

GENERAL NOTES

I. STANDARD GENERAL NOTES

- APPROXIMATE LOCATIONS 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 AUGUST 2006 BY SILL, ADCOCK & ASSOCIATES, LLC.
- THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON THE MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 1618 AND NO. 17AB. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE CONCRETE MONUMENTS.
- 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 BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWING, 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 LOCATIONS OF THE TEST PITS. 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.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON PLANS:

A T & T	1-800-252-1133
BGE (CONSTRUCTION SERVICES)	410-850-4820
BGE (EMERGENCY)	410-850-1400
BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE COMPANY	410-795-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERIZON	1-800-743-0033/1-800-224-9210
- 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 CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-7450 AT LEAST 5 WORKING DAYS BEFORE 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(a) OF THE HOWARD COUNTY CODE.
- ALL HOUSE CONNECTION AND TAPS TO BE MADE USING SADDLES.
- ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE, CONTINUITY TEST STATIONS AND OTHER REQUIREMENTS MUST BE IN ACCORDANCE WITH THE VOLUME IV DESIGN STANDARDS.

II. STANDARD WATER MAIN GENERAL NOTES

- ALL WATER MAINS TO BE P.V.C. IN ACCORDANCE TO HOWARD COUNTY DESIGN MANUAL, VOLUME IV, UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO 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 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE 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.
- ALL IRON FITTINGS TO BE EPOXY COATED FOR CORROSION PROTECTION.
- ALL BENDS FOR PVC PIPE TO UTILIZE HIGH DEFLECTION COUPLINGS.

III. STANDARD SEWER MAIN GENERAL NOTES

- ALL SEWER MAINS SHALL BE DIP 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 COVERS, STANDARD DETAIL GS.52. WHERE WATERTIGHT FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

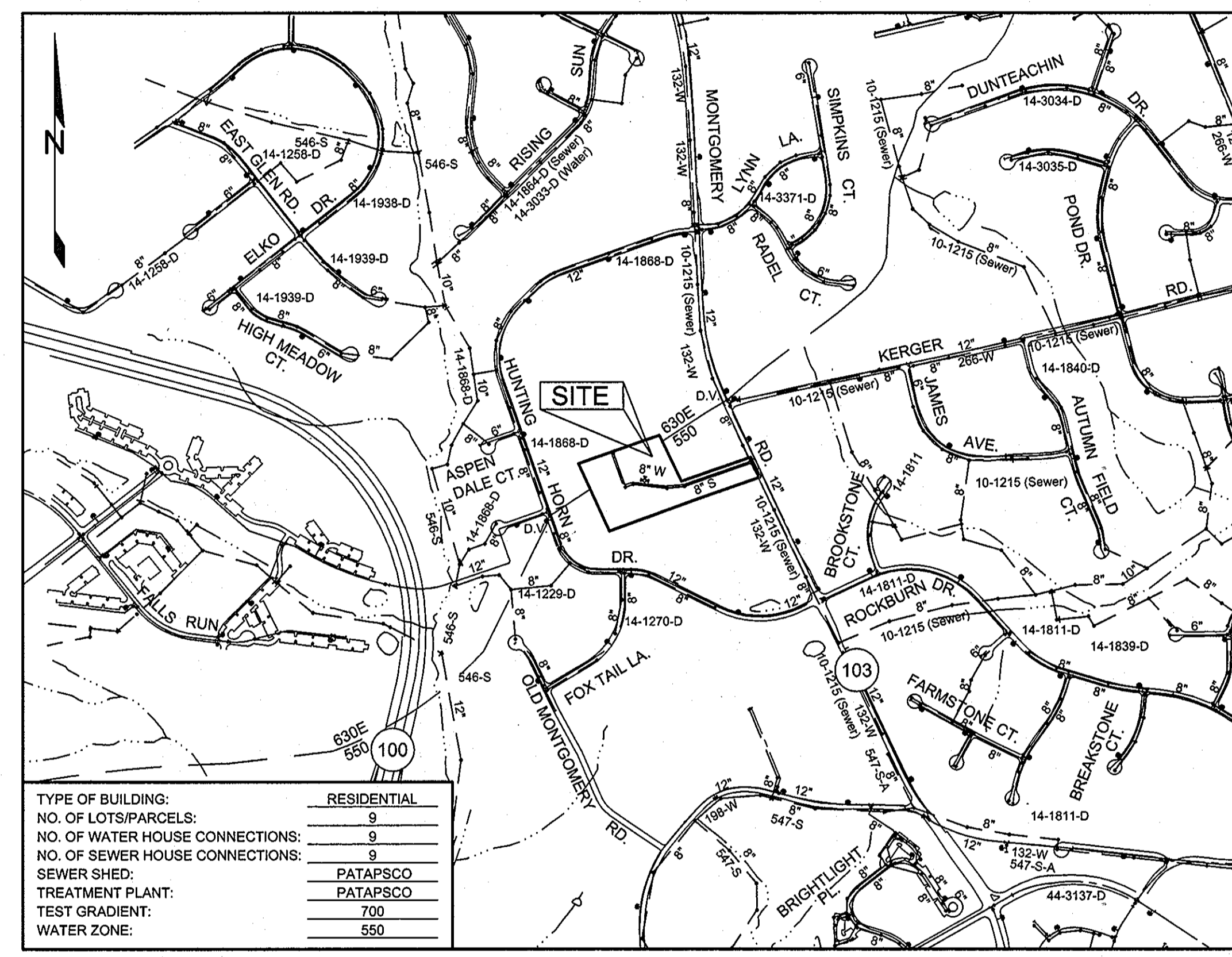
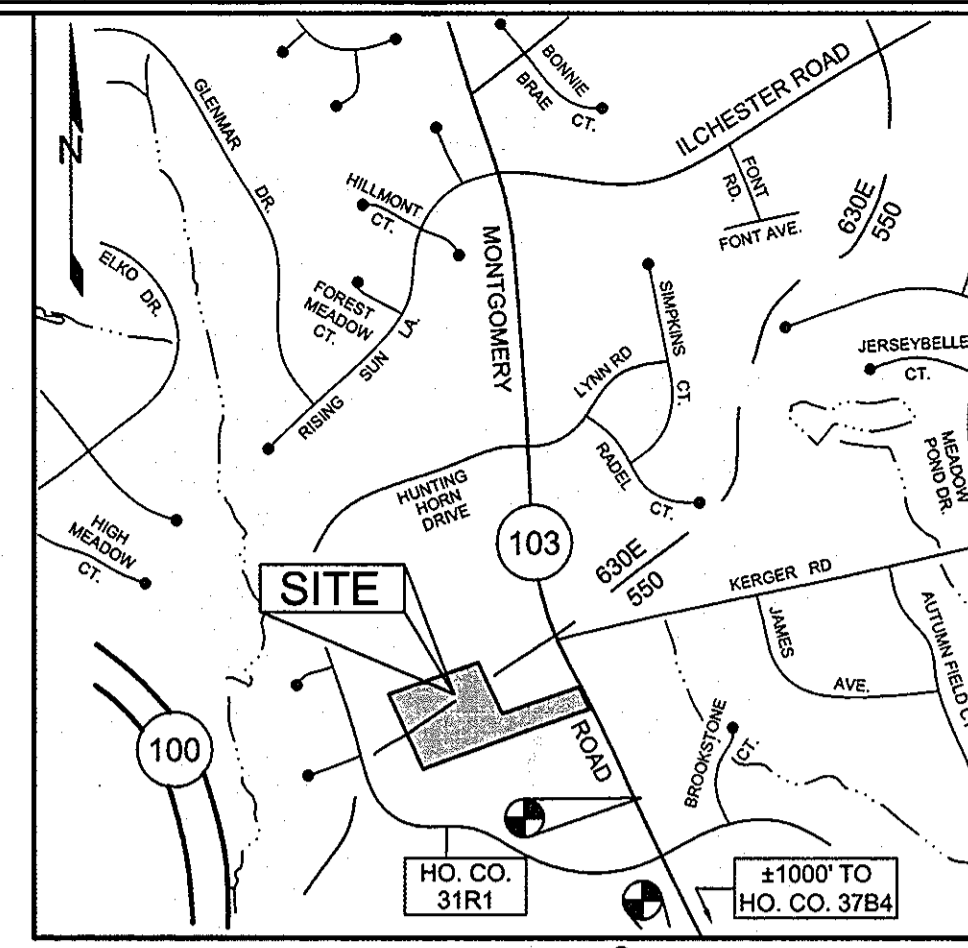
PUBLIC WATER AND SEWER PLAN

BONNIE ORCHARD

LOTS 1 THRU 9 AND OPEN SPACE LOTS 10 AND 11

HOWARD COUNTY, MARYLAND

CONTRACT NO. 14-4422-D



LOCATION PLAN
SCALE: 1"=600'

BENCHMARKS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
31R1	565,303.4777	1,372,517.7171	400.99'	EAST SIDE OF MONTGOMERY ROAD, 45.8' SOUTH OF FIRE HYDRANT, 50.5' NORTH OF POLE 854189
37B4	563,928.5542	1,373,109.1044	401.41'	SOUTHWEST CORNER OF MONTGOMERY ROAD AND OLD MONTGOMERY ROAD INTERSECTION, 41.1' WEST OF SEWER MANHOLE 854189, 41.1' EAST OF POLE 854189

QUANTITIES					
NAME OF UTILITY CONTRACTOR: COSENTINO CONTRACTING CO.					
SURVEY AND DRAFTING DIVISION AS-BUILT:					
ITEMS	QUANTITIES		AS-BUILT		
	ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER	
8" PVC (WATER)	925 LF	940 LF	8" C900 MR-18	JM EAGLE	BR5
8" PVC (SEWER)	887 LF	910 LF	14" PVC SDR 35	JM EAGLE	BR5
8" VALVE	2	2	8" PSCOR GATE V	MULLER	BR5
8"x12" TS & V	1	1	8" x12" TS & V	POMAC IND.	BR5
8"x6" FHT	1	1	MJ HYD. TEE RUSHON	STAR PIPE	BR5
FIRE HYDRANT	1	1	5'x6" MULLER H. BANG.	MULLER	BR5
SEWER MANHOLE	6	6			
4" SHC	209 LF	462 LF	SMR-35 PVC	JM EAGLE	BR5
1" WHC	191 LF				

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PROFILES

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLANS F-08-122

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

 SOIL CONSERVATION DISTRICT DATE: 1/26/10

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE: JUNE 20, 2011.

Sill · Adcock & Associates · LLC
 Engineers · Surveyors · Planners
 3300 North Ridge Road, Suite 160
 Ellicott City, Maryland 21043
 Phone: 443.325.7682 Fax: 443.325.7685
 Email: info@sadall.com

DESIGNED BY: PS
 DRAWN BY: PS
 CHECKED BY: PS
 DATE: DECEMBER 18, 2009

NO.	DESCRIPTION	DATE

COVER SHEET

600' SCALE MAP NO. 31 BLOCK NO. 20

BONNIE ORCHARD
 LOTS 1 THRU 9 AND OPEN SPACE LOTS 10 AND 11

TAX MAP 31 GRID 20 PARCEL 565 & 595
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTRACT NO. 14-4422-D

SCALE: AS SHOWN
 SHEET NO. 1 OF 3

AS BUILTS
 BY: DJR DATE: 8/4/11

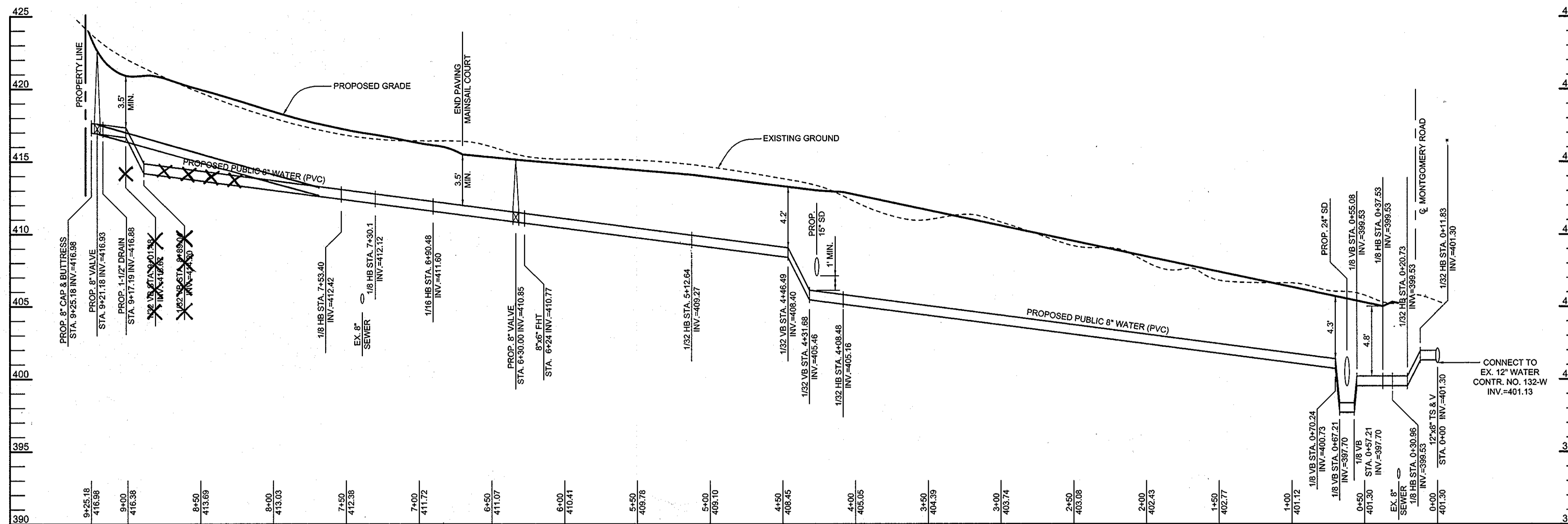
OWNER/DEVELOPER
 BONNIE ORCHARD, LLC
 8835 P COLUMBIA 100 PARKWAY
 COLUMBIA, MARYLAND 21045
 410.730.1810

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES DATE: 1/26/10

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 2/5/10

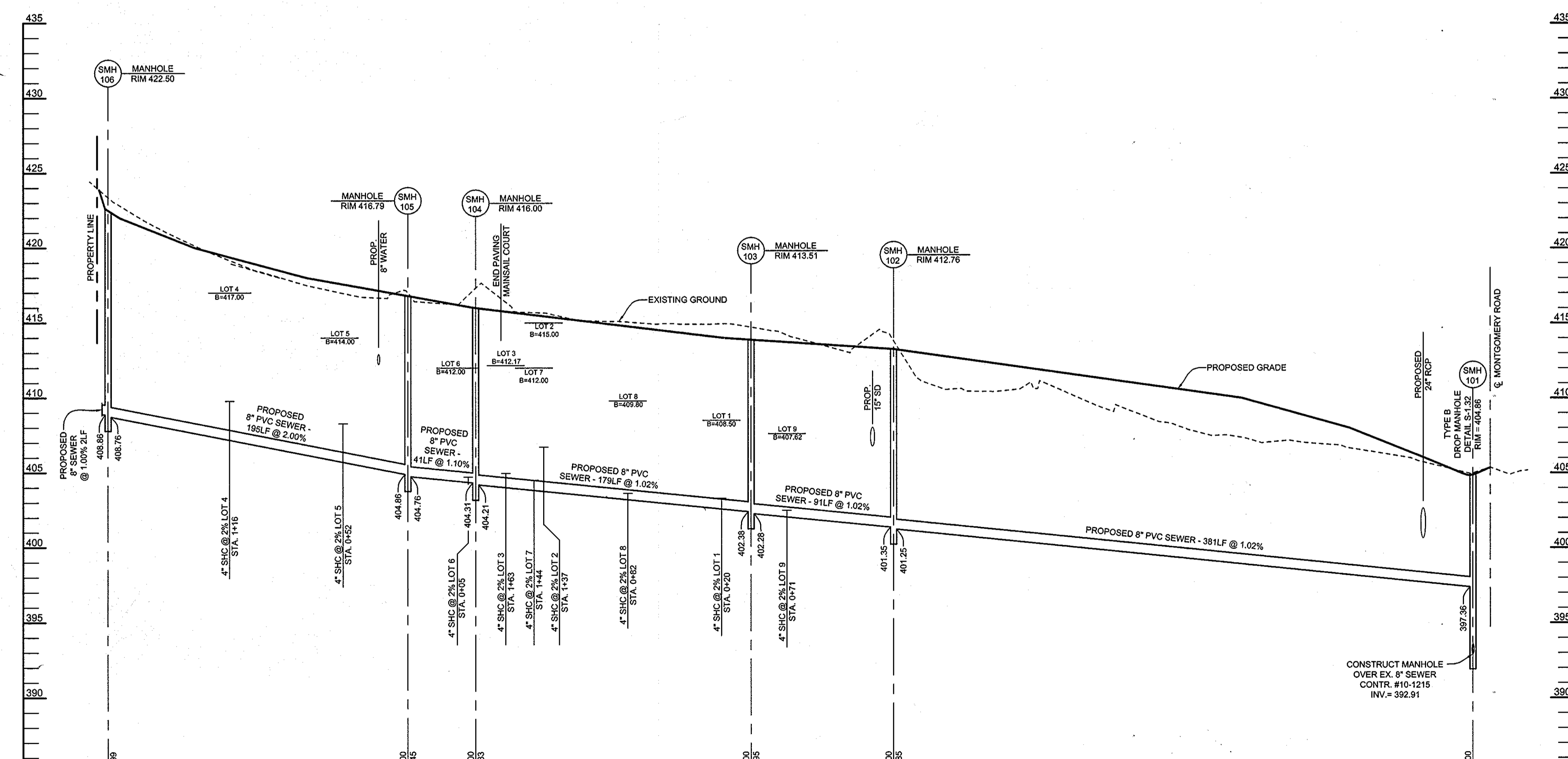


WATER PROFILE
SCALE: HORIZ.: 1"=50'
VERT.: 1"=5'

SEWER HOUSE CONNECTION SCHEDULE			
LOT NO.	INVERT @ MAIN	INVERT @ RW	MIN. CELLAR ELEV.
1	402.75	403.30	408.10
2	405.93	406.72	413.83
3	404.18	404.97	410.70
4	409.38	409.79	415.64
5	407.87	408.28	413.75
6	404.53	404.72	411.15
7	403.99	404.50	411.79
8	403.37	403.63	409.17
9	402.22	402.50	407.08

STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
101	STD. 4' PRECAST MANHOLE	@ STA. 0+10.8 5.0' LEFT	404.86	397.38	393.01	G-5.12
102	STD. 4' PRECAST MANHOLE	@ STA. 3+95.4 6.5' LEFT	412.76	401.33	401.23	G-5.12
103	STD. 4' PRECAST MANHOLE	@ STA. 4+89.4 6.5' LEFT	413.51	402.38	402.28	G-5.12
104	STD. 4' PRECAST MANHOLE	N 565,589.7 E 1,371,611.0	416.00	404.31	404.21	G-5.12
105	STD. 4' PRECAST MANHOLE	N 565,644.1 E 1,371,568.3	416.79	404.87	404.77	G-5.12
106	STD. 4' PRECAST MANHOLE	N 565,632.0 E 1,371,502.1	422.50	408.93	408.83	G-5.12

NOTES:
1. TOP ELEVATIONS FOR PRECAST MANHOLES ARE TO THE CENTER TOP OF MANHOLE COVER.
2. TOP SLOPE OF STRUCTURES TO CONFORM TO SLOPE OF PAVING.
3. LOCATION COORDINATES ARE CENTER OF STRUCTURE FOR MANHOLES.



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

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 1		SMH 2 - 123'	SMH 3 - 42'
LOT 2		F.H. - 25'	SMH 4 - 55.7'
LOT 3		SMH 5 - 138'	SMH 6 - 61.2'
LOT 4		SMH 5 - 131.2'	SMH 6 - 72'
LOT 5		SMH 4 - 86.5'	SMH 5 - 58.5'
LOT 6		F.H. - 89.5'	SMH 4 - 28'
LOT 7		F.H. - 61'	SMH 4 - 39.3'
LOT 8		F.H. - 56'	SMH 4 - 92'
LOT 9		SMH 2 - 82'	SMH 3 - 22'

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 1		SMH 2 - 112.5'	SMH 3 - 35.4'
LOT 2		SMH 4 - 61.4'	SMH 5 - 107'
LOT 3		SMH 4 - 44'	SMH 5 - 87'
LOT 4		SMH 5 - 141.2'	SMH 6 - 62'
LOT 5		SMH 4 - 79.4'	SMH 5 - 48.6'
LOT 6		SMH 4 - 13'	SMH 5 - 41.6'
LOT 7		SMH 4 - 47.5'	F.H. - 57.5'
LOT 8		SMH 3 - 85.6'	F.H. - 59.75'
LOT 9		SMH 2 - 71.4'	SMH 3 - 28'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES
DATE: 11/4/10

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 2/5/10
N.G.

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Phone: 443.325.7682 Fax: 443.325.7685
Email: info@saand.com

DESIGNED BY: PS
DRAWN BY: PS
CHECKED BY: PS
DATE: DECEMBER 18, 2009

STATE OF MARYLAND
PAUL M. SILL
LICENSED PROFESSIONAL ENGINEER
NO. 32025
EXPIRES JUNE 20, 2011

NO.	DESCRIPTION	DATE

WATER AND SEWER PROFILES
600' SCALE MAP NO. 31 BLOCK NO. 20

BONNIE ORCHARD
LOTS 1 THRU 9 AND OPEN SPACE LOTS 10 AND 11
TAX MAP 31 GRID 20 1ST ELECTION DISTRICT
PARCEL 565 & 595 HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-4422-D

SCALE: AS SHOWN
SHEET NO. 3 OF 3

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BY: OPI DATE: 8/4/11
OWNER/DEVELOPER
BONNIE ORCHARD, LLC
8835-F COLUMBIA 100 PARKWAY
COLUMBIA, MARYLAND 21045
410.730.1810