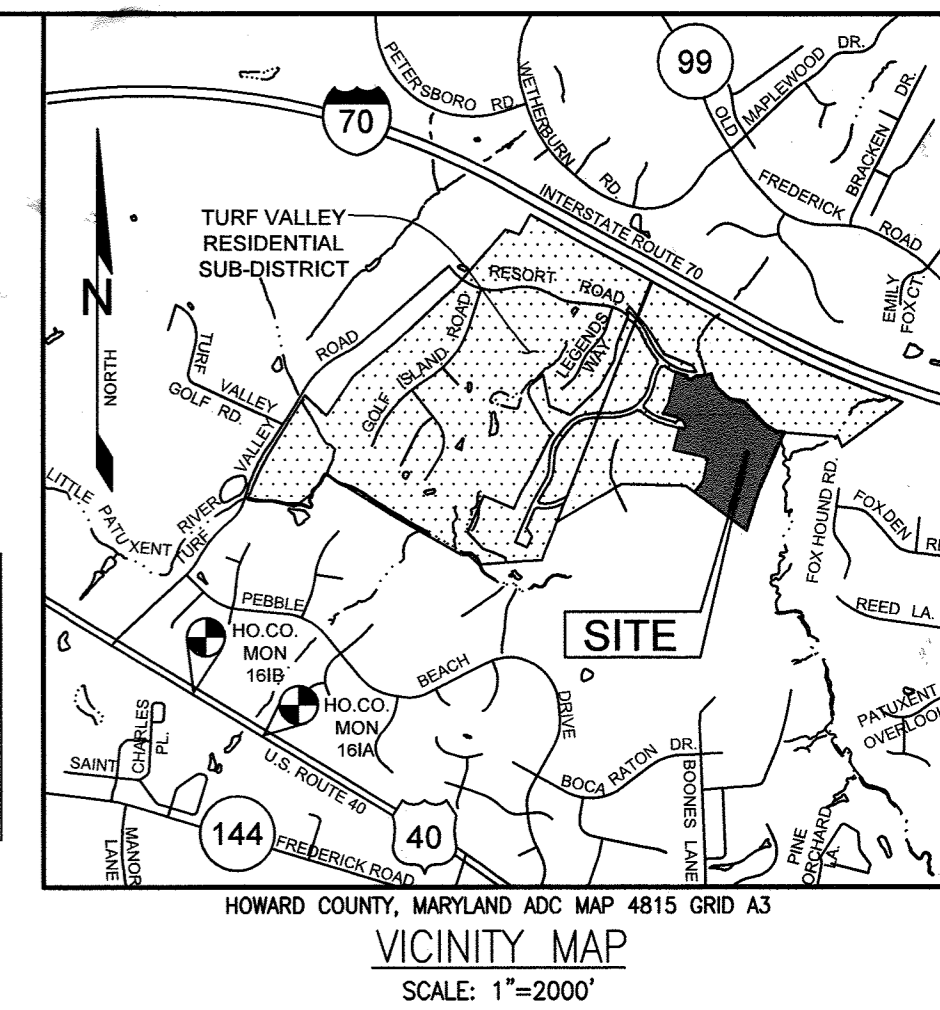


# PUBLIC WATER AND SEWER PLANS FOR TURF VALLEY POD E-1 PHASE I

LOTS 1-17, OPEN SPACE LOTS 73 & 74, GOLF SPACE LOTS  
75 & 76, AND NON-BUILDABLE BULK PARCELS G,H, & I  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
CONTRACT # 24-4979-D

INDEX OF DRAWINGS	
SHEET #	SHEET TITLE
1	COVER SHEET
2	WATER AND SEWER PLAN AND PROFILES

BENCHMARKS				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
161B	590,475.2538	1,344,753.9350	469.892	11.5' SOUTHWEST OF WBL RT. 40, 20.8' WEST OF PK NAIL IN SHOULDER, 66.4' SOUTH OF LAST POST IN GUARDRAIL
161A	589,509.366	1,346,343.63	463.797	RT. 40, 0.35 MI WEST OF RT. 144 JOINT

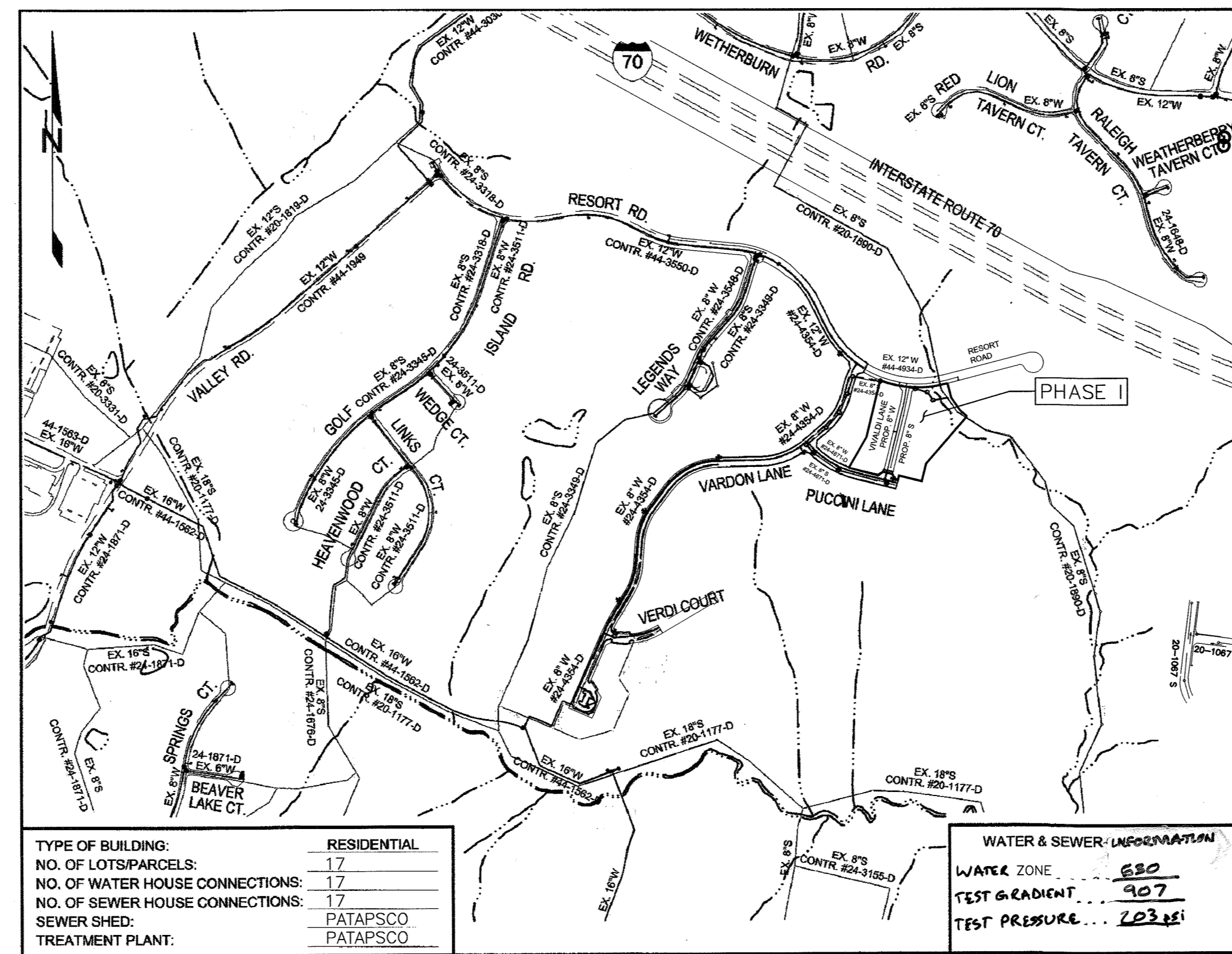


WATER QUANTITIES				
ITEM	SUPPLIER	ESTIMATE	UNIT	AS-BUILT
8" DIP WATER, CLASS 54	US PIPE	472	LF	468.80'
1.5" WHC	CAMBRIDGE LEE	430	LF	413.27'
1" METER (OUTSIDE SETTING)	PRISM PRECAST AND MCDONALD	17	EA	17
6" FIRE HYDRANT & VALVE	AMERICAN BELLING AMERICAN FLOW	1	EA	1
8" x 6" FIRE HYDRANT TEE	STAR PIPE PRODUCTS	1	EA	1

SEWER QUANTITIES				
ITEM	SUPPLIER	ESTIMATE	UNIT	AS-BUILT
8" PVC DR35	G.P.K. NATIONAL PIPE	441	LF	441.0'
4" SHC	G.P.K. NATIONAL PIPE	418	LF	416.8'
SEWER MANHOLE	GAPPLY L POUNSEY ATLANTIC CONG. PRODUCTS	2	EA	2
DOGHOUSE MANHOLE	CAPPLY L POUNSEY ATLANTIC CONG. PRODUCTS	1	EA	1
CLEANOUT	PRISM PRECAST	17	EA	17

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 1	2502 VIVALDI LANE	83.25' FR. SMH 131 TO WHC Lot 1	5.5' FR. SHC Lot 1 TO WHC Lot 1
LOT 2	2504 VIVALDI LANE	71.00' FR. SMH 131 TO WHC Lot 2	5.1' FR. SHC Lot 2 TO WHC Lot 2
LOT 3	2506 VIVALDI LANE	45.07' FR. SMH 131 TO WHC Lot 3	6.2' FR. SHC Lot 3 TO WHC Lot 3
LOT 4	2508 VIVALDI LANE	29.00' FR. SMH 131 TO WHC Lot 4	24.3' FR. SHC Lot 4 TO WHC Lot 4
LOT 5	2516 VIVALDI LANE	51.17' FR. F.H. TO WHC Lot 5	6.25' FR. SHC Lot 5 TO WHC Lot 5
LOT 6	2518 VIVALDI LANE	87.01' FR. F.H. TO WHC Lot 6	5.30' FR. SHC Lot 6 TO WHC Lot 6
LOT 7	2520 VIVALDI LANE	88.91' FR. SMH 132 TO WHC Lot 7	7.40' FR. SHC Lot 7 TO WHC Lot 7
LOT 8	2522 VIVALDI LANE	57.21' FR. SMH 132 TO WHC Lot 8	5.60' FR. SHC Lot 8 TO WHC Lot 8
LOT 9	2505 VIVALDI LANE	20.04' FR. SMH 131 TO WHC Lot 9	6.90' FR. SHC Lot 9 TO WHC Lot 9
LOT 10	2507 VIVALDI LANE	20.17' FR. SMH 131 TO WHC Lot 10	6.40' FR. SHC Lot 10 TO WHC Lot 10
LOT 11	2509 VIVALDI LANE	55.51' FR. SMH 131 TO WHC Lot 11	6.80' FR. SHC Lot 11 TO WHC Lot 11
LOT 12	2511 VIVALDI LANE	84.89' FR. SMH 131 TO WHC Lot 12	6.0' FR. SHC Lot 12 TO WHC Lot 12
LOT 13	2515 VIVALDI LANE	67.71' FR. F.H. TO WHC Lot 13	7.1' FR. SHC Lot 13 TO WHC Lot 13
LOT 14	2517 VIVALDI LANE	99.31' FR. F.H. TO WHC Lot 14	10.0' FR. SHC Lot 14 TO WHC Lot 14
LOT 15	2519 VIVALDI LANE	84.41' FR. SMH 132 TO WHC Lot 15	5.8' FR. SHC Lot 15 TO WHC Lot 15
LOT 16	2521 VIVALDI LANE	30.00' FR. SMH 132 TO WHC Lot 16	26.0' FR. SHC Lot 16 TO WHC Lot 16
LOT 17	2523 VIVALDI LANE	28.81' FR. SMH 132 TO WHC Lot 17	25.2' FR. SHC Lot 17 TO WHC Lot 17

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE			
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 1	2502 VIVALDI LANE	104.21' FR. SMH 131 TO SHC Lot 1	5.5' FR. WHC Lot 1 TO SHC Lot 1
LOT 2	2504 VIVALDI LANE	75.61' FR. SMH 131 TO SHC Lot 2	5.1' FR. WHC Lot 2 TO SHC Lot 2
LOT 3	2506 VIVALDI LANE	50.41' FR. SMH 131 TO SHC Lot 3	6.2' FR. WHC Lot 3 TO SHC Lot 3
LOT 4	2508 VIVALDI LANE	32.07' FR. SMH 131 TO SHC Lot 4	24.3' FR. WHC Lot 4 TO SHC Lot 4
LOT 5	2516 VIVALDI LANE	57.25' FR. F.H. TO SHC Lot 5	6.25' FR. WHC Lot 5 TO SHC Lot 5
LOT 6	2518 VIVALDI LANE	82.81' FR. F.H. TO SHC Lot 6	5.30' FR. WHC Lot 6 TO SHC Lot 6
LOT 7	2520 VIVALDI LANE	85.01' FR. SMH 132 TO SHC Lot 7	7.41' FR. WHC Lot 7 TO SHC Lot 7
LOT 8	2522 VIVALDI LANE	62.01' FR. SMH 132 TO SHC Lot 8	5.61' FR. WHC Lot 8 TO SHC Lot 8
LOT 9	2505 VIVALDI LANE	24.17' FR. SMH 131 TO SHC Lot 9	6.91' FR. WHC Lot 9 TO SHC Lot 9
LOT 10	2507 VIVALDI LANE	26.17' FR. SMH 131 TO SHC Lot 10	6.41' FR. WHC Lot 10 TO SHC Lot 10
LOT 11	2509 VIVALDI LANE	49.01' FR. SMH 131 TO SHC Lot 11	6.81' FR. WHC Lot 11 TO SHC Lot 11
LOT 12	2511 VIVALDI LANE	79.91' FR. SMH 131 TO SHC Lot 12	6.01' FR. WHC Lot 12 TO SHC Lot 12
LOT 13	2515 VIVALDI LANE	69.01' FR. F.H. TO SHC Lot 13	7.11' FR. WHC Lot 13 TO SHC Lot 13
LOT 14	2517 VIVALDI LANE	92.41' FR. F.H. TO SHC Lot 14	10.01' FR. WHC Lot 14 TO SHC Lot 14
LOT 15	2519 VIVALDI LANE	89.51' FR. SMH 132 TO SHC Lot 15	5.81' FR. WHC Lot 15 TO SHC Lot 15
LOT 16	2521 VIVALDI LANE	60.71' FR. SMH 132 TO SHC Lot 16	26.01' FR. WHC Lot 16 TO SHC Lot 16
LOT 17	2523 VIVALDI LANE	18.41' FR. SMH 132 TO SHC Lot 17	25.21' FR. WHC Lot 17 TO SHC Lot 17



LOCATION MAP  
SCALE: 1"=600'

LEGEND	
<p>○ EX. SANITARY SEWER MANHOLE</p> <p>○ EX. WATER VALVE</p> <p>○ EX. FIRE HYDRANT</p> <p>○ EX. LIGHT POLE</p> <p>— EX. SANITARY SEWER MAIN</p> <p>— EX. WATER MAIN</p>	<p>--- RIGHT OF WAY LINE</p> <p>--- EASEMENT LINE</p> <p>○ PROP. SANITARY MANHOLE</p> <p>○ PROP. WATER VALVE</p> <p>○ PROP. FIRE HYDRANT</p> <p>--- PROP. SANITARY SEWER MAIN</p> <p>--- PROP. WATER MAIN</p> <p>--- PROP. SEWER HOUSE CONNECTION &amp; CLEANOUT</p> <p>--- PROP. WATER HOUSE CONNECTION &amp; METER</p> <p>--- PROP. STORM DRAIN</p> <p>--- PROP. CURB</p>

**NOTE:**  
1. ALL WATER HOUSE CONNECTIONS SHALL BE 1.5" WITH A 1" METER (OUTSIDE SETTING) UNLESS OTHERWISE NOTED ON THE PLANS.  
2. ALL SEWER HOUSE CONNECTIONS SHALL BE 4" PVC UNLESS OTHERWISE NOTED IN THE PLANS.

- ### WATER NOTES
- ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
  - TOPS OF ALL WATER MAINS SHALL 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 STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 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 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, 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 OR 5-DEGREE SWEEP. TAKING CARE NOT TO USE COMPACTION 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 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 CERTAINTED 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 (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 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.
  - ALL WATER HOUSE CONNECTIONS SHALL BE 1.5" WITH A 1" METER, OUTSIDE SETTING.
- ### 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 BASED ON WINGS AERIAL MAPPING CO., INC. WITH 2 FOOT CONTOUR INTERVAL ON OR ABOUT JANUARY, 2006.
  - 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. 171C, NO. 186J1, 1, 2, 3. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE BY KCI TECHNOLOGIES, INC. AND 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 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 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 THESE PLANS:
 

AT&T.....	1-800-252-1133
BGE (CONSTRUCTION SERVICES).....	410-637-8713
BGE (EMERGENCY).....	410-685-0123
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
  - 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 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.
- ### SEWER 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 COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT 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.

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

*John R. Hunter* 8/7/18  
HOWARD SOIL CONSERVATION DISTRICT DATE

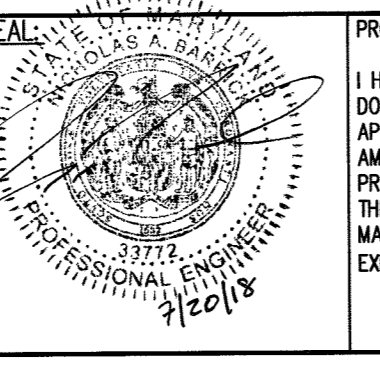
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER F-17-096-095

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 8-7-18  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]* 8/14/18  
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. 33772, EXPIRATION DATE: 6/16/2019

**KCI TECHNOLOGIES**  
ENGINEERS  
PLANNERS  
SCIENTISTS  
CONSTRUCTION MANAGERS  
936 RODENBROOK ROAD  
SHARPS, MD 21152  
PHONE: (410) 316-7800  
FAX: (410) 316-7817  
WWW.KCI.COM

DESIGN:	SK				
DRAWN:	SK				
CHECKED:	NB				
DATE:	05-07-2018				
BY	NO.	REVISION	DATE	600' SCALE MAP NO.	BLOCK

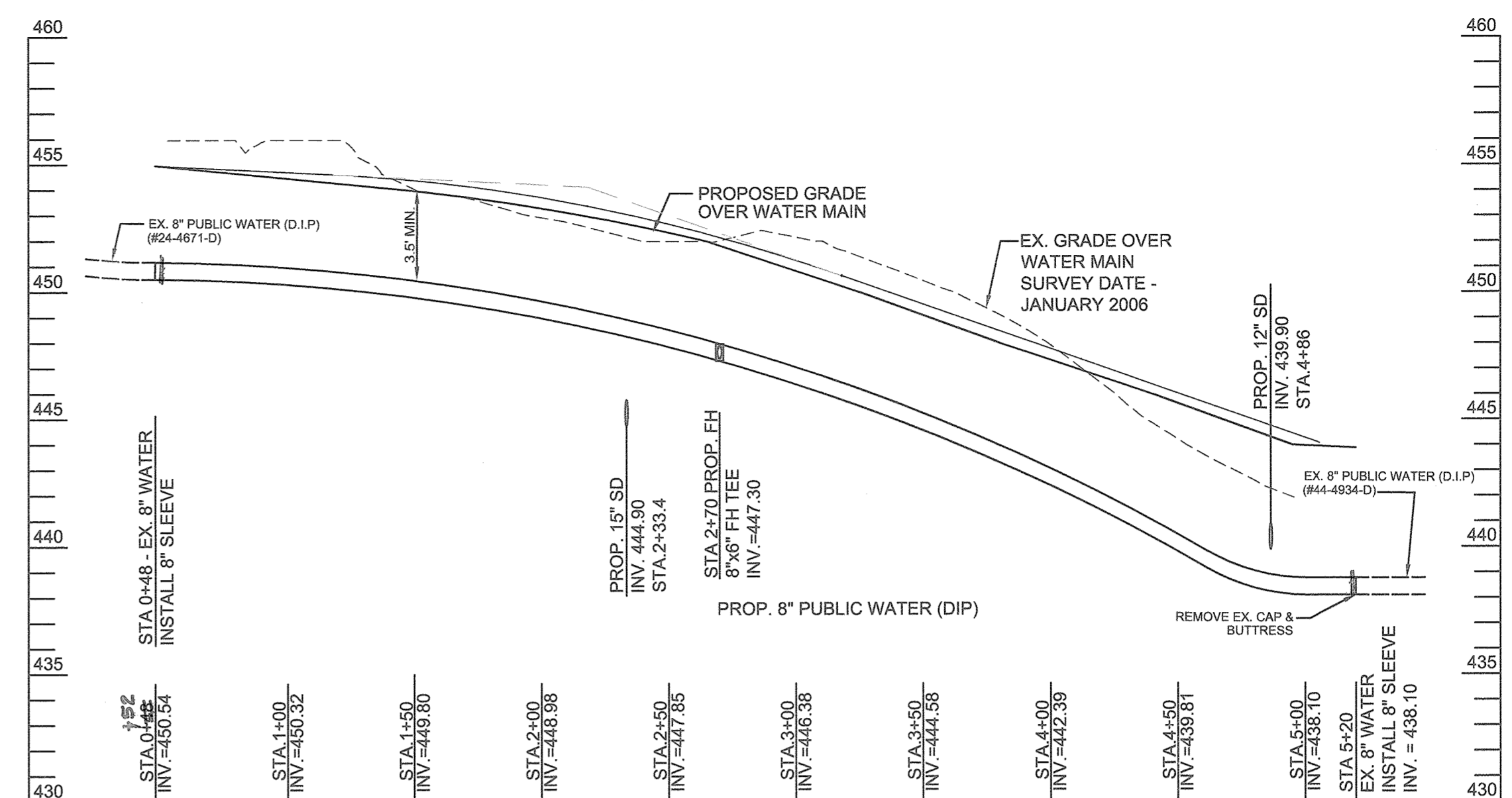
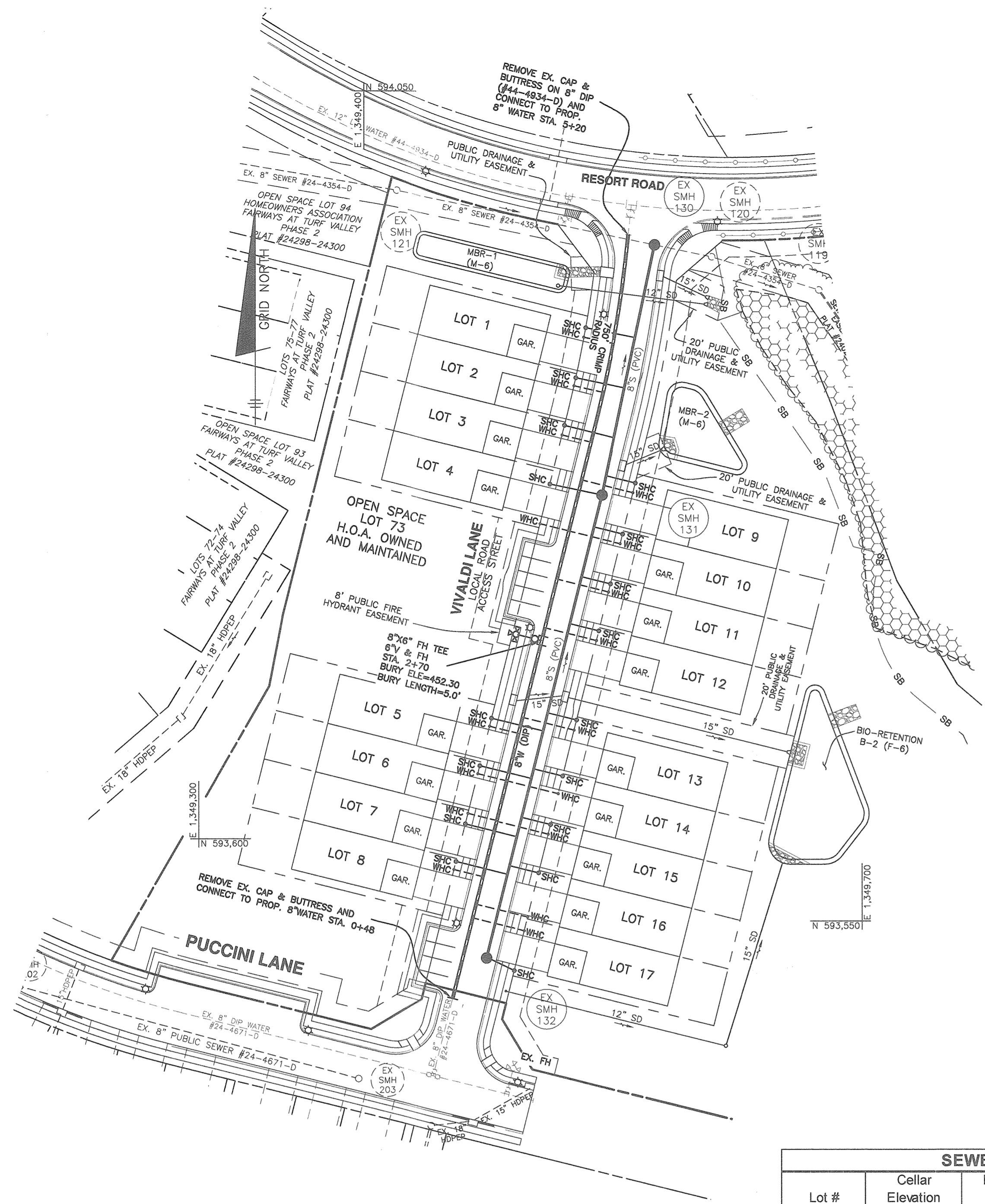
**TURF VALLEY, POD E-1, PHASE I**  
CONTRACT # 24-4979-D

LOTS 1-17, OPEN SPACE LOTS 73 AND 74, GOLF SPACE LOTS 75 AND 76  
AND NON-BUILDABLE BULK PARCELS G, H, AND I  
A SUBDIVISION OF P/O PARCEL 706, NON-BUILDABLE BULK PARCELS "A" AND "B"  
BLUFFS AT TURF VALLEY, PLAT NO. 24021, & NON-BUILDABLE BULK PARCELS "E" AND "F" FARWAYS AT TURF VALLEY PH II,  
PLAT NO. 29294

TAX MAP 17 GRID 13, ZONED: PCCC

ELECTION DISTRICT NO. 2      HOWARD COUNTY, MARYLAND

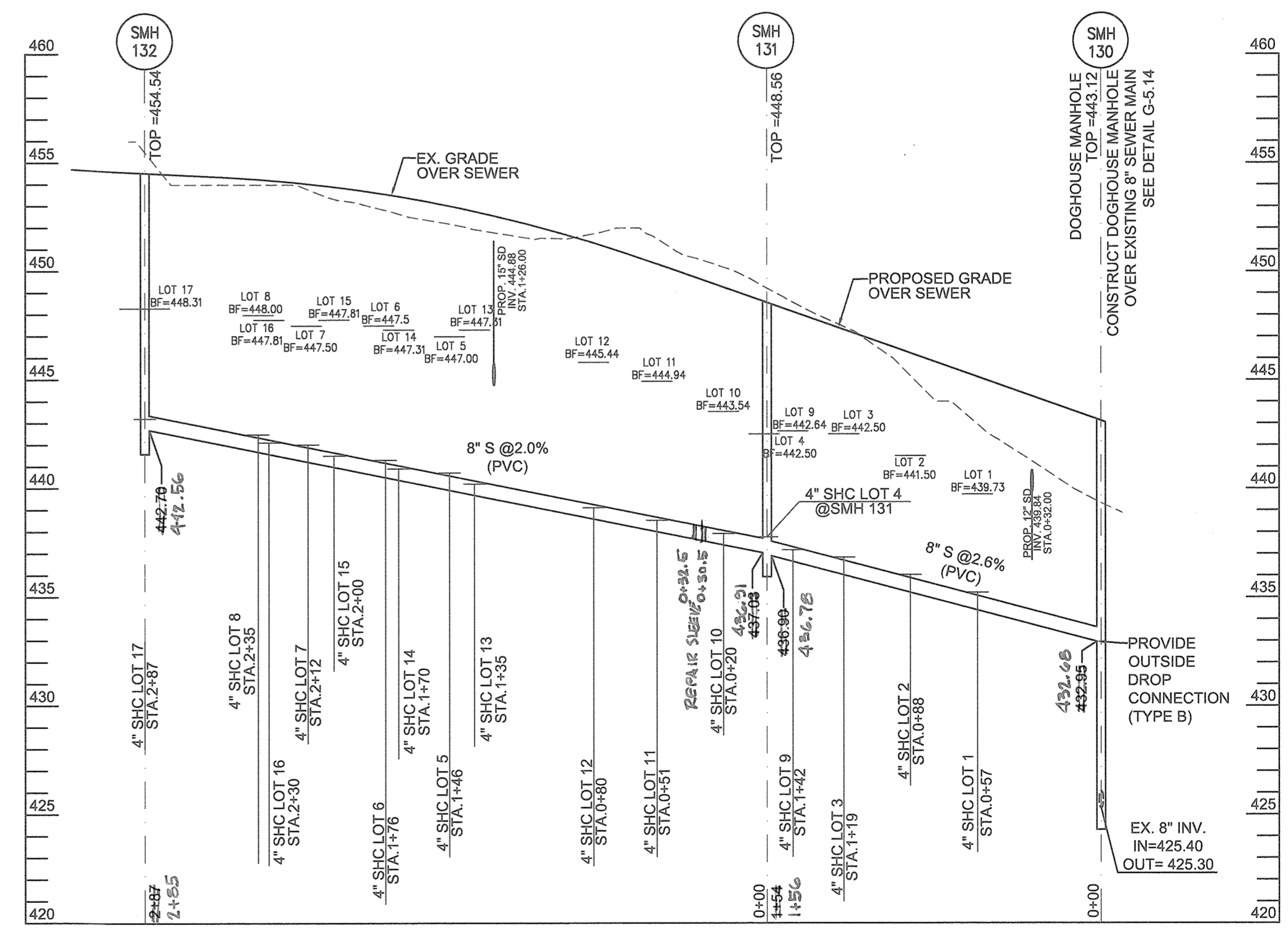
SCALE AS SHOWN  
SHEET 1 OF 2



PUBLIC WATER PROFILE (VIVALDI LANE)  
SCALE 1"=50' H, 1"=5' V

SEWER HOUSE CONNECTION SCHEDULE						
Lot #	Cellar Elevation	Minimum Cellar Elevation	Invert @ Main	Invert @ RAW	Drop Connection ?	DHC Standpipe Height
1	439.73	439.42	434.40.14	435.00.71		
2	441.50	440.55	435.41.37	436.01.73		
3	442.50	441.67	436.77.85	437.39.64		
4	442.50	441.86	436.77.85	437.34.94		
5	447.00	444.92	439.92.00	442.56.72	YES	-2.00
6	447.50	445.84	440.72.02	444.38.04		
7	447.50	446.54	441.44.02	442.08.16		
8	448.00	447.00	441.90.48	442.54.13		
9	442.64	441.88	437.16.04	437.52.27		
10	443.54	442.42	436.70.18	437.96.51		
11	444.94	442.65	438.01.70	438.37.15		
12	445.44	443.62	438.80.38	439.18.72		
13	447.31	444.72	439.90.48	440.26.81	YES	-2.00
14	447.31	445.42	440.60.18	440.98.51		
15	447.81	446.02	441.20.78	441.56.12		
16	447.81	446.64	441.89.58	442.18.72		
17	448.31	447.42	442.70.58	443.06.28		

NOTE: ALL DROP CONNECTIONS ARE HOWARD COUNTY STD. DETAIL S-2.12 TYPE 'A'



SEWER MAIN PROFILE (SMH 130 TO SMH 132)  
SCALE 1"=50' H, 1"=5' V

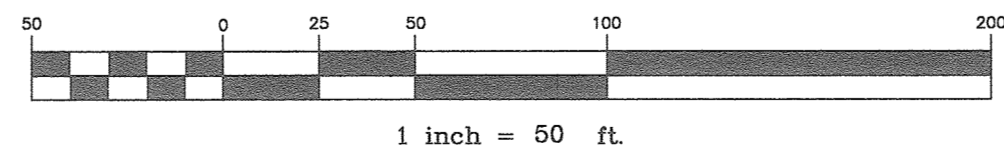
WATER MAIN STAKEOUT TABLE			
LOCATION	ITEM	NORTHING	EASTING
VIVALDI LANE			
STA. 0+48	CONNECT TO 8" W	593503.90	1349452.91
STA. 4+08	PC	593853.14	1349540.31
STA. 5+20	PT, CONNECT TO 8"W	593963.49	1349559.35

SEWER STRUCTURE TABLE						
ITEM	NORTHING	EASTING	TOP ELEV.	INV. IN ELEV.	INV. OUT ELEV.	HOWARD COUNTY STD. DETAIL
SMH 132	593528.19	1349473.41	454.54	-	442.70	G-5.12
SMH 131	593806.86	1349543.26	448.56	437.03	436.90	G-5.12
SMH 130	593957.36	1349575.16	443.12	432.95	425.30	G-5.14 (TYPE B)

THIS MYLAR REPLACES PREVIOUS SHEET 2 SIGNED ON 8-10-2018  
KCI TECHNOLOGIES

MANGIONE ENTERPRISES OF TURF VALLEY, LP  
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. 22390, Expiration Date: 6-30-2019.



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*[Signature]*  
6-6-19  
DATE

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
*[Signature]*  
6-17-19  
DATE

**BENCHMARK**  
ENGINEERS & LAND SURVEYORS & PLANNERS  
ENGINEERING, INC.  
8480 BALTIMORE NATIONAL PIKE & SUITE 418 & ELICOTT CITY, MARYLAND 21043  
(P) 410-465-8105 (F) 410-465-6644  
WWW.BEI-CIVILENGINEERING.COM

*[Signature]*  
6-4-19  
REV: #1

DESIGN:	DBT			
DRAFT:	DBT			
CHK:	CAM			
DATE:	5/2019			
BEI	1	REVISE SHC & WHC LOCATIONS SO METERS AND C/O'S ARE NOT LOCATED IN DRIVEWAY PAVEMENT		5-30-2019
BY	NO.	REVISIONS		DATE

WATER & SEWER  
PLAN AND PROFILES  
600 SCALE MAP NO. 16  
BLOCK: 16

TURF VALLEY, POD E-1, PHASE 1  
LOTS 1-17, OPEN SPACE LOTS 73 AND 74, GOLF SPACE LOTS 75 AND 76  
AND NON-BUILDABLE BULK PARCELS 'G', 'H', AND 'I'  
TAX MAP: 17 - GRID: 13 - PARCEL: 706 - ZONED: PGCC - ELECTION DISTRICT 2  
CONTRACT NO. 24-4979-D

SCALE:  
AS SHOWN  
SHEET NO.  
2 OF 2