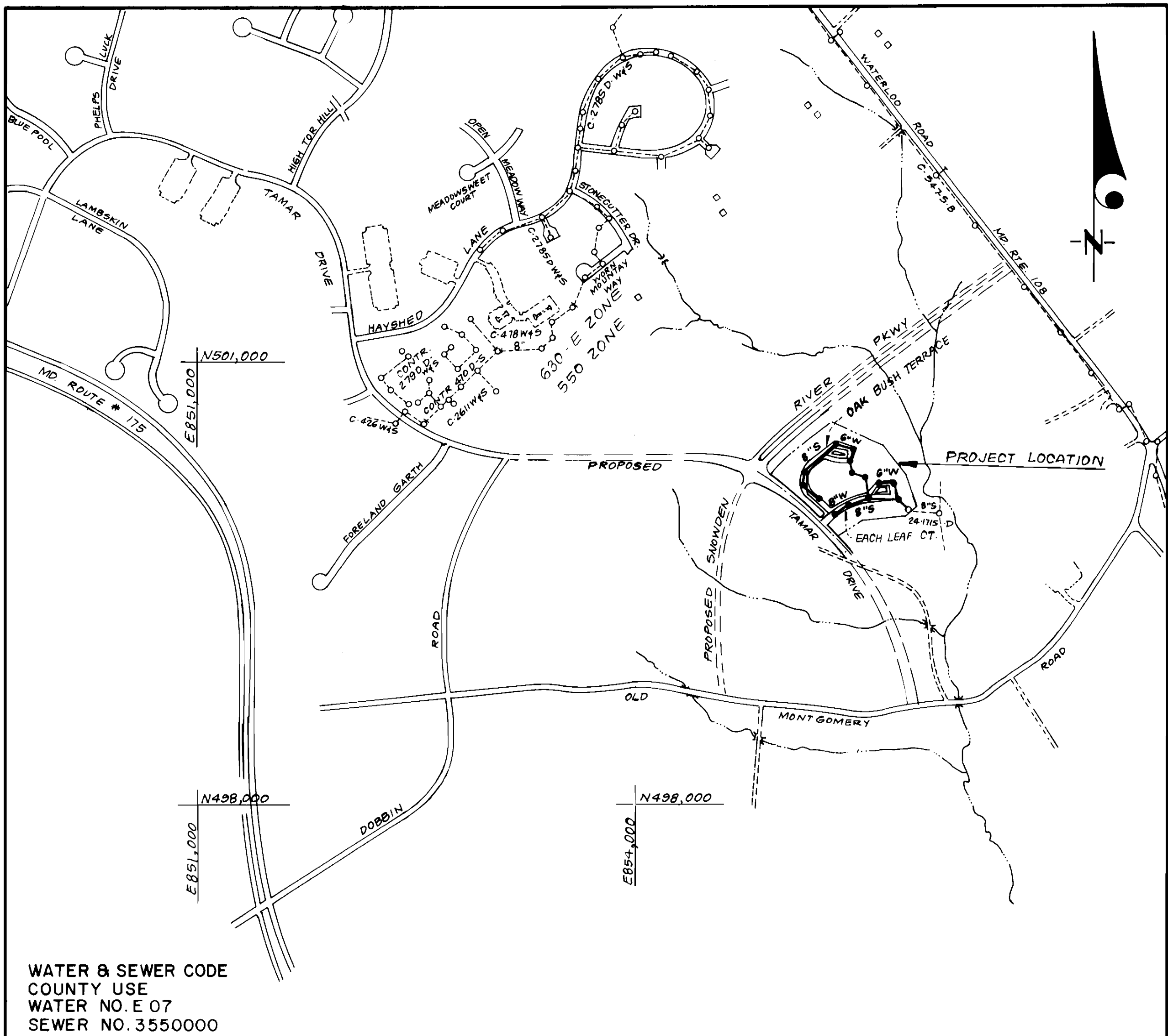


SEWER HOUSE CONNECTION TABLE					
LOTS	Inv. @ R.	Min. C.	LOTS	Inv. @ R.	Min. C.
C1/C2	385.4	389.1	C44/C45	382.7	386.2
C3/C4	385.0	388.6	C46/C47	378.5	382.1
C5/C6	384.4	387.9	C48/C49	376.9	380.5
C7	383.8	387.3	C50/C51	376.0	379.6
C8	383.1	386.5	C52/C53	374.6	378.1
C9/C10	382.3	385.9	C54	375.2	378.6
C11/C12	381.3	384.8	C55/C56	371.5	375.1
C13/C14	380.2	383.7	C57/C58	371.2	374.7
C15/C16	379.1	382.6	C59/C60	370.7	374.2
C17/C18	379.0	382.3	C61	370.4	373.4
C19	378.5	381.8	C62	370.2	373.3
C20/C21	378.3	381.5	C63/C64	369.9	373.1
C22/C23	378.0	381.2	C65/C66	369.3	372.5
C24/C25	378.4	381.7	C67/C68	368.1	371.1
C26/C27	377.7	381.0	C69	366.7	369.3
C28/C29	377.4	380.6	C70/C71	369.7	372.9
C30	377.3	380.0	C72/C73	370.7	373.8
C31	377.0	379.6	C74/C75	372.2	375.3
C32/C33	379.6	383.2	C76/C77	373.2	376.3
C34/C35	381.0	384.6	C78/C79	376.5	380.1
C36/C37	381.6	385.5	C80/C81	377.8	381.4
C38/C39	385.3	389.1	C82/C83	379.1	382.6
C40/C41	386.0	389.8	C84/C85	380.7	384.2
C42/C43	383.6	387.2			

TYPE OF BUILDING	Townhouses
NO. OF LOTS	85
NO. OF WHC's	85
NO. OF SHC's	85
DRAINAGE AREA	Little Potuxent



WATER & SEWER CODE
 COUNTY USE
 WATER NO. E 07
 SEWER NO. 3550000

VICINITY MAP
 SCALE: 1" = 600'

CONTRACT NO. 24-1791-D
 VILLAGE OF LONG REACH
 SECTION 3 AREA 2

PARCEL C, LOTS C-1 THRU C-88
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

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 Inspector, at the contractor's expense.
- All horizontal controls are based on Maryland State Coordinates.
- All vertical controls are based on U.S.G.S. Datum.
- 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. Any cost incurred to the contractor for tunneling or bracing at poles shall be included in unit prices bid for excavation and backfill.
- For details not shown on the drawings use Howard County Standard Specifications and Howard County Design Manual, Volume IV. The Contractor shall have Volume IV on the job.
- Contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in the vicinity of proposed utilities at his own expense.
- Contractor shall notify the following utilities or agencies at least five (5) working days before starting work shown on these plans.
 - State Highway Administration - 531-5533
 - Baltimore Gas & Electric Company - Underground Damage Control - 859-9004
 - Baltimore Gas & Electric Company - Contractor Services - 850-4620
 - Baltimore Gas & Electric Company - Trouble Shooting - 298-9001
 - "Miss Utility" - 1-800-257-7777
 - Chesapeake & Potomac (C & P) Telephone Company - 1-800-257-7777
 - Bureau of Utilities Howard County - 992-2366
 - Colonial Pipeline Company - 795-1390
- Trees are to be protected from damage to maximum extent. Trees 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 as directed by the Inspector. Payment for such removal shall be included in the unit price bid for excavation and backfill.
- Place regulation "Men Working" and warning signs as required to comply with Maryland State Highway Administration Manual of Traffic Control for Highway Construction and Maintenance Operations.
- All water mains to be D.I.P. Class 52 unless otherwise noted.
- Top 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.
- Block all fittings with concrete.
- Bury line elevations on fire hydrants shall be set to the 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 to be compacted in accordance with Sections 1003 & 1008 of the Standard Specifications.
- All water house connections shall be for an inside meter setting.
- The contractor shall not operate any water main valves on the existing system.
- All sewer mains shall be C.S.P.X., V.C.P.X., P.V.C., or A.C.P. Class 2400 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.
- Water main and water house connection lines must have a minimum of one foot separation from the sanitary sewer and sewer house connections as they cross. Except at crossings, water and sewer lines shall have a minimum horizontal separation of 10'.
- Manholes designated thus: WT, shall have a Watertight Frame and Cover.
- All D.I.P. fittings shall be in accordance with AWWA specification C-153 Ductile Iron Compact Fittings, 3-inch through 12-inch for water and other liquids.

QUANTITIES			
ITEM	EST'D	AS BUILT	MATERIAL / SUPPLIER
8"W	928 L.F.	1204 L.F.	CL 52 DIP - 3" DIA. PIPE
6"W	689 L.F.	722 L.F.	"
8"S	1815 L.F.	1801 L.F.	NATIONAL PIPE SDR 35 - SA WATERWORKS
6"SHC	1415 L.F.	1274 L.F.	"
2"WHC	100 L.F.	82 L.F.	ASTM A 88 WOLVERINE - SA WATERWORKS
1"WHC	790 L.F.	724 L.F.	"
3/4"WHC	1205 L.F.	1217 L.F.	"
F.H.	4 EA.	4 EA.	U.S. PIPE - SA WATERWORKS
4' 0" Dia. MH	15 EA.	15 EA.	PRECAST - ATHLETIC CONCRETE
8"V	2 EA.	2 EA.	U.S. PIPE - SA WATERWORKS
6"V (excl. F.H.)	6 EA.	6 EA.	"

Sediment Control Measures will be implemented in accordance with Section 219 of the Specifications & with Road Construction Plan F-88-237; Drawing, Sediment & Erosion Control.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT.
 SIGNATURE: [Signature] DATE: 10/21/88
 U.S. SOIL CONSERVATION SERVICE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

APPROVED:
 SIGNATURE: [Signature] DATE: 10/24/88
 HOWARD S.C.D.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS: [Signature] DATE: 10-27-88
 CHIEF, BUREAU OF ENGINEERING: [Signature] DATE: 10/28/88
 CHIEF, BUREAU OF UTILITIES: [Signature] DATE: 10/28/88
 CHIEF, LAND DEVELOPMENT DIV.: [Signature] DATE: 10/28/88

CLARK-FINEFROCK & SACKETT, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 7135 MINSTREL WAY COLUMBIA MARYLAND 21045
 (301) 381-7500 BALTO. (301) 621-8100 WASH.

DES: JTR
 DRN: V.L.M.
 CHK: JTR
 DATE: 4/88

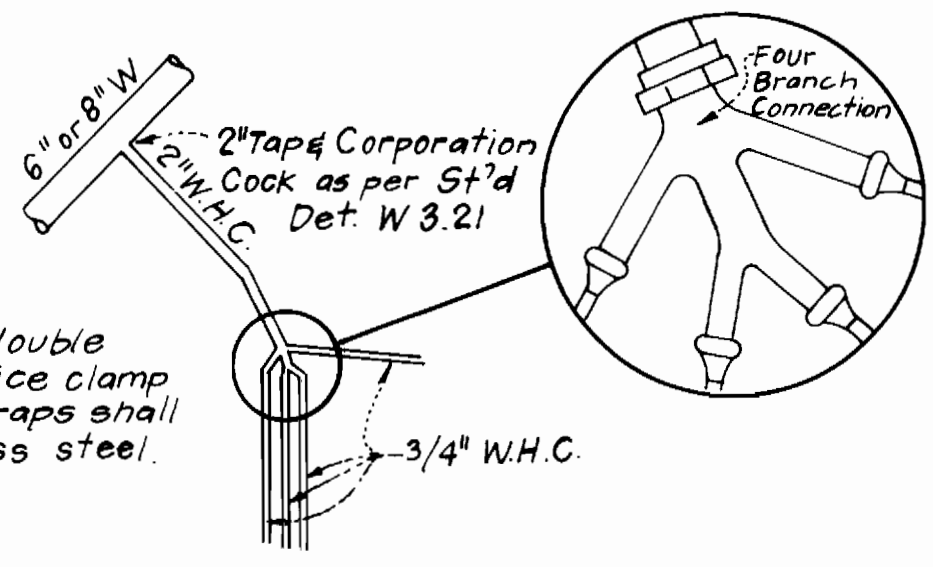
BY	NO.	REVISION	DATE

TITLE SHEET
 600' SCALE MAP NO. 37 BLOCK NO.

COLUMBIA
 VILLAGE OF LONG REACH
 SECTION 3 AREA 2
 PARCEL C, LOTS C-1 THRU C-88
 6TH ELECTION DISTRICT
 CONTRACT NO. 24-1791-D

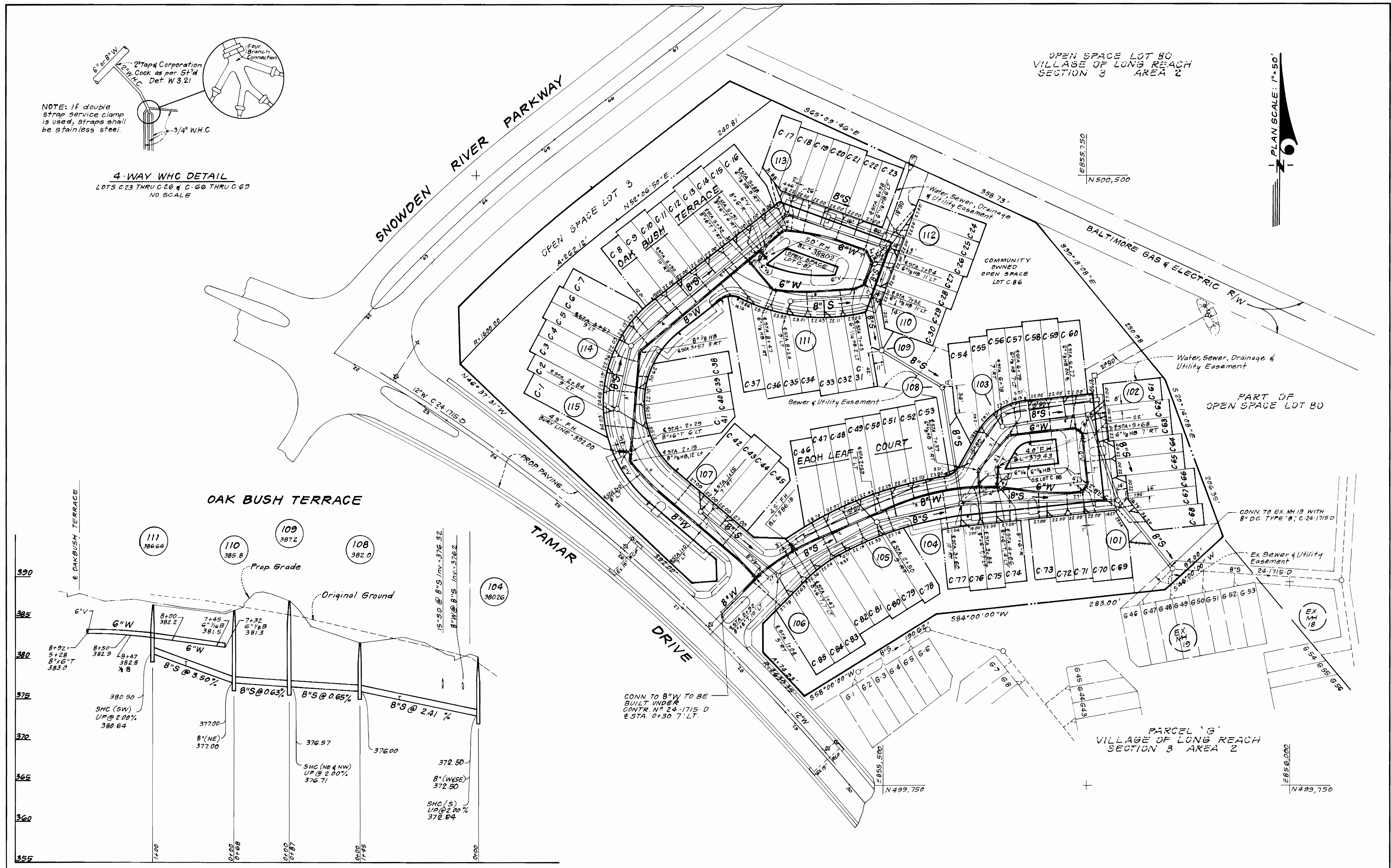
SCALE AS SHOWN
 SHEET 1 OF 3

AS-BUILT 4-26-88



4-WAY WHC DETAIL
 LOTS C-23 THRU C-26 & C-66 THRU C-69
 NO SCALE

OPEN SPACE LOT 80
 VILLAGE OF LONG REACH
 SECTION 3 AREA 2



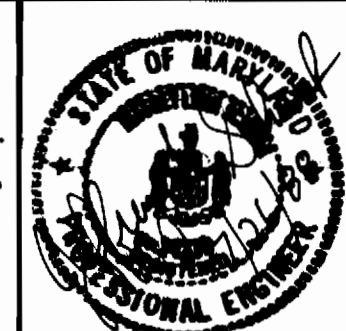
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: [Signature]
 Chief, Bureau of Engineering: [Signature]
 Chief, Bureau of Utilities: [Signature]

DATE: 10-27-88

CLARK · FINEPROCK & SACKETT, INC.
 ENGINEERS · PLANNERS · SURVEYORS

7135 MINSTREL WAY COLUMBIA MARYLAND 21045
 (301) 381-7500 BALTO. (301) 621-8100 WASH.



DES: JTR			
DRN: VLM			
CHK: JTR			
DATE: 7/88			

PLAN & PROFILES OF
 WATER & SEWER MAINS

600' SCALE MAP NO. 37 BLOCK NO.

COLUMBIA
 VILLAGE OF LONG REACH
 SECTION 3 AREA 2
 PARCEL C, LOTS C-1 THRU C-88
 6 ELECTION DISTRICT
 CONTRACT NO. 24-1791-D

SCALE
 AS SHOWN

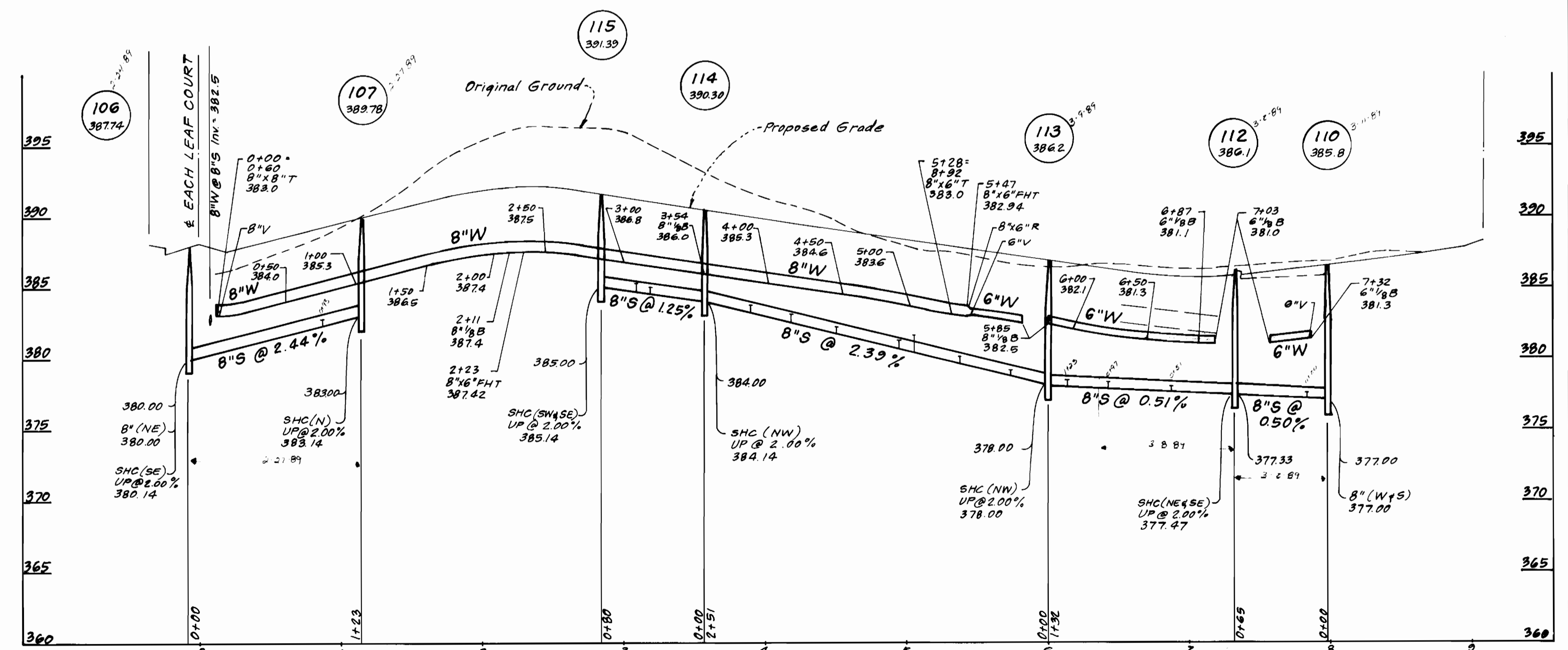
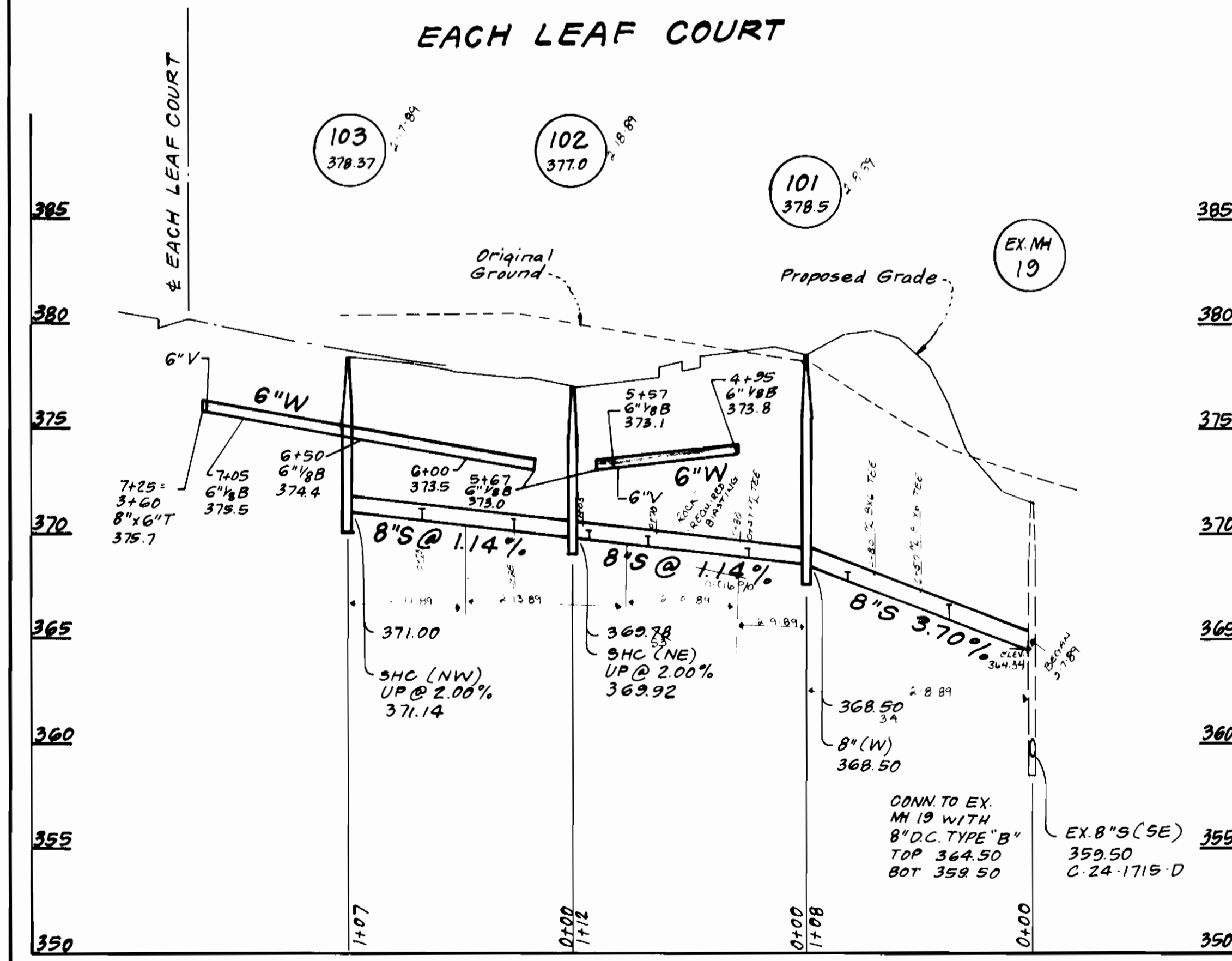
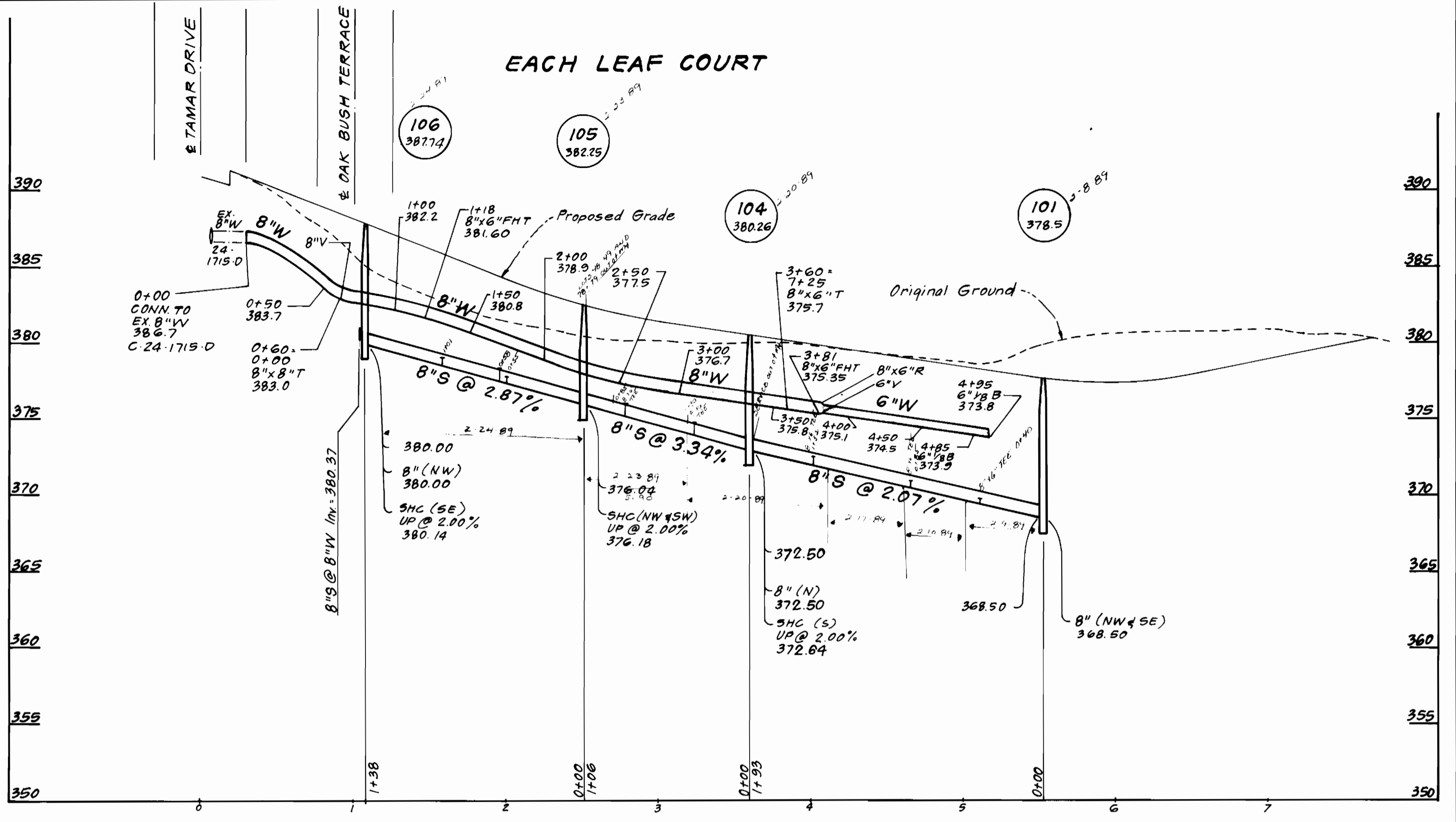
SHEET
 2 OF 3A

AS BUILT 4-26-89

SUMMARY NOTES
 1) 12" B.S. 16'S ARE NOT FIELD LINES. MAIN LINE FITTINGS AND JOINTS TO BE IDENTIFIED BY S.I.E. INSPECTOR FOR 1" PLUS MINUS CLEARANCE FOR REQUIREMENTS IN PARAGRAPH 7.2.5. WHERE SIGNIFICANT BY FALLS TO BE FORMED SEE 2-B BY MEMORANDUM.

2) TRENCHES TO BE INSTALLED AS PER APPROVED PLAN BUT SPACING OF 3'-2" MIN. DESIGN MINIMUM DEPTH FOR THIS PROJECT SEE 2-B BY MEMORANDUM. LETTER AND 2-B BY MEMORANDUM IN FILE.

3) ALL ELEVATIONS SHOWN MINUS 2 FEET VERTICALLY FOR M.S. OR PLUS MINUS 1 FOOT HORIZONTALLY FOR M.S. UNLESS OTHERWISE NOTED (AS PER INSPECTION REQUIREMENTS) AND OF ADDITIONAL AS PER PLAN.



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

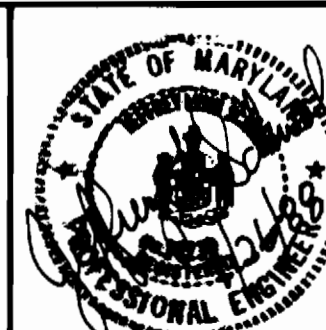
James M. ... 10/28/88
 DIRECTOR OF PUBLIC WORKS DATE

... 10/28/88
 CHIEF, BUREAU OF UTILITIES DATE

... 10/28/88
 CHIEF, LAND DEVELOPMENT DIV. DATE

CLARK · FINEROCK & SACKETT, INC.
 ENGINEERS · PLANNERS · SURVEYORS

7135 MINSTREL WAY COLUMBIA MARYLAND 21045
 (301) 381-7500 BALTO. (301) 621-8100 WASH.



DES: JTR					
DRN: VLM					
CHK: JTR					
DATE: 7/88	BY:	NO.	REVISION	DATE	

PROFILES OF
 WATER & SEWER MAINS

600' SCALE MAP NO. 37 BLOCK NO.

COLUMBIA
 VILLAGE OF LONG REACH
 SECTION 3 AREA 2
 PARCEL C, LOTS C-1 THRU C-88
 6TH ELECTION DISTRICT
 CONTRACT NO. 24-1791-D

SCALE AS SHOWN
 SHEET 3 OF 37

AS BUILT 4-26-89

SEWER AS BUILT

WATER AS BUILT

Lot	LOCATION	DISTANCE	Lot	LOCATION	DISTANCE	Lot	LOCATION	DISTANCE	Lot	LOCATION	DISTANCE
C-1	Manhole # 115	16.5'	C-70	Manhole # 101	43'	C-1	FIRE HYDRANT STA: 5743 OAK Bush Terrace	36.5'	C-66	Manhole # 102	104.5'
C-2	Manhole # 114	85'	C-71	Manhole # 104	156'	C-1	Manhole # 115	25.5'	C-67	Manhole # 101	19.4'
C-3	Manhole # 115	49'	C-72	Manhole # 101	86'	C-2	"	28'	"	EXISTING MANHOLE # 19	96'
C-4	Manhole # 114	48.5'	C-73	Manhole # 104	112'	C-3	Manhole # 114	64.5'	C-68	"	69.3'
C-5	Manhole # 115	58'	C-74	Manhole # 101	150'	C-4	Manhole # 115	68'	"	Manhole # 101	44.7'
C-6	Manhole # 114	15.5'	C-75	Manhole # 104	53'	C-5	Manhole # 114	25'	C-69	"	17.5'
C-7	FIRE HYDRANT STA: 5747 OAK Bush Terrace	34'	C-76	"	30.5'	C-6	"	30'	"	FIRE HYDRANT STA: 5741 EACH LEAF COUNT	158.4'
C-8	"	174'	C-77	Manhole # 105	109'	C-7	FIRE HYDRANT STA: 5747 OAK Bush Terrace	183.6'	C-70	"	133'
C-8	"	145'	C-78	"	16'	C-8	Manhole # 114	77'	"	Manhole # 101	31.9'
C-9	Manhole # 114	66'	C-79	Manhole # 106	139'	C-9	FIRE HYDRANT STA: 5747 OAK Bush Terrace	131.5'	C-71	"	65.6'
C-9	"	99'	C-80	Manhole # 105	48'	C-9	Manhole # 114	118'	C-72	FIRE HYDRANT STA: 5741 EACH LEAF COUNT	104'
C-10	FIRE HYDRANT STA: 5747 OAK Bush Terrace	111'	C-81	Manhole # 106	94'	C-10	"	89.8'	C-73	Manhole # 101	100.5'
C-11	Manhole # 113	112.5'	C-82	Manhole # 105	92'	C-11	FIRE HYDRANT STA: 5747 OAK Bush Terrace	89.8'	C-73	FIRE HYDRANT STA: 5741 EACH LEAF COUNT	80.6'
C-12	FIRE HYDRANT STA: 5747 OAK Bush Terrace	72'	C-83	Manhole # 106	50'	C-12	"	54.1'	C-74	"	68.5'
C-13	Manhole # 113	70'	C-84	Manhole # 105	135'	C-13	Manhole # 113	59.7'	C-74	"	65'
C-14	FIRE HYDRANT STA: 5747 OAK Bush Terrace	40'	C-85	Manhole # 106	28'	C-14	"	47.4'	C-74	Manhole # 104	74'
C-15	"	52.5'				C-15	FIRE HYDRANT STA: 5747 OAK Bush Terrace	43'	C-75	FIRE HYDRANT STA: 5741 EACH LEAF COUNT	35'
C-16	Manhole # 113	27'				C-16	"	64.2'	C-76	Manhole # 104	35'
C-17	"	36'				"	Manhole # 113	16'	C-77	"	35'
C-18	Manhole # 112	152'				C-17	"	47.2'	"	Manhole # 105	88'
C-19	"	118'				"	FIRE HYDRANT STA: 5747 OAK Bush Terrace	98.2'	C-78	"	22.5'
C-20	Manhole # 113	30'				C-18	"	88.5'	"	Manhole # 104	91.5'
C-20	"	51.5'				"	Manhole # 113	24.9'	C-79	Manhole # 105	88'
C-21	Manhole # 112	91.5'				C-19	"	34.4'	C-80	FIRE HYDRANT 1918 EACH LEAF COUNT	91'
C-22	Manhole # 113	94'				C-20	FIRE HYDRANT STA: 5747 OAK Bush Terrace	90.6'	C-81	"	55'
C-23	Manhole # 112	48.5'				C-21	Manhole # 113	72.4'	C-82	Manhole # 106	35'
C-24	"	46'				C-22	Manhole # 112	66.2'	C-83	FIRE HYDRANT STA: 1918 EACH LEAF COUNT	49.5'
C-25	Manhole # 110	110'				C-23	"	35.8'	C-84	Manhole # 106	35.5'
C-26	Manhole # 112	125'				"	Manhole # 113	123.8'	C-85	"	35.5'
C-27	Manhole # 110	63.5'				C-24	"	161.8'	C-85	FIRE HYDRANT STA: 1918 EACH LEAF COUNT	77'
C-28	Manhole # 112	48.5'				"	Manhole # 112	54.6'			
C-29	Manhole # 110	21.5'				C-25	"	29'			
C-30	"	NA				C-25	Manhole # 110	89.2'			
C-30	Manhole # 109	NA				C-26	"	77.6'			
C-31	"	12'				"	Manhole # 112	19'			
C-32	Manhole # 110	67.5'				C-27	"	29'			
C-33	Manhole # 110	64'				C-28	Manhole # 110	37.9'			
C-34	Manhole # 111	51'				C-29	Manhole # 112	69.5'			
C-35	"	17'				C-30	Manhole # 110	12.7'			
C-35	Manhole # 110	108'				C-31	"	42'			
C-36	Manhole # 111	50'				C-32	Manhole # 111	NA			
C-37	FIRE HYDRANT STA: 5747 OAK Bush Terrace	60'				C-33	Manhole # 110	82'			
C-38	Manhole # 114	54.5'				C-34	Manhole # 111	NA			
C-39	Manhole # 115	46.5'				C-35	"	26.2'			
C-40	Manhole # 114	95'				C-36	FIRE HYDRANT STA: 5747 OAK Bush Terrace	64.3'			
C-41	Manhole # 115	39'				C-37	"	62.2'			
C-42	Manhole # 107	23'				"	Manhole # 111	72.3'			
C-43	Manhole # 106	137'				C-38	Manhole # 114	45.5'			
C-44	Manhole # 107	36'				"	Manhole # 115	53'			
C-45	Manhole # 106	93'				C-39	Manhole # 114	74.8'			
C-46	"	93'				C-40	Manhole # 115	35.4'			
C-47	Manhole # 105	64'				C-41	"	32.9'			
C-48	Manhole # 106	137'				"	FIRE HYDRANT STA: 2723 OAK Bush Terrace	44'			
C-49	Manhole # 105	34'				C-42	"	96.4'			
C-50	Manhole # 104	56'				"	Manhole # 107	35.5'			
C-51	Manhole # 105	47'				C-43	"	21.4'			
C-52	Manhole # 104	50'				C-44	FIRE HYDRANT STA: 1918 EACH LEAF COUNT	105'			
C-53	Manhole # 105	82'				C-45	"	67'			
C-54	Manhole # 108	NA				"	Manhole # 107	51'			
C-54	Manhole # 104	NA				C-46	Manhole # 105	80'			
C-55	Manhole # 103	19'				"	FIRE HYDRANT STA: 1918 EACH LEAF COUNT	36.5'			
C-56	Manhole # 102	116.5'				C-47	"	76'			
C-57	Manhole # 103	47'				C-48	"	47'			
C-58	Manhole # 102	74.5'				C-49	"	36'			
C-59	Manhole # 103	88'				C-50	Manhole # 104	107'			
C-60	Manhole # 102	37'				C-51	Manhole # 105	67'			
C-61	"	25.5'				C-52	Manhole # 104	69'			
C-62	Manhole # 101	116'				C-53	"	38.5'			
C-63	Manhole # 102	22'				"	Manhole # 105	100'			
C-64	Manhole # 101	73.5'				C-54	Manhole # 104	NA			
C-65	Manhole # 102	68.5'				C-55	Manhole # 103	NA			
C-66	Manhole # 101	47'				C-56	"	28.7'			
C-67	Manhole # 101	81'				C-57	Manhole # 102	44.5'			
C-68	Manhole # 102	30.5'				C-58	Manhole # 103	64.6'			
C-69	Manhole # 101	24'				C-59	Manhole # 102	53'			
C-70	Manhole # 101	95.5'				C-60	"	26.2'			
C-71	Manhole # 101	26'				C-61	Manhole # 103	97.7'			
C-72	Manhole # 102	133.5'				C-62	Manhole # 102	21'			
C-73	Manhole # 101	54'				C-63	Manhole # 101	116.4'			
C-74	EXISTING MANHOLE # 19	62'				C-64	Manhole # 102	236'			
						C-65	Manhole # 101	73.4'			
							Manhole # 102	63.2'			
							Manhole # 101	49'			

NOTE: AS-BUILTS FOR VALVES AND FIRE HYDRANTS SHOWN ON PLAN VIEW.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS _____ DATE _____ CHIEF, BUREAU OF ENGINEERING _____ DATE _____

DES: _____

DRN: _____

CHK: _____

DATE: _____ BY NO. _____ REVISION _____

KATHY WILSON

04-26-89

600' SCALE MAP NO. _____ BLOCK NO. _____

COLUMBIA VILLAGE OF LONG REACH

CONT. NO. 24-1791-D

SCALE AS SHOWN

SHEET 3A OF 3A