GENERAL NOTES

- 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 CONTRACTORS EXPENSE.
- 2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES 83/91.
- 3. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88 UNLESS OTHERWISE NOTED ON THE PLANS.
- 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- 5. 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
- 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 CONTAIN FOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATION
- 8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN

AT &T	
BGE (CONTRACTOR SERVICE)	410-850-4620
BGE (UINDERGROUND DAMAGE CONTROL)	410-787-9068
BUREAU OF UTILITIES	
COLONIAL PIPELINE CO	410-795-1390
MISS UTILITY	
STATE HIGHWAY ADMINISTRATION	
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
- 10. 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.
- 11. 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.

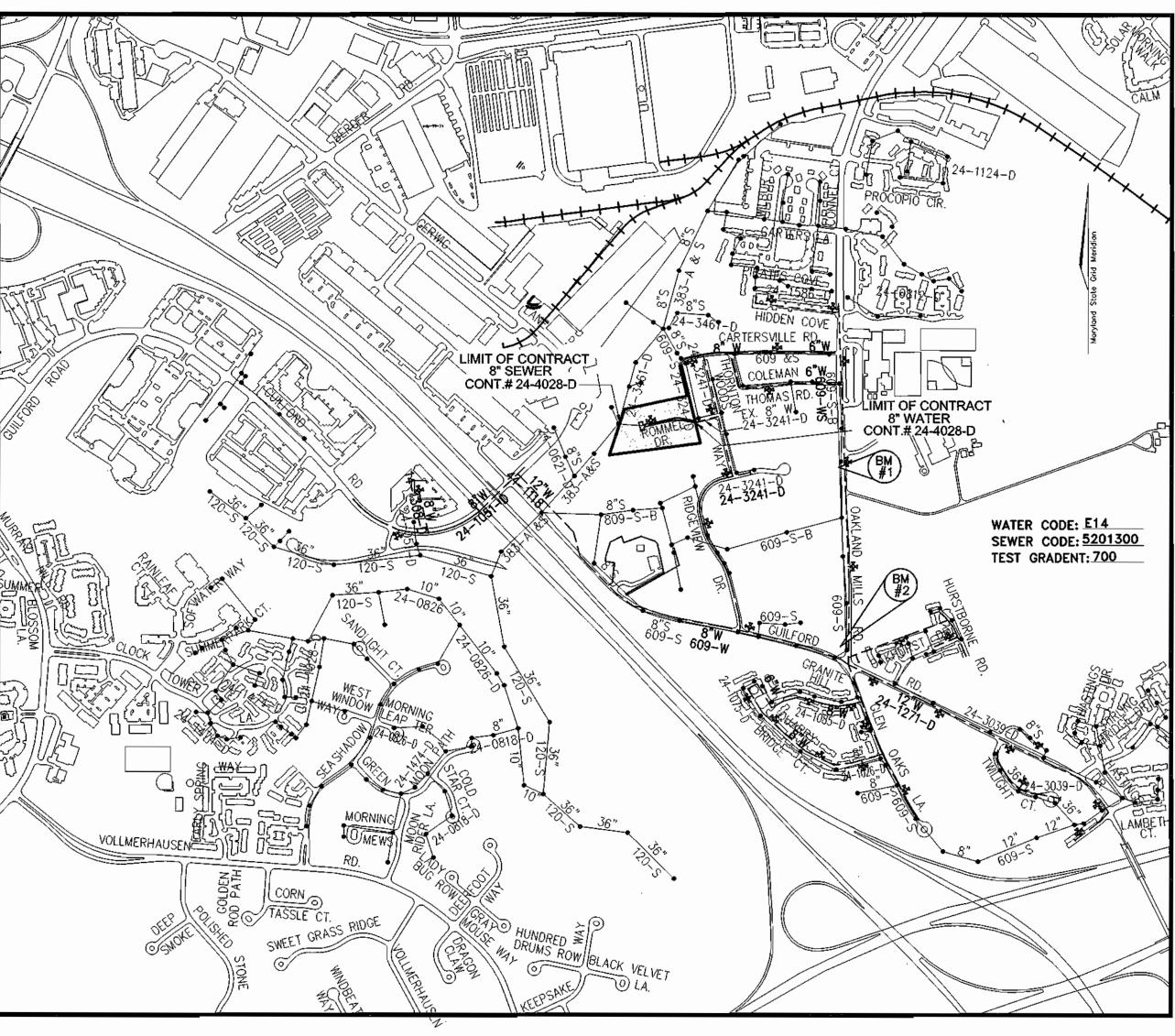
PART II - WATER

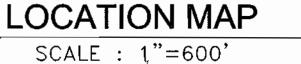
- 1. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- 2. TOP'S OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED
- 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 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. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.

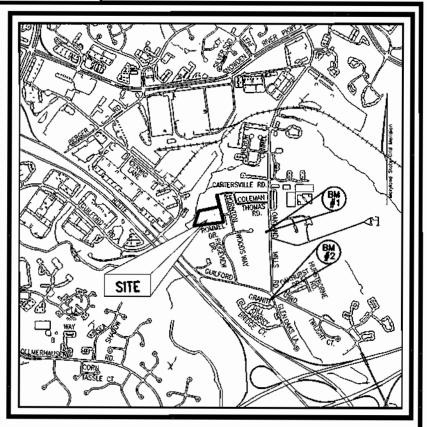
- 1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- 2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 3. FORCE MAIN SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT 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.

TYPE OF BUILDING:	RESIDENTIAL
NO. OF UNITS/PARCELS:	10
NO. OF WATER HOUSE CONNECTIONS:	10
NO. OF SEWER HOUSE CONNECTIONS:	10
DRAINAGE AREA:	LITTLE PATUXENT
TREATMENT PLANT: LITTLE PATUXENT WRF	-

THORNTON WOODS OVERLOOK CONTRACT NO. 24-4028-D HOWARD COUNTY, MARYLAND







VICINITY MAP

BENCHMARKS

BENCHMARK NO. 1: COUNTY CONTROL #42R5 N. 548,777.0609, E. 1,360,3609768 ELEV. = 391.54

BENCHMARK NO. 2: COUNTY CONTROL #42R6 N. 546,822.0895, E. 1,360,340.6529 ELEV. =389.12

QUANTITIES

NAME OF UTILITY CONTRACTOR : SURVEY AND DRAFTING DIVISION AS-BUILT DATE: AS-BUILT QUANTITIES ESTIMATED QUANTITIES MANUFACTURER/SUPPLIER MANHOLE 3 EA. 8" SEWER 500 LF 1 EA. 6" VALVE 1 EA. 34 LF 6" WATER 330 LF 8" WATER 1 1/2"T.W.H.C. 68 LF 4" SH.C. IGOLF

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH F-02-126.

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.

SOIL CONSERVATION D





DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC. ENGINEERS | 7125 Riverwood Drive Columbia, Maryland 21046-2354 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226

CHK:	JCO					
DATE:	SEPT. 2002	BY	NO.	 RE\	/ISION	

WATER & SEWER PLAN

DATE 600' SCALE MAP NO.

THORNTON WOODS OVERLOOK LOTS 1 - 10 HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4028-D

SCALE SHOWN SHEET

_ OF <u>3</u>

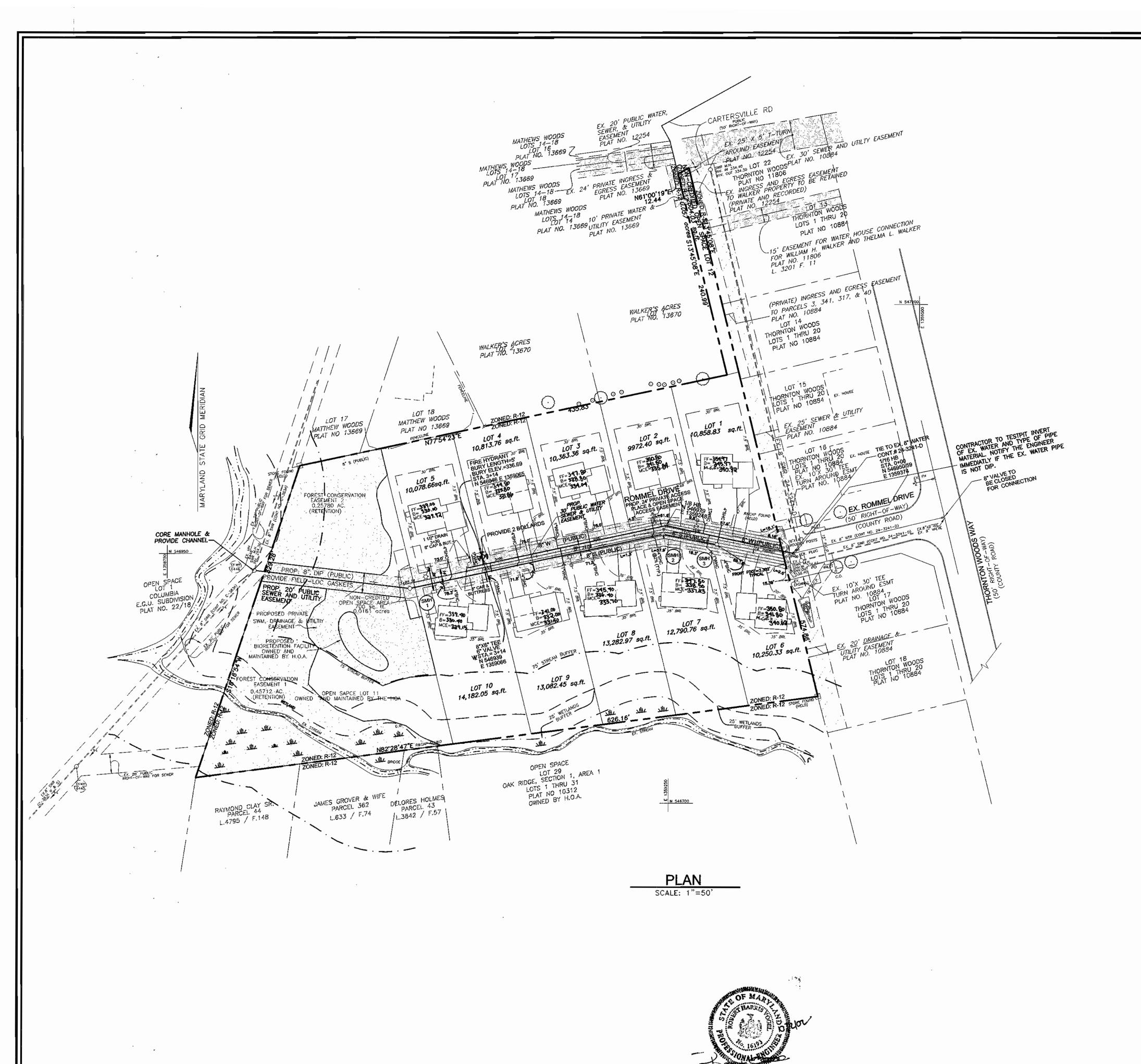
PARCEL '41'

surveyors | Bel Air, Maryland

Columbia, Maryland

__<u>42</u>__ BLOCK NO.

TAX MAP#42 GRID 16 **6TH ELECTION DISTRICT** HOWARD COUNTY, MARYLAND



CURVE TABLE						
CURVE NO.	RADIUS	TANGENT	LENGTH	DELTA	CHORD BEARING	CHORD DISTANCE
C1	150.00'	30.61'	60.391	23'04'00"	N 89*26'23"E	59.98'
C2	150.00'	30.61	60.39'	23°04'00"	S 89°26'23"W	59.98'

Course	Bearing	Distance
L1	N 79°01'37" W	75.96'
L2	N 79°01'37" W	118.57
L3	S 77'54'23" W	34.32
L5	N 79°01'37" W	119.34
L6	S 77.54.23" W	108.65'
L9	N 79°01'37" W	120.11
L10	S 77*54'23" W	182.98
L12	N 79'01'37" W	120.88
L13	S 77'54'23" W	255.31'
L14	S 79°01'37" E	76.46'
L16	N 77°54'23" E	30.12'
L17	S 79°01'37" E	123.18'
L20	S 79°01'37" E	122.41
L22	N 77°54'23" E	176.34
L23	S 79*01'37" E	121.65

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.

ENGINEERS | 7125 Riverwood Drive Columbia, Maryland 21046-2354

ARCHITECTS | Phone: 410-290-9550 Fax: 410-720-6226

SURVEYORS | Bel Air, Maryland Columbia, Maryland Warrenton, Virginia Columbia, Maryland Colu

٠.	J	1				
	DES:	RJ				
	DRN:	RJ				
	<u> </u>					
	CHK:	JCO				
inia		CEDT		1	REVISE MCE AND HOUSE ELEV	
	DATE:	SEPT. 2002	BY	NO.	REVISION	DATE

WATER & SEWER PLAN

THORNTON WOODS OVERLOOK LOTS 1 - 10 HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4028-D

PARCEL '41'

HOWARD COUNTY, MARYLAND

SCALE AS

SHOWN

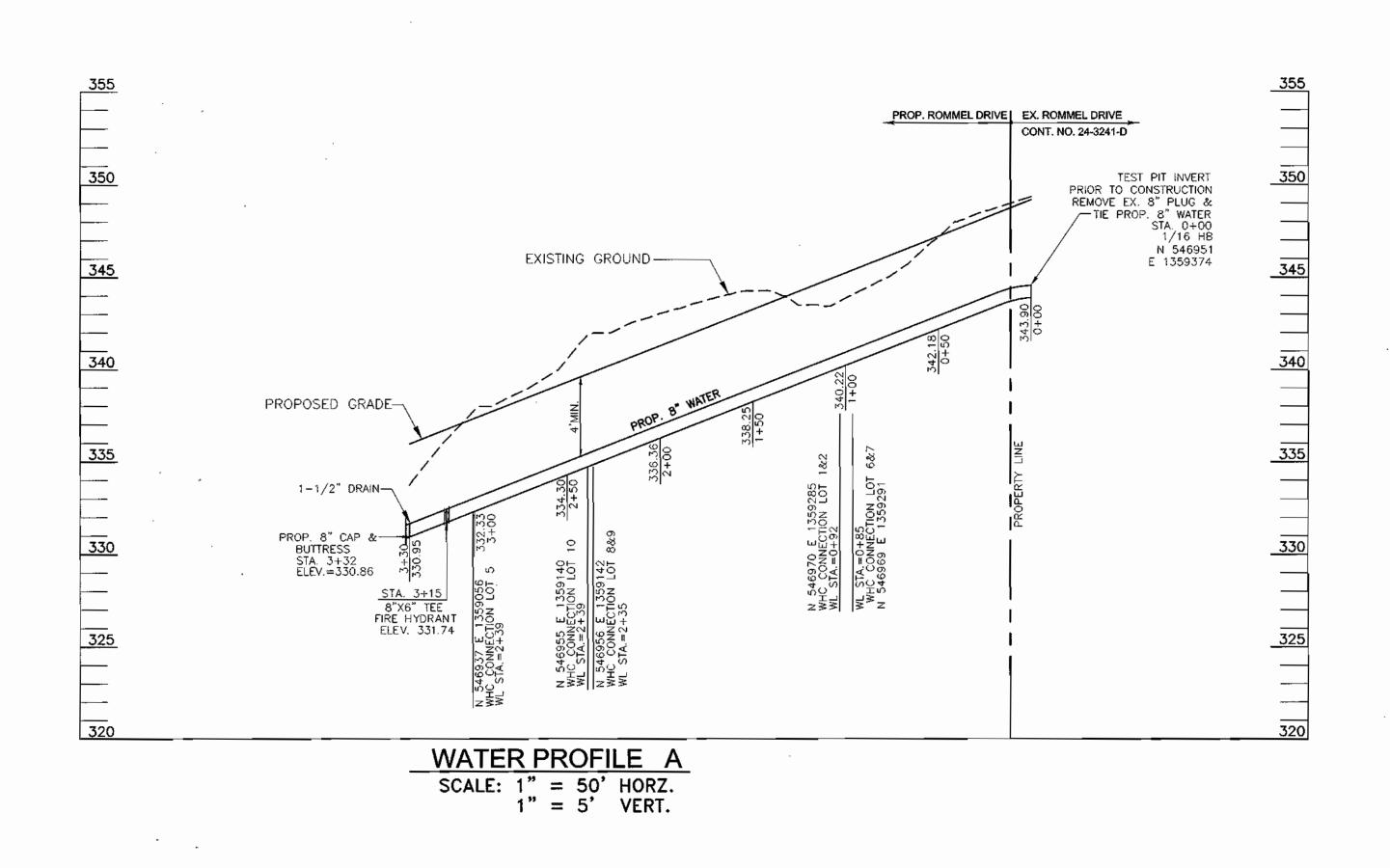
SHEET

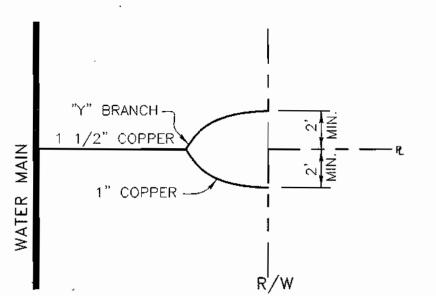
2 OF 3

600' SCALE MAP NO.

__42__ BLOCK NO. ___16__

TAX MAP#42 GRID 16 6TH ELECTION DISTRICT





TYPICAL TWIN WATER HOUSE CONNECTION DETAIL HOWARD COUNTY STANDARD DETAIL W3.23 NOT TO SCALE

SEWER CONNECTION TABULATION					
TYPE	ELEVATION @ MAIN	ELEVATION @ PUBLIC EASEMENT	M.C.E.		
S.H.C.	334.32	336.72	340.35		
S.H.C.	331.88	332.28	335.84		
· S.H.C.	330.00	330.40	334.04		
S.H.C.	337.88	338.38	33186		
S.H.C.	325.88	396.98	329.92		
S.H.C.	. 336.32	336.62	340.62		
S.H.C.	333.53	333.73	337.23		
S.H.C.	330.00	33020	333.76		
S.H.C.	- 3 <u>38</u> ,30	328.40	331.90		
S.H.C.	37565	325.85	329.15		
	S.H.C. S.H.C. S.H.C. S.H.C. S.H.C. S.H.C. S.H.C. S.H.C. S.H.C.	S.H.C. 334.32 S.H.C. 331.88 S.H.C. 330.00 S.H.C. 337.88 S.H.C. 335.68 S.H.C. 3336.32 S.H.C. 333.53 S.H.C. 330.00 S.H.C. 330.00	S.H.C. 330.00 330.28 S.H.C. 337.88 330.20 S.H.C. 337.88 330.20 S.H.C. 337.88 330.20 S.H.C. 3335.88 336.28 S.H.C. 3336.32 336.62 S.H.C. 3336.32 336.62 S.H.C. 3336.30 338.73 S.H.C. 330.00 330.20 S.H.C. 330.00 330.20		

MANHOLE LOCATION CHART						
MANHOLE NO.	TYPE	LOCATION	TOP ELEVATION			
SMH 1	DROP MANHOLE TYPE 'B' HO. CO. STD. DET. S1.32	N 546915 E 1358992	345.98			
SMH 2	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 546970 E 1359245	343.91			
SMH 3	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 546959 E 1359298	333.58			

EXISTING GROUND-PROPOSED GRADE GRANITE BLOCK BOTTOM E.G.U. SUBDIVISION | THORTON WOODS CONT. NO. C-383A EX. 8" S— INV. OUT 294.36 SEWER PROFILE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC. ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354

ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226

DRN: RJ CHK: JCO

DES: RJ REVISE SELLER BETWEEN SMH-1 & SMH-3 DATE: SEPT. 2002 BY NO. REVISION

WATER & SEWER PLAN

THORNTON WOODS OVERLOOK LOTS 1 - 10 HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4028-D

SCALE

SHOWN

SHEET

3 OF 3

DATE 600' SCALE MAP NO.

TAX MAP#42 GRID 16 **6TH ELECTION DISTRICT** PARCEL '41' HOWARD COUNTY, MARYLAND

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 CONTRACTORS EXPENSE.

- 2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES 83/91
- 3. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88 UNLESS OTHERWISE NOTED ON THE PLANS.
- 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- 5. 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.
- 6. 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.
- 8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN

AT &T	1-800-252-1133
BGE (CONTRACTOR SERVICE)	410-850-4620
BGE (UINDERGROUND DAMAGE CONTROL)	
BUREAU OF UTILITIES	
COLONIAL PIPELINE CQ	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	
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
- 10. 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.

PART II - WATER

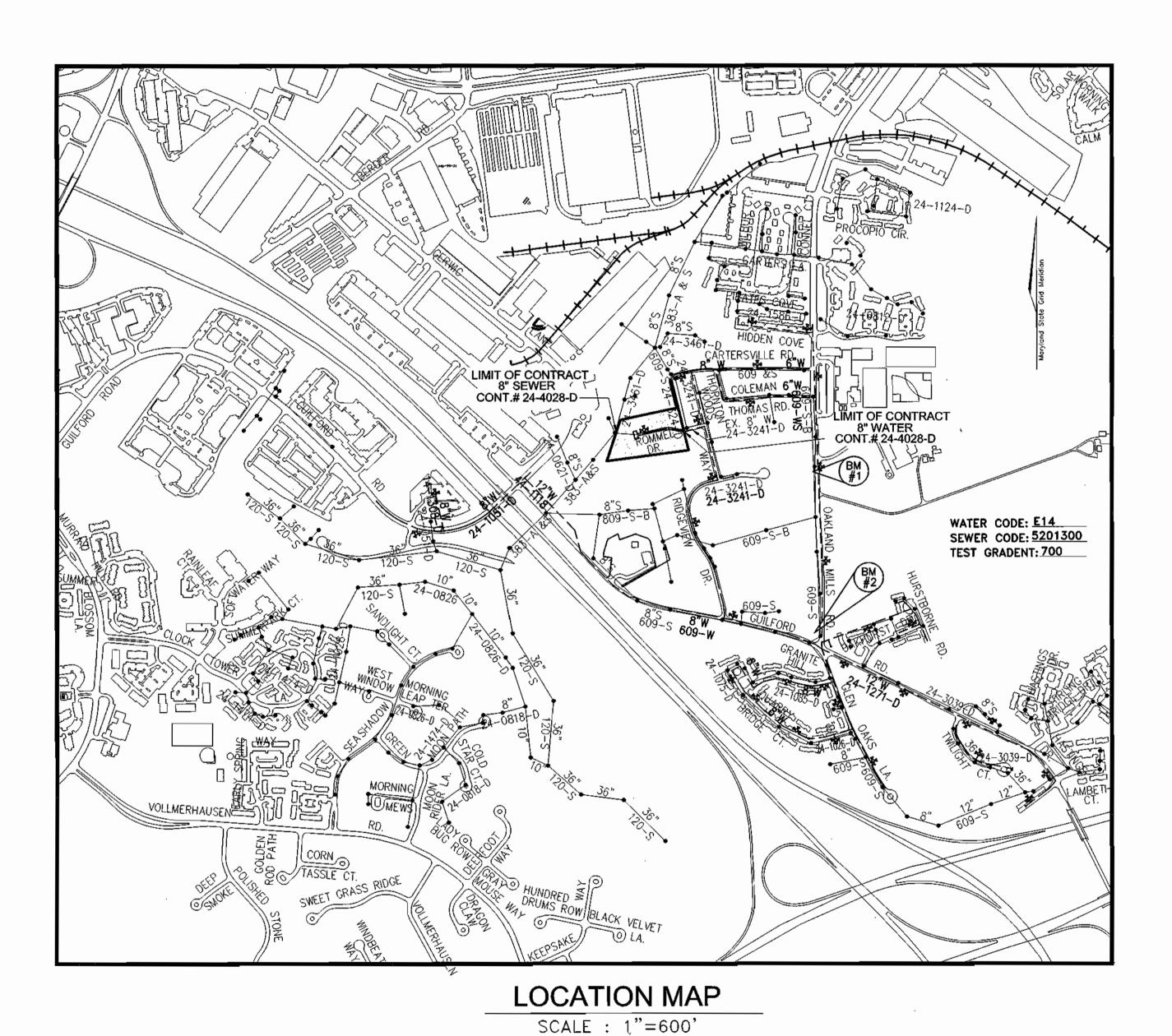
- 1. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- 2. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- 3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED
- 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 AND 1005 OF THE STANDARD SPECIFICATIONS.
- 6. 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

- 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 MAIN SHALL BE D.I.P. ONLY.
- 4. 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 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.

TYPE OF BUILDING:	RESIDENTIAL
NO. OF UNITS/PARCELS:	10
NO. OF WATER HOUSE CONNECTIONS:	10
NO. OF SEWER HOUSE CONNECTIONS:	10
DRAINAGE AREA:	LITTLE PATUXENT
TREATMENT PLANT: LITTLE PATUXENT WRF	·

THORNTON WOODS OVERLOOK CONTRACT NO. 24-4028-D HOWARD COUNTY, MARYLAND



REVISION

VICINITY MAP SCALE: 1"=2000'

BENCHMARKS

BENCHMARK NO. 1: COUNTY CONTROL #42R5 N. 548,777.0609, E. 1,360,3609768 ELEV. = 391.54

BENCHMARK NO. 2: COUNTY CONTROL #42R6 N. 546,822,0895, E. 1,360,340,6529 ELEV. =389.12

OLIANTITIES

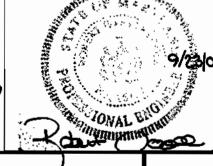
QUANTITIES								
NAME OF UTILITY CONTRACTOR:								
SURVEY AND	SURVEY AND DRAFTING DIVISION AS-BUILT DATE :							
ITEMS	QUANTITIES		AS-	-BUILT				
TIEMS	ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER				
MANHOLE	3 EA.							
8" SEWER	500 LF							
6" VALVE	1 EA.							
8"X6" TEE	1 EA.							
FIRE HYDRANT	1 EA.							
8" CAP & BUTTRESS	1 EA.							
1" W.H.C.	34 LF							
6" WATER	4 LF							
8" WATER	330 LF							
1 1/2"T.W.H.C.	GBLF							
4" S.H.C.	IGOLF	• ,						

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH F-02-126.

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL

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





DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

IRVEYORS Bel Air, Maryland

FREDERICK WARD ASSOCIATES, INC. ENGINEERS | 7125 Riverwood Drive Columbia, Maryland 21046-2354 RCHITECTS Phone: 410-290-9550 Fax: 410-720-6226

Columbia, Maryland

	DRN:	RJ		
	CHK:	JCO		
rginia		CEDT		
-	DATE:	SEPT. 2002	BY	NO.

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WATER & SEWER PLAN

DATE 600' SCALE MAP NO.

THORNTON WOODS OVERLOOK LOTS 1 - 10 HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4028-D

PARCEL '41' HOWARD COUNTY, MARYLAND

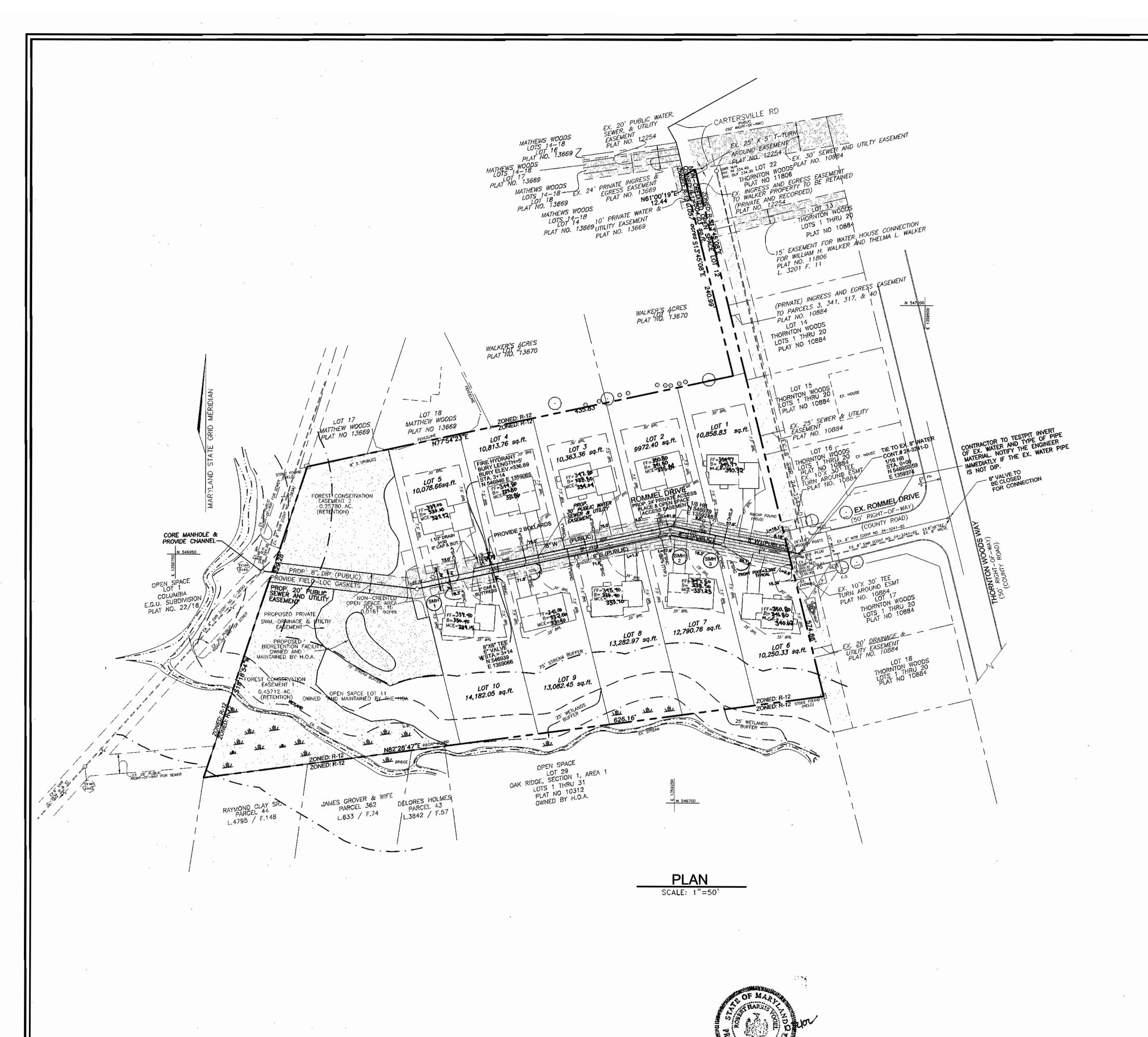
TAX MAP#42 GRID 16

6TH ELECTION DISTRICT

<u>42</u> BLOCK NO. <u>16</u>

SCALE SHOWN SHEET

_ OF <u>3</u>



CURVE TABLE						
CURVE NO.	RADIUS	TANGENT	LENGTH	DELTA	CHORD BEARING	CHORD DISTANCE
C1	150.00'	30.61	60.39'	23'04'00"	N 89*26'23"E	59.98'
C2	150.00'	30.61	60.39'	23'04'00"	S 89*26'23"W	59.98'

Course	Bearing	Distance
L1	N 79°01'37" W	75.96'
L2	N 79°01'37" W	118.57
L3	S 77'54'23" W	34.32'
L5	N 79°01'37" W	119.34
L6	S 77 ' 54'23" W	108.65'
L9	N 79°01'37" W	120.11
L10	S 77°54'23" W	182.98
L12	N 79°01'37" W	120.88
L13	S 77°54'23" W	255.31'
L14	S 79*01'37" E	76.46
L16	N 77*54'23" E	30.12'
L17	S 79*01'37" E	123.18'
L20	S 79°01'37" E	122.41
L22	N 77*54'23" E	176.34
L23	S 79*01'37" E	121.65

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIAT ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226 SURVEYORS Bel Air, Maryland Columbia, Maryland

TES, INC.	DRN:
-2354	СНК:
Warrenton, Virginia	

	Б.					
ES:	RJ					
RN:	ŔĴ					W.A
HK:	JCO					
				REVISE MCE AND HOUSE ELEV		
ATE:	SEPT. 2002	BY	NO.	REVISION	DATE	600' SCALE MAP N
	2002	יטן	14O.	1/5401014		OUU SCALE MAF I

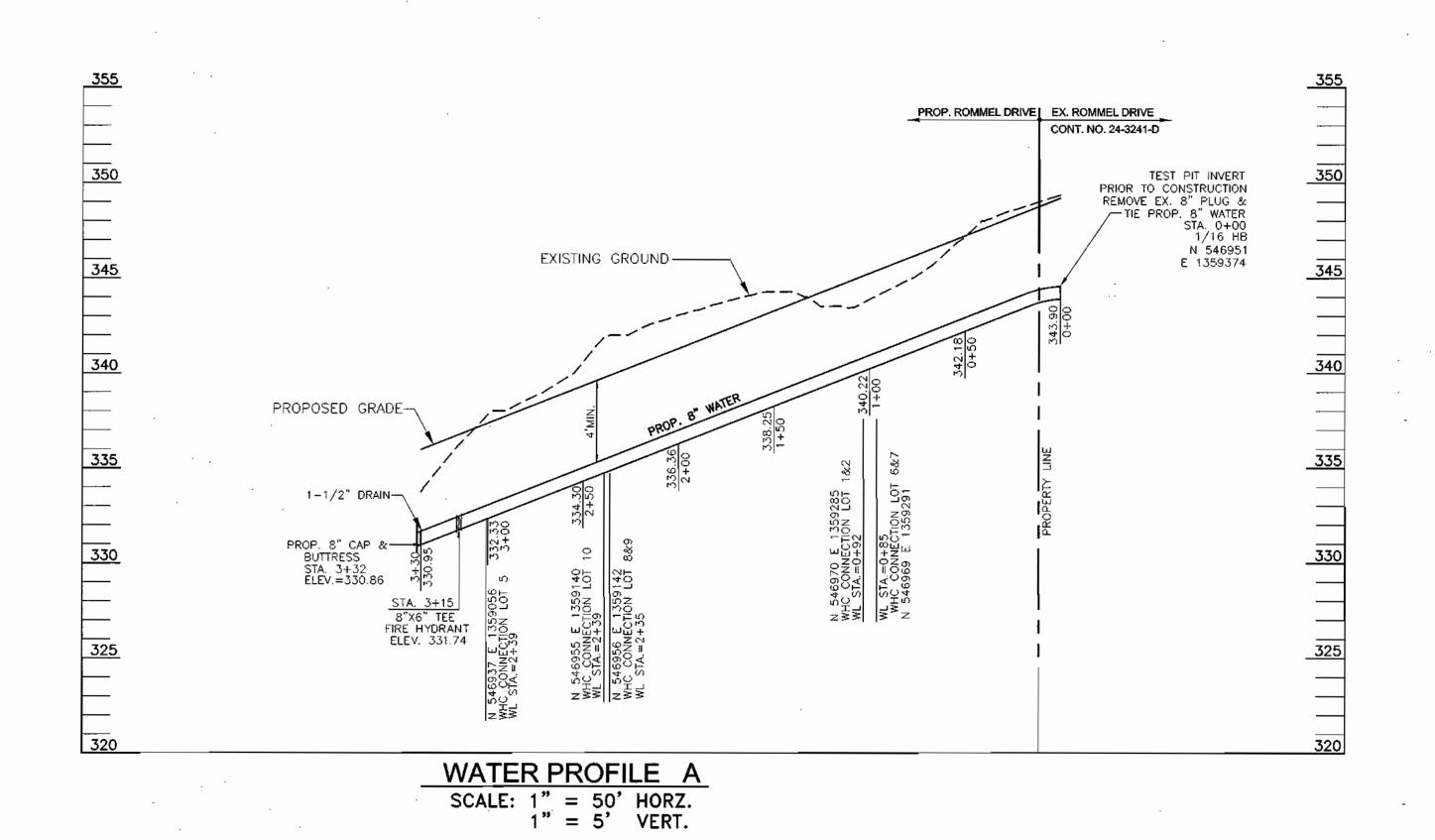
VATER & SEWER PLAN

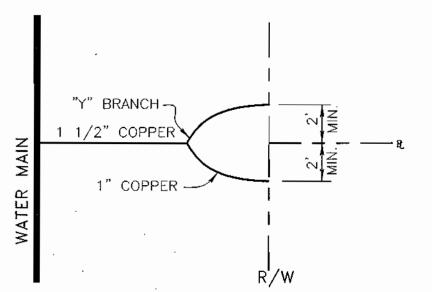
THORNTON WOODS OVERLOOK LOTS 1 - 10 HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4028-D

PARCEL `41' HOWARD COUNTY, MARYLAND TAX MAP#42 GRID 16 6TH ELECTION DISTRICT

SHOWN SHEET 2 OF 3

SCALE AS





TYPICAL TWIN WATER HOUSE CONNECTION DETAIL HOWARD COUNTY STANDARD DETAIL W3.23 NOT TO SCALE

	SEWE	R CONNECTIO	N TABULATION	
LOT NO	TYPE	ELEVATION @ MAIN	ELEVATION @ PUBLIC EASEMENT	M.C.E.
1	S.H.C.	ં 334.3ર	336.72	346.32
2	S.H.C.	331.88	332.28	335.84
3	- S.H.C.	330.00	330.40	334.04
4	S.H.C.	.3 37.88 %	338,38	33186
5	S.H.C.	335.88	396.98	329.92
6	S.H.C.	336.32	336.62	340.62
7	S.H.C.	33353	333.73	337.33
8	S.H.C.	330.00	33020	333.76
9	S.H.C.	- 328.2 v	328.40	331.90
10	S.H.C.	32565	325.85	339.15
			-	<u> </u>

MANHOLE LOCATION CHART					
MANHOLE NO.	TYPE	LOCATION	TOP ELEVATION		
SMH 1	DROP MANHOLE TYPE 'B' HO. CO. STD. DET. \$1.32	N 546915 E 1358992	345.98		
SMH 2	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 546970 E 1359245	343.91		
SMH 3	STD. PRECAST MH HO. CO. STD. DET. G5.12	N 546959 E 13 <u>59298</u>	333.58°		
			-		

EXISTING GROUND-PROPOSED GRADE-E.G.U. SUBDIVISION | THORTON WOODS CONT. NO. C-383A EX. 8" S→ INV. OUT 294.36 SEWER PROFILE

DEPARTMENT OF PUBLIC WORKS

DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND HOWARD COUNTY, MARYLAND

	FREDERICK '	WARD	ASSC	CIAT	ES. INC).
s	7125 Riverwood Drive	Columbia,	Maryland	21046-	2354	
s	Phone: 410-290-95	50 Fax:	410-720	-6226		
x l	Rel Air Maryland	Columb	ia Marylar	ad	Warrenton	Vir

FC.	D.I.					
ES:	RJ					
RN:	RJ					
шv.	JCO					
ΠIX.	300					
	SEDT			REVISE SELLER BETWEEN SMH-1 9 SMH-3		
ATE:	SEPT. 2002	BY	NO.	REVISION	DATE	600' SCAL

WATER & SEWER
PLAN
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THORNTON WOODS OVERLOOK LOTS 1 - 10 HOWARD COUNTY, MARYLAND CONTRACT NO. 24-4028-D

SHOWN SHEET 3 of 3

SCALE AS

PARCEL '41' TAX MAP#42 GRID 16 ______BLOCK NO. _____16 ALE MAP NO. HOWARD COUNTY, MARYLAND **6TH ELECTION DISTRICT**