

CONTRACT NO. 24-1628-D

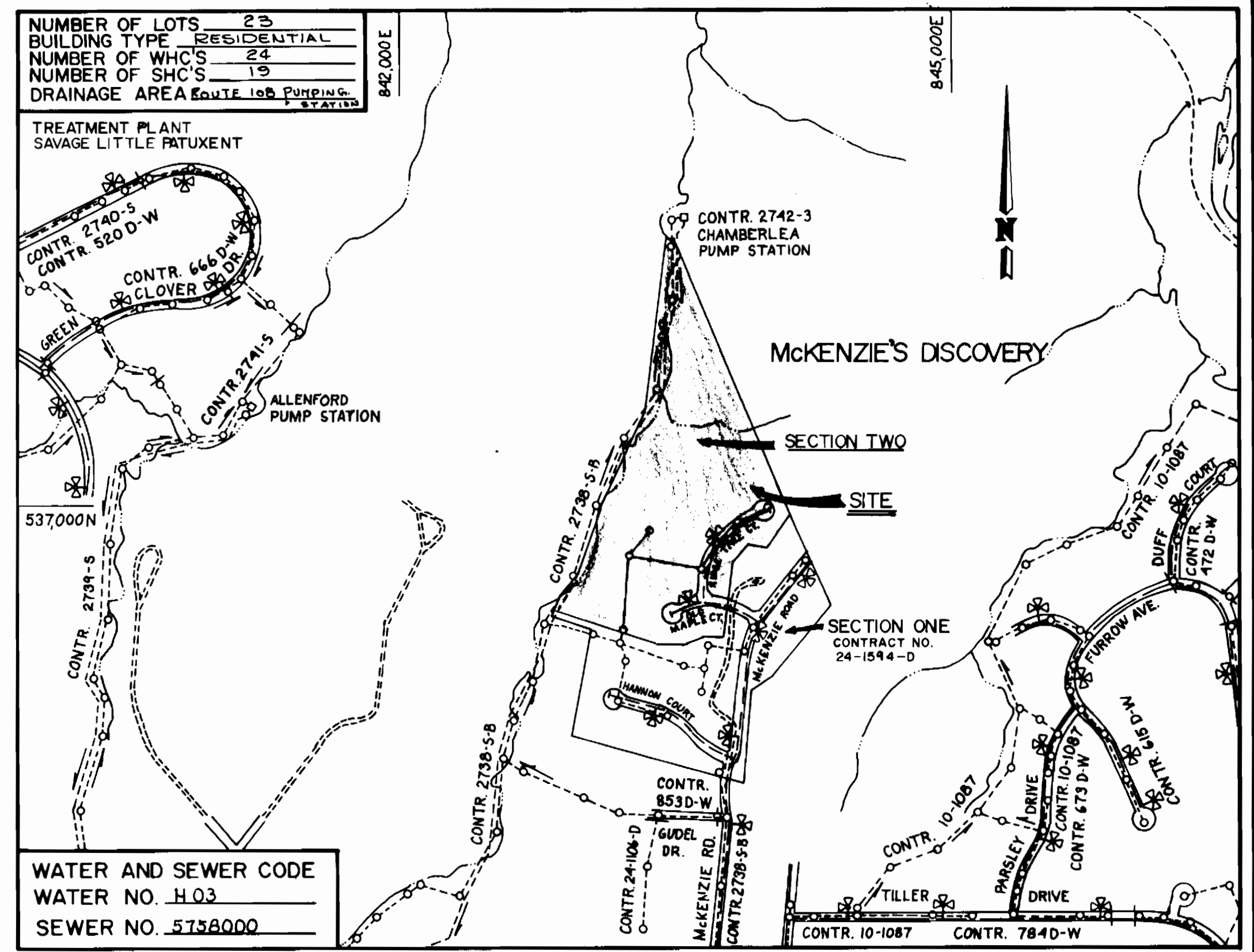
McKENZIE'S DISCOVERY

SECTION TWO

WATER AND SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS



- GENERAL NOTES**
- 1 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.
 - 2 ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
 - 3 ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
 - 4 ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 - 5 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 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.
 - 6 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. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
 - 7 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.
 - 8 CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES 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 561-2585
 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL - 234-5621
 BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING - 298-9013
 MISS UTILITY - 1-800-257-7777
 COLONIAL PIPELINE CO. - 795-1590
 BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
 - 9 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.
 - 10 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.
 - 11 ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
 - 12 TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3 1/2" COVER UNLESS OTHERWISE NOTED.
 - 13 VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - 14 ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 - 15 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 SECTIONS 1003 AND 1008 OF THE STANDARD SPECIFICATIONS.
 - 16 THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
 - 17 ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
 - 18 THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
 - 19 ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - 20 MANHOLES SHOWN WITH 12" AND 18" WALLS ARE BRICK MANHOLES ONLY.
 - 21 MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G.552 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - 22 HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
 - 23 ALL WATER CONNECTIONS SHALL BE SET FOR INSIDE METER SETTING.

- INDEX**
1. TITLE SHEET
 2. PLAN OF WATER AND SEWER MAIN
 3. WATER AND SEWER MAIN PROFILE

NOTES:
 SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLANS, SHEETS 7, 8, 9, 10, SEDIMENT AND EROSION, AND FINAL PLAN 7-87-113.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS
Robert M. Benjamin 6-9-87
 U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
Stephen L. Harker 6/17/87
 HOWARD S.C.D. DATE

QUANTITIES			
ITEM	QUANTITY	AS-BUILT	SUPPLIER
8" x 8" TEE	1	2	Relax Home Supplies
8" WATER	781	250	Co. Hill Pipe Co.
6" WATER	203	203	"
8" x 6" TEE	2	2	Relax Home Supplies
8" VALVES	2	2	"
6" VALVES (EXCL. FHV'S)	2	2	"
12" W.H.C.	274	274	"
3/4" W.H.C.	304	304	"
FIRE HYDRANTS	2	2	Manning Hancock
MANHOLES	7	7	"
8" SEWER	1,494	1494	Relax Home Supply
6" S.H.C.	500	500	"
6" D.H.C.	4	4	"
8" x 6" REDUCER	1	1	"
1 1/2" DRAIN	1	1	"

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert M. Benjamin 6-16-87
 DIRECTOR OF PUBLIC WORKS DATE

William M. Williams 6-15-87
 CHIEF, BUREAU OF ENGINEERING DATE

Robert M. Benjamin 6-12-87
 CHIEF, BUREAU OF UTILITIES DATE

William M. Williams 6-11-87
 CHIEF, LAND DEVELOPMENT DIVISION DATE

JOHN E. HARMS JR.
 AND ASSOCIATES INC.
 CONSULTING ENGINEERS - ARCHITECTS - SURVEYORS
 9030 RED BRANCH ROAD SUITE 100
 COLUMBIA, MARYLAND 21045
 TELEPHONE (301) 740-5200



DES: J.A.B.			
DRN: J.J.T.			
CHK: W.H.N.			
DATE: JAN, 87			
BY NO.		REVISION	DATE

TITLE SHEET

600' SCALE MAP NO. 17 BLOCK NO. 9

McKENZIE'S DISCOVERY

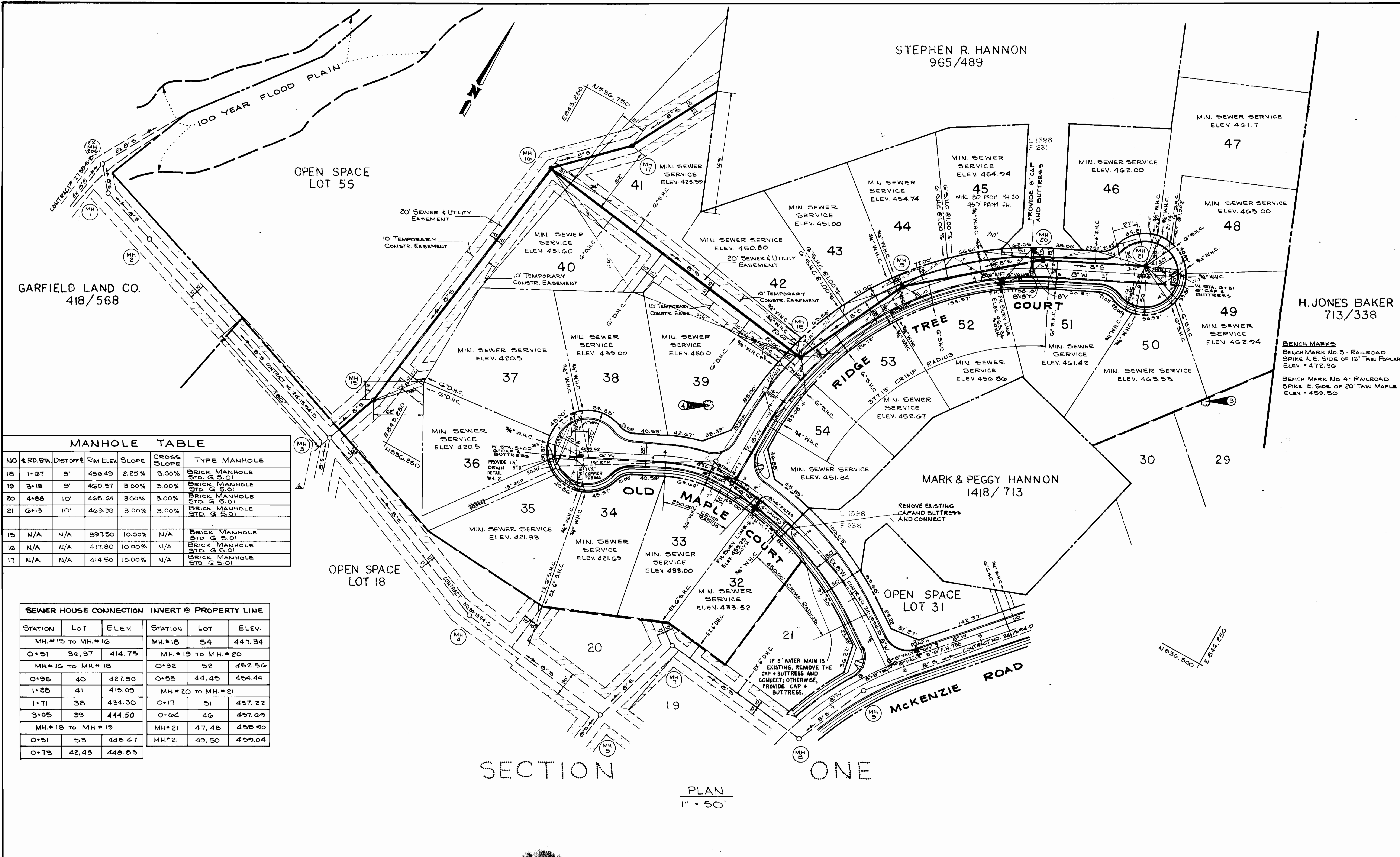
SECTION TWO

CONTRACT NO. 24-1628-D

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: H: 1" = 50'
 V: 1" = 5'

SHEET 1 OF 3



MANHOLE TABLE

NO.	R.D. STA.	DIST. OFF.	RIM ELEV.	SLOPE	CROSS SLOPE	TYPE MANHOLE
18	1+67	9'	456.49	2.25%	3.00%	BRICK MANHOLE STD. G 5.01
19	3+18	9'	460.57	3.00%	3.00%	BRICK MANHOLE STD. G 5.01
20	4+88	10'	465.64	3.00%	3.00%	BRICK MANHOLE STD. G 5.01
21	6+13	10'	469.39	3.00%	3.00%	BRICK MANHOLE STD. G 5.01
15	N/A	N/A	397.50	10.00%	N/A	BRICK MANHOLE STD. G 5.01
16	N/A	N/A	417.80	10.00%	N/A	BRICK MANHOLE STD. G 5.01
17	N/A	N/A	414.50	10.00%	N/A	BRICK MANHOLE STD. G 5.01

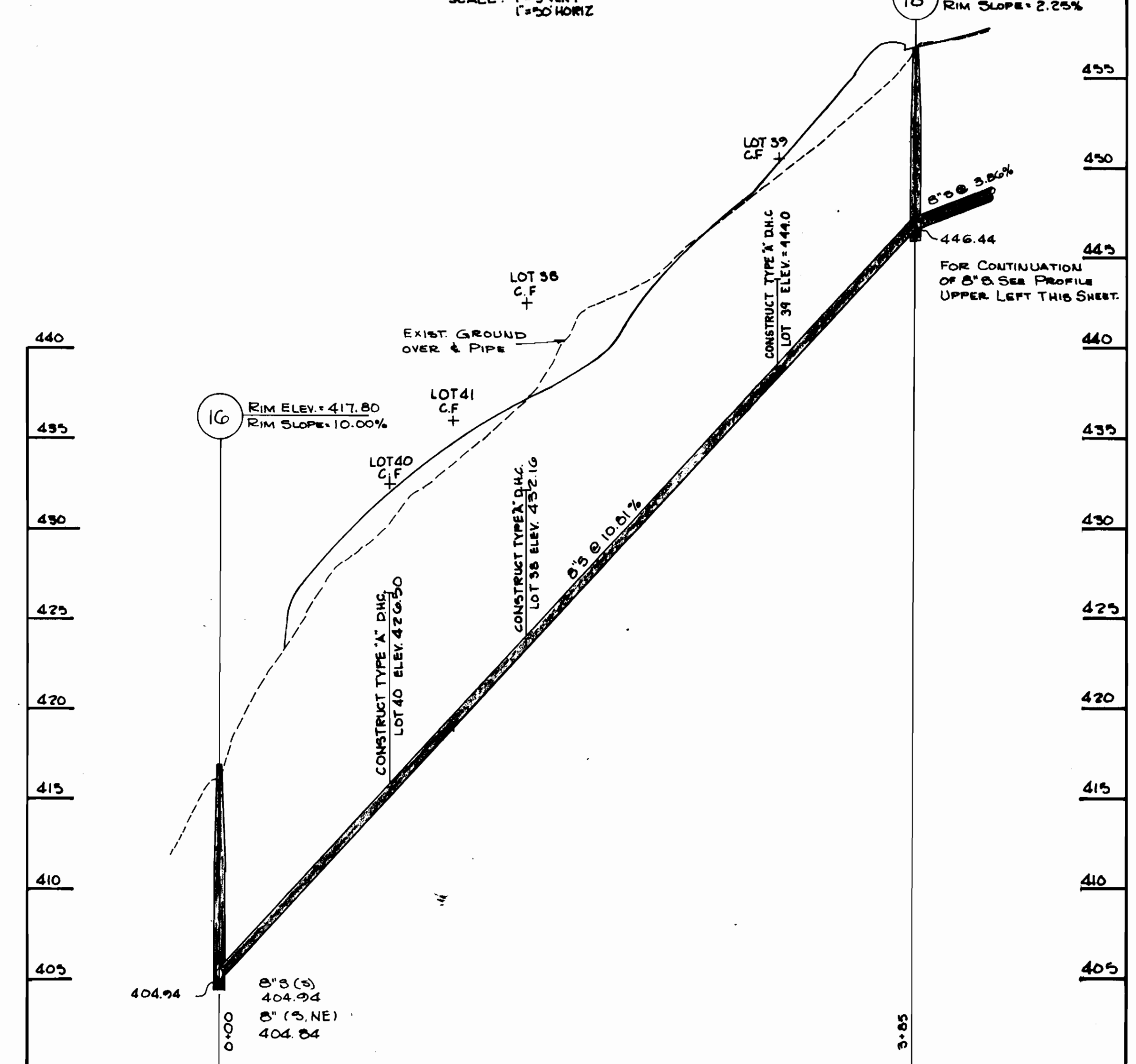
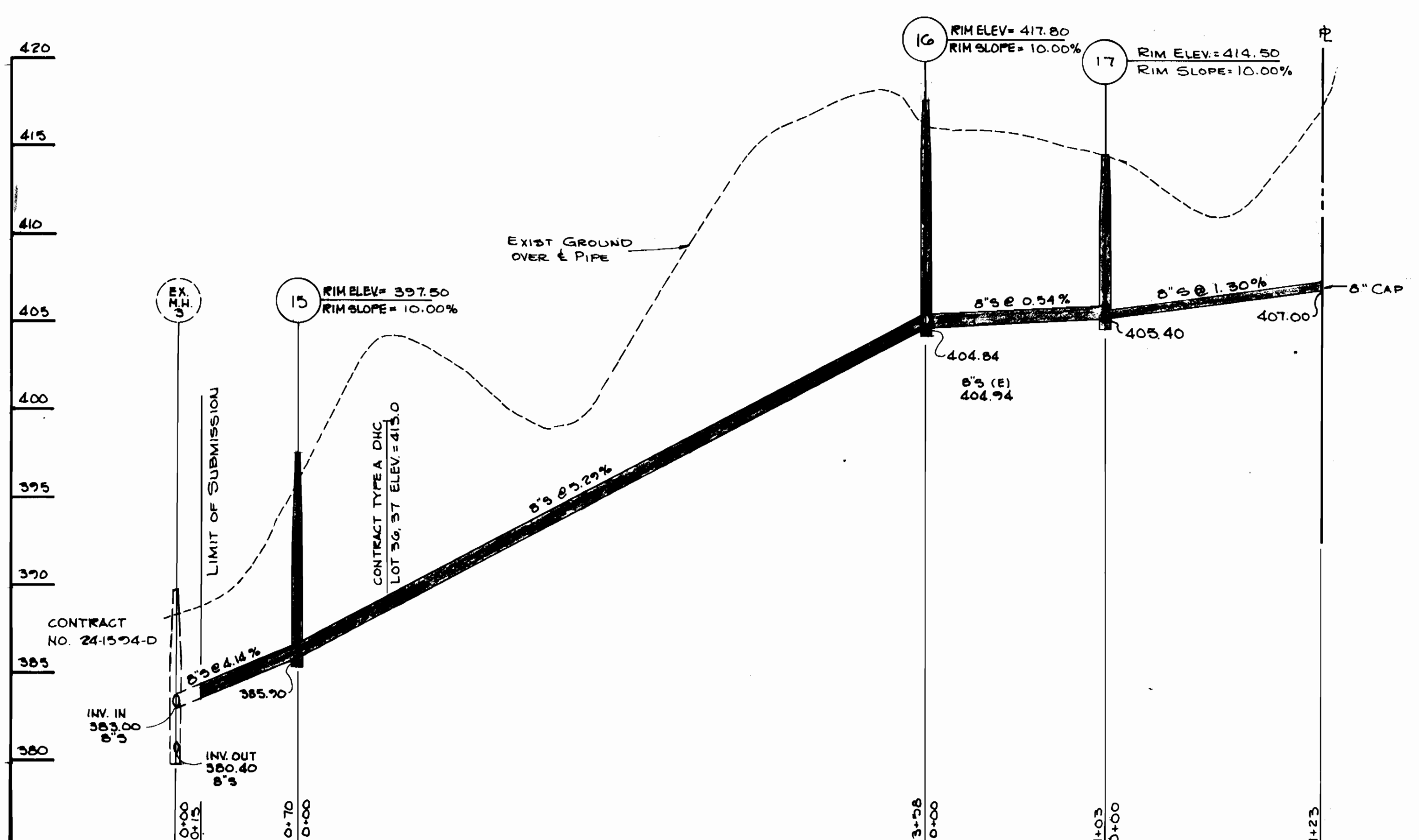
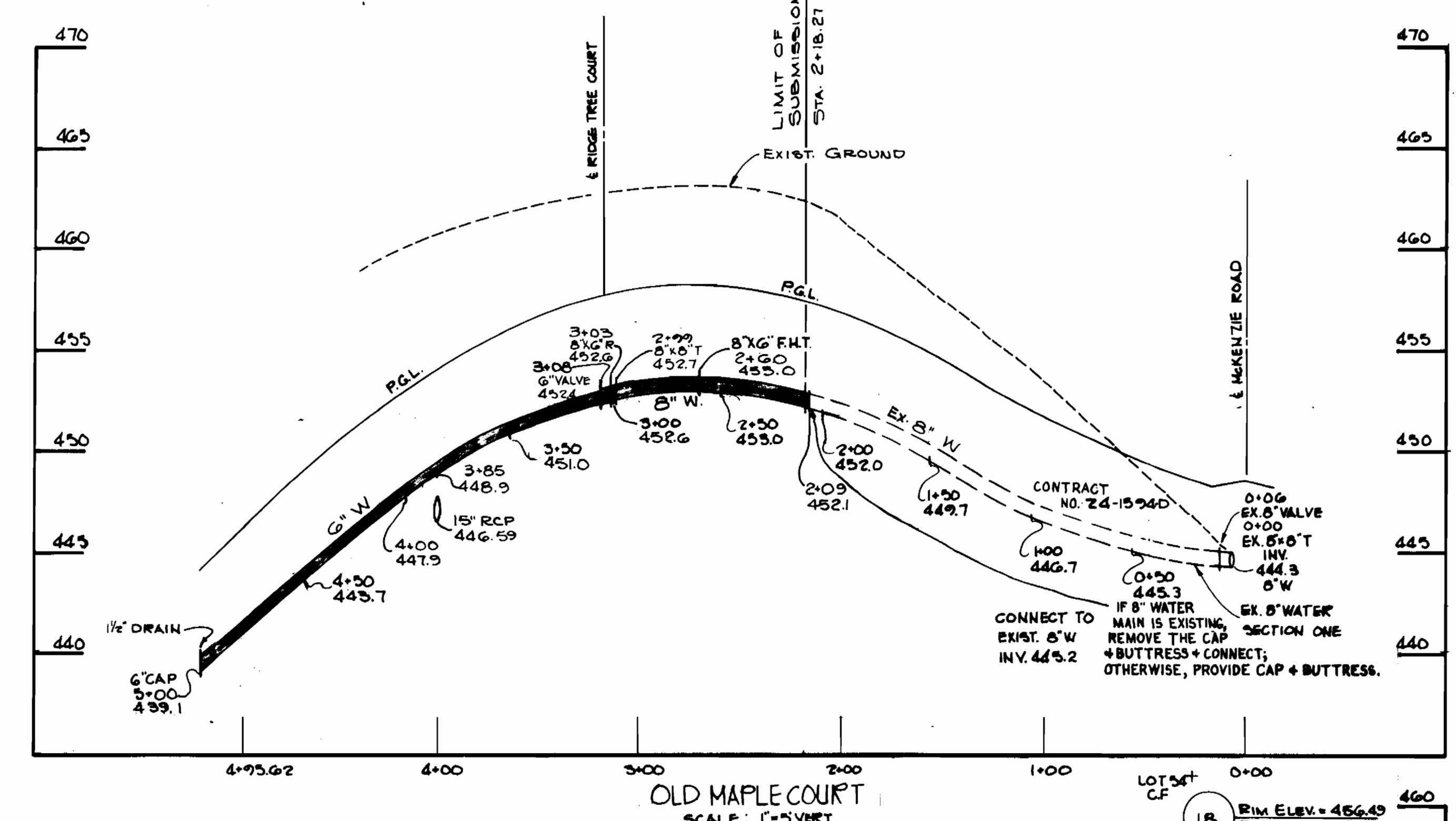
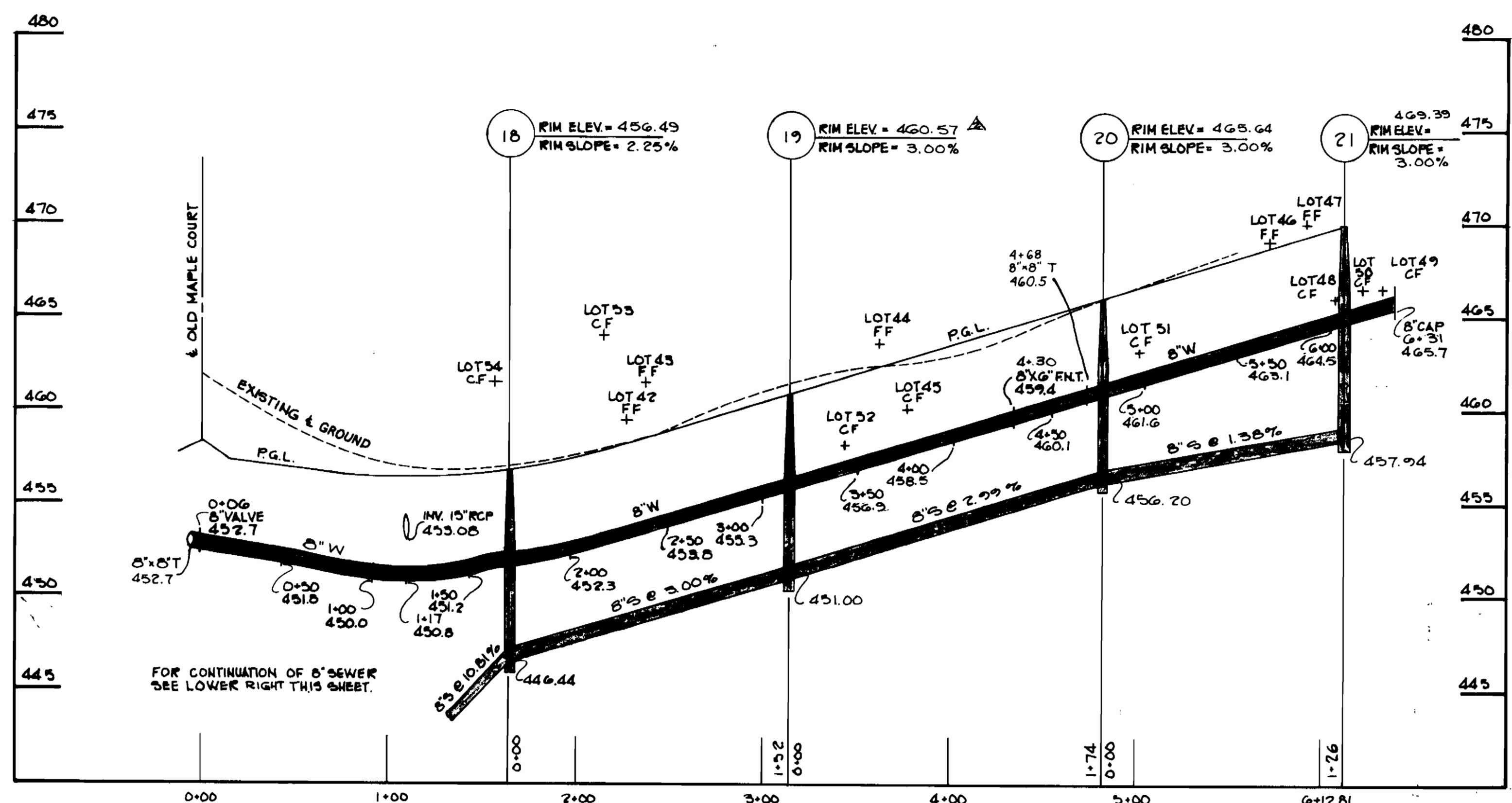
SEWER HOUSE CONNECTION INVERT @ PROPERTY LINE

STATION	LOT	ELEV.	STATION	LOT	ELEV.
MH.#15 to MH.#16			MH.#18	54	447.34
0+51	36, 37	414.75	MH.#19 to MH.#20		
MH.#16 to MH.#18			0+32	52	452.56
0+95	40	427.50	0+55	44, 45	454.44
1+25	41	419.09	MH.#20 to MH.#21		
1+71	38	434.30	0+17	51	457.22
3+05	39	444.50	0+64	46	457.69
MH.#18 to MH.#19			MH.#21	47, 48	458.90
0+51	53	446.47	MH.#21	49, 50	459.04
0+73	42, 43	448.83			

SECTION ONE PLAN
1" = 50'

CONTRACT NO. 24-1628-D

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works Chief, Bureau of Utilities	JOHN E. HARMS JR. AND ASSOCIATES INC. CONSULTING ENGINEERS - ARCHITECTS - SURVEYORS 9030 RED BRANCH ROAD SUITE 100 COLUMBIA, MARYLAND 21045 TELEPHONE (301) 740-5200		DES. JMM/JAB		PLAN OF WATER AND SEWER MAINS MCKENZIE'S DISCOVERY SECTION TWO TAX MAP NO. 17 PARCELS 4, 172 & 360 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE 1" = 50'
			DRN. J.M.M.			SHEET 2 OF 3
DATE: JAN, 1987			Y.P. <input checked="" type="checkbox"/> RELOCATED AS-BUILT WHC FOR LOT NO. 49 3/13/89 W.H.N. <input checked="" type="checkbox"/> REVISED PER HOWARD CO. COMMENTS 2/9/87 J.M.M. <input checked="" type="checkbox"/> REVISED PER HOWARD CO. COMMENTS 3/9/87	600' SCALE MAP NO. 17 BLOCK NO. 2	1-13-89 F-87-113 04-86-002D	



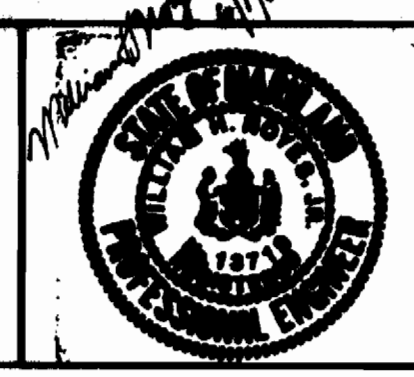
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director: *[Signature]* 6-16-87
DATE

Chief, Bureau of Engineering: *[Signature]* 6-12-87
DATE

Chief, Land Development Division: *[Signature]*
DATE

JOHN E. HARMS JR.
AND ASSOCIATES INC.
CONSULTING ENGINEERS - ARCHITECTS - SURVEYORS
9030 RED BRANCH ROAD SUITE 100
COLUMBIA, MARYLAND 21045
TELEPHONE (301) 740-5200



DESIGNER	J.M.M.	DATE	JAN 1987
DRN. POA			
CHK. W.H.N.			
REVISION	REVISED PER HOWARD CO COMMENTS	DATE	9/87
REVISION	REVISE PER HOWARD COUNTY COMMENTS	DATE	3/6/87

PROFILE OF
WATER AND SEWER MAINS

600' SCALE MAP NO. 17 BLOCK NO. 9

MCKENZIES DISCOVERY
SECTION TWO

TAX MAP NO. 17 PARCELS 4, 172 & 360
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTRACT NO. 24-1628-D

SCALE
H: 1"=50'
V: 1"=5'

SHEET
3 OF 3