
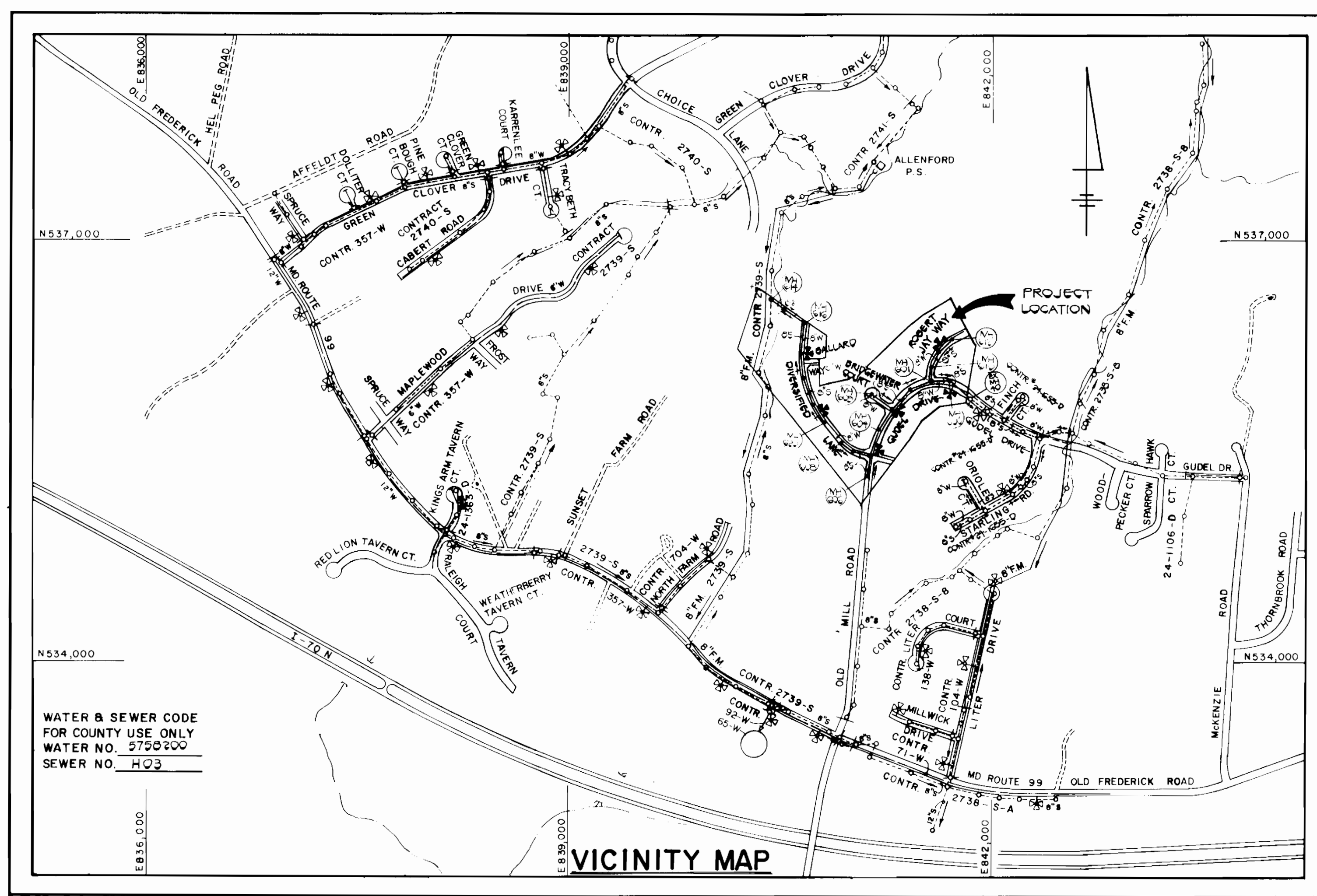


**GENERAL NOTES**

- 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 SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6".
- 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. 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 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: 850-4620  
 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL: 859-9004  
 BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING: 298-9001  
 MISS UTILITY: 1-559-0100  
 COLONIAL PIPELINE COMPANY: 795-1390  
 BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 992-2366  
 C & P TELEPHONE COMPANY : 1-800-257-7777
- 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.
- 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 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 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 1003 AND 1008 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 THE PLANS OR IN THE SPECIFICATIONS. (STD. DETAIL W.3.21).
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE AT LEAST ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- MANHOLES DESIGNATED M.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS STANDARD DETAIL GS.52 WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 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.
- 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.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL GS.51.
- 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 & OTHER LIQUIDS.



WATER & SEWER CODE  
 FOR COUNTY USE ONLY  
 WATER NO. 5750200  
 SEWER NO. H03

TYPE OF BUILDING	RESIDENTIAL
NUMBER OF LOTS	57 (57 BUILDABLE)
NO. OF WATER HOUSE CONNECTIONS	57
NO. OF SEWER HOUSE CONNECTIONS	57
DRAINAGE AREA	LITTLE PATUXENT
CONTRACTOR'S NAME	FISHER, COLLINS AND CARTER, INC.
PROJECT NO.	24-1742-D

SCALE : 1" = 600'

# CONTRACT NO. 24-1742-D BRIDGEWATER SECTION 1 AREA 1 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

ITEM	EST'D	AS-BUILT	SUPPLIER	MANUFACTURER
8" SEWER	1007 L.F.	1007 L.F.	...	...
8" S(D.I.P.)	1007 L.F.	1007 L.F.	...	...
6" SEWER	1234 L.F.	404 L.F.	...	...
MANHOLES	20 EA.	0 EA.	...	...
8" WATER	100 L.F.	200 L.F.	...	...
6" WATER	100 L.F.	210 L.F.	...	...
3" WATER	24 L.F.	24 L.F.	...	...
FIRE HYD.	0 EA.	0 EA.	...	...
3/4" WHC	605 L.F.	739 L.F.	...	...
1" WHC	450 L.F.	568 L.F.	...	...
BLOW-OFF	1 EA.	1 EA.	...	...
8" VALVES	7 EA.	7 EA.	...	...
6" VALVES(EXCL.FH)	1 EA.	1 EA.	...	...

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F 88-175

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

PLAN REFERENCE NUMBERS:  
 S87-83  
 P88-15  
 F88-175

*James M. ...*  
 US SOIL CONSERVATION SERVICE DATE: 4/20/98

THIS DEVELOPMENT PLAN IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT (E-P-88-20)

APPROVED:  
*Stephen ...*  
 HOWARD SOIL CONSERVATION DISTRICT DATE: 4/20/98

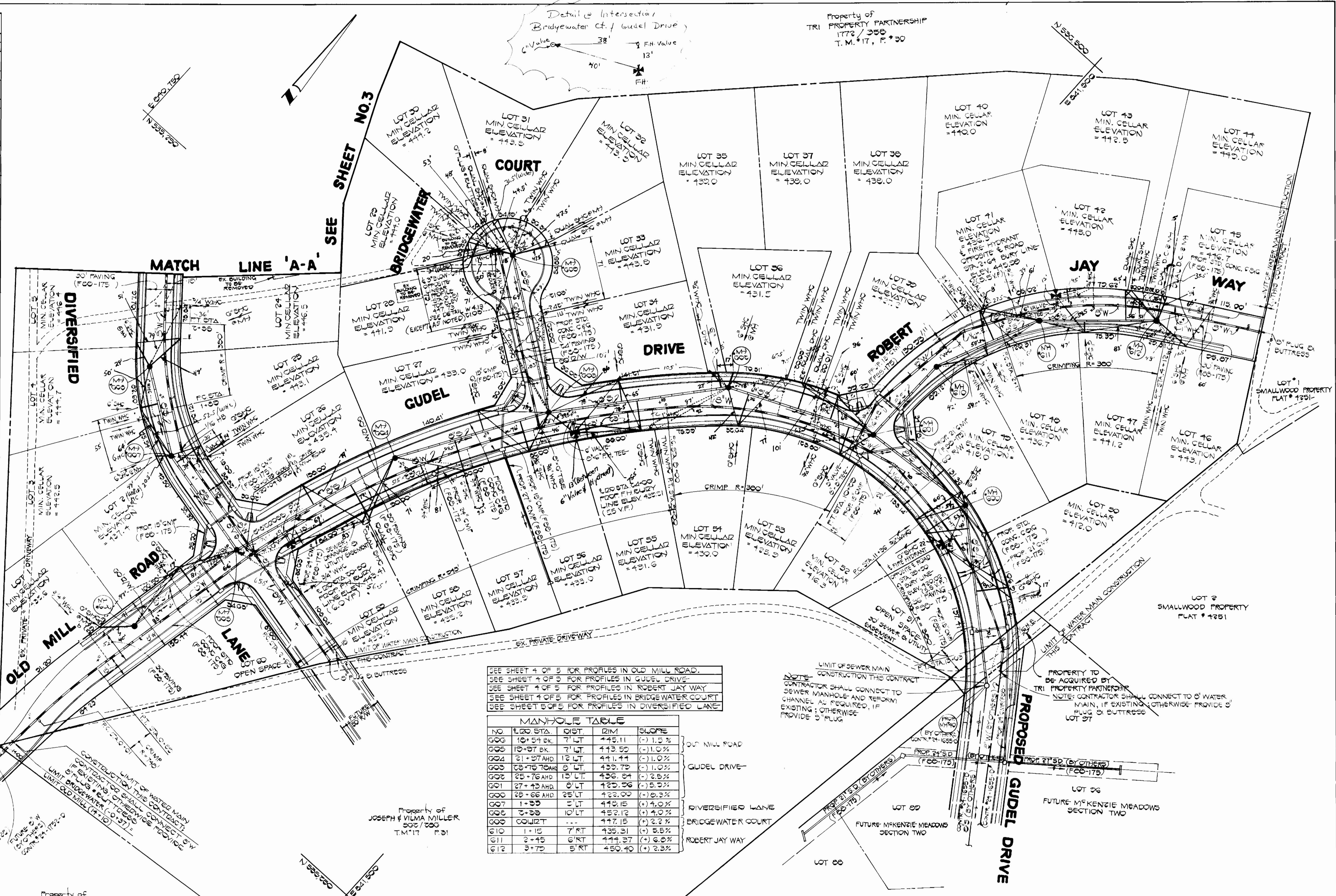
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 4-29-98 DATE: 4-29-98	FISHER, COLLINS AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 DATE: 4/19/98	D.S. T.A.F. D.R.V. J.O. C.H.K. P.W.K. DATE: 4/19/98	TITLE SHEET	BRIDGEWATER SECTION 1 AREA 1 CONTRACT NO. 24-1742-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 5
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CONTRACT NO. 24-1742-D  
 BRIDGEWATER  
 SECTION 1 AREA 1  
 WATER & SEWER MAIN EXTENSIONS  
 HOWARD COUNTY, MARYLAND

AS BUILT

**INVERT OF SEWER HOUSE CONNECTIONS AT PROPERTY LINE**

STATION	LOT NO.	INVERT ELEV.
N-600 TO N-601		
0+62 RT	LOT 2	432.92
MH*606 RT	LOT 1	434.59
N-602 TO N-607		
1+18 RT	LOT 36	435.04
MH*607 LT	LOT 3	437.84
N-607 TO N-611		
MH*607 LT	LOT 3	427.34
0+60 LT	LOT 4	429.80
MH*608 RT	LOT 5	441.44
MH*608 RT	LOT 24	441.72
N-610 TO N-611		
0+56 RT	LOT 40	432.21
0+68 LT	LOTS 40 & 41	431.73
N-611 TO N-612		
0+47 RT	LOT 47	433.65
0+55 LT	LOT 4+5+12	437.34
MH*612 LT	LOTS 44 & 1.D.C.	441.30
MH*612 RT	LOT 40	433.90
N-612 TO N-613		
1+10 LT	LOT 50	433.70
MH*613 LT	LOT 30	435.10
MH*613 RT	LOT 30 & 31	435.04
MH*613 RT	LOTS 32 & 33	435.02
N-613 TO N-614		
0+59 LT	LOTS 50 & 51	430.55
1+05 RT	LOT 30	430.58
N-614 TO N-615		
0+34 LT	LOT 30	428.30
0+76 RT	LOT 27	428.50
1+10 LT	LOT 27	428.08
N-615 TO N-616		
MH*616 RT	LOT 30	430.36
0+07 LT	LOT 35 L.H.	421.39
1+03 RT	LOT 24	426.94
1+20 RT	LOT 24	426.93
N-616 TO N-617		
0+28 LT	LOT 25	421.20
0+50 RT	LOT 25	421.85
0+80 RT	LOTS 27 & 28 D.H.	423.60
1+47 LT	LOT 24	425.25
MH*617 RT	LOT 24	425.63
N-617 TO N-618		
0+10 RT	LOT 42	412.84
1+06 RT	LOT 50	407.03
1+77 LT	LOT 53	411.43



SEE SHEET 4 OF 5 FOR PROFILES IN OLD MILL ROAD.  
 SEE SHEET 4 OF 5 FOR PROFILES IN GUDEL DRIVE.  
 SEE SHEET 4 OF 5 FOR PROFILES IN ROBERT JAY WAY  
 SEE SHEET 4 OF 5 FOR PROFILES IN BRIDGEWATER COURT  
 SEE SHEET 5 OF 5 FOR PROFILES IN DIVERSIFIED LANE.

**MANHOLE TABLE**

NO.	LOC STA.	DIST.	DIM.	SLOPE
G00	10+54 BK	7' LT	445.11	(-) 1.0%
G01	19+97 BK	7' LT	443.50	(-) 1.0%
G04	21+27 AHD	12' LT	441.44	(-) 1.0%
G03	28+75 70MM	8' LT	435.79	(-) 1.0%
G02	25+76 AHD	15' LT	436.84	(-) 2.5%
G01	27+43 AHD	8' LT	425.96	(-) 5.2%
G00	28+66 AHD	25' LT	422.00	(-) 6.3%
G07	1+33	2' LT	442.15	(+) 4.0%
G06	2+38	10' LT	452.12	(+) 4.0%
G05	COLLRT	...	447.16	(+) 2.2%
G10	1+16	7' RT	435.31	(+) 5.5%
G11	2+45	6' RT	444.27	(+) 6.8%
G12	3+72	5' RT	450.40	(+) 2.3%

**PLAN**  
1"=50'

Property of  
PAUL & CATHERINE NAGENGAST  
215 / 556  
T.M. '17, P. 20

Property of  
JOSEPH & VILMA MILLER  
502 / 300  
T.M. '17, P. 31

Property of  
D.H. MINCHEW  
1400 / 732  
T.M. '17, P. 202

**NOTE**  
CONTRACTOR SHALL CONNECT TO SEWER MANHOLE AND REFORM CHANNEL AS REQUIRED, IF EXISTING; OTHERWISE, PROVIDE 3" PLUG.  
  
**NOTE**  
CONTRACTOR SHALL CONNECT TO WATER MAIN, IF EXISTING; OTHERWISE, PROVIDE 3" PLUG OR BUTTRESS.  
 PROPERTY TO BE ACQUIRED BY TRI PROPERTY PARTNERSHIP

CONTRACT NO. 24-1742-D  
BRIDGEWATER  
SECTION ONE, AREA ONE  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND

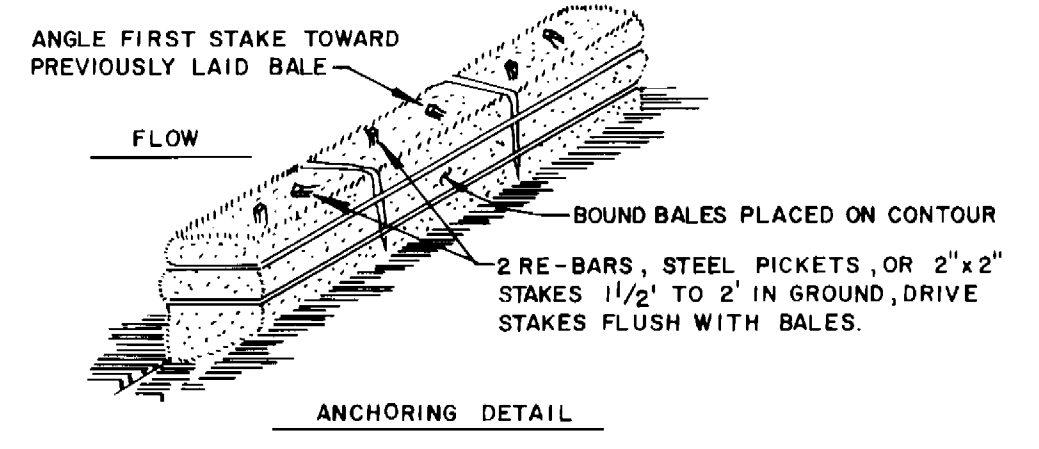
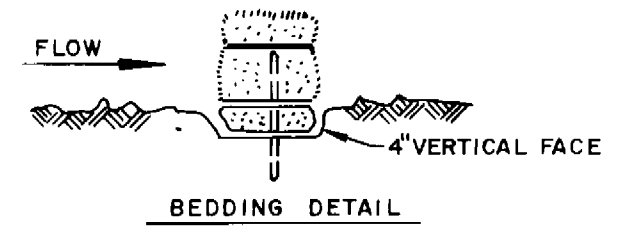
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 4/26/88 DATE: 4-19-88	FISHER, COLLINS AND CARTER, INC. #9757 CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 DATE: 2/10/88	DES. D.B.S.	BY NO.	REVISION	DATE	PROFILES WATER AND SEWER MAINS BRIDGEWATER SECTION ONE AREA ONE CONTRACT NO. 24-1742-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 2 OF 5
		DRN. D.B.S.	BY NO.	REVISION	DATE		

**BENCH MARKS**

F.C.C. B.M. #1 ELEV. 390.67  
 X-CUT SET ON NORTH SIDE OF RIM OF  
 EX. MANHOLE #350

F.C.C. B.M. #2 ELEV. 370.32  
 R. R. SPIKE SET IN 10' TREE, 207'  
 NORTH OF MANHOLE #350

NOTE:  
 BUILD MANHOLE #614  
 OVER EXISTING SEWER  
 MAIN AND FORM CHANNEL.  
 AS REQUIRED SEE STD.  
 DETAIL G5.14



**STRAW BALE DIKE**

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE 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 AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

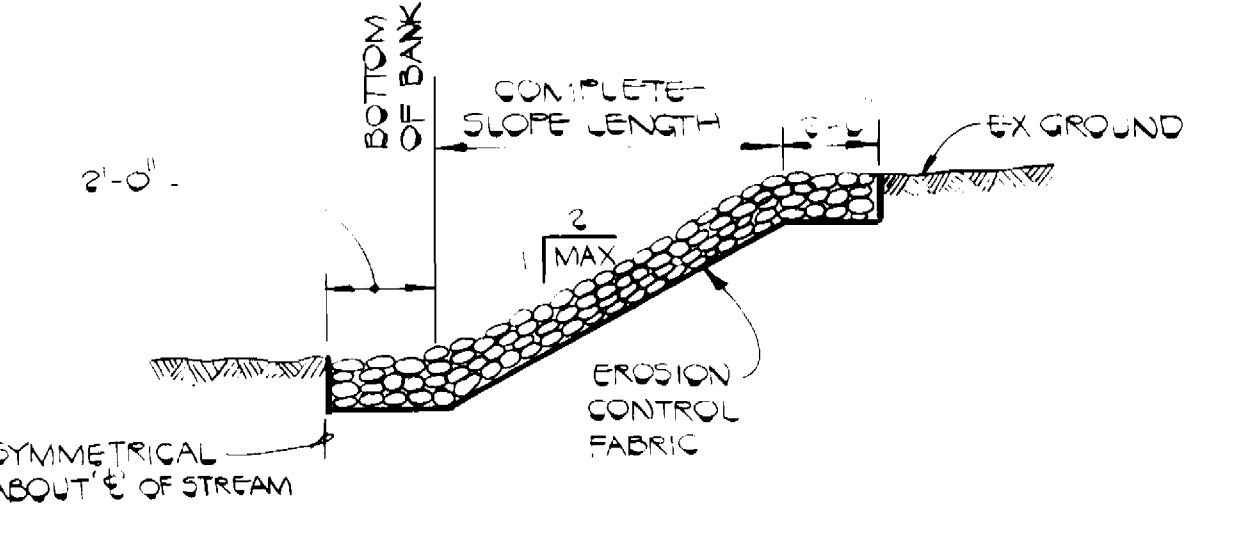
INVERT OF SEWER HOUSE CONNECTIONS  
 AT PROPERTY LINE

STATION	LOT NO.	INVERT ELEV.
MH#610 TO MH#620		
0+10 RT.	LOT 8	440.00
0+75 LT.	LOT 82	440.00
1+13 RT.	LOT 7	441.07
MH#620 LT.	LOT 22	441.56
MH#630 RT.	LOT 6	441.40
MH#615 TO MH#610		
MH#610 RT.	LOT 10 DHC	424.15
1+05 RT.	LOT 9	422.32
1+15 LT.	LOT 30	422.11
1+23 LT.	LOT 21	420.41
MH#617 TO MH#615		
0+30 RT.	LOT 12 D.C.	415.30
1+11 RT.	LOT 11 C-4	410.40
1+32 LT.	LOT 15	415.30
MH#610 RT.	LOT 10 D.C.	424.15
MH#616 TO MH#617		
0+40 LT.	LOT 17	395.15
0+65 RT.	LOT 14	395.65
1+62 LT.	LOT 18	400.30
1+70 RT.	LOT 13 DHC	406.50
MH#615 TO MH#616		
0+77 RT.	LOT 15	391.31

**RIP RAP NOTES**

RIP RAP SHALL BE PLACED OVER ALL DISTURBED AREAS WITHIN THE FULL WIDTH OF THE RIGHT OF WAY AT THOSE LOCATIONS INDICATED ON THE DRAWINGS RIP RAP FOR PLACEMENT ALONG THE STREAM BANK AT THE SEWER MAIN CROSSING SHALL CONFORM TO SHA SPECIFICATIONS FOR CLASS II STONE AND THE THICKNESS OF THE RIP RAP LAYER SHALL BE 2'-0"

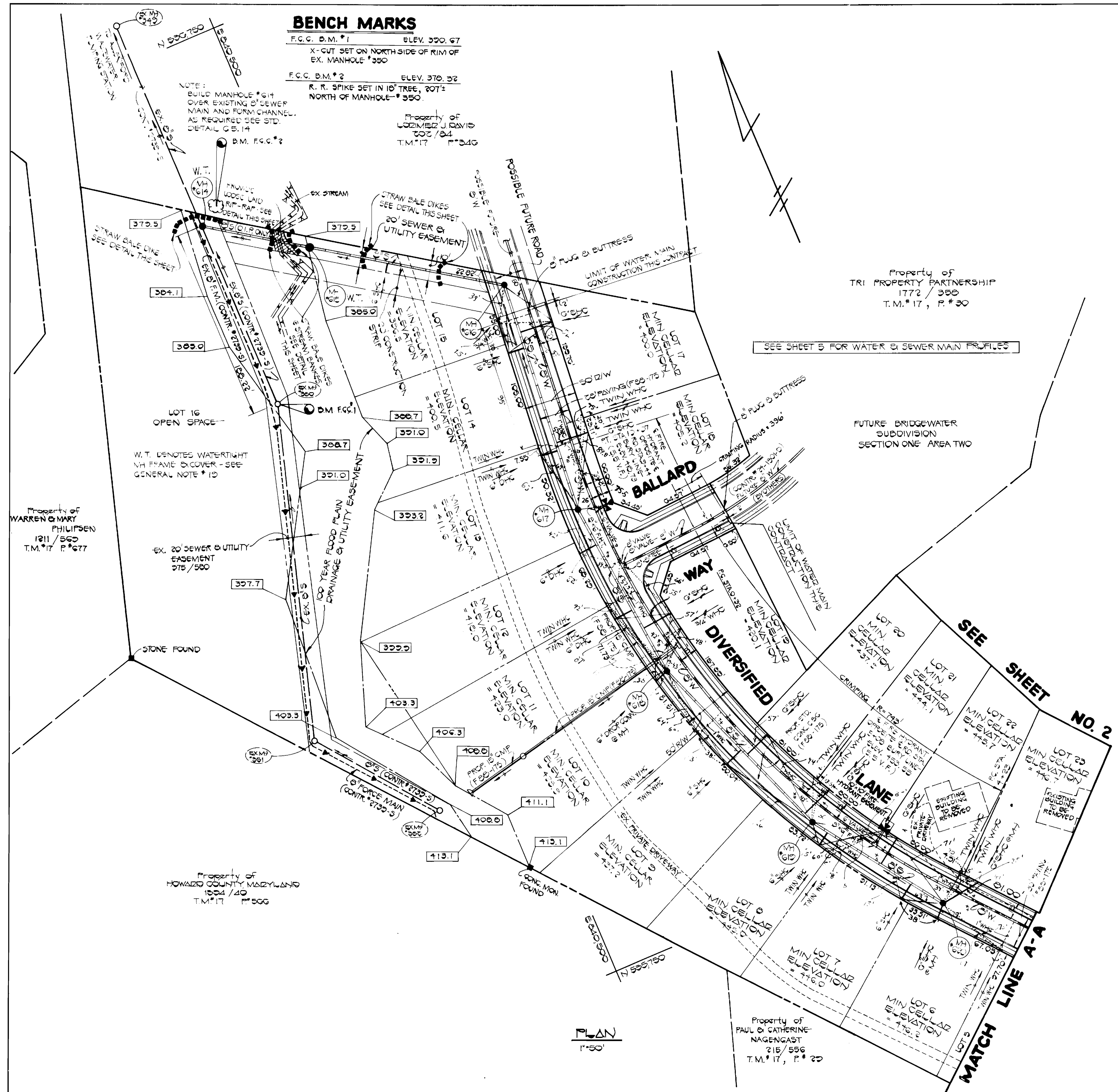
EROSION CONTROL FABRIC SHALL BE POLY FILTER-X AS MANUFACTURED BY CARTHAGE-MILLS, INC. OR PERMEALNER M-135 AS MANUFACTURED BY STAFF INDUSTRIES, INC. OR EQUAL.



MANHOLE TABLE

NO.	SIZE	DIST.	RIM	SLOPE
#620	4'-2"	9' LT	455.24	(-) 1.5%
#615	5'-7"	10' LT	442.87	(-) 5.0%
#610	7'-7"	10' LT	432.87	(-) 2.5%
#617	9'-5"	9' LT	417.76	(-) 7.5%
#616	11'-3"	9' LT	EX. GROUND	--

DIVERSIFIED LANE



DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

4/19/88  
 DATE

4-25-88  
 DATE

5-28-88  
 DATE

FISHER, COLLINS AND CARTER, INC. #9757  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVENUE  
 ELLICOTT CITY, MARYLAND 21043

TERRELL A. FISHER

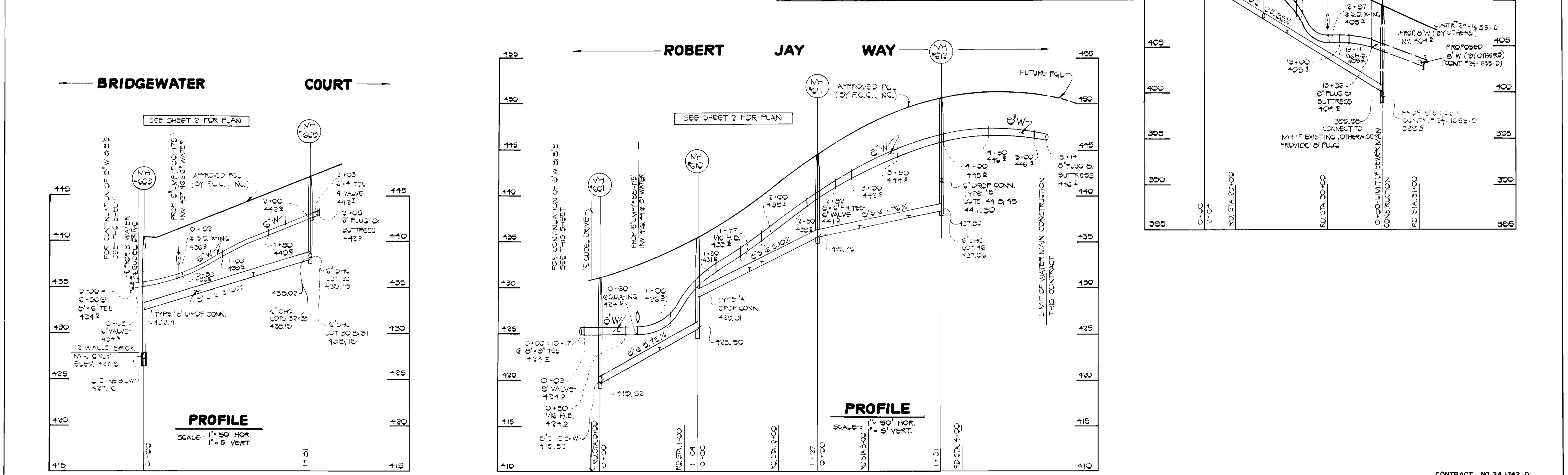
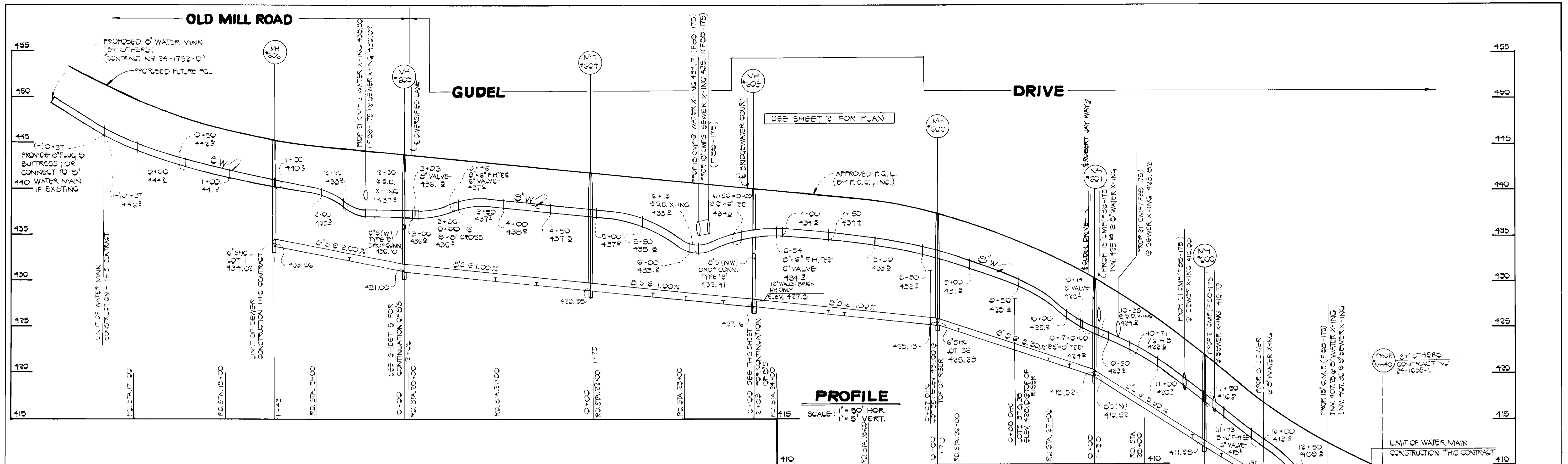
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 DRN: D.B.S.  
 CHK: P.W.K.  
 DATE: 2/10/88

PLAN  
 WATER AND SEWER MAINS

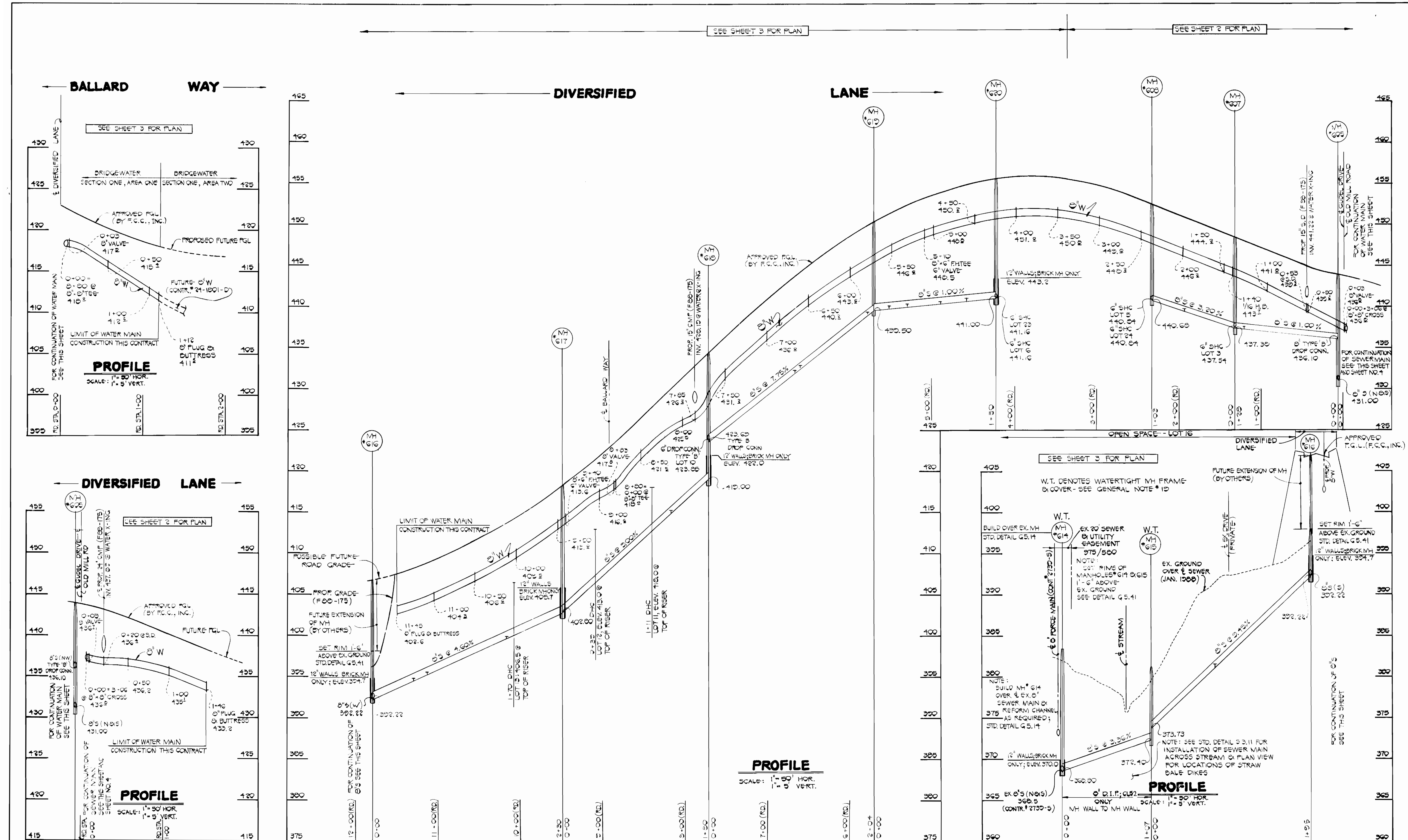
600 SCALE MAP NO. 17 BLOCK NO. 8

BRIDGEWATER  
 SECTION ONE AREA ONE  
 CONTRACT NO. 24-1742-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 3 OF 5



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 4-19-88 CHIEF, BUREAU OF UTILITIES		FISHER, COLLINS AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 DATE: 2/10/88		DES: T.A.F. DRN: J.O. CHK: P.W.K. DATE: 2/10/88		PROFILES WATER AND SEWER MAINS 600 SCALE MAP NO. 17 BLOCK NO. 8		BRIDGE WATER SECTION ONE AREA ONE CONTRACT NO. 24-1742-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND		SCALE AS SHOWN SHEET 4 OF 5
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<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>James J. ...</i> DIRECTOR OF PUBLIC WORKS DATE: 4-25-88</p> <p><i>Robert ...</i> CHIEF, BUREAU OF UTILITIES DATE: 4-19-88</p>	<p>FISHER, COLLINS AND CARTER, INC. # 9757 CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043</p> <p><i>Terrell A. Fisher</i> TERRELL A. FISHER</p>	<p>DES: T. A. F. DRN: J. O. CHK: P. W. K. DATE: 4/10/88</p>	<p>BY NO. REVISION DATE</p>	<p>600' SCALE MAP NO. 17 BLOCK NO. 8</p>
				<p>SCALE AS SHOWN</p> <p>SHEET 5 OF 5</p>

BRUNING 69150

CONTRACT NO. 24-1742-D  
BRIDGE WATER  
SECTION ONE AREA ONE  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND