WATER AND SEWER EXTENSIONS
BROOKDALE INDUSTRIAL PARK
A. DUIE PYLE TRUCKING FACILITY
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-4824-D

SHEET INDEX

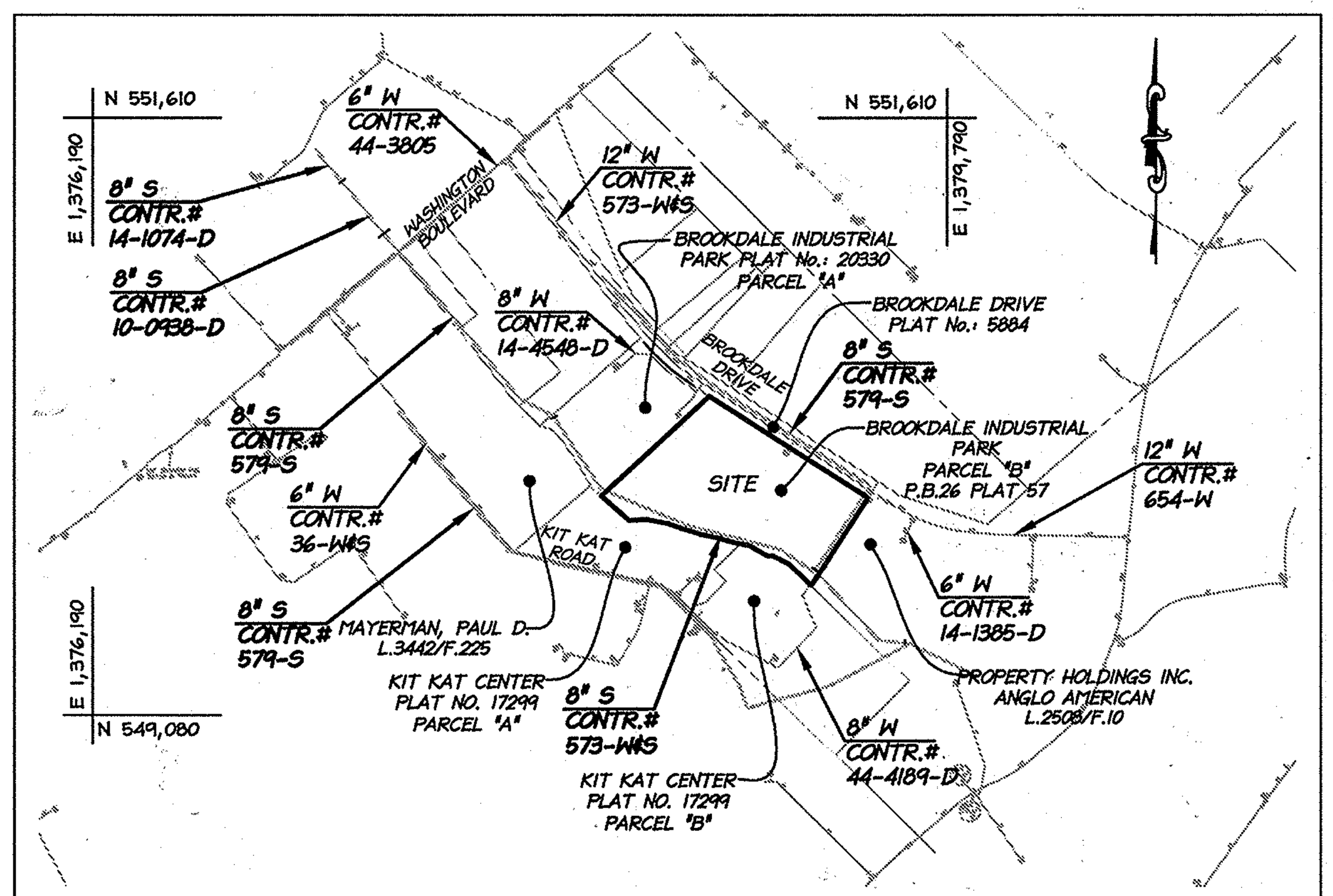
NO.	TITLE
1	COVER SHEET
2	WATER & SEWER EXTENSION PLAN
3	WATER & SEWER PROFILES

QUANTITIES

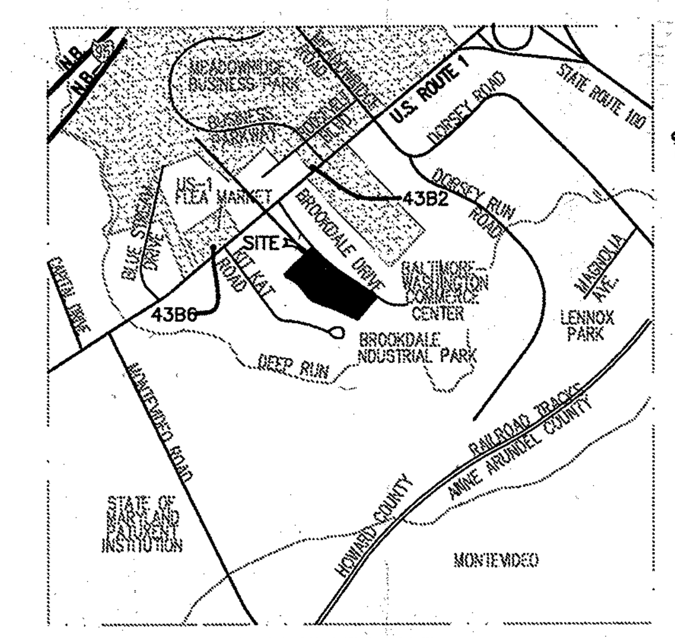
ITEMS	QUANTITIES ESTIMATED	AS-BUILT QUANTITIES	AS-BUILT TYPE	MANUFACTURER/ SUPPLIER
8" WATER (C900 PVC)	740 LF	646LF		NORTH AMERICAN PIPE
6" WATER (C900 PVC)	150 LF	148LF		NORTH AMERICAN PIPE
6" 1/8 H.B.	2 EA	2 EA		TYLER UNION
6" 1/16 H.B.	1 EA	1 EA		TYLER UNION
8" 1/8 H.B.	1 EA	1 EA		TYLER UNION
8" 1/16 H.B.	1 EA	1 EA		TYLER UNION
8" 1/16 U.V.B.	1 EA			
8" 1/16 L.V.B.	1 EA			
6" HIGH-DEFLECTION COUPLING	2 EA			
8" HIGH-DEFLECTION COUPLING	1 EA			
12" x 8" TAPPING SADDLE	1 EA	1 EA		
8" x 6" F.H.T.	2 EA	2 EA		TYLER UNION
8" x 6" R.	1 EA	1 EA		
8"V	2 EA	2 EA		TYLER UNION
6" V (FIRE HYDRANT)	2 EA	2 EA		TYLER UNION
CABLE TEST STATION	2 EA	1 EA		
6" SEWER (PVC)	100 LF	15		
SEWER MANHOLE	1 EA	1 EA		
SEWER CLEANOUT W/ 1/8 HB	1 EA			
DROP HOUSE CONNECTION	3 EA			
GREASE INTERCEPTOR	1 EA			

NAME OF UTILITY CONTRACTOR:

SURVEY AND DRAFTING DIV. CHECKBOX: AS-BUILT DATE:



LOCATION MAP
SCALE: 1 inch = 600 feet



VICINITY MAP
SCALE: 1 inch = 2000 feet
MAP: 5054 GRID: H-2
ADC No. 21007249

43B2	NORTH: 551,655.0086	EAST: 1,378,179.9408
43B6	NORTH: 550,601.5927	EAST: 1,376,866.0468

GENERAL NOTES

PART I
1. APPROXIMATE LOCATION 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.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED BY christopher consultants, ltd in APRIL of 2013.
3. THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'07 AS PROJECTED BY GPS AND PREVIOUS TRAVERSE RUNS. ALL VERTICAL CONTROLS ARE BASED ON NAVD'88. VERTICAL CONTROLS PROVIDED ON THE DRAWING ARE REFERENCED TO THE FOLLOWING BENCHMARKS:
   SITE BM 1: TOP OF GRATE INLET NO. 2 / ELEV. 180.53
   SITE BM 2: TOP OF GRATE INLET NO. 7 / ELEV. 177.00
   (SEE SHEET 2 FOR BENCHMARK LOCATIONS)
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 12". 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.
6. 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.
7. 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.
8. 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)	410-637-8713
BGE (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	1-800-743-0033/410-224-9210

9. 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.
10. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114 (a) OF THE HOWARD COUNTY CODE.

PART II - WATER
1. ALL WATER MAINS SHALL BE C900 PVC (DR-14) UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
7. TRACER WIRES AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
8. FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL 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 TEST RECORDS RECEIVED.
9. 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.

PART III - SEWER
1. ALL SEWER MAINS 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. ONLY.
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. 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.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.

LEGEND

- PROPERTY LINE
- EXISTING BUILDINGS
- EXISTING CURB AND GUTTER
- EXISTING OVERHEAD ELECTRIC
- EXISTING STORM DRAIN
- EX. PRIV. 8" S — EXISTING SANITARY SEWER
- EX. 12" W (CONTR# 44-1882-D) — EXISTING WATER
- EXISTING SEWER AND UTILITY EASEMENT
- PROPOSED SEWER AND UTILITY EASEMENT
- 24" RCP — PROPOSED STORM DRAIN
- 8" W (PVC) — PROPOSED PUBLIC WATER
- 6" S (PRIVATE) — PROPOSED SANITARY SEWER

TYPE OF BUILDING:	INDUSTRIAL (TRUCKING FACILITY)
No. OF LOTS/PARCELS:	1
No. OF WATER HOUSE CONNECTIONS:	2
No. OF SEWER HOUSE CONNECTIONS:	1
DRAINAGE AREA:	10.0 Ac.
TREATMENT PLANT:	PATAPSCO WASTEWATER TREATMENT PLANT

PURPOSE STATEMENT

TO PROVIDE WATER AND SEWER SERVICE FOR THE PROPOSED MAINTENANCE BUILDING. THE SEWER LATERAL AND GREASE TRAP WILL BE PRIVATE AND BE DISCHARGED THROUGH EXISTING MANHOLE S-1638. THE PROPOSED WATER LINE WILL BE CONNECTED TO THE EX. WATER LINE (CONTRACT #573-W&S) IN BROOKDALE DRIVE AND WILL RUN THROUGH THE SITE IN A PROPOSED EASEMENT TO PROPOSED FIRE HYDRANTS AND THEN CONTINUE OUTSIDE OF THE EASEMENT TO THE MAINTENANCE BUILDING. THE PROPOSED OFFICE ADDITION WILL INSTALL A NEW WHC OFF OF THE EXISTING 6" FIRE LINE INSIDE OF THE BUILDING AND ABANDON THE EXISTING 2" DOMESTIC LINE (SEE PLUMBING PLANS FOR MORE INFORMATION). THE EXISTING SANITARY SEWER FOR THE BUILDING WILL BE MAINTAINED AND USED WITH THE NEW ADDITION.

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE SPECIFICATIONS AND AS SHOWN ON RED-LINE REVISION OF SDP-95-67

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

John R. Robertson 10/22/13
HOWARD SOIL CONSERVATION DISTRICT — DATE

OWNER / DEVELOPER
A. DUIE PYLE
P.O. BOX 564
WEST CHESTER, PA 19381
(610) 696-5800

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
10/15/13
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
10.23.13 M.G.
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

christopher consultants
engineering · surveying · land planning
christopher consultants, ltd.
7172 columbia gateway drive (suite 100) · columbia, md 21046-2990
410.872.8690 · metro 301.881.0148 · fax 410.872.8693

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. 27223
EXP. DATE MARCH, 2014

STATE OF MARYLAND — DAVID J. SHARON — NO. 27223 — REGISTERED PROFESSIONAL ENGINEER
9/27/13

DES:	EG
DRN:	EG
CHK:	DS
DATE: AUG. 2013	

BY	NO.	REVISION	DATE
CLS		KCI TECHNOLOGIES AS-BUILT DRAWINGS	10/7/15

COVER SHEET

600 SCALE MAP NO. 43 BLOCK NO.

WATER and SEWER EXTENSIONS
BROOKDALE INDUSTRIAL PARK
A. DUIE PYLE TRUCKING FACILITY
CONTRACT No. 14-4824-D
7070 BROOKDALE DRIVE
ELKRIDGE, MARYLAND 21075
ELECTION DISTRICT 1
TAX MAP 43, GRID 5, PARCEL 628
ZONE: M-2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 3

101288 (W&S)

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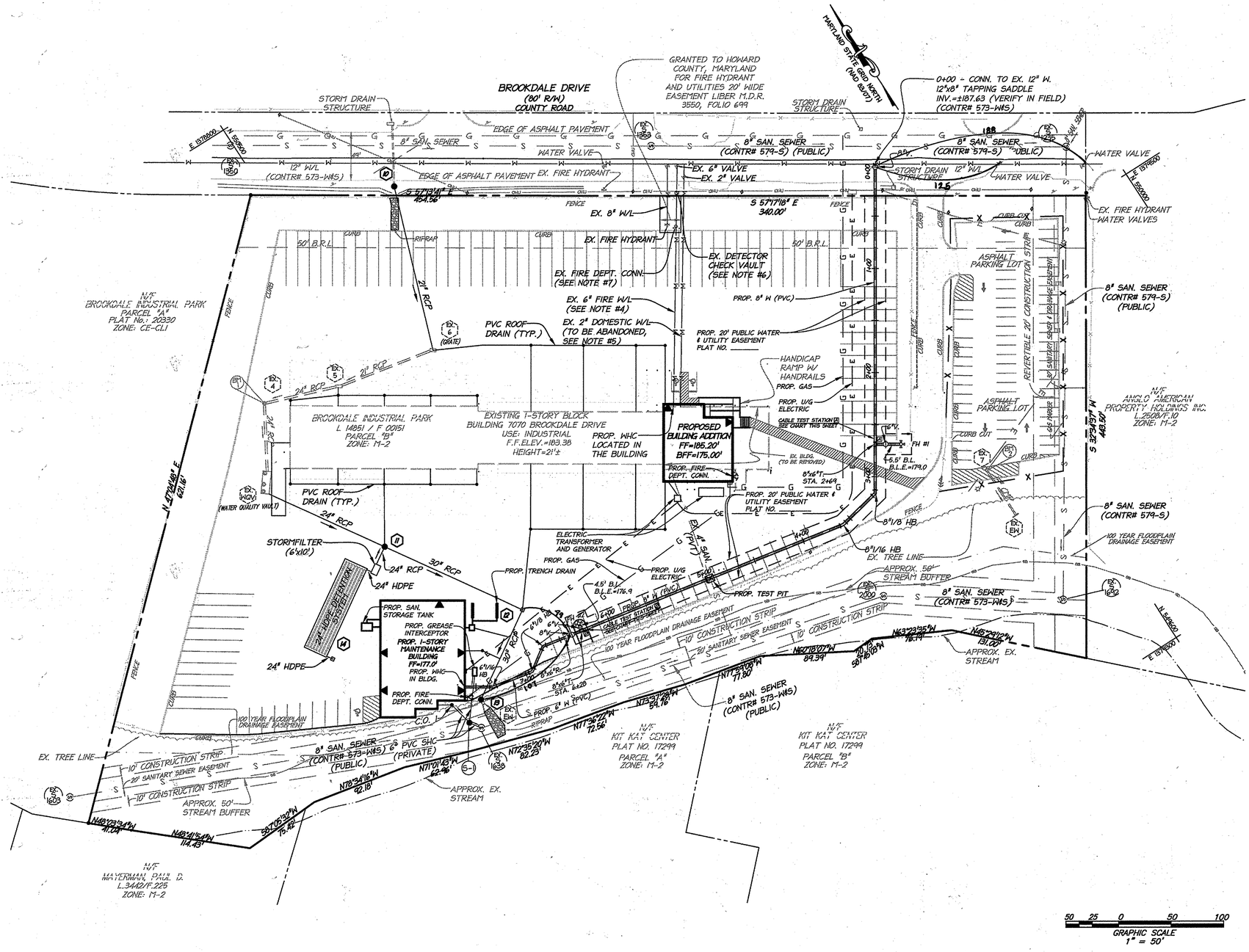
FITTING CHART		
STATION	FITTING	NAD '83/'07 COORDINATES
0+00	12"x8" TS&V	N 550137.36 E 1379304.519
2+69	8"x6" FHT	N 549911.17 E 1379159.30
3+17	8"⅛ HB	N 549871.22 E 1379133.65
3+59	8"⅛ HB	N 549862.37 E 1379092.05
6+28	8"x6" FHT	N 549911.33 E 1378827.59
6+38	8" VALVE	N 549913.15 E 1378817.76
6+44	8"x6" R	N 549914.28 E 1378811.57
6+68	6"⅛ HB	N 549918.57 E 1378786.49
6+94	6"⅛ HB	N 549903.85 E 1378767.07
7+34	6"⅛ HB	N 549911.47 E 1378727.59

FIRE HYDRANT CHART		
FH	NAD '83/'07 COORDINATES	W.M. STATION
1	N 549897.88 E 1379179.99	2+69
2	N 549918.57 E 1378828.93	6+28

CABLE TEST STATION CHART			
STR.	STATION	OFFSET	REMARKS
A	2+67	25' LEFT	HO. CO. STD. DETAIL W-1.15
B	6+26	8' RIGHT	HO. CO. STD. DETAIL W-1.15

SEWER MANHOLE CHART
MH	NAD '83/'07 COORDIANTED
S-1	N 549894.98 E 1378690.18
EX. S 1638	N 549884.71 E 1378697.10

SEWER CLEANOUT CHART
C.O.	NAD '83/'07 COORDIANTED
1	N 549918.17 E 1378685.18



NOTES:

1. SEE SHEET 3 FOR PROFILES OF WATER AND SEWER.
2. THIS SITE IS LOCATED IN THE 400 WATER PRESSURE ZONE. NO DIVISION VALVES ARE PROPOSED WITH THIS PLAN UNLESS REQUESTED BY HOWARD COUNTY.
3. A PRESSURE REDUCER VALVE (PRV) WILL BE INSTALLED IN THE BUILDING DUE TO THE WATER PRESSURE BEING GREATER THAN 60 PSI.
4. CONVERT EXISTING 6" FIRE WATER LINE TO A 6" FIRE AND DOMESTIC WATER LINE.
5. ABANDON EXISTING 2" DOMESTIC WATER LINE AT THE MAIN, REMOVE PIPE AND PLUG AT THE MAIN.
6. REMOVE EXISTING DETECTOR CHECK AND VAULT, REPLACE WITH A PIPE SLEEVE AND/OR SPOOL PIECE.
7. REMOVE EXISTING FIRE DEPARTMENT CONNECTION.
8. ALL C900 PVC WATERLINE SHALL BE DR-14.
9. AVOID PLACING FENCE POSTS IN VICINITY OF WATERLINE.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

10/15/13
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

10.23.13
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

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EXP. DATE MARCH, 2014

STATE OF MARYLAND — CHRISTOPHER J. CORSON — No. 27223 — REGISTERED PROFESSIONAL ENGINEER

9/27/13

DES:	EG
DRN:	EG
CHK:	DS
DATE: AUG. 2013	

BY	NO.	REVISION	DATE
CLS		KCI TECHNOLOGIES AS-BUILT DRAWINGS	10/3/15

WATER & SEWER EXTENSION PLAN

600 SCALE MAP NO. 43 BLOCK NO.

WATER and SEWER EXTENSIONS
BROOKDALE INDUSTRIAL PARK
A. DUIE PYLE TRUCKING FACILITY
CONTRACT No. 14-4824-D
7070 BROOKDALE DRIVE
ELKRIDGE, MARYLAND 21075

ELECTION DISTRICT 1
TAX MAP 43, GRID 5, PARCEL 628
ZONE: M-2
HOWARD COUNTY, MARYLAND

SCALE 1"=50'

SHEET 2 OF 3

101288 (W&S)

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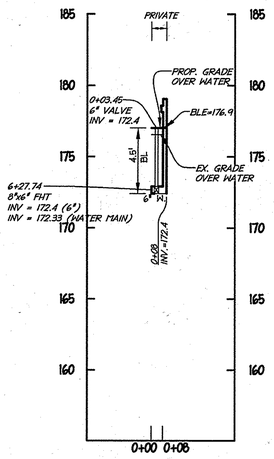
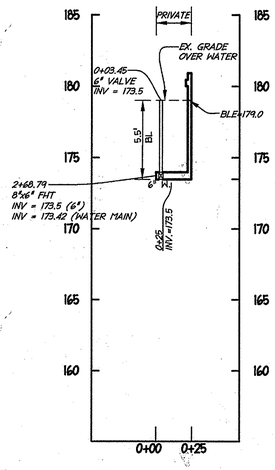
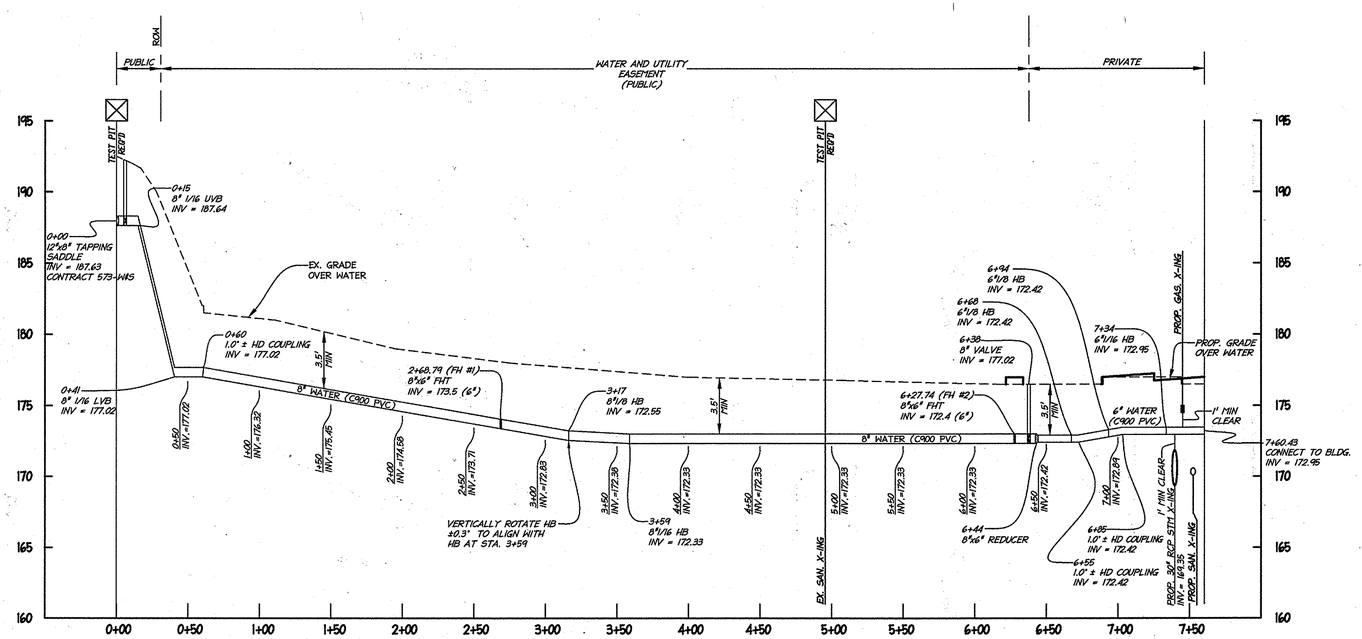


PROPOSED FIRE HYDRANT #2
STA. 6+27.74
HOR 1"=50'
VER 1"= 5'



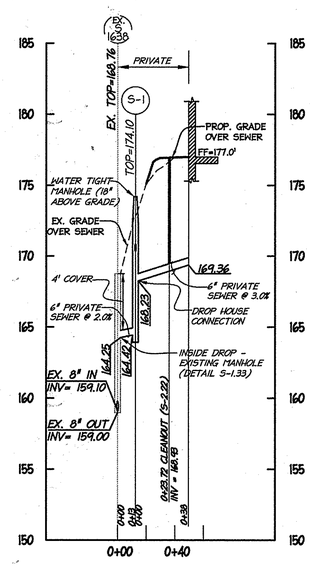
PROPOSED FIRE HYDRANT #1
STA. 2+68.79
HOR 1"=50'
VER 1"= 5'



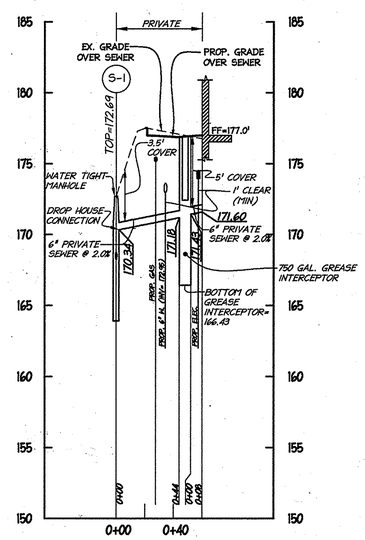
PROPOSED 8" PUBLIC WATER
STA. 0+00-7+60.43
HOR 1"=50'
VER 1"= 5'

NOTES:

1. SEE SHEET 2 FOR PLAN VIEW OF WATER AND SEWER.
2. PROPOSED SANITARY STRUCTURE S-1 HAS TWO DROP CONNECTIONS (S-1.33) AND HAS A WATER TIGHT FRAME COVER (G-5.52).
3. PROPOSED SANITARY CLEANOUT HAS A 45° BEND, SEE PLAN VIEW FOR HORIZONTAL LAYOUT.



PROPOSED 6" SEWER HOUSE CONNECTION
(PRIVATE)
HOR 1"=50'
VER 1"= 5'



PROPOSED 6" GREASE INTERCEPTOR
(PRIVATE)
HOR 1"=50'
VER 1"= 5'

VERTICAL SCALE
5 2.5 0 5 10
GRAPHIC SCALE
1" = 5'

HORIZONTAL SCALE:
50 25 0 50 100
GRAPHIC SCALE
1" = 50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 10/25/13

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 10-23-13

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WATER & SEWER PROFILES

600 SCALE MAP NO. 43 BLOCK NO.

WATER and SEWER EXTENSIONS
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TAX MAP 43, GRID 5, PARCEL 628
ZONE: M-2
HOWARD COUNTY, MARYLAND

SCALE 1"=50'
SHEET 3 OF 3

101288 (W&S)

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