

GENERAL NOTES

PART I

- Approximate location of existing mains are 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.
- All vertical controls are based on U.S.G.S. data.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required. 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 bracing of additional poles or damages shall be deducted from money 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 Detail 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 at the location of the test pit. 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.
- Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans.

State Highway Administration	(410) 531-5533
BC&E Co. Contractor Services	(410) 850-4620
BC&E Co. Underground Damage Control	(410) 787-9068
Miss Utility	(410) 257-7777
Colonial Pipeline Co.	(410) 795-1390
Howard County Department of Public Works Bureau of Utilities	(410) 313-4900
- Trees and shrubs are to be protected from damage to 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 line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.

PART II - WATER

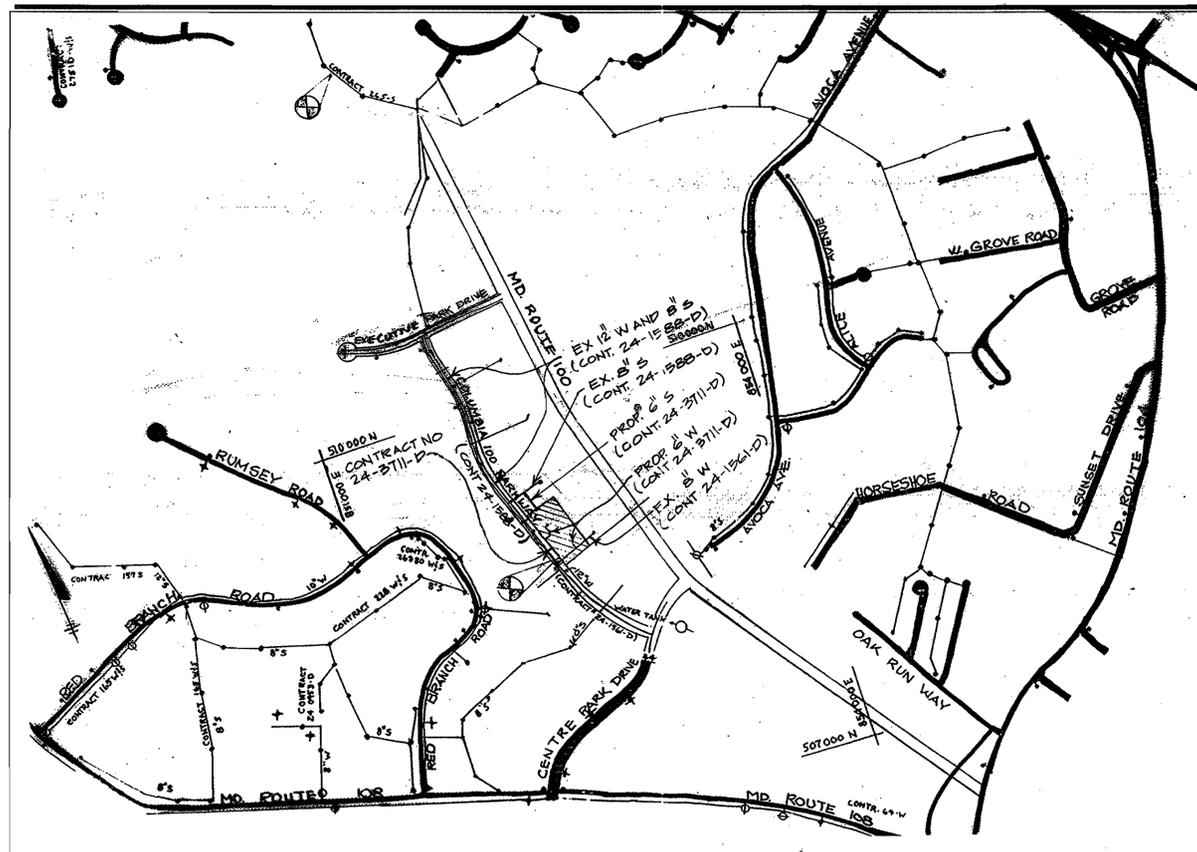
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details 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 strapped and buttressed with concrete in accordance with Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on the existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- The minimum vertical clearance between any water main and any other underground utilities is one foot.

PART III - SEWER

- All sewer mains shall be DIP or P. V. C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 15" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight manhole frame and cover is 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.

VICINITY MAP

SCALE: 1" = 600'



BENCHMARK DATA

No.	Location	Elevation
30 FC	0.65 Miles North of Centre Park Drive West of Route 100.	386.842
----	Southwest property corner (Rebar with cap)	479.35

1) Refer to Howard County location sketch for exact location

Type of Building	22,775 sq.ft. commercial
No. of Lots/Parcels	1
No. of Water House Connections	1
No. of Sewer House Connections	1
Drainage Area	Little Patuxent
Treatment Plant	Route 108 Pumping Station, Patapsco
Water Code	G02
Sewer Code	5750639
Test Gradient	780

QUANTITY TABLE

ITEM #	DESCRIPTION	QUANTITY	UNIT
1	8" VALVE	2	EA
2	8" PLUG AND BUTTRESS	2	EA
3	8" X 8" TEE	1	EA
4	8" X 6" TEE	1	EA
5	8" X 6" REDUCER	1	EA
6	8" DIP CLASS 52 PIPE	213	EA
7	6" VALVE	2	EA
8	6" 1/8 HORIZONTAL BEND	2	EA
9	6" X 6" TEE	1	EA
10	6" DIP CLASS 52 PIPE	136	LF
11	FIRE HYDRANT	1	EA
12	6" SDR 35	86	LF
13	6" PLUG	1	EA
14	CLEANOUT	1	EA

INDEX

SHEET	TITLE
1	TITLE SHEET
2	PLAN AND PROFILES

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

APPROVED: *John F. Robertson* 9/8/98
HOWARD SOIL CONSERVATION DISTRICT DATE

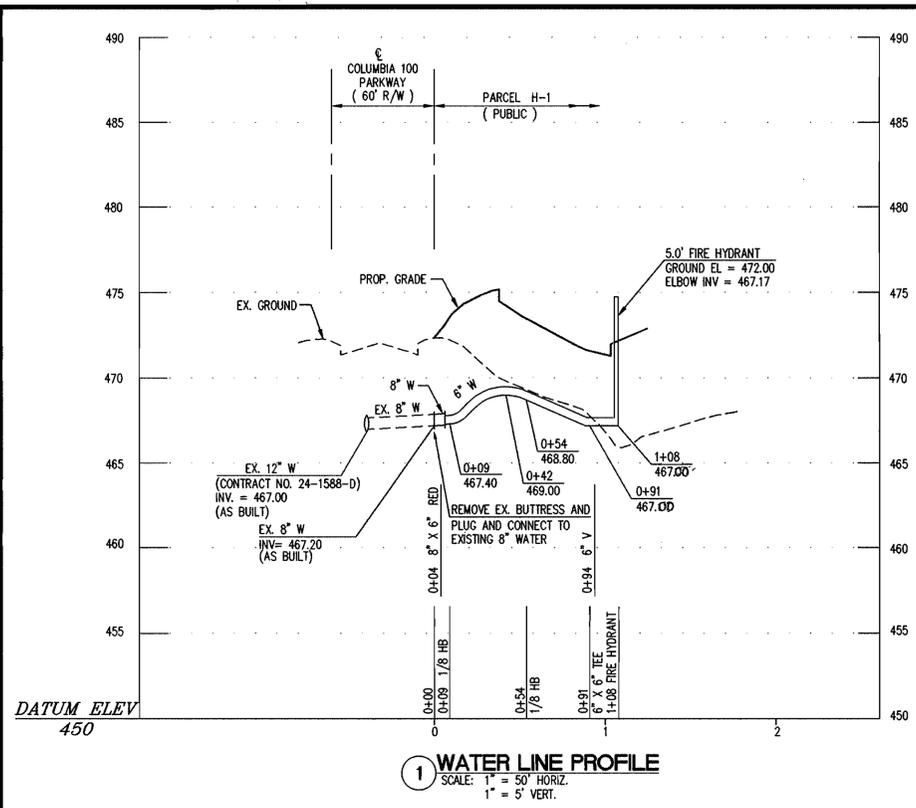
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: *Cheryl Summers* 9/8/98
U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

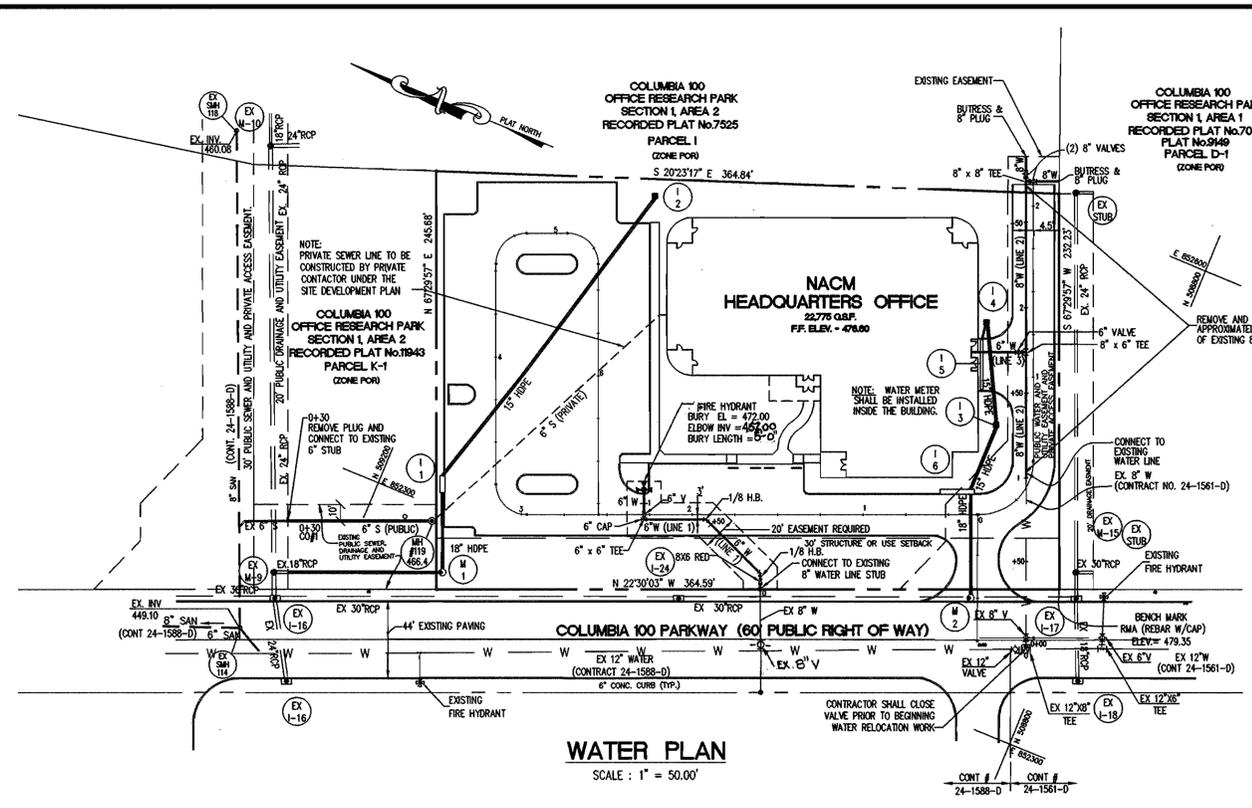
NOTE: SEDIMENT CONTROL SHALL BE PROVIDED AS PER SDP-98-122 AND SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV, SPECIFICATIONS.

121414.LDWG(214111).dwg Mod Aug 12 02:33:31 1998 RDM

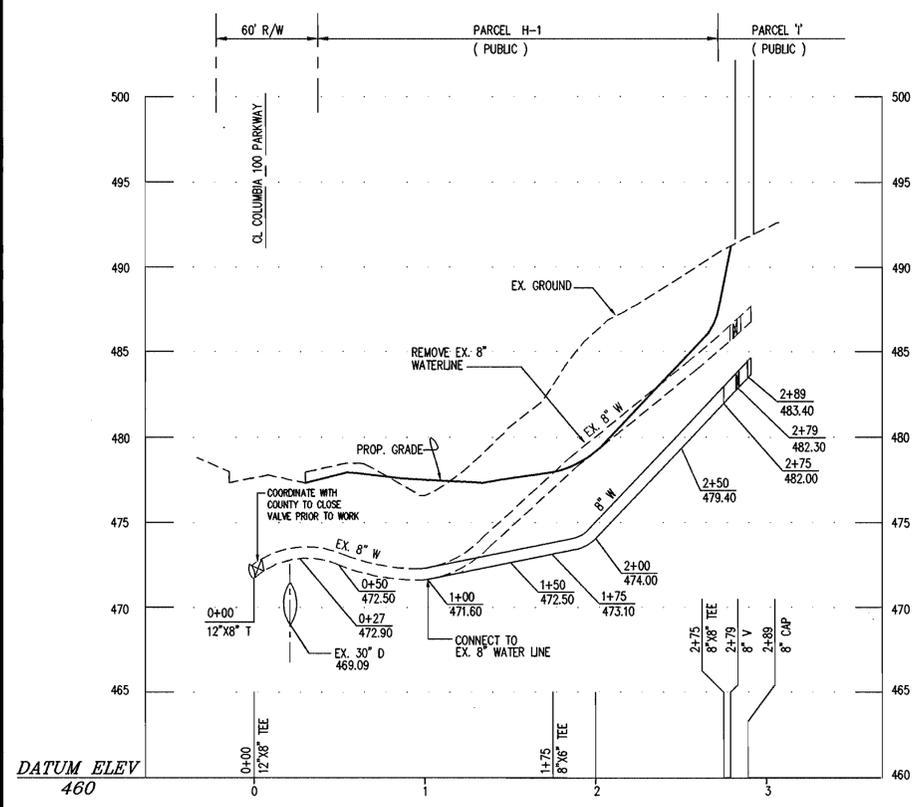
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities DATE: 9/2/98	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division DATE: 9/10/98	RBA Group ENGINEERS • ARCHITECTS • PLANNERS 7164 Columbia Gateway Drive Suite 205, Columbia, Maryland 21046 Phone (410) 312-0986, Fax 312-0997	PROFESSIONAL ENGINEER JOHN F. ROBERTSON No. 11193 2/11/93	DES: JWC DRN: CRD CHK: JWC DATE: 05/29/98	BY NO. REVISION DATE JWC 1 ADDED SEWER EXTENSION 07/10/98 JWC 2 COUNTY COMMENTS 08/10/98	WATER AND SEWER EXTENSION PLAN NUMBER OF LOTS: 1 600' SCALE MAP NO. 30 BLOC NO. N/A	SECTION 1, AREA 2, PARCEL H-1 COLUMBIA 100 OFFICE RESEARCH PARK WATER AND SEWER EXTENSION PLAN CONTRACT NO. 24-3711-D 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 2
---	--	--	--	--	--	---	--	--------------------------------



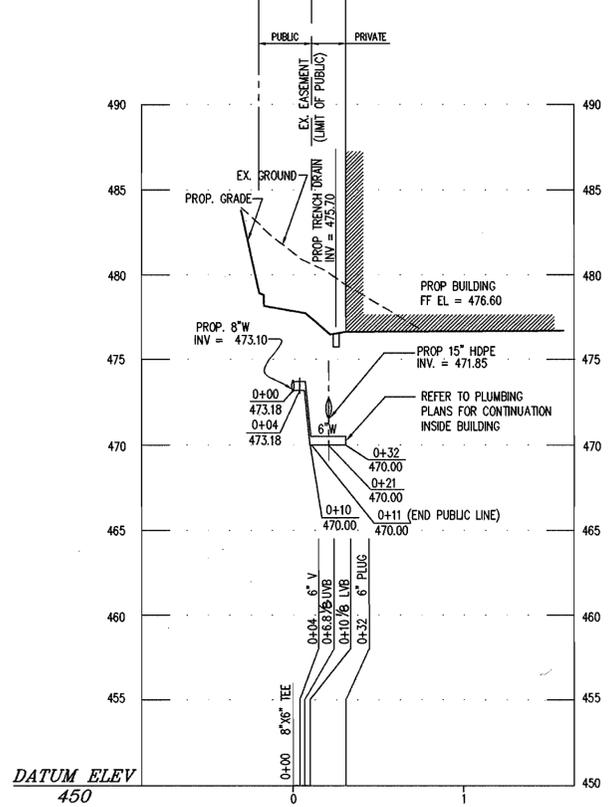
1 WATER LINE PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.



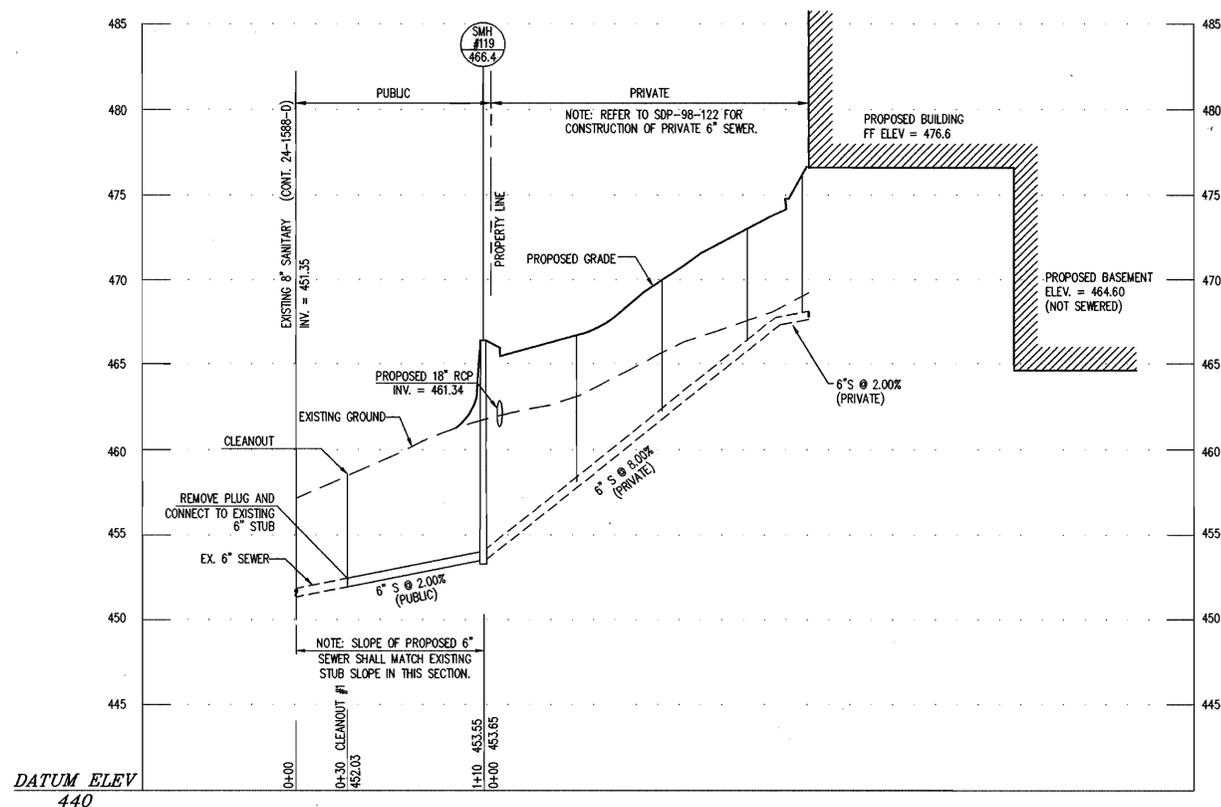
WATER PLAN
 SCALE: 1" = 50.00'



2 WATER LINE PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.



3 WATER LINE PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.



4 SANITARY SEWER PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 5' VERT.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert M. Bauman
 CHIEF, BUREAU OF UTILITIES
 9-2-98
 DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 9/1/98
 DATE

The RBA Group
 ENGINEERS • ARCHITECTS • PLANNERS
 7164 Columbia Gateway Drive
 Suite 205, Columbia, Maryland 21046
 Phone (410) 312-0966, Fax 312-0897
 [Professional Engineer Seal]
 8/25/98

DES:	BY:	NO.	REVISION	DATE
JWC	JWC	1	ADDED SEWER EXTENSION	07/10/98
DRN:	JWC	2	COUNTY COMMENTS	08/10/98
CHK:	JWC	3	COUNTY COMMENTS	08/25/98
DATE:	05/29/98			

SECTION 1, AREA 2, PARCEL H-1
COLUMBIA 100 OFFICE RESEARCH PARK
 WATER AND SEWER EXTENSION PLAN
 NUMBER OF LOTS: 1
 600' SCALE MAP NO. 30 BLOCK NO. N/A

SCALE AS SHOWN
 SHEET 2 OF 2
 CONTRACT NO. 24-3711-D
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

GENERAL NOTES

- PART I
- Approximate location of existing mains are 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.
 - All vertical controls are based on U.S.G.S. data.
 - All pipe elevations shown are invert elevations.
 - Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required. 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 bracing of additional poles or damages shall be deducted from money 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 Detail 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 at the location of the test pit. 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.
 - Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans.

State Highway Administration	(410) 531-5533
BG&E Co. Contractor Services	(410) 850-4620
BG&E Co. Underground Damage Control	(410) 787-9068
Miss Utility	(410) 257-7777
Colonial Pipeline Co.	(410) 795-1390
Howard County Department of Public Works Bureau of Utilities	(410) 313-4900
 - Trees and shrubs are to be protected from damage to 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 line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.

PART II - WATER

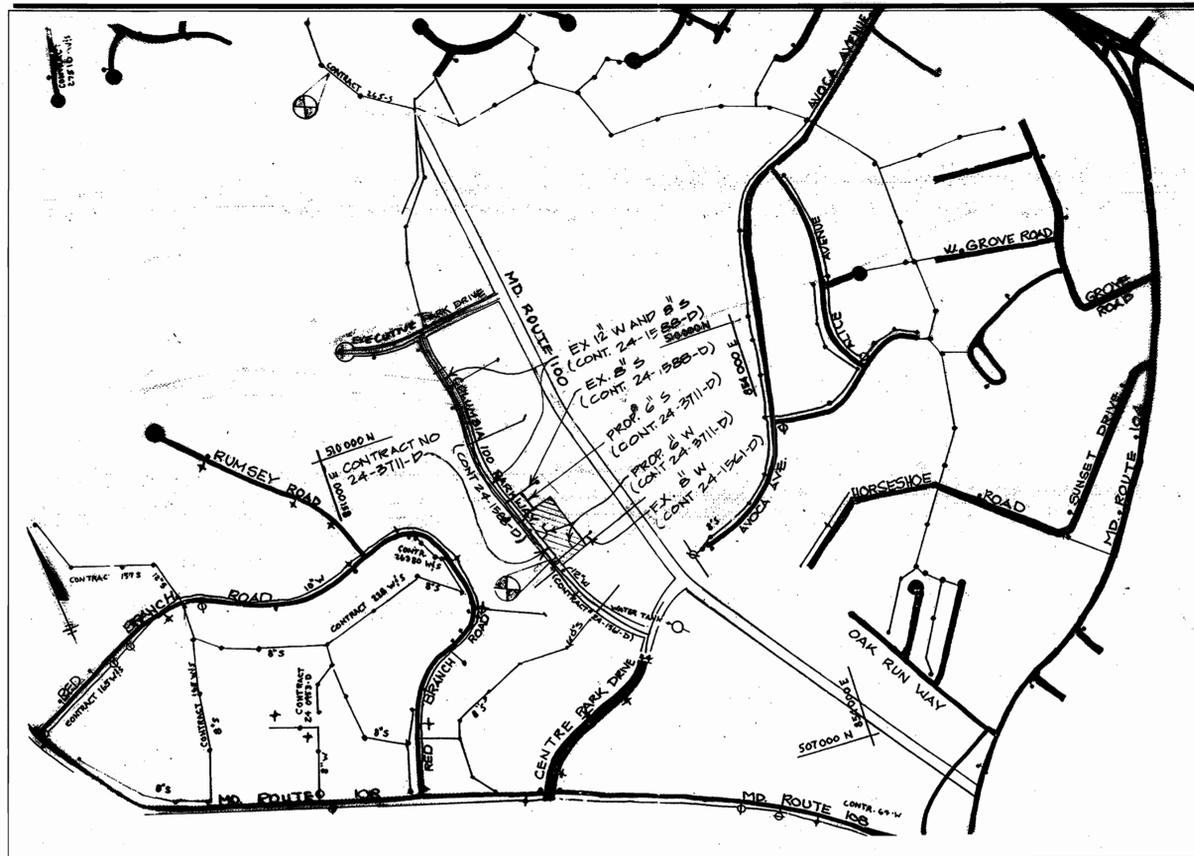
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details 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 strapped and buttressed with concrete in accordance with Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
- The contractor shall not operate any water main valves on the existing water system.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- The minimum vertical clearance between any water main and any other underground utilities is one foot.

PART III - SEWER

- All sewer mains shall be DIP or P. V. C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 13" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight manhole frame and cover is 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.

VICINITY MAP

SCALE: 1" = 600'



BENCHMARK DATA

No.	Location	Elevation
30 FC	0.65 Miles North of Centre Park Drive West of Route 100.	386.842
----	Southwest property corner (Rebar with cap)	479.35

1) Refer to Howard County location sketch for exact location

Type of Building	22,775 sq.ft. commercial
No. of Lots/Parcels	1
No. of Water House Connections	1
No. of Sewer House Connections	1
Drainage Area	Little Patuxent
Treatment Plant	Route 108 Pumping Station, Patapsco
Water Code	G02
Sewer Code	5750639
Test Gradient	780

QUANTITY TABLE

ITEM	DESCRIPTION	QUANTITY	UNIT
1	8" VALVE <i>MUELLER R.S.</i>	2	EA
2	8" PLUG AND BUTTRESS <i>D.I.P.</i>	2	EA
3	8" X 8" TEE <i>TYLER D.I.P.</i>	1	EA
4	8" X 6" TEE <i>TYLER D.I.P.</i>	1	EA
5	8" X 6" REDUCER <i>TYLER D.I.P.</i>	1	EA
6	8" DIP CLASS 52 PIPE <i>GRIFFIN D.I.P.</i>	201 213	EA
7	6" VALVE <i>MUELLER QIP</i>	2	EA
8	6" 1/8 HORIZONTAL BEND <i>TYLER D.I.P.</i>	2	EA
9	6" X 6" TEE <i>TYLER D.I.P.</i>	1	EA
10	6" DIP CLASS 52 PIPE <i>GRIFFIN D.I.P.</i>	138 118	LF
11	FIRE HYDRANT <i>KENNEY</i>	1	EA
12	6" SDR 35 <i>E.T.I. P.V.C.</i>	28 26	LF
13	6" PLUG <i>E.T.I. P.V.C.</i>	1	EA
14	CLEANOUT <i>DAVIS CONCRETE</i>	1	EA

INDEX

SHEET	TITLE
1	TITLE SHEET
2	PLAN AND PROFILES

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

APPROVED: *John K. Selator* 9/8/98
HOWARD SOIL CONSERVATION DISTRICT DATE

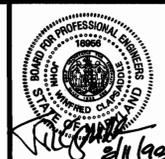
REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: *Cheryl Simmons* 9/8/98
U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

NOTE: SEDIMENT CONTROL SHALL BE PROVIDED AS PER SDP-98-122 AND SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV, SPECIFICATIONS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND



DES:	BY	NO.	REVISION	DATE
JWC	JWC	1	ADDED SEWER EXTENSION	07/10/98
DRN:	CRD	JWC	COUNTY COMMENTS	08/10/98
CHK:	JWC			
DATE:				05/29/98

WATER AND SEWER EXTENSION PLAN

NUMBER OF LOTS: 1

600' SCALE MAP NO. 30 BLOC NO. N/A

SECTION 1, AREA 2, PARCEL H-1
COLUMBIA 100 OFFICE RESEARCH PARK
WATER AND SEWER EXTENSION PLAN

CONTRACT NO. 24-3711-D

2nd ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2

Randy Benner
CHIEF, BUREAU OF UTILITIES

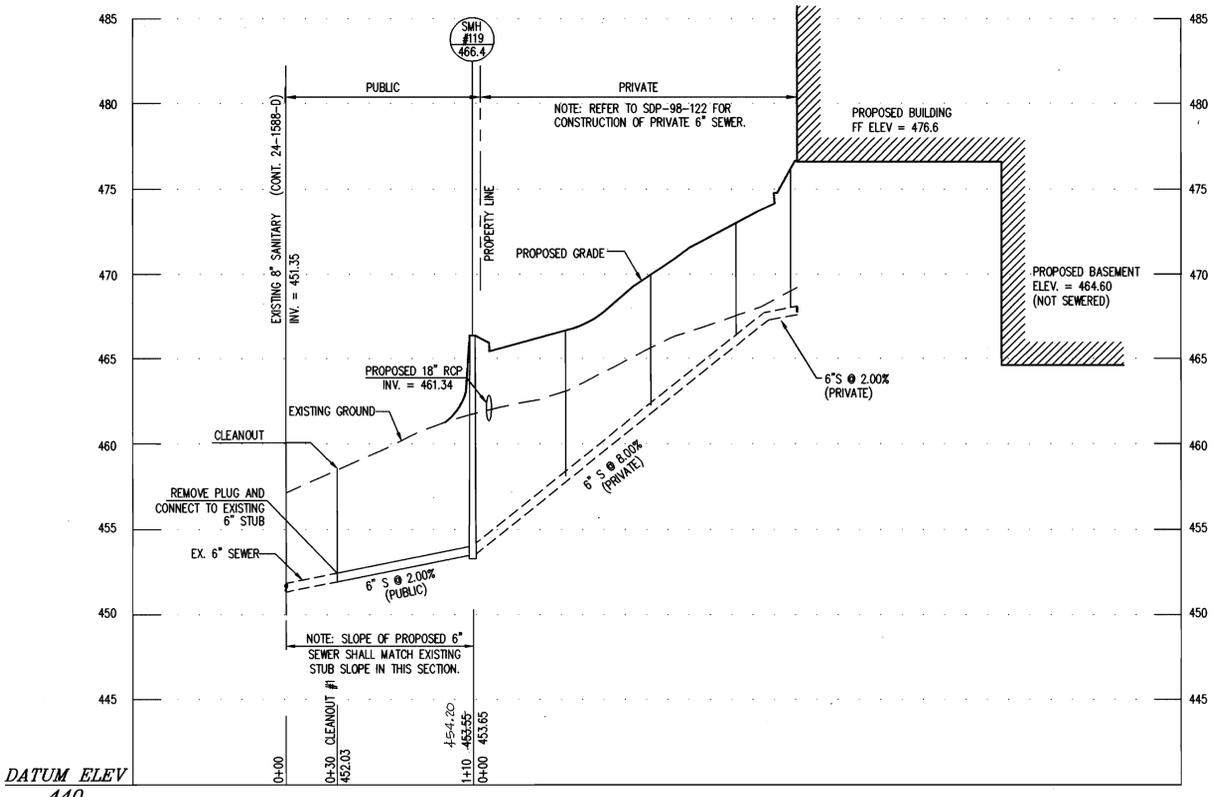
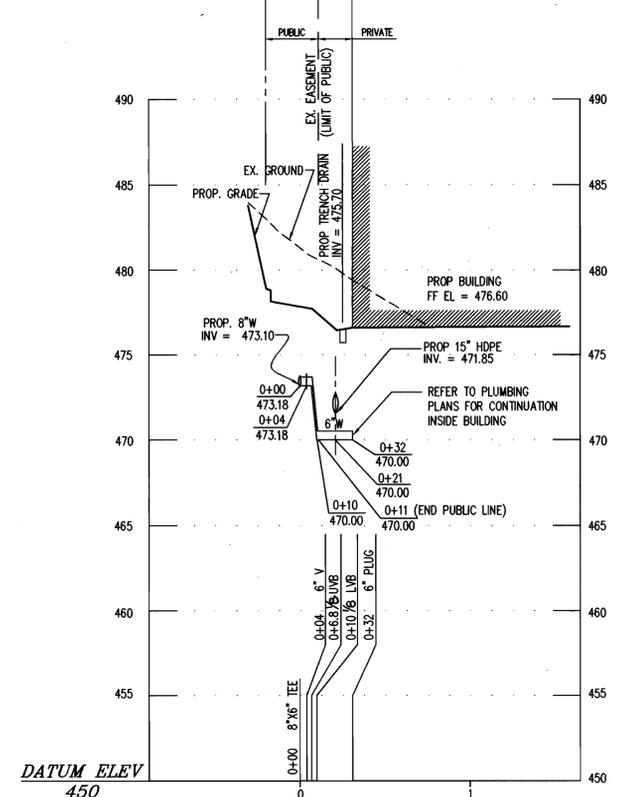
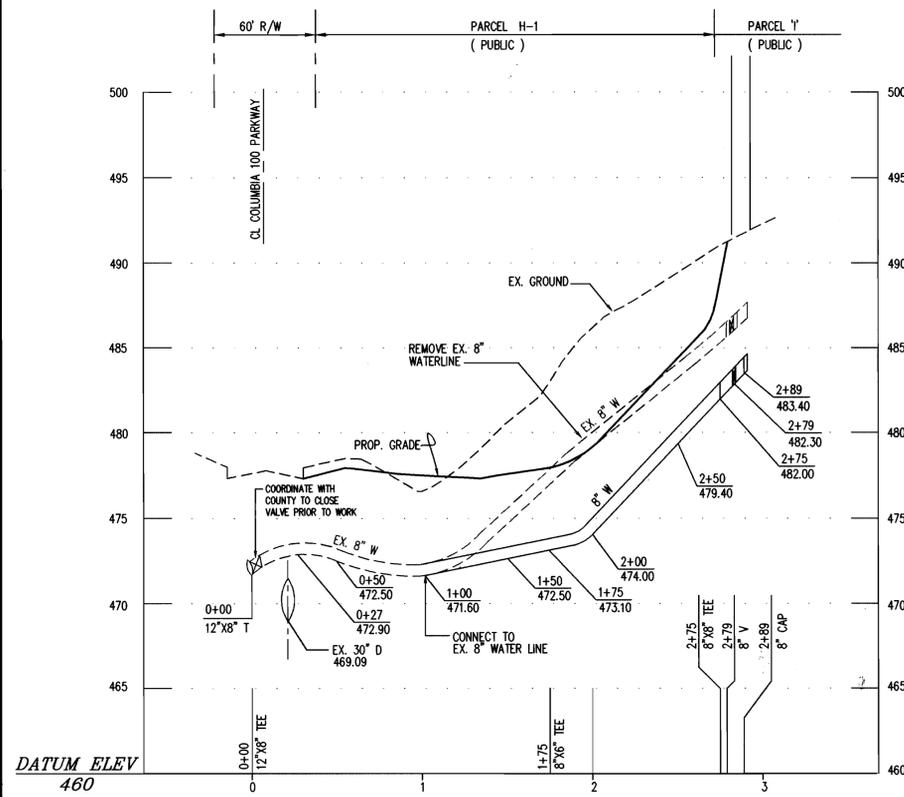
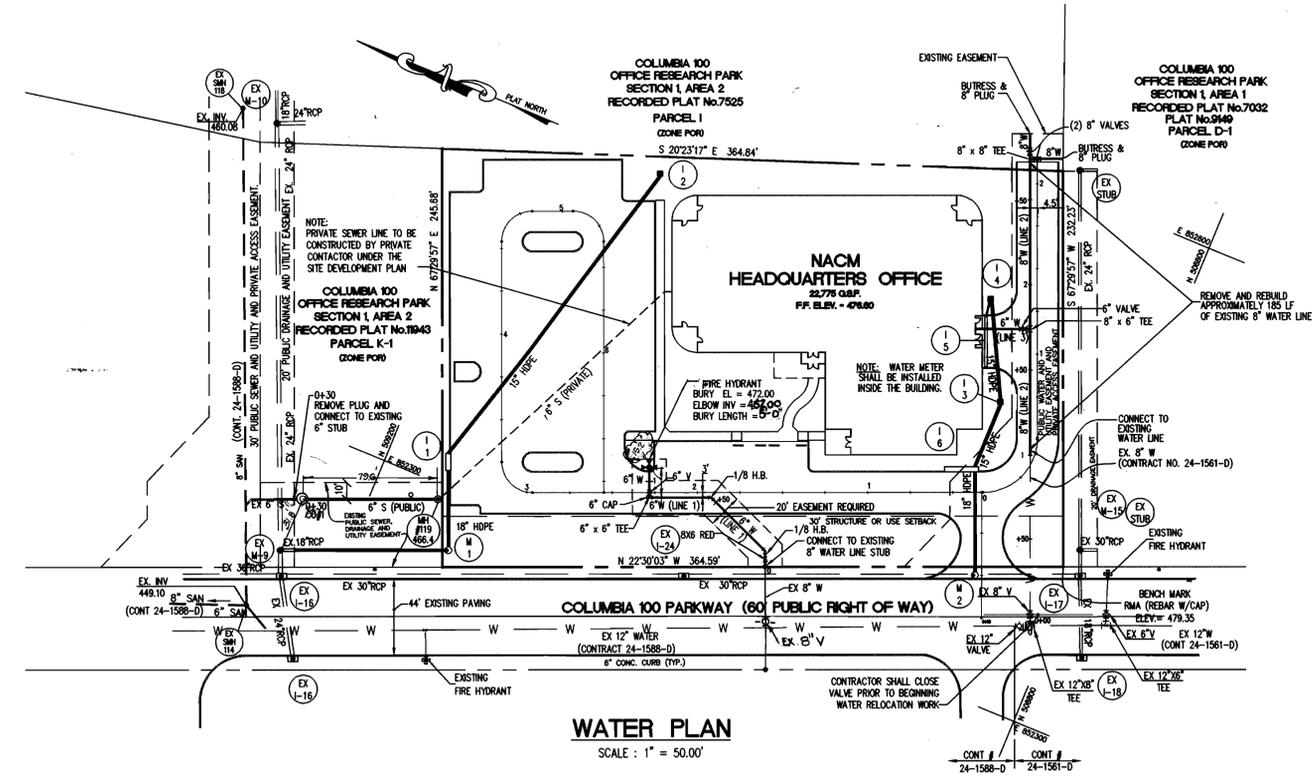
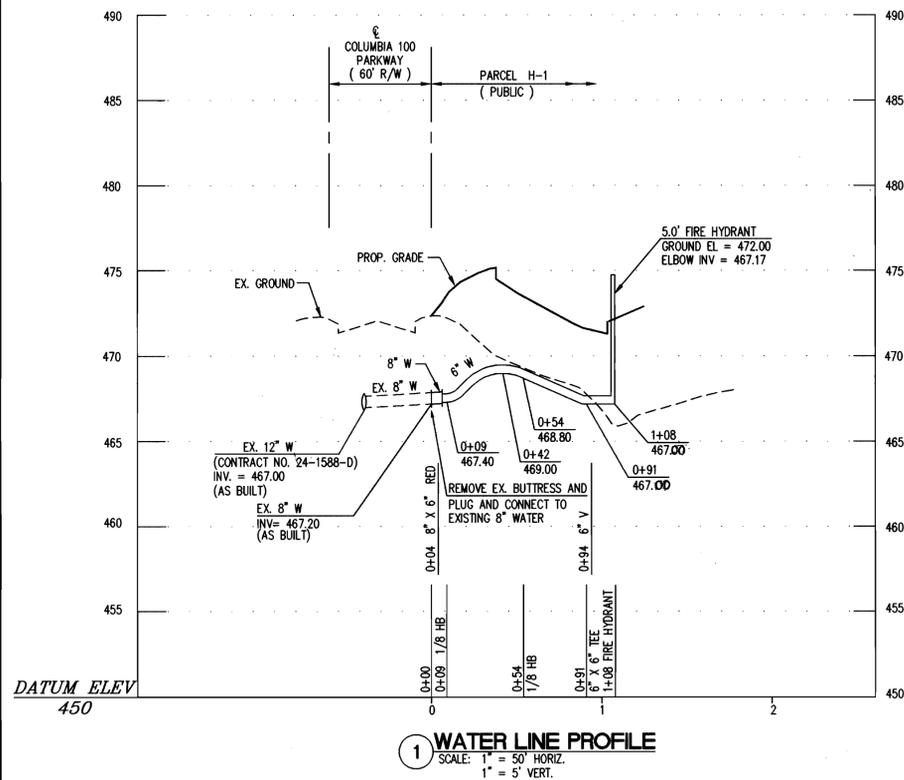
9-2-98

DATE

Cheryl Simmons
CHIEF, DEVELOPMENT ENGINEERING DIVISION

9/10/98

DATE



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Baerger
CHIEF, BUREAU OF UTILITIES

9-2-98
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

John J. Deane
CHIEF, DEVELOPMENT ENGINEERING DIVISION

9/2/98
DATE

The RBA Group
ENGINEERS • ARCHITECTS • PLANNERS
7184 Columbia Gateway Drive
Suite 205, Columbia, Maryland 21046
Phone (410) 312-0968, Fax 312-0897

[Signature]
2/25/98

DES:	BY NO.	REVISION	DATE
JWC	JWC 1	ADDED SEWER EXTENSION	07/10/98
DRN:	JWC 2	COUNTY COMMENTS	08/10/98
CHK:	JWC 3	COUNTY COMMENTS	08/25/98
DATE:	05/29/98	AS EXIST. CONDITIONS ADDED TO PLAN	6/98

WATER AND SEWER EXTENSION PLAN

NUMBER OF LOTS: 1

600' SCALE MAP NO. 30 BLOCK NO. N/A

SECTION 1, AREA 2, PARCEL H-1
COLUMBIA 100 OFFICE RESEARCH PARK
WATER AND SEWER EXTENSION PLAN

CONTRACT NO. 24-3711-D

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 2

6:124141.U:\DWG\DWG\241410.DWG Tue Aug 25 12:34:01 1998 PC#10 JOHN