



For Profile see this sheet and chit. 3.

**Benchmark**  
 Station 371A (Concrete Monument)  
 N 55° 31' 16" E 197° 02' 12" (NAD 83)  
 Elev: 103.73 (NVD 129)  
 Station is located on Northwest side of MD Rte. 1, Entrance to Meadowridge Memorial Park

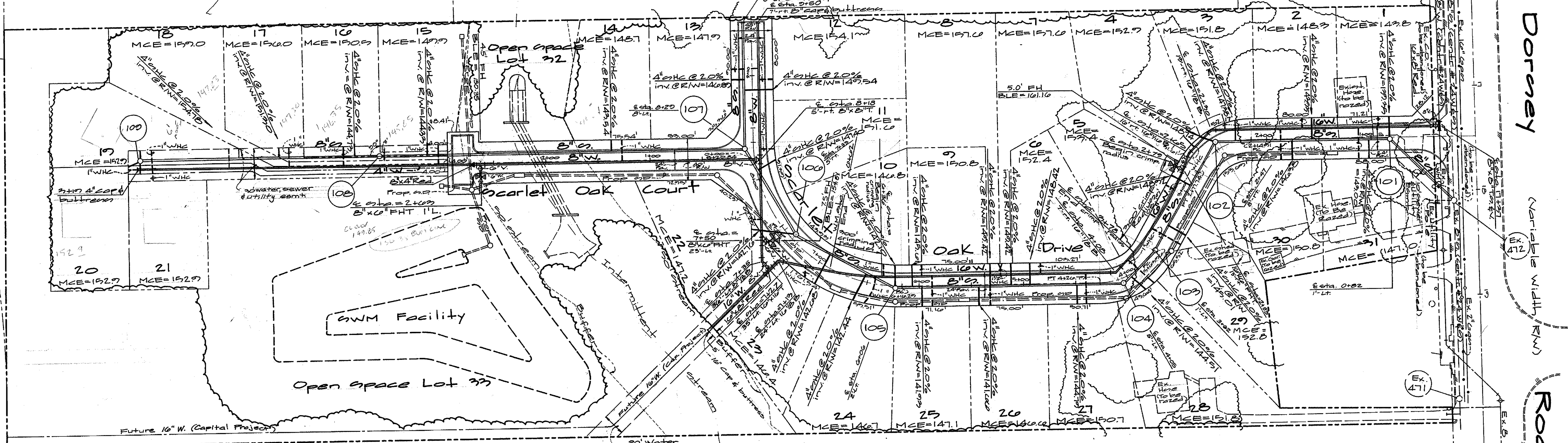
**Benchmark**  
 Station 47B2 (Concrete Monument)  
 N 55° 10' 55" 01 E 197° 16' 04" (NAD 83)  
 Elev: 209.01 (NVD 129)  
 Station is located in median island of MD Rte. 1, 40' E Northeast of intersection with Brookdale Road

N/F Property of  
 Howard T. & Margaret E. Fultz  
 L.224 F.710

N/F Property of  
 George C. & Nannie L. Lane  
 L.898 F.507

N/F Property of  
 Symcha & Jean F. Shipak  
 L.9581 F.529

N/F Property of  
 Saval Realty Company  
 L.314 F.5

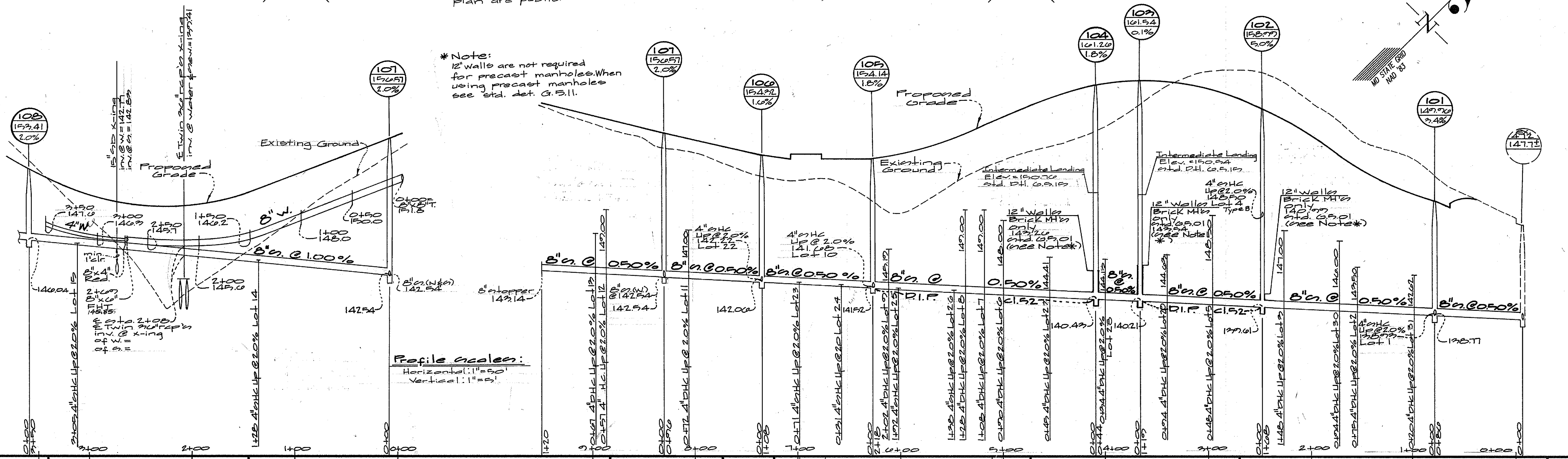


**Plan scale:**  
 1" = 50'

Note: All roads shown on this plan are public County roads. All water and sewer shown on this plan are public.

N/F Property of  
 Melvin L. Konec et al  
 L.2550 F.714

\* Note:  
 12" Walls are not required for precast manholes. When using precast manholes see std. det. G.5.11.

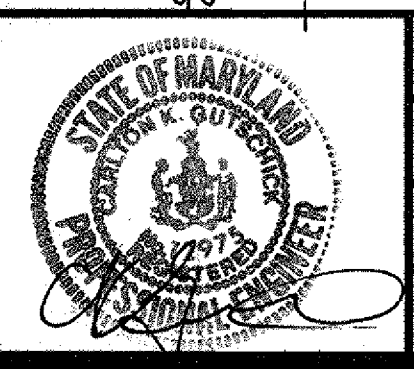


**Profile scales:**  
 Horizontal: 1" = 50'  
 Vertical: 1" = 5'

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Robert M. Bainger  
 CHIEF, BUREAU OF UTILITIES  
 1-27-99  
 DATE

DEPARTMENT OF PLANNING AND ZONING  
 HOWARD COUNTY, MARYLAND  
 [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 1/27/99  
 DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK  
 BURTONVILLE, MARYLAND 20888  
 TEL: 301-421-4024 BALT: 410-681-1820 DC/VA: 301-988-2224 FAX: 301-421-4186

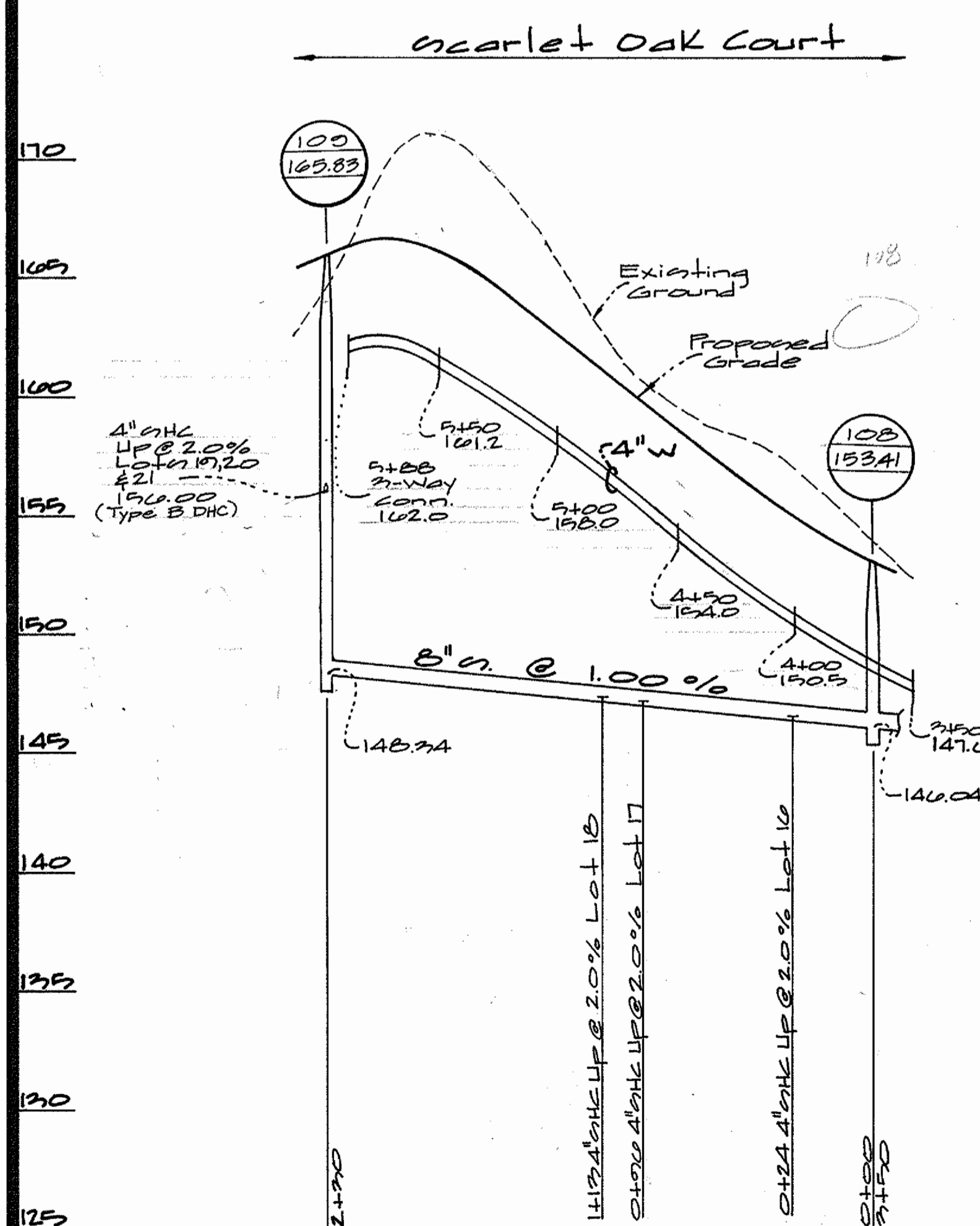
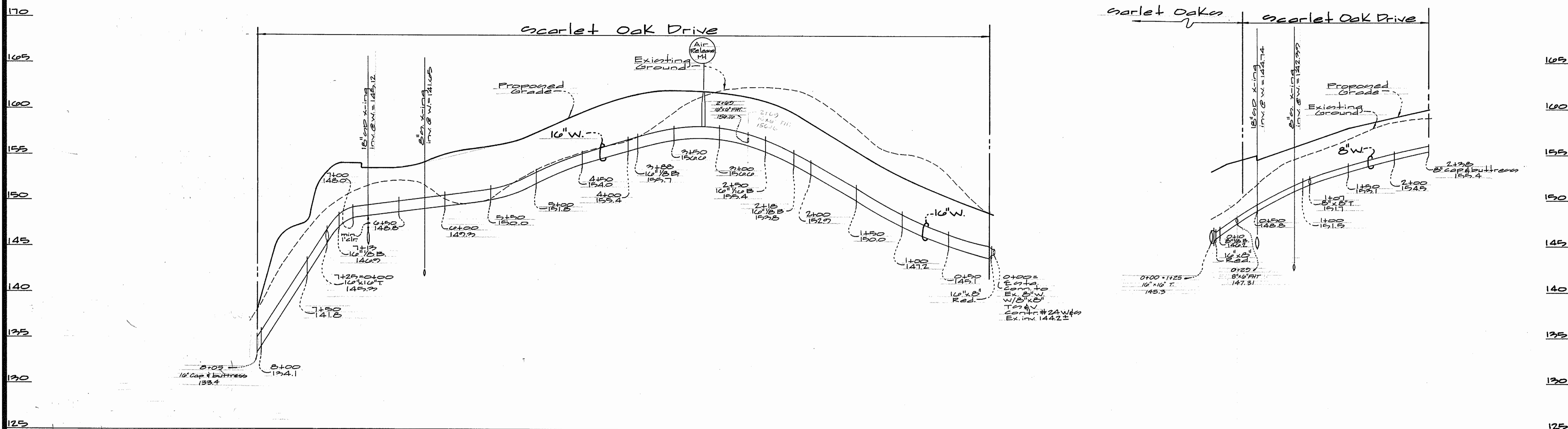


DES: wsl					
DRN: wsl					
CHK:					
DATE: 1/99					
BY	NO	REVISION	DATE		

Water & Sewer  
 Plan & Profiles  
 600' SCALE MAP NO. 43 BLOCK NO. 5/6

SCALE AS SHOWN  
 SHEET 2 OF 3  
 SCARLET OAKS  
 LOTS 1 THRU 33  
 Contract No. 14-3744-D  
 ELKRIDGE ELECTION DISTRICT No. 1  
 HOWARD COUNTY, MARYLAND

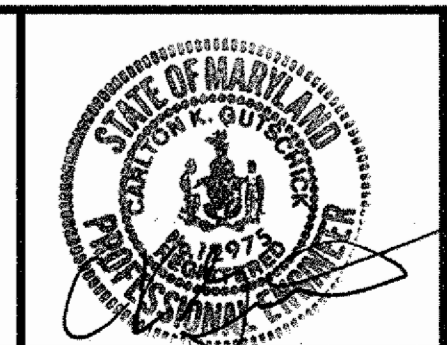
For Plan see sheet 2



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
1-27-99  
DATE

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
1/20/99  
DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-999-2524 FAX: 301-421-4186



DES: wsl zlb					
DRN: wsl					
CHK:					
DATE: 1/99	BY	NO	REVISION	DATE	

Water & sewer  
Plan & Profiles  
Scale:  
Horiz: 1"=50'  
Vert: 1"=5'


SCARLET OAKS  
LOTS 1 THRU 33  
Contract No. 14-3744-D  
ELKRIE ELECTION DISTRICT No. 1  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 22

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
10" Water	805 LF	809	D.I.P. CL 52	ATLANTIC STATES
8" Water	509 LF	507	D.I.P. CL 52	ATLANTIC STATES
6" Water	32 LF	32	D.I.P. CL 52	ATLANTIC STATES
4" Water	310 LF	310	D.I.P. CL 52	ATLANTIC STATES
6" Valves	2 EA	3	WEGORATE	MUELLER CO.
8" Valves	2 EA	3	WEGORATE	MUELLER CO.
8"x8" T	2 EA	2	COMPS.	UNION FOUNDRY
10"x10" HB	1 EA	1	COMPS.	UNION FOUNDRY
FHT	2 EA	3	CEBURIUM	MUELLER CO.
10"x2" Reducer	2 EA	2	COMPS.	UNION FOUNDRY
10" HB	2 EA	2	COMP.	UNION FOUNDRY
10"x10" T	1 EA	1	COMP.	UNION FOUNDRY
8"x8" Tee & V.	1 EA	1	M.J.	MUELLER CO.
8" Cap & Buttress	1 EA	1	COMP.	UNION FOUNDRY
4" Cap & Buttress	1 EA	1	COMP.	UNION FOUNDRY
1 1/2" W.H.C.	15 LF	15 LF	K	READING TUBE
1" W.H.C.	515 LF	515 LF	K	READING TUBE
10" Cap & Buttress	1 EA	1	M.J.	UNION FOUNDRY
10" Valve	1 EA	1	WEGORATE	CLOW VALVE CO.
4" new manholes	2 EA	2	CATB	FREDERICK PRECAST
8" sewer	1539 LF	1542	COMP.	HARRINGTON CORP.
4" s.h.c./h.c.	542 LF	542	K	READING TUBE
8" stopper	1 EA	1	COMP.	HARRINGTON CORP.

TYPE OF BUILDING	Single Family Residential
NUMBER OF UNITS	- 33 -
NUMBER OF S.H.C.'s	- 31 -
NUMBER OF W.H.C.'s	- 21 -
DRAINAGE AREA	2.67 acres
TREATMENT PLANT	2.67 acres

**GENERAL NOTES**

- PART I
- 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 [North American Datum 1983 (NAD '83)].
  - All vertical controls are based on U.S.G.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 (5) working days before starting work shown on these plans:
 

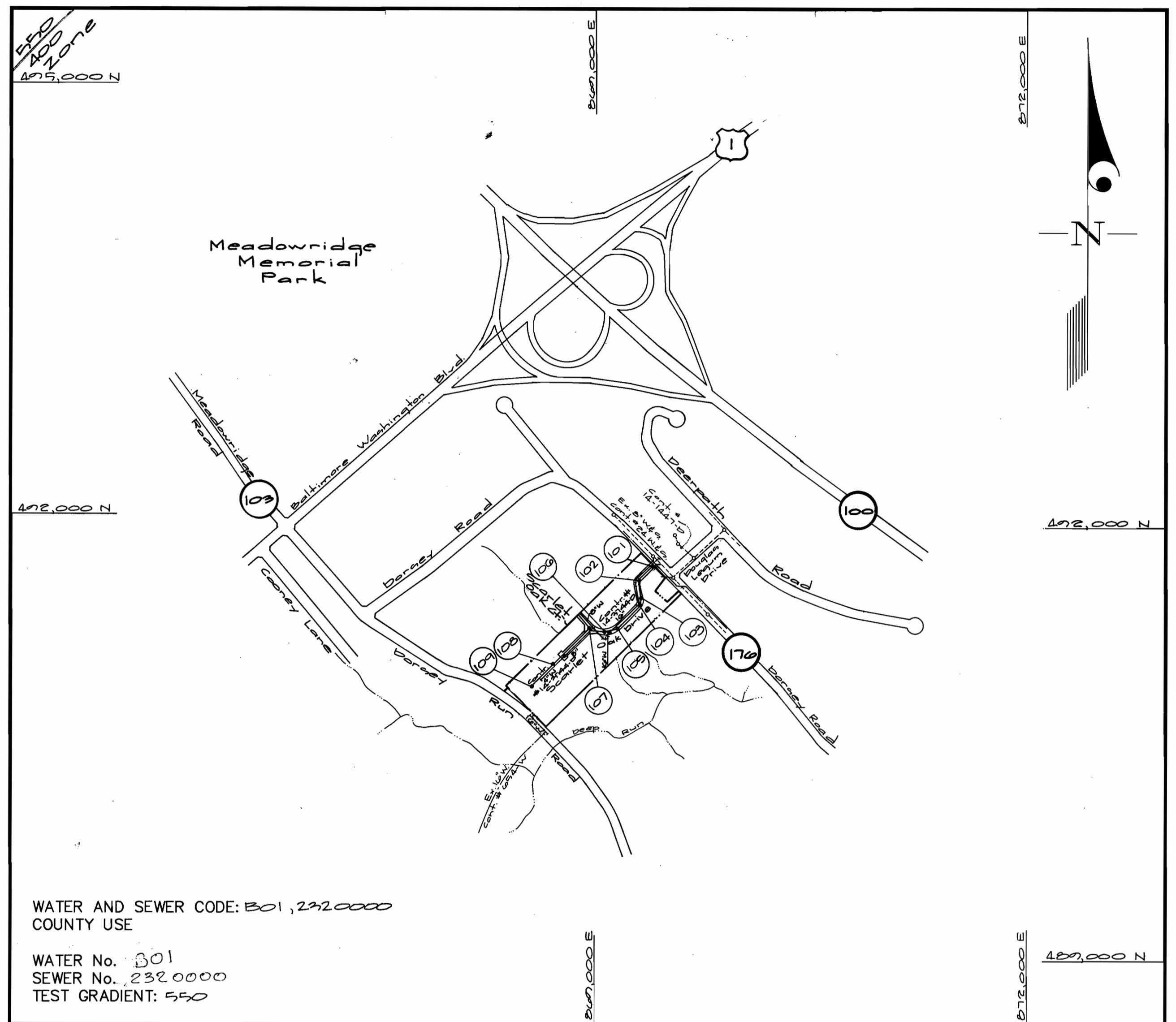
State Highway Administration	531-5533
BGE Contractor Services	850-4620
BGE Under Ground Damage Control	787-9068
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	795-1390
Howard County Department of Public Works Bureau of Utilities	313-4900
  - Trees and shrubs are to be protected from damage to maximum 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.
  - The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five (5) working days before any open cut or any County road or boring/jacking operation on County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirement per Section 18.114(a) of the Howard County Code.

**PART II - WATER**

- 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 buttressed 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 restrained and buttressed with concrete in accordance with the 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.
- For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 1' connection with a 3/4" meter.

**PART III - SEWER**

- All sewer mains shall be DIP and 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 covers, Standard Detail G5.52. Where watertight frame and cover is used, set top of frame 1'-6" above finished grade unless otherwise noted on drawings.
- House(s) with the symbol "C.N.S." indicates that cellar cannot be served.



VICINITY MAP  
SCALE: 1"=600'

WATER AND SEWER CODE: B01, 292.0000  
COUNTY USE  
WATER No. 301  
SEWER No. 232.0000  
TEST GRADIENT: 550

LOT#	SEWER CONT.	DIST.
21	MH 100 TO	15 H.C.
21	S.H.C. LOT 20	15 H.C.
22	MH 106 TO	S.H.C.
22	MH 107 TO	S.H.C.
23	FIRE HYDRANT	15 H.C.
23	REAR COR INLET TO	S.H.C.
24	INLET FRONT COR.	S.H.C.
24	S.D. MH LOT 24	B.H.C.
25	S.D. MH LOT 24	S.H.C.
25	MH 107 TO	S.H.C.
26	CURB STOP LOT 8	S.H.C.
26	INLET LOT 25 TO	S.H.C.
27	MH 104 TO	S.H.C.
27	S.D. MH LOT 28	S.H.C.
28	MH 104 TO	B.H.C.
28	S.D. MH LOT 28	S.H.C.
29	S.D. MH IN RD TO	S.H.C.
29	S.D. MH IN RD TO	S.H.C.
20	S.D. INLET TO	S.H.C.
31	INLET FRONT COR.	S.H.C.
31	MH 101 TO	S.H.C.
31	8" VALVE IN GRASS TO FIRE HYDRANT	28'
31	HYDRANT VALVE	AND BACK FROM CURB
31	HYDRANT VALVE	BACK FROM CURB
31	HYDRANT VALVE	HYDRANT TO VALVE

CONTRACT No. 14-3744-D  
Scarlet Oaks  
Lots 1-33  
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PUBLIC WORK

AS-BUILT FIELD MEASUREMENTS

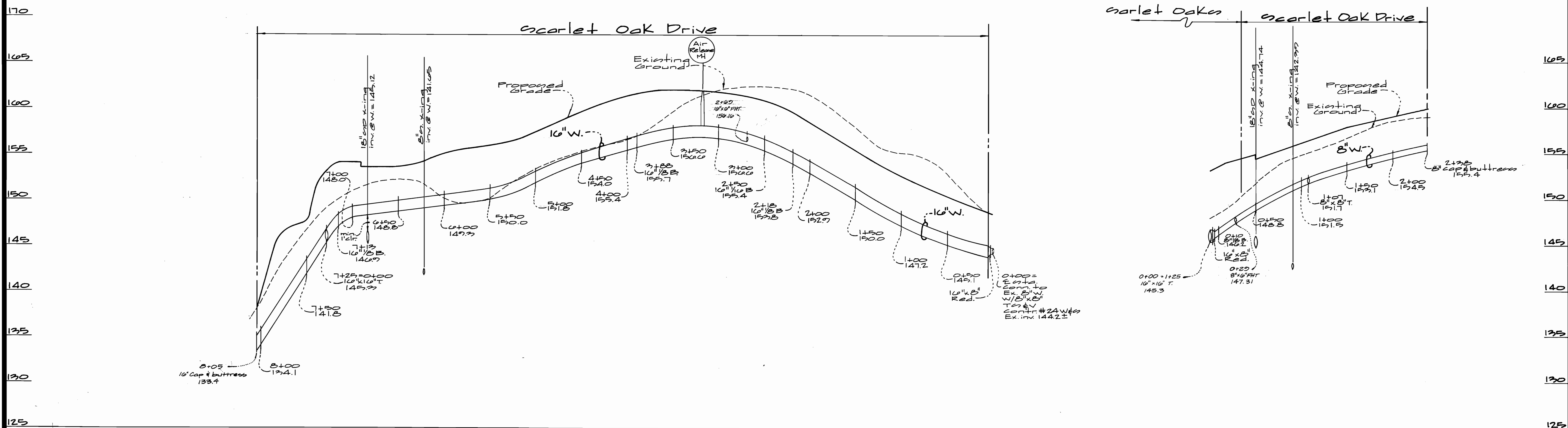
"WATER"				"SEWER"				
LOT	FROM	TO	DIST.	LOT	FROM	TO	DIST.	
1	INLET	CURB STOP	58'	21	CURB STOP @ LOT 20	CURB STOP	28'	
2	MH 101	CURB STOP	26'	22	MH 106 TO	CURB STOP	46'	
2	COR INLET	CURB STOP	34'	22	MH 107 TO	CURB STOP	66'	
2	MH 101	CURB STOP	87'	23	FIRE H. TO	CURB STOP	50'	
3	S.D. MH IN ROAD	CURB STOP	31'	23	REAR COR INLET TO	CURB STOP	19'	
3	S.D. INLET FRONT COR.	CURB STOP	34'	24	S.D. MH LOT 24 TO	CURB STOP	31'	
4	F.H.	CURB STOP	25'	24	INLET FRONT COR TO	CURB STOP	24'	
4	S.D. MH IN ROAD	CURB STOP	34'	25	S.D. MH @ LOT 24 TO	CURB STOP	38'	
5	AIR RELEASE	CURB STOP	35'	25	MH 107 TO	CURB STOP	41'	
6	F.H.	CURB STOP	23'	26	CURB STOP LOT 8 TO	CURB STOP	44'	
6	FRONT COR. INLET	CURB STOP	75'	26	INLET LOT 25 TO	CURB STOP	44'	
7	MH 104	CURB STOP	83'	27	MH 104 TO	CURB STOP	40'	
7	INLET @ LOT 24	CURB STOP	45'	27	S.D. MH @ LOT 28 TO	CURB STOP	27'	
8	MH 106	CURB STOP	100'	28	MH 104 TO	CURB STOP	27'	
8	INLET @ LOT 24 @	CURB STOP	40'	28	S.D. MH @ LOT 28 TO	CURB STOP	52'	
9	CURB STOP @ LOT 6	CURB STOP	44'	29	MH 108 TO	CURB STOP	28'	
9	MH 106	CURB STOP	34'	29	S.D. MH TO	CURB STOP	12'	
9	S.D. @ LOT 24	CURB STOP	44'	30	S.D. MH IN RD TO	CURB STOP	53'	
10	MH 106	CURB STOP	26'	30	S.D. INLET FRONT COR TO	CURB STOP	40'	
10	INLET @ LOT 24	CURB STOP	48'	31	INLET FRONT COR TO	CURB STOP	34'	
11	MH 107 TO	CURB STOP	28'	31	MH 101 TO	CURB STOP	33'	
11	S.D. MH	CURB STOP	60'	31	MH 107	VALVE BOX	16'	
12	MH 107	CURB STOP	78'	31	S.D. MH	VALVE BOX	42'	
12	CURB STOP @ LOT 13	CURB STOP	41'	31	F.H. TO 16" VALVE		21'	
13	MH 107 TO	CURB STOP	75'	31	LOT#	FROM	"SEWER" TO	DIST.
13	CURB STOP @ LOT 12	CURB STOP	41'	1	INLET TO	HOUSE CONN.	60'	
14	INLET COR TO	CURB STOP	97'	1	MH 101 TO	HOUSE CONN.	23'	
14	S.D. MH TO	CURB STOP	87'	2	FRONT COR INLET TO	CURB STOP	32'	
15	MH 108 TO	CURB STOP	57'	2	MH 101 TO	HOUSE CONN.	77'	
15	FIRE HYDRANT	CURB STOP	51'	3	S.P.H. IN RD TO	CURB STOP	34'	
16	MH 108 TO	CURB STOP	34'	3	S.D. INLET FRONT COR	CURB STOP	86'	
16	CURB STOP @ LOT 17	CURB STOP	54'	4	FIRE H. TO	HOUSE CONN.	32'	
17	MH 108 TO	CURB STOP	40'	4	S.D. MH IN RD TO	CURB STOP	31'	
17	CURB STOP @ LOT 18	CURB STOP	57'	5	AIR RELEASE MH TO	HOUSE CONN.	47'	
18	MH 108 TO	CURB STOP	84'	5	FIRE H. TO	HOUSE CONN.	10'	
18	MH 108 TO	CURB STOP	140'	6	FRONT COR INLET @ LOT 25	HOUSE CONN.	65'	
19	MH 108 TO	CURB STOP	10'	6	MH 104 TO	HOUSE CONN.	33'	
19	CURB STOP @ LOT 21	CURB STOP	13'	7	INLET @ LOT 24 TO	HOUSE CONN.	40'	
20	S.P.H. # 19	CURB STOP	10'	7	CURB STOP @ LOT 26 TO	HOUSE CONN.	41'	
20	CURB STOP @ LOT 21	CURB STOP	28'	8	INLET @ LOT 24 TO	HOUSE CONN.	53'	
21	MH 108 TO	CURB STOP	21'	8	CURB STOP @ LOT 26	HOUSE CONN.	47'	
21	MH 108 TO	CURB STOP	21'	9	MH 106 TO	HOUSE CONN.	28'	
21	MH 108 TO	CURB STOP	21'	9	S.D. MH @ LOT 24	HOUSE CONN.	40'	
21	MH 108 TO	CURB STOP	21'	10	MH 106 TO	HOUSE CONN.	24'	
21	MH 108 TO	CURB STOP	21'	10	INLET @ LOT 24	HOUSE CONN.	59'	
21	MH 108 TO	CURB STOP	21'	11	MH 107 TO	HOUSE CONN.	20'	
21	MH 108 TO	CURB STOP	21'	11	S.D. MH TO	HOUSE CONN.	60'	
21	MH 108 TO	CURB STOP	21'	12	MH 107 TO	HOUSE CONN.	81'	
21	MH 108 TO	CURB STOP	21'	13	CURB STOP @ LOT 13	HOUSE CONN.	46'	
21	MH 108 TO	CURB STOP	21'	13	MH 108 TO	HOUSE CONN.	57'	
21	MH 108 TO	CURB STOP	21'	13	CURB STOP @ LOT 12	HOUSE CONN.	41'	
21	MH 108 TO	CURB STOP	21'	14	COR. INLET TO	HOUSE CONN.	83'	
21	MH 108 TO	CURB STOP	21'	14	S.D. MH TO	HOUSE CONN.	100'	
21	MH 108 TO	CURB STOP	21'	15	MH 108 TO	HOUSE CONN.	45'	
21	MH 108 TO	CURB STOP	21'	15	F.H. TO	HOUSE CONN.	61'	
21	MH 108 TO	CURB STOP	21'	16	MH 108 TO	HOUSE CONN.	20'	
21	MH 108 TO	CURB STOP	21'	16	HOUSE CONN. LOT 17 TO	HOUSE CONN.	70'	
21	MH 108 TO	CURB STOP	21'	17	MH 108 TO	HOUSE CONN.	96'	
21	MH 108 TO	CURB STOP	21'	17	HOUSE CONN. LOT 18	HOUSE CONN.	55'	
21	MH 108 TO	CURB STOP	21'	18	MH 108 TO	HOUSE CONN.	89'	
21	MH 108 TO	CURB STOP	21'	18	MH 108 TO	HOUSE CONN.	181'	
21	MH 108 TO	CURB STOP	21'	19	MH 108 TO	HOUSE CONN.	8'	
21	MH 108 TO	CURB STOP	21'	19	HOUSE CONN. LOT 20	HOUSE CONN.	10'	
21	MH 108 TO	CURB STOP	21'	20	MH 108 TO	HOUSE CONN.	16'	
21	MH 108 TO	CURB STOP	21'	20	SEWER CONN. LOT 21	HOUSE CONN.	20'	

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.  
*Cheryl K. Simmons* 01-27-99  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE  
APPROVED: *John P. Robertson* 01-27-99  
HOWARD S.C.D.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>John P. Robertson</i> 1-27-99 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>John P. Robertson</i> 1/20/99 CHIEF, DEVELOPMENT ENGINEERING DIVISION	<b>GLW</b> GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK - BURTONSVILLE, MARYLAND 20866 TEL: (410) 880-1820 ~ FAX: (301) 421-4186	DES: W2J DRN: KLP CHK: DATE: 1/99	K.B.1 1 AS-BUILT CONDITIONS ADDED TO PLAN 10/20/99 BY NO REVISION DATE	Public Water & Sewer Extension scale: As shown.	GLW FILE No. 96093 SCALE AS SHOWN SHEET 1 OF 2
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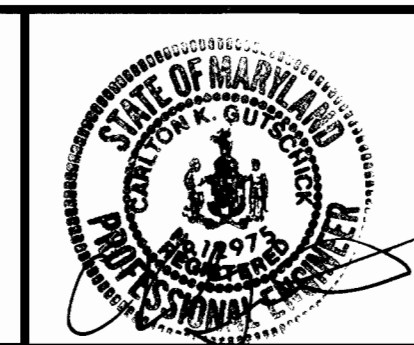
For Plan see sheet 2



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
1-27-99  
DATE

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
1/28/99  
DATE

**GLW** GUTSCHICK LITTLE & WEBER, P.A.  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



DES: Was1					
ZLB					
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DATE: 1/99	BY	NO	REVISION	DATE	

Water & Sewer  
Plan & Profiles  
Scale:  
Horiz. 1" = 50'  
Vert. 1" = 5'

**SCARLET OAKS**  
LOTS 1 THRU 33  
Contract No. 14-3744-D  
ELKRIE ELECTION DISTRICT No. 1  
HOWARD COUNTY, MARYLAND  
SCALE AS SHOWN  
SHEET 22 OF 22