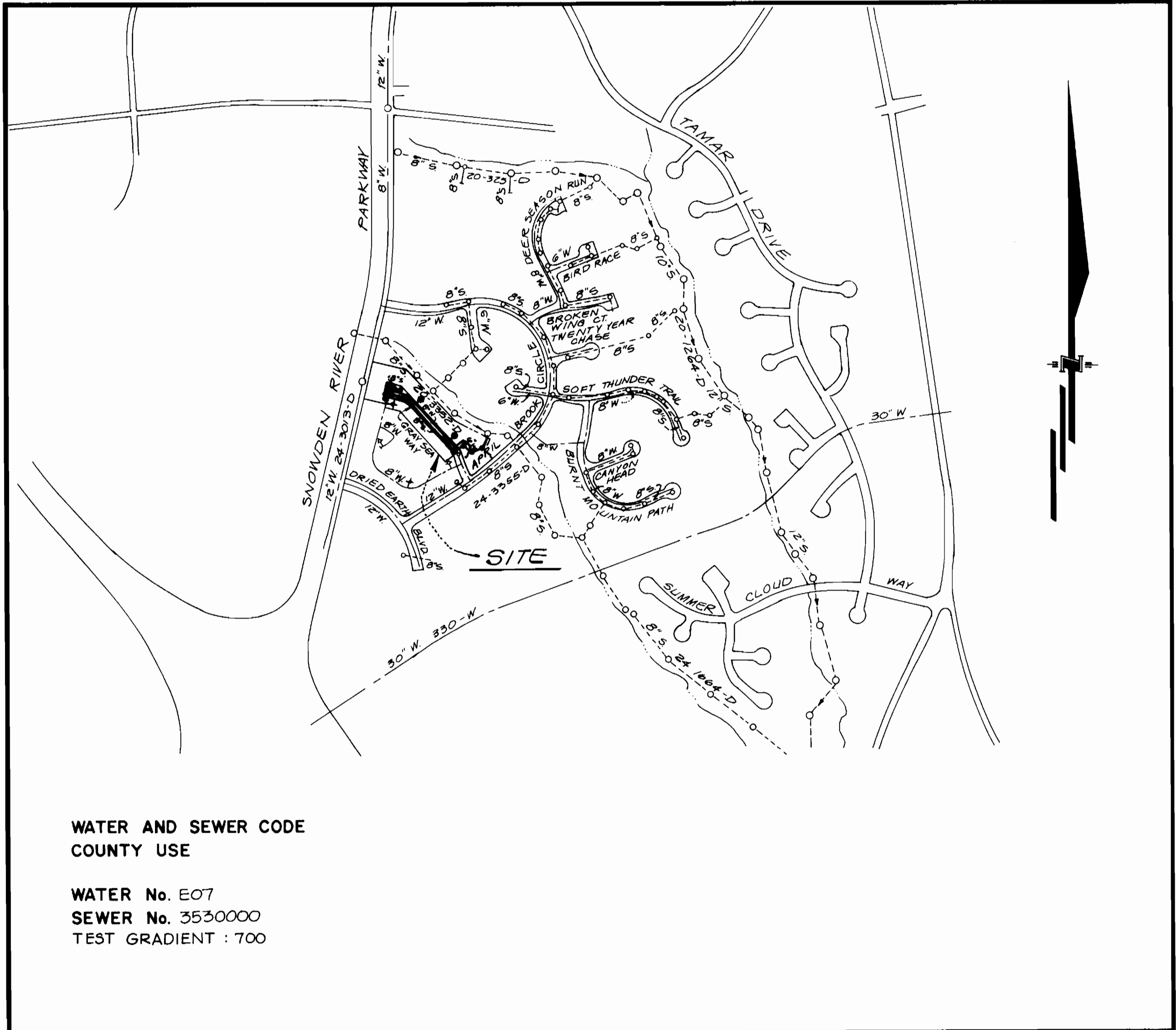


WATER AS-BUILTS

LOT	FROM	TO	DIST.	LOT	FROM	TO	DIST.
1	MH-310	CURB STOP BOX	38'	37	MH-309	CURB STOP BOX	10'
1	MH-302	"	40'	38	MH-307	"	48'
2	MH-310	"	37'	39	MH-308	"	59'
2	MH-302	"	08'	39	MH-307	"	20'
3	MH-310	"	41'	40	MH-308	"	55'
4	MH-310	"	03'	40	MH-307	"	25'
4	MH-310	"	05'	40	MH-308	"	25'
4	MH-310	"	37'	41	MH-307	"	20'
5	MH-310	"	70'	41	MH-308	"	30'
5	MH-310	"	39'	42	MH-307	"	20'
6	MH-310	"	100'	42	MH-308	"	20'
6	MH-302	"	39'	43	MH-307	"	24'
7	MH-310	"	40'	43	MH-308	"	34'
7	MH-302	"	35'	43	MH-311	"	20'
8	MH-302	"	57'	44	MH-307	"	24'
8	MH-302	"	28'	44	MH-311	"	20'
9	MH-301	"	65'	45	MH-307	"	40'
9	MH-302	"	41'	45	MH-311	"	40'
10	MH-302	"	46'	46	MH-307	"	02'
10	MH-302	"	71'	46	MH-306	"	75'
11	MH-302	"	77'	47	MH-307	"	81'
11	MH-303	"	47'	47	MH-306	"	70'
12	MH-302	"	83'	48	MH-309	"	105'
12	MH-303	"	44'	48	MH-306	"	35'
13	MH-303	"	37'	49	FH#2	"	55'
14	FH#1	"	43'	49	MH-306	"	53'
14	MH-309	"	79'	50	MH-306	"	26'
15	FH#1	"	98'	51	FH#2	"	53'
15	MH-305	"	65'	51	MH-306	"	71'
16	FH#1	"	70'	52	FH#2	"	49'
16	MH-305	"	70'	52	O.V. 3+37	"	39'
17	FH#1	"	66'	53	FH#2	"	35'
17	MH-309	"	71'	54	FH#2	"	65'
18	FH#1	"	70'	54	B.V. 3+37	"	38'
19	B.V. 3+37	"	125'	55	FH#2	"	42'
19	MH-305	"	127'	55	B.V. 3+37	"	120'
20	B.V. 3+37	"	120'	56	FH#2	"	90'
20	MH-305	"	192'	56	B.V. 3+37	"	125'
21	FH#2	"	87'	57	FH#2	"	96'
21	B.V. 3+37	"	83'	58	MH-305	"	116'
22	FH#2	"	105'	58	B.V. 3+37	"	128'
22	B.V. 3+37	"	84'	59	MH-305	"	110'
23	FH#2	"	80'	60	B.V. 3+37	"	133'
24	B.V. 3+37	"	80'	60	MH-305	"	77'
24	FH#2	"	80'	60	FH#1	"	121'
25	B.V. 3+37	"	48'	61	MH-305	"	70'
25	FH#2	"	65'	61	FH#1	"	122'
26	B.V. 3+37	"	31'	62	MH-305	"	35'
26	FH#2	"	70'	62	FH#2	"	88'
27	B.V. 3+37	"	57'	63	MH-305	"	25'
27	FH#2	"	79'	63	MH-304	"	56'
28	MH-306	"	40'	64	MH-305	"	29'
28	FH#2	"	79'	64	MH-304	"	30'
29	FH#2	"	05'	65	MH-304	"	69'
29	MH-306	"	74'	65	MH-304	"	20'
30	FH#2	"	98'	66	MH-305	"	70'
30	MH-306	"	53'	66	MH-304	"	17'
31	MH-309	"	35'	67	MH-305	"	75'
31	MH-308	"	91'	67	MH-304	"	30'
32	MH-309	"	93'				
32	MH-309	"	81'				
33	MH-309	"	40'				
33	MH-308	"	95'				
34	MH-308	"	42'				
34	MH-308	"	30'				
35	MH-309	"	70'				
35	MH-309	"	30'				
36	MH-308	"	75'				
36	MH-308	"	30'				



WATER AND SEWER CODE
COUNTY USE

WATER No. E07
SEWER No. 3530000
TEST GRADIENT : 700

VICINITY MAP
SCALE: 1" = 600'

CONTRACT NO. 24-3484-D
COLUMBIA
VILLAGE OF LONGREACH
SECTION 4 AREA 2
LOTS C-1 THRU C-68
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

TYPE OF BUILDING	TOWNHOUSES
NUMBER OF UNITS	67
NUMBER OF SHC's	67
NUMBER OF WHC's	67
DRAINAGE AREA	DORSEY
TREATMENT PLANT	Little Settlement Water Reclamation Plant, Howard County

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.
 - 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 a 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 the 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
BGA&E Co. Contractor Services	850-4620
BGA&E Co. Under Ground Damage Control	787-9068
Miss Utility	1-800-257-7777
Colonial Pipeline Co.	795-1390
Howard County Dept. of Public Works, Bur. 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.
- 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 less shall be strapped to less.
 - 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 strapped and buttressed 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.
- PART III - SEWER
- All sewer mains shall be D.I.P. 6" PVC unless otherwise noted.
 - The contractor shall provide a joint in all sewer mains within 2'-0" of exterior manhole wall.
 - 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 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 the cellar cannot be served.

WATER AS-BUILTS

ITEMS	QUANTITIES ESTIMATED	QUANTITIES AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" W	750 LF	750 LF	DIP	GRAFFIN PIPE PRODUCTS Co.
6" W	277 LF	287 LF	DIP	GRAFFIN PIPE PRODUCTS Co.
1" WHC	670 LF	948 LF	1/2" COPPER	HOWELL METALS
1 1/2" WHC	1900 LF	858 LF	3/4" COPPER	HOWELL METALS
8" W (to be lowered)	25 LF	30 LF	DIP	
FH A.V.	2 ea.	2 EA.	SALE VALVE	MUELLER Co.
8" S	1122 LF	1133 LF	PVC	J-M MANUFACTURING
4" S&C	300 LF	884 LF	PVC	J-M MANUFACTURING
6" S&C	1800 LF	700 LF	PVC	J-M MANUFACTURING
4" Manhole	11 ea.	11 EA.	PRECAST CONCRETE	ATLANTIC CONCRETE PRODUCTS
Type "B" Drop Conn.	2 ea.	2 EA.	PVC	J-M MANUFACTURING
6" Valves	3 ea.	3 EA.	SALE VALVE	U.S. PIPE & FOUNDRY
6" Valves	1 ea.	1 EA.	SALE VALVE	U.S. PIPE & FOUNDRY
1/2" H.B.	5 ea.	5 EA.	DIP	U.S. PIPE & FOUNDRY
1/2" H.B.	1 ea.	0 EA.		

Sediment Control Measures will be implemented in accordance with Section 219 of the Specifications & with Road Construction Plan F-56-G8; Drawings 3 of 5 for Sediment & Erosion Control.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.

J. A. Whitfield
SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE

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

APPROVED: *John P. ...*
DATE: 3/15/96

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Ruth ...
CHIEF, BUREAU OF UTILITIES DATE: 3-12-96

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

...
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 3/16/96

GW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS

3608 NATIONAL DRIVE SUITE 250 BURTOWNSVILLE OFFICE PARK
BURTOWNSVILLE, MD 20888
(301) 421-4024

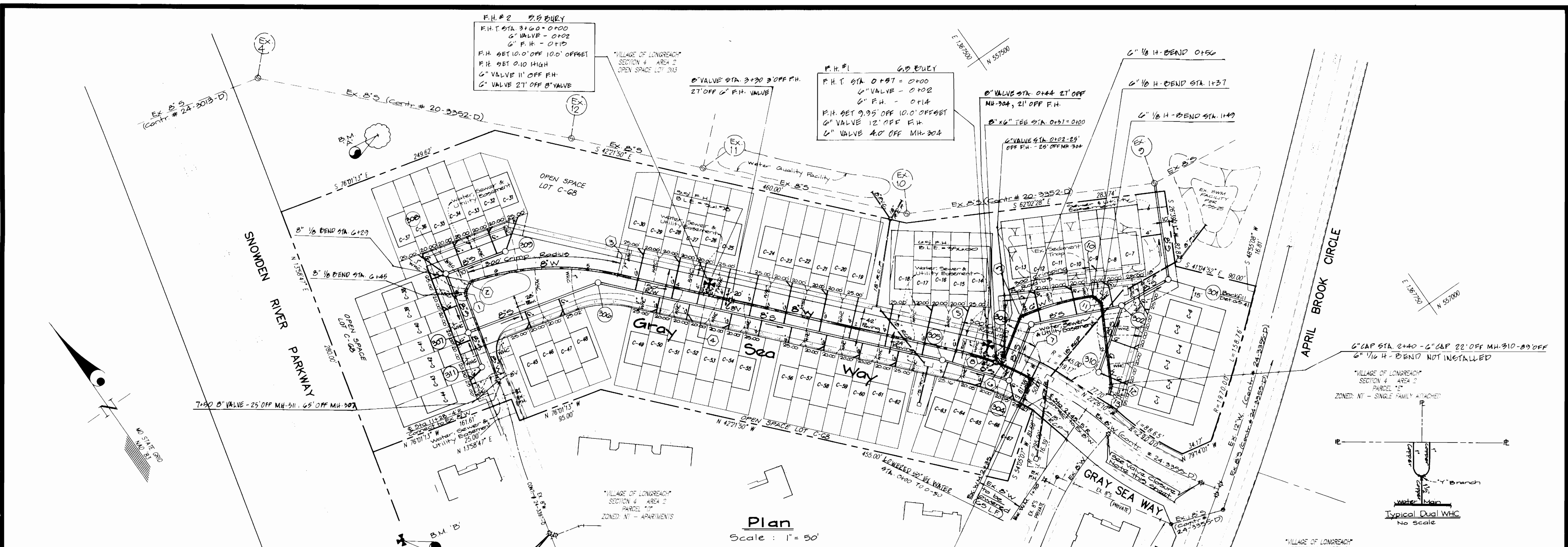
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DRN: HKJ					
CHK: GAH					
DATE: Feb 1996	BY	NO.	REVISION	DATE	

PUBLIC WATER AND SEWER
CONSTRUCTION PLANS
TITLE SHEET

600' SCALE MAP NO. 27 BLOCK NO. 13

COLUMBIA
VILLAGE OF LONGREACH
SECTION 4 AREA 2
LOTS C-1 THRU C-68
CONTRACT # 24-3484-D
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 3



Plan
Scale: 1" = 50'

Ex. 8 Valve to be closed for connection of proposed 8" Water

*** Valve Closure Note ***
Close Existing valves near April Brook Circle and begin construction of proposed 8" Water from W.M. Sta. 0+00 to 0+44. Install prop. 8" Valve at Sta. 0+44. The 8" Valve at W.M. Sta. 0+37 and the G" Valve immediately close the newly installed valves and re-open the Ex. valves before continuing construction.

LOT#	FROM	TO	DIST.
1	MH-302	SAN. BOARD	87'
2	MH-310	"	86'
3	MH-302	"	82'
4	MH-310	"	85'
5	MH-302	"	81'
6	MH-310	"	80'
7	MH-302	"	81'
8	MH-310	"	82'
9	MH-302	"	83'
10	MH-310	"	84'
11	MH-302	"	85'
12	MH-310	"	86'
13	MH-302	"	87'
14	MH-310	"	88'
15	MH-302	"	89'
16	MH-310	"	90'
17	MH-302	"	91'
18	MH-310	"	92'
19	MH-302	"	93'
20	MH-310	"	94'
21	MH-302	"	95'
22	MH-310	"	96'
23	MH-302	"	97'
24	MH-310	"	98'
25	MH-302	"	99'
26	MH-310	"	100'
27	MH-302	"	101'
28	MH-310	"	102'
29	MH-302	"	103'
30	MH-310	"	104'
31	MH-302	"	105'
32	MH-310	"	106'
33	MH-302	"	107'
34	MH-310	"	108'
35	MH-302	"	109'
36	MH-310	"	110'
37	MH-302	"	111'
38	MH-310	"	112'
39	MH-302	"	113'
40	MH-310	"	114'
41	MH-302	"	115'
42	MH-310	"	116'
43	MH-302	"	117'
44	MH-310	"	118'
45	MH-302	"	119'
46	MH-310	"	120'
47	MH-302	"	121'
48	MH-310	"	122'
49	MH-302	"	123'
50	MH-310	"	124'
51	MH-302	"	125'
52	MH-310	"	126'
53	MH-302	"	127'
54	MH-310	"	128'
55	MH-302	"	129'
56	MH-310	"	130'
57	MH-302	"	131'
58	MH-310	"	132'
59	MH-302	"	133'
60	MH-310	"	134'
61	MH-302	"	135'
62	MH-310	"	136'
63	MH-302	"	137'
64	MH-310	"	138'
65	MH-302	"	139'
66	MH-310	"	140'
67	MH-302	"	141'
68	MH-310	"	142'
69	MH-302	"	143'
70	MH-310	"	144'
71	MH-302	"	145'
72	MH-310	"	146'
73	MH-302	"	147'
74	MH-310	"	148'
75	MH-302	"	149'
76	MH-310	"	150'
77	MH-302	"	151'
78	MH-310	"	152'
79	MH-302	"	153'
80	MH-310	"	154'
81	MH-302	"	155'
82	MH-310	"	156'
83	MH-302	"	157'
84	MH-310	"	158'
85	MH-302	"	159'
86	MH-310	"	160'
87	MH-302	"	161'
88	MH-310	"	162'
89	MH-302	"	163'
90	MH-310	"	164'
91	MH-302	"	165'
92	MH-310	"	166'
93	MH-302	"	167'
94	MH-310	"	168'
95	MH-302	"	169'
96	MH-310	"	170'
97	MH-302	"	171'
98	MH-310	"	172'
99	MH-302	"	173'
100	MH-310	"	174'
101	MH-302	"	175'
102	MH-310	"	176'
103	MH-302	"	177'
104	MH-310	"	178'
105	MH-302	"	179'
106	MH-310	"	180'
107	MH-302	"	181'
108	MH-310	"	182'
109	MH-302	"	183'
110	MH-310	"	184'
111	MH-302	"	185'
112	MH-310	"	186'
113	MH-302	"	187'
114	MH-310	"	188'
115	MH-302	"	189'
116	MH-310	"	190'
117	MH-302	"	191'
118	MH-310	"	192'
119	MH-302	"	193'
120	MH-310	"	194'
121	MH-302	"	195'
122	MH-310	"	196'
123	MH-302	"	197'
124	MH-310	"	198'
125	MH-302	"	199'
126	MH-310	"	200'

LOT#	FROM	TO	DIST.
39	MH-307	SAN. BOARD	39'
40	"	"	37'
41	"	"	36'
42	"	"	43'
43	"	"	31'
44	"	"	41'
45	"	"	18'
46	"	"	21'
47	"	"	85'
48	"	"	64'
49	"	"	54'
50	"	"	20'
51	"	"	52'
52	"	"	18'
53	"	"	48'
54	"	"	83'
55	"	"	25'
56	"	"	88'
57	"	"	70'
58	"	"	55'
59	"	"	93'
60	"	"	52'
61	"	"	95'
62	"	"	67'
63	"	"	71'
64	"	"	42'
65	"	"	100'
66	"	"	31'
67	"	"	70'
68	"	"	92'
69	"	"	31'
70	"	"	65'
71	"	"	39'
72	"	"	48'
73	"	"	31'
74	"	"	35'
75	"	"	92'
76	"	"	56'
77	"	"	76'
78	"	"	136'
79	"	"	110'

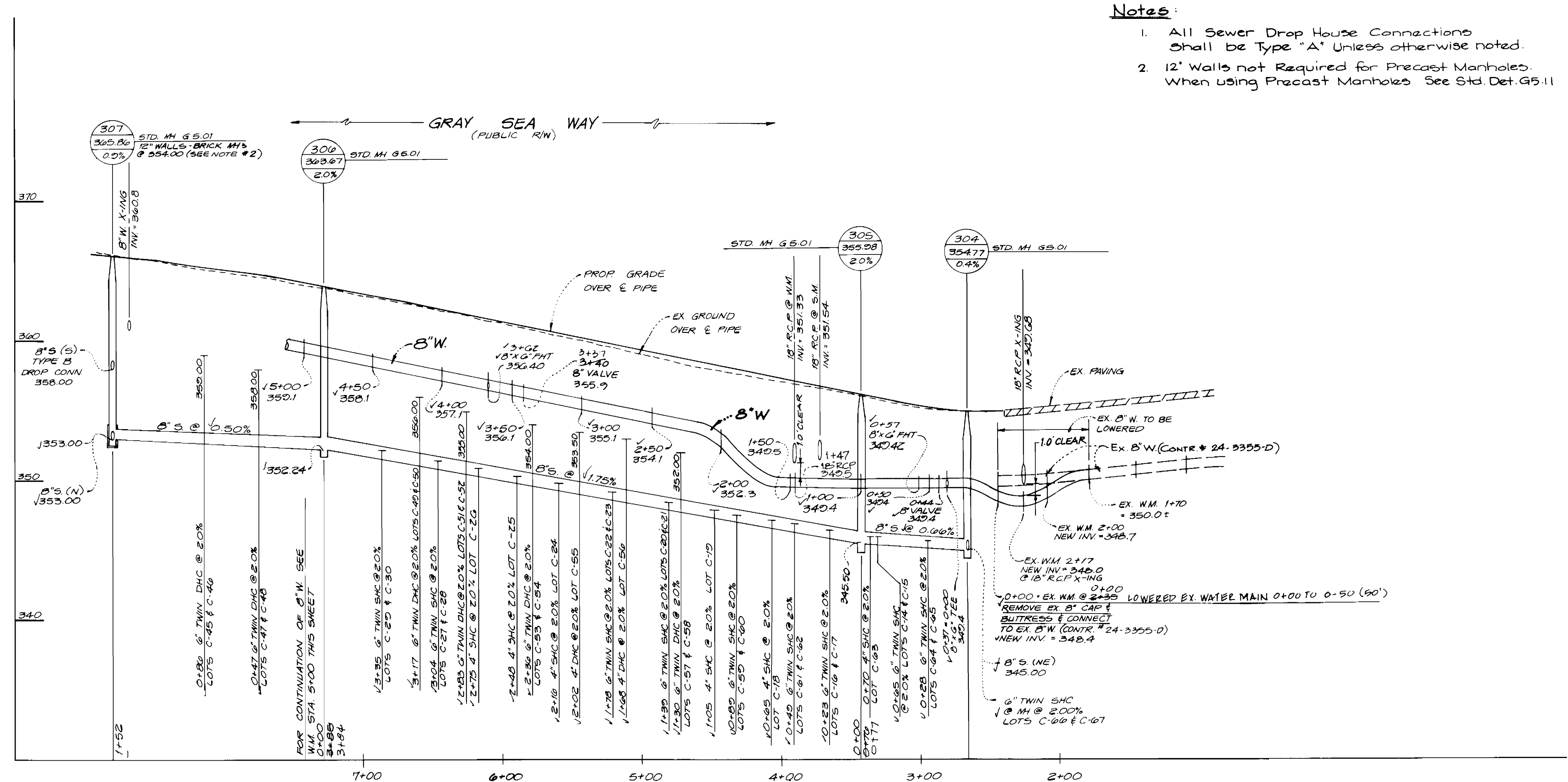
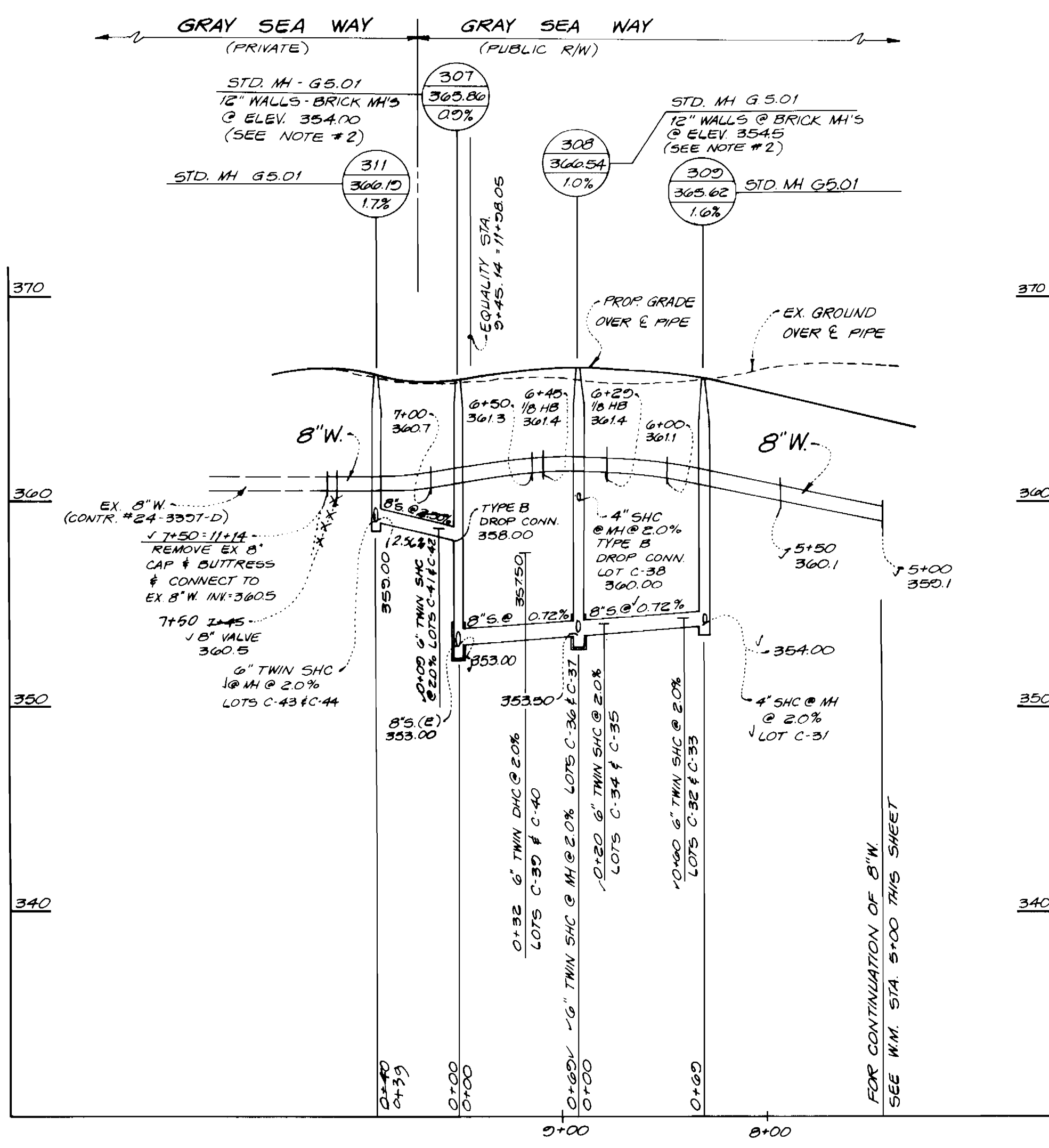
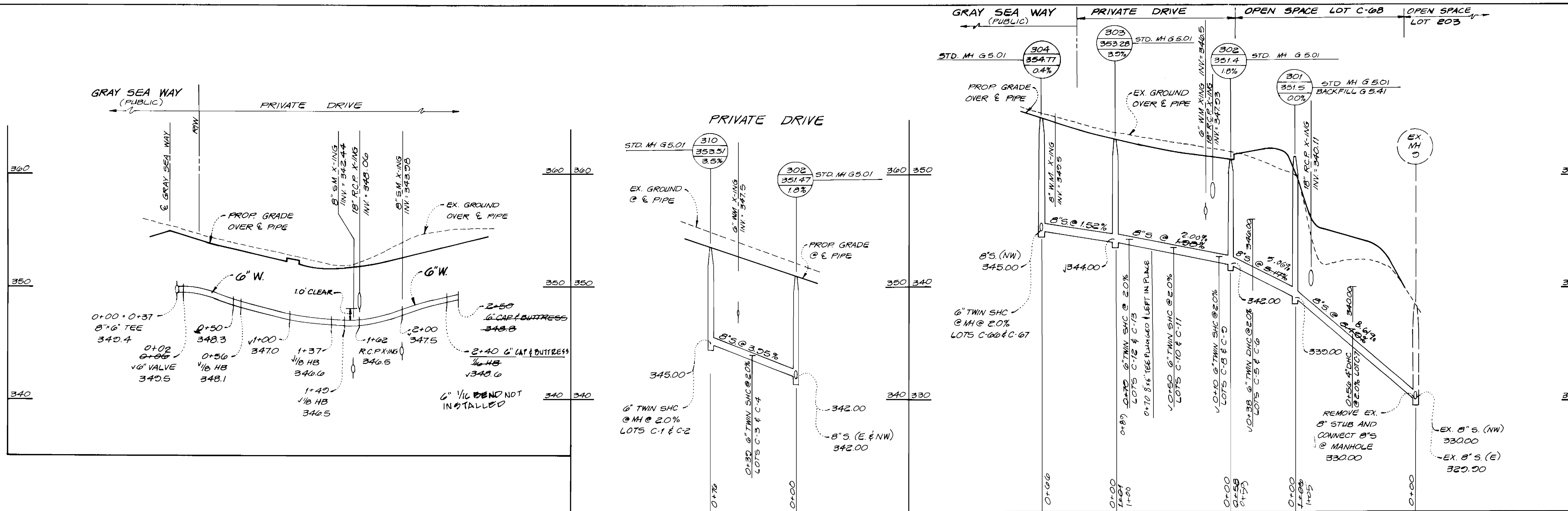
SEWER HOUSE CONNECTION DATA					
LOT NO.	INV. @ R/W	MIN. CELLAR ELEV.			
✓ C-1	345.9	349.2	✓ C-35	354.3	357.5
✓ C-2	345.9	349.2	✓ C-36	354.4	357.6
✓ C-3	344.3	347.5	✓ C-37	354.4	357.6
✓ C-4	344.3	347.6	✓ C-38	350.3	353.7
✓ C-5	346.5	349.7	✓ C-39	357.9	361.2
✓ C-6	346.4	349.7	✓ C-40	357.8	361.2
✓ C-7	340.5	343.4	✓ C-41	358.7	362.1
✓ C-8	342.9	346.0	✓ C-42	358.7	362.0
✓ C-9	342.9	346.2	✓ C-43	359.6	362.9
✓ C-10	343.7	346.9	✓ C-44	359.6	362.8
✓ C-11	343.8	346.9	✓ C-45	359.5	362.8
✓ C-12	344.2	347.2	✓ C-46	359.4	362.6
✓ C-13	344.3	347.5	✓ C-47	358.5	361.8
✓ C-14	346.8	350.0	✓ C-48	358.4	361.6
✓ C-15	346.9	350.0	✓ C-49	356.4	359.8
✓ C-16	347.1	350.2	✓ C-50	356.4	359.7
✓ C-17	347.2	350.3	✓ C-51	355.4	358.8
✓ C-18	347.8	351.0	✓ C-52	355.4	358.7
✓ C-19	348.5	351.6	✓ C-53	354.4	357.8
✓ C-20	349.0	352.2	✓ C-54	354.4	357.7
✓ C-21	349.0	352.1	✓ C-55	353.9	357.3
✓ C-22	349.6	352.9	✓ C-56	353.4	356.8
✓ C-23	349.7	352.9	✓ C-57	352.4	355.7
✓ C-24	350.4	353.6	✓ C-58	352.4	355.8
✓ C-25	351.0	354.2	✓ C-59	347.6	350.8
✓ C-26	351.4	354.5	✓ C-60	347.5	350.9
✓ C-27	351.8	355.0	✓ C-61	346.9	350.1
✓ C-28	351.9	355.0	✓ C-62	346.8	350.2
✓ C-29	352.4	355.5	✓ C-63	346.0	349.3
✓ C-30	352.4	355.6	✓ C-64	345.7	348.9
✓ C-31	355.1	358.2	✓ C-65	345.6	348.9
✓ C-32	354.7	357.9	✓ C-66	345.6	348.9
✓ C-33	354.6	357.8	✓ C-67	345.6	348.0
✓ C-34	354.4	357.6			

STRUCTURE AND APPURTENANCE DATA		
NO.	DESCRIPTION	LOCATION
301	MANHOLE - GS.01	OPEN SPACE LOT C-68
302	MANHOLE - GS.01	PRIVATE DRIVE STA. 1+10 - 33' RT.
303	MANHOLE - GS.01	PRIVATE DRIVE STA. 1+87 - 4' RT.
304	MANHOLE - GS.01	GRAY SEA WAY STA. 2+66 - 7' LT.
305	MANHOLE - GS.01	GRAY SEA WAY STA. 3+44 - 7' LT.
306	MANHOLE - GS.01	GRAY SEA WAY STA. 7+28 - 7' LT.
307	MANHOLE - GS.01	GRAY SEA WAY STA. 11+93 - 8' LT.
308	MANHOLE - GS.01	GRAY SEA WAY
309	MANHOLE - GS.01	GRAY SEA WAY STA. 8+31 - 10' RT.
310	MANHOLE - GS.01	GRAY SEA WAY STA. 0+55 - 6' LT.
311	MANHOLE - GS.01	GRAY SEA WAY (PRIVATE) STA. 11+53 - 8' LT.

NO.	DESCRIPTION	LOCATION
1	1/8 H.B.	GRAY SEA WAY STA. 9+10 - 4' LT.
2	1/8 H.B.	GRAY SEA WAY STA. 8+78 - 8' LT.
3	P.C. STA.	GRAY SEA WAY STA. 7+10 - 7' RT.
4	8" x 6" FHT	GRAY SEA WAY STA. 6+10 - 7' RT.
5	P.T. STA.	GRAY SEA WAY STA. 3+31 - 7' RT.
6	8" x 6" TEE	GRAY SEA WAY STA. 2+81 - 6' RT.
7	P.C. STA.	GRAY SEA WAY STA. 2+58 - 5' RT.
8	8" x 6" FHT	GRAY SEA WAY STA. 5+02 - 6.5' RT.
9	P.C. STA.	PRIVATE DRIVE STA. 1+91 - 16' RT.
10	1/8 H.B.	PRIVATE DRIVE STA. 1+21 - 22' RT.
11	P.T. STA.	PRIVATE DRIVE STA. 1+21 - 22' RT.
12	1/16 H.B.	PRIVATE DRIVE STA. 0+44 - 11' RT.
13	6" CAP & BUTTRESS	PRIVATE DRIVE STA. 0+35 - 12' RT.

Benchmarks

B.M. 'A': Cut nail in 30" Poplar Elev. = 351.61
B.M. 'B': Fire Hydrant Elev. = 360.88



- Notes:**
1. All Sewer Drop House Connections shall be Type "A" unless otherwise noted.
 2. 12' Walls not Required for Precast Manholes. When Using Precast Manholes See Std. Det. G5-11