

**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.
- TOPOGRAPHY SHOWN HEREON IS OBTAINED FROM AERIAL PHOTOGRAMMETRY COMPILED BY POTOMAC AERIAL SURVEYS INC. JANUARY 12, 2012.
- THE PROPERTY OUTLINE SHOWN HEREON IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING INC., DATED FEBRUARY 2012.
- THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 47H2 AND 47GC. ALL VERTICAL CONTROLS ARE BASED ON (NAVD' 88). VERTICAL CONTROLS PROVIDED ON DRAWINGS ARE:  
 GEODETIC SURVEY CONTROL 47H2 (N 529706.4221 E 1355445.3364)  
 BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.  
 GEODETIC SURVEY CONTROL 47GC (N 528939.7281 E 1354223.5536)  
 BRASS DISC SET ON TOP OF A CONCRETE MONUMENT.
- 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 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 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 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 THESE PLANS:  
 AT&T (CONTRACTOR SERVICES) 1-800-252-1133  
 BGE (EMERGENCY) 410-657-8713  
 BUREAU OF UTILITIES 410-685-0123  
 COLONIAL PIPELINE COMPANY 410-313-4900  
 MISS UTILITY 410-795-1360  
 STATE HIGHWAY ADMINISTRATION 1-800-257-7777  
 VERIZON 410-531-5533  
 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 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.

**PART II - WATER**

- ALL WATER MAINS TO BE C-900 PVC (DR-18) 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.
- SPRINKLER SYSTEM FOR SINGLE RESIDENTIAL DWELLING UNITS SHALL HAVE WATER HOUSE CONNECTIONS AND WATER METERS THAT ARE SIZED IN ACCORDANCE WITH THE DESIGN OF THE SPRINKLER SYSTEMS. SPRINKLER SYSTEMS FOR SINGLE RESIDENTIAL DWELLINGS SHALL HAVE A MINIMUM OF 1.5" SERVICE CONNECTION WITH A 1" OUTSIDE METER SETTING.
- TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. SEVENTEEN (17) POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. TWELVE (12) POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
- PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS. THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.
- ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 3-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED, WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING.

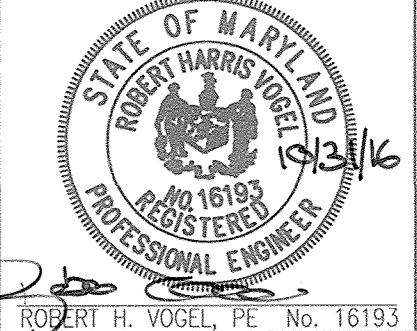
SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF VOLUME IV AND WITH FINAL PLAN F-16-011.

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
  
 SOIL CONSERVATION DISTRICT  
 11/16/16  
 DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
  
 CHIEF, BUREAU OF UTILITIES  
 DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 12.5.16  
 DATE

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



PROFESSIONAL CERTIFICATE  
 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. 16193.  
 EXPIRATION DATE: 09-27-2018  
 DES: GH / EDS  
 DRN: GH  
 CHK: RHV  
 DATE: OCTOBER 2016 NO. REVISION DATE

**FINAL WATER AND SEWER PLAN  
 TITLE SHEET**

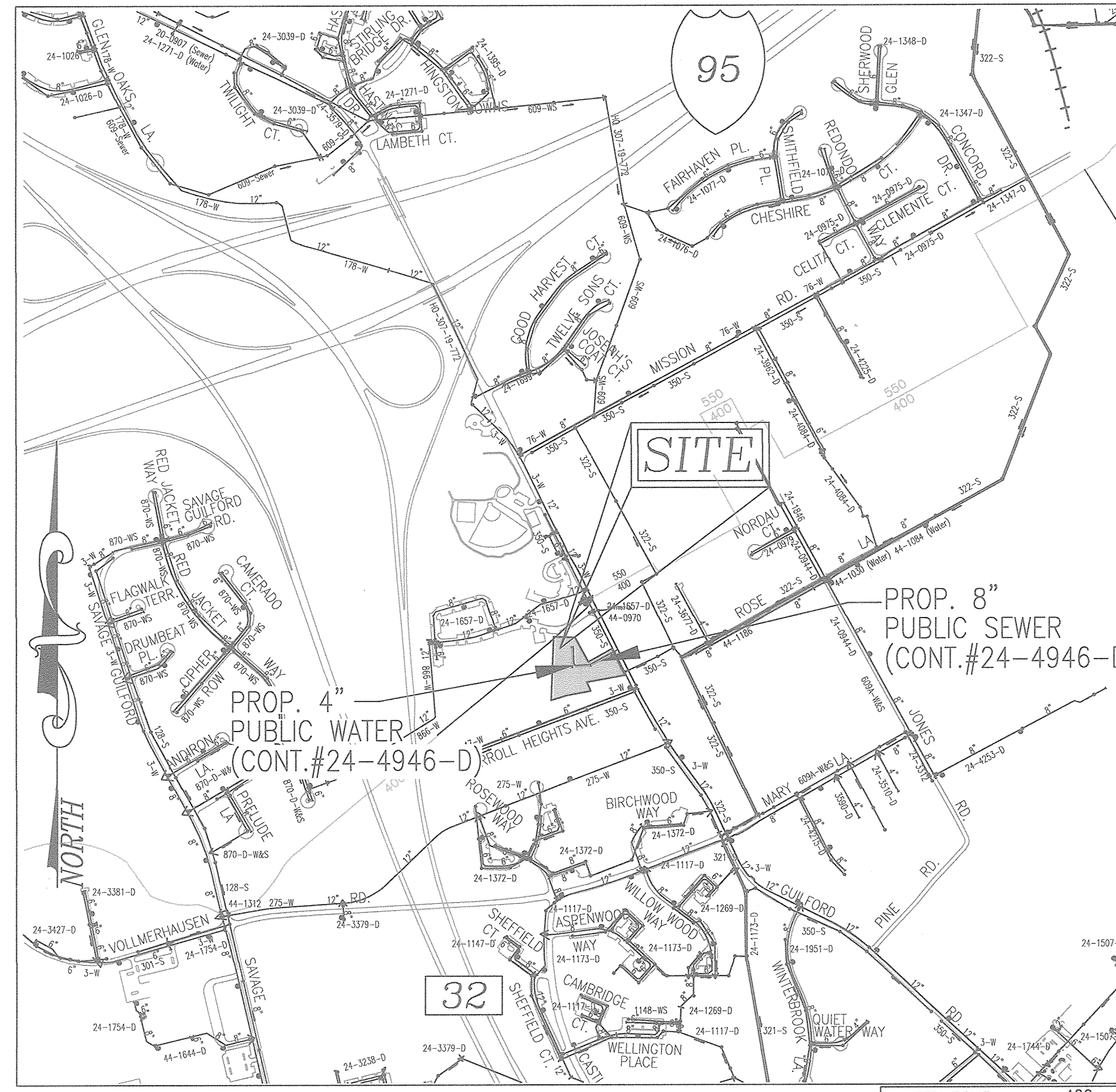
**COTTAGE GROVE  
 LOTS 1-4 AND OPEN SPACE LOT 5  
 CONTRACT NO. 24-4946-D**

TAX MAP 42, GRID 24  
 6TH ELECTION DISTRICT  
 PARCEL 101  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 1 OF 3

# FINAL WATER AND SEWER PLAN COTTAGE GROVE

LOTS 1-4 AND OPEN SPACE LOT 5  
 GUILFORD ROAD  
 ZONED R-12  
 HOWARD COUNTY, MARYLAND  
 CONTRACT 24-4946-D



VICINITY MAP  
 SCALE: 1"=600'

WATER ZONE: 400  
 TEST GRADIENT: 550

TYPE OF BUILDING :	SINGLE FAMILY DETACHED
NO. OF LOTS/PARCELS :	4
NO. OF SINGLE WATER HOUSE CONNECTIONS :	4
NO. OF TWIN WATER HOUSE CONNECTIONS :	0
NO. OF SEWER HOUSE CONNECTIONS :	4
DRAINAGE AREA:	LITTLE PATUXENT WRP

PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1.5-DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTIFIED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.

FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS, (IPEX) BLUE BRUTE DR18 OR EQUAL.

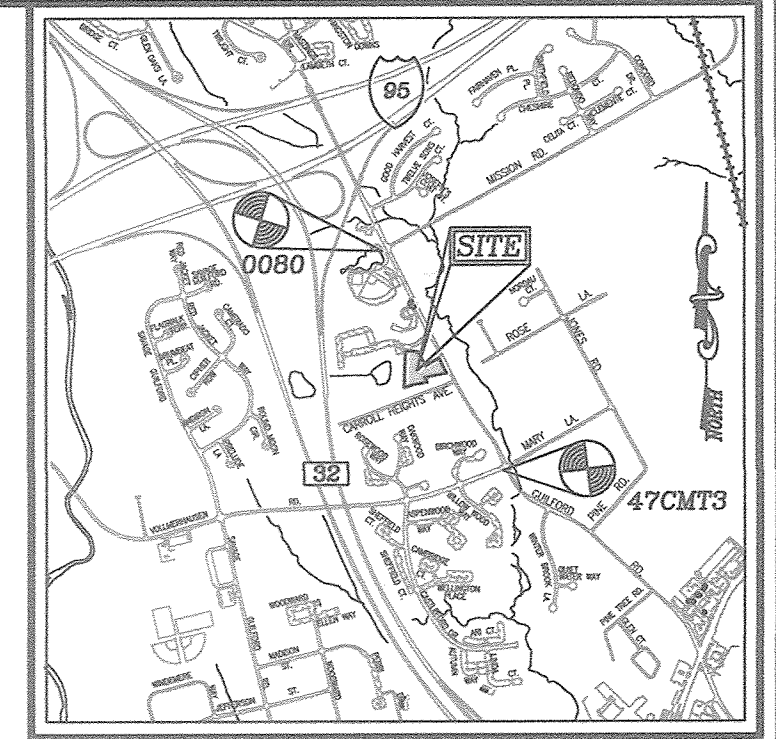
WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATE AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC., OR APPROVED EQUAL.

**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 COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT 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.

**BENCHMARKS**

COORDINATES BASED ON NAD 83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 0080, 47CMT3.  
 HOWARD COUNTY BENCHMARK  
 0080 N 542366.914 E 1363075.974 ELEV. 282.392  
 47CMT3 N 540092.293 E 1364340.611 ELEV. 212.962



LOCATION MAP  
 SCALE: 1"=2000'  
 ADC MAP COORDINATE: 40, F-2

**LEGEND:**

	EXISTING CURB AND GUTTER
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROPOSED PRIVATE WATER
	PROPOSED PRIVATE SEWER
	PROPOSED PUBLIC WATER
	PROPOSED FIRE HYDRANT
	PROPOSED PUBLIC SEWER

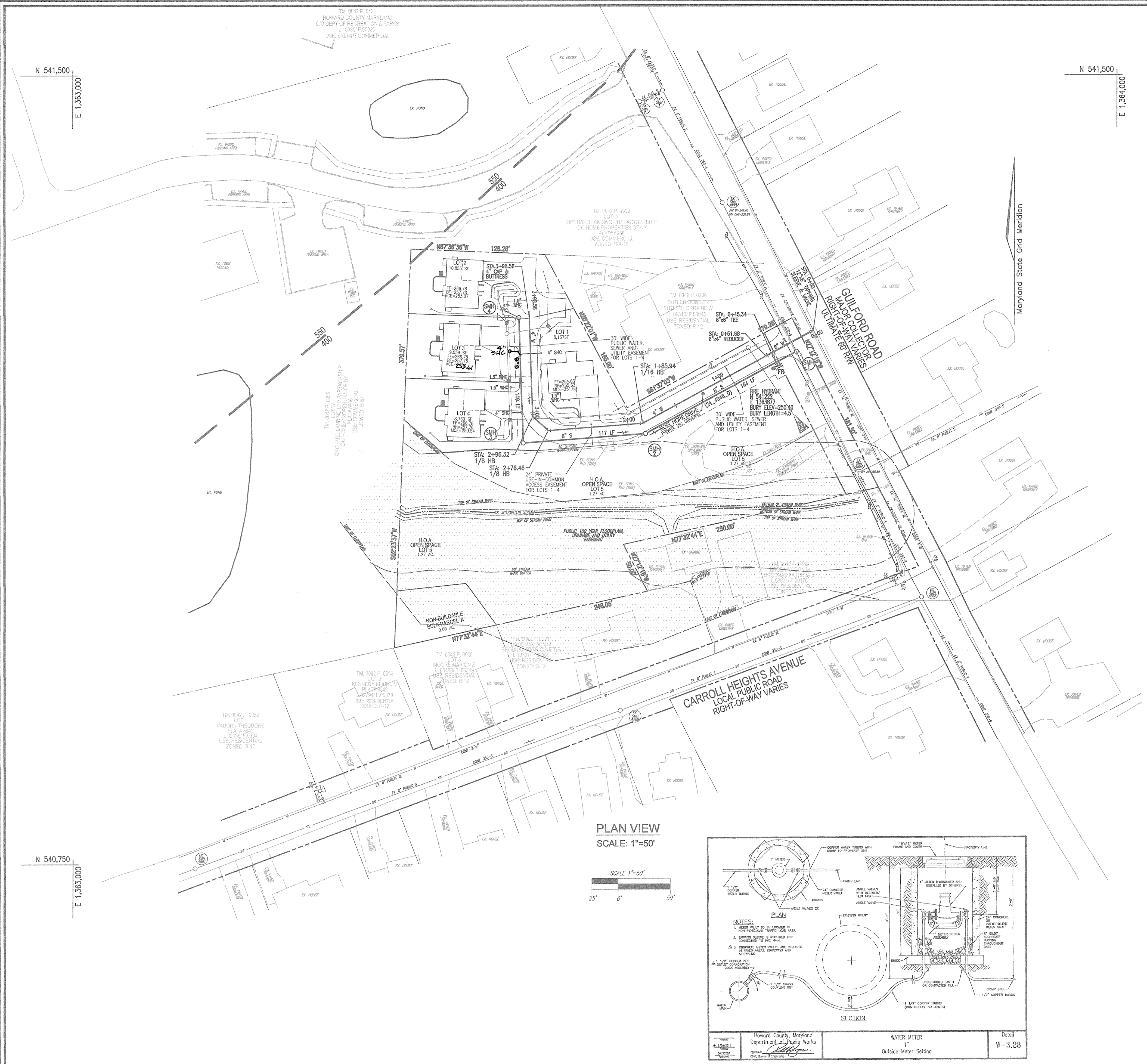
NAME OF UTILITY CONTRACTOR :		QUANTITIES ESTIMATED		QUANTITIES AS-BUILT		TYPE		MANUFACTURER/SUPPLIER	
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :									
WATER									
12" x 6" TAPPING SLEEVE	1 EA	0	1 EA	0	1 EA	0	1 EA	0	1 EA
6" WATER	52 LF	52 LF	52 LF	0	0	0	0	0	0
4" WATER	347 LF	347 LF	347 LF	0	0	0	0	0	0
1.5" WMC	30 LF	30 LF	30 LF	0	0	0	0	0	0
4" 1/8" HB	3 EA	3 EA	3 EA	0	0	0	0	0	0
6" 2" VERT COUPLING	1 EA	1 EA	1 EA	0	0	0	0	0	0
4" CAP AND BUTTRISS	1 EA	1 EA	1 EA	0	0	0	0	0	0
6" x 6" TEE	1 EA	1 EA	1 EA	0	0	0	0	0	0
6" VALVE	2 EA	2 EA	2 EA	0	0	0	0	0	0
FIRE HYDRANT	1 EA	1 EA	1 EA	0	0	0	0	0	0
1" WATER METER	4 EA	4 EA	4 EA	0	0	0	0	0	0
6" x 4" REDUCER	1 EA	1 EA	1 EA	0	0	0	0	0	0
SEWER									
8" PVC SEWER	400 LF	400 LF	400 LF	0	0	0	0	0	0
4" PVC SEWER	51 LF	51 LF	51 LF	0	0	0	0	0	0
4" CO	4 LF	4 LF	4 LF	0	0	0	0	0	0
4" MANHOLE	4 LF	4 LF	4 LF	0	0	0	0	0	0

\*(1) MJ TAPPING VALVE  
 (1) MJ GATE VALVE  
 \*(3) PRECAST (1) DOGHOUSE

**AS-BUILT**  
 10/10/18

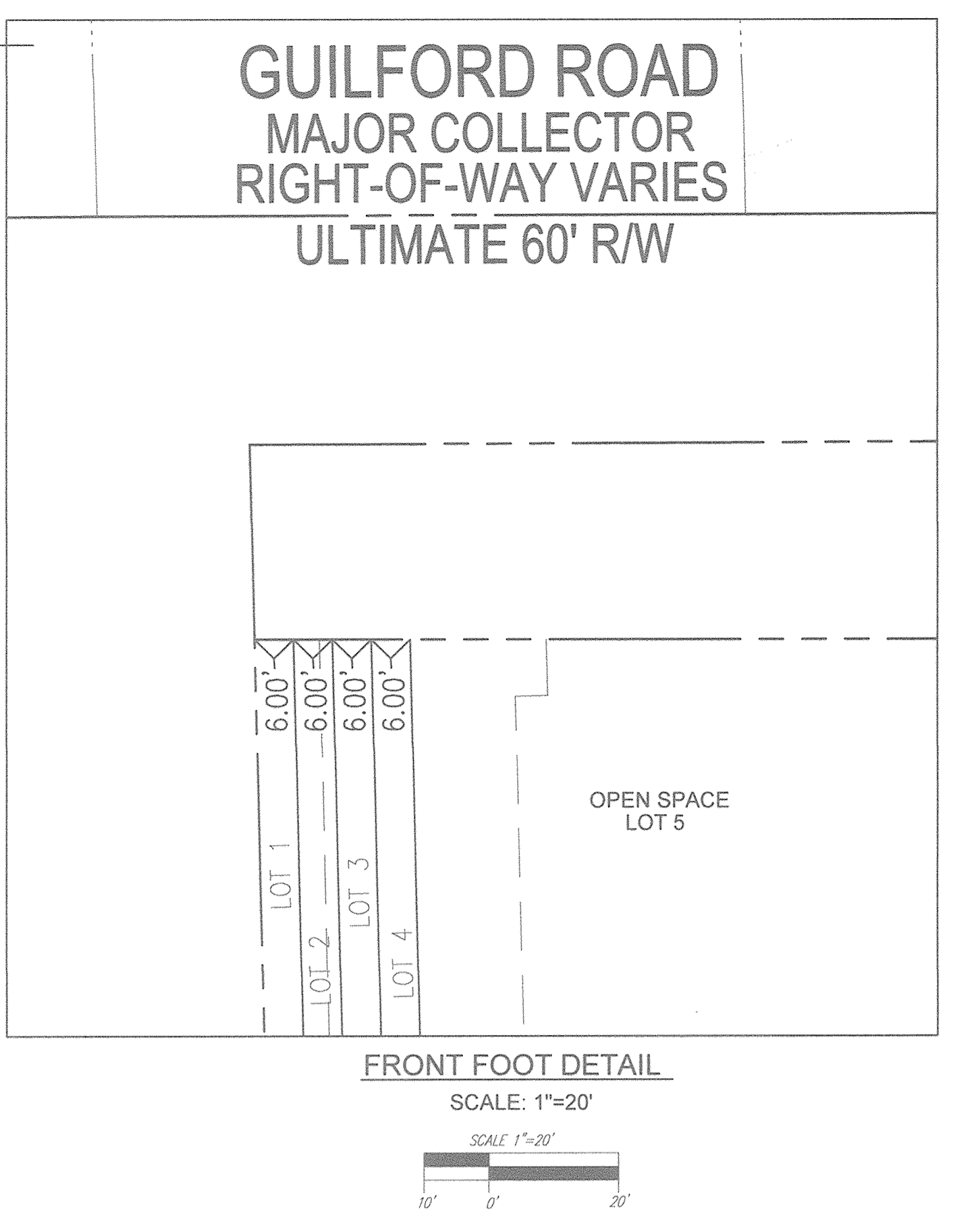
OWNER: HAMPTON HILLS, LLC  
 3675 PARK AVE., SUITE 301  
 ELLICOTT CITY, MD 21043  
 (410) 480-0023

DEVELOPER: TRINITY HOMES MARYLAND LLC  
 3675 PARK AVE., SUITE 301  
 ELLICOTT CITY, MD 21043  
 (410) 480-0023



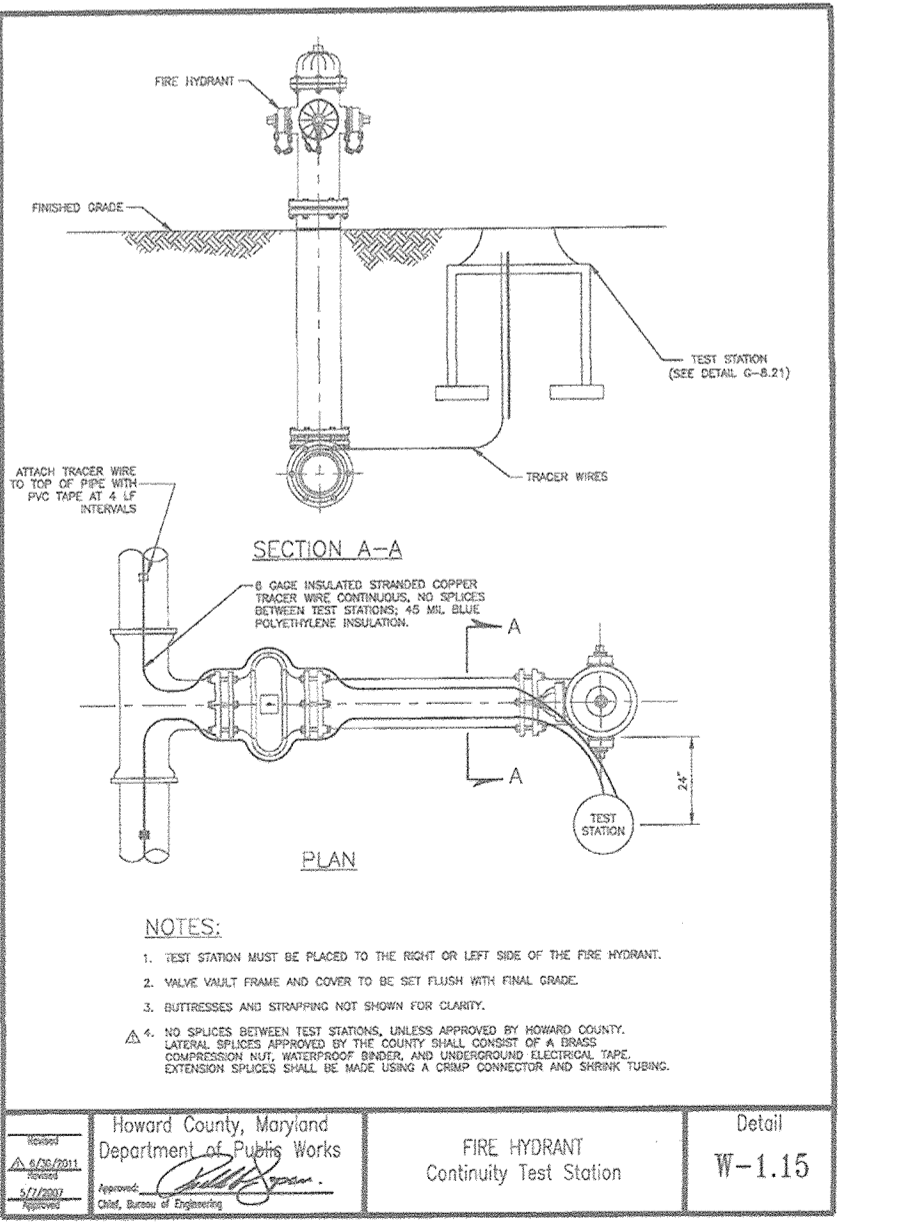
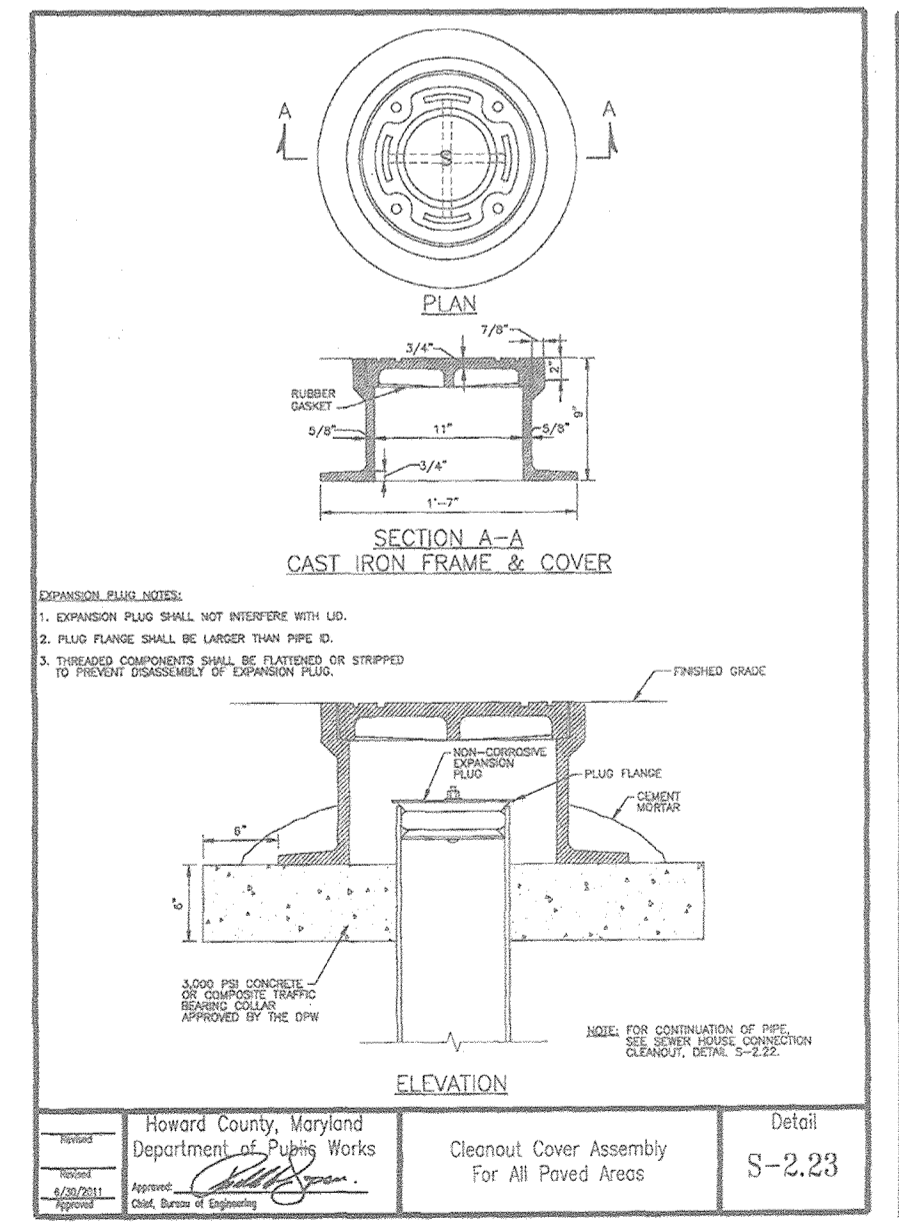
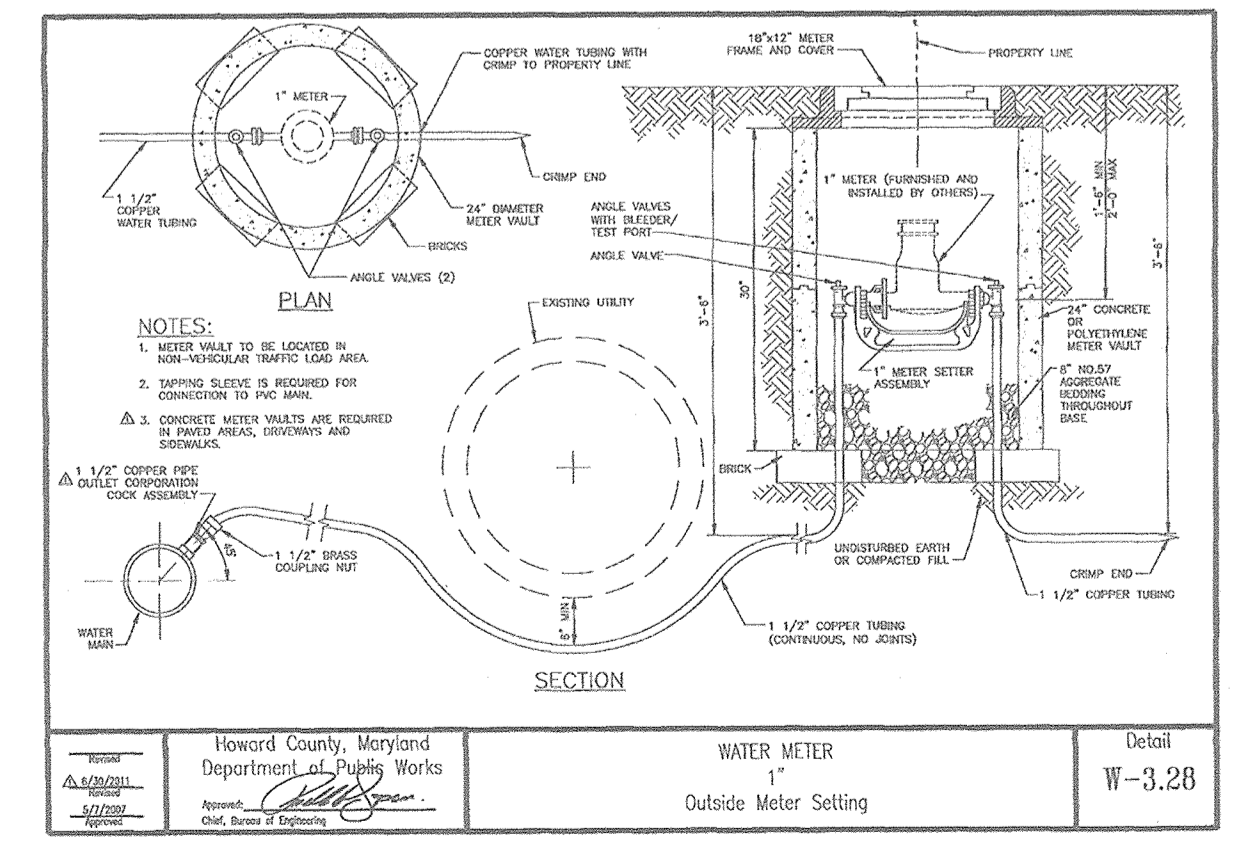
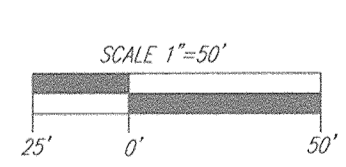
**LEGEND:**

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING MANHOLE
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED WATER MAIN
	PROPOSED TEE
	PROPOSED SEWER
	WATER HOUSE CONNECTION
	SEWER HOUSE CONNECTION



**AS-BUILT**  
Date 10/31/13

**PLAN VIEW**  
SCALE: 1"=50'



**OWNER**  
HAMPTON HILLS, LLC  
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(410) 480-0023

**DEVELOPER**  
TRINITY HOMES MARY LAND LLC  
3675 PARK AVE., SUITE 301  
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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

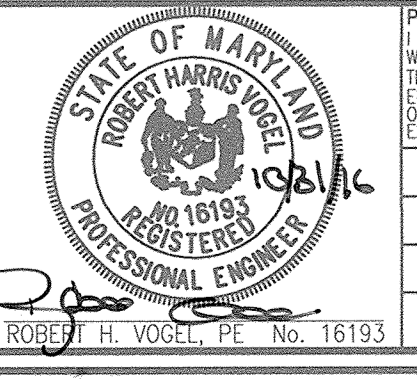
*Chad C. Green*  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*Chad C. Green*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

12.5.16  
DATE

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PROFESSIONAL CERTIFICATE  
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DES:	GH / EDS
DRN:	GH
CHK:	RHV
DATE:	OCTOBER 2016
NO.:	
REVISION:	
DATE:	

**FINAL WATER AND SEWER PLAN**  
PLAN VIEW

600' SCALE MAP NO. 42  
BLOCK NO. 24

**COTTAGE GROVE**  
LOTS 1-4 AND OPEN SPACE LOT 5  
CONTRACT NO. 24-4946-D

TAX MAP 42, GRID 24  
6TH ELECTION DISTRICT

PARCEL 101  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 3

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 1		WHC-SMH-3-46.5'	WHC-SMH-4-81.2'
LOT 2		WHC-SMH-3-133.3'	WHC-SMH-4-16.3'
LOT 3		WHC-SMH-3-65.7'	WHC-SMH-4-56.7'
LOT 4		WHC-SMH-3-36.1'	WHC-SMH-4-66.3'

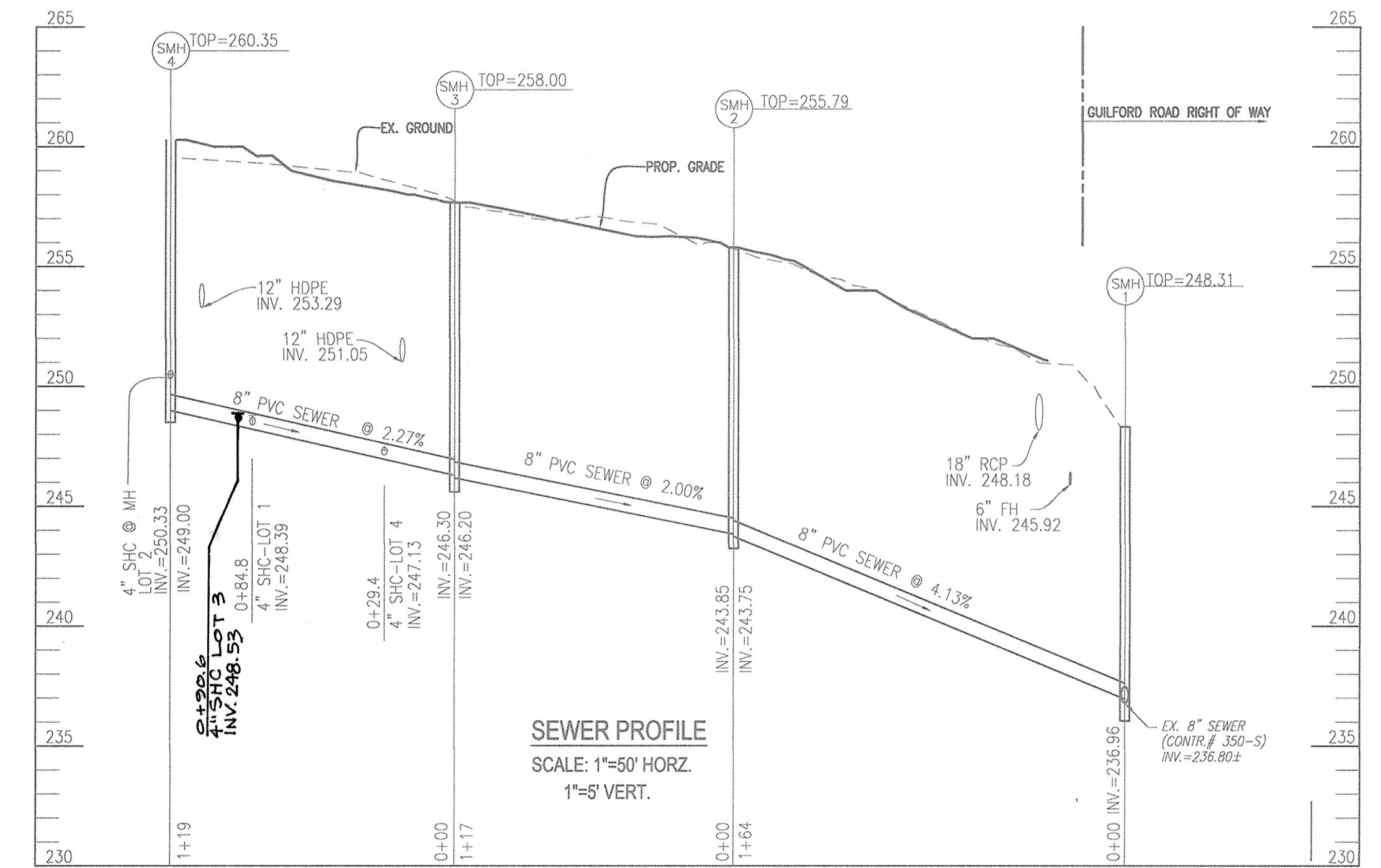
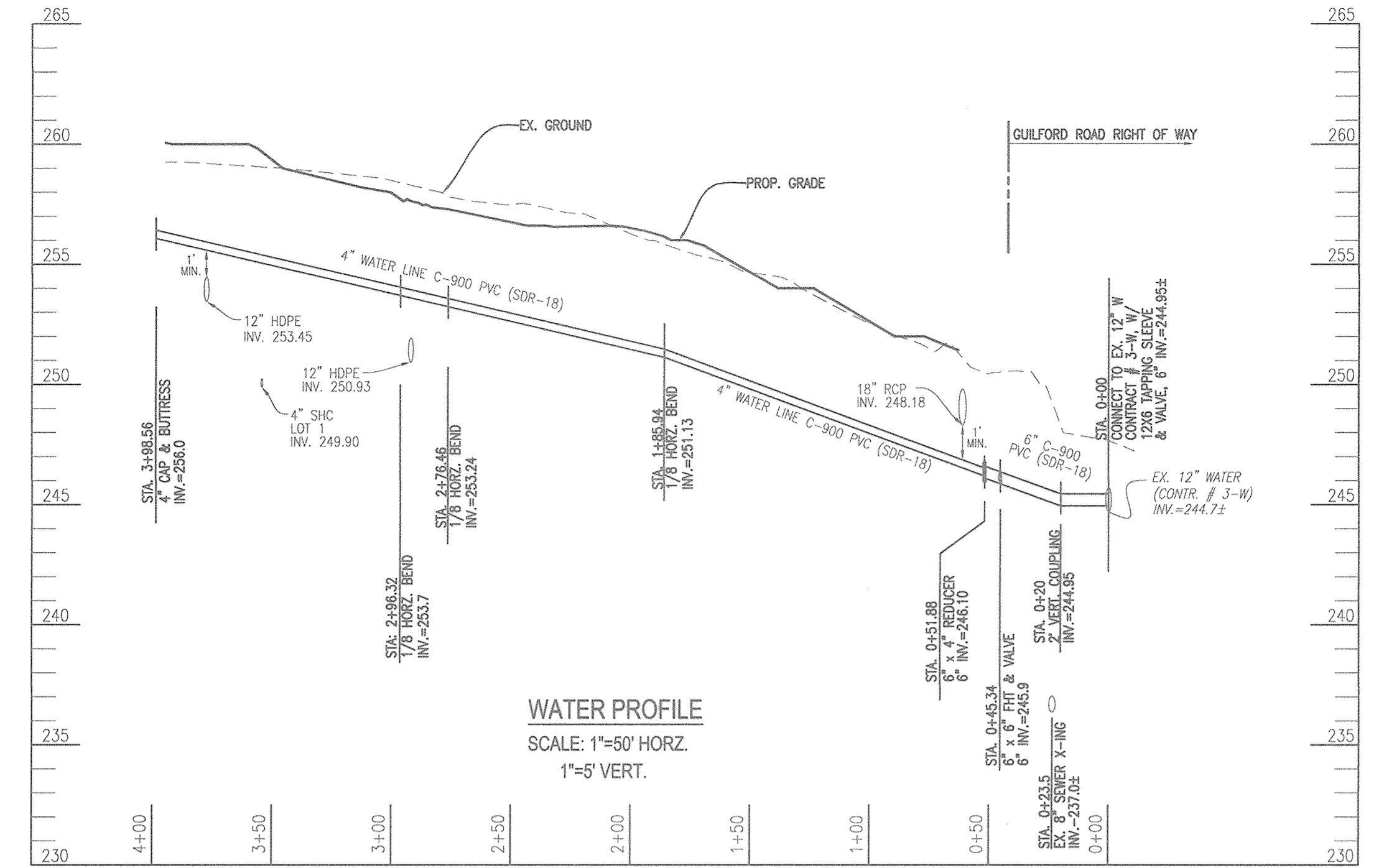
SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT #	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 1		SHC-SMH-3-88.5'	SHC-SMH-4-41.4'
LOT 2		SHC-SMH-3-127.0'	SHC-SMH-4-14.5'
LOT 3		SHC-SMH-3-92.7'	SHC-SMH-4-31.0'
LOT 4		SHC-SMH-3-32.4'	SHC-SMH-4-70.2'

FHV-FH-14.0'	FHV-SMH-1-22.9'
6" Valve station 0+00 FH-45.3'	6" Valve station 0+00 SMH-1-22.9'

WATER MAIN LOCATION CHART	
WL STA.	APPURTENANCE
WL STA. 0+00.00	CONNECT TO EXISTING 12" WATER
WL STA. 0+04.00	6" VALVE
WL STA. 0+46.88	6"x8" TEE (6" VALVE AND 8" FIRE HYDRANT)
WL STA. 0+51.88	6"x4" REDUCER
WL STA. 1+85.94	1/8" HORIZONTAL BEND
WL STA. 2+76.46	1/8" HORIZONTAL BEND
WL STA. 2+89.38	1/8" HORIZONTAL BEND
WL STA. 3+94.75	4" CAP AND BUTTRESS

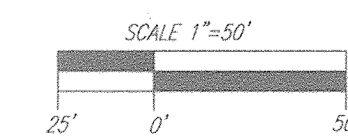
SEWER MANHOLE SCHEDULE					
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT
SMH 1	PRECAST MH HO. CO. STD. DET. G-5.12	N 541237.34 E 1363693.13	248.31	236.96	236.80±
SMH 2	PRECAST MH HO. CO. STD. DET. G-5.12	N 541159.27 E 1363548.65	255.79	243.85	243.75
SMH 3	PRECAST MH HO. CO. STD. DET. G-5.12	N 541150.49 E 1363431.60	258.00	246.30	246.20
SMH 4	PRECAST MH HO. CO. STD. DET. G-5.12	N 541269.74 E 1363427.37	260.35	249.00	-

MCE CHART						
DROP THRU SLAB = 2.5'						
LOT#	EL @ MAIN	TYPE	DIST. TO ESMT.	EL @ ESMT.	DIST. ESMT. TO HOUSE	EL @ HOUSE
1	248.39	SHC	20.00	248.79	20.00	249.19
2	250.33	SHC	10.00	250.53	42.28	251.37
3	<b>248.53</b>	SHC	10.00	<b>248.73</b>	59.38	<b>251.11</b>
4	247.13	SHC	10.00	247.33	35.40	248.04



**AS-BUILT**

Date 12/31/18



**OWNER**  
HAMPTON HILLS, LLC  
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**DEVELOPER**  
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DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

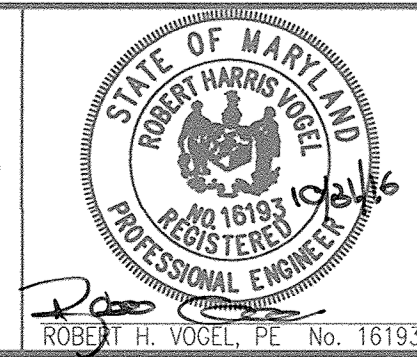
*Steve C. C...*  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*Chad...*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

12.5.16

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NO.	REVISION	DATE
1	DESIGN	OCTOBER 2016

**FINAL WATER AND SEWER PLAN PROFILES**

600' SCALE MAP NO. 42

**COTTAGE GROVE**  
LOTS 1-4 AND OPEN SPACE LOT 5  
CONTRACT NO. 24-4946-D

TAX MAP 42, GRID 24  
6TH ELECTION DISTRICT

SCALE AS SHOWN

SHEET 3 OF 3

PARCEL 101  
HOWARD COUNTY, MARYLAND