALL BE ANNA C900 PVC; DR-14.
 - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
 - 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.
 - TRACES WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. AND PVC WATER MAINS IN ACCORDANCE WITH 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 ANNA STANDARD C900 PVC 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, SEVENTEEN (17) POUND 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. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 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.
 - ROOPER 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, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL OF 3-DEGREES (1-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF ANNA C900. SHALL HAVE A MINIMUM LAY LENGTH OF 8-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 ANNA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR-18 OR EQUAL.

- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF ANNA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSERT 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. TO ACCOMMODATE A SPRINKLER SYSTEM, ALL RESIDENTIAL DWELLING UNITS SHALL HAVE A 1-1/2" WATER HOUSE CONNECTION WITH A 1" OUTSIDE METER SETTING, STD. DET. W-3.22.

- PART C: SEWER MAIN GENERAL NOTES**
- 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 WETTOP 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.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

CONTRACT NO. 14-5065-D
 OXFORD SQUARE
 LOTS 379-434, OPEN SPACE
 LOTS 435-439 & PARCEL 'I-I'
 "THE YARDS"
 SEWER & WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

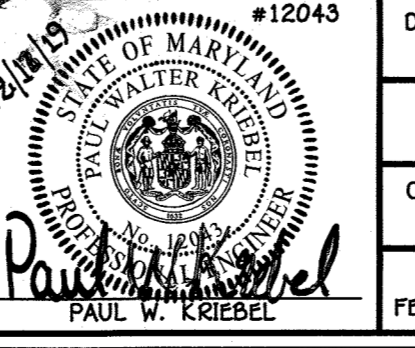
2-25-19
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

3-18-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

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. 12245 EXPIRATION DATE 5/7/16/20.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 18272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895



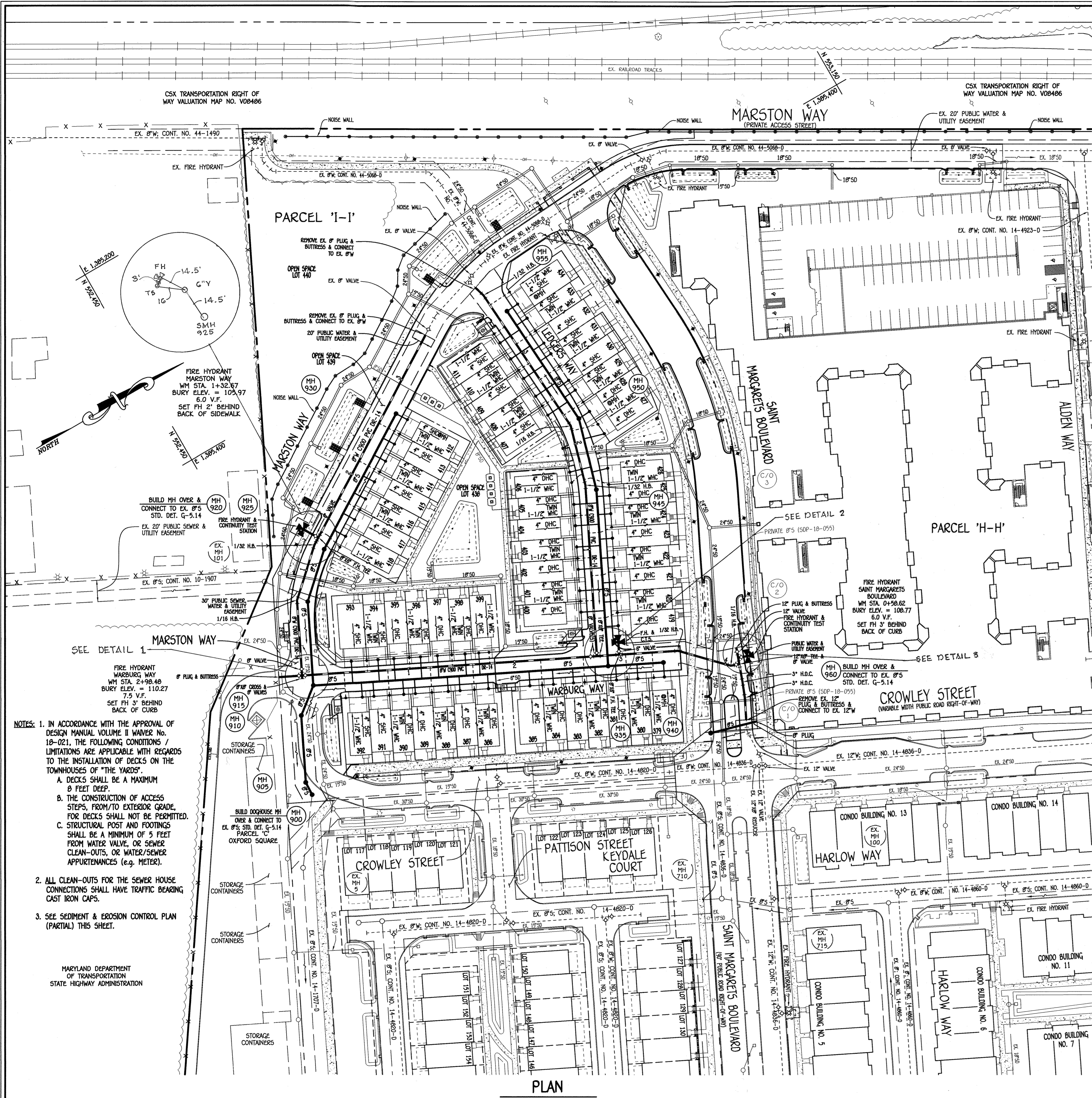
DESIGNED BY:	B.C.R.	DATE:	FEBRUARY, 2019
DRAWN BY:	B.C.R.	BY NO.:	
CHECKED BY:	P.W.K.	REVISION:	

SEWER & WATER MAIN EXTENSIONS
 TITLE SHEET

600' SCALE MAP NO. 38 BLOCK NO. 20
 F.C.C. WORK ORDER NO. 09014-3024
 FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE
 LOTS 379-434, OPEN SPACE LOTS 435-439 & PARCEL 'I-I'
 "THE YARDS"
 SEWER & WATER MAIN EXTENSIONS
 CONTRACT NO. 14-5065-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 OF 6



- NOTES:**
- IN ACCORDANCE WITH THE APPROVAL OF DESIGN MANUAL VOLUME II W/AVER NO. 18-021, THE FOLLOWING CONDITIONS/LIMITATIONS ARE APPLICABLE WITH REGARDS TO THE INSTALLATION OF DECKS ON THE TOWNHOUSES OF "THE YARDS":
 - DECKS SHALL BE A MAXIMUM 8 FEET DEEP.
 - THE CONSTRUCTION OF ACCESS STEPS, FROM/TO EXTERIOR GRADE, FOR DECKS SHALL NOT BE PERMITTED.
 - STRUCTURAL POST AND FOOTINGS SHALL BE A MINIMUM OF 5 FEET FROM WATER VALVE, OR SEWER CLEAN-OUTS, OR WATER/SEWER APPURTENANCES (E.G. METER).
 - ALL CLEAN-OUTS FOR THE SEWER HOUSE CONNECTIONS SHALL HAVE TRAFFIC BEARING CAST IRON CAPS.
 - SEE SEDIMENT & EROSION CONTROL PLAN (PARTIAL) THIS SHEET.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 2-26-19
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

[Signature] 3-18-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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. 12043 EXPIRATION DATE 6/7/16/22.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE BLDG. 11222 BALDWIN NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2895



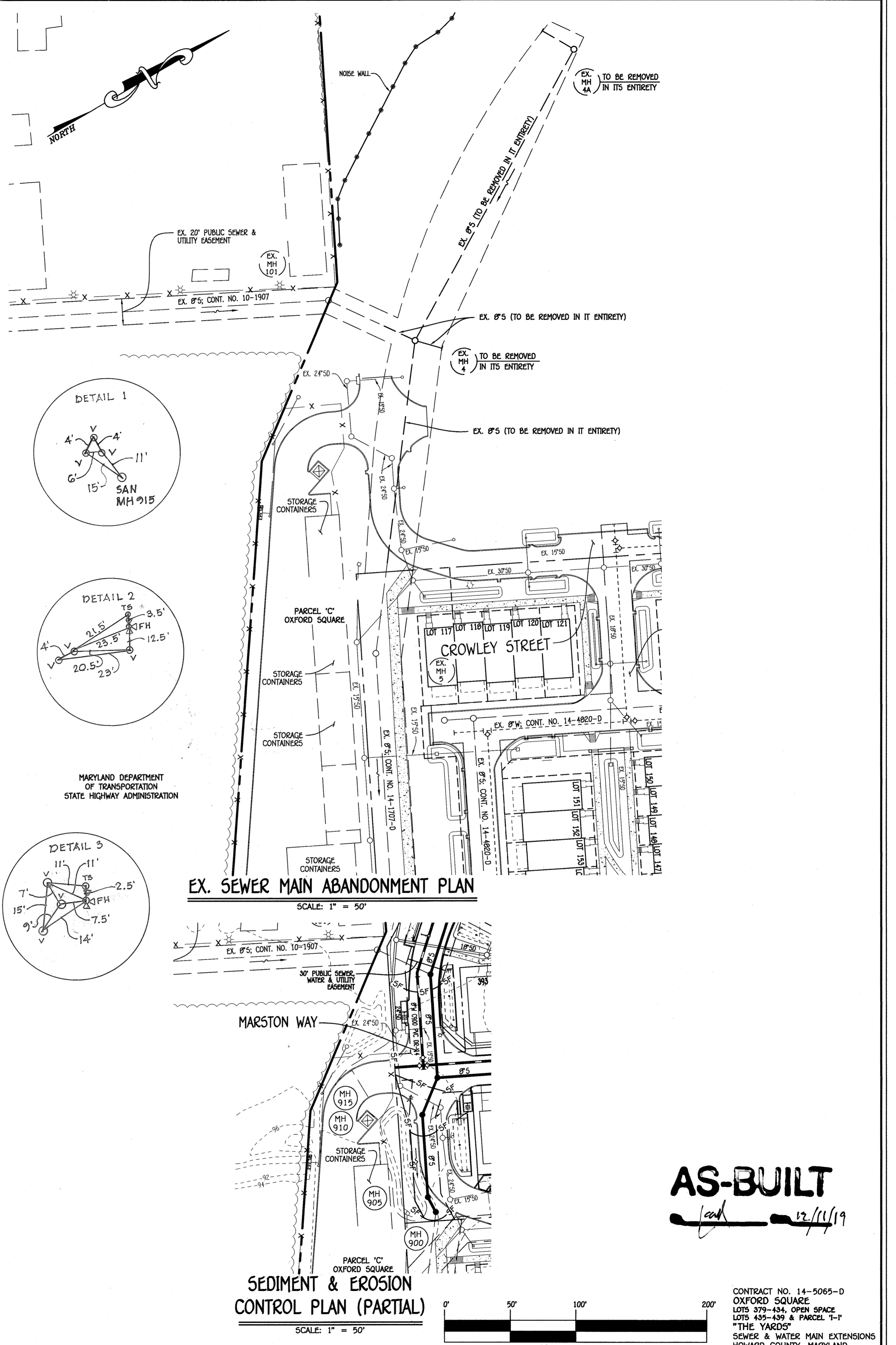
DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.W.K.
DATE:	FEBRUARY, 2019
BY NO.	
REVISION	

SEWER & WATER MAINS: PLAN
EX. 8" SEWER: ABANDONMENT
SEDIMENT & EROSION CONTROL:
PLAN (PARTIAL)

600' SCALE MAP NO. 30 BLOCK NO. 20
F.C.C. WORK ORDER NO. 09014-3024
DATE: _____ FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

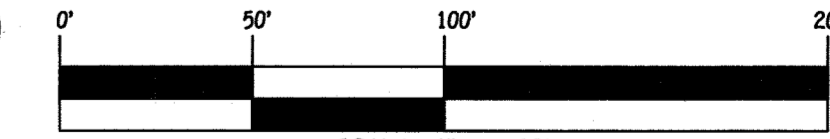
OXFORD SQUARE
LOTS 379-434, OPEN SPACE LOTS 435-439 & PARCEL 'I-I'
"THE YARDS"
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 14-5065-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 6



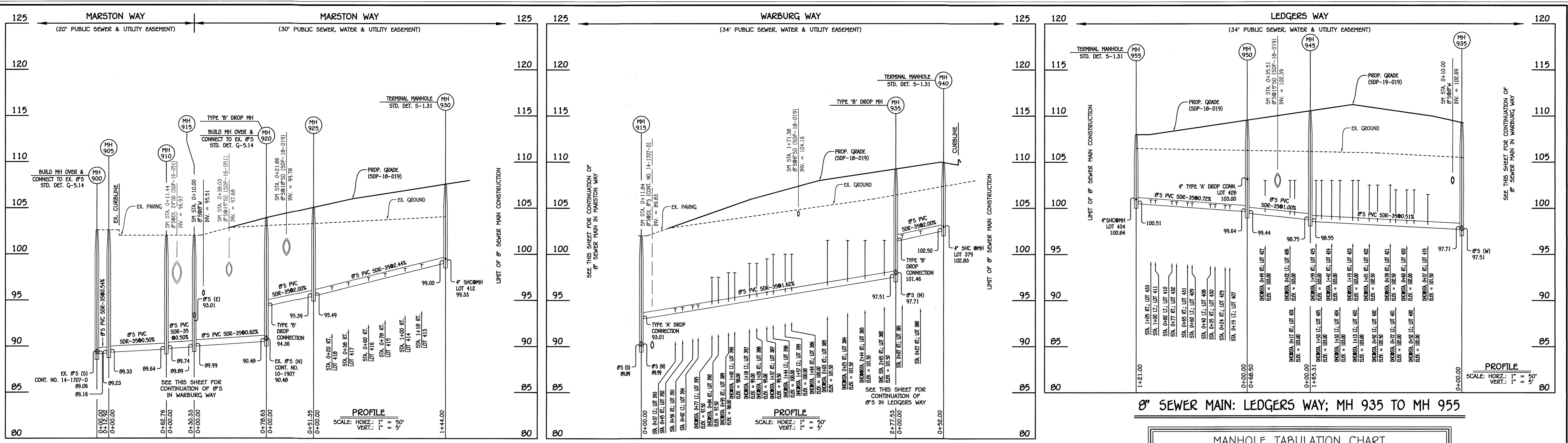
EX. SEWER MAIN ABANDONMENT PLAN
SCALE: 1" = 50'

SEDIMENT & EROSION CONTROL PLAN (PARTIAL)
SCALE: 1" = 50'



AS-BUILT
[Signature] 12/11/19

CONTRACT NO. 14-5065-D
OXFORD SQUARE
LOTS 379-434, OPEN SPACE
LOTS 435-439 & PARCEL 'I-I'
"THE YARDS"
SEWER & WATER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND



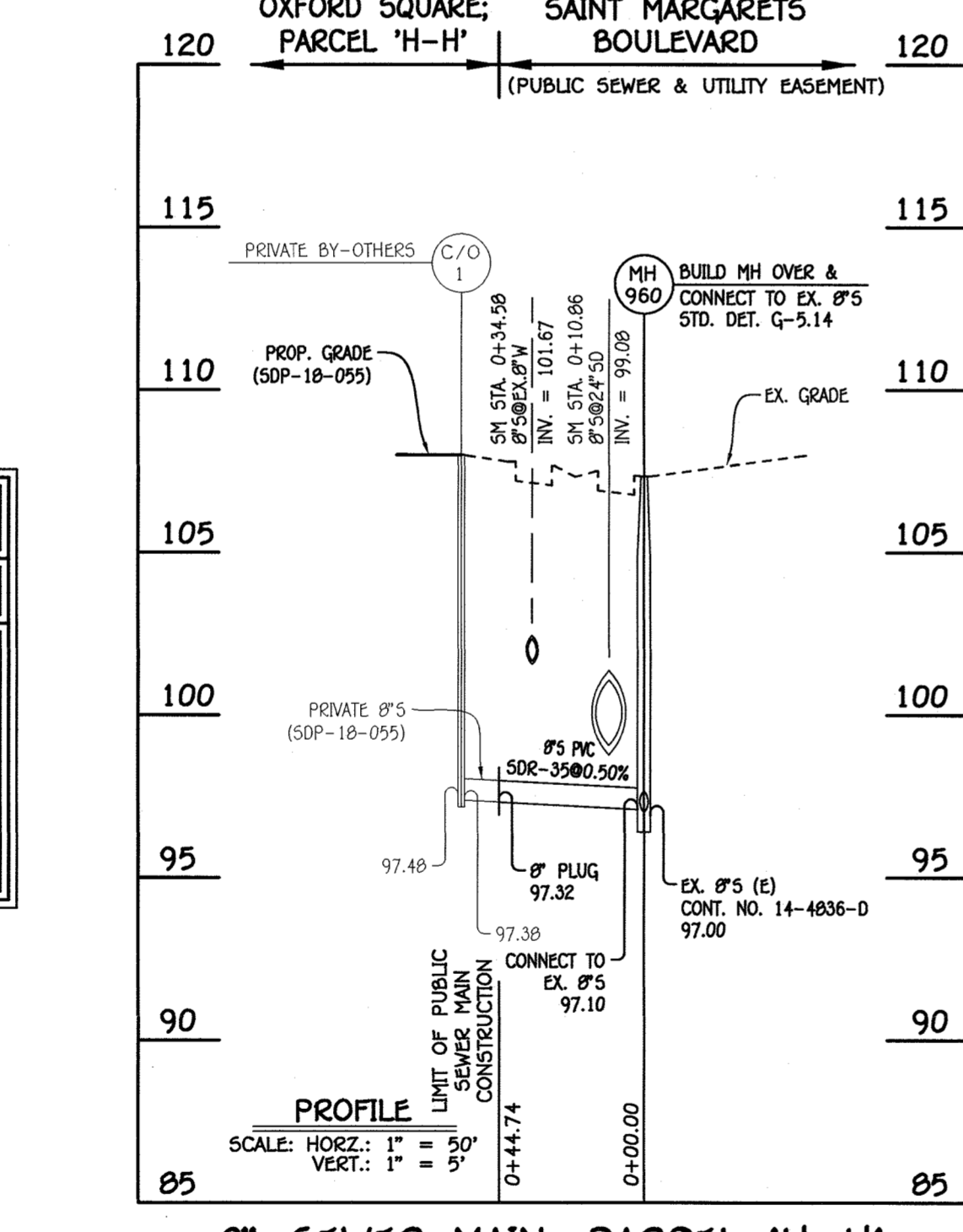
8" SEWER MAIN: MARSTON WAY; MH 900 TO MH 930

8" SEWER MAIN: WARBURG WAY; MH 915 TO MH 940

8" SEWER MAIN: LEDGERS WAY; MH 935 TO MH 955

NO.	NORTHING	EASTING	RIM ELEVATION
900	552390.74	1395727.83	102.58
905	552391.23	1395714.92	102.58
910	552418.98	1395658.62	102.00
915	552442.95	1395640.04	102.00
920	552477.71	1395569.51	103.91
925	552515.69	1395534.95	105.06
930 (TERMINAL)	552637.77	1395458.58	107.59

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EDGE OF EASEMENT	M.C.E.	SLAB
MH 925 TO MH 930 (TERMINAL)					
0+20 RT.	418	96.15	96.39	100.19	107.39
0+38 RT.	417	96.59	96.83	100.63	108.06
0+60 RT.	416	97.12	97.36	101.16	108.06
0+78 RT.	415	97.56	97.80	101.60	108.73
1+00 RT.	414	98.10	98.34	102.14	109.40
1+18 RT.	413	98.54	98.78	102.58	109.40
MMH 930 RT.	412	99.33	99.57	103.43	109.40



8" SEWER MAIN: PARCEL 'H-H'

NO.	NORTHING	EASTING	RIM ELEVATION
960	552743.86	1395865.04	107.34
8" PLUG	552786.86	1395877.41	--

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

NO.	NORTHING	EASTING	RIM ELEVATION
935	552691.89	1395762.72	109.26
940 (TERMINAL)	552738.54	1395785.71	109.96

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EDGE OF EASEMENT	M.C.E.	SLAB
MH 915 TO MH 935					
0+37 LT.	393	93.78	94.20	98.10	106.12
0+45 RT.	392	93.91	94.19	98.09	106.78
0+56 RT.	391	94.09	94.37	98.27	107.45
0+62 LT.	394	94.18	94.60	98.50	106.79
0+77 LT.	395 (DHC)	97.50	97.92	101.82	106.79
0+84 RT.	390 (DHC)	97.50	97.78	101.68	108.12
0+95 RT.	389 (DHC)	98.00	98.28	102.18	108.12
1+02 LT.	396 (DHC)	98.00	98.42	102.32	107.46
1+18 LT.	397 (DHC)	99.00	99.42	103.32	108.13
1+26 RT.	388 (DHC)	99.00	99.28	103.18	108.79
1+37 RT.	387 (DHC)	99.50	99.78	103.68	108.79
1+44 LT.	398 (DHC)	100.00	100.42	104.32	108.80
1+57 LT.	399 (DHC)	100.00	100.42	104.32	109.47
1+64 RT.	386 (DHC)	100.00	100.28	104.18	109.46
2+03 RT.	385 (DHC)	101.50	101.78	105.68	110.21
2+25 RT.	384 (DHC)	101.50	101.78	105.68	110.88
2+44 RT.	383 (DHC)	101.50	101.78	105.68	111.55
2+65 RT.	382 (DHC)	101.50	101.78	105.68	110.88
MH 935 TO MH 940 (TERMINAL)					
0+07 RT.	381	101.77	102.05	105.85	110.88
0+27 RT.	380	102.17	102.45	106.25	111.55
MMH 940 RT.	379	102.83	103.11	107.01	111.55

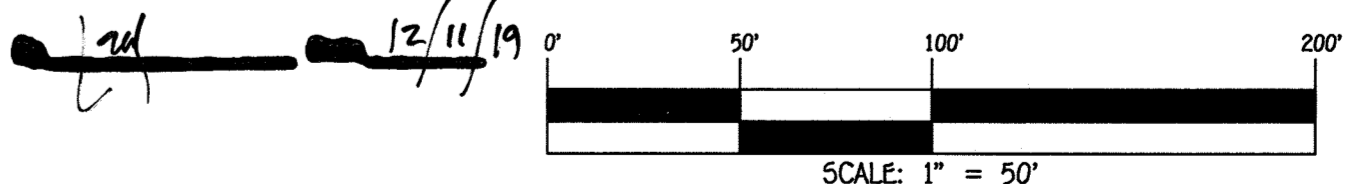
NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

NO.	NORTHING	EASTING	RIM ELEVATION
945	552764.99	1395614.45	110.56
950	552784.12	1395548.68	109.29
955 (TERMINAL)	552776.16	1395427.94	108.00

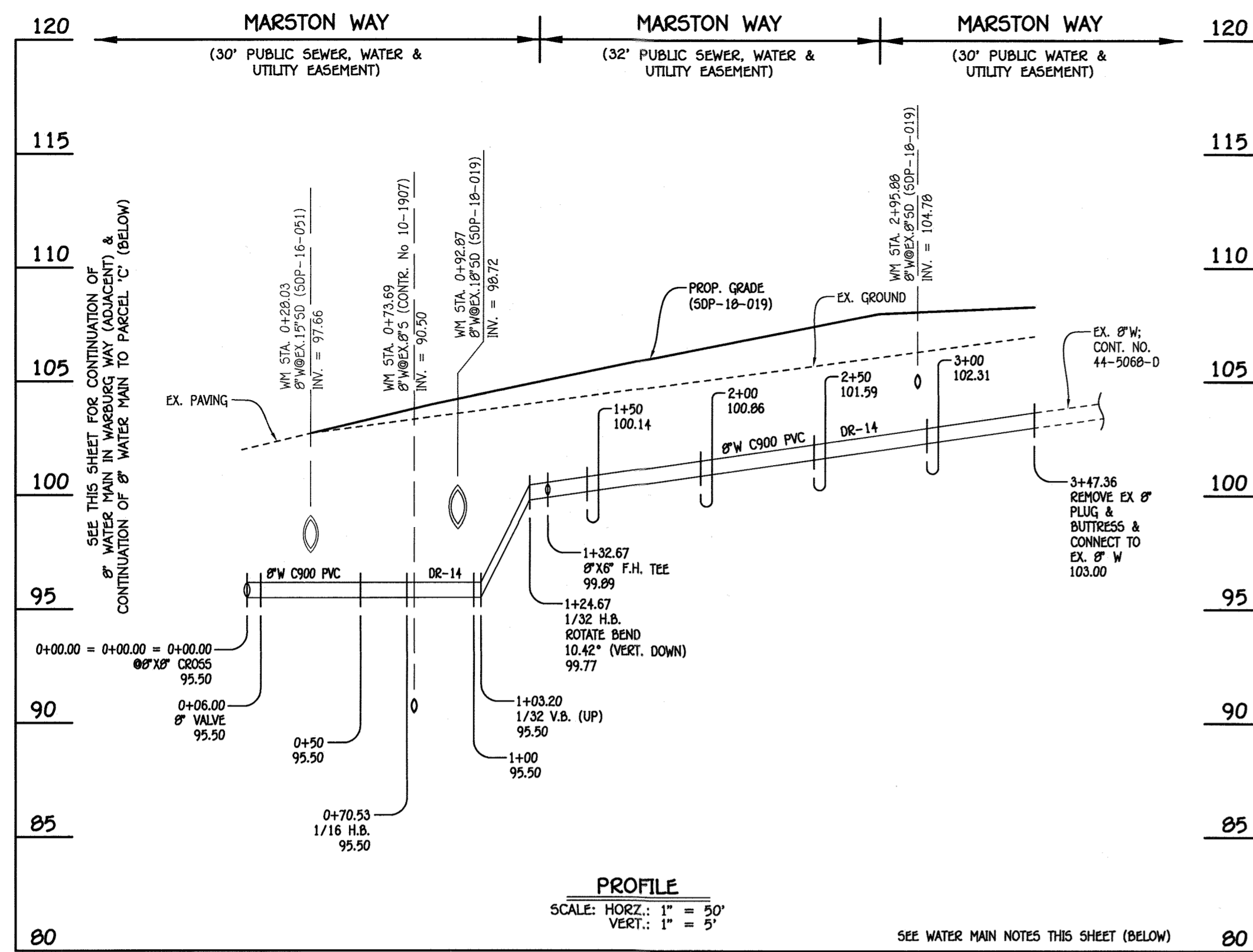
NOTE: SET MH RIMS FLUSH W/PROPOSED GRADE.

STATION	LOT	ELEVATION AT MAIN	ELEVATION AT EDGE OF EASEMENT	M.C.E.	SLAB
MH 935 TO MH 945					
0+37 RT.	419 (DHC)	101.50	101.74	105.56	112.00
0+52 LT.	400 (DHC)	102.00	102.44	106.24	111.58
0+60 RT.	420 (DHC)	102.00	102.24	105.98	112.67
0+72 LT.	401 (DHC)	102.00	102.44	106.20	112.25
0+78 RT.	421 (DHC)	102.50	102.74	106.50	112.67
0+92 LT.	402 (DHC)	102.50	102.94	106.74	112.25
1+01 RT.	422 (DHC)	102.50	102.74	106.50	112.67
1+13 LT.	403 (DHC)	103.00	103.44	107.20	112.25
1+19 RT.	423 (DHC)	103.00	103.24	107.02	112.67
1+33 LT.	404 (DHC)	103.00	103.44	107.22	112.25
1+42 RT.	424 (DHC)	103.00	103.24	107.04	112.67
1+53 LT.	405 (DHC)	103.00	103.44	107.20	112.25
1+59 RT.	425 (DHC)	103.00	103.24	107.00	112.67
MH 945 TO MH 950					
0+17 RT.	426 (DHC)	103.00	103.30	107.16	112.00
0+22 LT.	406 (DHC)	103.00	103.40	107.36	111.58
0+49 RT.	427 (DHC)	103.00	103.40	107.26	111.38
MMH 950 RT.	428 (TYPE 'A' DROP CONN.)	103.00	103.24	107.04	111.38
MH 950 TO MH 955 (TERMINAL)					
0+19 LT.	407	99.95	100.39	104.19	111.17
0+24 RT.	429	99.98	100.22	104.02	112.05
0+35 RT.	430	100.06	100.30	104.10	112.05
0+40 LT.	408	100.10	100.54	104.34	111.17
0+60 LT.	409	100.24	100.68	104.48	110.50
0+65 RT.	431	100.28	100.52	104.32	112.05
0+77 RT.	432	100.36	100.60	104.40	112.05
0+82 LT.	410	100.40	100.84	104.64	109.83
1+00 LT.	411	100.53	100.97	104.77	109.16
1+05 RT.	433	100.57	100.81	104.61	112.05
MMH 955 RT.	434	100.84	101.08	104.88	111.38

AS-BUILT

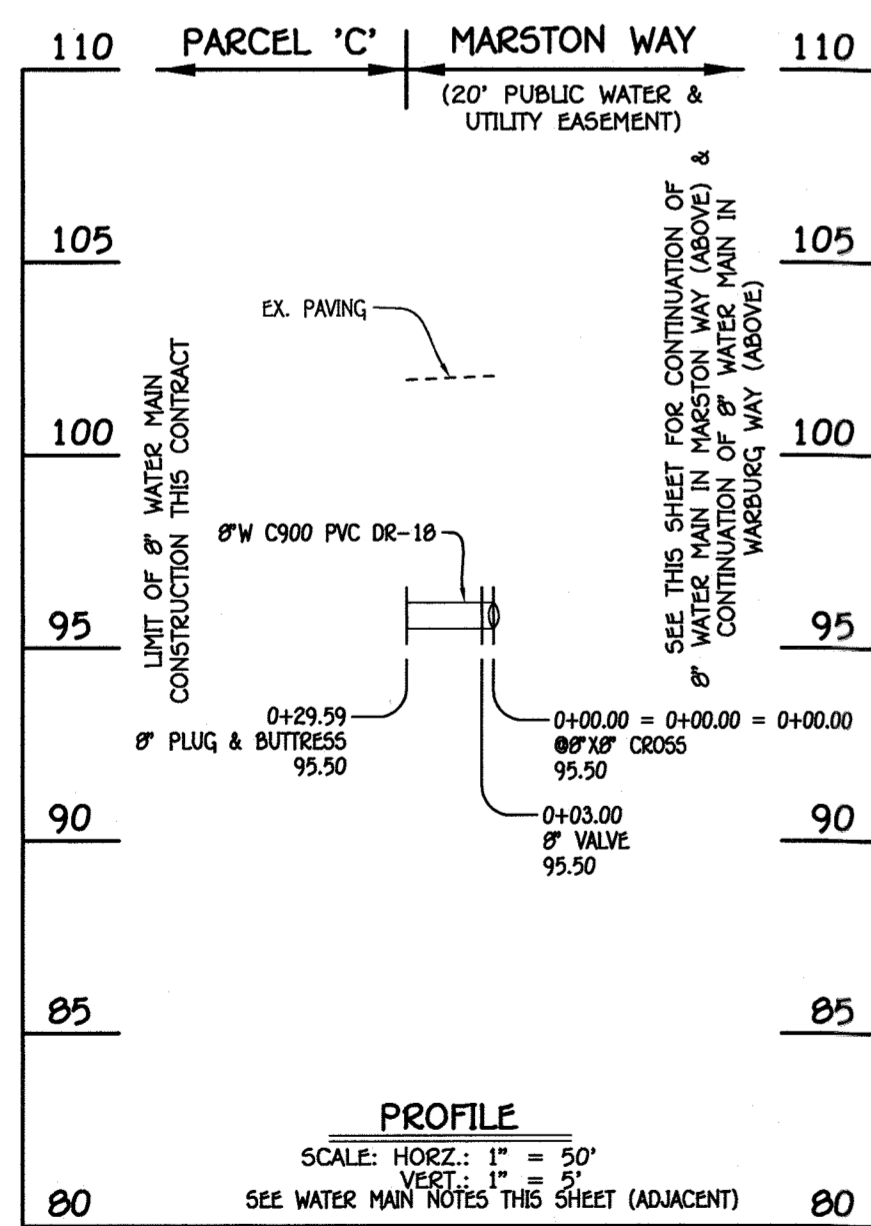


DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND 	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12243 EXPIRATION DATE 5/7/16/20. FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 15275 BALTIMORE NATIONAL PARK ELICOTT CITY, MARYLAND 21042 (410) 461-2895	DESIGNED BY : B.C.R.	#12043 	DRAWN BY : B.C.R.	600' SCALE MAP NO. 38 BLOCK NO. 20 F.C.C. WORK ORDER NO. 09014-3024 FILE NAME : SEWER & WATER MAIN EXTENSIONS PLAN	CONTRACT NO. 14-5065-D OXFORD SQUARE LOTS 379-434, OPEN SPACE LOTS 435-439 & PARCEL T-1 "THE YARDS" SEWER & WATER MAIN EXTENSIONS CONTRACT NO. 14-5065-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN
			CHECKED BY : P.W.K.		DATE : FEBRUARY, 2019			SHEET 3 OF 6



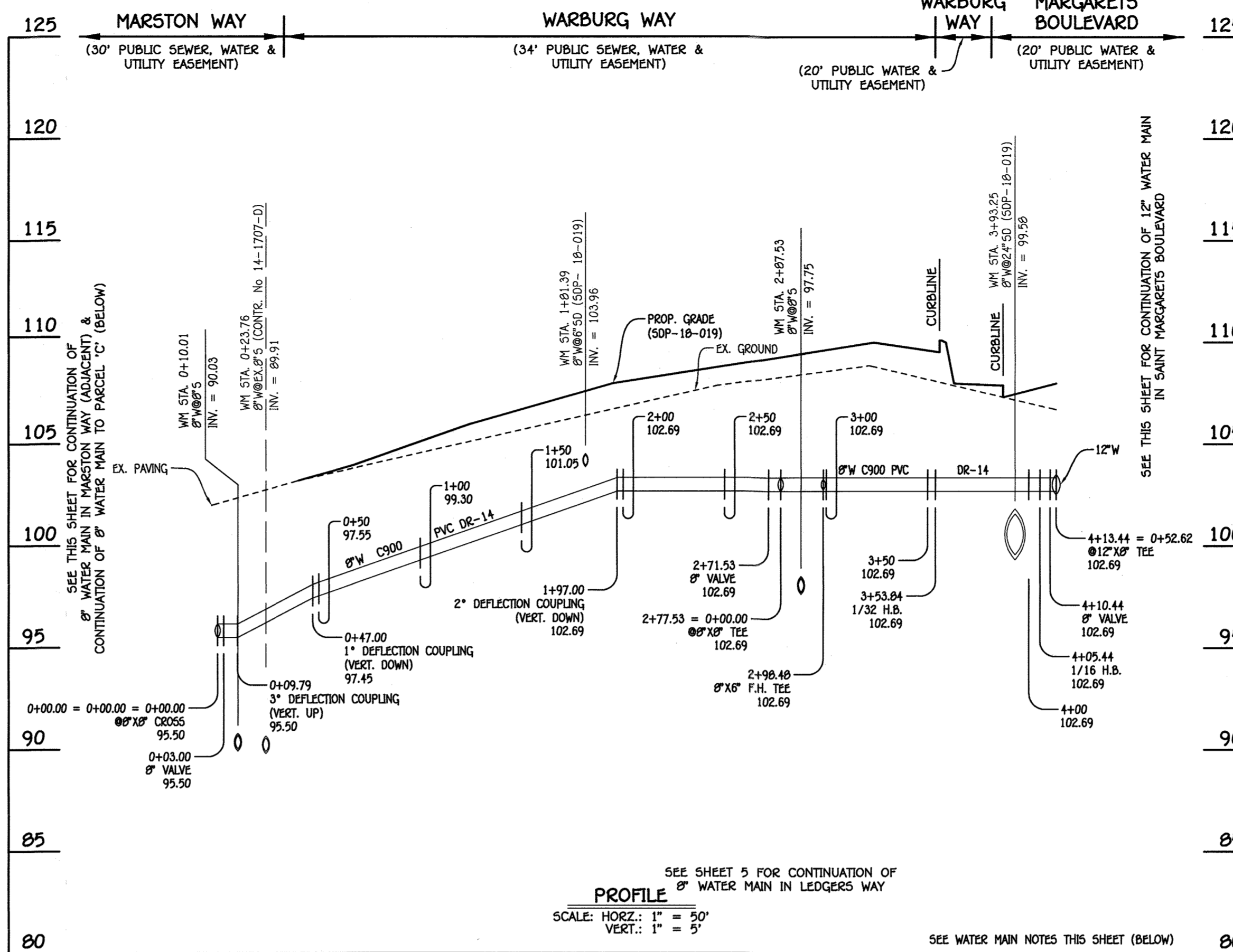
8" WATER MAIN: MARSTON WAY

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: MARSTON WAY			
0+00.00 = 0+00.00 = 0+00.00	8" X 8" CROSS	552438.40	1385626.65
0+06.00	8" VALVE	552441.05	1385621.27
0+70.53	1/16 HB	552469.58	1385563.39
1+03.20	1/32 V.B. (UP)	552493.74	1385541.40
1+24.67	1/32 HB	552509.62	1385526.95
1+32.67	8" X 6" F.H. TEE	552516.40	1385522.70
3+47.36	EX. 8" PLUG & BUTTRESS	552698.41	1385408.84



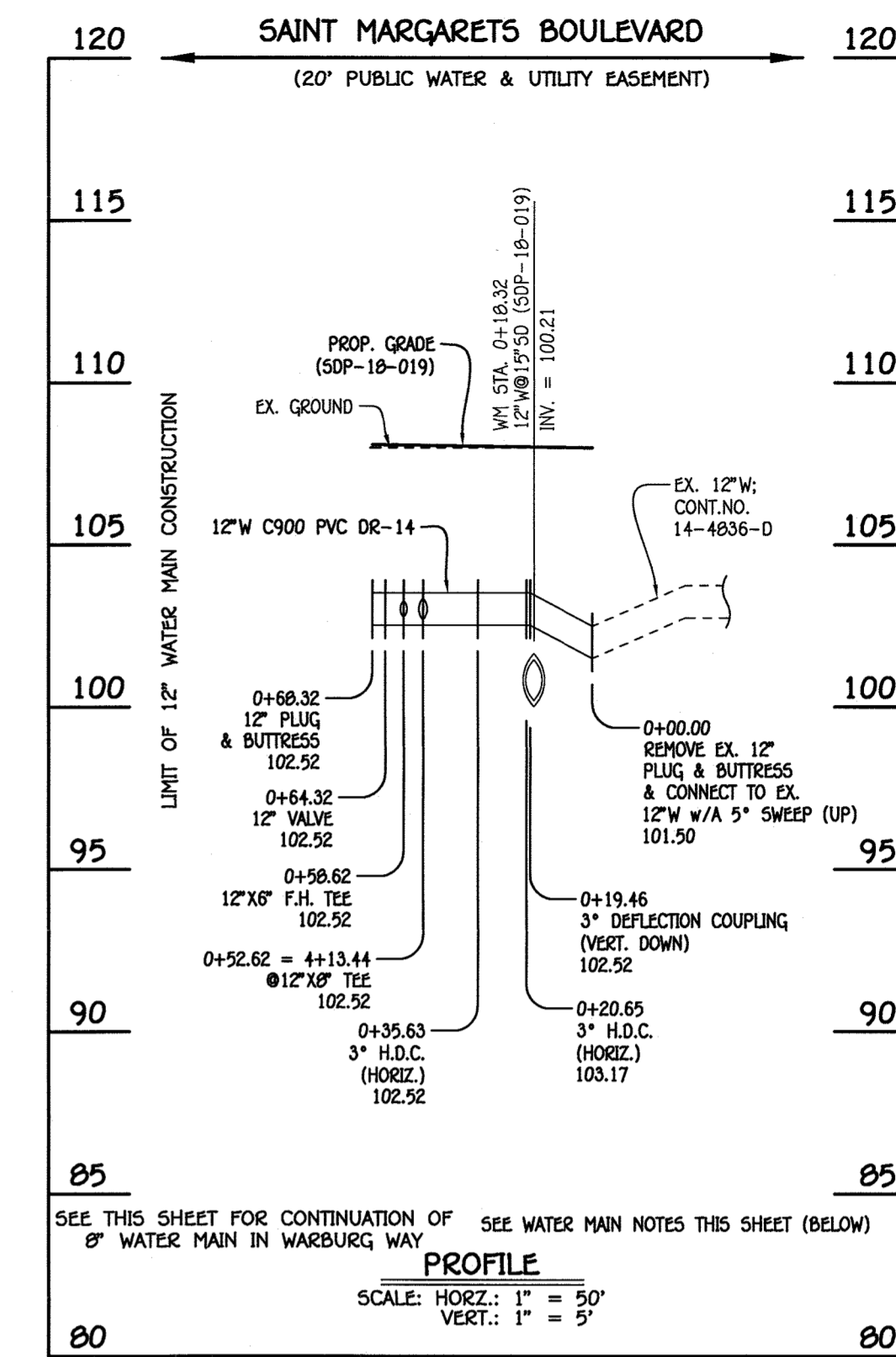
8" WATER MAIN: PARCEL 'C'

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: PARCEL 'C'			
0+00.00 = 0+00.00	8" X 8" CROSS	552438.40	1385626.65
0+03.00	8" VALVE	552435.80	1385625.33
0+22.59	8" PLUG & BUTTRESS	552418.81	1385617.00



8" WATER MAIN: WARBURG WAY

W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: WARBURG WAY			
0+00.00 = 0+00.00 = 0+00.00	8" X 8" CROSS	552438.40	1385626.65
0+03.00	8" VALVE	552441.09	1385627.98
0+09.79	3" DEFLECTION COUPLING (VERT. UP)	552447.18	1385630.98
0+47.00	1" DEFLECTION COUPLING (VERT. DOWN)	552480.56	1385647.43
1+97.00	2" DEFLECTION COUPLING (VERT. DOWN)	552615.11	1385713.74
2+71.53	8" VALVE	552681.96	1385746.68
2+77.53 = 0+00.00	8" X 8" TEE	552687.34	1385749.33
2+98.48	8" X 6" F.H. TEE	552706.14	1385758.60
3+53.84	1/32 HB	552755.79	1385783.07
4+05.44	1/16 HB	552791.77	1385820.06
4+10.44	8" VALVE	552796.48	1385821.75
4+13.44 = 0+52.62	12" X 8" TEE	552799.30	1385822.77

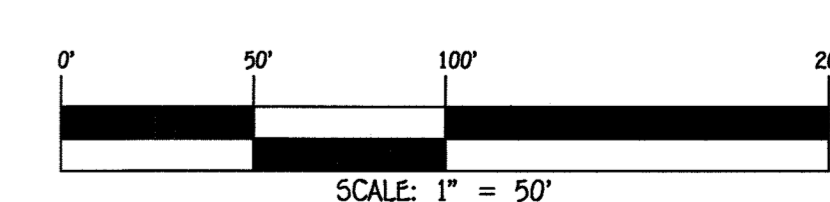


12" WATER MAIN: SAINT MARGARETS BOULEVARD

W.M. STA.	APPURTENANCE	NORTHING	EASTING
12" WATER MAIN: SAINT MARGARETS BOULEVARD			
0+00.00	EX. 12" PLUG & BUTTRESS	552778.79	1385871.15
0+19.46	3" DEFLECTION COUPLING (VERT. DOWN)	552787.42	1385853.71
0+20.65	3" H.D.C. (HORIZ.)	552787.94	1385852.65
0+35.63	3" H.D.C. (HORIZ.)	552793.54	1385838.75
0+52.62 = 4+13.44	12" X 8" TEE	552799.30	1385822.77
0+58.62	12" X 6" F.H. TEE	552801.33	1385817.12
0+64.32	12" VALVE	552803.26	1385811.75
0+68.32	12" PLUG & BUTTRESS	552804.62	1385807.99

AS-BUILT
12/11/19

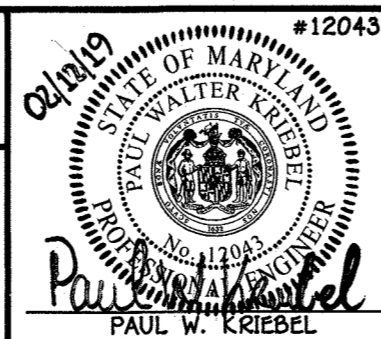
- WATER MAIN NOTES:**
1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE; DR-14.
 2. ALL PIPE BEDDING, TRACERS WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.
 4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature]
2-26-19
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
[Signature]
3-18-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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. 18243 EXPIRATION DATE 8/7/16/20.
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2895



DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: FEBRUARY, 2019

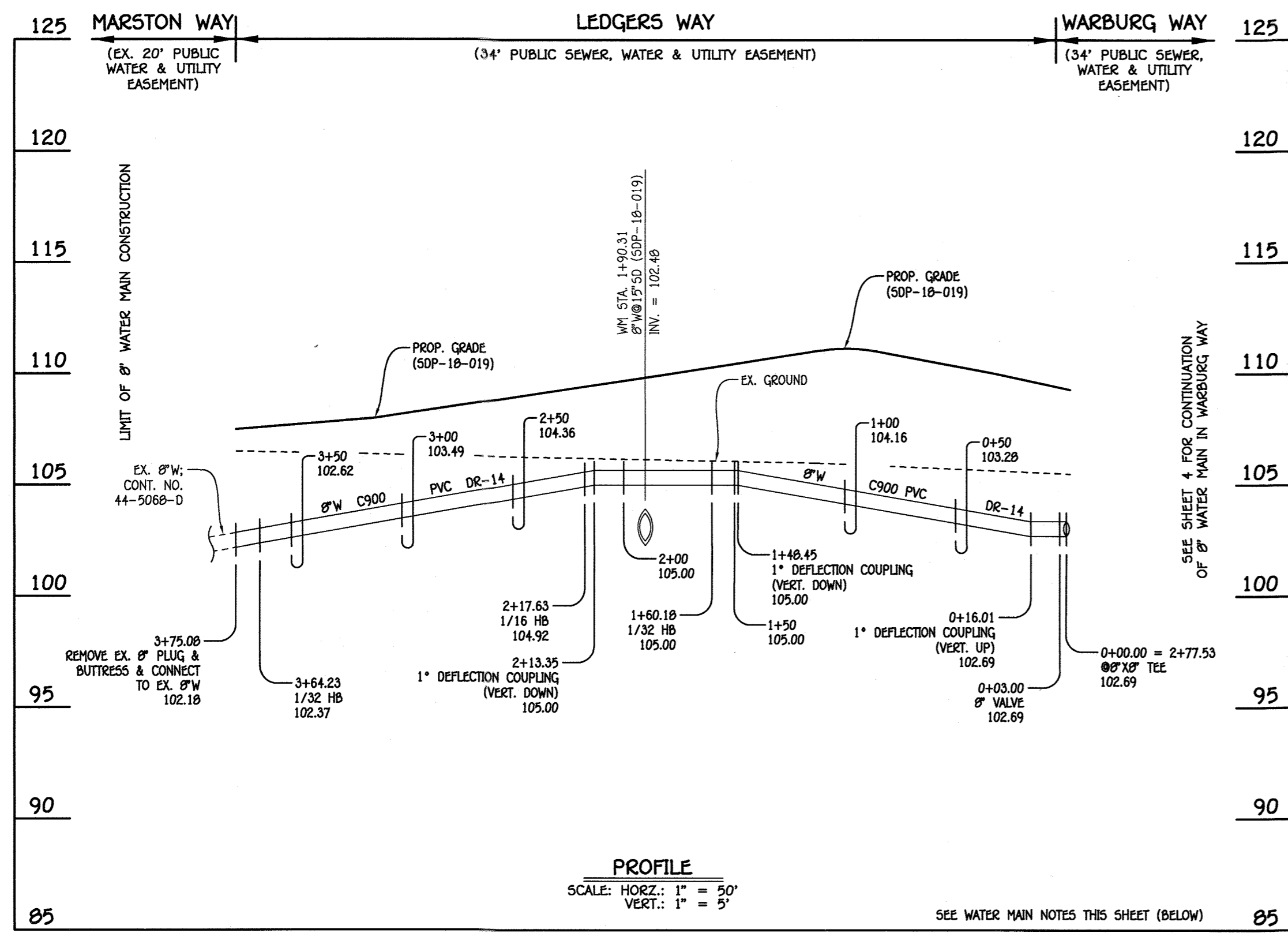
**WATER MAIN EXTENSIONS
PROFILES, CHARTS & NOTES**

600' SCALE MAP NO. 38 BLOCK NO. 20
F.C.C. WORK ORDER NO. 09014-3024
FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE
LOTS 379-434, OPEN SPACE LOTS 435-439 & PARCEL '1-1'
"THE YARDS"
SEWER & WATER MAIN EXTENSIONS
CONTRACT NO. 14-5065-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 4 OF 6



8" WATER MAIN: LEDGERS WAY

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: LEDGERS WAY			
0+00.00 = 2+77.53	ØØ" X Ø" TEE	552687.35	1385749.33
0+03.00	Ø" VALVE	552688.67	1385746.64
0+16.01	1" DEFLECTION COUPLING (VERT. UP)	552694.42	1385734.98
1+48.45	1" DEFLECTION COUPLING (VERT. DOWN)	552752.99	1385616.18
1+60.18	1/32 HB	552758.17	1385605.67
2+13.35	1" DEFLECTION COUPLING (VERT. DOWN)	552773.02	1385554.61
2+17.63	1/16 HB	552774.21	1385550.50
3+64.25	1/32 HB	552764.57	1385404.20
3+75.00	EX. Ø" PLUG & BUTTRESS	552761.28	1385393.88

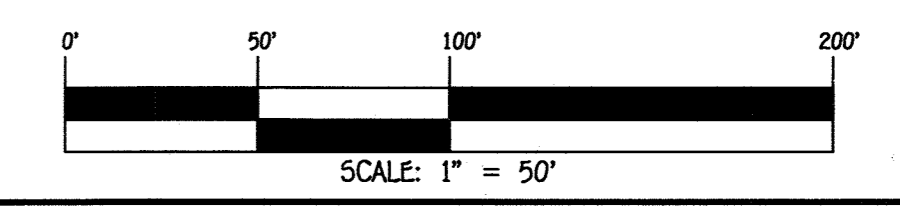
- WATER MAIN NOTES:**
1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE, DR-14.
 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV - WATER AND SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION.
 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TREE PVC HIGH DEFLECTION COUPLINGS.
 4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE					
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1		LOCATION DIMENSION 2	
379		SMH 940	14'	SMH 935	53'
380			28'		21'
381			40'		14'
382		SMH 915	268'		17'
383			244'		35'
384			227'		52'
385			204'		75'
386			166.5'		115'
387			139.5'		140'
388			128'		152'
389			98'		182.5'
390			87'		193'
391			60'		221'
392			48.5'		234'
393			43'		242'
394			66'		216'
395			80'		201'
396			105'		175'
397			121'		160'
398			146'		134.5'
399			160'		122'
400		SMH 945	116.5'	SMH 935	58'
401			97'		77'
402			78'		97'
403			58'		118'
404			41'		137'
405			29'		158'
406			32'	SMH 950	52'
407		SMH 955	103'		28'
408			83'		45'
409			64.5'		64'
410			44'		85'
411			30'		100'
412		SMH 925	136'	SMH 930	14'
413			119.5'		30'
414			102'		46'
415			80'		68'
416			63'		85'
417			42'		107'
418			26'	SMH 930	125'
419		SMH 945	129'	SMH 935	40'
420			108'		63'
421			86'		81'
422			66'		104'
423			48'		121'
424			25'		145'
425			13'		162'
426			22'	SMH 950	30'
427			51'		54'
428		SMH 955	120'		13'
429			77'		26'
430			87'		95.5'
431			56'		64'
432			44.5'		77'
433			20'		103'
434			14'		119'

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE					
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1		LOCATION DIMENSION 2	
379		SMH 940	16'	SMH 935	45'
380					21'
381					21'
382		SMH 915	256'		25'
383			256'		25'
384			216'		63'
385			216'		63'
386			152'		127.5'
387			152'		127.5'
388			112'		168'
389			112'		168'
390			73'		207'
391			73'		207'
392			34'		248'
393			57'		226'
394			57'		226'
395			95'		186'
396			95'		186'
397			134'		146'
398			134'		146'
399			168'		112'
400		SMH 945	106'	SMH 935	145'
401			106'		145'
402			68'		105'
403			68'		105'
404			34'		67'
405			34'		67'
406			26'	SMH 950	60'
407		SMH 955	93'		34'
408			55'		34'
409			55'		70'
410			23'		70'
411			23'		110'
412		SMH 925	131'	SMH 930	20'
413			131'		20'
414			91'		56'
415			91'		56'
416			53'		95'
417			53'		95'
418		SMH 925	17'		135'
419		SMH 945	117'	SMH 935	51'
420			117'		51'
421			77'		91'
422			77'		91'
423			37'		131'
424			27'		131'
425			10'	SMH 950	68'
426			10'		68'
427			60'		20'
428		SMH 955	105'		15'
429			105'		15'
430			70'		50'
431			70'		50'
432			31'		89'
433			31'		89'
434			19'		133'

AS-BUILT

 12/11/19



CONTRACT NO. 14-5065-D
 OXFORD SQUARE
 LOTS 379-434, OPEN SPACE
 LOTS 435-439 & PARCEL T-1
 "THE YARDS"
 SEWER & WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

 CHIEF, BUREAU OF UTILITIES
 DATE: 2-26-19

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3-18-19

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. 12043 EXPIRATION DATE 8/7/16/20.
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 18276 BALDWIN NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

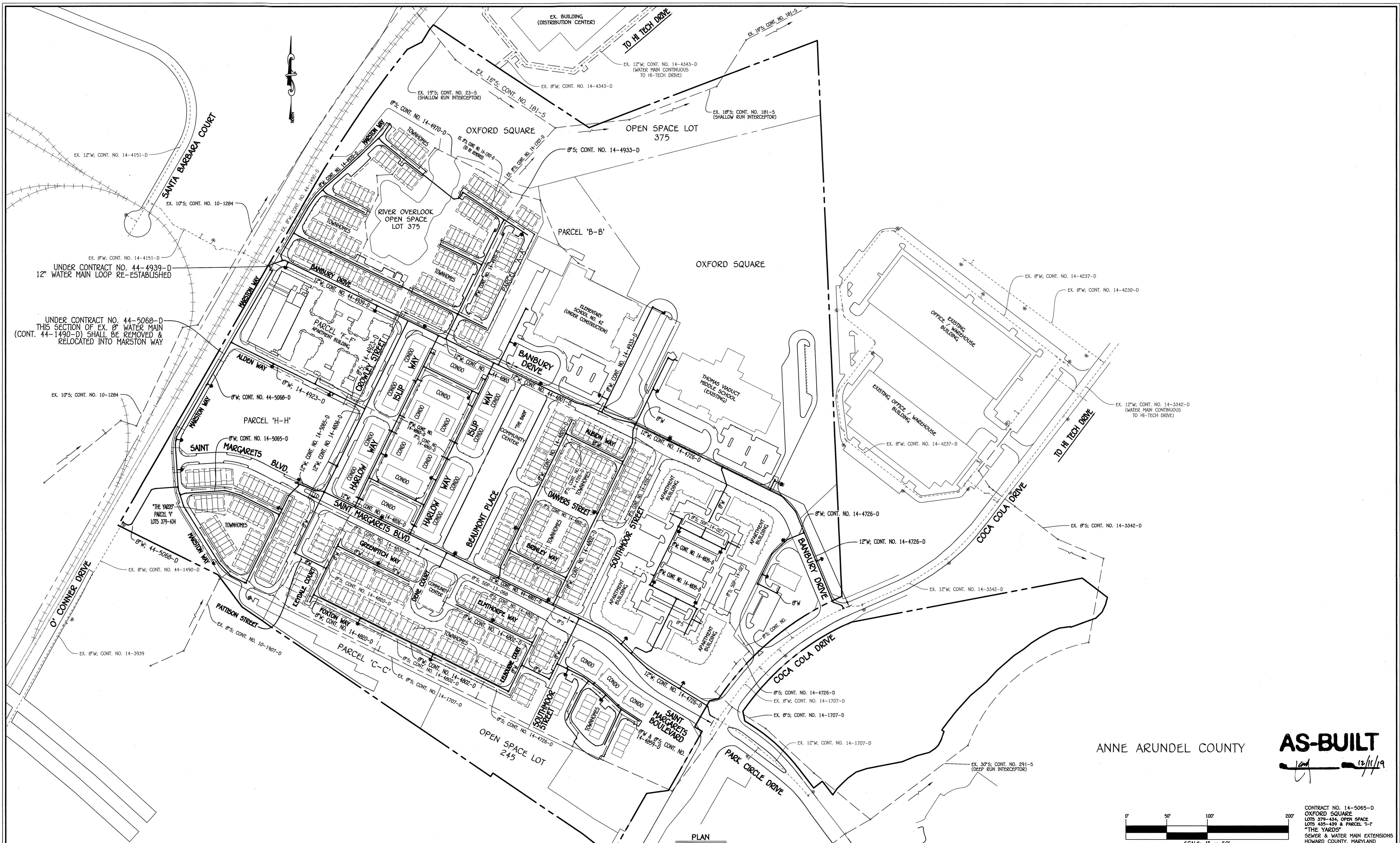
PAUL W. KRIEBEL
 #12043

DESIGNED BY :
 B.C.R.
 DRAWN BY :
 B.C.R.
 CHECKED BY :
 F.W.K.
 DATE :
 FEBRUARY, 2019
 BY NO. REVISION DATE

WATER MAIN EXTENSIONS
 PROFILE, CHART, NOTES &
 "AS-BUILT" TABLES
 600' SCALE MAP NO. 38 BLOCK NO. 20
 F.C.C. WORK ORDER NO. 09014-3024
 FILE NAME : SEWER & WATER MAIN EXTENSIONS PLAN

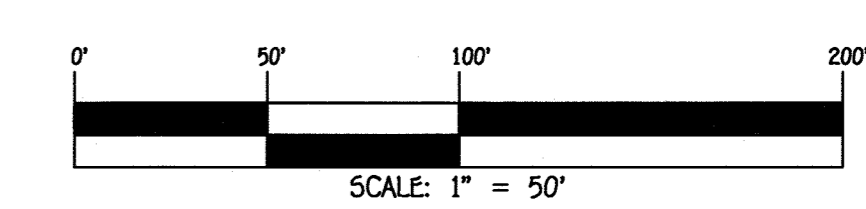
OXFORD SQUARE
 LOTS 379-434, OPEN SPACE LOTS 435-439 & PARCEL 'T-1'
 "THE YARDS"
 SEWER & WATER MAIN EXTENSIONS
 CONTRACT NO. 14-5065-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 5 OF 6



ANNE ARUNDEL COUNTY

AS-BUILT
Jan 12/11/19

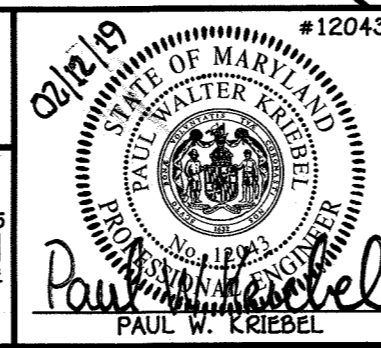


CONTRACT NO. 14-5065-D
 OXFORD SQUARE
 LOTS 379-434, OPEN SPACE
 LOTS 435-439 & PARCEL 'I-I'
 "THE YARDS"
 SEWER & WATER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
Con Jap
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND
Ch. P. H.
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

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. 12043 EXPIRATION DATE IS 7/16/20.
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 841-2999



DESIGNED BY:	B.C.R.	DATE:	FEBRUARY, 2019
DRAWN BY:	B.C.R.	BY:	NO.
CHECKED BY:	P.W.K.	REVISION:	

SEWER & WATER MAIN EXTENSIONS OVERVIEW
 600' SCALE MAP NO. 38 BLOCK NO. 20
 F.C.C. WORK ORDER NO. 09014-3024
 FILE NAME: SEWER & WATER MAIN EXTENSIONS PLAN

OXFORD SQUARE
 LOTS 379-434, OPEN SPACE LOTS 435-439 & PARCEL 'I-I'
 "THE YARDS"
 SEWER & WATER MAIN EXTENSIONS
 CONTRACT NO. 14-5065-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN
 SHEET 6 OF 6

PLAN
 SCALE: 1" = 150'