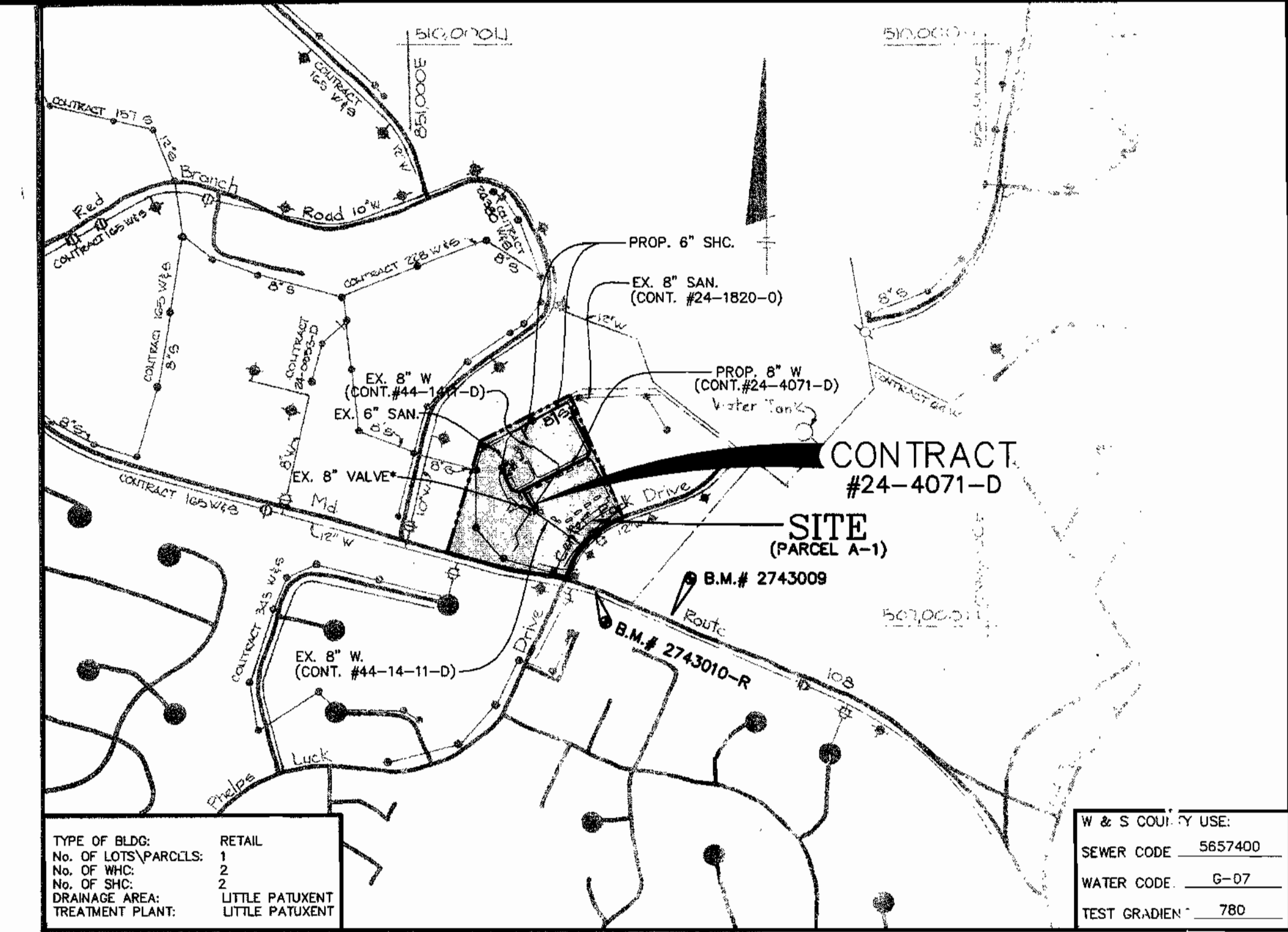


BENCHMARKS
 B.M. # HO.CO. 2743010-R ELEV. 482.29'
 3/4" REBAR 0.4' BELOW SURFACE 34.7'
 SOUTH OF CURB ON MD RTE. 108 175'±
 EAST OF CL. PHELPS LUCK DRIVE.
 B.M. # HO.CO. 2743009 ELEV. 530.07'
 CONC. MONUMENT @ SURFACE 49'± EAST
 OF NORTHWEST COR. OF HOWARD H.S. ON
 NORTH SIDE OF MD. RTE. 108.

WATERLINE COORDINATE TABLE

NO.	NORTHING	EASTING	DESCRIPTION
1	568,323.08	1,364,055.54	STA. 0+00 W/L 'A'
2	568,324.51	1,364,051.15	STA. 0+10 W/L 'A'
3	568,344.80	1,364,060.28	STA. 0+20 W/L 'A'
4	568,351.14	1,364,048.01	STA. 0+40 W/L 'A'
5	568,395.47	1,364,028.55	STA. 0+60 W/L 'A'
6	568,433.71	1,364,009.09	STA. 1+22.50 W/L 'A' = 0+00 W/L 'B' & 'C'
7	568,471.35	1,364,083.07	STA. 0+83 W/L 'B' = 0+00 W/L 'E'
8	568,473.91	1,364,088.21	STA. 0+89 W/L 'B'
9	568,603.01	1,364,341.78	STA. 3+73.50 W/L 'B'
10	568,650.01	1,364,356.67	STA. 4+23.50 W/L 'B'
11	568,817.10	1,364,971.16	STA. 6+10.50 W/L 'B'
12	568,841.91	1,364,258.99	STA. 6+38.50 W/L 'B' = 0+00 W/L 'F'
13	568,844.70	1,364,256.90	STA. 6+41.50 W/L 'B'
14	568,844.24	1,364,282.72	STA. 6+38.50 W/L 'B' = 0+00 W/L 'G'
15	568,846.98	1,364,268.07	STA. 0+83 W/L 'C'
16	568,432.48	1,364,006.64	STA. 0+02 W/L 'C'
17	568,424.37	1,363,990.75	STA. 0+21 W/L 'C'
18	568,437.51	1,363,950.42	STA. 0+63 W/L 'C'
19	568,504.11	1,363,916.56	STA. 1+38 W/L 'C' = 0+00 W/L 'D'
20	568,508.86	1,363,913.64	STA. 1+42 W/L 'C'
21	568,512.78	1,363,912.16	STA. 1+47 W/L 'C'
22	568,541.98	1,363,909.89	STA. 1+77 W/L 'C'
23	568,508.64	1,363,925.47	STA. 0+10 W/L 'D'
24	568,459.76	1,364,088.96	STA. 0+13 W/L 'D'
25	568,812.87	1,364,262.17	STA. 0+10 W/L 'E'
26	568,751.07	1,364,004.67	SMH-1
27	568,846.16	1,364,161.01	SMH-2



W & S COUNTY USE:

SEWER CODE	5657400
WATER CODE	G-07
TEST GRADE	780

VICINITY MAP
SCALE: 1"=600'

GENERAL NOTES

- PART I**
- APPROXIMATE LOCATION OF EXISTING MAINS IS SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83 (1991).
 - ALL VERTICAL CONTROLS ARE BASED ON NGVD 29.
 - 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 TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
 - FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY 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 DRAWING. 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.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
- | | |
|----------------------------------|-----------------------------|
| AT&T | 1-800-252-1133 |
| BGE (CONTRACTOR SERVICES) | 410-850-4630 |
| BGE (UNDERGROUND DAMAGE CONTROL) | 410-787-9068 |
| BUREAU OF UTILITIES | 410-313-4900 |
| COLUMBIAN PIPE CO. | 410-795-1391 |
| MISSISSIPPI UTILITY | 1-800-257-7777 |
| STATE HIGHWAY ADMINISTRATION | 410-531-5533 |
| VERIZON | 1-800-743-0033/410-224-9210 |
- PART II WATER**
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 - FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. 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.
- PART III SEWER**
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
 - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - FORCE MAINS SHALL BE D.I.P. ONLY.
 - MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNED W.T. IN PLAN AND PROFILE SHALL HAVE WATER TIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATER TIGHT 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.

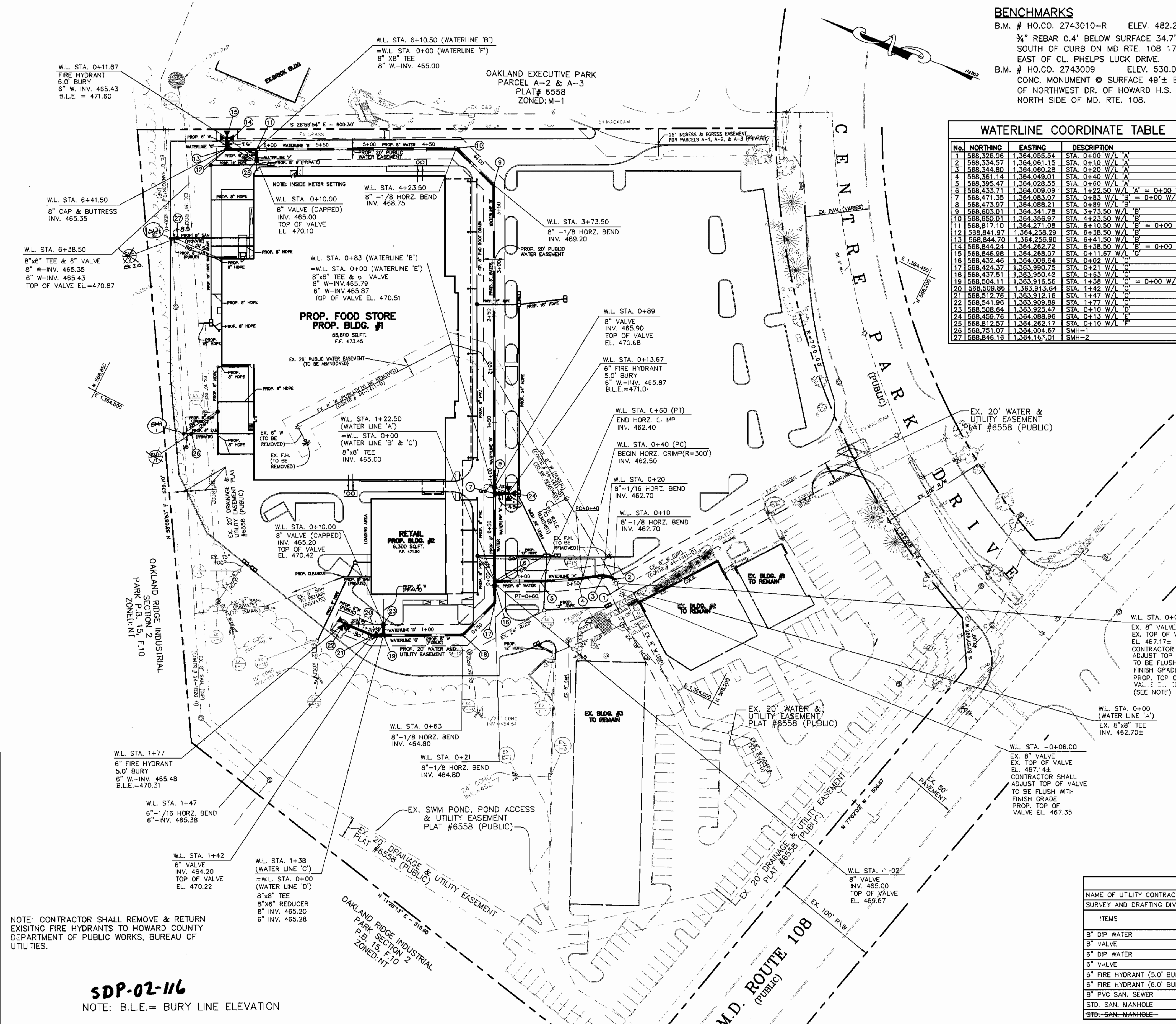
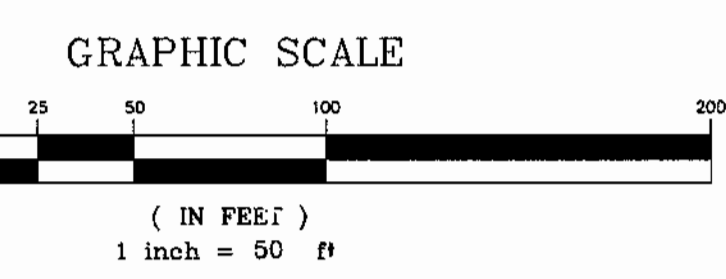
NOTE:
 CONTRACTOR SHALL RESTRAIN OR STRAP EXISTING 8" VALVE AT WL STA. 0+06 TO SOUTH SIDE OF EXISTING 8" TEE AT WL STA. 0+00 PRIOR TO REMOVAL OF THE EXISTING 8" WATER MAIN WHERE SHOWN.
 2. STRAIN HARNESS SHALL BE A SPLIT MEGALUG GLAND WITH 4 EACH, 3/8 INCH TIE RODS AND BOLTS, OR STEEL STRAPS AND 3/4 INCH TIE RODS AND BOLTS, OR APPROVED EQUAL.

PROPOSED WATER MAIN T.E.-IN PROCEDURES

- CONTRACTOR SHALL NOTIFY HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES AT (410) 313-4900 TO CLOSE THE EXISTING 8" VALVE AT WL STA. 0+06 AS SHOWN ON THE PLAN AND MARK THE EXISTING FIRE HYDRANTS TO BE REMOVED AS "NOT IN SERVICE".
- CONTRACTOR SHALL RESTRAIN OR STRAP EXISTING 8" VALVE (WL STA. 0+06) TO SOUTH SIDE OF EXISTING 8" TEE (WL STA. 0+00). SEE NOTE ON PLAN FOR RESTRAINING OF EXISTING VALVE.
- CONTRACTOR SHALL REMOVE EXISTING WATER MAIN, FIRE HYDRANTS AND APPURTENANCES AS SHOWN ON THE PLAN.
- CONTRACTOR SHALL INSTALL PROPOSED WATER MAIN AND APPURTENANCES STARTING AT WL STA. 0+20 AS SHOWN ON THE APPROVED PLANS.
- WITH THE APPROVAL OF THE HOWARD COUNTY DESIGN MANUAL, VOLUME II (WATER AND SEWER) AND FLUSH THE WATER SYSTEM.
- WITH THE APPROVAL OF THE HOWARD COUNTY DESIGN MANUAL, THE CONTRACTOR SHALL TEST THE PROPOSED WATER MAIN INTO THE EXISTING 8" WATER VALVE TO MEET LINE AND GRADE.
- CONTRACTOR SHALL NOTIFY HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES AT (410) 313-4900 TO OPEN THE EXISTING 8" VALVE (WL STA. 0+06).

QUANTITIES

NAME OF UTILITY CONTRACTOR: BOWEN & KRON SURVEY AND DRAFTING DIVISION AS-BUILT DATE:	QUANTITIES ESTIMATED		AS-BUILT	
	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER	
8" DIP WATER	918 LF.	900	CL-52	U.S. PIPE & FOUNDRY
8" VALVE	4 EA.	4	GATE	MUELLER
6" DIP WATER	65 LF.	62	CL-52	U.S. PIPE & FOUNDRY
6" VALVE	3 EA.	3	GATE	MUELLER
6" FIRE HYDRANT (5.0' BURY)	2 EA.	2	5'	MUELLER
6" FIRE HYDRANT (6.0' BURY)	1 EA.	1	6'	MUELLER
8" PVC SAN. SEWER	20 LF.	21	SDR 35	J.M. MANUFACTURER
STD. SAN. MANHOLE	2 EA.	2		ATLANTIC CONG.
STD. SAN. MANHOLE	2 EA.	2		



NOTE: CONTRACTOR SHALL REMOVE & RETURN EXISTING FIRE HYDRANTS TO HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES.

SDP-02-116
NOTE: B.L.E. = BURY LINE ELEVATION

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

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

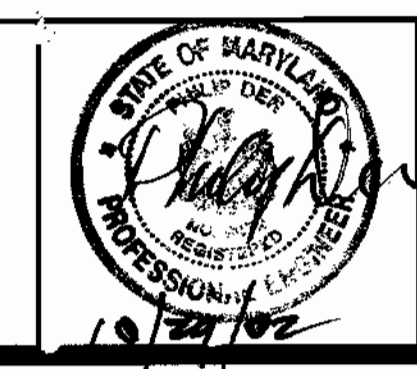
ENGINEERS:
Consulting Engineers
849 Fairmount Avenue (410) 512-4500
Baltimore, Maryland 21286 (410) 324-4100 (FAX)
WHITNEY, BAILEY, COX & MAGNANI, LLC

OWNER/DEVELOPER
COLUMBIA PALACE LIMITED PARTNERSHIP
17 W. PENNSYLVANIA AVE.
TOWSON, MARYLAND 21204-5016
DEED REFERENCE = 1435/257
DEED REFERENCE = 1389/337

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

ENGINEERS:
Consulting Engineers
849 Fairmount Avenue (410) 512-4500
Baltimore, Maryland 21286 (410) 324-4100 (FAX)
WHITNEY, BAILEY, COX & MAGNANI, LLC



DES: D.M.B.
DRN: S.J.D.
CHK: P.D.
DATE: 4/22/02

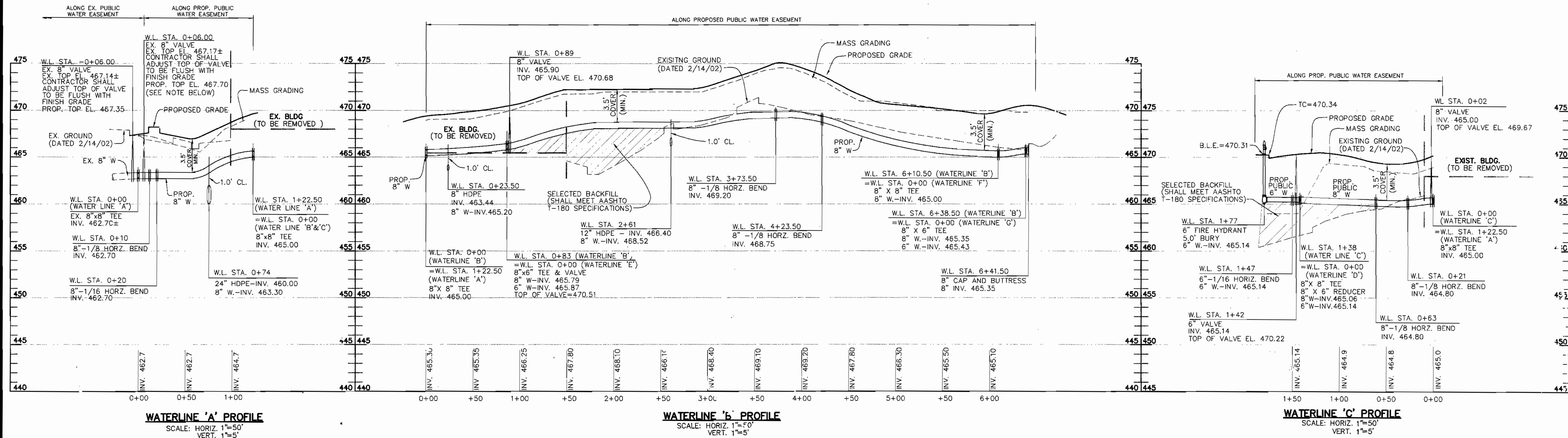
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REVISION: AS-BUILT DATA SHOWN
DATE: 9/17/03

500' SCALE MAP NO. 30 BLOCK NO. 18

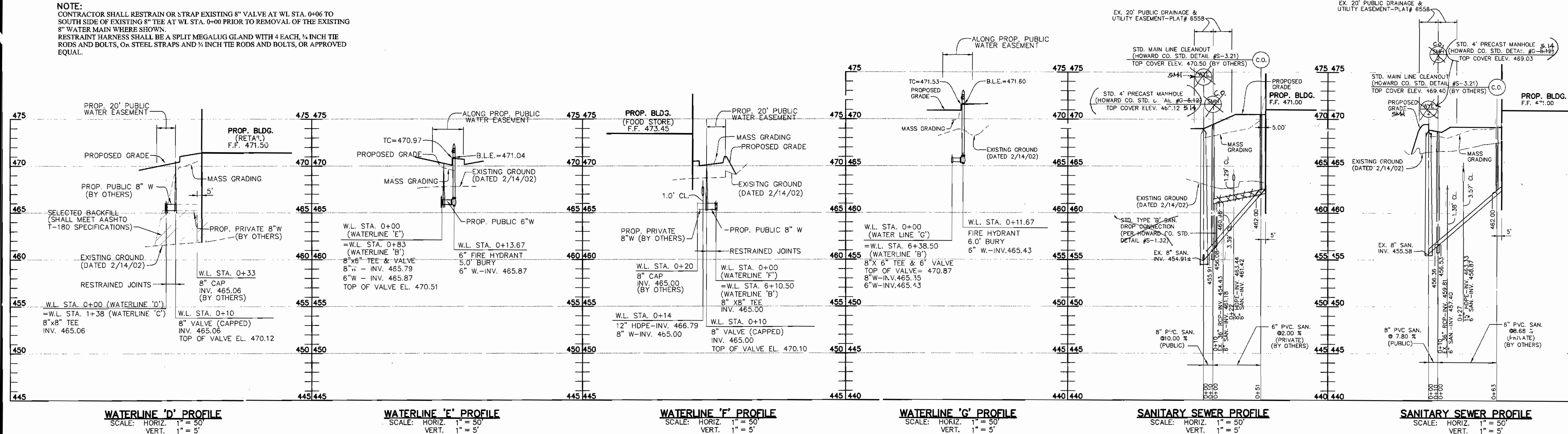
8" PUBLIC WATER AND SANITARY SEWER

OAKLAND EXECUTIVE PARK PARCEL A-1
HOWARD CO., MARYLAND
Contract No. 24-4071-D
Election District 2

SCALE AS SHOWN
SHEET 1 OF 2



NOTE:
CONTRACTOR SHALL RESTRAIN OR STRAP EXISTING 8" VALVE AT WL STA. 0+06 TO SOUTH SIDE OF EXISTING 8" TEE AT WL STA. 0+00 PRIOR TO REMOVAL OF THE EXISTING 8" WATER MAIN WHERE SHOWN.
RESTRAINT HARNESS SHALL BE A SPLIT MEGALUG GLAND WITH 4 EACH, 3/4 INCH TIE RODS AND BOLTS, OR STEEL STRAPS AND 3/4 INCH TIE RODS AND BOLTS, OR APPROVED EQUAL.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

R. J. ...
11-6-02
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

...
12/2/02
DATE

ENGINEERS:
Whitney, Bailey, Cox & Magnani, LLC
849 Fairmount Avenue (410) 512-4500
Baltimore, Maryland 21286 (410) 324-4100 (FAX)
WHITNEY, BAILEY, COX & MAGNANI, LLC

DES: D.M.B.
DRN: S.J.D.
CHK: P.D.
DATE: 4/22/02

NO.	REVISION	DATE
1	ASBUILT DATA SHOWN	9/18/02

8" PUBLIC WATER AND SANITARY SEWER
600' SCALE MAP NO. 30 BLOCK NO. 18

OAKLAND EXECUTIVE PARK PARCEL A-1
HOWARD CO., MARYLAND
Contract No. 24-4071-D
Election District 2

SCALE A5 SHOWN
SHEET 2 of 2