

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.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OCTOBER 2004 BY ROBERT H. VOGEL ENGINEERING, 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. 24BA, NO. 24CA.
ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROL PROVIDED ON THE DRAWINGS ARE 24BA AND 24CA (ENGINEER/SURVEY FIRM SHALL PROVIDE DESCRIPTION OF VERTICAL CONTROL POINTS, I.E., IRON BARS, CROSS CUTS ON CONCRETE STRUCTURES, ETC.)
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
- 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 811: 1-800-252-1133
BGE (CONTRACTOR SERVICE): 410-850-4620
BGE (EMERGENCY): 410-685-1400
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
- 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 WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.

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 STANDARD DETAILS. THE 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.

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 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME 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.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH FINAL PLAN F-06-22

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

John K. Robertson 1/8/07
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

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

Jim Markey 1/8/07
U.S. SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

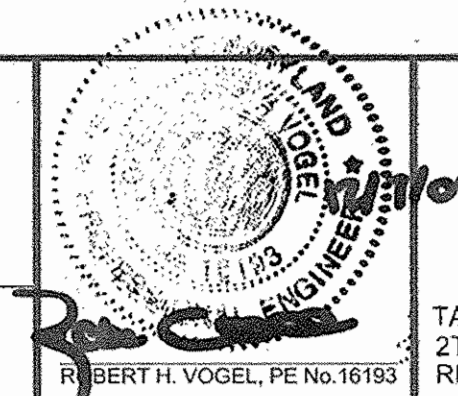
Robert H. Vogel 1-2-07
CHIEF, BUREAU OF UTILITIES DATE

Jim Markey 1/16/07
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: 410-461-8561

DES: MY			
DRN: MY			
CHK: RHV			
MAY 2006	KCI 1	AS-BUILT DATA SHOWN	02/03/08
DATE:	BY NO.	REVISION	DATE

8" WATER
8" SEWER
600' SCALE MAP NO. 24
BLOCK NO. 11



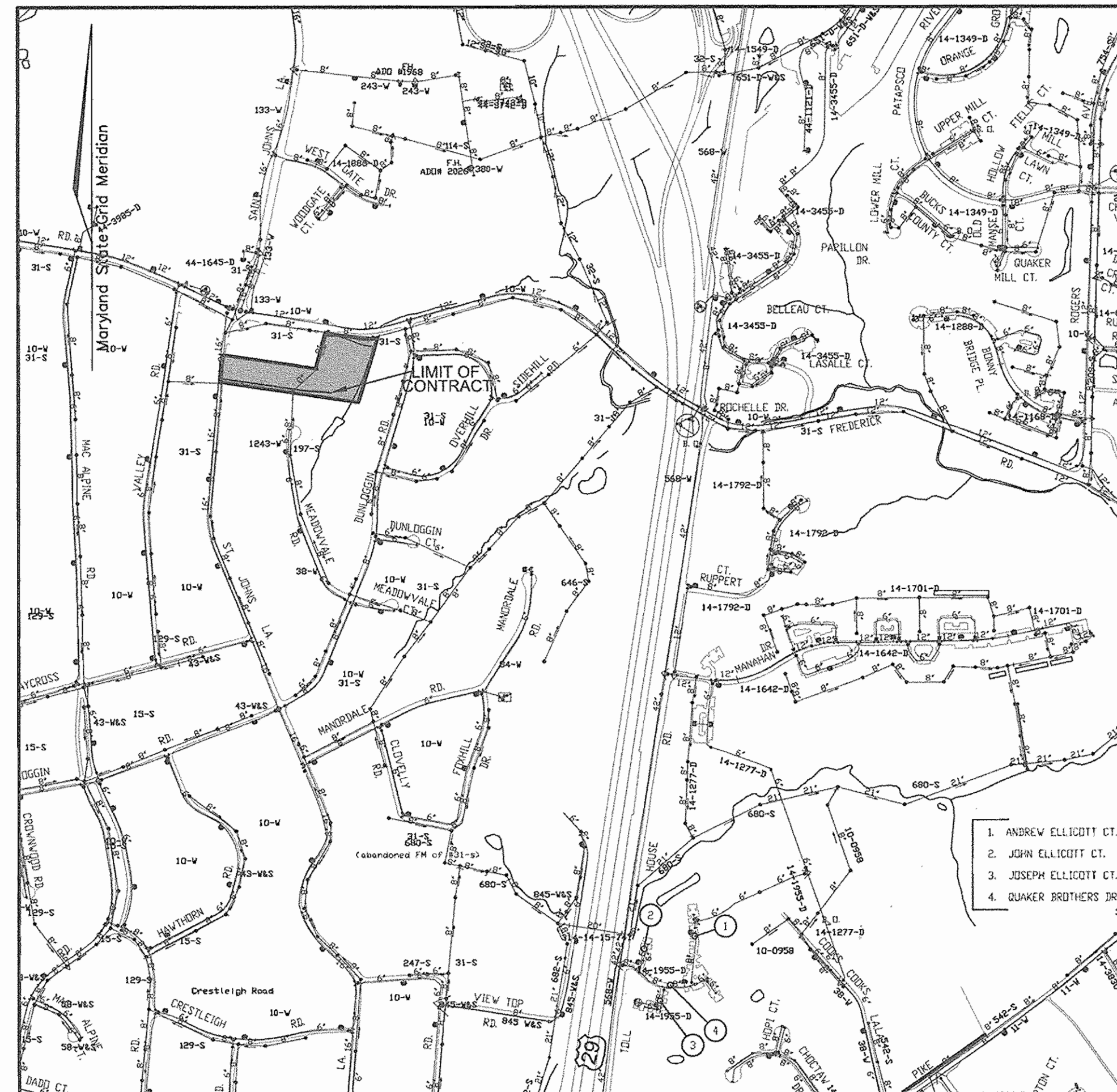
TAX MAP 24 BLOCK 11
2TH ELECTION DISTRICT
REF: S-00-09, WP-00-110 (7/6/2000)

TIBER RIDGE
LOTS 1-11
CONTRACT NO. 14-4325-D

PARCEL '821
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 2

TIBER RIDGE PUBLIC WATER & SEWER CONSTRUCTION PLAN HOWARD COUNTY, MARYLAND CONTRACT NO. 14-4325-D

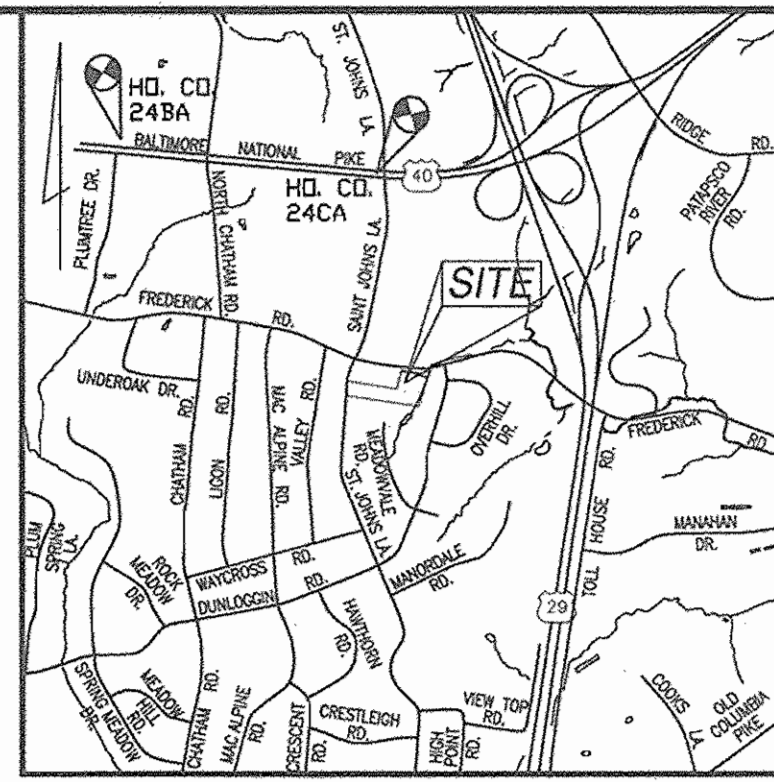


LOCATION MAP
SCALE: 1"=600'

WATER CODE: 608
SEWER CODE: 1402800
TEST GRADIENT: 700

TYPE OF BUILDING: SINGLE HOUSE
NO. OF UNITS: 9
NO. OF WATER HOUSE CONNECTIONS: 9
NO. OF SEWER HOUSE CONNECTIONS: 9
DRAINAGE AREA: PATAPSCO RIVER LOWER NORTH BRANCH
TREATMENT PLANT: DEEP RUN

BENCHMARKS
HOWARD COUNTY CONTROL TRAVERSE NO. 24CA
N 586506.183 E 1361634.312
HOWARD COUNTY CONTROL TRAVERSE NO. 24BA
N 586783.250 E 1359211.698



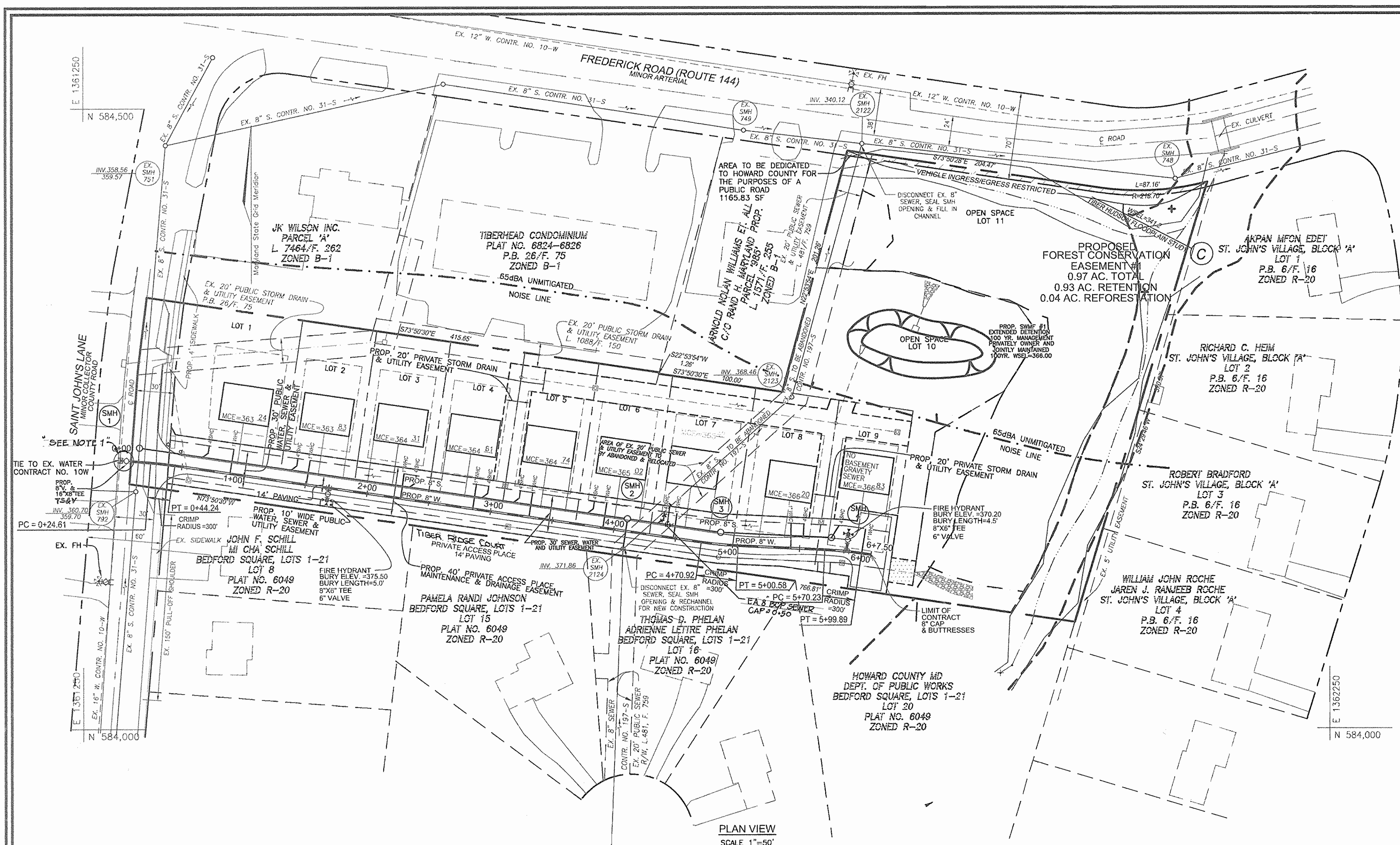
VICINITY MAP
SCALE 1"=2000'

QUANTITIES

NAME OF UTILITY CONTRACTOR : UTILITIES UNLIMIT				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
WATER				
8" WATER	620 LF.	608	DIP CL 52	GRIFFIN / BRS
8" CAP AND BUTTRISS	1 EA.	1EA	D.I.P.	" / BRS
FIRE HYDRANT	2 EA.	2EA	MUELLER	MUELLER / BRS
8"x6" FIREHYDRANT TEE	2 EA.	2EA	SIGM.	SIGMA / BRS
8" S	563 LF.	594	P.V.C.	J.M. / BRS
MANHOLE	4 EA.	1EA	PRECAST	FREDERICK PRECAST
16"XB TAPPING SLEEVE & VALVE	1 EA.	1EA	D.S.	ROMAC IND. BRS
4" SHC	113 LF.	90LF.	P.V.C.	J.M. BRS
1" WHC	170 LF.	194.0	K COPPER	READING BRS

"SEWER"			"WATER"				
FROM	TO	LOT #	DIST.	FROM	TO	LOT #	DIST.
MH 1	"	1	61.9	MH 1	"	1	82.6
MH 1	"	2	136.0	"	"	2	147.0
F.H.	"	1	110.5	F.H.	"	1	90.0
"	"	2	48.0	"	"	2	37.5
"	"	3	77.9	"	"	3	64.0
"	"	4	134.1	"	"	4	123.0
LOT 1	"	2	75.6	LOT 1	"	2	65.0
LOT 2	"	3	100.5	"	"	3	72.6
LOT 3	"	4	58.1	"	"	4	60.5
LOT 4	"	5	25.5	"	"	5	47.0
LOT 5	"	6	62.2	"	"	6	60.8
MH 2	"	4	115.7	MH 2	"	4	126.5
"	"	5	90.4	"	"	5	79.6
"	"	6	29.6	"	"	6	20.2
"	"	7	37.4	"	"	7	42.0
MH 3	"	7	41.8	MH 3	"	7	37.8
"	"	8	71.7	"	"	8	59.8
"	"	9	100.0	"	"	9	121.0
MH 4	"	8	26.0	MH 4	"	8	36.5
"	"	9	12.4	"	"	9	27.8
F.H.	"	8	37.1	F.H.	"	8	48.5
"	"	9	10.1	"	"	9	14.1
				F.H.	"	STA 590 TO G VAL	15.6
				MH 4	"	TO G VALVE	16.2
				F.H.	"	STA 1+70 TO G VAL	8.75
				MH 1	"	TO G VALVE	161.6
				MH 1	"	TO 8" VALVE	14.3
				INLET	"	TO 8" VALVE	58.0

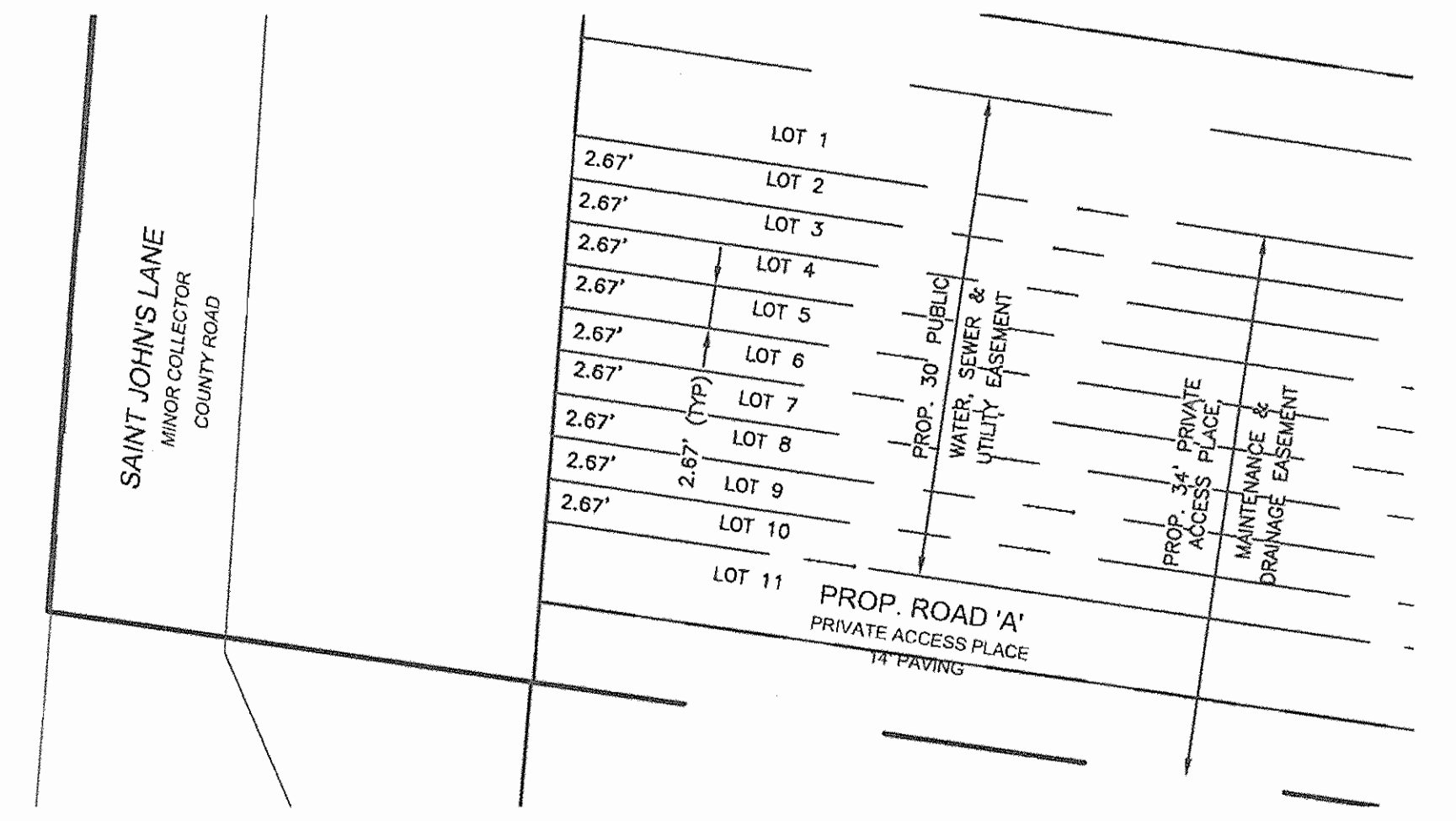
DEVELOPER
WILLIAMSBURG GROUP
5485 HARPERS FARM RD, STE 200
COLUMBIA, MARYLAND 21044
(410) 597-8800



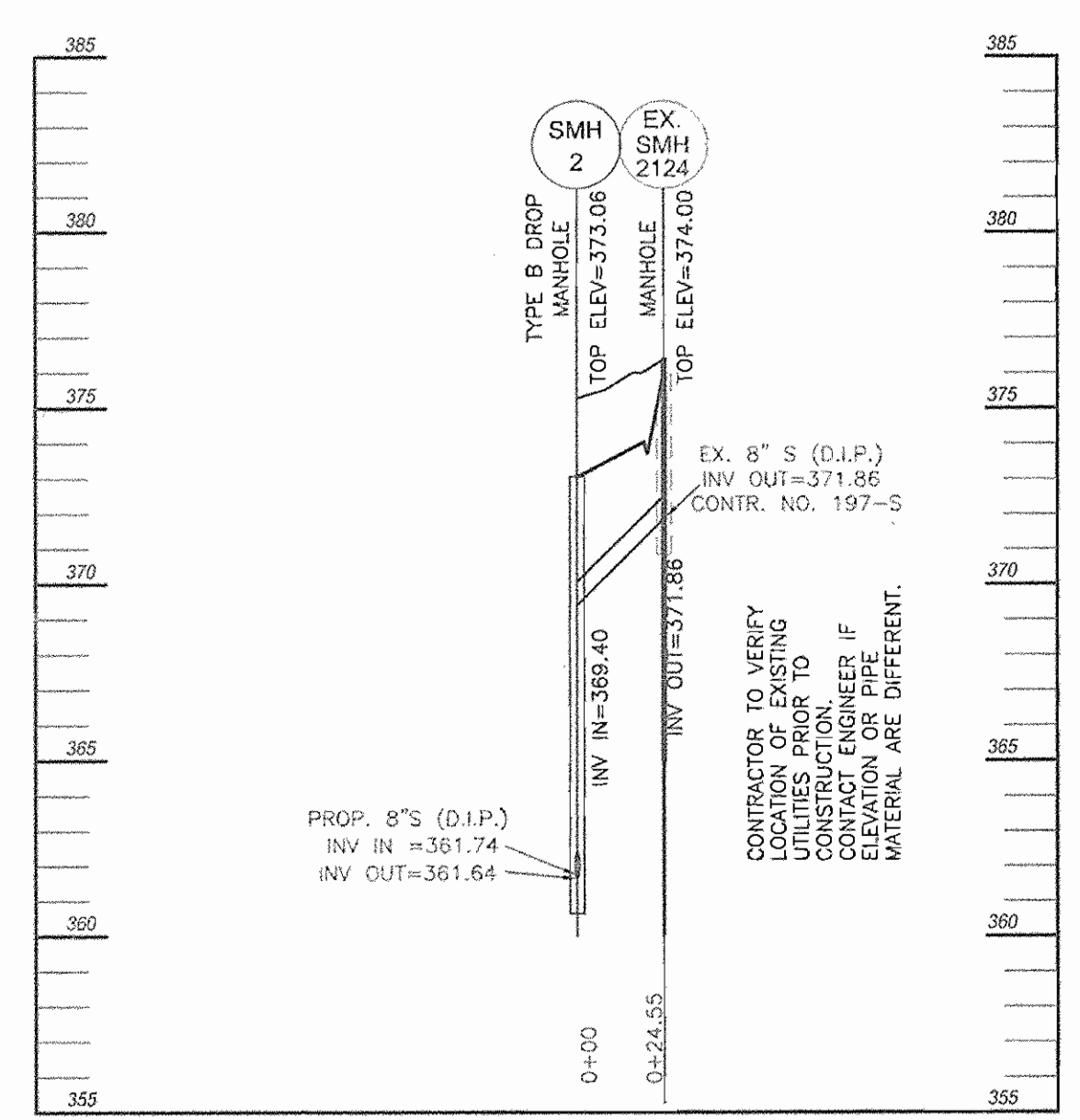
SEWER MANHOLE SCHEDULE						
NO.	TYPE	LOCATION		TOP ELEV.	INV. IN	INV. OUT
		NORTHING	EASTING			
SMH 101	STD. PRECAST MH HO. CO. STD. DET. G5.12	584227.0890	1361295.1565	369.95	359.66	359.56
SMH 102	STD. PRECAST MH HO. CO. STD. DET. G5.12	584169.2056	1361666.4582	373.06	361.74	361.64
SMH 103	STD. PRECAST MH HO. CO. STD. DET. G5.12	584158.1294	1361761.3354	374.20	362.22	362.12
SMH 104	STD. PRECAST MH HO. CO. STD. DET. G5.12	584154.9438	1361827.6436	371.05	-	362.86

SEWER CONNECTION TABULATION						
LOT NO	TYPE	ELEV. @ MAN	ELEV. @ R/W OR EASEMENT @ UNIT		M.C.E.	
			ELEV.	ELEV.		
1	4" SHC. 10 LF @ 0.2%	360.10	360.30	360.54	363.24	
2	4" SHC. 10 LF @ 0.2%	360.46	360.66	361.13	363.83	
3	4" SHC. 10 LF @ 0.2%	360.94	361.14	361.61	364.31	
4	4" SHC. 10 LF @ 0.2%	361.24	361.44	361.91	364.61	
5	4" SHC. 10 LF @ 0.2%	361.36	361.56	362.04	364.74	
6	4" SHC. 10 LF @ 0.2%	361.66	361.86	362.32	365.02	
7	4" SHC. 10 LF @ 0.2%	362.05	362.25	362.72	365.42	
8	4" SHC. 10 LF @ 0.2%	362.86	363.06	363.50	366.20	
9	4" SHC. 11.48 LF @ 0.2%	363.20	363.43	364.13	366.83	

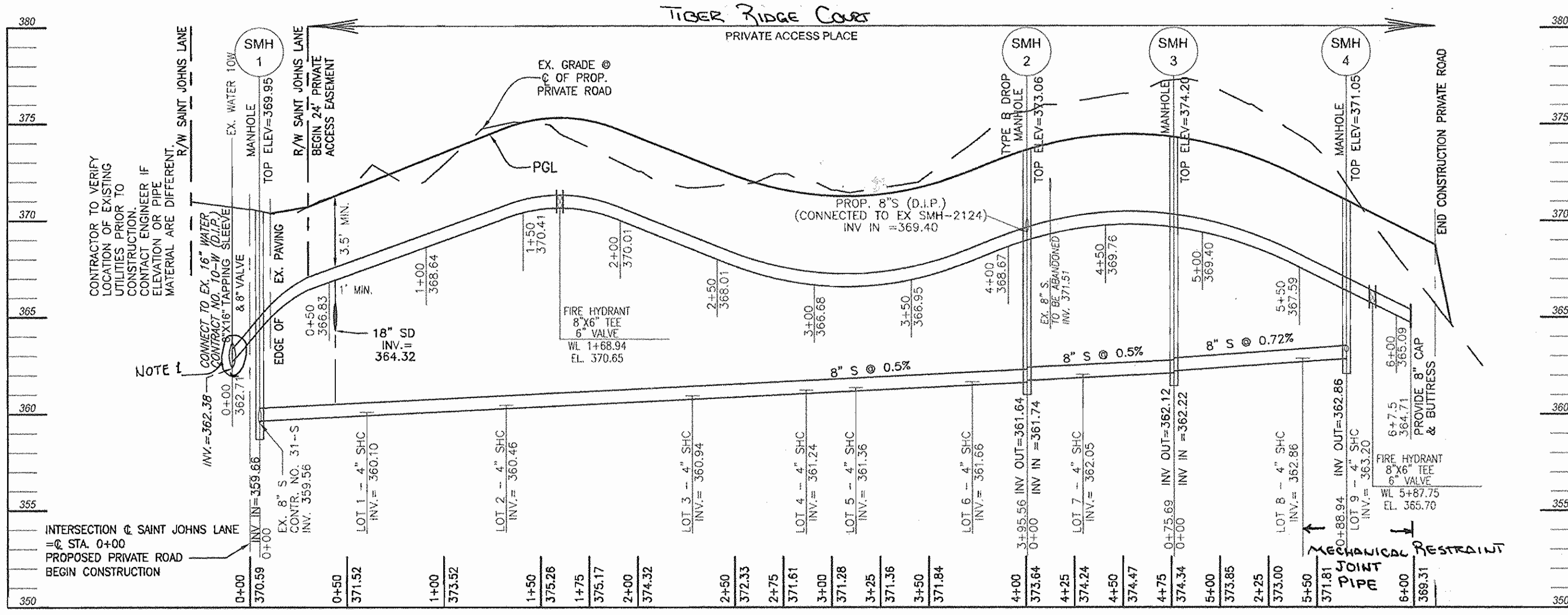
- NOTE:
- CONTRACTOR TO TEST PIT EX. SEWER MAIN AT SMH1 IN ADVANCE OF CONSTRUCTION TO CONFIRM ELEVATION AND LOCATION.
 - INVERT OF EX. SEWER IS PROVIDED FROM AVAILABLE RECORD DRAWINGS.
 - THE EXISTING PIPE MATERIAL IS ASBESTOS CEMENT CONCRETE PIPE AND MAY NEED TO BE SUPPORTED IF EXCAVATING BELOW THE PIPE.
 - ANY DAMAGE TO PUBLIC R/W, PAVING OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- SEQUENCE OF CONSTRUCTION:
- CONSTRUCT PROPOSED SEWER MAIN FROM SMH1 TO SMH4.
 - CONNECT THE PROPOSED SEWER MAIN TO THE EXISTING SEWER AT EXISTING SMH 2124.
 - ABANDON THE EXISTING SEWER MAIN CONNECTION FROM SMH2122 TO SMH2124 AND SMH2123 (CONTRACT # 197-S).
 - THE PROPOSED SEWER MAIN TO EXISTING SEWER MAIN AFTER THE PROPOSED SEWER MAIN IS "IN SERVICE". ABANDON EXISTING SEWER CONNECTION WHILE SEWER LINE IS IN SERVICE.
 - THE EXISTING SEWER LINE MUST REMAIN IN OPERATION DURING THE CONSTRUCTION OF THE PROPOSED SEWER.
 - ONCE THE EXISTING SEWER LINE IS ABANDONED, COMPLETE FINAL GRADING.



ENLARGED VIEW OF PIPESTEM WIDTHS AT RW
SCALE: 1"=10'



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



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

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HOWARD COUNTY, MARYLAND

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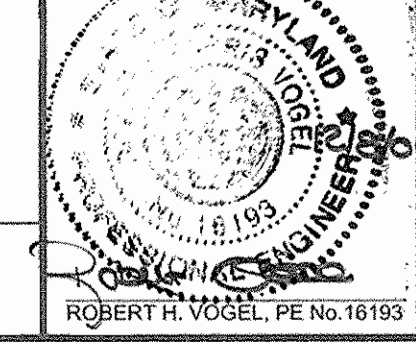
1-2-07
DATE

1/16/07
DATE

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

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DRN:	MY				
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DATE:	MAY 2006				
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**8" WATER
8" SEWER**



**TIBER RIDGE
LOTS 1-11
CONTRACT NO. 14-4325-D**

SCALE AS SHOWN

SHEET 2 OF 2

TAX MAP 24 BLOCK 11
2TH ELECTION DISTRICT
REF.: S-00-09, WP-00-110 (7/6/2000)

PARCEL '821'
HOWARD COUNTY, MARYLAND