


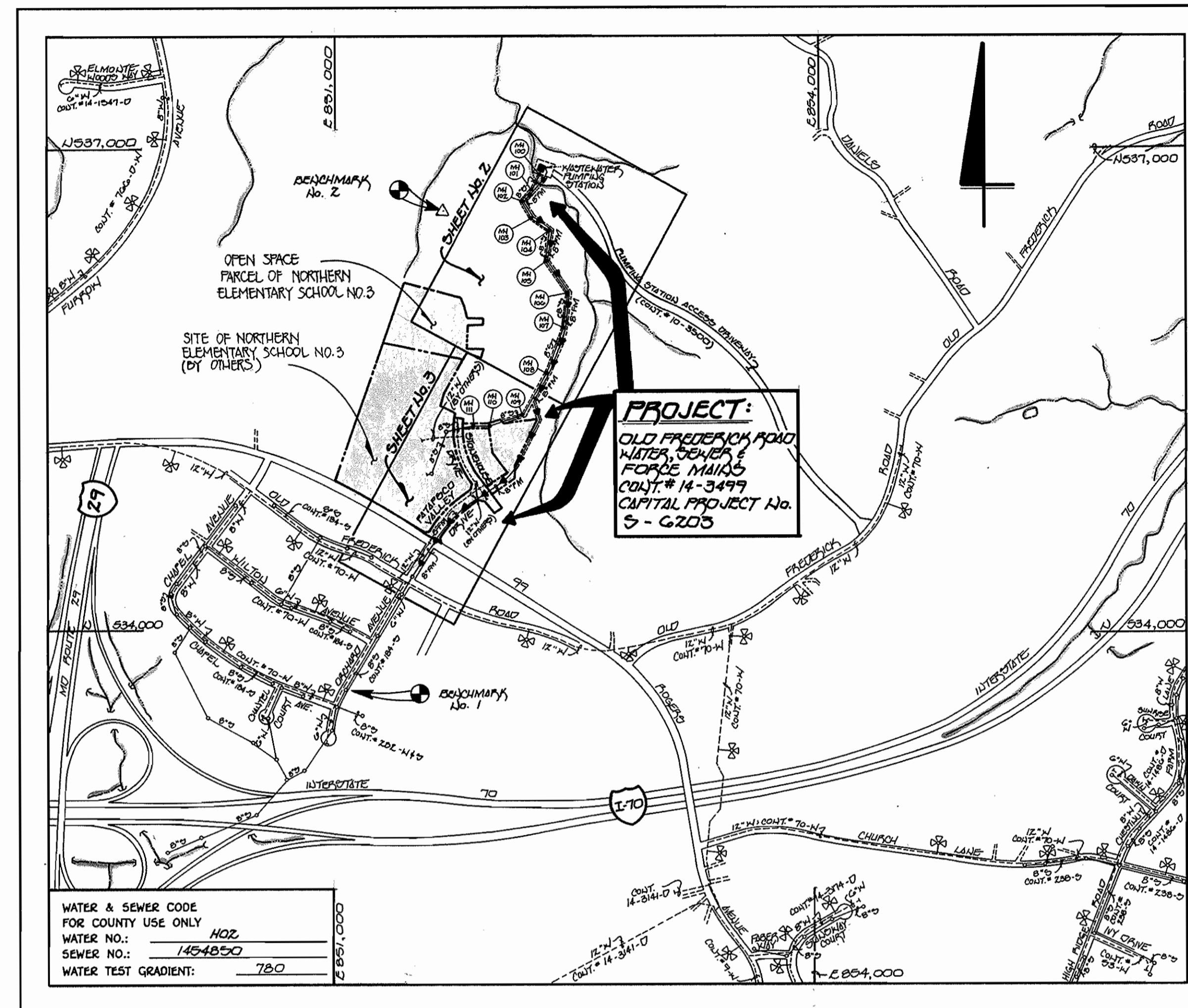
GENERAL NOTES

- 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 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. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (1991 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
- 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- 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 - 950-4620
 BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
 MISS UTILITY - 1-800-257-7777
 COLONIAL PIPELINE CO. - 795-1390

- 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 THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL 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 ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W1.11 AND W2.13). 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 D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, @ (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.

29. THE 2" WATER HOUSE CONNECTION SHALL BE TYPE K COPPER AS SPECIFIED IN SECTION 200.15.07 OF THE STANDARD SPECIFICATIONS AND SHALL BE INSTALLED 3'-6" BELOW FINISH GRADE.



WATER & SEWER CODE FOR COUNTY USE ONLY
 WATER NO.: HOZ
 SEWER NO.: 1454850
 WATER TEST GRADIENT: 780

TYPE OF BUILDING: ELEMENTARY SCHOOL (BY OTHERS)
 NUMBER OF LOTS: 3 (0 BUILDABLE)
 NO. OF WATER HOUSE CONNECTIONS: 0
 NO. OF SEWER HOUSE CONNECTIONS: 0
 DRAINAGE AREA: 281,000
 TREATMENT PLANT: PATAPSCO WHITT, CITY OF BALTIMORE VIA OLD FREDERICK ROAD PUMP STATION

VICINITY MAP

SCALE: 1"=600'

QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		SUPPLIER
		QUANTITIES	TYPE	
8" SENIOR	1300 L.F.	1359.85 L.F.	8" 30A35PVC	J-M MANUFACTURING
8" SENIOR (DIP)	781 L.F.	708 L.F.	CL52 DIP TYTON	ATLANTIC STATES
SENIOR MANHOLES	11 EACH	11 EACH	5'-6" WALL	ATLANTIC STATES
8" SENIOR - RUGS	1 EACH	NONE	NONE	NONE
8" FORCE MAIN	3073 L.F.	3073 L.F.	CL54 DIP	ATLANTIC STATES
8" FM - 1/2 HD	6 EACH	7 EACH	MJ45	GRIFFIN PIPE
8" FM - 1/2 HD	3 EACH	2 EACH	MJ	GRIFFIN PIPE
8" FM - 1/2 HD	1 EACH	1 EACH	MJ	GRIFFIN PIPE
AIR RELEASE MH	3 EACH	3 EACH	PRECAST	ATLANTIC STATES
BLOWOFF MH	3 EACH	3 EACH	PRECAST	ATLANTIC STATES
12" WATER	357 L.F.	357 L.F.	CL52 TYTON	ATLANTIC STATES
12" TAPPING VALVE	1 EACH	1 EACH	MJ	MUELLER
12" TAPPING VALVE	1 EACH	1 EACH	WEDGE TAPP VALVE	MUELLER
1/2" DRAIN ASSEMBLY	1 EACH	1 EACH	H 15000 CORP	MUELLER
12" RUG & BUTTRESS	1 EACH	1 EACH	CIP / MJ	GRIFFIN PIPE
2" WHC	2200 L.F.	2319 L.F.	TYPE K	CAMBRIDGE LEE
24" OVERLAPPING PIPE	162 L.F.	160 L.F.	24" O.D. X 374" WALL	BALTIMORE PIPE

NAME OF UTILITY CONTRACTOR: R.F. KLINE
 SURVEYING & DRAINAGE DIVISION AS-BUILT DATE: 1 MAY 1997

INDEX OF DRAWINGS	
No.	DESCRIPTION
1	TITLE SHEET
2	PLAN: SENIOR & FORCE MAIN / DETAILS
3	PLAN: WATER, SENIOR & FORCE MAIN / DETAILS
4	PROFILES: SENIOR & FORCE MAIN
5	PROFILES: FORCE MAIN
6	PROFILES: WATER & SENIOR MAINS / NOTES

CAPITAL PROJECT NO. S-6203
CONTRACT No. 14-3499
OLD FREDERICK ROAD
WATER, SEWER & FORCE MAINS
HOWARD COUNTY, MARYLAND

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 J. H. Wayfield / JWC 5/3/96
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 John R. Robertson 5/3/96
 HOWARD COUNTY SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AS SHOWN ON THESE PLANS

Michael L. McCann 4/2/96
 SIGNATURE OF DEVELOPER DATE

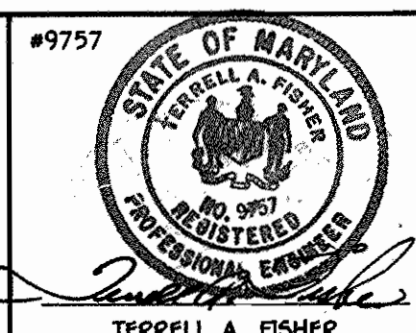
BENCHMARKS

BENCHMARK No. 1 ELEV. = 401.10
 EXISTING MANHOLE RIM No. 1 (CONTRACT # 10-1852-17)
 1) 534.310, 051000 E 551, 495.348000

BENCHMARK No. 2 ELEV. = 407.75
 HUB WITH STRIKE MARKED "TRaverse P.T. No. 120"
 1) 536, 742.360000 E 551, 766.690000

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 4/3/96
 4-15-96
 4-3-1996

Fisher, Collins & Carter, Inc.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK
 10272 Baltimore National Pike
 Ellicott City, Maryland 21042
 (410) 481 - 2855

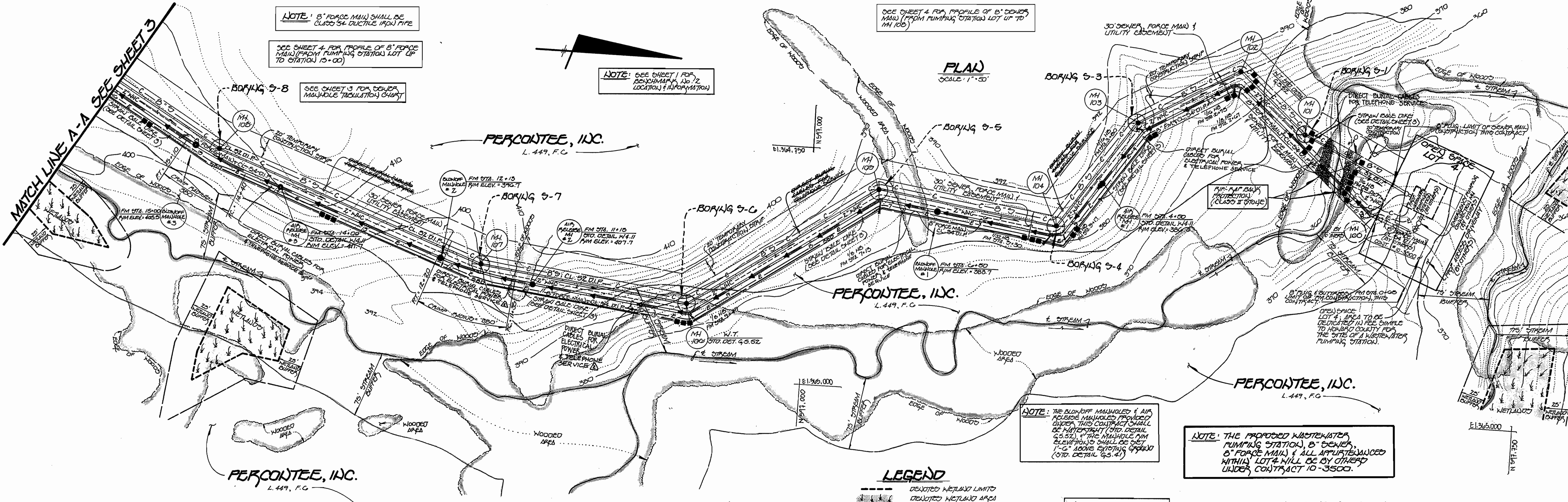


DES: M.J.M.	REJ	ADDENDUM NO. 1 - 22 AUG 96
DRWN: J.M.M.	REJ	AS-BUILT CONDITIONS
CHK: P.W.K.		
DATE: 12/95		
BY NO.		REVISION

TITLE SHEET
 600' SCALE MAP NO. 17 BLOCK NO. 12

OLD FREDERICK ROAD WATER, SEWER & FORCE MAIN
 CAPITAL PROJECT No. S-6203
 CONTRACT NO. 14-3499
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN
 SHEET 1 OF 6

CONTRACT NO. 14-3499
 CAPITAL PROJECT No. S-6203
 OLD FREDERICK ROAD
 WATER, SEWER AND FORCE MAINS
 HOWARD COUNTY, MARYLAND



8-INCH FORCE MAIN TABULATION CHART

APPROXIMATE JOCE	STATION	F.C.C. POINT TO	NORTHING	EASTING
1/16 H.B.	0+77	2520	536, 890.71	852, 373.36
@ BLOWOFF MANHOLE	1+00	2617	536, 833.28	852, 358.39
1/16 H.B.	2+07	2564	536, 695.46	852, 237.68
1/16 H.B.	2+75	2571	536, 651.72	852, 241.20
1/16 H.B.	3+80	2548	536, 595.00	852, 292.48
@ AIR RELEASE MH	4+50	2620	536, 555.47	852, 350.25
1/16 H.B.	5+17	2574	536, 517.68	852, 405.63
1/32 H.B.	5+30	2577	536, 500.95	852, 447.85
@ BLOWOFF MANHOLE	6+50	2621	536, 362.11	852, 371.41
1/16 H.B.	7+13	2543	536, 324.48	852, 383.44
1/16 H.B.	7+49	2542	536, 330.55	852, 017.37
@ AIR RELEASE MH	11+35	2622	536, 705.82	852, 496.90
P.C.	11+35	2545	536, 751.51	852, 495.12
@ BLOWOFF MANHOLE	12+13	2623	536, 856.88	852, 470.68
P.T.	12+20	2647	536, 826.06	852, 474.96
@ AIR RELEASE MH	14+00	2624	536, 698.95	852, 413.21
P.C.	14+40	2537	536, 655.99	852, 377.49
@ BLOWOFF MANHOLE	15+00	2625	536, 601.45	852, 372.95
P.T.	15+10	2541	536, 595.99	852, 367.45
1/16 H.B.	16+75	2534	536, 455.33	852, 288.06
1/16 H.B.	17+70	2532	536, 342.67	852, 328.62
P.C.	20+88	2529	536, 084.71	852, 195.53
P.T.	22+85	2531	534, 741.30	852, 066.41
P.C.	24+98	2597	534, 822.45	851, 885.44
P.T.	28+08	2395	534, 695.42	851, 671.21
@ END OF 24" CASING PIPE	28+50	2626	534, 557.57	851, 649.30
@ END OF 24" CASING PIPE	29+32	2627	534, 487.63	851, 606.52
P.C.	30+32	2610	534, 407.00	851, 556.00
P.F.C.	30+88	2611	534, 360.96	851, 524.18
@ EX. MH #1	31+40	2618	534, 318.55	851, 474.58

FORCE MAIN SURFACE RESTORATION SCHEDULE

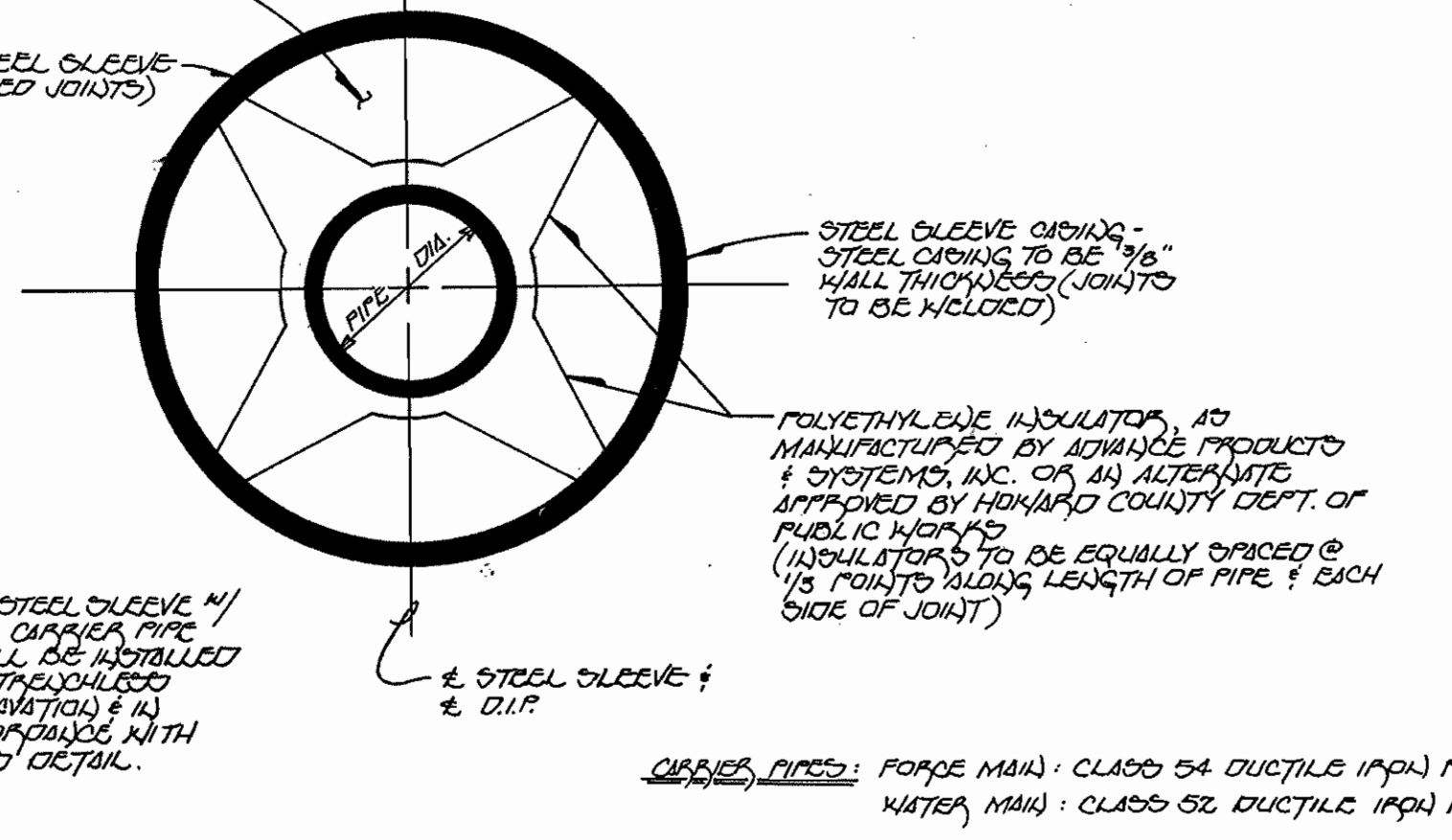
STATION TO STATION	TYPE
0+00 TO 0+63	PUMPING STATION LOT 1 (BY OTHERS) CONT. TO 3500
0+63 TO 1+10	SEED & MULCH (EX. GROUND)
1+10 TO 1+45	PIP-RAP (STREAM X-ING)
1+45 TO 23+52	SEED & MULCH (EX. GROUND)
23+52 TO 23+71	SEED & MULCH
23+71 TO 28+50	SEED & MULCH
28+50 TO 29+32	LIMIT OF TRENCHLESS EXCAVATION IN MARYLAND ROUTE 99
29+32 TO 30+65	SEED & MULCH (EX. GROUND)
30+65 TO 31+40	PAVING

SEWER MAIL SURFACE RESTORATION SCHEDULE

MH TO MH	STATION TO STATION	TYPE
100 TO 101	0+00 TO 0+17	PUMPING STATION LOT 1 (BY OTHERS) CONT. TO 3500
	0+17 TO 0+75	SEED & MULCH (EX. GROUND)
	0+75 TO 0+95	PIP-RAP (STREAM X-ING)
	0+95 TO 1+23	SEED & MULCH (EX. GROUND)
101 TO 102	0+00 TO 0+95	SEED & MULCH (EX. GROUND)
102 TO 103	0+00 TO 1+21	SEED & MULCH (EX. GROUND)
103 TO 104	0+00 TO 1+38	SEED & MULCH (EX. GROUND)
104 TO 105	0+00 TO 1+90	SEED & MULCH (EX. GROUND)
105 TO 106	0+00 TO 2+35	SEED & MULCH (EX. GROUND)
106 TO 107	0+00 TO 2+20	SEED & MULCH (EX. GROUND)
107 TO 108	0+00 TO 3+00	SEED & MULCH (EX. GROUND)
108 TO 109	0+00 TO 3+06	SEED & MULCH (EX. GROUND)
109 TO 110	0+00 TO 2+23	SEED & MULCH (EX. GROUND)
	0+00 TO 0+30	SEED & MULCH (EX. GROUND)
110 TO 111	0+30 TO 0+82	SEED & MULCH
	0+00 TO 0+23	SEED & MULCH
	0+23 TO 1+23	SEED & MULCH
	1+23 TO 1+32	SEED & MULCH

WATER MAIN SURFACE RESTORATION SCHEDULE

STATION TO STATION	TYPE
0+00 TO 0+25	PAVING
0+25 TO 2+10	SEED & MULCH (EX. GROUND)
2+10 TO 2+65	PAVING
2+65 TO 3+45	LIMITS OF TRENCHLESS EXCAVATION IN MARYLAND ROUTE 99
3+45 TO 3+57	SEED & MULCH



LEGEND

- DELETED WETLAND LIMITS
- DELETED WETLAND AREAS
- DELETED EXISTING CONTOURS

NOTE: FORCE MAIN SURFACE RESTORATION SCHEDULE: BETWEEN FORCE MAIN STATIONS 23+60 AND 28+50, DELETE "SEED AND MULCH". REPLACE WITH THE FOLLOWING:

STATION (+/-)	TO STATION (+/-)	TYPE
23+60	23+65	SIDEWALK
23+65	23+69	SOD
23+69	23+71	CONCRETE CURB & GUTTER
23+71	28+50	PAVING (SECTION P-3, STANDARD DETAIL R-2.01)

NOTE: ANNUAL SPICE - AT EACH END OF EXISTING SEAL W/C CEMENT GROUT

NOTE: THE PROPOSED WASTEWATER PUMPING STATION, 8" SEWER & FORCE MAIN & ALL APPURTENANCES WITHIN LOT 4 WILL BE BY OTHERS UNDER CONTRACT 10-3500.

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THE PLAN OF DEVELOPMENT & PLAN FOR EROSION & SEDIMENT CONTROL & THAT ALL PROFESSIONAL PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A COURSEWORK OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION & SEDIMENT BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OF THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Michael J. McCann FOR PERCONTEE, INC. 4/2/96
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION & SEDIMENT CONTROL, RESTORATION & MAINTENANCE IS A WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS & THAT IT HAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Paul W. Keel, Jr. 04/02/96
SIGNATURE OF ENGINEER DATE

NOTE: THE LENGTH OF OPEN SEWER & FORCE MAIN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR TO THAT WHICH WILL BE BACKFILLED & STABILIZED WITHIN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.

NOTE: SEE SHEET G FOR THE "CONVENTIONS & MANAGEMENT PRACTICES FOR WORKINGS IN NON-TYPICAL WETLANDS."

NOTE: SEE SHEET G FOR THE "SEQUENCE OF CONSTRUCTION."

- 1. DIRECT BURIED CABLE FOR TELEPHONE SERVICE PLACED IN TRENCH WITH ELECTRICAL SERVICE.
- 2. D&E USED POLES TO CROSS STREAM WITH ELECTRICAL AND TELEPHONE SERVICE.

CONTRACT NO. 14-3499
CAPITAL PROJECT NO. 9-G203
OLD FREDERICK ROAD WATER, SEWER & FORCE MAINS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Cam P. Chew 5/5/96 4/3/96
DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF UTILITIES

Robert M. Beaman 4-15-96 4-3-1996
CHIEF, BUREAU OF UTILITIES DATE CHIEF, WATER & SEWER (CONV.) DIVISION

Fisher, Collins & Carter, Inc. #9757
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
1072 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 451-2850

TERRELL A. FISHER

DES: M.J.M. REJ
DRWN: J.M.M. REJ
CHK: P.W.K.
DATE: 12/95

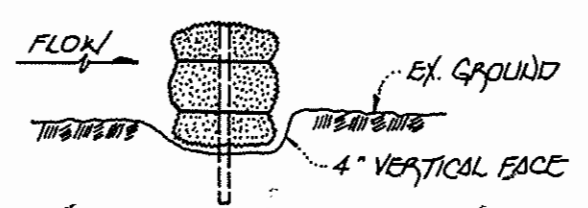
ADDENDUM NO. 1 - 22A0696
AS-BUILT CONDITIONS

BY: NO. REVISION DATE

SEWER & FORCE MAIN
PLAN VIEW

600' SCALE MAP NO. 17 & 18 BLOCK NO. 12 (TM 17), 7 (TM 18)

SCALE AS SHOWN
SHEET 2 OF 6



NOTE: STRAW BALE DIKE SHOWN ON THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO EXISTING 2' DEPTH 4' VERTICAL FACE CONTROL MEASURED SHOWN UNDER 74C-37 & 501' 4C-34.

NOTE: SEE SHEET G FOR THE "CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS."

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR, & IN A ROW & END TOGETHER TIGHTLY ADJUTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, & PLACED SO THE BIDDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR 2" X 4" BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT & REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE OBTAINED THEIR UTILIZED SO AS NOT TO BLOCK OR IMPAIR STORM FLOW OR DRAINAGE.

STRAW BALE DIKE

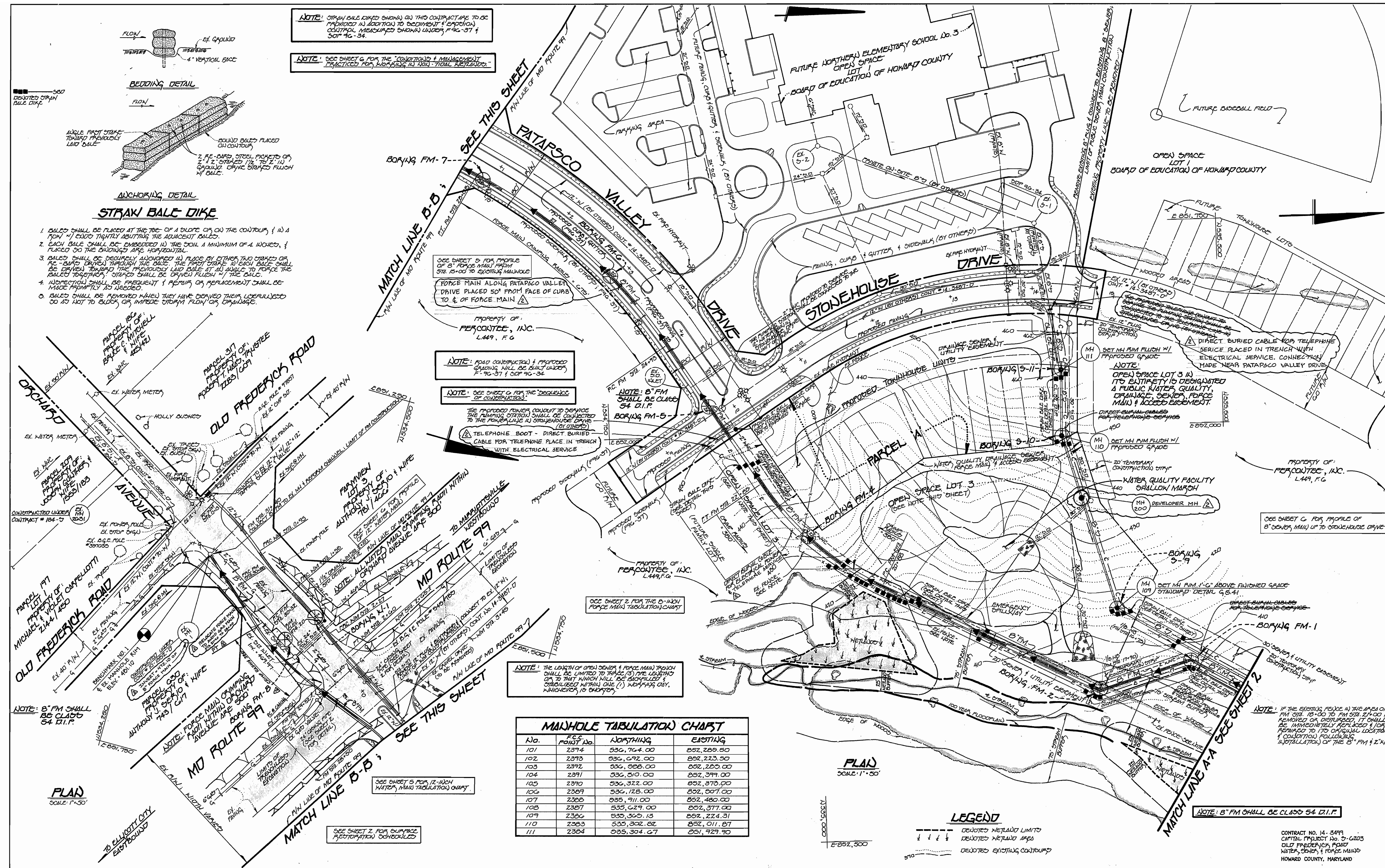
MANHOLE TABULATION CHART

No.	F.C.C. POINT NO.	NORTHING	EASTING
101	2374	836,764.00	852,289.50
102	2375	836,692.00	852,223.50
103	2372	836,868.00	852,255.00
104	2371	836,510.00	852,377.00
105	2370	836,322.00	852,378.00
106	2369	836,128.00	852,507.00
107	2368	835,911.00	852,480.00
108	2367	835,629.00	852,377.00
109	2366	835,365.13	852,274.31
110	2365	835,302.82	852,011.87
111	2364	835,304.67	851,929.90

PLAN
SCALE: 1" = 50'

LEGEND

- DOTTED WETLAND LIMITS
- DOTTED WETLAND AREA
- DOTTED EXISTING CONTOUR



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. ... 5/15/96
DIRECTOR OF PUBLIC WORKS DATE

Robert ... 4/15/96
CHIEF, BUREAU OF ENGINEERING DATE

Robert ... 4-15-96
CHIEF, BUREAU OF UTILITIES DATE

4/3/96
DATE

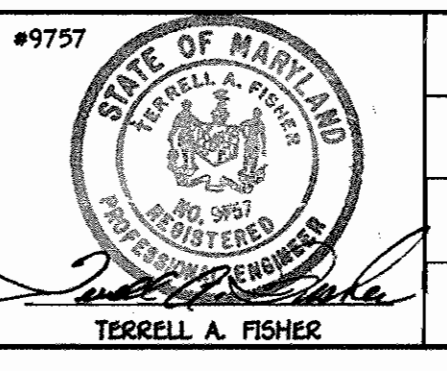
1-3-1996
DATE

Fisher, Collins & Carter, Inc.
#9757

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CONVENTIONAL SQUARE OFFICE BLDG.
10212 BALTIMORE NATIONAL PIKE
GILLCOTT CITY, MARYLAND 21042
(410) 401-2355

TERRELL A. FISHER



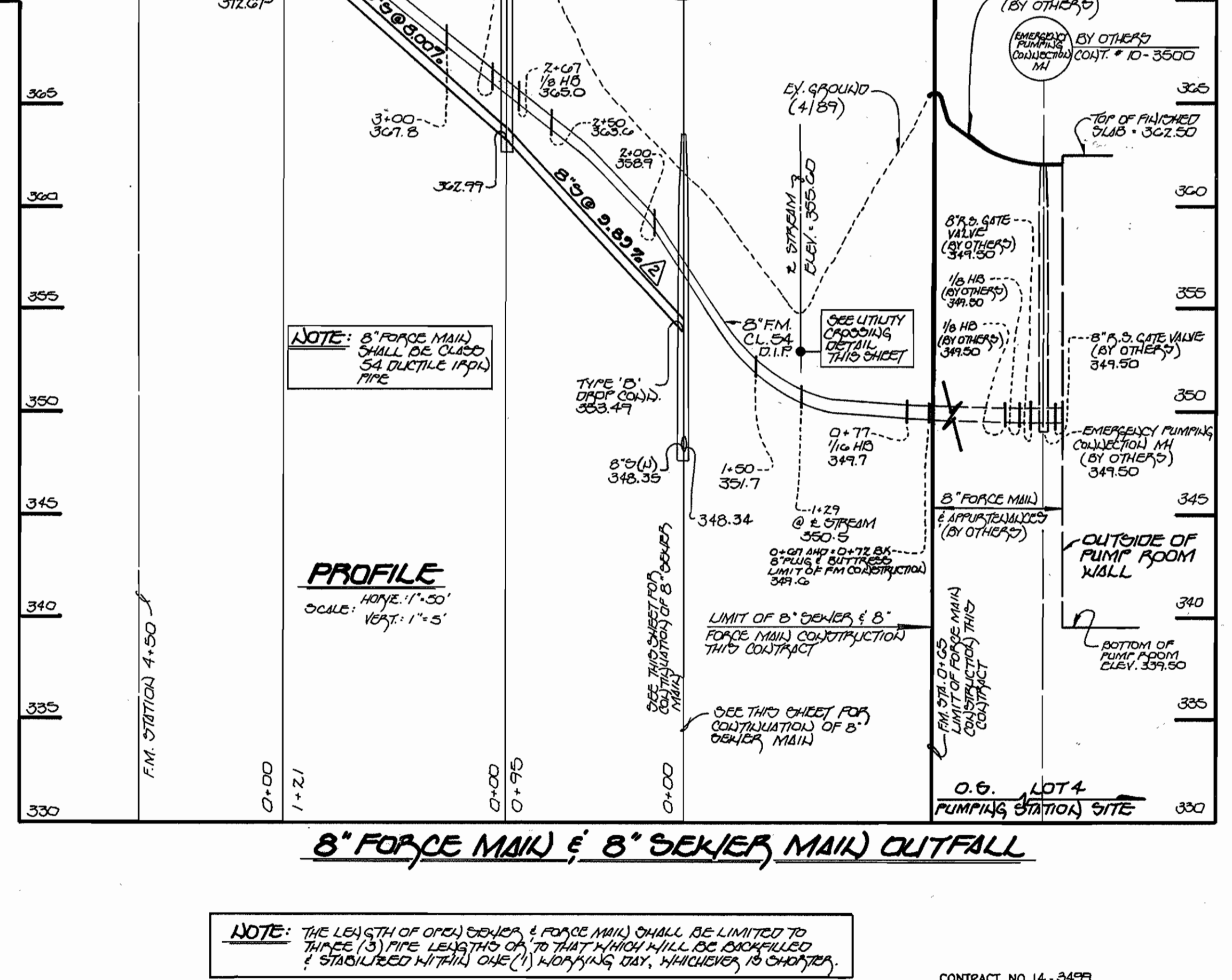
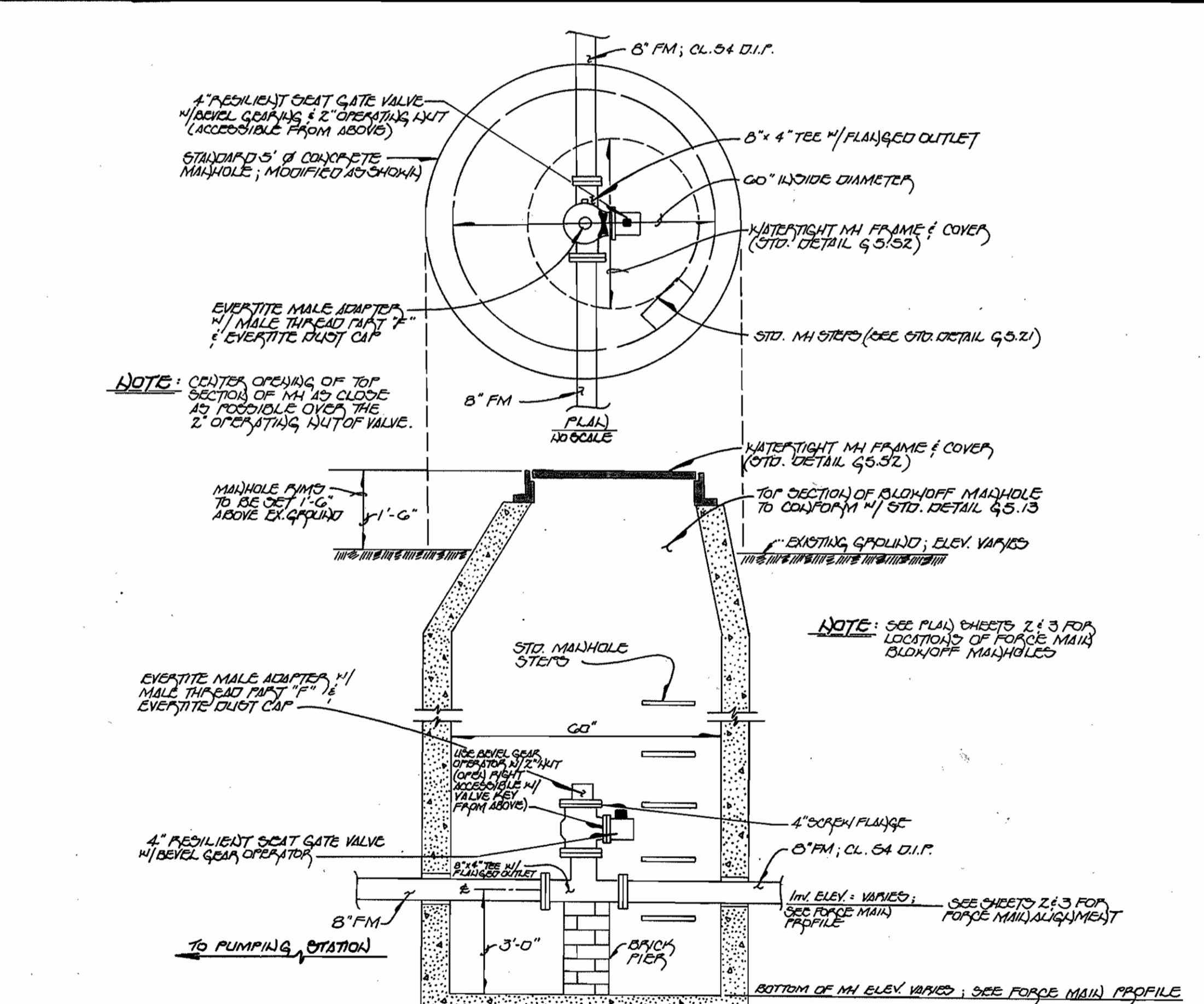
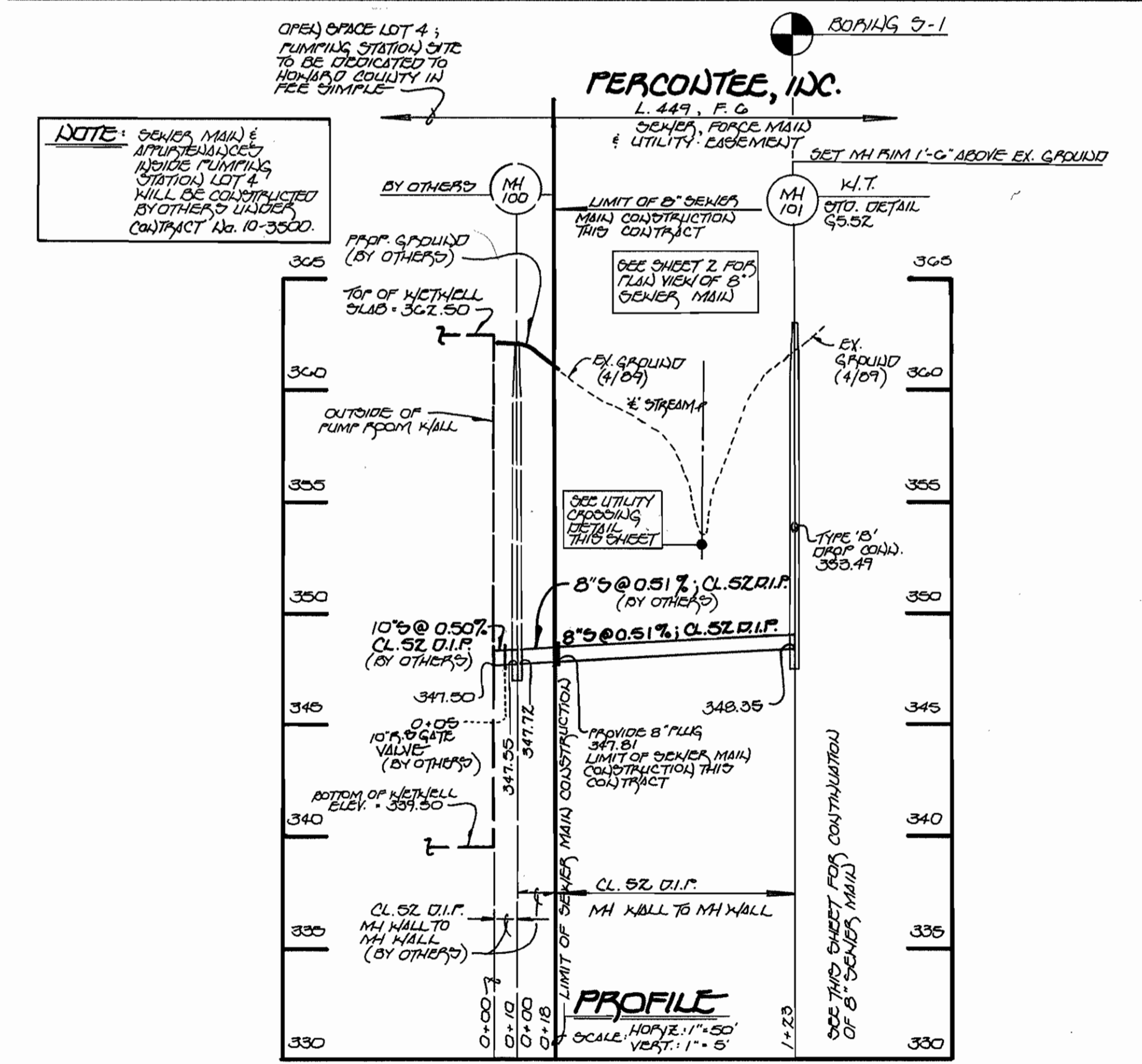
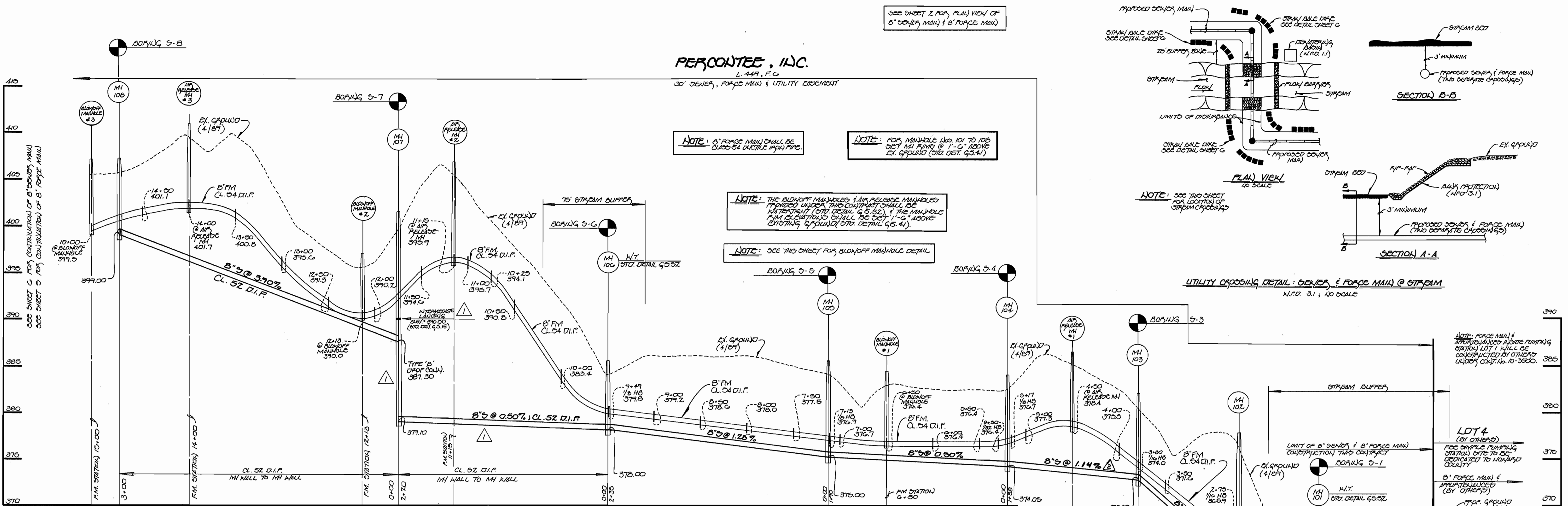
DES.	REV.	DATE	REVISION
H.M.H.	1	22 AUG 96	APPENDUM NO. 1 - 22 AUG 96
J.M.H.	2		AS-BUILT CONDITIONS
P.M.K.			
		12/95	

WATER, SEWER & FORCE MAINS
PLAN VIEW

600' SCALE MAP NO. 17 & 18 BLOCK NO. 12 (TM 17), 7 (TM 18)

OLD FREDERICK ROAD WATER, SEWER & FORCE MAINS
CAPITAL PROJECT No. 9-G203
CONTRACT NO. 14-3499
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

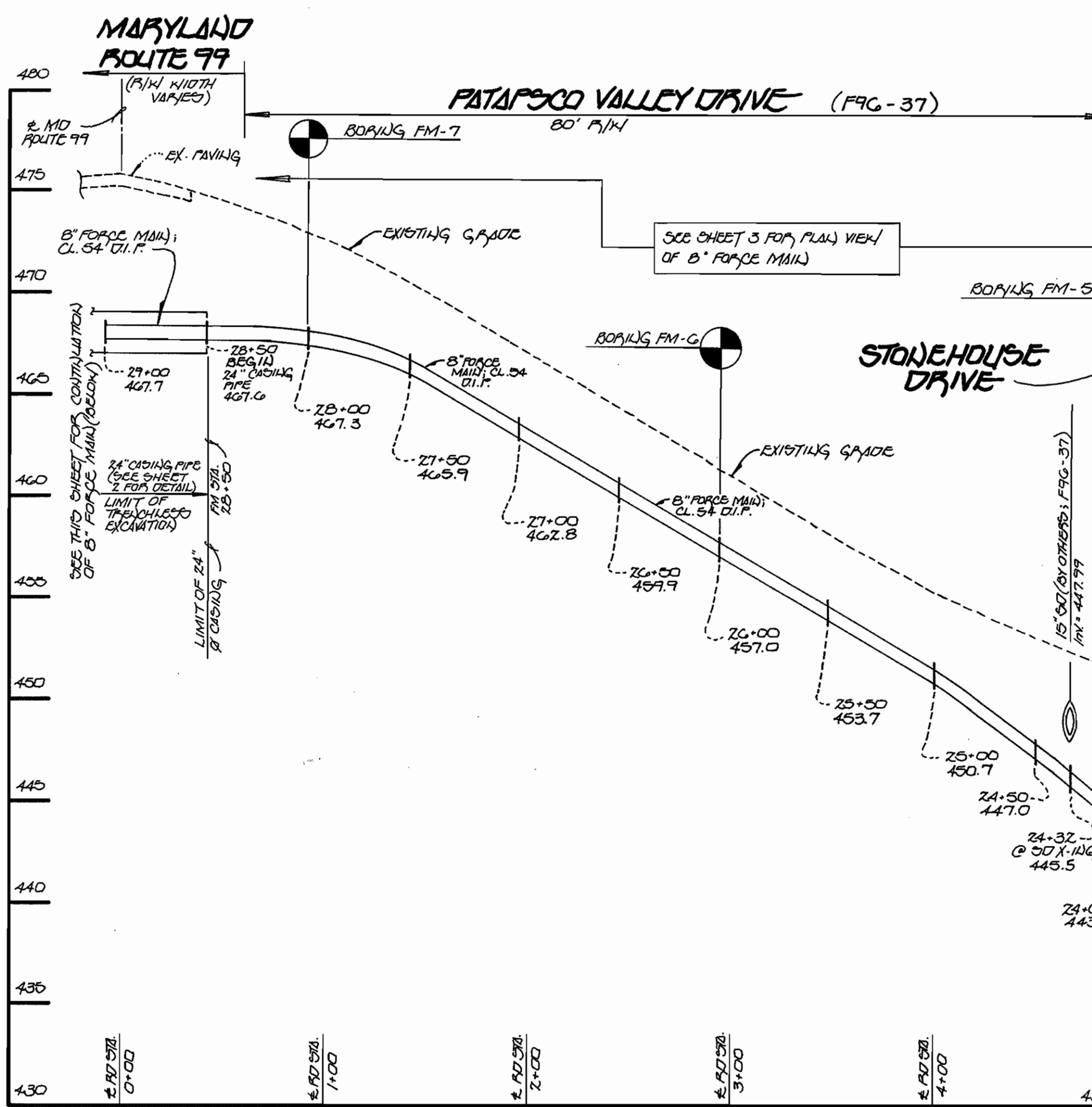
SCALE AS SHOWN
SHEET 3 OF C



8\"/>

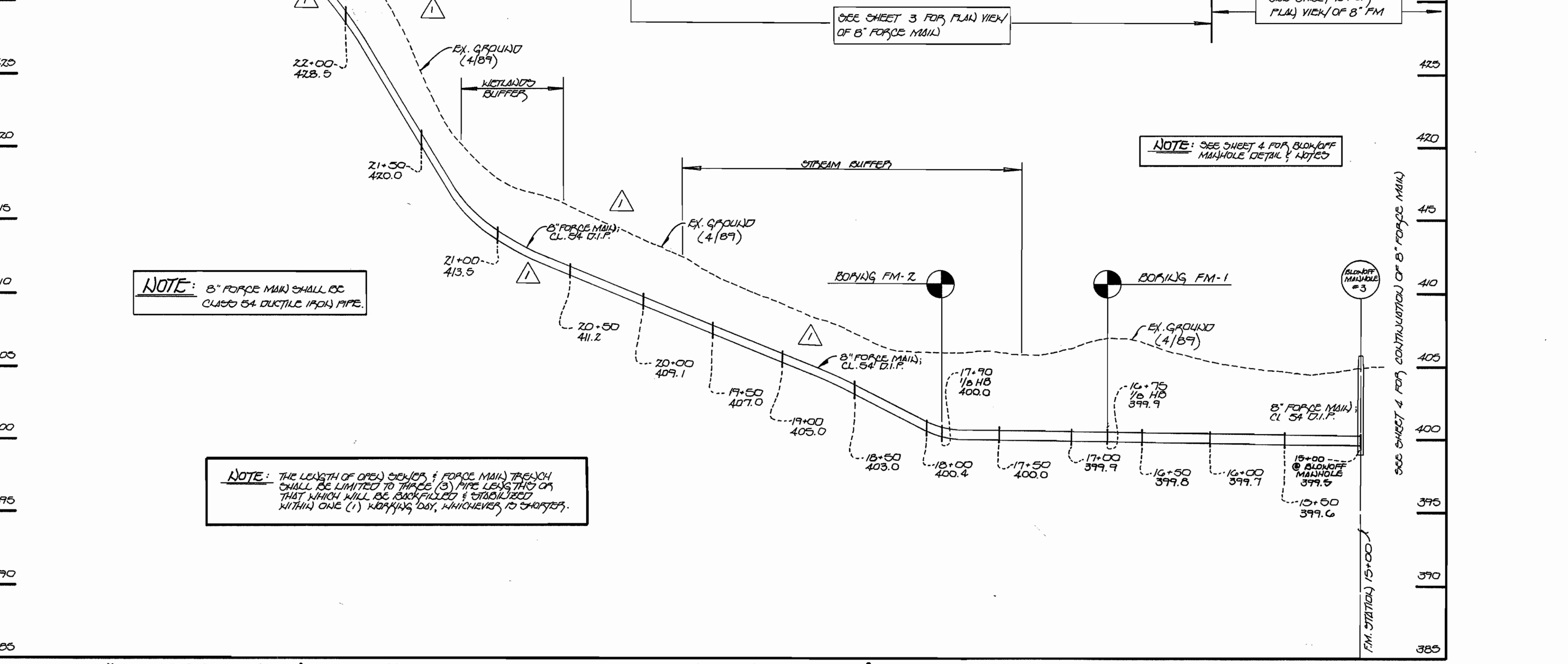
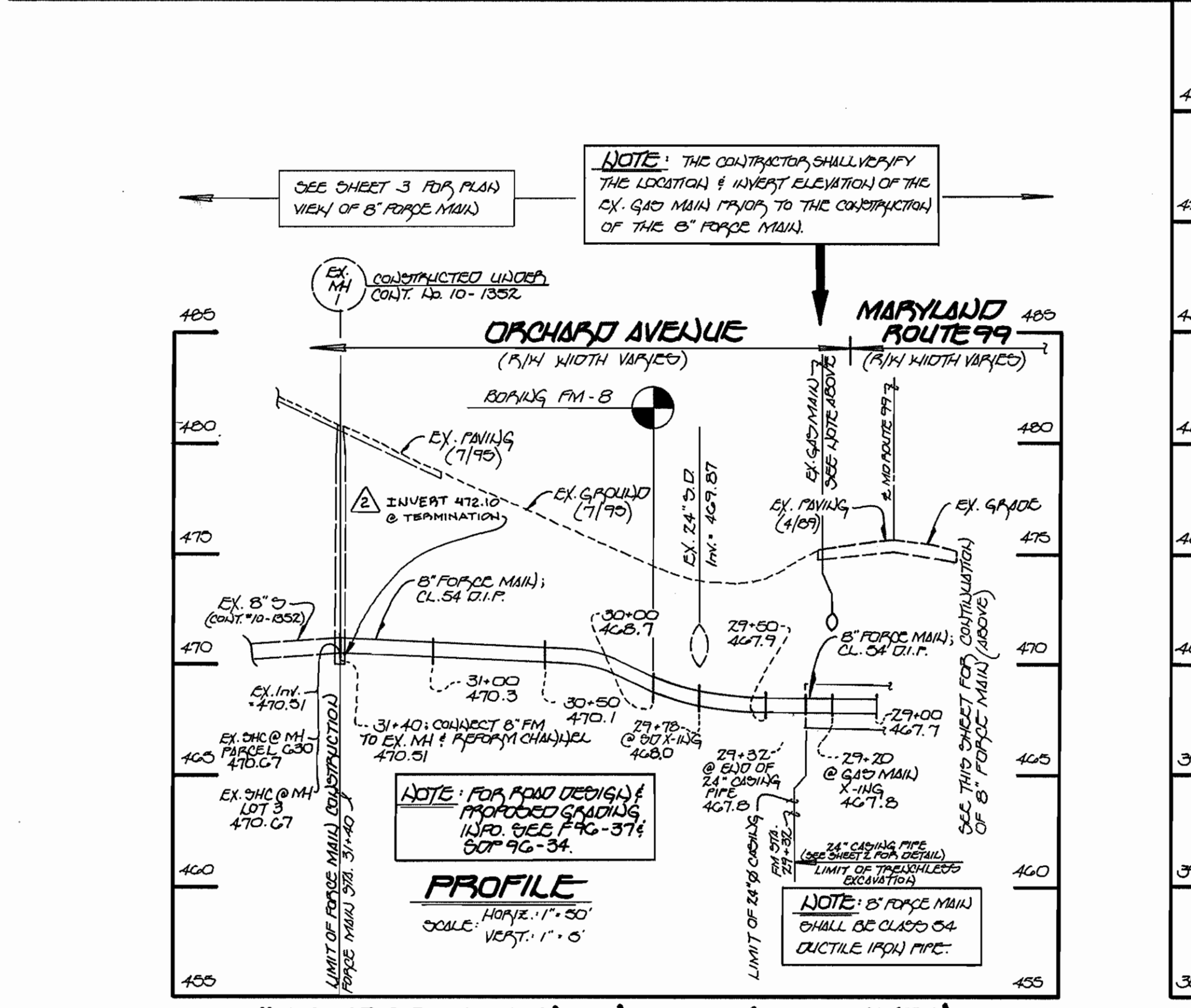
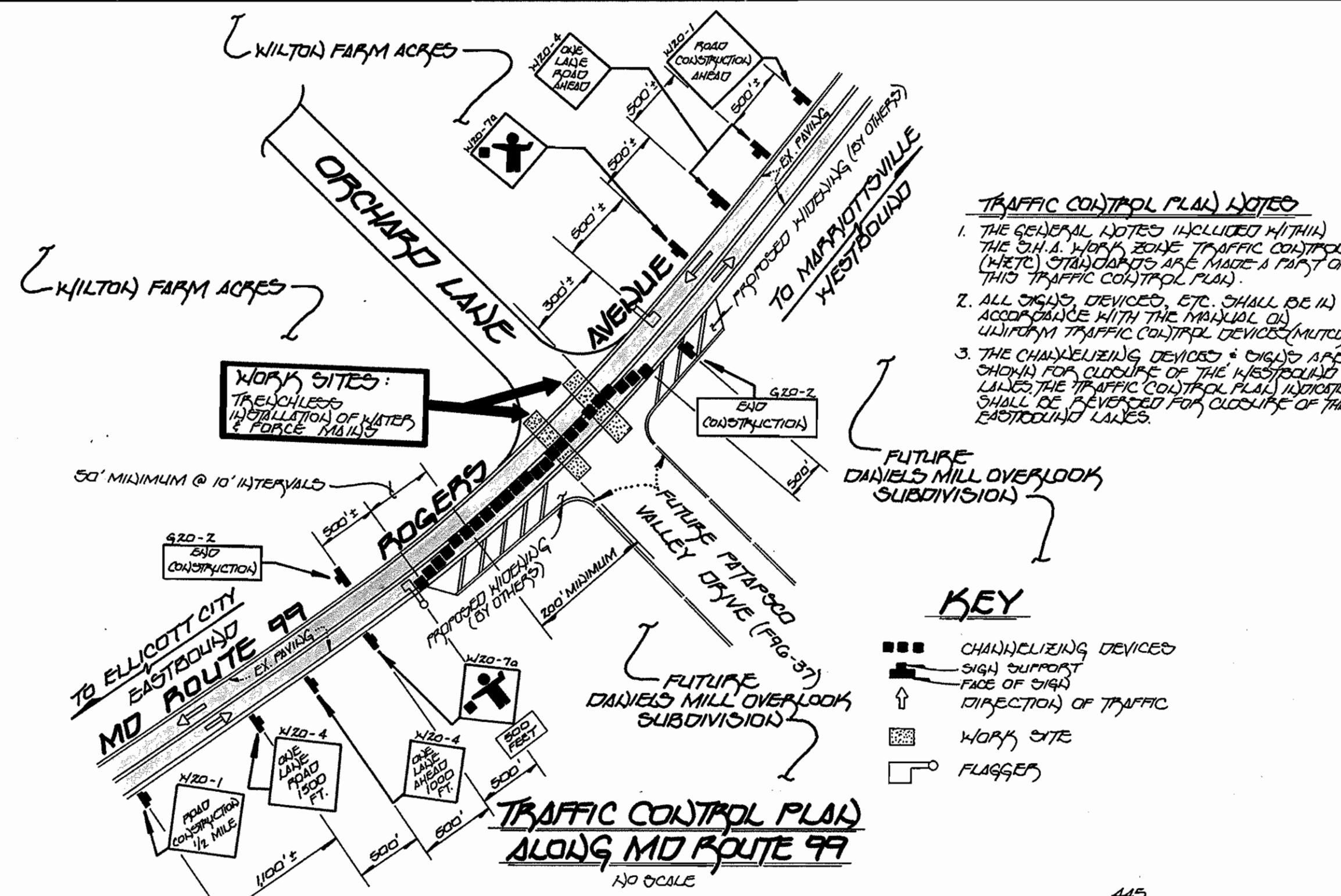
BLOW-OFF MANHOLE - NO SCALE

8\"/>



12" WATER MAIN TABULATION CHART

APPROXIMATE	STATION	P.C.S. POINT 26	NORTHING	EASTING
12" x 12" TAPPING SUBPIPE	0+00	2675	534,276.85	851,424.17
12" TAPPING VALVE	0+03			
P.C.	0+13	2674	534,308.28	851,430.36
P.A.C.	0+25	2676	534,376.77	851,474.77
P.A.C.	1+58	2678	534,427.11	851,510.25
@ 1/2" DRAIN ASSEMBLY	1+75	2686	534,443.61	851,519.12
P.A.C.	2+27	2680	534,485.70	851,549.24
P.T.	2+60	2682	534,512.50	851,568.86
@ END OF 24" CASING PIPE	2+65	2685	534,516.62	851,571.70
@ END OF 24" CASING PIPE	3+45	2684	534,582.47	851,617.13
12" PLUG & BUTTWELD ON EX. 12" W. (CONT. #14-3857-12)	3+57	2685	534,592.34	851,623.94



8" FORCE MAIN IN ORCHARD AVENUE

8" FORCE MAIN: PATAPSCO VALLEY DRIVE TO OPEN SPACE LOT 3

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James P. Shaw
DIRECTOR OF PUBLIC WORKS

4-15-96
DATE

Robert M. Beaman
CHIEF, BUREAU OF UTILITIES

4-2-1996
DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

9757

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
TERRELL A. FISHER

DES.	REJ.	AS-BUILT CONDITIONS
M.J.M.		
J.M.M.		
P.W.K.		
DATE	12/95	
BY	NO.	REVISION
F.C.C.	1	REVISE FORCE MAIN & EXISTING GRAVITY FROM STA. 10+60 TO STA. 23+00

PROFILES
FORCE MAIN

60' SCALE MAP NO. 17 BLOCK NO. 12

OLD FREDERICK ROAD WATER, SEWER & FORCE MAIN

CAPITAL PROJECT No. 9-C203

CONTRACT NO. 14-3499

SECOND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 5 OF 6

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (G13-1825).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - SEVEN (7) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOPES AND ALL GREATER THAN 3:1 FOURTEEN (14) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 50 (SEC. 54), TEMPORARY SEEDING (SEC. 52) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN SECOND-MENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	150.69 ACRES
EASEMENT/CONSTRUCTION STRIP	1.85 ACRES
AREA DISTURBED	1.85 ACRES
AREA TO BE ROOFED OR PAVED	0.00 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.85 ACRES
TOTAL CUT	49.10 CU.YDS.
TOTAL FILL	45.10 CU.YDS.
- AREA LOCATION (NOT APPLICABLE) - 0.00 CU.YDS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF TWO (2) ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

PERMANENT SEEDING NOTES

- ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:
- SEEDBED PREPARATION:** LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.
- SOIL AMENDMENTS:** APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./1,000 SQ.FT.) OF 10-20-20 FERTILIZER.
- SEEDING:** FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15TH, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS./ACRE (1.4 LBS./1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.09 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION 02-USE: 02D (2-TONS PER ACRE OF WELL ANCHORED STRAW 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDED.
- MULCHING:** APPLY 1 1/2 TO 2 TONS PER ACRE (90 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 210 GALLONS PER ACRE (5 GALL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES 8 FEET OR HIGHER, USE 340 GALLONS PER ACRE (9 GALL./1,000 SQ.FT.) FOR ANCHORING.
- MAINTENANCE:** INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

- APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
- SEEDBED PREPARATION:** LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
- SOIL AMENDMENTS:** APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 SQ.FT.)
- SEEDING:** FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 17 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./ACRE) OF WEEPING LOVEGRASS (07 LBS./1,000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOB.
- MULCHING:** APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 210 GALLONS PER ACRE (5 GALL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS ON SLOPES 8 FEET OR HIGHER, USE 340 GALLONS PER ACRE (9 GALL./1,000 SQ.FT.) FOR ANCHORING.
- REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

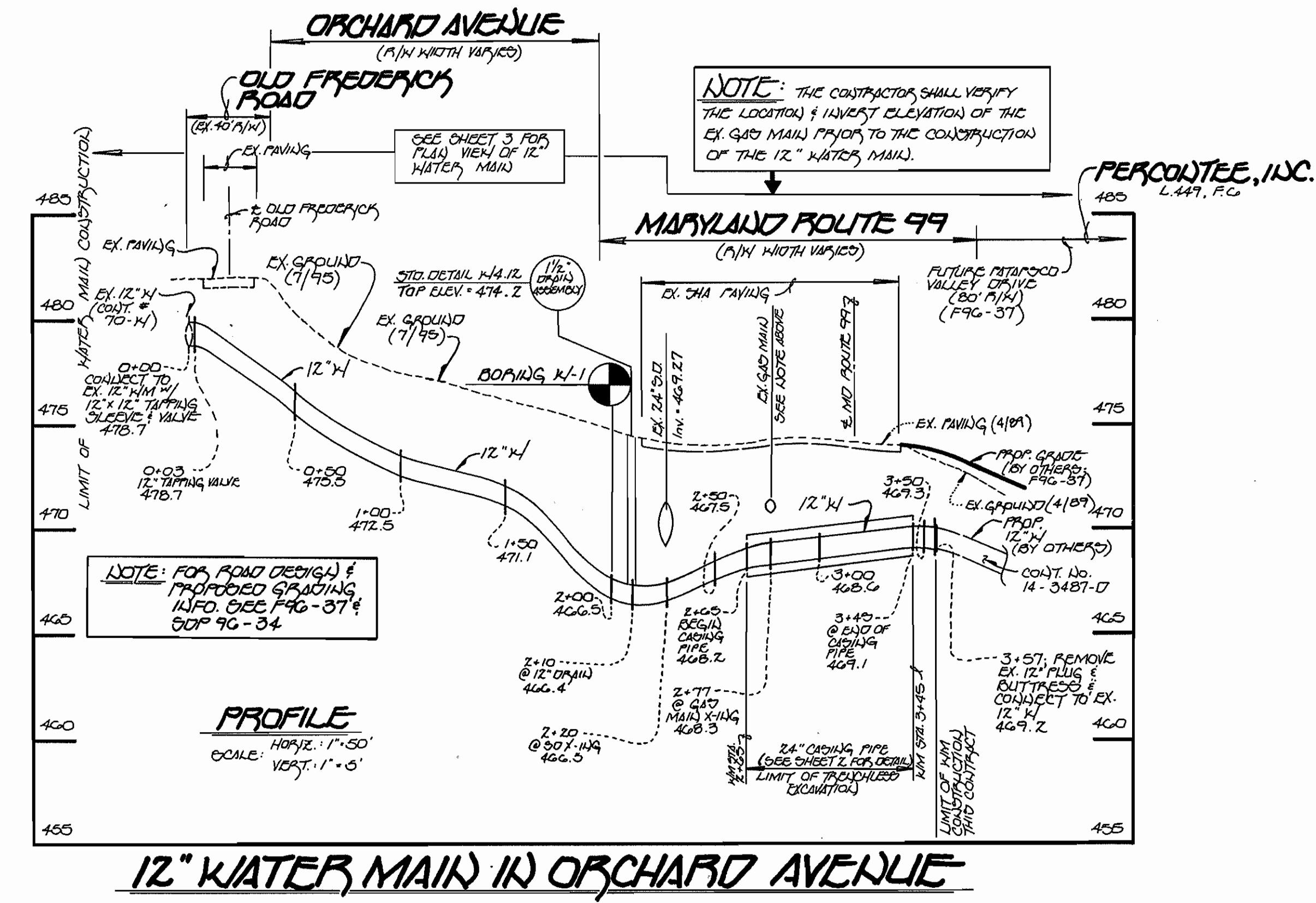
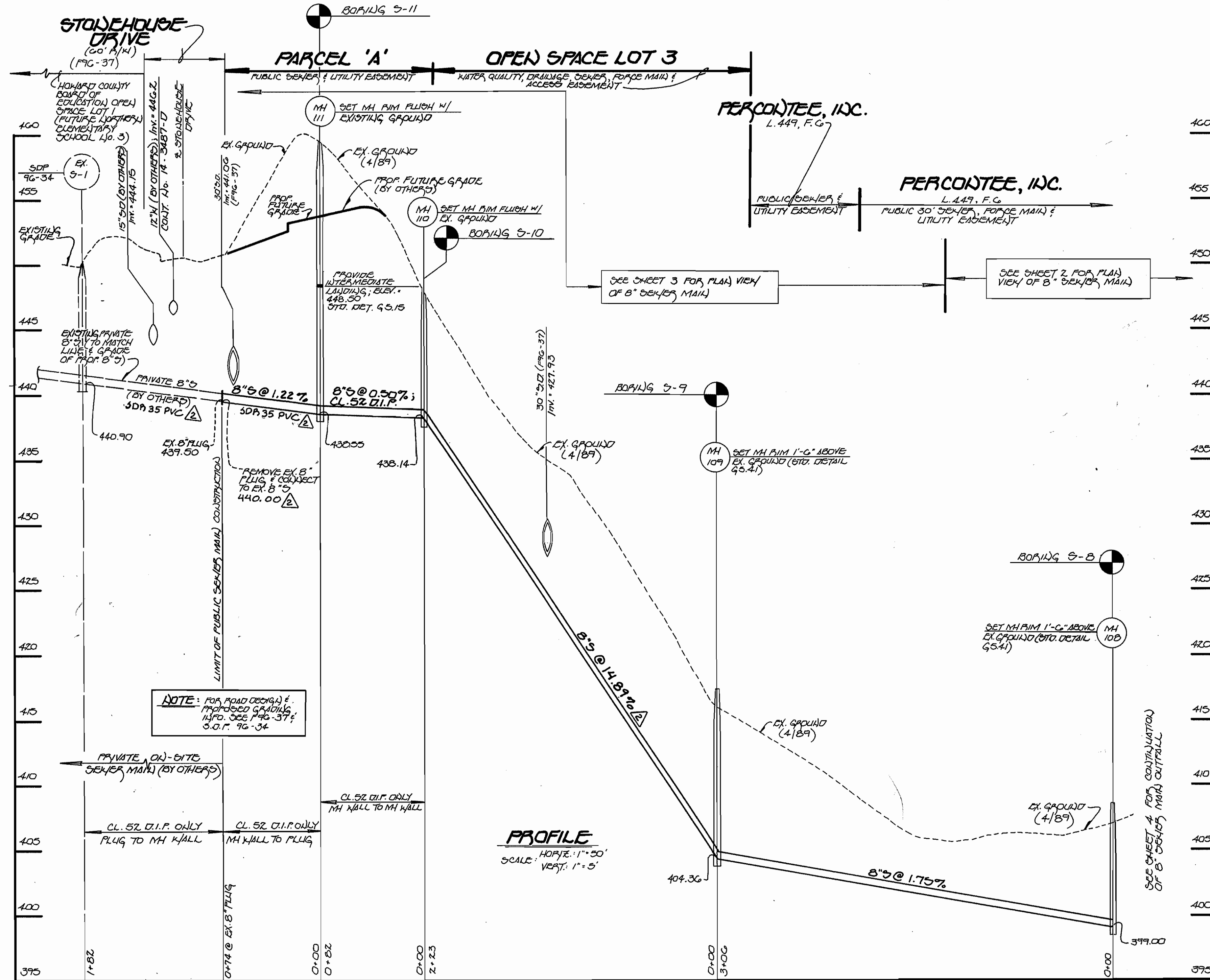
- OBTAIN THE REQUIRED GRADING PERMIT. (7 DAYS)
- NOTIFY MISS UTILITY 48 HOURS BEFORE BEGINNING ANY WORK (1-800-257-7777). NOTIFY HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK (410)313-1870. (1 DAY)
- INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON THE PLAN SHEETS. (3 DAYS)
- THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL DEVICES AFTER EACH RAINFALL AND ON A DAILY BASIS (AS REQUIRED)
- CLEAR AND GRUB AS NECESSARY, ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER MAIN, SEWER MAIN AND FORCE MAIN AND ONLY WITHIN THE DESIGNATED EASEMENTS. (5 DAYS)
- INSTALL THE WATER, SEWER, FORCE MAIN & APPURTENANCES. THE CONTRACTOR SHALL PREFERABLE THE BEST OF THE "CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS." THESE CONDITIONS APPLY TO ALL UTILITY WORK CONDUCTED WITHIN THE NON-TIDAL WETLANDS & BUFFERED BY CHANNELS ON THESE PLANS. (10 DAYS)
- STABILIZE & MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING LISTED ON THIS SHEET. (3 DAYS)
- FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS, & AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION & SEDIMENT CONTROL DEVICES. (1 DAY)

MANHOLE RIM ELEVATION CHART

MANHOLE No.	RIM ELEVATION	DETAILS
101	364.53	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4) WATER TIGHT (STD. DETAIL G.5.92)
102	382.42	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
103	384.17	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
104	384.53	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
105	386.42	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
106	388.24	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
107	400.87	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
108	407.95	SET RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
109	416.41	SET MH RIM 1'-6" ABOVE EX. GROUND (STD. DETAIL G.5.4)
110	439.10	SET RIM FLUSH W/ EXISTING GROUND
111	459.00	SET RIM FLUSH W/ EXISTING GROUND

CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS

- STOCKPILE & MAINTAIN SEPARATELY THE TOP 6" - 12" OF TOPSOIL MATERIAL, TO BE REUSED AS THE LAYER OF BACKFILLED MATERIAL.
- REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OF DEBRIS TO ALL UPLAND DISPOSAL AREA.
- PLACE MATERIAL IN A LOCATION & MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER, FROM INTO OR OUT OF THE NON-TIDAL WETLANDS.
- MAINTAIN THE HYDROLOGIC REGIME OF THE NON-TIDAL WETLAND UPSTREAM, DOWNSTREAM, OR ADJACENT TO THE NON-TIDAL WETLANDS.
- PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY DESIGN THE EQUIPMENT TO PREVENT DAMAGE TO NON-TIDAL WETLANDS.
- USE PREVIOUSLY EXCAVATED MATERIAL AS BACKFILL, UNLESS IT CONTAINS HAZARDOUS METAL PRODUCTS, UNWARRANTED DEBRIS, TOXIC MATERIAL OR ANY OTHER DEleterious SUBSTANCE. USE CLEAN COMPACT MATERIAL WHICH EXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL.
- ALL VEGETATION IN THE WETLAND & BUFFER SHALL BE PART OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (Lolium multiflorum), WILLET (Spartina patens), SMARTY (Imperata sp.), CATO (Lolium sp.) & TOR AYE (Secale cereale). THESE SPECIES SHOULD BE MAINTAINED THROUGHOUT THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF THE NATURAL WETLANDS SPECIES. OTHER NONPERSISTENT VEGETATION MAY ALSO BE ACCEPTABLE, BUT MUST BE APPROVED BY THE DIVISION. REVEGETATION SHALL NOT BE DISTURBED IN THE WETLANDS OR BUFFER AREAS. THE AREA SHOULD BE SEEDING & MULCHED TO PRODUCE GOOD SEED AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- UPON COMPLETION OF THE PROJECT NON-TIDAL WETLANDS & THE 25-FOOT NON-TIDAL WETLAND BUFFER WILL NOT BE MOVED OR OTHERWISE MANAGED TO PREVENT THE RE-ESTABLISHMENT OF THE FORESATED COVER.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES & ELEVATIONS OF NON-TIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES & ELEVATIONS.



12" WATER MAIN IN ORCHARD AVENUE and **8" SEWER MAIN OUTFALL FROM STONEHOUSE DRIVE**

DIRECTOR OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

5/15/96 DATE
4/3/96 DATE

4/15/96 DATE
4/3/1996 DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK
10272 Baltimore National Pike
Elliott City, Maryland 21042
(410) 481-2866

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
TERRELL A. FISHER

DES.	DRWN.	CHK.	DATE
M.J.M.	J.M.M.	P.W.K.	12/90

WATER & SEWER MAINS PROFILES

60' SCALE MAP NO. 17 BLOCK NO. 12

OLD FREDERICK ROAD WATER, SEWER & FORCE MAIN
CAPITAL PROJECT No. 9-G203
CONTRACT NO. 14-3499
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET C OF C