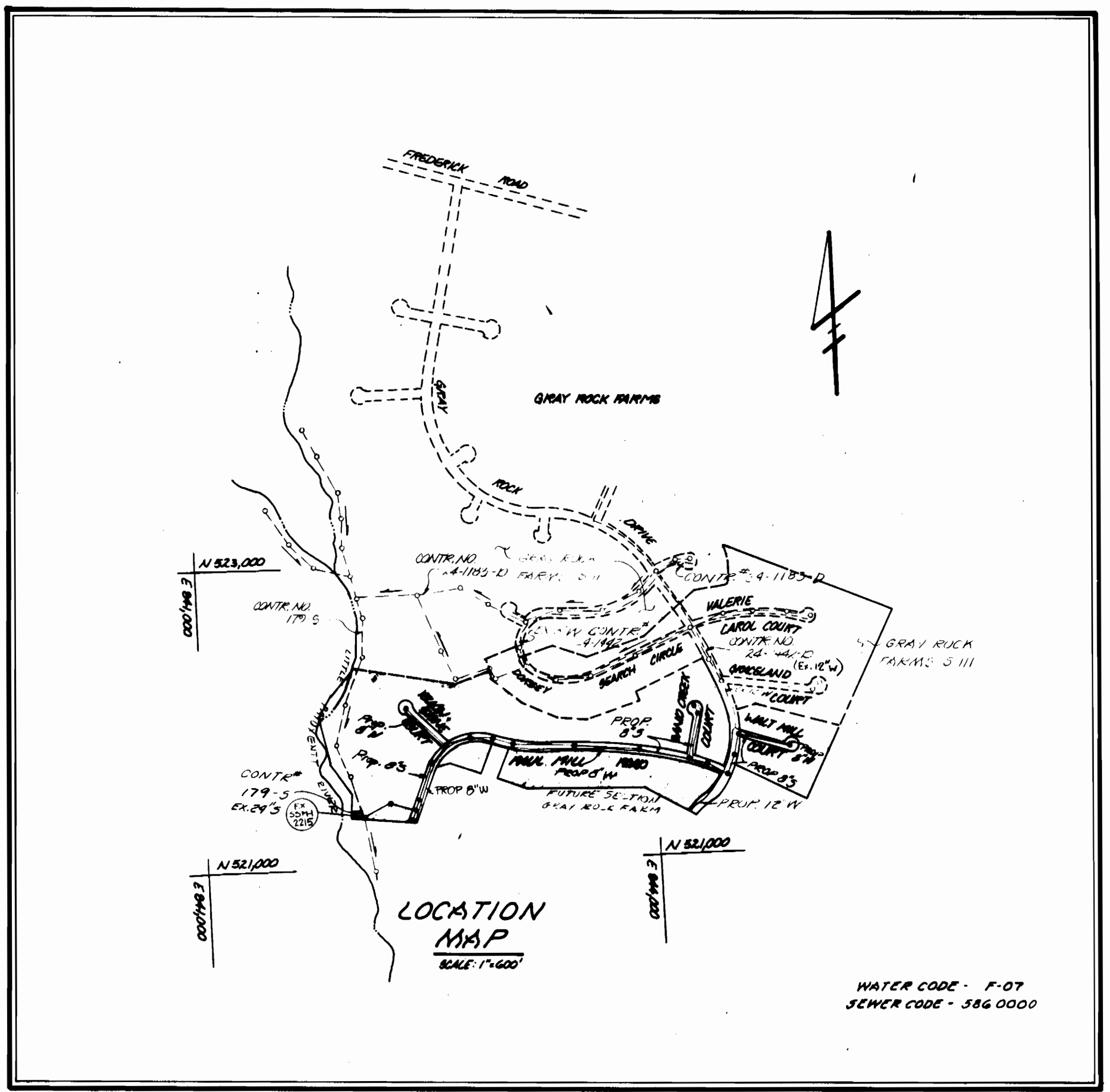


TYPE OF BUILDINGS	RESIDENTIAL
NUMBER OF LOTS	100 (200 OPEN SPACE - 80 LOTS)
NUMBER OF SMC'S	49
NUMBER OF WHC'S	49
DRAINAGE AREA	LITTLE PATUXENT
TREATMENT PLANT	PUMPING STATION PATUXENT VIA RT. 196

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 Field run tops by Bomdar Associates, Field Book 92 pg. 69-130 run August '87 & Field Book 96, pg. 15-25 run July '87.
- 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 and 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 Details.
- For material and construction methods use Howard County Standard specifications.
- 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 - 311-3533
Engineering - Damage Control 236-3421
"Miss Utility" 1-555-0100
Chesapeake & Potomac (CAP) Telephone Co. 725-9976
American Telephone & Telegraph - Cable Location Div. 393-3533
Colonial Pipeline Co. 869-795-1300
Bureau of Utilities Howard County - 992-2366
- 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 Inspector payment for such removal shall be included in the unit price bid for excavation and backfill.
- Place regulation "man 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 C.I.P. or D.I.P. unless otherwise noted.
- Top of all water mains to have a minimum of 36" cover unless otherwise noted.
- Valves adjacent to trees shall be strapped to trees.
- 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 backfilled with concrete in accordance with Standard Details Set 1 around the hydrant to be compacted in accordance with Section 10.03, 10.04 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, unless otherwise noted.
- All sewer mains shall be C.S.P.P., V.C.P.P., P.V.C. or A.C.P. class 2400 ^{AS PER UNDER 1" DIA. 2" DIA. 3" DIA. 4" DIA.}
- 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'.
- ALL DIP FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-155 DUCTILE IRON COMPACT FITTINGS, 8" THROUGH 12" FOR WATER AND OTHER LIQUIDS.

- NOTES:
- FOR WATER & SEWER PLAN SEE SHEET 2 & 3 OF T.
 - FOR SANITARY SEWER PROFILES SEE SHEET 4 & 5 OF T.
 - FOR WATER PROFILES SEE SHEET 6 & 7 OF T.



GRAY ROCK FARMS
SECTION - 4
HOWARD COUNTY, MARYLAND
CONTRACT NO.:
24 - 1730 - D

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH ARTICLE NO. 15 OF THE SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLAN F-88-77 DRAWING NO. 677 OF 10, GRADING, SEDIMENT EROSION CONTROL.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
James M. Nelson 2-4-88
U.S. SOIL CONSERVATION SERVICE DATE

THE DEVELOPMENT IS APPROVED SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Stephen J. Fike 2-4-88
SOIL CONSERVATION DISTRICT DATE

ITEM	QUANTITIES	MATERIAL / COMPANY
12" WATER MAIN	755 LF	755 B' ATLANTIC STATES 18" PIPE CO
6" WATER MAIN	2947'	" " " "
12" V.P. CURB	1 EA	Griffin Pipe Products
12" V.P. TEE	1 EA	" " " "
8" V.P. TEE	3 EA	" " " "
8" V.P. TEE	8 EA	" " " "
12" VALVE	2 EA	Mueller Company
8" VALVE	9 EA	" " " "
12" CAP & BUTTRESS	1 EA	Griffin Pipe Products
6" CAP & BUTTRESS	3 EA	" " " "
6" CAP & BUTTRESS	3 EA	" " " "
6" V.P. REDUCER	3 EA	" " " "
6" V.P. REDUCER	2 EA	" " " "
3" BLOWOFF	2 EA	Mueller Company
1/2" BLOWOFF	2 EA	Mueller Co. & Howell Metals
6" V.P. HEDGEMAN	8 EA	Mueller Company
45° BEND	2 EA	Griffin Pipe Products
22 1/2° BEND	5 EA	" " " "
1 1/2" BEND	1 EA	ELIMENATED
3/4" WHC	141 LF	1360 Howell Metals & Mueller Co
1" WHC	103 LF	135 " " " "
8" SEWER MAIN	4074 LF	3975' National Pipe Company
6" SMC	1300 LF	1410' " " " "
MANHOLE	19 EA	19 Atlantic Process Pipe Co.
24" DIA. MANHOLE	1 EA	National Pipe & Supply
ITEM	EST'D	NO. BUILT

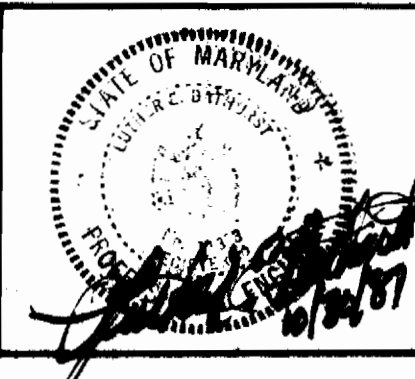
DEPARTMENT OF PUBLIC WORKS

James M. Nelson 2/2/88
DATE

John J. ... 2-2-88
DATE

John J. ... 2-2-88
DATE

BOENDERS ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
3565 ELLICOTT MILLS DR.
ELLICOTT CITY, MARYLAND 21043
(301) 465-7777



DES: LNA			
DRN: JCO			
CNC: L.E.B			
DATE: AUGUST 1987	BY: NO.	REVISION	DATE

TITLE SHEET

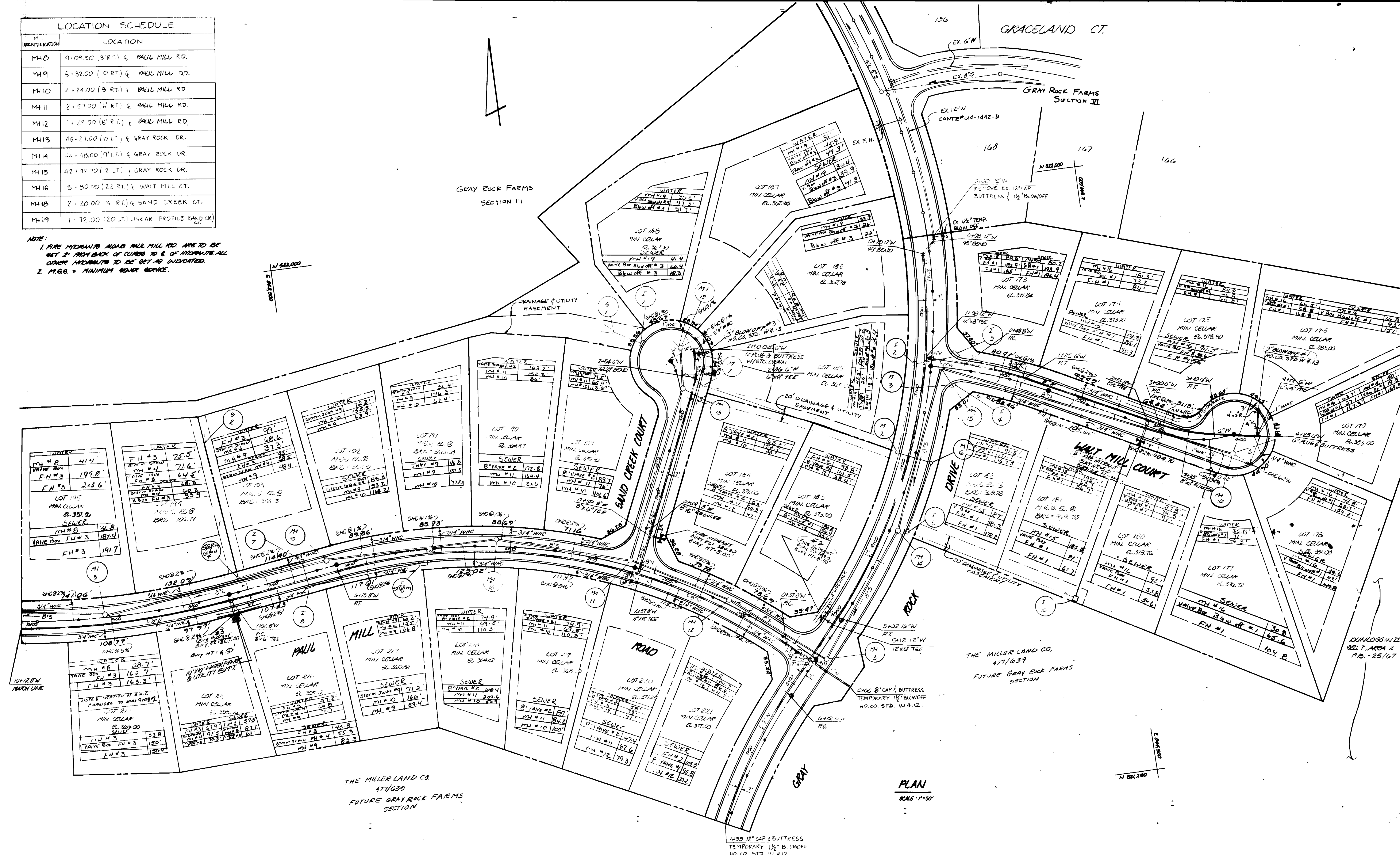
GRAY ROCK FARMS SECTION - 4
2ND ELECTION DISTRICT
CONTRACT NO. 24-1730-D

SCALE AS SHOWN

SHEET 1 of 7

M-I IDENTIFICATION	LOCATION
MH8	9+09.50 (3' RT.) & PAUL MILL RD.
MH9	6+32.00 (10' RT.) & PAUL MILL RD.
MH10	4+24.00 (3' RT.) & PAUL MILL RD.
MH11	2+57.00 (6' RT.) & PAUL MILL RD.
MH12	1+29.00 (6' RT.) & PAUL MILL RD.
MH13	46+27.00 (10' LT.) & GRAY ROCK DR.
MH14	44+48.00 (9' LT.) & GRAY ROCK DR.
MH15	42+42.70 (12' LT.) & GRAY ROCK DR.
MH16	3+80.70 (22' RT.) & WALT MILL CT.
MH18	2+20.00 (3' RT.) & SAND CREEK CT.
MH19	1+72.00 (20' LT.) LINEAR PROFILE (SAND CR.)

NOTE:
 1. FIRE HYDRANTS ADJACENT PAUL MILL RD. ARE TO BE SET 2' FROM BACK OF CURB TO E. OF HYDRANTS. ALL OTHER HYDRANTS TO BE SET AS INDICATED.
 2. M.R.S. = MINIMUM ROUGH SERVICE.



PLAN
 SCALE: 1"=50'

THE MILLER LAND CO.
 477/639
 FUTURE GRAY ROCK FARMS SECTION

THE MILLER LAND CO.
 477/639
 FUTURE GRAY ROCK FARMS SECTION

DEPARTMENT OF PUBLIC WORKS

BOENDER ASSOCIATES, INC.
 ENGINEERS PLANNERS SURVEYORS
 3565 ELLICOTT MILLS DR
 ELLICOTT CITY, MARYLAND 21043
 (301) 465-7777



DES. E.U.A.	RELOCATED FIRE HYDRANT	3-9-88
J.C.D.	CHANGE CELLAR FLEX, LOTS 176 & 177	4-28-88
DRN. J.C.D.		
CHK. L.E.B.		
DATE: AUGUST, 1987	BY NO.	REVISION

WATER & SEWER PLAN

GRAY ROCK FARMS SECTION - 4
 2 ND ELECTION DISTRICT
 CONTRACT NO. 24-1730-D

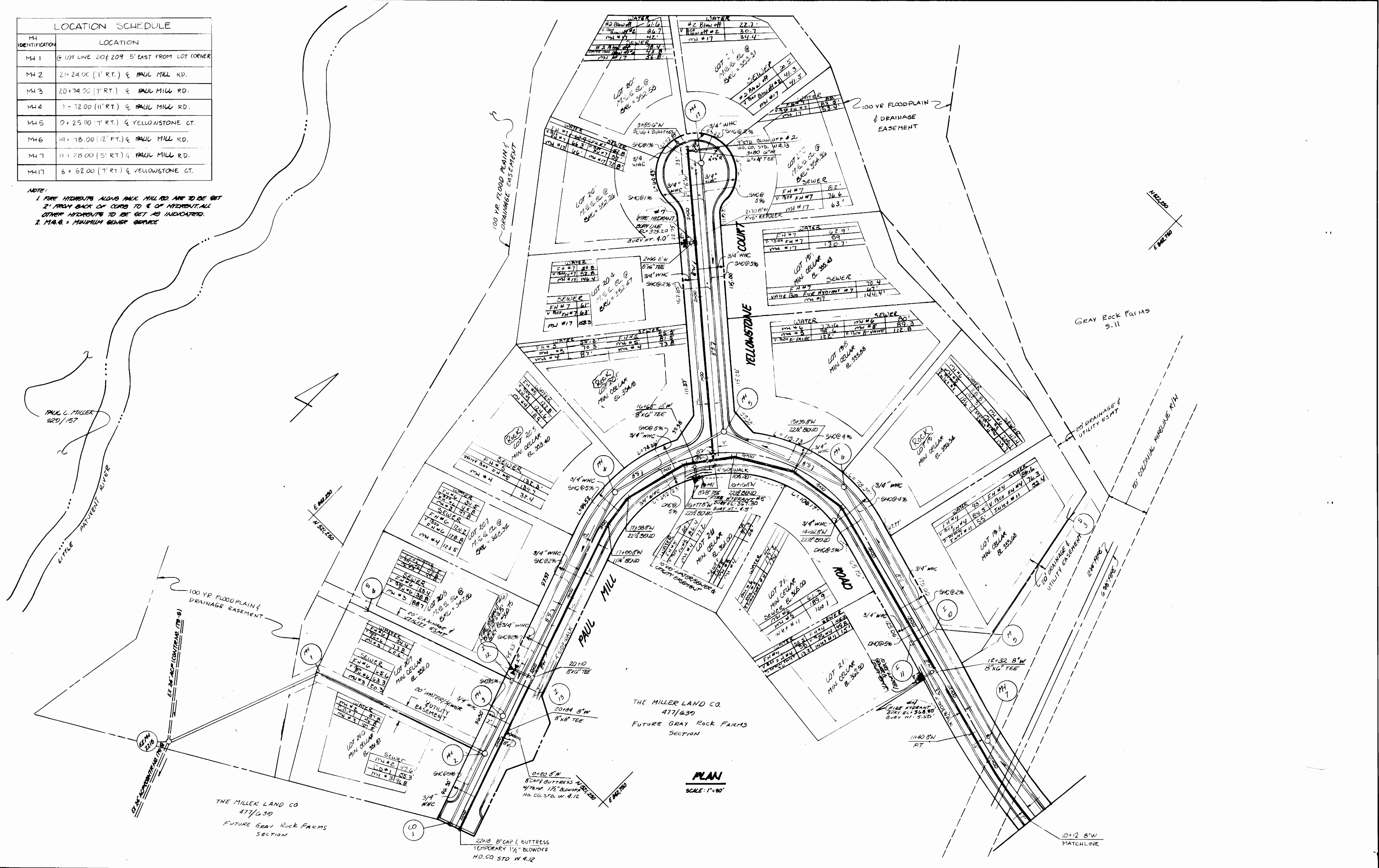
SCALE
 1" = 50'
 SHEET
 2 of 7

DEPARTMENT OF PUBLIC WORKS
 DIRECTOR OF PUBLIC WORKS
 DATE: 2-1-89
 CHIEF, BUREAU OF UTILITIES

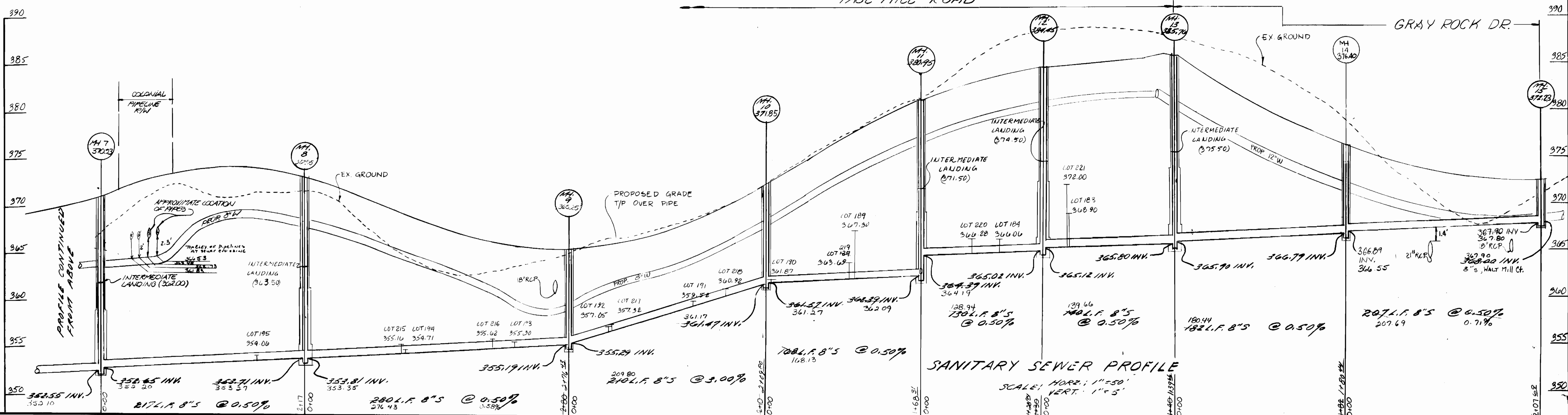
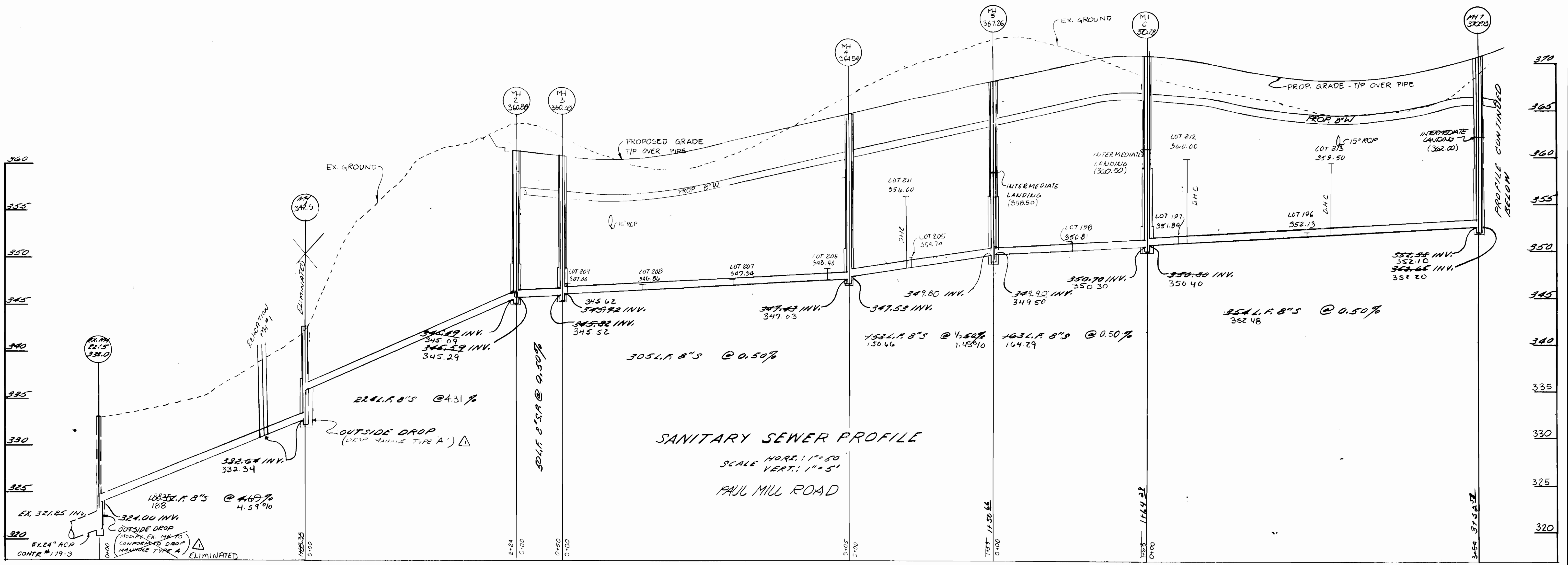
CHIEF, BUREAU OF ENGINEERING
 DATE: 2-2-89
 CHIEF, LAND DEVELOPMENT DIV.

LOCATION SCHEDULE	
M# IDENTIFICATION	LOCATION
M#1	@ LOT LINE 208 & 209 5' EAST FROM LOT CORNER
M#2	21+24.00 (1' RT.) @ PAUL MILL RD.
M#3	20+74.00 (7' RT.) @ PAUL MILL RD.
M#4	7+72.00 (11' RT.) @ PAUL MILL RD.
M#5	0+25.00 (7' RT.) @ YELLOWSTONE CT.
M#6	14+78.00 (12' RT.) @ PAUL MILL RD.
M#7	11+78.00 (5' RT.) @ PAUL MILL RD.
M#17	3+62.00 (7' RT.) @ YELLOWSTONE CT.

NOTE:
 1. FIRE HYDRANTS ALONG PAUL MILL RD. ARE TO BE SET 2' FROM BACK OF CURB TO E. OF HYDRANT. ALL OTHER HYDRANTS TO BE SET AS INDICATED.
 2. M.B.G. = MINIMUM GROUND SERVICE



DEPARTMENT OF PUBLIC WORKS Director of Public Works: <i>[Signature]</i> DATE: 2-1-88 Chief, Bureau of Utilities: <i>[Signature]</i> DATE: 2-1-88		BOENDER ASSOCIATES, INC. ENGINEERS PLANNERS - SURVEYORS 3565 ELLICOTT MILLS DR. ELLICOTT CITY, MARYLAND 21043 (301) 465-7777		DES: E.U.A. DRN: J.C.O. CHK: L.E.B. DATE: AUGUST, 1987		RELOCATED FIRE HYDRANT 2-4-88		GRAY ROCK FARMS SECTION - 4 2ND ELECTION DISTRICT CONTRACT NO. 24-1730-D		SCALE 1" = 80' SHEET 3 OF 7
THE MILLER LAND CO. 477/639 FUTURE GRAY ROCK FARMS SECTION		THE MILLER LAND CO. 477/639 FUTURE GRAY ROCK FARMS SECTION		PLAN SCALE: 1" = 80'		WATER & SEWER PLAN		AS-BUILT 8-15-88 81037		



DEPARTMENT OF PUBLIC WORKS

DATE: 2-1-88
 DATE: 2-2-88
 DATE: 2-1-88
 DATE: 2-2-88

BOENDER ASSOCIATES, INC.
 ENGINEERS PLANNERS SURVEYORS
 3565 ELLICOTT MILLS DR
 ELLICOTT CITY, MARYLAND 21043
 (301) 465-7777

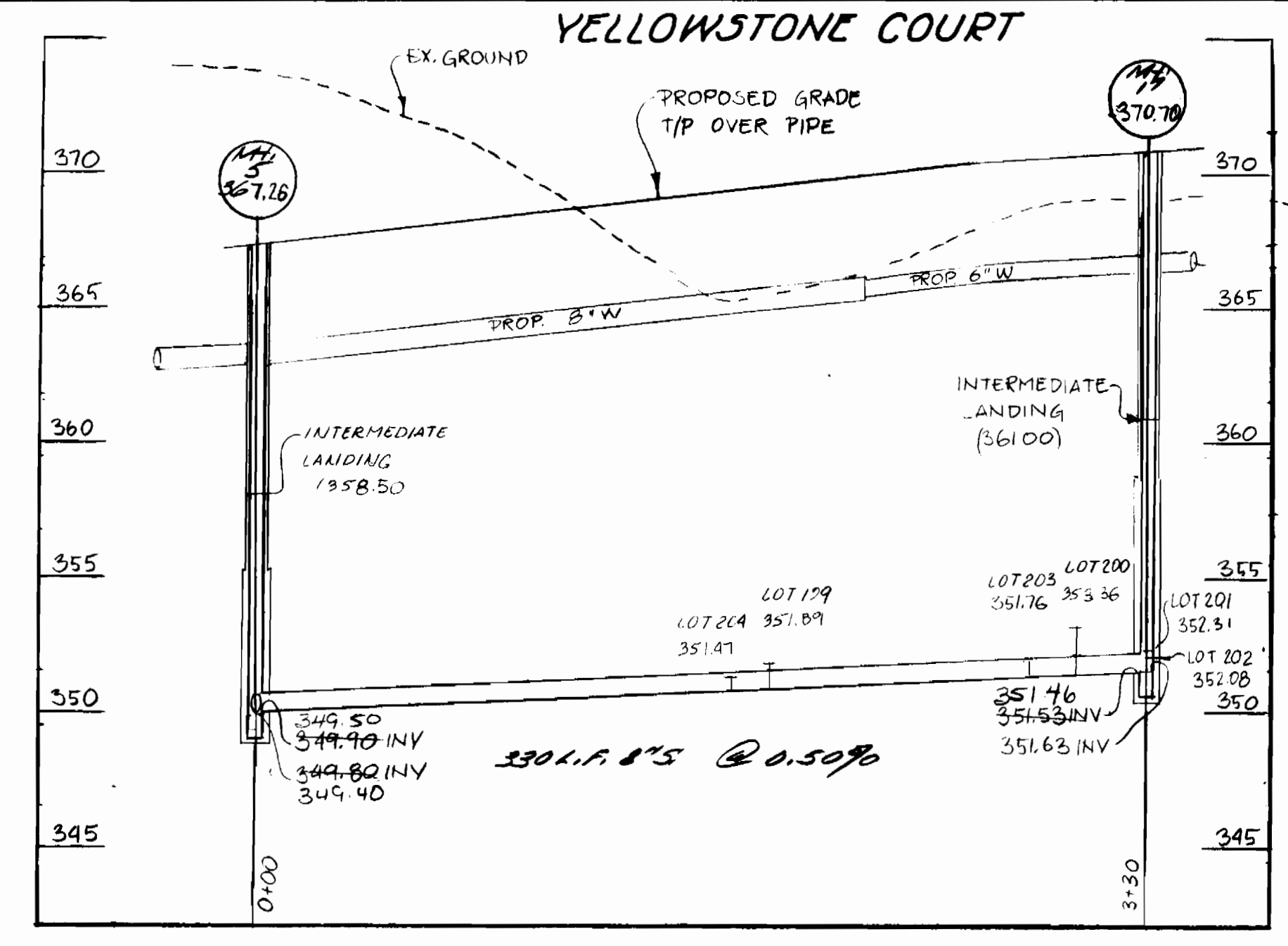
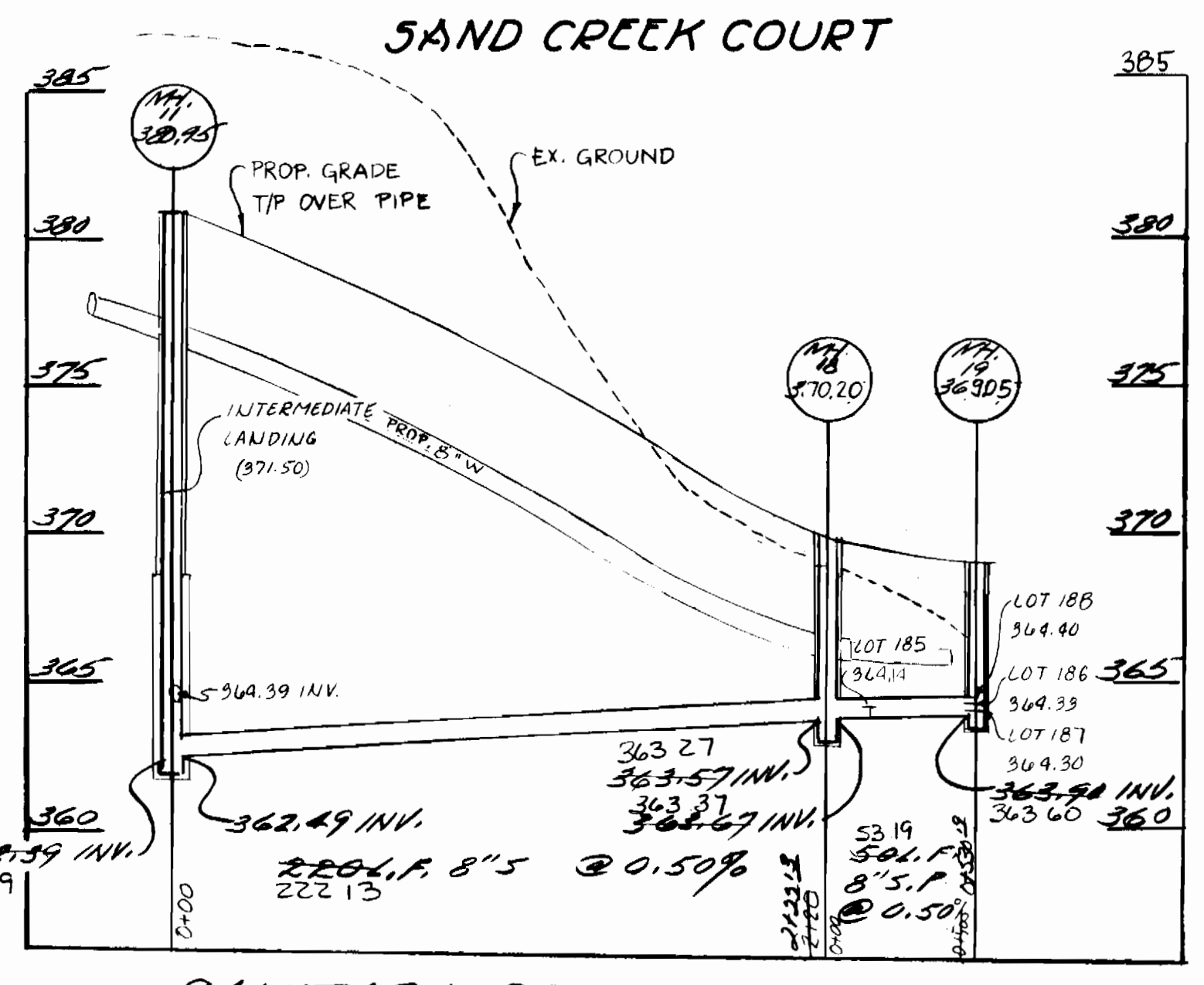
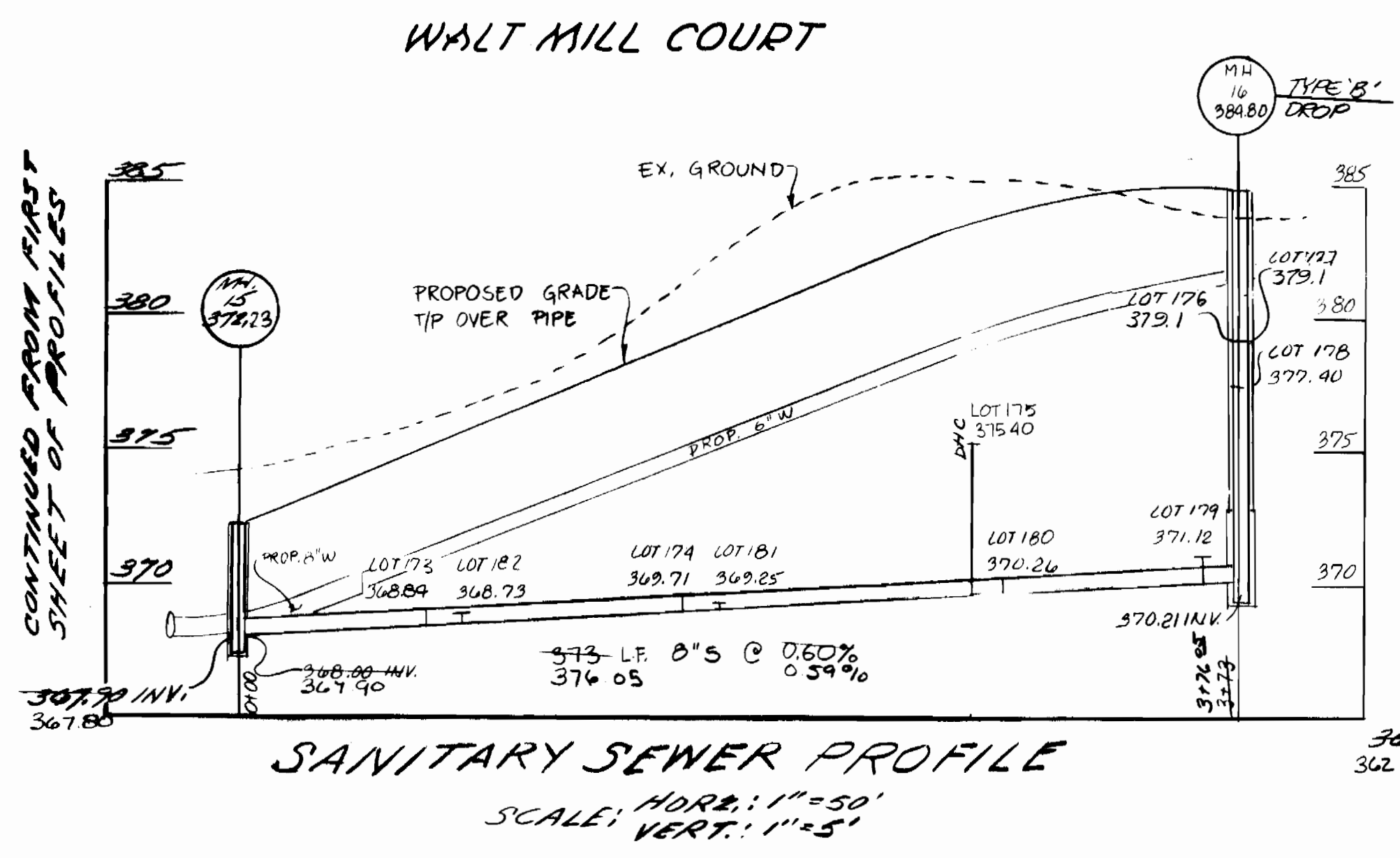
DES: E.V.A.			
DRN: BWS			
CHK: L.E.B.	JCO	PIPE SLOPE @ MH 1 TO MH 2	5/2/88
DATE: Aug. 87	DMW	NOTE MH TYPE #2215 1"	3/29/87
BY: NO.		REVISION	DATE

SANITARY SEWER PROFILES

GRAY ROCK FARM SECTION 4
 2ND. ELECTION DISTRICT
 CONTRACT NO. 24-1730-D

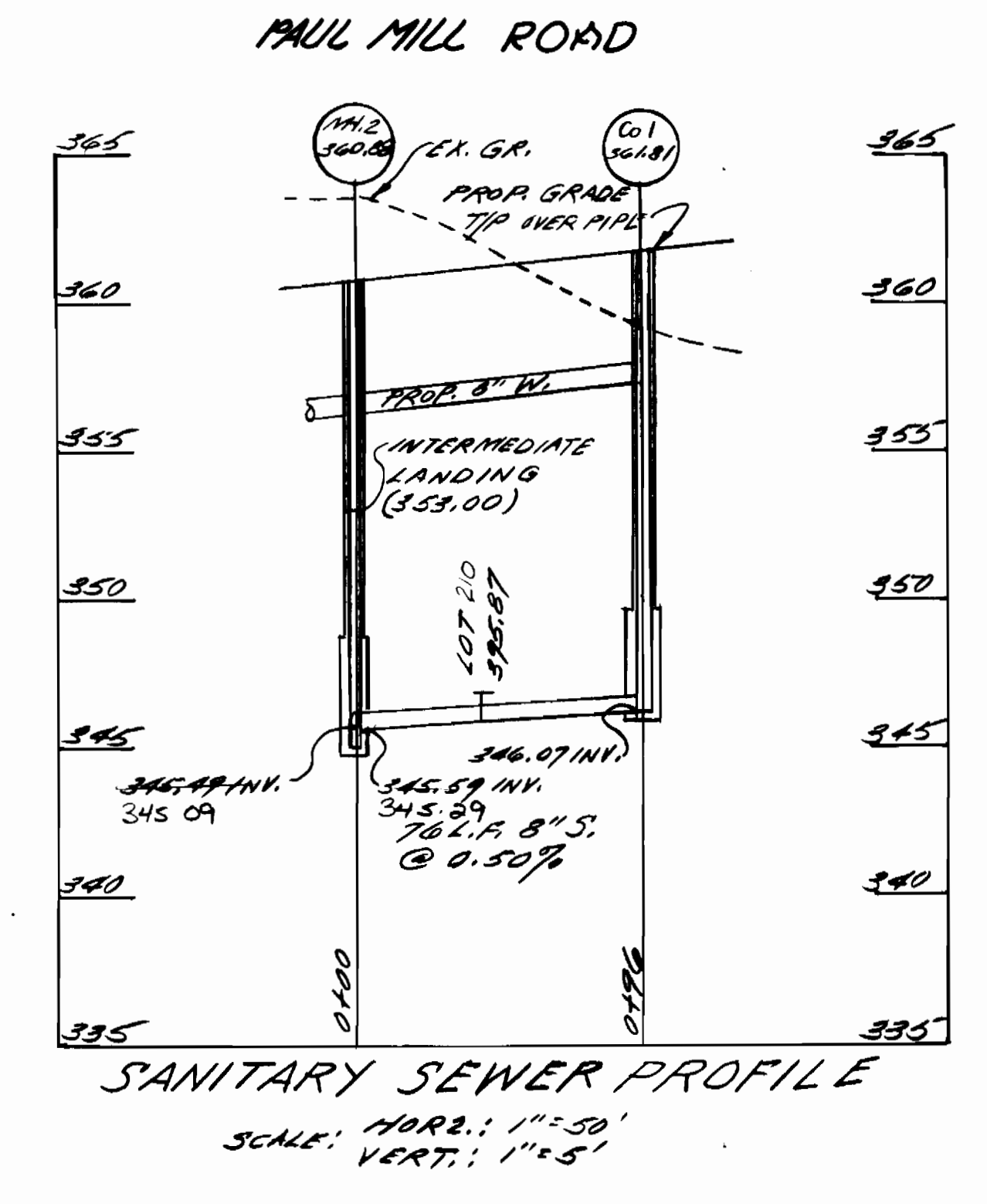
SCALE AS SHOWN

SHEET 4 of 7



LOT #	INV. D.H.C. @ TOP OF DROP	INV. S.H.C. @ SEWER	INV. S.H.C. @ W	MIN. CELLAR EL.	HOWARD CO. STD. DETAIL
173	N/A	368.99	368.84	371.84	S 2.11
174	N/A	369.05	369.71	373.21	S 2.11
175	374.50'	N/A	375.14	378.80	S 2.12
176	376.50'	N/A	379.1	383.00	S 1.32 @ M4
177	377.50'	N/A	379.1	383.00	S 1.32 @ M4
178	376.50'	N/A	379.40	381.00	S 1.32 @ M4
179	N/A	370.23	371.12	370.68	S 2.11
180	N/A	369.76	370.24	373.74	S 2.11
181	N/A	369.05	369.25	372.25	S 2.11
182	N/A	368.56	368.75	371.79	S 2.11
183	368.00'	N/A	368.90	373.90	S 2.12
184	N/A	368.96	369.06	371.06	S 2.11
185	N/A	369.78	369.28	371.28	S 2.11
186	367.00'	N/A	367.31	370.80	S 2.12
187	N/A	368.19	368.49	368.49	S 2.11
188	N/A	361.67	361.87	364.87	S 2.11
189	N/A	360.98	360.98	364.98	S 2.11
190	N/A	359.27	359.58	362.58	S 2.11
191	N/A	359.57	359.81	360.31	S 2.11
192	N/A	356.78	357.52	360.82	S 2.11
193	N/A	354.90	355.62	358.12	S 2.11
194	N/A	355.00	355.80	358.80	S 2.11
195	N/A	354.43	354.71	358.21	S 2.11
196	N/A	354.90	355.16	358.66	S 2.11

LOT #	INV. D.H.C. @ TOP OF DROP	INV. S.H.C. @ SEWER	INV. S.H.C. @ W	MIN. CELLAR EL.	HOWARD CO. STD. DETAIL
184	359.00	N/A	361.00	366.00	S 2.12
185	N/A	359.06	359.26	357.56	S 2.11
186	N/A	369.86	369.26	367.51	S 2.11
187	N/A	369.00	369.33	367.98	S 2.11 @ M4
188	N/A	369.00	369.30	367.95	S 2.11 @ M4
189	N/A	369.00	369.40	367.90	S 2.11 @ M4
190	N/A	350.77	351.47	354.97	S 2.11
191	N/A	350.84	351.89	356.89	S 2.11
192	N/A	351.32	351.76	354.76	S 2.11
193	N/A	351.36	353.36	358.36	S 2.11
194	N/A	351.63	352.31	355.81	S 2.11 @ M4
195	N/A	351.63	352.06	355.06	S 2.11 @ M4
196	356.00	N/A	357.50	362.50	S 2.12
197	N/A	357.73	352.13	355.43	S 2.11
198	N/A	357.04	357.84	356.34	S 2.11
199	358.00	N/A	360.00	365.00	S 2.12
200	N/A	350.31	351.31	353.31	S 2.11
201	N/A	348.99	349.74	352.24	S 2.11
202	354.32	N/A	356.00	361.00	S 2.12
203	N/A	349.90	349.90	353.40	S 2.11
204	N/A	346.50	349.50	350.80	S 2.11
205	N/A	346.42	346.86	350.36	S 2.11
206	N/A	346.00	347.00	352.00	S 2.11
207	N/A	345.87	346.87	352.87	S 2.11



DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF UTILITIES

CHIEF, LAND DEVELOPMENT DIV.

BOENDER ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS

3565 ELLICOTT MILLS DR
ELLICOTT CITY, MARYLAND 21043
(301) 465-7777



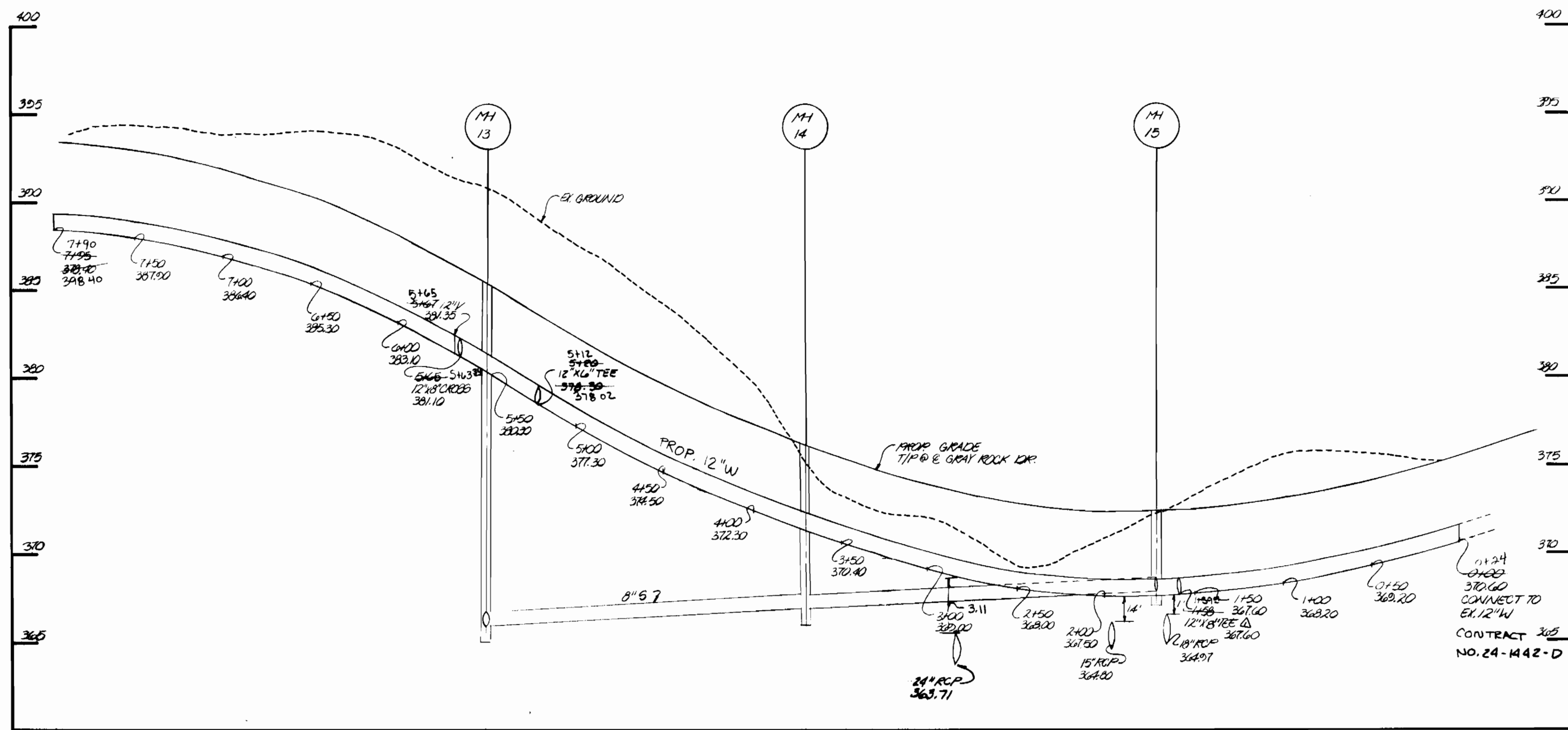
DES: E.U.A.
DRN: BWS
CHK: L.E.B.
DATE: Aug 87

BY: [Signature]
NO. [Blank]
REVISION: CHANGE SAC @ LOTS 176 & 177
DATE: 4-28-88

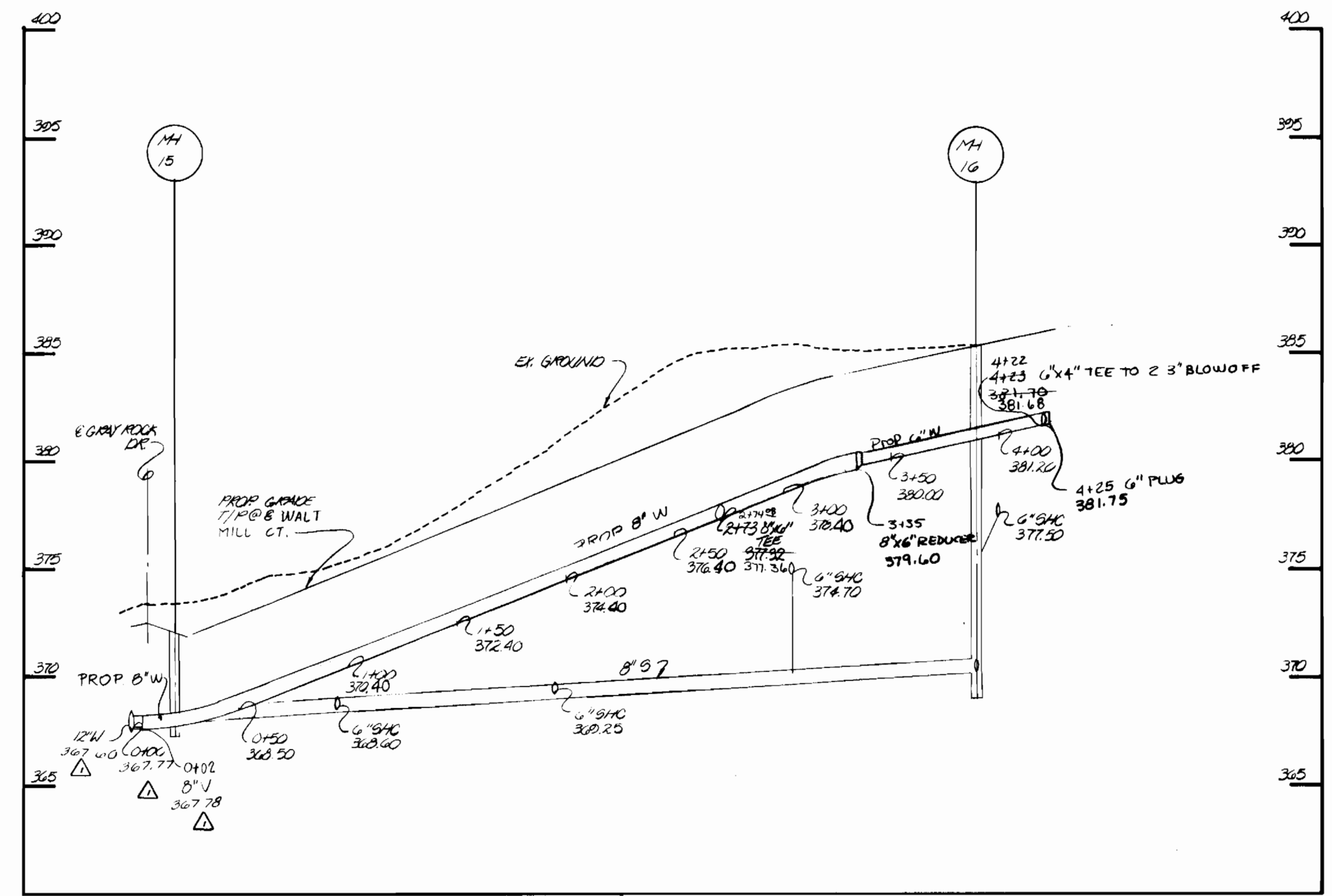
SANITARY SEWER PROFILES

GRAY ROCK FARMS SECTION 4
THELECTION DISTRICT
CONTRACT NO. 24-1730-D

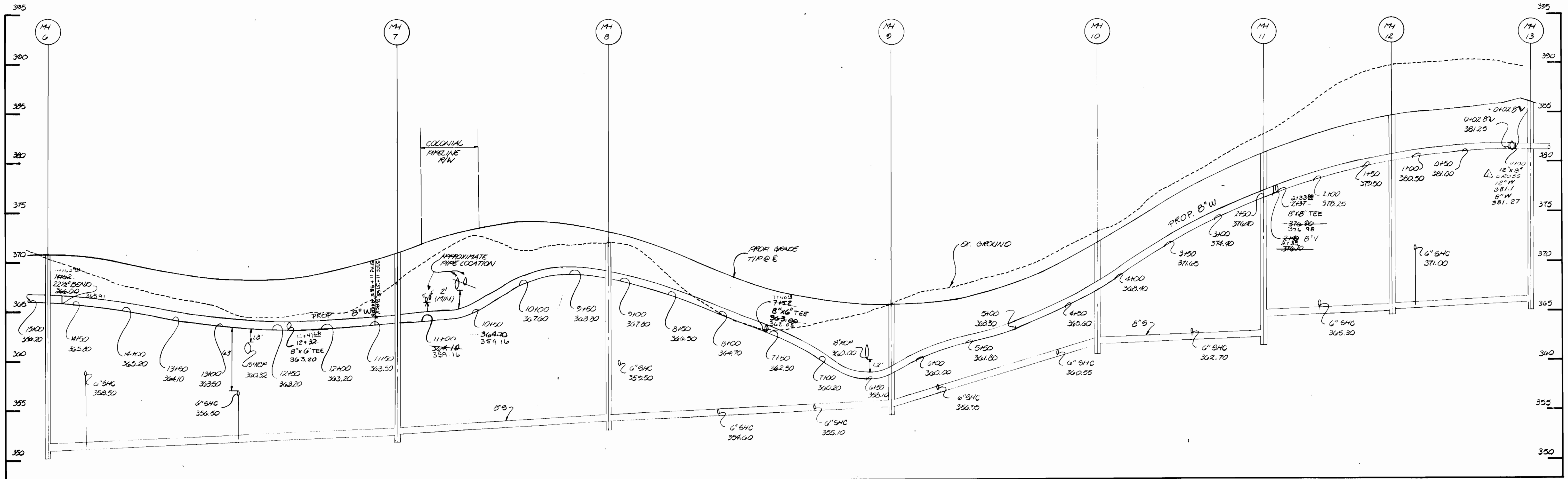
SCALE AS SHOWN
SHEET 5 OF 7



**WATER MAIN PROFILE
GRAY ROCK DRIVE**
SCALE: HOR. 1"=50'
VERT. 1"=5'



**WATER MAIN PROFILE
WALT MILL CT.**
SCALE: HOR. 1"=50'
VERT. 1"=5'



WATER MAIN PROFILE - PAUL MILL ROAD
SCALE: HOR. 1"=50', VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS

Director of Public Works: *[Signature]* DATE: 2/2/88

Chief, Bureau of Engineering: *[Signature]* DATE: 2-2-88

Chief, Bureau of Utilities: *[Signature]* DATE: 2-1-88

Chief, Land Development Div.: *[Signature]* DATE: 2-2-88

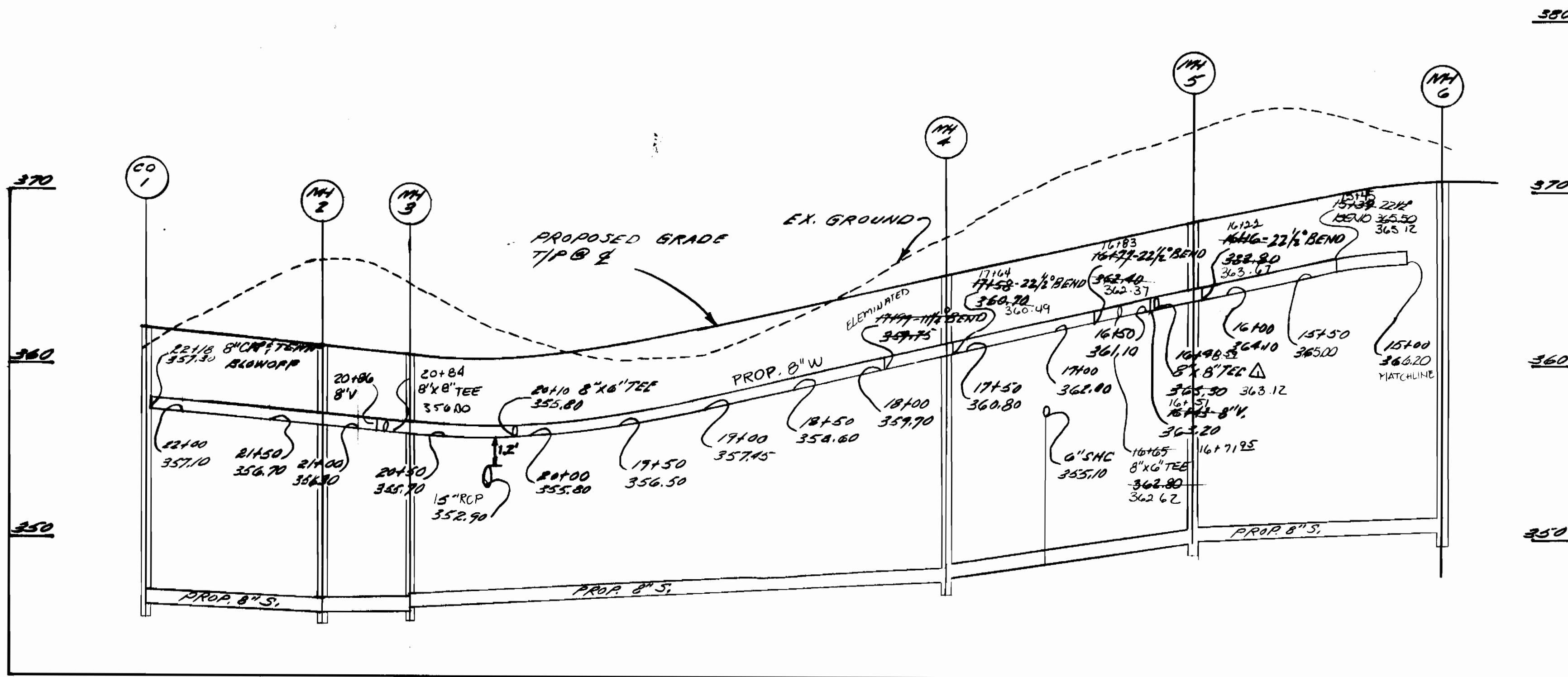
BOENDER ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS
3565 ELLICOTT MILLS DR.
ELLICOTT CITY, MARYLAND 21043
(301) 465-7777



DES: E.U.A.			
DRN: J.C.O.			
CHK: L.S.B.			
DATE: 6/27/87	BY: NO.	REVISION	DATE
		REVISE TEE SIZE, INV. ELEV. & CROSS LOCATION	5/20/88

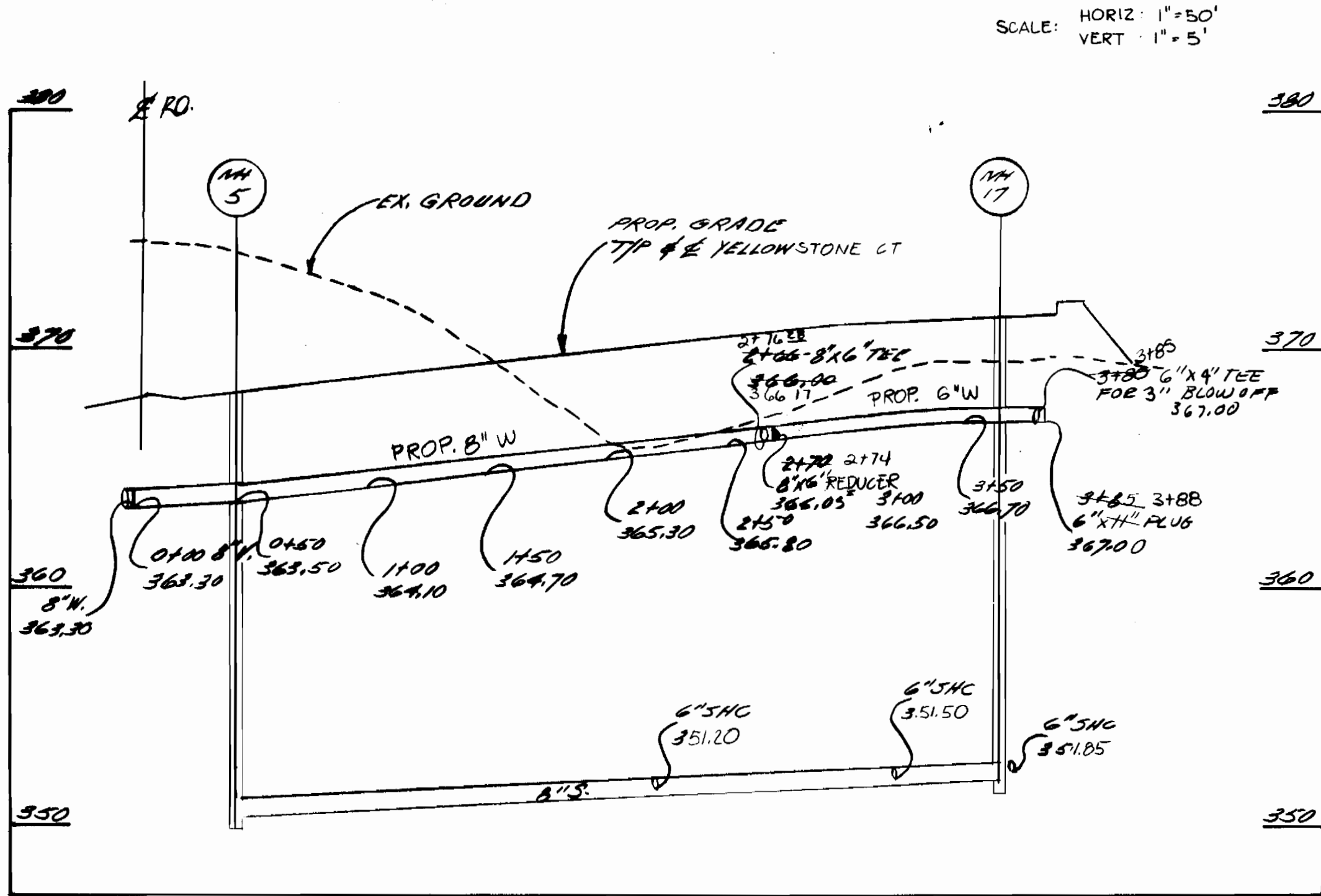
WATER MAIN PROFILES

GRAY ROCK FARMS SECTION - 4
2ND ELECTION DISTRICT
CONTRACT NO. 24-1730-D



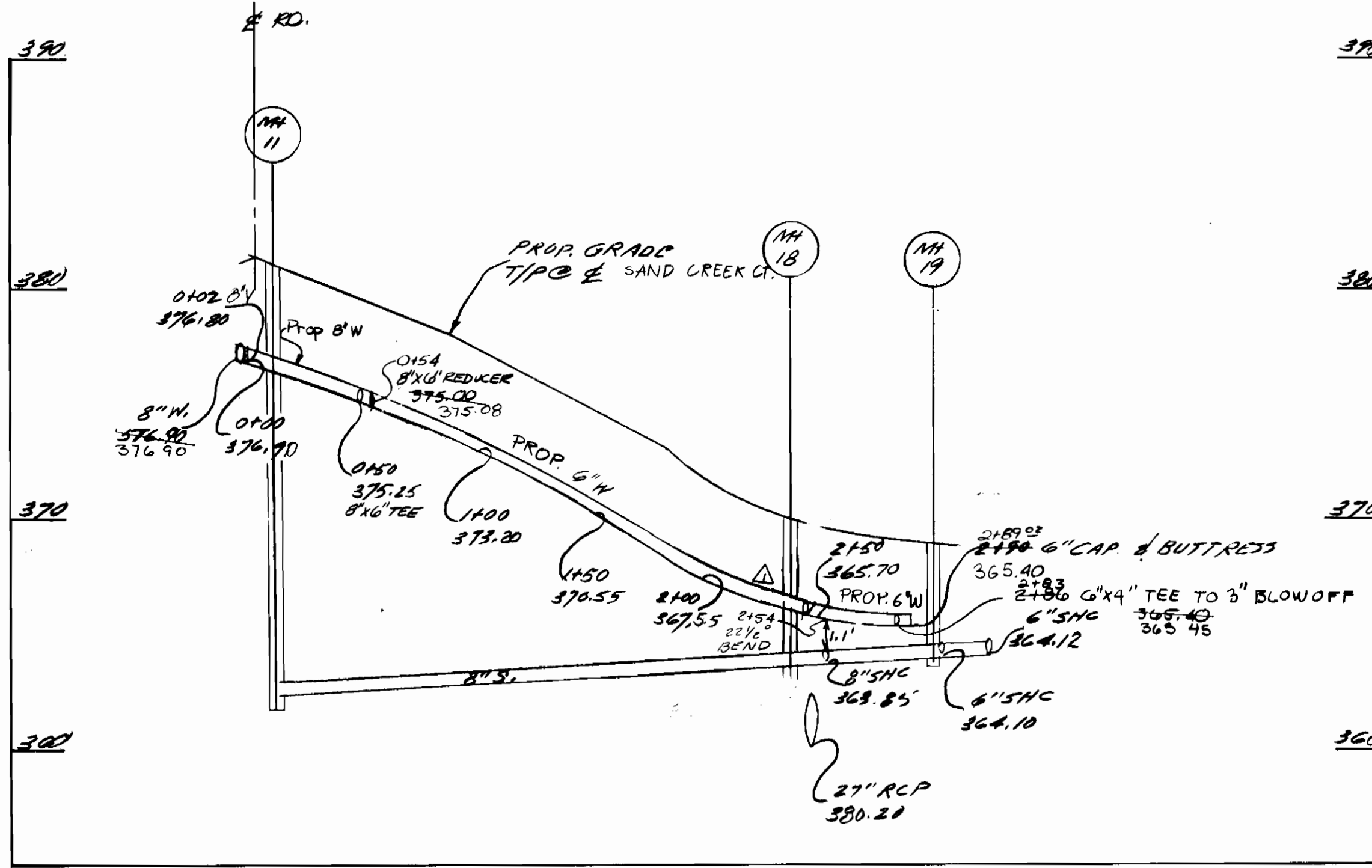
WATER MAIN PROFILE
PAUL MILL ROAD

SCALE: HORIZ: 1"=50'
VERT: 1"=5'



WATER MAIN PROFILE
YELLOWSTONE CT.

SCALE: HORIZ: 1"=50'
VERT: 1"=5'



WATER MAIN PROFILE
SAND CREEK CT.

SCALE: HORIZ: 1"=50'
VERT: 1"=5'

DEPARTMENT OF PUBLIC WORKS

BOENDER ASSOCIATES, INC.
ENGINEERS PLANNERS - SURVEYORS
3565 ELLICOTT MILLS DR.
ELLICOTT CITY, MARYLAND 21043
(301) 465-7777



DES: E.U.A.				
DRN: B.W.B.				
CHK: L.E.B.				
DATE: 09/11/98	D.M.M.	1	REVISE TEE SIZE & NOTE BOND LOCATION	9/12/98
BY: NO.			REVISION	DATE

WATER MAIN PROFILES

2ND ELECTION DISTRICT
CONTRACT NO. 24-1730-D

SCALE
AS SHOWN
SHEET
7 of 7