

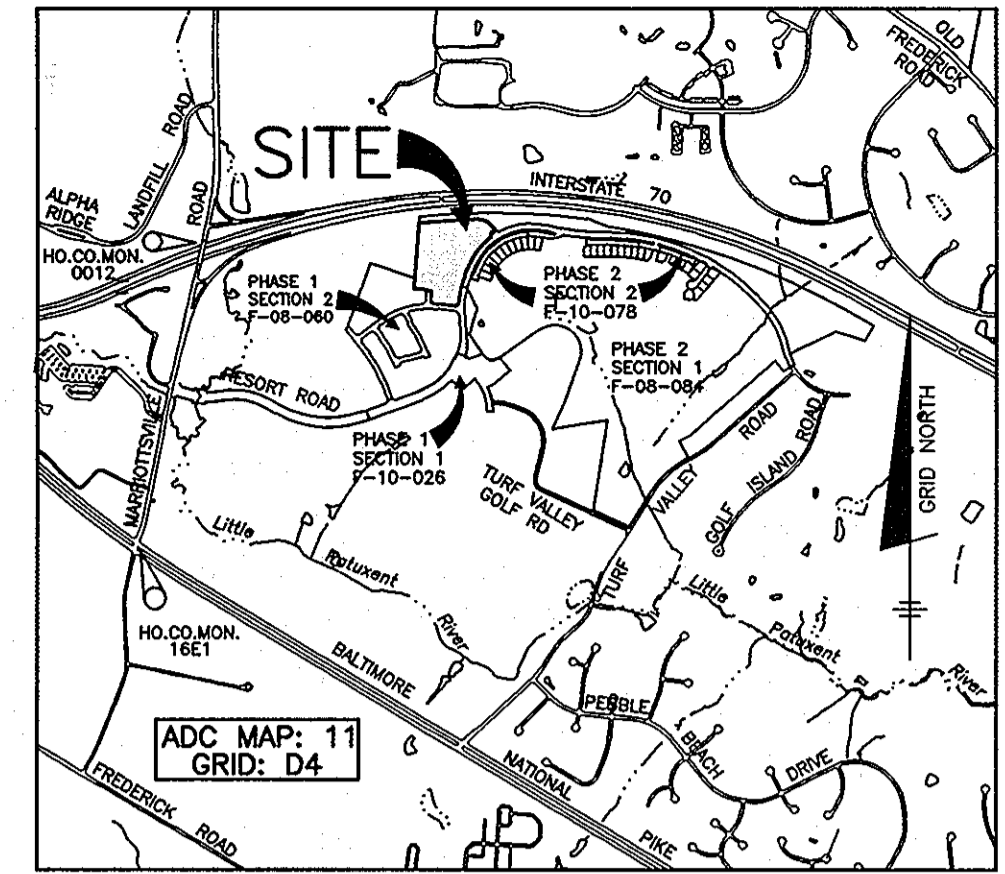
VILLAGES AT TURF VALLEY

PHASE 3

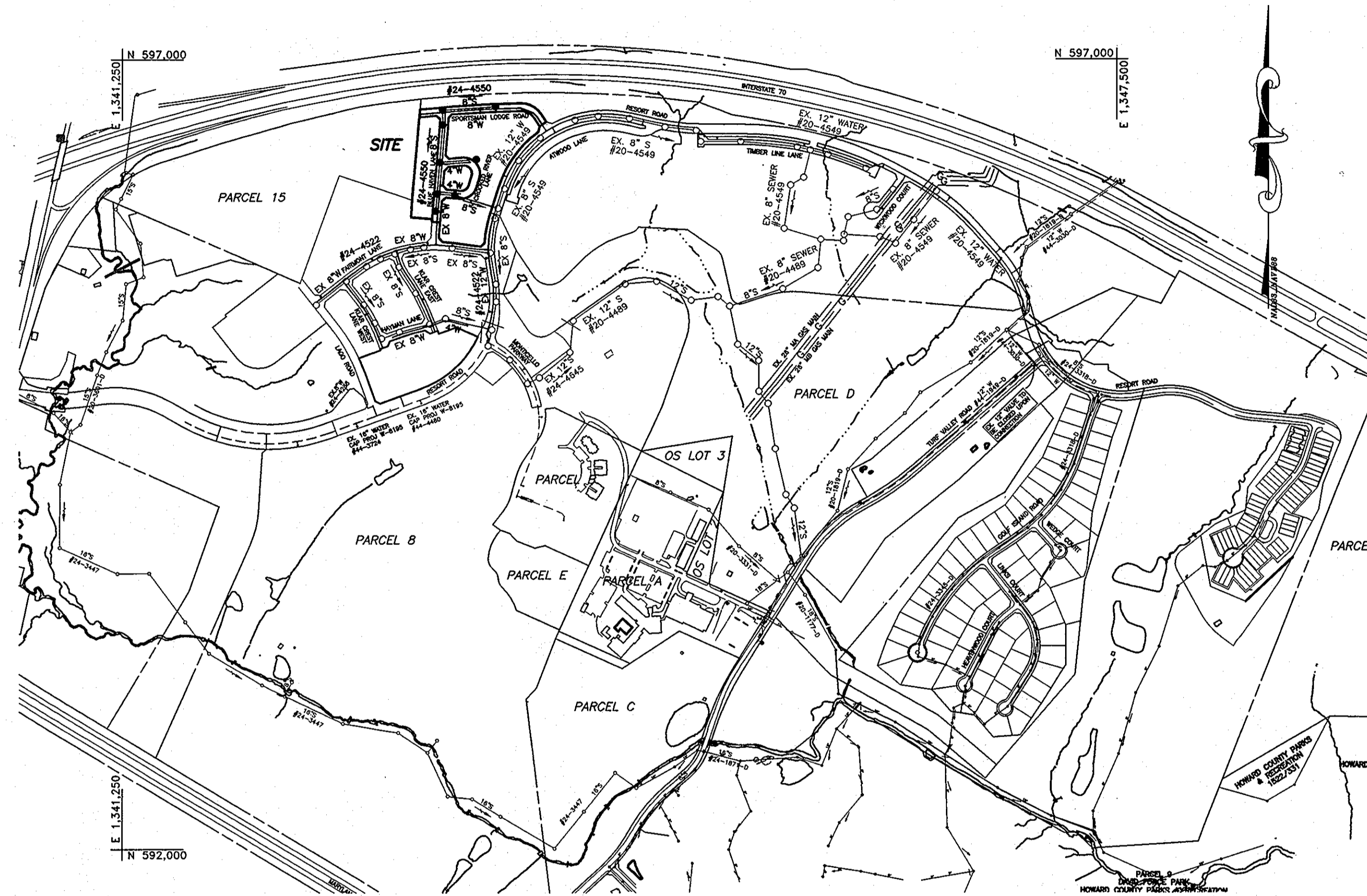
CONTRACT NO. 24-4550-D

BENCHMARKS NAD'83 HORIZONTAL
 HO. CO. #16E1 (AKA: 3438001)
 STAMPED BRASS DISK SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE.
 N 593250.960' E 1340192.70'
 ELEVATION: 463.981'

HO. CO. #0012 (AKA: 3439001)
 STAMPED BRASS DISK SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE.
 N 596502.760' E 1340864.37'
 ELEVATION: 486.298'



VICINITY MAP
 SCALE: 1" = 2000'

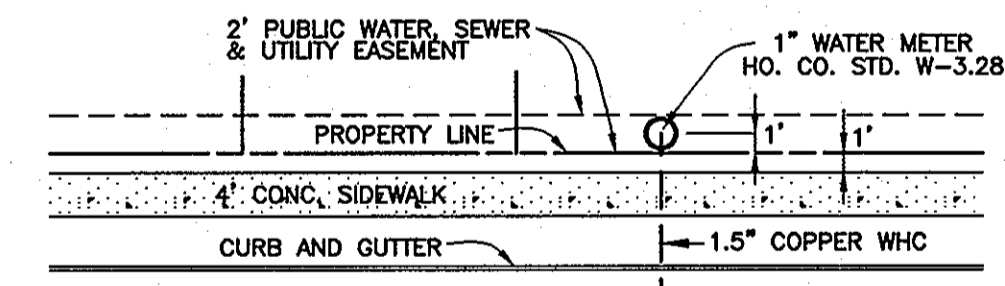


TYPE OF BUILDING: SFA
 NO. OF LOTS/PARCELS/UNITS: 35
 NUMBER OF SHC'S: 35
 NUMBER OF WHC'S: 35
 AREA OF COMMERCIAL LOT/PARCEL: N/A
 SEWER SHED: LITTLE PATUXENT WRP
 PUMPING STATION: ROUTE 108 PS
 WATER ZONE: 630W
 TEST GRADIENT: 780

VICINITY MAP
 SCALE: 1" = 600'

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" D.I.P. WATER	1510 LF			
4" D.I.P. WATER	340 LF			
FIRE HYDRANTS (INCLUDES 8"x6" TEE & 6" VALVE)	2 EA.			
8"x8" TEE	1 EA.			
8"x4" TEE	2 EA.			
8" VALVE	5 EA.			
4" VALVE	2 EA.			
8" PLUG & BUTTRESS	1 EA.			
4" PLUG & BUTTRESS	2 EA.			
1.5" WHC	1046 LF			
8" PVC SEWER	659 LF			
8" DIP SEWER	909 LF			
MANHOLES	8 EA.			
VERT FEET OF MANHOLES	117 VF			
4" SHC	793 LF			

NAME OF UTILITY CONTRACTOR:
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE:



TYPICAL WATER HOUSE CONNECTION
 NOT TO SCALE

NOTE:
 ALL WATER HOUSE CONNECTIONS ARE TO BE 1.5" WITH A 1" METER (OUTSIDE SETTING).

GENERAL NOTES

PART I - GENERAL

- 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 IN FEBRUARY, 2003 BY BENCHMARK ENGINEERING, INC.
- 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. 0012 AND NO. 16E1.
- ALL VERTICAL CONTROLS ARE BASED ON NAVD '83. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 0012 AND 16E1.
- 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 [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 (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - AT&T.....1-800-252-1133
 - BGE (CONSTRUCTION SERVICES).....410-850-4620
 - BGE (EMERGENCY).....410-856-1400
 - BUREAU OF UTILITIES.....410-313-4900
 - COLONIAL PIPELINE CO.....410-795-1390
 - MISS UTILITY.....800-257-7777
 - STATE HIGHWAY ADMINISTRATION.....410-531-5533
 - VERIZON.....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 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 (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(g) OF THE HOWARD COUNTY CODE.

PART II - WATER

- 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.

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 COVER, STANDARD DETAIL C5.52. 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 CELLAR CANNOT BE SERVED.

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET PUBLIC WATER & SEWER MAINS
2	PLAN VIEW OF PUBLIC WATER & SEWER MAINS
3	PROFILES OF PUBLIC WATER & SEWER MAINS

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

Shawn S. [Signature] 3/26/10
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER F-08-085.

OWNER/DEVELOPER:
 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. 21443, Expiration Date: 12-21-2010.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

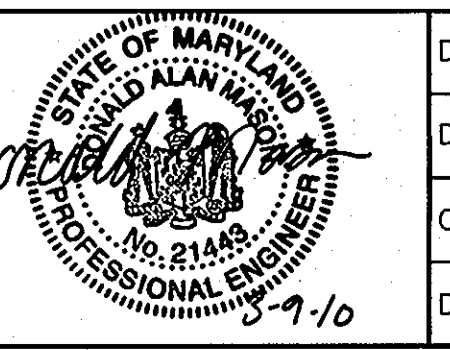
Shawn S. [Signature] 3/26/10
 CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

Paul [Signature] 4.5.10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE SUITE 418
 ELICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644



DESIGN: DBT				
DRAFT: DBT				
CHK: DAM				
DATE: 03/2010	BY NO.	REVISIONS	DATE	

TITLE SHEET
 PUBLIC WATER & SEWER MAINS

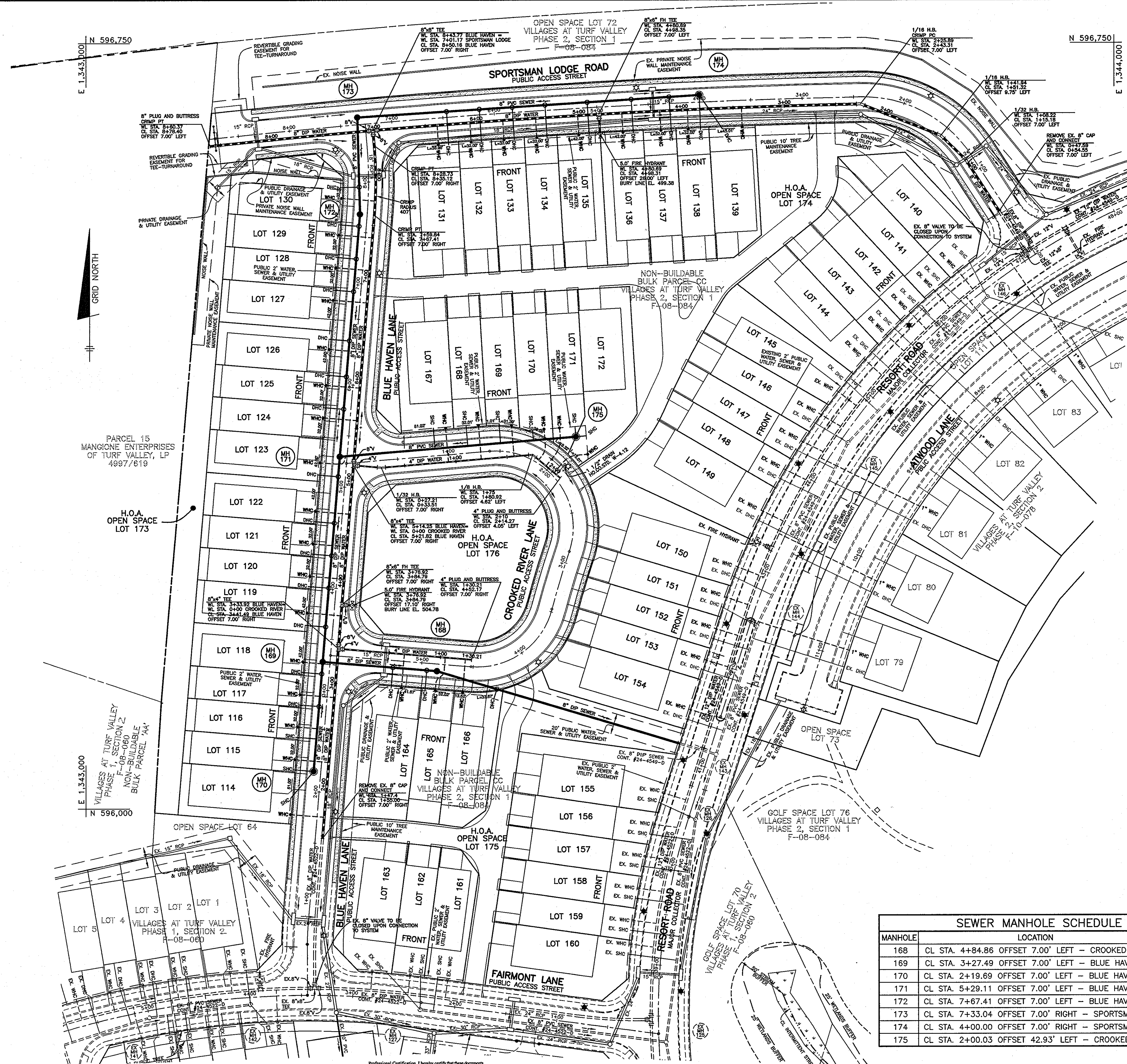
600 SCALE MAP NO. 16 BLOCK: 11 200 SCALE MAP NO. 146

VILLAGES AT TURF VALLEY
 PHASE 3
 LOTS 114 thru 172
 OPEN SPACE LOTS 173 thru 176
 TAX MAP: 16 - BLOCK: 17 - PARCEL: P/O 8 - ZONED: PGCC - ELECTION DISTRICT: 3

CONTRACT NO. 24-4550-D

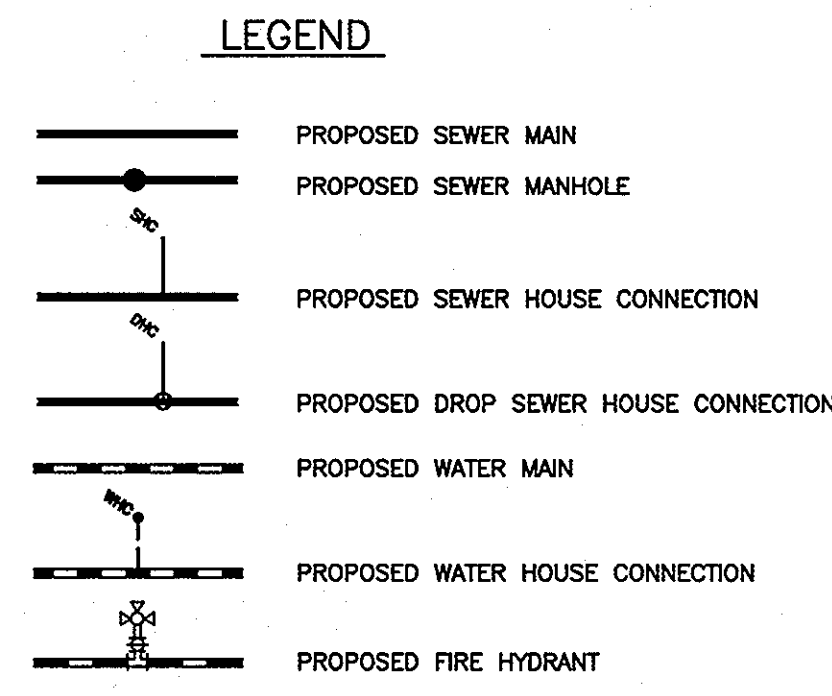
SCALE:
 AS SHOWN

SHEET NO.
 1 OF 3



SHC CHART						
Lot Number	Invert @ main standpipe @ main	Invert of or esmt	MCE	DHC?	Height of Drop	
114	486.36	N/A	487.05	491.60	No	N/A
115	486.36	N/A	486.76	491.37	No	N/A
116	486.02	N/A	486.42	490.99	No	N/A
117	485.86	486.86	487.26	491.87	Yes	1.00
118	485.70	488.20	488.60	493.17	Yes	2.50
119	485.81	489.81	490.21	494.85	Yes	4.00
120	486.00	490.50	490.90	495.47	Yes	4.50
121	486.16	491.16	491.56	496.17	Yes	5.00
122	486.32	491.32	491.72	496.29	Yes	5.00
123	486.55	492.05	492.45	497.09	Yes	5.50
124	486.78	493.78	494.18	498.75	Yes	7.00
125	487.14	494.14	494.54	499.15	Yes	7.00
126	487.32	493.32	493.72	498.31	Yes	6.00
127	487.56	493.56	493.96	498.57	Yes	6.00
128	487.72	491.72	492.12	496.69	Yes	4.00
129	487.88	490.88	491.28	495.89	Yes	3.00
130	488.18	489.68	490.08	494.66	Yes	1.50
131	489.49	492.49	493.14	497.78	Yes	3.00
132	489.81	492.81	493.46	498.10	Yes	3.00
133	490.13	493.13	493.77	498.38	Yes	3.00
134	490.45	493.45	494.09	498.75	Yes	3.00
135	490.86	493.86	494.51	499.17	Yes	3.00
136	491.29	494.79	495.45	500.11	Yes	3.50
137	491.66	495.16	495.83	500.46	Yes	3.50
138	492.12	495.12	495.80	500.44	Yes	3.00
139	492.12	495.12	495.92	500.54	Yes	3.00
164	485.20	489.20	489.60	494.34	Yes	4.00
165	485.03	490.03	490.43	495.15	Yes	5.00
166	484.56	491.06	491.26	496.07	Yes	6.50
167	501.68	N/A	502.08	506.72	No	N/A
168	502.00	N/A	502.40	507.06	No	N/A
169	502.32	N/A	502.71	507.33	No	N/A
170	502.64	N/A	502.84	507.66	No	N/A
171	503.23	N/A	503.43	508.20	No	N/A
172	503.23	N/A	503.43	508.53	No	N/A

SEWER MANHOLE SCHEDULE		
MANHOLE	LOCATION	RIM ELEV.
168	CL STA. 4+84.86 OFFSET 7.00' LEFT - CROOKED RIVER LANE	504.57
169	CL STA. 3+27.49 OFFSET 7.00' LEFT - BLUE HAVEN LANE	502.38
170	CL STA. 2+19.69 OFFSET 7.00' LEFT - BLUE HAVEN LANE	497.80
171	CL STA. 5+29.11 OFFSET 7.00' LEFT - BLUE HAVEN LANE	506.31
172	CL STA. 7+67.41 OFFSET 7.00' LEFT - BLUE HAVEN LANE	503.27
173	CL STA. 7+33.04 OFFSET 7.00' RIGHT - SPORTSMAN LODGE ROAD	501.74
174	CL STA. 4+00.00 OFFSET 7.00' RIGHT - SPORTSMAN LODGE ROAD	498.75
175	CL STA. 2+00.03 OFFSET 42.93' LEFT - CROOKED RIVER LANE	515.00

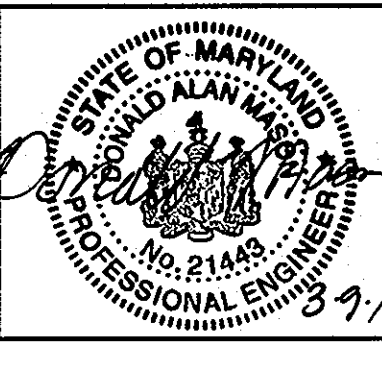


OWNER/DEVELOPER:
MANGIONE ENTERPRISES OF TURF VALLEY, LP
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410-825-8400

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

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ENGINEERING, INC.
2480 BALTIMORE NATIONAL PIKE SUITE 415 A ELLCOTT CITY, MARYLAND 21043
(P) 410-465-4100 (F) 410-465-4864
60 THOMAS JOHNSON DRIVE FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BE-CIVILENGINEERS.COM

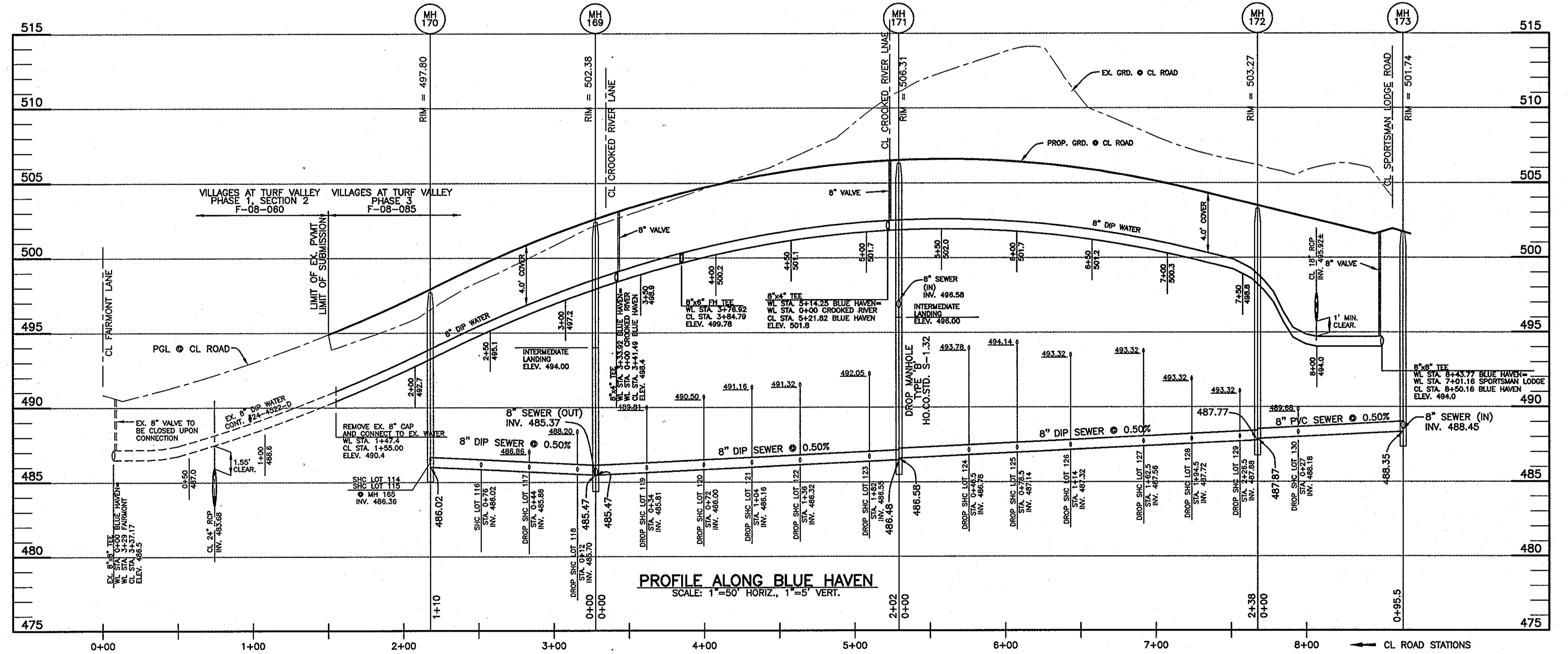
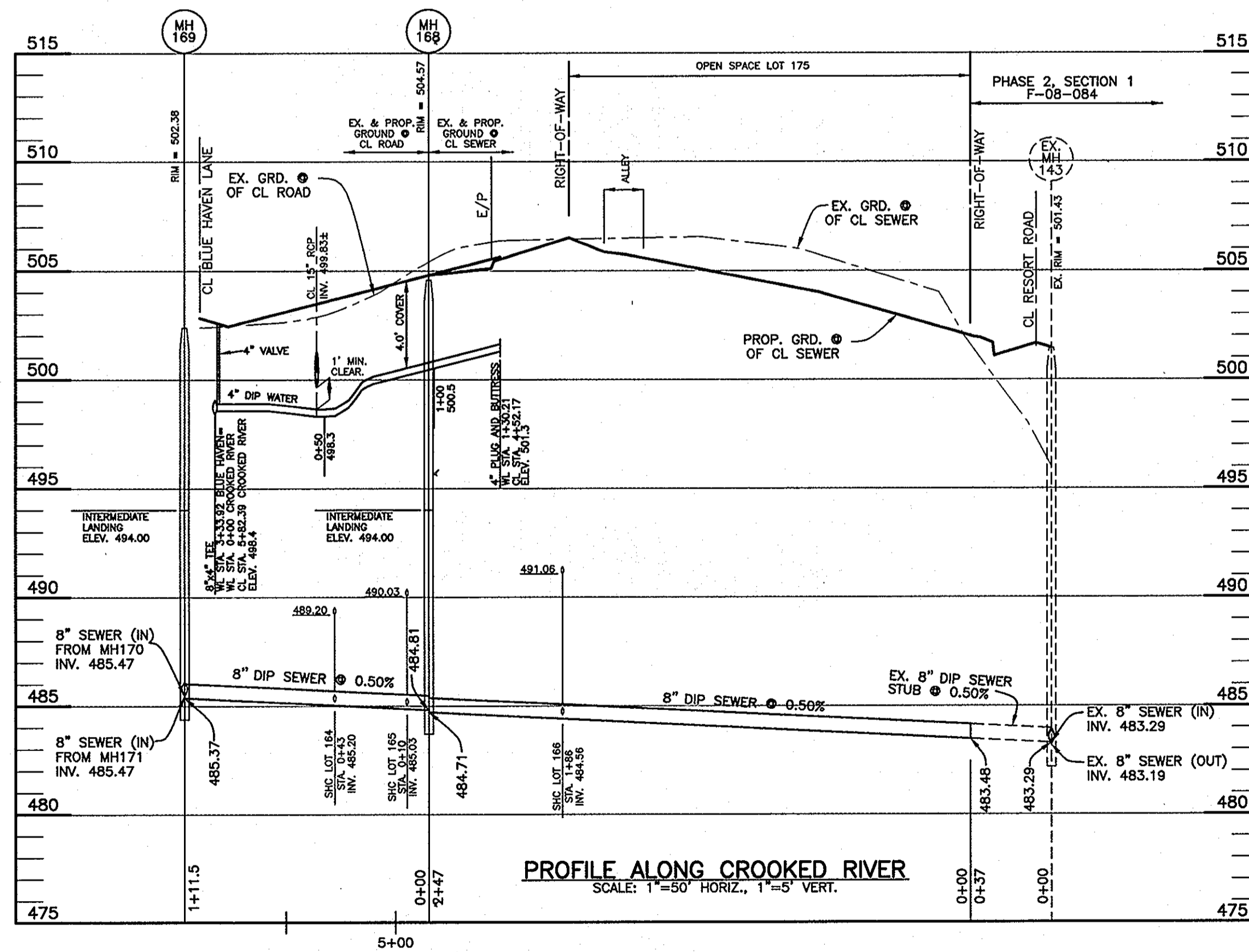
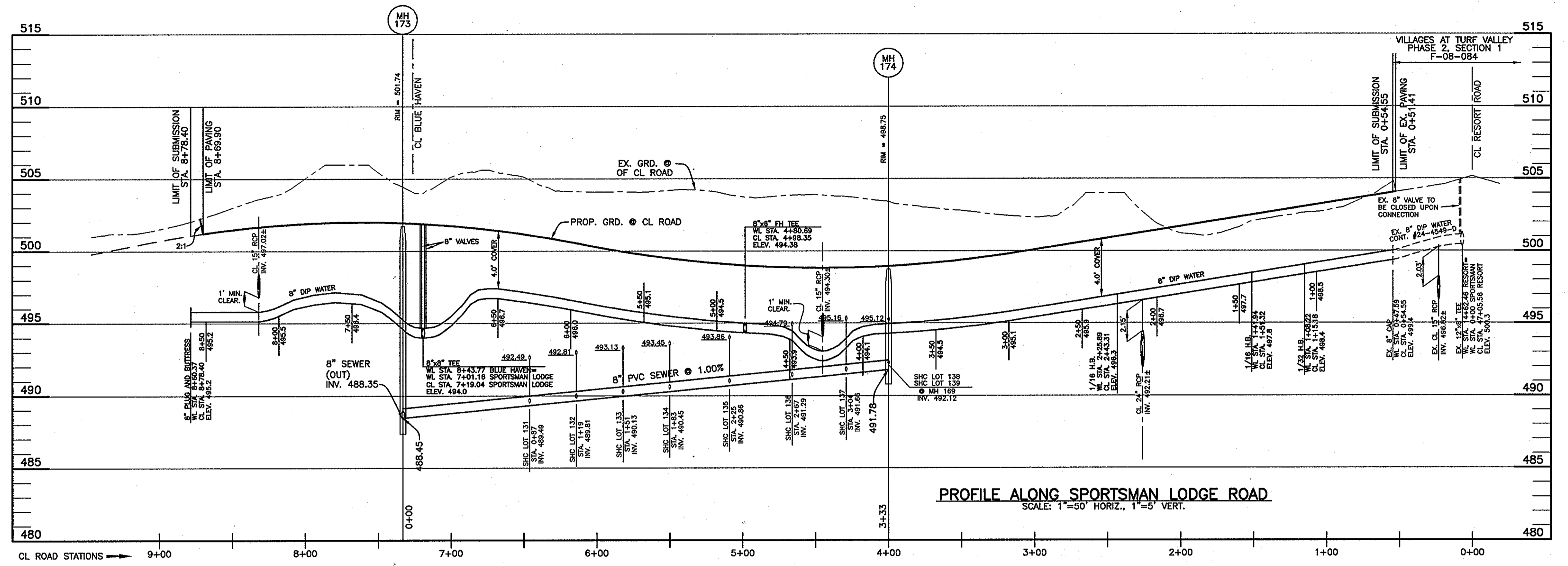
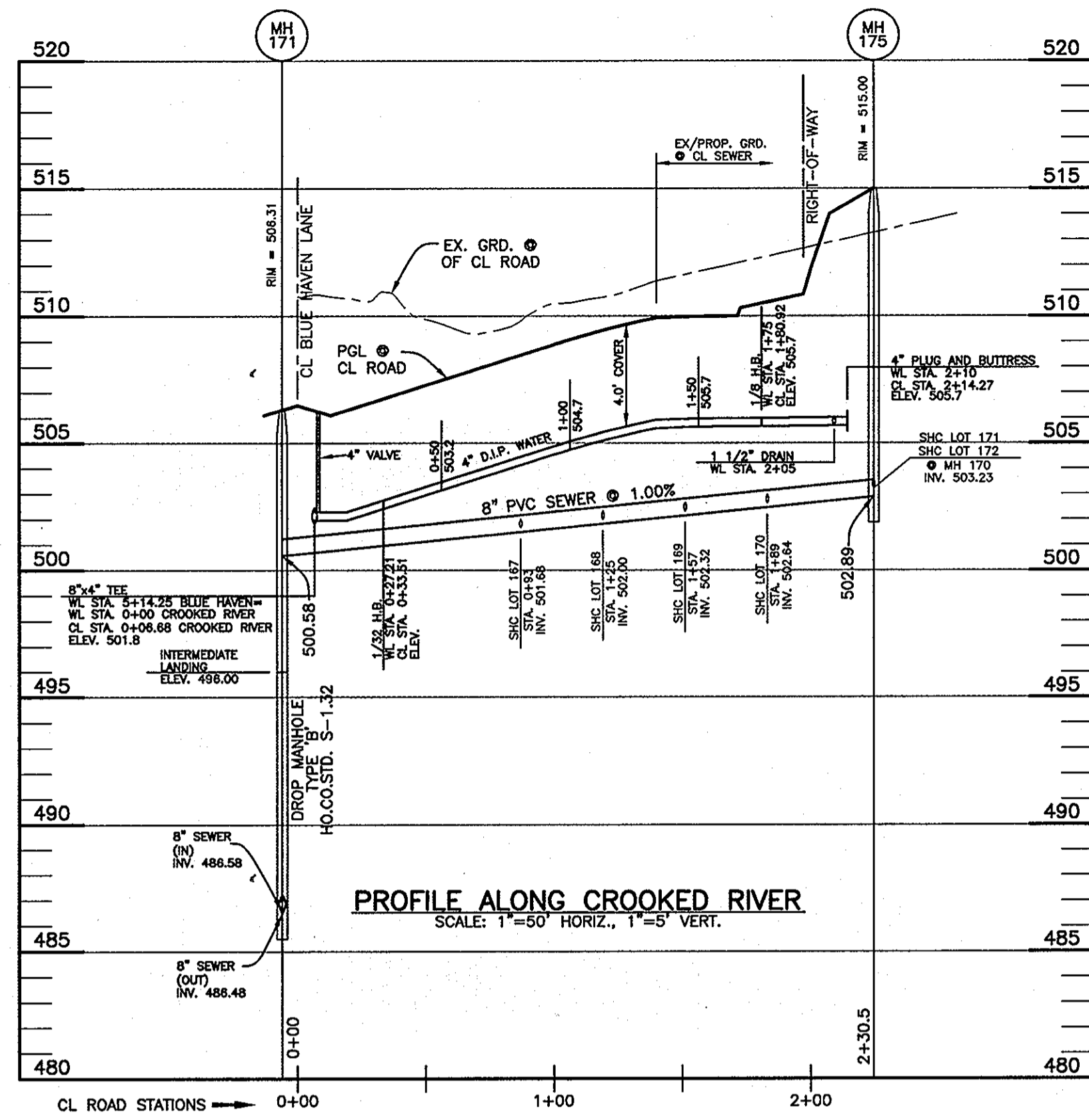


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DRAFT: DBT
CHK: DAM
DATE: 03/2010

PLAN VIEW
PUBLIC WATER & SEWER MAINS

VILLAGES AT TURF VALLEY
PHASE 3
LOTS 114 thru 172
OPEN SPACE LOTS 173 thru 176
TAX MAP: 16 - BLOCK: 17 - PARCEL: P/O 8 - ZONED: PGCC - ELECTION DISTRICT: 3
CONTRACT NO. 24-4550-D

SCALE:
AS SHOWN
SHEET NO.
2 OF 3



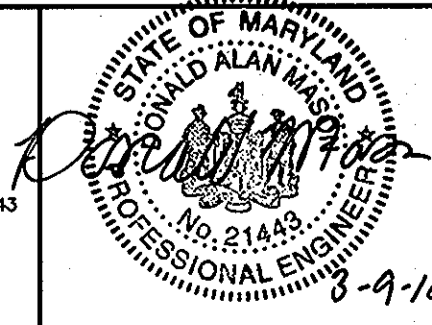
OWNER/DEVELOPER:
MANGIONE ENTERPRISES OF TURF VALLEY, LP
1205 YORK ROAD, PENTHOUSE
LUTHERVILLE, MARYLAND 21093
410-825-8400

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. 21443, Expiration Date: 12-31-2010.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

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PROFILE VIEW
PUBLIC WATER & SEWER MAINS

600 SCALE MAP NO. 16 BLOCK: 11 200 SCALE MAP NO. 146

VILLAGES AT TURF VALLEY

PHASE 3
LOTS 111 thru 169
OPEN SPACE LOTS 170-173
TAX MAP: 16 - BLOCK: 17 - PARCEL: P/O 8 - ZONED: PGCC - ELECTION DISTRICT: 3

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SCALE:
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SHEET NO.
3 OF 3