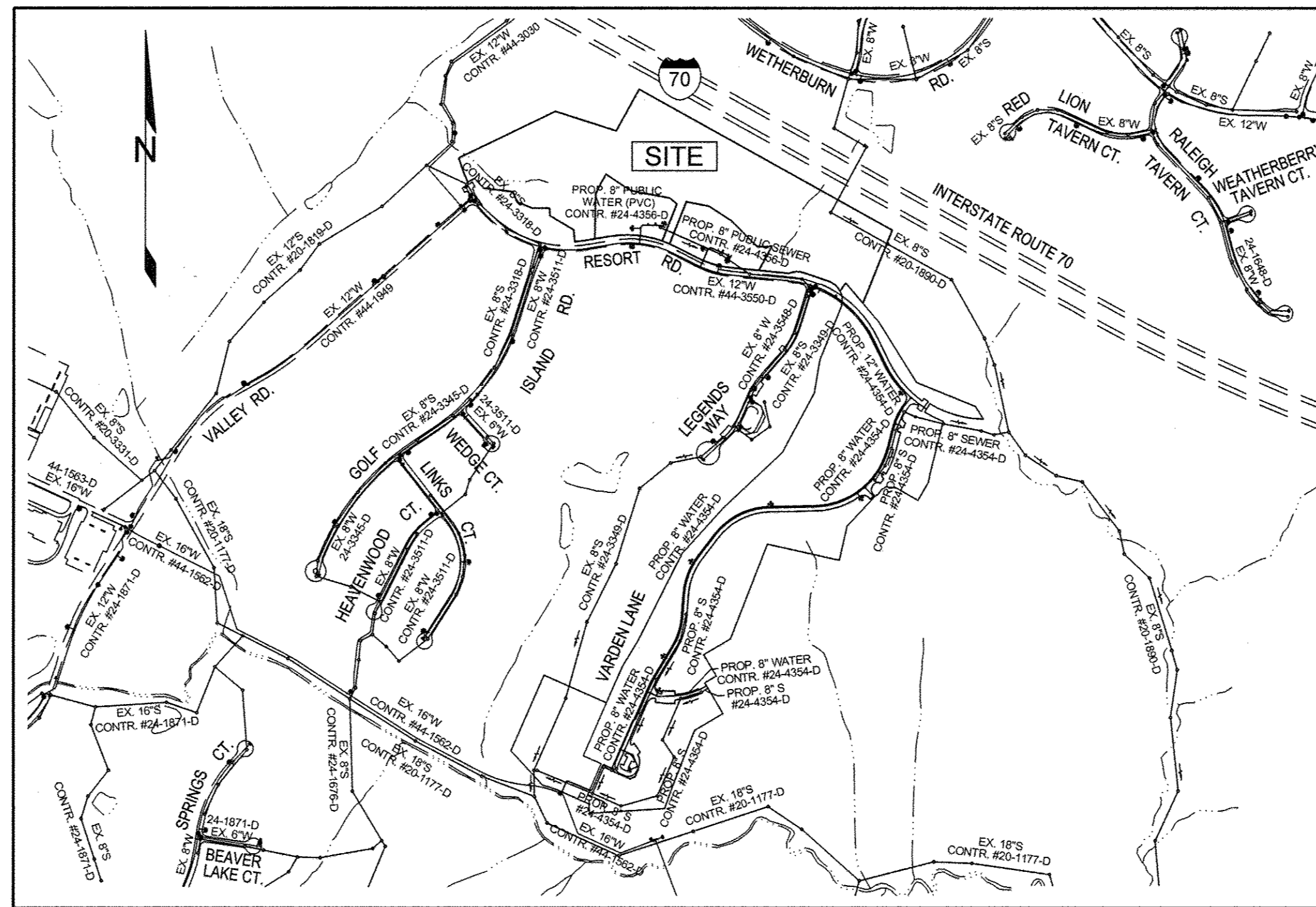


**GENERAL NOTES**

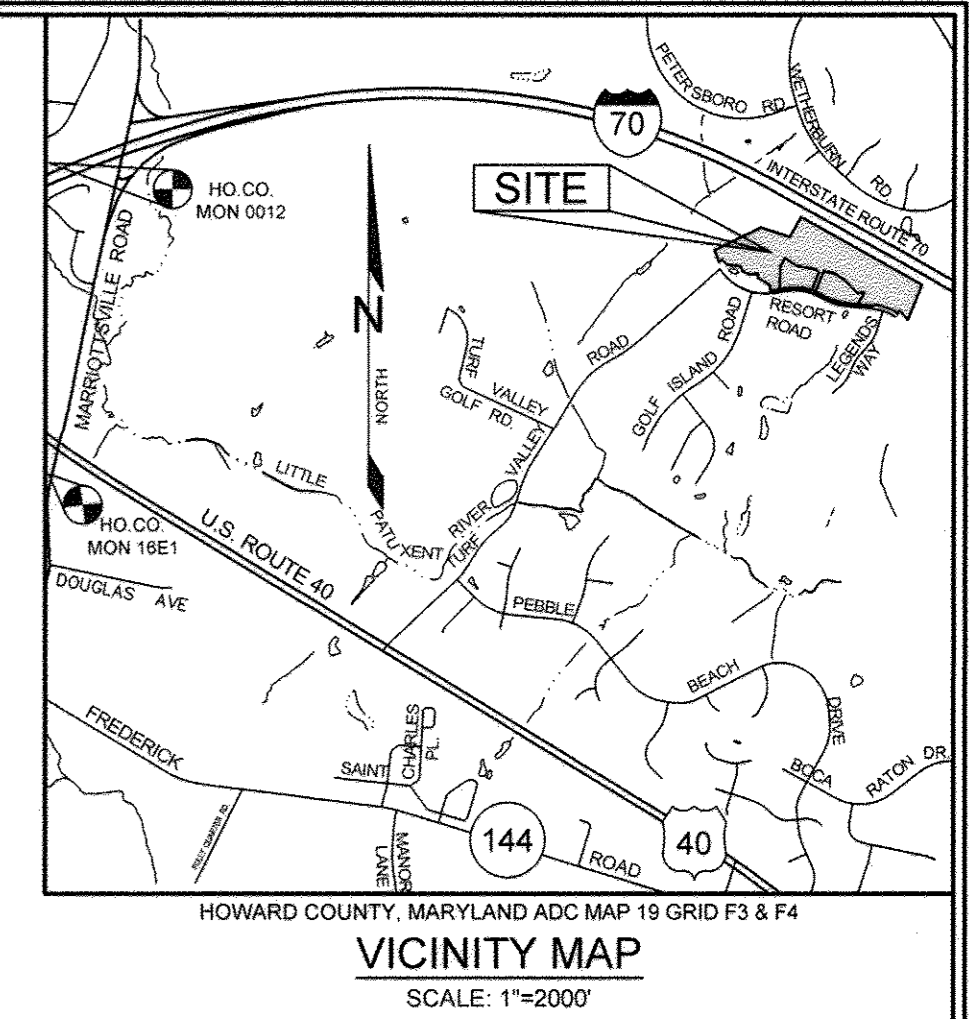
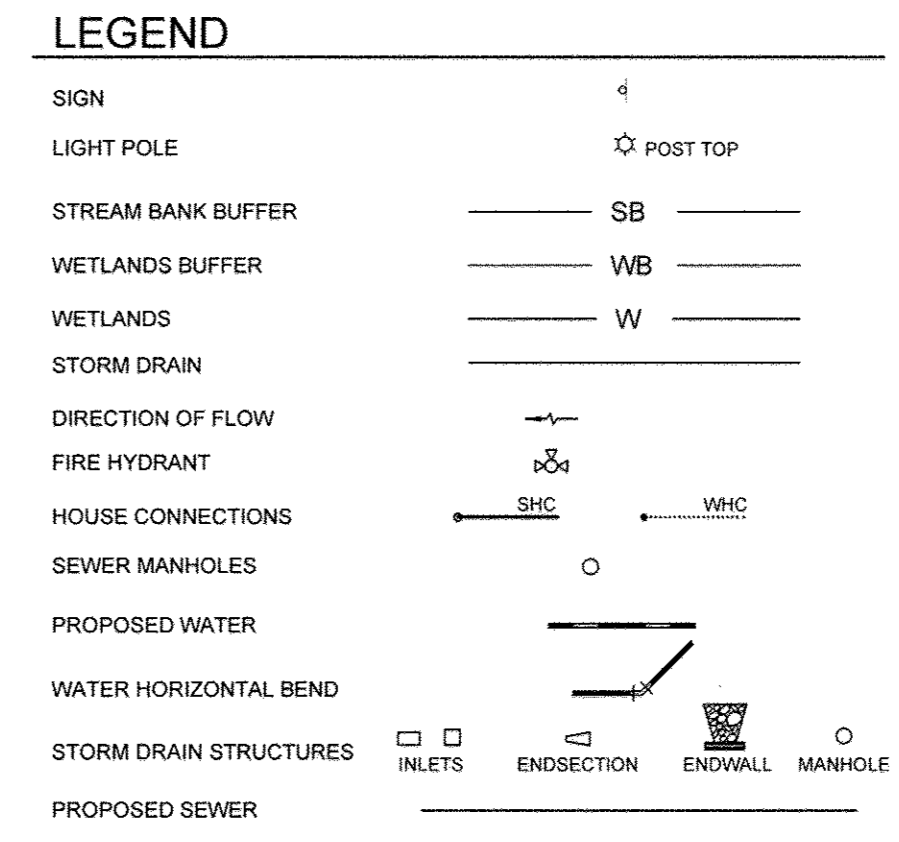
- STANDARD GENERAL NOTES**
  - APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
  - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OR ABOUT JANUARY, 2006 BY WINGS AERIAL MAPPING CO., INC.
  - 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. 1748. ALL VERTICAL CONTROLS ARE BASED ON NAVD 83. 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 1-800-252-1133  
 BGE (CONSTRUCTION SERVICES) 410-337-8713  
 BGE (EMERGENCY) 410-685-0123  
 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 1-800-743-0231-800-224-8210
  - 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.
- STANDARD WATER MAIN GENERAL NOTES**
  - ALL WATER MAINS TO BE C900 DR-18 PVC 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 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 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.
  - 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 WMA STANDARD C900 FOR PVC PRESSURE PIPES SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OF SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIALS 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 AND SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. 17 POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 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 THE PVC PIPE.
  - ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-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 OF 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 COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING. PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSI MEETING 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, DR 18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (PEX) 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 C-900 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 COUPLING OR 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 INCORPORATES 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.
- STANDARD SEWER MAIN GENERAL NOTES**
  - 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 18" WALLS ARE FOR BRICK MANHOLES ONLY.
  - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAMES 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 THE CELLAR CANNOT BE SERVED.



HOWARD COUNTY, MARYLAND ADC MAP 19 GRID F3 & F4  
**LOCATION PLAN**  
 SCALE: 1"=600'

TYPE OF BUILDING	RESIDENTIAL - MULTI-FAMILY
NO. OF UNITS	60
NO. OF WATER HOUSE CONNECTIONS	2
NO. OF TWIN WATER HOUSE CONNECTIONS	N/A
NO. OF SEWER HOUSE CONNECTIONS	2
SEWER SHED	LITTLE PATUXENT
TREATMENT PLANT	LITTLE PATUXENT WATER RECLAMATION PLANT

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	WATER MAIN & SEWER MAIN PLAN
3	SEWER PROFILES
4	WATER PROFILES



ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" C900 DR-18 WATER	505 L.F.	439	PVC	JM EAGLE / LB WATER
12" X8" TSBV	2	2	STAINLESS STEEL	FORD METER COX / LB WATER
6" V	4	4	GATE VALVE	AMERICAN FLOW CONTROL / LB WATER
8" V	2	2	GATE VALVE	AMERICAN FLOW CONTROL / LB WATER
1/8 BENDS	8	4	D.I.P.	TYLER UNION / LB WATER
1/16 BENDS	1	1	D.I.P.	TYLER UNION / LB WATER
1/32 BENDS	2	2	D.I.P.	TYLER UNION / LB WATER
8" X6" T	4	4	D.I.P.	TYLER UNION / LB WATER
8" X8" T	2	2	D.I.P.	TYLER UNION / LB WATER
FIRE HYDRANTS	4	4	D.I.P.	AMERICAN FLOW CONTROL / LB WATER
8" CAP & BUTTRISS	2	2	D.I.P.	TYLER UNION / LB WATER
2" HD.C.	3			
5" SWEEP	1			
8" SEWER	927 L.F.	914	SDI 35	JM EAGLE / LB WATER
SEWER MANHOLES	5	5	CONCRETE	CONCRETE PRECAST / CONTRACTORS PRECAST

NAME OF UTILITY CONTRACTOR: UTILITIES UNLIMITED  
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE: 2-16-15

# CONTRACT NO.: 24-4356-D

## VANTAGE CONDOMINIUMS

### AT TURF VALLEY

#### WATER & SEWER MAIN EXTENSIONS

#### HOWARD COUNTY, MARYLAND

#### DEPARTMENT OF PUBLIC WORKS

NOTE: THE PURPOSE OF THIS REVISED PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

**OWNER/DEVELOPER**  
 MANGIONE ENTERPRISES OF TURF VALLEY, LP  
 ATTN: LOUIS MANGIONE  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
 410.825.8400

DPZ FILE NOS  
 SDP-08-032  
 F-08-057

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE STANDARD SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLANS SDP-08-032.

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

*John C. Robertson* 8/7/14  
 SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
*John Willetts* 8/8/14  
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND  
*Chad Edman* 8-13-14  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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. 30265, EXPIRATION DATE: JUNE 20, 2015.

**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@silladcock.com

DESIGNED BY:	PS
DRAWN BY:	JT,BK
CHECKED BY:	PS
DATE:	JULY 11, 2014

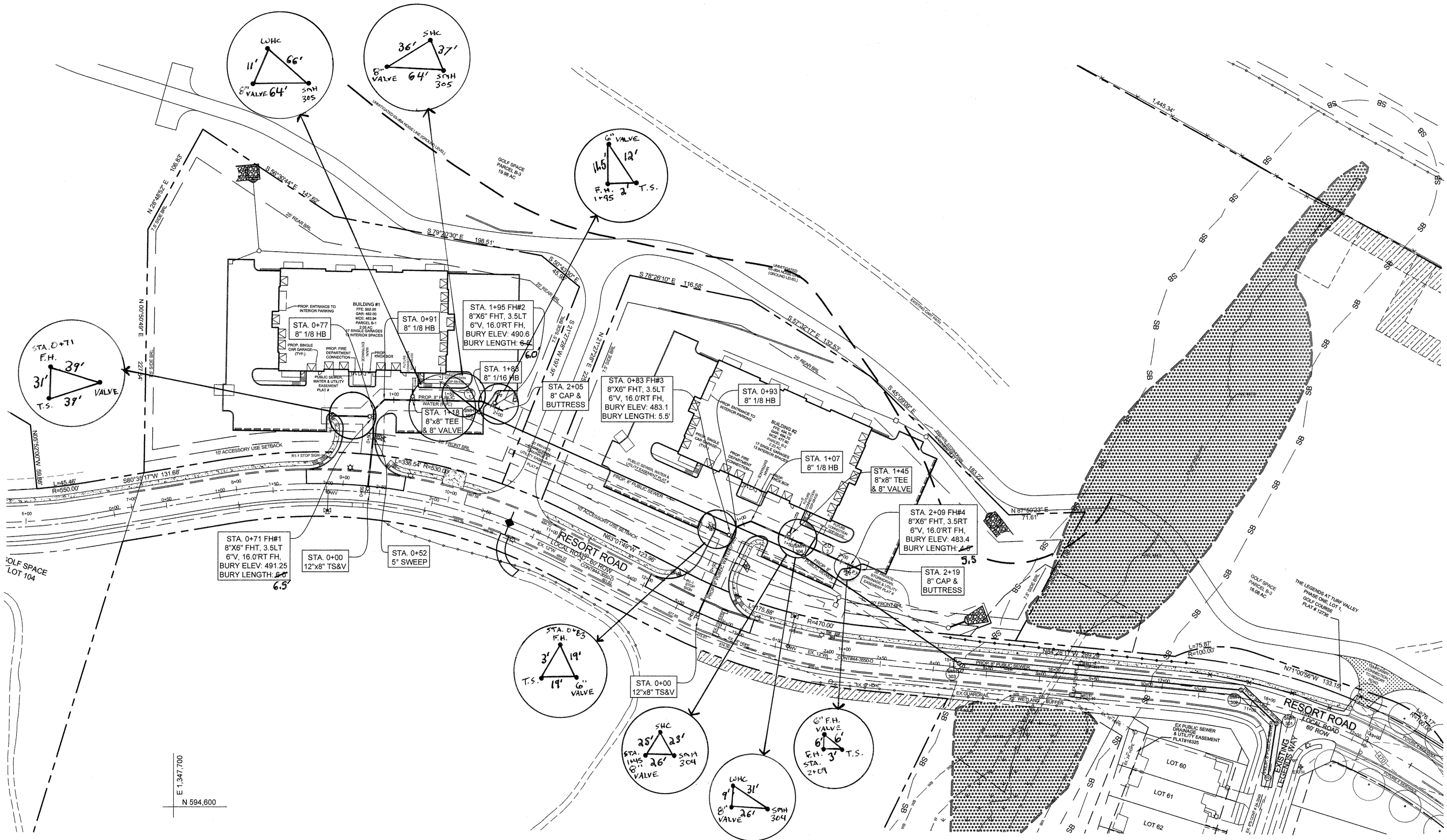
NO.	DESCRIPTION	DATE
1	AS-BUILT	2-16-15
2	REVISED PER NEW LAYOUT	07/11/14

**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1  
 TAX MAP 16 GRID 12 & 18  
 TAX MAP 17 GRID 7  
 2ND ELECTION DISTRICT  
 PARCEL 8 & 706  
 HOWARD COUNTY, MARYLAND

TITLE SHEET  
 600' SCALE MAP NO. 16 BLOCK NO. 18

SCALE: 1"=50'  
 SHEET NO. 1 OF 4

CONTRACT NO. 24-4356-D



N 595,300  
E 1,349,000



MARYLAND STATE GRID  
NAD 83

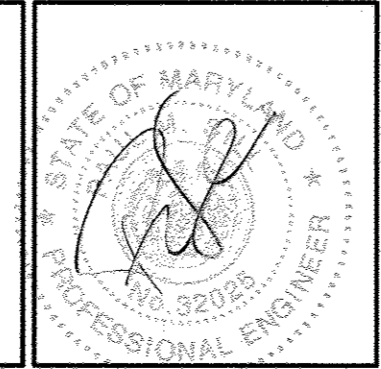
N 594,600  
E 1,349,000

NOTE: THE PURPOSE OF THIS REVISED PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

OWNER/DEVELOPER  
MANGIONE ENTERPRISES OF TURF VALLEY, LP  
ATTN: LOUIS MANGIONE  
1205 YORK ROAD, PENTHOUSE  
LUTHERVILLE, MARYLAND 21093  
410.825.8400

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. 32022, EXPIRATION DATE: JUNE 20, 2015.

**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@silladcock.com



DESIGNED BY:	PS	
DRAWN BY:	JT.BK	
CHECKED BY:	PS	
DATE:	JULY 11, 2014	
NO.	DESCRIPTION	DATE
2	AS-BUILT	2-16-15
1	REVISED PER NEW LAYOUT	07/11/14
REVISIONS		

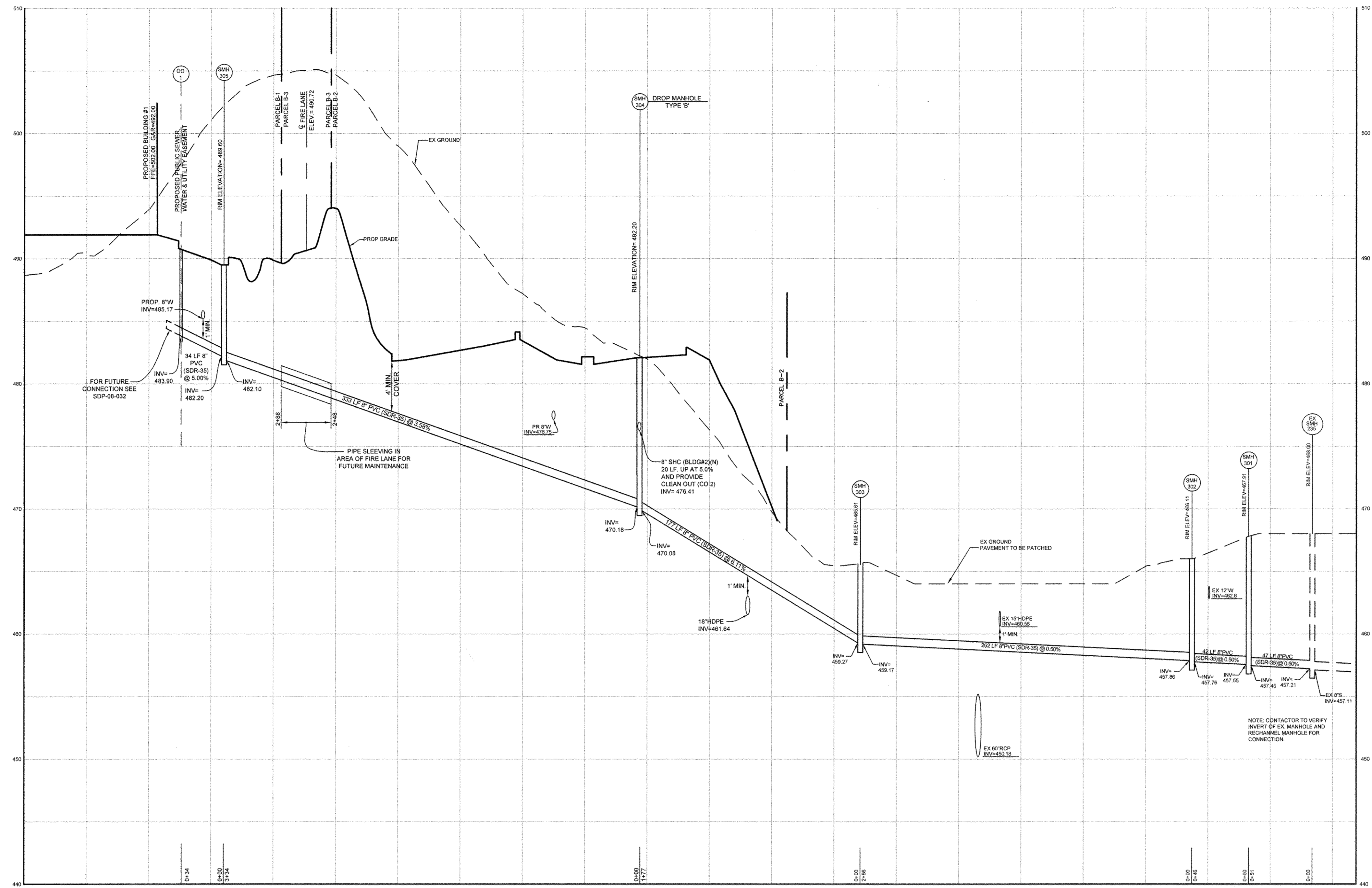
WATER MAIN & SEWER MAIN PLAN  
600' SCALE MAP NO. 16 BLOCK NO.18

VANTAGE CONDOMINIUMS AT TURF VALLEY  
(PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
ZONE: PGCC-1  
TAX MAP 16 GRID 12 & 18  
TAX MAP 17 GRID 7  
2ND ELECTION DISTRICT  
PARCEL 8 & 706  
HOWARD COUNTY, MARYLAND  
CONTRACT NO. 24-4356-D

SCALE: 1"=50'  
SHEET NO. 2 OF 4

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND  <i>[Signature]</i> for 88 8/4/14 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND  <i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION 8-13-14 DATE
--	--

SEWER MAIN TABULATION CHART	
8" SEWER MAIN	
MANHOLE #	COORDINATES
SMH 301	N 594,678.090 E 1,348,734.639
SMH 302	N 594,709.488 E 1,348,701.627
SMH 303	N 594,734.314 E 1,348,437.266
SMH 304	N 594,834.031 E 1,348,291.471
SMH 305	N 594,968.943 E 1,347,986.606



**8" SEWER PROFILE**  
 HOR. SCALE: 1"=50'  
 VERT. SCALE: 1"=5'

NOTE: THE PURPOSE OF THIS REVISED PLAN IS TO RECONFIGURE THE LAYOUT OF THE DEVELOPMENT IN THE AREA OF THE PROPOSED BUILDINGS.

DPZ FILE NOS  
 SDP-08-032  
 F-08-057

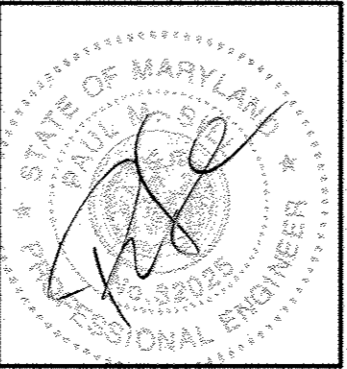
**OWNER/DEVELOPER**  
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 ATTN: LOUIS MANGIONE  
 1205 YORK ROAD, PENTHOUSE  
 LUTHERVILLE, MARYLAND 21093  
 410.825.8400

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DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 [Signature]  
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 8.13.14  
 DATE

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DESIGNED BY: PS  
 DRAWN BY: JT, BK  
 CHECKED BY: PS  
 DATE: JULY 11, 2014

NO.	DESCRIPTION	DATE
1	REVISED PER NEW LAYOUT	07/11/14

**SEWER PROFILES**  
 600' SCALE MAP NO. 16  
 BLOCK NO. 18

**VANTAGE CONDOMINIUMS AT TURF VALLEY**  
 (PODS B, C & H : SEC IV: RESIDENTIAL PHASE IVE)  
 ZONE: PGCC-1  
 TAX MAP 16 GRID 12 & 18  
 TAX MAP 17 GRID 7  
 2ND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 PARCEL 8 & 706  
**CONTRACT NO. 24-4356-D**

SCALE:  
 1"=50'  
 SHEET NO.  
 3 OF 4

