

W/S 3309-D

AS-BUILT

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" WATER	1182 LF	1182 ±	CL 82 M.I. D.I.P.	GRIFFIN PIPE / B.R.S.
6" WATER	76 LF	76 ±	" " " "	" " " "
4" WATER	31 LF	31	" " " "	" " " "
1" WHC	50 LF	50 LF	TYPE K COPPER	HOWELL METALS B.R.S.
3/4" WHC	400 LF	400 ±	" " " "	" " " "
6" FIRE HYDRANTS	3 EA	3 EA	" " " "	MUELLER CO. / B.R.S.
8" VALVES	1 EA	1 EA	M.I. GATE VALVE	" " " "
6" VALVES	3 EA	3 EA	" " " "	" " " "
4" VALVES	2 EA	2 EA	" " " "	" " " "
8" SEWER	242 LF	242	P.V.C.	" " " "
8" & D.I.P. CL. 32	120 LF	120 L.F.	CL 82 D.I.P.	GRIFFIN PIPE / B.R.S.
4" WHC	782 LF	862 L.F.	P.V.C.	" " " "
MANHOLES	10 EA	10	PRECAST CONCRETE	ATLANTIC MAN.
2" WWC	20 L.F.	20	TYPE K CONCRETE	HOWELL METALS B.R.S.

AS-BUILT WATER HOUSE CONNECTIONS			AS-BUILT SEWER HOUSE CONNECTIONS		
FROM	TO	DISTANCE	FROM	TO	DISTANCE
LOT 88	M.H. 212	26'	LOT 88	M.H. 212	28.6'
"	4" S.U.C. (LOT 88)	0'	"	3/4" WHC (LOT 88)	0'
"	6" F.L.V. @ KERGER RD.	21.0'	"	"	"
LOT 87	M.H. 214	50'	LOT 87	M.H. 214	10
"	3/4" WHC (LOT 87)	50'	"	TO WHC (LOT 87)	53.6'
LOT 89	M.H. 218	22.5'	LOT 89	M.H. 218	22'
"	3/4" WHC (LOT 89)	50.4'	"	3/4" WHC (LOT 89)	10'
"	"	"	"	3/4" WHC (LOT 89)	52.6'

AS-BUILT WATER HOUSE CONNECTIONS			AS-BUILT SEWER HOUSE CONNECTIONS		
FROM	TO	DISTANCE	FROM	TO	DISTANCE
LOT 86	M.H. 214	50'	LOT 86	M.H. 214	20.4'
"	3/4" WHC (LOT 86)	50'	"	3/4" WHC (LOT 86)	20.4'
"	S.U.C. (LOT 86)	20.4'	"	"	"
LOT 85	M.H. 218	35.4'	LOT 85	M.H. 218	31'
"	3/4" WHC (LOT 85)	50.4'	"	3/4" WHC (LOT 85)	19'
"	"	"	"	3/4" WHC (LOT 85)	52.6'

AS-BUILT VALVE LOCATIONS (SUNNYFIELD CT)		
FROM	TO	DISTANCE
6" F.H. VALVE @ STA. 18+40	EX. F.H.	28.3'
"	EX. M.H. 13	21.8'
"	WHC LOT 71	30.4'
"	WHC LOT 70	31.5'
"	CURB MARK	15.0'
8" VALVE @ STA. 18+08 (ZONE VALVE)	EX. M.H.	28.2'
"	OFF OF CURB	11'
6" F.H. VALVE @ STA. 12+13	EX. F.H.	22.3'
"	M.H. 201	26.3'
"	WEST INLET	40.4'
"	FRONT EDGE	11.0'
4" VALVE @ STA. 21+15	M.H. 216	17.1'
"	EX. F.H. @ STA. 21+00	64.7'
6" F.H. VALVE	EX. F.H.	60.3'
"	EX. F.H.	17.1'
"	FRONT EDGE	21.3'

MANHOLE TABLE					
MH NUMBER	ROAD	STATION	DISTANCE	RIM ELEV.	SLOPE
214	11	12	0' LT.	368.11	3.00%
200	SEE SHEET 2			336.2	
201	12	14	7' RT.	341.50	1.06%
202	11	25	10' RT.	345.42	4.52%
215	11	25	7' RT.	344.04	7.65%
216	11	27	11' RT.	320.05	7.65%
217	11	25	11' RT.	321.01	7.65%
218	11	27	7' RT.	315.63	3.40%
219	11	25	120' LT.	328.23	8.00%
220	11	27	101' RT.	321.30	2.25%

AS-BUILT VALVE LOCATIONS (SUNNYFIELD CT)		
FROM	TO	DISTANCE
6" F.H. VALVE @ STA. 21+00	CURB FRONT	11.7'
"	EX. F.H.	11.7'
"	M.H. 217	31.7'
"	M.H. 216	52.5'
"	EX. F.H. @ STA. 21+15	25.7'
4" VALVE @ STA. 21+15	M.H. 217	22.7'
"	EX. F.H. VALVE	25.7'
"	EX. F.H.	28.1'
"	FRONT EDGE	6'

Sediment control measures for this contract will be implemented in accordance with Section 219 of the Specifications and as shown on F-23-137.

*John K. Roberts* 12/1/93  
 HOWARD SOIL CONSERVATION DISTRICT

Review for Howard Soil Conservation District and meets technical requirements.

*J. A. Wald* 12/1/93  
 U.S. SOIL CONSERVATION SERVICE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

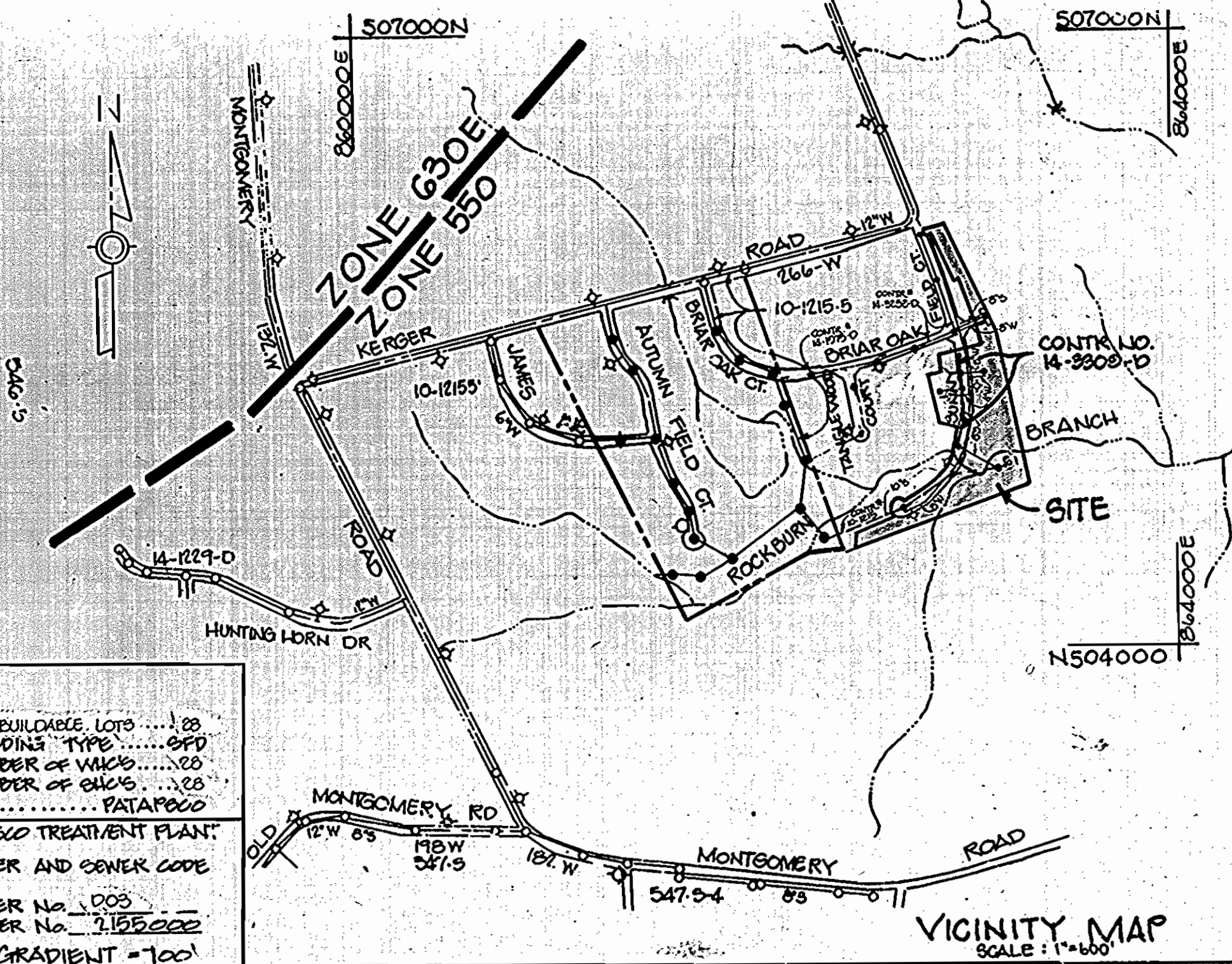
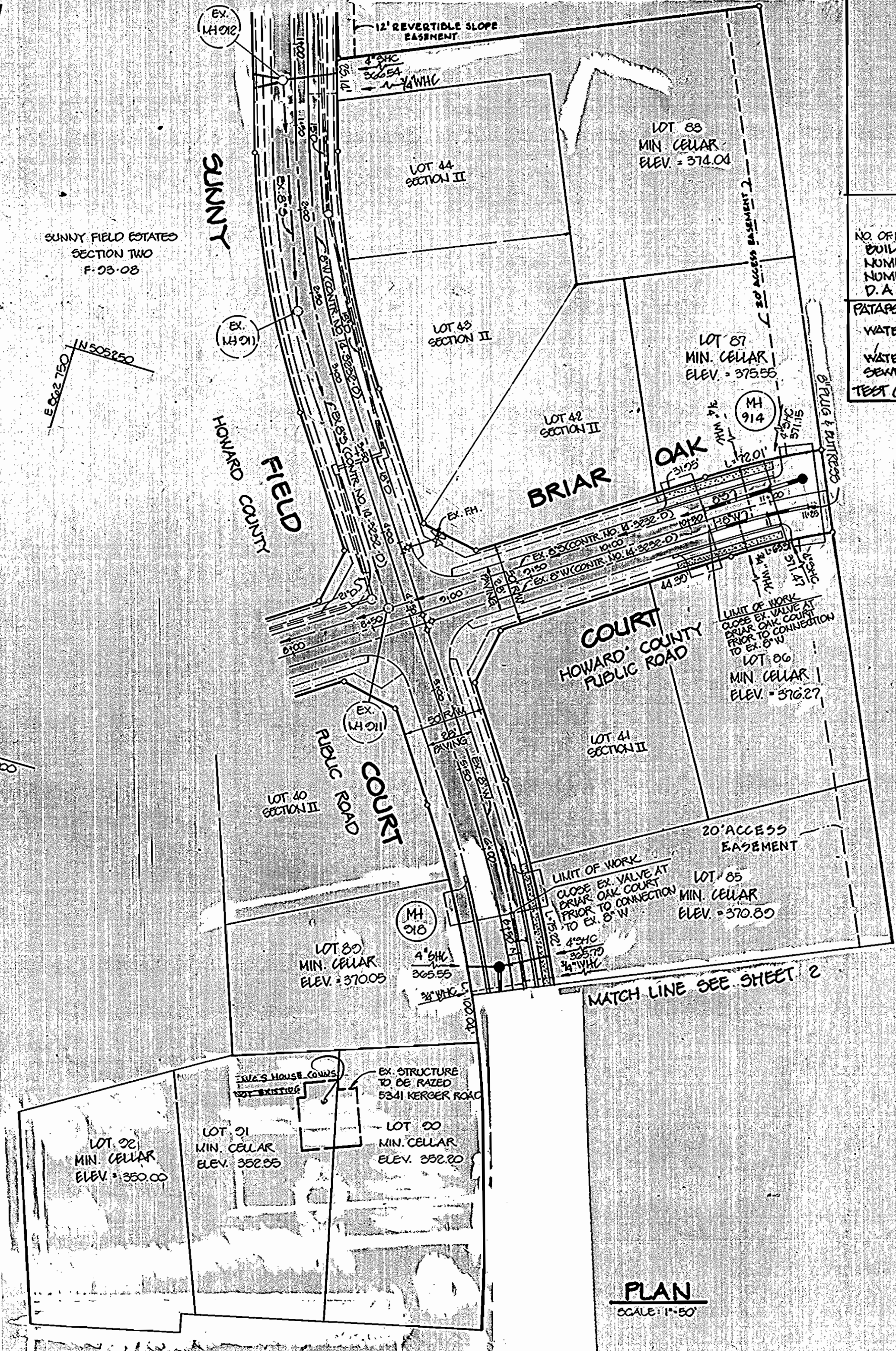
*John K. Roberts* 12/1/93  
 HOWARD SOIL CONSERVATION DISTRICT

B.M. # 1 BENCH MARK DESCRIPTION  
 TOP OF CONCRETE PILE ON EXISTING FIRE HYDRANT, NORTH SIDE OF KERGER RD. ELEV. 348.16

B.M. # 2 1/4" NAIL IN TREE LABEL F-4 ELEV. 348.16

B.M. # 3 EX. MH # 14 RIM ELEV. 352.32

B.M. # 4 EX. MH # 200 RIM ELEV. 284.21



NO. OF BUILDINGS, LOTS... 28  
 BUILDING TYPE... 28  
 NUMBER OF WHCS... 28  
 NUMBER OF SHCS... 28  
 D.A. .... PATAPSCO

PATAPSCO TREATMENT PLANT:  
 WATER AND SEWER CODE  
 WATER No. 205  
 SEWER No. 215  
 TEST GRADIENT = 100'

GENERAL NOTES

- Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- All horizontal controls are based on Maryland State Coordinates.
- All vertical controls are based on U.S.C.S. data.
- All pipe elevations shown are invert elevations.
- Clear all utilities by a minimum of 6". Clear all poles by 2'-0" minimum or tunnel as required. 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 bracing of additional poles or damages shall be deducted from money owed 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 Detail 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. 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.
- Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:  
 State Highway Administration 531-5533  
 Baltimore Gas & Electric Co. Contractor Services 850-4620  
 Baltimore Gas & Electric Co. Underground Damage Control 787-9068  
 Missa Utility 1-800-257-7777  
 Colonial Pipeline Co. 795-1350  
 Bureau of Utilities, Howard County Department of Public Works 313-4900
- Trees shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the contractor.
- 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.
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Tops of all water mains to have a minimum of 3-1/2" cover unless otherwise noted.
- Valves adjacent to tees shall be strapped to tees.
- All fittings shall be bolted 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 strapped and bolted with concrete in accordance with Standard Details. 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.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- All sewer mains shall be DIP, RCP, VCPX, CSPX, RCP and P.V.C. unless otherwise noted.
- The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole 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 05-52. Where watertight manhole 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.

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*James J. ...* 12/3/93  
 DIRECTOR OF PUBLIC WORKS

*Robert M. ...* 11-22-93  
 CHIEF, BUREAU OF UTILITIES

RIEYER MUEGGE AND ASSOCIATES, INC.  
 PLANNERS ENGINEERS SURVEYORS

2005 CENTRE PARK DRIVE, SUITE 200, COLUMBIA, MD. 21045  
 410-277-0000 FAX: 410-277-7000

STATE OF MARYLAND  
 JAYKANT G. PAREKH #19145

DES: JTD	DATE: 11/10/93
DRN: MAD	BY: NO.
CHK: C.J.R.	REVISION
DATE: 11/10/93	DATE: 600' SCALE MAP NO. 21
BY: NO.	BLOCK NO. 21

SUNNY FIELD ESTATES  
 SECTION THREE LOTS 68-90  
 ELECTION DISTRICT NUMBER 1  
 CONTRACT NO. 14-2809-D  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 11 OF 13

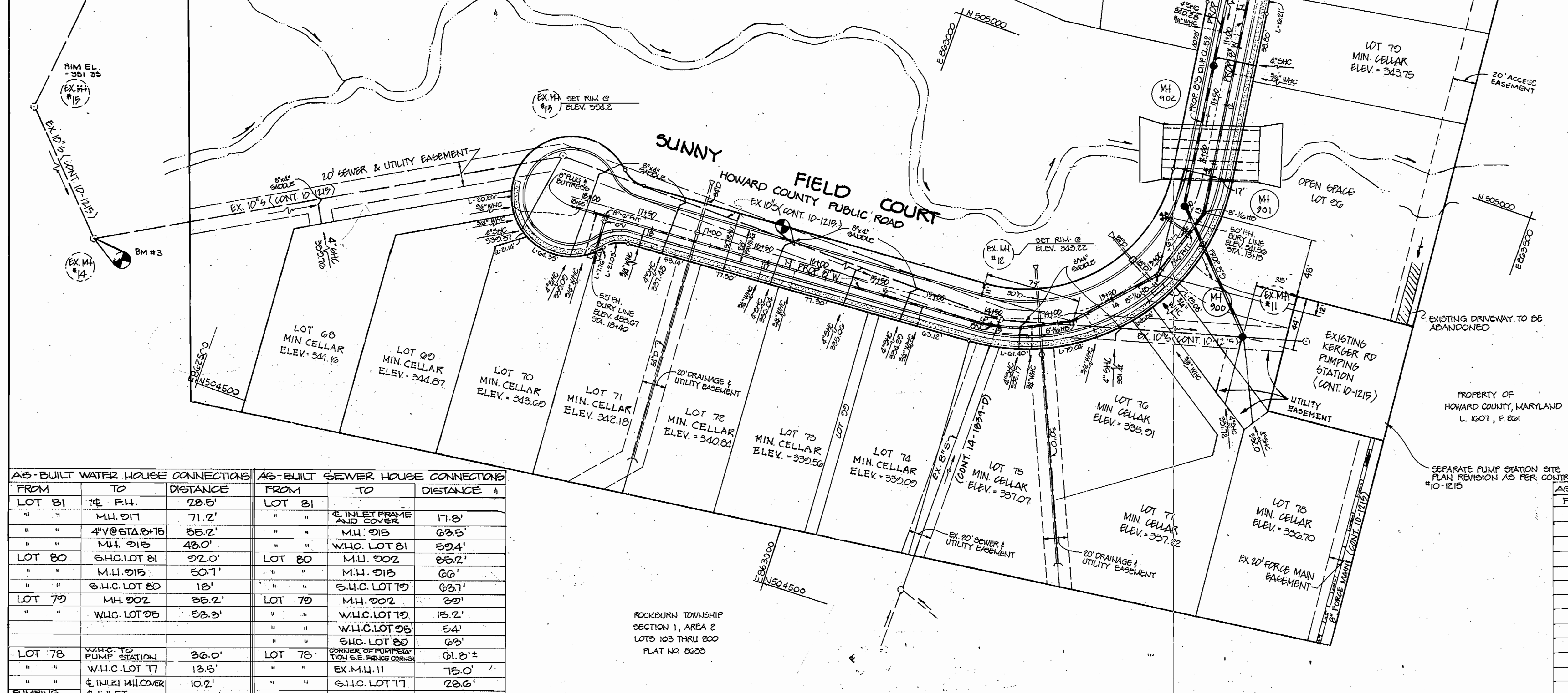


AS-BUILT

AS-BUILT WATER HOUSE CONNECTIONS			AS-BUILT SEWER HOUSE CONNECTIONS		
FROM	TO	DISTANCE	FROM	TO	DISTANCE
LOT 95	M.H. 902	34'	LOT 95	M.H. 902	43.8'
"	W.H.C. LOT 80	80.5'	"	W.H.C. LOT 95	11'
LOT 94	M.H. 920	23'	LOT 94	M.H. 915	92.2'
"	W.H.C. LOT 91	45.8'	"	W.H.C. LOT 94	22'
LOT 93	M.H. 920	19'	"	W.H.C. LOT 93	28.8'
"	W.H.C. LOT 94	41.3'	LOT 93	M.H. 920	20'
LOT 92	M.H. 920	17'	"	W.H.C. LOT 93	9'
"	W.H.C. LOT 93	16.3'	"	W.H.C. LOT 92	9'
"	S.H.C. LOT 93	9'	"	S.H.C. LOT 91	65.2'
LOT 91	M.H. 920	64.6'	LOT 91	M.H. 920	52'
"	W.H.C. LOT 90	67'	"	W.H.C. 91	14'
LOT 90	W.H.C. LOT 91	67'	"	W.H.C. 94	36.9'
"	M.H. 916	52'	LOT 90	M.H. 916	43.4'
"	E OF INLET FRAME AND COVER	54.6'	"	W.H.C. LOT 90	9'
LOT 84	M.H. 917	87'	LOT 84	M.H. 917	62.3'
"	S.H.C. LOT 84	26'	"	W.H.C. LOT 84	26'
"	M.H. 919	46'	"	4" V	45'
"	4" V. AT RD.	68.4'	LOT 83	M.H. 919	20'
"	S.H.C. LOT 83	60'	"	W.H.C. LOT 84	60'
LOT 83	M.H. 919	15.8'	"	W.H.C. LOT 83	15.4'
"	S.H.C. LOT 82	7.8'	LOT 82	M.H. 919	19.2'
"	W.H.C. LOT 82	15.2'	"	W.H.C. LOT 82	11.0'
LOT 82	M.H. 919	15.2'	"	W.H.C. LOT 82	11.0'
"	4" F.H.	104.2'	"	W.H.C. LOT 84	57'
"	W.H.C. LOT 84	57'	LOT 68	EX. M.H. 13	62'
LOT 68	EX. M.H. 13	62'	"	W.H.C. LOT 68	9'
"	W.H.C. LOT 68	9'	"	W.H.C. LOT 68	205.3'
"	6" F.H.V.	78'	"	W.H.C. LOT 68	205.3'

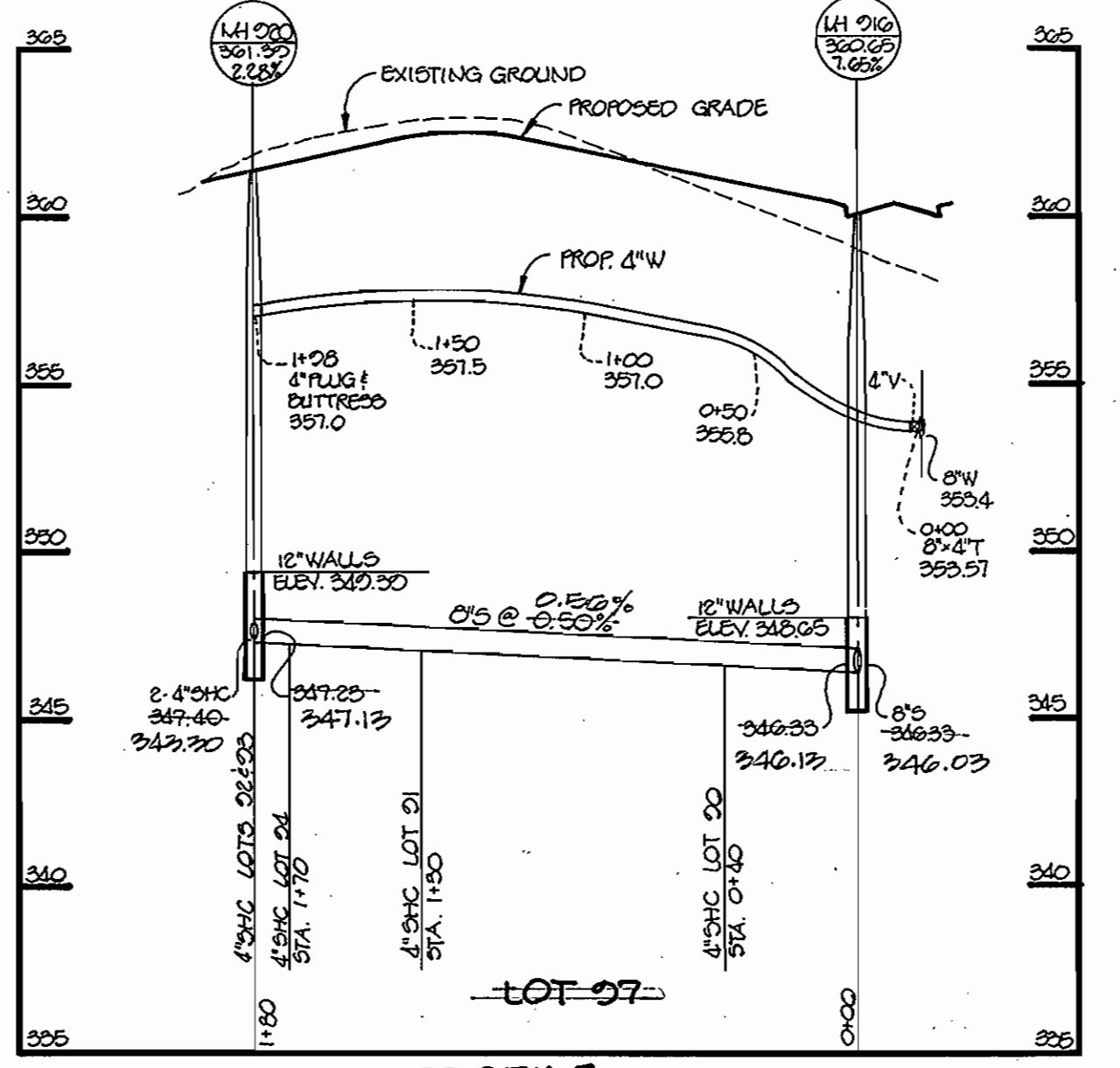
AS-BUILT WATER HOUSE CONNECTIONS			AS-BUILT SEWER HOUSE CONNECTIONS		
FROM	TO	DISTANCE	FROM	TO	DISTANCE
LOT 71	S.H.C. LOT 71	19.0'	LOT 71	3/4" W.H.C. (LOT 71)	10'
"	6" F.H.V.	39.3'	"	6" F.H.V.	58'
"	4" F.H.	91.0'	"	4" F.H.	54.4'
LOT 70	EX. M.H. 13	85.4'	LOT 70	EX. M.H. 13	81.1'
"	6" F.H.V.	37.2'	"	W.H.C. (LOT 70)	13'
"	4" F.H.	14.8'	"	4" F.H.	25'
LOT 69	S.H.C. (LOT 69)	12'	LOT 69	W.H.C. LOT 69	12'
"	EX. M.H. 13	66.0'	"	EX. M.H. 13	73.2'
"	6" F.H.V.	74.6'	"	6" F.H.V.	71.1'
"	W.H.C. LOT 70	43'	"	W.H.C. LOT 70	43'

SECTION ONE OPEN SPACE LOT 67 P. 00-092

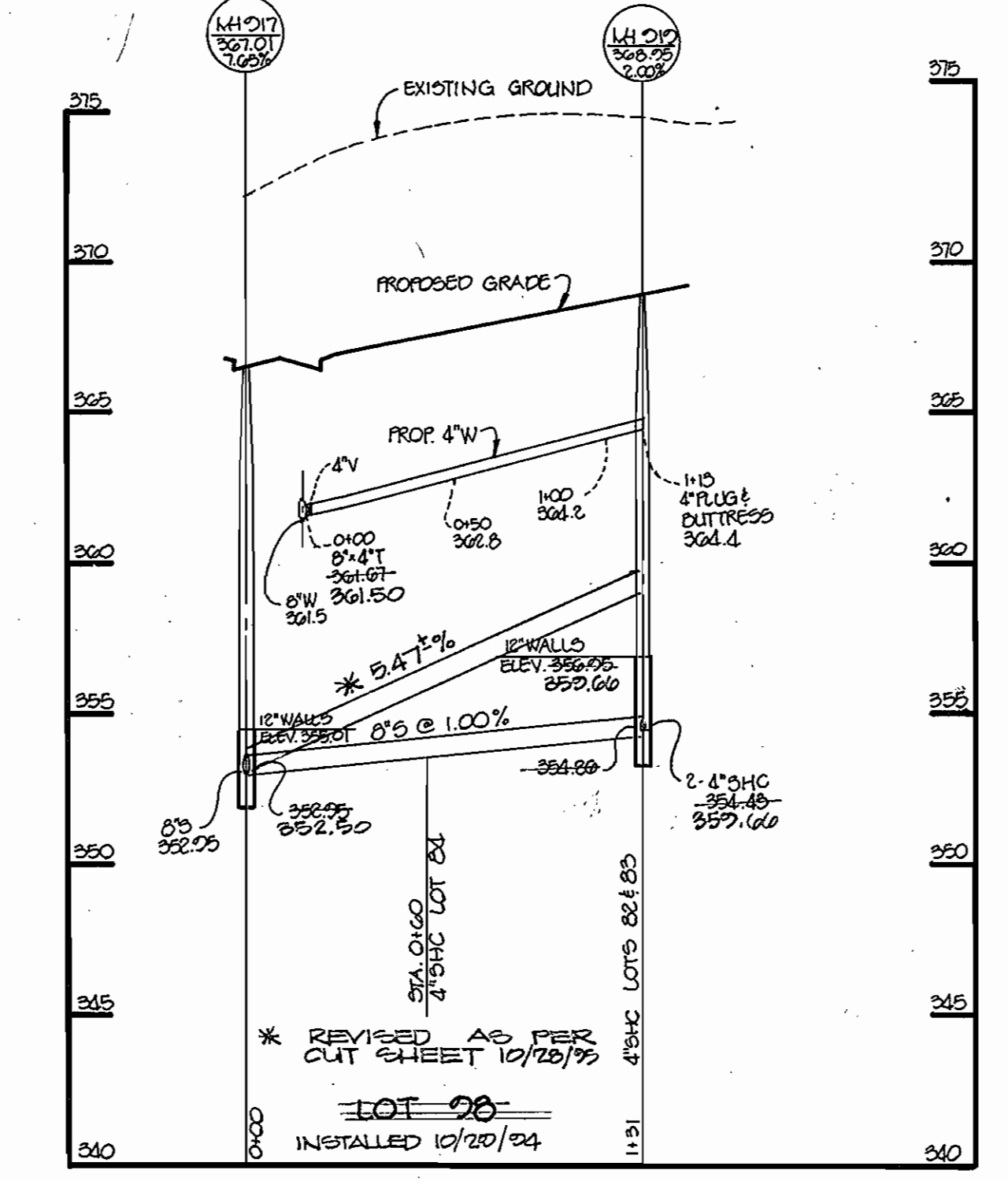


PLAN SCALE: 1"=50'

MATCH LINE SEE SHEET 1



PROFILE SCALE: HOR: 1"=50' VERT: 1"=5'



PROFILE SCALE: HOR: 1"=50' VERT: 1"=5'

AS-BUILT WATER HOUSE CONNECTIONS			AS-BUILT SEWER HOUSE CONNECTIONS		
FROM	TO	DISTANCE	FROM	TO	DISTANCE
LOT 81	4" F.H.	28.5'	LOT 81	4" INLET FRAME AND COVER	17.8'
"	M.H. 917	71.2'	"	M.H. 915	63.5'
"	4" V @ STA 8+75	65.2'	"	W.H.C. LOT 81	59.4'
"	M.H. 915	48.0'	LOT 80	M.H. 902	85.2'
LOT 80	S.H.C. LOT 81	92.0'	"	M.H. 915	66'
"	M.H. 915	50.7'	"	S.H.C. LOT 79	63.1'
"	S.H.C. LOT 80	18'	LOT 79	M.H. 902	39'
LOT 79	M.H. 902	35.2'	"	W.H.C. LOT 79	15.2'
"	W.H.C. LOT 95	58.3'	"	W.H.C. LOT 95	54'
LOT 78	W.H.C. TO PUMP STATION	36.0'	LOT 78	S.H.C. LOT 80	63'
"	W.H.C. LOT 77	13.5'	"	CONCRETE OF PUMP STATION S.E. CORNER OF PRNCE	61.8'
"	4" INLET FRAME AND COVER	10.2'	"	EX. M.H. 11	75.0'
"	6" F.H.V.	31.2'	"	S.H.C. LOT 77	28.6'
"	W.H.C. LOT 78	36.0'	LOT 77	4" S.H.C. LOT 78	28.6'
"	BEHIND CURB	11.4'	"	EX. M.H. 11	65'
LOT 77	W.H.C. LOT 78	13.5'	"	PUMP STATION SW CORNER OF PRNCE	74'
"	4" S.H.C. LOT 76	54.0'	"	"	"
"	4" INLET FRAME AND COVER	20'	"	"	"

AS-BUILT WATER HOUSE CONNECTIONS			AS-BUILT SEWER HOUSE CONNECTIONS		
FROM	TO	DISTANCE	FROM	TO	DISTANCE
LOT 76	4" S.D. M.H.	51.4'	LOT 76	W.H.C. LOT 77	25.0'
"	4" S.H.C. LOT 76	16'	"	4" S.D. M.H.	60'
"	4" S.D. M.H.	27.8'	"	4" FRAME AND COVER INLET	54.0' ±
"	4" S.V.	36.8'	LOT 75	8" V @ STA 15+06	31.0' ±
"	W.H.C. LOT 76	57'	"	W.H.C. LOT 75	10' ±
LOT 74	8" V @ STA 15+06	66.6'	"	4" S.D. M.H. @ STREET	23.0'
"	S.H.C. LOT 75	91.0'	LOT 74	S.H.C. LOT 73	50'
"	"	"	"	* TREE @ ELOT 12	"
"	"	"	"	W.H.C. LOT 14	12'
"	"	"	"	8" V @ STA 15+06	79' ±
LOT 73	S.H.C. LOT 73	42'	LOT 73	S.H.C. LOT 74	50'
"	BEHIND CURB	9.6'	"	"	"
"	"	"	"	BEHIND CURB	8.0' ±
LOT 72	4" S.H.C. LOT 71	26.4'	LOT 72	4" S.H.C. (TO TREE)	28' ±
"	W.H.C. LOT 73	71'	"	4" EX. S.D. M.H.	71.2'
"	* TREE	9.2'	"	W.H.C. LOT 72	22.0'
"	"	"	"	W.H.C. LOT 73	7.0'

\* TREE IS BEHIND CURB ON THE NORTH SIDE OF SUNNYFIELD CT.

W/S 3309-D 2

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

James J. Lee 12/16/93  
DIRECTOR OF PUBLIC WORKS DATE

Robert J. Reiner 11-22-93  
CHIEF, BUREAU OF UTILITIES DATE

12/3/93  
12/3/93

RIEMER WUEGGE AND ASSOCIATES, INC.  
PLANNERS ENGINEERS SURVEYORS  
2010 CENTRE PARK DRIVE SUITE 200 COLUMBIA, MD 21046  
410-997-8000 FAX: 410-997-3282

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
J. Farrell  
JAYKANT D. PAREKH #10128

DES: JTD	DATE: 11-10-92
DRN: WAD	BY NO.
CHK: C.J.R.	REVISION
	DATE

PLAN AND PROFILES OF WATER AND SEWER MAINS

600 SCALE MAP NO. 21 BLOCK NO. 21

SUNNYFIELD ESTATES  
SECTION THREE LOTS 68-99  
ELECTION DISTRICT NUMBER 1  
CONTRACT NO. 14-3309-D  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 3  
BUILT 1/10/95



