

**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 SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
  - THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC. IN APRIL, 2002. FIELD LOCATION OF SPECIMEN TREES AND HOWARD COUNTY PHOTOGRAMMETRIC.
  - THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCED SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 17AB AND 17DA. ALL VERTICAL CONTROLS SHOWN ARE BASED ON NAVD 88 HOWARD COUNTY CONTROLS 17AB AND 17DA.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
  - 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 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 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.
  - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTES 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 OPERATION AT HIS OWN EXPENSE.
  - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:  
 AT&T ..... 1-800-252-1133  
 BGE (CONTRACTOR SERVICE) ..... 410-850-4620  
 BGE (UNDERGROUND DAMAGE CONTROL) ..... 410-787-9068  
 BUREAU OF UTILITIES ..... 410-313-4800  
 COLONIAL PIPELINE CO. .... 410-795-1390  
 MESS UTILITY ..... 1-800-257-7777  
 STATE HIGHWAY ADMINISTRATION ..... 410-531-5533  
 VERIZON ..... 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.
  - 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 THE CONSTRUCTION OF THE MAIN.
  - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUTTING OR BORING JACKING OF ANY COUNTY ROAD FOR LAYING BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAIN OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
  - PROVIDE CAST IRON ROADWAY BOXES FOR WHC BALL VALVE WITHIN PAVED AREAS.
  - ALL STRUCTURE MUST BE LOCATED A MINIMUM OF 10 FEET FROM ANY PUBLIC WATER AND SEWER EASEMENT.
  - ALL VERTICAL CONTROLS BASED ON USGS DATA.

**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'-6" 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 INSTALLED IN ACCORDANCE WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND 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.

**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 MAIN 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 WATER-TIGHT FRAME AND COVER, STANDARD DETAIL 05.52. 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 CELLAR CANNOT BE SERVED.

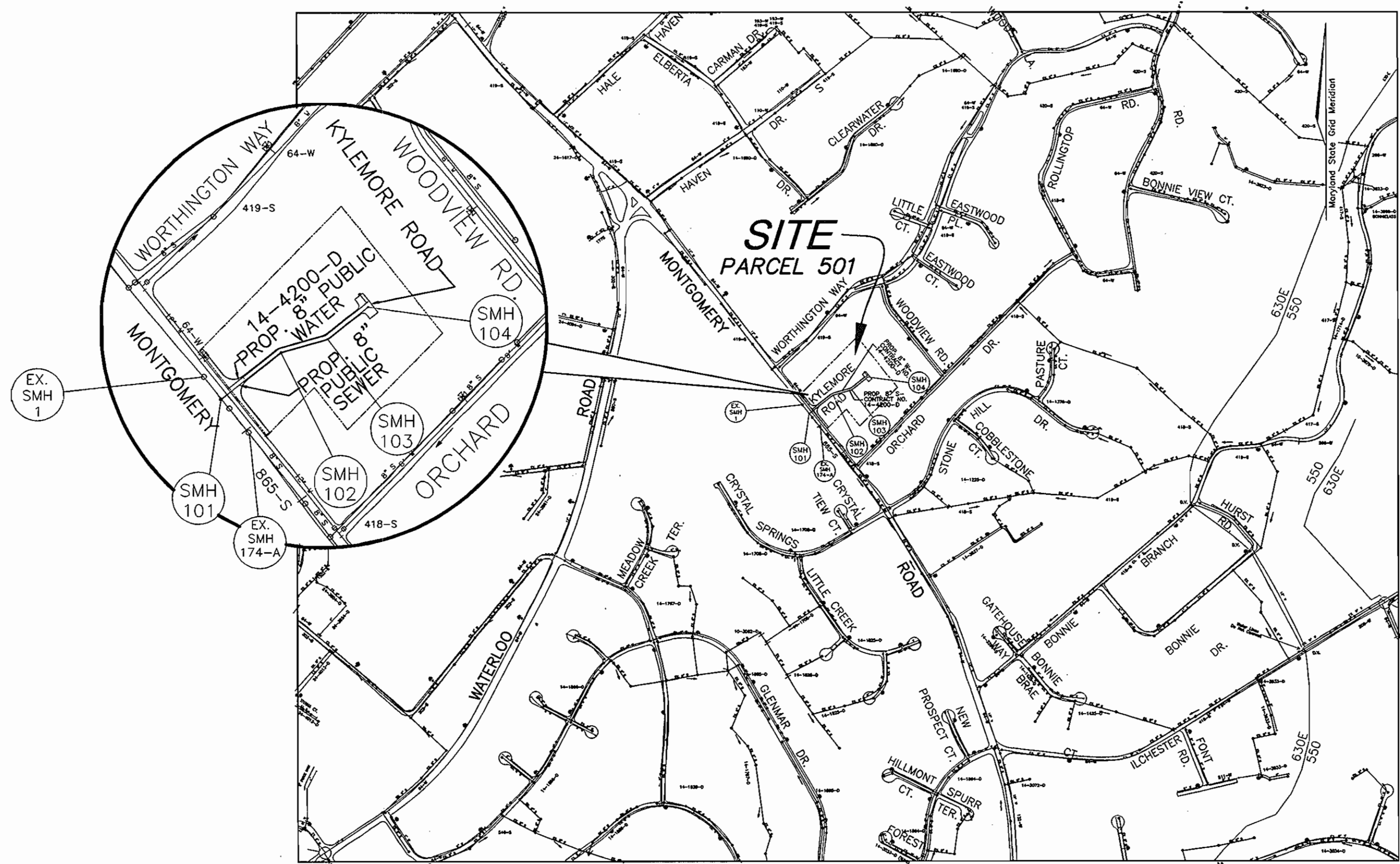
# FINAL WATER & SEWER PLANS

# WORTHINGTON WEST

## LOTS 1-8 AND OPEN SPACE LOT 9

## CONTRACT NO. 14-4200-D

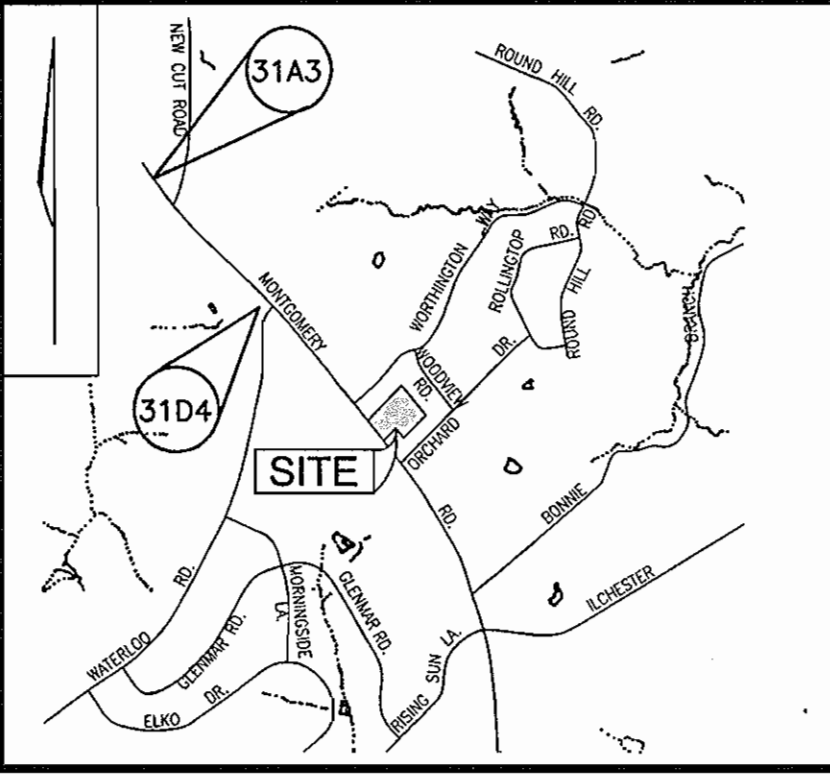
## HOWARD COUNTY, MARYLAND



**LOCATION PLAN**  
SCALE: 1"=600'

TYPE OF BUILDING: <u>RESIDENTIAL</u>	
NO. OF UNITS/PARCELS:	<u>9 (8 LOTS + OPEN SPACE LOT 9)</u>
NO. OF WATER HOUSE CONNECTIONS:	<u>8</u>
NO. OF SEWER HOUSE CONNECTIONS:	<u>8</u>
DRAINAGE AREA:	<u>PATAPSCO</u>
TREATMENT PLANT:	<u>PATAPSCO (ROUTE 108 PUMPING STATION)</u>

BENCHMARKS				
NO.	NORTHING	EASTING	ELEVATION	TYPE
31D4	571700.659	1369606.281	495.179	CONC. MON.
31A3	573217.877	1368237.662	487.641	CONC. MON.



**VICINITY MAP**  
SCALE: 1"=2000'

WATER CODE: G-01  
SEWER CODE: 1255028  
WATER TEST GRADIENT: 780

QUANTITIES				
NAME OF UTILITY CONTRACTOR:				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:				
ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
<b>WATER</b>				
8" WATER MAIN (D.I.P.)	413 LF	412	DIP	ATLANTIC STATES
6" WATER MAIN (D.I.P.)	28 LF	28	DIP	ATLANTIC STATES
FIRE HYDRANT	1 EACH	2		MUELLER
8"x6" FIRE HYDRANT, TEE AND VALVE	1 EACH	1	D1	MUELLER
12"x8" TAPPING SLEEVE & VALVE	1 EACH	1	D1	SMITH BLAIN
<b>SEWER</b>				
8" SEWER (PVC)	425 LF	386	PVC	NORTH AMERICAN
MANHOLES (40.8 VF)	4 EACH	4	PRECAST	ATLANTIC STATES
1" WHC	127 LF	140	COPPER	MUELLER
4" SHC	114 LF	151	PVC	NORTH AMERICAN

WATER LOCATION CHART			
CL. WATER STA.	APPURTENANCE	OFFSET FROM CL. KRAMER ROAD/COORDINATES	
0+00	12"x8" TS&V	5' LT.	
1+60	22.5" BEND	N570586.02 E1370803.29	
2+79	22.5" BEND	N570518.23 E1370917.83	
4+12	CAP & BUTTRESS	N570701.16 E1371022.39	
4+08	8"x6" TEE	5' LT.	
4+08	6" VALVE	7' LT.	
4+08	6" FIRE HYDRANT	27' LT.	

MANHOLE LOCATION CHART			
MANHOLE NO.	TYPE	LOCATION	TOP ELEVATION
SMH 101	STD. PRECAST MH HO. CO. STD. DET. 05.12	N 570460.79 E 1370680.15	504.11
SMH 102	STD. PRECAST MH HO. CO. STD. DET. 05.12	N 570576.93 E 1370807.91	502.18
SMH 103	STD. PRECAST MH HO. CO. STD. DET. 05.12	N 570809.15 E 1370922.47	494.87
SMH 104	STD. PRECAST MH HO. CO. STD. DET. 05.12	N 570464.62 E 1370688.14	498.32

SEWER CONNECTION TABULATION				
LOT NO.	TYPE	ELEVATION @ ESMT.	ELEVATION @ MAIN	M.C.E.
1	4" S.H.C.	492.40	492.00	495.10
2	4" S.H.C.	493.38	492.18	495.70
3	4" S.H.C.	492.85	492.05	491.35
4	4" S.H.C.	494.22	493.62	491.21
5	4" S.H.C.	493.72	493.62	491.61
6	4" S.H.C.	492.15	492.40	495.15
7	4" S.H.C.	493.56	492.28	495.30
8	4" S.H.C.	493.70	492.00	495.50

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH F-05-114 AND WITH THESE PLANS FOR LIMIT OF DISTURBANCE.

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. JOHN K. ROBERTSON SOIL CONSERVATION DISTRICT DATE: <u>9/27/06</u>	REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. JIM MAY U.S. SOIL CONSERVATION DISTRICT DATE: <u>9/27/06</u>
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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND [Name] BUREAU OF UTILITIES DATE: <u>9/15/06</u>	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND [Name] CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: <u>5/1/06</u>	<b>ROBERT H. VOGEL</b> ENGINEERS • SURVEYORS • PLANNERS 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961	DES: JT DRN: RN CHK: JCO DATE: MARCH 2006 BY NO. _____ REVISION _____ DATE _____
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COVER SHEET	600' SCALE MAP NO. 31 BLOCK NO. 14
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**WORTHINGTON WEST**  
CONTRACT NO. 14-4200-D

TAX MAP 31 BLOCK 14  
PARCEL 501

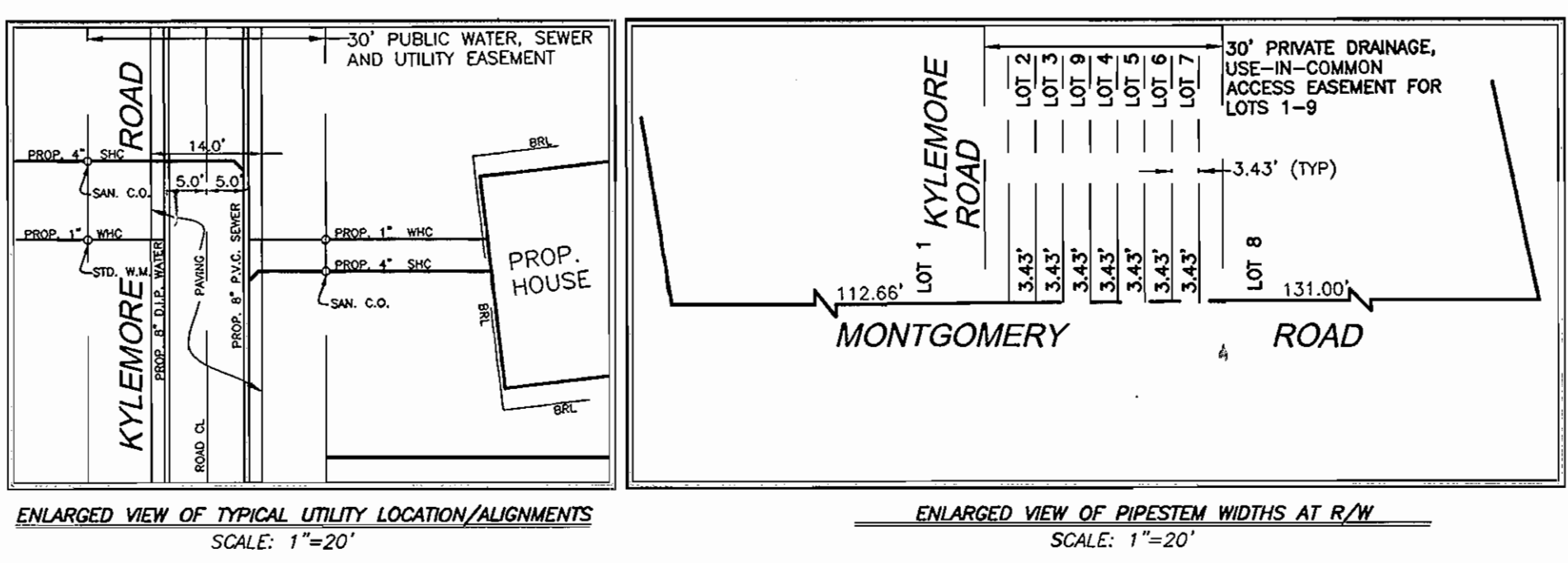
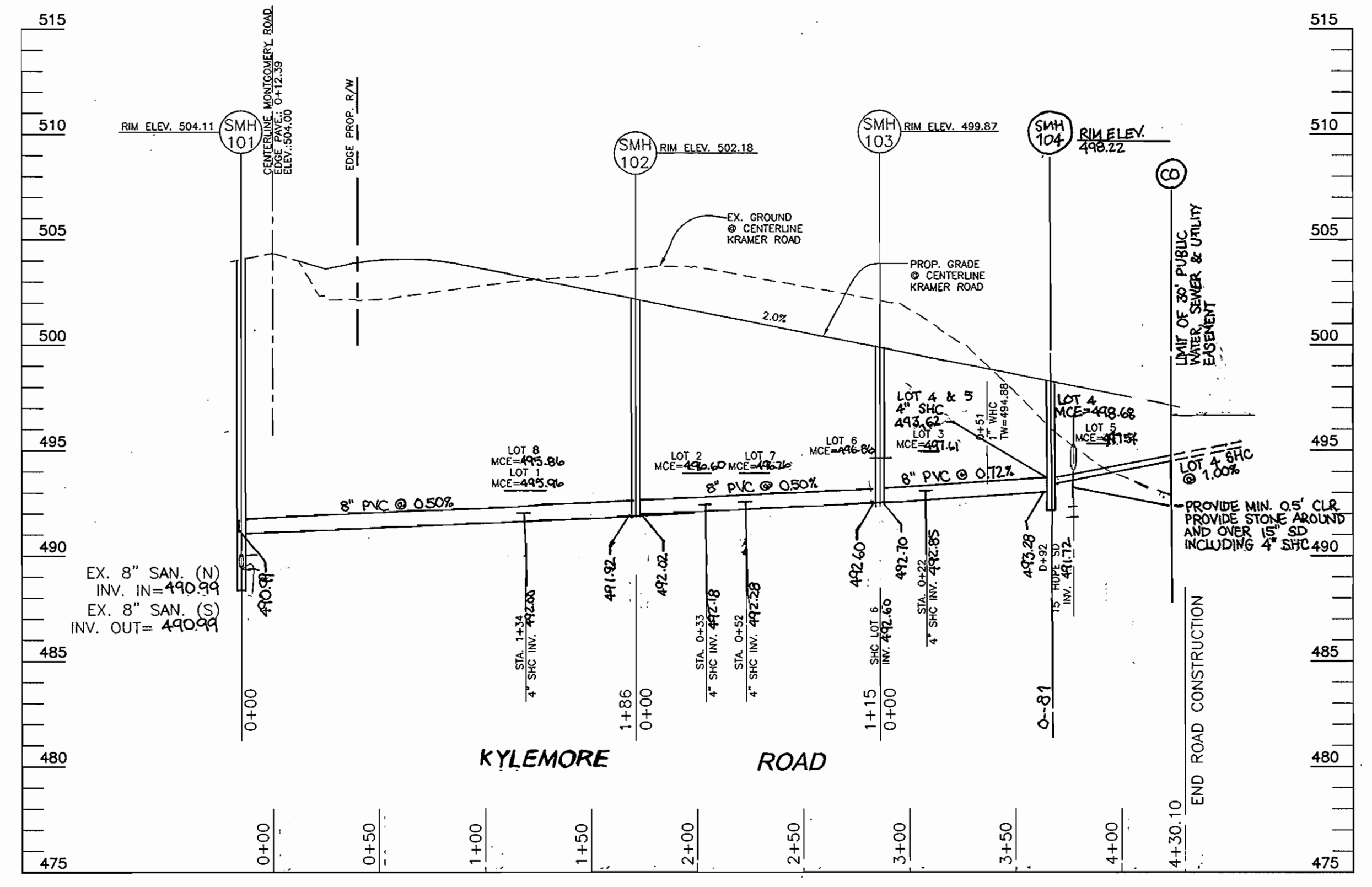
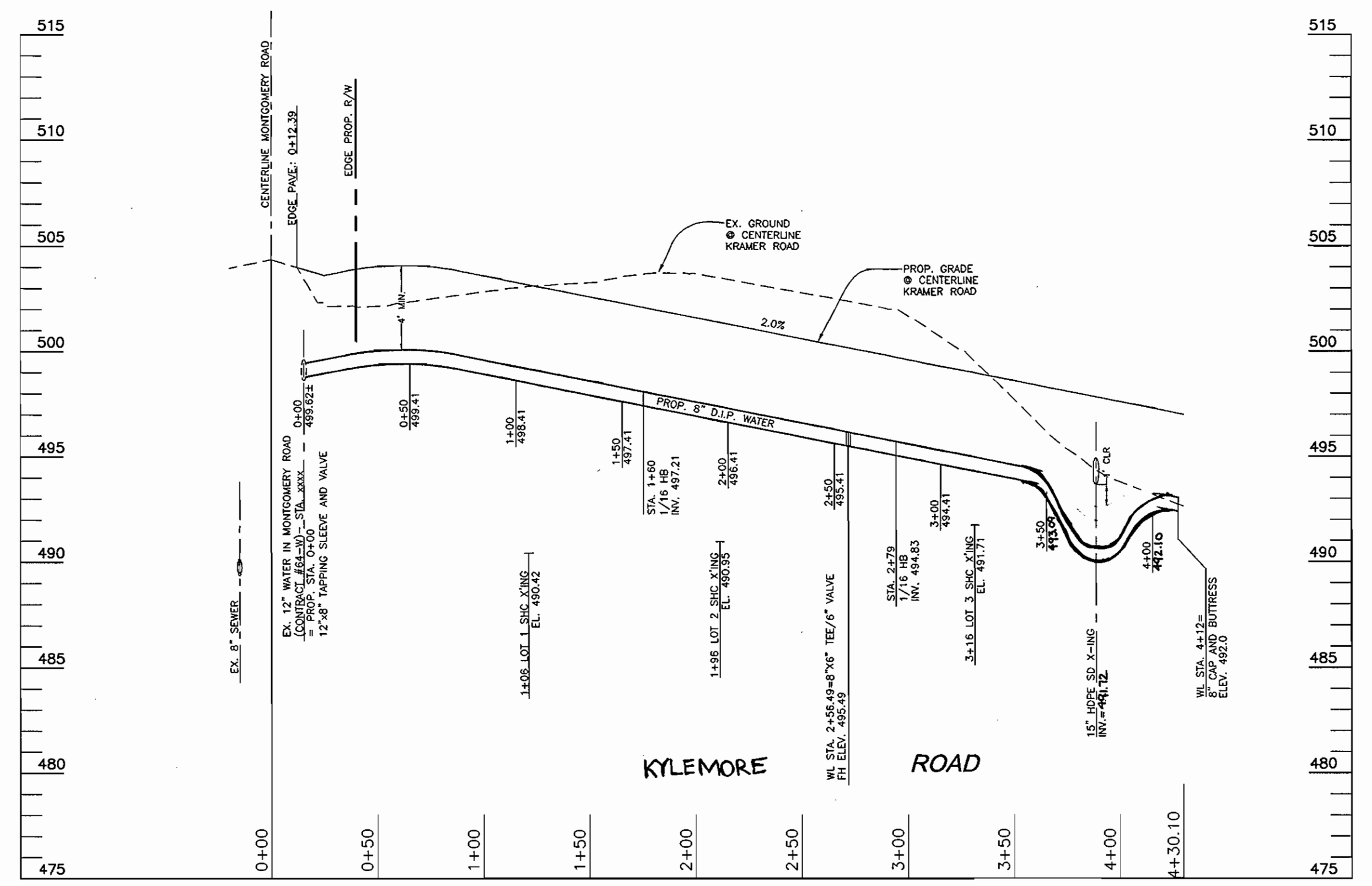
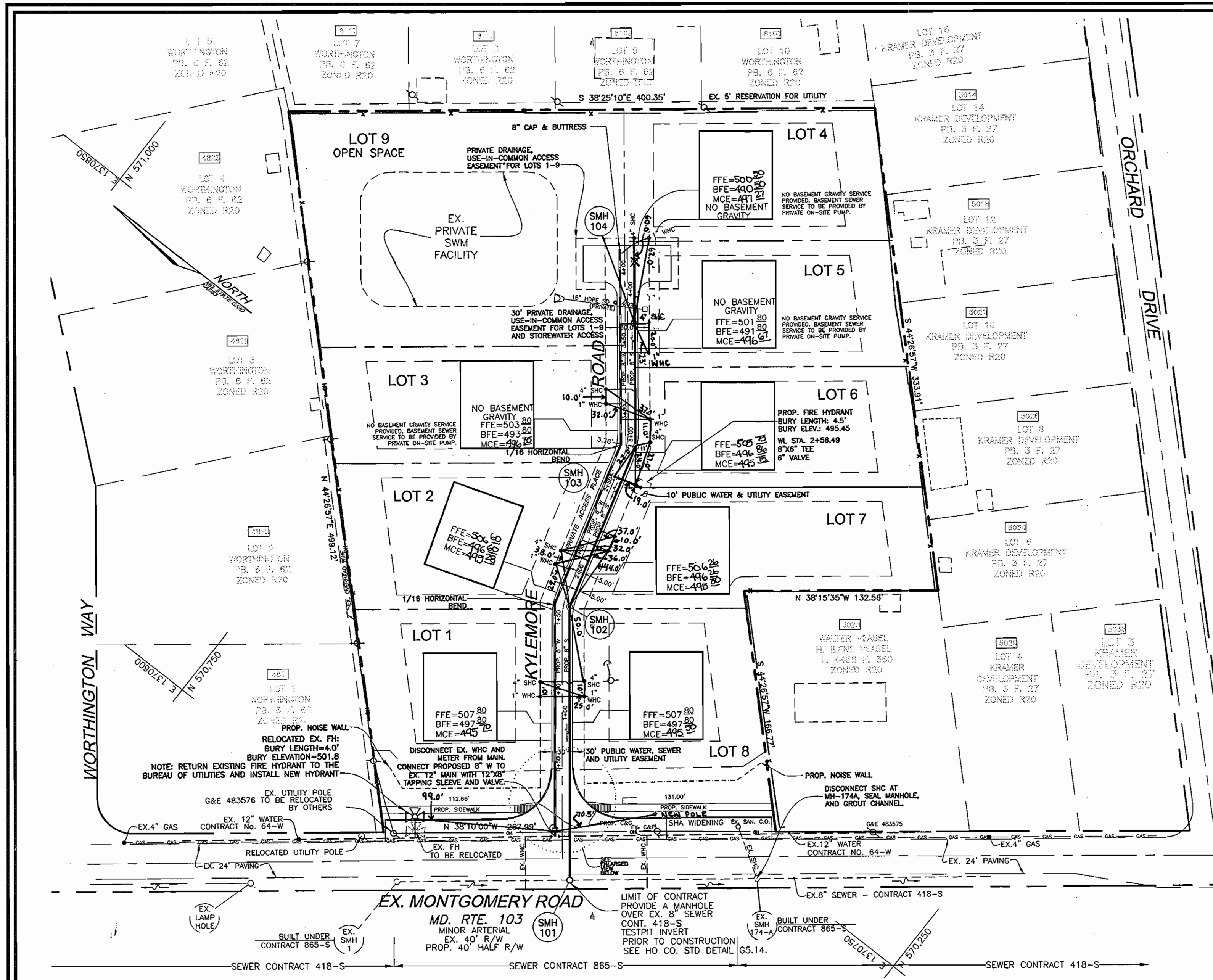
SCALE AS SHOWN

SHEET 1 OF 2

2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

AS-BUILTS

**OWNER/DEVELOPER**  
FORTY WEST GROUP, INC.  
3230 WEST BETHANY LANE  
ELLICOTT CITY, MD 21042  
PHONE: (410) 418-8900



**NOTES**

- CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- INFORMATION ON EXISTING UTILITIES TAKEN FROM AS-BUILTS AND PLANS UNDER HOWARD COUNTY CONTRACTS 865-S AND 418-S.

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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*Michael H. Lewis* 4/8/06  
CHIEF, BUREAU OF UTILITIES DATE

*David Dorman* 5/2/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DES:	JT		
DRN:	RN		
CHK:	JCO		
DATE:	MARCH 2006		
BY:	NO.	REVISION	DATE
	1	REVISE WATER & SEWER PLAN & PROFILES	7.31.06

**PLAN AND PROFILES**

600' SCALE MAP NO. 31  
BLOCK NO. 14

STATE OF MARYLAND  
HARRIS JOSEPH  
NO. 14495  
REGISTERED PROFESSIONAL ENGINEER

**WORTHINGTON WEST**  
CONTRACT NO. 14-4200-D

TAX MAP 31 BLOCK 14  
PARCEL 501

2ND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 2