

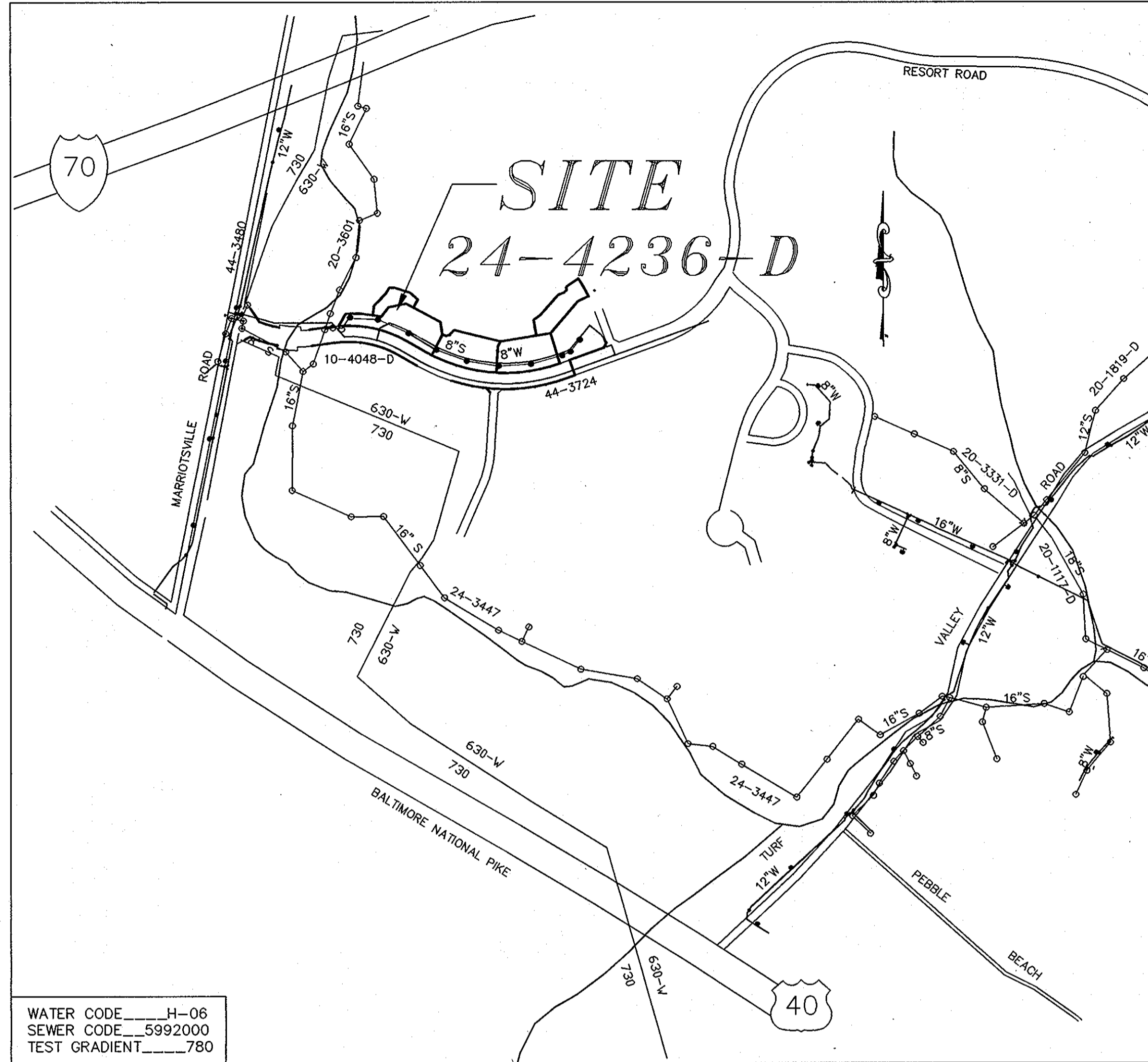
QUANTITY TABLE

ITEMS	QUANTITIES		TYPE	MANUFACTURER/SUPPLIER
	ESTIMATED	QUANTITIES		
STANDARD MH (HO. CO. STD.G-5.01)	10 EACH	13 EA.	PRECAST CONCRETE	ATLANTIC CONCRETE PRODUCTS
STANDARD MH (HO.CO. STD.G-5.01 PRIVATE)	1 EACH	1 EA.	PRECAST CONCRETE	ATLANTIC CONCRETE PRODUCTS
8" SEWER MAIN	1657 L.F.	1500± L.F.	SDR-35 PVC	J.M. EAGLE / BELAIR ROAD SUPPLY
8" SEWER HOUSE CONNECTION	100 L.F.	219 L.F.	SDR-35 PVC	J.M. EAGLE / BELAIR ROAD SUPPLY
# MANHOLE SEWER HOUSE CONNECTIONS	4 EACH	4 EA.	SDR-35 6" P.V.C.	J.M. EAGLE / BELAIR ROAD SUPPLY
8" WATER MAIN	L.F.	1520 L.F.	8" P.V.C. DR-18-C900	J.M. EAGLE / BELAIR ROAD SUPPLY
8" WATER HOUSE CONNECTION	40 L.F.	40± L.F.	8" P.V.C. DR-18-C900	J.M. EAGLE / BELAIR ROAD SUPPLY
# 8" WATER HOUSE CONNECTION	4 EACH	4 EA.	8" P.V.C. DR-18-C900	J.M. EAGLE / BELAIR ROAD SUPPLY
8"x8" T	2 EACH	4 EA.	8" D.I.P. M3	STAR PIPE / BELAIR ROAD SUPPLY
8" V	6 EACH	6 EA.	8" D.I.P. M3	STAR PIPE / BELAIR ROAD SUPPLY
8"x6" T.&V.	8 EACH		MUELLER	MUELLER CO. / BELAIR ROAD SUPPLY
FH	4 EACH	4 EA.	MUELLER	MUELLER CO. / BELAIR ROAD SUPPLY
1/32 H.B.	6 EACH	6 EA.	8" D.I.P. M3	STAR PIPE / BELAIR ROAD SUPPLY
1/16 H.B.	1 EACH	1 EA.	8" D.I.P. M3	STAR PIPE / BELAIR ROAD SUPPLY
1/8 H.B.	4 EACH	4 EA.	8" D.I.P. M3	STAR PIPE / BELAIR ROAD SUPPLY
8" C.&B.	2 EACH	8 EA.	STAR PIPE	BELAIR ROAD SUPPLY
NAME OF UTILITY CONTRACTOR: C.C.S. CONSOLIDATED CONSTRUCTION				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				
8" WATER PVC C900	1613 L.F.	1520 L.F.	8" P.V.C. DR-18-C900	J.M. EAGLE / BELAIR ROAD SUPPLY

INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	SEWER PLAN
3	WATER PROFILE
4	SEWER PROFILES
5	WATER PLAN

EROSION AND SEDIMENT CONTROL FOR THIS CONTRACT IS PROVIDED UNDER SDP-07-062.



WATER CODE: H-06
SEWER CODE: 5992000
TEST GRADIENT: 780

TYPE OF BUILDING	APARTMENTS
No. OF UNITS	4
No. OF WATER HOUSE CONNECTION	4
No. OF SEWER HOUSE CONNECTIONS	4
ELECTION DISTRICT	THIRD
DRAINAGE AREA	LITTLE PATUXENT R.
TREATMENT PLANT	LITTLE PATUXENT WATER QUALITY MANAGEMENT CENTER

VICINITY MAP

SCALE: 1"=600'
GENERAL NOTES (CONT.)

- PART II WATER
9. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
10. 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.
11. UNLESS OTHERWISE NOTED ON THE PLAN OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUNDS 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, MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 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.

GENERAL NOTES

- PART I
1. 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.
2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON FEB. 1999 BY WINGS AERIAL MAPPING.
3. HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '27 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3440001 AND NO. 3440002. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.C. DATA.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
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 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 OWNED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. 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.
7. 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.
8. 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).....410-850-4620
BGE(EMERGENCY).....410-685-1400
BUREAU OF UTILITIES.....410-313-4900
COLONIAL PIPELINE COMPANY.....410-795-1390
STATE HIGHWAY ADMINISTRATION.....410-531-5533
VERIZON.....1-800-743-0033/410-224-9210
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED OUTSIDE 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 EXCAVATED. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 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 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.
12. PLEASE USE CAUTION WHEN EXCAVATING IN THE VICINITY OF OVERHEAD ELECTRIC LINES.

- PART II WATER
1. ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 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.
8. FOR SPRINKLER SYSTEMS FOR ALL TOWNHOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.

- 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 MAINS SHALL BE D.I.P. ONLY.
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. 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.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATED THAT THE CELLAR CANNOT BE SERVED.

**CONTRACT NO.: 24-4236-D
OAKMONT AT TURF VALLEY
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS**

DEVELOPER

MANGIONE ENTERPRISES OF TURF VALLEY, L.P.
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
(410) 825-8400

AS BUILT
BY: DFI DATE: 8/5/13

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S SIGNATURE _____ DATE _____

DEVELOPER'S NAME _____

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER'S SIGNATURE _____ DATE 7/24/13

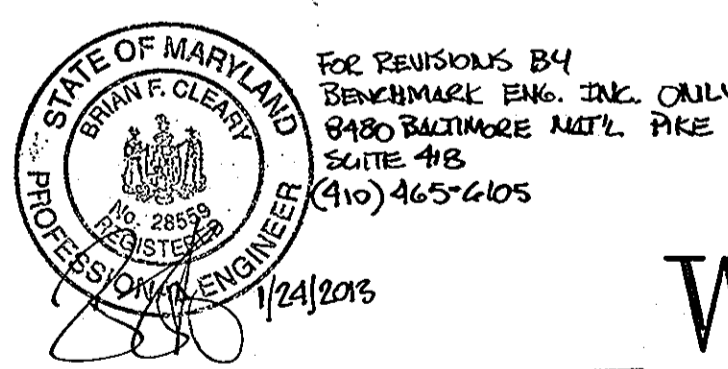
Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 28659 Expiration Date: 7/22/2013

PLAN REFERENCE NUMBERS
P-00-007, P-00-021
F-02-74, F-02-82
SDP-07-062

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.
7/31/13

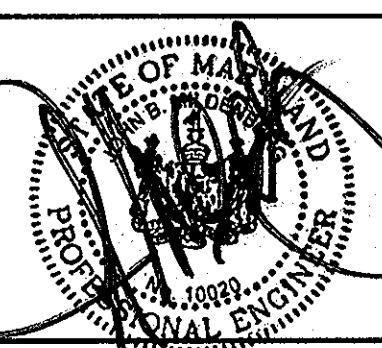
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.
7/31/13



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
7-25-06

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Beltsville, Maryland 21042
(410) 997-0296 Balt. (301) 621-5221 Wash. (410) 997-0298 Tex.



engineering	HSP/MMM	illustration	HSP/MMM	approval	JBM	BET	3	REVISE WATER MAIN TO PVC C900, ADD SHL AND REVISE PUBLIC WATER / UTILITY EASEMENT AND GENERAL NOTES	11/10/13
project	03029	RD	B	1	REVISED SEWER PIPE LENGTH <td></td> <td></td> <td></td> <td>7/7/13</td>				7/7/13
date	JUNE 08	BY	NO.	REVISION	DATE	600' SCALE MAP NO. 16	BLOCK NO. 10 & 16		

TITLE SHEET

**OAKMONT AT TURF VALLEY
TAX MAP 16 PARCEL 8**
CONTRACT NO.: 24-4236-D
THIRD ELECTION DISTRICT
HOWARD COUNTY

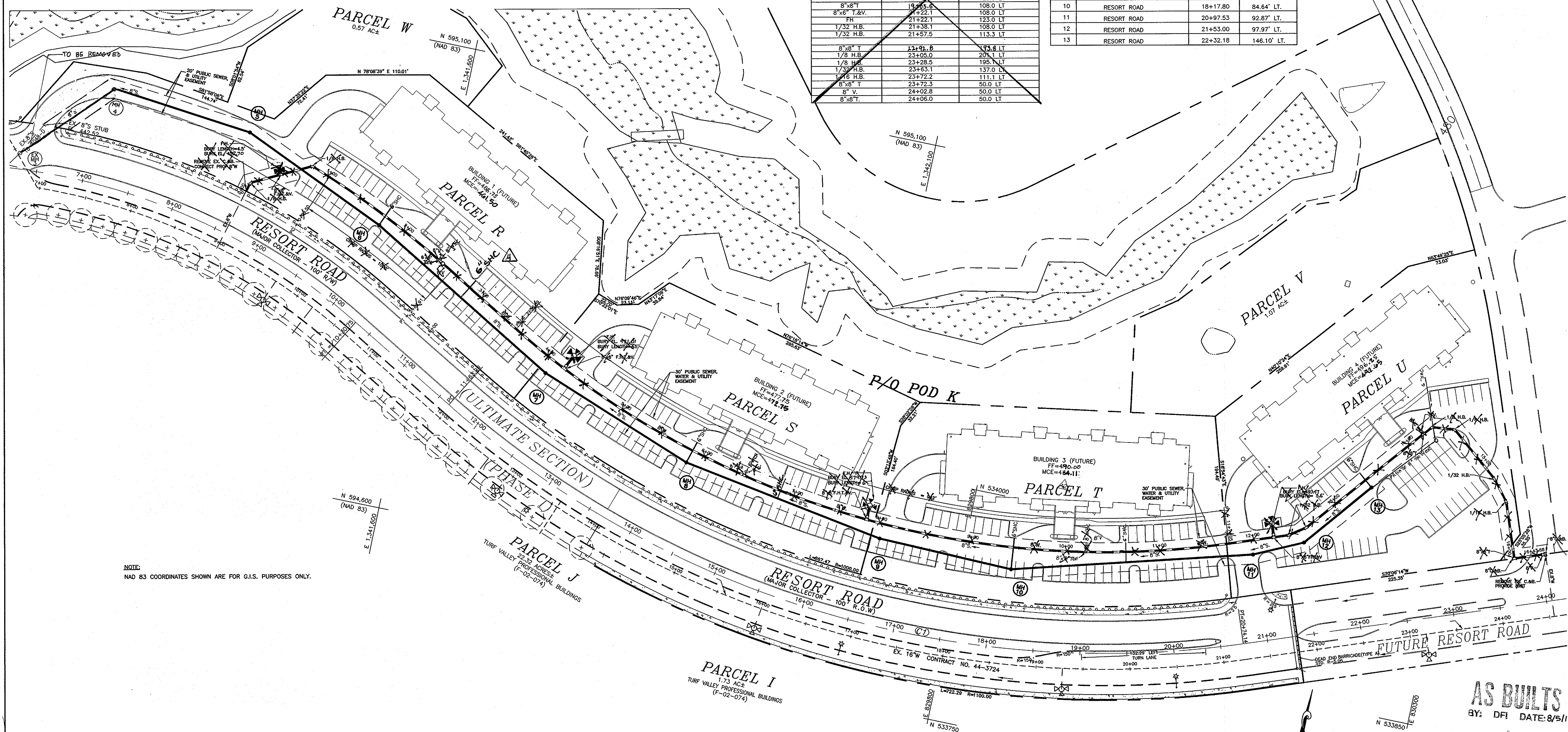
scale AS SHOWN
1 of 5

* SEE SHEET 3 FOR WATER MAIN TABULATION CHART
 * SEE SHEET 3 FOR SEWER HOUSE CONNECTION TABLE

APPURTENANCE	ROAD STA.	OFFSET
1/8" H.B.	8+61.2	59.8 LT.
8"x6" T.&V.	8+83.4	82.8
FH	8+77.3	90.0 LT.
1/8" H.B.	9+05.2	87.7 LT.
8"x8" T.	10+04.5	108.4 LT.
8" V.	10+08.5	108.4 LT.
8"x6" T.&V.	12+36.5	108.0 LT.
FH	12+36.5	123.0 LT.
8"x8" T.	14+32.0	108.7 LT.
8"x6" T.&V.	16+50.8	108.0 LT.
FH	16+49.8	123.0 LT.
8"x8" T.	19+20.5	108.0 LT.
8"x6" T.&V.	19+22.1	108.0 LT.
FH	21+22.1	123.0 LT.
1/32" H.B.	21+38.1	108.0 LT.
1/32" H.B.	21+57.5	113.3 LT.
8"x8" T.	23+92.0	173.8 LT.
1/8" H.B.	23+05.0	204.1 LT.
1/8" H.B.	23+28.5	195.0 LT.
1/32" H.B.	23+83.1	137.0 LT.
1/16" H.B.	23+72.2	111.1 LT.
8"x8" T.	23+72.3	50.0 LT.
8" V.	24+02.8	50.0 LT.
8"x8" T.	24+06.0	50.0 LT.

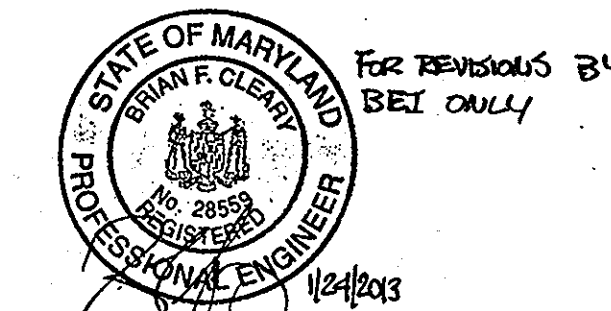
MH #	ROAD NAME	CL STATION	OFFSET
4	RESORT ROAD	8+83.61	108.19 LT.
5	RESORT ROAD	8+39.79	107.96' LT.
6	RESORT ROAD	9+86.46	95.68' LT.
7	RESORT ROAD	12+22.91	92.03' LT.
8	RESORT ROAD	14+17.94	93.67' LT.
9	RESORT ROAD	16.81.18	92.04' LT.
10	RESORT ROAD	18+17.80	84.64' LT.
11	RESORT ROAD	20+97.53	92.87' LT.
12	RESORT ROAD	21+53.00	97.97' LT.
13	RESORT ROAD	22+32.18	146.10' LT.

UNIT #	% SLOPE	INV. @ EASE	MIN. CELLAR ELEV.
1	2	447.58	452.04
2	2	480.50	484.50
3	2	473.56	477.52
4	2	479.18	483.98



NOTE:
 NAD 83 COORDINATES SHOWN ARE FOR G.I.S. PURPOSES ONLY.

AS BUILTS
 BY: DF DATE: 8/5/13



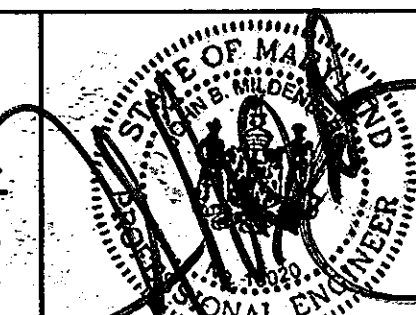
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 28559 Expiration Date: 7/2/2018

THIS PLAN IS FOR SEWER MAIN ONLY.
 SEE SHEET 5 FOR WATER MAIN PLAN.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0298 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax.



NO.	REVISION	DATE
1	REVISED TO REFLECT SHP MODIFICATIONS	7/3/13
2	REVISE LOCATION OF WHO'S I/SK	7/1/13
3	REMOVE WATER MAIN FROM PLAN VIEW	11.9.12
4	SHOW 6" SHC ON PARCEL 'R'	4.19.13

SEWER PLAN

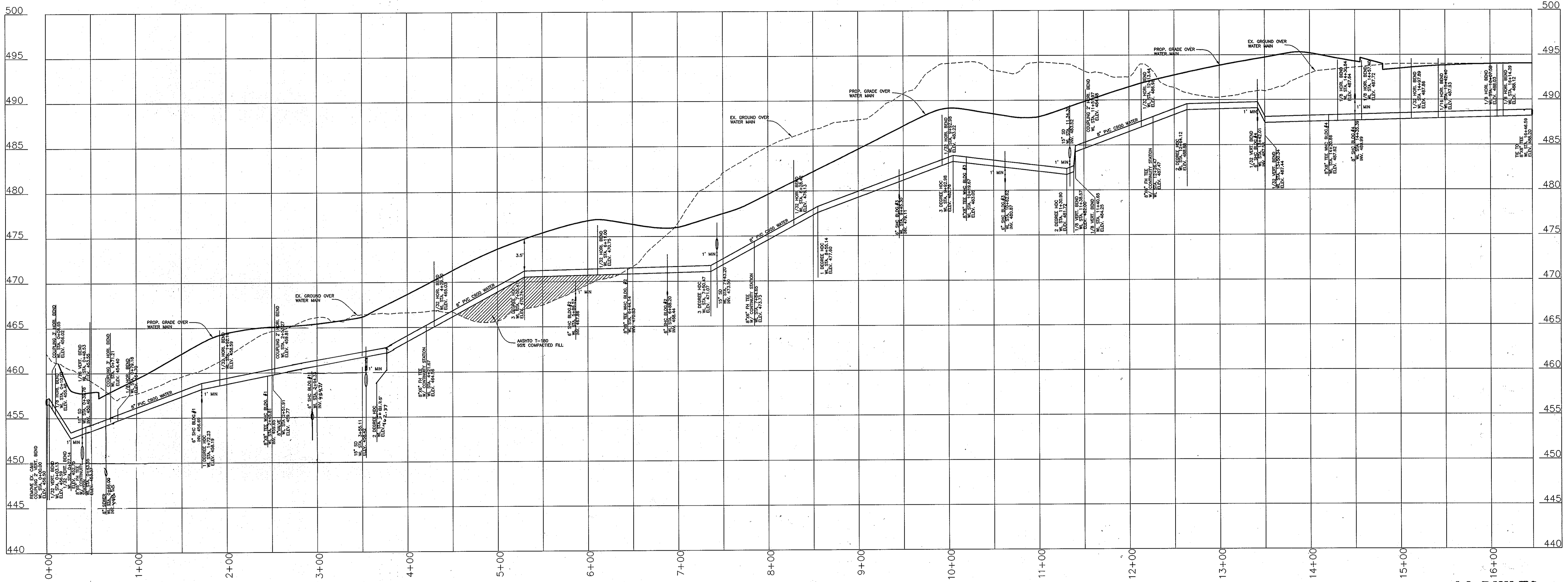
**OAKMONT AT TURF VALLEY
 TAX MAP 16 PARCEL 8**
 CONTRACT NO.: 24-4236-D
 THIRD ELECTION DISTRICT
 HOWARD COUNTY

scale
 1"=50'
 2 OF 5

FH: 03-029 D:\DC\W-S\103029-FINAL-MS-MAY14.DWG

APPURTENANCE	STATION	LOCATION
COUPLING 3" HB	WL STA 0+06.65	N 594906.36 E 1341396.32
1/8" HB	WL STA 0+10.05	N 594909.52 E 1341397.36
8"x6" TEE FH	WL STA 0+43.95	N 594924.65 E 1341427.24
COUPLING 3" HB	WL STA 0+78.82	N 594937.07 E 1341451.77
1/8" HB	WL STA 0+79.18	N 594940.29 E 1341459.06
1/32" HB	WL STA 1+92.16	N 594899.54 E 1341564.43
8"x6" TEE WHC	WL STA 2+45.81	N 594870.84 E 1341609.74
8"x6" TEE FH	WL STA 4+21.97	N 594797.76 E 1341769.52
1/32" HB	WL STA 4+29.70	N 594777.68 E 1341768.29
1/32" HB	WL STA 6+11.00	N 594718.23 E 1341939.57
8"x6" TEE WHC	WL STA 6+44.14	N 594713.66 E 1341972.39
8"x6" TEE FH	WL STA 7+84.65	N 594694.28 E 1342111.56
1/32" HB	WL STA 8+28.42	N 594688.2395 E 1342154.90
1/32" HB	WL STA 9+92.98	N 594697.67 E 1342319.20
8"x6" TEE WHC	WL STA 10+19.67	N 594704.35 E 1342345.04
COUPLING 2" HB	WL STA 11+51.97	N 594737.48 E 1342473.13
1/32" HB	WL STA 12+13.44	N 594754.94 E 1342532.07
8"x6" TEE FH	WL STA 12+26.47	N 594761.00 E 1342543.60
1/16" HB	WL STA 12+51.00	N 594772.40 E 1342565.31
8"x6" TEE WHC	WL STA 14+20.86	N 594903.79 E 1342872.97
1/8" HB	WL STA 14+30.84	N 594911.51 E 1342879.30
1/8" HB	WL STA 14+57.89	N 594915.5258 E 1342705.55
1/32" HB	WL STA 14+97.89	N 594891.56 E 1342738.18
1/16" HB	WL STA 15+42.40	N 594858.71 E 1342768.22
1/8" HB	WL STA 16+07.58	N 578945.07 E 1293732.74
1/8" HB	WL STA 16+14.39	N 578942.41 E 1293739.01

BUILDING #	% SLOPE	ELEV. AT EASEMENT	MIN. CELLAR ELEV.
1	2	456.83	461.50
1	2	460.43	465.10
2	2	468.07	472.75
2	2	468.57	473.22
3	2	479.33	484.11
3	2	481.06	485.71
4	2	487.95	492.65
4	2	490.20	495.39



8" WATER PROFILE
 HORIZONTAL SCALE: 1"=50'
 VERTICAL SCALE: 1"=5'

NOTE: ALL COUPLINGS FOR PVC WATER ARE TO BE CERTAINTED PVC HIGH DEFLECTIONS COUPLINGS.

FOR REVISIONS BY BEI ONLY

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. 28559 Expiration Date: 7/22/2013

AS BUILT
 BY: DJF DATE: 8/5/13

THE SHEET REPLACES PREVIOUSLY APPROVED SHEET 3 DATED JULY 2006 PER REVISION #3.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John C. Green 2/15/13
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

John Edmund 2/20/19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE & SUITE 418 A ELICOTT CITY, MARYLAND 21043
 (P) 410-465-6100 (F) 410-465-6664
 60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
 (P) 301-371-3505 (F) 301-371-3506
 WWW.BE-ENR.COM

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.

John Edmund 1/24/2013
 PROFESSIONAL ENGINEER

DESIGN: JCO			
DRAFT: JCO			
CHK: BFC	BEI 4	REVISE WATER ELEV. 0+50 TO 0+70 OF 2+88 TO 3+01	4-19-13
DATE: 11.8.12	BEI 3	REVISE WATER MAIN TO PVC C900	11.8.12
BY: NO.		REVISIONS	DATE

WATER PROFILE

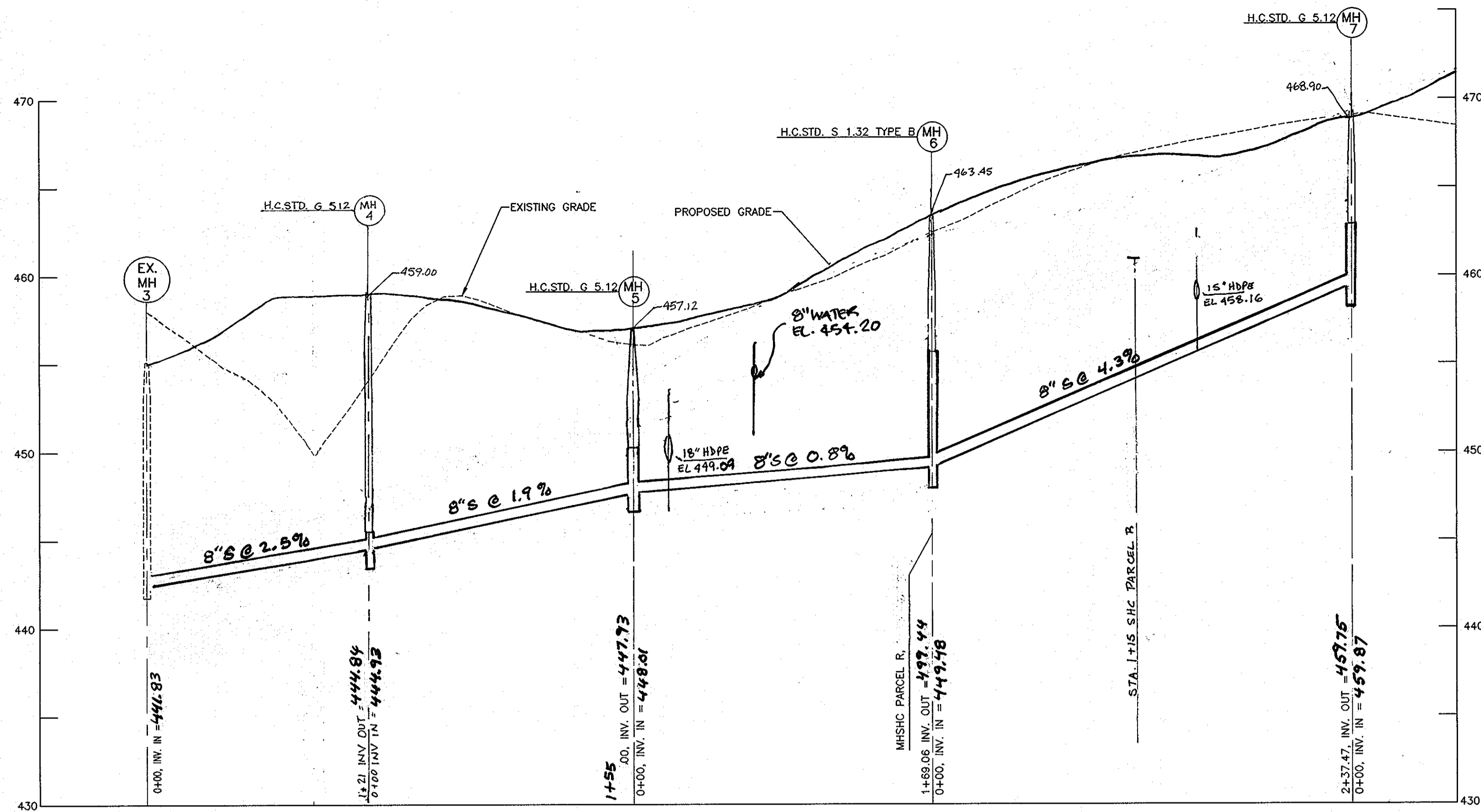
600 SCALE MAP NO. 16 BLOCK: 10 & 16

OAKMONT AT TURF VALLEY TAX MAP 16 PARCEL 8

CONTRACT NO: 24-4236-D
 THIRD ELECTION DISTRICT
 HOWARD COUNTY

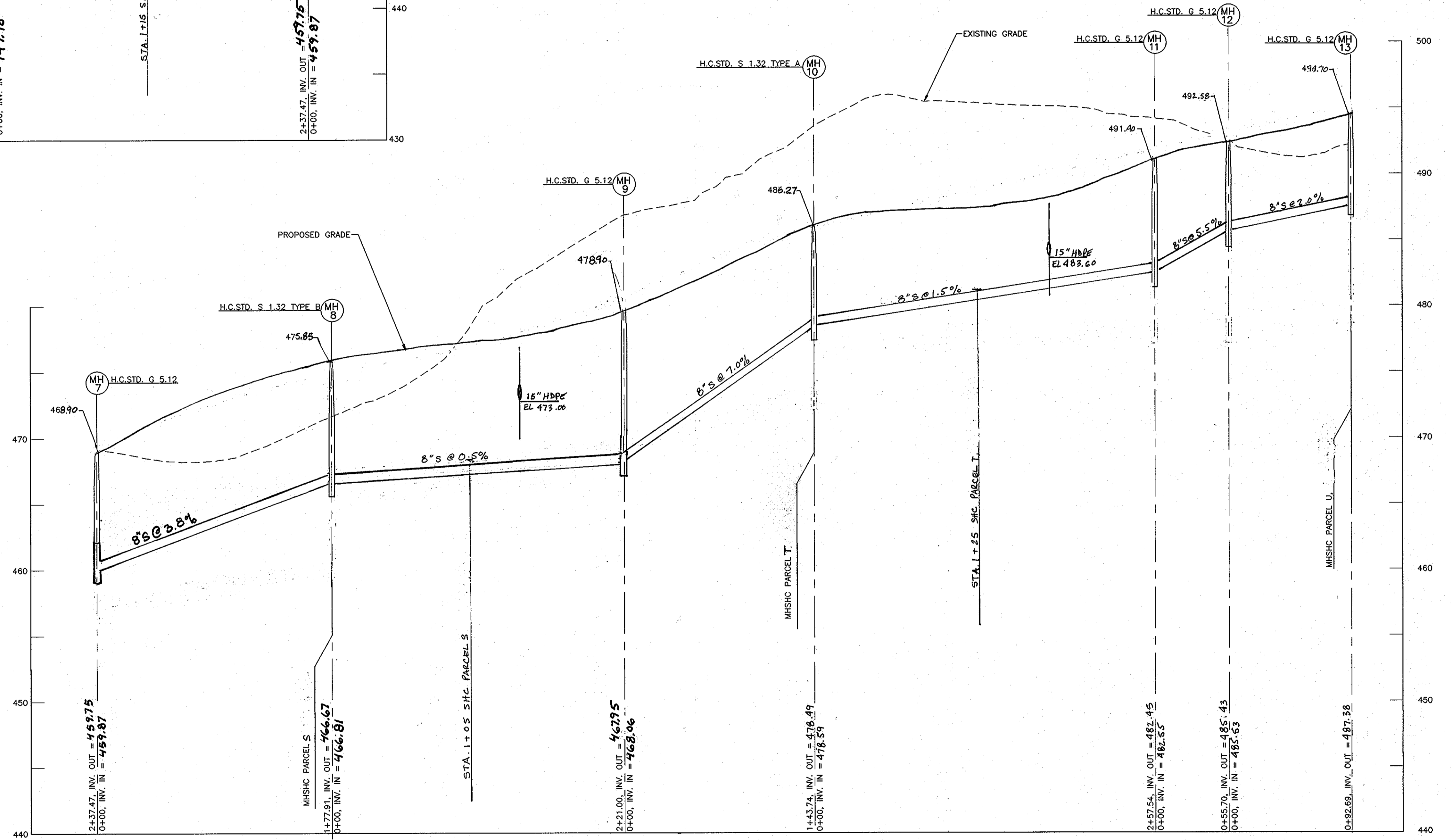
SCALE: AS SHOWN

SHEET NO. 3 OF 5



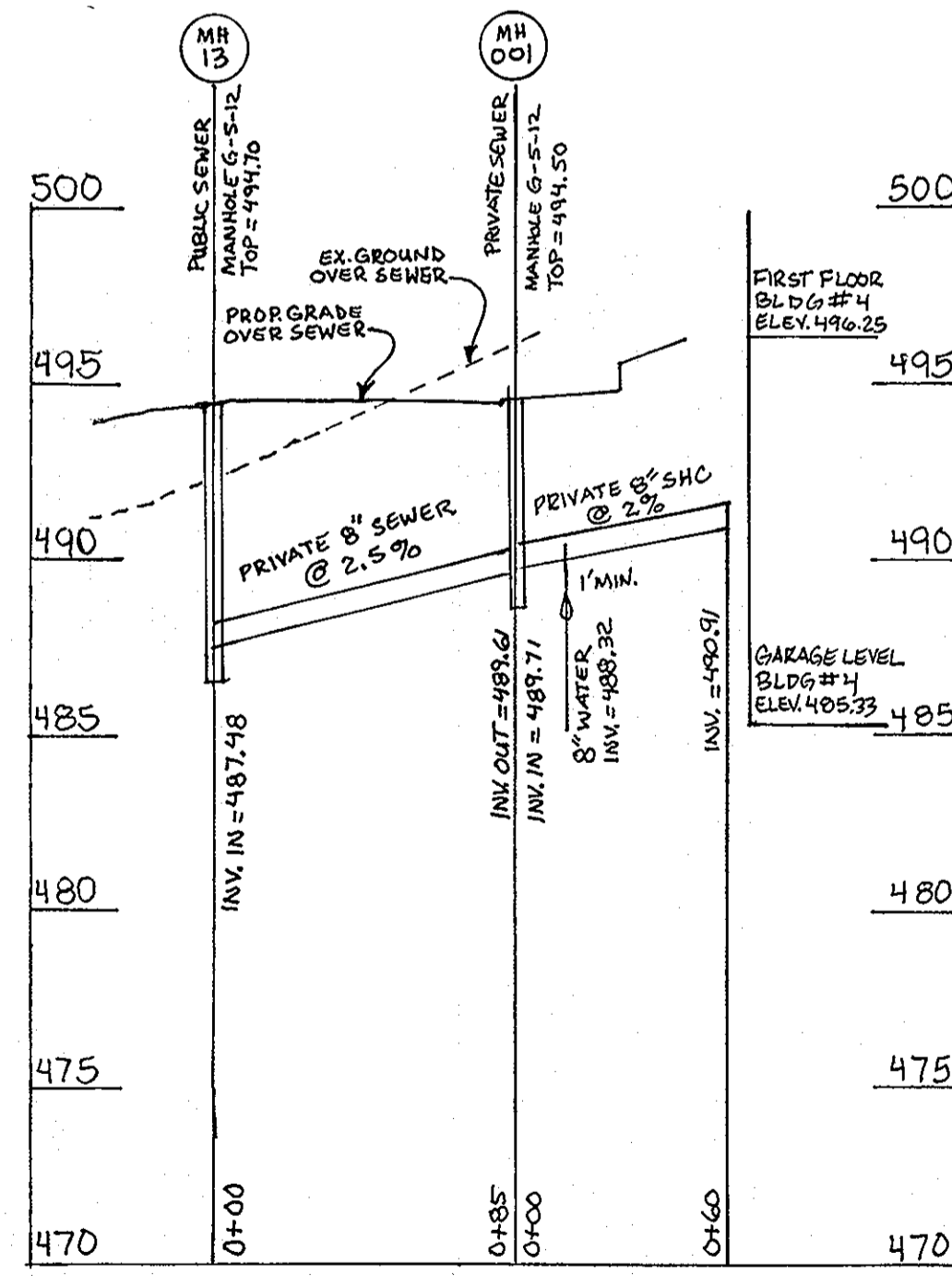
SEWER MAIN PROFILE

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



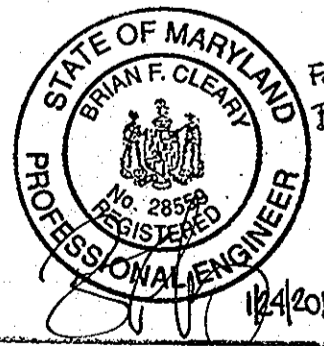
SEWER MAIN PROFILE

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



PRIVATE SEWER PROFILE

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



FOR REVISIONS BY
BFC ONLY

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. 28559 Expiration Date: 7/22/2013

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

**MILDENBERG,
BOENDER & ASSOC., INC.**

Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21043
(410) 937-0236 Fax: (301) 621-5521 Wash. (410) 937-0236 Pa.



engineering	RDB/MMM	illustration	RDB	approval	JBM	project	MMM	RDB	date	JULY 06	BY	NO.	REVISION	DATE
BET	4	REVISE INV. MH 3 TO MH 9 PER AS-BUILT CONDITIONS	1/11/12											
BET	3	ADD PRIVATE SEWER PROFILE	1/14/13											
BET	2	REVISE SEWER PROFILES	7/17/09											
RDB	1	REVISIONS TO REFLECT SUPPLEMENTATIONS	7/31/07											

SEWER PROFILES

600' SCALE MAP NO. 16 BLOCK NO. 10 & 16

**OAKMONT AT TURF VALLEY
TAX MAP 16 PARCEL 8**

CONTRACT NO.: 24-4236-D
THIRD ELECTION DISTRICT
HOWARD COUNTY

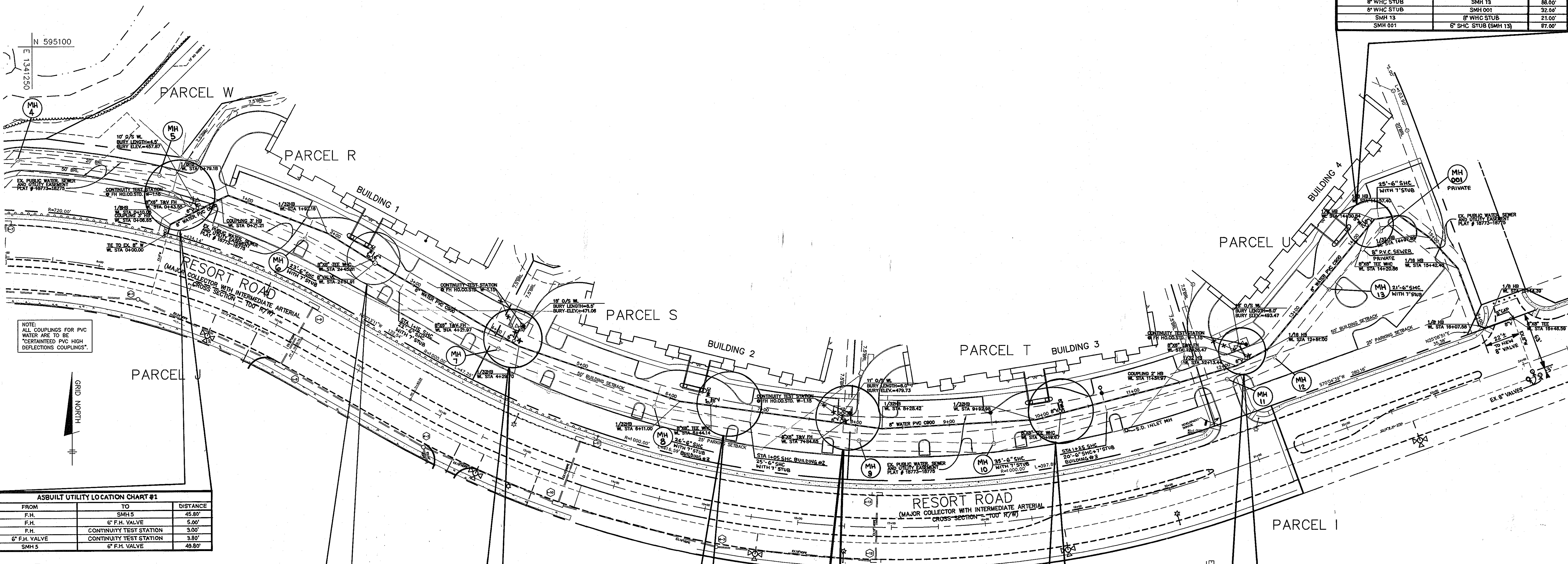
AS BUILTS
BY: DFI DATE: 8/5/13

scale
AS SHOWN

4 of 5

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FROM	TO	DISTANCE
8" WHC VALVE	SMH 001	17.00'
8" WHC VALVE	SMH 13	82.00'
8" WHC VALVE	8" WHC STUB	20.00'
8" WHC STUB	SMH 13	88.00'
8" WHC STUB	SMH 001	32.00'
SMH 13	8" WHC STUB	21.00'
SMH 001	6" SHC STUB (SMH 13)	87.00'



NOTE:
ALL COUPLINGS FOR PVC
WATER ARE TO BE
CERTAINTED PVC HIGH
DEFLECTIONS COUPLINGS.

FROM	TO	DISTANCE
F.H.	SMH 5	45.80'
F.H.	6" F.H. VALVE	5.00'
F.H.	CONTINUITY TEST STATION	3.00'
6" F.H. VALVE	CONTINUITY TEST STATION	3.80'
SMH 5	6" F.H. VALVE	49.80'

FROM	TO	DISTANCE
SMH 6 STUB	8" WHC VALVE	54.00'
SMH 6	8" WHC VALVE	73.00'
SMH 6	8" IN-LINE VALVE	76.00'
8" WHC VALVE	8" SEWER STUB @ STA 1+15	54.50'
8" IN-LINE VALVE	8" WHC VALVE	4.00'
8" WHC VALVE	8" WATER STUB	16.00'

FROM	TO	DISTANCE
SMH 7	F.H. @ STA 4+21	34.00'
SMH 7	6" F.H. VALVE	17.50'
SMH 7	CONTINUITY TEST STATION	35.00'
F.H.	CONTINUITY TEST STATION	2.00'
6" F.H. VALVE	CONTINUITY TEST STATION	17.70'

FROM	TO	DISTANCE
6" SHC STUB @ STA 1+05	8" WHC VALVE	56.00'
SMH 8	8" WHC VALVE @ STA 6+44	64.00'
8" WHC VALVE @ STA 6+44	8" SEWER STUB (SMH 8)	58.00'
SMH 8	6" SHC STUB (SMH 8)	17.00'
SMH 8	6" SHC STUB (SMH 8)	109.00'

FROM	TO	DISTANCE
F.H.	6" F.H. VALVE	11.50'
F.H.	CONTINUITY TEST STATION	2.00'
F.H.	SMH 9	35.50'
6" F.H. VALVE	CONTINUITY TEST STATION	11.30'
6" F.H. VALVE	SMH 9	27.60'
CONTINUITY TEST STATION	SMH 9	35.30'

FROM	TO	DISTANCE
8" WHC VALVE	SMH 10	73.00'
8" WHC VALVE	8" WHC STUB	19.00'
8" WHC STUB	6" SHC STUB (SMH 10)	35.00'
6" SHC @ STA 1+25	8" WHC VALVE	57.00'
6" SHC @ STA 1+25	SD INLET MH	82.00'

FROM	TO	DISTANCE
F.H.	6" F.H. VALVE	16.80'
F.H.	CONTINUITY TEST STATION	2.00'
SMH 11	F.H.	32.00'
SMH 11	6" F.H. VALVE	28.00'
SMH 11	CONTINUITY TEST STATION	32.50'
SMH 12	6" F.H. VALVE	30.50'
SMH 12	F.H.	40.50'
SMH 12	CONTINUITY TEST STATION	31.00'
SMH 12	6" SHC (SMH 12)	118.00'

THIS PLAN IS FOR WATER MAIN PLAN VIEW ONLY. SEE SHEET 2 FOR SEWER MAIN PLAN VIEW.
SEE SHEET 3 FOR WATER MAIN TABULATION CHART AND SEWER HOUSE CONNECTION TABLE.

THE SHEET IS ADDED TO THE PREVIOUSLY APPROVED SET DATED JULY 2006 PER REVISION #3

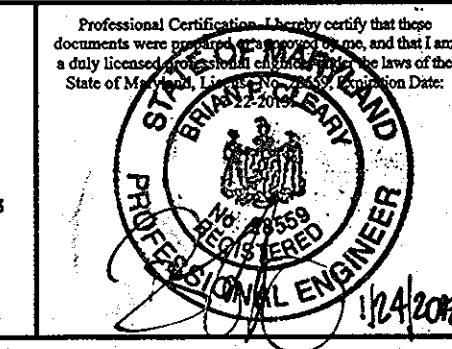
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Steve Carr
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Chris Anderson
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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WWW.BEC-ENGINEERING.COM



DESIGN:	JCO		
DRAFT:	JCO		
CHK:	BFC		
DATE:	11.8.12		
BY:	NO.	REVISIONS	DATE
	3	REVISE WATER PLAN TO PVC C900	11.8.12

WATER PLAN

600 SCALE MAP NO. 16 BLOCK: 10 & 16

OAKMONT AT TURF VALLEY
TAX MAP 16 PARCEL 8
CONTRACT NO: 24-4236-D
THIRD ELECTION DISTRICT
HOWARD COUNTY

SCALE:
1"=50'

SHEET NO.
5 OF 5

AS BUILTS
BY: DFI DATE: 8/5/13

P12141.dwg NEW WATERLINGS WATER PLAN, 1/23/2013 3:37:03 PM